

BANK ONE CORPORATION | 2000 ANNUAL REPORT

For the Year Ended December 31 (Dollars in millions, except per share data)	**2000**	1999	*% change*
PER COMMON SHARE DATA			
Earnings (loss):			
Basic	$ (0.45)	$ 2.97	N/M
Diluted	(0.45)	2.95	N/M
Dividends declared	1.26	1.68	– 25
Book value (at December 31)	15.90	17.34	– 8
Market price (at December 31)	36.63	32.00	+ 14
FOR THE YEAR			
Total revenue, net of interest expense	$ 13,926	$ 17,713	– 21
Net income (loss)	(511)	3,479	N/M
Net interest income – tax equivalent basis	8,974	9,142	– 2
Provision for credit losses	3,398	1,249	N/M
Noninterest income	5,090	8,692	– 41
Noninterest expense	11,608	11,490	+ 1
Return (loss) on average assets	(0.19)%	1.36%	
Return (loss) on average common equity	(2.7)%	17.1%	
AT YEAR-END			
Managed loans*	$ 236,492	$ 229,196	+ 3
Managed assets*	309,096	315,064	– 2
Total assets	269,300	269,425	—
Deposits	167,077	162,278	+ 3
Common equity	18,445	19,900	– 7
Employees	80,778	87,735	– 8
AVERAGE BALANCES			
Managed loans*	$ 233,192	$ 218,602	+ 7
Managed assets*	314,961	302,189	+ 4
Deposits	162,462	155,184	+ 5
Common equity	19,382	20,264	– 4

**Managed: adjusted to include credit card loans that have been securitized and removed from the balance sheet.*

Bank One, confronting daunting challenges, had an extremely difficult year in 2000. We lost $511 million after taking $5 billion in charge-offs, reserve additions, write-downs and various adjustments. We reduced the dividend by 50 percent — something no corporation should ever have to do. We faced management changes, customer service problems, litigation, incompatible computer systems, costly and inefficient operations and a rapidly deteriorating credit climate. These results are absolutely unacceptable — to you and to Bank One's management.

After you read this letter, I hope you'll see concrete reasons for optimism. The most important are these: This company has strong franchises and a solid core; we've got good market positions; fine, albeit underperforming, businesses; and excellent products and services. As a result, we did not have to resort to radical restructuring to restore the company to health. Yet, we did make many tough decisions. We did what we believed was right and in the best long-term interest of our company. Now that we have put a significant portion of our problems behind us, we enter 2001 a much stronger company.

Since this is my first letter to you, I'd like to tell you about the principles that guide us and then note some of the actions we have taken to revitalize Bank One. You'll find information on Bank One's major businesses elsewhere in this report and in expanded detail in the 10-K.

As we move ahead with Bank One's turnaround, we can't promise you specific outcomes or risk-free results. But here's what we *will* promise you:

1. We will share with you the truth, and offer honest assessments of our businesses and our prospects.
2. We will relentlessly follow our business principles.
3. We will act with integrity and honor.
4. We will always try to do the right thing, not the easy or expedient thing.
5. We will work hard and with fierce resolve to make this a company of which our shareholders, employees, customers and communities can be proud.

Our priorities are to:

BE FIELD AND CLIENT DRIVEN True customer orientation means acting in the customer's best interest, by offering great products and services — not once in a while, but all the time. It also means being highly responsive, courteous and quick to follow through on promises. It requires adopting an outward, not an inward focus, thinking and responding to the competition. It requires always worrying about the competition. We want to infuse that keen awareness into every part of the organization. The field should drive the process, and staff employees in their important support roles need to always remember they are there because of the field; they need to be lean, knowledgeable and extremely responsive.

We have begun to dramatically improve customer service through a variety of actions and sweeping systems enhancements. This renewed customer focus is starting to pay off. As an example, we've put advanced technology, including Internet-enabled PCs, into all of our banking centers, giving our people in the field far better access to information that helps them serve our customers. Our field people also have much more authority and accountability. We also have started a lot of new initiatives because of our new online "suggestion box," where we have received more than 6,000 ideas from employees, who know the most about the company. By most measures, customer problems are down dramatically and service levels are up substantially. We have made substantial progress, but we know we still have a way to go to be the best in class.

SET THE HIGHEST STANDARDS OF PERFORMANCE It's up to each company, each leadership team and each individual to set their own standards of performance. Ours will be the highest. We will not shy away from comparing ourselves to the best companies, knowing that often we'll come up short. Striving to be the best motivates us to seek constant improvement.

Toward that end, we take corporate governance seriously. Our Board has reviewed its own governance and adopted best practices as to how it will conduct itself. This led us to reduce the size of the Board, while adding two outside directors with considerable expertise. A smaller Board helps create more active dialogue and a thorough and open review of all our issues, whether they are strategic, risk or management related.

SET THE HIGHEST STANDARDS OF INTEGRITY In business, as in every other arena, ethical behavior doesn't just happen. It has to be cultivated and repeatedly affirmed throughout the organization. At Bank One, acting with integrity is a paramount expectation. It applies to every aspect of our company, including compliance, employee relations, marketing and sales.

Maintaining the highest standards of integrity involves faithfully meeting our commitments to our customers, to fellow employees, to the Board, to you our shareholders and to all of our other partners. Every commitment we make should, and will, be sacrosanct.

BUILD FOR GOOD AND BAD TIMES A mark of an exceptional company is consistently good performance relative to that of its competitors, regardless of economic conditions and competitive threats. We want Bank One to be that kind of company.

As you know, there's been a considerable slowdown in the economy, and no one can say with assurance where it's headed. While we have great confidence in the American economy, we also prepare for its occasional unpredictable volatility. Our obligation is to build the company so it can thrive in any environment. The best companies capitalize on their strength to grow aggressively in downturns, when their competition is unable to do so.

To help us withstand economic downturns and competitive pressures, we've taken a number of strong steps, which I will continue to highlight.

CREATE A FORTRESS BALANCE SHEET In 2000, we fortified Bank One's balance sheet by:

Scouring the balance sheet, to thoroughly understand our assets and liabilities; to make sure that someone is accountable for them; to use conservative, economically appropriate accounting; and to have strong financial controls.

Strengthening loan loss reserves. For example, we began 2000 with reserves attributable to loan losses of 1.4 percent of loans — by some measures, the weakest in the industry. During the year we added almost $2 billion to reserves, to end 2000 with loan loss reserves to loans of 2.4 percent — among the industry's strongest. While this reserve addition was needed to address the deteriorating credit environment, we've strengthened our relative position.

Achieving strong capital ratios. We also ended the year with a tangible-equity to managed-assets ratio of 5.5 percent and Tier 1 capital ratio of 7.3 percent — both considered to be strong capital ratios. We expect these ratios to improve even more in 2001.

Maintaining strong credit ratings. We are grateful that we were able to take all of the actions we did and avoid a downgrade. We are committed to maintaining strong credit ratings; in fact, we'd like to improve them over time.

Generating capital and flexibility. Cutting the dividend, as tough as that decision was, has greatly enhanced our capital retention. It has allowed us to reclaim our ability to actively decide what to do with our capital. By the end of this year, we anticipate that we'll be generating substantial excess capital. And we will try to deploy it wisely and in the shareholders' best interest, whether by retaining it, investing in our businesses, acquiring other businesses or buying back our stock.

ACHIEVE AND MAINTAIN GREAT FINANCIAL DISCIPLINE Financial discipline is the bedrock of a healthy and growing company. We need to understand our business in excruciating detail. This means:

Great reporting and management information systems, resulting in financial and operating reports that are comprehensive, comprehensible and transparent; and management reports that are frequent, precise and detailed. We have also tried to enhance our disclosures to the business and financial community.

Meaningful profit and loss statements. We've created more than 2,000 profit and loss statements, including one for each banking center. These will help us make decisions based on fact, allocate capital appropriately and properly compensate based on performance. There will be one set of numbers inside and outside the company, so there can be no disputes about how any unit has performed.

Together, these actions should lead to high-quality earnings that:

- are increasing, recurring and predictable in nature,
- yield high returns on capital,
- produce good margins, and
- have reasonable risk relative to the capital deployed.

These financial disciplines will give us the tools, information and knowledge that we need to be a great company.

Reducing credit risk. It's appropriate here to comment on our corporate credit exposure, particularly in light of a deteriorating credit environment. Based on our analysis, our company has taken too much overall credit risk, has assumed too many big individual risks, and has experienced low returns relative to the capital deployed. Credit has often been a loss leader for commercial banks — a situation that is acceptable if risks are appropriate and if other revenue sources make up for the loss leader. Therefore, we intend to reduce our individual and gross aggregate credit risk, while trying to win more business from our customers to justify the risks that we do take. We expect this to reduce commercial exposures on and off the balance sheet by $10 billion to $20 billion and free up capital that has been earning low returns.

It's important to understand that our goal isn't to reduce the size of our business, but to achieve better returns and create a healthier business. While some of these changes are institutionally and culturally difficult, we will exit unprofitable relationships relentlessly, albeit carefully and respectfully. This action will enable us to develop stronger, deeper and more meaningful relationships with our customers over time.

We also expect and are prepared for several quarters of commercial credit costs at a rate at least double that of the approximately 40 basis points experienced in the last several years. To put these numbers into historical perspective, the 40 basis points is a cyclical low. Although the level expected for the next several quarters would be considered higher than normal, in a deep recession, commercial costs can run as high as 175 basis points. While none of us would like the impact on our earnings of a recession, because of all the steps we have taken we are now prepared to weather even that kind of environment.

BUILD A SOLID INFRASTRUCTURE Great companies — profitable companies — consistently build their infrastructures. They strive for the best systems and back-office operations. They are highly efficient, they cut waste constantly and they invest continuously.

Bank One must be a low-cost producer by eliminating unnecessary costs wherever we find them. In 2001, we will have cut $500 million in wasteful spending from our operations, after investing hundreds of millions of dollars in our businesses. We have reduced our total overhead, net of investments, by $500 million. This waste cutting has not hurt our company's performance or customer service. In fact, it has enhanced our operations by eliminating unnecessary, redundant and bureaucratic behavior.

We have reduced headcount by 8 percent, from 87,700 to 80,800, mainly through attrition and selective staff reductions. Our remaining employees are more productive, and potentially happier and better rewarded. Yet our cost structure, though greatly improved, is still too high. We must continue to reduce it.

We're creating effective systems and efficient operations. As examples, we're aggressively consolidating, streamlining, standardizing and centralizing our back-office activities. In addition, we are collapsing our 20 major bank charters into three and integrating our computer systems. We have four major conversions to do, and we hope to complete two by the end of this year. While these actions will cost us roughly $150 million a year for the next several years, they are critical. Converting to uniform operating systems — and doing it quickly — will help us run our businesses more efficiently, provide better customer service and put us in a strong position to aggressively grow internally or by acquisition. Ultimately, it should save Bank One hundreds of millions of dollars a year.

Centralizing operations does not mean consolidating authority. We won't be doing the latter. Instead, we'll be providing the field with better products and services at a cheaper cost. These changes will enhance our ability to push more authority and decision making to the field.

We are making substantial technological and other investments for the future. No company has ever had much of a future by cutting costs alone. Success is measured by top- and bottom-line growth. So we're investing substantially in our businesses to increase our market share, revenues and profits. Our retail service efforts, banking center platform, e-commerce products and expanding capital markets activities are just some of the areas receiving added support. Also, the importance of technology (here we include the Internet) cannot be overemphasized. We believe it will be critical in the financial services business, and, therefore, we need to embrace it and integrate it into everything we do. We need to continually strive to give our customers more, better, faster and cheaper. Technology, in all of its forms, allows companies to do this as they gain the benefits of economies of scale.

EXECUTE SUPERBLY As important as strategy is, we need to improve our execution, because without it, we will surely fail. Execution involves every employee, every phone call and every contact we have with customers. It is the devil in the details. We've got to execute or we will fail. And we *will* execute, by:

Acting with greater urgency and speed. One thing that has kept us from moving fast is bureaucracy. We still have too much of it at Bank One, and we will eradicate it. Bureaucracy, silos and politics are the bane of large corporations; they must be combated vigorously and continually. Fast and lean is the antidote to creeping bureaucracy. We'll continue to de-layer the organization and empower employees at all levels.

Becoming much more disciplined, which means meeting *all* of our commitments. Without discipline, mediocrity rules.

Giving ample resources and authority to the field, because that's where we interact with our customers. We need all of our banking center managers and business heads to feel and act like they are the president of their own company.

Remembering that our businesses are highly interrelated and field based. Each unit's success depends on the success and contributions of the others. Our strength resides in our regions; therefore, regional teams of senior executives from each business are driving our effort to improve customer service and revenues at the local level.

Communicating effectively and often. Real teamwork demands nothing less. In addition to urging employees to share best practices across the company, we need to be brutally honest with ourselves and foster open debate about what we do well, what we don't do well and what we can do better. Problems don't age well; denying or hiding them guarantees that they will get worse.

Treating fellow employees as customers. At Bank One, everyone counts, and we've got to remember that we support one another. Above all, it means doing what's right for Bank One, even if we have to make unpopular decisions and forgo near-term rewards. We all need to earn each other's respect every day.

CREATE A GREAT TEAM AND WINNING CULTURE Eventually, it all comes down to our people. Building a great team and developing deep "bench strength" are requisites for any company's long-term performance. One of our biggest priorities of 2000 was to assemble an exceptionally capable group of leaders by adding talented executives from outside Bank One and by promoting the deserving from within. We believe that we have done that. Of the top 12 executives who now make up the senior management team, six are new to the company and six come from within the company — three recently promoted to their jobs. This process of seeking out the best individuals for the job is happening throughout the organization, and I believe we are well on our way to having a world-class management team.

Creating a meritocracy. Managers and employees perform best when they're motivated, challenged and rewarded for doing the right thing. And companies perform best when shareholder, management and employee interests are aligned. We're seeking that alignment in a number of ways. For one thing, we are trying to establish a true meritocracy. Employees

will be rewarded for their efforts and contributions. We want employees to contribute in any way they can. Some employees' contributions go far beyond the P&L, and hopefully we will have the insight to reward people for the "soft" things they do to help the company, like recruiting, mentoring or simply having the courage and character to stand up for what is right.

You have to get incentives right. We want employees to think and act as owners by offering them an appropriate stake in Bank One's financial performance. We're modernizing compensation to make it fairer, simpler and more performance based. (With our new P&Ls, we are able to do that.) And in the spirit of these principles, we've eliminated most entitlements, special perks and special deals. Compensation will follow performance, not titles. Done right, our new incentive plans will create the proper balance of individual and collective accountability. We want our people to make more money, but only if the company performs. Ultimately, we would love to be the leanest, best performing and highest paying company.

It starts at the top. Your senior management received no bonuses for the year just ended. All of the Planning Group members, including those with guarantees, decided it was appropriate to give them up. This company cannot and will not pay the senior people more when the company does worse. Now we will be the first to sacrifice, as is appropriate. The higher the manager, the more his or her compensation will be tied to the company's performance — no excuses. Leadership is an honor, a privilege and a responsibility to do the right thing and set the right example.

It should include everyone. We made changes to the employee 401(k) and other benefit plans — not just to save money but, more important, to encourage greater stock ownership and long-term commitment to the company. The company match for 401(k) participants is now in Bank One stock. While we have reduced the company match (and eliminated it totally for highly paid individuals), we have added an outright grant of $300 (which we hope to increase as our performance improves) for lower paid individuals who probably did not have enough money to invest in the 401(k) and get the match in the first place. We believe this will add 15,000 of our employees to our shareholder ranks, bringing the total number of employee shareholders to approximately 60,000.

The 2001 stock option awards were spurred by the same principle. They were granted to more people and are based more on performance than on position. We also lengthened the vesting period of all new options from two years to five years. Simply put, we want the most benefits to go to our highest performers who stay to make Bank One a great company.

IN CLOSING Bank One, like all other companies, was built on the shoulders of those who came before us, and we are grateful to all of our retired employees and directors for their service to this company. In particular, we would like to express special appreciation to Verne Istock, who retired in September as President after 35 years. We also want to welcome our newest Board members Heidi Miller and David Novak to our company. We believe that we have started on the path to make Bank One a company that our customers, shareowners, employees (current and former) and communities can be proud of.

I especially want to thank our 80,000 employees. They've made Herculean efforts to turn this company around and to build the platform for enduring success. I'm delighted and honored to work with them, and I am confident that working together we can build Bank One into one of the best financial services companies in America.

Yours truly,



James Dimon
Chairman and Chief Executive Officer

February 20, 2001



CORPORATE BANKING provides services to corporations, financial institutions, governments and nonprofit entities with annual revenues exceeding $250 million. Services include credit products, corporate finance, treasury, international and capital markets products.

Profile

#3 commercial bank in the U.S., with other offices in Australia, Canada, Germany, Hong Kong, Japan, Mexico, People's Republic of China, Singapore, South Korea, Taiwan, United Kingdom

#1 commercial bank in the Midwest

Leading provider of cash and treasury management services

#4 League table standing (for loan syndications)

Goals

Increase ROE and net income

Improve market penetration of non-credit products

Build only where we can compete

Focus on high-value customer relationships

Exit low-value relationships

Customers
1,500+ (Fortune 1,000 and mid corporate)

Employees
4,589

Revenue
$2.2 billion

Loans (average)
$50.1 billion

Deposits (average)
$21.4 billion

National commercial real estate loans (at 12/31/00)
$9.5 billion

Loan syndications
Lead arranger deals:
$58.1 billion
(6% market share)

MIDDLE MARKET BANKING offers traditional credit products, cash management, capital markets, international and investment management services to companies and nonprofit organizations with annual revenues between $5 million and $250 million.

Profile

Strong business concentration in the Midwest and South

Market share exceeds 20% in 10 of 12 footprint states

Lead bank for 70% of customers

Nearly a third of customers use Bank One exclusively

#1 provider of cash management services in the 12-state footprint

Goals

Run as a separate business line

Improve returns

Achieve disciplined loan growth

Leverage Retail franchise and pursue Private Client opportunities

Gain greater primary share

Improve customer satisfaction

Customers **18,000+** Employees **12,016**	Revenue **$1.7 billion** Treasury Management Services revenue **$1.3 billion*** **included in Corporate and Middle Market revenue*	Loans (average) **$32.1 billion** Deposits (average) **$18.2 billion**

INVESTMENT MANAGEMENT provides investment advisory, insurance, retirement and custody, corporate trust, credit products and investment services to individuals and institutions. One Group® mutual funds and Private Client Services are managed in this business.

Profile

One Group is the third largest bank-owned mutual fund family in the U.S. and one of the country's 25 largest fund complexes.

Among the top three bank-owned insurance companies; Third largest corporate or municipal trustee; Second largest asset-backed and mortgage-backed trustee; Among the top 15 banks in managed and overall trust assets

Morningstar Ratings
One Group funds ranked 4 and 5: **62%**
One Group funds ranked 3 and higher: **97%**

Goals

Build on the strong franchise and solid asset management foundation

Implement Private Client Services for high-net-worth clientele

Expand One Group through third-party distribution

Customers/clients
One Group **607,000**
Retail Investment **800,000**
Private Client Services **215,000**
Institutional **4,500**
Corporate Trust **6,500**
Credit Life Insurance **4.3 million**

Employees **6,562**

Private client advisors **585**

Licensed bankers **2,700**

Mutual fund & annuities sales (through retail brokerage)
$4.2 billion

Assets under management (at 12/31/00)
$131.2 billion:

Mutual funds **$70.4 billion**

Institutional & retail accounts **$60.8 billion**

RETAIL BANKING offers a full range of deposit, investment, loan and insurance products to consumers and small businesses in metropolitan and community markets. Its network includes more than 1,800 banking centers, 6,000 ATMs, online banking and other channels.

Profile

Operations in 14 states:

Arizona, Colorado, Florida, Illinois, Indiana, Kentucky, Louisiana, Michigan, Ohio, Oklahoma, Texas, Utah, West Virginia, Wisconsin

#1 or #2 share in more than 60% of markets

#2 ATM distribution network

#3 bank provider of home equity loans

#3 lender to small businesses

Goals

Integrate business and consumer banking at the local level

Improve customer service

Capitalize on strong sales culture

Empower banking center managers

Improve efficiency and profitability

Increase returns from auto business

Customers
Retail **8 million**
Business **425,000**
Online **918,000**

Employees
35,759

Revenue
$5.5 billion

ONE Cards (debit cards)
4.5 million

Investment sales volume
$4.2 billion

Loans (average)
$74.6 billion

Assets (average)
$79.0 billion

Deposits (average)
$88.4 billion

FIRST USA, based in Wilmington, Delaware, is a leader in the credit card industry, marketing credit cards for consumers and businesses under the First USA and Bank One brand names. It also markets and issues cards on behalf of some 1,900 marketing partners.

Profile

Partners include U.S. corporations, universities, sports franchises, affinity organizations and financial institutions.

#3 credit card issuer (based on managed loans outstanding)

Largest issuer of VISA® credit cards

One of the first in the U.S. to offer "smart" chip card technology to its cardmembers

Goals

Build on significant strides to improve customer service

Improve marketing efficiency by reducing acquisition costs

Develop new products and services

Continue to eliminate waste and aggressively manage expenses

Improve risk-adjusted margin

Number of partners/affiliates
1,870

Employees
10,901

Managed credit card loans (average)
$66.2 billion

Assets (average)
$70.0 billion

Charge volume
$142.5 billion

Cards issued
51.7 million

Accounts opened in 2000
3.3 million

CORPORATE INVESTMENTS manages Bank One's proprietary investment portfolio, with the exception of traditional fixed-income bond investments. Its activities include growth, tax-oriented and value investing, as well as leveraged and equipment leasing.

Profile

Tax-oriented strategies produce stable, steady earnings

Direct-investment strategies produce more attractive, more volatile returns

Key Investments

Equipment and facilities leasing; Affordable housing; Specialized energy; Venture funds; Private equity; Asset-backed and commercial mortgage-backed securities; High-yield bonds; Hedge funds

Goals

Continue stable earnings run rate

Explore and capitalize on great investment opportunities

Use our businesses as potential products for our customers

Hire new business head

Employees **200**	Assets (average) **$8.5 billion:**	Return on assets (average) **2.8 percent**
Revenue **$320 million**	*Tax-oriented investments* **$4.3 billion**	Return on equity (average) **20 percent**
Net income **$239 million**	*Direct investments* **$4.2 billion**	

December 31 (Dollars in millions)	**2000**	1999
ASSETS		
Cash and due from banks	$ 17,291	$ 16,076
Interest-bearing due from banks	5,210	6,645
Federal funds sold and securities under resale agreements	4,737	9,782
Trading assets	2,788	7,952
Derivative product assets	2,322	3,372
Investment securities	50,561	47,912
Loans:		
Commercial	100,460	96,352
Consumer	69,047	63,488
Credit card	4,744	4,037
Allowance for credit losses	(4,110)	(2,285)
Loans, net	170,141	161,592
Premises and equipment, net	2,894	3,317
Customers' acceptance liability	402	366
Other assets	12,954	12,411
Total assets	$ 269,300	$ 269,425
LIABILITIES		
Deposits		
Demand	$ 30,738	$ 31,194
Savings	63,414	64,435
Time	47,958	36,877
Foreign offices	24,967	29,772
Total deposits	167,077	162,278
Federal funds purchased and securities under repurchase agreements	12,120	18,720
Other short-term borrowings	18,003	21,211
Long-term debt	38,428	33,857
Guaranteed preferred beneficial interest in the Corporation's junior subordinated debt	2,483	1,578
Acceptances outstanding	402	366
Derivative product liabilities	2,212	3,332
Other liabilities	9,940	7,993
Total liabilities	250,665	249,335
STOCKHOLDERS' EQUITY		
Preferred stock	190	190
Common stock – $0.01 par value	12	12

Number of Common Shares (In thousands)	**2000**	1999
Authorized	2,500,000	2,500,000
Issued	1,181,386	1,182,121
Outstanding	1,159,829	1,147,343

Surplus	10,487	10,799
Retained earnings	9,060	11,037
Accumulated other adjustments to stockholders' equity	(5)	(263)
Deferred compensation	(121)	(118)
Treasury stock at cost (shares in thousands)	(988)	(1,567)
Total stockholders' equity	18,635	20,090
Total liabilities and stockholders' equity	$ 269,300	$ 269,425

For the Year Ended December 31 (In millions, except per share amounts)	**2000**	1999	1998
INTEREST INCOME			
Loans, including fees	$ 15,214	$ 13,051	$ 14,106
Bank balances	503	233	331
Federal funds sold and securities under resale agreements	577	445	423
Trading assets	440	330	367
Investment securities	3,344	3,235	2,297
Total	20,078	17,294	17,524
INTEREST EXPENSE			
Deposits	6,137	4,651	4,943
Federal funds purchased and securities under repurchase agreements	1,142	935	1,090
Other short-term borrowings	1,216	942	737
Long-term debt	2,747	1,745	1,407
Total	11,242	8,273	8,177
NET INTEREST INCOME	8,836	9,021	9,347
Provision for credit losses	3,398	1,249	1,408
NET INTEREST INCOME AFTER PROVISION FOR CREDIT LOSSES	5,438	7,772	7,939
NONINTEREST INCOME			
Non-deposit service charges	1,537	1,502	1,390
Credit card revenue	2,299	3,413	3,096
Service charges on deposits	1,310	1,283	1,255
Fiduciary and investment management fees	783	793	807
Investment securities gains (losses)	(235)	509	405
Trading	134	147	141
Other income (loss)	(738)	1,045	977
Total	5,090	8,692	8,071
NONINTEREST EXPENSE			
Salaries and employee benefits	4,388	4,271	4,477
Occupancy and equipment expense	1,010	910	845
Outside service fees and processing	1,532	1,743	1,349
Marketing and development	874	1,188	1,024
Communication and transportation	841	829	781
Depreciation	454	460	512
Other intangible amortization	410	168	91
Goodwill amortization	70	69	77
Other expense	1,868	1,298	1,327
Totalnoninterestexpense beforemerger-related andrestructuringcharges	11,447	10,936	10,483
Merger-related and restructuring charges	161	554	1,062
Total	11,608	11,490	11,545
INCOME (LOSS) BEFORE INCOME TAXES	(1,080)	4,974	4,465
Applicable income tax (benefit)	(569)	1,495	1,357
NET INCOME (LOSS)	$ (511)	$ 3,479	$ 3,108
NET INCOME (LOSS) ATTRIBUTABLE TO COMMON STOCKHOLDERS' EQUITY	$ (523)	$ 3,467	$ 3,094
EARNINGS (LOSS) PER SHARE:			
Basic	$ (0.45)	$ 2.97	$ 2.65
Diluted	$ (0.45)	$ 2.95	$ 2.61

Timothy P. Moen
Human Resources

Robert A. O'Neill, Jr.
Chief Auditor

Sarah L. McClelland
Chief Risk Management Officer

James Dimon
Chairman and Chief Executive Officer

David P. Bolger
President and CEO, Middle Market Banking

Austin A. Adams
Technology and Operations



Philip G. Heasley
President and CEO, First USA

R. Michael Welborn
President and CEO, Retail Banking

Charles W. Scharf
Chief Financial Officer

Christine A. Edwards
Chief Legal Officer and Secretary

James S. Boshart, III
President and CEO, Corporate Banking

David J. Kundert
President and CEO, Investment Management



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Chicago, IL 60670
312-732-4000

Company Information
Information on Bank One products and services is available on the Internet at the following websites:

www.bankone.com
Bank One's financial supersite

www.onegroup.com
Bank One's proprietary family of mutual funds

www.oneinvest.com
Bank One's online investment services and securities trading

www.firstusa.com
Bank One's credit card company

www.WingspanBank.com
Bank One's Internet-based bank

Privacy Policy
Bank One's Consumer Information Values and Privacy Policy describes how we protect customers' financial privacy. For more information, visit one of Bank One's three major websites:

www.bankone.com
www.firstusa.com
www.WingspanBank.com

Community Report
You're invited to view *ONE Community*, which highlights Bank One's community service and philanthropic programs, at *www.bankone.com*.

General Inquiries
News media representatives and others seeking general information should contact Corporate Media Relations at 312-732-7820.

Financial Information
Bank One annual reports, earnings and news releases, 10-K and 10-Q reports, and other financial information can be obtained by visiting the "About Bank One" section of our website at *www.bankone.com*.

You also can obtain the most recent financial information on Bank One by phoning our toll-free Corporate News and Shareholder Information Service at 877-ONE-FACT (877-663-3228).

Stockholder Relations and Information
Stockholders with questions regarding their stockholder account, dividends, stock transfer, lost certificates or changes of address should contact the transfer agent at the address and applicable phone number below.

First Chicago Trust Company
of New York
c/o EquiServe
P.O. Box 2500
Jersey City, NJ 07303-2500

Telephone:
Inside the United States: 888-764-5592
Outside the United States: 201-324-0498
TDD/TTY (for the hearing impaired):
201-222-4955

Internet: *www.equiserve.com*

Bank One offers stockholders direct deposit of dividends, a convenient and safe method for having dividends deposited without charge into their account at most U.S. financial institutions. Please contact EquiServe for further information.

The Dividend Reinvestment and Stock Purchase Plan provides a simple way to invest in Bank One common stock without paying brokerage commissions. For a prospectus and enrollment card, please contact EquiServe.

Investor Relations
Analysts, portfolio managers and other investors seeking additional financial information are welcome to contact:

Investor Relations
Bank One Corporation
1 Bank One Plaza
Mail Code IL1-0738
Chicago, IL 60670-0738
312-732-4812

Dividend Information
Dividends on the common stock, if declared by the Board of Directors, customarily are paid on January 1, April 1, July 1 and October 1.

Stock Listing
The common stock is listed on the New York and Chicago stock exchanges and trades under the ticker symbol ONE. Two series of preferred stock are listed on the New York Stock Exchange.

Annual Meeting of Stockholders
The Annual Meeting of Stockholders will be held on Tuesday, May 15, 2001, at 9:30 a.m. (Chicago Time) in the Bank One Auditorium, located in the Plaza area of the corporate headquarters at 1 Bank One Plaza in Chicago.

Independent Public Accountants
KPMG LLP
303 East Wacker Drive
Chicago, Illinois 60601

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Headquartered in Chicago, Bank One Corporation is the country's fifth largest bank holding company, with assets of more than $265 billion. Bank One offers a full range of financial services to large corporate and middle-market commercial customers and to retail consumers. It is the largest VISA® credit card issuer, the third largest bank lender to small businesses and one of the top 25 managers of mutual funds. A leader in the retail market, Bank One operates more than 1,800 banking centers as well as a nationwide network of ATMs. It also is a major commercial bank in the United States and in select international markets.

BANK ONE CORPORATION 1 Bank One Plaza Chicago, Illinois 60670

For the Year Ended December 31, 2000

BANK ONE CORPORATION

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Selected Financial Data

(In millions, except ratios and per share data)	2000	1999	1998	1997	1996
Income Statement Data:					
Total revenue, net of interest expense	**$ 13,926**	$ 17,713	$ 17,418	$ 16,155	$ 15,239
Net interest income—tax-equivalent basis	**8,974**	9,142	9,469	9,619	9,417
Provision for credit losses	**3,398**	1,249	1,408	1,988	1,716
Noninterest income	**5,090**	8,692	8,071	6,694	5,994
Noninterest expense	**11,608**	11,490	11,545	9,740	8,681
Net income (loss)	**(511)**	3,479	3,108	2,960	3,231
Per Common Share Data:					
Net income (loss):					
Basic	**$ (0.45)**	$ 2.97	$ 2.65	$ 2.48	$ 2.64
Diluted	**(0.45)**	2.95	2.61	2.43	2.57
Cash dividends declared	**1.26**	1.68	1.52	1.38	1.24
Book value	**15.90**	17.34	17.31	16.03	16.64
Balance Sheet:					
Loans:					
Managed	**$236,492**	$229,196	$216,391	$196,993	$182,799
Reported	**174,251**	163,877	155,398	159,579	153,496
Deposits	**167,077**	162,278	161,542	153,726	145,206
Long-term debt (1)	**40,911**	35,435	22,298	21,546	15,363
Total assets:					
Managed	**309,096**	315,064	305,781	278,439	234,710
Reported	**269,300**	269,425	261,496	239,372	225,822
Common stockholders' equity	**18,445**	19,900	20,370	18,724	18,856
Total stockholders' equity	**18,635**	20,090	20,560	19,050	19,507
Credit Quality Ratios:					
Net charge-offs to average loans	**0.81%**	0.77%	0.97%	1.21%	1.04%
Allowance for credit losses to period end loans	**2.36**	1.39	1.46	1.77	1.75
Nonperforming assets to related assets	**1.48**	1.02	0.83	0.68	0.64
Financial Performance Ratios:					
Return (loss) on average assets	**(0.19)%**	1.36%	1.30%	1.29%	1.43%
Return (loss) on average common equity	**(2.7)**	17.1	15.9	15.8	17.5
Net interest margin:					
Managed	**4.76**	5.37	5.56	5.50	5.28
Reported	**3.72**	4.09	4.52	4.75	4.70
Efficiency ratio:					
Managed	**66.7**	54.5	57.6	53.2	51.4
Reported	**82.5**	64.4	65.8	59.7	56.3
Capital Ratios:					
Risk-based capital:					
Tier 1	**7.3**	7.7	7.9	8.2	9.5
Total	**10.8**	10.7	11.3	12.3	13.6
Tangible common equity/tangible managed assets	**5.5**	5.7	5.8	6.2	6.9
Common Stock Data:					
Average shares outstanding:					
Basic	**1,154**	1,168	1,170	1,176	1,199
Diluted	**1,154**	1,178	1,189	1,213	1,254
Stock price, year-end	**$ 36.63**	$ 32.00	$ 51.06	$ 49.37	$ 39.09
Stock dividends	**—**	—	10%	—	10%
Employees (2)	**80,778**	87,735	92,800	95,900	99,400

(1) Includes trust preferred capital securities.

(2) Employee headcount for 2000 and 1999 is based on full-time and part-time employment with benefits. Headcount for years prior to 1999 is an estimate based on full-time and part-time employment with benefits.

Description Of Business

BANK ONE CORPORATION ("Bank One" or the "Corporation") is a multibank holding company registered under the Bank Holding Company Act of 1956 (the "BHC Act"), and is headquartered in Chicago, Illinois. Bank One was incorporated in Delaware on April 9, 1998, to effect the merger (the "Merger") of Banc One Corporation ("Banc One") and First Chicago NBD Corporation ("FCN"). The Merger became effective on October 2, 1998.

Bank One provides domestic retail banking, finance and credit card services; worldwide commercial banking services; and trust and investment management services. Bank One operates banking offices in Arizona, Colorado, Florida, Illinois, Indiana, Kentucky, Louisiana, Michigan, Ohio, Oklahoma, Texas, Utah, West Virginia and Wisconsin and in selected international markets. Bank One also engages in other businesses related to banking and finance, including credit card and merchant processing, consumer and education finance, mortgage lending and servicing, insurance, venture capital, investment and merchant banking, trust, brokerage, investment management, leasing, community development and data processing. These activities are conducted through bank subsidiaries (collectively, the "Banks") and nonbank subsidiaries.

Bank One is a leader in retail and small business banking, operating more than 1,800 banking centers and a nationwide network of ATMs. The Corporation is the #3 commercial bank in the United States. Bank One has leadership positions in syndicated lending, asset-backed financing and middle market banking. The Corporation is the third largest credit card company in the United States and is the largest VISA® credit card issuer in the world. Bank One is one of the leading bank-owned investment management companies with in excess of $130 billion in assets under management.

Basis of Presentation

Management's discussion and analysis may contain forward-looking statements provided to assist in the understanding of anticipated future financial performance. However, such performance involves risks and uncertainties that may cause actual results to differ materially from those expressed in forward-looking statements. See pages 101–102 for a full discussion of these factors.

For funding and risk management purposes, the Corporation periodically securitizes loans, primarily in support of credit card activities. The accounting for securitizations complicates the understanding of underlying trends in net interest income, net interest margin and noninterest income, as well as the underlying growth rates of reported loans. For clarification, these trends are also reviewed on a "managed" basis, which adds data on securitized credit card loans to reported data on loans. Results on a managed basis, where presented, should be read in conjunction with reported results. See page 43 for reconciliation of reported to managed results.

Business Segments

The Corporation is managed on a line of business basis. The business segments' financial results presented reflect the current organization of the Corporation. The following table summarizes certain financial information by line of business for the periods indicated:

	Net Income (Loss) (In millions)		Average Managed Assets (In billions)	
	2000	**1999**	**2000**	**1999**
Retail	**$ 389**	$1,041	**$ 79.0**	$ 72.5
Commercial Banking	**(226)**	788	**109.5**	106.0
First USA	**(1)**	1,135	**70.0**	74.9
Investment Management	**322**	317	**7.6**	7.1
Corporate Investments	**239**	371	**8.5**	7.8
Corporate/Unallocated	**(1,234)**	424	**40.4**	33.9
Total business segment results	**(511)**	4,076	**315.0**	302.2
Merger-related items and other significant items	**—**	(597)	**—**	—
Total Corporation	**$ (511)**	$3,479	**$315.0**	$302.2

Performance in 2000, and to a lesser degree 1999, was impacted by a number of significant items (see Tables 1 and 2 on page 15). In 2000, these items consisted primarily of asset valuation writedowns resulting in a net negative impact on earnings of $2.887 billion pretax ($1.879 billion after tax). These items primarily reflected the result of an intensive review of businesses, systems, operations and the balance sheet conducted throughout the year and exclude any provision for credit loss items. In 1999, such items consisted primarily of merger-related charges and writedowns and gains from asset sales resulting in a net negative impact on earnings of $880 million pretax ($597 million after tax).

Description of Methodology

The results of the business segments are intended to reflect each as if it were a stand-alone business. The management reporting process that derives these results allocates income and expenses using market-based methodologies. Funds transfer pricing is used to allocate interest income and interest expense and reflect an appropriate level of interest rate risk in each line of business. The Corporation's remaining interest rate risk position is included in the Corporate/Unallocated segment.

Beginning in the second quarter of 2000, the provision for credit losses was fully allocated to the appropriate lines of business and reflects Management's estimate of inherent losses. Prior to the second quarter, the provision in the lines of business was determined using standard credit cost methodologies that measured expected losses over a certain period of time. Any difference between the aggregate provision of the businesses and the Corporation's total was reflected in Corporate/Unallocated.

Historically, the costs of certain support units were allocated to the lines of business based on factors other than usage, such as headcount and total assets. The methodology was changed in the third quarter of 2000 to better reflect the actual cost and usage of services provided and was consistently applied to all lines of business. Costs allocated to First USA decreased, while unallocated costs that are included in Corporate/Unallocated increased.

The lines of business are assigned capital that reflects the underlying risk in that business. See the ''Capital Management'' section on page 43 for a discussion of the economic capital framework.

The 1999 merger-related charges and the effect of certain identified transactions in prior periods were not attributed to any business segment since they were not considered a part of core business activities.

BUSINESS SEGMENT RESULTS AND OTHER DATA

Retail

Retail includes consumer and small business banking, auto and consumer lending, and interactive banking and financial management through bankone.com and WingspanBank.com. Retail provides a broad range of financial products and services, including deposits, investments, loans, and insurance, to more than 8 million consumers and 425,000 small businesses, over 900,000 of which are serviced on-line.

Retail operates banking centers in 14 states where it has #1 or #2 market share in more than 60% of its markets. Retail's distribution channels include approximately 1,800 banking centers, 6,000 ATMs, online banking, and 24-hour telephone banking.. The ONE Card, issued by Retail is one of the country's leading debit cards for individuals. Bank One is the #3 lender to small businesses.

Bank One is a leader in originating consumer credit nationwide through direct and indirect channels, including its banking centers, relationships with brokers, the Internet and telephone. The Corporation offers real

estate secured, education, tax refund, and consumer installment loans, and auto loans and leases to individuals. The Corporation is also the #3 bank provider of home equity loans.

(Dollars in millions)	2000	1999	% Change
Net interest income—tax-equivalent basis	**$4,895**	$4,379	12%
Provision for credit losses	**870**	415	N/M
Noninterest income	**618**	1,541	(60)
Noninterest expense	**4,035**	3,933	3
Net income	**389**	1,041	(63)
Return on equity	**7%**	23%	
Efficiency ratio	**73**	66	
(Dollars in billions)			
Loans—average	**$ 74.6**	$ 66.1	13
Assets—average	**79.0**	72.5	9
Deposits—average	**88.4**	89.1	(1)
Common equity—average	**5.8**	4.6	26
Supplemental Information:			
Headcount—full-time	**35,759**	N/A	—
Loans: **(dollars in billions)**			
Home equity loans—average	**$ 27.7**	$ 20.1	38
Indirect auto loans/leases—average	**24.2**	23.4	3
Commercial loans—average	**11.7**	11.0	6
Other personal loans—average	**11.0**	11.6	(5)
Distribution:			
Banking centers	**1,810**	1,854	(2)
ATMs	**6,055**	6,824	(11)
On-line customers **(in thousands)**	**918**	488	88
Investments:			
Sales volume **(in billions)**	**$ 4.2**	$ 4.1	2

N/M—Not meaningful.

N/A—Not available due to changes in segment composition, see Note 5 on page 59.

Retail reported net income of $389 million in 2000, down from $1.041 billion in 1999. This reduction reflected a combination of factors, most notably a significant increase in provision for credit losses and the negative impact of significant items in 2000 (see Tables 1 and 2 on page 15), which were partially offset by an increase in net interest income. Excluding the significant items, Retail's net income would have been $870 million for 2000.

Net interest income increased $516 million, or 12%, from 1999, reflecting 13% growth in average loans, wider deposit spreads and improved pricing on indirect auto loans, partially offset by a shift in deposit mix toward higher rate certificates of deposits. Loan growth was driven by a 38% increase in average home equity loans, partially offset by a decline in other personal loans.

Provision for credit losses increased $455 million in 2000. This principally reflected the significant growth in home equity loans, higher net charge-offs and increases in home equity nonperforming loans.

Noninterest income declined $923 million, or 60%, from 1999. The most significant factor contributing to this decrease was losses associated with auto leases. Results for 2000 included a $532 million increase in the auto lease residual reserve plus $225 million of losses on sales of autos. An additional $113 million was related to

writedowns for planned loan sales and $25 million of writedowns for interest-only strips. At December 31, 2000, Management decided to discontinue its plan to sell these loans. The 2000 results included $83 million less in miscellaneous asset sale gains than in 1999.

Noninterest expense increased $102 million, or 3%, from the prior year reflecting $85 million of significant items, principally $54 million of severance and other writedowns related to business restructuring, and $31 million of operational and other. A $54 million increase in expenses was associated with Wingspan's full year of operation. Excluding these items, noninterest expense was down slightly, reflecting the positive impacts from waste reduction initiatives, reduced incentive compensation and the sale of the consumer finance business.

Commercial Banking

Commercial Banking offers a broad array of products, including cash management, capital markets and lending, to Corporate Banking and Middle Market Banking customers.

Corporate Banking serves more than 1,500 large corporations, financial institutions, government and not-for-profit entities with revenues greater than $250 million. It is the #1 commercial bank in the Midwest and the #3 commercial bank in the United States. In addition to lending, Corporate Banking offers a broad range of financial products and develops, markets, and delivers cash management, capital markets, international treasury and trade, e-Business and other noncredit products and services. Bank One's Capital Markets business is engaged in the origination, trading, and distribution of asset-backed securities, investment grade and high yield securities, derivatives, tax-exempt securities, and government bonds, for which the broker/dealer is a primary dealer. Capital Markets is also actively engaged in loan syndications, market research, advisory services, and private placements.

Middle Market Banking serves customers with annual revenues in excess of $5 million up to $250 million. With more than 18,000 customers, Bank One's market share exceeds 20% in 10 of the 12 states in which it operates. These customers use a wide variety of services with nearly one third using Bank One exclusively. Since privately held companies comprise the vast majority of the Middle Market customer base, providing credit is fundamental to the success of this business. The loan portfolio is well diversified across a broad range of industries and geographic locations. In addition to credit, this customer segment actively uses Bank One's treasury management, international, capital markets, and investment management products and services. Bank One's Middle Market Banking business is the #1 provider of cash management services in the 12 state footprint. Middle Market Banking benefits from both the retail banking infrastructure and investment management capabilities of the Corporation.

(Dollars in millions)	2000	1999	% Change
Net interest income—tax-equivalent basis	**$2,717**	$2,538	7%
Provision for credit losses	**2,213**	435	N/M
Noninterest income	**1,397**	1,281	9
Noninterest expense	**2,257**	2,195	3
Net income (loss)	**(226)**	788	N/M
Return (loss) on equity	**(3)%**	14%	
Efficiency ratio	**55**	57	
(Dollars in billions)			
Loans—average	**$ 82.2**	$ 74.4	10
Assets—average	**109.5**	106.0	3
Deposits—average	**39.6**	37.7	5
Common equity—average	**6.6**	5.7	16
Supplemental Information:			
Headcount—full-time	**16,605**	N/A	—
Total Commercial Banking Credit Quality:			
Charge-offs—%	**0.68%**	0.39%	
Nonperforming loans **(in millions)**	**$1,523**	$ 871	75
Nonperforming loans ratio—end of period	**1.87%**	1.10%	
Corporate Banking:			
Loans and leases—average **(in billions)**	**$ 50.1**	$ 44.7	12
Deposits—average **(in billions)**	**$ 21.4**	$ 19.1	12
Net charge-offs to average loans	**0.87%**	0.53%	
Nonperforming loans **(in millions)**	**$1,065**	$ 578	84
Nonperforming loans ratio—end of period	**2.22%**	1.12%	
Syndications/Lead Arranger Deals:			
Volume **(in billions)**	**$ 58.1**	$ 47.9	21
Number of transactions	**209**	190	10
League table standing—rank	**4**	4	—
League table standing—market share	**6%**	7%	
Middle Market Banking:			
Loans and leases—average **(in billions)**	**$ 32.1**	$ 29.7	8
Deposits—average **(in billions)**	**18.2**	18.6	(2)
Net charge-offs to average loans	**0.40%**	0.18%	
Nonperforming loans **(in millions)**	**$ 458**	$ 293	56
Nonperforming loans ratio—end of period	**1.37%**	0.93%	

N/M—Not meaningful.

N/A—Not available due to changes in segment composition, see Note 5 on page 59.

Commercial Banking reported a net loss of $226 million for 2000, compared with 1999's net income of $788 million. This $1.014 billion decrease was principally driven by an increase in the provision for credit losses of $1.778 billion.

Net interest income increased $179 million, or 7% from the prior year, driven by 10% average loan growth partially offset by a modest decline in spread due to competitive pricing pressures in Corporate Banking and Middle Market banking and higher nonperforming loans. Middle Market Banking average loans were $32.1 billion, increasing 8% from the prior year. Corporate Banking reported a 12% increase in average loans year-over-year. While loan balances continued to grow throughout the year in Middle Market Banking, Corporate Banking loans started to decline in the fourth quarter, reflecting efforts to focus on more profitable customers.

The provision for credit losses increased $1.778 billion in 2000 from the prior year due to deterioration in the quality of loans and a higher reserve level established for the general loan portfolio. The deterioration in credit quality reflected the slowing of the economy as well as weakness in several industries and leveraged finance transactions. See Credit Risk Management (on page 26) for additional credit related discussion.

Noninterest income of $1.397 billion increased $116 million, or 9% from the prior year. Treasury Management Services revenue of $647 million increased $71 million, or 12%, driven by strong growth in commercial card activity, higher sweep fees and continued growth in wholesale lockbox imaging. Capital markets revenue of $429 million improved $25 million, or 6%, due to growing market share in municipals, increased activity in the asset-backed finance business, foreign exchange trading and high yield securities. Lending-related fees of $205 million increased $60 million, or 41%, reflecting higher levels of loan commitment fees.

Noninterest expense increased $62 million, or 3%, from the prior year, and included $21 million for severance and $6 million for fixed asset writeoffs, as well as an increase in treasury management services investment spending. These increases were partially offset by lower incentive compensation and waste reduction efforts.

First USA

First USA is the third largest credit card company in the United States and is the largest Visa® credit card issuer in the world, with $67 billion in managed credit card receivables and 51.7 million cardmembers. First USA.com is the leader in online card marketing and customer service, with over 2.3 million registered users of its web site.

First USA offers its products through cards marketed directly to customers under the First USA brand, affinity groups and co-brand relationships. First USA offers two types of general-purpose credit cards, premium and standard, as well as small business cards. All cards are issued to customers under either the Visa® or MasterCard® name. Premium cards, which include Platinum and Titanium cards, generally have higher usage and balances than do standard cards. First USA directs the majority of its new account acquisition efforts to members of endorsing groups, commercial firms, and financial institutions, including Bank One and has more than 1,800 marketing partners.

First USA grants credit by carefully applying a credit decision model to new customers. This model has been developed over the years, and is the result of the over 100 million credit decisions that First USA has made over its history.

(Dollars in millions)	2000	1999	% Change
Net interest income—tax-equivalent basis	**$ 5,835**	$6,881	(15)%
Provision for credit losses	**3,637**	3,593	1
Noninterest income	**746**	1,632	(54)
Noninterest expense	**2,946**	3,204	(8)
Net income (loss)	**(1)**	1,135	N/M
Return on outstandings (pretax)	**—%**	2.5%	
Return on equity	**—**	19	
Efficiency ratio	**45**	38	
(Dollars in billions)			
Loans—average	**$ 66.2**	$ 69.0	(4)
Assets—average	**70.0**	74.9	(7)
Common equity—average	**6.1**	6.0	2
Supplemental Information:			
Headcount—full-time	**10,901**	N/A	—
Percentage of Average Outstandings:			
Net interest income—tax-equivalent basis	**8.81%**	9.97%	
Provision for credit losses	**5.49**	5.21	
Noninterest income	**1.13**	2.37	
Noninterest expense	**4.45**	4.64	
Pretax income—tax-equivalent basis	**—**	2.49	
Net income	**—**	1.64	
Credit Card Loans—end of period: (dollars in billions)			
Owned credit card loans	**$ 4.7**	$ 4.0	17
Seller's interest in credit cards	**22.5**	19.7	14
Loans on balance sheet	**27.2**	23.7	15
Securitized credit card loans	**39.8**	45.7	(13)
Managed credit card loans	**$ 67.0**	$ 69.4	(3)
Credit Quality:			
Managed charge-offs (in millions)	**$ 3,584**	$3,790	(5)
Managed charge-off-ratio	**5.42%**	5.49%	
Delinquency ratio—30+ days	**4.51**	4.57	
Delinquency ratio—90+ days	**2.02**	2.13	
Charge volume (in billions)	**$ 142.5**	$142.7	—
New accounts opened (in thousands)	**3,324**	8,108	(59)
Cards issued (1) (in thousands)	**51,693**	64,191	(19)

(1) The decrease in cards issued is partly attributable to purging of accounts as noted below.

N/M—Not meaningful.

N/A—Not available due to changes in segment composition, see Note 5 on page 59.

First USA reported a net loss of $1 million in 2000, compared with net income of $1.135 billion in 1999. This reflected a 23% decline in revenue and a slightly higher provision for credit losses, partially offset by lower expenses. Current year results included $830 million pretax of significant items (see Tables 1 and 2 on page 15). Excluding these items, 2000 results represented a 1.3% pretax return on outstandings, down from 2.5% in 1999. On this same basis, return on equity declined to 9% from 19% in 1999.

Net interest income declined $1.046 billion, or 15%, from 1999. This was primarily driven by decreased spread, lower late fee revenue, and a decline in average loans. Average managed outstandings were $66.2 million, down 4% from the prior year. Attrition on mature vintage balances continued to improve throughout 2000. At year-end 2000, First USA had 51.7 million cards issued, compared to 64.2 million at December 31, 1999. Approximately 7 million inactive accounts were purged during 2000.

Provision for credit losses increased only 1% in 2000. This reflected an increase in provision mostly offset by a decrease in the managed charge-off rate to 5.42% from 5.49% in 1999. The prior year charge-offs included $183 million related to the early adoption of the Federal Financial Institutions Examination Council's (FFIEC) revised consumer credit guidelines. At year end, the managed 30-day and 90-day delinquency rates were 4.51% and 2.02%, respectively, down from 4.57% and 2.13% a year earlier.

Noninterest income declined $886 million, or 54% from the prior year. Current year results included $467 million of significant items primarily related to writedowns of the interest-only strip on securitized credit card receivables and marketing partnership agreements (see Table 1 on page 15). In addition, 2000 results included $116 million of net securitization amortization compared with net securitization gains of $61 million in 1999. Revenue sharing payments to partnership and affinity groups, which are included in noninterest income, increased in 2000 reflecting the emphasis on these growing customer groups. In addition, lower revenue from fee-based products contributed to the decline in noninterest income from the prior year, as well as the prior year's inclusion of $126 million of nonrecurring items.

Noninterest expense declined $258 million, or 8%, from the prior year. Excluding the impact of $328 million of significant items, noninterest expense declined $586 million, or 18%. This decrease reflected a decline in marketing expenses and the positive impact of waste reduction initiatives, such as lower headcount and improved operating efficiency, as well as the sale of the international operations, lower processing costs due to the decrease in portfolio size, and a decrease in internal costs related to a change in allocation methodology. This change in allocation methodology was implemented in the 2000 third quarter to better reflect the actual cost of services provided. These positive impacts were partially offset by increased fraud and operational losses.

Investment Management

The Investment Management Group (IMG) provides investment, insurance, trust and private banking services to individuals. The Group also provides investment-related services, including retirement and custody services, securities lending and corporate trust to institutions.

The Investment Management Group's registered investment advisory arm, Banc One Investment Advisors, ranks among the nation's top asset managers, with approximately $131 billion in assets under management. In addition, the Investment Management Group manages One Group Mutual Funds, one of the largest mutual fund families with more than $70 billion in assets under management. Performance of the funds has been exceptionally strong with 97% ranked 3 stars or better and 62% ranked 4 stars or better by Morningstar.

Private Client Services (PCS) is uniquely designed to help manage and build wealth for high net worth clients. PCS provides integrated financial advice and services such as brokerage, investment and alternative asset management, personal trust, private banking, insurance and financial planning through 585 advisors.

Investment Management serves Bank One's retail customer base by delivering investment products and services through our 1,800 banking centers in 14 states. IMG teams 700 dedicated investment professionals with 2,700 licensed bankers in Retail's banking centers to deliver high quality investment and insurance products.

Custody, master trust and retirement services (such as 401(k), defined benefit and non-qualified plans) are provided to institutional customers. Corporate trust services are provided to governmental and municipal entities, as well as a broad range of middle market and large companies. The Corporate Trust unit ranks among the three largest providers in the country for bond trustee services.

(Dollars in millions)	2000	1999	% Change
Net interest income—tax-equivalent basis	**$ 409**	$ 376	9%
Provision for credit losses	**13**	2	N/M
Noninterest income	**1,161**	1,179	(2)
Noninterest expense	**1,049**	1,075	(2)
Net income	**322**	317	2
Return on equity	**36%**	35%	
Efficiency ratio	**67**	69	
(Dollars in billions)			
Loans—average	**$ 6.6**	$ 5.7	16
Assets—average	**7.6**	7.1	7
Deposits—average	**8.5**	8.8	(3)
Common equity—average	**0.9**	0.9	—
Supplemental Information:			
Headcount—full-time	**6,562**	N/A	
Assets Under Management—end of period (dollars in billions):			
Mutual funds	**$ 70.4**	$ 64.4	9
Other	**60.8**	64.5	(6)
Total	**$131.2**	$128.9	2
Morningstar Rankings:			
Percentage of 4 & 5 ranked funds	**62%**	54%	
Percentage of 3+ ranked funds	**97**	84	
Retail Brokerage:			
Mutual fund & annuities sales **(in billions)**	**$ 4.2**	$ 4.0	5
Number of accounts **(in thousands)**	**384**	349	10
Market value customer assets-end of period **(in billions)**	**$ 23.1**	$ 23.4	(1)
Private Client Services:			
Loans—average **(in billions)**	**$ 6.4**	$ 5.5	16
Deposits—average **(in billions)**	**7.0**	7.2	(3)
Number of Advisors	**585**	N/A	

N/M—Not meaningful.

N/A—Not available due to changes in segment composition, see Note 5 on page 59.

Investment Management reported net income of $322 million, up $5 million from the prior year.

Net interest income increased $33 million, or 9%, from the prior year, reflecting a 16% increase in average loans partially offset by narrower spreads related to the 3% decrease in average deposits.

Provision for credit losses increased $11 million, principally related to higher net charge-offs and loan growth.

Noninterest income, which is principally fiduciary and investment fees, decreased $18 million, or 2%, due to the sale of a subsidiary in the 1999 second quarter. Excluding the impact of this sale, noninterest income increased 2%, reflecting growth in retail brokerage and insurance volumes and moderate growth in assets under management.

Noninterest expense decreased $26 million, or 2%, also related to the 1999 second quarter sale of a subsidiary. Excluding the impact of this sale, expenses increased 2%, principally related to volume growth in retail brokerage and insurance activities.

Assets under management totaled $131.2 million, up 2% from the end of 1999. One Group® mutual fund assets under management increased 9% to $70.4 billion. One Group® fund performance continued to remain strong, with 97% of these funds rated three stars or higher by Morningstar. Average assets under management increased 5% compared with 1999, driven principally by a 14% increase in One Group mutual funds.

Corporate Investments

The Corporate Investments Group engages in proprietary investment activities for the account of Bank One. A diversified portfolio of investments is allocated between tax-oriented transactions and portfolios of more traditional asset classes.

Tax-oriented investments include investments in and advising on leases for commercial aircraft and major industrial and power production facilities and equipment. Investments also are made in alternative energy programs and affordable housing projects qualifying for federal tax credits.

Investment portfolios in the other asset classes are executed by a combination of direct investing and fund investing. Fund investments are made pursuant to allocations for selected investment strategies and are committed to proven managers satisfying established due diligence criteria. Fund investments include venture capital funds, hedge funds and commercial real estate funds. Direct investments are comprised of a diversified portfolio that includes exposure to several market sectors, including commercial mortgage-backed securities, asset-backed securities, collateralized debt obligations, high-yield bonds, private equity and mezzanine debt.

Corporate Investment's portfolio is diversified among several asset classes, some of which provide stable earnings streams while others may be more volatile.

(Dollars in millions)	2000	1999	% Change
Net interest income—tax-equivalent basis	**$107**	$175	(39)%
Provision for credit losses	**2**	—	N/M
Noninterest income	**213**	407	(48)
Noninterest expense	**102**	134	(24)
Net income	**239**	371	(36)
Return on equity	**20%**	37%	
Efficiency ratio	**32**	23	
(Dollars in billions)			
Loans—average	**$3.6**	$ 3.5	3
Assets—average	**8.5**	7.8	9
Common equity—average	**1.2**	1.0	20
Supplemental Information:			
Headcount—full time	**200**	N/A	—

N/M—Not meaningful.

N/A—Not available due to changes in segment composition, see Note 5 on page 59.

Corporate Investments reported net income of $239 million, down $132 million, or 36%, from 1999. Tax-oriented strategies continued to provide stable core performance. This performance was offset by the third quarter sale of the operations and substantially all of the assets of Banc One Capital Funding Corporation (primarily housing and healthcare investments and related servicing rights), as well as a decline in the collective contribution from all other investment strategies during the year's difficult capital markets environment.

Net interest income declined $68 million, or 39%. Growth in investment levels for venture capital, private equity, hedge funds and tax-oriented housing and energy investments which are noninterest yielding, accounted for $43 million of the decline, and was due to the funding cost of these investments. Spread income from Banc One Capital Funding Corporation activities declined $39 million from the prior year. Spread income is expected to decline approximately $8 million in the coming year as compared to 2000 due to the absence of the Banc One Capital Funding activities, with negligible impact to net income.

Noninterest income declined $194 million, or 48%. Equity securities gains totaled $187 million in 2000, down from $334 million in 1999. Securities gains from venture capital and private equity investing declined $148 million, or 55%, reflecting the weak market for initial public offerings (IPOs) and financial restructurings in 2000. Asset impairment charges and realized losses related to the collateralized debt obligation investment portfolios represented $27 million of the overall decline.

Noninterest expense declined $32 million, or 24%, reflecting the benefits from waste reduction efforts, lower performance-based compensation, and a $5 million reduction attributable to the sale of certain assets.

Corporate/Unallocated

Corporate/Unallocated includes certain items that are not allocated to the lines of business. Going forward, Corporate/Unallocated results are expected to reflect the Corporation's investment securities portfolio, the unallocated interest rate risk position, unallocated expenses of certain corporate support areas, and the impact of unallocated net assets and capital. The 2000 and 1999 results included certain unallocated expenses for support areas, gains and losses, restructuring charges, and writedowns and expenses resulting from Management's review of the business.

(Dollars in millions)	2000	1999	% Change
Net interest income (expense)—tax-equivalent basis	**$ (457)**	$ 108	N/M
Provision for credit losses	**—**	(107)	N/M
Noninterest income	**(240)**	433	N/M
Noninterest expense	**1,218**	77	N/M
Net income (loss)	**(1,234)**	424	N/M
Return (loss) on equity	**(95)%**	20%	
Efficiency ratio	**N/M**	14	
(Dollars in billions)			
Assets—average	**$ 40.4**	$33.9	19
Deposits—average	**23.3**	18.5	26
Common equity—average	**(1.3)**	2.1	N/M
Supplemental Information:			
Headcount—full time	**10,751**	N/A	—

N/M—Not meaningful.

N/A—Not available due to changes in segment composition, see Note 5 on page 59.

The net loss in Corporate/Unallocated was $1.234 billion in 2000, compared with net income of $424 million in 1999. The 2000 results included the negative impact of $1.279 billion, pretax, of significant items. (See tables 1 and 2 on page 15).

Net interest expense was $457 million in 2000, compared with net interest income of $108 million for 1999. The year-over-year change reflects the interest rate risk position of the Corporation and the level of unallocated equity and assets. The 1999 unallocated equity was a positive $2.1 billion, while in 2000 the unallocated equity was a negative $1.3 billion. The amount of unallocated equity represents the difference between shareholders' equity and attributed economic capital. Refer to the ''Capital Management'' section, beginning on page 43 for additional information. The change, in part, reflects the writedowns taken during 2000 in conjunction with Management's effort to strengthen the balance sheet.

Provision for credit losses was fully allocated to the lines of business in 2000. The 1999 provision was a negative $107 million, reflecting the difference between standard credit costs in the lines of business and the Corporation's actual provision expense.

Noninterest income was a negative $240 million in 2000, compared with $433 million in 1999. Investment securities losses totaled $428 million in 2000, compared with gains of $94 million in 1999. The investment securities losses in 2000 included $415 million of losses resulting from the repositioning of the Corporation's investment portfolio in the second quarter of 2000, more than offsetting the income on corporate-owned life insurance. Income on corporate-owned life insurance and gains on sales of assets were included in 1999's results.

Noninterest expense was $1.218 billion for 2000, compared with $77 million in 1999. Significant items recorded in 2000 included $350 million for operational and other losses, $315 million for occupancy-related costs, a $190 million addition to legal accruals and $9 million in severance.

Significant Items

The following table summarizes significant items recorded in 2000 by each business segment and income statement line, excluding provision for credit losses not FFIEC-related:

Business Segments—Table 1 (In millions)	Retail	Commercial	First USA	Investment Management	Corporate Investments	Corporate/ Unallocated	Total
Pretax expense (income):							
Writedown of auto lease residuals	$532	$ —	$ —	$—	$—	$ —	$ 532
Repositioning of investment securities portfolio						415	415
Operational and other (1)	42	(19)	63		10	350	446
Writedown of interest-only strip			354				354
Occupancy and fixed asset related	9	6	11	(4)		315	337
Writedown of purchased credit card relationship intangibles			275				275
Writedowns primarily related to planned loan sales (2)	167						167
Increase to legal accruals						190	190
Writedown of marketing partnership agreements			121				121
Severance related	10	21	6	4		9	50
Total	$760	$ 8	$830	—	$10	$1,279	$2,887
After tax	$481	$ 5	$526	$—	$ 7	$ 860	$1,879
Income Statement line—Table 2 (In millions)							
Pretax expense (income):							
Net interest income	$ 14	$ (7)	$ —	$—	$—	$ (6)	$ 1
Provision for loan loss	11		35				46
Noninterest income:							
Non-deposit service charges					(1)		(1)
Credit card revenue			152				152
Service charges on deposits		5					5
Investment securities (gains) losses		(1)			11	415	425
Trading		44					44
Other income	650	3	315	2		11	981
Total noninterest income	650	51	467	2	10	426	1,606
Noninterest expense:							
Salaries and employee benefits (1)	12	(42)	(4)	(19)		145	92
Net occupancy and equipment	9	6	11			72	98
Depreciation and amortization			275	9		36	320
Other expense	24	1	39	8		466	538
Merger-related and restructuring	40	(1)	7			140	186
Total noninterest expense	85	(36)	328	(2)	—	859	1,234
Pretax expense	$760	$ 8	$830	$—	$10	$1,279	$2,887

(1) Includes $75 million of incentive accruals reversed in the fourth quarter relating to the full year in which existing plans were adjusted to a pay for performance basis.

(2) At December 31, 2000, Management discontinued its plan to dispose of these loans, and as such, are now considered part of the general portfolio.

During 1999, significant items totaling $880 million pretax ($597 million after-tax) were not allocated to specific business segments. These items included charges of $722 million for merger and restructuring costs, $321 million for asset impairment, valuation adjustments and other charges, and $197 million for provision for credit losses primarily associated with the FFIEC implementation. These charges were partially offset by gains of $111 million and $249 million, respectively, for the sale of Concord/EPS and the Indiana divestitures.

The income statement lines affected in 1999 are as follows:

(In millions)	
Provision for credit losses	**$ 176**
Noninterest income	**(169)**
Noninterest expense	**873**
Pretax expense	**$ 880**
After tax	**$ 597**

Consolidated Results

Summary of Financial Results

The Corporation reported a 2000 net loss of $511 million, or $0.45 per share, compared with net income of $3.479 billion, or $2.95 per diluted share, in 1999, and $3.108 billion, or $2.61 per diluted share, in 1998.

Net Interest Income

Net interest income includes spreads on earning assets as well as items such as loan fees, cash interest collections on problem loans, dividend income, interest reversals, and income or expense on derivatives used to manage interest rate risk. Net interest margin measures how effectively the Corporation uses its earning assets and underlying capital.

In order to understand fundamental trends in net interest income, average earning assets and net interest margins, it is useful to analyze financial performance on a managed portfolio basis, which adds data on securitized loans to reported data on loans as presented below:

	Year Ended December 31		
(Dollars in millions)	2000	1999	1998
Managed:			
Net interest income—tax-equivalent basis	**$ 13,506**	$ 14,457	$ 13,828
Average earning assets	**284,035**	269,237	248,621
Net interest margin	**4.76%**	5.37%	5.56%
Reported:			
Net interest income—tax-equivalent basis	**$ 8,974**	$ 9,142	$ 9,469
Average earning assets	**241,058**	223,539	209,514
Net interest margin	**3.72%**	4.09%	4.52%

Lower average credit card outstandings, lower fee revenues and narrower spread on credit card loans were the most significant causes of the decline in both the net interest income and related margin in 2000. Lower average credit card outstandings and fee revenues reflected customer attrition and reduced new account origination, while narrower spread reflected higher funding costs in 2000. Competitive pricing pressures in Corporate Banking and Middle Market Banking and higher nonperforming loans reduced margins slightly in the commercial loan portfolio.

During the second half of 2000, net interest income declined, reflecting a lower level of loans and the cost of carrying a higher level of nonperforming assets. Exposure to the Corporate Banking market could decline in 2001 as the line of business places increased emphasis on relationship profitability.

On a reported basis, net interest margin was 3.72% in 2000, compared with 4.09% in 1999 and 4.52% in 1998. The decrease in net interest margin in 2000 was related to lower credit card spreads as well as a less favorable earning asset mix.

Loans, which are presented on a managed basis, are as follows:

(Dollars in millions)	2000	Percent	1999	Percent	1998	Percent
Average managed loans:						
Credit card	**$ 66,178**	**28%**	$ 68,980	32%	$ 60,532	30%
Commercial	**100,202**	**43**	90,182	41	82,118	41
Consumer	**66,812**	**29**	59,440	27	57,206	29
Total	**$233,192**	**100%**	$218,602	100%	$199,856	100%

Average managed credit card loans in 2000 were down $2.8 billion, or 4%, from 1999 levels. Average managed credit card loans in 1999 were up 14% or $8.4 billion from 1998 levels to $69.0 billion.

Average commercial loans increased $10.0 billion or 11% in 2000 and $8.1 billion or 10% in 1999, reflecting underlying growth, concentrated in the Corporate Banking and Middle Market Banking portfolios.

Average consumer loans, excluding credit card loans, were up $7.4 billion, or 12%, from 1999. Growth in home equity loans was partially offset by run-off in residential mortgages and portfolio sales. The Corporation expects continued growth in consumer loans in 2001.

Noninterest Income

The table below shows the components of noninterest income for the periods indicated:

	Year Ended December 31			Percent Increase (Decrease)	
(Dollars in millions)	2000	1999	1998	1999-2000	1998-1999
Non-deposit service charges	**$1,537**	$1,502	$1,390	2%	8%
Credit card revenue (1)	**1,104**	1,363	1,244	(19)	10
Service charges on deposits	**1,310**	1,283	1,255	2	2
Fiduciary and investment management fees	**783**	793	807	(1)	(2)
Investment securities gains (losses)	**(235)**	509	405	N/M	26
Trading	**134**	147	141	(9)	4
Other income (loss)	**(738)**	685	718	N/M	(5)
Gains from banking center sales	**—**	—	259	—	N/M
Gain on Indiana Divestitures	**—**	249	—	N/M	N/M
Gain on sale of Concord/EPS	**—**	111	—	N/M	N/M
Managed noninterest income	**$3,895**	$6,642	$6,219	(41)%	7%

(1) Excludes net credit card revenue due to securitization totaling $1.195 billion in 2000, $2.050 billion in 1999 and $1.852 billion in 1998.
N/M—Not meaningful.

In order to provide more meaningful trend analysis, credit card fee revenue and total noninterest income in the above table are shown on a managed basis. Credit card fee revenue excludes the net interest revenue associated with securitized credit card receivables. Components of noninterest income that are primarily related to a single business segment are discussed within that business segment rather than the consolidated section.

Noninterest income in each of the last three years was affected by a number of significant items. In 2000, such items resulted in a negative impact of $1.606 billion (see Table 2 on page 15), primarily related to securities losses and writedowns of auto lease residuals and planned loan sales. In 1999, these items resulted in a $191 million net positive impact ($169 million of negative impact related to asset impairment and valuation adjustments (see page 15), which were offset by $360 million of gains), and 1998 included $259 million of one-time gains (see above table).

Excluding the impact of these items, noninterest income in 2000 was $5.500 billion, down $951 million, or 15%, from $6.451 billion in 1999, with results for 1999 up $491 million, or 8%, from $5.960 billion in 1998.

Non-deposit service charges increased 2% in 2000, compared with the 1999 levels, as higher loan syndication fees were partially offset by lower leasing fees for auto loans. Non-deposit service charges in 1999 increased 8% from 1998 levels, reflecting growth in fees from asset-backed finance transactions, higher loan syndication fees, and continued growth in other fee revenue from retail product areas.

Managed credit card revenue declined 19% to $1.104 billion in 2000 as compared to 1999, reflecting a decline in managed credit card receivables as well as writedowns for certain affinity partnership agreements of $137 million, which included the second quarter writedown of $121 million. Credit card fee revenue in 1999 included asset impairment writedowns of $59 million for certain assets, including affinity programs.

Service charges on deposit accounts, which include deficient balance fees, increased 2% in both 2000 and 1999, reflecting growth in cash management fees, due in part to the extensive cross selling of product offerings across an expanded geographic region. Effective cross selling was supported by enhanced product features and functionality of the core treasury management services provided to customers on a national basis.

Fiduciary and investment management fees decreased slightly in 2000 as compared to 1999, as fee growth from traditional trust products and services, investment management activities and shareholder services was offset by the absence of revenues from certain unprofitable account relationships exited in 2000. In 1999, fiduciary and investment management fees, adjusted for certain noncomparable items recorded in 1998, were up 11% over 1998 as a result of higher market values of trust assets and increases in proprietary mutual fund revenue.

Investment securities portfolio activities produced a loss of $235 million in 2000 as compared to $509 million of net revenue in 1999, primarily as the result of the repositioning of the Corporation's investment portfolio in the 2000 second quarter (see Significant Items Tables 1 and 2 on page 15) and lower venture capital valuations. The 26% increase in investment securities gains in 1999 as compared to 1998 primarily reflected favorable equity market conditions.

Trading results declined slightly to $134 million in 2000 compared with $147 million in 1999 as improved foreign exchange trading was offset by a decline in revenue generated from interest rate derivatives. The 1999 improvement over the $141 million in 1998 reflected favorable results in interest rate derivatives offset by a decline in foreign exchange trading income.

Other activities generated losses of $738 million in 2000, compared with $685 million of income in 1999. Net securitization amortization in 2000 totaled $116 million, compared with net gains of $54 million and $180 million in 1999 and 1998, respectively. Asset impairment writedowns associated with credit card interest-only strip securities were $432 million for 2000 compared to $40 million for 1999. These writedowns were driven by the narrower margin and increased attrition based on the earnings decline in the credit card business. Auto residual losses totaled $757 million for 2000, compared with $167 million for 1999. Included in these losses were charges of $552 million ($532 million significant items), $100 million and $102 million in 2000, 1999 and 1998, respectively, for asset valuation adjustments. While the Corporation has estimated the level of other than temporary impairment inherent in its leasing residual portfolio at December 31, 2000, continued deterioration in used car prices may result in additional charges, further reducing the carrying value of the Corporation's auto lease residual portfolio.

Included in other income in 1999 were $249 million of gains on the divestiture of banking centers in Indiana required in connection with the Banc One/FCN merger and a $111 million gain from an investment in Concord/EPS. Gains of $259 million from sales of banking centers were recorded in 1998.

Noninterest Expense

Noninterest expense in 2000 was $11.608 billion, compared with $11.490 billion in 1999. Noninterest expense has been relatively flat over the past three years. Certain expense categories decreased during 2000 as a result of the Corporation's waste reduction efforts.

The table below shows the components of noninterest expense for the periods indicated:

	Year Ended December 31			Percent Increase (Decrease)	
(Dollars in millions)	2000	1999	1998	1999-2000	1998-1999
Salaries and employee benefits:					
Salaries	**$ 3,735**	$ 3,668	$ 3,770	2%	(3)%
Employee benefits	**653**	603	707	8	(15)
Total salaries and employee benefits	**4,388**	4,271	4,477	3	(5)
Occupancy and equipment expense	**1,010**	910	845	11	8
Outside service fees and processing	**1,532**	1,743	1,349	(12)	29
Marketing and development	**874**	1,188	1,024	(26)	16
Communication and transportation	**841**	829	781	1	6
Depreciation	**454**	460	512	(1)	(10)
Other intangible amortization	**410**	168	91	N/M	85
Goodwill amortization	**70**	69	77	1	(10)
Other	**1,868**	1,298	1,327	44	(2)
Total noninterest expense before merger-related and restructuring charges	**11,447**	10,936	10,483	5	4
Merger-related and restructuring charges	**161**	554	1,062	(71)	(48)
Total noninterest expense	**$11,608**	$11,490	$11,545	1	—
Employees (1)	**80,778**	87,735	92,800	(8)	(5)
Efficiency ratio—managed basis	**66.7%**	54.5%	57.6%		

(1) For 2000 and 1999 employee headcount is based on full-time and part-time employment with benefits. Employee headcount for 1998 is an estimate based on full-time and part-time employment with benefits.

N/M—Not meaningful.

Components of noninterest expense that are primarily related to a single business segment are discussed within that business segment rather than the consolidated section.

Salary and benefit costs, including severance charges, were $4.388 billion in 2000, up 3% from $4.271 billion in 1999. The increase was due to higher salary levels, partially offset by reduced headcount and lower incentive compensation in 2000. At December 31, 2000, the number of employees with benefits totaled 80,778, down 8% from 87,735 in 1999. The decrease in salary and benefits costs in 1999 from 1998 was largely attributable to staff reductions and reduced pension costs and the integration of employee benefit programs.

Occupancy and equipment expense in 2000 was up $100 million, or 11%, from 1999 levels. This increase included $98 million of the $337 million significant item (see table 1 on page 15) related to writedowns concerning vacant space and other occupancy-related matters. The increase in 1999 reflected growth in production facilities as well as higher equipment costs for certain business units. The 1999 increase also reflected the outsourcing of various property management services and the implementation and ongoing support of an expanded ATM delivery network, including the Rapid Cash retail banking initiative.

Outside service fees and processing expense decreased 12% in 2000 after increasing 29% in 1999. A portion of the decrease in 2000 and the increase in 1999 reflected consulting and implementation costs incurred to support Year 2000 readiness, as well as other development, technology and reengineering initiatives in various businesses in 1999. The 2000 decrease also included benefits from the Corporation's waste reduction initiatives.

Marketing and development expense decreased 26% in 2000 and increased 16% in 1999 from 1998. Credit card marketing efforts accounted for much of the fluctuations in these periods. These expenses are expected to increase in 2001 as First USA begins to refocus on certain marketing programs. The increase in these expenses in 1999 over 1998 included a change in business practice, which resulted in expensing credit card account sourcing costs as they are incurred rather than capitalizing them.

Other intangible amortization expense included $288 million and $21 million of additional writedowns in purchased credit card relationships in 2000 and 1999, respectively. In 2000, $275 million of these writedowns is included in the Significant Items tables on page 15. These asset writedowns reduced the carrying value of identified intangible assets and will reduce the ongoing level of related amortization expense.

Other operating expense increased $570 million in 2000 compared with 1999, primarily relating to $538 million of significant items recorded in 2000. These charges included $190 million to the legal reserve to cover increased corporate and business litigation exposure, approximately $85 million of fixed assets and software writeoffs, as well as miscellaneous and operational errors.

Applicable Income Taxes

The following table shows the Corporation's income (loss) before income taxes, as well as applicable income tax expense (benefit) and effective tax rate for each of the past three years:

(Dollars in millions)	2000	1999	1998
Income (loss) before income taxes	**$(1,080)**	$4,974	$4,465
Applicable income taxes (benefit)	**(569)**	1,495	1,357
Effective tax rates	**52.7%**	30.1%	30.4%

Applicable income tax expense or (benefit) for all three years included benefits for tax-exempt income, tax-advantaged investments and general business tax credits offset by the effect of nondeductible expenses, including goodwill. In the case of a loss before income taxes, the effect of the net tax benefits described above is to increase, rather than decrease, the effective tax benefit. This is the primary reason for the difference in effective tax rates between 2000 and the previous years. More detail on income taxes can be found in Note 19, beginning on page 78.

Risk Management

Risk Management Policy and Structure

Risk is an inherent part of the Corporation's businesses and activities. The extent to which the Corporation properly and effectively identifies, assesses, monitors and manages each of the various types of risk involved in its business activities is critical to its soundness and profitability. The Corporation's lines of businesses help reduce the impact that volatility in any particular area or related areas may have on its operating results as a whole. The Corporation seeks to identify, assess, monitor and manage, in accordance with defined policies and procedures, the following principal risks involved in the Corporation's business activities: liquidity risk, market risk, credit risk and operational risk.

The risk management process of the Corporation is dynamic with independent oversight that requires effective communication between lines of businesses and corporate-level departments, judgment and knowledge of specialized products and markets. The Corporation's senior management takes an active role in the risk

management process and has developed policies and procedures that require specific functions to assist in the identification, assessment and control of various risks. In recognition of the nature of the Bank One's business activities, the Corporation's risk management policies, procedures and methodologies are evolutionary in nature and are subject to ongoing review and modification.

Overall risk management policies for the Corporation are established by the Corporate Risk and Capital Committee, who reviews the Corporation's performance relative to these policies. The Corporate Risk and Capital Committee has oversight responsibility for various risk committees of the Corporation's distinct lines of business and assists the Audit and Risk Management Committee of the Board of Directors in monitoring Bank One's policy standards and guidelines for risk management, among other duties. The individual line of business committees monitor and review their respective lines of businesses compliance with the Corporation's risk management practices, as well as manage and monitor specific risks, sales practices, pricing and reserve adequacy, legal enforceability, and operational and systems risks. Line of business subsidiary committees, which report to the respective line of business risk management committees, approve transactions, manage market and credit risk, approve significant policy and underwriting decisions, review major analytical findings for business implications, and develop and maintain credit underwriting policy initiatives.

The Corporation's Corporate Risk Management Department, Finance Department and Law, Compliance and Governmental Relations Department, also assist senior management and the Corporate Risk and Capital Committee in monitoring and controlling the Corporation's risk profile. The Corporate Risk Management department is responsible for risk policy development, risk analysis and risk reporting to senior management and the Corporate Risk and Capital Committee and has operational responsibility for measuring and monitoring aggregate market and credit risk with respect to institutional trading activities. In addition, the Internal Audit Department, which also reports to senior management, periodically examines and evaluates the Corporation's operations and control environment. The Corporation continues to be committed to employing qualified personnel with appropriate expertise in each of its various areas to implement effectively the Company's risk management and monitoring systems and processes.

The Corporation's various business activities generate liquidity, market, credit and operating risks:

- Liquidity risk is the possibility of being unable to meet all current and future financial obligations in a timely manner.
- Market risk is the possibility that changes in future market rates or prices will make the Corporation's positions less valuable.
- Credit risk is the possibility of loss from borrowers and counterparties failing to perform according to the terms of a transaction.
- Operating risk, among other things, includes the risk of fraud by employees or persons outside the Corporation, the execution of unauthorized transactions by employees, and errors relating to transaction processing and systems.

Liquidity Risk Management

Liquidity is managed in order to preserve stable, reliable and cost-effective sources of cash to meet all current and future financial obligations in a timely manner. The Corporation considers strong capital ratios, credit quality and core earnings essential to retaining high credit ratings and, consequently, cost-effective access to market liquidity. In addition, a portfolio of liquid assets, consisting of federal funds sold, deposit placements and selected highly marketable investment securities, is maintained to meet short-term demands on liquidity.

The Consolidated Statement of Cash Flows, on page 51, presents data on cash and cash equivalents provided and used in operating, investing and financing activities.

The Corporation's ability to attract wholesale funds on a regular basis and at a competitive cost is fostered by strong ratings from the major credit rating agencies. As of December 31, 2000, the Corporation and its principal banks had the following long- and short-term debt ratings:

	Short-Term Debt		Senior Long-Term Debt	
	S & P	Moody's	S & P	Moody's
The Corporation (Parent)	A-1	P-1	A	Aa3
Principal Banks	A-1	P-1	A+	Aa2

The Treasury Department is responsible for identifying, measuring and monitoring the Corporation's liquidity profile. The position is evaluated monthly by analyzing the composition of the liquid asset portfolio, performing various measures to determine the sources and stability of the wholesale purchased funds market, tracking the exposure to off-balance sheet draws on liquidity, and monitoring the timing differences in short-term cash flow obligations.

Access to a variety of funding markets and customers in the retail and wholesale sectors is vital both to liquidity management and to cost minimization. A large retail customer deposit base is one of the significant strengths of the Corporation's liquidity position. In addition, a diversified mix of short- and long-term funding sources from the wholesale markets is maintained through active participation in global capital markets and by securitizing and selling assets such as credit card receivables.

Deposits and Other Purchased Funds

The following table shows the total funding source at December 31:

(In millions)	2000	1999	1998	1997	1996
Domestic offices:					
Demand	**$ 30,738**	$ 31,194	$ 39,854	$ 35,954	$ 33,479
Savings	**63,414**	64,435	62,645	58,946	56,359
Time:					
Under $100,000	**25,302**	22,825	24,483	28,815	30,955
$100,000 and over	**22,656**	14,052	11,819	11,329	10,312
Foreign offices	**24,967**	29,772	22,741	18,682	14,101
Total deposits	**167,077**	162,278	161,542	153,726	145,206
Federal funds purchased and securities Under repurchase agreements	**12,120**	18,720	23,164	20,346	21,662
Commercial paper	**3,048**	3,184	2,113	1,507	2,446
Other short-term borrowings	**14,955**	18,027	14,824	11,299	10,593
Long-term debt (1)	**40,911**	35,435	22,298	21,546	15,363
Total other purchased funds	**71,034**	75,366	62,399	54,698	50,064
Total	**$238,111**	$237,644	$223,941	$208,424	$195,270

(1) Includes trust preferred capital securities.

Changes in the relative mix of funding sources reflect an ongoing shift in consumer investment preferences and the Corporation's decision, for liquidity management purposes, to decrease reliance on short-term borrowings through the issuance of longer-term deposits and debt.

Overview

Market risk refers to potential losses arising from changes in interest rates, foreign exchange rates, equity prices and commodity prices, as well as the correlation among these factors and their volatility. The portfolio effect of engaging in diverse trading activities helps reduce the potential impact of market risk on earnings. Through its trading activities, the Corporation strives to take advantage of profit opportunities available in interest and exchange rate movements. In asset and liability management activities, policies are in place that are designed to closely manage structural interest rate and foreign exchange rate risk. Disclosures about the fair value of financial instruments, which reflect changes in market prices and rates, can be found in Note 22, beginning on page 82.

Trading Activities

The Corporation's trading activities are primarily customer-oriented. Cash instruments are sold to satisfy customers' investment needs. Derivative contracts are initially entered into to meet the risk management needs of customers. In general, the Corporation then enters into offsetting positions to reduce market risk. In order to accommodate customers, an inventory of capital markets instruments is carried, and access to market liquidity is maintained by making bid-offer prices to other market makers. The Corporation may also take proprietary trading positions in various capital markets cash instruments and derivatives, and these positions are designed to profit from anticipated changes in market factors.

Many trading positions are kept open for brief periods of time, often less than one day. Other positions may be held for longer periods. Trading positions are valued at estimated fair value. Realized and unrealized gains and losses on these positions are included in noninterest income as trading profits.

Value-At-Risk

The Corporation has developed policies and procedures to manage market risk through a value-at-risk measurement and control system, through a stress testing process and through dollar trading limits. The objective of this process is to quantify and manage market risk in order to limit single and aggregate exposures. Dollar trading limits are subject to varying levels of approval by senior line of business management, with review by the Capital Markets Risk Management Department. The Corporation's Capital Markets Risk Management Department works with various line of business personnel in refining and monitoring of the Corporation's market risk policies and procedures, and is the primary oversight unit for market risk arising from line of business trading and trading related activity.

Value-at-risk is intended to measure the maximum fair value the Corporation could lose on a trading position, given a specified confidence level and time horizon. Value-at-risk limits and exposure are monitored on a daily basis for each significant trading portfolio. Stress testing is similar to value-at-risk except that the confidence level is geared to capture more extreme, less frequent market events.

The Corporation's value-at-risk calculation measures potential losses in fair value using a 99% confidence level and a one-day time horizon. This equates to 2.33 standard deviations from the mean under a normal distribution. This means that, on average, daily profits and losses are expected to exceed value-at-risk one out of every 100 overnight trading days. Value-at-risk is calculated using various statistical models and techniques for cash and derivative positions, including options.

The following table shows the average, high and low of the value-at-risk measurements at each quarter end in 2000 and 1999, along with value-at-risk amounts at December 31, 2000 and December 31, 1999:

	2000				1999			
(In millions)	Average	High	Low	Dec 31	Average	High	Low	Dec 31
Risk type								
Interest rate	**$11**	**$15**	**$7**	**$7**	$21	$28	$14	$14
Currency exchange rate	**1**	**1**	**—**	**1**	1	2	—	—
Equity	**1**	**2**	**1**	**1**	1	1	1	1
Diversification benefit				**—**				(2)
Aggregate portfolio market risk				**$9**				$13

The activities covered by the table above reflect trading and other activities, including certain overseas balance sheet positions that are managed principally as trading risk. Value-at-risk from commodity price risk was immaterial.

Interest rate risk was the predominant type of market risk incurred during 2000. At December 31, 2000, approximately 75% of primary market risk exposures were related to interest rate risk. Exchange rate, equity and commodity risks accounted for 11%, 11% and 3%, respectively, of primary market risk exposures.

U.S. Treasury, corporate, asset-backed, municipal and mortgage-backed securities generated 79% of interest rate risk. Interest rate derivatives accounted for 19% of interest rate risk. The remaining 2% of interest rate risk were derived from money market and foreign exchange trading activities.

Within the category of currency exchange rate risk, foreign exchange spot, forward and option trading generated 98% of the risk. Of the currency exchange rate risk arising from these activities, 62% related to major currency exposures and 38% to minor currencies.

Equity derivatives trading generated 93% of equity price risk, and equity cash instruments generated the remaining 7% of equity price risk.

At December 31, 2000, aggregate portfolio market risk exposures were 30% lower than at year-end 1999. The majority of this decline was due to decreased market risk in various trading books.

Structural Interest Rate Risk Management

Interest rate risk exposure in the Corporation's "core" business (non-trading) activities, i.e., asset/liability management ("ALM") position, is a result of reprice, option and basis risks associated with on- and off-balance sheet positions. Reprice risk represents timing mismatches in the Corporation's ability to alter contractual rates earned on financial assets or paid on liabilities in response to changes in market interest rates. Basis risk refers to the potential for changes in the underlying relationship between market rates or indices, which subsequently result in a narrowing of the spread earned on a loan or investment relative to its cost of funds. Option risk arises from "embedded options" present in many financial instruments such as interest rate options, loan prepayment options and deposit early withdrawal options. These provide customers and investors opportunities to take advantage of directional changes in rates, which could have an adverse impact on the Corporation's margin performance. Embedded options are complex risk positions that are difficult to predict and offset, and are a large component of the interest rate risk exposure to the Corporation.

The Corporation has established risk measures, limits, policy guidelines and internal control mechanisms (collectively referred to as the Interest Rate Risk Policy) for managing the overall ALM position. According to

these policies, responsibility for the management of interest rate risk resides in the Corporate Treasury function. Other business units are prohibited from purposefully assuming interest rate risk, except in circumstances where it is uniquely related to a product or business offering.

The ALM position is measured and monitored using sophisticated and detailed risk management tools, including earnings simulation modeling and economic value of equity sensitivity analysis, to capture both near-term and longer-term interest rate risk exposures. The level of interest rate risk taken by the Corporation is closely monitored and managed by a comprehensive risk control process involving senior executives from across the Corporation, including finance, risk management and the various lines of business. Senior Management is regularly apprised of the risks associated with the ALM position, with exposures tested under multiple rate and yield curve scenarios. The Corporation balances the return potential of the ALM position against the desire to limit volatility in earnings and/or economic value.

Earnings simulation analysis, or earnings-at-risk, measures the sensitivity of pretax earnings to various interest rate movements. The base-case scenario is established using the implied forward curve. The comparative scenarios assume an immediate parallel shock of the forward curve in increments of ± 100 basis point rate movements. Numerous other scenarios are analyzed, including more gradual rising or declining rate changes and non-parallel rate shifts. Estimated earnings for each scenario are calculated over a 12-month and 24-month horizon. The interest rate scenarios are used for analytical purposes and do not necessarily represent Management's view of future market movements. Rather, these are intended to provide a measure of the degree of volatility interest rate movements may introduce into the earnings and economic value of the Corporation.

The table below shows the Corporation's pretax earnings sensitivity profile as of year-end 2000 and 1999:

	Immediate Change in Rates	
(In millions)	**−100 bp**	**+100 bp**
December 31, 2000	**$29**	**$ 5**
December 31, 1999	194	(178)

The change in the earnings sensitivity between 1999 and 2000 primarily reflects Management's decision to maintain a relatively neutral rate risk posture, and was achieved largely by shortening the duration of investments held for liquidity and collateral purposes.

Modeling the sensitivity of earnings to interest rate risk is highly dependent on the numerous assumptions embedded in the model. While the earnings sensitivity analysis incorporates Management's best estimate of interest rate and balance sheet dynamics under various market rate movements, the actual behavior and resulting earnings impact will likely differ from that projected. For mortgage-related assets, the earnings simulation model captures the expected prepayment behavior under changing interest rate environments. Additionally, the model measures the impact of interest rate caps and floors on adjustable-rate loan products. Assumptions and methodologies regarding the interest rate or balance behavior of indeterminate maturity products, e.g., credit card receivables, savings, money market, NOW and demand deposits reflect Management's best estimate of expected future behavior and are reviewed regularly. Sensitivity of service fee income to market interest rate levels, such as those related to cash management products, is included as well. The earnings sensitivity profile does not reflect potential differences in the timing of income recognition on transactions that were designed to have an offsetting economic effect. For example, the interest-only strip recorded in conjunction with a credit card securitization may be subsequently subject to the accounting recognition of impairment due to adverse changes in market interest and payment rates while the income or expense on offsetting asset and liability positions are recorded on an accrual basis.

The Corporation has risk exposure at time periods beyond the 24 months captured in earnings sensitivity analysis. Management uses an economic value of equity sensitivity technique to capture the risk in both short and long-term positions. This analysis involves calculating future cash flows over the full life of all current assets, liabilities and off-balance sheet positions under different rate scenarios. The discounted present value of all cash flows represents the Corporation's economic value of equity. The sensitivity of this value to shifts in the yield curve allows Management to measure longer-term repricing and option risk in the portfolio. Interest rate risk in trading activities and other activities, including certain overseas balance sheet positions, is managed principally as trading risk.

Foreign Exchange Risk Management

Whenever possible, foreign currency-denominated assets are funded with liability instruments denominated in the same currency. If a liability denominated in the same currency is not immediately available or desired, a forward foreign exchange or cross-currency swap contract is used to fully hedge the risk due to cross-currency funding.

To minimize the capital impact of translation gains or losses measured on an after-tax basis, the Corporation uses forward foreign exchange contracts to hedge the exposure created by investments in overseas branches and subsidiaries.

Credit Risk Management

In conducting its business operations, the Corporation is exposed to the risk that borrowers or counterparties may default on their obligations to the Corporation. These transactions create credit exposure that is reported both on and off the balance sheet. On-balance sheet credit exposure includes such items as loans. Off-balance sheet credit exposure includes unfunded credit commitments and other credit-related financial instruments. Credit exposures resulting from derivative financial instruments are reported both on and off the balance sheet; see page 38 for more details.

The Corporation has developed policies and procedures to manage the level and composition of risk in its credit portfolio. The objective of this credit risk management process is to quantify and manage credit risk on an aggregate portfolio basis as well as to reduce the risk of a loss resulting from a customer's failure to perform according to the terms of a transaction. The Corporation's Risk Management Department works with lending officers and other various line of business personnel involved in credit decision making and is involved in the implementation, refinement and monitoring of the Corporation's credit policies and procedures. Credit limits are subject to varying levels of approval by senior line of business management and the Corporate Risk Management Department.

In order to meet its credit risk management objectives, the Corporation maintains a risk profile that is diverse in terms of borrower concentrations, product-type, and industry and geographic concentrations. Additional diversification of the Corporation's exposure is accomplished through syndication of credits, participations, loan sales, securitizations and other risk-reduction measures.

Consumer Risk Management

The Corporation's consumer risk management process utilizes sophisticated risk assessment tools, including credit scoring, across each of the consumer lines of business, including credit cards, loans secured by real estate, automobile loans and leases, and other unsecured loans. With these tools, product and price offerings are targeted to best match the consumer risk profile.

Management of consumer lines of business continue to proactively manage the risk/reward relationship of each consumer loan portfolio segment, such that these businesses are positioned to achieve profitability targets and required rates of return on investment.

Commercial Risk Management

The Corporation's commercial risk management process utilizes enterprise policies focused on origination, portfolio management and managed asset related activities. This risk management framework establishes approval authorities and related processes, risk rating methodologies, portfolio review parameters and management of problem loans. Line of business senior management and the Corporate Risk Management Department are actively engaged in these activities as well as continuously exploring methods to improve commercial risk management.

Management of the commercial lines of business continue to proactively manage the risk/reward relationship of each commercial relationship and portfolio segment such that these businesses are positioned to achieve profitability targets and required rates of return.

Within the commercial portfolio, borrowers/transactions are assigned specific risk ratings (on a scale from 1–12, with 1 and 12 the highest and lowest rating, respectively) by the originating credit officer based upon an established underwriting and approval process. Approvals are made based upon the amount of credit exposure inherent in the credit extension and are reviewed by senior line of business management and the Corporate Risk Management Department, as appropriate. Risk ratings are reviewed periodically by senior line of business personnel and the Corporate Risk Management Department and revised, if needed, to reflect the borrowers'/transactions' current risk profile. The lower categories of credit risk are equivalent to the four bank regulatory classifications: Special Mention, Substandard, Doubtful and Loss.

Operating Risk Management

In addition to being exposed to liquidity, market and credit risk, the Corporation is also exposed to numerous types of operating risk. Operating risk generally refers to the risk of loss resulting from the Corporation's operations, including, but not limited to, the risk of fraud by employees or persons outside the Corporation, the execution of unauthorized transactions by employees, errors relating to transaction processing and systems, and other breaches of the internal control system and compliance requirements. This risk of loss also includes the potential legal actions that could arise as a result of the operational deficiency or as a result of noncompliance with applicable regulatory standards.

The Corporation operates in many different businesses in diverse markets and placed reliance on the ability of its employees and systems to process a high number of transactions. In the event of a breakdown in the internal control systems, improper operation of systems or improper employee actions, the Corporation could suffer financial loss, face regulatory action and suffer damage to its reputation. In order to address this risk, Management maintains a system of internal controls with the objective of providing proper transaction authorization, safeguarding of assets from misuse or theft, and ensuring the reliability of financial and other data.

The Corporation maintains systems of controls that it believes are reasonably designed to provide Management with timely and accurate information about the operations of Bank One. These systems have been designed to manage operating risk at appropriate levels given the Corporation's financial strength, the environment in which it operates, and considering factors such as competition and regulation. Bank One has also established procedures that are designed to ensure that Management's policies relating to conduct, ethics and business practices are followed on a uniform basis. In certain cases, the Corporation has experienced losses from operating risk. Such losses, among other things, have included the effects of operational errors that the Corporation has discovered and taken charges for (see Significant Items on page 15). While there can be no assurance that the Corporation will not suffer such losses in the future, Management believes that substantial progress has been made in improving internal controls, systems and corporate-wide processes and procedures. Furthermore, Management believes the plans to streamline the organization through charter consolidations and further systems integration, as well as policies enacted to push down reporting accountabilities further in the organization, have improved the Corporation's ability to identify and limit operating risk.

Selected Statistical Information

The significant components of credit risk and the related ratios, presented on a reported basis, for the years indicated are as follows:

(Dollars in millions)	December 31, 2000	1999	1998	1997	1996
At year-end:					
Loans outstanding	**$174,251**	$163,877	$155,398	$159,579	$153,496
Nonperforming loans	**2,475**	1,559	1,207	1,025	912
Other, including other real estate owned	**98**	106	90	61	71
Nonperforming assets	**2,573**	1,665	1,297	1,086	983
Allowance for credit losses	**4,110**	2,285	2,271	2,817	2,687
Nonperforming assets/ related assets	**1.48%**	1.02%	0.83%	0.68%	0.64%
Allowance for credit losses/loans outstanding	**2.36**	1.39	1.46	1.77	1.75
Allowance for credit losses/nonperforming loans	**166**	147	188	275	295
For the year ended:					
Average loans	**$171,768**	$156,855	$154,952	$155,926	$146,094
Net charge-offs	**1,391**	1,206(1)	1,498	1,887	1,522
Net charge-offs/average loans	**0.81%**	0.77%	0.97%	1.21%	1.04%
Allowance for credit losses/net charge-offs	**295**	189(1)	152	149	177

(1) The $1.206 billion net charge-off amount in 1999 included $143 million of charges required to bring the consumer portfolio into compliance with FFIEC guidelines. Excluding these incremental charge-offs, the adjusted coverage ratio would have been 215%.

Loan Composition

For analytical purposes, the Corporation's portfolio is divided into commercial, consumer and credit card categories as of December 31 for the years indicated:

	2000		1999		1998		1997		1996	
	Amount	**% (1)**	**Amount**	**% (1)**	**Amount**	**% (1)**	**Amount**	**% (1)**	**Amount**	**% (1)**
Commercial:										
Domestic:										
Commercial	**$ 65,270**	**28%**	$ 59,070	26%	$ 53,362	25%	$ 48,458	25%	$ 44,791	25%
Real estate:										
Construction	**5,757**	**2**	5,836	3	5,108	2	4,639	2	4,387	2
Other	**16,778**	**7**	18,817	8	17,787	8	16,545	8	16,016	9
Lease financing	**5,818**	**3**	5,562	2	6,236	3	4,537	2	4,258	2
Foreign	**6,837**	**3**	7,067	3	5,945	3	5,127	3	4,160	2
Total commercial	**100,460**	**43**	96,352	42	88,438	41	79,306	40	73,612	40
Consumer:										
Residential real estate	**40,596**	**17**	32,313	14	25,804	12	28,088	14	26,941	15
Automotive—loans	**12,130**	**5**	12,925	6	10,839	5	10,315	5	12,126	6
Automotive—leases	**8,611**	**4**	10,642	5	9,795	5	7,683	4	5,167	3
Other	**7,710**	**3**	7,608	3	11,488	5	11,522	6	10,795	6
Total consumer	**69,047**	**29**	63,488	28	57,926	27	57,608	29	55,029	30
Credit card: (2)										
On balance sheet	**4,744**	**2**	4,037	2	9,034	4	22,665	12	24,855	14
Securitized	**62,241**	**26**	65,319	28	60,993	28	37,414	19	29,303	16
Managed credit card	**66,985**	**28**	69,356	30	70,027	32	60,079	31	54,158	30
Total managed	**$236,492**	**100%**	$229,196	100%	$216,391	100%	$196,993	100%	$182,799	100%
Total reported	**$174,251**		$163,877		$155,398		$159,579		$153,496	

(1) Percentages shown above for loan type are determined as a percentage of total managed assets.

(2) During 1998, the Corporation's certificated retained interests in credit card securitizations were reclassified to investment securities—available for sale. The Corporation's certificated retained interests totaled $22.6 billion, $19.7 billion and $16.7 billion at December 31, 2000, 1999 and 1998, respectively.

Consumer and Credit Card Portfolio

Consumer loans consist of credit card receivables as well as loans secured by residential real estate, automobile financing, and other forms of secured and unsecured consumer installment credit. Individual decisions to grant credit are made pursuant to processes existing at the appropriate line of business level, with the Credit Risk Management Department's oversight for overall credit policies (see Consumer Risk Management discussion on page 27). Excluding securitized receivables, the aggregate consumer and credit card loan portfolio increased during the year to $73.8 billion at year-end 2000. Including securitized credit card receivables, the consumer portfolio increased $3.2 billion, or 2%, to $136 billion at December 31, 2000.

Credit quality within the Corporation's consumer and credit card portfolios deteriorated modestly in 2000 from 1999 levels, reflecting increases in nonperforming consumer finance and home equity loans. Consumer bankruptcies, while down from their peak levels experienced in 1998, remain at historically high levels. An increase in the rate of bankruptcy filings in 2001 would result in higher credit losses across the consumer and credit card portfolios.

Managed Credit Card Receivables

For analytical purposes, the Corporation reports credit card receivables on both a reported basis and a managed basis. Reported credit card receivables include those receivables held in the portfolio and reported on the balance sheet. Managed credit card receivables include reported credit card receivables and those sold to investors through securitization (see page 41 for discussion of Loan Securitizations).

	December 31		
(Dollars in millions)	**2000**	**1999**	**1998**
Average balances:			
Credit card loans	**$ 4,754**	$ 7,233	$15,628
Securitized credit card receivables	**61,424**	61,747	44,904
Total average managed credit card receivables	**$66,178**	$68,980	$60,532
Total net charge-offs (including securitizations)	**$ 3,584**	$ 3,790	$ 3,369
Net charge-offs/average total receivables (1)	**5.42%**	5.49%	5.57%
Credit card delinquency rate at period-end:			
30 or more days	**4.51%**	4.57%	4.47%
90 or more days	**2.02%**	2.13%	1.98%

(1) Ratios include $183 million of securitized charge-offs taken in the fourth quarter of 1999 related to the early adoption of certain of the FFIEC's new consumer charge-off guidelines.

Average managed credit card receivables at December 31, 2000 were down slightly from year-end 1999, reflecting attrition, the disposition of international card operations and reduced new account origination. The increase in managed credit card loans in 1999 from 1998 reflected in part the Corporation's September 1998 purchase of the credit card operations of Chevy Chase Bank, FSB, including $4.8 billion of managed credit card loans.

The decline in the managed credit card charge-off rate to 5.42% in 2000 from 5.49% in 1999 reflected the effect of $183 million of securitized charge-offs taken in the 1999 fourth quarter related to the early adoption of certain new FFIEC consumer charge-off guidelines. The 1999 rate also included the effect of charge-off policy conformance changes made in the 1998 fourth quarter. Without conforming such practices, and excluding the impact of the $183 million of securitized charge-offs, the 1999 charge-off rate would have been 5.36%, compared with 5.57% in 1998. Future charge-offs in the credit card portfolio and credit quality are subject to uncertainties which may cause actual results to differ widely from that forecasted, including the direction and level of loan delinquencies, changes in consumer behavior, bankruptcy trends, portfolio seasoning, interest rate movements,

and portfolio mix, among other things. Current economic data suggests that credit quality will not significantly deteriorate. However, any change in the general economy could materially change these expectations.

Consumer Loans

Information pertaining to consumer loans (i.e., non-credit card) for the years ended is as follows:

	December 31		
(Dollars in millions)	**2000**	**1999**	**1998**
Average balances	**$66,812**	$59,440	$57,206
Total net charge-offs	**547**	558	413
Net charge-offs/average balances (1)	**0.82%**	0.94%	0.72%

(1) Ratios include $143 million of consumer charge-offs taken in the fourth quarter of 1999 related to the early adoption of the FFIEC's new consumer charge-off guidelines. Excluding these charge-offs, the 1999 rate was 0.70%.

The consumer loan portfolio primarily consists of loans secured by real estate as well as auto loans and leases, and provides broad diversification of risk from both a product and geographic perspective. The net charge-off rate for non-credit card consumer loans in 2000 was 0.82%. The decrease from 1999 reflects $143 million of consumer charge-offs taken in the fourth quarter of 1999 related to early adoption of the FFIEC's new consumer credit guidelines. The 1999 consumer charge-off rate, excluding these charge-offs, would have been 0.70%. The 12 basis point increase in the 2000 net charge-off rate over the adjusted 1999 rate reflected the maturing credit loss profile associated with high volume prior year vintages. The adjusted 1999 consumer charge-off rate of 0.70% was down two basis points from the 1998 ratio, reflecting consistent performance. Future consumer portfolio charge-offs and credit quality are subject to uncertainties which may cause actual results to differ widely from that forecasted, including the direction and level of loan delinquencies, changes in consumer behavior, bankruptcy trends, portfolio seasoning, interest rate movements, and portfolio mix, among other things. Current data suggests that credit quality will not significantly deteriorate with the exception of certain indirect portfolios underwritten over the past few years. However, any change in the general economy could materially change these expectations.

The Corporation continues to proactively manage its consumer credit operation to ensure profitable and manageable growth that can be sustained regardless of the economic environment. Recent actions taken include 1) tightening of credit underwriting criteria, 2) rationalization of the number and quality of third party loan originators (i.e., brokers and correspondents) and 3) refinement of pricing and risk management models. Collectively, these actions are intended to result in a more prudent and profitable portfolio growth trend in 2001.

Commercial Portfolio

The Corporation's commercial portfolio primarily comprises Corporate Banking (including syndicated credits) and Middle Market Banking loans and leases as well as commercial real estate loans made across various industries and geographic regions. Commercial loans increased 4%, from $96.4 billion at December 31, 1999, to $100.5 billion at December 31, 2000, primarily driven by growth in both the Corporate Banking and Middle Market Banking portfolios. Nonperforming commercial loans increased $708 million to $1.761 billion at year-end 2000, from $1.053 billion at December 31, 1999, primarily due to portfolio deterioration across several industries and acquisition finance transactions. Commercial net charge-offs were $597 million, or 0.60% of average loans, in 2000, compared with $306 million, or 0.34%, in 1999. For 2001, net charge-offs are expected to increase given increases in nonperforming commercial loans and loan losses observed in 2000, and the general outlook for weaker economic conditions in 2001. Future charge-offs and credit quality in the commercial portfolio are subject to uncertainties which may cause actual results to differ widely from that forecasted, including the direction and level of economic activity and its impact on selected industries, commercial real estate

values, interest rate movements, and portfolio mix, among other things. Management currently anticipates that commercial credit losses for the next several quarters will at least double that of the approximately 40 basis points experienced in the last several years. While credit losses expected for the next several quarters would be considered higher than normal, a deep recession would cause dramatically higher credit losses than currently anticipated.

Commercial Portfolio Concentrations

The following table reflects the more significant borrower industry concentrations of the commercial loan portfolio as of December 31, 2000:

(Dollars in millions)	Carrying Amount	Percent
Commercial real estate	**$ 22,535**	**22.4%**
Wholesale trade	**6,080**	**6.0**
Industrial materials	**4,775**	**4.8**
Oil and gas	**4,207**	**4.2**
Metals and products	**4,128**	**4.1**
Consumer staples	**3,880**	**3.9**
Other	**54,855**	**54.6**
Total commercial	**$100,460**	**100.0%**

Commercial Real Estate

The commercial real estate segment of the portfolio is the largest product category and consists primarily of loans secured by real estate as well as certain loans that are real estate-related. This exposure includes loans and commitments that finance both owner-occupied and investment properties/projects.

At December 31, 2000, commercial real estate loans totaled $22.5 billion, or 22% of commercial loans, compared with $24.7 billion, or 26% of commercial loans, at December 31, 1999. This 9% decline was largely due to Management efforts to reduce commercial real estate exposure. During 2000, net charge-offs in the commercial real estate portfolio segment were $14 million, compared with $1 million in 1999. Nonperforming commercial real estate assets, including other real estate owned, totaled $401 million, or 1.8% of related assets, at December 31, 2000, compared with $413 million, or 1.7% of related assets, at December 31, 1999.

Commercial real estate lending is conducted in several lines of business with the majority of these loans originated by Corporate Banking primarily through its specialized National Commercial Real Estate Group. This group's focus is lending to targeted regional and national real estate developers, homebuilders and REITs/REOCs. As of December 31, 2000, this group's loan outstandings totaled $9.5 billion or 42% of the commercial real estate portfolio. Middle Market Banking originates primarily owner-occupied real estate loans located in the various markets served by Middle Market bankers.

The table below presents commercial real estate loans for the National Commercial Real Estate Group by property type as of December 31, 2000:

PROPERTY-TYPE (National Commercial Real Estate Group only) (Dollars in millions)	Carrying Amount	Percent
Retail	**$ 1,608**	**16.9%**
Apartment complexes	**1,525**	**16.1**
Office buildings	**1,412**	**14.9**
REIT/REOC	**1,228**	**12.9**
Industrial	**491**	**5.2**
Lodging	**402**	**4.2**
Other	**2,823**	**29.8**
Total National Commercial Real Estate Group loans	**9,489**	**100.0%**
Other commercial real estate loans (1)	**13,046**	
Total commercial real estate loans	**$22,535**	

(1) Comprised primarily of Middle Market Banking loans secured by real estate.

The commercial real estate portfolio is geographically diverse, with no geographic concentrations greater than 10% of the portfolio at December 31, 2000.

Asset Quality

Nonperforming Assets

The Corporation defines nonperforming loans as commercial loans that are impaired and/or on nonaccrual status, consumer loans (i.e., non-credit card) greater than 90 days past due and restructured loans. These loans, along with assets primarily consisting of foreclosed real estate, represent nonperforming assets.

The following table shows the Corporation's nonperforming assets for the past five years:

	December 31				
(Dollars in millions)	2000	1999	1998	1997	1996
Nonperforming Loans:					
Commercial	**$1,761**	$1,053	$ 729	$ 609	$536
Consumer (1)	**714**	506	478	416	376
Total (2)	**2,475**	1,559	1,207	1,025	912
Other, primarily other real estate owned	**98**	106	90	61	71
Total nonperforming assets	**$2,573**	$1,665	$1,297	$1,086	$983
Nonperforming assets/related assets	**1.48%**	1.02%	0.83%	0.68%	0.64%
Loans 90 days or more past due and accruing interest (1)	**$ 62**	$ 126	$ 239	$ 578	$542

(1) Prior year amounts were restated for comparison purposes to reflect a change in policy adopted in 2000 to classify consumer loans 90 days past due as nonperforming.

(2) The amount of interest on nonperforming loans that was contractually due in 2000 totaled $143 million. Of this amount, $22 million was actually recorded in 2000.

At December 31, 2000, nonperforming assets totaled $2.573 billion, compared with $1.665 billion at year-end 1999 and $1.297 billion at year-end 1998. The increase in nonperforming assets from year-end 1999 was primarily due to increases in nonperforming loans in the non-real estate portion of the commercial portfolio, and to a lesser extent, the consumer portfolio. The $208 million increase in consumer nonperforming loans in 2000 was attributable mainly to a deterioration in the home equity portfolio segment. Consumer nonperforming

loans are written down to net realizable value once they reach 120 days delinquent and within 60 days of bankruptcy notification, thus minimizing the potential for additional credit charge-offs in this portfolio segment. The $708 million increase in nonperforming loans in the commercial portfolio resulted from credit deterioration across several industries and leveraged acquisition finance transactions. During 2000, Management substantially increased its focus on reviewing and analyzing credit, including giving more weight to recent history in estimating the potential for borrower default. This has led in some cases to earlier recognition of nonperforming and problem assets as compared to previous years.

Despite the Corporation's diversified commercial portfolio, the Corporation has experienced credit quality deterioration in a number of distinct market segments. A weakening economy, among other things, had led to an increase in nonperforming loans. The Corporation has established processes for identifying potential problem areas of the portfolio, which currently include exposure to leveraged lending and acquisition finance activities, healthcare, automotive parts and manufacturing, business finance and leasing, professional services, miscellaneous transportation services, selected utilities, telecommunications, and companies engaged in ongoing asbestos litigation. The Corporation will continue its enhanced focus on identifying and monitoring these potential exposure areas.

Charge-offs

Managed net charge-offs increased 2% during 2000 to $4.728 billion, reflecting higher commercial charge-offs. This increase was partially offset by lower consumer and credit card charge-offs relative to the 1999 period, which reflected early adoption of certain new FFIEC consumer charge-off guidelines. The managed net charge-off rate decreased to 2.03% in 2000 versus 2.13% in 1999. Excluding the FFIEC-related charges adopted in 1999, the net charge-off rate for 2000 was five basis points higher than in 1999.

The following table shows a breakout of net charge-offs by portfolio segment for the past three years ended December 31:

	2000			1999			1998		
(Dollars in millions)	**Net charge-offs**	**Average balance**	**Net charge-off rate**	**Net charge-offs**	**Average balance**	**Net charge-off rate**	**Net charge-offs**	**Average balance**	**Net charge-off rate**
Commercial	**$ 597**	**$100,202**	**0.60%**	$ 306	$ 90,182	0.34%	$ 222	$ 82,118	0.27%
Consumer (1)	**547**	**66,812**	**0.82**	558	59,440	0.94	413	57,206	0.72
Credit card (1)(2)	**3,584**	**66,178**	**5.42**	3,790	68,980	5.49	3,369	60,532	5.57
Total—Managed	**4,728**	**$233,192**	**2.03%**	4,654	$218,602	2.13%	4,004	$199,856	2.00%
Securitized	**(3,337)**			(3,448)			(2,506)		
Total—Reported	**$ 1,391**	**$171,768**	**0.81%**	$ 1,206	$156,855	0.77%	$ 1,498	$154,952	0.97%

(1) Includes $143 million of consumer charge-offs and $183 million of securitized charge-offs taken in the fourth quarter of 1999 related to the early adoption of certain of the FFIEC's new consumer charge-off guidelines.

(2) Reported on a managed basis.

Charge-off Policies

A charge-off on commercial loans is recorded in the reporting period in which either an event occurs that confirms the existence of a loss or it is determined that a loan or a portion of a loan is uncollectible.

The timing and amount of the charge-off on consumer loans will depend on the type of loan, giving consideration to available collateral, as well as the circumstances giving rise to the delinquency. The Corporation adheres to uniform guidelines published by FFIEC in charging off consumer loans. A credit card loan is charged off when it becomes 180 days past due or in the event of bankruptcy notification, specifically, 60 days of receipt of notification. Consumer loans (i.e., non-credit card) are generally charged-off following a delinquency period of 120 days past due, or 60 days of receipt of notification in case of bankruptcy. Closed-end consumer loans such as auto loans and leases, and home mortgage loans, are typically written down to the extent of loss after considering the net realizable value of the collateral.

Allowance for Credit Losses

The allowance for credit losses is maintained at a level that in Management's judgment is adequate to provide for estimated probable credit losses inherent in various on- and off-balance sheet financial instruments. Reserves are based on an estimate of potential inherent loss at a point in time using a combination of empirically driven tests and Management's judgment. Each quarter, reserves are formally estimated by each line of business and reviewed and modified by the Corporate Risk Management Department and Senior Management. The allowance for credit losses also include provisions for losses on loans considered impaired and measured pursuant to Statement of Financial Accounting Standards (''SFAS'') No. 114, ''Accounting by Creditors for Impairment of a Loan'' (see Note 7 to the Consolidated Financial Statements on page 61). Securitized and held for sale loans, including credit card receivables, are not subject to this reserve process.

It is the Corporate Risk Management Department's responsibility to recommend a reserve and provision that result in adequate coverage of inherent losses within the Corporation's credit portfolios. The Corporate Risk Management Department's assessment is based on line-of-business reserve tests, portfolio-level econometric modeling and stress testing, as well as Management's judgment. The Corporate Risk Management Department also utilizes third-party analysis to validate internal measures of expected inherent loss, credit quality and reserve adequacy.

The table below summarizes the changes in the allowance for credit losses for the years ended December 31:

(In millions)	2000	1999	1998	1997	1996
Balance, beginning of year	**$2,285**	$2,271	$2,817	$2,687	$2,422
Charge-offs:					
Commercial:					
Domestic:					
Commercial	**618**	325	222	200	174
Real estate:					
Construction	**8**	5	3	3	3
Other	**11**	27	25	19	28
Lease financing	**7**	12	20	12	15
Foreign	**64**	41	52	—	2
Total commercial	**708**	410	322	234	222
Consumer:					
Residential real estate	**230**	189	74	52	32
Automotive:					
Loans	**215**	256	220	260	221
Leases	**91**	87	61	51	27
Other	**162**	203	246	256	209
Total consumer	**698**	735	601	619	489
Credit card	**261**	386	1,022	1,544	1,216
Total charge-offs	**1,667**	1,531	1,945	2,397	1,927
Recoveries:					
Commercial:					
Domestic:					
Commercial	**98**	70	68	97	87
Real estate:					
Construction	**1**	6	3	6	10
Other	**4**	25	23	29	27
Lease financing	**1**	2	5	3	4
Foreign	**7**	1	1	12	15
Total commercial	**111**	104	100	147	143
Consumer:					
Residential real estate	**17**	12	11	14	8
Automotive:					
Loans	**69**	82	92	105	93
Leases	**21**	23	21	17	5
Other	**44**	60	64	63	55
Total consumer	**151**	177	188	199	161
Credit card	**14**	44	159	164	101
Total recoveries	**276**	325	447	510	405
Net charge-offs:					
Commercial	**597**	306	222	87	79
Consumer	**547**	558	413	420	328
Credit Card	**247**	342	863	1,380	1,115
Total net charge-off	**1,391**	1,206	1,498	1,887	1,522
Provision for credit losses	**3,398**	1,249	1,408	1,988	1,716
Transfers	**(182)**	(29)	(456)	29	71
Balance, end of year	**$4,110**	$2,285	$2,271	$2,817	$2,687

Transfers from the allowance for credit losses primarily represent allocable credit reserves associated with consumer loan sale transactions, including securitization transactions.

Composition of Allowance for Credit Losses

While the allowance for credit losses is available to absorb credit losses in the entire portfolio, the tables below present an estimate of the allowance for credit losses allocated by loan type and the percentage of loans in each category to total loans as of December 31:

(Dollars in millions)	**2000**		**1999**		**1998**		**1997**		**1996**	
Commercial (1)	**$3,199**	**78%**	$ 972	43%	$ 834	37%	$ 660	23%	$ 674	25%
Consumer	**714**	**17**	486	21	440	19	484	17	345	13
Credit Card	**197**	**5**	148	6	199	9	813	29	930	35
Unallocated	**—**	**—**	679	30	798	35	860	31	738	27
Total	**$4,110**	**100%**	$2,285	100%	$2,271	100%	$2,817	100%	$2,687	100%
Percentage of loans to total loans:										
Commercial		**58%**		59%		57%		50%		48%
Consumer		**39**		39		37		36		36
Credit Card		**3**		2		6		14		16
Total		**100%**		100%		100%		100%		100%

(1) Includes reserves related to Business and Community Banking loans, which are included in the Retail business segment results.

The $1.825 billion increase in the allowance for credit losses in 2000, of which $1 billion relates to the fourth quarter, was due primarily to significantly higher commercial net charge-offs and nonperforming loans, and to some extent, portfolio growth. Contributing to the increase were refinements in the credit management process that involved analyzing all of the Corporation's credit exposure at an increasingly granular level. These actions include:

- Giving more weight to recent history when estimating expected default rates.
- Increasing the loss assumptions from default across most risk categories.
- Increasing the likelihood of draw downs against unfunded commitments.
- Stress-testing the portfolio based upon more recent, as well as long-term trends.

At December 31, 2000, the allowance for credit losses was 295% of current year net charge-offs (on a reported basis) as compared to a reserve coverage ratio of 189% at December 31, 1999. This increase reflected significant deterioration in certain components of the commercial portfolio, leading to a strengthening of loan loss reserves. The allowance for credit losses at December 31, 2000, represented 2.36% of period-end loans and 166% of nonperforming loans, up from 1.39% and 147%, respectively, at December 31, 1999. The allowance for credit losses established for specifically identified off-balance sheet lending exposures was insignificant at December 31, 2000.

Reserve Determination

The Corporation determines reserve amounts based upon the probable loss in the credit portfolios. The reserve is based on ranges of estimates and is intended to be adequate but not excessive. This process includes deriving probable loss estimates that are based on historical loss rates, portfolio stress testing of probable loss estimates and Management's judgment.

During the fourth quarter of 2000, the Corporation reviewed its practice of maintaining unallocated reserves in light of continuing refinement in loss estimation processes, including improvements in portfolio level stress testing techniques. It was concluded that the use of unallocated reserves would be discontinued. These reserves are now aligned with their respective portfolios.

Probable Loss Estimation

The Corporation employs several different methodologies for estimating probable losses. Methodologies are determined based on a number of factors, including type of asset (e.g., consumer installment versus commercial loan), risk measurement parameters (e.g., delinquency status and bureau score versus commercial risk rating), and risk management and collection processes (e.g., retail collection center versus centrally managed workout units).

For each of the consumer portfolios, including the credit card portfolio, reserves are established based on a statistical analysis of inherent loss over discrete periods of time. The analysis reviews historical losses, vintage performance, delinquencies and other risk characteristics of the various consumer products to estimate probable losses. These other risk characteristics evaluated may include, among other things, recent loss experience in the consumer portfolios, changes in origination sources, portfolio seasoning and underlying credit practices, including charge-off policies. These factors and analysis are updated on a quarterly basis.

For the commercial portfolio, the Corporation conducts a two-part test. First, significant credits that have a risk rating equivalent to the bank regulatory classifications of substandard, doubtful and loss are formally reviewed each quarter and asset-specific reserves are established as appropriate. Second, inherent losses for the remaining commercial portfolio are estimated by assigning a specific reserve factor to each risk category of the portfolio based on a statistical analysis of historical loss experience over a discrete period of time. During the second quarter of 2000, the Corporation refined its measurement process for estimating probable losses inherent in the commercial portfolio. To refine the process, the Corporation analyzed historical credit loss and risk-rating migration data. The results of the analysis showed deterioration in the Corporation's risk-class-specific default probabilities and loss given default estimates. The factors were updated to reflect a higher estimate of incurred losses in the portfolio, based on recent experience and Management's view of the current portfolio and economic conditions. The Corporation continues to review its estimated loss factors on a regular basis and updates such factors where appropriate.

Portfolio Stress-Testing

Stress-test based reserves are established in order to appropriately reflect the presence of indicators of inherent losses that are not fully reflected in the historical loss information. The factors considered include: nonperforming, charge-off, delinquency, portfolio growth and concentration trends; the imprecision inherent in the rating process that drives the application of reserve factors; and the effect of known changes in the economy or other events that affect loss performance and Management's judgment.

The Corporation has incorporated portfolio level stress testing since the first quarter of 1999. The focus of stress testing is to provide a range of reserve estimates which incorporate the Corporation's historical loss experience and the reserve impact of events that have occurred but which are not reflected in either the Corporation's historical expected loss factors or the current assigned risk rating.

Stress testing of the commercial portfolio is accomplished using a framework developed to test default and loss probability estimates and the expected downgrades to exposures in identified high-risk industries. This process includes: a base case scenario using three alternative market comparable probability sets and an estimated loss given default probability to measure the impact on reserves; determining the need to apply a higher loss given default probability to the base case since historical loss rates may vary over the business cycle; and the determination of trend based reserves in high-risk industries that may not be fully reflected in the historically based loss factors, using market-based tools and information as well as sanctioned macroeconomic forecasts.

Beginning in the second quarter of 2000, results of econometric modeling and stress testing of the consumer (i.e., non-credit card) portfolio by the Corporate Risk Management Department were formally incorporated into the estimation process. The purpose of this analysis is to quantify the impact of events that have occurred but whose effects are not yet incorporated into the historically based reserve rates. In this analysis, the consumer

subportfolios were subjected to seven distinct economic scenarios, and aggregate twelve-month losses were forecasted. Findings for the various scenarios were weighted to reflect the relative likelihood of the scenarios, and weighted average losses were obtained for each subportfolio within the consumer portfolio. The weighted average losses represent our best estimate of expected losses for each segment of the consumer portfolio. Based on an analysis of these tests and Management's judgment, line of business specific stress test based reserves were established. Specific factors incorporated into these tests included: increased concentration of higher loan-to-value ("LTV" greater than 90%) and sub-prime credits untested by a higher interest rate environment; higher concentration levels of used auto installment loans; lower new application quality; increased third party obligations; longer loan durations; and higher advance rates.

Beginning in the second quarter of 2000, results of econometric modeling and stress testing of the credit card portfolio by the Corporate Risk Management Department were formally incorporated into the estimation process. The purpose of this analysis is to quantify the impact of events that have occurred but whose effects are not yet incorporated into the historically based reserve rates. In this analysis, the subportfolios of First USA were subjected to seven distinct economic scenarios, and aggregate nine-month losses were forecasted. Findings for the various scenarios were weighted to reflect the relative likelihood of the scenarios and weighted average loss was obtained for the line of business. The weighted average loss represents our best estimate of expected losses for the credit card portfolio. Based on an analysis of these tests and Management's judgment, specific stress test based reserves were established for the credit card portfolio as detailed above.

Derivative Financial Instruments

The Corporation uses a variety of derivative financial instruments in its trading, asset and liability management, and corporate investment activities. See Note 21 (c), beginning on page 81, for a discussion of the nature and the terms of derivative financial instruments.

Notional Principal or Contractual Amounts of Derivative Financial Instruments

The following tables represent the gross notional principal or contractual amounts of outstanding derivative financial instruments used in certain activities:

December 31, 2000 (In billions)	Trading	Asset and Liability Management	Total
Interest rate contracts	**$ 695**	**$13**	**$ 708**
Foreign exchange contracts	**91**	**1**	**92**
Equity contracts	**8**	**—**	**8**
Commodity contracts	**3**	**—**	**3**
Total	**$ 797**	**$14**	**$ 811**
December 31, 1999 (In billions)			
Interest rate contracts	$ 895	$20	$ 915
Foreign exchange contracts	106	1	107
Equity contracts	10	—	10
Commodity contracts	1	—	1
Total	$1,012	$21	$1,033

These amounts indicate the volume of transaction activity, and they do not represent the market or credit risk associated with these instruments. In addition, these volumes do not reflect the netting of offsetting transactions.

Accounting for Derivative Financial Instruments

Derivative financial instruments used in trading activities are valued at estimated fair value. Such instruments include swaps, forwards, spot, futures, options, caps, floors and forward rate agreements and other conditional or exchange contracts in the interest rate, foreign exchange, equity and commodity markets. The estimated fair values are based on quoted market prices or pricing and valuation models on a present value basis using current market information. Realized and unrealized gains and losses, including any interest income or expense, are recorded in noninterest income as trading profits. Where appropriate, compensation for credit risk and ongoing servicing is deferred and recorded as income over the life of the derivative financial instruments.

Purchased option, cap and floor contracts are reported in derivative product assets, and written option, cap and floor contracts are reported in derivative product liabilities. For other derivative financial instruments, an unrealized gain is reported in derivative product assets, and an unrealized loss is reported in derivative product liabilities. However, fair value amounts recognized for derivative financial instruments executed with the same counterparty under a legally enforceable master netting arrangement are reported on a net basis. Cash flows from derivative financial instruments are reported net as operating activities.

Derivative financial instruments used in ALM activities, principally interest rate swaps, are typically classified as synthetic alterations or anticipatory hedges and are required to meet specific criteria. Such interest rate swaps are designated as ALM derivatives, and are linked to and adjust the interest rate sensitivity of a specific asset, liability, firm commitment, or anticipated transaction or a specific pool of transactions with similar risk characteristics. Interest rate swaps that do not meet these and the following criteria are designated as derivatives used in trading activities and are accounted for at estimated fair value.

Synthetic Alteration—(1) the asset or liability to be converted creates exposure to interest rate risk; (2) the swap is effective as a synthetic alteration of the balance sheet item; (3) the start date of the swap does not extend beyond that point in time at which it is believed that modeling systems produce reliable interest rate sensitivity information; and (4) the related balance sheet item, from trade date to final maturity, has sufficient balances for alteration.

Anticipatory Hedge—(1) the transaction to be hedged creates exposure to interest rate risk; (2) the swap acts to reduce inherent rate risk by moving closer to being insensitive to interest rate changes; (3) the swap is effective as a hedge of the transaction; (4) the significant characteristics and expected terms of the anticipated transaction are identified; and (5) it is probable that the anticipated transaction will occur.

Income or expense on most ALM derivatives used to manage interest rate exposure is recorded on an accrual basis, as an adjustment to the yield of the linked exposures over the periods covered by the contracts. This matches the income recognition treatment of that exposure, generally assets or liabilities carried at historical cost, that are recorded on an accrual basis. If an interest rate swap is terminated early or dedesignated as an ALM derivative, any unrecognized gain or loss at that point in time is deferred and amortized as an adjustment of the yield on the linked interest rate exposure position over the remaining periods originally covered by the swap. If all or part of a linked position is terminated, e.g., a linked asset is sold or prepaid, or if the amount of an anticipated transaction is likely to be less than originally expected, then the related pro rata portion of any unrecognized gain or loss on the swap is recognized in earnings at that time, and the related pro rata portion of the swap is subsequently accounted for at estimated fair value.

Income Resulting from Derivative Financial Instruments

The Corporation uses interest rate derivative financial instruments to reduce structural interest rate risk and the volatility of net interest margin. Net interest margin reflects the effective use of these derivatives. Without their use, net interest income would have been lower by $52 million in 2000, lower by $181 million in 1999 and lower by $78 million in 1998.

Deferred gains, net of deferred losses, on interest rate swaps terminated early or dedesignated as ALM derivatives totaled $19 million as of December 31, 2000. This amount will be amortized as an adjustment to interest income or expense on the linked interest rate exposure position. The net adjustment remaining to be amortized is $31 million in 2001, $12 million in 2002, $1 million in 2003 and $(25) million thereafter.

Credit Exposure Resulting from Derivative Financial Instruments

The Corporation maintains risk management policies that monitor and limit exposure to credit risks. For a further discussion of credit risks, see the "Credit Risk Management" section, beginning on page 26.

Credit exposure from derivative financial instruments arises from the risk of a counterparty default on the derivative contract. The amount of loss created by the default is the replacement cost or current fair value of the defaulted contract. The Corporation utilizes master netting agreements whenever possible to reduce its credit exposure from customer defaults. These agreements allow the netting of contracts with unrealized losses against contracts with unrealized gains to the same counterparty, in the event of a counterparty default.

The table below shows the impact of these master netting agreements:

	December 31	
(In millions)	2000	1999
Gross replacement cost	**$9,769**	$12,254
Less: Adjustment due to master netting agreements	**(7,222)**	(8,895)
Current credit exposure	**2,547**	3,359
Unrecognized net (gains) losses due to nontrading activity	**(225)**	13
Balance sheet exposure	**$2,322**	$ 3,372

Current credit exposure represents the total loss the Corporation would have suffered had every counterparty been in default on those dates. These amounts are adjusted by the unrealized and unrecognized gains and losses on derivatives used in asset and liability management activities to arrive at the balance sheet exposure.

Asset and Liability Management Derivatives

Access to the derivatives market is an important element in maintaining the Corporation's desired interest rate risk position. In general, the assets and liabilities generated through ordinary business activities do not naturally create offsetting positions with respect to repricing, basis or maturity characteristics. Using off-balance sheet instruments, principally plain vanilla interest rate swaps (ALM swaps), the interest rate sensitivity of specific on-balance sheet transactions, as well as pools of assets, is adjusted to maintain the desired interest rate risk profile.

At December 31, 2000, the notional value of ALM interest rate swaps tied to specific assets or liabilities totaled $12.6 billion as follows:

(In millions)	Receive Fixed Pay Floating	Pay Fixed Receive Floating	Basis Swaps	Total
Interest rate swaps associated with:				
Investment securities	$ —	$ 50	$—	$ 50
Funds borrowed (including long-term debt)	5,300	7,212	60	12,572
Total	$5,300	$7,262	$60	$12,622

Interest rate swaps used to adjust the interest rate sensitivity of specific transactions will not need to be replaced at maturity, since the corresponding asset or liability will mature along with the swap.

The Corporation has reviewed and modified its policies and procedures regarding the designation of hedged assets and liabilities in response to the January 1, 2001 adoption of a new accounting standard for derivatives, SFAS No. 133, ''Accounting for Derivative Instruments and Hedging Activities''. Certain types of assets and liabilities are less likely to be designated as hedged under the new accounting standard. However, this new standard has had only a minor impact on the Corporation's ability to hedge structural interest rate risk using interest rate swaps. The accounting treatment for derivative instruments used in hedging activities changed significantly on January 1, 2001, with the adoption of SFAS 133. See Note 1(j), beginning on page 54 for more information.

Asset and Liability Management Swaps—Maturities and Rates

The notional amounts, expected maturity, and weighted-average pay and receive rates for the ALM swap position at December 31, 2000, are summarized as follows:

(Dollars in millions)	2001	2002	2003	2004	2005	Thereafter	Total
Receive fixed/pay floating swaps:							
Notional amount	$ 475	$ —	$ 25	$ —	$2,000	$2,800	$ 5,300
Weighted average:							
Receive rate	7.24%	—%	7.61%	—%	7.12%	6.97%	7.05%
Pay rate	6.85%	—%	7.17%	—%	6.85%	6.87%	6.86%
Pay fixed/receive floating swaps:							
Notional amount	$ —	$2,787	$1,250	$2,690	$ 250	$ 285	$ 7,262
Weighted average:							
Receive rate	—%	7.03%	7.06%	6.99%	7.23%	7.11%	7.03%
Pay rate	—%	6.90%	7.18%	6.69%	7.67%	6.91%	6.90%
Basis swaps:							
Notional amount	$ 50	$ —	$ —	$ 10	$ —	$ —	$ 60
Total notional amount	$ 525	$2,787	$1,275	$2,700	$2,250	$3,085	$12,622

For generic interest rate swaps, the maturities are contractual. Variable interest rates—which generally are the one-month, three-month and six-month London interbank offered rates (''LIBOR'') in effect on the date of repricing—are assumed to remain constant. However, interest rates will change and consequently will affect the related weighted-average information presented.

LOAN SECURITIZATIONS

The Corporation transforms loans into securities, which are sold to investors—a process referred to as securitization. The Corporation primarily securitizes credit card receivables but also securitizes home equity loans and consumer assets to a limited extent. In a credit card securitization, a designated pool of credit card receivables is removed from the balance sheet and transferred to a third-party special purpose entity (''SPE'' or ''Trust''), that in turn sells securities to investors entitling them to receive specified cash flows during the life of the security. The proceeds from the issuance are then distributed by the SPE to the Corporation as consideration for the loans transferred. Following a securitization, the Corporation receives: fees for servicing the receivables and any excess finance charges, yield-related fees, and interchange revenue on the receivables over and above the interest paid to the investors, net credit losses and servicing fees (termed ''the excess spread'').

The Corporation's continuing involvement in the securitized assets includes the process of managing and servicing the transferred receivables, as well as maintaining an undivided, pro rata interest in all credit card receivables that have been securitized, referred to as seller's interest, which is generally equal to the pool of assets included in the securitization less the investor's portion of those assets. As the amount of the loans in the securitized pool fluctuates due to customer payments, purchases, cash advances, and credit losses, the carrying

amount of the seller's interest will vary. However, the seller's interest is required to be maintained at a minimum level to ensure receivables are available for allocation to the investor interest. This minimum level is generally between 4% and 7% of the SPE's principal receivables.

Investors in the beneficial interests of the securitized loans have no recourse against the Corporation if cash flows generated from the securitized loans are inadequate to service the obligations of the SPE. To help ensure that adequate funds are available in the event of a shortfall, the Corporation is required to deposit funds into cash spread accounts if excess spread falls below certain minimum levels. Spread accounts are funded from excess spread that would normally be returned to the Corporation. In addition, various forms of other credit enhancement are provided to protect more senior investor interests from loss. Credit enhancements associated with credit card securitizations, such as cash collateral or spread accounts, totaled $311 million at December 31, 2000, and are classified on the balance sheet as other assets.

The following comprised the Corporation's managed credit card loans at December 31, 2000:

(In millions)	
Owned credit card loans—held in portfolio	$ 2,835
Owned credit card loans—held for future securitization	1,909
Seller's interest in credit card loans (investment securities) (1)	22,446
Total credit card loans reflected on balance sheet	27,190
Securities sold to investors and removed from balance sheet	39,795
Managed credit card loans	$66,985

(1) Includes approximately $900 million of credit card loans sold in a securitization occurring in the first quarter of 2001.

For analytical purposes only, the following table shows income statement line items adjusted for the net impact of securitization of credit card receivables for the years ended December 31:

(Dollars in millions)	Reported	Credit Card Securitizations	Managed
		2000	
Net interest income—tax-equivalent basis	**$ 8,974**	**$ 4,532**	**$ 13,506**
Provision for credit losses	**3,398**	**3,337**	**6,735**
Noninterest income	**5,090**	**(1,195)**	**3,895**
Noninterest expense	**11,608**	**—**	**11,608**
Net income (loss)	**(511)**	**—**	**(511)**
Total average loans	**171,768**	**61,424**	**233,192**
Total average earning assets	**241,058**	**42,977**	**284,035**
Total average assets	**271,984**	**42,977**	**314,961**
Net interest margin	**3.72%**	**10.55%**	**4.76%**
Delinquency and charge-off rates:			
Credit card delinquencies over 30 days as a percentage of ending credit card loan balances	**2.74%**	**4.64%**	**4.51%**
Credit card delinquencies over 90 days as a percentage of ending credit card loan balances	**1.20%**	**2.08%**	**2.02%**
Net credit card charge-offs as a percentage of average credit card loan Balances	**5.20%**	**5.43%**	**5.42%**
		1999	
Net interest income—tax-equivalent basis	$ 9,142	$ 5,315	$ 14,457
Provision for credit losses	1,249	3,265	4,514
Noninterest income	8,692	(2,050)	6,642
Noninterest expense	11,490	—	11,490
Net income	3,479	—	3,479
Total average loans	156,855	61,747	218,602
Total average earning assets	223,539	45,698	269,237
Total average assets	256,491	45,698	302,189
Net interest margin	4.09%	11.63%	5.37%
Delinquency and charge-off rates:			
Credit card delinquencies over 30 days as a percentage of ending credit card loan balances	4.06%	4.60%	4.57%
Credit card delinquencies over 90 days as a percentage of ending credit card loan balances	1.87%	2.15%	2.13%
Net credit card charge-offs as a percentage of average credit card loan Balances	4.73%	5.58%	5.49%

Capital Management

Capital represents the stockholders' investment on which the Corporation strives to generate attractive returns. It is the foundation of a cohesive risk management framework and links return with risk. Capital supports business growth and provides protection to depositors and creditors.

In conjunction with the annual financial planning process, a capital plan is established to ensure that the Corporation and all of its subsidiaries have capital structures consistent with prudent management principles and regulatory requirements.

Economic Capital

An important aspect of risk management and performance measurement is the ability to evaluate the risk and return of a business unit, product or customer consistently across all lines of business. The Corporation's economic capital framework facilitates this standard measure of risk and return. Business units are assigned capital consistent with the underlying risks of their product methodology set, customer base and delivery channels. The following principles are inherent in the capital attribution employed:

- An equal amount of capital is assigned for each measured unit of risk.
- Risk is defined in terms of ''unexpected'' losses over the life of the exposure, measured at a confidence interval consistent with that level of capitalization necessary to achieve a targeted AA debt rating. Unexpected losses are in excess of those normally incurred and for which reserves are maintained.
- Business units are assessed a uniform charge against allotted capital, representing a target hurdle rate on equity investments. Returns on capital in excess of the hurdle rate contribute to increases in shareholder value.

Four forms of risk are measured—credit, market, operational and lease residual. Credit risk capital is determined through an analysis of both historical loss experience and market expectations. Market risk capital is set consistent with value at risk limits established by the Corporation's risk oversight committees. Operational risk capital incorporates event and technology risks, as well as the general business risks arising from operating leverage. The operating risk evaluation process involves an examination of various risk factors that contribute to a greater likelihood of loss due to business failure, fraud or processing error. Finally, lease residual risk capital covers the potential for losses arising from the disposition of assets returned at the end of lease contracts. This price risk is analyzed based upon historical loss experiences and market factors, as well as by reviewing event-specific scenarios.

The economic capital process provides a valuable analytical tool that is critical to the understanding of business segment performance trends. The methodologies employed are subject to ongoing development and review. Over time, the Corporation's view of individual risks and associated capital will likely change given improvements in our ability to quantify risks inherent in various business activities.

Regulatory Capital Requirements

Bank One is subject to capital requirements and guidelines imposed on bank holding companies by the Federal Reserve Board. The Office of the Comptroller of the Currency (''OCC''), the Federal Deposit Insurance Corporation (''FDIC'') and the Federal Reserve Board impose similar requirements and guidelines on the Banks within their respective jurisdictions. These capital requirements establish higher capital standards for banks and bank holding companies that assume greater risks. For this purpose, a bank holding company's or bank's assets and certain specified off-balance sheet commitments are assigned to four risk categories, each weighted differently based on the level of credit risk ascribed to such assets or commitments. A bank holding company's or bank's total capital, in turn, is divided into three tiers:

- core (''Tier 1'') capital, which includes common equity, certain qualifying cumulative and noncumulative perpetual preferred stock and related surplus, and minority interests in equity accounts of consolidated subsidiaries;
- supplementary (''Tier 2'') capital, which includes perpetual preferred stock and related surplus not meeting the Tier 1 definition, hybrid capital instruments, perpetual debt and mandatory convertible securities, subordinated debt, intermediate-term preferred stock, and allowances for loan and lease losses; and
- market risk (''Tier 3'') capital, which includes qualifying unsecured subordinated debt.

Goodwill, certain identifiable intangible assets, and certain other assets must be deducted in calculating the sum of the core capital elements.

Bank One, like other bank holding companies, is required to maintain Tier 1 and total capital (the sum of Tier 1, Tier 2 and Tier 3 capital) equal to at least 4% and 8%, respectively, of its total risk-weighted assets. At December 31, 2000, Bank One met both requirements, with Tier 1 and total capital equal to 7.3% and 10.8%, respectively, of its total risk-weighted assets. Each of the Banks was in compliance with its applicable minimum capital requirement at December 31, 2000.

The Federal Reserve Board, the FDIC and the OCC have adopted rules to incorporate market and interest-rate risk components into their risk-based capital standards. Under these market risk requirements, capital is allocated to support the amount of market risk related to a financial institution's ongoing trading activities.

The Federal Reserve Board also requires bank holding companies to maintain a minimum ''leverage ratio'' (Tier 1 capital to adjusted average assets) of 3% for bank holding companies that have the highest regulatory rating or have implemented the risk-based capital measures for market risk, or 4% for holding companies that do not meet either of these requirements. Each of the Banks is subject to similar requirements adopted by the applicable federal regulatory agency. At December 31, 2000, Bank One's leverage ratio was 7.3%, and each of the Banks was in compliance with its applicable leverage ratio requirement.

Each federal banking regulator may set capital requirements higher than the minimums noted above if circumstances warrant it. For example, institutions experiencing or anticipating significant growth may be expected to maintain capital ratios, including tangible capital positions, well above the minimum levels. Furthermore, the Federal Reserve Board has indicated that it will consider a ''tangible Tier 1 capital leverage ratio'' (deducting all intangibles) and other measures of capital strength in evaluating proposals for expansion or new activities. No federal banking regulator has imposed any such special capital requirement on Bank One or the Banks.

Failure to meet capital requirements could subject a bank to a variety of enforcement remedies, including the termination of deposit insurance by the FDIC, and to certain restrictions on its business, which are described below.

The Federal Deposit Insurance Corporation Improvement Act of 1991 (''FDICIA''), among other things, identifies five capital categories (from ''well capitalized'' to ''critically undercapitalized'') for insured depository institutions and requires the respective federal bank regulatory agencies to implement systems for ''prompt corrective action'' for insured depository institutions that do not meet minimum capital requirements within these categories.

Failure to meet the capital guidelines could subject a depository institution to capital-raising requirements. An ''undercapitalized'' depository institution must develop a capital restoration plan, and its parent holding company must guarantee the bank's compliance with the plan. In the event of the bankruptcy of the parent holding company, this guarantee would take priority over the parent's general unsecured creditors. In addition, FDICIA requires the federal bank regulatory agencies to prescribe certain non-capital standards for safety and soundness relating generally to operations and management, asset quality and executive compensation, and it permits regulatory action against a financial institution that does not meet these standards.

As of December 31, 2000, each Bank was ''well capitalized'' based on the ''prompt corrective action'' ratios and guidelines described above. It should be noted, however, that a Bank's capital category is determined solely for the purpose of applying the federal banking agencies' ''prompt corrective action'' regulations; the capital category may not constitute an accurate representation of the Bank's overall financial condition or prospects.

Selected Capital Ratios

The Corporation aims to maintain regulatory capital ratios, including those of the principal banking subsidiaries, in excess of the well-capitalized guidelines under federal banking regulations. The Corporation has maintained a well-capitalized regulatory position of the past five years.

The tangible common equity to tangible managed assets ratio is also monitored. This ratio adds securitized credit card loans to reported total assets and is calculated net of total intangible assets. The tangible common equity to tangible managed assets ratio was 5.5% at December 31, 2000, down from 5.7% at December 31, 1999. Tier 1 and Total Capital ratios were 7.3% and 10.8%, respectively, at December 31, 2000, down from 7.7% and up from 10.7%, respectively, at December 31, 1999.

The Corporation's capital ratios that adhere to regulatory guidelines appear in the table below:

	December 31					Well-Capitalized Regulatory Guidelines
	2000	1999	1998	1997	1996	
Regulatory leverage (1)	**7.3%**	7.7%	8.0%	7.8%	8.9%	3.0%
Risk-based capital ratios (1)						
Tier 1	**7.3**	7.7	7.9	8.2	9.5	6.0
Total	**10.8**	10.7	11.3	12.3	13.6	10.0
Common equity/managed assets	**6.0**	6.3	6.7	6.7	8.0	
Tangible common equity/tangible managed assets	**5.5**	5.7	5.8	6.2	6.9	—
Double leverage ratio (1)	**108**	112	108	107	107	—
Divided payout ratio	**N/M**	57	58	61	38	—

(1) Includes trust preferred capital securities.
N/M—Not meaningful.

The components of the Corporation's regulatory risk-based capital and risk-weighted assets are as follows December 31:

(In millions)	**2000**	1999	1998	1997	1996
Regulatory risk-based capital:					
Tier 1 capital	**$ 19,824**	$ 20,247	$ 19,495	$ 17,958	$ 19,241
Tier 2 capital	**9,316**	7,967	8,295	9,000	8,196
Total capital	**$ 29,140**	$ 28,214	$ 27,790	$ 26,958	$ 27,437
Total risk-weighted assets	**$270,182**	$263,169	$244,473	$219,557	$202,213

In deriving Tier 1 and total capital, goodwill and other nonqualifying intangible assets are deducted as indicated December 31:

(In millions)	**2000**	1999	1998	1997	1996
Goodwill	**$ 858**	$ 934	$1,075	$1,120	$ 920
Other nonqualifying intangibles	**375**	669	637	109	61
Subtotal	**1,233**	1,603	1,712	1,229	981
Qualifying intangibles	**214**	583	984	473	278
Total intangibles	**$1,447**	$2,186	$2,696	$1,702	$1,259

Dividend Policy

The Corporation's common dividend policy reflects its earnings outlook, desired payout ratios, the need to maintain an adequate capital level and alternative investment opportunities. The common dividend payout ratio

is targeted in the range of 25%—30% of earnings over time. Common stock dividends declared for 2000 were $1.26 per share compared with $1.68 per share for 1999. This reflects a 50% reduction of the quarterly dividend rate from 42 cents per share to 21 cents per share in the third quarter of 2000. On January 16, 2001, the Corporation declared its quarterly common cash dividend of 21 cents per share, payable on April 1, 2001.

On January 20, 1998, Banc One declared a 10% common stock dividend to shareholders of record on February 12, 1998. On January 18, 2000, the Corporation announced the discontinuation of the biannual 10% stock dividend.

Double Leverage

Double leverage is the extent to which the Corporation's debt is used to finance investments in subsidiaries. Double leverage was 108% at December 31, 2000 and 112% at December 31, 1999. Trust Preferred Capital Securities of $2.483 billion in 2000 and $1.578 billion in 1999 were included in capital for purposes of this calculation.

Stock Repurchase Program and Other Capital Activities

On May 18, 1999, the Corporation's Board of Directors authorized the purchase of up to 65 million shares of the Corporation's common stock. As of December 31, 2000, the Corporation had purchased 36.6 million shares of common stock at an average price of $44.95 per share. No shares have been repurchased under the authorized plan since September 30, 1999.

On January 30, 2001, the Corporation added to its Tier 1 capital through the sponsorship of a trust that issued $300 million aggregate principal amount of trust preferred securities, maturing on January 30, 2031, with a distribution rate of 8.00%. The sole asset of the sponsored trust is $309.3 million principal amount of 8.00% junior subordinated debt of the Corporation that will mature on January 30, 2031, and is redeemable prior to maturity at the Corporation's option on or after January 30, 2006.

During 2000, the Corporation added to its Tier 1 capital through the sponsorship of three trusts that issued $915 million in aggregate principal amount of trust preferred securities. During 1999, the Corporation sponsored one trust that issued $575 million in aggregate principal amount of trust preferred securities. These preferred securities are tax-advantaged issues that qualify for Tier 1 capital treatment. See Note 12 to the Corporation's consolidated financial statements for more detail.

On August 10, 1999, the Corporation redeemed all of its outstanding 7½% Preferred Purchase Units, totaling $150 million. The redemption price was $25.00 per unit, plus accrued and unpaid interest and contract fees totaling $0.47 per unit.

During 2000 and 1999, the Corporation strengthened its capital position through the issuance of $1 billion and $350 million of subordinated debt, respectively.

On December 1, 2000, the Corporation converted all outstanding 12¾% First Commerce Convertible Debenture Bonds, Series A and B. The conversion rate was 18.9473. All of the debentures were converted to shares of the Corporation's common stock.

Consolidated Balance Sheets

BANK ONE CORPORATION and Subsidiaries

(Dollars in millions)	December 31 2000	1999
Assets		
Cash and due from banks	**$ 17,291**	$ 16,076
Interest-bearing due from banks	**5,210**	6,645
Federal funds sold and securities under resale agreements	**4,737**	9,782
Trading assets	**2,788**	7,952
Derivative product assets	**2,322**	3,372
Investment securities	**50,561**	47,912
Loans:		
Commercial	**100,460**	96,352
Consumer	**69,047**	63,488
Credit card	**4,744**	4,037
Allowance for credit losses	**(4,110)**	(2,285)
Loans, net	**170,141**	161,592
Premises and equipment, net	**2,894**	3,317
Customers' acceptance liability	**402**	366
Other assets	**12,954**	12,411
Total assets	**$269,300**	$269,425
Liabilities		
Deposits:		
Demand	**$ 30,738**	$ 31,194
Savings	**63,414**	64,435
Time	**47,958**	36,877
Foreign offices	**24,967**	29,772
Total deposits	**167,077**	162,278
Federal funds purchased and securities sold under repurchase agreements	**12,120**	18,720
Other short-term borrowings	**18,003**	21,211
Long-term debt	**38,428**	33,857
Guaranteed preferred beneficial interest in the Corporation's junior subordinated debt	**2,483**	1,578
Acceptances outstanding	**402**	366
Derivative product liabilities	**2,212**	3,332
Other liabilities	**9,940**	7,993
Total liabilities	**250,665**	249,335
Stockholders' Equity		
Preferred stock	**190**	190
Common stock—$0.01 par value	**12**	12
Number of common shares (in thousands):	**2000** / **1999**	
Authorized	**2,500,000** / 2,500,000	
Issued	**1,181,386** / 1,182,121	
Outstanding	**1,159,829** / 1,147,343	
Surplus	**10,487**	10,799
Retained earnings	**9,060**	11,037
Accumulated other adjustments to stockholders' equity	**(5)**	(263)
Deferred compensation	**(121)**	(118)
Treasury stock, at cost (21,557,000 shares in 2000 and 34,778,000 shares in 1999)	**(988)**	(1,567)
Total stockholders' equity	**18,635**	20,090
Total liabilities and stockholders' equity	**$269,300**	$269,425

The accompanying notes are an integral part of this statement.

CONSOLIDATED INCOME STATEMENTS

BANK ONE CORPORATION and Subsidiaries

(In millions, except per share data)	For the Year Ended December 31 2000	1999	1998
Interest Income:			
Loans, including fees	**$15,214**	$13,051	$14,106
Bank balances	**503**	233	331
Federal funds sold and securities under resale agreements	**577**	445	423
Trading assets	**440**	330	367
Investment securities	**3,344**	3,235	2,297
Total	**20,078**	17,294	17,524
Interest Expense:			
Deposits	**6,137**	4,651	4,943
Federal funds purchased and securities under repurchase agreements	**1,142**	935	1,090
Other short-term borrowings	**1,216**	942	737
Long-term debt	**2,747**	1,745	1,407
Total	**11,242**	8,273	8,177
Net Interest Income	**8,836**	9,021	9,347
Provision for credit losses	**3,398**	1,249	1,408
Net Interest Income After Provision for Credit Losses	**5,438**	7,772	7,939
Noninterest Income:			
Non-deposit service charges	**1,537**	1,502	1,390
Credit card revenue	**2,299**	3,413	3,096
Service charges on deposits	**1,310**	1,283	1,255
Fiduciary and investment management fees	**783**	793	807
Investment securities gains (losses)	**(235)**	509	405
Trading	**134**	147	141
Other income (loss)	**(738)**	1,045	977
Total	**5,090**	8,692	8,071
Noninterest Expense:			
Salaries and employee benefits	**4,388**	4,271	4,477
Occupancy and equipment expense	**1,010**	910	845
Outside service fees and processing	**1,532**	1,743	1,349
Marketing and development	**874**	1,188	1,024
Communication and transportation	**841**	829	781
Depreciation	**454**	460	512
Other intangible amortization	**410**	168	91
Goodwill amortization	**70**	69	77
Other	**1,868**	1,298	1,327
Total noninterest expense before merger and restructuring charges	**11,447**	10,936	10,483
Merger-related and restructuring charges	**161**	554	1,062
Total	**11,608**	11,490	11,545
Income (Loss) Before Income Taxes	**(1,080)**	4,974	4,465
Applicable income taxes (benefit)	**(569)**	1,495	1,357
Net Income (Loss)	**$ (511)**	$ 3,479	$ 3,108
Net Income (Loss) Attributable to Common Stockholders' Equity	**$ (523)**	$ 3,467	$ 3,094
Earnings (Loss) Per Share:			
Basic	**$ (0.45)**	$ 2.97	$ 2.65
Diluted	**$ (0.45)**	$ 2.95	$ 2.61

The accompanying notes are an integral part of this statement.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

BANK ONE CORPORATION and Subsidiaries

(In millions)	Preferred Stock	Common Stock	Surplus	Retained Earnings	Accumulated Other Adjustments to Stockholders' Equity	Deferred Compensation	Treasury Stock	Total Stockholders' Equity
Balance—December 31, 1997	$ 326	$12	$12,584	$ 8,063	$ 209	$(137)	$(2,007)	$19,050
Net income				3,108				3,108
Change in fair value, investment securities—available for sale, net of taxes					15			15
Translation gain, net of hedge results and taxes					15			15
Net income and changes in accumulated other adjustments to stockholders' equity								3,138
Cash dividends declared:								
On common stock				(1,228)				(1,228)
On preferred stock				(5)				(5)
On common stock by pooled affiliates				(401)				(401)
On preferred stock by pooled affiliates				(9)				(9)
Conversion of preferred stock	(136)		136					—
Issuance of stock			(189)				430	241
Acquisition of subsidiaries							2	2
Purchase of common stock							(375)	(375)
Cancellation of shares held in treasury			(1,866)				1,866	—
Awards granted, net of forfeitures and amortization						29		29
Other			104			14		118
Balance—December 31, 1998	190	12	10,769	9,528	239	(94)	(84)	20,560
Net income				3,479				3,479
Change in fair value, investment securities—available for sale, net of taxes					(489)			(489)
Translation (loss), net of hedge results and taxes					(13)			(13)
Net income and changes in accumulated other adjustments to stockholders' equity								2,977
Cash dividends declared:								
On common stock				(1,958)				(1,958)
On preferred stock				(12)				(12)
Issuance of stock			(14)				175	161
Purchase of common stock							(1,677)	(1,677)
Awards granted, net of forfeitures and amortization						(24)		(24)
Other			44				19	63
Balance—December 31, 1999	190	12	10,799	11,037	(263)	(118)	(1,567)	20,090
Net loss				**(511)**				**(511)**
Change in fair value, investment securities—available for sale, net of taxes					**256**			**256**
Translation gain, net of hedge results and taxes					**2**			**2**
Net loss and changes in accumulated other adjustments to stockholders' equity								**(253)**
Cash dividends declared:								
On common stock				**(1,454)**				**(1,454)**
On preferred stock				**(12)**				**(12)**
Issuance of stock			**(302)**				**615**	**313**
Purchase of common stock							**(17)**	**(17)**
Awards granted, net of forfeitures and amortization						**(34)**		**(34)**
Other			**(10)**			**31**	**(19)**	**2**
Balance—December 31, 2000	**$ 190**	**$12**	**$10,487**	**$ 9,060**	**$ (5)**	**$(121)**	**$ (988)**	**$18,635**

The accompanying notes are an integral part of this statement.

Consolidated Statements of Cash Flows

BANK ONE CORPORATION and Subsidiaries

(In millions)	For the Year Ended December 31 2000	1999	1998
Cash Flows from Operating Activities:			
Net income (loss)	**$ (511)**	$ 3,479	$ 3,108
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	**934**	697	680
Provision for credit losses	**3,398**	1,249	1,408
Equity securities gains	**(193)**	(415)	(250)
Investment securities (gains) losses	**429**	(94)	(155)
Net (increase) decrease in net derivative product assets	**(71)**	(233)	187
Net (increase) decrease in trading assets	**11,691**	(292)	(180)
Net (increase) decrease in other assets	**(655)**	245	(2,290)
Net increase (decrease) in other liabilities	**1,502**	(830)	(35)
Gain on sale of banks and branch offices	**—**	(348)	(343)
Merger-related and restructuring charges	**161**	276	1,026
Other operating adjustments	**143**	(100)	1,516
Net cash provided by operating activities	**16,828**	3,634	4,672
Cash Flows from Investing Activities:			
Net (increase) decrease in federal funds sold and securities under resale agreements	**5,045**	80	(695)
Securities available for sale:			
Purchases	**(72,098)**	(56,564)	(27,077)
Maturities	**17,882**	16,150	7,336
Sales	**48,960**	38,361	18,543
Securities held to maturity:			
Maturities	**—**	—	104
Credit card receivables securitized	**—**	7,279	10,323
Net increase in loans	**(14,903)**	(21,377)	(20,831)
Loan recoveries	**276**	325	447
Net cash and cash equivalents due to mergers, acquisitions and dispositions	**—**	(1,669)	(2,337)
Additions to premises and equipment	**(533)**	(593)	(824)
All other investing activities, net	**(1,194)**	41	(4,854)
Net cash used in investing activities	**(16,565)**	(17,967)	(19,865)
Cash Flows from Financing Activities:			
Net increase in deposits	**4,681**	3,907	10,548
Net increase (decrease) in federal funds purchased and securities under repurchase agreements	**(6,599)**	(4,444)	2,819
Net increase (decrease) in other short-term borrowings	**(3,208)**	4,274	3,992
Proceeds from issuance of long-term debt	**13,914**	28,736	19,062
Repayment of long-term debt	**(9,237)**	(16,245)	(18,062)
Cash dividends paid	**(1,222)**	(2,420)	(1,322)
Proceeds from issuance of trust preferred stock	**911**	575	—
Proceeds from issuance of common and treasury stock	**152**	61	161
Purchase of treasury stock	**(3)**	(1,647)	(375)
All other financing activities, net	**(19)**	(238)	(4)
Net cash provided by (used in) financing activities	**(630)**	12,559	16,819
Effect of Exchange Rate Changes on Cash and Cash Equivalents	**147**	(25)	604
Net Increase (Decrease) in Cash and Cash Equivalents	**(220)**	(1,799)	2,230
Cash and Cash Equivalents at Beginning of Year	**22,721**	24,520	22,290
Cash and Cash Equivalents at End of Year	**$ 22,501**	$ 22,721	$ 24,520
Other Cash-Flow Disclosures:			
Interest paid	**$ 10,777**	$ 8,082	$ 8,281
State and federal income taxes paid	**510**	704	680

The accompanying notes are an integral part of this statement.

BANK ONE CORPORATION and Subsidiaries

NOTE 1—Summary of Significant Accounting Policies

The consolidated financial statements of BANK ONE CORPORATION (''the Corporation'' and ''Bank One'') and subsidiaries have been prepared in conformity with generally accepted accounting principles. Management is required to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes that could differ from actual results. Certain prior-year financial statement information has been reclassified to conform to the current year's financial statement presentation. Consolidated financial statements have been restated to include the results of operations, financial position and changes in cash flows for each period in which an acquisition was accounted for as a pooling of interests. Adjustments to conform accounting policies have been made upon integration of each acquired entity.

(a) Principles of Consolidation

The Corporation's consolidated financial statements include all accounts of the Corporation (the ''Parent Company'') and all significant majority-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated.

(b) Trading Activities

Trading assets and liabilities are carried at fair value. Trading profits include realized and unrealized gains and losses from both cash and derivative financial instruments used in trading activities. Trading profits also include any interest income or expense from derivative instruments. Trading activities involve instruments with interest rate, exchange rate, equity price and commodity price market risk.

(c) Investment Securities

Debt and equity investment securities classified as available-for-sale are carried at fair value. Fair value for venture capital investments that are publicly traded is determined using quoted market prices when the investment is unrestricted; otherwise fair value is estimated using quoted market prices adjusted for market liquidity and sale restrictions. Fair value for venture capital investments that are not publicly traded is estimated based on the investees' financial results, conditions and prospects, values of comparable public companies, market liquidity and sales restrictions. Unrealized and realized gains and losses related to venture capital investments and realized gains and losses, including other than temporary impairments, on other available-for-sale equity securities are included in noninterest income as equity securities gains. Unrealized gains and losses, net of taxes, on all other available-for-sale securities are included in accumulated other adjustments to stockholders' equity. Realized gains and losses, including other than temporary impairments, on available-for-sale investment debt securities are included in investment securities gains. The specific identification method is used to calculate realized gains or losses.

(d) Loans

Loans held for the foreseeable future are carried at cost. Unearned income includes deferred loan origination fees reduced by loan origination costs. Loans held for sale are carried at the lower of cost or fair value with unrealized losses included in other income. Realized gains or losses resulting from loan sales typically are included in other income but may be recorded as a recovery or charge-off when the shortfall is primarily credit related. The Corporation typically provides lease financing to its customers through direct financing leases. Leveraged leases, which represent direct financing leases involving nonrecourse debt, also are provided to customers.

Loan origination fees and commitment fees are typically deferred and amortized over the life of the related loan. Loan origination fees and costs on credit card and other revolving loans are typically deferred and amortized

into interest income using a straight-line method over one year. Other credit-related fees, such as syndication management fees, commercial letter of credit fees, and fees on unused, available lines of credit, are recorded as service charges and commissions when received or over time to match the earnings process.

Direct financing leases are recorded at the aggregate amount of lease payments to be received plus the estimated residual values of the underlying leased assets, plus any unamortized initial direct costs, less unearned income. Leveraged leases are recorded net of nonrecourse debt. Income from direct lease financing is recognized over the lives of the leases on an approximate level rate of return on the unrecovered investment. The income recognition pattern for leveraged leases is to record losses in the early years and earnings in the later years. Residual values of leased assets are reviewed periodically for reasonableness. Declines in residual values judged to be other than temporary are recognized in the period such determinations are made.

(e) Nonperforming Loans

A loan is considered nonperforming when placed on nonaccrual status, or when renegotiated at terms that represent an economic concession to the borrower. Commercial nonperforming loans are generally identified as impaired loans. An economic concession on a renegotiated loan may represent forgiveness of principal and/or interest or a below-market interest rate offered to the borrower to maximize recovery of the loan. Generally, this occurs when the borrower's cash flow is insufficient to service the loan under its original terms. Subject to the nonaccrual policy below, interest on these loans is accrued at the reduced rates.

Management places a commercial loan or lease financing receivable on nonaccrual status when the collection of contractual principal or interest is deemed doubtful, or it becomes 90 days or more past due, is not well-secured and in the process of collection. Accrued but uncollected interest is reversed and charged against interest income. Subsequently, the commercial loan or lease financing receivable is accounted for on a cash basis. Cash payments received are recognized either as interest income or as a reduction of principal when collection of principal is doubtful. A commercial loan or lease financing receivable is returned to accrual status only when all of the principal and interest amounts contractually due are reasonably assured of repayment within a reasonable time frame and when the borrower has demonstrated payment performance. Subsequently, the commercial loan or lease financing receivable is accounted for on an accrual basis.

A credit card loan is charged off rather than placed on nonaccrual status when it becomes 180 days past due. Prior to the second quarter of 2000, other consumer loans also were charged off rather than placed on nonaccrual status. During the second quarter of 2000, the accounting policy for other consumer loans was changed, and the Corporation now places other consumer loans on nonaccrual status when they become 90 days past due. Accrued but uncollected interest is reversed and charged against interest income when credit card loans are charged off or other consumer loans are placed on nonaccrual status. Reporting of nonperforming loans was restated for all prior periods to reflect the change in accounting policy.

The Corporation's charge-off policies for both commercial and consumer loans are presented on page 33.

(f) Allowance for Credit Losses

Management maintains the allowance for credit losses at a level it believes is adequate to provide for estimated probable credit losses inherent in on- and off-balance sheet credit exposure. The allowance for credit losses attributable to specifically identified off-balance sheet credit exposure is not material. For a more detailed discussion, see the ''Allowance for Credit Losses'' section on page 34.

(g) Premises and Equipment

Depreciation and amortization is computed using the straight-line method over the estimated useful life of the owned asset and, for leasehold improvements, over the lesser of the remaining term of the leased facility or the estimated economic life of the improvement. For owned and capitalized assets, estimated useful lives range

from three to 30 years. Maintenance and repairs are charged to expense as incurred, while major improvements are capitalized.

(h) Other Real Estate Owned

Other real estate owned includes assets that have been received in satisfaction of debt. Other real estate owned is initially recorded and subsequently carried at the lower of cost or fair value less estimated selling costs. Any valuation adjustments required at the date of transfer are charged to the allowance for credit losses. Subsequently, unrealized losses and realized gains and losses on sale typically are included in other income. Operating results from other real estate are recorded in other noninterest expense.

(i) Intangible Assets

Intangible assets include goodwill resulting from acquisitions accounted for by the purchase method and identifiable intangible assets, such as customer lists, core deposits and credit card relationships. Goodwill is equal to an acquired company's acquisition cost less the net fair value assigned to identifiable assets acquired and liabilities assumed.

Intangible assets are reported in other assets and are amortized into other noninterest expense on an accelerated or straight-line basis over the period the Corporation expects to benefit from such assets. Goodwill is amortized over estimated periods ranging from five to 40 years (See Note 3—Mergers and Acquisitions for further details). Intangible assets are periodically reviewed for other than temporary impairment with any such declines in value included in other noninterest expense.

(j) Derivative Financial Instruments

Effective January 1, 2001, the Corporation adopted SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities" ("SFAS No. 133"), as amended by SFAS No. 137, "Accounting for Derivative Instruments and Hedging Activities—Deferral of the Effective Date of FASB Statement No. 133" and SFAS No. 138, "Accounting for Certain Derivative Instruments and Certain Hedging Activities—an Amendment of FASB Statement No. 133." SFAS No. 133, as amended, establishes new accounting and reporting standards for derivative instruments and hedging activities. It requires that an entity recognizes all derivatives as either assets or liabilities on the balance sheet and measure those derivatives at fair value. The accounting for the gains or losses resulting from changes in the value of those derivatives depends on the intended use of the derivative and whether it qualifies for hedge accounting. SFAS No. 133, as amended, significantly changes the accounting treatment for interest rate and foreign exchange derivatives the Corporation uses in its asset and liability management activities.

SFAS No. 133, as amended, requires that certain adjustments be made to the financial statements upon adoption of the standard. Based upon qualified and documented hedging relationships as of December 31, 2000, these adjustments, referred to as transition adjustments, had the following impact on the Corporation's financial position on January 1, 2001 (In millions):

Increase in derivative product assets	$ 319
Increase in all other assets	2
Increase in derivative product liabilities	(162)
Increase in all other liabilities	(312)
Pretax balance sheet impact of transition adjustments	(153)
Increase in deferred tax asset	56
	(97)
Decrease in accumulated other adjustments to stockholders' equity, net of tax	(98)
Pretax increase in net income	$ 1

The transition adjustments recorded on January 1, 2001, were reported in net income and accumulated other adjustments to stockholders' equity, as appropriate.

For a discussion of the Corporation's pre-SFAS No. 133 accounting policies for derivative financial instruments in effect for all periods presented herein, see the "Derivative Financial Instruments" section, beginning on page 38.

(k) Foreign Currency Translation

If a foreign installation's functional currency is the U.S. dollar, then its local currency financial statements are remeasured to U.S. dollars. Remeasurement effects and the results of related hedging transactions are included in other income.

If a foreign installation's functional currency is its local currency, then its local currency financial statements are translated into U.S. dollars. Translation adjustments, related hedging results and applicable income taxes are included in accumulated other adjustments to stockholders' equity.

(l) Income Taxes

Deferred tax assets and liabilities are determined based on temporary differences between financial reporting and tax basis of assets and liabilities and are measured using the enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in rates is recognized as income or expense in the period that includes the enactment date.

(m) Cash Flow Reporting

The Corporation uses the indirect method, which reports cash flows from operating activities by adjusting net income to reconcile to net cash flows from operating activities. Cash and cash equivalents consist of cash and due from banks, whether interest-bearing or not. Net reporting of cash transactions has been used when the balance sheet items consist predominantly of maturities of three months or less, or where otherwise permitted. Other items are reported on a gross basis.

(n) Stock-Based Compensation

The Corporation has elected to continue to account for stock options granted and its Employee Stock Purchase Plan pursuant to the methods prescribed in Accounting Principles Board ("APB") Opinion No. 25, "Accounting for Stock Issued to Employees", as permitted by Statement of Financial Accounting Standards ("SFAS") No. 123, "Accounting for Stock-Based Compensation," and related interpretations. Accordingly, there are no charges to earnings associated with stock options granted or with the Employee Stock Purchase Plan offered by the Corporation. Compensation expense related to restricted stock awards is recorded ratably over the period the shares remain restricted. Information on the Corporation's stock-based compensation plans and disclosure of the pro forma effect of applying the fair value method contained in SFAS No. 123 is included in Note 18, beginning on page 75.

(o) New Accounting Pronouncements

Accounting for Transfers and Servicing of Financial Assets and Liabilities

In September 2000, the FASB issued SFAS No. 140, "Accounting for Transfers and Servicing of Financial Assets and Liabilities" ("SFAS No. 140"). SFAS No. 140 revises certain criteria promulgated in previous accounting literature (SFAS No. 125) for accounting for securitizations and other transfers of financial assets and collateral, and requires additional disclosures concerning these activities. The accounting requirements of SFAS No. 140 for securitizations and other transfers of financial assets are effective for securitizations and transfers occurring on or after April 1, 2001. The applicable disclosures are required to be adopted for calendar year

companies effective December 15, 2000, and accordingly, have been incorporated in these Notes to Consolidated Financial Statements. The Corporation is currently evaluating the effects of adopting the remaining provisions of SFAS No. 140 on its current accounting policies for loan securitizations and other transfers of financial assets. The Corporation currently believes that the impact, if any, of adopting SFAS No. 140 will be insignificant to its financial position and net income.

Revenue Recognition in Financial Statements

In December 1999, the Securities and Exchange Commission ("SEC") issued Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements" ("SAB No. 101"). SAB No. 101 summarizes certain of the SEC's views in applying generally accepted accounting principles to revenue recognition in financial statements. In June 2000, the SEC issued SAB No. 101B to defer the effective date of implementation of SAB No. 101 until the fourth quarter of fiscal 2000. The Corporation has reviewed its existing revenue recognition practices related to various products and services and has determined these practices are in compliance with the recognition rules prescribed in SAB No. 101 and the recent interpretive guidance issued by the SEC.

NOTE 2—Earnings Per Share

Basic EPS is computed by dividing income available to common stockholders by the average number of common shares outstanding for the period. Except when the effect would be antidilutive, the diluted EPS calculation includes shares that could be issued under outstanding stock options and the employee stock purchase plans, and common shares that would result from the conversion of convertible preferred stock and convertible debentures. In the diluted calculation for 1998, net income is not reduced by dividends related to convertible preferred stock in the amount of $2 million, since such dividends would not have been paid had the convertible portion of the preferred stock converted to common stock. In addition, interest on convertible debentures (net of tax) is added to net income, since this interest would not be paid if the debentures were converted to common stock.

The following table sets forth the computation of basic and diluted earnings per share:

(In millions, except per share data)	Year Ended December 31 2000	1999	1998
Basic:			
Net income (loss)	**$ (511)**	$3,479	$3,108
Preferred stock dividends	**(12)**	(12)	(14)
Net income (loss) attributable to common stockholders' equity	**$ (523)**	$3,467	$3,094
Diluted:			
Net income (loss)	**$ (511)**	$3,479	$3,108
Interest on convertible debentures, net of tax (1)	**—**	6	7
Preferred stock dividends	**(12)**	(12)	(12)
Diluted income (loss) available to common stockholders (1)	**$ (523)**	$3,473	$3,103
Average shares outstanding	**1,154**	1,168	1,170
Dilutive shares:			
Stock options (1)	**—**	6	12
Convertible preferred stock	**—**	—	1
Convertible debentures (1)	**—**	4	4
Employee stock purchase plans	**—**	—	2
Average shares outstanding, assuming full dilution	**1,154**	1,178	1,189
Earnings (loss) per share:			
Basic	**$(0.45)**	$ 2.97	$ 2.65
Diluted (1)	**$(0.45)**	$ 2.95	$ 2.61

(1) Common equivalent shares and related income have been excluded from the computation of diluted loss per share for the year ended December 31, 2000, as the effect would be antidilutive.

NOTE 3—Mergers and Acquisitions

On October 2, 1998, Banc One Corporation ("Banc One") and First Chicago NBD Corporation ("FCN") were each merged into the Corporation, which was a wholly owned subsidiary of Banc One formed in 1998 to effect the Merger. Each share of Banc One common stock was converted into one share of the Corporation's common stock. Each share of FCN common stock was converted into the right to receive 1.62 shares of the Corporation's common stock. In aggregate, 291 million shares of FCN were converted into 471 million shares of the Corporation's common stock. Each share of preferred stock of FCN outstanding immediately prior to the Merger was converted into one share of a series of corresponding preferred stock of the Corporation with substantially the same terms. The transaction was accounted for as a pooling of interests.

On September 30, 1998, the Corporation purchased the credit card operation of Chevy Chase Bank, FSB. The portfolio included $4.8 billion in managed credit card loans and 2.8 million Visa® and Master Card® credit card accounts. At the purchase date, a credit card account premium of $291 million was recognized on the balance sheet and is being amortized over seven years using the straight-line method. During 2000, the Corporation recognized an impairment loss associated with this purchased premium of $107 million.

On June 12, 1998, the Corporation completed its acquisition of First Commerce Corporation ("First Commerce") located in New Orleans, Louisiana, resulting in the issuance of approximately 56 million shares of the Corporation's common stock valued at $3.5 billion for all the outstanding shares of First Commerce common stock, in a tax-free exchange. Each share of First Commerce common stock was exchanged for 1.408 shares of the Corporation's common stock. First Commerce was a multi-bank holding company with total assets of approximately $9.3 billion and stockholders' equity of approximately $805 million at June 12, 1998. The acquisition was accounted for as a pooling of interests.

NOTE 4—Merger-Related and Restructuring Charges

a) Second Quarter 2000 Restructuring Charge

The Corporation recorded restructuring costs in the second quarter of 2000 related to the restructuring of certain of its retail businesses as well as exit costs associated with specific decisions made to abandon identified facilities, equipment and application software. The following table summarizes the details of these restructuring charges:

(In millions)	Personnel-Related Costs	Asset Writedowns	Contractual Obligations	Total
June 30, 2000 Restructuring Charge	**$32**	**$104**	**$97**	**$233**
Reserve Adjustments:				
Increases	**—**	**—**	**—**	**—**
Decreases	**(14)**	**(1)**	**—**	**(15)**
Amounts Paid/Asset Writedowns	**(1)**	**(27)**	**(96)**	**(124)**
December 31, 2000 Reserve Balance	**$17**	**$ 76**	**$ 1**	**$ 94**

Personnel-related items recorded initially consisted primarily of severance costs related to identified staff reductions totaling 2,200 positions in the Retail line of business that would be implemented when assets were sold. Asset writedowns included leasehold write-offs related to leased properties following the decision to abandon such facilities, as well as in the case of fixed assets and capitalized software for which similar decisions were made. Contractual obligations included the estimated costs associated with lease and other contract termination costs incorporated in the business restructuring plans.

At December 31, 2000, Management decided not to dispose of the assets previously identified for sale and, as a result, Management reduced its estimate of staff reductions to approximately 1,257 positions. Accordingly, Management reduced the severance reserve established for this potential asset sale to $14 million. The remaining liabilities, including severance, associated with these actions will be paid as required over the contract period.

b) Fourth Quarter 1999 Restructuring Charge

Restructuring costs recorded in the fourth quarter of 1999 totaled $207 million. The following table summarizes the activity related to this restructuring reserve during 2000:

(In millions)	Personnel-Related Costs	Asset Writedowns	Contractual Obligations	Total
December 31, 1999 Reserve Balance	$143	$ 24	$ 40	$ 207
Reserve Adjustments:				
Increases	4	1	16	21
Decreases	(26)	(3)	(17)	(46)
Amounts Paid/Asset Writedowns	(91)	(22)	(36)	(149)
December 31, 2000 Reserve Balance	**$ 30**	**$ —**	**$ 3**	**$ 33**

The Corporation's restructuring plan included severance and other exit costs related to the closure of the Corporation's consumer finance branch network. Personnel-related items consisted primarily of severance and benefits costs for separated employees and executives due to delayering and management realignment. The net reduction in force was anticipated to approximate 5,100 positions. Other charges include identified asset write-offs and the termination costs associated with lease and other vendor contracts.

The restructuring plan was modified in 2000 as the branch network was packaged for sale with $2.2 billion in consumer loans. The final transaction included a provision to provide job opportunities for employees and for

the assumption of remaining lease obligations. As a result, $16 million in reserves established to cover these costs were reversed and an additional restructuring charge of $4 million was taken in the first quarter of 2000 to reflect further planned integration efforts in the consumer lending function, primarily associated with staff reductions.

At December 31, 2000, Management reduced its estimate of remaining staff reductions to approximately 725 positions and accordingly, recorded a $26 million reduction in the severance reserve. Actions under this restructuring plan were completed by year-end 2000. The remaining liabilities, including severance, associated with these actions will be paid as required over the contract period.

c) Banc One/FCN Merger

Actions under this restructuring plan have been completed, with only the payment of identified obligations remaining. Unpaid amounts totaled $28 million at December 31, 2000, and will be paid as required over the contract period.

Note 5—Business Segments

In the second quarter of 2000, the Corporation significantly realigned its organization, which resulted in the following changes in the composition of the Corporation's externally reported segments compared to those reported in the Corporation's 1999 Form 10-K:

- Consumer Lending and Other Consumer were combined in a new segment defined as "Retail"; WingspanBank.com was moved to Retail from First USA.
- Private Banking was transferred from Commercial Banking to Investment Management.
- Investment Management, which was previously allocated to the other segments, was presented as a separate line of business.
- Corporate Investments, which was previously included in Commercial Banking, was presented as a separate line of business.
- The segment defined as "Other Activities" was eliminated.

The Corporation has not presented segment information for the year ended December 31, 1998, as it would be impracticable to restate the 1998 period based on the current segment compositions in an efficient and cost-effective matter. The Corporation also has not presented 2000 data under both the "old" and "new" segment compositions, as it would be impracticable to restate 2000 financial data using the 1999 segment definitions and methodologies.

The information presented on page 3 is consistent with the content of business segment data provided to the Corporation's management. The Corporation's management currently does not use product group revenues to assess consolidated results. Aside from investment management and insurance products, product offerings are tailored to specific customer segments. As a result, the aggregation of product revenues and related profit measures across lines of business is not available.

Aside from the United States, no single country or geographic region generates a significant portion of the Corporation's revenues or assets. In addition, there are no single customer concentrations of revenue or profitability.

See the following "Business Segments" sections for additional disclosure regarding the Corporation's operating segments:

- "Business Segments" on page 3.

- Data presented in tables up until sections entitled "Supplemental Information" are included in the "Business Segment Results and Other Data" section beginning with "Retail" through "Corporate/Unallocated" on pages 4–14.

NOTE 6—Investment Securities—Available for Sale

The following table is a summary of the available-for-sale investment portfolio:

December 31, 2000 (In millions)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value (Book Value)
U.S. Treasury	**$ 2,587**	**$ 2**	**$ 34**	**$ 2,555**
U.S. government agencies	**14,415**	**18**	**47**	**14,386**
States and political subdivisions	**1,276**	**24**	**8**	**1,292**
Interest in credit card securitized receivables	**22,652**	**116**	**205**	**22,563**
Other debt securities	**5,237**	**18**	**57**	**5,198**
Equity securities (1) (2)	**4,373**	**253**	**59**	**4,567**
Total	**$50,540**	**$431**	**$410**	**$50,561**

December 31, 1999 (In millions)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value (Book Value)
U.S. Treasury	$ 2,569	$ 1	$101	$ 2,469
U.S. government agencies	12,919	3	412	12,510
States and political subdivisions	1,599	20	38	1,581
Interests in securitized credit card receivables	20,369	279	193	20,455
Other debt securities	7,611	5	172	7,444
Equity securities (1) (2)	3,238	281	66	3,453
Total	$48,305	$589	$982	$47,912

December 31, 1998 (In millions)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value (Book Value)
U.S. Treasury	$ 4,496	$ 66	$ 12	$ 4,550
U.S. government agencies	10,469	108	18	10,559
States and political subdivisions	1,980	84	—	2,064
Interests in securitized credit card receivables	17,544	201	375	17,370
Other debt securities	8,174	72	75	8,171
Equity securities (1) (2)	2,094	115	71	2,138
Total	$44,757	$646	$551	$44,852

(1) The fair values of certain securities for which market quotations were not available were estimated. In addition, the fair values of certain securities reflect liquidity and other market-related factors.

(2) Includes investments accounted for at fair value in keeping with specialized industry practice.

As of December 31, 2000, debt investment securities had the following maturity and yield characteristics:

(Dollars in millions)	Due in 1 year or less		Due after 1 year through 5 years		Due after 5 years through 10 years		Due after 10 years		Total	
	Amortized Cost	Yield	Amortized Cost	Yield	Amortized Cost	Yield	Amortized Cost	Yield	Amortized Cost	Yield
U.S. Treasury	$ 1,178	5.97%	$ 993	4.66%	$ 175	4.75%	$ 241	5.25%	$ 2,587	5.31%
U.S. government agencies	11,695	6.16	848	5.82	878	5.95	994	6.54	14,415	6.15
States and political subdivisions (1)	185	7.72	487	8.00	261	8.28	343	5.10	1,276	7.24
Other debt securities	21,193	9.33	5,620	7.65	697	7.67	379	8.94	27,889	8.94
Total debt securities —at amortized cost	$34,251	8.12%	$7,948	7.10%	$2,011	6.74%	$1,957	6.59%	$46,167	7.82%
Total debt securities —at fair value	$34,171		$7,913		$1,999		$1,911		$45,994	

(1) Includes tax-equivalent adjustments based on federal income tax rate of 35%.

The distribution of mortgage-backed securities and collateralized mortgage obligations is based on average expected maturities. Actual maturities might differ because issuers may have the right to call or prepay obligations.

NOTE 7—Loans

Loan composition is as follows:

December 31 (in millions)	2000	1999
Commercial:		
Domestic:		
Commercial	$ 65,270	$ 59,070
Real estate:		
Construction	5,757	5,836
Other	16,778	18,817
Lease financing	5,818	5,562
Foreign	6,837	7,067
Total commercial	100,460	96,352
Consumer:		
Residential real estate	40,596	32,313
Automotive—loans	12,130	12,925
Automotive—leases	8,611	10,642
Other	7,710	7,608
Total consumer	69,047	63,488
Credit card	4,744	4,037
Total loans	174,251	163,877
Less: Allowance for credit losses	4,110	2,285
Total loans, net	$170,141	$161,592

Loans are net of unearned income of $3.467 billion and $4.075 billion as of December 31, 2000 and 1999, respectively. Loans held for sale totaled $3.0 billion at both December 31, 2000 and 1999.

The Corporation's primary goal in managing credit risk is to minimize the impact of default by an individual borrower or group of borrowers. As a result, the Corporation strives to maintain a loan portfolio that is diverse in terms of loan type, industry, borrower and geographic concentrations. As of December 31, 2000 and 1999,

there were no significant loan concentrations with any single borrower, industry or geographic segment (see Credit Portfolio Composition on pages 28–32).

The Corporation's impaired loan information is as follows:

(In millions)	Year Ended December 31 2000	1999
Impaired loans with related allowance	**$1,748**	$1,026
Impaired loans with no related allowance (1)	**13**	27
Total impaired loans	**$1,761**	$1,053
Allowance on impaired loans (2)	**$ 407**	$ 246

(In millions)	Year Ended December 31 2000	1999	1998
Average balance of impaired loans	**$1,335**	$ 972	$ 638
Interest income recognized on impaired loans	**31**	46	38

(1) Impaired loans for which the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan do not require an allowance under SFAS No. 114.

(2) The allowance for impaired loans is included in the Corporation's overall allowance for credit losses.

A loan is considered impaired when it is probable that all principal and interest amounts due will not be collected in accordance with the loan's contractual terms. Certain loans, such as loans carried at the lower of cost or fair value or small-balance homogeneous loans (e.g., credit card, home mortgages and installment credit) are exempt from impairment determinations for disclosure purposes. Impairment is recognized to the extent that the recorded investment of an impaired loan or pool of loans exceeds its value either based on the loan's underlying collateral or the calculated present value of projected cash flows discounted at the contractual interest rate. Loans having a significant recorded investment are measured on an individual basis, while loans not having a significant recorded investment are grouped and measured on a pool basis.

Maturity Distribution and Interest Rate Sensitivity of Loans

The following table shows a distribution of the maturity of loans and, for those loans due after one year, a breakdown between those loans that have floating interest rates and those that have predetermined interest rates at December 31, 2000 follows:

(In millions)	One Year or Less	One to Five Years	Over Five Years	Total
Domestic:				
Commercial	$24,926	$34,582	$5,762	$65,270
Real estate	10,422	10,207	1,906	22,535
Total domestic	35,348	44,789	7,668	87,805
Foreign	4,472	2,132	233	6,837
Total	$39,820	$46,921	$7,901	$94,642
Loans with floating interest rates		$34,786	$3,521	$38,307
Loans with predetermined interest rates		12,135	4,380	16,515
Total		$46,921	$7,901	$54,822

The amounts above exclude domestic consumer loans and domestic lease financing receivables.

Foreign Outstandings

Included in claims are loans, balances with banks, acceptances, securities, equity investments, accrued interest, other monetary assets and current credit exposure on derivative contracts. At year-end 2000 and 1998, there were no countries for which cross-border and net local country claims exceeded 1.0% of total assets.

The table below presents 1999 foreign outstandings where such outstandings exceeded 1.0% of total assets:

(In millions) December 31, 1999	Cross-Border Claims			Net Local Country Claims	Total Cross-Border & Net Local Country Claims
	Banks	Governments & Official Institutions	Other		
Germany (1)	$2,199	$600	$319	—	$3,118

(1) At year-end 1999, local country claims were reduced by $129 million of local country liabilities.

At December 31, 2000 and 1998, Germany was the only country for which cross-border and net local country claims totaled between 0.75% and 1.0% of total assets. These outstandings amounted to $2.512 billion and $2.194 billion, respectively.

At December 31, 1999, there were no countries for which cross-border and net local country claims totaled between 0.75% and 1.0% of total assets.

NOTE 8—Loan Securitizations

The Corporation transforms loans into securities, which are sold to investors—a process referred to as securitization. At the time the Corporation enters into a securitization, a gain or loss is generally recognized based upon the fair value of the retained interests, primarily the interest-only strip. During the revolving period of a credit card securitization, the cash excess spread (excluding interchange income) received reduces the interest-only strip. At the same time, an additional gain is recognized each month over the life of the transaction as additional receivables are sold. The interest-only strip is ultimately extinguished when the securities sold to investors are repaid. For the year ended December 31, 2000, the Corporation's normal revolving credit card activities resulted in a net decrease in the interest-only strip of $52 million. This was comprised of $594 million in revolving gains on credit card securitizations, less cash excess spread of $646 million received. In addition, $432 million of impairment write-downs of the interest-only strip were recorded. The Corporation recognized $116 million in net securitization amortization in the managed income statement, including amortization of transaction costs, as investors in individual series were repaid.

A servicing asset or liability is not generally recognized in a credit card securitization (and thus considered in the gain or loss computation) since the Corporation receives adequate compensation relative to current market servicing prices to service the receivables sold. Transaction costs in credit card securitizations are typically deferred and amortized over the life of the security as a reduction of noninterest income. Other securitization transaction costs may be included in the gain or loss on sale.

At December 31, 2000, the estimated fair value of seller's interest and interest-only strip from credit card securitizations were as follows:

(In millions)	
Seller's interest	$22,356
Interest-only strip	221
Total interests in credit card securitizations	$22,577

Certain estimates are used in determining the fair value of the interest-only strip at both the date of securitization and the balance sheet date, including the excess spread, receivable lives and the discount rate. The

components of excess spread, which are estimated, include finance charge and fee revenue (excluding interchange income) generated by the securitized loans in excess of interest paid to investors, related net credit losses and servicing fees. The resulting expected cash flows over the lives of the receivables are discounted at a rate commensurate with the risk of the cash flows to determine the fair value. Such estimates and assumptions are subject to change, and accordingly, the Corporation may not recover all of the recorded investment of the interest-only strip (and thus be measured for impairment). The receivables in each trust have unique attributes and therefore the interest-only strip related to each trust is evaluated separately. The seller's interest resulting from credit card securitizations is recorded at fair value using a present value approach, with assumptions that are consistent with the valuation of the interest-only strip.

The following represents the Corporation's key weighted-average assumptions used to estimate the fair value of the interest-only strip and seller's interest relating to credit card securitizations at December 31, 2000, and the pretax sensitivity of the fair values to immediate 10 and 20 percent adverse changes in these assumptions are as follows:

(Dollars in millions)	Interest-Only Strip (1)	Sellers Interest (2)	Total Retained Interests
Receivable Lives			**0.5 Years**
10% Adverse Change	$ 23.6	$11.3	$ 34.9
20% Adverse Change	47.4	22.7	70.1
Excess Spread:			**1.23%**
10% Adverse Change	24.2	11.6	35.8
20% Adverse Change	48.4	23.2	71.6
Expected Net Credit Losses (3):			**6.80%**
10% Adverse Change	103.4	56.2	159.6
20% Adverse Change	194.1	98.1	292.2
Discount Rate:			**10.00%**
10% Adverse Change	0.7	0.3	1.0
20% Adverse Change	1.5	0.7	2.2

(1) The effect of adverse changes in key assumptions on the fair value of the interest-only strip would be recorded in non-interest income.

(2) The effect of adverse changes in key assumptions on the value of the seller's interest is recorded in accumulated other adjustments to stockholders' equity, unless the decline in value is deemed to be other than temporary, which would result in a charge to noninterest income upon recognition.

(3) Certain Trust legal documents include finance charge and fee revenue reversals in the definition of net credit losses, resulting in a higher net credit loss rate for Trust purposes.

The sensitivity analysis presented above illustrates the potential magnitude of significant adverse changes in key assumptions used in valuing the interest-only strip and seller's interest, and thus the potential impact to the Corporation's financial position and results of operations. However, the sensitivities of the fair values of the interest-only strip and seller's interest to changes in each key assumption presented above may not be linear. Furthermore, the sensitivities above for each key variable are calculated independently of changes in the other key variables. Therefore, the sensitivity analysis above does not purport to present the maximum impairment loss that would result from 10 and 20 percent adverse changes in these assumptions. Actual experience observed may result in changes in multiple key assumptions concurrently, the magnitude of which on the fair value of the interest-only strip and seller's interest would be dependent on the relative change and the direction of change. In addition, the sensitivity analysis does not give effect to corrective action that Management could and would take to mitigate the impact of adverse changes in key assumptions. The asset values of the seller's interest, interest-only strip and credit enhancements are periodically reviewed for other-than-temporary impairment (see page 10 for 2000 impairment related disclosures for First USA).

The key weighted average economic assumptions and ranges of assumptions used to estimate the fair value of interest-only strip and seller's interest at the date of securitization (including transfer of new balances under revolving structures) for credit card securitizations occurring during 2000 were as follows:

	Assumptions
Receivable Lives	0.5 Years
Excess Spread	1.22% to 3.14%
Expected Net Credit Losses	6.47% to 6.82%
Discount Rate	10.00%

The table below summarizes the cash flows received from (paid to) credit card securitization master trusts (i.e., SPEs) during the year ended December 31, 2000:

(In millions)	
Cash collections used by Trusts to purchase new revolving balances	$83,469
Servicing fees received	649
Cash flows received on retained interests (1)	2,224
Cash used to fund reserve (spread) accounts	(32)

(1) Includes cash flows from interest-only strips as well as interchange fees received from securitized accounts.

For a detailed discussion of the Corporation's loan securitization process for credit card loans, see the "Loan Securitizations" section, beginning on page 41.

Note 9—Allowance for Credit Losses

Changes in the allowance for credit losses for the years ended December 31 were as follows:

(In millions)	**2000**	**1999**	**1998**
Balance, beginning of year	**$ 2,285**	$ 2,271	$ 2,817
Additions (deductions):			
Charge-offs	**(1,667)**	(1,531)	(1,945)
Recoveries	**276**	325	447
Net charge-offs	**(1,391)**	(1,206)	(1,498)
Provision for credit losses	**3,398**	1,249	1,408
Transfers	**(182)**	(29)	(456)
Balance, end of year	**$ 4,110**	$ 2,285	$ 2,271

NOTE 10—Long-Term Debt

Long-term debt consists of borrowings having an original maturity of greater than one year. Original issue discount and deferred issuance costs are amortized into interest expense over the terms of the related notes. Long-term debt at December 31, 2000 and 1999, was as follows:

(Dollars in millions)	Effective Rate(1)	2000	1999
Parent Company			
Subordinated debt			
9⅞% notes due 2000	—%	**$ —**	$ 100
9⅕% notes due 2001	9.20	**5**	5
9¼% notes due 2001	9.27	**100**	100
10¼% notes due 2001	10.20	**100**	100
11¼% notes due 2001	8.76	**97**	99
7¼% notes due 2002(2)	7.47	**349**	348
8⅞% notes due 2002	7.05	**102**	104
8¹⁄₁₀% notes due 2002	6.94	**203**	205
8¼% notes due 2002	6.73	**102**	104
8.74% notes due 2003(2)	8.77	**170**	170
7⅝% notes due 2003	7.68	**200**	200
6⅞% notes due 2003	6.90	**200**	200
Floating rate notes due 2003(3)	6.92	**150**	150
7¼% debentures due 2004	7.28	**200**	200
Floating rate notes due 2005(3)	6.43	**96**	96
7% notes due 2005	6.85	**300**	297
6⅛% notes due 2006	6.33	**149**	149
7% notes due 2006	7.07	**149**	149
7⅛% notes due 2007	7.16	**199**	199
7⅜% notes due 2007(2)	7.62	**398**	398
6% notes due 2009	7.15	**315**	349
6⅜% notes due 2009	6.35	**200**	200
9⅞% notes due 2009(2)	9.97	**53**	53
7⅞% notes due 2010	8.41	**995**	—
10% notes due 2010	10.06	**198**	198
9⁹⁄₁₀% notes due 2019	9.91	**143**	143
7¾% notes due 2025(2)	7.98	**295**	294
7⅝% notes due 2026(2)	7.61	**492**	492
8% notes due 2027(2)	8.48	**490**	490
Convertible debentures 12¾% Series A	—	**—**	19
Convertible debentures 12¾% Series B	—	**—**	46
Senior debt			
Medium-term notes	6.83	**14,360**	14,445
Other	—	**14**	9
Total Parent Company		**20,824**	20,111
Subsidiaries			
Bank notes, various rates and maturities	6.76	**13,375**	11,279
Subordinated 7⅜% notes due 2002	8.44	**149**	148
Subordinated 6¼% notes due 2003	6.25	**200**	200
Subordinated 6⅝%-7.65% notes due 2003	6.81-7.78	**453**	452
Subordinated 6% notes due 2005	6.84	**149**	148
Subordinated 6¼% notes due 2008	6.40	**496**	496
Subordinated 8¼% notes due 2024	7.72	**248**	254
Capitalized lease and others, at various rates and maturities	various	**2,534**	769
Total subsidiaries		**17,604**	13,746
Total long-term debt		**$38,428**	$33,857

(1) The effective rate includes amortization of premium or discount. Interest rate swap agreements have been entered into that have altered the stated interest rate for certain of the borrowings from fixed to variable interest rates and from variable to fixed interest rates. The effective rates include the impact of these interest rate swap agreements at December 31, 2000. The terms to maturity of the interest rate swaps are equal to those of the altered borrowings.

(2) The notes are not subject to redemption and impose certain limitations relating to funded debt, liens and the sale or issuance of capital stock of significant bank subsidiaries.

(3) The floating rate notes due in 2003 have an interest rate priced at the greater of 4¼% or the three-month LIBOR plus ⅛%. The floating rate notes due in 2005 have an interest rate of the greater of 5¼% or the three-month LIBOR rate plus ¼%.

Aggregate annual scheduled repayments of long-term debt at December 31, 2000:

(In millions)	Total
2001	$10,925
2002	8,007
2003	4,435
2004	3,718
2005	4,118
Thereafter	7,225
Total	$38,428

NOTE 11—Deposits and Short-Term Borrowings

Deposits

The following tables show a maturity distribution of domestic time certificates of deposit of $100,000 and over, other domestic time deposits of $100,000 and over, and deposits in foreign offices, predominantly in amounts in excess of $100,000 at December 31, 2000:

(Dollars in millions) Domestic Time Certificates of Deposit of $100,000 and Over	Amount	Percent
Three months or less	**$ 6,645**	30%
Over three months to six months	**2,021**	9
Over six months to twelve months	**3,108**	14
Over twelve months	**10,671**	47
Total	**$22,445**	100%

Domestic Other Time Deposits of $100,000 and Over	Amount	Percent
Three months or less	**$ 206**	98%
Over three months to six months	**—**	—
Over six months to twelve months	**—**	—
Over twelve months	**5**	2
Total	**$ 211**	100%

Foreign Offices	Amount	Percent
Three months or less	**$22,423**	90%
Over three months to six months	**1,761**	7
Over six months to twelve months	**738**	3
Over twelve months	**45**	—
Total	**$24,967**	100%

Short-Term Borrowings

Borrowings with original maturities of one year or less are classified as short-term. The following is a summary of short-term borrowings for each of the three years ended December 31:

(Dollars in millions)	2000	1999	1998
Federal funds purchased:			
Outstanding at year-end	**$ 5,253**	$ 5,483	$12,112
Weighted-average rate at year-end.	**5.89%**	4.54%	4.65%
Daily average outstanding for the year	**$ 6,281**	$ 7,060	$ 9,262
Weighted-average rate for the year	**6.14%**	4.96%	5.24%
Highest outstanding at any month-end	**$ 9,663**	$ 8,806	$12,112
Securities under repurchase agreements:			
Outstanding at year-end	**$ 6,867**	$13,237	$11,052
Weighted-average rate at year-end	**6.01%**	4.08%	4.43%
Daily average outstanding for the year	**$12,680**	$12,651	$12,423
Weighted-average rate for the year	**5.96%**	4.62%	4.87%
Highest outstanding at any month-end	**$17,609**	$16,102	$15,676
Bank notes:			
Outstanding at year-end	**$12,426**	$12,707	$10,321
Weighted-average rate at year-end	**6.71%**	5.60%	5.22%
Daily average outstanding for the year	**$12,298**	$11,112	$ 8,175
Weighted-average rate for the year	**6.50%**	5.57%	5.52%
Highest outstanding at any month-end	**$13,327**	$12,947	$10,321
Commercial paper:			
Outstanding at year-end	**$ 3,048**	$ 3,184	$ 2,113
Weighted-average rate at year-end	**6.62%**	6.09%	4.54%
Daily average outstanding for the year	**$ 3,137**	$ 3,006	$ 1,882
Weighted-average rate for the year	**5.94%**	5.23%	5.58%
Highest outstanding at any month-end	**$ 3,303**	$ 3,595	$ 2,491
Other short-term borrowings:			
Outstanding at year-end	**$ 2,529**	$ 5,320	$ 4,503
Weighted-average rate at year-end	**6.22%**	4.46%	4.51%
Daily average outstanding for the year	**$ 3,543**	$ 3,739	$ 3,733
Weighted-average rate for the year	**6.50%**	4.98%	4.86%
Highest outstanding at any month-end	**$ 6,861**	$ 5,475	$ 7,202
Total short-term borrowings:			
Outstanding at year-end	**$30,123**	$39,931	$40,101
Weighted-average rate at year-end	**6.36%**	4.86%	4.73%
Daily average outstanding for the year	**$37,939**	$37,568	$35,475
Weighted-average rate for the year	**6.26%**	5.00%	5.15%

NOTE 12—Guaranteed Preferred Beneficial Interest in the Corporation's Junior Subordinated Debt

The Corporation has sponsored eight trusts with a total aggregate issuance of $2.483 billion at December 31, 2000 in trust preferred securities. These trust preferred securities are tax-advantaged issues that qualify for Tier 1 capital treatment. Distributions on these securities are included in interest expense on long-term debt. Each of the trusts is a statutory business trust organized for the sole purpose of issuing trust securities and investing the proceeds thereof in junior subordinated debentures of the Corporation, the sole asset of each trust. The preferred trust securities of each trust represent preferred beneficial interests in the assets of the respective trusts and are subject to mandatory redemption upon payment of the junior subordinated debentures held by the trust. The common securities of each trust are wholly owned by the Corporation. Each trust's ability to pay amounts due on the trust preferred securities is solely dependent upon the Corporation making payment on the related junior subordinated debentures. The Corporation's obligations under the junior subordinated securities and other relevant trust agreements, in aggregate, constitute a full and unconditional guarantee by the Corporation of each respective trust's obligations under the trust securities issued by such trust. See Note 14 for discussion of the restrictions on the ability of the Corporation to obtain funds from its subsidiaries.

	Trust Preferred			Junior Subordinated Debt Owned by Trust		
(Dollars in millions)	IssuanceDate	Initial Liquidation Value	Distribution Rate	Initial Principal Amount	Maturity	Redeemable Beginning
Capital IV	August 30, 2000	$160	3-mo LIBOR plus 1.50%	$164.9	September 1, 2030	See (1) below.
Capital III	August 30, 2000	475	8.75	489.7	September 1, 2030	See (1) below.
Capital II	August 8, 2000	280	8.50	288.7	August 15, 2030	August 15, 2005
Capital I	September 20, 1999	575	8.00	593	September 15, 2029	September 20, 2004
First Chicago NBD Capital 1	January 31, 1997	250	3-mo LIBOR plus 0.55%	258	February 1, 2027	February 1, 2007
First USA Capital Trust I (2)	December 20, 1996	200	9.33	206.2	January 15, 2027	January 15, 2007
First Chicago NBD Institutional Capital A	December 3, 1996	500	7.95	515	December 1, 2026	December 1, 2006
First Chicago NBD Institutional Capital B	December 5, 1996	250	7.75	258	December 1, 2026	December 1, 2006

(1) Redeemable at any time subject to approval by the Federal Reserve Board.

(2) The Corporation paid a premium of $36 million to repurchase $193 million of these securities in 1997.

NOTE 13—Stock Dividends and Preferred Stock

The Corporation is authorized to issue 50,000,000 shares of preferred stock with a par value of $0.01 per share. The Board of Directors is authorized to fix the particular designations, preferences, rights, qualifications and restrictions for each series of preferred stock issued. All preferred shares rank prior to common shares, both as to dividends and liquidation, but have no general voting rights. The dividend rate on each of the cumulative adjustable rate series is based on stated value and adjusted quarterly, based on a formula that considers the interest rates for selected short- and long-term U.S. Treasury securities prevailing at the time the rate is set.

Information on preferred stock is as follows:

	Stated Value	Issued and Outstanding December 31		Carrying Amount December 31 (in millions)	
		2000	1999	2000	1999
Preferred Stock					
Series B	$100	1,191,000	1,191,000	$119	$119
Series C	100	713,800	713,800	71	71

The maximum, minimum and current dividend rates for individual series of preferred stock were as follows at December 31, 2000:

	Shares Outstanding	Stated Value Per Share	Annual Dividend Rate			Redemption Price (1)
			Maximum	Minimum	Current	
Cumulative Adjustable Rate (2)						
Series B	1,191,000	$100.00	12.0%	6.0%	6.0%	$100.00
Series C	713,800	$100.00	12.5%	6.5%	6.5%	$100.00

(1) Plus accrued and unpaid dividends.
(2) Currently redeemable.

On January 18, 2000, the Corporation announced the discontinuation of a biannual 10% stock dividend.

Note 14—Dividends and Capital Restrictions

The Corporation's national bank subsidiaries are subject to two statutory limitations on their ability to pay dividends. Under the first, dividends cannot exceed the level of undivided profits. In addition, a national bank cannot declare a dividend, without regulatory approval, in an amount in excess of its net income for the current year combined with the combined net profits for the preceding two years. State bank subsidiaries may also be subject to limitations on dividend payments. The amount of dividends available from certain nonbank subsidiaries that are subject to dividend restrictions is regulated by the governing agencies to which they report.

Based on these statutory requirements, the bank affiliates could, in the aggregate, have declared additional dividends of up to approximately $409 million without regulatory approval at January 1, 2001. The payment of dividends by any bank may also be affected by other factors, such as the maintenance of adequate capital.

The bank affiliates are subject to various regulatory capital requirements that may require them to maintain minimum ratios of total and Tier 1 capital to risk-weighted assets and of Tier 1 capital to average assets. Failure to meet minimum capital requirements results in certain actions by bank regulators that could have a direct material effect on the bank affiliates' financial statements. As of December 31, 2000, management believed that each of the bank affiliates met all capital adequacy requirements to which it is subject and is correctly categorized as well capitalized under the regulatory framework for prompt corrective action. There are no conditions or events since that categorization that management believes have changed the institution's category. For more information, see the "Capital Management—Regulatory Capital Requirements" section, beginning on page 44.

The actual and required capital amounts and ratios for the Corporation and its principal banking subsidiaries are presented as follows:

	Actual		To Be Categorized Adequately Capitalized	
	Capital Amount	Capital Ratio	Capital Amount	Capital Ratio
At December 31, 2000 (Dollars in millions)				
Risk-adjusted capital (to risk-weighted assets):				
The Corporation (consolidated)	**$29,140**	**10.8%**	**$21,615**	**8.0%**
Bank One, N.A. (Chicago) (1)	**9,411**	**11.1**	**6,761**	**8.0**
Bank One, N.A. (Columbus)	**4,283**	**12.0**	**2,862**	**8.0**
Bank One, Texas, N.A.	**2,924**	**10.7**	**2,182**	**8.0**
Bank One, Michigan (2)	**2,406**	**10.9**	**1,759**	**8.0**
Bank One, Arizona, N.A.	**2,663**	**11.0**	**1,940**	**8.0**
First USA Bank, N.A.	**2,230**	**15.8**	**1,126**	**8.0**
Tier 1 capital (to risk-weighted assets):				
The Corporation (consolidated)	**$19,824**	**7.3%**	**$10,807**	**4.0%**
Bank One, N.A. (Chicago) (1)	**5,564**	**6.6**	**3,380**	**4.0**
Bank One, N.A. (Columbus)	**2,867**	**8.0**	**1,431**	**4.0**
Bank One, Texas, N.A.	**1,720**	**6.3**	**1,091**	**4.0**
Bank One, Michigan (2)	**1,582**	**7.2**	**879**	**4.0**
Bank One, Arizona, N.A.	**1,699**	**7.0**	**970**	**4.0**
First USA Bank, N.A..	**2,110**	**15.0**	**563**	**4.0**
Tier 1 leverage (to average assets):				
The Corporation (consolidated)	**$19,824**	**7.3%**	**$ 8,167**	**3.0%**
Bank One, N.A. (Chicago) (1)	**5,564**	**5.6**	**3,996**	**4.0**
Bank One, N.A. (Columbus)	**2,867**	**7.8**	**1,471**	**4.0**
Bank One, Texas, N.A	**1,720**	**5.6**	**1,221**	**4.0**
Bank One, Michigan (2)	**1,582**	**7.2**	**878**	**4.0**
Bank One, Arizona, N.A.	**1,699**	**7.1**	**956**	**4.0**
First USA Bank, N.A.	**2,110**	**11.8**	**718**	**4.0**
At December 31, 1999				
Risk-adjusted capital (to risk-weighted assets):				
The Corporation (consolidated)	$28,214	10.7%	$21,054	8.0%
Bank One, N.A. (Chicago) (1)	8,892	11.5	6,196	8.0
Bank One, N.A. (Columbus)	3,207	10.1	2,551	8.0
Bank One, Texas, N.A.	2,972	11.0	2,153	8.0
Bank One, Michigan (2)	2,403	11.2	1,713	8.0
Bank One, Arizona, N.A.	2,763	11.0	2,017	8.0
First USA Bank, N.A.	2,493	18.3	1,088	8.0
Tier 1 capital (to risk-weighted assets):				
The Corporation (consolidated)	$20,247	7.7%	$10,527	4.0%
Bank One, N.A. (Chicago) (1)	5,697	7.4	3,098	4.0
Bank One, N.A. (Columbus)	2,157	6.8	1,276	4.0
Bank One, Texas, N.A.	1,928	7.2	1,077	4.0
Bank One, Michigan (2)	1,612	7.5	856	4.0
Bank One, Arizona, N.A.	1,881	7.5	1,009	4.0
First USA Bank, N.A.	2,201	16.2	544	4.0
Tier 1 leverage (to average assets):				
The Corporation (consolidated)	$20,247	7.7%	$ 7,911	3.0%
Bank One, N.A. (Chicago) (1)	5,697	6.3	3,630	4.0
Bank One, N.A. (Columbus)	2,157	6.6	1,306	4.0
Bank One, Texas, N.A	1,928	6.6	1,173	4.0
Bank One, Michigan (2)	1,612	7.0	927	4.0
Bank One, Arizona, N.A.	1,881	8.4	898	4.0
First USA Bank, N.A.	2,201	12.0	737	4.0

(1) Formerly The First National Bank of Chicago.

(2) Formerly NBD Bank (Michigan).

Federal banking law restricts each bank subsidiary from extending credit to the Corporation in excess of 10% of the subsidiary's capital stock and surplus, as defined. Any such extensions of credit are subject to strict collateral requirements.

NOTE 15—Supplemental Disclosures for Statement of Cash Flows

During 2000, the Corporation transferred $6.5 billion of available for sale securities to trading securities. The transfer was for capital management purposes. All of these securities were sold during 2000.

During 1999, the Corporation transferred $2.3 billion of asset-backed securities and variable corporate coupons from investment securities available for sale to trading assets. This transfer was for capital management purposes and reflects the Corporation's intent to sell these assets in the short term.

In connection with the Banc One/FCN merger, a $656 million transfer was made in 1998 to reclassify debt investment securities from held to maturity to available for sale. The reclassification was made to maintain an interest rate risk position that existed prior to the business combination.

During 1998, the Corporation reclassified $9.5 billion from loans, and $468 million from other assets, to investment securities-available for sale. The amounts transferred represent the Corporation's retained interests in its securitized credit card receivables.

Loans transferred to other real estate owned totaled $131 million, $113 million and $239 million in 2000, 1999 and 1998, respectively.

During both 2000 and 1999, the Corporation recognized several noncash charges to earnings for significant items. Several of these items will never result in future cash outflows while other items represent future uses of cash. See tables 1 and 2 on page 15 and "Business Segments" on pages 4–14 for a detailed listing of significant items.

NOTE 16—Supplemental Disclosures for Accumulated Other Adjustments to Stockholders' Equity

Accumulated other adjustments to stockholders' equity is as follows:

(In millions)	2000	1999	1998
Fair value adjustment on investment securities—available for sale:			
Balance, beginning of period	**$(271)**	$ 218	$203
Change in fair value, net of taxes of $6 in 2000, $(180) in 1999 and $72 in 1998	**(5)**	(391)	120
Reclassification adjustment, net of taxes of $151 in 2000, $(56) in 1999 and $(57) in 1998	**261**	(98)	(105)
Balance, end of period	**(15)**	(271)	218
Accumulated translation adjustment:			
Balance, beginning of period	**8**	21	6
Translation gain(loss), net of hedge results and taxes	**2**	(13)	15
Balance, end of period	**10**	8	21
Total accumulated other adjustments to stockholders' equity	**$ (5)**	$(263)	$239

NOTE 17—Employee Benefits

(a) Pension Plans

Prior to 2000, the Corporation had various noncontributory defined benefit pension plans covering substantially all salaried employees. Effective December 31, 1999, all noncontributory defined benefit pension plans were combined into one plan. Effective December 31, 2000, the supplemental executive retirement plan was discontinued. There was no effect on the 2000 periodic pension cost, however, ongoing periodic pension cost will be reduced by approximately $4.3 million annually.

The tables below set forth the Corporation's qualified plans' change in benefit obligation, change in plan assets and funded status:

(In millions)	2000	1999
Change in benefit obligation		
Benefit obligation, January 1	**$2,250**	$2,380
Service cost	**103**	116
Interest cost	**182**	165
Actuarial loss (gain)	**128**	(259)
Plan change	**—**	109
Curtailment	**—**	(12)
Benefits paid	**(415)**	(249)
Benefit obligation, December 31	**2,248**	2,250
Change in plan assets		
Fair value of plan assets, January 1	**3,400**	3,393
Actual return on plan assets	**146**	254
Corporation contribution	**3**	2
Benefits paid	**(415)**	(249)
Fair value of plan assets, December 31	**3,134**	3,400
Funded status	**886**	1,150
Unrecognized net actuarial loss (gain)	**(357)**	(655)
Unrecognized prior service cost	**28**	32
Unrecognized net transition assets	**(7)**	(21)
Prepaid pension costs, December 31	**$ 550**	$ 506

Plan assets include approximately 1.0 million shares of the Corporation's common stock with a fair value of approximately $37 million at December 31, 2000, and $32 million at December 31, 1999.

The table below sets forth net periodic pension cost for 2000, 1999 and 1998 for the Corporation's qualified and nonqualified pension plans:

(In millions)	2000	1999	1998
Service cost—benefits earned during the period	**$ 110**	$ 123	$ 135
Interest cost on benefit obligation	**194**	175	172
Expected return on plan assets	**(300)**	(293)	(271)
Amortization of prior service cost	**9**	(1)	(2)
Recognized actuarial (gain) loss	**(11)**	(1)	1
Amortization of transition assets	**(13)**	(13)	(13)
Curtailment gain	**—**	(13)	—
Net periodic pension cost	**$ (11)**	$ (23)	$ 22

The accrued pension cost for the Corporation's nonqualified supplemental pension plans was $77 million and $90 million at December 31, 2000 and 1999, respectively. Such plans are unfunded.

The assumptions used in determining the Corporation's benefit obligation and net periodic pension cost for both qualified and nonqualified supplemental pension plans are as follows:

	December 31		
(In millions)	2000	1999	1998
Actuarial assumptions:			
Weighted-average discount rate for benefit obligation	**7.50%**	8.00%	7.00%
Weighted-average rate of compensation increase	**4.25%**	5.00%	5.00%
Expected long-term rate of return on plan assets	**9.50%**	9.50%	9.50%

(b) Postretirement Benefits Other Than Pensions

The Corporation sponsors postretirement life insurance plans and provides health care benefits for certain retirees and grandfathered employees when they retire. The postretirement life insurance benefit is noncontributory, while the health care benefits are contributory.

The Corporation's postretirement benefit plans' change in benefit obligation and funded status at December 31, 2000 and 1999 are as follows:

(In millions)	2000	1999
Change in benefit obligation		
Benefit obligation, January 1	**$ 164**	$ 190
Service cost	**—**	1
Interest cost	**13**	13
Actuarial loss (gain)	**37**	(21)
Benefits paid	**(17)**	(19)
Curtailment	**(2)**	—
Benefit obligation, December 31	**195**	164
Change in plan assets		
Fair value of plan assets, January 1	**—**	—
Employer contribution	**17**	19
Benefits paid	**(17)**	(19)
Fair value of plan assets, December 31	**—**	—
Funded status	**(195)**	(164)
Unrecognized net actuarial loss (gain)	**20**	(17)
Unrecognized prior service cost	**(38)**	(47)
Accrued postretirement benefit costs, December 31	**$(213)**	$(228)

Net periodic cost for postretirement health care and life insurance benefits during 2000, 1999 and 1998 includes the following:

(In millions)	2000	1999	1998
Service cost—benefits earned during the period	**$ —**	$ 1	$ 6
Interest cost on accumulated postretirement benefit obligation	**13**	13	17
Amortization of prior service cost	**(12)**	(12)	—
Adjustment for acquisitions	**—**	2	—
Curtailment	**1**	—	—
Net periodic postretirement benefit cost	**$ 2**	$ 4	$23

The weighted average discount rate used in determining the accumulated postretirement benefit obligation was 7.50% at December 31, 2000, and 8.00% at December 31, 1999.

For measurement purposes, an annual rate of increase of 6.00% was assumed for 2000 in the cost of covered health care benefits; this range was assumed to decrease to 5.00% in the years 2001 and thereafter. These assumptions have a significant effect on the amounts reported. Accordingly, the effect of a 1.00% change in the assumed health-care-cost trend rates is as follows:

(In millions)	1% increase	1% decrease
Effect on 2000 service and interest cost components	**$0.8**	**$0.7**
Effect on December 31, 2000, accumulated postretirement benefit obligation	**$9.6**	**$8.5**

(c) 401(k) Plans

The Corporation sponsored various 401(k) plans that together covered substantially all of its employees. Up until 2000, the Corporation was required to make contributions to the plans in varying amounts. The expense related to these plans was $137 million in 2000, $81 million in 1999 and $89 million in 1998. Effective December 31, 1999, all new contributions are being made to one Corporation-sponsored 401(k) plan, thereby establishing uniform contribution requirements for the entire Corporation.

NOTE 18—Stock-Based Compensation

The Corporation utilizes several types of stock-based awards as part of its overall compensation program. In addition, the Corporation provides employees the opportunity to purchase its shares through its Employee Stock Purchase Plan. The Corporation's stock-based compensation plans provide for the granting of awards to purchase or receive common shares and include limits as to the aggregate number of shares available for grants and the total number of shares available for grants of stock awards in any one year. The compensation cost that has been charged against income for the Corporation's stock-based compensation plans was $59 million for 2000, $38 million for 1999 and $52 million for 1998. As a result of the 1999 fourth-quarter restructuring plan, $4 million was recorded as a restructuring charge related to the immediate vesting of restricted shares for certain executives. In 1998, $113 million was recorded as a restructuring charge related to the immediate vesting of certain restricted and performance shares resulting from the respective changes in control at FCN and First Commerce.

(a) Restricted Shares

Restricted shares granted to key officers of the Corporation require them to continue employment for a stated number of years from the grant date before restrictions on the shares lapse. The market value of the restricted shares as of the date of grant is amortized to compensation expense ratably over the period the shares

remain restricted. Holders of restricted stock receive dividends and have the right to vote the shares. As a result of the respective changes in control at FCN and First Commerce in 1998, substantially all outstanding restricted stock issued at these entities vested immediately at the time of the respective changes in control.

(b) Stock Options

The Corporation's stock option plans generally provide that the exercise price of any stock option may not be less than the fair value of the common stock on the date of grant.

Options granted under the Corporation's current stock-based compensation program generally vest over a five-year period and have a term of ten years. Certain option grants include the right to receive additional option grants ("reload" or "restorative" options) in an amount equal to the number of common shares used to satisfy the exercise price. Upon grant, reload options assume the same remaining term as the related original option and vest over a six-month period. Under a number of predecessor programs, options were granted with distinct provisions including vesting periods generally ranging from two to five years and possessing maximum terms of eight to 20 years. As a result of the change in control at FCN and First Commerce in 1998, all outstanding stock options issued at these entities vested and became exercisable immediately at the time of the respective changes in control.

The following tables summarize stock option activity for 2000, 1999 and 1998, respectively, and provide details of the Corporation's stock options outstanding at December 31, 2000:

	2000		1999		1998	
(Shares in Thousands)	Shares	Wtd. Avg. Exercise Price	Shares	Wtd. Avg. Exercise Price	Shares	Wtd. Avg. Exercise Price
Outstanding at January 1	**44,630**	**$40.88**	38,247	$34.34	40,798	$26.60
Granted	**42,659**	**27.25**	15,556	50.35	8,896	54.79
Exercised	**(2,089)**	**19.66**	(6,473)	24.34	(9,902)	20.29
Forfeited	**(7,885)**	**38.56**	(2,700)	36.56	(1,545)	37.77
Outstanding at December 31	**77,315**	**$34.17**	44,630	$40.88	38,247	$34.34
Exercisable at December 31	**25,503**	**$36.41**	19,847	$32.86	22,983	$29.30

	Options Outstanding			Options Exercisable	
(Shares in Thousands) Range of Exercise Prices	Number Outstanding Dec. 31, 2000	Wtd. Avg. Exercise Price	Wtd. Avg. Remaining Contractual Life	Number Exercisable Dec. 31, 2000	Wtd. Avg. Exercise Price
Less than $20.00	**3,031**	16.58	2.6 years	**3,031**	$16.58
$20.01—$25.00	**4,060**	24.27	4.6	**4,060**	24.27
$25.01—$30.00	**37,990**	26.60	16.6	**3,752**	26.43
$30.01—$35.00	**5,288**	32.54	8.0	**1,645**	32.42
$35.01—$45.00	**6,056**	38.82	7.2	**3,540**	39.00
$45.01—$55.00	**16,695**	49.55	12.9	**6,778**	48.71
Greater than $55.00	**4,195**	59.12	8.7	**2,697**	59.00
Total	**77,315**	$34.17	12.8 years	**25,503**	$36.41

(c) Employee Stock Purchase Plan

The Corporation sponsors an Employee Stock Purchase Plan designed to encourage employee stock ownership. This plan generally allows eligible employees to purchase shares of the Corporation's common stock at a 15% discount from the market price at the beginning of an offering or the market price at the end of such

offerings, whichever is lower. During the current 18-month offering period, an employee is allowed to make deposits of up to 20% of his/her earnings (up to a designated maximum) on an annual basis to an interest-bearing savings account to purchase the number of shares permissible under the plan. The maximum number of shares each participant may purchase cannot exceed the contribution limit divided by the applicable purchase price on the offering date. The Corporation does not recognize any compensation expense with respect to this plan.

(d) Pro Forma Costs of Stock-Based Compensation

The grant date fair values of stock options granted under the Corporation's various stock option plans and the Employee Stock Purchase Plan were estimated using the Black-Scholes option-pricing model. This model was developed to estimate the fair value of traded options, which have different characteristics than employee stock options. In addition, changes to the subjective input assumptions can result in materially different fair market value estimates. Therefore, the Black-Scholes model may not necessarily provide a reliable single measure of the fair value of employee stock options and purchase rights.

The following table summarizes stock-based compensation grants and their related weighted-average grant-date fair values for the years ended December 31:

	2000		1999		1998	
(Shares in Thousands)	Number of Shares	Wtd. Avg. Grant Date Fair Value	Number of Shares	Wtd. Avg. Grant Date Fair Value	Number of Shares	Wtd. Avg. Grant Date Fair Value
Stock option plans . . .	**42,659**	**$ 9.80**	15,556	$12.28	8,896	$12.03
Restricted shares	**4,517**	**27.85**	1,728	51.13	651	56.54
Employee Stock Purchase Plan (1)	**2,122**	**3.27**	2,974	7.28	—	—

(1) Estimated number of shares that employees would purchase under the plan for 1999.

The following assumptions were used to determine the Black-Scholes weighted-average grant date fair value of stock option awards and conversions in 2000, 1999 and 1998: (1) expected dividend yields ranged from 2.61%—4.86%, (2) expected volatility ranged from 19.11%—42.29%, (3) risk-free interest rates ranged from 4.36%—6.43% and (4) expected lives ranged from two to 13 years.

The following assumptions were used to determine the Black-Scholes weighted-average grant-date fair value of employees' purchase rights under the employee stock purchase plans in 2000 and 1999, respectively: (1) expected dividend yields of 2.58% and 2.86%, (2) expected volatility of 39.63% and 34.68%, (3) risk-free interest rates of 6.22% and 5.07% and (4) expected lives of 0.5 and 1.0 years. As certain employee stock purchase plans expired during 1998 and no additional rights were granted, determination of the average grant date fair value was not required in 1998.

Had the compensation cost for the Corporation's stock-based compensation plans been determined in accordance with the fair-value-based accounting method provided by SFAS No. 123, the net income and earnings per share implications for the years ended December 31, 2000, 1999 and 1998 would have been as follows:

	2000		1999		1998	
(In millions, except per share data)	Pro Forma(1)	As Reported	Pro Forma(1)	As Reported	Pro Forma(1)	As Reported
Net income (loss)	**$ (646)**	**$ (511)**	$3,413	$3,479	$3,034	$3,108
Net income per common share, basic	**(0.57)**	**(0.45)**	2.91	2.97	2.58	2.65
Net income per common share, diluted	**(0.57)**	**(0.45)**	2.89	2.95	2.55	2.61

(1) The above pro forma information may not be representative of the pro forma impact in future years.

As a result of the change in control at FCN and First Commerce, additional compensation expense of $21 million associated with the accelerated vesting of stock options was included in the 1998 pro forma net income under SFAS No. 123.

NOTE 19—Income Taxes

The components of total applicable income tax expense (benefit) in the consolidated income statement for the years ended December 31, 2000, 1999 and 1998, are as follows:

(In millions)	2000	1999	1998
Income tax expense:			
Current:			
Federal	**$ 571**	$ 735	$ 801
Foreign	**25**	2	4
State	**26**	97	98
Total	**622**	834	903
Deferred:			
Federal	**(1,151)**	624	424
State	**(40)**	37	30
Total	**(1,191)**	661	454
Applicable income taxes (benefit)	**$ (569)**	$1,495	$1,357

The tax effects of fair value adjustments on securities available for sale, foreign currency translation adjustments and certain tax benefits related to stock options are recorded directly to stockholders' equity. The net tax (benefit) charge recorded directly to stockholders' equity amounted to $107 million in 2000, $(259) million in 1999 and $(66) million in 1998.

A summary reconciliation of the differences between applicable income taxes and the amounts computed at the applicable regular federal tax rate of 35% follows:

(Dollars in millions)	2000		1999		1998	
Statutory tax rate	**$(378)**	**35.0%**	$1,741	35.0%	$1,563	35.0%
Increase (decrease) resulting from:						
State income taxes, net of federal income tax benefit	**(4)**	**0.3**	87	1.8	83	1.9
Tax-exempt interest	**(57)**	**5.3**	(66)	(1.3)	(58)	(1.3)
Tax credits	**(179)**	**16.6**	(133)	(2.7)	(94)	(2.1)
Goodwill	**25**	**(2.3)**	23	0.5	25	0.5
Cash surrender value of life insurance	**(56)**	**5.2**	(48)	(1.0)	(45)	(1.0)
Nontaxable liquidating distributions	—	—	—	—	(142)	(3.2)
Other, net	**80**	**(7.4)**	(109)	(2.2)	25	0.6
Applicable income taxes (benefit)	**$(569)**	**52.7%**	$1,495	30.1%	$1,357	30.4%

A net deferred tax liability is included in other liabilities in the consolidated balance sheet as a result of temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and their related tax bases. The components of the net deferred tax liability as of December 31, 2000 and 1999 are as follows:

(In millions)	2000	1999
Deferred tax liabilities:		
Deferred income on lease financing	**$3,895**	$3,632
Prepaid pension costs	**165**	91
Securitizations of credit card receivables	**155**	247
Deferred fee income	**336**	59
Other	**200**	36
Gross deferred tax liabilities	**4,751**	4,065
Deferred tax assets:		
Allowance for credit losses	**1,667**	969
Restructure reserves	**127**	142
Incentive compensation	**257**	112
Other	**933**	(4)
Gross deferred tax assets	**2,984**	1,219
Net deferred tax liability	**$1,767**	$2,846

The Corporation has an alternative minimum tax (AMT) credit carryforward for tax purposes of $109 million at December 31, 2000. The Corporation also had carryforwards of foreign tax credits (FTC) and general business credits (GBC) in the amounts of $25 million and $156 million respectively. The FTC's will expire after 2006 and the GBC's will expire after 2020.

NOTE 20—Lease Commitments

The Corporation has entered into a number of operating lease agreements for premises and equipment. The minimum annual rental commitments under these leases are shown below:

(In millions)	
2001	$ 279
2002	250
2003	242
2004	213
2005	180
2006 and thereafter	1,035
Total	$2,199

The leasing commitments presented above include $259 million of cumulative charges to earnings taken through December 31, 2000, relating to the early exit from certain facilities. Rental income from premises leased to others in the amount of $80 million in 2000, $87 million in 1999 and $101 million in 1998 has reduced occupancy expense. Rental expense under operating leases approximated $384 million in 2000, $414 million in 1999 and $356 million in 1998.

NOTE 21—Financial Instruments with Off-Balance Sheet Risk

In the normal course of business, the Corporation is a party to financial instruments containing credit and/or market risks that are not required to be reflected in the balance sheet. These financial instruments include credit-related instruments as well as certain derivative instruments. The Corporation has risk management policies to identify, monitor and limit exposure to credit, liquidity and market risks.

The following disclosures represent the Corporation's credit exposure, assuming that every counterparty to financial instruments with off-balance sheet credit risk fails to perform completely according to the terms of the contracts, and that the collateral and other security, if any, proves to be of no value to the Corporation.

This note does not address the amount of market losses the Corporation would incur if future changes in market prices make financial instruments with off-balance sheet market risk less valuable or more onerous.

(a) Collateral and Other Security Arrangements

The credit risk of both on- and off-balance sheet financial instruments varies based on many factors, including the value of collateral held and other security arrangements. To mitigate credit risk, the Corporation generally determines the need for specific covenant, guarantee and collateral requirements on a case-by-case basis, depending on the nature of the financial instrument and the customer's creditworthiness. The Corporation may also receive comfort letters and oral assurances. The amount and type of collateral held to reduce credit risk varies but may include real estate, machinery, equipment, inventory and accounts receivable, as well as cash on deposit, stocks, bonds and other marketable securities that are generally held in the Corporation's possession or at another appropriate custodian or depository. This collateral is valued and inspected on a regular basis to ensure both its existence and adequacy. Additional collateral is requested when appropriate.

(b) Credit-Related Financial Instruments

The table below summarizes credit-related financial instruments, including both commitments to extend credit and letters of credit:

	December 31	
(In billions)	**2000**	**1999**
Unused credit card lines	**$272.7**	$270.5
Unused loan commitments	**162.9**	143.6
Standby letters of credit and foreign office guarantees	**19.0**	16.8
Commercial letters of credit	**0.7**	0.8

Since many of the unused commitments are expected to expire unused or be only partially used, the total amount of unused commitments in the preceding table does not necessarily represent future cash requirements.

Credit card lines allow customers to use a credit card to buy goods or services and to obtain cash advances. However, the Corporation has the right to change or terminate any terms or conditions of a customer's credit card account, upon notification to the customer. Loan commitments are agreements to make or acquire a loan or lease as long as the agreed-upon terms (e.g., expiry, covenants or notice) are met. The Corporation's commitments to purchase or extend loans help its customers meet their liquidity needs.

Standby letters of credit and foreign office guarantees are issued in connection with agreements made by customers to counterparties. If the customer fails to comply with the agreement, the counterparty may enforce the standby letter of credit or foreign office guarantee as a remedy. Credit risk arises from the possibility that the customer may not be able to repay the Corporation for standby letters of credit or foreign office guarantees. At December 31, 2000 and 1999, standby letters of credit and foreign office guarantees had been issued for the following purposes:

	December 31	
(In millions)	**2000**	**1999**
Financial	**$15,705**	$14,261
Performance	**3,305**	2,551
Total (1)	**$19,010**	$16,812

(1) Includes $2.7 billion at December 31, 2000, and $1.9 billion at December 31, 1999, participated to other institutions.

At December 31, 2000, $14.8 billion of standby letters of credit and foreign office guarantees was due to expire within three years, and $4.2 billion was to expire after three years.

Commercial letters of credit are issued or confirmed to ensure payment of customers' payables or receivables in short-term international trade transactions. Generally, drafts will be drawn when the underlying transaction is consummated as intended. However, the short-term nature of this instrument serves to mitigate the risk associated with these contracts.

(c) Derivative Financial Instruments

The Corporation enters into a variety of derivative financial instruments in its trading, asset and liability management, and corporate investment activities. These instruments offer customers protection from rising or falling interest rates, exchange rates, equity prices and commodity prices. They can either reduce or increase the Corporation's exposure to such changing rates or prices.

The following is a brief description of such derivative financial instruments:

- Interest rate forward and futures contracts represent commitments either to purchase or sell a financial instrument at a specified future date for a specified price, and may be settled in cash or through delivery.
- An interest rate swap is an agreement in which two parties agree to exchange, at specified intervals, interest payment streams calculated on an agreed-upon notional principal amount with at least one stream based on a specified floating rate index.
- Interest rate options are contracts that grant the purchaser, for a premium payment, the right either to purchase from or sell to the writer of the option, a financial instrument at a specified price within a specified period of time or on a specified date.
- Interest rate caps and floors are contracts with notional principal amounts that require the seller, in exchange for a fee, to make payments to the purchaser if a specified market interest rate exceeds the fixed cap rate or falls below the fixed floor rate on specified future dates.
- Forward rate agreements are contracts with notional principal amounts that settle in cash at a specified future date based on the differential between a specified market interest rate and a fixed interest rate.
- Foreign exchange contracts represent swap, spot, forward, futures and option contracts to exchange currencies.
- Equity price contracts represent swap, forward, futures, cap, floor and option contracts that derive their values from underlying equity prices.
- Commodity price contracts represent swap, futures, cap, floor and option contracts that derive their values from underlying commodity prices.

The Corporation's objectives and strategies for using derivative financial instruments for structural interest rate risk management and foreign exchange risk management are discussed on pages 24 to 26.

Balance sheet exposure for derivative financial instruments includes the amount of recognized gains in the market valuations of those contracts. Those amounts fluctuate as a function of maturity, interest rates, foreign exchange rates, equity prices and commodity prices.

The credit risk associated with exchange-traded derivative financial instruments is limited to the relevant clearinghouse. Options written do not expose the Corporation to credit risk, except to the extent of the underlying risk in a financial instrument that the Corporation may be obligated to acquire under certain written put options. Caps and floors written do not expose the Corporation to credit risk.

On some derivative financial instruments, the Corporation may have additional risk. This is due to the underlying risk in the financial instruments that the Corporation may be obligated to acquire or the risk that the Corporation will deliver under a contract, but the customer fails to deliver the countervailing amount. The Corporation believes that its credit and settlement procedures minimize these risks.

Not all derivative financial instruments have off-balance sheet market risk. Market risk associated with options purchased and caps and floors purchased are recorded in the balance sheet.

NOTE 22—Fair Value of Financial Instruments

The Corporation is required to disclose the estimated fair value of its financial instruments in accordance with SFAS No. 107, ''Disclosures about Fair Value of Financial Instruments.'' These disclosures do not attempt to estimate or represent the Corporation's fair value as a whole. The disclosure excludes assets and liabilities that are not financial instruments as well as the significant unrecognized value associated with core deposits and credit card relationships.

Fair value amounts disclosed represent point-in-time estimates that may change in subsequent reporting periods due to market conditions or other factors. Estimated fair value amounts in theory represent the amounts at which financial instruments could be exchanged or settled in a current transaction between willing parties. In practice, however, this may not be the case due to inherent limitations in the methodologies and assumptions used to estimate fair value. For example, quoted market prices may not be realized because the financial instrument may be traded in a market that lacks liquidity; or a fair value derived using a discounted cash flow approach may not be the amount realized because of the subjectivity involved in selecting underlying assumptions, such as projecting cash flows or selecting a discount rate. The fair value amount also may not be realized because it ignores transaction costs and does not include potential tax effects. The Corporation does not plan to dispose of, either through sale or settlement, the majority of its financial instruments at these estimated fair values.

The following table summarizes the carrying values and estimated fair values of financial instruments as of December 31, 2000 and 1999:

(In millions)	2000 Carrying Value	2000 Estimated Fair Value	1999 Carrying Value	1999 Estimated Fair Value
Financial assets:				
Cash and other short-term financial instruments (a)	**$ 27,640**	**$ 27,640**	$ 32,869	$ 32,869
Trading assets (a)	**2,788**	**2,788**	7,952	7,952
Investment securities (b)	**50,561**	**50,561**	47,912	47,912
Loans (c)	**174,251**	**171,633**	163,877	161,911
Allowance for credit losses	**(4,110)**	**—**	(2,285)	—
Loans, net	**170,141**	**171,633**	161,592	161,911
Derivative product assets:				
Trading purposes (1)(f)	**2,148**	**2,148**	3,160	3,160
Other than trading purposes (f)	**174**	**313**	212	199
Total derivative product assets	**2,322**	**2,461**	3,372	3,359
Financial instruments in other assets (a)	**2,220**	**2,220**	1,911	1,911
Financial liabilities:				
Deposits (d)	**167,077**	**167,882**	162,278	162,135
Securities sold not yet purchased (a)	**285**	**285**	753	753
Other short-term financial instruments (a)	**30,240**	**30,240**	39,544	39,544
Long-term debt (2)(e)	**40,911**	**40,867**	35,435	35,678
Derivative product liabilities:				
Trading purposes (1)(f)	**2,090**	**2,090**	3,115	3,115
Other than trading purposes (f)	**122**	**161**	217	137
Total derivative product liabilities	**2,212**	**2,251**	3,332	3,252
Financial instruments in other liabilities (a)	**1,828**	**1,828**	1,363	1,363

(1) The estimated average fair values of derivative financial instruments used in trading activities during 2000 and 1999 were $2.8 billion and $4.3 billion, respectively, classified as assets and $2.8 billion and $4.4 billion, respectively, classified as liabilities.

(2) Includes trust preferred capital securities.

Estimated fair values are determined as follows:

(a) Financial Instruments Whose Carrying Value Approximates Fair Value

A financial instrument's carrying value approximates its fair value when the financial instrument has an immediate or short-term maturity (generally one year or less), or is carried at fair value.

Quoted market prices or dealer quotes typically are used to estimate fair values of trading securities and securities sold under repurchase agreements.

Commitments to extend credit and letters of credit typically result in loans with a market interest rate when funded. The recorded book value of deferred fee income approximates the fair value.

(b) Investment Securities

Quoted market prices typically are used to estimate the fair value of debt investment securities. Quoted market prices for similar securities are used to estimate fair value when a quoted market price is not available for a specific debt investment security. See Note 1(c) on page 52 for the methodologies used to determine the fair value of equity investment securities.

(c) Loans

The loan portfolio was segmented based on loan type, credit quality and repricing characteristics. Carrying values are used to estimate fair values of certain variable rate loans with no significant credit concerns and frequent repricing. A discounted cash flow method was used to estimate the fair value of other loans. Discounting was based on the contractual cash flows, and discount rates typically are based on the year-end yield curve plus a spread that reflects pricing on loans with similar characteristics. If applicable, prepayment assumptions are factored into the fair value determination based on historical experience and current economic and lending conditions.

(d) Deposits

The amount payable on demand at the report date is used to estimate fair value of demand and savings deposits with no defined maturity. A discounted cash flow method is used to estimate the fair value of fixed-rate time deposits. Discounting was based on the contractual cash flows and the current rates at which similar deposits with similar remaining maturities would be issued, adjusted for servicing costs. Carrying value typically is used to estimate the fair value of floating-rate time deposits.

(e) Long-Term Debt

Quoted market prices or the discounted cash flow method was used to estimate the fair value of the Corporation's fixed-rate long-term debt. Discounting was based on the contractual cash flows and the current rates at which debt with similar terms could be issued. Carrying value typically is used to estimate the fair value of floating-rate long-term debt.

(f) Derivative Product Assets and Liabilities

Quoted market prices or pricing and valuation models were used to estimate the fair value of derivative product assets and liabilities. Assumptions input into models were based on current market information.

NOTE 23—Related Party Transactions

Certain executive officers, directors and their related interests are loan customers of the Corporation's affiliates. The Securities and Exchange Commission (the "Commission") has determined that, with respect to the Corporation and significant subsidiaries (as defined by the Commission), disclosure of borrowings by directors and executive officers and certain of their related interests should be made if the loans are greater than 5% of stockholders' equity, in the aggregate. These loans in aggregate were not greater than 5% of stockholders' equity at December 31, 2000 or 1999.

NOTE 24—Pledged Assets

Assets having a book value of $44.2 billion as of December 31, 2000, and $62.7 billion as of December 31, 1999, were pledged as collateral for repurchase agreements, off-balance sheet investment products, and governmental and trust department deposits in accordance with federal and state requirements, and for other purposes required by law. The assets pledged generally were comprised of commercial mortgage loans and investment securities. Of the total collateral pledged as of December 31, 2000, $491 million of collateral, which was comprised of investment securities posted as collateral for repurchase agreements, was permitted to be sold or repledged by the secured party.

The Corporation's bank affiliates are required to maintain average noninterest-bearing cash balances, in accordance with Federal Reserve Board regulations. The average required reserve balances were $2.5 billion in 2000 and $2.9 billion in 1999.

NOTE 25—Collateral Policy Related to Certain Asset Transfer Activity

It is the Corporation's policy to take possession of securities purchased under agreements to resell in order to secure the risk of counterparty nonperformance on the transaction. The Corporation monitors the fair value of the underlying securities as compared to the related receivable, including accrued interest, and adjusts the level of collateral as necessary. With respect to securities lent, the Corporation receives collateral to secure the risk of counterparty nonperformance in the form of cash or other collateral, in an amount generally in excess of the fair value of the lent securities. The Corporation monitors the fair value of the securities lent on a daily basis, and additional cash or securities are obtained as necessary.

The fair value of collateral accepted by the Corporation in connection with these activities was $4.1 billion at December 31, 2000, of which, $3.8 billion had been sold or repledged as of the balance sheet date.

NOTE 26—Contingent Liabilities

The Corporation and certain of its subsidiaries have been named as defendants in various legal proceedings, including certain class actions, arising out of the normal course of business or operations. In certain of these proceedings, which are based on alleged violations of consumer protection, securities, banking, insurance and other laws, rules or principles, substantial money damages are asserted against the Corporation and its subsidiaries. Since the Corporation and certain of its subsidiaries, which are regulated by one or more federal and state regulatory authorities, are the subject of numerous examinations and reviews by such authorities, the Corporation also is and will be, from time to time, normally engaged in various disagreements with regulators, related primarily to its financial services businesses. The Corporation has also received certain tax deficiency assessments. In view of the inherent difficulty of predicting the outcome of such matters, the Corporation cannot state what the eventual outcome of pending matters will be; however, based on current knowledge and after consultation with counsel, Management does not believe that liabilities arising from these matters, if any, will have a material adverse effect on the consolidated financial position of the Corporation.

NOTE 27—BANK ONE CORPORATION (Parent Company Only)
Condensed Financial Statements

Condensed Balance Sheets

December 31 (In millions)	2000	1999
Assets		
Cash and due from banks:		
Bank subsidiaries	**$ 14**	$ 16
Interest-bearing due from banks:		
Bank subsidiaries	**7,247**	2,836
Trading assets	**13**	—
Investment securities—available for sale	**135**	353
Loans and receivables—subsidiaries:		
Bank subsidiaries	**7,044**	7,109
Nonbank subsidiaries	**6,934**	8,845
Investment in subsidiaries:		
Bank subsidiaries	**21,166**	20,148
Nonbank subsidiaries	**1,663**	4,255
Other assets	**424**	445
Total assets	**$44,640**	$44,007
Liabilities and Stockholders' Equity		
Short-term borrowings:		
Nonbank subsidiaries	**$ 73**	$ 66
Other	**1,166**	1,268
Long-term debt:		
Nonbank subsidiaries	**2,560**	1,621
Other	**20,824**	20,118
Other liabilities	**1,382**	844
Total liabilities	**26,005**	23,917
Stockholders' equity	**18,635**	20,090
Total liabilities and stockholders' equity	**$44,640**	$44,007

BANK ONE CORPORATION (Parent Company Only)
Condensed Income Statements

(In millions)	For the Year December 31 2000	1999	1998
Operating Income			
Dividends:			
Bank subsidiaries	**$ 1,775**	$2,367	$4,087
Nonbank subsidiaries	**762**	373	359
Interest income:			
Bank subsidiaries	**822**	534	478
Nonbank subsidiaries	**513**	438	247
Other	**22**	11	8
Management and other fees from affiliates	**—**	—	606
Other income:			
Bank subsidiaries	**7**	7	—
Other	**19**	190	26
Total	**3,920**	3,920	5,811
Operating Expense			
Interest expense:			
Nonbank subsidiaries	**161**	93	80
Other	**1,556**	1,132	863
Merger-related charges	**140**	287	675
Salaries and employee benefits	**52**	9	209
Professional fees and services	**4**	3	76
Marketing and development	**—**	—	60
Other expense	**255**	97	373
Total	**2,168**	1,621	2,336
Income Before Income Taxes and Equity in Undistributed Net Income of Subsidiaries	**1,752**	2,299	3,475
Applicable income tax benefit	**(197)**	(198)	(284)
Income Before Equity in Undistributed Net Income of Subsidiaries	**1,949**	2,497	3,759
Equity in undistributed net income (loss) of subsidiaries:			
Bank subsidiaries	**(1,835)**	797	(420)
Nonbank subsidiaries	**(625)**	185	(231)
Net Income (Loss)	**$ (511)**	$3,479	$3,108

BANK ONE CORPORATION (Parent Company Only)
Condensed Statements of Cash Flows

(In millions)	For the Year December 31 2000	1999	1998
Cash Flows from Operating Activities			
Net income (loss)	**$ (511)**	$3,479	$3,108
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Equity in net income of subsidiaries	**(77)**	(3,722)	(3,965)
Dividends received from subsidiaries	**2,537**	2,740	4,446
Other operating adjustments	**83**	417	17
Total adjustments	**2,543**	(565)	498
Net cash provided by operating activities	**2,032**	2,914	3,606
Cash Flows from Investing Activities			
Net (increase) in loans to subsidiaries	**2,296**	(3,226)	(3,024)
Net increase in capital investments in subsidiaries	**(668)**	(1,277)	(1,559)
Purchase of investment securities—available for sale	**(1,095)**	(805)	(38)
Proceeds from sales and maturities of investment securities—available for sale	**1,321**	729	44
Other, net	**29**	(29)	—
Net cash provided by (used in) investing activities	**1,883**	(4,608)	(4,577)
Cash Flows from Financing Activities			
Net increase (decrease) in commercial paper and short-term borrowings	**(181)**	37	443
Proceeds from issuance of long-term debt	**3,964**	9,524	3,387
Redemption and repayment of long-term debt	**(2,216)**	(2,843)	(350)
Dividends paid	**(1,222)**	(2,420)	(1,322)
Proceeds from issuance of common and treasury stock	**152**	61	161
Purchase of treasury stock	**(3)**	(1,647)	(375)
Net cash provided by financing activities	**494**	2,712	1,944
Net Increase in Cash and Cash Equivalents	**4,409**	1,018	973
Cash and Cash Equivalents at Beginning of Year	**2,852**	1,834	861
Cash and Cash Equivalents at End of Year	**$7,261**	$2,852	$1,834
Other Cash-Flow Disclosures			
Interest paid	**$1,620**	$1,113	$ 923
Income tax receipt	**(139)**	(335)	(50)

In connection with issuances of commercial paper, the Corporation has an agreement providing future credit availability (back-up lines of credit) with non-affiliated banks. The agreements aggregated $300 million at December 31, 2000. The commitment fee paid under these agreements was 0.07%. The back-up lines of credit, together with overnight money market loans, short-term investments and other sources of liquid assets, exceeded the amount of commercial paper issued at December 31, 2000.

NOTE 27—Quarterly Financial Data (Unaudited)

	2000				1999			
(In millions, except ratios and per share data)	**Fourth**	**Third**	**Second**	**First**	**Fourth**	**Third**	**Second**	**First**
Income Statement Data:								
Total revenue, net of interest expense	**$ 3,461**	**$ 3,942**	**$ 2,509**	**$ 4,014**	$ 3,970	$ 4,340	$ 4,533	$ 4,870
Net interest income—tax-equivalent basis	**2,247**	**2,242**	**2,257**	**2,228**	2,221	2,271	2,341	2,309
Provision for credit losses	**1,507**	**516**	**1,013**	**362**	416	277	275	281
Noninterest income	**1,247**	**1,734**	**288**	**1,821**	1,782	2,098	2,222	2,590
Noninterest expense	**2,847**	**2,593**	**3,507**	**2,661**	3,030	2,713	2,806	2,941
Net income (loss)	**(512)**	**581**	**(1,269)**	**689**	411	925	992	1,151
Per Common Share Data:								
Net income (loss):								
Basic	**$ (0.44)**	**$ 0.50**	**$ (1.11)**	**$ 0.60**	$ 0.36	$ 0.79	$ 0.84	$ 0.97
Diluted	**(0.44)**	**0.50**	**(1.11)**	**0.60**	0.36	0.79	0.83	0.96
Cash dividends declared	**0.21**	**0.21**	**0.42**	**0.42**	0.42	0.42	0.42	0.42
Book value	**15.90**	**16.47**	**16.12**	**17.43**	17.34	17.32	17.73	17.68
Balance Sheet:								
Loans:								
Managed	**$236,492**	**$237,505**	**$234,412**	**$229,673**	$229,196	$222,117	$218,795	$213,814
Reported	**174,251**	**176,419**	**172,591**	**168,078**	163,877	158,143	157,464	154,850
Deposits	**167,077**	**164,130**	**163,169**	**164,643**	162,278	156,900	156,454	153,699
Long-term debt (1)	**40,911**	**42,641**	**39,093**	**38,753**	35,435	34,735	27,728	24,988
Total assets:								
Managed	**309,096**	**324,780**	**316,011**	**317,176**	315,064	311,490	302,844	294,694
Reported	**269,300**	**283,373**	**272,709**	**273,008**	269,425	264,135	256,033	250,402
Common stockholders' equity	**18,445**	**19,042**	**18,630**	**20,081**	19,900	19,860	20,860	20,870
Total stockholders' equity	**18,635**	**19,232**	**18,820**	**20,271**	20,090	20,050	21,050	21,060
Credit Quality Ratios:								
Net charge-offs to average loans	**1.11%**	**0.74%**	**0.75%**	**0.64%**	0.95%	0.68%	0.71%	0.73%
Allowance for credit losses to period end loans	**2.36**	**1.75**	**1.73**	**1.39**	1.39	1.42	1.43	1.47
Nonperforming assets to related assets	**1.48**	**1.21**	**1.03**	**0.99**	1.02	1.06	1.03	1.04
Financial Performance Ratios:								
Return (loss) on average assets	**(0.75)%**	**0.85%**	**(1.87)%**	**1.03%**	0.62%	1.44%	1.57%	1.85%
Return (loss) on average common equity	**(10.7)**	**12.2**	**(26.0)**	**13.9**	8.2	18.2	19.1	22.9
Net interest margin:								
Managed	**4.65**	**4.66**	**4.80**	**4.91**	4.98	5.32	5.55	5.66
Reported	**3.67**	**3.68**	**3.77**	**3.78**	3.79	4.04	4.26	4.30
Efficiency ratio:								
Managed	**66.0%**	**54.6%**	**103.8%**	**53.7%**	62.1%	52.1%	52.3%	52.1%
Reported	**81.5**	**65.2**	**137.8**	**65.7**	75.7	62.1	61.5	60.0
Capital Ratios:								
Risk-based capital:								
Tier 1	**7.3**	**7.5**	**7.2**	**7.7**	7.7	7.7	8.1	8.2
Total	**10.8**	**10.9**	**10.3**	**10.6**	10.7	10.8	11.4	11.7
Tangible common equity/tangible managed assets	**5.5**	**5.4**	**5.4**	**5.7**	5.7	5.7	6.2	6.3
Common Stock Data:								
Average shares outstanding:								
Basic	**1,158**	**1,156**	**1,153**	**1,149**	1,147	1,167	1,180	1,178
Diluted (2)	**1,158**	**1,167**	**1,153**	**1,155**	1,154	1,177	1,195	1,193
Stock price:								
High	**$ 37.69**	**$ 38.81**	**$ 36.88**	**$ 34.75**	$ 39.56	$ 60.88	$ 63.13	$ 57.75
Low	**31.88**	**28.44**	**26.56**	**24.25**	29.98	34.31	53.75	47.50
Close	**36.63**	**38.06**	**26.56**	**34.38**	32.00	34.81	59.56	55.06

(1) Includes trust preferred capital securities.

(2) Common equivalent shares have been excluded from the computation of diluted loss per share in the second and fourth quarters of 2000 as the effect would be antidilutive.

REPORT OF MANAGEMENT

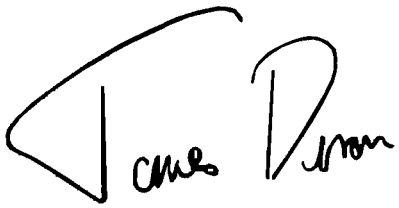
Management of BANK ONE CORPORATION and its subsidiaries ("the Corporation") is responsible for the preparation, integrity and fair presentation of its published financial reports. These reports include consolidated financial statements that have been prepared in accordance with Generally Accepted Accounting Principles, using Management's best judgment and all information available.

The consolidated financial statements of the Corporation have been audited by Arthur Andersen LLP, independent auditors. Their accompanying report is based upon an audit conducted in accordance with generally accepted auditing standards, including the related review of internal accounting controls and financial reporting matters. The Audit and Risk Management Committee of the Board of Directors, which consists solely of outside directors, meets at least quarterly with the independent auditors, the Internal Audit Department and representatives of management to discuss, among other things, accounting and financial reporting matters.

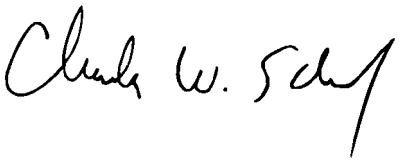
Management of the Corporation is responsible for establishing and maintaining an effective internal control structure over financial reporting, including the safeguarding of assets against unauthorized acquisition, use or disposition. The Corporation maintains systems of controls that it believes are reasonably designed to provide Management with timely and accurate information about the operations of the Corporation. Both the Corporation's independent auditors and the internal audit function directly provide reports on significant matters to the Audit and Risk Management Committee. The Corporation's independent auditors, the internal audit function and the Audit and Risk Management Committee have free access to each other. Substantial changes were made in 2000 which Management believes improved internal controls, systems and corporate-wide processes and procedures.

The Corporation is dedicated to maintaining a culture that reflects the highest standards of integrity and ethical conduct when engaging in its business activities. Management of the Corporation is responsible for compliance with various federal and state laws and regulations, and the Corporation has established procedures that are designed to ensure that Management's policies relating to conduct, ethics and business practices are followed on a uniform basis.

BANK ONE CORPORATION



James Dimon
Chairman and Chief Executive Officer



Charles W. Scharf
Executive Vice President and
Chief Financial Officer

Chicago, Illinois
January 16, 2001

Report of Independent Public Accountants

To the Stockholders and Board of Directors
of BANK ONE CORPORATION:

We have audited the accompanying consolidated balance sheets of BANK ONE CORPORATION (a Delaware corporation) and subsidiaries as of December 31, 2000 and 1999, and the related consolidated statements of income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2000. These financial statements are the responsibility of BANK ONE CORPORATION's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of BANK ONE CORPORATION and subsidiaries as of December 31, 2000 and 1999, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2000, in conformity with accounting principles generally accepted in the United States.

Chicago, Illinois,
January 17, 2001



SELECTED STATISTICAL INFORMATION

Common Stock and Stockholder Data: (1)(2)	**2000**	**1999**	**1998**	**1997**	**1996**
Market price:					
High for the year	**$38.81**	$63.13	$64.78	$54.37	$43.53
Low for the year	**24.25**	29.98	37.58	35.57	28.41
At year-end	**36.63**	32.00	51.06	49.37	39.09
Book value (at year-end)	**15.90**	17.34	17.31	16.03	16.64
Dividend payout ratio (3)	**N/M**	57%	58%	61%	38%
Financial Ratios:					
Net income (loss) as a percentage of: (4)					
Average stockholders' equity	**(2.6)%**	17.0%	15.8%	15.6%	17.1%
Average common stockholders' equity	**(2.6)**	17.2	15.9	16.0	17.8
Average total assets	**(0.2)**	1.4	1.3	1.3	1.4
Average earning assets	**(0.2)**	1.6	1.5	1.5	1.6
Stockholders' equity at year-end as a percentage of:					
Total assets at year-end	**6.9**	7.5	7.9	8.0	8.6
Total loans at year-end	**10.7**	12.3	13.2	11.9	12.7
Total deposits at year-end	**11.2**	12.4	12.7	12.4	13.4
Average stockholders' equity as a percentage of:					
Average total assets	**7.2**	8.0	8.2	8.2	8.4
Average loans	**11.4**	13.0	12.7	12.2	12.9
Average deposits	**12.0**	13.2	13.1	12.9	13.2
Income to fixed charges: (5)					
Excluding interest on deposits	**0.8x**	2.3x	2.3x	2.4x	2.6x
Including interest on deposits	**0.9x**	1.6x	1.5x	1.5x	1.6x

(1) There were 114,511 common stockholders of record as of December 31, 2000.

(2) The principal market for the Corporation's common stock is the New York Stock Exchange. The Corporation's common stock also is listed on the Chicago Stock Exchange.

(3) Due to loss.

(4) Does not include deduction for preferred dividends.

(5) Results for the year ended December 31, 2000, were insufficient to cover fixed charges. The coverage deficiency was approximately $1.2 billion.

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Average Balances/Net Interest Margin/Rates

BANK ONE CORPORATION and Subsidiaries

(Income and rates on tax-equivalent basis) (Dollars in millions)	Year Ended December 31					
	2000			1999		
	Average Balance	Interest	Average Rate	Average Balance	Interest	Average Rate
Assets						
Short-term investments	**$ 16,941**	**$ 1,080**	**6.38%**	$ 13,976	$ 678	4.85%
Trading assets	**6,937**	**439**	**6.33**	6,128	332	5.42
Investment securities: (1)						
U.S. government and federal agencies	**14,406**	**958**	**6.65**	15,228	1,008	6.62
States and political subdivisions	**1,367**	**105**	**7.68**	1,835	135	7.36
Other (2)	**29,639**	**2,362**	**7.97**	29,517	2,169	7.35
Total investment securities	**45,412**	**3,425**	**7.54**	46,580	3,312	7.11
Loans: (3)						
Commercial	**100,202**	**8,381**	**8.36**	90,182	6,812	7.55
Consumer	**66,812**	**6,086**	**9.11**	59,440	5,142	8.65
Credit card	**4,754**	**805**	**16.93**	7,233	1,139	15.75
Total loans	**171,768**	**15,272**	**8.89**	156,855	13,093	8.35
Total earning assets (4)	**241,058**	**$20,216**	**8.39%**	223,539	$17,415	7.79%
Allowance for credit losses	**(2,860)**			(2,290)		
Other assets	**33,786**			35,242		
Total assets	**$271,984**			$256,491		
Liabilities and Stockholders' Equity						
Deposits—interest-bearing:						
Savings	**$ 16,433**	**$ 240**	**1.46%**	$ 19,866	$ 310	1.56%
Money market	**47,552**	**1,658**	**3.49**	44,730	1,445	3.23
Time	**43,555**	**2,646**	**6.08**	35,202	1,784	5.07
Foreign offices (5)	**27,609**	**1,593**	**5.77**	24,157	1,112	4.60
Total deposits—interest-bearing	**135,149**	**6,137**	**4.54**	123,955	4,651	3.75
Federal funds purchased and securities under repurchase agreements	**18,961**	**1,142**	**6.02**	19,711	935	4.74
Other short-term borrowings	**18,978**	**1,216**	**6.41**	17,857	942	5.28
Long-term debt (6)	**39,395**	**2,747**	**6.97**	29,367	1,745	5.94
Total interest-bearing liabilities	**212,483**	**$11,242**	**5.29%**	190,890	$ 8,273	4.33%
Demand deposits	**27,313**			31,229		
Other liabilities	**12,616**			13,918		
Preferred stock	**190**			190		
Common stockholders' equity	**19,382**			20,264		
Total liabilities and stockholders' equity	**$271,984**			$256,491		
Interest income/earning assets		**$20,216**	**8.39%**		$17,415	7.79%
Interest expense/earning assets		**11,242**	**4.67**		8,273	3.70
Net interest margin		**$ 8,974**	**3.72%**		$ 9,142	4.09%

(1) The combined amounts for investment securities available for sale and held to maturity are based on their respective carrying values. Based on the amortized cost of investment securities available for sale, the combined average balance for 2000, 1999, 1998, 1997 and 1996 would be $45.500 billion, $46.612 billion, $33.415 billion, $26.246 billion and $28.613 billion, respectively, and the average earned rate in 2000, 1999, 1998, 1997 and 1996 would be 7.53%, 7.11%, 7.12%, 6.63% and 6.73%, respectively.

(2) The Corporation's undivided interest in securitized credit card receivables was reclassified from loans to investment securities during 1998. Such amounts averaged $18,447 million for 2000, $16,048 million for 1999 and $5,798 million for 1998.

(3) Nonperforming loans are included in average balances used to determine rates.

(4) Includes tax-equivalent adjustments based on federal income tax rate of 35%.

(5) Includes international banking facilities' deposit balances in domestic offices and balances of Edge Act and overseas offices.

(6) Includes trust preferred capital securities.

Year Ended December 31								
1998			1997			1996		
Average Balance	Interest	Average Rate	Average Balance	Interest	Average Rate	Average Balance	Interest	Average Rate
$ 14,632	$ 754	5.15%	$ 14,412	$ 801	5.56%	$ 18,040	$ 1,010	5.60%
6,203	366	5.90	5,616	331	5.89	7,366	425	5.77
16,683	1,102	6.61	18,851	1,273	6.75	20,562	1,451	7.06
2,211	176	7.96	2,648	220	8.31	3,191	224	7.02
14,833	1,101	7.42	4,881	246	5.04	5,006	252	5.03
33,727	2,379	7.05	26,380	1,739	6.59	28,759	1,927	6.70
82,118	6,382	7.77	76,636	6,108	7.97	71,376	5,691	7.97
57,206	5,360	9.37	56,410	5,324	9.44	51,792	4,811	9.29
15,628	2,405	15.39	22,880	3,400	14.86	22,926	3,371	14.70
154,952	14,147	9.13	155,926	14,832	9.51	146,094	13,873	9.50
209,514	$17,646	8.42%	202,334	$17,703	8.75%	200,259	$17,235	8.60%
(2,731)			(2,751)			(2,577)		
33,007			30,299			27,946		
$239,790			$229,882			$225,628		
$20,710	$ 470	2.27%	$ 22,408	$ 519	2.32%	$ 21,346	$ 491	2.30%
39,115	1,458	3.73	34,565	1,302	3.77	33,763	1,194	3.54
38,211	2,066	5.41	41,894	2,315	5.53	43,169	2,355	5.46
18,489	949	5.13	16,476	855	5.19	15,772	817	5.18
116,525	4,943	4.24	115,343	4,991	4.33	114,050	4,857	4.26
21,685	1,090	5.03	20,430	1,073	5.25	23,971	1,267	5.29
13,790	737	5.34	14,129	786	5.56	15,244	799	5.24
22,089	1,407	6.37	18,945	1,234	6.51	13,277	895	6.74
174,089	$ 8,177	4.70%	168,847	$ 8,084	4.79%	166,542	$ 7,818	4.69%
33,647			31,199			29,279		
12,323			10,889			10,907		
223			487			757		
19,508			18,460			18,143		
$239,790			$229,882			$225,628		
	$17,646	8.42%		$17,703	8.75%		$17,235	8.60%
	8,177	3.90		8,084	4.00		7,818	3.90
	$ 9,469	4.52%		$ 9,619	4.75%		$ 9,417	4.70%

Analysis of Changes in Net Interest Income

The following table shows the approximate effect on net interest income of volume and rate changes for 2000 and 1999 for the year ended December 31:

Year Ended December 31 (in millions)	2000 over 1999			1999 over 1998		
	Volume	Rate	Total	Volume	Rate	Total
Increase (decrease) in interest income:						
Short-term investments	**$ 189**	**$213**	**$ 402**	$ (32)	$ (44)	$ (76)
Trading assets	**51**	**56**	**107**	(4)	(30)	(34)
Investment securities:						
U.S. government and federal agency	**(55)**	**5**	**(50)**	(96)	2	(94)
States and political subdivisions	**(36)**	**6**	**(30)**	(28)	(13)	(41)
Other	**10**	**183**	**193**	1,079	(11)	1,068
Loans:						
Commercial	**838**	**731**	**1,569**	609	(179)	430
Consumer	**672**	**272**	**944**	193	(411)	(218)
Credit card	**(420)**	**86**	**(334)**	(1,322)	56	(1,266)
Total			**2,801**			(231)
Increase (decrease) in interest expense:						
Deposits:						
Savings	**(50)**	**(20)**	**(70)**	(13)	(147)	(160)
Money market	**98**	**115**	**213**	181	(194)	(13)
Time	**507**	**355**	**862**	(152)	(130)	(282)
Foreign offices	**199**	**282**	**481**	261	(98)	163
Federal funds purchased and securities under repurchase agreements	**(45)**	**252**	**207**	(94)	(61)	(155)
Other short-term borrowings	**72**	**202**	**274**	215	(10)	205
Long-term debt	**699**	**303**	**1,002**	432	(94)	338
Total			**2,969**			96
Decrease in net interest income			**$ (168)**			$ (327)

For purposes of this table, changes that are not due solely to volume or rate changes are allocated to volume.

ANNUAL REPORT ON FORM 10-K

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2000

Commission file number 001-15323

BANK ONE CORPORATION
Incorporated in the State of Delaware
IRS Employer Identification #31-0738296
Address: 1 Bank One Plaza, Chicago, Illinois 60670
Telephone: (312) 732-4000

Securities registered pursuant to Section 12(b) of the Act (Common Stock listed on the New York Stock Exchange and the Chicago Stock Exchange; all others listed only on the New York Stock Exchange):

Common Stock, $0.01 par value
Preferred Stock with Cumulative and Adjustable Dividends, Series B ($100 stated value), $0.01 par value
Preferred Stock with Cumulative and Adjustable Dividends, Series C ($100 stated value), $0.01 par value
7¼% Subordinated Debentures Due 2004
8.10% Subordinated Notes Due 2002
Guarantee of 8.00% Preferred Securities of BANK ONE Capital I
Guarantee of 8.50% Preferred Securities of BANK ONE Capital II
Guarantee of 8.00% Preferred Securities of BANK ONE Capital V

Securities registered pursuant to Section 12(g) of the Act: None.

The registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days.

Disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

The aggregate market value of voting stock held by nonaffiliates of the Corporation at December 31, 2000, was approximately $37,800,000,000 (based on the average price of such stock on February 23, 2001). At December 31, 2000, the Corporation had 1,159,828,803 shares of its Common Stock, $0.01 par value, outstanding.

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(1) The information required by this Item has been previously reported in Bank One's Current Report on Form 8-K dated February 23, 2001, and is expressly incorporated herein by reference. It is also set forth under the heading "Proposal 2—Ratification of Appointment of Independent Auditor" in Bank One's definitive proxy statement dated March 30, 2001.

(2) The information required by Items 10, 11, 12 and 13, respectively, is contained under the following headings in Bank One's definitive proxy statement dated March 30, 2001 and is expressly incorporated herein by reference:

Item 10—"Proposal 1—Election of Directors" and "Section 16(a) Beneficial Ownership Reporting Compliance."

Item 11—"Compensation of Executive Officers," "Director Meeting Attendance and Fee Arrangements" and "Transactions with Directors, Executive Officers, Stockholders and Associates—Organization, Compensation and Nominating Committee Interlocks and Insider Participation."

Item 12—"Beneficial Ownership of Bank One's Common Stock."

Item 13—"Transactions with Directors, Executive Officers, Stockholders and Associates."

EMPLOYEES

As of December 31, 2000, Bank One and its subsidiaries had 80,778 full time and part time employees with benefits.

COMPETITION

Bank One and its subsidiaries face active competition in all of their principal activities, not only from commercial banks, but also from savings and loan associations, credit unions, finance companies, mortgage companies, leasing companies, insurance companies, mutual funds, securities brokers and dealers, other domestic and foreign financial institutions, and various nonfinancial institutions. The Gramm-Leach-Bliley Act of 1999 (''the GLB Act'') likely will intensify competition. Additional discussion of this legislation is included in the ''Supervision and Regulation'' section below.

MONETARY POLICY AND ECONOMIC CONTROLS

The earnings of the Banks, and therefore the earnings of Bank One, are affected by the policies of regulatory authorities, including the Board of Governors of the Federal Reserve System (the ''Federal Reserve Board''). An important function of the Federal Reserve Board is to promote orderly economic growth by influencing interest rates and the supply of money and credit. Among the methods that have been used to achieve this objective are open market operations in United States government securities, changes in the discount rate for member bank borrowings and changes in reserve requirements against bank deposits. These methods are used in varying combinations to influence overall growth and distribution of bank loans, investments and deposits, interest rates on loans and securities, and rates paid for deposits.

The effects of the various Federal Reserve Board policies on the future business and earnings of Bank One cannot be predicted. Other economic controls also have affected Bank One's operations in the past. Bank One cannot predict the nature or extent of any effects that possible future governmental controls or legislation might have on its business and earnings.

SUPERVISION AND REGULATION

General

As a bank holding company, Bank One is regulated under the BHC Act, and is subject to inspection, examination and supervision by the Federal Reserve Board. Under the BHC Act, bank holding companies generally may not own or control more than 5% of the voting shares of any company, including a bank, or acquire certain assets of banks and other companies, without the Federal Reserve Board's prior approval. In addition, bank holding companies (except those that have become ''financial holding companies'') generally may engage, directly or indirectly, only in banking and such other activities as are determined by the Federal Reserve Board to be closely related to banking. The BHC Act, as amended by the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 (''Riegle-Neal''), permits bank holding companies, subject to certain restrictions, to merge with or acquire banks and branches in any state that has not opted out of Riegle-Neal.

The 'GLB Act' eliminated many of the restrictions placed on the activities of certain qualified bank holding companies. Among other things, the GLB Act repealed certain Glass-Steagall Act restrictions on affiliations between banks and securities firms, and amended the BHC Act to permit bank holding companies that qualify as ''financial holding companies'' (''FHCs'') to engage in activities, and acquire companies engaged in activities, that are: financial in nature (including insurance underwriting, insurance company portfolio investment, financial advisory, securities underwriting, dealing and market-making, and merchant banking activities); incidental to financial activities; or complementary to financial activities if the Federal Reserve Board determines that they pose no substantial risk to the safety or soundness of depository institutions or the financial system in general.

The GLB Act also permits national banks, under certain circumstances, to engage through special financial subsidiaries in the financial and other incidental activities authorized for FHCs. Bank One has not yet determined when it may elect to become an FHC or to establish a financial subsidiary.

Liability for Bank Subsidiaries

The Federal Reserve Board requires that a bank holding company act as a source of financial and managerial strength to each of its subsidiary banks and to maintain resources adequate to support each subsidiary bank. In addition, the National Bank Act permits the Office of the Comptroller of the Currency (''OCC'') to order the pro rata assessment of shareholders of a national bank whose capital has become impaired. If a shareholder fails to pay such an assessment, the OCC can order the sale of the shareholder's stock to cover the deficiency. In the event of a bank holding company's bankruptcy, any commitment by the bank holding company to a federal bank regulatory agency to maintain the capital of a subsidiary bank would be assumed by the bankruptcy trustee and entitled to priority of payment.

Under the Federal Deposit Insurance Act, the Federal Deposit Insurance Corporation (''FDIC'') can hold any FDIC-insured depository institution liable for any loss the FDIC incurs, or reasonably expects to incur, in connection with (1) the default of any commonly controlled FDIC-insured depository institution or (2) any assistance provided by the FDIC to any commonly controlled depository institution that is in danger of default. ''Default'' is defined generally as the appointment of a conservator or receiver and ''in danger of default'' is defined generally as the existence of certain conditions indicating that a ''default'' is likely to occur absent regulatory assistance. All of the Banks are FDIC-insured depository institutions.

Capital Requirements

Bank One is subject to capital requirements and guidelines imposed on bank holding companies by the Federal Reserve Board. The OCC, the FDIC and the Federal Reserve Board impose similar requirements and guidelines on the Banks within their respective jurisdictions. These capital requirements are described in ''Capital Management—Regulatory Capital Requirements'' on pages 44-45.

The Banks

Most of the Banks are national banking associations and, as such, are subject to regulation primarily by the OCC and, secondarily, by the FDIC and the Federal Reserve Board. Bank One's state-chartered Banks are subject to regulation by the Federal Reserve Board and the FDIC and, in addition, by their respective state banking departments. The Banks' operations in other countries are subject to various restrictions imposed by the laws of those countries.

Various federal and state laws limit the amount of dividends the Banks can pay to Bank One without regulatory approval. In addition, federal bank regulatory agencies have authority to prohibit the Banks from engaging in unsafe or unsound practices in conducting their business. The payment of dividends, depending upon the financial condition of the bank in question, could be deemed to constitute an unsafe or unsound practice.

Depositor Preference Statute

Federal law provides that deposits and certain claims for administrative expenses and employee compensation against an insured depository institution are afforded a priority over other general unsecured claims against such institution, including federal funds and letters of credit, in the liquidation or other resolution of the institution by any receiver.

OTHER

Bank One's nonbank subsidiaries and banking-related business units are subject to regulation by various state and federal regulatory agencies and self-regulatory organizations. Activities subject to such regulation include investment management, investment advisory services, commodities and securities brokerage, insurance services and products, securities dealing and transfer agency services.

PROPERTIES

Bank One's headquarters are in Chicago, Illinois. The 60-story building, located in the center of the Chicago "Loop" business district, is master-leased and has 1,750,000 square feet of space, of which Bank One occupies approximately 57%; the balance is subleased to other tenants. Bank One and its subsidiaries occupy more than 2,800 owned or leased domestic properties, including banking centers, operations facilities and commercial banking offices. In addition, Bank One has foreign offices in major cities in Canada, Mexico, Europe, Asia and Australia. These offices all are located in leased premises.

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. In addition, the Corporation may make or approve certain statements in future filings with the Securities and Exchange Commission, in press releases, and in oral and written statements made by or with the Corporation's approval that are not statements of historical fact and may constitute forward-looking statements. Forward-looking statements may relate to, without limitation, the Corporation's financial condition, results of operations, plans, objectives, future performance or business.

Forward-looking statements can be identified by the fact that they do not relate strictly to historical or current facts. They often include the words "believes", "anticipates", "expects", "intends", "plans", "estimates", "targets" or words of similar meaning or future or conditional verbs such as "will", "would", "should", "could" or "may".

Forward-looking statements involve risks and uncertainties. Actual conditions, events or results may differ materially from those contemplated by a forward-looking statement. Factors that could cause this difference—many of which are beyond the Corporation's control—include the following, without limitation:

- Local, regional and international business or economic conditions may differ from those expected.
- The effects of and changes in trade, monetary and fiscal policies and laws, including the Federal Reserve Board's interest rate policies may adversely affect the Corporation's business.
- The timely development and acceptance of new products and services may be different than anticipated.
- Technological changes instituted by the Corporation and by persons who may affect the Corporation's business may be more difficult to accomplish or more expensive than anticipated or may have unforeseen consequences.
- Acquisitions and integration of acquired businesses may be more difficult or expensive than expected.
- The ability to increase market share and control expenses may be more difficult than anticipated.
- Changes in laws and regulations (including laws and regulations concerning taxes, banking, securities and insurance) may adversely affect the Corporation or its business.
- Changes in accounting policies and practices, as may be adopted by regulatory agencies and the Financial Accounting Standards Board, may affect expected financial reporting.
- The costs, effects and outcomes of litigation may adversely affect the Corporation or its business.
- The Corporation may not manage the risks involved in the foregoing as well as anticipated.

Forward-looking statements speak only as of the date they are made. The Corporation undertakes no obligation to update any forward-looking statement to reflect subsequent circumstances or events.

EXECUTIVE OFFICERS OF THE REGISTRANT

Name and Age	Current Position Held with the Corporation and Effective Date First Elected to Office Indicated
James Dimon (45)	Director, Chairman and Chief Executive Officer (3/27/00)
Austin A. Adams (57)	Executive Vice President (3/1/01)
David P. Bolger (43)	Executive Vice President (4/20/99)
James S. Boshart, III (55)	Executive Vice President (9/5/00)
Christine A. Edwards (48)	Executive Vice President, Chief Legal Officer and Secretary (5/16/00)
Philip G. Heasley (51)	Executive Vice President (1/2/01)
David J. Kundert (58)	Executive Vice President (12/15/98)
Sarah L. McClelland (41)	Executive Vice President (9/4/00)
Timothy P. Moen (48)	Executive Vice President (12/15/98)
Robert A. O'Neill, Jr. (47)	Executive Vice President and Chief Auditor (1/19/99)
Charles W. Scharf (35)	Executive Vice President and Chief Financial Officer (6/12/00)
R. Michael Welborn (49)	Executive Vice President (5/16/00)

Messrs. Bolger, Kundert, Moen, O'Neill and Welborn, and Ms. McClelland, each have served as an officer of Bank One, or a subsidiary or predecessor, for more than five years. The prior business experience of the other executive officers is set forth below:

James Dimon: November 1998–March 2000—private investor; October–November 1998—President, Citigroup, Inc., and Chairman and Co-Chief Executive Officer of Citigroup subsidiary Salomon Smith Barney Holdings, Inc.; November 1993–October 1998—President and Chief Operating Officer, Travelers Group, as well as executive positions with Travelers' subsidiaries Smith Barney, Inc. and Salomon Smith Barney Holdings, Inc. during that period.

Austin A. Adams: 1985–February 2001—Executive Vice President of the Automation and Operations Group, First Union Corporation.

James S. Boshart, III: June 1998–September 2000—Co-Chief Executive Officer, Schroder Salomon Smith Barney; January 1998–June 1998—Head of Transition Team, Salomon Smith Barney; 1997–January 1998—Vice Chairman and Co-Head of Investment Banking, Salomon Smith Barney; 1995–1997—Head of Capital Markets, Smith Barney, Inc.

Christine A. Edwards: 1999–May 2000—Executive Vice President and Chief Legal Officer, ABN AMRO North America; 1997–1999—Executive Vice President, Chief Legal Officer and Secretary, Morgan Stanley Dean Witter; 1990–1997—Executive Vice President, General Counsel and Secretary, Dean Witter Discover & Co.

Philip G. Heasley: July, 1999–November, 2000—President and Chief Operating Officer, U.S. Bancorp; 1994–July 1999—Vice Chairman, U.S. Bancorp.

Charles W. Scharf: 1998–June, 2000—Chief Financial Officer, Citigroup Global Corporate and Investment Bank; 1995–1998—Chief Financial Officer, Salomon Smith Barney, Inc.

Bank One's executive officers serve until the annual meeting of the Board of Directors (May 15, 2001).

EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

(a) (1) Financial Statements.

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(2) Financial Statement Schedules.

All schedules normally required by Form 10-K are omitted, since either they are not applicable or the required information is shown in the financial statements or the notes thereto.

(3) Exhibits.

3(A). Bank One's Restated Certificate of Incorporation, as amended [Exhibit 3(A) to Bank One's 1998 Annual Report on Form 10-K (File No. 333-60313) incorporated herein by reference].

3(B). Bank One's By-Laws, as amended [Exhibit 3(B) to Bank One's 1999 Annual Report on Form 10-K (File No. 001-15323) incorporated herein by reference].

4. Instruments defining the rights of security holders, including indentures.†

10(A). Summary of BANK ONE CORPORATION Stock Performance Plan.★

10(B). BANK ONE CORPORATION Director Stock Plan, as amended.★

10(C). Summary of BANK ONE CORPORATION Supplemental Executive Retirement Plan.★

10(D). BANK ONE CORPORATION Deferred Compensation Plan, as amended.★

10(E). BANK ONE CORPORATION Supplemental Savings and Investment Plan [Exhibit 10(F) to Bank One's 1999 Annual Report on Form 10-K (File No. 001-15323) incorporated herein by reference].★

10(F). BANK ONE CORPORATION Supplemental Personal Pension Account Plan [Exhibit 10(G) to Bank One's 1999 Annual Report on Form 10-K (File No. 001-15323) incorporated herein by reference].★

10(G). Form of BANK ONE CORPORATION Individual Change of Control Employment Agreement for each executive officer listed above under "Executive Officers of the Registrant" except Messrs. Dimon, Adams and Heasley [Exhibit 10 (H-2) to Bank One's 1999 Annual Report on Form 10-K (File No. 001-15323) incorporated herein by reference).★

10(H). Summary of BANK ONE CORPORATION Executive Management Separation Plan.★

10(I). BANK ONE CORPORATION Planning Group Annual Incentive Plan [Exhibit 10 (J) to Bank One's 1999 Annual Report on Form 10-K (File No. 001-15323) incorporated herein by reference].★

10(J). BANK ONE CORPORATION Investment Option Plan [Exhibit 10(K) to Bank One's 1999 Annual Report on Form 10-K (File No. 001-15323) incorporated herein by reference].★

10(K). BANK ONE CORPORATION Executive Life Insurance Plan [Exhibit 10(L) to Bank One's 1999 Annual Report on Form 10-K (File No. 001-15323) incorporated herein by reference].*

10(L). Summary of BANK ONE CORPORATION Executive Life Plus Plan.*

10(M). Summary of BANK ONE CORPORATION Director Deferred Compensation Plan.*

10(N). First Chicago Corporation Stock Incentive Plan, [Exhibit 10(P) to Bank One's 1998 Annual Report on Form 10-K (File No. 333-60313) incorporated herein by reference].*

10(O). NBD Bancorp, Inc. Performance Incentive Plan, as amended [Exhibit 10(Q) to Bank One's 1998 Annual Report on Form 10-K (File No. 333-60313) incorporated herein by reference].*

10(P). Revised and Restated BANC ONE CORPORATION 1989 Stock Incentive Plan [Exhibit 10.8 to Banc One's 1997 Annual Report on Form 10-K (File No. 1-8552) incorporated herein by reference].*

10(Q). Revised and Restated BANC ONE CORPORATION 1995 Stock Incentive Plan [Exhibit 10(Z) to Bank One's 1998 Annual Report on Form 10-K (File No. 333-60313) incorporated herein by reference].*

10(R). Agreement dated March 27, 2000, between BANK ONE CORPORATION and James Dimon [Exhibit 10(a) to Bank One's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2000 (File No. 001-15323) incorporated herein by reference].*

10(S). Retirement Agreement dated August 22, 2000, between BANK ONE CORPORATION and Verne G. Istock [Exhibit 10(a) to Bank One's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2000 (File No. 001-15323) incorporated herein by reference].*

10(T). Agreement dated March 1, 2000, between BANK ONE CORPORATION and William P. Boardman [Exhibit 10(AA) to Bank One's 1999 Annual Report on Form 10-K (File No. 001-15323) incorporated herein by reference].*

12. Statements re computation of ratios.

21. Subsidiaries of the Corporation.

23. Consents of experts and counsel.

(b) Bank One filed the following Current Reports on Form 8-K during the quarter ended December 31, 2000:

Date	Item Reported
October 17, 2000	Announcement of third quarter 2000 earnings.
November 7, 2000	Announcements of certain management changes affecting the Retail Banking and First USA credit card businesses.

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†Bank One hereby agrees to furnish to the Commission upon request copies of instruments defining the rights of holders of long-term debt of Bank One and its consolidated subsidiaries; the total amount of such debt does not exceed 10% of the total assets of Bank One and its subsidiaries on a consolidated basis.

*Management contract or compensatory plan or arrangement required to be filed as an exhibit to this Form 10-K.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, this 8th day of March, 2001.

BANK ONE CORPORATION
(Registrant)

By: /s/ JAMES DIMON
James Dimon
Principal Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities indicated, this 8th day of March, 2001.

/s/ JOHN H. BRYAN
John H. Bryan
Director

/s/ WILLIAM T. MCCORMICK, JR.
William T. McCormick, Jr.
Director

/s/ JAMES S. CROWN
James S. Crown
Director

/s/ HEIDI G. MILLER
Heidi G. Miller
Director

/s/ JAMES DIMON
James Dimon
Director

/s/ DAVID C. NOVAK
David C. Novak
Director

/s/ MAUREEN A. FAY
Maureen A. Fay
Director

/s/ JOHN W. ROGERS, JR.
John W. Rogers, Jr.
Director

/s/ JOHN R. HALL
John R. Hall
Director

/s/ FREDERICK P. STRATTON, JR.
Frederick P. Stratton, Jr.
Director

/s/ LABAN P. JACKSON, JR.
Laban P. Jackson, Jr.
Director

/s/ ROBERT D. WALTER
Robert D. Walter
Director

/s/ JOHN W. KESSLER
John W. Kessler
Director

/s/ CHARLES W. SCHARF
Charles W. Scharf
Principal Finanical Officer

/s/ RICHARD A. MANOOGIAN
Richard A. Manoogian
Director

/s/ WILLIAM J. ROBERTS
William J. Roberts
Principal Accounting Officer



Doing business as

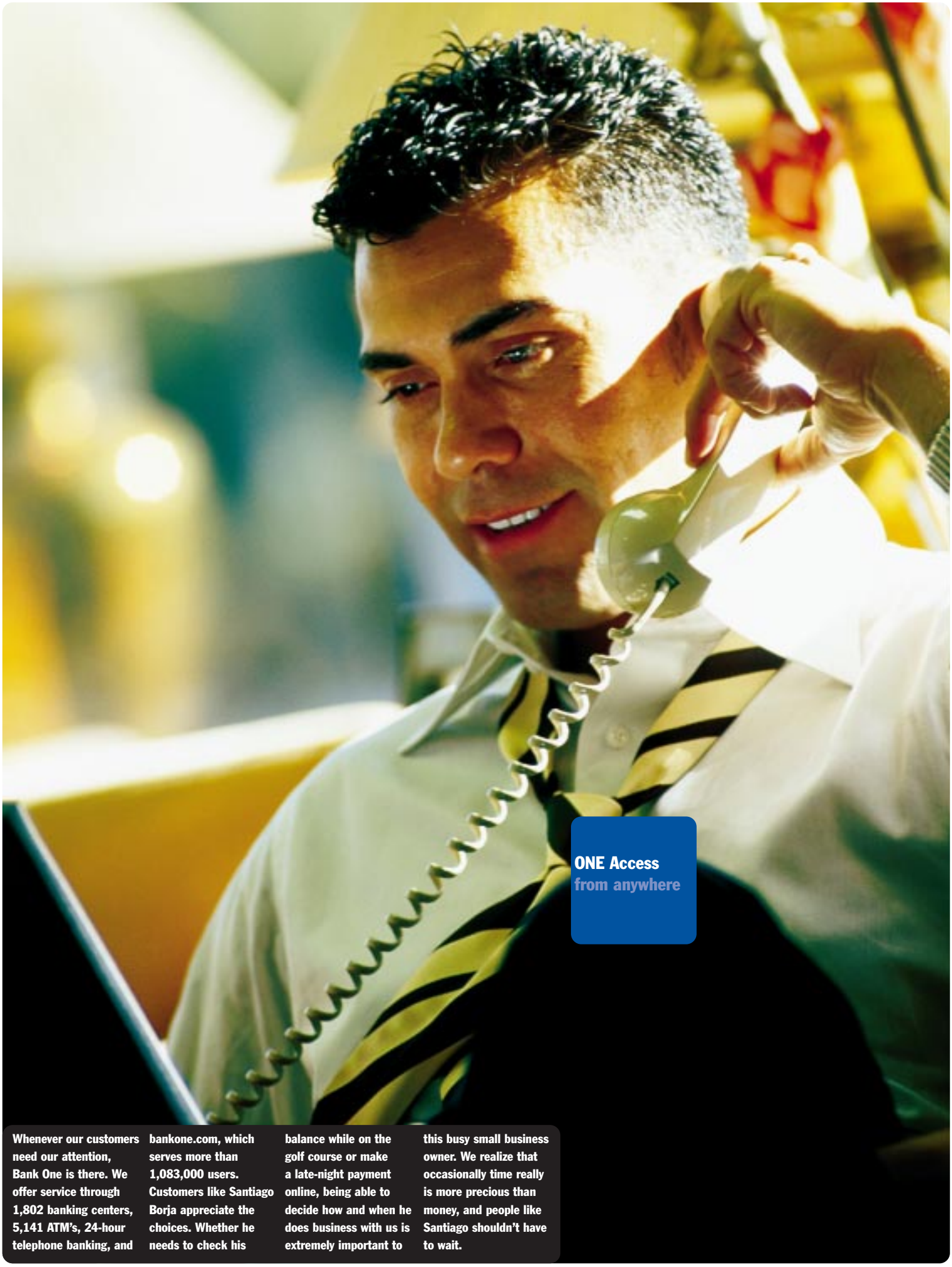
BANK ONE 2001 ANNUAL REPORT

FINANCIAL HIGHLIGHTS

FOR THE YEAR ENDED DECEMBER 31,	2001	2000	% change
(Dollars in millions, except per share data)			
Segment Results			
Retail	**$ 1,272**	$ 414	N/M
Commercial Banking	**721**	(115)	N/M
First USA	**946**	3	N/M
Investment Management	**374**	322	16
Corporate	**(409)**	(1,033)	60
Total business segments operating income (loss), net of tax	**2,904**	(409)	N/M
Accounting change, net of tax	**(44)**	–	N/M
Merger and restructuring-related charges, net of tax	**(222)**	(102)	N/M
Total Corporation net income (loss)	**$ 2,638**	$ (511)	N/M
Operating Financial Ratios [1]			
Return (loss) on average assets	**1.09%**	(0.15)%	
Return (loss) on average common equity	**14.7%**	(2.1)%	
Managed net interest margin	**4.89%**	4.76%	
Managed efficiency ratio	**47.4%**	65.8%	
Consolidated Results			
Total revenue, net of interest expense	**$ 15,861**	$ 13,926	14
Net interest income – tax equivalent basis	**8,769**	8,974	– 2
Noninterest income	**7,223**	5,090	42
Provision for credit losses	**2,510**	3,398	– 26
Operating noninterest expense	**9,200**	11,447	– 20
Operating income (loss)	**2,904**	(409)	N/M
Net income (loss)	**2,638**	(511)	N/M
At Year End			
Managed loans	**$ 218,102**	$ 236,492	– 8
Managed assets	**306,304**	309,096	– 1
Deposits	**167,530**	167,077	–
Common equity	**20,226**	18,445	10
Employees	**73,519**	80,778	– 9
Cash dividends declared	**0.84**	1.26	– 33
Book value	**17.33**	15.90	9
Market price	**39.05**	36.63	7
Capital Ratios			
Risk-based capital:			
Tier 1	**8.6%**	7.3%	
Total	**12.2%**	10.8%	
Tangible common equity/tangible managed assets	**5.9%**	5.5%	

N/M–Not meaningful

(1) Excludes merger and restructuring–related charges and cumulative effect of accounting change.



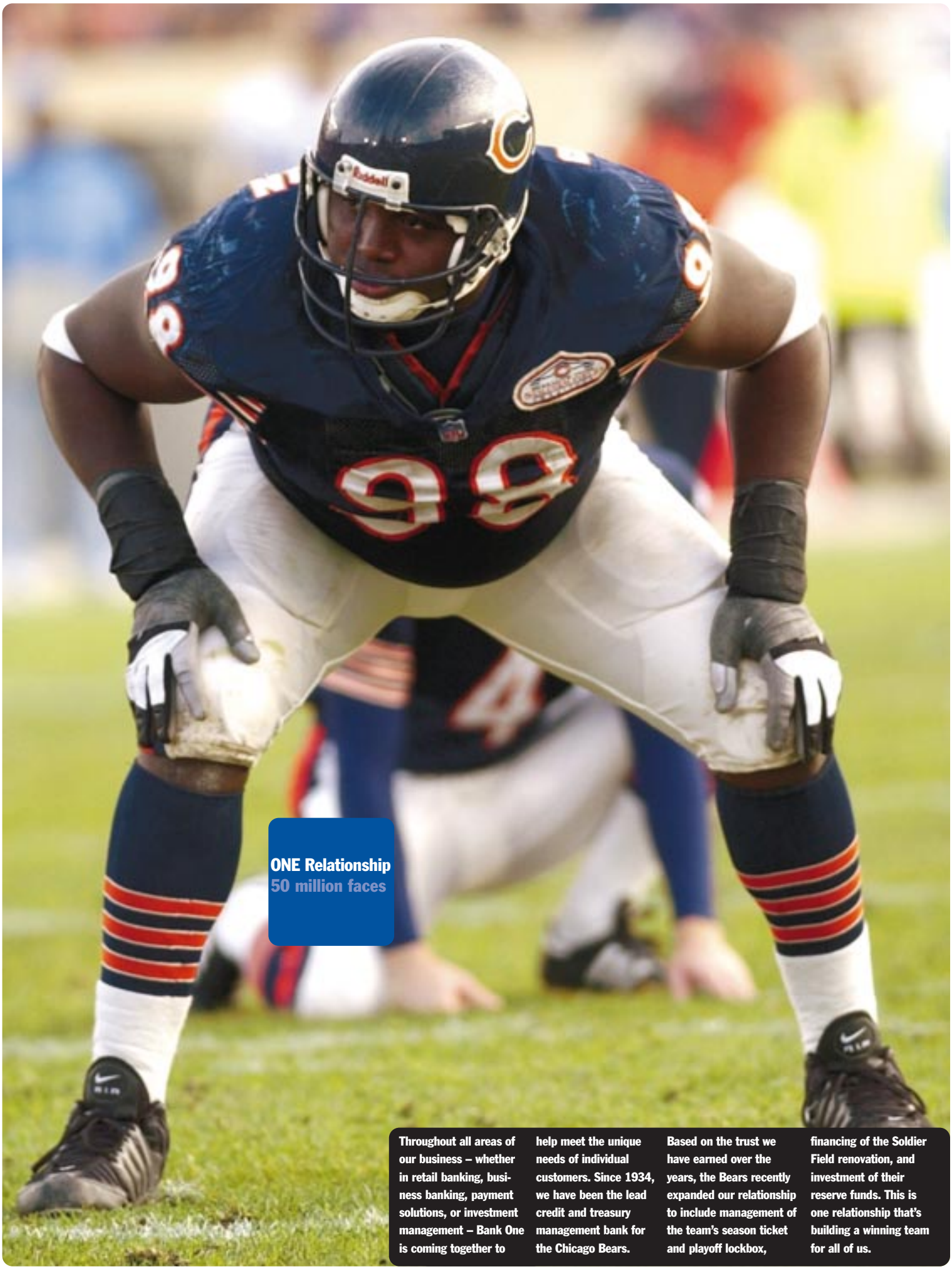
ONE Access
from anywhere

Whenever our customers need our attention, Bank One is there. We offer service through 1,802 banking centers, 5,141 ATM's, 24-hour telephone banking, and bankone.com, which serves more than 1,083,000 users. Customers like Santiago Borja appreciate the choices. Whether he needs to check his balance while on the golf course or make a late-night payment online, being able to decide how and when he does business with us is extremely important to this busy small business owner. We realize that occasionally time really is more precious than money, and people like Santiago shouldn't have to wait.



ONE Provider
for many needs

It helps to do business with a banker who takes the time to understand all your needs. Bob and Myrna Schlegel, owners of Pavestone, began banking with us in 1987. In the last 10 years, annual revenues have soared from $5 million to $170 million. Of course, growth at that level presents tremendous challenges. Bank One has provided the credit, leasing, capital markets, treasury management, and international tools the Schlegels have needed to grow their business. On the personal side, the Schlegels are also working with us to manage their wealth. One customer working with one provider has made for one great success story.



ONE Relationship
50 million faces

Throughout all areas of our business – whether in retail banking, business banking, payment solutions, or investment management – Bank One is coming together to help meet the unique needs of individual customers. Since 1934, we have been the lead credit and treasury management bank for the Chicago Bears. Based on the trust we have earned over the years, the Bears recently expanded our relationship to include management of the team's season ticket and playoff lockbox, financing of the Soldier Field renovation, and investment of their reserve funds. This is one relationship that's building a winning team for all of us.



ONE Community
many locations

Bank One is working to help improve the lives of people all over the country. Our contribution, investment, and lending programs support community-based projects and organizations such as Homeward Bound – a transitional housing program in Maricopa County, Arizona, for homeless, impending homeless, and families affected by domestic violence. In 2001, Bank One contributed more than $40 million to educational, community development, and civic leadership causes. Our community investment program worked to ensure access to financial services and to promote economic development throughout our markets. One community, many locations. Bank One is working to make one big difference in each community we serve.

2001 was a year that none of us will ever forget. It was an extraordinary time for our nation and our economy. At Bank One, it was a year of coming together as one company and one team with a singular passion to win. A time to make enormous progress in the face of numerous unforeseen challenges.

Bank One made good progress in 2001. We earned $2.6 billion in a difficult economic environment. Equally important, we substantially improved our systems and service, financial discipline, balance sheet, cost structure, and management team. Of course, 2001 had its pluses, minuses, challenges and lessons. In the first part of this letter, I will report on what we accomplished (or didn't) in 2001 and how we have positioned ourselves for 2002. In the second part, I will deal with some more forward-looking issues, specifically our developing views of our businesses and a few of the key challenges we must confront.

I. REVIEW OF 2001, OUTLOOK FOR 2002

Our financial performance – earnings of $2.6 billion and a return on equity of 13% – was satisfactory but not outstanding. Despite the recession, we should have done better. Our credit costs were worse than you should expect, and worse than most of our competitors. On most other measures, however, we made good progress in positioning ourselves for 2002 and beyond.

IMPROVED FINANCIAL DISCIPLINE AND RISK MANAGEMENT

In 2001, we strengthened the quality of both earnings and capital. Our actions were, and will continue to be, driven by the following priorities:

Conservative Accounting Policies and Practices. Your company uses relatively conservative accounting policies and assumptions that affect valuation of assets and liabilities. For example, we manage all off-balance sheet assets and liabilities with the same attention and level of consistency as if they were on the balance sheet. (For the interested reader, we make full disclosures on these in the financial review section.)

We have consistently strengthened reserves to protect against loan losses. While a material amount of the reserve increase was necessary due to declining credit quality, we are also more accurately reflecting the risk within our loan book through a more disciplined and granular rating system (a 20-grade system versus a 12-grade system), and a more rapid recognition and response to loan deterioration. In fact, I believe that where in the past we significantly lagged changes in ratings by the rating agencies, we now recognize deterioration more quickly.

In addition, we report internally thousands of profit-and-loss statements, covering everything from individual branches and products to cost and capital allocations. These disciplines are allowing us to make better and more informed decisions.

Managing Risk. Last year we told you we had too much aggregate risk, too much risk in individual names, and that we were not properly compensated for the risks we were taking. Three examples illustrate how seriously we undertook the task of properly managing risk:

1. In our large corporate business, we reduced on- and off-balance sheet credit exposures by $38.5 billion, or 26%. Our total exposure is now $109 billion, which is close to the aggregate level we believe is appropriate. Additionally, we instituted tougher individual limits, and now have fewer exceptions. Most importantly, our corporate business revenue is essentially flat, which means that our revenue per dollar of risk is up 22%. Furthermore, our revenue is of better quality because a greater percentage comes from the higher margin fee businesses.

   In spite of this, fourth quarter credit losses for our large corporate business were 1.7% – higher than normal – and our full-year return on equity (ROE) was 8%. If normalized for credit losses (60-70 basis points through a cycle), our ROE would have been 13%, a respectable number and one that is now far more stable than in the past. Middle market losses, at 1.9% in the fourth quarter, were also embarrassingly high. Even with this high loss, however, our full-year ROE was 13%, which demonstrates how strong this business can be when properly executed. Finally, our loan loss reserve for our total commercial business is now a very strong 4.37% of loans, giving us great comfort against adverse events.

2. We stopped buying brokered home equity loans that: 1) we did not individually underwrite, and 2) had certain high risk characteristics, even though they were at the time among the most profitable and rapidly growing part of our home equity business. At their peak, these loans totaled approximately $8 billion and credit losses were running under 1%. In 2002, however, we expect credit losses to reach over 4%. Since we stopped writing this

business in 2000, we have reduced exposure to $5 billion and the remainder is running off. This explains a large part of our higher than expected consumer credit losses.

3. We substantially reduced auto lease production from $500 million per month to $50 million per month due to concerns related to declining used auto valuations. Our total auto lease portfolio has been reduced to $6.1 billion from a peak of nearly $11 billion. By the end of 2003, the portfolio should be at approximately $2.5 billion, leaving us with what we believe is an appropriate level of risk.

These three examples illustrate how we manage risk and deal with problems. We could have sold these assets, but they would have been hugely discounted below what we believe was their intrinsic value. This would not, in our opinion, be in the best financial interest of shareholders. We are willing to make the tough decisions. These are just a few examples of how we have tightened policies and procedures across the board. We know these actions can slow short-term growth, but we value a clean balance sheet over growth at any cost. We want our growth to be solid and healthy.

We believe the actions we have taken will substantially lower future credit losses. We are determined to become superior – not just average – credit underwriters. While credit risk tends to deteriorate during a recession, borrowers still have the contractual right and option to borrow. We need to incorporate these facts into our analysis of risk over an economic cycle. We also must acknowledge and account for the fact that in average times credit quality increases and decreases proportionately, but in a recession it generally moves only downward. We want to be ready for that contingency, especially in times like these. Whatever the future holds – and we expect at least the first half of 2002 to continue to be a difficult credit environment – we are prepared.

Improving Quality of Earnings and Capital. Higher fundamental margins (mostly due to a lower cost structure), higher levels of recurring revenues, and reduced risk on the balance sheet have improved the quality of our earnings. They also effectively improve the quality of our capital: The quality of our capital is higher than that of an identically capitalized company with more aggressive accounting and more risk on its balance sheet.

Better Capital, Capital Usage and Flexibility. We have higher quality capital and more of it: Our year-end Tier 1 capital ratios went from 7.3% in 2000 to 8.6% in 2001, among the highest for a bank our size. According to our internal calculations, which are more conservative than in the past, we are now more than adequately capitalized. We believe we are at the right place, particularly during these uncertain economic times.

We want a fortress balance sheet with unquestionable strength. I cannot overemphasize how happy we were to maintain our credit ratings as we went through our restructuring, nor can I overemphasize how absolutely committed we are to keeping and hopefully improving our ratings – even if it means reducing short-term earnings or slowing short-term growth.

Clearly, we are now generating capital in excess of our immediate needs. This capital flexibility is a strategic imperative, providing us with the option to increase our dividends, invest in our businesses, make acquisitions, or simply do nothing. This year, we added another capital tool when your Board approved (without any negative rating implication) a modest $500 million stock buyback program. We will use this provision wisely based on our view of opportunities and risk. We also believe tough times can provide better relative opportunities for strong companies.

One more year of fine-tuning and intensive management, and these finance and risk disciplines will be part of our culture. Of course, error and surprise can never be entirely eliminated. However, we are far more secure, enabling us to make sound decisions based on economics, not on accounting.

BUILDING OUR CORE AND INFRASTRUCTURE We made good progress on building our "core" in 2001 by:

Becoming More Efficient. We are now well on our way to becoming a low-cost provider. We reduced our overhead costs by approximately $1.2 billion in 2001, which was more than we originally hoped for. Headcount decreased from 81,000 to 73,500 and will continue to drop in 2002 as we complete more consolidations and conversions. With overhead now running at approximately $9.2 billion, we

plan to strengthen our business by reinvesting additional efficiencies of more than $300 million into systems, services, and marketing in the coming year. As a shareholder, I would be concerned to see costs cut dramatically if proper investments weren't being made for the future. I can assure you we are making substantial investments that we believe will pay dividends in the future.

Consolidating and Upgrading Our Technology. We completed one major credit card and two major deposit conversions, all virtually flawlessly, this year. The deposit conversions cost upwards of $75 million, and covered four states serving five million customers. We still have two remaining deposit system conversions to go in 2002. Due to the higher level of complexity of these conversions, they may not go as smoothly, but we have established discrete milestones to ensure that deadline pressures do not compromise our franchise. It's more important to do these right than it is to do them quickly.

If we accomplish these conversions by the end of the year, then we will essentially be on one platform. Throughout the process, we will continue to retire hundreds of obsolete programs, upgrade some, and install top-of-the-line systems. We are also upgrading loan and deposit systems, as well as our cash management systems and banker workstations. These workstations standardize sales and profitability platforms, and automate many manual functions. They also deliver new customer information systems which provide a complete view of customer relationships and allow for greatly enhanced service. Imagine our capabilities in 2003 if our team can accomplish all of this. I can't wait.

Lastly, we will have substantially upgraded our national telecom network and reduced reliance on consultants and vendors. We are taking advantage of the downturn in the technology business to hire hundreds of great, talented individuals.

Providing Better Customer Service. Through better systems and proper compensation plans, the quality of service is now tracked, measured and rewarded. It is constantly getting better and we are confident that in the next few years we will be best in class. Perhaps the most dramatic example is at First USA, where our customer satisfaction ratings over the past two years have improved by 23%.

BUILDING MANAGEMENT CAPABILITIES At the end of the day, great management and great people are the most important elements for success (although capital allocation and luck come close). Sustained success, however, requires integrity, courage, trust, openness and a true meritocracy at all levels. We want everyone – branch managers, call center employees, sales managers and staff department managers – to know their job, know it counts, share information freely, and fight to win. People now speak up when something is wrong. Teamwork requires practice, perseverance *and* maximum individual effort. It's not just one or another. And we are getting there. People throughout our company are stepping up and fighting for their team. Highlights include:

A Changing Culture. We are now acting with more openness, passion and urgency. For example, when we introduced a new Bureaucracy Busters program to rid ourselves of stifling bureaucracy and to streamline processes, we received thousands of recommendations, many of which have been implemented. The process of busting bureaucracy never ends, but what's different now is that all of our folks are engaged in challenging the system and solving the problems.

Giving More Authority to the Field. As we centralize operations and standardize policies and procedures, we also strive to give our people in the field more authority and responsibility. Each of our local businesses supports and feeds the others with ideas, customers and products. Local profit-and-loss statements now allow us to push decision-making into the field, where it belongs. At the same time, by centralizing certain functions we were able to achieve economies of scale, maintain quality standards, and create better products, cheaper and faster. These efficiencies and improvements help empower our employees on the front lines. We have terrific people in the field, and we want to support them, not impede them. Once we get the balance right, it will be one of our greatest strengths.

Increasing Ownership and Teamwork. This year, we gave nearly 40,000 of our lower paid people with a year or more of service a $300 grant of Bank One stock to their 401(k). At the time these grants were issued, roughly 15,600 of these employees didn't have a 401(k) and for the most part didn't own stock. Now, almost everyone who has been with us for more than a year owns stock. There is a feeling that

this is *our* company. Teamwork within and across business lines is growing. For example, our corporate bankers now join with our investment managers on customer calls. The result: record asset growth in our investment management group during a year when most money managers saw assets shrinking.

There are, of course, many other great examples, but one touched me in particular. American National Bank, a proud institution that has been part of Bank One since 1984, decided to change its name to Bank One, as did our credit card subsidiary, First USA. These decisions were made in the lines of business – not by management here at headquarters. Although systems conversions had something to do with it, the real impetus was their desire to come together with us: One Company, One Name, One Stock, One Team. Incentives must be done right, but they aren't what matter most. Teamwork creates real winners.

II. LOOKING FORWARD

We believe our immediate priorities of customer service, financial discipline, system conversions, and building the management team are absolutely the right ones for us. They are essential to building a great company, but they are, admittedly, not sufficient. We also need good franchises and solid growth. With that in mind, I'd like to give you a view of our current thinking about our franchise and growth prospects.

Building Strong Franchises. Retail banking and asset management, small business banking, private client services and middle market banking are strong franchises. We group these businesses together because they feed and complement each other and their strength is in the field. They are particularly valuable when a company has a significant local market share, which we mostly do.

When taken together and run properly, we believe these businesses are an attractive franchise that can deliver good returns and solid growth. These businesses should grow at least with the economy, and probably faster as we expand our products and services. Of course, local competition can be fierce, and some of the basic products will gradually be disintermediated by innovations and other changes. But how many businesses can consistently average 15-20% ROE over time while growing? I think these businesses can.

Therefore, our goal in these businesses is to simply be very good at them, and to grow both organically (e.g., "same store" sales, new products, market-share gains, etc.) and by acquisition. Our view is that as these businesses continue to consolidate, the winners will be those that combine a superior customer experience with the benefits of economies of scale, great systems, product breadth, lower funding costs, credit diversification, and branding. That is, of course, if the scourge of large corporations – bureaucracy – is kept at bay. Our actions to date – taming bureaucracy, improving financial and operating disciplines, and strengthening management – put us in a position to win.

Three of our other businesses – credit cards, payment systems and asset management – are excellent businesses on their own. They are also a natural fit with the "general banking" business. Together, they provide each other with the competitive advantage of free access and a vast distribution network.

In credit cards, we have made significant progress in the past year. We have dramatically lowered expenses and our service platform is as good as any. The credit card industry is consolidating. Growth in a consolidating industry comes from taking share from others, as well as through acquisitions. Our capabilities and scale, combined with our access to capital and distribution, put us in an excellent position to be a winning consolidator.

Payment systems, which include card, traditional cash management, and Paymentech (our merchant processor), are outstanding businesses. They have solid margins, require low capital and grow with time. They, too, benefit from our large distribution network and in 2002 we hope to prove to our shareholders their extraordinary potential.

Asset management has always been a terrific business (although we believe margins will be squeezed over time because they are simply too high in a low-return environment). Competitively, we feel we are well positioned for growth as we continue to leverage our superior performance and natural distribution advantage.

Large corporate banking is probably our toughest competitive business, but it also gives us the opportunity to develop highly sophisticated, industrial-strength products that can be used in all of our franchises. With proper risk management and cross-selling, returns are reasonable. Large corporate relationships are deep and our bankers have been extremely successful selling additional payment systems,

asset management, and capital markets products. We believe that many of our capital markets products (syndication, foreign exchange, derivatives, asset-backed securities and investment grade bond origination) can compete with the industry's best without our being forced to take excessive risk. We still owe our shareholders a more defined strategy in this arena. As we develop it, we will continue to run the business well and grow it profitably with reasonable risk.

Building A Brand. One of our new goals for 2002 will be building our national brand. One of our advantages is that Bank One does business with more than 60 million individuals and institutions. But many of them aren't aware of it. For instance, many of our First USA customers don't draw a connection to Bank One, which is one of the reasons First USA is moving to the Bank One name. The value of a unified brand will be far greater. A brand is a promise to customers, but more importantly it is a commitment we are making to ourselves about who we are and just how good we want to be. We're now ready to step up our game at all levels – inside the company, for our customers, and against the competition.

Becoming Innovative. We want to make innovation part of our DNA. This does not mean spending hundreds of millions of dollars on failed ideas. It does mean we will take some chances knowing that some will fail. It requires that we build forward-looking ideas into every conversation, every analysis and every new product we look at. We have a few new products coming out this year that we think fill this bill.

An example is our recent agreement with Microsoft. We have a number of specific leading edge products, but the truly exciting idea is that we are now working together to use new technology and the Internet to continuously develop new financial products and services. We believe this pioneering work will put us at the forefront as the industry constantly changes.

Growing through Mergers and Acquisitions. We believe all of our current businesses will continue to consolidate. A weak economy creates opportunities for strong companies. Based on the actions we are taking and the core disciplines we are developing, I believe we are in a position to take advantage of emerging opportunities.

IN CLOSING This hasn't been an easy year for our employees. Yet, despite conversions, cost cutting and a recession, we went full speed ahead building our core systems, financial discipline, balance sheet and management. Even though we are probably only two-thirds of the way through our "infrastructure building," the boot camp phase is over and we are devoting more resources to the future. We understand that fixing our infrastructure sometimes inhibits short-term growth, but you can't build something great and lasting on a weak foundation. We are committed to creating a company that delivers solid, profitable long-term growth. In fact, we are convinced that good profit growth is coming – initially from improved operations and margins, then increasingly from true "unit" growth.

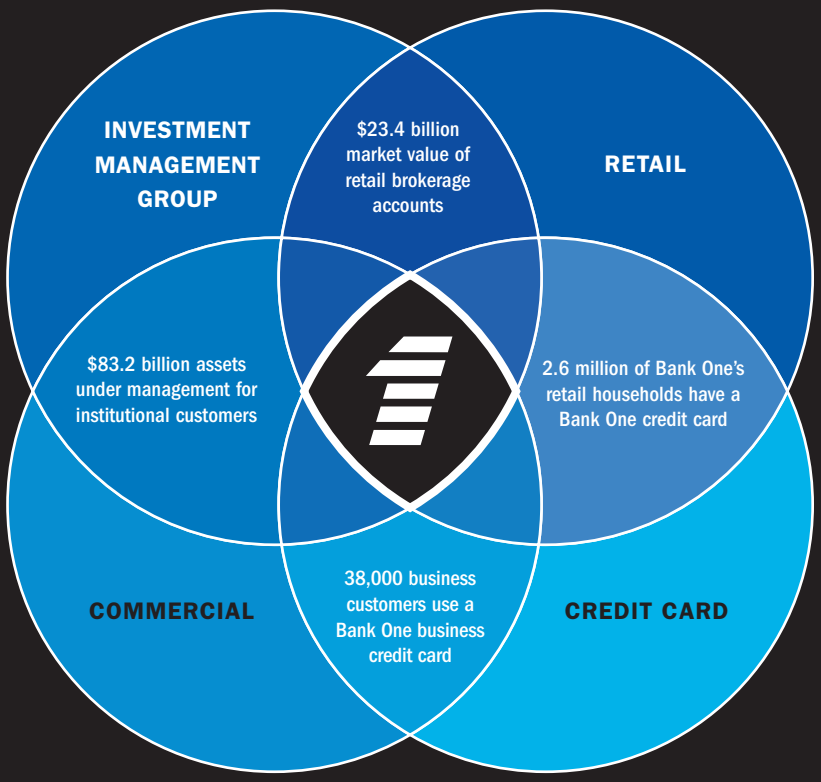


We are aggressively engaged in building our company. We are now strong enough to move even faster. I am proud to work with such a talented, committed group and am more convinced than ever that together we will build Bank One into one of the best financial services companies in America.



James Dimon
CHAIRMAN AND CHIEF EXECUTIVE OFFICER
FEBRUARY 20, 2002

Bank One is coming together as one team and one brand to deliver one great customer experience. We are integrating the best Bank One has to offer to serve consumers, governments, and businesses large and small. We're listening carefully, anticipating needs, advising customers and holding ourselves accountable for results. From our retail associates helping a banking customer get a credit card to our commercial bankers introducing a business owner to a Private Client Service advisor, we're doing business as one to help our customers achieve their financial goals.



Investment Management Group

- Portfolio Management
- Mutual Funds
- Financial Planning
- Brokerage
- Private Client Services
- Corporate and Personal Trust
- Alternative Asset Management
- Insurance
- Retirement Services
- Securities Lending
- Custody and Master Trust

Retail

- Checking & Savings Accounts
- Consumer Lending
- Small Business Banking
- Debit/ATM Cards
- Investment Accounts
- Credit Cards
- Insurance
- Auto Loans & Leases
- Online Banking
- Home Loans

Commercial

- Global Cash Management
- Commercial Lending
- Loan Syndications
- Commercial Cards
- Investment Management
- Asset-Backed Finance
- Investment Grade Securities
- Derivatives
- Foreign Exchange
- Global Trade

Credit Card

- Credit Cards
- Affinity Cards
- Rewards Cards
- Smart Cards
- Stored-Value Cards
- Business Cards

The success of our Commercial Banking division stems from our extensive knowledge of our customers, our superior products and services, and our experienced relationship managers.

CREATING MUTUALLY BENEFICIAL RELATIONSHIPS

In 2001, we took significant steps to position ourselves for growth.

In the Middle Market segment, which focuses on privately held companies, we strengthened our sales process and put in place systems to manage risk better.

In Corporate Banking, which focuses on Fortune 1000 customers, we redefined many of our relationships, expanding our work in fee-based services and reducing our emphasis on loan products. The result: better service for our best customers and a $38.5 billion reduction in risk exposure for us.

LEVERAGING OUR PRESENCE IN MIDDLE MARKET BANKING

Bank One is a proven leader in Middle Market banking, ranking first or second in 22 out of the 35 markets we serve. More than 70% of our 18,000 customers consider us their lead bank, creating an extraordinary franchise with solid potential for growth.

While returns among this segment were not where we wanted them in 2001, we have made good strides in improving relationship profitability and building the base for more stable, higher returns.

Our goals for the coming year are to continue improving our risk management processes and to expand delivery of capital markets, investment management, and treasury management solutions to this important and growing customer base.

REDEFINING RELATIONSHIPS WITH CORPORATE CUSTOMERS

By redefining our relationships with large corporate customers, we are now in a stronger position to deliver superior products and services to our best customers.

Consistently ranked in the top five in all treasury management product categories, our treasury management services division proved its leadership once again, producing revenues of more than $1.1 billion – 10% more than last year.

Our capital markets group also had a successful year. We positioned ourselves solidly in loan syndications, asset-backed securitization, investment grade securities, and derivatives, increasing our revenue from capital markets products by 41%.

As evidence of our success, we improved our league table standings from 17th to 8th in the asset-backed term market and from 15th to 12th in investment grade securities. In syndications, our $2.7 billion financing of Suiza Foods' acquisition of Dean Foods was named the "U.S. Leveraged Loan of the Year" for 2001 by the International Financing Review.

Working with our partners throughout Bank One, we have been able to help deepen customer relationships by providing tools like investment and liquidity management, as well as corporate trust, securities custody, and retirement plan services.

When organizations choose to work with Bank One, they get the personal attention and full resources of a national provider who is wholly committed to helping them meet their needs. The changes we made in 2001 position us well to operate as a single, efficient business focused on delivering competitive, world-class solutions to our customers.

Wade Reed, who started Hannon Hydraulics in his Dallas garage as a spunky 23-year-old, has learned plenty about finance by running the company for 26 years. But he needed post-graduate assistance after he bought his biggest competitor and revenues grew more than 50 percent over the next year. Banker Carlos Munguia (right) used capital markets capabilities to convert traditional debt to variable-rate bonds and used derivatives to hedge Reed's interest rate risk. "Carlos knew my business and got me financing I never knew existed – and he saved me money," Reed said. Hannon has also used treasury management, leasing, and investment products. "Carlos always tells me the truth, not just what I want to hear. He has made us a better company."



2.3

BILLION PAYMENT TRANSACTIONS
PROCESSED PER YEAR FOR
COMMERCIAL CUSTOMERS

41%

INCREASE IN REVENUE FROM SALES
OF CAPITAL MARKETS PRODUCTS

$34.3

BILLION AVERAGE OUTSTANDING
BALANCE IN MIDDLE MARKET LOANS

With more than 55 million cards in force and a card membership base that is spending $140 billion annually with us, we are a leader in offering payment products customized to the needs of an increasingly sophisticated consumer.

CUSTOMIZING PRODUCTS TO MEET CUSTOMER NEEDS

In an industry that is rapidly consolidating, we continue to lead by offering customers a broad range of credit and payment solutions.

Whether they are seeking cards with competitive interest rates, cards offering rewards, affinity cards, or pre-loaded spending cards, we've got the products to meet our customers' needs.

Frequently that means working with partners like United Airlines, providing mileage for travel, or General Mills, which contributes money to customers' local schools for every purchase.

POSITIONING FOR GROWTH

2001 was an important year for us. With a new management team in place, we reorganized to become more customer-centric, assigning profit and loss accountability at both the product and segment levels. We focused on becoming a more efficient, disciplined organization, which resulted in a reduction in operating expenses by 19% and a significant improvement in returns.

We also renewed key partnership agreements, including our agreement with United Airlines, while rebuilding the sales organization to establish additional strategic partner relationships with hotels, airlines, universities, other banks, and retailers. Additionally, we created a special team to employ state-of-the art analytics to help us manage decisions related to all stages of our customer relationships.

Another noteworthy achievement was the acquisition and successful integration of the Wachovia credit card portfolio, which added millions of new customers.

These and many other initiatives are setting the foundation for profitable growth.

ULTIMATELY, IT GETS PERSONAL

Intense competition for customers dictates one thing: our success tomorrow will be built on how well we treat customers today.

In this high-tech world, it's great to know there are people out there who really care about individual customers. They are people like Beverly Small, who helped a cardmember meet a very important deadline – her wedding in Italy.

When the bride's airline tickets were cancelled due to a reservation error, Beverly not only got the tickets reinstated but convinced the airline to issue them at the original price. (An important and difficult challenge, because the ticket price had more than doubled.)

Beverly is an example of the thousands of people on our team who know winning requires us to prove ourselves to each of our customers every day in all that we do.

And with technologies and commerce changing so rapidly, we know it's not about plastic, it's about the payment transaction and the value we add to it. We will continue to lead by giving consumers and commercial customers innovative products that provide convenient, beneficial, and satisfying ways to purchase the things they want and need.

When MSN® wanted to offer customers a credit card worthy of parent Microsoft's name, they came to us. Jennifer Osborn (right) and her team created the MSN Titanium Visa® credit card with a hip translucent look, excellent rates, and free Microsoft® Money software. "We know we can trust Bank One to take care of our customers," said Yusuf Mehdi, vice president of MSN Personal Services & Business at Microsoft Corporation. And like MSN's trademark butterfly, the Bank One/Microsoft relationship has spread its wings. Today, Bank One products are being integrated into Microsoft channels and we're working together to develop financial products and services for delivery to Bank One and Microsoft customers.



47.3

MILLION CALLS ANSWERED PER YEAR BY CARD-MEMBER SERVICES

528

THOUSAND ACCOUNT PAYMENTS MADE PER MONTH ON FIRSTUSA.COM

$65.4

BILLION AVERAGE OUTSTANDING BALANCES

261

MILLION STATEMENTS MAILED PER YEAR

Each day, more than 33,000 Bank One associates are deepening our relationships with customers by listening carefully, anticipating needs, providing solutions, and holding themselves accountable for results.

BUILDING RELATIONSHIPS ONE CUSTOMER AT A TIME

In retail banking, our focus is on helping consumers and small business owners achieve their financial goals. For the nearly 7.3 million households who bank with us, that might mean helping them take advantage of new tax laws to save for a child's education, plan for retirement, evaluate insurance needs, or weigh the benefits of a home equity loan.

For our network of 500,000 small business customers, it means going beyond just traditional banking to provide things like cash flow management tools, payroll services, employee health insurance, or succession planning services – products and services once used primarily by larger companies.

EMPOWERING OUR PEOPLE

We realize that our people perform best when backed by technology that gives them the information they need to make smart decisions. That's why we invested approximately $79 million this year alone to upgrade and convert to company-wide technology systems.

Even as we move toward common systems, customer service is our top priority. By taking the time to reach out to customers before our conversions in Texas, Utah, Arizona, and Louisiana, we smoothed the transition and enhanced our customer relationships. In fact, 14,500 customers we spoke with during the conversions took the time to open a new Premier One® account with us.

Our customer service and technology investments are paying off at the branch-level. Using enhanced e-business technology, for example, our banking center managers now have quick access to – and responsibility for – their own profit and loss statements.

These P&L's, accompanied by online management training and best practices tools, are helping our managers run their business as owners, giving them the information they need to work most effectively at the local level.

LEVERAGING OUR STRENGTHS

The geographic breadth of our retail franchise – 1,800 banking centers in 14 states – positions us well to balance a wide range of national trends – from expanding customer relationships in high-growth markets to serving an increasingly mobile customer base.

In addition to our geographic breadth, we are working harder than ever to help meet customer needs by bringing together the best Bank One has to offer.

Working with our partners in Bank One's commercial banking, credit card, and investment management units, we can now provide customers with access to virtually any financial product or service they may need.

But our work is just beginning. Technology and regulatory advances are changing what it means to be a retail bank. By listening to our customers and responding with solutions that meet their individual needs, we believe we're well positioned not just to win in this new world, but to help define it.

Two years ago, Bank One customer David Weaver felt like "just another number." In fact, he was moving his accounts to another bank when branch manager Kenyon Warren (right) interceded and asked for one more shot. "David had legitimate concerns," said Kenyon. "I simply took the time to listen and fix the service issues – not just for David, but for our other customers as well." Today, David has expanded his relationship with Bank One to include cash management services and installment loans that are helping him manage and grow his businesses. "My needs are unique and my team at Bank One understands that," says David, who clearly doesn't feel like a number anymore.


$12.3
BILLION IN SMALL BUSINESS LOANS
4.4
MILLION DEBIT CARDS ISSUED
236,600,000
TRANSACTIONS PER YEAR COMPLETED ON BANK ONE ATM'S
1.1
MILLION TRANSACTIONS PER DAY
IN BANK ONE BANKING CENTERS
$4.87
BILLION IN RETAIL
INVESTMENT SALES

Institutions and individuals look to us for help in accumulating, growing, protecting, and transferring wealth. With more than $142 billion in assets under management, we are a proven leader in our field.

FUELING GROWTH IN CHALLENGING TIMES

This was an exceptional year for the Investment Management Group: in a year that saw the value of market assets declining, we grew assets under management by 9% to $142.6 billion.

Our growth was driven by three factors: our continued ability to deliver solid risk-adjusted performance, our successful efforts to expand product availability, and a strengthened focus on teaming within Bank One.

At the heart of the Investment Management Group is Banc One Investment Advisors – our SEC-registered investment advisory group that ranks among the top 40 asset managers in the country.

Last year, more than half of our One Group® Mutual Funds were rated 4- or 5-stars by Morningstar, placing us among the best performers in the industry.

In a recent report rating our One Group® Mutual Funds "number one in the bank channel in 2001," *Mutual Fund Market News* wrote that investors like us for our "reasonable fees, adroit stock-picking ability and lack of style drift." (In other words, we do what we say we're going to do, we do it well and we price it right. Is there any other way to do business?)

EXPANDING OUR CUSTOMER BASE

This year we also stepped up our commitment to expand our customer base.

Within Bank One, our institutional customers accounted for $83.2 billion of our assets under management, up 30% from $63.8 billion in 2000.

We also reached out to Bank One retail banking customers, completing the year with four consecutive quarters of record retail investment sales and year-over-year-growth of 14%.

Our record of performance has also earned us the trust of numerous brokerage and financial advisory firms who sell our mutual funds. In 2001, third-party sales of One Group® funds were up 75%.

PARTNERING TO SERVE WEALTHY INDIVIDUALS

Realizing that high net worth individuals have special needs, our Private Client Services group helps qualified customers manage and grow wealth.

Using an advisory approach, we are able to draw upon the best minds in each element of financial planning to customize solutions. Our particular expertise in working with owners of privately held companies has allowed us to serve an increasing number of customers in Bank One's Middle Market banking segment.

PERFORMANCE-DRIVEN RESULTS

Our growth strategy for the coming year is to continue on the path set in 2001. As economic conditions continue to fluctuate, we are challenging ourselves to continue delivering solid risk-adjusted performance to a growing customer base. Ultimately, in our business, that's how all of us distinguish ourselves in the marketplace.

When Utilities, Inc. began the process of selling their company, investment specialist Sarah Norris (right) and several other members of the Private Client Services team provided guidance to company Chairman Jim Camaren and President/ CFO Larry Schumacher for transitioning their wealth.

"For years, 99% of our money has been tied up in the company and we've been there to watch and protect it," said Camaren, who has been working with Private Client Services for nearly a decade. "Once the sale of our company is finalized, we'll need a knowledgeable partner to help us out," said Schumacher. "Bank One has been Utilities, Inc.'s business bank for over 35 years. On both the business and the personal side, our bankers not only 'get it' but they make things so easy that working with them during this next stage in our lives is simply natural."



$83.5

BILLION ONE GROUP® MUTUAL FUND ASSETS

4,195

LICENSED INVESTMENT REPRESENTATIVES

394,000

RETAIL BROKERAGE ACCOUNTS

$988.6

BILLION CORPORATE TRUST SECURITIES UNDER ADMINISTRATION

$49.7

BILLION PRIVATE CLIENT SERVICES ASSETS UNDER MANAGEMENT

PLANNING GROUP



Pictured left to right, Back row: **Charles W. Scharf, William I. Campbell** *(Advisor)*, **David E. Donovan, Philip G. Heasley, James S. Boshart III** *Middle row:* **Christine A. Edwards, Austin A. Adams, Linda Bammann, R. Michael Welborn, David J. Kundert** *Front row:* **James Dimon, Sarah L. McClelland**

PLANNING GROUP

James Dimon
Chairman and
Chief Executive Officer

Austin A. Adams
Head of Technology and Operations

Linda Bammann
Chief Risk Management Officer

James S. Boshart III
President and CEO
Commercial Banking

William I. Campbell
Advisor

David E. Donovan
Head of Human Resources

Christine A. Edwards
Chief Legal Officer and Secretary

Philip G. Heasley
President and CEO
First USA

David J. Kundert
President and CEO
Investment Management

Sarah L. McClelland
Chief Auditor

Charles W. Scharf
Chief Financial Officer

R. Michael Welborn
President and CEO
Retail Banking

BOARD OF DIRECTORS

James Dimon [4]
Chairman and Chief Executive Officer
Bank One Corporation

John H. Bryan [1]
Retired Chairman
and Chief Executive Officer
Sara Lee Corporation
(CONSUMER PRODUCTS)

James S. Crown [2, 3]
General Partner
Henry Crown and Company
(Not Incorporated)
(DIVERSIFIED INVESTMENTS)

Dr. Maureen A. Fay, O.P. [2, 3, 4]
President
University of Detroit Mercy
(EDUCATION)

John R. Hall [2, 4]
Retired Chairman
and Chief Executive Officer
Ashland, Inc.
(CHEMICAL REFINER, MANUFACTURER
AND DISTRIBUTOR)

Laban P. Jackson, Jr. [1]
Chairman and Chief Executive Officer
Clear Creek Properties, Inc.
(REAL ESTATE DEVELOPMENT)

John W. Kessler [2]
Owner
John W. Kessler Company
(REAL ESTATE DEVELOPMENT)

Richard A. Manoogian [2]
Chairman and Chief Executive Officer
Masco Corporation
(DIVERSIFIED MANUFACTURER)

William T. McCormick, Jr. [1]
Chairman and Chief Executive Officer
CMS Energy Corporation
(DIVERSIFIED ENERGY)

Heidi G. Miller [2]
Vice Chairman
Marsh, Inc.
(INSURANCE AND PROFESSIONAL SERVICES)

David C. Novak [1]
Chairman and Chief Executive Officer
Tricon Global Restaurants, Inc.
(RESTAURANT OPERATIONS)

John W. Rogers, Jr. [1, 3]
Chairman and Chief Executive Officer
Ariel Capital Management, Inc.
(INSTITUTIONAL MONEY MANAGEMENT)

Frederick P. Stratton, Jr. [1, 3]
Chairman of the Board
Briggs & Stratton Corporation
(ENGINE MANUFACTURER)

Robert D. Walter [1, 4] *(Retiring in 2002)*
Chairman and Chief Executive Officer
Cardinal Health, Inc.
(PHARMACEUTICAL SERVICES)

[1] *Member of the Audit and Risk Management Committee*
[2] *Member of the Organization, Compensation, and Nominating Committee*
[3] *Member of the Public Responsibility Committee*
[4] *Member of the Executive Committee*

We stand on the shoulders of those who came before us.
Bank One Corporation represents more than 140 financial institutions that have come together to form one great company. The following are just a few of the distinguished institutions that have served customers throughout our long history:

Bank One Corporation

Banc One Corporation

- Union Savings & Trust Company, founded 1812
- Winters National Corporation, founded 1815
- The Marine Corporation, founded 1839
- American Fletcher Corporation, founded 1839
- Barnitz Bank, founded 1850
- Marine Corporation of Springfield, founded 1851
- Liberty National Bancorp, founded 1854
- City National Bank & Trust Company, founded 1868
- The First Huntington National Bank, founded 1872
- Team Bank, founded 1873
- Affiliated Bankshares of Colorado, founded 1874
- Premier Bancorp, founded 1882
- Liberty Bancorp of Oklahoma, founded 1895
- Valley National Corporation, founded 1899
- MCorp Bank, founded 1916
- Firestone Bank, founded 1916
- First Commerce Corporation, founded 1933
- Valley Bank & Trust Company, founded 1948
- First USA, founded 1985

First Chicago NBD Corporation

- Wayne State Bank, founded 1854
- The First National Bank of Chicago, founded 1863
- INB Financial Corporation, founded 1863
- Gainer Corporation, founded 1865
- First National Bank of Plymouth, founded 1871
- Midwest Commerce Corporation, founded 1872
- Genesee Merchants Bank & Trust Company, founded 1872
- Gary-Wheaton Bank, founded 1874
- Metropolitan National Bank, founded 1884
- Wolverine State Bank, founded 1887
- Winnetka Trust & Savings Bank, founded 1894
- West Michigan Financial Corporation, founded 1895
- Roscommon State Bank, founded 1907
- Peoples State Bank of Belleville, founded 1913
- Union Bancorp, founded 1918
- American National Bank, founded 1928
- National Bank of Detroit, founded 1933
- Ravenswood Financial Corporation, founded 1933
- Lake Shore Bancorp, founded 1943

BANK ONE CORPORATION
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SELECTED FINANCIAL INFORMATION

BANK ONE CORPORATION and Subsidiaries

(In millions, except ratios and per share data)	**2001**	2000	1999	1998	1997
Income Statement Data:					
Total revenue, net of interest expense	**$ 15,861**	$ 13,926	$ 17,713	$ 17,418	$ 16,155
Net interest income–fully taxable-equivalent ("FTE") basis	**8,769**	8,974	9,142	9,469	9,619
Noninterest income	**7,223**	5,090	8,692	8,071	6,694
Provision for credit losses	**2,510**	3,398	1,249	1,408	1,988
Noninterest expense	**9,551**	11,608	11,490	11,545	9,740
Income (loss) before cumulative effect of change in accounting principle	**2,682**	(511)	3,479	3,108	2,960
Net income (loss)	**2,638**	(511)	3,479	3,108	2,960
Per Common Share Data:					
Income (loss) before cumulative effect of change in accounting principle:					
Basic	**$ 2.28**	$ (0.45)	$ 2.97	$ 2.65	$ 2.48
Diluted [1]	**2.28**	(0.45)	2.95	2.61	2.43
Net income (loss):					
Basic	**$ 2.25**	$ (0.45)	$ 2.97	$ 2.65	$ 2.48
Diluted [1]	**2.24**	(0.45)	2.95	2.61	2.43
Cash dividends declared	**0.84**	1.26	1.68	1.52	1.38
Book value	**17.33**	15.90	17.34	17.31	16.03
Balance Sheet Data–Ending Balances:					
Loans:					
Managed	**$218,102**	$236,492	$229,196	$216,391	$196,993
Reported	**156,733**	174,251	163,877	155,398	159,579
Deposits	**167,530**	167,077	162,278	161,542	153,726
Long-term debt [2]	**43,418**	40,911	35,435	22,298	21,546
Total assets:					
Managed	**306,304**	309,096	315,064	305,781	278,439
Reported	**268,954**	269,300	269,425	261,496	239,372
Common stockholders' equity	**20,226**	18,445	19,900	20,370	18,724
Total stockholders' equity	**20,226**	18,635	20,090	20,560	19,050
Credit Quality Ratios:					
Net charge-offs to average loans–managed [3]	**2.53%**	2.03%	2.13%	2.00%	2.07%
Allowance for credit losses to period-end loans	**2.89**	2.36	1.39	1.46	1.77
Nonperforming assets to related assets	**2.35**	1.48	1.02	0.83	0.68
Financial Performance Ratios:					
Return (loss) on average assets	**0.98%**	(0.19)%	1.36%	1.30%	1.29%
Return (loss) on average common equity	**13.4**	(2.7)	17.1	15.9	15.8
Net interest margin:					
Managed	**4.89**	4.76	5.37	5.56	5.50
Reported	**3.69**	3.72	4.09	4.52	4.75
Efficiency ratio:					
Managed	**49.2**	66.7	54.5	57.6	53.2
Reported	**59.7**	82.5	64.4	65.8	59.7
Capital Ratios:					
Risk-based capital:					
Tier 1	**8.6%**	7.3%	7.7%	7.9%	8.2%
Total	**12.2**	10.8	10.7	11.3	12.3
Tangible common equity/tangible managed assets	**5.9**	5.5	5.7	5.8	6.2
Common Stock Data:					
Average shares outstanding:					
Basic	**1,166**	1,154	1,168	1,170	1,176
Diluted [1]	**1,174**	1,154	1,178	1,189	1,213
Stock price, year-end	**$ 39.05**	$ 36.63	$ 32.00	$ 51.06	$ 49.37
Stock dividends	**–**	–	–	10%	–
Employees [4]	**73,519**	80,778	87,735	92,800	95,900

(1) Common equivalent shares and related income were excluded from the computation of diluted loss per share for the year-ended December 31, 2000 as the effect was antidilutive.

(2) Includes trust preferred capital securities.

(3) The year ended December 31, 2001 includes $92 million of charge-offs which are not classified as such in the Corporation's GAAP financial information because they are part of a portfolio which has been accounted for as loans held at a discount. The inclusion of this amount in charge-offs more accurately reflects the credit performance of the portfolio. In the Corporation's financial statements, this item results in a higher provision in excess of net charge-offs.

(4) Beginning in 2001, employees on long-term disability and employees of unconsolidated subsidiaries are excluded. Prior period data have not been reclassified for this change.

OTHER FINANCIAL DATA

The Corporation's consolidated operating financial results and ratios at December 31 are as follows:

(In millions, except ratios and per share data)	**2001**	2000	2000 Adjusted	1999
Operating income (loss)	**$2,904**	$ (409)	$1,751	$4,076
Operating earnings per share-diluted	**$ 2.47**	$ (0.35)	$ 1.52	$ 3.46
Return (loss) on average assets	**1.09%**	(0.15)%	0.63%	1.49%
Return (loss) on average common equity	**14.7**	(2.1)	8.8	18.9
Net interest margin:				
Managed	**4.89**	4.76	4.76	5.37
Reported	**3.69**	3.72	3.72	4.09
Efficiency ratio:				
Managed	**47.4**	65.8	54.7	51.8
Reported	**57.5**	81.4	66.4	61.3

These results and ratios exclude merger and restructuring-related charges and, change in accounting and the 2000 adjusted and 1999 ratios exclude items outlined in the Significant Items table on page 42.

DESCRIPTION OF BUSINESS

BANK ONE CORPORATION and subsidiaries ("Bank One" or the "Corporation") is a diversified financial holding company that offers a full range of financial services to consumers and commercial customers. Bank One is:

- A leader in retail and small business banking
- A premier provider of lending, treasury management, and capital markets products to commercial customers
- The third largest credit card issuer in the United States
- A leading investment management company

Basis of Presentation

The Corporation's financial statements are based on the application of generally accepted accounting principles, which are described in the notes to the consolidated financial statements starting on page 74. Certain accounting principles involve significant management judgment, including the use of assumptions and estimates. By their nature, changes in the assumptions and estimates potentially could significantly affect the Corporation's financial position and results of operations. The Corporation's accounting policies are discussed throughout this Financial Review section.

Management's discussion and analysis may contain forward-looking statements provided to assist in the understanding of anticipated future financial performance. However, such performance involves risks and uncertainties that may cause actual results to differ materially from those expressed in forward-looking statements. See page 69 for a discussion of these factors.

For funding and risk management purposes, the Corporation periodically securitizes loans, primarily in support of credit card activities. The accounting for securitizations complicates the understanding of underlying trends in net interest income, net interest margin and noninterest income, as well as the underlying growth rates of reported loans. For clarification, these trends are also reviewed on a "managed" basis, which adds data on securitized credit card loans to reported data on loans. Results on a managed basis, where presented, should be read in conjunction with reported results. See page 65 for the reconciliation of reported to managed results.

BUSINESS SEGMENTS

The Corporation is managed on a line of business basis. The business segments' financial results presented reflect the current organization of the Corporation. The following table summarizes certain financial information by line of business for the periods indicated.

	Operating/Net Income (Loss) (In millions)			Average Managed Assets (In billions)		
	2001 [1]	2000 [2]	1999	**2001**	2000	1999
Retail	**$1,272**	$ 414	$1,041	**$ 78.9**	$ 79.0	$ 72.5
Commercial Banking	**721**	(115)	906	**104.2**	114.5	109.7
First USA	**946**	3	1,135	**68.7**	70.0	74.9
Investment Management	**374**	322	317	**8.1**	7.6	7.1
Corporate	**(409)**	(1,033)	677	**47.5**	43.9	38.0
Total business segment operating income (loss), net of tax	**2,904**	(409)	4,076	**$307.4**	$315.0	$302.2
Accounting change, net of tax	**(44)**	–	–			
Merger and restructuring-related charges, net of tax	**(222)**	(102)	(351)			
Other significant items, net of tax	–	–	(246)			
Total Corporation net income (loss)	**$2,638**	$ (511)	$3,479			

(1) During 2001, the tax-oriented portfolio of Corporate Investments was transferred to Commercial Banking, while the principal investments and fixed income portfolios were transferred to Corporate. All results for prior periods conform to the current line of business organization.

(2) Beginning in the second quarter of 2000, the provision for credit losses was fully allocated to the appropriate lines of business. Prior to the second quarter of 2000, the business' provision was based upon standard credit costs, with any difference between the aggregate provision of the businesses and the Corporation's total reflected in Corporate.

Description of Methodology

The results of the business segments are intended to reflect each as if it were a stand-alone business. The management reporting process that derives these results allocates income and expenses using market-based methodologies. Funds transfer pricing is used to allocate interest income and expense to each line of business. A portion of the Corporation's interest rate risk position is currently included in Corporate.

Historically, the costs of certain support units were allocated to the lines of business based on factors other than usage, such as headcount and total assets. The methodology was changed in the third quarter of 2000 to better reflect the actual cost and usage of services provided and was consistently applied to all lines of business. Costs allocated to First USA decreased, while unallocated costs that are included in Corporate increased.

The lines of business are assigned capital that reflects the underlying risk in that business. See the "Capital Management" section on page 67 for a discussion of the economic capital framework.

For 1999, the effect of certain identified transactions were not attributed to any business segment since they were not considered a part of core business activities.

BUSINESS SEGMENT RESULTS AND OTHER DATA

The information provided in the line of business tables beginning with the caption entitled "Financial Performance" is included herein for analytical purposes only and is based on management information systems, assumptions and methodologies that are under continual review.

The financial information and supplemental data presented in the tables below for the respective lines of business are reported on an actual basis. However, to assist with the analysis of underlying trends, the discussion of business segment results excludes merger and restructuring-related charges and the impact of the 2000 and 1999 significant items noted in the "Significant Items" section on pages 41–42.

Retail

Retail provides a broad range of financial products and services, including deposits, investments, loans, insurance, and interactive banking to nearly 7.3 million households and 500,000 small business customers, over 1 million of whom are registered online users.

Products and services are delivered to customers through approximately 33,000 employees, 1,800 branches in 14 states, a large network of ATM's, bankone.com, and 24-hour telephone banking. THE ONE Card, issued by Retail, is one of the country's leading debit cards for individuals and small businesses, with 4.4 million cards issued.

Retail originates consumer credit nationwide through its banking centers, relationships with brokers, the Internet, and the telephone. Retail offers real estate-secured, education, tax refund, consumer installment loans, and auto loans and leases to individuals. Retail is also a leading lender to small businesses.

(Dollars in millions)	**2001**	2000	1999
Net interest income-FTE	**$ 5,025**	$ 4,895	$ 4,379
Banking fees and commissions [1]	**458**	473	N/A
Credit card revenue [2]	**164**	144	N/A
Service charges on deposits [3]	**795**	767	N/A
Fiduciary and investment management fees [4]	**–**	1	N/A
Other income (loss)	**25**	(767)	N/A
Noninterest income	**1,442**	618	1,541
Total revenue	**6,467**	5,513	5,920
Provision for credit losses	**1,010**	870	415
Salaries and employee benefits	**1,492**	1,552	N/A
Other expense	**1,985**	2,443	N/A
Noninterest expense	**3,477**	3,995	3,933
Operating pretax income-FTE	**1,980**	648	1,572
Tax expense and FTE adjustment	**708**	234	531
Operating income	**1,272**	414	1,041
Merger and restructuring-related charges, net of tax	**(66)**	(25)	–
Net income	**$ 1,206**	$ 389	$ 1,041
FINANCIAL PERFORMANCE:			
Return on equity [5]	**21%**	7%	23%
Efficiency ratio [5]	**54**	72	66
Headcount–full-time [6]	**33,155**	35,759	N/A
ENDING BALANCES (in billions):			
Small business commercial	**$ 12.3**	$ 12.1	N/A
Home equity	**30.3**	31.4	N/A
Vehicles:			
Loans	**13.5**	14.3	N/A
Leases	**6.1**	8.8	N/A
Other personal	**9.8**	10.7	N/A
Total loans	**72.0**	77.3	N/A
Assets	**76.2**	80.0	N/A
Demand deposits	**25.8**	24.9	N/A
Savings	**36.1**	32.0	N/A
Time	**25.6**	32.2	N/A
Total deposits	**87.5**	89.1	N/A
Equity	**6.3**	5.9	N/A

(Dollars in millions)	**2001**	2000	1999
AVERAGE BALANCES (in billions):			
Small business commercial	**$ 12.2**	$ 11.7	$ 11.0
Home equity	**30.8**	27.7	20.1
Vehicles:			
Loans	**13.9**	14.3	13.2
Leases	**7.3**	9.9	10.2
Other personal	**10.5**	11.0	11.6
Total loans	**74.7**	74.6	66.1
Assets	**78.9**	79.0	72.5
Demand deposits	**24.2**	24.6	N/A
Savings	**34.1**	33.4	N/A
Time	**29.4**	30.4	N/A
Total deposits	**87.7**	88.4	89.1
Equity	**6.2**	5.8	4.6
CREDIT QUALITY (in millions):			
Net charge-offs:			
Small business commercial	**$ 71**	$ 44	N/A
Home equity	**375**	181	N/A
Vehicles:			
Loans [7]	**246**	138	N/A
Leases	**99**	70	N/A
Other personal	**122**	109	N/A
Total consumer [7]	**842**	498	N/A
Total net charge-offs [7]	**913**	542	N/A
Net charge-off ratios:			
Small business commercial	**0.58%**	0.38%	N/A
Home equity	**1.22**	0.65	N/A
Vehicles:			
Loans [7]	**1.77**	0.97	N/A
Leases	**1.36**	0.70	N/A
Other personal	**1.16**	1.00	N/A
Total consumer [7]	**1.35**	0.79	N/A
Total net charge-offs [7]	**1.22**	0.73	N/A
Nonperforming assets:			
Small business commercial	**$ 329**	$ 215	N/A
Consumer [8]	**1,041**	697	N/A
Total nonperforming loans	**1,370**	912	N/A
Other, including Other Real Estate Owned ("OREO")	**104**	83	N/A
Total nonperforming assets	**1,474**	995	N/A
Allowance for credit losses	**$1,040**	$ 846	N/A
Allowance to period-end loans	**1.44%**	1.09%	N/A
Allowance to nonperforming loans	**76**	93	N/A
Nonperforming assets to related assets	**2.04**	1.29	N/A
DISTRIBUTION:			
Banking centers	**1,802**	1,810	1,854
ATMs	**5,141**	6,055	6,824
# On-line customers *(in thousands)*	**1,083**	918	488
# Households *(in thousands)*	**7,258**	7,679	N/A
# Business customers *(in thousands)*	**508**	519	N/A
# Debit cards issued *(in thousands)*	**4,414**	4,159	N/A
INVESTMENTS:			
Investment sales volume *(in millions)*	**$4,867**	$4,272	4,077

N/M–Not meaningful.

N/A–Not available due to changes in segment composition.

(1) Banking fees and commissions include insurance fees, documentary fees, loan servicing fees, commitment fees, mutual fund commissions, syndicated management fees, leasing fees, safe deposit fees, official checks fees, ATM interchange and miscellaneous other fee revenue.

(2) Credit card revenue includes credit card fees, merchant fees and interchange fees.

(3) Service charges on deposits include service charges on deposits, deficient balance fees, non-sufficient funds/overdraft fees and waived fees.

(4) Fiduciary and investment management fees include asset management fees, personal trust fees, other trust fees and advisory fees.

(5) Ratios are based on operating income.

(6) Beginning in 2001, employees on long-term disability and employees of unconsolidated subsidiaries are excluded. Prior period data has not been reclassified.

(7) The year ended December 31, 2001 includes $92 million of charge-offs which are not classified as such in the Corporation's GAAP financial information because they are part of a portfolio which has been accounted for as loans held at a discount. The inclusion of this amount in charge-offs more accurately reflects the credit performance of the portfolio. In the Corporation's financial statements, this item results in a higher provision in excess of net charge-offs.

(8) Includes consumer balances that are placed on nonaccrual status when the collection of contractual principal or interest becomes 90 days past due.

2001 compared to 2000

Retail reported operating income of $1.272 billion in 2001 compared to $870 million in 2000. The prior year's operating income reflected an adjustment for significant items totaling $456 million after tax. The $402 million, or 46%, year-over-year increase on an adjusted basis was principally driven by a $300 million after tax reduction in noninterest expense.

Net interest income was $5.025 billion for the year, up $116 million, or 2%, from the prior year due to lower rates, improved spreads on the indirect auto loan portfolio and 11% growth in average home equity outstandings. December loan balances were down $5.3 billion from the prior year as Retail managed reductions in certain segments of auto lease and brokered home equity loan portfolios while direct home equity loans grew.

Deposits generated a narrower margin compared to 2000, reflecting the lower rate environment and a decline in average balances. Favorable mix changes from time to savings helped mitigate the impact of lower rates and balances. More positive trends emerged late in 2001 as demand deposit balances posted 2% growth from the fourth quarter of 2000 to the fourth quarter of 2001. This growth was accompanied by a 5% increase in new accounts year over year.

Noninterest income was $1.442 billion, up $174 million, or 14%, compared to 2000. The absence of lease residual losses and higher fee revenue from deposit accounts and investment sales were partially offset by gains from the sale of miscellaneous assets in 2000. Sales of mutual funds and annuities totaled $4.9 billion in the year, up $595 million, or 14%, from the prior year.

The provision for credit losses was $1.010 billion, up $151 million, or 18%, from 2000. Managed net charge-offs were $913 million, up $371 million from the prior year. Charge-offs on brokered home equity loans and auto loans and leases were the primary drivers of Retail's year over year increase.

Nonperforming assets were $1.474 billion, up $479 million, or 48%, compared to 2000, driven primarily by an increase in brokered home equity nonperforming loans. Nonperforming assets were 2.04% of related assets in the year, up from 1.29% the previous year. The allowance for credit losses expressed as a percent of year-end loans increased to 1.44% compared to 1.09% a year ago.

Noninterest expense was $3.477 billion, down $473 million, or 12%, from the prior year driving an improvement in the efficiency ratio from 64% in 2000 to 54% in the current year. The consolidation of operating sites in 2000 and 2001 and better overall expense management in Retail, and throughout the Corporation, drove the efficiency improvement. In addition, staffing levels were down 2,600 year over year leading to a 4% decrease in salary and benefit expense.

2000 compared to 1999

Retail reported operating income of $870 million in 2000, down from $1.041 billion in 1999. The $171 million reduction was driven by lower noninterest income and higher provision expense partially offset by higher net interest income.

Net interest income increased $530 million, or 12%, from 1999, reflecting 13% growth in average loans, wider deposit spreads and improved pricing on indirect auto loans, partially offset by a shift in deposit mix toward higher rate certificates of deposit. Loan growth was driven by a 38% increase in average home equity loans, partially offset by a decline in other personal loans.

Noninterest income declined $273 million, or 18%, from 1999. Lease residual losses were $126 million higher in 2000 than 1999, while gains from the sale of miscellaneous assets were down $83 million.

Provision for credit losses increased $444 million in 2000. This principally reflected the significant growth in home equity loans, higher net charge-offs, and increases in home equity nonperforming loans.

Noninterest expense was $17 million higher in 2000 than 1999, principally related to investments in new internet capabilities, partially offset by positive impacts from waste reduction initiatives, reduced incentive compensation, and the sale of the consumer finance business.

Commercial Banking

Commercial Banking offers a broad array of products, including global cash management, capital markets, commercial cards, investment management, and lending to Corporate Banking and Middle Market customers.

Corporate Banking serves large corporations, financial institutions, municipalities, and not-for-profit entities. In addition to lending, Corporate Banking offers a wide range of financial products and develops, markets, and delivers cash management, capital markets, global treasury and trade, e-business and other noncredit products and services. Bank One's Capital Markets business is engaged in the origination, trading, and distribution of asset-backed securities, investment grade and high yield securities, derivatives, tax-exempt securities, and government bonds. Capital Markets is also actively engaged in loan syndications, market research, advisory services, and private placements.

Middle Market Banking serves approximately 18,000 customers with annual revenues from about $10 million up to $500 million. These customers use a wide variety of services, with nearly one third using Bank One exclusively. Since privately held companies comprise the vast majority of the Middle Market customer base, providing credit is fundamental to the success of this business. The loan portfolio is diversified across a broad range of industries and geographic locations. In addition to credit, this customer segment actively uses Bank One's cash management, international, capital markets, and investment management products and services.

(Dollars in millions)	**2001**	2000	1999
Net interest income–FTE	**$ 2,702**	$ 2,825	$ 2,655
Banking fees and commissions	**714**	605	N/A
Credit card revenue	**86**	75	N/A
Service charges on deposits	**614**	519	N/A
Fiduciary and investment management fees	**3**	3	N/A
Investment securities losses	**(12)**	–	N/A
Trading	**269**	183	N/A
Other income (loss)	**(100)**	(31)	N/A
Noninterest income	**1,574**	1,354	1,248
Total revenue	**4,276**	4,179	3,903
Provision for credit losses	**1,070**	2,217	436
Salaries and employee benefits	**1,073**	1,044	N/A
Other expense	**1,147**	1,228	N/A
Noninterest expense	**2,220**	2,272	2,208
Operating pretax income (loss)–FTE	**986**	(310)	1,259
Tax expense (benefit) and FTE adjustment	**265**	(195)	353
Operating income (loss)	**721**	(115)	906
Merger and restructuring-related charges, net of tax	**(46)**	1	–
Net income (loss)	**$ 675**	$ (114)	$ 906
Memo: Revenue by activity			
Lending-related revenue	**1,965**	2,173	N/A
Treasury management services [9]	**1,132**	1,029	N/A
Capital markets [10]	**681**	482	N/A
Other	**498**	495	N/A

(Dollars in millions)	**2001**	2000	1999
FINANCIAL PERFORMANCE:			
Return (loss) on equity [5]	**10%**	(2)%	15%
Efficiency ratio [5]	**52**	54	57
Headcount–full-time [6]			
Corporate Banking (including Capital Markets)	**4,341**	4,779	N/A
Middle Market	**3,911**	4,179	N/A
Treasury Management Services	**4,723**	5,016	N/A
Support and Other Administrative [11]	**29**	279	N/A
Total headcount–full-time	**13,004**	14,253	N/A
ENDING BALANCES (in billions):			
Loans	**$ 70.1**	$ 85.1	N/A
Assets	**98.1**	103.7	N/A
Demand deposits	**25.2**	21.2	N/A
Savings	**3.1**	N/A	N/A
Time (+ Savings in 2000)	**14.0**	8.0	N/A
Foreign offices	**8.6**	8.5	N/A
Total deposits	**50.9**	37.7	N/A
Equity	**7.2**	7.0	N/A
AVERAGE BALANCES (in billions):			
Loans	**$ 77.8**	$ 85.6	$ 77.5
Assets	**104.2**	114.5	109.7
Demand deposits	**21.1**	21.1	N/A
Savings	**2.7**	N/A	N/A
Time (+ Savings in 2000)	**8.9**	8.5	N/A
Foreign offices	**9.0**	9.8	N/A
Total deposits	**41.6**	39.4	37.7
Equity	**7.2**	6.8	5.9
CREDIT QUALITY (in millions):			
Net commercial charge-offs	**$ 1,041**	$ 562	N/A
Net commercial charge-off ratios	**1.34%**	0.66%	0.39%
Nonperforming assets:			
Commercial nonperforming loans	**$ 2,101**	$ 1,523	$ 871
Other, including OREO	**27**	13	N/A
Total nonperforming assets	**2,128**	1,536	N/A
Allowance for credit losses	**$ 3,066**	$ 3,044	N/A
Allowance to period-end loans	**4.37%**	3.58%	N/A
Allowance to nonperforming loans	**146**	200	N/A
Nonperforming assets to related assets	**3.03**	1.80	1.10%
CORPORATE BANKING (in billions):			
Loans–ending balance	**$ 36.6**	$ 51.7	N/A
–average balance	**43.5**	53.4	47.8
Deposits–ending balance	**$ 28.7**	$ 19.6	N/A
–average balance	**23.0**	21.4	19.1
Credit Quality *(in millions)*:			
Net charge-offs	**$ 638**	$ 435	N/A
Net charge-off ratio	**1.47%**	0.81%	0.53%
Nonperforming loans	**$ 1,154**	$ 1,065	$ 578
Nonperforming loans to total loans	**3.15%**	2.06%	1.12%

(Dollars in millions)	**2001**	2000	1999
SYNDICATIONS:			
Lead Arranger Deals:			
Volume *(in billions)*	**$ 53.9**	$ 59.3	$47.9
Number of transactions	**227**	210	190
League table standing–rank	**4**	4	4
League table standing–market share	**7%**	6%	7%
MIDDLE MARKET BANKING (in billions):			
Loans–ending balance	**$ 33.5**	$ 33.4	N/A
–average balance	**34.3**	32.1	29.7
Deposits–ending balance	**22.2**	18.1	N/A
–average balance	**18.6**	18.2	18.6
Credit Quality *(in millions)*:			
Net charge-offs	**$ 403**	$ 127	N/A
Net charge-off ratio	**1.17%**	0.40%	0.18%
Nonperforming loans	**$ 947**	$ 458	$ 293
Nonperforming loans to total loans	**2.83%**	1.37%	0.93%

For additional footnote detail see page 28.

(9) Treasury Management Services includes both fees and fee equivalents from compensating balances.

(10) Capital Markets includes trading revenues and underwriting, syndicated lending and advisory fees.

(11) Full-time headcount in 2000 has been reclassified to reflect the movement of Support and Other Administrative personnel into the respective business units reported.

2001 compared to 2000

Commercial Banking reported operating income of $721 million for 2001, up $836 million from 2000 primarily due to a significantly lower credit provision. After adjusting for the negative impact of $404 million after tax of significant items in 2000, operating income increased by $432 million, or 149%. The year's results reflected strategic efforts to reduce Corporate Banking credit exposure and improve the cross-sell of Capital Markets and Treasury Management products.

At December 31, 2001, loans were $70.1 billion, down $15.0 billion, or 18%, from the prior year. Corporate Banking loans were $36.6 billion at year-end, down $15.1 billion, or 29%, from a year ago. Middle Market loans were $33.5 billion, essentially flat from last year.

Revenue totaled $4.276 billion, up $53 million, or 1%, from 2000, with a decline in net interest income more than offset by growth in noninterest income, particularly in Treasury Management and Capital Markets.

Net interest income was $2.702 billion, down $116 million, or 4%, from the prior year reflecting the earnings impact of lower average loan balances resulting from efforts to reduce credit risk exposure.

Noninterest income was $1.574 billion, up $169 million, or 12%, from the prior year. Banking fees and commissions increased $109 million, or 18%, due to growth in the asset-backed and investment grade underwriting business and higher business sweep fees. Service charges on deposits increased $90 million, or 17%, reflecting improvement in Treasury Management volumes and pricing, as well as a shift in payment for services to fees from net interest income due to the lower value ascribed to customers' compensating deposit balances. Trading revenue increased $42 million, primarily reflecting improvement in fixed income trading activities. Other income decreased by $72 million mainly due to losses on the sale of loans.

The provision for credit losses was $1.070 billion, down $519 million, or 33%, from 2000. Net charge-offs were $1.041 billion, up $479 million, or 85%, from the prior year and represented 1.34% of average loans, up from 0.66% in 2000. Corporate Banking net charge-offs were $638 million, or 1.47% of average loans, up from 0.81% in 2000. 2001 charge-offs included $216 million related to nonperforming and other credit related loan sales. There were no losses on loan sales in 2000. Middle Market net charge-offs were $403 million, or 1.17% of average loans, up from 0.40% of average loans in the prior year. For additional detail on Commercial Banking net charge-offs see the table on page 57.

The allowance for credit losses at December 31, 2001 was $3.066 billion, up $22 million, or 1%, from the prior year. This represented 4.37% of year-end loans and 146% of nonperforming loans compared with 3.58% and 200%, respectively, at December 31, 2000. Nonperforming loans were $2.101 billion, up $578 million, or 38%, from year-end 2000. Corporate Banking nonperforming loans at year-end were $1.154 billion, up $89 million, or 8%, from the prior year. Before reflecting the sale of nonperforming loans, Corporate Banking nonperforming loans increased $671 million during the year. Middle Market nonperforming loans were $947 million at December 31, 2001, up $489 million, or 107%, from the prior year. For additional detail on Commercial Banking nonperforming assets and allowance for credit losses see the tables on page 56 and page 58, respectively.

Noninterest expense was $2.220 billion, down $87 million, or 4%, from 2000 reflecting the impact of waste-reduction efforts and lower headcount. The 2001 efficiency ratio improved to 52% from 55% in 2000.

2000 compared to 1999

Commercial Banking reported operating income of $289 million for 2000 on an adjusted basis, compared with $906 million in 1999. This $617 million decrease was primarily driven by an increase in the provision for credit losses of $1.153 billion.

Net interest income increased $163 million, or 6%, from the prior year, driven by 10% average loan growth partially offset by a modest decline in spread due to competitive pricing pressures and higher nonperforming loans.

The provision for credit losses increased $1.153 billion in 2000 from the prior year due to deterioration in the quality of loans and a higher reserve level established for the commercial loan portfolio. The deterioration in credit quality reflected the slowing of the economy as well as weakness in several industries and leveraged finance transactions.

Noninterest income of $1.405 billion increased $157 million, or 13%, from the prior year primarily due to growth in Treasury Management Service revenue of $71 million, or 12%, lending related fees of $60 million, or 41%, and Capital Markets revenue of $25 million, or 6%.

Noninterest expense increased $99 million, or 4%, from the prior year, principally related to Treasury Management Services investment spending.

First USA

First USA offers a wide variety of card products, including co-brand, affinity, rewards, business, general purpose, and smart credit cards, as well as stored-value cards. All of these cards carry the respective Visa® or MasterCard® brand names.

With more than 55 million cards in circulation, First USA is the third largest credit card provider in the United States and the largest Visa® credit card issuer in the world. First USA has $68 billion in managed credit card receivables, which includes a portfolio of approximately $6 billion in card receivables which was acquired from Wachovia Corporation ("Wachovia") in 2001. FirstUSA.com is also a leader in online card marketing and customer service, with more than 1.9 million registered users of its website.

First USA offers credit cards for consumers and businesses under the First USA and Bank One names and on behalf of its 1,900 marketing partners. These partners include some of the leading corporations, universities, and affinity organizations in the United States.

(Dollars in millions-managed basis)	**2001**	2000	1999
Net interest income–FTE	**$6,090**	$5,835	$6,881
Banking fees and commissions	**96**	112	N/A
Credit card revenue	**1,146**	854	N/A
Investment securities gains	**–**	11	N/A
Trading	**–**	(1)	N/A
Other income (loss)	**120**	(230)	N/A
Noninterest income	**1,362**	746	1,632
Total revenue	**7,452**	6,581	8,513
Provision for credit losses	**3,823**	3,637	3,593
Salaries and employee benefits	**501**	517	N/A
Other expense	**1,618**	2,422	N/A
Noninterest expense	**2,119**	2,939	3,204
Operating pretax income–FTE	**1,510**	5	1,716
Tax expense and FTE adjustment	**564**	2	581
Operating income	**946**	3	1,135
Merger and restructuring-related charges, net of tax	**(39)**	(4)	–
Net income (loss)	**$ 907**	$ (1)	$1,135
Memo: Net securitization gains (amortization)	**(62)**	(116)	61
FINANCIAL PERFORMANCE:			
% of average outstandings:			
Net interest income–FTE	**9.31%**	8.81%	9.97%
Provision for credit losses	**5.85**	5.49	5.21
Noninterest income	**2.08**	1.13	2.37
Risk adjusted revenue	**5.54**	4.45	7.13
Noninterest expense	**3.24**	4.44	4.64
Pretax income–FTE	**2.31**	0.01	2.49
Operating income	**1.45**	–	1.64
Net income	**1.39**	–	1.64
Return on equity [5]	**15**	–	19
Efficiency ratio [5]	**28**	45	38
Headcount–full-time [6]	**9,871**	10,901	N/A
ENDING BALANCES (in billions):			
Owned	**$ 6.8**	$ 4.7	$ 4.0
Seller's interest	**24.0**	22.4	19.7
Loans on balance sheet	**30.8**	27.2	23.7
Securitized	**37.4**	39.8	45.7
Loans	**68.2**	67.0	69.4
Assets	**72.7**	70.5	N/A
Equity	**6.4**	6.2	N/A
AVERAGE BALANCES (in billions):			
Owned	**$ 6.8**	$ 4.8	N/A
Seller's interest	**18.8**	18.5	N/A
Loans on balance sheet	**25.6**	23.2	N/A
Securitized	**39.8**	43.0	N/A
Loans	**65.4**	66.2	69.0
Assets	**68.7**	70.0	74.9
Equity	**6.3**	6.1	6.0

(Dollars in millions)	**2001**	2000	1999
CREDIT QUALITY (in millions):			
Net charge-offs:			
Credit card–managed	**$ 3,823**	$ 3,584	$ 3,790
Net charge-off ratios:			
Credit card–managed	**5.84%**	5.42%	5.49%
12-month lagged [12]	**5.77**	5.19	N/A
Delinquency ratio:			
–30+ days	**4.46**	4.51	4.57
–90+ days	**1.93**	2.02	2.13
Allowance for credit losses	**$ 396**	$ 197	N/A
Allowance to period-end owned loans	**5.82%**	4.19%	N/A
OTHER DATA:			
Charge volume *(in billions)*	**$ 140.4**	$ 142.5	$ 142.7
New accounts opened *(in thousands)*	**3,925**	3,324	8,108
Cards issued *(in thousands)*	**55,554**	51,693	64,191
Number of FirstUSA.com customers *(in millions)* [13]	**1.9**	2.1	N/A

For additional footnote detail see page 28.

(12) 2001 ratio includes Wachovia net charge-offs but excludes Wachovia loans.

(13) Approximately 1 million registered users were purged in late 2001 due to inactivity.

2001 compared to 2000

First USA reported operating income of $946 million in 2001, up from $3 million in the prior year. Adjusted for $522 million after tax of significant items, 2000 operating income was $525 million. Increased reported operating income reflected lower expenses, the addition of the Wachovia portfolio and higher revenue, partially offset by increased credit costs. The Corporation expects the acquisition of the Wachovia portfolio to add approximately $100 million annually to after tax earnings. The pre-tax return on outstandings was 2.3% in 2001, up from 1.3% in 2000.

Net interest income totaled $6.090 billion, up $255 million, or 4%, from the prior year reflecting lower interest rates and the addition of the Wachovia portfolio, partially offset by lower average outstandings and loan fee income. Average managed outstandings were $65.4 billion, down $800 million, or 1%, from the prior year. End of period managed loans were $68.2 billion, up $1.2 billion from the prior year. First USA opened 3.9 million new accounts during the year, an 18% increase from the prior year. At December 31, 2001, 55.6 million cards were issued.

Noninterest income was $1.362 billion, a $149 million, or 12%, increase from the prior year reflecting the addition of the Wachovia portfolio and increased securitization activity.

The managed provision for credit losses was $3.823 billion, a $221 million, or 6%, increase from the prior year reflecting the addition of the Wachovia portfolio and increased net charge-offs.

Noninterest expense totaled $2.119 billion, a $499 million, or 19%, decrease from the prior year, reflecting lower fraud and operational losses, processing costs and a decrease in internally allocated costs related to a mid-year 2000 change in methodology. The decline from last year also reflected the sale of international operations in the second quarter of 2000. These reductions were partially offset by the addition of the Wachovia portfolio and higher marketing expense.

2000 compared to 1999

First USA reported operating income of $525 million for 2000, down $610 million, or 54%, from 1999. A decline in revenue was partially offset by lower expenses. The 2000 results represented a 1.3% return on outstandings, down from 2.5% in 1999.

Net interest income was $5.835 billion, down $1.046 billion, or 15%, from 1999, reflecting narrower spread, lower late fee revenue, and lower average outstandings. Average managed outstandings for 2000 were $66.2 billion, down 4% from 1999. End of period managed loans declined to $67.0 billion, or 3%. First USA opened 3.3 million accounts in 2000, down 59% from 1999.

Noninterest income was $1.213 billion, down $419 million, or 26%, from 1999, due to decreased securitization activity and higher revenue sharing payments to partnership and affinity groups reflecting the emphasis on these growing customer groups. In addition, lower revenue from fee-based products contributed to the decline as well as the prior year's inclusion of $126 million of nonrecurring items.

The provision for credit losses was $3.602 billion, relatively flat with 1999. The charge-off rate decreased slightly to 5.42% from 5.49% in 1999. The 1999 charge-offs included $183 million from the early adoption of the Federal Financial Institutions Examination Council's (FFIEC) revised consumer credit guidelines. At year-end, the managed 30-day and 90-day delinquency rates were 4.51% and 2.02%, respectively, down from 4.57% and 2.13% a year earlier.

Noninterest expense was $2.618 billion, down $586 million, or 18%, from 1999, reflecting a decline in marketing expenses, improved operating efficiencies, lower processing costs, the sale of the international operations, and a decrease in internally allocated costs related to a mid-year 2000 change in methodology. These positive impacts were partially offset by increased fraud and operational losses.

Investment Management

The Investment Management Group (IMG) provides investment, insurance, trust and private banking services to individuals. IMG also provides investment and investment related services, including retirement and custody services, securities lending and corporate trust to institutions.

IMG's registered investment advisory arm, Banc One Investment Advisors, ranks among the nation's top asset managers with more than $142 billion in assets under management. In addition, IMG manages One Group® Mutual Funds, one of the largest mutual fund complexes with 50 funds and more than $83 billion in assets under management. Performance of the funds continues to remain strong. 88% of the assets are in funds ranked 3 stars or better and 57% of the assets are in funds ranked 4 stars or better by Morningstar.

Private Client Services (PCS) helps manage and build wealth for high net worth clients. PCS provides integrated financial advice and services such as brokerage, investments and alternative asset management, personal trust, private banking, insurance and financial planning through over 600 client advisors.

The Retail Investment Services (RIS) business serves Bank One's retail customer base by delivering investment products and services through 1,800 banking centers in 14 states. RIS teams have more than 3,000 licensed bankers in Bank One retail banking centers to deliver high quality investment and insurance products.

The Global Corporate Trust business ranks among the three largest providers in the country for bond trustee services. These services are provided to governmental and municipal entities, as well as a broad range of middle market and large institutions.

(Dollars in millions)	**2001**	2000	1999
Net interest income–FTE	**$ 427**	$ 409	$ 376
Banking fees and commissions	**480**	354	N/A
Service charges on deposits	**17**	16	N/A
Fiduciary and investment management fees	**751**	780	N/A
Other income	**11**	11	N/A
Noninterest income	**1,259**	1,161	1,179
Total revenue	**1,686**	1,570	1,555
Provision for credit losses	**38**	13	2
Salaries and employee benefits	**564**	554	N/A
Other expense	**488**	495	N/A
Noninterest expense	**1,052**	1,049	1,075
Operating pretax income–FTE	**596**	508	478
Tax expense and FTE adjustment	**222**	186	161
Operating income	**374**	322	317
Merger and restructuring-related charges, net of tax	**(12)**	–	–
Net income	**$ 362**	$ 322	$ 317
Memo: Insurance revenues	**437.2**	357.2	N/A
FINANCIAL PERFORMANCE:			
Return on equity [5]	**37%**	36%	35%
Efficiency ratio [5]	**62**	67	69
Headcount–full-time [6]	**6,071**	6,562	N/A
ENDING BALANCES (in billions):			
Loans	**$ 7.2**	$ 7.0	N/A
Assets	**8.6**	8.1	N/A
Demand deposits	**2.8**	3.3	N/A
Savings	**3.3**	2.2	N/A
Time	**3.2**	4.0	N/A
Foreign offices	**0.2**	0.1	N/A
Total deposits	**9.5**	9.6	N/A
Equity	**1.1**	1.0	N/A

(Dollars in millions)	**2001**	2000	1999
AVERAGE BALANCES (in billions):			
Loans	**$ 6.9**	$ 6.6	$ 5.7
Assets	**8.1**	7.6	7.1
Demand deposits	**2.0**	2.5	N/A
Savings	**2.8**	1.9	N/A
Time	**3.3**	4.0	N/A
Foreign offices	**0.2**	0.2	N/A
Total deposits	**8.2**	8.5	8.8
Equity	**1.0**	0.9	0.9
CREDIT QUALITY (in millions):			
Net charge-offs:			
Commercial	**$ 27**	N/A	N/A
Consumer	**7**	N/A	N/A
Total net charge-offs	**34**	N/A	N/A
Net charge-off ratios:			
Commercial	**0.81%**	N/A	N/A
Consumer	**0.19**	N/A	N/A
Total net charge-off ratio	**0.49**	N/A	N/A
Nonperforming assets:			
Commercial	**$ 38**	$ 36	N/A
Consumer	**4**	4	N/A
Total nonperforming loans	**42**	40	N/A
Other including OREO	**1**	–	N/A
Total nonperforming assets	**43**	40	N/A
Allowance for credit losses	**$ 25**	$ 22	N/A
Allowance to period-end loans	**0.35%**	0.31%	N/A
Allowance to nonperforming loans	**60**	55	N/A
Nonperforming assets to related assets	**0.60**	0.57	N/A
ASSETS UNDER MANAGEMENT ENDING BALANCES (in billions):			
Mutual funds	**$ 83.5**	$ 70.4	$ 64.4
Other	**59.1**	60.8	64.5
Total	**142.6**	131.2	128.9
By type:			
Money market	**$ 58.5**	$ 43.1	N/A
Equity	**47.3**	53.5	N/A
Fixed income	**36.8**	34.6	N/A
Total	**142.6**	131.2	128.9
By channel:			
Private client services	**$ 49.7**	$ 58.3	N/A
Retail brokerage	**9.7**	9.1	N/A
Institutional	**61.2**	47.9	N/A
Commercial cash sweep	**9.8**	8.6	N/A
All other	**12.2**	7.3	N/A
Total	**142.6**	131.2	128.9
Morningstar Rankings:			
Percentage of customer assets in 4 and 5 ranked funds	**57%**	49%	54%
Percentage of customer assets in 3+ ranked funds	**88**	99	84
TRUST ASSETS ENDING BALANCES:			
Trust assets under administration *(in billions)*	**$352.5**	$319.4	N/A

(Dollars in millions)	**2001**	2000	1999
CORPORATE TRUST SECURITIES ENDING BALANCES:			
Corporate trust securities under administration *(in billions)*	**$988.6**	$751.1	N/A
RETAIL BROKERAGE:			
Mutual fund sales *(in millions)*	**$2,284**	$2,613	N/A
Annuity sales	**2,583**	1,659	N/A
Total sales	**4,867**	4,272	4,077
Number of accounts–end of period *(in thousands)*	**394**	384	349
Market value customer assets–end of period *(in billions)*	**$ 23.4**	$ 23.1	$ 23.4
Number of registered sales representatives	**724**	700	N/A
Number of licensed retail bankers	**3,042**	2,689	N/A
Annuity account value *(in billions)*	**$ 8.7**	$ 6.8	N/A
PRIVATE CLIENT SERVICES:			
Number of Private Client advisors	**641**	747	N/A
Number of Private Client offices	**105**	104	N/A
Client Assets:			
Assets under management *(in billions)*	**$ 49.7**	$ 58.3	N/A
Ending Balances *(in billions)*:			
Loans	**$ 7.0**	$ 6.7	N/A
Deposits	**7.6**	7.2	N/A
Average Balances *(in billions)*:			
Loans	**$ 6.9**	$ 6.4	$ 5.5
Deposits	**7.0**	7.0	7.2

For additional footnote detail see page 28.

2001 compared to 2000

IMG reported operating income of $374 million, up $52 million from the prior year.

Net interest income increased $18 million, or 4%, from the prior year, reflecting a 5% increase in average loans partially offset by narrower deposit spreads and a 4% decrease in average deposits.

Provision for credit losses increased $25 million, principally related to higher net charge-offs resulting from a difficult economic climate and loan growth.

Noninterest income, which is principally fiduciary and investment fees, increased $96 million, or 8%. Beginning in November 2000, fees associated with the administration of the One Group® mutual funds were recorded as revenue, with a corresponding increase in expense. Prior to that, a third-party administrator incurred such fees and expenses, which totaled $80 million in 2000. Excluding the impact of this change, noninterest income increased $16 million reflecting growth in retail brokerage sales offset by lower investment advisory fees on equity assets because of overall market conditions.

Noninterest expense increased $1 million, principally related to expenses of $80 million associated with the administration of the One Group® funds, offset by a decrease in expenses related to tighter cost control, lower headcount and reduced operating losses. Excluding the expenses associated with the administration of the One Group® funds, noninterest expenses declined 8%.

Assets under management totaled $142.6 billion, up 9% from the end of 2000. One Group® mutual fund assets under management increased 19% to $83.5 billion. One Group® fund performance continued to remain strong, with 88% of these funds rated three stars or higher by Morningstar. Average assets under management increased 3% compared with 2000, driven principally by a 12% increase in One Group® mutual funds.

2000 compared to 1999

IMG reported operating income of $322 million, up $5 million from the prior year.

Net interest income increased $33 million, or 9%, from the prior year, reflecting a 16% increase in average loans partially offset by narrower spreads related to the 3% decrease in average deposits.

Provision for credit losses increased $11 million, principally related to higher net charge-offs and loan growth.

Noninterest income, which is principally fiduciary and investment fees, decreased $16 million, or 1%, due to the sale of a subsidiary in the 1999 second quarter. Excluding the impact of this sale, noninterest income increased 2%, reflecting growth in retail brokerage and insurance volumes and moderate growth in assets under management.

Noninterest expense decreased $24 million, or 2%, also related to the 1999 second quarter sale of a subsidiary. Excluding the impact of this sale, expenses increased 2%, principally related to volume growth in retail brokerage and insurance activities.

Assets under management totaled $131.2 billion, up 2% from the end of 1999. One Group® mutual fund assets under management increased 9% to $70.4 billion. One Group® fund performance continued to remain strong, with 99% of these funds rated three stars or higher by Morningstar. Average assets under management increased 5% compared with 1999, driven principally by a 14% increase in One Group® mutual funds.

Corporate

Corporate includes Treasury, fixed income and principal investment portfolios, unallocated corporate expenses, and any gains or losses from corporate transactions.

(Dollars in millions)	**2001**	2000	1999
Net interest income (expense)–FTE [14]	**$ (664)**	$ (458)	$ 166
Banking fees and commissions	**(17)**	N/A	N/A
Credit card revenue	**(1)**	N/A	N/A
Service charges on deposits	**23**	N/A	N/A
Investment securities losses	**(54)**	N/A	N/A
Trading	**(49)**	N/A	N/A
Other income	**304**	N/A	N/A
Noninterest income [15]	**206**	16	873
Total revenue (loss)	**(458)**	(442)	1,039
Provision for credit losses	**–**	(2)	(108)
Salaries and employee benefits	**568**	N/A	N/A
Other expense	**(236)**	N/A	N/A
Noninterest expense [16]	**332**	1,192	198
Operating pretax income (loss)–FTE	**(790)**	(1,632)	949
Tax expense (benefit) and FTE adjustment	**(381)**	(599)	272
Operating income (loss)	**(409)**	(1,033)	677
Merger and restructuring-related charges, net of tax	**(59)**	(74)	–
Net income (loss)	**$ (468)**	$ (1,107)	$ 677
FINANCIAL PERFORMANCE:			
Headcount–full-time [6]	**11,418**	13,303	N/A
ENDING BALANCES (in billions):			
Loans	**$ 0.6**	$ 0.1	N/A
Assets	**50.7**	46.8	N/A
Deposits	**19.6**	30.7	N/A
Equity	**(0.8)**	(1.6)	N/A
AVERAGE BALANCES (in billions):			
Loans	**$ 0.7**	$ 0.4	N/A
Assets	**47.5**	43.9	$ 38.0
Deposits	**24.3**	26.2	18.6
Equity	**(1.1)**	(0.2)	2.9

For additional footnote detail see page 28.

(14) Net interest income primarily includes Treasury results and interest spread on investment related activities.

(15) Noninterest income primarily includes the gains and losses from investment activities and other corporate transactions.

(16) Noninterest expense primarily includes corporate expenses not allocated to the lines of business.

2001 compared to 2000

Corporate reported an operating loss of $409 million for 2001, compared with an operating loss of $1,033 million in 2000. Excluding significant items of $778 million after tax, the operating loss in 2000 was $255 million.

Net interest expense increased to $664 million for 2001 from $464 million in 2000. These results were principally due to changes in the Treasury investment portfolio and an increase in unallocated equity.

Investments, which includes Treasury, fixed income and principal investment portfolios, declined $143 million after tax from 2000 due to market conditions. These results are principally reflected in investment securities gains and losses.

Unallocated corporate expenses were $332 million in 2001 versus $473 million in 2000. The $141 million reduction from 2000 was principally due to increased allocations.

2000 compared to 1999

Corporate reported an operating loss of $255 million in 2000, compared with operating income of $677 million in 1999.

Treasury results worsened in 2000, driven by declining interest rates and the level of unallocated equity and assets. This change was principally reflected in net interest expense, which was $464 million in 2000, compared to net interest income of $166 million for 1999.

Investments results declined $141 million after tax from 1999 principally due to the weakening market for initial public offerings and financial restructurings, and lower gains in the Treasury portfolio.

Noninterest expense was $473 million for 2000, compared with $198 million in 1999. Expenses for 2000 included higher legal expenses, severance-related expenses and other operational losses. Additionally, unallocated corporate expenses increased in 2000 due to the change in allocation methodology.

Significant Items

Results in 2000 included the negative impact of $2.160 billion after tax ($3.329 billion pre-tax) of significant items. The following summarizes significant items recorded in 2000 by each business segment and income statement line, excluding merger and restructuring–related charges:

Business Segments–Table 1

(In millions)	Retail	Commercial	First USA	Investment Management	Corporate	Total
Pretax expense (income)						
Writedown of auto lease residuals	$532					$ 532
Provision for credit losses		$628				628
Repositioning of investment securities portfolio					$ 415	415
Operational and other [1]	2	(18)	$ 56		220	260
Writedown of interest-only strip			354			354
Occupancy and fixed asset related	9	6	11	$(4)	315	337
Writedown of purchased credit card relationship intangibles			275			275
Writedowns primarily related to planned loan sales [2]	167					167
Increase to legal accruals					190	190
Writedown of marketing partnership agreements			121			121
Severance related	10	21	6	4	9	50
Total	$720	$637	$823	$ –	$1,149	$3,329
After tax	$456	$404	$522	$ –	$ 778	$2,160

Income Statement Line–Table 2

(In millions)	Retail	Commercial	First USA	Investment Management	Corporate	Total
Net interest income	$ 14	$ (7)			$ (6)	$ 1
Noninterest income:						
Banking fees and commissions					(1)	(1)
Credit card revenue			$152			152
Service charges on deposits		5				5
Investment securities (gains) losses		(1)			426	425
Trading		44				44
Other income	650	3	315	$ 2	11	981
Total noninterest income	650	51	467	2	436	1,606
Provision for credit losses	11	628	35			674
Noninterest expense:						
Salaries and employee benefits [1]	12	(42)	(4)	(19)	145	92
Occupancy expense	9	6	11		72	98
Other intangible amortization			275	9	36	320
Other	24	1	39	8	466	538
Total noninterest expense	45	(35)	321	(2)	719	1,048
Pretax expense	$720	$637	$823	$ –	$1,149	$3,329

(1) Includes $75 million of incentive accruals reversed in the fourth quarter relating to the full year in which existing plans were adjusted to a pay for performance basis.

(2) At December 31, 2000, Management discontinued its plan to dispose of these loans, and as such, are now considered part of the general portfolio.

During 1999, significant items totaling $880 million pretax ($597 million after-tax) were not allocated to specific business segments. These items included charges of $722 million for merger and restructuring costs, $321 million for asset impairments, valuation adjustments and other charges, and $197 million for provision for credit losses primarily associated with the implementation of the FFIEC's revised consumer credit guidelines. These charges were partially offset by gains of $111 million and $249 million, respectively, from the sale of Concord and the Indiana divestitures.

Below is a reconciliation of managed 2000 actual results with results adjusted for significant items:

2000 Significant Items – Table 3 – Managed Basis

(In millions)	2001 Actual	2000 Actual	2000 Adjustments	2000 Adjusted	1999 Actual	2001 Actual vs. 2000 Adjusted		2000 Adjusted vs. 1999 Actual	
Consolidated									
Net interest income	**$13,580**	$13,506	$ (1)	$13,507	$14,457	$ 73	1%	$ (950)	(7)%
Noninterest income	**5,843**	3,895	(1,606)	5,501	6,642[1]	342	6	(1,141)	(17)
Provision for credit losses	**5,941**	6,735	674	6,061	4,514[1]	(120)	(2)	1,547	34
Noninterest expense	**9,200**	11,447	1,048	10,399	10,936[1]	(1,199)	(12)	(537)	(5)
Operating income (loss)	**2,904**	(409)	(2,160)	1,751	3,830[1]	1,153	66	(2,079)	(54)
Merger and restructuring-related, net of tax	**(222)**	(102)	–	(102)	(351)	(120)	N/M	249	71
Net income (loss)	**2,638**[2]	(511)	(2,160)	1,649	3,479	989	60	(1,830)	(53)
Retail									
Net interest income	**5,025**	4,895	(14)	4,909	4,379	116	2	530	12
Noninterest income	**1,442**	618	(650)	1,268	1,541	174	14	(273)	(18)
Provision for credit losses	**1,010**	870	11	859	415	151	18	444	N/M
Noninterest expense	**3,477**	3,995	45	3,950	3,933	(473)	(12)	17	–
Operating income (loss)	**1,272**	414	(456)	870	1,041	402	46	(171)	(16)
Merger and restructuring-related, net of tax	**(66)**	(25)	–	(25)	–	(41)	N/M	(25)	N/M
Net income	**1,206**	389	(456)	845	1,041	361	43	(196)	(19)
Commercial Banking									
Net interest income	**2,702**	2,825	7	2,818	2,655	(116)	(4)	163	6
Noninterest income	**1,574**	1,354	(51)	1,405	1,248	169	12	157	13
Provision for credit losses	**1,070**	2,217	628	1,589	436	(519)	(33)	1,153	N/M
Noninterest expense	**2,220**	2,272	(35)	2,307	2,208	(87)	(4)	99	4
Operating income (loss)	**721**	(115)	(404)	289	906	432	N/M	(617)	(68)
Merger and restructuring-related, net of tax	**(46)**	1	–	1	–	(47)	N/M	1	N/M
Net income (loss)	**675**	(114)	(404)	290	906	385	N/M	(618)	(68)
First USA									
Net interest income	**6,090**	5,835	–	5,835	6,881	255	4	(1,046)	(15)
Noninterest income	**1,362**	746	(467)	1,213	1,632	149	12	(419)	(26)
Provision for credit losses	**3,823**	3,637	35	3,602	3,593	221	6	9	–
Noninterest expense	**2,119**	2,939	321	2,618	3,204	(499)	(19)	(586)	(18)
Operating income (loss)	**946**	3	(522)	525	1,135	421	80	(610)	(54)
Merger and restructuring-related, net of tax	**(39)**	(4)	–	(4)	–	(35)	N/M	(4)	N/M
Net income (loss)	**907**	(1)	(522)	521	1,135	386	74	(614)	(54)
Investment Management									
Net interest income	**427**	409	–	409	376	18	4	33	9
Noninterest income	**1,259**	1,161	(2)	1,163	1,179	96	8	(16)	(1)
Provision for credit losses	**38**	13	–	13	2	25	N/M	11	N/M
Noninterest expense	**1,052**	1,049	(2)	1,051	1,075	1	–	(24)	(2)
Operating income (loss)	**374**	322	–	322	317	52	16	5	2
Merger and restructuring-related, net of tax	**(12)**	–	–	–	–	(12)	N/M	–	–
Net income	**362**	322	–	322	317	40	12	5	2
Corporate									
Net interest income (expense)	**(664)**	(458)	6	(464)	166	(200)	(43)	(630)	N/M
Noninterest income	**206**	16	(436)	452	873	(246)	(54)	(421)	(48)
Provision for credit losses	**–**	(2)	–	(2)	(108)	2	N/M	106	98
Noninterest expense	**332**	1,192	719	473	198	(141)	(30)	275	N/M
Operating income (loss)	**(409)**	(1,033)	(778)	(255)	677	(154)	(60)	(932)	N/M
Merger and restructuring-related, net of tax	**(59)**	(74)	–	(74)	–	15	20	(74)	N/M
Net income (loss)	**(468)**	(1,107)	(778)	(329)	677	(139)	(42)	(1,006)	N/M

N/M–Not meaningful.

(1) Consolidated noninterest income, provision for credit losses, and noninterest expense include $(169) million, $176 million, and $319 million, respectively, of significant items that were not allocated to specific business segments. Excluding these amounts segment operating income was $4,076 million.

(2) Consolidated results for 2001 include $44 million after tax of cumulative effect of change in accounting principle not allocated to specific business segments.

CONSOLIDATED RESULTS

Net Interest Income

Net interest income includes spreads on earning assets as well as items such as loan fees, cash interest collections on problem loans, dividend income, interest reversals, and income or expense on derivatives used to manage interest rate risk.

In order to understand fundamental trends in net interest income, average earning assets and net interest margins, it is useful to analyze financial performance on a managed portfolio basis, which adds data on securitized loans to reported data on loans as presented below:

YEAR ENDED DECEMBER 31	**2001**	2000	1999
(Dollars in millions)			
Managed:			
Net interest income–FTE basis	**$ 13,580**	$ 13,506	$ 14,457
Average earning assets	**277,672**	284,035	269,237
Net interest margin	**4.89%**	4.76%	5.37%
Reported:			
Net interest income–FTE basis	**$ 8,769**	$ 8,974	$ 9,142
Average earning assets	**237,869**	241,058	223,539
Net interest margin	**3.69%**	3.72%	4.09%

2001 compared to 2000

On a managed basis, net interest income increased modestly in 2001 relative to 2000. The earnings benefit derived from falling interest rates was partially offset by lower earning assets. The decline in average earning assets was largely due to efforts to reduce commercial credit exposure, brokered home equity loan and auto lease outstandings, and also reflected lower credit card receivables. As represented by the year-over-year improvement in net interest margin, overall balance sheet profitability improved. This reflected the reduction in low margin commercial credits, more disciplined pricing in the consumer loan sector, and increases in the percentage of funding provided by core retail deposits and net free funds.

On a reported basis, net interest income was slightly below that reported in 2000, largely due to lower earning assets as mentioned above.

2000 compared to 1999

Lower average credit card outstandings, lower fee revenues and narrower spread on credit card loans were the most significant causes of the decline in both the net interest income and related margin in 2000. Lower average credit card outstandings and fee revenues reflected customer attrition and reduced new account origination, while narrower spread reflected higher funding costs in 2000. Competitive pricing pressures in Corporate Banking and Middle Market Banking and higher nonperforming loans reduced margins slightly in the commercial loan portfolio.

During 2000, net interest income declined, reflecting a lower level of loans and the cost of carrying a higher level of nonperforming assets.

On a reported basis, net interest margin was 3.72% in 2000, compared with 4.09% in 1999. The decrease in net interest margin in 2000 was related to lower credit card spreads as well as a less favorable earning asset mix.

Noninterest Income

The components of noninterest income for the periods indicated are:

(Dollars in millions)				% Change	
YEAR ENDED DECEMBER 31	**2001**	2000	1999	2001-2000	2000-1999
Banking fees and commissions	**$1,731**	$1,537	$1,502	13%	2%
Credit card revenue	**1,395**	1,104	1,363	26	(19)
Service charges on deposits	**1,449**	1,310	1,283	11	2
Fiduciary and investment management fees	**754**	783	793	(4)	(1)
Investment securities gains (losses)	**(66)**	(235)	509	72	N/M
Trading	**220**	134	147	64	(9)
Other income (loss)	**360**	(738)	685	N/M	N/M
Gain on Indiana divestitures	**–**	–	249	N/M	N/M
Gain on sale of Concord	**–**	–	111	N/M	N/M
Managed noninterest income	**$5,843**	$3,895	$6,642	50%	(41)%

N/M–Not meaningful.

In order to provide more meaningful trend analysis, credit card revenue and total noninterest income in the above table are shown on a managed basis. Credit card fee revenue excludes the net interest revenue associated with securitized credit card receivables. Components of noninterest income that are primarily related to a single business segment are discussed within that business segment rather than the consolidated section.

2001 compared to 2000

Managed banking fees and commissions increased by $194 million, or 13%, compared to 2000 levels. This increase was primarily the result of increased annuity sales and fees associated with the in-house administration of the One Group® mutual funds, which the Corporation began recording as revenue in the 2000 fourth quarter. Additionally, this increase reflects growth in retail brokerage sales.

Managed credit card revenue increased $291 million, or 26%, in 2001 when compared to 2000. This improvement was due to the third quarter addition of the Wachovia portfolio and significant items recorded in 2000 (see table 2 on page 41).

Service charges on deposits increased $139 million, or 11%, in 2001 when compared to 2000. A lower rate environment produced a shift to the payment of fees from net interest income due to the lower value ascribed to customers' compensating deposit balances.

Fiduciary and investment management fees declined by $29 million, or 4%, in 2001 compared to levels maintained in 2000. This reduction was as a result of lower investment advisory fees on equity assets because of overall market conditions.

Investment securities losses were $66 million for 2001 due to principal investment losses and lower market valuations, partially offset by the gains on sale of fixed income securities. This was an improvement from 2000 when investment securities portfolios activity produced a loss of $235 million. This loss occurred when significant items were recorded in the second quarter of 2000 (see table 2 on page 41).

Trading produced gains of $220 million, an increase of $86 million, or 64%, when compared to 2000. This improvement was due to significant items recorded in 2000 (see table 2 on page 41) and market value gains.

Other income in 2001 was $360 million compared to a $738 million loss in 2000. This improvement over last year was predominately due to significant items recorded in 2000 (see table 2 on page 41).

2000 compared to 1999

Banking fees and commissions increased 2% in 2000, compared with the 1999 levels, as higher loan syndication fees were partially offset by lower leasing fees for auto loans.

Managed credit card revenue declined 19% to $1.104 billion in 2000 as compared to 1999, reflecting a decline in managed credit card receivables as well as writedowns for certain affinity partnership agreements included in the 2000 significant items (see table 2 on page 41).

Service charges on deposit accounts, which include deficient balance fees, increased 2% reflecting growth in cash management fees, due in part to the extensive cross selling of product offerings, which was supported by enhanced product features and functionality of the core treasury management services provided to customers on a national basis.

Fiduciary and investment management fees decreased slightly in 2000 as compared to 1999, as fee growth from traditional trust products and services, investment management activities and shareholder services was offset by the absence of revenues from certain unprofitable account relationships exited in 2000.

Investment securities portfolio activities produced a loss of $235 million in 2000 as compared to $509 million of net gains in 1999, primarily as the result of the repositioning of the Corporation's investment portfolio in the 2000 second quarter (see table 2 on page 41) and lower principal valuations.

Trading results declined slightly to $134 million in 2000 compared with $147 million in 1999 as improved foreign exchange trading was offset by a decline in revenue generated from interest rate derivatives.

Other activities generated losses of $738 million in 2000, compared with $685 million of income in 1999. Net securitization amortization in 2000 totaled $116 million, compared with net gains of $61 million in 1999. Asset impairment writedowns associated with credit card interest-only strip securities were $432 million for 2000 compared to $40 million for 1999. These writedowns were driven by the narrower margin and increased attrition based on the earnings decline in the credit card business. Auto residual losses totaled $757 million for 2000, compared with $167 million for 1999. Included in these losses were charges of $552 million ($532 million significant items) and $100 million in 2000 and 1999, respectively, for asset valuation adjustments.

Noninterest Expense

The components of noninterest expense for the periods indicated are:

(Dollars in millions)				% Change	
YEAR ENDED DECEMBER 31	**2001**	2000	1999	2001-2000	2000-1999
Salaries and employee benefits:					
Salaries	**$ 3,638**	$ 3,949	$ 3,925	(8)%	1%
Employee benefits	**560**	653	603	(14)	8
Total salaries and employee benefits	**4,198**	4,602	4,528	(9)	2
Occupancy expense	**686**	872	703	(21)	24
Equipment expense	**457**	593	667	(23)	(11)
Outside service fees and processing	**1,178**	1,537	1,771	(23)	(13)
Marketing and development	**862**	900	1,235	(4)	(27)
Telecommunication	**407**	411	334	(1)	23
Other intangible amortization	**97**	410	168	(76)	N/M
Goodwill amortization	**69**	70	69	(1)	1
Other	**1,246**	2,052	1,461	(39)	40
Total noninterest expense before merger- and restructuring-related charges	**9,200**	11,447	10,936	(20)	5
Merger and restructuring-related charges	**351**	161	554	N/M	(71)
Total noninterest expense [1]	**$ 9,551**	$11,608	$11,490	(18)	1
Employees	**73,519**	80,778	87,735	(9)	(8)
Efficiency ratio–managed basis	**49.2%**	66.7%	54.5%		

N/M–Not meaningful.

(1) Certain expenses have been reclassified from salaries to other expenses in all periods.

Components of noninterest expense that are primarily related to a single business segment are discussed within that business segment rather than the consolidated section.

2001 compared to 2000

Salary and benefit costs were $4.198 billion in 2001, down 9% from $4.602 billion in 2000. This decline was attributed to expense savings from reduced headcount and cost reductions associated with the modification of the Corporation's benefit plans.

Occupancy expense declined in 2001 by $186 million, or 21%, from 2000 levels. The decrease in 2001 was the result of less occupied space.

Equipment expense in 2001 decreased $136 million compared to the previous year. Reduced furniture and equipment rental along with lower maintenance and depreciation expense was primarily the reason for the 23% decline.

Outside service fees and processing expense also declined in 2001 compared to a year ago. The majority of the 23% decline was attributed to a reduction in consulting expense and the benefits from contract renegotiations and other waste-reduction initiatives.

For 2001, marketing and development expense decreased $38 million, or 4%, compared to 2000 as continued expense reductions in the Retail line of business more than offset increased expenditures for First USA.

Other intangible amortization expense decreased by $313 million, or 76%, from a year ago, predominately due to significant items recorded in 2000 (see table 2 on page 41).

Other expense was reduced by $806 million, or 39%, when compared to the year 2000. This decrease was primarily due to significant items recorded in 2000 (see table 2 on page 41). This reduction also reflects the continuation of the Corporation's waste-reduction initiatives to lower expenses for such items as travel, entertainment and other miscellaneous items, which was partially offset by system conversion costs. The Corporation successfully converted the Texas/Louisiana deposit system during the 2001 third quarter and the Arizona/Utah deposit system in the 2001 fourth quarter and is working to complete the remaining system conversions around year-end 2002.

The Corporation recorded a $354 million pre-tax restructuring-related charge in the 2001 fourth quarter for additional real estate and severance costs to accomplish more rapid expense reductions, accelerated systems conversions and other consolidations.

2000 compared to 1999

Salary and benefit costs were $4.602 billion in 2000, up 2% from $4.528 billion in 1999. The increase was due to higher salary levels, partially offset by reduced headcount and lower incentive compensation in 2000.

Occupancy expense in 2000 was up $169 million, or 24%, from 1999 levels. This increase included $98 million of the $337 million significant item (see table 2 on page 41) related to writedowns concerning vacant space and other occupancy-related matters.

Equipment expense decreased 11% in 2000 from 1999, primarily due to reduced furniture and equipment rental and lower maintenance and depreciation expense.

Outside service fees and processing expense decreased 13% compared to 1999. A portion of the decrease in 2000 reflected consulting and implementation costs incurred to support Year 2000 readiness, as well as other development, technology and reengineering initiatives in various businesses in 1999. The 2000 decrease also included benefits from the Corporation's waste-reduction initiatives.

Marketing and development expense decreased 27% in 2000 from 1999. Credit card marketing efforts accounted for much of the fluctuations in this period.

Other intangible amortization expense included $288 million and $21 million of additional writedowns in purchased credit card relationships in 2000 and 1999, respectively. In 2000, $275 million of these writedowns is included in table 1 on page 41.

Other expense increased $591 million in 2000 compared with 1999, primarily relating to $538 million of significant items recorded in 2000 (see table 2 on page 41). These charges included $190 million increase to the legal reserve to cover increased corporate and business litigation exposure, approximately $85 million of fixed assets and software write-offs, as well as miscellaneous and operational errors.

Applicable Income Taxes

The Corporation's income (loss) before income taxes and cumulative effect of change in accounting principle, as well as applicable income tax expense (benefit) and effective tax rate for each of the past three years follows:

(Dollars in millions)	**2001**	2000	1999
Income (loss) before income taxes and the cumulative effect of change in accounting principle	**$3,800**	$(1,080)	$4,974
Applicable income taxes (benefits)	**1,118**	(569)	1,495
Effective tax rate	**29.4%**	52.7%	30.1%

Applicable income tax expense (benefit) for all three years included benefits for tax-exempt income, tax-advantaged investments and general business tax credits offset by the effect of nondeductible expenses, including goodwill. In the case of a loss before income taxes and the cumulative effect of change in accounting principle, the effect of the net tax benefits described above is to increase, rather than decrease, the effective rate of tax. This is the primary reason for the difference in effective tax rates between 2000 and the other years presented. More detail on income taxes can be found in Note 20 to the consolidated financial statements beginning on page 90.

RISK MANAGEMENT

Risk is an inherent part of the Corporation's businesses and activities. The Corporation's ability to properly and effectively identify, assess, monitor and manage risk in its business activities is critical to its soundness and profitability. The diversity of the Corporation's lines of business helps reduce the impact that volatility in any particular area has on its operating results as a whole.

The risk management process of the Corporation is dynamic and requires effective communication between lines of business and corporate-level departments, as well as judgment and knowledge of specialized products and markets. The Corporation's risk management activities consider both on- and off-balance sheet exposure. The Corporation's Senior Management takes an active role in the risk management process and has developed policies and procedures that require specific functions to assist in the identification, assessment and control of various risks. In recognition of the nature of Bank One's business activities, the Corporation's risk management policies, procedures and methodologies are subject to ongoing review and modification.

Overall risk management policies for the Corporation are established by the Corporate Risk and Capital Committee, which reviews the Corporation's performance relative to these policies. The Corporate Risk and Capital Committee has responsibility for various risk committees of the Corporation's lines of business and assists the Audit and Risk Management Committee of the Board of Directors in monitoring Bank One's policies and guidelines for risk management. The Audit and Risk Management Committee reviews risk management policies and procedures, and receives regular updates regarding the Corporation's compliance with these policies and procedures, including credit, market, liquidity, and operational risks. Individual line of business committees monitor and review their respective line of business compliance with the Corporation's risk management practices. These committees manage specific risks, sales practices, pricing, allowance adequacy, legal enforceability, and operational and systems risks.

Corporate Risk Management, Finance, Law, Compliance and Government Relations also assist Senior Management and the Corporate Risk and Capital Committee in monitoring and controlling the Corporation's risk profile. Corporate Risk Management is responsible for risk policy development and overseeing implementation, risk analysis, and risk reporting to Senior Management. The Corporate Risk and Capital Committee has responsibility for monitoring aggregate market and credit risk. The Corporation's Asset/Liability Committee ("ALCO") has direct oversight responsibility for the Corporation's liquidity position and periodically updates the Audit and Risk Management Committee. Corporate Audit periodically examines and evaluates the Corporation's operations and control environment. The Corporation remains committed to employing qualified personnel with appropriate expertise to implement effectively the Corporation's risk management and monitoring systems.

The Corporation's business activities generate liquidity, market, credit and operational risks:

- Liquidity risk is the risk that the Corporation is unable to meet all current and future financial obligations in a timely manner.
- Market risk is the risk that changes in future market rates or prices will make the Corporation's positions less valuable.
- Credit risk is the risk of loss from borrowers and counterparties' failure to perform according to the terms of a transaction.
- Operational risk, among other things, includes the risk of loss due to errors in product and service delivery, failure of internal controls over information systems and accounting records, and internal and external fraud.

LIQUIDITY RISK MANAGEMENT

Liquidity is managed to preserve stable, reliable and cost-effective sources of cash to meet all current and future financial obligations. At Bank One, strong liquidity is provided by a variety of sources including:

- A portfolio of liquid assets, comprised of federal funds sold, deposit placements and marketable securities.
- A large customer deposit base arising through the Corporation's Commercial Banking and Retail business activities.
- A diversified mix of short- and long-term funding sources from the wholesale financial markets.
- Significant borrowing capacity at the Federal Reserve Discount Window.

Bank One is an active participant in the global financial markets through which it obtains a significant amount of funding. These markets serve as a cost-effective source of funds and are a critical component of the Corporation's liquidity management. Decisions to access these markets are based upon relative costs, prospective views of balance sheet growth, and a targeted liquidity profile. A disruption in the financial markets could limit access to liquidity for the Corporation.

The Corporation's ability to maintain regular access to competitively priced wholesale funds is fostered by strong debt ratings from the major credit rating agencies. Management views the following factors as critical to retaining high credit ratings:

- Strong capital ratios and credit quality
- A stable, diverse earnings stream
- Diversity of liquidity sources
- Strong liquidity monitoring procedures

At December 31, 2001, the Corporation and its principal banks had the following long- and short-term debt ratings:

	Short-Term Debt		Senior Long-Term Debt	
	S & P	Moody's	S & P	Moody's
The Corporation (Parent)	A-1	P-1	A	Aa3
Principal Banks	A-1	P-1	A+	Aa2

Treasury is responsible for measuring and managing the liquidity profile with oversight from ALCO. A combination of daily, weekly and monthly reports provided to Senior Management detail the following:

- Internal liquidity risk metrics
- Composition and level of the liquid asset portfolio
- Timing differences in short-term cash flow obligations
- Available pricing and market access to the financial markets for capital, term-debt and securitization transactions
- Exposure to contingent draws on the Corporation's liquidity

The Corporation monitors and manages liquidity considering both on- and off-balance sheet exposures. On-balance sheet liquidity is impacted by balance sheet growth, level and mix of customer deposits, and access to wholesale funding. In the normal course of business, the Corporation enters into certain forms of off-balance sheet transactions, including credit card securitizations, unfunded loan commitments and letters of credit. These transactions are managed through the Corporation's various risk management processes. Liquidity facilities provided to Bank One administered and third party administered specialized financing entities might require funding if the Corporation's short-term rating were to fall to A-2 or P-2. Credit card securitizations would be subject to early amortization if certain performance measures of the issuing trust are not maintained. Either event would result in additional funding requirements for the Corporation.

MARKET RISK MANAGEMENT

Overview

Market risk refers to potential losses arising from changes in interest rates, foreign exchange rates, equity prices and commodity prices. The portfolio effect of diverse trading activities helps reduce market risk. Through its trading activities, the Corporation strives to take advantage of profit opportunities available in interest and exchange rate movements. In asset and liability management activities, policies are in place to closely manage structural interest rate and foreign exchange rate risk. Disclosures about the fair value of financial instruments, which reflect changes in market prices and rates, can be found in Note 23 to the consolidated financial statements beginning on page 93.

Trading Activities

The Corporation's trading activities are primarily customer-oriented. Cash instruments are bought and sold to satisfy customers' investment needs. Derivative contracts are initially entered into to meet the risk management needs of customers. The Corporation enters into subsequent transactions to manage the level of risk in accordance with approved limits. In order to accommodate customers, an inventory of capital markets instruments is carried, and access to market liquidity is maintained by making bid-offer prices to other market makers. The Corporation may also take proprietary trading positions in various capital markets cash instruments and derivatives, and these positions are designed to profit from anticipated changes in market factors.

Many trading positions are kept open for brief periods of time, often less than one day. Other positions may be held for longer periods. Trading positions are carried at estimated fair value. Realized and unrealized gains and losses on these positions are included in noninterest income as trading.

Value-At-Risk

The Corporation has developed policies and procedures to manage market risk in its trading activities through a value-at-risk measurement and control system, a stress testing process and dollar trading limits. The objective of this process is to quantify and manage market risk in order to limit single and aggregate exposures. Dollar trading limits are subject to varying levels of approval by senior line of business management, with review by Corporate Market Risk Management. Corporate Market Risk Management works with various line of business personnel in refining and monitoring market risk policies and procedures, and is the primary oversight unit for market risk arising from line of business activities creating market risk for the Corporation.

For trading portfolios, value-at-risk measures the maximum fair value the Corporation could lose on a trading position, given a specified confidence level and time horizon. Value-at-risk limits and exposures are monitored daily for each significant trading portfolio. Stress testing is similar to value-at-risk except that the confidence level is geared to capture more extreme, less frequent market events.

The Corporation's value-at-risk calculation measures potential losses in fair value using a 99% confidence level and a one-day time horizon. This equates to 2.33 standard deviations from the mean under a normal distribution. This means that, on average, daily profits and losses are expected to exceed value-at-risk one out of every 100 overnight trading days. Value-at-risk is calculated using a statistical model applicable to cash and derivative positions, including options.

Average, high and low of the value-at-risk measurements for 2001 and 2000, along with value-at-risk amounts at December 31, 2001 and December 31, 2000 are:

	2001			
(In millions)	Average	High	Low	Dec. 31
Risk type				
Interest rate	**$11**	**$15**	**$8**	**$11**
Currency exchange rate	**1**	**4**	**–**	**–**
Equity	**1**	**4**	**–**	**1**
Aggregate trading portfolio market risk				**$12**

	2000			
(In millions)	Average	High	Low	Dec. 31
Risk type				
Interest rate	$11	$15	$7	$7
Currency exchange rate	1	1	–	1
Equity	1	2	1	1
Aggregate trading portfolio market risk				$9

Interest rate risk was the predominant type of market risk incurred during 2001. At December 31, 2001, approximately 90% of primary market risk exposures were related to interest rate risk. Currency exchange rate, equity and commodity risks accounted for 3%, 6% and 1%, respectively, of primary market risk exposures.

U.S. Treasury, corporate, asset-backed, municipal, and mortgage-backed securities generated 75% of interest rate risk. Interest rate derivatives accounted for 22% of interest rate risk, while the remaining 3% was derived primarily from money market and foreign exchange trading activities.

Foreign exchange spot, forward and option trading generated 100% of the currency exchange rate risk. Of the currency exchange rate risk arising from these activities, 55% related to major currency exposures and 45% to minor currencies.

Equity derivatives trading and off-setting cash positions generated 100% of equity price risk.

At December 31, 2001, aggregate portfolio market risk exposures were 33% higher than at year-end 2000. The majority of this increase was due to increased market risk in various trading books.

Structural Interest Rate Risk Management

Interest rate risk exposure in the Corporation's core non-trading business activities, i.e., asset/liability management ("ALM") position, is a result of reprice, option, and basis risks associated with on- and off-balance sheet positions. Reprice risk represents timing mismatches in the Corporation's ability to alter contractual rates earned on financial assets or paid on liabilities in response to changes in market interest rates. Basis risk refers to the potential for changes in the underlying relationship between market rates or indices, which subsequently result in a narrowing of the spread earned on a loan or investment relative to its cost of funds. Option risk arises from "embedded options" present in many financial instruments such as interest rate options, loan prepayment options and deposit early withdrawal options. These provide customers and investors opportunities to take advantage of directional changes in rates, which could have an adverse impact on the Corporation's margin performance. Embedded options are complex risk positions that are difficult to predict and offset, and are a large component of the interest rate risk exposure to the Corporation.

The Corporation has established risk measures, limits, policy guidelines and internal control mechanisms (collectively referred to as the Interest Rate Risk Policy) for managing the overall ALM position, including both on- and off-balance sheet positions. Responsibility for the management of interest rate risk resides with Treasury with oversight by the Corporation's ALCO. Business unit management is responsible for understanding their interest rate risk, while the Corporation controls and monitors this risk centrally.

The ALM position is measured using sophisticated risk management tools, including earnings simulation modeling and economic value of equity sensitivity analysis, to capture near-term and longer-term interest rate risk exposures. Senior Management is regularly apprised of the risks associated with the ALM position, with exposures tested under multiple rate and yield curve scenarios. The Corporation balances the return potential of the ALM position against the desire to limit volatility in earnings and/or economic value.

Earnings simulation analysis, or earnings-at-risk, measures the sensitivity of pretax earnings to various interest rate movements. The base-case scenario is established using current interest rates. The comparative scenarios assume an immediate parallel shock in increments of ± 100 basis point rate movements. Numerous other scenarios are analyzed, including more gradual rising or declining rate changes and non-parallel rate shifts. Estimated earnings for each scenario are calculated over multiple years. The interest rate scenarios are used for analytical purposes and do not necessarily represent Management's view of future market movements. Rather, these are intended to provide a measure of the degree of volatility interest rate movements may introduce into the earnings and economic value of the Corporation.

The Corporation's 12-month pretax earnings sensitivity profile as of year-end 2001 and 2000 is as follows:

	Immediate Change in Rates	
(In millions)	-100 bp	+100 bp
December 31, 2001	**$174**	**$(341)**
December 31, 2000	$ 29	$ 5

The increase in earnings sensitivity during the year reflects an increase in the duration of the Corporation's earning assets, in part driven by management actions taken in anticipation of declining short-term interest rates.

Modeling the sensitivity of earnings to interest rate risk is highly dependent on numerous assumptions embedded in the model. While the earnings sensitivity analysis incorporates Management's best estimate of interest rate and balance sheet dynamics under various market rate movements, the actual behavior and resulting earnings impact will likely differ from that projected. For mortgage-related assets, the earnings simulation model captures the expected prepayment behavior under changing interest rate environments. Additionally, the model measures the impact of interest rate caps and floors on adjustable-rate loan products. Assumptions and methodologies regarding the interest rate or balance behavior of indeterminate maturity products, e.g., credit card receivables, savings, money market, NOW and demand deposits reflect Management's best estimate of expected future behavior. Sensitivity of service fee income to market interest rate levels, such as those related to cash management products, is included as well. The earnings sensitivity profile does not reflect potential differences in the timing of income recognition on transactions that were designed to have an offsetting economic effect. For example, the interest-only strip recorded in conjunction with a credit card securitization may be subsequently subject to the accounting recognition of impairment due to adverse changes in market interest and payment rates while the income or expense on offsetting asset and liability positions are recorded on an accrual basis.

In addition to the earnings sensitivity analysis described above, Management uses an economic value of equity sensitivity technique to capture the risk in both short- and long-term positions. This analysis involves calculating future cash flows over the full life of all current assets, liabilities and off-balance sheet positions under different rate scenarios. The discounted present value of all cash flows represents the Corporation's economic value of equity. The sensitivity of this value to shifts in the yield curve allows Management to measure longer-term repricing and option risk in the portfolio. Interest rate risk in trading activities and other activities, including certain overseas balance sheet positions, is managed principally as trading risk.

Foreign Exchange Risk Management

Whenever possible, foreign currency-denominated assets are funded with liability instruments denominated in the same currency. If a liability denominated in the same currency is not immediately available or desired, a forward foreign exchange or cross-currency swap contract is used to hedge the risk due to cross-currency funding.

To minimize the capital impact of translation gains or losses measured on an after-tax basis, the Corporation uses forward foreign exchange contracts to hedge the exposure created by non-U.S. dollar investments in overseas branches and subsidiaries.

CREDIT RISK MANAGEMENT

The Corporation is exposed to the risk that borrowers or counterparties may default on their obligations to the Corporation. These transactions create credit exposure that is reported both on- and off- balance sheet. On-balance sheet credit exposure includes such items as loans. Off-balance sheet credit exposure includes unfunded credit commitments and other credit-related financial instruments. Credit exposures resulting from derivative financial instruments are discussed in the "Derivative Financial Instruments" section beginning on page 61.

The Corporation's Risk and Capital Committee has developed policies to manage the level and composition of risk in its credit portfolio, and reviews the Corporation's performance relative to those policies. The objective of this credit risk management process is to quantify and manage credit risk on an aggregate portfolio basis as well as to reduce the risk of loss resulting from an individual customer default. Corporate Risk Management works with lending officers and line of business personnel involved in credit decision making and is involved in the implementation, refinement, and monitoring of the Corporation's credit policies and procedures. Credit limits are subject to varying levels of approval by senior line of business management and Corporate Risk Management.

In order to meet its credit risk management objectives, the Corporation maintains a risk profile that is diverse in terms of borrower concentrations, product-type, and industry and geographic concentrations. Additional diversification of the Corporation's exposure is accomplished through syndication of credits, participations, loan sales, securitizations, credit derivatives and other risk-reduction measures.

Consumer Credit Risk Management (Including Credit Card and Retail)

The Corporation's consumer risk management process utilizes sophisticated risk assessment tools, including credit scoring, across the life cycle of each type of loan product, including credit cards, loans secured by real estate, vehicle loans and leases, and other unsecured loans. These tools are used to target product and price offerings to best match the consumer risk profile to identify consumers whose risk profile has deteriorated for proactive risk mitigation efforts, and to initiate portfolio-wide risk management strategies to ensure that the portfolios remain within Management-defined risk tolerance levels.

Management of consumer lines of business continues to proactively manage the risk/reward relationship of each consumer loan portfolio segment such that these businesses are positioned to achieve profitability targets and required rates of return on investment.

Commercial Credit Risk Management

The Corporation's commercial risk management process utilizes enterprise policies focused on origination, portfolio management and managed asset related activities. This risk management framework establishes approval authorities and related processes, risk rating methodologies, portfolio review parameters and management of problem loans. Line of business Senior Management and Corporate Risk Management are actively engaged in these activities as well as continuously exploring methods to improve commercial risk management.

Management of the Commercial Banking line of business continues to proactively manage the risk/reward relationship of each commercial relationship and portfolio segment such that these businesses are positioned to achieve profitability targets and required rates of return.

Within the Commercial Banking portfolio, borrowers/transactions are assigned specific obligor risk ratings (on a scale from 1–20, and facility rating 1-8 based upon collateral supporting the transaction) by the originating credit officer based upon an established underwriting and approval process. Approvals are made based upon the amount of credit exposure inherent in the credit extension and are reviewed by senior line of business management and Corporate Risk Management, as appropriate. Risk ratings are reviewed periodically by senior line of business personnel and Corporate Risk Management and revised, if needed, to reflect the borrowers'/transactions' current risk profile. The lower categories of credit risk are equivalent to the four bank regulatory classifications: Special Mention, Substandard, Doubtful and Loss.

The Corporation occasionally enters into credit derivatives as one method of credit protection against the deterioration of identified credit risk on loans and loan commitments. At December 31, 2001, credit derivatives were in place to cover approximately $3.3 billion in notional commercial credit exposure. Realized and unrealized gains and lossses on credit derivatures are recorded in noninterest income as trading.

OPERATIONAL RISK MANAGEMENT

The Corporation is exposed to numerous types of operational risk. Operational risk generally refers to the risk of loss resulting from the Corporation's operations, including, but not limited to, the risk of fraud by employees or persons outside the Corporation, the execution of unauthorized transactions by employees, errors relating to transaction processing and systems, and breaches of the internal control system and compliance requirements. This risk of loss also includes the potential legal actions that could arise as a result of the operational deficiency or as a result of noncompliance with applicable regulatory standards.

The Corporation operates in many different businesses in diverse markets and places reliance on the ability of its employees and systems to process a high number of transactions. In the event of a breakdown in the internal control systems, improper operation of systems or improper employee actions, the Corporation could suffer financial loss, face regulatory action and suffer damage to its reputation. In order to address this risk, Management maintains a system of internal controls with the objective of providing proper transaction authorization and execution, safeguarding of assets from misuse or theft, and ensuring the reliability of financial and other data.

The Corporation maintains systems of controls that provide Management with timely and accurate information about the operations of Bank One. These systems have been designed to manage operational risk at appropriate levels given the Corporation's financial strength, the environment in which it operates, and considering factors such as competition and regulation. Bank One has also established procedures that are designed to ensure that policies relating to conduct, ethics and business practices are followed on a uniform basis. In certain cases, the Corporation has experienced losses from operational risk. Such losses have included the effects of operational errors that the Corporation has discovered and taken charges in the income statement. While there can be no assurance the Corporation will not suffer such losses in the future, Management continually monitors and improves its internal controls, systems and corporate-wide processes and procedures. Furthermore, Management believes the plans to streamline the organization through charter consolidations and further systems integration and policies enacted to push down reporting accountabilities further in the organization, have improved the Corporation's ability to identify and limit operational risk.

Selected Statistical Information

The significant components of credit risk and the related ratios, presented on a reported basis, for the years indicated are as follows:

DECEMBER 31,	2001	2000	1999	1998	1997
(Dollars in millions)					
Loans outstanding	**$156,733**	$174,251	$163,877	$155,398	$159,579
Average loans	**167,054**	171,768	156,855	154,952	155,926
Nonperforming loans	**3,551**	2,475	1,559	1,207	1,025
Other, including other real estate owned	**137**	98	106	90	61
Nonperforming assets	**3,688**	2,573	1,665	1,297	1,086
Allowance for credit losses	**4,528**	4,110	2,285	2,271	2,817
Net charge-offs	**2,288**	1,391	1,206[1]	1,498	1,887
Nonperforming assets to related assets	**2.35%**	1.48%	1.02%	0.83%	0.68%
Allowance for credit losses/loans outstanding	**2.89**	2.36	1.39	1.46	1.77
Allowance for credit losses/nonperforming loans	**128**	166	147	188	275
Net charge-offs/average loans	**1.37**	0.81	0.77	0.97	1.21
Allowance for credit losses/net charge-offs	**198**	295	189[1]	152	149

(1) Includes $143 million of charges required to bring the consumer portfolio into compliance with FFIEC guidelines. Excluding these incremental charge-offs, the adjusted coverage ratio would have been 215%.

Loan Composition

In 2001, the Corporation changed its loan composition methodology to a line of business approach, dividing the loan portfolio into Retail, Commercial Banking, First USA, and other lines of business. The Corporation has presented 2000 information under both the "old" and "new" compositions, but has not presented 1999, 1998 and 1997 under the "new" composition as it would be impractical to reclassify those periods using the new methodologies.

The Corporation's loan portfolio at December 31 are as follows:

	2001		2000	
(Dollars in millions)	Amount	% [1]	Amount	% [1]
Retail:				
Small business commercial	**$ 12,347**	6	$ 12,103	5
Home equity	**30,268**	14	31,361	13
Vehicles:				
Loans	**13,481**	6	14,300	6
Leases	**6,155**	3	8,840	4
Other personal	**9,779**	4	10,697	5
Total Retail	**72,030**	33	77,301	33
Commercial Banking:				
Corporate Banking:				
Commercial and industrial	**22,268**	10	N/A	
Commercial real estate	**8,975**	4	N/A	
Lease financing	**4,669**	2	N/A	
Other	**731**	–	N/A	
Total Corporate Banking	**36,643**	16	51,700	22
Middle Market:				
Commercial and industrial	**28,676**	13	N/A	
Commercial real estate	**3,472**	2	N/A	
Lease financing	**1,053**	1	N/A	
Other	**294**	–	N/A	
Total Middle Market	**33,495**	16	33,400	14
Total Commercial Banking	**70,138**	32	85,100	36
Other lines of business	**7,779**	4	7,106	3
First USA:				
On balance sheet	**6,786**	3	4,744	2
Securitized [2]	**61,369**	28	62,241	26
Managed credit card	**68,155**	31	66,985	28
Total managed	**$218,102**	100%	$236,492	100%
Total reported	**$156,733**		$174,251	

N/A–Not available.

(1) Percentages shown above for loan type are determined as a percentage of total managed loans.

(2) Includes seller's interest in credit card loans and securities sold to investors and removed from the balance sheet.

Prior to 2001, the Corporation's loan portfolio was divided into commercial, consumer and credit card loan categories as of December 31:

	2000		1999		1998		1997	
(Dollars in millions)	Amount	% [1]	Amount	% [1]	Amount	% [1]	Amount	% [1]
Commercial:								
Domestic:								
Commercial	$ 65,270	28%	$ 59,070	26%	$ 53,362	25%	$ 48,458	25%
Real estate:								
Construction	5,757	2	5,836	3	5,108	2	4,639	2
Other	16,778	7	18,817	8	17,787	8	16,545	8
Lease financing	5,818	3	5,562	2	6,236	3	4,537	2
Foreign	6,837	3	7,067	3	5,945	3	5,127	3
Total commercial	100,460	43	96,352	42	88,438	41	79,306	40
Consumer:								
Residential real estate	40,596	17	32,313	14	25,804	12	28,088	14
Automotive–loans/leases	20,741	9	23,567	11	20,634	10	17,998	9
Other	7,710	3	7,608	3	11,488	5	11,522	6
Total consumer	69,047	29	63,488	28	57,926	27	57,608	29
Credit card:								
On balance sheet	4,744	2	4,037	2	9,034	4	22,665	12
Securitized [2]	62,241	26	65,319	28	60,993	28	37,414	19
Managed credit card	66,985	28	69,356	30	70,027	32	60,079	31
Total managed	$236,492	100%	$229,196	100%	$216,391	100%	$196,993	100%
Total reported	$174,251		$163,877		$155,398		$159,579	

(1) Percentages shown above for loan type are determined as a percentage of total managed loans.

(2) Includes seller's interest in credit card loans and securities sold to investors and removed from the balance sheet.

Managed Credit Card Receivables

For analytical purposes, the Corporation reports credit card receivables on both a reported basis and a managed basis. Reported credit card receivables include those receivables held in the portfolio and reported on the balance sheet. Managed credit card receivables include reported credit card receivables and those sold to investors through securitization (see page 64 for discussion of Loan Securitizations).

The following table shows the average managed credit card receivables and the related charge-off and delinquency rates for the years ended:

DECEMBER 31,	**2001**	2000	1999
(Dollars in millions)			
Average balances:			
Credit card loans	**$ 6,884**	$ 4,754	$ 7,233
Securitized credit card receivables	**58,563**	61,424	61,747
Total average managed credit card receivables	**65,447**	66,178	68,980
Total net charge-offs (including securitizations)	**$ 3,823**	$ 3,584	$ 3,790
Net charge-offs/average total receivables [1]	**5.84%**	5.42%	5.49%
Credit card delinquency rate at period-end:			
30 or more days	**4.46%**	4.51%	4.57%
90 or more days	**1.93%**	2.02%	2.13%

(1) Ratios include $143 million of securitized charge-offs taken in the fourth quarter of 1999 related to the early adoption of certain of the FFIEC's consumer charge-off guidelines.

The increase in the managed credit card charge-off rate to 5.84% in 2001 from 5.42% in 2000 reflected the general weakness in the United States economy during 2001. Consumer credit markets generally saw increased levels of delinquency and loss through 2001. Nationally, consumers filed for bankruptcy in 2001 in much higher numbers than in any prior year. Credit management tools used to manage the level and volatility of losses for credit card accounts have been continually updated and where appropriate these tools were adjusted to reduce credit risk in 2001. Management believes the quality of new credit card accounts opened in 2001 is superior to the quality of accounts opened in preceding years. Management of risk in the existing accounts also improved in 2001.

The benefit of these actions is seen in a modest level of volatility experienced in losses on credit card accounts despite the weakness in the economy. The Corporation currently expects that credit losses will increase modestly in 2002. Future charge-offs in the credit card portfolio and credit quality are subject to uncertainties which may cause actual results to differ widely from that forecasted, including the direction and level of loan delinquencies, changes in consumer behavior, bankruptcy trends, portfolio seasoning, interest rate movements, and portfolio mix, among other things. While current economic and credit data suggests that credit quality will not significantly deteriorate, material deterioration in the general economy could materially change these expectations.

Retail

The retail loan portfolio primarily consists of loans secured by real estate as well as vehicle loans and leases, and provides broad diversification of risk from both a product and geographic perspective. Average receivable balances for 2001 were $74.7 billion. Even though average receivables were flat compared to the prior year, the Corporation continues to effectively enhance the composition of loans in the portfolio by emphasizing high quality prime credit lending reflecting the organization's desire for profitability. During 2001, the Corporation continued to de-emphasize vehicle leasing and significantly refocused its indirect real estate lending involving loans sourced through brokers. New loans originated in 2001 on average reflect higher credit quality consistent with management's focus on the prime credit market segment. The net charge-off rate for retail loans in 2001 was 1.10%, up 37 basis points from the prior year. The increase from 2000 reflected the impact of general weakness in economic conditions including higher consumer bankruptcies and higher losses on brokered home equity loans. Given the current state of the economy, Management expects consumer loan losses to rise modestly for the foreseeable future. Future retail portfolio charge-offs and credit quality are subject to uncertainties which may cause actual results to differ widely from that forecasted, including the direction and level of loan delinquencies, changes in consumer behavior, bankruptcy trends, portfolio seasoning, interest rate movements and portfolio mix among other things.

The Corporation continues to proactively manage its retail credit operation to ensure profitability even in difficult economic conditions. Ongoing efforts include continual review and enhancement of credit underwriting criteria, rationalization of the number and quality of third-party loan originators (i.e., brokers and correspondents) and refinement of pricing and risk management models.

Commercial Banking

Commercial Banking loans decreased by $15.0 billion, or 18%, between December 31, 2000 and December 31, 2001, primarily due to a planned and managed reduction of the Corporate Banking portfolio. Nonperforming Commercial Banking loans increased by $578 million, or 38%, to $2.1 billion at December 31, 2001, as compared to $1.5 billion at December 31, 2000, primarily due to continued portfolio deterioration across a number of industry segments. Commercial Banking's net charge-offs in 2001 were $1.041 billion, or 1.34% of average loans, compared with $562 million of net charge-offs, or 0.66% of average loans, in 2000. Given the current state of the economy, the Corporation expects Middle Market nonperforming loans to increase, with charge-offs rising modestly for the foreseeable future. Future charge-offs and credit quality in the Commercial Banking portfolio are subject to uncertainties that may cause actual results to differ from that forecasted, including the state of the economy and its impact on individual industries, commercial real estate values, interest rate movements and portfolio mix, among other things. While credit losses expected for the foreseeable future would be considered higher than normal, a deepening of the recession would cause higher credit losses than currently anticipated.

Commercial and Industrial Loans

Commercial and industrial loans represent commercial loans other than commercial real estate. At December 31, 2001, commercial and industrial loans totaled $50.9 billion, which represents 73% of the Commercial Banking portfolio.

The more significant borrower industry concentrations of the Commercial Banking commercial and industrial portfolio as of December 31, 2001 are:

(Dollars in millions)	Outstanding	Percent of Total Commercial and Industrial Loans
Wholesale trade	$ 4,409	8.7%
Industrial materials	3,355	6.6
Oil and gas	3,219	6.3
Consumer staples	3,008	5.9
Metals and products	2,749	5.4

Commercial Real Estate

Commercial real estate loans represent credit extended for real-estate related purposes to borrowers or counterparties who are primarily in the real estate development or investment business and for which the ultimate repayment of the loan is dependent on the sale, lease, rental or refinancing of the property.

Commercial real estate lending is conducted in several lines of business with the majority of these loans originated by Corporate Banking primarily through its specialized National Commercial Real Estate Group. This group's focus is lending to targeted regional and national real estate developers, homebuilders and REITs/REOCs. As of December 31, 2001, National Commercial Real Estate Group's loan outstandings totaled $8.8 billion or 70% of the commercial real estate portfolio.

At December 31, 2001, commercial real estate loans totaled $12.4 billion, or 18% of Commercial Banking loans. During 2001, net charge-offs in the commercial real estate portfolio segment were $14 million. Nonperforming commercial real estate assets, including other real estate owned, totaled $199 million, or 1.6% of related assets, at December 31, 2001.

The commercial real estate loan portfolio by both collateral location and property type as of December 31, 2001 are as follows:

(Dollars in millions)	Outstanding	
By Collateral Location:	Amount	% of Portfolio
Illinois	$ 1,682	14%
Michigan	1,348	11
Texas	1,004	8
California	960	8
Arizona	958	8
Ohio	839	7
Indiana	504	4
Louisiana	487	4
Colorado	356	3
Kentucky	326	3
Other areas	1,806	13
Unsecured	1,670	13
Secured by other than real estate	507	4
Total	$12,447	100%
By Property Type:		
Retail	$ 1,913	15%
Office	1,804	15
Apartment	1,770	14
REIT/diversified	1,297	10
Single family residential development	1,273	10
Industrial/warehouse	1,230	10
Hotels	625	5
Residential lots	472	4
Miscellaneous commercial income producing	1,864	15
Miscellaneous residential developments	199	2
Total	$12,447	100%

ASSET QUALITY

In 2001, the Corporation changed its loan composition methodology to a line of business approach, dividing the loan portfolio into Retail, Commercial Banking, First USA, and other lines of business. The Corporation has presented 2000 information under both the "old" and "new" compositions, but has not presented 1999, 1998 and 1997 under the "new" composition as it would be impractical to reclassify those periods using the new methodologies.

Nonperforming Assets

The Corporation places loans on nonaccrual status as follows:

- Retail consumer loans are placed on nonaccrual status when the collection of contractual principal or interest becomes 90 days past due. Accrued but uncollected interest and fee income are reversed and charged against interest income when the consumer loan is placed on nonaccrual status. Subsequent cash collections are recognized as interest income unless the consumer loan is subsequently charged-off, in which case cash collections are recognized as recoveries.
- Commercial Banking and Retail small business commercial loans are placed on nonaccrual status when the collection of contractual principal or interest is deemed doubtful, or it becomes 90 days or more past due and is both not well-secured and in the process of collection. Accrued but uncollected interest and fee income are reversed and charged against interest income when placed on nonaccrual status. Cash interest payments received are recognized either as interest income or as a reduction of principal when collection of principal is doubtful. The loan is returned to accrual status only when all of the principal and interest amounts contractually due are reasonably assured within a reasonable time frame and when the borrower has demonstrated payment performance.
- Credit card receivables are charged-off rather than placed on nonaccrual status.

The Corporation's nonperforming loans by line of business and total nonperforming assets for the periods indicated are as follows:

DECEMBER 31,	**2001**	2000
(Dollars in millions)		
Nonperforming Loans:		
Retail	**$1,370**	$ 912
Commercial Banking:		
Corporate Banking	**1,154**	1,065
Middle Market Banking	**947**	458
Other lines of business	**80**	40
Total [1]	**3,551**	2,475
Other, primarily other real estate owned	**137**	98
Total nonperforming assets	**$3,688**	$2,573
Nonperforming assets/related assets	**2.35%**	1.48%
Loans 90-days or more past due and accruing interest:		
Credit Card	**$ 96**	$ 57
Other	**1**	5
Total	**$ 97**	$ 62

(1) The amount of interest on nonperforming loans that was contractually due in 2001 totaled $202 million. Of this amount, $34 million was actually recorded in 2001.

Prior to 2001, the Corporation's nonperforming assets as of December 31 are:

(Dollars in millions)	2000	1999	1998	1997
Nonperforming Loans:				
Commercial	$1,761	$1,053	$ 729	$ 609
Consumer	714	506	478	416
Total	2,475	1,559	1,207	1,025
Other, primarily other real estate owned	98	106	90	61
Total nonperforming assets	$2,573	$1,665	$1,297	$1,086
Nonperforming assets/related assets	1.48%	1.02%	0.83%	0.68%
Loans 90 days or more past due and accruing interest:				
Credit Card	$ 57	$ 76	$ 161	$ 438
Other	5	50	78	140
Total	$ 62	$ 126	$ 239	$ 578

The Corporation has experienced credit quality deterioration in a number of distinct Commercial Banking market segments. The Corporation has established processes for identifying potential problem areas of the portfolio, which currently include exposure to leveraged lending and acquisition finance activities, healthcare, automotive parts and manufacturing, business finance and leasing, professional services, miscellaneous transportation services, telecommunications and selected utilities. The Corporation will continue to monitor and manage these potential risks.

Nonperforming loans within Retail, which includes all consumer balances more than 90-days past due, increased by $458 million in 2001 to $1.4 billion reflecting deterioration in credit performance consistent with general economic conditions. These increases primarily reflect loans secured by residential real estate

where the Corporation maintains a loss recognition policy including the writing down of assets to net realizable value at 120-days past due. Retail nonperforming assets are likely to continue to increase modestly for the foreseeable future and will be influenced in part by the future direction of economic conditions including residential real estate valuation trends.

Charge-off Policies

The Corporation records charge-offs as follows:

- Commercial loans are charged-off in the reporting period in which either an event occurs that confirms the existence of a loss or it is determined that a loan or a portion of a loan is uncollectible.
- A credit card loan is charged-off in the month it becomes contractually 180 days past due and remains unpaid at the end of that month or in the event of bankruptcy notification, specifically, 60 days after receipt of notification. Interest on credit card loans is accrued until the loan is charged-off. At the time of charge-off, accrued but uncollected finance charges and fee income are reversed and charged against interest income and credit card revenue, respectively. Subsequent cash collections are recorded as recoveries.
- Retail loans are generally charged-off following a delinquency period of 120 days, or within 60 days after receipt of notification in case of bankruptcy. Closed-end consumer loans, such as auto loans and leases and home mortgage loans, are typically written down to the extent of loss after considering the net realizable value of the collateral.

The timing and amount of the charge-off on consumer loans will depend on the type of loan, giving consideration to available collateral, as well as the circumstances giving rise to the delinquency. The Corporation adheres to uniform guidelines published by the FFIEC in charging off consumer loans.

The following table shows the Corporation's net charge-offs by line of business for the years ended December 31:

	2001			2000		
(Dollars in millions)	**Net charge-offs**	**Average balance**	**Net charge-off rate**	Net charge-offs	Average balance	Net charge-off rate
Retail [1]	**$ 821**	**$ 74,749**	**1.10%**	$ 542	$ 74,632	0.73%
Commercial banking:						
Corporate Banking	**638**	**43,495**	**1.47**	435	53,343	0.81
Middle Market Banking	**403**	**34,310**	**1.17**	127	32,178	0.40
First USA	**3,823**	**65,447**	**5.84**	3,584	66,178	5.42
Other lines of business	**34**	**7,616**		40	6,861	
Total–Managed [1]	**5,719**	**$225,617**	**2.53%**	4,728	$233,192	2.03%
Securitized	**(3,431)**			(3,337)		
Total–Reported	**$2,288**	**$167,054**	**1.37%**	$ 1,391	$171,768	0.81%

(1) 2001 amounts exclude $92 million of charge-offs relating to part of a portfolio that has been accounted for as loans held at a discount, but viewed for management purposes as charge-offs.

Prior to 2001, net charge-offs by portfolio for the years ended December 31 are:

	2000			1999		
(Dollars in millions)	Net charge-offs	Average balance	Net charge-off rate	Net charge-offs	Average balance	Net charge-off rate
Commercial	$ 597	$100,202	0.60%	$ 306	$ 90,182	0.34%
Consumer [1]	547	66,812	0.82	558	59,440	0.94
Credit card [1]	3,584	66,178	5.42	3,790	68,980	5.49
Total–Managed [1]	4,728	$233,192	2.03%	4,654	$218,602	2.13%
Securitized	(3,337)			(3,448)		
Total–Reported	$ 1,391	$171,768	0.81%	$1,206	$156,855	0.77%

(1) Includes $143 million of consumer charge-offs and $183 million of securitized charge-offs taken in the fourth quarter of 1999 related to the early adoption of certain of the FFIEC's new consumer charge-off guidelines.

Charge-offs

Managed net charge-offs increased 21% during 2001 to $5.719 billion, reflecting higher charge-offs in all lines of business. The managed net charge-off rate increased to 2.53% in 2001 versus 2.03% in 2000.

Retail net charge-offs for 2001 totaled $821 million, up from $542 million in 2000. Increases in credit losses across all consumer portfolios including small business were recorded. Several factors contributing to these increased losses include: increased consumer bankruptcies; increased severity per default involving auto loans and leases tied to weaker market prices for repossessed vehicles; and overall weakening of consumer economic fundamentals associated with an economy in recession.

Loan Sales

A summary of the Corporation's Corporate Banking loan sales in 2001 follows:

(In millions)	Loans Sold	Charge-offs	Loss on Sales
Nonperforming loans	$ 582	$124	$ –
Other credit related loans sold	487	92	1
Other loans sold	1,148	–	43
Total	$2,217	$216	$44

The Corporation sells Corporate Banking loans in the normal course of its business activities. These loans are subject to the Corporation's overall risk management practices and are one alternative the Corporation uses to manage credit risk. Decisions to sell particular loans are made after taking into account various alternatives to manage credit exposure. Sales transactions are initiated when Management determines its sales intent. When a loan is sold, the gain or loss is evaluated to determine whether it resulted from credit deterioration or other conditions. Based upon this evaluation, the losses on other loans sold in 2001 were deemed to be caused by other than credit deterioration. The sale of nonperforming and other credit related loans were primarily recorded as charge-offs as the losses on sale were attributable to credit deterioration.

Allowance for Credit Losses

The allowance for credit losses is maintained at a level that in Management's judgment is adequate to provide for estimated probable credit losses inherent in various on- and off-balance sheet financial instruments. This process includes deriving probable loss estimates that are based on historical loss ratios and portfolio stress testing and Management's judgment. The allowance is based on ranges of estimates and is intended to be adequate but not excessive. Each quarter, an allowance level is formally estimated by each line of business and reviewed by Corporate Risk and Senior Management. The allowance for credit losses also includes provisions for losses on loans considered impaired and measured pursuant to Statement of Financial Accounting Standards ("SFAS") No. 114, "Accounting by Creditors for Impairment of a Loan" (see Note 8 to the consolidated financial statements on page 80). Securitized and loans held for sale, including credit card receivables, are not subject to this process.

Corporate Risk Management recommends an allowance and provision for credit losses that result in adequate coverage of inherent losses within the Corporation's credit portfolios. Corporate Risk Management's assessment is based on line of business tests, portfolio-level econometric modeling and stress testing, as well as Management's judgment. Corporate Risk Management also utilizes third-party analysis to validate internal measures of inherent loss, credit quality and allowance adequacy.

The change in the Corporation's allowance for credit losses for the years ended December 31 are as follows:

(In millions)	**2001**	2000
Balance, beginning of period	**$4,110**	$2,285
Charge-offs:		
Retail:		
Small business commercial	**93**	66
Home equity	**402**	196
Vehicles:		
Loans	**220**	201
Leases	**127**	91
Other personal	**151**	149
Total Retail	**993**	703
Commercial Banking:		
Corporate Banking:		
Commercial and industrial	**689**	N/A
Commercial real estate	**15**	N/A
Lease financing	**16**	N/A
Total Corporate Banking	**720**	469
Middle Market:		
Commercial and industrial	**417**	N/A
Commercial real estate	**8**	N/A
Lease financing	**36**	N/A
Total Middle Market	**461**	157
Total Commercial Banking	**1,181**	626
First USA	**415**	261
Other lines of business	**41**	77
Total charge-offs	**$2,630**	$1,667
Recoveries:		
Retail:		
Small business commercial	**$ 22**	$ 22
Home equity	**27**	15
Vehicles:		
Loans	**66**	63
Leases	**28**	21
Other personal	**29**	40
Total Retail	**172**	161
Commercial Banking:		
Corporate Banking:		
Commercial and industrial	**74**	N/A
Commercial real estate	**8**	N/A
Lease financing	**–**	N/A
Total Corporate Banking	**82**	36
Middle Market:		
Commercial and industrial	**49**	N/A
Commercial real estate	**1**	N/A
Lease financing	**8**	N/A
Total Middle Market	**58**	28
Total Commercial Banking	**140**	64
First USA	**23**	14
Other lines of business	**7**	37
Total recoveries	**342**	276
Net charge-offs:		
Retail	**821**	542
Commercial Banking	**1,041**	562
First USA	**392**	247
Other lines of business	**34**	40
Total net charge-off	**2,288**	1,391
Provision for credit losses	**2,510**	3,398
Transfers [1]	**196**	(182)
Balance, end of year	**$4,528**	$4,110

N/A–Not available.

(1) Transfers to the allowance for credit losses as of December 31, 2001 primarily represent the addition of the Wachovia credit card portfolio. All periods reflect transfers of allocable credit allowances associated with loan sale transactions, including securitization transactions.

For analytical purposes, summarized below are the changes in the allowance for credit loss for the years ended December 31:

(In millions)	2000	1999	1998	1997
Balance, beginning of year	$2,285	$2,271	$2,817	$2,687
Charge-offs:				
Commercial:				
Domestic:				
Commercial	618	325	222	200
Real estate:				
Construction	8	5	3	3
Other	11	27	25	19
Lease financing	7	12	20	12
Foreign	64	41	52	–
Total commercial	708	410	322	234
Consumer:				
Residential real estate	230	189	74	52
Automotive:				
Loans	215	256	220	260
Leases	91	87	61	51
Other	162	203	246	256
Total consumer	698	735	601	619
Credit card	261	386	1,022	1,544
Total charge-offs	1,667	1,531	1,945	2,397
Recoveries:				
Commercial:				
Domestic:				
Commercial	98	70	68	97
Real estate:				
Construction	1	6	3	6
Other	4	25	23	29
Lease financing	1	2	5	3
Foreign	7	1	1	12
Total commercial	111	104	100	147
Consumer:				
Residential real estate	17	12	11	14
Automotive:				
Loans	69	82	92	105
Leases	21	23	21	17
Other	44	60	64	63
Total consumer	151	177	188	199
Credit card	14	44	159	164
Total recoveries	276	325	447	510
Net charge-offs:				
Commercial	597	306	222	87
Consumer	547	558	413	420
Credit Card	247	342	863	1,380
Total net charge-off	1,391	1,206	1,498	1,887
Provision for credit losses	3,398	1,249	1,408	1,988
Transfers	(182)	(29)	(456)	29
Balance, end of year	$4,110	$2,285	$2,271	$2,817

Transfers from the allowance for credit losses primarily represent allocable credit allowances associated with consumer loan sale transactions, including securitization transactions.

Composition of Allowance for Credit Losses

While the allowance for credit losses is available to absorb credit losses in the entire portfolio, presented below is an allocation of the allowance for credit losses by line of business as of December 31:

	2001		2000	
(Dollars in millions)	**Amount**	**%**	Amount	%
Retail	**$1,040**	**23%**	$ 846	20%
Commercial Banking				
Corporate Banking	**1,714**	**38**	1,699	41
Middle Market	**1,352**	**30**	1,345	33
First USA	**396**	**8**	197	5
Other lines of business	**26**	**1**	23	1
Total	**$4,528**	**100%**	$4,110	100%

For analytical purposes, an allocation of the allowance for credit losses by loan type as of December 31 follows:

	2000		1999		1998		1997	
(Dollars in millions)	Amount	%	Amount	%	Amount	%	Amount	%
Commercial [1]	$3,199	78%	$ 972	43%	$ 834	37%	$ 660	23%
Consumer	714	17	486	21	440	19	484	17
Credit Card	197	5	148	6	199	9	813	29
Unallocated	–	–	679	30	798	35	860	31
Total	$4,110	100%	$2,285	100%	$2,271	100%	$2,817	100%

(1) Includes allowance related to Business and Community Banking loans, which are included in the Retail business segment results.

At December 31, 2001, the allowance for credit losses was 198% of current year net charge-offs (on a reported basis) as compared to a reserve coverage ratio of 295% at December 31, 2000. This decrease reflects deterioration in certain components of the Commercial Banking and brokered home equity portfolios. The allowance for credit losses at December 31, 2001, represented 2.89% of period-end loans and 128% of nonperforming loans, compared to 2.36% and 166%, respectively, at December 31, 2000. The allowance for credit losses established for specifically identified off-balance sheet lending exposures was not material at December 31, 2001.

Reserve Determination

The Corporation determines allowance levels based upon the probable loss in the credit portfolios. The allowance is based on ranges of estimates and is intended to be adequate but not excessive. The estimation process includes deriving probable loss estimates that are based on historical loss rates, portfolio stress testing of probable loss estimates and Management's judgment.

During 2000, the Corporation reviewed its practice of maintaining unallocated reserves in light of continuing refinement in loss estimation processes, including improvements in portfolio level stress testing techniques. It was concluded that the use of unallocated reserves would be discontinued. These reserves were aligned with their respective portfolios.

Probable Loss Estimation

The Corporation employs several methodologies for estimating probable losses. Methodologies are determined based on a number of factors, including type of asset (e.g., consumer installment versus commercial loan), risk measurement parameters (e.g., delinquency status and bureau score versus commercial risk rating), and risk management and collection processes (e.g., retail collection center versus centrally managed workout units).

For the Retail and Credit Card portfolios, the allowance is based on a statistical analysis of inherent losses over discrete periods of time. The analysis reviews historical losses, vintage performance, delinquencies and other risk characteristics of the various products to estimate probable losses. Other risk characteristics evaluated may include: recent loss experience in the portfolios, changes in origination sources, portfolio seasoning and underlying credit practices, including charge-off policies. These factors and analysis are updated on a quarterly basis.

For the Commercial Banking portfolio, the Corporation conducts a two-part test. First, significant credits that have a risk rating equivalent to the bank regulatory classifications of Substandard, Doubtful and Loss are formally reviewed periodically and at least quarterly and asset-specific reserves are established as appropriate. Second, inherent losses for the remaining Commercial Banking portfolio are estimated by assigning an expected loss factor to each risk category of the portfolio based on a statistical analysis of historical loss experience over a discrete period of time. During the second quarter of 2001, the Corporation refined its measurement process for estimating probable losses inherent in the Commercial Banking portfolio. To refine the process, the Corporation analyzed historical credit loss, risk-rating migration and loss given default data and assigned probability of default and loss given default factors to each exposure in the portfolio.

Portfolio Stress-Testing

Stress testing is performed on all significant portfolios to simulate the effect of economic deterioration on credit performance. Stress testing the portfolios provides Management with a range of loss estimates that incorporates the Corporation's historical loss experience and the reserve impact of events that have occurred, or might possibly occur, but that have not been reflected in either the historical expected loss factors or the currently assigned risk ratings.

Stress testing of the commercial portfolio is accomplished using a framework developed to test expected default factors and loss given default estimates and to test the effect of downgrades to exposures in identified high-risk industries. This process includes, establishing a base case scenario using three alternative market probability sets and an estimated loss given default probability to measure the impact on reserves; determining the effect of applying a higher loss given default probability to the base case to take into consideration the variability of historical loss rates over the business cycle; and estimating trend-based reserves in high-risk industries that may not be fully reflected in the historically based loss factors, using market-based tools and information as well as sanctioned macroeconomic forecasts.

Stress testing the consumer portfolios, including credit card, is accomplished by applying the results of econometric modeling to each of the portfolio segments. The purpose of this analysis is to quantify the impact of economic deterioration on existing weaknesses in the portfolios, whose effects are not yet incorporated into the historically based reserve rates. The stress test models employ a regression methodology that incorporates the latest national trends for each consumer credit product segment. Economic variables used include consumer debt, unemployment rates, consumer debt burdens, consumer confidence, bankruptcies, and interest rates, among other statistics. Additionally, a series of portfolio specific stress tests are performed to simulate individual economic events. These include such events as declining residential real estate prices, weakening used car prices, rising interest rates, spikes in personal bankruptcies, and economic recession scenarios. The results of the stress testing are used by Management to support the adequacy of the allowance established.

DERIVATIVE FINANCIAL INSTRUMENTS

The Corporation uses a variety of derivative financial instruments in its trading, asset and liability management, as well as to manage certain currency translation exposures of foreign operations. These instruments include interest rate, currency, equity and commodity swaps, forwards, spot, futures, options, caps, floors, forward rate agreements, and other conditional or exchange contracts, and include both exchange-traded and over-the-counter contracts.

Accounting for Derivative Financial Instruments

Effective January 1, 2001, the Corporation adopted SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities" ("SFAS No. 133"), as amended. The new standard significantly changed the accounting treatment for interest rate and foreign exchange derivatives the Corporation uses in its derivative activity accounted for as a hedge. The new accounting treatment for derivatives is described below.

Trading Derivative Instruments

Derivative financial instruments used in trading activities are carried at fair value. Such instruments include swaps, forwards, spot, futures, options, caps, floors and forward rate agreements and other conditional or exchange contracts in the interest rate, foreign exchange, equity and commodity markets. The estimated fair

values are based on quoted market prices or pricing and valuation models on a present value basis using current market information. Realized and unrealized gains and losses, including any interest income or expense, are recorded in noninterest income as trading. Where appropriate, compensation for credit risk and ongoing servicing is deferred and recorded as income over the life of the derivative financial instruments.

Purchased option, cap and floor contracts are reported in derivative product assets, and written option, cap and floor contracts are reported in derivative product liabilities. For other derivative financial instruments, unrealized gains are reported in derivative product assets, and unrealized losses are reported in derivative product liabilities. However, fair value amounts recognized for derivative financial instruments executed with the same counterparty under a legally enforceable master netting arrangement are reported on a net basis. Cash flows from derivative financial instruments are reported net as operating activities.

Credit derivatives are accounted for as derivative instruments under SFAS No. 133. As a result, the change in fair value of credit derivative instruments is included in trading results in the Corporation's financial statements while any credit assessment change in the identified commercial credit exposure is reflected as a change in the allocated credit reserves.

Hedging Derivative Instruments

Derivative financial instruments used in hedging activities are designated as fair value hedges, cash flow hedges, or hedges of net investments in foreign operations, and are required to meet specific criteria. The instruments used in fair value hedges and cash flow hedges are principally interest rate swaps. Such interest rate swaps are linked to and adjust effectively the interest rate sensitivity of specific assets and liabilities. Interest rate swaps not designated and qualified as a hedge are treated as trading derivative instruments.

Fair Value Hedges (primarily hedges of fixed rate interest-bearing instruments)–The change in fair value of both the hedging derivative and hedged item is recorded in current earnings. If a hedge is dedesignated prior to maturity, previous adjustments to the carrying value of the hedged item are recognized in earnings to match the earnings recognition pattern of the hedged item (e.g., level yield amortization if hedging an interest-bearing instrument).

Cash Flow Hedges (primarily hedges of variable rate interest-bearing instruments)–The effective portion of the change in fair value of the hedging derivative is recorded in Accumulated Other Adjustments to Stockholders' Equity ("AOASE") and the ineffective portion directly in earnings. Amounts in AOASE are reclassified into earnings in a manner consistent with the earnings pattern of the underlying hedged item (generally, reflected in interest expense). The total amount of such reclassification into earnings is projected to be charges of $105 million after tax ($163 million pre-tax) over the next twelve months. The maximum length of time exposure to the variability of future cash flows for forecasted transactions hedged is 12 months. If a hedge is dedesignated prior to maturity, previous adjustments to AOASE are recognized in earnings to match the earnings recognition pattern of the hedged item (e.g., level yield amortization if hedging an interest-bearing instrument). The effect on earnings from the discontinuance of cash flow hedges due to the determination that a forecasted transaction is no longer likely to occur was immaterial.

Interest income or expense on most hedging derivatives used to manage interest rate exposure is recorded on an accrual basis, as an adjustment to the yield of the linked exposures over the periods covered by the contracts. This matches the income recognition treatment of that exposure, generally assets or liabilities carried at historical cost, with interest recorded on an accrual basis. If all or part of a linked position is terminated, e.g., a linked asset is sold or prepaid, or if the amount of an anticipated transaction is likely to be less than originally expected, then the related pro rata portion of any unrecognized gain or loss on the derivative is recognized in earnings at that time, and the related pro rata portion of the derivative is subsequently accounted for as a trading instrument.

Hedges of non-U.S Dollar Net Investment in Foreign Operations–In order to minimize the capital impact of translation gains or losses measured on an after-tax basis, the Corporation uses forward foreign exchange contracts to hedge the exposure relating to non-U.S. dollar net investments in foreign operations. The effective portion of the change in fair value of the hedging derivatives is recorded in AOASE as part of the cumulative translation adjustment. The amount of after-tax gains included in the cumulative translation adjustment during the year ended December 31, 2001, related to hedges of the foreign currency exposures of net investments in foreign operations, totaled $6 million.

Income Resulting from Derivative Financial Instruments

The Corporation uses interest rate derivative financial instruments to reduce structural interest rate risk and the volatility of net interest margin. Net interest margin reflects the effective use of these derivatives. Without their use, net interest income would have been lower by $68 million in 2001, $52 million in 2000, and $181 million in 1999.

The amount of hedge ineffectiveness recognized for cash flow and fair value hedges in the year ended December 31, 2001 was insignificant. No component of a hedging derivative instrument's gain or loss is excluded from the assessment of hedge effectiveness.

Credit Exposure Resulting from Derivative Financial Instruments

The credit risk associated with exchange-traded derivative financial instruments is limited to the relevant clearinghouse. Options written do not expose the Corporation to credit risk, except to the extent of the underlying risk in a financial instrument that the Corporation may be obligated to acquire under certain written put options. Caps and floors written do not expose the Corporation to credit risk.

Credit exposure from derivative financial instruments arises from the risk of a counterparty default on the derivative contract. The amount of loss created by the default is the replacement cost or current positive fair value of the defaulted contract. The Corporation utilizes master netting agreements whenever possible to reduce its credit exposure from counterparty defaults. These agreements allow the netting of contracts with unrealized losses against contracts with unrealized gains to the same counterparty, in the event of a counterparty default.

The impact of these master netting agreements for the year ended December 31 follows:

(In millions)	**2001**	2000
Gross replacement cost	**$12,262**	$ 9,769
Less: Adjustment due to master netting agreements	**(9,037)**	(7,222)
Current credit exposure	**3,225**	2,547
Unrecognized net gains due to nontrading activity [1]	**–**	(225)
Balance sheet credit exposure	**$ 3,225**	$ 2,322

(1) At December 31, 2001, exposure amount is zero due to the January 1, 2001 adoption of SFAS No. 133.

Asset and Liability Management Derivatives

Access to the derivatives market is an important element in maintaining the Corporation's desired interest rate risk position. In general, the assets and liabilities generated through ordinary business activities do not naturally create offsetting positions with respect to repricing, basis or maturity characteristics. Using derivative instruments, principally plain vanilla interest rate swaps (ALM swaps), interest rate sensitivity is adjusted to maintain the desired interest rate risk profile.

At December 31, 2001, the notional value of ALM interest rate swaps linked to specific assets or liabilities totaled $12.5 billion as follows:

	Receive Fixed Pay Floating	Pay Fixed Receive Floating		
(In millions)	Fair Value Hedge	Fair Value Hedge	Cash Flow Hedge	Total Swaps
Interest rate swaps associated with:				
Investment securities	$ –	$50	$ –	$ 50
Funds borrowed (including long-term debt)	7,939	–	4,522	12,461
Total	$7,939	$50	$4,522	$12,511

Interest rate swaps used to adjust the interest rate sensitivity of securities and funds borrowed will not need to be replaced at maturity, since the corresponding asset or liability will mature along with the swap. Interest rate swaps designated as an interest rate related hedge of an existing fixed rate asset or liability are fair value type hedges. Conversely, interest rate swaps designated as an interest rate hedge of an existing variable rate asset or liability are cash flow type hedges. Management designates interest rate swaps as hedges of both fixed and variable rate assets and liabilities interchangeably. The type of hedge for accounting purposes is not a strategic consideration. The Corporation has an insignificant amount of hedges involving forecasted transactions and no nonderivative instruments are designated as a hedge.

Asset and Liability Management Swaps–Maturities and Rates

The notional amounts, maturity, and weighted-average pay and receive rates for the ALM swap position at December 31, 2001 are summarized as follows:

(Dollars in millions)	2002	2003	2004	2005	2006	Thereafter	Total
Receive fixed/pay floating swaps:							
Notional amount	$1,664	$25	$–	$2,000	$ –	$4,250	$ 7,939
Weighted average:							
Receive rate	4.31%	7.61%	–%	7.12%	–%	6.51%	6.21%
Pay rate	2.20	2.35	–	2.26	–	2.38	2.31
Pay fixed/receive floating swaps:							
Notional amount	$2,787	$1,250	$–	$ 250	$235	$50	$ 4,572
Weighted average:							
Receive rate	2.22%	2.13%	–%	2.35%	2.30%	2.46%	2.21%
Pay rate	6.90	7.18	–	7.67	6.74	7.70	7.02
Total notional amount	$4,451	$1,275	$–	$2,250	$235	$4,300	$12,511

Variable interest rates–which generally are the one-month, three-month and six-month London interbank offered rates ("LIBOR") in effect on the date of repricing–are assumed to remain constant. However, interest rates will change and consequently will affect the related weighted-average information presented.

LOAN SECURITIZATIONS AND OFF-BALANCE SHEET ACTIVITIES

Loan Securitizations

The Corporation transforms loans into securities, which are sold to investors–a process referred to as securitization. The Corporation primarily securitizes credit card receivables but also securitizes home equity loans and consumer assets to a limited extent. In a credit card securitization, a designated pool of credit card receivables is removed from the balance sheet and transferred to a third-party special purpose entity ("SPE" or "Trust"), that in turn sells securities to investors entitling them to receive specified cash flows during the life of the security. The proceeds from the issuance are then distributed by the SPE to the Corporation as consideration for the loans transferred. Following a securitization, the Corporation receives: fees for servicing the receivables and any excess finance charges, yield-related fees, and interchange revenue on the receivables over and above the interest paid to the investors, net credit losses and servicing fees (termed "the excess spread").

The Corporation's continuing involvement in the securitized assets includes the process of managing and servicing the transferred receivables, as well as maintaining an undivided, pro rata interest in all credit card receivables that have been securitized, referred to as seller's interest, which is generally equal to the pool of assets included in the securitization less the investor's portion of those assets. The Corporation's seller's interest ranks pari-passu with the investors' interests in the Trusts. As the amount of the loans in the securitized pool fluctuates due to customer payments, purchases, cash advances, and credit losses, the carrying amount of the seller's interest will vary. However, the seller's interest is required to be maintained at a minimum level to ensure receivables are available for allocation to the investor interest. This minimum level is generally between 4% and 7% of the SPE's principal receivables.

Investors in the beneficial interests of the securitized loans have no recourse against the Corporation if cash flows generated from the securitized loans are inadequate to service the obligations of the SPE. To help ensure that adequate funds are available in the event of a shortfall, the Corporation is required to deposit funds into cash spread accounts if excess spread falls below certain minimum levels. Spread accounts are funded from excess spread that would normally be returned to the Corporation. In addition, various forms of other credit enhancements are provided to protect more senior investor interests from loss. Credit enhancements associated with credit card securitizations, such as cash collateral or spread accounts, totaled $165 million and $311 million at December 31, 2001 and 2000, respectively, and are classified on the balance sheet as other assets.

The following comprised the Corporation's managed credit card loans at December 31:

(In millions)	**2001**	2000
Owned credit card loans – held in portfolio	**$ 5,040**	$ 2,835
Owned credit card loans – held for future securitization	**1,746**	1,909
Seller's interest in credit card loans (investment securities)	**24,019**	22,446
Total credit card loans reflected on balance sheet	**30,805**	27,190
Securities sold to investors and removed from balance sheet	**37,350**	39,795
Managed credit card loans	**$68,155**	$66,985

For analytical purposes only, income statement line items are adjusted for the net impact of securitization of credit card receivables for the years ended December 31:

	2001			2000			1999		
(Dollars in millions)	**Reported**	**Credit Card Securi-tizations**	**Managed**	Reported	Credit Card Securi-tizations	Managed	Reported	Credit Card Securi-tizations	Managed
Net interest income–FTE basis	**$ 8,769**	**$ 4,811**	**$ 13,580**	$ 8,974	$ 4,532	$ 13,506	$ 9,142	$ 5,315	$ 14,457
Provision for credit losses	**2,510**	**3,431**	**5,941**	3,398	3,337	6,735	1,249	3,265	4,514
Noninterest income	**7,223**	**(1,380)**	**5,843**	5,090	(1,195)	3,895	8,692	(2,050)	6,642
Noninterest expense	**9,551**	**–**	**9,551**	11,608	–	11,608	11,490	–	11,490
Net income (loss)	**2,638**	**–**	**2,638**	(511)	–	(511)	3,479	–	3,479
Total average loans	**167,054**	**58,563**	**225,617**	171,768	61,424	233,192	156,855	61,747	218,602
Total average earning assets	**237,869**	**39,803**	**277,672**	241,058	42,977	284,035	223,539	45,698	269,237
Total average assets	**267,581**	**39,803**	**307,384**	271,984	42,977	314,961	256,491	45,698	302,189
Net interest margin	**3.69%**	**12.09%**	**4.89%**	3.72%	10.55%	4.76%	4.09%	11.63%	5.37%
Credit Card delinquency ratios:									
30+ days	**3.00**	**4.84**	**4.46**	2.74	4.64	4.51	4.06	4.60	4.57
90+ days	**1.41**	**2.08**	**1.93**	1.20	2.08	2.02	1.87	2.15	2.13
Net credit card charge-off ratio	**5.69**	**5.86**	**5.84**	5.20	5.43	5.42	4.73	5.58	5.49

Other Off-Balance Sheet Activities

In the normal course of business, the Corporation is a party to a number of activities that contain credit, market and operational risk that are not reflected in whole or in part in the Corporation's consolidated financial statements. Such activities include: traditional off-balance sheet credit-related financial instruments; commitments under capital and operating leases and long term debt; credit enhancement associated with asset-backed securities business; and joint venture activities.

The Corporation provides customers with off-balance sheet credit support through loan commitments, standby letters of credit and guarantees, as well as commercial letters of credit. Summarized credit-related financial instruments, including both commitments to extend credit and letters of credit, at December 31, 2001 are as follows:

		Amount of Commitment Expiration Per Period			
(In billions)	Total	Less Than 1 Year	1 - 3 Years	3 - 5 Years	Over 5 Years
Unused credit card lines	$299.3	$299.3	$ –	$ –	$ –
Unused loan commitments	148.2	109.0	23.7	14.7	0.8
Standby letters of credit and foreign office guarantees	19.4	10.1	6.0	2.7	0.6
Commercial letters of credit	0.6	0.6	–	–	–

Since many of the unused commitments are expected to expire unused or be only partially used, the total amount of unused commitments in the preceding table does not necessarily represent future cash requirements.

In addition to owned banking facilities, the Corporation has entered into a number of long-term leasing arrangements to support the ongoing activities of the Corporation. The required payments under such commitments and long-term debt at December 31, 2001 are as follows:

(In millions)	2002	2003	2004	2005	2006	2007 and After	Total
Operating leases	$ 264	$ 249	$ 214	$ 169	$ 152	$ 890	$ 1,938
Trust preferred capital securities	–	–	–	–	–	3,315	3,315
Long-term debt, including capital leases	8,512	7,910	5,575	3,932	6,935	7,239	40,103
Total	$8,776	$8,159	$5,789	$4,101	$7,087	$11,444	$45,356

The Corporation is an active participant in the asset-backed securities business where it helps meet customers' financing needs by providing access to commercial paper markets in conjunction with specialized financing entities. Customers benefit from such structured financing transactions as such transactions provide an ongoing source of asset liquidity and a potentially favorable financing alternative.

The Corporation, in its role as administrator of these independently rated specialized financing entities, structures financing transactions for customers such that the receivables financed through the specialized financing entities are appropriately diversified and credit enhanced to support the issuance of asset-backed commercial paper. The Corporation does not service these assets and does not transfer its own receivables into these specialized financing entities. Credit enhancement facilities, in the form of either loan or asset purchase commitments, support each transaction in the specialized financing entities. At December 31, 2001, credit enhancement facilities for these entities approximated $52.1 billion, of which the Corporation provided $38.3 billion. At December 31, 2000, credit enhancement facilities for these entities approximated $42.0 billion, of which the Corporation provided $29.7 billion. Assets in the trust are principally trade receivables, auto loans and leases, credit card and a variety of other receivables.

In addition to customer financing transactions, these specialized financing entities fund, through the issuance of asset-backed commercial paper, other selected portfolios of marketable investment securities that are not reflected on the Corporation's balance sheet. Such transactions are structured in a similar fashion to the customer transactions. Off-balance sheet liquidity lines provided by the Corporation associated with these transactions were $4.0 billion at December 31, 2001 and $3.0 billion at December 31, 2000.

The Corporation also provides credit enhancement facilities to other than Bank One administered specialized financing entities. These credit enhancements approximated $2.1 billion and $1.5 billion at December 31, 2001 and 2000, respectively.

The Corporation provides program-wide credit enhancement, in the form of subordinated debt, for certain specialized financing entities it administers. The Corporation provided $1.1 billion in subordinated debt at December 31, 2001 and $845 million at December 31, 2000. In addition, the Corporation provides to customers transaction specific credit enhancement in the form of subordinated interests and off-balance sheet purchase commitments. At December 31, 2001 and 2000, the Corporation provided credit enhancements through subordinated interest positions of $59 million and $72 million, respectively, and off-balance sheet purchase commitments totaling $297 million and $123 million, respectively.

The risk associated with the credit enhancement provided in these transactions is managed as part of the Corporation's risk management practices.

The Corporation is a participant in several operating joint venture initiatives where the Corporation has a majority equity interest in the entity; however, based on the terms of the joint venture arrangement, the ventures are jointly controlled and managed. As a result, such investments are currently accounted for under the equity method of accounting rather than being consolidated on a line-by-line basis in the Corporation's financial statements. In 2002, Management has exerted additional influence over two of these joint ventures. As a result, the Corporation consolidated these two joint ventures beginning in the first quarter of 2002. Total assets of these two joint ventures are $1.2 billion as of December 31, 2001 and this consolidation will have no net impact to the Corporation's consolidated net income. The Corporation's investment in the remaining joint ventures totaled $302 million at December 31, 2001.

CAPITAL MANAGEMENT

Economic Capital

An important aspect of risk management and performance measurement is the ability to evaluate the risk and return of a business unit, product or customer consistently across all lines of business. The Corporation's economic capital framework facilitates this standard measure of risk and return. Business units are assigned capital consistent with the underlying risks of their product set, customer base and delivery channels.

The following principles are inherent in the capital allocation methodology employed:

- An equal amount of capital is assigned for each measured unit of risk.
- Risk is defined in terms of "unexpected" losses over the life of the exposure, measured at a confidence interval consistent with that level of capitalization necessary to achieve a targeted AA debt rating. Unexpected losses are in excess of those normally incurred and for which reserves are maintained.
- Business units are assessed a uniform charge against allotted capital, representing a target hurdle rate on equity investments. Returns on capital in excess of the hurdle rate contribute to increases in shareholder value.

Four forms of risk are measured–credit, market, operational and lease residual. Credit risk capital is determined through an analysis of both historical loss experience and market expectations. Market risk capital is set consistent with value-at-risk limits established by the Corporation's risk oversight committees. Operational risk capital incorporates event and technology risks. The operational risk evaluation process involves an examination of various risk factors that contribute to a greater likelihood of loss due to such things as fraud or processing error. Finally, lease residual risk capital covers the potential for losses arising from the disposition of assets returned at the end of lease contracts. This price risk is analyzed based upon historical loss experiences and market factors, as well as by reviewing event-specific scenarios.

The economic capital process provides a valuable analytical tool that is critical to the understanding of business segment performance trends. The methodologies employed are subject to ongoing development and review. Over time, the Corporation's view of individual risks and associated capital will likely change given improvements in the Corporation's ability to quantify risks inherent in various business activities.

Selected Capital Ratios

The Corporation aims to maintain regulatory capital ratios, including those of the principal banking subsidiaries, in excess of the well-capitalized guidelines under federal banking regulations. The Corporation maintains a well-capitalized regulatory position.

The tangible common equity to tangible managed assets ratio is also monitored. This ratio adds securitized credit card loans to reported total assets and is calculated net of total intangible assets.

The Corporation's capital ratios follow:

DECEMBER 31,	2001	2000	1999	1998	1997	Well-Capitalized Regulatory Guidelines
Regulatory leverage	**8.2%**	7.3%	7.7%	8.0%	7.8%	3.0%
Risk-based capital ratios						
Tier 1	**8.6**	7.3	7.7	7.9	8.2	6.0
Total	**12.2**	10.8	10.7	11.3	12.3	10.0
Common equity/managed assets	**6.6**	6.0	6.3	6.7	6.7	–
Tangible common equity/tangible managed assets	**5.9**	5.5	5.7	5.8	6.2	–
Double leverage ratio	**103**	108	112	108	107	–
Dividend payout ratio	**38**	N/M	57	58	61	–

N/M–Not meaningful.

The components of the Corporation's regulatory risk-based capital and risk-weighted assets are as follows at December 31:

(In millions)	2001	2000	1999	1998	1997
Regulatory risk-based capital:					
Tier 1 capital	**$ 21,749**	$ 19,824	$ 20,247	$ 19,495	$ 17,958
Tier 2 capital	**9,091**	9,316	7,967	8,295	9,000
Total capital	**$ 30,840**	$ 29,140	$ 28,214	$ 27,790	$ 26,958
Total risk-weighted assets	**$253,330**	$270,182	$263,169	$244,473	$219,557

In deriving Tier 1 and total capital, goodwill and other nonqualifying intangible assets are deducted as indicated for the period ended December 31:

(In millions)	2001	2000	1999	1998	1997
Goodwill	**$1,560**	$ 858	$ 934	$1,075	$1,120
Other nonqualifying intangibles	**207**	375	669	637	109
Subtotal	**1,767**	1,233	1,603	1,712	1,229
Qualifying intangibles	**414**	214	583	984	473
Total intangibles	**$2,181**	$1,447	$2,186	$2,696	$1,702

In November 2001, the U.S. banking regulators revised the risk based capital rules for the treatment of recourse arrangements, direct credit substitutes, asset and mortgage backed securities, and residual interests in securitization structures. Additionally, in January 2002, the U.S. banking regulators announced changes in the risk based capital rules, related to the treatment of certain equity investments made in nonfinancial companies. Both of the new rules become effective during 2002, and the risk capital ratios presented above do not reflect these changes. It is anticipated that the revised rules will not have a material impact on the Corporation's risk based capital ratios.

Dividend Policy

The Corporation's common stock dividend policy reflects its earnings outlook, desired payout ratios, the need to maintain an adequate capital level and alternative investment opportunities. The common stock dividend payout ratio is currently targeted in the range of 25% - 30% of earnings over time. Common stock dividends declared for 2001 were $0.84 per share compared with $1.26 per share for 2000. This reflects a 50% reduction of the quarterly dividend rate from 42 cents per share to 21 cents per share in the third quarter of 2000. On January 15, 2002, the Corporation declared its quarterly common cash dividend of 21 cents per share, payable on April 1, 2002.

On January 18, 2000, the Corporation announced the discontinuation of the biannual 10% stock dividend.

Double Leverage

Double leverage is the extent to which the Corporation's resources are used to finance investments in subsidiaries. Double leverage was 103% at December 31, 2001 and 108% at December 31, 2000. Trust Preferred Capital Securities of $3.315 billion in 2001 and $2.483 billion in 2000 were included in capital for purposes of this calculation.

Stock Repurchase Program and Other Capital Activities

On November 1, 2001, the Corporation redeemed all outstanding preferred stock with cumulative and adjustable dividends, Series B and C, totaling $190 million. The redemption price for both of the Series B and C preferred stock was $100.00 per share, plus accrued and unpaid dividends totaling $1.00 per share and $1.083 per share, respectively.

On September 17, 2001, the Corporation's Board of Directors approved the repurchase of up to $500 million of the Corporation's common stock. This buyback is part of the remaining 28.4 million share buyback program authorized in May 1999. The timing of the purchases and the exact number of shares to be repurchased will depend on market conditions. The share repurchase program does not include specific price targets or timetables and may be suspended at any time. In 2001, the Corporation purchased 2.6 million shares of common stock at an average price of $29.62 per share, leaving 25.8 million shares available for repurchase under the buyback program.

During 2001, the Corporation added to its Tier 1 capital through the sponsorship of two trusts that issued $825 million in aggregate principal amount of trust preferred securities. During 2000, the Corporation added to its Tier 1 capital through the sponsorship of three trusts that issued $915 million in aggregate principal amount of trust preferred securities. These preferred securities are tax-advantaged issues that qualify for Tier 1 capital treatment. See Note 13 to the consolidated financial statements on page 85 for more detail.

During 2001 and 2000, the Corporation strengthened its capital position through the issuance of $750 million and $1 billion of subordinated debt, respectively.

On December 1, 2000, the Corporation converted all outstanding 12 3/4% First Commerce Convertible Debenture Bonds, Series A and B. The conversion rate was 18.9473. All of the debentures were converted to shares of the Corporation's common stock.

FORWARD-LOOKING STATEMENTS

This discussion of financial results contains forward-looking statements about the Corporation, including descriptions of plans or objectives of its management for future operations, products or services, and forecasts of its revenues, earnings or other measures of economic performance. Forward-looking statements can be identified by the fact that they do not relate strictly to historical or current facts. They often include the words "believe," "expect," "anticipate," "intend," "plan," "estimate" or words of similar meaning, or future or conditional verbs such as "will," "would," "should," "could" or "may."

Forward-looking statements, by their nature, are subject to risks and uncertainties. A number of factors—many of which are beyond the Corporation's control—could cause actual conditions, events or results to differ significantly from those described in the forward-looking statements. Some of these factors include certain credit, market, operational, liquidity and interest rate risks associated with the Corporation's business and operations. Other factors described in the Corporation's Form 10-K include changes in business and economic conditions, competition, fiscal and monetary policies and legislation.

Forward-looking statements speak only as of the date they are made. The Corporation does not undertake to update forward-looking statements to reflect circumstances or events that occur after the date the forward-looking statements are made or to reflect the occurrence of unanticipated events, such as further market deterioration that adversely affects credit quality, auto lease residuals and credit card asset values.

CONSOLIDATED BALANCE SHEETS

BANK ONE CORPORATION and Subsidiaries

FOR THE YEAR ENDED DECEMBER 31,	2001	2000
(Dollars in millions)		
Assets		
Cash and due from banks	**$ 17,383**	$ 17,291
Interest-bearing due from banks	**1,030**	5,210
Federal funds sold and securities under resale agreements	**9,347**	4,737
Trading assets	**6,167**	2,788
Derivative product assets	**3,225**	2,322
Investment securities	**60,883**	50,561
Loans	**156,733**	174,251
Allowance for credit losses	**(4,528)**	(4,110)
Loans, net	**152,205**	170,141
Premises and equipment, net	**2,534**	2,894
Customers' acceptance liability	**257**	402
Other assets	**15,923**	12,954
Total assets	**$268,954**	$269,300
Liabilities		
Deposits:		
Demand	**$ 32,179**	$ 30,738
Savings	**80,599**	63,414
Time:		
Under $100,000	**20,106**	25,302
$100,000 and over	**18,071**	22,656
Foreign offices	**16,575**	24,967
Total deposits	**167,530**	167,077
Federal funds purchased and securities sold under repurchase agreements	**13,728**	12,120
Other short-term borrowings	**10,255**	18,003
Long-term debt	**40,103**	38,428
Guaranteed preferred beneficial interest in the Corporation's junior subordinated debt	**3,315**	2,483
Acceptances outstanding	**257**	402
Derivative product liabilities	**2,574**	2,212
Other liabilities	**10,966**	9,940
Total liabilities	**248,728**	250,665
Stockholders' Equity		
Preferred stock	**–**	190
Common stock ($0.01 par value; authorized 4,000,000,000 in 2001 and 2,500,000,000 in 2000; issued 1,181,382,304 in 2001 and 1,181,385,876 in 2000)	**12**	12
Surplus	**10,311**	10,487
Retained earnings	**10,707**	9,060
Accumulated other adjustments to stockholders' equity	**(65)**	(5)
Deferred compensation	**(121)**	(121)
Treasury stock, at cost (14,415,873 shares in 2001 and 21,557,073 shares in 2000)	**(618)**	(988)
Total stockholders' equity	**20,226**	18,635
Total liabilities and stockholders' equity	**$268,954**	$269,300

The accompanying notes are an integral part of this statement.

CONSOLIDATED INCOME STATEMENTS

BANK ONE CORPORATION and Subsidiaries

FOR THE YEAR ENDED DECEMBER 31,	**2001**	2000	1999
(In millions, except per share data)			
Net Interest Income:			
Interest income	**$17,304**	$20,078	$17,294
Interest expense	**8,666**	11,242	8,273
Total net interest income	**8,638**	8,836	9,021
Noninterest Income:			
Banking fees and commissions	**1,731**	1,537	1,502
Credit card revenue	**2,775**	2,299	3,413
Service charges on deposits	**1,449**	1,310	1,283
Fiduciary and investment management fees	**754**	783	793
Investment securities gains (losses)	**(66)**	(235)	509
Trading	**220**	134	147
Other income (losses)	**360**	(738)	1,045
Total noninterest income	**7,223**	5,090	8,692
Total revenue, net of interest expense	**15,861**	13,926	17,713
Provision for credit losses	**2,510**	3,398	1,249
Noninterest Expense:			
Salaries and employee benefits	**4,198**	4,602	4,528
Occupancy expense	**686**	872	703
Equipment expense	**457**	593	667
Outside service fees and processing	**1,178**	1,537	1,771
Marketing and development	**862**	900	1,235
Telecommunication	**407**	411	334
Other intangible amortization	**97**	410	168
Goodwill amortization	**69**	70	69
Other	**1,246**	2,052	1,461
Total noninterest expense before merger and restructuring-related charges	**9,200**	11,447	10,936
Merger and restructuring-related charges	**351**	161	554
Total noninterest expense	**9,551**	11,608	11,490
Income (loss) before income taxes and cumulative effect of change in accounting principle	**3,800**	(1,080)	4,974
Applicable income taxes (benefit)	**1,118**	(569)	1,495
Income (loss) before cumulative effect of change in accounting principle	**2,682**	(511)	3,479
Cumulative effect of change in accounting principle, net of taxes of $25	**(44)**	–	–
Net income (loss)	**$ 2,638**	$ (511)	$ 3,479
Net income (loss) attributable to common stockholders' equity	**$ 2,628**	$ (523)	$ 3,467
Earnings (loss) per share before cumulative effect of change in accounting principle:			
Basic	**$ 2.28**	$ (0.45)	$ 2.97
Diluted	**$ 2.28**	$ (0.45)	$ 2.95
Earnings (loss) per share:			
Basic	**$ 2.25**	$ (0.45)	$ 2.97
Diluted	**$ 2.24**	$ (0.45)	$ 2.95

The accompanying notes are an integral part of this statement.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

BANK ONE CORPORATION and Subsidiaries

(In millions)	Preferred Stock	Common Stock	Surplus	Retained Earnings	Accumulated Other Adjustments to Stockholders' Equity	Deferred Compensation	Treasury Stock	Total Stockholders' Equity
Balance–December 31, 1998	$ 190	$ 12	$10,769	$ 9,528	$ 239	$ (94)	$ (84)	$20,560
Net income				3,479				3,479
Change in fair value, investment securities–available for sale, net of taxes					(489)			(489)
Translation loss, net of hedge results and taxes					(13)			(13)
Net income and changes in accumulated other adjustments to stockholders' equity								2,977
Cash dividends declared:								
Common stock				(1,958)				(1,958)
Preferred stock				(12)				(12)
Issuance of stock			(14)				175	161
Purchase of common stock							(1,677)	(1,677)
Awards granted, net of forfeitures and amortization						(24)		(24)
Other			44				19	63
Balance–December 31, 1999	190	12	10,799	11,037	(263)	(118)	(1,567)	20,090
Net loss				(511)				(511)
Change in fair value, investment securities–available for sale, net of taxes					256			256
Translation gain, net of hedge results and taxes					2			2
Net loss and changes in accumulated other adjustments to stockholders' equity								(253)
Cash dividends declared:								
Common stock				(1,454)				(1,454)
Preferred stock				(12)				(12)
Issuance of stock			(302)				615	313
Purchase of common stock							(17)	(17)
Awards granted, net of forfeitures and amortization						(34)		(34)
Other			(10)			31	(19)	2
Balance–December 31, 2000	190	12	10,487	9,060	(5)	(121)	(988)	18,635
Net income				2,638				2,638
Change in fair value, investment securities–available for sale, net of taxes					93			93
Change in fair value of cash-flow type hedge derivative instruments, net of taxes					(146)			(146)
Translation loss, net of hedge results and taxes					(7)			(7)
Net income and changes in accumulated other adjustments to stockholders' equity								2,578
Cash dividends declared:								
Common stock				(981)				(981)
Preferred stock				(10)				(10)
Issuance of stock			(179)				448	269
Redemption of stock	(190)							(190)
Purchase of common stock							(78)	(78)
Other			3					3
Balance–December 31, 2001	$ –	$ 12	$10,311	$10,707	$ (65)	$ (121)	$ (618)	$20,226

The accompanying notes are an integral part of this statement.

CONSOLIDATED STATEMENTS OF CASH FLOWS

BANK ONE CORPORATION and Subsidiaries

FOR THE YEAR ENDED DECEMBER 31, *(In millions)*	**2001**	2000	1999
Cash Flows from Operating Activities:			
Net income (loss)	**$ 2,638**	$ (511)	$ 3,479
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	**571**	934	697
Cumulative effect of accounting change	**69**	–	–
Provision for credit losses	**2,510**	3,398	1,249
Investment securities (gains) losses	**66**	236	(509)
Net decrease in net derivative product assets	**(198)**	(71)	(233)
Net (increase) decrease in trading assets	**(3,456)**	11,691	(292)
Net (increase) decrease in other assets	**213**	(655)	245
Net increase (decrease) in other liabilities	**375**	1,502	(830)
Gain on sale of banks and branch offices	**–**	–	(348)
Merger and restructuring-related charges	**351**	161	276
Other operating adjustments	**(764)**	139	(100)
Net cash provided by operating activities	**2,375**	16,824	3,634
Cash Flows from Investing Activities:			
Net (increase) decrease in federal funds sold and securities under resale agreements	**(4,610)**	5,045	80
Securities available for sale:			
Purchases	**(56,088)**	(72,098)	(56,564)
Maturities	**23,579**	17,882	16,150
Sales	**23,393**	48,960	38,361
Credit card receivables securitized	**3,845**	–	7,279
Net decrease (increase) in loans	**13,425**	(14,903)	(21,377)
Purchase of Wachovia credit card business	**(5,776)**	–	–
Loan recoveries	**342**	276	325
Net cash and cash equivalents due to mergers, acquisitions and dispositions	**–**	–	(1,669)
Additions to premises and equipment	**(169)**	(533)	(593)
Proceeds from sales of premises and equipment	**55**	**–**	**–**
All other investing activities, net	**383**	(1,194)	41
Net cash used in investing activities	**(1,621)**	(16,565)	(17,967)
Cash Flows from Financing Activities:			
Net increase in deposits	**373**	4,681	3,907
Net increase (decrease) in federal funds purchased and securities under repurchase agreements	**1,607**	(6,599)	(4,444)
Net increase (decrease) in other short-term borrowings	**(7,757)**	(3,208)	4,274
Proceeds from issuance of long-term debt	**12,466**	13,914	28,736
Repayment of long-term debt	**(11,341)**	(9,237)	(16,245)
Cash dividends paid	**(991)**	(1,222)	(2,420)
Proceeds from issuance of trust preferred capital securities	**825**	915	575
Proceeds from issuance of common and treasury stock	**191**	152	61
Redemption of preferred stock	**(190)**	–	–
Purchase of common stock for treasury	**(78)**	(3)	(1,647)
All other financing activities, net	**19**	(19)	(238)
Net cash provided by (used in) financing activities	**(4,876)**	(626)	12,559
Effect of exchange rate changes on cash and cash equivalents	**34**	147	(25)
Net Decrease in Cash and Cash Equivalents	**(4,088)**	(220)	(1,799)
Cash and Cash Equivalents at Beginning of Year	**22,501**	22,721	24,520
Cash and Cash Equivalents at End of Year	**$ 18,413**	$ 22,501	$ 22,721
Other Cash Flow Disclosures:			
Interest paid	**$ 9,221**	$ 10,777	$ 8,082
Income taxes paid	**506**	371	701

The accompanying notes are an integral part of this statement.

Note 1–Summary of Significant Accounting Policies

BANK ONE CORPORATION and subsidiaries ("Bank One" or the "Corporation") is a financial holding company that offers a full range of financial services to commercial and business customers and consumers. The consolidated financial statements have been prepared in conformity with generally accepted accounting principles, and certain prior-year financial statement information has been reclassified to conform to the current year's presentation. The preparation of the consolidated financial statements require Management to make estimates and assumptions that affect the amounts reported and disclosures of contingent assets and liabilities. Actual results could differ from those estimates.

(a) Principles of Consolidation

The Corporation's consolidated financial statements include all accounts of BANK ONE CORPORATION (the "Parent Company") and all significant majority-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated. Results of operations of acquired entities are included from the acquisition date, and assets and liabilities are stated at their estimated fair values at the acquisition date.

(b) Resale and Repurchase Agreements

Securities purchased under resale agreements and securities sold under repurchase agreements are treated as collateralized financing transactions and carried at the amount at which the securities will be subsequently resold or repurchased, plus accrued interest. Where appropriate, resale and repurchase agreements with the same counterparty are reported on a net basis.

(c) Trading Activities

Trading assets and liabilities are carried at fair value. Trading profits include realized and unrealized gains and losses from both cash and derivative financial instruments used in trading activities. Trading activities involve instruments with interest rate, exchange rate, equity price, credit and commodity price market risk.

(d) Investment Securities

Debt and equity investment securities designated as available-for-sale are carried at fair value, with unrealized gains and losses, net of taxes, included in accumulated other adjustments to stockholders' equity. The estimated fair value of a security is determined based on market quotations when available or, if not available, by using a discounted cash flow approach. Realized gains and losses, including other than temporary impairments, are included in noninterest income as investment securities gains (losses). The specific identification method is used to calculate realized gains or losses.

Effective April 1, 2001, the Corporation adopted Emerging Issues Task Force (EITF) Issue No. 99-20, "Recognition of Interest Income and Impairment on Purchased and Retained Beneficial Interests in Securitized Financial Assets" ("EITF No. 99-20"). Under EITF No. 99-20, impairment on certain securitized financial assets must be recognized when the asset's fair value is below its carrying value and there has been an adverse change in estimated cash flows. Prior to EITF No. 99-20, the Corporation judged declines as other than temporary based on the underlying facts and circumstances surrounding the investment, such as the length of time the market value had been below cost or based on the creditworthiness of the issuer. Under EITF No. 99-20, the Corporation recognizes interest income based on the amount of the excess of estimated cash flows over the recorded investment in the securitized financial asset. Changes in estimated cash flows are recognized on a prospective basis. The effect of adopting EITF No. 99-20 was a one-time, non-cash charge to earnings of $44 million after-tax ($69 million pre-tax) or $0.04 per diluted share. This charge has been presented as a cumulative effect of a change in accounting principle in the consolidated income statement.

Principal investments are carried at fair value, with unrealized and realized gains and losses included in noninterest income as investment securities gains (losses). The fair value of a publicly traded principal investment is determined using quoted market prices when the investment is unrestricted; otherwise fair value is estimated using quoted market prices adjusted for market liquidity and sale restrictions. The fair value for principal investments that are not publicly traded is estimated based on the investees' financial results, conditions and prospects, values of comparable public companies, market liquidity and sales restrictions.

(e) Loans, including lease finance receivables

Loans are carried at the principal amount outstanding, net of unearned income and amounts charged off. Unearned income, which includes deferred loan origination fees reduced by loan origination costs, for loans, excluding credit cards, is amortized to interest income over the life of the related loan using the straight-line method that approximates the effective interest rate method. Fees received for providing loan commitments and letters of credit that result in loans are typically deferred and amortized to interest income over the life of the related loan, beginning with the initial borrowing. Fees on commitments and letters of credit that are not expected to be funded are amortized to noninterest income as banking fees and commissions over the commitment period. Other credit-related fees, including syndication management fees, are recorded to noninterest income as banking fees and commissions when received or over time to match the earnings process.

The carrying amount of credit card loans also includes unpaid interest and fees. Loan origination fees and costs on credit card loans are typically deferred and amortized over one year using a straight-line method to noninterest income as credit card revenue.

The Corporation typically provides lease financing to its customers through direct financing leases. Leveraged leases, which represent direct financing leases involving nonrecourse debt, also are provided to customers. Unearned income on a direct financing lease is amortized to income over the lease term so as to yield a constant rate of return on the net investment in the lease. Periodic recognition of lease income on leveraged leases is based on an analysis of cash flows using the original investment less deferred taxes arising from the difference between the pretax financial accounting income and taxable income. Residual values for leased automobiles are reviewed at least annually with periodic reviews performed as warranted by the underlying circumstances. Valuations are based upon various assumptions and estimates including the probability of the automobile being returned to the Corporation, estimated costs incurred to reduce the number of returned automobiles from the customer, estimated collectable fees for mileage and other wear and tear, reconditioning costs, and estimated used car sales prices. Declines in estimated residual value that are other than temporary are recognized in the period such determination is made in other noninterest income.

(f) Loan Sales

When a commercial loan is sold, the loan's carrying value is compared to the net sales proceeds. Any shortfall in value that is presumed to be credit related is recorded as a charge-off reducing the allowance for credit losses. Any shortfall in value not presumed to be credit related is recorded as a charge to other noninterest income.

With consumer loan portfolio sales, the allocable portion of the allowance for credit losses adjusts the carrying value of the loan portfolio and is treated as a transfer out of the allowance for credit losses. The difference between the portfolio's carrying value adjusted for the allocable credit reserves and the net sales proceeds is recorded as a component of other noninterest income.

(g) Nonperforming Loans

A loan is considered nonperforming when placed on nonaccrual status, or when renegotiated at terms that represent an economic concession to the borrower because of a decline in the borrower's financial condition. For a more detailed discussion, see the "Nonperforming Assets" section beginning on page 56. The Corporation's charge-off policies are presented on page 57.

(h) Allowance for Credit Losses

Management maintains the allowance for credit losses at a level it believes is adequate to provide for estimated probable credit losses inherent in on- and off-balance sheet credit exposure. For a more detailed discussion, see the "Allowance for Credit Losses" section beginning on page 58.

(i) Premises and Equipment

Premises and equipment are carried at cost less accumulated depreciation and amortization. Depreciation and amortization is computed using the straight-line method over the estimated useful life of the owned asset and, for leasehold improvements, over the lesser of the remaining term of the leased facility or the estimated economic life of the improvement. For owned and capitalized assets, estimated useful lives range from three to 30 years. Maintenance and repairs are charged to expense as incurred, while major improvements are capitalized and amortized to operating expense over their identified useful life.

(j) Other Real Estate Owned ("OREO")

OREO includes real estate assets that have been received in satisfaction of debt. OREO is initially recorded and subsequently carried at the lower of cost or fair value less estimated selling costs. Any valuation adjustments required at the date of transfer are charged to the allowance for credit losses. Subsequently, unrealized losses and realized gains and losses on sale are included in other noninterest income. Operating results from OREO are recorded in other noninterest expense.

(k) Intangible Assets

Intangible assets include goodwill resulting from acquisitions and identifiable intangible assets, such as customer lists, core deposits and credit card relationships. Goodwill is equal to an acquired company's acquisition cost less the value of net tangible and intangible assets.

Intangible assets are reported in other assets and are amortized into other noninterest expense on an accelerated or straight-line basis over the period the Corporation expects to benefit from such assets. Goodwill is amortized over estimated periods ranging from five to 40 years. Intangible assets are periodically reviewed for other than temporary impairment with any such declines in value included in other noninterest expense.

(l) Income Taxes

Deferred tax assets and liabilities are determined based on temporary differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that are in effect. The effect on deferred tax assets and liabilities of a change in rates is recognized as income or expense in the period that includes the enactment date.

(m) Cash Flow Reporting

Cash and cash equivalents consist of cash and due from banks, whether interest-bearing or not. Net reporting of cash transactions has been used when the balance sheet items consist predominantly of maturities of three months or less, or where otherwise permitted. Other items are reported on a gross basis.

(n) Stock-Based Compensation

The Corporation accounts for stock awards pursuant to the methods prescribed in Accounting Principles Board ("APB") Opinion No. 25, "Accounting for Stock Issued to Employees." As stock options are granted at fair value, there are no charges to earnings associated with stock options granted. Compensation expense related to restricted stock awards is recorded as earned over the restriction period.

(o) New and Pending Accounting Pronouncements

The Corporation adopted in 2001 the following new accounting pronouncements and will adopt in 2002 the following pending accounting pronouncements. In general, the effect of those adopted in 2001 were not significant to the Corporation's consolidated financial statements. Upon adoption of SFAS No. 142. "Goodwill and Other Intangible Assets" ("SFAS No. 142"), the Corporation does not currently anticipate significant goodwill impairment based upon the current analysis of facts and circumstances.

Accounting for Transfers and Servicing of Financial Assets and Liabilities

Effective April 1, 2001, the Corporation adopted SFAS No. 140, "Accounting for Transfers and Servicing of Financial Assets and Liabilities" ("SFAS No. 140"). On July 23, 2001, the Financial Accounting Standards Board ("FASB") issued a Technical Bulletin that delayed the effective date of certain provisions of SFAS No. 140 relating to isolation in bankruptcy for banks subject to FDIC receivership and for certain other financial institutions. For these entities, the isolation provisions are effective for transfers of financial assets occurring after December 31, 2001, except for transfers involving revolving credits such as credit card securitizations. An additional transition period was granted for securitizations involving revolving credits that ends three months after the earliest date at which sufficient approvals can be obtained to permit the necessary changes to existing master trusts to meet the isolation provisions, but in no event extend later than June 30, 2006. The Corporation is analyzing the effect of SFAS No. 140 on its current securitization structures. The new standard also provides revised guidance for an entity to be considered a qualifying special purpose entity and requires additional disclosures concerning securitization activities and collateral.

Accounting for Derivative Instruments and Hedging Activities

Effective January 1, 2001, the Corporation adopted SFAS No. 133, as amended. The new standard significantly changed the accounting treatment for interest rate and foreign exchange derivatives the Corporation uses in its asset and liability management activities. The Corporation's accounting for derivatives used in trading activities has not changed as the result of SFAS No. 133. Hedging derivatives are now recognized on the balance sheet at fair value as either assets or liabilities. Hedge ineffectiveness, if any, is calculated and recorded in current earnings. The accounting for the effective portion of the change in value of a hedging derivative is based on the nature of the hedge. See "Derivative Financial Instruments" beginning on page 61 for detailed information on the Corporation's strategy in using derivative instruments in its asset and liability management and trading activities, as well as the accounting principles and disclosures for these instruments.

Business Combinations and Goodwill and Other Intangible Assets

In July 2001, the FASB issued SFAS No. 141, "Business Combinations" ("SFAS No. 141") and SFAS No. 142. SFAS No. 141 requires that all business combinations initiated after June 30, 2001 be accounted for under the purchase method and establishes the specific criteria for the recognition of intangible assets separately from goodwill. Under SFAS No. 142, goodwill will no longer be amortized, but will be subject to impairment tests at least annually. SFAS No. 142 will be effective for the Corporation on January 1, 2002. However, any acquired goodwill or intangible assets recorded in transactions closed subsequent to June 30, 2001 were immediately subject to the amortization provisions of SFAS No. 142. Upon adoption of SFAS No. 142, the Corporation estimates the elimination of goodwill amortization will positively impact net income by approximately $69 million annually.

Note 2–Earnings Per Share

Basic EPS is computed by dividing income available to common stockholders by the average number of common shares outstanding for the period. Except when the effect would be antidilutive, the diluted EPS calculation includes shares that could be issued under outstanding stock options and the employee stock purchase plans, and common shares that would result from the conversion of convertible preferred stock and convertible debentures. In addition, interest on convertible debentures (net of tax) is added to net income, since this interest would not be paid if the debentures were converted to common stock.

The computation of basic and diluted earnings per share follows:

YEAR ENDED DECEMBER 31,	**2001**	2000	1999
(In millions, except per share data)			
Income (loss) before cumulative effect of accounting change	**$2,682**	$ (511)	$3,479
Cumulative effect of accounting change, net of tax	**(44)**	–	–
Net income (loss)	**2,638**	(511)	3,479
Preferred stock dividends	**(10)**	(12)	(12)
Net income (loss) available to common stockholders for basic EPS	**2,628**	(523)	3,467
Interest on convertible debentures, net of tax [1]	**–**	–	6
Diluted income (loss) available to common stockholders [1]	**$2,628**	$ (523)	$3,473
Average shares outstanding	**1,166**	1,154	1,168
Stock options [1]	**8**	–	6
Convertible debentures [1]	**–**	–	4
Average shares outstanding assuming full dilution	**1,174**	1,154	1,178
Earnings (loss) per share before cumulative effect of change in accounting principle:			
Basic	**$ 2.28**	$ (0.45)	$ 2.97
Diluted [1]	**2.28**	(0.45)	2.95
Earnings (loss) per share:			
Basic	**$ 2.25**	$ (0.45)	$ 2.97
Diluted [1]	**2.24**	(0.45)	2.95

(1) Common equivalent shares and related income have been excluded from the computation of diluted loss per share for the year ended December 31, 2000, as the effect would be antidilutive.

Note 3–Acquisitions

On July 27, 2001, the Corporation completed its acquisition of the Wachovia credit card business, including a credit card portfolio of approximately $7.5 billion consumer credit card receivables. The acquisition was accounted for under the provisions of SFAS No. 141 and SFAS No. 142. The first component of the transaction was the primary portfolio of $6.2 billion in receivables of credit card holders who are not customers of Wachovia's retail bank. The second component was the agent bank portfolio of $1.3 billion.

On September 7, 2001, the Corporation announced its agreement with Wachovia to end the agent bank relationship and sell back to Wachovia the approximately $1.3 billion of consumer credit card receivables of customers who also have a Wachovia retail banking relationship. Under the terms of the agreement, Wachovia paid a $350 million termination fee and will reimburse the Corporation for the premium paid for the repurchased receivables and conversion costs related to the repurchase.

Note 4–Restructuring-Related Charges

a) Fourth Quarter 2001 Restructuring-Related Charges

The Corporation recorded restructuring-related charges in the fourth quarter of 2001 for additional real estate and severance costs to accomplish more rapid expense reductions, accelerated systems conversions and other consolidations. Summarized below are the details of these restructuring-related charges:

DECEMBER 31, 2001 (In millions)	Personnel-Related Costs	Contractual Obligations and Asset Writedowns	Total
Restructuring-related charges	**$ 76**	**$278**	**$354**

Personnel-related items consist primarily of severance costs related to identified staff reductions in the lines of business totaling approximately 6,900 positions. Contractual obligations included the estimated costs associated with lease and other contract termination costs incorporated in the business restructuring plans. Asset writedowns included leasehold write-offs related to leased properties following the decision to abandon such facilities, as well as in the case of fixed assets and capitalized software for which similar decisions were made. Actions under this overall restructuring plan are expected to be completed within a 12-month period. Certain contractual payments associated with these actions, as required, will extend beyond this 12-month time-frame.

b) Second Quarter 2000 Restructuring-Related Charges

Actions under this restructuring plan have been completed, with only payments of identified obligations remaining, which consist primarily of lease obligations. Unpaid amounts totaled $58 million as of December 31, 2001, and will be paid as required over the remaining contractual periods.

Note 5–Business Segments

In the third quarter of 2001, certain organizational changes were made involving Corporate Investments and Commercial Banking business. The tax-oriented portfolio of Corporate Investments was transferred to Commercial Banking, while the principal investments and fixed income portfolios were transferred to Corporate. Additionally, certain expenses were reclassified from salaries to other expenses. Results for prior periods have been adjusted to reflect these and other insignificant changes and to conform to the current line of business structure.

The information presented on page 26 is consistent with the content of business segment data provided to the Corporation's management which does not use product group revenues to assess consolidated results. Aside from investment management and insurance products, product offerings are tailored to specific customer segments. As a result, the aggregation of product revenues and related profit measures across lines of business is not available.

Aside from the United States, no single country or geographic region generates a significant portion of the Corporation's revenues or assets. In addition, there are no single customer concentrations of revenue or profitability.

See the following "Business Segments" sections for additional disclosure regarding the Corporation's operating segments:

- "Business Segments" on page 26.
- Data presented in tables up until the section entitled "Financial Performance" included in the "Business Segment Results and Other Data" section beginning with "Retail" through "Corporate" on pages 27–40.

Note 6–Interest Income and Interest Expense

Details of interest income and expense are as follows:

FOR THE YEAR ENDED DECEMBER 31, (In millions)	**2001**	2000	1999
Interest Income			
Loans, including fees	**$13,213**	$15,214	$13,051
Bank balances	**145**	503	233
Federal funds sold and securities under resale agreements	**418**	577	445
Trading assets	**309**	440	330
Investment securities	**3,219**	3,344	3,235
Total	**17,304**	20,078	17,294
Interest Expense			
Deposits	**4,895**	6,137	4,651
Federal funds purchased and securities sold under repurchase agreements	**633**	1,142	935
Other short-term borrowings	**659**	1,216	942
Long-term debt	**2,479**	2,747	1,745
Total	**8,666**	11,242	8,273
Net Interest Income	**8,638**	8,836	9,021
Provision for credit losses	**2,510**	3,398	1,249
Net Interest Income After Provision for Credit Losses	**$ 6,128**	$ 5,438	$ 7,772

Note 7–Investment Securities

A summary of the Corporation's investment portfolio follows:

FOR THE YEAR ENDED DECEMBER 31, 2001	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value (Book Value)
(In millions)				
U.S. Treasury	$ 1,424	$ 30	$ 4	$ 1,450
U.S. government agencies	25,265	113	132	25,246
States and political subdivisions	1,310	28	8	1,330
Interests in credit card securitized receivables	23,998	107	–	24,105
Other debt securities	4,397	24	18	4,403
Equity securities [1]	2,775	10	15	2,770
Total available for sale securities	$ 59,169	$ 312	$ 177	59,304
Principal and other investments [2]				1,579
Total investment securities				$ 60,883
FOR THE YEAR ENDED DECEMBER 31, 2000				
(In millions)				
U.S. Treasury	$ 2,587	$ 2	$ 34	$ 2,555
U.S. government agencies	14,415	18	47	14,386
States and political subdivisions	1,276	24	8	1,292
Interests in credit card securitized receivables	22,447	116	–	22,563
Other debt securities	5,237	18	57	5,198
Equity securities [1]	2,730	15	40	2,705
Total available for sale securities	$ 48,692	$ 193	$ 186	48,699
Principal and other investments [2]				1,862
Total investment securities				$ 50,561
FOR THE YEAR ENDED DECEMBER 31, 1999				
(In millions)				
U.S. Treasury	$ 2,569	$ 1	$ 101	$ 2,469
U.S. government agencies	12,919	3	412	12,510
States and political subdivisions	1,599	20	38	1,581
Interests in credit card securitized receivables	20,176	279	–	20,455
Other debt securities	7,611	5	172	7,444
Equity securities [1]	2,002	11	5	2,008
Total available for sale securities	$ 46,876	$ 319	$ 728	46,467
Principal and other investments [2]				1,445
Total investment securities				$47,912

(1) The fair values of certain securities for which market quotations were not available were estimated.

(2) The fair values of certain securities reflect liquidity and other market-related factors, and includes investments accounted for at fair value consistent with specialized industry practice.

For the year ended December 31, 2001, gross recognized gains and losses on the sale of investment securities were $537 million and $603 million, respectively.

As of December 31, 2001, debt investment securities had the following maturity and yield characteristics:

	Due in 1 year or less		Due after 1 year through 5 years		Due after 5 years through 10 years		Due after 10 years		Total	
	Amortized Cost	Yield	Amortized Cost	Yield	Amortized Cost	Yield	Amortized Cost	Yield	Amortized Cost	Yield
(Dollars in millions)										
U.S. Treasury	$ 190	3.36%	$ 1,151	4.28%	$ 59	5.89%	$ 24	7.06%	$ 1,424	4.27%
U.S. government agencies	630	4.89	2,132	4.77	1,010	4.93	21,493	5.86	25,265	5.71
States and political subdivisions	169	5.02	387	5.05	338	5.02	416	5.24	1,310	7.78
Other debt securities	22,223	7.94	4,385	5.74	1,330	4.96	457	8.46	28,395	7.47
Total debt securities –at amortized cost	$23,212	7.80%	$ 8,055	5.24%	$ 2,737	4.97%	$22,390	5.91%	$56,394	6.61%
Total debt securities– –at fair value	$23,316		$ 8,132		$ 2,741		$22,345		$56,534	

The distribution of mortgage-backed securities and collateralized mortgage obligations is based on average expected maturities. Actual maturities might differ because issuers may have the right to call or prepay obligations.

Note 8–Loans

Loan composition by line of business is as follows:

FOR THE YEAR ENDED DECEMBER 31,	2001	2000
(In millions)		
Retail:		
Small business commercial	**$ 12,347**	$ 12,103
Home equity	**30,268**	31,361
Vehicles:		
Loans	**13,481**	14,300
Leases	**6,155**	8,840
Other personal	**9,779**	10,697
Total Retail	**72,030**	77,301
Commercial Banking:		
Corporate Banking:		
Commercial and industrial	**22,268**	N/A
Commercial real estate	**8,975**	N/A
Lease financing	**4,669**	N/A
Other	**731**	N/A
Middle Market:		
Commercial and industrial	**28,676**	N/A
Commercial real estate	**3,472**	N/A
Lease financing	**1,053**	N/A
Other	**294**	N/A
Total Commercial Banking	**70,138**	85,100
Other lines of business	**7,779**	7,106
First USA	**6,786**	4,744
Total loans	**156,733**	174,251
Less: Allowance for credit losses	**4,528**	4,110
Total loans, net	**$152,205**	$170,141

N/A–Not available.

Loans are net of unearned income of $2.749 billion and $3.467 billion as of December 31, 2001 and 2000, respectively. Loans held for sale, which are carried at the lower of cost or fair value, totaled $3.000 billion and $2.964 billion at December 31, 2001 and 2000, respectively.

The Corporation's primary goal in managing credit risk is to minimize the impact of default by an individual borrower or group of borrowers. As a result, the Corporation strives to maintain a loan portfolio that is diverse in terms of loan type, industry, borrower and geographic concentrations. As of December 31, 2001 and 2000, there were no significant loan concentrations with any single borrower, industry or geographic segment (see "Credit Portfolio Composition" on pages 52–55).

A loan is considered impaired when it is probable that all principal and interest amounts due will not be collected in accordance with the loan's contractual terms. Certain loans, such as loans carried at the lower of cost or fair value or small-balance homogeneous loans (e.g., credit card, home mortgages and installment credit) are exempt from impairment determinations for disclosure purposes. Impaired loans, accordingly, exclude consumer loans classified as nonaccrual. Such consumer loans totaled $1.064 billion and $714 million at December 31, 2001 and 2000, respectively.

Impairment is recognized to the extent that the recorded investment of an impaired loan or pool of loans exceeds its value either based on the loan's underlying collateral or the calculated present value of projected cash flows discounted at the contractual interest rate. Loans having a significant recorded investment are measured on an individual basis, while loans not having a significant recorded investment are grouped and measured on a pool basis.

The Corporation's impaired loan information is as follows:

FOR THE YEAR ENDED DECEMBER 31,	2001	2000
(In millions)		
Impaired loans with related allowance	**$2,487**	$1,748
Impaired loans with no related allowance[1]	**–**	13
Total impaired loans	**$2,487**	$1,761
Allowance on impaired loans [2]	**$ 731**	$ 407

FOR THE YEAR ENDED DECEMBER 31,	2001	2000	1999
(In millions)			
Average balance of impaired loans	**$2,047**	$1,335	$ 972
Interest income recognized on impaired loans	**46**	31	46

(1) Impaired loans for which the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan do not require an allowance under SFAS No. 114.

(2) The allowance for impaired loans is included in the Corporation's overall allowance for credit losses.

Maturity Distribution and Interest Rate Sensitivity of Loans

A distribution of the maturity of loans by line of business and, for those loans due after one year, a breakdown between those loans that have floating interest rates and those that have predetermined interest rates at December 31, 2001 follows:

(In millions)	One Year or Less	One to Five Years	Over Five Years	Total
Retail:				
Small business commercial	$ 3,290	$ 6,159	$ 2,898	$ 12,347
Home equity	628	1,279	28,361	30,268
Vehicles:				
Loans	549	9,784	3,148	13,481
Leases	1,655	4,500	–	6,155
Other personal	1,765	807	7,207	9,779
Total Retail	7,887	22,529	41,614	72,030
Commercial Banking:				
Corporate Banking:				
Commercial and industrial	5,953	15,009	1,306	22,268
Commercial real estate	4,324	4,319	332	8,975
Lease financing	80	588	4,001	4,669
Other	731	–	–	731
Middle Market:				
Commercial and industrial	12,276	13,554	2,846	28,676
Commercial real estate	1,048	1,994	430	3,472
Lease financing	72	708	273	1,053
Other	294	–	–	294
Total Commercial Banking [1]	24,778	36,172	9,188	70,138
Total reported [1]	$ 32,665	$ 58,701	$ 50,802	$142,168
Loans with floating interest rates		$ 27,451	$ 13,186	$ 40,637
Loans with predetermined interest rates		31,250	37,616	68,866
Total		$ 58,701	$ 50,802	$109,503

(1) Excludes Commercial Banking lease financing receivables, credit card, and other lines of business.

Foreign Outstandings

Foreign outstandings include loans, balances with banks, acceptances, securities, equity investments, accrued interest, other monetary assets and current credit exposure on derivative contracts. At year-end 2001 and 2000, there were no countries for which cross-border and net local country claims exceeded 1.0% of total assets. At December 31, 1999, Germany was the only country with cross-border claims exceeding 1.0% of total assets. The oustandings amounted to $3.118 billion.

At December 31, 2001 and 1999 there were no countries for which cross-border claims totaled between 0.75% and 1.0% of total assets. At December 31, 2000, Germany was the only country for which cross-border and net local country claims totaled between 0.75% and 1.0% of total assets. These outstandings amounted to $2.512 billion.

Note 9–Credit Card Securitizations

The Corporation transforms credit card receivables into securities, which are sold to investors–a process referred to as securitization. Gain or loss on the sale of the credit card receivable depends in part on the previous carrying amount of the financial assets involved in the transfer, allocated between the assets sold and the retained interests based on their relative fair value at the date of transfer. During 2001, the Corporation securitized approximately $3.8 billion in credit card receivables. Maturities of credit card securitizations during 2001 totaled $9.2 billion, with an additional $10.3 billion scheduled for 2002. During 2001 and 2000, the Corporation recognized $62 million and $116 million, respectively, in net securitization amortization in the consolidated income statement, including amortization of transaction costs, as the gain on securitization from new transactions was offset by amortization as investors in individual series were repaid.

A servicing asset or liability is not generally recognized in a credit card securitization (and thus not considered in the gain or loss computation) since the Corporation receives adequate compensation relative to current market servicing prices to service the receivables sold. Transaction costs in credit card securitizations are typically deferred and amortized over the life of the security as a reduction of noninterest income.

At December 31, 2001 and 2000, the estimated fair value of the interest-only strip associated with credit card securitizations was $219 million and $221 million, respectively, while the estimated fair value of the seller's interest was $23.9 billion and $22.4 billion, respectively. The interest-only strip and seller's interest are both recorded as investment securities.

Certain estimates are used in determining the fair value of the interest-only strip at both the date of securitization and the balance sheet date, including the excess spread, receivable lives and the discount rate. The components of excess spread, which are estimated, include finance charge and fee revenue (excluding interchange income) generated by the securitized loans in excess of interest paid to investors, related net credit losses and servicing fees. The resulting expected cash flows over the lives of the receivables are discounted at a rate commensurate with the risk of the cash flows to determine the fair value. Such estimates and assumptions are subject to change, and accordingly, the Corporation may not recover all of the recorded investment of the interest-only strip (and thus be measured for impairment). The receivables in each trust have unique attributes and therefore the interest-only strip related to each trust is evaluated separately. The seller's interest resulting from credit card securitizations is recorded at fair value using a present value approach, with assumptions that are consistent with the valuation of the interest-only strip.

The following represents the Corporation's key weighted-average assumptions used to estimate the fair value of the retained interests relating to credit card securitizations at December 31, 2001, and the pretax sensitivity of the fair values to immediate 10 and 20 percent adverse changes in these assumptions are as follows:

(Dollars in millions)	Interest-Only Strip [1]	Sellers Interest [2]	Total Retained Interests
Receivable Lives:			**0.5 years**
10% Adverse Change	$ 23.4	$ 11.6	35.0
20% Adverse Change	47.0	23.1	70.1
Excess Spread:			**1.24%**
10% Adverse Change	24.0	11.8	35.8
20% Adverse Change	48.0	23.7	71.7
Expected Net Credit Losses [3]:			**7.11%**
10% Adverse Change	120.4	67.4	187.8
20% Adverse Change	204.6	116.4	321.0
Discount Rate:			**10.00%**
10% Adverse Change	0.7	0.3	1.0
20% Adverse Change	1.5	0.7	2.2

(1) The effect of adverse changes in key assumptions on the fair value of the interest-only strip would be recorded in noninterest income.

(2) The effect of adverse changes in key assumptions on the value of the sellers interest is recorded in accumulated other adjustments to stockholders' equity, unless the decline in value is deemed to be other than temporary, which would result in a charge to noninterest income upon recognition.

(3) Certain Trust legal documents include finance charge and fee revenue reversals in the definition of net credit losses, resulting in a higher net credit loss rate for Trust purposes.

The sensitivity analysis illustrates the potential magnitude of significant adverse changes in key assumptions used in valuing the retained interests, and thus the potential impact to the Corporation's financial position and results of operations. However, the sensitivities of the fair values of the retained interests to changes in each key assumption may not be linear. Furthermore, the sensitivities for each key variable are calculated independently of changes in the other key variables. Therefore, the sensitivity analysis does not purport to present the maximum impairment loss that would result from 10 and 20 percent adverse changes in these assumptions. Actual experience observed may result in changes in multiple key assumptions concurrently, the magnitude of which on the fair value of the retained interests would be dependent on the relative change and the direction of change. In addition, the sensitivity analysis does not give effect to corrective action that Management could and would take to mitigate the impact of adverse changes in key assumptions. The asset values of the retained interests are periodically reviewed for other-than-temporary impairment.

The key weighted-average economic assumptions and ranges of assumptions used to estimate the fair value of retained interests at the date of securitization (including transfer of new balances under revolving structures) for credit card securitizations occurring during 2001 were approximately the same as the assumptions used to value the retained interests at December 31, 2001.

Cash flows received from (paid to) credit card securitization master trusts (i.e., SPEs) during the year ended December 31, 2001 and 2000 are as follows:

(In millions)	**2001**	2000
Proceeds from reinvestment in revolving securitizations	**$72,206**	$83,469
Proceeds from new securitizations	**3,845**	–
Servicing fees received	**598**	649
Cash flows received on retained interests [1]	**2,577**	2,224
Cash released from (used to fund) spread accounts	**146**	(32)

(1) Includes cash flows from interest-only strips as well as interchange fees received from securitized accounts.

For a detailed discussion of the Corporation's loan securitization process for credit card loans, see the "Loan Securitizations" section beginning on page 64.

Note 10–Allowance for Credit Losses

Changes in the allowance for credit losses for the years ended December 31 were as follows:

(In millions)	**2001**	2000	1999
Balance, beginning of year	**$ 4,110**	$ 2,285	$ 2,271
Additions (deductions):			
Charge-offs	**(2,630)**	(1,667)	(1,531)
Recoveries	**342**	276	325
Net charge-offs	**(2,288)**	(1,391)	(1,206)
Provision for credit losses	**2,510**	3,398	1,249
Transfers [1]	**196**	(182)	(29)
Balance, end of year	**$ 4,528**	$ 4,110	$ 2,285

(1) Transfers to the allowance for credit losses in 2001 primarily represent the addition of the Wachovia credit card portfolio. Transfers from the allowance for credit losses for prior years primarily represent allocable credit allowances associated with consumer loan sale transactions, including securitization transactions.

Note 11–Long-Term Debt

Long-term debt consists of borrowings having an original maturity of greater than one year. Original issue discount and deferred issuance costs are amortized into interest expense over the terms of the related notes. Long-term debt at December 31, 2001 and 2000 was as follows:

(Dollars in millions)	Interest Rate	Maturities	**2001**	2000
Parent Company				
Senior debt:				
Medium-term notes	1.98–7.63%	2002–2008	**$14,387**	$14,360
Other	–	–	**8**	14
Subordinated debt:				
Notes	5.90–10.00	2002–2027	**6,920**	6,204
Floating rate notes	Various	2003	**150**	246
Subsidiaries				
Bank notes	1.76–7.93	2002–2006	**12,933**	13,375
Subordinated notes	6.00–8.25	2002–2008	**1,729**	1,695
Capital leases	5.50–11.07	2002–2019	**66**	71
Other	1.85–11.14	2002–2028	**3,910**	2,463
Total long-term debt			**$40,103**	$38,428

Aggregate annual scheduled repayments of long-term debt at December 31, 2001 are as follows:

(In millions)	Total
2002	$ 8,512
2003	7,910
2004	5,575
2005	3,932
2006	6,935
Thereafter	7,239
Total	$40,103

Note 12–Deposits and Short-Term Borrowings

Deposits

The maturity distribution of domestic time certificates of deposit of $100,000 and over and deposits in foreign offices, predominantly in amounts in excess of $100,000, at December 31, 2001 is as follows:

(Dollars in millions)	Amount	Percent
Domestic Time Certificates of Deposit of $100,000 and Over:		
Three months or less	$ 4,934	28%
Over three months to six months	2,040	11
Over six months to twelve months	2,446	14
Over twelve months	8,445	47
Total	$17,865	100%
Foreign Offices:		
Three months or less	16,057	97%
Over three months to six months	278	2
Over six months to twelve months	208	1
Over twelve months	32	–
Total	$16,575	100%

The Corporation has an aggregate amount of domestic other time deposits of $100,000 and over of $206 million at December 31, 2001, which primarily mature within three months.

Short-Term Borrowings

Borrowings with original maturities of one year or less are classified as short-term. The following is a summary of short-term borrowings for each of the three years ended December 31:

	At Year-End			For the Year	
(Dollars in millions)	Outstandings	Weighted-Average rate	Daily Average Outstandings	Weighted-Average Rate	Highest Outstandings at Month End
2001:					
Federal funds purchased	**$ 3,171**	**1.62%**	**$ 5,121**	**4.32%**	**$ 6,353**
Securities sold under repurchase agreements	**10,557**	**1.43**	**11,543**	**3.57**	**13,386**
Bank notes	**4,529**	**3.07**	**8,267**	**5.48**	**13,047**
Commercial paper	**828**	**1.58**	**1,968**	**4.75**	**2,634**
Other short-term borrowings	**4,898**	**1.60**	**3,273**	**3.43**	**4,629**
Total short-term borrowings	**$23,983**	**1.83%**	**$30,172**	**4.28%**	
2000:					
Federal funds purchased	$ 5,253	5.89%	$ 6,281	6.14%	$ 9,663
Securities sold under repurchase agreements	6,867	6.01	12,680	5.96	17,609
Bank notes	12,426	6.71	12,298	6.50	13,327
Commercial paper	3,048	6.62	3,137	5.94	3,303
Other short-term borrowings	2,529	6.22	3,543	6.50	6,861
Total short-term borrowings	$30,123	6.36%	$37,939	6.26%	
1999:					
Federal funds purchased	$ 5,483	4.54%	$ 7,060	4.96%	$ 8,806
Securities sold under repurchase agreements	13,237	4.08	12,651	4.62	16,102
Bank notes	12,707	5.60	11,112	5.57	12,947
Commercial paper	3,184	6.09	3,006	5.23	3,595
Other short-term borrowings	5,320	4.46	3,739	4.98	5,475
Total short-term borrowings	$39,931	4.86%	$37,568	5.00%	

Note 13–Guaranteed Preferred Beneficial Interest in the Corporation's Junior Subordinated Debt

The Corporation has sponsored ten trusts with a total aggregate issuance outstanding of $3.315 billion at December 31, 2001 in trust preferred securities as follows.

	Trust Preferred			Junior Subordinated Debt Owned by Trust		
(Dollars in millions)	Issuance Date	Initial Liquidation Value	Distribution Rate	Initial Principal Amount	Maturity	Redeemable Beginning
Capital VI	September 28, 2001	$525	7.20%	$541.2	October 15, 2031	October 15, 2006
Capital V	January 30, 2001	300	8.00%	309.3	January 30, 2031	January 30, 2006
Capital IV	August 30, 2000	160	3-mo LIBOR plus 1.50%	164.9	September 1, 2030	September 1, 2005
Capital III	August 30, 2000	475	8.75%	489.7	September 1, 2030	See (1) below.
Capital II	August 8, 2000	280	8.50%	288.7	August 15, 2030	August 15, 2005
Capital I	September 20, 1999	575	8.00%	593.0	September 15, 2029	September 20,2004
First Chicago NBD Capital 1	January 31, 1997	250	3-mo LIBOR plus 0.55%	258.0	February 1, 2027	February 1, 2007
First USA Capital Trust I [2]	December 20, 1996	200	9.33%	206.2	January 15, 2027	January 15, 2007
First Chicago NBD Institutional Capital A	December 3, 1996	500	7.95%	515.0	December 1, 2026	December 1, 2006
First Chicago NBD Institutional Capital B	December 5, 1996	250	7.75%	258.0	December 1, 2026	December 1, 2006

(1) Redeemable at any time subject to approval by the Federal Reserve Board.

(2) The Corporation paid a premium of $36 million to repurchase $193 million of these securities in 1997.

These trust preferred securities are tax-advantaged issues that qualify for Tier 1 capital treatment. Distributions on these securities are included in interest expense on long-term debt. Each of the trusts is a statutory business trust organized for the sole purpose of issuing trust securities and investing the proceeds thereof in junior subordinated debentures of the Corporation, the sole asset of each trust. The preferred trust securities of each trust represent preferred beneficial interests in the assets of the respective trusts and are subject to mandatory redemption upon payment of the junior subordinated debentures held by the trust. The common securities of each trust are wholly-owned by the Corporation. Each trust's ability to pay amounts due on the trust preferred securities is solely dependent upon the Corporation making payment on the related junior subordinated debentures. The Corporation's obligations under the junior subordinated securities and other relevant trust agreements, in aggregate, constitute a full and unconditional guarantee by the Corporation of each respective trust's obligations under the trust securities issued by such trust. See Note 15 to the consolidated financial statements on page 85 for discussion of the restrictions on the ability of the Corporation to obtain funds from its subsidiaries.

Note 14–Stock Dividends and Preferred Stock

The Corporation is authorized to issue 50 million shares of preferred stock with a par value of $0.01 per share. On November 1, 2001 the Corporation redeemed all outstanding preferred stock with cumulative and adjustable dividends, Series B and C, totaling $190 million. The redemption price for both the Series B and C preferred stock was $100 per share, plus accrued and unpaid dividends totaling $1.00 per share and $1.083 per share, respectively. At December 31, 2000 the Corporation had outstanding 1,191,000 and 713,800 shares of Series B and C preferred stock with a stated value of $100 per share and a carrying value of $119 million and $71 million, respectively. The dividend rate on each of the cumulative adjustable rate series was based on a stated value and adjusted quarterly, based on a formula that considers the interest rates for selected short- and long-term U.S. Treasury securities prevailing at the time the rate is set.

Note 15–Dividends and Capital Restrictions

The Corporation's national bank subsidiaries are subject to statutory limitations on their ability to pay dividends. Dividends cannot exceed the level of undivided profits. In addition, a national bank cannot declare a dividend, without regulatory approval, in an amount in excess of its net income for the current year combined with the combined net profits for the preceding two years. State bank subsidiaries may also be subject to limitations on dividend payments.

Based on these statutory requirements, the bank affiliates could have declared aggregate additional dividends of up to approximately $620 million without regulatory approval at January 1,

2002. The payment of dividends by any bank may also be affected by other factors, such as the maintenance of adequate capital.

The bank affiliates are subject to various regulatory capital requirements that require them to maintain minimum ratios of total and Tier 1 capital to risk-weighted assets and of Tier 1 capital to average assets. Failure to meet minimum capital requirements results in certain regulatory actions that could have a direct material effect on the bank affiliates' financial statements. As of December 31, 2001, Management believed that each of the bank affiliates met all applicable capital adequacy requirements and are correctly categorized as "well capitalized" under the regulatory framework for prompt corrective action. There are no conditions or events since that categorization that Management believes have changed the institution's category.

The actual and required capital amounts and ratios for the Corporation and its principal banking subsidiaries are presented as follows:

	Actual		To Be Categorized Adequately Capitalized	
(Dollars in millions)	Capital Amount	Capital Ratio	Capital Amount	Capital Ratio
At December 31, 2001				
Risk-adjusted capital (to risk-weighted assets):				
The Corporation (consolidated)	**$30,840**	**12.2%**	**$20,266**	**8.0%**
Bank One, N.A. (Chicago)	**16,112**	**12.6%**	**10,191**	**8.0**
Bank One, N.A. (Columbus)	**4,594**	**10.9**	**3,373**	**8.0**
Bank One, Michigan	**2,115**	**11.9**	**1,420**	**8.0**
First USA Bank, N.A.	**2,253**	**16.5**	**1,092**	**8.0**
Tier 1 capital (to risk-weighted assets):				
The Corporation (consolidated)	**$21,749**	**8.6%**	**$10,133**	**4.0%**
Bank One, N.A. (Chicago)	**10,595**	**8.3**	**5,096**	**4.0**
Bank One, N.A. (Columbus)	**2,915**	**6.9**	**1,687**	**4.0**
Bank One, Michigan	**1,576**	**8.9**	**710**	**4.0**
First USA Bank, N.A.	**2,099**	**15.4**	**546**	**4.0**
Tier 1 leverage (to average assets):				
The Corporation (consolidated)	**$21,749**	**8.2%**	**$ 7,942**	**3.0%**
Bank One, N.A. (Chicago)	**10,595**	**6.6**	**6,469**	**4.0**
Bank One, N.A. (Columbus)	**2,915**	**6.4**	**1,811**	**4.0**
Bank One, Michigan	**1,576**	**7.3**	**867**	**4.0**
First USA Bank, N.A.	**2,099**	**14.2**	**589**	**4.0**
At December 31, 2000				
Risk-adjusted capital (to risk-weighted assets):				
The Corporation (consolidated)	$29,140	10.8%	$21,615	8.0%
Bank One, N.A. (Chicago) [1]	16,007	11.3	11,378	8.0
Bank One, N.A. (Columbus)	4,283	12.0	2,862	8.0
Bank One, Michigan	2,406	10.9	1,759	8.0
First USA Bank, N.A.	2,230	15.8	1,126	8.0
Tier 1 capital (to risk-weighted assets):				
The Corporation (consolidated)	$19,824	7.3%	$10,807	4.0%
Bank One, N.A. (Chicago) [1]	9,689	6.8	5,689	4.0
Bank One, N.A. (Columbus)	2,867	8.0	1,431	4.0
Bank One, Michigan	1,582	7.2	879	4.0
First USA Bank, N.A.	2,110	15.0	563	4.0
Tier 1 leverage (to average assets):				
The Corporation (consolidated)	$19,824	7.3%	$ 8,167	3.0%
Bank One, N.A. (Chicago) [1]	9,689	6.4	6,078	4.0
Bank One, N.A. (Columbus)	2,867	7.8	1,471	4.0
Bank One, Michigan	1,582	7.2	878	4.0
First USA Bank, N.A.	2,110	11.8	718	4.0

(1) Reclassified to show the effect of the 2001 mergers with Bank One, Texas, N.A., Bank One, Louisiana, N.A., Bank One, Florida, Bank One, Arizona, N.A., and Bank One, Utah, N.A.

Federal banking law restricts each bank subsidiary from extending credit to the Corporation in excess of 10% of the subsidiary's capital stock and surplus, as defined. Any such extensions of credit are subject to strict collateral requirements.

Note 16–Supplemental Disclosures for Statements of Cash Flows

During 2000 and 1999, the Corporation transferred $6.5 billion and $2.3 billion, respectively, of investment securities available for sale to trading securities. These transfers were for capital management purposes.

Loans transferred to other real estate owned totaled $162 million, $131 million, and $113 million in 2001, 2000, and 1999, respectively.

During 2000 and 1999, the Corporation recognized several non-cash charges to earnings for significant items. Several of these items will not result in future cash outflows while other items represent future uses of cash. See tables 1 and 2 on page 41 for a detailed listing of significant items.

Note 17–Supplemental Disclosures for Accumulated Other Adjustments to Stockholders' Equity

Accumulated other adjustments to stockholders' equity are as follows:

(In millions)	**2001**	2000	1999
Fair value adjustment on investment securities–available for sale:			
Balance, beginning of period	**$ (15)**	$ (271)	$ 218
Change in fair value, net of taxes of $86 in 2001, $(6) in 2000 and $(180) in 1999	**158**	(5)	(391)
Reclassification adjustment, net of taxes of $(38) in 2001, $151 in 2000 and $(56) in 1999	**(65)**	261	(98)
Balance, end-of-period	**78**	(15)	(271)
Fair value adjustment on derivative instruments–cash flow type hedges:			
Balance, beginning of period	**–**	–	–
Transition adjustment at January 1, 2001, net of taxes of $(56) [1]	**(98)**	–	–
Net change in fair value associated with current period hedging activities, net of taxes of $(70) in 2001	**(139)**	–	–
Net reclassification into earnings, net of taxes of $49 in 2001 [1]	**91**	–	–
Balance, end-of-period	**(146)**	–	–
Accumulated translation adjustment:			
Balance, beginning of period	**10**	8	21
Translation gain (loss), net of hedge results and taxes	**(7)**	2	(13)
Balance, end of period	**3**	10	8
Total accumulated other adjustments to stockholders' equity	**$ (65)**	$ (5)	$ (263)

(1) During 2001, $89 million after-tax of the transition adjustment recorded at January 1, 2001 was reclassified into earnings.

Note 18–Employee Benefits

(a) Pension Plans

Prior to 2000, the Corporation had various noncontributory defined benefit pension plans covering substantially all salaried employees. Effective December 31, 1999, all noncontributory defined benefit pension plans were combined into one plan. Effective December 31, 2000, the supplemental executive retirement plan was discontinued.

The Corporation's qualified plans' change in benefit obligation, change in plan assets and funded status are as follows:

(In millions)	**2001**	2000
Change in benefit obligation:		
Benefit obligation, January 1	**$2,248**	$2,250
Service cost	**92**	103
Interest cost	**168**	182
EGTRRA adjustment [1]	**7**	–
Actuarial loss	**108**	128
Benefits paid	**(326)**	(415)
Benefit obligation, December 31	**$2,297**	$2,248
Change in plan assets:		
Fair value of plan assets, January 1	**$3,134**	$3,400
Actual return (loss) on plan assets	**(114)**	146
Corporation contribution	**53**	3
Benefits paid	**(326)**	(415)
Fair value of plan assets, December 31	**$2,747**	$3,134
Funded status	**$ 450**	886
Unrecognized net actuarial loss (gain)	**156**	(357)
Unrecognized prior service cost	**24**	28
Unrecognized net transition assets	**–**	(7)
Prepaid pension costs, December 31	**$ 630**	$ 550

(1) The Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) contained various provisions relating to the operations of qualified pension plans. Increases to the benefit limits and the limit on pensionable earnings caused a shift in pension obligation from the non-qualified to the qualified plan.

Plan assets include approximately 1.0 million shares of the Corporation's common stock with a fair value of approximately $40 million and $37 million at December 31, 2001 and 2000, respectively.

The net periodic pension benefit for 2001, 2000 and 1999 for the Corporation's qualified and nonqualified pension plans are as follows:

(In millions)	**2001**	2000	1999
Service cost–benefits earned during the period	**$ 96**	$ 110	$ 123
Interest cost on benefit obligation	**177**	194	175
Expected return on plan assets	**(287)**	(300)	(293)
Amortization of prior service cost	**8**	9	(1)
Recognized actuarial (gain)	**(1)**	(11)	(1)
Amortization of transition assets	**(7)**	(13)	(13)
Curtailment gain	**–**	–	(13)
Net periodic pension benefit	**$ (14)**	$ (11)	$ (23)

The accrued pension cost for the Corporation's nonqualified supplemental pension plans was $39 million and $77 million at December 31, 2001 and 2000, respectively. Such plans are unfunded.

The assumptions used in determining the Corporation's benefit obligation and net periodic pension cost for both qualified and nonqualified supplemental pension plans are as follows:

FOR THE YEAR ENDED DECEMBER 31,	2002	**2001**	2000	1999
Actuarial assumptions:				
Weighted-average discount rate for benefit obligation	7.00%(1)	**7.00%**	7.50%	8.00%
Weighted-average rate of compensation increase	4.25%	**4.25%**	4.25%	5.00%
Expected long-term rate of return on plan assets	8.50%	**9.50%**	9.50%	9.50%

(1) Rate currently expected at December 31, 2002.

(b) Postretirement Benefits Other Than Pensions

The Corporation sponsors postretirement life insurance plans and provides health care benefits for certain retirees and grandfathered employees when they retire. The postretirement life insurance benefit is noncontributory, while the health care benefits are contributory.

The Corporation's postretirement benefit plans' change in benefit obligation and funded status at December 31, 2001 and 2000 are as follows:

(In millions)	**2001**	2000
Change in benefit obligation:		
Benefit obligation, January 1	**$ 195**	$ 164
Service cost	**–**	–
Interest cost	**14**	13
Actuarial loss	**48**	37
Benefits paid	**(24)**	(17)
Curtailment	**–**	(2)
Benefit obligation, December 31	**233**	195
Change in plan assets:		
Fair value of plan assets, January 1	**–**	–
Employer contribution	**24**	17
Benefits paid	**(24)**	(17)
Fair value of plan assets, December 31	**–**	–
Funded status	**(233)**	(195)
Unrecognized net actuarial loss	**67**	20
Unrecognized prior service cost	**(25)**	(38)
Accrued postretirement costs, December 31	**$(191)**	$(213)

Net periodic cost for postretirement health care and life insurance benefits during 2001, 2000 and 1999 includes the following:

(In millions)	**2001**	2000	1999
Service cost–benefits earned during the period	**$ –**	$ –	$ 1
Interest cost on accumulated postretirement benefit obligation	**14**	13	13
Amortization of prior service cost	**(12)**	(12)	(12)
Adjustment for acquisitions	**–**	–	2
Curtailment	**–**	1	–
Net periodic postretirement cost	**$ 2**	$ 2	$ 4

The weighted average discount rate used in determining the accumulated postretirement benefit obligation was 7.00% at December 31, 2001, and 7.50% at December 31, 2000.

For measurement purposes, an annual rate of increase of 10.00% was assumed for 2001 in the cost of covered health care benefits; this range was assumed to decrease to 5.00% in the years 2009 and thereafter. These assumptions have a significant effect on the amounts reported. Accordingly, the effect of a 1.00% change in the assumed health care cost trend rates is as follows:

(In millions)	1% increase	1% decrease
Effect on 2001 service and interest cost components	$ 0.9	$ 0.8
Effect on December 31, 2001, accumulated postretirement benefit obligation	$14.3	$12.6

(c) 401(k) Plans

The Corporation sponsored various 401(k) plans that together covered substantially all of its employees. Up until 2000, the Corporation was required to make contributions to the plans in varying amounts. The expense related to these plans was $95 million in 2001, $137 million in 2000 and $81 million in 1999. Effective December 31, 1999, all new contributions are being made to one Corporation-sponsored 401(k) plan, thereby establishing uniform contribution requirements for the entire Corporation.

Note 19–Stock-Based Compensation

The Corporation utilizes several types of stock-based awards as part of its overall compensation program. In addition, the Corporation provides employees the opportunity to purchase its shares through its Employee Stock Purchase Plan. The Corporation's stock-based compensation plans provide for the granting of awards to purchase or receive common shares and include limits as to the aggregate number of shares available for grants and the total number of shares available for grants of stock awards in any one year. The compensation cost that has been charged against income for the Corporation's stock-based compensation plans was $70 million for

2001, $59 million for 2000 and $38 million for 1999. As a result of the 1999 fourth-quarter restructuring plan, $4 million was recorded as a restructuring charge related to the immediate vesting of restricted shares for certain executives.

(a) Restricted Shares

Restricted shares granted to key officers of the Corporation require them to continue employment for a stated number of years from the grant date before restrictions on the shares lapse. The market value of the restricted shares as of the date of grant is amortized to compensation expense as earned over the restriction period. Holders of restricted stock receive dividends and have the right to vote the shares.

(b) Stock Options

The Corporation's stock option plans generally provide that the exercise price of any stock option may not be less than the closing price of the common stock on the trading day preceding the date of grant of the common stock.

Options granted under the Corporation's stock-based compensation program generally vest ratably over a five-year period and have a term of ten years. Certain option grants include the right to receive additional option grants ("reload" or "restorative" options) in an amount equal to the number of common shares used to satisfy the exercise price and applicable withholding taxes. Upon grant, reload options assume the same remaining term as the related original option and vest six months from the date of grant.

Summarized stock option activity for 2001, 2000 and 1999, respectively, and details of the Corporation's stock options outstanding at December 31, 2001 follows:

	2001		2000		1999	
(Shares in thousands)	**Shares**	**Wtd. Avg. Exercise Price**	**Shares**	**Wtd. Avg. Exercise Price**	**Shares**	**Wtd. Avg. Exercise Price**
Outstanding at January 1	**77,315**	**$34.17**	44,630	$40.88	38,247	$34.34
Granted	**23,573**	**37.73**	42,659	27.25	15,556	50.35
Exercised	**(7,262)**	**25.09**	(2,089)	19.66	(6,473)	24.34
Forfeited	**(3,144)**	**36.72**	(7,885)	38.56	(2,700)	36.56
Outstanding at December 31	**90,482**	**$35.72**	77,315	$34.17	44,630	$40.88
Exercisable at December 31	**45,525**	**$36.30**	25,503	$36.41	19,847	$32.86

	Options Outstanding			**Options Exercisable**	
(Shares in thousands) **Range of Exercise Prices**	**Number Outstanding Dec. 31, 2001**	**Wtd. Avg. Exercise Price**	**Wtd. Avg. Remaining Contractual Life**	**Number Exercisable Dec. 31, 2001**	**Wtd. Avg. Exercise Price**
Less than $20.00	**2,084**	$16.21	1.8 years	**2,084**	$16.21
$20.01 - $25.00	**3,261**	24.47	3.8 years	**3,261**	24.47
$25.01 - $30.00	**31,640**	26.61	14.5 years	**16,139**	26.46
$30.01 - $35.00	**5,632**	32.70	7.2 years	**3,137**	32.33
$35.01 - $45.00	**27,623**	38.04	8.5 years	**5,211**	38.80
$45.01 - $55.00	**16,166**	49.53	10.7 years	**12,190**	49.34
Greater than $55.00	**4,076**	59.13	6.8 years	**3,503**	59.09
Total	**90,482**	$35.72	10.5 years	**45,525**	$36.30

(c) Employee Stock Purchase Plan

The Corporation sponsors an Employee Stock Purchase Plan designed to encourage employee stock ownership. This plan generally allows eligible employees to purchase shares of the Corporation's common stock at a 15% discount from the market price at the beginning of an offering or the market price at the end of such offering, whichever is lower. During the current 18-month offering period, an employee is allowed to make deposits of up to 20% of his/her earnings (up to a designated maximum) on an annual basis to an interest-bearing savings account to purchase the number of shares permissible under the plan. The maximum number of shares each participant may purchase cannot exceed the contribution limit divided by the applicable purchase price on the offering date. Shares purchased by the participant are subject to a one year holding period and cannot be sold or transferred for one year after the purchase date. The Corporation does not recognize any compensation expense with respect to this plan.

(d) Pro Forma Costs of Stock-Based Compensation

The grant date fair values of stock options granted under the Corporation's various stock option plans and the Employee Stock Purchase Plan were estimated using the Black-Scholes option-pricing model. This model was developed to estimate the fair value of traded options, which have different characteristics than employee stock options. In addition, changes to the subjective input assumptions can result in materially different fair market value estimates. Therefore, the Black-Scholes model may not necessarily provide a reliable single measure of the fair value of employee stock options and purchase rights.

Summarized stock-based compensation grants and their related weighted-average grant-date fair values for the years ended December 31 follows:

	2001		2000		1999	
(Shares in thousands)	**Number of Shares**	**Wtd. Avg. Grant Date Fair Value**	**Number of Shares**	**Wtd. Avg. Grant Date Fair Value**	**Number of Shares**	**Wtd. Avg. Grant Date Fair Value**
Stock option plans	**23,573**	**$ 13.34**	42,659	$ 9.80	15,556	$ 12.28
Restricted shares	**2,065**	**37.68**	4,517	27.85	1,728	51.13
Employee Stock Purchase Plan [1]	**2,483**	**9.68**	2,122	3.27	2,974	7.28

(1) Estimated number of shares that employees would purchase under the 2001, 2000 and 1999 plans.

The following assumptions were used to determine the Black-Scholes weighted-average grant date fair value of stock option awards and conversions in 2001, 2000 and 1999: (1) expected dividend yields ranged from 2.29% - 4.86%, (2) expected volatility ranged from 19.11% - 42.29%, (3) risk-free interest rates ranged from 4.85% - 6.43% and (4) expected lives ranged from 2 to 13 years.

The following assumptions were used to determine the Black-Scholes weighted-average grant-date fair value of employees' purchase rights under the employee stock purchase plans in 2001, 2000 and 1999, respectively: (1) expected dividend yields of 2.30%, 2.58% and 2.86%, (2) expected volatility of 33.80%, 39.63% and 34.68%, (3) risk-free interest rate of 2.61%, 6.22% and 5.07% and (4) expected lives of 1.5, 0.5 and 1.0 years.

Had the compensation cost for the Corporation's stock-based compensation plans been determined in accordance with the fair-value-based accounting method provided by SFAS No. 123 "Accounting for Stock-Based Compensation," the net income and earnings per share implications for the years ended December 31, 2001, 2000 and 1999 would have been as follows:

	2001		2000		1999	
(In millions, except per share data)	**Pro Forma[1]**	**As Reported**	**Pro Forma[1]**	**As Reported**	**Pro Forma[1]**	**As Reported**
Net income (loss)	**$2,452**	**$2,638**	$ (646)	$ (511)	$3,413	$3,479
Net income (loss) per common share, basic	**2.09**	**2.25**	(0.57)	(0.45)	2.91	2.97
Net income (loss) per common share, diluted	**2.08**	**2.24**	(0.57)	(0.45)	2.89	2.95

(1) The above pro forma information may not be representative of the pro forma impact in future years.

Note 20–Income Taxes

The components of total applicable income tax expense (benefit) in the consolidated income statement for the years ended December 31, 2001, 2000 and 1999 are as follows:

(In millions)	**2001**	2000	1999
Income tax expense:			
Current:			
Federal	**$ 797**	$ 571	$ 735
Foreign	**11**	32	2
State	**115**	26	97
Total	**923**	629	834
Deferred:			
Federal	**194**	(1,151)	624
Foreign	**5**	(7)	–
State	**(4)**	(40)	37
Total	**195**	(1,198)	661
Applicable income taxes (benefit)	**$ 1,118**	$ (569)	$ 1,495

The tax effects of fair value adjustments on securities available for sale, derivative instruments in cash flow type hedges, foreign currency translation adjustments and certain tax benefits related to stock options are recorded directly to stockholders' equity. The net tax (benefit) charge recorded directly to stockholders' equity amounted to $(47) million in 2001, $107 million in 2000 and $(259) million in 1999.

A reconciliation of expected income tax expense at the federal statutory rate of 35% to the Corporation's applicable income tax expense and effective tax rate follows:

(Dollars in millions)	**2001**		2000		1999	
Statutory tax rate	**$1,330**	**35.0%**	$ (378)	35.0%	$1,741	35.0%
Increase (decrease) resulting from:						
State income taxes, net of federal income tax benefit	**72**	**1.9**	(4)	0.3	87	1.8
Tax-exempt interest	**(56)**	**(1.5)**	(57)	5.3	(66)	(1.3)
Tax credits	**(231)**	**(6.1)**	(179)	16.6	(133)	(2.7)
Goodwill	**23**	**0.6**	25	(2.3)	23	0.5
Cash surrender value of life insurance	**(57)**	**(1.5)**	(56)	5.2	(48)	(1.0)
Other, net	**37**	**1.0**	80	(7.4)	(109)	(2.2)
Applicable income taxes (benefit)	**$1,118**	**29.4%**	$ (569)	52.7%	$1,495	30.1%

A net deferred tax liability is included in other liabilities in the consolidated balance sheet as a result of temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and their related tax bases. The components of the net deferred tax liability as of December 31, 2001 and 2000 are as follows:

(In millions)	**2001**	2000
Deferred tax liabilities:		
Deferred income on lease financing	**$4,242**	$3,895
Prepaid pension costs	**216**	165
Securitizations of credit card receivables	**121**	155
Deferred fee income	**333**	336
Other	**77**	200
Gross deferred tax liabilities	**4,989**	4,751
Deferred tax assets:		
Allowance for credit losses	**1,744**	1,667
Restructure reserves	**177**	127
Incentive compensation	**302**	257
Other	**862**	933
Gross deferred tax assets	**3,085**	2,984
Net deferred tax liability	**$1,904**	$1,767

The Corporation has an alternative minimum tax (AMT) credit carryforward for tax purposes of $87 million at December 31, 2001. The Corporation also has carryforwards of foreign tax credits ("FTC") in the amounts of $38 million. The FTC's will expire after 2005.

Note 21–Lease Commitments

The Corporation has entered into a number of operating lease agreements for premises and equipment. The minimum annual rental commitments under these leases are shown below:

(In millions)	
2002	$ 264
2003	249
2004	214
2005	169
2006	152
2007 and thereafter	890
Total	$1,938

Rental income from premises leased to others in the amount of $77 million in 2001, $80 million in 2000, and $87 million in 1999 has reduced occupancy expense. Rental expense under operating leases approximated $332 million in 2001, $384 million in 2000, and $414 million in 1999.

Note 22–Financial Instruments with Off-Balance Sheet Risk

In the normal course of business, the Corporation is a party to financial instruments containing credit and/or market risks that are not required to be reflected in the balance sheet. These financial instruments are primarily credit-related instruments. The Corporation has risk management policies to identify, monitor and limit exposure to credit, liquidity and market risks.

The following disclosures represent the Corporation's credit exposure, assuming that every counterparty to financial instruments with off-balance sheet credit risk fails to perform completely according to the terms of the contracts, and that the collateral and other security, if any, proves to be of no value to the Corporation.

This note does not address the amount of market losses the Corporation would incur if future changes in market prices make financial instruments with off-balance sheet market risk less valuable or more onerous. For a more detailed discussion of off-balance sheet activities see the "Other Off-Balance Sheet Activities" section beginning on page 66.

(a) Collateral and Other Security Arrangements

The credit risk of both on- and off-balance sheet financial instruments varies based on many factors, including the value of collateral held and other security arrangements. To mitigate credit risk, the Corporation generally determines the need for specific covenant, guarantee and collateral requirements on a case-by-case basis, depending on the nature of the financial instrument and the customer's creditworthiness. The Corporation may also receive comfort letters and oral assurances. The amount and type of collateral held to reduce credit risk varies but may include real estate, machinery, equipment, inventory and accounts receivable, as well as cash on deposit, stocks, bonds and other marketable securities that are generally held in the Corporation's possession or at another appropriate custodian or depository. This collateral is valued and inspected on a regular basis to ensure both its existence and adequacy. Additional collateral is requested when appropriate.

(b) Credit-Related Financial Instruments

Summarized credit-related financial instruments, including both commitments to extend credit and letters of credit are as follows:

FOR THE YEAR ENDED DECEMBER 31,	**2001**	2000
(In billions)		
Unused credit card lines	**$299.3**	$272.7
Unused loan commitments	**148.2**	162.9
Standby letters of credit and foreign office guarantees	**19.4**	19.0
Commercial letters of credit	**0.6**	0.7

Since many of the unused commitments are expected to expire unused or be only partially used, the total amount of unused commitments in the preceding table does not necessarily represent future cash requirements.

Credit card lines allow customers to use a credit card to buy goods or services and to obtain cash advances. However, the Corporation has the right to change or terminate any terms or conditions of a customer's credit card account, upon notification to the customer. Loan commitments are agreements to make or acquire a loan or lease as long as the agreed-upon terms (e.g., expiry, covenants or notice) are met. The Corporation's commitments to purchase or extend loans help its customers meet their liquidity needs.

Standby letters of credit and foreign office guarantees are issued in connection with agreements made by customers to counterparties. If the customer fails to comply with the agreement, the counterparty may enforce the standby letter of credit or foreign office guarantee as a remedy. Credit risk arises from the possibility that the customer may not be able to repay the Corporation for standby letters of credit or foreign office guarantees. At December 31, 2001 and 2000, standby letters of credit and foreign office guarantees had been issued for the following purposes:

FOR THE YEAR ENDED DECEMBER 31,	**2001**	2000
(In millions)		
Financial	**$15,611**	$15,705
Performance	**3,786**	3,305
Total [1]	**$19,397**	$19,010

(1) Includes $3.4 billion at December 31, 2001, and $2.7 billion at December 31, 2000, participated to other institutions.

Commercial letters of credit are issued or confirmed to ensure payment of customers' payables or receivables in short-term international trade transactions. Generally, drafts will be drawn when the underlying transaction is consummated as intended. However, the short-term nature of this instrument serves to mitigate the risk associated with these contracts.

Note 23–Fair Value of Financial Instruments

The Corporation is required to disclose the estimated fair value of its financial instruments in accordance with SFAS No. 107, "Disclosures about Fair Value of Financial Instruments." These disclosures do not attempt to estimate or represent the Corporation's fair value as a whole. The disclosure excludes assets and liabilities that are not financial instruments as well as the significant unrecognized value associated with core deposits and credit card relationships.

Fair value amounts disclosed represent point-in-time estimates that may change in subsequent reporting periods due to market conditions or other factors. Estimated fair value amounts in theory represent the amounts at which financial instruments could be exchanged or settled in a current transaction between willing parties. In practice, however, this may not be the case due to inherent limitations in the methodologies and assumptions used to estimate fair value. For example, quoted market prices may not be realized because the financial instrument may be traded in a market that lacks liquidity; or a fair value derived using a discounted cash flow approach may not be the amount realized because of the subjectivity involved in selecting underlying assumptions, such as projecting cash flows or selecting a discount rate. The fair value amount also may not be realized because it ignores transaction costs and does not include potential tax effects. The Corporation does not plan to dispose of, either through sale or settlement, the majority of its financial instruments at these estimated fair values.

Summarized carrying values and estimated fair values of financial instruments as of December 31, 2001 and 2000 follows:

	2001		2000	
(In millions)	**Carrying Value**	**Estimated Fair Value**	**Carrying Value**	**Estimated Fair Value**
Financial assets:				
Cash and other short-term financial instruments (a)	**$ 28,017**	**$ 28,017**	$ 27,640	$ 27,640
Trading assets (a)	**6,167**	**6,167**	2,788	2,788
Investment securities (b)	**60,883**	**60,883**	50,561	50,561
Loans (c)	**156,733**	**154,619**	174,251	171,633
Allowance for credit losses	**(4,528)**	**–**	(4,110)	–
Loans, net	**152,205**	**154,619**	170,141	171,633
Derivative product assets (f)	**3,225**	**3,225**	2,322	2,461
Financial instruments in other assets (a)	**1,459**	**1,459**	2,220	2,220
Financial liabilities:				
Deposits (d)	**167,530**	**168,414**	167,077	167,882
Securities sold not yet purchased (a)	**1,237**	**1,237**	285	285
Other short-term financial instruments (a)	**23,003**	**23,003**	30,240	30,240
Long-term debt [(1)](e)	**43,418**	**44,521**	40,911	40,867
Derivative product liabilities (f)	**2,574**	**2,574**	2,212	2,251
Financial instruments in other liabilities (a)	**1,273**	**1,273**	1,828	1,828

(1) Includes trust preferred capital securities.

Estimated fair values are determined as follows:

(a) Financial Instruments Whose Carrying Value Approximates Fair Value

A financial instrument's carrying value approximates its fair value when the financial instrument has an immediate or short-term maturity (generally one year or less), or is carried at fair value.

Quoted market prices or dealer quotes typically are used to estimate fair values of trading securities and securities sold under repurchase agreements.

Commitments to extend credit and letters of credit typically result in loans with a market interest rate when funded. The recorded book value of deferred fee income approximates the fair value.

(b) Investment Securities

Quoted market prices typically are used to estimate the fair value of debt investment securities. Quoted market prices for similar securities are used to estimate fair value when a quoted market price is not available for a specific debt investment security. See Note 1(d) to the consolidated financial statements on page 74 for the methodologies used to determine the fair value of equity investment securities.

(c) Loans

The loan portfolio was segmented based on loan type, credit quality and repricing characteristics. Carrying values are used to estimate fair values of certain variable rate loans with no significant credit concerns and frequent repricing. A discounted cash flow method was used to estimate the fair value of other loans. Discounting was based on the contractual cash flows, and discount rates typically are based on the year-end yield curve plus a spread that reflects pricing on loans with similar characteristics. If applicable, prepayment assumptions are factored into the fair value determination based on historical experience and current economic and lending conditions.

(d) Deposits

The amount payable on demand at the report date is used to estimate fair value of demand and savings deposits with no defined maturity. A discounted cash flow method is used to estimate the fair value of fixed-rate time deposits. Discounting was based on the contractual cash flows and the current rates at which similar deposits with similar remaining maturities would be issued, adjusted for servicing costs. Carrying value typically is used to estimate the fair value of floating-rate time deposits.

(e) Long-Term Debt

Quoted market prices or the discounted cash flow method was used to estimate the fair value of the Corporation's fixed-rate long-term debt. Discounting was based on the contractual cash flows and the current rates at which debt with similar terms could be issued. Carrying value typically is used to estimate the fair value of floating-rate long-term debt.

(f) Derivative Product Assets and Liabilities

For December 2001, the carrying value equals the estimated fair value due to the adoption of SFAS No. 133 during 2001. For the year 2000, quoted market prices or pricing and valuation models were used to estimate the fair value of derivative product assets and liabilities. Assumptions input into models were based on current market information.

Note 24–Related Party Transactions

Certain executive officers, directors and their related interests are loan customers of the Corporation. These loans in the aggregate were less than 5% of stockholders' equity at December 31, 2001 and 2000.

Note 25–Pledged Assets

Assets having a book value of $70.3 billion as of December 31, 2001, and $44.2 billion as of December 31, 2000, were pledged as collateral for repurchase agreements, certain derivative instrument transactions, and governmental and trust department deposits in accordance with federal and state requirements, and for other purposes required by law. The assets pledged generally were comprised of commercial mortgage loans and investment securities. Of the total collateral pledged as of December 31, 2001, $3.1 billion of collateral, which was comprised of securities posted as collateral for repurchase agreements, was permitted to be sold or repledged by the secured party. The Corporation does not issue equity puts.

The Corporation's bank affiliates are required to maintain average noninterest-bearing cash balances, in accordance with Federal Reserve Board regulations. The average required reserve balances were $2.3 billion in 2001 and $2.5 billion in 2000.

Note 26–Collateral Policy Related to Certain Asset Transfer Activity

It is the Corporation's policy to take possession of securities purchased under agreements to resell in order to secure the risk of counterparty nonperformance on the transaction. The Corporation monitors the fair value of the underlying securities as compared to the related receivable, including accrued interest, and adjusts the level of collateral as necessary. With respect to securities lent, the Corporation receives collateral to secure the risk of counterparty nonperformance in the form of cash or other collateral, in an amount generally in excess of the fair value of the lent securities. The Corporation monitors the fair value of the securities lent on a daily basis, and additional cash or securities are obtained as necessary.

At December 31, 2001 and 2000, the fair value of collateral accepted by the Corporation in connection with these activities was $6.3 billion and $4.1 billion, respectively, of which, $5.9 billion and $3.8 billion, respectively, had been sold or repledged as of the balance sheet date.

Note 27–Contingent Liabilities

The Corporation and certain of its subsidiaries have been named as defendants in various legal proceedings, including certain class actions, arising out of the normal course of business or operations. In certain of these proceedings, which are based on alleged violations of consumer protection, securities, banking, insurance and other laws, rules or principles, substantial money damages are asserted against the Corporation and its subsidiaries. Since the Corporation and certain of its subsidiaries, which are regulated by one or more federal and state regulatory authorities, are the subject of numerous examinations and reviews by such authorities, the Corporation also is and will be, from time to time, normally engaged in various disagreements with regulators, related primarily to its financial services businesses. The Corporation has also received certain tax deficiency assessments. In view of the inherent difficulty of predicting the outcome of such matters, the Corporation cannot state what the eventual outcome of pending matters will be; however, based on current knowledge and after consultation with counsel, Management does not believe that liabilities arising from these matters, if any, will have a material adverse effect on the consolidated financial position of the Corporation.

Note 28–Parent Company Only Condensed Financial Statements

Condensed Balance Sheets

FOR THE YEAR ENDED DECEMBER 31,	2001	2000
(In millions)		
Assets		
Cash and due from banks:		
Bank subsidiaries	**$ 2**	$ 14
Interest-bearing due from banks:		
Bank subsidiaries	**7,345**	7,247
Securities under resale agreement	**30**	–
Trading assets	**5**	13
Investment securities	**17**	135
Loans and receivables–subsidiaries:		
Bank subsidiaries	**6,171**	7,044
Nonbank subsidiaries	**7,940**	6,934
Investment in subsidiaries:		
Bank subsidiaries	**22,670**	21,166
Nonbank subsidiaries	**1,630**	1,663
Other assets	**1,179**	424
Total assets	**$46,989**	$44,640
Liabilities and Stockholders' Equity		
Short-term borrowings:		
Nonbank subsidiaries	**$ 68**	$ 73
Other	**546**	1,166
Long-term debt:		
Nonbank subsidiaries	**3,419**	2,560
Other	**21,465**	20,824
Other liabilities	**1,265**	1,382
Total liabilities	**26,763**	26,005
Stockholders' equity	**20,226**	18,635
Total liabilities and stockholders' equity	**$46,989**	$44,640

Condensed Income Statements

FOR THE YEAR ENDED DECEMBER 31,	2001	2000	1999
(In millions)			
Operating Income			
Dividends:			
Bank subsidiaries	**$1,645**	$ 1,775	$2,367
Nonbank subsidiaries	**209**	762	373
Interest income:			
Bank subsidiaries	**655**	822	534
Nonbank subsidiaries	**381**	513	438
Other	**3**	22	11
Other income:			
Bank subsidiaries	**5**	7	7
Other	**(2)**	19	190
Total	**2,896**	3,920	3,920
Operating Expense			
Interest expense:			
Nonbank subsidiaries	**234**	161	93
Other	**1,308**	1,556	1,132
Merger and restructuring-related charges	**(12)**	140	287
Salaries and employee benefits	**(1)**	52	9
Professional fees and services	**2**	4	3
Other expense	**34**	255	97
Total	**1,565**	2,168	1,621
Income before income taxes and cumulative effect of change in accounting principle and equity in undistributed net income of subsidiaries	**1,331**	1,752	2,299
Applicable income tax benefit	**(202)**	(197)	(198)
Income before cumulative effect of change in accounting principle and equity in undistributed net income of subsidiaries	**1,533**	1,949	2,497
Equity in undistributed net income (loss) of subsidiaries:			
Bank subsidiaries	**1,300**	(1,835)	797
Nonbank subsidiaries	**(151)**	(625)	185
Income (loss) before cumulative effect of change of accounting principle	**2,682**	(511)	3,479
Cumulative effect of change of accounting principle, net of taxes	**(44)**	–	–
Net Income (Loss)	**$2,638**	$ (511)	$3,479

Note 28 Continued–Parent Company Only Condensed Financial Statements

Condensed Statements of Cash Flows

FOR THE YEAR ENDED DECEMBER 31, *(In millions)*	**2001**	2000	1999
Cash Flows from Operating Activities:			
Net income (loss)	**$ 2,638**	$ (511)	$ 3,479
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Equity in net income of subsidiaries	**(3,003)**	(77)	(3,722)
Cumulative effect of accounting change of subsidiaries	**69**	–	–
Dividends received from subsidiaries	**1,854**	2,537	2,740
Other operating adjustments	**68**	83	417
Net cash provided by operating activities	**1,626**	2,032	2,914
Cash Flows from Investing Activities:			
Net (increase) decrease in loans to subsidiaries	**(435)**	2,296	(3,226)
Net increase in capital investments in subsidiaries	**(412)**	(668)	(1,277)
Purchase of investment securities–available for sale	**(79)**	(1,095)	(805)
Proceeds from sales and maturities of investment securities–available for sale	**189**	1,321	729
Other, net	**(30)**	29	(29)
Net cash provided by (used in) investing activities	**(767)**	1,883	(4,608)
Cash Flows from Financing Activities:			
Net increase (decrease) in commercial paper and short-term borrowings	**(624)**	(181)	37
Proceeds from issuance of long-term debt	**6,414**	3,964	9,524
Redemption and repayment of long-term debt	**(5,495)**	(2,216)	(2,843)
Dividends paid	**(991)**	(1,222)	(2,420)
Proceeds from issuance of common and treasury stock	**191**	152	61
Purchase of treasury stock	**(78)**	(3)	(1,647)
Payment for redemption of preferred stock	**(190)**	–	–
Net cash provided by (used in) financing activities	**(773)**	494	2,712
Net Increase in Cash and Cash Equivalents	**86**	4,409	1,018
Cash and Cash Equivalents at Beginning of Year	**7,261**	2,852	1,834
Cash and Cash Equivalents at End of Year	**$7,347**	$ 7,261	$ 2,852
Other Cash-Flow Disclosures			
Interest paid	**$1,501**	$ 1,620	$ 1,113
Income tax receipt	**(374)**	(139)	(335)

Overnight money market loans, short-term investments and other sources of liquid assets exceeded the amount of commercial paper issued at December 31, 2001.

Note 29–Quarterly Financial Data (Unaudited)

	2001				2000			
	Fourth	**Third**	**Second**	**First**	Fourth	Third	Second	First
(In millions, except ratios and per share data)								
Income Statement Data:								
Total revenue, net of interest expense	**$ 4,207**	**$ 4,016**	**$ 3,846**	**$ 3,792**	$ 3,461	$ 3,942	$ 2,509	$ 4,014
Net interest income–FTE	**2,273**	**2,193**	**2,085**	**2,218**	2,247	2,242	2,257	2,228
Noninterest income	**1,972**	**1,853**	**1,791**	**1,607**	1,247	1,734	288	1,821
Provision for credit losses	**765**	**620**	**540**	**585**	1,507	516	1,013	362
Noninterest expense	**2,706**	**2,303**	**2,306**	**2,236**	2,847	2,593	3,507	2,661
Income (loss) before cumulative effect of change in accounting principle	**541**	**754**	**708**	**679**	(512)	581	(1,269)	689
Net income (loss)	**541**	**754**	**664**	**679**	(512)	581	(1,269)	689
Per Common Share Data:								
Income (loss) before cumulative effect of change in accounting principle:								
Basic	**$ 0.46**	**$ 0.64**	**$ 0.60**	**$ 0.58**	$ (0.44)	$ 0.50	$ (1.11)	$ 0.60
Diluted [1]	**0.46**	**0.64**	**0.60**	**0.58**	(0.44)	0.50	(1.11)	0.60
Net income (loss):								
Basic	**0.46**	**0.64**	**0.57**	**0.58**	(0.44)	0.50	(1.11)	0.60
Diluted [1]	**0.46**	**0.64**	**0.56**	**0.58**	(0.44)	0.50	(1.11)	0.60
Cash dividends declared	**0.21**	**0.21**	**0.21**	**0.21**	0.21	0.21	0.42	0.42
Book value	**17.33**	**17.30**	**16.49**	**16.20**	15.90	16.47	16.12	17.43
Balance Sheet Data–								
Ending Balances:								
Loans:								
Managed	**$218,102**	**$222,604**	**$223,390**	**$229,942**	$236,492	$237,505	$234,412	$229,673
Reported	**156,733**	**164,251**	**166,576**	**171,427**	174,251	176,419	172,591	168,078
Deposits	**167,530**	**162,385**	**164,299**	**163,555**	167,077	164,130	163,169	164,643
Long-term debt [2]	**43,418**	**44,361**	**41,693**	**42,197**	40,911	42,641	39,093	38,753
Total assets:								
Managed	**306,304**	**310,207**	**312,244**	**315,104**	309,096	324,780	316,011	317,176
Reported	**268,954**	**270,252**	**272,412**	**274,352**	269,300	283,373	272,709	273,008
Common stockholders' equity	**20,226**	**20,192**	**19,261**	**18,876**	18,445	19,042	18,630	20,081
Total stockholders' equity	**20,226**	**20,382**	**19,451**	**19,066**	18,635	19,232	18,820	20,271
Credit Quality Ratios:								
Net charge-offs to average loans–managed [3]	**2.84%**	**2.58%**	**2.50%**	**2.40%**	2.22%	1.86%	1.99%	2.04%
Allowance for credit losses to period end loans	**2.89**	**2.73**	**2.54**	**2.45**	2.36	1.75	1.73	1.39
Nonperforming assets to related assets	**2.35**	**1.96**	**1.77**	**1.55**	1.48	1.21	1.03	0.99
Financial Performance Ratios:								
Return (loss) on average assets	**0.80%**	**1.13%**	**0.99%**	**1.02%**	(0.75)%	0.85	(1.87)%	1.03%
Return (loss) on average common equity	**10.5**	**15.0**	**13.9**	**14.6**	(10.7)	12.2	(26.0)	13.9
Net interest margin:								
Managed	**5.20**	**4.95**	**4.65**	**4.76**	4.65	4.66	4.80	4.91
Reported	**3.84**	**3.70**	**3.50**	**3.71**	3.67	3.68	3.77	3.78
Efficiency ratio:								
Managed	**53.5**	**46.9**	**48.5**	**47.6**	66.0	54.6	103.8	53.7
Reported	**63.7**	**56.9**	**59.5**	**58.5**	81.5	65.2	137.8	65.7

Note 29–Quarterly Financial Data (Unaudited)—continued

	2001				2000			
	Fourth	**Third**	**Second**	**First**	Fourth	Third	Second	First
(In millions, except ratios and per share data)								
Capital Ratios:								
Risk-based capital:								
Tier 1	**8.6%**	**8.4%**	**8.2%**	**7.8%**	7.3%	7.5%	7.2%	7.7%
Total	**12.2**	**11.7**	**11.6**	**11.2**	10.8	10.9	10.3	10.6
Tangible common equity/tangible managed assets	**5.9**	**5.8**	**5.8**	**5.6**	5.5	5.4	5.4	5.7
Common Stock Data:								
Average shares outstanding:								
Basic	**1,166**	**1,168**	**1,166**	**1,163**	1,158	1,156	1,153	1,149
Diluted [1]	**1,174**	**1,176**	**1,176**	**1,173**	1,158	1,167	1,153	1,155
Stock price:								
High	**$39.85**	**$38.95**	**$39.60**	**$39.85**	$ 37.69	$ 38.81	$ 36.88	$34.75
Low	**28.00**	**28.00**	**33.61**	**33.49**	31.88	28.44	26.56	24.25
Close	**39.05**	**31.47**	**35.80**	**36.18**	36.63	38.06	26.56	34.38
Employees [4]	**73,519**	**75,801**	**78,491**	**79,157**	80,778	81,291	82,443	N/A

N/A–Not available.

(1) Common equivalent shares and related income were excluded from the computation of diluted loss per share for the three months ended December 31, 2000 and June 30, 2000 as the effect would be antidilutive.

(2) Includes trust preferred capital securities.

(3) Fourth quarter, third quarter, second quarter and first quarter 2001 amounts include $14 million, $14 million, $24 million and $40 million, respectively, of charge-offs which are not classified as such in the Corporation's GAAP financial information because they are part of a portfolio which has been accounted for as loans held at a discount. The inclusion of these amounts in charge-offs more accurately reflects the credit performance of the portfolio. In the Corporation's financial statements, these items result in a higher provision in excess of net charge-offs.

(4) Beginning in the first quarter of 2001, employees on long-term disability and employees of unconsolidated subsidiaries are excluded. Prior period data have not been restated for this change.

REPORT OF MANAGEMENT

Management of BANK ONE CORPORATION and its subsidiaries (the "Corporation") is responsible for the preparation, integrity and fair presentation of its published financial reports. These reports include consolidated financial statements that have been prepared in accordance with generally accepted accounting principles, using Management's best judgment and all information available.

The consolidated financial statements of the Corporation have been audited by KPMG LLP, independent public accountants. Their accompanying report is based upon an audit conducted in accordance with generally accepted auditing standards, including the related review of internal accounting controls and financial reporting matters. The Audit and Risk Management Committee of the Board of Directors, which consists solely of outside directors, meets at least quarterly with the independent auditors, Corporate Audit and representatives of Management to discuss, among other things, accounting and financial reporting matters.

Management of the Corporation is responsible for establishing and maintaining an effective internal control structure over financial reporting, including the safeguarding of assets against unauthorized acquisition, use or disposition. The Corporation maintains systems of controls that it believes are reasonably designed to provide Management with timely and accurate information about the operations of the Corporation. This process is supported by an internal audit function along with the ongoing appraisal of internal controls by the Audit and Risk Management Committee. Both the Corporation's independent auditors and the internal audit function directly provide reports on significant matters to the Audit and Risk Management Committee. The Corporation's independent auditors, the internal audit function and the Audit and Risk Management Committee have free access to each other. Internal controls, systems and corporate-wide processes and procedures are continually enhanced.

The Corporation is dedicated to maintaining a culture that reflects the highest standards of integrity and ethical conduct when engaging in its business activities. Management of the Corporation is responsible for compliance with various federal and state laws and regulations, and the Corporation has established procedures that are designed to ensure that Management's policies relating to conduct, ethics and business practices are followed on a uniform basis.

BANK ONE CORPORATION



James Dimon
Chairman and Chief Executive Officer



Charles W. Scharf
Executive Vice President and Chief Financial Officer

Chicago, Illinois
January 15, 2002

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

The Board of Directors and Stockholders
BANK ONE CORPORATION

We have audited the accompanying consolidated balance sheet of BANK ONE CORPORATION and subsidiaries as of December 31, 2001 and the related consolidated statements of income, stockholders' equity, and cash flows for the year then ended. These consolidated financial statements are the responsibility of the Corporation's Management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit. The accompanying consolidated balance sheet of BANK ONE CORPORATION and subsidiaries as of December 31, 2000 and the related consolidated statements of income, stockholders' equity, and cash flows for each of the years in the two-year period ended December 31, 2000 were audited by other auditors whose report thereon dated January 17, 2001, expressed an unqualified opinion on those statements.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by Management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of BANK ONE CORPORATION and subsidiaries as of December 31, 2001 and the results of their operations and their cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States of America.



Chicago, Illinois
January 15, 2002

SELECTED STATISTICAL INFORMATION

BANK ONE CORPORATION and Subsidiaries

Common Stock and Stockholder Data: [1][2]	**2001**	2000	1999	1998	1997
Market price:					
High for the year	**$39.85**	$38.81	$63.13	$64.78	$54.37
Low for the year	**28.00**	24.25	29.98	37.58	35.57
At year-end	**39.05**	36.63	32.00	51.06	49.37
Book value (at year-end)	**17.33**	15.90	17.34	17.31	16.03
Dividend payout ratio	**38%**	N/M	57%	58%	61%
Financial Ratios:					
Net income (loss) as a percentage of: [3]					
Average stockholders' equity	**13.5%**	(2.6)%	17.0%	15.8%	15.6%
Average common stockholders' equity	**13.4**	(2.6)	17.2	15.9	16.0
Average total assets	**1.0**	(0.2)	1.4	1.3	1.3
Average earning assets	**1.1**	(0.2)	1.6	1.5	1.5
Stockholders' equity at year-end as a percentage of:					
Total assets at year-end	**7.5**	6.9	7.5	7.9	8.0
Total loans at year-end	**12.9**	10.7	12.3	13.2	11.9
Total deposits at year-end	**12.1**	11.2	12.4	12.7	12.4
Average stockholders' equity as a percentage of:					
Average total assets	**7.4**	7.2	8.0	8.2	8.2
Average loans	**11.8**	11.4	13.0	12.7	12.2
Average deposits	**12.2**	12.0	13.2	13.1	12.9
Income to fixed charges: [4]					
Excluding interest on deposits	**2.0x**	0.8x	2.3x	2.3x	2.4x
Including interest on deposits	**1.4x**	0.9x	1.6x	1.5x	1.5x

N/M–Not meaningful.

(1) There were 108,242 common stockholders of record as of December 31, 2001.

(2) The principal market for the Corporation's common stock is the New York Stock Exchange. The Corporation's common stock also is listed on the Chicago Stock Exchange.

(3) Does not include deduction for preferred dividends.

(4) Results for the year ended December 31, 2000, were insufficient to cover fixed charges. The coverage deficiency was approximately $1.2 billion.

Corporate Headquarters

Bank One Corporation
1 Bank One Plaza
Chicago, IL 60670
(312) 732-4000

Company Information

Information on Bank One products and services is available on the Internet at the following websites:

www.bankone.com
Bank One's primary website

www.onegroup.com
Bank One's proprietary family of mutual funds

www.oneinvest.com
Bank One's online investment services and securities trading

www.firstusa.com
Bank One's credit card company

Financial Information

Bank One annual reports, earnings and news releases, 10-K and 10-Q reports, and other financial information can be obtained by visiting the "About Bank One" section of our website at www.bankone.com.

You can also obtain the most recent financial information on Bank One by phoning our toll-free Corporate News and Shareholder Information Service at 877-ONE-FACT (877-663-3228).

Investor Relations

Analysts, portfolio managers, and other investors seeking additional financial information are welcome to contact:

Investor Relations
Bank One Corporation
1 Bank One Plaza
Mail Code IL1-0738
Chicago, IL 60670-0738
(312) 732-4812

Stockholder Relations and Information

Stockholders with questions regarding their stockholder account, dividends, stock transfer, lost certificates, or changes of address should contact the transfer agent at the address and applicable phone number below.

EquiServe Trust Company, N.A.
P.O. Box 2500
Jersey City, NJ 07303-2500
Telephone:
Inside the United States: (888) 764-5592
Outside the United States: (201) 324-0498
TDD/TTY (for the hearing impaired):
(800) 952-9245
Internet: www.equiserve.com

Stock Listing

The common stock is listed on the New York and Chicago stock exchanges and trades under the ticker symbol ONE.

Dividend Information

Dividends on the common stock, if declared by the Board of Directors, customarily are paid on January 1, April 1, July 1, and October 1.

Annual Meeting of Stockholders

The Annual Meeting of Stockholders will be held on Tuesday, April 16, 2002, at 9:30 a.m. (Chicago Time) in the Bank One Auditorium, located in the Plaza area of the corporate headquarters at 1 Bank One Plaza in Chicago.

Independent Public Accountants

KPMG LLP
303 East Wacker Drive
Chicago, IL 60601

Bank One will send its Annual Report on Form 10-K for 2001 filed with the Securities and Exchange Commission without charge to any stockholder who requests a copy in writing. Please send requests to: Bank One Corporation, Attn: Investor Relations, 1 Bank One Plaza, Mail Code IL1-0738, Chicago, IL 60670-0738.

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BANK ONE



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2002 ANNUAL REPORT

FINANCIAL HIGHLIGHTS

FOR THE YEAR ENDED DECEMBER 31,	2002	2001	% change
(Dollars in millions, except per share and headcount data)			
SEGMENT RESULTS			
Retail Banking	**$ 1,390**	$ 1,181	18
Commercial Banking	**617**	700	(12)
Card Services	**1,166**	907	29
Investment Management	**411**	362	14
Corporate	**(289)**	(468)	(38)
Cummulative effect of change in accounting principle, net of taxes of ($25)	**—**	(44)	N/M
Total Corporation net income (loss)	**$ 3,295**	$ 2,638	25
FINANCIAL PERFORMANCE			
Return on average assets	**1.25%**	0.98%	
Return on average common equity	**15.2%**	13.4%	
Net interest margin	**3.8%**	3.7%	
Efficiency ratio	**56.4%**	59.7%	
CONSOLIDATED RESULTS			
Total revenue, net of interest expense	**$ 16,831**	$ 15,861	6
Net interest income – fully taxable-equivalent ("FTE") basis	**8,740**	8,769	—
Noninterest income	**8,236**	7,223	14
Provision for credit losses	**2,487**	2,510	(1)
Noninterest expense	**9,581**	9,551	—
Net income	**3,295**	2,638	25
AT YEAR-END			
Loans	**$ 148,125**	$ 156,733	(5)
Assets	**277,383**	268,954	3
Deposits	**170,008**	167,530	1
Common stockholders' equity	**22,440**	20,226	11
Headcount	**73,685**	73,519	—
Cash dividends declared	**0.84**	0.84	—
Book value	**19.28**	17.33	11
Market price	**36.55**	39.05	(6)
CAPITAL RATIOS			
Risk-based capital:			
Tier 1	**9.9%**	8.6%	
Total	**13.7%**	12.2%	
Leverage	**8.9%**	8.2%	

N/M=Not meaningful

Bank One made very good progress in 2002. We earned $3.3 billion – or approximately 15% return on equity (ROE) – versus $2.6 billion in 2001. In many ways 2002 ended the "fix-it" chapter for Bank One. I can now say that we are appropriately and responsibly investing in all parts of our business. This clearly wasn't true in the past. In 2003 we will continue to make substantial investments in all areas, including people, technology, marketing, products, branches, and branding.

Today Bank One is positioned to grow properly and profitably. Our discipline and investments will drive revenue growth. Efficiency will gradually improve operating margins and pay for our investments. Credit will improve due to our pruning and better management of exposures and the eventual economic recovery.

In this letter I will review our accomplishments of 2002 and share how we will build on this progress in 2003 and beyond. I will also discuss some critical subjects in the news.

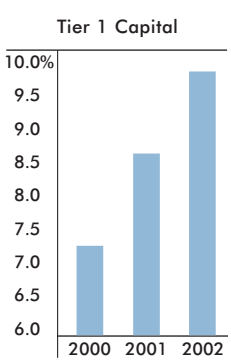
This year I've asked the heads of our four main lines of business, as well as our Chief Information Officer and our Chief Risk Management Officer, to add to this letter with their own shareholder letters. Each area is facing specific business opportunities and challenges, and each leader does an outstanding job of assessing and addressing them.

You will note some consistent themes across our lines of business. First, we are not in any business where we can't effectively compete. Second, each of our businesses is beginning to perform and demonstrate signs of growth. Third, each is realizing its competitive advantages and becoming an efficient, best-in-class provider.

As you read our letters, I hope you feel – as I do every day – the growing energy and competitive spirit at Bank One.

I. THE IMPORTANCE OF 2002 ACCOMPLISHMENTS

By the end of 2002 we had significantly cut expenses, run off large, unprofitable, and risky books of business, consolidated and upgraded massively complex systems and operations, strengthened our management teams, and implemented highly structured risk controls. I am extremely pleased that during a time of dramatic change we were also able to show growth.



Building our fortress balance sheet. We ended the year with Tier 1 capital of 9.9% and a loan-loss reserve ratio of 3.2% – both among the highest of all major banks. Even if new accounting rules require us to move certain off-balance-sheet exposures, such as asset-backed conduits, onto our balance sheet, our capital ratios will continue to be among the strongest in the industry.

Our pension obligations are fully funded. This year we expanded our authorized share buyback program from $500 million to $2 billion and to date have purchased more than $600 million of stock.

In the event of continued economic weakness, we are extremely well capitalized and well reserved. We are also well protected against rising interest rates, which I will talk about later in this letter.

Building a foundation for growth while sustaining strong and expanding margins. In 2003 expenses will increase approximately $300 million, to $9.9 billion. A large portion of this increase is related to the expensing of options and higher medical, pension, and insurance costs. Your company is also dramatically increasing investments in key areas such as new products, marketing, systems, and branch upgrades. This spending is what I would call good spending. While these investments increase expenses in the short run, they fortify and drive growth in the long run.

Realizing the benefits of a risk management culture. Today we are more disciplined in assessing and pricing risk than ever before. Moving to a more rigorous and disciplined risk management process has been difficult for both our people and our customers, but in 2002 we began to see the fruits of our labor. Credit costs were down in middle market in every quarter of the year, and nonperforming loans in both corporate banking and middle market were down in the third and fourth quarters. In the last cycle our losses were worse than those of our competitors. In the next cycle our goal is to do better than our competitors and I am confident we can achieve it.

Anticipating a decline in credit costs. Although we don't know when the economic recovery will begin, we do know that we are in very good shape, regardless of whether the economy improves slowly or even gets worse for a while. It is unlikely that we will need to increase reserves, raise capital, or modify our investment spending. When the recovery does take hold, as it inevitably will, credit losses in both the consumer and commercial businesses should trend down to more normal levels.

The one issue to keep in mind is the lumpiness of the large corporate credit losses. There are still some industries showing weaknesses, such as airlines and merchant energy, which could keep the losses in corporate banking fairly high for the next several quarters.

I will talk later about how we intend to manage the credit cycle, but clearly any continued reduction in loss rates will add to earnings. Eventually, we may find ourselves in a situation where we have a clear need for lower loss provisioning. That's a problem that we can't wait to have!

Some thoughts on United Airlines. In the fourth quarter Bank One provided $600 million of debtor-in-possession (DIP) financing to United Airlines. This is an extremely large loan to a troubled company. We insisted that the DIP financing stand on its own two feet. As such, we believe the protections built into the financing provide us with good collateral coverage. Even in the worst possible case (liquidation of the company), we could expect to get our money back on our DIP financing.

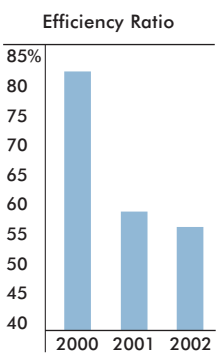
One factor in our decision to make this loan was our credit card relationship with United. Reward programs are extremely important for the future of the credit card business and this particular program would be very hard to replace. It is in our interest that United return to full health.

While we are hoping for a positive outcome, and are doing whatever is in our power to make that happen, we need to take into consideration the worst-case scenario.

In the event the worst case does happen, we would expect to write off several hundred million dollars not related to the DIP financing, but to the various costs associated with discontinuing and trying to replace the United rewards program.

It is a complicated calculation of probabilities that brought us to this position. If the worst case does occur, we are prepared to work as hard as it takes to make up for it.

Converting and upgrading systems. This year we completed the virtually flawless conversion of our two most complex systems, Michigan and Illinois. We did not spend the past two years simply converting many poor systems into one. That alone would have been a tremendous accomplishment, but we also massively upgraded major systems, including check processing, deposit systems, loan systems, cash management systems, and banker workstations. In the process we became one of the first financial institutions to launch online check imaging, which is available free of charge to all customers. Our plans for 2003 are equally impressive.



In-sourcing our systems capabilities. We don't believe our technology accomplishments would have been possible if we had continued to rely

on outsourced systems. During the past 18 months we have in-sourced most of our systems, hiring more than 1,700 new technology professionals. These people are patriots – not mercenaries – who are allowing us to take control of our destiny. They are developing a deep understanding of our customers and they share our passion for winning by improving service, expanding capabilities, and reducing costs.

We are also in-sourcing and upgrading our data processing capabilities by building two state-of-the-art, secure, fully mirrored facilities that offer real-time backup.

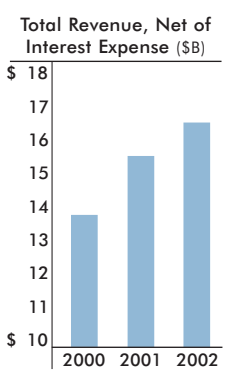
With our volume of business and the quality of our people, we do not believe we are sacrificing any economies of scale or capability by managing the technology ourselves. In fact, we are seeing evidence to the contrary.

Strengthening and broadening management disciplines. Our success depends upon our ability to develop great business strategies, improve products and customer service, execute well, and pay attention to every asset, every branch, every employee, every detail.

To that end we are setting the highest expectations and standards for ourselves. We are not there yet, but given our rate of progress, we will be there soon.

Ensuring "good" growth. Profitable, sustainable, properly underwritten growth is not a vision; it is the result of excellent management discipline, an unrelenting focus on execution, consistent management of risk, a competitive product set, and outstanding customer service.

In 2002 we began to see signs of good growth. Debit cards, credit cards, home equity loans, assets under management, and capital market revenues are all growing. And for the first time in five years, we are beginning to see growth in retail transaction accounts. While we aren't where we want to be, we are clearly seeing signs that we're moving in the right direction.



In addition, we are nearing the completion of the deliberate runoff of business (and unfortunate nondeliberate runoff due to the many changes made in the last three years) in both our commercial and consumer businesses.

Furthermore, we're making all the investments necessary to drive future growth, from enhanced technology to new products and marketing.

Most important, because of the tough work we have done, we can now begin to grow our businesses responsibly and more aggressively, knowing that the growth is profitable, sustainable, and properly underwritten – not the kind of growth that we might regret later in the business cycle.

We expect 2003 to be a decent year (weaker in the beginning and stronger as the year goes on) and, assuming a reasonable level of economic recovery, 2004 could be a very good year.

II. THOUGHTS ON QUALITY OF EARNINGS AND MANAGING GROWTH, THE BALANCE SHEET, AND WALL STREET

The first thing people talk about when discussing company results is earnings, but earnings tell just a small part of the story and sometimes not even the most important part. Decisions that can positively or negatively affect earnings one year can easily have the opposite effect in future years. Each decision must be evaluated by how it will affect not just the short term but also the long-term health of the company.

Measuring results through a complete and balanced scorecard. Any financial company can improve earnings in the short run by taking on additional risk and cutting back on investments in people, products, service, and brand. Such decisions, however, may not be in the company's best interest long-term. Those companies may report short-term growth, but it may be the kind of growth one comes to regret. Good companies fight for profitable, sustainable

growth that builds over time. They don't make shortsighted decisions to achieve it and they don't offer excuses when they don't achieve it.

The real trick is in managing the risk/reward trade-off – while still being prepared for different economic environments and investing in the future. We seek good growth – profitable, sustainable, well-underwritten growth that builds over time. Getting there requires the use of a complete and balanced scorecard – one that goes beyond earnings to address many questions, such as:

- Are we recruiting and developing great people?
- Are we investing wisely for the future?
- Are we innovating better products?
- Are we relentlessly improving our core processes?
- Are we making good returns on capital?
- Are we properly underwriting and managing our risk?

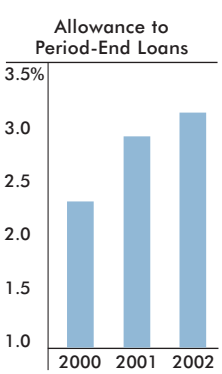
Business leaders are frequently asked to identify their "three big areas of focus." It's a frustrating question. If you want to build a great company, you must focus on many issues – and balancing them is an art.

Managing through cycles and recessions. We must be able to manage our business through difficult cycles and recessions.

A lot of people have referred to our current economic environment as "a perfect storm," but the reality is that our country has experienced and survived many storms. In the past 20 years alone, we have been involved in numerous military conflicts, some countries have defaulted multiple times, and we have experienced at least three significant recessions. It's hard to predict when a storm will happen, but one thing is inevitable: it will happen.

We cannot control these events; we can barely predict them. But we can, and must, be prepared for them. Risk is not symmetrical. You can make a lot of money in the good times, but if you aren't careful, you'll go bankrupt in the bad.

The most cyclical part of *our* business is the credit cycle. We must risk rate and price exposures to get a good return through the cycle – not just during the good times.



Last year I told you we had moved to a more granular risk rating system (a 20-grade system versus a 12-grade system) that helps us more accurately rate credits and allows for direct comparisons to public ratings and, where applicable, to market prices. If we properly rate credits and manage our risk, credit losses through the cycle can be fairly predictable.

For example, in corporate banking, we believe that if we properly rate our credits, average losses will be approximately 60 to 80 basis points through the cycle – or as low as 20 to 30 basis points in the good times and as high as 150 to 175 basis points in the bad. We would like to run the business to achieve a 15% average ROE. This means in the good times we should earn in excess of 20%, and in the bad, we must be prepared to earn as low as 5% to 10%.

In middle market, we believe our losses could be as low as 20 to 30 basis points in the good times and as high as 100 basis points in the bad. As such, we should achieve an average ROE of approximately 20% through the cycle.

Clearly we will always try to mitigate the downside, but at the same time we must rationally plan for it.

Managing interest rate exposure. Interest rate exposure is another area in which financial services companies can assume excess risk – often at great peril. As with underwriting credit, good analysis of interest rate exposure is rooted in facts and evaluations based on a variety of realistic assumptions and scenarios. This analysis should be a never-ending process.

Although we analyze hundreds of variables, only a few can dramatically change results. For example, three of the biggest assumptions in our interest rate models are:

- How competitive pricing of new credit cards will change with interest rates;
- How consumer deposits will act in various interest rate environments;
- How interest rate changes will affect the values of mortgages.

It is often natural for a financial services company to maintain some interest rate risk since short-term funding rates are usually lower than long-term rates. In the past, it was better for companies to fund short and lend long. Recently, however, we have positioned ourselves to benefit modestly from various rising interest rate scenarios. The decision cost us approximately $400 million in revenue in 2002 and thus impacted revenue growth. We based our decision on a strong belief that rates are near historic lows and, while they could go a little lower, they could clearly go a lot higher during the next several years. Given that risk is not symmetrical, we are willing to pay the price to protect ourselves against a significant rise in interest rates.

Creating flexibility with a fortress balance sheet. As discussed earlier, companies can also increase earnings fairly easily by increasing their leverage. In 2002 we could have increased earnings by 25 to 30 cents a share simply by buying back $5 billion in stock, which would have reduced our Tier 1 capital from 9.9% to a still healthy 7.8%. However, by not doing this, we haven't lost these earnings. Instead, we think of them as "earnings-in-store" that will become evident as we deploy our capital. Our current capital position reduces our risk and provides us with greater flexibility.

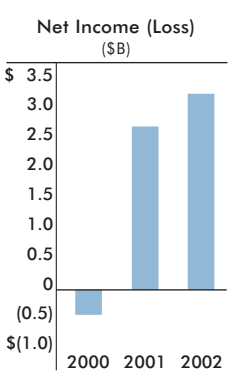
Analyzing quality of earnings. There is an active debate about whether GAAP earnings properly reflect results or whether results are better reflected through "operating," "core," or "pro forma" numbers. These differences are, at best, confusing and, at worst, artificial and misleading. However, it is critical that shareholders understand the quality and *type* of earnings. Certain earnings are, in fact, nonrecurring, and we are committed to fully disclosing and distinguishing between those results we view as recurring and those that are not.

For example, we have a $31.6 billion corporate banking loan book, which we hold reserves against and *don't* mark-to-market. We hedge approximately 20% with credit derivatives, which we *do* mark-to-market through the income statement. We believe we are making the right economic decisions to manage and hedge our risk (usually to reduce individual credit exposures to levels with which we are comfortable). Although we expect the credit derivatives position to go up or down every quarter, we do not consider the mark-to-market impact to be real earnings. That's why we have separately disclosed the credit derivatives notional amount and the quarterly mark-to-market impact.

Similarly, we don't expect all gains on investments to be recurring. For example, we have $2 billion in equity investments, from which we anticipate an adequate return (although we haven't made much lately). It is reasonable for shareholders to expect an average return of 10%, even though we think we will do much better. We certainly don't anticipate a high valuation on peak-year investment earnings. We make every effort to give you the numbers as clearly as possible and then let you decide.

Managing Wall Street. CEOs often feel enormous pressure from Wall Street to deliver quarterly and annual earnings, but I would venture to say that most of our investors don't really care about 1 or 2 cents of quarterly earnings. They do, however, want to understand the dynamics of our business, to be assured that we are looking at our business with brutal honesty, and to feel confident that we are taking the right actions, however difficult, to ensure long-term success.

That's why we strive to tell our whole story – the good, the bad, and the ugly. In doing so, we know we may earn the respect of some, lose the respect of others, but ultimately attract the kind of shareholders who seek balanced tough decision making that is in the company's best, long-term interest.



Growing organically versus through acquisitions. Our first objective in each of our businesses is to achieve good returns. To that end we must first demonstrate the capacity to grow organically without relying upon acquisitions. We believe this is possible in all of our businesses. If we can't run our own businesses well, then

we have not earned the right to run someone else's. In 2002 we made tremendous progress toward earning that right.

Banks have been consolidating for a long time, and I believe this trend will continue. The industry is still highly fragmented and there are still tremendous economies of scale to be achieved in systems, branding, product innovation, and diversification.

To be attractive, a potential acquisition must meet our criteria with regard to three critical factors:

– Price
– Business logic
– Ability to execute

We know these are extremely complex transactions and that many brilliantly conceived acquisitions have failed because of their inability to overcome crippling bureaucracies, culture clashes, or office politics. Yet companies that acquire well have been enormously successful.

Bank One is in a fortunate position. We can – and will – continue to grow on our own. We do not have to acquire to be successful. However, if the right acquisition opportunity presents itself, we are now ready and able to pursue it. But the rationale must be compelling.

III. COMMENTS ON RECENT NEWS EVENTS

The root cause of many of the recent problems in corporate America (at least in my opinion) was a complete lack of business ethics. Weak corporate governance practices, poor accounting standards, and bubble markets simply created additional opportunities for people to abuse the system. While we can't legislate ethics, we can strengthen governance practices, reduce flexibility in interpreting accounting guidelines, and improve disclosure requirements.

Strengthening corporate governance. Extreme examples of corporate fraud and deceit prompted a rigorous, but appropriate, focus on corporate governance issues in 2002. Many of the changes now being adopted will have little effect on the vast majority of companies – they had the right principles, although practices varied. Conversely, some of the corporate governance actions will have a material impact on the small number of companies that had the wrong principles *and* practices.

One of the wonderful attributes of this country and American business, however, is that we are constantly reforming and striving to improve.

Governance has been a focus at Bank One for several years. When I joined the company in 2000, one of our first actions was to dramatically reduce the size of the Board. It is hard to have a candid dialogue or make meaningful decisions in a group of 22 people. (As one of my friends says, "The bigger the crowd, the better the news.") We also limited the number of inside directors to one – me.

In addition, we directly tied executive compensation to company performance. You may remember that we paid no bonuses to our senior management team in 2000, even though many of us were new to the company.

In 2001 I asked the Board to meet without me to review my performance. We have since formalized our governance policies to require twice-yearly board sessions without the CEO. We also stipulated that senior management must maintain ownership of 75% of all stock they obtain through options or restricted stock. In addition, we eliminated the Supplemental Executive Retirement Plan and 401(k) match for senior executives.

This year we modified every Board committee charter to reflect the highest standards of governance. In the second quarter we began expensing stock options and in the fourth quarter we created a Board Governance Committee to ensure that we maintain the best practices and principles. We also eliminated split-dollar life insurance. (We should have done that sooner.) Shareholders can continue to feel confident that we are striving to manage according to the highest standards of governance and that senior management will be the first to pay the price for inadequate company performance.

The need for tougher accounting standards. While the current debate has centered on whether we need a rules-based or principles-based accounting system, I believe we need both stricter rules and better principles in accounting. The enormous flexibility that currently exists in accounting has made it extremely difficult for investors to properly assess a company's results. While progress has been made in these areas, we must continue to be vigilant, particularly with regard to:

1. *Improved application of principles.* The goal in reporting should be to clarify – not obfuscate – results. Technical accounting rules should never be used as an excuse for nondisclosure of material information. For example, just because an exposure is off-balance-sheet doesn't mean it doesn't exist and that it shouldn't be talked about if it might have a material effect on results.

2. *Better disclosure of assumptions.* When accounting rules are sensitive to assumptions, those assumptions should be fully disclosed, including a discussion of what would happen if those assumptions changed. This should be done consistently across companies in like industries so investors can make valid comparisons.

3. *Stricter and consistent application of rules (i.e., those not based on assumptions).* For example, in the credit card business, regulators should tell us exactly how to account for credit card charge-offs and recoveries. Right now companies have multiple choices, and an investor would have to be a detective to figure out the impact of these differences. Create one strict set of rules to allow for direct comparison across companies.

Until accounting rules and principles are applied rigorously and consistently, it will be difficult to compare and analyze results across like companies, and the unethical will continue to have opportunities to abuse the system.

We are continuously striving to the best of our ability to improve our reporting and enhance our disclosures.

IV. REALIZING THE POWER OF THE FRANCHISE WHILE FOCUSING ON WHAT REALLY MATTERS

Our customers are our top priority, but we can't meet their needs without the full backing and support of our employees. That's why I consider our 74,000 employees to be our most important asset. They know all about their businesses and are the ones who should be making the vast majority of decisions.

Getting the best from our people. "Empowerment" may be an overused and misunderstood word, but we simply can't win without it. We must constantly seek to improve our products, invent new ones, and give our customers better, faster service – preferably at a lower cost. Innovation doesn't come from one department or one individual. It comes when everyone participates, and people participate when they feel respected as full members of the team. (Wouldn't each of us advise friends to look for a new job if their company didn't treat them this way?) We will never stop trying to foster the spirit of partnership among all our employees at Bank One.

We also believe our employees should share in the company's success. That's why we've built stock ownership into our culture. Today more than 90% of our employees who have been with us a year or more own Bank One stock. And although we will continue to reward people with options, we are considering changes in the programs to make them less capricious and more effective. We will also continue to put stock into the 401(k) accounts of all employees who earn less than $40,000 a year, regardless of whether they buy stock on their own.

Giving people a stake in the company, however, goes well beyond financial rewards. Incentives must be done right, but they aren't what matters most. Our employees are not here just for the money. They are here because they want to be part of a winning team.

Creating a winning team takes hard work and there is no substitute for it. Teams do not win because they have a new stadium or the best uniforms. Some of the best teams don't even have the best individual athletes. Teams win because they are disciplined, they work well together, they execute consistently, and they have a passion to win.

Building a self-sustaining culture. We are working to build a culture based on truth, knowledge, constructive debate, a passion to win, and the courage to face and fix mistakes.

We encourage people with diverse styles to work together. We recognize that there are legitimate differences in style, and that's OK. However, we do not confuse poor behavior with "style differences." For example, if a manager doesn't foster active and honest communication, that's not a "style difference." That's bad management.

Our commitment is to create a self-sustaining culture that will ensure the health of this company for decades to come.

Leadership is key to creating a healthy culture. It's management's job to see things for what they are – and, just as important – for what they aren't. My experience is that if you ask people to tell you the truth about what needs to be done, they'll tell you. Our responsibility is to create a company that promotes this kind of constructive exchange. Then – and I believe this is the hardest part of leadership – we must have the fortitude and courage to take action and do the right things, however difficult.

Problems don't age well. Addressing them early may be hard, but in the long run it's far less painful.

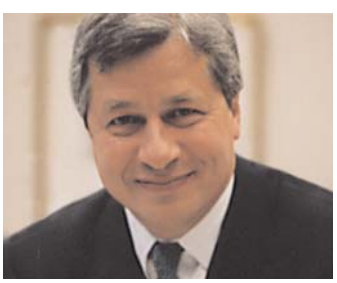
Giving back. Our success has enabled us to give back to our communities. In 2002 we donated $40 million in cash to local nonprofit organizations. Our greatest source of pride, however, is in our employees, who have contributed tremendous time and talent to worthwhile causes throughout the country.

We are also proud of our commitment to pay the full salary differential for the entire tour of duty of all Bank One employees called to serve our country. These individuals are willing to make the ultimate sacrifice. Their lives – and the lives of their families – should not be made more stressful by financial hardship.

In closing. I am thrilled to report that Bob Lipp, chairman and CEO of Travelers Property Casualty Corporation, and Steve Burke, president of Comcast Cable Communications, have accepted our invitations to join our Board of Directors. Both bring to Bank One tremendous management experience and the highest standards of ethics and integrity. I am honored that they have chosen to commit their energies to our company.

Bank One exits 2002 financially stronger than it has been in years, with sharpened disciplines and signs of growth. We end the year as one company, operating as one team, with one brand.

There is one thing we strive for above all else: to build one of the best financial services companies in America – a company that stands the test of time. All of us want to feel proud when it's time to pass this company along to the next generation. Building a vibrant, healthy company is in the best interests of everyone – our shareholders, customers, employees, and, ultimately, our country. And we intend to do it.





James Dimon
CHAIRMAN AND CHIEF EXECUTIVE OFFICER
FEBRUARY 14, 2003

one commitment : 60 million customers

Implicit in our strategy is the commitment to serve those who put their trust and their confidence in Bank One. How we serve them speaks to a deeper commitment to understand, appreciate and respond to individual needs.


PERSONAL CHECKING
OVERDRAFT PROTECTION
CERTIFICATE OF DEPOSIT
PAYROLL PROCESSING
CREDIT/DEBIT CARD PROCESSING
BUSINESS TERM LOANS
BUSINESS LINE OF CREDIT
LETTER OF CREDIT
BUSINESS CHECKING
CASH MANAGEMENT

KATRINA MARKOFF

ENTREPRENEUR AND CHOCOLATIER

CUSTOMER SINCE 1997

Sweet sensation

Katrina Markoff is a daring soul. An Indiana native with Macedonian roots, she's that rare combination of artist and entrepreneur who's able to take unlikely ingredients and turn them into gold. Her grandmother, who taught her that love can start in a kitchen, wasn't surprised when Katrina started selling chocolates in a hatbox, but truffle lovers were blown away. And they weren't the only ones to sit up and ask for more.

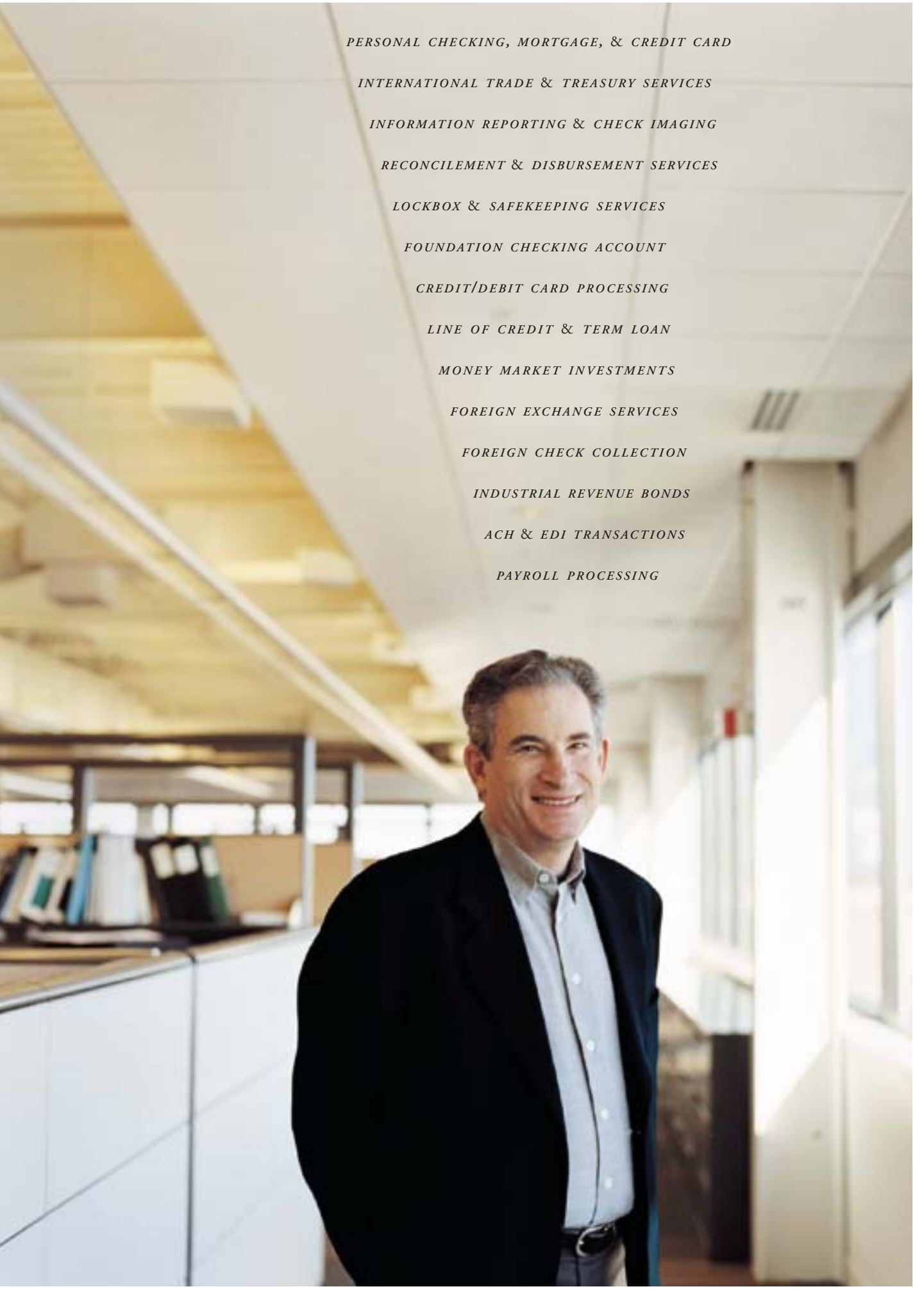
As the owner and creative force behind Vosges Haut-Chocolat, Katrina doesn't lack for confidence. Her bold moves and uncanny combinations are grounded in training from Le Cordon Bleu and a relentless desire to get things right. What began in her basement is now generating annual sales of $2 million. She's got two boutiques, strong sales through the Internet, and plans to open a shop in New York. She's also got a bank that appreciates how a little Japanese wasabi root or Indian curry powder can turn a bonbon into a bonanza.

"They've been much more than a bank to me," says Katrina, as she juggles two phones and three mixing bowls. "The people at Bank One act like consultants and partners. They brought me a recipe for growth, and with their help I've been able to bring my 'haut-chocolat' experience to the world."

That's one sweet relationship.

With nearly $10 billion in loans outstanding, Bank One is the country's 5th leading lender to small businesses.

In 2002 the Retail Investment Sales group sold $5.4 billion in investment products, an increase of $540 million from 2001.



PERSONAL CHECKING, MORTGAGE, & CREDIT CARD

INTERNATIONAL TRADE & TREASURY SERVICES

INFORMATION REPORTING & CHECK IMAGING

RECONCILEMENT & DISBURSEMENT SERVICES

LOCKBOX & SAFEKEEPING SERVICES

FOUNDATION CHECKING ACCOUNT

CREDIT/DEBIT CARD PROCESSING

LINE OF CREDIT & TERM LOAN

MONEY MARKET INVESTMENTS

FOREIGN EXCHANGE SERVICES

FOREIGN CHECK COLLECTION

INDUSTRIAL REVENUE BONDS

ACH & EDI TRANSACTIONS

PAYROLL PROCESSING

EDWARD KAPLAN

ENGINEER AND VISIONARY

CUSTOMER SINCE 1992

Earning its stripes

Zebra Technologies is one of America's fastest-growing companies. Since 1992 the company has increased annual sales from $58 million to $450 million, and now has a market cap near $2 billion. Ed Kaplan, Zebra's leader and cofounder, says the company's growth trajectory is based on meeting customer needs. "To keep Zebra on track, our team delivers operational excellence and innovative products," he remarks. "Our employees meet these demands, and we expect the same from our bank. They must be as fast and nimble as we are."

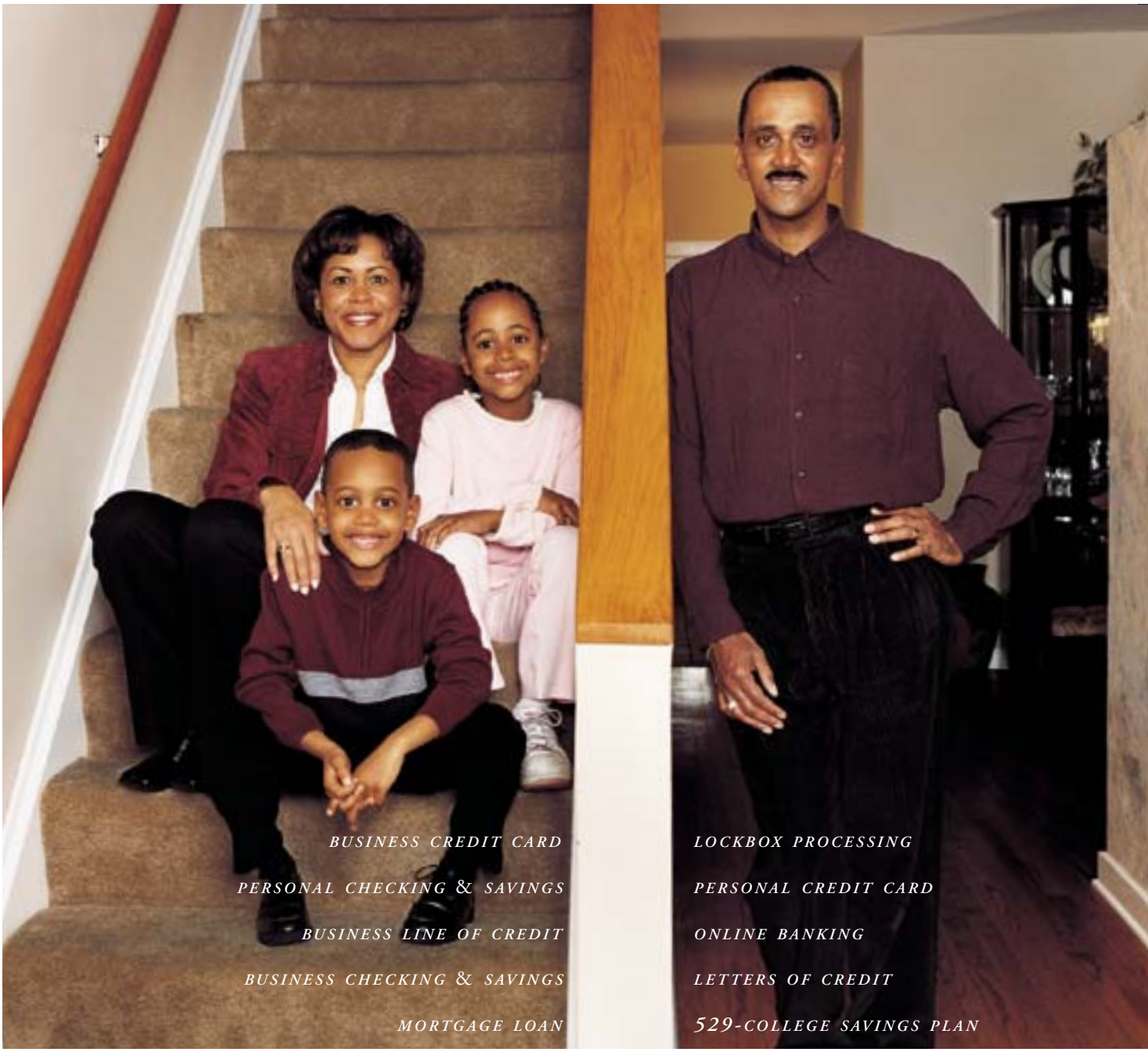
Bank One helps Zebra by providing a variety of domestic and international services that improve efficiency and speed productivity. "We're a technology company, so we're always looking to technology to make things work better, and Bank One has definitely come through in that area," states Ed. "They've provided us with a host of Web-based applications and technological solutions that have made our lives easier. They anticipate our needs. That's the best type of financial partnership you can have."

When it comes to meeting Ed's financial needs, it's not all black and white. That's why today, Bank One's relationship with Ed Kaplan extends beyond his business to include helping him manage his personal wealth and his foundation.

Could there be a new king of the jungle out there?

Bank One ranks as one of the top 3 bank issuers of commercial cards to large corporate and middle market customers.

In 2002 Bank One maintained its strong 4th place league table position in syndicated loans, gaining both in absolute and relative volume.


BUSINESS CREDIT CARD
PERSONAL CHECKING & SAVINGS
BUSINESS LINE OF CREDIT
BUSINESS CHECKING & SAVINGS
MORTGAGE LOAN
LOCKBOX PROCESSING
PERSONAL CREDIT CARD
ONLINE BANKING
LETTERS OF CREDIT
529-COLLEGE SAVINGS PLAN

PAUL AND ADRIENNE FREGIA WITH DANIELLE AND PRESTON

ENTREPRENEURS, PARENTS AND FIRST-TIME INVESTORS

CUSTOMERS SINCE 1984

How one thing leads to another

Paul Fregia didn't think much about it when he first opened his checking account at Bank One. His office was located in the Bank One headquarters' building, so it made sense. Today, however, location has nothing to do with it.

"What started as a relationship of convenience has turned into a solid partnership based on trust," says Paul, who has since started his own business. Beginning with a simple checking and savings account, Paul went on to work with Bank One to secure a home loan, start-up capital for his own company and ongoing business financing. Recently Paul's wife got into the act as well, establishing Bank One business banking accounts to support her newly opened medical practice.

"Relationships are the building blocks of any successful business," says Paul, owner of Grandma Maud's DownHome Cookin'®. "What we appreciate most is the ability of our banker to learn about our goals and then pull together the full range of services we'll need to achieve them."

With the businesses now established and growing, the Fregias' focus is on their growing family as well. Today they are working with Bank One to prepare a financial plan that will ensure college educations and – yes, they're already thinking about it – weddings for the kids.

That's definitely another trip to the bank.

Each hour $17.7 million in purchases are made with Bank One credit cards.

Customers can choose from more than 1,200 co-branded, affinity and other cards issued by Bank One in association with many of America's favorite brands.



TRUSTEE BANK • CUSTODIAN SERVICES • INVESTMENT MANAGEMENT • DONOR ADVISED FUND

CAROL CRENSHAW

FINANCIAL MASTERMIND – THE CHICAGO COMMUNITY TRUST

CUSTOMER SINCE 1929

Trusted ally

"Our needs may appear simple, but that doesn't mean they're easy," says Carol Crenshaw, chief financial officer of The Chicago Community Trust, the nation's second-oldest community foundation. "We require outstanding investment assistance and risk management along with a steady stream of workable solutions for challenges as varied as Chicago itself."

So where does Carol turn for such assistance? An often-called number connects her to Bank One's institutional investment group, which manages $110 million of the Trust's endowment funds.

Proper management of that money means a world of difference to thousands of not-for-profit groups. Each year the Trust extends more than $40 million in grants to organizations that care for the homeless, protect battered women and educate the youth. Continued success like that requires strong partners.

Bank One has been an active and committed trustee of The Chicago Community Trust since 1929. It's a lasting relationship that continues to grow and evolve. In 2002 the bank developed, through the Trust's corporate affiliate, The Chicago Community Foundation, a donor advised fund program that enables contributors to establish named funds and recommend grants to eligible charitable groups. "It's a great idea," says Carol, "one that will further our mission of identifying and assisting worthy groups throughout the region."

Here's to a 74-year relationship that's still going strong.

Institutional investment sales increased by 26% from 2001, resulting in $78 billion in institutional assets with Banc One Investment Advisors.

Bank One's CollegeChoice 529 Investment Plan℠, featuring numerous investment portfolios, was introduced in 2002 and grew to $100 million in assets.

RETAIL BANKING

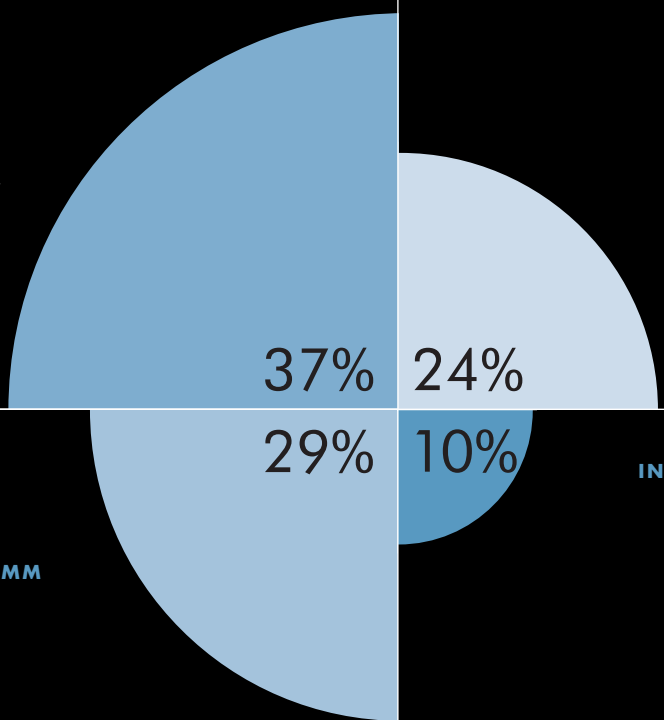
REVENUE: $6,285 MM
NET INCOME: $1,390 MM
ASSETS: $71.4 B

Checking and Savings Accounts
Consumer Lending
Small Business Banking
Debit/ATM Cards
Investment Accounts
Insurance
Online Banking and Bill Pay
Home Loans

COMMERCIAL BANKING

REVENUE: $4,111 MM
NET INCOME: $617 MM
ASSETS: $93.7 B

Global Cash Management
Commercial Lending
Loan Syndications
Commercial Cards
Investment Management
Asset-Backed Finance
Investment Grade Securities
Derivatives
Foreign Exchange
Global Trade



Percentage of total revenue

CARD SERVICES

REVENUE: $4,864 MM
NET INCOME: $1,166 MM
ASSETS: $45.3 B

Credit Cards
Affinity Cards
Rewards Cards
Smart Cards
Stored-Value Cards
Business Cards
Hybrid Cards
Merchant Processing

INVESTMENT MANAGEMENT

REVENUE: $1,718 MM
NET INCOME: $411 MM
ASSETS: $8.7 B

Portfolio Management
Mutual Funds
Financial Planning
Brokerage
Private Client Services
Corporate and Personal Trust
Alternative Asset Management
Insurance
Retirement Services
Securities Lending
Custody and Master Trust

74,000 employees : one goal

Success is measured in many ways, but for us the ultimate success is to connect with our customers and advance their best interests. Each and every day, in thousands of places and in countless ways, Bank One reaches its customers with specific solutions and individual answers.

Dream catcher

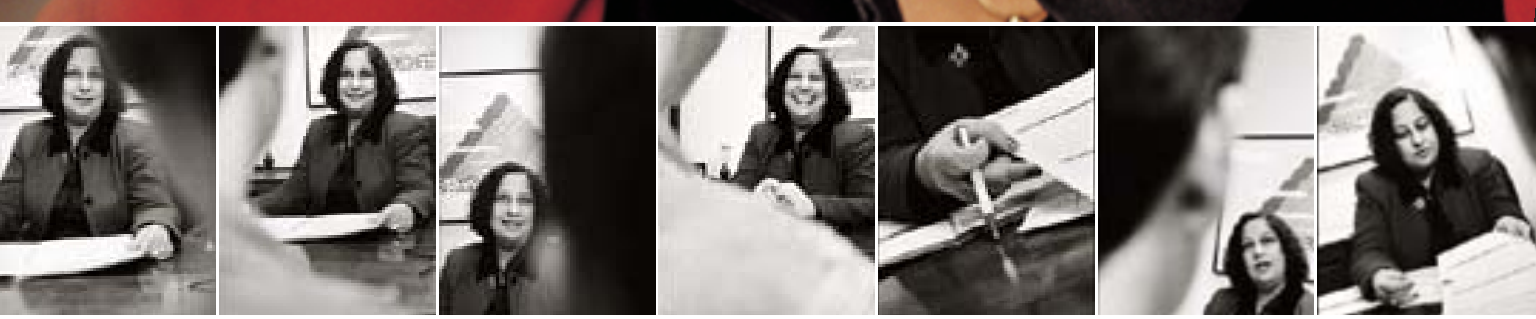
"People don't simply want a bank account. What they want is a relationship with someone they trust who can help them achieve their goals. The account is simply a means to an end. Whenever I meet with new customers, it's my job to connect with them and get a sense of their goals and dreams – whether it's buying a first home, preparing for a new baby, planning for retirement or sending a child off to college. The way I see it, if a customer leaves my desk without that conversation, then I haven't done my job."

Clearly, Gita Chopra is doing her job. Today she's the leading relationship banker in the country. "The people I work with aren't simply customers. They have truly become friends. I take an active interest in where their lives are going, and am proud of the role we at Bank One can play to help them get there."

GITA CHOPRA

RELATIONSHIP BANKER

EMPLOYEE SINCE 1994



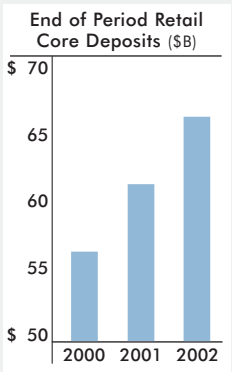
2,839 relationship bankers provide solutions for 6.9 million retail households across 14 states.

1.4 million customers use bankone.com for their online banking, an increase of 30% from 2001.

DEAR SHAREHOLDER:

Retail Banking produced strong financial results in 2002. Net income increased 18% from the prior year and ROE was 22%. We grew our core businesses while aggressively downsizing several under-performing portfolios. The liquidation of our under-performing portfolios reduced assets by almost $4.5 billion, revenues by $198 million, and negatively impacted 2002 earnings. While these actions hurt our short-term financial performance, they will improve our long-term returns.

We are extremely focused on growing our core businesses – retail branch banking, small business banking, and consumer lending. These businesses are very attractive, with ROEs in excess of 25% excluding our liquidating portfolios. We intend to grow by leveraging our existing network of 1,795 branches, by opening new branches and, eventually, through acquisition.



Our success depends on growing our core deposit franchise and then cross-selling our other products through financial profiles that uncover customer needs. This past year marked the first time since 1998 that we opened more accounts than we closed. While we are glad that we reversed the trend, we will not be satisfied until we have achieved meaningful and consistent growth in this account base accompanied by robust cross-selling.

MARKETING AND PRODUCT FOCUS We have increased both the effectiveness and the amount we spend on marketing and are committed to having the best products in the market. This past year we rolled out several new product initiatives including free checking and free online imaged statements, and we eliminated the assisted teller fee. We will constantly look for ways to make our products more attractive to our customers.

STRENGTHENING OUR SALES FOCUS We have dramatically improved our internal sales effort, growing our sales force from 2,296 to 2,839 at year-end. We have moved our salespeople to production-based compensation and our internal sales campaigns are now tightly coordinated with our external marketing efforts.

IMPROVING THE CUSTOMER EXPERIENCE To be successful, we must decrease the level of account attrition. Our research indicates most of our customers leave us within the first year because they aren't put into an account appropriate for their needs. In response, we have changed our procedures to ensure a qualified salesperson takes a comprehensive look at a customer's financial needs when opening an account. Additionally, our focus is on opening all new accounts with convenience items such as debit cards, direct deposit and bill pay to increase customer satisfaction and retention.

We are confident these actions will decrease attrition and ultimately result in increased sales. Using our financial profiles, we are in a stronger position to assess other customer needs that create opportunities to cross-sell a loan, credit card, investment product, CD, or savings account.

We are also making our branches and ATMs more convenient and attractive places to conduct business. We are extending hours in 85% of our branches by 10 hours per week, or an increase of 20%, and we are upgrading branch interiors, exterior signage and ATMs. While extending hours provides a greater convenience for our customers, it also provides us more time to meet with customers, which will increase sales.

STRENGTHENING MANAGEMENT DISCIPLINE We are running our branch system with far greater discipline. We have set clear expectations for our people and we communicate with them constantly. Equally important is our rigorous process of reviewing progress against these expectations as we coach our people toward success.

GOING FORWARD Our 1,795 branches provide a tremendous advantage as we seek to grow our franchise. In our communities, Bank One is well recognized as a market leader. We are the number one or two bank in nearly half of our markets, which translates to strong name recognition. The convenience of our branches and ATMs makes us an attractive choice for customers in need of banking products. Our size and strength allow us to attract and retain the best people as well as deliver the most relevant product set at the most competitive prices. Our goal is to leverage all these advantages to provide a trusted, consistent customer experience in every branch, every day.

We believe our future is extremely bright. We have a qualified and dedicated team of people serving our customers. We have a passion for winning in the marketplace. The business has outstanding returns, and we are confident in our ability to grow it profitably.



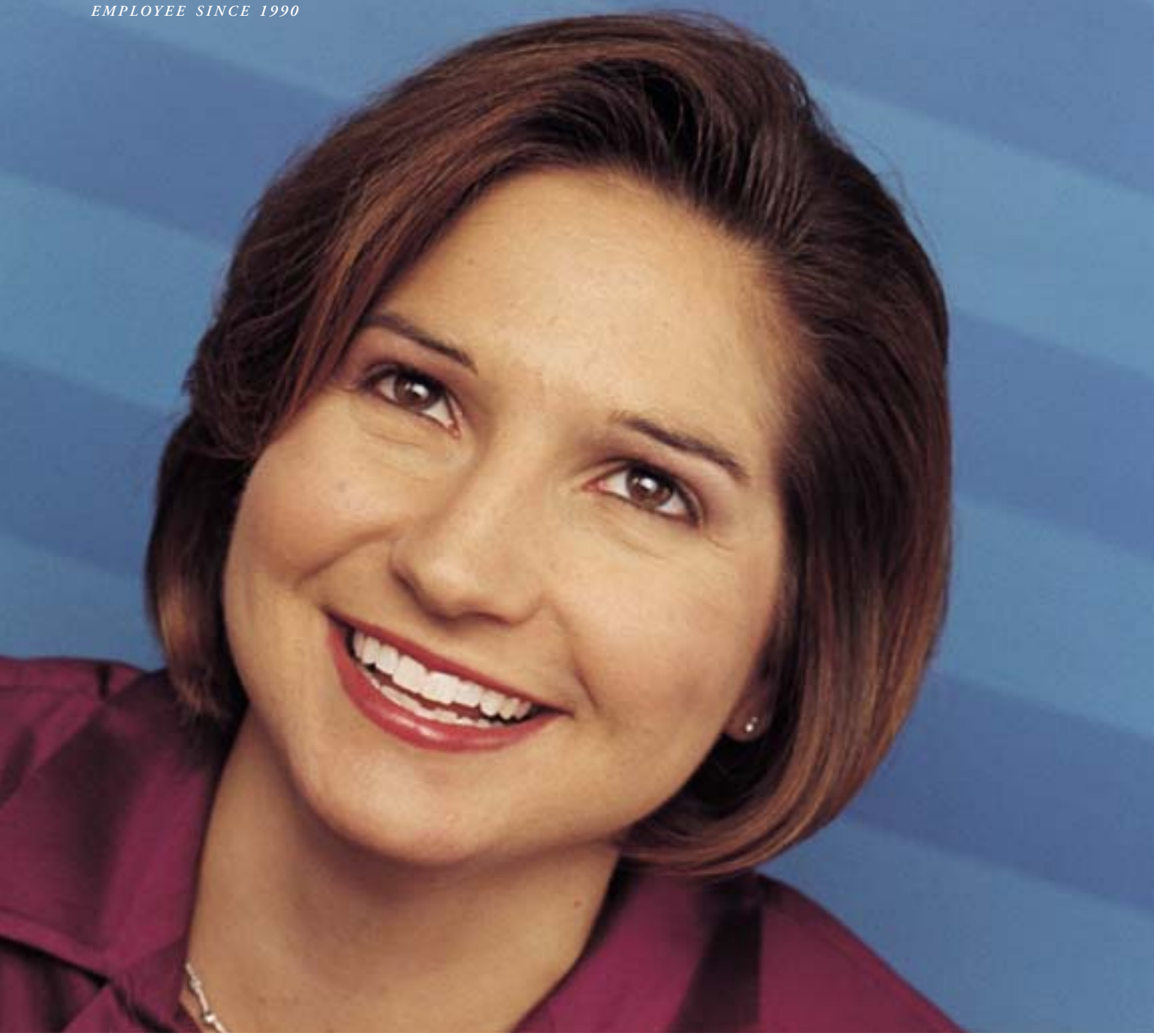
Charles W. Scharf
President and CEO, Retail Banking

In the cards

Pauline Trusiak was born to be a banker, or at least she thinks so. Her father, who also works for Bank One, first brought her to work when she was six. Now, several years and a few degrees later, Pauline manages a $400 million commercial card portfolio that includes two of Bank One's largest commercial card customers, ChevronTexaco and the University of California.

"There's nothing I like better than delivering an innovative, out-of-the-box solution for my customers," explains Pauline between phone calls. "On second thought," she adds, "maybe there's one thing that's better – I love winning business away from a competitor."

PAULINE TRUSIAK
COMMERCIAL CARD CONSULTANT
EMPLOYEE SINCE 1990



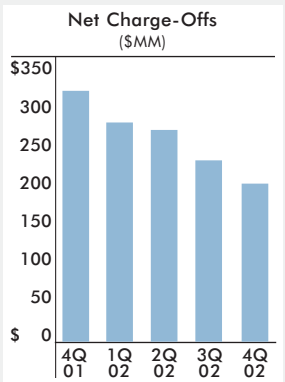
With nearly 20% of the market share, Bank One is the #1 originator of debit ACH transactions for commercial customers.

Charge volume on Bank One commercial card products increased more than $1.0 billion, or 21%, in 2002.

DEAR SHAREHOLDER:

Commercial Banking successfully tackled several ambitious and difficult tasks in 2002 that strengthened our business and positioned us for the future. We created one integrated line of business with one set of common systems and moved an important part of our franchise, American National Bank, to the Bank One brand. Along the way we proved to ourselves and to the public that we have the leadership and teamwork it takes to successfully identify and execute complex changes when they are right for our business.

FINANCIAL RESULTS Overall, our full-year ROE for the large corporate business was 9% and 13% for the middle market. This is below our expectations and was negatively impacted by our efforts to further reduce credit exposure and the ongoing challenge of the current economic environment.



However, in the fourth quarter of 2002 we realized an improvement in our net charge-offs. Credit losses for the large corporate business were at 1.03%, an improvement of 99 basis points from fourth quarter 2001, and 0.70% for middle market, an improvement of 105 basis points from the prior-year quarter. These improved credit losses drove ROE increases, with large corporate at 15% and middle market at 17%.

OUR BUSINESS IS POISED FOR GROWTH In addition to moving to one set of common systems, we simultaneously upgraded many of our systems and products. We continued to improve existing processes to further increase revenue in core products and decrease our operating costs, while simplifying our operating environment. The result is a solid foundation of systems, products and services that allows us to be more flexible and respond quickly to market demands.

Our product groups, global treasury services and capital markets, remain leaders in their fields. Our cash management products continue to be ranked in the top five of all cash management categories, and our emerging product areas, including commercial card and electronic products, realized strong growth. Fee-based cash management revenue did decline due to the reduction of our loan exposure and lower interest rates as well as companies migrating from paper to electronic transactions.

Despite very turbulent market conditions in many of the product segments in which capital markets competes, 2002 finished on a high note, with profitability up 10% from a record 2001 performance. Additionally, we maintained or improved our capital markets product rankings, including placing third for credit card and seventh for automotive in the term asset-backed markets and maintaining a fourth-place position in loan syndications, while increasing market share.

In addition to investing in our systems, we also invested in state-of-the-art workstation tools to enhance our understanding of our customers and help manage those relationships. Upon the complete deployment of these tools in the first quarter of 2003, we will have an unprecedented view of our customers, not to mention a standardized methodology for tracking profitability.

What we learned about ourselves in 2002 may prove to be our most significant accomplishment. We are moving forward with a confidence that can only be gained from setting aggressive goals and executing them successfully. The leadership, teamwork and tenacity displayed by our people are unmatched by anything I have witnessed in my career.

LOOKING AHEAD In 2003 we will focus our energy on doing what we do best – building relationships with our customers, listening carefully to their needs, ensuring that our products and services meet those needs and providing high-quality execution. Many new products and product enhancements are under development, and there will be a significant investment in service. We will also continue to communicate with our clients early and often, a strategy that gave us an advantage last year.

I began by explaining how our activities in 2002 have positioned us for growth. I'll conclude by saying how confident I am in our future. We certainly have new challenges ahead of us. You can be assured, however, that we will apply the same discipline to growing our business this year as we did to laying a solid foundation in 2002.



James S. Boshart III
President and CEO, Commercial Banking

Problem = Opportunity + Opportunity + Opportunity

After spending more than 30 years in customer service, there aren't many things Richard Jackson hasn't seen or heard before. He manages each situation as if it's his first, but a single philosophy drives each interaction. "In every problem, there's an opportunity," he says. "The secret is in listening carefully to each person. No two situations are alike. The moment you think you have the answer before hearing the problem is the moment you're in trouble."

"There's a reason people pull one credit card out of their wallet and not another," Richard explains. "Most of the time it's a decision based on trust – trust that if there's a problem it will be solved without hassle or delay." Today Bank One Card Services meets the needs of 50 million credit card customers and maintains one of the highest customer satisfaction ratings in the industry.

Looks like these cardmember service advisors aren't missing many opportunities at all.

RICHARD JACKSON
CARDMEMBER SERVICE ADVISOR/
MARKETING COORDINATOR
EMPLOYEE SINCE 1999



Each week Card Services advisors answer about 923,000 phone calls from customers across the world.

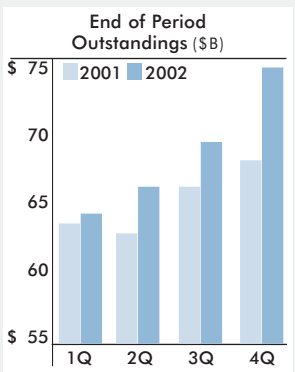
The Bank One Card Services business card portfolio grew by 23% in 2002.

DEAR SHAREHOLDER:

At Card Services we made solid progress on our growth initiatives in 2002 as we benefited from a focus on control and profitability in the previous year. We took the lead in quality, credit and co-branding, and we significantly closed the gap in our drive to become the lowest-cost provider.

We have reengineered many processes around the customer, allowing us to deliver industry-leading service. Better product pricing and more feature choice for our cardmembers helped reinforce customer loyalty, while our six Card Services operating centers provided high levels of customer service. This positive performance allows us to focus our resources on enhancing our 50 million credit card relationships as well as acquiring more profitable and stable accounts.

We also rebalanced our credit card loan portfolio, employing improved credit cycle skills and more intelligent asset management. Our risk-based, customer-driven strategies allowed us to take these actions. As a result, in 2002 we saw excellent credit performance, an 11% increase in charge volume, an 8.7% growth in outstandings, and strong evidence of a more loyal customer base.



LEADING BRANDS HELP DRIVE GROWTH Our new business development effort, guided by our strategy to become the preferred partner of America's leading brands, was successfully restarted in 2002. With the addition of large new co-brand partners such as Amazon.com, BJ's Wholesale Club®, The Walt Disney Company, UPS® and many others, we now have triple the co-brand relationships of our nearest competitor and anticipate growth from these additions beginning in 2003. As more and more consumers switch to rewards-based payment products, our partnerships give us a powerful competitive advantage.

The Mileage Plus segment did well throughout 2002 despite the financial difficulties experienced by United Airlines. Cardmembers responded to our expanded suite of products and rewards promotions, and we expect to continue rewarding customer loyalty with aggressive promotions this year. As I write this letter, we remain cautiously optimistic about the future of this portfolio, although the successful reorganization of United Airlines is necessary for the program to remain viable.

Our brand awareness work began in 2002 and included the successful conversion of millions of First USA cards to the Bank One brand. At the same time we launched our first-ever national television advertising campaign to build awareness of our extensive credit card product line, our partnerships with well-known American icons, and our new name.

FOCUS ON LOWER COSTS AND BETTER RESPONSE RATES We've worked hard to drive down costs as we aspire to become the industry's lowest-cost provider. None of us will be satisfied until we reach that goal. We pushed down our average cost per active statement and expect further benefits from our focus on quality and infrastructure. The improvements are not ends in themselves, but rather point to our efforts to better the customer experience at every touch point. The resulting lower costs and higher customer satisfaction are evidence of a quality dividend we will continue to enjoy.

Net response rates to our direct mail campaigns were relatively flat in 2002. We did not perform as well as some of our peers for most of the year; however, we are tackling this concern. Our new analytical models, which help us increase our response rates, show a lot of promise. We are dedicated to improving this capability, as it is critical for our growth projections.

MOVING FORWARD For 2003, we look to our customers for steady growth and improved profitability. We also expect our partners and prospective partners to continue to rely on our expertise. We are committed to maintaining our credit improvements and strengthening our share of the payments business. Several major co-brand and new product launches take center stage in the first half of the year, and we will continue to keep service levels high and costs low. Know that you have a management team committed to building a strong cards and payments business for Bank One, and we appreciate your support.



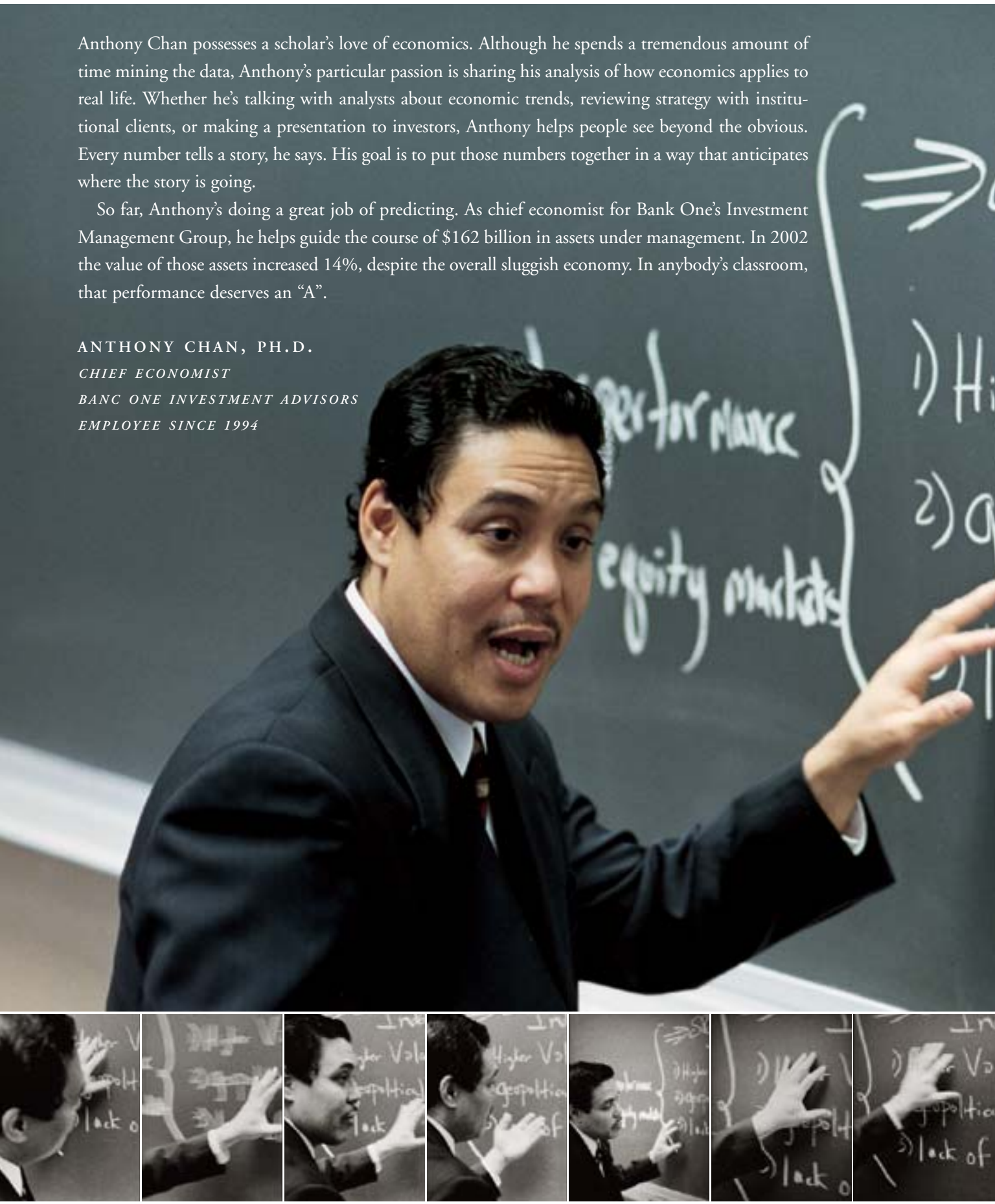
Philip G. Heasley
President and CEO, Card Services

Numbers guy

Anthony Chan possesses a scholar's love of economics. Although he spends a tremendous amount of time mining the data, Anthony's particular passion is sharing his analysis of how economics applies to real life. Whether he's talking with analysts about economic trends, reviewing strategy with institutional clients, or making a presentation to investors, Anthony helps people see beyond the obvious. Every number tells a story, he says. His goal is to put those numbers together in a way that anticipates where the story is going.

So far, Anthony's doing a great job of predicting. As chief economist for Bank One's Investment Management Group, he helps guide the course of $162 billion in assets under management. In 2002 the value of those assets increased 14%, despite the overall sluggish economy. In anybody's classroom, that performance deserves an "A".

ANTHONY CHAN, PH.D.
CHIEF ECONOMIST
BANC ONE INVESTMENT ADVISORS
EMPLOYEE SINCE 1994



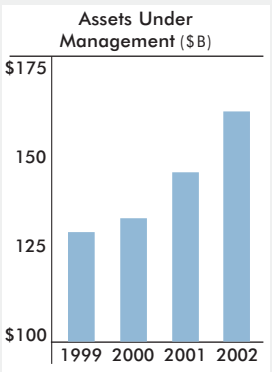
In 2002 One Group® mutual fund assets grew 21% versus an industry average of -8%.

The 118 investment professionals at Banc One Investment Advisors have an average investment experience of more than 13 years.

DEAR SHAREHOLDER:

In 2002 the Investment Management Group had another year of challenging market conditions and nervous investors. It was the third consecutive year of volatile and unfavorable securities markets, but it was our third consecutive year of double-digit asset and earnings growth. On a year-to-year basis, assets under management grew 14%; earnings grew 14%; and expenses decreased 4%, including restructuring-related charges and reversals.

Assets under management, a key driver of our earnings, grew from $143 billion to $162 billion in 2002, while mutual fund assets industry-wide experienced an 8% decline. In the 2002 year-end edition of *Barron's*, Banc One Investment Advisors ranked better than two-thirds of its peers in its ability to protect equity investors and shareholders during difficult markets. We also ranked second in our ability to retain equity assets.



DISCIPLINED RESULTS By adhering to a disciplined asset management philosophy, our money managers keep delivering competitive investment returns – avoiding fads and short-term trends. We are forever conscious of the risk inherent in the investment markets. We cannot eliminate that risk, but we can attempt to manage it for our clients. In 2002 our equity returns, although at negative levels, stood up well against peer averages, as the equity markets reeled from geopolitical, corporate integrity and economic concerns. Our fixed income team excelled in one of the most difficult bond markets we've ever seen. Our fixed income Lipper rankings are top-tier for one-, three- and five-year time periods.

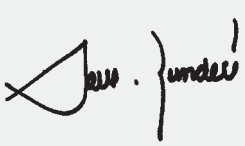
Another key to our financial performance is the same principle we espouse for our clients – diversification. We are not overly dependent on any single client segment, asset style or product category. This breadth of product and distribution helped produce record investment sales in 2002. In retail brokerage, sales of mutual funds and annuities reached $5.4 billion, 11% above sales in 2001. In our institutional business, investment sales hit a new record, $30 million as measured by annualized revenue, 66% above last year. Neither of these achievements would have happened without the strong support of our Retail and Commercial Banking partners. In our third-party distribution business, sales of One Group® through external channels reached $3 billion, 94% above 2001 levels.

GROWTH INITIATIVES Our private client services business continued to develop an integrated platform to serve the needs of high net worth individuals. We added 73 new private client services advisors and made real progress leveraging Bank One's commercial relationships. During 2002 average deposits increased by $1.3 billion, 19% more than 2001. However, the market value of customer assets declined 15%. This is an attractive, high-growth business in which Bank One has tremendous potential to be a major player.

Going forward, another area of growth for us will be insurance services. In 2002 we brought in an experienced executive management team that launched several successful products and developed a solid game plan to grow on multiple levels. One of our priorities will be to acquire life and annuity insurance manufacturing capabilities.

We realize we can only reach our long-term goals with both organic growth and acquisitions. Throughout the year we looked hard at a number of companies to extend our manufacturing and distribution capabilities; however, we didn't find the right target at the right price. We'll keep looking, but we're not willing to make an acquisition just for the sake of doing so. As the securities markets continue to struggle, we believe there will be attractive opportunities to consider.

Finally, at year-end we announced a realignment of our companies to further accelerate growth. Retail investment services has become part of Retail Banking. Private client services has become a stand-alone business. The Investment Management Group will now focus exclusively on our asset management, corporate trust and insurance capabilities. This new structure recognizes the value of each of these businesses to the future of Bank One and positions the corporation to maximize their earnings in the years ahead.



David J. Kundert
President and CEO, Investment Management

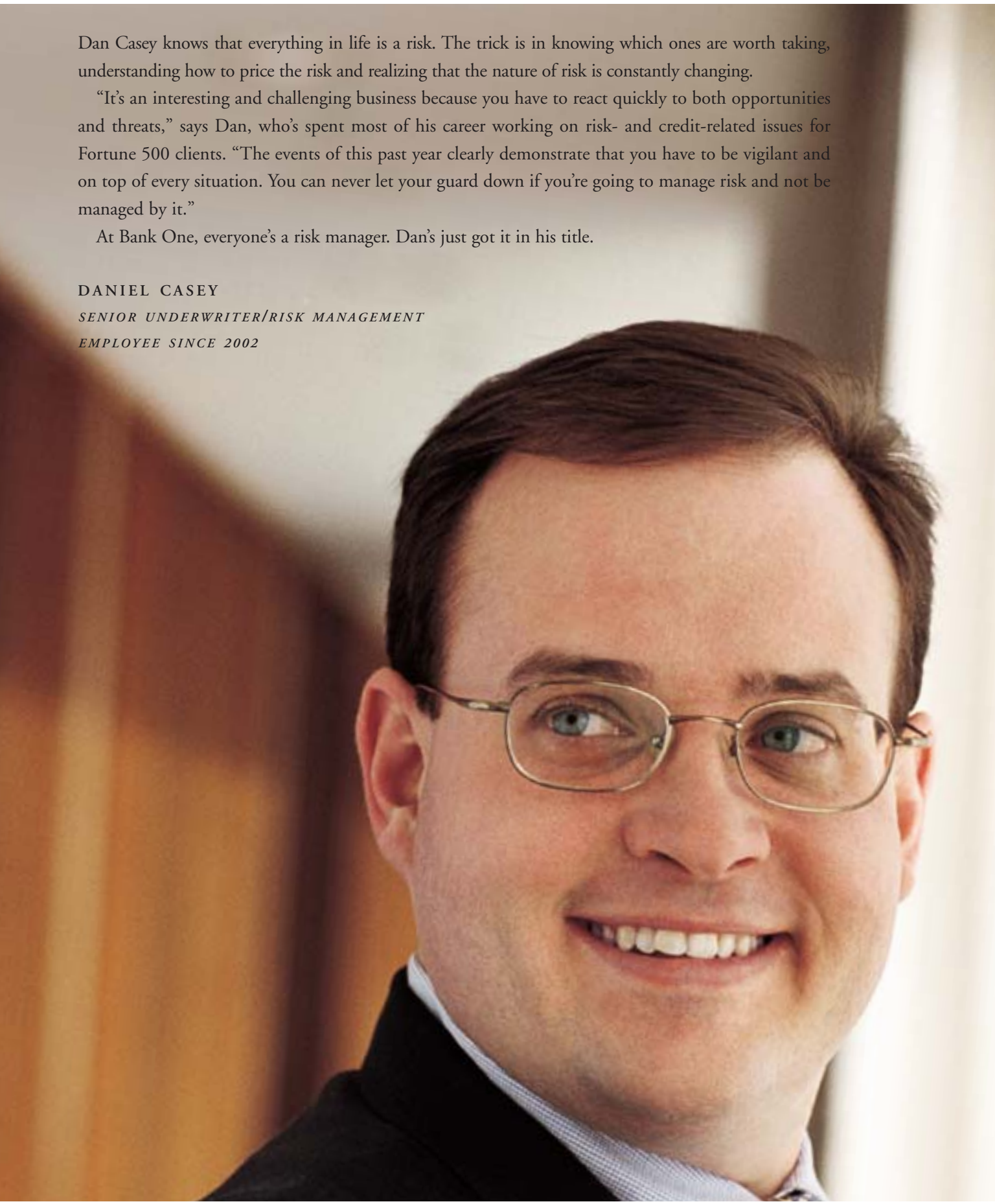
On guard

Dan Casey knows that everything in life is a risk. The trick is in knowing which ones are worth taking, understanding how to price the risk and realizing that the nature of risk is constantly changing.

"It's an interesting and challenging business because you have to react quickly to both opportunities and threats," says Dan, who's spent most of his career working on risk- and credit-related issues for Fortune 500 clients. "The events of this past year clearly demonstrate that you have to be vigilant and on top of every situation. You can never let your guard down if you're going to manage risk and not be managed by it."

At Bank One, everyone's a risk manager. Dan's just got it in his title.

DANIEL CASEY
SENIOR UNDERWRITER/RISK MANAGEMENT
EMPLOYEE SINCE 2002



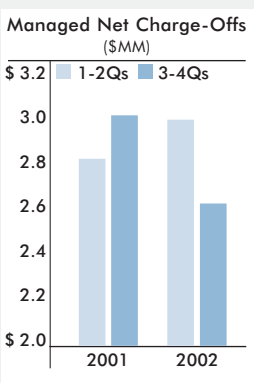
Bank One's 3.2% ratio of reserves to loans stands among the best in the industry.

Bank One's nonperforming loans decreased by $275 million, or 8%, from 2001.

DEAR SHAREHOLDER:

Being the Chief Risk Officer for a leading financial institution presented significant challenges in 2002. With a market characterized by significant corporate misbehavior and fraud, continued decline in stock values, a soft economy, high consumer debt, rising personal bankruptcies, and a lack of market growth, solid risk management discipline was more important than ever.

The good news is that Bank One was prepared for these difficult times. We began restructuring risk management disciplines in late 2000, with continuing improvements through 2002. This enabled us to improve our risk profile and react quickly to a rapidly changing economic environment. Our balance sheet is strong and our risk profile is healthy. Compared with 2001, we have lower charge-offs (managed basis) and nonperforming loans that reduce earnings volatility.



RISK MANAGEMENT IS A STATE OF MIND

Risk management is the responsibility of every Bank One employee, not just the corporate risk staff. Each of our 74,000 employees owns the risk issues of his or her specific daily activities. Our basic principles of risk management include:

- Know your business and customer.
- Think outside the box.
- Raise red flags immediately.
- Be forward looking as to where risk might lurk.
- Get paid for risk.
- Manage risk dynamically.

Incorporating these principles into employees' mindsets and activities is a cultural shift we emphasize throughout the organization.

Risk management governance approach and infrastructure changes were put into place in 2002 to support this cultural shift. Each line of business head and chief risk officer chairs a risk committee overseeing changes in policy, business initiatives, current risk profiles and market conditions. Weekly risk reports highlight key changes in business trends and serve to identify risk issues and create mitigation plans. We're developing new processes and systems to improve risk measurement and reporting. Our focus includes credit, market and operational risk, as they all contribute to our overall risk profile.

UPGRADING RISK MANAGEMENT PEOPLE, PROCESS AND SYSTEMS Although we run Card Services and Retail units as separate lines of business, we integrated those risk management activities under one Consumer Chief Risk Officer to better manage the credit relationships of our consumer customers across all products. To support this growing portfolio, we added depth to the risk management team, revamped underwriting systems/models, and improved data quality and reporting.

Commercial Banking risk management practices continue to become more sophisticated. We aggressively manage credit risk to our corporate, middle market, global treasury and capital markets customers through active portfolio management; a focus on risk/reward; forward-looking, externally focused risk measurement; risk-based limit setting and monitoring; expanded loan risk distribution (sales and credit derivatives); an evolution to more sophisticated portfolio management tools; and routine testing of probability of default and loss given default assumptions.

We applied risk management philosophies and committee structures consistent with the Commercial Banking governance structure to private client services to have consistent methods of risk assessment across all lines of business. Within Investment Management, we identified issues that created operational and reputational risk and developed new processes to minimize those risks.

PROFITING FROM SMART RISK DECISIONS

Much has been printed about Bank One's participation in the financing of two separate United Airlines Debtor-In-Possession (DIP) credit facilities. Due to our credit card relationship with United, we clearly have a vested interest in a healthy, prosperous United Airlines franchise. However, we did not compromise our risk principles; the transactions stand on their own merits. They are well structured, well priced and clearly within our credit competence of execution.

MAKING A NAME FOR OURSELVES Aggressive portfolio management techniques and proactive risk management disciplines allowed us to manage and prosper in a challenging year. We're confident that we'll be known for our core competency in risk management disciplines. With strong risk disciplines in place, we are poised to support growth – focused on balancing risk and reward to build a stronger future for Bank One.



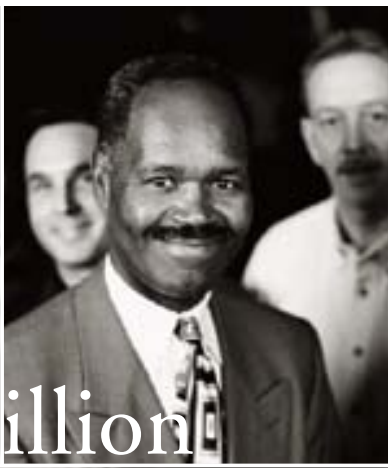
Linda Bammann
Chief Risk Management Officer

One system won







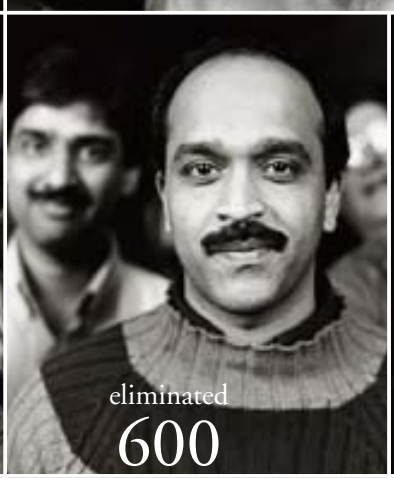




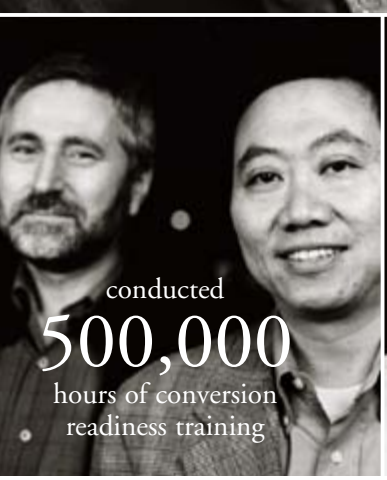


















DEAR SHAREHOLDER:

In today's financial services marketplace, technology is a critical component for success. We believe that when technology is developed in a cooperative and synergistic way throughout the enterprise, it can become a competitive advantage.

Two years ago Bank One launched strategic initiatives to standardize computer systems and streamline operations nationwide. The objectives of both were to improve customer service, simplify our employees' work and reduce costs.

A "HERCULEAN EFFORT" In the last 18 months we have successfully completed four major system conversions, essentially tripling the number of customer accounts on the standard deposit platform from four million to 12 million. When plans were announced to accomplish statewide system conversions for Michigan and Illinois in 2002, the media and industry analysts viewed the commitment with skepticism, saying it would take a "Herculean effort."

Charter and System Reductions

JANUARY 2001	JANUARY 2002	JANUARY 2004
20 Bank Charters	15 Bank Charters	5 Bank Charters
9 Deposit Systems	6 Deposit Systems	1 Deposit System
11 Lending Systems	10 Lending Systems	3 Lending Systems

It was with tremendous pride that we deemed completion of the last major state conversion – Illinois in November 2002 – an unqualified success. It was the largest conversion of any type in Bank One history, and in my 30-year banking career I have never seen a more seamless, large conversion with virtually no significant customer impacts.

In addition to the enormous effort put forth for conversion activities, we continued to streamline our operations and enhance our systems.

- We realized an annual savings of $53.2 million as a result of credit card and operating site consolidations and improved productivity.
- We developed a desktop system that allows frontline employees to provide tailored financial solutions for customers.
- We built a check image archive and retrieval system that now provides all Bank One customers with access to digital images of their checks on bankone.com.
- We upgraded our national telecommunications network for faster information retrieval and improved customer service.
- We brought a number of functions in-house to build internal expertise and enable greater control of our technical support.

During the past 18 months we have invested heavily in time, dollars and people to create competitive parity. We hired more than 1,750 top-notch technology professionals, significantly increasing our workforce both in quantity and quality, while competitors and other businesses were reducing their headcount.

LOOKING FORWARD Completion of the major system conversions in 2002 allows us to redirect $200 million into the development of new technology. These investments will strengthen and expand our business and product offerings to better compete in the marketplace. We are also targeting an additional $100 million in savings in 2004 as we continue to better leverage our operating systems and infrastructure across the enterprise.

Moving into 2003, we will continue to consolidate and standardize our systems, but on a much smaller scale. We will work toward our three-year goal of reducing the total number of systems from 1,277 to less than 700. With much of the foundational work complete, we will align our energy and resources to focus on significantly improving our systems' availability for our customers, and on developing systems that provide products to increase corporate revenue.

We will develop new technology to support our business lines in delivering quality products and services. Priorities include:

- A state-of-the-art teller banking system
- A new suite of Internet tools for commercial clients
- A relationship management system to provide better customer information
- New systems to better manage our financial planning and risk management
- An expanded ability to service customers across broad geographic areas

IN CLOSING We have an incredible sense of accomplishment when we review 2002. Our focus, our commitment, our productivity, and our pride – for what no one really thought could be accomplished in one year – have energized our team. We look forward to building on this foundation in 2003 to fully differentiate ourselves in the marketplace and improve Bank One's financial performance.



Austin A. Adams
Chief Information Officer

PLANNING GROUP

James Dimon
Chairman and
Chief Executive Officer

Austin A. Adams
Chief Information Officer

Linda Bammann
Chief Risk Management
Officer

James S. Boshart III
President and CEO
Commercial Banking

William I. Campbell
Advisor

David E. Donovan
President and CEO
Private Client Services

Christine A. Edwards
Chief Legal Officer
and Secretary

Philip G. Heasley
President and CEO
Card Services

Larry L. Helm
President and CEO
Middle Market Banking

David J. Kundert
President and CEO
Investment Management

Jay Mandelbaum
Strategy and Business
Development

Sarah L. McClelland
Chief Auditor

Heidi Miller
Chief Financial Officer

Tyree B. Miller
President and CEO
Global Treasury Services

Charles W. Scharf
President and CEO
Retail Banking



Planning Group, Standing: **Philip G. Heasley; David E. Donovan; Sarah L. McClelland; Larry L. Helm; James S. Boshart III; Christine A. Edwards; Charles W. Scharf; Tyree B. Miller; David J. Kundert; William I. Campbell** *(Advisor). Seated:* **Jay Mandelbaum; Linda Bammann; James Dimon; Austin A. Adams; Heidi Miller**

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Chief Executive Officer
Bank One Corporation

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Retired Chairman
and Chief Executive Officer
Sara Lee Corporation
(CONSUMER PRODUCTS)

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(Beginning February 2003)
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Communications, Inc.
(CABLE COMMUNICATIONS)

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General Partner
Henry Crown and Company
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(DIVERSIFIED INVESTMENTS)

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Chief Executive Officer
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(REAL ESTATE DEVELOPMENT)

John W. Kessler [2]
Owner
John W. Kessler Company
(REAL ESTATE DEVELOPMENT)

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(Beginning February 2003)
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Chief Executive Officer
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Corp.
(PROPERTY AND CASUALTY INSURANCE)

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Chief Executive Officer
Ariel Capital Management, Inc.
(INSTITUTIONAL MONEY MANAGEMENT)

Frederick P. Stratton, Jr. [1, 3]
Chairman Emeritus
Briggs & Stratton
Corporation
(ENGINE MANUFACTURER)

[1] *Member of the Audit and Risk Management Committee*

[2] *Member of the Compensation and Organization Committee*

[3] *Member of the Public Responsibility Committee*

[4] *Member of the Corporate Governance and Nominating Committee*

[5] *Member of the Executive Committee*

BANK ONE CORPORATION
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SELECTED FINANCIAL INFORMATION
BANK ONE CORPORATION and Subsidiaries

(In millions, except per share data, ratios, and headcount)	**2002**[5]	2001	2000	1999	1998
Income Statement Data:					
Total revenue, net of interest expense	**$ 16,831**	$ 15,861	$ 13,926	$ 17,713	$ 17,418
Net interest income – fully taxable-equivalent (FTE) basis [1]	**8,740**	8,769	8,974	9,142	9,469
Noninterest income	**8,236**	7,223	5,090	8,692	8,071
Provision for credit losses	**2,487**	2,510	3,398	1,249	1,408
Noninterest expense	**9,581**	9,551	11,608	11,490	11,545
Income (loss) before cumulative effect of change in accounting principle	**3,295**	2,682	(511)	3,479	3,108
Net income (loss)	**3,295**	2,638	(511)	3,479	3,108
Per Common Share Data:					
Income (loss) before cumulative effect of change in accounting principle:					
Basic	**$ 2.83**	$ 2.28	$ (0.45)	$ 2.97	$ 2.65
Diluted [2]	**2.80**	2.28	(0.45)	2.95	2.61
Net income (loss):					
Basic	**$ 2.83**	$ 2.25	$ (0.45)	$ 2.97	$ 2.65
Diluted [2]	**2.80**	2.24	(0.45)	2.95	2.61
Cash dividends declared	**0.84**	0.84	1.26	1.68	1.52
Book value	**19.28**	17.33	15.90	17.34	17.31
Balance Sheet Data – Ending Balances:					
Loans	**$148,125**	$156,733	$174,251	$163,877	$155,398
Total assets	**277,383**	268,954	269,300	269,425	261,496
Deposits	**170,008**	167,530	167,077	162,278	161,542
Long-term debt [3]	**43,234**	43,418	40,911	35,435	22,298
Common stockholders' equity	**22,440**	20,226	18,445	19,900	20,370
Total stockholders' equity	**22,440**	20,226	18,635	20,090	20,560
Credit Quality Ratios:					
Net charge-offs to average loans	**1.63%**	1.37%	0.81%	0.77%	0.97%
Allowance to period end loans	**3.20**	2.97	2.42	1.42	1.51
Nonperforming assets to related assets [4]	**2.38**	2.35	1.48	1.02	0.83
Financial Performance Ratios:					
Return (loss) on average assets	**1.25%**	0.98%	(0.19)%	1.36%	1.30%
Return (loss) on average common equity	**15.2**	13.4	(2.7)	17.1	15.9
Net interest margin	**3.78**	3.69	3.72	4.09	4.52
Efficiency ratio	**56.4**	59.7	82.5	64.4	65.8
Capital Ratios:					
Risk-based capital:					
Tier 1	**9.9%**	8.6%	7.3%	7.7%	7.9%
Total	**13.7**	12.2	10.8	10.7	11.3
Leverage	**8.9**	8.2	7.3	7.7	8.0
Common Stock Data:					
Average shares outstanding:					
Basic	**1,162**	1,166	1,154	1,168	1,170
Diluted [2]	**1,172**	1,174	1,154	1,178	1,189
Stock price, year-end	**$ 36.55**	$ 39.05	$ 36.63	$ 32.00	$ 51.06
Stock dividends	**—**	—	—	—	10%
Headcount	**73,685**	73,519[6]	80,778	87,735	92,800

(1) Net interest income-FTE includes taxable equivalent adjustments of $145 million, $131 million, $138 million, $121 million and $122 million for the years ended December 31, 2002, 2001, 2000, 1999 and 1998, respectively.

(2) Common equivalent shares and related income were excluded from the computation of diluted loss per share for the year-ended December 31, 2000 as the effect was antidilutive.

(3) Includes trust preferred capital securities.

(4) Related assets consist of loans outstanding, including loans held for sale and other real estate owned.

(5) Results include the effects of the consolidation of Paymentech, Inc. and Anexsys, LLC.

(6) Beginning in 2001, employees on long-term disability and employees of unconsolidated subsidiaries are excluded. Prior period data have not been reclassified for this change.

DESCRIPTION OF BUSINESS

BANK ONE CORPORATION and subsidiaries ("Bank One" or the "Corporation") is a diversified financial holding company that offers a full range of financial services to consumers and commercial customers. The Corporation is:

- A leader in retail and small business banking
- A premier provider of lending, treasury management, and capital markets products to commercial customers
- The third largest credit card issuer in the United States and the largest Visa® issuer in the world
- A leading investment management company

For a description of each business segment refer to "Business Segment Results and Other Data" beginning on page 38.

Basis of Presentation

The Corporation's financial statements are based on the application of accounting principles generally accepted in the United States of America, which are described in the notes to the consolidated financial statements starting on page 84. The Corporation's financial statements are highly dependent upon certain judgments, assumptions and estimates made by the Corporation. Those that are most critical to the overall financial statements are described below.

Management's discussion and analysis may contain forward-looking statements provided to assist in the understanding of anticipated future financial performance. However, such performance involves risks and uncertainties that may cause actual results to differ materially from those expressed in forward-looking statements. See page 79 for a discussion of these factors.

APPLICATION OF CRITICAL ACCOUNTING POLICIES

Generally accepted accounting principles are complex and require management to apply significant judgment to various accounting, reporting and disclosure matters. Management must use assumptions and estimates to apply these principles where actual measurement is not possible or practical.

For a complete discussion of the Corporation's significant accounting policies, see the footnotes to the Consolidated Financial Statements (pages 84-108) and discussion throughout this financial review document. Below is a plain-English discussion of the Corporation's critical accounting policies. These policies are critical because they are highly dependent upon subjective or complex judgments, assumptions and estimates. Changes in such estimates may have a significant impact on the financial statements. Management has reviewed the application of these policies with the Audit and Risk Management Committee of the Corporation's Board of Directors.

Allowance for Credit Losses

The allowance for credit losses represents management's estimate of probable losses inherent in the Corporation's credit portfolios. In determining an adequate allowance, management makes numerous assumptions, estimates and assessments. At the end of 2002, the allowance for credit losses was $4.5 billion, representing 3.20% of loans at year end.

The Corporation's allowance consists of three components: asset specific, expected loss and stress. The Corporation's methodology for determining each component is more fully described on pages 57-58 and 71-72.

The asset specific component applies to loans evaluated individually for impairment and is based upon management's best estimate of discounted cash repayments and proceeds from liquidating collateral. The actual timing and amount of repayments and the ultimate realizable value of the collateral may differ from management's estimates.

The expected loss component for commercial credits is based upon internal risk ratings that are applied to individual credits based upon the probability and amount of loss in the event of a default. These expected loss estimates are sensitive to changes in the risk profile of a customer, realizable value of collateral, other risk factors and actual loss experience.

The expected loss component of consumer credits is generally determined by applying statistical loss factors and other risk indicators to pools of loans by asset type. These expected loss estimates are sensitive to changes in delinquency status, credit bureau scores, the realizable value of collateral, and other risk factors.

The stress component represents the effect of probable economic deterioration above and beyond what is reflected in the asset specific and expected loss components. This amount is determined based upon the results of a series of tests that stress the credit portfolios. The Corporation's stress testing methodology is more fully described on pages 71 – 72.

The underlying assumptions, estimates and assessments used by management to determine these components are continually evaluated and updated to reflect management's current view of overall economic conditions and relevant factors impacting credit quality and inherent losses. Changes in such estimates could significantly impact the allowance and provision for credit losses in each business segment. The Corporation could experience credit losses that are different from the current estimates made by management.

Securitizations

The Corporation packages primarily credit card loans into securities that are sold to investors or retained on the balance sheet through the process of securitization. By applying detailed accounting guidelines, the Corporation determines if a securitization transaction results in a sale (as opposed to a secured borrowing), the amount of any gain or loss on such sale, and the value of retained interests in the securitized assets. During 2002, Card Services recognized $55 million in gains from the securitization of $6.8 billion in credit card receivables. The retained interest was approximately $28 billion at the end of 2002.

Management utilizes a discounted cash flow model to estimate the value of retained interests. Projected cash flows are generally based upon estimates of finance charges and fees related to the securitized assets, net credit losses, average life, the contractual fee to service the loans, and also contractual interest paid to third party investors. See page 94 for a pretax sensitivity analysis of the assumptions used to determine the fair values assigned to the Corporation's retained interests.

Changes in the cash flow estimates used may have a significant impact on Card Services' valuation of retained interests and the initial gain or loss on sale. See the "Loan Securitizations" on page 74 and Note 9 "Credit Card Securitizations" on pages 94-95 for further information on the Corporation's securitization activities.

Valuation of Certain Financial Instruments

The majority of the Corporation's financial instruments that require fair value measurements are determined based on quoted market prices. The Corporation must estimate the fair value of certain financial instruments, such as some principal investments and credit derivatives, which are not publicly traded or are traded in limited markets. These amounts represent the estimated values at which financial instruments could be currently exchanged or settled between willing parties.

While the fair value of a publicly traded investment is determined using quoted market prices, the fair value of some investments must be estimated based upon the investees' financial results, conditions and prospects, values of comparable public companies, market liquidity, and sale restrictions. Other investments require the use of a discounted cash flow model or other modeling techniques utilizing the limited market information to estimate fair value. These fair value estimates are most sensitive to the timing and amount of actual cash flows and market liquidity.

Changes in these estimates may have a significant impact on the carrying amount and the related valuation gains and losses on these financial instruments in the Commercial Banking and Corporate lines of business.

Stock Option Compensation

Prior to 2002, the Corporation did not record compensation expense for stock option awards. In 2002, the Corporation began recognizing the expense associated with stock options granted during 2002 using the fair value method. Compensation cost is calculated based on the fair value of the award at the grant date, and is recognized as an expense over the vesting period of the grant. The Corporation uses the Black-Scholes option pricing model to estimate the value of granted options. This model takes into account the option exercise price, the expected life, expected forfeitures, the current price of the underlying stock, the expected volatility of the Corporation's stock, expected dividends on the stock and a discount rate.

Since compensation cost is measured at the grant date, the only variable whose change would impact expected compensation expense recognized in future periods for 2002 grants is actual forfeitures. If the Corporation experiences a 50% lower forfeiture rate than estimated, compensation expense in the period of change would increase by $4 million. See Note 19 "Stock-Based Compensation" on page 100 for the specific assumptions used to calculate the fair value of options granted.

Pension

The Corporation provides pension benefits to its employees. In accordance with applicable accounting rules, the Corporation does not consolidate the assets and liabilities associated with the pension plan. (At the end of 2002, the fair value of pension plan assets was $2.5 billion and the plan was overfunded). Instead, the Corporation recognizes a prepaid asset for contributions the Corporation has made to the pension plan in excess of pension expense. The measurement of the prepaid asset and the annual pension expense involves actuarial and economic assumptions.

The assumptions used in pension accounting relate to the expected rate of return on plan assets, the rate of increase in salaries, the interest-crediting rate, the discount rate, and other assumptions. See Note 18 "Employee Benefits" on page 98 for the specific assumptions used by the Corporation.

The annual pension expense for the Corporation is currently most sensitive to the return on asset assumption. For example, each 25 basis point reduction in the 2003 expected rate of return of 7.5% would increase the Corporation's 2003 pension expense by approximately $8 million. In addition, each 25 basis point reduction in the 2003 discount rate of 6.5% would impact the Corporation's 2003 pension expense by approximately $1 million.

SUMMARY OF RESULTS

(All comparisons are to the prior year unless otherwise specified)

Net income was $3.3 billion, or $2.80 per diluted share. This is compared to net income of $2.6 billion, or $2.24 per diluted share.

Net interest income remained relatively unchanged at $8.6 billion. Decreases resulting from the intentional reduction of certain segments of the loan portfolio were offset by increases in Retail core deposits and the benefit of lower interest rates.

Noninterest income of $8.2 billion increased $1.0 billion, and as a percentage of total revenue increased to 48.9% from 45.5%. This increase was primarily due to growth in credit card revenue resulting from the acquisition of the Wachovia credit card business in the third quarter of 2001, and the consolidation of Paymentech, Inc. beginning January 1, 2002.

Noninterest income included numerous offsetting items, including net investment security gains of $165 million compared to losses of $66 million. The gain included a $261 million gain on sale of the interest in the GE Monogram joint venture, partially offset by net losses in the investment portfolios. Also included in the change in noninterest income were the $129 million increase in service charges on deposits, increases in asset-backed finance and underwriting fees in capital markets of $48 million, and $42 million in fee income related to increased annuity and mutual fund sales. In addition, noninterest income included $42 million of mark-to-market adjustments on the credit derivatives portfolio used to hedge exposure to specific credits in the loan portfolio, compared to $6 million in the prior year. Partially offsetting these increases were various asset writedowns. In addition, 2001 included $73 million of gains on the sales of the Corporation's interests in EquiServe Limited Partnership and Star Systems, an ATM network.

Total noninterest expenses of $9.6 billion increased by $30 million including a $414 million reduction in restructuring related charges. Excluding restructuring related charges and reversals, the change is a result of increased marketing expenditures of $192 million, $118 million for the consolidation of Paymentech and Anexsys, $89 million for terminating and renegotiating certain vendor contracts, and increased compensation expense for incentives and stock options.

Provision for credit losses was $2.5 billion for the year ended December 31, 2002, a decrease of $23 million. The allowance for credit losses was $4.5 billion as of December 31, 2002, unchanged from December 31, 2001. As a percentage of period end loans, the allowance increased to 3.20% from 2.97%. This is due to the reduction of the overall loan portfolio from $156.7 billion to $148.1 billion.

BALANCE SHEET ANALYSIS

In 2002, the Corporation took actions relating to both the asset and liability sides of the balance sheet in order to defensively position itself for a higher rate environment. On the asset side, the treasury investment portfolio was repositioned for rising rates, and the Corporation adjusted the funding of the balance sheet to selectively lengthen maturities and fix rates.

The Corporation's loan portfolio was $148.1 billion compared with $156.7 billion, a decrease of $8.6 billion, or 5%. Commercial Banking loans totaled $61.9 billion compared to $72.5 billion, a decrease of $10.6 billion, or 15%. Reductions of $8.5 billion and $1.8 billion in commercial and industrial and commercial real estate loans, respectively, reflected the impact of risk management initiatives to reduce aggregate risk, risk in specific credits and to be properly compensated for risks taken. Card Services loans totaled $11.6 billion compared to $6.8 billion, an increase of $4.8 billion, or 71%, reflecting lower attrition and higher utilization. During the year, 4.9 million credit card accounts were opened, an increase of 25%. Retail loans totaled $67.7 billion compared with $69.6 billion, a decrease of $1.9 billion, due primarily to the intentional reduction of the discontinued brokered home equity portfolios and auto lease offset by growth in the on-going home equity portfolio.

Investment securities totaled $67.6 billion compared with $60.9 billion. This increase of $6.7 billion, or 11%, was driven by an increase of $4.2 billion, or 18%, in retained interests in securitized credit card receivables, a $1.8 billion, or 7%, increase in U.S. government agencies, an increase of $639 million, or 23%, in equity securities, and an increase of $342 million, or 8%, in other debt securities. Partially offsetting these increases were the previously mentioned asset writedowns.

Total deposits were $170.0 billion compared to $167.5 billion, an increase of $2.5 billion, or 1%. Savings deposits totaled $88.9 billion compared to $80.6 billion, an increase of $8.3 billion, or 10%. Demand deposits totaled $34.3 billion compared to $32.2 billion, an increase of $2.1 billion, or 7%. Offsetting these increases was a decrease in time deposits of $7.7 billion, or 20%, to $30.5 billion from $38.2 billion.

The Corporation is managed on a line of business basis. The business segments' financial results presented reflect the current organization of the Corporation. The following table summarizes net income (loss) by line of business for the periods indicated.

For the Year Ended December 31,	**2002**[1]	2001[2]	2000
(In millions)			
Retail	**$1,390**	$1,181	$367
Commercial Banking	**617**	700	(92)
Card Services	**1,166**	907	(1)
Investment Management	**411**	362	322
Corporate	**(289)**	(468)	(1,107)
Income (loss) before cumulative effect of change in accounting principle	**3,295**	2,682	(511)
Cumulative effect of change in accounting principle, net of taxes of ($25)	**—**	(44)	—
Net income (loss)[3]	**$3,295**	$2,638	$(511)

(1) During 2002, the dealer commercial services business was transferred from Retail to Commercial Banking. All results for prior periods conform to the current line of business organization.

(2) During 2001, the tax-oriented portfolio of corporate investments was transferred to Commercial Banking, while the principal investments and fixed income portfolios were transferred to Corporate. All results for prior periods conform to the current line of business organization.

(3) Net income includes restructuring-related charges (reversals) net of tax expense (benefit) of $(40) million, $222 million and $102 million for 2002, 2001, and 2000, respectively

Description of Methodology

The results of the business segments are intended to reflect each segment as if it were a stand-alone business. The management reporting process that derives these results allocates income and expenses using market-based methodologies. Funds transfer pricing is used to allocate interest income and expense to each line of business. A portion of the Corporation's interest rate risk position is currently included in Corporate. The lines of business are assigned economic capital that reflects the underlying risk in that business. See the "Capital Management" section on page 77 for a discussion of the economic capital framework.

Historically, the costs of certain support units were allocated to the lines of business based on factors other than usage, such as headcount and total assets. The methodology was changed in the third quarter of 2000 to better reflect the actual cost and usage of services provided and was consistently applied to all lines of business. As a result of this methodology change, costs allocated to Card Services decreased, while unallocated costs that are included in Corporate increased.

The information provided in the line of business tables beginning with the caption entitled "Financial Performance" is included herein for analytical purposes only and is based on management information systems, assumptions and methodologies that are under continual review by management.

The financial information and supplemental data presented in the tables below for the respective lines of business are reported on an actual basis. To assist with the analysis of underlying trends, a discussion of merger and restructuring-related charges and their impact on business segment results is included for 2000 on pages 52–53.

Retail

Retail provides a broad range of financial products and services, including deposits, investments, loans, insurance, and on-line banking to nearly 6.9 million households including 489,000 small business customers. 1.4 million of total households are registered on-line users.

Products and services are delivered to customers through approximately 32,000 employees, 1,795 banking centers in 14 states, a large network of ATM's, bankone.com, and 24-hour telephone banking. THE ONE® Card, issued by Retail, is one of the country's leading debit cards for individuals and small businesses, with 4.6 million cards issued.

Retail originates consumer credit nationwide through its banking centers, relationships with brokers, the Internet, and the telephone. Retail offers real estate-secured, education, tax refund, consumer installment and auto loans and leases to individuals. Retail is also a leading lender to small businesses.

(Dollars in millions)	**2002**	2001	2000
Income Statement Data:			
Net interest income-FTE [1] [2]	**$ 4,871**	$ 4,961	$ 4,834
Banking fees and commissions [3]	**430**	455	470
Credit card revenue [4]	**177**	164	144
Service charges on deposits [5]	**834**	791	763
Other income (loss)	**(27)**	25	(766)
Total noninterest income	**1,414**	1,435	611
Total revenue, net of interest expense	**6,285**	6,396	5,445
Provision for credit losses	**910**	1,007	865
Salaries and employee benefits	**1,449**	1,476	1,536
Other expense	**1,800**	1,971	2,431
Total noninterest expense before merger and restructuring-related charges (reversals)	**3,249**	3,447	3,967
Merger and restructuring-related charges (reversals) [6]	**(18)**	104	39
Total noninterest expense	**3,231**	3,551	4,006
Income before income taxes	**2,144**	1,838	574
Applicable income taxes	**754**	657	207
Net income	**$ 1,390**	$ 1,181	$ 367
Memo – Revenue by source:			
Brokered core businesses	**$ 5,925**	$ 5,838	N/A
Home equity discontinued/vehicle leases	**360**	558	N/A
Financial Performance:			
Return on equity	**22%**	19%	6%
Efficiency ratio	**51**	56	74
Headcount–full-time [7]	**32,244**	32,904	35,514
Ending Balances *(in billions):*			
Small business commercial	**$ 9.9**	$ 9.9	$ 9.3
Home equity	**28.5**	25.1	31.4
Vehicle	**14.0**	13.5	14.3
Other personal	**8.5**	9.8	10.7
Core businesses	**60.9**	58.3	65.7
Brokered home equity discontinued	**3.2**	5.1	N/A
Vehicle leases	**3.6**	6.2	8.8
Brokered home equity discontinued/vehicle leases	**6.8**	11.3	8.8
Total loans [8]	**67.7**	69.6	74.5
Assets	**71.4**	73.6	77.1
Demand deposits	**27.7**	25.5	24.6
Savings	**38.8**	36.1	32.0
Time	**21.8**	25.6	32.2
Total deposits	**88.3**	87.2	88.8
Equity	**6.2**	6.2	5.8
Average Balances *(in billions):*			
Small business commercial	**$ 10.0**	$ 9.6	$ 9.4
Home equity	**26.2**	24.1	27.7
Vehicle	**13.8**	13.9	14.3
Other personal	**8.8**	10.5	11.0
Core businesses	**58.8**	58.1	62.4
Brokered home equity discontinued	**4.1**	6.7	N/A
Vehicle leases	**4.8**	7.3	9.9
Brokered home equity discontinued/vehicle leases	**8.9**	14.0	9.9
Total loans	**67.7**	72.1	72.3
Assets	**71.2**	76.2	76.4
Demand deposits	**26.1**	23.9	24.3
Savings	**37.9**	34.1	33.4
Time	**24.1**	29.4	30.4
Total deposits	**88.1**	87.4	88.1
Equity	**6.2**	6.1	5.7

(Dollars in millions)	**2002**	2001	2000
Credit Quality			
Net charge-offs:			
Small business commercial	**$ 85**	$ 70	$ 44
Home equity	**260**	210	181
Vehicle	**228**	154	138
Other personal	**109**	122	109
Core businesses	**682**	556	472
Brokered home equity discontinued	**158**	165	N/A
Vehicle leases	**79**	99	70
Home equity discontinued/vehicle leases	**237**	264	70
Total consumer	**834**	750	498
Total net charge-offs	**919**	820	542
Net charge-off ratios:			
Small business commercial	**0.85%**	0.73%	0.47%
Home equity	**0.99**	0.87	0.65
Vehicle	**1.65**	1.11	0.97
Other personal	**1.24**	1.16	0.99
Core businesses	**1.16**	0.96	0.76
Brokered home equity discontinued	**3.85**	2.46	N/A
Vehicle leases	**1.65**	1.36	0.71
Home equity discontinued/vehicle leases	**2.66**	1.89	0.71
Total consumer	**1.45**	1.20	0.79
Total net charge-offs	**1.36**	1.14	0.75
Nonperforming assets:			
Commercial	**$ 293**	$ 303	$ 214
Consumer [9]	**1,038**	1,041	697
Total nonperforming loans [10]	**1,331**	1,344	911
Other, including other real estate owned (OREO)	**223**	104	83
Total nonperforming assets	**1,554**	1,448	994
Allowance for credit losses	**1,018**	1,027	836
Allowance to period end loans [8]	**1.57%**	1.53%	1.15%
Allowance to nonperforming loans [10]	**77**	76	92
Nonperforming assets to related assets	**2.29**	2.08	1.33
Distribution:			
Number of:			
Banking centers	**1,795**	1,802	1,810
ATMs	**3,960**	5,141	6,055
On-line customers *(in thousands)*	**1,404**	1,083	918
Households *(in thousands)*	**6,942**	7,258	7,679
Business customers *(in thousands)*	**489**	508	519
Debit cards issued *(in thousands)*	**4,647**	4,414	4,159
Investments:			
Investment sales volume *(in millions)*	**$ 5,407**	$ 4,867	$ 4,272

N/A Not available due to changes in segment composition.

N/M Not meaningful.

(1) Net interest income-FTE includes tax equivalent adjustments of $22 million, $21 million and $25 million for the years ended December 31, 2002, 2001 and 2000, respectively.

(2) Net interest income is presented rather than gross interest income and gross interest expense because the Corporation relies primarily on net interest revenue to assess the performance of the segment and make resource allocations.

(3) Banking fees and commissions include insurance fees, documentary fees, commitment fees, mutual fund commissions, leasing fees, safe deposit fees, official checks fees, ATM interchange and miscellaneous other fee revenue.

(4) Credit card revenue includes credit card fees, debit card fees, merchant fees and interchange fees.

(5) Service charges on deposits include deficient balance fees, non-sufficient funds/overdraft fees and other service related fees.

(6) Restructuring-related charges (reversals) are allocated to each line of business for management reporting purposes. Restructuring-related charges (reversals) are discussed on pages 52–53 and in Note 4 "Restructuring-Related Activity" on page 89. Income before restructuring-related charges (reversals) for Retail, net of $(7) million, $38 million and $14 million of income taxes (benefit) was $1.4 billion, $1.2 billion and $392 million, for the years ended December 31, 2002, 2001 and 2000, respectively.

(7) Beginning in 2001, employees on long-term disability and employees of unconsolidated subsidiaries are excluded. Prior period data has not been reclassified.

(8) Loans include loans held for sale of $2.7 billion, $2.3 billion and $1.8 billion at December 31, 2002, 2001 and 2000, respectively. These amounts are not included in allowance coverage statistics. Prior periods have been recalculated to conform to current period presentation.

(9) Includes consumer balances that are placed on nonaccrual status when the collection of contractual principal or interest becomes 90 days past due.

(10) Nonperforming loans include loans held for sale of $3 million at December 31, 2002. There were no nonperforming loans held for sale at December 31, 2001 and 2000. These amounts are not included in allowance coverage statistics. Prior periods have been recalculated to conform to current period presentation.

2002 compared to 2001

Retail reported net income of $1.4 billion, up $209 million, or 18%, primarily reflecting reductions in noninterest expense.

Net interest income declined to $4.9 billion for the year, down $90 million, or 2%, driven by the intentional reduction of $5.1 billion of average loan balances for the vehicle lease and discontinued brokered home equity portfolios. This decline was partially offset by a 10% increase in core deposits, which include demand and savings products.

Noninterest income was $1.4 billion, down $21 million, or 1%, primarily as a result of lower mortgage-related revenue and lower revenue from the reduction of non-branded ATMs, partially offset by higher deposit service charges and debit card revenue.

Noninterest expense was $3.2 billion, a decline of $320 million, or 9% including a $122 million reduction in restructuring-related charges. Excluding restructuring costs, improvements were driven by lower staffing, the absence of goodwill amortization, lower fraud and operating losses and lower ATM expenses. The decline was partially offset by additional investments in marketing and benefits costs.

The provision for credit losses was $910 million, down $97 million, or 10%, due to the absence of reserve increases and reductions in net charge-offs in discontinued brokered home equity and vehicle leases offset by higher charge-offs in on-going home equity and vehicle loans.

The allowance for credit losses of $1.0 billion represented 1.57% of period-end loans, an increase from 1.53% in the prior year. Nonperforming assets were $1.6 billion, up $106 million, or 7%, due to increases in other real estate owned offset by nominal declines in commercial loans and consumer loans.

2001 compared to 2000

Retail reported net income of $1.2 billion in 2001 compared to $367 million in 2000. The 2000 net income reflected an adjustment for significant items totaling $456 million after-tax. The $358 million, or 43%, year-over-year increase, on an adjusted basis was principally driven by a $260 million reduction in noninterest expense.

Net interest income was $5.0 billion for the year, up $127 million, or 3%, due to improved spreads on the indirect auto loan portfolio and 11% growth in average home equity outstandings, partially offset by a narrower deposit margin. Loan balances were down $4.9 billion as Retail managed reductions in certain segments of the loan portfolio while direct home equity loans grew.

Deposits generated a narrower margin compared to 2000, reflecting the lower rate environment and a decline in average balances. Favorable mix changes from time to savings helped mitigate the impact of lower rates and balances. More positive trends emerged late in 2001 as average demand deposit balances posted 2% growth from the fourth quarter of 2000 to the fourth quarter of 2001.

Noninterest income was $1.4 billion, up $824 million compared to 2000. The absence of lease residual losses and higher fee revenue from deposit accounts and investment sales was partially offset by gains from the sale of miscellaneous assets in 2000. Sales of mutual funds and annuities totaled $4.9 billion in the year, up $595 million, or 14%.

Noninterest expense was $3.6 billion, down $455 million, or 11%, driving an improvement in the efficiency ratio from 74% in 2000 to 56% in 2001. The consolidation of operating sites in 2000 and 2001 and better overall expense management in Retail, and throughout the Corporation, drove the efficiency improvement. In addition, staffing levels were down 2,600 year-over-year leading to a 4% decrease in salaries and employee benefits expense.

The provision for credit losses was $1.0 billion, up $142 million, or 16%, from 2000. Net charge-offs were $820 million, up $278 million. Charge-offs on brokered home equity loans and auto loans and leases were the primary drivers of Retail's year-over-year increase.

Nonperforming assets were $1.4 billion, up $454 million, or 46%, compared to 2000, driven primarily by an increase in brokered home equity nonperforming loans. Nonperforming assets were 2.08% of related assets in the year, up from 1.33%. The allowance for credit losses expressed as a percent of year-end loans increased to 1.53% compared to 1.15% a year ago.

Commercial Banking

Commercial Banking offers a broad array of products, including global cash management, treasury services, capital markets, commercial cards, lending and other noncredit products and services to corporate banking and middle market banking customers.

Corporate banking serves primarily large corporations, financial institutions and commercial real estate entities. The Corporation's capital markets business is engaged in the origination, trading, and distribution of asset-backed securities, investment grade and high yield securities, derivatives, tax-exempt securities, foreign exchange, government bonds and tax oriented investments. Capital markets is also actively engaged in loan syndications, market research, advisory services, and private placements.

Middle market banking serves the customer segment with annual revenues from approximately $10 million to $500 million, which includes corporations, municipalities and not-for-profit entities. These customers use a wide variety of services, with nearly one-third using the Corporation exclusively. Since privately held companies comprise the vast majority of the middle market customer base, providing credit is fundamental to the success of this business. The loan portfolio is diversified across a broad range of industries and geographic locations. In addition to credit, this customer segment actively uses the Corporation's cash management, international, capital markets, and investment management products and services.

(Dollars in millions)	**2002**[12]	2001	2000
Income Statement Data:			
Net interest income-FTE [2] [11]	**$ 2,467**	$ 2,765	$ 2,886
Banking fees and commissions	**780**	718	608
Credit card revenue	**77**	86	75
Service charges on deposits	**714**	618	523
Fiduciary and investment management fees [13]	**1**	3	3
Investment securities losses	**(13)**	(12)	—
Trading [14]	**248**	269	183
Other losses	**(163)**	(100)	(31)
Total noninterest income	**1,644**	1,582	1,361
Total revenue, net of interest expense	**4,111**	4,347	4,247
Provision for credit losses	**994**	1,073	2,222
Salaries and employee benefits [15]	**1,062**	1,028	1,004
Other expense [15]	**1,280**	1,222	1,296
Total noninterest expense before merger and restructuring-related charges (reversals)	**2,342**	2,250	2,300
Merger and restructuring-related charges (reversals) [16]	**(4)**	73	(2)
Total noninterest expense	**2,338**	2,323	2,298
Income (loss) before income taxes	**779**	951	(273)
Applicable income taxes (benefit)	**162**	251	(181)
Net income (loss)	**$ 617**	$ 700	$ (92)
Memo–Revenue by activity [17]:			
Lending-related revenue	**$ 1,685**	$ 2,017	$ 2,206
Credit derivative hedge portfolio	**42**	6	—
Global treasury services	**1,653**	1,606	1,454
Capital markets [18]	**717**	684	482
Other	**14**	34	105
Financial Performance:			
Return (loss) on equity	**8%**	10%	(1)%
Efficiency ratio	**57**	53	54
Efficiency ratio excluding Credit derivative hedge portfolio	**57**	54	N/A
Headcount–full-time [19]:			
Corporate banking (including capital markets)	**2,359**	2,714	3,545
Middle market	**2,853**	3,251	3,543
Global treasury services	**3,342**	2,984	3,118
Operations, technology, and other administration	**1,988**	2,188	2,099
Total headcount–full-time	**10,542**	11,137	12,305
Ending Balances *(in billions):*			
Loans [20]	**$ 61.9**	$ 72.5	$ 87.9
Assets	**93.7**	100.7	106.6
Demand deposits	**25.5**	25.5	21.5
Savings	**3.5**	3.1	N/A
Time	**17.4**	14.0	8.0
Foreign offices	**10.2**	8.6	8.5
Total deposits	**56.6**	51.2	38.0
Equity	**7.4**	7.3	7.1
Average Balances *(in billions):*			
Loans	**$ 66.0**	$ 80.4	$ 87.9
Assets	**95.1**	107.1	117.1
Demand deposits	**22.4**	21.4	21.4
Savings	**3.0**	2.7	N/A
Time	**14.0**	8.9	8.5
Foreign offices	**8.6**	9.0	9.8
Total deposits	**48.0**	42.0	39.7
Equity	**7.4**	7.3	6.9

(Dollars in millions)	**2002**[12]	2001	2000
Credit Quality			
Net charge-offs	**$ 994**	$ 1,042	$ 562
Net charge-off ratio	**1.51%**	1.30%	0.64%
Nonperforming assets:			
Nonperforming loans [21]	**$ 1,874**	$ 2,127	$ 1,524
Other, including OREO	**21**	27	13
Total nonperforming assets	**1,895**	2,154	1,537
Allowance for credit losses	**3,071**	3,079	3,054
Allowance to period end loans [20]	**4.98%**	4.25%	3.48%
Allowance to nonperforming loans [21]	**166**	145	200
Nonperforming assets to related assets	**3.06**	2.97	1.75
Corporate banking *(in billions):*			
Loans –ending balance	**$ 31.6**	$ 36.6	$ 51.7
–average balance	**33.0**	43.5	53.4
Deposits –ending balance	**32.0**	28.7	19.6
–average balance	**26.1**	23.0	21.4
Credit quality *(dollars in millions)*:			
Net charge-offs	**639**	638	435
Net charge-off ratio	**1.94%**	1.47%	0.81%
Nonperforming loans	**$ 873**	$ 1,154	$ 1,065
Nonperforming loans to total loans	**2.76%**	3.15%	2.06%
Syndications:			
Lead arranger deals:			
Volume *(in billions)*	**$ 61.9**	$ 54.1	$ 59.8
Number of transactions	**271**	238	231
League table standing–rank	**4**	4	4
League table standing–market share	**6%**	5%	5%
Middle market banking *(in billions):*			
Loans –ending balance	**$ 30.3**	$ 35.9	$ 36.2
–average balance	**33.0**	36.9	34.5
Deposits –ending balance	**24.6**	22.5	18.4
–average balance	**21.9**	19.0	18.5
Credit quality *(dollars in millions)*:			
Net charge-offs	**355**	404	127
Net charge-off ratio	**1.08%**	1.09%	0.37%
Nonperforming loans	**$ 1,001**	$ 973	$ 459
Nonperforming loans to total loans	**3.30%**	2.71%	1.27%

For additional footnote detail see page 40

(11) Net interest income-FTE includes taxable equivalent adjustments of $91 million, $79 million and $111 million for the years ended December 31, 2002, 2001 and 2000, respectively.

(12) Results include the effect of consolidating Anexsys, LLC which had an impact on individual line items of revenue and expense but no impact on net income for the year ended December 31, 2002. The consolidation resulted in a $46 million increase in net interest income, a $19 million increase in noninterest income and a $65 million increase in noninterest expense.

(13) Fiduciary and investment management fees include asset management fees, personal trust fees, other trust fees and advisory fees.

(14) Trading income primarily includes realized and unrealized mark-to-market changes from trading assets, derivative financial instruments and foreign exchange products.

(15) Prior period data has been adjusted for the transfer of the national retail lockbox operations and cash vault services business from Commercial Banking to Corporate in 2002.

(16) Restructuring-related charges (reversals) are discussed on pages 52–53 and in Note 4 "Restructuring-Related Activity" on page 89. Income (loss) before restructuring-related charges (reversals) for Commercial Banking, net of $(1) million, $27 million and $(1) million of income taxes (benefit), was $614 million, $746 million and $(93) million, for the years ended December 31, 2002, 2001 and 2000, respectively.

(17) Prior periods have been adjusted to conform to material organizational changes.

(18) Capital markets includes trading income and underwriting, syndicated lending and advisory fees.

(19) Full-time headcount in 2000 has been reclassified to reflect the movement of support and other administrative personnel into the respective business units reported.

(20) Loans include loans held for sale of $235 million, $83 million and $488 million at December 31, 2002, 2001 and 2000, respectively. These amounts are not included in allowance coverage statistics. Prior periods have been recalculated to conform to current period presentation.

(21) Nonperforming loans include loans held for sale of $19 million at December 31, 2002. There were no nonperforming loans held for sale at December 31, 2001, and 2000. These amounts are not included in allowance coverage statistics. Prior periods have been recalculated to conform to current period presentation.

2002 compared to 2001

Commercial Banking reported net income of $617 million for 2002, down $83 million, or 12%, from 2001, due to lower net interest income offset by lower income taxes, lower credit provision and the absence of restructuring charges in 2002.

Net interest income was $2.5 billion, down $298 million, or 11%, reflecting a reduction in average loans of $14.4 billion or 18%. Average loans decreased $10.5 billion, or 24%, in corporate banking and $3.9 billion, or 11%, in middle market.

Mark-to-market adjustments on the credit derivatives portfolio positively impacted the current year by $42 million and the prior year by $6 million. Given the mark-to-market accounting treatment of this portfolio, continued volatility is expected. Excluding the impact of the gain in each period, noninterest income increased $26 million, or 2%, primarily as a result of the following items: banking fees and commissions increased $62 million, or 9%, due to growth in asset-backed finance underwriting and other capital markets products; service charges on deposits increased $96 million, or 16%, reflecting a shift in payment for services to fees due to the lower value of customers' compensating deposit balances; trading revenue decreased by $57 million, or 22%, primarily reflecting a decrease in fixed income trading revenues; and other income decreased by $63 million primarily due to higher losses in tax-oriented investments and various asset write-downs.

Noninterest expense was $2.3 billion, up $15 million, or 1%, from 2001 including a $77 million reduction in restructuring-related charges. Excluding restructuring costs, noninterest expense increased by $92 million, or 4%, as a result of a $65 million impact from the consolidation of Anexsys, LLC, as well as higher incentive compensation and systems conversion-related expenses.

The effective tax rate (on an FTE basis) of 20.8% in 2002 decreased from 26.4% in 2001 primarily due to an increase in tax credits generated from tax oriented investments combined with a decrease in pre-tax income in 2002.

The provision for credit losses was $994 million, down $79 million, or 7%, from 2001. Net charge-offs were $994 million, down $48 million, or 5%, and represented 1.51% of average loans, up from 1.30% in 2001. Corporate banking net charge-offs were $639 million, or 1.94% of average loans, up from 1.47% in 2001. Middle market net charge-offs were $355 million, or 1.08% of average loans, down slightly from 1.09% of average loans in the prior year. For additional detail on Commercial Banking net charge-offs, see the table on page 67.

The allowance for credit losses at December 31, 2002, was $3.1 billion, down $8 million from the prior year. This represented 4.98% of year-end loans and 166% of nonperforming loans compared with 4.25% and 145%, respectively, at December 31, 2001. Nonperforming loans were $1.9 billion, down $253 million, or 12%, from year-end 2001. Corporate banking nonperforming loans at year-end were $873 million, down $281 million, or 24%, from the prior year. Middle market nonperforming loans were $1.0 billion at December 31, 2002, up $28 million, or 3%, from the prior year. For additional detail on Commercial Banking nonperforming assets and the allowance for credit losses, see the tables on page 66 and page 69 respectively.

2001 compared to 2000

Commercial Banking reported net income of $700 million for 2001, up $792 million from 2000, primarily due to a significantly lower credit provision. 2001 results reflected strategic efforts to reduce corporate banking credit exposure and improve the cross-sell of capital markets and global treasury services products.

Net interest income was $2.8 billion, down $121 million, or 4%, reflecting the earnings impact of lower average loan balances resulting from efforts to reduce credit risk exposure.

Noninterest income was $1.6 billion, up $221 million, or 16%. Banking fees and commissions increased $110 million, or 18%, due to growth in the asset-backed and investment grade underwriting business and higher account sweep fees. Service charges on deposits increased $95 million, or 18%, reflecting improvement in global treasury services' volumes and pricing, as well as a shift in payment for services to fees due to the lower value of customers' compensating deposit balances. Trading revenue increased $86 million, or 47%, primarily reflecting improvement in fixed income trading activities. Other income decreased by $69 million mainly due to losses on the sale of loans.

The provision for credit losses was $1.1 billion, down $1.1 billion, or 52%, from 2000. In 2000, the allowance for credit losses increased substantially as the provision exceeded net charge-offs by $1.7 billion. In 2001 net charge-offs were $1.0 billion, up $480 million, or 85%, and represented 1.30% of average loans, up from 0.64% in 2000.

Noninterest expense was $2.3 billion, up $25 million from 2000, and included $73 million of additional restructuring-related charges. Excluding restructuring costs, noninterest expense declined $50 million, or 2%, reflecting the impact of waste-reduction efforts and lower headcount. The 2001 efficiency ratio improved to 53% from 54% in 2000.

Card Services

Card Services (previously referred to as Credit Card) offers customers more than 1,200 co-brand, affinity and other cards. These cards include some of the leading corporations, financial institutions, universities, sports franchises and affinity organizations. All of these cards carry the respective Visa® or MasterCard® brand names.

With 50.4 million cards in circulation, Card Services is the third largest credit card provider in the United States and the largest Visa credit card issuer in the world. Card Services is also a leader in online card marketing and customer service, with more than 3.4 million registered users of its website.

(Dollars in millions)	**2002**[23]	2001	2000
Income Statement Data:			
Net interest income-FTE [2] [22]	**$ 1,271**	$ 1,280	$ 1,303
Banking fees and commissions	**66**	96	112
Credit card revenue	**3,560**	2,525	2,050
Other income (loss)	**(33)**	120	(220)
Total noninterest income	**3,593**	2,741	1,942
Total revenue, net of interest expense	**4,864**	4,021	3,245
Provision for credit losses	**531**	392	301
Salaries and employee benefits	**589**	501	517
Other expense	**1,856**	1,618	2,422
Total noninterest expense before merger and restructuring-related charges (reversals)	**2,445**	2,119	2,939
Merger and restructuring-related charges (reversals) [24]	**(19)**	61	7
Total noninterest expense	**2,426**	2,180	2,946
Income (loss) before income taxes	**1,907**	1,449	(2)
Applicable income taxes (benefit)	**741**	542	(1)
Net income (loss)	**$ 1,166**	$ 907	$ (1)
Memo–Net securitization amortization	**$ (50)**	$ (62)	$ (116)
Financial Performance:			
Return on equity	**18%**	14%	—%
Efficiency ratio	**50**	54	91
Headcount–full-time	**10,548**	9,871	10,901
Ending Balances *(in billions):*			
Owned loans [25]	**$ 11.6**	$ 6.8	$ 4.7
Seller's interest and accrued interest receivable	**28.5**	24.0	22.5
Total	**40.1**	30.8	27.2
Assets	**45.3**	35.3	30.7
Equity	**6.4**	6.4	6.2
Average Balances *(in billions):*			
Owned loans	**$ 9.9**	$ 6.8	$ 4.8
Seller's interest and accrued interest receivable	**23.2**	18.8	18.5
Total	**33.1**	25.6	23.3
Assets	**37.6**	28.9	27.0
Equity	**6.4**	6.3	6.1
Credit Quality *(dollars in millions):*			
Net charge-offs	**$ 514**	$ 392	$ 247
Net charge-off ratios:			
Credit card – reported	**5.19%**	5.69%	5.20%
Delinquency ratio:			
30+ days	**2.95**	3.00	2.74
90+ days	**1.38**	1.41	1.20
Allowance for credit losses	**$ 396**	$ 396	$ 197
Allowance to period end owned loans (excluding loans held for sale) [25]	**5.22%**	7.86%	6.95%
Other Data:			
Charge volume *(in billions)*	**$ 155.4**	$ 140.4	$ 142.5
New accounts opened *(in thousands)*	**4,911**	3,925	3,324
Credit cards issued *(in thousands)* [26]	**50,351**	50,996	51,693
Number of FirstUSA.com customers *(in millions)* [27]	**3.4**	1.9	2.1
Paymentech:			
Bank card volume *(in millions)*	**$124,727**	$115,332	$108,684
Total transactions *(in millions)*	**4,208**	3,778	3,441

Through securitization the Corporation transforms a substantial portion of its credit card receivables into securities, which are sold to investors. Securitization impacts the Corporation's consolidated balance sheet by removing those credit card receivables that have been sold and by reclassifying those credit card receivables whose ownership has been transformed into certificate form (referred to as "Seller's Interest") from loans to investments. Gain or loss on the sale of credit card receivables, net of amortization of transaction costs and amortization from securitization repayments, is reported as securitization income in other income. Securitization also impacts the Corporation's consolidated income statement by reclassifying interest income and fees, interchange income, credit losses and recoveries related to securitized receivables as securitization income. Credit card interest income and fees, interchange income, credit losses and recoveries related to credit card receivables that have been converted to certificate form are reclassified as investment income in net interest income.

The Corporation evaluates its Card Services line of business trends on a managed basis, which treats the securitization as a secured financing transaction and assumes that receivables have not been sold and are still on the balance sheet. The Corporation manages its Card Services operations on a managed basis because the receivables that are securitized are subject to underwriting standards comparable to the owned portfolio and are serviced by operating personnel without regard to ownership. The Corporation believes that investors should be informed, and often request information, about the credit performance of the entire managed portfolio in order to understand the quality of the Card Services originations and the related credit risks inherent in the owned portfolio and retained interests in securitizations. In addition, the Corporation funds its Card Services operations, reviews operating results and makes decisions about allocating resources, such as employees and capital, on a managed basis. See "Loan Securitizations" on page 74 and Note 9 "Credit Card Securitizations," on pages 94–95 for additional information related to the Corporation's securitization activity.

The following table presents certain Card Services information on a managed basis.

Card Services – Managed Basis	**2002**[23]	2001	2000
Ending Balances *(in billions):*			
Owned [25]	**$ 11.6**	$ 6.8	$ 4.7
Seller's interest and accrued interest receivable [28]	**28.5**	24.0	22.5
Loans and investment securities on balance sheet	**40.1**	30.8	27.2
Securitized loans	**33.9**	37.4	39.8
Managed loans	**74.0**	68.2	67.0
Managed assets	**79.2**	72.7	70.5
Average Managed Assets *(in billions):*	**72.4**	68.7	70.0
Credit Quality *(dollars in millions):*			
Managed net charge-offs	**3,632**	3,823	3,584
Managed net charge-off ratios:			
For the period	**5.35%**	5.84%	5.42%
12-month lagged [29]	**5.55**	5.77	5.19
Managed delinquency ratio:			
30+ days	**4.02**	4.46	4.51
90+ days	**1.80**	1.93	2.02

For additional footnote detail see pages 40 and 43.

(22) Net interest income-FTE did not have tax equivalent adjustments for the years ended December 31, 2002, 2001 and 2000.

(23) Results include the effect of consolidating Paymentech beginning in the first quarter of 2002. As a result of this consolidation net interest income included $13 million, noninterest income included $322 million and noninterest expense included $285 million. There was no impact on net income.

(24) Restructuring-related charges (reversals) are discussed on pages 52–53 and in Note 4 "Restructuring-Related Activity" on page 89. Income (loss) before restructuring-related charges (reversals) for Card Services, net of $(7) million, $22 million and $3 million of income taxes (benefit), was $1.1 billion, $946 million and $3 million for the years ended December 31, 2002, 2001 and 2000, respectively.

(25) Loans include loans held for sale of $4.0 billion, $1.7 billion and $1.9 billion at December 31, 2002, 2001 and 2000, respectively. These amounts are not included in allowance coverage statistics. Prior periods have been recalculated to conform to current period presentation.

(26) Approximately 4.5 million previously acquired inactive accounts were purged during 2002 and prior periods have been recalculated to conform to current period presentation.

(27) Approximately 1 million registered users were purged in late 2001 due to inactivity.

(28) The investor portion of accrued interest receivable was $685 million and is recorded in other assets at December 31, 2002.

(29) The current year lagged loss rate includes Wachovia net credit losses while the prior year average loans only includes five months of Wachovia balances. The prior year lagged loss rate includes five months of Wachovia net credit losses while the 2000 average loans do not include Wachovia balances. The 2001 ratio includes Wachovia net charge-offs but excludes Wachovia loans.

2002 compared to 2001

Card Services reported net income of $1.2 billion, up $259 million, or 29%. 2002 results reflected twelve months of earnings from the acquisition of the Wachovia credit card business while 2001 results reflected five months of Wachovia earnings.

Total reported revenue was $4.9 billion, up $843 million or 21%. Net interest income was $1.3 billion, down $9 million, or 1%, reflecting lower spreads due to competitive pricing partially offset by higher volumes. Excluding the $322 million impact of the Paymentech consolidation effective January 1, 2002, noninterest income was $3.3 billion, an increase of $530 million, or 19%, primarily driven by higher volume related revenue and higher income earned on securitized loans.

Excluding the $285 million impact from the consolidation of Paymentech, noninterest expense was $2.1 billion, a decrease of $39 million, or 2%, resulting from continued expense management and the impact of restructuring-related charges (reversals) partially offset by higher marketing expense.

The reported provision for credit losses was $531 million, an increase of $139 million, or 35%, as a result of portfolio growth.

Securitization gains were $55 million resulting from the securitization of $6.8 billion in credit card receivables. This compares with securitization gains of $28 million resulting from the securitization of $3.8 billion in credit card receivables in the previous year.

Card Services has a significant co-branding relationship with United Airlines, the Mileage Plus® award program. In the fourth quarter of 2002, United Airlines announced their intent to reorganize under Chapter 11 of the U.S. Bankruptcy Code. The outcome is uncertain at this time, and could have a significant impact on Card Services. If United Airlines is unsuccessful, and in the worst scenario is liquidated, Card Services' net income would be negatively impacted by the dissolution of the marketing agreement, loss of fee and interest income and increased marketing expense to encourage customers to continue card usage. Management expects the amount could be as high as several hundred million dollars.

2001 compared to 2000

Card Services reported net income of $907 million in 2001, up from a net loss of $1 million. Adjusted for $522 million after-tax of significant items, 2000 net income was $521 million. Increased reported net income reflected lower expenses, the addition of the Wachovia credit card business and higher income on securitized loans, partially offset by increased credit costs and lower spreads.

Total reported revenue was $4.0 billion, up $776 million or 24%. Net interest income was $1.3 billion, down $23 million, or 2%, reflecting lower spreads partially offset by the addition of the Wachovia credit card business and higher fees.

Noninterest income was $2.7 billion, an increase of $799 million, or 41%. 2000 noninterest income included $467 million in significant items. Excluding these charges, noninterest income increased $332 million, or 14%, reflecting the Wachovia credit card business, higher income on securitized loans and increased securitization activity.

The reported provision for credit losses was $392 million, an increase of $91 million, or 30%, as a result of portfolio growth partially offset by lower provision funding.

Noninterest expense totaled $2.2 billion, a decrease of $766 million, or 26%. 2000 noninterest expense included significant items of $321 million. Excluding these charges, noninterest expense decreased $445 million, or 17%, reflecting lower fraud and operational losses, processing costs and a decrease in internally allocated costs related to a mid-year 2000 change in methodology. The decline from 2000 also reflected the sale of international operations in the second quarter. These reductions were partially offset by the addition of the Wachovia credit card business, additional restructuring reserves and higher marketing expense.

Securitization gains were $28 million resulting from the securitization of $3.8 billion in credit card receivables. There were no securitizations entered into in 2000.

Investment Management

The Investment Management Group (IMG) provides investment, insurance, trust and private banking services to individuals. IMG also provides investment and investment related services, including retirement and custody services, securities lending and corporate trust to institutions.

IMG's registered investment advisory arm, Banc One Investment Advisors, ranks among the nation's top asset managers with $162.0 billion in assets under management. In addition, IMG manages One Group® mutual funds, one of the largest mutual fund complexes with over 50 funds and $101.2 billion in assets under management. Performance of the funds continues to remain strong. 89% of the assets are in funds ranked 3 stars or better and 50% of the assets are in funds ranked 4 stars or better by Morningstar®. During 2002 the distribution function for the One Group mutual funds was brought in-house.

Private client services (PCS) helps manage and build wealth for high net worth clients. PCS provides integrated financial advice and services such as brokerage, investments and alternative asset management, personal trust, private banking, insurance and financial planning through nearly 700 client advisors.

The retail investment services (RIS) business serves the Corporation's retail customer base by delivering high quality investment and insurance products and services through nearly 3,100 licensed bankers in 1,795 banking centers in 14 states.

The global corporate trust business ranks among the largest providers in the country for bond trustee services. These services are provided to governmental and municipal entities, as well as a broad range of middle market and large institutions.

(Dollars in millions)	**2002**	2001	2000
Income Statement Data:			
Net interest income-FTE [2] [30]	**$ 423**	$ 427	$ 409
Banking fees and commissions	**523**	480	354
Service charges on deposits	**19**	17	16
Fiduciary and investment management fees	**739**	751	780
Other income	**14**	11	11
Total noninterest income	**1,295**	1,259	1,161
Total revenue, net of interest expense	**1,718**	1,686	1,570
Provision for credit losses	**35**	38	13
Salaries and employee benefits	**565**	564	554
Other expense	**464**	488	495
Total noninterest expense before merger and restructuring-related charges (reversals)	**1,029**	1,052	1,049
Merger and restructuring-related charges (reversals) [31]	**(1)**	19	—
Total noninterest expense	**1,028**	1,071	1,049
Income before income taxes	**655**	577	508
Applicable income taxes	**244**	215	186
Net income	**$ 411**	$ 362	$ 322
Memo – Insurance revenues	**$ 447**	$ 437	$ 357
Financial Performance:			
Return on equity	**37%**	36%	36%
Efficiency ratio	**60**	64	67
Headcount–full-time	**5,895**	6,071	6,562
Ending Balances *(in billions):*			
Loans	**$ 6.9**	$ 7.2	$ 7.0
Assets	**8.7**	8.6	8.1
Demand deposits	**2.6**	2.8	3.3
Savings	**4.8**	3.3	2.2
Time	**3.4**	3.2	4.0
Foreign offices	**0.2**	0.2	0.1
Total deposits	**11.0**	9.5	9.6
Equity	**1.1**	1.1	1.0
Average Balances *(in billions):*			
Loans	**$ 7.0**	$ 6.9	$ 6.6
Assets	**8.5**	8.1	7.6
Demand deposits	**2.1**	2.0	2.5
Savings	**4.0**	2.8	1.9
Time	**3.3**	3.3	4.0
Foreign offices	**0.2**	0.2	0.2
Total deposits	**9.6**	8.3	8.6
Equity	**1.1**	1.0	0.9
Credit Quality *(dollars in millions):*			
Net charge-offs:			
Commercial	**$ 15**	$ 27	N/A
Consumer	**5**	7	N/A
Total net charge-offs	**20**	34	N/A
Net charge-off ratios:			
Commercial	**0.45%**	0.81%	N/A
Consumer	**0.14**	0.19	N/A
Total net charge-off ratio	**0.29**	0.49	N/A
Nonperforming assets:			
Commercial	**$ 61**	$ 38	$ 36
Consumer	**10**	4	4
Total nonperforming loans	**71**	42	40
Other, including OREO	**1**	1	—
Total nonperforming assets	**72**	43	40
Allowance for credit losses	**40**	25	22
Allowance to period end loans	**0.58%**	0.35%	0.31%
Allowance to nonperforming loans	**56**	60	55
Nonperforming assets to related assets	**1.04**	0.60	0.57

(In billions)	**2002**	2001	2000
Assets Under Management Ending Balances			
Mutual funds	**$ 101.2**	$ 83.5	$ 70.4
Other	**60.8**	59.1	60.8
Total	**162.0**	142.6	131.2
By type:			
Money market	**78.6**	58.5	43.1
Equity	**37.1**	47.3	53.5
Fixed income	**46.3**	36.8	34.6
Total	**162.0**	142.6	131.2
By channel: [17]			
Private client services	**42.7**	50.6	56.2
Retail brokerage	**7.0**	7.6	7.0
Institutional	**77.8**	62.4	52.1
Commercial cash sweep	**9.0**	9.8	8.6
Capital markets	**4.9**	1.5	0.4
External [32]	**10.8**	3.8	1.1
All other direct [33]	**9.8**	6.9	5.8
Total	**162.0**	142.6	131.2
Morningstar® Rankings: [34]			
% of assets in funds ranked 4 or better	**50%**	57%	49%
% of assets in funds ranked 3 or better	**89**	88	99
Trust Assets Ending Balances *(in billions):*			
Trust assets under administration	**$ 342.8**	$ 352.5	$ 319.4
Corporate Trust Securities Ending Balances *(in billions):* [35]			
Corporate trust securities under administration	**$1,016.0**	$ 915.0	$ 751.1
Retail Brokerage *(in millions):*			
Mutual fund sales	**2,293**	2,284	2,613
Annuity sales	**3,114**	2,583	1,659
Total sales	**5,407**	4,867	4,272
Number of customers–end of period [17] *(in thousands)*	**681**	646	N/A
Market value customer assets–end of period *(in billions)*:			
Brokerage	**$ 16.6**	$ 16.6	$ 17.3
Annuity account value	**11.3**	8.7	6.8
Total market value [17]	**27.9**	25.3	24.1
Number of registered sales representatives	**845**	724	700
Number of licensed retail bankers	**3,086**	3,042	2,689
Private Client Services:			
Number of private client advisors	**676**	641	747
Number of private client offices [36]	**92**	105	104
Market value customer assets–end of period [17] *(in billions)*	**$ 61.7**	$ 72.2	$ 80.6
Ending balances *(in billions)*:			
Loans	**6.9**	7.0	6.7
Deposits	**9.2**	7.6	7.2
Average balances *(in billions)*:			
Loans	**6.9**	6.9	6.4
Deposits	**8.3**	7.0	7.0

For additional footnote detail see pages 40, 43 and 46.

(30) Net interest income-FTE did not have tax equivalent adjustments for the years ended December 31, 2002, 2001 and 2000, respectively.

(31) Restructuring-related charges (reversals) are discussed on pages 52–53 and in Note 4 "Restructuring Related Activity" on page 89. Income before restructuring-related charges (reversals) for IMG, net of $244 million and $222 million of income taxes, was $411 million and $374 million for the years ended December 31, 2002 and 2001, respectively.

(32) Includes broker/dealers, trust companies, and registered investment advisors that sell, or offer, One Group funds.

(33) One Group funds invested in other One Group funds and other mutual funds sub-advised.

(34) Morningstar changed the rating process effective June 30, 2002 with no prior period restatements.

(35) Certain adjustments, primarily definitional in nature, were made to prior periods to conform to the current period presentation. Ending balances are estimated.

(36) During 2002, PCS offices that were in close proximity were consolidated to realize operational efficiencies.

2002 compared to 2001

IMG reported net income of $411 million, up $49 million from the prior year. Net interest income decreased $4 million, or 1%, reflecting narrower spreads on deposits and an increase in other funding costs.

Noninterest income, which is principally fiduciary, investment and banking fees and commissions, increased $36 million, or 3%. The principal driver of growth in noninterest income was an 11% increase in retail brokerage sales, partially offset by lower management fee revenue resulting from weak market conditions and a shift in assets under management from equities to money market and fixed income assets.

Noninterest expense was $1.0 billion, a decrease of $23 million, or 2%, excluding the impact of the restructuring charges and reversals. The principal drivers of the decrease were lower headcount and other cost savings initiatives.

The provision for credit losses was $35 million, a $3 million decrease from the prior year. The allowance for credit losses increased $15 million to $40 million reflecting the deterioration in credit quality of certain large loans. Nonperforming assets were $72 million, a $29 million increase, reflecting the aforementioned deterioration.

Assets under management were $162.0 billion, an increase of $19.4 billion, or 14%, as a result of strong money market and fixed income asset growth, partially offset by a decline in equity assets, reflecting weak market conditions. One Group mutual fund assets grew to $101.2 billion, an increase of $17.7 billion, or 21%.

2001 compared to 2000

IMG reported net income of $362 million, up $40 million. Net interest income increased $18 million, or 4%, reflecting a 5% increase in average loans partially offset by narrower deposit spreads and a 3% decrease in average deposits.

Noninterest income, which is principally fiduciary, investment and banking fees and commissions, increased $98 million, or 8%. Beginning in November 2000, fees associated with the administration of the One Group mutual funds were recorded as revenue, with a corresponding increase in expense. Prior to that, a third-party administrator incurred such fees and expenses, which totaled $80 million in 2000. Excluding the impact of this change, noninterest income increased $18 million reflecting growth in retail brokerage sales offset by lower investment advisory fees on equity assets because of overall market conditions.

Noninterest expense before restructuring-related charges increased $3 million, principally related to expenses of $80 million associated with the administration of the One Group mutual funds, offset by a decrease in expenses related to tighter cost control, lower headcount and reduced operating losses. Excluding the expenses associated with the administration of the One Group mutual funds, noninterest expenses declined 7%.

Provision for credit losses increased $25 million, principally related to higher net charge-offs resulting from a difficult economic climate and loan growth.

Assets under management totaled $142.6 billion, up 9% from the end of 2000. One Group mutual fund assets under management increased 19% to $83.5 billion. One Group mutual fund performance continued to remain strong, with 88% of these funds rated three stars or higher by Morningstar. Average assets under management increased 3% compared with 2000, driven principally by a 12% increase in One Group mutual funds.

Corporate

Corporate includes treasury, fixed income and principal investment portfolios, mortgage-servicing assets, unallocated corporate expenses, and any gains or losses from corporate transactions. The treasury group within the Corporate line of business risk manages mortgage-servicing assets on behalf of the Corporation.

(Dollars in millions)	**2002**	2001	2000
Income Statement Data:			
Net interest expense-FTE [2] [37] [38]	**$ (292)**	$ (664)	$ (458)
Banking fees and commissions	**(24)**	(18)	N/A
Credit card revenue	**2**	—	N/A
Service charges on deposits	**11**	23	N/A
Investment securities gains (losses)	**178**	(54)	N/A
Trading losses	**(24)**	(49)	N/A
Other income	**147**	304	N/A
Total noninterest income [39]	**290**	206	15
Total loss, net of interest expense	**(2)**	(458)	(443)
Provision for credit losses	**17**	—	(3)
Salaries and employee benefits	**800**	629	N/A
Other expense	**(221)**	(297)	N/A
Total noninterest expense before merger and restructuring-related charges (reversals)	**579**	332	1,192
Merger and restructuring-related charges (reversals) [40]	**(21)**	94	117
Total noninterest expense [41]	**558**	426	1,309
Loss before income benefit	**(577)**	(884)	(1,749)
Applicable income benefit	**(288)**	(416)	(642)
Net loss	**$ (289)**	$ (468)	$ (1,107)

	2002	2001	2000
Financial Performance:			
Headcount–full-time [19]	**14,456**	13,536	15,496
Ending Balances *(in billions):*			
Loans	**$ —**	$ 0.6	$ 0.1
Assets	**58.3**	50.8	46.8
Memo–			
Treasury investments [42]	**34.2**	32.2	22.8
Principal investments [43]	**2.3**	2.7	3.5
Deposits	**14.1**	19.6	30.7
Equity	**1.3**	(0.8)	(1.6)
Average Balances *(in billions):*			
Loans	**$ 0.2**	$ 0.9	$ 0.2
Assets	**50.6**	47.3	43.9
Deposits	**14.3**	24.1	26.1
Equity	**0.6**	(0.9)	(0.2)

For additional footnote detail see pages 40, 43, 46 and 49.

(37) Net interest expense-FTE includes tax equivalent adjustments of $32 million, $25 million and $2 million for the years ended December 31, 2002, 2001 and 2000, respectively.

(38) Net interest expense-FTE primarily includes treasury results and interest spread on investment related activities.

(39) Noninterest income primarily includes the gains and losses from investment activities and other corporate transactions.

(40) Restructuring-related charges (reversals) are discussed on pages 52–53 and in Note 4 "Restructuring-Related Activity" on page 89. Loss before merger and restructuring-related charges (reversals) for Corporate, net of $(8) million, $35 million and $44 million in income tax expense (benefit), was $302 million, $409 million and $1.0 billion for the years ended December 31, 2002, 2001 and 2000, respectively.

(41) Noninterest expense primarily includes corporate expenses not allocated to the lines of business.

(42) Treasury investments may include U.S. government and agency debt securities, mortgage and other asset backed securities and other fixed income investments.

(43) Principal investments include primarily private equity investments and venture capital fund investments.

2002 compared to 2001

Corporate net loss was $289 million, compared with a net loss of $468 million. Excluding the impact of restructuring charges/reversals, net loss was $302 million in 2002 and $409 million in 2001.

Net interest expense was $292 million, an improvement of $372 million, primarily a result of lower interest rates. During the latter part of the year the Corporation took actions to position the balance sheet more defensively for rising interest rates. These actions primarily involved raising fixed rate funding and swapping existing floating rate liabilities to fixed rate. As a result, the Corporation significantly shifted its interest rate risk posture as further detailed in the "Market Risk Management Non-Trading Activities" discussion beginning on page 61.

Net investment securities gains were $178 million reflecting the gain on the sale of the GE Monogram joint venture of $261 million, partially offset by net losses in the investment portfolios. In 2001, net investment losses were $54 million due to writedowns in the principal investments portfolio partially offset by treasury investment portfolio gains. The valuation adjustments in principal investments in 2002 and 2001 were primarily a result of the overall decline in the value of the equity market, the interest rate environment and a decline in the value of private investments as a result of existing economic conditions.

Other income was $147 million, compared with $304 million. The decrease of $157 million was primarily a result of mortgage related losses and valuation adjustments on other investments in 2002, and $73 million of gains realized in 2001 on the sales of the Corporation's interests in EquiServe Limited Partnership and Star Systems, an ATM network.

Corporate noninterest expenses were $558 million, compared with $426 million in the prior year. The current year increase was primarily due to salaries and benefits, including stock options, and one-time charges of $89 million related to the in-sourcing of certain vendor contracts.

2001 compared to 2000

Corporate reported a net loss of $468 million, compared with a net loss of $1.1 billion. Excluding restructuring charges of $59 million after-tax, the net loss in 2001 was $409 million. Excluding restructuring charges and significant items of $73 million and $778 million, after-tax, respectively, the net loss in 2000 was $256 million.

Net interest expense increased to $664 million from $458 million in 2000. These results were principally due to changes in the treasury investment portfolio and an increase in unallocated equity.

Noninterest income was $206 million compared with $15 million in 2000. Excluding significant item charges of $436 million, noninterest income in 2000 was $451 million. The $245 million decrease from 2000 was primarily driven by higher investment security losses resulting from market conditions.

Unallocated corporate expenses were $426 million compared with $1.3 billion. Excluding restructuring charges and significant items, unallocated corporate expenses were $332 million in 2001 versus $473 million in 2000. The $141 million reduction from 2000 was principally due to increased allocations.

Significant Items

In 2000, the Corporation initiated certain actions (e.g., decisions related to staff reductions and the use of existing real estate and fixed assets), made certain decisions regarding its business activities (e.g., substantially reducing the vehicle lease portfolio), reacted to changes in market conditions (e.g., decline in used car market, investment portfolio repositioning), and applied assumptions reflective of current market conditions, including current deterioration in performance, in its valuation process (e.g., interest-only strip, purchased credit card relationships). The results of these actions were adjustments to the carrying value of related assets and liabilities. These items were identified as significant items to differentiate these actions from ongoing/routine business activities.

The Corporation determined and recorded the adjustments for these actions (in general) as follows:

- Severance costs related to staff reductions were based on the identified number of employees terminated.
- Real estate and fixed asset costs were based on the estimated costs to close and consolidate facilities, including the write-off of capitalized costs.
- Due to overcapacity in the used automobile market, especially with sport utility vehicles (a major component of the Corporation's lease portfolio), estimated residual values for leased automobiles declined significantly. Accordingly, the Corporation wrote down the residual value related to these automobile leases. In addition, the Corporation planned to sell certain vehicle loans, which were written down to fair value. The Corporation's lease financing accounting policy is presented on page 85.
- The losses on the repositioning of the investment portfolio, as part of the Corporation's overall investment strategy, were based on market prices.
- The Corporation evaluates the fair value of its interest-only strip resulting from securitization transactions at both the date of the securitization and the balance sheet date. In 2000, the Corporation adjusted these assumptions and estimates to reflect the change in the fair value for these types of assets and, accordingly, recorded a writedown in its interest-only strip. For a more detailed discussion of the factors used in this process, see Note 9 "Credit Card Securitizations" on pages 94-95.
- The writedown of purchased credit card relationship intangibles reflected revised assumptions in the Corporation's discounted cash flow analysis reflecting higher cost of funds assumptions, consistent with the interest rate environment, and loss trends resulting from deterioration in performance.

As a result of the significant items noted and the restructuring plans initiated in 2000 and 2001, the Corporation's noninterest expense, before restructuring-related reversals was $9.6 billion for 2002, which represented a reduction in annualized noninterest expense of approximately $1.2 billion and decreased headcount of approximately 9,000 employees from June 30, 2000.

Results in 2000 included the negative impact of $2.2 billion after-tax ($3.3 billion pre-tax) of significant items. Business Segments – Table 1 – summarizes these significant items by action taken within each line of business. Income Statement Line – Table 2 – reflects these same actions by income statement line. Both tables exclude merger and restructuring–related charges.

Business Segments – Table 1 – 2000

(In millions)	Retail	Commercial Banking	Card Services	Investment Management	Corporate	Total
Pretax expense (income)						
Writedown of auto lease residuals	$532					$ 532
Provision for credit losses		$628				628
Repositioning of investment securities portfolio					$ 415	415
Operational and other [1]	2	(18)	$ 56		220	260
Writedown of interest-only strip			354			354
Occupancy and fixed asset related	9	6	11	$ (4)	315	337
Writedown of purchased credit card relationship intangibles			275			275
Writedowns primarily related to planned loan sales [2]	167					167
Increase in legal accruals					190	190
Writedown of marketing partnership agreements			121			121
Severance related	10	21	6	4	9	50
Total	$720	$637	$823	$ —	$1,149	$3,329
After-tax	$456	$404	$522	$ —	$ 778	$2,160

Income Statement Line – Table 2 – 2000

(In millions)	Retail	Commercial Banking	Card Services	Investment Management	Corporate	Total
Net interest income	$ 14	$ (7)			$(6)	$1
Noninterest income:						
Banking fees and commissions					(1)	(1)
Credit card revenue			$152			152
Service charges on deposits		5				5
Investment securities (gains) losses		(1)			426	425
Trading		44				44
Other income	650	3	315	2	11	981
Total noninterest income	650	51	467	2	436	1,606
Provision for credit losses	11	628	35			674
Noninterest expense:						
Salaries and employee benefits [1]	12	(42)	(4)	(19)	145	92
Occupancy expense	9	6	11		72	98
Other intagible amoritization			275	9	36	320
Other	24	1	39	8	466	538
Total noninterest expense	45	(35)	321	(2)	719	1,048
Pretax expense	$720	$637	$823	$ —	$1,149	$3,329

(1) Includes $75 million of incentive accruals reversed in the fourth quarter relating to the full year in which existing plans were adjusted to a pay for performance basis.

(2) At December 31, 2000, management discontinued its plan to dispose of these loans, and as such, are considered part of the general portfolio.

CONSOLIDATED RESULTS

Net Interest Income

Net interest income represents the spread on interest earning assets over interest bearing liabilities as well as items such as loan fees, cash interest collections on problem loans, dividend income, interest reversals, and income or expense on derivatives used to manage interest rate risk.

				Percent Change	
For the Year Ended December 31,	**2002**[3]	2001	2000	2002-2001	2001-2000
(Dollars in millions)					
Net interest income-FTE basis [1] [2]	**$ 8,740**	$ 8,769	$ 8,974	—%	(2)%
Average earning assets	**231,401**	237,869	241,058	(3)	(1)
Net interest margin	**3.78%**	3.69%	3.72%		

(1) Net interest income-FTE includes taxable equivalent adjustments of $145 million, $131 million, and $138 million for years ended December 31, 2002, 2001 and 2000, respectively.

(2) Net interest income is presented rather than gross interest income and gross interest expense because the Corporation relies primarily on net interest revenue to assess performance.

(3) Results include the effects of the consolidation of Paymentech, Inc. and Anexsys, LLC.

2002 compared to 2001

While the net interest margin increased to 3.78% from 3.69%, net interest income declined $29 million to $8.7 billion from $8.8 billion. This decrease was primarily a result of intentionally reducing earning assets such as large corporate loans, vehicle leases and brokered home equity loans. In addition, the Corporation took actions to both the assets and liabilities sides of the balance sheet to defensively position itself for a higher rate environment.

2001 compared to 2000

Net interest income declined $205 million from that reported in 2000, largely due to lower earning assets. The decline in average earning assets was attributed to efforts to reduce commercial credit exposure, discontinued brokered home equity loan and auto lease outstandings, and also reflected lower credit card receivables.

Noninterest Income

The components of noninterest income for the periods indicated are:

				Percent Change	
For the Year Ended December 31,	**2002** [1]	2001	2000	2002-2001	2001-2000
(Dollars in millions)					
Banking fees and commissions	**$1,775**	$1,731	$1,537	3%	13%
Credit card revenue	**3,816**	2,775	2,299	38	21
Service charges on deposits	**1,578**	1,449	1,310	9	11
Fiduciary and investment management fees	**740**	754	783	(2)	(4)
Investment securities gains (losses)	**165**	(66)	(235)	N/M	(72)
Trading	**224**	220	134	2	64
Other income (losses)	**(62)**	360	(738)	N/M	N/M
Total noninterest income	**$8,236**	$7,223	$5,090	14	42
Noninterest income to total revenue	**48.9%**	45.5%	36.6%		

N/M Not meaningful.

(1) Results include the effects of the consolidation of Paymentech, Inc. and Anexsys, LLC.

Components of noninterest income that are primarily related to a single business segment are discussed within that business segment rather than the consolidated section.

2002 compared to 2001

Banking fees and commissions of $1.8 billion increased $44 million, or 3%. This increase was primarily the result of increased annuity and mutual fund sales, as well as from growth in asset-backed finance and other underwriting fees in capital markets, partially offset by lower mortgage-related revenue.

Credit card revenue of $3.8 billion increased $1.0 billion, or 38%. This increase was due to the addition of the Wachovia credit card business, consolidation of Paymentech, higher volume-related revenue and higher income earned on securitized loans.

Service charges on deposits of $1.6 billion increased $129 million, or 9%. This increase primarily reflected improvement in global treasury services as clients shifted their payment method to fees due to the lower value of their compensating deposit balances.

Net investment gains were $165 million compared to losses of $66 million. Included in 2002 results was the $261 million gain on sale of the GE Monogram joint venture, partially offset by net losses in the investment portfolios.

Trading produced gains of $224 million, an increase of $4 million, or 2%. This slight increase was primarily the result of an increase in the fair value of credit derivatives used to hedge the commercial loan portfolio and limit exposures for specific credits, partially offset by lower results across multiple trading products.

Other income decreased $422 million. This decrease was primarily due to higher losses on tax-oriented investments, mortgage-related losses, valuation adjustments on other investments, various asset write-downs and the consolidation of Paymentech and Anexsys. Gains on the sale of ownership interests in EquiServe Limited Partnership and Star Systems recognized in the prior year also contributed to the decrease.

2001 compared to 2000

Banking fees and commissions increased $194 million, or 13%. This increase was primarily the result of increased annuity sales and fees associated with the in-house administration of the One Group mutual funds, which the Corporation began recording as revenue in the 2000 fourth quarter. Additionally, this increase reflected growth in retail brokerage sales.

Credit card revenue increased $476 million, or 21%. This improvement was due to the third quarter 2001 addition of the Wachovia credit card business and significant items recorded in 2000 (see table 2 on page 53).

Service charges on deposits increased $139 million, or 11%. A lower rate environment produced a shift to the payment of fees from net interest income due to the lower value ascribed to customers' compensating deposit balances.

Fiduciary and investment management fees declined by $29 million, or 4%. This reduction was as a result of lower investment advisory fees on equity assets because of overall market conditions.

Investment securities losses were $66 million due to principal investment losses and lower market valuations, partially offset by the gains on sale of fixed income securities. This was an improvement from 2000 when investment securities portfolio activity produced a loss of $235 million. This loss occurred when significant items were recorded in the second quarter of 2000 (see table 2 on page 53).

Trading produced gains of $220 million, an increase of $86 million, or 64%. This improvement was due to significant items recorded in 2000 (see table 2 on page 53) and market value gains.

Other income was $360 million compared to a $738 million loss in 2000. This improvement was predominately due to significant items recorded in 2000 (see table 2 on page 53).

Noninterest Expense

The components of noninterest expense for the periods indicated are as follows:

				Percent Change	
For the Year Ended December 31,	**2002**	2001	2000	2002-2001	2001-2000
(Dollars in millions)					
Salaries and employee benefits:					
Salaries [1]	**$ 3,823**	$ 3,638	$ 3,949	5%	(8)%
Employee benefits	**642**	560	653	15	(14)
Total salaries and employee benefits	**4,465**	4,198	4,602	6	(9)
Occupancy	**645**	686	872	(6)	(21)
Equipment	**426**	457	593	(7)	(23)
Outside service fees and processing	**1,303**	1,178	1,537	11	(23)
Marketing and development	**1,054**	862	900	22	(4)
Telecommunication	**365**	407	411	(10)	(1)
Other intangible amortization	**125**	97	410	29	(76)
Goodwill amortization	**—**	69	70	N/M	(1)
Other expense [1]	**1,261**	1,246	2,052	1	(39)
Total noninterest expense before merger and restructuring-related charges (reversals)	**9,644**	9,200	11,447	5	(20)
Merger and restructuring-related charges (reversals)	**(63)**	351	161	N/M	N/M
Total noninterest expense	**$ 9,581**	$ 9,551	$11,608	—	(18)
Headcount	**73,685**	73,519	80,778	—	(9)
Efficiency ratio	**56.4%**	59.7%	82.5%		

N/M Not meaningful.

(1) Certain expenses have been reclassified from salaries to other expenses in all periods.

Components of noninterest expense that are primarily related to a single business segment are discussed within that business segment rather than the consolidated section.

2002 compared to 2001

Salaries and employee benefits of $4.5 billion increased $267 million, or 6%. This increase was due to insourcing activities previously performed by outside vendors, increased incentive compensation, the consolidation of Paymentech and Anexsys, and also included $45 million related to the adoption of the fair value method of accounting for stock option and stock purchase plans.

Outside service fees and processing expense of $1.3 billion increased $125 million, or 11%, due to the increase in contract programming charges related to the Corporation's systems conversion efforts and the one-time charge of $89 million related to termination and renegotiation of certain vendor contracts.

Marketing and development expense of $1.1 billion increased $192 million, or 22%, primarily due to increased advertising expenditures for Card Services and certain Retail products.

Telecommunication expense of $365 million decreased $42 million, or 10%, primarily due to lower servicing expenses resulting from the termination and renegotiation of certain vendor contracts.

Other intangible amortization of $125 million increased $28 million, or 29%, primarily due to the amortization of purchased credit card relationships associated with the addition of the Wachovia credit card business. In accordance with SFAS No. 142, "Goodwill and Other Intangible Assets," the Corporation no longer amortizes goodwill and thus did not incur any goodwill amortization expense during 2002.

Other expense increased by $15 million primarily due to systems conversion costs. The Corporation successfully completed the Michigan, Florida and Illinois conversions during 2002.

As a result of the significant items noted on pages 52-53 and restructuring plans initiated in 2000 and 2001, the Corporation's noninterest expense before restructuring-related reversals was $9.6 billion for 2002, which represents a reduction in annualized noninterest expense of $1.2 billion and decreased headcount of approximately 9,000 employees from June 30, 2000.

2001 compared to 2000

Salaries and employee benefits were $4.2 billion, down 9% from $4.6 billion. This decline was attributed to expense savings from reduced headcount and cost reductions associated with the modification of the Corporation's benefit plans.

Occupancy expense declined by $186 million, or 21%. The decrease was the result of less occupied space.

Equipment expense in 2001 decreased $136 million. Reduced furniture and equipment rental along with lower maintenance and depreciation expense was primarily the reason for the 23% decline.

The Corporation recorded restructuring-related charges in the fourth quarter of 2001 affecting all lines of business for additional real estate and staff reductions (severance) costs to accomplish expense reductions, accelerated systems conversions, and other consolidations. Actions under the plan were implemented. See Note 4 "Restructuring-Related Activity" on page 89.

The Corporation recorded restructuring-related charges in the second quarter of 2000 related to restructuring its indirect lending and home mortgage business as well as exit costs associated with specific decisions made to permanently abandon identified facilities, equipment and application software (for all lines of business). Actions under this plan have been completed, with only payments of identified obligations remaining. See Note 4 "Restructuring-Related Activity" on page 89.

Restructuring-related charges (reversals) are allocated to each line of business (see tables on pages 52-53) for management reporting purposes.

Outside service fees and processing expense also declined 23%, attributed to a reduction in consulting expense and the benefits from contract renegotiations and other waste-reduction initiatives.

Marketing and development expense decreased $38 million, or 4%, as continued expense reductions in the Retail line of business more than offset increased expenditures for Card Services.

Other intangible amortization expense decreased by $313 million, or 76%, predominately due to significant items recorded in 2000 (see table 2 on page 53).

Other expense was reduced by $806 million, or 39%. This decrease was primarily due to significant items recorded in 2000 (see table 2 on page 53). This reduction also reflects the continuation of the Corporation's waste-reduction initiatives to lower expenses for such items as travel, entertainment and other miscellaneous items, which was partially offset by system conversion costs. The Corporation successfully converted the Texas/Louisiana and the Arizona/Utah deposit systems during 2001.

Applicable Income Taxes

The Corporation's income (loss) before income taxes and cumulative effect of change in accounting principle, as well as applicable income tax expense (benefit) and effective tax rate for each of the past three years follows:

(Dollars in millions)	**2002**	2001	2000
Income (loss) before income taxes (benefit) and cumulative effect of change in accounting principle	**$4,763**	$3,800	$(1,080)
Applicable income taxes (benefit)	**1,468**	1,118	(569)
Effective tax rate	**30.8%**	29.4%	52.7%

Applicable income tax expense (benefit) for all three years included benefits for tax-exempt income, tax-advantaged investments and general business tax credits offset by the effect of nondeductible expenses. In the case of a loss before income taxes and the cumulative effect of change in accounting principle, the effect of the net tax benefits described above is to increase, rather than decrease, the effective rate of tax. This is the primary reason for the difference in effective tax rates between 2000 and the other years presented. More detail on income taxes can be found in Note 20 "Income Taxes" on page 101.

RISK MANAGEMENT

Risk is an inherent part of the Corporation's business activities. The Corporation's ability to properly and effectively identify, measure, monitor, and report risk in its business activities is critical to its soundness and profitability. The diversity of the Corporation's lines of business helps reduce the impact that volatility in any particular area has on its operating results as a whole.

Corporate Risk Management Governance Structure

While the lines of business are primarily responsible for managing the risks inherent in their businesses, the Corporation has established a risk management governance structure to establish policy, monitor adherence to policy and manage the overall risk profile of the organization.

The Corporation believes risk management is the responsibility of every employee. However, various functional groups have specific roles and responsibilities to manage risk:

- **Board of Directors:** determines risk appetite and risk capacity. The Audit and Risk Management Committee routinely reviews risk issues.
- **Risk Committees:** ensure appropriate management of aggregate risks and capital, acceptable corporate and line of business risk profiles and the integrity of risk governance processes. Risks addressed include, but are not limited to credit, market and operational risk. The Executive Risk Committee is co-chaired by the Chief Executive Officer and Chief Risk Officer. Lines of business sub-committees are co-chaired by the heads of the lines of business and their respective chief risk officers. Committee members represent the lines of business, corporate risk management, finance and legal functions.
- **Chief Risk Officer:** establishes effective risk management infrastructure (people, process and systems).
- **Lines of Business:** manages risk exposures to approved limit structures for their applicable line of business and identifies risk linkages to other businesses.
- **Investment Committee:** ensure appropriate management of both new investment proposals and the existing portfolio of investments; approve new investment proposals and divestment strategies. The committe is co-chaired by the Chief Financial Officer and Head of Financial Planning and Acquisitions.
- **Principal Investments Committee:** a separate investment committee exists for governing the principal investments portfolio and is chaired by the Chief Executive Officer.
- **Corporate Audit:** independently assesses and recommends actions to mitigate risk.
- **Asset and Liability Committee ("ALCO"):** provides governance and oversight of liquidity, structural interest rate risk and capital and is co-chaired by the Chief Financial Officer and Treasurer.

Risk Management Process

There are four critical elements to the Corporation's risk management process:

- **Risk Identification:** The Corporation identifies risk dynamically by assessing the potential impact of internal and external factors on current businesses and new products/programs, and by developing risk mitigation strategies to effectively manage identified risks.
- **Risk Measurement:** The Corporation measures risk using a variety of methodologies including: calculating expected loss, unexpected loss and value-at-risk; and conducting stress tests and making comparisons to external benchmarks. Measurement models and underlying assumptions are routinely validated to ensure accurate risk measurement.
- **Risk Monitoring/Control:** The Corporation establishes risk management policies and procedures. These policies contain approved limits by customer, product and business that are monitored weekly.
- **Risk Reporting:** Risk reporting covers all lines of business and is comprehensively provided to management on a weekly basis.

Risk Types

There are seven major risk types identified by the Corporation:

- **Credit risk** is the risk to earnings or capital arising from an obligor's failure to meet the terms of any contract with the lender or otherwise fail to perform as agreed.
- **Liquidity risk** is the risk of loss arising from an institution's inability to meet its obligations when they come due without incurring unacceptable losses.
- **Market risk** is the risk that changes in future market rates or prices will make the Corporation's positions less valuable.
- **Operational risk** is the risk of loss resulting from inadequate or failed internal processes, people or systems or from external events.
- **Reputation risk** is the risk to earnings or capital arising from negative public opinion. This affects the institution's ability to establish new relationships or services, or continue servicing existing relationships.
- **Strategic risk** is the risk to earnings or capital arising from adverse business decisions or improper implementation of those decisions.
- **Compliance risk** is the risk to earnings or capital arising from violations of, or non-conformance with, laws, rules, regulations, prescribed practices, or ethical standards.

CREDIT RISK MANAGEMENT

Credit risk is a significant risk to the Corporation. It represents risk to earnings arising from an obligor's failure to meet the terms of any contract with the Corporation or otherwise fail to perform as agreed. Credit risk is found in all activities where success depends on issuer, borrower or counterparty performance. It arises any time funds are extended, committed, invested, or otherwise exposed through actual or implied contractual agreements, whether reflected on or off the balance sheet. On-balance sheet credit exposure includes such items as loans. Off-balance sheet credit exposure includes unfunded credit commitments and other credit-related financial instruments.

Management proactively manages the risk/reward relationship of each portfolio to achieve profitability targets and required rates of return on investment. The Corporation uses credit derivatives (primarily single name credit swaps) and short bond positions, as protection against deterioration of credit quality on commercial loans and loan commitments.

Risk Identification

Credit risk is the most prevalent risk associated with banking, and encompasses more than the traditional definition associated with lending activities. Credit risk also arises in conjunction with a broad range of bank activities, including selected investment portfolio products, derivatives trading partners, or foreign exchange counterparties. Credit risk also arises due to country or sovereign exposure, as well as indirectly through guarantor performance.

Risk Measurement

Expected and Unexpected Losses

Using statistical techniques, expected and unexpected losses are calculated for each segment of the portfolio. Expected loss is the average expected loss over a cycle, and unexpected loss represents the potential volatility of losses relative to expected loss levels.

Expected loss calculations and related stress tests are used as a basis for evaluating allowance for credit losses adequacy. Unexpected loss calculations are used as a basis for calculating economic capital, which is a management tool used to allocate capital for internal management purposes. Expected and unexpected loss calculations are made at the facility and portfolio levels, and are used as a basis for pricing to ensure appropriate risk/reward balance.

The Corporation employs several methodologies for estimating expected and unexpected losses. Methodologies are determined based on a number of factors, including type of asset (e.g., consumer installment versus commercial loan), risk measurement parameters (e.g., delinquency status and bureau score versus commercial risk rating), and risk management and collection processes (e.g., retail collection center versus centrally managed workout units). Risk measurement is primarily based upon two methodologies: risk rating exposure and credit scoring exposure.

Risk-Rated Exposure

For portfolios that are risk-rated (generally commercial), expected and unexpected loss calculations are based on estimates of probability of default and loss given default. Probability of default is the one-year expected default calculated on an obligor basis. Loss given default is an estimate of losses that are based upon collateral and structural support for each credit facility. Calculations and assumptions are based on management information systems and methodologies that are under continual review.

In the second quarter 2001, the Corporation refined its measurement process for estimating expected loss by enhancing its risk rating system to provide for discrete estimates of probability of default and loss given default. In addition, the Corporation moved from a one-tier, 12 point combined obligor and facility-based scale to estimate expected loss to a two-tiered methodology: a 20 point obligor-based scale, which estimates probability of default, and an 8 point facility-based scale, which estimates loss

given default. The benefit of the 20 point obligor-based scale is it enables the Corporation to benchmark its internal measures of risk with publicly available ratings and market prices. The estimated probability of default covers a one-year time horizon. Expected loss represents the combined effect of estimates from both components. While the risk rating system changed, estimates of expected loss were relatively unaffected and no increase to the reserve was required.

Risk ratings are reviewed on an ongoing basis by corporate risk management and revised, if needed, to reflect the borrowers' current risk profile and the related collateral position. The lower categories of credit risk are equivalent to the four bank regulatory classifications: Special Mention, Substandard, Doubtful and Loss.

Credit-Scored Exposure

For credit-scored portfolios (generally Retail and Card Services), expected loss is based on a statistical analysis of inherent losses over discrete periods of time. Expected losses are estimated using statistical analysis, such as roll rate models, which use historical losses, and vintage forecasting models. Other risk characteristics evaluated include: recent loss experience in the portfolios, changes in origination sources, portfolio seasoning, loss severity, and underlying credit practices, including charge-off policies. This analysis is applied to the current portfolios in order to forecast delinquencies and severity of losses, which determines the amount of future probable losses. These factors and analysis are updated on a quarterly basis.

Risk Monitoring/Control

The Executive Risk Committee has developed policies to manage the level and composition of risk in its portfolio, and reviews the Corporation's performance relative to those policies.

The line of business risk committees have developed policies that focus on origination, portfolio management and managed assets related activities. The policy framework establishes approval authorities and related processes, risk rating methodologies, portfolio review parameters and management of problem loans. The objective of the credit risk management process is to quantify and manage credit risk on an aggregate portfolio basis as well as to reduce the risk of loss resulting from an individual customer default. Corporate risk management works with lending officers and line of business personnel involved in credit decision making and is involved in the implementation, refinement, and monitoring of the Corporation's credit policies and procedures. Credit limits are approved by the Executive Risk Committee and adherence to those limits is monitored weekly.

In order to meet its credit risk management objectives, the Corporation maintains a risk profile that is diverse in terms of borrower, product-type, and industry and geographic concentrations. Additional diversification of the Corporation's exposure is accomplished through syndication of credits, participations, loan sales, securitizations, credit derivatives and other risk-reduction techniques.

Risk Reporting

Aggregate credit exposure, credit metric forecasts, hold limit exceptions and risk profile changes are reported weekly for all portfolios. Expected loss calculations and detailed portfolio reporting of industry, customer and geographic concentrations are reported monthly to senior management. In addition, the results of comprehensive stress tests of expected loss for reserve establishment are presented in the quarterly reports to senior management. Through the Risk Committee governance structure, credit risk trends and limit exceptions are regularly discussed on a comprehensive basis.

LIQUIDITY RISK MANAGEMENT

Liquidity is managed to preserve stable, reliable and cost-effective sources of funding to meet all current and future financial obligations.

At the Corporation, strong liquidity is provided by a variety of sources including:

- A portfolio of liquid assets, comprised of federal funds sold, deposit placements and marketable securities.
- A large customer deposit base arising through the Corporation's Commercial Banking and Retail business activities.
- A diversified mix of short- and long-term funding sources from the wholesale financial markets.
- A substantial and growing capital position in excess of regulatory well-capitalized standards.
- Significant borrowing capacity at the Federal Reserve discount window.

The Corporation is an active participant in the global financial markets through which it obtains a significant amount of funding. These markets serve as a cost-effective source of funds and are a critical component of the Corporation's liquidity management. Decisions to access these markets are based upon relative costs, prospective views of balance sheet growth, and a targeted liquidity profile. A disruption in the financial markets could limit access to liquidity for the Corporation.

The Corporation's ability to maintain regular access to competitively priced wholesale funds is fostered by strong debt ratings from the major credit rating agencies. Management views the following factors as critical to retaining high credit ratings:

- Strong capital ratios and credit quality
- A stable, diverse earnings stream
- Diversity of liquidity sources
- Strong liquidity monitoring procedures

At December 31, 2002, the Corporation and its principal banks had the following long- and short-term debt ratings:

	Short-Term Debt			Senior Long-Term Debt		
	S & P	Moody's	Fitch	S & P	Moody's	Fitch
The Corporation (parent)	A-1	P-1	F-1	A	Aa3	A+
Principal banks	A-1	P-1	F-1+	A+	Aa2	AA-

Risk Identification

Treasury is responsible for measuring and managing the liquidity profile with oversight from the ALCO. Liquidity risks reviewed include the diversity of the Corporation's sources of funding and the maturity structure of those sources, quantity of liquid assets held, contingent funding requirements and sensitivity to changes in credit ratings. Treasury tests a series of liquidity scenarios and works with the lines of business to understand and manage the potential liquidity risks in the Corporation.

Measurement and Monitoring/Control

The Corporation has established operating guidelines around balance sheet liquidity that include required levels of liquid assets and limits on liquidity gaps. Liquidity gaps measure balance sheet cash flow mismatches and quantify certain liability maturities in excess of liquid assets.

The Corporation monitors and manages liquidity considering both on- and off-balance sheet exposures. On-balance sheet liquidity is impacted by balance sheet growth, level and mix of customer deposits, and access to wholesale funding. In the normal course of business, the Corporation enters into certain forms of off-balance sheet transactions, including credit card securitizations, unfunded loan commitments and letters of credit. These transactions are managed through the Corporation's various risk management processes. For example, liquidity facilities provided to Corporation-and third party-administered specialized financing entities might require funding if the Corporation's short-term rating were to fall to A-2 or P-2. Credit card securitizations may be subject to early amortization if certain performance measures of the issuing trust were not maintained. Other events could result in additional funding requirements for the Corporation.

The parent company faces unique liquidity constraints due to legal limitations on its ability to borrow funds from its banking subsidiaries. The parent company obtains funding to meet its obligations through bank and non-bank subsidiary dividends (within regulatory limitations) and through the issuance of debt securities. The parent company holds liquid assets equal to at least 12 months of its upcoming debt maturities to ensure adequate liquidity is available.

Reporting

A combination of daily, weekly, monthly and periodic reports provided to senior management detail the following:

- Internal liquidity risk metrics
- Composition and level of the liquid asset portfolio
- Timing differences in short-term cash flow obligations
- Available pricing and market access to the financial markets for capital, term-debt and securitization transactions
- Exposure to contingent draws on the Corporation's liquidity
- Liquidity stress testing under systemic and Corporation specific scenarios

MARKET RISK MANAGEMENT

Market risk refers to potential losses arising from changes in interest rates, foreign exchange rates, equity prices, commodity prices and credit spreads in market risk sensitive instruments. Market risk arises in both trading and non-trading portfolios. The section on "Market Risk Management-Nontrading Activities" on page 61 provides an overview of our approach to managing market risks arising from non-trading portfolios. In these asset and liability management activities, policies are in place to closely manage structural interest rate risk. Disclosures about the fair value of financial instruments, which reflect changes in market prices and rates, can be found in Note 23 "Fair Value of Financial Instruments" on pages 103–105.

Market Risk Management — Trading Activities

Through its trading activities, the Corporation strives to take advantage of profit opportunities due to changes in interest rates, exchange rates, equity prices, commodity prices and credit spreads. The Corporation's trading activities are primarily customer-oriented. For example, cash instruments are bought and sold to satisfy customers' investment needs. Derivative contracts are initially entered into to meet the risk management needs of customers. The Corporation enters into subsequent transactions to manage the level of risk in accordance with approved limits. In order to accommodate customers, an inventory of capital markets instruments is carried, and access to market liquidity is maintained by making bid-offer prices to other market makers. The Corporation may also take proprietary trading positions in various capital markets cash instruments and derivatives, and these positions are designed to profit from anticipated changes in market factors. Activity is focused in OECD (Organisation for Economic Cooperation and Development) markets, with very little activity in emerging markets.

Many trading positions are kept open for brief periods of time, often less than one day. Other positions may be held for longer periods. Trading positions are carried at estimated fair value, with realized and unrealized gains and losses included in noninterest income as trading income.

Risk Identification

Corporate market risk management works with various lines of business personnel to refine and monitor market risk policies and procedures, and is the primary independent oversight unit for market risk arising from line of business activities. The line of business, working in conjunction with corporate market risk management, is responsible for comprehensive identification of market risks. These market risks include the sensitivities to such market factors as changes in prices, interest rate curves, spreads, basis, volatility, gamma, time decay and correlations. Market risk management also conducts annual reviews of each of the trading businesses to confirm approved products and trading strategies.

Risk Measurement

The Corporation relies on a number of statistical and non-statistical measurements to monitor the level of market risk arising from interest rates, foreign exchange, equities, commodities and credit spreads. The Corporation has developed policies and procedures to manage market risk in its trading activities through a value-at-risk measurement, stress testing and dollar trading limits. The objective of this process is to quantify and manage market risk in order to limit single and aggregate exposures. Dollar trading limits are subject to varying levels of approval by senior line of business management, with review by corporate market risk management. For non-trading portfolios, the primary measures of market risk are earnings at risk and the economic value of equity.

Value-At-Risk

For trading portfolios, value-at-risk measures the maximum fair value the Corporation could be reasonably expected to lose on a trading position, given a specified confidence level and time horizon. Value-at-risk limits and exposure are monitored daily for each significant trading portfolio. Value-at-risk was not calculated for credit derivatives used to hedge specific credits in the loan portfolio. However, stress testing is regularly performed for these credit

derivative positions. See discussion of credit derivatives under the "Trading Derivative Instruments" section on page 72. Likewise, value-at-risk calculations do not include the principal investments portfolio that is being accounted for similar to trading portfolios in that realized and unrealized gains and losses are recorded currently in income.

The Corporation applies a statistical model to its portfolios of cash and derivative positions, including options, to calculate value-at-risk. The variance-covariance model estimates the volatility of returns on individual assets, as well as the correlation of changes of asset price pairs. These volatility and correlation estimates are made on the basis of one-year, equally-weighted historical observations of market variables. The model then computes the volatility of changes in the market values of the portfolios (i.e., the value-at-risk results) by applying each portfolio's statistical sensitivities to the correlations.

The Corporation's value-at-risk calculation measures potential losses in fair value using a 99% confidence level and a one-day time horizon. This equates to 2.33 standard deviations from the mean under a normal distribution. This means that, on average, daily profits and losses are expected to exceed value-at-risk one out of every 100 overnight trading days.

The value-at-risk in the Corporation's trading portfolio was as follows (excluding credit derivatives and other instruments used to hedge specific credits in the loan portfolio with a notional amount of $7.3 billion and $3.3 billion at December 31, 2002 and 2001, respectively):

	2002			
(In millions)	**December 31**	**Average**	**High**	**Low**
High Volume Capital Markets Trading Portfolios and Mortgage Pipeline [1]				
Risk type:				
Interest rate	**$6**	**$5**	**$7**	**$3**
Commodity price	**—**	**—**	**2**	**—**
Currency exchange rate	**—**	**—**	**3**	**—**
Equity	**1**	**1**	**2**	**—**
Diversification benefit	**—**	**—**	**N/A**	**N/A**
Other Trading Portfolios	**7**	**6**	**8**	**3**
Risk type:				
Interest rate	**7**	**7**	**8**	**7**
Aggregate trading portfolio market risk	**$14**	**13**	**16**	**11**

	2001			
(In millions)	December 31	Average	High	Low
High Volume Capital Markets Trading Portfolios and Mortgage Pipeline [1]				
Risk type:				
Interest rate	$5	$5	$7	$3
Commodity price	—	—	—	—
Currency exchange rate	—	1	4	—
Equity	1	1	4	—
Diversification benefit	—	—	N/A	N/A
Other Trading Portfolios	6	7	15	3
Risk type:				
Interest rate	6	6	8	5
Aggregate trading portfolio market risk	$12	13	16	9

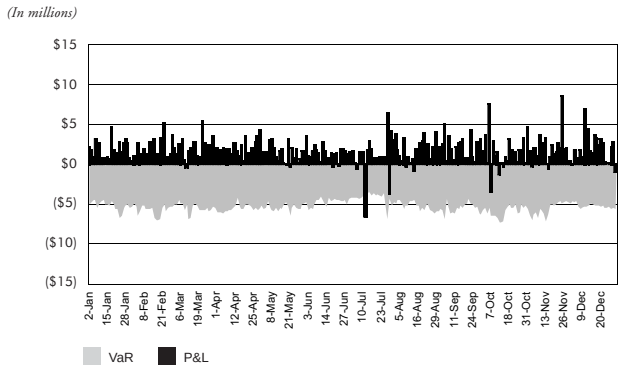
(1) Subject to backtesting.

Interest rate risk was the predominant type of market risk incurred during 2002. At December 31, 2002, approximately 95% of primary market risk exposures were related to interest rate risk. Currency exchange rate, equity and commodity risks accounted for 1%, 3% and 1%, respectively, of primary market risk exposures.

- U.S. Treasury, corporate, asset-backed, municipal, and mortgage-backed securities generated 82% of the interest rate risk component. Interest rate derivatives accounted for 15% of the interest rate risk, while the remaining 3% was derived primarily from money market and foreign exchange trading activities.
- Foreign exchange spot, forward and option trading generated 100% of the currency exchange rate risk. Of the currency exchange rate risk arising from these activities, 43% related to major currency exposures and 57% to minor currencies.
- Equity derivatives trading and off-setting cash positions generated 100% of equity price risk.

At December 31, 2002, aggregate portfolio market risk exposures were 17% higher than at year-end 2001. The majority of this increase was due to increased market risk in various trading books.

Value-at-risk levels are regularly backtested to validate the model by comparing predictions with actual results. For 2002, backtesting results for the high volume capital markets portfolios and the mortgage pipeline appear in the following graph:



These backtesting results reflect only the higher volume trading portfolios that are actively managed and marked-to-market on a daily basis (i.e., the capital markets trading portfolios and the mortgage pipeline in the consumer lending business). Based on a 99% confidence interval in predicting actual profit or loss, the Corporation would expect actual profit or loss to exceed value-at-risk one day for every one hundred days. As shown in the graph above, there was only one day in 2002 where the actual loss exceeded the calculated value-at-risk. The Corporation's value-at-risk measure provides a conservative measure of the level of market risk.

Stress Testing

Stress tests are conducted regularly for all capital markets trading portfolios including credit derivatives for a standard set of forward-looking scenarios for large, low probability changes in the market variables. Scenarios may be derived from either severe historical crises or forward assessment of developing market trends. The scenarios are continuously reviewed to reflect changing market and economic conditions.

Risk Monitoring

The Corporation establishes limits for value-at-risk, market variable exposures, position limits and dollar trading loss limits for all capital markets trading portfolios. Actual activity compared with these limits is monitored daily. In addition, trading limits have been established for trading portfolios within other areas of the Corporation, including treasury and principal investments. Actual activity compared with these trading limits is regularly monitored. As a rule, all businesses are expected to maintain exposure within approved limits. Should a risk exposure level exceed approved limit levels, business management provides a strategy for bringing risk levels down within approved levels.

Risk Reporting

Value-at-risk, market variable exposures and dollar trading loss limit exceptions are reported daily for each capital markets trading portfolio. Market risk exposure trends, value-at-risk trends, profit and loss changes, aged asset inventories and portfolio concentrations are reported daily to business management and weekly to executive management. In addition, the results of comprehensive, weekly stress tests are presented in the weekly reports to executive management. Market risk exposure for treasury and principal investment trading portfolios are reported regularly through the Risk Committee governance structure. Market risk trends and limit exceptions are comprehensively and regularly discussed.

Market Risk Management — Non-Trading Activities

Interest rate risk exposure in the Corporation's core non-trading business activities, (i.e., asset/liability management ("ALM") position), is a result of reprice, option, and basis risks associated with on- and off-balance sheet positions. Reprice risk represents timing mismatches in the Corporation's ability to alter contractual rates earned on financial assets or paid on liabilities in response to changes in market interest rates. Basis risk refers to the potential for change in the underlying relationship between market rates or indices, which subsequently result in a narrowing of the spread earned on a loan or investment relative to its cost of funds. Option risk arises from "embedded options" present in many financial instruments such as interest rate options, loan prepayment options and deposit early withdrawal options. These provide customers and investors opportunities to take advantage of directional changes in rates, which could have an adverse impact on the Corporation's margin performance. Embedded options are complex risk positions that are difficult to predict and offset, and are a significant component of the interest rate risk exposure for the Corporation.

Risk Identification

Interest rate risk arises through ongoing banking activities, including traditional customer lending and deposit activities and wholesale funding and portfolio actions. The Corporation identifies interest rate risk by quantifying the impact of new programs, products and strategies on overall balance sheet sensitivity.

Responsibility for management of interest rate risk resides with treasury under the oversight of the Corporation's ALCO and is apprised weekly of newly discovered risks associated with the ALM position and the strategies to manage resultant exposure.

Risk Measurement

The ALM position is measured using sophisticated earnings simulation and valuation tools. The primary risk measure employed is earnings-at-risk, which measures the sensitivity of pretax earnings to various interest rate movements as compared to a base-case scenario established using current rates. Earnings-at-risk incorporates estimates of balance sheet growth, pricing and customer behavior under each scenario analyzed. The analysis is calculated over multiple time horizons.

In addition to earnings-at-risk analysis, management uses an economic value of equity sensitivity technique to capture the risk in both short- and long-term positions. This analysis involves calculating future cash flows over the life of all current assets, liabilities and off-balance sheet positions under different rate scenarios. The discounted present value of all cash flows represents the Corporation's economic value of equity. The sensitivity of this value to shifts in the yield curve allows management to measure longer-term repricing and option risk in the portfolio.

The measurement of interest rate risk is highly dependent on numerous assumptions. While the risk analysis incorporates management's best estimate of interest rate and balance sheet dynamics under various market rate movements, the actual behavior and resulting earnings impact will likely differ from that projected. Sensitivities to key assumptions are tested and reviewed to provide a range of possible outcomes. For mortgage-related assets, the simulation model captures the expected prepayment behavior under changing interest rate environments. Assumptions and methodologies regarding the interest rate or balance behavior of indeterminate maturity products, (e.g., credit card receivables, savings, money market, NOW and demand deposits), reflect management's best estimate of expected future behavior. Sensitivity of

service fee income to market interest rate levels, such as those related to cash management products, is included as well.

Risk Monitoring

The Corporation has established risk measures, policy limits and internal control mechanisms (collectively referred to as the Interest Rate Risk Policy) for managing the overall ALM position, including both on- and off-balance sheet positions. Policy limits are based on immediate parallel shocks of +/-100 basis point rate movements.

Responsibility for the management of interest rate risk resides with treasury under the oversight of the ALCO. Business unit management is responsible for understanding their interest rate risk, while the Corporation controls and monitors this risk centrally. ALCO is apprised weekly of the risks associated with the ALM position, with exposures tested under multiple rate and yield curve scenarios. The Corporation balances the return potential of the ALM position against the desire to limit volatility in earnings and/or economic value.

Risk Reporting

Based on immediate parallel shocks, the Corporation's earnings-at-risk to rising interest rates, versus base-case, has improved. The Corporation's 12-month pretax earnings sensitivity profile as of year-end 2002 and 2001 is as follows:

	Immediate Change in Rates			
(In millions)	+200 bp	+100 bp	-50 bp	-100 bp
December 31, 2002	**$165**	**$100**	**$(89)**	**$(177)**
December 31, 2001	$(754)	$(341)	$135	$174

The decrease in earnings-at-risk during the year largely reflects management's decision to reduce exposure to rising market interest rates and take advantage of market opportunities to secure long-term, low cost funding. These activities included the termination of $6 billion notional value in receive fixed/pay floating swaps, execution of $15 billion pay fixed/receive floating swaps and the issuance of $5 billion in fixed rate term funding.

Numerous alternative scenarios are reviewed internally, including more gradual and more severe rate movements and non-parallel rate shifts. These scenarios are intended to provide a more comprehensive view of the Corporation's interest rate risk exposure by further detailing reprice, option, yield curve and basis risk. The interest rate scenarios are used for analytical purposes and do not necessarily represent management's view of future market movements. Rather, they are intended to provide a measure of the degree of volatility interest rate movements may introduce into the earnings and economic value of the Corporation.

Rates as represented by implied forward rates (or the market's expectations for rates as embedded in the current yield curve) provide an important benchmark in the evaluation of balance sheet management strategies and the overall risk posture. The market's view of rates is embedded in the price of all financial instruments. Strategies to modify risk are therefore evaluated based on a comparison of management's and the market's expectations about the degree and timing of the expected rate movement. At year-end, implied forward rates suggested a modest increase in interest rates in the second half of 2003. This rate scenario would not materially impact the earnings of the Corporation.

The Corporation generally benefits if rates increase earlier or more than expected under the implied forwards or if the general level of rate increase is sudden and severe due to actions taken over the year to minimize increases in funding costs relative to assets repricings. The benefit of increasing short-term rates is further enhanced when rates increase more than 425 basis points and the rate earned on a portion of the credit card portfolio moves above contractual floors. The Corporation would be negatively impacted by sudden rate increases accompanied by a flattening yield curve that would diminish the benefit of term asset repricing.

Steeper yield curves typically benefit earnings, particularly when the increase in long-term rates is not accompanied by increasing short-term rates. Falling long-term rates negatively impact earnings and can also expose the Corporation to additional option risk. The Corporation's basis risk is largely the result of corporate and consumer demand for prime-based loan products. Declines in the prime rate relative to bank funding costs will result in decreased earnings.

OPERATIONAL RISK MANAGEMENT

The Corporation is exposed to numerous types of operational risk. Operational risk is defined as the risk of loss resulting from the inadequate or failed internal processes, people and systems or from external events. Operational risk generally refers to the risk of loss resulting from the Corporation's operations, including, but not limited to, the risk of fraud by employees or persons outside the Corporation, the execution of unauthorized transactions by employees, errors relating to transaction processing and systems, and breaches of the internal control system and compliance requirements. This risk of loss also includes the potential legal actions that could arise as a result of the operational deficiency or as a result of noncompliance with applicable regulatory standards.

The Corporation operates in many different businesses in diverse markets and places reliance on the ability of its employees and systems to process a high number of transactions. In the event of a breakdown in the internal control systems, improper operation of systems or improper employee actions, the Corporation could suffer financial loss, face regulatory action and suffer damage to its reputation. The Corporation's framework for managing operational risk establishes a foundation on which to comprehensively and effectively identify, measure, mitigate, monitor and report operational risks.

The Corporation maintains systems of controls that provide management with timely and accurate information about the operations of the Corporation. These systems have been designed to manage operational risk at appropriate levels given the Corporation's financial strength, the environment in which it operates, and considering factors such as competition and regulation. The Corporation has also established procedures that are designed to ensure that policies relating to conduct, ethics and business practices are followed on a uniform basis. In certain cases, the Corporation has experienced losses from operational risk. Such losses have included the effects of operational errors that the Corporation has discovered and taken as charges in the income statement. While there can be no assurance the Corporation will not suffer such losses in the future, management continually monitors and improves its internal controls, systems and corporate-wide processes and procedures. Furthermore, management believes the plans to streamline the organization through charter consolidations and further systems integration and policies enacted to push down reporting accountabilities further in the organization, have improved the Corporation's ability to identify and limit operational risk.

Selected Statistical Information

The significant components of credit risk and the related ratios for the years indicated are as follows:

December 31,	**2002**	2001	2000	1999	1998
(Dollars in millions)					
Loans outstanding	**$148,125**	$156,733	$174,251	$163,877	$155,398
Average loans	**150,805**	167,054	171,768	156,855	154,952
Nonperforming loans [1]	**3,276**	3,551	2,475	1,559	1,207
Other, including other real estate owned	**251**	137	98	106	90
Nonperforming assets	**3,527**	3,688	2,573	1,665	1,297
Allowance for credit losses	**4,525**	4,528	4,110	2,285	2,271
Net charge-offs	**2,465**	2,288	1,391	1,206[3]	1,498
Nonperforming assets to related assets [2]	**2.38%**	2.35%	1.48%	1.02%	0.83%
Allowance to period end loans	**3.20**	2.97	2.42	1.42	1.51
Allowance to nonperforming loans	**139**	128	166	147	188
Net charge-offs to average loans	**1.63**	1.37	0.81	0.77	0.97
Allowance to net charge-offs	**184**	198	295	189[3]	152

(1) Includes loans held for sale of $22 million for the year ended December 31, 2002. For December 31, 2001, 2000, 1999 and 1998 there were no nonperforming loans included in loans held for sale. These amounts are not included in allowance coverage statistics.

(2) Related assets consist of loans outstanding, including loans held for sale and other real estate owned.

(3) Includes $143 million of charge-offs required to bring the consumer portfolio into compliance with FFIEC guidelines. Excluding these incremental charge-offs, the adjusted coverage ratio would have been 215%.

Loan Composition

In 2001, the Corporation changed its loan composition methodology to a line of business approach, dividing the loan portfolio into Retail, Commercial Banking, Card Services, IMG and Corporate. The Corporation has presented 2000 information under both the "old" and "new" compositions, but has not presented 1999 and 1998 under the "new" composition as it would be impractical to reclassify those periods using the new methodologies.

The Corporation's loan portfolios at December 31 are as follows:

	2002		2001		2000	
(Dollars in millions)	**Amount**	**Percent**	Amount	Percent	Amount	Percent
Retail:						
Small business commercial	**$ 9,863**	**7%**	$ 9,947	6%	$ 9,344	5%
Home equity	**28,469**	**19**	25,143	16	31,361	18
Vehicle	**14,012**	**9**	13,481	9	14,300	8
Other personal	**8,491**	**6**	9,779	7	10,697	6
Core businesses	**60,835**	**41**	58,350	38	65,702	37
Brokered home equity discontinued	**3,242**	**2**	5,125	3	N/A	
Vehicle leases	**3,596**	**2**	6,155	4	8,840	5
Home equity discontinued/vehicle leases	**6,838**	**4**	11,280	7	8,840	5
Total Retail	**67,673**	**45**	69,630	45	74,542	42
Commercial Banking:						
Corporate banking:						
Commercial and industrial	**17,866**	**12**	22,268	14	N/A	
Commercial real estate	**8,321**	**6**	8,975	6	N/A	
Lease financing	**4,358**	**3**	4,669	3	N/A	
Other	**1,014**	**—**	731	—	N/A	
Total corporate banking	**31,559**	**21**	36,643	23	51,700	30
Middle market:						
Commercial and industrial	**26,983**	**18**	31,076	20	N/A	
Commercial real estate	**2,318**	**2**	3,472	2	N/A	
Lease financing	**1,008**	**1**	1,053	1	N/A	
Other	**27**	**—**	294	—	N/A	
Total middle market	**30,336**	**21**	35,895	23	36,159	21
Total Commercial Banking	**61,895**	**42**	72,538	46	87,859	51
Card Services	**11,581**	**8**	6,786	4	4,744	3
IMG and Corporate	**6,976**	**5**	7,779	5	7,106	4
Total	**$148,125**	**100%**	$156,733	100%	$174,251	100%

N/A Not available due to changes in segment composition.

Loans held for sale, which are classified as loans, are carried at lower of cost or fair value and totaled $6.9 billion, $4.2 billion and $4.2 billion at December 31, 2002, 2001 and 2000, respectively. At December 31, 2002, loans held for sale included Commercial Banking loans of $235 million of which approximately $19 million were included in nonperforming loans, and Card Services and other consumer loans of $6.7 billion.

Prior to 2001, the Corporation's loan portfolio was divided into commercial, consumer and credit card loan categories as follows:

	2000		1999		1998	
(Dollars in millions)	Amount	Percent	Amount	Percent	Amount	Percent
Commercial:						
Domestic:						
Commercial	$ 65,270	38%	$ 59,070	36%	$ 53,362	34%
Real estate:						
Construction	5,757	3	5,836	4	5,108	3
Other	16,778	10	18,817	11	17,787	12
Lease financing	5,818	3	5,562	3	6,236	4
Foreign	6,837	4	7,067	4	5,945	4
Total commercial	100,460	58	96,352	58	88,438	57
Consumer:						
Residential real estate	40,596	23	32,313	20	25,804	17
Automotive-loans/leases	20,741	12	23,567	14	20,634	13
Other	7,710	4	7,608	5	11,488	7
Total consumer	69,047	39	63,488	39	57,926	37
Card Services	4,744	3	4,037	3	9,034	6
Total	$174,251	100%	$163,877	100%	$155,398	100%

Managed Credit Card Receivables

For analytical purposes, the Corporation reports credit card receivables on both a reported basis and a managed basis. Reported credit card receivables include those receivables held in the portfolio and reported on the balance sheet. Managed credit card receivables include reported credit card receivables, receivables sold to investors through securitization and retained interests (see page 74 for discussion of "Loan Securitizations").

The following table shows the average managed credit card receivables and the related charge-off and delinquency rates for the years ended:

December 31,	**2002**	2001	2000
(Dollars in millions)			
Average balances:			
Credit card loans	**$ 9,899**	$ 6,884	$ 4,754
Credit card receivables transferred to trusts	**57,969**	58,563	61,424
Total average managed credit card receivables	**67,868**	65,447	66,178
Total net charge-offs (including securitizations)	**$ 3,632**	$ 3,823	$ 3,584
Net charge-offs/average total receivables	**5.35%**	5.84%	5.42%
Card Services delinquency rate at period end:			
30+ days	**4.02%**	4.46%	4.51%
90+ days	**1.80%**	1.93%	2.02%

The decrease in the managed net charge-off rate to 5.35% in 2002 from 5.84% in 2001 reflected management's continued emphasis on prudent credit risk management including disciplined underwriting and account management practices targeted to the prime and super prime credit sectors. Nationally, consumers filed for bankruptcy in 2002 in much higher numbers than in any prior year. Credit risk management tools used to manage the level and volatility of losses for credit card accounts have been continually updated, and, where appropriate, these tools were adjusted to reduce credit risk in 2002 and beyond. The managed credit card portfolio continues to reflect a well-seasoned portfolio that has good national geographic diversification.

Future charge-offs in the credit card portfolio and overall credit quality are subject to uncertainties, which may cause actual results to differ from current and historic performance. This could include the direction and level of loan delinquencies, changes in consumer behavior, bankruptcy trends, portfolio seasoning, interest rate movements, and portfolio mix, among other things. While current economic and credit data suggests that credit quality will not significantly deteriorate, significant deterioration in the general economy could materially change these expectations.

Retail

The retail loan portfolio primarily consists of loans secured by real estate as well as vehicle loans and leases, and provides broad diversification of risk from both a product and geographic perspective. Average loan balances for 2002 were $67.7 billion. The Corporation continues to effectively enhance the composition of loans in the portfolio by emphasizing loans to prime credit quality prospects. During 2002, the Corporation continued to de-emphasize vehicle leasing and significantly refocused its indirect real estate lending involving loans sourced through brokers. New loans originated in 2002 on average reflect higher credit quality consistent with management's focus on the prime credit market segment. The net charge-off rate for retail loans in 2002, however, was 1.36%, an increase of 22 basis points from 2001. The increase in part reflected higher loss severity on vehicle loans due to price weakness in the secondary market for used vehicles, increased consumer bankruptcies and higher losses from discontinued segments of the broker home equity portfolio.

Future retail portfolio charge-offs and credit quality are subject to uncertainties which may cause actual results to differ from current anticipated performance, including the direction and level of loan delinquencies, changes in consumer behavior, bankruptcy trends, portfolio seasoning, interest rate movements and portfolio mix among other things.

The Corporation continues to proactively manage its retail credit operation even in difficult economic conditions. Ongoing efforts include continual review and enhancement of credit underwriting criteria, rationalization of the number and quality of third-party loan originators (i.e., brokers and correspondents) and refinement of pricing and risk management models.

Commercial Banking

Commercial Banking loans decreased by $10.6 billion, or 15%, between December 31, 2001, and December 31, 2002, primarily due to a planned and managed reduction of the corporate banking portfolio. Nonperforming Commercial Banking loans decreased by $253 million, or 12%, to $1.9 billion at December 31, 2002, as compared to $2.1 billion at December 31, 2001, primarily driven by improvement in corporate banking. Commercial Banking's net charge-offs in 2002 were $994 million, or 1.51% of average loans, compared with $1.0 billion of net charge-offs, or 1.30% of average loans, in 2001.

Management believes that actions taken over the past two years have led to an overall improvement in both the corporate banking and middle market credit portfolios. These actions, including the deliberate reductions in the loan portfolio, are essentially complete. The Corporation remains increasingly comfortable with its ability to better control, manage and underwrite risk in a consistent and disciplined manner. In spite of this improvement, future charge-offs and credit quality in the Commercial Banking portfolio are subject to uncertainties that may cause actual results to differ from historical experience or forecasted results, including the state of the economy and its impact on individual industries, commercial real estate values, interest rate movements and portfolio mix, among other things.

Commercial and Industrial Loans

Commercial and industrial loans represent commercial loans other than commercial real estate. At December 31, 2002, commercial and industrial loans totaled $44.8 billion, which represents 73% of the Commercial Banking portfolio.

The more significant industry concentrations of the Commercial Banking commercial and industrial portfolio for the year ended December 31, 2002 are as follows:

	2002	
(Dollars in millions)	Outstanding	Percent[1]
Motor vehicles and parts/auto related	$ 3,990	8.9%
Wholesale trade	3,558	7.9
Oil and gas	3,069	6.8
Industrial materials	2,471	5.5
Business finance and leasing	2,222	5.0
Other [2]	29,539	65.9
Total	$44,849	100%

(1) Total outstanding by industry concentration as a percentage of total commercial and industrial loans.

(2) Presented for informational purposes and includes 36 industry concentrations including telephone, wireless and cable of $557 million (or 1.2% of the total portfolio).

Commercial Real Estate

Commercial real estate loans represent credit extended for real estate-related purposes to borrowers or counterparties who are primarily in the real estate development or investment business and for which the primary source of repayment of the loan is from the sale, lease, rental, management, operations or refinancing of the property.

Commercial real estate lending is conducted in several lines of business with the majority of these loans originated by corporate banking primarily through its specialized National Commercial Real Estate Group. This group's focus is lending to targeted regional and national real estate developers and homebuilders. As of December 31, 2002, National Commercial Real Estate Group's loan outstandings totaled $8.3 billion or 78% of the commercial real estate portfolio.

At December 31, 2002 and 2001, commercial real estate loans totaled $10.6 billion and $12.4 billion, or 17% and 18% of Commercial Banking loans, respectively. During 2002 and 2001, net charge-offs in the commercial real estate portfolio segment were $46 million and $14 million, respectively. Nonperforming commercial real estate assets, including other real estate owned, totaled $212 million, or 2.0% of related assets, at December 31, 2002. As of December 31, 2001, nonperforming commercial real estate assets, including other real estate owned, totaled $199 million, or 1.6% of related assets.

The commercial real estate loan portfolio by both collateral location and property type as of December 31, 2002 are as follows:

(Dollars in millions)	Outstanding	
By Collateral Location:	Amount	Percent of Portfolio
Michigan	$ 1,118	11%
California	1,109	10
Illinois	1,088	10
Ohio	848	8
Texas	824	8
Arizona	741	7
Louisiana	376	3
Kentucky	369	3
Indiana	363	3
Colorado	288	3
Other areas	1,563	15
Unsecured	1,341	13
Secured by other than commercial real estate	611	6
Total	$10,639	100%

By Property Type:	Amount	Percent of Portfolio
Apartment	$ 1,854	17%
Retail	1,762	17
Office	1,738	16
Industrial/warehouse	1,161	11
Single family residential development	1,137	11
Hotels	560	5
Residential lots	543	5
Miscellaneous commercial income producing	1,758	17
Miscellaneous residential developments	126	1
Total	$10,639	100%

ASSET QUALITY

In 2001, the Corporation changed its loan composition methodology to a line of business approach, dividing the loan portfolio into Retail, Commercial Banking, Card Services, and other lines of business. The Corporation has presented 2000 information under both the "old" and "new" compositions, but has not presented 1999 and 1998 under the "new" composition as it would be impractical to reclassify those periods using the new methodologies.

Nonperforming Assets

The Corporation places loans on nonaccrual status as follows:

- Retail consumer loans are placed on nonaccrual status when the collection of contractual principal or interest becomes 90 days past due. Accrued but uncollected interest and fee income are reversed and charged against interest income when the consumer loan is placed on nonaccrual status. Subsequent cash collections are recognized as interest income unless the consumer loan is subsequently charged-off, in which case cash collections are recognized as recoveries.
- Commercial Banking and Retail small business commercial loans are placed on nonaccrual status when the collection of contractual principal or interest is deemed doubtful, or it becomes 90 days or more past due and is not both well-secured and in the process of collection. Accrued but uncollected interest and fee income are reversed and charged against interest income when placed on nonaccrual status. Cash interest payments received are recognized either as interest income or as a reduction of principal when collection of principal is doubtful. The loan is returned to accrual status only when all of the principal and interest amounts contractually due are reasonably assured within a reasonable time frame and when the borrower has demonstrated payment performance.
- Credit card receivables are charged-off rather than placed on nonaccrual status.

The Corporation's nonperforming assets for the years ended December 31 are as follows:

(Dollars in millions)	**2002**	2001	2000
Nonperforming Loans:			
Retail	**$1,331**	$1,344	$ 911
Commercial Banking:			
Corporate banking	**873**	1,154	1,065
Middle market banking	**1,001**	973	459
Total Commercial Banking	**1,874**	2,127	1,524
IMG and Corporate	**71**	80	40
Total [1] [2]	**3,276**	3,551	2,475
Other, including other real estate owned	**251**	137	98
Total nonperforming assets	**$3,527**	$3,688	$2,573
Nonperforming assets to related assets [3]	**2.38%**	2.35%	1.48%
Loans 90-days or more past due and accruing interest:			
Card Services	**$ 160**	$ 96	$ 57
Other	**1**	1	5
Total	**$ 161**	$ 97	$ 62

(1) Nonperforming loans at December 31, 2002, include $22 million of loans held for sale. For December 31, 2001 and 2000, there were no nonperforming loans included in held for sale.

(2) The amount of interest on nonperforming loans that was contractually due in 2002 totaled $281 million. Of this amount, $111 million was actually recorded in 2002.

(3) Related assets consist of loans outstanding, including loans held for sale, and other real estate owned.

Prior to 2001, the Corporation's nonperforming assets as of December 31 were:

(Dollars in millions)	2000	1999	1998
Nonperforming Loans:			
Commercial	$1,761	$1,053	$ 729
Consumer	714	506	478
Total	2,475	1,559	1,207
Other, including other real estate owned	98	106	90
Total nonperforming assets	$2,573	$1,665	$1,297
Nonperforming assets to related assets [1]	1.48%	1.02%	0.83%
Loans 90-days or more past due and accruing interest:			
Card Services	$ 57	$ 76	$ 161
Other	5	50	78
Total	$ 62	$ 126	$ 239

(1) Related assets consist of loans outstanding, including loans held for sale, and other real estate owned.

Credit quality improved in 2002 as nonperforming assets declined $161 million from the prior year. In Commercial Banking, nonperforming loans declined $253 million from the prior year. These declines are a result of risk management actions including: loan sales, distressed portfolio sales, and ongoing review of individual credits. The Corporation has established processes for identifying potential problem areas of the portfolio, which currently include exposure to energy, auto-related, airlines and telecommunications. The Corporation will continue to monitor and manage these potential risks, however, concerns remain due to the uncertain economic environment and the potential effect they may have on future credit quality.

Nonperforming loans within Retail at December 31, 2002, were $1.3 billion, a decrease of $13 million. This decrease was primarily driven by discontinued segments of the brokered home equity business. Home equity loans are written down to net realizable value once a loan reaches 120 days delinquency. However, due to the time necessary to complete foreclosure and acquire title, real estate loans remain in nonperforming status for an extended period.

Charge-offs

The Corporation records charge-offs as follows:

- Commercial loans are charged-off in the reporting period in which either an event occurs that confirms the existence of a loss or it is determined that a loan or a portion of a loan is uncollectible.
- A credit card loan is charged-off in the month it becomes contractually 180 days past due and remains unpaid at the end of that month, or 60 days after receipt of bankruptcy notification. Interest on credit card loans is accrued until the loan is charged-off. All interest and fees on loans greater than 90 days delinquent are fully reserved for. At the time of charge-off, accrued but uncollected finance charges and fee income are reversed and charged against interest income and credit card revenue, respectively. Subsequent cash collections are recorded as recoveries. Beginning in 2003, recoveries of previously reversed interest income related to charged off loans are recorded as interest income.
- Retail loans are generally charged-off following a delinquency period of 120 days, or within 60 days for unsecured Retail loans after receipt of notification in case of bankruptcy. Closed-end consumer loans, such as auto loans and leases and home mortgage loans, are typically written down to the extent of loss after considering the net realizable value of the collateral.

The timing and amount of the charge-off on consumer loans will depend on the type of loan, giving consideration to available collateral, as well as the circumstances giving rise to the delinquency. The Corporation adheres to uniform guidelines published by the FFIEC in charging off consumer loans.

The Corporation's net charge-offs for the years ended December 31 are as follows:

	2002			2001			2000		
(Dollars in millions)	**Net charge-offs**	**Average balance**	**Net charge-off rate**	Net charge-offs	Average balance	Net charge-off rate	Net charge-offs	Average balance	Net charge-off rate
Retail	**$ 919**	**$ 67,671**	**1.36%**	$ 820	$ 72,149	1.14%	$ 542	$ 72,282	0.75%
Commercial Banking:									
Corporate banking	**639**	**32,973**	**1.94**	638	43,495	1.47	435	53,343	0.81
Middle market banking	**355**	**32,996**	**1.08**	404	36,910	1.09	127	34,528	0.37
Total Commercial Banking	**994**	**65,969**	**1.51**	1,042	80,405	1.30	562	87,871	0.64
Card Services	**514**	**9,899**	**5.19**	392	6,884	5.69	247	4,754	5.20
IMG and Corporate	**38**	**7,266**	**—**	34	7,616	—	40	6,861	—
Total	**$2,465**	**$150,805**	**1.63%**	$2,288	$167,054	1.37%	$1,391	$171,768	0.81%

Net charge-offs increased 8% during 2002 to $2.5 billion from the prior year reflecting higher charge-offs in nearly all lines of business. The net charge-off rate increased to 1.63% in 2002 versus 1.37% in 2001.

Retail net charge-offs for 2002 totaled $919 million, up from $820 million in 2001. Several factors contributed to these increased losses including: increased consumer bankruptcies; increased severity per default involving auto loans and leases tied to weaker market prices for repossessed vehicles; and high losses on discontinued brokered home equity loans.

For a discussion of Commercial Banking net charge-offs see "Commercial Banking" on page 65.

Card Services net charge-offs for 2002 totaled $514 million, up from $392 million pimarily as a result of growth in the portfolio.

Loan Sales

A summary of the Corporation's Commercial Banking loan sales, excluding syndications, and syndication-related activity and trade finance transactions, for the years indicated are as follows:

(In millions)	**2002**	2001
Loans sold and loans transferred to loans held for sale: [1]		
Nonperforming loans	**$ 508**	$ 582
Other loans with credit related losses	**670**	487
Other loans	**852**	1,148
Total	**$2,030**	$2,217
Impact of sales, transfers to loans held for sale and valuation adjustments on held for sale:		
Charge-offs on loans sold and transferred to held for sale:		
Nonperforming loans	**$ 92**	$ 124
Other loans with credit related losses	**42**	92
Total charge-offs to allowance	**134**	216
Losses on loans sold and held for sale	**35**	43
Total	**$ 169**	$ 259

(1) December 31, 2002 data includes loans reclassified to loans held for sale that are not yet sold of approximately $19 million, $148 million and $68 million in nonperforming loans, other loans with credit related losses and other loans, respectively.

The Corporation sells Commercial Banking loans in the normal course of its business activities as one alternative to manage credit risk. These loans are subject to the Corporation's overall risk management practices. When a loan is sold or transferred to held for sale, the gain or loss is evaluated to determine whether it resulted from credit deterioration or other conditions. Based upon this evaluation, losses resulting from credit deterioration are recorded as charge-offs. Losses or gains deemed to be from other than credit deterioration are recorded as losses or gains on sale. Subsequent writedowns in fair value on loans held for sale are reflected in other noninterest income.

Loans classified as held for sale are carried at the lower of cost or market value. Accordingly, these loans are no longer included in the evaluation of the adequacy of the allowance for credit losses.

ALLOWANCE FOR CREDIT LOSSES

The allowance for credit losses is maintained at a level that in management's judgment is adequate to provide for estimated probable credit losses inherent in various on- and off-balance sheet financial instruments. This process includes deriving expected loss estimates that are based on historical loss ratios, portfolio stress testing and management's judgment. The allowance is based on ranges of estimates and is intended to be adequate but not excessive. Each quarter, an allowance level is estimated by each line of business and reviewed by corporate risk management and senior management. The allowance for credit losses also includes provisions for losses on loans considered impaired and measured pursuant to Statement of Financial Accounting Standards ("SFAS") No. 114, "Accounting by Creditors for Impairment of a Loan," (see Note 8 "Loans" on page 92). Securitized loans and loans held for sale, including credit card receivables, are not subject to this process.

Corporate risk management recommends an allowance and provision for credit losses that result in adequate coverage of inherent losses within the Corporation's credit portfolios. Corporate risk management's assessment is based on line of business tests, portfolio-level modeling and stress testing, as well as management's judgment. Corporate risk management also utilizes third-party benchmarks to validate internal measures of probability of default, loss given default, credit quality and allowance adequacy.

The changes in the Corporation's allowance for credit losses for the years ended December 31 are as follows:

(In millions)	**2002**	2001	2000
Balance, beginning of year	**$4,528**	$4,110	$2,285
Charge-offs:			
Retail:			
Small business commercial	**105**	92	66
Home equity	**292**	230	196
Vehicle	**288**	220	201
Other personal	**135**	151	149
Core businesses	**820**	693	612
Brokered home equity discontinued	**162**	172	N/A
Vehicle leases	**96**	127	91
Home equity discontinued/vehicle leases	**258**	299	91
Total consumer	**973**	900	637
Total Retail	**1,078**	992	703
Commercial Banking:			
Corporate Banking:			
Commercial and industrial	**541**	689	N/A
Commercial real estate	**35**	15	N/A
Lease financing	**135**	16	N/A
Total corporate banking	**711**	720	469
Middle market:			
Commercial and industrial	**377**	418	N/A
Commercial real estate	**21**	8	N/A
Lease financing	**30**	36	N/A
Total middle market	**428**	462	157
Total Commercial Banking	**1,139**	1,182	626
Card Services	**565**	415	261
IMG and Corporate	**47**	41	77
Total charge-offs	**2,829**	2,630	1,667
Recoveries:			
Retail:			
Small business commercial	**20**	22	22
Home equity	**32**	20	15
Vehicle	**60**	66	63
Other personal	**26**	29	40
Core businesses	**138**	137	140
Brokered home equity discontinued	**4**	7	N/A
Vehicle leases	**17**	28	21
Home equity discontinued/vehicle leases	**21**	35	21
Total consumer	**139**	150	139
Total Retail	**159**	172	161
Commercial Banking:			
Corporate banking:			
Commercial and industrial	**66**	74	N/A
Commercial real estate	**6**	8	N/A
Lease financing	**—**	—	N/A
Total corporate banking	**72**	82	36
Middle market:			
Commercial and industrial	**65**	49	N/A
Commercial real estate	**4**	1	N/A
Lease financing	**4**	8	N/A
Total middle market	**73**	58	28
Total Commercial Banking	**145**	140	64
Card Services	**51**	23	14
IMG and Corporate	**9**	7	37
Total recoveries	**364**	342	276
Net charge-offs:			
Retail	**919**	820	542
Commercial Banking	**994**	1,042	562
Card Services	**514**	392	247
IMG and Corporate	**38**	34	40
Total net charge-offs	**2,465**	2,288	1,391
Provision for credit losses	**2,487**	2,510	3,398
Transfers[1]	**(25)**	196	(182)
Balance, end of year	**$4,525**	$4,528	$4,110

N/A Not available due to changes in segment composition.

(1) Transfers to the allowance for credit losses in 2001 primarily represent the addition of the Wachovia credit card portfolio. Transfers from the allowance for credit losses for 2000 primarily represent allocable credit allowances associated with consumer loan sale transactions, including securitization transactions.

For analytical purposes, using the previous methodology for portfolio segmentation, summarized below are the changes in the allowance for credit loss for the years ended December 31:

(In millions)	2000	1999	1998
Balance, beginning of year	$2,285	$2,271	$2,817
Charge-offs:			
Commercial:			
Domestic:			
Commercial	618	325	222
Real estate:			
Construction	8	5	3
Other	11	27	25
Lease financing	7	12	20
Foreign	64	41	52
Total commercial	708	410	322
Consumer:			
Residential real estate	230	189	74
Automotive:			
Loans	215	256	220
Leases	91	87	61
Other	162	203	246
Total consumer	698	735	601
Card Services	261	386	1,022
Total charge-offs	1,667	1,531	1,945
Recoveries:			
Commercial:			
Domestic:			
Commercial	98	70	68
Real estate:			
Construction	1	6	3
Other	4	25	23
Lease financing	1	2	5
Foreign	7	1	1
Total commercial	111	104	100
Consumer:			
Residential real estate	17	12	11
Automotive:			
Loans	69	82	92
Leases	21	23	21
Other	44	60	64
Total consumer	151	177	188
Card Services	14	44	159
Total recoveries	276	325	447
Net charge-offs:			
Commerical	597	306	222
Consumer	547	558	413
Card Services	247	342	863
Total net charge-offs	1,391	1,206	1,498
Provision for credit losses	3,398	1,249	1,408
Transfers [1]	(182)	(29)	(456)
Balance, end of year	$4,110	$2,285	$2,271

(1) Transfers from the allowance for credit losses primarily represent allocable credit allowances associated with consumer loan sale transactions, including securitization transactions.

Composition of Allowance for Credit Losses

While the allowance for credit losses is available to absorb credit losses in the entire portfolio, allocations of the allowance for credit losses by line of business as of December 31 are as follows:

	2002		2001		2000	
(Dollars in millions)	**Amount**	**Percent**	Amount	Percent	Amount	Percent
Retail	**$1,018**	**22%**	$1,027	23%	$ 836	20%
Commercial Banking:						
Corporate banking	**1,706**	**38**	1,714	38	1,699	41
Middle market	**1,365**	**30**	1,365	30	1,355	33
Total Commercial Banking	**3,071**	**68**	3,079	68	3,054	74
Card Services	**396**	**9**	396	8	197	5
IMG and Corporate	**40**	**1**	26	1	23	1
Total	**$4,525**	**100%**	$4,528	100%	$4,110	100%

For analytical purposes using the previous methodology for portfolio segmentation, an allocation of the allowance for credit losses by loan type as of December 31 follows:

	2000		1999		1998	
(Dollars in millions)	Amount	Percent	Amount	Percent	Amount	Percent
Commercial [1]	$3,199	78%	$ 972	43%	$ 834	37%
Consumer	714	17	486	21	440	19
Card Services	197	5	148	6	199	9
Unallocated	—	—	679	30	798	35
Total	$4,110	100%	$2,285	100%	$2,271	100%

(1) Includes allowance related to Business and Community Banking loans, which are included in the Retail business segment results.

Components of Allowance for Credit Losses

The Corporation determines allowance levels based upon the probable losses in the credit portfolios. Several methodologies are employed for estimating probable losses. A detailed discussion of the process is presented beginning on page 57.

The table below presents the components of the probable loss estimate as of December 31:

(In millions)	**2002**	2001
Asset specific	**$ 678**	$ 731
Expected loss	**2,810**	3,167
Stress	**1,037**	630
Total [1]	**$4,525**	$4,528

(1) The underlying assumptions, estimates and assessments made by management to determine the components of the allowance for credit losses are continually evaluated by management and updated to reflect management's judgments regarding economic conditions and various relevant factors impacting credit quality and inherent losses.

The December 31, 2002 allowance for credit losses remained relatively unchanged; however, due to decreases in nonperforming loans and asset levels, coverage ratios improved. The allowance for credit losses at December 31, 2002 represented 3.20% of period-end loans and 139% of nonperforming loans, compared to 2.97% and 128%, respectively, at December 31, 2001. The asset-specific and expected loss components of the allowance for credit losses decreased from prior year reflecting some improvement in credit quality. However, this was offset by an increase in the stress component of the allowance for credit losses reflecting management's ongoing assessment and outlook of the probable losses inherent in the portfolio resulting from the overall economic environment. The allowance for credit losses established for specifically identified off-balance sheet lending exposures was not material at December 31, 2002.

As a result of significant deterioration in certain components of the commercial loan portfolio, the allowance for credit losses was increased to $4.1 billion at December 31, 2000. The majority of the increase in the allowance occurred in the fourth quarter of 2000 as the Corporation identified an increase in the losses inherent in the portfolio not yet realized. During 2001, increases in both charge-offs and nonperforming loans occurred as net charge-offs increased from $1.4 billion in 2000 to $2.3 billion in 2001, and nonperforming loans increased from $2.5 billion at December 31, 2000 to $3.6 billion at December 31, 2001. While credit deterioration occurred during 2000, necessitating the increase in the allowance for credit losses, its impact on delinquencies and charge-offs on the commercial loan portfolio was realized in subsequent periods. While the calculated coverage ratios for 2001 declined in comparison to 2000, the decline was a result of the lagging nature of charge-offs.

Portfolio Stress-Tests

Stress testing is performed on all significant portfolios to simulate the effect of economic deterioration on credit performance. Stress testing the portfolios provides management with a range of loss estimates that incorporates the Corporation's historical loss experience and the reserve impact of events that have occurred, but that have not been reflected in either the historical expected loss factors or the currently assigned risk ratings.

Stress testing of the commercial portfolio is accomplished using a framework developed to test expected default factors and loss given default estimates and to test the effect of downgrades to exposures in identified high-risk industries. This process includes: establishing a base case scenario using three alternative market probability sets and an estimated loss given default probability to measure the impact on reserves; determining the effect of apply-

ing a higher loss given default probability to the base case to take into consideration the variability of historical loss rates over the business cycle; and estimating trend-based reserves in high-risk industries that may not be fully reflected in the historically based loss factors, using market-based tools and information as well as sanctioned macroeconomic forecasts.

Stress testing the consumer portfolios, including credit card, is accomplished in part by analyzing the 5-year historical loss experience for each major product segment. Management analyzes the range of credit loss experienced for each major portfolio segment taking into account economic cycles, portfolio seasoning, underwriting criteria, and then formulates a stress test range that incorporates relevant risk factors that can impact overall credit performance.

DERIVATIVE FINANCIAL INSTRUMENTS

In the normal course of business, the Corporation uses a variety of derivative financial instruments in its trading activity and asset and liability management, and to a lesser extent, in its mortgage operations and to manage certain currency translation exposures of foreign entities.

Effective January 1, 2001, the Corporation adopted SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities" ("SFAS No. 133"), as amended. This standard significantly changed the accounting treatment for interest rate and foreign exchange derivatives the Corporation uses in its derivative activity. As required by SFAS No. 133, all derivative instruments are carried at fair value irrespective of the purpose for entering into the contracts (i.e., trading, hedging, etc). Purchased option contracts are reported in derivative product assets, and written option contracts are reported in derivative product liabilities. For other derivative financial instruments, unrealized gains are reported in derivative product assets, and unrealized losses are reported in derivative product liabilities. However, fair value amounts recognized for derivative financial instruments executed with the same counterparty under a legally enforceable master netting arrangement are reported on a net basis. Cash flows from derivative financial instruments are reported net as operating activities in the statement of cash flows.

Trading Derivative Instruments

Derivative financial instruments used in trading activities include swaps, forwards, futures, options, and other conditional or exchange contracts in the interest rate, foreign exchange, equity and commodity markets. The estimated fair values are based on quoted market prices or valuation models using current market information. Realized and unrealized gains and losses, including any interest income or expense on derivative instruments, are recorded in noninterest income as trading.

The Corporation uses credit derivatives (primarily single name credit default swaps) and short bond positions, as protection against the deterioration of credit quality on commercial loans and loan commitments. The change in fair value of credit derivative instruments is included in trading results in the Corporation's financial statements, while any credit assessment change in the identified commercial credit exposure is reflected as a change in the allocated credit reserves. At December 31, 2002, the notional amount of credit derivatives economically hedging commercial credit exposure totaled $7.3 billion, and related trading income was $42 million.

Asset and Liability Management Hedging Derivative Instruments

Derivatives are an integral component of the Corporation's asset/liability management activities and associated management of interest rate risk. In general, the assets and liabilities generated through the ordinary course of business activities do not naturally create offsetting positions with respect to repricing, basis or maturity characteristics. Using derivative instruments, principally plain vanilla interest rate swaps (ALM swaps), interest rate sensitivity is adjusted to maintain the desired interest rate risk profile. Interest rate swaps used to adjust the interest rate sensitivity of certain interest-bearing assets and liabilities will not need to be replaced at maturity, since the corresponding asset or liability will mature along with the interest rate swap.

Derivative financial instruments used in hedging activities are designated as fair value hedges, cash flow hedges, or hedges of net investments in foreign operations, and are required to meet specific criteria. The instruments used in fair value hedges and cash flow hedges are principally interest rate swaps. Such interest rate swaps are designated as a hedge, and adjust effectively the interest rate sensitivity of specific assets and liabilities. Interest rate swaps not designated as a qualified hedge are treated as trading derivative instruments.

Interest rate swaps designated as an interest rate related hedge of an existing fixed rate asset or liability are fair value type hedges. Conversely, interest rate swaps designated as an interest rate hedge of an existing variable rate asset or liability are cash flow type hedges. The risk characteristics of the item being hedged generally determine the type of hedge for accounting purposes. Maximizing hedge effectiveness is the primary consideration in choosing the specific asset, liability or forecasted transaction to be hedged.

Fair Value Hedges

Fair value hedges primarily represent hedges of fixed rate interest-bearing instruments. The change in fair value of both the hedging derivative and hedged item is recorded in current earnings. If a hedge is dedesignated prior to maturity, previous adjustments to the carrying value of the hedged item are recognized in earnings to match the earnings recognition pattern of the hedged item (e.g., level yield amortization if hedging an interest-bearing instrument that has not been sold or extinguished).

Cash Flow Hedges

Cash flow hedges primarily represent hedges of variable rate interest-bearing instruments. The effective portion of the change in fair value of the hedging derivative is recorded in Accumulated Other Adjustments to Stockholders' Equity ("AOASE"), which is reclassified into earnings in a manner consistent with the earnings pattern of the underlying hedged instrument or transaction. At December 31, 2002, the total amount of such reclassification into earnings is projected to be a decrease in net interest income of $323 million after-tax ($510 million pre-tax) over the next twelve months. This decrease, along with the contractual interest on the underlying variable rate debt, achieves the overall intended result of converting the variable rate to a specified fixed rate and is included in our analysis of interest rate exposure. These projections involve the use of currently forecasted interest rates over the next twelve months. These rates, and the resulting reclassifications into earnings, are subject to change. The maximum length of time is 27 months for which exposure to the variability of future cash flows for forecasted transactions is hedged. No events occurred in 2002 that impacted earnings from the discontinuance of cash flow hedges due to the determination that a forecasted transaction is no longer likely to occur.

Interest income or expense on most hedging derivatives used to manage interest rate exposure is recorded on an accrual basis as an adjustment to the yield of the designated hedged exposures over the periods covered by the contracts. This matches the income recognition treatment of that exposure, generally assets or liabilities carried at historical cost, with interest recorded on an accrual basis. If all or part of a designated hedged position is terminated (e.g., a hedged asset is sold or prepaid), or if the amount of an anticipated transaction is likely to be less than originally expected, then the related pro rata portion of any unrecognized gain or loss on the derivative is recognized in earnings at that time, and the related pro rata portion of the derivative is subsequently accounted for as a trading instrument.

Hedges entered into by the Corporation are regularly monitored to verify that the hedge continues to be effective in offsetting changes in fair value or cash flows of the risk being hedged. In the event that hedges cease to be effective, hedge accounting is discontinued. Amounts previously recognized as adjustments to the carrying value of the hedged item (in a fair value hedge), and accumulated in AOASE (in a cash flow hedge) are subsequently recognized in earnings when the previously hedged item affects earnings.

The amount of hedge ineffectiveness recognized for cash flow and fair value hedges for the twelve months ended December 31, 2002 and 2001, was a gain of $2 million and $14 million, respectively, recognized in noninterest income. No component of a hedging derivative instrument's gain or loss is excluded from the assessment of hedge effectiveness. The Corporation has no non-derivative instruments designated as a hedge.

Asset and Liability Management Swaps — Maturities and Rates

The notional amounts, maturity, and weighted-average pay and receive rates for the ALM swap position at December 31, 2002, are summarized as follows:

(Dollars in millions)	2003	2004	2005	2006	2007	Thereafter	Total
Receive fixed/pay floating swaps:[1]							
Notional amount	$ 225	$ —	$ —	$ —	$ —	$2,475	$ 2,700
Weighted average:							
Receive rate	3.13%	—%	—%	—%	—%	6.22%	5.96%
Pay rate	1.43	—	—	—	—	1.74	1.72
Pay fixed/receive floating swaps:[1]							
Notional amount	$1,310	$2,970	$9,582	$2,895	$1,821	$ 50	$18,628
Weighted average:							
Receive rate	1.67%	1.63%	1.36%	1.46%	1.53%	1.78%	1.46%
Pay rate	6.93	3.67	4.19	4.77	3.69	7.71	4.35
Total notional amount	$1,535	$2,970	$9,582	$2,895	$1,821	$2,525	$21,328

(1) Variable interest rates – which generally are the one-month, three-month and six-month London interbank offered rates ("LIBOR") in effect on the date of repricing.

Mortgage Banking Hedging Activity

The Corporation uses derivatives, primarily mortgage backed security forward sale agreements, to hedge exposure to changes in interest rates in its mortgage loan origination and sale activity. Changes in fair value of mortgage loan interest rate lock commitments granted to customers and the related derivative contracts used to economically hedge this exposure are recorded in other noninterest income. In contrast, fair value hedge accounting, as described above, is used to account for the derivatives entered into to hedge the 15 and 30 year closed loan warehouse that is held for sale. Changes in fair value of derivatives used to economically hedge the adjustable rate closed loan warehouse are also recorded in other noninterest income.

Hedges of Non-U.S Dollar Net Investment in Foreign Operations

In order to minimize the capital impact of translation gains or losses measured on an after-tax basis, the Corporation uses forward foreign exchange contracts to hedge the exposure relating to non-U.S. dollar net investments in foreign operations. The effective portion of the change in fair value of the hedging derivatives is recorded in AOASE as part of the cumulative translation adjustment. The amount of after-tax gains included in the cumulative translation adjustment during the years ended December 31, 2002 and 2001, related to hedges of the foreign currency exposures of net investments in foreign operations, totaled $9 million and $6 million, respectively.

Credit Exposure Resulting from Derivative Financial Instruments

The credit risk associated with exchange-traded derivative financial instruments is limited to the relevant clearinghouse. Written options do not expose the Corporation to credit risk, except to the extent of the underlying risk in a financial instrument that the Corporation may be obligated to acquire under certain written put options. Written caps and floors do not expose the Corporation to credit risk.

Credit exposure from derivative financial instruments arises from the risk of a counterparty default on the derivative contract. The amount of loss created by the default is the replacement cost or current positive fair value of the defaulted contract. The Corporation utilizes master netting agreements whenever possible to reduce its credit exposure from counterparty defaults. These agreements allow the netting of contracts with unrealized losses against contracts with unrealized gains to the same counterparty, in the event of a counterparty default.

The impact of these master netting agreements at December 31 follows:

(In millions)	**2002**	2001
Gross replacement cost	**$22,066**	$12,262
Less: Adjustment due to master netting agreements	**17,793**	9,037
Balance sheet credit exposure	**$ 4,273**	$ 3,225

LOAN SECURITIZATIONS AND OFF-BALANCE SHEET ACTIVITIES

Loan Securitizations

The Corporation transforms loans into securities that are sold to investors through the process of securitization. The Corporation primarily securitizes credit card receivables and home equity loans and consumer assets. In a credit card securitization, a designated pool of credit card receivables is removed from the balance sheet and transferred to a QSPE, that in turn sells securities to investors entitling them to receive specified cash flows during the life of the security. The proceeds from the issuance of securities are then distributed by the QSPE to the Corporation as consideration for the loans transferred. Following a securitization, the Corporation receives fees for servicing the receivables and any excess finance charges, yield-related and other fees, and interchange revenue on the receivables over and above the interest paid to the investors, net credit losses and servicing fees (collectively termed "the excess spread"). At the date of sale an interest-only strip is recorded on the balance sheet representing the estimated discounted excess spread earned on the assets sold over the life of underlying receivables.

The Corporation's continued involvement in the securitized assets includes the process of managing and servicing the transferred receivables, as well as maintaining an undivided, pro rata interest in all credit card receivables that have been securitized, referred to as seller's interest, which is generally equal to the pool of assets included in the securitization less the investors' portion of those assets. The Corporation's seller's interest ranks pari-passu with the investors' interests in the trusts. As the amount of the loans in the securitized pool fluctuates due to customer payments, purchases, cash advances, and credit losses, the carrying amount of the seller's interest will vary. However, the seller's interest is required to be maintained at a minimum level to ensure receivables are available for allocation to the investor's interest. This minimum level is generally between 4% and 7% of the QSPEs principal receivables. The Corporation's credit card seller's interests were in aggregate 45% and 38% of the QSPEs principal receivables at December 31, 2002, and 2001, respectively. Average credit card seller's interests were approximately 40% and 30% of the QSPEs average principal receivables for the years ended December 31, 2002, and 2001, respectively.

Investors in the beneficial interests of the securitized loans have no recourse against the Corporation if cash flows generated from the securitized loans are inadequate to service the obligations of the QSPE. To help ensure that adequate funds are available in the event of a shortfall, the Corporation is required to deposit funds into cash spread accounts if excess spread falls below certain minimum levels. Spread accounts are funded from excess spread that would normally be returned to the Corporation. In addition, various forms of other credit enhancements are provided to protect more senior investor interests from loss. Credit enhancements associated with credit card securitizations, such as cash collateral or spread accounts, totaled $145 million and $165 million at December 31, 2002, and 2001, respectively, and are classified on the balance sheet as other assets at amounts approximating fair value.

The following comprised the Corporation's managed credit card loans at December 31:

(In millions)	**2002**	2001
Owned credit card loans – held in portfolio	**$ 7,592**	$ 5,040
Owned credit card loans – held for future securitization	**3,989**	1,746
Seller's interest in credit card loans and accrued interest receivable	**28,526**	24,019
Total credit card loans reflected on balance sheet	**40,107**	30,805
Securities sold to investors and removed from balance sheet	**33,889**	37,350
Managed credit card loans	**$73,996**	$68,155

Off-Balance Sheet Activities

In the normal course of business, the Corporation is a party to a number of activities that contain credit, market and operational risk that are not reflected in whole or in part in the Corporation's consolidated financial statements. Such activities include: traditional off-balance sheet credit-related financial instruments; commitments under capital and operating leases and long-term debt; credit enhancement and liquidity facilities associated with the commercial paper conduit program; joint venture activities; and other contractual obligations.

Credit-Related Financial Instruments

The Corporation provides customers with off-balance sheet credit support through loan commitments, standby letters of credit and guarantees, as well as commercial letters of credit. Summarized credit-related financial instruments at December 31, 2002, are as follows:

		Amount of Commitment Expiration Per Period			
(In billions)	Total	Less Than 1 Year	1 – 3 Years	3 – 5 Years	Over 5 Years
Unused credit card lines	$337.5	$337.5	$ —	$ —	$ —
Unused loan commitments	134.8	103.1	22.1	9.3	0.3
Standby letters of credit and foreign office guarantees	24.0	16.3	5.9	1.4	0.4
Commercial letters of credit	0.5	0.5	—	—	—

Since many of the unused commitments are expected to expire unused or be only partially used, the total amount of unused commitments in the preceding table does not necessarily represent future cash requirements.

Lease Commitments, Long-Term Debt and Other

The Corporation has entered into a number of long-term leasing arrangements of banking facilities to support the ongoing activities of the Corporation. The required payments under such commitments and long-term debt at December 31, 2002 are as follows:

(In millions)	2003	2004	2005	2006	2007	2008 and After	Total
Long-term debt, including capital leases	$7,846	$6,291	$6,622	$6,896	$4,542	$7,722	$39,919
Trust preferred capital securities	—	—	—	—	—	3,315	3,315
Operating leases	239	228	205	187	160	843	1,862
Total	$8,085	$6,519	$6,827	$7,083	$4,702	$11,880	$45,096

Asset Backed Finance Programs

The Corporation is an active participant in the asset-backed securities business where it helps meet customers' financing needs by providing access to the commercial paper markets through special purpose entities, known as multi-seller conduits. These entities are separate bankruptcy-remote corporations in the business of purchasing interests in, and making loans secured by, receivable pools and other financial assets pursuant to agreements with customers. The entities fund their purchases and loans through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flow from the pools of assets. Investors in the commercial paper have no recourse to the general assets of the Corporation. Customers benefit from such structured financing transactions as these transactions provide an ongoing source of asset liquidity, access to the capital markets, and a potentially favorable cost of financing.

As of December 31, 2002, the Corporation administered multi-seller conduits with a total program limit of $70.0 billion and with $39.3 billion in commercial paper outstanding. The multi-seller conduits were rated A-1 by S & P, P-1 by Moody's and F1 or higher by Fitch.

These multi-seller conduits are a type of variable interest entity ("VIE"), as defined by Financial Accounting Standards Board ("FASB") Interpretation No. 46, "Consolidation of Variable Interest Entities" ("FIN No. 46"). From the Corporation's perspective, these entities have historically met all of the requirements to be treated as independent entities, which have not been required to be consolidated. See pages 87–88 for additional discussion. Each of the multi-seller conduits administered by the Corporation has standalone financial statements, which are independently audited on an annual basis.

As administrator of the multi-seller conduits, the Corporation provides deal origination services, asset portfolio monitoring, treasury and financial administration services for these entities. The Corporation structures financing transactions for customers such that the receivables and other financial instruments financed through the multi-seller conduits are appropriately diversified and credit enhanced to support the conduits' commercial paper issuances. The Corporation does not service these assets and does not transfer its own receivables or other financial instruments into the multi-seller conduits it administers. Each conduit has program documents and investment policies, which govern the types of assets and structures permitted by the conduit. The mix of assets is principally trade receivables, auto loans and leases and credit card receivables. Under the program document, one conduit has publicly rated marketable investment securities.

The commercial paper issued by the conduits is supported by deal specific credit enhancement, which is generally structured to cover more than the expected losses on the pool of assets. The deal specific credit enhancement is typically in the form of overcollateralization, but may also include any combination of the following: recourse to the seller or originator, cash collateral accounts, letters of credit, excess spread, retention of subordinated interests or third-party guarantees. In a limited number of cases, the Corporation provides the deal specific credit enhancement as a financial arrangement for the customer. As of December 31, 2002 and 2001, the Corporation provided such deal specific credit enhancement to customers in the form of subordinated interests totaling $203 million and $132 million, respectively. These subordinated interest positions are included in loans on the Corporation's balance sheet.

In general, the commercial paper investors have access to a second loss credit protection in the form of program-wide credit enhancement. The program-wide credit enhancement consists of a subordinated term loan from the Corporation and a surety bond from an AAA rated monoline insurance company. The subordinated term loans from the Corporation to these entities totaled $1.0 billion and $1.1 billion as of December 31, 2002 and 2001, respectively. However, one conduit has only deal specific credit enhancements provided by other financial institutions.

As a means of ensuring timely repayment of the commercial paper, each asset pool financed by the conduits has a minimum of 100% deal specific liquidity facility associated with it. In the unlikely event of a disruption in the commercial paper market or in the event an asset pool is removed from the conduit, the administrator can draw on the liquidity facility to repay the maturing commercial paper. The liquidity facilities are typically in the form of asset purchase agreements and are generally structured such that the bank liquidity provider is purchasing, or lending against, a pool of non-defaulted, performing assets. Additionally, programwide liquidity facilities and lines of credit are provided by the Corporation to the multi-seller conduits to facilitate access to the commercial paper markets.

The following table summarizes the total amount of deal specific and programwide liquidity facilities, as well as the share of these facilities provided by the Corporation, for each of the multi-seller conduits as of December 31, 2002 and 2001:

	2002			2001		
(Dollars in billions)	Total Liquidity Facility	Liquidity Facility provided by the Corporation	Percent	Total Liquidity Facility	Liquidity Facility provided by the Corporation	Percent
Total multi-seller conduits	**$50.6**	**$41.3**	**82%**	$53.5	$41.3	77%

The Corporation also provides deal specific and program-wide liquidity facilities to conduits administered by other financial institutions totaling approximately $6.3 billion and $2.1 billion as of December 31, 2002 and 2001, respectively.

With the January 2003 issuance of FIN No. 46, the Corporation is currently in the process of evaluating what entities will be required to be consolidated. The Corporation believes it is reasonably possible that the multi-seller conduits and an investment vehicle as currently structured, for which it is the administrator will be consolidated. Investors in the multi-seller conduits have no recourse to the general assets of the Corporation.

Based on information as of December 31, 2002, the expected impact of FIN No. 46 to the Corporation's balance sheet would be to increase both assets and liabilities by approximately $42.8 billion for the multi-seller conduits and an investment vehicle. Management has estimated its maximum loss exposure to be $130 million. Based on capital ratios as of December 31, 2002, consolidation of these entities would affect regulatory risk-based capital by reducing the Tier 1 risked-based capital ratio from 9.9% to 8.6% and total risked-based capital ratio from 13.7% to 12.1%. The Corporation's actual capital ratios as of the date of adoption will depend on the actual level of risk based capital, which is subject to change from that of December 31, 2002.

Principal Investments and Joint Ventures

In the normal course of business, the Corporation invests in principal investments, comprised of indirect investments in private equity, venture capital, and other equity and debt assets. The investment strategy for the portfolio, primarily executed by One Equity Partners (a wholly-owned consolidated subsidiary), is to focus on direct investments in high potential entities. Investments made in the past year include stakes in Howaldtswekre-Deutsche Werft (HDW), the global leader in the design and manufacture of non-nuclear submarines, and Polaroid, a leader in the instant imaging industry. Commitments to fund such investments at December 31, 2002 totaled $1.1 billion.

Beginning January 1, 2002, Paymentech, Inc. and Anexsys, LLC were consolidated. At December 31, 2002, the Corporation is not party to any material joint venture arrangements which are not consolidated.

Loans Sold with Recourse

The Corporation occasionally sells or securitizes loans with limited recourse. The amount of outstanding loans sold with recourse totaled $4.7 billion and $8.3 billion at December 31, 2002, and 2001, respectively. The recourse provisions require the Corporation to repurchase loans at par plus accrued interest upon a credit-related triggering event. Exposure to credit losses from these arrangements has been reduced with the purchase of credit insurance contracts that cover the majority of expected losses.

CAPITAL MANAGEMENT

The capital position of the Corporation is managed to achieve management's external debt rating objectives, comply with regulatory requirements and reflect the underlying risks of the Corporation's business activities. The Corporation employs an economic capital framework (described further on page 79) to facilitate a standard measure of risk and return across all business units, as well as to provide a measure of capital adequacy consistent with internal risk evaluation practices. This serves as the basis for capital planning and related management activities.

Selected Capital Ratios

The Corporation aims to maintain regulatory capital ratios, including those of the principal banking subsidiaries, in excess of the well-capitalized guidelines under federal banking regulations. The Corporation maintains a well-capitalized regulatory position.

The Corporation's capital ratios are as follows:

	2002	2001	2000	1999	1998	Well-Capitalized Regulatory Guidelines
Risk-based capital ratios:						
Tier 1	**9.9%**	8.6%	7.3%	7.7%	7.9%	6.0%
Total	**13.7**	12.2	10.8	10.7	11.3	10.0
Leverage ratio [1]	**8.9**	8.2	7.3	7.7	8.0	N/A
Common equity/assets	**8.1**	7.5	6.8	7.4	7.8	—
Tangible common equity/tangible reported assets	**7.2**	6.8	6.3	6.6	6.8	—
Tangible common equity/tangible managed assets	**6.4**	5.9	5.5	5.7	5.8	—
Double leverage ratio	**103**	103	108	112	108	—
Dividend payout ratio	**30**	38	N/M	57	58	—

N/A Not applicable

(1) The minimum regulatory guideline is 3%.

The components of the Corporation's regulatory risk-based capital and risk-weighted assets are as follows at December 31:

(In millions)	**2002**	2001	2000	1999	1998
Regulatory risk-based capital:					
Tier 1 capital	**$ 23,918**	$ 21,749	$ 19,824	$ 20,247	$ 19,495
Tier 2 capital	**9,201**	9,091	9,316	7,967	8,295
Total capital	**33,119**	30,840	29,140	28,214	27,790
Total risk-weighted assets	**$241,468**	$253,330	$270,182	$263,169	$244,473

In deriving Tier 1 and total capital, goodwill and other nonqualifying intangible assets are deducted as indicated for the years ended December 31:

(In millions)	**2002**	2001	2000	1999	1998
Goodwill	**$1,882**	$1,560	$ 858	$ 934	$1,075
Other nonqualifying intangibles	**256**	207	375	669	637
Subtotal	**2,138**	1,767	1,233	1,603	1,712
Qualifying intangibles	**415**	414	214	583	984
Total intangibles	**$2,553**	$2,181	$1,447	$2,186	$2,696

See page 77 for a discussion of the possible impact of consolidation of certain multi-seller conduits to the Corporation's risk-based capital ratios under FIN No. 46.

Dividend Policy

The Corporation's common stock dividend policy reflects its earnings outlook, desired payout ratios, the need to maintain an adequate capital level, and alternative investment opportunities. The common stock dividend payout ratio is currently targeted in the range of 25% - 30% of earnings over time. Common stock dividends declared for 2002 and 2001 were $0.84 per share. On January 21, 2003, the Corporation declared its quarterly common cash dividend of $0.21 per share, payable on April 1, 2003.

Double Leverage

Double leverage is the extent to which the Corporation's resources are used to finance investments in subsidiaries. Double leverage was 103% at December 31, 2002, and 2001. Trust Preferred Capital Securities of $3.3 billion in 2002 and 2001 were included in capital for purposes of this calculation.

Stock Repurchase Program and Other Capital Activities

On July 16, 2002, the Corporation's Board of Directors approved the repurchase of up to $2 billion of the Corporation's common stock, replacing the two previous buyback programs announced in September 2001 and May 1999. The timing of the purchases and the exact number of shares to be repurchased will depend on market conditions. The share repurchase program does not include specific price targets or timetables and may be suspended at any time. In 2002, the Corporation purchased 16 million shares of common stock at an average price of $37.54 per share. There remains available $1.6 billion of common stock that may be repurchased under the Board authorization.

On November 1, 2001, the Corporation redeemed all outstanding preferred stock with cumulative and adjustable dividends, Series B and C, totaling $190 million. The redemption price for both of the Series B and C preferred stock was $100.00 per share, plus accrued and unpaid dividends totaling $1.00 per share and $1.083 per share, respectively.

During 2001, the Corporation added to its Tier 1 capital through the sponsorship of two trusts that issued $825 million in aggregate principal amount of trust preferred securities.

During 2001 the Corporation strengthened its capital position through the issuance of $750 million of subordinated debt.

Economic Capital

An important aspect of risk management and performance measurement is the ability to evaluate the risk and return of a business unit, product or customer consistently across all lines of business. The Corporation's economic capital framework facilitates this standard measure of risk and return. Business units are assigned capital consistent with the underlying risks of their product set, customer base and delivery channels.

The following principles are inherent in the capital allocation methodology employed:

- An equal amount of capital is assigned for each measured unit of risk.
- Risk is defined in terms of "unexpected" losses over the life of the exposure, measured at a confidence interval consistent with that level of capitalization necessary to achieve a targeted AA solvency standard. Unexpected losses are in excess of those normally incurred and for which reserves are maintained.
- Business units are assessed a uniform charge against allotted capital, representing a target hurdle rate on equity investments. Returns on capital in excess of the hurdle rate contribute to increases in shareholder value.

Four forms of risk are measured – credit, market, operational and lease residual. Credit risk capital is determined through an analysis of both historical loss experience and market expectations. Market risk capital is set consistent with value-at-risk limits established by the Corporation's risk oversight committees. Operational risk capital incorporates event and technology risks. The operational risk evaluation process involves an examination of various risk factors that contribute to a greater likelihood of loss due to such things as fraud or processing error. Finally, lease residual risk capital covers the potential for losses arising from the disposition of assets returned at the end of lease contracts. This price risk is analyzed based upon historical loss experiences and market factors, as well as by reviewing event-specific scenarios.

The economic capital process provides a valuable analytical tool that is critical to the understanding of business segment performance trends. The methodologies employed are subject to ongoing development and review. Over time, the Corporation's view of individual risks and associated capital will likely change given improvements in the Corporation's ability to quantify risks inherent in various business activities.

FORWARD-LOOKING STATEMENTS

This discussion of financial results contains forward-looking statements about the Corporation, including descriptions of plans or objectives of its management for future operations, products or services, and forecasts of its revenues, earnings or other measures of economic performance. Forward-looking statements can be identified by the fact that they do not relate strictly to historical or current facts. They often include the words "believe," "expect," "anticipate," "intend," "plan," "estimate" or words of similar meaning, or future or conditional verbs such as "will," "would," "should," "could" or "may."

Forward-looking statements, by their nature, are subject to risks and uncertainties. A number of factors – many of which are beyond the Corporation's control – could cause actual conditions, events or results to differ significantly from those described in the forward-looking statements. Some of these factors include certain credit, market, operational, liquidity and interest rate risks associated with the Corporation's business and operations. Other factors described in the Corporation's Form 10-K include changes in business and economic conditions, competition, fiscal and monetary policies and legislation.

Forward-looking statements speak only as of the date they are made. The Corporation does not undertake to update forward-looking statements to reflect circumstances or events that occur after the date the forward-looking statements are made or to reflect the occurrence of unanticipated events, such as further market deterioration that adversely affects credit quality, auto lease residuals and credit card asset values.

CONSOLIDATED BALANCE SHEETS
BANK ONE CORPORATION and Subsidiaries

At December 31,	**2002**	2001
(Dollars in millions)		
Assets		
Cash and due from banks	**$ 17,920**	$ 17,383
Interest-bearing due from banks	**1,503**	1,030
Federal funds sold and securities purchased under resale agreements	**17,356**	9,347
Trading assets	**7,190**	6,167
Derivative product assets	**4,273**	3,225
Investment securities	**67,643**	60,883
Loans [1]	**148,125**	156,733
Allowance for credit losses	**(4,525)**	(4,528)
Loans, net	**143,600**	152,205
Other assets	**17,898**	18,714
Total assets	**$277,383**	$268,954
Liabilities		
Deposits:		
Demand	**$ 34,325**	$ 32,179
Savings	**88,934**	80,599
Time:		
Under $100,000	**16,767**	20,106
$100,000 and over	**13,745**	18,071
Foreign offices	**16,237**	16,575
Total deposits	**170,008**	167,530
Federal funds purchased and securities sold under repurchase agreements	**14,578**	13,728
Other short-term borrowings	**12,306**	10,255
Long-term debt	**39,919**	40,103
Guaranteed preferred beneficial interest in the Corporation's junior subordinated debt	**3,315**	3,315
Derivative product liabilities	**3,838**	2,574
Other liabilities	**10,979**	11,223
Total liabilities	**254,943**	248,728
Stockholders' Equity		
Common stock ($0.01 par value; authorized 4,000,000,000; issued 1,181,382,304)	**12**	12
Surplus	**10,239**	10,311
Retained earnings	**13,020**	10,707
Accumulated other adjustments to stockholders' equity	**(8)**	(65)
Deferred compensation	**(157)**	(121)
Treasury stock, at cost (17,340,948 and 14,415,873 shares, respectively)	**(666)**	(618)
Total stockholders' equity	**22,440**	20,226
Total liabilities and stockholders' equity	**$277,383**	$268,954

(1) Includes loans held for sale of $6.9 billion and $4.2 billion at December 31, 2002 and 2001, respectively.

The accompanying notes are an integral part of this statement.

CONSOLIDATED INCOME STATEMENTS
BANK ONE CORPORATION and Subsidiaries

For The Year Ended December 31,	**2002**	2001	2000
(In millions, except per share data)			
Net Interest Income:			
Interest income	**$13,935**	$17,304	$20,078
Interest expense	**5,340**	8,666	11,242
Total net interest income	**8,595**	8,638	8,836
Noninterest Income:			
Banking fees and commissions	**1,775**	1,731	1,537
Credit card revenue	**3,816**	2,775	2,299
Service charges on deposits	**1,578**	1,449	1,310
Fiduciary and investment management fees	**740**	754	783
Investment securities gains (losses)	**165**	(66)	(235)
Trading	**224**	220	134
Other income (losses)	**(62)**	360	(738)
Total noninterest income	**8,236**	7,223	5,090
Total revenue, net of interest expense	**16,831**	15,861	13,926
Provision for credit losses	**2,487**	2,510	3,398
Noninterest Expense:			
Salaries and employee benefits	**4,465**	4,198	4,602
Occupancy	**645**	686	872
Equipment	**426**	457	593
Outside service fees and processing	**1,303**	1,178	1,537
Marketing and development	**1,054**	862	900
Telecommunication	**365**	407	411
Other intangible amortization	**125**	97	410
Goodwill amortization	**—**	69	70
Other expense	**1,261**	1,246	2,052
Total noninterest expense before merger and restructuring-related charges (reversals)	**9,644**	9,200	11,447
Merger and restructuring-related charges (reversals)	**(63)**	351	161
Total noninterest expense	**9,581**	9,551	11,608
Income (loss) before income taxes (benefit) and cumulative effect of change in accounting principle	**4,763**	3,800	(1,080)
Applicable income taxes (benefit)	**1,468**	1,118	(569)
Income (loss) before cumulative effect of change in accounting principle	**3,295**	2,682	(511)
Cumulative effect of change in accounting principle, net of taxes of ($25)	**—**	(44)	—
Net income (loss)	**$ 3,295**	$ 2,638	$ (511)
Net income (loss) attributable to common stockholders' equity	**3,295**	2,628	(523)
Earnings (loss) per share before cumulative effect of change in accounting principle:			
Basic	**$ 2.83**	$ 2.28	$ (0.45)
Diluted	**2.80**	2.28	(0.45)
Earnings (loss) per share:			
Basic	**$ 2.83**	$ 2.25	$ (0.45)
Diluted	**2.80**	2.24	(0.45)

The accompanying notes are an integral part of this statement.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

BANK ONE CORPORATION and Subsidiaries

(In millions)	Preferred Stock	Common Stock	Surplus	Retained Earnings	Accumulated Other Adjustments to Stockholders' Equity	Deferred Compensation	Treasury Stock	Total Stockholders' Equity
Balance-December 31, 1999	$ 190	$12	$10,799	$11,037	$(263)	$(118)	$(1,567)	$20,090
Net loss				(511)				(511)
Change in fair value, investment securities-available for sale, net of taxes					256			256
Translation gain, net of hedge results and taxes					2			2
Net loss and changes in accumulated other adjustments to stockholders' equity				(511)	258			(253)
Cash dividends declared:								
Common stock				(1,454)				(1,454)
Preferred stock				(12)				(12)
Net issuance of common stock			(302)				615	313
Purchase of common stock							(17)	(17)
Restricted stock awards granted, net of forfeitures and amortization						(34)		(34)
Other			(10)			31	(19)	2
Balance-December 31, 2000	$ 190	$12	$10,487	$ 9,060	$ (5)	$(121)	$ (988)	$18,635
Net income				2,638				2,638
Change in fair value, investment securities-available for sale, net of taxes					93			93
Change in fair value of cash-flow hedge derivative securities, net of taxes					(146)			(146)
Translation loss, net of hedge results and taxes					(7)			(7)
Net income and changes in accumulated other adjustments to stockholders' equity				2,638	(60)			2,578
Cash dividends declared:								
Common stock				(981)				(981)
Preferred stock				(10)				(10)
Net issuance of common stock			(179)				448	269
Redemption of stock	(190)							(190)
Purchase of common stock							(78)	(78)
Other			3					3
Balance-December 31, 2001	$ —	$12	$10,311	$10,707	$ (65)	$(121)	$ (618)	$20,226
Net income				3,295				3,295
Change in fair value, investment securities-available for sale, net of taxes					474			474
Change in fair value of cash-flow hedge derivative securities, net of taxes					(414)			(414)
Translation loss, net of hedge results and taxes					(3)			(3)
Net income and changes in accumulated other adjustments to stockholders' equity				3,295	57			3,352
Common stock cash dividends declared				(982)				(982)
Net issuance of common stock			(134)				(48)	(182)
Restricted stock awards granted, net of forfeitures and amortization						(36)		(36)
Stock option grants			45					45
Other			17					17
Balance-December 31, 2002	**$ —**	**$12**	**$10,239**	**$13,020**	**$ (8)**	**$(157)**	**$ (666)**	**$22,440**

The accompanying notes are an integral part of this statement.

CONSOLIDATED STATEMENTS OF CASH FLOWS
BANK ONE CORPORATION and Subsidiaries

For The Year Ended December 31,	**2002**	2001	2000
(In millions)			
Cash Flows from Operating Activities:			
Net income (loss)	**$ 3,295**	$ 2,638	$ (511)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	**524**	571	934
Cumulative effect of accounting change	**—**	69	—
Provision for credit losses	**2,487**	2,510	3,398
Investment securities (gains) losses, net	**(165)**	66	236
Net increase in net derivative product assets and liabilities	**(504)**	(198)	(71)
Net (increase) decrease in trading assets	**(1,021)**	(3,456)	11,691
Net decrease (increase) in other assets	**1,229**	213	(655)
Net (decrease) increase in other liabilities	**(867)**	375	1,502
Merger-related and restructuring (reversals) charges	**(63)**	351	161
Other operating adjustments	**523**	(764)	139
Net cash provided by operating activities	**5,438**	2,375	16,824
Cash Flows from Investing Activities:			
Net (increase) decrease in federal funds sold and securities purchased under resale agreements	**(8,010)**	(4,610)	5,045
Securities available for sale:			
Purchases	**(57,304)**	(56,088)	(72,098)
Maturities	**7,193**	23,579	17,882
Sales	**48,340**	23,393	48,960
Credit card receivables securitized	**6,775**	3,845	—
Net (increase) decrease in loans	**(4,677)**	13,425	(14,903)
Purchase of Wachovia credit card business	**—**	(5,776)	—
Loan recoveries	**364**	342	276
Additions to premises and equipment	**(488)**	(169)	(533)
Proceeds from sales of premises and equipment	**53**	55	—
All other investing activities, net	**(257)**	383	(1,194)
Net cash used in investing activities	**(8,011)**	(1,621)	(16,565)
Cash Flows from Financing Activities:			
Net increase in deposits	**2,590**	373	4,681
Net increase (decrease) in federal funds purchased and securities sold under repurchase agreements	**850**	1,607	(6,599)
Net increase (decrease) in other short-term borrowings	**2,061**	(7,757)	(3,208)
Proceeds from issuance of long-term debt	**8,293**	12,466	13,914
Repayment of long-term debt	**(8,945)**	(11,341)	(9,237)
Repurchase of treasury stock	**(617)**	(78)	(3)
Cash dividends paid	**(983)**	(991)	(1,222)
Proceeds from issuance of trust preferred capital securities	**—**	825	915
Proceeds from issuance of common and treasury stock	**292**	191	152
Redemption of preferred stock	**—**	(190)	—
All other financing activities, net	**69**	19	(19)
Net cash provided by (used in) financing activities	**3,610**	(4,876)	(626)
Effect of exchange rate changes on cash and cash equivalents	**(27)**	34	147
Net increase (decrease) in cash and cash equivalents	**1,010**	(4,088)	(220)
Cash and cash equivalents at beginning of year	**18,413**	22,501	22,721
Cash and cash equivalents at end of year	**$ 19,423**	$ 18,413	$ 22,501
Other cash flow disclosures:			
Interest paid	**$ 5,684**	$ 9,221	$ 10,777
Income taxes paid	**1,111**	506	371

The accompanying notes are an integral part of this statement.

Note 1 – Summary of Significant Accounting Policies

BANK ONE CORPORATION, along with its subsidiaries ("Bank One" or the "Corporation"), is a financial holding company that offers a full range of financial services to commercial and business customers and consumers.

(a) Basis of Presentation

The consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States of America. Certain prior-year financial statement information has been reclassified to conform to the current year's presentation. The preparation of the consolidated financial statements requires management to make estimates and assumptions that affect the amounts reported and disclosures of contingent assets and liabilities. Actual results could differ from those estimates.

Certain assets and liabilities, primarily derivative assets and liabilities as well as resale and repurchase agreements, are reported on a net basis by counterparty if legally enforceable master netting arrangements are in place.

(b) Principles of Consolidation

The Corporation's consolidated financial statements include all accounts of BANK ONE CORPORATION (the "Parent Company") and all significant majority-owned subsidiaries with principal investment subsidiaries following specialized industry accounting as described below. All significant intercompany accounts and transactions have been eliminated. Results of operations of acquired entities are included from the acquisition date, and assets and liabilities are stated at their estimated fair values at the acquisition date.

The Corporation is involved with Special Purpose Entities ("SPEs") as either a transferor or an administrator. The Corporation considers the underlying facts and circumstances of individual transactions when assessing the appropriateness of consolidating SPEs. The Corporation's assessment focuses on its ability to influence or control a SPE as well as the dispersion of risk and rewards attributable to a SPE. In cases where the Corporation transfers financial assets to a SPE, the SPE must represent a qualifying SPE ("QSPE") or the Corporation consolidates the transferred financial assets. QSPE status is achieved when all conditions specified in SFAS No. 140, "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities" ("SFAS No. 140") are met. Those conditions focus on whether the SPE is demonstrably distinct from the Corporation, limited to only permitted activities, limited on what assets the QSPE may hold, and limited on sales or other dispositions of assets. The Corporation has determined that its credit card trusts are QSPEs, and has obtained supporting legal opinions as applicable.

As discussed on pages 75-77 the Corporation serves as an administrator of commercial paper multi-seller conduits. In determining whether to consolidate the financial assets held by these SPEs, the Corporation considered qualitative and quantitative factors of the SPEs that were deemed appropriate prior to the issuance of new and pending accounting pronouncements. Such factors included the purpose and nature of the SPE, the Corporation's continuing involvement, any fee arrangements, credit facilities and other relevant factors. Based on its evaluation of these factors, the Corporation has determined that none of these SPEs require consolidation. However, as described in Note 1(r) "New and Pending Accounting Pronouncements" it is reasonably possible that these SPEs will be consolidated effective July 1, 2003 under new accounting guidance.

The Corporation's principal investment subsidiaries, separate legal entities, have majority equity ownership in investees that are not consolidated because of specialized industry accounting for investment companies which requires fair value accounting.

(c) Resale and Repurchase Agreements

Securities purchased under resale agreements and securities sold under repurchase agreements are treated as collateralized financing transactions and carried at the amount at which the securities will be subsequently resold or repurchased, plus accrued interest.

(d) Trading Activities

The Corporation's trading activities are primarily customer oriented. Securities bought and sold and held principally for short-term appreciation or other trading purposes and to protect credit deterioration in the loan portfolio are classified as trading assets and other short-term borrowings and recorded on a trade date basis at fair value. Derivative contracts entered into for trading and economic hedging purposes which do not qualify for hedge accounting are classified as derivative product assets and derivative product liabilities, as appropriate. Trading income includes realized and unrealized gains and losses from trading positions, including interest income or expense on derivative instruments. Estimated fair values are based on quoted market prices or valuation models, which use current market information. Trading activities involve instruments with interest rate, exchange rate, equity price, credit and commodity price risk.

(e) Hedging Activities

Hedging derivatives that qualify for hedge accounting are recognized on the balance sheet at fair value as either derivative product assets or liabilities. Hedge ineffectiveness, if any, is calculated and recorded in current earnings. See "Derivative Financial Instruments" beginning on page 72 for detailed information on the Corporation's strategy in using derivative instruments in its asset and liability management and trading activities, as well as the accounting principles and disclosures for these instruments.

(f) Investment Securities

Debt and equity investment securities designated as available for sale are carried at fair value, with unrealized gains and losses, net of taxes, included in accumulated other adjustments to stockholders' equity. The estimated fair value of a security is determined based on market quotations when available or, if not available, by using a discounted cash flow approach. Realized gains and losses, including other than temporary impairments, are included in noninterest income as investment securities gains (losses). The specific identification method is used to calculate realized gains or losses.

In accordance with Emerging Issues Task Force (EITF) No. 99-20, "Recognition of Interest Income and Impairment on Purchased and Retained Beneficial Interests in Securitized Financial Assets," impairment of certain beneficial interests in securitized financial assets must be recognized when there has been an adverse change in estimated cash flows and the asset's fair value is below its carrying value. The Corporation recognizes interest income based on the amount of the excess of estimated cash flows over the recorded investment in the securitized financial assets. Changes in estimated cash flows are recognized on a prospective basis. The Corporation adopted EITF No. 99-20 effective April 1, 2001. The effect of adoption was a one-time, non-cash charge to earnings of $44 million after-tax ($69 million pre-tax).

Principal investments are carried at fair value, with unrealized and realized gains and losses included in noninterest income as investment securities gains (losses). The fair value of a publicly traded principal investment is determined using quoted market prices when the investment is unrestricted; otherwise fair value is estimated using quoted market prices adjusted for market liquidity, position size and sale restrictions other than time. The fair value of principal investments that are not publicly traded is estimated based on the investees' financial results, conditions and prospects, values of comparable public companies, market liquidity and sales restrictions.

(g) Equity and Cost Method Investments

The equity method of accounting is applied to investments that the Corporation has significant influence over, excluding principal investments, which typically represents ownership interests between 20-50% for investments in common stock or when ownership interests equals or exceeds 3% for investments in limited partnerships. The equity method of accounting results in recognition of the Corporation's pro-rata share of investment income or loss in other noninterest income.

The cost method of accounting is applied to investments that the Corporation does not have a significant influence over, excluding principal investments, which typically represent ownership interests less than 20% for investments in common stock or when ownership interests is less than 3% for investments in limited partnerships. The cost method recognizes income when dividends are received.

(h) Loans

Loans are recognized at the principal amount outstanding, net of unearned income and amounts charged off. The recorded investment in credit card loans also includes unpaid interest and fees. Unearned income includes deferred loan origination fees reduced by loan origination costs. Unearned income on loans, excluding credit card loans, is amortized to interest income over the life of the related loan using methods which approximate the effective interest rate method. Unearned income on credit card loans is typically amortized over one year using a straight-line method to noninterest income as credit card revenue.

Fees received for providing loan commitments and letters of credit that result in loans are typically deferred and amortized to interest income over the life of the related loan, beginning with the initial borrowing. Fees on commitments and letters of credit are amortized to noninterest income as banking fees and commissions over the commitment period when funding is not expected.

Other credit-related fees, including syndication management fees, are recorded to noninterest income as banking fees and commissions when received or over time to match the earnings process.

(i) Lease Financing Receivables

The Corporation typically provides lease financing to its customers through direct financing leases. Leveraged leases, which represent direct financing leases involving nonrecourse debt, also are provided to customers. Unearned income on a direct financing lease is amortized to income over the lease term so as to yield a constant rate of return on the net investment in the lease. Periodic recognition of lease income on leveraged leases is based on an analysis of cash flows using the original investment less deferred taxes arising from the difference between the pretax financial accounting income and taxable income. Residual values of leased assets are reviewed at least annually with periodic reviews performed as warranted by the underlying circumstances. In the case of automobiles, valuations are based upon various assumptions and estimates including the probability of the automobile being returned to the Corporation, estimated costs incurred to reduce the number of returned automobiles from the customer, estimated collectable fees for mileage and other wear and tear, reconditioning costs, and estimated used car sales prices. Declines in estimated residual values that are other than temporary are recognized in the period such determination is made in other noninterest income.

(j) Loan Sales and Securitizations

Loans held for sale are carried at the lower of cost or market value. When a loan is sold or transferred to held for sale, the loan's carrying value is compared to its fair value and any shortfall in value that is determined to be credit related is recorded as a charge-off, reducing the allowance for credit losses. Any shortfall in fair value other than credit related is recorded as a charge to other noninterest income. All subsequent net declines in market value of loans held for sale are recorded to other noninterest income.

With consumer loan portfolio sales, the allocable portion of the allowance for credit losses adjusts the carrying value of the loan portfolio and is treated as a transfer out of the allowance for credit losses. The difference between the portfolio's carrying value adjusted for the allocable credit reserves and the net sales proceeds is recorded as a component of other noninterest income.

The Corporation records a transfer of financial assets as a sale when it surrenders control over those financial assets to the extent that consideration other than beneficial interests in the transferred assets is received in exchange. The Corporation considers control surrendered when all conditions prescribed by SFAS No. 140 are met. Those conditions focus on whether the transferred financial assets are isolated beyond the reach of the Corporation and its creditors, the constraints on the transferee or beneficial interest holders, and the Corporation's rights or obligations to reacquire transferred financial assets. As appropriate, the Corporation obtains legal opinions supporting the conclusion that transferred financial assets are isolated beyond the reach of the Corporation and its creditors.

(k) Nonperforming Loans

A loan is considered nonperforming when placed on nonaccrual status, or when renegotiated at terms that represent an economic concession to the borrower because of a decline in the borrower's financial condition. For a more detailed discussion, see the "Nonperforming Assets" section beginning on page 66. The Corporation's charge-off policies are presented on page 67.

(l) Allowance for Credit Losses

Management maintains the allowance for credit losses at a level it believes is adequate to provide for estimated probable credit losses inherent in on- and off-balance sheet credit exposure. For a more detailed discussion, see the "Allowance for Credit Losses" section beginning on page 68.

(m) Premises and Equipment

Premises and equipment are carried at cost less accumulated depreciation and amortization. Depreciation and amortization is computed using the straight-line method over the estimated useful life of the owned asset and, for leasehold improvements, over the lesser of the remaining term of the leased facility or the estimated economic life of the improvement. For owned and capitalized assets, estimated useful lives range from three to 30 years. Maintenance and repairs are charged to expense as incurred, while major improvements are capitalized and amortized to operating expense over the identified useful life.

(n) Other Real Estate Owned ("OREO")

OREO includes real estate assets that have been received in satisfaction of debt. OREO is initially recorded and subsequently carried at the lower of cost or fair value less estimated selling costs. Any valuation adjustments required at the date of transfer are charged to the allowance for credit losses. Subsequently, unrealized losses and realized gains and losses on sale are included in other noninterest income. Operating results from OREO are recorded in other noninterest expense.

(o) Credit Card Award Programs

Costs associated with credit card award programs are accounted for on an accrual basis, and are charged against credit card revenue in the period in which the related benefits are earned by customers. See page 47 for a discussion of risks and uncertainty associated with an award program.

(p) Income Taxes

Deferred tax assets and liabilities are determined based on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and their related tax bases and are measured using the enacted tax rates and laws that are in effect. The effect on deferred tax assets and liabilities of a change in rates is recognized as income or expense in the period in which the change occurs.

(q) Cash Flow Reporting

Cash and cash equivalents consist of cash and due from banks, whether interest-bearing or not. Net reporting of cash transactions has been used when the balance sheet items consist predominantly of maturities of three months or less, or where otherwise permitted. Other items are reported on a gross basis.

(r) New and Pending Accounting Pronouncements

The Corporation adopted in 2002 the following new accounting pronouncements and will adopt in 2003 the following pending accounting pronouncements.

Goodwill and Other Intangible Assets

Effective January 1, 2002, the Corporation adopted SFAS No. 142, "Goodwill and Other Intangible Assets" ("SFAS No. 142"). Under SFAS No. 142, goodwill and intangible assets with indefinite lives are no longer amortized, but are subject to impairment tests at least annually. Intangible assets with finite lives continue to be amortized over the period the Corporation expects to benefit from such assets and are periodically reviewed for other than temporary impairment.

The impact of adopting SFAS No. 142 on net income and earnings per share adjusted to exclude amortization expense (net of taxes) related to goodwill is as follows:

(In millions, except per share data)	**2002**	2001	2000
Net income (loss) attributable to common stockholders' equity[1]	**$3,295**	$2,628	$ (523)
Goodwill amortization	**—**	44	44
Pro forma net income (loss) attributable to common stockholders' equity	**$3,295**	$2,672	$ (479)
Basic earnings (loss) per share:			
Reported earnings (loss) per share	**$ 2.83**	$ 2.25	$(0.45)
Goodwill amortization	**—**	0.04	0.04
Pro forma basic earnings (loss) per share	**$ 2.83**	$ 2.29	$(0.41)
Diluted earnings (loss) per share:			
Reported earnings (loss) per share	**$ 2.80**	$ 2.24	$(0.45)
Goodwill amortization	**—**	0.04	0.04
Pro forma diluted earnings (loss) per share	**$ 2.80**	$ 2.28	$(0.41)

(1) Includes the impact of preferred stock dividends of $10 million and $12 million in 2001 and 2000, respectively.

Stock Options

Effective January 1, 2002, the Corporation adopted the fair value recognition provisions of SFAS No. 123, "Accounting for Stock-based Compensation" ("SFAS No. 123"), as amended by SFAS No. 148, "Accounting for Stock-Based Compensation– Transition and Disclosure, an amendment to FASB Statement No. 123" ("SFAS No. 148"), and selected the prospective method of transition and began recognizing compensation expense based on the fair value method on newly granted stock awards. Under this method, compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the vesting period of the grant. Pursuant to the requirements of SFAS No. 123, as amended by SFAS No. 148, options granted prior to January 1, 2002, continue to be accounted for under APB Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB No. 25"). Under APB No. 25, no compensation expense is recognized when the exercise price is greater than or equal to the market price of the underlying common stock on the date of grant.

Awards under the Corporation's stock compensation plans vest over periods ranging from two to five years. Therefore, the expense related to stock option compensation included in the determination of net income for 2002 is less than that which would have been recognized if the fair value method had been applied to all awards since the original effective date of SFAS No. 123. The net income and earnings per share implications if the fair value method had been applied to all awards which vested during the years ended December 31, 2002, 2001 and 2000 would have been as follows:

(In millions, except per share data)	**2002**	2001[1]	2000[1]
Net income (loss) attributable to common stockholders' equity[2]	**$3,295**	$2,628	$ (523)
Add: Stock option employee compensation expense included in reported net income, net of related tax effects	**29**	—	—
Deduct: Total stock option employee compensation expense determined under the fair value method for all awards vested during the year, net of related tax effects [3]	**92**	222	151
Pro forma net income (loss) attributable to common stockholders' equity	**$3,232**	$2,406	$(674)
Earnings (loss) per share:			
Basic – as reported	**$ 2.83**	$ 2.25	$(0.45)
Basic – pro forma	**2.78**	2.06	(0.58)
Diluted – as reported	**2.80**	2.24	(0.45)
Diluted – pro forma	**2.76**	2.05	(0.58)

(1) In 2002, management refined its methodology in estimating pro forma compensation cost. Accordingly, the 2001 and 2000 pro forma compensation cost has been adjusted for comparability purposes.

(2) Includes the impact of preferred stock dividends of $10 million and $12 million in 2001 and 2000, respectively.

(3) Stock option awards granted in 1999 and 2000 were fully vested by early 2002.

Costs Associated with Exit or Disposal Activities

In 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities" ("SFAS No. 146") which supercedes EITF No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)." SFAS No. 146 requires that a liability for costs associated with an exit or disposal activity be recognized when the liability is incurred rather than when a company commits to such an activity and also establishes fair value as the objective for initial measurement of the liability. The Corporation will adopt SFAS No. 146 for exit or disposal activities that are initiated after December 31, 2002, and the impact of adoption is not expected to have a material impact on the Corporation's results of operations, financial position or cash flows.

Accounting and Disclosure Requirements for Guarantees

In 2002, the FASB issued Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others" ("FIN No. 45") which requires additional disclosures by a guarantor about its obligations under certain guarantees that it has issued. FIN No. 45 also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The most significant instruments impacted for the Corporation are financial and performance standby letters of credit. The required FIN No. 45 disclosures for 2002 have been incorporated into Note 22 "Financial Instruments with Off-Balance Sheet Risk" that appears on pages 102–103. The accounting requirements of FIN No. 45 are effective for the Corporation on January 1, 2003, on a prospective basis. The impact of adoption is not expected to have a material impact on the Corporation's results of operations, financial position or cash flows.

Consolidation of Variable Interest Entities

In 2003, the FASB issued Interpretation No. 46, "Consolidation of Variable Interest Entities" ("FIN No. 46") which provides new accounting guidance on when to consolidate a variable interest entity. A variable interest entity exists when either the total equity investment at risk is not sufficient to permit the entity to finance its activities by itself, or the equity investors lack one of three characteristics associated with owning a controlling financial interest. Those characteristics include the direct or indirect ability to make decisions about an entity's activities through voting rights or similar rights, the obligation to absorb the expected losses of an entity if they occur, and the right to receive the expected residual returns of the entity if they occur.

FIN No. 46 is effective immediately for new entities that were created or acquired after January 31, 2003, and will become effective on July 1, 2003, for entities in which the Corporation had a variable interest prior to February 1, 2003. The Corporation plans to adopt FIN No. 46 on a prospective basis and, accordingly, will not restate prior periods. FIN No. 46 affects the Corporation's accounting and reporting for certain SPEs in which the Corporation is involved.

The Corporation's retained interest in its credit card securitizations and its investments in commercial mortgage backed securities will not be consolidated since both transaction structures are exempt from the requirements of FIN No. 46.

As discussed on pages 75 – 77, the Corporation is an active participant in the asset-backed securities business where it helps meet customers' financing needs by providing access to the commercial paper markets through SPEs, known as multi-seller conduits. These multi-seller conduits are a type of variable interest entity ("VIE"), as defined by FIN No. 46. These entities have historically met the requirements to be treated as independent entities, which have not been required to be consolidated. With the January 2003 issuance of FIN No. 46, the Corporation believes it is reasonably possible that the multi-seller conduits and an investment vehicle as currently structured, for which it is the administrator, will be consolidated. Investors in the multi-seller conduits have no recourse to the general assets of the Corporation. The Corporation is currently evaluating all variable interests in variable interest entities.

Based on information as of December 31, 2002, the expected impact of FIN No. 46 to the Corporation's balance sheet would be to increase both assets and liabilities by approximately $42.8 billion. Any difference between the net amount added to the balance sheet and the amount of any previously recognized interest in the newly consolidated entities would be recognized as a cumulative effect of an accounting change. The Corporation is assessing the impact of adoption, if any. See page 77 for loss exposure and the potential impact on risk-based capital ratios.

Note 2 – Earnings Per Share

Basic EPS is computed by dividing income available to common stockholders by the average number of common shares outstanding for the period. Except when the effect would be antidilutive, the diluted EPS calculation includes shares that could be issued under outstanding stock options and the employee stock purchase plans. In addition, interest on convertible debentures (net of tax) is added to net income, since this interest would not be paid if the debentures were converted to common stock.

The computation of basic and diluted earnings per share follows:

For The Year Ended December 31,	**2002**	2001	2000
(In millions, except per share data)			
Income (loss) before cumulative effect of change in accounting principle	**$3,295**	$2,682	$ (511)
Cumulative effect of change in accounting principle, net of taxes of ($25)	**—**	(44)	—
Net income (loss)	**3,295**	2,638	(511)
Preferred stock dividends	**—**	(10)	(12)
Net income (loss) available to common stockholders for basic and diluted EPS	**$3,295**	$2,628	$ (523)
Average shares outstanding	**1,162**	1,166	1,154
Stock options	**10**	8	—
Average shares outstanding assuming full dilution	**1,172**	1,174	1,154
Earnings (loss) per share before cumulative effect of change in accounting principle:			
Basic	**$ 2.83**	$ 2.28	$ (0.45)
Diluted	**2.80**	2.28	(0.45)
Earnings (loss) per share:			
Basic	**2.83**	2.25	(0.45)
Diluted	**2.80**	2.24	(0.45)

Note 3 – Acquisitions

On July 27, 2001, the Corporation completed its acquisition of the Wachovia credit card business, including a credit card portfolio of approximately $7.5 billion consumer credit card receivables. The acquisition was accounted for under the provisions of SFAS No. 141 and SFAS No. 142. The first component of the transaction was the primary portfolio of $6.2 billion in receivables of credit card holders who are not customers of Wachovia's retail bank. The second component was the agent bank portfolio comprised of credit card holders that were Retail customers of Wachovia of $1.3 billion. Wachovia retained the right to purchase the agent bank receivables under certain conditions.

On September 7, 2001, the Corporation announced its agreement with Wachovia to end the agent bank relationship and sell back to Wachovia the approximately $1.3 billion of consumer credit card receivables of customers who also have a Wachovia retail banking relationship. Under the terms of the agreement, Wachovia paid a $350 million termination fee and reimbursed the Corporation for the premium paid on the repurchased receivables and conversion costs related to the repurchase. The Corporation accounted for these amounts received from Wachovia as a reduction of acquisition intangibles.

Note 4 – Restructuring-Related Activity

a) Fourth Quarter 2001 Restructuring-Related Charges

The Corporation recorded restructuring-related charges in the fourth quarter of 2001 for additional real estate and severance costs to accomplish more rapid expense reductions, accelerated systems conversions and other consolidations. Summarized below are the details of these restructuring-related charges:

(In millions)	Personnel-Related Costs	Contractual Obligations and Asset Writedowns	Total
December 31, 2001			
Reserve balance	$ 76	$ 278	$ 354
Amounts utilized	(36)	(168)	(204)
Reserve adjustments	(21)	(21)	(42)
December 31, 2002			
Reserve balance	**$ 19**	**$ 89**	**$ 108**

Personnel-related costs initially recorded consisted primarily of severance costs related to identified staff reductions in the lines of business totaling approximately 6,900 positions for: the consolidation of various telephone banking and related sites and loan processing locations for Retail; the consolidation of call centers by Card Services; the closing of certain international locations; the consolidation of credit processing activities to one primary loan system for middle market banking; and certain other consolidations. At December 31, 2002, approximately 2,700 of these identified employees have been terminated under these programs, including 600 of which have future payment obligations of approximately $10 million. During the 2002 second quarter, the reserve was adjusted for approximately 3,100 employees, primarily in the Retail and Card Services lines of business, due to changes in attrition and circumstances for elimination under these programs.

Contractual obligations included the estimated costs associated with lease and other contract termination costs incorporated in the business restructuring plans. Asset writedowns included leasehold improvement write-offs related to leased properties following the decision to abandon such facilities, as well as in the case of fixed assets and capitalized software for which similar decisions were made.

Actions remaining under this overall restructuring plan are expected to be completed within approximately six months or less. Certain contractual payments associated with these actions, as required, will extend beyond this six month time frame.

b) Second Quarter 2000 Restructuring-Related Activity

Actions under this restructuring plan have been completed, with only payments of identified obligations remaining, which consist primarily of lease obligations. Unpaid amounts totaled $41 million as of December 31, 2002, and will be paid as required over the remaining contractual periods.

Note 5 – Business Segments

In 2002, certain organizational changes were made involving the Corporate, Commercial Banking, and Retail lines of business. The dealer commercial services business was transferred from Retail to Commercial Banking. National retail lockbox operations and cash vault services were transferred from Commercial Banking to Corporate. Results for the prior periods have been adjusted to reflect these and other insignificant changes to conform to the current line of business structure.

The information below is consistent with the content of business segment data provided to the Corporation's management, which does not use product group revenues to assess consolidated results. Aside from investment management and insurance products, product offerings are tailored to specific customer segments. As a result, the aggregation of product revenues and related profit measures across lines of business is not available.

Aside from the United States of America, no single country or geographic region generates a significant portion of the Corporation's revenues or assets. In addition, there are no single customer concentrations of revenue or profitability.

For additional disclosures regarding the Corporation's segments see the "Business Segment Results" section beginning on page 38.

The following table summarizes certain financial information by line of business for the years indicated:

	Total Revenues-FTE [1]			Provision for Income Taxes [1]			Net Income (Loss)			Identifiable Assets at Period-End		
For The Year Ended December 31,	**2002**	2001	2000	**2002**	2001	2000	**2002**	2001	2000	**2002**	2001	2000
(In millions, except identifiable assets in billions)												
Retail	**$ 6,285**	$ 6,396	$ 5,445	**$ 754**	$ 657	$ 207	**$1,390**	$1,181	$ 367	**$ 71.4**	$ 73.6	$ 77.1
Commercial Banking	**4,111**	4,347	4,247	**162**	251	(181)	**617**	700	(92)	**93.7**	100.7	106.6
Card Services	**4,864**	4,021	3,245	**741**	542	(1)	**1,166**	907	(1)	**45.3**	35.3	30.7
Investment Management	**1,718**	1,686	1,570	**244**	215	186	**411**	362	322	**8.7**	8.6	8.1
Corporate	**(2)**	(458)	(442)	**(288)**	(416)	(643)	**(289)**	(468)	(1,107)	**58.3**	50.7	46.8
Total before cumulative effect of change in accounting principle	**16,976**	15,992	14,065	**1,613**	1,249	(432)	**3,295**	2,682	(511)	**277.4**	268.9	269.3
Cumulative effect of change in accounting principle, net of taxes of ($25)							**—**	(44)	—			
Total	**$16,976**	$15,992	$14,065	**$1,613**	$1,249	$(432)	**$3,295**	$2,638	$ (511)	**$277.4**	$268.9	$269.3

(1) Revenue and provision for income tax includes taxable equivalent adjustments of $145 million, $131 million and $138 million for the years ended December 31, 2002, 2001 and 2000, respectively.

Note 6 – Interest Income and Interest Expense

Details of interest income and expense are as follows:

For The Year Ended December 31,	2002	2001	2000
(In millions)			
Interest Income			
Loans, including fees	**$ 9,947**	$13,213	$15,214
Bank balances	**58**	145	503
Federal funds sold and securities purchased under resale agreements	**159**	418	577
Trading assets	**256**	309	440
Investment securities	**3,515**	3,219	3,344
Total interest income	**13,935**	17,304	20,078
Interest Expense			
Deposits	**2,719**	4,895	6,137
Federal funds purchased and securities sold under repurchase agreements	**271**	633	1,142
Other short-term borrowings	**262**	659	1,216
Long-term debt	**2,088**	2,479	2,747
Total interest expense	**5,340**	8,666	11,242
Net Interest Income	**8,595**	8,638	8,836
Provision for credit losses	**2,487**	2,510	3,398
Net Interest Income After Provison for Credit Losses	**$ 6,108**	$ 6,128	$ 5,438

Note 7 – Investment Securities

A summary of the Corporation's investment portfolio follows:

At December 31, 2002	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value (Book Value)
(In millions)				
U.S. Treasury	**$ 1,310**	**$ 25**	**$ —**	**$ 1,335**
U.S. government agencies	**26,419**	**635**	**14**	**27,040**
States and political subdivisions	**1,116**	**54**	**1**	**1,169**
Interests in credit card securitized receivables	**28,202**	**147**	**—**	**28,349**
Other debt securities	**4,719**	**40**	**14**	**4,745**
Equity securities [1]	**3,406**	**4**	**1**	**3,409**
Total available for sale securities	**$65,172**	**$905**	**$ 30**	**$66,047**
Principal and other investments [2]				**1,596**
Total investment securities				**$67,643**
At December 31, 2001				
(In millions)				
U.S. Treasury	$ 1,424	$ 30	$ 4	$ 1,450
U.S. government agencies	25,265	113	132	25,246
States and political subdivisions	1,310	28	8	1,330
Interests in credit card securitized receivables	23,998	107	—	24,105
Other debt securities	4,397	24	18	4,403
Equity securities [1]	2,775	10	15	2,770
Total available for sale securities	$59,169	$312	$177	$59,304
Principal and other investments [2]				1,579
Total investment securities				$60,883

(1) The fair values of certain securities for which market quotations were not available were estimated.

(2) The fair values of certain securities reflect liquidity adjustments and other market-related factors, and include investments accounted for at fair value consistent with specialized industry practice.

For the year ended December 31, 2002, gross recognized gains and losses on the sale of investment securities were $1.3 billion and $1.1 billion, respectively. For the year ended December 31, 2001, gross recognized gains and losses on investment securities were $1.0 billion and $1.1 billion, respectively.

As of December 31, 2002, debt investment securities had the following maturity and yield characteristics:

	Due in less than 1 year		Due in 1 year through 5 years		Due in 5 years through 10 years		Due after 10 years		Total	
	Amortized Cost	Yield	Amortized Cost	Yield	Amortized Cost	Yield	Amortized Cost	Yield	Amortized Cost	Yield
(Dollars in millions)										
U.S. Treasury	$ 822	4.13%	$ 460	3.69%	$ 25	8.11%	$ 3	9.63%	$ 1,310	4.07%
U.S. government agencies	23	6.61	1,190	2.81	93	5.11	25,113	5.02	26,419	4.92
States and political subdivisions	124	4.88	253	5.12	280	4.40	459	4.84	1,116	4.80
Other debt securities	25,443	10.93	5,353	7.44	1,347	3.49	778	3.39	32,921	9.88
Total debt securities -at amortized cost	$26,412	10.69%	$7,256	6.36%	$1,745	3.79%	$26,353	4.97%	$61,766	7.54%
Total debt securities— -at fair value	$26,557		$7,309		$1,785		$26,987		$62,638	

The distribution of mortgage-backed securities and collateralized mortgage obligations is based on average expected maturities. Actual maturities could differ as issuers may have the right to call or prepay obligations.

Note 8 – Loans

Loan composition by line of business is as follows:

At December 31,	**2002**	2001
(In millions)		
Retail:		
Small business commercial	**$ 9,863**	$ 9,947
Home equity	**28,469**	25,143
Vehicles	**14,012**	13,481
Other personal	**8,491**	9,779
Core businesses	**60,835**	58,350
Brokered home equity discontinued	**3,242**	5,125
Vehicle leases	**3,596**	6,155
Home equity discontinued/ vehicle leases	**6,838**	11,280
Total consumer	**57,810**	59,683
Total Retail	**67,673**	69,630
Commercial Banking:		
Corporate banking:		
Commercial and industrial	**17,866**	22,268
Commercial real estate	**8,321**	8,975
Lease financing	**4,358**	4,669
Other	**1,014**	731
Total corporate banking	**31,559**	36,643
Middle market:		
Commercial and industrial	**26,983**	31,076
Commercial real estate	**2,318**	3,472
Lease financing	**1,008**	1,053
Other	**27**	294
Total middle market	**30,336**	35,895
Total Commercial Banking	**61,895**	72,538
Card Services	**11,581**	6,786
IMG and Corporate	**6,976**	7,779
Total loans	**148,125**	156,733
Less: Allowance for credit losses	**4,525**	4,528
Total loans, net	**$143,600**	$152,205

Loans are net of unearned income of $2.3 billion and $2.7 billion as of December 31, 2002, and 2001, respectively. Loans held for sale, which are carried at the lower of cost or market value, totaled $6.9 billion and $4.2 billion at December 31, 2002, and 2001, respectively.

The Corporation's primary goal in managing credit risk is to minimize the impact of default by an individual borrower or group of borrowers. As a result, the Corporation strives to maintain a loan portfolio that is diverse in terms of loan type, industry, borrower and geographic concentrations. As of December 31, 2002, and 2001, there were no significant loan concentrations with any single borrower, industry or geographic segment (see "Credit Portfolio Composition" on pages 63-66).

A loan is considered impaired when it is probable that all principal and interest amounts due will not be collected in accordance with the loan's contractual terms. Certain loans, such as loans carried at the lower of cost or fair value or small-balance homogeneous loans (e.g., credit card, home mortgages and installment credit) are exempt from impairment determinations for disclosure purposes. Impaired loans, accordingly, exclude commercial nonaccrual loans that are held for sale and consumer loans classified as nonaccrual. These loans totaled $1.1 billion at December 31, 2002 and 2001.

Impairment is recognized to the extent that the recorded investment of an impaired loan or pool of loans exceeds its value either based on the loan's underlying collateral or the calculated present value of projected cash flows discounted at the contractual interest rate. Loans having a significant recorded investment are measured on an individual basis, while loans not having a significant recorded investment are grouped and measured on a pool basis.

The Corporation's impaired loan information is as follows:

At December 31,	**2002**	2001
(In millions)		
Impaired loans with related allowance	**$2,183**	$2,487
Impaired loans with no related allowance [1]	**11**	—
Total impaired loans	**$2,194**	$2,487
Allowance on impaired loans [2]	**678**	731

At December 31,	**2002**	2001	2000
(In millions)			
Average balance of impaired loans	**$2,462**	$2,047	$1,335
Interest income recognized on impaired loans	**40**	41	31

(1) Impaired loans for which the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan do not require an allowance under SFAS No. 114, "Accounting by Creditors for Impairement of a loan – an amendment of FASB Statements No. 5 and 15."

(2) The allowance for impaired loans is included in the Corporation's overall allowance for credit losses.

Maturity Distribution and Interest Rate Sensitivity of Loans

A distribution of the maturity of loans by line of business and, for those loans due after one year, a breakdown between those loans that have floating interest rates and those that have predetermined interest rates at December 31, 2002, follows:

(In millions)	One Year or Less	One to Five Years	Over Five Years	Total
Retail:				
Small business commercial	$ 2,865	$ 4,337	$ 2,661	$ 9,863
Home equity	449	827	27,193	28,469
Vehicle	301	9,267	4,444	14,012
Other personal	3,016	1,168	4,307	8,491
Core businesses	6,631	15,599	38,605	60,835
Brokered home equity discontinued	348	9	2,885	3,242
Vehicle leases	1,215	2,381	—	3,596
Brokered home equity discontinued/vehicle leases	1,563	2,390	2,885	6,838
Total Retail	8,194	17,989	41,490	67,673
Commercial Banking:				
Corporate banking:				
Commercial and industrial	5,167	11,660	1,039	17,866
Commercial real estate	3,920	4,271	130	8,321
Lease financing	217	443	3,698	4,358
Other	1,014	—	—	1,014
Middle market:				
Commercial and industrial	13,345	11,685	1,953	26,983
Commercial real estate	848	1,283	187	2,318
Lease financing	73	591	344	1,008
Other	27	—	—	27
Total Commercial Banking	24,611	29,933	7,351	61,895
Total [1]	$32,805	$47,922	$ 48,841	$129,568
Loans with floating interest rates		$24,612	$ 13,808	$ 38,420
Loans with predetermined interest rates		23,310	35,033	58,343
Total		$47,922	$ 48,841	$ 96,763

(1) Excludes Card Services, Investment Management Group and Corporate lines of business.

Foreign Outstandings

Foreign outstandings include loans, balances with banks, acceptances, securities, equity investments, accrued interest, other monetary assets and current credit exposure on derivative contracts. At year-end 2002, 2001 and 2000, there were no countries for which cross-border and net local country claims exceeded 1.0% of total assets.

At December 31, 2002, Japan and Germany were the only countries for which cross-border claims totaled between 0.75% and 1.0% of total assets. These outstandings totaled $4.5 billion in aggregate. At December 31, 2001, there were no countries for which cross-border and net local country claims totaled between 0.75% and 1.0% of total assets. At December 31, 2000, Germany was the only country for which cross-border and net local country claims totaled between 0.75% and 1.0% of total assets. These outstandings amounted to $2.5 billion.

Note 9 – Credit Card Securitizations

The Corporation transforms a substantial portion of its credit card receivables into securities, which are sold to investors – a process referred to as securitization. Securitization impacts the Corporation's consolidated balance sheet by removing those credit card receivables that have been sold and by reclassifying those credit card receivables whose nature has been transformed but retained in certificate form (referred to as "seller's interest") from loans to investments. Gain or loss on the sale of the credit card receivable depends in part on the previous carrying amount of the financial assets involved in the transfer, allocated between the assets sold and the retained interests based on their relative fair value at the date of transfer. Gain or loss on the sale of the credit card receivables, net of amortization of transaction costs and amortization from securitization repayments, is reported in securitization income. Securitization also impacts the Corporation's consolidated income statement by reclassifying interest income and fees, interchange income, credit losses and recoveries related to securitized receivables as securitization income. Credit card interest income and fees, interchange income, credit losses and recoveries related to credit card receivables whose nature has been retained but converted to certificate form (seller's interest) are reclassified as investment income.

During 2002, the Corporation securitized approximately $6.8 billion in credit card receivables. Maturities of credit card securitizations during 2002 were $10.2 billion, with an additional $8.2 billion scheduled for 2003. During 2002 and 2001, the Corporation recognized $50 million and $62 million, respectively, in net securitization amortization in the consolidated income statement, including amortization of transaction costs, as the gain on securitization from new transactions was offset by amortization as investors in individual series were repaid.

A servicing asset or liability is not recognized in a credit card securitization (and thus not considered in the gain or loss computation) since the Corporation receives adequate compensation relative to current market servicing prices to service the receivables sold. Transaction costs in credit card securitizations are deferred and amortized over the life of the security as a reduction of noninterest income.

At December 31, 2002, and 2001, the estimated fair value of the interest-only strip associated with credit card securitizations was $205 million and $219 million, respectively, and the estimated fair value of the seller's interest was $28.1 billion and $23.9 billion, respectively. The interest-only strip and seller's interest are both recorded as investment securities. The investor portion of accrued interest receivable is recorded in other assets in 2002 and was $685 million and $810 million at December 31, 2002 and 2001, respectively.

Certain estimates are used in determining the fair value of the interest-only strip at both the date of securitization and the balance sheet date, including the excess spread, average receivable lives and the discount rate. The components of excess spread, which are estimated, include finance charge and fee revenue (excluding interchange income) generated by the securitized loans in excess of interest paid to investors, related net credit losses and contractual servicing fees. The resulting expected cash flows over the average lives of the receivables are discounted at a rate commensurate with the risk of the cash flows to determine the fair value. Such estimates and assumptions are subject to change, and accordingly, the Corporation may not recover all of the recorded investment of the interest-only strip (and thus be measured for impairment). The receivables in each trust have unique attributes and therefore the interest-only strip related to each trust is evaluated separately. The seller's interest resulting from credit card securitizations is recorded at fair value using a present value approach, with assumptions that are consistent with the valuation of the interest-only strip

The following represents the Corporation's key weighted-average assumptions used to estimate the fair value of the retained interests relating to credit card securitizations at December 31, 2002, and the pretax sensitivity of the fair values to immediate 10% and 20% adverse changes in these assumptions:

(Dollars in millions)	Interest-Only Strip[1]	Sellers Interest[2]	Total Retained Interests
Receivable Lives:			**0.5 years**
10% Adverse Change	$ 22.1	$ 14.3	36.4
20% Adverse Change	44.2	28.8	73.0
Excess Spread:			**1.22%**
10% Adverse Change	22.6	14.7	37.3
20% Adverse Change	45.2	29.4	74.6
Expected Net Credit Losses: [3]			**5.97%**
10% Adverse Change	93.3	67.5	160.8
20% Adverse Change	183.9	119.3	303.2
Discount Rate:			**10.00%**
10% Adverse Change	0.7	0.4	1.1
20% Adverse Change	1.4	0.9	2.3

(1) The effect of adverse changes in key assumptions on the fair value of the interest-only strip would be recorded in noninterest income.

(2) The effect of adverse changes in key assumptions on the fair value of the seller's interest is recorded in accumulated other adjustments to stockholders' equity, net of tax, unless the decline in value is deemed to be other than temporary, which would result in a charge to noninterest income upon recognition.

(3) Certain trust legal documents include finance charge and fee revenue reversals in the definition of net credit losses, resulting in a higher net credit loss rate for Trust purposes.

The sensitivity analysis illustrates the potential magnitude of significant adverse changes in key assumptions used in valuing the retained interests, and thus the potential impact to the Corporation's financial position and results of operations. However, the sensitivities of the fair values of the retained interests to changes in each key assumption may not be linear. Furthermore, the sensitivities for each key variable are calculated independently of changes in the other key variables. Therefore, the sensitivity analysis does not purport to present the maximum impairment loss that would result from 10% and 20% adverse changes in these assumptions. Actual experience observed may result in changes in multiple key assumptions concurrently, the magnitude of which on the fair value of the retained interests would be dependent on the relative change and the direction of change. In addition, the sensitivity analysis does not give effect to corrective action that management could and would take to mitigate the impact of adverse changes in key assumptions. The asset values of the retained interests are periodically reviewed for other-than-temporary impairment.

The key weighted-average economic assumptions and ranges of assumptions used to estimate the fair value of retained interests at the date of securitization (including transfer of new balances

under revolving structures) for credit card securitizations occurring during 2002 were approximately the same as those used to value the retained interests at December 31, 2002.

Cash flows received from credit card securitization master trusts (i.e., QSPEs) during the years ended December 31 are as follows:

(In millions)	**2002**	2001	2000
Proceeds from reinvestment in revolving securitizations	**$60,633**	$72,206	$83,469
Proceeds from new securitizations	**6,775**	3,845	–
Servicing fees received	**505**	598	649
Cash flows received on retained interests [1]	**2,586**	2,577	2,224
Cash released from (used to fund) spread accounts	**13**	146	(32)

(1) Includes cash flows from interest-only strips as well as interchange fees received from securitized accounts.

For a detailed discussion of the Corporation's loan securitization process for credit card loans, see the "Loan Securitizations" section beginning on page 74.

Note 10 – Allowance for Credit Losses

Changes in the allowance for credit losses for the years ended December 31 are as follows:

(In millions)	**2002**	2001	2000
Balance, beginning of year	**$ 4,528**	$ 4,110	$ 2,285
Additions (deductions):			
Charge-offs	**(2,829)**	(2,630)	(1,667)
Recoveries	**364**	342	276
Net charge-offs	**(2,465)**	(2,288)	(1,391)
Provision for credit losses	**2,487**	2,510	3,398
Transfers [1]	**(25)**	196	(182)
Balance, end of year	**$ 4,525**	$ 4,528	$ 4,110

(1) Transfers to the allowance for credit losses in 2001 primarily represent the addition of the Wachovia credit card portfolio. Transfers from the allowance for credit losses for 2000 primarily represent allocable credit allowances associated with consumer loan sale transactions, including securitization transactions.

Note 11 – Long-Term Debt

Long-term debt consists of borrowings having an original maturity of greater than one year. Original issue discount and deferred issuance costs are amortized into interest expense over the terms of the related notes. Long-term debt at December 31, 2002 and 2001 is as follows:

(Dollars in millions)	Interest Rate	Maturities	**2002**	2001
Parent Company				
Senior debt:				
Medium-term notes	1.49–7.63%	2003–2008	**$11,973**	$14,387
Other	—	—	**6**	8
Subordinated debt:				
Notes	5.25–10.00%	2003–2027	**7,270**	6,920
Floating rate notes	Various	2003	**150**	150
Subsidiaries				
Bank notes	1.40–7.93%	2003–2007	**13,866**	12,933
Subordinated notes	6.00–8.25%	2003–2008	**1,590**	1,729
Capital leases	4.27–12.60%	2003–2011	**73**	66
Federal Home Loan Bank Advances	1.35–4.57%	2005–2007	**3,715**	2,000
Other	1.00–15.93%	2003–2018	**1,276**	1,910
Total long-term debt			**$39,919**	$40,103

Aggregate annual scheduled repayments of long-term debt at December 31, 2002 are as follows:

(In millions)	Total
2003	$ 7,846
2004	6,291
2005	6,622
2006	6,896
2007	4,542
Thereafter	7,722
Total	$39,919

Note 12 – Deposits and Short-Term Borrowings

Deposits

The maturity distribution of domestic time certificates of deposit of $100,000 and over and deposits in foreign offices, predominantly in amounts in excess of $100,000, at December 31, 2002 is as follows:

(Dollars in millions)	Amount	Percent
Domestic Time Certificates of Deposit of $100,000 and Over:		
Three months or less	$ 3,556	26%
Over three months to six months	2,317	18
Over six months to twelve months	1,352	10
Over twelve months	6,265	46
Total	$13,490	100%
Foreign Offices:		
Three months or less	$16,061	99%
Over three months to six months	63	—
Over six months to twelve months	82	1
Over twelve months	31	—
Total	$16,237	100%

The Corporation has an aggregate amount of domestic other time deposits of $100,000 and over of $255 million at December 31, 2002, which primarily mature within three months.

Short-Term Borrowings

Borrowings with original maturities of one year or less are classified as short-term. The following is a summary of short-term borrowings for the years ended December 31:

	At Year-End		For the Year		
(Dollars in millions)	**Outstanding**	**Weighted-Average Rate**	**Daily Average Outstandings**	**Weighted-Average Rate**	**Highest Outstandings at Month End**
2002:					
Federal funds purchased	**$ 3,833**	**1.02%**	**$ 4,400**	**1.63%**	**$ 6,086**
Securities sold under repurchase agreements	**10,745**	**1.11**	**10,548**	**1.55**	**12,730**
Bank notes	**8,519**	**1.57**	**4,960**	**2.11**	**9,733**
Commercial paper	**567**	**1.65**	**485**	**2.26**	**567**
Other short-term borrowings	**3,220**	**1.41**	**3,441**	**2.61**	**5,310**
Total short-term borrowings	**$26,884**	**1.28%**	**$23,834**	**1.85%** [1]	
2001:					
Federal funds purchased	$ 3,171	1.62%	$ 5,121	4.32%	$ 6,353
Securities sold under repurchase agreements	10,557	1.43	11,543	3.57	13,386
Bank notes	4,529	3.07	8,267	5.48	13,047
Commercial paper	828	1.58	1,968	4.75	2,634
Other short-term borrowings	4,898	1.60	3,273	3.68	4,629
Total short-term borrowings	$23,983	1.83%	$30,172	4.31% [1]	
2000:					
Federal funds purchased	$ 5,253	5.89%	$ 6,281	6.13%	$ 9,663
Securities sold under repurchase agreements	6,867	6.01	12,680	5.96	17,609
Bank notes	12,426	6.71	12,298	6.50	13,327
Commercial paper	3,048	6.62	3,137	5.94	3,303
Other short-term borrowings	2,529	6.22	3,543	6.27	6,861
Total short-term borrowings	$30,123	6.36%	$37,939	6.19% [1]	

(1) The Corporation uses interest rate swaps to hedge certain short-term borrowings in its asset and liability management activities. The overall weighted average rate, including the effects of derivative contracts was 2.24%, 4.28% and 6.26% at December 31, 2002, 2001 and 2000, respectively.

Note 13 – Guaranteed Preferred Beneficial Interest in the Corporation's Junior Subordinated Debt

The Corporation has sponsored ten trusts with a total aggregate issuance outstanding of $3.3 billion at December 31, 2002, in trust preferred securities as follows:

	Trust Preferred			Junior Subordinated Debt Owned by Trust		
(Dollars in millions)	**Issuance Date**	**Initial Liquidation Value**	**Distribution Rate**	**Initial Principal Amount**	**Maturity**	**Redeemable Beginning**
Capital VI	September 28, 2001	$525	7.20%	$541.2	October 15, 2031	October 15, 2006
Capital V	January 30, 2001	300	8.00%	309.3	January 30, 2031	January 30, 2006
Capital IV	August 30, 2000	160	3-mo LIBOR plus 1.50%	164.9	September 1, 2030	September 1, 2005
Capital III	August 30, 2000	475	8.75%	489.7	September 1, 2030	See (1) below.
Capital II	August 8, 2000	280	8.50%	288.7	August 15, 2030	August 15, 2005
Capital I	September 20, 1999	575	8.00%	592.8	September 15, 2029	September 20, 2004
First Chicago NBD Capital 1	January 31, 1997	250	3-mo LIBOR plus 0.55%	257.7	February 1, 2027	February 1, 2007
First USA Capital Trust I [2]	December 20, 1996	200	9.33%	206.2	January 15, 2027	January 15, 2007
First Chicago NBD Institutional Capital A	December 3, 1996	500	7.95%	515.5	December 1, 2026	December 1, 2006
First Chicago NBD Institutional Capital B	December 5, 1996	250	7.75%	257.7	December 1, 2026	December 1, 2006

(1) Redeemable at any time subject to approval by the Federal Reserve Board.

(2) The Corporation paid a premium of $36 million to repurchase $193 million of these securities in 1997.

These trust preferred securities are tax-advantaged issues that qualify for Tier 1 capital treatment. Distributions on these securities are included in interest expense on long-term debt. Each of the trusts is a statutory business trust organized for the sole purpose of issuing trust securities and investing the proceeds thereof in junior subordinated debentures of the Corporation, the sole asset of each trust. The preferred trust securities of each trust represent preferred beneficial interests in the assets of the respective trusts and are subject to mandatory redemption upon payment of the junior subordinated debentures held by the trust. The common securities of each trust are wholly-owned by the Corporation. Each trust's ability to pay amounts due on the trust preferred securities is solely dependent upon the Corporation making payment on the related junior subordinated debentures. The Corporation's obligations under the junior subordinated securities and other relevant trust agreements, in aggregate, constitute a full and unconditional guarantee by the Corporation of each respective trust's obligations under the trust securities issued by each respective trust. See Note 15 "Dividends and Capital Restrictions" for discussion of the restrictions on the ability of the Corporation to obtain funds from its subsidiaries.

Note 14 – Stock Dividends and Preferred Stock

The Corporation is authorized to issue 50 million shares of preferred stock with a par value of $0.01 per share. On November 1, 2001, the Corporation redeemed all outstanding preferred stock with cumulative and adjustable dividends, Series B and C, totaling $190 million. The redemption price for both the Series B and C preferred stock was $100 per share, plus accrued and unpaid dividends totaling $1.00 per share and $1.083 per share, respectively. At December 31, 2000, the Corporation had outstanding 1,191,000 and 713,800 shares of Series B and C preferred stock with a stated value of $100 per share and a carrying value of $119 million and $71 million, respectively. The dividend rate on each of the cumulative adjustable rate series was based on a stated value and adjusted quarterly, based on a formula that considers the interest rates for selected short- and long-term U.S. Treasury securities prevailing at the time the rate is set.

Note 15 – Dividends and Capital Restrictions

The Corporation's national bank subsidiaries are subject to statutory limitations on their ability to pay dividends. Dividends cannot exceed the level of undivided profits. In addition, a national bank cannot declare a dividend, without regulatory approval, in an amount in excess of its net income for the current year and the combined net profits for the preceding two years. State bank subsidiaries may also be subject to limitations on dividend payments.

Based on these statutory requirements, the bank affiliates could have declared aggregate additional dividends of up to approximately $4.0 billion without regulatory approval at January 1, 2003. The payment of dividends by any bank may also be affected by other factors, such as the maintenance of adequate capital.

The bank affiliates are subject to various regulatory capital requirements that require them to maintain minimum ratios of total and Tier 1 capital to risk-weighted assets and of Tier 1 capital to average assets. Failure to meet minimum capital requirements results in certain regulatory actions that could have a direct material effect on the bank affiliates' financial statements. As of December 31, 2002, management believed that each of the bank affiliates met all applicable capital adequacy requirements and are correctly categorized as "well capitalized" under the regulatory framework for prompt corrective action. There are no conditions or events since that categorization that management believes have changed the institution's category.

The actual and required capital amounts and ratios for the Corporation and its principal banking subsidiaries are presented as follows:

(Dollars in millions)	Tier 1 Capital	Total Capital	Risk-Weighted Assets	Adjusted Average Assets	Tier 1 Capital[1] Ratio	Total Capital[1] Ratio	Tier 1 Leverage[2] Ratio
December 31, 2002							
The Corporation (consolidated)	**$23,918**	**$33,119**	**$241,468**	**$267,321**	**9.9%**	**13.7%**	**8.9%**
Bank One, N.A. (Chicago)	**16,888**	**23,360**	**173,725**	**211,067**	**9.7**	**13.4**	**8.0**
Bank One, N.A. (Columbus)	**3,164**	**5,162**	**42,193**	**57,244**	**7.5**	**12.2**	**5.5**
Bank One, Delaware N.A. [3]	**2,630**	**2,756**	**17,748**	**16,213**	**14.8**	**15.5**	**16.2**
December 31, 2001							
The Corporation (consolidated)	$21,749	$30,840	$253,330	$264,720	8.6%	12.2%	8.2%
Bank One, N.A. (Chicago) [4]	15,407	22,971	181,450	207,017	8.5	12.7	7.4
Bank One, N.A. (Columbus)	2,915	4,594	42,165	45,286	6.9	10.9	6.4
Bank One, Delaware N.A. [3]	2,099	2,253	13,645	14,737	15.4	16.5	14.2
Well capitalized ratios [5]					6.0%	10.0%	5.0% [6]
Minimum capital ratios [5]					4.0	8.0	3.0

(1) Tier 1 Capital or Total Capital, as applicable, divided by risk-weighted assets. Risk-weighted assets include assets and off-balance sheet positions, weighted by the type of instruments and the risk weight of the counterparty, collateral, or guarantor.

(2) Tier 1 Capital divided by adjusted average quarterly assets (net of allowance for loan losses, goodwill and certain intangible assets).

(3) Formerly First USA Bank, N.A.

(4) Restated to show the effect of the 2002 mergers with Bank One, Michigan, Bank One, Indiana, N.A., Bank One, Wisconsin, Bank One, Colorado, N.A., Bank One, Illinois, N.A. and American National Bank & Trust.

(5) As defined by the regulations issued by the Federal Reserve Board, the FDIC and the OCC.

(6) Represents requirements for bank subsidiaries pursuant to regulations issued under the Federal Deposit Insurance Corporation Improvement Act. There is no Tier 1 Leverage component in the definition of a well-capitalized bank holding company.

Federal banking law restricts each bank subsidiary from extending credit to the Corporation in excess of 10% of the subsidiary's capital stock and surplus, as defined. Any such extensions of credit are subject to strict collateral requirements.

Note 16 – Supplemental Disclosures for Statements of Cash Flows

During 2000, the Corporation transferred $6.5 billion of investment securities available for sale to trading securities. This transfer was for capital management purposes.

Loans transferred to other real estate owned totaled $414 million, $162 million, and $131 million in 2002, 2001, and 2000, respectively. During 2000, the Corporation recognized several non-cash charges to earnings for significant items. Several of these items will not result in future cash outflows while other items represent future uses of cash. See tables 1 and 2 on pages 52–53 for a detailed listing of significant items.

Note 17 – Supplemental Disclosures for Accumulated Other Adjustments to Stockholders' Equity

Accumulated other adjustments to stockholders' equity are as follows:

(In millions)	**2002**	2001	2000
Fair value adjustment on investment securities–available for sale:			
Balance, beginning of year	**$ 78**	$ (15)	$(271)
Change in fair value, net of taxes of $323, $86 and $(6) for the year ended December 31, 2002, 2001 and 2000, respectively	**560**	158	(5)
Reclassification adjustment, net of taxes of $(50), $(38) and $151 for the year ended December 31, 2002, 2001 and 2000, respectively	**(86)**	(65)	261
Balance, end of year	**552**	78	(15)
Fair value adjustment on derivative instruments–cash flow type hedges:			
Balance, beginning of period	**(146)**	—	—
Transition adjustment at January 1, 2001, net of tax benefit of $56	**—**	(98)	—
Net change in fair value associated with current period hedging activities, net of tax benefits of $425 and $70 for the year ended December 31, 2002 and 2001, respectively	**(711)**	(139)	—
Net reclassification into earnings, net of taxes of $178 and $49 for the year ended December 31, 2002 and 2001, respectively [1]	**297**	91	—
Balance, end of year	**(560)**	(146)	—
Accumulated translation adjustment:			
Balance, beginning of period	**3**	10	8
Translation gain (loss), net of hedge results and taxes	**(3)**	(7)	2
Balance, end of year	**—**	3	10
Total accumulated other adjustments to stockholders' equity	**$ (8)**	$ (65)	$ (5)

(1) During 2001, $89 million after-tax of the transition adjustment recorded at January1, 2001, was reclassified into earnings.

Note 18 – Employee Benefits

(a) Pension Plans

The Corporation's qualified plans' change in benefit obligation, change in plan assets and funded status are as follows:

(In millions)	**2002**	2001
Change in benefit obligation:		
Benefit obligation, January 1	**$2,297**	$2,248
Service cost	**101**	92
Interest cost	**166**	168
EGTRRA adjustment [1]	**—**	7
Actuarial loss	**182**	108
Benefits paid	**(327)**	(326)
Benefit obligation, December 31	**$2,419**	$2,297
Change in plan assets:		
Fair value of plan assets, January 1	**$2,747**	$3,134
Actual loss on plan assets	**(219)**	(114)
Corporation contribution	**280**	53
Benefits paid	**(327)**	(326)
Fair value of plan assets, December 31	**$2,481**	$2,747
Funded status	**$ 62**	$ 450
Unrecognized net actuarial loss	**829**	156
Unrecognized prior service cost	**20**	24
Prepaid pension costs, December 31	**$ 911**	$ 630

(1) The Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) contained various provisions relating to the operations of qualified pension plans. Increases to the benefit limits and the limit on pensionable earnings caused a shift in pension obligation from the non-qualified to the qualified plan.

Plan assets include approximately 1.0 million shares of the Corporation's common stock with a fair value of approximately $38 million and $40 million at December 31, 2002, and 2001, respectively.

The net periodic pension expense (benefit) for 2002, 2001 and 2000 for the Corporation's qualified and nonqualified pension plans is as follows:

(In millions)	**2002**	2001	2000
Service cost-benefits earned during the period	**$ 104**	$ 96	$ 110
Interest cost on benefit obligation	**173**	177	194
Expected return on plan assets	**(272)**	(287)	(300)
Amortization of prior service costs	**9**	8	9
Recognized actuarial (gain) loss	**5**	(1)	(11)
Amortization of transition assets	**—**	(7)	(13)
Net periodic pension expense (benefit)	**$ 19**	$ (14)	$ (11)

The accrued pension cost for the Corporation's nonqualified supplemental pension plans was $44 million and $39 million at December 31, 2002, and 2001, respectively. Such plans are unfunded.

The assumptions used in determining the Corporation's benefit obligation and net periodic pension cost for both qualified and nonqualified supplemental pension plans are as follows:

For The Year Ended December 31,	2003	**2002**	2001	2000
Actuarial assumptions:				
Weighted-average discount rate for benefit obligation	6.50% [1]	**6.50%**	7.00%	7.50%
Weighted-average rate of compensation increase	4.25%	**4.25%**	4.25%	4.25%
Expected long-term rate of return on plan assets	7.50%	**8.50%**	9.50%	9.50%

(1) Rate currently expected at December 31, 2003.

(b) Postretirement Benefits Other Than Pensions

The Corporation sponsors postretirement life insurance plans and provides health care benefits for certain retirees and grandfathered employees when they retire. The postretirement life insurance benefit is noncontributory, while the health care benefits are contributory.

The Corporation's postretirement benefit plans' change in benefit obligation, change in plan assets and funded status are as follows:

(In millions)	**2002**	2001
Change in benefit obligation:		
Benefit obligation, January 1	**$ 233**	$ 195
Interest cost	**15**	14
Actuarial loss	**24**	48
Benefits paid	**(20)**	(24)
Benefit obligation, December 31	**$ 252**	$ 233
Change in plan assets:		
Fair value of plan assets, January 1	**$ —**	$ —
Implementation of retiree VEBA	**76**	—
Actual return on plan assets	**6**	—
Employer contribution	**18**	24
Benefits paid	**(20)**	(24)
Fair value of plan assets, December 31	**$ 80**	$ —
Funded status	**$(172)**	$(233)
Unrecognized net actuarial loss	**85**	67
Unrecognized prior service cost	**(12)**	(25)
Accrued postretirement costs, December 31	**$ (99)**	$(191)

Net periodic cost for postretirement health care and life insurance benefits during 2002, 2001 and 2000 includes the following:

(In millions)	**2002**	2001	2000
Interest cost on accumulated postretirement benefit obligation	**$ 15**	$ 14	$ 13
Amortization of prior service costs	**(12)**	(12)	(12)
Expected return on plan assets	**(3)**	—	—
Recognized actuarial loss	**3**	—	—
Curtailment	**—**	—	1
Net periodic postretirement cost	**$ 3**	$ 2	$ 2

The weighted average discount rate used in determining the accumulated postretirement benefit obligation was 6.50% at December 31, 2002, and 7.00% at December 31, 2001.

The expected long-term rate of return on plan assets was 5.40% in 2002. For measurement purposes, an annual rate of increase of 10.00% was assumed for 2002 in the cost of covered health care benefits; this range was assumed to decrease to 5.00% in the years 2010 and thereafter. These assumptions have a significant effect on the amounts reported. Accordingly, the effect of a 1.00% change in the assumed health care cost trend rates is as follows:

(In millions)	1% increase	1% decrease
Effect on 2002 service and interest cost components	$ 1.0	$(0.9)
Effect on December 31, 2002, accumulated postretirement benefit obligation	$16.7	$(14.6)

(c) 401(k) Plan

The Corporation sponsored a 401(k) plan that covered substantially all of its employees. The expense related to this plan was $98 million in 2002, $95 million in 2001 and $137 million in 2000.

Note 19 – Stock-Based Compensation

The Corporation utilizes several types of stock-based awards as part of its overall compensation program. In addition, the Corporation provides employees the opportunity to purchase its shares through its Employee Stock Purchase Plan. The Corporation's stock-based compensation plans provide for granting of awards to purchase or receive common shares and include limits as to the aggregate number of shares available for grants and the total number of shares available for grants of stock awards in any one year. Compensation cost charged against income for the Corporation's stock-based compensation plans was $118 million for 2002, $70 million for 2001 and $59 million for 2000.

(a) Restricted Shares

Restricted shares granted to key officers of the Corporation require them to continue employment for a stated number of years from the grant date before restrictions on the shares lapse. The market value of the restricted shares as of the date of grant is amortized to compensation expense as earned over the restriction period. Holders of restricted stock receive dividends and have the right to vote the shares.

(b) Stock Options

The Corporation's stock option plans generally provide that the exercise price of any stock option may not be less than the closing price of the common stock on the trading day preceding the date of grant of the common stock.

Options granted under the Corporation's stock-based compensation program generally vest ratably over a five-year period and have a term of ten years. Certain option grants include the right to receive additional option grants ("reload" or "restorative" options) in an amount equal to the number of common shares used to satisfy the exercise price and applicable withholding taxes. Upon grant, reload options assume the same remaining term as the related original option and vest six months from the date of grant.

Summarized stock option activity for 2002, 2001 and 2000, respectively, and details of the Corporation's stock options outstanding at December 31, 2002, follows:

	2002		2001		2000	
(Shares in thousands)	**Shares**	**Wtd. Avg. Exercise Price**	Shares	Wtd. Avg. Exercise Price	Shares	Wtd. Avg. Exercise Price
Outstanding at January 1	**90,482**	**$35.72**	77,315	$34.17	44,630	$40.88
Granted	**20,063**	**40.95**	23,573	37.73	42,659	27.25
Exercised	**(10,223)**	**26.60**	(7,262)	25.09	(2,089)	19.66
Forfeited	**(4,210)**	**41.16**	(3,144)	36.72	(7,885)	38.56
Outstanding at December 31	**96,112**	**$37.57**	90,482	$35.72	77,315	$34.17
Exercisable at December 31	**58,037**	**$36.84**	45,525	$36.30	25,503	$36.41

	Options Outstanding			Options Exercisable	
(Shares in thousands) Range of Exercise Prices	**Number Outstanding Dec. 31, 2002**	Wtd. Avg. Exercise Price	Wtd. Avg. Remaining Contractual Life	**Number Exercisable Dec. 31, 2002**	Wtd. Avg. Exercise Price
Less than $20.00	**1,220**	$16.52	1.3 years	**1,220**	$16.52
$20.01 – $25.00	**2,597**	24.54	2.9	**2,597**	24.54
$25.01 – $30.00	**23,932**	26.67	12.2	**21,952**	26.51
$30.01 – $35.00	**4,785**	32.72	6.2	**3,008**	32.46
$35.01 – $40.00	**26,151**	37.88	7.6	**9,037**	37.87
$40.01 – $45.00	**18,385**	41.35	9.1	**1,181**	43.31
$45.01 – $55.00	**15,236**	49.63	8.9	**15,236**	49.63
Greater than $55.00	**3,806**	59.12	5.2	**3,806**	59.12
Total	**96,112**	$37.57	8.9 years	**58,037**	$36.84

(c) Employee Stock Purchase Plan

The Corporation sponsors an Employee Stock Purchase Plan designed to encourage employee stock ownership. This plan generally allows eligible employees to purchase shares of the Corporation's common stock at a 15% discount from the market price at the beginning of an offering or the market price at the end of such offering, whichever is lower. During the current two-year offering period, an employee is allowed to make deposits of up to 20% of their earnings (up to a designated maximum) on an annual basis to an interest-bearing savings account to purchase the number of shares permissible under the plan. The maximum number of shares each participant may purchase cannot exceed the contribution limit divided by the applicable purchase price on the offering date.

Shares purchased by the participant are subject to a one-year holding period and cannot be sold or transferred for one year after the purchase date. Upon adoption of SFAS No. 123 in 2002, the Corporation prospectively recognizes compensation expense over the offering period equal to the estimated fair value of the projected shares to be purchased by the employee.

(d) Fair Value of Stock-Based Compensation

The grant date fair values of stock options granted under the Corporation's various stock option plans and the Employee Stock Purchase Plan were estimated using the Black-Scholes option-pricing model. This model was developed to estimate the fair value of traded options, which have different characteristics than employee stock options. In addition, changes to the subjective input assumptions can result in materially different fair market value estimates. Therefore, the Black-Scholes model may not necessarily provide a reliable single measure of the fair value of employee stock options and purchase rights.

Summarized stock-based compensation grants and their related weighted-average grant-date fair values for the years ended December 31 follows:

	2002		2001		2000	
(Shares in thousands)	**Number of Shares**	**Wtd. Avg. Grant Date Fair Value Per Share**	Number of Shares	Wtd. Avg. Grant Date Fair Value Per Share	Number of Shares	Wtd. Avg. Grant Date Fair Value Per Share
Stock option plans	**20,063**	**$12.68**	23,573	$13.34	42,659	$ 9.80
Restricted shares	**3,488**	**37.68**	2,065	37.68	4,517	27.85
Employee Stock Purchase Plan	**3,300**(1)	**11.48**	2,483	9.68	2,122	3.27

(1) Estimated number of shares that employees would purchase under the 2002 plan.

The following assumptions were used to determine the Black-Scholes weighted-average grant date fair value of options granted during 2002, 2001 and 2000:

	Stock Option Plans			Employee Stock Purchase Plans		
Weighted-Average Assumptions:	**2002**	2001	2000	**2002**	2001	2000
Expected dividend yield	**1.97%**	2.29%	4.29%	**2.18%**	2.30%	2.58%
Expected volatility	**35.84**	36.85	42.29	**32.46**	33.80	39.63
Risk-free interest rate	**4.34**	5.02	6.43	**2.75**	2.61	6.22
Expected life (in years)	**4.88**	4.64	9.26	**1.98**	1.50	0.50

Note 20 – Income Taxes

The components of total applicable income tax expense (benefit) in the consolidated income statement for the years ended December 31 follows:

(In millions)	**2002**	2001	2000
Income tax expense:			
Current:			
Federal	**$1,208**	$ 797	$ 571
Foreign	**7**	11	32
State	**144**	115	26
Total	**1,359**	923	629
Deferred:			
Federal	**138**	194	(1,151)
Foreign	**1**	5	(7)
State	**(30)**	(4)	(40)
Total	**109**	195	(1,198)
Applicable income taxes (benefit)	**$1,468**	$1,118	$ (569)

The tax effects of fair value adjustments on securities available for sale, foreign currency translation adjustments and certain tax benefits related to stock options are recorded directly to stockholders' equity. The net tax (benefit) charge recorded directly to stockholders' equity was $(28) million in 2002, $(47) million in 2001 and $107 million in 2000.

A reconciliation of expected income tax expense at the federal statutory rate of 35% to the Corporation's applicable income tax expense (benefit) and effective tax rate follows:

(Dollars in millions)	**2002**		2001		2000	
Statutory tax rate	**$1,667**	**35.0%**	$1,330	35.0%	$(378)	35.0%
Increase (decrease) resulting from:						
State income taxes, net of federal income tax benefit	**74**	**1.6**	72	1.9	(4)	0.3
Tax-exempt interest	**(50)**	**(1.1)**	(56)	(1.5)	(57)	5.3
Tax credits	**(287)**	**(6.1)**	(231)	(6.1)	(179)	16.6
Goodwill	**—**	**—**	23	0.6	25	(2.3)
Cash surrender value of life insurance	**(54)**	**(1.1)**	(57)	(1.5)	(56)	5.2
Other, net	**118**	**2.5**	37	1.0	80	(7.4)
Applicable income taxes (benefit)	**$1,468**	**30.8%**	$1,118	29.4%	$(569)	52.7%

A net deferred tax liability is included in other liabilities in the consolidated balance sheet as a result of temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and their related tax bases. The components of the net deferred tax liability for the years ended December 31 follows:

(In millions)	**2002**	2001
Deferred tax liabilities:		
Deferred income on lease financing	**$4,042**	$4,242
Prepaid pension costs	**315**	216
Deferred fee income	**461**	333
Other	**176**	198
Gross deferred tax liabilities	**4,994**	4,989
Deferred tax assets:		
Allowance for credit losses	**1,691**	1,744
Purchased intangibles	**289**	227
Deferred compensation	**257**	302
Other	**678**	812
Gross deferred tax assets	**2,915**	3,085
Net deferred tax liability	**$2,079**	$1,904

As of December 31, 2002, the Corporation has foreign tax credit carryforwards totaling $33 million. These credits will expire after 2005 if not used. Management believes that it is more likely than not that these credits will be used within the carryforward period.

Note 21 – Lease Commitments

The Corporation has entered into a number of operating lease agreements for premises and equipment. The minimum annual rental commitments under these leases are as follows:

(In millions)	
2003	$ 239
2004	228
2005	205
2006	187
2007	160
2008 and thereafter	843
Total	$1,862

Rental income from premises leased to others in the amount of $78 million in 2002, $77 million in 2001, and $80 million in 2000 has reduced occupancy expense. Rental expense under operating leases approximated $328 million in 2002, $332 million in 2001, and $384 million in 2000.

Note 22 – Financial Instruments with Off-Balance Sheet Risk

In the normal course of business, the Corporation is a party to financial instruments containing credit and/or market risks that are not required to be reflected in the balance sheet. These financial instruments are primarily credit-related instruments. The Corporation has risk management policies to identify, monitor and limit exposure to credit, liquidity and market risks.

The following disclosures represent the Corporation's credit exposure, assuming that every counterparty to financial instruments with off-balance sheet credit risk fails to perform completely according to the terms of the contracts, and that the collateral and other security, if any, proves to be of no value to the Corporation.

This note does not address the amount of market losses the Corporation would incur if future changes in market prices make financial instruments with off-balance sheet market risk less valuable or more onerous. For a more detailed discussion of off-balance sheet activities see the "Off-Balance Sheet Activities" section beginning on page 75.

(a) Collateral and Other Security Arrangements

The credit risk of both on- and off-balance sheet financial instruments varies based on many factors, including the value of collateral held and other security arrangements. To mitigate credit risk, the Corporation generally determines the need for specific covenant, guarantee and collateral requirements on a case-by-case basis, depending on the nature of the financial instrument and the customer's creditworthiness. The Corporation may also receive comfort letters and oral assurances. The amount and type of collateral held to reduce credit risk varies but may include real estate, machinery, equipment, inventory and accounts receivable, as well as cash on deposit, stocks, bonds and other marketable securities that are generally held in the Corporation's possession or at another appropriate custodian or depository. This collateral is valued and inspected on a regular basis to ensure both its existence and adequacy. Additional collateral is requested when appropriate. Credit derivatives and credit insurance have also been purchased to further reduce the credit risk inherent in these contracts.

(b) Credit-Related Financial Instruments

Summarized credit-related financial instruments, including both commitments to extend credit and letters of credit are as follows:

For The Year Ended December 31,	**2002**	2001
(In billions)		
Unused credit card lines	**$337.5**	$299.3
Unused loan commitments	**134.8**	148.2
Commercial letters of credit	**0.5**	0.6

Since many of the unused commitments are expected to expire unused or be only partially used, the total amount of unused commitments in the preceding table does not necessarily represent future cash requirements.

Credit card lines allow customers to use a credit card to buy goods or services and to obtain cash advances. However, the Corporation has the right to change or terminate any terms or conditions of a customer's credit card account, upon notification to the customer. Loan commitments are agreements to make or acquire a loan or lease as long as the agreed-upon terms (e.g., expiry, covenants or notice) are met. The Corporation's commitments to purchase or extend loans help its customers meet their liquidity needs.

Commercial letters of credit are issued or confirmed to ensure payment of customers' payables or receivables in short-term international trade transactions. Generally, drafts will be drawn when the underlying transaction is consummated as intended. However, the short-term nature of this instrument serves to mitigate the risk associated with these contracts.

(c) Financial Guarantees

The following is a summary of instruments that are considered financial guarantees in accordance with FIN No. 45:

At December 31,	**2002**		2001	
(In billions)	**Contract Amount**	**Carrying Value**[3]	Contract Amount	Carrying Value[3]
Standby letters of credit and foreign office guarantees [1] [2]	**$24.0**	**$0.2**	$19.4	$0.2
Loans sold with recourse	**4.7**	**—**	8.3	—
Swap guarantees	**0.2**	**—**	0.2	—
Asset purchase agreements[4]	**2.5**	**—**	2.6	—

(1) The contract amount of financial standby letters of credit and foreign office guarantees and performance standby letters of credit and foreign office guarantees totaled $20.4 billion and $3.6 billion and $15.6 billion and $3.8 billion at December 31, 2002 and 2001, respectively.

(2) Includes $7.1 billion at December 31, 2002, and $3.4 billion at December 31, 2001, participated to other institutions.

(3) The carrying value of financial guarantees includes amounts deferred and recognized in income over the life of the contract and amounts accrued for inherent losses in accordance with FASB Statement No. 5, "Accounting for Contingencies" ("FAS No. 5"). These amounts are generally reported in other liabilities, except the FAS No. 5 component related to standby letters of credit that is reported in the allowance for credit losses. See page 68, "Allowance for Credit Losses", for more information.

(4) Certain asset purchase agreements entered into in conjunction with the Corporation's asset backed finance conduit programs qualify as financial guarantees under this new accounting guidance due to the specific structure of certain of these agreements. For additional discussion of the asset purchase agreements and the related off-balance sheet exposures, see pages 75–77.

Standby letters of credit and foreign office guarantees are issued in connection with agreements made by customers to counterparties. If the customer fails to comply with the agreement, the counterparty may enforce the standby letter of credit or foreign office guarantee as a remedy. Credit risk arises from the possibility that the customer may not be able to repay the Corporation for standby letters of credit or foreign office guarantees.

The Corporation occasionally sells or securitizes loans with limited recourse. The recourse provisions require the Corporation to repurchase loans at par plus accrued interest upon a credit-related triggering event. Exposure to credit losses from these arrangements has been reduced with the purchase of credit insurance contracts that cover the majority of expected losses. Although expected losses are covered by insurance, the maximum exposure to credit losses is approximately the contract amount stated above.

The Corporation also sells put options that are considered a form of financial guarantee when the counterparties that purchase the contracts actually own the reference financial instrument (generally loans, commodities and equities). A put option sold by the Corporation provides the counterparty the right to sell (i.e., "put") the reference asset to the Corporation at a pre-determined price. The following table summarizes the Corporation's inventory of sold put options as of December 31, 2002, in which it is probable that the counterparty owns the reference financial instrument:

(In millions)	Contract Amount	Carrying Value
Loans	$1,371	$ 0.7
Commodities	351	7.7
Equities	50	13.2
Other	23	—

In the ordinary course of its business, the Corporation enters into contracts that contain indemnification provisions. These provisions require the Corporation to make payments to another party in the event that certain events occur. Many of these provisions call for the Corporation to indemnify the other party against loss in the event that the Corporation fails to perform its own obligations under the contract. These performance guarantees are not subject to disclosure. Other types of indemnification agreements that function as financial guarantees are considered to have remote risk of loss, historical loss experience is negligible and maximum exposure to loss is not possible to estimate due to the pervasive, yet low risk, nature of these agreements.

Note 23 – Fair Value of Financial Instruments

The Corporation is required to disclose the estimated fair value of its financial instruments in accordance with SFAS No. 107, "Disclosures about Fair Value of Financial Instruments." These disclosures do not attempt to estimate or represent the Corporation's fair value as a whole. The disclosure excludes assets

and liabilities that are not financial instruments as well as the significant unrecognized value associated with core deposits and credit card relationships.

Fair value amounts disclosed represent point-in-time estimates that may change in subsequent reporting periods due to market conditions or other factors. Estimated fair value amounts in theory represent the amounts at which financial instruments could be exchanged or settled in a current transaction between willing parties. In practice, however, this may not be the case due to inherent limitations in the methodologies and assumptions used to estimate fair value. For example, quoted market prices may not be realized because the financial instrument may be traded in a market that lacks liquidity; or a fair value derived using a discounted cash flow approach may not be the amount realized because of the subjectivity involved in selecting the underlying assumptions, such as projecting cash flows or selecting a discount rate. The fair value amount also may not be realized because it ignores transaction costs and does not include potential tax effects. The Corporation does not plan to dispose of, either through sale or settlement, the majority of its financial instruments at these estimated fair values.

	2002		2001	
(In millions)	**Carrying Value**	**Estimated Fair Value**	Carrying Value	Estimated Fair Value
Financial assets:				
Cash and other short-term financial instruments (a)	**$ 37,001**	**$ 37,001**	$ 28,017	$ 28,017
Trading assets (a)	**7,190**	**7,190**	6,167	6,167
Investment securities (b)	**67,643**	**67,643**	60,883	60,883
Loans (c)	**148,125**	**146,649**	156,733	154,619
Allowance for credit losses	**(4,525)**	**—**	(4,528)	—
Loans, net	**143,600**	**146,649**	152,205	154,619
Derivative product assets (f)	**4,273**	**4,273**	3,225	3,225
Financial instruments in other assets (a)	**1,315**	**1,315**	1,459	1,459
Financial liabilities:				
Deposits (d)	**170,008**	**171,312**	167,530	168,414
Securities sold not yet purchased (a)	**1,957**	**1,957**	1,237	1,237
Other short-term financial instruments (a)	**25,149**	**25,149**	23,003	23,003
Long-term debt [1] (e)	**43,234**	**46,090**	43,418	44,521
Derivative product liabilities (f)	**3,838**	**3,838**	2,574	2,574
Financial instruments in other liabilities (a)	**930**	**930**	1,273	1,273

(1) Includes trust preferred capital securities.

Estimated fair values are determined as follows:

(a) Financial Instruments Whose Carrying Value Approximates Fair Value

A financial instrument's carrying value approximates its fair value when the financial instrument has an immediate or short-term maturity (generally one year or less), or is carried at fair value. Quoted market prices or dealer quotes typically are used to estimate fair values of trading securities and securities sold under repurchase agreements.

(b) Investment Securities

Quoted market prices typically are used to estimate the fair value of debt investment securities. Quoted market prices for similar securities are used to estimate fair value when a quoted market price is not available for a specific debt investment security. See Note 1(f) "Investment Securities" on pages 84–85 for the methodologies used to determine the fair value of equity investment securities.

(c) Loans

The loan portfolio was segmented based on loan type, credit quality and repricing characteristics. Carrying values are used to estimate fair values of certain variable rate loans with no significant credit concerns and frequent repricing. A discounted cash flow method was used to estimate the fair value of other loans. Discounting was based on the contractual cash flows, and discount rates typically are based on the year-end yield curve plus a spread that reflects pricing on loans with similar characteristics. If applicable, prepayment assumptions are factored into the fair value determination based on historical experience and current economic and lending conditions.

Commitments to extend credit and letters of credit typically result in loans with a market interest rate when funded. The recorded book value of deferred fee income approximates the fair value.

(d) Deposits

The amount payable on demand at the report date is used to estimate the fair value of demand and savings deposits with no defined maturity. A discounted cash flow method is used to estimate the fair value of fixed-rate time deposits. Discounting was based on the contractual cash flows and the current rates at which similar deposits with similar remaining maturities would be issued, adjusted for servicing costs. Typically, the carrying value is used to estimate the fair value of floating-rate time deposits.

(e) Long-Term Debt

Quoted market prices or the discounted cash flow method was used to estimate the fair value of the Corporation's fixed-rate long-term debt. Discounting was based on the contractual cash flows and the current rates at which debt with similar terms could be issued. Typically, the carrying value is used to estimate the fair value of floating-rate long-term debt.

(f) Derivative Product Assets and Liabilities

Quoted market prices or valuation models that incorporate current market data inputs are used to estimate the fair value of derivative product assets and liabilities.

Note 24 – Related Party Transactions

Certain executive officers, directors and their related interests are loan customers of the Corporation. These loans in the aggregate were less than 5% of stockholders' equity at December 31, 2002, and 2001.

Note 25 – Pledged Assets

Assets having a book value of $56.9 billion as of December 31, 2002, and $70.3 billion as of December 31, 2001, were pledged as collateral for repurchase agreements, certain derivative instrument transactions, governmental and trust department deposits in accordance with federal and state requirements, and for other purposes required by law. The assets pledged generally were comprised of investment securities and loans. Of the total collateral pledged as of December 31, 2002, $3.2 billion of collateral, which was comprised of securities posted as collateral for repurchase agreements, were permitted to be sold or repledged by the secured party. The Corporation does not issue equity puts.

The Corporation's bank affiliates are required to maintain average noninterest-bearing cash balances, in accordance with Federal Reserve Board regulations. The average required reserve balances were $2.5 billion in 2002 and $2.3 billion in 2001.

Note 26 – Collateral Policy Related to Certain Asset Transfer Activity

It is the Corporation's policy to take possession of securities purchased under agreements to resell in order to secure the risk of counterparty nonperformance on a transaction. The Corporation monitors the fair value of the underlying securities as compared to the related receivable, including accrued interest, and adjusts the level of collateral as necessary. With respect to securities lent, the Corporation receives collateral to secure the risk of counterparty nonperformance in the form of cash or other collateral, in an amount generally in excess of the fair value of the lent securities. The Corporation monitors the fair value of the securities lent on a daily basis, and additional cash or securities are obtained as necessary. At December 31, 2002, and 2001, the fair value of collateral accepted by the Corporation in connection with these activities was $7.0 billion and $6.3 billion, respectively, of which, $6.6 billion and $5.9 billion, respectively, had been sold or repledged as of the balance sheet date.

The maximum outstanding amount of securities under resale agreements at any month end during 2002 and 2001, was $8.1 billion and $8.5 billion, respectively. The average oustanding amount of securities under resale agreements during 2002 and 2001 was $6.5 billion and $7.1 billion, respectively.

Note 27 – Contingent Liabilities

The Corporation and certain of its subsidiaries have been named as defendants in various legal proceedings, including certain class actions, arising out of the normal course of business or operations. In certain of these proceedings, which are based on alleged violations of consumer protection, securities, banking, insurance and other laws, rules or principles, substantial money damages are asserted against the Corporation and its subsidiaries. Since the Corporation and certain of its subsidiaries, which are regulated by one or more federal and state regulatory authorities, are the subject of numerous examinations and reviews by such authorities, the Corporation also is and will be, from time to time, normally engaged in various disagreements with regulators, related primarily to its financial services businesses. The Corporation has also received certain tax deficiency assessments. In view of the inherent difficulty of predicting the outcome of such matters, the Corporation cannot state what the eventual outcome of pending matters will be; however, based on current knowledge and after consultation with counsel, management does not believe that liabilities arising from these matters, if any, will have a material adverse effect on the consolidated financial position or results of operations of the Corporation.

Note 28 – Parent Company Only Condensed Financial Statements

Condensed Balance Sheets

At December 31,	2002	2001
(In millions)		
Assets		
Cash and due from banks:		
Bank subsidiaries	**$ 6**	$ 2
Interest-bearing due from banks:		
Bank subsidiaries	**7,128**	7,345
Securities purchased under resale agreements	**50**	30
Trading assets	**—**	5
Investment securities	**20**	17
Loans and receivables—subsidiaries:		
Bank subsidiaries	**5,304**	6,171
Nonbank subsidiaries	**7,096**	7,940
Investment in subsidiaries:		
Bank subsidiaries	**24,943**	22,670
Nonbank subsidiaries	**1,630**	1,630
Other assets	**834**	1,179
Total assets	**$47,011**	$46,989
Liabilities and Stockholders' Equity		
Short-term borrowings:		
Nonbank subsidiaries	**$ 63**	$ 68
Other	**457**	546
Long-term debt:		
Nonbank subsidiaries	**3,411**	3,419
Other	**19,407**	21,465
Other liabilities	**1,233**	1,265
Total liabilities	**24,571**	26,763
Stockholders' equity	**22,440**	20,226
Total liabilities and stockholders' equity	**$47,011**	$46,989

Condensed Income Statements

For The Year Ended December 31,	2002	2001	2000
(In millions)			
Operating Income			
Dividends:			
Bank subsidiaries	**$1,634**	$1,645	$ 1,775
Nonbank subsidiaries	**57**	209	762
Interest income:			
Bank subsidiaries	**289**	655	822
Nonbank subsidiaries	**316**	381	513
Other	**1**	3	22
Other income (loss):			
Bank subsidiaries	**1**	5	7
Other	**(11)**	(2)	19
Total operating income	**2,287**	2,896	3,920
Operating Expense			
Interest expense:			
Nonbank subsidiaries	**253**	234	161
Other	**943**	1,308	1,556
Merger and restructuring-related charges (reversals)	**(12)**	(12)	140
Salaries and employee benefits	**—**	(1)	52
Professional fees and services	**—**	2	4
Other expense	**5**	34	255
Total operating expense	**1,189**	1,565	2,168
Income before income taxes and cumulative effect of change in accounting principle and equity in undistributed net income (loss) of subsidiaries	**1,098**	1,331	1,752
Applicable income tax benefit	**(224)**	(202)	(197)
Income before cumulative effect of change in accounting principle and equity in undistributed net income (loss) of subsidiaries	**1,322**	1,533	1,949
Equity in undistributed net income (loss) of subsidiaries:			
Bank subsidiaries	**2,181**	1,300	(1,835)
Nonbank subsidiaries	**(208)**	(151)	(625)
Income (loss) before cumulative effect of change in accounting principle	**3,295**	2,682	(511)
Cumulative effect of change in accounting principle, net of taxes of ($25)	**—**	(44)	—
Net income (loss)	**$3,295**	$2,638	$ (511)

Note 29 – Continued–Parent Company Only Condensed Financial Statements

Condensed Statements of Cash Flows

For The Year Ended December 31,	2002	2001	2000
(In millions)			
Cash Flows from Operating Activities:			
Net income (loss)	**$ 3,295**	$ 2,638	$(511)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Equity in net income of subsidiaries	**(3,664)**	(3,003)	(77)
Cumulative effect of accounting change of subsidiaries	**—**	69	—
Dividends received from subsidiaries	**1,691**	1,854	2,537
Other operating adjustments	**1,123**	68	83
Net cash provided by operating activities	**2,445**	1,626	2,032
Cash Flows from Investing Activities:			
Net decrease (increase) in loans to subsidiaries	**1,550**	(435)	2,296
Net increase in capital investments in subsidiaries	**(262)**	(412)	(668)
Purchase of investment securities—available for sale	**(15)**	(79)	(1,095)
Proceeds from sales and maturities of investment securities—available for sale	**16**	189	1,321
Other, net	**(19)**	(30)	29
Net cash provided by (used in) investing activities	**1,270**	(767)	1,883
Cash Flows from Financing Activities:			
Net decrease in commercial paper and short-term borrowings	**(100)**	(624)	(181)
Proceeds from issuance of long-term debt	**1,854**	6,414	3,964
Redemption and repayment of long-term debt	**(4,375)**	(5,495)	(2,216)
Dividends paid	**(982)**	(991)	(1,222)
Proceeds from issuance of common and treasury stock	**292**	191	152
Purchase of treasury stock	**(617)**	(78)	(3)
Payment for redemption of preferred stock	**—**	(190)	—
Net cash (used in) provided by financing activities	**(3,928)**	(773)	494
Net (decrease) increase in cash and cash equivalents	**(213)**	86	4,409
Cash and cash equivalents at beginning of year	**7,347**	7,261	2,852
Cash and cash equivalents at end of year	**$ 7,134**	$ 7,347	$ 7,261
Other cash-flow disclosures:			
Interest paid	**$ 1,246**	$ 1,501	$ 1,620
Income tax received	**(539)**	(374)	(139)

Overnight money market loans, short-term investments and other sources of liquid assets exceeded the amount of commercial paper issued at December 31, 2001.

Note 30 – Quarterly Financial Data (Unaudited)

	2002[4][5]				2001			
	Fourth	**Third**	**Second**	**First**	Fourth	Third	Second	First
(In millions, except per share data, ratios, and headcount)								
Income Statement Data:								
Total revenue, net of interest expense	**$ 4,225**	**$ 4,180**	**$ 4,274**	**$ 4,152**	$ 4,207	$ 4,016	$ 3,846	$ 3,792
Net interest income– fully taxable-equivalent ("FTE") basis [1]	**2,192**	**2,235**	**2,078**	**2,235**	2,273	2,193	2,085	2,218
Noninterest income	**2,069**	**1,983**	**2,232**	**1,952**	1,972	1,853	1,791	1,607
Provision for credit losses	**628**	**587**	**607**	**665**	765	620	540	585
Noninterest expense	**2,383**	**2,415**	**2,438**	**2,345**	2,706	2,303	2,306	2,236
Income before cumulative effect of change in accounting principle	**842**	**823**	**843**	**787**	541	754	708	679
Net income	**842**	**823**	**843**	**787**	541	754	664	679
Per Common Share Data:								
Income before cumulative effect of change in accounting principle:								
Basic	**$ 0.73**	**$ 0.71**	**$ 0.72**	**$ 0.67**	$ 0.46	$ 0.64	$ 0.60	$ 0.58
Diluted	**0.72**	**0.70**	**0.71**	**0.67**	0.46	0.64	0.60	0.58
Net income:								
Basic	**$ 0.73**	**$ 0.71**	**$ 0.72**	**$ 0.67**	$ 0.46	$ 0.64	$ 0.57	$ 0.58
Diluted	**0.72**	**0.70**	**0.71**	**0.67**	0.46	0.64	0.56	0.58
Cash dividends declared	**0.21**	**0.21**	**0.21**	**0.21**	0.21	0.21	0.21	0.21
Book value	**19.28**	**18.79**	**18.37**	**17.81**	17.33	17.30	16.49	16.20
Balance Sheet Data – Ending Balances:								
Loans	**$148,125**	**$150,389**	**$147,728**	**$152,126**	$156,733	$164,251	$166,576	$171,427
Total assets	**277,383**	**274,187**	**270,343**	**262,947**	268,954	270,252	272,412	274,352
Deposits	**170,008**	**164,036**	**157,518**	**158,803**	167,530	162,385	164,299	163,555
Long-term debt [2]	**43,234**	**42,481**	**43,756**	**44,194**	43,418	44,361	41,693	42,197
Common stockholders' equity	**22,440**	**21,925**	**21,563**	**20,913**	20,226	20,192	19,261	18,876
Total stockholders' equity	**22,440**	**21,925**	**21,563**	**20,913**	20,226	20,382	19,451	19,066
Credit Quality Ratios:								
Net charge-offs to average loans	**1.65%**	**1.55%**	**1.62%**	**1.71%**	1.79%	1.37%	1.22%	1.13%
Allowance to period end loans	**3.20**	**3.17**	**3.19**	**3.06**	2.97	2.82	2.62	2.52
Nonperforming assets to related assets [3]	**2.38**	**2.48**	**2.65**	**2.58**	2.35	1.96	1.77	1.55
Financial Performance Ratios:								
Return on average assets	**1.24%**	**1.24%**	**1.32%**	**1.21%**	0.80%	1.13%	0.99%	1.02%
Return on average common equity	**15.0**	**14.8**	**15.7**	**15.3**	10.5	15.0	13.9	14.6
Net interest margin	**3.67**	**3.84**	**3.69**	**3.91**	3.84	3.70	3.50	3.71
Efficiency ratio	**55.9**	**57.3**	**56.6**	**56.0**	63.7	56.9	59.5	58.5
Capital Ratios:								
Risk-based capital:								
Tier 1	**9.9%**	**9.5%**	**9.4%**	**9.0%**	8.6%	8.4%	8.2%	7.8%
Total	**13.7**	**13.0**	**13.0**	**12.7**	12.2	11.7	11.6	11.2
Leverage	**8.9**	**9.0**	**9.1**	**8.6**	8.2	8.1	8.0	7.7
Common Stock Data:								
Average shares outstanding:								
Basic	**1,157**	**1,162**	**1,174**	**1,170**	1,166	1,168	1,166	1,163
Diluted	**1,166**	**1,171**	**1,184**	**1,179**	1,174	1,176	1,176	1,173
Stock price:								
High	**$ 40.05**	**$ 41.20**	**$ 42.53**	**$ 42.45**	$ 39.85	$ 38.95	$ 39.60	$ 39.85
Low	**32.59**	**32.90**	**37.02**	**34.56**	28.00	28.00	33.61	33.49
Close	**36.55**	**37.40**	**38.48**	**41.78**	39.05	31.47	35.80	36.18
Headcount	**73,685**	**73,535**	**73,579**	**73,864**	73,519	75,801	78,491	79,157

(1) Net interest income-FTE includes taxable equivalent adjustments of $36 million, $38 million, $36 million and $35 million for quarters ended December 31, 2002, September 30, 2002, June 30, 2002 and March 31, 2002, respectively. Net interest income-FTE includes taxable equivalent adjustments of $38 million, $30 million, $30 million and $33 million for quarters ended December 31, 2001, September 30, 2001, June 30, 2001 and March 31, 2001, respectively.

(2) Includes trust preferred capital securities.

(3) Related assets consist of loans outstanding, including loans held for sale, and other real estate owned.

(4) 2002 includes the addition of employees due to the consolidation of Paymentech, Inc. and Anexsys, LLC.

(5) Results include the effect of the consolidation of Paymentech, Inc. and Anexsys, LLC.

Management of BANK ONE CORPORATION and its subsidiaries (the "Corporation") is responsible for the preparation, integrity and fair presentation of its published financial reports. These reports include consolidated financial statements that have been prepared in accordance with generally accepted accounting principles in the United States of America, using management's best judgment and all information available.

The consolidated financial statements of the Corporation have been audited by KPMG LLP, independent public accountants. Their accompanying report is based upon an audit conducted in accordance with standards established by the American Institute of Certified Public Accountants, including the related review of internal accounting controls and financial reporting matters. The Audit and Risk Management Committee of the Board of Directors, which consists solely of outside directors, meets at least quarterly with the independent auditors, Corporate Audit and representatives of management to discuss, among other things, accounting and financial reporting matters.

Management of the Corporation is responsible for establishing and maintaining disclosure controls and procedures to ensure that information required to be disclosed in reports filed or submitted under Securities Exchange Act of 1934 (the "Exchange Act") is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. In addition to disclosure controls and procedures, management of the Corporation is responsible for establishing and maintaining an effective internal control structure, which provides reasonable, but not absolute, assurance of the safeguarding of assets against unauthorized acquisition, use or disposition. The Corporation maintains systems of controls that it believes are reasonably designed to provide management with timely and accurate information about the operations of the Corporation. This process is supported by an internal audit function along with the ongoing appraisal of controls by the Audit and Risk Management Committee. Both the Corporation's independent auditors and the internal audit function directly provide reports on significant matters to the Audit and Risk Management Committee. The Corporation's independent auditors, the internal audit function and the Audit and Risk Management Committee have free access to each other. Disclosure controls and procedures, internal controls, systems and corporate-wide processes and procedures are continually evaluated and enhanced.

Management of the Corporation evaluated its disclosure controls and procedures as of December 31, 2002. Based on this evaluation, the Principal Executive Officer and Principal Financial Officer each concludes that as of December 31, 2002, the Corporation maintained effective disclosure controls and procedures in all material respects, including those to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, and is accumulated and communicated to management, including the Principal Executive Officer and the Principal Financial Officer, as appropriate to allow for timely disclosure. There have been no significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to our most recent evaluation.

The Corporation is dedicated to maintaining a culture that reflects the highest standards of integrity and ethical conduct when engaging in its business activities. Management of the Corporation is responsible for compliance with various federal and state laws and regulations, and the Corporation has established procedures that are designed to ensure that management's policies relating to conduct, ethics and business practices are followed on a uniform basis.

BANK ONE CORPORATION

James Dimon
Chairman and Chief Executive Officer

Heidi Miller
Executive Vice President and Chief Financial Officer

Chicago, Illinois
January 16, 2003

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

The Board of Directors and Stockholders
BANK ONE CORPORATION:

We have audited the accompanying consolidated balance sheets of Bank One Corporation and subsidiaries ("the Corporation") as of December 31, 2002 and 2001, and the related consolidated statements of income, stockholders' equity, and cash flows for the years then ended. These consolidated financial statements are the responsibility of the Corporation's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. The accompanying consolidated statements of income, stockholders' equity, and cash flows of the Corporation for the year ended December 31, 2000 have been audited by the Corporation's predecessor auditors, who have ceased operations. Those auditors expressed an unqualified opinion on those consolidated financial statements in their report dated January 17, 2001.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Corporation as of December 31, 2002 and 2001, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Chicago, Illinois
January 16, 2003

Common Stock and Stockholder Data: [1] [2]	**2002**	2001	2000	1999	1998
Market price:					
High for the year	**$42.53**	$39.85	$38.81	$63.13	$64.78
Low for the year	**32.59**	28.00	24.25	29.98	37.58
At year-end	**36.55**	39.05	36.63	32.00	51.06
Book value (at year-end)	**19.28**	17.33	15.90	17.34	17.31
Dividend payout ratio	**30%**	38%	N/M	57%	58%
Financial Ratios:					
Net income (loss) as a percentage of: [3]					
Average stockholders' equity	**15.2%**	13.4%	(2.6)%	17.0%	15.8%
Average common stockholders' equity	**15.2**	13.5	(2.6)	17.2	15.9
Average total assets	**1.3**	1.0	(0.2)	1.4	1.3
Average earning assets	**1.4**	1.1	(0.2)	1.6	1.5
Stockholders' equity at year-end as a percentage of:					
Total assets at year-end	**8.1**	7.5	6.9	7.5	7.9
Total loans at year-end	**15.1**	12.9	10.7	12.3	13.2
Total deposits at year-end	**13.2**	12.1	11.2	12.4	12.7
Average stockholders' equity as a percentage of:					
Average total assets	**8.2**	7.3	7.2	8.0	8.2
Average loans	**14.4**	11.6	11.4	13.0	12.7
Average deposits	**13.6**	12.0	12.0	13.2	13.1
Income to fixed charges: [4]					
Excluding interest on deposits	**2.8x**	2.0x	0.8x	2.3x	2.3x
Including interest on deposits	**1.9x**	1.4x	0.9x	1.6x	1.5x

N/M Not meaningful.

(1) There were 103,589 registered common stockholders of record as of December 31, 2002.

(2) The principal market for the Corporation's common stock is the New York Stock Exchange. The Corporation's common stock is also listed on the Chicago Stock Exchange.

(3) Does not include a deduction for preferred dividends.

(4) Results for the year ended December 31, 2000, were insufficient to cover fixed charges. The coverage deficiency was approximately $1.2 billion.

Corporate Headquarters

Bank One Corporation
1 Bank One Plaza
Chicago, IL 60670
(312) 732-4000

Company Information

Information on Bank One products and services is available on the Internet at the following websites:

www.bankone.com
Bank One's primary website

www.onegroup.com
Bank One's proprietary family of mutual funds

www.oneinvest.com
Bank One's online investment services and securities trading

www.cardmemberservices.com
Bank One's credit card company

Financial Information

Bank One annual reports, earnings and news releases, 10-K and 10-Q reports, and other financial information can be obtained by visiting the "About Bank One" section of our website at www.bankone.com.

You can also obtain the most recent financial information on Bank One by phoning our toll-free Corporate News and Shareholder Information Service at 877-ONE-FACT (877-663-3228).

Investor Relations

Analysts, portfolio managers, and other investors seeking additional financial information are welcome to contact:

Investor Relations
Bank One Corporation
1 Bank One Plaza
Mail Code IL1-0738
Chicago, IL 60670-0738
(312) 732-4812

Shareholder Relations and Information

Shareholders with questions regarding their stockholder account, dividends, stock transfer, lost certificates, or changes of address should contact the transfer agent at the address and applicable phone number below.

EquiServe Trust Company, N.A.
P.O. Box 43069
Providence, RI 02940-3069
Telephone:
Inside the United States: (888) 764-5592
Outside the United States: (781) 575-2723
TDD/TTY (for the hearing impaired):
(800) 952-9245
Internet: www.equiserve.com

Stock Listing

The common stock is listed on the New York and Chicago stock exchanges and trades under the ticker symbol ONE.

Dividend Information

Dividends on the common stock, if declared by the Board of Directors, customarily are paid on January 1, April 1, July 1, and October 1.

Annual Meeting of Shareholders

The Annual Meeting of Shareholders will be held on Tuesday, April 15, 2003, at 9:30 a.m. (Chicago Time) in the Bank One Auditorium, located in the Plaza area of the corporate headquarters at 1 Bank One Plaza in Chicago.

Independent Public Accountants

KPMG LLP
303 East Wacker Drive
Chicago, IL 60601

Bank One will send its Annual Report on Form 10-K for 2002 filed with the Securities and Exchange Commission without charge to any shareholder who requests a copy in writing. Please send requests to: Bank One Corporation, Attn: Investor Relations, 1 Bank One Plaza, Mail Code IL1-0738, Chicago, IL 60670-0738.

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BANK ONE

2003 Annual Report



Creating Value

For the year ended December 31,	2003	2002	2001
(Dollars in millions, except per share, ratio and headcount data)			
Segment Results			
Retail	**$ 1,558**	$ 1,451	$ 1,046
Commercial Banking	**1,197**	617	700
Card Services	**1,159**	1,166	907
Investment Management Group	**345**	324	293
Corporate	**(1,134)**	(302)	(297)
Cumulative effect of change in accounting principle, net of taxes of ($25)	**—**	—	(44)
Total Corporation net income (loss) from continuing operations	**3,125**	3,256	2,605
Discontinued operations, net of taxes of $233, $22, $19	**410**	39	33
Total Corporation net income	**$ 3,535**	$ 3,295	$ 2,638
Financial Performance			
Return on average assets	**1.27%**	1.25%	0.98%
Return on average common equity	**15.6**	15.2	13.4
Net interest margin	**3.44**	3.76	3.67
Efficiency ratio	**59.7**	56.6	59.8
Consolidated Results			
Total revenue, net of interest expense	**$ 16,212**	$ 16,735	$ 15,748
Net interest income – fully taxable-equivalent ("FTE") basis	**8,311**	8,700	8,736
Noninterest income	**8,063**	8,180	7,143
Provision for credit losses	**2,045**	2,487	2,510
Noninterest expense	**9,777**	9,546	9,490
Net income	**3,535**	3,295	2,638
At Year-End			
Loans	**$138,147**	$148,125	$156,733
Total assets	**326,563**	277,985	269,507
Deposits	**164,621**	170,008	167,530
Common stockholders' equity	**23,419**	22,440	20,226
Headcount	**71,196**	73,685	73,519
Cash dividends declared	**0.92**	0.84	0.84
Book value	**20.92**	19.28	17.33
Market price	**45.59**	36.55	39.05
Capital Ratios			
Risk-based capital:			
Tier 1	**10.0%**	9.9%	8.6%
Total	**13.7**	13.7	12.2
Leverage	**8.8**	8.9	8.2

On January 14, 2004, J.P. Morgan Chase & Co. and Bank One entered into an agreement to merge Bank One into JPMorgan Chase. JPMorgan Chase has filed a Registration Statement on Form S-4 with the Securities and Exchange Commission containing a preliminary joint proxy statement/prospectus regarding the proposed merger. Shareholders are urged to read the definitive joint proxy statement/prospectus when it becomes available because it will contain important information. Shareholders will be able to obtain a free copy of the definitive joint proxy statement/prospectus, as well as other filings containing information about JPMorgan Chase and Bank One, without charge, at the SEC's Internet site (http://www.sec.gov). Copies of the definitive joint proxy statement/prospectus and the filings with the SEC that will be incorporated by reference in the definitive joint proxy statement/prospectus can also be obtained, without charge, by directing a request to J.P. Morgan Chase & Co., 270 Park Avenue, New York, New York 10017, Attention: Office of the Secretary (212-270-6000), or to Bank One Corporation, 1 Bank One Plaza, Suite 0738, Chicago, Illinois 60670, Attention: Investor Relations (312-336-3013).

The respective directors and executive officers of JPMorgan Chase and Bank One and other persons may be deemed to be participants in the solicitation of proxies in respect of the proposed merger. Information regarding JPMorgan Chase's and Bank One's directors and executive officers and a description of their direct and indirect interests, by security holdings or otherwise, is available in the preliminary joint proxy statement/prospectus contained in the above-referenced Registration Statement on Form S-4 filed with the SEC on February 20, 2004.

DEAR FELLOW SHAREHOLDER

This letter is the fourth I have written to you as Chairman and CEO of Bank One. Due to the proposed merger of Bank One with J. P. Morgan Chase & Co., it will likely be my last. I write it with some sadness, because we are closing an extraordinary chapter in the history of our company, but also with enormous excitement because we now have the opportunity to create one of the truly great financial institutions in the world.

Without the tireless and incredible efforts of the thousands of employees at Bank One, we would not have been in a position to embark upon this new journey. Their exceptional talent and steadfast resolve to doing the right thing have transformed every aspect of Bank One – from customer service and systems to products and marketing.

Their hard work is reflected in our share price – an 85% increase in the stock price since we began on this journey together in March of 2000. This performance compares with a 25% decrease in the S&P 500 and a 24% increase in the Keefe Banking Index during the same period.

Our employees have created this remarkable opportunity. Our commitment to you in the days ahead is to realize its great promise.

Righting the Ship; Fixing the Bank

In 2000, we reported a net loss of $511 million; in 2003, we earned a record $3.5 billion. We achieved these results by instilling greater financial discipline, improving efficiency, upgrading systems, integrating technology, strengthening management and relentlessly attacking bureaucracy.

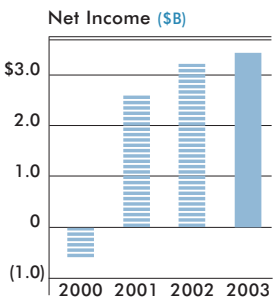
Instilling financial discipline Our first priority in 2000 was to create a fortress balance sheet. With this goal in mind, we evaluated each asset and liability to ensure that its value was accurately reflected and properly managed. We created thousands of profit and loss statements to help our managers better understand and raise performance in each component of their respective businesses. Providing this information helps ensure that we adhere to rigorous standards of fact-based decision making. Today, for example, each of our 1,841 banking centers has its own P&L, enabling each branch manager to make decisions based on her or his market's unique needs.

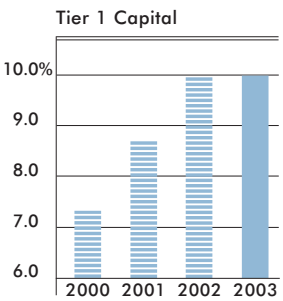
Additionally, we realized the need to prepare ourselves for what would become an enormously difficult period in the credit cycle. In 2000, we began a rigorous process to reduce and better manage both overall and individual credit risk across all lines of business. Today, we believe that our credit and risk management process is among the strongest in the industry. We exited unprofitable customer relationships and unprofitable business segments. We increased the amount of fee-based business we do with customers. Today, non-lending revenue accounts for 64% of our large corporate banking business, compared to approximately 45% in 2000.

As our financial strength improved, we strategically deployed excess capital. In 2003, we made two small but important acquisitions, increased the dividend by 19% and bought back more than 55 million shares of stock at an average price of $37.29 for a total cost of $2 billion – without weakening our capital position. In fact, we ended the year with our Tier 1 Capital among the strongest in the industry at 10.0%, up from 7.3% in 2000.

Improving efficiency During the past four years, we eliminated $1.8 billion from our cost structure. Each expense category – from the use of cell phones to vendor and real estate contracts – was painstakingly evaluated. The number of operating centers was reduced from 71 to 48 and more than 1,000 software applications were consolidated. In addition, we eliminated the unnecessary use of consultants and terminated executive perks, while putting additional stock into the 401(k) plans of 40,000 employees. We reduced headcount by 19%, despite increases in staff from acquisitions, in-sourcing thousands of technology jobs and hiring thousands of customer-focused professionals. As a result, we have not only improved efficiency, but we have improved customer service across all of our businesses.

Upgrading, integrating and consolidating systems and technology The task of integrating and upgrading our systems and technology was perhaps our most complex challenge. In





2000, we relied upon nine deposit systems and eleven lending systems, and had well over a thousand computer applications. There was virtually no form of standardization, and it was clear we could not properly run the bank – let alone go through another major merger or acquisition – until our systems were consolidated.

We spent $500 million and hundreds of thousands of hours converting our systems, which has already resulted in annual savings of $200 million and better productivity. Our bankers now operate on one deposit system, one consumer loan system, one corporate loan system, one middle market loan system and one check processing system – all significantly upgraded. In addition, we introduced a new standardized customer profitability system that provides our bankers with the user-friendly, sophisticated sales tools that they need to offer more value to our customers. Combined, these improvements enable our bankers to work smarter and faster to serve the best interests of Bank One customers.

Strengthening management Today, Bank One's culture focuses on executing with skill, precision and a sense of urgency. While we encourage constructive debate, we also recognize the importance of reaching a decision and working together as one team with one agenda. Each day, we endeavor to take responsibility for our mistakes; make good on our commitments; and do what's right for our customers, our company, our shareholders and each other.

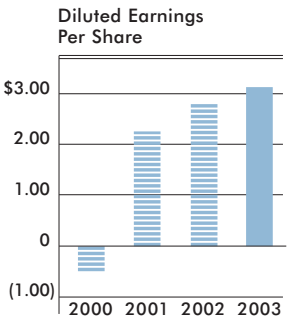
Throughout this process, we have become more field- and customer-driven. In retail, small business, private banking, middle market and even philanthropy, our success depends on how well we understand the needs of customers in local communities. We realize that people sitting at headquarters don't have all the answers. That's why our senior leadership is spending increasingly more time outside their offices and in the front lines with those who have direct contact with customers and important knowledge about every community we serve.

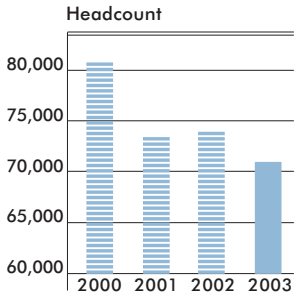
And our people are becoming more efficient. Today, meetings are shorter and more productive, and unnecessary paperwork has been reduced. The effort is ongoing and we continue to be deliberate and unrelenting in our resolve to keep bureaucracy at bay.

Investing in the Future; Igniting Growth

Despite the extremely tough economic environment during the past four years and our need to significantly reduce expenses, we never stopped aggressively investing in our future. By 2003, our hard work, cost cutting and investments began to yield good, profitable, sustainable growth:

Retail In 2003, we strengthened marketing programs, extended banking hours by up to 20% in most of our markets and brought more than 1,000 new customer-focused sales staff into the branches. We added 58 new branches and 434 new ATMs, renovated more than 250 branches and converted 874 ATMs to the latest technology. We dropped the hated teller fee. We upgraded our products with free checking, free online bill payment and free e-mail





alerts. Bank One's online banking tools are now among the best in the industry. (This past year bankone.com received the International Academy of Digital Arts and Sciences "Webby Award" in the Financial Services category.)

All of this work is clearly paying off. In 2003, we added 434,000 net new checking accounts. This compares to 2000 and 2001, when we were losing thousands of accounts, and to 2002, when we reported only 4,000 net new accounts. In addition to increased checking accounts, in-branch sales are improving dramatically through cross-selling efforts: credit card sales were up 84%; home equity loans increased 27%; and investment sales were up 10%.

Commercial Banking Our initial focus in Commercial Banking was on properly managing risk, navigating our businesses through the credit cycle and decreasing our reliance on lending revenue. Our investment in capital markets and global treasury services helped fuel our growth in fee-based revenue. In 2003, non-lending revenue accounted for 64% of our large corporate banking business, versus approximately 45% three years ago. In capital markets alone, revenue grew to $890 million, up more than 80% since 2000.

Today, Bank One ranks second in managing customer asset-backed commercial paper outstanding, and has become one of the top 10 originators of investment-grade debt. In 2003, global treasury services introduced a breakthrough product to help healthcare insurers and providers electronically process payments and remittance advices. In addition, an electronic payment product is now offered that allows large-scale companies and public entities to accept bill payments over the phone or through the Internet.

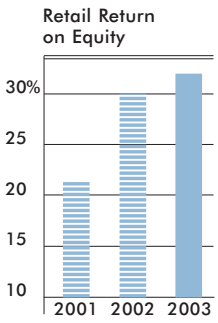
We also reduced our credit exposures by more than $63 billion since 2000. The smaller loan portfolio – along with the continued strong improvement in credit quality – allowed us to release $420 million in corporate banking loan loss reserves in 2003.

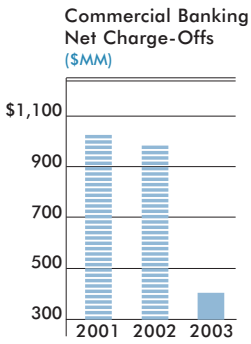
Return on equity for our large corporate banking business was 17% (excluding the benefit of the release of reserves). That is a significant increase from 8.4% in 2002, and, we believe, a sustainable one. In middle market, return on equity was 16%, versus 13% in the prior year. With a recovery in the economy, we expect solid returns and growth as we move forward.

Card Services Although profit was essentially flat in Card Services, overall customer spending on our cards grew by 7.5% to $167.1 billion, and loan balances outstanding increased to $76.3 billion from $74 billion in 2002.

In 2003, Card Services led the industry in new card introductions and launched the first major card innovation in years. The year was off to a great start with the highly anticipated March launch of Disney's Visa® Credit Card. Avon, Volkswagen and Starbucks soon joined our list of great partner brands, each with its own rewards card.

We also developed successful new marketing channels that do not rely on direct mail, which is becoming increasingly more expensive and less effective. In 2003, for the first time, direct mail sales accounted for less than





half of our new accounts. Several partners, including Disney, Starbucks and Amazon, are using their Internet sites to allow customers to apply for cards. Perhaps the most innovative distribution channel is Avon's 600,000 representatives who are now offering the Avon rewards card to their customers.

Our partnership with Starbucks led to the new Starbucks Card Duetto™ Visa, the first card to combine a stored-value card and credit card. Recognized by *Business Week* as one of the best new products of 2003, this card has exceeded our expectations.

Investment Management Group The Investment Management Group grew assets under management by 15% compared to 2002. This growth was buoyed by the equity market rebound and strong sales in our retail, institutional and third party channels. Assets under management increased 42% since year-end 2000, from $131 billion to $187 billion, an especially impressive performance considering the difficult market environment of the past three years.

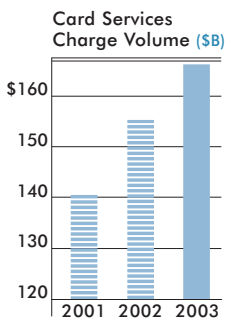
In 2003, we significantly expanded our investment management capabilities with two strategic acquisitions: Zurich Life and Security Capital Research & Management Incorporated. Zurich Life provides us with the manufacturing and expanded distribution capabilities to offer high-quality life insurance and annuity products. Security Capital, a recognized expert in developing real estate investment products, complements our wide range of high-performing products for institutional clients.

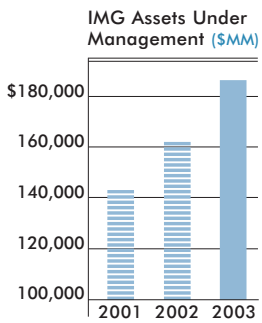
Additionally, in 2003, we strengthened governance and control practices of the One Group Mutual Funds to better protect the interests of fund investors, and we continue to cooperate with our regulators, including the New York State Attorney General and the Securities and Exchange Commission, in reviewing our mutual fund practices. Details about these changes can be found on www.onegroup.com.

The Next Chapter: JPMorgan Chase

In 2003, for the first time, your company was strong enough to be in a position to consider multiple options as we contemplated the future. We could continue on our current path, purchase a franchise or merge with another company. (Although, I do not believe that JPMorgan Chase, or any other company for that matter, would have considered us an attractive merger candidate had we not fixed the company.) After looking at and weighing the risks and rewards of each option, we concluded – and are very confident – that the proposed merger with JPMorgan Chase provides us with a truly unique opportunity to build one of the world's great financial institutions.

We believe the combined enterprise will continue to deliver superior returns to our shareholders. We believe it will be great for our current and prospective customers because they will have access to a broader offering of better and more competitively priced products and services. We believe it will be great for employees because a stronger company ultimately results in expanded opportunities for





career growth and development (although in the beginning there will, unfortunately, be some painful staff reductions). And we believe it will be great for each of the communities in which we operate, because building a vibrant, healthy company is the prerequisite to responsible corporate citizenship, a value deeply held by both companies.

It will also be good for Chicago because, while the parent company will be headquartered in New York, the combined company's retail and middle market businesses will be headquartered here. There is strong business logic to support the dual headquarters structure. I have learned from firsthand experience that Chicago is a terrific place in which to build a company and raise a family. It offers a wonderful quality of life, a lower cost structure, a highly educated workforce and an involved civic community that is backed by supportive city leaders. Chicago also serves as an important gateway for reaching our significant Midwest customer base.

A compelling business-by-business rationale When the merger is complete, the company will operate in six major businesses:

- *Retail*, which includes branch banking, small business and consumer lending, such as mortgages and auto loans
- *Card Services*
- *Treasury & Securities Services*, including cash management and treasury services, institutional trust services, and investor services
- *Middle Market*, which includes mid-corporate banking
- *Global Investment Management and Private Banking*
- *Investment Banking*

Once combined, each and every one of these businesses will not only be strengthened, but will also be a top competitor in its field.

The business rationale is attractive from every perspective:

1. Most important, in each business our customers will benefit from broader, more complete and higher quality products and services.
2. Economically, each business will be strengthened by the benefits and efficiency that come with scale. During the next three years, we expect to realize annual savings of $2.2 billion, without having a negative impact on customer service.
3. Globally, we will gain immediate access to international capabilities in key areas such as all capital markets products, financial advisory services, asset management and treasury services (including trade finance, custody, trust and cash management).
4. And, finally – and we don't want to oversell but we do feel strongly about this point: the whole is greater than the sum of the parts. Each business fuels and complements the others, providing substantial competitive advantages such as distribution channels (e.g., providing retail banking customers with credit cards and mortgages; providing middle market and investment banking customers with treasury and securities services, just to name a few), and the benefit of great global brands.

A compelling overall fit for our company In addition to strengthening each line of business, this transaction provides

a more diversified earnings stream, a larger capital base, stronger capital generation capabilities, and increased capacity to invest in our businesses. (It is noteworthy that – on the day this merger was announced – the rating agencies took the unusual step of placing both Bank One and JPMorgan Chase on "positive watch.") All of the above should ultimately lead to a lower cost of capital and the ability to better withstand difficult times in the economic cycle.



Capable and compatible management teams and a proven ability to execute To succeed, companies cannot rely on business logic alone. They must be able to execute a game plan. Effective execution begins with a capable and compatible management team. I have known Bill Harrison, Chairman and CEO of JPMorgan Chase, for more than 10 years and have tremendous respect for him, both personally and professionally. Our faith in his character, integrity and ability gave us great confidence that this merger would be successful.

In addition to Bill and me, many of the members of our senior management teams have also worked together at other companies or sat across the table from each other as competitors. They have worked in and across all lines of business and, as a result, have mutual respect for and understanding of our various businesses. And both senior management teams have experience executing large-scale mergers. We are confident we can execute this merger successfully.

In closing The past four years have been transformative for all of us at Bank One. Together, we faced some tough challenges and have created a strong, healthy company. We are now positioned to achieve our goal of becoming one of the best financial institutions in the world.

The business rationale for this merger is extremely sound: If we do not succeed, we will have only ourselves to blame. We cannot promise you results, but having chosen this course of action, we therefore owe you – and will promise you – this: we will do all in our power to deliver on its extraordinary potential.



James Dimon
CHAIRMAN AND CHIEF EXECUTIVE OFFICER
FEBRUARY 17, 2004



"When it comes to banking, I'm a very needy person because I'm always traveling around the country. What's valuable to me is that my banker looks out for my family and me – and for our future – so I can sleep easy at night. It's a good situation to be in."

Pat Green

Country singer

Three-time Grammy nominee

6'3" (with his boots on)

New dad

Bank One customer – 5 years

Creating Value for Customers

Customers – from large corporations to individual consumers – rely on us to understand their goals, provide solutions and demonstrate results. We take that responsibility seriously. After all, that's how we create value for the 60 million customers we work with. From home equity loans to high yield securities, we are dedicated to providing each customer with the best products and services in the industry.

Creating Value for Businesses

Whether it's a *Fortune 500* corporation, a family-run business, a government agency or a nonprofit, organizations large and small rely on us to listen, understand their businesses and provide solutions that address their needs. We recognize that each business is unique. At Bank One, we are dedicated to building deep relationships with our customers to help them leverage resources, save time and money, and compete more effectively.





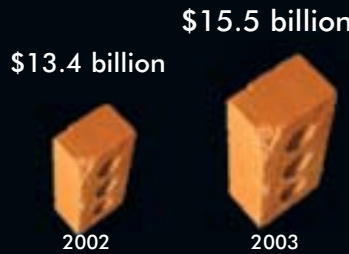
Location, location, location

In addition to the capabilities of our proprietary branches and offices in 10 international cities, we maintain a co-operative arrangement with banks around the world. Bank One commercial customers have access to this network of banks in 32 countries.

3rd largest provider of cash management products in the United States

From implementing an electronic funds transfer solution to increase collection speed, to consolidating idle funds into one parent account for overnight investment, our cash management services provide businesses with the tools they need to monitor, manage and maintain their cash flows in today's global economy.

Commercial real estate commitments



We provide loans and a wide range of services to meet the commercial real estate financing needs of entrepreneurs, businesses, large corporations and institutional investors.



A card for every need

Whether they need a purchasing card, a single card solution that combines the procurement process with travel expense management, or a stored-value card to pay employees, our commercial card services group delivers streamlined financial management solutions to the more than 1,800 organizations that use a Bank One card.

Businesses bank on us

Each day 3,000 large corporations, 20,000 middle market companies and nearly 500,000 small businesses rely on us to help them meet their financial goals.

A host of options

With average outstanding commercial loan balances of $67 billion, we offer a comprehensive array of financing solutions – ranging from basic working capital loans to highly structured debtor-in-possession transactions – to small business, middle market and large corporate borrowers.



Structuring innovative financing solutions

Whether they need a stand-alone bank loan syndication or a multi-product financing solution, our capital markets experts provide companies with structuring innovation and wide distribution to either public or private debt markets.

Institutional assets under management

$62 billion	$78 billion	$95 billion
2001	2002	2003

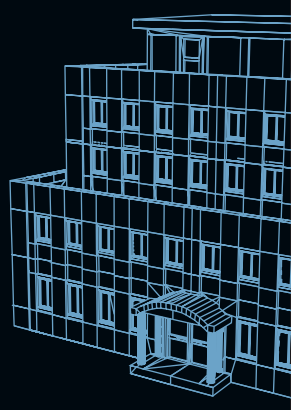
We combine a dedicated service team and a broad product line to provide tailored investment management solutions for companies large and small.

Small business is big business

With $10.2 billion in loans, we provide small businesses with the funds they need to expand their business, purchase capital goods or inventory, meet short-term cash requirements and consolidate business debt.

Expanding what we do

Our purchase of Security Capital Research & Management Incorporated – a respected advisor in providing real estate investment products to institutional investors – is an example of how we're expanding the services we provide commercial customers.





Carmelo Mauro

Owner of Carmelo's Ristorante Italiano

Speaks five languages

Delivers VIP ("Very Italian Pampering")

Helps high school kids run their own restaurant business

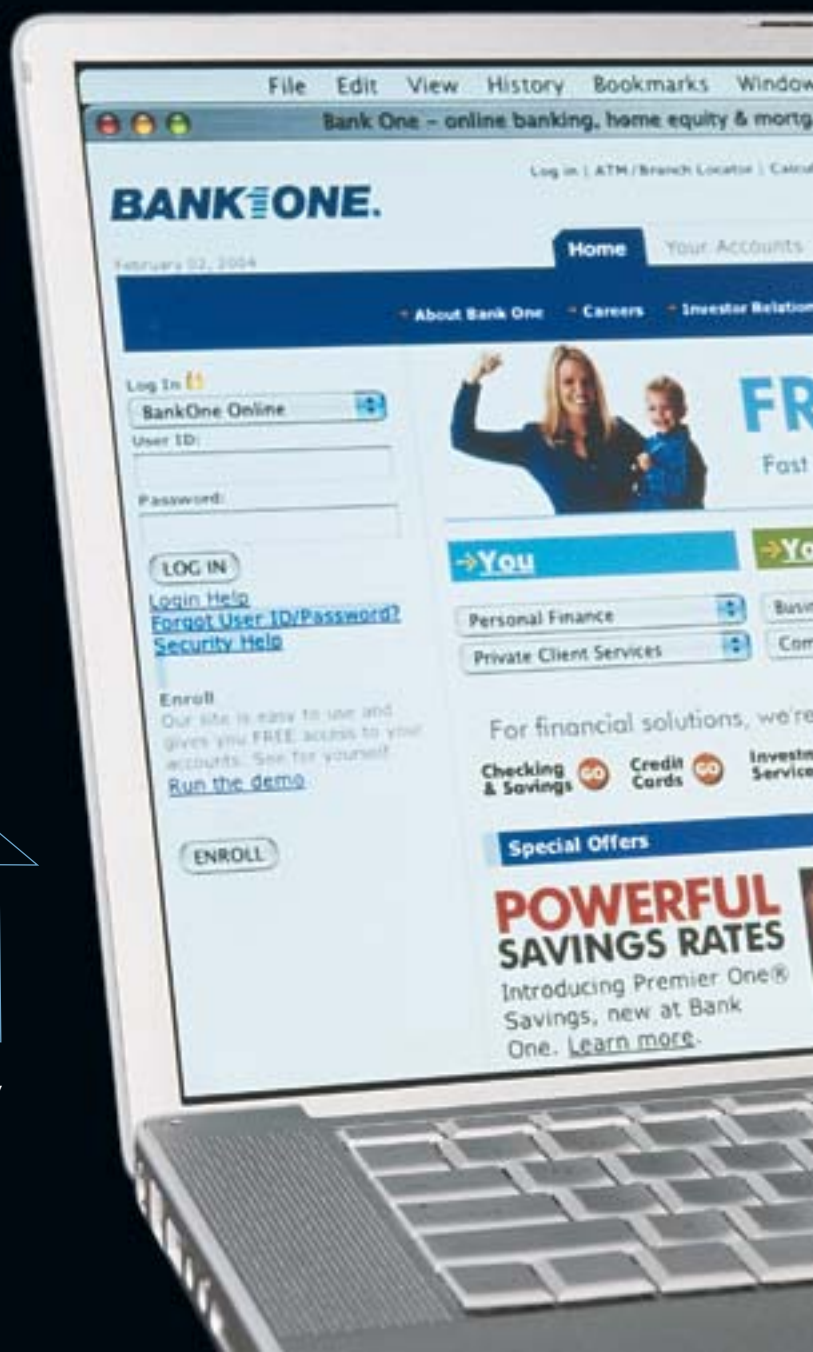
Bank One customer – 9 years

"Value means having a financial partner who is genuinely looking for ways for me to improve my business. As a small business owner, I have to wear a lot of hats – chef, consultant, company spokesperson, general manager. What's valuable to me is the fact that I don't have to wear the "financier" hat too – my banker does that for me."


Patti and Jack O'Donnell
She: Stay-at-home mom
Independent consultant
Avid volunteer
Mother of 1 (soon to be 3)
He: Curious 1-year-old
Favorite toy is a ball
Soon-to-be big brother
Bank One customers:
She: 17 years
He: 10 months
"My husband and I are busy – we both work and are fortunate to have a large extended family and great friends. Financial stability is important to us for our kids' sake, especially with a growing family. Having a financial partner to help achieve our financial goals – for our children and ourselves – is incredibly valuable."

Creating Value for Consumers

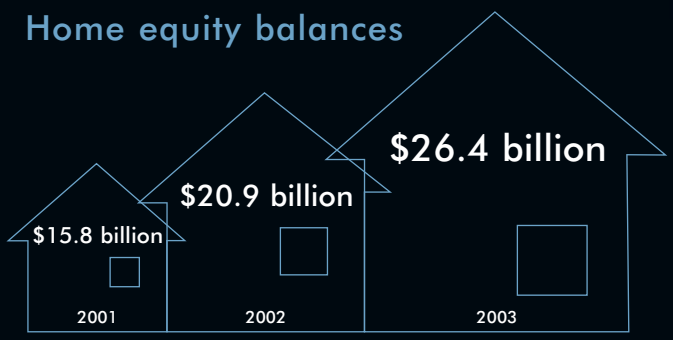
We understand that when it comes to money, each person has unique needs. That's why we've moved beyond the traditional branch bank to become a financial services company offering a wide range of products and services to help people meet their financial goals. Today, customers visiting our branches can meet with bankers to create a financial plan that includes everything from checking and savings accounts to college and retirement planning to life insurance, annuities and mutual funds. And with conveniences like free online bill payment, automatic e-mail alerts and digital check imaging, our customers spend less time worrying about doing the things they have to do, and more time focusing on the things they want to do.



2.3 million policyholders

As a leading underwriter of term life insurance, we serve consumers through both a national network of 40,000 licensed brokers/insurance agents and our One Life Direct marketing platform.

Home equity balances



People put a lot of work into their homes; we make it easy for them to convert that into cash.

Convenience

Bank One customers have access to 1,841 banking centers, 4,394 ATMs and 24/7 online and telephone banking.

BankOne.com Recognized for its clean, intuitive and fast user interface, BankOne.com was honored in 2003 by the Webby Business Awards as the top financial services Web site in the country.



Choices

Customers have more than 1,200 different kinds of Bank One credit cards to choose from, ranging from low-interest-rate cards, to those that earn rewards or cash back, to others that support a favorite nonprofit organization.



Smart

We provide more than $4.2 billion a year in education loans to students and parents across the nation.

Core deposits

$61.6 billion	$66.5 billion	$71.7 billion
2001	2002	2003

Our array of checking and savings account choices offers the flexibility and convenience to meet customers' individual banking needs.

$105 billion mutual fund assets under management

With 49 professionally managed funds to choose from, One Group mutual funds offer a fund for nearly every type of investor.

1.5 million acres managed

With more than 1,600 properties under our care, we assist clients in one of the largest farm and ranch management operations in America.



Dick Bass

Owner of Snowbird Ski
& Summer Resort

Former geologist and rancher

First to scale the highest mountain
on all seven continents

Guiding Bassism: "If you don't stop,
you can't get stuck."

Bank One customer – 14 years

"It's wonderful to have a relationship with a financial institution where the banker sees you often. I mean more than just weekly – sometimes two or three times a week. It makes a difference. They really know me and my business, and they've gone out of their way to put themselves in my place, even when it means taking to the slopes. That's invaluable."


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Creating Value for Communities

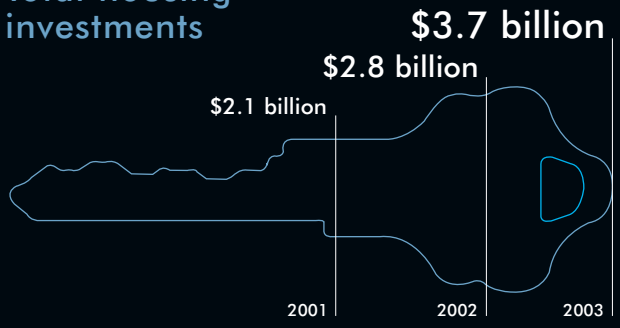
As a financial services company, we have a special connection to the communities we serve. Our philanthropic, community lending and employee volunteer programs are delivering much needed resources to the people in the communities in which we live and work. Whether it's providing financing to a construction company to build low-income housing units, sponsoring educational programs on basic banking or helping to teach entrepreneurial skills in an underserved community, we're developing and implementing effective solutions to support the development of communities and help people succeed in life.



With knowledge comes power

Recognizing that it's never too early to start developing good financial habits, we partnered with WTTW-TV, the PBS television station in Chicago, to create "Money Farm," a series of two-minute television vignettes for kids. Nominated for a local Emmy, the show features kids teaching kids how to save, spend, invest and donate money. "Money Farm" was just one of nearly 300 financial literacy grants we made during 2003.

Total housing investments



Banc One Capital Corporation's Housing Investments Group is a leading equity investor in affordable housing.

Revitalizing neighborhoods

We work to empower communities by providing the financial resources required to help build and revitalize neighborhoods. That's why in 2003 we made more than $895 million in Community Reinvestment Act-qualified community development loans and investments in the communities Bank One seeks to serve.

Turning dreams into reality

Our $12.5 billion five-year alliance with Fannie Mae will provide affordable mortgage financing for underserved people and communities, including minority families, women-headed households, immigrants and people with disabilities.



Helping one student at a time

In 2003 we donated more than $8.5 million to support programs that develop financial literacy skills in youth, help economically disadvantaged students prepare for or gain access to college, and promote partnerships among schools, parents and community agencies in low-income areas.

Employee involvement

In 2003 the Bank One Employee Partnership Grant program, which contributes up to $5,000 to nonprofit organizations to fund the expenses for teams of Bank One volunteers, provided more than $240,000 to qualified nonprofits around the country.

Supporting business and employment growth

With nearly $200 million in new SBA loans in 2003, we're a significant participant in the Small Business Administration's loan programs, which provide small and middle market businesses with flexible financing options to start, expand and grow their companies.

Committed to inclusion in all that we do

For us, inclusion means creating an environment where everyone – customers, suppliers and employees – are welcome regardless of race, gender or sexual orientation. That's why we reach out to targeted audience segments with specialized marketing and supplier diversity programs, support employee networking groups, and sponsor and celebrate diversity programs in our communities. In 2003 alone, we provided nearly $9.5 million to support programs that address cultural enrichment and issues related to diversity.

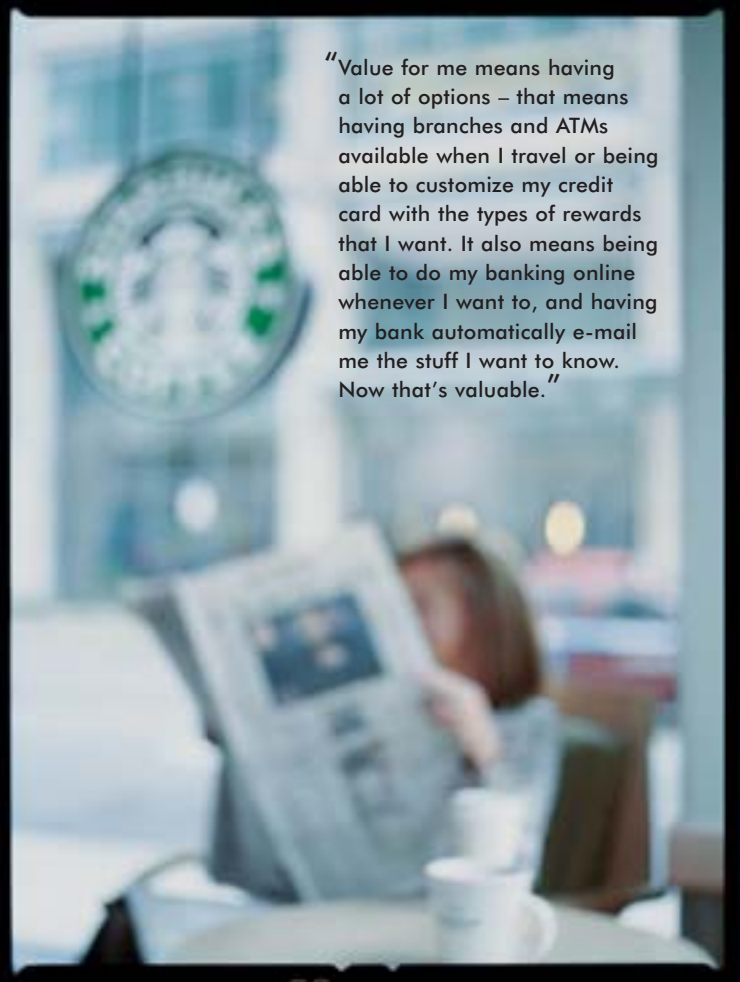


$42 million in donations

Backed by a grant from Bank One, Little Black Pearl is helping young people living in Chicago's inner city create and sell their artwork, such as "Summer in the Hood," (above) by 13-year-old Nelson Gordon. In 2003 Bank One made contributions to more than 3,000 nonprofit organizations, with nearly 75% of the grants targeted to help meet needs in low- and moderate-income communities.



Jason Lee
Healthcare consultant
Misses his native Southern California sunshine
Snowboarder
Card-carrying Starbucks enthusiast
Planning to retire at 50
Bank One customer – 3 years

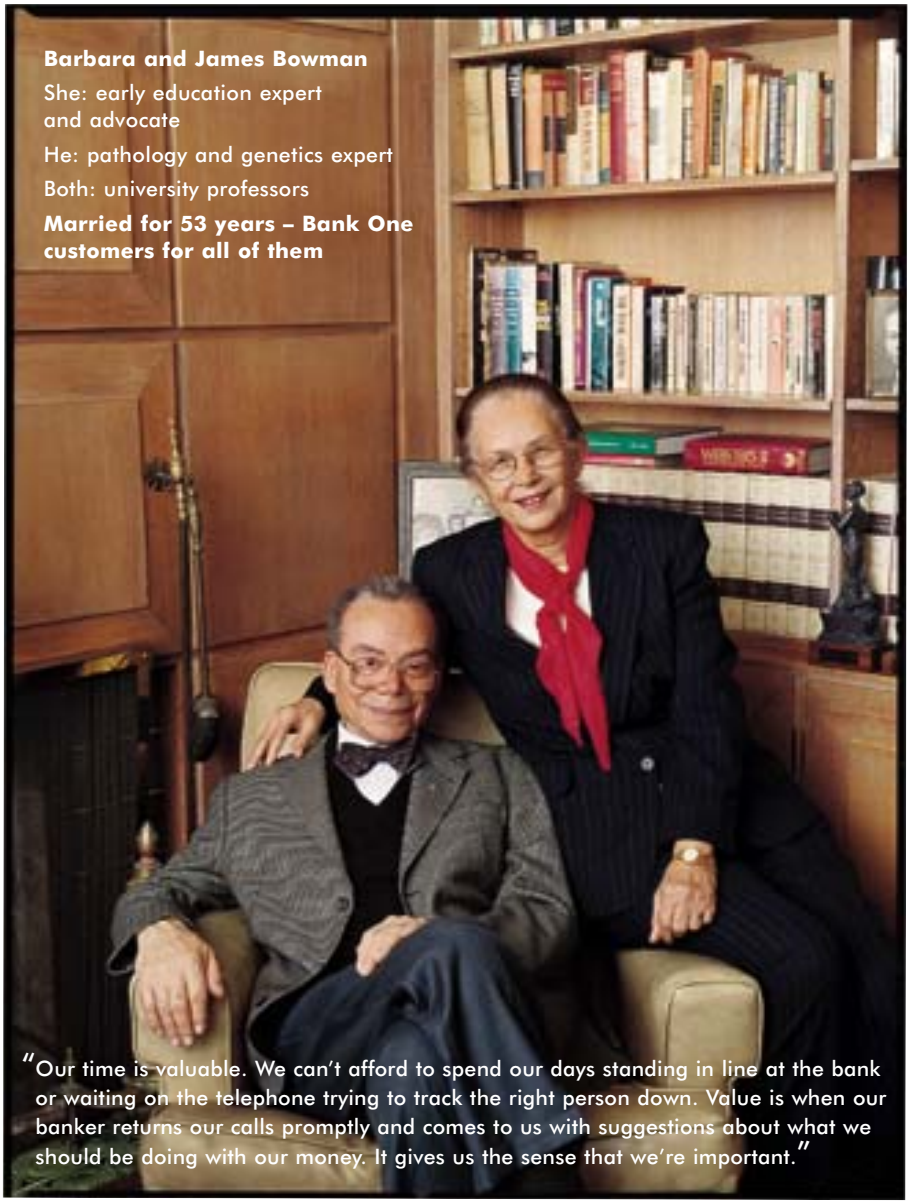


"Value for me means having a lot of options – that means having branches and ATMs available when I travel or being able to customize my credit card with the types of rewards that I want. It also means being able to do my banking online whenever I want to, and having my bank automatically e-mail me the stuff I want to know. Now that's valuable."









Barbara and James Bowman

She: early education expert and advocate

He: pathology and genetics expert

Both: university professors

Married for 53 years – Bank One customers for all of them

"Our time is valuable. We can't afford to spend our days standing in line at the bank or waiting on the telephone trying to track the right person down. Value is when our banker returns our calls promptly and comes to us with suggestions about what we should be doing with our money. It gives us the sense that we're important."

2003 Business Results at a Glance

With net income of $3.5 billion, 2003 was a record year for us. Our Retail bank achieved growth in accounts, deposits and loans. Credit quality in the Commercial bank continued to improve. Assets under management increased, and Card volumes and balances grew. Each of our businesses began to perform better, and we are well positioned for the future.

RETAIL

27%
increase from 2002 in home equity loans

$5.9
billion in retail investment sales

Financial Performance	2003	2002	2001
Revenue ($MM):	**$ 6,303**	$ 6,073	$ 5,837
Net income ($MM):	**1,558**	1,451	1,046
Return on equity:	**33%**	30%	22%
Core deposits ($MM):	**71,680**	66,495	61,610
Relationship bankers:	**3,600**	2,839	2,295
Checking accounts (000s):	**5,286**	4,852	4,844

Growing organically and improving the customer experience. Retail demonstrated solid results in 2003, showing growth in core deposits, investment sales and small business and home equity loans. Net checking account growth also showed strong improvement, increasing by 434,000. We continued to invest in marketing, enhance technology systems and improve our product offerings by providing free online bill payment and personalized e-mail alerts. We also made significant infrastructure improvements, opening 58 new banking centers, renovating more than 250 others, adding or upgrading more than 1,300 ATMs and extending hours in most of our locations. We increased our sales force by more than 1,000 people, while the overall headcount declined by nearly 1,700. We were also successful in several of our cross-sell initiatives, including credit card production in branches. We are confident that 2004 will bring continued growth for our franchise.

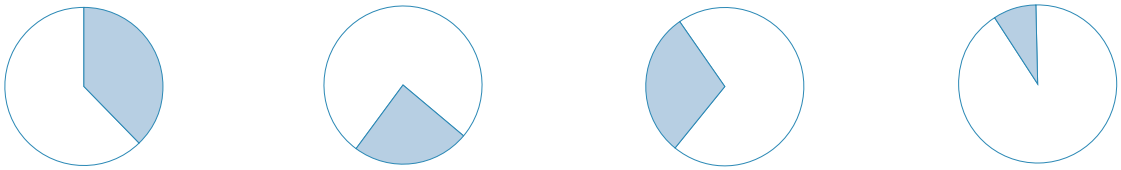
COMMERCIAL BANKING

$580
million increase in net income from 2002

60%
decrease in net charge-offs from 2002

Financial Performance	2003	2002	2001
Revenue ($MM):	**$ 4,014**	$ 4,111	$ 4,347
Net income ($MM):	**1,197**	617	700
Return on equity:	**16%**	8%	10%
Net charge-off ratio:	**0.70%**	1.51%	1.30%
Corporate banking loans ($MM):	**27,123**	31,559	36,643
Middle market loans ($MM):	**26,629**	30,336	35,935

Building relationships by enhancing product capabilities while managing risk. Commercial Banking made good progress in 2003. Excluding the impact of the loan loss reserve release, large corporate banking return on equity was 17.0%, a significant increase from 8.4% in 2002. In middle market, net charge-offs as a percentage of loans improved significantly from 1.08% in 2002 to 0.60%, and return on equity was up 3% from 2002 to 16%. Our capital markets group had another banner year, with double-digit revenue growth of 24% from 2002. Although growth in core cash management transactions was negatively impacted by the low-interest-rate environment and industry-wide decline in check volume, we launched significant new product capabilities in 2003 that capitalize on the trend from paper to electronic payments, technology and new industry regulations. In 2004 we will execute with quality and deliver new and enhanced products while maintaining our disciplined approach to credit and expenses.



Percentage of 2003 Total Revenue

RETAIL
Checking and Savings Accounts
Consumer Lending
Small Business Banking
Debit/ATM Cards
Investment Accounts
Insurance and Annuities
Online Banking and Bill Payment

COMMERCIAL BANKING
Global Cash Management
Commercial Lending
Loan Syndications
Commercial Cards
Asset-Backed Finance
Investment Grade Securities
Derivatives
Foreign Exchange
Global Trade

CARD SERVICES
Credit Cards
Affinity Cards
Rewards Cards
Smart Cards
Stored-Value Cards
Business Cards
Hybrid Cards
Merchant Processing

INVESTMENT MANAGEMENT GROUP
Portfolio Management
Mutual Funds
Retirement Services
Private Client Services
Financial Planning
Brokerage
Personal Trust
Alternative Asset Management
Insurance

CARD SERVICES

$12
billion increase in charge volume from 2002

4
of Bank One's credit cards were named to CardTrak's "top 10 new cards of 2003" list

Financial Performance	2003	2002	2001
Revenue ($MM):	**$ 4,938**	$ 4,864	$ 4,021
Net income ($MM):	**1,159**	1,166	907
Return on equity:	**18%**	18%	14%
Charge volume ($B):	**167.1**	155.4	140.4
Managed receivables ($MM):	**76,328**	73,996	68,155
Bank card volume ($B):	**155.0**	124.7	115.3

Satisfying customers while aligning for growth. At Card Services we did not achieve our growth targets in 2003, and we were disappointed that profitability was flat to the prior year. We opened 4.6 million net new accounts and saw outstandings grow to $76.3 billion – respectable numbers, but certainly not at levels matching our potential. We did have significant success in 2003, including new card launches from Avon, Disney, Starbucks and Volkswagen, as well as numerous renewed relationships with high-profile partners. Our Starbucks Card Duetto™ Visa, named by *Business Week* as one of the best products of 2003, outperformed all expectations. We also hit new highs for customer satisfaction, continued to drive down our operating costs, improved our segmenting capabilities and emerged as a leader in managing credit card fraud – reducing fraud losses by 18% in 2003. In 2004 we will continue to pursue growth by launching innovative and valuable card programs that appeal to millions of consumers.

INVESTMENT MANAGEMENT GROUP

22%
increase from 2002 in institutional assets under management

19%
increase from 2002 in mutual fund sales through external channels

Financial Performance	2003	2002	2001
Revenue ($MM):	**$1,480**	$1,298	$1,297
Net income ($MM):	**345**	324	293
Return on equity:	**30%**	34%	31%
Assets under management ($B):	**187**	162	143
Mutual fund assets under management ($B):	**105**	101	83
Insurance policies in-force (000s):	**2,306**	1,193	1,533

Tightening our focus on the core business. 2003 Investment Management Group highlights included a 15% increase in assets under management and strategic acquisitions of Zurich Life and Security Capital Research & Management Incorporated. With these acquisitions and the sale of our corporate trust business to JPMorgan Chase, we made considerable progress tightening our focus on the core business of asset management. We also took steps in 2003 to strengthen our equity management team, naming a new equity chief investment officer and hiring new equity leaders for our growth, value and international portfolio management teams. 2003 also brought about a challenge to our mutual fund business from concerns about market timing and industry practices. We are confident, however, that the actions we are taking in response to these concerns have strengthened the funds for our investors and the future of this business.

Planning Group

James Dimon
Chairman and
Chief Executive Officer

Austin A. Adams
Chief Information Officer

Linda Bammann
Chief Risk Management
Officer

James S. Boshart III
President and CEO
Commercial Banking

William I. Campbell
President and CEO
Bank One Card Services

Stephen Cerrone
Human Resources

David E. Donovan
President and CEO
Private Client Services

Joan Guggenheimer
Chief Legal Officer
and Secretary

David J. Kundert
President and CEO
Investment Management
Group

Jay Mandelbaum
Strategy and Planning

Heidi Miller
Chief Financial Officer

Tyree B. Miller
President and CEO
Global Treasury Services

Charles W. Scharf
President and CEO
Retail

Board of Directors

James Dimon [5]
Chairman and
Chief Executive Officer
Bank One Corporation

John H. Bryan [1, 4]
Retired Chairman
and Chief Executive Officer
Sara Lee Corporation
(CONSUMER PRODUCTS)

Stephen B. Burke [2]
President
Comcast Cable
Communications, Inc.
(CABLE COMMUNICATIONS)

James S. Crown [2, 3]
General Partner
Henry Crown and Company
(Not Incorporated)
(DIVERSIFIED INVESTMENTS)

Dr. Maureen A. Fay, O.P. [2, 3, 5]
President
University of Detroit Mercy
(EDUCATION)

John R. Hall [2, 4, 5]
Retired Chairman
and Chief Executive Officer
Ashland Inc.
(CHEMICAL REFINER, MANUFACTURER AND DISTRIBUTOR)

Laban P. Jackson, Jr. [1, 5]
Chairman and
Chief Executive Officer
Clear Creek Properties, Inc.
(REAL ESTATE DEVELOPMENT)

John W. Kessler [2]
Owner
John W. Kessler Company
(REAL ESTATE DEVELOPMENT)

Robert I. Lipp
Chairman and
Chief Executive Officer
Travelers Property Casualty
Corp.
(PROPERTY AND CASUALTY
INSURANCE)

Richard A. Manoogian [2]
Chairman and
Chief Executive Officer
Masco Corporation
(DIVERSIFIED MANUFACTURER)

David C. Novak [1, 4]
Chairman and
Chief Executive Officer
Yum! Brands, Inc.
(RESTAURANT OPERATIONS)

John W. Rogers, Jr. [1, 3]
Chairman and
Chief Executive Officer
Ariel Capital Management, LLC
(INSTITUTIONAL MONEY
MANAGEMENT)

Frederick P. Stratton, Jr. [1, 3]
Chairman Emeritus
Briggs & Stratton Corporation
(ENGINE MANUFACTURER)

[1] *Member of the Audit and Risk Management Committee*

[2] *Member of the Compensation and Organization Committee*

[3] *Member of the Public Responsibility Committee*

[4] *Member of the Corporate Governance and Nominating Committee*

[5] *Member of the Executive Committee*

ANNUAL REPORT 2004







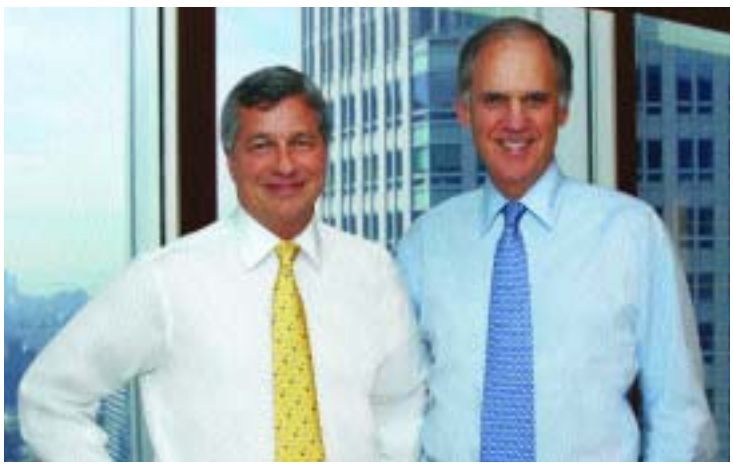
JPMorganChase

Financial highlights

As of or for the year ended December 31, (in millions, except per share, ratio and headcount data)	2004	2003
Reported basis[a]		
Total net revenue	**$ 43,097**	$ 33,384
Net income	**4,466**	6,719
Net income per share:		
Basic	**1.59**	3.32
Diluted	**1.55**	3.24
Return on common equity	**6%**	16%
Headcount	**160,968**	96,367
Pro forma combined-operating basis		
Total net revenue	**$ 57,280**	$ 55,697
Earnings	**10,289**	9,330
Diluted earnings per share	**2.85**	2.61
Return on common equity	**10%**	9%

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America. 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

The financial information provided on pages 1-15 is presented on a pro forma combined-operating basis. The unaudited pro forma combined historical results represent how the financial information of JPMorgan Chase & Co. and Bank One Corporation may have appeared on a combined basis had the two companies been merged as of the earliest date indicated. Additional information, including reconciliation of the pro forma numbers to GAAP, can be found on Form 8-K/A furnished to the Securities and Exchange Commission on January 19, 2005. For a description of operating basis, including management's reasons for its use of such measures, see page 25 of this Annual Report.



Right: Bill Harrison
Chairman and
Chief Executive Officer

Left: Jamie Dimon
President and
Chief Operating Officer

Dear fellow shareholder,

On January 14, 2004, we shared with you our plan to unite Bank One and JPMorgan Chase with the goal of creating the best financial services company in the world. Throughout the year, we have worked hard to execute one of the largest mergers in financial services history. As expected, the process has been challenging and rewarding. On a *pro forma combined* basis for the full year, net operating income was $10.3 billion with a 10% return on equity (ROE) or a 17% ROE less goodwill. While these results are not yet what we want them to be, we believe the progress we have made during the past year will ultimately be reflected in our performance.

In this, our first letter to you as a combined company, we will review our 2004 merger milestones, our business performance and our priorities going forward. After reading this letter, we hope you will believe, as we do, that we are doing all of the right things to win in the long run. Today, we are more confident than ever in our ability to build a great company.

I. 2004 MERGER MILESTONES

We have made substantial progress in merging our businesses. Since combining the holding companies on July 1, 2004, we have:

- Achieved merger-related cost saves of $400 million and decreased headcount by 6,500, or 4%, thereby staying on target to achieve a total expense reduction of $3 billion by 2007.
- Merged the lead banks, broker/dealers and credit card banks.
- Made all the key technology decisions, including the selection of our national deposit platform, general ledger, customer identification system and credit card processing system.
- Created a disciplined operating structure consisting of common reporting, risk management, talent management, monthly business reviews and performance-based compensation.
- Identified our top 1,000 leaders and brought them together with our senior management team to learn about the new firm's potential and plan for its future.

II. REVIEW OF 2004 BUSINESS PERFORMANCE

Most of our businesses performed adequately in 2004. However, the full advantages that will come from an increased number of distribution channels, coordinated branding and marketing efforts, and the efficiencies of scale are yet to be realized. For our customers, the added value of broader, more complete and higher-quality products and services will be substantial.

Below is a brief review by line of business. For more detail, please refer to management's discussion and analysis later in this report. To make meaningful comparisons in this letter, we will be discussing our results on a *pro forma combined* basis.

The Investment Bank reported net operating earnings of $3.7 billion with an ROE of 18%. A significant highlight for the year was the performance of our underwriting and advisory businesses. Already the leader in many league categories, including syndicated loans and interest rate and credit derivatives, we moved from 16th place to 4th in initial public offerings and ranked 2nd in global announced M&A, having advised on seven of the 10 largest global M&A deals. Our fixed income business, however, experienced a 13% drop in revenues. Overall, we should have done considerably better in an economic cycle that produced healthier credit results than anticipated. Over time, we are aiming for a 20% ROE through economic cycles. That means striving for a 30% return in the good times and, we hope, no less than a 10% return in the bad. In 2005, we will seek to maintain our global leadership positions by investing in infrastructure and business growth.

Retail Financial Services reported operating earnings of $3.3 billion with an ROE of 25%. These earnings reflect a 33% increase in consumer and small business banking that helped offset weak performance in home finance. In home finance, we were challenged by an industry downturn in mortgage originations driven largely by a dramatic drop-off of refinancing activity due to rising interest rates. Now that the era of historically low interest rates appears to be over, we are focused on running this business far more efficiently. Goals for 2005 include transitioning the Bank One branded business to the Chase brand, investing in our distribution network and creating a culture focused on productivity and sales.

Card Services reported operating earnings of $1.7 billion and an ROE of 14%. Card Services made outstanding progress toward meeting its merger targets, reducing headcount by 1,400, or 7%, and is on track to meet its target of $650 million in expense saves. In addition to completing the conversion of the heritage Chase card portfolio to our new processing platform in 2005, our drive toward market leadership will come from organic growth, economies of scale, superior customer service and an increased focus on innovation.

Commercial Banking reported operating earnings of $992 million and an ROE of 29%. The merger between Bank One and JPMorgan Chase presents a tremendous opportunity for us to meet the growing treasury, asset and wealth management, and investment banking needs of our more than 25,000 middle market, corporate banking and real estate clients. In 2005, we will take significant steps toward realizing that opportunity.

Asset & Wealth Management reported operating earnings of $879 million and an ROE of 37%. Improved equity markets and an emphasis on operating efficiencies helped us grow ROE from 25% in 2003. In 2005, we will focus on improving investment performance and add new bankers and officers to gather additional assets and grow our base of ultra high net worth and high net worth clients.

Treasury & Securities Services reported operating earnings of $437 million and an ROE of 23%. These earnings understate the business' importance, however, because much of our treasury services revenue is included in other business segment results. In 2004, Treasury & Securities Services delivered double-digit revenue growth while also completing the first phase of integrating international operations in 36 countries. In 2005, our goal will be to merge technology systems and leverage the broader set of product capabilities achieved through the merger.

III. OUR PRIORITIES

DEVELOP AND MAINTAIN STRONG FINANCIAL DISCIPLINE. Financial discipline is the bedrock upon which great companies are built. Great companies prevail through both good and bad economic times and consistently deliver solid performance relative to competitors. Our goal is to become one of those companies. Financial discipline requires:

Superior financial reporting and management information systems. In 2004, we created a new internal and external financial reporting architecture with high-quality and transparent accounting policies that cover capital allocation, revenue sharing, expense allocation and funds-transfer pricing. We then worked with our line of business leaders and their respective chief financial officers to develop comprehensive financial and operating metrics to use in building their businesses. Today, thousands of profit-and-loss statements – including one for each of our 2,500 branches, for example – help us allocate capital appropriately and drive performance. We strive to use one set of numbers inside and outside the company to bring consistency and clarity to how we view and measure performance. While we are satisfied with the progress we have made to date, the real benefit will come over time as our management teams increasingly use these tools.

A fortress balance sheet. A fortress balance sheet requires a thorough understanding and management of our assets and liabilities; the use of conservative, appropriate accounting; tight financial controls; strong loan loss reserves; and a commitment to solid credit ratings. We want a balance sheet of unquestioned strength.

With a fortress balance sheet, we can withstand – perhaps even benefit from – difficult times and be deliberate in our capital allocation decisions. Last year, we paid dividends of $1.36 per share and spent $738 million to repurchase stock while making key investments in our business and ended the year with a strong Tier 1 capital ratio of 8.7%.

Accountability for performance. Financial reports alone won't suffice. They are simply tools. Financial discipline also requires those in charge to have a deep understanding of their businesses and of what drives profitability and growth. Each month, the management team from each line of business meets with us to discuss financial performance, revenue growth, risk management, competitive threats, productivity, innovation, key initiatives and talent management.

In the beginning, these meetings were somewhat painful for most of us. Too often, they ended with more questions than answers. Many managers were asked to dive more deeply into the numbers and be more tough-minded about the reasons why certain initiatives were not on target. Although they aren't yet where they should be, our meetings are becoming more open, candid and focused.

In addition to placing more accountability for performance within each line of business, each business needs to increasingly give its field managers the clear and appropriate authority they need to be more accountable and responsive to customers and local market conditions.

Identifying, pricing and managing risk. All of our businesses must be properly paid for assuming risk. All forms of risk – interest, credit, market, liquidity, operational, technology and business – must be categorized, valued, measured and dynamically managed in the constantly changing economic and business environment. While we continue to set risk policy and manage overall risk centrally, we have established line of business risk committees that are accountable for risk performance within the business. By working directly with the businesses, we are creating an informed risk culture that responds more quickly to business and economic changes and strives to avoid surprises.

CUT WASTE AND IMPROVE EFFICIENCY THROUGH OUTSTANDING SYSTEMS AND OPERATIONS. A financial services company cannot win unless it is a low-cost provider. This requires eliminating waste and creating the most effective systems and most efficient operations in the business. We are well on our way. For example:

- We have completed the credit card industry's largest-ever systems conversion, moving 60% of our Visa and MasterCard cardmember base to a faster, more flexible and cost-effective processing system; the remaining 40% will be converted in 2005, at which point all 94 million credit cards will be serviced through a single technology platform.
- Already the leader in U.S. dollar funds transfers, we will finish our clearing systems integration in the second quarter of 2005. When we are done, our team will have invested 59,000 development hours on the project designed to ensure that the 285,000 transactions that move an average of $1.8 trillion every day are executed flawlessly.
- Within the Investment Bank, we are creating a global technology platform for institutional credit risk management as well as credit trading and derivatives processing.
- We will move the Texas banking franchise onto our common deposit platform in 2005. In 2006, we will complete our bank franchise integration with the conversion of New York, New Jersey and Connecticut, providing all customers with full access to banking services across state lines.
- We are consolidating operations centers, refreshing the networks of our 11 major processing centers and 22 large business hubs, expanding strategic data centers, significantly reducing the number of required software applications and centralizing our global help desks to provide consistent infrastructure.
- We believe that to assume more control of our destiny we must assume more control of our technology. On January 1, 2005, we welcomed 4,000 previously outsourced technologists to the firm. Together, we will strive to build the best, most efficient systems and operations in our industry.

By year-end 2006, we hope to have completed nearly 500 conversions and reduced our total number of systems by approximately 35%. It is an undertaking that will require more than 8.5 million "people hours" and at least 1.5 million hours of systems testing. When the process is complete, most of our systems will be on single and upgraded platforms. This will give us a distinct edge in providing our customers with products and services that are competitively superior in quality, innovation and price. During the next two years, our systems conversions will be one of our most difficult challenges, but we will do whatever it takes to get them right.

INVEST FOR GROWTH. Business cannot grow simply by improving efficiency. Growth requires a laser-like focus on execution, a consistent management of risk, a competitive product set and outstanding customer service. We are not interested in growth simply for the sake of growth. We are

looking for "good growth"; i.e., good products that meet customer needs and can be profitable over a sustained period of time.

Although we currently hold leadership positions in virtually every business we are in, there is room to grow in all of them. We intend to build these businesses by investing in organic growth and filling strategic gaps through acquisitions and partnerships.

Investing in organic growth. We will not grow short-term revenue at the expense of long-term success. For us, smart growth means doing a lot of little things right. Some key examples for 2005 include:

- Extending our reach in consumer banking by adding more than 1,000 sales people, 150 branches, and 1,000 ATMs to our 17-state retail bank network;
- Aggressively funding new business development in the Investment Bank, with a special focus on the energy sector and mortgage-backed securities business, as well as investing in fixed income and foreign exchange prime brokerage;
- Intensifying our marketing of Card Services by bringing the Chase brand to a broader customer base; maximizing our partnerships with many of the nation's best-known brands; innovating continuously; and expanding product breadth;
- Increasing our Private Bank's ultra high net worth client base by entering eight new markets globally and building our Private Client Services' client base by expanding our presence in the large and rapidly growing high net worth market in the northeast United States.

Filling the gaps through acquisitions and partnerships. In addition to fueling organic growth, we will pursue strategic acquisitions and partnerships to fill gaps in capabilities, geographies, product offerings and services. Although we are not prepared to make any large moves at this time, we will not pass up smaller acquisitions of strategic value. For example, we entered into two important partnerships and made one acquisition:

- In February 2005, JPMorgan and Cazenove Group formed JPMorgan Cazenove, a joint venture that will be one of the United Kingdom's foremost investment banks. This venture is a major step toward strengthening our global position.
- In December 2004, we formed a strategic partnership with and acquired a majority interest in Highbridge Capital Management, a hedge fund with $7 billion of assets under management and an extraordinary consistency of returns. Highbridge's talent, longevity and track record will be a tremendous addition to our investment offerings for institutional and high net worth clients.
- In January 2004, JPMorgan Chase acquired Electronic Financial Services, a leading provider of government-issued benefits payments and pre paid stored value cards used by state and federal government agencies and private institutions. This acquisition further advanced our leadership position in wholesale electronic payment services and immediately positioned us as a leader in the public sector segment.

BUILD GREAT BRANDS. Shortly after the merger was announced, we began formulating our brand strategy. At first, we thought we simply needed to decide whether to market our consumer products under the name of Bank One or Chase. Our research, however, produced intriguing results. Both Chase and Bank One tested well, but the research revealed that each has very different strengths. The Chase brand is associated with "a tradition of trust" that could extend to a broader array of products and services, such as insurance, retirement products and investments. The Bank One brand, however, is viewed as having "momentum."

Beginning in March 2005, you will see the emergence of a new Chase brand that combines the best of both: the trustworthiness of Chase with the energy of Bank One. Chase will be used to market products and services offered by Commercial Banking, Card Services and Retail Financial Services. The re-energized brand will be introduced with a nationwide marketing campaign focusing initially on the Chase family of credit cards.

By the end of 2006, our consumer business will be spending more than $1 billion annually in support of one brand: Chase. We intend to make Chase the best brand in the consumer financial services industry. We are on track to have all of our more than 2,500 bank branches operating under the Chase brand by the end of the third quarter 2006.

Our research also reaffirmed the power of the JPMorgan brand, which is associated with a long history of unsurpassed client service, high performance standards, integrity and commitment to relationships. The Investment Bank, our international services and Asset & Wealth Management businesses – which include investment management, the Private Bank and Private Client Services – will now be marketed solely under the JPMorgan brand.

CREATE A WINNING CULTURE. Over the course of our careers, we have completed many major mergers. They are always difficult. Mergers are about change, and change is hard. Our past experiences, however, have made us appreciate the enormous progress that the people of Bank One and JPMorgan Chase have achieved this year.

Since we announced the merger, a lot has been written about how the cultures of Bank One and JPMorgan Chase would interact and which one would survive. Today, a new culture is emerging that reflects the best of both firms. Every day, we are getting better, and the effects are taking hold. We are becoming more candid and open in the way we communicate and more disciplined in the way we run the firm. People are working together to tackle issues, and managers are leading their teams with a deeper understanding of the underlying dynamics of their businesses. There is greater buy-in for the vision, more passion about growing the business and a heightened sense of urgency.

A winning culture requires great leaders. In 2004, we identified our top 1,000 leaders from throughout the businesses and around the world. But that is just the beginning. In 2005, we will conduct in-depth talent reviews in all lines of business to identify our high-potential individuals and create development plans for all of them. Our LeadershipMorganChase program provides a unique forum for our senior managers to come together to learn more about our vision and plan for the firm and to develop the skills they need to become great managers and leaders. Our goal is to provide our people with everything they need to play an instrumental role in the future growth and success of this firm.

We are also working to create a more inclusive work environment by requiring our managers to be accountable for building diverse teams. As part of our effort to improve diversity at the executive level, we are now devoting much more attention to career planning and development for high-potential employees from under-represented groups.

BUILD A GREAT COMPANY. Our firm has been built on a reputation of trust that spans more than two centuries and represents the coming together of more than 300 companies. Today, we stand on the shoulders of those who came before us. We honor this legacy by committing ourselves to the integrity and customer service that have long distinguished our firm. We intend to earn this reputation every day by doing the right thing, not necessarily the most expedient thing.

Our Board of Directors shares this commitment and is helping us accomplish it. We expect a lot from our Board, and they expect a lot from us. We appreciate their support and value their guidance.

We also would like to express special appreciation to the Directors who have retired since the merger was announced: Riley P. Bechtel; Frank A. Bennack, Jr.; John H. Bryan; M. Anthony Burns; Dr. Maureen A. Fay; John R. Hall; Helene L. Kaplan; John W. Rogers, Jr.; and Frederick P. Stratton, Jr.

A great company gives its employees the opportunity to share in the success they have helped create. Two-thirds of our employees own our stock. They think like owners because they are. To help ensure that our senior management team always acts in the long-term best interests of the firm, we are required to hold 75% of the stock awarded.

A great company gives back to the community it serves. Our predecessor firms have long and distinguished traditions of active community involvement. Lending to build and rebuild communities, philanthropic giving and employee volunteerism are traditions that are very much alive today at JPMorgan Chase. In 2004, more than 18,000 JPMorgan Chase employees around the world dedicated 145,000 hours to 1,900 volunteer community service projects.

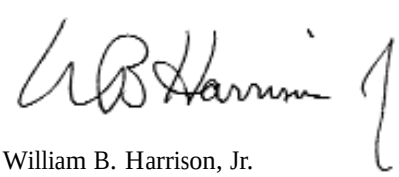
In 2004, we made an $800 billion, 10-year public commitment to provide loans and investments that will benefit the credit and capital needs of minority and lower-income households and communities. In 2004, we achieved the first $68 billion of that commitment.

Additionally, we contributed more than $140 million to thousands of not-for-profit organizations around the world. To help ensure we are meeting the specific needs of these communities, most of our philanthropic decisions are made locally. One of these community projects – our ON_DEC program in Brooklyn – received the 2004 "Ron Brown Award for Corporate Leadership," the only presidential award honoring companies for achievement in employee and community relations.

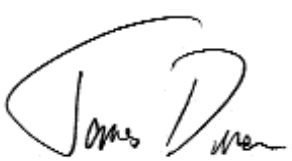
IN CLOSING, the past few years were transformative for both Bank One and JPMorgan Chase. In facing tough challenges we each have emerged better, stronger and healthier. Together, we are now equipped and determined to become the best financial institution in the world.

We asked a great deal of our employees during the past year, and they delivered. But we still have an enormous amount of work ahead. The coming year will be a crucial one for us. The potential is tremendous. We promise to do everything in our power to seize the opportunity and deliver on it for our customers, for our shareholders, for our employees and for all of the communities we serve throughout the United States and around the world.

Sincerely,



William B. Harrison, Jr.
Chairman and Chief Executive Officer



James Dimon
President and Chief Operating Officer

March 1, 2005

Investment Bank



Investment Bank

(In millions, except ratios)	Pro forma* 2004	2003
Total net revenue	$13,506	$14,254
Operating earnings	3,654	3,929
Return on common equity	18%	17%

Our businesses

We are one of the world's leading investment banks with deep client relationships and product capabilities, serving 8,000 clients in more than 100 countries. Our clients are corporations, financial institutions, governments and institutional investors worldwide. Our broad client franchise is one of many features that differentiates us from our investment banking peers.

We provide a complete platform to our clients, including advising on corporate strategy and structure, equity and debt capital raising, sophisticated risk management, research, and market-making in cash securities and derivative instruments around the world. We also participate in proprietary investing and trading.

2004 accomplishments

- Grew Investment banking fees by 12%.
- Increased share of initial public offerings in the global markets by U.S. issuers to 9% from 1% – up to #4 from #16 in 2003.
- Pioneered a new hybrid offering: the credit equity target redemption note structure is the first product to integrate interest rate, credit and equity derivatives.
- Advised on seven of the 10 largest deals in announced global M&A and grew share to 26%, up from 16% in 2003.
- Developed significant economies of scale in derivatives technology and analytics, thereby achieving low-cost producer status.
- Strengthened our position in Europe by creating JPMorgan Cazenove, a joint venture that will provide investment banking services to clients in the United Kingdom and Ireland.

2005 execution focus

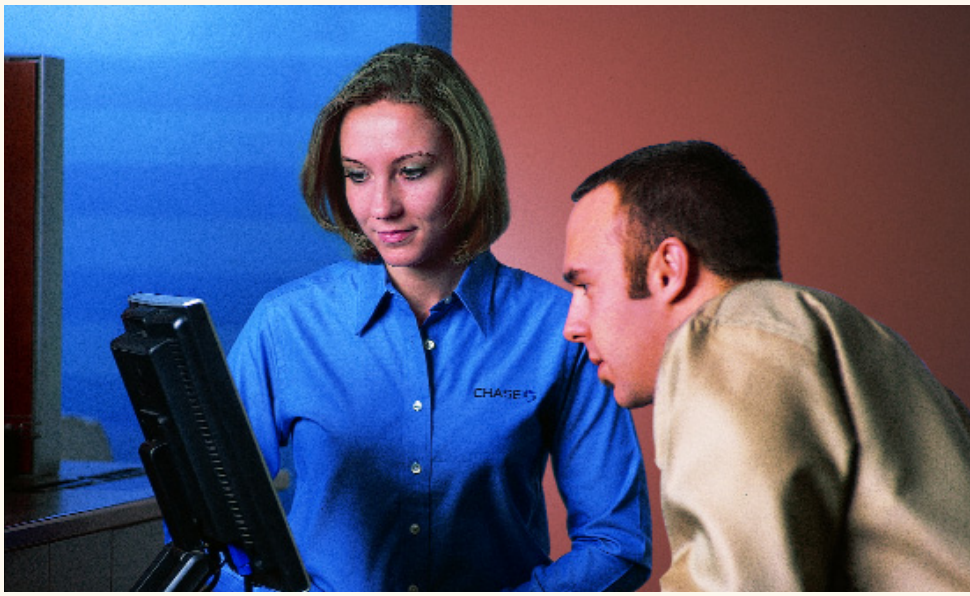
- Focus on the client; exceed expectations with each interaction.
- Deliver our full product base to clients; leverage partnerships with Commercial Banking's Middle Market segment, Treasury & Securities Services and Chase Home Finance.
- Focus on generating higher returns relative to our risk taking.
- Invest in growth businesses, including Energy and Commodities, Fixed Income and Foreign Exchange Prime Brokerage, Equities and Mortgage-Backed Securities.
- Maintain a talented, entrepreneurial and inclusive workforce.
- Streamline decision making, be nimble and efficient, and concentrate on fostering efficient processes and procedures.

* All information is on a pro forma combined-operating basis. See inside front cover for details.

Investment Bank highlights

- Structured Products Award for Innovation of the Year – JPMorgan credit equity target redemption note (*Risk* magazine, January 2005)
- #1 Interest Rate Options, Interest Rate Swaps, Equity Derivatives and Credit Derivatives (*Risk* End User Rankings, May 2004)
- #1 U.S. M&A (announced); #1 Global and U.S. Syndicated Loans; #1 Asia Pacific Equity Convertibles; #2 Global M&A (announced); #2 Europe Middle East Africa M&A (number of deals); #2 Europe Middle East Africa Equity Convertibles; #2 U.S. Investment Grade Bonds; and #3 Global Debt, Equity and Equity-Related Securities

Retail Financial Services



Retail Financial Services

(In millions, except ratios)	Pro forma* 2004	2003
Total net revenue	$15,076	$14,770
Operating earnings	3,279	2,633
Return on common equity	25%	21%

Our businesses

Retail Financial Services helps meet the financial needs of consumers and small businesses through more than 2,500 bank branches and 225 mortgage offices as well as through relationships with over 15,000 auto dealerships, 2,500 schools and universities, and 2,100 insurance agencies.

More than 5,000 personal bankers, 2,500 mortgage loan officers, 1,300 investment representatives and 1,000 small business bankers work with customers to provide checking and savings accounts, mortgage and home equity loans, small business loans, credit cards, investments and insurance.

We are the fourth-largest mortgage originator, the second-largest home equity originator, the largest bank originator of automobile loans and a top provider of loans for college students.

2004 accomplishments

- Increased consumer and small business banking relationships, resulting in a 9% increase in average core deposits and a 7% increase in checking accounts.
- Rolled out profit-and-loss statements as well as a consistent sales incentive program throughout the branch network.
- Implemented an integrated Small Business Banking model, aligning products, services and incentives with the branch network.
- Originated $146 billion of mortgages and grew mortgage servicing portfolio by 9% to $562.0 billion.
- Grew auto and education loans by 7% to $53.9 billion.
- Increased investment sales volume by 7% to $10.9 billion.

2005 execution focus

- Add more than 150 branches, 1,000 employees in new branches, 1,000 salespeople throughout our branch network and 1,000 ATMs to serve customers better.
- Continue to open new checking accounts and to build on these and existing relationships to include sales of investments, credit cards, and home equity and small business loans.
- Integrate mortgage lenders into bank branches to serve 9 million branch customers.
- Achieve incremental merger savings, freeing capital for investment in new branches, branch and ATM refurbishment, salesforce, marketing and technology.
- Begin to convert Bank One branches to Chase brand on a state-by-state basis, heightening local market visibility, generating new customers and expanding current relationships.

* All information is on a pro forma combined-operating basis. See inside front cover for details.

Retail Financial Services highlights

- Added 106 bank branches, bringing the total to 2,508 in one of the largest U.S. branch networks and added 325 ATMs, bringing the total to 6,650 in the second-largest U.S. ATM network
- Grew checking accounts by 563,000, bringing the total to 8.2 million accounts
- Increased home equity originations by 23% to $52 billion

Card Services



Card Services

(In millions, except ratios)	Pro forma* 2004	2003
Total net revenue	$15,001	$13,968
Operating earnings	1,681	1,368
Return on common equity	14%	12%

Our businesses

With 94 million cards in circulation and more than $135 billion in managed loans, Chase Card Services is the largest issuer of general-purpose credit cards in the United States and the largest merchant acquirer in the country. Our customers used our cards for over $282 billion worth of charge volume in 2004.

Chase offers a wide variety of cards to satisfy the individual needs of consumers and small businesses, including cards issued for AARP, Amazon.com, Continental Airlines, Marriott, Southwest Airlines, Starbucks, United Airlines, Universal Studios, Walt Disney Company and a range of other well-known brands and organizations.

2004 accomplishments

- Made quick merger integration decisions and took action by selecting the best people, practices and processes.
- Acquired 17.8 million net new Visa, MasterCard and private label accounts.
- Completed the industry's largest-ever systems conversion, moving millions of accounts in the heritage Bank One portfolio to a more flexible and cost-effective processing system.
- Increased merchant processing volume to $489 billion.
- Acquired the Circuit City portfolio, giving us a platform that will allow us to issue private label cards.

2005 execution focus

- Drive profitable growth in new customer acquisitions by leveraging best-in-class processes as well as our substantial credit card partnerships and by investing in new capabilities.
- Grow existing customer base profitably by keeping and activating more customers and increasing sales volume and fee-based revenue programs.
- Drive down operating cost per active account to industry-leading levels.
- Invest in marketing and technology initiatives designed to position the Chase brand for long-term growth.
- Complete card conversion by moving heritage Chase portfolio to new processing system.

* All information is on a pro forma combined-operating basis. See inside front cover for details.

Card Services highlights

- 94 million credit cards issued; over $282 billion in 2004 charge volume
- Largest general-purpose credit card issuer and merchant acquirer in the U.S.
- More than 850 credit card partnerships with well-known brands

Commercial Banking



Commercial Banking

(In millions, except ratios)	Pro forma* 2004	2003
Total net revenue	$3,417	$3,397
Operating earnings	992	832
Return on common equity	29%	20%

Our businesses

Commercial Banking serves more than 25,000 clients, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenues generally ranging from $10 million to $2 billion.

A local market presence and a strong customer service model coupled with a focus on risk management provide a solid infrastructure for Commercial Banking to offer the complete product set of JPMorgan Chase, including lending, treasury services, investment banking and investment management.

Commercial Banking's clients benefit greatly from our extensive retail banking branch network and often use the capabilities of JPMorgan Chase exclusively to meet their financial services needs.

2004 accomplishments

- Engaged more than 4,500 employees across 22 states to communicate a consistent and timely message to clients regarding the merger and benefits to them.
- Delivered $1 billion of earnings and a 29% ROE through disciplined financial management.
- Grew deposits 16% to $66 billion.
- Launched a client coverage initiative to more effectively provide financial solutions to the companies in our markets.
- Began the integration of systems and products to enhance our ability to offer a full range of financial services.

2005 execution focus

- Demonstrate commitment to our clients through all stages of their growth with our industry expertise and extensive geographic reach.
- Provide consistent coverage to our clients offering them the best in local service.
- Accelerate business development through focused product and client coverage in the markets we serve.
- Continue integrating the systems and services to deliver the full range of capabilities more efficiently to our customers.

* All information is on a pro forma combined-operating basis. See inside front cover for details.

Commercial Banking highlights

- Businesses include Middle Market Banking, Corporate Banking, Commercial Real Estate Banking, Business Credit and Equipment Leasing
- Commercial Banking operates in 10 of the top 15 major metropolitan areas in the U.S.
- Leading commercial bank in the U.S., with $50 billion in average loans and $66 billion in average deposits

Treasury & Securities Services



Treasury & Securities Services

(In millions, except ratios)	Pro forma* 2004	2003
Total net revenue	$5,400	$4,772
Operating earnings	437	454
Return on common equity	23%	24%

Our businesses

Treasury & Securities Services is a global leader in providing transaction, investment and information services to support the needs of chief financial officers, treasurers, issuers and institutional investors worldwide through its three businesses – Treasury Services, Investor Services and Institutional Trust Services.

Treasury Services is a leading provider of cash management, trade and treasury services, processing an average of $1.8 trillion in U.S. dollar funds transfers daily. Investor Services is one of the top three custodians in the world, with $9.1 trillion in total assets under custody. Institutional Trust Services is the world's largest debt trustee and American Depositary Receipt bank (based on market capitalization under management), servicing $6.7 trillion in debt.

2004 accomplishments

- Delivered double-digit revenue growth.
- Created the world's largest cash management provider as a result of the merger.
- Executed the first phase of the merger successfully, which included integrating international operations in 36 countries.
- Increased assets under custody by 20%.
- Grew volume of Automated Clearing House (ACH) originations by 30%.
- Increased corporate trust securities under administration by 6%.
- Acquired two companies that expanded product depth and geographic reach: Tranaut, a recognized best-in-class hedge fund administrator; and TASC, the largest third-party asset administration service provider in South Africa.

2005 execution focus

- Leverage broad product capabilities from the merger to provide innovative solutions to clients.
- Expand in high-potential market segments and regions.
- Cross sell with business partners across JPMorgan Chase.
- Achieve market differentiation by delivering competitively superior customer service and product innovation.
- Continue to focus on cost efficiencies to fund investments in the business.
- Make strategic acquisitions to increase scale in traditional product areas, extend product lines and expand geographic reach.

* All information is on a pro forma combined-operating basis. See inside front cover for details.

Treasury & Securities Services highlights

- #1 U.S. Dollar Treasury Clearing and Commercial Payments; #1 ACH Originations, CHIPS and Fedwire
- #2 Global Custody; "Best Global Custodian Overall" *(Global Investor)*
- #1 Trustee U.S. Corporate Debt; #1 Global Trustee Collateralized Debt Obligations

Asset & Wealth Management



Asset & Wealth Management

(In millions, except ratios)	Pro forma* 2004	2003
Total net revenue	**$4,901**	$4,275
Operating earnings	**879**	629
Return on common equity	**37%**	25%

Our businesses

Asset & Wealth Management provides investment and wealth management services to investors and their advisors. With combined assets under supervision in excess of $1 trillion, we are one of the largest asset and wealth managers in the world. We manage our clients' assets through four key business segments: Institutional, Retail, Private Bank and Private Client Services.

JPMorgan Asset Management provides investment management for our institutional and retail clients through a broad range of separate accounts and funds. Our retail clients, who seek retirement and brokerage services, also are serviced through JPMorgan Retirement Plan Services and BrownCo. Our ultra high net worth and high net worth clients receive integrated wealth management services from JPMorgan Private Bank and JPMorgan Private Client Services, respectively.

2004 accomplishments

- Achieved strong earnings growth driven by asset inflows and improved markets globally.
- Surpassed $100 billion in European retail client assets, including mandates for diverse funds, sub-advisory and liquidity strategies.
- Delivered strong, consistent performance across a broad range of investment strategies. More than 90% of JPMorgan Asset Management's U.S. large-cap research-driven equity strategies and 95% of our broad market fixed income strategies outperformed industry benchmarks for 2004 and 2003.
- Produced record asset inflows for JPMorgan Private Bank.
- Formed a strategic partnership with and acquired a majority interest in Highbridge Capital Management, a $7 billion hedge fund firm with extraordinary consistency of returns and experienced business leadership.

2005 execution focus

- Meet client demand for absolute return by expanding our investment capabilities in alternative investment products.
- Continue to integrate our intellectual capital with the global resources required to deliver strong, consistent investment performance across our broad range of investment strategies.
- Continue to expand the geographic footprint of our wealth management businesses by investing in eight new Private Banking markets globally and building the Private Client Services markets in the northeastern U.S.
- Build our Retail franchise by expanding our third-party distribution, 401(k) and brokerage platforms.

* All information is on a pro forma combined-operating basis. See inside front cover for details.

Asset & Wealth Management highlights

- $1 trillion in assets under supervision; over $40 billion in alternative assets under management
- 2 million retail clients, plus institutional and high net worth clients
- #1 U.S. Private Bank; #2 Global Money Market Asset Manager; #2 Offshore Fund Manager; #3 Global Private Bank; #3 U.S. Active Asset Manager; #5 U.S. Mutual Fund Company

Corporate



Our businesses

The Corporate Sector is composed of the Private Equity business, Treasury, and corporate staff and other centrally managed expenses. The Private Equity business invests in leveraged buyouts, growth equity and venture capital for the Firm and third parties around the world. Treasury manages structural interest rate risk and the Firm's investment portfolio. The corporate staff areas support the lines of business to deliver superior financial services to businesses and consumers around the world.

The support areas include: Central Technology and Operations; Internal Audit; Executive Office; Finance; General Services; Human Resources; Marketing & Communications; Office of the General Counsel; Real Estate and Business Services; Risk Management; and Strategy and Development.

2004 accomplishments

- Generated strong Private Equity results while reducing the book value of the Private Equity portfolio to $7.5 billion at year-end 2004, from $9.6 billion at year-end 2003.
- Repositioned the Treasury investment portfolio in expectation of rising interest rates.
- Repurchased $738 million of common stock.
- Implemented financial reporting architecture.
- Finalized brand strategy.
- Began the insourcing of technology activities.
- Eliminated duplicate activities that resulted from the merger and reduced related headcount.
- Conformed our human resources and benefits policies.

2005 execution focus

- Reduce the Firm's overall exposure to Private Equity while continuing to invest in Private Equity as a strategic business.
- Invest in corporate technology initiatives: expand the strategic data centers; enhance the infrastructure that supports risk and finance activities; integrate the technology that supports human resources activities; refresh 11 major processing centers and 22 corporate business hubs; consolidate global help desks and provide consistent infrastructure; and consolidate operating centers.
- Advance technology initiatives within Card Services, Investment Bank and Treasury & Securities Services.

All information is on a pro forma combined-operating basis. See inside front cover for details.

Community Partnership



Our businesses

Central to our history and culture is the principle of working to improve the communities we serve. In 2004, JPMorgan Chase contributed over $140 million to thousands of not-for-profit organizations around the world and provided more than $3.0 billion just in community development lending and investing for housing and economic development in low- and moderate-income communities. As part of our global volunteer initiative, 27,500 employees, retirees, friends and family members participated in 1,900 volunteer projects. We also work to preserve the environment through policies and initiatives that are guided by our Office of Environmental Affairs.

We have experienced firsthand the benefits gained with a corporate culture that's actively inclusive, where colleagues are recognized based on their talent and skills and where diversity is used as a competitive advantage to benefit from the broadest possible pool of employee talent, experiences and perspectives.

These capabilities and programs support our interaction with communities and with each other and guide our efforts to be a responsible corporate citizen.

2004 accomplishments

- Achieved more than $68.0 billion in the first year of our $800 billion, 10-year public commitment.
- Contributed over $140 million to not-for-profits, including $18 million directed by employees through our matching gift and volunteer grants programs.
- Enriched communities with sponsorships and events focused on arts, culture and sports, including the JPMorgan Chase Corporate Challenge that raised more than $375,000 for local not-for-profit organizations globally.
- Relaunched the Corporate Diversity Council, chaired by Bill Harrison. The Council sets the overall vision for diversity within JPMorgan Chase and seeks to create a more inclusive workplace for all.
- Established the Office of Environmental Affairs and allocated dedicated resources to increase the company's focus on environmental issues related to the company.

2005 execution focus

- Continue to work with thousands of not-for-profits across the United States and in global markets to make an impact in three primary areas of need: community asset development, youth education and community life.
- Strengthen our partnerships with the communities by evaluating and addressing their needs based on our complete lending, investing, philanthropic and sponsorship capabilities.
- Continue to drive accountability for diversity through business metrics across the organization.
- Develop and implement a comprehensive environmental policy to promote environmentally responsible ways to conduct our internal and external business activities.

Community Partnership highlights

- Made an $800 billion, 10-year public commitment to provide loans and investments that will benefit the credit and capital needs of minority and lower-income households and communities
- Earned "The Ron Brown Award for Corporate Leadership," a U.S. presidential award that recognizes companies for outstanding achievement in employee and community relations, for our ON_DEC program which bridges the "digital divide" at one inner city middle school in New York
- Provided more than $5 million in corporate and employee donations to help with the Indian Ocean tsunami disaster relief efforts to several not-for-profit organizations, including, but not limited to, the International Red Cross, UNICEF and numerous Asia-based organizations

Board of Directors

Hans W. Becherer [1,4]
Retired Chairman and
Chief Executive Officer
Deere & Company
(Equipment manufacturer)

John H. Biggs [1,3]
Former Chairman and
Chief Executive Officer
Teachers Insurance
and Annuity Association-
College Retirement
Equities Fund (TIAA-CREF)
(Pension fund)

Lawrence A. Bossidy [4,5]
Retired Chairman
Honeywell International Inc.
(Technology and manufacturing)

Stephen B. Burke [2,3]
President
Comcast Cable Communications, Inc.
(Cable television)

James S. Crown [4,5]
President
Henry Crown and Company
(Diversified investments)

James Dimon
President and
Chief Operating Officer

Ellen V. Futter [4,5]
President and Trustee
American Museum of
Natural History
(Museum)

William H. Gray, III [2,4]
Retired President and
Chief Executive Officer
The College Fund/UNCF
(Educational assistance)

William B. Harrison, Jr.
Chairman and
Chief Executive Officer

Laban P. Jackson, Jr. [1,3]
Chairman and
Chief Executive Officer
Clear Creek Properties, Inc.
(Real estate development)

John W. Kessler [2,4]
Owner
John W. Kessler Company
and Chairman
The New Albany Company
(Real estate development)

Robert I. Lipp [4,5]
Executive Chairman of
the Board
The St. Paul Travelers
Companies, Inc.
(Insurance)

Richard A. Manoogian [1,4]
Chairman and
Chief Executive Officer
Masco Corporation
(Diversified manufacturer)

David C. Novak [2,3]
Chairman and
Chief Executive Officer
Yum! Brands, Inc.
(Franchised restaurants)

Lee R. Raymond [2,3]
Chairman of the Board and
Chief Executive Officer
Exxon Mobil Corporation
(Oil and gas)

John R. Stafford [2,3]
Retired Chairman of
the Board
Wyeth
(Pharmaceuticals)

Member of:
1. Audit Committee
2. Compensation & Management Development Committee
3. Corporate Governance & Nominating Committee
4. Public Responsibility Committee
5. Risk Policy Committee

Executive Committee (*denotes member of Operating Committee)

William B. Harrison, Jr.*
Chairman and
Chief Executive Officer

James Dimon*
President and
Chief Operating Officer

Austin A. Adams*
Technology & Operations

Paul Bateman
Asset Management

Steven D. Black*
Investment Bank

Philip F. Bleser
Commercial Banking

Douglas L. Braunstein
Investment Bank

William I. Campbell*
Card Services

Michael J. Cavanagh*
Finance

Michael K. Clark
Institutional Trust &
Investor Services

John R. Corrie
Investment Bank

David A. Coulter
West Coast Region

William M. Daley
Midwest Region

Klaus Diederichs
Investment Bank

Ina R. Drew*
Chief Investment Officer

Patrik L. Edsparr
Investment Bank

John J. Farrell*
Human Resources

Walter A. Gubert
Europe, Middle East and Africa

Joan Guggenheimer*
Legal & Compliance

Carlos M. Hernandez
Investment Bank

Frederick W. Hill
Marketing & Communications

Lorraine E. Hricik
Treasury Services

Fawzi Kyriakos-Saad
Investment Bank

Rick Lazio
Government Affairs

James B. Lee, Jr.
Investment Bank

Steve MacLellan
Private Client Services

Samuel Todd Maclin*
Commercial Banking

Jay Mandelbaum*
Strategy

Donald H. McCree, III
Risk Management

William H. McDavid*
Legal & Compliance

Heidi Miller*
Treasury & Securities Services

R. Ralph Parks
Asia Pacific

Scott Powell
Home Finance

David W. Puth
Investment Bank

Charles W. Scharf*
Retail Financial Services

Richard J. Srednicki
Card Services

James E. Staley*
Asset & Wealth Management

Jeffrey C. Walker
Private Equity

Don M. Wilson III*
Risk Management

Thomas L. Wind
Home Finance

William T. Winters*
Investment Bank

Other corporate officers

Anthony J. Horan
Secretary

Mark I. Kleinman
Treasury

William J. Moran
Audit

Joseph L. Sclafani
Controller

 This page has been amended since the Annual Report was printed and presents the Executive Committee of the Firm as of March 30, 2005.

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Management's discussion and analysis

JPMorgan Chase & Co..

This section of the Annual Report provides management's discussion and analysis ("MD&A") of the financial condition and results of operations for JPMorgan Chase. See the Glossary of terms on page 131 for a definition of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based upon the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause JPMorgan Chase's results to differ materially from those set forth in such forward-looking statements. Such risks and uncertainties are described herein and in Part I, Item 1: Business, Important factors that may affect future results, in the JPMorgan Chase Annual Report on Form 10-K for the year ended December 31, 2004, filed with the Securities and Exchange Commission and available at the Commission's website (www.sec.gov), to which reference is hereby made.

Introduction

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States, with $1.2 trillion in assets, $106 billion in stockholders' equity and operations in more than 50 countries. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing, investment management, private banking and private equity. JPMorgan Chase serves more than 90 million customers, including consumers nationwide and many of the world's most prominent wholesale clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank"), a national banking association with branches in 17 states; and Chase Bank USA, National Association, a national bank headquartered in Delaware that is the Firm's credit card issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities Inc. ("JPMSI"), its U.S. investment banking firm.

The headquarters for JPMorgan Chase is in New York City. The retail banking business, which includes the consumer banking, small business banking and consumer lending activities with the exception of credit card, is headquartered in Chicago. Chicago also serves as the headquarters for the commercial banking business.

JPMorgan Chase's activities are organized, for management reporting purposes, into six business segments, as well as Corporate. The Firm's wholesale businesses are comprised of the Investment Bank, Commercial Banking, Treasury & Securities Services, and Asset & Wealth Management. The Firm's consumer businesses are comprised of Retail Financial Services and Card Services. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows:

Investment Bank

JPMorgan Chase is one of the world's leading investment banks, as evidenced by the breadth of its client relationships and product capabilities. The Investment Bank ("IB") has extensive relationships with corporations, financial institutions, governments and institutional investors worldwide. The Firm provides a full range of investment banking products and services, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, and market-making in cash securities and derivative instruments in all major capital markets. The IB also commits the Firm's own capital to proprietary investing and trading activities.

Retail Financial Services

Retail Financial Services ("RFS") includes Home Finance, Consumer & Small Business Banking, Auto & Education Finance and Insurance. Through this group of businesses, the Firm provides consumers and small businesses with a broad range of financial products and services including deposits, investments, loans and insurance. Home Finance is a leading provider of consumer real estate loan products and is one of the largest originators and servicers of home mortgages. Consumer & Small Business Banking offers one of the largest branch networks in the United States, covering 17 states with 2,508 branches and 6,650 automated teller machines. Auto & Education Finance is the largest bank originator of automobile loans as well as a top provider of loans for college students. Through its Insurance operations, the Firm sells and underwrites an extensive range of financial protection products and investment alternatives, including life insurance, annuities and debt protection products.

Card Services

Card Services ("CS") is the largest issuer of general purpose credit cards in the United States, with approximately 94 million cards in circulation, and is the largest merchant acquirer. CS offers a wide variety of products to satisfy the needs of its cardmembers, including cards issued on behalf of many well-known partners, such as major airlines, hotels, universities, retailers and other financial institutions.

Commercial Banking

Commercial Banking ("CB") serves more than 25,000 corporations, municipalities, financial institutions and not-for-profit entities, with annual revenues generally ranging from $10 million to $2 billion. A local market presence and a strong customer service model, coupled with a focus on risk management, provide a solid infrastructure for CB to provide the Firm's complete product set – lending, treasury services, investment banking and investment management – for both corporate clients and their executives. CB's clients benefit greatly from the Firm's extensive branch network and often use the Firm exclusively to meet their financial services needs.

Treasury & Securities Services

Treasury & Securities Services ("TSS") is a global leader in providing transaction, investment and information services to support the needs of corporations, issuers and institutional investors worldwide. TSS is the largest cash management provider in the world and one of the top three global custodians. The Treasury Services business provides clients with a broad range of capabilities, including U.S. dollar and multi-currency clearing, ACH, trade, and short-term liquidity and working capital tools. The Investor Services business provides a wide range of capabilities, including custody, funds services, securities lending, and performance measurement and execution products. The Institutional Trust Services business provides trustee, depository and administrative services for debt and equity issuers. Treasury Services partners with the Commercial Banking, Consumer & Small Business Banking and Asset & Wealth Management segments to serve clients firmwide. As a result, certain Treasury Services revenues are included in other segments' results.

Asset & Wealth Management

Asset & Wealth Management ("AWM") provides investment management to retail and institutional investors, financial intermediaries and high-net-worth families and individuals globally. For retail investors, AWM provides investment management products and services, including a global mutual fund franchise, retirement plan administration, and consultation and brokerage

services. AWM delivers investment management to institutional investors across all asset classes. The Private bank and Private client services businesses provide integrated wealth management services to ultra-high-net-worth and high-net-worth clients, respectively.

Merger with Bank One Corporation

Effective July 1, 2004, Bank One Corporation ("Bank One") merged with and into JPMorgan Chase (the "Merger"), pursuant to an Agreement and Plan of Merger dated January 14, 2004. As a result of the Merger, each outstanding share of common stock of Bank One was converted in a stock-for-stock exchange into 1.32 shares of common stock of JPMorgan Chase. The Merger was accounted for using the purchase method of accounting. The purchase price to complete the Merger was $58.5 billion. Key objectives of the Merger were to provide the Firm with a more balanced business mix and greater geographic diversification.

Bank One's results of operations were included in the Firm's results beginning July 1, 2004. Therefore, the results of operations for the 12 months ended December 31, 2004, reflect six months of operations of the combined Firm and six months of heritage JPMorgan Chase; the results of operations for all other periods prior to 2004 reflect only the operations of heritage JPMorgan Chase.

It is expected that cost savings of approximately $3.0 billion (pre-tax) will be achieved by the end of 2007; approximately two-thirds of the savings are anticipated to be realized by the end of 2005. Total 2004 Merger savings were approximately $400 million. Merger costs to combine the operations of JPMorgan Chase and Bank One are expected to range from approximately $4.0 billion to $4.5 billion (pre-tax). Of these costs, approximately $1.0 billion, specifically related to Bank One, were accounted for as purchase accounting adjustments and were recorded as an increase to goodwill in 2004. Of the approximately $3.0 billion to $3.5 billion in remaining Merger-related costs, $1.4 billion (pre-tax) were incurred in 2004 and have been charged to income, $1.4 billion (pre-tax) are expected to be incurred in 2005, and the remaining costs are expected to be incurred in 2006. These estimated Merger-related charges will result from actions taken with respect to both JPMorgan Chase's and Bank One's operations, facilities and employees. The charges will be recorded based on the nature and timing of these integration actions.

As part of the Merger, certain accounting policies and practices were conformed, which resulted in $976 million (pre-tax) of charges in 2004. The significant components of the conformity charges were comprised of a $1.4 billion (pre-tax) charge related to the decertification of the seller's interest in credit card securitizations, and the benefit of a $584 million reduction in the allowance for credit losses as a result of conforming the wholesale and consumer credit provision methodologies.

Other business events

Electronic Financial Services

On January 5, 2004, JPMorgan Chase acquired Electronic Financial Services ("EFS"), a leading provider of government-issued benefits payments and prepaid stored value cards used by state and federal government agencies and private institutions. The acquisition further strengthened JPMorgan Chase's position as a leading provider of wholesale payment services.

Cazenove

On November 5, 2004, JPMorgan Chase and Cazenove Group plc ("Cazenove") announced an agreement to combine Cazenove's investment banking business and JPMorgan Chase's United Kingdom-based investment banking business into a new entity to be jointly owned. The partnership will provide investment banking services in the United Kingdom and Ireland. The transaction closed on February 28, 2005, and the new company is called JPMorgan Cazenove Holdings.

Highbridge

On December 13, 2004, JPMorgan Chase formed a strategic partnership with and acquired a majority interest in Highbridge Capital Management ("Highbridge"), a New York-based multi-strategy hedge fund manager, with seven discrete strategy groups and more than $7 billion of assets under management. Highbridge has offices in New York, London and Hong Kong. Including Highbridge, JPMorgan Chase now manages more than $40 billion of absolute-return products (e.g., hedge funds, private equity and real estate investments).

Vastera

On January 7, 2005, JPMorgan Chase agreed to acquire Vastera, a provider of global trade management solutions, for approximately $129 million. Vastera's business will be combined with the Logistics and Trade Services businesses of TSS's Treasury Services unit. The transaction is expected to close in the first half of 2005. Vastera automates trade management processes associated with the physical movement of goods internationally; the acquisition will enable Treasury Services to offer management of information and processes in support of physical goods movement, together with financial settlement.

Executive overview

This overview of management's discussion and analysis highlights selected information and may not contain all of the information that is important to readers of this Annual Report. This overview discusses the economic or industry-wide factors that affected JPMorgan Chase, the factors that drove business performance, and the factors that management monitors in setting policy. For a more complete understanding of trends, events, commitments, uncertainties, liquidity, capital resources and critical accounting estimates, this entire Annual Report should be read carefully.

Financial performance of JPMorgan Chase

As of or for the year ended December 31,[a] (in millions, except per share and ratio data)	2004	2003	Change
Total net revenue	$ 43,097	$ 33,384	29%
Provision for credit losses	2,544	1,540	65
Noninterest expense	34,359	21,816	57
Net income	4,466	6,719	(34)
Net income per share – diluted	1.55	3.24	(52)
Average common equity	75,641	42,988	76
Return on average common equity ("ROCE")	6%	16%	(1,000)bp
Loans	$ 402,114	$ 214,766	87%
Total assets	1,157,248	770,912	50
Deposits	521,456	326,492	60
Tier 1 capital ratio	8.7%	8.5%	20bp
Total capital ratio	12.2	11.8	40

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

Business overview

The Firm's results in 2004 were affected by many factors, but the most significant of these were the Merger, the litigation charge taken in the second quarter of the year and global economic growth.

The Firm reported 2004 net income of $4.5 billion, or $1.55 per share, compared with net income of $6.7 billion, or $3.24 per share, for 2003. The return on common equity was 6%, compared with 16% in 2003. Results included $3.7 billion in after-tax charges, or $1.31 per share, comprised of: Merger costs of $846 million; charges to conform accounting policies as a result of the Merger of $605 million; and a charge of $2.3 billion to increase litigation reserves. Excluding these charges, operating earnings would have been $8.2 billion, or $2.86 per share, and return on common equity would have been 11%. Operating earnings represent business results without the merger-related costs and the significant litigation charges.

During the course of the year, the Firm developed a comprehensive plan of Merger integration and began to execute on the plan. Significant milestones during the year included: branding decisions for all businesses; merger of the holding companies, lead banks and credit card banks; conversion of the Bank One credit card portfolio to a new processing platform; announcement of insourcing of major technology operations; and consolidation and standardization of human resource policies and benefit plans. As part of the Merger, the Firm announced that it had targeted reducing operating expenses by $3.0 billion (pre-tax) by the end of 2007. In order to accomplish the cost reductions, the Firm announced that it expects to incur Merger costs of approximately $4.0 billion to $4.5 billion and reduce its workforce by approximately 12,000 over the same time period.

In 2004, both the U.S. and global economies continued to strengthen overall, even though momentum slowed during the second half of the year due to rising oil prices. Gross domestic product increased by 3.9% globally and 4.4% in the U.S., both up from 2003. The U.S. economy experienced rising short-term interest rates, driven by Federal Reserve Board ("FRB") actions during the course of the year. The federal funds rate increased from 1.00% to 2.25% during the year and the yield curve flattened, as long-term interest rates were relatively stable. Equity markets, both domestic and international, enjoyed strong results, with the S&P 500 up 9% and international indices increasing in similar fashion. Capital markets activity during 2004 was healthy, debt underwriting was consistent with the strong levels experienced in 2003, and equity underwriting enjoyed strong and consistent activity during the year. The U.S. consumer sector showed continued strength buoyed by the overall economic strength, despite slowing mortgage origination and refinance activity. Retail sales were up over the prior year, and bankruptcy filings were down significantly from 2003.

On an operating basis, net income in each of the Firm's lines of business was affected primarily by the Merger. The discussion that follows highlights other factors which affected operating results in each business.

Despite the relatively beneficial capital markets environment, results for the Investment Bank were under pressure during the year. This was primarily due to a decline in trading revenue related to lower fixed income trading, driven by weaker portfolio management results, and a reduction in net interest income, stemming primarily from lower loan balances. This was partially offset by increased investment banking fees, the result of continued strength in debt underwriting, and higher advisory fees. The Investment Bank benefited from a reduction in the allowance for credit losses, primarily due to the improved credit quality of the loan portfolio, as evidenced by the significant drop in nonperforming loans and, to a lesser extent, recoveries of previously charged-off loans. Expenses rose, primarily due to higher compensation expenses.

Retail Financial Services benefited from better spreads earned on deposits and growth in retained residential mortgage and home equity loan balances. Mortgage fees and related income was also up, reflecting higher mortgage servicing revenue, partially offset by significantly lower prime mortgage production income related to the slower mortgage origination activity. The Provision for credit losses benefited from improved credit quality in nearly all portfolios and a reduction in the allowance for credit losses related to the sale of a $4 billion manufactured home loan portfolio. Higher compensation expenses were due to continued expansion of the branch office network, including 130 new locations (106 net additional branches) opened during 2004 for the combined Firm, and expansion of the sales force, partially offset by ongoing efficiency improvements.

Card Services revenue benefited from higher loan balances and customer charge volume, which increased net interest income and higher net interchange income, respectively. Expenses increased due to higher marketing spending and higher volume-based processing expenses.

Commercial Banking revenues benefited from strong deposit growth and higher investment banking fees. These benefits were partially offset by lower service charges on deposits, which often decline when interest rates rise. Credit quality continued to improve, resulting in lower net charge-offs and nonperforming loans.

Treasury & Securities Services revenues benefited from strong growth in assets under custody and average deposits, along with deposit spreads, which improved due to the relatively low interest rate environment for deposits. These benefits were offset by lower service charges on deposits, which often decline when interest rates rise. Revenues and expenses also were affected by acquisitions, divestitures and growth in business volume. Expenses also increased due to software impairment charges, and legal and technology-related expenses.

Asset & Wealth Management results were positively affected by the strength of global equity markets, an improved product mix, better investment performance and net asset inflows. Results also benefited from deposit and loan growth.

The Corporate segment performance was negatively affected by a repositioning of the investment securities portfolio and tighter spreads. This was partially offset by improved Private Equity results due to an improved climate for investment sales.

The Firm's balance sheet was likewise significantly affected by the Merger. Aside from the Merger, the Firm took a number of actions during the year to strengthen the balance sheet. Notably, the Treasury investment portfolio was repositioned to reduce exposure to rising interest rates; auto leasing was de-emphasized, and lease receivables were reduced by 16% to $8 billion; the $4 billion manufactured home loan portfolio was sold; the $2 billion recreational vehicle portfolio was sold subsequent to year-end; a significant portion of third-party private equity investments have been sold; and the Firm increased its litigation reserves. The Firm's capital base was also significantly enhanced following the Merger. As of year-end, total stockholders' equity was $106 billion, and the Tier 1 capital ratio was 8.7%. The capital position allowed the Firm to begin repurchasing common stock during the second half of the year, with more than $700 million, or 19.3 million common shares, repurchased during the year.

2005 business outlook

JPMorgan Chase's outlook for 2005 should be viewed against the backdrop of the global economy, financial markets and the geopolitical environment, all of which are integrally linked together. While the Firm considers outcomes for, and has contingency plans to respond to, stress environments, its basic outlook for 2005 is predicated on the interest rate movements implied in the forward rate curve for U.S. Treasuries, the continuation of the favorable U.S. and international equity markets and continued expansion of the global economy.

The performance of the Firm's capital markets businesses is highly correlated to overall global economic growth. The Investment Bank enters 2005 with a strong pipeline for advisory and underwriting business, and it continues to focus on growing its client-driven trading business. Compared with 2004, the Investment Bank expects a reduction in credit portfolio revenues, as both net interest income on loans and gains from workouts are likely to decrease. Financial market movements and activity levels also affect Asset & Wealth Management and Treasury & Securities Services. Asset & Wealth Management anticipates revenue growth, driven by net inflows to Assets under supervision and by the Highbridge acquisition, as well as deposit and loan growth. Treasury & Securities Services anticipates modest revenue growth, due to wider spreads on deposits, as well as increased business volume and activity in the custody, trade, commercial card, American Depositary Receipt and Collateralized Debt Obligation businesses. Commercial Banking anticipates that net revenues will benefit from growth in treasury services and investment banking fees, offset by margin compression on loans.

The business outlook varies for the respective consumer businesses. Card Services anticipates modest growth in consumer spending and in card outstandings. For RFS, Home Finance earnings are likely to weaken given a market-driven decline in mortgage originations, neutralizing the expected earnings increase in Consumer & Small Business Banking. The drop in revenue at Home Finance should be mitigated by ongoing efforts to bring expenses in line with lower expected origination volumes. Growth is expected to continue in Consumer & Small Business Banking, with increases in core deposits and associated revenue partially offset by ongoing investments in the branch distribution network. New branch openings should continue at a pace consistent with or slightly above those of 2004. At the heritage Chase branches, expanded hours and realigned compensation plans that tie incentives to branch performance are expected to provide improvements in productivity and incremental net revenue growth. Earnings in Auto & Education Finance are expected to remain under pressure, given the current competitive operating environment. Across all RFS businesses, credit quality trends remain stable, with a slight increase in credit costs likely in 2005.

The Corporate sector includes Private Equity, Treasury and the corporate support units. The revenue outlook for the Private Equity business is directly related to the strength of equity market conditions in 2005. If current market conditions persist, the Firm anticipates continued realization of private equity gains; the Firm is not anticipating investment securities gains from the Treasury portfolio in 2005.

The Provision for credit losses in 2005 is anticipated to be higher than in 2004, driven primarily by a return to a more normal level of provisioning for credit losses in the wholesale businesses over time. The consumer Provision for credit losses in 2005 should reflect increased balances, with generally stable credit quality. The Firm plans to implement higher minimum-payment requirements in the Card Services business in the third quarter of 2005; it is anticipated that this will increase delinquency and net charge-off rates, but the magnitude of the impact is currently being assessed.

The Firm's 2005 expenses should reflect the realization of $1.5 billion in merger savings. These savings are expected to be offset by a projected $1.1 billion of incremental spending related to firmwide technology infrastructure, distribution enhancement, and product improvement and expansion in Retail Financial Services, the Investment Bank and Asset & Wealth Management. In addition, expenses will increase as a result of recent acquisitions, such as Highbridge and Cazenove.

Management will seek to continue to strengthen the Firm's balance sheet through rigorous financial and risk discipline. Any capital generated in excess of the Firm's capital targets, and beyond that required to support anticipated modest growth in assets and the underlying risks of the Firm's businesses, including litigation risk, will create capital flexibility in 2005 with respect to common stock repurchases and further investments in the Firm's businesses.

Consolidated results of operations

The following section provides a comparative discussion of JPMorgan Chase's consolidated results of operations on a reported basis for the three-year period ended December 31, 2004. Factors that are primarily related to a single business segment are discussed in more detail within that business segment than they are in this consolidated section. For a discussion of the Critical accounting estimates used by the Firm that affect the Consolidated results of operations, see pages 77–79 of this Annual Report.

Revenue

Year ended December 31,[a] (in millions)	2004	2003	2002
Investment banking fees	$ 3,537	$ 2,890	$ 2,763
Trading revenue	3,612	4,427	2,675
Lending & deposit related fees	2,672	1,727	1,674
Asset management, administration and commissions	7,967	5,906	5,754
Securities/private equity gains	1,874	1,479	817
Mortgage fees and related income	1,004	923	988
Credit card income	4,840	2,466	2,307
Other income	830	601	458
Noninterest revenue	26,336	20,419	17,436
Net interest income	16,761	12,965	12,178
Total net revenue	$ 43,097	$ 33,384	$ 29,614

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

2004 compared with 2003

Total net revenues, at $43.1 billion, rose by $9.7 billion or 29%, primarily due to the Merger, which affected every category of Total net revenue. Additional factors contributing to the revenue growth were higher consumer demand for credit products and higher credit card charge volume, as well as strong retail and wholesale deposit growth. Investment banking revenues increased as a result of growth in global market volumes and market share gains. Revenue also benefited from acquisitions and growth in assets under custody, under management and under supervision, the result of global equity market appreciation and net asset inflows. Private equity gains were higher due to an improved climate for investment sales. The discussion that follows highlights factors other than the Merger that affected the 2004 versus 2003 comparison.

The increase in Investment banking fees was driven by significant gains in underwriting and advisory activities as a result of increased global market volumes and market share gains. Trading revenue declined by 18%, primarily due to lower portfolio management results in fixed income and equities. For a further discussion of Investment banking fees and Trading revenue, which are primarily recorded in the IB, see the IB segment results on pages 30–32 of this Annual Report.

Lending & deposit related fees were up from 2003 due to the Merger. The rise was partially offset by lower service charges on deposits, as clients paid for services with deposits, versus fees, due to rising interest rates. Throughout 2004, deposit balances grew in response to rising interest rates.

The increase in Asset management, administration and commissions was also driven by the full-year impact of other acquisitions – such as EFS in January 2004, Bank One's Corporate Trust business in November 2003 and JPMorgan Retirement Plan Services in June 2003 – as well as the effect of global equity market appreciation, net asset inflows and a better product mix. In addition, a more active market for trading activities in 2004 resulted in higher brokerage commissions. For additional information on these fees and commissions, see the segment discussions for AWM on pages 45–46, TSS on pages 43–44 and RFS on pages 33–38 of this Annual Report.

Securities/private equity gains for 2004 rose from the prior year, primarily fueled by the improvement in the Firm's private equity investment results. This was offset by lower securities gains on the Treasury investment portfolio as a result of lower volumes of securities sold, and lower gains realized on sales due to higher interest rates; additionally, RFS's Home Finance business reported losses in 2004 on available-for-sale ("AFS") securities, as compared with gains in 2003. For a further discussion of securities gains, see the RFS and Corporate segment discussions on pages 33–38 and 47–48, respectively, of this Annual Report. For a further discussion of Private equity gains, which are primarily recorded in the Firm's Private Equity business, see the Corporate segment discussion on pages 47–48 of this Annual Report.

Mortgage fees and related income rose as a result of higher servicing revenue; this improvement was partially offset by lower mortgage servicing rights ("MSRs") asset risk management results and prime mortgage production revenue, and lower gains from sales and securitizations of subprime loans as a result of management's decision in 2004 to retain these loans. Mortgage fees and related income excludes the impact of NII and securities gains related to home mortgage activities. For a discussion of Mortgage fees and related income, which is primarily recorded in RFS's Home Finance business, see the Home Finance discussion on pages 34–36 of this Annual Report.

Credit card income increased from 2003 as a result of higher customer charge volume, which resulted in increased interchange income, and higher credit card servicing fees associated with the increase of $19.4 billion in average securitized loans. The increases were partially offset by higher volume-driven payments to partners and rewards expense. For a further discussion of Credit card income, see CS's segment results on pages 39–40 of this Annual Report.

The increase in Other income from 2003 reflected gains on leveraged lease transactions and higher net results from corporate and bank-owned life insurance policies. These positive factors in 2004 were partially offset by gains on sales of several nonstrategic businesses and real estate properties in 2003.

Net interest income rose from 2003 as growth in volumes of consumer loans and deposits, as well as wider spreads on deposits, contributed to higher net interest income. These were partially offset by lower wholesale loan balances in the IB and tighter spreads on loans, investment securities and trading assets stemming from the rise in interest rates. The Firm's total average interest-earning assets for 2004 were $744.1 billion, up $154.2 billion from 2003. Growth was also driven by higher levels of consumer loans. The net interest yield on these assets, on a fully taxable-equivalent basis, was 2.27% in 2004, an increase of 6 basis points from the prior year.

2003 compared with 2002

Total revenue for 2003 was $33.4 billion, up 13% from 2002. All businesses benefited from improved economic conditions in 2003. In particular, the low–interest rate environment drove robust fixed income markets and an unprecedented mortgage refinancing boom, which drove the growth in revenue.

Investment banking fees increased by $127 million, primarily due to growth in IB's equity underwriting, which was up 49%, reflecting increases in market share and underwriting volumes. This increase was partially offset by lower advisory fees reflecting depressed levels of M&A activity. Trading revenue was up $1.8 billion, or 65%, primarily due to strong client and portfolio management revenue growth in fixed income and equity markets as a result of the low–interest rate environment, improvement in equity markets and volatility in credit markets. For a further discussion of Investment banking fees and Trading revenue, which are primarily recorded in the Investment Bank, see the IB segment results on pages 30-32 of this Annual Report.

Lending & deposit related fees rose, the result of higher fees on standby letters of credit, due to growth in transaction volume, and higher service charges on deposits. These charges were driven by an increase in the payment of services with fees, versus deposits, due to lower interest rates.

The increase in Asset management, administration and commissions was attributable to a more favorable environment for debt and equity activities, resulting in higher fees for the custody, institutional trust, brokerage and other processing-related businesses. Fees for investment management activities also increased as a result of acquisitions in AWM, but these increases were partially offset by institutional net fund outflows, which resulted in lower average assets under management.

Securities/private equity gains increased to $1.5 billion from $817 million in 2002, reflecting significant improvement in private equity gains. These gains were partially offset by lower gains realized from the sale of securities in Treasury and of AFS securities in RFS's Home Finance business, driven by increasing interest rates beginning in the third quarter of 2003. For a further discussion of private equity gains (losses), see the Corporate segment discussion on pages 47–48 of this Annual Report.

Mortgage fees and related income declined by 7% in 2003, primarily due to a decline in revenue associated with risk management of the MSR asset, mortgage pipeline and mortgage warehouse; these were partially offset by higher fees from origination and sales activity and other fees derived from volume and market-share growth. For a discussion of Mortgage fees and related income, which is primarily recorded in RFS's Home Finance business, see the Home Finance discussion on pages 34–36 of this Annual Report.

Credit card income rose as a result of higher credit card servicing fees associated with the $6.7 billion growth in average securitized credit card receivables. For a further discussion of Credit card income, see CS's segment results on pages 39–40 of this Annual Report.

Other income rose, primarily from $200 million in gains on sales of securities acquired in loan workouts (compared with $26 million in 2002), as well as gains on the sale of several nonstrategic businesses and real estate properties; these were partly offset by lower net results from corporate and bank-owned life insurance policies. In addition, 2002 included $73 million of write-downs for several Latin American investments.

The increase in Net interest income reflected the positive impact of lower interest rates on consumer loan originations, such as mortgages and automobile loans and leases and related funding costs. Net interest income was partially reduced by a lower volume of wholesale loans and lower spreads on investment securities. The Firm's total average interest-earning assets in 2003 were $590 billion, up 6% from the prior year. The net interest yield on these assets, on a fully taxable-equivalent basis, was 2.21%, the same as in the prior year.

Provision for credit losses

2004 compared with 2003

The Provision for credit losses of $2.5 billion was up $1.0 billion, or 65%, compared with the prior year. The impact of the Merger, and of accounting policy conformity charges of $858 million, were partially offset by releases in the allowance for credit losses related to the wholesale loan portfolio, primarily due to improved credit quality in the IB. Wholesale nonperforming loans decreased by 21% even after the inclusion of Bank One's loan portfolio. RFS's Provision for credit losses benefited from a reduction in the allowance for credit losses related to the sale of the $4 billion manufactured home loan portfolio and continued positive credit quality trends in the home and auto finance businesses. The provision related to the credit card portfolio grew by $919 million, principally due to the Merger. For further information about the Provision for credit losses and the Firm's management of credit risk, see the Credit risk management discussion on pages 57–69 of this Annual Report.

2003 compared with 2002

The 2003 Provision for credit losses was $2.8 billion lower than in 2002, primarily reflecting continued improvement in the quality of the wholesale loan portfolio and a higher volume of credit card securitizations.

Noninterest expense

Year ended December 31,[a] (in millions)	2004	2003	2002
Compensation expense	$ 14,506	$ 11,387	$ 10,693
Occupancy expense	2,084	1,912	1,606
Technology and communications expense	3,702	2,844	2,554
Professional & outside services	3,862	2,875	2,587
Marketing	1,335	710	689
Other expense	2,859	1,694	1,802
Amortization of intangibles	946	294	323
Total noninterest expense before merger costs and litigation reserve charge	29,294	21,716	20,254
Merger costs	1,365	—	1,210
Litigation reserve charge	3,700	100	1,300
Total noninterest expense	$ 34,359	$ 21,816	$ 22,764

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

2004 compared with 2003

Noninterest expense was $34.4 billion in 2004, up $12.5 billion, or 57%, primarily due to the Merger. Excluding $1.4 billion of Merger costs, and litigation reserve charges, Noninterest expenses would have been $29.3 billion, up 35%. In addition to the Merger and litigation charges, expenses increased due to reinvestment in the lines of business, partially offset by merger-related savings throughout the Firm. Each category of Noninterest expense was affected by the Merger. The discussion that follows highlights other factors which affected the 2004 versus 2003 comparison.

Compensation expense was up from 2003, primarily due to strategic investments in the IB and continuing expansion in RFS. These factors were partially offset by ongoing efficiency improvements and merger-related savings throughout the Firm, and a reduction in pension costs. The decline in pension costs was mainly attributable to the increase in the expected return on plan assets from a discretionary $1.1 billion contribution to the Firm's pension

plan in April 2004, partially offset by changes in actuarial assumptions for 2004 compared with 2003. For a detailed discussion of pension and other postretirement benefit costs, see Note 6 on pages 92–95 of this Annual Report.

The increase in Occupancy expense was partly offset by lower charges for excess real estate, which were $103 million in 2004, compared with $270 million in 2003.

Technology and communications expense was higher than in the prior year as a result of higher costs associated with greater use of outside vendors, primarily IBM, to support the global infrastructure requirements of the Firm. After the Merger, JPMorgan Chase decided to terminate its outsourcing agreement with IBM, effective December 31, 2004. For a further discussion regarding the IBM outsourcing agreement, see the Corporate segment discussion on page 47 of this Annual Report.

Professional & outside services rose due to higher legal costs associated with pending litigation matters, as well as outside services stemming from recent acquisitions, primarily EFS, and growth in business at TSS and CS.

Marketing expense rose as CS initiated a more robust marketing campaign during 2004.

Other expense was up due to software impairment write-offs of $224 million, primarily in TSS and Corporate, compared with $60 million in 2003; higher accruals for non-Enron-related litigation cases; and the impact of growth in business volume. These were partly offset by a $57 million settlement related to the Enron surety bond litigation.

For a discussion of Amortization of intangibles and Merger costs, refer to Note 15 and Note 8 on pages 109–111 and 98, respectively.

In June of 2004, JPMorgan Chase recorded a $3.7 billion (pre-tax) addition to the Litigation reserve. While the outcome of litigation is inherently uncertain, the addition reflected management's assessment of the appropriate reserve level in light of all then-known information. By comparison, 2003 included a charge of $100 million for Enron-related litigation.

2003 compared with 2002

Total Noninterest expense was $21.8 billion, down 4% from the prior year. In 2002, the Firm recorded $1.3 billion of charges, principally for Enron-related litigation, and $1.2 billion for merger and restructuring costs related to programs announced prior to January 1, 2002. Excluding these costs, expenses rose by 8% in 2003, reflecting higher performance-related incentives, increased costs related to stock-based compensation and pension and other postretirement expenses; and higher occupancy expenses. The Firm began expensing stock options in 2003.

The increase in Compensation expense principally reflected higher performance-related incentives, as well as higher pension and other postretirement benefit costs, primarily as a result of changes in actuarial assumptions. The increase pertaining to incentives included $266 million as a result of adopting SFAS 123, and $120 million from the reversal in 2002 of previously accrued expenses for certain forfeitable key employee stock awards. Total compensation expenses declined as a result of the transfer, beginning April 1, 2003, of 2,800 employees to IBM in connection with the aforementioned technology outsourcing agreement.

The increase in Occupancy expense reflected costs of additional leased space in midtown Manhattan and in the South and Southwest regions of the United States, higher real estate taxes in New York City and the cost of enhanced safety measures. Also contributing to the increase were charges for unoccupied excess real estate of $270 million; this compared with $120 million in 2002.

Technology and communications expense increased primarily due to a shift in expenses: costs that were previously associated with Compensation and Other expenses shifted, upon the commencement of the IBM outsourcing agreement, to Technology and communications expense. Also contributing to the increase were higher costs related to software amortization. For a further discussion of the IBM outsourcing agreement, see Corporate on page 47 of this Annual Report.

Professional & outside services rose, reflecting greater utilization of third-party vendors for processing activities and higher legal costs associated with various litigation and business-related matters.

Higher Marketing expense was driven by more robust campaigns for the Home Finance business.

The decrease in Other expense was due partly to expense management initiatives, such as reduced allowances to expatriates and recruitment costs.

There were no Merger costs in 2003. In 2002, merger and restructuring costs of $1.2 billion were for programs announced prior to January 1, 2002.

The Firm added $100 million to the Enron-related litigation reserve in 2003 to supplement a $1.3 billion reserve initially recorded in 2002. The 2002 reserve was established to cover Enron-related matters, as well as certain other material litigation, proceedings and investigations in which the Firm is involved.

Income tax expense

The Firm's Income before income tax expense, Income tax expense and effective tax rate were as follows for each of the periods indicated:

Year ended December 31,[a] (in millions, except rate)	2004	2003	2002
Income before income tax expense	$6,194	$10,028	$2,519
Income tax expense	1,728	3,309	856
Effective tax rate	27.9%	33.0%	34.0%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

2004 compared with 2003

The reduction in the effective tax rate for 2004, as compared with 2003, was the result of various factors, including lower reported pre-tax income, a higher level of business tax credits, and changes in the proportion of income subject to federal, state and local taxes, partially offset by purchase accounting adjustments related to leveraged lease transactions. The Merger costs and accounting policy conformity adjustments recorded in 2004, and the Litigation reserve charge recorded in the second quarter of 2004, reflected a tax benefit at a 38% marginal tax rate, contributing to the reduction in the effective tax rate compared with 2003.

2003 compared with 2002

The effective tax rate decline was principally attributable to changes in the proportion of income subject to state and local taxes.

Explanation and reconciliation of the Firm's use of non-GAAP financial measures

The Firm prepares its Consolidated financial statements using accounting principles generally accepted in the United States of America ("U.S. GAAP"); these financial statements appear on pages 84–87 of this Annual Report. That presentation, which is referred to as "reported basis," provides the reader with an understanding of the Firm's results that can be consistently tracked from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews line-of-business results on an "operating basis," which is a non-GAAP financial measure. The definition of operating basis starts with the reported U.S. GAAP results. In the case of the IB, operating basis noninterest revenue includes, in Trading revenue, net interest income related to trading activities. Trading activities generate revenues, which are recorded for U.S. GAAP purposes in two line items on the income statement: Trading revenue, which includes the mark-to-market gains or losses on trading positions, and Net interest income, which includes the interest income or expense related to those positions. Combining both the trading revenue and related net interest income enables management to evaluate the IB's trading activities, by considering all revenue related to these activities, and facilitates operating comparisons to other competitors. The following table reclassifies the Firm's trading-related Net interest income to Trading revenue.

Trading-related Net interest income reclassification

Year ended December 31,[a] (in millions)	2004	2003	2002
Net interest income – reported	$ 16,761	$ 12,965	$ 12,178
Trading-related NII	(1,950)	(2,129)	(1,880)
Net interest income – adjusted	$ 14,811	$ 10,836	$ 10,298
Trading revenue – reported[b]	$ 3,612	$ 4,427	$ 2,675
Trading-related NII	1,950	2,129	1,880
Trading revenue – adjusted[b]	$ 5,562	$ 6,556	$ 4,555

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

(b) Reflects Trading revenue at the Firm level. The majority of Trading revenue is recorded in the Investment Bank.

In addition, segment results reflect revenues on a tax-equivalent basis. The tax-equivalent gross-up for each business segment is based upon the level, type and tax jurisdiction of the earnings and assets within each business segment. Operating revenue for the Investment Bank includes tax-equivalent adjustments for income tax credits primarily related to affordable housing investments as well as tax-exempt income from municipal bond investments. Information prior to the Merger has not been restated to conform with this new presentation. The amount of the tax-equivalent gross-up for each business segment is eliminated within the Corporate segment. For a further discussion of trading-related revenue and tax-equivalent adjustments made to operating revenue, see the IB on pages 30–32 of this Annual Report.

In the case of Card Services, operating or managed basis excludes the impact of credit card securitizations on revenue, the Provision for credit losses, net charge-offs and loan receivables. Through securitization the Firm transforms a portion of its credit card receivables into securities, which are sold to investors. The credit card receivables are removed from the consolidated balance sheet through the transfer of principal credit card receivables to a trust, and the sale of undivided interests to investors that entitle the investors to specific cash flows generated from the credit card receivables. The Firm retains the remaining undivided interests as seller's interests, which are recorded in Loans on the Consolidated balance sheet. A gain or loss on the sale of credit card receivables to investors is recorded in Other income. Securitization also affects the Firm's consolidated income statement by reclassifying as credit card income, interest income, certain fee revenue, and recoveries in excess of interest paid to the investors, gross credit losses and other trust expenses related to the securitized receivables. For a reconciliation of reported to managed basis of Card Services results, see page 40 of this Annual Report. For information regarding loans and residual interests sold and securitized, see Note 13 on pages 103–106 of this Annual Report. JPMorgan Chase uses the concept of "managed receivables" to evaluate the credit performance and overall financial performance of the underlying credit card loans, both sold and not sold; as the same borrower is continuing to use the credit card for ongoing charges, a borrower's credit performance will affect both the loan receivables sold under SFAS 140 and those not sold. Thus, in its disclosures regarding managed loan receivables, JPMorgan Chase treats the sold receivables as if they were still on the balance sheet in order to disclose the credit performance (such as net charge-off rates) of the entire managed credit card portfolio. In addition, Card Services operations are funded, operating results are evaluated and decisions about allocating resources such as employees and capital are based on managed financial information.

Finally, operating basis excludes Merger costs, the Litigation reserve charge and accounting policy conformity adjustments related to the Merger, as management believes these items are not part of the Firm's normal daily business operations (and, therefore, are not indicative of trends) and do not provide meaningful comparisons with other periods.

Management uses certain non-GAAP financial measures at the segment level. Management believes these non-GAAP financial measures provide information to investors in understanding the underlying operational performance and trends of the particular business segment and facilitate a comparison of the business segment with the performance of competitors.

The following summary table provides a reconciliation from the Firm's reported GAAP results to operating results:

(Table continues on next page)

Year ended December 31,[a]	2004				2003			
(in millions, except per share and ratio data)	Reported results	Credit card[b]	Special items	Operating basis	Reported results	Credit card[b]	Special items	Operating basis
Revenue								
Investment banking fees	$ 3,537	$ —	$ —	$ 3,537	$ 2,890	$ —	$ —	$ 2,890
Trading revenue[c]	5,562	—	—	5,562	6,556	—	—	6,556
Lending & deposit related fees	2,672	—	—	2,672	1,727	—	—	1,727
Asset management, administration and commissions	7,967	—	—	7,967	5,906	—	—	5,906
Securities/private equity gains	1,874	—	—	1,874	1,479	—	—	1,479
Mortgage fees and related income	1,004	—	—	1,004	923	—	—	923
Credit card income	4,840	(2,267)	—	2,573	2,466	(1,379)	—	1,087
Other income	830	(86)	118[1]	862	601	(71)	—	530
Noninterest revenue[c]	28,286	(2,353)	118	26,051	22,548	(1,450)	—	21,098
Net interest income[c]	14,811	5,251	—	20,062	10,836	3,320	—	14,156
Total net revenue	43,097	2,898	118	46,113	33,384	1,870	—	35,254
Provision for credit losses	2,544	2,898	(858)[2]	4,584	1,540	1,870	—	3,410
Noninterest expense								
Merger costs	1,365	—	(1,365)[3]	—	—	—	—	—
Litigation reserve charge	3,700	—	(3,700)[4]	—	100	—	—	100
All other noninterest expense	29,294	—	—	29,294	21,716	—	—	21,716
Total noninterest expense	34,359	—	(5,065)	29,294	21,816	—	—	21,816
Income before income tax expense	6,194	—	6,041	12,235	10,028	—	—	10,028
Income tax expense	1,728	—	2,296[6]	4,024	3,309	—	—	3,309
Net income	$ 4,466	$ —	$ 3,745	$ 8,211	$ 6,719	$ —	$ —	$ 6,719
Earnings per share – diluted	$ 1.55	$ —	$ 1.31	$ 2.86	$ 3.24	$ —	$ —	$ 3.24
Return on common equity	6%	—	5%	11%	16%	—	—	16%
Return on equity – goodwill[d]	9	—	7	16	19	—	—	19
Return on assets	0.46	NM	NM	0.81	0.87	NM	NM	0.83
Overhead ratio	80%	NM	NM	64%	65%	NM	NM	62%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) The impact of credit card securitizations affects CS. See pages 39–40 of this Annual Report for further information.
(c) Includes the reclassification of trading-related Net interest income to Trading revenue. See page 25 of this Annual Report for further information.
(d) Net income applicable to common stock/Total average common equity (net of goodwill). The Firm uses return on equity less goodwill, a non-GAAP financial measure, to evaluate the operating performance of the Firm. The Firm utilizes this measure to facilitate operating comparisons to other competitors.

Year ended December 31,[e]	2004			2003		
(in millions)	Reported	Securitized	Managed	Reported	Securitized	Managed
Loans – Period-end	$ 402,114	$ 70,795	$ 472,909	$ 214,766	$ 34,856	$ 249,622
Total assets – average	962,556	51,084	1,013,640	775,978	32,365	808,343

(e) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

(Table continued from previous page)

2002			
Reported results	Credit card[b]	Special items	Operating basis
$ 2,763	$ —	$ —	$ 2,763
4,555	—	—	4,555
1,674	—	—	1,674
5,754	—	—	5,754
817	—	—	817
988	—	—	988
2,307	(1,341)	—	966
458	(36)	—	422
19,316	(1,377)	—	17,939
10,298	2,816	—	13,114
29,614	1,439	—	31,053
4,331	1,439	—	5,770
1,210	—	(1,210)[3]	—
1,300	—	(1,300)[4]	—
20,254	—	(98)[5]	20,156
22,764	—	(2,608)	20,156
2,519	—	2,608	5,127
856	—	887[6]	1,743
$ 1,663	$ —	$ 1,721	$ 3,384
$ 0.80	$ —	$ 0.86	$ 1.66
4%	—	4%	8%
5	—	5	10
0.23	NM	NM	0.45
77%	NM	NM	65%

2002		
Reported	Securitized	Managed
$ 216,364	$ 30,722	$ 247,086
733,357	26,519	759,876

Special Items

The reconciliation of the Firm's reported results to operating results in the accompanying table sets forth the impact of several special items incurred by the Firm in 2002 and 2004. These special items are excluded from Operating earnings, as management believes these items are not part of the Firm's normal daily business operations and, therefore, are not indicative of trends and do not provide meaningful comparisons with other periods. These items include Merger costs, significant litigation charges, charges to conform accounting policies and other items, each of which is described below:

(1) Other income in 2004 reflects $118 million of other accounting policy conformity adjustments.

(2) The Provision for credit losses in 2004 reflects $858 million of accounting policy conformity adjustments, consisting of a $1.4 billion charge related to the decertification of the seller's interest in credit card securitizations, partially offset by a benefit of $584 million related to conforming wholesale and consumer credit provision methodologies for the combined Firm.

(3) Merger costs of $1.4 billion in 2004 reflect costs associated with the Merger; the $1.2 billion of charges in 2002 reflect merger and restructuring costs associated with programs announced prior to January 1, 2002.

(4) Significant litigation charges of $3.7 billion and $1.3 billion were taken in 2004 and 2002, respectively.

(5) All Other noninterest expense in 2002 reflects a $98 million charge for excess real estate capacity related to facilities in the West Coast region of the United States.

(6) Income tax expense in 2004 and 2002 of $2.3 billion and $887 million, respectively, represents the tax effect of the above items.

Formula Definitions for Non-GAAP Metrics

The table below reflects the formulas used to calculate both the following GAAP and non-GAAP measures:

Return on common equity

Reported — Net income* / Average common equity
Operating — Operating earnings* / Average common equity

Return on equity - goodwill

Reported — Net income* / Average common equity less goodwill
Operating — Operating earnings* / Average common equity less goodwill

Return on assets

Reported — Net income / Average assets
Operating — Operating earnings / Average managed assets

Overhead ratio

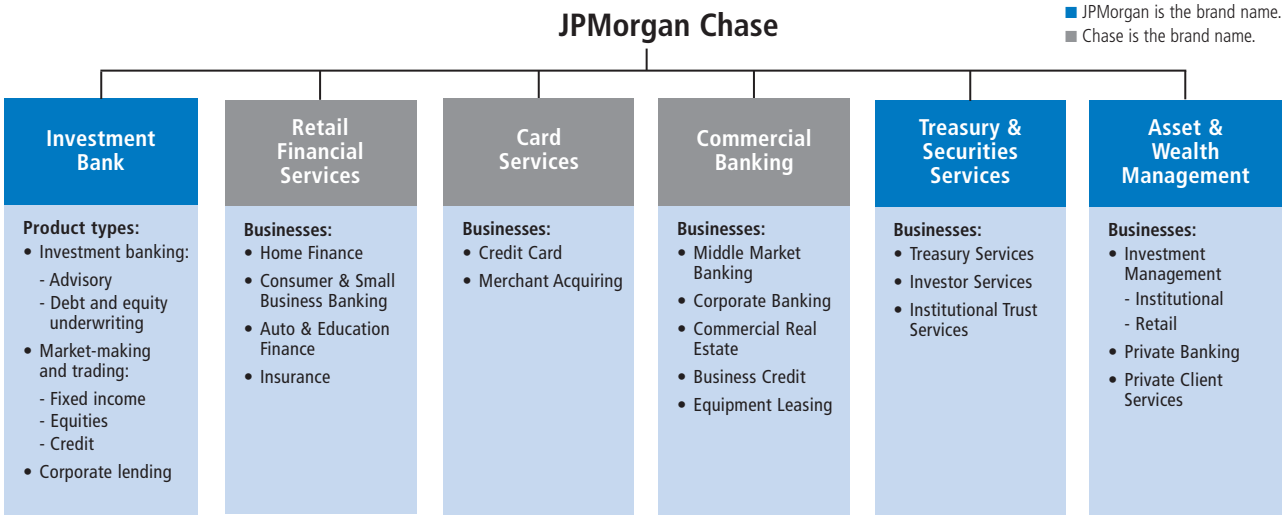
Reported — Total noninterest expense / Total net revenue
Operating — Total noninterest expense / Total net revenue

* Represents earnings applicable to common stock

Business segment results

The Firm is managed on a line-of-business basis. The business segment financial results presented reflect the current organization of JPMorgan Chase. There are six major reportable business segments: the Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset & Wealth Management, as well as a Corporate segment.

The segments are based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on an operating basis.



In connection with the Merger, business segment reporting was realigned to reflect the new business structure of the combined Firm. Treasury was transferred from the IB into Corporate. The segment formerly known as Chase Financial Services had been comprised of Chase Home Finance, Chase Cardmember Services, Chase Auto Finance, Chase Regional Banking and Chase Middle Market; as a result of the Merger, this segment is now called Retail Financial Services and is comprised of Home Finance, Auto & Education Finance, Consumer & Small Business Banking and Insurance. Chase Middle Market moved into Commercial Banking, and Chase Cardmember Services is now its own segment called Card Services. TSS remains unchanged. Investment Management & Private Banking has been renamed Asset & Wealth Management. JPMorgan Partners, which formerly was a stand-alone business segment, was moved into Corporate. Corporate is currently comprised of Private Equity (JPMorgan Partners and ONE Equity Partners), Treasury, as well as corporate support areas, which include Central Technology and Operations, Internal Audit, Executive Office, Finance, General Services, Human Resources, Marketing & Communications, Office of the General Counsel, Real Estate and Business Services, Risk Management and Strategy and Development.

Segment results for periods prior to July 1, 2004, reflect heritage JPMorgan Chase–only results and have been restated to reflect the current business segment organization and reporting classifications.

Segment results – Operating basis[a][b]

(Table continues on next page)

Year ended December 31,	Total net revenue			Noninterest expense		
(in millions, except ratios)	**2004**	2003	Change	**2004**	2003	Change
Investment Bank	**$ 12,605**	$ 12,684	(1)%	**$ 8,696**	$ 8,302	5%
Retail Financial Services	**10,791**	7,428	45	**6,825**	4,471	53
Card Services	**10,745**	6,144	75	**3,883**	2,178	78
Commercial Banking	**2,374**	1,352	76	**1,343**	822	63
Treasury & Securities Services	**4,857**	3,608	35	**4,113**	3,028	36
Asset & Wealth Management	**4,179**	2,970	41	**3,133**	2,486	26
Corporate	**562**	1,068	(47)	**1,301**	529	146
Total	**$ 46,113**	$ 35,254	31%	**$ 29,294**	$ 21,816	34%

(a) Represents the reported results excluding the impact of credit card securitizations and, in 2004, Merger costs, the significant litigation reserve charges and accounting policy conformity adjustments related to the Merger.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(c) As a result of the Merger, new capital allocation methodologies were implemented during the third quarter of 2004. The capital allocated to each line of business considers several factors: stand-alone peer comparables, economic risk measures and regulatory capital requirements. In addition, effective with the third quarter of 2004, goodwill, as well as the associated capital, is only allocated to the Corporate line of business. Prior periods have not been revised to reflect these new methodologies and are not comparable to the presentation beginning in the third quarter of 2004.

Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives these results allocates income and expense using market-based methodologies. At the time of the Merger, several of the allocation methodologies were revised, as noted below. The changes became effective July 1, 2004. As prior periods have not been revised to reflect these new methodologies, they are not comparable to the presentation of periods beginning with the third quarter of 2004. Further, the Firm intends to continue to assess the assumptions, methodologies and reporting reclassifications used for segment reporting, and it is anticipated that further refinements may be implemented in future periods.

Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenues from those transactions. These revenue sharing agreements were revised on the Merger date to provide consistency across the lines of businesses.

Funds transfer pricing

Funds transfer pricing ("FTP") is used to allocate interest income and interest expense to each line of business and also serves to transfer interest rate risk to Corporate. While business segments may periodically retain interest rate exposures related to customer pricing or other business-specific risks, the balance of the Firm's overall interest rate risk exposure is included and managed in Corporate. In the third quarter of 2004, FTP was revised to conform the policies of the combined firms.

Expense allocation

Where business segments use services provided by support units within the Firm, the costs of those support units are allocated to the business segments. Those expenses are allocated based on their actual cost, or the lower of actual cost or market cost, as well as upon usage of the services provided. Effective with the third quarter of 2004, the cost allocation methodologies of the heritage firms were aligned to provide consistency across the business segments. In addition, expenses related to certain corporate functions, technology and operations ceased to be allocated to the business segments and are retained in Corporate. These retained expenses include parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other one-time items not aligned with the business segments.

Capital allocation

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, economic risk measures and regulatory capital requirements. The amount of capital assigned to each business is referred to as equity. Effective with the third quarter of 2004, new methodologies were implemented to calculate the amount of capital allocated to each segment. As part of the new methodology, goodwill, as well as the associated capital, is allocated solely to Corporate. Although U.S. GAAP requires the allocation of goodwill to the business segments for impairment testing (see Note 15 on page 109 of this Annual Report), the Firm has elected not to include goodwill or the related capital in each of the business segments for management reporting purposes. See the Capital management section on page 50 of this Annual Report for a discussion of the equity framework.

Credit reimbursement

TSS reimburses the IB for credit portfolio exposures the IB manages on behalf of clients the segments share. At the time of the Merger, the reimbursement methodology was revised to be based on pre-tax earnings, net of the cost of capital related to those exposures. Prior to the Merger, the credit reimbursement was based on pre-tax earnings, plus the allocated capital associated with the shared clients.

Tax-equivalent adjustments

Segment results reflect revenues on a tax-equivalent basis for segment reporting purposes. Refer to page 25 of this Annual Report for additional details.

Segment results – Operating basis[a][b]

(Table continued from previous page)

Year ended December 31,	Operating earnings			Return on common equity – goodwill[c]	
(in millions, except ratios)	**2004**	2003	Change	**2004**	2003
Investment Bank	**$ 2,948**	$ 2,805	5%	**17%**	15%
Retail Financial Services	**2,199**	1,547	42	**24**	37
Card Services	**1,274**	683	87	**17**	20
Commercial Banking	**608**	307	98	**29**	29
Treasury & Securities Services	**440**	422	4	**17**	15
Asset & Wealth Management	**681**	287	137	**17**	5
Corporate	**61**	668	(91)	**NM**	NM
Total	**$ 8,211**	$ 6,719	22%	**16%**	19%

Investment Bank

JPMorgan Chase is one of the world's leading investment banks, as evidenced by the breadth of its client relationships and product capabilities. The Investment Bank has extensive relationships with corporations, financial institutions, governments and institutional investors worldwide. The Firm provides a full range of investment banking products and services, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, and market-making in cash securities and derivative instruments in all major capital markets. The Investment Bank also commits the Firm's own capital to proprietary investing and trading activities.

As a result of the Merger, the Treasury business has been transferred to the Corporate sector, and prior periods have been restated to reflect the reorganization.

Selected income statement data

Year ended December 31,[a] (in millions, except ratios)	2004	2003	2002
Revenue			
Investment banking fees:			
Advisory	$ 938	$ 640	$ 743
Equity underwriting	781	699	470
Debt underwriting	1,853	1,532	1,494
Total investment banking fees	3,572	2,871	2,707
Trading-related revenue:[b]			
Fixed income and other	5,008	6,016	4,607
Equities	427	556	20
Credit portfolio	6	(186)	(143)
Total trading-related revenue	5,441	6,386	4,484
Lending & deposit related fees	539	440	394
Asset management, administration and commissions	1,400	1,217	1,244
Other income	328	103	(125)
Noninterest revenue	11,280	11,017	8,704
Net interest income[b]	1,325	1,667	1,978
Total net revenue[c]	12,605	12,684	10,682
Provision for credit losses	(640)	(181)	2,392
Credit reimbursement from (to) TSS[d]	90	(36)	(82)
Noninterest expense			
Compensation expense	4,893	4,462	4,298
Noncompensation expense	3,803	3,840	3,500
Total noninterest expense	8,696	8,302	7,798
Operating earnings before income tax expense	4,639	4,527	410
Income tax expense (benefit)	1,691	1,722	(3)
Operating earnings	$ 2,948	$ 2,805	$ 413
Financial ratios			
ROE	17%	15%	2%
ROA	0.62	0.64	0.10
Overhead ratio	69	65	73
Compensation expense as % of total net revenue	39	35	40

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Trading revenue, on a reported basis, excludes the impact of Net interest income related to IB's trading activities; this income is recorded in Net interest income. However, in this presentation, to assess the profitability of IB's trading business, the Firm combines these revenues for segment reporting purposes. The amount reclassified from Net interest income to Trading revenue was $1.9 billion, $2.1 billion and $1.9 billion for 2004, 2003 and 2002, respectively.
(c) Total net revenue includes tax-equivalent adjustments, primarily due to tax-exempt income from municipal bond investments, and income tax credits related to affordable housing investments of $274 million, $117 million and $112 million for 2004, 2003, and 2002, respectively.
(d) TSS is charged a credit reimbursement related to certain exposures managed within the IB credit portfolio on behalf of clients shared with TSS. For a further discussion, see Credit reimbursement on page 29 of this Annual Report.

2004 compared with 2003

In 2004, Operating earnings of $2.9 billion were up 5% from the prior year. Increases in Investment banking fees, a reduction in the Provision for credit losses and the impact of the Merger were partially offset by decreases in trading revenues and net interest income. Return on equity was 17%.

Total net revenue of $12.6 billion was relatively flat from the prior year, primarily due to lower Fixed income markets revenues and total Credit portfolio revenues, offset by increases in Investment banking fees and the impact of the Merger. The decline in revenue from Fixed income markets was driven by weaker portfolio management trading results, mainly in the interest rate markets business. Total credit portfolio revenues were down due to lower net interest income and lending fees, primarily driven by lower loan balances; these were partially offset by higher trading revenue due to more severe credit spread tightening in 2003 relative to 2004. Investment banking fees increased by 24% over the prior year, driven by significant gains in advisory and debt underwriting. The advisory gains were a result of increased global market volumes and market share, while the higher underwriting fees were due to stronger client activity.

The Provision for credit losses was a benefit of $640 million, compared with a benefit of $181 million in 2003. The improvement in the provision was the result of a $633 million decline in net charge-offs, partially offset by lower reductions in the allowance for credit losses in 2004 relative to 2003. For additional information, see Credit risk management on pages 57–69 of this Annual Report.

For the year ended December 31, 2004, Noninterest expense was up 5% from the prior year. The increase from 2003 was driven by higher Compensation expense, including strategic investments and the impact of the Merger.

2003 compared with 2002

Operating earnings of $2.8 billion were up significantly over 2002. The increase in earnings was driven by a significant decline in the Provision for credit losses, coupled with strong growth in fixed income and equity markets revenues.

Total net revenue was $12.7 billion, an increase of $2.0 billion from the prior year. The low interest rate environment, improvement in equity markets and volatility in credit markets produced increased client and portfolio management revenue in fixed income and equities. Market share gains in equity underwriting contributed to the increase in Investment banking fees over 2002.

The Provision for credit losses was a benefit of $181 million in 2003, compared with a cost of $2.4 billion in 2002, reflecting improvement in the overall credit quality of the wholesale portfolio and the restructuring of several nonperforming wholesale loans.

Noninterest expense increased by 6% from 2002, reflecting higher incentives related to improved financial performance and the impact of expensing stock options. Noncompensation expenses were up 10% from the prior year due to increases in technology and occupancy costs.

Selected metrics

Year ended December 31,[a] (in millions, except headcount and ratios)	2004	2003	2002
Revenue by business			
Investment banking fees	$ 3,572	$ 2,871	$ 2,707
Fixed income markets	6,314	6,987	5,450
Equities markets	1,491	1,406	1,018
Credit portfolio	1,228	1,420	1,507
Total net revenue	$ 12,605	$ 12,684	$ 10,682
Revenue by region			
Americas	$ 6,870	$ 7,250	$ 6,360
Europe/Middle East/Africa	4,082	4,331	3,215
Asia/Pacific	1,653	1,103	1,107
Total net revenue	$ 12,605	$ 12,684	$ 10,682
Selected balance sheet (average)			
Total assets	$473,121	$436,488	$ 429,866
Trading assets–debt and equity instruments	173,086	156,408	134,191
Trading assets–derivatives receivables	58,735	83,361	70,831
Loans[b]	42,618	45,037	55,998
Adjusted assets[c]	393,646	370,776	359,324
Equity	17,290	18,350	19,134
Headcount	17,478	14,691	15,012
Credit data and quality statistics			
Net charge-offs	$ 47	$ 680	$ 1,627
Nonperforming assets:			
Nonperforming loans[d][e]	954	1,708	3,328
Other nonperforming assets	242	370	408
Allowance for loan losses	1,547	1,055	1,878
Allowance for lending related commitments	305	242	324
Net charge-off rate[b]	0.13%	1.65%	3.15%
Allowance for loan losses to average loans[b]	4.27	2.56	3.64
Allowance for loan losses to nonperforming loans[d]	163	63	57
Nonperforming loans to average loans	2.24	3.79	5.94
Market risk–average trading and credit portfolio VAR			
Trading activities:			
Fixed income[f]	$ 74	$ 61	NA
Foreign exchange	17	17	NA
Equities	28	18	NA
Commodities and other	9	8	NA
Diversification	(43)	(39)	NA
Total trading VAR	85	65	NA
Credit portfolio VAR[g]	14	18	NA
Diversification	(9)	(14)	NA
Total trading and credit portfolio VAR	$ 90	$ 69	NA

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

(b) The year-to-date average loans held for sale are $6.4 billion, $3.8 billion and $4.3 billion for 2004, 2003 and 2002, respectively. These amounts are not included in the allowance coverage ratios and net charge-off rates. The 2002 net charge-offs and net charge-off rate exclude charge-offs of $212 million taken on lending-related commitments.

(c) Adjusted assets equals total average assets minus (1) securities purchased under resale agreements and securities borrowed less securities sold, not yet purchased; (2) assets of variable interest entities (VIEs) consolidated under FIN 46R; (3) cash and securities segregated and on deposit for regulatory and other purposes; and (4) goodwill and intangibles. The amount of adjusted assets is presented to assist the reader in comparing the IB's asset and capital levels to other investment banks in the securities industry. Asset-to-equity leverage ratios are commonly used as one measure to assess a company's capital adequacy. The IB believes an adjusted asset amount, which excludes certain assets considered to have a low risk profile, provides a more meaningful measure of balance sheet leverage in the securities industry. See Capital management on pages 50–52 of this Annual Report for a discussion of the Firm's overall capital adequacy and capital management.

(d) Nonperforming loans include loans held for sale of $2 million, $30 million and $16 million as of December 31, 2004, 2003 and 2002, respectively. These amounts are not included in the allowance coverage ratios.

(e) Nonperforming loans exclude loans held for sale of $351 million, $22 million and $2 million as of December 31, 2004, 2003, and 2002, respectively, that were purchased as part of the IB's proprietary investing activities.

(f) Includes all mark-to-market trading activities, plus available-for-sale securities held for IB investing purposes.

(g) Includes VAR on derivative credit valuation adjustments, credit valuation adjustment hedges and mark-to-market loan hedges, which are reported in Trading revenue. This VAR does not include the accrual loan portfolio, which is not marked to market.

NA - Data for 2002 is not available on a comparable basis.

According to Thomson Financial, in 2004, the Firm improved its ranking in U.S. announced M&A from #8 to #1, and Global announced M&A from #4 to #2, while increasing its market share significantly. The Firm's U.S. initial public offerings ranking improved from #16 to #4, with the Firm moving to #6 from #4 in the U.S. Equity & Equity-related category. The Firm maintained its #1 ranking in U.S. syndicated loans, with a 32% market share, and its #3 position in Global Debt, Equity and Equity-related.

Market shares and rankings[a]

	2004		2003		2002	
December 31,	Market Share	Rankings	Market Share	Rankings	Market Share	Rankings
Global debt, equity and equity-related	7%	# 3	8%	# 3	8%	#3
Global syndicated loans	20	# 1	20	# 1	26	#1
Global long-term debt	7	# 2	8	# 2	8	#2
Global equity and equity-related	6	# 6	8	# 4	4	#8
Global announced M&A	26	# 2	16	# 4	14	#5
U.S. debt, equity and equity-related	8	# 5	9	# 3	10	#2
U.S. syndicated loans	32	# 1	35	# 1	39	#1
U.S. long-term debt	12	# 2	10	# 3	13	#2
U.S. equity and equity-related	8	# 6	11	# 4	6	#6
U.S. announced M&A	33	# 1	13	# 8	14	#7

(a) Sourced from Thomson Financial Securities data. Global announced M&A is based on rank value; all other rankings are based on proceeds, with full credit to each book manager/equal if joint. Because of joint assignments, market share of all participants will add up to more than 100%. Market share and rankings are presented on a combined basis for all periods presented, reflecting the merger of JPMorgan Chase and Bank One.

Composition of revenue

Year ended December 31,[a] (in millions)	Investment banking fees	Trading-related revenue	Lending & deposit related fees	Asset management, administration and commissions	Other income	NII	Total net revenue
2004							
Investment banking fees	**$ 3,572**	**$ —**	**$ —**	**$ —**	**$ —**	**$ —**	**$ 3,572**
Fixed income markets	**—**	**5,008**	**191**	**287**	**304**	**524**	**6,314**
Equities markets	**—**	**427**	**—**	**1,076**	**(95)**	**83**	**1,491**
Credit portfolio	**—**	**6**	**348**	**37**	**119**	**718**	**1,228**
Total	**$ 3,572**	**$ 5,441**	**$ 539**	**$ 1,400**	**$ 328**	**$ 1,325**	**$ 12,605**
2003							
Investment banking fees	$ 2,871	$ —	$ —	$ —	$ —	$ —	$ 2,871
Fixed income markets	—	6,016	107	331	84	449	6,987
Equities markets	—	556	—	851	(85)	84	1,406
Credit portfolio	—	(186)	333	35	104	1,134	1,420
Total	$ 2,871	$ 6,386	$ 440	$ 1,217	$ 103	$ 1,667	$ 12,684
2002							
Investment banking fees	$ 2,707	$ —	$ —	$ —	$ —	$ —	$ 2,707
Fixed income markets	—	4,607	75	295	(20)	493	5,450
Equities markets	—	20	—	911	(53)	140	1,018
Credit portfolio	—	(143)	319	38	(52)	1,345	1,507
Total	$ 2,707	$ 4,484	$ 394	$ 1,244	$ (125)	$ 1,978	$ 10,682

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

IB's revenues are comprised of the following:

Investment banking fees includes advisory, equity underwriting, bond underwriting and loan syndication fees.

Fixed income markets includes client and portfolio management revenue related to both market-making and proprietary risk-taking across global fixed income markets, including government and corporate debt, foreign exchange, interest rate and commodities markets.

Equities markets includes client and portfolio management revenue related to market-making and proprietary risk-taking across global equity products, including cash instruments, derivatives and convertibles.

Credit portfolio revenue includes Net interest income, fees and loan sale activity for IB's credit portfolio. Credit portfolio revenue also includes gains or losses on securities received as part of a loan restructuring, and changes in the credit valuation adjustment ("CVA"), which is the component of the fair value of a derivative that reflects the credit quality of the counterparty. See page 63 of the Credit risk management section of this Annual Report for a further discussion of the CVA. Credit portfolio revenue also includes the results of risk management related to the Firm's lending and derivative activities. See pages 64–65 of the Credit risk management section of this Annual Report for a further discussion on credit derivatives.

Retail Financial Services

RFS includes Home Finance, Consumer & Small Business Banking, Auto & Education Finance and Insurance. Through this group of businesses, the Firm provides consumers and small businesses with a broad range of financial products and services including deposits, investments, loans and insurance. Home Finance is a leading provider of consumer real estate loan products and is one of the largest originators and servicers of home mortgages. Consumer & Small Business Banking offers one of the largest branch networks in the United States, covering 17 states with 2,508 branches and 6,650 automated teller machines ("ATMs"). Auto & Education Finance is the largest bank originator of automobile loans as well as a top provider of loans for college students. Through its Insurance operations, the Firm sells and underwrites an extensive range of financial protection products and investment alternatives, including life insurance, annuities and debt protection products.

Selected income statement data

Year ended December 31,[a] (in millions, except ratios)	2004	2003	2002
Revenue			
Lending & deposit related fees	$ 1,013	$ 486	$ 509
Asset management, administration and commissions	849	357	368
Securities/private equity gains (losses)	(83)	381	493
Mortgage fees and related income	1,037	905	982
Credit card income	230	107	91
Other income	31	(28)	82
Noninterest revenue	3,077	2,208	2,525
Net interest income	7,714	5,220	3,823
Total net revenue	10,791	7,428	6,348
Provision for credit losses	449	521	334
Noninterest expense			
Compensation expense	2,621	1,695	1,496
Noncompensation expense	3,937	2,773	2,234
Amortization of intangibles	267	3	3
Total noninterest expense	6,825	4,471	3,733
Operating earnings before income tax expense	3,517	2,436	2,281
Income tax expense	1,318	889	849
Operating earnings	$ 2,199	$ 1,547	$ 1,432
Financial ratios			
ROE	24%	37%	37%
ROA	1.18	1.05	1.25
Overhead ratio	63	60	59

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

2004 compared with 2003

Operating earnings were $2.2 billion, up from $1.5 billion a year ago. The increase was largely due to the Merger. Excluding the benefit of the Merger, earnings declined as lower MSR risk management results and reduced prime mortgage production revenue offset the benefits of growth in loan balances, wider spreads on deposit products and improvement in credit costs.

Total net revenue increased to $10.8 billion, up 45% from the prior year. Net interest income increased by 48% to $7.7 billion, primarily due to the Merger, growth in retained loan balances and wider spreads on deposit products. Noninterest revenue increased to $3.1 billion, up 39%, due to the Merger and higher mortgage servicing income. Both components of total revenue included declines associated with risk managing the MSR asset and lower prime mortgage originations.

The Provision for credit losses was down 14% to $449 million, despite the influence of the Merger. The effect of the Merger was offset by a reduction in the allowance for loan losses, resulting from the sale of the manufactured home loan portfolio, and continued positive credit quality trends in the consumer lending businesses.

Noninterest expense totaled $6.8 billion, up 53% from the prior year, primarily due to the Merger and continued investments to expand the branch network. Partially offsetting the increase were merger-related expense savings in all businesses.

2003 compared with 2002

Total net revenue was $7.4 billion in 2003, an increase of 17% over 2002. Net interest income increased by 37% to $5.2 billion, reflecting the positive impact of the low interest rate environment on consumer loan originations, particularly in Home Finance, and on spreads earned on retained loans.

The Provision for credit losses of $521 million increased by 56% compared with the prior year due to continued growth in the retained loan portfolios. Credit quality remained stable in 2003, as charge-offs decreased slightly, to $381 million.

Noninterest expense rose 20% to $4.5 billion. The increase reflected higher business volumes and compensation costs.

Selected metrics

Year ended December 31,[a] (in millions, except headcount and ratios)	2004	2003	2002
Selected balance sheet (ending)			
Total assets	$ 226,560	$ 139,316	NA
Loans[b]	202,473	121,921	NA
Core deposits[c]	157,256	75,850	NA
Total deposits	182,765	86,162	NA
Selected balance sheet (average)			
Total assets	$ 185,928	$ 147,435	$ 114,248
Loans[d]	162,768	120,750	93,125
Core deposits[c]	121,121	80,116	68,551
Total deposits	137,796	89,793	79,348
Equity	9,092	4,220	3,907
Headcount	59,632	32,278	29,096
Credit data and quality statistics			
Net charge-offs[e]	$ 990	$ 381	$ 382
Nonperforming loans[f]	1,161	569	554
Nonperforming assets	1,385	775	730
Allowance for loan losses	1,228	1,094	955
Net charge-off rate	0.67%	0.40%	0.48%
Allowance for loan losses to ending loans[b]	0.67	1.04	NA
Allowance for loan losses to nonperforming loans[f]	107	209	181
Nonperforming loans to total loans	0.57	0.47	NA

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) End-of-period loans include loans held for sale of $18,022 million, $17,105 million and $19,948 million at December 31, 2004, 2003 and 2002, respectively. Those amounts are not included in the allowance coverage ratios.
(c) Includes demand and savings deposits.
(d) Average loans include loans held for sale of $14,736 million, $25,293 million and $13,500 million for 2004, 2003 and 2002, respectively. These amounts are not included in the net charge-off rate.
(e) Includes $406 million of charge-offs related to the manufactured home loan portfolio in the fourth quarter of 2004.
(f) Nonperforming loans include loans held for sale of $13 million, $45 million and $25 million at December 31, 2004, 2003 and 2002, respectively. These amounts are not included in the allowance coverage ratios.
NA – Data for 2002 is not available on a comparable basis.

Home Finance

Home Finance is comprised of two key business segments: Prime Production & Servicing and Consumer Real Estate Lending. The Prime Production & Servicing segment includes the operating results associated with the origination, sale and servicing of prime mortgages. Consumer Real Estate Lending reflects the operating results of consumer loans that are secured by real estate, retained by the Firm and held in the portfolio. This portfolio includes prime and subprime first mortgages, home equity lines and loans, and manufactured home loans. The Firm stopped originating manufactured home loans early in 2004 and sold substantially all of its remaining portfolio at the end of the year.

Selected income statement data by business

Year ended December 31,[a] (in millions)	2004	2003	2002
Prime production and servicing			
Production	$ 728	$ 1,339	$ 1,052
Servicing:			
Mortgage servicing revenue, net of amortization	651	453	486
MSR risk management results	113	784	670
Total net revenue	1,492	2,576	2,208
Noninterest expense	1,115	1,124	921
Operating earnings	240	918	821
Consumer real estate lending			
Total net revenue	2,376	1,473	712
Provision for credit losses	74	240	191
Noninterest expense	922	606	417
Operating earnings	881	414	81
Total Home Finance			
Total net revenue	3,868	4,049	2,920
Provision for credit losses	74	240	191
Noninterest expense	2,037	1,730	1,338
Operating earnings	1,121	1,332	902

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

2004 compared with 2003

Operating earnings in the Prime Production & Servicing segment dropped to $240 million from $918 million in the prior year. Results reflected a decrease in prime mortgage production revenue, to $728 million from $1.3 billion, due to a decline in mortgage originations. Operating earnings were also impacted by a drop in MSR risk management revenue, to $113 million from $784 million in the prior year. Results in 2004 included realized losses of $89 million on the sale of AFS securities associated with risk management of the MSR asset, compared with securities gains of $359 million in the prior year. Noninterest expense was relatively flat at $1.1 billion.

Operating earnings for the Consumer Real Estate Lending segment more than doubled to $881 million from $414 million in the prior year. The increase was largely due to the addition of the Bank One home equity lending business but also reflected growth in retained loan balances and a $95 million net benefit associated with the sale of the $4 billion manufactured home loan portfolio; partially offsetting these increases were lower subprime mortgage securitization gains. These factors contributed to total net revenue rising 61% to $2.4 billion. The provision for credit losses, at $74 million, decreased by 69% from a year ago. This was the result of an $87 million reduction in the allowance for loan losses associated with the manufactured home loan portfolio sale, improved credit quality and lower delinquencies, partially offset by the Merger. Noninterest expense totaled $922 million, up 52% from the year-ago period, largely due to the Merger.

2003 compared with 2002

Home Finance achieved record financial performance in 2003, as operating earnings of $1.3 billion increased by 48% from 2002.

Total net revenue of $4.0 billion increased by 39% over 2002, given record production revenue, improved margins and higher home equity revenue.

The provision for credit losses of $240 million for 2003 increased by 26% over 2002, primarily due to higher retained loan balances. Credit quality continued to be strong relative to 2002, as evidenced by a lower net charge-off ratio and reduced delinquencies.

Noninterest expense of $1.7 billion increased by 29% from 2002, primarily a result of growth in origination volume. The increase in expenses was also a result of higher performance-related incentives and strategic investments made to further expand certain distribution channels. These were partially offset by production-related expense reduction efforts initiated in the fourth quarter of 2003.

Selected metrics

Year ended December 31,[a] (in millions, except ratios and where otherwise noted)	2004	2003	2002
Origination volume by channel (in billions)			
Retail	$ 74.2	$ 90.8	$ 56.3
Wholesale	48.5	65.6	36.2
Correspondent	22.8	44.5	20.6
Correspondent negotiated transactions	41.5	83.3	42.6
Total	187.0	284.2	155.7
Origination volume by business (in billions)			
Mortgage	$ 144.6	$ 259.5	$ 141.8
Home equity	42.4	24.7	13.9
Total	187.0	284.2	155.7
Business metrics (in billions)			
Loans serviced (ending)	$ 562.0	$ 470.0	$ 426.0
MSR net carrying value (ending)	5.1	4.8	3.2
End of period loans owned			
Mortgage loans held for sale	14.2	15.9	18.8
Mortgage loans retained	42.6	34.5	26.9
Home equity and other loans	67.9	24.1	18.5
Total end of period loans owned	124.7	74.5	64.2
Average loans owned			
Mortgage loans held for sale	12.1	23.5	12.0
Mortgage loans retained	40.7	32.0	27.7
Home equity and other loans	47.0	19.4	17.2
Total average loans owned	99.8	74.9	56.9
Overhead ratio	53%	43%	46%
Credit quality statistics			
30+ day delinquency rate	1.27%	1.81%	3.07%
Net charge-offs			
Mortgage	$ 19	$ 26	$ 50
Home equity and other loans[b]	554	109	93
Total net charge-offs	573	135	143
Net charge-off rate			
Mortgage	0.05%	0.08%	0.18%
Home equity and other loans	1.18	0.56	0.53
Total net charge-off rate[c]	0.65	0.26	0.32
Nonperforming assets	$ 844	$ 546	$ 518

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Includes $406 million of charge-offs related to the manufactured home loan portfolio in the fourth quarter of 2004.
(c) Excludes mortgage loans held for sale.

Home Finance's origination channels are comprised of the following:

Retail – A mortgage banker employed by the Firm directly contacts borrowers who are buying or refinancing a home through a branch office, through the Internet or by phone. Borrowers are frequently referred to a mortgage banker by real estate brokers, home builders or other third parties.

Wholesale – A third-party mortgage broker refers loans to a mortgage banker at the Firm. Brokers are independent loan originators that specialize in finding and counseling borrowers but do not provide funding for loans.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions sell closed loans to the Firm.

Correspondent negotiated transactions ("CNT") – Mid- to large-sized mortgage lenders, banks and bank-owned mortgage companies sell servicing to the Firm on an as-originated basis. These transactions supplement traditional production channels and provide growth opportunities in the servicing portfolio in stable and rising-rate periods.

The table below reconciles management's disclosure of Home Finance's revenue into the reported U.S. GAAP line items shown on the Consolidated statement of income and in the related Notes to Consolidated financial statements:

Year ended December 31,[a]	Prime production and servicing			Consumer real estate lending			Total revenue		
(in millions)	**2004**	2003	2002	**2004**	2003	2002	**2004**	2003	2002
Net interest income	**$ 700**	$ 1,556	$ 727	**$ 2,245**	$ 1,226	$ 712	**$ 2,945**	$ 2,782	$ 1,439
Securities / private equity gains (losses)	**(89)**	359	498	**—**	—	—	**(89)**	359	498
Mortgage fees and related income[b]	**881**	661	983	**131**	247	—	**1,012**	908	983
Total	**$ 1,492**	$ 2,576	$ 2,208	**$ 2,376**	$ 1,473	$ 712	**$ 3,868**	$ 4,049	$ 2,920

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Includes activity reported elsewhere as Other income.

The following table details the MSR risk management results in the Home Finance business:

MSR risk management results

Year ended December 31,[a] (in millions)	**2004**	2003	2002
Reported amounts:			
MSR valuation adjustments[b]	**$ (248)**	$ (253)	$ (4,040)
Derivative valuation adjustments and other risk management gains (losses)[c]	**361**	1,037	4,710
MSR risk management results	**$ 113**	$ 784	$ 670

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Excludes subprime loan MSR activity of $(2) million and $(13) million in 2004 and 2002, respectively. There was no subprime loan MSR activity in 2003.
(c) Includes gains, losses and interest income associated with derivatives both designated and not designated as a SFAS 133 hedge, and securities classified as both trading and available-for-sale.

Home Finance uses a combination of derivatives, AFS securities and trading securities to manage changes in the fair value of the MSR asset. These risk management activities are intended to protect the economic value of the MSR asset by providing offsetting changes in the fair value of related risk management instruments. The type and amount of hedging instruments used in this risk management activity change over time as market conditions and approach dictate.

During 2004, negative MSR valuation adjustments of $248 million were more than offset by $361 million of aggregate risk management gains, including net interest earned on AFS securities. In 2003, negative MSR valuation adjustments of $253 million were more than offset by $1.0 billion of aggregate risk management gains, including net interest earned on AFS securities. Unrealized gains/(losses) on AFS securities were $(3) million, $(144) million and $377 million at December 31, 2004, 2003 and 2002, respectively. For a further discussion of MSRs, see Critical accounting estimates on page 79 and Note 15 on pages 109–111 of this Annual Report.

Consumer & Small Business Banking

Consumer & Small Business Banking offers a full array of financial services through a branch network spanning 17 states as well as through the Internet. Product offerings include checking and savings accounts, mutual funds and annuities, credit cards, mortgages and home equity loans, and loans for small business customers (generally with annual sales less than $10 million). This segment also includes community development loans.

Selected income statement data

Year ended December 31,[a] (in millions)	**2004**	2003	2002
Total net revenue	**$ 5,385**	$ 2,422	$ 2,648
Provision for credit losses	**165**	76	(31)
Noninterest expense	**3,981**	2,358	2,055
Operating earnings	**760**	(4)	361

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

2004 compared with 2003

Operating earnings totaled $760 million, up from a loss of $4 million in the prior-year period. The increase was largely due to the Merger but also reflected wider spreads on deposits and lower expenses. These benefits were partially offset by a higher Provision for credit losses.

Total net revenue was $5.4 billion, compared with $2.4 billion in the prior year. While the increase is primarily attributable to the Merger, total net revenue also benefited from wider spreads on deposits.

The Provision for credit losses increased to $165 million from $76 million in the prior year. The increase was in part due to the Merger but also reflected an increase in the Allowance for credit losses to cover high-risk portfolio segments.

The increase in noninterest expense to $4.0 billion was largely attributable to the Merger. Incremental expense from investments in the branch distribution network was also a contributing factor.

2003 compared with 2002

Total net revenue of $2.4 billion decreased by 9% compared with 2002. Net interest income declined by 10% to $1.6 billion, primarily due to the low–interest rate environment. Noninterest revenue decreased by 5% to $828 million given lower deposit fee income, decreased debit card fees and one-time gains in 2002.

Noninterest expense of $2.4 billion increased by 15% from 2002. The increase was largely due to investments in technology within the branch network and higher compensation expenses related to increased staff levels.

The Provision for credit losses of $76 million increased by $107 million compared with 2002. This reflected a reduction in the allowance for loan losses in 2002.

Selected metrics

Year ended December 31,[a] (in millions, except ratios and where otherwise noted)	2004	2003	2002
Business metrics (in billions)			
End-of-period balances			
Small business loans	$ 12.5	$ 2.2	NA
Consumer and other loans[b]	2.2	2.0	NA
Total loans	14.7	4.2	NA
Core deposits[c]	146.7	66.4	NA
Total deposits	172.2	76.7	NA
Average balances			
Small business loans	$ 7.3	$ 2.1	$ 1.9
Consumer and other loans[b]	2.1	2.0	2.6
Total loans	9.4	4.1	4.5
Core deposits[c]	110.0	64.8	57.9
Total deposits	126.6	74.4	68.7
Number of:			
Branches	2,508	561	560
ATMs	6,650	1,931	1,876
Personal bankers	5,324	1,820	1,587
Personal checking accounts (in thousands)	7,286	1,984	2,037
Business checking accounts (in thousands)	894	347	345
Online customers (in thousands)	6,587	NA	NA
Debit cards issued (in thousands)	8,392	2,380	2,352
Overhead ratio	74%	97%	78%
Retail brokerage business metrics			
Investment sales volume	$7,324	$ 3,579	NA
Number of dedicated investment sales representatives	1,364	349	291
Credit quality statistics			
Net charge-offs			
Small business	$ 77	$ 35	$ 24
Consumer and other loans	77	40	51
Total net charge-offs	154	75	75
Net charge-off rate			
Small business	1.05%	1.67%	1.26%
Consumer and other loans	3.67	2.00	1.96
Total net charge-off rate	1.64	1.83	1.67
Nonperforming assets	$ 299	$ 72	$ 94

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Primarily community development loans.
(c) Includes demand and savings deposits.
NA - Data is not available on a comparable basis.

Auto & Education Finance

Auto & Education Finance provides automobile loans and leases to consumers and loans to commercial clients, primarily through a national network of automotive dealers. The segment also offers loans to students via colleges and universities across the United States.

Selected income statement data

Year ended December 31,[a] (in millions)	2004	2003	2002
Total net revenue	$ 1,145	$ 842	$ 683
Provision for credit losses	210	205	174
Noninterest expense	490	291	247
Operating earnings	270	206	166

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

2004 compared with 2003

Operating earnings totaled $270 million, up 31% from the prior year. While the increase was reflective of the Merger, performance for the year was moderated by narrower spreads and reduced origination volumes arising from a competitive operating environment.

Total net revenue increased by 36% to $1.1 billion from the prior year. This increase reflected the Merger but included a decline in net interest income, given the competitive operating environment in 2004 and incremental charges associated with the Firm's lease residual exposure.

The Provision for credit losses totaled $210 million, up 2% from the prior year. The increase was due to the Merger but was largely offset by a lower provision for credit losses, reflecting favorable credit trends.

Noninterest expense increased by 68% to $490 million, largely due to the Merger.

The following is a brief description of selected business metrics within Consumer & Small Business Banking.

- **Personal bankers –** Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.
- **Investment sales representatives –** Licensed retail branch sales personnel, assigned to support several branches, who assist with the sale of investment products including college planning accounts, mutual funds, annuities and retirement accounts.

2003 compared with 2002

In 2003, operating earnings were $206 million, 24% higher than in 2002. Total net revenue grew by 23% to $842 million. Net interest income grew by 33% in comparison to 2002, driven by higher average loans and leases outstanding and wider spreads.

The Provision for credit losses increased by 18% to $205 million, primarily reflecting a 32% increase in average loan and lease receivables. Credit quality continued to be strong relative to 2002, as evidenced by a lower net charge-off ratio and a reduced delinquency rate.

Noninterest expense of $291 million increased by 18% compared with 2002. The increase in expenses was driven by higher origination volume and higher performance-based incentives.

Selected metrics

Year ended December 31,[a] (in millions, except ratios and where otherwise noted)	2004	2003	2002
Business metrics (in billions)			
End of period loans and lease receivables			
Loans receivables	$ 54.6	$ 33.7	$ 28.0
Lease receivables	8.0	9.5	9.4
Total end-of-period loans and lease receivables	62.6	43.2	37.4
Average loans and lease receivables			
Loans outstanding (average)[b]	$ 44.3	$ 32.0	$ 23.3
Lease receivables (average)	9.0	9.7	8.4
Total average loans and lease receivables[b]	53.3	41.7	31.7
Overhead ratio	43%	35%	36%
Credit quality statistics			
30+ day delinquency rate	1.55%	1.42%	1.49%
Net charge-offs			
Loans	$ 219	$ 130	$ 126
Lease receivables	44	41	38
Total net charge-offs	263	171	164
Net charge off rate			
Loans[b]	0.52%	0.43%	0.58%
Lease receivables	0.49	0.42	0.45
Total net charge-off rate[b]	0.52	0.43	0.54
Nonperforming assets	$ 242	$ 157	$ 118

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Average loans include loans held for sale of $2.3 billion, $1.8 billion and $1.5 billion for, 2004, 2003 and 2002, respectively. These are not included in the net charge-off rate.

Insurance

Insurance is a provider of financial protection products and services, including life insurance, annuities and debt protection. Products and services are distributed through both internal lines of business and external markets.

Selected income statement data

Year ended December 31,[a] (in millions)	2004	2003	2002
Total net revenue	$ 393	$ 115	$ 97
Noninterest expense	317	92	93
Operating earnings	48	13	3
Memo: Consolidated gross insurance-related revenue[b]	1,191	611	536

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Includes revenue reported in the results of other businesses.

2004 compared with 2003

Insurance operating earnings totaled $48 million on total net revenue of $393 million in 2004. The increases in total net revenue and noninterest expense over the prior year were almost entirely due to the Merger.

2003 compared with 2002

Operating earnings in 2003 reflected a 19% increase in Total net revenue, while expenses were essentially flat.

Selected metrics

Year ended December 31,[a] (in millions, except where otherwise noted)	2004	2003	2002
Business metrics – ending balances			
Invested assets	$ 7,368	$ 1,559	$ 919
Policy loans	397	—	—
Insurance policy and claims reserves	7,279	1,096	535
Term premiums – first year annualized	28	—	—
Proprietary annuity sales	208	548	490
Number of policies in force – direct/assumed (in thousands)	2,611	631	NA
Insurance in force – direct/assumed	$ 277,827	$ 31,992	NA
Insurance in force – retained	80,691	31,992	NA
A.M. Best rating	A	A	A

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
NA - Data for 2002 is not available on a comparable basis.

The following is a brief description of selected business metrics within Insurance.

- **Proprietary annuity sales** represent annuity contracts marketed through and issued by subsidiaries of the Firm.
- **Insurance in force – direct/assumed** includes the aggregate face amount of insurance policies directly underwritten and assumed through reinsurance.
- **Insurance in force – retained** includes the aggregate face amounts of insurance policies directly underwritten and assumed through reinsurance, after reduction for face amounts ceded to reinsurers.

Card Services

Card Services is the largest issuer of general purpose credit cards in the United States, with approximately 94 million cards in circulation, and is the largest merchant acquirer. CS offers a wide variety of products to satisfy the needs of its cardmembers, including cards issued on behalf of many well-known partners, such as major airlines, hotels, universities, retailers and other financial institutions.

JPMorgan Chase uses the concept of "managed receivables" to evaluate the credit performance of the underlying credit card loans, both sold and not sold: as the same borrower is continuing to use the credit card for ongoing charges, a borrower's credit performance will affect both the receivables sold under SFAS 140 and those not sold. Thus, in its disclosures regarding managed receivables, JPMorgan Chase treats the sold receivables as if they were still on the balance sheet in order to disclose the credit performance (such as net charge-off rates) of the entire managed credit card portfolio. Operating results exclude the impact of credit card securitizations on revenue, the provision for credit losses, net charge-offs and receivables. Securitization does not change reported net income versus operating earnings; however, it does affect the classification of items on the Consolidated statements of income.

Selected income statement data – managed basis

Year ended December 31,[a] (in millions, except ratios)	2004	2003	2002
Revenue			
Asset management, administration and commissions	$ 75	$ 108	$ 126
Credit card income	2,179	930	826
Other income	117	54	31
Noninterest revenue	2,371	1,092	983
Net interest income	8,374	5,052	4,930
Total net revenue	10,745	6,144	5,913
Provision for credit losses	4,851	2,904	2,751
Noninterest expense			
Compensation expense	893	582	523
Noncompensation expense	2,485	1,336	1,320
Amortization of intangibles	505	260	286
Total noninterest expense	3,883	2,178	2,129
Operating earnings before income tax expense	2,011	1,062	1,033
Income tax expense	737	379	369
Operating earnings	$ 1,274	$ 683	$ 664
Financial metrics			
ROE	17%	20%	19%
Overhead ratio	36	35	36

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

2004 compared with 2003

Operating earnings of $1.3 billion increased by $591 million compared with the prior year, primarily due to the Merger. In addition, earnings benefited from higher loan balances and charge volume, partially offset by a higher provision for credit losses and higher expenses.

Total net revenue of $10.7 billion increased by $4.6 billion. Net interest income of $8.4 billion increased by $3.3 billion, primarily due to the Merger and higher loan balances. Noninterest revenue of $2.4 billion increased by $1.3 billion, primarily due to the Merger and higher charge volume, which generated increased interchange income. This was partially offset by higher volume-driven payments to partners, reflecting the sharing of income and increased rewards expense.

The Provision for credit losses of $4.9 billion increased by $1.9 billion, primarily due to the Merger and growth in credit card receivables. Credit ratios remained strong, benefiting from reduced contractual and bankruptcy charge-offs. The net charge-off ratio was 5.27%. The 30-day delinquency ratio was 3.70%.

Noninterest expense of $3.9 billion increased by $1.7 billion, primarily related to the Merger. In addition, expenses increased due to higher marketing expenses and volume-based processing expenses, partially offset by lower compensation expenses.

2003 compared with 2002

Operating earnings of $683 million increased by $19 million or 3% compared with the prior year. Earnings benefited from higher revenue, partially offset by a higher provision for credit losses and expenses.

Total net revenue of $6.1 billion increased by 4%. Net interest income of $5.1 billion increased by 2% due to higher spread and loan balances. Noninterest revenue of $1.1 billion increased by 11% due to higher charge volume, which generated increased interchange income. This was partially offset by higher rewards expense.

The Provision for credit losses was $2.9 billion, an increase of 6%, primarily due to the higher provision for credit losses and higher losses due to loan growth. Conservative risk management and rigorous collection practices contributed to stable credit quality.

Noninterest expense was $2.2 billion, an increase of 2%, due to volume-based processing expenses, partially offset by disciplined expense management.

Selected metrics

Year ended December 31,[a] (in millions, except headcount, ratios and where otherwise noted)	2004	2003	2002
Memo: Net securitization gains (amortization)	$ (8)	$ 1	$ 16
% of average managed outstandings:			
Net interest income	9.16%	9.95%	10.08%
Provision for credit losses	5.31	5.72	5.62
Noninterest revenue	2.59	2.15	2.01
Risk adjusted margin[b]	6.45	6.38	6.46
Noninterest expense	4.25	4.29	4.35
Pre-tax income	2.20	2.09	2.11
Operating earnings	1.39	1.35	1.36
Business metrics			
Charge volume (in billions)	$ 193.6	$ 88.2	$ 79.0
Net accounts opened (in thousands)	7,523	4,177	3,680
Credit cards issued (in thousands)	94,285	35,103	33,488
Number of registered internet customers (in millions)	13.6	3.7	2.2
Merchant acquiring business			
Bank card volume (in billions)	$ 396.2	$ 261.2	$ 226.1
Total transactions (in millions)	12,066	7,154	6,509
Selected ending balances			
Loans:			
Loans on balance sheet	$ 64,575	$ 17,426	$ 20,101
Securitized loans	70,795	34,856	30,722
Managed loans	$135,370	$ 52,282	$ 50,823
Selected average balances			
Managed assets	$ 94,741	$ 51,406	$ 49,648
Loans:			
Loans on balance sheet	$ 38,842	$ 17,604	$ 22,410
Securitized loans	52,590	33,169	26,519
Managed loans	$ 91,432	$ 50,773	$ 48,929
Equity	7,608	3,440	3,444
Headcount	19,598	10,612	10,885
Credit quality statistics – managed			
Net charge-offs	$ 4,821	$ 2,996	$ 2,887
Net charge-off rate	5.27%	5.90%	5.90%
Delinquency ratios – managed			
30+ days	3.70%	4.68%	4.69%
90+ days	1.72	2.19	2.16
Allowance for loan losses	$ 2,994	$ 1,225	$ 1,459
Allowance for loan losses to period-end loans	4.64%	7.03%	7.26%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Represents Total net revenue less Provision for credit losses.

The financial information presented below reconciles reported basis and managed basis to disclose the effect of securitizations.

Year ended December 31,[a] (in millions)	2004	2003	2002
Income statement data			
Credit card income			
Reported data for the period	$ 4,446	$ 2,309	$ 2,167
Securitization adjustments	(2,267)	(1,379)	(1,341)
Managed credit card income	$ 2,179	$ 930	$ 826
Other income			
Reported data for the period	$ 203	$ 125	$ 67
Securitization adjustments	(86)	(71)	(36)
Managed other income	$ 117	$ 54	$ 31
Net interest income			
Reported data for the period	$ 3,123	$ 1,732	$ 2,114
Securitization adjustments	5,251	3,320	2,816
Managed net interest income	$ 8,374	$ 5,052	$ 4,930
Total net revenue[b]			
Reported data for the period	$ 7,847	$ 4,274	$ 4,474
Securitization adjustments	2,898	1,870	1,439
Managed total net revenue	$ 10,745	$ 6,144	$ 5,913
Provision for credit losses			
Reported data for the period	$ 1,953	$ 1,034	$ 1,312
Securitization adjustments	2,898	1,870	1,439
Managed provision for credit losses	$ 4,851	$ 2,904	$ 2,751
Balance sheet – average balances			
Total average assets			
Reported data for the period	$ 43,657	$ 19,041	$ 23,129
Securitization adjustments	51,084	32,365	26,519
Managed average assets	$ 94,741	$ 51,406	$ 49,648
Credit quality statistics			
Net charge-offs			
Reported net charge-offs data for the period	$ 1,923	$ 1,126	$ 1,448
Securitization adjustments	2,898	1,870	1,439
Managed net charge-offs	$ 4,821	$ 2,996	$ 2,887

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Includes Credit card income, Other income and Net interest income.

The following is a brief description of selected business metrics within Card Services.

- **Charge volume** – Represents the dollar amount of cardmember purchases, balance transfers and cash advance activity.
- **Net accounts opened** – Includes originations, purchases and sales.
- **Merchant acquiring business** – Represents an entity that processes payments for merchants. JPMorgan Chase is a majority owner of Paymentech, Inc. and a 50% owner of Chase Merchant Services.
- **Bank card volume** – Represents the dollar amount of transactions processed for the merchants.
- **Total transactions** – Represents the number of transactions and authorizations processed for the merchants.

Commercial Banking

Commercial Banking serves more than 25,000 corporations, municipalities, financial institutions and not-for-profit entities, with annual revenues generally ranging from $10 million to $2 billion. A local market presence and a strong customer service model, coupled with a focus on risk management, provide a solid infrastructure for Commercial Banking to provide the Firm's complete product set – lending, treasury services, investment banking and investment management – for both corporate clients and their executives. Commercial Banking's clients benefit greatly from the Firm's extensive branch network and often use the Firm exclusively to meet their financial services needs.

Commercial Banking operates in 10 of the top 15 major U.S. metropolitan areas. Within this network, Commercial Banking is divided into three customer coverage segments. General coverage for corporate clients is done by Middle Market Banking, which generally covers clients up to $500 million, and Corporate Banking, which generally covers clients over $500 million. Corporate Banking typically focuses on clients that have broader investment banking needs. The third segment, Commercial Real Estate, serves investors in and developers of for-sale housing, multifamily rental, retail, office and industrial properties. In addition to these three customer groupings, Commercial Banking offers several products to the Firm's entire customer base. Chase Business Credit is a leading national provider of highly structured asset-based financing, syndications and collateral analysis. Chase Equipment Leasing finances a variety of equipment types and offers vendor programs for leading capital and technology equipment manufacturers. Given this structure, Commercial Banking manages a customer base and loan portfolio that is highly diversified across a broad range of industries and geographic locations.

Commercial Banking was known prior to the Merger as Chase Middle Market and was a business within the former Chase Financial Services.

Selected income statement data

Year ended December 31,[a] (in millions, except ratios)	2004	2003	2002
Revenue			
Lending & deposit related fees	$ 441	$ 301	$ 285
Asset management, administration and commissions	32	19	16
Other income[b]	209	73	65
Noninterest revenue	682	393	366
Net interest income	1,692	959	999
Total net revenue	2,374	1,352	1,365
Provision for credit losses	41	6	72
Noninterest expense			
Compensation expense	465	285	237
Noncompensation expense	843	534	565
Amortization of intangibles	35	3	7
Total noninterest expense	1,343	822	809
Operating earnings before income tax expense	990	524	484
Income tax expense	382	217	201
Operating earnings	$ 608	$ 307	$ 283
Financial ratios			
ROE	29%	29%	24%
ROA	1.67	1.87	1.77
Overhead ratio	57	61	59

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) IB-related and commercial card revenues are included in Other income.

2004 compared with 2003

Operating earnings were $608 million, an increase of 98%, primarily due to the Merger.

Total net revenue was $2.4 billion, an increase of 76%, primarily due to the Merger. In addition to the overall increase related to the Merger, Net interest income of $1.7 billion was positively affected by higher deposit balances, partially offset by lower lending-related revenue. Noninterest revenue of $682 million was positively affected by higher investment banking fees and higher gains on the sale of loans and securities acquired in satisfaction of debt, partially offset by lower service charges on deposits, which often decline as interest rates rise.

The Provision for credit losses was $41 million, an increase of $35 million, primarily due to the Merger. Excluding the impact of the Merger, the provision was higher in 2004. Lower net charge-offs in 2004 were partially offset by lower reductions in the Allowance for credit losses in 2004 relative to 2003.

Noninterest expense was $1.3 billion, an increase of $521 million, or 63%, primarily related to the Merger.

2003 compared with 2002

Operating earnings were $307 million, an increase of 8% compared with 2002.

Total net revenue of $1.4 billion decreased by 1% compared with 2002. Net interest income of $1.0 billion decreased by 4% compared with the prior year, primarily due to lower deposit and loan spreads, partially offset by higher deposit and loan balances. Noninterest revenue was $393 million, an increase of 7%, primarily reflecting higher service charges on deposits and investment banking fees.

The Provision for credit losses was $6 million, a decrease of $66 million, which resulted from a larger reduction in the Allowance for credit losses and lower net charge-offs in 2003, reflecting an improvement in credit quality.

Noninterest expense was $822 million, an increase of 2% compared with 2002. The increase was the result of higher severance costs and performance-based incentives, partially offset by a decrease in other expenses.

Selected metrics

Year ended December 31,[a] (in millions, except headcount and ratios)	2004	2003	2002
Revenue by product:			
Lending	$ 764	$ 396	$ 414
Treasury services	1,467	896	925
Investment banking	120	66	51
Other	23	(6)	(25)
Total Commercial Banking revenue	2,374	1,352	1,365
Selected balance sheet (average)			
Total assets	$ 36,435	$ 16,460	$ 15,973
Loans and leases	32,417	14,049	13,642
Deposits	51,620	32,880	29,403
Equity	2,093	1,059	1,199
Headcount	4,555	1,730	1,807
Credit data and quality statistics:			
Net charge-offs	$ 61	$ 76	$ 107
Nonperforming loans	527	123	198
Allowance for loan losses	1,322	122	182
Allowance for lending-related commitments[b]	169	26	—
Net charge-off rate	0.19%	0.54%	0.78%
Allowance for loan losses to average loans	4.08	0.87	1.33
Allowance for loan losses to nonperforming loans	251	99	92
Nonperforming loans to average loans	1.63	0.88	1.45

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) In 2002, the Allowance for lending-related commitments was allocated to the IB. Had the amount been allocated to CB, the allowance would have been $24 million.

Commercial Banking revenues are comprised of the following:

Lending incorporates a variety of financing alternatives, such as term loans, revolving lines of credit and asset-based structures and leases, which are often secured by receivables, inventory, equipment or real estate.

Treasury services incorporates a broad range of products and services to help clients manage short-term liquidity through deposits and sweeps, and longer-term investment needs through money market accounts, certificates of deposit and mutual funds; manage working capital through lockbox, global trade, global clearing and commercial card products; and have ready access to information to manage their business through on-line reporting tools.

Investment banking products provide clients with more sophisticated capital-raising alternatives, through loan syndications, investment-grade debt, asset-backed securities, private placements, high-yield bonds and equity underwriting, and balance sheet and risk management tools through foreign exchange, derivatives, M&A and advisory services.

Treasury & Securities Services

Treasury & Securities Services is a global leader in providing transaction, investment and information services to support the needs of corporations, issuers and institutional investors worldwide. TSS is the largest cash management provider in the world and one of the top three global custodians. The Treasury Services business provides clients with a broad range of capabilities, including U.S. dollar and multi-currency clearing, ACH, trade, and short-term liquidity and working capital tools. The Investor Services business provides a wide range of capabilities, including custody, funds services, securities lending, and performance measurement and execution products. The Institutional Trust Services business provides trustee, depository and administrative services for debt and equity issuers. Treasury Services partners with the Commercial Banking, Consumer & Small Business Banking and Asset & Wealth Management segments to serve clients firmwide. As a result, certain Treasury Services revenues are included in other segments' results.

Selected income statement data

Year ending December 31,[a] (in millions, except ratios)	2004	2003	2002
Revenue			
Lending & deposit related fees	$ 647	$ 470	$ 445
Asset management, administration and commissions	2,445	1,903	1,800
Other income	382	288	328
Noninterest revenue	3,474	2,661	2,573
Net interest income	1,383	947	962
Total net revenue	4,857	3,608	3,535
Provision for credit losses	7	1	3
Credit reimbursement (to) from IB[b]	(90)	36	82
Noninterest expense			
Compensation expense	1,629	1,257	1,131
Noncompensation expense	2,391	1,745	1,616
Amortization of intangibles	93	26	24
Total noninterest expense	4,113	3,028	2,771
Operating earnings before income tax expense	647	615	843
Income tax expense	207	193	294
Operating earnings	$ 440	$ 422	$ 549
Financial ratios			
ROE	17%	15%	20%
Overhead ratio	85	84	78
Memo			
Treasury Services firmwide overhead ratios[c]	62	62	62
Treasury & Securities Services firmwide overhead ratio[c]	74	76	72

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) TSS is charged a credit reimbursement related to certain exposures managed within the IB credit portfolio on behalf of clients shared with TSS. For a further discussion, see Credit reimbursement on page 29 of this Annual Report.
(c) TSS and TS firmwide overhead ratios have been calculated based on the firmwide revenues described in footnote (b) on page 44 of this Annual Report and TSS or TS expenses, respectively, including those allocated to certain other lines of business.

2004 compared with 2003

Operating earnings for the year were $440 million, an increase of $18 million, or 4%. Results in 2004 include an after-tax gain of $10 million on the sale of an Investor Services business. Prior-year results include an after-tax gain of $22 million on the sale of an Institutional Trust Services business. Excluding these one-time gains, operating earnings increased by $30 million, or 8%. Both net revenue and Noninterest expense increased primarily as a result of the Merger, the acquisition of Bank One's Corporate Trust business in November 2003 and the acquisition of EFS in January 2004.

TSS net revenue improved by 35% to $4.9 billion. This revenue growth reflected the benefit of the Merger and the acquisitions noted above and improved product revenues across TSS. Net interest income grew to $1.4 billion from $947 million as a result of average deposit balance growth of 44%, to $128 billion, a change in the corporate deposit pricing methodology in 2004 and wider deposit spreads. Growth in fees and commissions was driven by a 20% increase in assets under custody to $9.1 trillion as well as new business growth in trade, commercial card, global equity products, securities lending, fund services, clearing and ACH. Partially offsetting these improvements were lower service charges on deposits, which often decline as interest rates rise, and a soft municipal bond market.

Treasury Services ("TS") net revenue grew to $2.0 billion, Investor Services ("IS") to $1.7 billion and Institutional Trust Services ("ITS") to $1.2 billion. TSS firmwide net revenue grew 41% to $6.5 billion. TSS firmwide net revenues include Treasury Services net revenues recorded in other lines of business.

Credit reimbursement to the Investment Bank was $90 million, compared with a credit from the Investment Bank of $36 million in the prior year, principally due to the Merger and a change in methodology. TSS is charged a credit reimbursement related to certain exposures managed within the Investment Bank credit portfolio on behalf of clients shared with TSS.

Noninterest expense totaled $4.1 billion, up from $3.0 billion, reflecting the Merger and the acquisitions noted above, $155 million of software impairment charges, upfront transition expenses related to on-boarding new custody and fund accounting clients, and legal and technology-related expenses.

On January 7, 2005, JPMorgan Chase agreed to acquire Vastera, a provider of global trade management solutions, for a total transaction value of approximately $129 million. Vastera's business will be combined with the Logistics and Trade Services businesses of the Treasury Services unit. The transaction is expected to close in the first half of 2005.

2003 compared with 2002

TSS operating earnings decreased by 23% from 2002 while delivering a return on allocated capital of 15%. A 9% increase in Noninterest expense and a lower credit reimbursement contributed to the lower earnings.

Total net revenue increased by 2%, with growth at ITS of 11%. ITS revenue growth was the result of debt product lines, increased volume in asset servicing, a pre-tax gain of $36 million on the sale of an Institutional Trust Services business in 2003, and the result of acquisitions which generated $29 million of new revenue in 2003. TS's revenue rose by 8% on higher trade and commercial payment card revenue and increased balance-related earnings, including

higher balance-deficiency fees resulting from the lower interest rate environment. IS's revenue contracted by 7%, the result of lower NII due to lower interest rates, lower foreign exchange and securities lending revenue, and a pre-tax gain of $50 million on the sale of the Firm's interest in a non-U.S. securities clearing firm in 2002.

Noninterest expense increased by 9%, attributable to higher severance, the impact of acquisitions, the cost associated with expensing of options, increased pension costs and charges to provide for losses on subletting unoccupied excess real estate.

TSS was assigned a credit reimbursement of pre-tax earnings and the associated capital related to certain credit exposures managed within IB's credit portfolio on behalf of clients shared with TSS. For 2003, the impact to TSS was to increase pre-tax operating earnings by $36 million and average allocated capital by $712 million.

Treasury & Securities Services firmwide metrics include certain TSS product revenues and deposits reported in other lines of business for customers who are also customers of those lines of business. In order to capture the firmwide impact of TS and TSS products and revenues, management reviews firmwide metrics such as firmwide deposits, firmwide revenue and firmwide overhead ratios in assessing financial performance for TSS. Firmwide metrics are necessary in order to understand the aggregate TSS business.

Selected metrics

Year ending December 31,[a] (in millions, except headcount and where otherwise noted)	2004	2003	2002
Revenue by business			
Treasury Services[b]	$ 1,994	$ 1,200	$ 1,111
Investor Services	1,709	1,448	1,561
Institutional Trust Services	1,154	960	863
Total net revenue	$ 4,857	$ 3,608	$ 3,535
Memo			
Treasury Services firmwide revenue[b]	$ 3,665	$ 2,214	$ 2,125
Treasury & Securities Services firmwide revenue[b]	6,528	4,622	4,549
Business metrics			
Assets under custody (in billions)	$ 9,137	$ 7,597	$ 6,336
Corporate trust securities under administration (in billions)[c]	6,676	6,127	NA
Selected balance sheet (average)			
Total assets	$ 23,430	$ 18,379	$ 17,239
Loans	7,849	6,009	5,972
Deposits			
U.S. deposits	82,928	54,116	32,698
Non-U.S. deposits	45,022	34,518	34,919
Total deposits	127,950	88,634	67,617
Equity	2,544	2,738	2,700
Memo			
Treasury Services firmwide deposits[d]	$ 99,587	$ 65,194	$ 41,508
Treasury & Securities Services firmwide deposits[d]	175,327	119,245	88,865
Headcount	22,612	15,145	14,810

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

(b) TSS and Treasury Services firmwide revenues include TS revenues recorded in certain other lines of business. Revenue associated with Treasury Services customers who are also customers of the Commercial Banking, Consumer & Small Business Banking and Asset & Wealth Management lines of business are reported in these other lines of business and are excluded from Treasury Services, as follows:

(in millions)	2004	2003	2002
Treasury Services revenue reported in Commercial Banking	$ 1,467	$ 896	$ 925
Treasury Services revenue reported in other lines of business	204	118	89

Note: Foreign exchange revenues are apportioned between TSS and the IB, and only TSS's share is included in TSS firmwide revenue.

(c) Corporate trust securities under administration include debt held in trust on behalf of third parties and debt serviced as agent.

(d) TSS and TS firmwide deposits include TS's deposits recorded in certain other lines of business. Deposits associated with Treasury Services customers who are also customers of the Commercial Banking line of business are reported in that line of business and are excluded from Treasury Services.

NA - Data for 2002 is not available on a comparable basis.

Asset & Wealth Management

Asset & Wealth Management provides investment management to retail and institutional investors, financial intermediaries and high-net-worth families and individuals globally. For retail investors, AWM provides investment management products and services, including a global mutual fund franchise, retirement plan administration, and consultation and brokerage services. AWM delivers investment management to institutional investors across all asset classes. The Private bank and Private client services businesses provide integrated wealth management services to ultra-high-net-worth and high-net-worth clients, respectively.

Selected income statement data

Year ended December 31,[a] (in millions, except ratios)	2004	2003	2002
Revenue			
Lending & deposit related fees	$ 28	$ 19	$ 21
Asset management, administration and commissions	3,140	2,258	2,228
Other income	215	205	216
Noninterest revenue	3,383	2,482	2,465
Net interest income	796	488	467
Total net revenue	4,179	2,970	2,932
Provision for credit losses	(14)	35	85
Noninterest expense			
Compensation expense	1,579	1,213	1,141
Noncompensation expense	1,502	1,265	1,261
Amortization of intangibles	52	8	6
Total noninterest expense	3,133	2,486	2,408
Operating earnings before income tax expense	1,060	449	439
Income tax expense	379	162	161
Operating earnings	$ 681	$ 287	$ 278
Financial ratios			
ROE	17%	5%	5%
Overhead ratio	75	84	82
Pre-tax margin ratio[b]	25	15	15

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

(b) Pre-tax margin represents Operating earnings before income taxes / Total net revenue, which is a comprehensive measure of pre-tax performance and is another basis by which AWM management evaluates its performance and that of its competitors. Pre-tax margin is an effective measure of AWM's earnings, after all costs are taken into consideration.

2004 compared with 2003

Operating earnings were $681 million, up 137% from the prior year, due largely to the Merger but also driven by increased revenue and a decrease in the Provision for credit losses; these were partially offset by higher Compensation expense.

Total net revenue was $4.2 billion, up 41%, primarily due to the Merger. Additionally, fees and commissions increased due to global equity market appreciation, net asset inflows and the acquisition of JPMorgan Retirement Plan Services ("RPS") in the second quarter of 2003. Fees and commissions also increased due to an improved product mix, with an increased percentage of assets in higher-yielding products. Net interest income increased due to deposit and loan growth.

The Provision for credit losses was a benefit of $14 million, a decrease of $49 million, due to an improvement in credit quality.

Noninterest expense was $3.1 billion, up 26%, due to the Merger as well as increased Compensation expense and the impact of increased technology and marketing initiatives.

2003 compared with 2002

Operating earnings were $287 million, up 3% from the prior year, reflecting an improved credit portfolio, the benefit of slightly higher revenues. During the second quarter of 2003, the Firm acquired American Century Retirement Plan Services Inc., a provider of defined contribution recordkeeping services, as part of its strategy to grow its U.S. retail investment management business. The business was renamed JPMorgan Retirement Plan Services ("RPS").

Total net revenue was $3.0 billion, up 1% from the prior year. The increase in fees and commissions reflected the acquisition of RPS and increased average equity market valuations in client portfolios, partly offset by institutional net outflows. Net interest income increased due to higher brokerage account balances and spreads. The decline in Other income primarily reflected nonrecurring items in 2002.

The Provision for credit losses decreased by 59%, due to an improvement in credit quality and recoveries.

Noninterest expense was $2.5 billion, up $78 million from 2002, reflecting the acquisition of RPS, higher Compensation expense, and real estate and software write-offs, partly offset by the continued impact of expense-management programs.

Selected metrics

Year ended December 31,[a] (in millions, except headcount and ratios)	2004	2003	2002
Revenue by client segment			
Private bank	$ 1,554	$ 1,437	$ 1,467
Retail	1,081	732	695
Institutional	994	723	688
Private client services	550	78	82
Total net revenue	$ 4,179	$ 2,970	$ 2,932
Business metrics			
Number of:			
Client advisors	1,226	615	673
Brown Co. average daily trades	29,901	27,150	24,584
Retirement Plan Services participants	918,000	756,000	—
Star rankings[b]			
% of customer assets in funds ranked 4 or better	48%	48%	NA
% of customer assets in funds ranked 3 or better	81	69	NA
Selected balance sheet (average)			
Total assets	$ 37,751	$ 33,780	$ 35,813
Loans	21,545	16,678	18,926
Deposits	32,039	20,249	19,329
Equity	3,902	5,507	5,649
Headcount	12,287	8,520	8,546

Year ended December 31,[a] (in millions, except ratios)	2004	2003	2002
Credit data and quality statistics			
Net charge-offs	$ 72	$ 9	$ 112
Nonperforming loans	79	173	139
Allowance for loan losses	216	130	97
Allowance for lending-related commitments	5	4	—
Net charge-off rate	0.33%	0.05%	0.59%
Allowance for loan losses to average loans	1.00	0.78	0.51
Allowance for loan losses to nonperforming loans	273	75	70
Nonperforming loans to average loans	0.37	1.04	0.73

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Derived from Morningstar for the United States; Micropal for the United Kingdom, Luxembourg, Hong Kong and Taiwan; and Nomura for Japan.
NA - Data for 2002 is not available on a comparable basis.

AWM's client segments are comprised of the following:

The **Private bank** addresses every facet of wealth management for ultra-high-net-worth individuals and families worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty wealth advisory services.

Retail provides more than 2 million customers worldwide with investment management, retirement planning and administration, and brokerage services through third-party and direct distribution channels.

Institutional serves more than 3,000 large and mid-size corporate and public institutions, endowments and foundations, and governments globally. AWM offers institutions comprehensive global investment services, including investment management across asset classes, pension analytics, asset-liability management, active risk budgeting and overlay strategies.

Private client services offers high-net-worth individuals, families and business owners comprehensive wealth management solutions that include financial planning, personal trust, investment and banking products and services.

Assets under supervision

2004 compared with 2003

Assets under supervision ("AUS") at December 31, 2004 were $1.3 trillion, up 66% from 2003, and Assets under management ("AUM") were $791 billion, up 41% from the prior year. The increases were primarily the result of the Merger, as well as market appreciation, net asset inflows and the acquisition of a majority interest in Highbridge Capital Management. The Firm also has a 43% interest in American Century Companies, Inc., whose AUM totaled $98 billion and $87 billion at December 31, 2004 and 2003, respectively. Custody, brokerage, administration, and deposits were $478 billion, up 135%, primarily due to the Merger, as well as market appreciation and net inflows across all products.

2003 compared with 2002

AUS at December 31, 2003, totaled $764 billion, up 19% from the prior year-end. AUM totaled $561 billion, up 9%, and custody, brokerage, administration and deposit accounts were $203 billion, up 54%. The increase in AUM was driven by higher equity market valuations in client portfolios, partly offset by institutional net outflows. Custody, brokerage, administration and deposits grew by $70 billion, driven by the acquisition of RPS ($41 billion), higher equity market valuations in client portfolios and net inflows from Private bank clients.

The diversification of AUS across product classes, client segments and geographic regions helped to mitigate the impact of market volatility on revenue. The Firm also had a 44% interest in American Century Companies, Inc., whose AUM totaled $87 billion and $72 billion at December 31, 2003 and 2002, respectively.

Assets under supervision[a][b] (in billions)	2004	2003
Asset class		
Liquidity	$ 232	$ 156
Fixed income	171	118
Equities, balanced and other	388	287
Assets under management	791	561
Custody/brokerage/administration/deposits	478	203
Total Assets under supervision	$ 1,269	$ 764
Client segment		
Private bank		
Assets under management	$ 139	$ 138
Custody/brokerage/administration/deposits	165	128
Assets under supervision	304	266
Retail		
Assets under management	133	93
Custody/brokerage/administration/deposits	88	71
Assets under supervision	221	164
Institutional		
Assets under management	466	322
Custody/brokerage/administration/deposits	184	—
Assets under supervision	650	322
Private client services		
Assets under management	53	8
Custody/brokerage/administration/deposits	41	4
Assets under supervision	94	12
Total Assets under supervision	$ 1,269	$ 764
Geographic region		
Americas		
Assets under management	$ 562	$ 365
Custody/brokerage/administration/deposits	444	168
Assets under supervision	1,006	533
International		
Assets under management	229	196
Custody/brokerage/administration/deposits	34	35
Assets under supervision	263	231
Total Assets under supervision	$ 1,269	$ 764
Memo:		
Mutual fund assets:		
Liquidity	$ 183	$ 103
Fixed income	41	27
Equity, balanced and other	104	83
Total mutual funds assets	$ 328	$ 213
Assets under supervision rollforward[b]		
Beginning balance	$ 764	$ 642
Net asset flows	25	(16)
Acquisitions[c]	383	41
Market/other impact	97	97
Ending balance	$ 1,269	$ 764

(a) Excludes Assets under management of American Century.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(c) Reflects the Merger with Bank One ($376 billion) in the third quarter of 2004, the acquisition of a majority interest in Highbridge Capital Management ($7 billion) in the fourth quarter of 2004 and the acquisition of RPS in the second quarter of 2003.

Corporate

The Corporate sector is comprised of Private Equity, Treasury, and corporate staff and other centrally managed expenses. Private Equity includes JPMorgan Partners and ONE Equity Partners businesses. Treasury manages the structural interest rate risk and investment portfolio for the Firm. The corporate staff areas include Central Technology and Operations, Internal Audit, Executive Office, Finance, General Services, Human Resources, Marketing & Communications, Office of the General Counsel, Real Estate and Business Services, Risk Management, and Strategy and Development. Other centrally managed expenses include items such as the Firm's occupancy and pension expense, net of allocations to the business.

Selected income statement data

Year ended December 31,[a] (in millions)	2004	2003	2002
Revenue			
Securities/private equity gains	$ 1,786	$ 1,031	$ 334
Other income	(2)	214	(11)
Noninterest revenue	1,784	1,245	323
Net interest income	(1,222)	(177)	(45)
Total net revenue	562	1,068	278
Provision for credit losses	(110)	124	133
Noninterest expense			
Compensation expense	2,426	1,893	1,867
Noncompensation expense	4,088	3,216	2,711
Net expenses allocated to other businesses	(5,213)	(4,580)	(4,070)
Total noninterest expense	1,301	529	508
Operating earnings before income tax expense	(629)	415	(363)
Income tax expense (benefit)	(690)	(253)	(128)
Operating earnings	$ 61	$ 668	$ (235)

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

2004 compared with 2003

Operating earnings were $61 million, down from earnings of $668 million in the prior year.

Noninterest revenue was $1.8 billion, up 43% from the prior year. The primary component of noninterest revenue is Securities/private equity gains, which totaled $1.8 billion, up 73% from the prior year. The increase was a result of net gains in the Private Equity portfolio of $1.4 billion in 2004, compared with $27 million in net gains in 2003. Partially offsetting these gains were lower investment securities gains in Treasury.

Net interest income was a negative $1.2 billion, compared with a negative $177 million in the prior year. The decline was driven primarily by actions and policies adopted in conjunction with the Merger.

Noninterest expense of $1.3 billion was up $772 million from the prior year due to the Merger. The Merger resulted in higher gross compensation and noncompensation expenses, which were partially offset by higher allocation of these expenses to the businesses. Incremental allocations to the businesses were lower than the gross expense increase due to certain policies adopted in conjunction with the Merger. These policies retain overhead costs that would not be incurred by the lines of business if operated on a stand-alone basis, as well as costs in excess of the market price for services provided by the corporate staff and technology and operations areas.

On September 15, 2004, JPMorgan Chase and IBM announced the Firm's plans to reintegrate the portions of its technology infrastructure – including data centers, help desks, distributed computing, data networks and voice networks – that were previously outsourced to IBM. In January 2005, approximately 3,100 employees and 800 contract employees were transferred to the Firm.

2003 compared with 2002

For 2003, Corporate had operating earnings of $668 million, compared with an operating loss of $235 million in 2002, driven primarily by higher gains in the Private Equity portfolio and income tax benefits not allocated to the business segments.

Selected metrics

Year ended December 31,[a] (in millions, except headcount)	2004	2003	2002
Selected average balance sheet			
Short-term investments[b]	$ 14,590	$ 4,076	$ 7,691
Investment portfolio[c]	63,475	63,506	61,816
Goodwill[d]	21,773	293	1,166
Total assets	162,234	104,395	97,089
Headcount	24,806	13,391	16,960
Treasury			
Securities gains (losses)[e]	$ 347	$ 999	$ 1,073
Investment portfolio (average)	57,776	56,299	54,197

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Represents Federal funds sold, Securities borrowed, Trading assets – debt and equity instruments and Trading assets – derivative receivables.
(c) Represents Investment securities and private equity investments.
(d) As of July 1, 2004, the Firm changed the allocation methodology of goodwill to retain all goodwill in Corporate.
(e) Excludes gains/losses on securities used to manage risk associated with MSRs.

Selected income statement and balance sheet data – Private equity

Year ended December 31,[a] (in millions)	2004	2003	2002
Private equity gains (losses)			
Direct investments			
Realized gains	$ 1,423	$ 535	$ 452
Write-ups / write-downs	(192)	(404)	(825)
Mark-to-market gains (losses)	164	215	(210)
Total direct investments	1,395	346	(583)
Third-party fund investments	34	(319)	(150)
Total private equity gains (losses)	1,429	27	(733)
Other income	53	47	59
Net interest income	(271)	(264)	(302)
Total net revenue	1,211	(190)	(976)
Total noninterest expense	288	268	296
Operating earnings (loss) before income tax expense	923	(458)	(1,272)
Income tax expense (benefit)	321	(168)	(466)
Operating earnings (losses)	$ 602	$ (290)	$ (806)
Private equity portfolio information[b]			
Direct investments			
Public securities			
Carrying value	$ 1,170	$ 643	$ 520
Cost	744	451	663
Quoted public value	1,758	994	761
Private direct securities			
Carrying value	5,686	5,508	5,865
Cost	7,178	6,960	7,316
Third-party fund investments[c]			
Carrying value	641	1,099	1,843
Cost	1,042	1,736	2,333
Total private equity portfolio			
Carrying value	$ 7,497	$ 7,250	$ 8,228
Cost	$ 8,964	$ 9,147	$10,312

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) For further information on the Firm's policies regarding the valuation of the private equity portfolio, see Note 9 on pages 98–100 of this Annual Report.
(c) Unfunded commitments to private third-party equity funds were $563 million, $1.3 billion and $2.0 billion at December 31, 2004, 2003 and 2002, respectively.

2004 compared with 2003

Private Equity's operating earnings for the year totaled $602 million, compared with a loss of $290 million in 2003. This improvement reflected a $1.4 billion increase in total private equity gains. In 2004, markets improved for investment sales, resulting in $1.4 billion of realized gains on direct investments, compared with $535 million in 2003. Net write-downs on direct investments were $192 million in 2004, compared with $404 million in 2003, as valuations continued to stabilize amid positive market conditions.

The carrying value of the Private Equity portfolio at December 31, 2004, was $7.5 billion, an increase of $247 million from December 31, 2003. The increase was primarily the result of the Merger. Otherwise, the portfolio declined as a result of sales of investments, consistent with management's intention to reduce over time the capital committed to private equity. Sales of third-party fund investments resulted in a decrease in carrying value of $458 million, to $641 million at December 31, 2004, compared with $1.1 billion at December 31, 2003.

2003 compared with 2002

The private equity portfolio recognized negative Total net revenue of $190 million and operating losses of $290 million in 2003. Opportunities to realize value through sales, recapitalizations and initial public offerings ("IPOs") of investments, although limited, improved during the year as the M&A and IPO markets started to recover.

Private equity gains totaled $27 million in 2003, compared with losses of $733 million in 2002. Private equity recognized gains of $346 million on direct investments and losses of $319 million on sales and writedowns of private third-party fund investments.

Balance sheet analysis

Selected balance sheet data

December 31, (in millions)	2004	2003[a]
Assets		
Trading assets – debt and equity instruments	$ 222,832	$ 169,120
Trading assets – derivative receivables	65,982	83,751
Securities:		
Available-for-sale	94,402	60,068
Held-to-maturity	110	176
Loans, net of allowance	394,794	210,243
Goodwill and other intangible assets	57,887	14,991
All other assets	321,241	232,563
Total assets	$ 1,157,248	$ 770,912
Liabilities		
Deposits	$ 521,456	$ 326,492
Trading liabilities – debt and equity instruments	87,942	78,222
Trading liabilities – derivative payables	63,265	71,226
Long-term debt	95,422	48,014
All other liabilities	283,510	200,804
Total liabilities	1,051,595	724,758
Stockholders' equity	105,653	46,154
Total liabilities and stockholders' equity	$ 1,157,248	$ 770,912

(a) Heritage JPMorgan Chase only.

Balance sheet overview

At December 31, 2004, the Firm's total assets were $1.2 trillion, an increase of $386 billion, or 50%, from the prior year, primarily as a result of the Merger. Merger-related growth in assets was primarily in: Available-for-sale securities; interests in purchased receivables related to Bank One's conduit business; wholesale and consumer loans; and goodwill and other intangibles, which was primarily the result of the purchase accounting impact of the Merger. Nonmerger-related growth was primarily due to the IB's increased trading activity, which is reflected in securities purchased under resale agreements and securities borrowed, as well as trading assets.

At December 31, 2004, the Firm's total liabilities were $1.1 trillion, an increase of $327 billion, or 45%, from the prior year, again primarily as a result of the Merger. Merger-related growth in liabilities was primarily in interest-bearing U.S. deposits, long-term debt, trust preferred securities and beneficial interests issued by consolidated variable interest entities. Nonmerger-related growth in liabilities was primarily driven by increases in noninterest-bearing U.S. deposits and the IB's trading activity, which is reflected in securities sold under repurchase agreements, partially offset by reductions in federal funds purchased.

Trading assets – debt and equity instruments

The Firm's debt and equity trading assets consist primarily of fixed income (including government and corporate debt) and cash equity and convertible instruments used for both market-making and proprietary risk-taking activities. The increase over 2003 was primarily due to growth in client-driven market-making activities across interest rate, credit and equity markets, as well as an increase in proprietary trading activities.

Trading assets and liabilities – derivative receivables and payables

The Firm uses various interest rate, foreign exchange, equity, credit and commodity derivatives for market-making, proprietary risk-taking and risk management purposes. The decline from 2003 was primarily due to the Firm's election, effective January 1, 2004, to report the fair value of derivative assets and liabilities net of cash received and paid, respectively, under legally enforceable master netting agreements. For additional information, refer to Credit risk management and Note 3 on pages 57–69 and 90–91, respectively, of this Annual Report.

Securities

AFS securities include fixed income (e.g., U.S. Government agency and asset-backed securities, as well as non-U.S. government and corporate debt) and equity instruments. The Firm uses AFS securities primarily to manage interest rate risk. The AFS portfolio grew by $34.3 billion from the 2003 year-end primarily due to the Merger. Partially offsetting the increase were net sales in the Treasury portfolio since the second quarter of 2004. In anticipation of the Merger, both heritage firms reduced the level of their AFS securities to reposition the combined firm. For additional information related to securities, refer to Note 9 on pages 98–100 of this Annual Report.

Loans

Loans, net of allowance, were $394.8 billion at December 31, 2004, an increase of 88% from the prior year, primarily due to the Merger. Also contributing to the increase was growth in both the RFS and CS loan portfolios, partially offset by lower wholesale loans in the IB. For a more detailed discussion of the loan portfolio and allowance for credit losses, refer to Credit risk management on pages 57–69 of this Annual Report.

Goodwill and other intangible assets

The $42.9 billion increase in Goodwill and other intangible assets from the prior year was primarily the result of the Merger and, to a lesser extent, the Firm's other acquisitions, such as EFS and the majority stake in Highbridge. For additional information, see Note 15 on pages 109–111 of this Annual Report.

Deposits

Deposits are a key source of funding. The stability of this funding source is affected by such factors as returns available to customers on alternative investments, the quality of customer service levels and competitive forces. Deposits increased by 60% from December 31, 2003, primarily the result of the Merger and growth in deposits in TSS. For more information, refer to the TSS segment discussion and the Liquidity risk management discussion on pages 43–44 and 55–56, respectively, of this Annual Report.

Long-term debt

Long-term debt increased by 99% from the prior year, primarily due to the Merger and net new debt issuances. For additional information on the Firm's long-term debt activity, see the Liquidity risk management discussion on pages 55–56 of this Annual Report.

Stockholders' equity

Total stockholders' equity increased by 129% to $105.7 billion, primarily as a result of the Merger. For a further discussion of capital, see Capital management on pages 50–52 of this Annual Report.

Capital management

The Firm's capital management framework is intended to ensure that there is capital sufficient to support the underlying risks of the Firm's business activities, measured by economic risk capital, and to maintain "well-capitalized" status under regulatory requirements. In addition, the Firm holds capital above these requirements in amounts deemed appropriate to achieve management's debt rating objectives. The Firm's capital framework is integrated into the process of assigning equity to the lines of business. The Firm may refine its methodology for assigning equity to the lines of business as the merger integration process continues.

Line of business equity

The Firm's framework for allocating capital is based on the following objectives:

- Integrate firmwide capital management activities with capital management activities within each of the lines of business.
- Measure performance in each business segment consistently across all lines of business.
- Provide comparability with peer firms for each of the lines of business.

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, incorporating sufficient capital to address economic risk measures, regulatory capital requirements, and capital levels for similarly rated peers. Return on equity is measured and internal targets for expected returns are established as a primary measure of a business segment's performance.

For performance management purposes, the Firm does not allocate goodwill to the lines of business because it believes that the accounting-driven allocation of goodwill could distort assessment of relative returns. In management's view, this approach fosters better comparison of line of business returns with other internal business segments, as well as with peers. The Firm assigns an amount of equity capital equal to the then current book value of its goodwill to the Corporate segment. The return on invested capital related to the Firm's goodwill assets is managed within this segment. In accordance with SFAS 142, the Firm allocates goodwill to the lines of business based on the underlying fair values of the businesses and then performs the required impairment testing. For a further discussion of goodwill and impairment testing, see Critical accounting estimates and Note 15 on pages 77–79 and 109–111 respectively, of this Annual Report.

This integrated approach to assigning equity to the lines of business is a new methodology resulting from the Merger. Therefore, current year line of business equity is not comparable to equity assigned to the lines of business in prior years. The increase in average common equity in the table below for 2004 was primarily attributable to the Merger.

(in billions)	Yearly Average	
Line of business equity[a]	**2004**	2003
Investment Bank	**$ 17.3**	$ 18.4
Retail Financial Services	**9.1**	4.2
Card Services	**7.6**	3.4
Commercial Banking	**2.1**	1.1
Treasury & Securities Services	**2.5**	2.7
Asset & Wealth Management	**3.9**	5.5
Corporate[b]	**33.1**	7.7
Total common stockholders' equity	**$ 75.6**	$ 43.0

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) 2004 includes $25.9 billion of equity to offset goodwill and $7.2 billion of equity primarily related to Treasury, Private Equity and the Corporate Pension Plan.

Economic risk capital

JPMorgan Chase assesses its capital adequacy relative to the underlying risks of the Firm's business activities, utilizing internal risk-assessment methodologies. The Firm assigns economic capital based primarily on five risk factors: credit risk, market risk, operational risk and business risk for each business; and private equity risk, principally for the Firm's private equity business.

(in billions)	Yearly Average	
Economic risk capital[a]	**2004**	2003
Credit risk	**$ 16.5**	$ 13.1
Market risk	**7.5**	4.5
Operational risk	**4.5**	3.5
Business risk	**1.9**	1.7
Private equity risk	**4.5**	5.4
Economic risk capital	**34.9**	28.2
Goodwill	**25.9**	8.1
Other[b]	**14.8**	6.7
Total common stockholders' equity	**$ 75.6**	$ 43.0

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Additional capital required to meet internal regulatory/debt rating objectives.

Credit risk capital

Credit risk capital is estimated separately for the wholesale businesses (Investment Bank, Commercial Banking, Asset & Wealth Management and Treasury & Securities Services) and consumer businesses (Retail Financial Services and Card Services).

Credit risk capital for the overall wholesale credit portfolio is defined in terms of unexpected credit losses, from both defaults and declines in market value due to credit deterioration, measured over a one-year period at a confidence level consistent with the level of capitalization necessary to achieve a targeted 'AA' solvency standard. Unexpected losses are in excess of those for which provisions for credit losses are maintained. In addition to maturity and correlations, capital allocation is differentiated by several principal drivers of credit risk: exposure at default (or loan equivalent amount), likelihood of default, loss severity, and market credit spread.

- Loan equivalent amount for counterparty exposures in an over-the-counter derivative transaction is represented by the expected positive exposure based on potential movements of underlying market rates. Loan equivalents for unused revolving credit facilities represent the portion of an unused commitment likely, based on the Firm's average portfolio historical experience, to become outstanding in the event an obligor defaults.
- Default likelihood is closely aligned with current market conditions for all publicly traded names or investment banking clients, yielding a forward-looking measure of credit risk. This facilitates more active risk management by utilizing the growing market in credit derivatives and secondary market loan sales. For privately-held firms in the commercial banking portfolio, default likelihood is based on longer term averages over an entire credit cycle.
- Loss severity of exposure is based on the Firm's average historical experience during workouts, with adjustments to account for collateral or subordination.
- Market credit spreads are used in the evaluation of changes in exposure value due to credit deterioration.

Credit risk capital for the consumer portfolio is intended to represent a capital level sufficient to support an 'AA' rating, and its allocation is based on product and other relevant risk segmentation. Actual segment level default and severity experience are used to estimate unexpected losses for a one-year horizon at a confidence level equivalent to the 'AA' solvency standard. Statistical results for certain segments or portfolios are adjusted upward to ensure that capital is consistent with external benchmarks, including subordination levels on market transactions and capital held at representative monoline competitors, where appropriate.

Market risk capital

The Firm allocates market risk capital guided by the principle that capital should reflect the extent to which risks are present in businesses. Daily VAR, monthly stress-test results and other factors determine appropriate capital charges for major business segments. See Market risk management on pages 70–74 of this Annual Report for more information about these market risk measures. The Firm allocates market risk capital to each business segment according to a formula that weights that segment's VAR and stress test exposures.

Operational risk capital

Capital is allocated to the lines of business for operational risk using a risk-based capital allocation methodology which estimates operational risk on a bottoms-up basis. The operational risk capital model is based on actual losses and potential scenario-based stress losses, with adjustments to the capital calculation to reflect changes in the quality of the control environment and with a potential offset for the use of risk-transfer products. The Firm believes the model is consistent with the new Basel II Framework and expects to propose it eventually for qualification under the advanced measurement approach for operational risk.

Business risk capital

Business risk is defined as the risk associated with volatility in the Firm's earnings due to factors not captured by other parts of its economic-capital framework. Such volatility can arise from ineffective design or execution of business strategies, volatile economic or financial market activity, changing client expectations and demands, and restructuring to adjust for changes in the competitive environment. For business risk, capital is allocated to each business based on historical revenue volatility and measures of fixed and variable expenses. Earnings volatility arising from other risk factors, such as credit, market, or operational risk, is excluded from the measurement of business risk capital, as those factors are captured under their respective risk capital models.

Private equity risk capital

Capital is allocated to publicly- and privately-held securities and third party fund investments and commitments in the Private Equity portfolio to cover the potential loss associated with a decline in equity markets and related asset devaluations. In addition to negative market fluctuations, potential losses in private equity investment portfolios can be magnified by liquidity risk. The capital allocation for the Private Equity portfolio is based upon measurement of the loss experience suffered by the Firm and other market participants over a prolonged period of adverse equity market conditions.

Regulatory capital

The Firm's federal banking regulator, the FRB, establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank") and Chase Bank USA, National Association.

On March 1, 2005, the FRB issued a final rule that continues the inclusion of trust preferred securities in Tier 1 capital, subject to stricter quantitative limits. The rule provides for a five-year transition period. The Firm is currently assessing the impact of the final rule. The effective date of the final rule is dependent on the date of publication in the Federal Register.

On July 20, 2004, the federal banking regulatory agencies issued a final rule that excludes assets of asset-backed commercial paper programs that are consolidated as a result of FIN 46R from risk-weighted assets for purposes of computing Tier 1 and Total risk-based capital ratios. The final rule also requires that capital be held against short-term liquidity facilities supporting asset-backed commercial paper programs. The final rule became effective September 30, 2004. Adoption of the rule did not have a material effect on the capital ratios of the Firm. In addition, under the final rule, both short- and long-term liquidity facilities will be subject to certain asset quality tests effective September 30, 2005.

The following tables show that JPMorgan Chase maintained a well-capitalized position based on Tier 1 and Total capital ratios at December 31, 2004 and 2003.

Capital ratios

December 31,	2004	2003[a]	Well-capitalized ratios
Tier 1 capital ratio	**8.7%**	8.5%	6.0%
Total capital ratio	**12.2**	11.8	10.0
Tier 1 leverage ratio	**6.2**	5.6	NA
Total stockholders' equity to assets	**9.1**	6.0	NA

(a) Heritage JPMorgan Chase only.

Risk-based capital components and assets

December 31, (in millions)	2004	2003[a]
Total Tier 1 capital	**$ 68,621**	$ 43,167
Total Tier 2 capital	**28,186**	16,649
Total capital	**$ 96,807**	$ 59,816
Risk-weighted assets	**$ 791,373**	$ 507,456
Total adjusted average assets	**1,102,456**	765,910

(a) Heritage JPMorgan Chase only.

Tier 1 capital was $68.6 billion at December 31, 2004, compared with $43.2 billion at December 31, 2003, an increase of $25.4 billion. The increase was due to an increase in common stockholders' equity of $60.2 billion, primarily driven by stock issued in connection with the Merger of $57.3 billion and net income of $4.5 billion; these were partially offset by dividends paid of $3.9 billion and common share repurchases of $738 million. The Merger added Tier 1 components such as $3.0 billion of additional qualifying trust preferred securities and $493 million of minority interests in consolidated subsidiaries; Tier 1 deductions resulting from the Merger included $34.1 billion of merger-related goodwill, and $3.4 billion of nonqualifying intangibles.

Additional information regarding the Firm's capital ratios and the associated components and assets, and a more detailed discussion of federal regulatory capital standards are presented in Note 24 on pages 116–117 of this Annual Report.

Basel II

The Basel Committee on Banking Supervision published the new Basel II Framework in 2004 in an effort to update the original international bank capital accord ("Basel I"), in effect since 1988. The goal of the Basel II Framework is to improve the consistency of capital requirements internationally, make regulatory capital more risk sensitive, and promote enhanced risk management practices among large, internationally active banking organizations. JPMorgan Chase supports the overall objectives of the Basel II Framework.

U.S. banking regulators are in the process of incorporating the Basel II Framework into the existing risk-based capital requirements. JPMorgan Chase will be required to implement advanced measurement techniques employing its internal estimates of certain key risk drivers to derive capital requirements. Prior to implementation of the new Basel II Framework, JPMorgan Chase will be required to demonstrate to the FRB that its internal criteria meet the relevant supervisory standards. The Basel II Framework will be fully effective in January 2008. JPMorgan Chase expects to implement the Basel II Framework within this timeframe.

JPMorgan Chase is currently analyzing local Basel II requirements in major jurisdictions outside the U.S. where it operates. Based on the results of this analysis, different approaches may be implemented in various jurisdictions.

Dividends

The Firm's common stock dividend policy reflects its earnings outlook, desired payout ratios, the need to maintain an adequate capital level and alternative investment opportunities. In 2004, JPMorgan Chase declared a quarterly cash dividend on its common stock of $0.34 per share. The Firm anticipates a dividend payout ratio in 2005 of 30-40% of operating earnings.

Stock repurchases

On July 20, 2004, the Board of Directors approved an initial stock repurchase program in the aggregate amount of $6.0 billion. This amount includes shares to be repurchased to offset issuances under the Firm's employee equity-based plans. The actual amount of shares repurchased will be subject to various factors, including market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account purchase accounting adjustments); internal capital generation; and alternative potential investment opportunities. During 2004, under the stock repurchase program, the Firm repurchased 19.3 million shares for $738 million at an average price per share of $38.27. The Firm did not repurchase any shares of its common stock during 2003.

Off–balance sheet arrangements and contractual cash obligations

Special-purpose entities

JPMorgan Chase is involved with several types of off-balance sheet arrangements including special purpose entities ("SPEs"), lines of credit and loan commitments. The principal uses of SPEs are to obtain sources of liquidity for JPMorgan Chase and its clients by securitizing their financial assets, and to create other investment products for clients. These arrangements are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. For example, SPEs are integral to the markets for mortgage-backed securities, commercial paper, and other asset-backed securities.

The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors. To insulate investors from creditors of other entities, including the seller of assets, SPEs are often structured to be bankruptcy-remote.

JPMorgan Chase is involved with SPEs in three broad categories of transactions: loan securitizations, multi-seller conduits and client intermediation. Capital is held, as appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments. For a further discussion of SPEs and the Firm's accounting for them, see Note 1 on page 88, Note 13 on pages 103–106 and Note 14 on pages 106–109 of this Annual Report.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Worldwide Rules of Conduct. These rules prohibit employees from self-dealing and prohibit employees from acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

For certain liquidity commitments to SPEs, the Firm could be required to provide funding if the credit rating of JPMorgan Chase Bank were downgraded below specific levels, primarily P-1, A-1 and F1 for Moody's, Standard & Poor's and Fitch, respectively. The amount of these liquidity commitments was $79.4 billion and $34.0 billion at December 31, 2004 and 2003, respectively. Alternatively, if JPMorgan Chase Bank were downgraded, the Firm could be replaced by another liquidity provider in lieu of funding under the liquidity commitment, or, in certain circumstances, could facilitate the sale or refinancing of the assets in the SPE in order to provide liquidity.

Of its $79.4 billion in liquidity commitments to SPEs at December 31, 2004, $47.7 billion is included in the Firm's total other unfunded commitments to extend credit, included in the table below (compared with $27.7 billion at December 31, 2003). As a result of the Firm's consolidation of multi-seller conduits in accordance with FIN 46R, $31.7 billion of these commitments are excluded from the table (compared with $6.3 billion at December 31, 2003), as the underlying assets of the SPEs have been included on the Firm's Consolidated balance sheets.

The revenue reported in the table below primarily represents servicing and custodial fee income. The Firm also has exposure to certain SPEs arising from derivative transactions; these transactions are recorded at fair value on the Firm's Consolidated balance sheets with changes in fair value (i.e., MTM gains and losses) recorded in Trading revenue. Such MTM gains and losses are not included in the revenue amounts reported in the table below.

The following table summarizes certain revenue information related to variable interest entities ("VIEs") with which the Firm has significant involvement, and qualifying SPEs ("QSPEs"). For a further discussion of VIEs and QSPEs, see Note 1 on page 88 of this Annual Report.

Revenue from VIEs and QSPEs

Year ended December 31,[a] (in millions)	VIEs[b]	QSPEs	Total
2004	**$154**	**$1,438**	**$1,592**
2003	79	979	1,058

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes VIE-related revenue (i.e., revenue associated with consolidated and significant nonconsolidated VIEs).

Contractual cash obligations

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. The accompanying table summarizes JPMorgan Chase's off–balance sheet lending-related financial instruments and significant contractual cash obligations, by remaining maturity, at December 31, 2004. For a discussion regarding Long-term debt and trust preferred capital securities, see Note 17 on pages 112–113 of this Annual Report. For a discussion regarding operating leases, see Note 25 on page 117 of this Annual Report.

Contractual purchases include commitments for future cash expenditures, primarily related to services. Capital expenditures primarily represent future cash payments for real estate–related obligations and equipment. Contractual purchases and capital expenditures at December 31, 2004, reflect the minimum contractual obligation under legally enforceable contracts with contract terms that are both fixed and determinable. Excluded from the following table are a number of obligations to be settled in cash, primarily in under one year. These obligations are reflected on the Firm's Consolidated balance sheets and include Federal funds purchased and securities sold under repurchase agreements; Other borrowed funds; purchases of Debt and equity instruments that settle within standard market timeframes (e.g., regular-way); Derivative payables that do not require physical delivery of the underlying instrument; and certain purchases of instruments that resulted in settlement failures.

Off–balance sheet lending-related financial instruments

By remaining maturity at December 31, 2004 (in millions)	Under 1 year	1–3 years	3–5 years	After 5 years	Total
Consumer	**$552,748**	**$ 3,603**	**$ 2,799**	**$ 42,046**	**$601,196**
Wholesale:					
Other unfunded commitments to extend credit[a][b]	**114,555**	**57,183**	**48,987**	**4,427**	**225,152**
Standby letters of credit and guarantees[a]	**22,785**	**30,805**	**21,387**	**3,107**	**78,084**
Other letters of credit[a]	**4,631**	**1,297**	**190**	**45**	**6,163**
Total wholesale	**141,971**	**89,285**	**70,564**	**7,579**	**309,399**
Total lending-related commitments	**$694,719**	**$ 92,888**	**$ 73,363**	**$ 49,625**	**$910,595**
Contractual cash obligations					
By remaining maturity at December 31, 2004 (in millions)					
Certificates of deposit of $100,000 and over	**$ 38,946**	**$ 7,941**	**$ 1,176**	**$ 1,221**	**$ 49,284**
Long-term debt	**15,833**	**30,890**	**23,527**	**25,172**	**95,422**
Trust preferred capital securities	**—**	**—**	**—**	**10,296**	**10,296**
FIN 46R long-term beneficial interests[c]	**3,072**	**708**	**203**	**2,410**	**6,393**
Operating leases[d]	**1,060**	**1,878**	**1,614**	**5,301**	**9,853**
Contractual purchases and capital expenditures	**1,791**	**518**	**252**	**181**	**2,742**
Obligations under affinity and co-brand programs	**868**	**2,442**	**1,086**	**6**	**4,402**
Other liabilities[e]	**968**	**1,567**	**1,885**	**6,546**	**10,966**
Total	**$ 62,538**	**$ 45,944**	**$ 29,743**	**$ 51,133**	**$ 189,358**

(a) Represents contractual amount net of risk participations totaling $26 billion at December 31, 2004.
(b) Includes unused advised lines of credit totaling $23 billion at December 31, 2004, which are not legally binding. In regulatory filings with the FRB, unused advised lines are not reportable.
(c) Included on the Consolidated balance sheets in Beneficial interests issued by consolidated variable interest entities.
(d) Excludes benefit of noncancelable sublease rentals of $689 million at December 31, 2004.
(e) Includes deferred annuity contracts and expected funding for pension and other postretirement benefits for 2005. Funding requirements for pension and postretirement benefits after 2005 are excluded due to the significant variability in the assumptions required to project the timing of future cash payments.

Risk management

Risk is an inherent part of JPMorgan Chase's business activities. The Firm's risk management framework and governance structure is intended to provide comprehensive controls and ongoing management of its major risks. In addition, this framework recognizes the diversity among the Firm's core businesses, which helps reduce the impact of volatility in any particular area on its operating results as a whole.

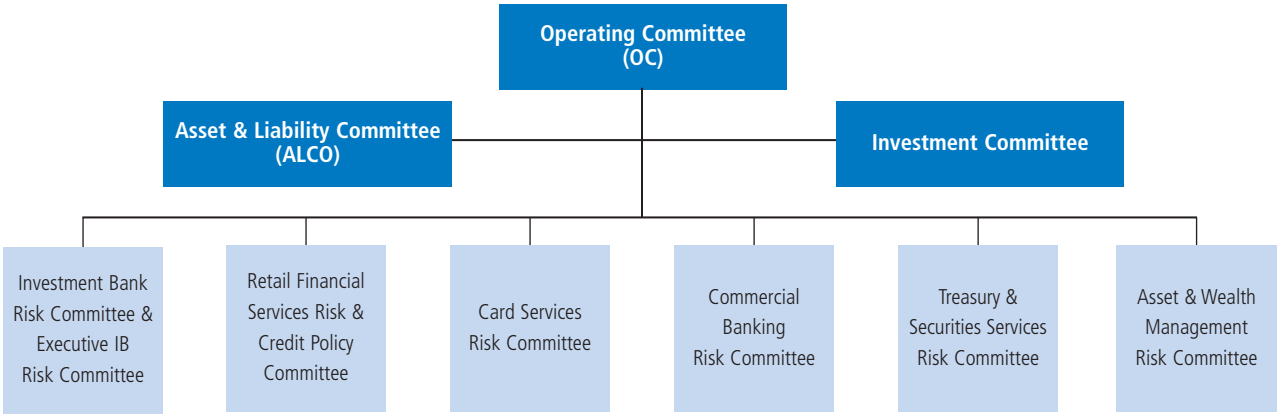
The Firm's ability to properly identify, measure, monitor and report risk is critical to its soundness and profitability.

- **Risk identification:** The Firm identifies risk by dynamically assessing the potential impact of internal and external factors on transactions and positions. Business and risk professionals develop appropriate mitigation strategies for the identified risks.
- **Risk measurement**: The Firm measures risk using a variety of methodologies, including calculating probable loss, unexpected loss and value-at-risk, and by conducting stress tests and making comparisons to external benchmarks. Measurement models and related assumptions are routinely reviewed to ensure that the Firm's risk estimates are reasonable and reflective of underlying positions.
- **Risk monitoring/Control:** The Firm establishes risk management policies and procedures. These policies contain approved limits by customer, product and business that are monitored on a daily, weekly and monthly basis as appropriate.
- **Risk reporting:** Risk reporting covers all lines of business and is provided to management on a daily, weekly and monthly basis as appropriate.

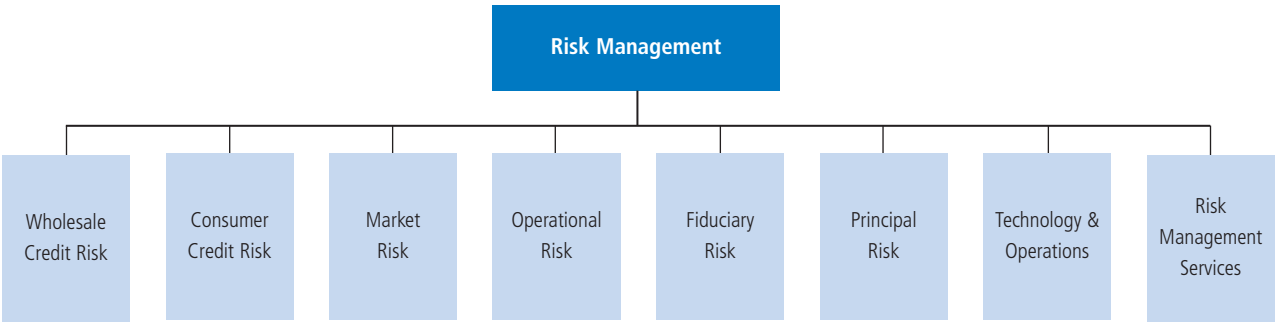
Risk governance

The Firm's risk governance structure is built upon the premise that each line of business is responsible for managing the risks inherent in its business activity. There are seven major risk types identified in the business activities of the Firm: liquidity risk, credit risk, market risk, operational risk, legal and reputation risk, fiduciary risk and principal risk. As part of the risk management structure, each line of business has a Risk Committee responsible for decisions relating to risk strategy, policies and control. Where appropriate, the Risk Committees escalate risk issues to the Firm's Operating Committee, comprised of senior officers of the Firm, or to the Risk Working Group, a subgroup of the Operating Committee.

In addition to the Risk Committees, there is an Asset & Liability Committee ("ALCO"), which oversees structural interest rate and liquidity risk as well as the Firm's funds transfer pricing policy, through which lines of business transfer market-hedgable interest rate risk to Treasury. Treasury also has responsibility for decisions relating to its risk strategy, policies and control. There is also an Investment Committee, which reviews key aspects of the Firm's global M&A activities that are undertaken for its own account and that fall outside the scope of established private equity and other principal finance activities.



Overlaying risk management within the lines of business is the corporate function of Risk Management which, under the direction of the Chief Risk Officer reporting to the President and Chief Operating Officer, provides an independent firmwide function for control and management of risk. Within Risk Management are those units responsible for credit risk, market risk, operational risk, fiduciary risk, principal risk, and risk technology and operations, as well as Risk Management Services, which is responsible for credit risk policy and methodology, risk reporting and risk education.



The Board of Directors exercises oversight of risk management as a whole and through the Board's Audit Committee and the Risk Policy Committee. The Audit Committee is responsible for oversight of guidelines and policies to govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal controls and financial reporting that is relied upon to provide reasonable assurance of compliance with the Firm's operational risk management processes. The Risk Policy Committee is responsible for oversight of management's responsibilities to assess and manage the Firm's credit risk, market risk, interest rate risk, investment risk and liquidity risk, and is also responsible for review of the Firm's fiduciary and asset management activities. Both committees are responsible for oversight of reputational risk. The Chief Risk Officer and other management report on the risks of the Firm to the Board of Directors, particularly through the Board's Audit Committee and Risk Policy Committee.

The major risk types identified by the Firm are discussed in the following sections.

Liquidity risk management

Liquidity risk arises from the general funding needs of the Firm's activities and in the management of its assets and liabilities. JPMorgan Chase's liquidity management framework is intended to maximize liquidity access and minimize funding costs. Through active liquidity management, the Firm seeks to preserve stable, reliable and cost-effective sources of funding. This enables the Firm to replace maturing obligations when due and fund assets at appropriate maturities and rates in all market environments. To accomplish this, management uses a variety of liquidity risk measures that take into consideration market conditions, prevailing interest rates, liquidity needs and the desired maturity profile of liabilities.

Risk identification and measurement

Treasury is responsible for setting the Firm's liquidity strategy and targets, understanding the Firm's on- and off-balance sheet liquidity obligations, providing policy guidance, overseeing policy adherence, and maintaining contingency planning and stress testing. In addition, it identifies and measures internal and external liquidity warning signals, such as the unusual widening of spreads, to permit early detection of liquidity issues.

The Firm's three primary measures of liquidity are:

- Holding company short-term position: Measures the parent holding company's ability to repay all obligations with a maturity less than one year at a time when the ability of the Firm's banks to pay dividends to the parent holding company is constrained.
- Cash capital surplus: Measures the Firm's ability to fund assets on a fully collateralized basis, assuming access to unsecured funding is lost.
- Basic surplus: Measures JPMorgan Chase Bank's ability to sustain a 90-day stress event that is specific to the Firm where no new funding can be raised to meet obligations as they come due.

All three primary liquidity measures are managed to provide sufficient surplus in the Firm's liquidity position.

Risk monitoring and reporting

Treasury is responsible for measuring, monitoring, reporting and managing the liquidity profile of the Firm through both normal and stress periods. Treasury analyzes reports to monitor the diversity and maturity structure of the Firm's sources of funding, and to assess downgrade impact scenarios, contingent funding needs, and overall collateral availability and pledging status. A contingency funding plan is in place, intended to help the Firm manage through periods when access to funding is temporarily impaired. A downgrade analysis considers the potential impact of a one- and two-notch downgrade at both the parent and bank level, and calculates the estimated loss of funding as well as the increase in annual funding costs in both scenarios. A trigger-risk funding analysis considers the impact of a bank downgrade below A-1/P-1, including the funding requirements that would be required if such an event were to occur. These liquidity analytics rely on management's judgment about JPMorgan Chase's ability to liquidate assets or use them as collateral for borrowings and take into account credit risk management's historical data on the funding of loan commitments (e.g., commercial paper back-up facilities), liquidity commitments to SPEs, commitments with rating triggers and collateral posting requirements. For a further discussion of SPEs and other off–balance sheet arrangements, see Off–balance sheet arrangements and contractual cash obligations on pages 52–53, as well as Note 1, Note 13, Note 14 and Note 27 on pages 88, 103–106, 106–109, and 119–120, respectively, of this Annual Report.

Funding

Sources of funds

The diversity of the Firm's funding sources enhances financial flexibility and limits dependence on any one source, thereby minimizing the cost of funds. A major source of liquidity for JPMorgan Chase Bank is provided by its large core deposit base. Core deposits include all U.S. deposits insured by the FDIC, up to the legal limit of $100,000 per depositor. In 2004, core bank deposits grew approximately 116% from 2003 year-end levels, primarily the result of the Merger, as well as growth within RFS and TSS. In addition to core deposits, the Firm benefits from substantial, stable deposit balances originated by TSS, Commercial Banking and the IB through the normal course of their businesses.

Additional funding flexibility is provided by the Firm's ability to access the repurchase and asset securitization markets. At December 31, 2004, $72 billion of securities were available for repurchase agreements, and $36 billion of credit card, automobile and mortgage loans were available for securitizations. These alternatives are evaluated on an ongoing basis to achieve an appropriate balance of secured and unsecured funding. The ability to securitize loans, and the associated gains on those securitizations, are principally dependent on the credit quality and yields of the assets securitized and are generally not dependent on the credit ratings of the issuing entity. Transactions between the Firm and its securitization structures are reflected in JPMorgan Chase's consolidated financial statements; these relationships include retained interests in securitization trusts, liquidity facilities and derivative transactions. For further details, see Notes 13 and 14 on pages 103–106 and 106–109, respectively, of this Annual Report.

The Firm is an active participant in the global financial markets. These markets serve as a cost-effective source of funds and are a critical component of the Firm's liquidity management. Decisions concerning the timing and tenor of accessing these markets are based on relative costs, general market conditions, prospective views of balance sheet growth and a targeted liquidity profile.

Issuance

Corporate credit spreads narrowed in 2004 across most industries and sectors, reflecting the market perception that credit risks were improving, as the number of downgrades declined, corporate balance sheet cash positions increased, and corporate profits exceeded expectations. JPMorgan Chase's credit spreads performed in line with peer spreads in 2004. The Firm took advantage of narrowing credit spreads globally by opportunistically issuing long-term debt and capital securities throughout the year. Consistent with its liquidity management policy, the Firm has raised funds at the parent holding company sufficient to cover maturing obligations over the next 12 months and to support the less liquid assets on its balance sheet. High investor cash positions and increased foreign investor participation in the corporate markets allowed JPMorgan Chase to diversify further its funding across the global markets while decreasing funding costs and lengthening maturities.

During 2004, JPMorgan Chase issued approximately $25.3 billion of long-term debt and capital securities. These issuances were partially offset by $16.0 billion of long-term debt and capital securities that matured or were redeemed, and the Firm's redemption of $670 million of preferred stock. In addition, in 2004 the Firm securitized approximately $6.5 billion of residential mortgage loans, $8.9 billion of credit card loans and $1.6 billion of automobile loans, resulting in pre-tax gains (losses) on securitizations of $47 million, $52 million and $(3) million, respectively. For a further discussion of loan securitizations, see Note 13 on pages 103–106 of this Annual Report.

Credit ratings

The credit ratings of JPMorgan Chase's parent holding company and each of its significant banking subsidiaries, as of December 31, 2004, were as follows:

	Short-term debt			Senior long-term debt		
	Moody's	S&P	Fitch	Moody's	S&P	Fitch
JPMorgan Chase & Co.	P-1	A-1	F1	Aa3	A+	A+
JPMorgan Chase Bank, N.A.	P-1	A-1+	F1+	Aa2	AA-	A+
Chase Bank USA, N.A.	P-1	A-1+	F1+	Aa2	AA-	A+

The Firm's principal insurance subsidiaries had the following financial strength ratings as of December 31, 2004:

	Moody's	S&P	A.M. Best
Chase Insurance Life and Annuity Company	A2	A+	A
Chase Insurance Life Company	A2	A+	A

In connection with the Merger, Moody's upgraded the ratings of the Firm by one notch, moving the parent holding company's senior long-term debt rating to Aa3 and JPMorgan Chase Bank's senior long-term debt rating to Aa2; and changed its outlook to stable. Also at that time, Fitch affirmed its ratings and changed its outlook to positive, while S&P affirmed all its ratings and kept its outlook stable.

The cost and availability of unsecured financing are influenced by credit ratings. A reduction in these ratings could adversely affect the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral requirements and decrease the number of investors and counterparties willing to lend. Critical factors in maintaining high credit ratings include a stable and diverse earnings stream; strong capital ratios; strong credit quality and risk management controls; diverse funding sources; and strong liquidity monitoring procedures.

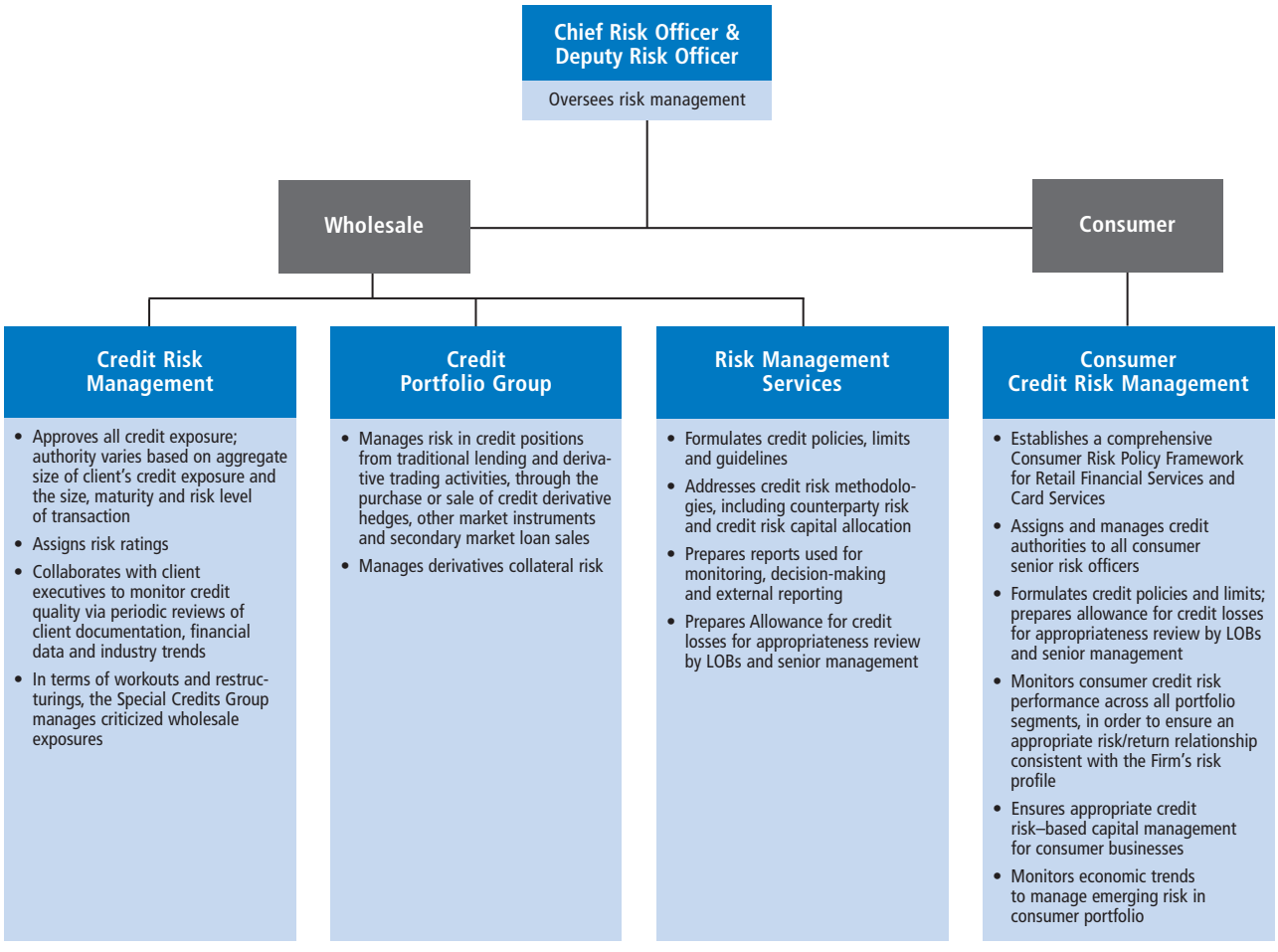
If the Firm's ratings were downgraded by one notch, the Firm estimates the incremental cost of funds and the potential loss of funding to be negligible. Additionally, the Firm estimates the additional funding requirements for VIEs and other third-party commitments would not be material. In the current environment, the Firm believes a downgrade is unlikely. For additional information on the impact of a credit ratings downgrade on funding requirements for VIEs, and on derivatives and collateral agreements, see Off–balance Sheet Arrangements on pages 52–53 and Ratings profile of derivative receivables mark-to-market ("MTM") on page 64, of this Annual Report.

Credit risk management

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit to customers of all sizes, from large corporate clients to loans for the individual consumer. Management manages the risk/reward relationship of each portfolio, discouraging the retention of loan assets that do not generate a positive return above the cost of risk-adjusted capital. The Firm's business strategy for its large corporate wholesale loan portfolio remains primarily one of origination for distribution; the majority of the Firm's wholesale loan originations (primarily to IB clients) continue to be distributed into the marketplace, with residual holds by the Firm averaging less than 10%. With regard to the prime consumer credit market, the Firm focuses on creating a portfolio that is diversified from both a product and a geographical perspective.

The Firm's credit risk management governance structure consists of the primary functions as described in the organizational chart below.

Credit risk organization



In 2004, the Firm continued to enhance its risk management discipline, managing wholesale single-name and industry concentration through its threshold and limit structure and using credit derivatives and loan sales in its portfolio management activity. The Firm manages wholesale exposure concentrations by obligor, risk rating, industry and geography. In addition, the Firm continued to make progress under its multi-year initiative to reengineer specific components of the credit risk infrastructure. The goal is to enhance the Firm's ability to provide immediate and accurate risk and exposure information; actively manage credit risk in the retained portfolio; support client relationships; more quickly manage the allocation of economic capital; and comply with Basel II initiatives.

In 2004, the Firm continued to grow its consumer loan portfolio, focusing on businesses providing the most appropriate risk/reward relationship while keeping within the Firm's desired risk tolerance. During the past year, the Firm also completed a strategic review of all consumer lending portfolio segments. This action resulted in the sale of the $4 billion manufactured home loan portfolio, de-emphasizing vehicle leasing and, subsequent to year-end 2004, the sale of a $2 billion recreational vehicle portfolio. Continued growth in the core consumer lending product set (residential real estate, auto and education finance, credit cards and small business) reflected a focus on the prime credit quality segment of the market.

Risk identification

The Firm is exposed to credit risk through its lending (e.g., loans and lending-related commitments), derivatives trading and capital markets activities. Credit risk also arises due to country or sovereign exposure, as well as indirectly through the issuance of guarantees.

Risk measurement

To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Losses generated by consumer loans are more predictable than wholesale losses but are subject to cyclical and seasonal factors. Although the frequency of loss is higher on consumer loans than on wholesale loans, the severity of loss is typically lower and more manageable. As a result of these differences, methodologies vary depending on certain factors, including type of asset (e.g., consumer installment versus wholesale loan), risk measurement parameters (e.g., delinquency status and credit bureau score versus wholesale risk rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups).

Credit risk measurement is based on the amount of exposure should the obligor or the counterparty default, and the loss severity given a default event. Based on these factors and related market-based inputs, the Firm estimates both probable and unexpected losses for the wholesale and consumer portfolios. Probable losses, reflected in the Provision for credit losses, are statistically-based estimates of credit losses over time, anticipated as a result of obligor or counterparty default. However, probable losses are not the sole indicators of risk. If losses were entirely predictable, the probable loss rate could be factored into pricing and covered as a normal and recurring cost of doing business. Unexpected losses, reflected in the allocation of credit risk capital, represent the potential volatility of actual losses relative to the probable level of losses (refer to Capital management on pages 50–51 of this Annual Report for a further discussion of the credit risk capital methodology). Risk measurement for the wholesale portfolio is primarily based on risk-rated exposure; and for the consumer portfolio it is based on credit-scored exposure.

Risk-rated exposure

For portfolios that are risk-rated, probable and unexpected loss calculations are based on estimates of probability of default and loss given default. Probability of default is expected default calculated on an obligor basis. Loss given default is an estimate of losses that are based on collateral and structural support for each credit facility. Calculations and assumptions are based on management information systems and methodologies under continual review. Risk ratings are assigned and reviewed on an ongoing basis by Credit Risk Management and revised, if needed, to reflect the borrowers' current risk profile and the related collateral and structural position.

Credit-scored exposure

For credit-scored portfolios (generally Retail Financial Services and Card Services), probable loss is based on a statistical analysis of inherent losses over discrete periods of time. Probable losses are estimated using sophisticated portfolio modeling, credit scoring and decision-support tools to project credit risks and establish underwriting standards. In addition, common measures of credit quality derived from historical loss experience are used to predict consumer losses. Other risk characteristics evaluated include recent loss experience in the portfolios, changes in origination sources, portfolio seasoning, loss severity and underlying credit practices, including charge-off policies. These analyses are applied to the Firm's current portfolios in order to forecast delinquencies and severity of losses, which determine the amount of probable losses. These factors and analyses are updated on a quarterly basis.

Risk monitoring

The Firm has developed policies and practices that are designed to preserve the independence and integrity of decision-making and ensure credit risks are accurately assessed, properly approved, continually monitored and actively managed at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, credit limits, risk-rating methodologies, portfolio-review parameters and problem-loan management. Wholesale credit risk is continually monitored on both an aggregate portfolio level and on an individual customer basis. For consumer credit risk, the key focus items are trends and concentrations at the portfolio level, where potential problems can be remedied through changes in underwriting policies and portfolio guidelines. Consumer Credit Risk Management monitors trends against business expectations and industry benchmarks.

In order to meet its credit risk management objectives, the Firm seeks to maintain a risk profile that is diverse in terms of borrower, product type, industry and geographic concentration. Additional diversification of the Firm's exposure is accomplished through syndication of credits, participations, loan sales, securitizations, credit derivatives and other risk-reduction techniques.

Risk reporting

To enable monitoring of credit risk and decision-making, aggregate credit exposure, credit metric forecasts, hold-limit exceptions and risk profile changes are reported to senior credit risk management regularly. Detailed portfolio reporting of industry, customer and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management on a quarterly basis. Through the risk governance structure, credit risk trends and limit exceptions are regularly provided to, and discussed with, the Operating Committee.

Credit portfolio

The following table presents JPMorgan Chase's credit portfolio as of December 31, 2004 and 2003. Total wholesale credit exposure increased by $167 billion, and total consumer exposure increased by $584 billion, at year-end 2004 from year-end 2003. This increase in total exposure (including $71 billion of securitized credit cards) was primarily the result of the Merger.

Wholesale and consumer credit portfolio

As of or for the year ended December 31,[a] (in millions, except ratios)	Credit exposure		Nonperforming assets[t][u]		Net charge-offs		Average annual net charge-off rate	
	2004	2003	**2004**	2003	**2004**	2003	**2004**	2003
Wholesale[b][c][d]								
Loans – reported[e]	**$ 135,067**	$ 75,419	**$ 1,574**	$ 2,004	**$ 186**	$ 765	**0.19%**	0.97%
Derivative receivables[f][g]	**65,982**	83,751	**241**	253	**NA**	NA	**NA**	NA
Interests in purchased receivables	**31,722**	4,752	**—**	—	**NA**	NA	**NA**	NA
Other receivables	**—**	108	**—**	108	**NA**	NA	**NA**	NA
Total wholesale credit-related assets[e]	**232,771**	164,030	**1,815**	2,365	**186**	765	**0.19**	0.97
Lending-related commitments[h][i]	**309,399**	211,483	**NA**	NA	**NA**	NA	**NA**	NA
Total wholesale credit exposure[e][j]	**$ 542,170**	$ 375,513	**$ 1,815**	$ 2,365	**$ 186**	$ 765	**0.19%**	0.97%
Consumer[c][k][l]								
Loans – reported[m]	**$ 267,047**	$ 139,347	**$ 1,169**	$ 580	**$ 2,913**	$ 1,507	**1.56%**	1.33%
Loans – securitized[m][n]	**70,795**	34,856	**—**	—	**2,898**	1,870	**5.51**	5.64
Total managed consumer loans[m]	**$ 337,842**	$ 174,203	**$ 1,169**	$ 580	**$ 5,811**	$ 3,377	**2.43%**	2.31%
Lending-related commitments	**601,196**	181,198	**NA**	NA	**NA**	NA	**NA**	NA
Total consumer credit exposure[o]	**$ 939,038**	$ 355,401	**$ 1,169**	$ 580	**$ 5,811**	$ 3,377	**2.43%**	2.31%
Total credit portfolio								
Loans – reported	**$ 402,114**	$ 214,766	**$ 2,743**	$ 2,584	**$ 3,099**	$ 2,272	**1.08%**	1.19%
Loans – securitized[n]	**70,795**	34,856	**—**	—	**2,898**	1,870	**5.51**	5.64
Total managed loans	**472,909**	249,622	**2,743**	2,584	**5,997**	4,142	**1.76**	1.84
Derivative receivables[f][g]	**65,982**	83,751	**241**	253	**NA**	NA	**NA**	NA
Interests in purchased receivables	**31,722**	4,752	**—**	—	**NA**	NA	**NA**	NA
Other receivables	**—**	108	**—**	108	**NA**	NA	**NA**	NA
Total managed credit-related assets	**570,613**	338,233	**2,984**	2,945	**5,997**	4,142	**1.76**	1.84
Wholesale lending-related commitments[h][i]	**309,399**	211,483	**NA**	NA	**NA**	NA	**NA**	NA
Consumer lending-related commitments	**601,196**	181,198	**NA**	NA	**NA**	NA	**NA**	NA
Assets acquired in loan satisfactions[p]	**NA**	NA	**247**	216	**NA**	NA	**NA**	NA
Total credit portfolio[q]	**$ 1,481,208**	$ 730,914	**$ 3,231**	$ 3,161	**$ 5,997**	$ 4,142	**1.76%**	1.84%
Purchased held-for-sale wholesale loans[r]	**$ 351**	$ 22	**$ 351**	$ 22	**NA**	NA	**NA**	NA
Credit derivative hedges notional[s]	**(37,200)**	(37,282)	**(15)**	(123)	**NA**	NA	**NA**	NA
Collateral held against derivatives	**(9,301)**	(36,214)	**NA**	NA	**NA**	NA	**NA**	NA

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes Investment Bank, Commercial Banking, Treasury & Securities Services and Asset & Wealth Management.
(c) Amounts are presented gross of the Allowance for loan losses.
(d) Net charge-off rates exclude year-to-date average wholesale loans HFS of $6.4 billion and $3.8 billion for 2004 and 2003, respectively.
(e) Wholesale loans past-due 90 days and over and accruing were $8 million and $42 million at December 31, 2004 and 2003, respectively.
(f) The 2004 amount includes the effect of legally enforceable master netting agreements. Effective January 1, 2004, the Firm elected to report the fair value of derivative assets and liabilities net of cash received and paid, respectively, under legally enforceable master netting agreements. As of December 31, 2004, derivative receivables were $98 billion before netting of $32 billion of cash collateral held.
(g) The Firm also views its credit exposure on an economic basis. For derivative receivables, economic credit exposure is the three-year averages of a measure known as Average exposure (which is the expected MTM value of derivative receivables at future time periods, including the benefit of collateral). Average exposure was $38 billion and $34 billion at December 31, 2004 and December 31, 2003, respectively. See pages 62–64 of this Annual Report for a further discussion of the Firm's derivative receivables.
(h) The Firm also views its credit exposure on an economic basis. For lending-related commitments, economic credit exposure is represented by a "loan equivalent," which is the portion of the unused commitments or other contingent exposure that is expected, based on average portfolio historical experience, to become outstanding in the event of a default by the obligor. Loan equivalents were $162 billion and $104 billion at December 31, 2004 and 2003, respectively. See page 65 of this Annual Report for a further discussion of this measure.
(i) Includes unused advised lines of credit totaling $23 billion and $19 billion at December 31, 2004 and 2003, respectively, which are not legally binding. In regulatory filings with the FRB, unused advised lines are not reportable.
(j) Represents Total wholesale loans, Derivative receivables, Interests in purchased receivables, Other receivables and Wholesale lending–related commitments.
(k) Net charge-off rates exclude year-to-date average HFS consumer loans (excluding Card) in the amount of $14.7 billion and $25.3 billion for 2004 and 2003, respectively.
(l) Includes Retail Financial Services and Card Services.
(m) Past-due loans 90 days and over and accruing includes credit card receivables of $998 million and $273 million, and related credit card securitizations of $1.3 billion and $879 million, at December 31, 2004 and 2003, respectively.
(n) Represents securitized credit cards. For a further discussion of credit card securitizations, see Card Services on pages 39–40 of this Annual Report.
(o) Represents Total consumer loans, Credit card securitizations and Consumer lending–related commitments.
(p) At December 31, 2004 and 2003, includes $23 million and $10 million, respectively, of wholesale assets acquired in loan satisfactions, and $224 million and $206 million, respectively, of consumer assets acquired in loan satisfactions.
(q) At December 31, 2004 and 2003, excludes $1.5 billion and $2.3 billion, respectively, of residential mortgage receivables in foreclosure status that are insured by government agencies. These amounts are excluded as reimbursement is proceeding normally.
(r) Represents distressed wholesale loans purchased as part of IB's proprietary investing activities.
(s) Represents the notional amount of single-name and portfolio credit derivatives used to manage the credit risk of wholesale credit exposure; these derivatives do not qualify for hedge accounting under SFAS 133.
(t) Excludes purchased held-for-sale ("HFS") wholesale loans.
(u) Nonperforming assets include wholesale HFS loans of $2 million and $30 million for 2004 and 2003, respectively, and consumer HFS loans of $13 million and $45 million for 2004 and 2003, respectively. HFS loans are carried at the lower of cost or market, and declines in value are recorded in Other income.

NA – Not applicable.

Wholesale credit portfolio

The increase in total wholesale exposure was almost entirely due to the Merger. Derivative receivables declined by $18 billion, primarily because, effective January 1, 2004, the Firm elected to report the fair value of derivative assets and liabilities net of cash received and paid, respectively, under legally enforceable master netting agreements. Loans, lending-related commitments and interests in purchased receivables increased by $60 billion, $98 billion and $27 billion, respectively, primarily as a result of the Merger.

Below are summaries of the maturity and ratings profiles of the wholesale portfolio as of December 31, 2004 and 2003. The ratings scale is based on the Firm's internal risk ratings and is presented on an S&P-equivalent basis.

Wholesale exposure

	Maturity profile[a]				Ratings profile						
					Investment-grade ("IG")			Noninvestment-grade			
At December 31, 2004 (in billions, except ratios)	<1 year	1–5 years	> 5 years	Total	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ & below	Total	Total % of IG
Loans	43%	43%	14%	100%	$ 31	$ 20	$ 36	$ 43	$ 5	$ 135	64%
Derivative receivables[b]	19	39	42	100	34	12	11	9	—	66	86
Interests in purchased receivables	37	61	2	100	3	24	5	—	—	32	100
Lending-related commitments[b][c]	46	52	2	100	124	68	74	40	3	309	86
Total exposure[d]	42%	49%	9%	100%	$ 192	$ 124	$ 126	$ 92	$ 8	$ 542	82%
Credit derivative hedges notional[e]	18%	77%	5%	100%	$ (11)	$ (11)	$ (13)	$ (2)	$ —	$ (37)	95%

	Maturity profile[a]				Ratings profile						
					Investment-grade ("IG")			Noninvestment-grade			
At December 31, 2003[f] (in billions, except ratios)	<1 year	1–5 years	> 5 years	Total	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ & below	Total	Total % of IG
Loans	50%	35%	15%	100%	$ 14	$ 13	$ 20	$ 22	$ 6	$ 75	63%
Derivative receivables[b]	20	41	39	100	47	15	12	9	1	84	88
Interests in purchased receivables	27	71	2	100	5	—	—	—	—	5	100
Lending-related commitments[b][c]	52	45	3	100	79	57	48	26	2	212	87
Total exposure[d]	44%	43%	13%	100%	$ 145	$ 85	$ 80	$ 57	$ 9	$ 376	83%
Credit derivative hedges notional[e]	16%	74%	10%	100%	$ (10)	$ (12)	$ (12)	$ (2)	$ (1)	$ (37)	92%

(a) The maturity profile of loans and lending-related commitments is based upon the remaining contractual maturity. The maturity profile of derivative receivables is based upon the maturity profile of Average exposure. See page 63 of this Annual Report for a further discussion of Average exposure.
(b) Based on economic credit exposure, the total percentage of Investment grade for derivative receivables was 92% and 91% as of December 31, 2004 and 2003, respectively, and for lending-related commitments was 85% and 88% as of December 31, 2004 and 2003, respectively. See footnotes (g) and (h) on page 59 of this Annual Report for a further discussion of economic credit exposure.
(c) Based on economic credit exposure, the maturity profile for the <1 year, 1–5 years and >5 years categories would have been 31%, 65% and 4%, respectively, as of December 31, 2004, and 38%, 58% and 4%, respectively, as of December 31, 2003. See footnote (h) on page 59 of this Annual Report for a further discussion of economic credit exposure.
(d) Based on economic credit exposure, the maturity profile for <1 year, 1–5 years and >5 years categories would have been 35%, 54% and 11%, respectively, as of December 31, 2004, and 36%, 46% and 18%, respectively, as of December 31, 2003. See footnotes (g) and (h) on page 59 of this Annual Report for a further discussion of economic credit exposure.
(e) Ratings are based on the underlying referenced assets.
(f) Heritage JPMorgan Chase only.

As of December 31, 2004, the wholesale exposure ratings profile remained relatively stable compared with December 31, 2003.

Wholesale credit exposure – selected industry concentration

The Firm actively manages the size and diversification of its industry concentrations, with particular attention paid to industries with actual or potential credit concerns. Following the Merger, the Firm commenced a thorough review of industry definitions and assignments in each of the heritage firm's portfolios. As a result of this review, the Firm's industry structure was modified, resulting in two new industry groups within the top-10 industry concentrations at December 31, 2004: Banks and finance companies (consists of the industries termed Commercial banks and Finance companies and lessors at year-end 2003) and Retail and consumer services (previously separate industries at December 31, 2003). The Merger resulted in increases in nearly every top 10 industry concentration. Exposures to Banks and finance companies and Asset managers declined, primarily as a result of the Firm's election to report fair value of derivative assets and liabilities net of cash received and paid, respectively, under legally enforceable master netting agreements, which affected derivative receivables. A significant portion of the Firm's derivatives portfolio is transacted with customers in these industries.

As of December 31, 2004 (in millions, except ratios)	Credit exposure[c]	Investment grade	Noninvestment-grade[d] Noncriticized	Criticized performing	Criticized nonperforming	Net charge-offs (recoveries)	Credit derivative hedges[e]	Collateral held against derivative receivables[c]
Top 10 industries[a]								
Banks and finance companies	$ 56,184	90%	$ 5,419	$ 132	$ 55	$ 6	$ (11,695)	$ (3,464)
Real estate	28,230	64	9,264	609	156	9	(800)	(45)
Healthcare	22,003	79	4,381	204	45	1	(741)	(13)
Retail and consumer services	21,732	76	4,871	285	108	—	(1,767)	(42)
Consumer products	21,427	68	6,382	408	71	85	(1,189)	(50)
Utilities	21,262	85	2,339	504	386	63	(2,247)	(27)
Asset managers	20,389	79	4,225	111	4	(15)	(80)	(655)
State and municipal governments	19,794	97	599	13	1	—	(394)	(18)
Securities firms and exchanges	18,176	87	2,278	4	13	1	(1,398)	(2,068)
Media	15,314	64	4,937	198	311	(5)	(1,600)	(45)
All other	297,659	83	47,261	4,001	665	41	(15,289)	(2,874)
Total	$ 542,170	82%	$ 91,956	$ 6,469	$ 1,815	$ 186	$ (37,200)	$ (9,301)

As of December 31, 2003[b] (in millions, except ratios)	Credit exposure[c]	Investment grade	Noninvestment-grade[d] Noncriticized	Criticized performing	Criticized nonperforming	Net charge-offs (recoveries)	Credit derivative hedges[e]	Collateral held against derivative receivables[c]
Top 10 industries[a]								
Banks and finance companies	$ 62,652	96%	$ 2,633	$ 107	$ 23	$ 15	$ (12,538)	$ (24,822)
Real estate	14,544	70	4,058	232	49	29	(718)	(182)
Healthcare	11,332	86	1,403	139	44	12	(467)	(35)
Retail and consumer services	14,451	73	3,615	224	83	64	(1,637)	(17)
Consumer products	13,774	71	3,628	313	103	6	(1,104)	(122)
Utilities	15,296	82	1,714	415	583	129	(1,960)	(176)
Asset managers	21,794	82	3,899	76	13	14	(245)	(1,133)
State and municipal governments	14,354	100	36	14	1	—	(405)	(12)
Securities firms and exchanges	15,599	83	2,582	9	13	4	(1,369)	(4,168)
Media	14,075	65	3,285	1,307	358	151	(1,678)	(186)
All other	177,642	80	30,002	3,652	1,095	341	(15,161)	(5,361)
Total	$ 375,513	83%	$ 56,855	$ 6,488	$ 2,365	$ 765	$ (37,282)	$ (36,214)

(a) Based on December 31, 2004, determination of Top 10 industries.
(b) Heritage JPMorgan Chase only.
(c) Credit exposure is net of risk participations and excludes the benefit of credit derivative hedges and collateral held against derivative receivables or loans. For 2004, collateral held against derivative receivables excludes $32 billion of cash collateral as a result of the Firm electing to report the fair value of derivative assets and liabilities net of cash received and paid, respectively, under legally enforceable master netting agreements.
(d) Excludes purchased nonaccrual loans held for sale of $351 million and $22 million at December 31, 2004 and 2003, respectively.
(e) Represents notional amounts only; these credit derivatives do not qualify for hedge accounting under SFAS 133.

Selected industry discussion

Presented below is a discussion of several industries to which the Firm has significant exposure and which it continues to monitor because of actual or potential credit concerns.

- **Banks and finance companies:** This industry group, primarily consisting of exposure to commercial banks, is the largest segment of the Firm's wholesale credit portfolio. Credit quality is high, as 90% of the exposure in this category is rated investment-grade.
- **Real estate:** Wholesale real estate grew considerably as a result of the Merger. The resulting exposure is diversified by transaction type, borrower base, geography and property type. In 2004, the portfolio continued to benefit from disciplined underwriting, low interest rates, high liquidity and increased capital demand.
- **All other:** All other at December 31, 2004, included $298 billion of credit exposure to 21 industry segments. Exposures related to SPEs and high-net-worth individuals totaled 45% of this category. SPEs provide secured financing (generally backed by receivables, loans or bonds on a bankruptcy-remote, non-recourse or limited-recourse basis) originated by companies in a diverse group of industries that are not highly correlated. The remaining All other exposure is well diversified across other industries, none of which comprises more than 3% of total exposure.

Wholesale criticized exposure

Exposures deemed criticized generally represent a ratings profile similar to a rating of CCC+/Caa1 and lower, as defined by Standard & Poor's/Moody's. Despite the Merger, the criticized component of the portfolio decreased to $8.3 billion at December 31, 2004, from $8.9 billion at year-end 2003. The portfolio continued to experience improvement due to debt repayments and

facility upgrades as a result of client recapitalizations; additional security and collateral taken in refinancings; client upgrades from improved financial performance; gross charge-offs; and a lack of migration of new exposures into the portfolio.

Criticized exposure – industry concentrations

As of December 31, 2004 (in millions)

Utilities	$ 890	10.7%
Real estate	765	9.2
Media	509	6.1
Chemicals/plastics	488	5.9
Consumer products	479	5.8
Machinery and equipment manufacturing	459	5.6
Airlines	450	5.4
Business services	444	5.4
Metals/mining	438	5.3
Building materials/construction	430	5.2
All other	2,932	35.4
Total	$ 8,284	100%

Wholesale nonperforming assets (excluding purchased held-for-sale wholesale loans) decreased from December 31, 2003, as a result of gross charge-offs of $543 million taken during 2004. Wholesale net charge-offs improved significantly compared with 2003, as a result of lower gross charge-offs and slightly higher recoveries. The 2004 wholesale net charge-off rate was 0.19%, compared with 0.97% in 2003.

Although future charge-offs in the wholesale portfolio and overall credit quality are subject to uncertainties, which may cause actual results to differ from historic performance, the Firm anticipates that the wholesale provision for credit losses will be higher in 2005 than it was in 2004, as the provision for credit losses moves to more normal levels over time.

Derivative contracts

In the normal course of business, the Firm utilizes derivative instruments to meet the needs of customers, to generate revenues through trading activities, to manage exposure to fluctuations in interest rates, currencies and other markets and to manage its own credit risk. The Firm uses the same credit risk management procedures as those used for traditional lending to assess and approve potential credit exposures when entering into derivative transactions.

The following table summarizes the aggregate notional amounts and the reported derivative receivables (i.e., the MTM or fair value of the derivative contracts after taking into account the effects of legally enforceable master netting agreements) at each of the dates indicated:

Notional amounts and derivative receivables marked to market ("MTM")

As of December 31, (in billions)	Notional amounts[a]		Derivative receivables MTM	
	2004	2003[b]	2004	2003[b]
Interest rate	$ 37,022	$ 31,252	$ 46	$ 60
Foreign exchange	1,886	1,545	8	10
Equity	434	328	6	9
Credit derivatives	1,071	578	3	3
Commodity	101	61	3	2
Total	40,514	33,764	66	84
Collateral held against derivative receivables	NA	NA	(9)[c]	(36)
Exposure net of collateral	NA	NA	$ 57	$ 48

(a) The notional amounts represent the gross sum of long and short third-party notional derivative contracts, excluding written options and foreign exchange spot contracts.
(b) Heritage JPMorgan Chase only.
(c) The Firm held $41 billion of collateral against derivative receivables as of December 31, 2004, consisting of $32 billion in net cash received under credit support annexes to legally enforceable master netting agreements, and $9 billion of other highly liquid collateral. The benefit of the $32 billion is reflected within the $66 billion of derivative receivables MTM. Excluded from the $41 billion of collateral is $10 billion of collateral delivered by clients at the initiation of transactions; this collateral secures exposure that could arise in the existing portfolio of derivatives should the MTM of the client's transactions move in the Firm's favor. Also excluded are credit enhancements in the form of letter-of-credit and surety receivables.

The $41 trillion of notional principal of the Firm's derivative contracts outstanding at December 31, 2004, significantly exceeds the possible credit losses that could arise from such transactions. For most derivative transactions, the notional principal amount does not change hands; it is simply used as a reference to calculate payments. The appropriate measure of current credit risk is, in the Firm's view, the MTM value of the contract, which represents the cost to replace the contracts at current market rates should the counterparty default. When JPMorgan Chase has more than one transaction outstanding with a counterparty, and a legally enforceable master netting agreement exists with that counterparty, the netted MTM exposure, less collateral held, represents, in the Firm's view, the appropriate measure of current credit risk. At December 31, 2004, the MTM value of derivative receivables (after taking into account the effects of legally enforceable master netting agreements and the impact of net cash received under credit support annexes to such legally enforceable master netting agreements) was $66 billion. Further, after taking into account $9 billion of other highly liquid collateral held by the Firm, the net current MTM credit exposure was $57 billion.

While useful as a current view of credit exposure, the net MTM value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE") and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. However, the total potential future credit risk embedded in the Firm's derivatives portfolio is not the simple sum of all Peak client credit risks. This is because, at the portfolio level, credit risk is reduced by the fact that when offsetting transactions are done with separate counterparties, only one of the two trades can generate a credit loss, even if both counterparties were to default simultaneously. The Firm refers to this effect as market diversification, and the Market-Diversified Peak ("MDP") measure is a portfolio aggregation of counterparty Peak measures, representing the maximum losses at the 97.5% confidence level that would occur if all counterparties defaulted under any one given market scenario and timeframe.

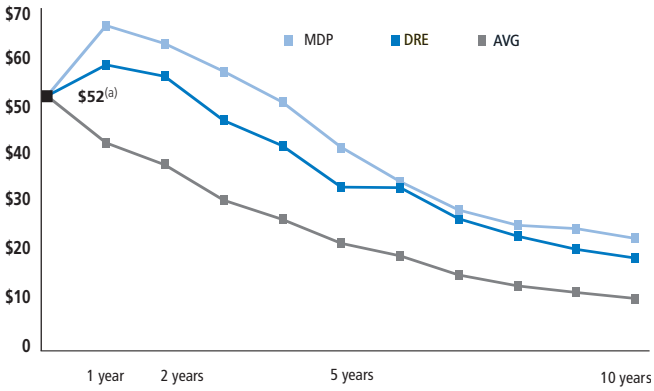
Derivative Risk Equivalent exposure is a measure that expresses the riskiness of derivative exposure on a basis intended to be equivalent to the riskiness of loan exposures. This is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, Average exposure is a measure of the expected MTM value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the Credit Valuation Adjustment ("CVA"), as described further below.

The chart below shows the exposure profiles to derivatives over the next 10 years as calculated by the MDP, DRE and AVG metrics. All three measures generally show declining exposure after the first year, if no new trades were added to the portfolio.

Exposure profile of derivatives measures

December 31, 2004
(in billions)



(a) Excludes $5 billion from the $57 billion of reported derivative receivables MTM net of collateral. The exclusion reflects risk mitigation for exchange traded deals and equity option calls.

The MTM value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based on the Firm's AVG to a counterparty, and on the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. The Firm risk manages its exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivatives transactions. The MTM value of the Firm's derivative payables does not incorporate a valuation adjustment to reflect JPMorgan Chase's credit quality.

The following table summarizes the ratings profile of the Firm's Consolidated balance sheet Derivative receivables MTM, net of cash and other highly liquid collateral, for the dates indicated:

Ratings profile of derivative receivables MTM

Rating equivalent	2004		2003[b]	
December 31, (in millions)	Exposure net of collateral[a]	% of exposure net of collateral	Exposure net of collateral	% of exposure net of collateral
AAA to AA-	$ 30,384	53%	$ 24,697	52%
A+ to A-	9,109	16	7,677	16
BBB+ to BBB-	9,522	17	7,564	16
BB+ to B-	7,271	13	6,777	14
CCC+ and below	395	1	822	2
Total	$ 56,681	100%	$ 47,537	100%

(a) The Firm held $41 billion of collateral against derivative receivables as of December 31, 2004, consisting of $32 billion in net cash received under credit support annexes to legally enforceable master netting agreements, and $9 billion of other highly liquid collateral. The benefit of the $32 billion is reflected within the $66 billion of derivative receivables MTM. Excluded from the $41 billion of collateral is $10 billion of collateral delivered by clients at the initiation of transactions; this collateral secures exposure that could arise in the existing portfolio of derivatives should the MTM of the client's transactions move in the Firm's favor. Also excluded are credit enhancements in the form of letter-of-credit and surety receivables.
(b) Heritage JPMorgan Chase only.

The Firm actively pursues the use of collateral agreements to mitigate counterparty credit risk in derivatives. The percentage of the Firm's derivatives transactions subject to collateral agreements increased slightly, to 79% as of December 31, 2004, from 78% at December 31, 2003. The Firm held $41 billion of collateral as of December 31, 2004 (including $32 billion of net cash received under credit support annexes to legally enforceable master netting agreements), compared with $36 billion as of December 31, 2003. The Firm posted $31 billion of collateral as of December 31, 2004, compared with $27 billion at the end of 2003.

Certain derivative and collateral agreements include provisions that require the counterparty and/or the Firm, upon specified downgrades in their respective credit ratings, to post collateral for the benefit of the other party. As of December 31, 2004, the impact of a single-notch ratings downgrade to JPMorgan Chase Bank, from its current rating of AA- to A+, would have been an additional $1.5 billion of collateral posted by the Firm; the impact of a six-notch ratings downgrade (from AA- to BBB-) would have been $3.9 billion of additional collateral. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the then-existing MTM value of the derivative contracts.

Use of credit derivatives

The following table presents the Firm's notional amounts of credit derivatives protection bought and sold by the respective businesses as of December 31, 2004 and 2003:

Credit derivatives positions

	Notional amount				
	Portfolio management		Dealer/client		
December 31, (in millions)	Protection bought[b]	Protection sold	Protection bought	Protection sold	Total
2004	$ 37,237	$ 37	$501,266	$ 532,335	$1,070,875
2003[a]	37,349	67	264,389	275,888	577,693

(a) Heritage JPMorgan Chase only.
(b) Includes $2 billion at both December 31, 2004 and 2003, of portfolio credit derivatives.

JPMorgan Chase has limited counterparty exposure as a result of credit derivatives transactions. Of the $66 billion of total Derivative receivables at December 31, 2004, approximately $3 billion, or 5%, was associated with credit derivatives, before the benefit of highly liquid collateral. The use of credit derivatives to manage exposures by the Credit Portfolio Group does not reduce the reported level of assets on the balance sheet or the level of reported off–balance sheet commitments.

Credit portfolio management activity

In managing its wholesale credit exposure, the Firm purchases single-name and portfolio credit derivatives. As of December 31, 2004, the notional outstanding amount of protection bought via single-name and portfolio credit derivatives was $35 billion and $2 billion, respectively. The Firm also diversifies its exposures by providing (i.e., selling) credit protection, which increases exposure to industries or clients where the Firm has little or no client-related exposure. This activity is not material to the Firm's overall credit exposure.

Use of single-name and portfolio credit derivatives

December 31, (in millions)	Notional amount of protection bought 2004	2003[a]
Credit derivative hedges of:		
Loans and lending-related commitments	$ 25,002	$ 22,471
Derivative receivables	12,235	14,878
Total	$ 37,237	$ 37,349

(a) Heritage JPMorgan Chase only.

The credit derivatives used by JPMorgan Chase for its portfolio management activities do not qualify for hedge accounting under SFAS 133, and therefore, effectiveness testing under SFAS 133 is not performed. These derivatives are reported at fair value, with gains and losses recognized as Trading revenue. The MTM value incorporates both the cost of credit derivative premiums and changes in value due to movement in spreads and credit events, whereas the loans and lending-related commitments being risk managed are accounted for on an accrual basis. Loan interest and fees are generally recognized in Net interest income, and impairment is recognized in the Provision for credit losses. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives utilized in portfolio management

activities, causes earnings volatility that is not representative of the true changes in value of the Firm's overall credit exposure. The MTM treatment of both the Firm's credit derivatives used for managing credit exposure ("short" credit positions) and the CVA, which reflects the credit quality of derivatives counterparty exposure ("long" credit positions), provides some natural offset.

In 2004, there were $44 million of losses in Trading revenue from credit portfolio management activities. The losses consisted of $297 million related to credit derivatives used to manage the Firm's credit exposure; of this amount, $234 million was associated with credit derivatives used to manage accrual lending activities, and $63 million with credit derivatives used to manage the derivatives portfolio. The losses were largely due to the ongoing cost of buying credit protection and some additional impact due to the global tightening of credit spreads. These losses were partially offset by $253 million of gains from a decrease in the MTM value of the CVA, a result of the same factors.

The 2003 credit portfolio management activity resulted in $191 million of losses included in Trading revenue. These losses included $746 million related to credit derivatives that were used to risk manage the Firm's credit exposure; approximately $504 million of this amount was associated with credit derivatives used to manage accrual lending activities, and the remainder was primarily related to credit derivatives used to manage the credit risk of MTM derivative receivables. The losses were generally driven by an overall global tightening of credit spreads. The $746 million loss was partially offset by $555 million of trading revenue gains, primarily related to the decrease in the MTM value of the CVA due to credit spread tightening.

The Firm also actively manages its wholesale credit exposure through loan and commitment sales. During 2004 and 2003, the Firm sold $5.9 billion and $5.2 billion of loans and commitments, respectively, resulting in losses of $8 million and $54 million, respectively, in connection with the management of its wholesale credit exposure. These activities are not related to the Firm's securitization activities, which are undertaken for liquidity and balance sheet management purposes. For a further discussion of securitization activity, see Note 13 on pages 103–106 of this Annual Report.

Dealer/client activity

As of December 31, 2004, the total notional amounts of protection purchased and sold by the dealer business were $501 billion and $532 billion, respectively. The mismatch between these notional amounts is attributable to the Firm selling protection on large, diversified, predominantly investment-grade portfolios (including the most senior tranches) and then risk managing these positions by buying protection on the more subordinated tranches of the same portfolios. In addition, the Firm may use securities to risk manage certain derivative positions. Consequently, while there is a mismatch in notional amounts of credit derivatives, in the Firm's view, the risk positions are largely matched.

Lending-related commitments

The contractual amount of wholesale lending-related commitments was $309 billion at December 31, 2004, compared with $211 billion at December 31, 2003. The increase was primarily due to the Merger. In the Firm's view, the total contractual amount of these instruments is not representative of the Firm's actual credit risk exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these instruments, the Firm has established a "loan-equivalent" amount for each commitment; this represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become outstanding in the event of a default by an obligor. The amount of the loan equivalents as of December 31, 2004 and 2003, was $162 billion and $104 billion, respectively.

Country exposure

The Firm has a comprehensive process for measuring and managing its exposures and risk in emerging markets countries – defined as those countries potentially vulnerable to sovereign events. Exposures to a country include all credit-related lending, trading, and investment activities, whether cross-border or locally funded. Exposure amounts are adjusted for credit enhancements (e.g. guarantees and letters of credit) provided by third parties located outside the country, if the enhancements fully cover the country risk, as well as the business risk. As of December 31, 2004, the Firm's exposure to any individual country was not material. In addition to monitoring country exposures, the Firm uses stress tests to measure and manage the risk of extreme loss associated with sovereign crises.

Consumer credit portfolio

JPMorgan Chase's consumer portfolio consists primarily of residential mortgages and home equity loans, credit cards, auto and education financings and loans to small businesses. The domestic consumer portfolio reflects the benefit of diversification from both a product and a geographical perspective. The primary focus is on serving the prime consumer credit market.

The following table presents managed consumer credit–related information for the dates indicated:

Consumer portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit-related exposure		Nonperforming assets		Net charge-offs		Average annual net charge-off rate[e]	
	2004	2003[d]	**2004**	2003[d]	**2004**	2003[d]	**2004**	2003[d]
Consumer real estate								
Home finance – home equity and other[a]	**$ 67,837**	$ 24,179	**$ 416**	$ 125	**$ 554**	$ 109	**1.18%**	0.56%
Home finance – mortgage	**56,816**	50,381	**257**	249	**19**	26	**0.05**	0.08
Total Home finance[a]	**124,653**	74,560	**673**	374	**573**	135	**0.65**	0.26
Auto & education finance	**62,712**	43,157	**193**	123	**263**	171	**0.52**	0.43
Consumer & small business and other	**15,107**	4,204	**295**	72	**154**	75	**1.64**	1.83
Credit card receivables – reported[b]	**64,575**	17,426	**8**	11	**1,923**	1,126	**4.95**	6.40
Total consumer loans – reported	**267,047**	139,347	**1,169**	580	**2,913**	1,507	**1.56**	1.33
Credit card securitizations[b][c]	**70,795**	34,856	**—**	—	**2,898**	1,870	**5.51**	5.64
Total consumer loans – managed[b]	**337,842**	174,203	**1,169**	580	**5,811**	3,377	**2.43**	2.31
Assets acquired in loan satisfactions	**NA**	NA	**224**	206	**NA**	NA	**NA**	NA
Total consumer related assets – managed	**337,842**	174,203	**1,393**	786	**5,811**	3,377	**2.43**	2.31
Consumer lending–related commitments:								
Home finance	**53,223**	31,626	**NA**	NA	**NA**	NA	**NA**	NA
Auto & education finance	**5,193**	2,637	**NA**	NA	**NA**	NA	**NA**	NA
Consumer & small business and other	**10,312**	5,792	**NA**	NA	**NA**	NA	**NA**	NA
Credit cards	**532,468**	141,143	**NA**	NA	**NA**	NA	**NA**	NA
Total lending-related commitments	**601,196**	181,198	**NA**	NA	**NA**	NA	**NA**	NA
Total consumer credit portfolio	**$ 939,038**	$ 355,401	**$1,393**	$ 786	**$5,811**	$ 3,377	**2.43%**	2.31%

(a) Includes $406 million of charge-offs related to the manufactured home loan portfolio in the fourth quarter of 2004.
(b) Past-due loans 90 days and over and accruing includes credit card receivables of $998 million and $273 million, and related credit card securitizations of $1.3 billion and $879 million at December 31, 2004 and 2003, respectively.
(c) Represents securitized credit cards. For a further discussion of credit card securitizations, see Card Services on page 39 of this Annual Report.
(d) Heritage JPMorgan Chase only.
(e) Net charge-off rates exclude average loans HFS in the amount of $14.7 billion and $25.3 billion for 2004 and 2003, respectively.
NA – Not applicable.

Total managed consumer loans as of December 31, 2004, were $338 billion, up from $174 billion at year-end 2003, reflecting the addition of the Bank One consumer credit portfolios. Consumer lending–related commitments increased by 232% to $601 billion at December 31, 2004, reflecting the impact of the Merger. The following discussion relates to the specific loan and lending-related categories within the consumer portfolio:

Retail Financial Services

Average RFS loan balances for 2004 were $163 billion. New loans originated in 2004 reflect higher credit quality, consistent with management's focus on the prime credit market segment. The net charge-off rate for retail loans in 2004 was 0.67%, an increase of 27 basis points from 2003. This increase was primarily attributable to the Merger and to $406 million of charge-offs in the fourth quarter of 2004, which were associated with the sale of the $4 billion manufactured home loan portfolio.

Future RFS charge-offs and credit quality are subject to uncertainties which may cause actual results to differ from current anticipated performance, including the direction and level of loan delinquencies, changes in consumer behavior, bankruptcy trends, portfolio seasoning, interest rate movements and portfolio mix, among other factors.

The Firm proactively manages its retail credit operation. Ongoing efforts include continual review and enhancement of credit underwriting criteria and refinement of pricing and risk management models.

Home Finance: Home finance loans on the balance sheet as of December 31, 2004, were $125 billion. This consisted of $68 billion of home equity and other loans and $57 billion of mortgages, including mortgage loans held-for-sale. Home equity and other loans previously included manufactured home loans, a product the Firm stopped originating at mid-year 2004; the Firm sold substantially all of its manufactured home loan portfolio at the end of 2004. The $125 billion in Home Finance receivables as of December 31, 2004, reflects an increase of $50 billion from year-end 2003, driven by the addition of Bank One's home equity and mortgage portfolios. Home Finance provides real estate lending to the full spectrum of credit borrowers, which included $7 billion in sub-prime credits at December 31, 2004. The geographic distribution of outstanding consumer real estate loans is well diversified.

Consumer real estate loan portfolio by geographic location

December 31, (in billions)	2004 Outstanding	2004 %	2003[a] Outstanding	2003[a] %
Top 10 U.S. States				
California	$ 22.8	18%	$ 17.3	23%
New York	18.4	15	16.3	22
Illinois	8.0	6	1.9	3
Texas	7.9	6	4.5	6
Florida	7.1	6	4.7	6
Ohio	6.1	5	0.7	1
Arizona	5.2	4	1.0	1
Michigan	5.2	4	1.2	2
New Jersey	4.5	4	3.1	4
Colorado	3.2	3	1.5	2
Total Top 10	88.4	71	52.2	70
Other	36.3	29	22.4	30
Total	$ 124.7	100%	$ 74.6	100%

(a) Heritage JPMorgan Chase only.

Auto & Education Finance: As of December 31, 2004, Auto & education finance loans increased to $63 billion, up from $43 billion at year-end 2003. The acquisition of the Bank One portfolio was responsible for the increase. The Auto & education loan portfolio reflects a high concentration of prime quality credits. During the past year, the Firm completed a strategic review of all consumer lending portfolio segments. This review resulted in the Firm choosing to de-emphasize vehicle leasing, which, as of December 31, 2004, comprised $8 billion of outstandings. It is anticipated that over time vehicle leases will account for a smaller share of balance sheet receivables and exposure. The strategic review also resulted in the sale of a $2 billion recreational vehicle portfolio in early 2005.

Consumer & Small Business/Insurance: As of December 31, 2004, Small business & other consumer loans increased to $15 billion compared with 2003 year-end levels of $4 billion. This portfolio segment is primarily comprised of loans to small businesses, and the increase reflects the acquisition of the Bank One small business portfolio. The portfolio reflects highly collateralized loans, often with personal loan guarantees.

Card Services

JPMorgan Chase analyzes its credit card portfolio on a managed basis, which includes credit card receivables on the consolidated balance sheet and those receivables sold to investors through securitization. Managed credit card receivables were $135 billion at December 31, 2004, an increase of $83 billion from year-end 2003, reflecting the acquisition of the Bank One portfolio.

Consumer credit quality trends continue to improve overall, reflecting general economic conditions and reduced consumer bankruptcy filings versus the prior year. The decrease in the managed credit card net charge-off rate, to 5.27% in 2004 from 5.90% in 2003, reflected the impact of the Merger, as well as management's continued emphasis on prudent credit risk management, including disciplined underwriting and account management practices targeted to the prime and super-prime credit sectors. Credit Risk Management tools used to manage the level and volatility of losses for credit card accounts have been continually updated, and, where appropriate, these tools were adjusted to reduce credit risk. The managed credit card portfolio continues to reflect a well-seasoned portfolio that has good U.S. geographic diversification.

Future charge-offs in the credit card portfolio and overall credit quality are subject to uncertainties, which may cause actual results to differ from historic performance. This could include the direction and level of loan delinquencies, changes in consumer behavior, bankruptcy trends, portfolio seasoning, interest rate movements and portfolio mix, among other factors. While current economic and credit data suggest that consumer credit quality will not significantly deteriorate, significant deterioration in the general economy could materially change these expectations.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses is intended to cover probable credit losses, including losses where the asset is not specifically identified or the size of the loss has not been fully determined. At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer and the Deputy Chief Risk Officer of the Firm and is discussed with a risk subgroup of the Operating Committee, relative to the risk profile of the Firm's credit portfolio and current economic conditions. The allowance is adjusted based on that review if, in management's judgment, changes are warranted. The allowance includes an asset-specific component and a formula-based component, the latter of which consists of a statistical calculation and adjustments to the statistical calculation. For further discussion of the components of the Allowance for credit losses, see Critical accounting estimates used by the Firm on page 77 and Note 12 on pages 102–103 of this Annual Report. At December 31, 2004, management deemed the allowance for credit losses to be sufficient to absorb losses that are inherent in the portfolio, including losses that are not specifically identified or for which the size of the loss has not yet been fully determined.

Summary of changes in the allowance for credit losses

For the year ended December 31,[a]	2004			2003		
(in millions)	Wholesale	Consumer	Total	Wholesale	Consumer	Total
Loans:						
Beginning balance	$ 2,204	$ 2,319	$ 4,523	$ 2,936	$ 2,414	$ 5,350
Addition allowance resulting from the Merger, July 1, 2004	1,788	1,335	3,123	—	—	—
Gross charge-offs	(543)	(3,262)[c]	(3,805)	(1,113)	(1,705)	(2,818)
Gross recoveries	357	349	706	348	198	546
Net charge-offs	(186)	(2,913)	(3,099)	(765)	(1,507)	(2,272)
Provision for loan losses:						
Provision excluding accounting policy conformity	(605)	2,403	1,798	25	1,554	1,579
Accounting policy conformity	(103)	1,188[d]	1,085	—	—	—
Total Provision for loan losses	(708)	3,591	2,883	25	1,554	1,579
Other	—	(110)	(110)[f]	8	(142)	(134)[f]
Ending balance	$ 3,098[b]	$ 4,222[e]	$ 7,320	$ 2,204	$ 2,319	$ 4,523
Lending-related commitments:						
Beginning balance	$ 320	$ 4	$ 324	$ 363	$ —	$ 363
Addition allowance resulting from the Merger, July 1, 2004	499	9	508	—	—	—
Net charge-offs	—	—	—	—	—	—
Provision for lending-related commitments:						
Provision excluding accounting policy conformity	(111)	(1)	(112)	(40)	1	(39)
Accounting policy conformity	(227)	—	(227)	—	—	—
Total Provision for lending-related commitments	(338)	(1)	(339)	(40)	1	(39)
Other	(1)	—	(1)	(3)	3	—
Ending balance	$ 480	$ 12	$ 492[g]	$ 320	$ 4	$ 324

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes $469 million of asset-specific loss and approximately $2.6 billion of formula-based loss. Included within the formula-based loss is $1.6 billion related to a statistical calculation and adjustments to the statistical calculation of $990 million.
(c) Includes $406 million of charge-offs related to the sale of the $4 billion manufactured home loan portfolio in the fourth quarter of 2004.
(d) Consists of an increase of approximately $1.4 billion as a result of the decertification of heritage Bank One seller's interest in credit card securitizations, partially offset by a reduction of $254 million to conform provision methodologies.
(e) Includes $3.2 billion and $1.0 billion of consumer statistical and adjustments to statistical components, respectively, at December 31, 2004.
(f) Primarily represents the transfer of the allowance for accrued fees on reported credit card loans.
(g) Includes $130 million of asset-specific loss and $362 million of formula-based loss. Note: The formula-based loss for lending-related commitments is based on statistical calculation. There is no adjustment to the statistical calculation for lending-related commitments.

Overall: The Allowance for credit losses increased by $3.0 billion from December 31, 2003, to December 31, 2004, primarily driven by the Merger. Adjustments required to conform to the combined Firm's allowance methodology, and alignment of accounting practices related to the seller's interest in credit card securitizations, resulted in a net increase in the Provision for credit losses of $858 million. See Note 12 on pages 102–103 of this Annual Report.

Loans: The allowance has two components: asset-specific and formula-based. As of December 31, 2004, management deemed the allowance to be appropriate. Excluding loans held for sale, the allowance represented 1.94% of loans at December 31, 2004, compared with 2.33% at year-end 2003.

The wholesale component of the allowance was $3.1 billion as of December 31, 2004, an increase from year-end 2003, primarily due to the Merger. The wholesale allowance also reflected a reduction of $103 million in the provision as a result of conforming the combined Firm's allowance methodology.

The consumer component of the allowance was $4.2 billion as of December 31, 2004, an increase from December 31, 2003, primarily attributable to the Merger and the decertification of Bank One's seller's retained interest in credit card securitizations. Adjustments required to conform to the combined Firm's allowance methodology included a reduction of $192 million in the Allowance for loan losses within RFS. Conforming the methodology within Card Services reduced the Allowance for loan losses by $62 million.

Additionally, in Card Services, $128 million in allowance for accrued fees and finance charges was reclassified from the Allowance for loan losses to Loans.

At the time of the Merger, Bank One's seller's interest in credit card securitizations was in a certificated or security form and recorded at fair value. Subsequently, a decision was made to decertificate these assets, which resulted in a reclassification of the seller's interest from Available-for-sale securities to Loans, at fair value, with no allowance for credit losses. Generally, as the underlying credit card receivables represented by the seller's interest were paid off, customers continued to use their credit cards and originate new receivables, which were then recorded as Loans at historical cost. As these new loans aged, it was necessary to establish an Allowance for credit losses consistent with the Firm's credit policies. During the second half of 2004, approximately $1.4 billion of the Allowance for loan losses was established through the provision associated with newly originated receivables related to the seller's interest.

Lending-related commitments: To provide for the risk of loss inherent in the Firm's process of extending credit, management also computes an asset-specific component and a formula-based component for wholesale lending–related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown. This allowance, which is reported in Other liabilities, was $492 million at December 31, 2004, and reflected the impact of the Merger, partially offset by a $227 million benefit as a result of conforming the combined Firm's allowance methodology. The allowance was $324 million at December 31, 2003.

Provision for credit losses

For a discussion of the reported Provision for credit losses, see page 23 of this Annual Report. The managed provision for credit losses, which reflects credit card securitizations, increased primarily due to the Merger.

For the year ended December 31,[a]	Provision for loan losses		Provision for lending-related commitments		Total provision for credit losses	
(in millions)	**2004**	2003	**2004**	2003	**2004**	2003
Investment Bank	**$ (525)**	$ (135)	**$ (115)**	$ (46)	**$ (640)**	$ (181)
Commercial Banking	**35**	8	**6**	(2)	**41**	6
Treasury & Securities Services	**7**	—	**—**	1	**7**	1
Asset & Wealth Management	**(12)**	36	**(2)**	(1)	**(14)**	35
Corporate	**(110)**	116	**—**	8	**(110)**	124
Total Wholesale	**(605)**	25	**(111)**	(40)	**(716)**	(15)
Retail Financial Services	**450**	520	**(1)**	1	**449**	521
Card Services	**1,953**	1,034	**—**	—	**1,953**	1,034
Total Consumer	**2,403**	1,554	**(1)**	1	**2,402**	1,555
Accounting policy conformity[b]	**1,085**	—	**(227)**	—	**858**	—
Total provision for credit losses	**2,883**	1,579	**(339)**	(39)	**2,544**	1,540
Add: Securitized credit losses	**2,898**	1,870	**—**	—	**2,898**	1,870
Less: Accounting policy conformity	**(1,085)**	—	**227**	—	**(858)**	—
Total managed provision for credit losses	**$ 4,696**	$ 3,449	**$ (112)**	$ (39)	**$ 4,584**	$ 3,410

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

(b) The provision for loan losses includes an increase of approximately $1.4 billion as a result of the decertification of heritage Bank One's seller's interest in credit card securitizations, partially offset by a reduction of $357 million to conform provision methodologies. The provision for lending-related commitments reflects a reduction of $227 million to conform provision methodologies in the wholesale portfolio.

Market risk management

Market risk represents the potential loss in value of portfolios and financial instruments caused by adverse movements in market variables, such as interest and foreign exchange rates, credit spreads, and equity and commodity prices.

Market risk management

Market Risk Management ("MRM") is a function independent of the businesses that identifies, measures, monitors, and controls market risk. It seeks to facilitate efficient risk/return decisions and to reduce volatility in operating performance. It strives to make the Firm's market risk profile transparent to senior management, the Board of Directors and regulators.

The chart below depicts the MRM organizational structure and describes the responsibilities of the groups within MRM.



There are also groups that report to the Chief Financial Officer with some responsibility for market risk-related activities. For example, within the Finance area, the valuation control functions are responsible for ensuring the accuracy of the valuations of positions that expose the Firm to market risk.

Risk identification and classification

MRM works in partnership with the business segments to identify market risks throughout the Firm, and to refine and monitor market risk policies and procedures. All business segments are responsible for comprehensive identification and verification of market risks within their units. Risk-taking businesses have Middle Office functions that act independently from trading personnel and are responsible for verifying risk exposures that the business takes. In addition to providing independent oversight for market risk arising from the business segments, MRM is also responsible for identifying exposures which may not be large within individual business segments, but which may be large for the Firm in aggregate. Weekly meetings are held between MRM and the heads of risk-taking businesses, to discuss and decide on risk exposures in the context of the market environment and client flows.

Positions that expose the Firm to market risk are classified into two categories: trading and nontrading risk. Trading risk includes positions that are held for trading purposes as a principal or as part of a business whose main business strategy is to trade or make markets. Unrealized gains and losses in these positions are generally reported in trading revenue. Nontrading risk includes securities held for longer term investment, and securities and derivatives used to manage the Firm's asset/liability exposures. In most cases, unrealized gains and losses in these positions are accounted for at fair value, with the gains and losses reported in Net income or Other comprehensive income.

Trading risk

Fixed income: Fixed income risk (which includes credit spread risk) involves the potential decline in Net income or financial condition due to adverse changes in market interest rates, which may result in changes to NII, securities valuations, and other interest-sensitive revenues and expenses.

Foreign exchange, equities, commodities and other: These risks involve the potential decline in Net income to the Firm due to adverse changes in foreign exchange, equities or commodities markets, whether due to proprietary positions taken by the Firm, or due to a decrease in the level of client activity. Other risks include passive long-term investments in numerous hedge funds that may have exposure to fixed income, foreign exchange, equity and commodity risk within their portfolio risk structures.

Nontrading risk

The execution of the Firm's core business strategies, the delivery of products and services to its customers, and the discretionary positions the Firm undertakes to risk-manage structural exposures give rise to interest rate risk in the nontrading activities of the Firm.

This exposure can result from a variety of factors, including differences in the timing among the maturity or re-pricing of assets, liabilities and off–balance sheet instruments. Changes in the level and shape of market interest rate curves may also create interest rate risk, since the re-pricing characteristics of the Firm's assets do not necessarily match those of its liabilities. The Firm is also exposed to basis risk, which is the difference in re-pricing characteristics of two floating rate indices, such as the prime rate and 3-month LIBOR. In addition, some of the Firm's products have embedded optionality that impact pricing and balance levels.

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, corporate-wide basis. Business units transfer their interest rate risk to Treasury through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for re-pricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are reviewed by Treasury.

The Firm's mortgage banking activities also give rise to complex interest rate risks. The interest rate exposure from the Firm's mortgage banking activities is a result of option and basis risks. Option risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly-originated mortgage commitments actually closing. Basis risk results from different relative movements between mortgage rates and other interest rates. These risks are managed through programs specific to the different mortgage banking activities. Potential impairment in the fair value of mortgage servicing rights ("MSRs") and increased amortization levels of MSRs are managed via a risk management program that attempts to offset changes in the fair value of MSRs with changes in the fair value of derivatives and investment securities. A similar approach is used to manage the interest rate risk associated with the Firm's mortgage origination business.

Risk measurement

Tools used to measure risk

Because no single measure can reflect all aspects of market risk, the Firm uses several measures, both statistical and nonstatistical, including:

- Statistical risk measures
  - Value-at-Risk ("VAR")
  - Risk identification for large exposures ("RIFLE")
- Nonstatistical risk measures
  - Economic value stress tests
  - Earnings-at-risk stress tests
  - Other measures of position size and sensitivity to market moves

Value-at-risk

JPMorgan Chase's statistical risk measure, VAR, gauges the potential loss from adverse market moves in an ordinary market environment and provides a consistent cross-business measure of risk profiles and levels of risk diversification. VAR is used to compare risks across businesses, to monitor limits and to allocate economic capital to the business segments. VAR provides risk transparency in a normal trading environment.

Each business day the Firm undertakes a comprehensive VAR calculation that includes both its trading and its nontrading activities. VAR for nontrading activities measures the amount of potential change in economic value; however, VAR for such activities is not a measure of reported revenue since nontrading activities are generally not marked to market through earnings. JPMorgan Chase's VAR calculation is highly granular, comprising more than 2.1 million positions and 240,000 pricing series (e.g., securities prices, interest rates, foreign exchange rates). For a substantial portion of its exposure, the Firm has implemented full-revaluation VAR, which, management believes, generates the most accurate results.

To calculate VAR, the Firm uses historical simulation, which measures risk across instruments and portfolios in a consistent, comparable way. This approach assumes that historical changes in market values are representative of future changes. The simulation is based on data for the previous 12 months.

The Firm calculates VAR using a one-day time horizon and a 99% confidence level. This means the Firm would expect to incur losses greater than that predicted by VAR estimates only once in every 100 trading days, or about 2.5 times a year.

All statistical models involve a degree of uncertainty, depending on the assumptions they employ. The Firm prefers historical simulation, because it involves fewer assumptions about the distribution of portfolio losses than parameter-based methodologies. In addition, the Firm regularly assesses the quality of the market data, since their accuracy is critical to computing VAR. Nevertheless, because VAR is based on historical market data, it may not accurately reflect future risk during environments in which market volatility is changing. In addition, the VAR measure on any particular day may not be indicative of future risk levels, since positions and market conditions may both change over time.

While VAR is a valuable tool for evaluating relative risks and aggregating risks across businesses, it only measures the potential volatility of daily revenues. Profitability and risk levels over longer time periods – a fiscal quarter or a year – may be only loosely related to the average value of VAR over those periods for several reasons. First, while VAR measures potential fluctuations around average daily revenue, the average itself could reflect significant gains or losses; for example, from client revenues that accompany risk-taking activities. Second, large trading revenues may result from positions taken over longer periods of time. For example, a business may maintain an exposure to rising or falling interest rates over a period of weeks or months. If the market exhibits a long-term trend over that time, the business could experience large gains or losses, even though revenue volatility on each individual day may have been small.

Trading VAR

IB trading VAR by risk type and credit portfolio VAR[a]

As of or for the year ended December 31, (in millions)[b]	2004 Average VAR	2004 Minimum VAR	2004 Maximum VAR	2004 At December 31,	2003[e] Average VAR	2003[e] Minimum VAR	2003[e] Maximum VAR	2003[e] At December 31,
By risk type:								
Fixed income	$ 74.4	$ 45.3	$117.5	$ 57.3	$ 61.4	$ 42.3	$ 104.3	$ 79.9
Foreign exchange	17.3	10.2	32.8	28.4	16.8	11.0	30.2	23.5
Equities	28.2	15.2	57.8	19.8	18.2	6.7	51.6	45.6
Commodities and other	8.7	6.5	17.9	8.4	7.7	4.9	12.6	8.7
Less: portfolio diversification	(43.6)	NM[d]	NM[d]	(41.8)	(39.4)	NM[d]	NM[d]	(61.7)
Total trading VAR	$ 85.0	$ 51.6	$125.2	$ 72.1	$ 64.7	$ 39.8	$ 116.3	$ 96.0
Credit portfolio VAR[c]	14.0	10.8	16.6	15.0	17.8	12.8	22.0	13.2
Less: portfolio diversification	(8.5)	NM[d]	NM[d]	(9.4)	(13.2)	NM[d]	NM[d]	(8.1)
Total trading and credit portfolio VAR	$ 90.5	$ 55.3	$131.6	$ 77.7	$ 69.3	$ 44.8	$ 119.8	$ 101.1

(a) Includes all mark-to-market trading activities in the IB, plus available for sale securities held for the IB's proprietary purposes. Amounts exclude VAR related to the Firm's private equity business. For a discussion of Private equity risk management, see page 76 of this Annual Report.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(c) Includes VAR on derivative credit valuation adjustments, credit valuation adjustment hedges and mark-to-market loan hedges which are all reported in Trading revenue. This VAR does not include the accrual loan portfolio, which is not marked to market.
(d) Designated as NM because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio diversification effect. In addition, JPMorgan Chase's average and period-end VARs are less than the sum of the VARs of its market risk components, due to risk offsets resulting from portfolio diversification.
(e) Amounts have been revised to reflect the reclassification of hedge fund investments, reclassification of Treasury positions to portfolios outside the IB, and the inclusion of available for sale securities held for the IB's proprietary purposes.

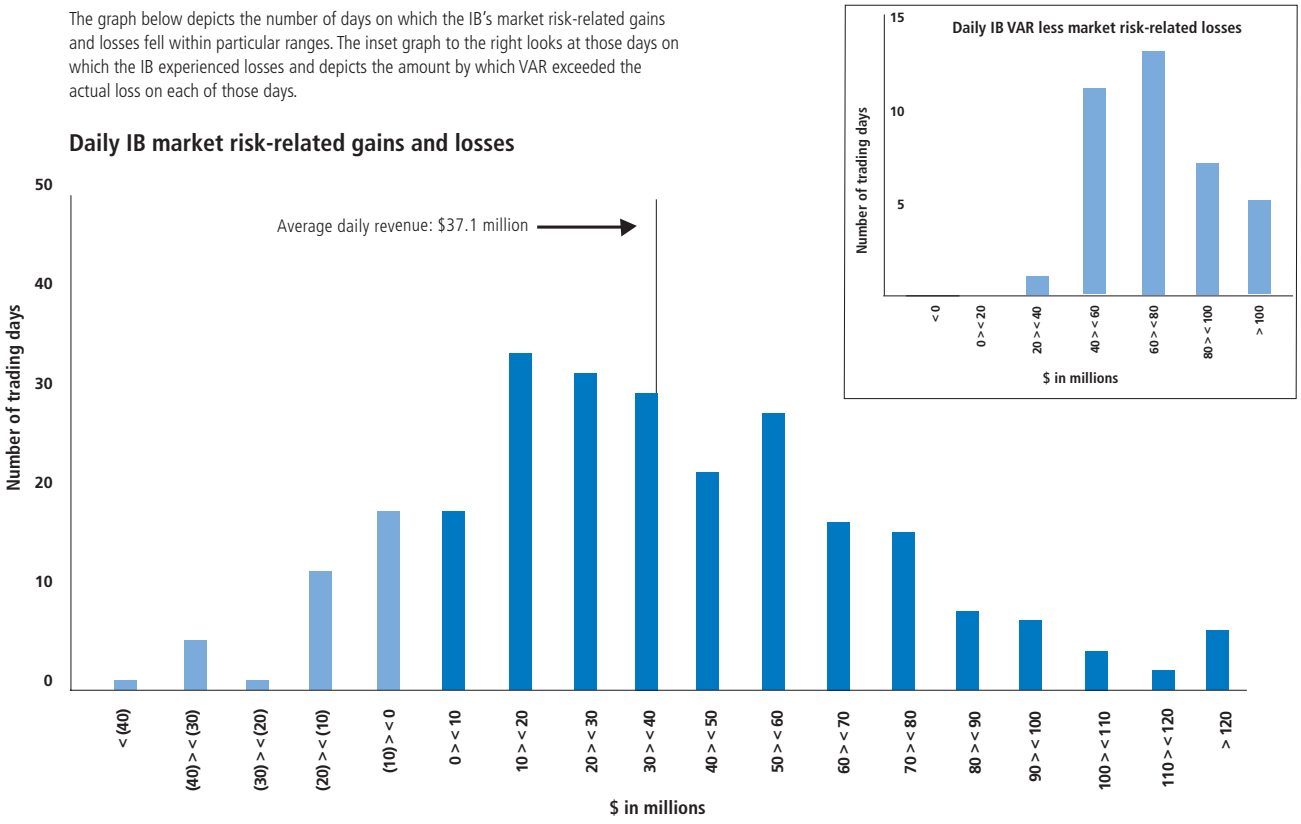
The largest contributors to the IB trading VAR in 2004 was fixed income risk. Before portfolio diversification, fixed income risk accounted for roughly 58% of the average IB Trading Portfolio VAR. The diversification effect, which on average reduced the daily average IB Trading Portfolio VAR by $43.6 million in 2004, reflects the fact that the largest losses for different positions and risks do not typically occur at the same time. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves. The degree of diversification is determined both by the extent to which different market variables tend to move together and by the extent to which different businesses have similar positions.

Average IB trading and Credit Portfolio VAR during 2004 rose to $90.5 million, compared with $69.3 million for the same period in 2003. Period-end VAR decreased over the same period, to $77.7 million from $101.1 million. The decrease was driven by a decline in fixed income and equities VAR, primarily due to decreased risk positions and lower market volatility. In general, over the course of a year, VAR exposures can vary significantly as trading positions change and market volatility fluctuates.

VAR backtesting

To evaluate the soundness of its VAR model, the Firm conducts daily backtesting of VAR against actual financial results, based on daily market risk-related revenue. Market risk-related revenue is defined as the daily change in value of the mark-to-market trading portfolios plus any trading-related net interest income, brokerage commissions, underwriting fees or other revenue. The Firm's definition of market risk-related revenue is consistent with the FRB's implementation of the Basel Committee's market risk capital rules. The histogram below illustrates the daily market risk-related gains and losses for the IB trading businesses for the year ended December 31, 2004. The chart shows that the IB posted market risk-related gains on 224 out of 261 days in this period, with 12 days exceeding $100 million. The inset graph looks at those days on which the IB experienced losses and depicts the amount by which VAR exceeded the actual loss on each of those days. Losses were sustained on 37 days, with no loss greater than $50 million, and with no loss exceeding the VAR measure.

The graph below depicts the number of days on which the IB's market risk-related gains and losses fell within particular ranges. The inset graph to the right looks at those days on which the IB experienced losses and depicts the amount by which VAR exceeded the actual loss on each of those days.



Economic value stress testing

While VAR reflects the risk of loss due to unlikely events in normal markets, stress testing captures the Firm's exposure to unlikely but plausible events in abnormal markets. Stress testing is equally important as VAR in measuring and controlling risk. Stress testing enhances the understanding of the Firm's risk profile and loss potential and is used for monitoring limits, cross-business risk measurement and economic capital allocation.

Economic-value stress tests measure the potential change in the value of the Firm's portfolios. Applying economic-value stress tests helps the Firm understand how the economic value of its balance sheet (i.e., not the amounts reported under U.S. GAAP) would change under certain scenarios. The Firm conducts economic-value stress tests for both its trading and its nontrading activities, using the same scenarios for both.

The Firm stress tests its portfolios at least once a month using multiple scenarios. Several macroeconomic event-related scenarios are evaluated across the Firm, with shocks to roughly 10,000 market prices specified for each scenario. Additional scenarios focus on the risks predominant in individual business segments, and include scenarios that focus on the potential for adverse moves in complex portfolios.

Scenarios are derived from either severe historical crises or forward assessment of developing market trends. They are continually reviewed and updated to reflect changes in the Firm's risk profile and economic events. Stress-test results, trends and explanations are provided each month to the Firm's executive management and to the lines of business to help them better measure and manage risks to understand event risk–sensitive positions.

The Firm's stress-test methodology assumes that, during an actual stress event, no management action would be taken to change the risk profile of portfolios. This captures the decreased liquidity that often occurs with abnormal markets and results, in the Firm's view, in a conservative stress-test result.

Based on the Firm's stress scenarios, the stress test loss (pre-tax) in the IB's trading portfolio ranged from $202 million to $1.2 billion, and $227 million to $895 million for the years ended December 31, 2004 and 2003, respectively. (The 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. In addition, the 2003 amounts have been revised to reflect the transfer of Treasury positions from the IB to the Corporate business segment.)

It is important to note that VAR results cannot be directly correlated to stress-test loss results for three reasons. First, stress-test losses are calculated at varying dates each month, while VAR is performed daily and reported for the period-end date. Second, VAR and stress tests are two distinct risk measurements yielding very different loss potentials. Thus, although the same trading portfolios are used for both tests, VAR is based on a distribution of one-day historical losses measured over the most recent one year; in contrast, stress testing subjects the portfolio to more extreme, larger moves over a longer time horizon (e.g., 2–3 weeks). Third, as VAR and stress tests are distinct risk measurements, the impact of portfolio diversification can vary greatly. For VAR, markets can change in patterns over a one-year time horizon, moving from highly correlated to less so; in stress testing, the focus is on a single event and the associated correlations in an extreme market situation. As a result, while VAR over a given time horizon can be lowered by a diversification benefit in the portfolio, this benefit would not necessarily manifest itself in stress-test scenarios, which assume large, coherent moves across all markets.

RIFLE

In addition to VAR, JPMorgan Chase employs the Risk Identification for Large Exposures ("RIFLE") methodology as another statistical risk measure. The Firm requires that all market risk–taking businesses self-assess their risks to unusual and specific events. Individuals who manage risk positions, particularly complex positions, identify potential worst-case losses that could arise from an unusual or specific event, such as a potential tax change, and estimate the probabilities of such losses. Through the Firm's RIFLE system, this information is then directed to the appropriate level of management, thereby permitting the Firm to identify further earnings vulnerabilities not adequately covered by VAR and stress testing.

Nonstatistical risk measures

Nonstatistical risk measures other than stress testing include net open positions, basis point values, option sensitivities, position concentrations and position turnover. These measures provide additional information on an exposure's size and the direction in which it is moving. Nonstatistical measures are used for monitoring limits, one-off approvals and tactical control.

Earnings-at-risk stress testing

The VAR and stress-test measures described above illustrate the total economic sensitivity of the Firm's balance sheet to changes in market variables. The effect of interest rate exposure on reported Net income is also critical. Interest rate risk exposure in the Firm's core nontrading business activities (i.e., asset/liability management positions) results from on- and off-balance sheet positions. The Firm conducts simulations of NII for its nontrading activities under a variety of interest rate scenarios, which are consistent with the scenarios used for economic-value stress testing. Earnings-at-risk tests measure the potential change in the Firm's Net interest income over the next 12 months. These tests highlight exposures to various rate-sensitive factors, such as the rates themselves (e.g., the prime lending rate), pricing strategies on deposits, optionality and changes in product mix. The tests included forecasted balance sheet changes, such as asset sales and securitizations, as well as prepayment and reinvestment behavior.

JPMorgan Chase's 12-month pre-tax earnings sensitivity profiles as of December 31, 2004, were as follows:

	Immediate change in rates		
(in millions)	+200bp	+100bp	-100bp
December 31, 2004	**$ (557)**	**$ (164)**	**$ (180)**

The Firm is exposed to both rising and falling rates. The Firm's risk to rising rates is largely the result of increased funding costs. In contrast, the exposure to falling rates is the result of potential compression in deposit spreads, coupled with higher anticipated levels of loan prepayments.

Immediate changes in interest rates present a limited view of risk, and so a number of alternative scenarios are also reviewed. These scenarios include the implied forward curve, nonparallel rate shifts and severe interest rate shocks on selected key rates. These scenarios are intended to provide a comprehensive view of JPMorgan Chase's earnings-at-risk over a wide range of outcomes.

Earnings-at-risk can also result from changes in the slope of the yield curve, because the Firm has the ability to lend at fixed rates and borrow at variable or short-term fixed rates. Based on these scenarios, the Firm's earnings would be negatively affected by a sudden and unanticipated increase in short-term rates without a corresponding increase in long-term rates. Conversely, higher long-term rates are generally beneficial to earnings, particularly when the increase is not accompanied by rising short-term rates.

Risk monitoring and control

Limits

Market risk is primarily controlled through a series of limits. The sizes of the limits reflect the Firm's risk appetite after extensive analysis of the market environment and business strategy. The analysis examines factors such as market volatility, product liquidity, business track record, and management experience and depth.

The Firm maintains different levels of limits. Corporate-level limits encompass VAR calculations and stress-test loss advisories. Similarly, business segment levels include limits based on VAR calculations and nonstatistical measurements, and P&L loss advisories. Businesses are responsible for adhering to established limits, against which exposures are monitored and reported daily. Exceeded limits are reported immediately to senior management, and the affected business unit must take appropriate action to reduce trading positions. If the business cannot do this within an acceptable timeframe, senior management is consulted on the appropriate action.

MRM regularly reviews and updates risk limits, and the Firm's Operating Committee reviews and approves risk limits at least twice a year. MRM further controls the Firm's exposure by specifically designating approved financial instruments for each business unit.

Qualitative review

MRM also performs periodic reviews of both businesses and products with exposure to market risk in order to assess the ability of the businesses to control market risk. The businesses' management strategies, market conditions, product details and effectiveness of risk controls are reviewed. Specific recommendations for improvements are made to management.

Model review

Many of the Firm's financial instruments cannot be valued based on quoted market prices but are instead valued using pricing models. Such models are used for management of risk positions, such as reporting risk against limits, as well as for valuation. A model review group, independent of the lines of business units and MRM, reviews the models the Firm uses, and assesses model appropriateness and consistency across businesses. The model reviews consider a number of issues: appropriateness of the model, assessing the extent to which it accurately reflects the characteristics of the transaction and captures its significant risks; independence and reliability of data sources; appropriateness and adequacy of numerical algorithms; and sensitivity to input parameters or other assumptions which cannot be priced from the market.

Reviews are conducted for new or changed models, as well as previously accepted models, and they assess whether there have been any material changes to the accepted models; whether there have been any changes in the product or market that may impact the model's validity; and whether there are theoretical or competitive developments that may require reassessment of the model's adequacy. For a summary of valuations based on models, see Critical accounting estimates used by the Firm on pages 77–79 of this Annual Report.

Risk reporting

Value-at-risk, nonstatistical exposures and dollar trading loss limit exceptions are reported daily for each trading and nontrading business. Market risk exposure trends, value-at-risk trends, profit and loss changes, and portfolio concentrations are reported weekly to business management and monthly to senior management. In addition, the results of comprehensive, monthly stress tests are presented to business and senior management.

Operational risk management

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors, or external events.

Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, business interruptions, inappropriate behavior of employees and vendors that do not perform in accordance with outsourcing arrangements. These events can potentially result in financial losses and other damage to the Firm, including reputational harm.

To monitor and control operational risk, the Firm maintains a system of comprehensive policies and a control framework designed to provide a sound and well-controlled operational environment. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject. Notwithstanding these control measures, the Firm incurs operational losses.

The Firm's approach to operational risk management is intended to mitigate such losses by supplementing the traditional control-based approach to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

Risk identification and measurement

Risk identification is the recognition of the operational risk events that management believes may give rise to operational losses.

In 2004, JPMorgan Chase redesigned the underlying architecture of its firmwide self-assessment process, and began implementing the process throughout the heritage Bank One business units. The goal of the self-assessment process is for each business to identify the key operational risks specific to its environment and assess the degree to which it maintains appropriate controls. Action plans are developed for control issues identified, and businesses are held accountable for tracking and resolving these issues on a timely basis.

All businesses were required to perform semiannual self-assessments in 2004, which were completed by the businesses through the use of software applications developed by the Firm. Going forward, the Firm will utilize the self-assessment process as a dynamic risk management tool.

Risk monitoring

The Firm has a process for monitoring operational risk-event data, permitting analysis of errors and losses as well as trends. Such analysis, performed both at a line-of-business level and by risk event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns. The data reported will enable the Firm to back-test against self-assessment results.

Risk reporting and analysis

Operational risk management reports provide timely and accurate information to the lines of business and senior management, including information about actual operational loss levels and self-assessment results. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's business and support areas.

During 2004, the Firm implemented Phoenix, a new internally-designed operational risk architecture model. Phoenix integrates the individual components of the operational risk management framework into a unified, web-based tool. When fully implemented, Phoenix will enable the Firm to enhance its reporting and analysis of operational risk data, leading to improved risk management and financial performance. Phoenix will also facilitate the ability of businesses to leverage existing processes to comply with risk management-related regulatory requirements thereby leading to increased efficiencies in the Firm's management of operational risk.

For purposes of reporting and analysis, the Firm categorizes operational risk events as follows:

- Client service and selection
- Business practices
- Fraud, theft and malice
- Execution, delivery and process management
- Employee disputes
- Disasters and public safety
- Technology and infrastructure failures

Audit alignment

Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. Internal Audit partners with business management and members of the control community in providing guidance on the operational risk framework, and reviews the effectiveness and accuracy of the business self-assessment process as part of its business unit audits.

Reputation and fiduciary risk management

A firm's success depends not only on its prudent management of liquidity, credit, market, operational and business risks, but equally on the maintenance among many constituents – clients, investors, regulators, as well as the general public – of a reputation for business practices of the highest quality.

Attention to reputation has always been a key aspect of the Firm's practices, and maintenance of reputation is the responsibility of everyone at the Firm. JPMorgan Chase bolsters this individual responsibility in many ways: through the Code of Conduct, training, policies and oversight functions that approve transactions. These oversight functions include a Conflicts Office, which examines wholesale transactions with the potential to create conflicts of interest or role for the Firm.

Policy review office

The Firm has an additional structure to address certain transactions with clients, especially complex derivatives and structured finance transactions, that have the potential to adversely affect its reputation. This structure reinforces the Firm's procedures for examining transactions in terms of appropriateness, ethical issues and reputational risk, and it intensifies the Firm's scrutiny of the purpose and effect of its transactions from the client's point of view, with the goal that these transactions not be used to mislead investors or others. The structure operates at three levels: as part of every business's transaction approval process; through review by regional Policy Review Committees; and through oversight by the Policy Review Office.

Primary responsibility for adherence to the policies and procedures designed to address reputation risk lies with the business units conducting the transactions in question. The Firm's transaction approval process requires review and sign-off from, among others, internal legal/compliance, conflicts, tax and accounting groups. Transactions involving an SPE established by the Firm receive particular scrutiny to ensure that every such entity is properly approved, documented, monitored and controlled.

Business units are also required to submit to regional Policy Review Committees proposed transactions that may heighten reputation risk – particularly a client's motivation and its intended financial disclosure of the transaction. The committees approve, reject or require further clarification on or changes to the transactions. The members of these committees are senior representatives of the business and support units in the region. The committees may escalate transaction review to the Policy Review Office.

The Policy Review Office is the most senior approval level for client transactions involving reputation risk issues. The mandate of the Office is to opine on specific transactions brought by the Regional Committees and consider changes in policies or practices relating to reputation risk. The head of the office consults with the Firm's most senior executives on specific topics and provides regular updates. Aside from governance and guidance on specific transactions, the objective of the policy review process is to reinforce a culture, through a "case study" approach, that ensures that all employees, regardless of seniority, understand the basic principles of reputation risk control and can recognize and address issues as they arise.

Fiduciary risk management

The Firm maintains risk management committees within each of its lines of business that include in their mandate the oversight of legal, reputational and fiduciary-related risks in their businesses that may produce significant losses or reputational damage. The Fiduciary Risk Management function works with the line-of-business risk committees to ensure that businesses providing investment or risk management products or services perform at the appropriate standard relative to their relationship with a client, whether it be fiduciary or non-fiduciary in nature. Of particular focus are the policies and practices that address a business' responsibilities to a client including client suitability determination, disclosure obligations, disclosure communications and performance expectations with respect to the investment and risk management products or services being provided by the Firm. In this way, the line-of-business risk committees, together with the Fiduciary Risk Management function, provide oversight of the Firm's efforts to monitor, measure and control the risks that may arise in the delivery of such products or services to clients, as well as those stemming from the Firm's responsibilities undertaken on behalf of employees.

Private equity risk management

Risk management

The Firm's private equity business employs processes for risk measurement and control of private equity risk that are similar to those used for other businesses within the Firm. The processes are coordinated with the Firm's overall approach to market and concentration risk. Private equity risk is initially monitored through the use of industry and geographic limits. Additionally, to manage the pace of new investments, a ceiling on the amount of annual private equity investment activity has been established. At December 31, 2004, the carrying value of the private equity portfolio was $7.5 billion.

Private Equity's publicly-held securities create a significant exposure to general declines in the equity markets. Initially to gauge that risk, VAR and stress-test exposures are calculated in the same way as they are for the Firm's trading and nontrading portfolios. However, because VAR assumes that positions can be exited in a normal market, JPMorgan Chase believes that the VAR for publicly-held securities does not necessarily represent the true value-at-risk for these holdings nor is it indicative of the loss potential for these holdings, due to the fact that most of the positions are subject to sale restrictions and, often, represent significant concentration of ownership. Accordingly, Private Equity management undertakes frequent reviews of its publicly-held securities investments as part of a disciplined approach to sales and risk management issues. Risk management programs are limited but are considered when practical and as circumstances dictate. Over time, the Firm may change the nature and type of Private equity risk management programs it enters into.

Critical accounting estimates used by the Firm

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the valuation of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the valuation of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

Allowance for credit losses

JPMorgan Chase's Allowance for credit losses covers the wholesale and consumer loan portfolios as well as the Firm's portfolio of wholesale lending-related commitments. The Allowance for loan losses is intended to adjust the value of the Firm's loan assets for probable credit losses as of the balance sheet date. For a further discussion of the methodologies used in establishing the Firm's Allowance for credit losses, see Note 12 on pages 102–103 of this Annual Report.

Wholesale loans and lending-related commitments

The methodology for calculating both the Allowance for loan losses and the Allowance for lending-related commitments involves significant judgment. First and foremost, it involves the early identification of credits that are deteriorating. Second, it involves management judgment to derive loss factors. Third, it involves management judgment to evaluate certain macroeconomic factors, underwriting standards, and other relevant internal and external factors affecting the credit quality of the current portfolio and to refine loss factors to better reflect these conditions.

The Firm uses a risk rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered include the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another, or considering additional factors that may be relevant in determining the risk rating of a particular loan, but which are not currently an explicit part of the Firm's methodology, could impact the risk rating assigned by the Firm to that loan.

Management applies its judgment to derive loss factors associated with each credit facility. These loss factors are determined by facility structure, collateral and type of obligor. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating these loss factors. Many factors can affect management's estimates of loss, including volatility of loss given default, probability of default and rating migrations. Judgment is applied to determine whether the loss given default should be calculated as an average over the entire credit cycle or at a particular point in the credit cycle. The application of different loss given default factors would change the amount of the Allowance for credit losses determined appropriate by the Firm. Similarly, there are judgments as to which external data on probability of default should be used, and when they should be used. Choosing data that are not reflective of the Firm's specific loan portfolio characteristics could affect loss estimates.

Management also applies its judgment to adjust the loss factors derived taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. The resultant adjustments to the statistical calculation of losses on the performing portfolio are determined by creating estimated ranges using historical experience of both loss given default and probability of default. Factors related to concentrated and deteriorating industries are also incorporated where relevant. The estimated ranges and the determination of the appropriate point within the range are based upon management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio. The adjustment to the statistical calculation for the wholesale loan portfolio for the period ended December 31, 2004, was $990 million, the maximum amount within the range, based on management's assessment of current economic conditions.

Consumer loans

For scored loans (generally consumer lines of business), loss is primarily determined by applying statistical loss factors and other risk indicators to pools of loans by asset type. These loss estimates are sensitive to changes in delinquency status, credit bureau scores, the realizable value of collateral, and other risk factors.

Adjustments to the statistical calculation are accomplished in part by analyzing the historical loss experience for each major product segment. Management analyzes the range of credit loss experienced for each major portfolio segment taking into account economic cycles, portfolio seasoning, and underwriting criteria and then formulates a range that incorporates relevant risk factors that impact overall credit performance. The recorded adjustment to the statistical calculation for the period ended December 31, 2004 was $1.0 billion, based on management's assessment of current economic conditions.

Fair value of financial instruments

A portion of JPMorgan Chase's assets and liabilities are carried at fair value, including trading assets and liabilities, AFS securities and private equity investments. Held-for-sale loans and mortgage servicing rights ("MSRs") are carried at the lower of fair value or cost. At December 31, 2004, approximately $417 billion of the Firm's assets were recorded at fair value.

The fair value of a financial instrument is defined as the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The majority of the Firm's assets reported at fair value are based on quoted market prices or on internally developed models that utilize independently sourced market parameters, including interest rate yield curves, option volatilities and currency rates.

The degree of management judgment involved in determining the fair value of a financial instrument is dependent upon the availability of quoted market prices or observable market parameters. For financial instruments that are actively traded and have quoted market prices or parameters readily available,

there is little to no subjectivity in determining fair value. When observable market prices and parameters do not exist, management judgment is necessary to estimate fair value. The valuation process takes into consideration factors such as liquidity and concentration concerns and, for the derivatives portfolio, counterparty credit risk (see the discussion of CVA on page 63 of this Annual Report). For example, there is often limited market data to rely on when estimating the fair value of a large or aged position. Similarly, judgment must be applied in estimating prices for less readily observable external parameters. Finally, other factors such as model assumptions, market dislocations and unexpected correlations can affect estimates of fair value. Imprecision in estimating these factors can impact the amount of revenue or loss recorded for a particular position.

Trading and available-for-sale portfolios

Substantially all of the Firm's securities held for trading and investment purposes ("long" positions) and securities that the Firm has sold to other parties but does not own ("short" positions) are valued based on quoted market prices. However, certain securities are less actively traded and, therefore, are not always able to be valued based on quoted market prices. The determination of their fair value requires management judgment, as this determination may require benchmarking to similar instruments or analyzing default and recovery rates. Examples include certain collateralized mortgage and debt obligations and high-yield debt securities.

As few derivative contracts are listed on an exchange, the majority of the Firm's derivative positions are valued using internally developed models that use as their basis readily observable market parameters – that is, parameters that are actively quoted and can be validated to external sources, including industry-pricing services. Certain derivatives, however, are valued based on models with significant unobservable market parameters – that is, parameters that may be estimated and are, therefore, subject to management judgment to substantiate the model valuation. These instruments are normally either less actively traded or trade activity is one-way. Examples include long-dated interest rate or currency swaps, where swap rates may be unobservable for longer maturities, and certain credit products, where correlation and recovery rates are unobservable. Due to the lack of observable market data, the Firm defers the initial trading profit for these financial instruments. The deferred profit is recognized in Trading revenue on a systematic basis and when observable market data becomes available. Management judgment includes recording fair value adjustments (i.e., reductions) to model valuations to account for parameter uncertainty when valuing complex or less actively traded derivative transactions. The following table summarizes the Firm's trading and available-for-sale portfolios by valuation methodology at December 31, 2004:

	Trading assets		Trading liabilities		
	Securities purchased[a]	Derivatives[b]	Securities sold[a]	Derivatives[b]	AFS securities
Fair value based on:					
Quoted market prices	92%	1%	99%	1%	94%
Internal models with significant observable market parameters	5	97	1	97	2
Internal models with significant unobservable market parameters	3	2	—	2	4
Total	100%	100%	100%	100%	100%

(a) Reflected as debt and equity instruments on the Firm's Consolidated balance sheets.
(b) Based on gross mark-to-market valuations of the Firm's derivatives portfolio prior to netting positions pursuant to FIN 39, as cross-product netting is not relevant to an analysis based upon valuation methodologies.

To ensure that the valuations are appropriate, the Firm has various controls in place. These include: an independent review and approval of valuation models; detailed review and explanation for profit and loss analyzed daily and over time; decomposing the model valuations for certain structured derivative instruments into their components and benchmarking valuations, where possible, to similar products; and validating valuation estimates through actual cash settlement. As markets and products develop and the pricing for certain derivative products becomes more transparent, the Firm refines its valuation methodologies. The Valuation Control Group within the Finance area, a group independent of the risk-taking function, is responsible for reviewing the accuracy of the valuations of positions taken within the Investment Bank.

For a discussion of market risk management, including the model review process, see Market risk management on pages 70–74 of this Annual Report. For further details regarding the Firm's valuation methodologies, see Note 29 on pages 121–124 of this Annual Report.

Loans held-for-sale

The fair value of loans in the held-for-sale portfolio is generally based on observable market prices of similar instruments, including bonds, credit derivatives and loans with similar characteristics. If market prices are not available, fair value is based on the estimated cash flows, adjusted for credit risk that is discounted using a rate appropriate for each maturity that incorporates the effects of interest rate changes.

Private equity investments

Valuation of private investments held primarily by the Private Equity business within Corporate requires significant management judgment due to the absence of quoted market prices, inherent lack of liquidity and the long-term nature of such assets. Private investments are initially valued based on cost. The carrying values of private investments are adjusted from cost to reflect both positive and negative changes evidenced by financing events with third-party capital providers. In addition, these investments are subject to ongoing

impairment reviews by Private Equity's senior investment professionals. A variety of factors are reviewed and monitored to assess impairment including, but not limited to, operating performance and future expectations, industry valuations of comparable public companies, changes in market outlook and the third-party financing environment over time. The Valuation Control Group within the Finance area is responsible for reviewing the accuracy of the carrying values of private investments held by Private Equity. For additional information about private equity investments, see the Private equity risk management discussion on page 76 and Note 9 on pages 98–100 of this Annual Report.

MSRs and certain other retained interests in securitizations

MSRs and certain other retained interests from securitization activities do not trade in an active, open market with readily observable prices. For example, sales of MSRs do occur, but the precise terms and conditions are typically not readily available. Accordingly, the Firm estimates the fair value of MSRs and certain other retained interests in securitizations using a discounted future cash flow model. For MSRs, the model considers portfolio characteristics, contractually specified servicing fees and prepayment assumptions, delinquency rates, late charges, other ancillary revenues, costs to service and other economic factors. For other retained interests in securitizations (such as interest-only strips), the model is generally based on projections of finance charges related to the securitized assets, net credit losses, average life, and contractual interest paid to the third-party investors. Changes in the assumptions used may have a significant impact on the Firm's valuation of retained interests. Management believes that the fair values and related assumptions utilized in the models are comparable to those used by other market participants. For a further discussion of the most significant assumptions used to value retained interests in securitizations and MSRs, as well as the applicable stress tests for those assumptions, see Notes 13 and 15 on pages 103–106 and 109–111, respectively, of this Annual Report.

Goodwill impairment

Under SFAS 142, goodwill must be allocated to reporting units and tested for impairment. The Firm tests goodwill for impairment at least annually or more frequently if events or circumstances, such as adverse changes in the business climate, indicate that there may be justification for conducting an interim test. Impairment testing is performed at the reporting-unit level (which is generally one level below the six major business segments identified in Note 31 on pages 126–127 of this Annual Report, plus Private Equity which is included in Corporate). The first part of the test is a comparison, at the reporting unit level, of the fair value of each reporting unit to its carrying amount, including goodwill. If the fair value is less than the carrying value, then the second part of the test is needed to measure the amount of potential goodwill impairment. The implied fair value of the reporting unit goodwill is calculated and compared to the carrying amount of goodwill recorded in the Firm's financial records. If the carrying value of reporting unit goodwill exceeds the implied fair value of that goodwill, then the Firm would recognize an impairment loss in the amount of the difference, which would be recorded as a charge against Net income.

The fair values of the reporting units are determined using discounted cash flow models based on each reporting unit's internal forecasts. In addition, analysis using market-based trading and transaction multiples, where available, are used to assess the reasonableness of the valuations derived from the discounted cash flow models.

Goodwill was not impaired as of December 31, 2004 or December 31, 2003, nor was any goodwill written off during the years ended December 31, 2004, 2003 and 2002. See Note 15 on page 109 of this Annual Report for additional information related to the nature and accounting for goodwill and the carrying values of goodwill by major business segment.

Nonexchange-traded commodity contracts at fair value

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, which are primarily based on internal models with significant observable market parameters. The Firm's nonexchange-traded commodity contracts are primarily energy-related contracts. The following table summarizes the changes in fair value for nonexchange-traded commodity contracts for the year ended December 31, 2004:

For the year ended December 31, 2004 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2004	$ 1,497	$ 751
Effect of legally enforceable master netting agreements	834	919
Gross fair value of contracts outstanding at January 1, 2004	2,331	1,670
Contracts realized or otherwise settled during the period	(5,486)	(4,139)
Fair value of new contracts	1,856	1,569
Changes in fair values attributable to changes in valuation techniques and assumptions	—	—
Other changes in fair value	5,052	4,132
Gross fair value of contracts outstanding at December 31, 2004	3,753	3,232
Effect of legally enforceable master netting agreements	(2,304)	(2,233)
Net fair value of contracts outstanding at December 31, 2004	$ 1,449	$ 999

The following table indicates the schedule of maturities of nonexchange-traded commodity contracts at December 31, 2004:

At December 31, 2004 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 1,999	$ 1,874
Maturity 1–3 years	1,266	1,056
Maturity 4–5 years	454	293
Maturity in excess of 5 years	34	9
Gross fair value of contracts outstanding at December 31, 2004	3,753	3,232
Effects of legally enforceable master netting agreements	(2,304)	(2,233)
Net fair value of contracts outstanding at December 31, 2004	$ 1,449	$ 999

Accounting and reporting developments

Accounting for income taxes – repatriation of foreign earnings under the American Jobs Creation Act of 2004

In December 2004, the FASB issued FSP SFAS 109-2, which provides accounting and disclosure guidance for the foreign earnings repatriation provision within the American Jobs Creation Act of 2004 (the "Act"). The Act was signed into law on October 22, 2004.

The Act creates a temporary incentive for U.S. companies to repatriate accumulated foreign earnings at a substantially reduced U.S. effective tax rate by providing a dividends received deduction on the repatriation of certain foreign earnings to the U.S. taxpayer (the "repatriation provision"). The new deduction is subject to a number of limitations and requirements.

Clarification to key elements of the repatriation provision from Congress or the U.S. Treasury Department may affect an enterprise's evaluation of the effect of the Act on its plan for repatriation or reinvestment of foreign earnings. The FSP provides a practical exception to the SFAS 109 requirement to reflect the effect of a new tax law in the period of enactment, because of the lack of clarification to certain provisions within the Act and the timing of the enactment. Thus, companies have additional time to assess the effect of the Act on its plan for reinvestment or repatriation of foreign earnings for purposes of applying SFAS 109. A company should apply the provisions of SFAS 109 (i.e., reflect the tax impact in the financial statements) in the period in which it makes the decision to repatriate or reinvest unremitted foreign earnings in accordance with the Act. Decisions can be made in stages (e.g., by foreign country). The repatriation provision is effective for either the 2004 or 2005 tax years for calendar year taxpayers.

The range of possible amounts that may be considered for repatriation under this provision is between zero and $1.9 billion. The Firm is currently assessing the impact of the repatriation provision and, at this time, cannot reasonably estimate the related range of income tax effects of such repatriation provision. Accordingly, the Firm has not reflected the tax effect of the repatriation provision in income tax expense or income tax liabilities.

Accounting for share-based payments

In December 2004, the FASB issued SFAS 123R, which revises SFAS 123 and supersedes APB 25. Accounting and reporting under SFAS 123R is generally similar to the SFAS 123 approach. However, SFAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. Pro forma disclosure is no longer an alternative.

The Firm has continued to account for stock options that were outstanding as of December 31, 2002 under APB 25 using the intrinsic value method. Therefore, compensation expense for some previously granted awards that was not recognized under SFAS 123 will be recognized under SFAS 123R. Had the Firm adopted SFAS 123R in prior periods, the impact would have approximated the impact of SFAS 123 as described in the disclosure of pro forma net income and earnings per share as presented in Note 7 on page 97 of this Annual Report. SFAS 123R must be adopted no later than July 1, 2005. SFAS 123R permits adoption using one of two methods – modified prospective or modified retrospective. The Firm is currently evaluating both the timing and method of adopting the new standard.

Impairment of available-for-sale and held-to-maturity securities
In September 2004, the FASB issued FSP EITF 03-1-1, indefinitely delaying the measurement provisions of EITF 03-1. The disclosure requirements of EITF 03-1 remain effective and are included in Note 9 on pages 98–100 of this Annual Report. EITF 03-1 addresses issues related to other-than-temporary impairment for securities classified as either available-for-sale or held-to-maturity under SFAS 115 (including individual securities and investments in mutual funds) and for investments accounted for under the cost method. A proposed FSP addressing these issues was issued by the FASB and is expected to be finalized in 2005. The impact of EITF 03-1, if any, to the Firm's investment portfolios will not be known until the final consensus is issued.

Accounting for interest rate lock commitments ("IRLCs")
IRLCs associated with mortgages to be held for sale represent commitments to extend credit at specified interest rates. On March 9, 2004, the Securities and Exchange Commission issued SAB No. 105, which summarizes the views of the Securities and Exchange Commission staff regarding the application of U.S. GAAP to loan commitments accounted for as derivative instruments. SAB 105 states that the value of the servicing asset should not be included in the estimate of fair value of IRLCs. SAB 105 is applicable for all IRLCs accounted for as derivatives and entered into on or after April 1, 2004.

Prior to April 1, 2004, JPMorgan Chase recorded IRLCs at estimated fair value. The fair value of IRLCs included an estimate of the value of the loan servicing right inherent in the underlying loan, net of the estimated costs to close the loan. Effective April 1, 2004, and as a result of SAB 105, the Firm no longer assigns fair value to IRLCs on the date they are entered into, with any initial gain being recognized upon the sale of the resultant loan. Also in connection with SAB 105, the Firm records any changes in the value of the IRLCs, excluding the servicing asset component, due to changes in interest rates after they are locked. Adopting SAB 105 did not have a material impact on the Firm's 2004 Consolidated financial statements.

Accounting for certain loans or debt securities acquired in a transfer
In December 2003, the AICPA issued SOP 03-3, which requires that loans purchased at a discount due to poor credit quality be recorded at fair value and prohibits the recognition of a loss accrual or valuation allowance at the time of purchase. SOP 03-3 also limits the yield that may be accreted to the excess of the undiscounted expected cash flows over the initial investment in the loan. Subsequent increases in expected cash flows are recognized prospectively through an adjustment of yield over its remaining life and decreases in expected cash flows are recognized as an impairment. For JPMorgan Chase entities, SOP 03-3 became effective for loans or debt securities acquired after December 31, 2004.

Accounting for postretirement health care plans that provide prescription drug benefits
In December 2003, the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (the "Act") was enacted. In May 2004, the FASB issued FSP SFAS 106-2, which provides guidance on accounting for the Act. For additional information, see Note 6 on page 92–95 of this Annual Report. In early 2005, the federal government issued additional guidance about how to apply certain provisions of the Act, which may lead to future accounting adjustments. Such adjustments, however, are not expected to be material.

Accounting for variable interest entities
In December 2003, the FASB issued a revision to FIN 46 to address various technical corrections and implementation issues that had arisen since the issuance of FIN 46. Effective March 31, 2004, JPMorgan Chase implemented FIN 46R for all VIEs, excluding certain investments made by its private equity business. Implementation of FIN 46R did not have a material effect on the Firm's Consolidated financial statements.

The application of FIN 46R involved significant judgement and interpretations by management. The Firm is aware of differing interpretations being developed among accounting professionals and the EITF with regard to analyzing derivatives under FIN 46R. Management's current interpretation is that derivatives should be evaluated by focusing on an economic analysis of the rights and obligations of a VIE's assets, liabilities, equity, and other contracts, while considering: the entity's activities and design; the terms of the derivative contract and the role it has with entity; and whether the derivative contract creates and/or absorbs variability of the VIE. The Firm will continue to monitor developing interpretations.

Management's report on internal control over financial reporting

JPMorgan Chase & Co.

Management of JPMorgan Chase & Co. is responsible for establishing and maintaining adequate internal control over financial reporting. As defined in Rules 13a-15(f) or 15d-15(f) under the Securities Exchange Act of 1934, internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive, principal operating and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

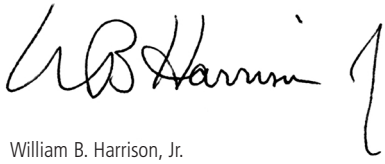
JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2004. In making the assessment, management used the framework in "Internal Control – Integrated Framework" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based on the assessment performed, management concluded that as of December 31, 2004, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO criteria. Additionally, based on management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2004.

Management's assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2004 has been audited by PricewaterhouseCoopers LLP, JPMorgan Chase's independent registered public accounting firm, who also audited the Firm's financial statements as of and for the year ended December 31, 2004, as stated in their report which is included herein.



William B. Harrison, Jr.
Chairman and Chief Executive Officer



James Dimon
President and Chief Operating Officer



Michael J. Cavanagh
Executive Vice President and Chief Financial Officer

February 22, 2005

Report of independent registered public accounting firm

JPMorgan Chase & Co.

PRICEWATERHOUSECOOPERS

PRICEWATERHOUSECOOPERS LLP • 300 MADISON AVENUE • NEW YORK, NY 10017

Report of Independent Registered Public Accounting Firm
To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

We have completed an integrated audit of JPMorgan Chase & Co.'s 2004 consolidated financial statements and of its internal control over financial reporting as of December 31, 2004 and audits of its 2003 and 2002 consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our opinions, based on our audits, are presented below.

Consolidated financial statements

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, changes in stockholders' equity and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Company") at December 31, 2004 and 2003, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2004 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Internal control over financial reporting

Also, in our opinion, management's assessment, included in the accompanying Management's report on internal control over financial reporting, that the Company maintained effective internal control over financial reporting as of December 31, 2004 based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), is fairly stated, in all material respects, based on those criteria. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control – Integrated Framework issued by COSO. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express opinions on management's assessment and on the effectiveness of the Company's internal control over financial reporting based on our audit. We conducted our audit of internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PricewaterhouseCoopers LLP

February 22, 2005

Consolidated statements of income

JPMorgan Chase & Co.

Year ended December 31, (in millions, except per share data)[a]	2004	2003	2002
Revenue			
Investment banking fees	$ 3,537	$ 2,890	$ 2,763
Trading revenue	3,612	4,427	2,675
Lending & deposit related fees	2,672	1,727	1,674
Asset management, administration and commissions	7,967	5,906	5,754
Securities/private equity gains	1,874	1,479	817
Mortgage fees and related income	1,004	923	988
Credit card income	4,840	2,466	2,307
Other income	830	601	458
Noninterest revenue	26,336	20,419	17,436
Interest income	30,595	24,044	25,936
Interest expense	13,834	11,079	13,758
Net interest income	16,761	12,965	12,178
Total net revenue	43,097	33,384	29,614
Provision for credit losses	2,544	1,540	4,331
Noninterest expense			
Compensation expense	14,506	11,387	10,693
Occupancy expense	2,084	1,912	1,606
Technology and communications expense	3,702	2,844	2,554
Professional & outside services	3,862	2,875	2,587
Marketing	1,335	710	689
Other expense	2,859	1,694	1,802
Amortization of intangibles	946	294	323
Total noninterest expense before merger costs and litigation reserve charge	29,294	21,716	20,254
Merger costs	1,365	—	1,210
Litigation reserve charge	3,700	100	1,300
Total noninterest expense	34,359	21,816	22,764
Income before income tax expense	6,194	10,028	2,519
Income tax expense	1,728	3,309	856
Net income	$ 4,466	$ 6,719	$ 1,663
Net income applicable to common stock	$ 4,414	$ 6,668	$ 1,612
Net income per common share			
Basic earnings per share	$ 1.59	$ 3.32	$ 0.81
Diluted earnings per share	1.55	3.24	0.80
Average basic shares	2,780	2,009	1,984
Average diluted shares	2,851	2,055	2,009
Cash dividends per common share	$ 1.36	$ 1.36	$ 1.36

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

The Notes to consolidated financial statements are an integral part of these statements.

Consolidated balance sheets

JPMorgan Chase & Co.

At December 31, (in millions, except share data)	2004	2003[a]
Assets		
Cash and due from banks	$ 35,168	$ 20,268
Deposits with banks	21,680	10,175
Federal funds sold and securities purchased under resale agreements	101,354	76,868
Securities borrowed	47,428	41,834
Trading assets (including assets pledged of $77,266 at December 31, 2004, and $81,312 at December 31, 2003)	288,814	252,871
Securities:		
Available-for-sale (including assets pledged of $26,881 at December 31, 2004, and $31,639 at December 31, 2003)	94,402	60,068
Held-to-maturity (fair value: $117 at December 31, 2004, and $186 at December 31, 2003)	110	176
Interests in purchased receivables	31,722	4,752
Loans	402,114	214,766
Allowance for loan losses	(7,320)	(4,523)
Loans, net of Allowance for loan losses	394,794	210,243
Private equity investments	7,735	7,250
Accrued interest and accounts receivable	21,409	12,356
Premises and equipment	9,145	6,487
Goodwill	43,203	8,511
Other intangible assets:		
Mortgage servicing rights	5,080	4,781
Purchased credit card relationships	3,878	1,014
All other intangibles	5,726	685
Other assets	45,600	52,573
Total assets	$ 1,157,248	$ 770,912
Liabilities		
Deposits:		
U.S. offices:		
Noninterest-bearing	$ 129,257	$ 73,154
Interest-bearing	261,673	125,855
Non-U.S. offices:		
Noninterest-bearing	6,931	6,311
Interest-bearing	123,595	121,172
Total deposits	521,456	326,492
Federal funds purchased and securities sold under repurchase agreements	127,787	113,466
Commercial paper	12,605	14,284
Other borrowed funds	9,039	8,925
Trading liabilities	151,207	149,448
Accounts payable, accrued expenses and other liabilities (including the Allowance for lending-related commitments of $492 at December 31, 2004, and $324 at December 31, 2003)	75,722	45,066
Beneficial interests issued by consolidated VIEs	48,061	12,295
Long-term debt	95,422	48,014
Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities	10,296	6,768
Total liabilities	1,051,595	724,758
Commitments and contingencies (see Note 25 of this Annual Report)		
Stockholders' equity		
Preferred stock	339	1,009
Common stock (authorized 9,000,000,000 shares and 4,500,000,000 shares at December 31, 2004 and 2003, respectively; issued 3,584,747,502 shares and 2,044,436,509 shares at December 31, 2004 and 2003, respectively)	3,585	2,044
Capital surplus	72,801	13,512
Retained earnings	30,209	29,681
Accumulated other comprehensive income (loss)	(208)	(30)
Treasury stock, at cost (28,556,534 shares at December 31, 2004, and 1,816,495 shares at December 31, 2003)	(1,073)	(62)
Total stockholders' equity	105,653	46,154
Total liabilities and stockholders' equity	$ 1,157,248	$ 770,912

(a) Heritage JPMorgan Chase only.

The Notes to consolidated financial statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity

JPMorgan Chase & Co.

Year ended December 31, (in millions, except per share data)[a]	2004	2003	2002
Preferred stock			
Balance at beginning of year	$ 1,009	$ 1,009	$ 1,009
Redemption of preferred stock	(670)	—	—
Balance at end of year	339	1,009	1,009
Common stock			
Balance at beginning of year	2,044	2,024	1,997
Issuance of common stock	72	20	27
Issuance of common stock for purchase accounting acquisitions	1,469	—	—
Balance at end of year	3,585	2,044	2,024
Capital surplus			
Balance at beginning of year	13,512	13,222	12,495
Issuance of common stock and options for purchase accounting acquisitions	55,867	—	—
Shares issued and commitments to issue common stock for employee stock-based awards and related tax effects	3,422	290	727
Balance at end of year	72,801	13,512	13,222
Retained earnings			
Balance at beginning of year	29,681	25,851	26,993
Net income	4,466	6,719	1,663
Cash dividends declared:			
Preferred stock	(52)	(51)	(51)
Common stock ($1.36 per share each year)	(3,886)	(2,838)	(2,754)
Balance at end of year	30,209	29,681	25,851
Accumulated other comprehensive income (loss)			
Balance at beginning of year	(30)	1,227	(442)
Other comprehensive income (loss)	(178)	(1,257)	1,669
Balance at end of year	(208)	(30)	1,227
Treasury stock, at cost			
Balance at beginning of year	(62)	(1,027)	(953)
Purchase of treasury stock	(738)	—	—
Reissuance from treasury stock	—	1,082	107
Share repurchases related to employee stock-based awards	(273)	(117)	(181)
Balance at end of year	(1,073)	(62)	(1,027)
Total stockholders' equity	$ 105,653	$ 46,154	$ 42,306
Comprehensive income			
Net income	$ 4,466	$ 6,719	$ 1,663
Other comprehensive income (loss)	(178)	(1,257)	1,669
Comprehensive income	$ 4,288	$ 5,462	$ 3,332

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

The Notes to consolidated financial statements are an integral part of these statements.

Consolidated statements of cash flows

JPMorgan Chase & Co.

Year ended December 31, (in millions)[a]	2004	2003	2002
Operating activities			
Net income	$ 4,466	$ 6,719	$ 1,663
Adjustments to reconcile net income to net cash provided by (used in) operating activities:			
Provision for credit losses	2,544	1,540	4,331
Depreciation and amortization	3,835	3,101	2,979
Deferred tax (benefit) provision	(827)	1,428	1,636
Investment securities (gains) losses	(338)	(1,446)	(1,563)
Private equity unrealized (gains) losses	(766)	(77)	641
Net change in:			
Trading assets	(48,703)	(2,671)	(58,183)
Securities borrowed	(4,816)	(7,691)	2,437
Accrued interest and accounts receivable	(2,391)	1,809	677
Other assets	(17,588)	(9,916)	6,182
Trading liabilities	29,764	15,769	25,402
Accounts payable, accrued expenses and other liabilities	13,277	5,973	(11,664)
Other operating adjustments	(262)	63	328
Net cash (used in) provided by operating activities	(21,805)	14,601	(25,134)
Investing activities			
Net change in:			
Deposits with banks	(4,196)	(1,233)	3,801
Federal funds sold and securities purchased under resale agreements	(13,101)	(11,059)	(2,082)
Other change in loans	(136,851)	(171,779)	(98,695)
Held-to-maturity securities:			
Proceeds	66	221	85
Purchases	—	—	(40)
Available-for-sale securities:			
Proceeds from maturities	45,197	10,548	5,094
Proceeds from sales	134,534	315,738	219,385
Purchases	(173,745)	(301,854)	(244,547)
Loans due to sales and securitizations	108,637	170,870	97,004
Net cash received (used) in business acquisitions	13,839	(669)	(72)
All other investing activities, net	2,544	1,635	(3,277)
Net cash (used in) provided by investing activities	(23,076)	12,418	(23,344)
Financing Activities			
Net change in:			
Deposits	52,082	21,851	11,103
Federal funds purchased and securities sold under repurchase agreements	7,065	(56,017)	41,038
Commercial paper and other borrowed funds	(4,343)	555	(4,675)
Proceeds from the issuance of long-term debt and capital debt securities	25,344	17,195	11,971
Repayments of long-term debt and capital debt securities	(16,039)	(8,316)	(12,185)
Net issuance of stock and stock-based awards	848	1,213	725
Redemption of preferred stock	(670)	—	—
Redemption of preferred stock of subsidiary	—	—	(550)
Treasury stock purchased	(738)	—	—
Cash dividends paid	(3,927)	(2,865)	(2,784)
All other financing activities, net	(26)	133	—
Net cash provided by (used in) financing activities	59,596	(26,251)	44,643
Effect of exchange rate changes on cash and due from banks	185	282	453
Net increase (decrease) in cash and due from banks	14,900	1,050	(3,382)
Cash and due from banks at the beginning of the year	20,268	19,218	22,600
Cash and due from banks at the end of the year	$ 35,168	$ 20,268	$ 19,218
Cash interest paid	$ 13,384	$ 10,976	$ 13,534
Cash income taxes paid	$ 1,477	$ 1,337	$ 1,253

Note: The fair values of noncash assets acquired and liabilities assumed in the Merger with Bank One were $320.9 billion and $277.0 billion, respectively. Approximately 1,469 million shares of common stock, valued at approximately $57.3 billion, were issued in connection with the merger with Bank One.

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

The Notes to consolidated financial statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States, with operations in more than 50 countries. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing, investment management, private banking and private equity. For a discussion of the Firm's business segment information, see Note 31 on pages 126–127 of this Annual Report.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the United States of America ("U.S. GAAP") and prevailing industry practices. Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by bank regulatory authorities.

Certain amounts in the prior periods have been reclassified to conform to the current presentation.

Consolidation

The consolidated financial statements include accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

The usual condition for a controlling financial interest is ownership of a majority of the voting interests of an entity. However, a controlling financial interest may also exist in entities, such as special purpose entities ("SPEs"), through arrangements that do not involve controlling voting interests.

SPEs are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. They are, for example, critical to the functioning of the mortgage- and asset-backed securities and commercial paper markets. SPEs may be organized as trusts, partnerships or corporations and are typically set up for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction describe how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs can be structured to be bankruptcy-remote, thereby insulating investors from the impact of the creditors of other entities, including the seller of the assets.

There are two different accounting frameworks applicable to SPEs; the qualifying SPE ("QSPE") framework under SFAS 140; and the variable interest entity ("VIE") framework under FIN 46R. The applicable framework depends on the nature of the entity and the Firm's relation to that entity. The QSPE framework is applicable when an entity transfers (sells) financial assets to an SPE meeting certain criteria as defined in SFAS 140. These criteria are designed to ensure that the activities of the entity are essentially predetermined in their entirety at the inception of the vehicle and that the transferor of the financial assets cannot exercise control over the entity and the assets therein. Entities meeting these criteria are not consolidated by the transferor or other counterparty, as long as the entity does not have the unilateral ability to liquidate or to cause it to no longer meet the QSPE criteria. The Firm primarily follows the QSPE model for securitizations of its residential and commercial mortgages, credit card loans and automobile loans. For further details, see Note 13 on pages 103–106 of this Annual Report.

When the SPE does not meet the QSPE criteria, consolidation is assessed pursuant to FIN 46R. Under FIN 46R, a VIE is defined as an entity that: (1) lacks enough equity investment at risk to permit the entity to finance its activities without additional subordinated financial support from other parties, (2) has equity owners that lack the right to make significant decisions affecting the entity's operations, and/or (3) has equity owners that do not have an obligation to absorb or the right to receive the entity's losses or returns.

FIN 46R requires a variable interest holder (i.e., a counterparty to a VIE) to consolidate the VIE if that party will absorb a majority of the expected losses of the VIE, receive a majority of the residual returns of the VIE, or both. This party is considered the primary beneficiary of the entity. The determination of whether the Firm meets the criteria to be considered the primary beneficiary of a VIE requires an evaluation of all transactions (such as investments, liquidity commitments, derivatives and fee arrangements) with the entity and an expected loss calculation when necessary. For further details, see Note 14 on pages 106–109 of this Annual Report.

Prior to the Firm's adoption of FIN 46 on July 1, 2003, the decision of whether or not to consolidate depended on the applicable accounting principles for non-QSPEs, including a determination regarding the nature and amount of investment made by third parties in the SPE. Consideration was given to, among other factors, whether a third party had made a substantive equity investment in the SPE; which party had voting rights, if any; who made decisions about the assets in the SPE; and who was at risk of loss. The SPE was consolidated if JPMorgan Chase retained or acquired control over the risks and rewards of the assets in the SPE.

Financial assets are derecognized when they meet the accounting sale criteria. Those criteria are: (1) the assets are legally isolated from the Firm's creditors; (2) the entity can pledge or exchange the financial assets or, if the entity is a QSPE, its investors can pledge or exchange their interests; and (3) the Firm does not maintain effective control via an agreement to repurchase the assets before their maturity or have the ability to unilaterally cause the holder to return the assets. All significant transactions and retained interests between the Firm, QSPEs and nonconsolidated VIEs are reflected on JPMorgan Chase's Consolidated balance sheets or in the Notes to consolidated financial statements.

Investments in companies that are considered to be voting-interest entities under FIN 46R, in which the Firm has significant influence over operating and financing decisions (generally defined as owning a voting or economic interest of 20% to 50%) are accounted for in accordance with the equity method of accounting. These investments are generally included in Other assets, and the Firm's share of income or loss is included in Other income. For a discussion of private equity investments, see Note 9 on pages 98–100 of this Annual Report.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included in the Consolidated balance sheets.

Use of estimates in the preparation of consolidated financial statements

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

Assets and liabilities denominated in foreign currencies are translated into U.S. dollars using applicable rates of exchange. JPMorgan Chase translates revenues and expenses using exchange rates at the transaction date.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in Other comprehensive income (loss) within Stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar and operations in highly inflationary environments, are reported in the Consolidated statements of income.

Statements of cash flows

For JPMorgan Chase's Consolidated statements of cash flows, cash and cash equivalents are defined as those amounts included in Cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's significant accounting policies and the Note and page where a detailed description of each policy can be found:

Trading activities	Note 3	Page 90
Other noninterest revenue	Note 4	Page 91
Pension and other postretirement employee benefit plans	Note 6	Page 92
Employee stock-based incentives	Note 7	Page 95
Securities and private equity investments	Note 9	Page 98
Securities financing activities	Note 10	Page 100
Loans	Note 11	Page 101
Allowance for credit losses	Note 12	Page 102
Loan securitizations	Note 13	Page 103
Variable interest entities	Note 14	Page 106
Goodwill and other intangible assets	Note 15	Page 109
Premises and equipment	Note 16	Page 111
Income taxes	Note 22	Page 115
Derivative instruments and hedging activities	Note 26	Page 118
Off–balance sheet lending-related financial instruments and guarantees	Note 27	Page 119
Fair value of financial instruments	Note 29	Page 121

Note 2 – Business changes and developments

Merger with Bank One Corporation

Bank One Corporation merged with and into JPMorgan Chase (the "Merger") on July 1, 2004. As a result of the Merger, each outstanding share of common stock of Bank One was converted in a stock-for-stock exchange into 1.32 shares of common stock of JPMorgan Chase; cash payments for fractional shares were approximately $3.1 million. JPMorgan Chase stockholders kept their shares, which remained outstanding and unchanged as shares of JPMorgan Chase following the Merger. Key objectives of the Merger were to provide the Firm with a more balanced business mix and greater geographic diversification. The Merger was accounted for using the purchase method of accounting, which requires that the assets and liabilities of Bank One be fair valued as of July 1, 2004. The purchase price to complete the Merger was $58.5 billion.

The purchase price of the Merger has been allocated to the assets acquired and liabilities assumed using their fair values at the merger date. The computation of the purchase price and the allocation of the purchase price to the net assets of Bank One – based on their respective fair values as of July 1, 2004 – and the resulting goodwill are presented below. The allocation of the purchase price may be modified through June 30, 2005, as more information is obtained about the fair value of assets acquired and liabilities assumed.

(in millions, except per share amounts)	July 1, 2004	
Purchase price		
Bank One common stock exchanged	1,113	
Exchange ratio	1.32	
JPMorgan Chase common stock issued	1,469	
Average purchase price per JPMorgan Chase common share[(a)]	$ 39.02	
		$ 57,336
Fair value of employee stock awards and direct acquisition costs		1,210
Total purchase price		$ 58,546
Net assets acquired:		
Bank One stockholders' equity	$ 24,156	
Bank One goodwill and other intangible assets	(2,754)	
Subtotal	21,402	
Adjustments to reflect assets acquired at fair value:		
Loans and leases	(2,261)	
Private equity investments	(75)	
Identified intangibles	8,665	
Pension plan assets	(778)	
Premises and equipment	(427)	
Other assets	(262)	
Amounts to reflect liabilities assumed at fair value:		
Deposits	(373)	
Deferred income taxes	767	
Postretirement plan liabilities	(49)	
Other liabilities	(975)	
Long-term debt	(1,234)	
		24,400
Goodwill resulting from Merger		$ 34,146

(a) The value of the Firm's common stock exchanged with Bank One shareholders was based on the average closing prices of the Firm's common stock for the two days prior to, and the two days following, the announcement of the Merger on January 14, 2004.

Unaudited condensed statement of net assets acquired

The following unaudited condensed statement of net assets acquired reflects the fair value of Bank One net assets as of July 1, 2004.

(in millions) July 1, 2004	
Assets	
Cash and cash equivalents	$ 14,669
Securities	70,512
Interests in purchased receivables	30,184
Loans, net of allowance	129,650
Goodwill and other intangible assets	42,811
All other assets	47,731
Total assets	$ 335,557
Liabilities	
Deposits	$ 164,848
Short-term borrowings	9,811
All other liabilities	61,472
Long-term debt	40,880
Total Liabilities	277,011
Net assets acquired	$ 58,546

Acquired, identifiable intangible assets

Components of the fair value of acquired, identifiable intangible assets as of July 1, 2004 were as follows:

(in millions)	Fair value	Weighted average life (in years)	Useful life (in years)
Core deposit intangibles	$ 3,650	5.1	Up to 10
Purchased credit card relationships	3,340	4.6	Up to 10
Other credit card–related intangibles	295	4.6	Up to 10
Other customer relationship intangibles	870	4.6–10.5	Up to 20
Subtotal	8,155	5.1	Up to 20
Indefinite-lived asset management intangibles	510	NA	NA
Total	$ 8,665	5.1	

Unaudited pro forma condensed combined financial information

The following unaudited pro forma condensed combined financial information presents the results of operations of the Firm had the Merger taken place at January 1, 2003.

Year ended December 31, (in millions)	2004	2003
Noninterest revenue	$ 31,175	$ 28,966
Net interest income	21,366	21,715
Total net revenue	52,541	50,681
Provision for credit losses	2,727	3,570
Noninterest expense	40,504	33,136
Income before income tax expense	9,310	13,975
Net income	$ 6,544	$ 9,330
Net income per common share:		
Basic	$ 1.85	$ 2.66
Diluted	1.81	2.61
Average common shares outstanding:		
Basic	3,510	3,495
Diluted	3,593	3,553

Other acquisitions

During 2004, JPMorgan Chase purchased the Electronic Financial Services ("EFS") business from Citigroup and acquired a majority interest in hedge fund manager Highbridge Capital Management ("Highbridge").

Note 3 – Trading activities

Trading assets include debt and equity securities held for trading purposes that JPMorgan Chase owns ("long" positions). Trading liabilities include debt and equity securities that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase securities at a future date to cover the short positions. Included in Trading assets and Trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. These amounts include the effect of master netting agreements as permitted under FIN 39. Effective January 1, 2004, the Firm elected to report the fair value of derivative assets and liabilities net of cash received and paid, respectively, under legally enforceable master netting agreements. At December 31, 2004, the amount of cash received and paid was approximately $32.2 billion and $22.0 billion, respectively. Trading positions are carried at fair value on the Consolidated balance sheets.

Trading revenue

Year ended December 31,[a] (in millions)	2004	2003	2002
Fixed income and other[b]	$ 2,976	$ 4,046	$ 2,527
Equities[c]	797	764	331
Credit portfolio[d]	(161)	(383)	(183)
Total	$ 3,612	$ 4,427	$ 2,675

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Includes bonds and commercial paper and various types of interest rate derivatives as well as foreign exchange and commodities.
(c) Includes equity securities and equity derivatives.
(d) Includes credit derivatives

Trading assets and liabilities

The following table presents the fair value of Trading assets and Trading liabilities for the dates indicated:

December 31, (in millions)	2004	2003[a]
Trading assets		
Debt and equity instruments:		
U.S. government, federal agencies/corporations obligations and municipal securities	$ 43,866	$ 44,678
Certificates of deposit, bankers' acceptances and commercial paper	7,341	5,765
Debt securities issued by non-U.S. governments	50,699	36,243
Corporate securities and other	120,926	82,434
Total debt and equity instruments	222,832	169,120
Derivative receivables:		
Interest rate	45,892	60,176
Foreign exchange	7,939	9,760
Equity	6,120	8,863
Credit derivatives	2,945	3,025
Commodity	3,086	1,927
Total derivative receivables	65,982	83,751
Total trading assets	$ 288,814	$252,871
Trading liabilities		
Debt and equity instruments[b]	$ 87,942	$ 78,222
Derivative payables:		
Interest rate	41,075	49,189
Foreign exchange	8,969	10,129
Equity	9,096	8,203
Credit derivatives	2,499	2,672
Commodity	1,626	1,033
Total derivative payables	63,265	71,226
Total trading liabilities	$ 151,207	$ 149,448

(a) Heritage JPMorgan Chase only.
(b) Primarily represents securities sold, not yet purchased.

Average Trading assets and liabilities were as follows for the periods indicated:

Year ended December 31,[a] (in millions)	2004	2003	2002
Trading assets – debt and equity instruments	$200,467	$ 154,597	$ 149,173
Trading assets – derivative receivables	59,521	85,628	73,641
Trading liabilities – debt and equity instruments[b]	$ 82,204	$ 72,877	$ 64,725
Trading liabilities – derivative payables	52,761	67,783	57,607

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Primarily represents securities sold, not yet purchased.

Note 4 – Other noninterest revenue

Investment banking fees

This revenue category includes advisory and equity and debt underwriting fees. Advisory fees are recognized as revenue when related services are performed. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee (e.g., not contingent on the customer obtaining financing). Underwriting fees are net of syndicate expenses. In addition, the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria.

The following table presents the components of Investment banking fees:

Year ended December 31, (in millions)[a]	2004	2003	2002
Underwriting:			
Equity	$ 780	$ 699	$ 464
Debt	1,859	1,549	1,543
Total Underwriting	2,639	2,248	2,007
Advisory	898	642	756
Total	$ 3,537	$ 2,890	$ 2,763

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

Lending & deposit related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit services in lieu of compensating balances, cash management-related activities or transactions, deposit accounts, and other loan servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody and institutional trust services, brokerage services, insurance premiums and commissions and other products. These fees are recognized over the period in which the related service is provided.

Mortgage fees and related income

This revenue category includes fees and income derived from mortgage origination, sales and servicing; and includes the effect of risk management activities associated with the mortgage pipeline, warehouse and the mortgage servicing rights ("MSRs") asset (excluding gains and losses on the sale of Available-for-sale ("AFS") securities). Origination fees and gains or losses on loan sales are recognized in income upon sale. Mortgage servicing fees are recognized over the period the related service is provided, net of amortization. Valuation changes in the mortgage pipeline, warehouse, MSR asset and corresponding risk management instruments are generally adjusted through earnings as these changes occur. Net interest income and securities gains and losses on AFS securities used in mortgage-related risk management activities are not included in Mortgage fees and related income. For a further discussion of MSRs, see Note 15 on pages 109–111 of this Annual Report.

Credit card income

This revenue category includes interchange income (i.e., transaction-processing fees) from credit and debit cards, annual fees, and servicing fees earned in connection with securitization activities. Also included in this category are volume-related payments to partners and rewards expense. Fee revenues are recognized as earned, except for annual fees, which are recognized over a 12-month period.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous affinity organizations and co-brand partners, which grant to the Firm exclusive rights to market to their members or customers. These organizations and partners provide to the Firm their endorsement of the credit card programs, mailing lists, and may also conduct marketing activities, and provide awards under the various credit card programs. The terms of these agreements generally range from 3 to 10 years. The economic incentives the Firm pays to the endorsing organizations and partners typically include payments based on new accounts, activation, charge volumes, and the cost of their marketing activities and awards.

The Firm recognizes the portion of its payments based on new accounts to the affinity organizations and co-brand partners as deferred loan origination costs. The Firm defers these costs and amortizes them over 12 months. The Firm expenses payments based on marketing efforts performed by the endorsing organization or partner to activate a new account after the account has been originated as incurred. Payments based on charge volumes and considered by the Firm as revenue sharing with the affinity organizations and co-brand partners, are deducted from Credit card income as the related revenue is earned.

Note 5 – Interest income and interest expense

Details of Interest income and Interest expense were as follows:

Year ended December 31, (in millions)[a]	2004	2003	2002
Interest Income			
Loans	$ 16,771	$ 11,812	$ 12,709
Securities	3,377	3,542	3,367
Trading assets	7,527	6,592	6,798
Federal funds sold and securities purchased under resale agreements	1,627	1,497	2,078
Securities borrowed	463	323	681
Deposits with banks	539	214	303
Interests in purchased receivables	291	64	—
Total interest income	30,595	24,044	25,936
Interest Expense			
Interest-bearing deposits	4,600	3,604	5,253
Short-term and other liabilities	6,290	5,871	7,038
Long-term debt	2,466	1,498	1,467
Beneficial interests issued by consolidated VIEs	478	106	—
Total interest expense	13,834	11,079	13,758
Net interest income	16,761	12,965	12,178
Provision for credit losses	2,544	1,540	4,331
Net interest income after provision for credit losses	$ 14,217	$ 11,425	$ 7,847

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

Note 6 – Pension and other postretirement employee benefit plans

New U.S.-based postretirement plans were approved in 2004 and the prior plans of JPMorgan Chase and Bank One were merged as of December 31, 2004.

The Firm's defined benefit pension plans are accounted for in accordance with SFAS 87 and SFAS 88. Its postretirement medical and life insurance plans are accounted for in accordance with SFAS 106.

The Firm uses a measurement date of December 31 for its pension and other postretirement employee benefit plans. The fair value of plan assets is used to determine the expected return on plan assets for its U.S. and non-U.S. defined benefit pension plans. For the U.S. postretirement benefit plan, the market-related value, which recognizes changes in fair value over a five-year period, is used to determine the expected return on plan assets. Unrecognized net actuarial gains and losses are amortized over the average remaining service period of active plan participants, if required.

In December 2003, the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (the "Act") was enacted. The Act established a prescription drug benefit under Medicare ("Medicare Part D") and a federal subsidy to sponsors of retiree health care benefit plans that provide a benefit that is at least actuarially equivalent to Medicare Part D. The Firm has determined that benefits provided to certain participants will be at least actuarially equivalent to Medicare Part D and has reflected the estimated effects of the subsidy in its financial statements and disclosures retroactive to the beginning of 2004 (July 1, 2004 for Bank One Plans) in accordance with FSP SFAS 106-2.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula, in the form of salary and interest credits, to determine the benefits to be provided at retirement, based on eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and benefits vest after five years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on eligible compensation and years of service.

It is the Firm's policy to fund its pension plans in amounts sufficient to meet the requirements under applicable employee benefit and local tax laws. In 2004, the Firm made a cash contribution to its U.S. defined benefit pension plan of $1.1 billion on April 1, funding the plan to the maximum allowable amount under applicable tax law. Additionally, the Firm made cash contributions totaling $40 million to fully fund the accumulated benefit obligations of certain non-U.S. defined benefit pension plans as of December 31, 2004. Based on the current funded status of the U.S. and non-U.S. pension plans, the Firm does not expect to make significant contributions in 2005.

Postretirement medical and life insurance

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and qualifying U.S. employees. These benefits vary with length of service and date of hire and provide for limits on the Firm's share of covered medical benefits. The medical benefits are contributory, while the life insurance benefits are noncontributory. Postretirement medical benefits are also offered to qualifying U.K. employees.

JPMorgan Chase's U.S. postretirement benefit obligation is partially funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expenses. The U.K. postretirement benefit plan is unfunded.

The following tables present the funded status and amounts reported on the Consolidated balance sheets, the accumulated benefit obligation and the components of net periodic benefit costs reported in the Consolidated statements of income for the Firm's U.S. and non-U.S. defined benefit pension and postretirement benefit plans.

December 31, (in millions)	Defined benefit pension plans U.S. 2004[a]	U.S. 2003[b]	Non-U.S. 2004[a]	Non-U.S. 2003[b]	Postretirement benefit plans[d] 2004[a][c]	Postretirement benefit plans[d] 2003[b]
Change in benefit obligation						
Benefit obligation at beginning of year	$ (4,633)	$ (4,241)	$ (1,659)	$ (1,329)	$ (1,252)	$ (1,126)
Merger with Bank One	(2,497)	NA	(25)	NA	(216)	NA
Benefits earned during the year	(251)	(180)	(17)	(16)	(15)	(15)
Interest cost on benefit obligations	(348)	(262)	(87)	(74)	(81)	(73)
Plan amendments	70	(89)	—	(1)	32	—
Employee contributions	—	—	—	(1)	(36)	(11)
Actuarial gain (loss)	(511)	(262)	(99)	(125)	(163)	(134)
Benefits paid	555	386	64	55	167	113
Curtailments	21	15	—	—	(8)	(2)
Special termination benefits	—	—	(12)	(1)	(2)	—
Foreign exchange impact and other	—	—	(134)	(167)	(3)	(4)
Benefit obligation at end of year	$ (7,594)	$ (4,633)	$ (1,969)	$ (1,659)	$ (1,577)	$ (1,252)
Change in plan assets						
Fair value of plan assets at beginning of year	$ 4,866	$ 4,114	$ 1,603	$ 1,281	$ 1,149	$ 1,020
Merger with Bank One	3,280	NA	20	NA	98	NA
Actual return on plan assets	946	811	164	133	84	154
Firm contributions	1,100	327	40	87	2	2
Benefits paid	(555)	(386)	(64)	(43)	(31)	(27)
Settlement payments	—	—	—	(12)	—	—
Foreign exchange impact and other	—	—	126	157	—	—
Fair value of plan assets at end of year	$ 9,637[e]	$ 4,866[e]	$ 1,889	$ 1,603	$ 1,302	$ 1,149
Reconciliation of funded status						
Funded status	$ 2,043	$ 233	$ (80)	$ (56)	$ (275)	$ (103)
Unrecognized amounts:						
Net transition asset	—	—	(1)	(1)	—	—
Prior service cost	47	137	4	5	(23)	8
Net actuarial (gain) loss	997	920	590	564	321	156
Prepaid benefit cost reported in Other assets	$ 3,087	$ 1,290	$ 513[f]	$ 512[f]	$ 23	$ 61
Accumulated benefit obligation	$ (7,167)	$ (4,312)	$ (1,931)	$ (1,626)	NA	NA

(a) Effective July 1, 2004, the Firm assumed the obligations of heritage Bank One's pension and other postretirement plans. These plans were similar to those of JPMorgan Chase and were merged into the Firm's plans effective December 31, 2004.
(b) Heritage JPMorgan Chase only.
(c) The effect of the Medicare Prescription Drug, Improvement and Modernization Act of 2003 resulted in a $35 million reduction in the Accumulated other postretirement benefit obligation.
(d) Includes postretirement benefit obligation of $43 million and $36 million and postretirement benefit liability (included in Accrued expenses) of $57 million and $54 million at December 31, 2004 and 2003, respectively, for the UK plan, which is unfunded.
(e) At December 31, 2004 and 2003, approximately $358 million and $315 million, respectively, of U.S. plan assets relate to surplus assets of group annuity contracts.
(f) At December 31, 2004 and 2003, Accrued expenses related to non-U.S. defined benefit pension plans that JPMorgan Chase elected not to pre-fund fully totaled $124 million and $99 million, respectively.

For the year ended December 31, (in millions)[a]	Defined benefit pension plans U.S. 2004	U.S. 2003	U.S. 2002	Non-U.S. 2004	Non-U.S. 2003	Non-U.S. 2002	Postretirement benefit plans 2004	Postretirement benefit plans 2003	Postretirement benefit plans 2002
Components of net periodic benefit costs									
Benefits earned during the period	$ 251	$ 180	$ 174	$ 17	$ 16	$ 16	$ 15	$ 15	$ 12
Interest cost on benefit obligations	348	262	275	87	74	62	81	73	69
Expected return on plan assets	(556)	(322)	(358)	(90)	(83)	(76)	(86)	(92)	(98)
Amortization of unrecognized amounts:									
Prior service cost	13	6	7	1	—	—	—	1	2
Net actuarial (gain) loss	23	62	—	44	35	6	—	—	(10)
Curtailment (gain) loss	7	2	15	—	8	(3)	8	2	(8)
Settlement (gain) loss	—	—	—	(1)	—	(2)	—	—	—
Special termination benefits	—	—	—	11	—	3	2	—	57
Net periodic benefit costs reported in Compensation expense	$ 86	$ 190	$ 113	$ 69	$ 50	$ 6	$ 20[b]	$ (1)	$ 24

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) The effect of the Medicare Prescription Drug, Improvement and Modernization Act of 2003 resulted in a $5 million reduction in the Firm's net periodic benefit costs.

JPMorgan Chase has a number of other defined benefit pension plans (i.e., U.S. plans not subject to Title IV of the Employee Retirement Income Security Act). The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees earn service credits on compensation amounts above the maximum stipulated by law. This plan is a nonqualified, noncontributory U.S. pension plan with an unfunded liability at December 31, 2004 and 2003, in the amount of $292 million and $178 million, respectively. Compensation expense related to the Firm's other defined benefit pension plans totaled $28 million in 2004, $19 million in 2003 and $15 million in 2002.

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. pension and other postretirement plan assets is a blended average of its investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the portfolio allocation. Asset-class returns are developed using a forward-looking building-block approach and are not based strictly on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yields and risk spreads (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets.

In the United Kingdom, which represents the most significant of the non-U.S. pension plans, procedures similar to those in the United States are used to develop the expected long-term rate of return on pension plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class, selected by reference to the yield on long-term U.K. government bonds and AA-rated long-term corporate bonds, plus an equity risk premium above the risk-free rate.

The discount rate used in determining the benefit obligation under the U.S. pension and other postretirement employee benefit plans is selected by reference to the year-end Moody's corporate AA rate, as well as other high-quality indices with similar duration to that of the respective plan's benefit obligations. The discount rate for the U.K. postretirement plans is selected by reference to the year-end iBoxx £ corporate AA 15-year-plus bond rate.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated benefit obligations, and the components of net periodic benefit costs for the Firm's U.S. and non-U.S. defined benefit pension and postretirement benefit plans, as of year-end.

	U.S.		Non-U.S.	
For the year ended December 31,	**2004**	2003	**2004**	2003
Weighted-average assumptions used to determine benefit obligations				
Discount rate	**5.75%**	6.00%	**2.00-5.30%**	2.00-5.40%
Rate of compensation increase	**4.50**	4.50	**1.75-3.75**	1.75-3.75

	U.S.			Non-U.S.		
For the year ended December 31,	**2004**	2003	2002	**2004**	2003	2002
Weighted-average assumptions used to determine net periodic benefit costs						
Discount rate	**6.00%**	6.50%	7.25%	**2.00-5.75%**	1.50-5.60%	2.50-6.00%
Expected long-term rate of return on plan assets:						
Pension	**7.50-7.75**	8.00	9.25	**3.00-6.50**	2.70-6.50	3.25-7.25
Postretirement benefit	**4.75-7.00**	8.00	9.00	**NA**	NA	NA
Rate of compensation increase	**4.25-4.50**	4.50	4.50	**1.75-3.75**	1.25-3.00	2.00-4.00

The following tables present JPMorgan Chase's assumed weighted-average medical benefits cost trend rate, which is used to measure the expected cost of benefits at year-end, and the effect of a one-percentage-point change in the assumed medical benefits cost trend rate.

December 31,	**2004**	2003[a]	2002[a]
Health care cost trend rate assumed for next year	**10%**	10%	9%
Rate to which cost trend rate is assumed to decline (ultimate trend rate)	**5**	5	5
Year that rate reaches ultimate trend rate	**2012**	2010	2008

(in millions) For the year ended December 31,2004	1-Percentage-point increase	1-Percentage-point decrease
Effect on total service and interest costs	**$ 5**	$ (4)
Effect on postretirement benefit obligation	**71**	(62)

(a) Heritage JPMorgan Chase only.

At December 31, 2004, the Firm reduced the discount rate used to determine its U.S. benefit obligations to 5.75%. The Firm also reduced the 2005 expected long-term rate of return on its U.S. pension plan assets to 7.50%. The expected long-term rate of return on the Firm's COLI postretirement plan assets remained at 7%; however, with the merger of Bank One's other postretirement plan assets, the Firm's overall expected long-term rate of return on U.S. postretirement plan assets decreased to 6.80% to reflect a weighted average expected rate of return for the merged plan. The changes as of December 31, 2004, to the discount rate and the expected long-term rate of return on plan assets is expected to increase 2005 U.S. pension and other postretirement benefit expenses by approximately $41 million. The impact of any changes to the discount rate and the expected long-term rate of return on plan assets on non-U.S. pension and other postretirement benefit expenses is not expected to be material.

JPMorgan Chase's U.S. pension and other postretirement benefit expenses are most sensitive to the expected long-term rate of return on plan assets. With all other assumptions held constant, a 25–basis point decline in the expected long-term rate of return on U.S. plan assets would result in an increase of approximately $25 million in 2005 U.S. pension and other postretirement benefit expenses. Additionally, a 25–basis point decline in the discount rate for the U.S. plans would result in an increase in 2005 U.S. pension and other postretirement benefit expenses of approximately $16 million and an increase in the related projected benefit obligations of approximately $215 million.

Investment strategy and asset allocation

The investment policy for the Firm's postretirement employee benefit plan assets is to optimize the risk-return relationship as appropriate to the respective plan's needs and goals, using a global portfolio of various asset classes diversified by market segment, economic sector and issuer. Specifically, the goal is to optimize the asset mix for future benefit obligations, while managing various risk factors and each plan's investment return objectives. For example, long-duration fixed income securities are included in the U.S. qualified pension plan's asset allocation, in recognition of its long-duration obligations. Plan assets are managed by a combination of internal and external investment managers and, on a quarterly basis, are rebalanced to target, to the extent economically practical.

The Firm's U.S. pension plan assets are held in various trusts and are invested in well diversified portfolios of equity (including U.S. large and small capitalization and international equities), fixed income (including corporate and government bonds), Treasury inflation-indexed and high-yield securities, cash equivalents and other securities. Non-U.S. pension plan assets are similarly invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to fund partially the U.S. postretirement benefit plan, are held in separate accounts with an insurance company and are invested in equity and fixed income index funds. In addition, tax-exempt municipal debt securities, held in a trust, are used to fund the U.S. postretirement benefit plan. Assets used to fund the Firm's U.S. and non-U.S. defined benefit pension plans include $53 million of JPMorgan Chase common stock in addition to JPMorgan Chase common stock held in connection with investments in third-party stock-index funds.

The following table presents the weighted-average asset allocation at December 31 for the years indicated, and the respective target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and postretirement benefit plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.[a]			Postretirement benefit plans[b]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	2004	2003[c]	Allocation	2004	2003[c]	Allocation	2004	2003[c]
Asset class									
Debt securities	40%	**38%**	41%	74%	**74%**	70%	50%	**46%**	50%
Equity securities	50	**53**	53	26	**26**	24	50	**54**	50
Real estate	5	**5**	5	—	**—**	—	—	**—**	—
Other	5	**4**	1	—	**—**	6	—	**—**	—
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Represents the U.K. defined benefit pension plan only, as plans outside the U.K. are not significant.
(b) Represents the U.S. postretirement benefit plan only, as the U.K. plan is unfunded.
(c) Heritage JPMorgan Chase only.

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service for the years indicated. The postretirement medical and life insurance payments are net of expected retiree contributions and the estimated Medicare Part D subsidy.

Year ended December 31, (in millions)	U.S. pension benefits	Non-U.S. pension benefits	U.S. and U.K. postretirement benefits
2005	$ 619	$ 60	$ 113
2006	578	62	110
2007	592	65	112
2008	606	67	114
2009	621	70	116
Years 2010–2014	3,352	387	588

Defined contribution plans

JPMorgan Chase offers several defined contribution plans in the U.S. and in certain non-U.S. locations. The most significant of these is the JPMorgan Chase 401(k) Savings Plan, covering substantially all U.S. employees. This plan allows employees to make pre-tax contributions to tax-deferred investment portfolios. The Firm matches eligible employee contributions up to a certain percentage of benefits eligible compensation per pay period, subject to plan and legal limits. Employees begin to receive matching contributions after completing a specified service requirement and are immediately vested in such company contributions. The Firm's defined contribution plans are administered in accordance with applicable local laws and regulations. Compensation expense related to these plans totaled $317 million in 2004, $240 million in 2003 and $251 million in 2002.

Note 7 – Employee stock-based incentives

Effective January 1, 2003, JPMorgan Chase adopted SFAS 123 using the prospective transition method. SFAS 123 requires all stock-based compensation awards, including stock options and stock-settled stock appreciation rights ("SARs"), to be accounted for at fair value. Stock options that were outstanding as of December 31, 2002 continue to be accounted for under APB 25 using the intrinsic value method. Under this method, no expense is recognized for stock options or SARs granted at the stock price on grant date, since such options have no intrinsic value. The Firm currently uses the Black-Scholes valuation model to estimate the fair value of stock options and SARs. Compensation expense for restricted stock and restricted stock units ("RSUs") is measured based on the number of shares granted and the stock price at the grant date. Compensation expense is recognized in earnings over the required service period.

In connection with the Merger, JPMorgan Chase converted all outstanding Bank One employee stock-based awards at the merger date, and those awards became exercisable for or based upon JPMorgan Chase common stock. The number of awards converted, and the exercise prices of those awards, was adjusted to take into account the Merger exchange ratio of 1.32.

On December 16, 2004, the FASB issued SFAS 123R, which revises SFAS 123 and supersedes APB 25. Accounting and reporting under SFAS 123R is generally similar to the SFAS 123 approach except that SFAS 123R requires all share-based payments to employees, including grants of stock options and SARs, to be recognized in the income statement based on their fair values. SFAS 123R must be adopted no later than July 1, 2005. SFAS 123R permits adoption using one of two methods — modified prospective or modified retrospective. The Firm is currently evaluating both the timing and method of adopting the new standard.

Key employee stock-based awards

JPMorgan Chase grants long-term stock-based incentive awards to certain key employees under two plans (the "LTI Plans"): the 1996 Long-Term Incentive Plan (the "1996 Plan"), as amended and approved by shareholders in May 2000, provides for grants of stock options, SARs, restricted stock and RSU awards, and the Stock Option Plan, a nonshareholder-approved plan, provides for grants of stock options and SARs. In 2004, 14.5 million SARs settled only in shares and 2.2 million nonqualified stock options were granted under the 1996 Plan.

Under the LTI Plans, stock options and SARs are granted with an exercise price equal to JPMorgan Chase's common stock price on the grant date. Generally, options and SARs cannot be exercised until at least one year after the grant date and become exercisable over various periods as determined at the time of the grant. These awards generally expire 10 years after the grant date.

The following table presents a summary of JPMorgan Chase's option and SAR activity under the LTI Plans during the last three years:

	2004		2003		2002	
Year ended December 31,[a] (in thousands)	Number of options/SARs	Weighted-average exercise price	Number of options	Weighted-average exercise price	Number of options	Weighted-average exercise price
Outstanding, January 1	**294,026**	**$ 39.88**	298,731	$ 40.84	272,304	$ 41.23
Granted	**16,667**	**39.79**	26,751	22.15	53,230	36.41
Bank One Conversion, July 1	**111,287**	**29.63**	NA	NA	NA	NA
Exercised	**(27,763)**	**25.33**	(14,574)	17.47	(9,285)	16.85
Canceled	**(17,887)**	**46.68**	(16,882)	47.57	(17,518)	45.59
Outstanding, December 31	**376,330**	**$ 37.59**	294,026	$ 39.88	298,731	$ 40.84
Exercisable, December 31	**246,945**	**$ 36.82**	176,163	$ 37.88	144,421	$ 34.91

(a) 2004 includes six months of awards for the combined Firm and six months of awards for heritage JPMorgan Chase. All other periods reflect the awards for heritage JPMorgan Chase only.

The following table details the distribution of options and SARs outstanding under the LTI Plans at December 31, 2004:

	Options/SARs outstanding			Options/SARs exercisable	
(in thousands) Range of exercise prices	Outstanding	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Exercisable	Weighted-average exercise price
$3.41–$20.00	**9,715**	**$ 17.67**	**0.9**	**9,707**	**$ 17.66**
$20.01–$35.00	**131,767**	**26.99**	**6.1**	**77,537**	**27.02**
$35.01–$50.00	**144,521**	**40.05**	**5.7**	**123,585**	**40.23**
$50.01–$65.58	**90,327**	**51.27**	**5.8**	**36,116**	**51.34**
Total	**376,330**	**$ 37.59**	**5.8**	**246,945**	**$ 36.82**

The following table presents a summary of JPMorgan Chase's restricted stock and RSU activity under the 1996 Plan during the last three years:

(in thousands)	Number of restricted stock/RSUs		
Year ended December 31,[a]	2004	2003	2002
Outstanding, January 1	**85,527**	55,886	48,336
Granted	**32,514**	44,552	24,624
Bank One conversion	**15,116**	NA	NA
Lapsed[b]	**(43,349)**	(12,545)	(15,203)
Forfeited	**(4,709)**	(2,366)	(1,871)
Outstanding, December 31	**85,099**	85,527	55,886

(a) 2004 results include six months of awards for the combined Firm and six months of awards for heritage JPMorgan Chase. All other periods reflect the awards for heritage JPMorgan Chase only.
(b) Lapsed awards represent both restricted stock for which restrictions have lapsed and RSUs that have been converted into common stock.

Restricted stock and RSUs are granted by JPMorgan Chase under the 1996 Plan at no cost to the recipient. These awards are subject to forfeiture until certain restrictions have lapsed, including continued employment for a specified period. The recipient of a share of restricted stock is entitled to voting rights and dividends on the common stock. An RSU entitles the recipient to receive a share of common stock after the applicable restrictions lapse; the recipient is entitled to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSU is outstanding.

The vesting of certain awards issued prior to 2002 is conditioned upon certain service requirements being met and JPMorgan Chase's common stock reaching and sustaining target prices within a five-year performance period. During 2002, it was determined that it was no longer probable that the target stock prices related to forfeitable awards granted in 1999, 2000, and 2001 would be achieved within their respective performance periods, and accordingly, previously accrued expenses were reversed. The target stock prices for these awards range from $73.33 to $85.00. Forfeitures of the 1999 awards in 2004 equaled 1.2 million shares; and 1.2 million shares of the 2000 award were forfeited in January 2005. The 2001 awards will be forfeited in January 2006 if their stock price targets are not achieved.

Broad-based employee stock options

In January 2004, JPMorgan Chase granted a total of 6.3 million options and SARs to all eligible full-time (75 options each) and part-time (38 options each) employees under the Value Sharing Plan, a nonshareholder-approved plan. The exercise price is equal to JPMorgan Chase's common stock price on the grant date. The options become exercisable over various periods and generally expire 10 years after the grant date.

The following table presents a summary of JPMorgan Chase's broad-based employee stock option plan and SAR activity during the past three years:

Year ended December 31,[a]	2004		2003		2002	
(in thousands)	Number of options/SARs	Weighted-average exercise price	Number of options	Weighted-average exercise price	Number of options	Weighted-average exercise price
Outstanding, January 1	**117,822**	**$ 39.11**	113,155	$ 40.62	87,393	$ 41.86
Granted	**6,321**	**39.96**	12,846	21.87	32,550	36.85
Exercised	**(5,960)**	**15.26**	(2,007)	13.67	(674)	15.01
Canceled	**(5,999)**	**39.18**	(6,172)	37.80	(6,114)	41.14
Outstanding, December 31	**112,184**	**$ 40.42**	117,822	$ 39.11	113,155	$ 40.62
Exercisable, December 31	**30,082**	**$ 36.33**	36,396	$ 32.88	38,864	$ 31.95

(a) All awards are for heritage JPMorgan Chase employees only.

The following table details the distribution of broad-based employee stock options and SARs outstanding at December 31, 2004:

	Options/SARs outstanding			Options/SARs exercisable	
(in thousands) Range of exercise prices	Outstanding	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Exercisable	Weighted-average exercise price
$ 20.01–$35.00	**17,750**	**$ 24.72**	**5.6**	**7,319**	**$ 28.79**
$ 35.01–$50.00	**73,298**	**41.11**	**5.6**	**22,763**	**38.76**
$ 50.01–$51.22	**21,136**	**51.22**	**6.1**	**—**	**—**
Total[a]	**112,184**	**$ 40.42**	**5.7**	**30,082**	**$ 36.33**

(a) All awards are for heritage JPMorgan Chase employees only.

Comparison of the fair and intrinsic value measurement methods

Pre-tax employee stock-based compensation expense related to these plans totaled $1.3 billion in 2004, $919 million in 2003 and $590 million in 2002. In response to the fact that the adoption of SFAS 123 eliminated the difference in the expense impact of issuing options and restricted stock, the Firm changed its incentive compensation policies upon the adoption of SFAS 123 to permit employees to elect to receive incentive awards in the form of options, restricted stock or a combination of both. The $266 million impact of the adoption of SFAS 123 in 2003 is comprised of (i) $86 million representing the value of stock options granted during 2003 and (ii) $180 million representing the value of restricted stock granted during 2003 that would have been issuable solely in the form of stock options prior to the adoption of SFAS 123.

The following table presents net income (after-tax) and basic and diluted earnings per share as reported, and as if all outstanding awards were accounted for at fair value:

Year ended December 31,[a] (in millions, except per share data)	2004	2003	2002
Net income as reported	**$ 4,466**	$ 6,719	$ 1,663
Add: Employee stock-based compensation expense originally included in reported net income	**778**	551	354
Deduct: Employee stock-based compensation expense determined under the fair value method for all awards	**(960)**	(863)	(1,232)
Pro forma net income	**$ 4,284**	$ 6,407	$ 785
Earnings per share:			
Basic: As reported	**$ 1.59**	$ 3.32	$ 0.81
Pro forma	**1.52**	3.16	0.37
Diluted: As reported	**$ 1.55**	$ 3.24	$ 0.80
Pro forma	**1.48**	3.09	0.37

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

The following table presents JPMorgan Chase's weighted-average grant-date fair values for the employee stock-based compensation awards granted, and the assumptions used to value stock options and SARs under a Black-Scholes valuation model:

Year ended December 31,[a]	2004	2003	2002
Weighted-average grant-date fair value			
Stock options:			
Key employee	**$ 13.04**	$ 5.60	$ 11.57
Broad-based employee	**10.71**	4.98	13.01
Converted Bank One options	**14.05**	NA	NA
Restricted stock and RSUs (all payable solely in stock)	**39.58**	22.03	36.28
Weighted-average annualized stock option valuation assumptions			
Risk-free interest rate	**3.44%**	3.19%	4.61%
Expected dividend yield[b]	**3.59**	5.99	3.72
Expected common stock price volatility	**41**	44	39
Assumed weighted-average expected life of stock options (in years)			
Key employee	**6.8**	6.8	6.8
Broad-based employee	**3.8**	3.8	6.8

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Based primarily on historical data at the grant dates.

Note 8 – Noninterest expense

Merger costs

Costs associated with the Bank One merger in 2004, and costs associated with various programs announced prior to January 1, 2002 and incurred as of December 31, 2002, were reflected in the Merger costs caption of the Consolidated statements of income. A summary of such costs, by expense category, is shown in the following table for 2004, 2003 and 2002.

Year ended December 31,[a] (in millions)	2004	2003	2002
Expense category			
Compensation	$ 467	$ —	$ 379
Occupancy	448	—	216
Technology and communications and other	450	—	615
Total[b]	$ 1,365	$ —	$ 1,210

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) With the exception of occupancy-related write-offs, all of the costs in the table require the expenditure of cash.

The table below shows the change in the liability balance related to the costs associated with the Bank One merger.

Year ended December 31,[a] (in millions)	2004	2003
Liability balance, beginning of period	$ —	$ —
Recorded as merger costs	1,365	—
Recorded as goodwill	1,028	—
Liability utilized	(1,441)	—
Total	$ 952	$ —

(a) 2004 activity includes six months of the combined Firm's activity and six months of heritage JPMorgan Chase activity, while 2003 activity includes heritage JPMorgan Chase only.

Note 9 – Securities and private equity investments

Securities are classified as AFS, Held-to-maturity ("HTM") or Trading. Trading securities are discussed in Note 3 on pages 90–91. Securities are classified as AFS when, in management's judgment, they may be sold in response to or in anticipation of changes in market conditions, or as part of the Firm's management of its structural interest rate risk. AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses after SFAS 133 valuation adjustments are reported as net increases or decreases to Accumulated other comprehensive income (loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in Securities / private equity gains on the Consolidated statements of income. Securities that the Firm has the positive intent and ability to hold to maturity are classified as HTM and are carried at amortized cost on the Consolidated balance sheets.

The following table presents realized gains and losses from AFS securities and private equity gains (losses):

Year ended December 31,[a] (in millions)	2004	2003	2002
Realized gains	$ 576	$ 2,123	$ 1,904
Realized losses	(238)	(677)	(341)
Net realized securities gains	338	1,446	1,563
Private equity gains (losses)	1,536	33	(746)
Total Securities/private equity gains	$ 1,874	$ 1,479	$ 817

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

The amortized cost and estimated fair value of AFS and held-to-maturity securities were as follows for the dates indicated:

	2004				2003[a]			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale securities								
U.S. government and federal agencies/ corporations obligations:								
Mortgage-backed securities	$ 46,577	$ 165	$ 601	$ 46,141	$ 32,248	$ 101	$ 417	$ 31,932
Collateralized mortgage obligations	682	4	4	682	1,825	3	—	1,828
U.S. treasuries	13,621	7	222	13,406	11,511	13	168	11,356
Agency obligations	1,423	18	9	1,432	106	2	—	108
Obligations of state and political subdivisions	2,748	126	8	2,866	2,841	171	52	2,960
Debt securities issued by non-U.S. governments	7,901	59	38	7,922	7,232	47	41	7,238
Corporate debt securities	7,007	127	18	7,116	818	23	8	833
Equity securities	5,810	39	14	5,835	1,393	24	11	1,406
Other, primarily asset-backed securities[b]	9,052	25	75	9,002	2,448	61	102	2,407
Total available-for-sale securities	$ 94,821	$ 570	$ 989	$ 94,402	$ 60,422	$ 445	$ 799	$ 60,068
Held-to-maturity securities[c]								
Total held-to-maturity securities	$ 110	$ 7	$ —	$ 117	$ 176	$ 10	$ —	$ 186

(a) Heritage JPMorgan Chase only.
(b) Includes collateralized mortgage obligations of private issuers, which generally have underlying collateral consisting of obligations of U.S. government and federal agencies and corporations.
(c) Consists primarily of mortgage-backed securities.

The following table presents the fair value and unrealized losses for AFS securities by aging category:

	Securities with unrealized losses					
	Less than 12 months		12 months or more		Total	
December 31, 2004 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total Fair value	Total Gross unrealized losses
Available-for-sale securities						
U.S. government and federal agencies/corporations obligations:						
Mortgage-backed securities	$ 33,806	$ 274	$ 11,884	$ 327	$ 45,690	$ 601
Collateralized mortgage obligations	278	4	2	—	280	4
U.S. treasuries	10,186	154	940	68	11,126	222
Agency obligations	1,303	9	3	—	1,306	9
Obligations of state and political subdivisions	678	6	96	2	774	8
Debt securities issued by non-U.S. governments	3,395	17	624	21	4,019	38
Corporate debt securities	1,103	13	125	5	1,228	18
Equity securities	1,804	14	23	—	1,827	14
Other, primarily asset-backed securities	1,896	41	321	34	2,217	75
Total securities with unrealized losses	$ 54,449	$ 532	$ 14,018	$ 457	$ 68,467	$ 989

Impairment is evaluated considering numerous factors, and their relative significance varies case to case. Factors considered include the length of time and extent to which the market value has been less than cost; the financial condition and near-term prospects of the issuer; and the intent and ability to retain the security in order to allow for an anticipated recovery in market value. If, based on the analysis, it is determined that the impairment is other-than-temporary, the security is written down to fair value, and a loss is recognized through earnings.

Included in the $989 million of gross unrealized losses on AFS securities at December 31, 2004, was $457 million of unrealized losses that have existed for a period greater than 12 months. These securities are predominately rated AAA and the unrealized losses are due to overall increases in market interest rates and not due to underlying credit concerns of the issuers. Substantially all of the securities with unrealized losses aged greater than 12 months have a market value at December 31, 2004, that is within 3% of their amortized cost basis.

The Firm believes that all aged unrealized losses, as described above, are expected to be recovered within a reasonable time through a typical interest rate cycle. Accordingly, the Firm has concluded that none of the securities in its investment portfolios are other-than-temporarily impaired at December 31, 2004.

In calculating the effective yield for mortgage-backed securities ("MBS") and collateralized mortgage obligations ("CMO"), JPMorgan Chase includes the effect of principal prepayments. Management regularly performs simulation testing to determine the impact that market conditions would have on its MBS and CMO portfolios. MBSs and CMOs that management believes have prepayment risk are included in the AFS portfolio and are reported at fair value.

The following table presents the amortized cost, estimated fair value and average yield at December 31, 2004, of JPMorgan Chase's AFS and HTM securities by contractual maturity:

	Available-for-sale securities			Held-to-maturity securities		
Maturity schedule of securities December 31, 2004 (in millions)	Amortized cost	Fair value	Average yield[a]	Amortized cost	Fair value	Average yield[a]
Due in one year or less	$ 8,641	$ 8,644	2.44%	$ —	$ —	—%
Due after one year through five years	19,640	19,600	3.18	—	—	—
Due after five years through 10 years	9,270	9,278	3.77	16	16	6.96
Due after 10 years[b]	57,270	56,880	4.48	94	101	6.88
Total securities	$ 94,821	$ 94,402	3.95%	$ 110	$ 117	6.89%

(a) The average yield is based on amortized cost balances at year-end. Yields are derived by dividing interest income by total amortized cost. Taxable-equivalent yields are used where applicable.
(b) Includes securities with no stated maturity. Substantially all of JPMorgan Chase's MBSs and CMOs are due in 10 years or more based on contractual maturity. The estimated duration, which reflects anticipated future prepayments based on a consensus of dealers in the market, is approximately four years for MBSs and CMOs.

Private equity investments are primarily held by the Private Equity business within Corporate (which includes JPMorgan Partners, reported as a stand-alone business segment prior to the Merger, and Bank One's ONE Equity Partners). The Private Equity business invests in buyouts, growth equity and venture opportunities in the normal course of business. These investments are accounted for under investment company guidelines. Accordingly, these investments, irrespective of the percentage of equity ownership interest held by Private Equity, are carried on the Consolidated balance sheets at fair value. Realized and unrealized gains and losses arising from changes in value are reported in Securities/private equity gains in the Consolidated statements of income in the period that the gains or losses occur.

Private investments are initially valued based on cost. The carrying values of private investments are adjusted from cost to reflect both positive and negative changes evidenced by financing events with third-party capital providers. In addition, these investments are subject to ongoing impairment reviews by Private Equity's senior investment professionals. A variety of factors are reviewed and monitored to assess impairment – including, but not limited to, operating performance and future expectations, comparable industry valuations of public companies, changes in market outlook and changes in the third-party financing environment. The Valuation Control Group within the Finance area is responsible for reviewing the accuracy of the carrying values of private investments held by Private Equity.

Private Equity also holds publicly-held equity investments, generally obtained through the initial public offering of private equity investments. These investments are marked to market at the quoted public value. To determine the carrying values of these investments, Private Equity incorporates the use of discounts to take into account the fact that it cannot immediately realize or risk manage the quoted public values as a result of regulatory, corporate and/or contractual sales restrictions imposed on these holdings.

The following table presents the carrying value and cost of the Private Equity investment portfolio for the dates indicated:

	2004		2003[a]	
December 31, (in millions)	Carrying value	Cost	Carrying value	Cost
Total private equity investments	**$ 7,735**	**$ 9,103**	$ 7,250	$ 9,147

(a) Heritage JPMorgan Chase only.

Note 10 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions primarily to finance the Firm's inventory positions, acquire securities to cover short positions and settle other securities obligations. The Firm also enters into these transactions to accommodate customers' needs.

Securities purchased under resale agreements ("resale agreements") and securities sold under repurchase agreements ("repurchase agreements") are generally treated as collateralized financing transactions and are carried on the Consolidated balance sheets at the amounts the securities will be subsequently sold or repurchased, plus accrued interest. Where appropriate, resale and repurchase agreements with the same counterparty are reported on a net basis in accordance with FIN 41. JPMorgan Chase takes possession of securities purchased under resale agreements. On a daily basis, JPMorgan Chase monitors the market value of the underlying collateral received from its counterparties, consisting primarily of U.S. and non-U.S. government and agency securities, and requests additional collateral from its counterparties when necessary.

Transactions similar to financing activities that do not meet the SFAS 140 definition of a repurchase agreement are accounted for as "buys" and "sells" rather than financing transactions. These transactions are accounted for as a purchase (sale) of the underlying securities with a forward obligation to sell (purchase) the securities. The forward purchase (sale) obligation, a derivative, is recorded on the Consolidated balance sheets at its fair value, with changes in fair value recorded in Trading revenue. Notional amounts of transactions accounted for as purchases under SFAS 140 were $6 billion at December 31, 2004, and $15 billion at December 31, 2003, respectively. Notional amounts of transactions accounted for as sales under SFAS 140 were $20 billion and $8 billion at December 31, 2004, and December 31, 2003, respectively. Based on the short-term duration of these contracts, the unrealized gain or loss is insignificant.

Securities borrowed and securities lent are recorded at the amount of cash collateral advanced or received. Securities borrowed consist primarily of government and equity securities. JPMorgan Chase monitors the market value of the securities borrowed and lent on a daily basis and calls for additional collateral when appropriate. Fees received or paid are recorded in Interest income or Interest expense.

December 31, (in millions)	2004	2003[a]
Securities purchased under resale agreements	**$ 94,076**	$ 62,801
Securities borrowed	**47,428**	41,834
Securities sold under repurchase agreements	**$ 105,912**	$ 103,610
Securities loaned	**6,435**	4,260

(a) Heritage JPMorgan Chase only.

JPMorgan Chase pledges certain financial instruments it owns to collateralize repurchase agreements and other securities financings. Pledged securities that can be sold or repledged by the secured party are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets.

At December 31, 2004, the Firm had received securities as collateral that can be repledged, delivered or otherwise used with a fair value of approximately $252 billion. This collateral was generally obtained under resale or securities borrowing agreements. Of these securities, approximately $238 billion were repledged, delivered or otherwise used, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales.

Note 11 – Loans

Loans are reported at the principal amount outstanding, net of the Allowance for loan losses, unearned income and any net deferred loan fees. Loans held for sale are carried at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. Loans are classified as "trading" where positions are bought and sold to make profits from short-term movements in price. Loans held for trading purposes are included in Trading assets and are carried at fair value, with the gains and losses included in Trading revenue. Interest income is recognized using the interest method, or on a basis approximating a level rate of return over the term of the loan.

Nonaccrual loans are those on which the accrual of interest is discontinued. Loans (other than certain consumer loans discussed below) are placed on nonaccrual status immediately if, in the opinion of management, full payment of principal or interest is in doubt, or when principal or interest is 90 days or more past due and collateral, if any, is insufficient to cover principal and interest. Interest accrued but not collected at the date a loan is placed on nonaccrual status is reversed against Interest income. In addition, the amortization of net deferred loan fees is suspended. Interest income on nonaccrual loans is recognized only to the extent it is received in cash. However, where there is doubt regarding the ultimate collectibility of loan principal, all cash thereafter received is applied to reduce the carrying value of the loan. Loans are restored to accrual status only when interest and principal payments are brought current and future payments are reasonably assured.

Consumer loans are generally charged to the Allowance for loan losses upon reaching specified stages of delinquency, in accordance with the Federal Financial Institutions Examination Council ("FFIEC") policy. For example, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification of the filing of bankruptcy, whichever is earlier. Residential mortgage products are generally charged off to net realizable value at 180 days past due. Other consumer products are generally charged off (to net realizable value if collateralized) at 120 days past due. Accrued interest on residential mortgage products, auto & education financings and certain other consumer loans are accounted for in accordance with the nonaccrual loan policy discussed above. Interest and fees related to credit card loans continue to accrue until the loan is charged-off or paid. Accrued interest on all other loans is generally reversed against interest income when the consumer loan is charged off. A collateralized loan is considered an in-substance foreclosure and is reclassified to assets acquired in loan satisfactions, within Other assets, only when JPMorgan Chase has taken physical possession of the collateral. This is regardless of whether formal foreclosure proceedings have taken place.

The composition of the loan portfolio at each of the dates indicated was as follows:

December 31, (in millions)	2004	2003[a]
U.S. wholesale loans:		
Commercial and industrial	$ 60,223	$ 30,748
Real estate	13,038	2,775
Financial institutions	14,060	8,346
Lease financing receivables	4,043	606
Other	8,504	1,850
Total U.S. wholesale loans	99,868	44,325
Non-U.S. wholesale loans:		
Commercial and industrial	25,115	22,916
Real estate	1,747	1,819
Financial institutions	7,269	6,269
Lease financing receivables	1,068	90
Total non-U.S. wholesale loans	35,199	31,094
Total wholesale loans:[b]		
Commercial and industrial	85,338	53,664
Real estate[c]	14,785	4,594
Financial institutions	21,329	14,615
Lease financing receivables	5,111	696
Other	8,504	1,850
Total wholesale loans	135,067	75,419
Total consumer loans:[d]		
Consumer real estate		
Home finance – home equity & other	67,837	24,179
Home finance – mortgage	56,816	50,381
Total Home finance	124,653	74,560
Auto & education finance	62,712	43,157
Consumer & small business and other	15,107	4,204
Credit card receivables[e]	64,575	17,426
Total consumer loans	267,047	139,347
Total loans[f][g][h]	$ 402,114	$ 214,766

(a) Heritage JPMorgan Chase only.
(b) Includes Investment Bank, Commercial Banking, Treasury & Securities Services and Asset & Wealth Management.
(c) Represents credits extended for real estate–related purposes to borrowers who are primarily in the real estate development or investment businesses and for which the primary repayment is from the sale, lease, management, operations or refinancing of the property.
(d) Includes Retail Financial Services and Card Services.
(e) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(f) Loans are presented net of unearned income of $4.1 billion and $1.3 billion at December 31, 2004, and December 31, 2003, respectively.
(g) Includes loans held for sale (principally mortgage-related loans) of $25.7 billion at December 31, 2004, and $20.8 billion at December 31, 2003.
(h) Amounts are presented gross of the Allowance for loan losses.

The following table reflects information about the Firm's loans held for sale, principally mortgage-related:

Year ended December 31, (in millions)[a]	2004	2003	2002
Net gains on sales of loans held for sale	$ 368	$ 933	$ 754
Lower of cost or market adjustments	39	26	(36)

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

Impaired loans

JPMorgan Chase accounts for and discloses nonaccrual loans as impaired loans and recognizes their interest income as discussed previously for nonaccrual loans. The Firm excludes from impaired loans its small-balance, homogeneous consumer loans; loans carried at fair value or the lower of cost or fair value; debt securities; and leases.

The table below sets forth information about JPMorgan Chase's impaired loans. The Firm primarily uses the discounted cash flow method for valuing impaired loans:

December 31, (in millions)	2004	2003[a]
Impaired loans with an allowance	$ 1,496	$ 1,597
Impaired loans without an allowance[b]	284	406
Total impaired loans	$ 1,780	$ 2,003
Allowance for impaired loans under SFAS 114[c]	$ 521	$ 595
Average balance of impaired loans during the year	1,883	2,969
Interest income recognized on impaired loans during the year	8	4

(a) Heritage JPMorgan Chase only.
(b) When the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan, then the loan does not require an allowance under SFAS 114.
(c) The allowance for impaired loans under SFAS 114 is included in JPMorgan Chase's Allowance for loan losses.

Note 12 – Allowance for credit losses

JPMorgan Chase's Allowance for loan losses covers the wholesale (primarily risk-rated) and consumer (primarily scored) loan portfolios and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also computes an Allowance for wholesale lending-related commitments using a methodology similar to that used for the wholesale loans.

As a result of the Merger, management modified its methodology for determining the Provision for credit losses for the combined Firm. The effect of conforming methodologies in 2004 was a decrease in the consumer allowance of $254 million and a decrease in the wholesale allowance (including both funded loans and lending-related commitments) of $330 million. In addition, the Bank One seller's interest in credit card securitizations was decertificated; this resulted in an increase to the provision for loan losses of approximately $1.4 billion (pre-tax) in 2004.

The Allowance for loan losses consists of two components: asset-specific loss and formula-based loss. Within the formula-based loss is a statistical calculation and an adjustment to the statistical calculation.

The asset-specific loss component relates to provisions for losses on loans considered impaired and measured pursuant to SFAS 114. An allowance is established when the discounted cash flows (or collateral value or observable market price) of the loan are lower than the carrying value of that loan. To compute the asset-specific loss component of the allowance larger impaired loans are evaluated individually, and smaller impaired loans are evaluated as a pool using historical loss experience for the respective class of assets.

The formula-based loss component covers performing wholesale and consumer loans and is the product of a statistical calculation, as well as adjustments to such calculation. These adjustments take into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the factors used to derive the statistical calculation.

The statistical calculation is the product of probability of default and loss given default. For risk-rated loans (generally loans originated by the wholesale lines of business), these factors are differentiated by risk rating and maturity. For scored loans (generally loans originated by the consumer lines of business), loss is primarily determined by applying statistical loss factors and other risk indicators to pools of loans by asset type. Adjustments to the statistical calculation for the risk-rated portfolios are determined by creating estimated ranges using historical experience of both loss given default and probability of default. Factors related to concentrated and deteriorating industries are also incorporated into the calculation where relevant. Adjustments to the statistical calculation for the scored loan portfolios are accomplished in part by analyzing the historical loss experience for each major product segment. The estimated ranges and the determination of the appropriate point within the range are based upon management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards, and other relevant internal and external factors affecting the credit quality of the portfolio.

The Allowance for lending-related commitments represents management's estimate of probable credit losses inherent in the Firm's process of extending credit. Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer and the Deputy Chief Risk Officer of the Firm and is discussed with a risk subgroup of the Operating Committee, relative to the risk profile of the Firm's credit portfolio and current economic conditions. As of December 31, 2004, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses that are inherent in the portfolio, including those not yet identifiable).

JPMorgan Chase maintains an Allowance for credit losses as follows:

Allowance for credit losses on:	Reported in: Balance sheet	Income statement
Loans	Allowance for loan losses	Provision for credit losses
Lending-related commitments	Other liabilities	Provision for credit losses

The table below summarizes the changes in the Allowance for loan losses:

December 31,[a] (in millions)	2004	2003
Allowance for loan losses at January 1	$ 4,523	$ 5,350
Addition resulting from the Merger, July 1, 2004	3,123	—
Gross charge-offs[b]	(3,805)	(2,818)
Gross recoveries	706	546
Net charge-offs	(3,099)	(2,272)
Provision for loan losses:		
Provision excluding accounting policy conformity	1,798	1,579
Accounting policy conformity[c]	1,085	—
Total Provision for loan losses	2,883	1,579
Other[d]	(110)	(134)
Allowance for loan losses at December 31[e]	$ 7,320	$ 4,523

(a) 2004 activity includes six months of the combined Firm's activity and six months of heritage JPMorgan Chase activity, while 2003 activity includes heritage JPMorgan Chase only.
(b) Includes $406 million related to the Manufactured Home Loan portfolio in the fourth quarter of 2004.
(c) Represents an increase of approximately $1.4 billion as a result of the decertification of heritage Bank One's seller's interest in credit card securitizations, partially offset by a reduction of $357 million to conform provision methodologies.
(d) Primarily represents the transfer of the allowance for accrued interest and fees on reported credit card loans.
(e) 2004 includes $469 million of asset-specific loss and $6.8 billion of formula-based loss. Included within the formula-based loss is $4.8 billion related to statistical calculation and an adjustment to the statistical calculation of $2.0 billion.

The table below summarizes the changes in the Allowance for lending-related commitments:

December 31,[a] (in millions)	2004	2003
Allowance for lending-related commitments at January 1	$ 324	$ 363
Addition resulting from the Merger, July 1, 2004	508	—
Provision for lending-related commitments:		
Provision excluding accounting policy conformity	(112)	(39)
Accounting policy conformity[b]	(227)	—
Total Provision for lending-related commitments	(339)	(39)
Other	(1)	—
Allowance for lending-related commitments at December 31[c]	$ 492	$ 324

(a) 2004 activity includes six months of the combined Firm's activity and six months of heritage JPMorgan Chase activity, while 2003 activity includes heritage JPMorgan Chase only.
(b) Represents a reduction of $227 million to conform provision methodologies in the wholesale portfolio.
(c) 2004 includes $130 million of asset-specific loss and $362 million of formula-based loss. Note: The formula-based loss for lending-related commitments is based on statistical calculation. There is no adjustment to the statistical calculation for lending-related commitments.

Note 13 – Loan securitizations

JPMorgan Chase securitizes, sells and services various consumer loans, such as consumer real estate, credit card and automobile loans, as well as certain wholesale loans (primarily real estate) originated by the Investment Bank. In addition, the Investment Bank purchases, packages and securitizes commercial and consumer loans. All IB activity is collectively referred to as Wholesale activities below. Interests in the sold and securitized loans may be retained as described below.

The Firm records a loan securitization as a sale when the transferred loans are legally isolated from the Firm's creditors and the accounting criteria for a sale are met. Gains or losses recorded on loan securitizations depend, in part, on the carrying amount of the loans sold and are allocated between the loans sold and the retained interests, based on their relative fair values at the date of sale. Since quoted market prices are generally not available, the Firm usually estimates the fair value of these retained interests by determining the present value of future expected cash flows using modeling techniques. Such models incorporate management's best estimates of key variables, such as expected credit losses, prepayment speeds and the discount rates appropriate for the risks involved. Gains on securitizations are reported in noninterest revenue. Retained interests that are subject to prepayment risk, such that JPMorgan Chase may not recover substantially all of its investment, are recorded at fair value; subsequent adjustments are reflected in Other comprehensive income or in earnings, if the fair value of the retained interest has declined below its carrying amount and such decline has been determined to be other-than-temporary.

JPMorgan Chase–sponsored securitizations utilize SPEs as part of the securitization process. These SPEs are structured to meet the definition of a QSPE (as discussed in Note 1 on page 88 of this Annual Report); accordingly, the assets and liabilities of securitization-related QSPEs are not reflected in the Firm's Consolidated balance sheets (except for retained interests, as described below) but are included on the balance sheet of the QSPE purchasing the assets. Assets held by securitization-related SPEs as of December 31, 2004 and 2003, were as follows:

December 31, (in billions)	2004	2003[a]
Credit card receivables	$ 106.3	$ 42.6
Residential mortgage receivables	19.1	21.1
Wholesale activities	44.8	33.8
Automobile loans	4.9	6.5
Total	$ 175.1	$ 104.0

(a) Heritage JPMorgan Chase only.

Interests in the securitized loans are generally retained by the Firm in the form of senior or subordinated interest-only strips, subordinated tranches, escrow accounts and servicing rights, and they are primarily recorded in Other assets. In addition, credit card securitization trusts require the Firm to maintain a minimum undivided interest in the trusts, representing the Firm's interests in the receivables transferred to the trust that have not been securitized. These interests are not represented by security certificates. The Firm's undivided interests are carried at historical cost and are classified in Loans.

JPMorgan Chase retains servicing responsibilities for all residential mortgage, credit card and automobile loan securitizations and for certain wholesale activity securitizations it sponsors, and receives annual servicing fees based

on the securitized loan balance plus certain ancillary fees. The Firm also retains the right to service the residential mortgage loans it sells in connection with mortgage-backed securities transactions with the Government National Mortgage Association ("GNMA"), Federal National Mortgage Association ("FNMA") and Federal Home Loan Mortgage Corporation ("Freddie Mac"). For a discussion of mortgage servicing rights, see Note 15 on pages 109–111 of this Annual Report.

The following table summarizes new securitization transactions that were completed during 2004 and 2003, the resulting gains arising from such securitizations, certain cash flows received from such securitizations, and the key economic assumptions used in measuring the retained interests, as of the dates of such sales:

Year ended December 31,[a]	2004				2003			
(in millions)	Mortgage	Credit card	Automobile	Wholesale activities[d]	Mortgage	Credit card	Automobile	Wholesale activities
Principal securitized	$ 6,529	$ 8,850	$ 1,600	$ 8,756	$ 13,270	$ 8,823	$ 4,510	$ 5,386
Pre-tax gains (losses)	47	52	(3)	135	168	44	13	107
Cash flow information:								
Proceeds from securitizations	$ 6,608	$ 8,850	$ 1,597	$ 8,430	$ 13,540	$ 8,823	$ 4,503	$ 5,493
Servicing fees collected	12	69	1	3	20	79	15	2
Other cash flows received	25	225	—	16	2	216	12	8
Proceeds from collections reinvested in revolving securitizations	—	110,697	—	—	—	58,199	—	—
Key assumptions (rates per annum):								
Prepayment rate[b]	23.8–37.6% CPR	15.5–16.7% PPR	1.5% ABS	17.0–50.0%	10.1–36.2% CPR	8.1–16.5% PPR	1.5–1.6% ABS	50.0%
Weighted-average life (in years)	1.9–3.0	0.5–0.6	1.8	2.0–4.0	2.0–4.6	0.6–1.0	1.7–1.8	1.3–5.2
Expected credit losses	1.0–2.3%	5.5–5.8%	0.6%	0.0–3.0%[c]	0.0–2.5%[c]	5.5–8.0%	0.5–0.6%	0.0%[c]
Discount rate	15.0–30.0%	12.0%	4.1%	0.6–5.0%	13.0–30.0%	12.0%	3.9–4.5%	1.0–5.0%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) CPR: constant prepayment rate; ABS: absolute prepayment speed; PPR: principal payment rate.
(c) Expected credit losses for prime residential mortgage and certain wholesale securitizations are minimal and are incorporated into other assumptions.
(d) Wholesale activities consist of wholesale loans (primarily real estate) originated by the Investment Bank as well as $1.8 billion of consumer loans purchased from the market, packaged and securitized by the Investment Bank.

In addition to securitization transactions, the Firm sold residential mortgage loans totaling $65.7 billion and $123.2 billion during 2004 and 2003, respectively, primarily as GNMA, FNMA and Freddie Mac mortgage-backed securities; these sales resulted in pre-tax gains of $58.1 million and $564.3 million, respectively.

At both December 31, 2004 and 2003, the Firm had, with respect to its credit card master trusts, $35.2 billion and $7.3 billion, respectively, related to its undivided interest, and $2.1 billion and $1.1 billion, respectively, related to its subordinated interest in accrued interest and fees on the securitized receivables, net of an allowance for uncollectible amounts. Credit card securitization trusts require the Firm to maintain a minimum undivided interest of 4% to 7% of the principal receivables in the trusts. The Firm maintained an average undivided interest in its principal receivables in the trusts of approximately 23% and 17% for 2004 and 2003, respectively.

The Firm also maintains escrow accounts up to predetermined limits for some of its credit card and automobile securitizations, in the unlikely event of deficiencies in cash flows owed to investors. The amounts available in such escrow accounts are recorded in Other assets and, as of December 31, 2004, amounted to $395 million and $132 million for credit card and automobile securitizations, respectively; as of December 31, 2003, these amounts were $456 million and $137 million for credit card and automobile securitizations, respectively.

The table below summarizes other retained securitization interests, which are primarily subordinated or residual interests and are carried at fair value on the Firm's Consolidated balance sheets:

December 31, (in millions)	2004	2003[a]
Residential mortgage[b]	$ 433	$ 570
Credit card[b]	494	193
Automobile[b]	85	151
Wholesale activities	23	34
Total	$ 1,035	$ 948

(a) Heritage JPMorgan Chase only.
(b) Pre-tax unrealized gains (losses) recorded in Stockholders' equity that relate to retained securitization interests totaled $118 million and $155 million for Residential mortgage; $(3) million and $11 million for Credit cards; and $11 million and $6 million for Automobile at December 31, 2004 and 2003, respectively.

The table below outlines the key economic assumptions used to determine the fair value of the remaining retained interests at December 31, 2004 and 2003, respectively; and the sensitivities to those fair values to immediate 10% and 20% adverse changes in those assumptions:

December 31, 2004 (in millions)	Mortgage	Credit card	Automobile	Wholesale activities
Weighted-average life (in years)	**0.8–3.4**	**0.5–1.0**	**1.3**	**0.2–4.0**
Prepayment rate	**15.1–37.1% CPR**	**8.3–16.7% PPR**	**1.4% ABS**	**0.0–50.0%[b]**
Impact of 10% adverse change	**$ (5)**	**$ (34)**	**$ (6)**	**$ (1)**
Impact of 20% adverse change	**(8)**	**(69)**	**(13)**	**(1)**
Loss assumption	**0.0–5.0%[c]**	**5.7–8.4%**	**0.7%**	**0.0–3.0%[c]**
Impact of 10% adverse change	**$ (17)**	**$ (144)**	**$ (4)**	**$ —**
Impact of 20% adverse change	**(34)**	**(280)**	**(8)**	**—**
Discount rate	**13.0–30.0%[d]**	**4.9–12.0%**	**5.5%**	**1.0–22.9%**
Impact of 10% adverse change	**$ (9)**	**$ (2)**	**$ (1)**	**$ —**
Impact of 20% adverse change	**(18)**	**(4)**	**(2)**	**—**

December 31, 2003 (in millions)[a]	Mortgage	Credit card	Automobile	Wholesale activities
Weighted-average life (in years)	1.4–2.7	0.4–1.3	1.5	0.6–5.9
Prepayment rate	29.0–31.7% CPR	8.1–15.1% PPR	1.5% ABS	0.0–50.0%[b]
Impact of 10% adverse change	$ (17)	$ (7)	$ (10)	$ (1)
Impact of 20% adverse change	(31)	(13)	(19)	(2)
Loss assumption	0.0–4.0%[c]	5.5–8.0%	0.6%	0.0%[c]
Impact of 10% adverse change	$ (28)	$ (21)	$ (6)	$ —
Impact of 20% adverse change	(57)	(41)	(12)	—
Discount rate	13.0–30.0%[d]	8.3–12.0%	4.4%	5.0–20.9%
Impact of 10% adverse change	$ (14)	$ (1)	$ (1)	$ (1)
Impact of 20% adverse change	(27)	(3)	(2)	(2)

(a) Heritage JPMorgan Chase only.
(b) Prepayment risk on certain wholesale retained interests are minimal and are incorporated into other assumptions.
(c) Expected credit losses for prime residential mortgage and certain wholesale securitizations are minimal and are incorporated into other assumptions.
(d) The Firm sells certain residual interests from sub-prime mortgage securitizations via Net Interest Margin ("NIM") securitizations and retains residuals interests in these NIM transactions, which are valued using a 30% discount rate.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based on a 10% or 20% variation in assumptions generally cannot be extrapolated easily, because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another assumption, which might counteract or magnify the sensitivities.

Expected static-pool net credit losses include actual incurred losses plus projected net credit losses, divided by the original balance of the outstandings comprising the securitization pool.

The table below displays the expected static-pool net credit losses for 2004, 2003 and 2002, based on securitizations occurring in that year:

	Loans securitized in:[a]					
	2004		2003[b]		2002[b]	
	Mortgage	Automobile	Mortgage	Automobile	Mortgage	Automobile
December 31, 2004	**0.0–3.3%**	**1.1%**	0.0–2.1%	0.9%	0.0–2.4%	0.8%
December 31, 2003	**NA**	**NA**	0.0–3.6	0.9	0.0–2.8	0.8
December 31, 2002	**NA**	**NA**	NA	NA	0.1–3.7	0.9

(a) Static-pool losses not applicable to credit card securitizations, due to their revolving structure.
(b) Heritage JPMorgan Chase only.

The table below presents information about delinquencies, net credit losses and components of reported and securitized financial assets at December 31, 2004 and 2003:

	Total Loans		Nonaccrual and 90 days or more past due		Net loan charge-offs[b] Year ended	
December 31, (in millions)	2004	2003[a]	2004	2003[a]	2004	2003
Home finance	$ 124,653	$ 74,560	$ 673	$ 374	$ 573	$ 135
Auto & education finance	62,712	43,157	193	123	263	171
Consumer & small business and other	15,107	4,204	295	72	154	75
Credit card receivables	64,575	17,426	1,006	284	1,923	1,126
Total consumer loans	267,047	139,347	2,167	853	2,913	1,507
Total wholesale loans	135,067	75,419	1,582	2,046	186	765
Total loans reported	402,114	214,766	3,749	2,899	3,099	2,272
Securitized loans:						
Residential mortgage[c]	11,533	15,564	460	594	150	191
Automobile	4,763	6,315	12	13	24	25
Credit card	70,795	34,856	1,337	879	2,898	1,870
Total consumer loans securitized	87,091	56,735	1,809	1,486	3,072	2,086
Securitized wholesale activities	1,401	2,108	—	9	—	—
Total loans securitized[d]	88,492	58,843	1,809	1,495	3,072	2,086
Total loans reported and securitized[e]	$ 490,606	$ 273,609	$ 5,558	$ 4,394	$ 6,171	$ 4,358

(a) Heritage JPMorgan Chase only.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(c) Includes $10.3 billion and $13.6 billion of outstanding principal balances on securitized sub-prime 1–4 family residential mortgage loans as of December 31, 2004 and 2003, respectively.
(d) Total assets held in securitization-related SPEs were $175.1 billion and $104.0 billion at December 31, 2004 and 2003, respectively. The $88.5 billion and $58.8 billion of loans securitized at December 31, 2004 and 2003, respectively, excludes: $50.8 billion and $37.1 billion of securitized loans, in which the Firm's only continuing involvement is the servicing of the assets; $35.2 billion and $7.3 billion of seller's interests in credit card master trusts; and $0.6 billion and $0.8 billion of escrow accounts and other assets, respectively.
(e) Represents both loans on the Consolidated balance sheets and loans that have been securitized, but excludes loans for which the Firm's only continuing involvement is servicing of the assets.

Note 14 – Variable interest entities

Refer to Note 1 on page 88 of this Annual Report for a further description of JPMorgan Chase's policies regarding consolidation of variable interest entities.

JPMorgan Chase's principal involvement with VIEs occurs in the following business segments:

- Investment Bank: Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner, by providing the structural flexibility to meet their needs pertaining to price, yield and desired risk. There are two broad categories of transactions involving VIEs in the IB: (1) multi-seller conduits and (2) client intermediation; both are discussed below. The IB also securitizes loans through QSPEs which are not considered VIEs, to create asset-backed securities, as further discussed in Note 13 on pages 103–106 of this Annual Report.
- Asset & Wealth Management: Provides investment management services to a limited number of the Firm's mutual funds deemed VIEs. AWM earns a fixed fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For the limited number of funds that qualify as VIEs, the Firm's interest is not considered significant under FIN 46R.
- Treasury & Securities Services: Provides trustee and custodial services to a number of VIEs. These services are similar to those provided to non-VIEs. TSS earns market-based fees for services provided. Such relationships are not considered significant interests under FIN 46R.
- Commercial Banking: Utilizes VIEs as part of its middle markets business. This involvement includes: (1) structuring and administering independent, member-owned finance entities for companies with dedicated distribution systems, where the Firm may also provide some liquidity, letters of credit and/or derivative instruments; and (2) synthetic lease transactions, in which the Firm provides financing to a SPE; in turn, the SPE purchases assets, which are then leased by the SPE to the Firm's customer. The CB earns market-based fees for providing such services. These activities do not involve the Firm holding a significant interest in VIEs.
- The Firm's Private Equity business, now included in Corporate, is involved with entities that may be deemed VIEs. Private equity activities are accounted for in accordance with the Investment Company Audit Guide ("Audit Guide"). The FASB deferred adoption of FIN 46R for non-registered investment companies that apply the Audit Guide until the proposed Statement of Position on the clarification of the scope of the Audit Guide is finalized. The Firm continues to apply this deferral provision; had FIN 46R been applied to VIEs subject to this deferral, the impact would have had an insignificant impact on the Firm's Consolidated financial statements as of December 31, 2004.

As noted above, there are two broad categories of transactions involving VIEs with which the IB is involved: multi-seller conduits and client intermediation. These are discussed more fully below.

Multi-seller conduits

The Firm is an active participant in the asset-backed securities business, where it helps meet customers' financing needs by providing access to the commercial paper markets through VIEs known as multi-seller conduits. These entities are separate bankruptcy-remote corporations in the business of purchasing interests in, and making loans secured by, receivable pools and other financial assets pursuant to agreements with customers. The entities fund their purchases and loans through the issuance of highly-rated commercial paper. The primary source of repayment of the commercial paper is the cash flow from the pools of assets.

JPMorgan Chase serves as the administrator and provides contingent liquidity support and limited credit enhancement for several multi-seller conduits. The commercial paper issued by the conduits is backed by sufficient collateral, credit enhancements and commitments to provide liquidity to support receiving at least a liquidity rating of A-1, P-1 and, in certain cases, F1.

As a means of ensuring timely repayment of the commercial paper, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it. In the unlikely event an asset pool is removed from the conduit, the administrator can draw on the liquidity facility to repay the maturing commercial paper. The liquidity facilities are typically in the form of asset purchase agreements and are generally structured such that the bank liquidity is provided by purchasing, or lending against, a pool of non-defaulted, performing assets. Deal-specific liquidity is the primary source of liquidity support for the conduits.

Program-wide liquidity in the form of revolving and short-term lending commitments is provided by the Firm to these vehicles in the event of short-term disruptions in the commercial paper market.

Deal-specific credit enhancement that supports the commercial paper issued by the conduits is generally structured to cover a multiple of historical losses expected on the pool of assets and is primarily provided by customers (i.e., sellers) or other third parties. The deal-specific credit enhancement is typically in the form of over-collateralization provided by the seller but may also include any combination of the following: recourse to the seller or originator, cash collateral accounts, letters of credit, excess spread, retention of subordinated interests or third-party guarantees. In certain instances, the Firm provides limited credit enhancement in the form of standby letters of credit.

The following table summarizes the Firm's involvement with Firm-administered multi-seller conduits:

	Consolidated		Nonconsolidated		Total	
December 31, (in billions)	**2004**[c]	2003[b]	**2004**[c]	2003[b][c]	**2004**[c]	2003[b][c]
Total commercial paper issued by conduits	**$ 35.8**	$ 6.3	**$ 9.3**	$ 5.4	**$ 45.1**	$ 11.7
Commitments						
Asset-purchase agreements	**$ 47.2**	$ 9.3	**$ 16.3**	$ 8.7	**$ 63.5**	$ 18.0
Program-wide liquidity commitments	**4.0**	1.6	**2.0**	1.0	**6.0**	2.6
Limited credit enhancements	**1.4**	0.9	**1.2**	1.0	**2.6**	1.9
Maximum exposure to loss[a]	**48.2**	9.7	**16.9**	9.0	**65.1**	18.7

(a) The Firm's maximum exposure to loss is limited to the amount of drawn commitments (i.e., sellers' assets held by the multi-seller conduits for which the Firm provides liquidity support) of $42.2 billion and $11.7 billion at December 31, 2004 and 2003, respectively, plus contractual but undrawn commitments of $22.9 billion and $7.0 billion at December 31, 2004 and 2003, respectively. Since the Firm provides credit enhancement and liquidity to these multi-seller conduits, the maximum exposure is not adjusted to exclude exposure absorbed by third-party liquidity providers.
(b) Heritage JPMorgan Chase only.
(c) In December 2003 and February 2004, two multi-seller conduits were restructured, with each conduit issuing preferred securities acquired by an independent third-party investor; the investor absorbs the majority of the expected losses of the conduit. In determining the primary beneficiary of the restructured conduits, the Firm leveraged an existing rating agency model – an independent market standard – to estimate the size of the expected losses, and considered the relative rights and obligations of each of the variable interest holders.

The Firm views its credit exposure to multi-seller conduit transactions as limited. This is because, for the most part, the Firm is not required to fund under the liquidity facilities if the assets in the VIE are in default. Additionally, the Firm's obligations under the letters of credit are secondary to the risk of first loss provided by the customer or other third parties – for example, by the overcollateralization of the VIE with the assets sold to it or notes subordinated to the Firm's liquidity facilities.

Additionally, the Firm is involved with a structured investment vehicle ("SIV") that funds a diversified portfolio of highly rated assets by issuing commercial paper, medium-term notes and capital. The assets and liabilities of this SIV were approximately $7.1 billion and are included in the Firm's Consolidated balance sheet at December 31, 2004.

Client intermediation

As a financial intermediary, the Firm is involved in structuring VIE transactions to meet investor and client needs. The Firm intermediates various types of risks (including fixed income, equity and credit), typically using derivative instruments as further discussed below. In certain circumstances, the Firm also provides liquidity and other support to the VIEs to facilitate the transaction. The Firm's current exposure to nonconsolidated VIEs is reflected in its Consolidated balance sheets or in the Notes to consolidated financial statements. The risks inherent in derivative instruments or liquidity commitments are managed similarly to other credit, market and liquidity risks to which the Firm is exposed. The Firm intermediates principally with the following types of VIEs: structured wholesale loan vehicles, credit-linked note vehicles, municipal bond vehicles and other client-intermediation vehicles, as discussed below. Following this discussion is a table summarizing the total assets held by these vehicles at December 31, 2004 and 2003.

The Firm has created structured wholesale loan vehicles managed by third parties, in which loans are purchased from third parties or through the Firm's syndication and trading functions and funded by issuing commercial paper. The amount of the commercial paper issued by these vehicles totaled $3.4 billion and $5.3 billion as of December 31, 2004 and 2003, respectively. Investors provide collateral and have a first risk of loss up to the amount of collateral pledged. The Firm retains a second-risk-of-loss position and does not absorb a majority of the expected losses of the vehicles. Documentation includes provisions intended, subject to certain conditions, to enable JPMorgan Chase to terminate the transactions related to a particular loan vehicle if the value of the relevant portfolio declines below a specified level. The Firm also provides liquidity support to these VIEs.

The Firm structures credit-linked notes in which the VIE purchases highly-rated assets (such as asset-backed securities) and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit not held by the VIE. Credit-linked notes are issued by the VIE to transfer the risk of the referenced credit to the investors in the VIE. Clients and investors often prefer a VIE structure, since the credit-linked notes generally carry a higher credit rating than they would if issued directly by JPMorgan Chase.

The Firm is involved with municipal bond vehicles for the purpose of creating a series of secondary market trusts that allow tax-exempt investors to finance their investments at short-term tax-exempt rates. The VIE purchases fixed-rate, longer-term highly rated municipal bonds by issuing puttable floating-rate certificates and inverse floating-rate certificates; the investors in the inverse floating-rate certificates are exposed to the residual losses of the VIE (the "residual interests"). For vehicles in which the Firm owns the residual interests, the Firm consolidates the VIE. In vehicles where third-party investors own the residual interests, the Firm's exposure is limited because of the high credit quality of the underlying municipal bonds, the unwind triggers based on the market value of the underlying collateral and the residual interests held by third parties. The Firm often serves as remarketing agent for the VIE and provides liquidity to support the remarketing.

Additionally, JPMorgan Chase structures, on behalf of clients, other client intermediation vehicles in which the Firm transfers the risks and returns of the assets held by the VIE, typically debt and equity instruments, to clients through derivative contracts.

Assets held by certain client intermediation–related VIEs at December 31, 2004 and 2003, were as follows:

December 31, (in billions)	2004	2003[e]
Structured wholesale loan vehicles[a]	$ 3.4	$ 5.3
Credit-linked note vehicles[b]	17.8	17.7
Municipal bond vehicles[c]	7.5	5.5
Other client intermediation vehicles[d]	4.0	5.8

(a) JPMorgan Chase was committed to provide liquidity to these VIEs of up to $5.2 billion and $8.0 billion at December 31, 2004 and 2003, respectively, of which $3.8 billion at December 31, 2004, and $6.3 billion at December 31, 2003, was in the form of asset purchase agreements. The Firm's maximum exposure to loss to these vehicles at December 31, 2004 and 2003, was $3.2 billion and $5.5 billion, respectively, which reflects the netting of collateral and other program limits.
(b) The fair value of the Firm's derivative contracts with credit-linked note vehicles was not material at December 31, 2004. Assets of $2.3 billion and $2.1 billion reported in the table above were recorded on the Firm's Consolidated balance sheets at December 31, 2004 and 2003, respectively, due to contractual relationships held by the Firm that relate to collateral held by the VIE.
(c) Total amounts consolidated due to the Firm owning residual interests were $2.6 billion at December 31, 2004 and $2.5 billion at December 31, 2003, and are reported in the table. Total liquidity commitments were $3.1 billion and $1.8 billion at December 31, 2004 and 2003, respectively. The Firm's maximum credit exposure to all municipal bond vehicles was $5.7 billion and $4.3 billion at December 31, 2004 and 2003, respectively.
(d) The Firm's net exposure arising from these intermediations is not significant.
(e) Heritage JPMorgan Chase only.

Finally, the Firm may enter into transactions with VIEs structured by other parties. These transactions can include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, trustee or custodian. These transactions are conducted at arm's length, and individual credit decisions are based upon the analysis of the specific VIE, taking into consideration the quality of the underlying assets. JPMorgan Chase records and reports these positions similarly to any other third-party transaction. These activities do not cause JPMorgan Chase to absorb a majority of the expected losses of the VIEs or to receive a majority of the residual returns of the VIE, and they are not considered significant for disclosure purposes.

Consolidated VIE assets

The following table summarizes the Firm's total consolidated VIE assets, by classification on the Consolidated balance sheets, as of December 31, 2004 and 2003:

December 31, (in billions)	2004	2003[c]
Consolidated VIE assets[a]		
Investment securities	$ 10.6	$ 3.8
Trading assets[b]	4.7	2.7
Loans	3.4	1.1
Interests in purchased receivables	31.6	4.7
Other assets	0.4	0.1
Total consolidated assets	$ 50.7	$ 12.4

(a) The Firm also holds $3.4 billion and $3.0 billion of assets, at December 31, 2004 and December 31, 2003, respectively, primarily as a seller's interest, in certain consumer securitizations in a segregated entity, as part of a two-step securitization transaction. This interest is included in the securitization activities disclosed in Note 13 on pages 103–106 of this Annual Report.
(b) Includes the fair value of securities and derivatives.
(c) Heritage JPMorgan Chase only.

Interests in purchased receivables include interests in receivables purchased by Firm-administered conduits, which have been consolidated in accordance with FIN 46R. Interests in purchased receivables are carried at cost and are reviewed to determine whether an other-than-temporary impairment exists. Based on the current level of credit protection specified in each transaction, primarily through overcollateralization, the Firm determined that no other-than-temporary impairment existed at December 31, 2004.

The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item titled "Beneficial interests issued by consolidated variable interest entities" on the Consolidated balance sheets. The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. See Note 17 on page 112 of this Annual Report for the maturity profile of FIN 46 long-term beneficial interests.

FIN 46 transition

Effective February 1, 2003, JPMorgan Chase implemented FIN 46 for VIEs created or modified after January 31, 2003, in which the Firm has an interest. Effective July 1, 2003, the Firm implemented FIN 46 for all VIEs originated prior to February 1, 2003, excluding certain investments made by its private equity business, as discussed above. The effect of adoption was an incremental increase in the Firm's assets and liabilities of approximately $17 billion at July 1, 2003. As a result of its adoption of FIN 46, the Firm also deconsolidated certain vehicles, primarily the wholly-owned Delaware statutory business trusts further discussed in Note 17 on pages 112–113 of this Annual Report.

Upon adoption of FIN 46, the assets, liabilities and noncontrolling interests of VIEs were generally measured at the amounts at which such interests would have been carried had FIN 46 been effective when the Firm first met the conditions to be considered the primary beneficiary. The difference between the net amount added to the balance sheet and the amount of any previously recognized interest in the newly consolidated entity was recognized as a cumulative effect of an accounting change at July 1, 2003, which resulted in a $2 million (after-tax) reduction to the Firm's consolidated earnings. The Firm also recorded a $34 million (after-tax) reduction in Other comprehensive income, related to AFS securities and derivative cash flow hedges; these were related to entities measured at the amount at which such interests would have been carried had FIN 46 been effective when the Firm first met the conditions of being the primary beneficiary.

FIN 46R transition

In December 2003, the FASB issued a revision to FIN 46 ("FIN 46R") to address various technical corrections and implementation issues that had arisen since the issuance of FIN 46. Effective March 31, 2004, JPMorgan Chase implemented FIN 46R for all VIEs, excluding certain investments made by its private equity business, as previously discussed. Implementation of FIN 46R did not have a significant effect on the Firm's Consolidated financial statements.

The application of FIN 46R involved significant judgments and interpretations by management. The Firm is aware of differing interpretations being developed among accounting professionals and the EITF with regard to analyzing derivatives under FIN 46R. Management's current interpretation is that derivatives should be evaluated by focusing on an economic analysis of the rights and obligations of a VIE's assets, liabilities, equity and other contracts, while considering the entity's activities and design; the terms of the derivative contract and the role it has with the entity; and whether the derivative contract creates and/or absorbs variability of the VIE. The Firm will continue to monitor developing interpretations.

Note 15 – Goodwill and other intangible assets

Effective January 1, 2002, the Firm adopted SFAS 142, reclassifying certain intangible assets from Goodwill to Other intangible assets. There was no impairment of goodwill upon adoption of SFAS 142.

Goodwill is not amortized but instead tested for impairment at the reporting-unit segment (which is generally one level below the six major reportable business segments as described in Note 31 on pages 126–127 of this Annual Report; plus Private Equity, which is included in Corporate). Goodwill is tested annually (during the fourth quarter) or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment. Intangible assets determined to have indefinite lives are not amortized but instead are tested for impairment at least annually, or more frequently if events or changes in circumstances indicate that the asset might be impaired. The impairment test compares the fair value of the indefinite lived intangible asset to its carrying amount. Other acquired intangible assets determined to have finite lives, such as core deposits and credit card relationships, are amortized over their estimated useful lives in a manner that best reflects the economic benefits of the intangible asset. In addition, impairment testing is performed periodically on these amortizing intangible assets.

Goodwill and Other intangible assets consist of the following:

December 31, (in millions)	2004	2003[a]
Goodwill	$ 43,203	$ 8,511
Mortgage servicing rights	5,080	4,781
Purchased credit card relationships	3,878	1,014
All other intangibles:		
Other credit card–related intangibles	$ 272	$ —
Core deposit intangibles	3,328	8
All other intangibles	2,126	677
Total other intangible assets	$ 5,726	$ 685

(a) Heritage JPMorgan Chase only.

Goodwill

As of December 31, 2004, goodwill increased by $34.7 billion compared with December 31, 2003, principally in connection with the Merger, but also due to the acquisitions of EFS and a majority stake in Highbridge. Goodwill was not impaired at December 31, 2004 or 2003, nor was any goodwill written off during the years ended December 31, 2004, 2003 or 2002.

Under SFAS 142, goodwill must be allocated to reporting units and tested for impairment. Goodwill attributed to the business segments was as follows:

(in millions)	Dec. 31, 2004	Dec. 31, 2003[a]	Goodwill resulting from the Merger, July 1, 2004
Investment Bank	$ 3,309	$ 2,084	$ 1,233
Retail Financial Services	15,022	446	14,559
Card Services	12,781	—	12,765
Commercial Banking	2,650	61	2,592
Treasury & Securities Services	2,044	1,390	461
Asset & Wealth Management	7,020	4,153	2,536
Corporate (Private Equity)	377	377	—
Total goodwill	$ 43,203	$ 8,511	$ 34,146

(a) Heritage JPMorgan Chase only.

Mortgage servicing rights

JPMorgan Chase recognizes as intangible assets mortgage servicing rights, which represent the right to perform specified residential mortgage servicing activities for others. MSRs are either purchased from third parties or retained upon sale or securitization of mortgage loans. Servicing activities include collecting principal, interest, and escrow payments from borrowers; making tax and insurance payments on behalf of the borrowers; monitoring delinquencies and executing foreclosure proceedings; and accounting for and remitting principal and interest payments to the investors of the mortgage-backed securities.

The amount capitalized as MSRs represents the amount paid to third parties to acquire MSRs or is based on fair value, if retained upon the sale or securitization of mortgage loans. The Firm estimates the fair value of MSRs using a discounted future cash flow model. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenues, costs to service and other economic factors. The Firm compares its fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience. Management believes that the assumptions used to estimate fair values are supportable and reasonable.

The Firm accounts for its MSRs at the lower of cost or market, in accordance with SFAS 140. MSRs are amortized as a reduction of the actual servicing income received in proportion to, and over the period of the estimated future net servicing income stream of, the underlying mortgage loans. For purposes of evaluating and measuring impairment of MSRs, the Firm stratifies its portfolio on the basis of the predominant risk characteristics, which are loan type and interest rate. Any indicated impairment is recognized as a reduction in revenue through a valuation allowance, to the extent that the carrying value of an individual stratum exceeds its estimated fair value.

The Firm evaluates other-than-temporary impairment by reviewing changes in mortgage and other market interest rates over historical periods and then determines an interest rate scenario to estimate the amounts of the MSRs' gross carrying value and the related valuation allowance that could be expected to be recovered in the foreseeable future. Any gross carrying value and related valuation allowance amount that are not expected to be recovered in the foreseeable future, based upon the interest rate scenario, are considered to be other-than-temporary.

The carrying value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. JPMorgan Chase uses a combination of derivatives, AFS securities and trading instruments to manage changes in the fair value of MSRs. The intent is to offset any changes in the fair value of MSRs with changes in the fair value of the related risk management instrument. MSRs decrease in value when interest rates decline. Conversely, securities (such as mortgage-backed securities), principal-only certificates and derivatives (when the Firm receives fixed-rate interest payments) decrease in value when interest rates increase. The Firm offsets the interest rate risk of its MSRs by designating certain derivatives (e.g., a combination of swaps, swaptions and floors that produces an interest rate profile opposite to the designated risk of the hedged MSRs) as fair value hedges of specified MSRs under SFAS 133. SFAS 133 hedge accounting allows the carrying value of the hedged MSRs to be adjusted through earnings in the same period that the change in value of the hedging derivatives is recognized through earnings. Both of these valuation adjustments are recorded in Mortgage fees and related income.

When applying SFAS 133, the loans underlying the MSRs being hedged are stratified into specific SFAS 133 asset groupings that possess similar interest rate and prepayment risk exposures. The documented hedge period for the Firm is daily. Daily adjustments are performed to incorporate new or terminated derivative contracts and to modify the amount of the corresponding similar asset grouping that is being hedged. The Firm has designated changes in the benchmark interest rate (LIBOR) as the hedged risk. In designating the benchmark interest rate, the Firm considers the impact that the change in the benchmark rate has on the prepayment speed estimates in determining the fair value of the MSRs. The Firm performs both prospective and retrospective hedge effectiveness evaluations, using a regression analysis, to determine whether the hedge relationship is expected to be highly effective. Hedge effectiveness is assessed by comparing the change in value of the MSRs, as a result of changes in benchmark interest rates, to the change in the value of the designated derivatives. For a further discussion on derivative instruments and hedging activities, see Note 26 on pages 118–119 of this Annual Report.

Securities (both AFS and Trading) are also used to manage the risk exposure of MSRs. Because these securities do not qualify as hedges under SFAS 133, they are accounted for under SFAS 115, with realized gains and losses and unrealized gains and losses on trading securities recognized in earnings in Securities/private equity gains, interest income on the AFS securities is recognized in earnings in Net interest income, and unrealized gains and losses on AFS securities are reported in Other comprehensive income. Finally, certain non-hedge derivatives, which have not been designated by management in SFAS 133 hedge relationships, are used to manage the economic risk exposure of MSRs and are recorded in Mortgage fees and related income.

The following table summarizes MSR activity and related amortization for the dates indicated. It also includes the key assumptions and the sensitivity of the fair value of MSRs at December 31, 2004, to immediate 10% and 20% adverse changes in each of those assumptions.

Year ended December 31, (in millions)[a]	2004	2003	2002
Balance at January 1	$ 6,159	$ 4,864	$ 7,749
Additions	1,757	3,201	2,071
Bank One merger	90	NA	NA
Sales	(3)	—	—
Other-than-temporary impairment	(149)	(283)	—
Amortization	(1,297)	(1,397)	(1,367)
SFAS 133 hedge valuation adjustments	(446)	(226)	(3,589)
Balance at December 31	6,111	6,159	4,864
Less: valuation allowance	1,031	1,378	1,634
Balance at December 31, after valuation allowance	$ 5,080	$ 4,781	$ 3,230
Estimated fair value at December 31	$ 5,124	$ 4,781	$ 3,230
Weighted-average prepayment speed assumption (CPR)	17.29%	17.67%	28.50%
Weighted-average discount rate	7.93%	7.31%	7.70%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
CPR: Constant prepayment rate

	2004
Weighted-average prepayment speed assumption (CPR)	17.29%
Impact on fair value with 10% adverse change	$ (295)
Impact on fair value with 20% adverse change	(558)
Weighted-average discount rate	7.93%
Impact on fair value with 10% adverse change	$ (128)
Impact on fair value with 20% adverse change	(249)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. As the figures indicate, changes in fair value based on a 10% and 20% variation in assumptions generally cannot be easily extrapolated because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might magnify or counteract the sensitivities.

The valuation allowance represents the extent to which the carrying value of MSRs exceeds its estimated fair value for its applicable SFAS 140 strata. Changes in the valuation allowance are the result of the recognition of impairment or the recovery of previously recognized impairment charges, due to changes in market conditions during the period. The changes in the valuation allowance for MSRs were as follows:

Year ended December 31, (in millions)[a]	2004	2003	2002
Balance at January 1	$ 1,378	$ 1,634	$ 1,170
Other-than-temporary impairment	(149)	(283)	—
SFAS 140 impairment (recovery) adjustment	(198)	27	464
Balance at December 31	$ 1,031	$ 1,378	$ 1,634

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results, while 2003 results include heritage JPMorgan Chase only.

During 2004 and 2003, the Firm recorded an other-than-temporary impairment of its MSRs of $149 million and $283 million, respectively, which permanently reduced the gross carrying value of the MSRs and the related valuation allowance. The permanent reduction precludes subsequent reversals. This write-down had no impact on the results of operations or financial condition of the Firm.

All other intangible assets

For 2004, All other intangible assets increased by approximately $7.9 billion, principally as a result of the Merger. This increase is net of amortization and includes $510 million of indefinite lived intangibles related to asset management advisory contracts. Indefinite-lived intangibles are not amortized, but instead are tested for impairment at least annually. The remainder of the Firm's other acquired intangible assets are subject to amortization.

The components of credit card relationships, core deposits and other intangible assets were as follows:

	2004			2003[b]		
December 31, (in millions)	Gross amount	Accumulated amortization	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	$ 5,225	$ 1,347	$ 3,878	$ 1,885	$ 871	$ 1,014
Other credit card–related intangibles	295	23	272	—	—	—
Core deposit intangibles	3,797	469	3,328	147	139	8
All other intangibles	2,528	402[a]	2,126	946	269	677

Amortization expense (in millions)[c]	2004	2003	2002
Purchased credit card relationships	$ 476	$ 256	$ 280
Other credit card–related intangibles	23	—	—
Core deposit intangibles	330	6	10
All other intangibles	117	32	33
Total amortization expense	$ 946	$ 294	$ 323

(a) Includes $16 million of amortization expense related to servicing assets on securitized automobile loans, which is recorded in Asset management, administration and commissions, for 2004.
(b) Heritage JPMorgan Chase only.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

Future amortization expense

The following table presents estimated amortization expenses related to credit card relationships, core deposits and All other intangible assets at December 31, 2004:

(in millions) Year ended December 31,	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	All other intangible assets	Total
2005	$ 701	$ 45	$ 622	$ 165	$ 1,533
2006	674	40	531	153	1,398
2007	606	35	403	136	1,180
2008	502	33	294	128	957
2009	360	29	239	124	752

Note 16 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or 10 years.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software under SOP 98-1. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life.

Note 17 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. The following table is a summary of long-term debt (net of unamortized original issue debt discount and SFAS 133 valuation adjustments):

By remaining contractual maturity at December 31, 2004 (in millions)		Under 1 year	1–5 years	After 5 years	**2004 total**	2003 total[g]
Parent company						
Senior debt:[a]	Fixed rate	$ 2,864	$ 20,029	$ 2,670	**$ 25,563**	$ 15,044
	Variable rate	6,221	8,295	612	**15,128**	10,696
	Interest rates[b]	1.22–7.63%	0.20–6.88%	1.12–5.00%	**0.20–7.63%**	0.96–7.50%
Subordinated debt:	Fixed rate	$ 1,419	$ 7,536	$ 13,100	**$ 22,055**	$ 14,382
	Variable rate	309	46	2,331	**2,686**	513
	Interest rates[b]	4.78–7.13%	5.75–9.88%	1.92–10.00%	**1.92–10.00%**	4.78–8.25%
	Subtotal	$ 10,813	$ 35,906	$ 18,713	**$ 65,432**	$ 40,635
Subsidiaries						
Senior debt:[a]	Fixed rate	$ 283	$ 4,133	$ 1,833	**$ 6,249**	$ 2,829
	Variable rate	4,234	13,547	4,316	**22,097**	3,842
	Interest rates[b]	2.13–10.45%	1.71–11.74%	2.19–13.00%	**1.71–13.00%**	1.13–13.00%
Subordinated debt:	Fixed rate	$ 503	$ 831	$ 310	**$ 1,644**	$ 708
	Variable rate	—	—	—	**—**	—
	Interest rates[b]	6.00–7.00%	6.13–6.70%	8.25%	**6.00–8.25%**	6.13–7.00%
	Subtotal	$ 5,020	$ 18,511	$ 6,459	**$ 29,990**	$ 7,379
Total long-term debt		$ 15,833	$ 54,417	$ 25,172	**$ 95,422**[d][e][f]	$ 48,014
FIN 46R long-term beneficial interests:[c]						
	Fixed rate	$ —	$ 341	$ 434	**$ 775**	$ 353
	Variable rate	3,072	570	1,976	**5,618**	2,076
	Interest rates[b]	2.02–2.84%	0.54–7.35%	2.25–12.79%	**0.54–12.79%**	1.12–10.00%
Total FIN 46R long-term beneficial interests		$ 3,072	$ 911	$ 2,410	**$ 6,393**	$ 2,429

(a) Included are various equity-linked or other indexed instruments. Embedded derivatives separated from hybrid securities in accordance with SFAS 133 are reported at fair value and shown net with the host contract on the balance sheet. Changes in fair value of separated derivatives are recorded in Trading revenue.
(b) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed and variable-rate issuances, which excludes the effects of related derivative instruments. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of derivatives, the range of modified rates in effect at December 31, 2004, for total long-term debt was 0.14% to 11.74%, versus the contractual range of 0.20% to 13.00% presented in the table above.
(c) Included on the Consolidated balance sheets in Beneficial interests issued by consolidated variable interest entities.
(d) At December 31, 2004, long-term debt aggregating $23.3 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective notes.
(e) The aggregate principal amount of debt that matures in each of the five years subsequent to 2004 is $15.8 billion in 2005, $15.4 billion in 2006, $15.5 billion in 2007, $11.6 billion in 2008 and $11.9 billion in 2009.
(f) Includes $1.5 billion of outstanding zero-coupon notes at December 31, 2004. The aggregate principal amount of these notes at their respective maturities is $4.6 billion.
(g) Heritage JPMorgan Chase only.

The weighted-average contractual interest rate for total long-term debt was 4.50% and 4.71% as of December 31, 2004 and 2003, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rate for total long-term debt, including the effects of related derivative instruments, was 3.97% and 2.79% as of December 31, 2004 and 2003, respectively.

JPMorgan Chase has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's trading activities. These guarantees rank on a parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities totaled $320 million and $509 million at December 31, 2004 and 2003, respectively.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities

At December 31, 2004, the Firm had 22 wholly-owned Delaware statutory business trusts ("issuer trusts") that issued guaranteed preferred beneficial interests in the Firm's junior subordinated deferrable interest debentures.

As a result of the adoption of FIN 46, JPMorgan Chase deconsolidated all the issuer trusts. Accordingly, the junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $10.3 billion and $6.8 billion at December 31, 2004 and 2003, respectively, were reflected in the Firm's Consolidated balance sheets in the Liabilities section under the caption "Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities." JPMorgan Chase records interest expenses on the corresponding junior subordinated debentures in its Consolidated statements of income. The Firm also records the common capital securities issued by the issuer trusts in Other assets in its Consolidated balance sheets at December 31, 2004 and 2003.

The debentures issued to the issuer trusts by the Firm, less the capital securities of the issuer trusts, qualify as Tier 1 capital. The following is a summary of the outstanding capital securities, net of discount, issued by each trust and the junior subordinated deferrable interest debenture issued by JPMorgan Chase to each trust as of December 31, 2004:

December 31, 2004 (in millions)	Amount of capital securities issued by trust[a]	Principal amount of debenture, held by trust[b]	Issue date	Stated maturity of capital securities and debentures	Earliest redemption date	Interest rate of capital securities and debentures	Interest payment/ distribution dates
Bank One Capital II	$ 280	$ 312	2000	2030	2005	8.50%	Quarterly
Bank One Capital III	474	621	2000	2030	Any time	8.75%	Semiannually
Bank One Capital IV	158	163	2000	2030	2005	LIBOR + 1.50%	Quarterly
Bank One Capital V	300	336	2001	2031	2006	8.00%	Quarterly
Bank One Capital VI	525	565	2001	2031	2006	7.20%	Quarterly
Chase Capital I	600	619	1996	2026	2006	7.67%	Semiannually
Chase Capital II	495	510	1997	2027	2007	LIBOR + 0.50%	Quarterly
Chase Capital III	296	306	1997	2027	2007	LIBOR + 0.55%	Quarterly
Chase Capital VI	248	256	1998	2028	Any time	LIBOR + 0.625%	Quarterly
Chase Capital VIII	250	258	2000	2030	2005	8.25%	Quarterly
First Chicago NBD Capital I	248	256	1997	2027	2007	LIBOR + 0.55%	Quarterly
First Chicago NBD Institutional Capital A	499	553	1996	2026	2006	7.95%	Semiannually
First Chicago NBD Institutional Capital B	250	274	1996	2026	2006	7.75%	Semiannually
First USA Capital Trust I	3	3	1996	2027	2007	9.33%	Semiannually
JPM Capital Trust I	750	773	1996	2027	2007	7.54%	Semiannually
JPM Capital Trust II	400	412	1997	2027	2007	7.95%	Semiannually
J.P. Morgan Chase Capital IX	500	515	2001	2031	2006	7.50%	Quarterly
J.P. Morgan Chase Capital X	1,000	1,046	2002	2032	2007	7.00%	Quarterly
J.P. Morgan Chase Capital XI	1,075	1,022	2003	2033	2008	5.88%	Quarterly
J.P. Morgan Chase Capital XII	400	403	2003	2033	2008	6.25%	Quarterly
J.P. Morgan Chase Capital XIII	472	486	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XIV	600	607	2004	2034	2009	6.20%	Quarterly
Total	$ 9,823	$ 10,296					

(a) Represents the amount of capital securities issued to the public by each trust, net of unamortized discount.
(b) Represents the principal amount of JPMorgan Chase debentures held as assets by each trust, net of unamortized discount amounts. The principal amount of debentures held by the trusts includes the impact of hedging and purchase accounting fair value adjustments that are recorded on the Firm's financial statements.

Note 18 – Preferred stock

JPMorgan Chase is authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share. Outstanding preferred stock at December 31, 2004 and 2003, was 4 million and 18 million shares, respectively. On December 31, 2004, JPMorgan Chase redeemed a total of 14 million shares of its Series A, L and N variable cumulative preferred stocks.

Dividends on shares of each outstanding series of preferred stock are payable quarterly. All of the preferred stock outstanding takes precedence over JPMorgan Chase's common stock for the payment of dividends and the distribution of assets in the event of a liquidation or dissolution of the Firm.

The following is a summary of JPMorgan Chase's preferred stock outstanding:

(in millions, except per share amounts and rates)	Stated value and redemption price per share[a]	Shares		Outstanding at December 31,		Earliest redemption date	Rate in effect at December 31, 2004
		2004	2003	2004	2003		
Fixed/adjustable rate, noncumulative	$ 50.00	4.00	4.00	$ 200	$ 200	See Note[c]	5.46%[d]
6.63% Series H cumulative[b]	500.00	0.28	0.28	139	139	3/31/2006	6.63
Adjustable rate, Series A cumulative	100.00	—	2.42	—	242	—	—
Adjustable rate, Series L cumulative	100.00	—	2.00	—	200	—	—
Adjustable rate, Series N cumulative	25.00	—	9.10	—	228	—	—
Total preferred stock		4.28	17.80	$ 339	$ 1,009		

(a) Redemption price includes amount shown in the table plus any accrued but unpaid dividends.
(b) Represented by depositary shares.
(c) The shares are redeemable at any time with not less than 30 nor more than 60 days' notice.
(d) The fixed/adjustable rate preferred stock remained fixed at 4.96% through June 30, 2003; thereafter, the minimum and maximum rates are 5.46% and 11.46%, respectively.

Note 19 – Common stock

At December 31, 2004, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock, with a $1 par value per share. In connection with the Merger, the shareholders approved an increase in the amount of authorized shares of 4.5 billion from the 4.5 billion that had been authorized as of December 31, 2003. Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during 2004, 2003 and 2002 were as follows:

December 31, (in millions)	2004	2003[a]	2002[a]
Issued – balance at January 1	2,044.4	2,023.6	1,996.9
Newly issued:			
Employee benefits and compensation plans	69.0	20.9	25.9
Employee stock purchase plans	3.1	0.7	0.8
Purchase accounting acquisitions and other	1,469.4	—	—
Total newly issued	1,541.5	21.6	26.7
Cancelled shares	(1.1)	(0.8)	—
Total issued – balance at December 31	3,584.8	2,044.4	2,023.6
Treasury – balance at January 1	(1.8)	(24.9)	(23.5)
Purchase of treasury stock	(19.3)	—	—
Share repurchases related to employee stock-based awards[b]	(7.5)	(3.0)	(3.9)
Issued from treasury:			
Employee benefits and compensation plans	—	25.8	2.1
Employee stock purchase plans	—	0.3	0.4
Total issued from treasury	—	26.1	2.5
Total treasury – balance at December 31	(28.6)	(1.8)	(24.9)
Outstanding	3,556.2	2,042.6	1,998.7

(a) Heritage JPMorgan Chase only.
(b) Participants in the 1996 Long-Term Incentive Plan and Stock Option Plan have shares withheld to cover income taxes. The shares withheld amounted to 5.7 million, 2.3 million and 2.9 million for 2004, 2003 and 2002, respectively.

During 2004, the Firm repurchased 19.3 million shares of common stock under a stock repurchase program which was approved by the Board of Directors on July 20, 2004. The Firm did not repurchase shares of its common stock during 2003 or 2002 under the prior stock repurchase program.

As of December 31, 2004, approximately 531 million unissued shares of common stock were reserved for issuance under various employee incentive, option and stock-purchase plans.

Note 20 – Earnings per share

SFAS 128 requires the presentation of basic and diluted earnings per share ("EPS") in the income statement. Basic EPS is computed by dividing net income applicable to common stock by the weighted-average number of common shares outstanding for the period. Diluted EPS is computed using the same method as basic EPS but, in the denominator, the number of common shares reflect, in addition to outstanding shares, the potential dilution that could occur if convertible securities or other contracts to issue common stock were converted or exercised into common stock. Net income available for common stock is the same for basic EPS and diluted EPS, as JPMorgan Chase had no convertible securities, and therefore, no adjustments to net income available for common stock were necessary. The following table presents the calculation of basic and diluted EPS for 2004, 2003 and 2002:

Year ended December 31, (in millions, except per share amounts)[a]	2004	2003	2002
Basic earnings per share			
Net income	$ 4,466	$ 6,719	$ 1,663
Less: preferred stock dividends	52	51	51
Net income applicable to common stock	$ 4,414	$ 6,668	$ 1,612
Weighted-average basic shares outstanding	2,779.9	2,008.6	1,984.3
Net income per share	$ 1.59	$ 3.32	$ 0.81
Diluted earnings per share			
Net income applicable to common stock	$ 4,414	$ 6,668	$ 1,612
Weighted-average basic shares outstanding	2,779.9	2,008.6	1,984.3
Add: Broad-based options	5.4	4.1	2.8
Key employee options	65.3	42.4	22.0
Weighted-average diluted shares outstanding	2,850.6	2,055.1	2,009.1
Net income per share[b]	$ 1.55	$ 3.24	$ 0.80

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Options issued under employee benefit plans to purchase 300 million, 335 million and 362 million shares of common stock were outstanding for the years ended 2004, 2003 and 2002, respectively, but were not included in the computation of diluted EPS because the options' exercise prices were greater than the average market price of the common shares.

Note 21 – Accumulated other comprehensive income (loss)

Accumulated other comprehensive income includes the after-tax change in unrealized gains and losses on AFS securities, cash flow hedging activities and foreign currency translation adjustments (including the impact of related derivatives).

Year ended December 31,[a] (in millions)	Unrealized gains (losses) on AFS securities[b]	Translation adjustments	Cash flow hedges	Accumulated other comprehensive income (loss)
Balance at December 31, 2001	$ (135)	$ (2)	$ (305)	$ (442)
Net change	866	(4)	807	1,669
Balance at December 31, 2002	731	(6)	502	1,227
Net change	(712)	—	(545)	(1,257)
Balance at December 31, 2003	19	(6)	(43)	(30)
Net change	**(80)[c]**	**(2)[d]**	**(96)**	**(178)**
Balance at December 31, 2004	**$ (61)**	**$ (8)[e]**	**$ (139)**	**$ (208)**

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Represents the after-tax difference between the fair value and amortized cost of the AFS securities portfolio and retained interests in securitizations recorded in Other assets.
(c) The net change during 2004 is primarily due to increasing rates and recognition of unrealized gains through securities sales.
(d) Includes $280 million of after-tax gains (losses) on foreign currency translation from operations for which the functional currency is other than the U.S. dollar, offset by $(282) million of after-tax gains (losses) on hedges.
(e) Includes after-tax gains and losses on foreign currency translation, including related hedge results from operations, for which the functional currency is other than the U.S. dollar.

The following table presents the after-tax changes in net unrealized holdings gains (losses) and the reclassification adjustments in unrealized gains and losses on AFS securities and cash flow hedges. Reclassification adjustments include amounts recognized in net income during the current year that had been previously recorded in Other comprehensive income.

Year ended December 31, (in millions)[a]	2004	2003	2002
Unrealized gains (losses) on AFS securities:			
Net unrealized holdings gains (losses) arising during the period, net of taxes[b]	$ 41	$ 149	$ 1,090
Reclassification adjustment for gains included in income, net of taxes[c]	(121)	(861)	(224)
Net change	$ (80)	$ (712)	$ 866
Cash flow hedges:			
Net unrealized holdings gains (losses) arising during the period, net of taxes[d]	$ 34	$ 86	$ 663
Reclassification adjustment for (gains) losses included in income, net of taxes[e]	(130)	(631)	144
Net change	$ (96)	$ (545)	$ 807

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Net of tax expense of $27 million for 2004, $92 million for 2003 and $758 million for 2002.
(c) Net of tax expense of $79 million for 2004, $528 million for 2003 and $156 million for 2002.
(d) Net of tax expense of $23 million for 2004, $60 million for 2003 and $461 million for 2002.
(e) Net of tax expense of $86 million for 2004 and $438 million for 2003, and net of tax benefit of $100 million for 2002.

Note 22 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset-and-liability method required by SFAS 109 to provide income taxes on all transactions recorded in the Consolidated financial statements. This requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax liability or asset for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Thus, the Firm's final tax-related assets and liabilities may ultimately be different.

Deferred income tax expense (benefit) results from differences between assets and liabilities measured for financial reporting and for income-tax return purposes. The significant components of deferred tax assets and liabilities are reflected in the following table:

December 31, (in millions)	2004	2003[a]
Deferred tax assets		
Allowance for other than loan losses	$ 3,711	$ 1,152
Allowance for loan losses	2,739	1,410
Employee benefits	2,677	2,245
Non-U.S. operations	743	741
Gross deferred tax assets	$ 9,870	$ 5,548
Deferred tax liabilities		
Leasing transactions	$ 4,266	$ 3,703
Depreciation and amortization	3,558	1,037
Fee income	1,162	387
Non-U.S. operations	1,144	687
Fair value adjustments	186	538
Other, net	348	68
Gross deferred tax liabilities	$ 10,664	$ 6,420
Valuation allowance	$ 150	$ 200
Net deferred tax liability	$ (944)	$ (1,072)

(a) Heritage JPMorgan Chase only.

A valuation allowance has been recorded in accordance with SFAS 109, primarily relating to deferred tax assets associated with non-U.S. operations.

The components of income tax expense included in the Consolidated statements of income were as follows:

Year ended December 31, (in millions)[a]	2004	2003	2002
Current income tax expense (benefit)			
U.S. federal	$ 1,695	$ 965	$ (1,334)
Non-U.S.	679	741	461
U.S. state and local	181	175	93
Total current expense (benefit)	2,555	1,881	(780)
Deferred income tax (benefit) expense			
U.S. federal	(382)	1,341	1,630
Non-U.S.	(322)	14	(352)
U.S. state and local	(123)	73	358
Total deferred (benefit) expense	(827)	1,428	1,636
Total income tax expense	$ 1,728	$ 3,309	$ 856

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

The preceding table does not reflect the tax effects of unrealized gains and losses on AFS securities, SFAS 133 hedge transactions and certain tax benefits associated with the Firm's employee stock plans. The tax effect of these items is recorded directly in Stockholders' equity. Stockholders' equity increased by $190 million and $898 million in 2004 and 2003, respectively, and decreased by $1.1 billion in 2002 as a result of these tax effects.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. For 2004, such earnings approximated $369 million on a pre-tax basis. At December 31, 2004, the cumulative amount of undistributed earnings in these subsidiaries approximated $2.6 billion. It is not practicable at this time to determine the income tax liability that would result upon repatriation of these earnings.

On October 22, 2004, the American Jobs Creation Act of 2004 (the "Act") was signed into law. The Act creates a temporary incentive for U.S. companies to repatriate accumulated foreign earnings at a substantially reduced U.S. effective tax rate by providing a dividends received deduction on the repatriation of certain foreign earnings to the U.S. taxpayer (the "repatriation provision"). The new deduction is subject to a number of limitations and requirements and is effective for either the 2004 or 2005 tax years for calendar year taxpayers. The range of possible amounts that may be considered for repatriation under this provision is between zero and $1.9 billion. The Firm is currently assessing the impact of the repatriation provision and, at this time, cannot reasonably estimate the related range of income tax effects of such repatriation provision. Accordingly, the Firm has not reflected the tax effect of the repatriation provision in income tax expense or income tax liabilities.

The tax expense applicable to securities gains and losses for the years 2004, 2003 and 2002 was $126 million, $477 million and $531 million, respectively.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for the past three years is shown in the following table:

Year ended December 31,[a]	2004	2003	2002
Statutory U.S. federal tax rate	35.0%	35.0%	35.0%
Increase (decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of federal income tax benefit	0.6[b]	2.1	11.6
Tax-exempt income	(4.1)	(2.4)	(6.2)
Non-U.S. subsidiary earnings	(1.3)	(0.7)	(2.2)
Business tax credits	(4.1)	(0.9)	(3.5)
Other, net	1.8	(0.1)	(0.7)
Effective tax rate	27.9%	33.0%	34.0%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) The decrease in 2004 is attributable to changes in the proportion of income subject to different state and local taxes.

The following table presents the U.S. and non-U.S. components of income before income tax expense:

Year ended December 31, (in millions)[a]	2004	2003	2002
U.S.	$ 3,817	$ 7,333	$ 1,834
Non-U.S.[b]	2,377	2,695	685
Income before income tax expense	$ 6,194	$ 10,028	$ 2,519

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the United States.

Note 23 – Restrictions on cash and intercompany funds transfers

The Federal Reserve Board requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $3.8 billion in 2004 and $2.6 billion in 2003.

Restrictions imposed by federal law prohibit JPMorgan Chase and certain other affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company-only basis) are dividends and interest from JPMorgan Chase Bank and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the FRB, the Office of the Comptroller of the Currency ("OCC") and the Federal Deposit Insurance Corporation ("FDIC") have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2005 and 2004, JPMorgan Chase's bank subsidiaries could pay, in the aggregate, $6.2 billion and $4.4 billion, respectively, in dividends to their respective bank holding companies without prior approval of their relevant banking regulators. Dividend capacity in 2005 will be supplemented by the banks' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2004 and 2003, cash in the amount of $4.3 billion and $3.5 billion, respectively, and securities with a fair value of $3.6 billion and $3.1 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers.

Note 24 – Capital

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital includes common stockholders' equity, qualifying preferred stock and minority interest less goodwill and other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1, subordinated long-term debt and other instruments qualifying as Tier 2, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total regulatory capital is subject to deductions for investments in certain subsidiaries. Under the risk-based capital guidelines of the FRB, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and total (Tier 1 plus Tier 2) capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital to average adjusted on–balance sheet assets). Failure to meet these minimum requirements could cause the FRB to take action. Bank subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2004 and 2003, JPMorgan Chase and its primary banking subsidiaries met all capital requirements to which each was subject.

The following table presents the risk-based capital ratios for JPMorgan Chase and its significant banking subsidiaries at December 31, 2004 and 2003:

(in millions, except ratios)	Tier 1 capital	Total capital	Risk-weighted assets[b]	Adjusted average assets[c]	Tier 1 capital ratio	Total capital ratio	Tier 1 leverage ratio
December 31, 2004							
JPMorgan Chase & Co.[a]	**$ 68,621**	**$ 96,807**	**$ 791,373**	**$ 1,102,456**	**8.7%**	**12.2%**	**6.2%**
JPMorgan Chase Bank, N.A.	**55,489**	**78,478**	**670,295**	**922,877**	**8.3**	**11.7**	**6.0**
Chase Bank USA, N.A.	**8,726**	**11,186**	**86,955**	**71,797**	**10.0**	**12.9**	**12.2**
December 31, 2003[d]							
JPMorgan Chase & Co.[a]	$ 43,167	$ 59,816	$ 507,456	$ 765,910	8.5%	11.8%	5.6%
JPMorgan Chase Bank	34,972	45,290	434,218	628,076	8.1	10.4	5.6
Chase Manhattan Bank USA, N.A.	4,950	6,939	48,030	34,565	10.3	14.4	14.3
Well-capitalized ratios[e]					6.0%	10.0%	5.0%[f]
Minimum capital ratios[e]					4.0	8.0	3.0

(a) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions, whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.
(b) Includes off–balance sheet risk-weighted assets in the amounts of $250.3 billion, $229.6 billion and $15.5 billion, respectively, at December 31, 2004, and $174.2 billion, $152.1 billion and $13.3 billion, respectively, at December 31, 2003.
(c) Average adjusted assets for purposes of calculating the leverage ratio include total average assets adjusted for unrealized gains/losses on securities, less deductions for disallowed goodwill and other intangible assets, investments in subsidiaries and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.
(d) Heritage JPMorgan Chase only.
(e) As defined by the regulations issued by the FRB, FDIC and OCC.
(f) Represents requirements for bank subsidiaries pursuant to regulations issued under the Federal Deposit Insurance Corporation Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.

The following table shows the components of the Firm's Tier 1 and total capital:

December 31, (in millions)	2004	2003[a]
Tier 1 capital		
Total stockholders' equity	**$ 105,653**	$ 46,154
Effect of net unrealized losses on AFS securities and cash flow hedging activities	**200**	24
Adjusted stockholders' equity	**105,853**	46,178
Minority interest[b]	**11,050**	6,882
Less: Goodwill	**43,203**	8,511
Investments in certain subsidiaries	**370**	266
Nonqualifying intangible assets	**4,709**	1,116
Tier 1 capital	**$ 68,621**	$ 43,167
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	**$ 20,690**	$ 12,128
Qualifying allowance for credit losses	**7,798**	4,777
Less: Investments in certain subsidiaries and other	**302**	256
Tier 2 capital	**$ 28,186**	$ 16,649
Total qualifying capital	**$ 96,807**	$ 59,816

(a) Heritage JPMorgan Chase only.
(b) Primarily includes trust preferred securities of certain business trusts.

Note 25 – Commitments and contingencies

At December 31, 2004, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes. Certain leases contain rent escalation clauses for real estate taxes; they may also contain other operating expenses and renewal-option clauses calling for increased rents. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions, or enter into further lease agreements.

The following table shows required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2004:

Year ended December 31, (in millions)	
2005	$ 1,060
2006	979
2007	899
2008	838
2009	776
After	5,301
Total minimum payments required	9,853
Less: Sublease rentals under noncancelable subleases	(689)
Net minimum payment required	$ 9,164

Total rental expense was as follows:

Year ended December 31, (in millions)[a]	2004	2003	2002
Gross rentals	**$ 1,187**	$ 1,061	$ 1,012
Sublease rentals	**(158)**	(106)	(134)
Net rental expense	**$ 1,029**	$ 955	$ 878

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

At December 31, 2004, assets were pledged to secure public deposits and for other purposes. The significant components of the assets pledged were as follows:

December 31, (in billions)	2004	2003[b]
Reverse repurchase/securities borrowing agreements	**$ 238**	$ 197
Securities	**49**	45
Loans	**75**	48
Other[a]	**90**	96
Total assets pledged	**$ 452**	$ 386

(a) Primarily composed of trading assets.
(b) Heritage JPMorgan Chase only.

Litigation reserve

During 2004, JPMorgan Chase increased its Litigation reserve by $3.7 billion. While the outcome of litigation is inherently uncertain, the amount of the Firm's Litigation reserve at December 31, 2004, reflected management's assessment of the appropriate litigation reserve level in light of all information known as of that date. Management reviews litigation reserves periodically, and the reserve may be increased or decreased in the future to reflect further developments. The Firm believes it has meritorious defenses to claims asserted against it and intends to continue to defend itself vigorously, litigating or settling cases, according to management's judgment as to what is in the best interest of stockholders.

Note 26 – Accounting for derivative instruments and hedging activities

Derivative instruments enable end users to increase, reduce or alter exposure to credit or market risks. The value of a derivative is derived from its reference to an underlying variable or combination of variables such as equity, foreign exchange, credit, commodity or interest rate prices or indices. JPMorgan Chase makes markets in derivatives for its customers and also is an end-user of derivatives in order to manage the Firm's exposure to credit and market risks.

SFAS 133, as amended by SFAS 138 and SFAS 149, establishes accounting and reporting standards for derivative instruments, including those used for trading and hedging activities, and derivative instruments embedded in other contracts. All free-standing derivatives, whether designated for hedging relationships or not, are required to be recorded on the balance sheet at fair value. The accounting for changes in value of a derivative depends on whether the contract is for trading purposes or has been designated and qualifies for hedge accounting. The majority of the Firm's derivatives are entered into for trading purposes. The Firm also uses derivatives as an end user to hedge market exposures, modify the interest rate characteristics of related balance sheet instruments or meet longer-term investment objectives. Both trading and end-user derivatives are recorded at fair value in Trading assets and Trading liabilities as set forth in Note 3 on pages 90–91 of this Annual Report.

In order to qualify for hedge accounting, a derivative must be considered highly effective at reducing the risk associated with the exposure being hedged. Each derivative must be designated as a hedge, with documentation of the risk management objective and strategy, including identification of the hedging instrument, the hedged item and the risk exposure, and how effectiveness is to be assessed prospectively and retrospectively. The extent to which a hedging instrument is effective at achieving offsetting changes in fair value or cash flows must be assessed at least quarterly. Any ineffectiveness must be reported in current-period earnings. For certain types of hedge relationships meeting stringent criteria, SFAS 133's "shortcut" method provides for an assumption of zero ineffectiveness. Under the shortcut method, quarterly effectiveness assessment is not required, and the entire change in the fair value of the hedging derivative is considered to be effective at achieving offsetting changes in fair values or cash flows. Due to the strict criteria of the shortcut method, the Firm's use of this method is primarily limited to hedges of Long-term debt.

For qualifying fair value hedges, all changes in the fair value of the derivative and in the fair value of the item for the risk being hedged are recognized in earnings. If the hedge relationship is terminated, then the fair value adjustment to the hedged item continues to be reported as part of the basis of the item and is amortized to earnings as a yield adjustment. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in Other comprehensive income and recognized in the income statement when the hedged cash flows affect earnings. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the change in fair value of the derivative recorded in Other comprehensive income is recognized when the cash flows that were hedged occur, consistent with the original hedge strategy. For hedge relationships discontinued because the forecasted transaction is not expected to occur according to the original strategy, any related derivative amounts recorded in Other comprehensive income are immediately recognized in earnings. For qualifying net investment hedges, changes in the fair value of the derivative or the revaluation of the foreign currency–denominated debt instrument are recorded in the translation adjustments account within Other comprehensive income. Any ineffective portions of net investment hedges are immediately recognized in earnings.

JPMorgan Chase's fair value hedges primarily include hedges of fixed-rate long-term debt, loans, AFS securities and MSRs. Interest rate swaps are the most common type of derivative contract used to modify exposure to interest rate risk, converting fixed-rate assets and liabilities to a floating rate. Interest rate options, swaptions and forwards are also used in combination with interest rate swaps to hedge the fair value of the Firm's MSRs. For a further discussion of MSR risk management activities, see Note 15 on pages 109–111 of this Annual Report. All amounts have been included in earnings consistent with the classification of the hedged item, primarily Net interest income, Mortgage fees and related income, and Other income. The Firm did not recognize any gains or losses during 2004 on commitments that no longer qualify as fair value hedges.

JPMorgan Chase also enters into derivative contracts to hedge exposure to variability in cash flows from floating-rate financial instruments and forecasted transactions, primarily the rollover of short-term assets and liabilities, and foreign currency-denominated revenues and expenses. Interest rate swaps, futures and forward contracts are the most common instruments used to reduce the impact of interest rate and foreign exchange rate changes on future earnings. All amounts affecting earnings have been recognized consistent with the classification of the hedged item, primarily Net interest income.

The Firm uses forward foreign exchange contracts and foreign currency-denominated debt instruments to protect the value of its net investments in foreign currencies in its non-U.S. subsidiaries. The portion of the hedging instruments excluded from the assessment of hedge effectiveness (forward points) is recorded in Net interest income.

The following table presents derivative instrument hedging-related activities for the periods indicated:

Year ended December 31, (in millions)[a]	2004	2003
Fair value hedge ineffective net gains/(losses)[b]	$ 199	$ 731[c]
Cash flow hedge ineffective net gains/(losses)[b]	—	(5)
Cash flow hedging gains on forecasted transactions that failed to occur	1	—

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes ineffectiveness and the components of hedging instruments that have been excluded from the assessment of hedge effectiveness.
(c) Amount restated to include the ineffectiveness and amounts excluded from the assessment of effectiveness associated with MSR hedging results.

Over the next 12 months, it is expected that $157 million (after-tax) of net gains recorded in Other comprehensive income at December 31, 2004, will be recognized in earnings. The maximum length of time over which forecasted transactions are hedged is 10 years, related to core lending and borrowing activities.

JPMorgan Chase does not seek to apply hedge accounting to all of its economic hedges. For example, the Firm does not apply hedge accounting to credit derivatives used to manage the credit risk of loans and commitments because of the difficulties in qualifying such contracts as hedges under SFAS 133. Similarly, the Firm does not apply hedge accounting to certain interest rate derivatives used as economic hedges.

Note 27 – Off-balance sheet lending-related financial instruments and guarantees

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparty draw down the commitment or the Firm fulfill its obligation under the guarantee, and the counterparty subsequently failed to perform according to the terms of the contract. Most of these commitments and guarantees expire without a default occurring or without being drawn. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. Further, certain commitments, primarily related to consumer financings, are cancelable, upon notice, at the option of the Firm.

To provide for the risk of loss inherent in wholesale-related contracts, an allowance for credit losses on lending-related commitments is maintained. See Note 12 on pages 102–103 of this Annual Report for a further discussion on the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts of off–balance sheet lending-related financial instruments and guarantees and the related allowance for credit losses on lending-related commitments at December 31, 2004 and 2003:

Off–balance sheet lending-related financial instruments

	Contractual amount		Allowance for lending-related commitments	
December 31, (in millions)	**2004**	2003[a]	**2004**	2003[a]
Consumer	**$ 601,196**	$ 181,198	**$ 12**	$ 4
Wholesale:				
Other unfunded commitments to extend credit[b][c][d]	**$ 225,152**	$ 172,369	**$ 185**	$ 153
Standby letters of credit and guarantees[b]	**78,084**	34,922	**292**	165
Other letters of credit[b]	**6,163**	4,192	**3**	2
Total wholesale	**$ 309,399**	$ 211,483	**$ 480**	$ 320
Total	**$ 910,595**	$ 392,681	**$ 492**	$ 324
Customers' securities lent	**$ 215,972**	$ 143,143	**NA**	NA

(a) Heritage JPMorgan Chase only.
(b) Represents contractual amount net of risk participations totaling $26.4 billion and $16.5 billion at December 31, 2004 and 2003, respectively.
(c) Includes unused advised lines of credit totaling $22.8 billion and $19.4 billion at December 31, 2004 and 2003, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable.
(d) Includes certain asset purchase agreements to the Firm's administered multi-seller asset-backed commercial paper conduits of $31.8 billion and $11.7 billion at December 31, 2004 and 2003, respectively; excludes $31.7 billion and $6.3 billion at December 31, 2004 and 2003, respectively, of asset purchase agreements related to the Firm's administered multi-seller asset-backed commercial paper conduits consolidated in accordance with FIN 46R, as the underlying assets of the conduits are reported in the Firm's Consolidated balance sheets. It also includes $7.5 billion and $9.2 billion at December 31, 2004 and 2003, respectively, of asset purchase agreements to structured wholesale loan vehicles and other third-party entities. The allowance for credit losses on lending-related commitments related to these agreements was insignificant at December 31, 2004 and 2003.

FIN 45 establishes accounting and disclosure requirements for guarantees, requiring that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. FIN 45 defines a guarantee as a contract that contingently requires the Firm to pay a guaranteed party, based on: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off–balance sheet lending arrangements to be guarantees under FIN 45: certain asset purchase agreements, standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts. These guarantees are described in further detail below.

As of January 1, 2003, newly issued or modified guarantees that are not derivative contracts have been recorded on the Firm's Consolidated balance sheets at their fair value at inception. The fair value of the obligation undertaken in issuing the guarantee at inception is typically equal to the net present value of the future amount of premium receivable under the contract. The Firm has recorded this amount in Other Liabilities with an offsetting entry recorded in Other Assets. As cash is received under the contract, it is applied to the premium receivable recorded in Other Assets, and the fair value of the liability recorded at inception is amortized into income as Lending & deposit related fees over the life of the guarantee contract. The amount of the liability related to guarantees recorded at December 31, 2004 and 2003, excluding the allowance for credit losses on lending-related commitments and derivative contracts discussed below, was approximately $341 million and $59 million, respectively.

Unfunded commitments to extend credit are agreements to lend only when a customer has complied with predetermined conditions, and they generally expire on fixed dates. The allowance for credit losses on wholesale lending-related commitments includes $185 million and $153 million at December 31, 2004 and 2003, respectively, related to unfunded commitments to extend credit. The majority of the Firm's unfunded commitments are not guarantees as defined in FIN 45, except for certain asset purchase agreements. These asset-purchase agreements are principally used as a mechanism to provide liquidity to SPEs, primarily multi-seller conduits, as described in Note 14 on pages 106–109 of this Annual Report.

Certain asset purchase agreements can be exercised at any time by the SPE's administrator, while others require a triggering event to occur. Triggering events include, but are not limited to, a need for liquidity, a market value decline of the assets or a downgrade in the rating of JPMorgan Chase Bank. These agreements may cause the Firm to purchase an asset from the SPE at an amount above the asset's fair value, in effect providing a guarantee of the initial value of the reference asset as of the date of the agreement. In most instances, third-party credit enhancements of the SPE mitigate the Firm's potential losses on these agreements. The allowance for credit losses on wholesale lending-related commitments related to these agreements was insignificant at December 31, 2004.

Standby letters of credit and financial guarantees are conditional lending commitments issued by JPMorgan Chase to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings and similar transactions. Approximately 70% of these arrangements mature within three years. The Firm typically has recourse to recover from the customer any amounts paid under these guarantees; in addition, the Firm may hold cash or other highly liquid collateral to support these guarantees. At December 31, 2004 and 2003,

the Firm held collateral relating to $7.4 billion and $7.7 billion, respectively, of these arrangements. The allowance for credit losses on lending-related commitments at December 31, 2004 and 2003, included $292 million and $165 million, respectively, related to standby letters of credit and financial guarantees.

The Firm holds customers' securities under custodial arrangements. At times, these securities are loaned to third parties, and the Firm issues securities lending indemnification agreements to the customer that protect the customer against the risk of loss if the third party fails to return the securities. To support these indemnification agreements, the Firm obtains from the third party cash or other highly liquid collateral with a market value exceeding 100% of the value of the loaned securities. At December 31, 2004 and 2003, the Firm held $221.6 billion and $146.7 billion, respectively, in collateral in support of these agreements.

In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that may require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract may also include a termination clause, which would allow the Firm to settle the contract at its fair value; thus, such a clause would not require the Firm to make a payment under the indemnification agreement. Even without the termination clause, management does not expect such indemnification agreements to have a material adverse effect on the consolidated financial condition of JPMorgan Chase. The Firm may also enter into indemnification clauses when it sells a business or assets to a third party, pursuant to which it indemnifies that third party for losses it may incur due to actions taken by the Firm prior to the sale. See below for more information regarding the Firm's loan securitization activities. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

As part of the Firm's loan securitization activities, as described in Note 13 on pages 103–106 of this Annual Report, the Firm provides representations and warranties that certain securitized loans meet specific requirements. The Firm may be required to repurchase the loans and/or indemnify the purchaser of the loans against losses due to any breaches of such representations or warranties. Generally, the maximum amount of future payments the Firm would be required to make under such repurchase and/or indemnification provisions would be equal to the current amount of assets held by such securitization-related SPEs as of December 31, 2004, plus, in certain circumstances, accrued and unpaid interest on such loans and certain expenses. The potential loss due to such repurchase and/or indemnity is mitigated by the due diligence the Firm performs to ensure that the assets comply with the requirements set forth in the representations and warranties. Historically, losses incurred on such repurchases and/or indemnifications have been insignificant, and therefore management expects the risk of material loss to be remote.

In connection with Card Services, the Firm is a partner with one of the leading companies in electronic payment services in two separate ventures, Chase Merchant Services and Paymentech (the "ventures"), the latter of which was acquired as a result of the Merger. These ventures provide merchant processing services in the United States and Canada. The ventures are each individually contingently liable for processed credit card sales transactions in the event of a dispute between the cardmember and a merchant. If a dispute is resolved in the cardmember's favor, the ventures will credit or refund the amount to the cardmember and charge back the transaction to the merchant. If the ventures are unable to collect the amount from the merchant, the ventures will bear the loss for the amount credited or refunded to the cardmember. The ventures mitigate this risk by withholding settlement, or by obtaining escrow deposits or letters of credit from certain merchants. However, in the unlikely event that: 1) a merchant ceases operations and is unable to deliver products, services or a refund; 2) the ventures do not have sufficient collateral from the merchants to provide customer refunds; and 3) the ventures do not have sufficient financial resources to provide customer refunds, the Firm would be liable to refund the cardholder in proportion to its approximate equity interest in the ventures. For the year ended December 31, 2004, the ventures incurred aggregate credit losses of $7.1 million on $396 billion of aggregate volume processed, of which the Firm shared liability only on $205 billion of aggregate volume processed. At December 31, 2004, the ventures held $620 million of collateral. In 2003, the Chase Merchant Services venture incurred aggregate credit losses of $2.0 million on $260 billion of aggregate volume processed, of which the Firm shared liability only on $77 billion of aggregate volume processed. At December 31, 2003, the Chase Merchant Services venture held $242 million of collateral. The Firm believes that, based on historical experience and the collateral held by the ventures, the fair value of the guarantee would not be materially different from the credit loss allowance recorded by the ventures; therefore, the Firm has not recorded any allowance for losses in excess of the allowance recorded by the ventures.

The Firm is a member of several securities and futures exchanges and clearinghouses both in the United States and overseas. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligation varies with different organizations. It may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to a members' guaranty fund, or, in a few cases, it may be unlimited. It is difficult to estimate the Firm's maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

In addition to the contracts described above, there are certain derivative contracts to which the Firm is a counterparty that meet the characteristics of a guarantee under FIN 45. These derivatives are recorded on the Consolidated balance sheets at fair value. These contracts include written put options that require the Firm to purchase assets from the option holder at a specified price by a specified date in the future, as well as derivatives that effectively guarantee the return on a counterparty's reference portfolio of assets. The total notional value of the derivatives that the Firm deems to be guarantees was $53 billion and $50 billion at December 31, 2004 and 2003, respectively. The Firm reduces its exposures to these contracts by entering into offsetting transactions or by entering into contracts that hedge the market risk related to these contracts. The fair value related to these contracts was a derivative receivable of $180 million and $163 million, and a derivative payable of $622 million and $333 million at December 31, 2004 and 2003, respectively. Finally, certain written put options and credit derivatives permit cash settlement and do not require the option holder or the buyer of credit protection to own the reference asset. The Firm does not consider these contracts to be guarantees as described in FIN 45.

Note 28 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit risk portfolio to assess potential concentration risks and to obtain collateral when deemed necessary. In the Firm's wholesale portfolio, risk concentrations are primarily evaluated by industry and by geographic region. In the consumer portfolio, concentrations are primarily evaluated by product and by U.S. geographic region.

For further information regarding on–balance sheet credit concentrations by major product and geography, see Note 11 on page 101 of this Annual Report. For information regarding concentrations of off–balance sheet lending-related financial instruments by major product, see Note 27 on page 119 of this Annual Report. More information about concentrations can be found in the following tables or discussion in the MD&A:

Wholesale exposure	Page 60
Wholesale selected industry concentrations	Page 61
Country exposure	Page 65
Consumer real estate by geographic location	Page 67

The table below presents both on-balance sheet and off-balance sheet wholesale- and consumer-related credit exposure as of December 31, 2004 and 2003:

	2004			2003[c]		
December 31, (in billions)	Credit exposure	On-balance sheet[a]	Off-balance sheet[b]	Credit exposure	On-balance sheet[a]	Off-balance sheet[b]
Wholesale-related:						
Banks and finance companies	**$ 56.2**	**$ 25.7**	**$ 30.5**	$ 62.7	$ 39.7	$ 23.0
Real estate	**28.2**	**16.7**	**11.5**	14.5	8.8	5.7
Healthcare	**22.0**	**4.5**	**17.5**	11.3	1.8	9.5
Retail and consumer services	**21.7**	**6.0**	**15.7**	14.5	4.2	10.3
Consumer products	**21.4**	**7.1**	**14.3**	13.8	3.6	10.2
All other wholesale	**392.7**	**172.8**	**219.9**	258.7	105.9	152.8
Total wholesale-related	**542.2**	**232.8**	**309.4**	375.5	164.0	211.5
Consumer-related:						
Home finance	**177.9**	**124.7**	**53.2**	106.2	74.6	31.6
Auto & education finance	**67.9**	**62.7**	**5.2**	45.8	43.2	2.6
Consumer & small business and other	**25.4**	**15.1**	**10.3**	10.0	4.2	5.8
Credit card receivables[d]	**597.0**	**64.5**	**532.5**	158.5	17.4	141.1
Total consumer-related	**868.2**	**267.0**	**601.2**	320.5	139.4	181.1
Total exposure	**$ 1,410.4**	**$ 499.8**	**$ 910.6**	$ 696.0	$ 303.4	$ 392.6

(a) Represents loans, derivative receivables, interests in purchased receivables and other receivables.
(b) Represents lending-related financial instruments.
(c) Heritage JPMorgan Chase only.
(d) Excludes $70.8 billion and $34.9 billion of securitized credit card receivables at December 31, 2004 and 2003, respectively.

Note 29 – Fair value of financial instruments

The fair value of a financial instrument is the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The accounting for an asset or liability may differ based on the type of instrument and/or its use in a trading or investing strategy. Generally, the measurement framework in financial statements is one of the following:

- at fair value on the Consolidated balance sheets, with changes in fair value recorded each period in the Consolidated statements of income;
- at fair value on the Consolidated balance sheets, with changes in fair value recorded each period in a separate component of Stockholders' equity and as part of Other comprehensive income;
- at cost (less other-than-temporary impairments), with changes in fair value not recorded in the financial statements but disclosed in the notes thereto; or
- at the lower of cost or fair value.

The Firm has an established and well-documented process for determining fair values. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on internally-developed models that primarily use market-based or independent information as inputs to the valuation model. Valuation adjustments may be necessary to ensure that financial instruments are recorded at fair value. These adjustments include amounts to reflect counterparty credit quality, liquidity and concentration concerns and are based on defined methodologies that are applied consistently over time.

- Credit valuation adjustments are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few derivative contracts are listed on an exchange, the majority of derivative positions are valued using internally developed models that use as their basis observable market parameters. Market practice is to quote parameters equivalent to a AA credit rating; thus, all counterparties are assumed to have the same credit quality. An adjustment is therefore necessary to reflect the credit quality of each derivative counterparty and to arrive at fair value. Without this adjustment, derivative positions would not be appropriately valued.
- Liquidity adjustments are necessary when the Firm may not be able to observe a recent market price for a financial instrument that trades in inactive (or less active) markets. Thus, valuation adjustments for risk of loss due to a lack of liquidity are applied to those positions to arrive at fair value. The Firm tries to ascertain the amount of uncertainty in the initial valuation based upon the liquidity or illiquidity, as the case may be, of the market in which the instrument trades and makes liquidity adjustments to the financial instruments. The Firm measures the liquidity adjustment based on the following factors: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quote; and (3) the volatility of the principal component of the financial instrument.
- Concentration valuation adjustments are necessary to reflect the cost of unwinding larger-than-normal market-size risk positions. The cost is determined based on the size of the adverse market move that is likely to occur during the extended period required to bring a position down to a nonconcentrated level. An estimate of the period needed to reduce, without market disruption, a position to a nonconcentrated level is generally based on the relationship of the position to the average daily trading volume of that position. Without these adjustments, larger positions would be valued at a price greater than the price at which the Firm could exit the positions.

Valuation adjustments are determined based on established policies and are controlled by a price verification group independent of the risk-taking function. Economic substantiation of models, prices, market inputs and revenue through price/input testing, as well as backtesting, is done to validate the appropriateness of the valuation methodology. Any changes to the valuation methodology are reviewed by management to ensure the changes are justified.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, the use of different methodologies to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Certain financial instruments and all nonfinancial instruments are excluded from the scope of SFAS 107. Accordingly, the fair value disclosures required by SFAS 107 provide only a partial estimate of the fair value of JPMorgan Chase. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

The following describes the methodologies and assumptions used, by financial instrument, to determine fair value.

Financial assets

Assets for which fair value approximates carrying value
The Firm considers fair values of certain financial assets carried at cost – including cash and due from banks, deposits with banks, securities borrowed, short-term receivables and accrued interest receivable – to approximate their respective carrying values, due to their short-term nature and generally negligible credit risk.

Assets where fair value differs from cost
The Firm's debt, equity and derivative trading instruments are carried at their estimated fair value. Quoted market prices, when available, are used to determine the fair value of trading instruments. If quoted market prices are not available, then fair values are estimated by using pricing models, quoted prices of instruments with similar characteristics, or discounted cash flows.

Federal funds sold and securities purchased under resale agreements
Federal funds sold and securities purchased under resale agreements are typically short-term in nature and, as such, for a significant majority of the Firm's transactions, cost approximates carrying value. This balance sheet item also includes structured resale agreements and similar products with long-dated maturities. To estimate the fair value of these instruments, cash flows are discounted using the appropriate market rates for the applicable maturity.

Securities
Fair values of actively traded securities are determined by the secondary market, while the fair values for nonactively traded securities are based on independent broker quotations.

Derivatives
Fair value for derivatives is determined based on the following:

- position valuation, principally based on liquid market pricing as evidenced by exchange-traded prices, broker-dealer quotations or related input parameters, which assume all counterparties have the same credit rating;
- credit valuation adjustments to the resulting portfolio valuation, to reflect the credit quality of individual counterparties; and
- other fair value adjustments to take into consideration liquidity, concentration and other factors.

For those derivatives valued based on models with significant unobservable market parameters, the Firm defers the initial trading profit for these financial instruments. The deferred profit is recognized in Trading revenue on a systematic basis and when observable market data becomes available.

The fair value of derivative payables does not incorporate a valuation adjustment to reflect JPMorgan Chase's credit quality.

Interests in purchased receivables
The fair value of variable-rate interests in purchased receivables approximate their respective carrying amounts due to their variable interest terms and negligible credit risk. The estimated fair values for fixed-rate interests in purchased receivables are determined using a discounted cash flow analysis using appropriate market rates for similar instruments.

Loans
Fair value for loans is determined using methodologies suitable for each type of loan:

- Fair value for the wholesale loan portfolio is estimated primarily using the cost of credit derivatives, which is adjusted to account for the differences in recovery rates between bonds, on which the cost of credit derivatives is based, and loans.
- Fair values for consumer installment loans (including automobile financings) and consumer real estate, for which market rates for comparable loans are readily available, are based on discounted cash flows, adjusted for prepayments. The discount rates used for consumer installment loans are current rates offered by commercial banks. For consumer real estate, secondary market yields for comparable mortgage-backed securities, adjusted for risk, are used.
- Fair value for credit card receivables is based on discounted expected cash flows. The discount rates used for credit card receivables incorporate only the effects of interest rate changes, since the expected cash flows already reflect an adjustment for credit risk.
- The fair value of loans in the held-for-sale and trading portfolios is generally based on observable market prices and on prices of similar instruments, including bonds, credit derivatives and loans with similar characteristics. If market prices are not available, the fair value is based on the estimated cash flows adjusted for credit risk; that risk is discounted, using a rate appropriate for each maturity that incorporates the effects of interest rate changes.

Other assets
This caption includes private equity investments and MSRs.

For a discussion of the fair value methodology for private equity investments, see Note 9 on page 100 of this Annual Report.

For a discussion of the fair value methodology for MSRs, see Note 15 on pages 109–111 of this Annual Report.

Financial liabilities

Liabilities for which fair value approximates carrying value
SFAS 107 requires that the fair value for deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value. SFAS 107 does not allow for the recognition of the inherent funding value of these instruments.

Fair value of commercial paper, other borrowed funds, accounts payable and accrued liabilities is considered to approximate their respective carrying values due to their short-term nature.

Interest-bearing deposits
Fair values of interest-bearing deposits are estimated by discounting cash flows based on the remaining contractual maturities of funds having similar interest rates and similar maturities.

Federal funds purchased and securities sold under repurchase agreements
Federal funds purchased and securities sold under repurchase agreements are typically short-term in nature; as such, for a significant majority of these transactions, cost approximates carrying value. This balance sheet item also includes structured repurchase agreements and similar products with long-dated maturities. To estimate the fair value of these instruments, the cash flows are discounted using the appropriate market rates for the applicable maturity.

Beneficial interests issued by consolidated VIEs
Beneficial interests issued by consolidated VIEs ("beneficial interests") are generally short-term in nature and, as such, for a significant majority of the Firm's transactions, cost approximates carrying value. The Consolidated balance sheets also include beneficial interests with long-dated maturities. The fair value of these instruments is based on current market rates.

Long-term debt-related instruments
Fair value for long-term debt, including the junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities, is based on current market rates and is adjusted for JPMorgan Chase's credit quality.

Lending-related commitments
Although there is no liquid secondary market for wholesale commitments, the Firm estimates the fair value of its wholesale lending-related commitments primarily using the cost of credit derivatives (which is adjusted to account for the difference in recovery rates between bonds, on which the cost of credit derivatives is based, and loans) and loan equivalents (which represent the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become outstanding in the event an obligor defaults). The Firm estimates the fair value of its consumer commitments to extend credit based on the primary market prices to originate new commitments. It is the change in current primary market prices that provides the estimate of the fair value of these commitments.

On this basis, at December 31, 2004 and 2003, the fair value of the Firm's lending-related commitments approximated the Allowance for lending-related commitments of $492 million and $324 million, respectively.

The following table presents the carrying value and estimated fair value of financial assets and liabilities valued under SFAS 107; accordingly, certain assets and liabilities that are not considered financial instruments are excluded from the table.

	2004			2003[a][b]		
December 31, (in billions)	Carrying value	Estimated fair value	Appreciation/ (depreciation)	Carrying value	Estimated fair value	Appreciation/ (depreciation)
Financial assets						
Assets for which fair value approximates carrying value	$ 125.7	$ 125.7	$ —	$ 84.6	$ 84.6	$ —
Federal funds sold and securities purchased under resale agreements	101.4	101.3	(0.1)	76.9	77.2	0.3
Trading assets	288.8	288.8	—	252.9	252.9	—
Securities	94.5	94.5	—	60.3	60.3	—
Loans:						
Wholesale, net of allowance for loan losses	132.0	134.6	2.6	73.2	74.5	1.3
Consumer, net of allowance for loan losses	262.8	262.5	(0.3)	137.0	138.2	1.2
Interests in purchased receivables	31.7	31.8	0.1	4.8	4.8	—
Other assets	50.4	51.1	0.7	61.0	61.5	0.5
Total financial assets	$ 1,087.3	$ 1,090.3	$ 3.0	$ 750.7	$ 754.0	$ 3.3
Financial liabilities						
Liabilities for which fair value approximates carrying value	$ 228.8	$ 228.8	$ —	$ 146.6	$ 146.6	$ —
Interest-bearing deposits	385.3	385.5	(0.2)	247.0	247.1	(0.1)
Federal funds purchased and securities sold under repurchase agreements	127.8	127.8	—	113.5	113.6	(0.1)
Trading liabilities	151.2	151.2	—	149.4	149.4	—
Beneficial interests issued by consolidated VIEs	48.1	48.0	0.1	12.3	12.3	—
Long-term debt-related instruments	105.7	107.7	(2.0)	54.8	57.0	(2.2)
Total financial liabilities	$ 1,046.9	$ 1,049.0	$ (2.1)	$ 723.6	$ 726.0	$ (2.4)
Net appreciation			$ 0.9			$ 0.9

(a) Heritage JPMorgan Chase only.
(b) Amounts have been revised to reflect the current year's presentation.

Note 30 – International operations

The following table presents income statement information of JPMorgan Chase by major geographic area. The Firm defines international activities as business transactions that involve customers residing outside of the United States, and the information presented below is based primarily on the domicile of the customer. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 31 on pages 126–127 of this Annual Report.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the United States.

For the year ended December 31, (in millions)[a]	Revenue[b]	Expense[c]	Income before income taxes	Net income
2004				
Europe/Middle East and Africa	**$ 6,566**	**$ 4,635**	**$ 1,931**	**$ 1,305**
Asia and Pacific	**2,631**	**1,766**	**865**	**547**
Latin America and the Caribbean	**816**	**411**	**405**	**255**
Other	**112**	**77**	**35**	**25**
Total international	**10,125**	**6,889**	**3,236**	**2,132**
Total U.S.	**32,972**	**30,014**	**2,958**	**2,334**
Total	**$ 43,097**	**$ 36,903**	**$ 6,194**	**$ 4,466**
2003				
Europe/Middle East and Africa	$ 6,344	$ 4,076	$ 2,268	$ 1,467
Asia and Pacific	1,902	1,772	130	91
Latin America and the Caribbean	1,000	531	469	287
Other	50	17	33	34
Total international	9,296	6,396	2,900	1,879
Total U.S.	24,088	16,960	7,128	4,840
Total	$ 33,384	$ 23,356	$ 10,028	$ 6,719
2002				
Europe/Middle East and Africa	$ 5,120	$ 4,882	$ 238	$ 157
Asia and Pacific	1,900	1,820	80	53
Latin America and the Caribbean	685	557	128	85
Other	42	34	8	5
Total international	7,747	7,293	454	300
Total U.S.	21,867	19,802	2,065	1,363
Total	$ 29,614	$ 27,095	$ 2,519	$ 1,663

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.
(b) Revenue is composed of Net interest income and noninterest revenue.
(c) Expense is composed of Noninterest expense and Provision for credit losses.

Note 31 – Business segments

JPMorgan Chase is organized into six major reportable business segments: the Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset & Wealth Management, as well as a Corporate segment. The segments are based on the products and services provided or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on an operating basis. For a definition of operating basis, see the footnotes to the table below. For a further discussion concerning JPMorgan Chase's business segments, see Business segment results on pages 28–29 of this Annual Report.

In connection with the Merger, business segment reporting was realigned to reflect the new business structure of the combined Firm. Treasury was transferred from the Investment Bank into Corporate. The segment formerly known as Chase Financial Services had been comprised of Chase Home Finance, Chase Cardmember Services, Chase Auto Finance, Chase Regional Banking and Chase Middle Market; as a result of the Merger, this segment is now called Retail Financial Services and is comprised of Home Finance, Auto & Education Finance, Consumer & Small Business Banking and Insurance. Chase Middle Market moved into Commercial Banking, and Chase Cardmember Services is now its own segment called Card Services. Treasury & Securities Services remains unchanged. Investment Management & Private Banking has been renamed Asset & Wealth Management. JPMorgan Partners, which formerly was a stand-alone business segment, was moved into Corporate. Lastly,

Segment results and reconciliation[a] (table continued on next page)

Year ended December 31,[b]	Investment Bank[e]			Retail Financial Services			Card Services[f]			Commercial Banking		
(in millions, except ratios)	**2004**	2003	2002	**2004**	2003	2002	**2004**	2003	2002	**2004**	2003	2002
Net interest income	**$ 1,325**	$ 1,667	$ 1,978	**$ 7,714**	$ 5,220	$ 3,823	**$ 8,374**	$ 5,052	$ 4,930	**$ 1,692**	$ 959	$ 999
Noninterest revenue	**11,705**	11,270	8,881	**3,119**	2,232	2,541	**2,349**	1,097	995	**561**	354	348
Intersegment revenue[c]	**(425)**	(253)	(177)	**(42)**	(24)	(16)	**22**	(5)	(12)	**121**	39	18
Total net revenue	**12,605**	12,684	10,682	**10,791**	7,428	6,348	**10,745**	6,144	5,913	**2,374**	1,352	1,365
Provision for credit losses	**(640)**	(181)	2,392	**449**	521	334	**4,851**	2,904	2,751	**41**	6	72
Credit reimbursement (to)/from TSS[d]	**90**	(36)	(82)	**—**	—	—	**—**	—	—	**—**	—	—
Merger costs	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Litigation reserve charge	**—**	100	—	**—**	—	—	**—**	—	—	**—**	—	—
Excess real estate charge	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Other noninterest expense	**8,696**	8,202	7,798	**6,825**	4,471	3,733	**3,883**	2,178	2,129	**1,343**	822	809
Income (loss) before income tax expense	**4,639**	4,527	410	**3,517**	2,436	2,281	**2,011**	1,062	1,033	**990**	524	484
Income tax expense (benefit)	**1,691**	1,722	(3)	**1,318**	889	849	**737**	379	369	**382**	217	201
Net income (loss)	**$ 2,948**	$ 2,805	$ 413	**$ 2,199**	$ 1,547	$ 1,432	**$ 1,274**	$ 683	$ 664	**$ 608**	$ 307	$ 283
Average equity	**$ 17,290**	$ 18,350	$ 19,134	**$ 9,092**	$ 4,220	$ 3,907	**$ 7,608**	$ 3,440	$ 3,444	**$ 2,093**	$ 1,059	$ 1,199
Average assets	**473,121**	436,488	429,866	**185,928**	147,435	114,248	**94,741**	51,406	49,648	**36,435**	16,460	15,973
Return on average equity	**17%**	15%	2%	**24%**	37%	37%	**17%**	20%	19%	**29%**	29%	24%
Overhead ratio	**69**	65	73	**63**	60	59	**36**	35	36	**57**	61	59

(a) In addition to analyzing the Firm's results on a reported basis, management looks at results on an "operating basis," which is a non-GAAP financial measure. Operating basis starts with the reported U.S. GAAP results. In the case of the Investment Bank, the operating basis includes the reclassification of net interest income related to trading activities to Trading revenue. In the case of Card Services, refer to footnote (f). These adjustments do not change JPMorgan Chase's reported net income. Finally, operating basis excludes the Merger costs, the Litigation reserve charge and accounting policy conformity adjustments related to the Merger, as management believes these items are not part of the Firm's normal daily business operations (and, therefore, not indicative of trends) and do not provide meaningful comparisons with other periods.

(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only.

(c) Intersegment revenue includes intercompany revenue and revenue-sharing agreements, net of intersegment expenses. Transactions between business segments are primarily conducted at fair value.

(d) TSS reimburses the IB for credit portfolio exposures the IB manages on behalf of clients the segments share. At the time of the Merger, the reimbursement methodology was revised to be based on pre-tax earnings, net of the cost of capital related to those exposures. Prior to the Merger, the credit reimbursement was based on pre-tax earnings, plus the allocated capital associated with the shared clients.

(e) Segment operating results include the reclassification of Net interest income ("NII") related to trading activities to Trading revenue within Noninterest revenue, which primarily impacts the Investment Bank. Trading-related NII reclassified to Trading revenue was $2.0 billion, $2.1 billion and $1.9 billion for 2004, 2003 and 2002, respectively. These amounts are eliminated in Corporate/reconciling items to arrive at NII and Noninterest revenue on a reported GAAP basis for JPMorgan Chase.

(f) Operating results for Card Services exclude the impact of credit card securitizations on revenue, provision for credit losses and average assets, as JPMorgan Chase treats the sold receivables as if they were still on the balance sheet in evaluating the overall performance of the credit card portfolio. The related securitization adjustments for 2004, 2003 and 2002 were: $5.3 billion, $3.3 billion and $2.8 billion, respectively, in NII; $(2.4) billion, $(1.4) billion and $(1.4) billion, respectively, in Noninterest revenue; $2.9 billion, $1.9 billion and $1.4 billion, respectively, in Provision for credit losses; and $51.1 billion, $32.4 billion and $26.5 billion, respectively, in Average assets. These adjustments are eliminated in Corporate/reconciling items to arrive at the Firm's reported GAAP results.

(g) Includes $858 million of accounting policy conformity adjustments consisting of approximately $1.4 billion related to the decertification of the seller's retained interest in credit card securitizations, partially offset by a benefit of $584 million related to conforming wholesale and consumer provision methodologies for the combined Firm.

(h) Merger costs attributed to the lines of business for 2004 were as follows: $74 million, Investment Bank; $201 million, Retail Financial Services; $79 million, Card Services; $23 million, Commercial Banking; $68 million, Treasury & Securities Services; $31 million, Asset & Wealth Management; and $889 million, Corporate.

Corporate is currently comprised of Private Equity (JPMorgan Partners and ONE Equity Partners), Treasury, as well as corporate support areas, which include Central Technology and Operations, Internal Audit, Executive Office, Finance, General Services, Human Resources, Marketing & Communications, the Office of General Counsel, Real Estate and Business Services, Risk Management and Strategy and Development.

Segment results, which are presented on an operating basis, reflect revenues on a tax-equivalent basis. The tax-equivalent gross-up for each business segment is based upon the level, type and tax jurisdiction of the earnings and assets within each business segment. Operating revenue for the Investment Bank includes tax-equivalent adjustments for income tax credits primarily related to affordable housing investments as well as tax-exempt income from municipal bond investments. Information prior to the Merger has not been restated to conform with this new presentation. The amount of the tax-equivalent gross-up for each business segment is eliminated within the Corporate segment and was $(303) million, $(122) million and $(116) million for the years ended December 31, 2004, 2003 and 2002, respectively.

The following table provides a summary of the Firm's segment results for 2004, 2003 and 2002 on an operating basis. The impact of credit card securitizations, merger costs, litigation charges and accounting policy conformity adjustments have been included in Corporate/reconciling items so that the total Firm results are on a reported basis. Segment results for periods prior to July 1, 2004, reflect heritage JPMorgan Chase–only results and have been restated to reflect the current business segment organization and reporting classifications.

(table continued from previous page)

Treasury & Securities Services			Asset & Wealth Management			Corporate/ reconciling items[e][f]			Total		
2004	2003	2002	**2004**	2003	2002	**2004**	2003	2002	**2004**	2003	2002
$ 1,383	$ 947	$ 962	**$ 796**	$ 488	$ 467	**$ (4,523)**	$ (1,368)	$ (981)	**$ 16,761**	$ 12,965	$ 12,178
3,226	2,475	2,387	**3,297**	2,415	2,328	**2,079**	576	(44)	**26,336**	20,419	17,436
248	186	186	**86**	67	137	**(10)**	(10)	(136)	**—**	—	—
4,857	3,608	3,535	**4,179**	2,970	2,932	**(2,454)**	(802)	(1,161)	**43,097**	33,384	29,614
7	1	3	**(14)**	35	85	**(2,150)[g]**	(1,746)	(1,306)	**2,544**	1,540	4,331
(90)	36	82	**—**	—	—	**—**	—	—	**—**	—	—
—	—	—	**—**	—	—	**1,365[h]**	—	1,210	**1,365**	—	1,210
—	—	—	**—**	—	—	**3,700**	—	1,300	**3,700**	100	1,300
—	—	—	**—**	—	—	**—**	—	98	**—**	—	98
4,113	3,028	2,771	**3,133**	2,486	2,408	**1,301**	529	508	**29,294**	21,716	20,156
647	615	843	**1,060**	449	439	**(6,670)**	415	(2,971)	**6,194**	10,028	2,519
207	193	294	**379**	162	161	**(2,986)**	(253)	(1,015)	**1,728**	3,309	856
$ 440	$ 422	$ 549	**$ 681**	$ 287	$ 278	**$ (3,684)**	$ 668	$ (1,956)	**$ 4,466**	$ 6,719	$ 1,663
$ 2,544	$ 2,738	$ 2,700	**$ 3,902**	$ 5,507	$ 5,649	**$ 33,112**	$ 7,674	$ 5,335	**$ 75,641**	$ 42,988	$ 41,368
23,430	18,379	17,239	**37,751**	33,780	35,813	**111,150**	72,030	70,570	**962,556**	775,978	733,357
17%	15%	20%	**17%**	5%	5%	**NM**	NM	NM	**6%**	16%	4%
85	84	78	**75**	84	82	**NM**	NM	NM	**80**	65	77

Note 32 – Parent company

Parent company – statements of income

Year ended December 31, (in millions)[a]	2004	2003	2002
Income			
Dividends from bank and bank holding company subsidiaries[b]	$ 1,208	$ 2,436	$ 3,079
Dividends from nonbank subsidiaries[c]	773	2,688	422
Interest income from subsidiaries	1,370	945	1,174
Other interest income	137	130	148
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	833	632	277
Nonbank	499	385	390
Other income	204	(25)	264
Total income	5,024	7,191	5,754
Expense			
Interest expense to subsidiaries[c]	603	422	405
Other interest expense	1,834	1,329	1,511
Compensation expense	353	348	378
Other noninterest expense	1,105	747	699
Total expense	3,895	2,846	2,993
Income before income tax benefit and undistributed net income of subsidiaries	1,129	4,345	2,761
Income tax benefit	556	474	432
Equity in undistributed net income (loss) of subsidiaries	2,781	1,900	(1,530)
Net income	$ 4,466	$ 6,719	$ 1,663

Parent company – balance sheets

December 31, (in millions)	2004	2003[d]
Assets		
Cash with banks, primarily with bank subsidiaries	$ 513	$ 148
Deposits with banking subsidiaries	10,703	12,554
Securities purchased under resale agreements, primarily with nonbank subsidiaries	—	285
Trading assets	3,606	3,915
Available-for-sale securities	2,376	2,099
Loans	162	550
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	19,076	9,239
Nonbank	34,456	24,489
Investment (at equity) in subsidiaries:		
Bank and bank holding company	105,599	43,853
Nonbank[c]	17,701	10,399
Goodwill and other intangibles	890	860
Other assets	11,557	9,213
Total assets	$ 206,639	$ 117,604
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries[c]	$ 14,195	$ 9,488
Other borrowed funds, primarily commercial paper	15,050	16,560
Other liabilities	6,309	4,767
Long-term debt[e]	65,432	40,635
Total liabilities	100,986	71,450
Stockholders' equity	105,653	46,154
Total liabilities and stockholders' equity	$ 206,639	$ 117,604

Parent company – statements of cash flows

Year ended December 31, (in millions)[a]	2004	2003	2002
Operating activities			
Net income	$ 4,466	$ 6,719	$ 1,663
Less: Net income of subsidiaries	4,762	7,017	1,971
Parent company net loss	(296)	(298)	(308)
Add: Cash dividends from subsidiaries[b][c]	1,964	5,098	2,320
Other, net	(81)	(272)	(912)
Net cash provided by operating activities	1,587	4,528	1,100
Investing activities			
Net cash change in:			
Deposits with banking subsidiaries	1,851	(2,560)	(3,755)
Securities purchased under resale agreements, primarily with nonbank subsidiaries	355	99	(40)
Loans	407	(490)	(27)
Advances to subsidiaries	(5,772)	(3,165)	6,172
Investment (at equity) in subsidiaries	(4,015)	(2,052)	(2,284)
Other, net	11	12	(37)
Available-for-sale securities:			
Purchases	(392)	(607)	(1,171)
Proceeds from sales and maturities	114	654	1,877
Cash received in business acquisitions	4,608	—	—
Net cash (used in) provided by investing activities	(2,833)	(8,109)	735
Financing activities			
Net cash change in borrowings from subsidiaries[c]	941	2,005	573
Net cash change in other borrowed funds	(1,510)	(2,104)	(915)
Proceeds from the issuance of long-term debt	12,816	12,105	12,533
Repayments of long-term debt	(6,149)	(6,733)	(12,271)
Proceeds from the issuance of stock and stock-related awards	848	1,213	725
Redemption of preferred stock	(670)	—	—
Treasury stock purchased	(738)	—	—
Cash dividends paid	(3,927)	(2,865)	(2,784)
Net cash provided by (used in) financing activities	1,611	3,621	(2,139)
Net increase (decrease) in cash with banks	365	40	(304)
Cash with banks at the beginning of the year	148	108	412
Cash with banks at the end of the year, primarily with bank subsidiaries	$ 513	$ 148	$ 108
Cash interest paid	$ 2,383	$ 1,918	$ 1,829
Cash income taxes paid	$ 701	$ 754	$ 592

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. All other periods reflect the results of heritage JPMorgan Chase only. For a further discussion of the Merger, see Note 2 on pages 89–90 of this Annual Report.
(b) Dividends in 2002 include a stock dividend of $1.2 billion from the mortgage business, which was contributed to JPMorgan Chase Bank.
(c) Subsidiaries include trusts that issued guaranteed capital debt securities ("issuer trusts"). As a result of FIN 46, the Parent deconsolidated these trusts in 2003. The Parent received dividends of $15 million and $11 million from the issuer trusts in 2004 and 2003, respectively. For a further discussion on these issuer trusts, see Note 17 on pages 112–113 of this Annual Report.
(d) Heritage JPMorgan Chase only.
(e) At December 31, 2004, all debt that contractually matures in 2005 through 2009 totaled $10.8 billion, $10.5 billion, $9.4 billion, $6.8 billion and $9.2 billion, respectively.

Supplementary information

Selected quarterly financial data (unaudited)

(in millions, except per share, ratio and headcount data)	2004				2003[b]			
As of or for the period ended	4th[a]	3rd[a]	2nd[b]	1st[b]	4th	3rd	2nd	1st
Selected income statement data								
Net interest income	$ 5,329	$ 5,452	$ 2,994	$ 2,986	$ 3,182	$ 3,198	$ 3,228	$ 3,357
Noninterest revenue	7,621	7,053	5,637	6,025	4,924	4,582	5,840	5,073
Total net revenue	12,950	12,505	8,631	9,011	8,106	7,780	9,068	8,430
Provision for credit losses	1,157	1,169	203	15	139	223	435	743
Noninterest expense before Merger costs and Litigation reserve charge	8,863	8,625	5,713	6,093	5,258	5,127	5,766	5,565
Merger costs	523	752	90	—	—	—	—	—
Litigation reserve charge	—	—	3,700	—	—	—	100	—
Total noninterest expense	9,386	9,377	9,503	6,093	5,258	5,127	5,866	5,565
Income (loss) before income tax expense (benefit)	2,407	1,959	(1,075)	2,903	2,709	2,430	2,767	2,122
Income tax expense (benefit)	741	541	(527)	973	845	802	940	722
Net income (loss)	$ 1,666	$ 1,418	$ (548)	$ 1,930	$ 1,864	$ 1,628	$ 1,827	$ 1,400
Per common share								
Net income (loss) per share: Basic	$ 0.47	$ 0.40	$ (0.27)	$ 0.94	$ 0.92	$ 0.80	$ 0.90	$ 0.69
Diluted	0.46	0.39	(0.27)	0.92	0.89	0.78	0.89	0.69
Cash dividends declared per share	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Book value per share	29.61	29.42	21.52	22.62	22.10	21.55	21.53	20.73
Common shares outstanding								
Average: Basic	3,515	3,514	2,043	2,032	2,016	2,012	2,006	2,000
Diluted	3,602	3,592	2,043	2,093	2,079	2,068	2,051	2,022
Common shares at period end	3,556	3,564	2,088	2,082	2,043	2,039	2,035	2,030
Selected ratios								
Return on common equity ("ROE")[c]	6%	5%	NM	17%	17%	15%	17%	13%
Return on assets ("ROA")[c][d]	0.57	0.50	NM	1.01	0.95	0.83	0.96	0.73
Tier 1 capital ratio	8.7	8.6	8.2%	8.4	8.5	8.7	8.4	8.4
Total capital ratio	12.2	12.0	11.2	11.4	11.8	12.1	12.0	12.2
Tier 1 leverage ratio	6.2	6.5	5.5	5.9	5.6	5.5	5.5	5.0
Selected balance sheet (period-end)								
Total assets	$ 1,157,248	$ 1,138,469	$ 817,763	$ 801,078	$ 770,912	$ 792,700	$ 802,603	$ 755,156
Securities	94,512	92,816	64,915	70,747	60,244	65,152	82,549	85,178
Total loans	402,114	393,701	225,938	217,630	214,766	225,287	227,394	217,471
Deposits	521,456	496,454	346,539	336,886	326,492	313,626	318,248	300,667
Long-term debt	95,422	91,754	52,981	50,062	48,014	43,945	43,371	42,851
Common stockholders' equity	105,314	104,844	44,932	47,092	45,145	43,948	43,812	42,075
Total stockholders' equity	105,653	105,853	45,941	48,101	46,154	44,957	44,821	43,084
Credit quality metrics								
Allowance for credit losses	$ 7,812	$ 8,034	$ 4,227	$ 4,417	$ 4,847	$ 5,082	$ 5,471	$ 5,651
Nonperforming assets	3,231	3,637	2,482	2,882	3,161	3,853	4,111	4,448
Allowance for loan losses to total loans[e]	1.94%	2.01%	1.92%	2.08%	2.33%	2.51%	2.60%	2.73%
Net charge-offs	$ 1,398	$ 865	$ 392	$ 444	$ 374	$ 614	$ 614	$ 670
Net charge-off rate[c][f]	1.47%	0.93%	0.77%	0.92%	0.76%	1.27%	1.31%	1.43%
Wholesale net charge-off rate[c][f]	0.21	(0.08)	0.29	0.50	(0.05)	1.25	1.25	1.36
Managed Card net charge-off rate[c]	5.24	4.88	5.85	5.81	5.77	5.84	6.04	5.95
Headcount	160,968	162,275	94,615	96,010	96,367	95,931	95,862	96,637
Share price[g]								
High	$ 40.45	$ 40.25	$ 42.57	$ 43.84	$ 36.99	$ 38.26	$ 36.52	$ 28.29
Low	36.32	35.50	34.62	36.30	34.45	32.40	23.75	20.13
Close	39.01	39.73	38.77	41.95	36.73	34.33	34.18	23.71

(a) Quarterly results include three months of the combined Firm's results.
(b) Heritage JPMorgan Chase only.
(c) Based on annualized amounts.
(d) Represents Net income / Total average assets.
(e) Excluded from this ratio were loans held for sale.
(f) Excluded from this ratio were average loans held for sale.
(g) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.
NM – Not meaningful due to net loss.

Five-year summary of consolidated financial highlights

JPMorgan Chase & Co

(unaudited)
(in millions, except per share, headcount and ratio data)

As of or for the year ended December 31,	2004[a]	Heritage JPMorgan Chase only 2003	2002	2001	2000
Selected income statement data					
Net interest income	$ 16,761	$ 12,965	$ 12,178	$ 11,401	$ 9,865
Noninterest revenue	26,336	20,419	17,436	17,943	23,321
Total net revenue	43,097	33,384	29,614	29,344	33,186
Provision for credit losses	2,544	1,540	4,331	3,182	1,380
Noninterest expense before Merger costs and Litigation reserve charge	29,294	21,716	20,254	21,073	21,642
Merger and restructuring costs	1,365	—	1,210	2,523	1,431
Litigation reserve charge	3,700	100	1,300	—	—
Total noninterest expense	34,359	21,816	22,764	23,596	23,073
Income before income tax expense and effect of accounting change	6,194	10,028	2,519	2,566	8,733
Income tax expense	1,728	3,309	856	847	3,006
Income before effect of accounting change	4,466	6,719	1,663	1,719	5,727
Cumulative effect of change in accounting principle (net of tax)	—	—	—	(25)	—
Net income	$ 4,466	$ 6,719	$ 1,663	$ 1,694	$ 5,727
Per common share					
Net income per share: Basic	$ 1.59	$ 3.32	$ 0.81	$ 0.83[f]	$ 2.99
Diluted	1.55	3.24	0.80	0.80[f]	2.86
Cash dividends declared per share	1.36	1.36	1.36	1.36	1.28
Book value per share	29.61	22.10	20.66	20.32	21.17
Common shares outstanding					
Average: Basic	2,780	2,009	1,984	1,972	1,884
Diluted	2,851	2,055	2,009	2,024	1,969
Common shares at period-end	3,556	2,043	1,999	1,973	1,928
Selected ratios					
Return on common equity ("ROE")	6%	16%	4%	4%	16%
Return on assets ("ROA")[b]	0.46	0.87	0.23	0.23	0.85
Tier 1 capital ratio	8.7	8.5	8.2	8.3	8.5
Total capital ratio	12.2	11.8	12.0	11.9	12.0
Tier 1 leverage ratio	6.2	5.6	5.1	5.2	5.4
Selected balance sheet (period-end)					
Total assets	$ 1,157,248	$ 770,912	$ 758,800	$ 693,575	$ 715,348
Securities	94,512	60,244	84,463	59,760	73,695
Loans	402,114	214,766	216,364	217,444	216,050
Deposits	521,456	326,492	304,753	293,650	279,365
Long-term debt	95,422	48,014	39,751	39,183	43,299
Common stockholders' equity	105,314	45,145	41,297	40,090	40,818
Total stockholders' equity	105,653	46,154	42,306	41,099	42,338
Credit quality metrics					
Allowance for credit losses	$ 7,812	$ 4,847	$ 5,713	$ 4,806	$ 3,948
Nonperforming assets	3,231	3,161	4,821	4,037	1,923
Allowance for loan losses to total loans[c]	1.94%	2.33%	2.80%	2.25%	1.77%
Net charge-offs	$ 3,099	$ 2,272	$ 3,676	$ 2,335	$ 1,480
Net charge-off rate[d]	1.08%	1.19%	1.90%	1.13%	0.73%
Headcount	160,968	96,367	97,124	95,812[g]	99,757[g]
Share price[e]					
High	$ 43.84	$ 38.26	$ 39.68	$ 59.19	$ 67.17
Low	34.62	20.13	15.26	29.04	32.38
Close	39.01	36.73	24.00	36.35	45.44

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) Represents Net income / Total average assets.
(c) Excluded from this ratio were loans held for sale of $25.7 billion, $20.8 billion, $25.0 billion, $16.6 billion and $8.8 billion at December 31, 2004, 2003, 2002, 2001 and 2000, respectively.
(d) Excluded from the net charge-off rates were average loans held for sale of $21.1 billion, $29.1 billion, $17.8 billion, $12.7 billion and $7.1 billion as of December 31, 2004, 2003, 2002, 2001 and 2000, respectively.
(e) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.
(f) Basic and diluted earnings per share were each reduced by $0.01 in 2001 because of the impact of the adoption of SFAS 133 relating to the accounting for derivative instruments and hedging activities.
(g) Represents full-time equivalent employees, as headcount data is unavailable.

Glossary of terms

JPMorgan Chase & Co.

AICPA: American Institute of Certified Public Accountants.

APB: Accounting Principles Board Opinion.

APB 25: "Accounting for Stock Issued to Employees."

Assets under management: Represent assets actively managed by Asset & Wealth Management on behalf of institutional, private banking, private client services and retail clients.

Assets under supervision: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Average managed assets: Refers to total assets on the Firm's balance sheet plus credit card receivables that have been securitized.

bp: Denotes basis points; 100 bp equals 1%.

Contractual credit card charge-off: In accordance with the Federal Financial Institutions Examination Council policy, credit card loans are charged-off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification of the filing of bankruptcy, whichever is earlier.

Core deposits: U.S. deposits insured by the Federal Deposit Insurance Corporation, up to the legal limit of $100,000 per depositor.

EITF: Emerging Issues Task Force.

EITF Issue 03-01: "The Meaning of Other-than-temporary Impairment and Its Application to Certain Investments."

FASB: Financial Accounting Standards Board.

FIN 39: FASB Interpretation No. 39, "Offsetting of Amounts Related to Certain Contracts."

FIN 41: FASB Interpretation No. 41, "Offsetting of Amounts Related to Certain Repurchase and Reverse Repurchase Agreements."

FIN 45: FASB Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirement for Guarantees, including Indirect Guarantees of Indebtedness of Others."

FIN 46R: FASB Interpretation No. 46 (revised December 2003), "Consolidation of Variable Interest Entities, an interpretation of Accounting Research Bulletin No. 51."

FASB Staff Position ("FSP") EITF Issue 03-1-1: "Effective Date of Paragraphs 10–20 of EITF Issue No. 03-01, 'The Meaning of Other-than-temporary Impairment and Its Application to Certain Investments.' "

FSP SFAS 106-2: "Accounting and Disclosure Requirements Related to the Medicare Prescription Drug, Improvement and Modernization Act of 2003."

FSP SFAS 109-2: "Accounting and Disclosure Guidance for the Foreign Earnings Repatriation Provision within the American Jobs Creation Act of 2004."

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment-grade" generally represents a risk profile similar to a rating of a BBB-/Baa3 or better, as defined by independent rating agencies.

Mark-to-market exposure: A measure, at a point in time, of the value of a derivative or foreign exchange contract in the open market. When the mark-to-market value is positive, it indicates the counterparty owes JPMorgan Chase and, therefore, creates a repayment risk for the Firm. When the mark-to-market value is negative, JPMorgan Chase owes the counterparty. In this situation, the Firm does not have repayment risk.

Master netting agreement: An agreement between two counterparties that have multiple derivative contracts with each other that provides for the net settlement of all contracts through a single payment, in a single currency, in the event of default on or termination of any one contract. See FIN 39.

NA: Data is not applicable for the period presented.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

SFAS: Statement of Financial Accounting Standards.

SFAS 87: "Employers' Accounting for Pensions."

SFAS 88: "Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits."

SFAS 106: "Employers' Accounting for Postretirement Benefits Other Than Pensions."

SFAS 107: "Disclosures about Fair Value of Financial Instruments."

SFAS 109: "Accounting for Income Taxes."

SFAS 114: "Accounting by Creditors for Impairment of a Loan."

SFAS 115: "Accounting for Certain Investments in Debt and Equity Securities."

SFAS 123: "Accounting for Stock-Based Compensation."

SFAS 123R: "Share-Based Payment."

SFAS 128: "Earnings per Share."

SFAS 133: "Accounting for Derivative Instruments and Hedging Activities."

SFAS 138: "Accounting for Certain Derivative Instruments and Certain Hedging Activities – an amendment of FASB Statement No. 133."

SFAS 140: "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities – a replacement of FASB Statement No. 125."

SFAS 142: "Goodwill and Other Intangible Assets."

SFAS 149: "Amendment of Statement No. 133 on Derivative Instruments and Hedging Activities."

Staff Accounting Bulletin ("SAB") 105: "Application of Accounting Principles to Loan Commitments."

Statement of Position ("SOP") 98-1: "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use."

Statement of Position ("SOP") 03-3: "Accounting for Certain Loans or Debt Securities Acquired in a Transfer."

Stress testing: A scenario that measures market risk under unlikely but plausible events in abnormal markets.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

Value-at-Risk ("VAR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

Community Advisory Board*

Mark A. Willis
Chairman
Community Advisory Board
JPMorgan Chase Community Development Group

Sharon Alexander-Holt
COO
The Urban League of Metropolitan Denver
Denver, CO

Lauren Anderson
Executive Director
Neighborhood Housing Services of New Orleans
New Orleans, LA

Polly Baca
CEO/Executive Director
Latin American Research and Service Agency
Denver, CO

Dionne Bagsby
Commissioner
Fort Worth, TX

Salvador Balcorta
Executive Director
Centro de Salud Familiar La Fe
El Paso, TX

Frank Ballesteros
Chief Administrative Officer
PPEP Microbusiness & Housing Development Corp.
Tucson, AZ

Eli Barbosa
Director of Neighborhood Reinvestment
Latin United Community Housing Association
Chicago, IL

Janie Barrera
President/CEO
ACCION Texas
San Antonio, TX

Shaun Belle
President/CEO
The Mt. Hope Housing Company
Bronx, NY

Pascual Blanco
Executive Director
La Fuerza Unida
Glen Cove, NY

Teresa Brice-Heames
Vice President
Housing for Mesa
Mesa, AZ

Sylvia Brooks
President/CEO
Houston Area Urban League
Houston, TX

Donnie Brown
Executive Director
Genesis Housing Development Corp.
Chicago, IL

James Buckley
Executive Director
University Neighborhood Housing Program
Bronx, NY

Jean Butzen
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Lakefront Supportive Housing
Chicago, IL

Joseph Carbone
President/CEO
The WorkPlace, Inc.
Bridgeport, CT

David Chen
Executive Director
Chinese American Planning Council
New York, NY

William Clark
President/CEO
Urban League of Rochester
Rochester, NY

Cesar Claro
Executive Director
Staten Island Economic Development Corp.
Staten Island, NY

Ricardo Diaz
Executive Director
United Community Center
Milwaukee, WI

Peter Elkowitz
President
Long Island Housing Partnership
Hauppauge, NY

Ron Fafoglia
Executive Director
TSP Hope, Inc.
Springfield, IL

Melissa Flournoy
President/CEO
The Louisiana Assoc. of Nonprofit Organizations (LANO)
Baton Rouge, LA

William Frey
Vice President, Director
Enterprise Foundation NYC Office
New York, NY

David Gallagher
Executive Director
Center for Neighborhood Economic Development
Long Island City, NY

Reuben Gant
Executive Director
Greenwood Community Development Corp.
Tulsa, OK

Reginald Gates
President/CEO
Dallas Black Chamber of Commerce
Dallas, TX

Sarah Gerecke
CEO
Neighborhood Housing Services of NYC
New York, NY

Christie Gillespie
Executive Director
Indiana Assoc. for Community Economic Development
Indianapolis, IN

Ernest Gonzalez
Corporate Committee Chair
Long Island Hispanic Chamber of Commerce
West Islip, NY

Mary Jane Gonzalez
Regional Director
Central Indiana Small Business Development Center
Indianapolis, IN

Dina Gonzalez
President
West Michigan Hispanic Chamber of Commerce
Grand Rapids, MI

Bruce Gottschall
Executive Director
Neighborhood Housing Services of Chicago
Chicago, IL

Colvin Grannum
President/CEO
Bedford Stuyvesant Restoration Corp.
Brooklyn, NY

Meg Haller
CEO
Gary Citywide CDC
Gary, IN

James Hargrove
Executive Director
Housing Authority of the City of Austin
Austin, TX

Don Hartman
Deputy Director
NHS of Phoenix
Phoenix, AZ

Roy Hastick
President/CEO
Caribbean American Chamber of Commerce & Industry
Brooklyn, NY

Norman Henry
President
Builders of Hope Community Development Corp.
Dallas, TX

Ralph Hollmon
President/CEO
Milwaukee Urban League, Inc.
Milwaukee, WI

Kevin Jackson
Executive Director
Chicago Rehab Network
Chicago, IL

Kim Jacobs
Executive Director
Westchester Housing Fund
Hawthorne, NY

Erma Johnson-Hadley
Vice Chancellor for Administration
Tarrant County College Dist.
Fort Worth, TX

Amy Klaben
President/CEO
Columbus Housing Partnership, Inc.
Columbus, OH

James Klein
Executive Director
Ohio Community Development Finance Fund
Columbus, OH

Christopher Kui
Executive Director
Asian Americans for Equality
New York, NY

Rhonda Lewis
President/CEO
Bridge Street Development Corp.
Brooklyn, NY

William Linder
Founder
New Community Corporation
Newark, NJ

Fred Lucas
President/CEO
Faith Center for Community Development
New York, NY

Richard Manson
Vice President
LISC
New York, NY

Maria Matos
Executive Director
Latin American Community Center
Wilmington, DE

Christie McCravy
Director of Homeownership Programs
The Housing Partnership, Inc.
Louisville, KY

Ghebre Selassie Mehreteab
Co-Chairman & CEO
The NHP Foundation
Washington, DC

Luis Miranda
Chairman
Audubon Partnership for Economic Development
New York, NY

Marlon Mitchell
Executive Director
City of Houston Small Business Development Corp.
Houston, TX

(continued on next page)

*Board membership as of January 2005

Community Advisory Board* (continued)

Andrew J. Mooney
Senior Program Director
Local Initiative Support Corporation
Chicago, IL

Randy Moore
Executive Director
Community Works in West Virginia, Inc.
Charleston, WV

Gilbert Moreno
President
Association for the Advancement of Mexican Americans
Houston, TX

Vincent Murray
Executive Director
Bagley Housing Association, Inc.
Detroit, MI

Joe Myer
Executive Director
NCALL Research
Dover, DE

Jeremy Nowak
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The Reinvestment Fund
Philadelphia, PA

David Pagan
Executive Director
Southside United Housing Development Fund Corp.
Brooklyn, NY

James Paley
Executive Director
Neighborhood Housing Services of New Haven
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John Parvensky
President
Colorado Coalition for the Homeless
Denver, CO

John Pritschard
President
Community Investment Corp.
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CFO
Greater Allen Cathedral of NY
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Hamilton County Community Action Agency
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Lawyer
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National Federation of Community Development Credit Unions
New York, NY

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Westchester Community Opportunity Program
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Project Hospitality
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Roosevelt, NY

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Greater Dallas Hispanic Chamber of Commerce
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Community Economic Development Fund
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Greater Harlem Chamber of Commerce
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Momentive Consumer Credit Counseling Service
Indianapolis, IN

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CEO
Metro Housing Partnership
Flint, MI

Diana Yazzie-Devine
President
Native American Connections
Phoenix, AZ

*Board membership as of January 2005

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Regional Advisory Board
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Chief Executive Officer
National Fuel Gas Company

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Chief Executive Officer
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Chief Executive Officer
KeySpan Energy Corporation

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Chief Executive Officer
CONMED Corporation

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and Chief Financial Officer
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Excellus Health Plan Inc.

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PaceWildenstein

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Secretary and Treasurer
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Chief Financial Officer
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Chief Executive Officer
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Chief Executive Officer
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Sterling Equities, Inc.

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*Board membership as of January 2005

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Executive Committee
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Apollo Management, L.P.

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Advisor

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News Corporation

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The Thomas H. Lee Partners, LP

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Granahan McCourt Capital

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Chief Executive Officer
The Blackstone Group

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Head of Global Fixed Income
AIG Global Investment Group, Inc.

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Chief Executive Officer
Cendant Corporation

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Worldwide, Inc.

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Verizon Communications

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Mortimer B. Zuckerman
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Distinguished Fellow
Hoover Institution
Stanford University
Stanford, California

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Chief Executive Officer
Bechtel Group, Inc.
San Francisco, California

Jean-Louis Beffa
Chairman and
Chief Executive Officer
Compagnie de Saint-Gobain
Paris, France

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Allen & Company
New York, New York

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Managing Director
Wesfarmers Limited
Perth, Australia

André Desmarais
President and
Co-Chief Executive Officer
Power Corporation of Canada
Montreal, Canada

Martin Feldstein
President and
Chief Executive Officer
National Bureau of
Economic Research, Inc.
Cambridge, Massachusetts

Arminio Fraga Neto
Founding Partner
Gavea Investimentos, Ltd.
Rio de Janeiro, Brazil

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Vice Chairman
National Council
for Social Security Fund
Beijing, People's Republic of China

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Chief Executive Officer
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Basel, Switzerland

Abdallah S. Jum'ah
President and CEO
Saudi Arabian Oil Company
Dhahran, Saudi Arabia

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Chairman
Kissinger Associates, Inc.
New York, New York

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of Directors
Koç Holding A.Ş.
Istanbul, Turkey

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Minister Mentor
Republic of Singapore
Singapore

Minoru Makihara
Senior Corporate Advisor and
Former Chairman
Mitsubishi Corporation
Tokyo, Japan

The Rt. Hon. Brian Mulroney
Senior Partner
Ogilvy Renault
Montreal, Canada

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Chairman and
Chief Executive Officer
ChevronTexaco Corporation
San Ramon, California

David Rockefeller
Former Chairman
The Chase Manhattan Bank, N.A.
New York, New York

Sir John Rose
Chief Executive
Rolls-Royce plc
London, United Kingdom

Walter V. Shipley
Former Chairman of the Board
The Chase Manhattan
Corporation
New York, New York

Jess Søderberg
Partner and
Chief Executive Officer
A.P. Møller-Maersk Group
Copenhagen, Denmark

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Chairman of the Board
The Dow Chemical Company
Midland, Michigan

Ratan Naval Tata
Chairman
Tata Sons Limited
Mumbai, India

Marco Tronchetti Provera
Chairman and
Chief Executive Officer
Pirelli & C. SpA
Milan, Italy

Cees J.A. van Lede
Former Chairman,
Board of Management
Akzo Nobel
Arnhem, The Netherlands

Douglas A. Warner III
Former Chairman of the Board
J.P. Morgan Chase & Co.
New York, New York

Ernesto Zedillo
Director
Yale Center for the Study
of Globalization
New Haven, Connecticut

Jaime Augusto Zobel de Ayala
President
Ayala Corporation
Makati City, Philippines

Ex-Officio Members

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Chairman and
Chief Executive Officer
JPMorgan Chase & Co.
New York, New York

James Dimon
President and
Chief Operating Officer
JPMorgan Chase & Co.
New York, New York

Andrew Crockett
President
JPMorgan Chase International
New York, New York

William M. Daley
Chairman of the Midwest Region
JPMorgan Chase & Co.
Chicago, Illinois

Walter A. Gubert
Vice Chairman
JPMorgan Chase & Co.
Chairman
JPMorgan Chase EMEA
London, United Kingdom

This page has been amended since the Annual Report was printed and presents the International Committee of the Firm as of March 30, 2005.

Governance

Our merger with Bank One Corporation gave us the opportunity to examine the corporate governance practices of both companies. By corporate governance, we mean the system of checks and balances among the Board of Directors, management and stockholders designed to produce an efficiently functioning corporation that is directed to creating long-term stockholder value, maintaining the highest standards of ethical conduct, reporting financial results with accuracy and transparency, and fully complying with all applicable laws and regulations as we conduct the Firm's business. We believe we have brought the best of both predecessors to the combined Firm's governance practices.

The Board

The Board of Directors reflects strong continuity with both predecessors. It has a super-majority of non-management directors and only two management members, Mr. Harrison and Mr. Dimon. The Board has determined that all of the non-management directors are independent under the Board's independence standards.

After the merger became effective, the Board took a fresh look at its structure and practices in its efforts to integrate the practices and experience of each predecessor company.

- The Board determined to maintain the existing Board committee structure with the principal committees consisting of Audit, Compensation & Management Development, Corporate Governance & Nominating, Public Responsibility and Risk Policy. Each committee reviewed its charter, taking into consideration the charters of corresponding predecessor committees. The revised committee charters can be found on our website at www.jpmorganchase.com (Governance).
- New committee assignments provided for both continuity in oversight as well as the application of new perspectives to the functions of the committees.
- The Board reviewed and revised its Corporate Governance Principles, retaining best practices from the predecessor companies. Among the changes adopted, the Corporate Governance Principles specify limits on other board memberships and include a pledge by directors to retain, as long as they serve, all shares of the Firm's common stock purchased on the open market or received pursuant to their service as a Board member. The Corporate Governance Principles can be found at www.jpmorganchase.com (Governance).

Internal Governance

Connecting the oversight of the Board and the day-to-day functioning of our employees are mechanisms intended to ensure that we conduct our daily business in accordance with the Firm's objectives and policies and in compliance with the laws and regulations that govern our diverse businesses. JPMorgan Chase operates multiple lines of business through a number of subsidiaries throughout the world. The Firm as a whole manages by line of business, supported by global policies and standards that typically apply to all relevant units regardless of geography or legal structure.

At the top of our control structure is our risk management process. At JPMorgan Chase, we are all risk managers. Risk governance begins with creating the right risk culture, and that is done by ensuring that every employee understands that risk management and control is the responsibility of each and every individual of the Firm. The Firm's risk governance structure is built upon the premise that each line of business is responsible for managing the risks inherent in its business activity. As part of the risk management structure, each line of business has a Risk Committee responsible for decisions relating to risk strategy, policies and control. Where appropriate, the Risk Committees escalate risk issues to the Firm's Operating Committee or to the Risk Working Group, a subgroup of the Operating Committee. The Board of Directors exercises oversight of risk management as a whole and through the Board's Audit Committee and the Risk Policy Committee.

Code of Conduct

The Firm's Code of Conduct is an important part of our policies and procedures to maintain high standards of conduct and to reduce or avoid reputational risk. Our integrity and reputation depend on our ability to do the right thing, even when it is not the easy thing. Our commitment to responsible, honest and ethical behavior was at the heart of the codes of conduct of both heritage firms and it remains so at JPMorgan Chase today. Following a thorough review, the Firm adopted a new Code of Conduct to replace similar policies that existed in our predecessor firms. The Code of Conduct sets forth the guiding principles and rules of behavior by which we conduct our daily business with our customers, vendors, stockholders and with our fellow employees. The Code of Conduct also requires preclearance of outside business activities and, for certain units, preclearance of personal securities transactions. The Code of Conduct applies to all employees and directors, who must annually affirm that they are in compliance with it. The Code of Conduct is available on our website at www.jpmorganchase.com (Governance).

JPMorgan Chase & Co.

Corporate headquarters

270 Park Avenue
New York, New York 10017-2070
Telephone: 212-270-6000
http://www.jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities Inc.

Annual report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the Securities and Exchange Commission will be made available upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, New York 10017-2070

Stock listing

New York Stock Exchange, Inc.
London Stock Exchange Limited
Tokyo Stock Exchange

The New York Stock Exchange (NYSE) ticker symbols for stock of JPMorgan Chase & Co. are as follows:

JPM (Common Stock)
JPMPRH (Depositary Shares Each Representing a One-Tenth Interest in 6 5/8% Cumulative Preferred Stock)

Certifications by the Chief Executive Officer, President and Chief Financial Officer of JPMorgan Chase & Co. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, have been filed as exhibits to the Firm's 2004 Annual Report on Form 10-K

The NYSE requires that the Chief Executive Officer of a listed company certify annually that he or she was not aware of any violation by the company of the NYSE's Corporate Governance listing standards. Such certification was made on June 21, 2004.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations site of www.jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, New York 10017-2070
Telephone: 212-270-6000

Directors

To contact any of the Board members please mail correspondence to:

JPMorgan Chase & Co.
Attention (Board member)
Office of the Secretary
270 Park Avenue, 35th Floor
New York, New York 10017-2070

The corporate governance principles of the board, the charters of the principal board committees and other governance information can be accessed by visiting www.jpmorganchase.com and clicking on "Governance." Stockholders may request a copy of such materials by writing to the Office of the Secretary at the above address.

Transfer agent and registrar

Mellon Investor Services LLC
Overpeck Center
85 Challenger Road
Ridgefield Park, New Jersey 07660-2108
Telephone: 1-800-758-4651
https://vault.melloninvestor.com/isd

Investor Services Program

JPMorgan Chase & Co.'s Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorgan Chase & Co. common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, Mellon Investor Services LLC, by calling 1-800-758-4651, by writing them at the address indicated above or by visiting their Web site at www.melloninvestor.com.

Direct deposit of dividends

For information about direct deposit of dividends, please contact Mellon Investor Services LLC.

Stockholder inquiries

Contact Mellon Investor Services LLC:

By telephone:

Within the United States, Canada and Puerto Rico: 1-800-758-4651 (toll free)

From all other locations: 1-201-329-8660 (collect)

TDD service for the hearing impaired within the United States, Canada and Puerto Rico: 1-800-231-5469 (toll free)

All other locations: 1-201-329-8354 (collect)

By mail:

Mellon Investor Services LLC
Overpeck Center
85 Challenger Road
Ridgefield Park, New Jersey 07660-2108

Duplicate mailings

If you receive duplicate mailings because you have more than one account listing and you wish to consolidate your accounts, please write to Mellon Investor Services LLC at the address above.

Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, New York 10017

This Annual Report has been printed on paper that is produced from raw materials that originated from a combination of well managed forests and post consumer waste (PCW) recycled fibers.

- The covers and financial reporting sections (pages 17-136) of this report are printed on paper independently certified by SmartWood, a program of the Rainforest Alliance, to the Forest Stewardship Council (FSC) standards and contains 30% PCW.

  The Forest Stewardship Council (FSC) is an independent nonprofit organization devoted to encouraging the responsible management of the world's forests. FSC sets high standards that ensure forestry is practiced in an environmentally responsible, socially beneficial, and economically viable way. Landowners and companies that sell timber or forest products seek certification as a way to verify to consumers that they have practiced forestry consistent with FSC standards.

- The remainder of the report (pages 1-16) is printed on paper made with 20% PCW recycled fibers.



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JPMORGAN CHASE & CO.

Annual Report 2005



JPMorganChase

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $1.2 trillion and operations in more than 50 countries. The firm is a leader in investment banking, financial services for consumers, small business and commercial banking, financial transaction processing, asset and wealth management, and private equity. A component of the Dow Jones Industrial Average, JPMorgan Chase serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its JPMorgan and Chase brands.

JPMorgan

JPMorgan has one of the largest client franchises in the world. Our clients include corporations, institutional investors, hedge funds, governments and affluent individuals in more than 100 countries.

The following businesses use the JPMorgan brand:

Investment Bank	Asset Management
Treasury Services	Private Bank
Worldwide Securities Services	Private Client Services

Information about JPMorgan capabilities can be found on jpmorgan.com.

CHASE

Chase is a leading U.S. financial services brand serving consumers, small businesses, corporations and governments with a full range of banking and asset management products in local markets and through national distribution.

The consumer businesses include:

Consumer Banking	Home Finance
Credit Card	Auto Finance
Small Business	Education Finance

The commercial banking businesses include:

Middle Market	Business Credit
Mid-Corporate	Equipment Leasing
Real Estate	

Information about Chase capabilities can be found on chase.com.

JPMorganChase

JPMorgan Chase is the brand used to express JPMorgan Chase & Co., the holding company, and is also used by our Treasury Services business and our Community Development Group.

Information about the firm is available at www.jpmorganchase.com.

Financial highlights

As of or for the year ended December 31, (in millions, except per share, ratio and headcount data)	2005	2004
Reported basis[a]		
Total net revenue	$ 54,533	$ 43,097
Provision for credit losses	3,483	2,544
Total noninterest expense	38,835	34,359
Net income	8,483	4,466
Per common share:		
Net income per share: Basic	2.43	1.59
Diluted	2.38	1.55
Cash dividends declared per share	1.36	1.36
Book value per share	30.71	29.61
Return on common equity	8%	6%
Tier 1 capital ratio	8.5	8.7
Total capital ratio	12.0	12.2
Total assets	$1,198,942	$1,157,248
Loans	419,148	402,114
Deposits	554,991	521,456
Total stockholders' equity	107,211	105,653
Headcount	168,847	160,968
Operating basis (pro forma)*		
Total net revenue	$ 59,149	$ 57,760
Provision for credit losses	7,259	6,490
Total noninterest expense	35,549	35,439
Earnings	10,521	10,289
Diluted earnings per share	2.95	2.85
Return on common equity	10%	10%

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America. 2004 results include six months of the combined Firm's results and six month of heritage JPMorgan Chase results.

* The financial information provided on pages 2-20 is presented on a pro forma combined-operating basis. The unaudited pro forma combined historical results represent how the financial information of JPMorgan Chase & Co. and Bank One Corporation may have appeared on a combined basis had the two companies been merged as of the earliest date indicated. Additional information, including reconciliation of the pro forma numbers to GAAP, can be found on Form 8-K furnished to the Securities and Exchange Commission on January 18, 2006. For a description of operating basis, including management's reasons for its use of such measures, see page 31 of this Annual Report.

Dear fellow shareholder,

As of year-end 2005, I stepped down as CEO of JPMorgan Chase – turning the leadership of the firm over to my partner, Jamie Dimon, who I believe will prove to be one of the outstanding CEOs the financial services industry has had in a long time.

As Chairman, I look forward to contributing to our growth by leveraging my global relationships and contacts and by helping to further develop strategy.

As I look back on my 38 years in the industry, all with the same organization, I realize how fortunate I have been and what an exciting journey I have been on. When I left a small town in North Carolina to join Chemical Bank in 1967, my goal was to spend two years in New York and then return to North Carolina. Little did I know I would be part of an industry and a career that were as challenging and rewarding as these have been.

I step down as CEO believing that:

- JPMorgan Chase is very well positioned strategically to be one of the great financial institutions in the world.
- Size does matter in our industry – provided that size translates into operating and scale efficiencies, increased profit margins, stronger earnings and leadership positions. And the benefits of size can only be realized within a culture that values teamwork, partnership and execution.
- One should be a leader – not a follower – as our industry irreversibly consolidates in a globalizing world.
- A diversified model will prove to have competitive advantage in terms of creating shareholder value over time.
- Managements and boards have to manage with a longer-term outlook and resist the pressures of the quarter-to-quarter mindset of the market.
- Building the best performance culture in the industry will ensure that all of the inherent potential of size is harvested and maximized.
- Relationships matter – with clients and with each other internally – and without them, a firm will never reach its potential and be its best.
- Companies with the highest ethical values, which start at the top and cascade all the way down, will be the great companies – and we must keep raising the bar on how we achieve this in a large, complex corporation.
- Surrounding yourself with people who are smarter and better than you are is critical because your talent pool will be a key determinant of success.
- I have been one of the most fortunate people in the world to have had the experience and the success I have had, and there is not one day that goes by that I don't think about this.

So from a small town to a big city – from a small bank to a big bank, I learned much along the way – that you, in fact, never stop learning. You should always commit to be the best you can be, you should think big and dream big, and you should think about how you can win and what your strategic platform should be to create sustainable shareholder value. And you should do this by always, always having the right set of values and living by them.

You learn that the peaks and valleys, the successes and failures of your job and life need to be viewed with the proper perspective and balance, and only with that balance and perspective can you find true north.

You learn how important your family and friends are in enabling you to maintain the passion and commitment to be the CEO of a firm like JPMorgan Chase and how privileged you've been to have been the leader.

Thus, while my JPMorgan Chase career is nearing an end, a new chapter in our company's long history is beginning. It is time to pass the baton to a new group of leaders, led by Jamie Dimon, who will take this firm to the next level of performance, harvesting its vast potential and maximizing shareholder value through great execution.

Letter from James Dimon, *Chief Executive Officer*

Dear fellow shareholder,



William B. Harrison, Jr., *Chairman* James Dimon, *Chief Executive Officer*

This is my first letter to you as the CEO of JPMorgan Chase. From a personal standpoint, I want to share with you some feelings and thoughts. I feel a tremendous mix of emotions: excitement about our potential, and a great sense of obligation and responsibility both to you, our shareholder, and to those who have built our company over the years. They have given us an exceptional opportunity – and we owe them not only our gratitude, but also our commitment to deliver on our company's potential and make them proud of what they have helped to build.

We have accomplished a great deal over the last year, and we are excited about our progress in 2005 and our plans for 2006. The foundation for everything we are doing rests on a set of business principles that we believe, when executed properly, create great companies. These principles are described on our Web site: www.jpmorganchase.com. In essence, we strive to:

- Share with you the truth and offer honest assessments of our businesses and our prospects.
- Act with integrity and honor.
- Do the right thing, not necessarily the easy or expedient thing.
- Work hard and with fierce resolve to make this a company of which our shareholders, employees, customers and communities can be proud.
- Focus relentlessly on the execution of our business principles.

There are some specific issues that are integral to the success of our company. I would like to address them by answering the following questions:

I. Are we in the right businesses?

II. Can we achieve outstanding performance?

III. Are we properly managing our risks?

IV. Do we have the right people and the right compensation strategy?

V. Are we a good corporate citizen?

Let me close with a profound thanks to our shareholders who have had the faith to believe in the potential of this firm. Thanks to our outstanding Board of Directors for their support and wisdom, and I want to express my special gratitude to retiring directors Larry Bossidy and Hans Becherer whose advice and counsel over many years have been invaluable. Thanks to all of our clients and customers around the world for the opportunity to serve them.

And thanks – 168,000 thanks – to our talented and dedicated employees around the world for what they stand for and for what they contribute every day.

I could not be more excited and confident about our future.

Sincerely,



William B. Harrison, Jr.
Chairman

March 8, 2006

I. Are we in the right businesses?

Let me unequivocally answer this question with a resounding "yes," for three reasons: each business is already well positioned – in terms of size and scope – within its specific industry; there is exceptional value in the linkages among our businesses; and the company's size, scale and brands are a competitive strength.

Each business is already well positioned within its specific industry

Our six major lines of business – Investment Banking, Commercial Banking, Retail Financial Services, Card Services, Asset & Wealth Management, and Treasury & Securities Services – all compete in consolidating industries. Businesses consolidate when the vast economies of scale that can be achieved (in systems, operations, distribution, brand and R&D, to name a few) will benefit the customer.

We cannot underestimate the power of these economic forces. Nor can we ignore the inevitable impact they have on our businesses. But change is hard – and many who attempt it fail. The winners will be those who can provide their customers with more access to better financial products and services at a lower price. In this environment, size, scale and staying power matter, and all of our core businesses *already have* what it takes to succeed; but as I discuss later, we must continue to improve our execution skills to distinguish our company in the marketplace. Our businesses do not and will not want for capital or investment. They are well equipped to survive in good and bad times, and our customers will continually benefit from their stability and efficiency, as well as the investments we are able to make in technology and innovation.

Our businesses belong together, and there is exceptional value in the linkages among them

As separate entities, our businesses are currently well positioned; together they are even stronger. Putting our businesses together makes sense only if doing so creates value for customers and, ultimately, shareholders. It does not work because we want it to – it only works because it gives the customer more for less, sooner rather than later. We have no interest in selling our customers products that they do not want or need.

In this context, the term "cross-sell" can be misleading. "Cross-selling" often carries negative connotations – as if it is a forced and unnatural act. In fact, it should be described more appropriately as "natural product-line extensions," which businesses have been doing successfully for hundreds of years. Wal-Mart has continually expanded the types of products it sells. Twenty years ago, who would have thought that it would sell lettuce and tomatoes? These product-line extensions are true also for Home Depot, commercial banks, investment banks, stockbrokers and even manufacturers. GE Aircraft Engines now finances and services what it manufactures. The essence of what makes this successful is that the customer is the winner.

By extending our product lines, we are able to leverage the substantial investments we have made to build our distribution system (e.g., branches, technology and sales people), strengthen our brand and earn the trust of our customers. For example, today our branches, which are our retail stores, not only accept deposits and provide access to cash, but also sell investments, mortgages, home equity loans, debit and credit cards, and online bill paying services, as well as small business loans, international funds transfers, payroll services, annuities, etc.

Our clear "natural product" set is financial services, which is what individuals and businesses want and expect from us. Where the products are "manufactured" is of little interest to them. What is important to them and to us is our ability to provide a better product, or package of products, at a lower cost. Our challenge is to view this from their perspective and ensure that our collective resources are focused accordingly.

In addition to providing substantial potential for growth, our mix of businesses presents us with fertile ground for innovation. Here are a few examples of how our businesses are working together:

Retail and Card Services. The competitive advantage is formidable when our retail bank – which serves almost 10 million households – joins forces with our credit card company, with its 110 million cardholders. This collaboration should result in excellent new products that address specific consumer needs. For example, we may be able to

make life much simpler for our customers by linking credit and debit cards and by offering them other products. The results of recent efforts are promising: credit card sales in our retail branches are up nearly 100% from two years ago.

Commercial Banking and Retail. A strong connection already exists between our Commercial Bank and our retail branches. In fact, there are few successful commercial banks in America that do not have a retail bank – and for good reason. A large share of retail business comes from small businesses and mid-sized companies. Many use branches as their financial back offices for cash, payroll processing and wire transfer services. This interdependency is cost effective for us and beneficial to our customers. In addition, business accounts often lead to new personal accounts and vice versa.

Investment Banking and Commercial Banking. A natural connection exists between an investment bank, which essentially serves large public companies, and a commercial bank, which essentially serves mid-sized to small public and non-public companies. Our Commercial Bank already generates hundreds of millions of dollars in revenues from offering its clients traditional investment banking services (e.g., advisory, debt and equity underwriting). Over the next few years, we believe that we can double Commercial Banking's revenues from these activities. In cities like Indianapolis, Austin, Denver and Tucson – where our Investment Bank does not have a physical presence – local businesses have strong relationships with our commercial bankers. These bankers know when their clients are contemplating transactions and need access to investment banking expertise. The connection is valuable for clients and beneficial to us. It enables our Investment Bank to generate revenues from its product expertise that it could not have previously produced without the client relationship. And it enables the Commercial Bank to better serve its clients by providing them with the additional products that they need.

Treasury & Securities Services; Asset & Wealth Management. Another important connection exists between Treasury & Securities Services and our other businesses. Many of our major customers (institutional, middle market, small business and retail) use TSS for activities such as cash, checks, ACH payments, wire transfer and custody. TSS generates approximately $9 billion of annual revenue by serving these customers. Asset & Wealth Management also benefits from working with other businesses, including managing assets for corporate clients, helping them meet their complex pension and investment needs, and offering products from across the company to individual clients.

Plenty of other examples exist, but the critical point remains: while each business should do well on its own, it should also be able to capitalize on our company's extensive and unique set of products and services to more fully and profitably meet customer needs. There is certainly no reason why they should do worse because they are part of this institution. The key, of course, is that the customers must be the winners.

The size and scale of the company are a competitive strength

The size, scale and scope of JPMorgan Chase also offer huge advantages: economies of scale in operations and systems; diversification of capital, risk and earnings; a great global brand; and the capability to make large investments at a lower cost of capital. In particular, the benefits of size and scale in operations and systems are vast, and they are real. Our diversified earning streams lower our risk, increase our credit ratings and reduce the cost of our capital. And since one of our major costs is the cost of money, the ability to raise funds cheaper, better, faster and more effectively around the world than other companies is a major advantage.

But size alone is not enough to win. In fact, if not properly managed, it can bring many negatives. Huge companies operating in complex, consolidating and fiercely competitive industries like ours can only achieve and sustain their success by competing where the "rubber hits the road" – at the level of the store, the product and the banker – not at corporate headquarters. We must equip those employees on the front lines to be responsive and responsible. The way we manage our size will reflect how much we recognize and respect this imperative. Bureaucracy and waste are lethal. To remain healthy and vibrant, we must constantly and consistently minimize bureaucracy, eliminate waste and insist upon excellent execution.

II. Can we achieve outstanding performance?

"Yes," but we are not there yet. Good positioning does not assure great performance. Creating great performance is not mystical; it takes consistent effort, focus, hard work and discipline.

The starting point for us is to admit where we are. Any way one analyzes our businesses, for the most part our costs are too high, our returns on capital are too low and our growth is not what it could be.

We are underperforming financially in many areas. We need to understand the reasons and focus our energy on making improvements, not excuses. We cannot afford to waste time justifying mediocrity. Each line of business now assesses its performance in a rigorous and very detailed way. Each compares results to targets in a variety of areas, including sales force productivity, customer service and systems development.

It is not enough for the overall business to make its profit targets. It would be unacceptable to achieve good financial returns by reducing expenses that are critical investments for the future or by compromising the *quality* of business that we do. The best way to reach and sustain a higher level of performance is to get every part of the business to step up its game. For example, we have some businesses that, in general, achieve adequate returns. These results are often produced when a few exceptional business segments do the heavy lifting for the rest. We cannot use our strengths in one part of our business to subsidize our weaknesses in another part.

We spend a lot of time on capital and return on capital. How we allocate capital should reflect our understanding of how changes in the economy – and the likely length and intensity of the cycles they cause – will affect specific parts of our business. Where will the risks and growth opportunities be? For example, there *will* be another recession; we just do not know when. What we do know, however, is that when it happens, our annual credit costs will increase substantially. Therefore, when we talk about return on capital, we must look at it through the cycle, not just during the best parts of the cycle.

Many companies that compete in our businesses have been well managed and able to produce excellent results for decades. We have every reason to be among them. Time will tell if we are. We have made progress, but not enough. To get outstanding performance, we must instill the following disciplines deep into the fiber of our company.

Become lean and efficient

This is an imperative. One cannot achieve great performance in fiercely competitive industries without being lean and efficient. It is irresponsible to waste our critical resources on expenditures that have nothing to do with better serving our clients and building a great company. We need to use our resources to grow, innovate, market, hire productive people and build systems. It is not just about cutting costs. A company cannot become great just by cutting costs. It is about building better systems to better serve our customers. It is about paying our people not only fairly, but effectively, to help create the right behavior. It is about how we run meetings. It is about designing the right products that are also profitable. (Many companies design products that lose money, and they do not even know it.) It is about constantly improving productivity.

We must continually ask ourselves: Can the same investment in the same area be better spent? Does every business strive to get the most out of its resources? The Investment Bank, for example, has many businesses, depending upon how you measure it. Does each business spend its money efficiently and wisely? Are we spending the right amount in the right way and expecting the right results? Last year, we spent over $1 billion in marketing to get 11 million new credit card accounts. Can we spend more and get even better results? We probably can. This year, we want to both spend more and get more from every dollar we spend. When we determine that we can and are spending money wisely, we will want to spend *more, not less*.

Since the merger, we have realized $1.9 billion in merger savings. However, much more is needed to achieve what we would consider to be *real* efficiency. This past year, we launched and completed major projects aimed at increasing our efficiency and improving our customer service over the long run. They include:

- Completing the largest credit card conversion in history. This effort combined over 30 million heritage Chase and Bank One accounts onto a single platform and provided us with a single best-in-class system to better serve our customers (and at a lower cost).

- Integrating and upgrading all of our businesses in Texas – in terms of products, brand, systems and operations – where we have 20,000 employees serving 2 million customers.

- Converting all U.S. dollar clearing to one platform globally, an operation that processes an average of $3.2 trillion daily for 200,000 clients worldwide.

- Executing the largest merger of mutual fund families in U.S. history, affecting 1.1 million fund shareholders.

- Completing the first and second construction phases of our new Global Services Center in Bangalore, India, and hiring 8,700 employees to meet increased demand and deliver more services from India.

- Migrating much of the company's production, disaster recovery, and development and test systems into a new data center. The move increases our data storage capability, enhances our resiliency, reduces infrastructure points of failure and lowers overall cost to the firm.

Over this next year, we will continue to massively upgrade and streamline our systems and operations. Highlights include:

- Converting and upgrading all of our operations in the New York tri-state market, beginning in the second quarter. This will be one of the most visible bank conversions in our industry and will have an impact on all of our businesses – specifically, 4.8 million deposit accounts representing over $190 billion, and involves more than 400 heritage Chase branches and over 3,000 teller workstations.

- Providing our retail and wholesale customers with uniform Internet platforms, upgrading loan origination systems and implementing a new mortgage servicing system.

- Substantially improving infrastructure, including data centers, networks and financial management systems.

We cannot build a great company unless we are unrelenting in our efforts to be a lean and efficient company. This must become a permanent part of our mindset.

Remove barriers to success

As I mentioned before, excessive bureaucracy is lethal. It slows us down, distracts us from our clients and demoralizes good employees. We must act with more openness, passion and urgency. The process of busting bureaucracy never ends, but what is different now is that our employees are engaged in challenging the system and solving the problems.

We continue to attack bureaucracy and improve all aspects of our management practices, including:

- *Accountability and decision making:* Central to the changes we have undertaken is the realignment of corporate staff. Now embedded in the businesses are many of the staff functions – like finance and systems – that used to be concentrated at the corporate level. The realignment gives our businesses greater ability to manage their support functions. For staff, better access to the businesses they support provides them with more knowledge and control. The restructuring will lead to better accountability, transparency and reporting, which in turn will *improve* execution and overall corporate risk management.

- *Management information and discipline:* It is hard to act on the truth if you do not know what it is. We want managers to have the tools and information to run their businesses as if they owned them. With this goal in mind, we now produce thousands of increasingly accurate reports that provide managers with specific information on their performance. In addition, we give them tools to proactively eliminate waste and manage their resources. Better reporting has dramatically improved the effectiveness of our business review meetings. Without this information, these meetings are often a waste of time. They now are convened at many levels of the company and focus on where we are and need to be, relative to our own benchmarks and the best performers

in each business. As a result of these discussions, we are able to establish real targets for our businesses in terms of growth, margins, returns, market share, etc.

- *People practices:* We have rationalized human resource processes by eliminating several unnecessary procedures and personnel to place accountability for managing people squarely where it belongs – with line managers. For example, performance reviews have been revamped and simplified, training has been streamlined and executive coaches have been eliminated. (We think coaching is the manager's job.) Performance reviews should facilitate, not prevent, meaningful, honest and comprehensive results-oriented exchanges between managers and their direct reports. Yet over time, the process grew to take on a life of its own and became a hindrance. Now the barriers are being removed. In addition, we have created a forum for discussion of our talent and made people management generally, and diversity in particular, part of the agenda of senior manager meetings across the company. We remain devoted to our people and their development, but we will use management accountability, not bureaucratic processes, to prove it. We want our people to communicate openly, easily and constructively.

Focus resources where we can succeed and win

We have sold or liquidated several businesses that either did not fit our strategy or did not contribute significantly to our long-term success. For these reasons, we sold BrownCo, and businesses in manufactured housing and recreational vehicles. We also announced the sale of our insurance business and have dramatically reduced the size of our auto leasing business.

By discontinuing or reducing our commitment to ancillary businesses, we availed ourselves of billions of dollars in capital. We redeployed this capital in businesses where we can win. For example, we invested in JPMorgan Cazenove, an investment banking joint venture in the United Kingdom (which already shows promising results); expanded our global trade management operations with the purchase of Vastera; and acquired the Sears Canada private-label credit card portfolio. In addition, we have recently completed the purchase of a consumer educational loan business, Collegiate Funding Services, that both processes and underwrites loans. These are all transactions that position us for real growth.

We have also freed up and redirected our capital to support innovation. We want to make innovation part of our DNA. This does not mean spending hundreds of millions of dollars on failed ideas. It does mean, however, that we will take calculated risks, knowing that some will fail. Progressive thinking should be reflected in every conversation, every analysis, and every product and service we provide. We have many new products coming out this year that we think will fill this bill.

The ultimate goal: create organic growth

Profitable, sustainable, properly underwritten growth is not a vision. It is the result of excellent management discipline, an unrelenting focus on execution, consistent management of risk, a competitive product set and outstanding customer service.

The level of effort and expense associated with merger activities and systems consolidation has been predictably huge. So the fact that we were able to absorb the impact – and still cut costs *and materially increase* investment spending – is a source of pride to all of us. What is even more gratifying, however, is to see evidence of real growth in most businesses, something that is often a casualty in merger consolidations.

In 2005, real growth – albeit not always great growth – took place across the board. Retail increased its deposits, checking accounts and credit cards. Commercial Banking achieved growth in leasing, middle market lending and liability balances. Treasury & Securities Services produced more custody business and had growth in liability balances. Asset & Wealth Management increased the level of assets under management. Card Services had growth in new customers, partners, card receivables and spending. Revenues in the Investment Bank increased in M&A, asset-backed securities, high-yield bonds and energy trading.

Equally important, we materially increased investment in areas that will drive *future* growth. Specifics include: spending hundreds of millions of dollars to open 150 new branches (this will drive growth in 2007 and beyond); adding more retail loan officers; hiring additional private bankers; funding the build-out of our energy and mortgage trading capabilities in the Investment Bank; and investing in state-of-the-art "blink" credit card technology (which enables customers to use credit cards for small payments without having to sign anything). Now being piloted in six cities, blink is an investment that has put us at the forefront of changes in payment systems and card innovation.

In addition to making across-the-board investments to build our businesses, we are making investments in our infrastructure that anticipate growth and prepare us to successfully manage it for years to come. In 2005, we invested over $1 billion in platform conversions, including those for Texas and Card Services.

By consolidating and improving platforms, we are eliminating the inefficiencies and competitive disadvantages associated with multiple operating platforms. In the process, we will create best-in-class platforms in many areas, such as global cash clearing, credit card, retail branches and some of our trading business. We believe that long-term success is not possible without great systems and operations. They will drive efficiency, innovation and speed to market. Much of this will be accomplished by the end of 2006.

III. Are we properly managing our risks?

Almost all of our businesses are risk-taking businesses – and we spend a great deal of time thinking about all aspects and types of risk inherent in them, including:

- Consumer and wholesale credit risk
- Market and trading risk
- Interest rate and liquidity risk
- Reputation and legal risk
- Operational and catastrophic risk

The notable fact about the first three risk areas is that they are cyclical, and all of them have elements of unpredictability. This requires us to be prepared for inevitable cycles. A company that properly manages itself in bad times is often the winner. For us, sustaining our strength is a strategic imperative. If we are strong during tough times – when others are weak – then the opportunities can be limitless. Protecting the company is paramount. I will highlight the types of risks we focus on to give you a sense of the threat they pose and how we plan for it.

Consumer and wholesale credit risk

Over the years, our company has substantially reduced its wholesale credit exposure by using a disciplined process for extending credit and maximizing return on shareholder capital. In the consumer market, we have controlled our risk by limiting the amount of low-prime and sub-prime credit we issue in our card and other consumer businesses. In addition, we have decided, at the expense of losing some volume, not to offer higher-risk, less-tested loan products, such as negatively amortizing Option ARMs.

While we are taking the right steps, we estimate that in a recession, consumer and wholesale credit costs could possibly get worse by more than $5 billion. This daunting reality requires us to be prepared and well protected. Protection #1 is having larger and more durable profits to absorb the losses. We are accomplishing this by increasing our margins virtually across the board. Protection #2 is maintaining a fortress balance sheet. We try to understand and manage every asset and every liability and make sure that someone is accountable for each one. It also means maintaining, as much as possible, strong loan loss reserves.

Finally, having a well-capitalized firm is critical. With Tier 1 capital at 8.5% and total capital at 12%, we believe we are there. The important point is that we need to manage the business, the balance sheet and the investments to earn adequate returns through the cycles and to be prepared for surprises. We do not want to realize high returns at the top, only to give them all back at the worst part of the cycle.

Market and trading risk, and interest rate and liquidity risk

We need to manage our risk–return payoff better in 2006. In 2005, our trading volatilities were unacceptably high. The $6 billion in trading revenues (not a bad result on its own) was the result of two great quarters and two quarters where we underperformed. We think that is too much volatility, and reducing it is one of our priorities. I believe we can accomplish this by continuing to diversify our trading business, by being more disciplined and precise in the execution of our risk management practices, and by hiring and retaining the best talent. We intend to deliver better, more consistent results over time, while maintaining our aggregate risk-taking appetite.

The good news is that we *have aggressively invested* to generate more diversified and consistent returns. For example, we have added energy trading, and increased our activities in mortgage- and asset-backed securities, and principal investing. We have leadership positions in credit markets and in our derivatives franchises, and we will continue to invest in order to sustain them. And while in the short run, some of this has actually increased volatility, we are convinced that our efforts – consistently applied – will succeed. However, we caution our shareholders not to expect immediate results.

Interest rate exposure is another area in which financial services companies can assume excess risk – often at great peril. As with underwriting credit, good analysis of interest rate exposure is rooted in facts and evaluations that are based upon a variety of realistic assumptions and scenarios. We devote substantial resources to understanding how interest rate changes will affect our performance. This analysis should be – and will be – an ongoing process. We believe that our company has carefully managed its interest rate risk so that even dramatic moves in rates of several percentage points cannot alone damage the company.

A healthy liquidity profile is essential to the ongoing viability of any company, financial or otherwise. We use a variety of tools to maintain a strong liquidity position at the parent and subsidiary companies, including stress scenarios, collateral management and a conservative debt structure for the company overall. We engage in a continual dialogue with major rating agencies, and we are focused on maintaining and improving our strong credit ratings.

Reputation and legal risk

The litigation costs in business are well known. We are intensely focused on ways to safeguard the firm's reputation and exposure. They include:

- Senior management endorsement of a code of conduct that all employees must sign and adhere to, as well as a commitment to provide appropriate training.
- A strong and independent compliance program that encourages employees to assist in surfacing compliance and ethical issues, and identifying money laundering and terrorist financing activities.
- A more robust due diligence process focused on securities underwriting transactions, where we have established centralized oversight of our processes and standards.
- A disciplined governance process to address conflicts and review transactions that may present conflicts that could harm the firm now or in the future.
- A productive and open dialogue with our regulators and an ongoing emphasis on staying alert to changes in regulatory standards.

We believe that these actions will mitigate our exposure, but we recognize, unfortunately, that they will not eliminate it. We have also implemented a disciplined process to continually review our liabilities and establish appropriate litigation reserves. While we make every effort to properly manage the company to reduce litigation and legal costs, we believe that our shareholders should assume that high legal costs will continue for the foreseeable future. They should be viewed, unfortunately, as simply a higher, permanent cost of doing business than in the past.

Operational and catastrophic risk

This year, we also made progress in strengthening our operational risk management programs. We have a consistent approach across all businesses for defining and aggregating

our exposure to potential operational loss. This approach helps us determine whether we will be adequately capitalized in the event of such a loss. In addition to carefully managing operational risk, we need to be prepared for unforeseen disasters. Catastrophic risk can take a variety of forms and significantly impair the performance and the operations of the company. We have formal disaster recovery and contingency plans in place. They worked well during Hurricane Katrina and the bombings in London, but we must continue to refine them as new risks appear.

Whatever the type of risk, the key point is that we try to have a comprehensive approach to managing it. This requires that the right people be in the right jobs and that there be clear accountability in each business for managing risk in addition to rigorous corporate oversight.

IV. Do we have the right people and the right compensation strategy?

At the end of the day, it all comes down to people. We have great people in this company. As I travel across the United States and around the world, I have become increasingly impressed with the talent and potential of our employees. Rarely can a company assemble this level of creative firepower and professional competence.

To maximize the collective strength of our people, we will need to work better as a team. Great teams are not great because they have star athletes. Great teams are great because the players have learned how to work together and focus their collective energy and talent on winning. We are in the early stages of building a great team.

The compensation cycle was difficult but productive this year. We are getting better at relating pay to performance. But there is still room for improvement. Increasingly, we also must orient ourselves to *absolute performance* against best-in-class targets, not simply improvement in performance. We want to be clear and truthful when we rate ourselves, and fair as well as effective when evaluating performance. Good performance goes beyond individual productivity to include group, unit and company performance. Compensation is not an entitlement; it should reflect an individual's and a team's contribution to helping make this a great company. We want to be one of the best-paying companies – but only when we are one of the best-performing companies.

We also want our employees to feel and act like owners, which is why stock is an important part of our compensation plans. Today more than 120,000 employees own, or have an option to own, approximately 14% of shares in the company. Executive Committee members are required to retain 75% of their stock awards as long as they are with the company. And in general, stock options are awarded on a limited basis.

We continually review our benefits programs to assure that they are of value to employees and cost effective. For example, the company has excellent medical benefits programs, but we subsidize them more for lower-paid employees than we do for higher-paid employees. (I hope that this instills a sense of pride in our managers.)

In addition, we no longer match highly paid employees in their 401(k); they have adequate pensions. We do not offer perks to executives like club memberships, financial planning and leased cars. We are reducing excessive executive severance plans. But more importantly, we are paying our employees more. Our thinking is simple – less compensation through entitlements, more from performance. We *want* to pay more and let our employees spend what they earn as they see fit.

We need to constantly remind ourselves that the most important thing we can do for employees is to build a healthy, vibrant company that treats people with respect and creates opportunity. Morale is not based upon perks; morale builds from respect, growth, innovation and success; from establishing a true meritocracy; from the stock performing well; from customers liking to do business with us. A great company will provide people with competitive compensation, the opportunity to benefit as the company grows and a rewarding career path.

V. Are we a good corporate citizen?

JPMorgan Chase has been – and will continue to be – a good corporate citizen. It is vitally important and enormously gratifying to all of us. Our commitment to our communities is deep, broad and multifaceted. We strive to be a great place to work and do business, and our success allows us to give back to the neighborhoods and cities we serve.

In one sense, we view ourselves as a small business. If we were the neighborhood store, we would give kids summer jobs, sponsor local sports teams and support community-based organizations. We operate this way in many of our communities around the world, striving to be as supportive as we can in all the communities we serve.

We add value by focusing on issues that are universally important, including education and community development. We dedicate resources to develop signature programs that help communities overcome the challenges they face in these areas. We are morally, programmatically and institutionally committed to inclusiveness and diversity.

JPMorgan Chase contributes more than $100 million annually to support local, national and international initiatives. Examples include:

- **Chase Early Emergent Leaders** in Arizona, where we are funding a leadership and training program, and providing technological assistance and training in literacy skills.
- **Corporation for Supportive Housing** in Ohio, where we are helping the homeless as well as individuals recovering from drug and alcohol addiction by giving them access to 300 units of affordable housing and providing them with the support they need to live independent, responsible and healthy lives.
- **South Bank Centre** in London, where we are supporting music and technology education that will help bring artistic programs to thousands of young people.
- **DonorsChoose** in Chicago, where we are participating in an effort that uses the Internet to connect donors nationwide with underserved classrooms. We are helping to expand this program for public schools in states affected by Hurricane Katrina.
- **StreetSquash** in New York City's Harlem neighborhood, where we are funding a community youth facility that will serve over 1,000 students through academic and athletic programs.
- **Wilmington Housing Partnership** in Delaware, where our support is helping develop over 300 affordable housing units in our local communities.

Our commitment to community involvement goes well beyond philanthropy. Across the country and around the world, we bring this commitment to life through a broad range of initiatives:

- **Community reinvestment.** We have received outstanding ratings under the Community Reinvestment Act. In the past two years, we have fulfilled $140 billion of an $800 billion, 10-year commitment in the United States to provide community-development loans and investments, small business loans and consumer mortgages for lower-income and minority households.
- **Community schools.** We support community schools, which cost-effectively provide students in low-income communities with access to a broad range of services, including academic, health and extracurricular activities. In Chicago, we are partnering with the civic community, nonprofit groups and the Chicago Public School system to bring this model to scale. To date, 120 schools (20%) have been converted into community schools.
- **Youth opportunity.** We provide scholarships and internships to the underprivileged through our Smart Start program in New York City, and intend to expand the program to Louisiana in 2006. In both the United States and the United Kingdom, we work to place outstanding students of color in summer intern positions through Sponsors for Educational Opportunity. We are also a significant contributor to UNCF.

- **Volunteerism.** Around the globe, employees build homes for people in need, work with children living in homeless shelters, collect food and gifts at holiday time, offer companionship to seniors, maintain our parks and provide relief to victims of disasters.

- **Workforce development.** We help homeless people, welfare recipients, individuals with disabilities, and low-wage workers move toward economic and family stability by supporting organizations like Project Match and the hiring of individuals through the Chicago-based Cara program.

- **Hurricane relief.** When Katrina struck the U.S. Gulf Coast, we tracked down our employees, guaranteed their jobs and provided funds to help them rebuild their lives. We offered programs and services to customers and communities, and let our competitors operate out of our branches.

- **Supporting employees serving in the military.** We recognize the hardships employees face when called to active duty. We are doing whatever we can to support them by providing paid military leave, continuing most benefits and ensuring their jobs are waiting for them when they come home. We do not want to add financial hardship to their great sacrifice.

- **Protecting the environment.** We have adopted a comprehensive policy that makes environmental awareness part of our business model. We have tackled environmental risk management and taken a leadership role to reduce greenhouse gas emissions. We are looking for ways to make our facilities more energy efficient and reduce the amount of paper we use.

Of all these worthwhile efforts, the ones I find most personally inspiring come from our employees. All over the world, JPMorgan Chase employees of every nationality, race and socioeconomic background give their time and put their resources where their hearts are. They consistently stand ready to support disaster relief around the world, whether for victims of hurricanes in Louisiana, earthquakes in Pakistan, floods in Mumbai or bombings in London. We take our role as global corporate citizen seriously and personally, and I hope that all of our employees are proud of the work we collectively do around the world.

In closing, our progress would not have been possible without tremendous dedication and talent at every level. Firstly, I want to thank Bill Harrison for his vision, leadership and great partnership. It has been an honor to work with him throughout this complex merger. The experience has been a rewarding one for me personally. Bill's openness, honesty, maturity and experience are a great inspiration to me. I look forward to his counsel and support in the future.

In addition, I thank our Board. Like this merger, our Board has come together in a very effective way, and has provided great advice and guidance to me and the management team.

Finally, I thank the employees of JPMorgan Chase for their amazing efforts in 2005. We have come a long way and are well on the road to realizing the vast potential of this company. An enormous amount of work remains, but I am confident that by working together, we will build the best financial services company in the world.



James Dimon
Chief Executive Officer

March 8, 2006

Investment Bank



(In millions, except ratios)	2005	Pro forma 2004
Total net revenue	$14,578	$13,506
Operating earnings	3,658	3,654
Return on common equity	18%	18%

JPMorgan is one of the world's leading investment banks with deep client relationships and product capabilities. Our clients are corporations, financial institutions, governments and institutional investors.

We offer our clients a full platform that enables us to develop the most complete and innovative financial solutions in the industry. We have global leadership positions in all our key products – mergers and acquisitions advice, capital raising, restructuring, risk management and research. JPMorgan also participates in proprietary trading and investing and market-making in cash securities and derivative instruments around the world. We continue to add to the breadth of our platform through organic growth and selective acquisitions, and by developing new products to meet the evolving needs of our clients.

Major 2005 accomplishments

- Achieved a #1 ranking in both loans and high-yield bonds, globally and in the U.S. – the first investment bank to do so.[a]
- Achieved #1 bookrunner ranking in U.S. Commercial Mortgage-Backed Securities and #2 globally for the first time.[a]
- Expanded our energy business, adding power, coal and emissions to oil and gas capabilities to diversify risk and meet client needs.
- Integrated JPMorgan Cazenove, winning key mandates and helping to achieve #2 rankings for Equities and M&A in the Europe, Middle East & Africa region.[b]
- Acquired Neovest Holdings, Inc., a provider of high-performance trading technology and direct market access services to institutional investors, asset managers and hedge funds.
- Strengthened our offerings in fixed income and foreign exchange prime brokerage.

2006 and beyond

- Increase the consistency of our trading results and improve return on capital.
- Continue to build out our securitized products, fixed income and foreign exchange prime brokerage, principal investments and energy businesses, particularly in Europe.
- Expand distribution of structured products to retail clients through third parties.
- Invest in strategic opportunities in select emerging markets.
- Leverage global footprint – work across regions to deliver global solutions for clients.
- Leverage significant cross-selling opportunities with Commercial Banking, Asset & Wealth Management, Treasury & Securities Services and Chase Home Finance.
- Attract, develop and retain the best talent in the industry.

2005 highlights

- **#2 investment banking fee revenue globally[b]**
- **#3 ranking in Global Announced M&A – advised on seven of the 10 largest M&A transactions[a]**
- **Participant in five of the top 10 largest equity transactions globally**
- **Energy Derivatives House of the Year award (*Risk* magazine, January 2006)**
- **Loan House, U.S. High Yield Bond House, European Structured Equity House (*IFR*, January 2006)**
- **#1 Interest Rate Swaps, Forward Rate Agreements, Cross-Currency Swaps, Credit Derivatives, Interest Rate Options, Exotic Interest Rate Products, Exotic Currency Products (*Risk* End User Rankings, April 2005)**

(a) Thomson Financial
(b) Dealogic

All 2004 information is on a pro forma combined-operating basis. See page 1 for details.

Retail Financial Services



(In millions, except ratios)	2005	Pro forma 2004
Total net revenue	$14,830	$15,076
Operating earnings	3,427	3,279
Return on common equity	26%	25%
Overhead ratio (ex. CDI)	55%	57%

Retail Financial Services helps meet the financial needs of consumers and small businesses. We provide convenient consumer banking through the nation's second-largest ATM network and fourth-largest branch network. We are the second-largest home equity originator, the fourth-largest mortgage originator and servicer, the largest non-captive originator of automobile loans and a top provider of loans for college students.

We serve customers through more than 2,600 bank branches and 280 mortgage offices, and through relationships with 15,600 auto dealerships and 2,500 schools and universities. More than 11,000 branch salespeople assist customers with checking and savings accounts, mortgage and home equity loans, small business loans, investments and insurance across our 17-state footprint from New York to Arizona. An additional 1,500 mortgage officers provide home loans throughout the country.

Major 2005 accomplishments

- Increased branch sales force by 23%, boosting sales of credit cards by 62% and mortgages and home equity loan balances by 18%.
- Grew checking accounts by 8%, bringing the total to 8.8 million accounts.
- Expanded mortgage product offerings to appeal to broader market, including first-time and minority home buyers, and increased focus on construction markets.
- Invested in high-visibility, effective marketing to protect and enhance the Chase brand in the Northeast and the rebranded Bank One markets.
- Enhanced ATM network, putting the Chase brand on 270 ATMs in Duane Reade stores (New York) and installing 200 ATMs in Walgreens (Arizona). Replaced 900 ATMs and rebranded 3,400 others.

2006 and beyond

- Expand branch network and sales staff while maintaining expense discipline to achieve consistent and profitable growth.
- Increase mortgage origination market share by focusing on home buyers and by leveraging bank branches. Continue to add and integrate mortgage officers into the branch network.
- Expand our student loan business to meet the needs of this growing market. Integrate the recently acquired Collegiate Funding Services.
- Continue investing in state-of-the-art technology to improve the customer experience and sales process. Convert Retail platform in the Northeast in 2006.
- Rebrand the 560 remaining Bank One branches and retrofit 440 Chase branches in 2006.

2005 highlights

- **Rebranded 1,400 Bank One branches and 3,400 ATMs to Chase in 10 states, leveraging increased visibility to expand existing relationships and generate new customers**
- **Opened 150 bank branches and added 990 ATMs to make banking more convenient for our customers**
- **Completed technology conversion in Texas, uniting 400 bank branches, 850 ATMs and 2 million customers on the same platform**

2005 results reflect a special provision taken for Hurricane Katrina.

All 2004 information is on a pro forma combined-operating basis. See page 1 for details.

Card Services



(In millions, except ratios)	2005	Pro forma 2004
Total net revenue	$15,366	$15,001
Operating earnings	1,907	1,681
Return on common equity	16%	14%
Return on outstandings (pre-tax)	2.21%	2.08%

With more than 110 million cards in circulation and $142 billion in managed loans, Chase Card Services is one of the nation's largest credit card issuers. Customers used Chase cards for more than $300 billion worth of transactions in 2005.

Chase offers a wide variety of cards to satisfy the needs of individual consumers, small businesses and partner organizations, including cards issued with AARP, Amazon, America Online, Continental Airlines, Marriott, Southwest Airlines, Starbucks, Sony, United Airlines, Universal Studios, Walt Disney Company, and many other well-known brands and organizations. Chase also issues private-label and co-branded credit cards with Circuit City and Sears Canada.

Through Chase Paymentech Solutions, LLC, we are the largest processor of MasterCard and Visa payments in the world.

Major 2005 accomplishments

- Acquired 21 million net new Visa, MasterCard and private-label accounts.
- Increased our private-label business and gained ability to issue cards in Canada by acquiring the Sears Canada portfolio.
- Issued more than 5 million Chase cards with "blink" in several major metropolitan markets, giving cardmembers and merchants a faster, more convenient way to pay using contactless payment technology.
- Increased merchant processing volume to $563 billion.
- Moved heritage Chase accounts to a new, more flexible and cost-effective processing system.
- Completed rebranding efforts, changing more than 51 million cards to the new Chase brand. Launched high-profile "Your Choice. Your Chase." advertising initiative.

2006 and beyond

- Develop innovative products and services to create differentiated value for consumers and partners and drive growth in number of cardmembers, outstandings and sales.
- Expand the markets we serve to reach a broader base of customers.
- Invest in marketing and technology initiatives designed to position Chase for superior long-term growth.
- Cross-sell card products to the firm's customers.
- Continue to increase productivity by driving down operating cost per active account.
- Establish Chase as an iconic brand by continually delivering on our brand promise through our employees, products and innovative new products.

2005 highlights

- **One of the largest credit card issuers**
- **More than $300 billion in charge volume**
- **$142 billion in managed loans**
- **More than 110 million cards issued**
- **Largest merchant acquirer in the world through Chase Paymentech Solutions, LLC**
- **More than 850 credit card partnerships with some of the world's best-known brands**

2005 results reflect the impact of newly enacted bankruptcy legislation, as well as a special provision taken for Hurricane Katrina.

All 2004 information is on a pro forma combined-operating basis. See page 1 for details.

Commercial Banking



(In millions, except ratios)	2005	Pro forma 2004
Total net revenue	$3,596	$3,417
Operating earnings	1,007	992
Return on common equity	30%	29%
Overhead ratio	52%	54%

Commercial Banking serves more than 25,000 clients, including corporations, municipalities, financial institutions and not-for-profit entities, with annual revenues generally ranging from $10 million to $2 billion. While most of our Middle Market clients are within the Retail Financial Services footprint, Commercial Banking also covers larger corporations, as well as local governments and financial institutions on a national basis.

We are a market leader with superior client penetration across the businesses we serve. Local market presence, coupled with industry expertise and excellent client service and risk management, enables us to offer superior financial advice. Partnership with other JPMorgan Chase businesses positions us to deliver broad product capabilities – including lending, treasury services, investment banking, and asset and wealth management – and meet all our clients' financial needs.

All 2004 information is on a pro forma combined-operating basis. See page 1 for details.

Major 2005 accomplishments

- Achieved double-digit growth in treasury services by cross-selling liability balances, products and services.
- Increased significantly the penetration of investment banking capabilities to the entire client base.
- Enhanced the local coverage model by strengthening leadership through strategic hiring and talent management, and by promoting diversity and developing employees.
- Established a dedicated team to provide advice and financial solutions to clients with multinational needs.
- Converted more than 9,000 customer relationships to a single deposit system, providing access to Chase's extensive branch network.
- Created operating efficiencies by integrating the heritage firms' business credit and leasing business systems.

2006 and beyond

- Cross-sell the company's extensive product set to our existing client base while maintaining strong credit fundamentals.
- Expand market share through increased prospect conversion, while focusing on prudent client selection.
- Optimize our use of client and competitor information to drive best practices regarding the coverage model, product delivery and customer service. Direct investment resources and product capability to the highest-potential market sectors.
- Outperform our peers in managing credit and operational risk.
- Continue to leverage industry expertise, global capabilities and geographic presence as a competitive advantage.
- Strengthen workforce through targeted training on combined product and service capabilities. Continue to focus on diversity efforts and initiatives.

2005 highlights

- **#1 large middle-market lender in the United States (Loan Pricing Corporation, 2005)**
- **#1 asset-based lender in the United States (Loan Pricing Corporation, 2005)**
- **42% market penetration and 14% lead share in our 15-state footprint, nearly twice the lead share and penetration of our nearest competitor (2005 SRBI Footprint Study)**
- **Average liability balances increased by more than $5.2 billion (up 8%), and average loan volumes grew by more than $1.9 billion (up 4%)**
- **Aircraft and Municipal leasing specialties expanded by leveraging existing expertise**

Treasury & Securities Services



(In millions, except ratios)	2005	Pro forma 2004
Total net revenue	$6,241	$ 5,400
Operating earnings	1,037	437
Return on common equity	55%	23%
Pre-tax operating margin	26%	12%

Treasury & Securities Services (TSS) is a global leader in transaction, investment and information services that support the needs of chief financial officers, treasurers, issuers and investors worldwide. TSS operates through two divisions:

Treasury Services **(TS) moves, concentrates and invests client money, and provides trade finance and logistics solutions. The business ranks first in U.S. dollar clearing, processing an average of $3.2 trillion in wire transfers daily.**

Worldwide Securities Services **(WSS) safekeeps, values, clears and services securities and portfolios for investors and broker-dealers; provides trustee and agent services; and is a leading manager of American Depositary Receipt programs. WSS is the world's largest global custodian, with $11.2 trillion in total assets under custody and $6.8 trillion of trust securities under administration.**

Major 2005 accomplishments

- Delivered double-digit revenue growth and increased net earnings by 137%.
- Acquired Vastera to become the first financial institution to offer a complete, integrated global trade solution supporting both the movement of goods and financial settlements.
- Built out alternative investment services by launching JPMorgan Private Equity Fund Services, which provides administration services to global private equity firms and institutional limited partners.
- Accomplished 54 major merger milestones, contributing to the firm's largest systems upgrade and the integration of Texas operations, and creating a single processing platform for U.S. dollar funds transfers.
- Consolidated two securities processing organizations into one, Worldwide Securities Services, to leverage the client base and product offerings and to achieve efficiencies.

2006 and beyond

- Focus on product delivery by customer segment.
- Continue to expand alternative investment services.
- Leverage the full capabilities of the firm to develop innovative solutions and cross-sell products with the Investment Bank, Commercial Banking, Small Business and Asset & Wealth Management.
- Achieve market differentiation by delivering competitively superior client service.
- Continue to focus on productivity and expense control to maximize earnings and fund investments in the business.
- Invest in technology and people to improve productivity and ensure the reliability needed to support quality client service and future business growth.

2005 highlights

- **Double-digit year-over-year growth in assets under custody (up 21%), Automated Clearing House Originations (up 18%), International Electronic Funds Transfer volume (up 92%) and wholesale cards issued (up 12%)**
- **#1 in U.S. Dollar Treasury Clearing[(a)], Commercial Payments[(a)], Automated Clearing House Originations[(b)], CHIPS[(c)] and Fedwire[(d)]**
- **#1 Trustee for new U.S. Corporate Debt, excluding asset- and mortgage-backed securities (by number of issues), and Global Trustee of U.S. Collateralized Debt Obligations[(e)]**
- **#1 U.S. Commercial Paper Issuing & Paying Agent[(e)]**
- **Liability balances increased by $29.3 billion, to $164.3 billion**

(a) FImetrix
(b) NACHA
(c) The Clearing House
(d) Federal Reserve
(e) Thomson Financial

All 2004 information is on a pro forma combined-operating basis. See page 1 for details.

Asset & Wealth Management



(In millions, except ratios)	2005	Pro forma 2004
Total net revenue	$5,664	$4,901
Operating earnings	1,216	879
Return on common equity	51%	37%
Pre-tax operating margin	33%	28%

Asset & Wealth Management provides investment advice and management for institutions and individuals. With assets under supervision of $1.1 trillion, we are one of the largest asset and wealth managers in the world. We serve four distinct client groups through three businesses: institutions through JPMorgan Asset Management; ultra-high-net-worth clients through the Private Bank; high-net-worth clients through Private Client Services; and retail clients through JPMorgan Asset Management. The majority of our client assets are in actively managed portfolios. We have global investment expertise in equities, fixed income, real estate, hedge funds, private equity and liquidity, including both money-market instruments and bank deposits. We also provide trust and estate services to ultra-high-net-worth and high-net-worth clients, and retirement services for corporations and individuals.

Major 2005 accomplishments

- Achieved record earnings, 16% revenue growth, 38% earnings growth and a 5% improvement in pre-tax margin to 33%.
- Completed the largest U.S. mutual fund merger in history.
- Surpassed $100 billion in Private Client Services assets under supervision.
- Reached the milestone of 1 million participants in our Retirement Plan Services business.
- Became the largest seller of mutual funds in Europe. Generated more than $25 billion of net flows, with $19 billion flowing into long-term funds and over $6 billion into liquidity funds.
- Delivered strong investment performance. Globally, 74% of our long-term mutual fund assets were ranked in first- or second-quartile funds for the five years ended December 31, 2005.

2006 and beyond

- Continue to deliver strong investment performance through rigorous review of investment strategies and diversification of investment processes.
- Expand third-party distribution of our investment management products and services, capitalizing on industry shifts toward open architecture and outsourcing of asset management.
- Respond to increasing demand for absolute-return investing by expanding our offering of alternative products globally and staying at the forefront of that move.
- Grow our 401(k) and IRA rollover retail channels through targeted marketing at both the corporate and participant levels and leveraging our connectivity with the rest of the firm.
- Extend our Private Bank and Private Client Services footprint, gain efficiencies and expand Private Client Services investment offerings.

2005 highlights

- **$1.1 trillion in total assets under supervision at year-end**
- **Grew assets under management by $56 billion to a total of $847 billion, including $32 billion of net flows**
- **Created shared-services organization to leverage economies of scale between Private Client Services and the Private Bank**
- **Sold BrownCo, a discount brokerage firm, for $1.6 billion**
- **Successfully completed first year of integration with Highbridge, with its assets under management increasing by 8%**

All 2004 information is on a pro forma combined-operating basis. See page 1 for details.

Community Partnership



JPMorgan Chase invests in organizations and programs that strengthen the neighborhoods, schools and the economic vitality of the communities we serve around the world. We also respond when disaster strikes. JPMorgan Chase provided programs and services to communities devastated by Hurricane Katrina. We donated millions of dollars to help relieve suffering caused by the Gulf Coast storms, and by the London bombings and the Pakistan earthquake, as well.

We expanded access to capital in low- and moderate-income communities, providing home mortgages, small business loans, investments, and innovative development programs and services. We took concrete action to protect the environment, adopting policies and practices to preserve our planet for future generations.

Within JPMorgan Chase, we are building an inclusive culture in which everyone has the opportunity to contribute, develop and succeed based on their talent and skills. In an increasingly global economy, the diverse experiences and perspectives of our people are a critical asset.

Major 2005 accomplishments

- Supported thousands of nonprofit organizations around the world.
- Invested $70 billion in the second year of our 10-year pledge to invest $800 billion in U.S. communities – the largest commitment by any financial services firm. Total investment to date is $140 billion.
- Expanded our Community Advisory Board to include 86 members representing communities throughout our footprint.
- Increased management accountability for creating a diverse senior leadership team.
- Implemented a comprehensive environmental policy by adopting the Equator Principles, guidelines that promote environmental and social risk management in project financing. The policy also addresses climate change, sustainable forestry, habitat protection, illegal logging and the concerns of indigenous peoples.

2006 and beyond

- Continue to work with not-for-profits around the world to effect positive change in the communities where we operate.
- Focus efforts on the credit and community-development needs of New Orleans and the Gulf Coast region.
- Support our communities in the third year of our $800 billion commitment.
- Continue to develop a diverse pool of talented employees at all levels to help us meet the unique financial needs of diverse individuals, families, businesses and communities.
- Increase the energy efficiency of our facilities and work toward reducing our U.S. greenhouse gas emissions over time.
- Continue to raise employees' awareness of environmental issues and their relevance to individuals' day-to-day work.

2005 highlights

- Contributed nearly $112 million to nonprofit organizations worldwide, including funds directed by employees through our matching-gift and volunteer programs
- Won $75 million New Markets Tax Credit; part of the Community Renewal Tax Relief Act, this program facilitates investment in low-income areas. Used funds to provide capital at favorable terms to low-income communities; will also support the work of community-development financial institutions
- Recognized as a "Low Carbon Leader" by *BusinessWeek* and the United Kingdom-based Climate Group for our leadership on climate change in financial services

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Merger with Bank One Corporation

Effective July 1, 2004, Bank One Corporation ("Bank One") merged with and into JPMorgan Chase & Co. (the "Merger"). As a result of the Merger, each outstanding share of common stock of Bank One was converted in a stock-for-stock exchange into 1.32 shares of common stock of JPMorgan Chase & Co. ("JPMorgan Chase"). The Merger was accounted for using the purchase method of accounting. Accordingly, the Firm's results of operations for 2004 include six months of the combined Firm's results and six months of heritage JPMorgan Chase results only and 2003 results of operations reflect the results of heritage JPMorgan Chase only. For additional information regarding the Merger, see Note 2 on page 92 of this Annual Report.

Five-year summary of consolidated financial highlights

JPMorgan Chase & Co.

(unaudited) (in millions, except per share, headcount and ratio data)			Heritage JPMorgan Chase only		
As of or for the year ended December 31,	**2005**	2004[e]	2003	2002	2001
Selected income statement data					
Noninterest revenue	**$ 34,702**	$ 26,336	$ 20,419	$ 17,436	$ 17,943
Net interest income	**19,831**	16,761	12,965	12,178	11,401
Total net revenue	**54,533**	43,097	33,384	29,614	29,344
Provision for credit losses	**3,483**	2,544	1,540	4,331	3,182
Noninterest expense before Merger costs and Litigation reserve charge	**35,549**	29,294	21,716	20,254	21,073
Merger and restructuring costs	**722**	1,365	—	1,210	2,523
Litigation reserve charge	**2,564**	3,700	100	1,300	—
Total noninterest expense	**38,835**	34,359	21,816	22,764	23,596
Income before income tax expense and effect of accounting change	**12,215**	6,194	10,028	2,519	2,566
Income tax expense	**3,732**	1,728	3,309	856	847
Income before effect of accounting change	**8,483**	4,466	6,719	1,663	1,719
Cumulative effect of change in accounting principle (net of tax)	**—**	—	—	—	(25)
Net income	**$ 8,483**	$ 4,466	$ 6,719	$ 1,663	$ 1,694
Per common share					
Net income per share: Basic	**$ 2.43**	$ 1.59	$ 3.32	$ 0.81	$ 0.83[f]
Diluted	**2.38**	1.55	3.24	0.80	0.80[f]
Cash dividends declared per share	**1.36**	1.36	1.36	1.36	1.36
Book value per share	**30.71**	29.61	22.10	20.66	20.32
Common shares outstanding					
Average: Basic	**3,492**	2,780	2,009	1,984	1,972
Diluted	**3,557**	2,851	2,055	2,009	2,024
Common shares at period-end	**3,487**	3,556	2,043	1,999	1,973
Selected ratios					
Return on common equity ("ROE")	**8%**	6%	16%	4%	4%
Return on assets ("ROA")[a]	**0.72**	0.46	0.87	0.23	0.23
Tier 1 capital ratio	**8.5**	8.7	8.5	8.2	8.3
Total capital ratio	**12.0**	12.2	11.8	12.0	11.9
Tier 1 leverage ratio	**6.3**	6.2	5.6	5.1	5.2
Selected balance sheet data (period-end)					
Total assets	**$ 1,198,942**	$ 1,157,248	$770,912	$ 758,800	$693,575
Securities	**47,600**	94,512	60,244	84,463	59,760
Loans	**419,148**	402,114	214,766	216,364	217,444
Deposits	**554,991**	521,456	326,492	304,753	293,650
Long-term debt	**108,357**	95,422	48,014	39,751	39,183
Common stockholders' equity	**107,072**	105,314	45,145	41,297	40,090
Total stockholders' equity	**107,211**	105,653	46,154	42,306	41,099
Credit quality metrics					
Allowance for credit losses	**$ 7,490**	$ 7,812	$ 4,847	$ 5,713	$ 4,806
Nonperforming assets[b]	**2,590**	3,231	3,161	4,821	4,037
Allowance for loan losses to total loans[c]	**1.84%**	1.94%	2.33%	2.80%	2.25%
Net charge-offs	**$ 3,819**	$ 3,099	$ 2,272	$ 3,676	$ 2,335
Net charge-off rate[c]	**1.00%**	1.08%	1.19%	1.90%	1.13%
Headcount	**168,847**	160,968	96,367	97,124	95,812[g]
Share price[d]					
High	**$ 40.56**	$ 43.84	$ 38.26	$ 39.68	$ 59.19
Low	**32.92**	34.62	20.13	15.26	29.04
Close	**39.69**	39.01	36.73	24.00	36.35

(a) Represents Net income divided by Total average assets.
(b) Excludes wholesale purchased held-for-sale ("HFS") loans purchased as part of the Investment Bank's proprietary activities.
(c) Excluded from the allowance coverage ratios were end-of-period loans held-for-sale; and excluded from the net charge-off rates were average loans held-for-sale.
(d) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.
(e) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(f) Basic and diluted earnings per share were each reduced by $0.01 in 2001 because of the impact of the adoption of SFAS 133 relating to the accounting for derivative instruments and hedging activities.
(g) Represents full-time equivalent employees, as headcount data is unavailable.

Management's discussion and analysis

JPMorgan Chase & Co.

This section of the Annual Report provides management's discussion and analysis ("MD&A") of the financial condition and results of operations for JPMorgan Chase. See the Glossary of terms on pages 134–135 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based upon the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause JPMorgan Chase's results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking statements on page 135 of this Annual Report) and in the JPMorgan Chase Annual Report on Form 10–K ("Form 10–K") for the year ended December 31, 2005, in Part I, Item 1A: Risk factors, to which reference is hereby made.

Introduction

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States, with $1.2 trillion in assets, $107 billion in stockholders' equity and operations worldwide. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing, asset and wealth management and private equity. Under the JPMorgan, Chase and Bank One brands, the Firm serves millions of customers in the United States and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank"), a national banking association with branches in 17 states; and Chase Bank USA, National Association, a national bank that is the Firm's credit card issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities Inc. ("JPMSI"), the Firm's U.S. investment banking firm.

JPMorgan Chase's activities are organized, for management reporting purposes, into six business segments, as well as Corporate. The Firm's wholesale businesses comprise the Investment Bank, Commercial Banking, Treasury & Securities Services, and Asset & Wealth Management. The Firm's consumer businesses comprise Retail Financial Services and Card Services. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows.

Investment Bank

JPMorgan Chase is one of the world's leading investment banks, as evidenced by the breadth of the Investment Bank client relationships and product capabilities. The Investment Bank ("IB") has extensive relationships with corporations, financial institutions, governments and institutional investors worldwide. The Firm provides a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, and market-making in cash securities and derivative instruments. The Investment Bank also commits the Firm's own capital to proprietary investing and trading activities.

Retail Financial Services

Retail Financial Services ("RFS") includes Home Finance, Consumer & Small Business Banking, Auto & Education Finance and Insurance. Through this group of businesses, the Firm provides consumers and small businesses with a broad range of financial products and services including deposits, investments, loans and insurance. Home Finance is a leading provider of consumer real estate loan products and is one of the largest originators and servicers of home mortgages. Consumer & Small Business Banking offers one of the largest branch networks in the United States, covering 17 states with 2,641 branches and 7,312 automated teller machines ("ATMs"). Auto & Education Finance is the largest noncaptive originator of automobile loans as well as a top provider of loans for college students. Through its Insurance operations, the Firm sells and underwrites an extensive range of financial protection products and investment alternatives, including life insurance, annuities and debt protection products.

Card Services

Card Services ("CS") is one of the largest issuers of credit cards in the United States, with more than 110 million cards in circulation, and is the largest merchant acquirer. CS offers a wide variety of products to satisfy the needs of its cardmembers, including cards issued on behalf of many well-known partners, such as major airlines, hotels, universities, retailers and other financial institutions.

Commercial Banking

Commercial Banking ("CB") serves more than 25,000 clients, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenues generally ranging from $10 million to $2 billion. While most Middle Market clients are within the Retail Financial Services footprint, CB also covers larger corporations, as well as local governments and financial institutions on a national basis. CB is a market leader with superior client penetration across the businesses it serves. Local market presence, coupled with industry expertise and excellent client service and risk management, enable CB to offer superior financial advice. Partnership with other JPMorgan Chase businesses positions CB to deliver broad product capabilities – including lending, treasury services, investment banking, and asset and wealth management – and meet its clients' financial needs.

Treasury & Securities Services

Treasury & Securities Services ("TSS") is a global leader in providing transaction, investment and information services to support the needs of corporations, issuers and institutional investors worldwide. TSS is one of the largest cash management providers in the world and a leading global custodian. The Treasury Services ("TS") business provides a variety of cash management products, trade finance and logistics solutions, wholesale card products, and short-term liquidity management tools. The Investor Services ("IS") business provides custody, fund services, securities lending, and performance measurement and execution products. The Institutional Trust Services ("ITS") business provides trustee, depository and administrative services for debt and equity issuers. TS partners with the Commercial Banking, Consumer & Small Business Banking and Asset & Wealth Management businesses to serve clients firmwide. As a result, certain TS revenues are included in other segments' results. TSS combined the management of the IS and ITS businesses under the name Worldwide Securities Services ("WSS") to create an integrated franchise which provides custody and investor services as well as securities clearance and trust services to clients globally. Beginning January 1, 2006, TSS will report results for two divisions: TS and WSS.

Asset & Wealth Management
Asset & Wealth Management ("AWM") provides investment advice and management for institutions and individuals. With Assets under supervision of $1.1 trillion, AWM is one of the largest asset and wealth managers in the world. AWM serves four distinct client groups through three businesses: institutions through JPMorgan Asset Management; ultra-high-net-worth clients through the Private Bank; high-net-worth clients through Private Client Services; and retail clients through JPMorgan Asset Management. The majority of AWM's client assets are in actively managed portfolios. AWM has global investment expertise in equities, fixed income, real estate, hedge funds, private equity and liquidity, including both money market instruments and bank deposits. AWM also provides trust and estate services to ultra-high-net-worth and high-net-worth clients, and retirement services for corporations and individuals.

2005 Business events

Collegiate Funding Services
On March 1, 2006, JPMorgan Chase acquired, for approximately $663 million, Collegiate Funding Services, a leader in student loan servicing and consolidation. This acquisition will enable the Firm to create a comprehensive education finance business.

BrownCo
On November 30, 2005, JPMorgan Chase sold BrownCo, an on-line deep-discount brokerage business, to E*TRADE Financial for a cash purchase price of $1.6 billion. JPMorgan Chase recognized an after-tax gain of $752 million.

Sears Canada credit card business
On November 15, 2005, JPMorgan Chase purchased Sears Canada Inc.'s credit card operation, including both the private-label card accounts and the co-branded Sears MasterCard® accounts. The credit card operation includes approximately 10 million accounts with $2.2 billion (CAD$2.5 billion) in managed loans. Sears Canada and JPMorgan Chase entered into an ongoing arrangement under which JPMorgan Chase will offer private-label and co-branded credit cards to both new and existing customers of Sears Canada.

Chase Merchant Services, Paymentech integration
On October 5, 2005, JPMorgan Chase and First Data Corp. completed the integration of the companies' jointly owned Chase Merchant Services and Paymentech merchant businesses, to be operated under the name of Chase Paymentech Solutions, LLC. The joint venture is the largest financial transaction processor in the U.S. for businesses accepting credit card payments via traditional point of sale, Internet, catalog and recurring billing. As a result of the integration into a joint venture, Paymentech has been deconsolidated and JPMorgan Chase's ownership interest in this joint venture is accounted for in accordance with the equity method of accounting.

Neovest Holdings, Inc.
On September 1, 2005, JPMorgan Chase completed its acquisition of Neovest Holdings, Inc., a provider of high-performance trading technology and direct market access. This transaction will enable the Investment Bank to offer a leading, broker-neutral trading platform across asset classes to institutional investors, asset managers and hedge funds.

Enron litigation settlement
On June 14, 2005, JPMorgan Chase announced that it had reached an agreement in principle to settle, for $2.2 billion, the Enron class action litigation captioned Newby v. Enron Corp. The Firm also recorded a nonoperating charge of $1.9 billion (pre-tax) to cover the settlement and to increase its reserves for certain other remaining material legal matters.

Vastera
On April 1, 2005, JPMorgan Chase acquired Vastera, a provider of global trade management solutions, for approximately $129 million. Vastera's business was combined with the Logistics and Trade Services businesses of TSS' Treasury Services unit. Vastera automates trade management processes associated with the physical movement of goods internationally; the acquisition enables TS to offer management of information and processes in support of physical goods movement, together with financial settlement.

WorldCom litigation settlement
On March 17, 2005, JPMorgan Chase settled, for $2.0 billion, the WorldCom, Inc. class action litigation. In connection with the settlement, JPMorgan Chase increased the Firm's Litigation reserve by $900 million.

JPMorgan Partners
On March 1, 2005, the Firm announced that the management team of JPMorgan Partners, LLC, a private equity unit of the Firm, will become independent when it completes the investment of the current $6.5 billion Global Fund, which it advises. The buyout and growth equity professionals of JPMorgan Partners will form a new independent firm, CCMP Capital, LLC, and the venture professionals will separately form a new independent firm, Panorama Capital, LLC. JPMorgan Chase has committed to invest the lesser of $875 million or 24.9% of the limited partnership interests in the fund to be raised by CCMP Capital, and has committed to invest the lesser of $50 million or 24.9% of the limited partnership interests in the fund to be raised by Panorama Capital. The investment professionals of CCMP and Panorama will continue to manage the JPMP investments pursuant to a management agreement with the Firm.

Cazenove
On February 28, 2005, JPMorgan Chase and Cazenove Group plc ("Cazenove") formed a business partnership which combined Cazenove's investment banking business and JPMorgan Chase's U.K.-based investment banking business in order to provide investment banking services in the United Kingdom and Ireland. The new company is called JPMorgan Cazenove Holdings.

Subsequent events

Sale of insurance underwriting business
On February 7, 2006, JPMorgan Chase announced that the Firm has agreed to sell its life insurance and annuity underwriting businesses to Protective Life Corporation for a cash purchase price of approximately $1.2 billion. The sale, which includes both the heritage Chase insurance business and the life business that Bank One had bought from Zurich Insurance in 2003, is subject to normal regulatory approvals and is expected to close in the third quarter of 2006. JPMorgan Chase anticipates the transaction will have no material impact on earnings.

Executive overview

This overview of management's discussion and analysis highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a more complete understanding of events, trends and uncertainties, as well as the liquidity, capital, credit and market risks, and the critical accounting estimates, affecting the Firm and the lines of business, this Annual Report should be read in its entirety.

Financial performance of JPMorgan Chase

As of or for the year ended December 31, (in millions, except per share and ratio data)	2005	2004[a]	Change
Total net revenue	**$ 54,533**	$ 43,097	27%
Provision for credit losses	**3,483**	2,544	37
Total noninterest expense	**38,835**	34,359	13
Net income	**8,483**	4,466	90
Net income per share – diluted	**2.38**	1.55	54
Average common equity	**105,507**	75,641	39
Return on common equity ("ROE")	**8%**	6%	
Loans	**$ 419,148**	$ 402,114	4%
Total assets	**1,198,942**	1,157,248	4
Deposits	**554,991**	521,456	6
Tier 1 capital ratio	**8.5%**	8.7%	
Total capital ratio	**12.0**	12.2	

(a) Includes six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Business overview

2005 represented the Firm's first full year as a merged company; 2004 included six months of the combined Firm's results and six months of heritage JPMorgan Chase results. Therefore, comparisons between the two years are significantly affected by the Merger. In addition, other key factors affecting 2005 results included litigation charges to settle the Enron and Worldcom class actions, a special provision for credit losses related to Hurricane Katrina, the impact of the new bankruptcy legislation on credit card charge-offs and the sale of BrownCo, as well as the global economic and market environments.

In 2005, the Firm successfully completed a number of milestones in the execution of its Merger integration plan. Key accomplishments included: launching a national advertising campaign that introduced a modernized Chase brand; the conversion of 1,400 Bank One branches, 3,400 ATMs and millions of Bank One credit cards to the Chase brand; completing the operating platform conversion in Card Services; and executing a major systems conversion in Texas that united 400 Chase and Bank One branches and over 800 ATMs under common systems and branding. These accomplishments resulted in continued efficiencies from the Merger, and the Firm made significant progress toward reaching the merger-related savings target of approximately $3.0 billion by the end of 2007. The Firm realized approximately $1.5 billion of merger savings in 2005, bringing estimated cumulative savings to $1.9 billion, and the annualized run-rate of savings entering 2006 is approximately $2.2 billion. In order to achieve these savings, the Firm expensed merger-related costs of $722 million during the year, bringing the total cumulative amount expensed since the Merger announcement to $2.1 billion. Management continues to estimate remaining Merger costs of approximately $0.9 billion to $1.4 billion, which are expected to be expensed over the next two years.

The Board of Directors announced in the fourth quarter that James Dimon, President and Chief Operating Officer, would succeed Chairman and Chief Executive Officer William B. Harrison, Jr. as Chief Executive Officer on December 31, 2005. Mr. Harrison remains Chairman of the Board.

The Firm reported 2005 net income of $8.5 billion, or $2.38 per share, compared with net income of $4.5 billion, or $1.55 per share, for 2004. The return on common equity was 8% compared with 6% in 2004.

Results included $2.0 billion in after-tax charges, or $0.57 per share, which included nonoperating litigation charges of $1.6 billion and Merger costs of $448 million. Excluding these charges, operating earnings were $10.5 billion, or $2.95 per share, and return on common equity was 10%. Operating earnings represent business results without merger-related costs, nonoperating litigation-related charges and recoveries, and costs related to conformance of accounting policies.

In 2005, both the U.S. and global economies continued to expand. Gross domestic product increased by an estimated 3.0% globally with the U.S. economy growing at a slightly faster pace. The U.S. economy experienced continued rising short-term interest rates, which were driven by Federal Reserve Board actions during the course of the year. The federal funds rate increased from 2.25% to 4.25% during the year, and the yield curve flattened as long term interest rates remained broadly steady. Equity markets, both domestic and international, reflected positive performance, with the S&P 500 up 3% and international indices increasing over 20%. Capital markets activity was very strong during 2005, with debt and equity underwriting and merger and acquisition activity surpassing 2004 levels. The U.S. consumer sector showed continued strength buoyed by overall economic strength, which benefited from good levels of employment and retail sales that increased versus the prior year. This strength came despite slowing mortgage origination and refinance activity as well as significantly higher bankruptcy filings due to the new bankruptcy legislation which became effective in October 2005.

The 2005 economic environment was a contributing factor to the performance of the Firm and each of its businesses. The overall economic expansion and strong level of capital markets activity helped to drive new business volume and sales growth within each business. The interest rate environment negatively affected both wholesale and consumer loan spreads, though wholesale liability spreads widened over the course of the year, benefiting Treasury & Securities Services and Commercial Banking. Additionally, the credit quality of the loan portfolio continued to remain strong, reflecting the beneficial economic environment, despite the impacts of accelerated bankruptcy filings and Hurricane Katrina.

The discussion that follows highlights, on an operating basis and excluding the impact of the Merger, the performance of each of the Firm's lines of business.

Investment Bank operating earnings benefited from higher revenue and a continued benefit from the Provision for credit losses, which were offset by increased compensation expense. Revenue growth was driven by higher, although volatile, fixed income trading results, stronger equity commissions and improved investment banking fees, all of which benefited from strength in global capital markets activity. Investment banking fees had particular strength in advisory, reflecting in part the benefit of the business partnership with Cazenove, which was formed in February of 2005. As in 2004, the

Provision for credit losses in 2005 was a benefit to earnings, mainly due to continued improvement in the credit quality of the loan portfolio. The increase in expense was primarily the result of higher performance-based incentive compensation due to increased revenues.

Retail Financial Services operating earnings benefited from the overall strength of the U.S. economy, which led to increased deposit, home equity and mortgage balances. In addition to the benefit from higher balances, revenues increased due to improved mortgage servicing rights ("MSRs") risk management results. Expenses declined, reflecting ongoing efficiency improvements across all businesses even as investments continued in retail banking distribution and sales, with the net addition during the year of 133 branch offices, 662 ATMs and over 1,300 personal bankers. These benefits were offset partially by narrower spreads on loans due to the interest rate environment and net losses associated with loan portfolio sale activity. The provision for credit losses benefited from improved credit trends in most consumer lending portfolios and from loan portfolio sales, but was affected negatively by a special provision related to Hurricane Katrina.

Card Services operating earnings benefited from lower expenses driven by merger savings and greater efficiencies from the operating platform conversion, which resulted in lower processing and compensation costs. Revenue benefited from higher loan balances and customer charge volume resulting from marketing initiatives and increased consumer spending. Partially offsetting this growth were narrower spreads on loan balances due to an increase in accounts in their introductory rate period and higher interest rates. The managed provision for credit losses increased due to record levels of bankruptcy-related charge-offs related to the new bankruptcy legislation that became effective in October 2005 and a special provision related to Hurricane Katrina. Despite these events, underlying credit quality remained strong, with a managed net charge-off ratio of 5.21%, down from 5.27% in 2004.

Commercial Banking operating earnings benefited from wider spreads and higher volumes related to liability balances and increased loan balances. Partially offsetting these benefits were narrower loan spreads related to competitive pressures in some markets and lower deposit-related fees due to higher interest rates. The provision for credit losses increased due to a special provision related to Hurricane Katrina, increased loan balances and refinements in the data used to estimate the allowance for credit losses. However, the underlying credit quality in the portfolio was strong throughout the year, as evidenced by lower net charge-offs and nonperforming loans compared with 2004.

Treasury & Securities Services operating earnings grew significantly in 2005. Revenue growth resulted from business growth and widening spreads on, and growth in, liability balances, all of which benefited from global economic strength and capital market activity. Partially offsetting this growth were lower deposit-related fees due to higher interest rates. Expenses decreased due to lower software impairment charges, partially offset by higher compensation expense resulting from new business growth, the Vastera acquisition completed in April, and by charges taken in the second quarter to terminate a client contract.

Asset & Wealth Management operating earnings benefited from net asset inflows and asset appreciation, both the result of favorable capital markets and improved investment performance, which resulted in an increased level of Assets under management. Results also benefited from the acquisition of a majority interest in Highbridge Capital Management in the fourth quarter of 2004 and growth in deposit and loan balances. Expenses increased due primarily to the acquisition of Highbridge and higher performance-based incentive compensation related to increased revenue.

Corporate segment operating earnings were affected negatively by repositioning of the Treasury Investment portfolio. This decline was offset partially by the gain on the sale of BrownCo of $1.3 billion (pre-tax) and improved Private Equity results.

The Firm had, at year-end, total stockholders' equity of $107 billion, and a Tier 1 capital ratio of 8.5%. The Firm purchased $3.4 billion, or 93.5 million shares of common stock during the year.

2006 Business outlook

The following forward-looking statements are based upon the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause JPMorgan Chase's results to differ materially from those set forth in such forward-looking statements.

JPMorgan Chase's outlook for 2006 should be viewed against the backdrop of the global economy, financial markets and the geopolitical environment, all of which are integrally linked. While the Firm considers outcomes for, and has contingency plans to respond to, stress environments, the basic outlook for 2006 is predicated on the interest rate movements implied in the forward rate curve for U.S. treasuries, the continuation of favorable U.S. and international equity markets and continued expansion of the global economy.

The performance of the Firm's capital markets and wholesale businesses are affected by overall global economic growth and by financial market movements and activity levels. The Investment Bank enters 2006 with a strong investment banking fee pipeline and continues to focus on new product expansion initiatives, such as commodities and securitized products, which are intended to benefit growth and reduce volatility in trading results over time. Compared with 2005, the Investment Bank anticipates lower credit portfolio revenues due to reduced gains from loan workouts. Asset & Wealth Management anticipates continued growth driven by continued net inflows to Assets under supervision. Treasury & Securities Services and Commercial Banking expect growth due to increased business activity and product sales.

Retail Financial Services anticipates benefiting from the expanded branch network and salesforce, and improved sales productivity and cross-selling in the branches, partially offset by pressure on loan and deposit spreads due to the higher interest rate environment. The acquisition of Collegiate Funding Services is expected to contribute modestly to earnings in 2006.

Card Services anticipates that managed receivables will grow in line with the overall credit card industry, benefiting from marketing initiatives, new partnerships and the acquisition of the Sears Canada credit card business. Revenues and expenses also will reflect the full-year impact of the Paymentech deconsolidation and the acquisition of the Sears Canada credit card business.

The Corporate segment includes Private Equity, Treasury and other corporate support units. The revenue outlook for the Private Equity business is directly related to the strength of the equity markets and the performance of the underlying portfolio investments. If current market conditions persist, the Firm anticipates continued realization of private equity gains in 2006, but results can be volatile from quarter to quarter. It is anticipated that Treasury net interest

income will gradually improve and that the net loss in Other Corporate will be reduced as merger savings and other expense reduction initiatives, such as less excess real estate, are realized.

The Provision for credit losses in 2006 is anticipated to be higher than in 2005, primarily driven by a trend toward a more normal level of provisioning for credit losses in the wholesale businesses. The consumer Provision for credit losses in 2006 should reflect generally stable underlying asset quality. However, it is anticipated that the first half of 2006 will experience lower credit card net charge-offs, as the record level of bankruptcy filings in the fourth quarter of 2005 are believed to have included bankruptcy filings that would otherwise have occurred in 2006. The second half of 2006 is expected to include increased credit card delinquencies and net charge-offs as a result of implementation of new FFIEC minimum payment rules.

Firmwide expenses are anticipated to benefit as the run rate of merger savings is expected to reach approximately $2.8 billion by the end of 2006 driven by activities such as the tri-state retail conversion and data center upgrades. Offsetting the merger savings will be continued investment in distribution enhancements and new product offerings; extensive merger integration activities and upgrading of technology; and expenses related to recent acquisitions, such as the Sears Canada credit card business and Collegiate Funding Services.

Consolidated results of operations

The following section provides a comparative discussion of JPMorgan Chase's consolidated results of operations on a reported basis for the three-year period ended December 31, 2005. Factors that are related primarily to a single business segment are discussed in more detail within that business segment than they are in this consolidated section. For a discussion of the Critical accounting estimates used by the Firm that affect the Consolidated results of operations, see pages 81–83 of this Annual Report.

Revenue

Year ended December 31,[a] (in millions)	2005	2004	2003
Investment banking fees	**$ 4,088**	$ 3,537	$ 2,890
Trading revenue	**5,860**	3,612	4,427
Lending & deposit related fees	**3,389**	2,672	1,727
Asset management, administration and commissions	**10,390**	8,165	6,039
Securities/private equity gains	**473**	1,874	1,479
Mortgage fees and related income	**1,054**	806	790
Credit card income	**6,754**	4,840	2,466
Other income	**2,694**	830	601
Noninterest revenue	**34,702**	26,336	20,419
Net interest income	**19,831**	16,761	12,965
Total net revenue	**$ 54,533**	$ 43,097	$ 33,384

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

2005 compared with 2004

Total net revenue for 2005 was $54.5 billion, up 27% from 2004, primarily due to the Merger, which affected every revenue category. The increase from the prior year also was affected by a $1.3 billion gain on the sale of BrownCo; higher Trading revenue; and higher Asset management, administration and commissions, which benefited from several new investments and growth in Assets under management and assets under custody. These increases were offset partly by available-for-sale ("AFS") securities losses as a result of repositioning of the Firm's Treasury investment portfolio. The discussions that follow highlight factors other than the Merger that affected the 2005 versus 2004 comparison.

The increase in Investment banking fees reflected continued strength in advisory, equity and debt underwriting, with particular growth in Europe, which benefited from the business partnership with Cazenove. Trading revenue increased from 2004, reflecting strength in fixed income, equities and commodities. For a further discussion of Investment banking fees and Trading revenue, which are primarily recorded in the IB, see the IB segment results on pages 36–38 of this Annual Report.

The higher Lending & deposit-related fees were driven by the Merger; absent the effects of the Merger, the deposit-related fees would have been lower due to rising interest rates. In a higher interest-rate environment, the value of deposit balances to a customer is greater, resulting in a reduction of deposit-related fees. For a further discussion of liability balances (including deposits) see the CB and TSS segment discussions on pages 47–48 and 49–50, respectively, of this Annual Report.

The increase in Asset management, administration and commissions revenue was driven by incremental fees from several new investments, including a majority interest in Highbridge Capital Management, LLC, the business partnership with Cazenove and the acquisition of Vastera. Also contributing to the higher level of revenue was an increase in Assets under management, reflecting net asset inflows, mainly in equity-related products, and global equity market appreciation. In addition, Assets under custody were up due to market value appreciation and new business. Commissions rose as a result of a higher volume of brokerage transactions. For additional information on these fees and commissions, see the segment discussions for IB on pages 36–38, AWM on pages 51–52 and TSS on pages 49–50 of this Annual Report.

The decline in Securities/private equity gains reflected $1.3 billion of securities losses, as compared with $338 million of gains in 2004. The losses resulted primarily from repositioning the Firm's Treasury investment portfolio in response to rising interest rates. The securities losses were offset partly by higher private equity gains due to a continuation of favorable capital markets conditions. For a further discussion of Securities/private equity gains, which are recorded primarily in the Firm's Treasury and Private Equity businesses, see the Corporate segment discussion on pages 53–54 of this Annual Report.

Mortgage fees and related income increased due to improvements in risk management results related to MSR assets. Mortgage fees and related income exclude the impact of NII and AFS securities gains related to home mortgage activities. For a discussion of Mortgage fees and related income, which is recorded primarily in RFS's Home Finance business, see the segment discussion for RFS on pages 39–44 of this Annual Report.

Credit card income rose as a result of higher interchange income associated with the increase in charge volume. This increase was offset partially by higher volume-driven payments to partners; rewards expense; and the impact of the deconsolidation of Paymentech, which was deconsolidated upon completion of the integration of Chase Merchant Services and the Paymentech merchant processing businesses in 2005. For a further discussion of Credit card income, see CS segment results on pages 45–46 of this Annual Report.

The increase in Other income primarily reflected a $1.3 billion pre-tax gain on the sale of BrownCo to E*TRADE Financial; higher gains from loan workouts and loan sales; and higher revenues as a result of a shift from financing leases to operating leases in the auto business. These gains were offset partly by write-downs on auto loans that were transferred to held-for-sale and a one-time gain in 2004 on the sale of an investment.

Net interest income rose as a result of higher average volume of, and wider spreads on, liability balances. Also contributing to the increase was higher average volume of wholesale and consumer loans, in particular, home equity and credit card loans. These increases were offset partially by narrower spreads on consumer and wholesale loans and on trading assets, as well as reduced Treasury investment portfolio levels. The Firm's total average interest-earning assets in 2005 were $916 billion, up 23% from the prior year. The net interest yield on these assets, on a fully taxable-equivalent basis, was 2.19%, a decrease of six basis points from the prior year.

2004 compared with 2003

Total net revenues, at $43.1 billion, rose by $9.7 billion, or 29%, primarily due to the Merger, which affected every category of Total net revenue. The discussion that follows highlights factors other than the Merger that affected the 2004 versus 2003 comparison.

The increase in Investment banking fees was driven by significant gains in underwriting and advisory activities as a result of increased global market volumes and market share gains. Trading revenue declined by 18%, primarily due to lower portfolio management results in fixed income and equities.

Lending & deposit related fees were up from 2003 due to the Merger. The rise was offset partially by lower deposit-related fees, as clients paid for services with deposits versus fees due to rising interest rates. Throughout 2004, deposit balances grew in response to rising interest rates.

The increase in Asset management, administration and commissions was driven also by the full-year impact of other acquisitions – such as EFS in January 2004, Bank One's Corporate Trust business in November 2003 and JPMorgan Retirement Plan Services in June 2003 – as well as the effect of global equity market appreciation, net asset inflows and a better product mix. In addition, a more active market for trading activities in 2004 resulted in higher brokerage commissions.

Securities/private equity gains for 2004 rose from the prior year, primarily fueled by the improvement in the Firm's private equity investment results. This change was offset by lower securities gains on the Treasury investment portfolio as a result of lower volumes of securities sold, and lower gains realized on sales due to higher interest rates. Additionally, RFS's Home Finance business reported losses in 2004 on AFS securities, as compared with gains in 2003. For a further discussion of securities gains, see the RFS and Corporate segment discussions on pages 39–44 and 53–54, respectively, of this Annual Report.

Mortgage fees and related income rose as a result of higher servicing revenue; this improvement was offset partially by lower MSR risk management results and prime mortgage production revenue, and by lower gains from sales and securitizations of subprime loans as a result of management's decision in 2004 to retain these loans. Mortgage fees and related income exclude the impact of NII and securities gains related to home mortgage activities.

Credit card income increased from 2003 as a result of higher customer charge volume, which resulted in increased interchange income, and higher credit card servicing fees associated with an increase of $19.4 billion in average securitized loans. The increases were offset partially by higher volume-driven payments to partners and rewards expense.

The increase in Other income from 2003 reflected gains on leveraged lease transactions, the sale of an investment in 2004 and higher net results from corporate- and bank-owned life insurance policies. These positive factors in 2004 were offset partially by gains on sales of several nonstrategic businesses and real estate properties in 2003.

Net interest income rose from 2003 as growth in volumes of consumer loans and deposits, as well as wider spreads on deposits, contributed to higher net interest income. These positive factors were offset partially by lower wholesale loan balances in the IB and tighter spreads on loans, investment securities and trading assets stemming from the rise in interest rates. The Firm's total average interest-earning assets for 2004 were $744 billion, up $154 billion from 2003. The net interest yield on these assets, on a fully taxable-equivalent basis, was 2.25% in 2004, an increase of four basis points from the prior year.

Provision for credit losses

2005 compared with 2004

The Provision for credit losses was $3.5 billion, an increase of $939 million, or 37%, from 2004, reflecting the full-year impact of the Merger. The wholesale Provision for credit losses was a benefit of $811 million for the year compared with a benefit of $716 million in the prior year, reflecting continued strength in credit quality. The wholesale loan net recovery rate was 0.06% in 2005, an improvement from a net charge-off rate of 0.18% in the prior year. The total consumer Provision for credit losses was $4.3 billion, $1.9 billion higher than the prior year, primarily due to the Merger, higher bankruptcy-related net charge-offs in Card Services and a $350 million special provision for Hurricane Katrina. 2004 included accounting policy conformity adjustments as a result of the Merger. Excluding these items, the consumer portfolio continued to show strength in credit quality.

The Firm had total nonperforming assets of $2.6 billion at December 31, 2005, a decline of $641 million, or 20%, from the 2004 level of $3.2 billion. For further information about the Provision for credit losses and the Firm's management of credit risk, see the Credit risk management discussion on pages 63–74 of this Annual Report.

2004 compared with 2003

The Provision for credit losses of $2.5 billion was up $1.0 billion, or 65%, compared with 2003. The impact of the Merger and accounting policy conformity charges of $858 million were offset partially by releases in the allowance for credit losses related to the wholesale loan portfolio, primarily due to improved credit quality in the IB, and the sale of the manufactured home loan portfolio in RFS.

Noninterest expense

Year ended December 31,[a] (in millions)	**2005**	2004	2003
Compensation expense	**$ 18,255**	$ 14,506	$ 11,387
Occupancy expense	**2,299**	2,084	1,912
Technology and communications expense	**3,624**	3,702	2,844
Professional & outside services	**4,224**	3,862	2,875
Marketing	**1,917**	1,335	710
Other expense	**3,705**	2,859	1,694
Amortization of intangibles	**1,525**	946	294
Merger costs	**722**	1,365	—
Litigation reserve charge	**2,564**	3,700	100
Total noninterest expense	**$ 38,835**	$ 34,359	$ 21,816

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

2005 compared with 2004

Noninterest expense was $38.8 billion, up 13% from the prior year, primarily due to the full-year impact of the Merger. Excluding Litigation reserve charges and Merger costs, Noninterest expense would have been $35.5 billion, up 21%. In addition to the Merger, expenses increased as a result of higher performance-based incentives, continued investment spending in the Firm's businesses and incremental marketing expenses related to launching the new Chase brand, partially offset by merger-related savings and other efficiencies throughout the Firm. Each category of Noninterest expense was affected by the Merger. The discussions that follow highlight factors other than the Merger that affected the 2005 versus 2004 comparison.

Compensation expense rose as a result of higher performance-based incentives; additional headcount due to the insourcing of the Firm's global technology infrastructure (effective December 31, 2004, when JPMorgan Chase terminated the Firm's outsourcing agreement with IBM); the impact of several investments, including Cazenove, Highbridge and Vastera; the accelerated vesting of certain employee stock options; and business growth. The effect of the termination of the IBM outsourcing agreement was to shift expenses from Technology and communications expense to Compensation expense. The increase in Compensation expense was offset partially by merger-related savings throughout the Firm. For a detailed discussion of employee stock-based incentives, see Note 7 on pages 100–102 of this Annual Report.

The increase in Occupancy expense was primarily due to the Merger, partially offset by lower charges for excess real estate and a net release of excess property tax accruals, compared with $103 million of charges for excess real estate in 2004.

Technology and communications expense was down only slightly. This reduction reflects the offset of six months of the combined Firm's results for 2004 against the full-year 2005 impact from termination of the JPMorgan Chase outsourcing agreement with IBM. The reduction in Technology and communications expense due to the outsourcing agreement termination is mostly offset by increases in Compensation expense related to additional headcount and investments in the Firm's hardware and software infrastructure.

Professional and outside services were higher compared with the prior year as a result of the insourcing of the Firm's global technology infrastructure, upgrades to the Firm's systems and technology, and business growth. These expenses were offset partially by expense-management initiatives.

Marketing expense was higher compared with the prior year, primarily as a result of the Merger and the cost of advertising campaigns to launch the new Chase brand.

The increase in Other expense reflected incremental expenses related to investments made in 2005, as well as an increase in operating charges for legal matters. Also contributing to the increase was a $93 million charge taken by TSS to terminate a client contract and a $40 million charge taken by RFS related to the dissolution of a student loan joint venture. These items were offset partially by lower software impairment write-offs, merger-related savings and other efficiencies.

For a discussion of Amortization of intangibles and Merger costs, refer to Note 15 and Note 8 on pages 114–116 and 103, respectively, of this Annual Report.

The 2005 nonoperating Litigation reserve charges that were recorded by the Firm were as follows: a $1.9 billion charge related to the settlement of the Enron class action litigation and for certain other material legal proceedings and a $900 million charge for the settlement costs of the WorldCom class action litigation; these were partially offset by a $208 million insurance recovery related to certain material litigation. In comparison, 2004 included a $3.7 billion nonoperating charge to increase litigation reserves. For a further discussion of litigation, refer to Note 25 on page 123 of this Annual Report.

2004 compared with 2003

Noninterest expense was $34.4 billion in 2004, up $12.5 billion, or 57%, primarily due to the Merger. Excluding $1.4 billion of Merger costs, and Litigation reserve charges, Noninterest expense would have been $29.3 billion, up 35%. The discussion that follows highlights other factors affecting the 2004 versus 2003 comparison.

Compensation expense was up from 2003, primarily due to strategic investments in the IB and continuing expansion in RFS. These factors were offset partially by ongoing efficiency improvements and merger-related savings throughout the Firm, and by a reduction in pension costs. The decline in pension costs was attributable mainly to the increase in the expected return on plan assets resulting from a discretionary $1.1 billion contribution to the Firm's pension plan in April 2004, partially offset by changes in actuarial assumptions for 2004 compared with 2003.

The increase in Occupancy expense was offset partly by lower charges for excess real estate, which were $103 million in 2004 compared with $270 million in 2003.

Technology and communications expense was higher than in the prior year as a result of higher costs associated with greater use of outside vendors, primarily IBM, to support the global infrastructure requirements of the Firm. For a further discussion regarding the IBM outsourcing agreement, see the Corporate segment discussion on page 53 of this Annual Report.

Professional & outside services rose due to higher legal costs associated with litigation matters, as well as outside services stemming from recent acquisitions — primarily Electronic Financial Services ("EFS"), and growth in business at TSS and CS.

Marketing expense rose as CS initiated a more robust marketing campaign during 2004.

Other expense was up due to software impairment write-offs of $224 million, primarily in TSS and Corporate, compared with $60 million in 2003; higher operating charges for legal matters; and growth in business volume. These expenses were offset partly by a $57 million settlement related to the Enron surety bond litigation.

For a discussion of Amortization of intangibles and Merger costs, refer to Note 15 and Note 8 on pages 114–116 and 103, respectively.

In June of 2004, JPMorgan Chase recorded a $3.7 billion addition to the Litigation reserve. By comparison, 2003 included a charge of $100 million for Enron-related litigation.

Income tax expense

The Firm's Income before income tax expense, Income tax expense and effective tax rate were as follows for each of the periods indicated:

Year ended December 31,[a] (in millions, except rate)	**2005**	2004	2003
Income before income tax expense	**$12,215**	$ 6,194	$10,028
Income tax expense	**3,732**	1,728	3,309
Effective tax rate	**30.6%**	27.9%	33.0%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

2005 compared with 2004

The increase in the effective tax rate was primarily the result of higher reported pre-tax income combined with changes in the proportion of income subject to federal, state and local taxes. Also contributing to the increase were lower 2005 nonoperating charges and a gain on the sale of BrownCo, which were taxed at marginal tax rates of 38% and 40%, respectively. These increases were offset partially by a tax benefit of $55 million recorded in connection with the repatriation of foreign earnings.

2004 compared with 2003

The reduction in the effective tax rate for 2004, as compared with 2003, was the result of various factors, including lower reported pre-tax income, a higher level of business tax credits, and changes in the proportion of income subject to federal, state and local taxes, partially offset by purchase accounting adjustments related to leveraged lease transactions. The Merger costs and accounting policy conformity adjustments recorded in 2004, and the Litigation reserve charge recorded in the second quarter of 2004, reflected a tax benefit at a 38% marginal tax rate, contributing to the reduction in the effective tax rate compared with 2003.

Explanation and reconciliation of the Firm's use of non-GAAP financial measures

The Firm prepares its Consolidated financial statements using accounting principles generally accepted in the United States of America ("U.S. GAAP"); these financial statements appear on pages 87–90 of this Annual Report. That presentation, which is referred to as "reported basis," provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's and the lines' of business results on an operating basis, which is a non-GAAP financial measure. The Firm's definition of operating basis starts with the reported U.S. GAAP results. Operating basis excludes: (i) merger costs, (ii) the nonoperating litigation charges taken and insurance recoveries received with respect to certain of the Firm's material litigation; and (iii) costs related to the conformance of certain accounting policies as a result of the Merger. Management believes these items are not part of the Firm's normal daily business operations and, therefore, not indicative of trends, as they do not provide meaningful comparisons with other periods. For additional detail on nonoperating litigation charges, see the Glossary of terms on page 134 of this Annual Report.

In addition, the Firm manages its lines of business on an operating basis. In the case of the Investment Bank, noninterest revenue on an operating basis includes, in trading-related revenue, net interest income related to trading activities. Trading activities generate revenues, which are recorded for U.S. GAAP purposes in two line items on the income statement: trading revenue, which includes the mark-to-market gains or losses on trading positions; and net interest income, which includes the interest income or expense related to those positions. The impact of changes in market interest rates will either be recorded in Trading revenue or Net interest income depending on whether the trading position is a cash security or a derivative. Combining both the trading revenue and related net interest income allows management to evaluate the economic results of the Investment Bank's trading activities, which for GAAP purposes are reported in both Trading revenue and Net interest income. In management's view, this presentation also facilitates operating comparisons to competitors. For a discussion of trading-related revenue, see the IB on pages 36–38 of this Annual Report.

In the case of Card Services, operating basis is also referred to as "managed basis," and excludes the impact of credit card securitizations on total net revenue, the provision for credit losses, net charge-offs and loan receivables. This presentation is provided to facilitate operating comparisons to competitors. Through securitization, the Firm transforms a portion of its credit card receivables into securities, which are sold to investors. The credit card receivables are removed from the consolidated balance sheet through the transfer of the receivables to a trust, and the sale of undivided interests to investors that entitle the investors to specific cash flows generated from the credit card receivables. The Firm retains the remaining undivided interests as seller's interests, which are recorded in Loans on the Consolidated balance sheets. A gain or loss on the sale of credit card receivables to investors is recorded in Other income. Securitization also affects the Firm's Consolidated statements of income as interest income, certain fee revenue, recoveries in excess of interest paid to the investors, gross credit losses and other trust expenses related to the securitized receivables are all reclassified into credit card income. For a reconciliation of reported to managed basis of Card Services results, see page 46 of this Annual Report. For information regarding loans and residual interests sold and securitized, see Note 13 on pages 108–111 of this Annual Report. JPMorgan Chase uses the concept of "managed receivables" to evaluate the credit performance and overall financial performance of the underlying credit card loans, both sold and not sold: as the same borrower is continuing to use the credit card for ongoing charges, a borrower's credit performance will affect both the loan receivables sold under SFAS 140 and those not sold. Thus, in its disclosures regarding managed loan receivables, JPMorgan Chase treats the sold receivables as if they were still on the balance sheet in order to disclose the credit performance (such as net charge-off rates) of the entire managed credit card portfolio. In addition, Card Services operations are funded, operating results are evaluated, and decisions are made about allocating resources such as employees and capital based upon managed financial information.

Finally, commencing with the first quarter of 2005, operating revenue (noninterest revenue and net interest income) for each of the segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from tax exempt securities and investments that receive tax credits are presented in the operating results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenues arising from both taxable and tax-exempt sources. The corresponding income tax impact related to these items is recorded within income tax expense. The Corporate sector's and the Firm's operating revenue and income tax expense for the periods prior to the first quarter of 2005 have been restated to be similarly presented on a tax-equivalent basis. This restatement had no impact on the Corporate sector's or the Firm's operating earnings.

Management uses certain non-GAAP financial measures at the segment level because it believes these non-GAAP financial measures provide information to investors in understanding the underlying operational performance and trends of the particular business segment and facilitate a comparison of the business segment with the performance of competitors.

The following summary table provides a reconciliation from the Firm's reported GAAP results to operating results:

(Table continues on next page)

Year ended December 31,[a]	2005					2004				
(in millions, except per share and ratio data)	Reported results	Credit card[b]	Nonoperating items	Tax-equivalent adjustments	Operating basis	Reported results	Credit card[b]	Nonoperating items	Tax-equivalent adjustments	Operating basis
Revenue										
Investment banking fees	**$ 4,088**	**$ —**	**$ —**	**$ —**	**$ 4,088**	$ 3,537	$ —	$ —	$ —	$ 3,537
Trading revenue[c]	**6,019**	**—**	**—**	**—**	**6,019**	5,562	—	—	—	5,562
Lending & deposit related fees	**3,389**	**—**	**—**	**—**	**3,389**	2,672	—	—	—	2,672
Asset management, administration and commissions	**10,390**	**—**	**—**	**—**	**10,390**	8,165	—	—	—	8,165
Securities/private equity gains	**473**	**—**	**—**	**—**	**473**	1,874	—	—	—	1,874
Mortgage fees and related income	**1,054**	**—**	**—**	**—**	**1,054**	806	—	—	—	806
Credit card income	**6,754**	**(2,718)**	**—**	**—**	**4,036**	4,840	(2,267)	—	—	2,573
Other income	**2,694**	**—**	**—**	**571**	**3,265**	830	(86)	118[3]	317	1,179
Noninterest revenue[c]	**34,861**	**(2,718)**	**—**	**571**	**32,714**	28,286	(2,353)	118	317	26,368
Net interest income[c]	**19,672**	**6,494**	**—**	**269**	**26,435**	14,811	5,251	—	6	20,068
Total net revenue	**54,533**	**3,776**	**—**	**840**	**59,149**	43,097	2,898	118	323	46,436
Provision for credit losses	**3,483**	**3,776**	**—**	**—**	**7,259**	2,544	2,898	(858)[4]	—	4,584
Noninterest expense										
Merger costs	**722**	**—**	**(722)[1]**	**—**	**—**	1,365	—	(1,365)[1]	—	—
Litigation reserve charge	**2,564**	**—**	**(2,564)[2]**	**—**	**—**	3,700	—	(3,700)[2]	—	—
All other noninterest expense	**35,549**	**—**	**—**	**—**	**35,549**	29,294	—	—	—	29,294
Total noninterest expense	**38,835**	**—**	**(3,286)**	**—**	**35,549**	34,359	—	(5,065)	—	29,294
Income before income tax expense	**12,215**	**—**	**3,286**	**840**	**16,341**	6,194	—	6,041	323	12,558
Income tax expense	**3,732**	**—**	**1,248**	**840**	**5,820**	1,728	—	2,296	323	4,347
Net income	**$ 8,483**	**$ —**	**$ 2,038**	**$ —**	**$ 10,521**	$ 4,466	$ —	$ 3,745	$ —	$ 8,211
Earnings per share – diluted	**$ 2.38**	**$ —**	**$ 0.57**	**$ —**	**$ 2.95**	$ 1.55	$ —	$ 1.31	$ —	$ 2.86
Return on common equity	**8%**	**—%**	**2%**	**—%**	**10%**	6%	—%	5%	—%	11%
Return on equity less goodwill	**14**	**—**	**3**	**—**	**17**	9	—	7	—	16
Return on assets	**0.72**	**NM**	**NM**	**NM**	**0.84**	0.46	NM	NM	NM	0.81
Overhead ratio	**71**	**NM**	**NM**	**NM**	**60**	80	NM	NM	NM	63
Effective income tax rate	**31**	**NM**	**38**	**NM**	**36**	28	NM	38	NM	35
Loans–Period-end	**$ 419,148**	**$70,527**	**—**	**—**	**$ 489,675**	$402,114	$70,795	—	—	$ 472,909
Total assets – average	**1,185,066**	**67,180**	**—**	**—**	**1,252,246**	962,556[a]	51,084[a]	—	—	1,013,640[a]

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) The impact of credit card securitizations affects CS. See pages 45–46 of this Annual Report for further information.
(c) **Trading-related net interest income reclassification**

Year ended December 31,[a] (in millions)	2005	2004	2003
Trading revenue – reported[d]	**$ 5,860**	$ 3,612	$ 4,427
Trading-related NII	**159**	1,950	2,129
Trading revenue – adjusted[d]	**$ 6,019**	$ 5,562	$ 6,556
Net interest income – reported	**$ 19,831**	$ 16,761	$ 12,965
Trading-related NII	**(159)**	(1,950)	(2,129)
Net interest income – adjusted	**$ 19,672**	$ 14,811	$ 10,836

(d) Reflects Trading revenue at the Firm level. The majority of Trading revenue is recorded in the Investment Bank.

(Table continued from previous page)

2003				
Reported results	Credit card[b]	Nonoperating items	Tax-equivalent adjustments	Operating basis
$ 2,890	$ —	$ —	$ —	$ 2,890
6,556	—	—	—	6,556
1,727	—	—	—	1,727
6,039	—	—	—	6,039
1,479	—	—	—	1,479
790	—	—	—	790
2,466	(1,379)	—	—	1,087
601	(71)	—	89	619
22,548	(1,450)	—	89	21,187
10,836	3,320	—	44	14,200
33,384	1,870	—	133	35,387
1,540	1,870	—	—	3,410
—	—	—	—	—
100	—	—	—	100
21,716	—	—	—	21,716
21,816	—	—	—	21,816
10,028	—	—	133	10,161
3,309	—	—	133	3,442
$ 6,719	$ —	$ —	$ —	$ 6,719
$ 3.24	$ —	$ —	$ —	$ 3.24
16%	—%	—%	—%	16%
19	—	—	—	19
0.87	NM	NM	NM	0.83
65	NM	NM	NM	62
33	NM	NM	NM	34
$214,766	$ 34,856	—	—	$ 249,622
775,978	32,365	—	—	808,343

Nonoperating Items

The reconciliation of the Firm's reported results to operating results in the accompanying table sets forth the impact of several nonoperating items incurred by the Firm in 2005 and 2004. These nonoperating items are excluded from Operating earnings, as management believes these items are not part of the Firm's normal daily business operations and, therefore, not indicative of trends as they do not provide meaningful comparisons with other periods. These items include Merger costs, nonoperating litigation charges and insurance recoveries, and charges to conform accounting policies, each of which is described below:

(1) Merger costs of $722 million in 2005 and $1.4 billion in 2004 reflect costs associated with the Merger.

(2) Net nonoperating litigation charges of $2.6 billion and $3.7 billion were taken in 2005 and 2004, respectively.

(3) Other income in 2004 reflects $118 million of other accounting policy conformity adjustments.

(4) The Provision for credit losses in 2004 reflects $858 million of accounting policy conformity adjustments, consisting of a $1.4 billion charge related to the decertification of the seller's interest in credit card securitizations, partially offset by a benefit of $584 million related to conforming wholesale and consumer credit provision methodologies for the combined Firm.

Calculation of Certain GAAP and Non-GAAP Metrics

The table below reflects the formulas used to calculate both the following GAAP and non-GAAP measures:

Return on common equity

Reported	Net income* / Average common equity
Operating	Operating earnings* / Average common equity

Return on equity less goodwill[a]

Reported	Net income* / Average common equity less goodwill
Operating	Operating earnings* / Average common equity less goodwill

Return on assets

Reported	Net income / Average assets
Operating	Operating earnings / Average managed assets

Overhead ratio

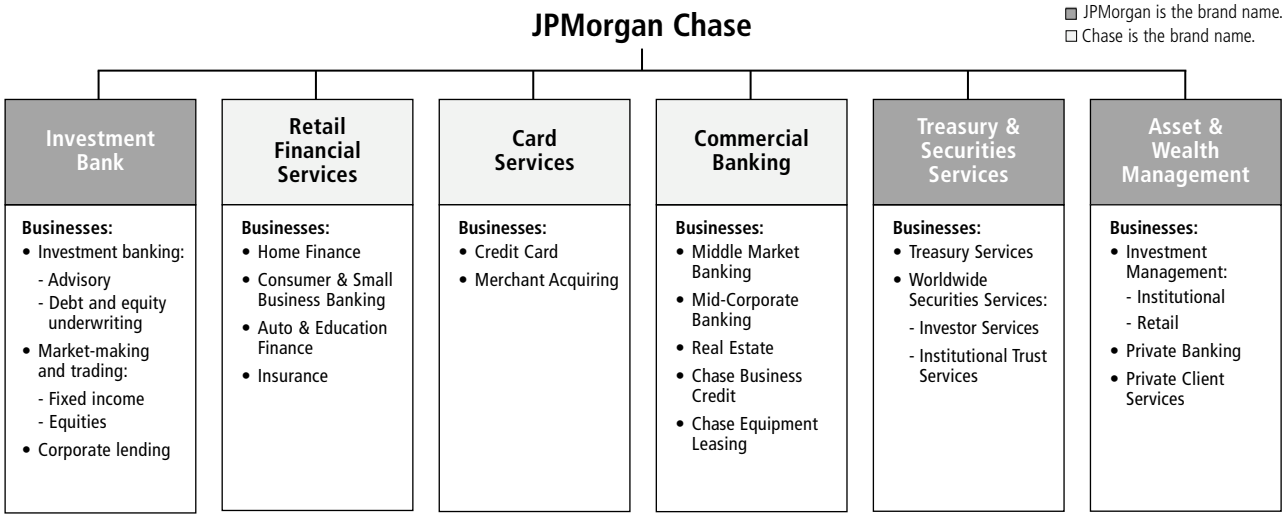
Reported	Total noninterest expense / Total net revenue
Operating	Total noninterest expense / Total net revenue

* Represents earnings applicable to common stock

(a) The Firm uses return on equity less goodwill, a non-GAAP financial measure, to evaluate the operating performance of the Firm. The Firm utilizes this measure to facilitate operating comparisons to competitors.

Business segment results

The Firm is managed on a line-of-business basis. The business segment financial results presented reflect the current organization of JPMorgan Chase. There are six major business segments: the Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset & Wealth Management, as well as a Corporate segment. The segments are based upon the products and services provided, or the type of customer served, and reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on an operating basis.



In connection with the Merger, business segment reporting was realigned to reflect the new business structure of the combined Firm. Treasury was transferred from the IB into Corporate. The segment formerly known as Chase Financial Services had been comprised of Chase Home Finance, Chase Cardmember Services, Chase Auto Finance, Chase Regional Banking and Chase Middle Market; as a result of the Merger, this segment is now called Retail Financial Services and is comprised of Home Finance, Auto & Education Finance, Consumer & Small Business Banking and Insurance. Chase Cardmember Services is now its own segment called Card Services, and Chase Middle Market moved into Commercial Banking. Investment Management & Private Banking was renamed Asset & Wealth Management. JPMorgan Partners, which formerly was a stand-alone business segment, was moved into Corporate. Corporate currently comprises Private Equity (JPMorgan Partners and ONE Equity Partners) and Treasury, and the corporate support areas, which include Central Technology and Operations, Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Office of the General Counsel, Corporate Real Estate and General Services, Risk Management, and Strategy and Development. Beginning January 1, 2006, TSS will report results for two divisions: TS and WSS. WSS was formed by consolidating IS and ITS.

Segment results for periods prior to July 1, 2004, reflect heritage JPMorgan Chase-only results and have been restated to reflect the current business segment organization and reporting classifications.

Segment results – Operating basis[(a)(b)]

(Table continues on next page)

Year ended December 31, (in millions, except ratios)	Total net revenue			Noninterest expense		
	2005	2004	Change	**2005**	2004	Change
Investment Bank	**$ 14,578**	$ 12,605	16%	**$ 9,739**	$ 8,696	12%
Retail Financial Services	**14,830**	10,791	37	**8,585**	6,825	26
Card Services	**15,366**	10,745	43	**4,999**	3,883	29
Commercial Banking	**3,596**	2,374	51	**1,872**	1,343	39
Treasury & Securities Services	**6,241**	4,857	28	**4,470**	4,113	9
Asset & Wealth Management	**5,664**	4,179	36	**3,860**	3,133	23
Corporate	**(1,126)**	885	NM	**2,024**	1,301	56
Total	**$ 59,149**	$ 46,436	27%	**$ 35,549**	$ 29,294	21%

(a) Represents reported results on a tax-equivalent basis and excludes the impact of credit card securitizations; Merger costs, litigation reserve charges and insurance recoveries deemed nonoperating; and accounting policy conformity adjustments related to the Merger.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(c) As a result of the Merger, new capital allocation methodologies were implemented during the third quarter of 2004. The capital allocated to each line of business considers several factors: stand-alone peer comparables, economic risk measures and regulatory capital requirements. In addition, effective with the third quarter of 2004, goodwill, as well as the associated capital, is only allocated to the Corporate line of business. Prior periods have not been revised to reflect these new methodologies and are not comparable to the presentation beginning in the third quarter of 2004.

Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives these results allocates income and expense using market-based methodologies. Effective with the Merger on July 1, 2004, several of the allocation methodologies were revised, as noted below. As prior periods have not been revised to reflect these new methodologies, they are not comparable to the presentation of periods beginning with the third quarter of 2004. Further, the Firm continues to assess the assumptions, methodologies and reporting reclassifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenues from those transactions. These revenue-sharing agreements were revised on the Merger date to provide consistency across the lines of business.

Funds transfer pricing

Funds transfer pricing ("FTP") is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to Corporate. The allocation process is unique to each business and considers the interest rate risk, liquidity risk and regulatory requirements of its stand-alone peers. Business segments may retain certain interest rate exposures, subject to management approval, that would be expected in the normal operation of a similar peer business. In the third quarter of 2004, FTP was revised to conform the policies of the combined firms.

Expense allocation

Where business segments use services provided by support units within the Firm, the costs of those support units are allocated to the business segments. Those expenses are allocated based upon their actual cost, or the lower of actual cost or market cost, as well as upon usage of the services provided. Effective with the third quarter of 2004, the cost allocation methodologies of the heritage firms were aligned to provide consistency across the business segments. In addition, expenses related to certain corporate functions, technology and operations ceased to be allocated to the business segments and are retained in Corporate. These retained expenses include parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other one-time items not aligned with the business segments. During 2005, the Firm refined cost allocation methodologies related to certain corporate functions, technology and operations expenses in order to improve transparency, consistency and accountability with regard to costs allocated across business segments. Prior periods have not been revised to reflect these new cost allocation methodologies.

Capital allocation

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, economic risk measures and regulatory capital requirements. The amount of capital assigned to each business is referred to as equity. At the time of the Merger, goodwill, as well as the associated capital, was allocated solely to Corporate. Effective January 2006, the Firm expects to refine its methodology for allocating capital to the business segments to include any goodwill associated with line of business-directed acquisitions since the Merger. U.S. GAAP requires the allocation of goodwill to the business segments for impairment testing (see Critical accounting estimates used by the Firm and Note 15 on pages 81–83 and 114–116, respectively, of this Annual Report). See the Capital management section on page 56 of this Annual Report for a discussion of the equity framework.

Credit reimbursement

TSS reimburses the IB for credit portfolio exposures the IB manages on behalf of clients the segments share. At the time of the Merger, the reimbursement methodology was revised to be based upon pre-tax earnings, net of the cost of capital related to those exposures. Prior to the Merger, the credit reimbursement was based upon pre-tax earnings, plus the allocated capital associated with the shared clients.

Tax-equivalent adjustments

Segment and Firm results reflect revenues on a tax-equivalent basis for segment reporting purposes. Refer to Explanation and reconciliation of the Firm's non-GAAP financial measures on page 31 of this Annual Report for additional details.

Segment results – Operating basis[a][b]

(Table continued from previous page)

Year ended December 31, (in millions, except ratios)	Operating earnings			Return on common equity – goodwill[c]	
	2005	2004	Change	**2005**	2004
Investment Bank	**$ 3,658**	$ 2,948	24%	**18%**	17%
Retail Financial Services	**3,427**	2,199	56	**26**	24
Card Services	**1,907**	1,274	50	**16**	17
Commercial Banking	**1,007**	608	66	**30**	29
Treasury & Securities Services	**1,037**	440	136	**55**	17
Asset & Wealth Management	**1,216**	681	79	**51**	17
Corporate	**(1,731)**	61	NM	**NM**	NM
Total	**$ 10,521**	$ 8,211	28%	**17%**	16%

Investment Bank

JPMorgan Chase is one of the world's leading investment banks, as evidenced by the breadth of its client relationships and product capabilities. The Investment Bank has extensive relationships with corporations, financial institutions, governments and institutional investors worldwide. The Firm provides a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, and market-making in cash securities and derivative instruments. The Investment Bank also commits the Firm's own capital to proprietary investing and trading activities.

Selected income statement data

Year ended December 31,[a] (in millions, except ratios)	2005	2004	2003
Revenue			
Investment banking fees:			
Advisory	**$ 1,263**	$ 938	$ 640
Equity underwriting	**864**	781	699
Debt underwriting	**1,969**	1,853	1,532
Total investment banking fees	**4,096**	3,572	2,871
Trading-related revenue:			
Fixed income and other	**5,673**	5,008	6,016
Equities	**350**	427	556
Credit portfolio	**116**	6	(186)
Total trading-related revenue[b]	**6,139**	5,441	6,386
Lending & deposit related fees	**594**	539	440
Asset management, administration and commissions	**1,724**	1,400	1,217
Other income	**615**	328	103
Noninterest revenue	**13,168**	11,280	11,017
Net interest income[b]	**1,410**	1,325	1,667
Total net revenue[c]	**14,578**	12,605	12,684
Provision for credit losses	**(838)**	(640)	(181)
Credit reimbursement from (to) TSS[d]	**154**	90	(36)
Noninterest expense			
Compensation expense	**5,785**	4,893	4,462
Noncompensation expense	**3,954**	3,803	3,840
Total noninterest expense	**9,739**	8,696	8,302
Operating earnings before income tax expense	**5,831**	4,639	4,527
Income tax expense	**2,173**	1,691	1,722
Operating earnings	**$ 3,658**	$ 2,948	$ 2,805
Financial ratios			
ROE	**18%**	17%	15%
ROA	**0.61**	0.62	0.64
Overhead ratio	**67**	69	65
Compensation expense as % of total net revenue	**40**	39	35

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Trading revenue, on a reported basis, excludes the impact of Net interest income related to IB's trading activities; this income is recorded in Net interest income. However, in this presentation, to assess the profitability of IB's trading business, the Firm combines these revenues for segment reporting purposes. The amount reclassified from Net interest income to Trading revenue was $0.2 billion, $1.9 billion and $2.1 billion for 2005, 2004 and 2003, respectively. The decline from prior years is due to tightening spreads as short-term funding rates have risen sharply and also, to a lesser extent, increased funding costs from growth in noninterest-bearing trading assets.
(c) Total net revenue includes tax-equivalent adjustments, primarily due to tax-exempt income from municipal bond investments and income tax credits related to affordable housing investments, of $752 million, $274 million and $117 million for 2005, 2004 and 2003, respectively.
(d) TSS is charged a credit reimbursement related to certain exposures managed within the IB credit portfolio on behalf of clients shared with TSS. For a further discussion, see Credit reimbursement on page 35 of this Annual Report.

The following table provides the IB's total net revenue by business segment:

Year ended December 31,[a] (in millions)	2005	2004	2003
Revenue by business			
Investment banking fees	**$ 4,096**	$ 3,572	$ 2,871
Fixed income markets	**7,242**	6,314	6,987
Equities markets	**1,799**	1,491	1,406
Credit portfolio	**1,441**	1,228	1,420
Total net revenue	**$ 14,578**	$ 12,605	$ 12,684

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

2005 compared with 2004

Operating earnings of $3.7 billion were up 24%, or $710 million, from the prior year. The increase was driven by the Merger, higher revenues and an increased benefit from the Provision for credit losses. These factors were partially offset by higher compensation expense. Return on equity was 18%.

Net revenue of $14.6 billion was up $2.0 billion, or 16%, over the prior year, representing the IB's highest annual revenue since 2000, driven by strong Fixed Income and Equity Markets and Investment banking fees. Investment banking fees of $4.1 billion increased 15% from the prior year driven by strong growth in advisory fees resulting in part from the Cazenove business partnership. Advisory revenues of $1.3 billion were up 35% from the prior year, reflecting higher market volumes. Debt underwriting revenues of $2.0 billion increased by 6% driven by strong loan syndication fees. Equity underwriting fees of $864 million were up 11% from the prior year driven by improved market share. Fixed Income Markets revenue of $7.2 billion increased 15%, or $928 million, driven by stronger, although volatile, trading results across commodities, emerging markets, rate markets and currencies. Equities Markets revenues increased 21% to $1.8 billion, primarily due to increased commissions, which were offset partially by lower trading results, which also experienced a high level of volatility. Credit Portfolio revenues were $1.4 billion, up $213 million from the prior year due to higher gains from loan workouts and sales as well as higher trading revenue from credit risk management activities.

The Provision for credit losses was a benefit of $838 million compared with a benefit of $640 million in 2004. The increased benefit was due primarily to the improvement in the credit quality of the loan portfolio and reflected net recoveries. Nonperforming assets of $645 million decreased by 46% since the end of 2004.

Noninterest expense increased 12% to $9.7 billion, largely reflecting higher performance-based incentive compensation related to growth in revenue. Noncompensation expense was up 4% from the prior year primarily due to the impact of the Cazenove business partnership, while the overhead ratio declined to 67% for 2005, from 69% in 2004.

2004 compared with 2003

In 2004, Operating earnings of $2.9 billion were up 5% from the prior year. Increases in Investment banking fees, the improvement in the Provision for credit losses and the impact of the Merger were partially offset by decreases in trading revenues and net interest income. Return on equity was 17% for 2004.

Total net revenue of $12.6 billion was relatively flat from the prior year, primarily due to lower Fixed income markets revenues and Credit portfolio revenues, offset by increases in Investment banking fees and the impact of the Merger. The decline in revenue from Fixed income markets was driven by weaker portfolio management trading results, mainly in the interest rate markets business. Credit portfolio revenues were down due to lower net interest income,

primarily driven by lower loan balances; these factors were partially offset by higher trading revenue due to more severe credit spread tightening in 2003 relative to 2004. Investment banking fees increased by 24% over the prior year, driven by significant gains in advisory and debt underwriting. The advisory gains were a result of increased global market volumes and market share, while the higher underwriting fees were due to stronger client activity.

The Provision for credit losses was a benefit of $640 million, compared with a benefit of $181 million in 2003. The improvement in the provision was the result of a $633 million decline in net charge-offs, partially offset by lower reductions in the allowance for credit losses in 2004 relative to 2003.

For the year ended December 31, 2004, Noninterest expense was up 5% from the prior year. The increase from 2003 was driven by higher Compensation expense, resulting from strategic investments and the impact of the Merger.

Selected metrics

Year ended December 31,[a] (in millions, except headcount and ratio data)	2005	2004	2003
Revenue by region			
Americas	**$ 8,223**	$ 6,870	$ 7,250
Europe/Middle East/Africa	**4,627**	4,082	4,331
Asia/Pacific	**1,728**	1,653	1,103
Total net revenue	**$ 14,578**	$ 12,605	$ 12,684
Selected average balances			
Total assets	**$ 598,118**	$473,121	$ 436,488
Trading assets–debt and equity instruments	**231,303**	173,086	156,408
Trading assets–derivatives receivables	**55,239**	58,735	83,361
Loans:			
Loans retained[b]	**42,918**	36,494	40,240
Loans held-for-sale[c]	**12,014**	6,124	4,797
Total loans	**54,932**	42,618	45,037
Adjusted assets[d]	**455,277**	393,646	370,776
Equity[e]	**20,000**	17,290	18,350
Headcount	**19,769**	17,478	14,691
Credit data and quality statistics			
Net charge-offs (recoveries)	**$ (126)**	$ 47	$ 680
Nonperforming assets:			
Nonperforming loans[f]	**594**	954	1,708
Other nonperforming assets	**51**	242	370
Allowance for loan losses	**907**	1,547	1,055
Allowance for lending related commitments	**226**	305	242
Net charge-off (recovery) rate[c]	**(0.29)%**	0.13%	1.69%
Allowance for loan losses to average loans[c]	**2.11**	4.24	2.56
Allowance for loan losses to nonperforming loans[f]	**187**	163	63
Nonperforming loans to average loans	**1.08**	2.24	3.79
Market risk–average trading and credit portfolio VAR[g][h][i]			
Trading activities:			
Fixed income[g]	**$ 67**	$ 74	$ 61
Foreign exchange	**23**	17	17
Equities	**34**	28	18
Commodities and other	**21**	9	8
Diversification[i]	**(59)**	(43)	(39)
Total trading VAR	**86**	85	65
Credit portfolio VAR[h]	**14**	14	18
Diversification[i]	**(12)**	(9)	(14)
Total trading and credit portfolio VAR	**$ 88**	$ 90	$ 69

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Loans retained include Credit Portfolio, Conduit loans, leverage leases, bridge loans for underwriting and other accrual loans.
(c) Loans held-for-sale, which include warehouse loans held as part of the IB's mortgage-backed, asset-backed and other securitization businesses, are excluded from Total loans for the allowance coverage ratio and net charge-off rate.
(d) Adjusted assets, a non-GAAP financial measure, equals total average assets minus (1) securities purchased under resale agreements and securities borrowed less securities sold, not yet purchased; (2) assets of variable interest entities (VIEs) consolidated under FIN 46R; (3) cash and securities segregated and on deposit for regulatory and other purposes; and (4) goodwill and intangibles. The amount of adjusted assets is presented to assist the reader in comparing the IB's asset and capital levels to other investment banks in the securities industry. Asset-to-equity leverage ratios are commonly used as one measure to assess a company's capital adequacy. The IB believes an adjusted asset amount, which excludes certain assets considered to have a low risk profile, provides a more meaningful measure of balance sheet leverage in the securities industry.
(e) Equity includes $15.0 billion, $15.0 billion and $14.6 billion of economic risk capital assigned to the IB for the years ended 2005, 2004 and 2003 respectively.
(f) Nonperforming loans include loans held-for-sale of $109 million, $2 million and $30 million as of December 31, 2005, 2004 and 2003, respectively. These amounts are not included in the allowance coverage ratios.
(g) Includes all fixed income mark-to-market trading activities, plus available-for-sale securities held for proprietary purposes.
(h) Includes VAR on derivative credit valuation adjustments, credit valuation adjustment hedges and mark-to-market hedges of the accrual loan portfolio, which are all reported in Trading revenue. This VAR does not include the accrual loan portfolio, which is not marked to market.
(i) Average VARs are less than the sum of the VARs of its market risk components, due to risk offsets resulting from portfolio diversification. The diversification effect reflects the fact that the risks are not perfectly correlated. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves.

According to Thomson Financial, in 2005, the Firm improved its ranking in U.S. Debt, Equity and Equity-related from #5 in 2004 to #4 and in U.S. Equity and Equity-related from #6 in 2004 to #5. The Firm maintained its #3 position in Global Announced M&A with 24% market share and its #1 position in Global Syndicated Loans. The Firm maintained its #2 ranking in U.S. Long-Term Debt, but dropped from #2 to #4 in Global Long-Term Debt.

According to Dealogic, the Firm was ranked #2 in Investment Banking fees generated during 2005.

Market shares and rankings[a]

	2005		2004		2003	
December 31,	Market Share	Rankings	Market Share	Rankings	Market Share	Rankings
Global debt, equity and equity-related	**6%**	**#4**	7%	# 3	8%	# 3
Global syndicated loans	**16**	**#1**	19	# 1	20	# 1
Global long-term debt	**6**	**#4**	7	# 2	8	# 2
Global equity and equity-related	**7**	**#6**	6	# 6	8	# 4
Global announced M&A	**24**	**#3**	24	# 3	16	# 4
U.S. debt, equity and equity-related	**8**	**#4**	8	# 5	9	# 3
U.S. syndicated loans	**28**	**#1**	32	# 1	34	# 1
U.S. long-term debt	**11**	**#2**	12	# 2	12	# 2
U.S. equity and equity-related	**9**	**#5**	8	# 6	11	# 4
U.S. announced M&A	**24**	**#3**	31	# 2	14	# 7

(a) Source: Thomson Financial Securities data. Global announced M&A is based on rank value; all other rankings are based upon proceeds, with full credit to each book manager/equal if joint. Because of joint assignments, market share of all participants will add up to more than 100%. The market share and rankings for the years ended December 31, 2004 and 2003 are presented on a combined basis, as if the merger of JPMorgan Chase and Bank One had been in effect during the periods.

Composition of revenue

Year ended December 31,[a] (in millions)	Investment banking fees	Trading-related revenue	Lending & deposit related fees	Asset management, administration and commissions	Other income	Net interest income	Total net revenue
2005							
Investment banking fees	**$ 4,096**	**$ —**	**$ —**	**$ —**	**$ —**	**$ —**	**$ 4,096**
Fixed income markets	**—**	**5,673**	**251**	**219**	**365**	**734**	**7,242**
Equities markets	**—**	**350**	**—**	**1,462**	**(88)**	**75**	**1,799**
Credit portfolio	**—**	**116**	**343**	**43**	**338**	**601**	**1,441**
Total	**$ 4,096**	**$ 6,139**	**$ 594**	**$ 1,724**	**$ 615**	**$ 1,410**	**$ 14,578**
2004							
Investment banking fees	$ 3,572	$ —	$ —	$ —	$ —	$ —	$ 3,572
Fixed income markets	—	5,008	191	287	304	524	6,314
Equities markets	—	427	—	1,076	(95)	83	1,491
Credit portfolio	—	6	348	37	119	718	1,228
Total	$ 3,572	$ 5,441	$ 539	$ 1,400	$ 328	$ 1,325	$ 12,605
2003							
Investment banking fees	$ 2,871	$ —	$ —	$ —	$ —	$ —	$ 2,871
Fixed income markets	—	6,016	107	331	84	449	6,987
Equities markets	—	556	—	851	(85)	84	1,406
Credit portfolio	—	(186)	333	35	104	1,134	1,420
Total	$ 2,871	$ 6,386	$ 440	$ 1,217	$ 103	$ 1,667	$ 12,684

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

IB revenues comprise the following:

Investment banking fees includes advisory, equity underwriting, bond underwriting and loan syndication fees.

Fixed income markets includes client and portfolio management revenue related to both market-making and proprietary risk-taking across global fixed income markets, including government and corporate debt, foreign exchange, interest rate and commodities markets.

Equities markets includes client and portfolio management revenue related to market-making and proprietary risk-taking across global equity products, including cash instruments, derivatives and convertibles.

Credit portfolio revenue includes Net interest income, fees and loan sale activity, as well as gains or losses on securities received as part of a loan restructuring, for IB's credit portfolio. Credit portfolio revenue also includes the results of risk management related to the Firm's lending and derivative activities, and changes in the credit valuation adjustment ("CVA"), which is the component of the fair value of a derivative that reflects the credit quality of the counterparty. See pages 69–70 of the Credit risk management section of this Annual Report for a further discussion.

Retail Financial Services

RFS includes Home Finance, Consumer & Small Business Banking, Auto & Education Finance and Insurance. Through this group of businesses, the Firm provides consumers and small businesses with a broad range of financial products and services including deposits, investments, loans and insurance. Home Finance is a leading provider of consumer real estate loan products and is one of the largest originators and servicers of home mortgages. Consumer & Small Business Banking offers one of the largest branch networks in the United States, covering 17 states with 2,641 branches and 7,312 automated teller machines ("ATMs"). Auto & Education Finance is the largest noncaptive originator of automobile loans as well as a top provider of loans for college students. Through its Insurance operations, the Firm sells and underwrites an extensive range of financial protection products and investment alternatives, including life insurance, annuities and debt protection products.

Selected income statement data

Year ended December 31,[a] (in millions, except ratios)	2005	2004	2003
Revenue			
Lending & deposit related fees	**$ 1,452**	$ 1,013	$ 486
Asset management, administration and commissions	**1,498**	1,020	459
Securities / private equity gains (losses)	**9**	(83)	381
Mortgage fees and related income	**1,104**	866	803
Credit card income	**426**	230	107
Other income	**136**	31	(28)
Noninterest revenue	**4,625**	3,077	2,208
Net interest income	**10,205**	7,714	5,220
Total net revenue	**14,830**	10,791	7,428
Provision for credit losses[b]	**724**	449	521
Noninterest expense			
Compensation expense	**3,337**	2,621	1,695
Noncompensation expense	**4,748**	3,937	2,773
Amortization of intangibles	**500**	267	3
Total noninterest expense	**8,585**	6,825	4,471
Operating earnings before income tax expense	**5,521**	3,517	2,436
Income tax expense	**2,094**	1,318	889
Operating earnings	**$ 3,427**	$ 2,199	$ 1,547
Financial ratios			
ROE	**26%**	24%	37%
ROA	**1.51**	1.18	1.05
Overhead ratio	**58**	63	60

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) 2005 includes a $250 million special provision related to Hurricane Katrina allocated as follows: $140 million in Consumer Real Estate Lending, $90 million in Consumer & Small Business Banking and $20 million in Auto & Education Finance.

2005 compared with 2004

Operating earnings were $3.4 billion, up $1.2 billion from the prior year. The increase was due largely to the Merger but also reflected increased deposit balances and wider spreads, higher home equity and subprime mortgage balances, and expense savings in all businesses. These benefits were partially offset by narrower spreads on retained loan portfolios, the special provision for Hurricane Katrina and net losses associated with portfolio loan sales in the Home Finance and Auto businesses.

Net revenue increased to $14.8 billion, up $4.0 billion, or 37%, due primarily to the Merger. Net interest income of $10.2 billion increased by $2.5 billion as a result of the Merger, increased deposit balances and wider spreads, and growth in retained consumer real estate loans. These benefits were offset partially by narrower spreads on loan balances and the absence of loan portfolios sold in late 2004 and early 2005. Noninterest revenue of $4.6 billion increased by $1.5 billion due to the Merger, improved MSR risk management results, higher automobile operating lease income and increased banking fees. These benefits were offset in part by losses on portfolio loan sales in the Home Finance and Auto businesses.

The Provision for credit losses totaled $724 million, up $275 million, or 61%, from 2004. Results included a special provision in 2005 for Hurricane Katrina of $250 million and a release in 2004 of $87 million in the Allowance for loan losses related to the sale of the manufactured home loan portfolio. Excluding these items, the Provision for credit losses would have been down $62 million, or 12%. The decline reflected reductions in the Allowance for loan losses due to improved credit trends in most consumer lending portfolios and the benefit of certain portfolios in run-off. These reductions were partially offset by the Merger and higher provision expense related to the decision to retain subprime mortgage loans.

Noninterest expense rose to $8.6 billion, an increase of $1.8 billion from the prior year, due primarily to the Merger. The increase also reflected continued investment in retail banking distribution and sales, increased depreciation expense on owned automobiles subject to operating leases and a $40 million charge related to the dissolution of a student loan joint venture. Expense savings across all businesses provided a favorable offset.

2004 compared with 2003

Operating earnings were $2.2 billion, up from $1.5 billion a year ago. The increase was due largely to the Merger. Excluding the benefit of the Merger, earnings declined as lower MSR risk management results and reduced prime mortgage production revenue offset the benefits of growth in loan balances, wider spreads on deposit products and improvement in credit costs.

Total net revenue increased to $10.8 billion, up 45% from the prior year. Net interest income increased by 48% to $7.7 billion, primarily due to the Merger, growth in retained loan balances and wider spreads on deposit products. Noninterest revenue increased to $3.1 billion, up 39%, due to the Merger and higher mortgage servicing income. Both components of total revenue included declines associated with risk managing the MSR asset and lower prime mortgage originations.

The Provision for credit losses was down 14% to $449 million despite the impact of the Merger. The effect of the Merger was offset by a reduction in the Allowance for loan losses resulting from the sale of the manufactured home loan portfolio, and continued positive credit quality trends in the consumer lending businesses.

Noninterest expense totaled $6.8 billion, up 53% from the prior year, primarily due to the Merger and continued investment to expand the branch network. Partially offsetting the increase were merger-related expense savings in all businesses.

Selected metrics

Year ended December 31,[a] (in millions, except headcount and ratios)	2005	2004	2003
Selected ending balances			
Total assets	**$ 224,801**	$ 226,560	$139,316
Loans[b]	**197,299**	202,473	121,921
Core deposits[c]	**161,666**	156,885	75,850
Total deposits	**191,415**	182,372	86,162
Selected average balances			
Total assets	**$ 226,368**	$ 185,928	$147,435
Loans[d]	**198,153**	162,768	120,750
Core deposits[c]	**160,641**	120,758	80,116
Total deposits	**186,811**	137,404	89,793
Equity	**13,383**	9,092	4,220
Headcount	**60,998**	59,632	32,278
Credit data and quality statistics			
Net charge-offs[e]	**$ 572**	$ 990	$ 381
Nonperforming loans[f]	**1,338**	1,161	569
Nonperforming assets	**1,518**	1,385	775
Allowance for loan losses	**1,363**	1,228	1,094
Net charge-off rate[d]	**0.31%**	0.67%	0.40%
Allowance for loan losses to ending loans[b]	**0.75**	0.67	1.04
Allowance for loan losses to nonperforming loans[f]	**104**	107	209
Nonperforming loans to total loans	**0.68**	0.57	0.47

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes loans held for sale of $16,598 million, $18,022 million and $17,105 million at December 31, 2005, 2004 and 2003, respectively. These amounts are not included in the allowance coverage ratios.
(c) Includes demand and savings deposits.
(d) Average loans include loans held for sale of $15,675 million, $14,736 million and $25,293 million for 2005, 2004 and 2003, respectively. These amounts are not included in the net charge-off rate.
(e) Includes $406 million of charge-offs related to the manufactured home loan portfolio in 2004.
(f) Nonperforming loans include loans held for sale of $27 million, $13 million and $45 million at December 31, 2005, 2004 and 2003, respectively. These amounts are not included in the allowance coverage ratios.

Home Finance

Home Finance is comprised of two key business segments: Prime Production & Servicing and Consumer Real Estate Lending. The Prime Production & Servicing segment includes the operating results associated with the origination, sale and servicing of prime mortgages. Consumer Real Estate Lending reflects the operating results of consumer loans that are secured by real estate, retained by the Firm and held in the portfolio. This portfolio includes prime and subprime first mortgages, home equity lines and loans, and manufactured home loans. The Firm stopped originating manufactured home loans early in 2004 and sold substantially all of its remaining portfolio in 2004.

Selected income statement data by business

Year ended December 31,[a] (in millions)	2005	2004	2003
Prime production and servicing			
Production	**$ 692**	$ 728	$ 1,339
Servicing:			
Mortgage servicing revenue, net of amortization	**635**	651	453
MSR risk management results[b]	**283**	113	784
Total net revenue	**1,610**	1,492	2,576
Noninterest expense	**943**	1,115	1,124
Operating earnings	**422**	240	918
Consumer real estate lending			
Total net revenue	**2,704**	2,376	1,473
Provision for credit losses	**298**	74	240
Noninterest expense	**940**	922	606
Operating earnings	**935**	881	414
Total Home Finance			
Total net revenue	**4,314**	3,868	4,049
Provision for credit losses	**298**	74	240
Noninterest expense	**1,883**	2,037	1,730
Operating earnings	**1,357**	1,121	1,332

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) For additional information, see page 42 of this Annual Report.

2005 compared with 2004

Operating earnings were $1.4 billion, up $236 million from the prior year, primarily due to the Merger, higher loan balances, reduced expenses and improved MSR risk management results.

Operating earnings for the Prime Production & Servicing segment totaled $422 million, up $182 million from the prior year. Net revenue of $1.6 billion increased by $118 million, reflecting improved MSR risk management results. The increase in MSR risk management results was due in part to the absence of prior-year securities losses on repositioning of the risk management asset. Decreased mortgage production revenue attributable to lower volume partially offset this benefit. Noninterest expense of $943 million decreased by $172 million, reflecting lower production volume and operating efficiencies.

Operating earnings for the Consumer Real Estate Lending segment increased by $54 million to $935 million. The current year included a loss of $120 million associated with the transfer of $3.3 billion of mortgage loans to held-for-sale, and a $140 million special provision related to Hurricane Katrina. Prior-year results included a $95 million net benefit associated with the sale of a $4.0 billion manufactured home loan portfolio and a $52 million charge related to a transfer of adjustable rate mortgage loans to held-for-sale. Excluding the after-tax impact of these items, earnings would have been up $242 million, reflecting the Merger, higher loan balances and lower expenses, partially offset by loan spread compression due to rising short-term interest rates and a flat yield curve, which contributed to accelerated home equity loan payoffs.

Home Finance uses a combination of derivatives, AFS securities and trading securities to manage changes in the fair value of the MSR asset. These risk management activities are intended to protect the economic value of the MSR asset by providing offsetting changes in the fair value of the related risk management instruments. The type and amount of instruments used in this risk management activity change over time as market conditions and approach dictate.

During 2005, positive MSR valuation adjustments of $777 million were partially offset by losses of $494 million on risk management instruments, including net interest earned on AFS securities. In 2004, negative MSR valuation adjustments of $248 million were more than offset by $361 million of aggregate risk management gains, including net interest earned on AFS securities. Unrealized losses on AFS securities were $174 million, $3 million and $144 million at December 31, 2005, 2004 and 2003, respectively. For a further discussion of MSRs, see Critical accounting estimates on page 83 and Note 15 on pages 114–116 of this Annual Report.

2004 compared with 2003

Operating earnings in the Prime Production & Servicing segment dropped to $240 million from $918 million in the prior year. Results reflected a decrease in prime mortgage production revenue, to $728 million from $1.3 billion, due to a decline in mortgage originations. Operating earnings were also adversely affected by a drop in MSR risk management revenue, to $113 million from $784 million in the prior year. Results in 2004 included realized losses of $89 million on the sale of AFS securities associated with the risk management of the MSR asset, compared with securities gains of $359 million in the prior year. Noninterest expense was relatively flat at $1.1 billion.

Operating earnings for the Consumer Real Estate Lending segment more than doubled to $881 million from $414 million in the prior year. The increase was largely due to the addition of the Bank One home equity lending business but also reflected growth in retained loan balances and a $95 million net benefit associated with the sale of the $4 billion manufactured home loan portfolio; partially offsetting these increases were lower subprime mortgage securitization gains as a result of management's decision in 2004 to retain these loans. These factors contributed to total net revenue rising 61% to $2.4 billion. The provision for credit losses, at $74 million, decreased by 69% from a year ago. This improvement was the result of an $87 million reduction in the allowance for loan losses associated with the manufactured home loan portfolio sale, improved credit quality and lower delinquencies, partially offset by the Merger. Noninterest expense totaled $922 million, up 52% from the year-ago period, largely due to the Merger.

Home Finance's origination channels are comprised of the following:

Retail – Borrowers who are buying or refinancing a home are directly contacted by a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by real estate brokers, home builders or other third parties.

Wholesale – A third-party mortgage broker refers loan applications to a mortgage banker at the Firm. Brokers are independent loan originators that specialize in finding and counseling borrowers but do not provide funding for loans.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions sell closed loans to the Firm.

Correspondent negotiated transactions ("CNT") – Mid- to large-sized mortgage lenders, banks and bank-owned mortgage companies sell servicing to the Firm on an as-originated basis. These transactions supplement traditional production channels and provide growth opportunities in the servicing portfolio in stable and rising-rate periods.

Selected metrics

Year ended December 31,[a] (in millions, except ratios and where otherwise noted)	2005	2004	2003
Origination volume by channel (in billions)			
Retail	**$ 83.9**	$ 74.2	$ 90.8
Wholesale	**50.4**	48.5	65.6
Correspondent	**14.0**	22.8	44.5
Correspondent negotiated transactions	**34.5**	41.5	83.3
Total	**182.8**	187.0	284.2
Origination volume by business (in billions)			
Mortgage	**$ 128.7**	$ 144.6	$ 259.5
Home equity	**54.1**	42.4	24.7
Total	**182.8**	187.0	284.2
Business metrics (in billions)			
Third-party mortgage loans serviced (ending)[b]	**$ 467.5**	$ 430.9	$ 393.7
MSR net carrying value (ending)	**6.5**	5.1	4.8
End-of-period loans owned			
Mortgage loans held-for-sale	**13.7**	14.2	15.9
Mortgage loans retained	**43.0**	42.6	34.5
Home equity and other loans	**76.8**	67.9	24.1
Total end of period loans owned	**133.5**	124.7	74.5
Average loans owned			
Mortgage loans held-for-sale	**12.1**	12.1	23.5
Mortgage loans retained	**46.4**	40.7	32.0
Home equity and other loans	**70.2**	47.0	19.4
Total average loans owned	**128.7**	99.8	74.9
Overhead ratio	**44%**	53%	43%
Credit data and quality statistics			
30+ day delinquency rate[c]	**1.61%**	1.27%	1.81%
Net charge-offs			
Mortgage	**$ 25**	$ 19	$ 26
Home equity and other loans[d]	**129**	554	109
Total net charge-offs	**154**	573	135
Net charge-off rate			
Mortgage	**0.05%**	0.05%	0.08%
Home equity and other loans	**0.18**	1.18	0.56
Total net charge-off rate[e]	**0.13**	0.65	0.26
Nonperforming assets[f]	**$ 998**	$ 844	$ 546

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes prime first mortgage loans and subprime loans.
(c) Excludes delinquencies related to loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by government agencies of $0.9 billion, $0.9 billion and $0.1 billion, for December 31, 2005, 2004 and 2003, respectively. These amounts are excluded as reimbursement is proceeding normally.
(d) Includes $406 million of charge-offs related to the manufactured home loan portfolio in 2004.
(e) Excludes mortgage loans held for sale.
(f) Excludes nonperforming assets related to loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by government agencies of $1.1 billion, $1.5 billion and $2.3 billion for December 31, 2005, 2004 and 2003, respectively. These amounts are excluded as reimbursement is proceeding normally.

The table below reconciles management's disclosure of Home Finance's revenue into the reported U.S. GAAP line items shown on the Consolidated statements of income and in the related Notes to Consolidated financial statements:

Year ended December 31,[a] (in millions)	Prime production and servicing			Consumer real estate lending			Total revenue		
	2005	2004	2003	**2005**	2004	2003	**2005**	2004	2003
Net interest income	**$ 426**	$ 700	$ 1,556	**$ 2,672**	$ 2,245	$1,226	**$ 3,098**	$ 2,945	$ 2,782
Securities / private equity gains (losses)	**3**	(89)	359	**—**	—	—	**3**	(89)	359
Mortgage fees and related income[b]	**1,181**	881	661	**32**	131	247	**1,213**	1,012	908
Total	**$ 1,610**	$ 1,492	$ 2,576	**$ 2,704**	$ 2,376	$1,473	**$ 4,314**	$ 3,868	$ 4,049

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes activity reported elsewhere as Other income.

The following table details the MSR risk management results in the Home Finance business:

MSR risk management results

Year ended December 31,[a] (in millions)	**2005**	2004	2003
Reported amounts:			
MSR valuation adjustments[b]	**$ 777**	$ (248)	$ (253)
Derivative valuation adjustments and other risk management gains (losses)[c]	**(494)**	361	1,037
MSR risk management results	**$ 283**	$ 113	$ 784

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Excludes subprime loan MSR activity of $(7) million and $(2) million in 2005 and 2004, respectively. There was no subprime loan MSR activity in 2003.
(c) Includes gains, losses and interest income associated with derivatives, both designated and not designated, as a SFAS 133 hedge, and securities classified as both trading and available-for-sale.

Consumer & Small Business Banking

Consumer & Small Business Banking offers a full array of financial services through a branch network spanning 17 states as well as through the Internet. Product offerings include checking and savings accounts, mutual funds and annuities, credit cards, mortgages and home equity loans, and loans for small business customers (customers with annual sales generally less than $10 million).

Selected income statement data

Year ended December 31,[a] (in millions)	**2005**	2004	2003
Noninterest revenue	**$ 2,929**	$ 1,864	$ 828
Net interest income	**5,476**	3,521	1,594
Total net revenue	**8,405**	5,385	2,422
Provision for credit losses	**214**	165	76
Noninterest expense	**5,431**	3,981	2,358
Operating earnings (loss)	**1,684**	760	(4)

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

2005 compared with 2004

Operating earnings totaled $1.7 billion, up $924 million from the prior year. While growth largely reflected the Merger, results also included increased deposit balances and wider spreads, as well as higher debit card and other banking fees. These factors contributed to net revenue increasing to $8.4 billion from $5.4 billion in the prior year. The Provision for credit losses of $214 million increased by $49 million; excluding the special provision of $90 million related to Hurricane Katrina, the Provision would have decreased by $41 million from the prior year, reflecting lower net charge-offs and improved credit quality trends. Noninterest expense increased by $1.5 billion to $5.4 billion, as a result of the Merger and continued investment in branch distribution and sales, partially offset by merger efficiencies.

2004 compared with 2003

Operating earnings totaled $760 million, up from a loss of $4 million in the prior-year period. The increase was largely due to the Merger but also reflected wider spreads on deposits and lower expenses. These benefits were partially offset by a higher Provision for credit losses.

Total net revenue was $5.4 billion, compared with $2.4 billion in the prior year. While the increase was primarily attributable to the Merger, total net revenue also benefited from wider spreads on deposits.

The Provision for credit losses increased to $165 million from $76 million in the prior year. The increase was in part due to the Merger but also reflected an increase in the allowance for credit losses to cover high-risk portfolio segments.

The increase in Noninterest expense to $4.0 billion was largely attributable to the Merger. Incremental expense from investment in the branch distribution network was also a contributing factor.

Selected metrics

Year ended December 31,[a] (in millions, except ratios and where otherwise noted)	2005	2004	2003
Business metrics (in billions)			
Selected ending balances			
Small business loans	**$ 12.7**	$ 12.5	$ 2.2
Consumer and other loans[b]	**1.7**	2.2	2.0
Total loans	**14.4**	14.7	4.2
Core deposits[c]	**152.3**	146.3	66.4
Total deposits	**181.9**	171.8	76.7
Selected average balances			
Small business loans	**$ 12.4**	$ 7.3	$ 2.1
Consumer and other loans[b]	**2.0**	2.1	2.0
Total loans	**14.4**	9.4	4.1
Core deposits[c]	**149.0**	109.6	64.8
Total deposits	**175.1**	126.2	74.4
Number of:			
Branches	**2,641**	2,508	561
ATMs	**7,312**	6,650	1,931
Personal bankers	**7,067**	5,750	1,820
Personal checking accounts (in thousands)[d]	**7,869**	7,235	1,984
Business checking accounts (in thousands)[d]	**924**	889	347
Active online customers (in thousands)	**4,231**	3,359	NA
Debit cards issued (in thousands)	**9,266**	8,392	2,380
Overhead ratio	**65%**	74%	97%
Retail brokerage business metrics			
Investment sales volume	**$ 11,144**	$ 7,324	$ 3,579
Number of dedicated investment sales representatives	**1,449**	1,364	349
Credit data and quality statistics			
Net charge-offs			
Small business	**$ 101**	$ 77	$ 35
Consumer and other loans	**40**	77	40
Total net charge-offs	**141**	154	75
Net charge-off rate			
Small business	**0.81%**	1.05%	1.67%
Consumer and other loans	**2.00**	3.67	2.00
Total net charge-off rate	**0.98**	1.64	1.83
Nonperforming assets	**$ 283**	$ 299	$ 72

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Primarily community development loans.
(c) Includes demand and savings deposits.
(d) Prior periods amounts have been restated to reflect inactive accounts that should have been closed during those periods.

Auto & Education Finance

Auto & Education Finance provides automobile loans and leases to consumers and loans to commercial clients, primarily through a national network of automotive dealers. The segment is also a top provider of loans to students at colleges and universities across the United States.

Selected income statement data

Year ended December 31,[a] (in millions)	2005	2004	2003
Total net revenue	**$ 1,467**	$ 1,145	$ 842
Provision for credit losses	**212**	210	205
Noninterest expense	**751**	490	291
Operating earnings	**307**	270	206

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

2005 compared with 2004

Operating earnings were $307 million, up $37 million from the prior year. The current year included a net loss of $83 million associated with a $2.3 billion auto loan securitization; a net loss of $42 million associated with a $1.5 billion auto loan securitization; a $40 million charge related to the dissolution of a student loan joint venture; a benefit of $34 million from the sale of a $2 billion recreational vehicle loan portfolio; and the $20 million special provision for credit losses related to Hurricane Katrina. The prior-year results included charges of $65 million related to auto lease residuals. Excluding the after-tax impact of these items, operating earnings would have increased by $90 million over the prior year, primarily due to the Merger and improved credit quality. Results continued to reflect lower production volumes and narrower spreads.

2004 compared with 2003

Operating earnings totaled $270 million, up 31% from the prior year. The increase was due to the Merger, offset by narrower spreads and reduced origination volumes reflecting a competitive operating environment.

Total net revenue increased by 36% to $1.1 billion from the prior year. This increase was due to the Merger, which more than offset a decline in net interest income, reflecting the competitive operating environment in 2004, and incremental charges associated with the Firm's auto lease residual exposure.

The following is a brief description of selected terms used by Consumer & Small Business Banking.

- **Personal bankers –** Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.
- **Investment sales representatives –** Licensed retail branch sales personnel, assigned to support several branches, who assist with the sale of investment products including college planning accounts, mutual funds, annuities and retirement accounts.

The Provision for credit losses totaled $210 million, up 2% from the prior year. The increase was due to the Merger but was largely offset by a lower Provision for credit losses, reflecting favorable credit trends.

Noninterest expense increased by 68% to $490 million, largely due to the Merger.

Selected metrics

Year ended December 31,[a] (in millions, except ratios and where otherwise noted)	2005	2004	2003
Business metrics (in billions)			
End-of-period loans and lease related assets			
Loans outstanding	**$ 44.7**	$ 54.6	$ 33.7
Lease related assets[b]	**5.2**	8.0	9.5
Total end-of-period loans and lease related assets	**49.9**	62.6	43.2
Average loans and lease related assets			
Loans outstanding[c]	**$ 48.5**	$ 44.3	$ 32.0
Lease related assets[d]	**6.6**	9.0	9.7
Total average loans and lease related assets[c][d]	**55.1**	53.3	41.7
Overhead ratio	**51%**	43%	35%
Credit quality statistics			
30+ day delinquency rate	**1.65%**	1.55%	1.42%
Net charge-offs			
Loans	**$ 257**	$ 219	$ 130
Lease receivables[d]	**20**	44	41
Total net charge-offs	**277**	263	171
Net charge-off rate			
Loans[c]	**0.57%**	0.52%	0.43%
Lease receivables	**0.32**	0.49	0.42
Total net charge-off rate[c]	**0.54**	0.52	0.43
Nonperforming assets	**$ 237**	$ 242	$ 157

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes operating lease-related assets of $0.9 billion for 2005. Balances prior to January 1, 2005, were insignificant.
(c) Average loans include loans held for sale of $3.5 billion, $2.3 billion and $1.8 billion for, 2005, 2004 and 2003, respectively. These are not included in the net charge-off rate.
(d) Includes operating lease-related assets of $0.4 billion for 2005. Balances prior to January 1, 2005, were insignificant. These are not included in the net charge-off rate.

Insurance

Insurance is a provider of financial protection products and services, including life insurance, annuities and debt protection. Products and services are distributed through both internal lines of business and external markets. On February 7, 2006, the Firm signed a definitive agreement to sell its life insurance and annuity underwriting business.

Selected income statement data

Year ended December 31,[a] (in millions)	2005	2004	2003
Total net revenue	**$ 644**	$ 393	$ 115
Noninterest expense	**520**	317	92
Operating earnings	**79**	48	13
Memo: Consolidated gross insurance-related revenue[b]	**1,642**	1,191	611

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes revenue reported in the results of other businesses.

2005 compared with 2004

Operating earnings totaled $79 million, an increase of $31 million from the prior year, on net revenues of $644 million. The increase was due primarily to the Merger. Results also reflected an increase in proprietary annuity sales commissions paid and lower expenses from merger savings and other efficiencies.

2004 compared with 2003

Operating earnings totaled $48 million on Total net revenue of $393 million in 2004. The increases in Total net revenue and Noninterest expense over the prior year were due almost entirely to the Merger.

Selected metrics

Year ended December 31,[a] (in millions, except where otherwise noted)	2005	2004	2003
Business metrics – ending balances			
Invested assets	**$ 7,767**	$ 7,368	$ 1,559
Policy loans	**388**	397	—
Insurance policy and claims reserves	**7,774**	7,279	1,096
Term life sales – first year annualized premiums	**60**	28	—
Term life premium revenues	**477**	234	—
Proprietary annuity sales	**706**	208	548
Number of policies in force – direct/assumed (in thousands)	**2,441**	2,611	631
Insurance in force – direct/assumed	**$ 282,903**	$ 277,827	$ 31,992
Insurance in force – retained	**87,753**	80,691	31,992
A.M. Best rating	**A**	A	A

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

The following is a brief description of selected business metrics within Insurance.

- **Proprietary annuity sales** represent annuity contracts marketed through and issued by subsidiaries of the Firm.
- **Insurance in force – direct/assumed** includes the aggregate face amount of insurance policies directly underwritten and assumed through reinsurance.
- **Insurance in force – retained** includes the aggregate face amounts of insurance policies directly underwritten and assumed through reinsurance, after reduction for face amounts ceded to reinsurers.

Card Services

Card Services is one of the largest issuers of credit cards in the United States, with more than 110 million cards in circulation, and is the largest merchant acquirer. CS offers a wide variety of products to satisfy the needs of its cardmembers, including cards issued on behalf of many well-known partners, such as major airlines, hotels, universities, retailers and other financial institutions.

JPMorgan Chase uses the concept of "managed receivables" to evaluate the credit performance of the underlying credit card loans, both sold and not sold: as the same borrower is continuing to use the credit card for ongoing charges, a borrower's credit performance will affect both the receivables sold under SFAS 140 and those not sold. Thus, in its disclosures regarding managed receivables, JPMorgan Chase treats the sold receivables as if they were still on the balance sheet in order to disclose the credit performance (such as net charge-off rates) of the entire managed credit card portfolio.

Operating results exclude the impact of credit card securitizations on revenue, the Provision for credit losses, net charge-offs and receivables. Securitization does not change reported Net income versus operating earnings; however, it does affect the classification of items on the Consolidated statements of income.

Selected income statement data – managed basis

Year ended December 31,[a][b] (in millions, except ratios)	**2005**	2004	2003
Revenue			
Asset management, administration and commissions	**$ —**	$ 75	$ 108
Credit card income	**3,351**	2,179	930
Other income	**212**	117	54
Noninterest revenue	**3,563**	2,371	1,092
Net interest income	**11,803**	8,374	5,052
Total net revenue	**15,366**	10,745	6,144
Provision for credit losses[c]	**7,346**	4,851	2,904
Noninterest expense			
Compensation expense	**1,081**	893	582
Noncompensation expense	**3,170**	2,485	1,336
Amortization of intangibles	**748**	505	260
Total noninterest expense	**4,999**	3,883	2,178
Operating earnings before income tax expense	**3,021**	2,011	1,062
Income tax expense	**1,114**	737	379
Operating earnings	**$ 1,907**	$ 1,274	$ 683
Memo: Net securitization gains (amortization)	**$ 56**	$ (8)	$ 1
Financial metrics			
ROE	**16%**	17%	20%
Overhead ratio	**33**	36	35

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) As a result of the integration of Chase Merchant Services and Paymentech merchant processing businesses into a joint venture, beginning in the fourth quarter of 2005, Total net revenue, Noninterest expense and pre-tax earnings have been reduced to reflect the deconsolidation of Paymentech. There is no impact to operating earnings.
(c) 2005 includes a $100 million special provision related to Hurricane Katrina.

2005 compared with 2004

Operating earnings of $1.9 billion were up $633 million, or 50%, from the prior year due to the Merger. In addition, lower expenses driven by merger savings, stronger underlying credit quality and higher revenue from increased loan balances and charge volume were partially offset by the impact of increased bankruptcies.

Net revenue was $15.4 billion, up $4.6 billion, or 43%. Net interest income was $11.8 billion, up $3.4 billion, or 41%, primarily due to the Merger, and the acquisition of a private label portfolio. In addition, higher loan balances were partially offset by narrower loan spreads and the reversal of revenue related to increased bankruptcies. Noninterest revenue of $3.6 billion was up $1.2 billion, or 50%, due to the Merger and higher interchange income from higher charge volume, partially offset by higher volume-driven payments to partners, higher expense related to rewards programs and the impact of the deconsolidation of Paymentech.

The Provision for credit losses was $7.3 billion, up $2.5 billion, or 51%, primarily due to the Merger, and included the acquisition of a private label portfolio. The provision also increased due to record bankruptcy-related net charge-offs resulting from the new bankruptcy legislation, which became effective on October 17, 2005. Finally, the Allowance for loan losses was increased in part by the special provision for credit losses related to Hurricane Katrina. These factors were partially offset by lower contractual net charge-offs. Despite a record level of bankruptcy losses, the net charge-off rate improved. The managed net charge-off rate was 5.21%, down from 5.27% in the prior year. The 30-day managed delinquency rate was 2.79%, down from 3.70% in the prior year, driven primarily by accelerated loss recognition of delinquent accounts as a result of the bankruptcy reform legislation and strong underlying credit quality.

Noninterest expense of $5.0 billion increased by $1.1 billion, or 29%, primarily due to the Merger, which included the acquisition of a private label portfolio. Merger savings, including lower processing and compensation costs and the impact of the deconsolidation of Paymentech, were partially offset by higher spending on marketing.

2004 compared with 2003

Operating earnings of $1.3 billion increased by $591 million compared with the prior year, primarily due to the Merger. In addition, earnings benefited from higher loan balances and charge volume, partially offset by a higher Provision for credit losses and higher expenses.

Total net revenue of $10.7 billion increased by $4.6 billion. Net interest income of $8.4 billion increased by $3.3 billion, primarily due to the Merger and higher loan balances. Noninterest revenue of $2.4 billion increased by $1.3 billion, primarily due to the Merger and increased interchange income resulting from higher charge-off volume. These factors were partially offset by higher volume-driven payments to partners, reflecting the sharing of income and increased rewards expense.

The Provision for credit losses of $4.9 billion increased by $1.9 billion, primarily due to the Merger and growth in credit card receivables. Credit ratios remained strong, benefiting from reduced contractual and bankruptcy charge-offs. The net charge-off ratio was 5.27%. The 30-day delinquency ratio was 3.70%.

Noninterest expense of $3.9 billion increased by $1.7 billion, primarily related to the Merger. In addition, expenses increased due to higher marketing expenses and volume-based processing expenses, partially offset by lower compensation expenses.

Selected metrics

Year ended December 31,[a] (in millions, except headcount, ratios and where otherwise noted)	2005	2004	2003
% of average managed outstandings:			
Net interest income	**8.65%**	9.16%	9.95%
Provision for credit losses	**5.39**	5.31	5.72
Noninterest revenue	**2.61**	2.59	2.15
Risk adjusted margin[b]	**5.88**	6.45	6.38
Noninterest expense	**3.67**	4.25	4.29
Pre-tax income (ROO)	**2.21**	2.20	2.09
Operating earnings	**1.40**	1.39	1.35
Business metrics			
Charge volume (in billions)	**$ 301.9**	$ 193.6	$ 88.2
Net accounts opened (in thousands)	**21,056**	7,523	4,177
Credit cards issued (in thousands)	**110,439**	94,285	35,103
Number of registered Internet customers (in millions)	**14.6**	13.6	3.7
Merchant acquiring business[c]			
Bank card volume (in billions)	**$ 563.1**	$ 396.2	$ 261.2
Total transactions (in millions)[d]	**15,499**	9,049	4,254
Selected ending balances			
Loans:			
Loans on balance sheets	**$ 71,738**	$ 64,575	$ 17,426
Securitized loans	**70,527**	70,795	34,856
Managed loans	**$142,265**	$ 135,370	$ 52,282
Selected average balances			
Managed assets	**$141,933**	$ 94,741	$ 51,406
Loans:			
Loans on balance sheets	**$ 67,334**	$ 38,842	$ 17,604
Securitized loans	**69,055**	52,590	33,169
Managed loans	**$136,389**	$ 91,432	$ 50,773
Equity	**11,800**	7,608	3,440
Headcount	**18,629**	19,598	10,612
Credit quality statistics			
Net charge-offs	**$ 7,100**	$ 4,821	$ 2,996
Managed net charge-off rate	**5.21%**	5.27%	5.90%
Delinquency ratios			
30+ days	**2.79%**	3.70%	4.68%
90+ days	**1.27**	1.72	2.19
Allowance for loan losses	**$ 3,274**	$ 2,994	$ 1,225
Allowance for loan losses to period-end loans	**4.56%**	4.64%	7.03%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Represents Total net revenue less Provision for credit losses.
(c) Represents 100% of the merchant acquiring business.
(d) Prior periods have been restated to conform methodologies following the integration of Chase Merchant Services and Paymentech merchant processing businesses.

The financial information presented below reconciles reported basis and managed basis to disclose the effect of securitizations.

Year ended December 31,[a] (in millions)	2005	2004	2003
Income statement data			
Credit card income			
Reported data for the period	**$ 6,069**	$ 4,446	$ 2,309
Securitization adjustments	**(2,718)**	(2,267)	(1,379)
Managed credit card income	**$ 3,351**	$ 2,179	$ 930
Other income			
Reported data for the period	**$ 212**	$ 203	$ 125
Securitization adjustments	**—**	(86)	(71)
Managed other income	**$ 212**	$ 117	$ 54
Net interest income			
Reported data for the period	**$ 5,309**	$ 3,123	$ 1,732
Securitization adjustments	**6,494**	5,251	3,320
Managed net interest income	**$ 11,803**	$ 8,374	$ 5,052
Total net revenue[b]			
Reported data for the period	**$ 11,590**	$ 7,847	$ 4,274
Securitization adjustments	**3,776**	2,898	1,870
Managed total net revenue	**$ 15,366**	$ 10,745	$ 6,144
Provision for credit losses			
Reported data for the period[c]	**$ 3,570**	$ 1,953	$ 1,034
Securitization adjustments	**3,776**	2,898	1,870
Managed provision for credit losses	**$ 7,346**	$ 4,851	$ 2,904
Balance sheet – average balances			
Total average assets			
Reported data for the period	**$ 74,753**	$ 43,657	$ 19,041
Securitization adjustments	**67,180**	51,084	32,365
Managed average assets	**$141,933**	$ 94,741	$ 51,406
Credit quality statistics			
Net charge-offs			
Reported net charge-offs data for the period	**$ 3,324**	$ 1,923	$ 1,126
Securitization adjustments	**3,776**	2,898	1,870
Managed net charge-offs	**$ 7,100**	$ 4,821	$ 2,996

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes noninterest revenue and Net interest income.
(c) 2005 includes a $100 million special provision related to Hurricane Katrina.

The following is a brief description of selected business metrics within Card Services.

- **Charge volume** – Represents the dollar amount of cardmember purchases, balance transfers and cash advance activity.
- **Net accounts opened** – Includes originations, portfolio purchases and sales.
- **Merchant acquiring business** – Represents an entity that processes payments for merchants. JPMorgan Chase is a partner in Chase Paymentech Solutions, LLC.
- **Bank card volume** – Represents the dollar amount of transactions processed for the merchants.
- **Total transactions** – Represents the number of transactions and authorizations processed for the merchants.

Commercial Banking

Commercial Banking serves more than 25,000 clients, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenues generally ranging from $10 million to $2 billion. While most Middle Market clients are within the Retail Financial Services footprint, CB also covers larger corporations, as well as local governments and financial institutions on a national basis. CB is a market leader with superior client penetration across the businesses it serves. Local market presence, coupled with industry expertise and excellent client service and risk management, enable CB to offer superior financial advice. Partnership with other JPMorgan Chase businesses positions CB to deliver broad product capabilities – including lending, treasury services, investment banking, and asset and wealth management – and meet its clients' financial needs.

Selected income statement data

Year ended December 31,[a] (in millions, except ratios)	2005	2004	2003
Revenue			
Lending & deposit related fees	**$ 575**	$ 441	$ 301
Asset management, administration and commissions	**60**	32	19
Other income[b]	**351**	209	73
Noninterest revenue	**986**	682	393
Net interest income	**2,610**	1,692	959
Total net revenue	**3,596**	2,374	1,352
Provision for credit losses[c]	**73**	41	6
Noninterest expense			
Compensation expense	**661**	465	285
Noncompensation expense	**1,146**	843	534
Amortization of intangibles	**65**	35	3
Total noninterest expense	**1,872**	1,343	822
Operating earnings before income tax expense	**1,651**	990	524
Income tax expense	**644**	382	217
Operating earnings	**$ 1,007**	$ 608	$ 307
Financial ratios			
ROE	**30%**	29%	29%
ROA	**1.78**	1.67	1.87
Overhead ratio	**52**	57	61

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) IB-related and commercial card revenues are included in Other income.
(c) 2005 includes a $35 million special provision related to Hurricane Katrina.

Commercial Banking operates in 10 of the top 15 major U.S. metropolitan areas and is divided into three customer segments: Middle Market Banking, Mid-Corporate Banking and Real Estate. General coverage for corporate clients is provided by Middle Market Banking, which covers clients with annual revenues generally up to $500 million. Mid-Corporate Banking covers clients with annual revenues generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs. The third segment, Real Estate, serves investors in, and developers of, for-sale housing, multifamily rental, retail, office, and industrial properties. In addition to these three customer segments, Commercial Banking offers several products to the Firm's entire customer base: Chase Business Credit, the #1 asset-based lender for 2005, provides asset-based financing, syndications, and collateral analysis, and Chase Equipment Leasing offers a variety of equipment finance and leasing products, with specialties in aircraft finance, public sector, and information technology. Given this structure, Commercial Banking manages a customer base and loan portfolio that is highly diversified across a broad range of industries and geographic locations.

2005 compared with 2004

Operating earnings of $1.0 billion were up $399 million from the prior year, primarily due to the Merger.

Net revenue of $3.6 billion increased by $1.2 billion, or 51%, primarily as a result of the Merger. In addition to the overall increase from the Merger, Net interest income of $2.6 billion was positively affected by wider spreads on higher volume related to liability balances and increased loans, partially offset by narrower loan spreads. Noninterest revenue of $986 million was lower due to a decline in deposit-related fees due to higher interest rates, partially offset by increased investment banking revenue.

Each business within Commercial Banking demonstrated revenue growth over the prior year, primarily due to the Merger. Middle Market revenue was $2.4 billion, an increase of $870 million over the prior year; Mid-Corporate Banking revenue was $548 million, an increase of $181 million; and Real Estate revenue was $534 million, up $166 million. In addition to the Merger, revenue was higher for each business due to wider spreads and higher volume related to liability balances and increased investment banking revenue, partially offset by narrower loan spreads.

Provision for credit losses of $73 million increased by $32 million, primarily due to a special provision related to Hurricane Katrina, increased loan balances and refinements in the data used to estimate the allowance for credit losses. The credit quality of the portfolio was strong with net charge-offs of $26 million, down $35 million from the prior year, and nonperforming loans of $272 million, down $255 million.

Noninterest expense of $1.9 billion increased by $529 million, or 39%, primarily due to the Merger and to an increase in allocated unit costs for Treasury Services products.

2004 compared with 2003

Operating earnings were $608 million, an increase of 98%, primarily due to the Merger.

Total net revenue was $2.4 billion, an increase of 76%, primarily due to the Merger. In addition to the overall increase related to the Merger, Net interest income of $1.7 billion was positively affected by higher liability balances, partially offset by lower lending-related revenue. Noninterest revenue of $682 million was positively affected by higher investment banking fees and higher gains on the sale of loans and securities acquired in satisfaction of debt, partially offset by lower deposit-related fees, which often decline as interest rates rise.

The Provision for credit losses was $41 million, an increase of $35 million, primarily due to the Merger. Excluding the impact of the Merger, the provision was higher in 2004. Lower net charge-offs in 2004 were partially offset by smaller reductions in the allowance for credit losses in 2004 relative to 2003.

Noninterest expense was $1.3 billion, an increase of $521 million, or 63%, primarily related to the Merger.

Selected metrics

Year ended December 31,[a] (in millions, except headcount and ratios)	2005	2004	2003
Revenue by product:			
Lending	**$ 1,076**	$ 764	$ 396
Treasury services	**2,299**	1,467	896
Investment banking	**213**	120	66
Other	**8**	23	(6)
Total Commercial Banking revenue	**3,596**	2,374	1,352
Revenue by business:			
Middle Market Banking	**$ 2,369**	$ 1,499	$ 772
Mid-Corporate Banking	**548**	367	194
Real Estate	**534**	368	206
Other	**145**	140	180
Total Commercial Banking revenue	**3,596**	2,374	1,352
Selected average balances			
Total assets	**$ 56,561**	$ 36,435	$ 16,460
Loans and leases	**51,797**	32,417	14,049
Liability balances[b]	**73,395**	52,824	32,880
Equity	**3,400**	2,093	1,059
Average loans by business:			
Middle market	**$ 31,156**	$ 17,471	$ 5,609
Mid-corporate banking	**6,375**	4,348	2,880
Real estate	**10,639**	7,586	2,831
Other	**3,627**	3,012	2,729
Total Commercial Banking loans	**51,797**	32,417	14,049
Headcount	**4,456**	4,555	1,730
Credit data and quality statistics:			
Net charge-offs	**$ 26**	$ 61	$ 76
Nonperforming loans	**272**	527	123
Allowance for loan losses	**1,392**	1,322	122
Allowance for lending-related commitments	**154**	169	26
Net charge-off rate	**0.05%**	0.19%	0.54%
Allowance for loan losses to average loans	**2.69**	4.08	0.87
Allowance for loan losses to nonperforming loans	**512**	251	99
Nonperforming loans to average loans	**0.53**	1.63	0.88

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Liability balances include deposits and deposits swept to on-balance sheet liabilities.

Commercial Banking revenues are comprised of the following:

Lending includes a variety of financing alternatives, which are often provided on a basis secured by receivables, inventory, equipment, real estate or other assets. Products include:

- Term loans
- Revolving lines of credit
- Bridge financing
- Asset-based structures
- Leases

Treasury services includes a broad range of products and services enabling clients to transfer, invest and manage the receipt and disbursement of funds, while providing the related information reporting. These products and services include:

- U.S. dollar and multi-currency clearing
- ACH
- Lockbox
- Disbursement and reconciliation services
- Check deposits
- Other check and currency-related services
- Trade finance and logistics solutions
- Commercial card
- Deposit products, sweeps and money market mutual funds

Investment banking products provide clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools, through:

- Loan syndications
- Investment-grade debt
- Asset-backed securities
- Private placements
- High-yield bonds
- Equity underwriting
- Advisory
- Interest rate derivatives
- Foreign exchange hedges

Treasury & Securities Services

Treasury & Securities Services is a global leader in providing transaction, investment and information services to support the needs of corporations, issuers and institutional investors worldwide. TSS is one of the largest cash management providers in the world and a leading global custodian. The TS business provides a variety of cash management products, trade finance and logistics solutions, wholesale card products, and short-term liquidity management tools. The IS business provides custody, fund services, securities lending, and performance measurement and execution products. The ITS business provides trustee, depository and administrative services for debt and equity issuers. TS partners with the Commercial Banking, Consumer & Small Business Banking and Asset & Wealth Management businesses to serve clients firmwide. As a result, certain TS revenues are included in other segments' results. TSS combined the management of the IS and ITS businesses under the name WSS to create an integrated franchise which provides custody and investor services as well as securities clearance and trust services to clients globally. Beginning January 1, 2006, TSS will report results for two divisions: TS and WSS.

Selected income statement data

Year ending December 31,[a] (in millions, except ratios)	2005	2004	2003
Revenue			
Lending & deposit related fees	**$ 728**	$ 647	$ 470
Asset management, administration and commissions	**2,908**	2,445	1,903
Other income	**543**	382	288
Noninterest revenue	**4,179**	3,474	2,661
Net interest income	**2,062**	1,383	947
Total net revenue	**6,241**	4,857	3,608
Provision for credit losses	**—**	7	1
Credit reimbursement (to) from IB[b]	**(154)**	(90)	36
Noninterest expense			
Compensation expense	**2,061**	1,629	1,257
Noncompensation expense	**2,293**	2,391	1,745
Amortization of intangibles	**116**	93	26
Total noninterest expense	**4,470**	4,113	3,028
Operating earnings before income tax expense	**1,617**	647	615
Income tax expense	**580**	207	193
Operating earnings	**$ 1,037**	$ 440	$ 422
Financial ratios			
ROE	**55%**	17%	15%
Overhead ratio	**72**	85	84
Pre-tax margin ratio[c]	**26**	13	17

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

(b) TSS is charged a credit reimbursement related to certain exposures managed within the IB credit portfolio on behalf of clients shared with TSS. For a further discussion, see Credit reimbursement on page 35 of this Annual Report.

(c) Pre-tax margin represents Operating earnings before income tax expense divided by Total net revenue, which is a comprehensive measure of pre-tax performance and is another basis by which TSS management evaluates its performance and that of its competitors. Pre-tax margin is an effective measure of TSS' earnings, after all operating costs are taken into consideration.

2005 compared with 2004

Operating earnings were $1.0 billion, an increase of $597 million, or 136%. Primarily driving the improvement in revenue were the Merger, business growth, and widening spreads on and growth in average liability balances. Noninterest expense increased primarily due to the Merger and higher compensation expense. Results for 2005 also included charges of $58 million (after-tax) to terminate a client contract. Results for 2004 also included software-impairment charges of $97 million (after-tax) and a gain of $10 million (after-tax) on the sale of a business.

TSS net revenue of $6.2 billion increased $1.4 billion, or 28%. Net interest income grew to $2.1 billion, up $679 million, due to wider spreads on liability balances, a change in the corporate deposit pricing methodology in 2004 and growth in average liability balances. Noninterest revenue of $4.2 billion increased by $705 million, or 20%, due to product growth across TSS, the Merger and the acquisition of Vastera. Leading the product revenue growth was an increase in assets under custody to $11.2 trillion, primarily driven by market value appreciation and new business, along with growth in wholesale card, securities lending, foreign exchange, trust product, trade, clearing and ACH revenues. Partially offsetting this growth in noninterest revenue was a decline in deposit-related fees due to higher interest rates and the absence, in the current period, of a gain on the sale of a business.

TS net revenue of $2.6 billion grew by $628 million, Investor Services net revenue of $2.2 billion grew by $446 million, and Institutional Trust Services net revenue of $1.5 billion grew by $310 million. TSS firmwide net revenue, which includes TS net revenue recorded in other lines of business, grew to $8.8 billion, up $2.3 billion, or 35%. Treasury Services firmwide net revenue grew to $5.2 billion, up $1.6 billion, or 43%.

Credit reimbursement to the Investment Bank was $154 million, an increase of $64 million, primarily as a result of the Merger. TSS is charged a credit reimbursement related to certain exposures managed within the Investment Bank credit portfolio on behalf of clients shared with TSS.

Noninterest expense of $4.5 billion was up $357 million, or 9%, due to the Merger, increased compensation expense resulting from new business growth and the Vastera acquisition, and charges of $93 million to terminate a client contract. Partially offsetting these increases were higher product unit costs charged to other lines of business, primarily Commercial Banking, lower allocations of Corporate segment expenses, merger savings and business efficiencies. The prior year included software-impairment charges of $155 million.

2004 compared with 2003

Operating earnings for the year were $440 million, an increase of $18 million, or 4%. Results in 2004 include an after-tax gain of $10 million on the sale of an IS business. Prior-year results include an after-tax gain of $22 million on the sale of an ITS business. Excluding these one-time gains, operating earnings would have increased by $30 million, or 8%. Both net revenue and Noninterest expense increased primarily as a result of the Merger, the acquisition of Bank One's Corporate Trust business in November 2003 and the acquisition of Electronic Financial Services ("EFS") in January 2004.

TSS net revenue improved by 35% to $4.9 billion. This revenue growth reflected the benefit of the Merger, the acquisitions noted above, and improved product revenues across TSS. Net interest income grew to $1.4 billion from $947 million as a result of average liability balance growth of 46%, to $126 billion, a change in the corporate deposit pricing methodology in 2004 and wider deposit spreads. Growth in fees and commissions was driven by a 22% increase in assets under custody to $9.3 trillion as well as new business growth in trade, commercial card, global equity products, securities lending, fund services, clearing and ACH. Partially offsetting these improvements were lower deposit-related fees, which often decline as interest rates rise, and a soft municipal bond market.

TS net revenue grew to $2.0 billion, IS to $1.7 billion and ITS to $1.2 billion. TSS firmwide net revenue grew by 41% to $6.5 billion. TSS firmwide net revenues include TS net revenues recorded in other lines of business.

Credit reimbursement to the Investment Bank was $90 million, compared with a credit from the Investment Bank of $36 million in the prior year, principally due to the Merger and a change in methodology. TSS is charged a credit reimbursement related to certain exposures managed within the Investment Bank credit portfolio on behalf of clients shared with TSS.

Noninterest expense totaled $4.1 billion, up from $3.0 billion, reflecting the Merger, the acquisitions noted above, $155 million of software impairment charges, upfront transition expenses related to on-boarding new custody and fund accounting clients, and legal and technology-related expenses.

Treasury & Securities Services firmwide metrics include certain TSS product revenues and liability balances reported in other lines of business related to customers who are also customers of those other lines of business. In order to capture the firmwide impact of TS and TSS products and revenues, management reviews firmwide metrics such as liability balances, revenues and overhead ratios in assessing financial performance for TSS. Firmwide metrics are necessary, in management's view, in order to understand the aggregate TSS business.

Selected metrics

Year ending December 31,[a] (in millions, except headcount and where otherwise noted)	2005	2004	2003
Revenue by business			
Treasury Services	**$ 2,622**	$ 1,994	$ 1,200
Investor Services	**2,155**	1,709	1,448
Institutional Trust Services	**1,464**	1,154	960
Total net revenue	**$ 6,241**	$ 4,857	$ 3,608
Business metrics			
Assets under custody (in billions)[b]	**$ 11,249**	$ 9,300	$ 7,597
Corporate trust securities under administration (in billions)[c]	**6,818**	6,676	6,127
Number of:			
US$ ACH transactions originated (in millions)	**2,966**	1,994	NA
Total US$ clearing volume (in thousands)	**95,713**	81,162	NA
International electronic funds transfer volume (in thousands)[d]	**89,537**	45,654	NA
Wholesale check volume (in millions)	**3,856**	NA	NA
Wholesale cards issued (in thousands)[e]	**13,206**	11,787	NA
Selected average balances			
Total assets	**$ 26,947**	$ 23,430	$ 18,379
Loans	**10,430**	7,849	6,009
Liability balances[f]	**164,305**	125,712	85,994
Equity	**1,900**	2,544	2,738
Headcount	**24,484**	22,612	15,145
TSS firmwide metrics			
Treasury Services firmwide revenue[g]	**$ 5,224**	$ 3,665	$ 2,214
Treasury & Securities Services firmwide revenue[g]	**8,843**	6,528	4,622
Treasury Services firmwide overhead ratio[h]	**55%**	62%	62%
Treasury & Securities Services firmwide overhead ratio[h]	**62**	74	76
Treasury Services firmwide liability balances[i]	**$139,579**	$ 102,785	$ 64,819
Treasury & Securities Services firmwide liability balances[i]	**237,699**	178,536	118,873

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) 2005 assets under custody include approximately $530 billion of ITS assets under custody that have not been included previously. At December 31, 2005, approximately 5% of total assets under custody were trust-related.
(c) Corporate trust securities under administration include debt held in trust on behalf of third parties and debt serviced as agent.
(d) International electronic funds transfer includes non-US$ ACH and clearing volume.
(e) Wholesale cards issued include domestic commercial card, stored value card, prepaid card, and government electronic benefit card products.
(f) Liability balances include deposits and deposits swept to on-balance sheet liabilities.
(g) Firmwide revenue includes TS revenue recorded in the Commercial Banking, Consumer & Small Business Banking and Asset & Wealth Management businesses (see below) and excludes FX revenues recorded in the IB for TSS-related FX activity. TSS firmwide FX revenue, which includes FX revenue recorded in TSS and FX revenue associated with TSS customers who are FX customers of the IB, was $382 million, $320 million and $256 million for the years ended December 31, 2005, 2004 and 2003, respectively.
(h) Overhead ratios have been calculated based on firmwide revenues and TSS and TS expenses, respectively, including those allocated to certain other lines of business. FX revenues and expenses recorded in the IB for TSS-related FX activity are not included in this ratio.
(i) Firmwide liability balances include TS' liability balances recorded in certain lines of business. Liability balances associated with TS customers who are also customers of the Commercial Banking line of business are not included in TS liability balances.

(in millions)[a]	2005	2004	2003
Treasury Services revenue reported in Commercial Banking	**$ 2,299**	$ 1,467	$ 896
Treasury Services revenue reported in other lines of business	**303**	204	118

Asset & Wealth Management

Asset & Wealth Management provides investment advice and management for institutions and individuals. With Assets under supervision of $1.1 trillion, AWM is one of the largest asset and wealth managers in the world. AWM serves four distinct client groups through three businesses: institutions through JPMorgan Asset Management; ultra-high-net-worth clients through the Private Bank; high-net-worth clients through Private Client Services; and retail clients through JPMorgan Asset Management. The majority of AWM's client assets are in actively managed portfolios. AWM has global investment expertise in equities, fixed income, real estate, hedge funds, private equity and liquidity, including both money market instruments and bank deposits. AWM also provides trust and estate services to ultra-high-net-worth and high-net-worth clients, and retirement services for corporations and individuals.

Selected income statement data

Year ended December 31,[a] (in millions, except ratios)	2005	2004	2003
Revenue			
Asset management, administration and commissions	**$ 4,189**	$ 3,140	$ 2,258
Other income	**394**	243	224
Noninterest revenue	**4,583**	3,383	2,482
Net interest income	**1,081**	796	488
Total net revenue	**5,664**	4,179	2,970
Provision for credit losses[b]	**(56)**	(14)	35
Noninterest expense			
Compensation expense	**2,179**	1,579	1,213
Noncompensation expense	**1,582**	1,502	1,265
Amortization of intangibles	**99**	52	8
Total noninterest expense	**3,860**	3,133	2,486
Operating earnings before income tax expense	**1,860**	1,060	449
Income tax expense	**644**	379	162
Operating earnings	**$ 1,216**	$ 681	$ 287
Financial ratios			
ROE	**51%**	17%	5%
Overhead ratio	**68**	75	84
Pre-tax margin ratio[c]	**33**	25	15

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) 2005 includes a $3 million special provision related to Hurricane Katrina.
(c) Pre-tax margin represents Operating earnings before income tax expense divided by Total net revenue, which is a comprehensive measure of pre-tax performance and is another basis by which AWM management evaluates its performance and that of its competitors. Pre-tax margin is an effective measure of AWM's earnings, after all costs are taken into consideration.

2005 compared with 2004

Operating earnings of $1.2 billion were up $535 million from the prior year due to the Merger and increased revenue, partially offset by higher compensation expense.

Net revenue was $5.7 billion, up $1.5 billion, or 36%. Noninterest revenue, primarily fees and commissions, of $4.6 billion was up $1.2 billion, principally due to the Merger, the acquisition of a majority interest in Highbridge Capital Management in 2004, net asset inflows and global equity market appreciation. Net interest income of $1.1 billion was up $285 million, primarily due to the Merger, higher deposit and loan balances, partially offset by narrower deposit spreads.

Private Bank client segment revenue of $1.7 billion increased by $135 million. Retail client segment revenue of $1.5 billion increased by $360 million. Institutional client segment revenue was up $504 million to $1.4 billion due to the acquisition of a majority interest in Highbridge Capital Management. Private Client Services client segment revenue grew by $486 million, to $1.0 billion.

Provision for credit losses was a benefit of $56 million, compared with a benefit of $14 million in the prior year, due to lower net charge-offs and refinements in the data used to estimate the allowance for credit losses.

Noninterest expense of $3.9 billion increased by $727 million, or 23%, reflecting the Merger, the acquisition of Highbridge and increased compensation expense related primarily to higher performance-based incentives.

2004 compared with 2003

Operating earnings were $681 million, up 137% from the prior year, due largely to the Merger but also driven by increased revenue and a decrease in the Provision for credit losses; these were partially offset by higher Compensation expense.

Total net revenue was $4.2 billion, up 41%, primarily due to the Merger. Additionally, fees and commissions increased due to global equity market appreciation, net asset inflows and the acquisition of JPMorgan Retirement Plan Services ("RPS") in 2003. Fees and commissions also increased due to an improved product mix, with an increased percentage of assets in higher-yielding products. Net interest income increased due to deposit and loan growth.

The Provision for credit losses was a benefit of $14 million, a decrease of $49 million, due to an improvement in credit quality.

Noninterest expense was $3.1 billion, up 26%, due to the Merger, increased Compensation expense and increased technology and marketing initiatives.

Selected metrics

Year ended December 31,[a] (in millions, except headcount and ranking data, and where otherwise noted)	2005	2004	2003
Revenue by client segment			
Private bank	**$ 1,689**	$ 1,554	$ 1,437
Retail	**1,544**	1,184	774
Institutional	**1,395**	891	681
Private client services	**1,036**	550	78
Total net revenue	**$ 5,664**	$ 4,179	$ 2,970
Business metrics			
Number of:			
Client advisors	**1,430**	1,333	651
Retirement Plan Services participants	**1,299,000**	918,000	756,000
% of customer assets in 4 & 5 Star Funds[b]	**46%**	48%	48%
% of AUM in 1st and 2nd quartiles:[c]			
1 year	**69**	66	57
3 years	**68**	71	69
5 years	**74**	68	65
Selected average balances			
Total assets	**$ 41,599**	$ 37,751	$ 33,780
Loans	**26,610**	21,545	16,678
Deposits[d]	**42,123**	32,431	20,576
Equity	**2,400**	3,902	5,507
Headcount	**12,127**	12,287	8,520

Credit data and quality statistics			
Net charge-offs	**$ 23**	$ 72	$ 9
Nonperforming loans	**104**	79	173
Allowance for loan losses	**132**	216	130
Allowance for lending-related commitments	**4**	5	4
Net charge-off rate	**0.09%**	0.33%	0.05%
Allowance for loan losses to average loans	**0.50**	1.00	0.78
Allowance for loan losses to nonperforming loans	**127**	273	75
Nonperforming loans to average loans	**0.39**	0.37	1.04

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Star rankings derived from Morningstar and Standard & Poor's.
(c) Quartile rankings sourced from Lipper and Standard & Poor's.
(d) Reflects the transfer in 2005 of certain consumer deposits from Retail Financial Services to Asset & Wealth Management.

AWM's client segments are comprised of the following:

Institutional serves large and mid-size corporate and public institutions, endowments and foundations, and governments globally. AWM offers these institutions comprehensive global investment services, including investment management across asset classes, pension analytics, asset-liability management, active risk budgeting and overlay strategies.

The **Private Bank** addresses every facet of wealth management for ultra-high-net-worth individuals and families worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty wealth advisory services.

Retail provides worldwide investment management services and retirement planning and administration through third-party and direct distribution channels.

Private Client Services offers high-net-worth individuals, families and business owners comprehensive wealth management solutions that include financial planning, personal trust, investment and banking products and services.

Assets under supervision

2005 compared with 2004

Assets under supervision ("AUS") at December 31, 2005, were $1.1 trillion, up 4%, or $43 billion, from the prior year despite a $33 billion reduction due to the sale of BrownCo. Assets under management ("AUM") were $847 billion, up 7%. The increase was primarily the result of net asset inflows in equity-related products and global equity market appreciation. The Firm also has a 43% interest in American Century Companies, Inc., whose AUM totaled $101 billion and $98 billion at December 31, 2005 and 2004, respectively. Custody, brokerage, administration, and deposits were $302 billion, down $13 billion due to a $33 billion reduction from the sale of BrownCo.

2004 compared with 2003

Assets under supervision at December 31, 2004, were $1.1 trillion, up 45% from 2003, and Assets under management were $791 billion, up 41% from the prior year. The increases were primarily the result of the Merger, as well as market appreciation, net asset inflows and the acquisition of a majority interest in Highbridge Capital Management. The Firm also has a 43% interest in American Century Companies, Inc., whose AUM totaled $98 billion and $87 billion at December 31, 2004 and 2003, respectively. Custody, brokerage, administration, and deposits were $315 billion, up 55%, due to market appreciation, the Merger and net inflows across all products.

Assets under supervision[a] (in billions)		
As of or for the year ended December 31,	**2005**	2004
Assets by asset class		
Liquidity	**$ 238**	$ 232
Fixed income	**165**	171
Equities & balanced	**370**	326
Alternatives	**74**	62
Total Assets under management	**847**	791
Custody/brokerage/administration/deposits	**302**	315
Total Assets under supervision	**$ 1,149**	$ 1,106
Assets by client segment		
Institutional	**$ 481**	$ 466
Private Bank	**145**	139
Retail	**169**	133
Private Client Services	**52**	53
Total Assets under management	**$ 847**	$ 791
Institutional	**$ 484**	$ 487
Private Bank	**318**	304
Retail	**245**	221
Private Client Services	**102**	94
Total Assets under supervision	**$ 1,149**	$ 1,106
Assets by geographic region		
U.S./Canada	**$ 562**	$ 554
International	**285**	237
Total Assets under management	**$ 847**	$ 791
U.S./Canada	**$ 805**	$ 815
International	**344**	291
Total Assets under supervision	**$ 1,149**	$ 1,106
Mutual fund assets by asset class		
Liquidity	**$ 182**	$ 183
Fixed income	**45**	41
Equity	**150**	104
Total mutual fund assets	**$ 377**	$ 328
Assets under management rollforward[b]		
Beginning balance, January 1	**$ 791**	$ 561
Flows:		
Liquidity	**8**	3
Fixed income	**—**	(8)
Equity, balanced and alternative	**24**	14
Acquisitions/divestitures[c]	**—**	183
Market/performance/other impacts[d]	**24**	38
Ending balance, December 31	**$ 847**	$ 791
Assets under supervision rollforward[b]		
Beginning balance, January 1	**$ 1,106**	$ 764
Net asset flows	**49**	42
Acquisitions/divestitures[e]	**(33)**	221
Market/performance/other impacts[d]	**27**	79
Ending balance, December 31	**$ 1,149**	$ 1,106

(a) Excludes Assets under management of American Century.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(c) Reflects the Merger with Bank One ($176 billion) and the acquisition of a majority interest in Highbridge Capital Management ($7 billion) in 2004.
(d) Includes AWM's strategic decision to exit the Institutional fiduciary business ($12 billion) in 2005.
(e) Reflects the Merger with Bank One ($214 billion) and the acquisition of a majority interest in Highbridge Capital Management ($7 billion) in 2004, and the sale of BrownCo ($33 billion) in 2005.

Corporate

The Corporate sector is comprised of Private Equity, Treasury, corporate staff units and expenses that are centrally managed. Private Equity includes the JPMorgan Partners and ONE Equity Partners businesses. Treasury manages the structural interest rate risk and investment portfolio for the Firm. The corporate staff units include Central Technology and Operations, Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Office of the General Counsel, Corporate Real Estate and General Services, Risk Management, and Strategy and Development. Other centrally managed expenses include the Firm's occupancy and pension-related expenses, net of allocations to the business.

Selected income statement data

Year ended December 31,[a] (in millions)	2005	2004[d]	2003[d]
Revenue			
Securities/private equity gains	**$ 200**	$ 1,786	$ 1,031
Other income[b]	**1,410**	315	303
Noninterest revenue	**1,610**	2,101	1,334
Net interest income	**(2,736)**	(1,216)	(133)
Total net revenue	**(1,126)**	885	1,201
Provision for credit losses[c]	**10**	(110)	124
Noninterest expense			
Compensation expense	**3,151**	2,426	1,893
Noncompensation expense	**4,216**	4,088	3,216
Subtotal	**7,367**	6,514	5,109
Net expenses allocated to other businesses	**(5,343)**	(5,213)	(4,580)
Total noninterest expense	**2,024**	1,301	529
Operating earnings before income tax expense	**(3,160)**	(306)	548
Income tax expense (benefit)	**(1,429)**	(367)	(120)
Operating earnings (loss)	**$ (1,731)**	$ 61	$ 668

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes $1.3 billion (pre-tax) gain on the sale of BrownCo in 2005.
(c) 2005 includes a $12 million special provision related to Hurricane Katrina.
(d) In 2005, the Corporate sector's and the Firm's operating results were presented on a tax-equivalent basis. Prior period results have been restated. This restatement had no impact on the Corporate sector's or the Firm's operating earnings.

2005 compared with 2004

Operating loss of $1.7 billion declined from earnings of $61 million in the prior year.

Net revenue was a loss of $1.1 billion compared with revenue of $885 million in the prior year. Noninterest revenue of $1.6 billion decreased by $491 million and included securities losses of $1.5 billion due to the repositioning of the Treasury investment portfolio, to manage exposure to interest rates, the gain on the sale of BrownCo of $1.3 billion and the increase in private equity gains of $262 million. For a further discussion on the sale of BrownCo, see Note 2 on page 93 of this Annual Report.

Net interest income was a loss of $2.7 billion compared with a loss of $1.2 billion in the prior year. Actions and policies adopted in conjunction with the Merger and the repositioning of the Treasury investment portfolio were the main drivers of the increased loss.

Noninterest expense was $2.0 billion, up $723 million, or 56%, from the prior year, primarily due to the Merger and the cost of the accelerated vesting of certain employee stock options. These increases were offset partially by merger-related savings and other expense efficiencies.

On September 15, 2004, JPMorgan Chase and IBM announced the Firm's plans to reintegrate the portions of its technology infrastructure – including data centers, help desks, distributed computing, data networks and voice networks – that were previously outsourced to IBM. In January 2005, approximately 3,100 employees and 800 contract employees were transferred to the Firm.

2004 compared with 2003

Operating earnings were $61 million, down from earnings of $668 million in the prior year.

Noninterest revenue was $2.1 billion, up 57% from the prior year. The primary component of noninterest revenue is Securities/private equity gains, which totaled $1.8 billion, up 73% from the prior year. The increase was a result of net gains in the Private Equity portfolio of $1.4 billion in 2004 compared with $27 million in net gains in 2003. Partially offsetting these gains were lower investment securities gains in Treasury.

Net interest income was a loss of $1.2 billion compared with a loss of $133 million in the prior year. The increased loss was driven primarily by actions and policies adopted in conjunction with the Merger.

Noninterest expense of $1.3 billion was up $772 million from the prior year due to the Merger. The Merger resulted in higher gross compensation and noncompensation expenses. Allocations of compensation and noncompensation expenses to the businesses were lower than the gross expense increase due to certain policies adopted in conjunction with the Merger, which retain in Corporate overhead costs that would not be incurred by the lines of business if operated on a stand-alone basis, and costs in excess of the market price for services provided by the corporate staff and technology and operations areas.

Selected metrics

Year ended December 31,[a] (in millions, except headcount)	2005	2004	2003
Selected average balances			
Short-term investments[b]	**$ 16,808**	$ 14,590	$ 4,076
Investment portfolio[c]	**54,481**	65,985	65,113
Goodwill[d]	**43,475**	21,773	293
Total assets	**160,720**	162,234	104,395
Headcount	**28,384**	24,806	13,391
Treasury			
Securities gains (losses)	**$ (1,502)**	$ 347	$ 999
Investment portfolio (average)	**46,520**	57,776	56,299
Investment portfolio (ending)	**30,741**	64,949	45,811

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Represents Federal funds sold, Securities borrowed, Trading assets – debt and equity instruments and Trading assets – derivative receivables.
(c) Represents Investment securities and private equity investments.
(d) As of July 1, 2004, the Firm revised the goodwill allocation methodology to retain all goodwill in Corporate. Effective with the first quarter of 2006, the Firm will refine its methodology to allocate goodwill to the lines of business.

Private equity

2005 compared with 2004

Private Equity's operating earnings for the year were $821 million compared with $602 million in the prior year. This improvement in earnings reflected an increase of $262 million in private equity gains to $1.7 billion, a 15% reduction in noninterest expenses and a $62 million decline in net funding costs of carrying portfolio investments. Private equity gains benefited from continued favorable markets for investment sales and recapitalizations, resulting in nearly $2 billion of realized gains. The carrying value of the private equity portfolio declined by $1.3 billion to $6.2 billion as of December 31, 2005. This decline was primarily the result of sales and recapitalizations of direct investments.

2004 compared with 2003

Private Equity's operating earnings for the year totaled $602 million compared with a loss of $290 million in 2003. This improvement reflected a $1.4 billion increase in total private equity gains. In 2004, markets improved for investment sales, resulting in $1.4 billion of realized gains on direct investments, compared with realized gains of $535 million in 2003. Net write-downs on direct investments were $192 million in 2004 compared with net write-downs of $404 million in 2003, as valuations continued to stabilize amid positive market conditions.

The carrying value of the Private Equity portfolio at December 31, 2004, was $7.5 billion, an increase of $247 million from December 31, 2003. The increase was primarily the result of the acquisition of ONE Equity Partners as a result of the Merger. Excluding ONE Equity Partners, the portfolio declined as a result of sales of investments, which was consistent with management's intention to reduce over time the capital committed to private equity. Sales of third-party fund investments resulted in a decrease in carrying value of $458 million, to $641 million at December 31, 2004, compared with $1.1 billion at December 31, 2003.

Selected income statement and balance sheet data – Private equity

Year ended December 31,[a] (in millions)	2005	2004	2003
Private equity gains (losses)			
Direct investments			
Realized gains	**$ 1,969**	$ 1,423	$ 535
Write-ups / (write-downs)	**(72)**	(192)	(404)
Mark-to-market gains (losses)	**(338)**	164	215
Total direct investments	**1,559**	1,395	346
Third-party fund investments	**132**	34	(319)
Total private equity gains (losses)	**1,691**	1,429	27
Other income	**40**	53	47
Net interest income	**(209)**	(271)	(264)
Total net revenue	**1,522**	1,211	(190)
Total noninterest expense	**244**	288	268
Operating earnings (loss) before income tax expense	**1,278**	923	(458)
Income tax expense	**457**	321	(168)
Operating earnings (loss)	**$ 821**	$ 602	$ (290)
Private equity portfolio information[b]			
Direct investments			
Public securities			
Carrying value	**$ 479**	$ 1,170	$ 643
Cost	**403**	744	451
Quoted public value	**683**	1,758	994
Private direct securities			
Carrying value	**5,028**	5,686	5,508
Cost	**6,463**	7,178	6,960
Third-party fund investments			
Carrying value	**669**	641	1,099
Cost	**1,003**	1,042	1,736
Total private equity portfolio			
Carrying value	**$ 6,176**	$ 7,497	$ 7,250
Cost	**$ 7,869**	$ 8,964	$ 9,147

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) For further information on the Firm's policies regarding the valuation of the private equity portfolio, see Note 9 on pages 103–105 of this Annual Report.

Balance sheet analysis

Selected balance sheet data

December 31, (in millions)	2005	2004
Assets		
Cash and due from banks	**$ 36,670**	$ 35,168
Deposits with banks and Federal funds sold	**26,072**	28,958
Securities purchased under resale agreements and Securities borrowed	**204,174**	141,504
Trading assets – debt and equity instruments	**248,590**	222,832
Trading assets – derivative receivables	**49,787**	65,982
Securities:		
Available-for-sale	**47,523**	94,402
Held-to-maturity	**77**	110
Loans, net of allowance for loan losses	**412,058**	394,794
Other receivables	**27,643**	31,086
Goodwill and other intangible assets	**58,180**	57,887
All other assets	**88,168**	84,525
Total assets	**$ 1,198,942**	$ 1,157,248
Liabilities		
Deposits	**$ 554,991**	$ 521,456
Securities sold under repurchase agreements and securities lent	**117,124**	112,347
Trading liabilities – debt and equity instruments	**94,157**	87,942
Trading liabilities – derivative payables	**51,773**	63,265
Long-term debt and capital debt securities	**119,886**	105,718
All other liabilities	**153,800**	160,867
Total liabilities	**1,091,731**	1,051,595
Stockholders' equity	**107,211**	105,653
Total liabilities and stockholders' equity	**$ 1,198,942**	$ 1,157,248

Securities purchased under resale agreements and Securities sold under repurchase agreements

The increase in Securities purchased under resale agreements was due primarily to growth in client-driven financing activities in North America and Europe.

Trading assets and liabilities – debt and equity instruments

The Firm's debt and equity trading instruments consist primarily of fixed income securities (including government and corporate debt) and equity and convertible cash instruments used for both market-making and proprietary risk-taking activities. The increase over December 31, 2004, was primarily due to growth in client-driven market-making activities across interest rate, credit and equity markets. For additional information, refer to Note 3 on page 94 of this Annual Report.

Trading assets and liabilities – derivative receivables and payables

The Firm uses various interest rate, foreign exchange, equity, credit and commodity derivatives for market-making, proprietary risk-taking and risk management purposes. The decline from December 31, 2004, was primarily due to the appreciation of the U.S. dollar and, to a lesser extent, higher interest rates, partially offset by increased commodity trading activity and rising commodity prices. For additional information, refer to Credit risk management and Note 3 on pages 63–74 and 94, respectively, of this Annual Report.

Securities

The AFS portfolio declined by $46.9 billion from December 31, 2004, primarily due to securities sales (as a result of management's decision to reposition the Treasury investment portfolio to manage exposure to interest rates) and maturities, which more than offset purchases. For additional information related to securities, refer to the Corporate segment discussion and to Note 9 on pages 53–54 and 103–105, respectively, of this Annual Report.

Loans

The $17 billion increase in gross loans was due primarily to an increase of $15 billion in the wholesale portfolio, primarily from the IB, reflecting higher balances of loans held-for-sale ("HFS") related to securitization and syndication activities, and growth in the IB Credit Portfolio. Wholesale HFS loans were $18 billion as of December 31, 2005, compared with $6 billion as of December 31, 2004. For consumer loans, growth in consumer real estate (primarily home equity loans) and credit card loans was offset largely by a decline in the auto portfolio. The increase in credit card loans primarily reflected growth from new account originations and the acquisition of $1.5 billion of Sears Canada loans on the balance sheet. The decline in the auto portfolio primarily reflected a difficult auto lending market in 2005, $3.8 billion of securitizations and was also the result of a strategic review of the portfolio in 2004 that led to the decisions to de-emphasize vehicle leasing and sell a $2 billion recreational vehicle portfolio. For a more detailed discussion of the loan portfolio and the Allowance for loan losses, refer to Credit risk management on pages 63–74 of this Annual Report.

Goodwill and Other intangible assets

The $293 million increase in Goodwill and Other intangible assets primarily resulted from higher MSRs due to growth in the servicing portfolio as well as an overall increase in the valuation from improved market conditions; the business partnership with Cazenove; the acquisition of the Sears Canada credit card business; and the Neovest and Vastera acquisitions. Partially offsetting the increase were declines from the amortization of purchased credit card relationships and core deposit intangibles and the deconsolidation of Paymentech. For additional information, see Note 15 on pages 114–116 of this Annual Report.

Deposits

Deposits increased by 6% from December 31, 2004. Retail deposits increased, reflecting growth from new account acquisitions and the ongoing expansion of the retail branch distribution network. Wholesale deposits were higher, driven by growth in business volumes. For more information on deposits, refer to the RFS segment discussion and the Liquidity risk management discussion on pages 39–44 and 61–62, respectively, of this Annual Report. For more information on liability balances, refer to the CB and TSS segment discussions on pages 47–48 and 49–50, respectively, of this Annual Report.

Long-term debt and capital debt securities

Long-term debt and capital debt securities increased by $14.2 billion, or 13%, from December 31, 2004, primarily due to net new issuances of long-term debt and capital debt securities. The Firm took advantage of narrow credit spreads globally to issue opportunistically long-term debt and capital debt securities throughout 2005. Consistent with its liquidity management policy, the Firm raised funds sufficient to cover maturing obligations over the next 12 months and to support the less liquid assets on its balance sheet. Large investor cash positions and increased foreign investor participation in the corporate markets allowed JPMorgan Chase to diversify further its funding across the global markets while lengthening maturities. For additional information on the Firm's long-term debt activity, see the Liquidity risk management discussion on pages 61–62 of this Annual Report.

Stockholders' equity

Total stockholders' equity increased by $1.6 billion from year-end 2004 to $107.2 billion at December 31, 2005. The increase was the result of net income for 2005 and common stock issued under employee plans, partially offset by cash dividends, stock repurchases, the redemption of $200 million of preferred stock and net unrealized losses in Accumulated other comprehensive income. For a further discussion of capital, see the Capital management section that follows.

Capital management

The Firm's capital management framework is intended to ensure that there is capital sufficient to support the underlying risks of the Firm's business activities, as measured by economic risk capital, and to maintain "well-capitalized" status under regulatory requirements. In addition, the Firm holds capital above these requirements in amounts deemed appropriate to achieve management's regulatory and debt rating objectives. The Firm's capital framework is integrated into the process of assigning equity to the lines of business.

Line of business equity

The Firm's framework for allocating capital is based upon the following objectives:

- Integrate firmwide capital management activities with capital management activities within each of the lines of business.
- Measure performance consistently across all lines of business.
- Provide comparability with peer firms for each of the lines of business.

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, incorporating sufficient capital to address economic risk measures, regulatory capital requirements, and capital levels for similarly rated peers. Return on equity is measured and internal targets for expected returns are established as a key measure of a business segment's performance.

For performance management purposes, the Firm initiated a methodology at the time of the Merger for allocating goodwill. Under this methodology, in the last half of 2004 and all of 2005, goodwill from the Merger and from any business acquisition by either heritage firm prior to the Merger was allocated to Corporate, as was any associated equity. Therefore, 2005 line of business equity is not comparable to equity assigned to the lines of business in prior years. The increase in average common equity in the following table for 2005 was attributable primarily to the Merger.

(in billions)	Yearly Average	
Line of business equity	**2005**	2004[a]
Investment Bank	**$ 20.0**	$ 17.3
Retail Financial Services	**13.4**	9.1
Card Services	**11.8**	7.6
Commercial Banking	**3.4**	2.1
Treasury & Securities Services	**1.9**	2.5
Asset & Wealth Management	**2.4**	3.9
Corporate[b]	**52.6**	33.1
Total common stockholders' equity	**$ 105.5**	$ 75.6

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) 2005 includes $43.5 billion of equity to offset goodwill and $9.1 billion of equity, primarily related to Treasury, Private Equity and the Corporate Pension Plan.

Effective January 1, 2006, the Firm expects to refine its methodology for allocating capital to the lines of business, and may continue to refine this methodology. The revised methodology, among other things, considers for each line of business goodwill associated with such line of business' acquisitions since the Merger. As a result of this refinement, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset & Wealth Management will have higher amounts of capital allocated in 2006, while the amount of capital allocated to the Investment Bank will remain unchanged. In management's view, the revised methodology assigns responsibility to the lines of business to generate returns on the amount of capital supporting acquisition-related goodwill. As part of this refinement in the capital allocation methodology, the Firm will assign to the Corporate segment an amount of equity capital equal to the then-current book value of goodwill from and prior to the Merger. In accordance with SFAS 142, the lines of business will continue to perform the required goodwill impairment testing. For a further discussion of goodwill and impairment testing, see Critical accounting estimates and Note 15 on pages 81–83 and 114–116, respectively, of this Annual Report.

Economic risk capital

JPMorgan Chase assesses its capital adequacy relative to the underlying risks of the Firm's business activities, utilizing internal risk-assessment methodologies. The Firm assigns economic capital based primarily upon five risk factors: credit risk, market risk, operational risk and business risk for each business; and private equity risk, principally for the Firm's private equity business.

(in billions)	Yearly Average	
Economic risk capital	**2005**	2004[a]
Credit risk	**$ 22.6**	$ 16.5
Market risk	**9.8**	7.5
Operational risk	**5.5**	4.5
Business risk	**2.1**	1.9
Private equity risk	**3.8**	4.5
Economic risk capital	**43.8**	34.9
Goodwill	**43.5**	25.9
Other[b]	**18.2**	14.8
Total common stockholders' equity	**$ 105.5**	$ 75.6

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) Additional capital required to meet internal debt and regulatory rating objectives.

Credit risk capital

Credit risk capital is estimated separately for the wholesale businesses (Investment Bank, Commercial Banking, Treasury & Securities Services and Asset & Wealth Management) and consumer businesses (Retail Financial Services and Card Services).

Credit risk capital for the overall wholesale credit portfolio is defined in terms of unexpected credit losses, both from defaults and declines in market value due to credit deterioration, measured over a one-year period at a confidence level consistent with the level of capitalization necessary to achieve a targeted 'AA' solvency standard. Unexpected losses are in excess of those for which provisions for credit losses are maintained. In addition to maturity and correlations, capital allocation is differentiated by several principal drivers of credit risk: exposure at default (or loan equivalent amount), likelihood of default, loss severity, and market credit spread.

- Loan equivalent amount for counterparty exposures in an over-the-counter derivative transaction is represented by the expected positive exposure based upon potential movements of underlying market rates. Loan equivalents for unused revolving credit facilities represent the portion of an unused commitment likely, based upon the Firm's average portfolio historical experience, to become outstanding in the event an obligor defaults.
- Default likelihood is based upon current market conditions for all publicly traded names and investment banking clients, by referencing the growing market in credit derivatives and secondary market loan sales. This methodology produces, in the Firm's view, more active risk management by utilizing a forward-looking measure of credit risk. This dynamic measure captures current market conditions and will change with the credit cycle over time impacting the level of credit risk capital. For privately-held firms in the commercial banking portfolio, default likelihood is based upon longer term averages over an entire credit cycle.

- Loss severity of exposure is based upon the Firm's average historical experience during workouts, with adjustments to account for collateral or subordination.
- Market credit spreads are used in the evaluation of changes in exposure value due to credit deterioration.

Credit risk capital for the consumer portfolio is intended to represent a capital level sufficient to support an 'AA' rating, and its allocation is based upon product and other relevant risk segmentation. Actual segment level default and severity experience are used to estimate unexpected losses for a one-year horizon at a confidence level equivalent to the 'AA' solvency standard. Statistical results for certain segments or portfolios are adjusted upward to ensure that capital is consistent with external benchmarks, including subordination levels on market transactions and capital held at representative monoline competitors, where appropriate.

Market risk capital

The Firm calculates market risk capital guided by the principle that capital should reflect the risk of loss in the value of portfolios and financial instruments caused by adverse movements in market variables, such as interest and foreign exchange rates, credit spreads, securities prices and commodities prices. Daily VAR, monthly stress-test results and other factors are used to determine appropriate capital levels. The Firm allocates market risk capital to each business segment according to a formula that weights that segment's VAR and stress test exposures. See Market risk management on pages 75–78 of this Annual Report for more information about these market risk measures.

Operational risk capital

Capital is allocated to the lines of business for operational risk using a risk-based capital allocation methodology which estimates operational risk on a bottom-up basis. The operational risk capital model is based upon actual losses and potential scenario-based stress losses, with adjustments to the capital calculation to reflect changes in the quality of the control environment or the potential offset as a result of the use of risk-transfer products. The Firm believes the model is consistent with the new Basel II Framework and expects to propose it eventually for qualification under the advanced measurement approach for operational risk.

Business risk capital

Business risk is defined as the risk associated with volatility in the Firm's earnings due to factors not captured by other parts of its economic-capital framework. Such volatility can arise from ineffective design or execution of business strategies, volatile economic or financial market activity, changing client expectations and demands, and restructuring to adjust for changes in the competitive environment. For business risk, capital is allocated to each business based upon historical revenue volatility and measures of fixed and variable expenses. Earnings volatility arising from other risk factors, such as credit, market, or operational risk, is excluded from the measurement of business risk capital, as those factors are captured under their respective risk capital models.

Private equity risk capital

Capital is allocated to privately- and publicly-held securities, third-party fund investments and commitments in the Private Equity portfolio to cover the potential loss associated with a decline in equity markets and related asset devaluations.

Regulatory capital

The Firm's federal banking regulator, the Federal Reserve Board ("FRB"), establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank and Chase Bank USA, National Association.

The federal banking regulatory agencies issued a final rule that makes permanent an interim rule issued in 2000 that provides regulatory capital relief for certain cash-collateralized securities borrowed transactions, effective February 22, 2006. The final rule also broadens the types of transactions qualifying for regulatory capital relief under the interim rule. Adoption of the rule is not expected to have a material effect on the Firm's capital ratios.

On March 1, 2005, the FRB issued a final rule, which became effective April 11, 2005, that continues the inclusion of trust preferred securities in Tier 1 capital, subject to stricter quantitative limits and revised qualitative standards, and broadens the definition of restricted core capital elements. The rule provides for a five-year transition period. As an internationally active bank holding company, JPMorgan Chase is subject to the rule's limitation on restricted core capital elements, including trust preferred securities, to 15% of total core capital elements, net of goodwill less any associated deferred tax liability. At December 31, 2005, JPMorgan Chase's restricted core capital elements were 16.5% of total core capital elements. JPMorgan Chase expects to be in compliance with the 15% limit by the March 31, 2009, implementation date.

On July 20, 2004, the federal banking regulatory agencies issued a final rule that excludes assets of asset-backed commercial paper programs that are consolidated as a result of FIN 46R from risk-weighted assets for purposes of computing Tier 1 and Total risk-based capital ratios. The final rule also requires that capital be held against short-term liquidity facilities supporting asset-backed commercial paper programs. The final rule became effective September 30, 2004. In addition, both short- and long-term liquidity facilities are subject to certain asset quality tests effective September 30, 2005. Adoption of the rule did not have a material effect on the capital ratios of the Firm.

The following tables show that JPMorgan Chase maintained a well-capitalized position based upon Tier 1 and Total capital ratios at December 31, 2005 and 2004.

Capital ratios

December 31,	**2005**	2004	Well-capitalized ratios
Tier 1 capital ratio	**8.5%**	8.7%	6.0%
Total capital ratio	**12.0**	12.2	10.0
Tier 1 leverage ratio	**6.3**	6.2	NA
Total stockholders' equity to assets	**8.9**	9.1	NA

Risk-based capital components and assets

December 31, (in millions)	**2005**	2004
Total Tier 1 capital	**$ 72,474**	$ 68,621
Total Tier 2 capital	**29,963**	28,186
Total capital	**$ 102,437**	$ 96,807
Risk-weighted assets	**$ 850,643**	$ 791,373
Total adjusted average assets	**1,152,546**	1,102,456

Tier 1 capital was $72.5 billion at December 31, 2005, compared with $68.6 billion at December 31, 2004, an increase of $3.9 billion. The increase was due primarily to net income of $8.5 billion, net common stock issued under employee plans of $1.9 billion, $1.3 billion of additional qualifying trust preferred securities and a decline of $716 million in the deduction for nonqualifying intangible assets as a result of amortization. Offsetting these increases were dividends declared of $4.8 billion, common share repurchases of $3.4 billion, an increase in the deduction for goodwill of $418 million and the redemption of $200 million of preferred stock. Additional information regarding the Firm's capital ratios and the federal regulatory capital standards to which it is subject is presented in Note 24 on pages 121–122 of this Annual Report.

Basel II

The Basel Committee on Banking Supervision published the new Basel II Framework in 2004 in an effort to update the original international bank capital

accord ("Basel I"), in effect since 1988. The goal of the Basel II Framework is to improve the consistency of capital requirements internationally, make regulatory capital more risk-sensitive, and promote enhanced risk management practices among large, internationally active banking organizations. JPMorgan Chase supports the overall objectives of the Basel II Framework.

U.S. banking regulators are in the process of incorporating the Basel II Framework into the existing risk-based capital requirements. JPMorgan Chase will be required to implement advanced measurement techniques in the U.S. by employing internal estimates of certain key risk drivers to derive capital requirements. Prior to implementation of the new Basel II Framework, JPMorgan Chase will be required to demonstrate to its U.S. bank supervisors that its internal criteria meet the relevant supervisory standards. JPMorgan Chase expects to be in compliance within the established timelines with all relevant Basel II rules.

Dividends

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired payout ratios, need to maintain an adequate capital level and alternative investment opportunities. In 2005, JPMorgan Chase declared a quarterly cash dividend on its common stock of $0.34 per share. The Firm continues to target a dividend payout ratio of 30-40% of operating earnings over time.

Stock repurchases

On July 20, 2004, the Board of Directors approved an initial stock repurchase program in the aggregate amount of $6.0 billion. This amount includes shares to be repurchased to offset issuances under the Firm's employee stock-based plans. The actual amount of shares repurchased is subject to various factors, including market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative potential investment opportunities. Under the stock repurchase program, during 2005, the Firm repurchased 93.5 million shares for $3.4 billion at an average price per share of $36.46. During 2004, the Firm repurchased 19.3 million shares for $738 million at an average price per share of $38.27. As of December 31, 2005, $1.9 billion of authorized repurchase capacity remained.

The Firm has determined that it may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate the repurchase of common stock in accordance with the repurchase program. A Rule 10b5-1 repurchase plan would allow the Firm to repurchase shares during periods when it would not otherwise be repurchasing common stock – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan that is established when the Firm is not aware of material nonpublic information.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5, Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on page 11 of JPMorgan Chase's 2005 Form 10–K.

Off–balance sheet arrangements and contractual cash obligations

Special-purpose entities

JPMorgan Chase is involved with several types of off-balance sheet arrangements, including special purpose entities ("SPEs"), lines of credit and loan commitments. The principal uses of SPEs are to obtain sources of liquidity for JPMorgan Chase and its clients by securitizing financial assets, and to create other investment products for clients. These arrangements are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. For example, SPEs are integral to the markets for mortgage-backed securities, commercial paper, and other asset-backed securities.

The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors. To insulate investors from creditors of other entities, including the seller of assets, SPEs can be structured to be bankruptcy-remote.

JPMorgan Chase is involved with SPEs in three broad categories: loan securitizations, multi-seller conduits and client intermediation. Capital is held, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments. For a further discussion of SPEs and the Firm's accounting for them, see Note 1 on page 91, Note 13 on pages 108–111 and Note 14 on pages 111–113 of this Annual Report.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and prohibit employees from acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

For certain liquidity commitments to SPEs, the Firm could be required to provide funding if the credit rating of JPMorgan Chase Bank were downgraded below specific levels, primarily P-1, A-1 and F1 for Moody's, Standard & Poor's and Fitch, respectively. The amount of these liquidity commitments was $71.3 billion and $79.4 billion at December 31, 2005 and 2004, respectively. Alternatively, if JPMorgan Chase Bank were downgraded, the Firm could be replaced by another liquidity provider in lieu of providing funding under the liquidity commitment, or, in certain circumstances, could facilitate the sale or refinancing of the assets in the SPE in order to provide liquidity.

Of its $71.3 billion in liquidity commitments to SPEs at December 31, 2005, $38.9 billion was included in the Firm's other unfunded commitments to extend credit and asset purchase agreements, included in the following table. Of the $79.4 billion of liquidity commitments to SPEs at December 31, 2004, $47.7 billion was included in the Firm's other unfunded commitments to extend credit and asset purchase agreements. As a result of the Firm's consolidation of multi-seller conduits in accordance with FIN 46R, $32.4 billion of these commitments, compared with $31.7 billion at December 31, 2004, are excluded from the following table, as the underlying assets of the SPEs have been included on the Firm's Consolidated balance sheets.

The Firm also has exposure to certain SPEs arising from derivative transactions; these transactions are recorded at fair value on the Firm's Consolidated balance sheets with changes in fair value (i.e., MTM gains and losses) recorded in Trading revenue. Such MTM gains and losses are not included in the revenue amounts reported in the table below.

The following table summarizes certain revenue information related to variable interest entities ("VIEs") with which the Firm has significant involvement, and qualifying SPEs ("QSPEs"). The revenue reported in the table below primarily represents servicing and custodial fee income. For a further discussion of VIEs and QSPEs, see Note 1, Note 13 and Note 14, on pages 91, 108–111 and 111–113, respectively, of this Annual Report.

Revenue from VIEs and QSPEs

Year ended December 31,[a] (in millions)	VIEs[b]	QSPEs	Total
2005	**$ 222**	**$ 1,645**	**$ 1,867**
2004	154	1,438	1,592
2003	79	979	1,058

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes VIE-related revenue (i.e., revenue associated with consolidated and significant nonconsolidated VIEs).

Off-balance sheet lending-related financial instruments and guarantees

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparty draw down the commitment or the Firm fulfill its obligation under the guarantee, and the counterparty subsequently fails to perform according to the terms of the contract. Most of these commitments and guarantees expire without a default occurring or without being drawn. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. Further, certain commitments, primarily related to consumer financings, are cancelable, upon notice, at the option of the Firm. For a further discussion of lending-related commitments and guarantees and the Firm's accounting for them, see Credit risk management on pages 63–72 and Note 27 on pages 124–125 of this Annual Report.

Contractual cash obligations

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Commitments for future cash expenditures primarily include contracts to purchase future services and capital expenditures related to real estate–related obligations and equipment.

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's off–balance sheet lending-related financial instruments and significant contractual cash obligations at December 31, 2005. Contractual purchases and capital expenditures in the table below reflect the minimum contractual obligation under legally enforceable contracts with contract terms that are both fixed and determinable. Excluded from the following table are a number of obligations to be settled in cash, primarily in under one year. These obligations are reflected on the Firm's Consolidated balance sheets and include Federal funds purchased and securities sold under repurchase agreements; Other borrowed funds; purchases of Debt and equity instruments; Derivative payables; and certain purchases of instruments that resulted in settlement failures. For a discussion regarding Long-term debt and trust preferred capital securities, see Note 17 on pages 117–118 of this Annual Report. For a discussion regarding operating leases, see Note 25 on page 122 of this Annual Report.

Off–balance sheet lending-related financial instruments and guarantees

	2005					
By remaining maturity at December 31, (in millions)	Under 1 year	1–3 years	3–5 years	Over 5 years	Total	2004 Total
Lending-related						
Consumer	**$597,047**	**$ 4,177**	**$ 3,971**	**$ 50,401**	**$ 655,596**	$ 601,196
Wholesale:						
Other unfunded commitments to extend credit[a][b]	**78,912**	**47,930**	**64,244**	**17,383**	**208,469**	185,822
Asset purchase agreements[c]	**9,501**	**17,785**	**2,947**	**862**	**31,095**	39,330
Standby letters of credit and guarantees[a][d]	**24,836**	**19,588**	**27,935**	**4,840**	**77,199**	78,084
Other letters of credit[a]	**6,128**	**586**	**247**	**40**	**7,001**	6,163
Total wholesale	**119,377**	**85,889**	**95,373**	**23,125**	**323,764**	309,399
Total lending-related	**$716,424**	**$90,066**	**$ 99,344**	**$ 73,526**	**$ 979,360**	$ 910,595
Other guarantees						
Securities lending guarantees[e]	**$244,316**	**$ —**	**$ —**	**$ —**	**$ 244,316**	$ 220,783
Derivatives qualifying as guarantees[f]	**25,158**	**14,153**	**2,264**	**20,184**	**61,759**	53,312

Contractual cash obligations

By remaining maturity at December 31, (in millions)

Time deposits of $100,000 and over	**$111,359**	**$ 2,917**	**$ 805**	**$ 692**	**$ 115,773**	$ 115,343
Long-term debt	**16,323**	**41,137**	**19,107**	**31,790**	**108,357**	95,422
Trust preferred capital debt securities	**—**	**—**	**—**	**11,529**	**11,529**	10,296
FIN 46R long-term beneficial interests[g]	**106**	**80**	**24**	**2,144**	**2,354**	6,393
Operating leases[h]	**993**	**1,849**	**1,558**	**5,334**	**9,734**	9,853
Contractual purchases and capital expenditures	**1,145**	**777**	**255**	**147**	**2,324**	2,742
Obligations under affinity and co-brand programs	**1,164**	**2,032**	**1,891**	**1,790**	**6,877**	4,402
Other liabilities[i]	**762**	**1,636**	**1,172**	**8,076**	**11,646**	10,966
Total	**$131,852**	**$50,428**	**$ 24,812**	**$ 61,502**	**$ 268,594**	$ 255,417

(a) Represents contractual amount net of risk participations totaling $29.3 billion and $26.4 billion at December 31, 2005 and 2004, respectively.
(b) Includes unused advised lines of credit totaling $28.3 billion and $22.8 billion at December 31, 2005 and 2004, respectively, which are not legally binding. In regulatory filings with the FRB, unused advised lines are not reportable.
(c) The maturity is based upon the weighted average life of the underlying assets in the SPE, primarily multi-seller asset-backed commercial paper conduits.
(d) Includes unused commitments to issue standby letters of credit of $37.5 billion and $38.4 billion at December 31, 2005 and 2004, respectively.
(e) Collateral held by the Firm in support of securities lending indemnification agreements was $245.0 billion and $221.6 billion at December 31, 2005 and 2004, respectively.
(f) Represents notional amounts of derivative guarantees. For a further discussion of guarantees, see Note 27 on pages 124–125 of this Annual Report.
(g) Included on the Consolidated balance sheets in Beneficial interests issued by consolidated VIEs.
(h) Excludes benefit of noncancelable sublease rentals of $1.3 billion and $689 million at December 31, 2005 and 2004, respectively.
(i) Includes deferred annuity contracts and expected funding for pension and other postretirement benefits for 2006. Funding requirements for pension and postretirement benefits after 2006 are excluded due to the significant variability in the assumptions required to project the timing of future cash payments.

Risk management

Risk is an inherent part of JPMorgan Chase's business activities. The Firm's risk management framework and governance structure is intended to provide comprehensive controls and ongoing management of the major risks inherent in its business activities.

The Firm's ability to properly identify, measure, monitor and report risk is critical to both soundness and profitability.

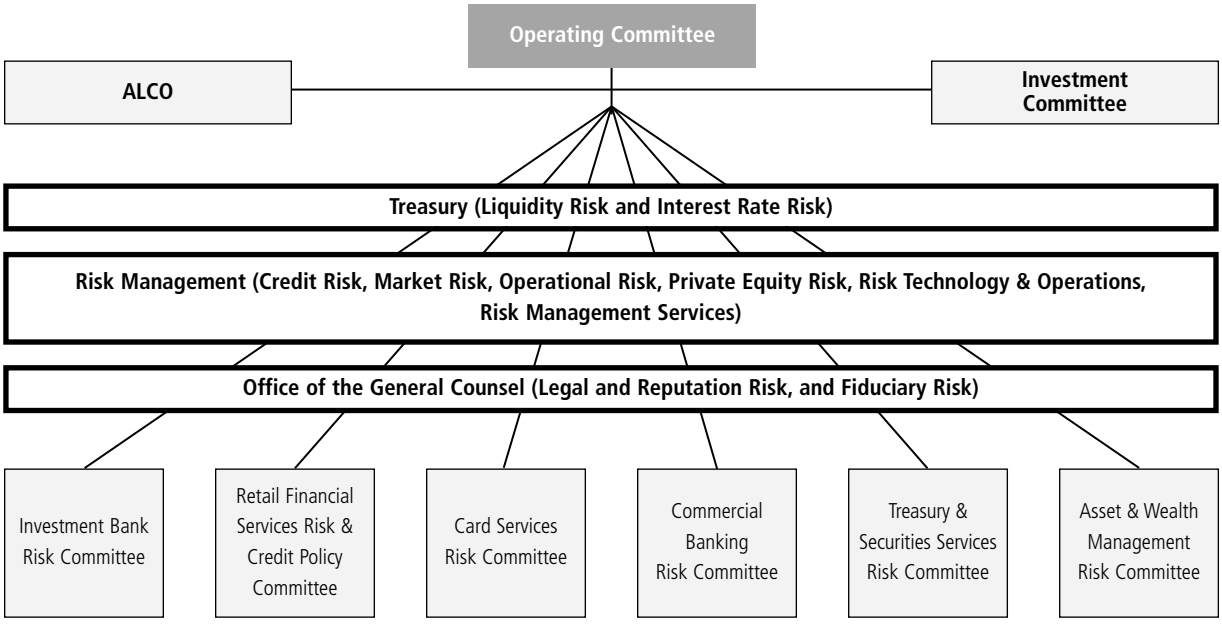
- **Risk identification:** The Firm identifies risk by dynamically assessing the potential impact of internal and external factors on transactions and positions. Business and risk professionals develop appropriate mitigation strategies for the identified risks.
- **Risk measurement**: The Firm measures risk using a variety of methodologies, including calculating probable loss, unexpected loss and value-at-risk, and by conducting stress tests and making comparisons to external benchmarks. Measurement models and related assumptions are routinely reviewed with the goal of ensuring that the Firm's risk estimates are reasonable and reflective of underlying positions.
- **Risk monitoring/Control:** The Firm establishes risk management policies and procedures. These policies contain approved limits by customer, product and business that are monitored on a daily, weekly and monthly basis as appropriate.
- **Risk reporting:** Risk reporting covers all lines of business and is provided to management on a daily, weekly and monthly basis as appropriate.

Risk governance

The Firm's risk governance structure is built upon the premise that each line of business is responsible for managing the risks inherent in its business activity. There are eight major risk types identified in the business activities of the Firm: liquidity risk, credit risk, market risk, interest rate risk, operational risk, legal and reputation risk, fiduciary risk and private equity risk. As part of the risk management structure, each line of business has a Risk Committee responsible for decisions relating to risk strategy, policies and control. Where appropriate, the Risk Committees escalate risk issues to the Firm's Operating Committee, comprised of senior officers of the Firm, or to the Risk Working Group, a subgroup of the Operating Committee.

Overlaying risk management within the lines of business are three corporate functions: Treasury, Risk Management and Office of the General Counsel. Treasury is responsible for measuring, monitoring, reporting and managing the interest rate and liquidity risk profile of the Firm. Risk Management, under the direction of the Chief Risk Officer reporting to the Chief Executive Officer, provides an independent firmwide function of control and management of risk. Within Risk Management are those units responsible for credit risk, market risk, operational risk, private equity risk and risk technology and operations, as well as Risk Management Services, which is responsible for risk policy and methodology, risk reporting and risk education. The Office of the General Counsel has oversight function for legal, reputation and fiduciary risk.

In addition to the six lines of business risk committees and these corporate functions, the Firm maintains an Asset & Liability Committee ("ALCO"), which oversees interest rate and liquidity risk, and capital management, as well as the Firm's funds transfer pricing policy, through which lines of business transfer interest rate risk to Treasury. Treasury has responsibility for ALCO policies and control and transfers aggregate risk positions to the Chief Investment Office, which has responsibility for managing the risk. There is also an Investment Committee, which reviews key aspects of the Firm's global M&A activities that are undertaken for its own investment account and that fall outside the scope of the Firm's private equity and other principal finance activities.



The Board of Directors exercises its oversight of risk management as a whole and through the Board's Risk Policy Committee and Audit Committee. The Risk Policy Committee is responsible for oversight of management's responsibilities to assess and manage the Firm's risks as described above.

The Audit Committee is responsible for oversight of guidelines and policies that govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal controls and financial reporting that is relied upon to provide reasonable assurance of compliance with the Firm's operational risk management processes. Both committees are responsible for oversight of reputation risk. The Chief Risk Officer and other management report on the risks of the Firm to the Board of Directors, particularly through the Board's Risk Policy Committee and Audit Committee. The major risk types identified by the Firm are discussed in the following sections.

Liquidity risk management

Liquidity risk arises from the general funding needs of the Firm's activities and in the management of its assets and liabilities. JPMorgan Chase's liquidity management framework is intended to maximize liquidity access and minimize funding costs. Through active liquidity management, the Firm seeks to preserve stable, reliable and cost-effective sources of funding. This enables the Firm to replace maturing obligations when due and fund assets at appropriate maturities and rates. To accomplish this task, management uses a variety of liquidity risk measures that take into consideration market conditions, prevailing interest rates, liquidity needs and the desired maturity profile of liabilities.

Governance

The Asset & Liability Committee ("ALCO") reviews the Firm's overall liquidity policy and oversees the contingency funding plan. The ALCO also provides oversight of the Firm's exposure to SPEs, with particular focus on the potential liquidity support requirements that the Firm may have to those SPEs.

Treasury is responsible for formulating the Firm's liquidity strategy and targets, understanding the Firm's on- and off-balance sheet liquidity obligations, providing policy guidance, overseeing policy adherence, and maintaining contingency planning and stress testing. In addition, it identifies and measures internal and external liquidity warning signals to permit early detection of liquidity issues.

An extension of the Firm's ongoing liquidity management is its contingency funding plan. The goals of the plan are to ensure maintenance of appropriate liquidity during normal and stress periods, measure and project funding requirements during periods of stress, and manage access to funding sources. The plan considers temporary and long-term stress scenarios where access to unsecured funding is severely limited or nonexistent. The plan forecasts potential funding needs, taking into account both on- and off-balance sheet exposures, separately evaluating access to funds by the parent holding company and JPMorgan Chase Bank.

The Firm's liquidity risk framework also incorporates tools to monitor three primary measures of liquidity:

- Holding company short-term position: Measures the parent holding company's ability to repay all obligations with a maturity of less than one year at a time when the ability of the Firm's subsidiaries to pay dividends to the parent company is constrained. Holding company short-term position is managed to a positive position over time.
- Cash capital surplus: Measures the Firm's ability to fund assets on a fully collateralized basis, assuming access to unsecured funding is lost. This measurement is intended to ensure that the illiquid portion of the balance sheet can be funded by equity, long-term debt, trust preferred securities and deposits the Firm believes to be core.
- Basic surplus: Measures the Bank's ability to sustain a 90-day stress event that is specific to the Firm where no new funding can be raised to meet obligations as they come due.

Each liquidity position is managed to provide sufficient surplus.

Risk monitoring and reporting

Treasury is responsible for measuring, monitoring, reporting and managing the liquidity profile of the Firm through both normal and stress periods. Treasury analyzes the diversity and maturity structure of the Firm's sources of funding; and assesses downgrade impact scenarios, contingent funding needs, and overall collateral availability and pledging status. A downgrade analysis considers the impact of both parent and bank level downgrades (one- and two-notch) and calculates the loss of funding and increase in annual funding costs for both scenarios. A trigger-risk funding analysis considers the impact of a bank level downgrade through A-1/P-1 as well as the increased contingent funding requirements that would be triggered. These liquidity analytics rely on management's judgment about JPMorgan Chase's ability to liquidate assets or use them as collateral for borrowings and take into account credit risk management's historical data on the funding of loan commitments (e.g., commercial paper back-up facilities), liquidity commitments to SPEs, commitments with rating triggers and collateral posting requirements. For a further discussion of SPEs and other off–balance sheet arrangements, see Off–balance sheet arrangements and contractual cash obligations on pages 58–59, as well as Note 1, Note 13, Note 14 and Note 27 on pages 91, 108–111, 111–113, and 124–125, respectively, of this Annual Report.

Funding

Sources of funds

Consistent with its liquidity management policy, the Firm has raised funds at the parent holding company sufficient to cover its obligations and those of its nonbank subsidiaries that mature over the next 12 months. Long-term funding needs for the parent holding company over the next several quarters are expected to be consistent with prior periods.

As of December 31, 2005, the Firm's liquidity position remained strong based upon its liquidity metrics. JPMorgan Chase's long-dated funding, including core deposits, exceeds illiquid assets, and the Firm believes its obligations can be met even if access to funding is impaired.

The diversity of the Firm's funding sources enhances financial flexibility and limits dependence on any one source, thereby minimizing the cost of funds. The deposits held by the RFS, CB and TSS lines of business are a stable and consistent source of funding for JPMorgan Chase Bank. As of December 31, 2005, total deposits for the Firm were $555 billion, which represented 67% of the Firm's funding liabilities. A significant portion of the Firm's retail deposits are "core" deposits, which are less sensitive to interest rate changes and therefore are considered more stable than market-based deposits. Core

deposits include all U.S. deposits insured by the FDIC, up to the legal limit of $100,000 per depositor. In 2005, core bank deposits increased approximately 8% from 2004 year-end. In addition to core retail deposits, the Firm benefits from substantial, geographically diverse corporate liability balances originated by TSS and CB through the normal course of business. These franchise-generated core liability balances are also a stable and consistent source of funding due to the nature of the businesses from which they are generated. For a further discussion of deposit and liability balance trends, see Business Segment Results and Balance Sheet Analysis on pages 34–35 and 55, respectively, of this Annual Report.

Additional sources of funds include a variety of both short- and long-term instruments, including federal funds purchased, commercial paper, bank notes, medium- and long-term debt, and capital debt securities. This funding is managed centrally, using regional expertise and local market access, to ensure active participation in the global financial markets while maintaining consistent global pricing. These markets serve as a cost-effective and diversified source of funds and are a critical component of the Firm's liquidity management. Decisions concerning the timing and tenor of accessing these markets are based upon relative costs, general market conditions, prospective views of balance sheet growth and a targeted liquidity profile.

Finally, funding flexibility is provided by the Firm's ability to access the repo and asset securitization markets. These markets are evaluated on an ongoing basis to achieve an appropriate balance of secured and unsecured funding. The ability to securitize loans, and the associated gains on those securitizations, are principally dependent upon the credit quality and yields of the assets securitized and are generally not dependent upon the credit ratings of the issuing entity. Transactions between the Firm and its securitization structures are reflected in JPMorgan Chase's consolidated financial statements; these relationships include retained interests in securitization trusts, liquidity facilities and derivative transactions. For further details, see Off-balance sheet arrangements and contractual cash obligations and Notes 13 and 27 on pages 58–59, 108–111 and 124–125, respectively, of this Annual Report.

Issuance

Corporate credit spreads widened modestly in 2005 across most industries and sectors. On an historical basis, credit spreads remain near historic tight levels as corporate balance sheet cash positions are strong and corporate profits generally healthy. JPMorgan Chase's credit spreads performed in line with peer spreads in 2005.

Continued strong foreign investor participation in the global corporate markets allowed JPMorgan Chase to identify attractive opportunities globally to further diversify its funding and capital sources while lengthening maturities. During 2005, JPMorgan Chase issued approximately $43.7 billion of long-term debt and capital debt securities. These issuances were offset partially by $26.9 billion of long-term debt and capital debt securities that matured or were redeemed and the Firm's redemption of $200 million of preferred stock. In addition, in 2005 the Firm securitized approximately $18.1 billion of residential mortgage loans, $15.1 billion of credit card loans and $3.8 billion of automobile loans, resulting in pre-tax gains on securitizations of $21 million, $101 million and $9 million, respectively. For a further discussion of loan securitizations, see Note 13 on pages 108–111 of this Annual Report.

Credit ratings

The credit ratings of JPMorgan Chase's parent holding company and each of its significant banking subsidiaries, as of December 31, 2005 and 2004, were as follows:

	Short-term debt			Senior long-term debt		
	Moody's	S&P	Fitch	Moody's	S&P	Fitch
JPMorgan Chase & Co.	P-1	A-1	F1	Aa3	A+	A+
JPMorgan Chase Bank, N.A.	P-1	A-1+	F1+	Aa2	AA-	A+
Chase Bank USA, N.A.	P-1	A-1+	F1+	Aa2	AA-	A+

The Firm's principal insurance subsidiaries had the following financial strength ratings as of December 31, 2005:

	Moody's	S&P	A.M. Best
Chase Insurance Life and Annuity Company	A2	A+	A
Chase Insurance Life Company	A2	A+	A

The cost and availability of unsecured financing are influenced by credit ratings. A reduction in these ratings could adversely affect the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral requirements and decrease the number of investors and counterparties willing to lend. Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources and strong liquidity monitoring procedures.

If the Firm's ratings were downgraded by one notch, the Firm estimates the incremental cost of funds and the potential loss of funding to be negligible. Additionally, the Firm estimates the additional funding requirements for VIEs and other third-party commitments would not be material. In the current environment, the Firm believes a downgrade is unlikely. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on pages 58–59 and Ratings profile of derivative receivables mark-to-market ("MTM") on page 69, of this Annual Report.

Credit risk management

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit to customers of all sizes, from large corporate clients to loans for the individual consumer. The Firm manages the risk/reward relationship of each portfolio and discourages the retention of loan assets that do not generate a positive return above the cost of risk-adjusted capital. The majority of the Firm's wholesale loan originations (primarily to IB clients) continues to be distributed into the marketplace, with residual holds by the Firm averaging less than 10%. Wholesale loans generated by CB and AWM are generally retained on the balance sheet. With regard to the prime consumer credit market, the Firm focuses on creating a portfolio that is diversified from both a product and a geographical perspective. Within the prime mortgage business, originated loans are retained on the balance sheet as well as selectively sold to government agencies; the latter category is routinely classified as held-for-sale.

Credit risk organization

Credit risk management is overseen by the Chief Risk Officer, a member of the Firm's Operating Committee. The Firm's credit risk management governance structure consists of the following primary functions:

- establishes a comprehensive credit risk policy framework
- calculates Allowance for credit losses and ensures appropriate credit risk-based capital management
- assigns and manages credit authorities to approve all credit exposure
- monitors and manages credit risk across all portfolio segments
- manages criticized exposures

Risk identification

The Firm is exposed to credit risk through lending (e.g., loans and lending-related commitments), derivatives trading and capital markets activities. The credit risk function works in partnership with the business segments in identifying and aggregating exposure across all lines of business.

Risk measurement

To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Losses generated by consumer loans are more predictable than wholesale losses, but are subject to cyclical and seasonal factors. Although the frequency of loss is higher on consumer loans than on wholesale loans, the severity of loss is typically lower and more manageable. As a result of these differences, methodologies vary depending on certain factors, including type of asset (e.g., consumer installment versus wholesale loan), risk measurement parameters (e.g., delinquency status and credit bureau score versus wholesale risk rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based upon the amount of exposure should the obligor or the counterparty default, the probability of default and the loss severity given a default event. Based upon these factors and related market-based inputs, the Firm estimates both probable and unexpected losses for the wholesale and consumer portfolios. Probable losses, reflected in the Provision for credit losses, are generally statistically-based estimates of credit losses over time, anticipated as a result of obligor or counterparty default. However, probable losses are not the sole indicators of risk. If losses were entirely predictable, the probable loss rate could be factored into pricing and covered as a normal and recurring cost of doing business. Unexpected losses, reflected in the allocation of credit risk capital, represent the potential volatility of actual losses relative to the probable level of losses. (Refer to Capital management on pages 56–58 of this Annual Report for a further discussion of the credit risk capital methodology.) Risk measurement for the wholesale portfolio is assessed primarily on a risk-rated basis; for the consumer portfolio, it is assessed primarily on a credit-scored basis.

Risk-rated exposure

For portfolios that are risk-rated, probable and unexpected loss calculations are based upon estimates of probability of default and loss given default. Probability of default is expected default calculated on an obligor basis. Loss given default is an estimate of losses that are based upon collateral and structural support for each credit facility. Calculations and assumptions are based upon management information systems and methodologies which are under continual review. Risk ratings are assigned and reviewed on an ongoing basis by Credit Risk Management and revised, if needed, to reflect the borrowers' current risk profiles and the related collateral and structural positions.

Credit-scored exposure

For credit-scored portfolios (generally held in RFS and CS), probable loss is based upon a statistical analysis of inherent losses over discrete periods of time. Probable losses are estimated using sophisticated portfolio modeling, credit scoring and decision-support tools to project credit risks and establish underwriting standards. In addition, common measures of credit quality derived from historical loss experience are used to predict consumer losses. Other risk characteristics evaluated include recent loss experience in the portfolios, changes in origination sources, portfolio seasoning, loss severity and underlying credit practices, including charge-off policies. These analyses are applied to the Firm's current portfolios in order to forecast delinquencies and severity of losses, which determine the amount of probable losses. These factors and analyses are updated on a quarterly basis.

Risk monitoring

The Firm has developed policies and practices that are designed to preserve the independence and integrity of decision-making and ensure credit risks are accurately assessed, properly approved, continually monitored and actively managed at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio-review parameters and problem-loan management. Wholesale credit risk is continually monitored on both an aggregate portfolio level and on an individual customer basis. For consumer credit risk, the key focus items are trends and concentrations at the portfolio level, where potential problems can be remedied through changes in underwriting policies and portfolio guidelines. Consumer Credit Risk Management monitors trends against business expectations and industry benchmarks. In order to meet credit risk management objectives, the Firm seeks to maintain a risk profile that is diverse in terms of borrower, product type, industry and geographic concentration. Additional diversification of the Firm's exposure is accomplished through loan syndication and participations, loan sales, securitizations, credit derivatives and other risk-reduction techniques.

Risk reporting

To enable monitoring of credit risk and decision-making, aggregate credit exposure, credit metric forecasts, hold-limit exceptions and risk profile changes are reported regularly to senior credit risk management. Detailed portfolio reporting of industry, customer and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, the Operating Committee.

2005 Credit risk overview

The wholesale portfolio experienced continued credit strength during 2005. Wholesale nonperforming loans were down by $582 million, or 37%, from 2004; net recoveries were $77 million compared with net charge-offs of

$186 million in 2004; and the allowance for credit losses decreased by $740 million, or 21%, reflecting the quality of the portfolio at this time. The Firm anticipates a return to more normal provisioning for credit losses for the wholesale portfolio in 2006. In 2005, the Firm also made significant strides in the multi-year initiative to reengineer specific components of the wholesale credit risk infrastructure. The Firm is on target to meet the goals of enhancing the timeliness and accuracy of risk and exposure information and reporting; management of credit risk in the retained portfolio; support of client relationships; allocation of economic capital and compliance with Basel II initiatives.

Consumer credit was impacted in 2005 by two significant events, Hurricane Katrina and federal bankruptcy reform legislation. Hurricane Katrina impacted customers across all consumer businesses (and to a lesser extent CB and AWM). As a result, the consumer Allowance for loan losses was increased by $350 million ($250 million in RFS, and $100 million in CS). It is anticipated that the majority of charge-offs associated with the hurricane will be taken against the allowance in 2006. Bankruptcy reform legislation became effective on October 17, 2005. This legislation prompted a "rush to file" effect that resulted in a spike in bankruptcy filings and increased credit losses, predominantly in CS, where it is believed that $575 million in estimated bankruptcy legislation-related credit losses occurred in the fourth quarter of 2005. It is anticipated that the first half of 2006 will experience lower credit card net charge-offs, as the record levels of bankruptcy filings in the 2005 fourth quarter are believed to have included bankruptcy filings that would have occurred in 2006. With the exception of the events noted above, the 2005 underlying credit performance, which was driven by favorable loss severity performance in residential real estate, continued to be strong. CS continues to quantify and refine the impact associated with changes in the FFIEC minimum-payment requirements. Actual implementation of the new payment requirements began in late 2005 and will run through early 2006; CS anticipates higher net charge-offs during the second half of 2006 as a result.

In 2005, the Firm continued to grow the consumer loan portfolio, focusing on businesses providing the most appropriate risk/reward relationship while keeping within the Firm's desired risk tolerance. During the past year, the Firm continued a de-emphasis of vehicle leasing and sold its $2 billion recreational vehicle portfolio. Continued growth in most core consumer lending products (residential real estate, credit cards and small business) reflected a focus on the prime credit quality segment of the market.

Credit portfolio

The following table presents JPMorgan Chase's credit portfolio as of December 31, 2005 and 2004. Total credit exposure at December 31, 2005, increased by $67 billion from December 31, 2004, reflecting an increase of $11 billion in the wholesale credit portfolio and $56 billion in the consumer credit portfolio. The significant majority of the consumer portfolio increase, or $54 billion, was primarily from growth in lending-related commitments. In the table below, reported loans include all HFS loans, which are carried at the lower of cost or fair value with changes in value recorded in Other income. However, these HFS loans are excluded from the average loan balances used for the net charge-off rate calculations.

Total credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming assets[i]		Net charge-offs		Average annual net charge-off rate[k]	
	2005	2004	**2005**	2004	**2005**	2004[h]	**2005**	2004[h]
Total credit portfolio								
Loans – reported[a]	**$ 419,148**	$ 402,114	**$ 2,343**[j]	$ 2,743[j]	**$ 3,819**	$ 3,099	**1.00%**	1.08%
Loans – securitized[b]	**70,527**	70,795	**—**	—	**3,776**	2,898	**5.47**	5.51
Total managed loans[c]	**489,675**	472,909	**2,343**	2,743	**7,595**	5,997	**1.68**	1.76
Derivative receivables[d]	**49,787**	65,982	**50**	241	**NA**	NA	**NA**	NA
Interests in purchased receivables	**29,740**	31,722	**—**	—	**NA**	NA	**NA**	NA
Total managed credit-related assets	**569,202**	570,613	**2,393**	2,984	**7,595**	5,997	**1.68**	1.76
Lending-related commitments[e]	**979,360**	910,595	**NA**	NA	**NA**	NA	**NA**	NA
Assets acquired in loan satisfactions	**NA**	NA	**197**	247	**NA**	NA	**NA**	NA
Total credit portfolio	**$ 1,548,562**	$1,481,208	**$ 2,590**	$ 3,231	**$ 7,595**	$ 5,997	**1.68%**	1.76%
Credit derivative hedges notional[f]	**$ (29,882)**	$ (37,200)	**$ (17)**	$ (15)	**NA**	NA	**NA**	NA
Collateral held against derivatives	**(6,000)**	(9,301)	**NA**	NA	**NA**	NA	**NA**	NA
Held-for-sale								
Total average HFS loans	**$ 27,689**	$ 20,860[h]	**NA**	NA	**NA**	NA	**NA**	NA
Nonperforming – purchased[g]	**341**	351	**NA**	NA	**NA**	NA	**NA**	NA

(a) Loans are presented net of unearned income of $3.0 billion and $4.1 billion at December 31, 2005 and 2004, respectively.
(b) Represents securitized credit card receivables. For a further discussion of credit card securitizations, see Card Services on pages 45–46 of this Annual Report.
(c) Past-due 90 days and over and accruing include loans of $1.1 billion and $998 million, and related credit card securitizations of $730 million and $1.3 billion at December 31, 2005 and 2004, respectively.
(d) Reflects net cash received under credit support annexes to legally enforceable master netting agreements of $27 billion and $32 billion as of December 31, 2005 and 2004, respectively.
(e) Includes wholesale unused advised lines of credit totaling $28.3 billion and $22.8 billion at December 31, 2005 and 2004, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable. Credit card lending-related commitments of $579 billion and $532 billion at December 31, 2005 and 2004, respectively, represents the total available credit to its cardholders; however, the Firm can reduce or cancel these commitments at any time as permitted by law.
(f) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit risk of credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133.
(g) Represents distressed HFS wholesale loans purchased as part of IB's proprietary activities, which are excluded from nonperforming assets.
(h) Includes six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(i) Includes nonperforming HFS loans of $136 million and $15 million as of December 31, 2005 and 2004, respectively.
(j) Excludes nonperforming assets related to loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by government agencies of $1.1 billion and $1.5 billion for December 31, 2005 and 2004, respectively. These amounts are excluded, as reimbursement is proceeding normally.
(k) Net charge-off rates exclude average loans HFS.

Wholesale credit portfolio

As of December 31, 2005, wholesale exposure (IB, CB, TSS and AWM) increased by $11 billion from December 31, 2004. Increases in Loans and lending-related commitments were offset partially by reductions in Derivative receivables and Interests in purchased receivables. As described on pages 36–37 of this Annual Report, the increase in Loans was primarily in the IB, reflecting an increase in loans held-for-sale related to securitization and syndication activities and growth in the IB credit portfolio. The increase in lending-related commitments was mostly due to CB activity. The decrease in Derivative receivables was due primarily to the appreciation of the U.S. dollar and higher interest rates, partially offset by rising commodity prices.

Wholesale

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming assets[g]		Net charge-offs		Average annual net charge-off rate[i]	
	2005	2004	**2005**	2004	**2005**	2004[f]	**2005**	2004[f]
Loans – reported[a]	**$ 150,111**	$ 135,067	**$ 992**	$ 1,574	**$ (77)**	$ 186	**(0.06)%**	0.18%
Derivative receivables[b]	**49,787**	65,982	**50**	241	**NA**	NA	**NA**	NA
Interests in purchased receivables	**29,740**	31,722	**—**	—	**NA**	NA	**NA**	NA
Total wholesale credit-related assets	**229,638**	232,771	**1,042**	1,815	**(77)**	186	**(0.06)**	0.18
Lending-related commitments[c]	**323,764**	309,399	**NA**	NA	**NA**	NA	**NA**	NA
Assets acquired in loan satisfactions	**NA**	NA	**17**	23	**NA**	NA	**NA**	NA
Total wholesale credit exposure	**$ 553,402**	$ 542,170	**$ 1,059**	$ 1,838	**$ (77)[h]**	$ 186	**(0.06)%**	0.18%
Credit derivative hedges notional[d]	**$ (29,882)**	$ (37,200)	**$ (17)**	$ (15)	**NA**	NA	**NA**	NA
Collateral held against derivatives	**(6,000)**	(9,301)	**NA**	NA	**NA**	NA	**NA**	NA
Held-for-sale								
Total average HFS loans	**$ 12,014**	$ 6,124[f]	**NA**	NA	**NA**	NA	**NA**	NA
Nonperforming – purchased[e]	**341**	351	**NA**	NA	**NA**	NA	**NA**	NA

(a) Past-due 90 days and over and accruing include loans of $50 million and $8 million at December 31, 2005 and 2004, respectively.
(b) Reflects net cash received under credit support annexes to legally enforceable master netting agreements of $27 billion and $32 billion as of December 31, 2005 and 2004, respectively.
(c) Includes unused advised lines of credit totaling $28.3 billion and $22.8 billion at December 31, 2005 and 2004, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable.
(d) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit risk of credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133.
(e) Represents distressed HFS loans purchased as part of IB's proprietary activities, which are excluded from nonperforming assets.
(f) Includes six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(g) Includes nonperforming HFS loans of $109 million and $2 million as of December 31, 2005 and 2004, respectively.
(h) Excludes $67 million in gains on sales of nonperforming loans in 2005; for additional information, see page 67 of this Annual Report.
(i) Net charge-off rates exclude average loans HFS.

Below are summaries of the maturity and ratings profiles of the wholesale portfolio as of December 31, 2005 and 2004. The ratings scale is based upon the Firm's internal risk ratings and is presented on an S&P-equivalent basis.

Wholesale exposure

At December 31, 2005 (in billions, except ratios)	Maturity profile[c]				Ratings profile			
					Investment-grade ("IG")[d]	Noninvestment-grade[d]		
	<1 year[d]	1–5 years[d]	> 5 years[d]	Total	AAA to BBB-	BB+ & below	Total	Total % of IG[d]
Loans	**43%**	**44%**	**13%**	**100%**	**$ 87**	**$ 45**	**$ 132**	**66%**
Derivative receivables	**2**	**42**	**56**	**100**	**42**	**8**	**50**	**84**
Interests in purchased receivables	**41**	**57**	**2**	**100**	**29**	**—**	**29**	**100**
Lending-related commitments	**37**	**56**	**7**	**100**	**276**	**48**	**324**	**85**
Total excluding HFS	**36%**	**52%**	**12%**	**100%**	**$ 434**	**$ 101**	**535**	**81%**
Held-for-sale[a]							**18**	
Total exposure							**$ 553**	
Credit derivative hedges notional[b]	**15%**	**74%**	**11%**	**100%**	**$ (27)**	**$ (3)**	**$ (30)**	**90%**

At December 31, 2004 (in billions, except ratios)	Maturity profile[c]				Ratings profile			
					Investment-grade ("IG")[d]	Noninvestment-grade[d]		
	<1 year[d]	1–5 years[d]	> 5 years[d]	Total	AAA to BBB-	BB+ & below	Total	Total % of IG[d]
Loans	44%	43%	13%	100%	$ 83	$ 46	$ 129	64%
Derivative receivables	19	39	42	100	57	9	66	86
Interests in purchased receivables	37	61	2	100	32	—	32	100
Lending-related commitments	46	52	2	100	266	43	309	86
Total excluding HFS	42%	49%	9%	100%	$ 438	$ 98	536	82%
Held-for-sale[a]							6	
Total exposure							$ 542	
Credit derivative hedges notional[b]	18%	77%	5%	100%	$ (35)	$ (2)	$ (37)	95%

(a) HFS loans primarily relate to securitization and syndication activities.
(b) Ratings are based upon the underlying referenced assets.
(c) The maturity profile of Loans and lending-related commitments is based upon the remaining contractual maturity. The maturity profile of Derivative receivables is based upon the maturity profile of Average exposure. See page 68 of this Annual Report for a further discussion of Average exposure.
(d) Excludes HFS loans.

At December 31, 2005, the percentage of the investment-grade wholesale exposure, excluding HFS, remained relatively unchanged from December 31, 2004. Derivative receivables of less than one year decreased as a result of the appreciation of the U.S. dollar on short-dated foreign exchange ("FX") contracts. The percentage of derivative exposure greater than 5 years increased from 42% to 56% at year-end 2005, primarily as a result of the reduction in shorter-dated exposure.

Wholesale credit exposure – selected industry concentration

The Firm continues to focus on the management and diversification of industry concentrations, with particular attention paid to industries with actual or potential credit concerns. As of December 31, 2005, the top 10 industries remained predominantly unchanged from year-end 2004, with the exception of Oil and gas, which replaced Media. Below are summaries of the top 10 industry concentrations as of December 31, 2005 and 2004.

As of December 31, 2005 (in millions, except ratios)	Credit exposure[d]	Investment grade	Noninvestment-grade		Net charge-offs/ (recoveries)	Credit derivative hedges[e]	Collateral held against derivative receivables[d]
			Noncriticized	Criticized			
Top 10 industries[a]							
Banks and finance companies	**$ 53,579**	**88%**	**$ 6,462**	**$ 232**	**$ (16)**	**$ (9,490)**	**$ (1,482)**
Real estate	**29,974**	**55**	**13,226**	**276**	**—**	**(560)**	**(2)**
Consumer products	**25,678**	**71**	**6,791**	**590**	**2**	**(927)**	**(28)**
Healthcare	**25,435**	**79**	**4,977**	**243**	**12**	**(581)**	**(7)**
State and municipal governments[b]	**25,328**	**98**	**409**	**40**	**—**	**(597)**	**(1)**
Utilities	**20,482**	**90**	**1,841**	**295**	**(4)**	**(1,624)**	**—**
Retail and consumer services[b]	**19,920**	**75**	**4,654**	**288**	**12**	**(989)**	**(5)**
Oil and gas	**18,200**	**77**	**4,267**	**9**	**—**	**(1,007)**	**—**
Asset managers	**17,358**	**82**	**2,949**	**103**	**(1)**	**(25)**	**(954)**
Securities firms and exchanges	**17,094**	**89**	**1,833**	**15**	**—**	**(2,009)**	**(1,525)**
All other	**282,802**	**82**	**47,966**	**3,081**	**(82)**	**(12,073)**	**(1,996)**
Total excluding HFS	**$ 535,850**	**81%**	**$ 95,375**	**$ 5,172**	**$ (77)**	**$ (29,882)**	**$ (6,000)**
Held-for-sale[c]	**17,552**						
Total exposure	**$ 553,402**						

As of December 31, 2004 (in millions, except ratios)	Credit exposure[d]	Investment grade	Noninvestment-grade		Net charge-offs/ (recoveries)	Credit derivative hedges[e]	Collateral held against derivative receivables[d]
			Noncriticized	Criticized			
Top 10 industries[a]							
Banks and finance companies	$ 55,840	90%	$ 5,348	$ 187	$ 6	$ (11,695)	$ (3,464)
Real estate	25,761	62	9,036	765	9	(800)	(45)
Consumer products	21,251	68	6,267	479	85	(1,189)	(50)
Healthcare	21,890	79	4,321	249	1	(741)	(13)
State and municipal governments	19,728	97	592	14	—	(394)	(18)
Utilities	21,132	85	2,316	890	63	(2,247)	(27)
Retail and consumer services	21,573	76	4,815	393	—	(1,767)	(42)
Oil and gas	14,420	81	2,713	51	9	(1,282)	(26)
Asset managers	20,199	79	4,192	115	(15)	(80)	(655)
Securities firms and exchanges	18,034	88	2,218	17	1	(1,398)	(2,068)
All other	295,902	82	48,150	5,122	27	(15,607)	(2,893)
Total excluding HFS	$ 535,730	82%	$ 89,968	$ 8,282	$ 186	$ (37,200)	$ (9,301)
Held-for-sale[c]	6,440						
Total exposure	$ 542,170						

(a) Based upon December 31, 2005, determination of Top 10 industries.
(b) During the second quarter of 2005, the Firm revised its industry classification for educational institutions to better reflect risk correlations and enhance the Firm's management of industry risk, resulting in an increase to State and municipal governments and a decrease to Retail and consumer services.
(c) HFS loans primarily relate to securitization and syndication activities.
(d) Credit exposure is net of risk participations and excludes the benefit of credit derivative hedges and collateral held against derivative receivables or loans. At December 31, 2005 and 2004, collateral held against derivative receivables excludes $27 billion and $32 billion, respectively, of cash collateral as a result of the Firm electing to report the fair value of derivative assets and liabilities net of cash received and paid, respectively, under legally enforceable master netting agreements.
(e) Represents notional amounts only; these credit derivatives do not qualify for hedge accounting under SFAS 133.

Wholesale criticized exposure

Exposures deemed criticized generally represent a ratings profile similar to a rating of CCC+/Caa1 and lower, as defined by Standard & Poor's/Moody's. The criticized component of the portfolio decreased to $5.2 billion (excluding HFS) at December 31, 2005, from $8.3 billion at year-end 2004, reflecting strong credit quality, refinancings and gross charge-offs. Also contributing to the decline was a refinement in methodology in the first quarter of 2005 to align the ratings methodologies of the heritage firms.

At December 31, 2005, Automotive, Telecom services and Retail and consumer services moved into the top 10 of wholesale criticized exposure, replacing Chemicals/plastics, Business services and Metals/mining industries.

Wholesale nonperforming assets

Wholesale nonperforming assets (excluding purchased held-for-sale wholesale loans) decreased by $779 million from $1.8 billion at December 31, 2004, as a result of loan sales, repayments and gross charge-offs. For full year 2005, wholesale net recoveries were $77 million compared with net charge-offs of $186 million in 2004, primarily due to lower gross charge-offs. The net recovery rate for full year 2005 was 0.06% compared with a net charge-off rate of 0.18% for the prior year. Net charge-offs do not include $67 million of gains from sales of nonperforming loans that were sold during 2005 to a counterparty other than the original borrower. When it is determined that a loan will be sold it is transferred into a held-for-sale account. Held-for-sale loans are accounted for at lower of cost or fair value, with changes in value recorded in other revenue.

Wholesale criticized exposure – industry concentrations

	2005		2004	
As of December 31, (in millions)	Credit exposure	% of portfolio	Credit exposure	% of portfolio
Media	**$ 684**	13.2%	$ 509	6.1%
Automotive	**643**	12.4	359	4.4
Consumer products	**590**	11.4	479	5.8
Telecom services	**430**	8.3	275	3.3
Airlines	**333**	6.5	450	5.4
Utilities	**295**	5.7	890	10.7
Machinery and equipment manufacturing	**290**	5.6	459	5.6
Retail and consumer services	**288**	5.6	393	4.8
Real estate	**276**	5.4	765	9.2
Building materials/construction	**266**	5.1	430	5.2
All other	**1,077**	20.8	3,273	39.5
Total excluding HFS	**$ 5,172**	100.0%	$ 8,282	100.0%
Held-for-sale[(a)]	**1,069**		2	
Total	**$ 6,241**		$ 8,284	

(a) HFS loans primarily relate to securitization and syndication activities; excludes purchased nonperforming HFS loans.

Wholesale selected industry discussion

Presented below is a discussion of several industries to which the Firm has significant exposure and which it continues to monitor because of actual or potential credit concerns. For additional information, refer to the tables above and on the preceding page.

- **Banks and finance companies:** This industry group, primarily consisting of exposure to commercial banks, is the largest segment of the Firm's wholesale credit portfolio. Credit quality is high, as 88% of the exposure in this category is rated investment-grade.
- **Real estate:** This industry, the second largest segment of the Firm's wholesale credit portfolio, grew modestly in 2005, as the portfolio continued to benefit from relatively low interest rates, high liquidity and increased capital demand. The exposure is well-diversified by client, transaction type, geography and property type.
- **Oil and gas:** During 2005, exposure to this industry group increased as a result of the rise in oil and gas prices; derivative receivables MTM increased on contracts that were executed at lower price levels. In addition, the Firm extended shorter term loans that were expected to be refinanced through capital market transactions and further syndications.
- **Media:** Criticized exposures within Media increased in 2005, and this industry now represents the largest percentage of the total criticized portfolio. The increase was attributable primarily to the extension of short-term financings to select borrowers. The remaining Media portfolio is stable, with the majority of the exposure rated investment-grade.
- **Automotive:** In 2005, Automotive original equipment manufacturers ("OEMs") and suppliers based in North America were negatively affected by a challenging operating environment. As a result, criticized exposures to the Automotive industry grew, primarily as a result of downgrades to select names within the portfolio. However, though larger in the aggregate, most of the criticized exposure remains undrawn and performing.
- **All other:** All other in the wholesale credit exposure concentration table at December 31, 2005, excluding HFS, included $283 billion of credit exposure to 21 industry segments. Exposures related to SPEs and high-net-worth individuals totaled 45% of this category. SPEs provide secured financing (generally backed by receivables, loans or bonds on a bankruptcy-remote, non-recourse or limited-recourse basis) originated by companies in a diverse group of industries that are not highly correlated. The remaining All other exposure is well diversified across other industries; none comprise more than 3% of total exposure.

Derivative contracts

In the normal course of business, the Firm utilizes derivative instruments to meet the needs of customers, to generate revenues through trading activities, to manage exposure to fluctuations in interest rates, currencies and other markets and to manage its own credit risk. The Firm uses the same credit risk management procedures as those used for its traditional lending activities to assess and approve potential credit exposures when entering into derivative transactions.

The following table summarizes the aggregate notional amounts and the reported derivative receivables (i.e., the MTM or fair value of the derivative contracts after taking into account the effects of legally enforceable master netting agreements) at each of the dates indicated:

Notional amounts and derivative receivables marked to market ("MTM")

As of December 31, (in billions)	Notional amounts[a]		Derivative receivables MTM	
	2005	2004	**2005**	2004
Interest rate	**$ 38,493**	$ 37,022	**$ 30**	$ 46
Foreign exchange	**2,136**	1,886	**3**	8
Equity	**458**	434	**6**	6
Credit derivatives	**2,241**	1,071	**4**	3
Commodity	**265**	101	**7**	3
Total	**$ 43,593**	$ 40,514	**50**	66
Collateral held against derivative receivables	**NA**	NA	**(6)**	(9)
Exposure net of collateral	**NA**	NA	**$ 44**[b]	$ 57[c]

(a) The notional amounts represent the gross sum of long and short third-party notional derivative contracts, excluding written options and foreign exchange spot contracts, which significantly exceed the possible credit losses that could arise from such transactions. For most derivative transactions, the notional principal amount does not change hands; it is used simply as a reference to calculate payments.

(b) The Firm held $33 billion of collateral against derivative receivables as of December 31, 2005, consisting of $27 billion in net cash received under credit support annexes to legally enforceable master netting agreements, and $6 billion of other liquid securities collateral. The benefit of the $27 billion is reflected within the $50 billion of derivative receivables MTM. Excluded from the $33 billion of collateral is $10 billion of collateral delivered by clients at the initiation of transactions; this collateral secures exposure that could arise in the derivatives portfolio should the MTM of the client's transactions move in the Firm's favor. Also excluded are credit enhancements in the form of letters of credit and surety receivables.

(c) The Firm held $41 billion of collateral against derivative receivables as of December 31, 2004, consisting of $32 billion in net cash received under credit support annexes to legally enforceable master netting agreements, and $9 billion of other liquid securities collateral. The benefit of the $32 billion is reflected within the $66 billion of derivative receivables MTM. Excluded from the $41 billion of collateral is $10 billion of collateral delivered by clients at the initiation of transactions; this collateral secures exposure that could arise in the derivatives portfolio should the MTM of the client's transactions move in the Firm's favor. Also excluded are credit enhancements in the form of letters of credit and surety receivables.

The MTM of derivative receivables contracts represents the cost to replace the contracts at current market rates should the counterparty default. When JPMorgan Chase has more than one transaction outstanding with a counterparty, and a legally enforceable master netting agreement exists with that counterparty, the netted MTM exposure, less collateral held, represents, in the Firm's view, the appropriate measure of current credit risk.

While useful as a current view of credit exposure, the net MTM value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE") and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. However, the total potential future credit risk embedded in the Firm's derivatives portfolio is not the simple sum of all Peak client credit risks. This is because, at the portfolio level, credit risk is reduced by the fact that when offsetting transactions are done with separate counterparties, only one of the two trades can generate a credit loss, even if both counterparties were to default simultaneously. The Firm refers to this effect as market diversification, and the Market-Diversified Peak ("MDP") measure is a portfolio aggregation of counterparty Peak measures, representing the maximum losses at the 97.5% confidence level that would occur if all counterparties defaulted under any one given market scenario and time frame.

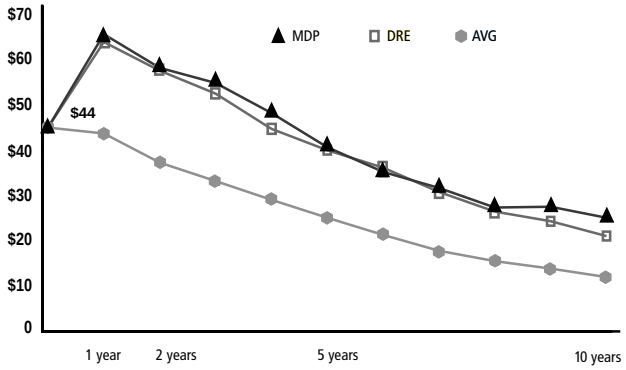
Derivative Risk Equivalent ("DRE") exposure is a measure that expresses the riskiness of derivative exposure on a basis intended to be equivalent to the riskiness of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, Average exposure ("AVG") is a measure of the expected MTM value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the Credit Valuation Adjustment ("CVA"), as further described below. Average exposure was $36 billion and $38 billion at December 31, 2005 and 2004, respectively, compared with derivative receivables MTM net of other highly liquid collateral of $44 billion and $57 billion at December 31, 2005 and 2004, respectively.

The graph below shows exposure profiles to derivatives over the next 10 years as calculated by the MDP, DRE and AVG metrics. All three measures generally show declining exposure after the first year, if no new trades were added to the portfolio.

Exposure profile of derivatives measures

December 31, 2005
(in billions)



The MTM value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based upon the Firm's AVG exposure to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions. The MTM value of the Firm's derivative payables does not incorporate a valuation adjustment to reflect JPMorgan Chase's credit quality.

The following table summarizes the ratings profile of the Firm's Consolidated balance sheets Derivative receivables MTM, net of cash and other liquid securities collateral, for the dates indicated:

Ratings profile of derivative receivables MTM

Rating equivalent	**2005**		2004	
December 31, (in millions)	Exposure net of collateral[(a)]	% of exposure net of collateral	Exposure net of collateral[(b)]	% of exposure net of collateral
AAA to AA-	**$ 20,735**	**48%**	$ 30,384	53%
A+ to A-	**8,074**	**18**	9,109	16
BBB+ to BBB-	**8,243**	**19**	9,522	17
BB+ to B-	**6,580**	**15**	7,271	13
CCC+ and below	**155**	**—**	395	1
Total	**$ 43,787**	**100%**	$ 56,681	100%

(a) The Firm held $33 billion of collateral against derivative receivables as of December 31, 2005, consisting of $27 billion in net cash received under credit support annexes to legally enforceable master netting agreements, and $6 billion of other liquid securities collateral. The benefit of the $27 billion is reflected within the $50 billion of derivative receivables MTM. Excluded from the $33 billion of collateral is $10 billion of collateral delivered by clients at the initiation of transactions; this collateral secures exposure that could arise in the derivatives portfolio should the MTM of the client's transactions move in the Firm's favor. Also excluded are credit enhancements in the form of letters of credit and surety receivables.

(b) The Firm held $41 billion of collateral against derivative receivables as of December 31, 2004, consisting of $32 billion in net cash received under credit support annexes to legally enforceable master netting agreements, and $9 billion of other liquid securities collateral. The benefit of the $32 billion is reflected within the $66 billion of derivative receivables MTM. Excluded from the $41 billion of collateral is $10 billion of collateral delivered by clients at the initiation of transactions; this collateral secures exposure that could arise in the derivatives portfolio should the MTM of the client's transactions move in the Firm's favor. Also excluded are credit enhancements in the form of letters of credit and surety receivables.

The Firm actively pursues the use of collateral agreements to mitigate counterparty credit risk in derivatives. The percentage of the Firm's derivatives transactions subject to collateral agreements increased slightly, to 81% as of December 31, 2005, from 79% at December 31, 2004. The Firm posted $27 billion and $31 billion of collateral as of December 31, 2005 and 2004, respectively.

Certain derivative and collateral agreements include provisions that require the counterparty and/or the Firm, upon specified downgrades in their respective credit ratings, to post collateral for the benefit of the other party. As of December 31, 2005, the impact of a single-notch ratings downgrade to JPMorgan Chase Bank, from its current rating of AA- to A+, would have been an additional $1.4 billion of collateral posted by the Firm; the impact of a six-notch ratings downgrade (from AA- to BBB-) would have been $3.8 billion of additional collateral. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the then-existing MTM value of the derivative contracts.

Credit derivatives

The following table presents the Firm's notional amounts of credit derivatives protection purchased and sold by the respective businesses as of December 31, 2005 and 2004:

Credit derivatives positions

	Notional amount				
	Portfolio management		Dealer/client		
December 31, (in billions)	Protection purchased[(a)]	Protection sold	Protection purchased	Protection sold	Total
2005	**$ 31**	**$ 1**	**$ 1,096**	**$ 1,113**	**$ 2,241**
2004	37	—	501	533	1,071

(a) Includes $848 million and $2 billion at December 31, 2005 and 2004, respectively, of portfolio credit derivatives.

In managing wholesale credit exposure, the Firm purchases single-name and portfolio credit derivatives; this activity does not reduce the reported level of assets on the balance sheet or the level of reported off-balance sheet commitments. The Firm also diversifies exposures by providing (i.e., selling) credit protection, which increases exposure to industries or clients where the Firm has little or no client-related exposure. This activity is not material to the Firm's overall credit exposure.

JPMorgan Chase has limited counterparty exposure as a result of credit derivatives transactions. Of the $50 billion of total Derivative receivables at December 31, 2005, approximately $4 billion, or 8%, was associated with credit derivatives, before the benefit of liquid securities collateral.

Dealer/client

At December 31, 2005, the total notional amount of protection purchased and sold in the dealer/client business increased $1.2 trillion from year-end 2004 as a result of increased trade volume in the market. This business has a mismatch between the total notional amounts of protection purchased and sold. However, in the Firm's view, the risk positions are largely matched when securities used to risk manage certain derivative positions are taken into consideration and the notional amounts are adjusted to a duration-based equivalent basis or to reflect different degrees of subordination in tranched structures.

Use of single-name and portfolio credit derivatives

December 31, (in millions)	Notional amount of protection purchased **2005**	2004
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 18,926**	$ 25,002
Derivative receivables	**12,088**	12,235
Total	**$ 31,014**	$ 37,237

Credit portfolio management activities

The credit derivatives used by JPMorgan Chase for portfolio management activities do not qualify for hedge accounting under SFAS 133, and therefore, effectiveness testing under SFAS 133 is not performed. These derivatives are reported at fair value, with gains and losses recognized as Trading revenue. The MTM value incorporates both the cost of credit derivative premiums and changes in value due to movement in spreads and credit events; in contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. Loan interest and fees are generally recognized in Net interest income, and impairment is recognized in the Provision for credit losses. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives utilized in portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure. The MTM related to the Firm's credit derivatives used for managing credit exposure, as well as the mark related to the CVA, which reflects the credit quality of derivatives counterparty exposure, are included in the table below:

For the year ended December 31, (in millions)	**2005**	2004[c]
Hedges of lending-related commitments[a]	**$ 24**	$ (234)
CVA and hedges of CVA[a]	**84**	188
Net gains (losses)[b]	**$ 108**	$ (46)

(a) These hedges do not qualify for hedge accounting under SFAS 133.
(b) Excludes $8 million and $52 million in 2005 and 2004, respectively, of other credit portfolio trading results that are not associated with hedging activities.
(c) Includes six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The Firm also actively manages wholesale credit exposure through loan and commitment sales. During 2005 and 2004, the Firm sold $4.0 billion and $5.9 billion of loans and commitments, respectively, recognizing gains of $76 million and losses of $8 million in 2005 and 2004, respectively. These activities are not related to the Firm's securitization activities, which are undertaken for liquidity and balance sheet management purposes. For a further discussion of securitization activity, see Note 13 on pages 108–111 of this Annual Report.

Lending-related commitments

The contractual amount of wholesale lending-related commitments was $324 billion at December 31, 2005, compared with $309 billion at December 31, 2004. In the Firm's view, the total contractual amount of these instruments is not representative of the Firm's actual credit risk exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these instruments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based upon average portfolio historical experience, to become outstanding in the event of a default by an obligor. The loan equivalent amount of the Firm's lending-related commitments as of December 31, 2005 and 2004, was $178 billion and $162 billion, respectively.

Country exposure

The Firm has a comprehensive process for measuring and managing exposures and risk in emerging markets countries – defined as those countries potentially vulnerable to sovereign events. Exposures to a country include all credit-related lending, trading, and investment activities, whether cross-border or locally funded. Exposure amounts are adjusted for credit enhancements (e.g., guarantees and letters of credit) provided by third parties located outside the country, if the enhancements fully cover the country risk as well as the business risk. As of December 31, 2005, the Firm's exposure to any individual emerging markets country was not material.

Consumer credit portfolio

JPMorgan Chase's consumer portfolio consists primarily of residential mortgages and home equity loans, credit cards, auto and education financings and loans to small businesses. The domestic consumer portfolio reflects the benefit of diversification from both a product and a geographical perspective. The primary focus is on serving the prime consumer credit market.

The following table presents managed consumer credit–related information for the dates indicated:

Consumer portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming assets[g]		Net charge-offs		Average annual net charge-off rate[i]	
	2005	2004	**2005**	2004	**2005**	2004[f]	**2005**	2004[f]
Consumer real estate								
Home finance – Home equity and other[a]	**$ 76,727**	$ 67,837	**$ 422**	$ 416	**$ 129**	$ 554	**0.18%**	1.18%
Home finance – Mortgage	**56,726**	56,816	**441**	257	**25**	19	**0.05**	0.05
Total Home finance[a]	**133,453**	124,653	**863**[h]	673[h]	**154**	573	**0.13**	0.65
Auto & education finance[b]	**49,047**	62,712	**195**	193	**277**	263	**0.54**	0.52
Consumer & small business and other	**14,799**	15,107	**280**	295	**141**	154	**0.98**	1.64
Credit card receivables – reported[c]	**71,738**	64,575	**13**	8	**3,324**	1,923	**4.94**	4.95
Total consumer loans – reported	**269,037**	267,047	**1,351**	1,169	**3,896**	2,913	**1.56**	1.56
Credit card securitizations[c][d]	**70,527**	70,795	**—**	—	**3,776**	2,898	**5.47**	5.51
Total consumer loans – managed[c]	**339,564**	337,842	**1,351**	1,169	**7,672**	5,811	**2.41**	2.43
Assets acquired in loan satisfactions	**NA**	NA	**180**	224	**NA**	NA	**NA**	NA
Total consumer related assets – managed	**339,564**	337,842	**1,531**	1,393	**7,672**	5,811	**2.41**	2.43
Consumer lending–related commitments:								
Home finance	**65,106**	53,223	**NA**	NA	**NA**	NA	**NA**	NA
Auto & education finance	**5,732**	5,193	**NA**	NA	**NA**	NA	**NA**	NA
Consumer & small business and other	**5,437**	10,312	**NA**	NA	**NA**	NA	**NA**	NA
Credit card[e]	**579,321**	532,468	**NA**	NA	**NA**	NA	**NA**	NA
Total lending-related commitments	**655,596**	601,196	**NA**	NA	**NA**	NA	**NA**	NA
Total consumer credit portfolio	**$ 995,160**	$ 939,038	**$1,531**	$ 1,393	**$ 7,672**	$ 5,811	**2.41%**	2.43%
Total average HFS loans	**$ 15,675**	$ 14,736[f]	**NA**	NA	**NA**	NA	**NA**	NA
Memo: Credit card – managed	**142,265**	135,370	**$ 13**	$ 8	**$ 7,100**	$ 4,821	**5.21%**	5.27%

(a) Includes $406 million of charge-offs related to the manufactured home loan portfolio in the fourth quarter of 2004.
(b) Excludes operating lease-related assets of $858 million for December 31, 2005. Balances at December 31, 2004, were insignificant.
(c) Past-due loans 90 days and over and accruing includes credit card receivables of $1.1 billion and $998 million, and related credit card securitizations of $730 million and $1.3 billion at December 31, 2005 and 2004, respectively.
(d) Represents securitized credit cards. For a further discussion of credit card securitizations, see Card Services on pages 45–46 of this Annual Report.
(e) The credit card lending-related commitments represent the total available credit to the Firm's cardholders. The Firm has not experienced, and does not anticipate, that all of its cardholders will exercise their entire available line of credit at any given point in time. The Firm can reduce or cancel a credit card commitment by providing the cardholder prior notice or without notice as permitted by law.
(f) Includes six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(g) Includes nonperforming HFS loans of $27 million and $13 million at December 31, 2005 and 2004, respectively.
(h) Excludes nonperforming assets related to loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by government agencies of $1.1 billion and $1.5 billion for December 31, 2005, and December 31, 2004, respectively. These amounts are excluded, as reimbursement is proceeding normally.
(i) Net charge-off rates exclude average loans HFS.

Total managed consumer loans at December 31, 2005, were $340 billion, up from $338 billion at year-end 2004. Consumer lending–related commitments increased by 9% to $656 billion at December 31, 2005, reflecting growth in credit cards and home equity lines of credit. The following discussion relates to the specific loan and lending-related categories within the consumer portfolio.

Retail Financial Services

Average RFS loan balances for 2005 were $198 billion. New loans originated in 2005 reflect high credit quality consistent with management's focus on the prime credit market segment. The net charge-off rate for retail loans in 2005 was 0.31%, a decrease of 36 basis points from 2004. This decrease was attributable primarily to $406 million of charge-offs in the fourth quarter of 2004 associated with the sale of the $4.0 billion manufactured home loan portfolio. Excluding these charge-offs, the net charge-off rate would have improved eight basis points.

Home Finance: Home finance loans on the balance sheet at December 31, 2005, were $133 billion. This amount consisted of $77 billion of home equity and other loans and $56 billion of mortgages, including mortgage loans held-for-sale. Home finance receivables as of December 31, 2005, reflect an increase of $9 billion from year-end 2004 driven by growth in the home equity portfolio. Home Finance provides consumer real estate lending to the full spectrum of credit borrowers, including $15 billion in sub-prime credits at December 31, 2005. Home Finance does not offer mortgage products that result in negative amortization but does offer mortgages with interest-only payment options to predominantly prime borrowers.

The geographic distribution of outstanding consumer real estate loans is well diversified as shown in the table below.

Consumer real estate loan portfolio by geographic location

December 31,	**2005**		2004	
(in billions)	Outstanding	%	Outstanding	%
Top 10 U.S. States				
California	**$ 24.4**	**18%**	$ 22.8	18%
New York	**19.5**	**15**	18.4	15
Florida	**10.3**	**8**	7.1	6
Illinois	**7.7**	**6**	8.0	6
Texas	**7.6**	**6**	7.9	6
Ohio	**6.1**	**5**	6.1	5
Arizona	**5.8**	**4**	5.2	4
New Jersey	**5.3**	**4**	4.5	4
Michigan	**5.2**	**4**	5.2	4
Colorado	**3.2**	**2**	3.2	3
Total Top 10	**95.1**	**72**	88.4	71
Other	**38.4**	**28**	36.3	29
Total	**$ 133.5**	**100%**	$ 124.7	100%

Auto & Education Finance: As of December 31, 2005, Auto & education finance loans decreased to $49 billion from $63 billion at year-end 2004. The decrease in outstanding loans was caused primarily by a difficult auto lending market in 2005, $3.8 billion in securitizations, the sale of the $2.0 billion recreational vehicle portfolio and the de-emphasis of vehicle leasing, which comprised $4.4 billion of outstanding loans as of December 31, 2005. It is anticipated that over time vehicle leases will account for a smaller share of balance sheet receivables and exposure. The Auto & Education loan portfolio reflects a high concentration of prime quality credits.

Consumer & Small Business and other: As of December 31, 2005, Small business & other consumer loans remained relatively stable at $14.8 billion compared with 2004 year-end levels of $15.1 billion. The portfolio reflects highly collateralized loans, often with personal loan guarantees.

Card Services

JPMorgan Chase analyzes the credit card portfolio on a managed basis, which includes credit card receivables on the consolidated balance sheet and those receivables sold to investors through securitization. Managed credit card receivables were $142 billion at December 31, 2005, an increase of $7 billion from year-end 2004, reflecting solid growth in the business as well as the addition of $2.2 billion of receivables as a result of the acquisition of the Sears Canada credit card business.

Consumer credit quality trends remained stable despite the effects of increased losses due to bankruptcy legislation, which became effective October 17, 2005. The managed credit card net charge-off rate decreased to 5.21% in 2005 from 5.27% in 2004. The 30-day delinquency rates declined significantly to 2.79% in 2005 from 3.70% in 2004, primarily driven by accelerated loss recognition of delinquent accounts as a result of the bankruptcy reform legislation and strong underlying credit quality. The managed credit card portfolio continues to reflect a well-seasoned portfolio that has good U.S. geographic diversification.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses is intended to cover probable credit losses, including losses where the asset is not specifically identified or the size of the loss has not been fully determined. At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer of the Firm, the Risk Policy Committee, a subgroup of the Operating Committee, and the Audit Committee of the Board of Directors of the Firm. The allowance is reviewed relative to the risk profile of the Firm's credit portfolio and current economic conditions and is adjusted if, in management's judgment, changes are warranted. The allowance includes an asset-specific component and a formula-based component, the latter of which consists of a statistical calculation and adjustments to the statistical calculation. For further discussion of the components of the Allowance for credit losses, see Critical accounting estimates used by the Firm on page 81 and Note 12 on pages 107–108 of this Annual Report. At December 31, 2005, management deemed the allowance for credit losses to be sufficient to absorb losses that are inherent in the portfolio, including losses that are not specifically identified or for which the size of the loss has not yet been fully determined.

Summary of changes in the allowance for credit losses

For the year ended December 31,	2005			2004[e]		
(in millions)	Wholesale	Consumer	Total	Wholesale	Consumer	Total
Loans:						
Beginning balance at January 1,	**$ 3,098**	**$ 4,222**	**$ 7,320**	$ 2,204	$ 2,319	$ 4,523
Addition resulting from the Merger, July 1, 2004	**—**	**—**	**—**	1,788	1,335	3,123
Gross charge-offs	**(255)**	**(4,614)**	**(4,869)**	(543)	(3,262)	(3,805)
Gross recoveries	**332**	**718**	**1,050**	357	349	706
Net (charge-offs) recoveries	**77**	**(3,896)**	**(3,819)**	(186)	(2,913)	(3,099)
Provision for loan losses:						
Provision excluding accounting policy conformity	**(716)**	**4,291**	**3,575**[c]	(605)	2,403	1,798
Accounting policy conformity	**—**	**—**	**—**	(103)	1,188[f]	1,085
Total Provision for loan losses	**(716)**	**4,291**	**3,575**	(708)	3,591	2,883
Other	**(6)**	**20**	**14**	—	(110)	(110)[g]
Ending balance	**$ 2,453**[a]	**$ 4,637**[b]	**$ 7,090**	$ 3,098[a]	$ 4,222[b]	$ 7,320
Components:						
Asset specific	**$ 203**	**$ —**	**$ 203**	$ 469	$ —	$ 469
Statistical component	**1,629**	**3,422**	**5,051**	1,639	3,169	4,808
Adjustment to statistical component	**621**	**1,215**	**1,836**	990	1,053	2,043
Total Allowance for loan losses	**$ 2,453**	**$ 4,637**	**$ 7,090**	$ 3,098	$ 4,222	$ 7,320
Lending-related commitments:						
Beginning balance at January 1,	**$ 480**	**$ 12**	**$ 492**	$ 320	$ 4	$ 324
Addition resulting from the Merger, July 1, 2004	**—**	**—**	**—**	499	9	508
Provision for lending-related commitments:						
Provision excluding accounting policy conformity	**(95)**	**3**	**(92)**	(111)	(1)	(112)
Accounting policy conformity	**—**	**—**	**—**	(227)	—	(227)
Total Provision for lending-related commitments	**(95)**	**3**	**(92)**	(338)	(1)	(339)
Other	**—**	**—**	**—**	(1)	—	(1)
Ending balance	**$ 385**	**$ 15**	**$ 400**[d]	$ 480	$ 12	$ 492[h]

(a) The wholesale allowance for loan losses to total wholesale loans was 1.85% and 2.41%, excluding wholesale HFS loans of $17.6 billion and $6.4 billion at December 31, 2005 and 2004, respectively.
(b) The consumer allowance for loan losses to total consumer loans was 1.84% and 1.70%, excluding consumer HFS loans of $16.6 billion and $18.0 billion at December 31, 2005 and 2004, respectively.
(c) 2005 includes a special provision related to Hurricane Katrina allocated as follows: Retail Financial Services $250 million, Card Services $100 million, Commercial Banking $35 million, Asset & Wealth Management $3 million and Corporate $12 million.
(d) Includes $60 million of asset-specific and $340 million of formula-based allowance at December 31, 2005. The formula-based allowance for lending-related commitments is based upon statistical calculation. There is no adjustment to the statistical calculation for lending-related commitments.
(e) Includes six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(f) Reflects an increase of $1.4 billion as a result of the decertification of heritage Bank One seller's interest in credit card securitizations, partially offset by a $254 million decrease in the allowance to conform methodologies in 2004.
(g) Primarily represents the transfer of the allowance for accrued interest and fees on reported and securitized credit card loans.
(h) Includes $130 million of asset-specific and $362 million of formula-based allowance at December 31, 2004. The formula-based allowance for lending-related commitments is based upon a statistical calculation. There is no adjustment to the statistical calculation for lending-related commitments.

The reduction in the allowance for credit losses of $322 million from December 31, 2004, was driven primarily by continued credit strength in the wholesale businesses, partially offset by an increase in the consumer allowance as a result of the special provision taken in the third quarter of 2005 due to Hurricane Katrina.

Excluding held-for-sale loans, the allowance for loan losses represented 1.84% of loans at December 31, 2005, compared with 1.94% at December 31, 2004. The wholesale component of the allowance decreased to $2.5 billion as of December 31, 2005, from $3.1 billion at year-end 2004, due to strong credit quality across all wholesale businesses. Excluding the special provision for Hurricane Katrina, the consumer component of the allowance would have been $4.3 billion as of December 31, 2005, a slight increase from December 31, 2004.

To provide for the risk of loss inherent in the Firm's process of extending credit, management also computes an asset-specific component and a formula-based component for wholesale lending–related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown. This allowance, which is reported in Other liabilities, was $400 million and $492 million at December 31, 2005 and 2004, respectively.

Provision for credit losses

For a discussion of the reported Provision for credit losses, see page 29 of this Annual Report. The managed provision for credit losses reflects credit card securitizations. At December 31, 2005, securitized credit card outstandings were relatively flat compared with the prior year-end.

For the year ended December 31,[a]	Provision for loan losses		Provision for lending-related commitments		Total provision for credit losses	
(in millions)	**2005**	2004	**2005**	2004	**2005**[c]	2004
Investment Bank	**$ (757)**	$ (525)	**$ (81)**	$ (115)	**$ (838)**	$ (640)
Commercial Banking	**87**	35	**(14)**	6	**73**	41
Treasury & Securities Services	**(1)**	7	**1**	—	**—**	7
Asset & Wealth Management	**(55)**	(12)	**(1)**	(2)	**(56)**	(14)
Corporate	**10**	(110)	**—**	—	**10**	(110)
Total Wholesale	**(716)**	(605)	**(95)**	(111)	**(811)**	(716)
Retail Financial Services	**721**	450	**3**	(1)	**724**	449
Card Services	**3,570**	1,953	**—**	—	**3,570**	1,953
Total Consumer	**4,291**	2,403	**3**	(1)	**4,294**	2,402
Accounting policy conformity[b]	**—**	1,085	**—**	(227)	**—**	858
Total provision for credit losses	**3,575**	2,883	**(92)**	(339)	**3,483**	2,544
Credit card securitization	**3,776**	2,898	**—**	—	**3,776**	2,898
Accounting policy conformity	**—**	(1,085)	**—**	227	**—**	(858)
Total managed provision for credit losses	**$ 7,351**	$ 4,696	**$ (92)**	$ (112)	**$ 7,259**	$ 4,584

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) The 2004 provision for loan losses includes an increase of approximately $1.4 billion as a result of the decertification of heritage Bank One seller's interest in credit card securitizations, partially offset by a reduction of $357 million to conform provision methodologies. The 2004 provision for lending-related commitments reflects a reduction of $227 million to conform provision methodologies in the wholesale portfolio.
(c) 2005 includes a $400 million special provision related to Hurricane Katrina allocated as follows: Retail Financial Services $250 million, Card Services $100 million, Commercial Banking $35 million, Asset & Wealth Management $3 million and Corporate $12 million.

Market risk management

Market risk is the exposure to an adverse change in the market value of portfolios and financial instruments caused by a change in market prices or rates.

Market risk management

Market Risk Management ("MRM") is an independent corporate risk governance function that identifies, measures, monitors, and controls market risk. It seeks to facilitate efficient risk/return decisions and to reduce volatility in operating performance. It strives to make the Firm's market risk profile transparent to senior management, the Board of Directors and regulators. Market Risk Management is overseen by the Chief Risk Officer, a member of the Firm's Operating Committee. MRM's governance structure consists of the following primary functions:

- Establishment of a comprehensive market risk policy framework
- Independent measurement, monitoring and control of business segment market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

In addition, the Firm's business segments have valuation control functions that are responsible for ensuring the accuracy of the valuations of positions that expose the Firm to market risk. These groups report primarily into Finance.

Risk identification and classification

MRM works in partnership with the business segments to identify market risks throughout the Firm and to refine and monitor market risk policies and procedures. All business segments are responsible for comprehensive identification and verification of market risks within their units. Risk-taking businesses have functions that act independently from trading personnel and are responsible for verifying risk exposures that the business takes. In addition to providing independent oversight for market risk arising from the business segments, MRM also is responsible for identifying exposures which may not be large within individual business segments, but which may be large for the Firm in aggregate. Regular meetings are held between MRM and the heads of risk-taking businesses to discuss and decide on risk exposures in the context of the market environment and client flows.

Positions that expose the Firm to market risk can be classified into two categories: trading and nontrading risk. Trading risk includes positions that are held by the Firm as part of a business segment or unit whose main business strategy is to trade or make markets. Unrealized gains and losses in these positions are generally reported in trading revenue. Nontrading risk includes securities held for longer term investment, mortgage servicing rights, and securities and derivatives used to manage the Firm's asset/liability exposures. Unrealized gains and losses in these positions are generally not reported in Trading revenue.

Trading risk

Fixed income risk (which includes interest rate risk and credit spread risk) involves the potential decline in net income or financial condition due to adverse changes in market rates, whether arising from client activities or proprietary positions taken by the Firm.

Foreign exchange, equities and commodities risks involve the potential decline in net income to the Firm due to adverse changes in foreign exchange, equities or commodities markets, whether arising from client activities or proprietary positions taken by the Firm.

Nontrading risk

Nontrading risk arises from execution of the Firm's core business strategies, the delivery of products and services to its customers, and the discretionary positions the Firm undertakes to risk-manage exposures.

These exposures can result from a variety of factors, including differences in the timing among the maturity or repricing of assets, liabilities and off–balance sheet instruments. Changes in the level and shape of market interest rate curves also may create interest rate risk, since the repricing characteristics of the Firm's assets do not necessarily match those of its liabilities. The Firm also is exposed to basis risk, which is the difference in re-pricing characteristics of two floating rate indices, such as the prime rate and 3-month LIBOR. In addition, some of the Firm's products have embedded optionality that impact pricing and balances.

The Firm's mortgage banking activities also give rise to complex interest rate risks. The interest rate exposure from the Firm's mortgage banking activities is a result of changes in the level of interest rates, option and basis risk. Option risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly-originated mortgage commitments actually closing. Basis risk results from different relative movements between mortgage rates and other interest rates.

Risk measurement

Tools used to measure risk

Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- Nonstatistical risk measures
- Value-at-Risk ("VAR")
- Loss advisories
- Economic value stress testing
- Earnings-at-risk stress testing
- Risk identification for large exposures ("RIFLE")

Nonstatistical risk measures

Nonstatistical risk measures other than stress testing include net open positions, basis point values, option sensitivities, market values, position concentrations and position turnover. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line of business and by risk type, and are used for monitoring limits, one-off approvals and tactical control.

Value-at-risk

JPMorgan Chase's primary statistical risk measure, VAR, estimates the potential loss from adverse market moves in an ordinary market environment and provides a consistent cross-business measure of risk profiles and levels of diversification. VAR is used for comparing risks across businesses, monitoring limits, one-off approvals, and as an input to economic capital calculations. VAR provides risk transparency in a normal trading environment.

Each business day the Firm undertakes a comprehensive VAR calculation that includes both its trading and its nontrading activities. VAR for nontrading activities measures the amount of potential change in fair value of the exposures related to these activities; however, VAR for such activities is not a measure of reported revenue since nontrading activities are generally not marked to market through earnings.

To calculate VAR, the Firm uses historical simulation, which measures risk across instruments and portfolios in a consistent and comparable way. This approach assumes that historical changes in market values are representative of future changes. The simulation is based upon data for the previous twelve months. The Firm calculates VAR using a one-day time horizon and an expected tail loss methodology, which approximates a 99% confidence level. This means the Firm would expect to incur losses greater than that predicted by VAR estimates only once in every 100 trading days, or about 2.5 times a year.

Trading VAR

IB trading VAR by risk type and credit portfolio VAR[a]

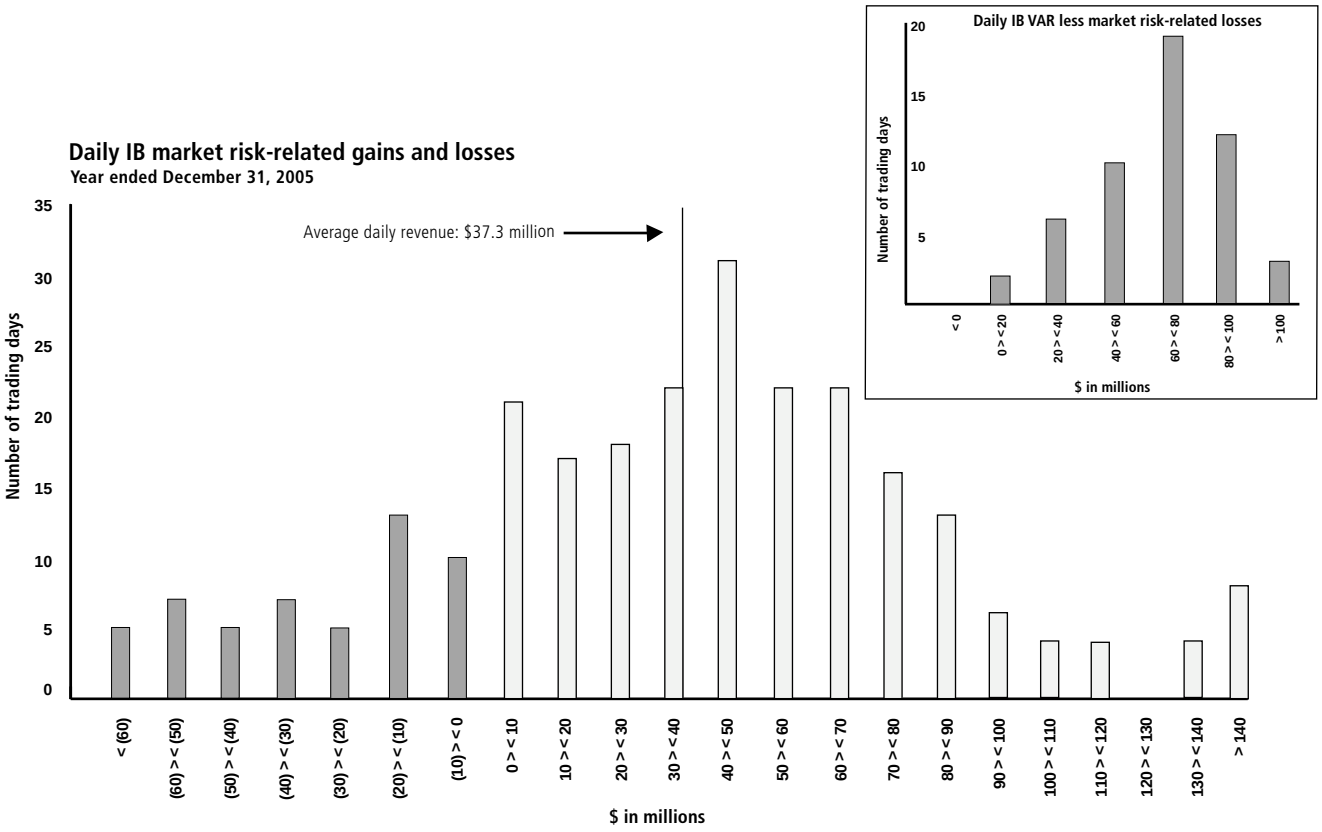
	2005				2004[e]			
As of or for the year ended December 31, (in millions)	Average VAR	Minimum VAR	Maximum VAR	At December 31,	Average VAR	Minimum VAR	Maximum VAR	At December 31,
By risk type:								
Fixed income	**$ 67**	**$ 37**	**$ 110**	**$ 89**	$ 74	$ 45	$ 118	$ 57
Foreign exchange	**23**	**16**	**32**	**19**	17	10	33	28
Equities	**34**	**15**	**65**	**24**	28	15	58	20
Commodities and other	**21**	**7**	**50**	**34**	9	7	18	8
Less: portfolio diversification	**(59)**[c]	**NM**[d]	**NM**[d]	**(63)**[c]	(43)[c]	NM[d]	NM[d]	(41)[c]
Total trading VAR	**$ 86**	**$ 53**	**$ 130**	**$ 103**	$ 85	$ 52	$ 125	$ 72
Credit portfolio VAR[b]	**14**	**11**	**17**	**15**	14	11	17	15
Less: portfolio diversification	**(12)**[c]	**NM**[d]	**NM**[d]	**(10)**[c]	(9)[c]	NM[d]	NM[d]	(9)[c]
Total trading and credit portfolio VAR	**$ 88**	**$ 57**	**$ 130**	**$ 108**	$ 90	$ 55	$ 132	$ 78

(a) Trading VAR excludes VAR related to the Firm's private equity business and certain exposures used to manage MSRs. For a discussion of Private equity risk management and MSRs, see page 80 and Note 15 on pages 114–116 of this Annual Report, respectively. Trading VAR includes substantially all mark-to-market trading activities in the IB, plus available-for-sale securities held for the IB's proprietary purposes (included within Fixed Income); however, particular risk parameters of certain products are not fully captured, for example, correlation risk.
(b) Includes VAR on derivative credit valuation adjustments, credit valuation adjustment hedges and mark-to-market hedges of the accrual loan portfolio, which are all reported in Trading revenue. This VAR does not include the accrual loan portfolio, which is not marked to market.
(c) Average and period-end VARs are less than the sum of the VARs of its market risk components, which is due to risk offsets resulting from portfolio diversification. The diversification effect reflects the fact that the risks are not perfectly correlated. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves.
(d) Designated as not meaningful ("NM") because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio diversification effect.
(e) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

IB's Average Total Trading and Credit Portfolio VAR decreased to $88 million during 2005 compared with $90 million for the same period in 2004. Period-end VAR increased over the same period to $108 million from $78 million. Commodities and other VAR increased due to the expansion of the energy trading business. The decrease in average Total Trading and Credit Portfolio VAR was driven by increased portfolio diversification as fixed income risk decreased and foreign exchange, equities and commodities risk increased. Trading VAR diversification increased to $59 million, or 41% of the sum of the components, from $43 million, or 34% of the sum of the components. The diversification effect between the trading portfolio and the credit portfolio also increased to $12 million, or 12% of the sum of the components, from $9 million, or 9% of the sum of the components. In general, over the course of the year, VAR exposures can vary significantly as trading positions change, market volatility fluctuates and diversification benefits change.

VAR backtesting

To evaluate the soundness of its VAR model, the Firm conducts daily backtesting of VAR against daily financial results, based upon market risk-related revenue. Market risk-related revenue is defined as the change in value of the mark-to-market trading portfolios plus any trading-related net interest income, brokerage commissions, underwriting fees or other revenue. The following histogram illustrates the daily market risk-related gains and losses for the IB trading businesses for the year ended December 31, 2005. The chart shows that the IB posted market risk-related gains on 208 out of 260 days in this period, with 20 days exceeding $100 million. The inset graph looks at those days on which the IB experienced losses and depicts the amount by which VAR exceeded the actual loss on each of those days. Losses were sustained on 52 days, with no loss greater than $90 million, and with no loss exceeding the VAR measure.



Loss advisories

Loss advisories are tools used to highlight to senior management trading losses above certain levels and are used to initiate discussion of remedies.

Economic value stress testing

While VAR reflects the risk of loss due to unlikely events in normal markets, stress testing captures the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm conducts economic-value stress tests for both its trading and its nontrading activities using multiple scenarios for both types of activities. Periodically, scenarios are reviewed and updated to reflect changes in the Firm's risk profile and economic events. Stress testing is as important as VAR in measuring and controlling risk. Stress testing enhances the understanding of the Firm's risk profile and loss potential, and is used for monitoring limits, one-off approvals and cross-business risk measurement, as well as an input to economic capital allocation.

Based upon the Firm's stress scenarios, the stress test loss (pre-tax) in the IB's trading portfolio ranged from $469 million to $1.4 billion, and $202 million to $1.2 billion, for the years ended December 31, 2005 and 2004, respectively. The 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Earnings-at-risk stress testing

The VAR and stress-test measures described above illustrate the total economic sensitivity of the Firm's balance sheet to changes in market variables. The effect of interest rate exposure on reported Net income also is critical. Interest rate risk exposure in the Firm's core nontrading business activities (i.e., asset/liability management positions) results from on– and off–balance sheet positions. The Firm conducts simulations of changes in NII from its nontrading activities under a variety of interest rate scenarios, which are consistent with the scenarios used for economic-value stress testing. Earnings-at-risk tests measure the potential change in the Firm's Net interest income over the next 12 months and highlight exposures to various rate-sensitive factors, such as the rates themselves (e.g., the prime lending rate), pricing strategies on deposits, optionality and changes in product mix. The tests include forecasted balance sheet changes, such as asset sales and securitizations, as well as prepayment and reinvestment behavior.

Earnings-at-risk also can result from changes in the slope of the yield curve, because the Firm has the ability to lend at fixed rates and borrow at variable or short-term fixed rates. Based upon these scenarios, the Firm's earnings would be affected negatively by a sudden and unanticipated increase in short-term rates without a corresponding increase in long-term rates. Conversely, higher long-term rates generally are beneficial to earnings, particularly when the increase is not accompanied by rising short-term rates.

Immediate changes in interest rates present a limited view of risk, and so a number of alternative scenarios also are reviewed. These scenarios include the implied forward curve, nonparallel rate shifts and severe interest rate shocks on selected key rates. These scenarios are intended to provide a comprehensive view of JPMorgan Chase's earnings-at-risk over a wide range of outcomes.

JPMorgan Chase's 12-month pre-tax earnings sensitivity profile as of December 31, 2005 and 2004, follows:

	Immediate change in rates		
(in millions)	+200bp	+100bp	-100bp
December 31, 2005	**$ 265**	**$ 172**	**$ (162)**
December 31, 2004	(557)	(164)	(180)

The Firm's risk to rising and falling interest rates is due primarily to corresponding increases and decreases in short-term funding costs.

RIFLE

Individuals who manage risk positions, particularly those that are complex, are responsible for identifying potential losses that could arise from specific unusual events, such as a potential tax change, and estimating the probabilities of losses arising from such events. This information is entered into the Firm's RIFLE system and directed to the appropriate level of management, thereby permitting the Firm to identify further earnings vulnerability not adequately covered by standard risk measures.

Risk monitoring and control

Limits

Market risk is controlled primarily through a series of limits. Limits reflect the Firm's risk appetite in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity, business track record and management experience.

MRM regularly reviews and updates risk limits, and senior management reviews and approves risk limits at least once a year. MRM further controls the Firm's exposure by specifically designating approved financial instruments and tenors, known as instrument authorities, for each business segment.

The Firm maintains different levels of limits. Corporate-level limits include VAR, stress and loss advisories. Similarly, line of business limits include VAR, stress and loss advisories, and are supplemented by nonstatistical measurements and instrument authorities. Businesses are responsible for adhering to established limits, against which exposures are monitored and reported. Limit breaches are reported in a timely manner to senior management, and the affected business segment is required to take appropriate action to reduce trading positions. If the business cannot do this within an acceptable timeframe, senior management is consulted on the appropriate action.

Qualitative review

MRM also performs periodic reviews as necessary of both businesses and products with exposure to market risk in order to assess the ability of the businesses to control their market risk. Strategies, market conditions, product details and risk controls are reviewed, and specific recommendations for improvements are made to management.

Model review

Some of the Firm's financial instruments cannot be valued based upon quoted market prices but are instead valued using pricing models. Such models are used for management of risk positions, such as reporting against limits, as well as for valuation. The Model Risk Group, independent of the businesses and MRM, reviews the models the Firm uses and assesses model appropriateness and consistency. The model reviews consider a number of factors about the model's suitability for valuation and risk management of a particular product, including whether it accurately reflects the characteristics of the transaction and its significant risks, the suitability and convergence properties of numerical algorithms, reliability of data sources, consistency of the treatment with models for similar products, and sensitivity to input parameters and assumptions that cannot be priced from the market.

Reviews are conducted for new or changed models, as well as previously accepted models, to assess whether there have been any changes in the product or market that may impact the model's validity and whether there are theoretical or competitive developments that may require reassessment of the model's adequacy. For a summary of valuations based upon models, see Critical Accounting Estimates used by the Firm on pages 81–83 of this Annual Report.

Risk reporting

Nonstatistical exposures, value-at-risk, loss advisories and limit excesses are reported daily for each trading and nontrading business. Market risk exposure trends, value-at-risk trends, profit and loss changes, and portfolio concentrations are reported weekly. Stress test results are reported monthly to business and senior management.

Operational risk management

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, business interruptions, inappropriate behavior of employees and vendors that do not perform in accordance with outsourcing arrangements. These events can potentially result in financial losses and other damage to the Firm, including reputational harm.

To monitor and control operational risk, the Firm maintains a system of comprehensive policies and a control framework designed to provide a sound and well-controlled operational environment. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject. Notwithstanding these control measures, the Firm incurs operational losses.

The Firm's approach to operational risk management is intended to mitigate such losses by supplementing traditional control-based approaches to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

During 2005, the Firm substantially completed the implementation of Phoenix, a new internally-designed operational risk software tool. Phoenix integrates the individual components of the operational risk management framework into a unified, web-based tool. Phoenix is intended to enable the Firm to enhance its reporting and analysis of operational risk data by enabling risk identification, measurement, monitoring, reporting and analysis to be done in an integrated manner, thereby enabling efficiencies in the Firm's management of its operational risk.

For purposes of identification, monitoring, reporting and analysis, the Firm categorizes operational risk events as follows:

- Client service and selection
- Business practices
- Fraud, theft and malice
- Execution, delivery and process management
- Employee disputes
- Disasters and public safety
- Technology and infrastructure failures

Risk identification and measurement

Risk identification is the recognition of the operational risk events that management believes may give rise to operational losses.

In 2005, JPMorgan Chase substantially completed a multi-year effort to redesign the underlying architecture of its firmwide self-assessment process. The goal of the self-assessment process is for each business to identify the key operational risks specific to its environment and assess the degree to which it maintains appropriate controls. Action plans are developed for control issues identified, and businesses are held accountable for tracking and resolving these issues on a timely basis.

All businesses were required to perform self-assessments in 2005. Going forward, the Firm will utilize the self-assessment process as a dynamic risk management tool.

Risk monitoring

The Firm has a process for monitoring operational risk-event data, permitting analysis of errors and losses as well as trends. Such analysis, performed both at a line of business level and by risk-event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns. The data reported will enable the Firm to back-test against self-assessment results.

Risk reporting and analysis

Operational risk management reports provide timely and accurate information, including information about actual operational loss levels and self-assessment results, to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and support areas.

Audit alignment

Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. Audit partners with business management and members of the control community in providing guidance on the operational risk framework and reviewing the effectiveness and accuracy of the business self-assessment process as part of its business unit audits.

Reputation and fiduciary risk management

A firm's success depends not only on its prudent management of liquidity, credit, market and operational risks that are part of its business risks, but equally on the maintenance among many constituents – clients, investors, regulators, as well as the general public – of a reputation for business practices of the highest quality. Attention to reputation has always been a key aspect of the Firm's practices, and maintenance of reputation is the responsibility of everyone at the Firm. JPMorgan Chase bolsters this individual responsibility in many ways, including through the Firm's Code of Conduct, training, maintaining adherence to policies and procedures and oversight functions that approve transactions. These oversight functions include a Conflicts Office, which examines wholesale transactions with the potential to create conflicts of interest for the Firm.

Policy review office

The Firm also has a specific structure to address certain transactions with clients, especially complex derivatives and structured finance transactions, that have the potential to adversely affect its reputation. This structure reinforces the Firm's procedures for examining transactions in terms of appropriateness, ethical issues and reputational risk, and it intensifies the Firm's scrutiny of the purpose and effect of its transactions from the client's point of view, with the goal that these transactions are not used to mislead investors or others. The structure operates at three levels: as part of every business' transaction approval process; through review by regional Reputation Risk Committees; and through oversight by the Policy Review Office.

Primary responsibility for adherence to the policies and procedures designed to address reputation risk lies with the business units conducting the transactions in question. The Firm's transaction approval process requires review from, among others, internal legal/compliance, conflicts, tax and accounting groups. Transactions involving an SPE established by the Firm receive particular scrutiny intended to ensure that every such entity is properly approved, documented, monitored and controlled.

Business units are also required to submit to regional Reputation Risk Committees proposed transactions that may give rise to heightened reputation risk – particularly a client's motivation and its intended financial disclosure of the transaction. The committees may approve, reject or require further clarification on or changes to the transactions. The members of these committees are senior representatives of the business and support units in the region. The committees may escalate transaction review to the Policy Review Office.

The Policy Review Office is the most senior approval level for client transactions involving reputation risk issues. The mandate of the Office is to opine on specific transactions brought by the Regional Committees and consider changes in policies or practices relating to reputation risk. The head of the Office consults with the Firm's most senior executives on specific topics and provides regular updates. Aside from governance and guidance on specific transactions, the objective of the policy review process is to reinforce a culture, through a "case study" approach, that ensures that all employees, regardless of seniority, understand the basic principles of reputation risk control and can recognize and address issues as they arise.

In 2006, this structure, which until now has been focused primarily on Investment Bank activities, will be expanded to include the activities of Commercial Banking and the Private Bank. These lines of business will implement training and review procedures similar to those in the Investment Bank and their activities also will be subject to the oversight of the Policy Review Office.

Fiduciary risk management

The risk management committees within each line of business include in their mandate the oversight of the legal, reputational and, where appropriate, fiduciary risks in their businesses that may produce significant losses or reputational damage. The Fiduciary Risk Management function works with the relevant line of business risk committees to ensure that businesses providing investment or risk management products or services that give rise to fiduciary duties to clients perform at the appropriate standard relative to their fiduciary relationship with a client. Of particular focus are the policies and practices that address a business' responsibilities to a client, including client suitability determination, disclosure obligations, disclosure communications and performance expectations with respect to such of the investment and risk management products or services being provided by the Firm that give rise to such fiduciary duties. In this way, the relevant line-of-business risk committees, together with the Fiduciary Risk Management function, provide oversight of the Firm's efforts to monitor, measure and control the risks that may arise in the delivery of the products or services to clients that give rise to such duties, as well as those stemming from any of the Firm's fiduciary responsibilities to employees under the Firm's various employee benefit plans.

Private equity risk management

Risk management

The Firm makes direct principal investments in private equity. The illiquid nature and long-term holding period associated with these investments differentiates private equity risk from the risk of positions held in the trading portfolios. The Firm's approach to managing private equity risk is consistent with the Firm's general risk governance structure. Controls are in place establishing target levels for total and annual investment in order to control the overall size of the portfolio. Industry and geographic concentration limits are in place intended to ensure diversification of the portfolio, and periodic reviews are performed on the portfolio to substantiate the valuations of the investments. The Valuation Control Group within the Finance area is responsible for reviewing the accuracy of the carrying values of private equity investments held by Private Equity. At December 31, 2005, the carrying value of the private equity portfolios of JPMorgan Partners and ONE Equity Partners businesses was $6.2 billion, of which $479 million represented positions traded in the public market.

Critical accounting estimates used by the Firm

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the valuation of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in a controlled and appropriate manner. The Firm believes its estimates for determining the valuation of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the wholesale and consumer loan portfolios as well as the Firm's portfolio of wholesale lending-related commitments. The Allowance for loan losses is intended to adjust the value of the Firm's loan assets for probable credit losses as of the balance sheet date. For a further discussion of the methodologies used in establishing the Firm's Allowance for credit losses, see Note 12 on pages 107–108 of this Annual Report.

Wholesale loans and lending-related commitments

The methodology for calculating both the Allowance for loan losses and the Allowance for lending-related commitments involves significant judgment. First and foremost, it involves the early identification of credits that are deteriorating. Second, it involves management judgment to derive loss factors. Third, it involves management judgment to evaluate certain macroeconomic factors, underwriting standards, and other relevant internal and external factors affecting the credit quality of the current portfolio and to refine loss factors to better reflect these conditions.

The Firm uses a risk rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered include the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based upon an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another, or considering additional factors that may be relevant in determining the risk rating of a particular loan but which are not currently an explicit part of the Firm's methodology, could impact the risk rating assigned by the Firm to that loan.

Management applies its judgment to derive loss factors associated with each credit facility. These loss factors are determined by facility structure, collateral and type of obligor. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating these loss factors. Many factors can affect management's estimates of loss, including volatility of loss given default, probability of default and rating migrations. Judgment is applied to determine whether the loss given default should be calculated as an average over the entire credit cycle or at a particular point in the credit cycle. The application of different loss given default factors would change the amount of the Allowance for credit losses determined appropriate by the Firm. Similarly, there are judgments as to which external data on probability of default should be used and when they should be used. Choosing data that are not reflective of the Firm's specific loan portfolio characteristics could also affect loss estimates.

Management also applies its judgment to adjust the loss factors derived, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. The resultant adjustments to the statistical calculation on the performing portfolio are determined by creating estimated ranges using historical experience of both loss given default and probability of default. Factors related to concentrated and deteriorating industries are also incorporated where relevant. The estimated ranges and the determination of the appropriate point within the range are based upon management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio. The adjustment to the statistical calculation for the wholesale loan portfolio for the period ended December 31, 2005, was $621 million, the higher-end within the range, based upon management's assessment of current economic conditions.

Consumer loans

For scored loans in the consumer lines of business, loss is primarily determined by applying statistical loss factors and other risk indicators to pools of loans by asset type. These loss estimates are sensitive to changes in delinquency status, credit bureau scores, the realizable value of collateral and other risk factors.

Adjustments to the statistical calculation are accomplished in part by analyzing the historical loss experience for each major product segment. Management analyzes the range of credit loss experienced for each major portfolio segment, taking into account economic cycles, portfolio seasoning and underwriting criteria, and then formulates a range that incorporates relevant risk factors that impact overall credit performance. The recorded adjustment to the statistical calculation for the period ended December 31, 2005, was $1.2 billion, based upon management's assessment of current economic conditions.

Fair value of financial instruments

A portion of JPMorgan Chase's assets and liabilities are carried at fair value, including trading assets and liabilities, AFS securities and private equity investments. Held-for-sale loans, mortgage servicing rights ("MSRs") and commodities inventory are carried at the lower of fair value or cost. At December 31, 2005, approximately $386 billion of the Firm's assets were recorded at fair value.

The fair value of a financial instrument is defined as the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The majority of the Firm's assets reported at fair value are based upon quoted market prices or on internally developed models that utilize independently sourced market parameters, including interest rate yield curves, option volatilities and currency rates.

The degree of management judgment involved in determining the fair value of a financial instrument is dependent upon the availability of quoted market prices or observable market parameters. For financial instruments that are actively traded and have quoted market prices or parameters readily available, there is little-to-no subjectivity in determining fair value. When observable market prices and parameters do not exist, management judgment is necessary to estimate fair value. The valuation process takes into consideration

factors such as liquidity and concentration concerns and, for the derivatives portfolio, counterparty credit risk (see the discussion of CVA on page 70 of this Annual Report). For example, there is often limited market data to rely on when estimating the fair value of a large or aged position. Similarly, judgment must be applied in estimating prices for less readily observable external parameters. Finally, other factors such as model assumptions, market dislocations and unexpected correlations can affect estimates of fair value. Imprecision in estimating these factors can impact the amount of revenue or loss recorded for a particular position.

Trading and available-for-sale portfolios

Substantially all of the Firm's securities held for trading and investment purposes ("long" positions) and securities that the Firm has sold to other parties but does not own ("short" positions) are valued based upon quoted market prices. However, certain securities are less actively traded and, therefore, are not always able to be valued based upon quoted market prices. The determination of their fair value requires management judgment, as this determination may require benchmarking to similar instruments or analyzing default and recovery rates. Examples include certain collateralized mortgage and debt obligations and high-yield debt securities.

As few derivative contracts are listed on an exchange, the majority of the Firm's derivative positions are valued using internally developed models that use as their basis readily observable market parameters – that is, parameters that are actively quoted and can be validated to external sources, including industry-pricing services. Certain derivatives, however, are valued based upon models with significant unobservable market parameters – that is, parameters that must be estimated and are, therefore, subject to management judgment to substantiate the model valuation. These instruments are normally either less actively traded or trade activity is one-way. Examples include long-dated interest rate or currency swaps, where swap rates may be unobservable for longer maturities, and certain credit products, where correlation and recovery rates are unobservable. Due to the lack of observable market data, the Firm defers the initial trading profit for these financial instruments. The deferred profit is recognized in Trading revenue on a systematic basis and when observable market data becomes available. Management's judgment also includes recording fair value adjustments (i.e., reductions) to model valuations to account for parameter uncertainty when valuing complex or less actively traded derivative transactions. The following table summarizes the Firm's trading and available-for-sale portfolios by valuation methodology at December 31, 2005:

	Trading assets		Trading liabilities		
	Securities purchased[a]	Derivatives[b]	Securities sold[a]	Derivatives[b]	AFS securities
Fair value based upon:					
Quoted market prices	**86%**	**2%**	**97%**	**2%**	**91%**
Internal models with significant observable market parameters	**12**	**96**	**2**	**97**	**6**
Internal models with significant unobservable market parameters	**2**	**2**	**1**	**1**	**3**
Total	**100%**	**100%**	**100%**	**100%**	**100%**

(a) Reflected as debt and equity instruments on the Firm's Consolidated balance sheets.
(b) Based upon gross mark-to-market valuations of the Firm's derivatives portfolio prior to netting positions pursuant to FIN 39, as cross-product netting is not relevant to an analysis based upon valuation methodologies.

To ensure that the valuations are appropriate, the Firm has various controls in place. These include: an independent review and approval of valuation models; detailed review and explanation for profit and loss analyzed daily and over time; decomposing the model valuations for certain structured derivative instruments into their components and benchmarking valuations, where possible, to similar products; and validating valuation estimates through actual cash settlement. As markets and products develop and the pricing for certain derivative products becomes more transparent, the Firm refines its valuation methodologies. The Valuation Control Group within the Finance area, a group independent of the risk-taking function, is responsible for reviewing the accuracy of the valuations of positions taken within the Investment Bank.

For a discussion of market risk management, including the model review process, see Market risk management on pages 75–78 of this Annual Report. For further details regarding the Firm's valuation methodologies, see Note 29 on pages 126–128 of this Annual Report.

Loans held-for-sale

The fair value of loans in the held-for-sale portfolio is generally based upon observable market prices of similar instruments, including bonds, credit derivatives and loans with similar characteristics. If market prices are not available, fair value is based upon the estimated cash flows adjusted for credit risk that is discounted using a rate appropriate for each maturity that incorporates the effects of interest rate changes.

Commodities inventory

The majority of commodities inventory includes bullion and base metals where fair value is determined by reference to prices in highly active and liquid markets. The fair value of other commodities inventory is determined primarily using prices and data derived from less liquid and developing markets where the underlying commodities are traded.

Private equity investments

Valuation of private investments held primarily by the Private Equity business within Corporate requires significant management judgment due to the absence of quoted market prices, inherent lack of liquidity and the long-term nature of such assets. Private investments are initially valued based upon cost. The carrying values of private investments are adjusted from cost to reflect both positive and negative changes evidenced by financing events with third-party capital providers. In addition, these investments are subject to ongoing impairment reviews by Private Equity's senior investment professionals. A variety of factors are reviewed and monitored to assess impairment including, but not limited to, operating performance and future expectations of the particular portfolio investment, industry valuations of comparable public companies, changes in market outlook and the third-party financing environment over time. The Valuation Control Group within the Finance area is responsible for reviewing the accuracy of the carrying values of private investments held by Private Equity. For additional information about private equity investments,

see the Private equity risk management discussion on page 80 and Note 9 on pages 103–105 of this Annual Report.

MSRs and certain other retained interests in securitizations
MSRs and certain other retained interests from securitization activities do not trade in an active, open market with readily observable prices. For example, sales of MSRs do occur, but the precise terms and conditions are typically not readily available. Accordingly, the Firm estimates the fair value of MSRs and certain other retained interests in securitizations using discounted future cash flow (DCF) models.

For MSRs, the model considers portfolio characteristics, contractually specified servicing fees and prepayment assumptions, delinquency rates, late charges, other ancillary revenues, costs to service and other economic factors. During the fourth quarter of 2005, the Company began utilizing an option adjusted spread ("OAS") valuation approach when determining the fair value of MSRs. This approach, when used in conjunction with the Firm's proprietary prepayment model, projects MSR cash flows over multiple interest rate scenarios, which are then discounted at risk-adjusted rates, to estimate an expected fair value of the MSRs. The OAS valuation approach is expected to provide improved estimates of fair value. The initial valuation of MSRs under OAS did not have a material impact to the Firm's financial statements.

For certain other retained interests in securitizations (such as interest only strips), a single interest rate path DCF model is used and generally includes assumptions based upon projected finance charges related to the securitized assets, estimated net credit losses, prepayment assumptions, and contractual interest paid to the third-party investors. Changes in the assumptions used may have a significant impact on the Firm's valuation of retained interests.

For both MSRs and certain other retained interests in securitizations, the Firm compares its fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience. Management believes that the assumptions used to estimate fair values are supportable and reasonable.

For a further discussion of the most significant assumptions used to value retained interests in securitizations and MSRs, as well as the applicable stress tests for those assumptions, see Notes 13 and 15 on pages 108–111 and 114–116, respectively, of this Annual Report.

Goodwill impairment
Under SFAS 142, goodwill must be allocated to reporting units and tested for impairment. The Firm tests goodwill for impairment at least annually or more frequently if events or circumstances, such as adverse changes in the business climate, indicate that there may be justification for conducting an interim test. Impairment testing is performed at the reporting-unit level (which is generally one level below the six major business segments identified in Note 31 on pages 130–131 of this Annual Report, plus Private Equity which is included in Corporate). The first part of the test is a comparison, at the reporting unit level, of the fair value of each reporting unit to its carrying amount, including goodwill. If the fair value is less than the carrying value, then the second part of the test is needed to measure the amount of potential goodwill impairment. The implied fair value of the reporting unit goodwill is calculated and compared to the carrying amount of goodwill recorded in the Firm's financial records. If the carrying value of reporting unit goodwill exceeds the implied fair value of that goodwill, then the Firm would recognize an impairment loss in the amount of the difference, which would be recorded as a charge against Net income.

The fair values of the reporting units are determined using discounted cash flow models based upon each reporting unit's internal forecasts. In addition, analysis using market-based trading and transaction multiples, where available, are used to assess the reasonableness of the valuations derived from the discounted cash flow models.

Goodwill was not impaired as of December 31, 2005 or 2004, nor was any goodwill written off due to impairment during the years ended December 31, 2005, 2004 and 2003. See Note 15 on page 114 of this Annual Report for additional information related to the nature and accounting for goodwill and the carrying values of goodwill by major business segment.

Accounting and reporting developments

Accounting for income taxes – repatriation of foreign earnings under the American Jobs Creation Act of 2004
On October 22, 2004, the American Jobs Creation Act of 2004 (the "Act") was signed into law. The Act creates a temporary incentive for U.S. companies to repatriate accumulated foreign earnings at a substantially reduced U.S. effective tax rate by providing a dividends received deduction on the repatriation of certain foreign earnings to the U.S. taxpayer (the "repatriation provision"). The new deduction is subject to a number of limitations and requirements.

In the fourth quarter of 2005, the Firm applied the repatriation provision to $1.9 billion of cash from foreign earnings, resulting in a net tax benefit of $55 million. The $1.9 billion of cash will be used in accordance with the Firm's domestic reinvestment plan pursuant to the guidelines set forth in the Act.

Accounting for share-based payments
In December 2004, the FASB issued SFAS 123R, which revises SFAS 123 and supersedes APB 25. In March 2005, the Securities and Exchange Commission ("SEC") issued SAB 107 which provides interpretive guidance on SFAS 123R. Accounting and reporting under SFAS 123R is generally similar to the SFAS 123 approach. However, SFAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based upon their fair values. Pro forma disclosure is no longer an alternative. SFAS 123R permits adoption using one of two methods – modified prospective or modified retrospective. In April 2005, the SEC approved a new rule that, for public companies, delays the effective date of SFAS 123R to no later than January 1, 2006. The Firm adopted SFAS 123R on January 1, 2006, under the modified prospective method.

The Firm continued to account for certain stock options that were outstanding as of December 31, 2002, under APB 25 using the intrinsic value method. Therefore, compensation expense for some previously granted awards that was not recognized under SFAS 123 will be recognized commencing January 1, 2006, under SFAS 123R. Had the Firm adopted SFAS 123R in prior periods, the impact would have approximated that shown in the SFAS 123 pro forma disclosures in Note 7 on pages 100–102 of this Annual Report, which presents net income and earnings per share as if all outstanding awards were accounted for at fair value.

Prior to adopting SFAS 123R, the Firm's accounting policy for share-based payment awards granted to retirement-eligible employees was to recognize

compensation cost over the awards' stated service period. For awards granted to retirement-eligible employees in January 2006, which are subject to SFAS 123R, the Firm will recognize compensation expense on the grant date without giving consideration to the impact of post-employment restrictions. This will result in an increase in compensation expense for the fiscal quarter ended March 31, 2006 of approximately $300 million, as compared with the expense that would have been recognized under the Firm's prior accounting policy. The Firm will also accrue in 2006 the estimated cost of stock awards to be granted to retirement-eligible employees in January 2007.

Accounting for conditional asset retirement obligations
In March 2005, FASB issued FIN 47 to clarify the term "conditional asset retirement obligation" as used in SFAS 143. Conditional asset retirement obligations are legal obligations to perform an asset retirement activity in which the timing and/or method of settlement are conditional based upon a future event that may or may not be within the control of the company. The obligation to perform the asset retirement activity is unconditional even though uncertainty exists about the timing and/or method of settlement. FIN 47 clarifies that a company is required to recognize a liability for the fair value of the conditional asset retirement obligation if the fair value of the liability can be reasonably estimated and provides guidance for determining when a company would have sufficient information to reasonably estimate the fair value of the obligation. The Firm adopted FIN 47 on December 31, 2005. The implementation did not have a material impact on its financial position or results of operations.

Accounting for Certain Hybrid Financial Instruments – an Amendment of FASB Statements No. 133 and 140
In February 2006, the FASB issued SFAS 155, which applies to certain "hybrid financial instruments," which are instruments that contain embedded derivatives. The new standard establishes a requirement to evaluate beneficial interests in securitized financial assets to determine if the interests represent freestanding derivatives or are hybrid financial instruments containing embedded derivatives requiring bifurcation.

This new standard also permits an election for fair value remeasurement of any hybrid financial instrument containing an embedded derivative that otherwise would require bifurcation under SFAS 133. The fair value election can be applied on an instrument-by-instrument basis to existing instruments at the date of adoption and can be applied to new instruments on a prospective basis.

Currently, the Firm is planning to adopt this standard effective January 1, 2006. In addition, the Firm is assessing to which qualifying existing and newly issued instruments it will apply the fair value election. Implementation of this standard is not expected to have a material impact on the Firm's financial position or results of operations.

Nonexchange-traded commodity derivative contracts at fair value

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, which are primarily based upon internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related contracts. The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2005:

For the year ended December 31, 2005 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2005	**$ 1,449**	**$ 999**
Effect of legally enforceable master netting agreements	**2,304**	**2,233**
Gross fair value of contracts outstanding at January 1, 2005	**3,753**	**3,232**
Contracts realized or otherwise settled during the period	**(12,589)**	**(10,886)**
Fair value of new contracts	**37,518**	**30,691**
Changes in fair values attributable to changes in valuation techniques and assumptions	**—**	**—**
Other changes in fair value	**(11,717)**	**(7,635)**
Gross fair value of contracts outstanding at December 31, 2005	**16,965**	**15,402**
Effect of legally enforceable master netting agreements	**(10,014)**	**(10,078)**
Net fair value of contracts outstanding at December 31, 2005	**$ 6,951**	**$ 5,324**

The following table indicates the schedule of maturities of nonexchange-traded commodity derivative contracts at December 31, 2005:

At December 31, 2005 (in millions)	Asset position	Liability position
Maturity less than 1 year	**$ 6,682**	**$ 6,254**
Maturity 1–3 years	**8,231**	**7,590**
Maturity 4–5 years	**1,616**	**1,246**
Maturity in excess of 5 years	**436**	**312**
Gross fair value of contracts outstanding at December 31, 2005	**16,965**	**15,402**
Effects of legally enforceable master netting agreements	**(10,014)**	**(10,078)**
Net fair value of contracts outstanding at December 31, 2005	**$ 6,951**	**$ 5,324**

Management's report on internal control over financial reporting

JPMorgan Chase & Co.

Management of JPMorgan Chase & Co. is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive, principal operating and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

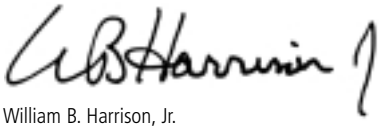
JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2005. In making the assessment, management used the framework in "Internal Control – Integrated Framework" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2005, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2005.

Management's assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2005 has been audited by PricewaterhouseCoopers LLP, JPMorgan Chase's independent registered public accounting firm, who also audited the Firm's financial statements as of and for the year ended December 31, 2005, as stated in their report which is included herein.



William B. Harrison, Jr.
Chairman of the Board



James Dimon
President and Chief Executive Officer

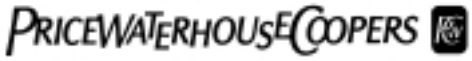


Michael J. Cavanagh
Executive Vice President and Chief Financial Officer

February 24, 2006

Report of independent registered public accounting firm

JPMorgan Chase & Co.



PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Report of Independent Registered Public Accounting Firm
To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

We have completed integrated audits of JPMorgan Chase & Co.'s 2005 and 2004 consolidated financial statements and of its internal control over financial reporting as of December 31, 2005, and an audit of its 2003 consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our opinions on JPMorgan Chase & Co.'s 2005, 2004, and 2003 consolidated financial statements and on its internal control over financial reporting as of December 31, 2005, based on our audits, are presented below.

Consolidated financial statements

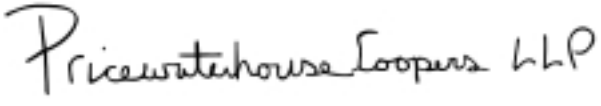
In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, changes in stockholders' equity and cash flows present fairly, in all material respects, the financial position of the JPMorgan Chase & Co. and its subsidiaries (the "Company") at December 31, 2005 and 2004, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2005 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Internal control over financial reporting

Also, in our opinion, management's assessment, included in the accompanying Management's report on internal control over financial reporting, that the Company maintained effective internal control over financial reporting as of December 31, 2005 based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), is fairly stated, in all material respects, based on those criteria. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2005, based on criteria established in Internal Control – Integrated Framework issued by the COSO. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express opinions on management's assessment and on the effectiveness of the Company's internal control over financial reporting based on our audit. We conducted our audit of internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



February 24, 2006

Consolidated statements of income

JPMorgan Chase & Co.

Year ended December 31, (in millions, except per share data)[a]	2005	2004	2003
Revenue			
Investment banking fees	**$ 4,088**	$ 3,537	$ 2,890
Trading revenue	**5,860**	3,612	4,427
Lending & deposit related fees	**3,389**	2,672	1,727
Asset management, administration and commissions	**10,390**	8,165	6,039
Securities/private equity gains	**473**	1,874	1,479
Mortgage fees and related income	**1,054**	806	790
Credit card income	**6,754**	4,840	2,466
Other income	**2,694**	830	601
Noninterest revenue	**34,702**	26,336	20,419
Interest income	**45,200**	30,595	24,044
Interest expense	**25,369**	13,834	11,079
Net interest income	**19,831**	16,761	12,965
Total net revenue	**54,533**	43,097	33,384
Provision for credit losses	**3,483**	2,544	1,540
Noninterest expense			
Compensation expense	**18,255**	14,506	11,387
Occupancy expense	**2,299**	2,084	1,912
Technology and communications expense	**3,624**	3,702	2,844
Professional & outside services	**4,224**	3,862	2,875
Marketing	**1,917**	1,335	710
Other expense	**3,705**	2,859	1,694
Amortization of intangibles	**1,525**	946	294
Merger costs	**722**	1,365	—
Litigation reserve charge	**2,564**	3,700	100
Total noninterest expense	**38,835**	34,359	21,816
Income before income tax expense	**12,215**	6,194	10,028
Income tax expense	**3,732**	1,728	3,309
Net income	**$ 8,483**	$ 4,466	$ 6,719
Net income applicable to common stock	**$ 8,470**	$ 4,414	$ 6,668
Net income per common share			
Basic earnings per share	**$ 2.43**	$ 1.59	$ 3.32
Diluted earnings per share	**2.38**	1.55	3.24
Average basic shares	**3,492**	2,780	2,009
Average diluted shares	**3,557**	2,851	2,055
Cash dividends per common share	**$ 1.36**	$ 1.36	$ 1.36

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

The Notes to consolidated financial statements are an integral part of these statements.

Consolidated balance sheets

JPMorgan Chase & Co.

At December 31, (in millions, except share data)	2005	2004
Assets		
Cash and due from banks	**$ 36,670**	$ 35,168
Deposits with banks	**21,661**	21,680
Federal funds sold and securities purchased under resale agreements	**133,981**	101,354
Securities borrowed	**74,604**	47,428
Trading assets (including assets pledged of $79,657 at December 31, 2005, and $77,266 at December 31, 2004)	**298,377**	288,814
Securities:		
Available-for-sale (including assets pledged of $17,614 at December 31, 2005, and $26,881 at December 31, 2004)	**47,523**	94,402
Held-to-maturity (fair value: $80 at December 31, 2005, and $117 at December 31, 2004)	**77**	110
Interests in purchased receivables	**29,740**	31,722
Loans	**419,148**	402,114
Allowance for loan losses	**(7,090)**	(7,320)
Loans, net of Allowance for loan losses	**412,058**	394,794
Private equity investments	**6,374**	7,735
Accrued interest and accounts receivable	**22,421**	21,409
Premises and equipment	**9,081**	9,145
Goodwill	**43,621**	43,203
Other intangible assets:		
Mortgage servicing rights	**6,452**	5,080
Purchased credit card relationships	**3,275**	3,878
All other intangibles	**4,832**	5,726
Other assets	**48,195**	45,600
Total assets	**$ 1,198,942**	$ 1,157,248
Liabilities		
Deposits:		
U.S. offices:		
Noninterest-bearing	**$ 135,599**	$ 129,257
Interest-bearing	**287,774**	261,673
Non-U.S. offices:		
Noninterest-bearing	**7,476**	6,931
Interest-bearing	**124,142**	123,595
Total deposits	**554,991**	521,456
Federal funds purchased and securities sold under repurchase agreements	**125,925**	127,787
Commercial paper	**13,863**	12,605
Other borrowed funds	**10,479**	9,039
Trading liabilities	**145,930**	151,207
Accounts payable, accrued expenses and other liabilities (including the Allowance for lending-related commitments of $400 at December 31, 2005, and $492 at December 31, 2004)	**78,460**	75,722
Beneficial interests issued by consolidated VIEs	**42,197**	48,061
Long-term debt	**108,357**	95,422
Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities	**11,529**	10,296
Total liabilities	**1,091,731**	1,051,595
Commitments and contingencies (see Note 25 of this Annual Report)		
Stockholders' equity		
Preferred stock	**139**	339
Common stock (authorized 9,000,000,000 shares at December 31, 2005 and 2004; issued 3,618,189,597 shares and 3,584,747,502 shares at December 31, 2005 and 2004, respectively)	**3,618**	3,585
Capital surplus	**74,994**	72,801
Retained earnings	**33,848**	30,209
Accumulated other comprehensive income (loss)	**(626)**	(208)
Treasury stock, at cost (131,500,350 shares at December 31, 2005, and 28,556,534 shares at December 31, 2004)	**(4,762)**	(1,073)
Total stockholders' equity	**107,211**	105,653
Total liabilities and stockholders' equity	**$ 1,198,942**	$ 1,157,248

The Notes to consolidated financial statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity

JPMorgan Chase & Co.

Year ended December 31, (in millions, except per share data)[a]	2005	2004	2003
Preferred stock			
Balance at beginning of year	**$ 339**	$ 1,009	$ 1,009
Redemption of preferred stock	**(200)**	(670)	—
Balance at end of year	**139**	339	1,009
Common stock			
Balance at beginning of year	**3,585**	2,044	2,024
Issuance of common stock	**33**	72	20
Issuance of common stock for purchase accounting acquisitions	**—**	1,469	—
Balance at end of year	**3,618**	3,585	2,044
Capital surplus			
Balance at beginning of year	**72,801**	13,512	13,222
Issuance of common stock and options for purchase accounting acquisitions	**—**	55,867	—
Shares issued and commitments to issue common stock for employee stock-based awards and related tax effects	**2,193**	3,422	290
Balance at end of year	**74,994**	72,801	13,512
Retained earnings			
Balance at beginning of year	**30,209**	29,681	25,851
Net income	**8,483**	4,466	6,719
Cash dividends declared:			
Preferred stock	**(13)**	(52)	(51)
Common stock ($1.36 per share each year)	**(4,831)**	(3,886)	(2,838)
Balance at end of year	**33,848**	30,209	29,681
Accumulated other comprehensive income (loss)			
Balance at beginning of year	**(208)**	(30)	1,227
Other comprehensive income (loss)	**(418)**	(178)	(1,257)
Balance at end of year	**(626)**	(208)	(30)
Treasury stock, at cost			
Balance at beginning of year	**(1,073)**	(62)	(1,027)
Purchase of treasury stock	**(3,412)**	(738)	—
Reissuance from treasury stock	**—**	—	1,082
Share repurchases related to employee stock-based awards	**(277)**	(273)	(117)
Balance at end of year	**(4,762)**	(1,073)	(62)
Total stockholders' equity	**$ 107,211**	$105,653	$ 46,154
Comprehensive income			
Net income	**$ 8,483**	$ 4,466	$ 6,719
Other comprehensive income (loss)	**(418)**	(178)	(1,257)
Comprehensive income	**$ 8,065**	$ 4,288	$ 5,462

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

The Notes to consolidated financial statements are an integral part of these statements.

Consolidated statements of cash flows

JPMorgan Chase & Co.

Year ended December 31, (in millions)[a]	2005	2004	2003
Operating activities			
Net income	**$ 8,483**	$ 4,466	$ 6,719
Adjustments to reconcile net income to net cash (used in) provided by operating activities:			
Provision for credit losses	**3,483**	2,544	1,540
Depreciation and amortization	**4,318**	3,835	3,101
Deferred tax (benefit) provision	**(1,791)**	(827)	1,428
Investment securities (gains) losses	**1,336**	(338)	(1,446)
Private equity unrealized (gains) losses	**55**	(766)	(77)
Gain on dispositions of businesses	**(1,254)**	(17)	(68)
Net change in:			
Trading assets	**(3,845)**	(48,703)	(2,671)
Securities borrowed	**(27,290)**	(4,816)	(7,691)
Accrued interest and accounts receivable	**(1,934)**	(2,391)	1,809
Other assets	**(9)**	(17,588)	(9,848)
Trading liabilities	**(12,578)**	29,764	15,769
Accounts payable, accrued expenses and other liabilities	**5,532**	13,277	5,973
Other operating adjustments	**1,267**	(245)	63
Net cash (used in) provided by operating activities	**(24,227)**	(21,805)	14,601
Investing activities			
Net change in:			
Deposits with banks	**104**	(4,196)	(1,233)
Federal funds sold and securities purchased under resale agreements	**(32,469)**	(13,101)	(11,059)
Other change in loans	**(148,894)**	(136,851)	(171,779)
Held-to-maturity securities:			
Proceeds	**33**	66	221
Available-for-sale securities:			
Proceeds from maturities	**31,053**	45,197	10,548
Proceeds from sales	**82,902**	134,534	315,738
Purchases	**(81,749)**	(173,745)	(301,854)
Proceeds due to the sale and securitization of loans	**126,310**	108,637	170,870
Net cash (used) received in business acquisitions or dispositions	**(1,039)**	13,864	(575)
All other investing activities, net	**4,796**	2,519	1,541
Net cash (used in) provided by investing activities	**(18,953)**	(23,076)	12,418
Financing activities			
Net change in:			
Deposits	**31,415**	52,082	21,851
Federal funds purchased and securities sold under repurchase agreements	**(1,862)**	7,065	(56,017)
Commercial paper and other borrowed funds	**2,618**	(4,343)	555
Proceeds from the issuance of long-term debt and capital debt securities	**43,721**	25,344	17,195
Repayments of long-term debt and capital debt securities	**(26,883)**	(16,039)	(8,316)
Proceeds from the issuance of stock and stock-related awards	**682**	848	1,213
Redemption of preferred stock	**(200)**	(670)	—
Treasury stock purchased	**(3,412)**	(738)	—
Cash dividends paid	**(4,878)**	(3,927)	(2,865)
All other financing activities, net	**3,868**	(26)	133
Net cash provided by (used in) financing activities	**45,069**	59,596	(26,251)
Effect of exchange rate changes on cash and due from banks	**(387)**	185	282
Net increase (decrease) in cash and due from banks	**1,502**	14,900	1,050
Cash and due from banks at the beginning of the year	**35,168**	20,268	19,218
Cash and due from banks at the end of the year	**$ 36,670**	$ 35,168	$ 20,268
Cash interest paid	**$ 24,583**	$ 13,384	$ 10,976
Cash income taxes paid	**$ 4,758**	$ 1,477	$ 1,337

Note: In 2004, the fair values of noncash assets acquired and liabilities assumed in the Merger with Bank One were $320.9 billion and $277.0 billion, respectively, and approximately 1,469 million shares of common stock, valued at approximately $57.3 billion, were issued in connection with the merger with Bank One.

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

The Notes to consolidated financial statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States, with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing, investment management, private banking and private equity. For a discussion of the Firm's business segment information, see Note 31 on pages 130–131 of this Annual Report.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the United States of America ("U.S. GAAP") and prevailing industry practices. Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by bank regulatory authorities.

Certain amounts in the prior periods have been reclassified to conform to the current presentation.

Consolidation

The consolidated financial statements include accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

The usual condition for a controlling financial interest is ownership of a majority of the voting interests of an entity. However, a controlling financial interest may also exist in entities, such as special purpose entities ("SPEs"), through arrangements that do not involve controlling voting interests.

SPEs are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. They are, for example, critical to the functioning of the mortgage- and asset-backed securities and commercial paper markets. SPEs may be organized as trusts, partnerships or corporations and are typically set up for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction describe how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs can be structured to be bankruptcy-remote, thereby insulating investors from the impact of the creditors of other entities, including the seller of the assets.

There are two different accounting frameworks applicable to SPEs: the qualifying SPE ("QSPE") framework under SFAS 140; and the variable interest entity ("VIE") framework under FIN 46R. The applicable framework depends on the nature of the entity and the Firm's relation to that entity. The QSPE framework is applicable when an entity transfers (sells) financial assets to an SPE meeting certain criteria defined in SFAS 140. These criteria are designed to ensure that the activities of the entity are essentially predetermined at the inception of the vehicle and that the transferor of the financial assets cannot exercise control over the entity and the assets therein. Entities meeting these criteria are not consolidated by the transferor or other counterparties, as long as they do not have the unilateral ability to liquidate or to cause the entity to no longer meet the QSPE criteria. The Firm primarily follows the QSPE model for securitizations of its residential and commercial mortgages, credit card loans and automobile loans. For further details, see Note 13 on pages 108–111 of this Annual Report.

When the SPE does not meet the QSPE criteria, consolidation is assessed pursuant to FIN 46R. Under FIN 46R, a VIE is defined as an entity that: (1) lacks enough equity investment at risk to permit the entity to finance its activities without additional subordinated financial support from other parties; (2) has equity owners that lack the right to make significant decisions affecting the entity's operations; and/or (3) has equity owners that do not have an obligation to absorb or the right to receive the entity's losses or returns.

FIN 46R requires a variable interest holder (i.e., a counterparty to a VIE) to consolidate the VIE if that party will absorb a majority of the expected losses of the VIE, receive the majority of the expected residual returns of the VIE, or both. This party is considered the primary beneficiary. In making this determination, the Firm thoroughly evaluates the VIE's design, capital structure and relationships among variable interest holders. When the primary beneficiary cannot be identified through a qualitative analysis, the Firm performs a quantitative analysis, which computes and allocates expected losses or residual returns to variable interest holders. The allocation of expected cash flows in this analysis is based upon the relative contractual rights and preferences of each interest holder in the VIE's capital structure. For further details, see Note 14 on pages 111–113 of this Annual Report.

All retained interests and significant transactions between the Firm, QSPEs and nonconsolidated VIEs are reflected on JPMorgan Chase's Consolidated balance sheets or in the Notes to consolidated financial statements.

Investments in companies that are considered to be voting-interest entities under FIN 46R in which the Firm has significant influence over operating and financing decisions are accounted for in accordance with the equity method of accounting. These investments are generally included in Other assets, and the Firm's share of income or loss is included in Other income. For a discussion of private equity investments, see Note 9 on pages 103–105 of this Annual Report.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included in the Consolidated balance sheets.

Use of estimates in the preparation of consolidated financial statements

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenues and expenses denominated in foreign currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in Other comprehensive income (loss) within Stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar and operations in highly inflationary environments, are reported in the Consolidated statements of income.

Statements of cash flows

For JPMorgan Chase's Consolidated statements of cash flows, cash and cash equivalents are defined as those amounts included in Cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's significant accounting policies and the Note and page where a detailed description of each policy can be found:

Trading activities	Note 3	Page 94
Other noninterest revenue	Note 4	Page 95
Pension and other postretirement employee benefit plans	Note 6	Page 96
Employee stock-based incentives	Note 7	Page 100
Securities and private equity investments	Note 9	Page 103
Securities financing activities	Note 10	Page 105
Loans	Note 11	Page 106
Allowance for credit losses	Note 12	Page 107
Loan securitizations	Note 13	Page 108
Variable interest entities	Note 14	Page 111
Goodwill and other intangible assets	Note 15	Page 114
Premises and equipment	Note 16	Page 116
Income taxes	Note 22	Page 120
Accounting for derivative instruments and hedging activities	Note 26	Page 123
Off–balance sheet lending-related financial instruments and guarantees	Note 27	Page 124
Fair value of financial instruments	Note 29	Page 126

Note 2 – Business changes and developments

Merger with Bank One Corporation

Bank One Corporation merged with and into JPMorgan Chase (the "Merger") on July 1, 2004. As a result of the Merger, each outstanding share of common stock of Bank One was converted in a stock-for-stock exchange into 1.32 shares of common stock of JPMorgan Chase. JPMorgan Chase stockholders kept their shares, which remained outstanding and unchanged as shares of JPMorgan Chase following the Merger. Key objectives of the Merger were to provide the Firm with a more balanced business mix and greater geographic diversification. The Merger was accounted for using the purchase method of accounting, which requires that the assets and liabilities of Bank One be fair valued as of July 1, 2004. The purchase price to complete the Merger was $58.5 billion.

As part of the Merger, certain accounting policies and practices were conformed, which resulted in $976 million of charges in 2004. The significant components of the conformity charges comprised a $1.4 billion charge related to the decertification of the seller's interest in credit card securitizations, and the benefit of a $584 million reduction in the allowance for credit losses as a result of conforming the wholesale and consumer credit provision methodologies.

The final purchase price of the Merger has been allocated to the assets acquired and liabilities assumed using their fair values as of the merger date. The computation of the purchase price and the allocation of the purchase price to the net assets of Bank One – based on their respective fair values as of July 1, 2004 – and the resulting goodwill are presented below.

(in millions, except per share amounts)	July 1, 2004	
Purchase price		
Bank One common stock exchanged	1,113	
Exchange ratio	1.32	
JPMorgan Chase common stock issued	1,469	
Average purchase price per JPMorgan Chase common share[a]	$ 39.02	
		$ 57,336
Fair value of employee stock awards and direct acquisition costs		1,210
Total purchase price		$ 58,546
Net assets acquired:		
Bank One stockholders' equity	$ 24,156	
Bank One goodwill and other intangible assets	(2,754)	
Subtotal	21,402	
Adjustments to reflect assets acquired at fair value:		
Loans and leases	(2,261)	
Private equity investments	(72)	
Identified intangibles	8,665	
Pension plan assets	(778)	
Premises and equipment	(417)	
Other assets	(267)	
Amounts to reflect liabilities assumed at fair value:		
Deposits	(373)	
Deferred income taxes	932	
Other postretirement benefit plan liabilities	(49)	
Other liabilities	(1,162)	
Long-term debt	(1,234)	
		24,386
Goodwill resulting from Merger[b]		$ 34,160

(a) The value of the Firm's common stock exchanged with Bank One shareholders was based on the average closing prices of the Firm's common stock for the two days prior to, and the two days following, the announcement of the Merger on January 14, 2004.

(b) Goodwill resulting from the Merger reflects adjustments of the allocation of the purchase price to the net assets acquired through June 30, 2005. Minor adjustments subsequent to June 30, 2005, are reflected in the December 31, 2005 Goodwill balance in Note 15 on page 114 of this Annual Report.

Condensed statement of net assets acquired

The following condensed statement of net assets acquired reflects the fair value of Bank One net assets as of July 1, 2004.

(in millions)	July 1, 2004
Assets	
Cash and cash equivalents	**$ 14,669**
Securities	**70,512**
Interests in purchased receivables	**30,184**
Loans, net of allowance for loan losses	**129,650**
Goodwill and other intangible assets	**42,825**
All other assets	**47,739**
Total assets	**$ 335,579**
Liabilities	
Deposits	**$ 164,848**
Short-term borrowings	**9,811**
All other liabilities	**61,494**
Long-term debt	**40,880**
Total liabilities	**277,033**
Net assets acquired	**$ 58,546**

Acquired, identifiable intangible assets

Components of the fair value of acquired, identifiable intangible assets as of July 1, 2004, were as follows:

	Fair value (in millions)	Weighted average life (in years)	Useful life (in years)
Core deposit intangibles	$ 3,650	5.1	Up to 10
Purchased credit card relationships	3,340	4.6	Up to 10
Other credit card–related intangibles	295	4.6	Up to 10
Other customer relationship intangibles	870	4.6–10.5	Up to 20
Subtotal	8,155	5.1	Up to 20
Indefinite-lived asset management intangibles	510	NA	NA
Total	$ 8,665		

Unaudited pro forma condensed combined financial information

The following unaudited pro forma condensed combined financial information presents the results of operations of the Firm had the Merger taken place at January 1, 2003.

Year ended December 31, (in millions, except per share)	2004	2003
Noninterest revenue	$ 31,175	$ 28,966
Net interest income	21,366	21,715
Total net revenue	52,541	50,681
Provision for credit losses	2,727	3,570
Noninterest expense	40,504	33,136
Income before income tax expense	9,310	13,975
Net income	$ 6,544	$ 9,330
Net income per common share:		
Basic	$ 1.85	$ 2.66
Diluted	1.81	2.61
Average common shares outstanding:		
Basic	3,510	3,495
Diluted	3,593	3,553

Other business events

Collegiate Funding Services

On March 1, 2006, JPMorgan Chase acquired, for approximately $663 million, Collegiate Funding Services, a leader in student loan servicing and consolidation. This acquisition will enable the Firm to create a comprehensive education finance business.

BrownCo

On November 30, 2005, JPMorgan Chase sold BrownCo, an on-line deep-discount brokerage business, to E*TRADE Financial for a cash purchase price of $1.6 billion. JPMorgan Chase recognized an after-tax gain of $752 million. BrownCo's results of operations are reported in the Asset & Wealth Management business segment; however, the gain on the sale, which is recorded in Other income in the Consolidated statements of income, is reported in the Corporate business segment.

Sears Canada credit card business

On November 15, 2005, JPMorgan Chase purchased Sears Canada Inc.'s credit card operation, including both the private-label card accounts and the co-branded Sears MasterCard® accounts. The credit card operation includes approximately 10 million accounts with $2.2 billion (CAD$2.5 billion) in managed loans. Sears Canada and JPMorgan Chase entered into an ongoing arrangement under which JPMorgan Chase will offer private-label and co-branded credit cards to both new and existing customers of Sears Canada.

Chase Merchant Services, Paymentech integration

On October 5, 2005, JPMorgan Chase and First Data Corp. completed the integration of the companies' jointly owned Chase Merchant Services and Paymentech merchant businesses, to be operated under the name of Chase Paymentech Solutions, LLC. The joint venture is the largest financial transaction processor in the U.S. for businesses accepting credit card payments via traditional point of sale, Internet, catalog and recurring billing. As a result of the integration into a joint venture, Paymentech has been deconsolidated and JPMorgan Chase's ownership interest in this joint venture is accounted for in accordance with the equity method of accounting.

Neovest Holdings, Inc.

On September 1, 2005, JPMorgan Chase completed its acquisition of Neovest Holdings, Inc., a provider of high-performance trading technology and direct market access. This transaction will enable the Investment Bank to offer a leading, broker-neutral trading platform across asset classes to institutional investors, asset managers and hedge funds.

Vastera

On April 1, 2005, JPMorgan Chase acquired Vastera, a provider of global trade management solutions, for approximately $129 million. Vastera's business was combined with the Logistics and Trade Services businesses of TSS' Treasury Services unit. Vastera automates trade management processes associated with the physical movement of goods internationally; the acquisition enables TS to offer management of information and processes in support of physical goods movement, together with financial settlement.

JPMorgan Partners

On March 1, 2005, the Firm announced that the management team of JPMorgan Partners, LLC, a private equity unit of the Firm, will become independent when it completes the investment of the current $6.5 billion Global Fund, which it advises. The buyout and growth equity professionals of JPMorgan Partners will form a new independent firm, CCMP Capital, LLC, and the venture professionals will separately form a new independent firm, Panorama Capital, LLC. JPMorgan Chase has committed to invest the lesser of $875 million or 24.9% of the limited partnership interests in the fund to be raised by CCMP Capital, and has committed to invest the lesser of $50 million or 24.9% of the limited partnership interests in the fund to be raised by Panorama Capital. The investment professionals of CCMP and Panorama will continue to manage the JPMP investments pursuant to a management agreement with the Firm.

Cazenove

On February 28, 2005, JPMorgan Chase and Cazenove Group plc ("Cazenove") formed a business partnership which combined Cazenove's investment banking business and JPMorgan Chase's U.K.-based investment banking business in order to provide investment banking services in the United Kingdom and Ireland. The new company is called JPMorgan Cazenove Holdings.

Other acquisitions

During 2004, JPMorgan Chase purchased the Electronic Financial Services ("EFS") business from Citigroup and acquired a majority interest in hedge fund manager Highbridge Capital Management ("Highbridge").

Note 3 – Trading activities

Trading assets include debt and equity securities held for trading purposes that JPMorgan Chase owns ("long" positions). Trading liabilities include debt and equity securities that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase securities at a future date to cover the short positions. Included in Trading assets and Trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. These amounts include the derivative assets and liabilities net of cash received and paid, respectively, under legally enforceable master netting agreements. At December 31, 2005, the amount of cash received and paid was approximately $26.7 billion and $18.9 billion, respectively. At December 31, 2004, the amount of cash received and paid was approximately $32.2 billion and $22.0 billion, respectively. Trading positions are carried at fair value on the Consolidated balance sheets.

Trading revenue

Year ended December 31,[a] (in millions)	**2005**	2004	2003
Fixed income and other[b]	**$ 4,554**	$ 2,976	$ 4,046
Equities[c]	**1,271**	797	764
Credit portfolio[d]	**35**	(161)	(383)
Total	**$ 5,860**	$ 3,612	$ 4,427

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Includes bonds and commercial paper and various types of interest rate derivatives as well as foreign exchange and commodities.
(c) Includes equity securities and equity derivatives.
(d) Includes credit derivatives.

Trading assets and liabilities

The following table presents the fair value of Trading assets and Trading liabilities for the dates indicated:

December 31, (in millions)	**2005**	2004
Trading assets		
Debt and equity instruments:		
U.S. government and federal agency obligations	**$ 16,283**	$ 16,867
U.S. government-sponsored enterprise obligations	**24,172**	23,513
Obligations of state and political subdivisions	**9,887**	3,486
Certificates of deposit, bankers' acceptances and commercial paper	**5,652**	7,341
Debt securities issued by non-U.S. governments	**48,671**	50,699
Corporate securities and other	**143,925**	120,926
Total debt and equity instruments	**248,590**	222,832
Derivative receivables:		
Interest rate	**30,416**	45,892
Foreign exchange	**2,855**	7,939
Equity	**5,575**	6,120
Credit derivatives	**3,464**	2,945
Commodity	**7,477**	3,086
Total derivative receivables	**49,787**	65,982
Total trading assets	**$ 298,377**	$ 288,814
Trading liabilities		
Debt and equity instruments[a]	**$ 94,157**	$ 87,942
Derivative payables:		
Interest rate	**28,488**	41,075
Foreign exchange	**3,453**	8,969
Equity	**11,539**	9,096
Credit derivatives	**2,445**	2,499
Commodity	**5,848**	1,626
Total derivative payables	**51,773**	63,265
Total trading liabilities	**$ 145,930**	$ 151,207

(a) Primarily represents securities sold, not yet purchased.

Average Trading assets and liabilities were as follows for the periods indicated:

Year ended December 31,[a] (in millions)	**2005**	2004	2003
Trading assets – debt and equity instruments	**$ 237,370**	$ 200,467	$ 154,597
Trading assets – derivative receivables	**57,365**	59,521	85,628
Trading liabilities – debt and equity instruments[b]	**$ 93,102**	$ 82,204	$ 72,877
Trading liabilities – derivative payables	**55,723**	52,761	67,783

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Primarily represents securities sold, not yet purchased.

Note 4 – Other noninterest revenue

Investment banking fees

This revenue category includes advisory and equity and debt underwriting fees. Advisory fees are recognized as revenue when related services are performed. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee (e.g., the fee is not contingent upon the customer obtaining financing). Underwriting fees are net of syndicate expenses. In addition, the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria.

The following table presents the components of Investment banking fees:

Year ended December 31, (in millions)[a]	**2005**	2004	2003
Underwriting:			
Equity	**$ 864**	$ 780	$ 699
Debt	**1,969**	1,859	1,549
Total Underwriting	**2,833**	2,639	2,248
Advisory	**1,255**	898	642
Total	**$ 4,088**	$ 3,537	$ 2,890

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

Lending & deposit related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts, and other loan servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody and institutional trust services, brokerage services, insurance premiums and commissions and other products. These fees are recognized over the period in which the related service is provided.

Mortgage fees and related income

This revenue category includes fees and income derived from mortgage origination, sales and servicing, and includes the effect of risk management activities associated with the mortgage pipeline, warehouse and the mortgage servicing rights ("MSRs") asset (excluding gains and losses on the sale of Available-for-sale ("AFS") securities). Origination fees and gains or losses on loan sales are recognized in income upon sale. Mortgage servicing fees are recognized over the period the related service is provided, net of amortization. Valuation changes in the mortgage pipeline, warehouse, MSR asset and corresponding risk management instruments are generally adjusted through earnings as these changes occur. Net interest income and securities gains and losses on AFS securities used in mortgage-related risk management activities are not included in Mortgage fees and related income. For a further discussion of MSRs, see Note 15 on pages 114–116 of this Annual Report.

Credit card income

This revenue category includes interchange income from credit and debit cards, annual fees, and servicing fees earned in connection with securitization activities. Volume-related payments to partners and expenses for rewards programs are also recorded within Credit card income. Fee revenues are recognized as earned, except for annual fees, which are recognized over a 12-month period. Expenses related to rewards programs are recorded when earned by the customer.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous affinity organizations and co-brand partners, which grant to the Firm exclusive rights to market to their members or customers. These organizations and partners provide to the Firm their endorsement of the credit card programs, mailing lists, and may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from 3 to 10 years. The economic incentives the Firm pays to the endorsing organizations and partners typically include payments based upon new accounts, activation, charge volumes, and the cost of their marketing activities and awards.

The Firm recognizes the portion of payments based upon new accounts to the affinity organizations and co-brand partners, as deferred loan origination costs. The Firm defers these costs and amortizes them over 12 months. Payments based upon charge volumes and considered by the Firm as revenue sharing with the affinity organizations and co-brand partners are deducted from Credit card income as the related revenue is earned. The Firm expenses payments based upon marketing efforts performed by the endorsing organization or partner to activate a new account as incurred. These costs are recorded within Noninterest expense.

Note 5 – Interest income and interest expense

Details of Interest income and Interest expense were as follows:

Year ended December 31, (in millions)[a]	**2005**	2004	2003
Interest income			
Loans	**$ 26,062**	$ 16,771	$ 11,812
Securities	**3,129**	3,377	3,542
Trading assets	**9,117**	7,527	6,592
Federal funds sold and securities purchased under resale agreements	**4,125**	1,627	1,497
Securities borrowed	**1,154**	463	323
Deposits with banks	**680**	539	214
Interests in purchased receivables	**933**	291	64
Total interest income	**45,200**	30,595	24,044
Interest expense			
Interest-bearing deposits	**10,295**	4,630	3,604
Short-term and other liabilities	**9,542**	6,260	5,871
Long-term debt	**4,160**	2,466	1,498
Beneficial interests issued by consolidated VIEs	**1,372**	478	106
Total interest expense	**25,369**	13,834	11,079
Net interest income	**19,831**	16,761	12,965
Provision for credit losses	**3,483**	2,544	1,540
Net interest income after provision for credit losses	**$ 16,348**	$ 14,217	$ 11,425

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

Note 6 – Pension and other postretirement employee benefit plans

New U.S.-based postretirement plans were introduced in 2005 after the Bank One plans were merged into the heritage JPMorgan Chase plans as of December 31, 2004.

The Firm's defined benefit pension plans are accounted for in accordance with SFAS 87 and SFAS 88. The postretirement medical and life insurance plans are accounted for in accordance with SFAS 106.

The Firm uses a measurement date of December 31 for pension and other postretirement employee benefit plans. In addition, as of August 1, 2005, the U.S. postretirement medical and life insurance plan was remeasured to reflect a mid-year plan amendment and the final Medicare Part D regulations that were issued on January 21, 2005. For the Firm's defined benefit pension plan assets, fair value is used to determine the expected return on pension plan assets. For the Firm's other postretirement employee benefit plan assets, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on other postretirement employee benefit plan assets. Unrecognized net actuarial gains and losses and prior service costs associated with the U.S. defined benefit pension plan are amortized over the average future service period of plan participants, which is currently 10 years. For other postretirement employee benefit plans, unrecognized gains and losses are also amortized over the average future service period, which is currently 8 years. However, prior service costs associated with other postretirement employee benefit plans are recognized over the average years of service remaining to full eligibility age, which is currently 6 years.

Defined Benefit Pension Plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula, in the form of salary and interest credits, to determine the benefits to be provided at retirement, based upon eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after five years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based upon eligible compensation and years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable employee benefit and local tax laws. The Firm did not make any U.S. pension plan contributions in 2005 and based upon the current funded status of this plan, the Firm does not expect to make significant contributions in 2006. In 2004, the Firm made a cash contribution to its U.S. defined benefit pension plan of $1.1 billion, funding the plan to the maximum allowable amount under applicable tax law. Additionally, the Firm made cash contributions totaling $78 million and $40 million to fully fund the accumulated benefit obligations of certain non-U.S. defined benefit pension plans as of December 31, 2005 and 2004, respectively.

Postretirement medical and life insurance

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and qualifying U.S. employees. These benefits vary with length of service and date of hire and provide for limits on the Firm's share of covered medical benefits. The medical benefits are contributory, while the life insurance benefits are noncontributory. As of August 1, 2005, the eligibility requirements for U.S. employees to qualify for subsidized retiree medical coverage were revised and life insurance coverage was eliminated for active employees retiring after 2005. Postretirement medical benefits also are offered to qualifying U.K. employees.

In December 2003, the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (the "Act") was enacted. The Act established a prescription drug benefit under Medicare ("Medicare Part D") and a federal subsidy to sponsors of retiree health care benefit plans that provide a benefit that is at least actuarially equivalent to Medicare Part D. The Firm has determined that benefits provided to certain participants are at least actuarially equivalent to Medicare Part D and has reflected the effects of the subsidy in the financial statements and disclosures retroactive to the beginning of 2004 (July 1, 2004 for Bank One plans) in accordance with FSP SFAS 106-2.

JPMorgan Chase's U.S. postretirement benefit obligation is partially funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for net postretirement benefit claim payments and related administrative expenses. The U.K. postretirement benefit plan is unfunded.

The following tables present the funded status and amounts reported on the Consolidated balance sheets, the accumulated benefit obligation and the components of net periodic benefit costs reported in the Consolidated statements of income for the Firm's U.S. and non-U.S. defined benefit pension and postretirement benefit plans:

December 31, (in millions)	Defined benefit pension plans				Other postretirement benefit plans[c][d]	
	U.S.		Non-U.S.			
	2005	2004[b]	**2005**	2004[b]	**2005**	2004[b]
Change in benefit obligation						
Benefit obligation at beginning of year	**$ (7,594)**	$ (4,633)	**$ (1,969)**	$ (1,659)	**$ (1,577)**	$ (1,252)
Merger with Bank One	**—**	(2,497)	**—**	(25)	**—**	(216)
Cazenove business partnership	**—**	—	**(291)**	—	**—**	—
Benefits earned during the year	**(280)**	(251)	**(25)**	(17)	**(13)**	(15)
Interest cost on benefit obligations	**(431)**	(348)	**(104)**	(87)	**(81)**	(81)
Plan amendments	**—**	70	**—**	—	**117**	32
Employee contributions	**—**	—	**—**	—	**(44)**	(36)
Actuarial gain (loss)	**(122)**	(511)	**(310)**	(99)	**21**	(163)
Benefits paid	**723**	555	**66**	64	**187**	167
Curtailments	**28**	21	**—**	—	**(9)**	(8)
Special termination benefits	**—**	—	**—**	(12)	**(1)**	(2)
Foreign exchange impact and other	**—**	—	**255**	(134)	**5**	(3)
Benefit obligation at end of year	**$ (7,676)**	$ (7,594)	**$ (2,378)**	$ (1,969)	**$ (1,395)**	$ (1,577)
Change in plan assets						
Fair value of plan assets at beginning of year	**$ 9,637**	$ 4,866	**$ 1,889**	$ 1,603	**$ 1,302**	$ 1,149
Merger with Bank One	**—**	3,280	**—**	20	**—**	98
Cazenove business partnership	**—**	—	**252**	—	**—**	—
Actual return on plan assets	**703**	946	**308**	164	**43**	84
Firm contributions	**—**	1,100	**78**	40	**3**	2
Benefits paid	**(723)**	(555)	**(66)**	(64)	**(19)**	(31)
Foreign exchange impact and other	**—**	—	**(238)**	126	**—**	—
Fair value of plan assets at end of year	**$ 9,617**[e]	$ 9,637[e]	**$ 2,223**	$ 1,889	**$ 1,329**	$ 1,302
Reconciliation of funded status						
Funded status	**$ 1,941**	$ 2,043	**$ (155)**	$ (80)	**$ (66)**	$ (275)
Unrecognized amounts:[a]						
Net transition asset	**—**	—	**—**	(1)	**—**	—
Prior service cost	**40**	47	**3**	4	**(105)**	(23)
Net actuarial loss	**1,078**	997	**599**	590	**335**	321
Prepaid benefit cost reported in Other assets	**$ 3,059**	$ 3,087	**$ 447**[f]	$ 513[f]	**$ 164**	$ 23
Accumulated benefit obligation	**$ (7,274)**	$ (7,167)	**$ (2,303)**	$ (1,931)	**NA**	NA

(a) For pension benefit plans, the unrecognized net loss is primarily the result of declines in interest rates in recent years, as offset by recent asset gains and amounts recognized through amortization in expense. Other factors that contribute to this unrecognized amount include demographic experience, which differs from expected, and changes in other actuarial assumptions. For other postretirement benefit plans, the primary drivers of the cumulative unrecognized loss was the decline in the discount rate in recent years and the medical trend, which was higher than expected. These losses have been offset somewhat by the recognition of future savings attributable to Medicare Part D subsidy payments.
(b) Effective July 1, 2004, the Firm assumed the obligations of heritage Bank One's pension and postretirement plans. These plans were similar to those of JPMorgan Chase and were merged into the Firm's plans effective December 31, 2004.
(c) The Medicare Prescription Drug, Improvement and Modernization Act of 2003 resulted in a $35 million reduction in the Accumulated other postretirement benefit obligation as of January 1, 2004. During 2005, an additional $116 million reduction was reflected for recognition of the final Medicare Part D regulations issued on January 21, 2005.
(d) Includes postretirement benefit obligation of $44 million and $43 million and postretirement benefit liability (included in Accrued expenses) of $50 million and $57 million at December 31, 2005 and 2004, respectively, for the U.K. plan, which is unfunded.
(e) At December 31, 2005 and 2004, approximately $405 million and $358 million, respectively, of U.S. plan assets relate to surplus assets of group annuity contracts.
(f) At December 31, 2005 and 2004, Accrued expenses related to non-U.S. defined benefit pension plans that JPMorgan Chase elected not to prefund fully totaled $164 million and $124 million, respectively.

For the year ended December 31, (in millions)	Defined benefit pension plans						Other postretirement benefit plans		
	U.S.			Non-U.S.					
	2005	2004[a]	2003[b]	**2005**	2004[a]	2003[b]	**2005**[c]	2004[a][c]	2003[b]
Components of net periodic benefit cost									
Benefits earned during the period	**$ 280**	$ 251	$ 180	**$ 25**	$ 17	$ 16	**$ 13**	$ 15	$ 15
Interest cost on benefit obligations	**431**	348	262	**104**	87	74	**81**	81	73
Expected return on plan assets	**(694)**	(556)	(322)	**(109)**	(90)	(83)	**(90)**	(86)	(92)
Amortization of unrecognized amounts:									
Prior service cost	**5**	13	6	**1**	1	—	**(10)**	—	1
Net actuarial loss	**4**	23	62	**38**	44	35	**12**	—	—
Curtailment (gain) loss	**2**	7	2	**—**	—	8	**(17)**	8	2
Settlement (gain) loss	**—**	—	—	**—**	(1)	—	**—**	—	—
Special termination benefits	**—**	—	—	**—**	11	—	**1**	2	—
Reported net periodic benefit costs	**$ 28**	$ 86	$ 190	**$ 59**	$ 69	$ 50	**$ (10)**	$ 20	$ (1)

(a) Effective July 1, 2004, the Firm assumed the obligations of heritage Bank One's pension and postretirement plans. These plans were similar to those of JPMorgan Chase and were merged into the Firm's plans effective December 31, 2004.
(b) Heritage JPMorgan Chase results only for 2003.
(c) The Medicare Prescription Drug, Improvement and Modernization Act of 2003 resulted in a $15 million and $5 million reduction in 2005 and 2004, respectively, in net periodic benefit cost. The impact on 2005 cost was higher as a result of the final Medicare Part D regulations issued on January 21, 2005.

JPMorgan Chase has a number of other defined benefit pension plans (i.e., U.S. plans not subject to Title IV of the Employee Retirement Income Security Act). The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees earn service credits on compensation amounts above the maximum stipulated by law. This plan is a nonqualified, noncontributory U.S. pension plan with an unfunded liability at December 31, 2005 and 2004, in the amount of $273 million and $292 million, respectively. Compensation expense related to this pension plan totaled $21 million in 2005, $28 million in 2004 and $19 million in 2003.

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. pension and other postretirement employee benefit plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the portfolio allocation. Asset-class returns are developed using a forward-looking building-block approach and are not based strictly upon historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets.

In the U.K., which represents the most significant of the non-U.S. pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on pension plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class, selected by reference to the yield on long-term U.K. government bonds and AA-rated long-term corporate bonds, plus an equity risk premium above the risk-free rate.

In 2005, the discount rate used in determining the benefit obligation under the U.S. pension and other postretirement employee benefit plans was selected by reference to the yield on a portfolio of bonds whose redemptions and coupons closely match each of the plan's projected cash flows; such portfolio is derived from a broad-based universe of high quality corporate bonds as of the measurement date. In years in which this hypothetical bond portfolio generates excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. Prior to 2005, discount rates were selected by reference to the year-end Moody's corporate AA rate, as well as other high-quality indices with a duration that was similar to that of the respective plan's benefit obligations. The discount rate for the U.K. pension and other postretirement employee benefit plans was determined by matching the duration of the Firm's obligations with the corresponding duration from the yield curve of the year-end iBoxx £ corporate AA 15-year-plus bond index.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated benefit obligations, and the components of net periodic benefit costs for the Firm's U.S. and non-U.S. defined benefit pension and postretirement benefit plans, as of year-end.

	U.S.		Non-U.S.	
For the year ended December 31,	**2005**	2004	**2005**	2004
Weighted-average assumptions used to determine benefit obligations				
Discount rate:				
Pension	**5.70%**	5.75%	**2.00-4.70%**	2.00-5.30%
Postretirement benefit	**5.65**	5.75	**4.7**	5.3
Rate of compensation increase	**4.00**	4.50	**3.00-3.75**	1.75-3.75

	U.S.			Non-U.S.		
For the year ended December 31,	**2005**	2004	2003[b]	**2005**	2004	2003[b]
Weighted-average assumptions used to determine net periodic benefit costs						
Discount rate	**5.75%**[a]	6.00%	6.50%	**2.00-5.30%**	2.00-5.75%	1.50-5.60%
Expected long-term rate of return on plan assets:						
Pension	**7.50**	7.50-7.75	8.00	**3.25-5.75**	3.00-6.50	2.70-6.50
Postretirement benefit	**4.75-7.00**	4.75-7.00	8.00	**NA**	NA	NA
Rate of compensation increase	**4.00**	4.25-4.50	4.50	**1.75-3.75**	1.75-3.75	1.25-3.00

(a) The postretirement plan was remeasured as of August 1, 2005, and a rate of 5.25% was used from the period of August 1, 2005, through December 31, 2005.
(b) Heritage JPMorgan Chase results only for 2003.

The following tables present JPMorgan Chase's assumed weighted-average medical benefits cost trend rate, which is used to measure the expected cost of benefits at year-end, and the effect of a one-percentage-point change in the assumed medical benefits cost trend rate.

December 31,	**2005**	2004[a]	2003[b]
Health care cost trend rate assumed for next year	**10%**	10%	10%
Rate to which cost trend rate is assumed to decline (ultimate trend rate)	**5**	5	5
Year that rate reaches ultimate trend rate	**2012**	2011	2010

(in millions) For the year ended December 31,2005	1-Percentage-point increase	1-Percentage-point decrease
Effect on total service and interest costs	**$ 4**	$ (3)
Effect on postretirement benefit obligation	**64**	(55)

(a) Effective July 1, 2004, the Firm assumed the obligations of heritage Bank One's pension and postretirement plans. These plans were similar to those of JPMorgan Chase and were merged into the Firm's plans effective December 31, 2004.
(b) 2003 reflects the results of heritage JPMorgan Chase only.

At December 31, 2005, the Firm reduced the discount rate used to determine its U.S. benefit obligations to 5.70% for the pension plan and to 5.65% for the postretirement benefits plans from the prior year rate of 5.75% for both plans. The Firm also changed the health care benefit obligation trend assumption to 10% for 2006, grading down to an ultimate rate of 5% in 2013. The 2006 expected long-term rate of return on its U.S. pension plan assets remained at 7.50%. The 2006 expected long-term rate of return on the Firm's COLI post-retirement plan assets remained at 7.00%; however, with the merger of Bank One's other postretirement plan assets, the Firm's overall expected long-term rate of return on U.S. postretirement employee benefit plan assets decreased to 6.84% and 6.80% in 2005 and 2004, respectively, to reflect a weighted average expected rate of return for the merged plan. The interest crediting rate assumption used to determine pension benefits changed to 5.00% from 4.75% in 2005, primarily due to changes in market interest rates which will result in additional expense of $18 million. The changes as of December 31, 2005, to the discount rates are expected to increase 2006 U.S. pension and other postretirement benefit expenses by approximately $5 million and to the non-U.S. pension and other postretirement benefit expenses by $23 million. The rate of compensation increase assumption of 4.00% at December 31, 2005, reflects the consolidation of the prior JPMorgan Chase and Bank One age-weighted increase assumptions; the impact to expense is not expected to be material.

JPMorgan Chase's U.S. pension and other postretirement benefit expenses are most sensitive to the expected long-term rate of return on plan assets. With all other assumptions held constant, a 25–basis point decline in the expected long-term rate of return on U.S. plan assets would result in an increase of approximately $26 million in 2006 U.S. pension and other postretirement benefit expenses. A 25–basis point decline in the discount rate for the U.S. plans would result in an increase in 2006 U.S. pension and other postretirement benefit expenses of approximately $20 million and an increase in the related projected benefit obligations of approximately $233 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2006 non-U.S. pension and other postretirement benefit expenses of $12 million. A 25-basis point increase in the interest crediting rate would result in an increase in 2006 U.S. pension expense of approximately $18 million.

Investment strategy and asset allocation

The investment policy for the Firm's postretirement employee benefit plan assets is to optimize the risk-return relationship as appropriate to the respective plan's needs and goals, using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Specifically, the goal is to optimize the asset mix for future benefit obligations, while managing various risk factors and each plan's investment return objectives. For example, long-duration fixed income securities are included in the U.S. qualified pension plan's asset allocation, in recognition of its long-duration obligations. Plan assets are managed by a combination of internal and external investment managers and, on a quarterly basis, are rebalanced to target, to the extent economically practical.

The Firm's U.S. pension plan assets are held in various trusts and are invested in well-diversified portfolios of equities (including U.S. large and small capitalization and international equities), fixed income (including corporate and government bonds), Treasury inflation-indexed and high-yield securities, cash equivalents, and other securities. Non-U.S. pension plan assets are held in various trusts and are similarly invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to fund partially the U.S. postretirement benefit plan, are held in separate accounts with an insurance company and are invested in equity and fixed income index funds. In addition, tax-exempt municipal debt securities, held in a trust, are used to fund the U.S. postretirement benefit plan. As of December 31, 2005, the assets used to fund the Firm's U.S. and non-U.S. defined benefit pension and postretirement benefit plans do not include JPMorgan Chase common stock, except in connection with investments in third-party stock-index funds.

The following table presents the weighted-average asset allocation at December 31 for the years indicated, and the respective target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and postretirement benefit plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.[a]			Postretirement benefit plans[b]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2005**	2004	Allocation	**2005**	2004	Allocation	**2005**	2004
Asset category									
Debt securities	30%	**33%**	38%	74%	**75%**	76%	50%	**54%**	54%
Equity securities	55	**57**	53	25	**24**	24	50	**46**	46
Real estate	5	**6**	5	1	**1**	—	—	**—**	—
Other	10	**4**	4	—	**—**	—	—	**—**	—
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Represents the U.K. defined benefit pension plan only, as plans outside the U.K. are not significant.
(b) Represents the U.S. postretirement benefit plan only, as the U.K. plan is unfunded.

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The postretirement medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. pension benefits	Non-U.S. pension benefits	Other postretirement benefits before Medicare Part D subsidy	Medicare Part D subsidy
2006	$ 558	$ 67	$ 124	$ 14
2007	550	70	127	15
2008	565	74	127	16
2009	584	77	128	17
2010	600	81	129	19
Years 2011–2015	3,266	396	633	111

Defined contribution plans

JPMorgan Chase offers several defined contribution plans in the U.S. and certain non-U.S. locations. The most significant of these plans is the 401(k) Savings Plan, which covers substantially all U.S. employees. The 401(k) Savings Plan allows employees to make pre-tax contributions to tax-deferred investment portfolios. The JPMorgan Chase Common Stock Fund within the 401(k) Savings Plan is a nonleveraged employee stock ownership plan. The Firm matches eligible employee contributions up to a certain percentage of benefits-eligible compensation per pay period, subject to plan and legal limits. Employees begin to receive matching contributions after completing a specified service requirement and are immediately vested in such company contributions. The Firm's defined contribution plans are administered in accordance with applicable local laws and regulations. Compensation expense related to these plans totaled $392 million in 2005, $317 million in 2004 and $240 million in 2003.

Note 7 – Employee stock-based incentives

Effective January 1, 2003, JPMorgan Chase adopted SFAS 123 using the prospective transition method. SFAS 123 requires all stock-based compensation awards, including stock options and stock-settled stock appreciation rights ("SARs"), to be accounted for at fair value. The Firm currently uses the Black-Scholes valuation model to estimate the fair value of stock options and SARs. Stock options that were outstanding as of December 31, 2002, continue to be accounted for under APB 25 using the intrinsic value method. Under this method, no expense is recognized for stock options or SARs granted at the stock price on grant date, since such options have no intrinsic value. Compensation expense for restricted stock and restricted stock units ("RSUs") is measured based upon the number of shares granted and the stock price at the grant date. Compensation expense is recognized in earnings over the required service period.

In connection with the Merger in 2004, JPMorgan Chase converted all outstanding Bank One employee stock-based awards at the merger date, and those awards became exercisable for or based upon JPMorgan Chase common stock. The number of awards converted, and the exercise prices of those awards, was adjusted to take into account the Merger exchange ratio of 1.32.

On December 16, 2004, the FASB issued SFAS 123R, which revises SFAS 123 and supersedes APB 25. In March 2005, the SEC issued SAB 107, which provides interpretive guidance on SFAS 123R. Accounting and reporting under SFAS 123R is generally similar to the SFAS 123 approach. However, SFAS 123R requires all share-based payments to employees, including grants of employee stock options and SARs, to be recognized in the income statement based upon their fair values. Pro forma disclosure is no longer an alternative. SFAS 123R permits adoption using one of two methods — modified prospective or modified retrospective. In April 2005, the U.S. Securities and Exchange Commission approved a new rule that, for public companies, delayed the effective date of SFAS 123R to no later than January 1, 2006. The Firm adopted SFAS 123R on January 1, 2006, under the modified prospective method.

Key employee stock-based awards

In 2005, JPMorgan Chase granted long-term stock-based awards under the 1996 Long-Term Incentive Plan as amended ("the 1996 Plan") until May 2005 and under the 2005 Long-Term Incentive Plan ("the 2005 Plan") thereafter to certain key employees. These two plans, plus prior Firm plans and plans assumed as the result of acquisitions, constitute the Firm's plans ("LTI Plans"). The 2005 Plan was adopted by the Board of Directors on March 15, 2005, and became effective on May 17, 2005, after approval by shareholders at the annual meeting. The 2005 Plan replaces three existing stock compensation plans—the 1996 Plan and two non-shareholder approved plans—all of which expired in May 2005. Under the terms of the 2005 Plan, 275 million shares of common stock are available for issuance during its five-year term. The 2005 Plan is the only active plan under which the Firm is currently granting stock-based incentive awards.

In 2005, 15.5 million SARs settled only in shares and 1.7 million nonqualified stock options were granted. Under the LTI Plans, stock options and SARs are granted with an exercise price equal to JPMorgan Chase's common stock price on the grant date. Generally, options and SARs cannot be exercised until at least one year after the grant date and become exercisable over various periods as determined at the time of the grant. These awards generally expire 10 years after the grant date.

In December 2005, the Firm accelerated the vesting of approximately 41 million unvested, out-of-the-money employee stock options granted in 2001 under the Growth and Performance Incentive Program ("GPIP"), which were scheduled to vest in January 2007. These options were not modified other than to accelerate vesting. The related expense was approximately $145 million, and was recognized as compensation expense in the fourth quarter of 2005. The Firm believes that at the time the options were accelerated they had limited economic value since the exercise price of the accelerated options was $51.22 and the closing price of the Firm's common stock on the effective date of the acceleration was $39.69.

The following table presents a summary of JPMorgan Chase's option and SAR activity under the LTI Plans during the last three years:

Year ended December 31,[a] (Options/SARs in thousands)	2005 Number of options/SARs	2005 Weighted-average exercise price	2004 Number of options/SARs	2004 Weighted-average exercise price	2003 Number of options	2003 Weighted-average exercise price
Outstanding, January 1	**376,330**	**$ 37.59**	294,026	$ 39.88	298,731	$ 40.84
Granted	**17,248**	**35.55**	16,667	39.79	26,751	22.15
Bank One Conversion, July 1	**NA**	**NA**	111,287	29.63	NA	NA
Exercised	**(26,731)**	**24.28**	(27,763)	25.33	(14,574)	17.47
Canceled	**(28,272)**	**44.77**	(17,887)	46.68	(16,882)	47.57
Outstanding, December 31	**338,575**	**$ 37.93**	376,330	$ 37.59	294,026	$ 39.88
Exercisable, December 31	**286,017**	**$ 38.89**	246,945	$ 36.82	176,163	$ 37.88

(a) 2004 includes six months of awards for the combined Firm and six months of awards for heritage JPMorgan Chase. 2003 reflects the awards for heritage JPMorgan Chase only.

The following table details the distribution of options and SARs outstanding under the LTI Plans at December 31, 2005:

(Options/SARs in thousands) Range of exercise prices	Options/SARs outstanding Outstanding	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Options/SARs exercisable Exercisable	Weighted-average exercise price
$7.27–$20.00	**2,504**	**$ 19.12**	**0.8**	**2,503**	**$ 19.12**
$20.01–$35.00	**125,422**	**28.02**	**5.8**	**88,418**	**27.22**
$35.01–$50.00	**135,263**	**40.04**	**4.9**	**119,710**	**40.13**
$50.01–$63.48	**75,386**	**51.27**	**4.8**	**75,386**	**51.27**
Total	**338,575**	**$ 37.93**	**5.2**	**286,017**	**$ 38.89**

The following table presents a summary of JPMorgan Chase's restricted stock and RSU activity under the LTI Plans during the last three years:

(in thousands) Year ended December 31,[a]	Number of restricted stock/RSUs 2005	2004	2003
Outstanding, January 1	**85,099**	85,527	55,886
Granted	**38,115**	32,514	44,552
Bank One conversion	**NA**	15,116	NA
Lapsed[b]	**(30,413)**	(43,349)	(12,545)
Forfeited	**(8,197)**	(4,709)	(2,366)
Outstanding, December 31	**84,604**	85,099	85,527

(a) 2004 includes six months of awards for the combined Firm and six months of awards for heritage JPMorgan Chase. 2003 reflects the awards for heritage JPMorgan Chase only.
(b) Lapsed awards represent both restricted stock for which restrictions have lapsed and RSUs that have been converted into common stock.

Restricted stock and RSUs are granted by JPMorgan Chase at no cost to the recipient. These awards are subject to forfeiture until certain restrictions have lapsed, including continued employment for a specified period. The recipient of a share of restricted stock is entitled to voting rights and dividends on the common stock. An RSU entitles the recipient to receive a share of common stock after the applicable restrictions lapse; the recipient is entitled to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSU is outstanding. Effective January 2005, the equity portion of the Firm's annual incentive awards were granted primarily in the form of RSUs.

The vesting of certain awards issued prior to 2002 is conditioned upon certain service requirements being met and JPMorgan Chase's common stock reaching and sustaining target prices within a five-year performance period. During 2002, it was determined that it was no longer probable that the target stock prices related to forfeitable awards granted in 1999, 2000, and 2001 would be achieved within their respective performance periods, and accordingly, previously accrued expenses were reversed. The target stock prices for these awards range from $73.33 to $85.00. These awards were forfeited as follows: 1.2 million shares granted in 1999 were forfeited in January 2004; and 1.2 million shares granted in 2000 were forfeited in January 2005. Additionally, 1.2 million shares granted in 2001 were forfeited in January 2006.

Broad-based employee stock options

No broad-based employee stock option grants were made in 2005. Prior awards were granted by JPMorgan Chase under the Value Sharing Plan, a non-shareholder-approved plan. The exercise price is equal to JPMorgan Chase's common stock price on the grant date. The options become exercisable over various periods and generally expire 10 years after the grant date.

The following table presents a summary of JPMorgan Chase's broad-based employee stock option plans and SAR activity during the past three years:

Year ended December 31,	2005		2004		2003	
(Options/SARs in thousands)	Number of options/SARs	Weighted-average exercise price	Number of options/SARs	Weighted-average exercise price	Number of options	Weighted-average exercise price
Outstanding, January 1	**112,184**	**$ 40.42**	117,822	$ 39.11	113,155	$ 40.62
Granted	**—**	**—**	6,321	39.96	12,846	21.87
Exercised	**(2,000)**	**24.10**	(5,960)	15.26	(2,007)	13.67
Canceled	**(4,602)**	**39.27**	(5,999)	39.18	(6,172)	37.80
Outstanding, December 31	**105,582**	**$ 40.78**	112,184	$ 40.42	117,822	$ 39.11
Exercisable, December 31	**52,592**	**$ 40.29**	30,082	$ 36.33	36,396	$ 32.88

The following table details the distribution of broad-based employee stock options and SARs outstanding at December 31, 2005:

	Options/SARs outstanding			Options/SARs exercisable	
(Options/SARs in thousands) Range of exercise prices	Outstanding	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Exercisable	Weighted-average exercise price
$ 20.01–$35.00	**15,200**	**$ 25.01**	**4.3**	**10,490**	**$ 26.42**
$ 35.01–$50.00	**70,088**	**41.18**	**4.5**	**41,990**	**43.72**
$ 50.01–$51.22	**20,294**	**51.22**	**5.1**	**112**	**51.22**
Total	**105,582**	**$ 40.78**	**4.6**	**52,592**	**$ 40.29**

Comparison of the fair and intrinsic value measurement methods

Pre-tax employee stock-based compensation expense related to the LTI plans totaled $1.6 billion in 2005, $1.3 billion in 2004 and $919 million in 2003.

The following table presents net income (after-tax) and basic and diluted earnings per share as reported, and as if all outstanding awards were accounted for at fair value:

Year ended December 31,[a] (in millions, except per share data)	2005	2004	2003
Net income as reported	**$ 8,483**	$ 4,466	$ 6,719
Add: Employee stock-based compensation expense originally included in reported net income	**938**	778	551
Deduct: Employee stock-based compensation expense determined under the fair value method for all awards	**(1,015)**	(960)	(863)
Pro forma net income	**$ 8,406**	$ 4,284	$ 6,407
Earnings per share:			
Basic: As reported	**$ 2.43**	$ 1.59	$ 3.32
Pro forma	**2.40**	1.52	3.16
Diluted: As reported	**$ 2.38**	$ 1.55	$ 3.24
Pro forma	**2.36**	1.48	3.09

(a) 2004 results include six months of awards for the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

The following table presents JPMorgan Chase's weighted-average, grant-date fair values for the employee stock-based compensation awards granted, and the assumptions used to value stock options and SARs under the Black-Scholes valuation model:

Year ended December 31,[a]	2005	2004	2003
Weighted-average grant-date fair value			
Stock options:			
Key employee	**$ 10.44**	$ 13.04	$ 5.60
Broad-based employee	**NA**	10.71	4.98
Converted Bank One options	**NA**	14.05	NA
Restricted stock and RSUs (all payable solely in stock)	**37.35**	39.58	22.03
Weighted-average annualized stock option valuation assumptions			
Risk-free interest rate	**4.25%**	3.44%	3.19%
Expected dividend yield[b]	**3.79**	3.59	5.99
Expected common stock price volatility	**37**	41	44
Assumed weighted-average expected life of stock options (in years)			
Key employee	**6.8**	6.8	6.8
Broad-based employee	**NA**	3.8	3.8

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Based primarily upon historical data at the grant dates.

Note 8 – Noninterest expense

Merger costs

Costs associated with the Merger were reflected in the Merger costs caption of the Consolidated statements of income. A summary of such costs, by expense category, is shown in the following table for 2005 and 2004. There were no such costs in 2003.

Year ended December 31, (in millions)	**2005**	2004[a]
Expense category		
Compensation	**$ 238**	$ 467
Occupancy	**(77)**	448
Technology and communications and other	**561**	450
Total[b]	**$ 722**	$ 1,365

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) With the exception of occupancy-related write-offs, all of the costs in the table require the expenditure of cash.

The table below shows the change in the liability balance related to the costs associated with the Merger.

Year ended December 31, (in millions)	**2005**	2004[a]
Liability balance, beginning of period	**$ 952**	$ —
Recorded as merger costs	**722**	1,365
Recorded as goodwill	**26**	1,028
Liability utilized	**(903)**	(1,441)
Total	**$ 797**	$ 952

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Note 9 – Securities and private equity investments

Securities are classified as AFS, Held-to-maturity ("HTM") or Trading. Trading securities are discussed in Note 3 on page 94 of this Annual Report. Securities are classified as AFS when, in management's judgment, they may be sold in response to or in anticipation of changes in market conditions, or as part of the Firm's management of its structural interest rate risk. AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses after SFAS 133 valuation adjustments are reported as net increases or decreases to Accumulated other comprehensive income (loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in Securities / private equity gains on the Consolidated statements of income. Securities that the Firm has the positive intent and ability to hold to maturity are classified as HTM and are carried at amortized cost on the Consolidated balance sheets.

The following table presents realized gains and losses from AFS securities and private equity gains (losses):

Year ended December 31,[a] (in millions)	**2005**	2004	2003
Realized gains	**$ 302**	$ 576	$ 2,123
Realized losses	**(1,638)**	(238)	(677)
Net realized securities gains (losses)	**(1,336)**	338	1,446
Private equity gains	**1,809**	1,536	33
Total Securities/private equity gains	**$ 473**	$ 1,874	$ 1,479

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

The amortized cost and estimated fair value of AFS and held-to-maturity securities were as follows for the dates indicated:

	2005				2004			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale securities								
U.S. government and federal agency obligations:								
U.S. treasuries	**$ 4,245**	**$ 24**	**$ 2**	**$ 4,267**	$ 13,621	$ 7	$ 222	$ 13,406
Mortgage-backed securities	**80**	**3**	**—**	**83**	2,405	41	17	2,429
Agency obligations	**165**	**16**	**—**	**181**	12	—	—	12
Collateralized mortgage obligations	**4**	**—**	**—**	**4**	71	4	4	71
U.S. government-sponsored enterprise obligations	**22,604**	**9**	**596**	**22,017**	46,143	142	593	45,692
Obligations of state and political subdivisions	**712**	**21**	**7**	**726**	2,748	126	8	2,866
Debt securities issued by non-U.S. governments	**5,512**	**12**	**18**	**5,506**	7,901	59	38	7,922
Corporate debt securities	**5,754**	**39**	**74**	**5,719**	7,007	127	18	7,116
Equity securities	**3,179**	**110**	**7**	**3,282**	5,810	39	14	5,835
Other, primarily asset-backed securities[a]	**5,738**	**23**	**23**	**5,738**	9,103	25	75	9,053
Total available-for-sale securities	**$ 47,993**	**$ 257**	**$ 727**	**$ 47,523**	$ 94,821	$ 570	$ 989	$ 94,402
Held-to-maturity securities[b]								
Total held-to-maturity securities	**$ 77**	**$ 3**	**$ —**	**$ 80**	$ 110	$ 7	$ —	$ 117

(a) Includes collateralized mortgage obligations of private issuers, which generally have underlying collateral consisting of obligations of the U.S. government and federal agencies and corporations.
(b) Consists primarily of mortgage-backed securities.

The following table presents the fair value and unrealized losses for AFS securities by aging category at December 31:

	Securities with unrealized losses					
	Less than 12 months		12 months or more		Total	
2005 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total Fair value	Total Gross unrealized losses
Available-for-sale securities						
U.S. government and federal agency obligations:						
U.S. treasuries	**$ 3,789**	**$ 1**	**$ 85**	**$ 1**	**$ 3,874**	**$ 2**
Mortgage-backed securities	**—**	**—**	**47**	**—**	**47**	**—**
Agency obligations	**7**	**—**	**13**	**—**	**20**	**—**
Collateralized mortgage obligations	**15**	**—**	**30**	**—**	**45**	**—**
U.S. government-sponsored enterprise obligations	**10,607**	**242**	**11,007**	**354**	**21,614**	**596**
Obligations of state and political subdivisions	**237**	**3**	**107**	**4**	**344**	**7**
Debt securities issued by non-U.S. governments	**2,380**	**17**	**71**	**1**	**2,451**	**18**
Corporate debt securities	**3,076**	**52**	**678**	**22**	**3,754**	**74**
Equity securities	**1,838**	**7**	**2**	**—**	**1,840**	**7**
Other, primarily asset-backed securities	**778**	**14**	**370**	**9**	**1,148**	**23**
Total securities with unrealized losses	**$ 22,727**	**$ 336**	**$ 12,410**	**$ 391**	**$ 35,137**	**$ 727**

	Securities with unrealized losses					
	Less than 12 months		12 months or more		Total	
2004 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total Fair value	Total Gross unrealized losses
Available-for-sale securities						
U.S. government and federal agency obligations:						
U.S. treasuries	$ 10,186	$ 154	$ 940	$ 68	$ 11,126	$ 222
Mortgage-backed securities	344	1	1,359	16	1,703	17
Agency obligations	5	—	3	—	8	—
Collateralized mortgage obligations	278	4	2	—	280	4
U.S. government-sponsored enterprise obligations	34,760	282	10,525	311	45,285	593
Obligations of state and political subdivisions	678	6	96	2	774	8
Debt securities issued by non-U.S. governments	3,395	17	624	21	4,019	38
Corporate debt securities	1,103	13	125	5	1,228	18
Equity securities	1,804	14	23	—	1,827	14
Other, primarily asset-backed securities	1,896	41	321	34	2,217	75
Total securities with unrealized losses	$ 54,449	$ 532	$ 14,018	$ 457	$ 68,467	$ 989

Impairment is evaluated considering numerous factors, and their relative significance varies case to case. Factors considered include the length of time and extent to which the market value has been less than cost; the financial condition and near-term prospects of the issuer of the securities; and the Firm's intent and ability to retain the security in order to allow for an anticipated recovery in market value. If, based upon the analysis, it is determined that the impairment is other-than-temporary, the security is written down to fair value, and a loss is recognized through earnings.

Included in the $727 million of gross unrealized losses on AFS securities at December 31, 2005, was $391 million of unrealized losses that have existed for a period greater than 12 months. These securities are predominately rated AAA and the unrealized losses are due to overall increases in market interest rates and not due to underlying credit concerns of the issuers. Substantially all of the securities with unrealized losses aged greater than 12 months have a market value at December 31, 2005, that is within 4% of their amortized cost basis.

In calculating the effective yield for mortgage-backed securities ("MBS") and collateralized mortgage obligations ("CMO"), JPMorgan Chase includes the effect of principal prepayments. Management regularly performs simulation testing to determine the impact that market conditions would have on its MBS and CMO portfolios. MBSs and CMOs that management believes have prepayment risk are included in the AFS portfolio and are reported at fair value.

The following table presents the amortized cost, estimated fair value and average yield at December 31, 2005, of JPMorgan Chase's AFS and HTM securities by contractual maturity:

	Available-for-sale securities			Held-to-maturity securities		
Maturity schedule of securities December 31, 2005 (in millions)	Amortized cost	Fair value	Average yield[a]	Amortized cost	Fair value	Average yield[a]
Due in one year or less	**$ 6,723**	**$ 6,426**	**2.77%**	**$ —**	**$ —**	**—%**
Due after one year through five years	**7,740**	**8,009**	**3.72**	**—**	**—**	**—**
Due after five years through 10 years	**5,346**	**5,366**	**4.70**	**30**	**31**	**6.96**
Due after 10 years[b]	**28,184**	**27,722**	**4.69**	**47**	**49**	**6.73**
Total securities	**$ 47,993**	**$ 47,523**	**4.27%**	**$ 77**	**$ 80**	**6.82%**

(a) The average yield is based upon amortized cost balances at year-end. Yields are derived by dividing interest income by total amortized cost. Taxable-equivalent yields are used where applicable.
(b) Includes securities with no stated maturity. Substantially all of JPMorgan Chase's MBSs and CMOs are due in 10 years or more based upon contractual maturity. The estimated duration, which reflects anticipated future prepayments based upon a consensus of dealers in the market, is approximately four years for MBSs and CMOs.

Private equity investments are primarily held by the Private Equity business within Corporate (which includes JPMorgan Partners and ONE Equity Partners businesses). The Private Equity business invests in buyouts, growth equity and venture opportunities in the normal course of business. These investments are accounted for under investment company guidelines. Accordingly, these investments, irrespective of the percentage of equity ownership interest held by Private Equity, are carried on the Consolidated balance sheets at fair value. Realized and unrealized gains and losses arising from changes in value are reported in Securities/private equity gains in the Consolidated statements of income in the period that the gains or losses occur.

Privately-held investments are initially valued based upon cost. The carrying values of privately-held investments are adjusted from cost to reflect both positive and negative changes evidenced by financing events with third-party capital providers. In addition, these investments are subject to ongoing impairment reviews by Private Equity's senior investment professionals. A variety of factors are reviewed and monitored to assess impairment including, but not limited to, operating performance and future expectations of the particular portfolio investment, industry valuations of comparable public companies, changes in market outlook and the third-party financing environment over time. The Valuation Control Group within the Finance area is responsible for reviewing the accuracy of the carrying values of private investments held by Private Equity.

Private Equity also holds publicly-held equity investments, generally obtained through the initial public offering of privately-held equity investments. Publicly-held investments are marked to market at the quoted public value. To determine the carrying values of these investments, Private Equity incorporates the use of discounts to take into account the fact that it cannot immediately realize or risk-manage the quoted public values as a result of regulatory and/or contractual sales restrictions imposed on these holdings.

The following table presents the carrying value and cost of the Private Equity investment portfolio for the dates indicated:

	2005		2004	
December 31, (in millions)	Carrying value	Cost	Carrying value	Cost
Total private equity investments	**$ 6,374**	**$ 8,036**	$ 7,735	$ 9,103

Note 10 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions primarily to finance the Firm's inventory positions, acquire securities to cover short positions and settle other securities obligations. The Firm also enters into these transactions to accommodate customers' needs.

Securities purchased under resale agreements ("resale agreements") and securities sold under repurchase agreements ("repurchase agreements") are generally treated as collateralized financing transactions and are carried on the Consolidated balance sheets at the amounts the securities will be subsequently sold or repurchased, plus accrued interest. Where appropriate, resale and repurchase agreements with the same counterparty are reported on a net basis in accordance with FIN 41. JPMorgan Chase takes possession of securities purchased under resale agreements. On a daily basis, JPMorgan Chase monitors the market value of the underlying collateral received from its counterparties, consisting primarily of U.S. and non-U.S. government and agency securities, and requests additional collateral from its counterparties when necessary.

Transactions similar to financing activities that do not meet the SFAS 140 definition of a repurchase agreement are accounted for as "buys" and "sells" rather than financing transactions. These transactions are accounted for as a purchase (sale) of the underlying securities with a forward obligation to sell (purchase) the securities. The forward purchase (sale) obligation, a derivative, is recorded on the Consolidated balance sheets at its fair value, with changes in fair value recorded in Trading revenue.

Securities borrowed and securities lent are recorded at the amount of cash collateral advanced or received. Securities borrowed consist primarily of government and equity securities. JPMorgan Chase monitors the market value of the securities borrowed and lent on a daily basis and calls for additional collateral when appropriate. Fees received or paid are recorded in Interest income or Interest expense.

December 31, (in millions)	2005	2004
Securities purchased under resale agreements	**$ 129,570**	$ 94,076
Securities borrowed	**74,604**	47,428
Securities sold under repurchase agreements	**$ 103,052**	$105,912
Securities loaned	**14,072**	6,435

JPMorgan Chase pledges certain financial instruments the Firm owns to collateralize repurchase agreements and other securities financings. Pledged securities that can be sold or repledged by the secured party are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets.

At December 31, 2005, the Firm had received securities as collateral that can be repledged, delivered or otherwise used with a fair value of approximately $331 billion. This collateral was generally obtained under resale or securities borrowing agreements. Of these securities, approximately $320 billion were repledged, delivered or otherwise used, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales.

Note 11 – Loans

Loans are reported at the principal amount outstanding, net of the Allowance for loan losses, unearned income and any net deferred loan fees. Loans held for sale are carried at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. Loans are classified as "trading" where positions are bought and sold to make profits from short-term movements in price. Loans held for trading purposes are included in Trading assets and are carried at fair value, with gains and losses included in Trading revenue. Interest income is recognized using the interest method, or on a basis approximating a level rate of return over the term of the loan.

Nonaccrual loans are those on which the accrual of interest is discontinued. Loans (other than certain consumer loans discussed below) are placed on nonaccrual status immediately if, in the opinion of management, full payment of principal or interest is in doubt, or when principal or interest is 90 days or more past due and collateral, if any, is insufficient to cover principal and interest. Interest accrued but not collected at the date a loan is placed on nonaccrual status is reversed against Interest income. In addition, the amortization of net deferred loan fees is suspended. Interest income on nonaccrual loans is recognized only to the extent it is received in cash. However, where there is doubt regarding the ultimate collectibility of loan principal, all cash thereafter received is applied to reduce the carrying value of such loans. Loans are restored to accrual status only when interest and principal payments are brought current and future payments are reasonably assured.

Consumer loans are generally charged to the Allowance for loan losses upon reaching specified stages of delinquency, in accordance with the Federal Financial Institutions Examination Council ("FFIEC") policy. For example, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification of the filing of bankruptcy, whichever is earlier. Residential mortgage products are generally charged off to net realizable value at 180 days past due. Other consumer products are generally charged off (to net realizable value if collateralized) at 120 days past due. Accrued interest on residential mortgage products, and automobile and education financings and certain other consumer loans are accounted for in accordance with the nonaccrual loan policy discussed in the preceding paragraph. Interest and fees related to credit card loans continue to accrue until the loan is charged off or paid. Accrued interest on all other consumer loans is generally reversed against interest income when the loan is charged off. A collateralized loan is considered an in-substance foreclosure and is reclassified to assets acquired in loan satisfactions, within Other assets, only when JPMorgan Chase has taken physical possession of the collateral, but regardless of whether formal foreclosure proceedings have taken place.

The composition of the loan portfolio at each of the dates indicated was as follows:

December 31, (in millions)	2005	2004
U.S. wholesale loans:		
Commercial and industrial	**$ 70,233**	$ 61,033
Real estate	**13,612**	13,038
Financial institutions	**11,100**	14,195
Lease financing receivables	**2,621**	3,098
Other	**14,499**	8,504
Total U.S. wholesale loans	**112,065**	99,868
Non-U.S. wholesale loans:		
Commercial and industrial	**27,452**	25,120
Real estate	**1,475**	1,747
Financial institutions	**7,975**	7,280
Lease financing receivables	**1,144**	1,052
Total non-U.S. wholesale loans	**38,046**	35,199
Total wholesale loans:[a]		
Commercial and industrial	**97,685**	86,153
Real estate[b]	**15,087**	14,785
Financial institutions	**19,075**	21,475
Lease financing receivables	**3,765**	4,150
Other	**14,499**	8,504
Total wholesale loans	**150,111**	135,067
Total consumer loans:[c]		
Consumer real estate		
Home finance – home equity & other	**76,727**	67,837
Home finance – mortgage	**56,726**	56,816
Total Home finance	**133,453**	124,653
Auto & education finance	**49,047**	62,712
Consumer & small business and other	**14,799**	15,107
Credit card receivables[d]	**71,738**	64,575
Total consumer loans	**269,037**	267,047
Total loans[e][f][g]	**$ 419,148**	$ 402,114

(a) Includes Investment Bank, Commercial Banking, Treasury & Securities Services and Asset & Wealth Management.
(b) Represents credits extended for real estate–related purposes to borrowers who are primarily in the real estate development or investment businesses and for which the primary repayment is from the sale, lease, management, operations or refinancing of the property.
(c) Includes Retail Financial Services and Card Services.
(d) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(e) Loans are presented net of unearned income of $3.0 billion and $4.1 billion at December 31, 2005 and 2004, respectively.
(f) Includes loans held for sale (primarily related to securitization and syndication activities) of $34.2 billion and $24.5 billion at December 31, 2005 and 2004, respectively.
(g) Amounts are presented gross of the Allowance for loan losses.

The following table reflects information about the Firm's loans held for sale, principally mortgage-related:

Year ended December 31, (in millions)[a]	**2005**	2004	2003
Net gains on sales of loans held for sale	**$ 596**	$ 368	$ 933
Lower of cost or fair value adjustments	**(332)**	39	26

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

Impaired loans

JPMorgan Chase accounts for and discloses nonaccrual loans as impaired loans and recognizes their interest income as discussed previously for nonaccrual loans. The Firm excludes from impaired loans its small-balance, homogeneous consumer loans; loans carried at fair value or the lower of cost or fair value; debt securities; and leases.

The table below sets forth information about JPMorgan Chase's impaired loans. The Firm primarily uses the discounted cash flow method for valuing impaired loans:

December 31, (in millions)[a]	**2005**	2004
Impaired loans with an allowance	**$ 1,095**	$ 1,496
Impaired loans without an allowance[b]	**80**	284
Total impaired loans	**$ 1,175**	$ 1,780
Allowance for impaired loans under SFAS 114[c]	**$ 257**	$ 521
Average balance of impaired loans during the year	**1,478**	1,883
Interest income recognized on impaired loans during the year	**5**	8

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) When the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan, then the loan does not require an allowance under SFAS 114.
(c) The allowance for impaired loans under SFAS 114 is included in JPMorgan Chase's Allowance for loan losses.

Note 12 – Allowance for credit losses

JPMorgan Chase's Allowance for loan losses covers the wholesale (risk-rated) and consumer (scored) loan portfolios and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also computes an Allowance for wholesale lending-related commitments using a methodology similar to that used for the wholesale loans.

The Allowance for loan losses includes an asset-specific component and a formula-based component. Within the formula-based component is a statistical calculation and an adjustment to the statistical calculation.

The asset-specific component relates to provisions for losses on loans considered impaired and measured pursuant to SFAS 114. An allowance is established when the discounted cash flows (or collateral value or observable market price) of the loan is lower than the carrying value of that loan. To compute the asset-specific component of the allowance, larger impaired loans are evaluated individually, and smaller impaired loans are evaluated as a pool using historical loss experience for the respective class of assets.

The formula-based component covers performing wholesale and consumer loans and is the product of a statistical calculation, as well as adjustments to such calculation. These adjustments take into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the factors used to derive the statistical calculation.

The statistical calculation is the product of probability of default and loss given default. For risk-rated loans (generally loans originated by the wholesale lines of business), these factors are differentiated by risk rating and maturity. For scored loans (generally loans originated by the consumer lines of business), loss is primarily determined by applying statistical loss factors and other risk indicators to pools of loans by asset type. Adjustments to the statistical calculation for the risk-rated portfolios are determined by creating estimated ranges using historical experience of both loss given default and probability of default. Factors related to concentrated and deteriorating industries are also incorporated into the calculation where relevant. Adjustments to the statistical calculation for the scored loan portfolios are accomplished in part by analyzing the historical loss experience for each major product segment. The estimated ranges and the determination of the appropriate point within the range are based upon management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards, and other relevant internal and external factors affecting the credit quality of the portfolio.

The Allowance for lending-related commitments represents management's estimate of probable credit losses inherent in the Firm's process of extending credit. Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

The allowance for credit losses is reviewed at least quarterly by the Chief Risk Officer of the Firm, the Risk Policy Committee, a risk subgroup of the Operating Committee, and the Audit Committee of the Board of Directors of the Firm relative to the risk profile of the Firm's credit portfolio and current economic conditions. As of December 31, 2005, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses that are inherent in the portfolio, including those not yet identifiable).

As a result of the Merger, management modified its methodology for determining the Provision for credit losses for the combined Firm. The effect of conforming methodologies in 2004 was a decrease in the consumer allowance of $254 million and a decrease in the wholesale allowance (including both funded loans and lending-related commitments) of $330 million. In addition, the Bank One seller's interest in credit card securitizations was decertificated; this resulted in an increase to the provision for loan losses of approximately $1.4 billion (pre-tax) in 2004.

JPMorgan Chase maintains an allowance for credit losses as follows:

Allowance for credit losses on:	Reported in: Balance sheet	Income statement
Loans	Allowance for loan losses	Provision for credit losses
Lending-related commitments	Other liabilities	Provision for credit losses

The table below summarizes the changes in the Allowance for loan losses:

December 31, (in millions)	2005	2004[c]
Allowance for loan losses at January 1	**$ 7,320**	$ 4,523
Addition resulting from the Merger, July 1, 2004	**—**	3,123
Gross charge-offs	**(4,869)**	(3,805)[d]
Gross recoveries	**1,050**	706
Net charge-offs	**(3,819)**	(3,099)
Provision for loan losses:		
Provision excluding accounting policy conformity	**3,575**	1,798
Accounting policy conformity[a]	**—**	1,085
Total Provision for loan losses	**3,575**	2,883
Other	**14**	(110)[e]
Allowance for loan losses at December 31	**$ 7,090**[b]	$ 7,320[f]

(a) Represents an increase of approximately $1.4 billion as a result of the decertification of heritage Bank One seller's interest in credit card securitizations, partially offset by a reduction of $357 million to conform provision methodologies.
(b) 2005 includes $203 million of asset-specific and $6.9 billion of formula-based allowance. Included within the formula-based allowance was $5.1 billion related to a statistical calculation (including $400 million related to Hurricane Katrina), and an adjustment to the statistical calculation of $1.8 billion.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(d) Includes $406 million related to the Manufactured Home Loan portfolio in the fourth quarter of 2004.
(e) Primarily represents the transfer of the allowance for accrued interest and fees on reported and securitized credit card loans.
(f) 2004 includes $469 million of asset-specific loss and $6.8 billion of formula-based loss. Included within the formula-based loss is $4.8 billion related to statistical calculation and an adjustment to the statistical calculation of $2.0 billion.

The table below summarizes the changes in the Allowance for lending-related commitments:

December 31, (in millions)	2005	2004[c]
Allowance for lending-related commitments at January 1	**$ 492**	$ 324
Addition resulting from the Merger, July 1, 2004	**—**	508
Provision for lending-related commitments:		
Provision excluding accounting policy conformity	**(92)**	(112)
Accounting policy conformity[a]	**—**	(227)
Total Provision for lending-related commitments	**(92)**	(339)
Other	**—**	(1)
Allowance for lending-related commitments at December 31[b]	**$ 400**	$ 492

(a) Represents a reduction of $227 million to conform provision methodologies in the wholesale portfolio.
(b) 2005 includes $60 million of asset-specific and $340 million of formula-based allowance. 2004 includes $130 million of asset-specific and $362 million of formula-based allowance. The formula-based allowance for lending-related commitments is based upon a statistical calculation. There is no adjustment to the statistical calculation for lending-related commitments.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Note 13 – Loan securitizations

JPMorgan Chase securitizes, sells and services various consumer loans, such as consumer real estate, credit card and automobile loans, as well as certain wholesale loans (primarily real estate) originated by the Investment Bank. In addition, the Investment Bank purchases, packages and securitizes commercial and consumer loans. All IB activity is collectively referred to below as Wholesale activities. Interests in the sold and securitized loans may be retained.

The Firm records a loan securitization as a sale when the transferred loans are legally isolated from the Firm's creditors and the accounting criteria for a sale are met. Those criteria are (1) the assets are legally isolated from the Firm's creditors; (2) the entity can pledge or exchange the financial assets or, if the entity is a QSPE, its investors can pledge or exchange their interests; and (3) the Firm does not maintain effective control via an agreement to repurchase the assets before their maturity or have the ability to unilaterally cause the holder to return the assets.

Gains or losses recorded on loan securitizations depend, in part, on the carrying amount of the loans sold and are allocated between the loans sold and the retained interests, based upon their relative fair values at the date of sale. Gains on securitizations are reported in noninterest revenue. Since quoted market prices are generally not available, the Firm usually estimates the fair value of these retained interests by determining the present value of future expected cash flows using modeling techniques. Such models incorporate management's best estimates of key variables, such as expected credit losses, prepayment speeds and the discount rates appropriate for the risks involved.

Retained interests that are subject to prepayment risk, such that JPMorgan Chase may not recover substantially all of its investment, are recorded at fair value; subsequent adjustments are reflected in Other comprehensive income or in earnings, if the fair value of the retained interest has declined below its carrying amount and such decline has been determined to be other-than-temporary.

Interests in the securitized loans are generally retained by the Firm in the form of senior or subordinated interest-only strips, subordinated tranches, escrow accounts and servicing rights, and they are generally recorded in Other assets. In addition, credit card securitization trusts require the Firm to maintain a minimum undivided interest in the trusts, representing the Firm's interests in the receivables transferred to the trust that have not been securitized. These interests are not represented by security certificates. The Firm's undivided interests are carried at historical cost and are classified in Loans. Retained interests from wholesale activities are reflected as trading assets.

JPMorgan Chase retains servicing responsibilities for all residential mortgage, credit card and automobile loan securitizations and for certain wholesale activity securitizations it sponsors, and receives servicing fees based on the securitized loan balance plus certain ancillary fees. The Firm also retains the right to service the residential mortgage loans it sells in connection with mortgage-backed securities transactions with the Government National Mortgage Association ("GNMA"), Federal National Mortgage Association ("FNMA") and Federal Home Loan Mortgage Corporation ("Freddie Mac"). For a discussion of mortgage servicing rights, see Note 15 on pages 114–116 of this Annual report.

JPMorgan Chase-sponsored securitizations utilize SPEs as part of the securitization process. These SPEs are structured to meet the definition of a QSPE (as discussed in Note 1 on page 91 of this Annual Report); accordingly, the assets and liabilities of securitization-related QSPEs are not reflected in the Firm's Consolidated balance sheets (except for retained interests, as described below) but are included on the balance sheet of the QSPE purchasing the

assets. Assets held by securitization-related SPEs as of December 31, 2005 and 2004, were as follows:

December 31, (in billions)	2005	2004
Credit card receivables	**$ 96.0**	$ 106.3
Residential mortgage receivables	**29.8**	19.1
Wholesale activities[a]	**72.9**	44.8
Automobile loans	**5.5**	4.9
Total	**$ 204.2**	$ 175.1

(a) Co-sponsored securitizations include non-JPMorgan Chase originated assets.

The following table summarizes new securitization transactions that were completed during 2005 and 2004, the resulting gains arising from such securitizations, certain cash flows received from such securitizations, and the key economic assumptions used in measuring the retained interests, as of the dates of such sales:

Year ended December 31,	2005				2004[a]			
(in millions)	Residential mortgage	Credit card	Automobile	Wholesale activities[e]	Residential mortgage	Credit card	Automobile	Wholesale activities[e]
Principal securitized	**$ 18,125**	**$ 15,145**	**$ 3,762**	**$ 22,691**	$ 6,529	$ 8,850	$ 1,600	$ 8,756
Pre-tax gains (losses)	**21**	**101**	**9**[c]	**131**	47	52	(3)	135
Cash flow information:								
Proceeds from securitizations	**$ 18,093**	**$ 14,844**	**$ 2,622**	**$ 22,892**	$ 6,608	$ 8,850	$ 1,597	$ 8,430
Servicing fees collected	**17**	**94**	**4**	**—**	12	69	1	3
Other cash flows received	**—**	**298**	**—**	**3**	25	225	—	16
Proceeds from collections reinvested in revolving securitizations	**—**	**129,696**	**—**	**—**	—	110,697	—	—
Key assumptions (rates per annum):								
Prepayment rate[b]	**9.1–12.1% CPR**	**16.7–20.0% PPR**	**1.5% ABS**	**0–50%**	23.8–37.6% CPR	15.5–16.7% PPR	1.5% ABS	17.0–50.0%
Weighted-average life (in years)	**5.6–6.7**	**0.4–0.5**	**1.4–1.5**	**1.0–4.4**	1.9–3.0	0.5–0.6	1.8	2.0–4.0
Expected credit losses	**—**[d]	**4.7–5.7%**	**0.6–0.7%**	**0–2.0%**[d]	1.0–2.3%	5.5–5.8%	0.6%	0.0–3.0%[d]
Discount rate	**13.0–13.3%**	**12.0%**	**6.3–7.3%**	**0.6–18.5%**	15.0–30.0%	12.0%	4.1%	0.6–5.0%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) CPR: constant prepayment rate; ABS: absolute prepayment speed; PPR: principal payment rate.
(c) The auto securitization gain of $9 million does not include the write-down of loans transferred to held-for-sale in 2005 and risk management activities intended to protect the economic value of the loans while held-for-sale.
(d) Expected credit losses for prime residential mortgage and certain wholesale securitizations are minimal and are incorporated into other assumptions.
(e) Wholesale activities consist of wholesale loans (primarily commercial real estate) originated by the Investment Bank as well as $11.4 billion and $1.8 billion of consumer loans purchased from the market in 2005 and 2004, respectively, and then packaged and securitized by the Investment Bank.

In addition to securitization transactions, the Firm sold residential mortgage loans totaling $52.5 billion, $65.7 billion and $123.2 billion during 2005, 2004 and 2003, respectively, primarily as GNMA, FNMA and Freddie Mac mortgage-backed securities; these sales resulted in pre-tax gains of $293 million, $58.1 million and $564.3 million, respectively.

At both December 31, 2005 and 2004, the Firm had, with respect to its credit card master trusts, $24.8 billion and $35.2 billion, respectively, related to undivided interests, and $2.2 billion and $2.1 billion, respectively, related to subordinated interests in accrued interest and fees on the securitized receivables, net of an allowance for uncollectible amounts. Credit card securitization trusts require the Firm to maintain a minimum undivided interest of 4% to 12% of the principal receivables in the trusts. The Firm maintained an average undivided interest in principal receivables in the trusts of approximately 23% for both 2005 and 2004, respectively.

The Firm also maintains escrow accounts up to predetermined limits for some credit card and automobile securitizations, in the unlikely event of deficiencies in cash flows owed to investors. The amounts available in such escrow accounts are recorded in Other assets and, as of December 31, 2005, amounted to $754 million and $76 million for credit card and automobile securitizations, respectively; as of December 31, 2004, these amounts were $395 million and $132 million for credit card and automobile securitizations, respectively.

The table below summarizes other retained securitization interests, which are primarily subordinated or residual interests and are carried at fair value on the Firm's Consolidated balance sheets:

December 31, (in millions)	2005	2004
Residential mortgage[a]	**$ 182**	$ 433
Credit card[a]	**808**	494
Automobile[a][b]	**150**	85
Wholesale activities[c]	**265**	23
Total	**$ 1,405**	$ 1,035

(a) Pre-tax unrealized gains (losses) recorded in Stockholders' equity that relate to retained securitization interests totaled $60 million and $118 million for Residential mortgage; $6 million and $(3) million for Credit card; and $5 million and $11 million for Automobile at December 31, 2005 and 2004, respectively.
(b) In addition to the automobile retained interest amounts noted above, the Firm also retained senior securities totaling $490 million at December 31, 2005, from 2005 auto securitizations that are classified as AFS securities. These securities are valued using quoted market prices and are therefore not included in the key economic assumption and sensitivities table that follows.
(c) In addition to the wholesale retained interest amounts noted above, the Firm also retained subordinated securities totaling $51 million at December 31, 2005, from re-securitization activities. These securities are valued using quoted market prices and are therefore not included in the key assumptions and sensitivities table that follows.

The table below outlines the key economic assumptions used to determine the fair value of the other retained interests at December 31, 2005 and 2004, respectively; and it outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in those assumptions:

December 31, 2005 (in millions)	Residential mortgage	Credit card	Automobile	Wholesale activities
Weighted-average life (in years)	**0.5–3.5**	**0.4–0.7**	**1.2**	**0.2–4.1**
Prepayment rate	**20.1–43.7% CPR**	**11.9–20.8% PPR**	**1.5% ABS**	**0.0–50.0%**[a]
Impact of 10% adverse change	**$ (3)**	**$ (44)**	**$ —**	**$ (5)**
Impact of 20% adverse change	**(5)**	**(88)**	**(2)**	**(6)**
Loss assumption	**0.0–5.2%**[b]	**3.2–8.1%**	**0.7%**	**0.0–2.0%**[b]
Impact of 10% adverse change	**$ (10)**	**$ (77)**	**$ (4)**	**$ (6)**
Impact of 20% adverse change	**(19)**	**(153)**	**(9)**	**(11)**
Discount rate	**12.7–30.0%**[c]	**6.9–12.0%**	**7.2%**	**0.2–18.5%**
Impact of 10% adverse change	**$ (4)**	**$ (2)**	**$ (1)**	**$ (6)**
Impact of 20% adverse change	**(8)**	**(4)**	**(3)**	**(12)**

December 31, 2004 (in millions)	Residential mortgage	Credit card	Automobile	Wholesale activities
Weighted-average life (in years)	0.8–3.4	0.5–1.0	1.3	0.2–4.0
Prepayment rate	15.1–37.1% CPR	8.3–16.7% PPR	1.4% ABS	0.0–50.0%[a]
Impact of 10% adverse change	$ (5)	$ (34)	$ (6)	$ (1)
Impact of 20% adverse change	(8)	(69)	(13)	(1)
Loss assumption	0.0–5.0%[b]	5.7–8.4%	0.7%	0.0–3.0%[b]
Impact of 10% adverse change	$ (17)	$ (144)	$ (4)	$ —
Impact of 20% adverse change	(34)	(280)	(8)	—
Discount rate	13.0–30.0%[c]	4.9–12.0%	5.5%	1.0–22.9%
Impact of 10% adverse change	$ (9)	$ (2)	$ (1)	$ —
Impact of 20% adverse change	(18)	(4)	(2)	—

(a) Prepayment risk on certain wholesale retained interests are minimal and are incorporated into other assumptions.
(b) Expected credit losses for prime residential mortgage and certain wholesale securitizations are minimal and are incorporated into other assumptions.
(c) The Firm sold certain residual interests from sub-prime mortgage securitizations via Net Interest Margin ("NIM") securitizations and retains residual interests in these NIM transactions, which are valued using a 30% discount rate.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based upon a 10% or 20% variation in assumptions generally cannot be extrapolated easily, because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another assumption, which might counteract or magnify the sensitivities.

Expected static-pool net credit losses include actual incurred losses plus projected net credit losses, divided by the original balance of the outstandings comprising the securitization pool.

The table below displays the expected static-pool net credit losses for 2005, 2004 and 2003, based upon securitizations occurring in that year:

	Loans securitized in:[a]					
	2005		2004[b]		2003[b]	
	Residential mortgage[c]	Automobile	Residential mortgage	Automobile	Residential mortgage	Automobile
December 31, 2005	**0.0%**	**0.9%**	0.0–2.4%	0.8%	0.0–2.0%	0.5%
December 31, 2004	**NA**	**NA**	0.0–3.3	1.1	0.0–2.1	0.9
December 31, 2003	**NA**	**NA**	NA	NA	0.0–3.6	0.9

(a) Static-pool losses are not applicable to credit card securitizations due to their revolving structure.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(c) 2005 securitizations consist of prime-mortgage securitizations only. Expected losses are minimal and incorporated in other assumptions.

The table below presents information about delinquencies, net credit losses and components of reported and securitized financial assets at December 31, 2005 and 2004:

	Total Loans		Nonaccrual and 90 days or more past due		Net loan charge-offs[a] Year ended	
December 31, (in millions)	**2005**	2004	**2005**	2004	**2005**	2004
Home finance	**$ 133,453**	$ 124,653	**$ 863**	$ 673	**$ 154**	$ 573
Auto & education finance	**49,047**	62,712	**195**	193	**277**	263
Consumer & small business and other	**14,799**	15,107	**280**	295	**141**	154
Credit card receivables	**71,738**	64,575	**1,091**	1,006	**3,324**	1,923
Total consumer loans	**269,037**	267,047	**2,429**	2,167	**3,896**	2,913
Total wholesale loans	**150,111**	135,067	**1,042**	1,582	**(77)**	186
Total loans reported	**419,148**	402,114	**3,471**	3,749	**3,819**	3,099
Securitized loans:						
Residential mortgage[b]	**8,061**	11,533	**370**	460	**105**	150
Automobile	**5,439**	4,763	**11**	12	**15**	24
Credit card	**70,527**	70,795	**730**	1,337	**3,776**	2,898
Total consumer loans securitized	**84,027**	87,091	**1,111**	1,809	**3,896**	3,072
Securitized wholesale activities	**9,049**	1,401	**4**	—	**—**	—
Total loans securitized[c]	**93,076**	88,492	**1,115**	1,809	**3,896**	3,072
Total loans reported and securitized[d]	**$ 512,224**	$ 490,606	**$ 4,586**	$ 5,558	**$ 7,715**	$ 6,171

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) Includes $5.9 billion and $10.3 billion of outstanding principal balances on securitized sub-prime 1–4 family residential mortgage loans as of December 31, 2005 and 2004, respectively.
(c) Total assets held in securitization-related SPEs were $204.2 billion and $175.1 billion at December 31, 2005 and 2004, respectively. The $93.1 billion and $88.5 billion of loans securitized at December 31, 2005 and 2004, respectively, excludes: $85.6 billion and $50.8 billion of securitized loans, in which the Firm's only continuing involvement is the servicing of the assets; $24.8 billion and $35.2 billion of seller's interests in credit card master trusts; and $0.7 billion and $0.6 billion of escrow accounts and other assets, respectively.
(d) Represents both loans on the Consolidated balance sheets and loans that have been securitized, but excludes loans for which the Firm's only continuing involvement is servicing of the assets.

Note 14 – Variable interest entities

Refer to Note 1 on page 91 of this Annual Report for a further description of JPMorgan Chase's policies regarding consolidation of variable interest entities.

JPMorgan Chase's principal involvement with VIEs occurs in the following business segments:

- Investment Bank: Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner by providing the structural flexibility to meet their needs pertaining to price, yield and desired risk. There are two broad categories of transactions involving VIEs in the IB: (1) multi-seller conduits and (2) client intermediation; both are discussed below. The IB also securitizes loans through QSPEs which are not considered VIEs, to create asset-backed securities, as further discussed in Note 13 on pages 108–111 of this Annual Report.
- Asset & Wealth Management: Provides investment management services to a limited number of the Firm's mutual funds deemed VIEs. AWM earns a fixed fee based upon assets managed; the fee varies with each fund's investment objective and is competitively priced. For the limited number of funds that qualify as VIEs, AWM's relationships with such funds are not considered significant interests under FIN 46R.
- Treasury & Securities Services: Provides trustee and custodial services to a number of VIEs. These services are similar to those provided to non-VIEs. TSS earns market-based fees for services provided. Such relationships are not considered significant interests under FIN 46R.
- Commercial Banking: Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner. This is often accomplished through the use of products similar to those offered in the Investment Bank. Commercial Banking may assist in the structuring and/or on-going administration of these VIEs and may provide liquidity, letters of credit and/or derivative instruments in support of the VIE.
- The Firm's Private Equity business, included in Corporate, is involved with entities that may be deemed VIEs. Private equity activities are accounted for in accordance with the Investment Company Audit Guide ("Audit Guide"). The FASB deferred adoption of FIN 46R for non-registered investment companies that apply the Audit Guide until the proposed Statement of Position on the clarification of the scope of the Audit Guide is finalized. The Firm continues to apply this deferral provision; had FIN 46R been applied to VIEs subject to this deferral, the impact would have had an insignificant impact on the Firm's Consolidated financial statements as of December 31, 2005.

As noted above, there are two broad categories of transactions involving VIEs with which the IB is involved: multi-seller conduits and client intermediation. These categories are discussed more fully below.

Multi-seller conduits

The Firm is an active participant in the asset-backed securities business, helping meet customers' financing needs by providing access to the commercial paper markets through VIEs known as multi-seller conduits. These entities are separate bankruptcy-remote corporations in the business of purchasing interests in, and making loans secured by, receivable pools and other financial assets pursuant to agreements with customers. The entities fund their purchases and loans through the issuance of highly-rated commercial paper. The primary source of repayment of the commercial paper is the cash flow from the pools of assets.

JPMorgan Chase serves as the administrator and provides contingent liquidity support and limited credit enhancement for several multi-seller conduits. The commercial paper issued by the conduits is backed by collateral, credit enhancements and commitments to provide liquidity sufficient to support receiving at least a liquidity rating of A-1, P-1 and, in certain cases, F1.

As a means of ensuring timely repayment of the commercial paper, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it. In the unlikely event an asset pool is removed from the conduit, the administrator can draw on the liquidity facility to repay the maturing commercial paper. The liquidity facilities are typically in the form of asset purchase agreements and are generally structured such that the bank liquidity is provided by purchasing, or lending against, a pool of non-defaulted, performing assets. Deal-specific liquidity is the primary source of liquidity support for the conduits.

Program-wide liquidity in the form of revolving and short-term lending commitments also is provided by the Firm to these vehicles in the event of short-term disruptions in the commercial paper market.

Deal-specific credit enhancement that supports the commercial paper issued by the conduits is generally structured to cover a multiple of historical losses expected on the pool of assets and is provided primarily by customers (i.e., sellers) or other third parties. The deal-specific credit enhancement is typically in the form of over-collateralization provided by the seller but also may include any combination of the following: recourse to the seller or originator, cash collateral accounts, letters of credit, excess spread, retention of subordinated interests or third-party guarantees. In certain instances, the Firm provides limited credit enhancement in the form of standby letters of credit.

The following table summarizes the Firm's involvement with Firm-administered multi-seller conduits:

	Consolidated		Nonconsolidated		Total	
December 31, (in billions)	**2005**	2004	**2005**	2004[b]	**2005**	2004[b]
Total commercial paper issued by conduits	**$ 35.2**	$ 35.8	**$ 8.9**	$ 9.3	**$ 44.1**	$ 45.1
Commitments						
Asset-purchase agreements	**$ 47.9**	$ 47.2	**$ 14.3**	$ 16.3	**$ 62.2**	$ 63.5
Program-wide liquidity commitments	**5.0**	4.0	**1.0**	2.0	**6.0**	6.0
Program-wide limited credit enhancements	**1.3**	1.4	**1.0**	1.2	**2.3**	2.6
Maximum exposure to loss[a]	**48.4**	48.2	**14.8**	16.9	**63.2**	65.1

(a) The Firm's maximum exposure to loss is limited to the amount of drawn commitments (i.e., sellers' assets held by the multi-seller conduits for which the Firm provides liquidity support) of $41.6 billion and $42.2 billion at December 31, 2005 and 2004, respectively, plus contractual but undrawn commitments of $21.6 billion and $22.9 billion at December 31, 2005 and 2004, respectively. Since the Firm provides credit enhancement and liquidity to these multi-seller conduits, the maximum exposure is not adjusted to exclude exposure absorbed by third-party liquidity providers.

(b) In December 2003 and February 2004, two multi-seller conduits were restructured, with each conduit issuing preferred securities acquired by an independent third-party investor; the investor absorbs the majority of the expected losses of the conduit. In determining the primary beneficiary of the restructured conduits, the Firm leveraged an existing rating agency model – an independent market standard – to estimate the size of the expected losses, and the Firm considered the relative rights and obligations of each of the variable interest holders.

The Firm views its credit exposure to multi-seller conduit transactions as limited. This is because, for the most part, the Firm is not required to fund under the liquidity facilities if the assets in the VIE are in default. Additionally, the Firm's obligations under the letters of credit are secondary to the risk of first loss provided by the customer or other third parties – for example, by the overcollateralization of the VIE with the assets sold to it or notes subordinated to the Firm's liquidity facilities.

Client intermediation

As a financial intermediary, the Firm is involved in structuring VIE transactions to meet investor and client needs. The Firm intermediates various types of risks (including fixed income, equity and credit), typically using derivative instruments as further discussed below. In certain circumstances, the Firm also provides liquidity and other support to the VIEs to facilitate the transaction. The Firm's current exposure to nonconsolidated VIEs is reflected in its Consolidated balance sheets or in the Notes to consolidated financial statements. The risks inherent in derivative instruments or liquidity commitments are managed similarly to other credit, market and liquidity risks to which the Firm is exposed. The Firm intermediates principally with the following types of VIEs: credit-linked note vehicles and municipal bond vehicles.

The Firm structures credit-linked notes in which the VIE purchases highly-rated assets (such as asset-backed securities) and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit not held by the VIE. Credit-linked notes are issued by the VIE to transfer the risk of the referenced credit to the investors in the VIE. Clients and investors often prefer a VIE structure, since the credit-linked notes generally carry a higher credit rating than they would if issued directly by JPMorgan Chase.

The Firm is involved with municipal bond vehicles for the purpose of creating a series of secondary market trusts that allow tax-exempt investors to finance their investments at short-term tax-exempt rates. The VIE purchases fixed-rate, longer-term highly-rated municipal bonds by issuing puttable floating-rate certificates and inverse floating-rate certificates; the investors in the inverse floating-rate certificates are exposed to the residual losses of the VIE (the "residual interests"). For vehicles in which the Firm owns the residual interests, the Firm consolidates the VIE. In vehicles where third-party investors own the residual interests, the Firm's exposure is limited because of the high credit quality of the underlying municipal bonds, the unwind triggers based upon the market value of the underlying collateral and the residual interests held by third parties. The Firm often serves as remarketing agent for the VIE and provides liquidity to support the remarketing.

Assets held by credit-linked and municipal bond vehicles at December 31, 2005 and 2004, were as follows:

December 31, (in billions)	**2005**	2004
Credit-linked note vehicles[(a)]	**$ 13.5**	$ 17.8
Municipal bond vehicles[(b)]	**13.7**	7.5

(a) Assets of $1.8 billion and $2.3 billion reported in the table above were recorded on the Firm's Consolidated balance sheets at December 31, 2005 and 2004, respectively, due to contractual relationships held by the Firm that relate to collateral held by the VIE.
(b) Total amounts consolidated due to the Firm owning residual interests were $4.9 billion and $2.6 billion at December 31, 2005 and 2004, respectively, and are reported in the table. Total liquidity commitments were $5.8 billion and $3.1 billion at December 31, 2005 and 2004, respectively. The Firm's maximum credit exposure to all municipal bond vehicles was $10.7 billion and $5.7 billion at December 31, 2005 and 2004, respectively.

Finally, the Firm may enter into transactions with VIEs structured by other parties. These transactions can include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, trustee or custodian. These transactions are conducted at arm's length, and individual credit decisions are based upon the analysis of the specific VIE, taking into consideration the quality of the underlying assets. JPMorgan Chase records and reports these positions similarly to any other third-party transaction. These activities do not cause JPMorgan Chase to absorb a majority of the expected losses of the VIEs or to receive a majority of the residual returns of the VIE, and they are not considered significant for disclosure purposes.

Consolidated VIE assets

The following table summarizes the Firm's total consolidated VIE assets, by classification on the Consolidated balance sheets, as of December 31, 2005 and 2004:

December 31, (in billions)	**2005**	2004
Consolidated VIE assets[(a)]		
Investment securities[(b)]	**$ 1.9**	$ 10.6
Trading assets[(c)]	**9.3**	4.7
Loans	**8.1**	3.4
Interests in purchased receivables	**29.6**	31.6
Other assets	**3.0**	0.4
Total consolidated assets	**$ 51.9**	$ 50.7

(a) The Firm also holds $3.9 billion and $3.4 billion of assets, at December 31, 2005 and December 31, 2004, respectively, primarily as a seller's interest, in certain consumer securitizations in a segregated entity, as part of a two-step securitization transaction. This interest is included in the securitization activities disclosed in Note 13 on pages 108–111 of this Annual Report.
(b) The decline in balance is primarily attributable to the sale of the Firm's interest in a structured investment vehicle's capital notes and resulting deconsolidation of this vehicle in 2005.
(c) Includes the fair value of securities and derivatives.

Interests in purchased receivables include interests in receivables purchased by Firm-administered conduits, which have been consolidated in accordance with FIN 46R. Interests in purchased receivables are carried at cost and are reviewed to determine whether an other-than-temporary impairment exists. Based upon the current level of credit protection specified in each transaction, primarily through overcollateralization, the Firm determined that no other-than-temporary impairment existed at December 31, 2005.

The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item titled, "Beneficial interests issued by consolidated variable interest entities" on the Consolidated balance sheets. The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. See Note 17 on page 117 of this Annual Report for the maturity profile of FIN 46 long-term beneficial interests.

FIN 46R transition

In December 2003, the FASB issued a revision to FIN 46 ("FIN 46R") to address various technical corrections and implementation issues that had arisen since the issuance of FIN 46. Effective March 31, 2004, JPMorgan Chase implemented FIN 46R for all VIEs, excluding certain investments made by its private equity business, as previously discussed. Implementation of FIN 46R did not have a significant effect on the Firm's Consolidated financial statements.

Note 15 – Goodwill and other intangible assets

Goodwill is not amortized but instead tested for impairment in accordance with SFAS 142 at the reporting-unit segment, which is generally one level below the six major reportable business segments (as described in Note 31 on pages 130–131 of this Annual Report); plus Private Equity (which is included in Corporate). Goodwill is tested annually (during the fourth quarter) or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment. Intangible assets determined to have indefinite lives are not amortized but instead are tested for impairment at least annually, or more frequently if events or changes in circumstances indicate that the asset might be impaired. The impairment test compares the fair value of the indefinite-lived intangible asset to its carrying amount. Other acquired intangible assets determined to have finite lives, such as core deposits and credit card relationships, are amortized over their estimated useful lives in a manner that best reflects the economic benefits of the intangible asset. In addition, impairment testing is performed periodically on these amortizing intangible assets.

Goodwill and other intangible assets consist of the following:

December 31, (in millions)	**2005**	2004
Goodwill	**$ 43,621**	$ 43,203
Mortgage servicing rights	**6,452**	5,080
Purchased credit card relationships	**3,275**	3,878

December 31, (in millions)	**2005**	2004
All other intangibles:		
Other credit card–related intangibles	**$ 124**	$ 272
Core deposit intangibles	**2,705**	3,328
All other intangibles	**2,003**	2,126
Total All other intangible assets	**$ 4,832**	$ 5,726

Goodwill

As of December 31, 2005, goodwill increased by $418 million compared with December 31, 2004, principally in connection with the establishment of the business partnership with Cazenove, as well as the acquisitions of Vastera, Neovest and the Sears Canada credit card business. These increases to Goodwill were partially offset by the deconsolidation of Paymentech. Goodwill was not impaired at December 31, 2005 or 2004, nor was any goodwill written off due to impairment during the years ended December 31, 2005, 2004 or 2003.

Goodwill attributed to the business segments was as follows:

(in millions)	**Dec. 31, 2005**	Dec. 31, 2004	Goodwill resulting from the Merger
Investment Bank	**$ 3,531**	$ 3,309	$ 1,179
Retail Financial Services	**14,991**	15,022	14,576
Card Services	**12,984**	12,781	12,802
Commercial Banking	**2,651**	2,650	2,599
Treasury & Securities Services	**2,062**	2,044	465
Asset & Wealth Management	**7,025**	7,020	2,539
Corporate (Private Equity)	**377**	377	—
Total goodwill	**$ 43,621**	$ 43,203	$ 34,160

Mortgage servicing rights

JPMorgan Chase recognizes as intangible assets mortgage servicing rights, which represent the right to perform specified residential mortgage servicing activities for others. MSRs are either purchased from third parties or retained upon sale or securitization of mortgage loans. Servicing activities include collecting principal, interest, and escrow payments from borrowers; making tax and insurance payments on behalf of the borrowers; monitoring delinquencies and executing foreclosure proceedings; and accounting for and remitting principal and interest payments to the investors of the mortgage-backed securities.

The amount capitalized as MSRs represents the amount paid to third parties to acquire MSRs or is based on fair value, if retained upon the sale or securitization of mortgage loans. The Firm estimates the fair value of MSRs using a discounted future cash flow model. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenues and costs to service, as well as other economic factors.

During the fourth quarter of 2005, the Firm enhanced its valuation of MSRs by utilizing an option-adjusted spread ("OAS") valuation approach. An OAS approach projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's proprietary prepayment model, and then discounts these cash flows at risk-adjusted rates. Prior to the fourth quarter of 2005, MSRs were valued using cash flows and discount rates determined by a "static" or single interest rate path valuation model. The initial valuation of MSRs under OAS did not have a material impact on the Firm's financial statements.

The Firm compares fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience. Management believes that the assumptions used to estimate fair values are supportable and reasonable.

The Firm accounts for its MSRs at the lower of cost or fair value, in accordance with SFAS 140. MSRs are amortized as a reduction of the actual servicing income received in proportion to, and over the period of, the estimated future net servicing income stream of the underlying mortgage loans. For purposes of evaluating and measuring impairment of MSRs, the Firm stratifies the portfolio on the basis of the predominant risk characteristics, which are loan type and interest rate. Any indicated impairment is recognized as a reduction in revenue through a valuation allowance, which represents the extent that the carrying value of an individual stratum exceeds its estimated fair value.

The Firm evaluates other-than-temporary impairment by reviewing changes in mortgage and other market interest rates over historical periods and then determines an interest rate scenario to estimate the amounts of the MSRs' gross carrying value and the related valuation allowance that could be expected to be recovered in the foreseeable future. Any gross carrying value and related valuation allowance amounts that are not expected to be recovered in the foreseeable future, based upon the interest rate scenario, are considered to be other-than-temporary.

The carrying value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. JPMorgan Chase uses a combination of derivatives, AFS securities and trading instruments to manage changes in the fair value of MSRs. The intent is to offset any changes in the fair value of MSRs with changes in the fair value of the related risk management instrument. MSRs decrease in value when interest rates decline. Conversely, securities (such as mortgage-backed securities), principal-only certificates and derivatives (when the Firm receives fixed-rate interest payments) decrease in value when interest rates increase. The Firm offsets the interest rate risk of its MSRs by designating certain derivatives (e.g., a combination of swaps, swaptions and floors that produces an interest rate profile opposite to the designated risk of the hedged MSRs) as fair value hedges of specified MSRs under SFAS 133. SFAS 133 hedge accounting allows the carrying value of the hedged MSRs to be adjusted through earnings in the same period that the change in value of the hedging derivatives is recognized through earnings. Both of these valuation adjustments are recorded in Mortgage fees and related income.

When applying SFAS 133, the loans underlying the MSRs being hedged are stratified into specific SFAS 133 asset groupings that possess similar interest rate and prepayment risk exposures. The documented hedge period for the Firm is daily. Daily adjustments are performed to incorporate new or terminated derivative contracts and to modify the amount of the corresponding similar asset grouping that is being hedged. The Firm has designated changes in the benchmark interest rate (LIBOR) as the hedged risk. In designating the benchmark interest rate, the Firm considers the impact that the change in the benchmark rate has on the prepayment speed estimates in determining the fair value of the MSRs. The Firm performs both prospective and retrospective hedge-effectiveness evaluations, using a regression analysis, to determine whether the hedge relationship is expected to be highly effective. Hedge effectiveness is assessed by comparing the change in value of the MSRs as a result of changes in benchmark interest rates to the change in the value of the designated derivatives. For a further discussion on derivative instruments and hedging activities, see Note 26 on page 123 of this Annual Report.

Securities (both AFS and Trading) also are used to manage the risk exposure of MSRs. Because these securities do not qualify as hedges under SFAS 133, they are accounted for under SFAS 115. Realized and unrealized gains and losses on trading securities are recognized in earnings in Mortgage fees and related income; interest income on the AFS securities is recognized in earnings in Net interest income; and unrealized gains and losses on AFS securities are reported in Other comprehensive income. Finally, certain nonhedge derivatives, which have not been designated by management in SFAS 133 hedge relationships, are used to manage the economic risk exposure of MSRs and are recorded in Mortgage fees and related income.

Certain AFS securities purchased by the Firm to manage structural interest rate risk were designated in 2005 as risk management instruments of MSRs. At December 31, 2005 and 2004, the unrealized loss on AFS securities used to manage the risk exposure of MSRs was $174 million and $3 million, respectively.

The following table summarizes MSR activity and related amortization for the dates indicated. It also includes the key assumptions and the sensitivity of the fair value of MSRs at December 31, 2005, to immediate 10% and 20% adverse changes in each of those assumptions.

Year ended December 31, (in millions)[a]	**2005**	2004	2003
Balance at January 1	**$ 6,111**	$ 6,159	$ 4,864
Additions	**1,897**	1,757	3,201
Bank One merger	**NA**	90	NA
Sales	**—**	(3)	—
Other-than-temporary impairment	**(1)**	(149)	(283)
Amortization	**(1,295)**	(1,297)	(1,397)
SFAS 133 hedge valuation adjustments	**90**	(446)	(226)
Balance at December 31	**6,802**	6,111	6,159
Less: valuation allowance	**350**	1,031	1,378
Balance at December 31, after valuation allowance	**$ 6,452**	$ 5,080	$ 4,781
Estimated fair value at December 31	**$ 6,668**	$ 5,124	$ 4,781
Weighted-average prepayment speed assumption (CPR)	**17.56%**	17.29%	17.67%
Weighted-average discount rate	**9.68%**	7.93%	7.31%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
CPR: Constant prepayment rate

	2005
Weighted-average prepayment speed assumption (CPR)	**17.56%**
Impact on fair value with 10% adverse change	**$ (340)**
Impact on fair value with 20% adverse change	**(654)**
Weighted-average discount rate	**9.68%**
Impact on fair value with 10% adverse change	**$ (231)**
Impact on fair value with 20% adverse change	**(446)**

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. As the figures indicate, changes in fair value based upon a 10% and 20% variation in assumptions generally cannot be easily extrapolated because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might magnify or counteract the sensitivities.

The valuation allowance represents the extent to which the carrying value of MSRs exceeds its estimated fair value for its applicable SFAS 140 strata. Changes in the valuation allowance are the result of the recognition of impairment or the recovery of previously recognized impairment charges due to changes in market conditions during the period. The changes in the valuation allowance for MSRs were as follows:

Year ended December 31, (in millions)[a]	**2005**	2004	2003
Balance at January 1	**$ 1,031**	$ 1,378	$ 1,634
Other-than-temporary impairment	**(1)**	(149)	(283)
SFAS 140 impairment (recovery) adjustment	**(680)**	(198)	27
Balance at December 31	**$ 350**	$ 1,031	$ 1,378

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results, while 2003 results include heritage JPMorgan Chase only.

The Firm recorded an other-than-temporary impairment of its MSRs of $1 million, $149 million and $283 million, in 2005, 2004 and 2003, respectively, which permanently reduced the gross carrying value of the MSRs and the related valuation allowance. The permanent reduction precludes subsequent reversals. This write-down had no impact on the results of operations or financial condition of the Firm.

Purchased credit card relationships and All other intangible assets
During 2005, purchased credit card relationship intangibles decreased by $603 million as a result of $703 million in amortization expense, partially offset by the purchase of the Sears Canada credit card business. All other intangible assets decreased by $894 million in 2005 primarily as a result of $836 million in amortization expense and the impact of the deconsolidation of Paymentech. Except for $513 million of indefinite-lived intangibles related to asset management advisory contracts which are not amortized but instead are tested for impairment at least annually, the remainder of the Firm's other acquired intangible assets are subject to amortization.

The components of credit card relationships, core deposits and other intangible assets were as follows:

	2005			2004		
December 31, (in millions)	Gross amount	Accumulated amortization	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	**$ 5,325**	**$ 2,050**	**$ 3,275**	$ 5,225	$ 1,347	$ 3,878
All other intangibles:						
Other credit card–related intangibles	**183**	**59**	**124**	295	23	272
Core deposit intangibles	**3,797**	**1,092**	**2,705**	3,797	469	3,328
Other intangibles	**2,582**	**579**[a]	**2,003**	2,528	402[a]	2,126

Amortization expense (in millions)[b]	**2005**	2004	2003
Purchased credit card relationships	**$ 703**	$ 476	$ 256
Other credit card–related intangibles	**36**	23	—
Core deposit intangibles	**623**	330	6
All other intangibles	**163**	117	32
Total amortization expense	**$ 1,525**	$ 946	$ 294

(a) Includes $14 million and $16 million for 2005 and 2004, respectively, of amortization expense related to servicing assets on securitized automobile loans, which is recorded in Asset management, administration and commissions.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

Future amortization expense

The following table presents estimated amortization expenses related to credit card relationships, core deposits and All other intangible assets at December 31, 2005:

(in millions) Year ended December 31,	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	All other intangible assets	Total
2006	$ 688	$ 16	$ 547	$ 163	$ 1,414
2007	620	15	469	145	1,249
2008	515	15	402	132	1,064
2009	372	15	329	123	839
2010	312	13	276	110	711

Note 16 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or 10 years. JPMorgan Chase has recorded immaterial asset retirement obligations related to asbestos remediation under SFAS 143 and FIN 47 in those cases where it has sufficient information to estimate the obligations' fair value.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software under SOP 98-1. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life, and reviewed for impairment on an ongoing basis.

Note 17 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. The following table is a summary of long-term debt (including unamortized original issue debt discount and SFAS 133 valuation adjustments):

By remaining contractual maturity at December 31, 2005 (in millions)		Under 1 year	1–5 years	After 5 years	**2005 total**	2004 total
Parent company						
Senior debt:[a]	Fixed rate	$ 5,991	$ 14,705	$ 4,224	**$ 24,920**	$ 25,563
	Variable rate	3,574	11,049	2,291	**16,914**	15,128
	Interest rates[b]	2.80–6.88%	0.22–6.63%	1.12–8.85%	**0.22–8.85%**	0.20–7.63%
Subordinated debt:	Fixed rate	$ 758	$ 8,241	$ 15,818	**$ 24,817**	$ 22,055
	Variable rate	—	26	1,797	**1,823**	2,686
	Interest rates[b]	6.13–7.88%	4.80–10.00%	1.92–9.88%	**1.92–10.00%**	1.92–10.00%
	Subtotal	$ 10,323	$ 34,021	$ 24,130	**$ 68,474**	$ 65,432
Subsidiaries						
Senior debt:[a]	Fixed rate	$ 636	$ 3,746	$ 2,362	**$ 6,744**	$ 6,249
	Variable rate	5,364	21,632	5,013	**32,009**	22,097
	Interest rates[b]	3.00–10.95%	1.71–17.00%	1.76–13.00%	**1.71–17.00%**	1.71–13.00%
Subordinated debt:	Fixed rate	$ —	$ 845	$ 285	**$ 1,130**	$ 1,644
	Variable rate	—	—	—	**—**	—
	Interest rates[b]	—	6.13–6.70%	8.25%	**6.13–8.25%**	6.00–8.25%
	Subtotal	$ 6,000	$ 26,223	$ 7,660	**$ 39,883**	$ 29,990
Total long-term debt		$ 16,323	$ 60,244	$ 31,790	**$ 108,357**[d][e][f]	$ 95,422
FIN 46R long-term beneficial interests:[c]						
	Fixed rate	$ 80	$ 9	$ 376	**$ 465**	$ 775
	Variable rate	26	95	1,768	**1,889**	5,618
	Interest rates[b]	3.39–7.35%	0.51–7.00%	2.42–12.79%	**0.51–12.79%**	0.54–12.79%
Total FIN 46R long-term beneficial interests		$ 106	$ 104	$ 2,144	**$ 2,354**	$ 6,393

(a) Included are various equity-linked or other indexed instruments. Embedded derivatives separated from hybrid securities in accordance with SFAS 133 are reported at fair value and shown net with the host contract on the balance sheet. Changes in fair value of separated derivatives are recorded in Trading revenue.

(b) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed and variable-rate issuances, which excludes the effects of related derivative instruments. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of derivatives, the range of modified rates in effect at December 31, 2005, for total long-term debt was 0.49% to 17.00%, versus the contractual range of 0.22% to 17.00% presented in the table above.

(c) Included on the Consolidated balance sheets in Beneficial interests issued by consolidated variable interest entities.

(d) At December 31, 2005, long-term debt aggregating $27.7 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based upon the terms specified in the respective notes.

(e) The aggregate principal amount of debt that matures in each of the five years subsequent to 2005 is $16.3 billion in 2006, $17.8 billion in 2007, $23.4 billion in 2008, $11.1 billion in 2009, and $8.0 billion in 2010.

(f) Includes $2.3 billion of outstanding zero-coupon notes at December 31, 2005. The aggregate principal amount of these notes at their respective maturities is $5.9 billion.

The weighted-average contractual interest rate for total long-term debt was 4.62% and 4.50% as of December 31, 2005 and 2004, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rate for total long-term debt, including the effects of related derivative instruments, was 4.65% and 3.97% as of December 31, 2005 and 2004, respectively.

JPMorgan Chase & Co. (Parent Company) has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's trading activities. These guarantees rank on a parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities totaled $170 million and $320 million at December 31, 2005 and 2004, respectively.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities

At December 31, 2005, the Firm had 22 wholly-owned Delaware statutory business trusts ("issuer trusts") that issued guaranteed preferred beneficial interests in the Firm's junior subordinated deferrable interest debentures.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $11.5 billion and $10.3 billion at December 31, 2005 and 2004, respectively, were reflected in the Firm's Consolidated balance sheets in the Liabilities section under the caption "Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities." The Firm also records the common capital securities issued by the issuer trusts in Other assets in its Consolidated balance sheets at December 31, 2005 and 2004.

The debentures issued to the issuer trusts by the Firm, less the capital securities of the issuer trusts, qualify as Tier 1 capital. The following is a summary of the outstanding capital securities, net of discount, issued by each trust and the junior subordinated deferrable interest debenture issued by JPMorgan Chase to each trust as of December 31, 2005:

December 31, 2005 (in millions)	Amount of capital securities issued by trust[a]	Principal amount of debenture held by trust[b]	Issue date	Stated maturity of capital securities and debentures	Earliest redemption date	Interest rate of capital securities and debentures	Interest payment/ distribution dates
Bank One Capital III	$ 474	$ 616	2000	2030	Any time	8.75%	Semiannually
Bank One Capital V	300	335	2001	2031	2006	8.00%	Quarterly
Bank One Capital VI	525	556	2001	2031	2006	7.20%	Quarterly
Chase Capital I	600	619	1996	2026	2006	7.67%	Semiannually
Chase Capital II	495	511	1997	2027	2007	LIBOR + 0.50%	Quarterly
Chase Capital III	296	306	1997	2027	2007	LIBOR + 0.55%	Quarterly
Chase Capital VI	249	256	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	248	256	1997	2027	2007	LIBOR + 0.55%	Quarterly
First Chicago NBD Institutional Capital A	499	551	1996	2026	2006	7.95%	Semiannually
First Chicago NBD Institutional Capital B	250	273	1996	2026	2006	7.75%	Semiannually
First USA Capital Trust I	3	3	1996	2027	2007	9.33%	Semiannually
JPM Capital Trust I	750	773	1996	2027	2007	7.54%	Semiannually
JPM Capital Trust II	400	412	1997	2027	2007	7.95%	Semiannually
J.P. Morgan Chase Capital IX	500	509	2001	2031	2006	7.50%	Quarterly
J.P. Morgan Chase Capital X	1,000	1,022	2002	2032	2007	7.00%	Quarterly
J.P. Morgan Chase Capital XI	1,075	1,009	2003	2033	2008	5.88%	Quarterly
J.P. Morgan Chase Capital XII	400	393	2003	2033	2008	6.25%	Quarterly
JPMorgan Chase Capital XIII	472	487	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XIV	600	593	2004	2034	2009	6.20%	Quarterly
JPMorgan Chase Capital XV	994	1,049	2005	2035	Any time	5.88%	Semiannually
JPMorgan Chase Capital XVI	500	501	2005	2035	2010	6.35%	Quarterly
JPMorgan Chase Capital XVII	496	499	2005	2035	Any time	5.85%	Semiannually
Total	$ 11,126	$ 11,529					

(a) Represents the amount of capital securities issued to the public by each trust, net of unamortized discount.
(b) Represents the principal amount of JPMorgan Chase debentures held as assets by each trust, net of unamortized discount amounts. The principal amount of debentures held by the trusts includes the impact of hedging and purchase accounting fair value adjustments that are recorded on the Firm's financial statements.

Note 18 – Preferred stock

JPMorgan Chase is authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share. Outstanding preferred stock at December 31, 2005 and 2004, was 280,433 and 4.28 million shares, respectively. On May 6, 2005, JPMorgan Chase redeemed a total of 4.0 million shares of its Fixed/adjustable rate, noncumulative preferred stock.

Dividends on shares of the outstanding series of preferred stock are payable quarterly. The preferred stock outstanding takes precedence over JPMorgan Chase's common stock for the payment of dividends and the distribution of assets in the event of a liquidation or dissolution of the Firm.

The following is a summary of JPMorgan Chase's preferred stock outstanding as of December 31:

(in millions, except per share amounts and rates)	Stated value and redemption price per share[b]	Shares		Outstanding at December 31,		Earliest redemption date	Rate in effect at December 31, 2005
		2005	2004	**2005**	2004		
6.63% Series H cumulative[a]	$ 500.00	**0.28**	0.28	**$ 139**	$ 139	3/31/2006	**6.63%**
Fixed/adjustable rate, noncumulative	50.00	**—**	4.00	**—**	200	—	**—**
Total preferred stock		**0.28**	4.28	**$ 139**	$ 339		

(a) Represented by depositary shares.
(b) Redemption price includes amount shown in the table plus any accrued but unpaid dividends.

Note 19 – Common stock

At December 31, 2005, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a $1 par value per share. In connection with the Merger, the shareholders approved an increase in the amount of authorized shares of 4.5 billion from the 4.5 billion that had been authorized as of December 31, 2003. Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during 2005, 2004 and 2003 were as follows:

December 31,[a] (in millions)	**2005**	2004	2003
Issued – balance at January 1	**3,584.8**	2,044.4	2,023.6
Newly issued:			
Employee benefits and compensation plans	**34.0**	69.0	20.9
Employee stock purchase plans	**1.4**	3.1	0.7
Purchase accounting acquisitions and other	**—**	1,469.4	—
Total newly issued	**35.4**	1,541.5	21.6
Cancelled shares	**(2.0)**	(1.1)	(0.8)
Total issued – balance at December 31	**3,618.2**	3,584.8	2,044.4
Treasury – balance at January 1	**(28.6)**	(1.8)	(24.9)
Purchase of treasury stock	**(93.5)**	(19.3)	—
Share repurchases related to employee stock-based awards[b]	**(9.4)**	(7.5)	(3.0)
Issued from treasury:			
Employee benefits and compensation plans	**—**	—	25.8
Employee stock purchase plans	**—**	—	0.3
Total issued from treasury	**—**	—	26.1
Total treasury – balance at December 31	**(131.5)**	(28.6)	(1.8)
Outstanding	**3,486.7**	3,556.2	2,042.6

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes. The shares withheld amounted to 8.2 million, 5.7 million and 2.3 million for 2005, 2004 and 2003, respectively.

During 2005 and 2004, the Firm repurchased 93.5 million shares and 19.3 million shares, respectively, of common stock under a stock repurchase program that was approved by the Board of Directors on July 20, 2004. The Firm did not repurchase shares of its common stock during 2003 under a prior stock repurchase program.

As of December 31, 2005, approximately 507 million unissued shares of common stock were reserved for issuance under various employee or director incentive, compensation, option and stock purchase plans.

Note 20 – Earnings per share

SFAS 128 requires the presentation of basic and diluted earnings per share ("EPS") in the income statement. Basic EPS is computed by dividing net income applicable to common stock by the weighted-average number of common shares outstanding for the period. Diluted EPS is computed using the same method as basic EPS but, in the denominator, the number of common shares reflect, in addition to outstanding shares, the potential dilution that could occur if convertible securities or other contracts to issue common stock were converted or exercised into common stock. Net income available for common stock is the same for basic EPS and diluted EPS, as JPMorgan Chase had no convertible securities, and therefore, no adjustments to net income available for common stock were necessary. The following table presents the calculation of basic and diluted EPS for 2005, 2004 and 2003:

Year ended December 31, (in millions, except per share amounts)[a]	**2005**	2004	2003
Basic earnings per share			
Net income	**$ 8,483**	$ 4,466	$ 6,719
Less: preferred stock dividends	**13**	52	51
Net income applicable to common stock	**$ 8,470**	$ 4,414	$ 6,668
Weighted-average basic shares outstanding	**3,491.7**	2,779.9	2,008.6
Net income per share	**$ 2.43**	$ 1.59	$ 3.32
Diluted earnings per share			
Net income applicable to common stock	**$ 8,470**	$ 4,414	$ 6,668
Weighted-average basic shares outstanding	**3,491.7**	2,779.9	2,008.6
Add: Broad-based options	**3.6**	5.4	4.1
Restricted stock, restricted stock units and key employee options	**62.0**	65.3	42.4
Weighted-average diluted shares outstanding	**3,557.3**	2,850.6	2,055.1
Net income per share[b]	**$ 2.38**	$ 1.55	$ 3.24

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Options issued under employee benefit plans to purchase 280 million, 300 million and 335 million shares of common stock were outstanding for the years ended 2005, 2004 and 2003, respectively, but were not included in the computation of diluted EPS because the options' exercise prices were greater than the average market price of the common shares.

Note 21 – Accumulated other comprehensive income (loss)

Accumulated other comprehensive income (loss) includes the after-tax change in unrealized gains and losses on AFS securities, cash flow hedging activities and foreign currency translation adjustments (including the impact of related derivatives).

Year ended December 31,[a] (in millions)	Unrealized gains (losses) on AFS securities[b]	Translation adjustments	Cash flow hedges	Accumulated other comprehensive income (loss)
Balance at December 31, 2002	$ 731	$ (6)	$ 502	$ 1,227
Net change	(712)	—	(545)	(1,257)
Balance at December 31, 2003	19	(6)	(43)	(30)
Net change	(80)[c]	(2)[d]	(96)	(178)
Balance at December 31, 2004	(61)	(8)	(139)	(208)
Net change	**(163)**[e]	**—**[f]	**(255)**	**(418)**
Balance at December 31, 2005	**$ (224)**	**$ (8)**	**$ (394)**	**$ (626)**

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Represents the after-tax difference between the fair value and amortized cost of the AFS securities portfolio and retained interests in securitizations recorded in Other assets.
(c) The net change during 2004 was due primarily to rising interest rates and recognition of unrealized gains through securities sales.
(d) Includes $280 million of after-tax gains (losses) on foreign currency translation from operations for which the functional currency is other than the U.S. dollar offset by $(282) million of after-tax gains (losses) on hedges.
(e) The net change during 2005 was due primarily to higher interest rates, partially offset by the reversal of unrealized losses through securities sales.
(f) Includes $(351) million of after-tax gains (losses) on foreign currency translation from operations for which the functional currency is other than the U.S. dollar offset by $351 million of after-tax gains (losses) on hedges.

The following table presents the after-tax changes in net unrealized holdings gains (losses) and the reclassification adjustments in unrealized gains and losses on AFS securities and cash flow hedges. Reclassification adjustments include amounts recognized in net income during the current year that had been previously recorded in Other comprehensive income.

Year ended December 31, (in millions)[a]	2005	2004	2003
Unrealized gains (losses) on AFS securities:			
Net unrealized holdings gains (losses) arising during the period, net of taxes[b]	**$ (1,058)**	$ 41	$ 149
Reclassification adjustment for (gains) losses included in income, net of taxes[c]	**895**	(121)	(861)
Net change	**$ (163)**	$ (80)	$ (712)
Cash flow hedges:			
Net unrealized holdings gains (losses) arising during the period, net of taxes[d]	**$ (283)**	$ 34	$ 86
Reclassification adjustment for (gains) losses included in income, net of taxes[e]	**28**	(130)	(631)
Net change	**$ (255)**	$ (96)	$ (545)

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Net of income tax expense (benefit) of $(648) million for 2005, $27 million for 2004 and $92 million for 2003.
(c) Net of income tax expense (benefit) of $(548) million for 2005, $79 million for 2004 and $528 million for 2003.
(d) Net of income tax expense (benefit) of $(187) million for 2005, $23 million for 2004 and $60 million for 2003.
(e) Net of income tax expense (benefit) of $(18) million for 2005 and $86 million for 2004 and $438 million for 2003.

Note 22 – Income taxes

JPMorgan Chase and eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset-and-liability method required by SFAS 109 to provide income taxes on all transactions recorded in the Consolidated financial statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax liability or asset for each temporary difference is determined based upon the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different.

Deferred income tax expense (benefit) results from differences between assets and liabilities measured for financial reporting and for income-tax return purposes. The significant components of deferred tax assets and liabilities are reflected in the following table:

December 31, (in millions)	2005	2004
Deferred tax assets		
Allowance for other than loan losses	**$ 3,554**	$ 3,711
Employee benefits	**3,381**	2,677
Allowance for loan losses	**2,745**	2,739
Non-U.S. operations	**807**	743
Fair value adjustments	**531**	—
Gross deferred tax assets	**$ 11,018**	$ 9,870
Deferred tax liabilities		
Depreciation and amortization	**$ 3,683**	$ 3,558
Leasing transactions	**3,158**	4,266
Fee income	**1,396**	1,162
Non-U.S. operations	**1,297**	1,144
Fair value adjustments	**—**	186
Other, net	**149**	348
Gross deferred tax liabilities	**$ 9,683**	$ 10,664
Valuation allowance	**$ 110**	$ 150
Net deferred tax asset (liability)	**$ 1,225**	$ (944)

A valuation allowance has been recorded in accordance with SFAS 109, primarily relating to deferred tax assets associated with certain portfolio investments.

The components of income tax expense included in the Consolidated statements of income were as follows:

Year ended December 31, (in millions)[a]	2005	2004	2003
Current income tax expense			
U.S. federal	**$ 4,269**	$ 1,695	$ 965
Non-U.S.	**917**	679	741
U.S. state and local	**337**	181	175
Total current expense	**5,523**	2,555	1,881
Deferred income tax (benefit) expense			
U.S. federal	**(2,063)**	(382)	1,341
Non-U.S.	**316**	(322)	14
U.S. state and local	**(44)**	(123)	73
Total deferred (benefit) expense	**(1,791)**	(827)	1,428
Total income tax expense	**$ 3,732**	$ 1,728	$ 3,309

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

The preceding table does not reflect the tax effects of unrealized gains and losses on AFS securities, SFAS 133 hedge transactions and certain tax benefits associated with the Firm's employee stock plans. The tax effect of these items is recorded directly in Stockholders' equity. Stockholders' equity increased by $425 million, $431 million and $898 million in 2005, 2004 and 2003, respectively, as a result of these tax effects.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. For 2005, such earnings approximated $333 million on a pre-tax basis. At December 31, 2005, the cumulative amount of undistributed pre-tax earnings in these subsidiaries approximated $1.5 billion. It is not practicable at this time to determine the income tax liability that would result upon repatriation of these earnings.

On October 22, 2004, the American Jobs Creation Act of 2004 (the "Act") was signed into law. The Act creates a temporary incentive for U.S. companies to repatriate accumulated foreign earnings at a substantially reduced U.S. effective tax rate by providing a dividends received deduction on the repatriation of certain foreign earnings to the U.S. taxpayer (the "repatriation provision"). The new deduction is subject to a number of limitations and requirements.

In the fourth quarter of 2005, the Firm applied the repatriation provision to $1.9 billion of cash from foreign earnings, resulting in a net tax benefit of $55 million. The $1.9 billion of cash will be used in accordance with the Firm's domestic reinvestment plan pursuant to the guidelines set forth in the Act.

The tax expense (benefit) applicable to securities gains and losses for the years 2005, 2004 and 2003 was $(536) million, $126 million and $477 million, respectively.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for the past three years is shown in the following table:

Year ended December 31,[a]	**2005**	2004	2003
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase (decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of federal income tax benefit	**1.6**	0.6[b]	2.1
Tax-exempt income	**(3.0)**	(4.1)	(2.4)
Non-U.S. subsidiary earnings	**(1.4)**	(1.3)	(0.7)
Business tax credits	**(3.6)**	(4.1)	(0.9)
Other, net	**2.0**	1.8	(0.1)
Effective tax rate	**30.6%**	27.9%	33.0%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) The lower rate in 2004 was attributable to changes in the proportion of income subject to different state and local taxes.

The following table presents the U.S. and non-U.S. components of income before income tax expense:

Year ended December 31, (in millions)[a]	**2005**	2004	2003
U.S.	**$ 8,959**	$ 3,817	$ 7,333
Non-U.S.[b]	**3,256**	2,377	2,695
Income before income tax expense	**$ 12,215**	$ 6,194	$ 10,028

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the United States of America.

Note 23 – Restrictions on cash and intercompany funds transfers

JPMorgan Chase Bank's business is subject to examination and regulation by the Office of the Comptroller of the Currency ("OCC"). The Bank is a member of the Federal Reserve System and its deposits are insured by the Federal Deposit Insurance Corporation ("FDIC").

The Federal Reserve Board requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $2.7 billion in 2005 and $3.8 billion in 2004.

Restrictions imposed by federal law prohibit JPMorgan Chase and certain other affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company-only basis) are dividends and interest from JPMorgan Chase Bank and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the FRB, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2006 and 2005, JPMorgan Chase's bank subsidiaries could pay, in the aggregate, $7.4 billion and $6.2 billion, respectively, in dividends to their respective bank holding companies without prior approval of their relevant banking regulators. Dividend capacity in 2006 will be supplemented by the banks' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2005 and 2004, cash in the amount of $6.4 billion and $4.3 billion, respectively, and securities with a fair value of $2.1 billion and $2.7 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers.

Note 24 – Capital

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital includes common stockholders' equity, qualifying preferred stock and minority interest less goodwill and other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1, subordinated long-term debt and other instruments qualifying as Tier 2, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total regulatory capital is subject to deductions for investments in certain subsidiaries. Under the risk-based capital guidelines of the FRB, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total (Tier 1 plus Tier 2) capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital to average adjusted on–balance sheet assets). Failure to meet these minimum requirements could cause the FRB to take action. Bank subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2005 and 2004, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

The following table presents the risk-based capital ratios for JPMorgan Chase and the Firm's significant banking subsidiaries at December 31, 2005 and 2004:

(in millions, except ratios)	Tier 1 capital	Total capital	Risk-weighted assets[c]	Adjusted average assets[d]	Tier 1 capital ratio	Total capital ratio	Tier 1 leverage ratio
December 31, 2005							
JPMorgan Chase & Co.[a]	**$ 72,474**	**$ 102,437**	**$ 850,643**	**$ 1,152,546**	**8.5%**	**12.0%**	**6.3%**
JPMorgan Chase Bank, N.A.	**61,050**	**84,227**	**750,397**	**995,095**	**8.1**	**11.2**	**6.1**
Chase Bank USA, N.A.	**8,608**	**10,941**	**72,229**	**59,882**	**11.9**	**15.2**	**14.4**
December 31, 2004							
JPMorgan Chase & Co.[a]	$ 68,621	$ 96,807	$ 791,373	$ 1,102,456	8.7%	12.2%	6.2%
JPMorgan Chase Bank, N.A.	55,489	78,478	670,295	922,877	8.3	11.7	6.0
Chase Bank USA, N.A.	8,726	11,186	86,955	71,797	10.0	12.9	12.2
Well-capitalized ratios[b]					6.0%	10.0%	5.0%[e]
Minimum capital ratios[b]					4.0	8.0	3.0[f]

(a) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions, whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.
(b) As defined by the regulations issued by the FRB, FDIC and OCC.
(c) Includes off–balance sheet risk-weighted assets in the amounts of $279.2 billion, $260.0 billion and $15.5 billion, respectively, at December 31, 2005, and $250.3 billion, $229.6 billion and $15.5 billion, respectively, at December 31, 2004.
(d) Average adjusted assets for purposes of calculating the leverage ratio include total average assets adjusted for unrealized gains/losses on securities, less deductions for disallowed goodwill and other intangible assets, investments in subsidiaries and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.
(e) Represents requirements for bank subsidiaries pursuant to regulations issued under the Federal Deposit Insurance Corporation Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.
(f) The minimum Tier 1 leverage ratio for bank holding companies and banks is 3% or 4% depending on factors specified in regulations issued by the FRB and OCC.

The following table shows the components of the Firm's Tier 1 and Total capital:

December 31, (in millions)	2005	2004
Tier 1 capital		
Total stockholders' equity	**$ 107,211**	$ 105,653
Effect of net unrealized losses on AFS securities and cash flow hedging activities	**618**	200
Adjusted stockholders' equity	**107,829**	105,853
Minority interest[a]	**12,660**	11,050
Less: Goodwill	**43,621**	43,203
Investments in certain subsidiaries	**401**	370
Nonqualifying intangible assets	**3,993**	4,709
Tier 1 capital	**$ 72,474**	$ 68,621
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	**$ 22,733**	$ 20,690
Qualifying allowance for credit losses	**7,490**	7,798
Less: Investments in certain subsidiaries and other	**260**	302
Tier 2 capital	**$ 29,963**	$ 28,186
Total qualifying capital	**$ 102,437**	$ 96,807

(a) Primarily includes trust preferred securities of certain business trusts.

Note 25 – Commitments and contingencies

At December 31, 2005, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes. Certain leases contain renewal options or escalation clauses providing for increased rental payments based upon maintenance, utility and tax increases or require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions, or enter into further lease agreements.

The following table shows required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2005:

Year ended December 31, (in millions)	
2006	$ 993
2007	948
2008	901
2009	834
2010	724
After	5,334
Total minimum payments required[a]	9,734
Less: Sublease rentals under noncancelable subleases	(1,323)
Net minimum payment required	$ 8,411

(a) Lease restoration obligations are accrued in accordance with SFAS 13, and are not reported as a required minimum lease payment.

Total rental expense was as follows:

Year ended December 31, (in millions)[a]	2005	2004	2003
Gross rental expense	**$ 1,269**	$ 1,187	$ 1,061
Sublease rental income	**(192)**	(158)	(106)
Net rental expense	**$ 1,077**	$ 1,029	$ 955

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

At December 31, 2005, assets were pledged to secure public deposits and for other purposes. The significant components of the assets pledged were as follows:

December 31, (in billions)	2005	2004
Reverse repurchase/securities borrowing agreements	**$ 320**	$ 238
Securities	**24**	49
Loans	**74**	75
Other[a]	**99**	90
Total assets pledged	**$ 517**	$ 452

(a) Primarily composed of trading assets.

Litigation reserve

The Firm maintains litigation reserves for certain of its litigations, including its material legal proceedings. While the outcome of litigation is inherently uncertain, management believes, in light of all information known to it at December 31, 2005, that the Firm's litigation reserves were adequate at such date. Management reviews litigation reserves periodically, and the reserves may be increased or decreased in the future to reflect further litigation developments. The Firm believes it has meritorious defenses to claims asserted against it in its currently outstanding litigation and, with respect to such litigation, intends to continue to defend itself vigorously, litigating or settling cases according to management's judgment as to what is in the best interest of stockholders.

Note 26 – Accounting for derivative instruments and hedging activities

Derivative instruments enable end users to increase, reduce or alter exposure to credit or market risks. The value of a derivative is derived from its reference to an underlying variable or combination of variables such as equity, foreign exchange, credit, commodity or interest rate prices or indices. JPMorgan Chase makes markets in derivatives for customers and also is an end-user of derivatives in order to manage the Firm's exposure to credit and market risks.

SFAS 133, as amended by SFAS 138 and SFAS 149, establishes accounting and reporting standards for derivative instruments, including those used for trading and hedging activities, and derivative instruments embedded in other contracts. All free-standing derivatives, whether designated for hedging relationships or not, are required to be recorded on the balance sheet at fair value. The accounting for changes in value of a derivative depends on whether the contract is for trading purposes or has been designated and qualifies for hedge accounting. The majority of the Firm's derivatives are entered into for trading purposes. The Firm also uses derivatives as an end user to hedge market exposures, modify the interest rate characteristics of related balance sheet instruments or meet longer-term investment objectives. Both trading and end-user derivatives are recorded at fair value in Trading assets and Trading liabilities as set forth in Note 3 on page 94 of this Annual Report.

In order to qualify for hedge accounting, a derivative must be considered highly effective at reducing the risk associated with the exposure being hedged. Each derivative must be designated as a hedge, with documentation of the risk management objective and strategy, including identification of the hedging instrument, the hedged item and the risk exposure, and how effectiveness is to be assessed prospectively and retrospectively. The extent to which a hedging instrument is effective at achieving offsetting changes in fair value or cash flows must be assessed at least quarterly. Any ineffectiveness must be reported in current-period earnings.

For qualifying fair value hedges, all changes in the fair value of the derivative and in the fair value of the item for the risk being hedged are recognized in earnings. If the hedge relationship is terminated, then the fair value adjustment to the hedged item continues to be reported as part of the basis of the item and is amortized to earnings as a yield adjustment. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in Other comprehensive income and recognized in the income statement when the hedged cash flows affect earnings. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the change in fair value of the derivative recorded in Other comprehensive income is recognized when the cash flows that were hedged occur, consistent with the original hedge strategy. For hedge relationships discontinued because the forecasted transaction is not expected to occur according to the original strategy, any related derivative amounts recorded in Other comprehensive income are immediately recognized in earnings. For qualifying net investment hedges, changes in the fair value of the derivative or the revaluation of the foreign currency–denominated debt instrument are recorded in the translation adjustments account within Other comprehensive income. Any ineffective portions of net investment hedges are immediately recognized in earnings.

JPMorgan Chase's fair value hedges primarily include hedges of fixed-rate long-term debt, loans, AFS securities and MSRs. Interest rate swaps are the most common type of derivative contract used to modify exposure to interest rate risk, converting fixed-rate assets and liabilities to a floating rate. Interest rate options, swaptions and forwards are also used in combination with interest rate swaps to hedge the fair value of the Firm's MSRs. For a further discussion of MSR risk management activities, see Note 15 on pages 114–116 of this Annual Report. All amounts have been included in earnings consistent with the classification of the hedged item, primarily Net interest income, Mortgage fees and related income, and Other income. The Firm did not recognize any gains or losses during 2005 on firm commitments that no longer qualify as fair value hedges.

JPMorgan Chase also enters into derivative contracts to hedge exposure to variability in cash flows from floating-rate financial instruments and forecasted transactions, primarily the rollover of short-term assets and liabilities, and foreign currency-denominated revenues and expenses. Interest rate swaps, futures and forward contracts are the most common instruments used to reduce the impact of interest rate and foreign exchange rate changes on future earnings. All amounts affecting earnings have been recognized consistent with the classification of the hedged item, primarily Net interest income.

The Firm uses forward foreign exchange contracts and foreign currency-denominated debt instruments to protect the value of net investments in foreign currencies in non-U.S. subsidiaries. The portion of the hedging instruments excluded from the assessment of hedge effectiveness (forward points) is recorded in Net interest income.

The following table presents derivative instrument hedging-related activities for the periods indicated:

Year ended December 31, (in millions)[a]	**2005**	2004
Fair value hedge ineffective net gains/(losses)[b]	**$ (58)**	$ 199
Cash flow hedge ineffective net gains/(losses)[b]	**(2)**	—
Cash flow hedging gains on forecasted transactions that failed to occur	**—**	1

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) Includes ineffectiveness and the components of hedging instruments that have been excluded from the assessment of hedge effectiveness.

Over the next 12 months, it is expected that $44 million (after-tax) of net gains recorded in Other comprehensive income at December 31, 2005, will be recognized in earnings. The maximum length of time over which forecasted transactions are hedged is 10 years, and such transactions primarily relate to core lending and borrowing activities.

JPMorgan Chase does not seek to apply hedge accounting to all of the Firm's economic hedges. For example, the Firm does not apply hedge accounting to standard credit derivatives used to manage the credit risk of loans and commitments because of the difficulties in qualifying such contracts as hedges under SFAS 133. Similarly, the Firm does not apply hedge accounting to certain interest rate derivatives used as economic hedges.

Note 27 – Off-balance sheet lending-related financial instruments and guarantees

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparty draw down the commitment or the Firm fulfills its obligation under the guarantee, and the counterparty subsequently fails to perform according to the terms of the contract. Most of these commitments and guarantees expire without a default occurring or without being drawn. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. Further, certain commitments, primarily related to consumer financings, are cancelable, upon notice, at the option of the Firm.

To provide for the risk of loss inherent in wholesale-related contracts, an allowance for credit losses on lending-related commitments is maintained. See Note 12 on pages 107–108 of this Annual Report for a further discussion on the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts of off–balance sheet lending-related financial instruments and guarantees and the related allowance for credit losses on lending-related commitments at December 31, 2005 and 2004:

Off–balance sheet lending-related financial instruments and guarantees

	Contractual amount		Allowance for lending-related commitments	
December 31, (in millions)	**2005**	2004	**2005**	2004
Lending-related				
Consumer	**$ 655,596**	$ 601,196	**$ 15**	$ 12
Wholesale:				
Other unfunded commitments to extend credit[a][b][c]	**208,469**	185,822	**208**	183
Asset purchase agreements[d]	**31,095**	39,330	**3**	2
Standby letters of credit and guarantees[a][e]	**77,199**	78,084	**173**	292
Other letters of credit[a]	**7,001**	6,163	**1**	3
Total wholesale	**323,764**	309,399	**385**	480
Total lending-related	**$ 979,360**	$ 910,595	**$ 400**	$ 492
Other guarantees				
Securities lending guarantees[f]	**$ 244,316**	$ 220,783	**NA**	NA
Derivatives qualifying as guarantees	**61,759**	53,312	**NA**	NA

(a) Represents contractual amount net of risk participations totaling $29.3 billion and $26.4 billion at December 31, 2005 and 2004, respectively.
(b) Includes unused advised lines of credit totaling $28.3 billion and $22.8 billion at December 31, 2005 and 2004, respectively, which are not legally binding. In regulatory filings with the FRB, unused advised lines are not reportable.
(c) Excludes unfunded commitments to private third-party equity funds of $242 million and $563 million at December 31, 2005 and 2004, respectively.
(d) Represents asset purchase agreements to the Firm's administered multi-seller asset-backed commercial paper conduits, which excludes $32.4 billion and $31.7 billion at December 31, 2005 and 2004, respectively, related to conduits that were consolidated in accordance with FIN 46R, as the underlying assets of the conduits are reported in the Firm's Consolidated balance sheets. It also includes $1.3 billion of asset purchase agreements to other third-party entities at December 31, 2005 and $7.5 billion of asset purchase agreements to structured wholesale loan vehicles and other third-party entities at December 31, 2004.
(e) Includes unused commitments to issue standby letters of credit of $37.5 billion and $38.4 billion at December 31, 2005 and 2004, respectively.
(f) Collateral held by the Firm in support of securities lending indemnification agreements was $245.0 billion and $221.6 billion at December 31, 2005 and 2004, respectively.

FIN 45 establishes accounting and disclosure requirements for guarantees, requiring that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. FIN 45 defines a guarantee as a contract that contingently requires the Firm to pay a guaranteed party, based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off–balance sheet lending arrangements to be guarantees under FIN 45: certain asset purchase agreements, standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts. These guarantees are described in further detail below.

The fair value at inception of the obligation undertaken when issuing the guarantees and commitments that qualify under FIN 45 is typically equal to the net present value of the future amount of premium receivable under the contract. The Firm has recorded this amount in Other Liabilities with an offsetting entry recorded in Other Assets. As cash is received under the contract, it is applied to the premium receivable recorded in Other Assets, and the fair value of the liability recorded at inception is amortized into income as Lending & deposit related fees over the life of the guarantee contract. The amount of the liability related to FIN 45 guarantees recorded at December 31, 2005 and 2004, excluding the allowance for credit losses on lending-related commitments and derivative contracts discussed below, was approximately $313 million and $341 million, respectively.

Unfunded commitments to extend credit are agreements to lend only when a customer has complied with predetermined conditions, and they generally expire on fixed dates.

The majority of the Firm's unfunded commitments are not guarantees as defined in FIN 45, except for certain asset purchase agreements that are principally used as a mechanism to provide liquidity to SPEs, primarily multi-seller conduits, as described in Note 14 on pages 111–113 of this Annual Report. Some of these asset purchase agreements can be exercised at any time by the SPE's administrator, while others require a triggering event to occur. Triggering events include, but are not limited to, a need for liquidity, a market value decline of the assets or a downgrade in the rating of JPMorgan Chase Bank. These agreements may cause the Firm to purchase an asset from the SPE at an amount above the asset's fair value, in effect providing a guarantee of the initial value of the reference asset as of the date of the agreement. In most instances, third-party credit enhancements of the SPE mitigate the Firm's potential losses on these agreements.

Standby letters of credit and financial guarantees are conditional lending commitments issued by JPMorgan Chase to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. Approximately 58% of these arrangements mature within three years. The Firm typically has recourse to recover from the customer any amounts paid under these guarantees; in addition, the Firm may hold cash or other highly liquid collateral to support these guarantees. At December 31, 2005 and 2004, the Firm held collateral relating to $9.0 billion and $7.4 billion, respectively, of these arrangements.

The Firm holds customers' securities under custodial arrangements. At times, these securities are loaned to third parties, and the Firm issues securities lending indemnification agreements to the customer that protect the customer against the risk of loss if the third party fails to return the securities. To support these indemnification agreements, the Firm obtains from the third party cash or other highly liquid collateral with a market value exceeding 100% of the value of the loaned securities. If the third-party borrower fails to return the securities, the Firm would use the collateral to purchase the securities in the market and would be exposed if the value of the collateral fell below 100%. The Firm invests third-party cash collateral received in support of the indemnification agreements. In a few cases where the cash collateral is invested in resale agreements, the Firm indemnifies the third party against reinvestment risk. At December 31, 2005 and 2004, the Firm held $245.0 billion and $221.6 billion, respectively, in collateral in support of securities lending indemnification arrangements. Based upon historical experience, management expects the risk of loss to be remote.

In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that may require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract may also include a termination clause, which would allow the Firm to settle the contract at its fair value; thus, such a clause would not require the Firm to make a payment under the indemnification agreement. Even without the termination clause, management does not expect such indemnification agreements to have a material adverse effect on the consolidated financial condition of JPMorgan Chase. The Firm may also enter into indemnification clauses when it sells a business or assets to a third party, pursuant to which it indemnifies that third party for losses it may incur due to actions taken by the Firm prior to the sale. See below for more information regarding the Firm's loan securitization activities. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based upon historical experience, management expects the risk of loss to be remote.

As part of the Firm's loan securitization activities, as described in Note 13 on pages 108–111 of this Annual Report, the Firm provides representations and warranties that certain securitized loans meet specific requirements. The Firm may be required to repurchase the loans and/or indemnify the purchaser of the loans against losses due to any breaches of such representations or warranties. Generally, the maximum amount of future payments the Firm would be required to make under such repurchase and/or indemnification provisions would be equal to the current amount of assets held by such securitization-related SPEs as of December 31, 2005, plus, in certain circumstances, accrued and unpaid interest on such loans and certain expenses. The potential loss due to such repurchase and/or indemnity is mitigated by the due diligence the Firm performs before the sale to ensure that the assets comply with the requirements set forth in the representations and warranties. Historically, losses incurred on such repurchases and/or indemnifications have been insignificant, and therefore management expects the risk of material loss to be remote.

The Firm is a partner with one of the leading companies in electronic payment services in a joint venture operating under the name of Chase Paymentech Solutions, LLC (the "joint venture"). The joint venture was formed in October 2005 as a result of an agreement to integrate the Firm's jointly-owned Chase Merchant Services ("CMS") and Paymentech merchant businesses, the latter of which was acquired as a result of the Merger. The joint venture provides merchant processing services in the United States and Canada. The joint venture is liable contingently for processed credit card sales transactions in the event of a dispute between the cardmember and a merchant. If a dispute is resolved in the cardmember's favor, the joint venture will credit or refund the amount to the cardmember and charge back the transaction to the merchant. If the joint venture is unable to collect the amount from the merchant, the joint venture will bear the loss for the amount credited or refunded to the cardmember. The joint venture mitigates this risk by withholding settlement, or by obtaining escrow deposits or letters of credit from certain merchants. However, in the unlikely event that: 1) a merchant ceases operations and is unable to deliver products, services or a refund; 2) the joint venture does not have sufficient collateral from the merchants to provide customer refunds; and 3) the joint venture does not have sufficient financial resources to provide customer refunds, the Firm would be liable to refund the cardholder in proportion to its approximate equity interest in the joint venture. For the year ended December 31, 2005, the joint venture, along with the integrated businesses of CMS and Paymentech, incurred aggregate credit losses of $11 million on $563 billion of aggregate volume processed, of which the Firm shared liability only on $200 billion of aggregate volume processed. At December 31, 2005, the joint venture held $909 million of collateral. In 2004, the CMS and Paymentech ventures incurred aggregate credit losses of $7.1 million on $396 billion of aggregate volume processed, of which the Firm shared liability only on $205 billion of aggregate volume processed. At December 31, 2004, the CMS and Paymentech ventures held $620 million of collateral. The Firm believes that, based upon historical experience and the collateral held by the joint venture, the fair value of the guarantee would not be different materially from the credit loss allowance recorded by the joint venture; therefore, the Firm has not recorded any allowance for losses in excess of the allowance recorded by the joint venture.

The Firm is a member of several securities and futures exchanges and clearinghouses both in the United States and overseas. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligation varies with different organizations. It may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to a members' guaranty fund, or, in a few cases, it may be unlimited. It is difficult to estimate the Firm's maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based upon historical experience, management expects the risk of loss to be remote.

In addition to the contracts described above, there are certain derivative contracts to which the Firm is a counterparty that meet the characteristics of a guarantee under FIN 45. These derivatives are recorded on the Consolidated balance sheets at fair value. These contracts include written put options that require the Firm to purchase assets from the option holder at a specified price by a specified date in the future, as well as derivatives that effectively guarantee the return on a counterparty's reference portfolio of assets. The total notional value of the derivatives that the Firm deems to be guarantees was $62 billion and $53 billion at December 31, 2005 and 2004, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions or by entering into contracts that hedge the market risk related to these contracts. The fair value related to these contracts was a derivative receivable of $198 million and $180 million, and a derivative payable of $767 million and $622 million at December 31, 2005 and 2004, respectively. Finally, certain written put options and credit derivatives permit cash settlement and do not require the option holder or the buyer of credit protection to own the reference asset. The Firm does not consider these contracts to be guarantees as described in FIN 45.

Note 28 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of the credit risk portfolio to assess potential concentration risks and to obtain collateral when deemed necessary. In the Firm's wholesale portfolio, risk concentrations are evaluated primarily by industry and by geographic region. In the consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region.

The Firm does not believe exposure to any one loan product with varying terms (e.g., interest-only payments for an introductory period) or exposure to loans with high loan-to-value ratios would result in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

For further information regarding on–balance sheet credit concentrations by major product and geography, see Note 11 on page 106 of this Annual Report. For information regarding concentrations of off–balance sheet lending-related financial instruments by major product, see Note 27 on page 124 of this Annual Report. More information about concentrations can be found in the following tables or discussion in the MD&A:

Wholesale exposure	Page 65
Wholesale selected industry concentrations	Page 66
Country exposure	Page 70
Consumer real estate loan portfolio by geographic location	Page 72

The table below presents both on-balance sheet and off-balance sheet wholesale- and consumer-related credit exposure as of December 31, 2005 and 2004:

	2005			2004		
December 31, (in billions)	Credit exposure[b]	On-balance sheet[b][c]	Off-balance sheet[d]	Credit exposure[b]	On-balance sheet[b][c]	Off-balance sheet[d]
Wholesale-related:						
Banks and finance companies	**$ 53.7**	**$ 20.3**	**$ 33.4**	$ 56.2	$ 25.7	$ 30.5
Real estate	**32.5**	**19.0**	**13.5**	28.2	16.7	11.5
Consumer products	**26.7**	**10.0**	**16.7**	21.4	7.1	14.3
Healthcare	**25.5**	**4.7**	**20.8**	22.0	4.5	17.5
State and municipal governments	**25.3**	**6.1**	**19.2**	19.8	4.1	15.7
All other wholesale	**389.7**	**169.5**	**220.2**	394.6	174.7	219.9
Total wholesale-related	**553.4**	**229.6**	**323.8**	542.2	232.8	309.4
Consumer-related:						
Home finance	**198.6**	**133.5**	**65.1**	177.9	124.7	53.2
Auto & education finance	**54.7**	**49.0**	**5.7**	67.9	62.7	5.2
Consumer & small business and other	**20.3**	**14.8**	**5.5**	25.4	15.1	10.3
Credit card receivables[a]	**651.0**	**71.7**	**579.3**	597.0	64.5	532.5
Total consumer-related	**924.6**	**269.0**	**655.6**	868.2	267.0	601.2
Total exposure	**$ 1,478.0**	**$ 498.6**	**$ 979.4**	$ 1,410.4	$ 499.8	$ 910.6

(a) Excludes $70.5 billion and $70.8 billion of securitized credit card receivables at December 31, 2005 and 2004, respectively.
(b) Includes HFS loans.
(c) Represents loans, derivative receivables and interests in purchased receivables.
(d) Represents lending-related financial instruments.

Note 29 – Fair value of financial instruments

The fair value of a financial instrument is the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The accounting for an asset or liability may differ based upon the type of instrument and/or its use in a trading or investing strategy. Generally, the measurement framework in the consolidated financial statements is one of the following:

- at fair value on the Consolidated balance sheets, with changes in fair value recorded each period in the Consolidated statements of income;
- at fair value on the Consolidated balance sheets, with changes in fair value recorded each period in a separate component of Stockholders' equity and as part of Other comprehensive income;
- at cost (less other-than-temporary impairments), with changes in fair value not recorded in the consolidated financial statements but disclosed in the notes thereto; or
- at the lower of cost or fair value.

The Firm has an established and well-documented process for determining fair values. Fair value is based upon quoted market prices, where available. If listed prices or quotes are not available, fair value is based upon internally-developed models that primarily use market-based or independent information as inputs to the valuation model. Valuation adjustments may be necessary to ensure that financial instruments are recorded at fair value. These adjustments include amounts to reflect counterparty credit quality, liquidity and concentration concerns and are based upon defined methodologies that are applied consistently over time.

- Credit valuation adjustments are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few derivative contracts are listed on an exchange, the majority of derivative positions are valued using internally developed models that use as their basis observable market parameters. Market practice is to quote parameters equivalent to a AA credit rating; thus, all counterparties are assumed to have the same credit quality. An adjustment is therefore necessary to reflect the credit quality of each derivative counterparty and to arrive at fair value. Without this adjustment, derivative positions would not be appropriately valued.

- Liquidity adjustments are necessary when the Firm may not be able to observe a recent market price for a financial instrument that trades in inactive (or less active) markets. Thus, valuation adjustments for risk of loss due to a lack of liquidity are applied to those positions to arrive at fair value. The Firm tries to ascertain the amount of uncertainty in the initial valuation based upon the liquidity or illiquidity, as the case may be, of the market in which the instrument trades and makes liquidity adjustments to the financial instruments. The Firm measures the liquidity adjustment based upon the following factors: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quote; and (3) the volatility of the principal component of the financial instrument.
- Concentration valuation adjustments are necessary to reflect the cost of unwinding larger-than-normal market-size risk positions. The cost is determined based upon the size of the adverse market move that is likely to occur during the extended period required to bring a position down to a nonconcentrated level. An estimate of the period needed to reduce, without market disruption, a position to a nonconcentrated level is generally based upon the relationship of the position to the average daily trading volume of that position. Without these adjustments, larger positions would be valued at a price greater than the price at which the Firm could exit the positions.

Valuation adjustments are determined based upon established policies and are controlled by a price verification group independent of the risk-taking function. Economic substantiation of models, prices, market inputs and revenue through price/input testing, as well as backtesting, is done to validate the appropriateness of the valuation methodology. Any changes to the valuation methodology are reviewed by management to ensure the changes are justified.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, the use of different methodologies to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Certain financial instruments and all nonfinancial instruments are excluded from the scope of SFAS 107. Accordingly, the fair value disclosures required by SFAS 107 provide only a partial estimate of the fair value of JPMorgan Chase. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

The following items describe the methodologies and assumptions used, by financial instrument, to determine fair value.

Financial assets

Assets for which fair value approximates carrying value
The Firm considers fair values of certain financial assets carried at cost – including cash and due from banks, deposits with banks, securities borrowed, short-term receivables and accrued interest receivable – to approximate their respective carrying values, due to their short-term nature and generally negligible credit risk.

Assets where fair value differs from cost
The Firm's debt, equity and derivative trading instruments are carried at their estimated fair value. Quoted market prices, when available, are used to determine the fair value of trading instruments. If quoted market prices are not available, then fair values are estimated by using pricing models, quoted prices of instruments with similar characteristics, or discounted cash flows.

Federal funds sold and securities purchased under resale agreements
Federal funds sold and securities purchased under resale agreements are typically short-term in nature and, as such, for a significant majority of the Firm's transactions, cost approximates carrying value. This balance sheet item also includes structured resale agreements and similar products with long-dated maturities. To estimate the fair value of these instruments, cash flows are discounted using the appropriate market rates for the applicable maturity.

Securities
Fair values of actively traded securities are determined by the secondary market, while the fair values for nonactively traded securities are based upon independent broker quotations.

Derivatives
Fair value for derivatives is determined based upon the following:

- position valuation, principally based upon liquid market pricing as evidenced by exchange-traded prices, broker-dealer quotations or related input parameters, which assume all counterparties have the same credit rating;
- credit valuation adjustments to the resulting portfolio valuation, to reflect the credit quality of individual counterparties; and
- other fair value adjustments to take into consideration liquidity, concentration and other factors.

For those derivatives valued based upon models with significant unobservable market parameters, the Firm defers the initial trading profit for these financial instruments. The deferred profit is recognized in Trading revenue on a systematic basis (typically straight-line amortization over the life of the instruments) and when observable market data becomes available.

The fair value of derivative payables does not incorporate a valuation adjustment to reflect JPMorgan Chase's credit quality.

Interests in purchased receivables
The fair value of variable-rate interests in purchased receivables approximate their respective carrying amounts due to their variable interest terms and negligible credit risk. The estimated fair values for fixed-rate interests in purchased receivables are determined using a discounted cash flow analysis using appropriate market rates for similar instruments.

Loans
Fair value for loans is determined using methodologies suitable for each type of loan:

- Fair value for the wholesale loan portfolio is estimated primarily, using the cost of credit derivatives, which is adjusted to account for the differences in recovery rates between bonds, upon which the cost of credit derivatives is based, and loans.
- Fair values for consumer installment loans (including automobile financings) and consumer real estate, for which market rates for comparable loans are readily available, are based upon discounted cash flows adjusted for prepayments. The discount rates used for consumer installment loans are current rates offered by commercial banks. For consumer real estate, secondary market yields for comparable mortgage-backed securities, adjusted for risk, are used.
- Fair value for credit card receivables is based upon discounted expected cash flows. The discount rates used for credit card receivables incorporate only the effects of interest rate changes, since the expected cash flows already reflect an adjustment for credit risk.

- The fair value of loans in the held-for-sale and trading portfolios is generally based upon observable market prices and upon prices of similar instruments, including bonds, credit derivatives and loans with similar characteristics. If market prices are not available, the fair value is based upon the estimated cash flows adjusted for credit risk; that risk is discounted, using a rate appropriate for each maturity that incorporates the effects of interest rate changes.

Other assets

Commodities inventory is carried at the lower of cost or fair value. For the majority of commodities inventory, fair value is determined by reference to prices in highly active and liquid markets. The fair value for other commodities inventory is determined primarily using pricing and other data derived from less liquid and developing markets where the underlying commodities are traded. This caption also includes private equity investments and MSRs. For a discussion of the fair value methodology for private equity investments, see Note 9 on page 105 of this Annual Report.

For a discussion of the fair value methodology for MSRs, see Note 15 on pages 114–116 of this Annual Report.

Financial liabilities

Liabilities for which fair value approximates carrying value

SFAS 107 requires that the fair value for deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value. SFAS 107 does not allow for the recognition of the inherent funding value of these instruments.

Fair value of commercial paper, other borrowed funds, accounts payable and accrued liabilities is considered to approximate their respective carrying values due to their short-term nature.

Interest-bearing deposits

Fair values of interest-bearing deposits are estimated by discounting cash flows based upon the remaining contractual maturities of funds having similar interest rates and similar maturities.

Federal funds purchased and securities sold under repurchase agreements

Federal funds purchased and securities sold under repurchase agreements are typically short-term in nature; as such, for a significant majority of these transactions, cost approximates carrying value. This balance sheet item also includes structured repurchase agreements and similar products with long-dated maturities. To estimate the fair value of these instruments, the cash flows are discounted using the appropriate market rates for the applicable maturity.

Beneficial interests issued by consolidated VIEs

Beneficial interests issued by consolidated VIEs ("beneficial interests") are generally short-term in nature and, as such, for a significant majority of the Firm's transactions, cost approximates carrying value. The Consolidated balance sheets also include beneficial interests with long-dated maturities. The fair value of these instruments is based upon current market rates.

Long-term debt-related instruments

Fair value for long-term debt, including the junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities, is based upon current market rates and is adjusted for JPMorgan Chase's credit quality.

Lending-related commitments

Although there is no liquid secondary market for wholesale commitments, the Firm estimates the fair value of its wholesale lending-related commitments primarily using the cost of credit derivatives (which is adjusted to account for the difference in recovery rates between bonds, upon which the cost of credit derivatives is based, and loans) and loan equivalents (which represent the portion of an unused commitment expected, based upon the Firm's average portfolio historical experience, to become outstanding in the event an obligor defaults). The Firm estimates the fair value of its consumer commitments to extend credit based upon the primary market prices to originate new commitments. It is the change in current primary market prices that provides the estimate of the fair value of these commitments. On this basis, at December 31, 2005, the estimated fair value of the Firm's lending-related commitments was a liability of $0.5 billion, compared with $0.1 billion at December 31, 2004.

The following table presents the carrying value and estimated fair value of financial assets and liabilities valued under SFAS 107; accordingly, certain assets and liabilities that are not considered financial instruments are excluded from the table.

	2005			2004		
December 31, (in billions)	Carrying value	Estimated fair value	Appreciation/ (depreciation)	Carrying value	Estimated fair value	Appreciation/ (depreciation)
Financial assets						
Assets for which fair value approximates carrying value	**$ 155.4**	**$ 155.4**	**$ —**	$ 125.7	$ 125.7	$ —
Federal funds sold and securities purchased under resale agreements	**134.0**	**134.3**	**0.3**	101.4	101.3	(0.1)
Trading assets	**298.4**	**298.4**	**—**	288.8	288.8	—
Securities	**47.6**	**47.6**	**—**	94.5	94.5	—
Loans: Wholesale, net of allowance for loan losses	**147.7**	**150.2**	**2.5**	132.0	134.6	2.6
Consumer, net of allowance for loan losses	**264.4**	**262.7**	**(1.7)**	262.8	262.5	(0.3)
Interests in purchased receivables	**29.7**	**29.7**	**—**	31.7	31.8	0.1
Other assets	**53.4**	**54.7**	**1.3**	50.4	51.1	0.7
Total financial assets	**$ 1,130.6**	**$ 1,133.0**	**$ 2.4**	$ 1,087.3	$ 1,090.3	$ 3.0
Financial liabilities						
Liabilities for which fair value approximates carrying value	**$ 241.0**	**$ 241.0**	**$ —**	$ 228.8	$ 228.8	$ —
Interest-bearing deposits	**411.9**	**411.7**	**0.2**	385.3	385.5	(0.2)
Federal funds purchased and securities sold under repurchase agreements	**125.9**	**125.9**	**—**	127.8	127.8	—
Trading liabilities	**145.9**	**145.9**	**—**	151.2	151.2	—
Beneficial interests issued by consolidated VIEs	**42.2**	**42.1**	**0.1**	48.1	48.0	0.1
Long-term debt-related instruments	**119.9**	**120.6**	**(0.7)**	105.7	107.7	(2.0)
Total financial liabilities	**$ 1,086.8**	**$ 1,087.2**	**$ (0.4)**	$ 1,046.9	$ 1,049.0	$ (2.1)
Net appreciation			**$ 2.0**			$ 0.9

Note 30 – International operations

The following table presents income statement information of JPMorgan Chase by major geographic area. The Firm defines international activities as business transactions that involve customers residing outside of the United States, and the information presented below is based primarily upon the domicile of the customer. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 31 on pages 130–131 of this Annual Report.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the United States.

For the year ended December 31, (in millions)[a]	Revenue[b]	Expense[c]	Income before income taxes	Net income
2005				
Europe/Middle East and Africa	**$ 7,708**	**$ 5,454**	**$ 2,254**	**$ 1,547**
Asia and Pacific	**2,840**	**2,048**	**792**	**509**
Latin America and the Caribbean	**969**	**497**	**472**	**285**
Other	**165**	**89**	**76**	**44**
Total international	**11,682**	**8,088**	**3,594**	**2,385**
Total U.S.	**42,851**	**34,230**	**8,621**	**6,098**
Total	**$ 54,533**	**$ 42,318**	**$ 12,215**	**$ 8,483**
2004				
Europe/Middle East and Africa	$ 6,566	$ 4,635	$ 1,931	$ 1,305
Asia and Pacific	2,631	1,766	865	547
Latin America and the Caribbean	816	411	405	255
Other	112	77	35	25
Total international	10,125	6,889	3,236	2,132
Total U.S.	32,972	30,014	2,958	2,334
Total	$ 43,097	$ 36,903	$ 6,194	$ 4,466
2003				
Europe/Middle East and Africa	$ 6,344	$ 4,076	$ 2,268	$ 1,467
Asia and Pacific	1,902	1,772	130	91
Latin America and the Caribbean	1,000	531	469	287
Other	50	17	33	34
Total international	9,296	6,396	2,900	1,879
Total U.S.	24,088	16,960	7,128	4,840
Total	$ 33,384	$ 23,356	$ 10,028	$ 6,719

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.
(b) Revenue is composed of Net interest income and noninterest revenue.
(c) Expense is composed of Noninterest expense and Provision for credit losses.

Note 31 – Business segments

JPMorgan Chase is organized into six major reportable business segments (the Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset & Wealth Management), as well as a Corporate segment. The segments are based upon the products and services provided or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on an operating basis. For a definition of operating basis, see the footnotes to the table below. For a further discussion concerning JPMorgan Chase's business segments, see Business segment results on pages 34–35 of this Annual Report.

In the third quarter of 2004, in connection with the Merger, business segment reporting was realigned to reflect the new business structure of the combined Firm. Treasury was transferred from the Investment Bank into Corporate. The segment formerly known as Chase Financial Services had been comprised of Chase Home Finance, Chase Cardmember Services, Chase Auto Finance, Chase Regional Banking and Chase Middle Market; as a result of the Merger, this segment is now called Retail Financial Services and is comprised of Home Finance, Auto & Education Finance, Consumer & Small Business Banking and Insurance. Chase Cardmember Services is now its own segment called Card Services, and Chase Middle Market moved into Commercial Banking. Investment Management & Private Banking was renamed Asset & Wealth Management. JPMorgan Partners, which formerly was a stand-alone business segment, was moved into Corporate. Corporate currently comprises Private Equity (JPMorgan Partners and ONE Equity Partners) and Treasury, and the

Segment results and reconciliation[a] (table continued on next page)

Year ended December 31,[b]	Investment Bank[d]			Retail Financial Services			Card Services[e]			Commercial Banking		
(in millions, except ratios)	**2005**	2004	2003	**2005**	2004	2003	**2005**	2004	2003	**2005**	2004	2003
Noninterest revenue	**$ 13,168**	$ 11,280	$ 11,017	**$ 4,625**	$ 3,077	$ 2,208	**$ 3,563**	$ 2,371	$ 1,092	**$ 986**	$ 682	$ 393
Net interest income	**1,410**	1,325	1,667	**10,205**	7,714	5,220	**11,803**	8,374	5,052	**2,610**	1,692	959
Total net revenue	**14,578**	12,605	12,684	**14,830**	10,791	7,428	**15,366**	10,745	6,144	**3,596**	2,374	1,352
Provision for credit losses	**(838)**	(640)	(181)	**724**	449	521	**7,346**	4,851	2,904	**73**	41	6
Credit reimbursement (to)/from TSS[c]	**154**	90	(36)	**—**	—	—	**—**	—	—	**—**	—	—
Merger costs	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Litigation reserve charge	**—**	—	100	**—**	—	—	**—**	—	—	**—**	—	—
Other noninterest expense	**9,739**	8,696	8,202	**8,585**	6,825	4,471	**4,999**	3,883	2,178	**1,872**	1,343	822
Total noninterest expense	**9,739**	8,696	8,302	**8,585**	6,825	4,471	**4,999**	3,883	2,178	**1,872**	1,343	822
Income (loss) before income tax expense	**5,831**	4,639	4,527	**5,521**	3,517	2,436	**3,021**	2,011	1,062	**1,651**	990	524
Income tax expense (benefit)	**2,173**	1,691	1,722	**2,094**	1,318	889	**1,114**	737	379	**644**	382	217
Net income (loss)	**$ 3,658**	$ 2,948	$ 2,805	**$ 3,427**	$ 2,199	$ 1,547	**$ 1,907**	$ 1,274	$ 683	**$ 1,007**	$ 608	$ 307
Average equity	**$ 20,000**	$ 17,290	$ 18,350	**$ 13,383**	$ 9,092	$ 4,220	**$ 11,800**	$ 7,608	$ 3,440	**$ 3,400**	$ 2,093	$ 1,059
Average assets	**598,118**	473,121	436,488	**226,368**	185,928	147,435	**141,933**	94,741	51,406	**56,561**	36,435	16,460
Return on average equity	**18%**	17%	15%	**26%**	24%	37%	**16%**	17%	20%	**30%**	29%	29%
Overhead ratio	**67**	69	65	**58**	63	60	**33**	36	35	**52**	57	61

(a) In addition to analyzing the Firm's results on a reported basis, management reviews the line of business results on an "operating basis," which is a non-GAAP financial measure. The definition of operating basis starts with the reported U.S. GAAP results. In the case of the Investment Bank, operating basis noninterest revenue includes, in Trading revenue, Net interest income ("NII") related to trading activities. In the case of Card Services, refer to footnote (e). These adjustments do not change JPMorgan Chase's reported net income. Operating basis also excludes Merger costs, nonoperating Litigation reserve charges and accounting policy conformity adjustments, as management believes these items are not part of the Firm's normal daily business operations (and, therefore, not indicative of trends) and do not provide meaningful comparisons with other periods. Finally, operating results reflect revenues (Noninterest revenue and NII) on a tax-equivalent basis. Refer to footnote (f) for the impact of these adjustments.

(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only.

(c) TSS reimburses the IB for credit portfolio exposures the IB manages on behalf of clients the segments share. At the time of the Merger, the reimbursement methodology was revised to be based upon pre-tax earnings, net of the cost of capital related to those exposures. Prior to the Merger, the credit reimbursement was based upon pre-tax earnings, plus the allocated capital associated with the shared clients.

(d) Segment operating results include the reclassification of NII related to trading activities to Trading revenue within Noninterest revenue, which impacts primarily the Investment Bank. Trading-related NII reclassified to Trading revenue was $159 million, $2.0 billion and $2.1 billion in 2005, 2004 and 2003, respectively. These amounts are eliminated in Corporate/reconciling items to arrive at NII and Noninterest revenue on a reported GAAP basis for JPMorgan Chase.

(e) Operating results for Card Services exclude the impact of credit card securitizations on revenue, provision for credit losses and average assets, as JPMorgan Chase treats the sold receivables as if they were still on the balance sheet in evaluating the overall performance of the credit card portfolio. These adjustments are eliminated in Corporate/reconciling items to arrive at the Firm's reported GAAP results. The related securitization adjustments were as follows:

Year ended December 31, (in millions)[b]	**2005**	2004	2003
Net interest income	**$ 6,494**	$ 5,251	$ 3,320
Noninterest revenue	**(2,718)**	(2,353)	(1,450)
Provision for credit losses	**3,776**	2,898	1,870
Average assets	**67,180**	51,084	32,365

corporate support areas, which include Central Technology and Operations, Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Office of the General Counsel, Corporate Real Estate and General Services, Risk Management, and Strategy and Development. Beginning January 1, 2006, TSS will report results for two divisions: TS and WSS. WSS was formed by consolidating IS and ITS.

The following table provides a summary of the Firm's segment results for 2005, 2004 and 2003 on an operating basis. The impact of credit card securitizations, Merger costs, nonoperating Litigation reserve charges and accounting policy conformity adjustments have been included in Corporate/reconciling items so that the total Firm results are on a reported basis. Finally, commencing with the first quarter of 2005, operating revenue (noninterest revenue and net interest income) for each of the segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from tax exempt securities and investments that receive tax credits are presented in the operating results on a basis comparable to taxable securities and investments. This approach allows management to assess the comparability of revenues arising from both taxable and tax-exempt sources. The corresponding income tax impact related to these items is recorded within income tax expense. The Corporate sector's and the Firm's operating revenue and income tax expense for the periods prior to the first quarter of 2005 have been restated to be presented similarly on a tax-equivalent basis. This restatement had no impact on the Corporate sector's or the Firm's operating earnings. Segment results for periods prior to July 1, 2004, reflect heritage JPMorgan Chase–only results and have been restated to reflect the current business segment organization and reporting classifications.

(table continued from previous page)

Treasury & Securities Services			Asset & Wealth Management			Corporate/ reconciling items[d][e][f]			Total		
2005	2004	2003	**2005**	2004	2003	**2005**	2004	2003	**2005**	2004	2003
$ 4,179	$ 3,474	$ 2,661	**$ 4,583**	$ 3,383	$ 2,482	**$ 3,598**	$ 2,069	$ 566	**$ 34,702**	$ 26,336	$ 20,419
2,062	1,383	947	**1,081**	796	488	**(9,340)**	(4,523)	(1,368)	**19,831**	16,761	12,965
6,241	4,857	3,608	**5,664**	4,179	2,970	**(5,742)**	(2,454)	(802)	**54,533**	43,097	33,384
—	7	1	**(56)**	(14)	35	**(3,766)**	(2,150)[g]	(1,746)	**3,483**	2,544	1,540
(154)	(90)	36	**—**	—	—	**—**	—	—	**—**	—	—
—	—	—	**—**	—	—	**722**[h]	1,365[h]	—	**722**	1,365	—
—	—	—	**—**	—	—	**2,564**	3,700	—	**2,564**	3,700	100
4,470	4,113	3,028	**3,860**	3,133	2,486	**2,024**	1,301	529	**35,549**	29,294	21,716
4,470	4,113	3,028	**3,860**	3,133	2,486	**5,310**	6,366	529	**38,835**	34,359	21,816
1,617	647	615	**1,860**	1,060	449	**(7,286)**	(6,670)	415	**12,215**	6,194	10,028
580	207	193	**644**	379	162	**(3,517)**	(2,986)	(253)	**3,732**	1,728	3,309
$ 1,037	$ 440	$ 422	**$ 1,216**	$ 681	$ 287	**$ (3,769)**	$ (3,684)	$ 668	**$ 8,483**	$ 4,466	$ 6,719
$ 1,900	$ 2,544	$ 2,738	**$ 2,400**	$ 3,902	$ 5,507	**$ 52,624**	$ 33,112	$ 7,674	**$ 105,507**	$ 75,641	$ 42,988
26,947	23,430	18,379	**41,599**	37,751	33,780	**93,540**	111,150	72,030	**1,185,066**	962,556	775,978
55%	17%	15%	**51%**	17%	5%	**NM**	NM	NM	**8%**	6%	16%
72	85	84	**68**	75	84	**NM**	NM	NM	**71**	80	65

(f) Segment operating results reflect revenues on a tax-equivalent basis with the corresponding income tax impact recorded within income tax expense. Tax-equivalent adjustments were as follows:

Year ended December 31, (in millions)[b]	**2005**	2004	2003
Net interest income	**$ 269**	$ 6	$ 44
Noninterest revenue	**571**	317	89
Income tax expense	**840**	323	133

These adjustments are eliminated in Corporate/reconciling items to arrive at the Firm's reported GAAP results.

(g) Includes $858 million of accounting policy conformity adjustments consisting of approximately $1.4 billion related to the decertification of the seller's retained interest in credit card securitizations, partially offset by a benefit of $584 million related to conforming wholesale and consumer provision methodologies for the combined Firm.

(h) Merger costs attributed to the lines of business for 2005 and 2004 were as follows (there were no merger costs in 2003):

Year ended December 31, (in millions)[b]	**2005**	2004
Investment Bank	**$ 32**	$ 74
Retail Financial Services	**133**	201
Card Services	**222**	79
Commercial Banking	**3**	23
Treasury & Securities Services	**95**	68
Asset & Wealth Management Services	**60**	31
Corporate	**177**	889

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Note 32 – Parent company

Parent company – statements of income

Year ended December 31, (in millions)[a]	2005	2004	2003
Income			
Dividends from bank and bank holding company subsidiaries	**$ 2,361**	$ 1,208	$ 2,436
Dividends from nonbank subsidiaries[b]	**791**	773	2,688
Interest income from subsidiaries	**2,369**	1,370	945
Other interest income	**209**	137	130
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**246**	833	632
Nonbank	**462**	499	385
Other income	**13**	204	(25)
Total income	**6,451**	5,024	7,191
Expense			
Interest expense to subsidiaries[b]	**846**	603	422
Other interest expense	**3,076**	1,834	1,329
Compensation expense	**369**	353	348
Other noninterest expense	**496**	1,105	747
Total expense	**4,787**	3,895	2,846
Income before income tax benefit and undistributed net income of subsidiaries	**1,664**	1,129	4,345
Income tax benefit	**852**	556	474
Equity in undistributed net income (loss) of subsidiaries	**5,967**	2,781	1,900
Net income	**$ 8,483**	$ 4,466	$ 6,719

Parent company – balance sheets

December 31, (in millions)	2005	2004
Assets		
Cash with banks, primarily with bank subsidiaries	**$ 461**	$ 513
Deposits with banking subsidiaries	**9,452**	10,703
Securities purchased under resale agreements, primarily with nonbank subsidiaries	**24**	—
Trading assets	**7,548**	3,606
Available-for-sale securities	**285**	2,376
Loans	**338**	162
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**22,673**	19,076
Nonbank	**31,342**	34,456
Investment (at equity) in subsidiaries:		
Bank and bank holding company	**110,745**	105,599
Nonbank[b]	**21,367**	17,701
Goodwill and other intangibles	**804**	890
Other assets	**10,553**	11,557
Total assets	**$ 215,592**	$ 206,639
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries[b]	**$ 16,511**	$ 14,195
Other borrowed funds, primarily commercial paper	**15,675**	15,050
Other liabilities	**7,721**	6,309
Long-term debt[c]	**68,474**	65,432
Total liabilities	**108,381**	100,986
Stockholders' equity	**107,211**	105,653
Total liabilities and stockholders' equity	**$ 215,592**	$ 206,639

Parent company – statements of cash flows

Year ended December 31, (in millions)[a]	2005	2004	2003
Operating activities			
Net income	**$ 8,483**	$ 4,466	$ 6,719
Less: Net income of subsidiaries	**9,119**	4,762	7,017
Parent company net loss	**(636)**	(296)	(298)
Add: Cash dividends from subsidiaries[b]	**2,891**	1,964	5,098
Other, net	**(130)**	(81)	(272)
Net cash provided by operating activities	**2,125**	1,587	4,528
Investing activities			
Net cash change in:			
Deposits with banking subsidiaries	**1,251**	1,851	(2,560)
Securities purchased under resale agreements, primarily with nonbank subsidiaries	**(24)**	355	99
Loans	**(176)**	407	(490)
Advances to subsidiaries	**(483)**	(5,772)	(3,165)
Investment (at equity) in subsidiaries	**(2,949)**	(4,015)	(2,052)
Other, net	**34**	11	12
Available-for-sale securities:			
Purchases	**(215)**	(392)	(607)
Proceeds from sales and maturities	**124**	114	654
Cash received in business acquisitions	**—**	4,608	—
Net cash (used in) provided by investing activities	**(2,438)**	(2,833)	(8,109)
Financing activities			
Net cash change in borrowings from subsidiaries[b]	**2,316**	941	2,005
Net cash change in other borrowed funds	**625**	(1,510)	(2,104)
Proceeds from the issuance of long-term debt	**15,992**	12,816	12,105
Repayments of long-term debt	**(10,864)**	(6,149)	(6,733)
Proceeds from the issuance of stock and stock-related awards	**682**	848	1,213
Redemption of preferred stock	**(200)**	(670)	—
Treasury stock purchased	**(3,412)**	(738)	—
Cash dividends paid	**(4,878)**	(3,927)	(2,865)
Net cash provided by (used in) financing activities	**261**	1,611	3,621
Net increase (decrease) in cash with banks	**(52)**	365	40
Cash with banks at the beginning of the year	**513**	148	108
Cash with banks at the end of the year, primarily with bank subsidiaries	**$ 461**	$ 513	$ 148
Cash interest paid	**$ 3,838**	$ 2,383	$ 1,918
Cash income taxes paid	**$ 3,426**	$ 701	$ 754

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. 2003 reflects the results of heritage JPMorgan Chase only. For a further discussion of the Merger, see Note 2 on pages 92–93 of this Annual Report.

(b) Subsidiaries include trusts that issued guaranteed capital debt securities ("issuer trusts"). As a result of FIN 46, the Parent deconsolidated these trusts in 2003. The Parent received dividends of $21 million and $15 million from the issuer trusts in 2005 and 2004, respectively. For a further discussion on these issuer trusts, see Note 17 on pages 117–118 of this Annual Report.

(c) At December 31, 2005, debt that contractually matures in 2006 through 2010 totaled $10.3 billion, $9.5 billion, $11.9 billion, $8.8 billion and $3.8 billion, respectively.

Supplementary information

Selected quarterly financial data (unaudited)

(in millions, except per share, ratio and headcount data)	2005[f]				2004			
As of or for the period ended	4th	3rd	2nd	1st	4th[f]	3rd[f]	2nd[h]	1st[h]
Selected income statement data								
Noninterest revenue	**$ 8,925**	**$ 9,613**	**$ 7,742**	**$ 8,422**	$ 7,621	$ 7,053	$ 5,637	$ 6,025
Net interest income	**4,753**	**4,852**	**5,001**	**5,225**	5,329	5,452	2,994	2,986
Total net revenue	**13,678**	**14,465**	**12,743**	**13,647**	12,950	12,505	8,631	9,011
Provision for credit losses	**1,224**	**1,245[g]**	**587**	**427**	1,157	1,169	203	15
Noninterest expense before Merger costs and Litigation reserve charge	**8,666**	**9,243**	**8,748**	**8,892**	8,863	8,625	5,713	6,093
Merger costs	**77**	**221**	**279**	**145**	523	752	90	—
Litigation reserve charge	**(208)**	**—**	**1,872**	**900**	—	—	3,700	—
Total noninterest expense	**8,535**	**9,464**	**10,899**	**9,937**	9,386	9,377	9,503	6,093
Income (loss) before income tax expense (benefit)	**3,919**	**3,756**	**1,257**	**3,283**	2,407	1,959	(1,075)	2,903
Income tax expense (benefit)	**1,221**	**1,229**	**263**	**1,019**	741	541	(527)	973
Net income (loss)	**$ 2,698**	**$ 2,527**	**$ 994**	**$ 2,264**	$ 1,666	$ 1,418	$ (548)	$ 1,930
Per common share								
Net income (loss) per share: Basic	**$ 0.78**	**$ 0.72**	**$ 0.28**	**$ 0.64**	$ 0.47	$ 0.40	$ (0.27)	$ 0.94
Diluted	**0.76**	**0.71**	**0.28**	**0.63**	0.46	0.39	(0.27)	0.92
Cash dividends declared per share	**0.34**	**0.34**	**0.34**	**0.34**	0.34	0.34	0.34	0.34
Book value per share	**30.71**	**30.26**	**29.95**	**29.78**	29.61	29.42	21.52	22.62
Common shares outstanding								
Average: Basic	**3,472**	**3,485**	**3,493**	**3,518**	3,515	3,514	2,043	2,032
Diluted	**3,564**	**3,548**	**3,548**	**3,570**	3,602	3,592	2,043	2,093
Common shares at period end	**3,487**	**3,503**	**3,514**	**3,525**	3,556	3,564	2,088	2,082
Selected ratios								
Return on common equity ("ROE")[a]	**10%**	**9%**	**4%**	**9%**	6%	5%	NM	17%
Return on assets ("ROA")[a][b]	**0.89**	**0.84**	**0.34**	**0.79**	0.57	0.50	NM	1.01
Tier 1 capital ratio	**8.5**	**8.2**	**8.2**	**8.6**	8.7	8.6	8.2%	8.4
Total capital ratio	**12.0**	**11.3**	**11.3**	**11.9**	12.2	12.0	11.2	11.4
Tier 1 leverage ratio	**6.3**	**6.2**	**6.2**	**6.3**	6.2	6.5	5.5	5.9
Selected balance sheet data (period-end)								
Total assets	**$ 1,198,942**	**$ 1,203,033**	**$1,171,283**	**$1,178,305**	$1,157,248	$1,138,469	$ 817,763	$ 801,078
Securities	**47,600**	**68,697**	**58,573**	**75,251**	94,512	92,816	64,915	70,747
Total loans	**419,148**	**420,504**	**416,025**	**402,669**	402,114	393,701	225,938	217,630
Deposits	**554,991**	**535,123**	**534,640**	**531,379**	521,456	496,454	346,539	336,886
Long-term debt	**108,357**	**101,853**	**101,182**	**99,329**	95,422	91,754	52,981	50,062
Common stockholders' equity	**107,072**	**105,996**	**105,246**	**105,001**	105,314	104,844	44,932	47,092
Total stockholders' equity	**107,211**	**106,135**	**105,385**	**105,340**	105,653	105,853	45,941	48,101
Credit quality metrics								
Allowance for credit losses	**$ 7,490**	**$ 7,615**	**$ 7,233**	**$ 7,423**	$ 7,812	$ 8,034	$ 4,227	$ 4,417
Nonperforming assets[c]	**2,590**	**2,839**	**2,832**	**2,949**	3,231	3,637	2,482	2,882
Allowance for loan losses to total loans[d]	**1.84%**	**1.86%**	**1.76%**	**1.82%**	1.94%	2.01%	1.92%	2.08%
Net charge-offs	**$ 1,360**	**$ 870**	**$ 773**	**$ 816**	$ 1,398	$ 865	$ 392	$ 444
Net charge-off rate[a][d]	**1.39%**	**0.89%**	**0.82%**	**0.88%**	1.46%	0.93%	0.78%	0.92%
Wholesale net charge-off (recovery) rate[a][d]	**0.07**	**(0.12)**	**(0.16)**	**(0.03)**	0.21	(0.07)	0.29	0.50
Managed Card net charge-off rate[a]	**6.39**	**4.70**	**4.87**	**4.83**	5.24	4.88	5.85	5.81
Headcount	**168,847**	**168,955**	**168,708**	**164,381**	160,968	162,275	94,615	96,010
Share price[e]								
High	**$ 40.56**	**$ 35.95**	**$ 36.50**	**$ 39.69**	$ 40.45	$ 40.25	$ 42.57	$ 43.84
Low	**32.92**	**33.31**	**33.35**	**34.32**	36.32	35.50	34.62	36.30
Close	**39.69**	**33.93**	**35.32**	**34.60**	39.01	39.73	38.77	41.95

(a) Based upon annualized amounts.
(b) Represents Net income divided by Total average assets.
(c) Excludes wholesale purchased held-for-sale ("HFS") loans purchased as part of the Investment Bank's proprietary activities.
(d) Excluded from the allowance coverage ratios were end-of-period loans held-for-sale; and excluded from the net charge-off rates were average loans held-for-sale.
(e) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.
(f) Quarterly results include three months of the combined Firm's results.
(g) Includes a $400 million special provision related to Hurricane Katrina allocated as follows: Retail Financial Services $250 million, Card Services $100 million, Commercial Banking $35 million, Asset & Wealth Management $3 million and Corporate $12 million.
(h) Heritage JPMorgan Chase results only.
NM – Not meaningful due to net loss.

Glossary of terms

JPMorgan Chase & Co.

ACH: Automated Clearing House.

APB: Accounting Principles Board Opinion.

APB 25: "Accounting for Stock Issued to Employees."

Assets under management: Represent assets actively managed by Asset & Wealth Management on behalf of institutional, private banking, private client services and retail clients. Excludes assets managed by American Century Companies, Inc., in which the Firm has a 43% ownership interest.

Assets under supervision: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Average managed assets: Refers to total assets on the Firm's balance sheet plus credit card receivables that have been securitized.

Contractual credit card charge-off: In accordance with the Federal Financial Institutions Examination Council policy, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification of the filing of bankruptcy, whichever is earlier.

Core deposits: U.S. deposits insured by the Federal Deposit Insurance Corporation, up to the legal limit of $100,000 per depositor.

Credit derivatives are contractual agreements that provide protection against a credit event of one or more referenced credits. The nature of a credit event is established by the protection buyer and protection seller at the inception of a transaction, and such events include bankruptcy, insolvency and failure to meet payment obligations when due. The buyer of the credit derivative pays a periodic fee in return for a payment by the protection seller upon the occurrence, if any, of a credit event.

Credit cycle: a period of time over which credit quality improves, deteriorates and then improves again. While portfolios may differ in terms of risk, the credit cycle is typically driven by many factors, including market events and the economy. The duration of a credit cycle can vary from a couple of years to several years.

FASB: Financial Accounting Standards Board.

FIN 39: FASB Interpretation No. 39, "Offsetting of Amounts Related to Certain Contracts."

FIN 41: FASB Interpretation No. 41, "Offsetting of Amounts Related to Certain Repurchase and Reverse Repurchase Agreements."

FIN 45: FASB Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirement for Guarantees, including Indirect Guarantees of Indebtedness of Others."

FIN 46R: FASB Interpretation No. 46 (revised December 2003), "Consolidation of Variable Interest Entities, an interpretation of Accounting Research Bulletin No. 51."

FIN 47: FASB Interpretation No. 47, "Accounting for Conditional Asset Retirement Obligations – an interpretation of FASB Statement No. 143."

FSP SFAS 106-2: "Accounting and Disclosure Requirements Related to the Medicare Prescription Drug, Improvement and Modernization Act of 2003."

Interests in Purchased Receivables: Represent an ownership interest in a percentage of cash flows of an underlying pool of receivables transferred by a third-party seller into a bankruptcy remote entity, generally a trust, and then financed through a commercial paper conduit.

Investment-grade: An indication of credit quality based upon JPMorgan Chase's internal risk assessment system. "Investment-grade" generally represents a risk profile similar to a rating of a BBB-/Baa3 or better, as defined by independent rating agencies.

Mark-to-market exposure: A measure, at a point in time, of the value of a derivative or foreign exchange contract in the open market. When the mark-to-market value is positive, it indicates the counterparty owes JPMorgan Chase and, therefore, creates a repayment risk for the Firm. When the mark-to-market value is negative, JPMorgan Chase owes the counterparty. In this situation, the Firm does not have repayment risk.

Master netting agreement: An agreement between two counterparties that have multiple derivative contracts with each other that provides for the net settlement of all contracts through a single payment, in a single currency, in the event of default on or termination of any one contract. See FIN 39.

NA: Data is not applicable or available for the period presented.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

Nonoperating litigation reserve charges and recoveries are the $208 million insurance recovery in the fourth quarter of 2005; the $1.9 billion charge taken in the second quarter of 2005; the $900 million charge taken in the first quarter of 2005; and the $3.7 billion charge taken in the second quarter of 2004; all of which relate to the legal cases named in the JPMorgan Chase Quarterly Report on Form 10–Q for the quarter ended September 30, 2004.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Return on common equity-goodwill: Represents net income applicable to common stock divided by total average common equity (net of goodwill). The Firm uses return on equity less goodwill, a non-GAAP financial measure, to evaluate the operating performance of the Firm. The Firm also utilizes this measure to facilitate operating comparisons to other competitors.

SFAS: Statement of Financial Accounting Standards.

SFAS 13: "Accounting for Leases."

SFAS 87: "Employers' Accounting for Pensions."

SFAS 88: "Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits."

SFAS 106: "Employers' Accounting for Postretirement Benefits Other Than Pensions."

SFAS 107: "Disclosures about Fair Value of Financial Instruments."

SFAS 109: "Accounting for Income Taxes."

SFAS 114: "Accounting by Creditors for Impairment of a Loan."

SFAS 115: "Accounting for Certain Investments in Debt and Equity Securities."

SFAS 123: "Accounting for Stock-Based Compensation."

SFAS 123R: "Share-Based Payment."

SFAS 128: "Earnings per Share."

SFAS 133: "Accounting for Derivative Instruments and Hedging Activities."

SFAS 138: "Accounting for Certain Derivative Instruments and Certain Hedging Activities – an amendment of FASB Statement No. 133."

Glossary of terms

JPMorgan Chase & Co.

SFAS 140: "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities – a replacement of FASB Statement No. 125."

SFAS 142: "Goodwill and Other Intangible Assets."

SFAS 143: "Accounting for Asset Retirement Obligations."

SFAS 149: "Amendment of Statement No. 133 on Derivative Instruments and Hedging Activities."

SFAS 155: "Accounting for Certain Hybrid Financial Instruments – an amendment of FASB Statements No. 133 and 140."

Staff Accounting Bulletin ("SAB") 107: "Application of Statement of Financial Accounting Standards No. 123 (revised 2004), Share-Based Payment."

Statement of Position ("SOP") 98-1: "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use."

Stress testing: A scenario that measures market risk under unlikely but plausible events in abnormal markets.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. government and federal agency obligations: Obligations of the U.S. government or an instrumentality of the U.S. government whose obligations are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

Value-at-Risk ("VAR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

Forward-looking statements

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," "anticipate" or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the Securities and Exchange Commission ("SEC"). In addition, the Firm's senior management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

All forward-looking statements, by their nature, are subject to risks and uncertainties. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. Factors that could cause this difference—many of which are beyond the Firm's control—include the following: local, regional and international business, political or economic conditions; changes in trade, monetary and fiscal policies and laws; technological changes instituted by the Firm and by other entities which may affect the Firm's business; mergers and acquisitions, including the Firm's ability to integrate acquisitions; ability of the Firm to develop new products and services; acceptance of new products and services and the ability of the Firm to increase market share; ability of the Firm to control expenses; competitive pressures; changes in laws and regulatory requirements; changes in applicable accounting policies; costs, outcomes and effects of litigation and regulatory investigations; changes in the credit quality of the Firm's customers; and adequacy of the Firm's risk management framework.

Additional factors that may cause future results to differ materially from forward-looking statements are discussed in Part I, Item 1A: Risk Factors in the Firm's Annual Report on Form 10–K for the year ended December 31, 2005, to which reference is hereby made. There is no assurance that any list of risks and uncertainties or risk factors is complete.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10–K, its Quarterly Reports on Form 10-Q and its Current Reports on Form 8-K.

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Arnhem, The Netherlands

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Yale Center for the Study
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Denver, Inc.
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Neighborhood Housing Services of
New Orleans
New Orleans, LA

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Latin American Research and
Service Agency LARASA
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Latin United Community Housing
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Houston, TX

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Orlando, FL

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Development Corp.
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Indiana Assoc. for Community
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William C. Rudin
President
Rudin Management Company, Inc.

Joel Seligman
President
University of Rochester

John Shalam
Chairman and
Chief Executive Officer
Audiovox Corporation

Arthur T. Shorin
Chairman and
Chief Executive Officer
The Topps Company, Inc.

Marie Toulantis
Chief Executive Officer
Barnes & Noble, Inc.

Kenneth L. Wallach
Chairman, President and
Chief Executive Officer
Central National-Gottesman Inc.

Fred Wilpon
Chairman
Sterling Equities, Inc.

*Board membership as of January 2006

Corporate Governance

Governance is a continuing focus at JPMorgan Chase, starting with the board of directors and continuing throughout the Firm. There are three pillars of good governance:

- An independent board, accountable to shareholders
- Strong internal governance
- Alignment with shareholders

Board governance

JPMorgan Chase's board is experienced, independent and accountable to shareholders. The board's structure and practices include *the following, and more information on board governance can be found on the Firm's website (www.jpmorganchase.com):*

- *effective size:* The board's preference is to maintain a smaller size for efficiency and to encourage active dialogue. As retirements occur, the board will actively seek to increase diversity among its membership.
- *a super-majority of non-management directors:* There are only two full-time management members on the board, Bill Harrison and Jamie Dimon. During 2005, Bob Lipp became a part-time member of management to share his special skills in developing talent within the firm. All other members of the board are non-management directors that the board has determined to be independent.
- *director independence:*
  independent directors – Each of the non-management directors of JPMorgan Chase was determined by the board to be independent in accordance with board standards that consider past and current employment relationships; any business relationships with or charitable contributions to entities at which a director serves as an officer; and personal banking and other financial relationships, which must be on an arm's-length basis.

  executive sessions of directors – In 2005, the board adopted the practice of meeting without management at each regularly scheduled board meeting.

  access to outside resources – Although the main responsibility for providing assistance to the board rests with management, the board and board committees can engage outside expert advice from sources independent of management at the expense of the Firm.
- *director accountability:*
  majority voting for directors – In 2005 the board adopted a policy providing that in uncontested elections, any director nominee who receives more withheld than for votes will tender his or her resignation. Absent a compelling reason, the board will accept the resignation.
- *director compensation:* The board believes it is desirable that a significant portion of overall director compensation be linked to JPMorgan Chase stock, and the board's total compensation includes approximately one-third cash and two-thirds stock-based compensation in the form of share equivalents that must be held until a director's termination of service.

Internal governance

While governance begins with the board of directors, managing the enterprise requires effective governance structures and practices throughout the organization. The firm as a whole manages by line of business, supported by global policies and standards that typically apply to all relevant units regardless of geography or legal structure. The strength of these global control processes is the foundation of regional and individual subsidiary governance. Three examples of the Firm's global processes and standards are its risk management structure, policy review process and codes of conduct.

Defined risk governance is a principle of risk management at JPMorgan Chase. The board of directors exercises oversight of risk management through the board as a whole and through the board's Audit and Risk Policy committees. The charters of these and other board committees are available at the Firm's website. The board delegates the formulation of policy and day-to-day risk oversight to management. The Firm's risk governance structure is built upon the premise that each line of business is responsible for managing the risks inherent in its business activity, including liquidity risk, credit risk, market risk, interest rate risk, operational risk, legal and reputation risk, fiduciary risk and private equity risk. Each line of business has a risk committee responsible for decisions relating to risk strategy, policies and control. Where appropriate, risk committees escalate risk issues to the Firm's Operating Committee, comprised of senior officers of the Firm, or to the Risk Working Group, a subgroup of the Operating Committee. Overlaying risk management within the lines of business are three corporate functions: Treasury, Risk Management and Office of the General Counsel. Treasury is responsible for managing the interest rate and liquidity profile of the Firm. Risk Management provides an independent firmwide function of control and management of risk. The Office of the General Counsel has oversight of legal, reputation and fiduciary risk. A discussion of risk management begins at page 60 of this Annual Report.

The policy review process is based on the recognition that a firm's success requires maintenance of a reputation for business practices of the highest quality. The Firm has a specific structure to address transactions with clients that have the potential to adversely affect the Firm's reputation. Primary responsibility for adherence to the policies and procedures designed to address reputation risk lies with business units, which are also required to submit to regional Reputation Risk Committees proposed transactions that may heighten reputation risk. The committees may approve, reject or require further clarification on or changes to the transaction, or they may escalate the review to the most senior level of review, the Policy Review Office. The objective of the policy review process is to reinforce a culture that ensures that all employees understand the basic principles of reputation risk control and can recognize and address issues as they arise. For a further description of the policy review process, see the discussion of reputation and fiduciary risk starting at page 80 of this Annual Report.

The Firm has two codes of conduct, one applying to all employees and a supplementary code that applies to senior executive and senior financial officers. The Code of Conduct is applicable to all employees and the Firm requires each employee to certify annually his or her compliance with the Code. The Firm also has a Code of Ethics for Finance Professionals to underscore the importance of ethical conduct and compliance with law, particularly as it relates to the maintenance of the Firm's financial books and records and the preparation of its financial statements. Both codes are available at the Firm's website.

Alignment with shareholders

Good corporate governance requires that compensation policies align with shareholder interests. JPMorgan Chase's compensation policy for executive officers emphasizes performance-based, variable compensation over fixed salary and uses equity-based awards to align the interests of executive officers with shareholders. Members of the Firm's Operating Committee are required to retain 75% of the net shares received from equity-based awards, after deduction for taxes and exercise costs.

Board of Directors

Hans W. Becherer [1,4]
Retired Chairman and
Chief Executive Officer
Deere & Company
(Equipment manufacturer)

John H. Biggs [1,3]
Former Chairman and
Chief Executive Officer
Teachers Insurance
and Annuity Association-
College Retirement
Equities Fund (TIAA-CREF)
(Pension fund)

Lawrence A. Bossidy [4,5]
Retired Chairman
Honeywell International Inc.
(Technology and manufacturing)

Stephen B. Burke [2,3]
President
Comcast Cable
Communications, Inc.
(Cable television)

James S. Crown [4,5]
President
Henry Crown and Company
(Diversified investments)

James Dimon
Chief Executive Officer
JPMorgan Chase & Co.

Ellen V. Futter [4,5]
President and Trustee
American Museum of
Natural History
(Museum)

William H. Gray, III [2,4]
Senior Advisor, Public Policy
& Business Diversity
Buchanan Ingersoll PC
(Law firm)

William B. Harrison, Jr.
Chairman of the Board
JPMorgan Chase & Co.

Laban P. Jackson, Jr. [1,3]
Chairman and
Chief Executive Officer
Clear Creek Properties, Inc.
(Real estate development)

John W. Kessler [2,4]
Owner
John W. Kessler Company
and Chairman
The New Albany Company
(Real estate development)

Robert I. Lipp [4,5]
Senior Advisor
JPMorgan Chase & Co.

Richard A. Manoogian [1,4]
Chairman and
Chief Executive Officer
Masco Corporation
(Diversified manufacturer)

David C. Novak [2,3]
Chairman and
Chief Executive Officer
Yum! Brands, Inc.
(Franchised restaurants)

Lee R. Raymond [2,3]
Retired Chairman and
Chief Executive Officer
Exxon Mobil Corporation
(Oil and gas)

William C. Weldon [2,3]
Chairman and
Chief Executive Officer
Johnson & Johnson
(Health care products)

Member of:

1. Audit Committee
2. Compensation & Management Development Committee
3. Corporate Governance & Nominating Committee
4. Public Responsibility Committee
5. Risk Policy Committee

Executive Committee (*denotes member of Operating Committee)

James Dimon*
Chief Executive Officer

Austin A. Adams*
Technology & Operations

Paul Bateman
Asset Management

Frank J. Bisignano*
Chief Administrative Officer

Steven D. Black*
Investment Bank

Philip F. Bleser
Commercial Banking

John F. Bradley*
Human Resources

Douglas L. Braunstein
Investment Bank

Richard M. Cashin
One Equity Partners

Michael J. Cavanagh*
Finance

Michael K. Clark
Institutional Trust &
Investor Services

Andrew Crockett
JPMorgan Chase International

William M. Daley
Midwest Region

Klaus Diederichs
Investment Bank

Ina R. Drew*
Chief Investment Officer

Patrik L. Edsparr
Investment Bank

Mary E. Erdoes
Private Bank

Martha J. Gallo
Audit

Walter A. Gubert
Europe, Middle East and Africa

Joan Guggenheimer*
Legal & Compliance

Carlos M. Hernandez
Investment Bank

Lorraine E. Hricik
Treasury Services

Rick Lazio
Government Affairs & Public Policy

James B. Lee, Jr.
Investment Bank

Steve MacLellan
Private Client Services

Samuel Todd Maclin*
Commercial Banking

Jay Mandelbaum*
Strategy

Donald H. McCree, III
Investment Bank

William H. McDavid*
Legal & Compliance

Heidi Miller*
Treasury & Securities Services

R. Ralph Parks
Asia Pacific

Scott Powell
Home Finance

David W. Puth
Investment Bank

Charles W. Scharf*
Retail Financial Services

Richard J. Srednicki*
Card Services

James E. Staley*
Asset & Wealth Management

Don M. Wilson III*
Risk Management

Thomas L. Wind
Home Finance

William T. Winters*
Investment Bank

Other corporate officers

Anthony J. Horan
Secretary

Mark I. Kleinman
Treasury

Joseph L. Sclafani
Controller

JPMorgan Chase & Co.

Corporate headquarters

270 Park Avenue
New York, New York 10017-2070
Telephone: 212-270-6000
http://www.jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities Inc.

Annual report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the Securities and Exchange Commission will be made available upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, New York 10017-2070

Stock listing

New York Stock Exchange, Inc.
London Stock Exchange Limited
Tokyo Stock Exchange

The New York Stock Exchange (NYSE) ticker symbols for stock of JPMorgan Chase & Co. are as follows:

JPM (Common Stock)
JPMPRH (Depositary Shares Each Representing a One-Tenth Interest in 6 5/8% Cumulative Preferred Stock)

Certifications by the Chairman, Chief Executive Officer and Chief Financial Officer of JPMorgan Chase & Co. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, have been filed as exhibits to the Firm's 2005 Annual Report on Form 10-K.

The NYSE requires that the Chief Executive Officer of a listed company certify annually that he or she was not aware of any violation by the company of the NYSE's Corporate Governance listing standards. Such certification was made on June 14, 2005.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations site of www.jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, New York 10017-2070
Telephone: 212-270-6000

Directors

To contact any of the Board members please mail correspondence to:

JPMorgan Chase & Co.
Attention (Board member)
Office of the Secretary
270 Park Avenue
New York, New York 10017-2070

The corporate governance principles of the board, the charters of the principal board committees and other governance information can be accessed by visiting www.jpmorganchase.com and clicking on "Governance." Stockholders may request a copy of such materials by writing to the Office of the Secretary at the above address.

Transfer agent and registrar

Mellon Investor Services LLC
480 Washington Blvd.
Jersey City, New Jersey 07310-1900
Telephone: 1-800-758-4651
https://vault.melloninvestor.com/isd

Investor Services Program

JPMorgan Chase & Co.'s Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorgan Chase & Co. common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, Mellon Investor Services LLC, by calling 1-800-758-4651, by writing them at the address indicated above or by visiting their Web site at www.melloninvestor.com.

Direct deposit of dividends

For information about direct deposit of dividends, please contact Mellon Investor Services LLC.

Stockholder inquiries

Contact Mellon Investor Services LLC:

By telephone:

Within the United States, Canada and Puerto Rico: 1-800-758-4651 (toll free)

From all other locations: 1-201-680-6578 (collect)

TDD service for the hearing impaired within the United States, Canada and Puerto Rico: 1-800-231-5469 (toll free)

All other locations: 1-201-680-6578 (collect)

By mail:

Mellon Investor Services LLC
480 Washington Blvd.
Jersey City, New Jersey 07310-1900

Duplicate mailings

If you receive duplicate mailings because you have more than one account listing and you wish to consolidate your accounts, please write to Mellon Investor Services LLC at the address above.

Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, New York 10017

This annual report is printed on paper made from well-managed forests and other controlled sources with the financial section printed on paper containing 20% post-consumer waste (PCW) recycled fibers. The paper is independently certified by SmartWood, a program of the Rainforest Alliance, to the Forest Stewardship Council (FSC) standards.

FSC is an independent nonprofit organization devoted to encouraging the responsible management of the world's forests. FSC sets high standards to ensure forestry is practiced in an environmentally responsible, socially beneficial and economically viable way.



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JPMorgan Chase & Co.
www.jpmorganchase.com

JPMORGAN CHASE & CO.

ANNUAL REPORT 2006





JPMorganChase

FINANCIAL HIGHLIGHTS

As of or for the year ended December 31, (in millions, except per share, ratio and headcount data)	2006	2005
Reported basis [a]		
Total net revenue	$ 61,437	$ 53,748
Provision for credit losses	3,270	3,483
Total noninterest expense	38,281	38,426
Income from continuing operations	13,649	8,254
Net income	$ 14,444	$ 8,483
Per common share:		
Basic earnings per share		
Income from continuing operations	$ 3.93	$ 2.36
Net income	4.16	2.43
Diluted earnings per share		
Income from continuing operations	$ 3.82	$ 2.32
Net income	4.04	2.38
Cash dividends declared per share	1.36	1.36
Book value per share	33.45	30.71
Return on common equity		
Income from continuing operations	12%	8%
Net income	13	8
Return on common equity (net of goodwill)		
Income from continuing operations	20%	13%
Net income	22	14
Tier 1 capital ratio	8.7	8.5
Total capital ratio	12.3	12.0
Total assets	$ 1,351,520	$1,198,942
Loans	483,127	419,148
Deposits	638,788	554,991
Total stockholders' equity	115,790	107,211
Headcount	174,360	168,847

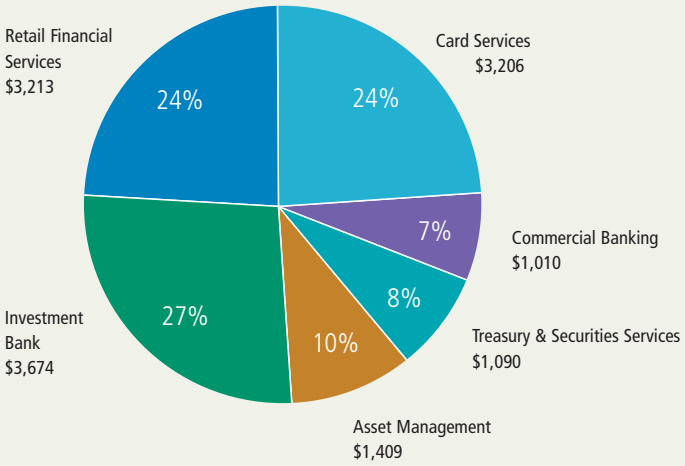
(a) Results are presented in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $1.4 trillion and operations in more than 50 countries. The firm is a leader in investment banking, financial services for consumers, small business and commercial banking, financial transaction processing, asset management and private equity. A component of the Dow Jones Industrial Average, JPMorgan Chase serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its JPMorgan and Chase brands.

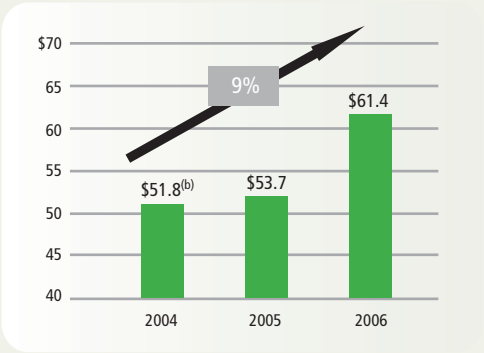
Information about JPMorgan capabilities can be found at www.jpmorgan.com and about Chase capabilities at www.chase.com. Information about the firm is available at www.jpmorganchase.com.

FINANCIAL TRENDS AT A GLANCE

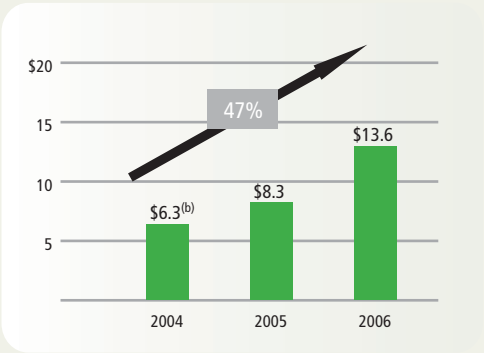
Income by line of business[a]
(in millions)



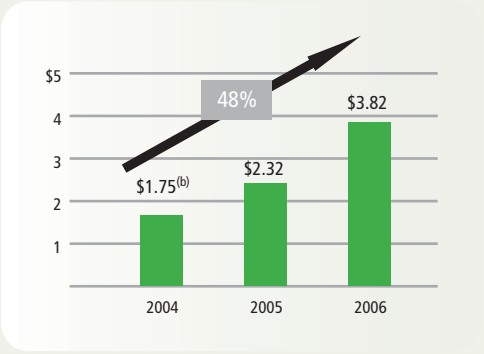
Net revenue
from continuing operations (in billions)



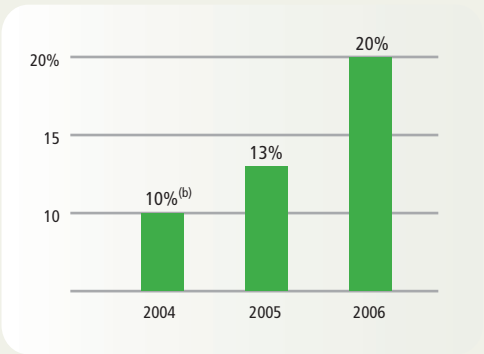
Income
from continuing operations (in billions)



Earnings per share
from continuing operations (fully diluted)



Return on equity (net of goodwill)
from continuing operations



All information shown on a reported basis on continuing operations.

Growth rates shown as compound annual growth rates (CAGRs).

(a) Excludes Corporate segment

(b) Presented on an unaudited pro forma combined basis that represents how the financial information of JPMorgan Chase & Co. and Bank One Corporation may have appeared on a combined basis had the two companies been merged for the full year.

DEAR FELLOW SHAREHOLDER,

JPMorgan Chase made very good progress in 2006. We earned $13.6 billion from continuing operations, up significantly from the year before; we grew our major businesses – and the growth was high quality; and we positioned ourselves extremely well for 2007 and beyond.

In this letter, I will review and assess our 2006 performance and describe key initiatives and issues we are focusing on this year and in the future to make our company even better. I hope, after reading this letter, that you will share my enthusiasm about the emerging power and enormous potential of the JPMorgan Chase franchise.

First, let's look at 2006:

I. OUR PERFORMANCE IN 2006: PROGRESS AND RENEWED FOCUS

At JPMorgan Chase, we analyze our performance against a broad spectrum of measures, including growth, quality, risk management, marketing, collaboration, operations, controls and compliance. We continue to make significant progress on all these fronts. Although our absolute performance is not yet where it should be, the pace and level of improvement are extremely good and make us more confident than ever about our future.

Starting with "financial performance," we believe there are six key aspects of our overall 2006 performance that illustrate the progress we have made.

Strengthened financial performance

Our earnings from continuing operations for the year were **$13.6 billion**, up from **$8.3 billion** in 2005. Return on equity (excluding goodwill) was 20% versus 13%. Revenue growth – almost all organic – was 14%. These results, produced with the support of a still-favorable credit environment, are good, but not excellent. And in some cases, we still trail our major competitors.

While we're not yet top-tier in financial performance, we feel particularly good about a number of major issues. We essentially completed a huge, complex merger while staying focused on business and pursuing growth; we dramatically cut expenses and waste; and we increased investment spending. Integration risk – the potential to suffer major setbacks because of merger-related issues – is always a big challenge and source of concern. But superb execution throughout 2005 and 2006 has enabled us to put that risk mostly behind us.

Increased management discipline and collaboration

Ultimately, we will succeed or fail based upon the talent, dedication and diligence of our management team and the people who work with them. On this measure, you, our shareholders, should be extremely pleased. Your management team regularly reviews all aspects of our business in an open and honest way, assessing our strengths and weaknesses, and our opportunities and risks. The level of collaboration among business units is higher than ever and still getting better. Our top managers work well together, respect each other and take pride in each other's successes. As I have stressed in prior shareholder letters, getting people to work together across all business units is critical to our success.

Here are some examples of what we can achieve by working well together. In all of these cases, the management team came together – to review facts and critically analyze and reanalyze issues – in order to find the right answers for our clients and our company. We developed and executed a game plan without the destructive politics, silly game-playing and selfish arguments about revenue-sharing that can destroy healthy collaboration and undermine progress.

Establishing the Corporate Bank

Previously, our investment bankers played the lead role in managing our firm's relationships with large clients, even when a client might require non-investment-banking products and services, such as cash management, custody, asset management, certain credit and derivatives products, and others. The product salespeople outside our Investment Bank operated somewhat independently from the investment bankers. As a result, we were not managing our relationships with many of our largest clients in an integrated and coordinated way. Too many people were selling their own products without feeling accountable for JPMorgan Chase's overall relationship with the client.

Now, we have addressed this issue with dedicated corporate bankers who cover the treasurer's offices of our largest, longest-standing and most important clients. These corporate bankers, in partnership with our investment bankers, are focused on developing our entire relationship with our clients – orchestrating the coverage effort with regular account planning, client reviews and coordinated calling. This effort ultimately should add hundreds of millions of dollars to revenue and create happier clients.

Building the mortgage business – in Home Lending and the Investment Bank

Home Lending is one of the largest originators and servicers of mortgages in the United States. Separately, our Investment Bank has been working hard to build out its mortgage capabilities as the mortgage business overall has been undergoing fundamental change, i.e., mortgages are increasingly being packaged and sold to institutional investors rather than being held by the company that originates them.

Historically, our two businesses, Home Lending and the Investment Bank, barely worked together. In 2004, almost no Home Lending mortgages were sold through our Investment Bank. This past year, however, our Investment Bank sold 95% of the non-agency mortgages (approximately $25 billion worth) originated by Home Lending. As a result, Home Lending materially increased its product breadth and volume because it could distribute and price more competitively. This arrangement obviously helped our sales efforts, and the Investment Bank was able to build a better business with a clear, competitive advantage. In 2006, our Investment Bank moved up several places in the league-table rankings for mortgages. (Importantly, Home Lending maintained its high underwriting standards; more on this later.) We believe that we now have the opportunity to become one of America's best mortgage companies.

Growing credit card sales through retail branches

In 2006, we opened more than one million credit card accounts through our retail branches, up 74% over 2005. Retail and Card Services teams drove this progress by working together and analyzing every facet of the business, including product design, marketing, credit reporting, systems and staffing. It started slowly, but as we've learned together and innovated, we've been able to add increasingly more profitable new accounts. We have the ability to provide – almost instantaneously – preapproved credit to customers while they are opening other banking accounts with us. And, while respecting customer privacy, we now can offer better pricing because we can underwrite using both credit card and retail customer information. Over time, this competitive advantage will enable us to add more value and produce better results for customers and for JPMorgan Chase.

Approaching Asia holistically

Our Operating Committee members traveled to Asia late last year and reviewed how we were doing, country-by-country. The reviews spanned all lines of business. This process shed new light on our businesses, sharpened our focus on ways we could work together to improve performance and strengthened our resolve to execute aggressively. This year, the business plans in each country are not only appropriately more ambitious, but also better coordinated and fully supported by the rest of the company. As this effort is replicated in other parts of the world, we are confident it will strengthen our operations and opportunities.

Working better together

There are plenty of other examples where good collaboration has made us better. Our Commercial Banking clients last year generated over $700 million of investment banking revenue, up 30% from 2005. The merger made this possible by bringing top-tier Investment Bank products to an extensive Commercial Banking customer base. In addition, our Treasury & Securities Services group does a significant amount of business with our Commercial Banking client base. Our Asset Management group calls on Commercial Banking and Investment Bank customers, and works with investment bankers to identify clients who can benefit from our private banking services. Clients across all of our businesses use our branches. We can use this kind of disciplined and collaborative approach across our businesses to continue to build on the distinctive strength of our extensive capabilities and relationships.

Achieved quality growth, driving future growth

It's easy to grow short-term earnings: just stop investing in your company's future and compromise your standards on accepting new clients and business. We won't do that.

Virtually all of our businesses achieved real, healthy growth. You can see this described more fully in the pages ahead, so I'll just reflect on a few key items.

- Our goal is to accomplish real, sustainable growth, but not growth at any cost. In the financial services world, it is easy to stretch for growth by reducing underwriting standards or taking on increasingly higher levels of risk. But such an approach is foolish longer term. For example, last year we declined to underwrite negative amortization mortgage loans and option adjustable-rate mortgages. That may have hurt our 2006 earnings a bit, but we believe it was the right decision for the company.
- We're growing our earnings, but not at the expense of smart, longer-term investments. We continue to invest in the areas that drive future growth, such as 125 new retail branches last year, 900 additional salespeople in branches, 65 new private bankers to serve our ultra-high-net-worth clients and stronger trading businesses in mortgages, energy and other commodities.
- Where it made sense, we went outside our company and acquired great assets and businesses, such as the swap of our Corporate Trust business for 339 Bank of New York retail branches and the bank's commercial banking business. We also did smaller deals to supplement our student loan, hedge fund processing, asset management, trading and credit card businesses.
- These investments are not confined to the front office. We've invested hundreds of millions of dollars in new and improved systems, which I will discuss next. While there's a short-term cost for these investments, there's a long-term benefit of increased efficiency and improved quality.

Materially improved infrastructure and cost structure

We continued a massive investment plan in our systems and operating infrastructure while simultaneously reducing expenses.

- We completed major consolidations and mergers of our platforms: retail (deposit and teller), wholesale loan and Internet.

- We have built or are building six new data centers, and are upgrading and consolidating the more than 20 centers that we had three years ago. Through this effort, we're significantly enhancing our data networks storage and information technology risk capabilities.

- Virtually all of our businesses improved their margins while investing for the future. The single-most salient cost reduction came in our Corporate line. You may recall that in 2004 we said we would maintain at Corporate all of what we deemed to be "inefficient costs," i.e., costs borne by the businesses without receiving commensurate benefits and costs that were dramatically higher than they should have been. Examples included vacant real estate, outdated data centers, information technology costs that were sometimes two to three times what they should have been, or staff support costs that were simply too high.

  We moved these costs to Corporate so we could: a) see what the businesses were really earning; b) bring into sharp relief these Corporate expenses and put pressure on ourselves to reduce them; and c) hold the businesses accountable for clearly defined costs that they could control.

  Well, it worked. "Unallocated Corporate Overhead" was $2.4 billion in 2005, was $750 million in 2006 and is expected to be $200 million to $400 million in 2007.

Improved risk management

To be a great company, we must excel at risk management across all of our businesses – consumer, commercial and wholesale. We understand that some risks, or correlations of risks, are often unknowable, or when knowable, unpredictable as to timing. Later, I will talk about some of these risks we face going forward, but here I will simply review 2006. We think we did a fairly good job overall, though there are some areas – especially related to mortgage servicing rights – where we are working to do significantly better.

- Both consumer and wholesale credit performed well. More important, we stuck to certain disciplines that now are serving us well. We made judgment calls that reduced revenue and often appeared very conservative. And where we chose to underwrite subprime mortgages, we adhered to strict underwriting standards. We sold almost all of our 2006 subprime mortgage originations, but retained our capacity to hold such mortgages when we believe that it is more financially prudent to do so.

- Our Private Equity investments are now about $6 billion, a very comfortable 9% of tangible equity, down from more than 20% in 2003. We think our teams in this business are doing an outstanding job and believe we have many good opportunities to grow our Private Equity business.

- We successfully managed the interest-rate cycle to minimize its impact on results. We took action based upon constant analysis and back-testing of interest-rate moves in each and every product. More important, we have tried (and continue to try) to balance our exposures so that extreme rate moves (which didn't happen in 2006) don't hurt us significantly. So while flat or slightly inverted yield curves may squeeze margins for us (as they do for our competitors), we are not that concerned about it. Our big concern is to protect our company from major rate changes.

- We materially improved the quality, consistency and level of our trading results – a major focus in 2006. And we specifically mean results versus trading volatility. We want to earn a better average return on capital with growing revenue. We will accept more volatility, but we must be paid for the risk we're taking through increased revenue. In 2006 we did a bit of both. Volatility was down while trading revenue was up substantially, by almost $3 billion.

Our Investment Bank management team accomplished this improved risk management by: a) successfully building out new trading capabilities, such as mortgage and energy, which helped diversify trading risk; b) regular reporting and reviews, particularly of large risk positions; c) increasing focus and accountability on specific trading risk; and d) more actively managing overall exposures.

- We clearly can do better on Mortgage Servicing Rights (MSRs) than we did in 2006. MSRs are the present value of net revenue estimated to be received for servicing mortgages, i.e., billing and collecting. We service over $525 billion of mortgages, and our MSR is valued on our balance sheet at about $7.5 billion. It is a volatile, assumption-based asset that can swing in value from quarter to quarter, even when fully hedged.

  As we previously reported, our MSR asset and related hedges posted losses of almost $400 million in 2006, which is unacceptable. As a result, we've spent a lot of time improving our models to make them far more sophisticated and drilling down to examine repayment issues and other factors – state-by-state and product-by-product. We've worked closely with our Investment Bank to incorporate the best from all the models.

  It is essential we get this right, and we've made good progress. We think we're about 80% there. How we value and manage this asset will be either a competitive strength or weakness. Our degree of success is a key economic variable that can help us originate and distribute loans more inexpensively. Companies that manage MSRs incorrectly will give back a lot of previously booked profits. But companies that get it right – and we intend to be one of them – will have a huge competitive advantage in an extremely price-competitive business.

Picked up the pace

All in all, we feel that we've made about as much progress as we could have in 2006. As we move toward our final major merger-related integration – the conversion of our New York wholesale platform later this year – we are declaring the merger of JPMorgan Chase and Bank One to be essentially complete. So we are – in the best sense of the phrase – back to business as usual. And that is where you want us to be.

Back to business as usual means we are moving beyond working on major, one-off integration projects, and we are looking more and more to the future. We'll continue to focus on all the basics, like people and systems and compliance and audit, as well as waste-cutting and bureaucracy-busting. But we can also look clearly to the future and focus on initiatives that will set us apart by accelerating growth and helping us achieve excellent financial results. Our confidence is strong in our ability to do this because the teams that have already accomplished so much are simply updating their mission.

We are striving for sustained financial performance, including revenue growth, better margins and returns on capital that compare favorably with the best of our competitors.

Finally, back to business as usual means that while we are running our businesses better and generating good organic growth, we are also receptive to the mergers and acquisitions that make sense for shareholders. To be viable, these opportunities must clear three important hurdles: the price must be right, the business logic must be compelling and our ability to execute must be strong. It is on this last point that many deals fail, and it is on this last point that we now have confidence, earned by what we have already accomplished.

The ability to execute a merger is a key strength that we do not want to squander on a bad transaction. We do not intend to do anything that is not in our shareholders' interest. We are patient, our internal opportunities abound and our prospects are good without any acquisitions.

II. LOOKING AHEAD: KEY INITIATIVES AND ISSUES

There are six important initiatives or issues we are tackling to help us become what we truly want to be – a consistently high-performing, highly respected financial services company.

Improving quality and service

Now that our merger work and consolidations are mainly done, we are turning more attention to improving quality and service – from front to back. We mean this in an all-encompassing way, whether it's a customer's experience with a teller, straight-through processing, improved operations, call center performance, better automated cross-selling or dozens of other areas. This applies to anything that affects the customer – and anything that makes it easier or better for our people servicing the customer. It includes cutting down on errors, which cost our company money, slow us down and annoy the customer.

The outcome, we are convinced, will be happier customers and lower attrition, more cross-selling and lower costs associated with more automation and fewer problems. The good news is that we have the focus, the will and the people to do this. They're the same ones who already have delivered so much throughout our merger work and consolidations.

Raising productivity

While over the past few years we have devoted significant attention to waste-cutting and cost reduction, we are now focusing more broadly on productivity overall. An example would be how we assess the effectiveness of a sales force. A sales force might have the right number of salespeople and the right products, but productivity could still be enhanced in multiple ways: more sales per salesperson; more sales from new products or old products; same sales but higher profitability per sale; or same sales and same profits, but deeper relationships with customers.

To achieve consistently high margins and returns relative to the competition, we need to achieve high levels of productivity everywhere and every step of the way – at every business unit, in every branch, with every sales force, in all of our systems programming units and across all our product marketing. Any company, including ours, can lose focus or be sloppy in managing productivity at these levels. Here are a few examples of how we have improved productivity:

- *Investment Bank:* We determined that our bankers in the United States were covering too many clients, and it is expensive simply to cover a client. While revenue per banker was adequate, our product penetration per client was too low. So we reduced the number of clients each banker covers, and the results should be very positive: the client should end up getting more attention, the banker should do more business with the client, and our revenue should go up. Since we already had a complete product set for bankers to sell, and because there are increasingly more companies that need our services, it was a no-brainer to add bankers.

  The Investment Bank this year is also intensifying its focus on reducing middle-office and back-office support costs. Our non-compensation expenses are too high, and as the Investment Bank has developed better financial management tools, we're better equipped to attack these excessive support costs. We believe that these excess costs could be as much as $500 million.

- *Credit card marketing:* Last year we did a good job reducing our costs of attracting, opening and servicing new credit card accounts. But to maximize opportunities, we need to become better at matching products to customers; differentiating between the profitability of

new branch-generated accounts versus those generated across other channels, such as the Internet; determining what other business we should be doing with the new card holder; and ensuring that our current card holders have the right products and rewards programs. We already have made good strides: Cards with rewards programs are now 53% of our card outstandings, up from 32% in 2003. And accounts generated from direct-mail solicitations, which often come with low introductory rates (and higher attrition rates), are down to 32% from 55% in 2003. We have much more work to do to continue this progress.

- *Commercial Banking sales force management:* Now Commercial Banking rigorously tracks results and profitability by banker and by client. We have our bankers work with their clients to ensure that all clients are profitable to the firm and that all clients benefit from their relationship with the firm.
- *New products in Commercial Banking:* This past year Commercial Banking continued to expand its product offering. It added subordinated debt, mezzanine financing and even equity investing. We already had the clients. They just were going elsewhere for these products.
- *Private Bank:* We're making it easier for qualified individuals to do business with us, beginning with how they open new Private Bank accounts. In the past, they had to review at least six different documents and sign multiple times just to start working with us. Now, a new customer usually fills out only a one-page form and signs it only once. Everyone's happier, and we save some trees.

Increasing marketing creativity and focus

Our company needs to become better at marketing. And by marketing we don't mean more television ads or direct mail solicitations. We mean taking a sophisticated approach to identifying a group of customers, figuring out what they need and then delivering it to them better than anyone else. The opportunities are significant. We have multiple efforts under way, and we want to give you a few examples of them.

Develop a better offering for affluent clients

We believe we do a very good job serving our ultra-high-net-worth clients – those with more than $25 million of investable assets. But we can do a lot more for the hundreds of thousands of affluent households that fall below that ultra-high threshold.

Whether through our retail branches, our card business or our Private Client Services unit, we interact with tens of thousands of very wealthy individuals every day. But in many cases, we haven't identified them as affluent, or we haven't focused on providing them with the right set of products that is tailored to meet their unique needs. In 2007, we intend to do a comprehensive analysis of this affluent market, and then develop and begin to execute a game plan. The likely result will be better identification of affluent clients, solutions and rewards programs that cut across multiple products, more tailored products, and specialized marketing and servicing.

Use customer knowledge to refine products, upgrade service

Our customers trust us and give us a lot of information so we can know them better. While respecting a customer's privacy, we can use this information to make better-informed decisions about what to offer customers and how to evaluate them.

We've already mentioned how we can instantaneously offer an approved credit card to customers while they are opening a checking account. We can also underwrite the

credit better, i.e., offer more competitive pricing based upon our proprietary knowledge of the customer. We're working on many other similar initiatives where our knowledge of the customer pre-emptively positions us in businesses such as home equity, mortgage, auto, credit card, retail branches and small business.

Coordinate outreach to specific groups

There are many different subsets of customers we serve who would appreciate and benefit from a coordinated approach to their specific needs.

One clear example involves universities. Surprisingly, we had not coordinated our outreach to this lucrative market. Retail opened student checking accounts; Education Finance made student loans; Card Services issued credit cards to students and alumni; Commercial Banking financed schools and serviced cash management needs; and our Asset Management group managed university funds. We're fixing this by working on a synchronized effort where a specialized sales team can offer a fully coordinated package more effectively and more efficiently.

Expanding to serve consumers outside the United States

International consumer expansion is not without risk. So one of our first objectives has been to add senior individuals to our talent pool who are knowledgeable and experienced in the international consumer area. In addition, we are now analyzing and developing country-specific strategies so that we can focus our efforts on the most important opportunities. We are fortunate to have developed strong relationships and partnerships over the years, so we have people and companies we trust and can rely upon for advice and access to investment opportunities around the world.

There are some essential principles supporting this effort that we want our shareholders to understand.

- Because restrictions on acquisitions – and other laws and regulations – differ by country, our approach must differ by country. In some areas, we may acquire partial interests or controlling stakes in companies, while in others we may start de novo.
- We will not stretch excessively to make investments. We believe that in many parts of the world, it is not necessary to feel desperate, as if the opportunities will exist only for a fleeting moment. We believe that as JPMorgan Chase grows and strengthens, its opportunities will increase. We also believe that in five to 10 years, as some countries develop and change, new and exciting opportunities will emerge. For example, to the extent that we would consider a merger or acquisition in Europe, there are likely to be many more pan-European banks to choose from in the future. In China or India, we might be allowed to buy a controlling interest in a bank. The set of options available to my successor will be dramatically different from and possibly superior to the current set of options. With that in mind, the best thing I can do for her or him is pass on a strong JPMorgan Chase.

Managing critical risks

The first half of this letter mentions that we were fairly pleased with how we managed risk in 2006. But managing risk is a constant challenge. We never stop worrying about it. Before discussing some specific risk issues, we believe you should be able to take some comfort from these key facts:

- Our profit margins have increased substantially, creating our best cushion for risk.
- Our balance sheet is strong and getting stronger. Tier I Capital at the end of 2006 was 8.7%, and even with stock buybacks, it should stay strong because of our improving capital generation.
- Our loan loss reserves are strong, at 1.7% for both consumer and wholesale at the end of 2006.

Here are some specific risk issues:

Challenges in the credit world

We continuously analyze and measure our risk. In fact, during budget planning, we ask our management teams to prepare – on all levels – for difficult operating environments. While the risk comes in many forms, such as recession, market turmoil and geopolitical turbulence, one of our largest risks is still the credit cycle. Credit losses, both consumer and wholesale, have been extremely low, perhaps among the best we'll see in our lifetimes. We must be prepared for a return to the norm in the credit cycle.

The chart below shows a rough estimate of what could happen to credit costs over the business cycle – provided we do a good and disciplined job underwriting credit.

Annual potential net charge-off rates by business

	ACTUAL 2006	ESTIMATED THROUGH CYCLE
Investment Bank	(0.05%)	1.00%
Commercial Banking	0.05%	0.50%
Card Services	3.33%	5.00%
Retail Financial Services		
Home Equity	0.18%	0.30%
Home Lending	0.12%	0.42%
Prime Mortgage	0.04%	0.08%
Subprime Mortgage	0.31%	1.00%
Auto Finance	0.56%	0.75%
Business Banking	0.69%	1.30%

In a tougher credit environment, credit losses could rise significantly, by as much as $5 billion over time, which may require increases in loan loss reserves. Investment Bank revenue could drop, and the yield curve could sharply invert. This could have a significant negative effect on JPMorgan Chase's earnings. That said, these events generally do not occur simultaneously, and there would be normal mitigating factors for our earnings (e.g., compensation pools likely would go down, some customer fees and spreads would probably go up, and funding costs could decrease).

It's important to share these numbers with you, not to worry you, but to be as transparent as possible about the potential impact of these negative scenarios and to let you know how we are preparing for them. We do not know exactly what will occur or when, but we do know that bad things happen. There is no question that our company's earnings could go down substantially. But if we are prepared, we can both minimize the damage to our company and capitalize on opportunities in the marketplace.

Subprime mortgages: the good, the bad and possibly the ugly

THE GOOD

We did a lot of things right:

- We did not originate option ARMs or other negative amortization loans.
- We applied the same underwriting standards to all of our subprime loans, whether originated by us or purchased from third parties.
- We sold substantially all of our 2006 subprime originations. (We underwrite all of our subprime loans to be held; in fact, we prefer to hold and service these mortgages, but prices at the time of sale were too good to pass up.)
- We were very careful in certain parts of the United States and were especially careful to seek accurate property appraisals.

THE BAD

- Default rates were still higher than we had predicted.
- In hindsight, when underwriting subprime, we could have been even more conservative and less sensitive to market and competitor practices. We've now materially tightened certain underwriting standards on subprime mortgages.
- We don't expect that losses on our subprime loans would go up by more than about $150 million – not so bad, but we prefer it weren't so.

POSSIBLY THE UGLY

We do not yet know the ultimate impact of recent industry excesses and mismanagement in the subprime market. Bad underwriting practices probably extended into many mortgage categories. As government officials investigate the market and losses mount, the industry is tightening underwriting standards by reducing loan-to-value ratios and using more conservative property values. There will be more due diligence on incomes and credit quality. More rigid standards increase foreclosures and make it more difficult to buy homes. This will lead to a lower number of sales and a reduction in home values.

The good news is this is happening in a healthy job environment, which is still the most important determinant of good consumer credit. The subprime business is a great example of what happens when something good (the ability to help a lot more people buy homes) is taken to excess. Even so, we still believe that subprime mortgages could be a very good business, and that when it all sorts out, we will be well-positioned.

Enhancing our corporate social responsibility standards

Last year we wrote to you about how our company is a caring and generous institution. We try to help all of the communities in which we operate. We do this in multiple ways, ranging from charitable giving and diversity initiatives to the promotion of economic opportunity and development. This year, we are working to make these efforts more meaningful and to become more socially responsible in a variety of ways, including several described below:

We strive to be fair and ethical in our business practices

- A strong set of principles guides our actions and informs our decisions. We demand that our executives behave in accordance with these principles.
- We are dedicated to high-quality, responsibly marketed products and services.
- We continually innovate and work to improve the quality of life for our clients and communities.

We are helping to protect the environment

Last year, we took a number of important steps in this critical area:

- We raised $1.5 billion of equity for the wind power market, with approximately $650 million allocated to our own portfolio. Since its inception in 2003, our renewable energy portfolio has invested in 26 wind farms, now totaling approximately $1 billion.
- We published a series of corporate research reports concerning business and environmental linkages, including legal and regulatory risks related to climate change, and issues and opportunities in biofuels and the ethanol market.
- We trained more than 100 bankers globally to better implement our environmental and social risk policy.
- We completed our U.S. greenhouse gas emissions baseline, increased our investments in energy-efficient projects, and purchased renewable energy credits (green energy).
- We began building several green bank branches and are seeking Leadership in Energy and Environmental Design certification for the renovation of our world headquarters.

We plan to continue the momentum with the following steps:

- We are strengthening our team to better manage the environmental and social risks within our deal flow.
- We are increasing our investments in energy-efficient projects as part of our commitment to reduce our greenhouse gas emissions.
- We are strengthening our efforts to offer clients products and services that help them reduce their greenhouse gas emissions.
- We are continuing to advance the public policy debate on the environmental effectiveness and economic efficiency of greenhouse gas emission reductions.

We are deepening our community involvement

- We intend to work more closely with government officials, regulators, communities and responsible third parties to improve both public policy and our company.
- Our philanthropic investment program is strategically focused on enhancing life in the communities we serve. In 2006, JPMorgan Chase invested more than $110 million in nearly 500 cities across 33 nations. In addition, we reinvigorated our strategic focus toward funding organizations and programs that are addressing the most pressing needs in our communities.
- In 2007, the JPMorgan Chase Foundation is taking a disciplined approach to helping our customers, employees, shareholders and neighbors in three critical need areas we call Live, Learn, and Thrive. In "Live," we focus on basic needs, such as housing, job training, financial literacy and social inclusion. The area we call "Learn" focuses on helping young people succeed in the education process, from birth through higher education, especially in impoverished areas. To help our communities "Thrive," we support vital environmental, arts and cultural institutions and initiatives. This year, we are launching our "Community Renaissance Initiative" in eight key U.S. markets, dedicating a large percentage of our philanthropic funding, energy and expertise to substantially strengthen high-need neighborhoods.

III. A FEW CLOSING COMMENTS

Corporate governance: Board of Directors

I believe your Board is functioning extremely well. Its members are totally engaged in and dedicated to setting – and meeting – the highest standards of governance. Discussions about our people, our strategies, our opportunities, our priorities and our obligations are open and substantive. The quality and productivity of these conversations should be even better as we reduce the size of the Board to about 12 members.

Compensation and ownership

While our Proxy Statement describes our philosophy in detail, I'd like to note here the key underpinnings of our compensation system: a) we believe a substantial portion of compensation should be tied to *performance*, particularly for senior employees; b) an ownership stake in the firm best *aligns our employees' and shareholders' interests*; c) compensation should be *market-based*; and d) we strive for *long-term orientation* both in the way we assess performance and in the way we structure compensation.

In addition, it's important to note some specifics:

- Your senior executive team received 50% of their incentive compensation in restricted stock units that vest over time.
- Your senior management team must keep 75% of all the stock they acquire from restricted stock units and option exercises until they leave the firm. I have held all of my stock compensation and plan to continue doing so.

- We have minimized personal perquisites, and have been particularly vigilant when it comes to club dues, car allowances and financial planning services.
- We believe pay should relate to building a company with sustained good performance. There is no magic in a single quarter or year, and we try to recognize when a friendly market, rather than excellent performance, lifts results.
- We provide senior managers limited pension and deferred-compensation programs. Also, we do not match the 401(k) plan contributions of our highest-paid employees, while we provide that benefit for most other U.S. employees.
- To recognize their hard work and to make them owners of the company, we made a special contribution worth $400 in stock to the 401(k) accounts of eligible lower-paid employees (and a comparable cash grant to similar employees outside the United States). This grant created about 12,100 new 401(k) participants and about 17,400 new JPMorgan Chase shareholders. I hope they will become regular 401(k) contributors and long-term investors. In all, more than 115,000 of our colleagues are now JPMorgan Chase shareholders.



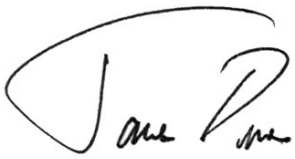
A fond farewell to our dedicated directors and Bill Harrison

I would like to thank retiring Board members John Biggs, Jack Kessler and Richard Manoogian for their long and distinguished service to our company.

And finally, I would like to thank Bill Harrison, my friend and partner, who retired as Chairman last year. We – and I – were blessed to have such a great, thoughtful leader. To Bill and his many great predecessors, we owe thanks for bequeathing to us this extraordinary opportunity.

One last, optimistic thought

We have an outstanding strategic position, a great brand, strong character, fantastic employees and a remarkable future. I am privileged to lead this company. I don't think we know yet how good we can be.



James Dimon
Chairman and Chief Executive Officer

March 12, 2007

(In millions, except ratios)	2006	2005
Total net revenue	$18,277	$14,613
Net income	3,674	3,673
Return on equity	18%	18%



INVESTMENT BANK

JPMorgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. Our clients are corporations, financial institutions, governments and institutional investors.

We offer our clients a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, and research. We have global leadership positions in all our key products, and our full platform enables us to develop some of the most complete and innovative financial solutions in the industry. We also commit the firm's own capital to proprietary investing and trading activities. We continue to strengthen our platform through organic growth and selective acquisitions, and by developing new products to meet the evolving needs of our clients.

2006 HIGHLIGHTS

- **#1 in Investment Banking fees[(a)].**
- **#2 in Global Debt, Equity and Equity-related[(b)].**
- **#1 in both global loan syndications and global high yield bonds for the second year in a row[(b)].**
- **#1 provider of financial products to sponsor clients[(a)].**
- **IFR's "Global Interest Rate and Commodities Derivatives House of the Year."**
- **Risk's "Energy Derivatives House of the Year."**
- **Named in BusinessWeek's Top 10 "Best Places to Launch Your Career."**

MAJOR 2006 ACCOMPLISHMENTS

- Record annual revenue, with record performance in IB fees, Fixed Income and Equity Markets.
- Reduced trading volatility through disciplined management and increased diversification, while achieving a record level of markets-related revenue.
- Strong progress on growth initiatives:
  - Energy and Securitized Products platforms largely built out in the U.S;
  - Added over 100 distributors, including Fidelity in the United States, for our Retail Structured Products business; and,
  - Strong Emerging Markets performance locally in the Europe, Middle East & Africa region; and in Latin America.
- Continued leverage of the firmwide platform through cross-selling products with Home Lending, Commercial Banking, Asset Management and Treasury & Securities Services.
- Strong expense discipline, with noncompensation expense up 4%, while revenue grew 25%.

2007 AND BEYOND

- Continue build-out of Energy and Securitized Products platforms, particularly in Europe and Asia.
- Capitalize on market opportunity in Pension Advisory and Risk Management.
- Expand manufacturing and distribution of Structured Products to retail clients.
- Build emerging markets presence through organic growth and through the pursuit of joint ventures and partnerships in select countries, particularly in Asia.
- Selectively expand principal investing capabilities.
- Continue to enhance discipline around risk, capital allocation and expenses.
- Fund investments in revenue growth through continued productivity savings.
- Attract, develop and retain the best talent in the industry.

(a) Dealogic

(b) Thomson Financial

(In millions, except ratios)	2006	2005
Total net revenue	$14,825	$14,830
Net income	3,213	3,427
Return on equity	22%	26%



RETAIL FINANCIAL SERVICES

Retail Financial Services helps meet the financial needs of consumers and businesses. We provide convenient consumer banking through the nation's fourth-largest branch network and third-largest ATM network. We are a top-five mortgage originator and servicer, the second-largest home equity originator, the largest noncaptive originator of automobile loans and one of the largest student loan originators.

We serve customers through more than 3,000 bank branches, 8,500 ATMs and 270 mortgage offices; and through relationships with more than 15,000 auto dealerships and 4,300 schools and universities. More than 11,000 branch salespeople assist customers with checking and savings accounts; mortgage, home equity and business loans; investments; and insurance across our 17-state footprint from New York to Arizona. More than 1,200 additional mortgage officers provide home loans throughout the country.

2006 HIGHLIGHTS

- Increased branch sales force 9%; and increased branch sales production, including credit cards 74% and investments 34%.
- Increased checking accounts 14%, to 10 million, and deposits 12%, to $204 billion.
- Increased Business Banking loan originations 22%, to $5.7 billion.
- Increased active online customer base 35%; generated 187 million online transactions, including bill payment and electronic payment, up 35%.
- Added 438 net new branches, including 339 acquired from The Bank of New York; and 1,194 ATMs, including 400 acquired from The Bank of New York and 500 placed in Walgreens stores throughout Florida, Colorado and Louisiana.

MAJOR 2006 ACCOMPLISHMENTS

- Expanded our leadership position in the highly attractive New York metropolitan area through the acquisition of The Bank of New York's consumer banking business, which added $12 billion in deposits.
- Purchased and integrated Collegiate Funding Services to expand the education lending business.
- Completed technology conversion in the New York Tri-state area; now serving all Chase-branded branches on the same state-of-the-art platform.
- Completed the Chase rebranding of remaining Bank One branches and ATMs.
- Expanded originations of alternative mortgage products – leveraging distribution capabilities in the Investment Bank – to serve changing consumer needs, while maintaining disciplined underwriting practices.

2007 AND BEYOND

- Improve customer cross-selling through continued expansion of the sales force and achieve double-digit growth in branch sales of mortgages, investments and credit cards.
- Invest in 125 to 150 additional branch locations annually, using disciplined and analytical approach to select markets and sites within markets.
- Convert The Bank of New York branches to the Chase technology platform in first half of 2007, refurbish those branches, and upgrade the sales process and customer experience.
- Continue to respond to changing residential lending environment; upgrade and consolidate mortgage origination and servicing technology by year-end 2008 to improve customer experience and increase operating efficiencies.

(In millions, except ratios)	2006	2005
Total net revenue	$14,745	$15,366
Net income	3,206	1,907
Return on equity	23%	16%



CARD SERVICES

With more than 154 million cards in circulation and $153 billion in managed loans, Chase Card Services is one of the nation's largest credit card issuers. Customers used Chase cards for more than $339 billion worth of transactions in 2006.

We offer a wide variety of general-purpose cards to satisfy the needs of individual consumers, small businesses and partner organizations, including cards issued with AARP, Amazon, Continental Airlines, Marriott, Southwest Airlines, Sony, United Airlines, Walt Disney Company and many other well-known brands and organizations. We also issue private-label cards with Circuit City, Kohl's, Sears Canada and BP.

Chase Paymentech Solutions, LLC, a joint venture with JPMorgan Chase and First Data Corporation, is the largest processor of MasterCard and Visa payments in the world, handling over 18 billion transactions in 2006.

2006 HIGHLIGHTS

- **Second-largest MasterCard/Visa credit card issuer in the United States[(a)].**
- **Largest merchant acquirer in the world through Chase Paymentech Solutions, LLC[(a)].**
- **Fourth-largest private-label credit card issuer in the United States[(a)].**
- **Increased overall profitability and grew managed loans while investing in activities to attract new customers and further engage current cardmembers.**
- **The Chase Home Improvement, Borders and BP Visa rewards card programs were included on list of 10 best cards of 2006 by IndexCreditCards.com.**

MAJOR 2006 ACCOMPLISHMENTS

- Added 15.9 million new Visa, MasterCard and private-label accounts.
- Launched innovative Chase Freedom[sm] program, the first card to give cardmembers the choice of earning either cash or points and changing back without leaving any rewards behind.
- Continued to build our private-label business through new partnerships with BP, Kohl's and Pier 1 Imports, Inc.
- Increased merchant processing volume to $661 billion, up 17% from 2005.
- Expanded judgmental lending and instant-credit decision-making capabilities.
- Continued to be market leader in contactless technology, with more than 7 million "blink" enabled Chase cards issued.
- Increased sales on the Sears Canada portfolio and launched our first new Canadian Visa product, the Chase Marriott Rewards Visa Card.

2007 AND BEYOND

- Establish Chase as an iconic brand by continually delivering on our brand promise through our employees, advertising and innovative products and services.
- Drive superior long-term growth in profits, customers, managed loans and sales by building customer value and reducing operating cost per account through investments in marketing and technology initiatives.
- Expand the markets we serve to reach a broader base of consumers, including the small-business, student, Hispanic and private-label segments.
- More effectively cross-sell credit card and bank products to the firm's customers, offering superior product sets and customer service.

(a) SEC filings and company reports

(In millions, except ratios)	2006	2005
Total net revenue	$3,800	$3,488
Net income	1,010	951
Return on equity	18%	28%



COMMERCIAL BANKING

Commercial Banking serves more than 30,000 clients, including corporations, municipalities, financial institutions and not-for-profit entities. These clients generally have annual revenues ranging from $10 million to $2 billion. Commercial bankers serve clients nationally throughout the retail branch footprint and in offices located in other major markets. We are the #1 commercial bank in our retail branch footprint.

Commercial Banking offers its clients industry knowledge, experience, a dedicated service model, comprehensive solutions and local expertise. The firm's broad platform positions us to deliver extensive product capabilities – including lending, treasury services, investment banking and asset management – to meet our clients' U.S. and international financial needs.

2006 HIGHLIGHTS

- **#1 commercial bank in market penetration in Chase's retail branch footprint, almost double that of the next leading competitor[a].**
- **#1 in overall customer satisfaction among large bank providers – 93% of clients surveyed are highly satisfied with our bankers[b].**
- **#2 asset-based lender in the United States[c].**
- **Generated record gross investment banking revenues of $716 million.**

MAJOR 2006 ACCOMPLISHMENTS

- Significantly increased cross-selling efforts with 30% growth in gross investment banking revenues and 9% growth in Treasury Services revenues.
- Completed both a major loan conversion, which impacted more than 14,000 clients with approximately $25 billion in loan balances, and several treasury services migrations to target platforms.
- Enhanced discipline in and accountability for the sales process through improved monthly metrics reports, business reviews and coaching.
- Added approximately 2,000 banking relationships, $2.3 billion in loans and $1.2 billion in liability balances from the acquisition of The Bank of New York's middle-market business.
- Created Chase Capital Corporation, which provides our clients with additional financing alternatives including mezzanine and second-lien loans as well as preferred equity.
- Opened five new offices to expand coverage in Des Moines (IA), Charlotte (NC), Orlando (FL), Denver (CO) and Princeton (NJ).

2007 AND BEYOND

- Increase prospect conversion through accelerated calling efforts and targeted marketing initiatives.
- Grow U.S. and international revenue by providing clients with more comprehensive solutions leveraging our Treasury & Securities Services, Asset Management and Investment Bank platforms.
- Continue to improve product and service offerings to clients through additional cash management tools, technology enhancements and alternative capital solutions.
- Outperform peers in credit through active portfolio management and superior underwriting standards, while effectively using capital and resources.
- Strengthen our workforce through key talent development, training and diversity initiatives.
- Convert our wholesale New York Tri-state customer base to the target deposit system; complete the migration of customers acquired in The Bank of New York transaction to the firm's platforms.

(a) SRBI Footprint Study 2005

(b) Barlow Research Middle Market Banking 2006, Chase Relationship Audit™

(c) Loan Pricing Corporation, 2006

(In millions, except ratios)	2006	2005
Total net revenue	$6,109	$5,539
Net income	1,090	863
Return on equity	48%	57%



TREASURY & SECURITIES SERVICES

Treasury & Securities Services is a global leader in transaction, investment and information services that support the needs of institutional clients worldwide. We are one of the world's largest cash management providers and a leading global custodian, operating through two divisions:

Treasury Services provides cash management products, trade finance and logistics solutions, wholesale card products, and short-term liquidity management capabilities to small and mid-sized companies, multinational corporations, financial institutions and government entities.

Worldwide Securities Services stores, values, clears and services securities and alternative investments for investors and broker-dealers; and manages depositary receipts programs globally.

2006 HIGHLIGHTS

- **Increased assets under custody 30%, to $13.9 trillion; and liability balances 22%, to $190 billion.**
- **Double-digit growth in Automated Clearing House Originations (up 18%), International Electronic Funds Transfer volume (up 62%) and U.S. Dollar Clearing volume (up 10%).**
- **#1 in Same Day U.S. Dollar Funds Transfers[a], Automated Clearing House Originations[b], CHIPS[c] and Fedwire[d].**
- **Industry awards included Best Overall Bank for Cash Management in North America (Global Finance), Securities Services Provider of the Year (The Banker) and #1 Global Liquidity Capabilities (Euromoney).**

MAJOR 2006 ACCOMPLISHMENTS

- Completed the purchase of the middle- and back-office operations of Paloma Partners Management Company, an investment funds management group, and closed the sale of select corporate trust businesses to The Bank of New York.
- Achieved all 2006 merger goals, including completion of the largest U.S. dollar clearing conversion in banking history.
- Introduced innovative products for automating healthcare claims reimbursement, for simplifying electronic payments for large corporations and government agencies, and for international check imaging.
- Built out the global investment operations outsourcing platform, securing two key deals and completing two major client conversions.
- Enhanced partnerships with businesses across JPMorgan Chase, increasing the number of Investment Bank referrals 13% and Business Banking transactions 10%.

2007 AND BEYOND

- Complete merger- and efficiency-related platform retirements and client migrations, including conversions to target billing, liquidity, sweep and deposit platforms.
- Expand alternative investment services, the global investment operations outsourcing platform, depositary receipts, liquidity management, foreign exchange and securities lending.
- Focus on international growth, particularly in Europe, the Middle East, Latin America, China and India.
- Leverage the Investment Bank, Commercial Banking and Asset Management to deliver a broad range of offerings in meeting client needs.
- Achieve market differentiation by delivering client service that is superior to that of our competition.
- Focus on productivity and expense control to maximize net income and fund investments in the business, including investments in technology and people.

(a) Ernst & Young
(b) NACHA
(c) The Clearing House
(d) Federal Reserve

(In millions, except ratios)	2006	2005
Total net revenue	**$6,787**	$5,664
Net income	**1,409**	1,216
Return on equity	**40%**	51%



ASSET MANAGEMENT

With assets under supervision of $1.3 trillion, Asset Management is a global leader in investment and wealth management. Our clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world.

We offer global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including both money market instruments and bank deposits. We also provide trust and estate and banking services to high-net-worth clients, and retirement services for corporations and individuals. The majority of our client assets are in actively managed portfolios.

2006 HIGHLIGHTS

- **Assets under management reached $1.0 trillion, with a total of $1.3 trillion assets under supervision.**
- **Largest global hedge fund manager with assets under management of $34 billion[a].**
- **JPMorgan Prime Money Market Fund became the first money market fund to reach $100 billion.**
- **Reached $100 billion in retirement assets.**
- **Became one of the largest Sino-foreign fund houses in China within two years of launching a joint venture with Shanghai International Trust & Investment Corporation (SITICO).**

MAJOR 2006 ACCOMPLISHMENTS

- Continued to deliver strong investment performance. Globally, 79% of our long-term mutual fund assets were ranked in first- or second-quartile funds for the five years ended December 31, 2006.
- Continued significant growth in our European business. Ranked second for net sales of all retail long-term mutual funds, with 2006 net sales of $19.7 billion[b].
- Achieved record performance with 20% revenue growth and 16% earnings growth.
- Net assets under management inflows were at a record level of $89 billion.
- Experienced record growth of net new clients in the Private Bank.
- Grew alternative assets under management including hedge funds, real estate, private equity and currency, by 35%, to $100 billion. Continued to experience strong investor interest in Highbridge funds with 97% growth in assets under management during 2006.
- Acquired CCA Strategies, an employee benefits and compensation consulting firm that will extend our retirement services capabilities to better respond to the needs of our clients.

2007 AND BEYOND

- Deliver strong investment performance through rigorous review of investment strategies and diversification of investment processes, and by attracting and retaining the best investment talent in the world.
- Expand third-party distribution of our investment management products and services, capitalizing on industry shifts toward open architecture and outsourcing of asset management.
- Respond to increasing demand for absolute-return investing by expanding our offering of alternative products globally and staying at the forefront of that move.
- Grow our 401(k) business and IRA rollover retail channels, at both the corporate and participant levels, as we leverage our connectivity with the rest of the firm.
- Extend our Private Bank and Private Client Services footprint, gain efficiencies and expand Private Client Services investment offerings.

(a) *Absolute Return* magazine, March 2007 issue, data as of year-end 2006

(b) Source FERI





CORPORATE CITIZENSHIP

JPMorgan Chase is committed to building vibrant communities, preserving our environment and promoting an inclusive culture that benefits our shareholders, customers, employees, neighbors and future generations. Corporate citizenship is fundamental to our success as a firm.

Our investment in programs that enable people to live, learn and thrive helps enhance the quality of the communities we serve. We contribute our leadership guidance, expertise and financial resources to help strengthen neighborhoods across the globe.

Inside our firm, we are building an inclusive culture in which everyone has the opportunity to contribute, develop and succeed based upon their talents and skills. In an increasingly global economy, we view the diverse experiences and perspectives of our people as a critical asset.

MAJOR 2006 ACCOMPLISHMENTS

- Invested more than $110 million in the communities we serve by supporting in excess of 2,800 not-for-profit organizations globally. We carefully select partners that promote economic stability, improve access to quality education and inspire communities through the celebration of arts and culture. Our investments span the globe, positively impacting communities in nearly 500 cities across 33 countries.
- Achieved significant progress toward our 10-year pledge to invest $800 billion in low- and moderate-income communities in the U.S. – the largest commitment by any bank focused on mortgages, small-business lending and community development. In 2006, we committed $87 billion, with total investment to date of $241 billion in the third year of the program.
- Played a leadership role in the creation of The New York Acquisition Fund, along with 15 lenders and in conjunction with six foundations and the City of New York. The Fund is a $230 million initiative to finance the acquisition of land and buildings to be developed and/or preserved for affordable housing.
- Led the effort to raise $1.5 billion of equity for the wind power market in 2006, with approximately $650 million allocated to our own portfolio. The firm's renewable energy portfolio now comprises approximately $1 billion of equity investments in 26 wind farms since its inception in 2003.
- Trained more than 100 bankers globally to better implement our environmental and social risk policy as part of our environmental risk management efforts.
- Completed our U.S. greenhouse gas emissions baseline, increased our investments in energy efficiency projects and purchased renewable energy credits (green energy).
- Built upon our commitment to supplier diversity, having spent in 2006 in excess of $500 million with minority- and women-owned business enterprises – expenditures that increased even in light of an overall decrease in provider spending.

2007 AND BEYOND

- Focus on increasing the social return, reach and impact of each dollar we invest in the community.
- Build and leverage employee volunteerism to improve our overall effectiveness and impact across the many neighborhoods we serve.
- Continue seeking out partners that are best positioned to help us deliver our mission of building vibrant communities that enable its members to live, learn and thrive.
- Maintain momentum toward our 10-year, $800 billion commitment to invest in communities across the U.S.
- Deepen our commitment to environmental awareness and continue developing financial products that will help our clients reduce their greenhouse gas emissions.
- Continue our leadership in the area of supplier diversity while expanding our efforts to do business with other disadvantaged groups.
- Continue developing at all levels a global pool of diverse talent to help us serve the unique and diverse needs of our customer base.

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FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

JPMorgan Chase & Co.

(unaudited) (in millions, except per share, headcount and ratio data)				Heritage JPMorgan Chase only	
As of or for the year ended December 31,	**2006**	2005	2004[d]	2003	2002
Selected income statement data					
Total net revenue	**$ 61,437**	$ 53,748	$ 42,372	$ 32,803	$ 29,076
Provision for credit losses	**3,270**	3,483	2,544	1,540	4,331
Total noninterest expense	**38,281**	38,426	33,972	21,490	22,471
Income from continuing operations before income tax expense	**19,886**	11,839	5,856	9,773	2,274
Income tax expense	**6,237**	3,585	1,596	3,209	760
Income from continuing operations	**13,649**	8,254	4,260	6,564	1,514
Income from discontinued operations[a]	**795**	229	206	155	149
Net income	**$ 14,444**	$ 8,483	$ 4,466	$ 6,719	$ 1,663
Per common share					
Basic earnings per share					
Income from continuing operations	**$ 3.93**	$ 2.36	$ 1.51	$ 3.24	$ 0.74
Net income	**4.16**	2.43	1.59	3.32	0.81
Diluted earnings per share					
Income from continuing operations	**$ 3.82**	$ 2.32	$ 1.48	$ 3.17	$ 0.73
Net income	**4.04**	2.38	1.55	3.24	0.80
Cash dividends declared per share	**1.36**	1.36	1.36	1.36	1.36
Book value per share	**33.45**	30.71	29.61	22.10	20.66
Common shares outstanding					
Average: Basic	**3,470**	3,492	2,780	2,009	1,984
Diluted	**3,574**	3,557	2,851	2,055	2,009
Common shares at period-end	**3,462**	3,487	3,556	2,043	1,999
Share price[b]					
High	**$ 49.00**	$ 40.56	$ 43.84	$ 38.26	$ 39.68
Low	**37.88**	32.92	34.62	20.13	15.26
Close	**48.30**	39.69	39.01	36.73	24.00
Market capitalization	**167,199**	138,387	138,727	75,025	47,969
Selected ratios					
Return on common equity ("ROE"):					
Income from continuing operations	**12%**	8%	6%	15%	4%
Net income	**13**	8	6	16	4
Return on assets ("ROA"):[c]					
Income from continuing operations	**1.04**	0.70	0.44	0.85	0.21
Net income	**1.10**	0.72	0.46	0.87	0.23
Tier 1 capital ratio	**8.7**	8.5	8.7	8.5	8.2
Total capital ratio	**12.3**	12.0	12.2	11.8	12.0
Overhead ratio	**62**	71	80	66	77
Selected balance sheet data (period-end)					
Total assets	**$1,351,520**	$ 1,198,942	$ 1,157,248	$ 770,912	$ 758,800
Loans	**483,127**	419,148	402,114	214,766	216,364
Deposits	**638,788**	554,991	521,456	326,492	304,753
Long-term debt	**133,421**	108,357	95,422	48,014	39,751
Total stockholders' equity	**115,790**	107,211	105,653	46,154	42,306
Headcount	**174,360**	168,847	160,968	96,367	97,124

(a) On October 1, 2006, JPMorgan Chase & Co. completed the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York Company Inc. The results of operations of these corporate trust businesses are being reported as discontinued operations for each of the periods presented.

(b) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.

(c) Represents Net income divided by Total average assets.

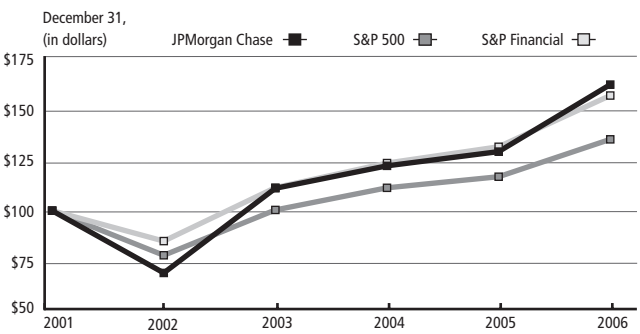
(d) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Stock Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced U.S. equity benchmark consisting of leading companies from different economic sectors. The S&P Financial Index is an index of 88 financial companies, all of which are within the S&P 500. The Firm is a component of both published industry indices.

The following table and graph assume $100 invested on December 31, 2001, in JPMorgan Chase common stock and $100 invested at that same time in each of the S&P indices. The comparison assumes that all dividends are reinvested.

	2001	2002	2003	2004	2005	**2006**
JPMorgan Chase	$ 100.00	$ 69.29	$ 111.06	$ 122.13	$ 129.15	**$ 162.21**
S&P Financial Index	100.00	85.00	111.38	123.50	131.53	**156.82**
S&P 500	100.00	78.00	100.37	111.29	116.76	**135.20**



This section of the Annual Report provides management's discussion and analysis ("MD&A") of the financial condition and results of operations for JPMorgan Chase. See the Glossary of terms on pages 145–146 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based upon the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause JPMorgan Chase's results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking statements on page 147 of this Annual Report) and in the JPMorgan Chase Annual Report on Form 10-K for the year ended December 31, 2006 ("2006 Form 10-K"), in Part I, Item 1A: Risk factors, to which reference is hereby made.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States, with $1.4 trillion in assets, $115.8 billion in stockholders' equity and operations worldwide. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing, asset management and private equity. Under the JPMorgan and Chase brands, the Firm serves millions of customers in the United States and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with branches in 17 states; and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national bank that is the Firm's credit card issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities Inc., the Firm's U.S. investment banking firm.

JPMorgan Chase's activities are organized, for management reporting purposes, into six business segments, as well as Corporate. The Firm's wholesale businesses comprise the Investment Bank, Commercial Banking, Treasury & Securities Services and Asset Management segments. The Firm's consumer businesses comprise the Retail Financial Services and Card Services segments. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows.

Investment Bank
JPMorgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The Investment Bank's clients are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, and research. The Investment Bank ("IB") also commits the Firm's own capital to proprietary investing and trading activities.

Retail Financial Services
Retail Financial Services ("RFS"), which includes Regional Banking, Mortgage Banking and Auto Finance reporting segments, helps meet the financial needs of consumers and businesses. RFS provides convenient consumer banking through the nation's fourth-largest branch network and third-largest ATM network. RFS is a top-five mortgage originator and servicer, the second-largest home equity originator, the largest noncaptive originator of automobile loans and one of the largest student loan originators.

RFS serves customers through more than 3,000 bank branches, 8,500 ATMs and 270 mortgage offices, and through relationships with more than 15,000 auto dealerships and 4,300 schools and universities. More than 11,000 branch salespeople assist customers, across a 17-state footprint from New York to Arizona, with checking and savings accounts, mortgage, home equity and business loans, investments and insurance. Over 1,200 additional mortgage officers provide home loans throughout the country.

Card Services
With more than 154 million cards in circulation and $152.8 billion in managed loans, Chase Card Services ("CS") is one of the nation's largest credit card issuers. Customers used Chase cards for over $339 billion worth of transactions in 2006.

Chase offers a wide variety of general-purpose cards to satisfy the needs of individual consumers, small businesses and partner organizations, including cards issued with AARP, Amazon, Continental Airlines, Marriott, Southwest Airlines, Sony, United Airlines, Walt Disney Company and many other well-known brands and organizations. Chase also issues private-label cards with Circuit City, Kohl's, Sears Canada and BP.

Chase Paymentech Solutions, LLC, a joint venture with JPMorgan Chase and First Data Corporation, is the largest processor of MasterCard and Visa payments in the world, having handled over 18 billion transactions in 2006.

Commercial Banking
Commercial Banking ("CB") serves more than 30,000 clients, including corporations, municipalities, financial institutions and not-for-profit entities. These clients generally have annual revenues ranging from $10 million to $2 billion. Commercial bankers serve clients nationally throughout the RFS footprint and in offices located in other major markets.

Commercial Banking offers its clients industry knowledge, experience, a dedicated service model, comprehensive solutions and local expertise. The Firm's broad platform positions CB to deliver extensive product capabilities – including lending, treasury services, investment banking and asset management – to meet its clients' U.S. and international financial needs.

Treasury & Securities Services
Treasury & Securities Services ("TSS") is a global leader in providing transaction, investment and information services to support the needs of institutional clients worldwide. TSS is one of the largest cash management providers in the world and a leading global custodian. Treasury Services ("TS") provides a variety of cash management products, trade finance and logistics solutions, wholesale card products, and liquidity management capabilities to small and midsized companies, multinational corporations, financial institutions and government entities. TS partners with the Commercial Banking, Retail Financial Services and Asset Management businesses to serve clients firmwide. As a result, certain TS revenues are included in other segments' results. Worldwide Securities Services ("WSS") stores, values, clears and services securities and alternative investments for investors and broker-dealers; and manages Depositary Receipt programs globally.

Asset Management
With assets under supervision of $1.3 trillion, Asset Management ("AM") is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including both money market instruments and bank deposits. AM also provides trust and estate and banking services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

Merger with Bank One Corporation

Effective July 1, 2004, Bank One Corporation ("Bank One") merged with and into JPMorgan Chase & Co. (the "Merger"). As a result of the Merger, each outstanding share of common stock of Bank One was converted in a stock-for-stock exchange into 1.32 shares of common stock of JPMorgan Chase & Co. The Merger was accounted for using the purchase method of accounting. Accordingly, the Firm's results of operations for 2004 include six months of heritage JPMorgan Chase results and six months of the combined Firm's results. For additional information regarding the Merger, see Note 2 on pages 95–96 of this Annual Report.

2006 Business events

Acquisition of the consumer, business banking and middle-market banking businesses of The Bank of New York in exchange for selected corporate trust businesses, including trustee, paying agent, loan agency and document management services
On October 1, 2006, JPMorgan Chase completed the acquisition of The Bank of New York Company, Inc.'s ("The Bank of New York") consumer, business banking and middle-market banking businesses in exchange for selected corporate trust businesses plus a cash payment of $150 million. This acquisition added 339 branches and more than 400 ATMs, and it significantly strengthens RFS's distribution network in the New York Tri-state area. The Bank of New York businesses acquired were valued at a premium of $2.3 billion; the Firm's corporate trust businesses that were transferred (i.e., trustee, paying agent, loan agency and document management services) were valued at a premium of $2.2 billion. The Firm also may make a future payment to The Bank of New York of up to $50 million depending on certain new account openings. This transaction included the acquisition of approximately $7.7 billion in loans and $12.9 billion in deposits from The Bank of New York. The Firm also recognized core deposit intangibles of $485 million which will be amortized using an accelerated method over a 10 year period. JPMorgan Chase recorded an after-tax gain of $622 million related to this transaction in the fourth quarter of 2006.

JPMorgan Partners management
On August 1, 2006, the buyout and growth equity professionals of JPMorgan Partners ("JPMP") formed an independent firm, CCMP Capital, LLC ("CCMP"), and the venture professionals separately formed an independent firm, Panorama Capital, LLC ("Panorama"). The investment professionals of CCMP and Panorama continue to manage the former JPMP investments pursuant to a management agreement with the Firm.

Sale of insurance underwriting business
On July 1, 2006, JPMorgan Chase completed the sale of its life insurance and annuity underwriting businesses to Protective Life Corporation for cash proceeds of approximately $1.2 billion, consisting of $900 million of cash received from Protective Life Corporation and approximately $300 million of preclosing dividends received from the entities sold. The after-tax impact of this transaction was negligible. The sale included both the heritage Chase insurance business and the insurance business that Bank One had bought from Zurich Insurance in 2003.

Acquisition of private-label credit card portfolio from Kohl's Corporation
On April 21, 2006, JPMorgan Chase completed the acquisition of $1.6 billion of private-label credit card receivables and approximately 21 million accounts from Kohl's Corporation ("Kohl's"). JPMorgan Chase and Kohl's have also entered into an agreement under which JPMorgan Chase will offer private-label credit cards to both new and existing Kohl's customers.

Collegiate Funding Services
On March 1, 2006, JPMorgan Chase acquired, for approximately $663 million, Collegiate Funding Services, a leader in education loan servicing and consolidation. This acquisition included $6 billion of education loans and will enable the Firm to create a comprehensive education finance business.

Acquisition of certain operations from Paloma Partners
On March 1, 2006, JPMorgan Chase acquired the middle and back office operations of Paloma Partners Management Company ("Paloma"), which was part of a privately owned investment fund management group. The parties also entered into a multiyear contract under which JPMorgan Chase will provide daily operational services to Paloma. The acquired operations have been combined with JPMorgan Chase's current hedge fund administration unit, JPMorgan Tranaut.

JPMorgan and Fidelity Brokerage Company
On February 28, 2006, the Firm announced a strategic alliance with Fidelity Brokerage to become the exclusive provider of new issue equity securities and the primary provider of fixed income products to Fidelity's brokerage clients and retail customers, effectively expanding the Firm's existing distribution platform.

EXECUTIVE OVERVIEW

This overview of management's discussion and analysis highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a more complete understanding of events, trends and uncertainties, as well as the capital, liquidity, credit and market risks, and the Critical accounting estimates, affecting the Firm and and its various lines of business, this Annual Report should be read in its entirety.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share and ratio data)	2006	2005	Change
Selected income statement data			
Net revenue	**$ 61,437**	$ 53,748	14%
Provision for credit losses	**3,270**	3,483	(6)
Noninterest expense	**38,281**	38,426	—
Income from continuing operations	**13,649**	8,254	65
Income from discontinued operations	**795**	229	247
Net income	**14,444**	8,483	70
Diluted earnings per share			
Income from continuing operations	**$ 3.82**	$ 2.32	65%
Net income	**4.04**	2.38	70
Return on common equity ("ROE")			
Income from continuing operations	**12%**	8%	
Net income	**13**	8	

Business overview

The Firm reported record 2006 net income of $14.4 billion, or $4.04 per share, compared with net income of $8.5 billion, or $2.38 per share, for 2005. The return on common equity was 13% compared with 8% in 2005. Reported results include discontinued operations related to the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York. Discontinued operations produced $795 million of net income in 2006 compared with $229 million in the prior year. The primary driver of the increase was a one-time gain of $622 million related to the sale of the corporate trust business (for further information on discontinued operations see Note 3 on page 97 of this Annual Report). Income from continuing operations was a record $13.6 billion, or $3.82 per share, compared with $8.3 billion, or $2.32 per share, for 2005. For a detailed discussion of the Firm's consolidated results of operations, see pages 28–31 of this Annual Report.

Effective December 31, 2006, William B. Harrison, Jr. retired as Chairman of the Board and was succeeded as Chairman by Chief Executive Officer James Dimon.

The Firm's record 2006 results were affected positively by global economic conditions, investment in each line of business and the successful completion of milestones in the execution of its Merger integration plan. A key milestone related to the Merger integration was the New York Tri-state consumer conversion, which linked the Firm's more than 2,600 branches in 17 states on a common systems platform (excluding 339 branches acquired from The Bank of New York on October 1, 2006). The Tri-state conversion, along with many other merger integration activities, resulted in continued efficiencies. As a result the Firm made significant progress toward reaching its annual merger-related savings target of approximately $3.0 billion by the end of 2007. The Firm realized approximately $675 million of incremental merger savings in 2006, bringing estimated cumulative savings for 2006 to $2.5 billion, and the annualized run-rate of savings entering 2007 is approximately $2.8 billion. In order to achieve these savings, the Firm expensed Merger costs of $305 million during the year (including a modest amount of costs related to The Bank of New York transaction), bringing the total cumulative amount expensed since the Merger announcement to approximately $3.4 billion (including capitalized costs). Management currently estimates remaining Merger costs of approximately $400 million, which are expected to be incurred during 2007 and will include a modest amount of expense related to the acquisition of The Bank of New York's consumer, business banking and middle-market banking businesses.

The Firm also continued active management of its portfolio of businesses during 2006. Actions included: exchanging selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York; divesting the insurance underwriting business; purchasing Collegiate Funding Services to develop further the education finance business; acquiring Kohl's private-label credit card portfolio; acquiring the middle and back office operations of Paloma Partners to expand the Firm's hedge fund administration capabilities; and announcing a strategic alliance with Fidelity Brokerage to provide new issue equity and fixed income products.

In 2006, the global economy continued to expand, which supported continued rapid growth in the emerging market economies. Global gross domestic product increased by an estimated 5%, with the European economy gaining momentum, Japan making steady progress and emerging Asian economies expanding approximately 8%. The U.S. economy rebounded early in the year from the prior-year hurricane disruptions, but weakened in the second half of the year as home construction declined, automobile manufacturing weakened and the benefit of reconstruction from hurricane disruptions dissipated. The U.S. experienced rising interest rates during the first half of the year, as the Federal Reserve Board increased the federal funds rate from 4.25% to 5.25%. With an anticipated slowing of economic growth, lower inflation and stabilizing energy prices, the federal funds rate was held steady during the second half of the year. The yield curve subsequently inverted as receding inflation expectations pushed long-term interest rates below the federal funds rate. Equity markets, both domestic and international, reflected positive performance, with the S&P 500 up 13% on average and international indices increasing 16% on average during 2006. Global capital markets activity was strong during 2006, with debt and equity underwriting and merger and acquisition activity surpassing 2005 levels. Demand for wholesale loans in the U.S. was strong with growth of approximately 14%, while U.S. consumer loans grew an estimated 4% during 2006. U.S. consumer spending grew at a solid pace, supported by strong equity markets, low unemployment and income growth, and lower energy prices in the second half of the year. This strength came despite a significant decline in real estate appreciation.

The 2006 economic environment was a contributing factor to the performance of the Firm and each of its businesses. The overall economic expansion, strong level of capital markets activity and positive performance in equity markets helped to drive new business volume and organic growth within each of the Firm's businesses while also contributing to the stable credit quality within the loan portfolio. However, the interest rate environment affected negatively wholesale loan spread and consumer loan and deposit spreads. Spreads related to wholesale liabilities widened compared with the prior year, but this benefit declined over the course of 2006.

The discussion that follows highlights the performance of each business segment compared with the prior year, and discusses results on a managed basis unless otherwise noted. For more information about managed basis, See Explanation and reconciliation of the Firm's use of non-GAAP financial measures on pages 32–33 of this Annual Report.

Investment Bank net income was flat compared with the prior year, as record revenue was offset by higher compensation expense and a provision for credit losses compared with a benefit in the prior year. Revenue benefited from investments in key business initiatives, increased market share and higher global capital markets activity. Record investment banking fees were driven by record debt and equity underwriting fees and strong advisory fees. Fixed income markets revenue set a new record with strength in credit markets, emerging markets and currencies. Equity markets revenue was also at a record level, reflecting strength in cash equities and equity derivatives. The current-year Provision for credit losses reflects portfolio activity; credit quality remained stable. The increase in expense was primarily the result of higher performance-based compensation including the impact of a higher ratio of compensation expense to revenue and the adoption of SFAS 123R.

Retail Financial Services net income was down from the prior year as lower results in Mortgage Banking were offset partially by improved performance in Regional Banking and Auto Finance. Revenue declined due to lower revenue in Mortgage Banking, narrower loan and deposit spreads in Regional Banking and the sale of the insurance business on July 1, 2006. Deposit and loan spreads reflected the current interest rate and competitive environments. These factors were offset partially by increases in average deposit and loan balances and higher deposit-related and branch production fees in Regional Banking, which benefited from the continued investment in the retail banking distribution network and the overall strength of the U.S. economy. The provision for credit losses declined from the prior year due to the absence of a special provision related to Hurricane Katrina in 2005, partially offset by the establishment of additional allowance for loan losses related to loans acquired from The Bank of New York. Expense increased, reflecting the purchase of Collegiate Funding Services in the first quarter of 2006 and ongoing investments in the retail banking distribution network, with the net addition during the year of 438 branch offices (including 339 from The Bank of New York), 1,194 ATMs and over 500 personal bankers. Partially offsetting these increases were the sale of the insurance business and merger-related and other operating efficiencies.

Card Services net income was a record, increasing significantly compared with the prior year, primarily the result of a lower provision for credit losses. Net revenue (excluding the impact of the deconsolidation of Paymentech) declined slightly from the prior year. Net interest income was flat as the benefit of an increase in average managed loan balances, partially due to portfolio acquisitions as well as marketing initiatives, was offset by the challenging interest rate and competitive environments. Noninterest revenue declined as increased interchange income related to higher charge volume from increased consumer spending was more than offset by higher volume-driven payments to partners, including Kohl's, and increased rewards expense. The managed provision for credit losses benefited from significantly lower bankruptcy-related credit losses following the new bankruptcy legislation that became effective in October 2005. Underlying credit quality remained strong. Expense (excluding the impact of the deconsolidation of Paymentech) increased driven by higher marketing spending and acquisitions, partially offset by merger savings.

Commercial Banking net income was a record in 2006. Record revenue benefited from higher liability balances, higher loan volumes and increased investment banking revenue, all of which benefited from increased sales efforts and U.S. economic growth. Partially offsetting these benefits were loan spread compression and a shift to narrower-spread liability products. The provision for credit losses increased compared with the prior year reflecting portfolio activity and the establishment of additional allowances for loan losses related to loans acquired from The Bank of New York, partially offset by a release of the unused portion of the special reserve established in 2005 for Hurricane Katrina. Credit quality remained stable. Expense increased due to higher compensation expense related to the adoption of SFAS 123R and increased expense related to higher client usage of Treasury Services' products.

Treasury & Securities Services net income was a record and increased significantly over the prior year. Revenue was at a record level driven by higher average liability balances, business growth, increased product usage by clients and higher assets under custody, all of which benefited from global economic growth and capital markets activity. This growth was offset partially by a shift to narrower-spread liability products. Expense increased due to higher compensation related to business growth, investments in new products and the adoption of SFAS 123R. The expense increase was offset partially by the absence of a prior-year charge to terminate a client contract.

Asset Management net income was a record in 2006. Record revenue benefited from increased assets under management driven by net asset inflows and strength in global equity markets, and higher performance and placement fees. The Provision for credit losses was a benefit reflecting net loan recoveries. Expense increased due primarily to higher performance-based compensation, incremental expense from the adoption of SFAS 123R, and increased minority interest expense related to Highbridge Capital Management, LLC ("Highbridge"), offset partially by the absence of BrownCo.

Corporate segment reported significantly improved results (excluding the impact of discontinued operations, as discussed further, below) driven by lower expense, improved revenue and the benefit of tax audit resolutions. Revenue benefited from lower securities losses, improved net interest spread and a higher level of available-for-sale securities partially offset by the absence of the gain on the sale of BrownCo and lower Private Equity results. Expense benefited from the absence of prior-year litigation reserve charges, higher insurance recoveries relating to certain material litigation, lower merger-related costs and other operating efficiencies. These benefits were offset partially by incremental expense related to the adoption of SFAS 123R.

On October 1, 2006, the Firm completed the exchange of selected corporate trust businesses, including trustee, paying agent, loan agency and document management services, for the consumer, business banking and middle-market banking businesses of The Bank of New York. The corporate trust businesses, which were previously reported in TSS, were reported as discontinued operations. The related balance sheet and income statement activity is reflected in the Corporate segment for all periods presented. During 2006, these businesses produced $795 million of net income compared with net income of $229 million in the prior year. Net income from discontinued operations was significantly higher in 2006 due to a one-time after-tax gain of $622 million related to the sale of these businesses. A modest amount of costs associated with the acquisition side of this transaction are included in Merger costs.

Credit costs for the Firm were $5.5 billion compared with $7.3 billion in the prior year. The $1.8 billion decrease was due primarily to lower bankruptcy-related losses in Card Services and the release in the current year of a portion of the $400 million special provision related to Hurricane Katrina that was taken in 2005. The decline was offset partially by an increase in the wholesale provision. The wholesale provision was $321 million compared with a benefit of $811 million in the prior year. The increase was due primarily to portfolio activity, partly offset by a decrease in nonperforming loans. Credit quality in the wholesale portfolio was stable. The benefit in 2005 was due to improvement in credit quality, reflected by significant reductions in criticized exposures and nonperforming loans. Consumer provision for credit losses was $5.2 billion compared with $8.1 billion in the prior year. The reduction primarily reflected the impact of significantly lower bankruptcy-related credit losses and a special provision for credit losses in 2005 related to Hurricane Katrina.

The Firm had, at year end, total stockholders' equity of $115.8 billion, and a Tier 1 capital ratio of 8.7%. The Firm purchased $3.9 billion, or 91 million shares of common stock during the year.

2007 Business outlook

The following forward-looking statements are based upon the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause JPMorgan Chase's results to differ materially from those set forth in such forward-looking statements.

JPMorgan Chase's outlook for 2007 should be viewed against the backdrop of the global economy, financial markets activity and the geopolitical environment, all of which are linked integrally. While the Firm considers outcomes for, and has contingency plans to respond to, stress environments, the basic outlook for 2007 is predicated on the interest rate movements implied in the forward rate curve for U.S. Treasury securities, the continuation of favorable U.S. and international equity markets and continued expansion of the global economy.

The Investment Bank enters 2007 with a strong investment banking fee pipeline and remains focused on developing new products and capabilities. Asset Management anticipates growth driven by continued net asset inflows. Commercial Banking and Treasury & Securities Services expect growth due to increased business activity and product sales with some competitive and rate pressures. However, the performance of the Firm's wholesale businesses will be affected by overall global economic growth and by financial market movements and activity levels in any given period.

Retail Financial Services anticipates benefiting from the continued expansion of the branch network and sales force, including the addition of The Bank of New York's 339 branches, and improved sales productivity and cross-selling in the branches. Loan and deposit spreads are expected to experience continued compression due to the interest rate and competitive environments.

Card Services anticipates growth in managed receivables and sales volume, both of which are expected to benefit from marketing initiatives and new partnerships. Expenditures on marketing are expected to be lower than the 2006 level.

In the Corporate segment, the revenue outlook for the Private Equity business is directly related to the strength of the equity markets and the performance of the underlying portfolio investments. If current market conditions persist, the Firm anticipates continued realization of private equity gains in 2007, but results can be volatile from quarter to quarter. Management believes that the net loss in Treasury and Other Corporate, on a combined basis, will be approximately $50 to $100 million per quarter in 2007, reflecting merger savings and other expense efficiency initiatives, such as less excess real estate.

The Provision for credit losses in 2007 is anticipated to be higher than in 2006, primarily driven by a trend toward a more normal level of provisioning for credit losses in both the wholesale and consumer businesses. The consumer Provision for credit losses should reflect a higher level of net charge-offs as bankruptcy filings continue to increase from the significantly lower than normal levels experienced in 2006 related to the change in bankruptcy law in 2005.

Firmwide expenses are anticipated to reflect investments in each business, continued merger savings and other operating efficiencies. Annual Merger savings are expected to reach approximately $3.0 billion by the end of 2007, upon the completion of the last significant conversion activity, the wholesale deposit conversion scheduled for the second half of 2007. Offsetting merger savings will be continued investment in distribution enhancements and new product offerings, and expenses related to recent acquisitions including The Bank of New York transaction. Merger costs of approximately $400 million are expected to be incurred during 2007 (including a modest amount related to The Bank of New York transaction). These additions are expected to bring total cumulative merger costs to $3.8 billion by the end of 2007.

CONSOLIDATED RESULTS OF OPERATIONS

The following section provides a comparative discussion of JPMorgan Chase's consolidated results of operations on a reported basis for the three-year period ended December 31, 2006. Factors that are related primarily to a single business segment are discussed in more detail within that business segment than they are in this consolidated section. Total net revenue, Noninterest expense and Income tax expense have been revised to reflect the impact of discontinued operations. For a discussion of the Critical accounting estimates used by the Firm that affect the Consolidated results of operations, see pages 83–85 of this Annual Report.

Revenue

Year ended December 31, (in millions)	2006	2005	2004[a]
Investment banking fees	**$ 5,520**	$ 4,088	$ 3,536
Principal transactions	**10,346**	7,669	5,148
Lending & deposit related fees	**3,468**	3,389	2,672
Asset management, administration and commissions	**11,725**	9,891	7,682
Securities gains (losses)	**(543)**	(1,336)	338
Mortgage fees and related income	**591**	1,054	803
Credit card income	**6,913**	6,754	4,840
Other income	**2,175**	2,684	826
Noninterest revenue	**40,195**	34,193	25,845
Net interest income	**21,242**	19,555	16,527
Total net revenue	**$ 61,437**	$ 53,748	$ 42,372

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

Total net revenue for 2006 was $61.4 billion, up by $7.7 billion, or 14%, from the prior year. The increase was due to higher Principal transactions, primarily from strong trading revenue results, record Asset management, administration and commissions revenue, and record Investment banking fees. Also contributing to the increase was higher Net interest income and lower securities portfolio losses. These improvements were offset partially by a decline in Other income partly as a result of the gain recognized in 2005 on the sale of BrownCo, and lower Mortgage fees and related income.

The increase in Investment banking fees was driven by record debt and equity underwriting as well as strong advisory fees. For a further discussion of Investment banking fees, which are recorded primarily in the IB, see the IB segment results on pages 36–37 of this Annual Report.

Principal transactions revenue consists of realized and unrealized gains and losses from trading activities, including physical commodities inventories that are accounted for at the lower of cost or fair value, primarily in the IB, and Private equity gains and losses, primarily in the private equity business of Corporate. Trading revenue increased compared with 2005 due to record performance in Equity and Fixed income markets. For a further discussion of Principal transactions revenue, see the IB and Corporate segment results on pages 36–37 and 53–54, respectively, of this Annual Report.

Lending & deposit related fees rose slightly in comparison with 2005 as a result of higher fee income on deposit-related fees and, in part, from The Bank of New York transaction. For a further discussion of the change in Lending & deposit related fees, which are recorded in RFS, see the RFS segment results on pages 38–42 of this Annual Report.

The increase in Asset management, administration and commissions revenue in 2006 was driven by growth in assets under management in AM, which exceeded $1 trillion at the end of 2006, higher equity-related commissions in IB and higher performance and placement fees. The growth in assets under management reflected net asset inflows in the institutional and retail segments. Also contributing to the increase were higher assets under custody in TSS driven by market value appreciation and new business; and growth in depositary receipts, securities lending and global clearing, all of which were driven by a combination of increased product usage by existing clients and new business. In addition, commissions in the IB rose as a result of strength across regions, partly offset by the sale of the insurance business and BrownCo. For additional information on these fees and commissions, see the segment discussions for AM on pages 50–52, TSS on pages 48–49 and RFS on pages 38–42, of this Annual Report.

The favorable variance in Securities gains (losses) was due primarily to lower Securities losses in Treasury in 2006 from portfolio repositioning activities in connection with the management of the Firm's assets and liabilities. For a further discussion of Securities gains (losses), which are mostly recorded in the Firm's Treasury business, see the Corporate segment discussion on pages 53–54 of this Annual Report.

Mortgage fees and related income declined in comparison with 2005 reflecting a reduction in net mortgage servicing revenue and higher losses on mortgage loans transferred to held-for-sale. These declines were offset partly by growth in production revenue as a result of higher volume of loans sales and wider gain on sale margins. Mortgage fees and related income exclude the impact of NII and AFS securities gains related to mortgage activities. For a discussion of Mortgage fees and related income, which is recorded primarily in RFS's Mortgage Banking business, see the Mortgage Banking discussion on page 41 of this Annual Report.

Credit card income increased from 2005, primarily from higher customer charge volume that favorably impacted interchange income and servicing fees earned in connection with securitization activities, which benefited from lower credit losses incurred on securitized credit card loans. These increases were offset partially by increases in volume-driven payments to partners, expenses related to reward programs, and interest paid to investors in the securitized loans. Credit card income also was impacted negatively by the deconsolidation of Paymentech in the fourth quarter of 2005.

The decrease in Other income compared with the prior year was due to a $1.3 billion pretax gain recognized in 2005 on the sale of BrownCo and lower gains from loan workouts. Partially offsetting these two items were higher automobile operating lease revenue; an increase in equity investment income, in particular, from Chase Paymentech Solutions, LLC; and a pretax gain of $103 million on the sale of MasterCard shares in its initial public offering.

Net interest income rose due largely to improvement in Treasury's net interest spread and increases in wholesale liability balances, wholesale and consumer loans, available-for-sale securities, and consumer deposits. Increases in consumer and wholesale loans and deposits included the impact of The Bank of New York transaction. These increases were offset partially by narrower spreads on both trading-related assets and loans, a shift to narrower-spread deposit products, RFS's sale of the insurance business and the absence of BrownCo in AM. The Firm's total average interest-earning assets for 2006 were $995.5 billion, up 11% from the prior year, primarily as a result of an increase in loans and other liquid earning assets, partially offset by a decline in interests in purchased receivables as a result of the restructuring and deconsolidation during the second quarter of 2006 of certain multi-seller con-

duits that the Firm administered. The net yield on interest-earning assets, on a fully taxable-equivalent basis, was 2.16%, a decrease of four basis points from the prior year. For a further discussion of Net interest income, see the Business Segment Results section on pages 34–35 of this Annual Report.

2005 compared with 2004

Total net revenue for 2005 was $53.7 billion, up 27% from 2004, primarily due to the Merger, which affected every revenue category. The increase from 2004 also was affected by a $1.3 billion gain on the sale of BrownCo; higher Principal transactions revenue; and higher Asset management, administration and commissions, which benefited from several new investments and growth in Assets under management and Assets under custody. These increases were offset partly by available-for-sale ("AFS") securities losses as a result of repositioning of the Firm's Treasury investment portfolio. The discussions that follow highlight factors other than the Merger that affected the 2005 versus 2004 comparison.

The increase in Investment banking fees was driven by strong growth in advisory fees resulting in part from the Cazenove business partnership. For a further discussion of Investment banking fees, which are primarily recorded in the IB, see the IB segment results on pages 36–37 and Note 2 on page 97 of this Annual Report.

Revenue from Principal transactions increased compared with 2004, driven by stronger, although volatile, trading results across commodities, emerging markets, rate markets and currencies. Private equity gains were higher due to a continuation of favorable capital markets conditions. For a further discussion of Principal transactions revenue, see the IB and Corporate segment results on pages 36–37 and 53–54, respectively, of this Annual Report.

The higher Lending & deposit related fees were driven by the Merger; absent the effects of the Merger, the deposit-related fees would have been lower due to rising interest rates. In a higher interest rate environment, the value of deposit balances to a customer is greater, resulting in a reduction of deposit-related fees. For a further discussion of liability balances (including deposits) see the CB and TSS segment discussions on pages 46–47 and 48–49, respectively, of this Annual Report.

The increase in Asset management, administration and commissions revenue was driven by incremental fees from several new investments, including the acquisition of a majority interest in Highbridge, the Cazenove business partnership and the acquisition of Vastera. Also contributing to the higher level of revenue was an increase in Assets under management, reflecting net asset inflows in equity-related products and global equity market appreciation. In addition, Assets under custody were up due to market value appreciation and new business. Commissions rose as a result of a higher volume of brokerage transactions. For additional information on these fees and commissions, see the segment discussions for IB on pages 36–37, AM on pages 50–52 and TSS on pages 48–49 of this Annual Report.

The decline in Securities gains (losses) reflected $1.3 billion of securities losses, as compared with $338 million of gains in 2004. The losses were due to repositioning of the Firm's Treasury investment portfolio, to manage exposure to interest rates. For a further discussion of Securities gains (losses), which are recorded primarily in the Firm's Treasury business, see the Corporate segment discussion on pages 53–54 of this Annual Report.

Mortgage fees and related income increased due to improved MSR risk-management results. For a discussion of Mortgage fees and related income, which is recorded primarily in RFS's Mortgage Banking business, see the segment discussion for RFS on pages 38–42 of this Annual Report.

Credit card income rose as a result of higher interchange income associated with the increase in charge volume. This increase was offset partially by higher volume-driven payments to partners and rewards expense. For a further discussion of Credit card income, see CS segment results on pages 43–45 of this Annual Report.

The increase in Other income primarily reflected a $1.3 billion pretax gain on the sale of BrownCo; higher gains from loan workouts and loan sales; and higher automobile operating lease income.

Net interest income rose as a result of higher average volume of, and wider spreads on, liability balances. Also contributing to the increase was higher average volume of wholesale and consumer loans, in particular, real estate and credit card loans, which partly reflected a private label portfolio acquisition by CS. These increases were offset partially by narrower spreads on consumer and wholesale loans and on trading-related assets, as well as the impact of the repositioning of the Treasury investment portfolio, and the reversal of revenue related to increased bankruptcies in CS. The Firm's total average interest-earning assets in 2005 were $899.1 billion, up 23% from the prior year. The net interest yield on these assets, on a fully taxable-equivalent basis, was 2.20%, a decrease of seven basis points from the prior year.

Provision for credit losses

Year ended December 31, (in millions)	**2006**	2005	2004[a]
Provision for credit losses	**$ 3,270**	$ 3,483	$ 2,544

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

The Provision for credit losses in 2006 declined $213 million from the prior year due to a $1.3 billion decrease in the consumer Provision for credit losses, partly offset by a $1.1 billion increase in wholesale Provision for credit losses. The decrease in the consumer provision was driven by CS, reflecting lower bankruptcy-related losses, partly offset by higher contractual net charge-offs. The 2005 consumer provision also reflected $350 million of a special provision related to Hurricane Katrina, a portion of which was released in the current year. The increase in the wholesale provision was due primarily to portfolio activity, partly offset by a decrease in nonperforming loans. The benefit in 2005 was due to strong credit quality, reflected in significant reductions in criticized exposure and nonperforming loans. Credit quality in the wholesale portfolio was stable. For a more detailed discussion of the loan portfolio and the Allowance for loan losses, refer to Credit risk management on pages 64–76 of this Annual Report.

2005 compared with 2004

The Provision for credit losses was $3.5 billion, an increase of $939 million, or 37%, from 2004, reflecting the full-year impact of the Merger. The wholesale Provision for credit losses was a benefit of $811 million for the year compared with a benefit of $716 million in the prior year, reflecting continued strength in credit quality. The wholesale loan net recovery rate was 0.06% in 2005, an improvement from a net charge-off rate of 0.18% in the prior year. The total consumer Provision for credit losses was $4.3 billion, $1.9 billion higher than the prior year, primarily due to the Merger, higher bankruptcy-related net charge-offs in Card Services and a $350 million special provision for Hurricane Katrina. Also included in 2004 were accounting policy conformity adjustments as a result of the Merger. Excluding these items, the consumer portfolio continued to show strength in credit quality.

Noninterest expense

Year ended December 31, (in millions)	2006	2005	2004[a]
Compensation expense	**$ 21,191**	$ 18,065	$ 14,291
Occupancy expense	**2,335**	2,269	2,058
Technology, communications and equipment expense	**3,653**	3,602	3,687
Professional & outside services	**3,888**	4,162	3,788
Marketing	**2,209**	1,917	1,335
Other expense	**3,272**	6,199	6,537
Amortization of intangibles	**1,428**	1,490	911
Merger costs	**305**	722	1,365
Total noninterest expense	**$ 38,281**	$ 38,426	$ 33,972

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

Total noninterest expense for 2006 was $38.3 billion, down slightly from the prior year. The decrease was due to material litigation-related insurance recoveries of $512 million in 2006 compared with a net charge of $2.6 billion (includes $208 million material litigation-related insurance recoveries) in 2005, primarily associated with the settlement of the Enron and WorldCom class action litigations and for certain other material legal proceedings. Also contributing to the decrease were lower Merger costs, the deconsolidation of Paymentech, the sale of the insurance business, and merger-related savings and operating efficiencies. These items were offset mostly by higher performance-based compensation and incremental expense of $712 million related to SFAS 123R, the impact of acquisitions and investments in businesses, as well as higher Marketing expenditures.

The increase in Compensation expense from 2005 was primarily a result of higher performance-based incentives, incremental expense related to SFAS 123R of $712 million for 2006, and additional headcount in connection with growth in business volume, acquisitions, and investments in the businesses. These increases were offset partially by merger-related savings and other expense efficiencies throughout the Firm. For a detailed discussion of the adoption of SFAS 123R and employee stock-based incentives see Note 8 on pages 105–107 of this Annual Report.

The increase in Occupancy expense from 2005 was due to ongoing investments in the retail distribution network, which included the incremental expense from The Bank of New York branches, partially offset by merger-related savings and other operating efficiencies.

The slight increase in Technology, communications and equipment expense for 2006 was due primarily to higher depreciation expense on owned automobiles subject to operating leases and higher technology investments to support business growth, partially offset by merger-related savings and operating efficiencies.

Professional & outside services decreased from 2005 due to merger-related savings and operating efficiencies, lower legal fees associated with several legal matters settled in 2005 and the Paymentech deconsolidation. The decrease was offset partly by acquisitions and business growth.

Marketing expense was higher compared with 2005, reflecting the costs of campaigns for credit cards.

Other expense was lower due to significant litigation-related charges of $2.8 billion in 2005, associated with the settlement of the Enron and WorldCom class action litigations and certain other material legal proceedings. In addition, the Firm recognized insurance recoveries of $512 million and $208 million, in 2006 and 2005, respectively, pertaining to certain material litigation matters. For a further discussion of litigation, refer to Note 27 on pages 130–131 of this Annual Report. Also contributing to the decline from the prior year were charges of $93 million in connection with the termination of a client contract in TSS in 2005; and in RFS, the sale of the insurance business in the third quarter of 2006. These items were offset partially by higher charges related to other litigation, and the impact of growth in business volume, acquisitions and investments in the businesses.

For discussion of Amortization of intangibles and Merger costs, refer to Note 16 and Note 9 on pages 121–123 and 108, respectively, of this Annual Report.

2005 compared with 2004

Noninterest expense for 2005 was $38.4 billion, up 13% from 2004, primarily due to the full-year impact of the Merger. Excluding Litigation reserve charges and Merger costs, Noninterest expense would have been $35.1 billion, up 22%. In addition to the Merger, expenses increased as a result of higher performance-based incentives, continued investment spending in the Firm's businesses and incremental marketing expenses related to launching the new Chase brand, partially offset by merger-related savings and operating efficiencies throughout the Firm. Each category of Noninterest expense was affected by the Merger. The discussions that follow highlight factors other than the Merger that affected the 2005 versus 2004 comparison.

Compensation expense rose as a result of higher performance-based incentives; additional headcount due to the insourcing of the Firm's global technology infrastructure (effective December 31, 2004, when JPMorgan Chase terminated the Firm's outsourcing agreement with IBM); the impact of several investments, including Cazenove, Highbridge and Vastera; the accelerated vesting of certain employee stock options; and business growth. The effect of the termination of the IBM outsourcing agreement was to shift expenses from Technology and communications expense to Compensation expense. The increase in Compensation expense was offset partially by merger-related savings throughout the Firm. For a detailed discussion of employee stock-based incentives, see Note 8 on pages 105–107 of this Annual Report.

The increase in Occupancy expense was due primarily to the Merger, partially offset by lower charges for excess real estate and a net release of excess property tax accruals, as compared with $103 million of charges for excess real estate in 2004.

Technology and communications expense was down slightly. This reduction reflects the offset of six months of the combined Firm's results for 2004 against the full-year 2005 impact from termination of the JPMorgan Chase outsourcing agreement with IBM. The reduction in Technology and communications expense due to the outsourcing agreement termination is offset mostly by increases in Compensation expense related to additional headcount and investments in the Firm's hardware and software infrastructure.

Professional and outside services were higher compared with the prior year as a result of the insourcing of the Firm's global technology infrastructure, upgrades to the Firm's systems and technology, and business growth. These expenses were offset partially by operating efficiencies.

Marketing expense was higher compared with the prior year, primarily as a result of the Merger and the cost of advertising campaigns to launch the new Chase brand.

The decrease in Other expense reflected lower litigation reserve charges for certain material legal proceedings in 2005: $1.9 billion related to the settlement of the Enron class action litigation and for certain other material legal proceedings, and $900 million for the settlement of the WorldCom class action litigation; and in 2004, $3.7 billion to increase litigation reserves. Also contributing to the decrease were a $208 million insurance recovery related to certain material litigation, lower software impairment write-offs, merger-related savings and operating efficiencies. These were offset partially by $93 million in charges taken by TSS to terminate a client contract and a $40 million charge taken by RFS related to the dissolution of a student loan joint venture.

For a discussion of Amortization of intangibles and Merger costs, refer to Note 16 and Note 9 on pages 121–123 and 108, respectively, of this Annual Report.

Income tax expense

The Firm's Income from continuing operations before income tax expense, Income tax expense and Effective tax rate were as follows for each of the periods indicated:

Year ended December 31, (in millions, except rate)	**2006**	2005	2004[a]
Income from continuing operations before income tax expense	**$19,886**	$ 11,839	$ 5,856
Income tax expense	**6,237**	3,585	1,596
Effective tax rate	**31.4%**	30.3%	27.3%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

The increase in the effective tax rate for 2006, as compared with the prior year, was primarily the result of higher reported pretax income combined with changes in the proportion of income subject to federal, state and local taxes. Also contributing to the increase in the effective tax rate were the litigation charges in 2005 and lower Merger costs, reflecting a tax benefit at a 38% marginal tax rate, partially offset by benefits related to tax audit resolutions of $367 million in 2006.

2005 compared with 2004

The increase in the effective tax rate was primarily the result of higher reported pretax income combined with changes in the proportion of income subject to federal, state and local taxes. Also contributing to the increase were lower 2005 litigation charges and a gain on the sale of BrownCo, which were taxed at marginal tax rates of 38% and 40%, respectively. These increases were offset partially by a tax benefit in 2005 of $55 million recorded in connection with the repatriation of foreign earnings.

Income from discontinued operations

As a result of the transaction with The Bank of New York on October 1, 2006, the results of operations of the selected corporate trust businesses (i.e., trustee, paying agent, loan agency and document management services) were reported as discontinued operations.

The Firm's Income from discontinued operations (after-tax) were as follows for each of the periods indicated:

Year ended December 31, (in millions)	**2006**	2005	2004[a]
Income from discontinued operations	**$ 795**	$ 229	$ 206

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The increases from the prior two periods in Income from discontinued operations were due primarily to a gain of $622 million from exiting the corporate trust business in the fourth quarter of 2006.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its Consolidated financial statements using accounting principles generally accepted in the United States of America ("U.S. GAAP"); these financial statements appear on pages 90–93 of this Annual Report. That presentation, which is referred to as "reported basis," provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

Effective January 1, 2006, JPMorgan Chase's presentation of "operating earnings," which excluded merger costs and material litigation reserve charges and recoveries from reported results, was eliminated. These items had been excluded previously from operating results because they were deemed nonrecurring; they are included now in the Corporate segment's results. In addition, trading-related net interest income no longer is reclassified from Net interest income to Principal transactions.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's and the lines' of business results on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications that assumes credit card loans securitized by CS remain on the balance sheet and presents revenue on a fully taxable-equivalent ("FTE") basis. These adjustments do not have any impact on Net income as reported by the lines of business or by the Firm as a whole.

The presentation of CS results on a managed basis assumes that credit card loans that have been securitized and sold in accordance with SFAS 140 still remain on the balance sheet and that the earnings on the securitized loans are classified in the same manner as the earnings on retained loans recorded on the balance sheet. JPMorgan Chase uses the concept of managed basis to evaluate the credit performance and overall financial performance of the entire

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis:

(Table continues on next page)

Year ended December 31,	2006				2005			
(in millions, except per share and ratio data)	Reported results	Credit card[b]	Tax-equivalent adjustments	Managed basis	Reported results	Credit card[b]	Tax-equivalent adjustments	Managed basis
Revenue								
Investment banking fees	**$ 5,520**	**$ —**	**$ —**	**$ 5,520**	$ 4,088	$ —	$ —	$ 4,088
Principal transactions	**10,346**	**—**	**—**	**10,346**	7,669	—	—	7,669
Lending & deposit related fees	**3,468**	**—**	**—**	**3,468**	3,389	—	—	3,389
Asset management, administration and commissions	**11,725**	**—**	**—**	**11,725**	9,891	—	—	9,891
Securities gains (losses)	**(543)**	**—**	**—**	**(543)**	(1,336)	—	—	(1,336)
Mortgage fees and related income	**591**	**—**	**—**	**591**	1,054	—	—	1,054
Credit card income	**6,913**	**(3,509)**	**—**	**3,404**	6,754	(2,718)	—	4,036
Other income	**2,175**	**—**	**676**	**2,851**	2,684	—	571	3,255
Noninterest revenue	**40,195**	**(3,509)**	**676**	**37,362**	34,193	(2,718)	571	32,046
Net interest income	**21,242**	**5,719**	**228**	**27,189**	19,555	6,494	269	26,318
Total net revenue	**61,437**	**2,210**	**904**	**64,551**	53,748	3,776	840	58,364
Provision for credit losses	**3,270**	**2,210**	**—**	**5,480**	3,483	3,776	—	7,259
Noninterest expense	**38,281**	**—**	**—**	**38,281**	38,426	—	—	38,426
Income from continuing operations before income tax expense	**19,886**	**—**	**904**	**20,790**	11,839	—	840	12,679
Income tax expense	**6,237**	**—**	**904**	**7,141**	3,585	—	840	4,425
Income from continuing operations	**13,649**	**—**	**—**	**13,649**	8,254	—	—	8,254
Income from discontinued operations	**795**	**—**	**—**	**795**	229	—	—	229
Net income	**$ 14,444**	**$ —**	**$ —**	**$ 14,444**	$ 8,483	$ —	$ —	$ 8,483
Income from continuing operations – diluted earnings per share	**$ 3.82**	**$ —**	**$ —**	**$ 3.82**	$ 2.32	$ —	$ —	$ 2.32
Return on common equity[a]	**12%**	**—%**	**—%**	**12%**	8%	—%	—%	8%
Return on common equity less goodwill[a]	**20**	**—**	**—**	**20**	13	—	—	13
Return on assets[a]	**1.04**	**NM**	**NM**	**1.00**	0.70	NM	NM	0.67
Overhead ratio	**62**	**NM**	**NM**	**59**	71	NM	NM	66
Loans–Period-end	**$ 483,127**	**$ 66,950**	**$ —**	**$ 550,077**	$ 419,148	$ 70,527	—	$ 489,675
Total assets – average	**1,313,794**	**65,266**	**—**	**1,379,060**	1,185,066	67,180	—	1,252,246

(a) Based on Income from continuing operations.
(b) The impact of credit card securitizations affects CS. See pages 43–45 of this Annual Report for further information.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

managed credit card portfolio. Operations are funded and decisions are made about allocating resources, such as employees and capital, based upon managed financial information. In addition, the same underwriting standards and ongoing risk monitoring are used for both loans on the balance sheet and securitized loans. Although securitizations result in the sale of credit card receivables to a trust, JPMorgan Chase retains the ongoing customer relationships, as the customers may continue to use their credit cards; accordingly, the customer's credit performance will affect both the securitized loans and the loans retained on the balance sheet. JPMorgan Chase believes managed basis information is useful to investors, enabling them to understand both the credit risks associated with the loans reported on the balance sheet and the Firm's retained interests in securitized loans. For a reconciliation of reported to managed basis of CS results, see Card Services segment results on pages 43–45 of this Annual Report. For information regarding the securitization process, and loans and residual interests sold and securitized, see Note 14 on pages 114–118 of this Annual Report.

Total net revenue for each of the business segments and the Firm is presented on an FTE basis. Accordingly, revenue from tax-exempt securities and investments that receive tax credits is presented in the managed results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenues arising from both taxable and tax-exempt sources. The corresponding income tax impact related to these items is recorded within Income tax expense.

Management also uses certain non-GAAP financial measures at the segment level because it believes these non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and therefore facilitate a comparison of the business segment with the performance of its competitors.

(Table continued from previous page)

2004[c]			
Reported results	Credit card[b]	Tax-equivalent adjustments	Managed basis
$ 3,536	$ —	$ —	$ 3,536
5,148	—	—	5,148
2,672	—	—	2,672
7,682	—	—	7,682
338	—	—	338
803	—	—	803
4,840	(2,267)	—	2,573
826	(86)	317	1,057
25,845	(2,353)	317	23,809
16,527	5,251	6	21,784
42,372	2,898	323	45,593
2,544	2,898	—	5,442
33,972	—	—	33,972
5,856	—	323	6,179
1,596	—	323	1,919
4,260	—	—	4,260
206	—	—	206
$ 4,466	$ —	$ —	$ 4,466
$ 1.48	$ —	$ —	$ 1.48
6%	—%	—%	6%
8	—	—	8
0.44	NM	NM	0.43
80	NM	NM	75
$ 402,114	$ 70,795	—	$ 472,909
962,556	51,084	—	1,013,640

Calculation of Certain GAAP and Non-GAAP Metrics

The table below reflects the formulas used to calculate both the following GAAP and non-GAAP measures:

Return on common equity
Net income* / Average common stockholders' equity

Return on common equity less goodwill[a]
Net income* / Average common stockholders' equity less goodwill

Return on assets

Reported	Net income / Total average assets
Managed	Net income / Total average managed assets[b] (including average securitized credit card receivables)

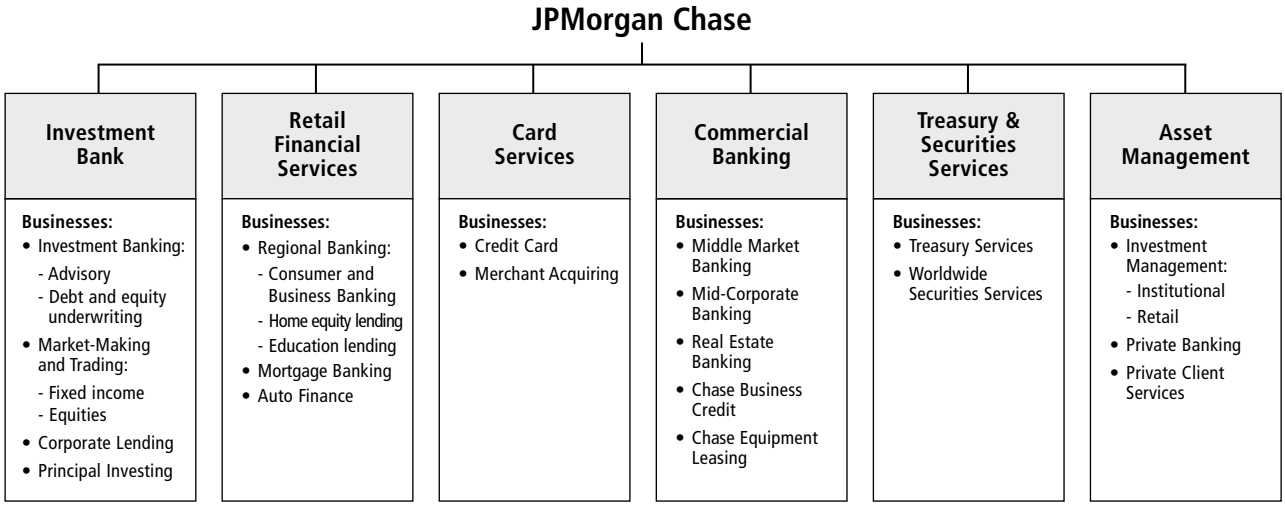
Overhead ratio
Total noninterest expense / Total net revenue

* Represents Net income applicable to common stock

(a) The Firm uses Return on common equity less goodwill, a non-GAAP financial measure, to evaluate the operating performance of the Firm and to facilitate comparisons to competitors.
(b) The Firm uses Return on managed assets, a non-GAAP financial measure, to evaluate the overall performance of the managed credit card portfolio, including securitized credit card loans.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line-of-business basis. The business segment financial results presented reflect the current organization of JPMorgan Chase. There are six major reportable business segments: the Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate segment. The segments are based upon the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. Segment results for 2004 include six months of the combined Firm's results and six months of heritage JPMorgan Chase only.



Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. During 2006, JPMorgan Chase modified certain of its segment disclosures to reflect more closely the manner in which the Firm's business segments are managed and to provide improved comparability with competitors. These financial disclosure modifications are reflected in this Annual Report and, except as indicated, the financial information for prior periods has been revised to reflect the changes as if they had been in effect throughout all periods reported. A summary of the changes follows:

- The presentation of operating earnings in 2005 and 2004 that excluded from reported results merger costs and material litigation reserve charges and recoveries was eliminated effective January 1, 2006. These items had been excluded previously from operating results because they were deemed nonrecurring; they are included now in the Corporate business segment's results.
- Trading-related net interest income is no longer reclassified from Net interest income to Principal transactions.
- Various wholesale banking clients, together with the related balance sheet and income statement items, were transferred among CB, the IB and TSS. The primary client transfer was corporate mortgage finance from CB to the IB and TSS.
- TSS firmwide disclosures have been adjusted to reflect a refined set of TSS products as well as a revised allocation of liability balances and lending-related revenue related to certain client transfers.
- As a result of the transaction with The Bank of New York, selected corporate trust businesses have been transferred from TSS to the Corporate segment and reported in discontinued operations for all periods reported.

The management reporting process that derives business segment results allocates income and expense using market-based methodologies. The Firm continues to assess the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods. Segment reporting methodologies used by the Firm are discussed below.

Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenues from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing

Funds transfer pricing ("FTP") is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Corporate business segment. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment's stand-alone peers. This process is overseen by the Firm's Asset-Liability Committee ("ALCO"). Business segments may retain certain interest rate exposures, subject to management approval, that would be expected in the normal operation of a similar peer business.

Capital allocation

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, economic risk measures and regulatory capital requirements. The amount of capital assigned to each business is referred to as equity. Effective January 1, 2006, the Firm refined its methodology for allocating capital to the business segments. As prior periods have not been revised to reflect the new capital allocations, certain business metrics, such as ROE, are not comparable to the current presentations. For a further discussion of this change, see Capital management–Line of business equity on page 57 of this Annual Report.

Expense allocation

Where business segments use services provided by support units within the Firm, the costs of those support units are allocated to the business segments. Those expenses are allocated based upon their actual cost or the lower of actual cost or market, as well as upon usage of the services provided. In contrast, certain other expenses related to certain corporate functions, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. These retained expenses include: parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other one-time items not aligned with the business segments.

During 2005, the Firm refined cost allocation methodologies related to certain corporate, technology and operations expenses in order to improve transparency, consistency and accountability with regard to costs allocated across business segments. Prior periods were not revised to reflect this methodology change.

Credit reimbursement

TSS reimburses the IB for credit portfolio exposures managed by the IB on behalf of clients that the segments share. At the time of the Merger, the reimbursement methodology was revised to be based upon pretax earnings, net of the cost of capital related to those exposures.

Segment results – Managed basis[a]

The following table summarizes the business segment results for the periods indicated:

Year ended December 31, (in millions, except ratios)	Total net revenue			Noninterest expense		
	2006	2005	2004[c]	**2006**	2005	2004[c]
Investment Bank	**$ 18,277**	$ 14,613	$ 12,633	**$ 12,304**	$ 9,749	$ 8,709
Retail Financial Services	**14,825**	14,830	10,791	**8,927**	8,585	6,825
Card Services	**14,745**	15,366	10,745	**5,086**	4,999	3,883
Commercial Banking	**3,800**	3,488	2,278	**1,979**	1,856	1,326
Treasury & Securities Services	**6,109**	5,539	4,198	**4,266**	4,050	3,726
Asset Management	**6,787**	5,664	4,179	**4,578**	3,860	3,133
Corporate[b]	**8**	(1,136)	769	**1,141**	5,327	6,370
Total	**$ 64,551**	$ 58,364	$ 45,593	**$ 38,281**	$ 38,426	$ 33,972

Year ended December 31, (in millions, except ratios)	Net income (loss)			Return on equity		
	2006	2005	2004[c]	**2006**	2005	2004[c]
Investment Bank	**$ 3,674**	$ 3,673	$ 2,956	**18%**	18%	17%
Retail Financial Services	**3,213**	3,427	2,199	**22**	26	24
Card Services	**3,206**	1,907	1,274	**23**	16	17
Commercial Banking	**1,010**	951	561	**18**	28	27
Treasury & Securities Services	**1,090**	863	277	**48**	57	14
Asset Management	**1,409**	1,216	681	**40**	51	17
Corporate[b]	**842**	(3,554)	(3,482)	**NM**	NM	NM
Total	**$ 14,444**	$ 8,483	$ 4,466	**13%**	8%	6%

(a) Represents reported results on a tax-equivalent basis and excludes the impact of credit card securitizations.
(b) Net income includes Income from discontinued operations (after-tax) of $795 million, $229 million and $206 million for 2006, 2005 and 2004, respectively.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

INVESTMENT BANK

JPMorgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The Investment Bank's clients are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, and research. The IB also commits the Firm's own capital to proprietary investing and trading activities.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2006	2005	2004[e]
Revenue			
Investment banking fees	**$ 5,537**	$ 4,096	$ 3,572
Principal transactions	**9,086**	6,059	3,548
Lending & deposit related fees	**517**	594	539
Asset management, administration and commissions	**2,110**	1,727	1,401
All other income	**528**	534	277
Noninterest revenue	**17,778**	13,010	9,337
Net interest income[a]	**499**	1,603	3,296
Total net revenue[b]	**18,277**	14,613	12,633
Provision for credit losses	**191**	(838)	(640)
Credit reimbursement from TSS[c]	**121**	154	90
Noninterest expense			
Compensation expense	**8,190**	5,792	4,896
Noncompensation expense	**4,114**	3,957	3,813
Total noninterest expense	**12,304**	9,749	8,709
Income before income tax expense	**5,903**	5,856	4,654
Income tax expense	**2,229**	2,183	1,698
Net income	**$ 3,674**	$ 3,673	$ 2,956
Financial ratios			
ROE	**18%**	18%	17%
ROA	**0.57**	0.61	0.62
Overhead ratio	**67**	67	69
Compensation expense as % of total net revenue[d]	**43**	40	39

(a) The decline in net interest income for the periods shown is largely driven by a decline in trading-related net interest income caused by a higher proportion of noninterest-bearing net trading assets to total net trading assets, higher funding costs compared with prior-year periods, and spread compression due to the inverted yield curve in place for most of the current year.
(b) Total Net revenue includes tax-equivalent adjustments, primarily due to tax-exempt income from municipal bond investments and income tax credits related to affordable housing investments, of $802 million, $752 million and $274 million for 2006, 2005 and 2004, respectively.
(c) TSS is charged a credit reimbursement related to certain exposures managed within the IB credit portfolio on behalf of clients shared with TSS. For a further discussion, see Credit reimbursement on page 35 of this Annual Report.
(d) Beginning in 2006, the Compensation expense to Total net revenue ratio is adjusted to present this ratio as if SFAS 123R had always been in effect. IB management believes that adjusting the Compensation expense to Total net revenue ratio for the incremental impact of adopting SFAS 123R provides a more meaningful measure of IB's Compensation expense to Total net revenue ratio.
(e) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

Net income of $3.7 billion was flat, as record revenue of $18.3 billion was offset largely by higher compensation expense, including the impact of SFAS 123R, and a provision for credit losses compared with a benefit in the prior year.

Total net revenue of $18.3 billion was up $3.7 billion, or 25%, from the prior year. Investment banking fees of $5.5 billion were a record, up 35% from the prior year, driven by record debt and equity underwriting as well as strong advisory fees, which were the highest since 2000. Advisory fees of $1.7 billion were up 31% over the prior year driven primarily by strong performance in the Americas. Debt underwriting fees of $2.7 billion were up 37% from the prior year driven by record performance in both loan syndications and bond underwriting. Equity underwriting fees of $1.2 billion were up 36% from the prior year driven by global equity markets. Fixed Income Markets revenue of $8.4 billion was also a record, up 15% from the prior year driven by strength in credit markets, emerging markets and currencies. Record Equity Markets revenue of $3.3 billion increased 81%, and was driven by strength in cash equities and equity derivatives. Credit Portfolio revenue of $1.1 billion was down 23%, primarily reflecting lower gains from loan workouts.

The following table provides the IB's total Net revenue by business segment:

Year ended December 31, (in millions)	2006	2005	2004[d]
Revenue by business			
Investment banking fees:			
Advisory	**$ 1,659**	$ 1,263	$ 938
Equity underwriting	**1,178**	864	781
Debt underwriting	**2,700**	1,969	1,853
Total investment banking fees	**5,537**	4,096	3,572
Fixed income markets[a]	**8,369**	7,277	6,342
Equity markets[b]	**3,264**	1,799	1,491
Credit portfolio[c]	**1,107**	1,441	1,228
Total net revenue	**$ 18,277**	$ 14,613	$ 12,633

(a) Fixed income markets includes client and portfolio management revenue related to both market-making and proprietary risk-taking across global fixed income markets, including foreign exchange, interest rate, credit and commodities markets.
(b) Equities markets includes client and portfolio management revenue related to market-making and proprietary risk-taking across global equity products, including cash instruments, derivatives and convertibles.
(c) Credit portfolio revenue includes Net interest income, fees and loan sale activity, as well as gains or losses on securities received as part of a loan restructuring, for the IB's credit portfolio. Credit portfolio revenue also includes the results of risk management related to the Firm's lending and derivative activities, and changes in the credit valuation adjustment ("CVA"), which is the component of the fair value of a derivative that reflects the credit quality of the counterparty. See pages 70–72 of the Credit risk management section of this Annual Report for further discussion.
(d) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Provision for credit losses was $191 million compared with a benefit of $838 million in the prior year. The current-year provision reflects portfolio activity; credit quality remained stable. The prior-year benefit reflected strong credit quality, a decline in criticized and nonperforming loans, and a higher level of recoveries.

Total noninterest expense of $12.3 billion was up by $2.6 billion, or 26%, from the prior year. This increase was due primarily to higher performance-based compensation, including the impact of an increase in the ratio of compensation expense to total net revenue, as well as the incremental expense related to SFAS 123R.

Return on equity was 18% on $20.8 billion of allocated capital compared with 18% on $20.0 billion in 2005.

2005 compared with 2004

Net income of $3.7 billion was up 24%, or $717 million, from the prior year. The increase was driven by the Merger, higher revenues and an increased benefit from the Provision for credit losses. These factors were offset partially by higher compensation expense. Return on equity was 18%.

Total net revenue of $14.6 billion was up $2.0 billion, or 16%, over the prior year, driven by strong Fixed Income and Equity Markets and Investment banking fees. Investment banking fees of $4.1 billion increased 15% from the prior year driven by strong growth in advisory fees resulting in part from the Cazenove business partnership. Advisory revenues of $1.3 billion were up 35% from the prior year, reflecting higher market volumes. Debt underwriting revenues of

$2.0 billion increased by 6% driven by strong loan syndication fees. Equity underwriting fees of $864 million were up 11% from the prior year driven by improved market share. Fixed Income Markets revenue of $7.3 billion increased 15%, or $935 million, driven by stronger, although volatile, trading results across commodities, emerging markets, rate markets and currencies. Equity Markets revenues increased 21% to $1.8 billion, primarily due to increased commissions, which were offset partially by lower trading results, which also experienced a high level of volatility. Credit Portfolio revenues were $1.4 billion, up $213 million from the prior year due to higher gains from loan workouts and sales as well as higher trading revenue from credit risk management activities.

The Provision for credit losses was a benefit of $838 million compared with a benefit of $640 million in 2004. The increased benefit was due primarily to the improvement in the credit quality of the loan portfolio and reflected net recoveries. Nonperforming assets of $645 million decreased by 46% since the end of 2004.

Total noninterest expense increased 12% to $9.7 billion, largely reflecting higher performance-based incentive compensation related to growth in revenue. Noncompensation expense was up 4% from the prior year primarily due to the impact of the Cazenove business partnership, while the overhead ratio declined to 67% for 2005, from 69% in 2004.

Selected metrics

Year ended December 31, (in millions, except headcount and ratio data)	2006	2005	2004[f]
Revenue by region			
Americas	**$ 9,227**	$ 8,258	$ 6,898
Europe/Middle East/Africa	**7,320**	4,627	4,082
Asia/Pacific	**1,730**	1,728	1,653
Total net revenue	**$ 18,277**	$ 14,613	$ 12,633
Selected average balances			
Total assets	**$ 647,569**	$599,761	$ 474,436
Trading assets–debt and equity instruments	**275,077**	231,303	190,119
Trading assets–derivative receivables	**54,541**	55,239	58,735
Loans:			
Loans retained[a]	**58,846**	44,813	37,804
Loans held-for-sale[b]	**21,745**	11,755	6,124
Total loans	**80,591**	56,568	43,928
Adjusted assets[c]	**527,753**	456,920	394,961
Equity	**20,753**	20,000	17,290
Headcount	**23,729**	19,802	17,501
Credit data and quality statistics			
Net charge-offs (recoveries)	**$ (31)**	$ (126)	$ 47
Nonperforming assets:			
Nonperforming loans[d]	**231**	594	954
Other nonperforming assets	**38**	51	242
Allowance for loan losses	**1,052**	907	1,547
Allowance for lending related commitments	**305**	226	305
Net charge-off (recovery) rate[b]	**(0.05)%**	(0.28)%	0.12%
Allowance for loan losses to average loans[b]	**1.79**	2.02	4.09
Allowance for loan losses to nonperforming loans[d]	**461**	187	163
Nonperforming loans to average loans	**0.29**	1.05	2.17
Market risk–average trading and credit portfolio VAR[e]			
Trading activities:			
Fixed income	**$ 56**	$ 67	$ 74
Foreign exchange	**22**	23	17
Equities	**31**	34	28
Commodities and other	**45**	21	9
Less: portfolio diversification	**(70)**	(59)	(43)
Total trading VAR	**84**	86	85
Credit portfolio VAR	**15**	14	14
Less: portfolio diversification	**(11)**	(12)	(9)
Total trading and credit portfolio VAR	**$ 88**	$ 88	$ 90

(a) Loans retained include Credit Portfolio, conduit loans, leveraged leases, bridge loans for underwriting and other accrual loans.
(b) Loans held-for-sale, which include loan syndications, and warehouse loans held as part of the IB's mortgage-backed, asset-backed and other securitization businesses, are excluded from Total loans for the allowance coverage ratio and net charge-off rate.
(c) Adjusted assets, a non-GAAP financial measure, equals total average assets minus (1) securities purchased under resale agreements and securities borrowed less securities sold, not yet purchased; (2) assets of variable interest entities (VIEs) consolidated under FIN 46R; (3) cash and securities segregated and on deposit for regulatory and other purposes; and (4) goodwill and intangibles. The amount of adjusted assets is presented to assist the reader in comparing the IB's asset and capital levels to other investment banks in the securities industry. Asset-to-equity leverage ratios are commonly used as one measure to assess a company's capital adequacy. The IB believes an adjusted asset amount that excludes the assets discussed above, which are considered to have a low risk profile, provides a more meaningful measure of balance sheet leverage in the securities industry.
(d) Nonperforming loans include loans held-for-sale of $3 million, $109 million and $2 million as of December 31, 2006, 2005 and 2004, respectively, which are excluded from the allowance coverage ratios. Nonperforming loans exclude distressed HFS loans purchased as part of IB's proprietary activities.
(e) For a more complete description of VAR, see page 77 of this Annual Report.
(f) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Total average loans of $80.6 billion increased by $24.0 billion, or 42%, from the prior year. Average loans retained of $58.8 billion increased by $14.0 billion, or 31%, from the prior year driven by higher levels of capital markets activity. Average loans held-for-sale of $21.7 billion were up by $10.0 billion, or 85%, from the prior year driven primarily by growth in the IB securitization businesses.

IB's average Total trading and credit portfolio VAR was $88 million for both 2006 and 2005. The Commodities and other VAR category has increased from $21 million on average for 2005 to $45 million on average for 2006, reflecting the build-out of the IB energy business, which has also increased the effect of portfolio diversification such that Total IB Trading VAR was down slightly compared with the prior year.

According to Thomson Financial, in 2006, the Firm maintained its #2 position in Global Debt, Equity and Equity-related, its #1 position in Global Syndicated Loans, and its #6 position in Global Equity & Equity-related transactions. The Firm improved its position in Global Long-term Debt to #3 from #4.

According to Dealogic, the Firm was ranked #1 in Investment Banking fees generated during 2006, based upon revenue.

Market shares and rankings[a]

	2006		2005		2004	
December 31,	Market Share	Rankings	Market Share	Rankings	Market Share	Rankings
Global debt, equity and equity-related	**7%**	**#2**	7%	#2	7%	#3
Global syndicated loans	**14**	**1**	15	1	19	1
Global long-term debt	**6**	**3**	6	4	7	2
Global equity and equity-related	**7**	**6**	7	6	6	6
Global announced M&A	**23**	**4**	23	3	22	3
U.S. debt, equity and equity-related	**9**	**2**	8	3	8	5
U.S. syndicated loans	**26**	**1**	28	1	32	1
U.S. long-term debt	**12**	**2**	11	2	12	2
U.S. equity and equity-related[b]	**8**	**6**	9	6	9	4
U.S. announced M&A	**27**	**3**	26	3	28	2

(a) Source: Thomson Financial Securities data. Global announced M&A is based upon rank value; all other rankings are based upon proceeds, with full credit to each book manager/equal if joint. Because of joint assignments, market share of all participants will add up to more than 100%. The market share and rankings for December 31, 2004 are presented on a combined basis, as if the merger of JPMorgan Chase and Bank One had been in effect for the entire period.
(b) References U.S domiciled equity and equity-related transactions, per Thomson Financial.

RETAIL FINANCIAL SERVICES

Retail Financial Services, which includes Regional Banking, Mortgage Banking and Auto Finance reporting segments, helps meet the financial needs of consumers and businesses. RFS provides convenient consumer banking through the nation's fourth-largest branch network and third-largest ATM network. RFS is a top-five mortgage originator and servicer, the second-largest home equity originator, the largest noncaptive originator of automobile loans and one of the largest student loan originators.

RFS serves customers through more than 3,000 bank branches, 8,500 ATMs and 270 mortgage offices, and through relationships with more than 15,000 auto dealerships and 4,300 schools and universities. More than 11,000 branch salespeople assist customers, across a 17-state footprint from New York to Arizona, with checking and savings accounts, mortgage, home equity and business loans, investments and insurance. Over 1,200 additional mortgage officers provide home loans throughout the country.

During the first quarter of 2006, RFS completed the purchase of Collegiate Funding Services, which contributed an education loan servicing capability and provided an entry into the Federal Family Education Loan Program consolidation market. On July 1, 2006, RFS sold its life insurance and annuity underwriting businesses to Protective Life Corporation. On October 1, 2006, JPMorgan Chase completed The Bank of New York transaction, significantly strengthening RFS's distribution network in the New York Tri-state area.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2006	2005	2004[b]
Revenue			
Lending & deposit related fees	**$ 1,597**	$ 1,452	$ 1,013
Asset management, administration and commissions	**1,422**	1,498	1,020
Securities gains (losses)	**(57)**	9	(83)
Mortgage fees and related income	**618**	1,104	866
Credit card income	**523**	426	230
Other income	**557**	136	31
Noninterest revenue	**4,660**	4,625	3,077
Net interest income	**10,165**	10,205	7,714
Total net revenue	**14,825**	14,830	10,791
Provision for credit losses	**561**	724	449
Noninterest expense			
Compensation expense	**3,657**	3,337	2,621
Noncompensation expense	**4,806**	4,748	3,937
Amortization of intangibles	**464**	500	267
Total noninterest expense	**8,927**	8,585	6,825
Income before income tax expense	**5,337**	5,521	3,517
Income tax expense	**2,124**	2,094	1,318
Net income	**$ 3,213**	$ 3,427	$ 2,199
Financial ratios			
ROE	**22%**	26%	24%
ROA	**1.39**	1.51	1.18
Overhead ratio	**60**	58	63
Overhead ratio excluding core deposit intangibles[a]	**57**	55	61

(a) Retail Financial Services uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation results in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would result in an improving overhead ratio over time, all things remaining equal. This non-GAAP ratio excludes Regional Banking's core deposit intangible amortization expense related to The Bank of New York transaction and the Bank One merger of $458 million, $496 million and $264 million for the years ended December 31, 2006, 2005 and 2004, respectively.

(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

Net income of $3.2 billion was down by $214 million, or 6%, from the prior year. A decline in Mortgage Banking was offset partially by improved results in Regional Banking and Auto Finance.

Total net revenue of $14.8 billion was flat compared with the prior year. Net interest income of $10.2 billion was down slightly due to narrower spreads on loans and deposits in Regional Banking, lower auto loan and lease balances and the sale of the insurance business. These declines were offset by the benefit of higher deposit and loan balances in Regional Banking, wider loan spreads in Auto Finance and The Bank of New York transaction. Noninterest revenue of $4.7 billion was up $35 million, or 1%, from the prior year. Results benefited from increases in deposit-related and branch production fees, higher automobile operating lease revenue and The Bank of New York transaction. This benefit was offset by lower net mortgage servicing revenue, the sale of the insurance business and losses related to loans transferred to held-for-sale. In 2006, losses of $233 million, compared with losses of $120 million in 2005, were recognized in Regional Banking related to mortgage loans transferred to held-for-sale; and losses of $50 million, compared with losses of $136 million in the prior year, were recognized in Auto Finance related to automobile loans transferred to held-for-sale.

The provision for credit losses of $561 million was down by $163 million from the prior-year provision due to the absence of a $250 million special provision for credit losses related to Hurricane Katrina in the prior year, partially offset by the establishment of additional allowance for loan losses related to loans acquired from The Bank of New York.

Noninterest expense of $8.9 billion was up by $342 million, or 4%, primarily due to The Bank of New York transaction, the acquisition of Collegiate Funding Services, investments in the retail distribution network and higher depreciation expense on owned automobiles subject to operating leases. These increases were offset partially by the sale of the insurance business and merger-related and other operating efficiencies and the absence of a $40 million prior-year charge related to the dissolution of a student loan joint venture.

2005 compared with 2004

Net income was $3.4 billion, up $1.2 billion from the prior year. The increase was due largely to the Merger but also reflected increased deposit balances and wider spreads, higher home equity and subprime mortgage balances, and expense savings in all businesses. These benefits were offset partially by narrower spreads on retained loan portfolios, the special provision for Hurricane Katrina and net losses associated with portfolio loan sales in Regional Banking and Auto Finance.

Total net revenue increased to $14.8 billion, up $4.0 billion, or 37%, due primarily to the Merger. Net interest income of $10.2 billion increased by $2.5 billion as a result of the Merger, increased deposit balances and wider spreads, and growth in retained consumer real estate loans. These benefits were offset partially by narrower spreads on loan balances and the absence of loan portfolios sold in late 2004 and early 2005. Noninterest revenue of $4.6 billion increased by $1.5 billion due to the Merger, improved MSR risk management results, higher automobile operating lease income and increased

deposit-related fees. These benefits were offset in part by losses on portfolio loan sales in Regional Banking and Auto Finance.

The Provision for credit losses totaled $724 million, up $275 million, or 61%, from 2004. Results included a special provision in 2005 for Hurricane Katrina of $250 million and a release in 2004 of $87 million in the Allowance for loan losses related to the sale of the manufactured home loan portfolio. Excluding these items, the Provision for credit losses would have been down $62 million, or 12%. The decline reflected reductions in the Allowance for loan losses due to improved credit trends in most consumer lending portfolios and the benefit of certain portfolios in run-off. These reductions were offset partially by the Merger and higher provision expense related to subprime mortgage loans retained on the balance sheet.

Total noninterest expense rose to $8.6 billion, an increase of $1.8 billion from the prior year, due primarily to the Merger. The increase also reflected continued investment in retail banking distribution and sales, increased depreciation expense on owned automobiles subject to operating leases and a $40 million charge related to the dissolution of a student loan joint venture. Expense savings across all businesses provided a favorable offset.

Selected metrics

Year ended December 31, (in millions, except headcount and ratios)	2006	2005	2004[e]
Selected ending balances			
Assets	**$ 237,887**	$ 224,801	$226,560
Loans[a]	**213,504**	197,299	202,473
Deposits	**214,081**	191,415	182,372
Selected average balances			
Assets	**$ 231,566**	$ 226,368	$185,928
Loans[b]	**203,882**	198,153	162,768
Deposits	**201,127**	186,811	137,404
Equity	**14,629**	13,383	9,092
Headcount	**65,570**	60,998	59,632
Credit data and quality statistics			
Net charge-offs[c]	**$ 576**	$ 572	$ 990
Nonperforming loans[d]	**1,677**	1,338	1,161
Nonperforming assets	**1,902**	1,518	1,385
Allowance for loan losses	**1,392**	1,363	1,228
Net charge-off rate[b]	**0.31%**	0.31%	0.67%
Allowance for loan losses to ending loans[a]	**0.77**	0.75	0.67
Allowance for loan losses to nonperforming loans[d]	**89**	104	107
Nonperforming loans to total loans	**0.79**	0.68	0.57

(a) Includes loans held-for-sale of $32,744 million, $16,598 million and $18,022 million at December 31, 2006, 2005 and 2004, respectively. These amounts are not included in the allowance coverage ratios.
(b) Average loans include loans held-for-sale of $16,129 million, $15,675 million and $14,736 million for 2006, 2005 and 2004, respectively. These amounts are not included in the net charge-off rate.
(c) Includes $406 million of charge-offs related to the manufactured home loan portfolio in 2004.
(d) Nonperforming loans include loans held-for-sale of $116 million, $27 million and $13 million at December 31, 2006, 2005 and 2004, respectively. These amounts are not included in the allowance coverage ratios.
(e) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Regional Banking

Selected income statement data

Year ended December 31, (in millions, except ratios)	2006	2005	2004[b]
Noninterest revenue	**$ 3,204**	$ 3,138	$1,975
Net interest income	**8,768**	8,531	5,949
Total net revenue	**11,972**	11,669	7,924
Provision for credit losses	**354**	512	239
Noninterest expense	**6,825**	6,675	4,978
Income before income tax expense	**4,793**	4,482	2,707
Net income	**$ 2,884**	$ 2,780	$1,697
ROE	**27%**	31%	34%
ROA	**1.79**	1.84	1.53
Overhead ratio	**57**	57	63
Overhead ratio excluding core deposit intangibles[a]	**53**	53	59

(a) Regional Banking uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation results in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this inclusion would result in an improving overhead ratio over time, all things remaining equal. This non-GAAP ratio excludes Regional Banking's core deposit intangible amortization expense related to The Bank of New York transaction and the Bank One merger of $458 million, $496 million and $264 million for the years ended December 31, 2006, 2005 and 2004, respectively.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

Regional Banking Net income of $2.9 billion was up by $104 million from the prior year. Total net revenue of $12.0 billion was up by $303 million, or 3%, including the impact of a $233 million current-year loss resulting from $13.3 billion of mortgage loans transferred to held-for-sale and a prior-year loss of $120 million resulting from $3.3 billion of mortgage loans transferred to held-for-sale. Results benefited from The Bank of New York transaction; the acquisition of Collegiate Funding Services; growth in deposits and home equity loans; and increases in deposit-related fees and credit card sales. These benefits were offset partially by the sale of the insurance business, narrower spreads on loans, and a shift to narrower-spread deposit products. The Provision for credit losses decreased by $158 million, primarily the result of a $230 million special provision in the prior year related to Hurricane Katrina, which was offset partially by additional Allowance for loan losses related to the acquisition of loans from The Bank of New York and increased net charge-offs due to portfolio seasoning and deterioration in subprime mortgages. Noninterest expense of $6.8 billion was up by $150 million, or 2%, from the prior year. The increase was due to investments in the retail distribution network, The Bank of New York transaction and the acquisition of Collegiate Funding Services, partially offset by the sale of the insurance business, merger savings and operating efficiencies, and the absence of a $40 million prior-year charge related to the dissolution of a student loan joint venture.

2005 compared with 2004

Regional Banking Net income of $2.8 billion was up by $1.1 billion from the prior year, including the impact of the Merger, and a current-year loss of $120 million resulting from $3.3 billion of mortgage loans transferred to held-for-sale compared with a prior-year loss of $52 million resulting from $5.2 billion of mortgage loans transferred to held-for-sale. Growth related to the Merger was offset partially by the impact of a $230 million special provision for credit losses related to Hurricane Katrina. Total net revenue of $11.7 billion was up by $3.7 billion, benefiting from the Merger, wider spreads on increased deposit balances, higher deposit-related fees and increased loan balances. These benefits were offset partially by mortgage loan spread compression due

to rising short-term interest rates and a flat yield curve, which contributed to accelerated home equity loan payoffs. The Provision for credit losses increased by $273 million, primarily the result of the $230 million special provision related to Hurricane Katrina, a prior-year $87 million benefit associated with the Firm's exit of the manufactured home loan business and the Merger. These increases were offset partially by the impact of lower net charge-offs and improved credit trends. Noninterest expense of $6.7 billion was up by $1.7 billion as a result of the Merger, the continued investment in branch distribution and sales, and a $40 million charge related to the dissolution of a student loan joint venture, partially offset by merger savings and operating efficiencies.

Selected metrics

Year ended December 31, (in millions, except ratios and where otherwise noted)	2006	2005	2004[h]
Business metrics (in billions)			
Selected ending balances			
Home equity origination volume	**$ 51.9**	$ 54.1	$ 41.8
End-of-period loans owned			
Home equity	**85.7**	73.9	67.6
Mortgage	**30.1**	44.6	41.4
Business banking	**14.1**	12.8	12.5
Education	**10.3**	3.0	3.8
Other loans[a]	**2.7**	2.6	3.6
Total end of period loans	**142.9**	136.9	128.9
End-of-period deposits			
Checking	**68.7**	64.9	60.8
Savings	**92.4**	87.7	86.9
Time and other	**43.3**	29.7	24.2
Total end-of-period deposits	**204.4**	182.3	171.9
Average loans owned			
Home equity	**78.3**	69.9	42.9
Mortgage	**45.1**	45.4	40.6
Business banking	**13.2**	12.6	7.3
Education	**8.3**	2.8	2.1
Other loans[a]	**2.6**	3.1	6.5
Total average loans[b]	**147.5**	133.8	99.4
Average deposits			
Checking	**62.8**	61.7	43.7
Savings	**89.9**	87.5	66.5
Time and other	**37.5**	26.1	16.6
Total average deposits	**190.2**	175.3	126.8
Average assets	**160.8**	150.8	110.9
Average equity	**10.5**	9.1	5.0
Credit data and quality statistics			
30+ day delinquency rate[c][d]	**2.02%**	1.68%	1.47%
Net charge-offs			
Home equity	**$ 143**	$ 141	$ 79
Mortgage	**56**	25	19
Business banking	**91**	101	77
Other loans	**48**	28	552
Total net charge-offs	**338**	295	727
Net charge-off rate			
Home equity	**0.18%**	0.20%	0.18%
Mortgage	**0.12**	0.06	0.05
Business banking	**0.69**	0.80	1.05
Other loans	**0.59**	0.93	8.49
Total net charge-off rate[b]	**0.23**	0.23	0.75
Nonperforming assets[e][f][g]	**$ 1,725**	$ 1,282	$ 1,145

(a) Includes commercial loans derived from community development activities and, prior to July 1, 2006, insurance policy loans.
(b) Average loans include loans held-for-sale of $2.8 billion, $2.9 billion and $3.1 billion for the years ended December 31, 2006, 2005 and 2004, respectively. These amounts are not included in the net charge-off rate.
(c) Excludes delinquencies related to loans eligible for repurchase as well as loans repurchased from Governmental National Mortgage Association ("GNMA") pools that are insured by government agencies of $1.0 billion, $0.9 billion, and $0.9 billion at December 31, 2006, 2005 and 2004, respectively. These amounts are excluded as reimbursement is proceeding normally.
(d) Excludes loans that are 30 days past due and still accruing, which are insured by government agencies under the Federal Family Education Loan Program of $0.5 billion at December 31, 2006. The education loans past due 30 days were insignificant at December 31, 2005 and 2004. These amounts are excluded as reimbursement is proceeding normally.
(e) Excludes nonperforming assets related to loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by government agencies of $1.2 billion, $1.1 billion, and $1.5 billion at December 31, 2006, 2005, and 2004, respectively. These amounts are excluded as reimbursement is proceeding normally.
(f) Excludes loans that are 90 days past due and still accruing, which are insured by government agencies under the Federal Family Education Loan Program of $0.2 billion at December 31, 2006. The Education loans past due 90 days were insignificant at December 31, 2005 and 2004. These amounts are excluded as reimbursement is proceeding normally.
(g) Includes nonperforming loans held-for-sale related to mortgage banking activities of $11 million, $27 million, and $13 million at December 31, 2006, 2005 and 2004, respectively.
(h) 2004 results include six months of the combined Firm's results and six months heritage JPMorgan Chase results.

Retail branch business metrics

Year ended December 31, (in millions, except where otherwise noted)	2006	2005	2004[c]
Investment sales volume	**$ 14,882**	$11,144	$ 7,324
Number of:			
Branches	**3,079**	2,641	2,508
ATMs	**8,506**	7,312	6,650
Personal bankers[a]	**7,573**	7,067	5,750
Sales specialists[a]	**3,614**	3,214	2,638
Active online customers (in thousands)[b]	**5,715**	4,231	3,359
Checking accounts (in thousands)	**9,995**	8,793	8,124

(a) Excludes employees acquired as part of The Bank of New York transaction. Mapping of the existing Bank of New York acquired base is expected to be completed over the next year.
(b) Includes Mortgage Banking and Auto Finance online customers.
(c) 2004 results include six months of the combined Firm's results and six months heritage JPMorgan Chase results.

The following is a brief description of selected terms used by Regional Banking.

- **Personal bankers –** Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.
- **Sales specialists –** Retail branch product-specific experts who are licensed or specifically trained to assist in the sale of investments, mortgages, home equity lines and loans, and products tailored to small businesses.

Mortgage Banking

Selected income statement data

Year ended December 31, (in millions, except ratios and where otherwise noted)	2006	2005	2004[a]
Production revenue	**$ 833**	$ 744	$ 916
Net mortgage servicing revenue:			
Servicing revenue	**2,300**	2,115	2,070
Changes in MSR asset fair value:			
Due to inputs or assumptions in model	**165**	770	(248)
Other changes in fair value	**(1,440)**	(1,295)	(1,309)
Derivative valuation adjustments and other	**(544)**	(494)	361
Total net mortgage servicing revenue	**481**	1,096	874
Total net revenue	**1,314**	1,840	1,790
Noninterest expense	**1,341**	1,239	1,364
Income (loss) before income tax expense	**(27)**	601	426
Net income (loss)	**$ (17)**	$ 379	$ 269
ROE	**NM**	24%	17%
ROA	**NM**	1.69	1.10
Business metrics (in billions)			
Third-party mortgage loans serviced (ending)	**$ 526.7**	$ 467.5	$ 430.9
MSR net carrying value (ending)	**7.5**	6.5	5.1
Average mortgage loans held-for-sale	**12.8**	12.1	11.4
Average assets	**25.8**	22.4	24.4
Average equity	**1.7**	1.6	1.6
Mortgage origination volume by channel (in billions)			
Retail	**$ 40.4**	$ 46.3	$ 47.9
Wholesale	**32.8**	34.2	33.5
Correspondent (including negotiated transactions)	**45.9**	48.5	64.2
Total	**$ 119.1**	$ 129.0	$ 145.6

(a) 2004 results include six months of the combined Firm's results and six months heritage JPMorgan Chase results.

2006 compared with 2005

Mortgage Banking Net loss was $17 million compared with net income of $379 million in the prior year. Total net revenue of $1.3 billion was down by $526 million from the prior year due to a decline in net mortgage servicing revenue offset partially by an increase in production revenue. Production revenue was $833 million, up by $89 million, reflecting increased loan sales and wider gain on sale margins that benefited from a shift in the sales mix. Net mortgage servicing revenue, which includes loan servicing revenue, MSR risk management results and other changes in fair value, was $481 million compared with $1.1 billion in the prior year. Loan servicing revenue of $2.3 billion increased by $185 million on a 13% increase in third-party loans serviced. MSR risk management revenue of negative $379 million was down by $655 million from the prior year, including the impact of a $235 million negative valuation adjustment to the MSR asset in the third quarter of 2006 due to changes and refinements to assumptions used in the MSR valuation model. This result also reflected a fully hedged position in the current year. Other changes in fair value of the MSR asset, representing runoff of the asset against the realization of servicing cash flows, were negative $1.4 billion. Noninterest expense was $1.3 billion, up by $102 million, or 8%, due primarily to higher compensation expense related to an increase in the number of loan officers.

2005 compared with 2004

Mortgage Banking Net income was $379 million compared with $269 million in the prior year. Net revenue of $1.8 billion was up by $50 million from the prior year. Revenue comprises production revenue and net mortgage servicing revenue. Production revenue was $744 million, down by $172 million, due to an 11% decrease in mortgage originations. Net mortgage servicing revenue, which includes loan servicing revenue, MSR risk management results and other changes in fair value, was $1.1 billion compared with $874 million in the prior year. Loan servicing revenue of $2.1 billion increased by $45 million on an 8% increase in third-party loans serviced. MSR risk management revenue of $276 million was up by $163 million from the prior year, reflecting positive risk management results. Other changes in fair value of the MSR asset, representing runoff of the asset against the realization of servicing cash flows, were negative $1.3 billion. Noninterest expense of $1.2 billion was down by $125 million, or 9%, reflecting lower production volume and operating efficiencies.

Mortgage Banking origination channels comprise the following:

Retail – Borrowers who are buying or refinancing a home work directly with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by real estate brokers, home builders or other third parties.

Wholesale – A third-party mortgage broker refers loan applications to a mortgage banker at the Firm. Brokers are independent loan originators that specialize in finding and counseling borrowers but do not provide funding for loans.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions sell closed loans to the Firm.

Correspondent negotiated transactions ("CNT") – Mid- to large-sized mortgage lenders, banks and bank-owned mortgage companies sell servicing to the Firm on an as-originated basis. These transactions supplement traditional production channels and provide growth opportunities in the servicing portfolio in stable and rising rate periods.

Net Mortgage servicing revenue components:

Production income – Includes net gain or loss on sales of mortgage loans, and other production related fees.

Servicing revenue – Represents all revenues earned from servicing mortgage loans for third parties, including stated service fees, excess service fees, late fees, and other ancillary fees.

Changes in MSR asset fair value due to inputs or assumptions in model – Represents MSR asset fair value adjustments due to changes in market-based inputs, such as interest rates and volatility, as well as updates to valuation assumptions used in the valuation model.

Changes in MSR asset fair value due to other changes – Includes changes in the MSR value due to servicing portfolio runoff (or time decay). Effective January 1, 2006, the Firm implemented SFAS 156, adopting fair value for the MSR asset. For the years ended December 31, 2005 and 2004, this amount represents MSR asset amortization expense calculated in accordance with SFAS 140.

Derivative valuation adjustments and other – Changes in the fair value of derivative instruments used to offset the impact of changes in market-based inputs to the MSR valuation model.

MSR risk management results – Includes "Changes in MSR asset fair value due to inputs or assumptions in model" and "Derivative valuation adjustments and other."

Auto Finance

Selected income statement data

Year ended December 31, (in millions, except ratios and where otherwise noted)	2006	2005	2004[b]
Noninterest revenue	$ 368	$ 86	$ 68
Net interest income	1,171	1,235	1,009
Total net revenue	1,539	1,321	1,077
Provision for credit losses	207	212	210
Noninterest expense	761	671	483
Income before income tax expense	571	438	384
Net income	$ 346	$ 268	$ 233
ROE	14%	10%	9%
ROA	0.77	0.50	0.46
Business metrics (in billions)			
Auto originations volume	$ 19.3	$ 18.1	$ 23.5
End-of-period loans and lease related assets			
Loans outstanding	$ 39.3	$ 41.7	$ 50.9
Lease financing receivables	1.7	4.3	8.0
Operating lease assets	1.6	0.9	—
Total end-of-period loans and lease related assets	42.6	46.9	58.9
Average loans and lease related assets			
Loans outstanding[a]	$ 39.8	$ 45.5	$ 42.3
Lease financing receivables	2.9	6.2	9.0
Operating lease assets	1.3	0.4	—
Total average loans and lease related assets	44.0	52.1	51.3
Average assets	44.9	53.2	52.0
Average equity	2.4	2.7	2.5
Credit quality statistics			
30+ day delinquency rate	1.72%	1.66%	1.64%
Net charge-offs			
Loans	$ 231	$ 257	$ 219
Lease financing receivables	7	20	44
Total net charge-offs	238	277	263
Net charge-off rate			
Loans[a]	0.59%	0.57%	0.52%
Lease financing receivables	0.24	0.32	0.49
Total net charge-off rate[a]	0.56	0.54	0.51
Nonperforming assets	$ 177	$ 236	$ 240

(a) Average loans include loans held-for-sale of $0.5 billion, $0.7 billion and $0.2 billion for 2006, 2005 and 2004, respectively. These amounts are not included in the net charge-off rate.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

Total net income of $346 million was up by $78 million from the prior year, including the impact of a $50 million current-year loss and a $136 million prior-year loss related to loans transferred to held-for-sale. Total net revenue of $1.5 billion was up by $218 million, or 17%, reflecting higher automobile operating lease revenue and wider loan spreads on lower loan and direct finance lease balances. The provision for credit losses of $207 million decreased by $5 million from the prior year. Noninterest expense of $761 million increased by $90 million, or 13%, driven by increased depreciation expense on owned automobiles subject to operating leases, partially offset by operating efficiencies.

2005 compared with 2004

Total net income of $268 million was up by $35 million from the prior year, including the impact of a $136 million current-year loss related to loans transferred to held-for-sale. Total net revenue of $1.3 billion was up by $244 million, or 23%, reflecting higher automobile operating lease revenue and a benefit of $34 million from the sale of the $2 billion recreational vehicle loan portfolio. These increases were offset partially by narrower spreads. Noninterest expense of $671 million increased by $188, or 39%, driven by increased depreciation expense on owned automobiles subject to operating leases, offset partially by operating efficiencies.

CARD SERVICES

With more than 154 million cards in circulation and $153 billion in managed loans, Chase Card Services is one of the nation's largest credit card issuers. Customers used Chase cards for over $339 billion worth of transactions in 2006.

Chase offers a wide variety of general-purpose cards to satisfy the needs of individual consumers, small businesses and partner organizations, including cards issued with AARP, Amazon, Continental Airlines, Marriott, Southwest Airlines, Sony, United Airlines, Walt Disney Company and many other well-known brands and organizations. Chase also issues private-label cards with Circuit City, Kohl's, Sears Canada and BP.

Chase Paymentech Solutions, LLC, a joint venture with JPMorgan Chase and First Data Corporation, is the largest processor of MasterCard and Visa payments in the world, having handled over 18 billion transactions in 2006.

JPMorgan Chase uses the concept of "managed receivables" to evaluate the credit performance of its credit card loans, both loans on the balance sheet and loans that have been securitized. For further information, see Explanation and reconciliation of the Firm's use of non-GAAP financial measures on pages 32–33 of this Annual Report. Managed results exclude the impact of credit card securitizations on Total net revenue, the Provision for credit losses, net charge-offs and loan receivables. Securitization does not change reported Net income; however, it does affect the classification of items on the Consolidated statements of income and Consolidated balance sheets.

Selected income statement data – managed basis

Year ended December 31, (in millions, except ratios)	2006	2005	2004[c]
Revenue			
Credit card income	**$ 2,587**	$3,351	$2,179
All other income	**357**	212	192
Noninterest revenue	**2,944**	3,563	2,371
Net interest income	**11,801**	11,803	8,374
Total net revenue[a]	**14,745**	15,366	10,745
Provision for credit losses[b]	**4,598**	7,346	4,851
Noninterest expense			
Compensation expense	**1,003**	1,081	893
Noncompensation expense	**3,344**	3,170	2,485
Amortization of intangibles	**739**	748	505
Total noninterest expense[a]	**5,086**	4,999	3,883
Income before income tax expense[a]	**5,061**	3,021	2,011
Income tax expense	**1,855**	1,114	737
Net income	**$ 3,206**	$ 1,907	$ 1,274
Memo: Net securitization gains/ (amortization)	**$ 82**	$ 56	$ (8)
Financial metrics			
ROE	**23%**	16%	17%
Overhead ratio	**34**	33	36

(a) As a result of the integration of Chase Merchant Services and Paymentech merchant processing businesses into a joint venture, beginning in the fourth quarter of 2005, Total net revenue, Total noninterest expense and Income before income tax expense have been reduced to reflect the deconsolidation of Paymentech. There was no impact to Net income.
(b) 2005 includes a $100 million special provision related to Hurricane Katrina; the remaining unused portion was released in 2006.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

To illustrate underlying business trends, the following discussion of CS' performance assumes that the deconsolidation of Paymentech had occurred as of the beginning of 2004. The effect of the deconsolidation would have reduced Total net revenue, primarily in Noninterest revenue, and Total noninterest expense, but would not have had any impact on Net income for each period. The following table presents a reconciliation of CS' managed basis to an adjusted basis to disclose the effect of the deconsolidation of Paymentech on CS' results for the periods presented.

Reconciliation of Card Services' managed results to an adjusted basis to disclose the effect of the Paymentech deconsolidation

Year ended December 31, (in millions)	2006	2005	2004[a]
Noninterest revenue			
Managed for the period	**$ 2,944**	$ 3,563	$ 2,371
Adjustment for Paymentech	**—**	(422)	(276)
Adjusted Noninterest revenue	**$ 2,944**	$ 3,141	$ 2,095
Total net revenue			
Managed for the period	**$14,745**	$15,366	$10,745
Adjustment for Paymentech	**—**	(435)	(283)
Adjusted Total net revenue	**$14,745**	$14,931	$10,462
Total noninterest expense			
Managed for the period	**$ 5,086**	$ 4,999	$ 3,883
Adjustment for Paymentech	**—**	(389)	(252)
Adjusted Total noninterest expense	**$ 5,086**	$ 4,610	$ 3,631

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

Net income of $3.2 billion was up by $1.3 billion, or 68%, from the prior year. Results were driven by a lower provision for credit losses due to significantly lower bankruptcy filings.

End-of-period managed loans of $152.8 billion increased by $10.6 billion, or 7%, from the prior year. Average managed loans of $141.1 billion increased by $4.7 billion, or 3%, from the prior year. Compared with the prior year, both average managed and end-of-period managed loans continued to be affected negatively by higher customer payment rates. Management believes that contributing to the higher payment rates are the new minimum payment rules and a higher proportion of customers in rewards-based programs.

The current year benefited from organic growth and reflected acquisitions of two loan portfolios. The first portfolio was the Sears Canada credit card business, which closed in the fourth quarter of 2005. The Sears Canada portfolio's average managed loan balances were $2.1 billion in the current year and $291 million in the prior year. The second purchase was the Kohl's private label portfolio, which closed in the second quarter of 2006. The Kohl's portfolio average and period-end managed loan balances for 2006 were $1.2 billion and $2.5 billion, respectively.

Total net managed revenue of $14.7 billion was down by $186 million, or 1% from the prior year. Net interest income of $11.8 billion was flat to the prior year. Net interest income benefited from an increase in average managed loan balances and lower revenue reversals associated with lower charge-offs. These increases were offset by attrition of mature, higher spread balances as a result of higher payment rates and higher cost of funds on balance growth in promotional, introductory and transactor loan balances, which increased due to continued investment in marketing. Noninterest revenue of $2.9 billion was down

by $197 million, or 6%. Interchange income increased, benefiting from 12% higher charge volume, but was more than offset by higher volume-driven payments to partners, including Kohl's, and increased rewards expense (both of which are netted against interchange income).

The managed provision for credit losses was $4.6 billion, down by $2.7 billion, or 37%, from the prior year. This benefit was due to a significant decrease in net charge-offs of $2.4 billion, reflecting the continued low level of bankruptcy losses, partially offset by an increase in contractual net charge-offs. The provision also benefited from a release in the Allowance for loan losses in the current year of unused reserves related to Hurricane Katrina, compared with an increase in the Allowance for loan losses in the prior year. The managed net charge-off rate decreased to 3.33%, down from 5.21% in the prior year. The 30-day managed delinquency rate was 3.13%, up from 2.79% in the prior year.

Noninterest expense of $5.1 billion was up $476 million, or 10%, from the prior year due largely to higher marketing spending and acquisitions offset partially by merger savings.

2005 compared with 2004

Net income of $1.9 billion was up $633 million, or 50%, from the prior year due to the Merger. In addition, lower expenses driven by merger savings, stronger underlying credit quality and higher revenue from increased loan balances and charge volume were offset partially by the impact of increased bankruptcies.

Net managed revenue was $14.9 billion, up $4.5 billion, or 43%. Net interest income was $11.8 billion, up $3.4 billion, or 41%, primarily due to the Merger, and the acquisition of a private label portfolio. In addition, higher loan balances were offset partially by narrower loan spreads and the reversal of revenue related to increased bankruptcy losses. Noninterest revenue of $3.1 billion was up $1.0 billion, or 50%, due to the Merger and higher interchange income from higher charge volume, partially offset by higher volume-driven payments to partners and higher expense related to rewards programs.

The Provision for credit losses was $7.3 billion, up $2.5 billion, or 51%, primarily due to the Merger, and included the acquisition of a private label portfolio. The provision also increased due to record bankruptcy-related net charge-offs resulting from bankruptcy legislation which became effective on October 17, 2005. Finally, the Allowance for loan losses was increased in part by the special Provision for credit losses related to Hurricane Katrina. These factors were offset partially by lower contractual net charge-offs. Despite a record level of bankruptcy losses, the net charge-off rate improved. The managed net charge-off rate was 5.21%, down from 5.27% in the prior year. The 30-day managed delinquency rate was 2.79%, down from 3.70% in the prior year, driven primarily by accelerated loss recognition of delinquent accounts as a result of the bankruptcy reform legislation and strong underlying credit quality.

Noninterest expense of $4.6 billion increased by $1.0 billion, or 27%, primarily due to the Merger, which included the acquisition of a private label portfolio. Merger savings, including lower processing and compensation costs were offset partially by higher spending on marketing.

Selected metrics

Year ended December 31, (in millions, except headcount, ratios and where otherwise noted)	2006	2005	2004[d]
% of average managed outstandings:			
Net interest income	**8.36%**	8.65%	9.16%
Provision for credit losses	**3.26**	5.39	5.31
Noninterest revenue	**2.09**	2.61	2.59
Risk adjusted margin[a]	**7.19**	5.88	6.45
Noninterest expense	**3.60**	3.67	4.25
Pretax income (ROO)	**3.59**	2.21	2.20
Net income	**2.27**	1.40	1.39
Business metrics			
Charge volume (in billions)	**$ 339.6**	$ 301.9	$ 193.6
Net accounts opened (in thousands)[b]	**45,869**	21,056	7,523
Credit cards issued (in thousands)	**154,424**	110,439	94,285
Number of registered Internet customers	**22.5**	14.6	13.6
Merchant acquiring business[c]			
Bank card volume (in billions)	**$ 660.6**	$ 563.1	$ 396.2
Total transactions	**18,171**	15,499	9,049
Selected ending balances			
Loans:			
Loans on balance sheets	**$ 85,881**	$ 71,738	$ 64,575
Securitized loans	**66,950**	70,527	70,795
Managed loans	**$152,831**	$ 142,265	$ 135,370
Selected average balances			
Managed assets	**$148,153**	$ 141,933	$ 94,741
Loans:			
Loans on balance sheets	**$ 73,740**	$ 67,334	$ 38,842
Securitized loans	**67,367**	69,055	52,590
Managed loans	**$141,107**	$ 136,389	$ 91,432
Equity	**$ 14,100**	$ 11,800	$ 7,608
Headcount	**18,639**	18,629	19,598
Managed credit quality statistics			
Net charge-offs	**$ 4,698**	$ 7,100	$ 4,821
Net charge-off rate	**3.33%**	5.21%	5.27%
Managed delinquency ratios			
30+ days	**3.13%**	2.79%	3.70%
90+ days	**1.50**	1.27	1.72
Allowance for loan losses	**$ 3,176**	$ 3,274	$ 2,994
Allowance for loan losses to period-end loans	**3.70%**	4.56%	4.64%

(a) Represents Total net revenue less Provision for credit losses.
(b) 2006 includes approximately 21 million accounts from the acquisition of the Kohl's private label portfolio in the second quarter of 2006 and approximately 9 million accounts from the acquisition of the BP and Pier 1 Imports, Inc. private label portfolios in the fourth quarter of 2006. Fourth quarter of 2005 includes approximately 10 million accounts from the acquisition of the Sears Canada portfolio.
(c) Represents 100% of the merchant acquiring business.
(d) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The following is a brief description of selected business metrics within Card Services.

- **Charge volume** – Represents the dollar amount of cardmember purchases, balance transfers and cash advance activity.
- **Net accounts opened** – Includes originations, purchases and sales.
- **Merchant acquiring business** – Represents an entity that processes payments for merchants. JPMorgan Chase is a partner in Chase Paymentech Solutions, LLC.
  - **Bank card volume** – Represents the dollar amount of transactions processed for merchants.
  - **Total transactions** – Represents the number of transactions and authorizations processed for merchants.

The financial information presented below reconciles reported basis and managed basis to disclose the effect of securitizations.

Year ended December 31, (in millions)	2006	2005	2004[c]
Income statement data[a]			
Credit card income			
Reported basis for the period	**$ 6,096**	$ 6,069	$ 4,446
Securitization adjustments	**(3,509)**	(2,718)	(2,267)
Managed credit card income	**$ 2,587**	$ 3,351	$ 2,179
All other income			
Reported basis for the period	**$ 357**	$ 212	$ 278
Securitization adjustments	**—**	—	(86)
Managed All other income	**$ 357**	$ 212	$ 192
Net interest income			
Reported basis for the period	**$ 6,082**	$ 5,309	$ 3,123
Securitization adjustments	**5,719**	6,494	5,251
Managed net interest income	**$ 11,801**	$ 11,803	$ 8,374
Total net revenue			
Reported basis for the period	**$ 12,535**	$ 11,590	$ 7,847
Securitization adjustments	**2,210**	3,776	2,898
Managed Total net revenue	**$ 14,745**	$ 15,366	$ 10,745
Provision for credit losses			
Reported data for the period[b]	**$ 2,388**	$ 3,570	$ 1,953
Securitization adjustments	**2,210**	3,776	2,898
Managed Provision for credit losses[b]	**$ 4,598**	$ 7,346	$ 4,851
Balance sheet – average balances[a]			
Total average assets			
Reported data for the period	**$ 82,887**	$ 74,753	$ 43,657
Securitization adjustments	**65,266**	67,180	51,084
Managed average assets	**$ 148,153**	$ 141,933	$ 94,741
Credit quality statistics[a]			
Net charge-offs			
Reported net charge-offs data for the period	**$ 2,488**	$ 3,324	$ 1,923
Securitization adjustments	**2,210**	3,776	2,898
Managed net charge-offs	**$ 4,698**	$ 7,100	$ 4,821

(a) For a discussion of managed basis, see the non-GAAP financial measures discussion on pages 32–33 of this Annual Report.
(b) 2005 includes a $100 million special provision related to Hurricane Katrina, which was released in 2006.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

COMMERCIAL BANKING

Commercial Banking serves more than 30,000 clients, including corporations, municipalities, financial institutions and not-for-profit entities. These clients generally have annual revenues ranging from $10 million to $2 billion. Commercial bankers serve clients nationally throughout the RFS footprint and in offices located in other major markets.

Commercial Banking offers its clients industry knowledge, experience, a dedicated service model, comprehensive solutions and local expertise. The Firm's broad platform positions CB to deliver extensive product capabilities – including lending, treasury services, investment banking and asset management – to meet its clients' U.S. and international financial needs.

On October 1, 2006, JPMorgan Chase completed the acquisition of The Bank of New York's consumer, business banking and middle-market banking businesses, adding approximately $2.3 billion in loans and $1.2 billion in deposits.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2006	2005	2004[c]
Revenue			
Lending & deposit related fees	**$ 589**	$ 572	$ 438
Asset management, administration and commissions	**67**	57	30
All other income[a]	**417**	357	217
Noninterest revenue	**1,073**	986	685
Net interest income	**2,727**	2,502	1,593
Total net revenue	**3,800**	3,488	2,278
Provision for credit losses[b]	**160**	73	41
Noninterest expense			
Compensation expense	**740**	654	461
Noncompensation expense	**1,179**	1,137	831
Amortization of intangibles	**60**	65	34
Total noninterest expense	**1,979**	1,856	1,326
Income before income tax expense	**1,661**	1,559	911
Income tax expense	**651**	608	350
Net income	**$ 1,010**	$ 951	$ 561
Financial ratios			
ROE	**18%**	28%	27%
ROA	**1.75**	1.82	1.72
Overhead ratio	**52**	53	58

(a) IB-related and commercial card revenues are included in All other income.
(b) 2005 includes a $35 million special provision related to Hurricane Katrina.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Commercial Banking operates in 14 of the top 15 U.S. metropolitan areas and is divided into three businesses: Middle Market Banking, Mid-Corporate Banking and Real Estate Banking. General coverage for corporate clients is provided by Middle Market Banking, which covers clients with annual revenues generally ranging between $10 million and $500 million. Mid-Corporate Banking covers clients with annual revenues generally ranging between $500 million and $2 billion and focuses on clients that have broader investment-banking needs. The third segment, Real Estate Banking, serves large regional and national real estate customers across the United States. In addition to these three customer segments, CB offers several products to the Firm's entire customer base:

- Asset-based financing, syndications and collateral analysis through Chase Business Credit.
- A variety of equipment finance and leasing products, with specialties in aircraft finance, public sector, healthcare and information technology through Chase Equipment Leasing.
- Alternative capital strategies that provide a broader range of financing options, such as mezzanine and second lien loans and preferred equity, through Chase Capital Corporation.

With a large customer base across these segments and products, management believes the CB loan portfolio is highly diversified across a broad range of industries and geographic locations.

2006 compared with 2005

Net income of $1.0 billion increased by $59 million, or 6%, from the prior year due to higher revenue, partially offset by higher expense and provision for credit losses.

Record net revenue of $3.8 billion increased 9%, or $312 million. Net interest income increased to $2.7 billion, primarily driven by higher liability balances and loan volumes, partially offset by loan spread compression and a shift to narrower-spread liability products. Noninterest revenue was $1.1 billion, up $87 million, or 9%, due to record IB-related revenue and higher commercial card revenue.

Revenue grew for each CB business compared with the prior year, driven by increased treasury services, investment banking and lending revenue. Compared with the prior year, Middle Market Banking revenue of $2.5 billion increased by $177 million, or 8%. Mid-Corporate Banking revenue of $656 million increased by $105 million, or 19%, and Real Estate Banking revenue of $458 million increased by $24 million, or 6%.

Provision for credit losses was $160 million, up from $73 million in the prior year, reflecting portfolio activity and the establishment of additional allowance for loan losses related to loans acquired from The Bank of New York, partially offset by a release of the unused portion of the special reserve established in 2005 for Hurricane Katrina. Net charge-offs were flat compared with the prior year. Nonperforming loans declined 56%, to $121 million.

Total noninterest expense of $2.0 billion increased by $123 million, or 7%, from last year, primarily related to incremental Compensation expense related to SFAS 123R and increased expense resulting from higher client usage of Treasury Services' products.

2005 compared with 2004

Net income of $951 million was up $390 million, or 70%, from the prior year, primarily due to the Merger.

Total net revenue of $3.5 billion increased by $1.2 billion, or 53%, primarily as a result of the Merger. In addition to the overall increase from the Merger, Net interest income of $2.5 billion was positively affected by wider spreads on higher volume related to liability balances and increased loan volumes, partially offset by narrower loan spreads. Noninterest revenue of $986 million was positively impacted by the Merger and higher IB revenue, partially offset by lower deposit-related fees due to higher interest rates.

Each business within CB demonstrated revenue growth over the prior year, primarily due to the Merger. Middle Market Banking revenue was $2.4 billion, an increase of $861 million, or 58%, over the prior year; Mid-Corporate Banking revenue was $551 million, an increase of $183 million, or 50%; and

Real Estate Banking revenue was $434 million, up $162 million, or 60%. In addition to the Merger, revenue was higher for each business due to wider spreads and higher volume related to liability balances and increased investment banking revenue, partially offset by narrower loan spreads.

Provision for credit losses of $73 million increased by $32 million, primarily due to a special provision related to Hurricane Katrina, increased loan balances and refinements in the data used to estimate the allowance for credit losses. The credit quality of the portfolio was strong with net charge-offs of $26 million, down $35 million from the prior year, and nonperforming loans of $272 million were down $255 million, or 48%.

Total noninterest expense of $1.9 billion increased by $530 million, or 40%, primarily due to the Merger and to an increase in allocated unit costs for Treasury Services' products.

Selected metrics

Year ended December 31, (in millions, except headcount and ratios)	2006	2005	2004[d]
Revenue by product:			
Lending	**$ 1,344**	$ 1,215	$ 805
Treasury services	**2,243**	2,062	1,335
Investment banking	**253**	206	118
Other	**(40)**	5	20
Total Commercial Banking revenue	**$ 3,800**	$ 3,488	$ 2,278
IB revenue, gross[a]	**716**	552	NA
Revenue by business:			
Middle Market Banking	**$ 2,535**	$ 2,358	$ 1,497
Mid-Corporate Banking	**656**	551	368
Real Estate Banking	**458**	434	272
Other	**151**	145	141
Total Commercial Banking revenue	**$ 3,800**	$ 3,488	$ 2,278
Selected average balances			
Total assets	**$ 57,754**	$ 52,358	$ 32,547
Loans and leases[b]	**53,596**	48,117	28,914
Liability balances[c]	**73,613**	66,055	47,646
Equity	**5,702**	3,400	2,093
Average loans by business:			
Middle Market Banking	**$ 33,225**	$ 31,193	$ 17,500
Mid-Corporate Banking	**8,632**	6,388	4,354
Real Estate Banking	**7,566**	6,909	4,047
Other	**4,173**	3,627	3,013
Total Commercial Banking loans	**$ 53,596**	$ 48,117	$ 28,914
Headcount	**4,459**	4,418	4,527
Credit data and quality statistics:			
Net charge-offs	**$ 27**	$ 26	$ 61
Nonperforming loans	**121**	272	527
Allowance for loan losses	**1,519**	1,392	1,322
Allowance for lending-related commitments	**187**	154	169
Net charge-off rate[b]	**0.05%**	0.05%	0.21%
Allowance for loan losses to average loans[b]	**2.86**	2.91	4.57
Allowance for loan losses to nonperforming loans	**1,255**	512	251
Nonperforming loans to average loans	**0.23**	0.57	1.82

(a) Represents the total revenue related to investment banking products sold to CB clients.
(b) Average loans include loans held-for-sale of $442 million and $283 million for 2006 and 2005, respectively. This information is not available for 2004. Loans held-for-sale amounts are not included in the net charge-off rate or allowance coverage ratios.
(c) Liability balances include deposits and deposits swept to on–balance sheet liabilities.
(d) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Commercial Banking revenues comprise the following:

Lending includes a variety of financing alternatives, which are often provided on a basis secured by receivables, inventory, equipment, real estate or other assets. Products include:

- Term loans
- Revolving lines of credit
- Bridge financing
- Asset-based structures
- Leases

Treasury services includes a broad range of products and services enabling clients to transfer, invest and manage the receipt and disbursement of funds, while providing the related information reporting. These products and services include:

- U.S. dollar and multi-currency clearing
- ACH
- Lockbox
- Disbursement and reconciliation services
- Check deposits
- Other check and currency-related services
- Trade finance and logistics solutions
- Commercial card
- Deposit products, sweeps and money market mutual funds

Investment banking provides clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools, through:

- Advisory
- Equity underwriting
- Loan syndications
- Investment-grade debt
- Asset-backed securities
- Private placements
- High-yield bonds
- Derivatives
- Foreign exchange hedges
- Securities sales

TREASURY & SECURITIES SERVICES

Treasury & Securities Services is a global leader in providing transaction, investment and information services to support the needs of institutional clients worldwide. TSS is one of the largest cash management providers in the world and a leading global custodian. Treasury Services provides a variety of cash management products, trade finance and logistics solutions, wholesale card products, and short-term liquidity management capabilities to small and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with the Commercial Banking, Retail Financial Services and Asset Management businesses to serve clients firmwide. As a result, certain TS revenues are included in other segments' results. Worldwide Securities Services stores, values, clears and services securities and alternative investments for investors and broker-dealers; and manages Depositary Receipt programs globally.

As a result of the transaction with The Bank of New York on October 1, 2006, selected corporate trust businesses were transferred from TSS to the Corporate segment and are reported in discontinued operations for all periods presented.

Selected income statement data

Year ending December 31, (in millions, except ratios)	2006	2005	2004[c]
Revenue			
Lending & deposit related fees	**$ 735**	$ 731	$ 649
Asset management, administration and commissions	**2,692**	2,409	1,963
All other income	**612**	519	361
Noninterest revenue	**4,039**	3,659	2,973
Net interest income	**2,070**	1,880	1,225
Total net revenue	**6,109**	5,539	4,198
Provision for credit losses	**(1)**	—	7
Credit reimbursement to IB[a]	**(121)**	(154)	(90)
Noninterest expense			
Compensation expense	**2,198**	1,874	1,414
Noncompensation expense	**1,995**	2,095	2,254
Amortization of intangibles	**73**	81	58
Total noninterest expense	**4,266**	4,050	3,726
Income before income tax expense	**1,723**	1,335	375
Income tax expense	**633**	472	98
Net income	**$ 1,090**	$ 863	$ 277
Financial ratios			
ROE	**48%**	57%	14%
Overhead ratio	**70**	73	89
Pretax margin ratio[b]	**28**	24	9

(a) TSS is charged a credit reimbursement related to certain exposures managed within the IB credit portfolio on behalf of clients shared with TSS. For a further discussion, see Credit reimbursement on page 35 of this Annual Report.
(b) Pretax margin represents Income before income tax expense divided by Total net revenue, which is a measure of pretax performance and another basis by which management evaluates its performance and that of its competitors.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

Net income was $1.1 billion, an increase of $227 million, or 26%, from the prior year. Earnings benefited from increased revenue, and was offset by higher compensation expense and the absence of prior-year charges of $58 million (after-tax) related to the termination of a client contract.

Total net revenue was $6.1 billion, an increase of $570 million, or 10%. Noninterest revenue was $4.0 billion, up by $380 million, or 10%. The improvement was due primarily to an increase in assets under custody to $13.9 trillion, which was driven by market value appreciation and new business. Also contributing to the improvement was growth in depositary receipts, securities lending, and global clearing, all of which were driven by a combination of increased product usage by existing clients and new business. Net interest income was $2.1 billion, an increase of $190 million, or 10%, benefiting from a 22% increase in average liability balances, partially offset by the impact of growth in narrower-spread liability products.

Treasury Services Total net revenue of $2.8 billion was up 4%. Worldwide Securities Services Total net revenue of $3.3 billion grew by $473 million, or 17%. TSS firmwide Total net revenue, which includes Treasury Services Total net revenue recorded in other lines of business, grew to $8.6 billion, up by $778 million, or 10%. Treasury Services firmwide Total net revenue grew to $5.2 billion, an increase of $305 million, or 6%.

Total noninterest expense was $4.3 billion, up $216 million, or 5%. The increase was due to higher compensation expense related to increased client activity, business growth, investment in new product platforms and incremental expense related to SFAS 123R, partially offset by the absence of prior-year charges of $93 million related to the termination of a client contract.

2005 compared with 2004

Net income was $863 million, an increase of $586 million, or 212%. Primarily driving the improvement in revenue were the Merger, business growth, and widening spreads on and growth in average liability balances. Noninterest expense increased primarily due to the Merger and higher compensation expense. Results for 2005 also included charges of $58 million (after-tax) to terminate a client contract. Results for 2004 also included software-impairment charges of $97 million (after-tax) and a gain of $10 million (after-tax) on the sale of a business.

Total net revenue of $5.5 billion increased $1.3 billion, or 32%. Net interest income grew to $1.9 billion, up $655 million, due to wider spreads on liability balances, a change in the corporate deposit pricing methodology in 2004 and growth in average liability balances. Noninterest revenue of $3.7 billion increased by $686 million, or 23%, due to product growth across TSS, the Merger and the acquisition of Vastera. Leading the product revenue growth was an increase in assets under custody to $10.7 trillion, primarily driven by market value appreciation and new business, along with growth in wholesale card, securities lending, foreign exchange, trade, clearing and ACH revenues. Partially offsetting this growth in noninterest revenue was a decline in deposit-related fees due to higher interest rates and the absence, in the current period, of a gain on the sale of a business.

TS Total net revenue of $2.7 billion grew by $635 million, and WSS Total net revenue of $2.8 billion grew by $706 million. TSS firmwide Total net revenue, which includes TS Total net revenue recorded in other lines of business, grew to $7.8 billion, up $2.1 billion, or 38%. Treasury Services firmwide Total net revenue grew to $4.9 billion, up $1.4 billion, or 41%.

Credit reimbursement to the Investment Bank was $154 million, an increase of $64 million, primarily as a result of the Merger. TSS is charged a credit reimbursement related to certain exposures managed within the Investment Bank credit portfolio on behalf of clients shared with TSS.

Total noninterest expense of $4.1 billion was up $324 million, or 9%, due to the Merger, increased compensation expense resulting from new business growth and the Vastera acquisition, and charges of $93 million to terminate a client contract. Partially offsetting these increases were higher product unit costs charged to other lines of business, primarily Commercial Banking, lower allocations of Corporate segment expenses, merger savings and business efficiencies. The prior year included software-impairment charges of $155 million.

Treasury & Securities Services firmwide metrics include certain TSS product revenues and liability balances reported in other lines of business for customers who are also customers of those lines of business. Management reviews firmwide metrics such as liability balances, revenues and overhead ratios in assessing financial performance for TSS as such firmwide metrics capture the firmwide impact of TS' and TSS' products and services. Management believes such firmwide metrics are necessary in order to understand the aggregate TSS business.

Selected metrics

Year ending December 31, (in millions, except headcount, ratio data and where otherwise noted)	2006	2005	2004[g]
Revenue by business			
Treasury Services	**$ 2,792**	$ 2,695	$ 2,060
Worldwide Securities Services	**3,317**	2,844	2,138
Total net revenue	**$ 6,109**	$ 5,539	$ 4,198
Business metrics			
Assets under custody (in billions)	**$ 13,903**	$ 10,662	$ 9,300
Number of:			
US$ ACH transactions originated (in millions)	**3,503**	2,966	1,994
Total US$ clearing volume (in thousands)	**104,846**	95,713	81,162
International electronic funds transfer volume (in thousands)[a]	**145,325**	89,537	45,654
Wholesale check volume (in millions)	**3,409**	3,735	NA
Wholesale cards issued (in thousands)[b]	**17,228**	13,206	11,787
Selected balance sheets (average)			
Total assets	**$ 31,760**	$ 28,206	$ 24,815
Loans	**15,564**	12,349	9,840
Liability balances[c]	**189,540**	154,731	115,514
Equity	**2,285**	1,525	1,989
Headcount	**25,423**	22,207	20,467
TSS firmwide metrics			
Treasury Services firmwide revenue[d]	**$ 5,242**	$ 4,937	$ 3,508
Treasury & Securities Services firmwide revenue[d]	**8,559**	7,781	5,646
Treasury Services firmwide overhead ratio[e]	**56%**	58%	65%
Treasury & Securities Services firmwide overhead ratio[e]	**62**	65	78
Treasury Services firmwide liability balances (average)[f]	**$162,020**	$139,579	$102,785
Treasury & Securities Services firmwide liability balances[f]	**262,678**	220,781	163,169

(a) International electronic funds transfer includes non-US$ ACH and clearing volume.
(b) Wholesale cards issued include domestic commercial card, stored value card, prepaid card, and government electronic benefit card products.
(c) Liability balances include deposits and deposits swept to on-balance sheet liabilities.
(d) Firmwide revenue includes TS revenue recorded in the CB, Regional Banking and AM lines of business (see below) and excludes FX revenues recorded in the IB for TSS-related FX activity.

(in millions)	2006	2005	2004[g]
Treasury Services revenue reported in CB	**$ 2,243**	$ 2,062	$ 1,335
Treasury Services revenue reported in other lines of business	**207**	180	113

TSS firmwide FX revenue, which includes FX revenue recorded in TSS and FX revenue associated with TSS customers who are FX customers of the IB, was $445 million, $382 million and $320 million for the years ended December 31, 2006, 2005 and 2004, respectively.

(e) Overhead ratios have been calculated based upon firmwide revenues and TSS and TS expenses, respectively, including those allocated to certain other lines of business. FX revenues and expenses recorded in the IB for TSS-related FX activity are not included in this ratio.
(f) Firmwide liability balances include TS' liability balances recorded in certain other lines of business. Liability balances associated with TS customers who are also customers of the CB line of business are not included in TS liability balances.
(g) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

ASSET MANAGEMENT

With assets under supervision of $1.3 trillion, AM is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including both money-market instruments and bank deposits. AM also provides trust and estate and banking services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2006	2005	2004[b]
Revenue			
Asset management, administration and commissions	**$ 5,295**	$ 4,189	$ 3,140
All other income	**521**	394	243
Noninterest revenue	**5,816**	4,583	3,383
Net interest income	**971**	1,081	796
Total net revenue	**6,787**	5,664	4,179
Provision for credit losses	**(28)**	(56)	(14)
Noninterest expense			
Compensation expense	**2,777**	2,179	1,579
Noncompensation expense	**1,713**	1,582	1,502
Amortization of intangibles	**88**	99	52
Total noninterest expense	**4,578**	3,860	3,133
Income before income tax expense	**2,237**	1,860	1,060
Income tax expense	**828**	644	379
Net income	**$ 1,409**	$ 1,216	$ 681
Financial ratios			
ROE	**40%**	51%	17%
Overhead ratio	**67**	68	75
Pretax margin ratio[a]	**33**	33	25

(a) Pretax margin represents Income before income tax expense divided by Total net revenue, which is a measure of pretax performance and another basis by which management evaluates its performance and that of its competitors.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

Net income was a record $1.4 billion, up by $193 million, or 16%, from the prior year. Improved results were driven by increased revenue offset partially by higher performance-based compensation expense, incremental expense from the adoption of SFAS 123R and the absence of a tax credit recognized in the prior year.

Total net revenue was a record $6.8 billion, up by $1.1 billion, or 20%, from the prior year. Noninterest revenue, principally fees and commissions, of $5.8 billion was up by $1.2 billion, or 27%. This increase was due largely to increased assets under management and higher performance and placement fees. Net interest income was $971 million, down by $110 million, or 10%, from the prior year. The decline was due primarily to narrower spreads on deposit products and the absence of BrownCo, partially offset by higher deposit and loan balances.

Institutional revenue grew 41%, to $2.0 billion, due to net asset inflows and higher performance fees. Private Bank revenue grew 13%, to $1.9 billion, due to increased placement activity, higher asset management fees and higher deposit balances, partially offset by narrower average spreads on deposits. Retail revenue grew 22%, to $1.9 billion, primarily due to net asset inflows, partially offset by the sale of BrownCo. Private Client Services revenue decreased 1%, to $1.0 billion, as higher deposit and loan balances were more than offset by narrower average deposit and loan spreads.

Provision for credit losses was a benefit of $28 million compared with a benefit of $56 million in the prior year. The current-year benefit reflects a high level of recoveries and stable credit quality.

Total noninterest expense of $4.6 billion was up by $718 million, or 19%, from the prior year. The increase was due to higher performance-based compensation, incremental expense related to SFAS 123R, increased salaries and benefits related to business growth, and higher minority interest expense related to Highbridge, partially offset by the absence of BrownCo.

2005 compared with 2004

Net income of $1.2 billion was up $535 million from the prior year due to the Merger and increased revenue, partially offset by higher compensation expense.

Total net revenue was $5.7 billion, up $1.5 billion, or 36%. Noninterest revenue, primarily fees and commissions, of $4.6 billion was up $1.2 billion, principally due to the Merger, the acquisition of a majority interest in Highbridge in 2004, net asset inflows and global equity market appreciation. Net interest income of $1.1 billion was up $285 million, primarily due to the Merger, higher deposit and loan balances, partially offset by narrower deposit spreads.

Private Bank revenue grew 9%, to $1.7 billion. Retail revenue grew 30%, to $1.5 billion. Institutional revenue grew 57%, to $1.4 billion, due to the acquisition of a majority interest in Highbridge. Private Client Services revenue grew 88%, to $1.0 billion.

Provision for credit losses was a benefit of $56 million, compared with a benefit of $14 million in the prior year, due to lower net charge-offs and refinements in the data used to estimate the allowance for credit losses.

Total noninterest expense of $3.9 billion increased by $727 million, or 23%, reflecting the Merger, the acquisition of Highbridge and increased compensation expense related primarily to higher performance-based incentives.

Selected metrics

Year ended December 31, (in millions, except headcount, ranking data, and where otherwise noted)	2006	2005	2004[e]
Revenue by client segment			
Institutional	**$ 1,972**	$ 1,395	$ 891
Retail	**1,885**	1,544	1,184
Private Bank	**1,907**	1,689	1,554
Private Client Services	**1,023**	1,036	550
Total net revenue	**$ 6,787**	$ 5,664	$ 4,179
Business metrics			
Number of:			
Client advisors	**1,506**	1,484	1,377
Retirement planning services participants	**1,362,000**	1,299,000	918,000
% of customer assets in 4 & 5 Star Funds[a]	**58%**	46%	48%
% of AUM in 1st and 2nd quartiles:[b]			
1 year	**83**	69	66
3 years	**77**	68	71
5 years	**79**	74	68
Selected average balance sheets data			
Total assets	**$ 43,635**	$ 41,599	$ 37,751
Loans[c]	**26,507**	26,610	21,545
Deposits[c][d]	**50,607**	42,123	32,431
Equity	**3,500**	2,400	3,902
Headcount	**13,298**	12,127	12,287
Credit data and quality statistics			
Net charge-offs (recoveries)	**$ (19)**	$ 23	$ 72
Nonperforming loans	**39**	104	79
Allowance for loan losses	**121**	132	216
Allowance for lending-related commitments	**6**	4	5
Net charge-off (recovery) rate	**(0.07)%**	0.09%	0.33%
Allowance for loan losses to average loans	**0.46**	0.50	1.00
Allowance for loan losses to nonperforming loans	**310**	127	273
Nonperforming loans to average loans	**0.15**	0.39	0.37

(a) Derived from Morningstar for the United States; Micropal for the United Kingdom, Luxembourg, Hong Kong and Taiwan; and Nomura for Japan.
(b) Quartile rankings sourced from Lipper for the United States and Taiwan; Micropal for the United Kingdom, Luxembourg, Hong Kong and Taiwan; and Nomura for Japan.
(c) The sale of BrownCo, which closed on November 30, 2005, included $3.0 billion in both loans and deposits.
(d) Reflects the transfer in 2005 of certain consumer deposits from RFS to AM.
(e) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

AM's client segments comprise the following:

Institutional brings comprehensive global investment services – including asset management, pension analytics, asset-liability management and active risk budgeting strategies – to corporate and public institutions, endowments, foundations, not-for-profit organizations and governments worldwide.

Retail provides worldwide investment management services and retirement planning and administration through third-party and direct distribution of a full range of investment vehicles.

The **Private Bank** addresses every facet of wealth management for ultra-high-net-worth individuals and families worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty-wealth advisory services.

Private Client Services offers high-net-worth individuals, families and business owners in the United States comprehensive wealth management solutions, including investment management, capital markets and risk management, tax and estate planning, banking, and specialty-wealth advisory services.

Assets under supervision

2006 compared with 2005

Assets under supervision ("AUS") were $1.3 trillion, up 17%, or $198 billion, from the prior year. Assets under management ("AUM") were $1.0 trillion, up 20%, or $166 billion, from the prior year. The increase was the result of net asset inflows in the Retail segment, primarily in equity-related products, Institutional segment flows, primarily in liquidity products, and market appreciation. Custody, brokerage, administration and deposit balances were $334 billion, up by $32 billion. The Firm also has a 43% interest in American Century Companies, Inc., whose AUM totaled $103 billion and $101 billion at December 31, 2006 and 2005, respectively.

2005 compared with 2004

AUS at December 31, 2005, were $1.1 trillion, up 4%, or $43 billion, from the prior year despite a $33 billion reduction due to the sale of BrownCo. AUM were $847 billion, up 7%. The increase was primarily the result of net asset inflows in equity-related products and global equity market appreciation. Custody, brokerage, administration, and deposits were $302 billion, down $13 billion due to a $33 billion reduction from the sale of BrownCo. The Firm also has a 43% interest in American Century Companies, Inc., whose AUM totaled $101 billion and $98 billion at December 31, 2005 and 2004, respectively.

Assets under supervision[a] (in billions) As of or for the year ended December 31,	**2006**	2005	2004
Assets by asset class			
Liquidity[b]	**$ 311**	$ 238	$ 232
Fixed income	**175**	165	171
Equities & balanced	**427**	370	326
Alternatives	**100**	74	62
Total Assets under management	**1,013**	847	791
Custody/brokerage/administration/deposits	**334**	302	315
Total Assets under supervision	**$ 1,347**	$ 1,149	$ 1,106
Assets by client segment			
Institutional[c]	**$ 538**	$ 481	$ 466
Retail[c]	**259**	169	133
Private Bank	**159**	145	139
Private Client Services	**57**	52	53
Total Assets under management	**$ 1,013**	$ 847	$ 791
Institutional[c]	**$ 539**	$ 484	$ 487
Retail[c]	**343**	245	221
Private Bank	**357**	318	304
Private Client Services	**108**	102	94
Total Assets under supervision	**$ 1,347**	$ 1,149	$ 1,106
Assets by geographic region			
U.S./Canada	**$ 630**	$ 562	$ 554
International	**383**	285	237
Total Assets under management	**$ 1,013**	$ 847	$ 791
U.S./Canada	**$ 889**	$ 805	$ 815
International	**458**	344	291
Total Assets under supervision	**$ 1,347**	$ 1,149	$ 1,106
Mutual fund assets by asset class			
Liquidity	**$ 255**	$ 182	$ 183
Fixed income	**46**	45	41
Equities	**206**	150	104
Total mutual fund assets	**$ 507**	$ 377	$ 328
Assets under management rollforward[d]			
Beginning balance, January 1	**$ 847**	$ 791	$ 561
Flows:			
Liquidity	**44**	8	3
Fixed income	**11**	—	(8)
Equities, balanced and alternative	**34**	24	14
Acquisitions/divestitures[e]	**—**	—	183
Market/performance/other impacts	**77**	24	38
Ending balance, December 31	**$ 1,013**	$ 847	$ 791
Assets under supervision rollforward[d]			
Beginning balance, January 1	**$ 1,149**	$ 1,106	$ 764
Net asset flows	**102**	49	42
Acquisitions/divestitures[f]	**—**	(33)	221
Market/performance/other impacts	**96**	27	79
Ending balance, December 31	**$ 1,347**	$ 1,149	$ 1,106

(a) Excludes Assets under management of American Century Companies, Inc.
(b) 2006 data reflects the reclassification of $19 billion of assets under management into liquidity from other asset classes. Prior period data were not restated.
(c) In 2006, assets under management of $22 billion from Retirement planning services has been reclassified from the Institutional client segment to the Retail client segment in order to be consistent with the revenue by client segment reporting.
(d) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(e) Reflects the Merger with Bank One ($176 billion) and the acquisition of a majority interest in Highbridge ($7 billion) in 2004.
(f) Reflects the sale of BrownCo ($33 billion) in 2005, and the Merger with Bank One ($214 billion) and the acquisition of a majority interest in Highbridge ($7 billion) in 2004.

CORPORATE

The Corporate sector comprises Private Equity, Treasury, corporate staff units and expenses that are centrally managed. Private Equity includes the JPMorgan Partners and ONE Equity Partners businesses. Treasury manages the structural interest rate risk and investment portfolio for the Firm. The corporate staff units include Central Technology and Operations, Internal Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Office of the General Counsel, Corporate Real Estate and General Services, Risk Management, and Strategy and Development. Other centrally managed expenses include the Firm's occupancy and pension-related expenses, net of allocations to the business.

On August 1, 2006, the buyout and growth equity professionals of JPMorgan Partners ("JPMP") formed an independent firm, CCMP Capital, LLC ("CCMP"), and the venture professionals separately formed an independent firm, Panorama Capital, LLC ("Panorama"). The investment professionals of CCMP and Panorama continue to manage the former JPMP investments pursuant to a management agreement with the Firm.

On October 1, 2006, the Firm completed the exchange of selected corporate trust businesses, including trustee, paying agent, loan agency and document management services, for the consumer, business banking and middle-market banking businesses of The Bank of New York. These corporate trust businesses, which were previously reported in TSS, are now reported as discontinued operations for all periods presented within Corporate. The related balance sheet and income statement activity were transferred to the Corporate segment commencing with the second quarter of 2006. Periods prior to the second quarter of 2006 have been revised to reflect this transfer.

Selected income statement data

Year ended December 31, (in millions)	2006	2005	2004[f]
Revenue			
Principal transactions	**$ 1,175**	$ 1,524	$ 1,542
Securities gains (losses)	**(608)**	(1,487)	332
All other income[a]	**485**	1,583	109
Noninterest revenue	**1,052**	1,620	1,983
Net interest income	**(1,044)**	(2,756)	(1,214)
Total net revenue	**8**	(1,136)	769
Provision for credit losses[b]	**(1)**	10	748
Noninterest expense			
Compensation expense	**2,626**	3,148	2,426
Noncompensation expense[c]	**2,351**	5,962	7,418
Merger costs	**305**	722	1,365
Subtotal	**5,282**	9,832	11,209
Net expenses allocated to other businesses	**(4,141)**	(4,505)	(4,839)
Total noninterest expense	**1,141**	5,327	6,370
Income (loss) from continuing operations before income tax expense	**(1,132)**	(6,473)	(6,349)
Income tax expense (benefit)[d]	**(1,179)**	(2,690)	(2,661)
Income (loss) from continuing operations	**47**	(3,783)	(3,688)
Income from discontinued operations[e]	**795**	229	206
Net income (loss)	**$ 842**	$ (3,554)	$(3,482)

(a) Includes a gain of $103 million in 2006 related to the initial public offering of Mastercard, and a gain of $1.3 billion on the sale of BrownCo in 2005.
(b) 2004 includes $858 million related to accounting policy conformity adjustments in connection with the Merger.
(c) Includes insurance recoveries related to material legal proceedings of $512 million and $208 million in 2006 and 2005, respectively. Includes litigation reserve charges of $2.8 billion and $3.7 billion in 2005 and 2004, respectively.
(d) Includes tax benefits recognized upon resolution of tax audits.
(e) Includes a $622 million gain from exiting the corporate trust business in the fourth quarter of 2006.
(f) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

2006 compared with 2005

Net income was $842 million compared with a net loss of $3.6 billion in the prior year. In comparison with the prior year, Private Equity earnings was $627 million, down from $821 million; Treasury net loss was $560 million compared with a net loss of $2.0 billion; the net loss in Other Corporate (including Merger costs) was $20 million compared with a net loss of $2.6 billion; and the Net income from discontinued operations was $795 million compared with $229 million.

Total net revenue was $8 million, as compared with a negative $1.1 billion in the prior year. Net interest income was a negative $1.0 billion compared with negative $2.8 billion in the prior year. Treasury was the primary driver of the improvement, with Net interest income of negative $140 million compared with negative $1.7 billion in the prior year, benefiting primarily from an improvement in Treasury's net interest spread and an increase in available-for-sale securities. Noninterest revenue was $1.1 billion compared with $1.6 billion, reflecting the absence of the $1.3 billion gain on the sale of BrownCo last year and lower Private Equity gains of $1.3 billion compared with gains of $1.7 billion in the prior year. These declines were offset by $619 million in securities losses in Treasury compared with securities losses of $1.5 billion in the prior year and a gain of $103 million related to the sale of Mastercard shares in its initial public offering in the current year.

Total noninterest expense was $1.1 billion, down by $4.2 billion from $5.3 billion in the prior year. Insurance recoveries relating to certain material litigation were $512 million in the current year, while the prior-year results included a material litigation charge of $2.8 billion, and related insurance recoveries of $208 million. Prior-year expense included a $145 million cost due to the accelerated vesting of stock options. Merger costs were $305 million compared with $722 million in the prior year.

Discontinued operations include the results of operations of selected corporate trust businesses sold to The Bank of New York on October 1, 2006. Prior to the sale, the selected corporate trust businesses produced $173 million of Net income in the current year compared with Net income of $229 million in the prior year. Net income from discontinued operations for 2006 also included a one-time gain of $622 million related to the sale of these businesses.

2005 compared with 2004

Total net revenue was a negative $1.1 billion compared with Total net revenue of $769 million in the prior year. Noninterest revenue of $1.6 billion decreased by $363 million and included securities losses of $1.5 billion due to the following: repositioning of the Treasury investment portfolio to manage exposure to interest rates; the gain on the sale of BrownCo of $1.3 billion; and the increase in private equity gains of $262 million. For further discussion on the sale of BrownCo, see Note 2 on page 97 of this Annual Report.

Net interest income was a loss of $2.8 billion compared with a loss of $1.2 billion in the prior year. Actions and policies adopted in conjunction with the Merger and the repositioning of the Treasury investment portfolio were the main drivers of the increased loss.

Total noninterest expense was $5.3 billion, down $1.1 billion from $6.4 billion in the prior year. Material litigation charges were $2.8 billion compared with $3.7 billion in the prior year. Merger costs were $722 million compared with $1.4 billion in the prior year. These decreases were offset primarily by the cost of accelerated vesting of certain employee stock options.

On September 15, 2004, JPMorgan Chase and IBM announced the Firm's plans to reintegrate the portions of its technology infrastructure – including data centers, help desks, distributed computing, data networks and voice networks – that were previously outsourced to IBM. In January 2005, approximately 3,100 employees and 800 contract employees were transferred to the Firm.

Selected metrics

Year ended December 31, (in millions, except headcount)	2006	2005	2004[e]
Total net revenue			
Private equity	**$ 1,142**	$ 1,521	$ 1,211
Treasury	**(797)**	(3,278)	81
Corporate other[a]	**(337)**	621	(523)
Total net revenue	**$ 8**	$ (1,136)	$ 769
Net income (loss)			
Private equity	**$ 627**	$ 821	$ 602
Treasury	**(560)**	(2,028)	(106)
Corporate other[a][b][c]	**169**	(2,128)	(3,337)
Merger costs	**(189)**	(448)	(847)
Income (loss) from continuing operations	**47**	(3,783)	(3,688)
Income from discontinued operations (after-tax)[d]	**795**	229	206
Total net income (loss)	**$ 842**	$ (3,554)	$(3,482)
Headcount	**23,242**	30,666	26,956

(a) Includes a gain of $64 million ($103 million pretax) in 2006 related to the initial public offering of Mastercard, and a gain of $752 million ($1.3 billion pretax) on the sale of BrownCo in 2005.
(b) Includes insurance recoveries (after-tax) related to material legal proceedings of $317 million and $129 million in 2006 and 2005, respectively. Includes litigation reserve charges (after-tax) of $1.7 billion and $2.3 billion in 2005 and 2004, respectively.
(c) Includes tax benefits recognized upon resolution of tax audits.
(d) Includes a $622 million gain from exiting the corporate trust business in the fourth quarter of 2006.
(e) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Private equity portfolio

2006 compared with 2005

The carrying value of the private equity portfolio declined by $95 million to $6.1 billion as of December 31, 2006. This decline was due primarily to sales offset partially by new investment activity. The portfolio represented 8.6% of the Firm's stockholders' equity less goodwill at December 31, 2006, down from 9.7% at December 31, 2005.

2005 compared with 2004

The carrying value of the private equity portfolio declined by $1.3 billion to $6.2 billion as of December 31, 2005. This decline was primarily the result of sales and recapitalizations of direct investments. The portfolio represented 9.7% and 12% of JPMorgan Chase's stockholders' equity less goodwill at December 31, 2005 and 2004, respectively.

Selected income statement and balance sheet data

Year ended December 31, (in millions)	2006	2005	2004[d]
Treasury			
Securities gains (losses)[a]	**$ (619)**	$ (1,486)	$ 339
Investment portfolio (average)	**63,361**	46,520	57,776
Investment portfolio (ending)	**82,091**	30,741	64,949
Private equity gains (losses)			
Realized gains	**$ 1,223**	$ 1,969	$ 1,423
Write-ups / (write-downs)	**(73)**	(72)	(192)
Mark-to-market gains (losses)	**72**	(338)	164
Total direct investments	**1,222**	1,559	1,395
Third-party fund investments	**77**	132	34
Total private equity gains (losses)[b]	**1,299**	1,691	1,429
Private equity portfolio information[c]			
Direct investments			
Public securities			
Carrying value	**$ 587**	$ 479	$ 1,170
Cost	**451**	403	744
Quoted public value	**831**	683	1,758
Private direct securities			
Carrying value	**4,692**	5,028	5,686
Cost	**5,795**	6,463	7,178
Third-party fund investments			
Carrying value	**802**	669	641
Cost	**1,080**	1,003	1,042
Total private equity portfolio			
Carrying value	**$ 6,081**	$ 6,176	$ 7,497
Cost	**$ 7,326**	$ 7,869	$ 8,964

(a) Gains/losses reflect repositioning of the Treasury investment securities portfolio. Excludes gains/losses on securities used to manage risk associated with MSRs.
(b) Included in Principal transactions.
(c) For further information on the Firm's policies regarding the valuation of the private equity portfolio, see Critical accounting estimates used by the Firm on pages 84–85 and Note 4 on pages 98–99 of this Annual Report, respectively.
(d) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Selected balance sheet data

December 31, (in millions)	2006	2005
Assets		
Cash and due from banks	**$ 40,412**	$ 36,670
Deposits with banks	**13,547**	21,661
Federal funds sold and securities purchased under resale agreements	**140,524**	133,981
Securities borrowed	**73,688**	74,604
Trading assets:		
Debt and equity instruments	**310,137**	248,590
Derivative receivables	**55,601**	49,787
Securities:		
Available-for-sale	**91,917**	47,523
Held-to-maturity	**58**	77
Interests in purchased receivables	**–**	29,740
Loans, net of Allowance for loan losses	**475,848**	412,058
Other receivables	**27,585**	27,643
Goodwill	**45,186**	43,621
Other intangible assets	**14,852**	14,559
All other assets	**62,165**	58,428
Total assets	**$ 1,351,520**	$ 1,198,942
Liabilities		
Deposits	**$ 638,788**	$ 554,991
Federal funds purchased and securities sold under repurchase agreements	**162,173**	125,925
Commercial paper and other borrowed funds	**36,902**	24,342
Trading liabilities:		
Debt and equity instruments	**90,488**	94,157
Derivative payables	**57,469**	51,773
Long-term debt and trust preferred capital debt securities	**145,630**	119,886
Beneficial interests issued by consolidated VIEs	**16,184**	42,197
All other liabilities	**88,096**	78,460
Total liabilities	**1,235,730**	1,091,731
Stockholders' equity	**115,790**	107,211
Total liabilities and stockholders' equity	**$ 1,351,520**	$ 1,198,942

Balance sheet overview

At December 31, 2006, the Firm's total assets were $1.4 trillion, an increase of $152.6 billion, or 13%, from December 31, 2005. Total liabilities were $1.2 trillion, an increase of $144.0 billion, or 13%, from December 31, 2005. Stockholders' equity was $115.8 billion, an increase of $8.6 billion, or 8% from December 31, 2005. The following is a discussion of the significant changes in balance sheet items during 2006.

Federal funds sold and securities purchased under resale agreements; Securities borrowed; Federal funds purchased and securities sold under repurchase agreements; and Commercial paper and Other borrowed funds

The Firm utilizes Federal funds sold and securities purchased under resale agreements, Securities borrowed, Federal funds purchased and securities sold under repurchase agreements and Commercial paper and other borrowed funds as part of its liquidity management activities, in order to manage the Firm's cash positions, risk-based capital requirements, and to maximize liquidity access and minimize funding costs. In 2006, Federal funds sold increased in connection with higher levels of funds that were available for short-term investments. Securities sold under repurchase agreements and Commercial paper and other borrowed funds increased primarily due to short-term requirements to fund trading positions and AFS securities inventory levels, as well as the result of growth in volume related to sweeps and other cash management products. For additional information on the Firm's Liquidity risk management, see pages 62–63 of this Annual Report.

Trading assets and liabilities – debt and equity instruments

The Firm uses debt and equity trading instruments for both market-making and proprietary risk-taking activities. These instruments consist primarily of fixed income securities (including government and corporate debt), equity securities and convertible cash instruments, as well as physical commodities. The increase in trading assets over December 31, 2005, was due primarily to the more favorable capital markets environment, with growth in client-driven market-making activities across both products (such as interest rate, credit and equity markets) and regions. For additional information, refer to Note 4 on page 98 of this Annual Report.

Trading assets and liabilities – derivative receivables and payables

The Firm utilizes various interest rate, foreign exchange, equity, credit and commodity derivatives for market-making, proprietary risk-taking and risk-management purposes. The increases in derivative receivables and payables from December 31, 2005, primarily stemmed from an increase in credit derivatives and equity contracts. For additional information, refer to Derivative contracts and Note 4 on pages 69–72 and 98, respectively, of this Annual Report.

Securities

The Firm's securities portfolio, almost all of which is classified as AFS, is used primarily to manage the Firm's exposure to interest rate movements. The AFS portfolio increased by $44.4 billion from the 2005 year end, primarily due to net purchases in the Treasury investment securities portfolio, in connection with repositioning the Firm's portfolio to manage exposure to interest rates. For additional information related to securities, refer to the Corporate segment discussion and to Note 10 on pages 53–54 and 108–111, respectively, of this Annual Report.

Interests in purchased receivables and Beneficial interests issued by consolidated VIEs

Interests in purchased receivables and Beneficial interests issued by consolidated VIEs declined from December 2005, as a result of the restructuring during the second quarter of 2006 of Firm-administered multi-seller conduits. The restructuring resulted in the deconsolidation of $29 billion of Interests in purchased receivables, $3 billion of Loans and $1 billion of AFS securities, as well as a corresponding decrease in Beneficial interests issued by consolidated VIEs. For additional information related to multi-seller conduits, refer to Off–balance sheet arrangements and contractual cash obligations on pages 59–60 and Note 15 on pages 118–120 of this Annual Report.

Loans

The Firm provides loans to customers of all sizes, from large corporate clients to individual consumers. The Firm manages the risk/reward relationship of each portfolio and discourages the retention of loan assets that do not generate a positive return above the cost of risk-adjusted capital. The $63.8 billion increase in loans, net of the Allowance for loan losses, from December 31, 2005, was due primarily to an increase of $33.6 billion in the wholesale portfolio, mainly in the IB, reflecting an increase in capital markets activity, including financings associated with client acquisitions, securitizations and loan syndications. CB loans also increased as a result of organic growth and The Bank of New York transaction. The $30.3 billion increase in consumer loans was due largely to increases in CS (reflecting strong organic growth, a reduction in credit card securitization activity, and the acquisitions of private-label credit card portfolios), increases in education loans resulting from the 2006 first-quarter acquisition of Collegiate Funding Services, and as a result of The Bank of New York transaction. These increases were offset partially by a decline in auto loans and leases. The Allowance for loan losses increased $189 million, or 3%, from December 31, 2005. For a more detailed discussion of the loan portfolio and the Allowance for loan losses, refer to Credit risk management on pages 64–76 of this Annual Report.

Goodwill

Goodwill arises from business combinations and represents the excess of the cost of an acquired entity over the net fair value amounts assigned to assets acquired and liabilities assumed. The $1.6 billion increase in Goodwill primarily resulted from the addition of $1.8 billion of goodwill from The Bank of New York transaction in the 2006 fourth quarter and from the 2006 first-quarter acquisition of Collegiate Funding Services. Partially offsetting the increase in Goodwill were reductions of $402 million resulting from the sale of selected corporate trust businesses to The Bank of New York; purchase accounting adjustments associated with the 2005 fourth-quarter acquisition of the Sears Canada credit card business; the 2006 second quarter sale of the insurance business; and a reduction related to reclassifying net assets of a subsidiary as held-for-sale. For additional information, see Notes 3 and 16 on pages 97 and 121–123 of this Annual Report.

Other intangible assets

The Firm's other intangible assets consist of mortgage servicing rights ("MSRs"), purchased credit card relationships, other credit card–related intangibles, core deposit intangibles, and all other intangibles. The $293 million increase in Other intangible assets primarily reflects higher MSRs due to growth in the servicing portfolio, the addition of core deposit intangibles from The Bank of New York transaction and purchase accounting adjustments related to the Sears Canada credit card business. Partially offsetting these increases were the amortization of intangibles and a $436 million reduction in Other intangible assets as a result of the sale of selected corporate trust businesses to The Bank of New York. For additional information on MSRs and other intangible assets, see Notes 3 and 16 on pages 97 and 121–123 of this Annual Report.

Deposits

The Firm's deposits represent a liability to customers, both retail and wholesale, for funds held on their behalf. Deposits are generally classified by location (U.S. and non-U.S.), whether they are interest- or noninterest-bearing, and by type (demand, money market deposit accounts ("MMDAs"), savings, time, negotiable order of withdrawal ("NOW") accounts), and help provide a stable and consistent source of funding to the Firm. Deposits increased by 15% from December 31, 2005. Growth in retail deposits reflected The Bank of New York transaction, new account acquisitions, and the ongoing expansion of the retail branch distribution network. Wholesale deposits increased driven by growth in business volumes. Partially offsetting the growth in wholesale deposits was a $24.0 billion decline as a result of the sale of selected corporate trust businesses to The Bank of New York. For more information on deposits, refer to the RFS segment discussion and the Liquidity risk management discussion on pages 38–42 and 62–63, respectively, of this Annual Report. For more information on wholesale liability balances, including deposits, refer to the CB and TSS segment discussions on pages 46–47 and 48–49, respectively, of this Annual Report.

Long-term debt and trust preferred capital debt securities

The Firm utilizes Long-term debt and trust preferred capital debt securities as part of its liquidity and capital management activities. Long-term debt and trust preferred capital debt securities increased by $25.7 billion, or 21%, from December 31, 2005, primarily due to net new issuances. Continued strong foreign investor participation in the global corporate markets allowed JPMorgan Chase to identify attractive opportunities globally to further diversify its funding and capital sources. During 2006, JPMorgan Chase issued approximately $56.7 billion of long-term debt and trust preferred capital debt securities. These issuances were offset partially by $34.3 billion of long-term debt and trust preferred capital debt securities that matured or were redeemed. For additional information on the Firm's long-term debt activities, see the Liquidity risk management discussion on pages 62–63 and Note 19 on pages 124–125 of this Annual Report.

Stockholders' equity

Total stockholders' equity increased by $8.6 billion, or 8%, from year-end 2005 to $115.8 billion at December 31, 2006. The increase was primarily the result of Net income for 2006 and net shares issued under the Firm's employee stock-based compensation plans, offset partially by the declaration of cash dividends, stock repurchases, a charge of $1.1 billion to Accumulated other comprehensive income (loss) related to the prospective adoption, as required on December 31, 2006, of SFAS 158 for the Firm's defined benefit pension and OPEB plans, and the redemption of preferred stock. For a further discussion of capital, see the Capital management section that follows. For a further discussion of SFAS 158, see Note 7 on pages 100–105 of this Annual Report.

The Firm's capital management framework is intended to ensure that there is capital sufficient to support the underlying risks of the Firm's business activities, as measured by economic risk capital, and to maintain "well-capitalized" status under regulatory requirements. In addition, the Firm holds capital above these requirements in amounts deemed appropriate to achieve management's regulatory and debt rating objectives. The process of assigning equity to the lines of business is integrated into the Firm's capital framework and is overseen by ALCO.

Line of business equity

The Firm's framework for allocating capital is based upon the following objectives:

- integrate firmwide capital management activities with capital management activities within each of the lines of business;
- measure performance consistently across all lines of business; and
- provide comparability with peer firms for each of the lines of business.

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, incorporating sufficient capital to address economic risk measures, regulatory capital requirements and capital levels for similarly rated peers. Return on equity is measured and internal targets for expected returns are established as a key measure of a business segment's performance.

Effective January 1, 2006, the Firm refined its methodology for allocating capital to the lines of business. As a result of this refinement, RFS, CS, CB, TSS and AM had higher amounts of capital allocated to them commencing in the first quarter of 2006. The revised methodology considers for each line of business, among other things, goodwill associated with such line of business' acquisitions since the Merger. In management's view, the revised methodology assigns responsibility to the lines of business to generate returns on the amount of capital supporting acquisition-related goodwill. As part of this refinement in the capital allocation methodology, the Firm assigned to the Corporate segment an amount of equity capital equal to the then-current book value of goodwill from and prior to the Merger. As prior periods have not been revised to reflect the new capital allocations, capital allocated to the respective lines of business for 2006 is not comparable to prior periods; and certain business metrics, such as ROE, are not comparable to the current presentation. The Firm may revise its equity capital-allocation methodology again in the future.

In accordance with SFAS 142, the lines of business perform the required goodwill impairment testing. For a further discussion of goodwill and impairment testing, see Critical accounting estimates and Note 16 on pages 83–85 and 121–123, respectively, of this Annual Report.

Line of business equity	Yearly Average	
(in billions)	**2006**	2005
Investment Bank	**$ 20.8**	$ 20.0
Retail Financial Services	**14.6**	13.4
Card Services	**14.1**	11.8
Commercial Banking	**5.7**	3.4
Treasury & Securities Services	**2.3**	1.5
Asset Management	**3.5**	2.4
Corporate[a]	**49.7**	53.0
Total common stockholders' equity	**$110.7**	$105.5

(a) 2006 and 2005 include $41.7 billion and $43.1 billion, respectively, of equity to offset goodwill and $8.0 billion and $9.9 billion, respectively, of equity, primarily related to Treasury, Private Equity and the Corporate Pension Plan.

Economic risk capital

JPMorgan Chase assesses its capital adequacy relative to the risks underlying the Firm's business activities, utilizing internal risk-assessment methodologies. The Firm assigns economic capital primarily based upon four risk factors: credit risk, market risk, operational risk and private equity risk, principally for the Firm's private equity business.

Economic risk capital	Yearly Average	
(in billions)	**2006**	2005
Credit risk	**$ 22.1**	$ 22.6
Market risk	**9.9**	9.8
Operational risk	**5.7**	5.5
Private equity risk	**3.4**	3.8
Economic risk capital	**41.1**	41.7
Goodwill	**43.9**	43.1
Other[a]	**25.7**	20.7[b]
Total common stockholders' equity	**$ 110.7**	$ 105.5

(a) Reflects additional capital required, in management's view, to meet its regulatory and debt rating objectives.
(b) Includes $2.1 billion of capital previously reported as business risk capital.

Credit risk capital

Credit risk capital is estimated separately for the wholesale businesses (IB, CB, TSS and AM) and consumer businesses (RFS and CS).

Credit risk capital for the overall wholesale credit portfolio is defined in terms of unexpected credit losses, both from defaults and declines in market value due to credit deterioration, measured over a one-year period at a confidence level consistent with the level of capitalization necessary to achieve a targeted 'AA' solvency standard. Unexpected losses are in excess of those for which provisions for credit losses are maintained. In addition to maturity and correlations, capital allocation is based upon several principal drivers of credit risk: exposure at default (or loan-equivalent amount), likelihood of default, loss severity and market credit spread.

- Loan-equivalent amount for counterparty exposure in an over-the-counter derivative transaction is represented by the expected positive exposure based upon potential movements of underlying market rates. The loan-equivalent amount for unused revolving credit facilities represents the portion of the unused commitment or other contingent exposure that is expected, based upon average portfolio historical experience, to become outstanding in the event of a default by an obligor.
- Default likelihood is based upon current market conditions for all Investment Bank clients by referencing equity and credit derivatives markets, as well as certain other publicly traded entities that are not IB clients. This methodology facilitates, in the Firm's view, more active risk management by utilizing a dynamic, forward-looking measure of credit. This measure changes with the credit cycle over time, impacting the level of credit risk capital. For privately held firms and individuals in the Commercial Bank and Asset Management, default likelihood is based upon longer-term averages through the credit cycles.
- Loss severity of exposure is based upon the Firm's average historical experience during workouts, with adjustments to account for collateral or subordination.

Credit risk capital for the consumer portfolio is based upon product and other relevant risk segmentation. Actual segment level default and severity experience are used to estimate unexpected losses for a one-year horizon at a confidence level equivalent to the 'AA' solvency standard. Statistical results for certain segments or

portfolios are adjusted to ensure that capital is consistent with external benchmarks, such as subordination levels on market transactions or capital held at representative monoline competitors, where appropriate.

Market risk capital

The Firm calculates market risk capital guided by the principle that capital should reflect the risk of loss in the value of portfolios and financial instruments caused by adverse movements in market variables, such as interest and foreign exchange rates, credit spreads, securities prices and commodities prices. Daily Value-at-Risk ("VAR"), monthly stress-test results and other factors are used to determine appropriate capital levels. The Firm allocates market risk capital to each business segment according to a formula that weights that segment's VAR and stress-test exposures. See Market risk management on pages 77–80 of this Annual Report for more information about these market risk measures.

Operational risk capital

Capital is allocated to the lines of business for operational risk using a risk-based capital allocation methodology which estimates operational risk on a bottom-up basis. The operational risk capital model is based upon actual losses and potential scenario-based stress losses, with adjustments to the capital calculation to reflect changes in the quality of the control environment or the use of risk-transfer products. The Firm believes the model is consistent with the new Basel II Framework and expects to propose it eventually for qualification under the advanced measurement approach for operational risk.

Private equity risk capital

Capital is allocated to privately- and publicly-held securities, third-party fund investments and commitments in the Private Equity portfolio to cover the potential loss associated with a decline in equity markets and related asset devaluations.

Regulatory capital

The Firm's federal banking regulator, the Federal Reserve Board, establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

On December 14, 2006, the federal banking regulatory agencies announced an interim decision that SFAS 158 will not impact regulatory capital. Until further guidance is issued, any amounts included in Accumulated other comprehensive income (loss) within Stockholders' equity related to the adoption of SFAS 158 will be excluded from regulatory capital. For further discussion of SFAS 158, refer to Note 7 on pages 100–105 of this Annual Report.

In the first quarter of 2006, the federal banking regulatory agencies issued a final rule that provides regulatory capital relief for certain cash-collateralized, securities-borrowed transactions. The final rule, which became effective February 22, 2006, also broadens the types of transactions qualifying for regulatory capital relief under the interim rule. Adoption of the rule did not have a material effect on the Firm's capital ratios.

On March 1, 2005, the Federal Reserve Board issued a final rule, which became effective April 11, 2005, that continues the inclusion of trust preferred capital debt securities in Tier 1 capital, subject to stricter quantitative limits and revised qualitative standards, and broadens the definition of restricted core capital elements. The rule provides for a five-year transition period. As an internationally active bank holding company, JPMorgan Chase is subject to the rule's limitation on restricted core capital elements, including trust preferred capital debt securities, to 15% of total core capital elements, net of goodwill less any associated deferred tax liability. At December 31, 2006, JPMorgan Chase's restricted core capital elements were 15.1% of total core capital elements.

The following tables show that JPMorgan Chase maintained a well-capitalized position based upon Tier 1 and Total capital ratios at December 31, 2006 and 2005.

Capital ratios

December 31,	**2006**	2005	Well-capitalized ratios
Tier 1 capital ratio	**8.7%**	8.5%	6.0%
Total capital ratio	**12.3**	12.0	10.0
Tier 1 leverage ratio	**6.2**	6.3	NA
Total stockholders' equity to assets	**8.6**	8.9	NA

Risk-based capital components and assets

December 31, (in millions)	**2006**	2005
Total Tier 1 capital	**$ 81,055**	$ 72,474
Total Tier 2 capital	**34,210**	29,963
Total capital	**$ 115,265**	$ 102,437
Risk-weighted assets	**$ 935,909**	$ 850,643
Total adjusted average assets	**1,308,699**	1,152,546

Tier 1 capital was $81.1 billion at December 31, 2006, compared with $72.5 billion at December 31, 2005, an increase of $8.6 billion. The increase was due primarily to net income of $14.4 billion, net issuances of common stock under the Firm's employee stock based compensation plans of $3.8 billion and $873 million of additional qualifying trust preferred capital debt securities. Partially offsetting these increases were changes in stockholders' equity net of Accumulated other comprehensive income (loss) due to dividends declared of $4.9 billion, common share repurchases of $3.9 billion, the redemption of preferred stock of $139 million, a $1.2 billion increase in the deduction for goodwill and other nonqualifying intangibles and a $563 million reduction in qualifying minority interests. Additional information regarding the Firm's capital ratios and the federal regulatory capital standards to which it is subject is presented in Note 26 on pages 129–130 of this Annual Report.

Basel II

The Basel Committee on Banking Supervision published the new Basel II Framework in 2004 in an effort to update the original international bank capital accord ("Basel I"), which has been in effect since 1988. The goal of the Basel II Framework is to make regulatory capital more risk-sensitive, and promote enhanced risk management practices among large, internationally active banking organizations.

U.S. banking regulators are in the process of incorporating the Basel II Framework into the existing risk-based capital requirements. JPMorgan Chase will be required to implement advanced measurement techniques in the U.S., commencing in 2009, by employing internal estimates of certain key risk drivers to derive capital requirements. Prior to its implementation of the new Basel II Framework, JPMorgan Chase will be required to demonstrate to its U.S. bank supervisors that its internal criteria meet the relevant supervisory standards. JPMorgan Chase expects to be in compliance within the established timelines with all relevant Basel II rules. During 2007 and 2008, the Firm will adopt Basel II rules in certain non-U.S. jurisdictions, as required.

Dividends

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratios, need to maintain an adequate capital level and alternative investment opportunities. In 2006, JPMorgan Chase declared quarterly cash dividends on its common stock of $0.34 per share. The Firm continues to target a dividend payout ratio of 30-40% of net income over time.

The following table shows the common dividend payout ratio based upon reported Net income:

Common dividend payout ratio

Year ended December 31,	**2006**	2005	2004
Common dividend payout ratio	**34%**	57%	88%

For information regarding restrictions on JPMorgan Chase's ability to pay dividends, see Note 25 on page 129 of this Annual Report.

Stock repurchases

On March 21, 2006, the Board of Directors approved a stock repurchase program that authorizes the repurchase of up to $8 billion of the Firm's common shares, which supercedes a $6 billion stock repurchase program approved in 2004. The $8 billion authorization includes shares to be repurchased to offset issuances under the Firm's employee stock-based plans. The actual number of shares repurchased is subject to various factors, including: market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative potential investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time.

For the year ended December 31, 2006, under the respective stock repurchase programs then in effect, the Firm repurchased a total of 91 million shares for $3.9 billion at an average price per share of $43.41. Under the original $6 billion stock repurchase program, during 2005, the Firm repurchased 94 million shares for $3.4 billion at an average price per share of $36.46.

As of December 31, 2006, $5.2 billion of authorized repurchase capacity remained under the current stock repurchase program.

The Firm has determined that it may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate the repurchase of common stock in accordance with the repurchase program. A Rule 10b5-1 repurchase plan would allow the Firm to repurchase shares during periods when it would not otherwise be repurchasing common stock – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan that is established when the Firm is not aware of material nonpublic information.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5, Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on page 11 of JPMorgan Chase's 2006 Form 10-K.

OFF–BALANCE SHEET ARRANGEMENTS AND CONTRACTUAL CASH OBLIGATIONS

Special-purpose entities

JPMorgan Chase is involved with several types of off–balance sheet arrangements, including special purpose entities ("SPEs"), lines of credit and loan commitments. The principal uses of SPEs are to obtain sources of liquidity for JPMorgan Chase and its clients by securitizing financial assets, and to create other investment products for clients. These arrangements are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. For example, SPEs are integral to the markets for mortgage-backed securities, commercial paper and other asset-backed securities.

The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors. To insulate investors from creditors of other entities, including the seller of assets, SPEs are generally structured to be bankruptcy-remote.

JPMorgan Chase is involved with SPEs in three broad categories: loan securitizations, multi-seller conduits and client intermediation. Capital is held, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments. For further discussion of SPEs and the Firm's accounting for these types of exposures, see Note 1 on page 94, Note 14 on pages 114–118 and Note 15 on pages 118–120 of this Annual Report.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

For certain liquidity commitments to SPEs, the Firm could be required to provide funding if the short-term credit rating of JPMorgan Chase Bank, N.A. were downgraded below specific levels, primarily P-1, A-1 and F1 for Moody's, Standard & Poor's and Fitch, respectively. The amount of these liquidity commitments was $74.4 billion and $71.3 billion at December 31, 2006 and 2005, respectively. Alternatively, if JPMorgan Chase Bank, N.A. were downgraded, the Firm could be replaced by another liquidity provider in lieu of providing funding under the liquidity commitment, or, in certain circumstances, could facilitate the sale or refinancing of the assets in the SPE in order to provide liquidity.

Of the $74.4 billion in liquidity commitments to SPEs at December 31, 2006, $74.0 billion was included in the Firm's other unfunded commitments to extend credit and asset purchase agreements, as shown in the table on the following page. Of the $71.3 billion of liquidity commitments to SPEs at December 31, 2005, $38.9 billion was included in the Firm's other unfunded commitments to extend credit and asset purchase agreements. Of these commitments, $356 million and $32.4 billion have been excluded from the table at December 31, 2006 and 2005, respectively, as the underlying assets of the SPEs have been included on the Firm's Consolidated balance sheets due to the consolidation of certain multi-seller conduits as required under FIN 46R. The decrease from the 2005 year end is due to the deconsolidation during the 2006 second quarter of several multi-seller conduits administrated by the Firm. For further information, refer to Note 15 on pages 118–120 of this Annual Report.

The Firm also has exposure to certain SPEs arising from derivative transactions; these transactions are recorded at fair value on the Firm's Consolidated balance sheets with changes in fair value (i.e., mark-to-market ("MTM") gains and losses) recorded in Principal transactions. Such MTM gains and losses are not included in the revenue amounts reported in the following table.

The following table summarizes certain revenue information related to consolidated and nonconsolidated variable interest entities ("VIEs") with which the Firm has significant involvement, and qualifying SPEs ("QSPEs"). The revenue reported in the table below primarily represents servicing and credit fee income. For further discussion of VIEs and QSPEs, see Note 1, Note 14 and Note 15, on pages 94, 114–118 and 118–120, respectively, of this Annual Report.

Revenue from VIEs and QSPEs

Year ended December 31, (in millions)	VIEs[c]	QSPEs	Total
2006	**$ 209**	**$ 3,183**	**$ 3,392**
2005[a]	222	2,940	3,162
2004[a][b]	154	2,732	2,886

(a) Prior-period results have been restated to reflect current methodology.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(c) Includes VIE-related revenue (i.e., revenue associated with consolidated and significant nonconsolidated VIEs).

Off–balance sheet lending-related financial instruments and guarantees

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparty draw down the commitment or the Firm be required to fulfill its obligation under the guarantee, and the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without a default occurring or without being drawn. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. Further, certain commitments, primarily related to consumer financings, are cancelable, upon notice, at the option of the Firm. For further discussion of lending-related commitments and guarantees and the Firm's accounting for them, see Credit risk management on pages 64–76 and Note 29 on pages 132–134 of this Annual Report.

Contractual cash obligations

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Commitments for future cash expenditures primarily include contracts to purchase future services and capital expenditures related to real estate–related obligations and equipment.

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's off–balance sheet lending-related financial instruments and significant contractual cash obligations at December 31, 2006. Contractual purchases and capital expenditures in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the following table are a number of obligations to be settled in cash, primarily in under one year. These obligations are reflected on the Firm's Consolidated balance sheets and include Federal funds purchased and securities sold under repurchase agreements; Other borrowed funds; purchases of Debt and equity instruments; Derivative payables; and certain purchases of instruments that resulted in settlement failures. For discussion regarding Long-term debt and trust preferred capital securities, see Note 19 on pages 124–125 of this Annual Report. For discussion regarding operating leases, see Note 27 on page 130 of this Annual Report.

Off–balance sheet lending-related financial instruments and guarantees

	2006					
By remaining maturity at December 31, (in millions)	Under 1 year	1–<3 years	3–5 years	Over 5 years	**Total**	2005 Total
Lending-related						
Consumer[a]	**$ 677,784**	**$ 3,807**	**$ 3,604**	**$ 62,340**	**$ 747,535**	$ 655,596
Wholesale:						
Other unfunded commitments to extend credit[b][c][d]	**92,829**	**52,465**	**67,250**	**16,660**	**229,204**	208,469
Asset purchase agreements[e]	**20,847**	**38,071**	**7,186**	**1,425**	**67,529**	31,095
Standby letters of credit and guarantees[c][f][g]	**23,264**	**21,286**	**38,812**	**5,770**	**89,132**	77,199
Other letters of credit[c]	**4,628**	**823**	**101**	**7**	**5,559**	4,346
Total wholesale	**141,568**	**112,645**	**113,349**	**23,862**	**391,424**	321,109
Total lending-related	**$ 819,352**	**$ 116,452**	**$ 116,953**	**$ 86,202**	**$ 1,138,959**	$ 976,705
Other guarantees						
Securities lending guarantees[h]	**$ 318,095**	**$ —**	**$ —**	**$ —**	**$ 318,095**	$ 244,316
Derivatives qualifying as guarantees[i]	**13,542**	**10,656**	**24,414**	**22,919**	**71,531**	61,759
Contractual cash obligations						
Time deposits	**$ 195,187**	**$ 5,314**	**$ 2,329**	**$ 1,519**	**$ 204,349**	$ 147,381
Long-term debt	**28,272**	**41,015**	**28,189**	**35,945**	**133,421**	108,357
Trust preferred capital debt securities	**—**	**—**	**—**	**12,209**	**12,209**	11,529
FIN 46R long-term beneficial interests[j]	**70**	**63**	**413**	**7,790**	**8,336**	2,354
Operating leases[k]	**1,058**	**1,995**	**1,656**	**6,320**	**11,029**	9,734
Contractual purchases and capital expenditures	**770**	**524**	**154**	**136**	**1,584**	2,324
Obligations under affinity and co-brand programs	**1,262**	**2,050**	**1,906**	**897**	**6,115**	6,877
Other liabilities[l]	**638**	**718**	**769**	**3,177**	**5,302**	11,646
Total	**$ 227,257**	**$ 51,679**	**$ 35,416**	**$ 67,993**	**$ 382,345**	$ 300,202

(a) Includes Credit card lending-related commitments of $657 billion and $579 billion at December 31, 2006 and 2005, respectively, that represent the total available credit to the Firm's cardholders. The Firm has not experienced, and does not anticipate, that all of its cardholders will utilize their entire available lines of credit at the same time. The Firm can reduce or cancel a credit card commitment by providing the cardholder prior notice or, in some cases, without notice as permitted by law.
(b) Includes unused advised lines of credit totaling $39.0 billion and $28.3 billion at December 31, 2006 and 2005, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable.
(c) Represents contractual amount net of risk participations totaling $32.8 billion and $29.3 billion at December 31, 2006 and 2005, respectively.
(d) Excludes unfunded commitments to private third-party equity funds of $589 million and $242 million at December 31, 2006 and 2005, respectively.
(e) The maturity is based upon the weighted-average life of the underlying assets in the SPE, which are primarily multi-seller asset-backed commercial paper conduits. Represents asset purchase agreements with the Firm's administered multi-seller asset-backed commercial paper conduits, which excludes $356 million and $32.4 billion at December 31, 2006 and 2005, respectively, related to conduits that were consolidated in accordance with FIN 46R, as the underlying assets of the conduits are reported in the Firm's Consolidated balance sheets. It also includes $1.4 billion and $1.3 billion of asset purchase agreements to other third-party entities at December 31, 2006 and 2005, respectively. Certain of the Firm's administered multi-seller conduits were deconsolidated as of June 2006; the assets deconsolidated were approximately $33 billion.
(f) JPMorgan Chase held collateral relating to $13.5 billion and $9.0 billion of these arrangements at December 31, 2006 and 2005, respectively.
(g) Includes unused commitments to issue standby letters of credit of $45.7 billion and $37.5 billion at December 31, 2006 and 2005, respectively.
(h) Collateral held by the Firm in support of securities lending indemnification agreements was $317.9 billion and $245.0 billion at December 31, 2006 and 2005, respectively.
(i) Represents notional amounts of derivatives qualifying as guarantees. For further discussion of guarantees, see Note 29 on pages 132–134 of this Annual Report.
(j) Included on the Consolidated balance sheets in Beneficial interests issued by consolidated VIEs.
(k) Excludes benefit of noncancelable sublease rentals of $1.2 billion and $1.3 billion at December 31, 2006 and 2005, respectively.
(l) Includes deferred annuity contracts. Excludes contributions for pension and other postretirement benefits plans, if any, as these contributions are not reasonably estimatable at this time.

Risk is an inherent part of JPMorgan Chase's business activities. The Firm's risk management framework and governance structure are intended to provide comprehensive controls and ongoing management of the major risks inherent in its business activities. The Firm's ability to properly identify, measure, monitor and report risk is critical to both its soundness and profitability.

- **Risk identification:** The Firm's exposure to risk through its daily business dealings, including lending, trading and capital markets activities, is identified and aggregated through the Firm's risk management infrastructure.
- **Risk measurement:** The Firm measures risk using a variety of methodologies, including calculating probable loss, unexpected loss and value-at-risk, and by conducting stress tests and making comparisons to external benchmarks. Measurement models and related assumptions are routinely reviewed with the goal of ensuring that the Firm's risk estimates are reasonable and reflect underlying positions.
- **Risk monitoring/control:** The Firm's risk management policies and procedures incorporate risk mitigation strategies and include approval limits by customer, product, industry, country and business. These limits are monitored on a daily, weekly and monthly basis, as appropriate.
- **Risk reporting:** Risk reporting is executed on a line of business and consolidated basis. This information is reported to management on a daily, weekly and monthly basis, as appropriate.

There are eight major risk types identified in the business activities of the Firm: liquidity risk, credit risk, market risk, interest rate risk, private equity risk, operational risk, legal and reputation risk, and fiduciary risk.

Risk governance

The Firm's risk governance structure starts with each line of business being responsible for managing its own risk. Each line of business works closely with Risk Management of the Firm, through its own risk committee and, in most cases, its own chief risk officer. Each risk committee is responsible for decisions regarding the business' risk strategy, policies and controls.

Overlaying the line of business risk management are five corporate functions with risk management–related responsibilities, including the Asset-Liability Committee, Treasury, Chief Investment Office, Office of the General Counsel and Risk Management.

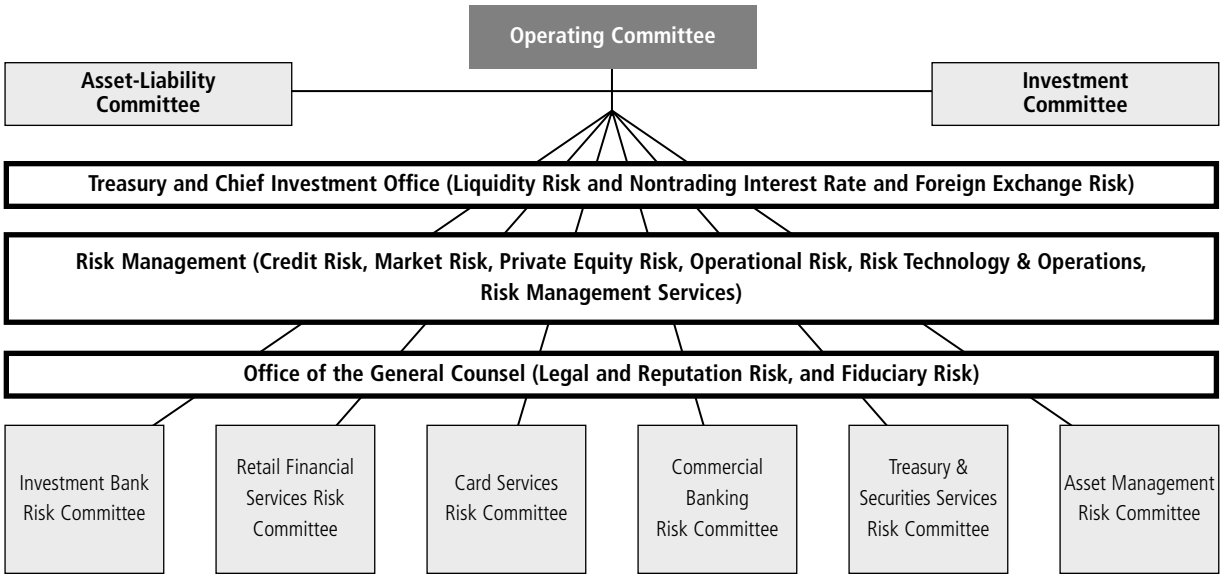
The Asset-Liability Committee is responsible for approving the Firm's liquidity policy, including contingency funding planning and exposure to SPEs (and any required liquidity support by the Firm of such SPEs). The committee also oversees the Firm's capital management and funds transfer pricing policy (through which lines of business "transfer" interest and foreign exchange risk to Treasury in the Corporate segment). The Committee is composed of the Firm's Chief Financial Officer, Chief Risk Officer, Chief Investment Officer, Corporate Treasurer and the Chief Financial Officers of each line of business.

Treasury and the Chief Investment Office are responsible for measuring, monitoring, reporting and managing the Firm's liquidity, interest rate and foreign exchange risk.

The Office of the General Counsel has oversight for legal and reputation and fiduciary risks.

Risk Management is responsible for providing a firmwide function of risk management and controls. Within Risk Management are units responsible for credit risk, market risk, operational risk and private equity risk, as well as Risk Management Services and Risk Technology and Operations. Risk Management Services is responsible for risk policy and methodology, risk reporting and risk education; and Risk Technology and Operations is responsible for building the information technology infrastructure used to monitor and manage risk. Risk Management is headed by the Firm's Chief Risk Officer, who is a member of the Operating Committee and reports to the Chief Executive Officer and the Board of Directors, primarily through the Board's Risk Policy Committee and Audit Committee. The person who filled the position of Chief Risk Officer during 2006 retired at the end of the year. Until his replacement is named, the Firm's Chief Executive Officer is acting as the interim Chief Risk Officer.

In addition to the risk committees of the lines of business and the above-referenced corporate functions, the Firm also has an Investment Committee, which oversees global merger and acquisition activities undertaken by JPMorgan Chase for its own investment account, that fall outside the scope of the Firm's private equity and other principal finance activities.



The Board of Directors exercises its oversight of risk management, principally through the Board's Risk Policy Committee and Audit Committee. The Risk Policy Committee oversees senior management risk-related responsibilities, including reviewing management policies and performance against these policies and related benchmarks. The Audit Committee is responsible for oversight of guidelines and policies that govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal controls and financial reporting that is relied upon to provide reasonable assurance of compliance with the Firm's operational risk management processes.

LIQUIDITY RISK MANAGEMENT

Liquidity risk arises from the general funding needs of the Firm's activities and in the management of its assets and liabilities. JPMorgan Chase's liquidity management framework is intended to maximize liquidity access and minimize funding costs. Through active liquidity management the Firm seeks to preserve stable, reliable and cost-effective sources of funding. This access enables the Firm to replace maturing obligations when due and fund assets at appropriate maturities and rates. To accomplish this, management uses a variety of measures to mitigate liquidity and related risks, taking into consideration market conditions, prevailing interest rates, liquidity needs and the desired maturity profile of liabilities, among other factors.

The three primary measures of the Firm's liquidity position include the following:

- **Holding company short-term position:** Holding company short-term position measures the parent holding company's ability to repay all obligations with a maturity of less than one year at a time when the ability of the Firm's subsidiaries to pay dividends to the parent company is constrained.
- **Cash capital position:** Cash capital position is a measure intended to ensure the illiquid portion of the balance sheet can be funded by equity, long-term debt, trust preferred capital debt securities and deposits the Firm believes to be core.
- **Basic surplus:** Basic surplus measures the Bank's ability to sustain a 90-day stress event that is specific to the Firm where no new funding can be raised to meet obligations as they come due.

Liquidity is managed so that, based upon the measures described above, management believes there is sufficient surplus liquidity.

An extension of liquidity management is the Firm's contingency funding plan. The goal of the plan is to ensure appropriate liquidity during normal and stress periods. The plan considers numerous temporary and long-term stress scenarios where access to unsecured funding is severely limited or nonexistent, taking into account both on– and off–balance sheet exposures, separately evaluating access to funds by the parent holding company, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

Part of the Firm's contingency funding plan is its ratings downgrade analysis. For this analysis, the impact of numerous rating agency downgrade scenarios are considered.

The various analytics used to manage the Firm's liquidity and related risks rely on management's judgment regarding JPMorgan Chase's ability to liquidate assets or use assets as collateral for borrowings and take into account historical data on the funding of loan commitments (for example, commercial paper back-up facilities), liquidity commitments to SPEs, commitments with rating triggers and collateral posting requirements.

Governance

The Firm's Asset-Liability Committee approves the Firm's liquidity policy and oversees the policy's execution. Treasury is responsible for measuring, monitoring, reporting and managing the Firm's liquidity risk profile. Treasury formulates the Firm's liquidity targets and strategies; monitors the Firm's on– and off–balance sheet liquidity obligations; maintains contingency planning, including ratings downgrade stress testing; and identifies and measures internal and external liquidity warning signals to permit early detection of liquidity issues.

Funding

Sources of funds

Consistent with its liquidity management policy, the Firm has raised funds at the parent holding company sufficient to cover its obligations and those of its nonbank subsidiaries that mature over the next 12 months.

As of December 31, 2006, the Firm's liquidity position remained strong based upon its liquidity metrics. JPMorgan Chase's long-dated funding, including core liabilities, exceeded illiquid assets, and the Firm believes its obligations can be met even if access to funding is impaired.

The diversity of the Firm's funding sources enhances financial flexibility and limits dependence on any one source, thereby minimizing the cost of funds. The deposits held by the RFS, CB, TSS and AM lines of business are generally a stable and consistent source of funding for JPMorgan Chase Bank, N.A. As of December 31, 2006, total deposits for the Firm were $639 billion. A significant portion of the Firm's deposits are retail deposits, which are less sensitive to interest rate changes and therefore are considered more stable than market-based (i.e., wholesale) deposits. In addition to these deposits, the Firm benefits from substantial liability balances originated by RFS, CB, TSS and AM through the normal course of business. These franchise-generated liability balances are also a stable and consistent source of funding due to the nature of the businesses from which they are generated. For a further discussion of deposit and liability balance trends, see Business Segment Results and Balance Sheet Analysis on pages 36–52 and 55–56, respectively, of this Annual Report.

Additional sources of funds include a variety of both short- and long-term instruments, including federal funds purchased, commercial paper, bank notes, long-term debt, and trust preferred capital debt securities. This funding is managed centrally, using regional expertise and local market access, to ensure active participation by the Firm in the global financial markets while maintaining consistent global pricing. These markets serve as a cost-effective and diversified source of funds and are a critical component of the Firm's liquidity management. Decisions concerning the timing and tenor of accessing these markets are based upon relative costs, general market conditions, prospective views of balance sheet growth and a targeted liquidity profile.

Finally, funding flexibility is provided by the Firm's ability to access the repurchase and asset securitization markets. These markets are evaluated on an ongoing basis to achieve an appropriate balance of secured and unsecured funding. The ability to securitize loans, and the associated gains on those securitizations, are principally dependent upon the credit quality and yields of the assets securitized and are generally not dependent upon the credit ratings of the issuing entity. Transactions between the Firm and its securitization structures are reflected in JPMorgan Chase's consolidated financial statements and notes to the consolidated financial statements; these relationships include retained interests in securitization trusts, liquidity facilities and derivative transactions. For further details, see Off–balance sheet arrangements and contractual cash obligations and Notes 14 and 29 on pages 59–60, 114–118 and 132–134, respectively, of this Annual Report.

Issuance

Continued strong foreign investor participation in the global corporate markets allowed JPMorgan Chase to identify attractive opportunities globally to further diversify its funding and capital sources. During 2006, JPMorgan Chase issued approximately $56.7 billion of long-term debt and trust preferred capital debt securities. These issuances were offset partially by $34.3 billion of long-term debt and trust preferred capital debt securities that matured or were redeemed, and by the Firm's redemption of $139 million of preferred stock. In addition, in 2006 the Firm securitized approximately $16.8 billion of residential mortgage loans and $9.7 billion of credit card loans, resulting in pretax gains on securitizations of $85 million and $67 million, respectively. In addition, the Firm securitized approximately $2.4 billion of automobile loans resulting in an insignificant gain. For a further discussion of loan securitizations, see Note 14 on pages 114–118 of this Annual Report.

In connection with the issuance of certain of its trust preferred capital debt securities, the Firm has entered into Replacement Capital Covenants ("RCCs") granting certain rights to the holder of "covered debt," as defined in the RCCs, that prohibit the repayment, redemption or purchase of the trust preferred capital debt securities except, with limited exceptions, to the extent that JPMorgan Chase has received specified amounts of proceeds from the sale of certain qualifying securities. Currently the Firm's covered debt is its 5.875% Junior Subordinated Deferrable Interest Debentures, Series O, due 2035. For more information regarding these covenants, see the Forms 8-K filed by the Firm on August 17, 2006, September 28, 2006 and February 2, 2007.

Cash Flows

Cash Flows from Operating Activities

For the years ended December 31, 2006 and 2005, net cash used in operating activities was $49.6 billion and $30.2 billion, respectively. Net cash was used to support the Firm's lending and capital markets activities, as well as to support loans originated or purchased with an initial intent to sell. JPMorgan Chase's operating assets and liabilities vary significantly in the normal course of business due to the amount and timing of cash flows. Management believes cash flows from operations, available cash balances and short- and long-term borrowings will be sufficient to fund the Firm's operating liquidity needs.

Cash Flows from Investing Activities

The Firm's investing activities primarily include originating loans to be held to maturity, other receivables, and the available-for-sale investment portfolio. For the year ended December 31, 2006, net cash of $99.6 billion was used in investing activities, primarily due to increased loans in the wholesale portfolio, mainly in the IB, reflecting an increase in capital markets activity, as well as organic growth in CB. On the consumer side, increases in CS loans reflected strong organic growth, the acquisitions of private-label credit card portfolios and the 2006 first-quarter acquisition of Collegiate Funding Services, offset partially by credit card securitization activity and a decline in auto loans and leases. Cash also was used to fund the increase in the Treasury investment securities portfolio, primarily in connection with repositioning of the Firm's portfolio to manage exposure to interest rates.

For the year ended December 31, 2005, net cash of $12.9 billion was used in investing activities, primarily attributable to growth in consumer loans, primarily home equity and in CS, reflecting growth in new account originations and the acquisition of the Sears Canada credit card business, offset partially by securitization activity and a decline in auto loans reflecting a difficult auto lending market. Net cash was generated by the Treasury investment securities portfolio primarily from maturities of securities, as purchases and sales of securities essentially offset each other.

Cash Flows from Financing Activities

The Firm's financing activities primarily include the issuance of debt and receipt of customer deposits. JPMorgan Chase pays quarterly dividends on its common stock and has an ongoing stock repurchase program. In 2006, net cash provided by financing activities was $152.7 billion due to growth in deposits, reflecting the ongoing expansion of the retail branch distribution network and higher wholesale business volumes; and net new issuances of Long-term debt and trust preferred capital debt securities, offset partially by the payment of cash dividends and stock repurchases.

In 2005, net cash provided by financing activities was $45.1 billion due to growth in deposits, reflecting, on the retail side, new account acquisitions and the ongoing expansion of the branch distribution network, and higher wholesale business volumes; and net new issuances of Long-term debt and trust preferred capital debt securities, offset partially by the payment of cash dividends and stock repurchases.

Credit ratings

The credit ratings of JPMorgan Chase's parent holding company and each of its significant banking subsidiaries, as of December 31, 2006, were as follows:

	Short-term debt			Senior long-term debt		
	Moody's	S&P	Fitch	Moody's	S&P	Fitch
JPMorgan Chase & Co.	P-1	A-1	F1	Aa3	A+	A+
JPMorgan Chase Bank, N.A.	P-1	A-1+	F1+	Aa2	AA-	A+
Chase Bank USA, N.A.	P-1	A-1+	F1+	Aa2	AA-	A+

On February 14, 2007, S&P raised the senior long-term debt ratings on JPMorgan Chase & Co. and the operating bank subsidiaries to AA- and AA, respectively. Additionally, S&P raised the short-term debt rating of JPMorgan Chase & Co. to A-1+. Similarly, on February 16, 2007, Fitch raised the senior long-term debt rating on JPMorgan Chase & Co. and operating bank subsidiaries to AA-. Fitch also raised the short-term debt rating of JPMorgan Chase & Co. to F1+. The cost and availability of unsecured financing are influenced by credit ratings. A reduction in these ratings could have an adverse affect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral requirements and decrease the number of investors and counterparties willing to lend. Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources and disciplined liquidity monitoring procedures.

If the Firm's ratings were downgraded by one notch, the Firm estimates the incremental cost of funds and the potential loss of funding to be negligible. Additionally, the Firm estimates the additional funding requirements for VIEs and other third-party commitments would not be material. In the current environment, the Firm believes a downgrade is unlikely. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on page 59 and Ratings profile of derivative receivables mark-to-market ("MTM") on page 71, of this Annual Report.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit (for example, through loans, lending-related commitments and derivatives) to customers of all sizes, from large corporate clients to the individual consumer. The Firm manages the risk/reward relationship of each credit and discourages the retention of assets that do not generate a positive return above the cost of risk-adjusted capital. The majority of the Firm's wholesale syndicated loan originations (primarily to IB clients) continues to be distributed into the marketplace, with residual holds by the Firm averaging less than 10%. Wholesale loans generated by CB and AM are generally retained on the balance sheet. With regard to the consumer credit market, the Firm focuses on creating a portfolio that is diversified from both a product and a geographic perspective. Within the mortgage business, originated loans are retained on the balance sheet as well as securitized and sold selectively to U.S. government agencies and U.S. government-sponsored enterprises; the latter category of loans is routinely classified as held-for-sale.

Credit risk organization

Credit risk management is overseen by the Chief Risk Officer. The Firm's credit risk management governance consists of the following primary functions:

- establishing a comprehensive credit risk policy framework
- calculating the allowance for credit losses and ensuring appropriate credit risk-based capital management
- assigning and managing credit authorities in connection with the approval of all credit exposure
- monitoring and managing credit risk across all portfolio segments
- managing criticized exposures

Risk identification

The Firm is exposed to credit risk through lending and capital markets activities. Credit risk management works in partnership with the business segments in identifying and aggregating exposures across all lines of business.

Risk measurement

To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Losses generated by consumer loans are more predictable than wholesale losses, but are subject to cyclical and seasonal factors. Although the frequency of loss is higher on consumer loans than on wholesale loans, the severity of loss is typically lower and more manageable on a portfolio basis. As a result of these differences, methodologies vary depending on certain factors, including type of asset (e.g., consumer installment versus wholesale loan), risk measurement parameters (e.g., delinquency status and credit bureau score versus wholesale risk rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based upon the amount of exposure should the obligor or the counterparty default, the probability of default and the loss severity given a default event. Based upon these factors and related market-based inputs, the Firm estimates both probable and unexpected losses for the wholesale and consumer portfolios. Probable losses, reflected in the Provision for credit losses, primarily are based upon statistical estimates of credit losses over time, anticipated as a result of obligor or counterparty default. However, probable losses are not the sole indicators of risk. If losses were entirely predictable, the probable loss rate could be factored into pricing and covered as a normal and recurring cost of doing business. Unexpected losses, reflected in the allocation of credit risk capital, represent the potential volatility of actual losses relative to the probable level of losses. (Refer to Capital management on pages 57–59 of this Annual Report for a further discussion of the credit risk capital methodology.) Risk measurement for the wholesale portfolio is assessed primarily on a risk-rated basis; for the consumer portfolio, it is assessed primarily on a credit-scored basis.

Risk-rated exposure

For portfolios that are risk-rated, probable and unexpected loss calculations are based upon estimates of probability of default and loss given default. Probability of default is the expected default calculated on an obligor basis. Loss given default is an estimate of losses that are based upon collateral and structural support for each credit facility. Calculations and assumptions are based upon management information systems and methodologies which are under continual review. Risk ratings are assigned and reviewed on an ongoing basis by Credit Risk Management and revised, if needed, to reflect the borrowers' current risk profiles and the related collateral and structural positions.

Credit-scored exposure

For credit-scored portfolios (generally held in RFS and CS), probable loss is based upon a statistical analysis of inherent losses over discrete periods of time. Probable losses are estimated using sophisticated portfolio modeling, credit scoring and decision-support tools to project credit risks and establish underwriting standards. In addition, common measures of credit quality derived from historical loss experience are used to predict consumer losses. Other risk characteristics evaluated include recent loss experience in the portfolios, changes in origination sources, portfolio seasoning, loss severity and underlying credit practices, including charge-off policies. These analyses are applied to the Firm's current portfolios in order to forecast delinquencies and severity of losses, which determine the amount of probable losses. These factors and analyses are updated on a quarterly basis.

Risk monitoring

The Firm has developed policies and practices that are designed to preserve the independence and integrity of decision-making and ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio-review parameters and guidelines for management of distressed exposure. Wholesale credit risk is monitored regularly on both an aggregate portfolio level and on an individual customer basis. For consumer credit risk, the key focus items are trends and concentrations at the portfolio level, where potential problems can be remedied through changes in underwriting policies and portfolio guidelines. Consumer Credit Risk Management monitors trends against business expectations and industry benchmarks. In order to meet credit risk management objectives, the Firm seeks to maintain a risk profile that is diverse in terms of borrower, product type, industry and geographic concentration. Additional management of the Firm's exposure is accomplished through loan syndication and participations, loan sales, securitizations, credit derivatives, use of master netting agreements and collateral and other risk-reduction techniques.

Risk reporting

To enable monitoring of credit risk and decision-making, aggregate credit exposure, credit metric forecasts, hold-limit exceptions and risk profile changes are reported regularly to senior credit risk management. Detailed portfolio reporting of industry, customer and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, the Operating Committee.

2006 Credit risk overview

The wholesale portfolio exhibited credit stability during 2006. There was substantial growth in wholesale lending as a result of increased capital markets–related activity, offset by decreases in nonperforming loans and criticized exposure of $601 million and $591 million, respectively. In 2006, the Firm also made significant strides in its multiyear initiative to reengineer its wholesale credit risk systems infrastructure. Several enhancements were incorporated into the Firm's operating infrastructure in 2006. Overall, the initiative has enhanced management of credit risk; timeliness and accuracy of reporting; support of client relationships; allocation of economic capital; and compliance with Basel II initiatives. The Firm is on target to substantially complete the initiative by year-end 2007.

Consumer credit performance generally was stable in 2006. CS adopted the FFIEC higher minimum payment requirements, which initially resulted in higher payment rates than historically experienced, albeit with losses less severe than initially anticipated. Loans impacted by Hurricane Katrina generally have performed better than initially projected, but have experienced longer resolution timeframes, especially where real estate and business banking assets are involved. The Allowance for loan losses related to Hurricane Katrina was reduced by $121 million in 2006 as a result of the better than anticipated performance. Bankruptcy reform legislation became effective on October 17, 2005. This legislation prompted a "rush to file" effect that resulted in a spike in bankruptcy filings and increased 2005 credit losses, predominantly in CS. As expected, following this spike in filings the Firm experienced lower credit card net charge-offs in 2006, as the record levels of bankruptcy filings in the fourth quarter of 2005 are believed to have included bankruptcy filings that would have occurred in 2006.

In 2006, management of the consumer segment continued to focus on portfolios providing the most appropriate risk/reward relationship while keeping within the Firm's desired risk tolerance. During the past year, the majority of the new subprime mortgage production was sold or classified as held-for-sale. In addition, a portion of the subprime mortgage portfolio was transferred into the held-for-sale account. The Firm also continued a de-emphasis of vehicle finance leasing. The Firm experienced growth in many core consumer lending products including home equity, credit cards, education, and business banking reflecting a focus on the prime credit quality segment of the market.

CREDIT PORTFOLIO

The following table presents JPMorgan Chase's credit portfolio as of December 31, 2006 and 2005. Total credit exposure at December 31, 2006, increased by $198.7 billion from December 31, 2005, reflecting an increase of $80.0 billion in the wholesale credit portfolio and $118.7 billion in the consumer credit portfolio as further described in the following pages.

In the table below, reported loans include all HFS loans, which are carried at the lower of cost or fair value with changes in value recorded in Noninterest revenue. However, these HFS loans are excluded from the average loan balances used for the net charge-off rate calculations.

Total credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming assets[i]		Net charge-offs		Average annual net charge-off rate	
	2006	2005	**2006**	2005	**2006**	2005	**2006**	2005
Total credit portfolio								
Loans – reported[a]	**$ 483,127**	$ 419,148	**$ 2,077**[j]	$ 2,343[j]	**$ 3,042**	$ 3,819	**0.73%**	1.00%
Loans – securitized[b]	**66,950**	70,527	**—**	—	**2,210**	3,776	**3.28**	5.47
Total managed loans[c]	**550,077**	489,675	**2,077**	2,343	**5,252**	7,595	**1.09**	1.68
Derivative receivables	**55,601**	49,787	**36**	50	**NA**	NA	**NA**	NA
Interests in purchased receivables[d]	**—**	29,740	**—**	—	**NA**	NA	**NA**	NA
Total managed credit-related assets	**605,678**	569,202	**2,113**	2,393	**5,252**	7,595	**1.09**	1.68
Lending-related commitments[d][e]	**1,138,959**	976,705	**NA**	NA	**NA**	NA	**NA**	NA
Assets acquired in loan satisfactions	**NA**	NA	**228**	197	**NA**	NA	**NA**	NA
Total credit portfolio	**$ 1,744,637**	$1,545,907	**$ 2,341**	$ 2,590	**$ 5,252**	$ 7,595	**1.09%**	1.68%
Net credit derivative hedges notional[f]	**$ (50,733)**	$ (29,882)	**$ (16)**	$ (17)	**NA**	NA	**NA**	NA
Collateral held against derivatives[g]	**(6,591)**	(6,000)	**NA**	NA	**NA**	NA	**NA**	NA
Held-for-sale								
Total average HFS loans	**$ 38,316**	$ 27,713	**$ 87**	$ 95	**NA**	NA	**NA**	NA
Nonperforming – purchased[h]	**251**	341	**NA**	NA	**NA**	NA	**NA**	NA

(a) Loans are presented net of unearned income and net deferred loan fees of $2.3 billion and $3.0 billion at December 31, 2006 and 2005, respectively.
(b) Represents securitized credit card receivables. For further discussion of credit card securitizations, see Card Services on pages 43–45 of this Annual Report.
(c) Past-due 90 days and over and accruing includes credit card receivables of $1.3 billion and $1.1 billion, and related credit card securitizations of $962 million and $730 million at December 31, 2006 and 2005, respectively.
(d) As a result of restructuring certain multi-seller conduits the Firm administers, JPMorgan Chase deconsolidated $29 billion of Interests in purchased receivables, $3 billion of Loans and $1 billion of Securities, and recorded a related increase of $33 billion of lending-related commitments during the second quarter of 2006.
(e) Includes wholesale unused advised lines of credit totaling $39.0 billion and $28.3 billion at December 31, 2006 and 2005, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable. Credit card lending-related commitments of $657 billion and $579 billion at December 31, 2006 and 2005, respectively, represent the total available credit to its cardholders. The Firm has not experienced, and does not anticipate, that all of its cardholders will utilize their entire available lines of credit at the same time. The Firm can reduce or cancel a credit card commitment by providing the cardholder prior notice or, in some cases, without notice as permitted by law.
(f) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133.
(g) Represents other liquid securities collateral held by the Firm as of December 31, 2006 and 2005, respectively.
(h) Represents distressed HFS wholesale loans purchased as part of IB's proprietary activities, which are excluded from nonperforming assets.
(i) Includes nonperforming HFS loans of $120 million and $136 million as of December 31, 2006 and 2005, respectively.
(j) Excludes nonperforming assets related to (1) loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by U.S. government agencies and U.S. government sponsored enterprises of $1.2 billion and $1.1 billion at December 31, 2006 and 2005, respectively, and (2) education loans that are 90 days past due and still accruing, which are insured by government agencies under the Federal Family Education Loan Program, of $0.2 billion at December 31, 2006. These amounts for GNMA and education loans are excluded, as reimbursement is proceeding normally.

WHOLESALE CREDIT PORTFOLIO

As of December 31, 2006, wholesale exposure (IB, CB, TSS and AM) increased by $80.0 billion from December 31, 2005, due to increases in lending-related commitments of $70.3 billion, Loans of $33.6 billion, and Derivative receivables of $5.8 billion, partially offset by a decrease of $29.7 billion in Interests in purchased receivables. During the second quarter of 2006, certain multi-seller conduits that the Firm administers were deconsolidated, resulting in a decrease of $29 billion in Interests in purchased receivables, offset by a related increase of $33 billion in lending-related commitments. For a more detailed discussion of the deconsolidation, refer to Note 15 on pages 118–120 of this Annual Report. The remainder of the increase in Loans and lending-related commitments was primarily in the IB, reflecting an increase in capital markets–related activity, including financings associated with client acquisitions, securitizations and loan syndications.

Wholesale

As of or for the year ended December 31, (in millions)	Credit exposure		Nonperforming assets[f]	
	2006	2005	**2006**	2005
Loans – reported[a]	**$ 183,742**	$ 150,111	**$ 391**	$ 992
Derivative receivables	**55,601**	49,787	**36**	50
Interests in purchased receivables	**—**	29,740	**—**	—
Total wholesale credit-related assets	**239,343**	229,638	**427**	1,042
Lending-related commitments[b]	**391,424**	321,109	**NA**	NA
Assets acquired in loan satisfactions	**NA**	NA	**3**	17
Total wholesale credit exposure	**$ 630,767**	$ 550,747	**$ 430**	$ 1,059
Net credit derivative hedges notional[c]	**$ (50,733)**	$ (29,882)	**$ (16)**	$ (17)
Collateral held against derivatives[d]	**(6,591)**	(6,000)	**NA**	NA
Held-for-sale				
Total average HFS loans	**$ 22,187**	$ 12,038	**$ 58**	$ 74
Nonperforming – purchased[e]	**251**	341	**NA**	NA

(a) Includes loans greater or equal to 90 days past due that continue to accrue interest. The principal balance of these loans totaled $29 million and $50 million at December 31, 2006 and 2005, respectively. Also see Note 12 on pages 112–113 of this Annual Report.
(b) Includes unused advised lines of credit totaling $39.0 billion and $28.3 billion at December 31, 2006 and 2005, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable.
(c) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit risk of credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133. Also see Credit derivative positions on page 71 of this Annual Report.
(d) Represents other liquid securities collateral held by the Firm as of December 31, 2006 and 2005, respectively.
(e) Represents distressed HFS loans purchased as part of IB's proprietary activities, which are excluded from nonperforming assets.
(f) Includes nonperforming HFS loans of $4 million and $109 million as of December 31, 2006 and 2005, respectively.

Net charge-offs/recoveries

Wholesale

Year ended December 31, (in millions, except ratios)	2006	2005
Loans – reported		
Net recoveries	**$ 22**	$ 77
Average annual net recovery rate[a]	**0.01%**	0.06%

(a) Excludes average loans HFS of $22 billion and $12 billion for the years ended December 31, 2006 and 2005, respectively.

During both 2006 and 2005, there were no net charge-offs for Derivative receivables, Interests in purchased receivables or lending-related commitments.

Net recoveries do not include gains from sales of nonperforming loans that were sold from the credit portfolio (as shown in the following table). Gains from these sales during 2006 and 2005 were $72 million and $67 million, respectively, and are reflected in Noninterest revenue.

Nonperforming loan activity

Wholesale

Year ended December 31, (in millions)	2006	2005
Beginning balance	**$ 992**	$ 1,574
Additions	**480**	581
Reductions:		
Paydowns and other	**(578)**	(520)
Charge-offs	**(186)**	(255)
Returned to performing	**(133)**	(204)
Sales	**(184)**	(184)
Total reductions	**(1,081)**	(1,163)
Net additions (reductions)	**(601)**	(582)
Ending balance	**$ 391**	$ 992

The following table presents summaries of the maturity and ratings profiles of the wholesale portfolio as of December 31, 2006 and 2005. The ratings scale is based upon the Firm's internal risk ratings and is presented on an S&P-equivalent basis.

Wholesale exposure

	Maturity profile[d]				Ratings profile			
					Investment-grade ("IG")	Noninvestment-grade		
December 31, 2006 (in billions, except ratios)	Under 1 year	1–5 years	Over 5 years	Total	AAA to BBB-	BB+ & below	Total	Total % of IG
Loans	**44%**	**41%**	**15%**	**100%**	**$ 104**	**$ 57**	**$ 161**	**65%**
Derivative receivables	**16**	**34**	**50**	**100**	**49**	**7**	**56**	**88**
Interests in purchased receivables[a]	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Lending-related commitments[a]	**36**	**58**	**6**	**100**	**338**	**53**	**391**	**86**
Total excluding HFS	**37%**	**51%**	**12%**	**100%**	**$ 491**	**$ 117**	**608**	**81%**
Loans held-for-sale[b]							**23**	
Total exposure							**$ 631**	
Net credit derivative hedges notional[c]	**16%**	**75%**	**9%**	**100%**	**$ (45)**	**$ (6)**	**$ (51)**	**88%**

	Maturity profile[d]				Ratings profile			
					Investment-grade ("IG")	Noninvestment-grade		
December 31, 2005 (in billions, except ratios)	Under 1 year	1–5 years	Over 5 years	Total	AAA to BBB-	BB+ & below	Total	Total % of IG
Loans	43%	44%	13%	100%	$ 87	$ 45	$ 132	66%
Derivative receivables	2	42	56	100	42	8	50	84
Interests in purchased receivables	41	57	2	100	30	—	30	100
Lending-related commitments	36	57	7	100	273	48	321	85
Total excluding HFS	35%	52%	13%	100%	$ 432	$ 101	533	81%
Loans held-for-sale[b]							18	
Total exposure							$ 551	
Net credit derivative hedges notional[c]	15%	74%	11%	100%	$ (27)	$ (3)	$ (30)	90%

(a) As a result of restructuring certain multi-seller conduits the Firm administers, JPMorgan Chase deconsolidated $29 billion of Interests in purchased receivables, $3 billion of Loans and $1 billion of Securities, and recorded a related increase of $33 billion of lending-related commitments during the second quarter of 2006.
(b) HFS loans relate primarily to securitization and syndication activities.
(c) Ratings are based upon the underlying referenced assets.
(d) The maturity profile of Loans and lending-related commitments is based upon the remaining contractual maturity. The maturity profile of Derivative receivables is based upon the maturity profile of Average exposure. See page 70 of this Annual Report for a further discussion of Average exposure.

Wholesale credit exposure – selected industry concentration

The Firm focuses on the management and the diversification of its industry concentrations. At December 31, 2006, the top 10 industries remained unchanged from December 31, 2005. The increase in Banks and finance companies, Utilities, Asset managers, and Securities firms and exchanges reflects the overall growth in wholesale exposure. Below are summaries of the top 10 industry concentrations as of December 31, 2006 and 2005.

Wholesale credit exposure – selected industry concentration

December 31, 2006 (in millions, except ratios)	Credit exposure[c]	Investment grade	Noninvestment-grade: Noncriticized	Noninvestment-grade: Criticized	Net charge-offs/ (recoveries)	Credit derivative hedges[d]	Collateral held against derivative receivables[e]
Top 10 industries[a]							
Banks and finance companies	**$ 61,792**	**84%**	**$ 9,733**	**$ 74**	**$ (12)**	**$ (7,847)**	**$ (1,452)**
Real estate	**32,102**	**57**	**13,702**	**243**	**9**	**(2,223)**	**(26)**
Healthcare	**28,998**	**83**	**4,618**	**284**	**(1)**	**(3,021)**	**(5)**
State and municipal governments	**27,485**	**98**	**662**	**23**	**—**	**(801)**	**(12)**
Consumer products	**27,114**	**72**	**7,327**	**383**	**22**	**(3,308)**	**(14)**
Utilities	**24,938**	**88**	**2,929**	**183**	**(6)**	**(4,123)**	**(2)**
Asset managers	**24,570**	**88**	**2,956**	**31**	**—**	**—**	**(750)**
Securities firms and exchanges	**23,127**	**93**	**1,527**	**5**	**—**	**(784)**	**(1,207)**
Retail and consumer services	**22,122**	**70**	**6,268**	**278**	**(3)**	**(2,069)**	**(226)**
Oil and gas	**18,544**	**76**	**4,356**	**38**	**—**	**(2,564)**	**—**
All other	**317,468**	**80**	**58,971**	**3,484**	**(31)**	**(23,993)**	**(2,897)**
Total excluding HFS	**$ 608,260**	**81%**	**$ 113,049**	**$ 5,026**	**$ (22)**	**$ (50,733)**	**$ (6,591)**
Held-for-sale[b]	**22,507**						
Total exposure	**$ 630,767**						

December 31, 2005 (in millions, except ratios)	Credit exposure[c]	Investment grade	Noninvestment-grade: Noncriticized	Noninvestment-grade: Criticized	Net charge-offs/ (recoveries)	Credit derivative hedges[d]	Collateral held against derivative receivables[e]
Top 10 industries[a]							
Banks and finance companies	$ 50,924	87%	$ 6,462	$ 232	$ (16)	$ (9,490)	$ (1,482)
Real estate	29,974	55	13,226	276	—	(560)	(2)
Healthcare	25,435	79	4,977	243	12	(581)	(7)
State and municipal governments	25,328	98	409	40	—	(597)	(1)
Consumer products	25,678	71	6,791	590	2	(927)	(28)
Utilities	20,482	90	1,841	295	(4)	(1,624)	—
Asset managers	17,358	82	2,949	103	(1)	(25)	(954)
Securities firms and exchanges	17,094	89	1,833	15	—	(2,009)	(1,525)
Retail and consumer services	19,920	75	4,654	288	12	(989)	(5)
Oil and gas	18,200	77	4,267	9	—	(1,007)	—
All other	282,802	82	47,966	3,081	(82)	(12,073)	(1,996)
Total excluding HFS	$ 533,195	81%	$ 95,375	$ 5,172	$ (77)	$ (29,882)	$ (6,000)
Held-for-sale[b]	17,552						
Total exposure	$ 550,747						

(a) Rankings are based upon exposure at December 31, 2006.
(b) HFS loans primarily relate to securitization and syndication activities.
(c) Credit exposure is net of risk participations and excludes the benefit of credit derivative hedges and collateral held against Derivative receivables or Loans.
(d) Represents notional amounts only; these credit derivatives do not qualify for hedge accounting under SFAS 133.
(e) Represents other liquid securities collateral held by the Firm as of December 31, 2006 and 2005, respectively.

Wholesale criticized exposure

Exposures deemed criticized generally represent a ratings profile similar to a rating of CCC+/Caa1 and lower, as defined by Standard & Poor's/Moody's. The criticized component of the portfolio decreased to $5.7 billion at December 31, 2006, from $6.2 billion at year-end 2005. The decline resulted from upgrades, repayments and reductions in wholesale nonperforming loans as shown on page 67 of this Annual Report.

At December 31, 2006, Healthcare, Agriculture/paper manufacturing, Business services, and Chemicals/plastics moved into the top 10 of wholesale criticized exposure, replacing Telecom services, Airlines, Machinery and equipment manufacturing, and Building materials/construction.

Wholesale criticized exposure – industry concentrations

	2006		2005	
December 31, (in millions, except ratios)	Credit exposure	% of portfolio	Credit exposure	% of portfolio
Automotive	**$ 1,442**	**29%**	$ 643	12%
Media	**392**	**8**	684	13
Consumer products	**383**	**7**	590	11
Healthcare	**284**	**6**	243	5
Retail and consumer services	**278**	**5**	288	6
Real estate	**243**	**5**	276	5
Agriculture/paper manufacturing	**239**	**5**	178	3
Business services	**222**	**4**	250	5
Utilities	**183**	**4**	295	6
Chemicals/plastics	**159**	**3**	188	4
All other	**1,201**	**24**	1,537	30
Total excluding HFS	**$ 5,026**	**100%**	$ 5,172	100%
Held-for-sale[(a)]	**624**		1,069	
Total	**$ 5,650**		$ 6,241	

(a) HFS loans primarily relate to securitization and syndication activities; excludes purchased nonperforming HFS loans.

Wholesale selected industry discussion

Presented below is a discussion of several industries to which the Firm has significant exposure, as well as industries the Firm continues to monitor because of actual or potential credit concerns. For additional information, refer to the tables above and on the preceding page.

- Banks and finance companies: This industry group, primarily consisting of exposure to commercial banks, is the largest segment of the Firm's wholesale credit portfolio. Credit quality is high, as 84% of the exposure in this category is rated investment-grade.
- Real estate: This industry, as the second largest segment of the Firm's wholesale credit portfolio, continued to grow in 2006, primarily due to improving market fundamentals and increased capital demand for the asset class supported by the relatively low interest rate environment. Real estate exposure is well-diversified by client, transaction type, geography, and property type. Approximately half of this exposure is to large public and rated real estate companies and institutions (e.g., REITS), as well as real estate loans originated for sale into the commercial mortgage-backed securities market. The remaining exposure is primarily to professional real estate developers, owners, or service providers and generally involves real estate leased to third-party tenants.
- Automotive: Automotive Original Equipment Manufacturers and suppliers based in North America continued to be impacted negatively by a challenging operating environment in 2006. As a result, criticized exposures grew in 2006, primarily as a result of downgrades to select names within the portfolio. Though larger in the aggregate, most of the criticized exposure remained undrawn, was performing and substantially secured.
- Media: Media no longer represents the largest percentage of criticized exposure since its criticized exposures decreased significantly in 2006. This decrease was due primarily to the maturation of short-term financing arrangements, repayments, and the planned sale to reduce select exposures.
- All other: All other in the wholesale credit exposure concentration table on page 68 of this Annual Report at December 31, 2006, excluding HFS, included $317.5 billion of credit exposure to 22 industry segments. Exposures related to SPEs and high-net-worth individuals were 31% and 13%, respectively, of this category. SPEs provide secured financing (generally backed by receivables, loans or bonds on a bankruptcy-remote, nonrecourse or limited-recourse basis) originated by a diverse group of companies in industries that are not highly correlated. The remaining All other exposure is well-diversified across industries other than those related to SPEs and high-net-worth individuals; none comprise more than 3% of total exposure.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments to meet the needs of customers; to generate revenues through trading activities; to manage exposure to fluctuations in interest rates, currencies and other markets; and to manage the Firm's credit exposure. For further discussion of derivative contracts, see Note 28 on pages 131–132 of this Annual Report.

The following table summarizes the aggregate notional amounts and the net derivative receivables MTM for the periods presented.

Notional amounts and derivative receivables marked to market ("MTM")

	Notional amounts[b]		Derivative receivables MTM[c]	
December 31, (in billions)	**2006**	2005	**2006**	2005
Interest rate	**$ 50,201**	$ 38,493	**$ 29**	$ 28
Foreign exchange	**2,520**	2,136	**4**	3
Equity	**809**	458	**6**	6
Credit derivatives	**4,619**	2,241	**6**	3
Commodity	**507**	265	**11**	10
Total, net of cash collateral[a]	**$ 58,656**	$ 43,593	**56**	50
Liquid securities collateral held against derivative receivables	**NA**	NA	**(7)**	(6)
Total, net of all collateral	**NA**	NA	**$ 49**	$ 44

(a) Collateral is only applicable to Derivative receivables MTM amounts.
(b) Represents the sum of gross long and gross short third-party notional derivative contracts, excluding written options and foreign exchange spot contracts.
(c) 2005 has been adjusted to reflect more appropriate product classification of certain balances.

The amount of Derivative receivables reported on the Consolidated balance sheets of $56 billion and $50 billion at December 31, 2006 and 2005, respectively, is the amount of the mark-to-market ("MTM") or fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm and represents the cost to the Firm to replace the contracts at current market rates should the counterparty default. However, in Management's view, the appropriate measure of current credit risk should also reflect additional liquid securities held as collateral by the Firm of $7 billion and $6 billion at December 31, 2006 and 2005, respectively, resulting in total exposure, net of all collateral, of $49 billion and $44 billion at December 31, 2006 and 2005, respectively.

The Firm also holds additional collateral delivered by clients at the initiation of transactions, but this collateral does not reduce the credit risk of the derivative receivables in the table above. This additional collateral secures potential exposure that could arise in the derivatives portfolio should the MTM of the client's transactions move in the Firm's favor. As of December 31, 2006 and 2005, the Firm held $12 billion and $10 billion, respectively, of this additional collateral. The derivative receivables MTM, net of all collateral, also does not include other credit enhancements in the forms of letters of credit and surety receivables.

While useful as a current view of credit exposure, the net MTM value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE") and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

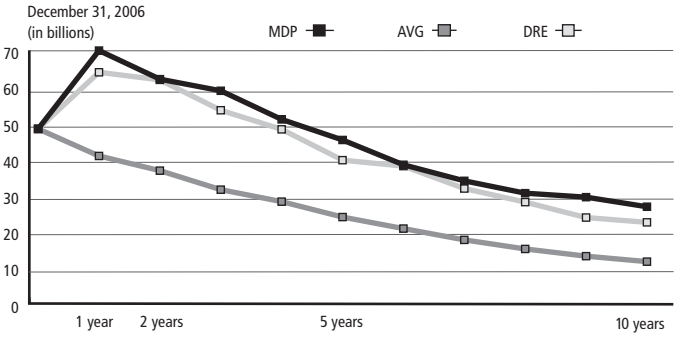
Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. However, the total potential future credit risk embedded in the Firm's derivatives portfolio is not the simple sum of all Peak client credit risks. This is because, at the portfolio level, credit risk is reduced by the fact that when offsetting transactions are done with separate counterparties, only one of the two trades can generate a credit loss, even if both counterparties were to default simultaneously. The Firm refers to this effect as market diversification, and the Market-Diversified Peak ("MDP") measure is a portfolio aggregation of counterparty Peak measures, representing the maximum losses at the 97.5% confidence level that would occur if all counterparties defaulted under any one given market scenario and time frame.

Derivative Risk Equivalent exposure is a measure that expresses the riskiness of derivative exposure on a basis intended to be equivalent to the riskiness of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, AVG is a measure of the expected MTM value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the Credit Valuation Adjustment ("CVA"), as further described below. Average exposure was $36 billion at both December 31, 2006 and 2005, compared with derivative receivables MTM, net of all collateral, of $49 billion and $44 billion at December 31, 2006 and 2005, respectively.

The graph below shows exposure profiles to derivatives over the next 10 years as calculated by the MDP, DRE and AVG metrics. All three measures generally show declining exposure after the first year, if no new trades were added to the portfolio.

Exposure profile of derivatives measures



The MTM value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based upon the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The following table summarizes the ratings profile of the Firm's Derivative receivables MTM, net of other liquid securities collateral, for the dates indicated:

Ratings profile of derivative receivables MTM

Rating equivalent	**2006**		2005	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA to AA-[a]	**$ 28,150**	**58%**	$ 20,735	48%
A+ to A-	**7,588**	**15**	8,074	18
BBB+ to BBB-	**8,044**	**16**	8,243	19
BB+ to B-	**5,150**	**11**	6,580	15
CCC+ and below	**78**	**—**	155	—
Total	**$ 49,010**	**100%**	$ 43,787	100%

(a) The increase in AAA to AA- was due primarily to exchange-traded commodity activities.

The Firm actively pursues the use of collateral agreements to mitigate counterparty credit risk in derivatives. The percentage of the Firm's derivatives transactions subject to collateral agreements decreased slightly, to 80% as of December 31, 2006, from 81% at December 31, 2005.

The Firm posted $27 billion of collateral as of both December 31, 2006 and 2005. Certain derivative and collateral agreements include provisions that require the counterparty and/or the Firm, upon specified downgrades in their respective credit ratings, to post collateral for the benefit of the other party. As of December 31, 2006, the impact of a single-notch ratings downgrade to JPMorgan Chase Bank, N.A., from its rating of AA- to A+ at December 31, 2006, would have required $1.1 billion of additional collateral to be posted by the Firm; the impact of a six-notch ratings downgrade (from AA- to BBB-) would have required $3.1 billion of additional collateral. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the then-existing MTM value of the derivative contracts.

Credit derivatives

The following table presents the Firm's notional amounts of credit derivatives protection purchased and sold by the respective businesses as of December 31, 2006 and 2005:

Credit derivatives positions

	Notional amount				
	Credit portfolio		Dealer/client		
December 31, (in billions)	Protection purchased	Protection sold	Protection purchased	Protection sold	**Total**
2006	**$ 52**[a]	**$ 1**	**$ 2,277**	**$ 2,289**	**$ 4,619**
2005	31	1	1,096	1,113	2,241

(a) Includes $23 billion which represents the notional amount for structured portfolio protection; the Firm retains the first risk of loss on this portfolio.

In managing wholesale credit exposure, the Firm purchases single-name and portfolio credit derivatives; this activity does not reduce the reported level of assets on the balance sheet or the level of reported off–balance sheet commitments. The Firm also diversifies exposures by providing (i.e., selling) credit protection, which increases exposure to industries or clients where the Firm has little or no client-related exposure. This activity is not material to the Firm's overall credit exposure.

JPMorgan Chase has limited counterparty exposure as a result of credit derivatives transactions. Of the $55.6 billion of total Derivative receivables MTM at December 31, 2006, approximately $5.7 billion, or 10%, was associated with credit derivatives, before the benefit of liquid securities collateral.

Dealer/client

At December 31, 2006, the total notional amount of protection purchased and sold in the dealer/client business increased $2.4 trillion from year-end 2005 as a result of increased trade volume in the market. This business has a mismatch between the total notional amounts of protection purchased and sold. However, in the Firm's view, the risk positions are largely matched when securities used to risk-manage certain derivative positions are taken into consideration and the notional amounts are adjusted to a duration-based equivalent basis or to reflect different degrees of subordination in tranched structures.

Credit portfolio management activities

Use of single-name and portfolio credit derivatives

December 31, (in millions)	Notional amount of protection purchased 2006	2005
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 40,755**	$ 18,926
Derivative receivables	**11,229**	12,088
Total	**$ 51,984**[a]	$ 31,014

(a) Includes $23 billion which represents the notional amount for structured portfolio protection; the Firm retains the first loss on this portfolio.

The credit derivatives used by JPMorgan Chase for credit portfolio management activities do not qualify for hedge accounting under SFAS 133, and therefore, effectiveness testing under SFAS 133 is not performed. These derivatives are reported at fair value, with gains and losses recognized in Principal transactions. The MTM value incorporates both the cost of credit derivative premiums and changes in value due to movement in spreads and credit events; in contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. Loan interest and fees are generally recognized in Net interest income, and impairment is recognized in the Provision for credit losses. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives utilized in portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure. The MTM related to the Firm's credit derivatives used for managing credit exposure, as well as the MTM related to the CVA, which reflects the credit quality of derivatives counterparty exposure, are included in the table below. These results can vary from year to year due to market conditions that impact specific positions in the portfolio.

Year ended December 31, (in millions)	2006	2005	2004[c]
Hedges of lending-related commitments[a]	**$ (246)**	$ 24	$ (234)
CVA and hedges of CVA[a]	**133**	84	188
Net gains (losses)[b]	**$ (113)**	$ 108	$ (46)

(a) These hedges do not qualify for hedge accounting under SFAS 133.
(b) Excludes gains of $56 million, $8 million and $52 million for the years ended December 31, 2006, 2005 and 2004, respectively, of other Principal transactions revenues that are not associated with hedging activities.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The Firm also actively manages wholesale credit exposure through loan and commitment sales. During 2006, 2005 and 2004, the Firm sold $3.1 billion, $4.0 billion and $5.9 billion of loans and commitments, respectively, recognizing gains (losses) of $73 million, $76 million and ($8) million in 2006, 2005 and 2004, respectively. The gains include gains on sales of nonperforming loans as discussed on page 67 of this Annual Report. These activities are not related to the Firm's securitization activities, which are undertaken for liquidity and balance sheet management purposes. For a further discussion of securitization activity, see Liquidity Risk Management and Note 14 on pages 62–63 and 114–118, respectively, of this Annual Report.

Lending-related commitments

The contractual amount of wholesale lending-related commitments was $391.4 billion at December 31, 2006, compared with $321.1 billion at December 31, 2005. See page 66 of this Annual Report for an explanation of the increase in exposure. In the Firm's view, the total contractual amount of these instruments is not representative of the Firm's actual credit risk exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these instruments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based upon average portfolio historical experience, to become outstanding in the event of a default by an obligor. The loan-equivalent amount of the Firm's lending-related commitments was $212 billion and $178 billion as of December 31, 2006 and 2005, respectively.

Emerging markets country exposure

The Firm has a comprehensive internal process for measuring and managing exposures and risk in emerging markets countries – defined as those countries potentially vulnerable to sovereign events. As of December 31, 2006, based upon its internal methodology, the Firm's exposure to any individual emerging-markets country was not significant, in that total exposure to any such country did not exceed 0.75% of the Firm's total assets. In evaluating and managing its exposures to emerging markets countries, the Firm takes into consideration all credit-related lending, trading, and investment activities, whether cross-border or locally funded. Exposure amounts are then adjusted for credit enhancements (e.g., guarantees and letters of credit) provided by third parties located outside the country, if the enhancements fully cover the country risk as well as the credit risk. For information regarding the Firm's cross-border exposure, based upon guidelines of the Federal Financial Institutions Examination Council ("FFIEC"), see Part 1, Item 1, "Loan portfolio, Cross-border outstandings," on page 155, of the Firm's Annual Report on Form 10-K for the year ended December 31,2006.

CONSUMER CREDIT PORTFOLIO

JPMorgan Chase's consumer portfolio consists primarily of residential mortgages, home equity loans, credit cards, auto loans and leases, education loans and business banking loans and reflects the benefit of diversification from both a product and a geographic perspective. The primary focus is serving the prime consumer credit market. There are no products in the real estate portfolios that result in negative amortization. However, RFS offers Home Equity lines of credit and Mortgage loans with interest-only payment options to predominantly prime borrowers. The Firm actively manages its consumer credit operation. Ongoing efforts include continual review and enhancement of credit underwriting criteria and refinement of pricing and risk management models.

The following table presents managed consumer credit–related information for the dates indicated:

Consumer portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming assets[e]		Net charge-offs		Average annual net charge-off rate[g]	
	2006	2005	**2006**	2005	**2006**	2005	**2006**	2005
Retail Financial Services								
Home equity	**$ 85,730**	$ 73,866	**$ 454**	$ 422	**$ 143**	$ 141	**0.18%**	0.20%
Mortgage	**59,668**	58,959	**769**	442	**56**	25	**0.12**	0.06
Auto loans and leases[a]	**41,009**	46,081	**132**	193	**238**	277	**0.56**	0.54
All other loans	**27,097**	18,393	**322**	281	**139**	129	**0.65**	0.83
Card Services – reported[b]	**85,881**	71,738	**9**	13	**2,488**	3,324	**3.37**	4.94
Total consumer loans – reported	**299,385**	269,037	**1,686**[f]	1,351[f]	**3,064**	3,896	**1.17**	1.56
Card Services – securitizations[b][c]	**66,950**	70,527	**—**	—	**2,210**	3,776	**3.28**	5.47
Total consumer loans – managed[b]	**366,335**	339,564	**1,686**	1,351	**5,274**	7,672	**1.60**	2.41
Assets acquired in loan satisfactions	**NA**	NA	**225**	180	**NA**	NA	**NA**	NA
Total consumer related assets – managed	**366,335**	339,564	**1,911**	1,531	**5,274**	7,672	**1.60**	2.41
Consumer lending–related commitments:								
Home equity	**69,559**	58,281	**NA**	NA	**NA**	NA	**NA**	NA
Mortgage	**6,618**	5,944	**NA**	NA	**NA**	NA	**NA**	NA
Auto loans and leases	**7,874**	5,665	**NA**	NA	**NA**	NA	**NA**	NA
All other loans	**6,375**	6,385	**NA**	NA	**NA**	NA	**NA**	NA
Card Services[d]	**657,109**	579,321	**NA**	NA	**NA**	NA	**NA**	NA
Total lending-related commitments	**747,535**	655,596	**NA**	NA	**NA**	NA	**NA**	NA
Total consumer credit portfolio	**$ 1,113,870**	$ 995,160	**$1,911**	$ 1,531	**$ 5,274**	$ 7,672	**1.60%**	2.41%
Total average HFS loans	**$ 16,129**	$ 15,675	**$ 29**	$ 21	**NA**	NA	**NA**	NA
Memo: Credit card – managed	**152,831**	142,265	**9**	13	**$ 4,698**	$ 7,100	**3.33%**	5.21%

(a) Excludes operating lease–related assets of $1.6 billion and $858 million at December 31, 2006 and 2005, respectively.
(b) Past-due loans 90 days and over and accruing includes credit card receivables of $1.3 billion and $1.1 billion at December 31, 2006 and 2005, and related credit card securitizations of $962 million and $730 million at December 31, 2006 and 2005, respectively.
(c) Represents securitized credit card receivables. For a further discussion of credit card securitizations, see Card Services on pages 43–45 of this Annual Report.
(d) The credit card lending–related commitments represent the total available credit to the Firm's cardholders. The Firm has not experienced, and does not anticipate, that all of its cardholders will utilize their entire available lines of credit at the same time. The Firm can reduce or cancel a credit card commitment by providing the cardholder prior notice or, in some cases, without notice as permitted by law.
(e) Includes nonperforming HFS loans of $116 million and $27 million at December 31, 2006 and 2005, respectively.
(f) Excludes nonperforming assets related to (1) loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by U.S. government agencies and U.S. government-sponsored enterprises of $1.2 billion and $1.1 billion for December 31, 2006 and 2005, respectively, and (2) education loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $0.2 billion at December 31, 2006. These amounts for GNMA and education loans are excluded, as reimbursement is proceeding normally.
(g) Net charge-off rates exclude average loans HFS of $16 billion for the years ended December 31, 2006 and 2005.

Total managed consumer loans as of December 31, 2006, were $366.3 billion, up from $339.6 billion at year-end 2005 reflecting growth in most consumer portfolios. Consumer lending-related commitments increased by 14%, to $747.5 billion at December 31, 2006, primarily reflecting growth in credit cards and home equity lines of credit. The following discussion relates to the specific loan and lending-related categories within the consumer portfolio.

Retail Financial Services:

Average RFS loan balances for 2006 were $203.9 billion. The net charge-off rate for retail loans in 2006 was 0.31%, which was flat compared with the prior year, reflecting stable credit trends in most consumer lending portfolios. New loans originated in 2006 primarily reflect high credit quality consistent with management's focus on prime and near-prime credit market segmentation. The Firm regularly evaluates market conditions and the overall economic returns of new originations and makes an initial determination of whether to classify specific new originations as held-for-investment or held-for-sale. The Firm also periodically evaluates the overall economic returns of its held-for-investment loan portfolio under prevailing market conditions to determine whether to retain or sell loans in the portfolio. When it is determined that a loan that was previously classified as held-for-investment will be sold it is transferred into a held-for-sale account. Held-for-sale loans are accounted for at the lower of cost or fair value, with changes in value recorded in Noninterest revenue.

Home equity: Home equity loans at December 31, 2006, were $85.7 billion, an increase of $11.9 billion from year-end 2005. Growth in the portfolio reflected organic growth, as well as The Bank of New York transaction. The geographic distribution is well-diversified as shown in the table below.

Mortgage: Mortgage loans at December 31, 2006, were $59.7 billion. Mortgage receivables as of December 31, 2006, reflected an increase of $709 million from the prior year. Although the Firm provides mortgage loans to the full spectrum of credit borrowers, more than 75% of RFS' mortgage loans on the balance sheet are to prime borrowers. In addition, the Firm sells or securitizes virtually all fixed-rate mortgage originations, as well as a portion of its adjustable rate originations. As a result, the portfolio of residential mortgage loans held-for-investment consists primarily of adjustable rate products. The geographic distribution is well-diversified as shown in the table below.

Consumer real estate loans by geographic location

Year ended December 31, (in billions, except ratios)	Home equity			
	2006		2005	
California	**$ 12.9**	**15%**	$ 10.5	14%
New York	**12.2**	**14**	10.2	14
Illinois	**6.2**	**7**	5.5	7
Texas	**5.8**	**7**	5.3	7
Arizona	**5.4**	**6**	4.5	6
Ohio	**5.3**	**6**	5.2	7
Florida	**4.4**	**5**	3.5	5
Michigan	**3.8**	**4**	3.7	5
New Jersey	**3.5**	**4**	2.6	4
Indiana	**2.6**	**3**	2.6	4
All other	**23.6**	**29**	20.3	27
Total	**$ 85.7**	**100%**	$ 73.9	100%

Year ended December 31, (in billions, except ratios)	Mortgage			
	2006		2005	
California	**$ 14.5**	**24%**	$ 13.8	23%
New York	**8.9**	**15**	9.2	16
Florida	**7.1**	**12**	6.8	12
New Jersey	**2.6**	**4**	2.6	4
Illinois	**2.4**	**4**	2.2	4
Texas	**2.1**	**4**	2.3	4
Virginia	**1.5**	**3**	1.7	3
Michigan	**1.5**	**3**	1.5	3
Arizona	**1.5**	**3**	1.2	2
Maryland	**1.4**	**2**	1.5	3
All other	**16.2**	**26**	16.2	26
Total	**$ 59.7**	**100%**	$ 59.0	100%

Auto loans and leases: As of December 31, 2006, Auto loans and leases decreased to $41.0 billion from $46.1 billion at year-end 2005. The decrease in outstanding loans was caused primarily by the de-emphasis of vehicle finance leasing, which comprised $2 billion of outstanding loans as of December 31, 2006, down from $4 billion in the prior year. The Auto loan portfolio reflects a high concentration of prime and near-prime quality credits.

All other loans: All other loans primarily include business banking loans (which are highly collateralized loans, often with personal loan guarantees), Education loans and community development loans. As of December 31, 2006, Other loans increased to $27.1 billion compared with $18.4 billion at year-end 2005. This increase is due primarily to an increase in education loans as a result of the acquisition of Collegiate Funding Services. Loan balances also increased in Business banking primarily as a result of The Bank of New York transaction.

Card Services

JPMorgan Chase analyzes its credit card portfolio on a managed basis, which includes credit card receivables on the consolidated balance sheet and those receivables sold to investors through securitization. Managed credit card receivables were $152.8 billion at December 31, 2006, an increase of $10.6 billion from year-end 2005, reflecting organic growth and acquisitions, partially offset by higher customer payment rates.

The managed credit card net charge-off rate decreased to 3.33% for 2006, from 5.21% in 2005. This decrease was due primarily to lower bankruptcy-related net charge-offs. The 30-day delinquency rates increased to 3.13% at December 31, 2006, from 2.79% at December 31, 2005, primarily driven by accelerated loss recognition of delinquent accounts in 2005, as a result of the 2005 bankruptcy reform legislation. The managed credit card portfolio continues to reflect a well-seasoned portfolio that has good U.S. geographic diversification.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for credit losses is intended to cover probable credit losses, including losses where the asset is not specifically identified or the size of the loss has not been fully determined. At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. The allowance is reviewed relative to the risk profile of the Firm's credit portfolio and current economic conditions and is adjusted if, in management's judgment, changes are warranted. The allowance includes an asset-specific component and a formula-based component, the latter of which consists of a statistical calculation and adjustments to the statistical calculation. For further discussion of the components of the allowance for credit losses, see Critical accounting estimates used by the Firm on page 83 and Note 13 on pages 113–114 of this Annual Report. At December 31, 2006, management deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses that are inherent in the portfolio, including losses that are not specifically identified or for which the size of the loss has not yet been fully determined).

Summary of changes in the allowance for credit losses

Year ended December 31,	2006			2005		
(in millions)	Wholesale	Consumer	Total	Wholesale	Consumer	Total
Loans:						
Beginning balance at January 1,	**$ 2,453**	**$ 4,637**	**$ 7,090**	$ 3,098	$ 4,222	$ 7,320
Gross charge-offs	**(186)**	**(3,698)**	**(3,884)**	(255)	(4,614)	(4,869)
Gross recoveries	**208**	**634**	**842**	332	718	1,050
Net (charge-offs) recoveries	**22**	**(3,064)**	**(3,042)**	77	(3,896)	(3,819)
Provision for loan losses[a]	**213**	**2,940**	**3,153**	(716)	4,291	3,575
Other	**23**	**55**	**78**[d]	(6)	20	14
Ending balance at December 31	**$ 2,711**[b]	**$ 4,568**[c]	**$ 7,279**	$ 2,453[b]	$ 4,637[c]	$ 7,090
Components:						
Asset specific	**$ 51**	**$ —**	**$ 51**	$ 203	$ —	$ 203
Statistical component	**1,757**	**3,398**	**5,155**	1,629	3,422	5,051
Adjustment to statistical component	**903**	**1,170**	**2,073**	621	1,215	1,836
Total Allowance for loan losses	**$ 2,711**	**$ 4,568**	**$ 7,279**	$ 2,453	$ 4,637	$ 7,090
Lending-related commitments:						
Beginning balance at January 1,	**$ 385**	**$ 15**	**$ 400**	$ 480	$ 12	$ 492
Provision for lending-related commitments	**108**	**9**	**117**	(95)	3	(92)
Other	**6**	**1**	**7**[d]	—	—	—
Ending balance at December 31	**$ 499**	**$ 25**	**$ 524**	$ 385	$ 15	$ 400
Components:						
Asset specific	**$ 33**	**$ —**	**$ 33**	$ 60	$ —	$ 60
Statistical component	**466**	**25**	**491**	325	15	340
Total allowance for lending-related commitments	**$ 499**	**$ 25**	**$ 524**	$ 385	$ 15	$ 400

(a) 2006 includes a $157 million release of Allowance for loan losses related to Hurricane Katrina. 2005 includes $400 million of allowance related to Hurricane Katrina.
(b) The ratio of the wholesale allowance for loan losses to total wholesale loans was 1.68% and 1.85%, excluding wholesale HFS loans of $22.5 billion and $17.6 billion at December 31, 2006 and 2005, respectively.
(c) The ratio of the consumer allowance for loan losses to total consumer loans was 1.71% and 1.84%, excluding consumer HFS loans of $32.7 billion and $16.6 billion at December 31, 2006 and 2005, respectively.
(d) Primarily relates to loans acquired in The Bank of New York transaction in the fourth quarter of 2006.

The Allowance for credit losses increased by $313 million from December 31, 2005, primarily due to activity in the wholesale portfolio. New lending activity in IB and CB was offset partially by lower wholesale nonperforming loans. Additionally, there was a release of $157 million of Allowance for loan losses related to Hurricane Katrina in the consumer and wholesale portfolios.

Excluding held-for-sale loans, the Allowance for loan losses represented 1.70% of loans at December 31, 2006, compared with 1.84% at December 31, 2005. The wholesale component of the allowance increased to $2.7 billion as of December 31, 2006, from $2.5 billion at year-end 2005, due to loan growth in the IB and CB, including the acquisition of The Bank of New York loan portfolio. The consumer allowance decreased $69 million, which included a release of $98 million in CS, partially offset by a $29 million build in RFS. The Allowance release by CS was primarily the result of releasing the remaining Allowance for loan loss related to Hurricane Katrina established in 2005. Excluding the allowance release for Hurricane Katrina, CS' Allowance for loan losses remained constant as improved credit quality offset the increase of $14.1 billion in loan receivables subject to the Allowance. The RFS build was primarily the result of loans acquired in The Bank of New York transaction.

To provide for the risk of loss inherent in the Firm's process of extending credit, management also computes an asset-specific component and a formula-based component for wholesale lending-related commitments. These components are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown. This allowance, which is reported in Other liabilities, was $524 million and $400 million at December 31, 2006 and 2005, respectively. The increase reflected increased lending-related commitments and updates to inputs used in the calculation.

Provision for credit losses

For a discussion of the reported Provision for credit losses, see page 29 of this Annual Report. The managed provision for credit losses includes credit card securitizations. For the year ended December 31, 2006, securitized credit card losses were lower compared with the prior-year periods, primarily as a result of lower bankruptcy-related charge-offs. At December 31, 2006, securitized credit card outstandings were $3.6 billion lower compared with the prior year end.

Year ended December 31,	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses[c]		
(in millions)	**2006**	2005	2004[b]	**2006**	2005	2004[b]	**2006**[a]	2005[a]	2004[b]
Investment Bank	**$ 112**	$ (757)	$ (525)	**$ 79**	$ (81)	$ (115)	**$ 191**	$ (838)	$ (640)
Commercial Banking	**133**	87	35	**27**	(14)	6	**160**	73	41
Treasury & Securities Services	**(1)**	(1)	7	**—**	1	—	**(1)**	—	7
Asset Management	**(30)**	(55)	(12)	**2**	(1)	(2)	**(28)**	(56)	(14)
Corporate	**(1)**	10	975	**—**	—	(227)	**(1)**	10	748
Total Wholesale	**213**	(716)	480	**108**	(95)	(338)	**321**	(811)	142
Retail Financial Services	**552**	721	450	**9**	3	(1)	**561**	724	449
Card Services	**2,388**	3,570	1,953	**—**	—	—	**2,388**	3,570	1,953
Total Consumer	**2,940**	4,291	2,403	**9**	3	(1)	**2,949**	4,294	2,402
Total provision for credit losses	**3,153**[a]	3,575[a]	2,883	**117**	(92)	(339)	**3,270**	3,483	2,544
Credit card securitization	**2,210**	3,776	2,898	**—**	—	—	**2,210**	3,776	2,898
Total managed provision for credit losses	**$ 5,363**	$ 7,351	$ 5,781	**$ 117**	$ (92)	$ (339)	**$5,480**	$ 7,259	$ 5,442

(a) 2006 includes a $157 million release of Allowance for loan losses related to Hurricane Katrina. 2005 includes $400 million of allowance related to Hurricane Katrina.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(c) The 2004 provision for loan losses includes an increase of approximately $1.4 billion as a result of the decertification of heritage Bank One seller's interest in credit card securitizations, partially offset by a reduction of $357 million to conform provision methodologies. The 2004 provision for lending-related commitments reflects a reduction of $227 million to conform provision methodologies in the wholesale portfolio.

Market risk is the exposure to an adverse change in the market value of portfolios and financial instruments caused by a change in market prices or rates.

Market risk management

Market risk is identified, measured, monitored, and controlled by an independent corporate risk governance function. Market risk management seeks to facilitate efficient risk/return decisions, reduce volatility in operating performance and make the Firm's market risk profile transparent to senior management, the Board of Directors and regulators. Market risk management is overseen by the Chief Risk Officer and performs the following primary functions:

- Establishment of a comprehensive market risk policy framework
- Independent measurement, monitoring and control of business segment market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

The Firm's business segments also have valuation teams whose functions are to provide independent oversight of the accuracy of the valuations of positions that expose the Firm to market risk. These valuation functions reside within the market risk management area and have a reporting line into Finance.

Risk identification and classification

The market risk management group works in partnership with the business segments to identify market risks throughout the Firm and to refine and monitor market risk policies and procedures. All business segments are responsible for comprehensive identification and verification of market risks within their units. Risk-taking businesses have functions that act independently from trading personnel and are responsible for verifying risk exposures that the business takes. In addition to providing independent oversight for market risk arising from the business segments, Market risk management also is responsible for identifying exposures which may not be large within individual business segments, but which may be large for the Firm in aggregate. Regular meetings are held between Market risk management and the heads of risk-taking businesses to discuss and decide on risk exposures in the context of the market environment and client flows.

Positions that expose the Firm to market risk can be classified into two categories: trading and nontrading risk. Trading risk includes positions that are held by the Firm as part of a business segment or unit whose main business strategy is to trade or make markets. Unrealized gains and losses in these positions are generally reported in Principal transactions revenue. Nontrading risk includes securities and other assets held for longer-term investment, mortgage servicing rights, and securities and derivatives used to manage the Firm's asset/liability exposures. Unrealized gains and losses in these positions are generally not reported in Principal transactions revenue.

Trading risk

Fixed income risk (which includes interest rate risk and credit spread risk), foreign exchange, equities and commodities and other trading risks involve the potential decline in Net income or financial condition due to adverse changes in market rates, whether arising from client activities or proprietary positions taken by the Firm.

Nontrading risk

Nontrading risk arises from execution of the Firm's core business strategies, the delivery of products and services to its customers, and the discretionary positions the Firm undertakes to risk-manage exposures.

These exposures can result from a variety of factors, including differences in the timing among the maturity or repricing of assets, liabilities and off–balance sheet instruments. Changes in the level and shape of market interest rate curves also may create interest rate risk, since the repricing characteristics of the Firm's assets do not necessarily match those of its liabilities. The Firm also is exposed to basis risk, which is the difference in repricing characteristics of two floating-rate indices, such as the prime rate and 3-month LIBOR. In addition, some of the Firm's products have embedded optionality that impact pricing and balances.

The Firm's mortgage banking activities also give rise to complex interest rate risks. The interest rate exposure from the Firm's mortgage banking activities is a result of changes in the level of interest rates, as well as option and basis risk. Option risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing. Basis risk results from different relative movements between mortgage rates and other interest rates.

Risk measurement

Tools used to measure risk

Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- Nonstatistical risk measures
- Value-at-risk ("VAR")
- Loss advisories
- Economic value stress testing
- Earnings-at-risk stress testing
- Risk identification for large exposures ("RIFLE")

Nonstatistical risk measures

Nonstatistical risk measures other than stress testing include net open positions, basis point values, option sensitivities, market values, position concentrations and position turnover. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line of business and by risk type, and are used for monitoring limits, one-off approvals and tactical control.

Value-at-risk

JPMorgan Chase's primary statistical risk measure, VAR, estimates the potential loss from adverse market moves in an ordinary market environment and provides a consistent cross-business measure of risk profiles and levels of diversification. VAR is used for comparing risks across businesses, monitoring limits, one-off approvals, and as an input to economic capital calculations. VAR provides risk transparency in a normal trading environment. Each business day the Firm undertakes a comprehensive VAR calculation that includes both its trading and its nontrading risks. VAR for nontrading risk measures the amount of potential change in the fair values of the exposures related to these risks; however, for such risks, VAR is not a measure of reported revenue since nontrading activities are generally not marked to market through earnings.

To calculate VAR, the Firm uses historical simulation, which measures risk across instruments and portfolios in a consistent and comparable way. This approach assumes that historical changes in market values are representative of future changes. The simulation is based upon data for the previous twelve months. The Firm calculates VAR using a one-day time horizon and an expected tail-loss methodology, which approximates a 99% confidence level. This means the Firm would expect to incur losses greater than that predicted by VAR estimates only once in every 100 trading days, or about two to three times a year.

IB Trading and Credit Portfolio VAR

IB trading VAR by risk type and credit portfolio VAR

	2006			2005				
As of or for the year ended December 31, (in millions)	Average VAR	Minimum VAR	Maximum VAR	Average VAR	Minimum VAR	Maximum VAR	At December 31, **2006**	At December 31, 2005
By risk type:								
Fixed income	**$ 56**	**$ 35**	**$ 94**	$ 67	$ 37	$ 110	**$ 44**	$ 89
Foreign exchange	**22**	**14**	**42**	23	16	32	**27**	19
Equities	**31**	**18**	**50**	34	15	65	**49**	24
Commodities and other	**45**	**22**	**128**	21	7	50	**41**	34
Less: portfolio diversification	**(70)**[c]	**NM**[d]	**NM**[d]	(59)[c]	NM[d]	NM[d]	**(62)**[c]	(63)[c]
Trading VAR[a]	**84**	**55**	**137**	86	53	130	**99**	103
Credit portfolio VAR[b]	**15**	**12**	**19**	14	11	17	**15**	15
Less: portfolio diversification	**(11)**[c]	**NM**[d]	**NM**[d]	(12)[c]	NM[d]	NM[d]	**(10)**[c]	(10)[c]
Total trading and credit portfolio VAR	**$ 88**	**$ 61**	**$ 138**	$ 88	$ 57	$ 130	**$ 104**	$ 108

(a) Trading VAR does not include VAR related to the MSR portfolio or VAR related to other corporate functions, such as Treasury and Private Equity. For a discussion of MSRs and the corporate functions, see pages 53–54 and Note 16 on pages 121–122 of this Annual Report, respectively. Trading VAR includes substantially all trading activities in IB; however, particular risk parameters of certain products are not fully captured, for example, correlation risk.

(b) Includes VAR on derivative credit valuation adjustments, hedges of the credit valuation adjustment and mark-to-market hedges of the accrual loan portfolio, which are all reported in Principal transactions revenue. This VAR does not include the accrual loan portfolio, which is not marked to market.

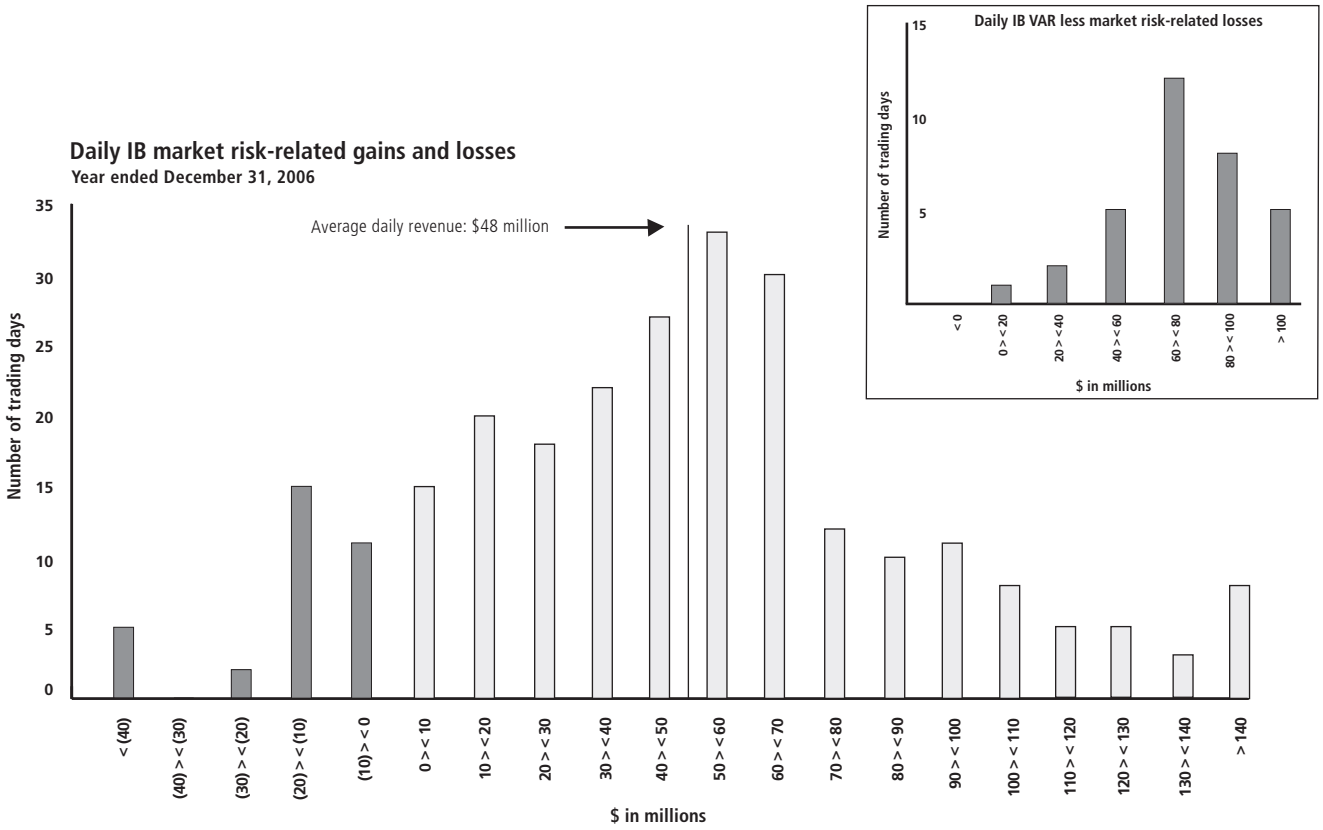
(c) Average and period-end VARs are less than the sum of the VARs of its market risk components, which is due to risk offsets resulting from portfolio diversification. The diversification effect reflects the fact that the risks are not perfectly correlated. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves.

(d) Designated as not meaningful ("NM") because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio diversification effect.

Investment Bank's average Total Trading and Credit Portfolio VAR was $88 million for both 2006 and 2005. Commodities and other VAR increased due to continued expansion of the energy trading business, while Fixed income VAR decreased due to reduced risk positions, as well as to lower market volatility compared with 2005. These changes also led to an increase in portfolio diversification, as Average Trading VAR diversification increased to $70 million, or 45% of the sum of the components, during 2006; from $59 million, or 41% of the sum of the components, during 2005. In general, over the course of the year, VAR exposures can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

VAR back-testing

To evaluate the soundness of its VAR model, the Firm conducts daily back-testing of VAR against daily IB market risk-related revenue, which is defined as the change in value of Principal transactions revenue less Private Equity gains/losses plus any trading-related net interest income, brokerage commissions, underwriting fees or other revenue. The following histogram illustrates the daily market risk-related gains and losses for IB trading businesses for the year ended December 31, 2006. The chart shows that IB posted market risk-related gains on 227 out of 260 days in this period, with 29 days exceeding $100 million. The inset graph looks at those days on which IB experienced losses and depicts the amount by which VAR exceeded the actual loss on each of those days. Losses were sustained on 33 days, with no loss greater than $100 million, and with no loss exceeding the VAR measure.



Loss advisories

Loss advisories are tools used to highlight to senior management trading losses above certain levels and are used to initiate discussion of remedies.

Economic value stress testing

While VAR reflects the risk of loss due to adverse changes in normal markets, stress testing captures the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm conducts economic-value stress tests for both its trading and its nontrading activities at least once a month using multiple scenarios that assume credit spreads widen significantly, equity prices decline and interest rates rise in the major currencies. Additional scenarios focus on the risks predominant in individual business segments and include scenarios that focus on the potential for adverse moves in complex portfolios. Periodically, scenarios are reviewed and updated to reflect changes in the Firm's risk profile and economic events. Along with VAR, stress testing is important in measuring and controlling risk. Stress testing enhances the understanding of the Firm's risk profile and loss potential, and stress losses are monitored against limits. Stress testing is also utilized in one-off approvals and cross-business risk measurement, as well as an input to economic capital allocation. Stress-test results, trends and explanations are provided each month to the Firm's senior management and to the lines of business to help them better measure and manage risks and to understand event risk-sensitive positions.

Earnings-at-risk stress testing

The VAR and stress-test measures described above illustrate the total economic sensitivity of the Firm's balance sheet to changes in market variables. The effect of interest rate exposure on reported Net income also is critical. Interest rate risk exposure in the Firm's core nontrading business activities (i.e., asset/liability management positions) results from on– and off–balance sheet positions. The Firm conducts simulations of changes in NII from its nontrading activities under a variety of interest rate scenarios. Earnings-at-risk tests measure the potential change in the Firm's Net interest income over the next 12 months and highlight exposures to various rate-sensitive factors, such as the rates themselves (e.g., the prime lending rate), pricing strategies on deposits, optionality and changes in product mix. The tests include forecasted balance sheet changes, such as asset sales and securitizations, as well as prepayment and reinvestment behavior.

Earnings-at-risk also can result from changes in the slope of the yield curve, because the Firm has the ability to lend at fixed rates and borrow at variable or short-term fixed rates. Based upon these scenarios, the Firm's earnings would be affected negatively by a sudden and unanticipated increase in short-term rates without a corresponding increase in long-term rates. Conversely, higher long-term rates generally are beneficial to earnings, particularly when the increase is not accompanied by rising short-term rates.

Immediate changes in interest rates present a limited view of risk, and so a number of alternative scenarios also are reviewed. These scenarios include the implied forward curve, nonparallel rate shifts and severe interest rate shocks on selected key rates. These scenarios are intended to provide a comprehensive view of JPMorgan Chase's earnings-at-risk over a wide range of outcomes.

JPMorgan Chase's 12-month pretax earnings sensitivity profile as of December 31, 2006 and 2005, were as follows:

	Immediate change in rates			
(in millions)	+200bp	+100bp	-100bp	-200bp
December 31, 2006	**$ (101)**	**$ 28**	**$ (21)**	**$(182)**
December 31, 2005	265	172	(162)	(559)

The primary change in earnings-at-risk from December 31, 2005, reflects a higher level of AFS securities and other repositioning. The Firm is exposed to both rising and falling rates. The Firm's risk to rising rates is largely the result of increased funding costs. In contrast, the exposure to falling rates is the result of higher anticipated levels of loan and securities prepayments.

Risk identification for large exposures ("RIFLE")

Individuals who manage risk positions, particularly those that are complex, are responsible for identifying potential losses that could arise from specific, unusual events, such as a potential tax change, and estimating the probabilities of losses arising from such events. This information is entered into the Firm's RIFLE database. Trading management has access to RIFLE, thereby permitting the Firm to monitor further earnings vulnerability not adequately covered by standard risk measures.

Risk monitoring and control

Limits

Market risk is controlled primarily through a series of limits. Limits reflect the Firm's risk appetite in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity, business trends and management experience.

Market risk management regularly reviews and updates risk limits. Senior management, including the Firm's Chief Executive Officer and Chief Risk Officer, is responsible for reviewing and approving risk limits at least once a year. Market risk management further controls the Firm's exposure by specifically designating approved financial instruments and tenors, known as instrument authorities, for each business segment.

The Firm maintains different levels of limits. Corporate-level limits include VAR and stress. Similarly, line-of-business limits include VAR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and instrument authorities. Businesses are responsible for adhering to established limits, against which exposures are monitored and reported. Limit breaches are reported in a timely manner to senior management, and the affected business segment is required either to reduce trading positions or consult with senior management on the appropriate action.

Qualitative review

The market risk management group also performs periodic reviews as necessary of both businesses and products with exposure to market risk in order to assess the ability of the businesses to control their market risk. Strategies, market conditions, product details and risk controls are reviewed, and specific recommendations for improvements are made to management.

Model review

Some of the Firm's financial instruments cannot be valued based upon quoted market prices but are instead valued using pricing models. Such models are used for management of risk positions, such as reporting against limits, as well as for valuation. The Model Risk Group, independent of the businesses and market risk management, reviews the models the Firm uses and assesses model appropriateness and consistency. The model reviews consider a number of factors about the model's suitability for valuation and risk management of a particular product, including whether it accurately reflects the characteristics of the transaction and its significant risks, the suitability and convergence properties of numerical algorithms, reliability of data sources, consistency of the treatment with models for similar products, and sensitivity to input parameters and assumptions that cannot be priced from the market.

Reviews are conducted of new or changed models, as well as previously accepted models, to assess whether there have been any changes in the product or market that may impact the model's validity and whether there are theoretical or competitive developments that may require reassessment of the model's adequacy. For a summary of valuations based upon models, see Critical Accounting Estimates used by the Firm on pages 83–85 of this Annual Report.

Risk reporting

Nonstatistical exposures, value-at-risk, loss advisories and limit excesses are reported daily for each trading and nontrading business. Market risk exposure trends, value-at-risk trends, profit and loss changes, and portfolio concentrations are reported weekly. Stress-test results are reported monthly to business and senior management.

PRIVATE EQUITY RISK MANAGEMENT

Risk management

The Firm makes direct principal investments in private equity. The illiquid nature and long-term holding period associated with these investments differentiates private equity risk from the risk of positions held in the trading portfolios. The Firm's approach to managing private equity risk is consistent with the Firm's general risk governance structure. Controls are in place establishing target levels for total and annual investment in order to control the overall size of the portfolio. Industry and geographic concentration limits are in place and intended to ensure diversification of the portfolio; and periodic reviews are performed on the portfolio to substantiate the valuations of the investments. The valuation function within Market risk management that reports into Finance is responsible for reviewing the accuracy of the carrying values of private equity investments held by Private Equity. At December 31, 2006, the carrying value of the private equity businesses was $6.1 billion, of which $587 million represented positions traded in the public market.

OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, fraudulent acts, business interruptions, inappropriate behavior of employees or vendors that do not perform in accordance with outsourcing arrangements. These events could result in financial losses and other damage to the Firm, including reputational harm.

To monitor and control operational risk, the Firm maintains a system of comprehensive policies and a control framework designed to provide a sound and well-controlled operational environment. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject. Notwithstanding these control measures, the Firm incurs operational losses.

The Firm's approach to operational risk management is intended to mitigate such losses by supplementing traditional control-based approaches to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

The Firm's operational risk framework is supported by Phoenix, an internally designed operational risk software tool. Phoenix integrates the individual components of the operational risk management framework into a unified, web-based tool. Phoenix enhances the capture, reporting and analysis of operational risk data by enabling risk identification, measurement, monitoring, reporting and analysis to be done in an integrated manner, thereby enabling efficiencies in the Firm's monitoring and management of its operational risk.

For purposes of identification, monitoring, reporting and analysis, the Firm categorizes operational risk events as follows:

- Client service and selection
- Business practices
- Fraud, theft and malice
- Execution, delivery and process management
- Employee disputes
- Disasters and public safety
- Technology and infrastructure failures

Risk identification and measurement

Risk identification is the recognition of the operational risk events that management believes may give rise to operational losses.

All businesses utilize the Firm's newly redesigned firmwide self-assessment process and supporting architecture as a dynamic risk management tool. The goal of the self-assessment process is for each business to identify the key operational risks specific to its environment and assess the degree to which it maintains appropriate controls. Action plans are developed for control issues identified, and businesses are held accountable for tracking and resolving these issues on a timely basis.

Risk monitoring

The Firm has a process for monitoring operational risk-event data, permitting analysis of errors and losses as well as trends. Such analysis, performed both at a line-of-business level and by risk-event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns. The data reported enables the Firm to back-test against self-assessment results. The Firm is a founding member of the Operational Risk Data Exchange, a not-for-profit industry association formed for the purpose of collecting operational loss data and sharing data in an anonymous form and benchmarking results back to members. Such information supplements the Firm's ongoing operational risk analysis.

Risk reporting and analysis

Operational risk management reports provide timely and accurate information, including information about actual operational loss levels and self-assessment results, to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and support areas.

Audit alignment

Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. Audit partners with business management and members of the control community in providing guidance on the operational risk framework and reviewing the effectiveness and accuracy of the business self-assessment process as part of its business unit audits.

REPUTATION AND FIDUCIARY RISK MANAGEMENT

A firm's success depends not only on its prudent management of the liquidity, credit, market and operational risks that are part of its business risks, but equally on the maintenance among many constituents – clients, investors, regulators, as well as the general public – of a reputation for business practices of the highest quality. Attention to reputation always has been a key aspect of the Firm's practices, and maintenance of reputation is the responsibility of everyone at the Firm. JPMorgan Chase bolsters this individual responsibility in many ways, including through the Firm's Code of Conduct, training, maintaining adherence to policies and procedures, and oversight functions that approve transactions. These oversight functions include a Conflicts Office, which examines wholesale transactions with the potential to create conflicts of interest for the Firm, and a Policy Review Office that reviews certain transactions with clients, especially complex derivatives and structured finance transactions that have the potential to affect adversely the Firm's reputation.

Policy Review Office

The Policy Review Office is the most senior approval level for client transactions involving reputation risk issues. The mandate of the Policy Review Office is to opine on specific transactions brought by the Regional Reputation Risk Review Committees and consider changes in policies or practices relating to reputation risk. The head of the Policy Review Office consults with the Firm's most senior executives on specific topics and provides regular updates. The Policy Review Office reinforces the Firm's procedures for examining transactions in terms of appropriateness, ethical issues and reputation risk. It focuses on the purpose and effect of its transactions from the client's point of view, with the goal that these transactions are not used to mislead investors or others.

Primary responsibility for adherence to the policies and procedures designed to address reputation risk lies with the business units conducting the transactions in question. The Firm's transaction approval process requires review from, among others, internal legal/compliance, conflicts, tax and accounting groups. Transactions involving an SPE established by the Firm receive particular scrutiny intended to ensure that every such entity is properly approved, documented, monitored and controlled.

Business units also are required to submit to regional Reputation Risk Review Committees proposed transactions that may give rise to heightened reputation risk. The committees may approve, reject or require further clarification on or changes to the transactions. The members of these committees are senior representatives of the business and support units in the region. The committees may escalate transaction review to the Policy Review Office.

Fiduciary risk management

The risk management committees within each line of business include in their mandate the oversight of the legal, reputational and, where appropriate, fiduciary risks in their businesses that may produce significant losses or reputational damage. The Fiduciary Risk Management function works with the relevant line-of-business risk committees with the goal of ensuring that businesses providing investment or risk management products or services that give rise to fiduciary duties to clients perform at the appropriate standard relative to their fiduciary relationship with a client. Of particular focus are the policies and practices that address a business' responsibilities to a client, including client suitability determination, disclosure obligations and communications, and performance expectations with respect to risk management products or services being provided by the Firm, that give rise to such fiduciary duties. In this way, the relevant line-of-business risk committees, together with the Fiduciary Risk Management function, provide oversight of the Firm's efforts to monitor, measure and control the risks that may arise in the delivery of the products or services to clients that give rise to such duties, as well as those stemming from any of the Firm's fiduciary responsibilities to employees under the Firm's various employee benefit plans.

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the valuation of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the valuation of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the wholesale and consumer loan portfolios as well as the Firm's portfolio of wholesale lending-related commitments. The Allowance for credit losses is intended to adjust the value of the Firm's loan assets for probable credit losses as of the balance sheet date. For further discussion of the methodologies used in establishing the Firm's Allowance for credit losses, see Note 13 on pages 113–114 of this Annual Report.

Wholesale loans and lending-related commitments

The methodology for calculating both the Allowance for loan losses and the Allowance for lending-related commitments involves significant judgment. First and foremost, it involves the early identification of credits that are deteriorating. Second, it involves judgment in establishing the inputs used to estimate the allowances. Third, it involves management judgment to evaluate certain macroeconomic factors, underwriting standards, and other relevant internal and external factors affecting the credit quality of the current portfolio and to refine loss factors to better reflect these conditions.

The Firm uses a risk rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based upon an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm to that loan.

The Firm applies its judgment to establish loss factors used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances. Many factors can affect estimates of loss, including volatility of loss given default, probability of default and rating migrations. Consideration is given as to whether the loss estimates should be calculated as an average over the entire credit cycle or at a particular point in the credit cycle, as well as to which external data should be used and when they should be used. Choosing data that are not reflective of the Firm's specific loan portfolio characteristics could also affect loss estimates. The application of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the loss factors derived, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. The resultant adjustments to the statistical calculation on the performing portfolio are determined by creating estimated ranges using historical experience of both loss given default and probability of default. Factors related to concentrated and deteriorating industries also are incorporated where relevant. The estimated ranges and the determination of the appropriate point within the range are based upon management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio. The adjustment to the statistical calculation for the wholesale loan portfolio for the period ended December 31, 2006, was $903 million based upon management's assessment of current economic conditions.

Consumer loans

For scored loans in the consumer lines of business, loss is determined primarily by applying statistical loss factors and other risk indicators to pools of loans by asset type. These loss estimates are sensitive to changes in delinquency status, credit bureau scores, the realizable value of collateral and other risk factors.

Adjustments to the statistical calculation are accomplished in part by analyzing the historical loss experience for each major product segment. Management analyzes the range of credit loss experienced for each major portfolio segment, taking into account economic cycles, portfolio seasoning and underwriting criteria, and then formulates a range that incorporates relevant risk factors that impact overall credit performance. The recorded adjustment to the statistical calculation for the period ended December 31, 2006, was $1.2 billion based upon management's assessment of current economic conditions.

Fair value of financial instruments, MSRs and commodities inventory

A portion of JPMorgan Chase's assets and liabilities are carried at fair value, including trading assets and liabilities, AFS securities, private equity investments and mortgage servicing rights ("MSRs"). Held-for-sale loans and physical commodities are carried at the lower of fair value or cost. At December 31, 2006, approximately $526.8 billion of the Firm's assets were recorded at fair value.

The fair value of a financial instrument is defined as the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The majority of the Firm's assets reported at fair value are based upon quoted market prices or upon internally developed models that utilize independently sourced market parameters, including interest rate yield curves, option volatilities and currency rates.

The degree of management judgment involved in determining the fair value of a financial instrument is dependent upon the availability of quoted market prices or observable market parameters. For financial instruments that are traded actively and have quoted market prices or parameters readily available, there is little-to-no subjectivity in determining fair value. When observable market prices and parameters do not exist, management judgment is necessary to estimate fair value. The valuation process takes into consideration

factors such as liquidity and concentration concerns and, for the derivatives portfolio, counterparty credit risk (For a discussion of CVA, see Derivative contracts on pages 69–72 of this Annual Report). For example, there is often limited market data to rely on when estimating the fair value of a large or aged position. Similarly, judgment must be applied in estimating prices for less readily observable external parameters. Finally, other factors such as model assumptions, market dislocations and unexpected correlations can affect estimates of fair value. Imprecision in estimating these factors can impact the amount of revenue or loss recorded for a particular position.

Trading and available-for-sale portfolios

The majority of the Firm's securities held for trading and investment purposes ("long" positions) and securities that the Firm has sold to other parties but does not own ("short" positions) are valued based upon quoted market prices. However, certain securities are traded less actively and, therefore, are not always able to be valued based upon quoted market prices. The determination of their fair value requires management judgment, as this determination may require benchmarking to similar instruments or analyzing default and recovery rates. Examples include certain collateralized mortgage and debt obligations and high-yield debt securities.

As few derivative contracts are listed on an exchange, the majority of the Firm's derivative positions are valued using internally developed models that use as their basis readily observable market parameters – that is, parameters that are actively quoted and can be validated to external sources, including industry-pricing services. Certain derivatives, however, are valued based upon models with significant unobservable market parameters – that is, parameters that must be estimated and are, therefore, subject to management judgment to substantiate the model valuation. These instruments are normally either traded less actively or trade activity is one way. Examples include long-dated interest rate or currency swaps, where swap rates may be unobservable for longer maturities, and certain credit products, where correlation and recovery rates are unobservable. Due to the lack of observable market data, the Firm defers the initial trading profit for these financial instruments. The deferred profit is recognized in Principal transactions revenue on a systematic basis (typically straight-line amortization over the life of the instruments) when observable market data becomes available. Management's judgment includes recording fair value adjustments (i.e., reductions) to model valuations to account for parameter uncertainty when valuing complex or less actively traded derivative transactions. The following table summarizes the Firm's trading and available-for-sale portfolios by valuation methodology at December 31, 2006:

	Trading assets		Trading liabilities		
December 31, 2006	Securities purchased[a]	Derivatives[b]	Securities sold[a]	Derivatives[b]	AFS securities
Fair value based upon:					
Quoted market prices	**83%**	**3%**	**97%**	**3%**	**97%**
Internal models with significant observable market parameters	**13**	**96**	**3**	**95**	**3**
Internal models with significant unobservable market parameters	**4**	**1**	**—**	**2**	**—**
Total	**100%**	**100%**	**100%**	**100%**	**100%**

(a) Reflected as debt and equity instruments on the Firm's Consolidated balance sheets.
(b) Based upon gross mark-to-market valuations of the Firm's derivatives portfolio prior to netting positions pursuant to FIN 39, as cross-product netting is not relevant to an analysis based upon valuation methodologies.

To ensure that the valuations are appropriate, the Firm has various controls in place. These include: an independent review and approval of valuation models; detailed review and explanation for profit and loss analyzed daily and over time; decomposing the model valuations for certain structured derivative instruments into their components and benchmarking valuations, where possible, to similar products; and validating valuation estimates through actual cash settlement. As markets and products develop and the pricing for certain derivative products becomes more transparent, the Firm continues to refine its valuation methodologies.

For further discussion of market risk management, including the model review process, see Market risk management on pages 77–80 of this Annual Report. For further details regarding the Firm's valuation methodologies, see Note 31 on pages 135–137 of this Annual Report.

Loans held-for-sale

The fair value of loans in the held-for-sale portfolio generally is based upon observable market prices of similar instruments, including bonds, credit derivatives and loans with similar characteristics. If market prices are not available, fair value is based upon the estimated cash flows adjusted for credit risk that is discounted using an interest rate appropriate for the maturity of the applicable loans.

Commodities inventory

The majority of commodities inventory includes bullion and base metals where fair value is determined by reference to prices in highly active and liquid markets. The fair value of other commodities inventory is determined primarily using prices and data derived from the markets on which the underlying commodities are traded. Market prices used may be adjusted for liquidity.

Private equity investments

Valuation of private investments held primarily by the Private Equity business within Corporate requires significant management judgment due to the absence of quoted market prices, inherent lack of liquidity and the long-term nature of such assets. Private equity investments are valued initially based upon cost. The carrying values of private equity investments are adjusted from cost to reflect both positive and negative changes evidenced by financing events with third-party capital providers. In addition, these investments are subject to ongoing impairment reviews by Private Equity's senior investment professionals. A variety of factors are reviewed and monitored to assess impairment including, but not limited to, operating performance and future expectations of the particular portfolio investment, industry valuations of comparable public companies, changes in market outlook and the third-party financing environment over time.

For a discussion of the accounting for Private equity investments, see Note 4 on pages 98–99 of this Annual Report.

MSRs and certain other retained interests in securitizations

MSRs and certain other retained interests from securitization activities do not trade in an active, open market with readily observable prices. For example, sales of MSRs do occur, but the precise terms and conditions typically are not readily available. Accordingly, the Firm estimates the fair value of MSRs and certain other retained interests in securitizations using discounted future cash flow (DCF) models.

For MSRs, the Firm uses an option adjusted spread ("OAS") valuation model in conjunction with the Firm's proprietary prepayment model to project MSR cash flows over multiple interest rate scenarios, which are then discounted at risk-adjusted rates to estimate an expected fair value of the MSRs. The OAS model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenues, costs to service and other economic factors.

For certain other retained interests in securitizations (such as interest-only strips), a single interest rate path DCF model is used and generally includes assumptions based upon projected finance charges related to the securitized assets, estimated net credit losses, prepayment assumptions, and contractual interest paid to third-party investors. Changes in the assumptions used may have a significant impact on the Firm's valuation of retained interests.

For both MSRs and certain other retained interests in securitizations, the Firm compares its fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience.

For further discussion of the most significant assumptions used to value retained interests in securitizations and MSRs, as well as the applicable stress tests for those assumptions, see Notes 14 and 16 on pages 114–118 and 121–122, respectively, of this Annual Report.

Goodwill impairment

Under SFAS 142, goodwill must be allocated to reporting units and tested for impairment. The Firm tests goodwill for impairment at least annually, and more frequently if events or circumstances, such as adverse changes in the business climate, indicate that there may be justification for conducting an interim test. Impairment testing is performed at the reporting-unit level (which is generally one level below the six major business segments identified in Note 33 on pages 139–141 of this Annual Report, plus Private Equity which is included in Corporate). The first part of the test is a comparison, at the reporting unit level, of the fair value of each reporting unit to its carrying amount, including goodwill. If the fair value is less than the carrying value, then the second part of the test is needed to measure the amount of potential goodwill impairment. The implied fair value of the reporting unit goodwill is calculated and compared with the carrying amount of goodwill recorded in the Firm's financial records. If the carrying value of reporting unit goodwill exceeds the implied fair value of that goodwill, then the Firm would recognize an impairment loss in the amount of the difference, which would be recorded as a charge against Net income.

The fair values of the reporting units are determined using discounted cash flow models based upon each reporting unit's internal forecasts. In addition, analysis using market-based trading and transaction multiples, where available, are used to assess the reasonableness of the valuations derived from the discounted cash flow models.

ACCOUNTING AND REPORTING DEVELOPMENTS

Accounting for share-based payments

Effective January 1, 2006, the Firm adopted SFAS 123R and all related interpretations using the modified prospective transition method. SFAS 123R requires all share-based payments to employees, including employee stock options and stock-settled stock appreciation right ("SARs"), to be measured at their grant date fair values. For additional information related to SFAS 123R, see Note 8 on pages 105–107 of this Annual Report.

Accounting for certain hybrid financial instruments – an amendment of FASB Statements No. 133 and 140

In February 2006, the FASB issued SFAS 155, which applies to certain "hybrid financial instruments" which are defined as financial instruments that contain embedded derivatives. The new standard establishes a requirement to evaluate beneficial interests in securitized financial assets to determine if the interests represent freestanding derivatives or are hybrid financial instruments containing embedded derivatives requiring bifurcation. It also permits an irrevocable election for fair value remeasurement of any hybrid financial instrument containing an embedded derivative that otherwise would require bifurcation under SFAS 133. The Firm adopted this standard effective January 1, 2006. For additional information related to SFAS 155, see Note 1 on page 95 of this Annual Report.

Accounting for servicing of financial assets

In March 2006, the FASB issued SFAS 156, which is effective as of the beginning of the first fiscal year beginning after September 15, 2006, with early adoption permitted. JPMorgan Chase elected to adopt the standard effective January 1, 2006. The standard permits an entity a one-time irrevocable election to adopt fair value accounting for a class of servicing assets. The Firm has defined MSRs as one class of servicing assets for this election. For additional information related to the Firm's adoption of SFAS 156 with respect to MSRs, see Note 16 on pages 121–122 of this Annual Report.

Postretirement benefit plans

In September 2006, the FASB issued SFAS 158, which requires recognition in the Consolidated balance sheets of the overfunded or underfunded status of defined benefit postretirement plans, measured as the difference between the fair value of plan assets and the amount of the benefit obligation. The Firm adopted SFAS 158 on a prospective basis on December 31, 2006. SFAS 158 has no impact either on the measurement of the Firm's plan assets or benefit obligations, or on how the Firm determines its net periodic benefit costs. For additional information related to SFAS 158, see Note 7 on pages 100–105 of this Annual Report.

Accounting for uncertainty in income taxes and changes in timing of cash flows related to income taxes generated by a leveraged lease

In July 2006, the FASB issued two pronouncements: FIN 48, which clarifies the accounting for uncertainty in income taxes recognized under SFAS 109, and the related FSP FAS 13-2. FIN 48 addresses the recognition and measurement of tax positions taken or expected to be taken, and also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, and disclosure. FSP FAS 13-2 requires the recalculation of returns on leveraged leases if there is a change or projected change in the timing of cash flows relating to income taxes generated by a leveraged lease. The Firm will apply FIN 48 to all of its income tax positions at the required effective date of January 1, 2007 under the transition provisions of the Interpretation. JPMorgan Chase currently estimates that the cumulative effect adjustment to implement FIN 48 will increase the January 1, 2007 balance of Retained earnings by approximately $400 million. However, the standard continues to be interpreted and the FASB is expected to issue additional guidance on FIN 48, which could affect this estimate. Accordingly, JPMorgan Chase will continue its assessment of the impact of FIN 48 on its financial condition and results of operations. The guidance in FSP FAS 13-2 will also be effective for the Firm on January 1, 2007. Implementation of FSP FAS 13-2 is expected to result in immaterial adjustments.

Fair value measurements

In September 2006, the FASB issued SFAS 157, which is effective for fiscal years beginning after November 15, 2007, with early adoption permitted. SFAS 157 defines fair value, establishes a framework for measuring fair value, and expands disclosures about assets and liabilities measured at fair value. The new standard provides a consistent definition of fair value which focuses on exit price and prioritizes, within a measurement of fair value, the use of market-based inputs over entity-specific inputs. The standard also establishes a three-level hierarchy for fair value measurements based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. SFAS 157 nullifies the guidance in EITF 02-3 which required the deferral of profit at inception of a transaction involving a derivative financial instrument in the absence of observable data supporting the valuation technique. The standard also eliminates large position discounts for financial instruments quoted in active markets and requires consideration of nonperformance risk when valuing liabilities. Currently, the fair value of the Firm's derivative payables does not incorporate a valuation adjustment to reflect JPMorgan Chase's credit quality.

The Firm intends to early adopt SFAS 157 effective January 1, 2007, and expects to record a cumulative effect after-tax increase to retained earnings of approximately $250 million related to the release of profit previously deferred in accordance with EITF 02-3. In order to determine the amount of this transition adjustment and to confirm that the Firm's valuation policies are consistent with exit price as prescribed by SFAS 157, the Firm reviewed its derivative valuations in consideration of all available evidence including recent transactions in the marketplace, indicative pricing services and the results of back-testing similar transaction types. In addition, the Firm expects to record adjustments to earnings related to the incorporation of the Firm's nonperformance risk in the valuation of liabilities recorded at fair value and for private equity investments where there is significant market evidence to support an increase in value but there has been no third-party market transaction related to the capital structure of the investment. The application of SFAS 157 involves judgement and interpretation. The Firm continues to monitor and evaluate the developing interpretations.

Fair value option for financial assets and financial liabilities

In February 2007, the FASB issued SFAS 159, which is effective for fiscal years beginning after November 15, 2007, with early adoption permitted. SFAS 159 provides an option for companies to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments. Under SFAS 159, fair value would be used for both the initial and subsequent measurement of the designated assets, liabilities and commitments, with the changes in value recognized in earnings. The Firm is reviewing the recently released standard and assessing what elections it may make as part of an early adoption effective January 1, 2007.

NONEXCHANGE-TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, which are primarily based upon internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related contracts. The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2006:

For the year ended December 31, 2006 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2006	**$ 6,951**	**$ 5,324**
Effect of legally enforceable master netting agreements	**10,014**	**10,078**
Gross fair value of contracts outstanding at January 1, 2006	**16,965**	**15,402**
Contracts realized or otherwise settled during the period	**(12,417)**	**(12,206)**
Fair value of new contracts	**21,554**	**21,007**
Changes in fair values attributable to changes in valuation techniques and assumptions	**—**	**—**
Other changes in fair value	**(601)**	**(317)**
Gross fair value of contracts outstanding at December 31, 2006	**25,501**	**23,886**
Effect of legally enforceable master netting agreements	**(19,671)**	**(19,980)**
Net fair value of contracts outstanding at December 31, 2006	**$ 5,830**	**$ 3,906**

The following table indicates the schedule of maturities of nonexchange-traded commodity derivative contracts at December 31, 2006:

December 31, 2006 (in millions)	Asset position	Liability position
Maturity less than 1 year	**$ 10,897**	**$ 11,039**
Maturity 1–3 years	**10,784**	**9,666**
Maturity 4–5 years	**2,630**	**1,838**
Maturity in excess of 5 years	**1,190**	**1,343**
Gross fair value of contracts outstanding at December 31, 2006	**25,501**	**23,886**
Effects of legally enforceable master netting agreements	**(19,671)**	**(19,980)**
Net fair value of contracts outstanding at December 31, 2006	**$ 5,830**	**$ 3,906**

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

JPMorgan Chase & Co.

Management of JPMorgan Chase & Co. is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2006. In making the assessment, management used the framework in "Internal Control – Integrated Framework" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2006, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2006.

Management's assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2006, has been audited by PricewaterhouseCoopers LLP, JPMorgan Chase's independent registered public accounting firm, who also audited the Firm's financial statements as of and for the year ended December 31, 2006, as stated in their report which is included herein.



James Dimon
Chairman and Chief Executive Officer



Michael J. Cavanagh
Executive Vice President and Chief Financial Officer

February 21, 2007



PRICEWATERHOUSECOOPERS LLP • 300 MADISON AVENUE • NEW YORK, NY 10017

Report of Independent Registered Public Accounting Firm
To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

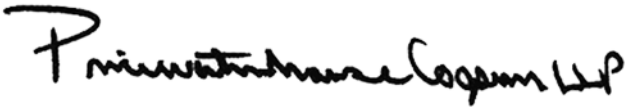
We have completed integrated audits of JPMorgan Chase & Co.'s consolidated financial statements and of its internal control over financial reporting as of December 31, 2006, in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our opinions, based on our audits, are presented below.

Consolidated financial statements
In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, changes in stockholders' equity and comprehensive income, and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Company") at December 31, 2006 and 2005, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2006 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Internal control over financial reporting
Also, in our opinion, management's assessment, included in the accompanying "Management's report on internal control over financial reporting", that the Company maintained effective internal control over financial reporting as of December 31, 2006 based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), is fairly stated, in all material respects, based on those criteria. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2006, based on criteria established in Internal Control - Integrated Framework issued by the COSO. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express opinions on management's assessment and on the effectiveness of the Company's internal control over financial reporting based on our audit. We conducted our audit of internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



February 21, 2007

CONSOLIDATED STATEMENTS OF INCOME

JPMorgan Chase & Co.

Year ended December 31, (in millions, except per share data)	2006	2005	2004[a]
Revenue			
Investment banking fees	**$ 5,520**	$ 4,088	$ 3,536
Principal transactions	**10,346**	7,669	5,148
Lending & deposit related fees	**3,468**	3,389	2,672
Asset management, administration and commissions	**11,725**	9,891	7,682
Securities gains (losses)	**(543)**	(1,336)	338
Mortgage fees and related income	**591**	1,054	803
Credit card income	**6,913**	6,754	4,840
Other income	**2,175**	2,684	826
Noninterest revenue	**40,195**	34,193	25,845
Interest income	**59,107**	45,075	30,460
Interest expense	**37,865**	25,520	13,933
Net interest income	**21,242**	19,555	16,527
Total net revenue	**61,437**	53,748	42,372
Provision for credit losses	**3,270**	3,483	2,544
Noninterest expense			
Compensation expense	**21,191**	18,065	14,291
Occupancy expense	**2,335**	2,269	2,058
Technology, communications and equipment expense	**3,653**	3,602	3,687
Professional & outside services	**3,888**	4,162	3,788
Marketing	**2,209**	1,917	1,335
Other expense	**3,272**	6,199	6,537
Amortization of intangibles	**1,428**	1,490	911
Merger costs	**305**	722	1,365
Total noninterest expense	**38,281**	38,426	33,972
Income from continuing operations before income tax expense	**19,886**	11,839	5,856
Income tax expense	**6,237**	3,585	1,596
Income from continuing operations	**13,649**	8,254	4,260
Income from discontinued operations	**795**	229	206
Net income	**$ 14,444**	$ 8,483	$ 4,466
Net income applicable to common stock	**$ 14,440**	$ 8,470	$ 4,414
Per common share data			
Basic earnings per share			
Income from continuing operations	**$ 3.93**	$ 2.36	$ 1.51
Net income	**4.16**	2.43	1.59
Diluted earnings per share			
Income from continuing operations	**3.82**	2.32	1.48
Net income	**4.04**	2.38	1.55
Average basic shares	**3,470**	3,492	2,780
Average diluted shares	**3,574**	3,557	2,851
Cash dividends per common share	**$ 1.36**	$ 1.36	$ 1.36

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The Notes to consolidated financial statements are an integral part of these statements.

CONSOLIDATED BALANCE SHEETS

JPMorgan Chase & Co.

December 31, (in millions, except share data)	2006	2005
Assets		
Cash and due from banks	**$ 40,412**	$ 36,670
Deposits with banks	**13,547**	21,661
Federal funds sold and securities purchased under resale agreements	**140,524**	133,981
Securities borrowed	**73,688**	74,604
Trading assets (including assets pledged of $82,474 at December 31, 2006, and $79,657 at December 31, 2005)	**365,738**	298,377
Securities:		
Available-for-sale (including assets pledged of $39,571 at December 31, 2006, and $17,614 at December 31, 2005)	**91,917**	47,523
Held-to-maturity (fair value: $60 at December 31, 2006, and $80 at December 31, 2005)	**58**	77
Interests in purchased receivables	**—**	29,740
Loans	**483,127**	419,148
Allowance for loan losses	**(7,279)**	(7,090)
Loans, net of Allowance for loan losses	**475,848**	412,058
Private equity investments	**6,359**	6,374
Accrued interest and accounts receivable	**22,891**	22,421
Premises and equipment	**8,735**	9,081
Goodwill	**45,186**	43,621
Other intangible assets:		
Mortgage servicing rights	**7,546**	6,452
Purchased credit card relationships	**2,935**	3,275
All other intangibles	**4,371**	4,832
Other assets	**51,765**	48,195
Total assets	**$ 1,351,520**	$ 1,198,942
Liabilities		
Deposits:		
U.S. offices:		
Noninterest-bearing	**$ 132,781**	$ 135,599
Interest-bearing	**337,812**	287,774
Non-U.S. offices:		
Noninterest-bearing	**7,662**	7,476
Interest-bearing	**160,533**	124,142
Total deposits	**638,788**	554,991
Federal funds purchased and securities sold under repurchase agreements	**162,173**	125,925
Commercial paper	**18,849**	13,863
Other borrowed funds	**18,053**	10,479
Trading liabilities	**147,957**	145,930
Accounts payable, accrued expenses and other liabilities (including the Allowance for lending-related commitments of $524 at December 31, 2006, and $400 at December 31, 2005)	**88,096**	78,460
Beneficial interests issued by consolidated variable interest entities	**16,184**	42,197
Long-term debt (including structured notes accounted for at fair value of $25,370 at December 31, 2006)	**133,421**	108,357
Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities	**12,209**	11,529
Total liabilities	**1,235,730**	1,091,731
Commitments and contingencies (see Note 27 on pages 130–131 of this Annual Report)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares at December 31, 2006 and 2005; issued 0 shares and 280,433 shares at December 31, 2006 and 2005, respectively)	**—**	139
Common stock ($1 par value; authorized 9,000,000,000 shares at December 31, 2006 and 2005; issued 3,657,786,282 shares and 3,618,189,597 shares at December 31, 2006 and 2005, respectively)	**3,658**	3,618
Capital surplus	**77,807**	74,994
Retained earnings	**43,600**	33,848
Accumulated other comprehensive income (loss)	**(1,557)**	(626)
Treasury stock, at cost (196,102,381 shares and 131,500,350 shares at December 31, 2006 and 2005, respectively)	**(7,718)**	(4,762)
Total stockholders' equity	**115,790**	107,211
Total liabilities and stockholders' equity	**$ 1,351,520**	$ 1,198,942

The Notes to consolidated financial statements are an integral part of these statements.

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME

JPMorgan Chase & Co.

Year ended December 31, (in millions, except per share data)	2006	2005	2004[a]
Preferred stock			
Balance at beginning of year	**$ 139**	$ 339	$ 1,009
Redemption of preferred stock	**(139)**	(200)	(670)
Balance at end of year	**—**	139	339
Common stock			
Balance at beginning of year	**3,618**	3,585	2,044
Issuance of common stock	**40**	33	72
Issuance of common stock for purchase accounting acquisitions	**—**	—	1,469
Balance at end of year	**3,658**	3,618	3,585
Capital surplus			
Balance at beginning of year	**74,994**	72,801	13,512
Issuance of common stock and options for purchase accounting acquisitions	**—**	—	55,867
Shares issued and commitments to issue common stock for employee stock-based compensation awards and related tax effects	**2,813**	2,193	3,422
Balance at end of year	**77,807**	74,994	72,801
Retained earnings			
Balance at beginning of year	**33,848**	30,209	29,681
Cumulative effect of change in accounting principles	**172**	—	—
Balance at beginning of year, adjusted	**34,020**	30,209	29,681
Net income	**14,444**	8,483	4,466
Cash dividends declared:			
Preferred stock	**(4)**	(13)	(52)
Common stock ($1.36 per share each year)	**(4,860)**	(4,831)	(3,886)
Balance at end of year	**43,600**	33,848	30,209
Accumulated other comprehensive income (loss)			
Balance at beginning of year	**(626)**	(208)	(30)
Other comprehensive income (loss)	**171**	(418)	(178)
Adjustment to initially apply SFAS 158	**(1,102)**	—	—
Balance at end of year	**(1,557)**	(626)	(208)
Treasury stock, at cost			
Balance at beginning of year	**(4,762)**	(1,073)	(62)
Purchase of treasury stock	**(3,938)**	(3,412)	(738)
Reissuance from treasury stock	**1,334**	—	—
Share repurchases related to employee stock-based compensation awards	**(352)**	(277)	(273)
Balance at end of year	**(7,718)**	(4,762)	(1,073)
Total stockholders' equity	**$ 115,790**	$ 107,211	$105,653
Comprehensive income			
Net income	**$ 14,444**	$ 8,483	$ 4,466
Other comprehensive income (loss)	**171**	(418)	(178)
Comprehensive income	**$ 14,615**	$ 8,065	$ 4,288

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The Notes to consolidated financial statements are an integral part of these statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

JPMorgan Chase & Co.

Year ended December 31, (in millions)	2006	2005	2004[a]
Operating activities			
Net income	**$ 14,444**	$ 8,483	$ 4,466
Adjustments to reconcile net income to net cash (used in) provided by operating activities:			
Provision for credit losses	**3,270**	3,483	2,544
Depreciation and amortization	**2,149**	2,828	2,924
Amortization of intangibles	**1,428**	1,490	911
Deferred tax benefit	**(1,810)**	(1,791)	(827)
Investment securities (gains) losses	**543**	1,336	(338)
Private equity unrealized (gains) losses	**(404)**	55	(766)
Gains on disposition of businesses	**(1,136)**	(1,254)	(17)
Stock based compensation	**2,368**	1,563	1,296
Originations and purchases of loans held-for-sale	**(178,355)**	(108,611)	(89,315)
Proceeds from sales and securitizations of loans held-for-sale	**170,874**	102,602	95,973
Net change in:			
Trading assets	**(61,664)**	(3,845)	(48,703)
Securities borrowed	**916**	(27,290)	(4,816)
Accrued interest and accounts receivable	**(1,170)**	(1,934)	(2,391)
Other assets	**(7,208)**	(9)	(17,588)
Trading liabilities	**(4,521)**	(12,578)	29,764
Accounts payable, accrued expenses and other liabilities	**7,815**	5,532	13,277
Other operating adjustments	**2,882**	(296)	(1,541)
Net cash used in operating activities	**(49,579)**	(30,236)	(15,147)
Investing activities			
Net change in:			
Deposits with banks	**8,168**	104	(4,196)
Federal funds sold and securities purchased under resale agreements	**(6,939)**	(32,469)	(13,101)
Held-to-maturity securities:			
Proceeds	**19**	33	66
Available-for-sale securities:			
Proceeds from maturities	**24,909**	31,053	45,197
Proceeds from sales	**123,750**	82,902	134,534
Purchases	**(201,530)**	(81,749)	(173,745)
Proceeds from sales and securitizations of loans held-for-investment	**20,809**	23,861	12,854
Originations and other changes in loans, net	**(70,837)**	(40,436)	(47,726)
Net cash received (used) in business dispositions or acquisitions	**185**	(1,039)	13,864
All other investing activities, net	**1,839**	4,796	2,519
Net cash used in investing activities	**(99,627)**	(12,944)	(29,734)
Financing activities			
Net change in:			
Deposits	**82,105**	31,415	52,082
Federal funds purchased and securities sold under repurchase agreements	**36,248**	(1,862)	7,065
Commercial paper and other borrowed funds	**12,657**	2,618	(4,343)
Proceeds from the issuance of long-term debt and capital debt securities	**56,721**	43,721	25,344
Repayments of long-term debt and capital debt securities	**(34,267)**	(26,883)	(16,039)
Net proceeds from the issuance of stock and stock-related awards	**1,659**	682	848
Excess tax benefits related to stock-based compensation	**302**	—	—
Redemption of preferred stock	**(139)**	(200)	(670)
Treasury stock purchased	**(3,938)**	(3,412)	(738)
Cash dividends paid	**(4,846)**	(4,878)	(3,927)
All other financing activities, net	**6,247**	3,868	(26)
Net cash provided by financing activities	**152,749**	45,069	59,596
Effect of exchange rate changes on cash and due from banks	**199**	(387)	185
Net increase in cash and due from banks	**3,742**	1,502	14,900
Cash and due from banks at the beginning of the year	**36,670**	35,168	20,268
Cash and due from banks at the end of the year	**$ 40,412**	$ 36,670	$ 35,168
Cash interest paid	**$ 36,415**	$ 24,583	$ 13,384
Cash income taxes paid	**$ 5,563**	$ 4,758	$ 1,477

Note: In 2006, the Firm exchanged selected corporate trust businesses for The Bank of New York's consumer, business banking and middle-market banking businesses. The fair values of the noncash assets exchanged was $2.15 billion. In 2004, the fair values of noncash assets acquired and liabilities assumed in the merger with Bank One were $320.9 billion and $277.0 billion, respectively, and approximately 1,469 million shares of common stock, valued at approximately $57.3 billion, were issued in connection with the merger with Bank One.

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The Notes to consolidated financial statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States, with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing, asset management and private equity. For a discussion of the Firm's business segment information, see Note 33 on pages 139–141 of this Annual Report.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the United States of America ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by bank regulatory authorities.

Certain amounts in the prior periods have been reclassified to conform to the current presentation.

Consolidation

The consolidated financial statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

The most usual condition for a controlling financial interest is the ownership of a majority of the voting interests of the entity. However, a controlling financial interest also may be deemed to exist with respect to entities, such as special purpose entities ("SPEs"), through arrangements that do not involve controlling voting interests.

SPEs are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. For example, they are critical to the functioning of the mortgage- and asset-backed securities and commercial paper markets. SPEs may be organized as trusts, partnerships or corporations and are typically set up for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction describe how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs can be structured to be bankruptcy-remote, thereby insulating investors from the impact of the creditors of other entities, including the seller of the assets.

There are two different accounting frameworks applicable to SPEs: the qualifying SPE ("QSPE") framework under SFAS 140; and the variable interest entity ("VIE") framework under FIN 46R. The applicable framework depends on the nature of the entity and the Firm's relation to that entity. The QSPE framework is applicable when an entity transfers (sells) financial assets to an SPE meeting certain criteria defined in SFAS 140. These criteria are designed to ensure that the activities of the entity are essentially predetermined at the inception of the vehicle and that the transferor of the financial assets cannot exercise control over the entity and the assets therein. Entities meeting these criteria are not consolidated by the transferor or other counterparties, as long as they do not have the unilateral ability to liquidate or to cause the entity no longer to meet the QSPE criteria. The Firm primarily follows the QSPE model for securitizations of its residential and commercial mortgages, credit card loans and automobile loans. For further details, see Note 14 on pages 114–118 of this Annual Report.

When the SPE does not meet the QSPE criteria, consolidation is assessed pursuant to FIN 46R. Under FIN 46R, a VIE is defined as an entity that: (1) lacks enough equity investment at risk to permit the entity to finance its activities without additional subordinated financial support from other parties; (2) has equity owners that lack the right to make significant decisions affecting the entity's operations; and/or (3) has equity owners that do not have an obligation to absorb the entity's losses or the right to receive the entity's returns.

FIN 46R requires a variable interest holder (i.e., a counterparty to a VIE) to consolidate the VIE if that party will absorb a majority of the expected losses of the VIE, receive the majority of the expected residual returns of the VIE, or both. This party is considered the primary beneficiary. In making this determination, the Firm thoroughly evaluates the VIE's design, capital structure and relationships among variable interest holders. When the primary beneficiary cannot be identified through a qualitative analysis, the Firm performs a quantitative analysis, which computes and allocates expected losses or residual returns to variable interest holders. The allocation of expected cash flows in this analysis is based upon the relative contractual rights and preferences of each interest holder in the VIE's capital structure. For further details, see Note 15 on pages 118–120 of this Annual Report.

Investments in companies that are considered to be voting-interest entities under FIN 46R in which the Firm has significant influence over operating and financing decisions are accounted for in accordance with the equity method of accounting. These investments are generally included in Other assets, and the Firm's share of income or loss is included in Other income.

All retained interests and significant transactions between the Firm, QSPEs and nonconsolidated VIEs are reflected on JPMorgan Chase's Consolidated balance sheets or in the Notes to consolidated financial statements.

For a discussion of the accounting for private equity investments, see Note 4 on pages 98–99 of this Annual Report.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included in the Consolidated balance sheets.

Use of estimates in the preparation of consolidated financial statements

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, of revenue and expenses, and of disclosures of contingent assets and liabilities. Actual results could be different from these estimates. For discussion of critical accounting estimates used by the Firm, see pages 83–85 of this Annual Report.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenues and expenses denominated in foreign (i.e., non-U.S.) currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in Other comprehensive income (loss) within Stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated statements of income.

Statements of cash flows

For JPMorgan Chase's Consolidated statements of cash flows, cash is defined as those amounts included in Cash and due from banks.

Accounting for certain hybrid financial instruments

SFAS 155 applies to certain "hybrid financial instruments" which are financial instruments that contain embedded derivatives. The standard establishes a requirement to evaluate beneficial interests in securitized financial assets to determine if the interests represent freestanding derivatives or are hybrid financial instruments containing embedded derivatives requiring bifurcation. SFAS 155 also permits an irrevocable election for fair value measurement of any hybrid financial instrument containing an embedded derivative that otherwise would require bifurcation under SFAS 133. The fair value election can be applied to existing instruments on an instrument-by-instrument basis at the date of adoption and can be applied to new instruments on a prospective basis.

The Firm adopted SFAS 155 effective January 1, 2006. The Firm has elected to fair value all instruments issued, acquired or modified after December 31, 2005, that are required to be bifurcated under SFAS 133, as amended by SFAS 138, SFAS 149 and SFAS 155. In addition, the Firm elected to fair value certain structured notes existing as of December 31, 2005, resulting in a $22 million cumulative effect increase to Retained earnings. The cumulative effect adjustment includes gross unrealized gains of $29 million and gross unrealized losses of $7 million.

The substantial majority of the structured notes to which the fair-value election has been applied are classified in Long-term debt on the Consolidated balance sheets. The change in fair value associated with structured notes is classified within Principal transactions revenue on the Consolidated statements of income. For a discussion of Principal transactions and Long-term debt, see Notes 4 and 19 on pages 98–99 and 124–125, respectively, of this Annual Report.

Significant accounting policies

The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found:

Business changes and developments	Note 2	Page 95
Principal transactions activities	Note 4	Page 98
Other noninterest revenue	Note 5	Page 99
Pension and other postretirement employee benefit plans	Note 7	Page 100
Employee stock-based incentives	Note 8	Page 105
Noninterest expense	Note 9	Page 108
Securities	Note 10	Page 108
Securities financing activities	Note 11	Page 111
Loans	Note 12	Page 112
Allowance for credit losses	Note 13	Page 113
Loan securitizations	Note 14	Page 114
Variable interest entities	Note 15	Page 118
Goodwill and other intangible assets	Note 16	Page 121
Premises and equipment	Note 17	Page 123
Income taxes	Note 24	Page 128
Accounting for derivative instruments and hedging activities	Note 28	Page 131
Off–balance sheet lending-related financial instruments and guarantees	Note 29	Page 132
Fair value of financial instruments	Note 31	Page 135

Note 2 – Business changes and developments

Merger with Bank One Corporation

Bank One Corporation merged with and into JPMorgan Chase (the "Merger") on July 1, 2004. As a result of the Merger, each outstanding share of common stock of Bank One was converted in a stock-for-stock exchange into 1.32 shares of common stock of JPMorgan Chase. JPMorgan Chase stockholders kept their shares, which remained outstanding and unchanged as shares of JPMorgan Chase following the Merger. Key objectives of the Merger were to provide the Firm with a more balanced business mix and greater geographic diversification. The Merger was accounted for using the purchase method of accounting, which requires that the assets and liabilities of Bank One be fair valued as of July 1, 2004. The purchase price to complete the Merger was $58.5 billion.

As part of the Merger, certain accounting policies and practices were conformed, which resulted in $976 million of charges in 2004. The significant components of the conformity charges were a $1.4 billion charge related to the decertification of the seller's interest in credit card securitizations, and the benefit of a $584 million reduction in the allowance for credit losses as a result of conforming the wholesale and consumer credit provision methodologies.

The final purchase price of the Merger was allocated to the assets acquired and liabilities assumed using their fair values as of the Merger date. The computation of the purchase price and the allocation of the purchase price to the net assets of Bank One – based upon their respective fair values as of July 1, 2004 – and the resulting goodwill are presented below.

(in millions, except per share amounts)		July 1, 2004
Purchase price		
Bank One common stock exchanged	1,113	
Exchange ratio	1.32	
JPMorgan Chase common stock issued	1,469	
Average purchase price per JPMorgan Chase common share[a]	$ 39.02	
		$ 57,336
Fair value of employee stock awards and direct acquisition costs		1,210
Total purchase price		58,546
Net assets acquired:		
Bank One stockholders' equity	$ 24,156	
Bank One goodwill and other intangible assets	(2,754)	
Subtotal	21,402	
Adjustments to reflect assets acquired at fair value:		
Loans and leases	(2,261)	
Private equity investments	(72)	
Identified intangible assets	8,665	
Pension plan assets	(778)	
Premises and equipment	(417)	
Other assets	(267)	
Amounts to reflect liabilities assumed at fair value:		
Deposits	(373)	
Deferred income taxes	932	
Other postretirement benefit plan liabilities	(49)	
Other liabilities	(1,162)	
Long-term debt	(1,234)	
		24,386
Goodwill resulting from Merger[b]		$ 34,160

(a) The value of the Firm's common stock exchanged with Bank One shareholders was based upon the average closing prices of the Firm's common stock for the two days prior to, and the two days following, the announcement of the Merger on January 14, 2004.
(b) Goodwill resulting from the Merger reflects adjustments of the allocation of the purchase price to the net assets acquired through June 30, 2005.

Condensed statement of net assets acquired

The following condensed statement of net assets acquired reflects the fair value of Bank One net assets as of July 1, 2004.

(in millions)	July 1, 2004
Assets	
Cash and cash equivalents	$ 14,669
Securities	70,512
Interests in purchased receivables	30,184
Loans, net of allowance for loan losses	129,650
Goodwill and other intangible assets	42,825
All other assets	47,739
Total assets	$ 335,579
Liabilities	
Deposits	$ 164,848
Short-term borrowings	9,811
All other liabilities	61,494
Long-term debt	40,880
Total liabilities	277,033
Net assets acquired	$ 58,546

Acquired, identified intangible assets

Components of the fair value of acquired, identified intangible assets as of July 1, 2004, were as follows:

	Fair value (in millions)	Weighted-average life (in years)	Useful life (in years)
Core deposit intangibles	$ 3,650	5.1	Up to 10
Purchased credit card relationships	3,340	4.6	Up to 10
Other credit card–related intangibles	295	4.6	Up to 10
Other customer relationship intangibles	870	4.6–10.5	Up to 20
Subtotal	8,155	5.1	Up to 20
Indefinite-lived asset management intangibles	510	NA	NA
Total	$ 8,665		

Unaudited pro forma condensed combined financial information

The following unaudited pro forma condensed combined financial information presents the results of operations of the Firm had the Merger taken place at January 1, 2004.

Year ended December 31, (in millions, except per share data)	2004
Noninterest revenue	$ 30,684
Net interest income	21,132
Total net revenue	51,816
Provision for credit losses	2,727
Noninterest expense	40,117
Income from continuing operations before income tax expense	8,972
Income from continuing operations	6,338
Income from discontinued operations	206
Net income	$ 6,544
Net income per common share:	
Basic	
Income from continuing operations	$ 1.79
Net income	1.85
Diluted	
Income from continuing operations	1.75
Net income	1.81
Average common shares outstanding:	
Basic	3,510
Diluted	3,593

Other business events

Acquisition of the consumer, business banking and middle-market banking businesses of The Bank of New York in exchange for selected corporate trust businesses, including trustee, paying agent, loan agency and document management services

On October 1, 2006, JPMorgan Chase completed the acquisition of The Bank of New York Company, Inc.'s ("The Bank of New York") consumer, business banking and middle-market banking businesses in exchange for selected corporate trust businesses plus a cash payment of $150 million. This acquisition added 339 branches and more than 400 ATMs, and it significantly strengthens Retail Financial Services distribution network in the New York Tri-state area. The Bank of New York businesses acquired were valued at a premium of $2.3 billion; the Firm's corporate trust businesses that were transferred (i.e., trustee, paying agent, loan agency and document management services) were valued at a premium of $2.2 billion. The Firm also may make a future payment to The Bank of New York of up to $50 million depending on certain new account openings. This transaction included the acquisition of approximately $7.7 billion in loans net of Allowance for loan losses and $12.9 billion in deposits from The Bank of New York. The Firm also recognized core deposit

intangibles of $485 million which will be amortized using an accelerated method over a 10 year period. JPMorgan Chase recorded an after-tax gain of $622 million related to this transaction in the fourth quarter of 2006.

JPMorgan Partners management

On August 1, 2006, the buyout and growth equity professionals of JPMorgan Partners ("JPMP") formed an independent firm, CCMP Capital, LLC ("CCMP"), and the venture professionals separately formed an independent firm, Panorama Capital, LLC ("Panorama"). The investment professionals of CCMP and Panorama continue to manage the former JPMP investments pursuant to a management agreement with the Firm.

Sale of insurance underwriting business

On July 1, 2006, JPMorgan Chase completed the sale of its life insurance and annuity underwriting businesses to Protective Life Corporation for cash proceeds of approximately $1.2 billion, consisting of $900 million of cash received from Protective Life Corporation and approximately $300 million of preclosing dividends received from the entities sold. The after-tax impact of this transaction was negligible. The sale included both the heritage Chase insurance business and the insurance business that Bank One had bought from Zurich Insurance in 2003.

Acquisition of private-label credit card portfolio from Kohl's Corporation

On April 21, 2006, JPMorgan Chase completed the acquisition of $1.6 billion of private-label credit card receivables and approximately 21 million accounts from Kohl's Corporation ("Kohl's"). JPMorgan Chase and Kohl's have also entered into an agreement under which JPMorgan Chase will offer private-label credit cards to both new and existing Kohl's customers.

Collegiate Funding Services

On March 1, 2006, JPMorgan Chase acquired, for approximately $663 million, Collegiate Funding Services, a leader in education loan servicing and consolidation. This acquisition included $6 billion of education loans and will enable the Firm to create a comprehensive education finance business.

BrownCo

On November 30, 2005, JPMorgan Chase sold BrownCo, an on-line deep-discount brokerage business, to E*TRADE Financial for a cash purchase price of $1.6 billion. JPMorgan Chase recognized an after-tax gain of $752 million on the sale. BrownCo's results of operations were reported in the Asset Management business segment; however, the gain on the sale, which was recorded in Other income in the Consolidated statements of income, was reported in the Corporate business segment.

Sears Canada credit card business

On November 15, 2005, JPMorgan Chase purchased Sears Canada Inc.'s credit card operation, including both private-label card accounts and co-branded Sears MasterCard® accounts, aggregating approximately 10 million accounts with $2.2 billion (CAD$2.5 billion) in managed loans. Sears Canada and JPMorgan Chase entered into an ongoing arrangement under which JPMorgan Chase will offer private-label and co-branded credit cards to both new and existing customers of Sears Canada.

Chase Merchant Services, Paymentech integration

On October 5, 2005, JPMorgan Chase and First Data Corp. completed the integration of the companies' jointly owned Chase Merchant Services and Paymentech merchant businesses, to be operated under the name Chase Paymentech Solutions, LLC. The joint venture is the largest financial transaction processor in the U.S. for businesses accepting credit card payments via traditional point of sale, Internet, catalog and recurring billing. As a result of the integration into a joint venture, Paymentech has been deconsolidated and JPMorgan Chase's ownership interest in this joint venture is accounted for in accordance with the equity method of accounting.

Cazenove

On February 28, 2005, JPMorgan Chase and Cazenove Group plc ("Cazenove") formed a business partnership which combined Cazenove's investment banking business and JPMorgan Chase's U.K.-based investment banking business in order to provide investment banking services in the United Kingdom and Ireland. The new company is called JPMorgan Cazenove Holdings.

Other acquisitions

During 2004, JPMorgan Chase purchased the Electronic Financial Services ("EFS") business from Citigroup and acquired a majority interest in hedge fund manager Highbridge Capital Management, LLC ("Highbridge").

Note 3 – Discontinued operations

The transfer of selected corporate trust businesses to The Bank of New York (see Note 2 above) includes the trustee, paying agent, loan agency and document management services businesses. JPMorgan Chase recognized an after-tax gain of $622 million on this transaction. The results of operations of these corporate trust businesses were transferred from the Treasury & Securities Services ("TSS") segment to the Corporate segment effective with the second quarter of 2006, and reported as discontinued operations. Condensed financial information of the corporate trust business follows:

Selected income statements data

Year ended December 31, (in millions)	**2006**	2005	2004[a]
Other noninterest revenue	**$ 407**	$ 509	$ 491
Net interest income	**264**	276	234
Gain on sale of discontinued operations	**1,081**	—	—
Total net revenue	**1,752**	785	725
Noninterest expense	**385**	409	387
Income from discontinued operations before income taxes	**1,367**	376	338
Income tax expense	**572**	147	132
Income from discontinued operations	**$ 795**	$ 229	$ 206

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The following is a summary of the assets and liabilities associated with the selected corporate trust businesses related to The Bank of New York transaction that closed on October 1, 2006.

Selected balance sheet data (in millions)	October 1, 2006
Goodwill and other intangibles	$ 838
Other assets	547
Total assets	$ 1,385
Deposits	$ 24,011
Other liabilities	547
Total liabilities	$ 24,558

JPMorgan Chase will provide certain transitional services to The Bank of New York for a defined period of time after the closing date. The Bank of New York will compensate JPMorgan Chase for these transitional services.

Note 4 – Principal transactions

Principal transactions is a new caption, effective January 1, 2006, in the Consolidated statements of income. Principal transactions revenue consists of: realized and unrealized gains and losses from trading activities (including physical commodities inventories that are accounted for at the lower of cost or fair value); changes in fair value associated with structured notes to which the SFAS 155 fair value election has been applied, and Private equity gains and losses. The prior-period presentation of Trading revenue and Private equity gains (losses) has been reclassified to this new caption. The following table presents Principal transactions revenue:

Year ended December 31, (in millions)	**2006**	2005	2004[a]
Trading revenue	**$ 8,986**	$ 5,860	$ 3,612
Private equity gains	**1,360**	1,809	1,536
Principal transactions	**$10,346**	$ 7,669	$ 5,148

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Trading assets and liabilities

Trading assets include debt and equity securities held for trading purposes that JPMorgan Chase owns ("long" positions). Trading liabilities include debt and equity securities that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase securities at a future date to cover the short positions. Included in Trading assets and Trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. Loans are classified as trading where positions are bought and sold to make profits from short-term movements in price. Trading positions are carried at fair value on the Consolidated balance sheets.

The following table presents the fair value of Trading assets and Trading liabilities for the dates indicated:

December 31, (in millions)	**2006**	2005
Trading assets		
Debt and equity instruments:		
U.S. government and federal agency obligations	**$ 17,358**	$ 16,283
U.S. government-sponsored enterprise obligations	**28,544**	24,172
Obligations of state and political subdivisions	**9,569**	9,887
Certificates of deposit, bankers' acceptances and commercial paper	**8,204**	5,652
Debt securities issued by non-U.S. governments	**58,387**	48,671
Corporate securities and other	**188,075**	143,925
Total debt and equity instruments	**310,137**	248,590
Derivative receivables:[a][b]		
Interest rate	**28,932**	28,113
Foreign exchange	**4,260**	2,855
Equity	**6,246**	5,575
Credit derivatives	**5,732**	3,464
Commodity	**10,431**	9,780
Total derivative receivables	**55,601**	49,787
Total trading assets	**$ 365,738**	$ 298,377
Trading liabilities		
Debt and equity instruments[c]	**$ 90,488**	$ 94,157
Derivative payables:[a][b]		
Interest rate	**22,738**	26,930
Foreign exchange	**4,820**	3,453
Equity	**16,579**	11,539
Credit derivatives	**6,003**	2,445
Commodity	**7,329**	7,406
Total derivative payables	**57,469**	51,773
Total trading liabilities	**$ 147,957**	$ 145,930

(a) 2005 has been adjusted to reflect more appropriate product classifications of certain balances.
(b) Included in Trading assets and Trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. These amounts are reported net of cash received and paid of $23.0 billion and $18.8 billion, respectively, at December 31, 2006, and $26.7 billion and $18.9 billion, respectively, at December 31, 2005, under legally enforceable master netting agreements.
(c) Primarily represents securities sold, not yet purchased.

Average Trading assets and liabilities were as follows for the periods indicated:

Year ended December 31, (in millions)	**2006**	2005	2004[b]
Trading assets – debt and equity instruments	**$280,079**	$ 237,073	$ 200,389
Trading assets – derivative receivables	**57,368**	57,365	59,522
Trading liabilities – debt and equity instruments[a]	**$102,794**	$ 93,102	$ 82,204
Trading liabilities – derivative payables	**57,938**	55,723	52,761

(a) Primarily represents securities sold, not yet purchased.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Private equity

The following table presents the carrying value and cost of the Private equity investment portfolio for the dates indicated:

December 31,	**2006**		2005	
(in millions)	Carrying value	Cost	Carrying value	Cost
Total private equity investments	**$ 6,359**	**$ 7,560**	$ 6,374	$ 8,036

Private equity investments are held primarily by the Private equity business within Corporate (which includes investments made by JPMorgan Partners and ONE Equity Partners). The Private Equity business invests in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines. Accordingly, these investments, irrespective of the percentage of equity ownership interest held by Private equity, are carried on the Consolidated balance sheets at fair value. Realized and unrealized gains and losses arising from changes in value are reported in Principal transactions revenue in the Consolidated statements of income in the period that the gains or losses occur.

Privately held investments are initially valued based upon cost. The carrying values of privately held investments are adjusted from cost to reflect both positive and negative changes evidenced by financing events with third-party capital providers. In addition, these investments are subject to ongoing impairment reviews by Private equity senior investment professionals. A variety of factors are reviewed and monitored to assess impairment including, but not limited to, operating performance of, and future expectations regarding, the particular portfolio investment; industry valuations of comparable public companies; changes in market outlook; and the third-party financing environment over time.

Private equity also holds publicly held equity investments, generally obtained through the initial public offering of privately held equity investments. Publicly held investments are marked-to-market at the quoted public value. To determine the carrying values of these investments, Private equity incorporates the use of discounts to take into account the fact that it cannot immediately realize the quoted public values as a result of regulatory and/or contractual sales restrictions imposed on these holdings.

Note 5 – Other noninterest revenue

Investment banking fees

This revenue category includes advisory and equity and debt underwriting fees. Advisory fees are recognized as revenue when the related services have been performed. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee (e.g., the fee is not contingent upon the customer obtaining financing). Underwriting fees are net of syndicate expenses. The Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria.

The following table presents the components of Investment banking fees:

Year ended December 31, (in millions)	**2006**	2005	2004[a]
Underwriting:			
Equity	**$ 1,179**	$ 864	$ 780
Debt	**2,703**	1,969	1,858
Total Underwriting	**3,882**	2,833	2,638
Advisory	**1,638**	1,255	898
Total	**$ 5,520**	$ 4,088	$ 3,536

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Lending & deposit related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts, and other loan servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based upon exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met.

Mortgage fees and related income

This revenue category includes fees and income derived from mortgage origination, sales and servicing, and includes the effect of risk management activities associated with the mortgage pipeline, warehouse and the mortgage servicing rights ("MSRs") asset (excluding gains and losses on the sale of Available-for-sale ("AFS") securities). Origination fees and gains or losses on loan sales are recognized in income upon sale. Mortgage servicing fees are recognized over the period the related service is provided. Valuation changes in the mortgage pipeline, warehouse, MSR asset and corresponding risk management instruments are recognized in earnings as these changes occur. Net interest income and securities gains and losses on AFS securities used in mortgage-related risk management activities are not included in Mortgage fees and related income. For a further discussion of MSRs, see Note 16 on pages 121–122 of this Annual Report.

Credit card income

This revenue category includes interchange income from credit and debit cards and servicing fees earned in connection with securitization activities. Volume-related payments to partners and expenses for rewards programs are netted against interchange income. Expenses related to rewards programs are recorded when the rewards are earned by the customer. Other Fee revenues are recognized as earned, except for annual fees, which are deferred with direct loan origination costs and recognized on a straight-line basis over the 12-month period to which they pertain.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous affinity organizations and co-brand partners, which grant to the Firm exclusive rights to market to their members or customers. These organizations and partners endorse the credit card programs and provide their mailing lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from 3 to 10 years. The economic incentives the Firm pays to the endorsing organizations and partners typically include payments based upon new account originations, charge volumes, and the cost of the endorsing organizations' or partners' marketing activities and awards.

The Firm recognizes the payments made to the affinity organizations and co-brand partners based upon new account originations as direct loan origination costs. Payments based upon charge volumes are considered by the Firm as revenue sharing with the affinity organizations and co-brand partners, which are deducted from Credit card income as the related revenue is earned. Payments based upon marketing efforts undertaken by the endorsing organization or partner are expensed by the Firm as incurred. These costs are recorded within Noninterest expense.

Note 6 – Interest income and Interest expense

Details of Interest income and Interest expense were as follows:

Year ended December 31, (in millions)	**2006**	2005[b]	2004[b][c]
Interest income			
Loans	**$ 33,121**	$ 26,056	$ 16,768
Securities	**4,147**	3,129	3,377
Trading assets	**10,942**	9,117	7,527
Federal funds sold and securities purchased under resale agreements	**5,578**	3,562	1,380
Securities borrowed	**3,402**	1,618	578
Deposits with banks	**1,265**	660	539
Interests in purchased receivables[a]	**652**	933	291
Total interest income	**59,107**	45,075	30,460
Interest expense			
Interest-bearing deposits	**17,042**	9,986	4,515
Short-term and other liabilities	**14,086**	10,002	6,474
Long-term debt	**5,503**	4,160	2,466
Beneficial interests issued by consolidated VIEs	**1,234**	1,372	478
Total interest expense	**37,865**	25,520	13,933
Net interest income	**21,242**	19,555	16,527
Provision for credit losses	**3,270**	3,483	2,544
Net interest income after Provision for credit losses	**$ 17,972**	$ 16,072	$ 13,983

(a) As a result of restructuring certain multi-seller conduits the Firm administers, JPMorgan Chase deconsolidated $29 billion of Interests in purchased receivables, $3 billion of Loans and $1 billion of Securities, and recorded $33 billion of lending-related commitments during the second quarter of 2006.
(b) Prior periods have been adjusted to reflect the reclassification of certain amounts to more appropriate Interest income and Interest expense lines.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Note 7 – Pension and other postretirement employee benefit plans

The Firm's defined benefit pension plans are accounted for in accordance with SFAS 87 and SFAS 88, and its other postretirement employee benefit ("OPEB") plans are accounted for in accordance with SFAS 106. In September 2006, the FASB issued SFAS 158, which requires companies to recognize on their Consolidated balance sheets the overfunded or underfunded status of their defined benefit postretirement plans, measured as the difference between the fair value of plan assets and the benefit obligation. SFAS 158 requires unrecognized amounts (e.g., net actuarial loss and prior service costs) to be recognized in Accumulated other comprehensive income ("AOCI") and that these amounts be adjusted as they are subsequently recognized as components of net periodic benefit cost based upon the current amortization and recognition requirements of SFAS 87 and SFAS 106. The Firm prospectively adopted SFAS 158 as required on December 31, 2006, which resulted in a charge to AOCI of $1.1 billion.

SFAS 158 also eliminates the provisions of SFAS 87 and SFAS 106 that allow plan assets and obligations to be measured as of a date not more than three months prior to the reporting entity's balance sheet date. The Firm uses a measurement date of December 31 for its defined benefit pension and OPEB plans; therefore, this provision of SFAS 158 will have no effect on the Firm's financial statements.

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. Amortization of net actuarial gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net actuarial gain or loss exceeds 10 percent of the greater of the projected benefit obligation or the fair value of the plan assets. Any excess, as well as prior service costs, are amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently 10 years. For OPEB plans, any excess net actuarial gains and losses also are amortized over the average future service period, which is currently seven years; however, prior service costs are amortized over the average years of service remaining to full eligibility age, which is currently five years.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula, in the form of pay and interest credits, to determine the benefits to be provided at retirement, based upon eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after five years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based upon factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable employee benefit and local tax laws. As a result of the enactment of the Pension Protection Act in August 2006, which increased the maximum amount allowable for tax deduction, the Firm is reviewing 2007 U.S. and non-U.S. defined benefit pension plan contribution alternatives. The amount of potential 2007 contributions, if any, is not reasonably estimable at this time.

JPMorgan Chase has a number of other defined benefit pension plans (i.e., U.S. plans not subject to Title IV of the Employee Retirement Income Security Act). The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees earn pay and interest credits on compensation amounts above the maximum stipulated by law under a qualified plan. The Excess Retirement Plan is a nonqualified, noncontributory U.S. pension plan with an unfunded projected benefit obligation at December 31, 2006 and 2005, in the amount of $301 million and $273 million, respectively. In the current year, this plan has been incorporated into certain of this Note's tables for which it had not been included in prior years.

Defined contribution plans

JPMorgan Chase offers several defined contribution plans in the U.S. and in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is The JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. The 401(k) Savings Plan allows employees to make pretax contributions to tax-deferred investment portfolios. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan. The Firm matches eligible employee contributions up to a certain percentage of benefits-eligible compensation per pay period, subject to plan and legal limits. Employees begin to receive matching contributions after completing a one-year service requirement and are immediately vested in the Firm's contributions when made. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and qualifying U.S. employees. These benefits vary with length of service and date of hire and provide for limits on the Firm's share of covered medical benefits. The medical benefits are contributory, while the life insurance benefits are noncontributory. As of August 1, 2005, the eligibility requirements for U.S. employees to qualify for subsidized retiree medical coverage were revised, and life insurance coverage was eliminated for active employees retiring after 2005. Postretirement medical benefits also are offered to qualifying U.K. employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expenses. The U.K. OPEB plan is unfunded.

The following tables present the funded status, changes in the benefit obligations and plan assets, accumulated benefit obligations, and AOCI amounts reported on the Consolidated balance sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans:

As of or for the year ended December 31, (in millions)	Defined benefit pension plans				OPEB plans[g]	
	U.S.		Non-U.S.			
	2006	2005[e]	**2006**	2005	**2006**	2005[h]
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (8,054)**	$ (7,980)	**$ (2,378)**	$ (1,969)	**$ (1,395)**	$ (1,577)
Cazenove business partnership	**—**	—	**—**	(291)	**—**	—
Benefits earned during the year	**(281)**	(293)	**(37)**	(25)	**(9)**	(13)
Interest cost on benefit obligations	**(452)**	(453)	**(120)**	(104)	**(78)**	(81)
Plan amendments	**—**	—	**2**	—	**—**	117
Liabilities of newly material plans[a]	**—**	—	**(154)**	—	**—**	—
Employee contributions	**NA**	NA	**(2)**	—	**(50)**	(44)
Actuarial gain (loss)	**(200)**	(123)	**(23)**	(310)	**(55)**	21
Benefits paid	**856**	766	**68**	66	**177**	187
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(13)**	NA
Curtailments	**33**	29	**2**	—	**(12)**	(9)
Settlements	**—**	—	**37**	—	—	—
Special termination benefits	**—**	—	**(1)**	—	**(2)**	(1)
Foreign exchange impact and other	**—**	—	**(311)**	255	**(6)**	5
Benefit obligation, end of year	**$ (8,098)**	$ (8,054)	**$ (2,917)**	$ (2,378)	**$ (1,443)**	$ (1,395)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 9,617**	$ 9,637	**$ 2,223**	$ 1,889	**$ 1,329**	$ 1,302
Cazenove business partnership	**—**	—	**—**	252	**—**	—
Actual return on plan assets	**1,151**	703	**94**	308	**120**	43
Firm contributions	**43**	43	**241**	78	**2**	3
Employee contributions	**—**	—	**2**	—	**—**	—
Assets of newly material plans[a]	**—**	—	**67**	—	**—**	—
Benefits paid	**(856)**	(766)	**(68)**	(66)	**(100)**	(19)
Settlements	**—**	—	**(37)**	—	**—**	—
Foreign exchange impact and other	**—**	—	**291**	(238)	**—**	—
Fair value of plan assets, end of year	**$ 9,955**[c]	$ 9,617[c]	**$ 2,813**	$ 2,223	**$ 1,351**	$ 1,329
Funded (unfunded) status	**$ 1,857**	$ 1,563	**$ (104)**	$ (155)	**$ (92)**	$ (66)
Unrecognized amounts:						
Net actuarial loss	**NA**[d]	1,087	**NA**[d]	599	**NA**[d]	335
Prior service cost (credit)	**NA**[d]	43	**NA**[d]	3	**NA**[d]	(105)
Net amount recognized in the Consolidated balance sheets[b]	**$ 1,857**	$ 2,693	**$ (104)**	$ 447[f]	**$ (92)**	$ 164
Accumulated benefit obligation, end of year	**$ (7,679)**	$ (7,647)	**$ (2,849)**	$ (2,303)	**NA**	NA

(a) Reflects adjustments related to pension plans in Germany and Switzerland, which have defined benefit pension obligations that were not previously measured under SFAS 87 due to immateriality.
(b) Net amount recognized is recorded in Other assets for prepaid pension costs or in Accounts payable, accrued expenses and other liabilities for accrued pension costs.
(c) At December 31, 2006 and 2005, approximately $282 million and $405 million, respectively, of U.S. plan assets related to participation rights under participating annuity contracts.
(d) Under SFAS 158, and as noted in the following table, amounts that were previously reported as part of prepaid or accrued pension costs are now reported within AOCI.
(e) Revised primarily to incorporate amounts related to the U.S. defined benefit pension plans not subject to Title IV of the Employee Retirement Income Security Act of 1974 (e.g., Excess Retirement Plan).
(f) At December 31, 2005, Accrued pension costs related to non-U.S. defined benefit pension plans that JPMorgan Chase elected not to prefund fully totaled $164 million.
(g) Includes accumulated postretirement benefit obligation of $52 million and $44 million and postretirement benefit liability (included in Accrued expenses) of $52 million and $50 million, at December 31, 2006 and 2005, respectively, for the U.K. plan, which is unfunded.
(h) The U.S. OPEB plan was remeasured as of August 1, 2005, to reflect a midyear plan amendment and the final Medicare Part D regulations that were issued on January 21, 2005; as a result, the benefit obligation was reduced by $116 million.

Amounts recognized in Accumulated other comprehensive income

December 31, 2006 (in millions)	Defined benefit pension plans						OPEB plans		
	U.S.			Non-U.S.					
	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Net actuarial loss[a]	**$ 783**	**$ 311**	**$ 472**	**$ 669**	**$ 266**	**$ 403**	**$ 335**	**$ 84**	**$ 251**
Prior service cost (credit)	**36**	**14**	**22**	**—**	**—**	**—**	**(77)**	**(31)**	**(46)**
Total recognized in Accumulated other comprehensive income	**$ 819**	**$ 325**	**$ 494**	**$ 669**	**$ 266**	**$ 403**	**$ 258**	**$ 53**	**$ 205**

(a) For defined benefit pension plans, the net actuarial loss is primarily the result of declines in discount rates in recent years, partially offset by asset gains. Other factors that contribute to this net actuarial loss include demographic experience, which differs from expectations, and changes in other actuarial assumptions. For OPEB plans, the primary drivers of the cumulative actuarial loss were the decline in the discount rate in recent years and in the medical cost trend rate, which was higher than expected. These losses have been offset partially by the recognition of future savings attributable to Medicare Part D subsidy receipts.

The following table presents the incremental effect of applying SFAS 158 on individual line items on the Consolidated balance sheets:

December 31, 2006 (in millions)	Before application of SFAS 158	SFAS 158 adjustments	After application of SFAS 158
Line item			
Other assets	$ 53,328	$ (1,563)	$ 51,765[a]
Total assets	1,353,083	(1,563)	1,351,520
Accounts payable, accrued expenses and other liabilities	88,557	(461)	88,096[b]
Total liabilities	1,236,191	(461)	1,235,730
Accumulated other comprehensive income (loss)	(455)	(1,102)	(1,557)
Total liabilities and stockholders' equity	1,353,083	(1,563)	1,351,520

(a) Includes overfunded defined benefit pension and OPEB plans of $2.3 billion.
(b) Includes underfunded defined benefit pension and OPEB plans of $596 million.

The following tables present the components of net periodic benefit costs reported in the Consolidated statements of income for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans:

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[e]		
Year ended December 31, (in millions)	**2006**	2005[b]	2004[b][c][d]	**2006**	2005	2004[c][d]	**2006**	2005	2004[c][d]
Components of net periodic benefit cost									
Benefits earned during the period	**$ 281**	$ 293	$ 271	**$ 37**	$ 25	$ 17	**$ 9**	$ 13	$ 15
Interest cost on benefit obligations	**452**	453	368	**120**	104	87	**78**	81	81
Expected return on plan assets	**(692)**	(694)	(556)	**(122)**	(109)	(90)	**(93)**	(90)	(86)
Amortization:									
Net actuarial loss	**12**	4	24	**45**	38	44	**29**	12	—
Prior service cost (credit)	**5**	5	14	**—**	1	1	**(19)**	(10)	—
Curtailment (gain) loss	**2**	3	8	**1**	—	—	**2**	(17)	8
Settlement (gain) loss	**—**	—	—	**4**	—	(1)	**—**	—	—
Special termination benefits	**—**	—	—	**1**	—	11	**2**	1	2
Subtotal	**60**	64	129	**86**	59	69	**8**	(10)	20
Other defined benefit pension plans[a]	**2**	3	1	**36**	39	24	**NA**	NA	NA
Total defined benefit plans	**62**	67	130	**122**	98	93	**NA**	NA	NA
Total defined contribution plans	**254**	237	187	**199**	155	130	**NA**	NA	NA
Total pension and OPEB cost included in Compensation expense	**$ 316**	$ 304	$ 317	**$ 321**	$ 253	$ 223	**$ 8**	$ (10)	$ 20

(a) Includes immaterial non-U.S. defined benefit pension plans.
(b) Revised primarily to incorporate amounts related to the U.S. defined benefit pension plans not subject to Title IV of the Employee Retirement Income Security Act of 1974 (e.g., Excess Retirement Plan).
(c) Effective July 1, 2004, the Firm assumed the obligations of heritage Bank One's pension and OPEB plans. These plans were similar to those of heritage JPMorgan Chase. The heritage Bank One plans were merged into the JPMorgan Chase plans effective December 31, 2004.
(d) 2004 results include six months of the combined Firm's results and six months of the heritage JPMorgan Chase results.
(e) The Medicare Prescription Drug, Improvement and Modernization Act of 2003 resulted in a reduction of $32 million, $15 million and $5 million in 2006, 2005 and 2004, respectively, in net periodic benefit cost. The impact on 2006 and 2005 costs were higher as a result of the final Medicare Part D regulations issued on January 21, 2005, which were reflected beginning as of August 1, 2005, the next measurement date for the plan.

The estimated amounts that will be amortized from AOCI into net periodic benefit cost, before tax, in 2007 are as follows:

	Defined benefit pension plans		OPEB plans	
Year ended December 31, 2007 (in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net actuarial loss	$ —	$ 52	$ 34	$ —
Prior service cost (credit)	5	—	(16)	—
Total	$ 5	$ 52	$ 18	$ —

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the portfolio allocation. Returns on asset classes are developed using a forward-looking building-block approach and are not strictly based upon historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets.

For the U.K. defined benefit pension plan, which represents the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on defined benefit pension plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class, selected by reference to the yield on long-term U.K. government bonds and AA-rated long-term corporate bonds, plus an equity risk premium above the risk-free rate.

In 2006 and 2005, the discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was selected by reference to the yield on a portfolio of bonds with redemption dates and coupons that closely match each of the plan's projected cash flows; such portfolio is derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which this hypothetical bond portfolio generates excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. Prior to 2005, discount rates were selected by reference to the year-end Moody's corporate AA rate, as well as other high-quality indices with a duration that was similar to that of the respective plan's benefit obligations. The discount rates for the U.K. defined benefit pension and OPEB plans represent rates from the yield curve of the year-end iBoxx £ corporate AA 15-year-plus bond index with durations corresponding to those of the underlying benefit obligations.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated benefit obligations and the components of net periodic benefit costs for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated:

	U.S.		Non-U.S.	
December 31,	**2006**	2005	**2006**	2005
Weighted-average assumptions used to determine benefit obligations				
Discount rate:				
Defined benefit pension plans	**5.95%**	5.70%	**2.25-5.10%**	2.00-4.70%
OPEB plans	**5.90**	5.65	**5.10**	4.70
Rate of compensation increase	**4.00**	4.00	**3.00-4.00**	3.00-3.75
Health care cost trend rate:				
Assumed for next year	**10.00**	10.00	**6.63**	7.50
Ultimate	**5.00**	5.00	**4.00**	4.00
Year when rate will reach ultimate	**2014**	2013	**2010**	2010

	U.S.			Non-U.S.		
Year ended December 31,	**2006**	2005	2004	**2006**	2005	2004
Weighted-average assumptions used to determine net periodic benefit costs						
Discount rate:						
Defined benefit pension plans	**5.70%**	5.75%	6.00%	**2.00-4.70%**	2.00-5.30%	2.00-5.75%
OPEB plans	**5.65**	5.25-5.75[a]	6.00	**4.70**	5.30	5.40
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**7.50**	7.50	7.50-7.75	**3.25-5.50**	3.25-5.75	3.00-6.50
OPEB plans	**6.84**	6.80[b]	4.75-7.00	**NA**	NA	NA
Rate of compensation increase	**4.00**	4.00	4.25-4.50	**3.00-3.75**	1.75-3.75	1.75-3.75
Health care cost trend rate:						
Assumed for next year	**10.00**	10.00	10.00	**7.50**	7.50	6.50
Ultimate	**5.00**	5.00	5.00	**4.00**	4.00	4.00
Year when rate will reach ultimate	**2013**	2012	2011	**2010**	2010	2009

(a) The OPEB plan was remeasured as of August 1, 2005, and a rate of 5.25% was used from the period of August 1, 2005, through December 31, 2005.
(b) In 2005 the expected long-term rate of return on plan assets for the Firm's OPEB plan was revised to show the aggregate expected return for the heritage Bank One and JPMorgan Chase plans.

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's total service and interest cost and accumulated postretirement benefit obligation:

For the year ended December 31, 2006 (in millions)	1-Percentage-point increase	1-Percentage-point decrease
Effect on total service and interest costs	**$ 4**	**$ (3)**
Effect on postretirement obligation	**63**	**(54)**

At December 31, 2006, the Firm increased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans based upon current market interest rates, which will result in a decrease in expense of approximately $23 million for 2007. The 2007 expected long-term rate of return on U.S. pension plan assets remained at 7.50%. The 2007 expected long-term rate of return on the Firm's U.S. OPEB plan assets increased from 6.84% to 7.00%. The Firm maintained the health care benefit obligation trend assumption at 10% for 2007, declining to an ultimate rate of 5% in 2014. The interest crediting rate assumption at December 31, 2006, used to determine pension benefits changed primarily due to changes in market interest rates, which will result in additional expense of $10 million for 2007. The assumed rate of compensation increase remained at 4.00% as of December 31, 2006. The most significant change to the assumptions used to determine net periodic benefit costs in 2006 from the prior year were lower discount rates for the Firm's non-U.S. plans, both defined benefit pension and OPEB, due to lower market interest rates, resulting in $23 million higher compensation expense in 2006 compared with 2005.

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expenses are most sensitive to the expected long-term rate of return on plan assets. With all other assumptions held constant, a 25–basis point decline in the expected long-term rate of return on U.S. plan assets would result in an increase of approximately $27 million in 2007 U.S. defined benefit pension and OPEB plan expenses. A 25–basis point decline in the discount rate for the U.S. plans would result in an increase in 2007 U.S. defined benefit pension and OPEB plan expenses of approximately $3 million and an increase in the related projected benefit obligations of approximately $217 million. A 25–basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2007 non-U.S. defined benefit pension and OPEB plan expenses of approximately $19 million. A 25–basis point increase in the interest crediting rate for the U.S. defined benefit pension plan would result in an increase in 2007 U.S. defined benefit pension expense of approximately $10 million and an increase in the related projected benefit obligations of approximately $82 million.

Investment strategy and asset allocation

The investment policy for the Firm's postretirement employee benefit plan assets is to optimize the risk-return relationship as appropriate to the respective plan's needs and goals, using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Specifically, the goal is to optimize the asset mix for future benefit obligations, while managing various risk factors and each plan's investment return objectives. For example, long-duration fixed income securities are included in the U.S. qualified pension plan's asset allocation, in recognition of its long-duration obligations. Plan assets are managed by a combination of internal and external investment managers and are rebalanced to within approved ranges, to the extent economically practical.

The Firm's U.S. defined benefit pension plan assets are held in various trusts and are invested in a well-diversified portfolio of equities (including U.S. large and small capitalization and international equities), fixed income (including corporate and government bonds), Treasury inflation-indexed and high-yield securities, real estate, cash equivalents, and alternative investments. Non-U.S. defined benefit pension plan assets are held in various trusts and are similarly invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to fund partially the U.S. OPEB plan, are held in separate accounts with an insurance company and are invested in equity and fixed income index funds. In addition, tax-exempt municipal debt securities, held in a trust, were used to fund the U.S. OPEB plan in prior periods; as of December 31, 2006, there are no remaining assets in the trust. As of December 31, 2006, the assets used to fund the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except in connection with investments in third-party stock-index funds.

The following table presents the weighted-average asset allocation at December 31 for the years indicated, and the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans:

	Defined benefit pension plans								
	U.S.			Non-U.S.[a]			OPEB plans[b]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2006**	2005	Allocation	**2006**	2005	Allocation	**2006**	2005
Asset category									
Debt securities	10-30%	**31%**	33%	73%	**70%**	75%	50%	**50%**	54%
Equity securities	25-60	**55**	57	26	**26**	24	50	**50**	46
Real estate	5-20	**8**	6	—	**1**	1	—	**—**	—
Alternatives	15-50	**6**	4	1	**3**	—	—	**—**	—
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Represents the U.K. defined benefit pension plan only, as plans outside the U.K. are not significant.
(b) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

The following table presents JPMorgan Chase's actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans:

	U.S.			Non-U.S.		
December 31,	**2006**	2005	2004	**2006**	2005	2004
Actual rate of return:						
Defined benefit pension plans	**13.40%**	7.50%	12.50%	**2.80-7.30%**	2.70-15.90%	2.30-10.50%
OPEB plans	**9.30**	3.30	7.10	**NA**	NA	NA

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions:

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2007	$ 561	$ 83	$ 130	$ 15
2008	563	81	132	16
2009	583	88	133	18
2010	602	93	135	19
2011	623	97	137	20
Years 2012–2016	3,417	533	657	121

Note 8 – Employee stock-based incentives

Effective January 1, 2006, the Firm adopted SFAS 123R and all related interpretations using the modified prospective transition method. SFAS 123R requires all share-based payments to employees, including employee stock options and stock appreciation rights ("SARs"), to be measured at their grant date fair values. Results for prior periods have not been restated. The Firm also adopted the transition election provided by FSP FAS 123(R)-3.

JPMorgan Chase had previously adopted SFAS 123, effective January 1, 2003, using the prospective transition method. Under SFAS 123, the Firm accounted for its stock-based compensation awards at fair value, similar to the SFAS 123R requirements. However, under the prospective transition method, JPMorgan Chase continued to account for unmodified stock options that were outstanding as of December 31, 2002, using the APB 25 intrinsic value method. Under this method, no expense was recognized for stock options granted at an exercise price equal to the stock price on the grant date, since such options have no intrinsic value.

Upon adopting SFAS 123R, the Firm began to recognize in the Consolidated statements of income compensation expense for unvested stock options previously accounted for under APB 25. Additionally, JPMorgan Chase recognized as compensation expense an immaterial cumulative effect adjustment resulting from the SFAS 123R requirement to estimate forfeitures at the grant date instead of recognizing them as incurred. Finally, the Firm revised its accounting policies for share-based payments granted to retirement-eligible employees under SFAS 123R. Prior to adopting SFAS 123R, the Firm's accounting policy for share-based payment awards granted to retirement-eligible employees was to recognize compensation cost over the award's stated service period. For awards granted to retirement-eligible employees in 2006, JPMorgan Chase recognized compensation expense on the grant date without giving consideration to the impact of post employment restrictions. In the first quarter of 2006, the Firm also began to accrue the estimated cost of stock awards granted to retirement-eligible employees in January 2007.

Employee stock-based awards

The Firm has granted restricted stock, restricted stock units ("RSUs"), stock options, and stock-settled SARs to certain of its employees.

In 2006, JPMorgan Chase granted long-term stock-based awards under the 2005 Long-Term Incentive Plan (the "2005 Plan"). In 2005, JPMorgan Chase granted long-term stock-based awards under the 1996 Long-Term Incentive Plan as amended (the "1996 plan") until May 2005 and under the 2005 Plan thereafter to certain key employees. These two plans, plus prior Firm plans and plans assumed as the result of acquisitions, constitute the Firm's stock-based compensation plans ("LTI Plans"). The 2005 Plan became effective on May 17, 2005, after approval by shareholders at the 2005 annual meeting. The 2005 Plan replaced three existing stock-based compensation plans – the 1996 Plan and two nonshareholder-approved plans – all of which expired in May 2005. Under the terms of the 2005 Plan, 275 million shares of common stock are available for issuance during its five-year term. The 2005 Plan is the only active plan under which the Firm is currently granting stock-based incentive awards.

Restricted stock and RSUs are granted by JPMorgan Chase at no cost to the recipient. These awards are subject to forfeiture until certain restrictions have lapsed, including continued employment for a specified period. The recipient of a share of restricted stock is entitled to voting rights and dividends on the common stock. An RSU entitles the recipient to receive a share of common stock after the applicable restrictions lapse; the recipient is entitled to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSU is outstanding. Effective January 2005, the equity portion of the Firm's annual incentive awards were granted primarily in the form of RSUs. The Firm also periodically grants discretionary share-based payment awards, primarily in the form of both employee stock options and SARs.

Under the LTI Plans, stock options and SARs have been granted with an exercise price equal to JPMorgan Chase's common stock price on the grant date. Generally, options and SARs cannot be exercised until at least one year after the grant date and become exercisable over various periods as determined at the time of the grant. These awards generally expire 10 years after the grant date. The Firm's share-based compensation awards generally vest in multiple tranches.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. For each tranche granted (other than grants to employees who are retirement eligible at the grant date), compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become retirement eligible during the vesting period. For each tranche granted to employees who will become retirement eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's retirement eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee share-based payment awards is to issue either new shares of common stock or treasury shares. During 2006, the Firm issued new shares of common stock from January 1 through May 31, 2006, and treasury shares from June 1 through December 31, 2006.

On March 21, 2006, the Board of Directors approved a stock repurchase program that authorizes the repurchase of up to $8 billion of the Firm's common shares, which supersedes a $6 billion stock repurchase program approved in 2004. The $8 billion authorization includes shares to be repurchased to offset issuances under the Firm's employee stock-based plans. The actual number of shares repurchased is subject to various factors, including: market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative potential investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time.

In December 2005, the Firm accelerated the vesting of approximately 41 million unvested, out-of-the-money employee stock options granted in 2001 under the Growth and Performance Incentive Program ("GPIP"), which were scheduled to vest in January 2007. These options were not modified other than to accelerate vesting. The related expense was approximately $145 million, and was recognized as compensation expense in the fourth quarter of 2005. The Firm believed that at the time the options were accelerated they had limited economic value since the exercise price of the accelerated options was $51.22 and the closing price of the Firm's common stock on the effective date of the acceleration was $39.69.

Restricted stock and RSU activity

Compensation expense for restricted stock and RSUs is measured based upon the number of shares granted multiplied by the stock price at the grant date, and is recognized in Net income as previously described. The following table summarizes JPMorgan Chase's restricted stock and RSU activity for 2006:

Restricted stock and RSU activity

Year ended December 31, 2006 (in thousands, except weighted average data)	Number of Shares	Weighted-average grant date fair value
Outstanding, January 1	**84,604**	**$ 35.22**
Granted	**44,553**	**39.43**
Lapsed[(a)]	**(33,327)**	**31.00**
Forfeited	**(7,374)**	**40.28**
Restricted stock/RSUs outstanding December 31	**88,456**	**$ 38.50**

(a) Lapsed awards represent awards granted in prior years for which, in the case of restricted stock, restrictions have lapsed; and, in the case of RSUs, the awards have been converted into common stock.

The total fair value of shares that vested during the years ended December 31, 2006, 2005 and 2004, was $1.3 billion, $1.1 billion and $1.7 billion, respectively.

The vesting of certain restricted stock and RSU awards issued prior to 2002 was conditioned upon certain service requirements being met and JPMorgan Chase's common stock reaching and sustaining target prices within a five-year performance period. During 2002, it was determined that it was no longer probable that the target stock prices related to forfeitable awards granted in 1999, 2000, and 2001 would be achieved within their respective performance periods, and accordingly, previously accrued expenses were reversed. The target stock prices for these awards ranged from $73.33 to $85.00. These awards were forfeited as follows: 1.2 million shares granted in 1999 were forfeited in January 2004; 1.2 million shares granted in 2000 were forfeited in January 2005; and 1.2 million shares granted in 2001 were forfeited in January 2006.

Employee stock option and SARs activity

Compensation expense, which is measured at the grant date as the fair value of employee stock options and SARs, is recognized in Net income as described above. The following table summarizes JPMorgan Chase's employee stock option and SARs activity for the year ended December 31, 2006, including awards granted to key employees and awards granted in prior years under broad-based plans:

Year ended December 31, 2006 (in thousands, except weighted-average data)	Number of options/SARs	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	**444,157**	**$ 38.61**		
Granted	**15,229**	**45.85**		
Exercised	**(70,446)**	**29.93**		
Forfeited	**(3,365)**	**36.14**		
Canceled	**(9,348)**	**47.88**		
Outstanding, December 31	**376,227**	**$ 40.31**	4.3	$ 3,384,553
Exercisable, December 31	**317,174**	**40.63**	3.8	2,794,461

The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2006, 2005 and 2004, was $10.99, $10.44 and $13.77, respectively. The total intrinsic value of options exercised during the years ended December 31, 2006, 2005 and 2004 was $994 million, $364 million and $520 million, respectively.

Impact of adoption of SFAS 123R

During 2006, the incremental expense related to the Firm's adoption of SFAS 123R was $712 million. This amount represents an accelerated noncash recognition of costs that would otherwise have been incurred in future periods. Also as a result of adopting SFAS 123R, the Firm's Income from continuing operations (pretax) for the year ended December 31, 2006, was lower by $712 million, and Income from continuing operations (after-tax), as well as Net income, for the year ended December 31, 2006, was lower by $442 million, than if the Firm had continued to account for share-based compensation under APB 25 and SFAS 123. Basic and diluted earnings per share from continuing operations, as well as basic and diluted Net income per share, for the year ended December 31, 2006 were $0.13 and $0.12 lower, respectively, than if the Firm had not adopted SFAS 123R.

The Firm recognized noncash compensation expense related to its various employee stock-based incentive awards of $2.4 billion (including the $712 million incremental impact of adopting SFAS 123R), $1.6 billion and $1.3 billion for the years ended December 31, 2006, 2005 and 2004, respectively, in its Consolidated statements of income. At December 31, 2006, approximately $1.0 billion (pretax) of compensation cost related to unvested awards has not yet been charged to Net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.2 years. The Firm does not capitalize any compensation cost related to share-based compensation awards to employees.

Cash flows and tax benefits

The total income tax benefit related to stock-based compensation arrangements recognized in the Firm's Consolidated statements of income for the years ended December 31, 2006, 2005 and 2004, was $947 million, $625 million and $519 million, respectively.

Prior to adopting SFAS 123R, the Firm presented all tax benefits of deductions resulting from share-based compensation awards as operating cash flows in its Consolidated statements of cash flows. SFAS 123R requires the cash flows resulting from the tax benefits of tax deductions in excess of the compensation expense recognized for those share-based compensation awards (i.e., excess tax benefits) to be classified as financing cash flows. The $302 million of excess tax benefits classified as a financing cash inflow during 2006 would have been classified as an operating cash inflow if the Firm had not adopted SFAS 123R.

The following table sets forth the cash received from the exercise of stock options under all share-based compensation arrangements and the actual tax benefit realized related to the tax deduction from the exercise of stock options.

Year ended December 31, (in millions)	**2006**	2005	2004
Cash received for options exercised	**$ 1,924**	$ 635	$ 764
Tax benefit realized	**211**	65	204

Comparison of the fair and intrinsic value measurement methods

The following table presents Net income and basic and diluted earnings per share as reported, and as if all 2005 and 2004 share-based payment awards were accounted for at fair value. All 2006 awards were accounted for at fair value.

Year ended December 31, (in millions, except per share data)	2005	2004[(a)]
Net income as reported	$ 8,483	$ 4,466
Add: Employee stock-based compensation expense included in reported Net income, net of related tax effects	938	778
Deduct: Employee stock-based compensation expense determined under the fair value method for all awards, net of related tax effects	(1,015)	(960)
Pro forma Net income	$ 8,406	$ 4,284
Earnings per share:		
Basic: As reported	$ 2.43	$ 1.59
Pro forma	2.40	1.52
Diluted: As reported	$ 2.38	$ 1.55
Pro forma	2.36	1.48

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The following table presents the assumptions used to value employee stock options and SARs granted during the period under the Black-Scholes valuation model:

Year ended December 31,	**2006**	2005	2004
Weighted-average annualized valuation assumptions			
Risk-free interest rate	**5.11%**	4.25%	3.44%
Expected dividend yield	**2.89**	3.79	3.59
Expected common stock price volatility	**23**	37	41
Expected life (in years)	**6.8**	6.8	6.7

Prior to the adoption of SFAS 123R, the Firm used the historical volatility of its common stock price as the expected volatility assumption in valuing options. The Firm completed a review of its expected volatility assumption in 2006. Effective October 1, 2006, JPMorgan Chase began to value its employee stock options granted or modified after that date using an expected volatility assumption derived from the implied volatility of its publicly traded stock options.

The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or cancelled. The expected life assumption was developed using historic experience.

Note 9 – Noninterest expense

Merger costs

Costs associated with the Merger and The Bank of New York transaction are reflected in the Merger costs caption of the Consolidated statements of income. A summary of such costs, by expense category, is shown in the following table for 2006, 2005 and 2004.

Year ended December 31, (in millions)	2006	2005	2004[c]
Expense category			
Compensation	**$ 26**	$ 238	$ 467
Occupancy	**25**	(77)	448
Technology and communications and other	**239**	561	450
Bank of New York transaction[a]	**15**	—	—
Total[b]	**$ 305**	$ 722	$ 1,365

(a) Represents Compensation and Technology and communications and other.
(b) With the exception of occupancy-related write-offs, all of the costs in the table require the expenditure of cash.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The table below shows the change in the liability balance related to the costs associated with the Merger.

Year ended December 31, (in millions)	2006	2005[b]	2004[c]
Liability balance, beginning of period	**$ 311**	$ 952	$ —
Recorded as merger costs	**290**	722	1,365
Recorded as goodwill	**—**	(460)	1,028
Liability utilized	**(446)**	(903)	(1,441)
Liability balance, end of period	**$ 155**[a]	$ 311	$ 952

(a) Excludes $21 million related to The Bank of New York transaction.
(b) 2005 has been revised to reflect the current presentation.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Note 10 – Securities

Securities are classified as AFS, Held-to-maturity ("HTM") or Trading. Trading securities are discussed in Note 4 on page 98 of this Annual Report. Securities are classified primarily as AFS when purchased as part of the Firm's management of its structural interest rate risk. AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses after SFAS 133 valuation adjustments are reported as net increases or decreases to Accumulated other comprehensive income (loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in Securities gains (losses) on the Consolidated statements of income. Securities that the Firm has the positive intent and ability to hold to maturity are classified as HTM and are carried at amortized cost on the Consolidated balance sheets. The Firm has not classified new purchases of securities as HTM for the past several years.

The following table presents realized gains and losses from AFS securities:

Year ended December 31, (in millions)	2006	2005	2004[b]
Realized gains	**$ 399**	$ 302	$ 576
Realized losses	**(942)**	(1,638)	(238)
Net realized Securities gains (losses)[a]	**$ (543)**	$(1,336)	$ 338

(a) Proceeds from securities sold were generally within 2% of amortized cost.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The amortized cost and estimated fair value of AFS and HTM securities were as follows for the dates indicated:

	2006				2005			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale securities								
U.S. government and federal agency obligations:								
U.S. treasuries	**$ 2,398**	**$ —**	**$ 23**	**$ 2,375**	$ 4,245	$ 24	$ 2	$ 4,267
Mortgage-backed securities	**32**	**2**	**1**	**33**	80	3	—	83
Agency obligations	**78**	**8**	**—**	**86**	165	16	—	181
Collateralized mortgage obligations	**—**	**—**	**—**	**—**	4	—	—	4
U.S. government-sponsored enterprise obligations	**75,434**	**334**	**460**	**75,308**	22,604	9	596	22,017
Obligations of state and political subdivisions	**637**	**17**	**4**	**650**	712	21	7	726
Debt securities issued by non-U.S. governments	**6,150**	**7**	**52**	**6,105**	5,512	12	18	5,506
Corporate debt securities	**611**	**1**	**3**	**609**	5,754	39	74	5,719
Equity securities	**3,689**	**125**	**1**	**3,813**	3,179	110	7	3,282
Other, primarily asset-backed securities[a]	**2,890**	**50**	**2**	**2,938**	5,738	23	23	5,738
Total available-for-sale securities	**$ 91,919**	**$ 544**	**$ 546**	**$ 91,917**	$ 47,993	$ 257	$ 727	$ 47,523
Held-to-maturity securities[b]								
Total held-to-maturity securities	**$ 58**	**$ 2**	**$ —**	**$ 60**	$ 77	$ 3	$ —	$ 80

(a) Includes collateralized mortgage obligations of private issuers.
(b) Consists primarily of mortgage-backed securities issued by U.S. government-sponsored entities.

The following table presents the fair value and gross unrealized losses for AFS securities by aging category at December 31:

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more		Total	
2006 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total Fair value	Total Gross unrealized losses
Available-for-sale securities						
U.S. government and federal agency obligations:						
U.S. treasuries	**$ 2,268**	**$ 23**	**$ —**	**$ —**	**$ 2,268**	**$ 23**
Mortgage-backed securities	**8**	**1**	**—**	**—**	**8**	**1**
Agency obligations	**—**	**—**	**—**	**—**	**—**	**—**
Collateralized mortgage obligations	**—**	**—**	**—**	**—**	**—**	**—**
U.S. government-sponsored enterprise obligations	**17,877**	**262**	**6,946**	**198**	**24,823**	**460**
Obligations of state and political subdivisions	**—**	**—**	**180**	**4**	**180**	**4**
Debt securities issued by non-U.S. governments	**3,141**	**13**	**2,354**	**39**	**5,495**	**52**
Corporate debt securities	**387**	**3**	**—**	**—**	**387**	**3**
Equity securities	**17**	**1**	**—**	**—**	**17**	**1**
Other, primarily asset-backed securities	**1,556**	**1**	**82**	**1**	**1,638**	**2**
Total securities with gross unrealized losses	**$ 25,254**	**$ 304**	**$ 9,562**	**$ 242**	**$ 34,816**	**$ 546**

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more		Total	
2005 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total Fair value	Total Gross unrealized losses
Available-for-sale securities						
U.S. government and federal agency obligations:						
U.S. treasuries	$ 3,789	$ 1	$ 85	$ 1	$ 3,874	$ 2
Mortgage-backed securities	—	—	47	—	47	—
Agency obligations	7	—	13	—	20	—
Collateralized mortgage obligations	15	—	30	—	45	—
U.S. government-sponsored enterprise obligations	10,607	242	11,007	354	21,614	596
Obligations of state and political subdivisions	237	3	107	4	344	7
Debt securities issued by non-U.S. governments	2,380	17	71	1	2,451	18
Corporate debt securities	3,076	52	678	22	3,754	74
Equity securities	1,838	7	2	—	1,840	7
Other, primarily asset-backed securities	778	14	370	9	1,148	23
Total securities with gross unrealized losses	$ 22,727	$ 336	$ 12,410	$ 391	$ 35,137	$ 727

Impairment of AFS securities is evaluated considering numerous factors, and their relative significance varies case-by-case. Factors considered include the length of time and extent to which the market value has been less than cost; the financial condition and near-term prospects of the issuer of a security; and the Firm's intent and ability to retain the security in order to allow for an anticipated recovery in fair value. If, based upon an analysis of each of the above factors, it is determined that the impairment is other-than-temporary, the carrying value of the security is written down to fair value, and a loss is recognized through earnings.

Included in the $546 million of gross unrealized losses on AFS securities at December 31, 2006, was $242 million of unrealized losses that have existed for a period greater than 12 months. These securities are predominately rated AAA and the unrealized losses primarily are due to overall increases in market interest rates and not concerns regarding the underlying credit of the issuers. The majority of the securities with unrealized losses aged greater than 12 months are obligations of U.S. government-sponsored enterprises and have a fair value at December 31, 2006, that is within 3% of their amortized cost basis.

The following table presents the amortized cost, estimated fair value and average yield at December 31, 2006, of JPMorgan Chase's AFS and HTM securities by contractual maturity:

	Available-for-sale securities			Held-to-maturity securities		
By remaining maturity at December 31, 2006 (in millions, except rates)	Amortized cost	Fair value	Average yield[(b)]	Amortized cost	Fair value	Average yield[(b)]
Due in one year or less	**$ 7,067**	**$ 7,063**	**2.81%**	**$ —**	**$ —**	**—%**
Due after one year through five years	**4,007**	**4,007**	**3.95**	**—**	**—**	**—**
Due after five years through 10 years	**1,224**	**1,211**	**4.73**	**44**	**46**	**6.91**
Due after 10 years[(a)]	**79,621**	**79,636**	**5.58**	**14**	**14**	**6.61**
Total securities	**$ 91,919**	**$ 91,917**	**5.28%**	**$ 58**	**$ 60**	**6.84%**

(a) Includes securities with no stated maturity. Substantially all of the Firm's MBSs and CMOs are due in 10 years or more based upon contractual maturity. The estimated duration, which reflects anticipated future prepayments based upon a consensus of dealers in the market, is approximately four years for MBSs and CMOs.
(b) The average yield is based upon amortized cost balances at year end. Yields are derived by dividing interest income by total amortized cost. Taxable-equivalent yields are used where applicable.

Note 11 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions, primarily to finance the Firm's inventory positions, acquire securities to cover short positions and settle other securities obligations. The Firm also enters into these transactions to accommodate customers' needs.

Securities purchased under resale agreements ("resale agreements") and securities sold under repurchase agreements ("repurchase agreements") are generally treated as collateralized financing transactions and are carried on the Consolidated balance sheets at the amounts the securities will be subsequently sold or repurchased, plus accrued interest. Where appropriate, resale and repurchase agreements with the same counterparty are reported on a net basis in accordance with FIN 41. JPMorgan Chase takes possession of securities purchased under resale agreements. On a daily basis, JPMorgan Chase monitors the market value of the underlying collateral, primarily U.S. and non-U.S. government and agency securities that it has received from its counterparties, and requests additional collateral when necessary.

Transactions similar to financing activities that do not meet the SFAS 140 definition of a repurchase agreement are accounted for as "buys" and "sells" rather than financing transactions. These transactions are accounted for as a purchase (sale) of the underlying securities with a forward obligation to sell (purchase) the securities. The forward purchase (sale) obligation, a derivative, is recorded on the Consolidated balance sheets at its fair value, with changes in fair value recorded in Principal transactions revenue.

Securities borrowed and securities lent are recorded at the amount of cash collateral advanced or received. Securities borrowed consist primarily of government and equity securities. JPMorgan Chase monitors the market value of the securities borrowed and lent on a daily basis and calls for additional collateral when appropriate. Fees received or paid are recorded in Interest income or Interest expense.

December 31, (in millions)	**2006**	2005
Securities purchased under resale agreements	**$ 122,479**	$ 129,570
Securities borrowed	**73,688**	74,604
Securities sold under repurchase agreements	**$ 143,253**	$ 103,052
Securities loaned	**8,637**	14,072

JPMorgan Chase pledges certain financial instruments it owns to collateralize repurchase agreements and other securities financings. Pledged securities that can be sold or repledged by the secured party are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets.

At December 31, 2006, the Firm had received securities as collateral that could be repledged, delivered or otherwise used with a fair value of approximately $317 billion. This collateral was generally obtained under resale or securities-borrowing agreements. Of these securities, approximately $291 billion were repledged, delivered or otherwise used, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales.

Note 12 – Loans

Loans that are originated or purchased by the Firm and that management has the intent and ability to hold for the foreseeable future are reported at the principal amount outstanding, net of the Allowance for loan losses, unearned income and any net deferred loan fees. Loans that are either originated or purchased by the Firm and that management intends to sell or to securitize are classified as held-for-sale and are carried at the lower of cost or fair value, with valuation changes recorded in Noninterest revenue. Gains or losses on held-for-sale loans are also recorded in Noninterest revenue. Interest income is recognized using the interest method, or on a basis approximating a level rate of return over the term of the loan.

Loans are transferred from the retained portfolio to the held-for-sale portfolio when management decides to sell the loan. Transfers to held-for-sale are recorded at the lower of cost or fair value on the date of transfer; losses attributed to credit losses are charged off to the Allowance for loan losses and losses due to interest rates, or exchange rates, are recognized in Noninterest revenue.

Nonaccrual loans are those on which the accrual of interest is discontinued. Loans (other than certain consumer loans discussed below) are placed on nonaccrual status immediately if, in the opinion of management, full payment of principal or interest is in doubt, or when principal or interest is 90 days or more past due and collateral, if any, is insufficient to cover principal and interest. Interest accrued but not collected at the date a loan is placed on nonaccrual status is reversed against Interest income. In addition, the amortization of net deferred loan fees is suspended. Interest income on nonaccrual loans is recognized only to the extent it is received in cash. However, where there is doubt regarding the ultimate collectibility of loan principal, all cash thereafter received is applied to reduce the carrying value of such loans. Loans are restored to accrual status only when interest and principal payments are brought current and future payments are reasonably assured. Loans are charged off to the Allowance for loan losses when it is highly certain that a loss has been realized.

Consumer loans are generally charged to the Allowance for loan losses upon reaching specified stages of delinquency, in accordance with the Federal Financial Institutions Examination Council ("FFIEC") policy. For example, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification of the filing of bankruptcy, whichever is earlier. Residential mortgage products are generally charged off to net realizable value at 180 days past due. Other consumer products, if collateralized, are generally charged off to net realizable value at 120 days past due. Accrued interest on residential mortgage products, automobile financings, education financings and certain other consumer loans are accounted for in accordance with the nonaccrual loan policy discussed in the preceding paragraph. Interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. Accrued interest on all other consumer loans is generally reversed against Interest income when the loan is charged off. A collateralized loan is considered an in-substance foreclosure and is reclassified to assets acquired in loan satisfactions, within Other assets, only when JPMorgan Chase has taken physical possession of the collateral, regardless of whether formal foreclosure proceedings have taken place.

The composition of the loan portfolio at each of the dates indicated was as follows:

December 31, (in millions)	**2006**	2005
U.S. wholesale loans:		
Commercial and industrial	**$ 77,788**	$ 70,233
Real estate	**14,237**	13,612
Financial institutions	**14,103**	11,100
Lease financing receivables	**2,608**	2,621
Other	**9,950**	14,499
Total U.S. wholesale loans	**118,686**	112,065
Non-U.S. wholesale loans:		
Commercial and industrial	**43,428**	27,452
Real estate	**1,146**	1,475
Financial institutions	**19,163**	7,975
Lease financing receivables	**1,174**	1,144
Other	**145**	—
Total non-U.S. wholesale loans	**65,056**	38,046
Total wholesale loans:[a]		
Commercial and industrial	**121,216**	97,685
Real estate[b]	**15,383**	15,087
Financial institutions	**33,266**	19,075
Lease financing receivables	**3,782**	3,765
Other	**10,095**	14,499
Total wholesale loans	**183,742**	150,111
Total consumer loans:[c]		
Home equity	**85,730**	73,866
Mortgage	**59,668**	58,959
Auto loans and leases	**41,009**	46,081
All other loans	**27,097**	18,393
Credit card receivables[d]	**85,881**	71,738
Total consumer loans	**299,385**	269,037
Total loans[e][f]	**$ 483,127**	$ 419,148

(a) Includes Investment Bank, Commercial Banking, Treasury & Securities Services and Asset Management.
(b) Represents credits extended for real estate–related purposes to borrowers who are primarily in the real estate development or investment businesses and for which the primary repayment is from the sale, lease, management, operations or refinancing of the property.
(c) Includes Retail Financial Services and Card Services.
(d) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(e) Loans are presented net of unearned income and net deferred loan fees of $2.3 billion and $3.0 billion at December 31, 2006 and 2005, respectively.
(f) Includes loans held-for-sale (primarily related to securitization and syndication activities) of $55.2 billion and $34.2 billion at December 31, 2006 and 2005, respectively.

The following table reflects information about the Firm's loan sales:

Year ended December 31, (in millions)	**2006**	2005[a]	2004[a][b]
Net gains on sales of loans (including lower of cost or fair value adjustments)	**$ 568**	$ 365	$ 459

(a) Prior periods have been revised to reflect the current presentation.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Impaired loans

JPMorgan Chase accounts for and discloses nonaccrual loans as impaired loans and recognizes their interest income as discussed previously for nonaccrual loans. The following are excluded from impaired loans: small-balance, homogeneous consumer loans; loans carried at fair value or the lower of cost or fair value; debt securities; and leases.

The table below sets forth information about JPMorgan Chase's impaired loans. The Firm primarily uses the discounted cash flow method for valuing impaired loans:

December 31, (in millions)	**2006**	2005
Impaired loans with an allowance	**$ 623**	$ 1,095
Impaired loans without an allowance[a]	**66**	80
Total impaired loans	**$ 689**	$ 1,175
Allowance for impaired loans under SFAS 114[b]	**153**	257

(a) When the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan, then the loan does not require an allowance under SFAS 114.
(b) The allowance for impaired loans under SFAS 114 is included in JPMorgan Chase's Allowance for loan losses.

Year ended December 31, (in millions)	**2006**	2005	2004
Average balance of impaired loans during the year	**$ 990**	$ 1,478	$ 1,883
Interest income recognized on impaired loans during the year	**2**	5	8

Note 13 – Allowance for credit losses

JPMorgan Chase's Allowance for loan losses covers the wholesale (risk-rated) and consumer (scored) loan portfolios and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio as of December 31, 2006, 2005 and 2004. Management also computes an allowance for wholesale lending-related commitments using a methodology similar to that used for the wholesale loans.

The table below summarizes the Firm's reporting of its allowance for credit losses:

		Reported in:
Allowance for credit losses on:	Balance sheet	Income statement
Loans	Allowance for loan losses	Provision for credit losses
Lending-related commitments	Other liabilities	Provision for credit losses

The Allowance for loan losses includes an asset-specific component and a formula-based component. Within the formula-based component is a statistical calculation and an adjustment to the statistical calculation.

The asset-specific component relates to provisions for losses on loans considered impaired and measured pursuant to SFAS 114. An allowance is established when the discounted cash flows (or collateral value or observable market price) of the loan is lower than the carrying value of that loan. To compute the asset-specific component of the allowance, larger impaired loans are evaluated individually, and smaller impaired loans are evaluated as a pool using historical loss experience for the respective class of assets.

The formula-based component covers performing wholesale and consumer loans and is the product of a statistical calculation, as well as adjustments to such calculation. These adjustments take into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the factors used to derive the statistical calculation.

The statistical calculation is the product of probability of default and loss given default. For risk-rated loans (generally loans originated by the wholesale lines of business), these factors are differentiated by risk rating and maturity. For scored loans (generally loans originated by the consumer lines of business), loss is primarily determined by applying statistical loss factors and other risk indicators to pools of loans by asset type. Adjustments to the statistical calculation for the risk-rated portfolios are determined by creating estimated ranges using historical experience of both probability of default and loss given default. Factors related to concentrated and deteriorating industries are also incorporated into the calculation where relevant. Adjustments to the statistical calculation for the scored loan portfolios are accomplished in part by analyzing the historical loss experience for each major product segment. The estimated ranges and the determination of the appropriate point within the range are based upon management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards, and other relevant internal and external factors affecting the credit quality of the portfolio.

The Allowance for lending-related commitments represents management's estimate of probable credit losses inherent in the Firm's process of extending credit as of December 31, 2006, 2005 and 2004. Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2006, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses that are inherent in the portfolio, including those not yet identifiable).

The table below summarizes the changes in the Allowance for loan losses:

Year ended December 31, (in millions)	**2006**	2005	2004[d]
Allowance for loan losses at January 1	**$ 7,090**	$ 7,320	$ 4,523
Addition resulting from the Merger, July 1, 2004	**—**	—	3,123
Gross charge-offs	**(3,884)**	(4,869)	(3,805)[e]
Gross recoveries	**842**	1,050	706
Net charge-offs	**(3,042)**	(3,819)	(3,099)
Provision for loan losses:			
Provision excluding accounting policy conformity	**3,153**	3,575	1,798
Accounting policy conformity	**—**	—	1,085
Total Provision for loan losses	**3,153**	3,575	2,883
Other	**78**[a]	14	(110)[f]
Allowance for loan losses at December 31	**$ 7,279**[b]	$ 7,090[c]	$ 7,320[g]

(a) Primarily relates to loans acquired in The Bank of New York transaction in the fourth quarter of 2006.
(b) Includes $51 million of asset-specific and $7.2 billion of formula-based allowance. Included within the formula-based allowance was $5.1 billion related to a statistical calculation and an adjustment to the statistical calculation of $2.1 billion.
(c) Includes $203 million of asset-specific and $6.9 billion of formula-based allowance. Included within the formula-based allowance was $5.1 billion related to a statistical calculation (including $400 million related to Hurricane Katrina), and an adjustment to a statistical calculation of $1.8 billion.
(d) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(e) Includes $406 million related to the Manufactured Home Loan portfolio in the fourth quarter of 2004.
(f) Primarily represents the transfer of the allowance for accrued interest and fees on reported and securitized credit card loans.
(g) Includes $469 million of asset-specific and $6.8 billion of formula-based allowance. Included within the formula-based allowance was $4.8 billion related to a statistical calculation and an adjustment to the statistical calculation of $2.0 billion.

The table below summarizes the changes in the Allowance for lending-related commitments:

Year ended December 31, (in millions)	2006	2005	2004[c]
Allowance for lending-related commitments at January 1	**$ 400**	$ 492	$ 324
Addition resulting from the Merger, July 1, 2004	**—**	—	508
Provision for lending-related commitments:			
Provision excluding accounting policy conformity	**117**	(92)	(112)
Accounting policy conformity	**—**	—	(227)[d]
Total Provision for lending-related commitments	**117**	(92)	(339)
Other[a]	**7**	—	(1)
Allowance for lending-related commitments at December 31[b]	**$ 524**	$ 400	$ 492

(a) 2006 amount relates to The Bank of New York transaction.
(b) 2006 includes $33 million of asset-specific and $491 million of formula-based allowance. 2005 includes $60 million of asset-specific and $340 million of formula-based allowance. 2004 includes $130 million of asset-specific and $362 million of formula-based allowance. The formula-based allowance for lending-related commitments is based upon a statistical calculation. There is no adjustment to the statistical calculation for lending-related commitments.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(d) Represents a reduction of $227 million to conform provision methodologies in the wholesale portfolio.

Note 14 – Loan securitizations

JPMorgan Chase securitizes and sells a variety of its consumer and wholesale loans. Consumer activities include securitizations of residential real estate, credit card and automobile loans that are originated or purchased by Retail Financial Services ("RFS"), and Card Services ("CS"). Wholesale activities include securitizations of purchased residential real estate loans and commercial loans (primarily real estate–related) originated by the Investment Bank ("IB").

JPMorgan Chase–sponsored securitizations utilize SPEs as part of the securitization process. These SPEs are structured to meet the definition of a QSPE (as discussed in Note 1 on page 94 of this Annual Report); accordingly, the assets and liabilities of securitization-related QSPEs are not reflected in the Firm's Consolidated balance sheets (except for retained interests, as described below) but are included on the balance sheet of the QSPE purchasing the assets. Assets held by securitization-related QSPEs as of December 31, 2006 and 2005, were as follows:

December 31, (in billions)	2006	2005
Consumer activities		
Credit card receivables	**$ 86.4**	$ 96.0
Automobile loans	**4.9**	5.5
Residential mortgage receivables	**40.7**	29.8
Wholesale activities		
Residential mortgages	**43.8**	11.1
Commercial and other[a][b]	**87.1**	61.8
Total	**$ 262.9**	$ 204.2

(a) Cosponsored securitizations include non-JPMorgan originated assets
(b) Commercial and other consists of commercial loans (primarily real estate) and non-mortgage consumer receivables purchased from third parties.

The Firm records a loan securitization as a sale when the accounting criteria for a sale are met. Those criteria are: (1) the transferred assets are legally isolated from the Firm's creditors; (2) the entity can pledge or exchange the financial assets or, if the entity is a QSPE, its investors can pledge or exchange their interests; and (3) the Firm does not maintain effective control via an agreement to repurchase the transferred assets before their maturity or have the ability to unilaterally cause the holder to return the transferred assets.

For loan securitizations that meet the accounting sales criteria, the gains or losses recorded depend, in part, on the carrying amount of the loans sold and are allocated between the loans sold and the retained interests, based upon their relative fair values at the date of sale. Gains on securitizations are reported in Noninterest revenue. When quoted market prices for the retained interests are not available, the Firm estimates the fair value for these retained interests by determining the present value of future expected cash flows using modeling techniques. Such models incorporate management's best estimates of key variables, such as expected credit losses, prepayment speeds and the discount rates appropriate for the risks involved.

Interests in the securitized loans may be retained by the Firm in the form of senior or subordinated interest-only strips, senior and subordinated tranches, and escrow accounts. The classification of retained interests is dependent upon several factors, including the type of interest (e.g., whether the retained interest is represented by a security certificate) and when it was retained, due to the adoption of SFAS 155. The Firm has elected to fair value all interests in securitized loans retained after December 31, 2005, that have an embedded derivative required to be bifurcated under SFAS 155; these retained interests are classified primarily as Trading assets. Retained interests from wholesale activities are classified as Trading assets. For consumer activities, senior and subordinated retained interests represented by a security certificate are classified as AFS. Retained interests not represented by a security certificate are classified in Other assets. For those retained interests that are subject to prepayment risk (such that JPMorgan Chase may not recover substantially all of its investment) but are not required to be bifurcated under SFAS 155, the retained interests are recorded at fair value; subsequent adjustments are reflected in earnings or in Other comprehensive income (loss). Retained interests classified as AFS are subject to the impairment provisions of EITF 99-20.

Credit card securitization trusts require the Firm to maintain a minimum undivided interest in the trusts, representing the Firm's interests in the receivables transferred to the trust that have not been securitized. These seller's interests are not represented by security certificates. The Firm's undivided interests are carried at historical cost and are classified in Loans.

2006, 2005 and 2004 Securitization activity

The following table summarizes new securitization transactions that were completed during 2006, 2005 and 2004; the resulting gains arising from such securitizations; certain cash flows received from such securitizations; and the key economic assumptions used in measuring the retained interests, as of the dates of such sales:

	Consumer activities			Wholesale activities	
Year ended December 31, 2006 (in millions, except rates and where otherwise noted)	Credit card	Automobile	Residential mortgage	Residential mortgage	Commercial and other
Principal securitized	**$ 9,735**	**$ 2,405**	**$ 16,803**	**$ 30,810**	**$ 13,858**
Pretax gains (losses)	**67**	**—**	**85**	**161**	**129**
Cash flow information:					
Proceeds from securitizations	**$ 9,735**	**$ 1,745**	**$ 16,754**	**$ 31,048**	**$ 14,248**
Servicing fees collected	**88**	**3**	**18**	**—**	**1**
Other cash flows received	**401**	**—**	**—**	**35**	**95**
Proceeds from collections reinvested in revolving securitizations	**151,186**	**—**	**—**	**—**	**—**
Key assumptions (rates per annum):					
Prepayment rate[a]	**20.0–22.2% PPR**	**1.4-1.5% ABS**	**18.2–24.6% CPR**	**10.0–45.0% CPR**	**0.0–36.2% CPR**
Weighted-average life (in years)	**0.4**	**1.4–1.9**	**3.0–3.6**	**1.5–4.0**	**1.5–6.1**
Expected credit losses[b]	**3.3–4.2%**	**0.3–0.7%**	**—%**	**0.1–3.3%**	**0.0–0.9%**
Discount rate	**12.0%**	**7.6–7.8%**	**8.4–12.7%**	**15.1–26.2%**	**3.8–14.0%**

	Consumer activities			Wholesale activities	
Year ended December 31, 2005 (in millions, except rates and where otherwise noted)	Credit card	Automobile	Residential mortgage	Residential mortgage	Commercial and other
Principal securitized	$ 15,145	$ 3,762	$ 18,125	$ 11,399	$ 11,292
Pretax gains (losses)	101	9[c]	21	(3)	134
Cash flow information:					
Proceeds from securitizations	$ 14,844	$ 2,622	$ 18,093	$ 11,494	$ 11,398
Servicing fees collected	94	4	17	—	—
Other cash flows received	298	—	—	—	3
Proceeds from collections reinvested in revolving securitizations	129,696	—	—	—	—
Key assumptions (rates per annum):					
Prepayment rate[a]	16.7–20.0% PPR	1.5% ABS	9.1–12.1% CPR	22.0–43.0% CPR	0.0–50.0% CPR
Weighted-average life (in years)	0.4–0.5	1.4–1.5	5.6–6.7	1.4–2.6	1.0–4.4
Expected credit losses[b]	4.7–5.7%	0.6–0.7%	—%	0.6–2.0%	—%
Discount rate	12.0%	6.3–7.3%	13.0–13.3%	16.0–18.5%	0.6–0.9%

	Consumer activities			
Year ended December 31, 2004[d] (in millions, except rates and where otherwise noted)	Credit card	Automobile	Residential mortgage	Wholesale activities[e]
Principal securitized	$ 8,850	$ 1,600	$ 6,529	$ 8,756
Pretax gains (losses)	52	(3)	47	135
Cash flow information:				
Proceeds from securitizations	$ 8,850	$ 1,597	$ 6,608	$ 8,430
Servicing fees collected	69	1	12	3
Other cash flows received	225	—	25	16
Proceeds from collections reinvested in revolving securitizations	110,697	—	—	—
Key assumptions (rates per annum):				
Prepayment rate[a]	15.5–16.7% PPR	1.5% ABS	23.8–37.6% CPR	17.0–50.0% CPR
Weighted-average life (in years)	0.5–0.6	1.8	1.9–3.0	2.0–4.0
Expected credit losses[b]	5.5–5.8%	0.6%	1.0–2.3%	0.0–3.0%
Discount rate	12.0%	4.1%	15.0–30.0%	0.6–5.0%

(a) CPR: constant prepayment rate; PPR: principal payment rate; ABS: absolute prepayment speed.
(b) Expected credit losses for prime residential mortgage and certain wholesale securitizations are minimal and are incorporated into other assumptions.
(c) The auto securitization gain of $9 million does not include the write-down of loans transferred to held-for-sale in 2005 and risk management activities intended to protect the economic value of the loans while held-for-sale.
(d) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(e) Delineation between Residential mortgage and Commercial and other is not available for 2004.

At both December 31, 2006 and 2005, the Firm had, with respect to its credit card master trusts, $19.3 billion and $24.8 billion, respectively, related to undivided interests, and $2.5 billion and $2.2 billion, respectively, related to subordinated interests in accrued interest and fees on the securitized receivables, net of an allowance for uncollectible amounts. Credit card securitization trusts require the Firm to maintain a minimum undivided interest of 4% to 12% of the principal receivables in the trusts. The Firm maintained an average undivided interest in principal receivables in the trusts of approximately 21% for 2006 and 23% for 2005.

The Firm also maintains escrow accounts up to predetermined limits for some credit card and automobile securitizations, to cover the unlikely event of deficiencies in cash flows owed to investors. The amounts available in such escrow accounts are recorded in Other assets and, as of December 31, 2006, amounted to $153 million and $56 million for credit card and automobile securitizations, respectively; as of December 31, 2005, these amounts were $754 million and $76 million for credit card and automobile securitizations, respectively.

JPMorgan Chase retains servicing responsibilities for all originated and for certain purchased residential mortgage, credit card and automobile loan securitizations and for certain commercial activity securitizations it sponsors, and receives servicing fees based upon the securitized loan balance plus certain ancillary fees. The Firm also retains the right to service the residential mortgage loans it sells in connection with mortgage-backed securities transactions with the Government National Mortgage Association ("GNMA"), Federal National Mortgage Association ("FNMA") and Federal Home Loan Mortgage Corporation ("Freddie Mac"). For a discussion of mortgage servicing rights, see Note 16 on pages 121–122 of this Annual report.

In addition to the amounts reported for securitization activity on the previous page, the Firm sold residential mortgage loans totaling $53.7 billion, $52.5 billion and $65.7 billion during 2006, 2005 and 2004, respectively, primarily as GNMA, FNMA and Freddie Mac mortgage-backed securities; these sales resulted in pretax gains of $251 million, $293 million and $58 million, respectively.

The table below summarizes other retained securitization interests, which are primarily subordinated or residual interests, and are carried at fair value on the Firm's Consolidated balance sheets:

December 31, (in millions)	**2006**	2005
Consumer activities		
Credit card[a][b]	**$ 833**	$ 808
Automobile[a][c]	**168**	150
Residential mortgage[a]	**155**	182
Wholesale activities[d]		
Residential mortgages	**1,032**	245
Commercial and other	**117**	20
Total	**$ 2,305**	$ 1,405

(a) Pretax unrealized gains recorded in Stockholders' equity that relate to retained securitization interests on consumer activities totaled $3 million and $6 million for credit card; $4 million and $5 million for automobile and $51 million and $60 million for residential mortgage at December 31, 2006 and 2005, respectively.
(b) The credit card retained interest amount noted above includes subordinated securities retained by the Firm totaling $301 million and $357 million at December 31, 2006 and 2005, respectively, that are classified as AFS securities. The securities are valued using quoted market prices and therefore are not included in the key economic assumptions and sensitivities table that follows.
(c) In addition to the automobile retained interest amounts noted above, the Firm also retained senior securities totaling $188 million and $490 million at December 31, 2006 and 2005, respectively, that are classified as AFS securities. These securities are valued using quoted market prices and therefore are not included in the key economic assumption and sensitivities table that follows.
(d) In addition to the wholesale retained interest amounts noted above, the Firm also retained subordinated securities totaling $23 million and $51 million at December 31, 2006 and 2005, respectively, predominately from resecuritizations activities that are classified as Trading assets. These securities are valued using quoted market prices and therefore are not included in the key assumptions and sensitivities table that follows.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's retained interests in its securitizations at December 31, 2006 and 2005, respectively; and it outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in those assumptions:

	Consumer activities			Wholesale activities	
December 31, 2006 (in millions, except rates and where otherwise noted)	Credit card	Automobile	Residential mortgage	Residential mortgage	Commercial and other
Weighted-average life (in years)	**0.4–0.5**	**1.1**	**0.2-3.4**	**1.9–2.5**	**0.2–5.9**
Prepayment rate	**17.5–20.4% PPR**	**1.4% ABS**	**19.3-41.8% CPR**	**10.0–42.9% CPR**	**0.0–50.0%[c] CPR**
Impact of 10% adverse change	**$ (52)**	**$ (1)**	**$ (4)**	**$ (44)**	**$ (1)**
Impact of 20% adverse change	**(104)**	**(3)**	**(7)**	**(62)**	**(2)**
Loss assumption	**3.5–4.1%**	**0.7%**	**0.0-5.1%[a]**	**0.1–2.2%**	**0.0–1.3%**
Impact of 10% adverse change	**$ (87)**	**$ (4)**	**$ (4)**	**$ (45)**	**$ (1)**
Impact of 20% adverse change	**(175)**	**(7)**	**(8)**	**(89)**	**(1)**
Discount rate	**12.0%**	**7.6%**	**8.4–30.0%[b]**	**16.0-20.0%**	**0.5–14.0%**
Impact of 10% adverse change	**$ (2)**	**$ (1)**	**$ (3)**	**$ (25)**	**$ (1)**
Impact of 20% adverse change	**(3)**	**(2)**	**(7)**	**(48)**	**(2)**

December 31, 2005 (in millions, except rates and where otherwise noted)	Consumer activities			Wholesale activities	
	Credit card	Automobile	Residential Mortgage	Residential mortgage	Commercial and other
Weighted-average life (in years)	0.4–0.7	1.2	0.5-3.5	2.6	0.2–4.1
Prepayment rate	11.9–20.8% PPR	1.5% ABS	20.1-43.7% CPR	22.0–46.6% CPR	0.0–50.0%[c] CPR
Impact of 10% adverse change	$ (44)	$ —	$ (3)	$ (4)	$ (1)
Impact of 20% adverse change	(88)	(2)	(5)	(4)	(2)
Loss assumption	3.2–8.1%	0.7%	0.0–5.2%[a]	0.6–2.0%	0.0%
Impact of 10% adverse change	$ (77)	$ (4)	$ (10)	$ (6)	$ —
Impact of 20% adverse change	(153)	(9)	(19)	(11)	—
Discount rate	6.9–12.0%	7.2%	12.7-30.0%[b]	16.0–18.5%	0.2–4.7%
Impact of 10% adverse change	$ (2)	$ (1)	$ (4)	$ (6)	$ —
Impact of 20% adverse change	(4)	(3)	(8)	(12)	—

(a) Expected credit losses for prime residential mortgage are minimal and are incorporated into other assumptions.
(b) The Firm sold certain residual interests from subprime mortgage securitizations via Net Interest Margin ("NIM") securitizations and retains residual interests in these NIM transactions, which are valued using a 30% discount rate.
(c) Prepayment risk on certain wholesale retained interests for commercial and other are minimal and are incorporated into other assumptions.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based upon a 10% or 20% variation in assumptions generally cannot be extrapolated easily because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in the table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might counteract or magnify the sensitivities.

Expected static-pool net credit losses include actual incurred losses plus projected net credit losses, divided by the original balance of the outstandings comprising the securitization pool. The table below displays the expected static-pool net credit losses for 2006, 2005 and 2004, based upon securitizations occurring in that year:

	Loans securitized in:[a]					
	2006		2005		2004[c]	
	Residential mortgage[b]	Automobile	Residential mortgage[b]	Automobile	Residential mortgage	Automobile
December 31, 2006	**4.4%**	**0.6%**	3.5%	0.7%	0.0–3.1%	0.7%
December 31, 2005	**NA**	**NA**	3.3	0.9	0.0–2.4	0.8
December 31, 2004	**NA**	**NA**	NA	NA	0.0–3.3	1.1

(a) Static-pool losses are not applicable to credit card securitizations due to their revolving nature.
(b) Primarily includes subprime residential mortgages securitized in 2006 and 2005 as part of wholesale activities. Expected losses for prime residential mortgage securitizations are minimal for consumer activities.
(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The table below presents information about delinquencies, net charge-offs (recoveries) and components of reported and securitized financial assets at December 31, 2006 and 2005:

	Total Loans		Nonaccrual and 90 days or more past due[d]		Net loan charge-offs (recoveries) Year ended	
December 31, (in millions)	**2006**	2005	**2006**	2005	**2006**	2005
Home Equity	**$ 85,730**	$ 73,866	**$ 454**	$ 422	**$ 143**	$ 141
Mortgage	**59,668**	58,959	**769**	442	**56**	25
Auto loans and leases	**41,009**	46,081	**132**	193	**238**	277
All other loans	**27,097**	18,393	**322**	281	**139**	129
Credit card receivables	**85,881**	71,738	**1,344**	1,091	**2,488**	3,324
Total consumer loans	**299,385**	269,037	**3,021**[e]	2,429[e]	**3,064**	3,896
Total wholesale loans	**183,742**	150,111	**420**	1,042	**(22)**	(77)
Total loans reported	**483,127**	419,148	**3,441**	3,471	**3,042**	3,819
Securitized consumer loans:						
Residential mortgage[a]	**7,995**	8,061	**191**	370	**57**	105
Automobile	**4,878**	5,439	**10**	11	**15**	15
Credit card	**66,950**	70,527	**962**	730	**2,210**	3,776
Total consumer loans securitized	**79,823**	84,027	**1,163**	1,111	**2,282**	3,896
Securitized wholesale activities						
Residential mortgage[a]	**27,275**	4,787	**544**	4	**13**	—
Commercial and other	**13,756**	4,262	**6**	—	**3**	—
Total securitized wholesale activities	**41,031**	9,049	**550**	4	**16**	—
Total loans securitized[b]	**120,854**	93,076	**1,713**	1,115	**2,298**	3,896
Total loans reported and securitized[c]	**$ 603,981**	$ 512,224	**$ 5,154**	$ 4,586	**$ 5,340**	$ 7,715

(a) Includes $18.6 billion and $11.9 billion of outstanding principal balances on securitized subprime 1–4 family residential mortgage loans as of December 31, 2006 and 2005, respectively.
(b) Total assets held in securitization-related SPEs were $262.9 billion and $204.2 billion at December 31, 2006 and 2005, respectively. The $120.9 billion and $93.1 billion of loans securitized at December 31, 2006 and 2005, respectively, excludes: $122.5 billion and $85.6 billion of securitized loans, in which the Firm's only continuing involvement is the servicing of the assets; $19.3 billion and $24.8 billion of seller's interests in credit card master trusts; and $0.2 billion and $0.7 billion of escrow accounts and other assets, respectively.
(c) Represents both loans on the Consolidated balance sheets and loans that have been securitized, but excludes loans for which the Firm's only continuing involvement is servicing of the assets.
(d) Includes nonperforming HFS loans of $120 million and $136 million at December 31, 2006 and 2005, respectively.
(e) Excludes nonperforming assets related to (i) loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by U.S. government agencies and U.S. government-sponsored enterprises of $1.2 billion and $1.1 billion for December 31, 2006 and 2005, respectively, and (ii) education loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $0.2 billion at December 31, 2006. These amounts for GNMA and education loans are excluded, as reimbursement is proceeding normally.

Note 15 – Variable interest entities

Refer to Note 1 on page 94 of this Annual Report for a further description of JPMorgan Chase's policies regarding consolidation of variable interest entities.

JPMorgan Chase's principal involvement with VIEs occurs in the following business segments:

- Investment Bank: Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner by providing flexibility relating to price, yield and desired risk. There are two broad categories of transactions involving VIEs in the IB: (1) multi-seller conduits and (2) client intermediation; both are discussed below. The IB also securitizes loans through QSPEs, to create asset-backed securities, as further discussed in Note 14 on pages 114–118 of this Annual Report.
- Asset Management ("AM"): Provides investment management services to a limited number of the Firm's mutual funds deemed VIEs. AM earns a fixed fee based upon assets managed; the fee varies with each fund's investment objective and is competitively priced. For the limited number of funds that qualify as VIEs, AM's relationships with such funds are not considered significant variable interests under FIN 46R.
- Treasury & Securities Services: Provides services to a number of VIEs. These services are similar to those provided to non-VIEs. TSS earns market-based fees for services provided. Such relationships are not considered significant variable interests under FIN 46R.
- Commercial Banking: Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner. This is often accomplished through the use of products similar to those offered in the Investment Bank. Commercial Banking may assist in the structuring and/or on-going administration of these VIEs and may provide liquidity, letters of credit and/or derivative instruments in support of the VIE. Such relationships are not considered significant variable interests under FIN 46R.
- The Private Equity business, included in Corporate, may be involved with entities that could be deemed VIEs. Private equity activities are accounted for in accordance with the Investment Company Audit Guide ("Audit Guide"). The FASB deferred adoption of FIN 46R for nonregistered investment companies that apply the Audit Guide until the proposed Statement of Position on the clarification of the scope of the Audit Guide is finalized. The Firm continues to apply this deferral provision; had FIN 46R been applied to VIEs subject to this deferral, the impact would have had an insignificant impact on the Firm's Consolidated financial statements as of December 31, 2006.

As noted above, there are two broad categories of transactions involving VIEs with which the IB is involved: multi-seller conduits and client intermediation.

Multi-seller conduits

The Firm is an active participant in the asset-backed securities business, helping meet customers' financing needs by providing access to the commercial paper markets through VIEs known as multi-seller conduits. These companies are separate bankruptcy-remote companies in the business of purchasing interests in, and making loans secured by, receivable pools and other financial assets pursuant to agreements with customers. The companies fund their purchases and loans through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flow from the pools of assets.

JPMorgan Chase serves as the administrator and provides contingent liquidity support and limited credit enhancement for several multi-seller conduits. The commercial paper issued by the conduits is backed by collateral, credit enhancements and commitments to provide liquidity sufficient to enable the conduit to receive a liquidity rating of at least A-1, P-1 and, in certain cases, F1.

As a means of ensuring timely repayment of the commercial paper, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it. The liquidity facilities are typically in the form of asset purchase agreements and are generally structured such that the liquidity is provided by the Firm purchasing, or lending against, a pool of nondefaulted, performing assets. Deal-specific liquidity facilities are the primary source of liquidity support for the conduits.

The Firm also provides vehicles with program-wide liquidity, in the form of revolving and short-term lending commitments, in the event of short-term disruptions in the commercial paper market.

Deal-specific credit enhancement that supports the commercial paper issued by the conduits is generally structured to cover a multiple of historical losses expected on the pool of assets and is provided primarily by customers (i.e., sellers) or other third parties. The deal-specific credit enhancement is typically in the form of overcollateralization provided by the seller but also may include any combination of the following: recourse to the seller or originator, cash collateral accounts, letters of credit, excess spread, retention of subordinated interests or third-party guarantees. In certain instances, the Firm provides limited credit enhancement in the form of standby letters of credit.

In June 2006, the Firm restructured four multi-seller conduits that it administers: each conduit issued a capital note that was acquired by an independent third-party investor who absorbs the majority of the expected losses of the respective conduit whose note it had purchased. In determining the primary beneficiary of the conduits, the Firm used a Monte Carlo–based model to size the expected losses and considered the relative rights and obligations of each of the variable interest holders. As a result of the restructuring, the Firm deconsolidated approximately $33 billion of assets and liabilities as of June 30, 2006. The following table summarizes the Firm's involvement with Firm-administered multi-seller conduits:

	Consolidated		Nonconsolidated		**Total**	
December 31, (in billions)	**2006**	2005	**2006**	2005	**2006**	2005
Total commercial paper issued by conduits	**$ 3.4**	$ 35.2	**$ 44.1**	$ 8.9	**$ 47.5**	$ 44.1
Commitments						
Asset-purchase agreements	**$ 0.5**	$ 47.9	**$ 66.0**	$ 14.3	**$ 66.5**	$ 62.2
Program-wide liquidity commitments	**1.0**	5.0	**4.0**	1.0	**5.0**	6.0
Program-wide limited credit enhancements	**—**	1.3	**1.6**	1.0	**1.6**	2.3
Maximum exposure to loss[(a)]	**1.0**	48.4	**67.0**	14.8	**68.0**	63.2

(a) The Firm's maximum exposure to loss is limited to the amount of drawn commitments (i.e., sellers' assets held by the multi-seller conduits for which the Firm provides liquidity support) of $43.9 billion and $41.6 billion at December 31, 2006 and 2005, respectively, plus contractual but undrawn commitments of $24.1 billion and $21.6 billion at December 31, 2006 and 2005, respectively. Certain of the Firm's administered multi-seller conduits were deconsolidated as of June 30, 2006; the assets deconsolidated were approximately $33 billion. Since the Firm provides credit enhancement and liquidity to Firm administered multi-seller conduits, the maximum exposure is not adjusted to exclude exposure that would be absorbed by third-party liquidity providers.

The Firm views its credit exposure to multi-seller conduit transactions as limited. This is because, for the most part, the Firm is not required to fund under the liquidity facilities if the assets in the VIE are in default. Additionally, the Firm's obligations under the letters of credit are secondary to the risk of first loss provided by the customer or other third parties – for example, by the overcollateralization of the VIE with the assets sold to it or notes subordinated to the Firm's liquidity facilities.

Client intermediation

As a financial intermediary, the Firm is involved in structuring VIE transactions to meet investor and client needs. The Firm intermediates various types of risks (including fixed income, equity and credit), typically using derivative instruments as further discussed below. In certain circumstances, the Firm also provides liquidity and other support to the VIEs to facilitate the transaction. The Firm's current exposure to nonconsolidated VIEs is reflected in its Consolidated balance sheets or in the Notes to consolidated financial statements. The risks inherent in derivative instruments or liquidity commitments are managed similarly to other credit, market and liquidity risks to which the Firm is exposed. The Firm intermediates principally with the following types of VIEs: credit-linked note vehicles and municipal bond vehicles.

The Firm structures credit-linked notes in which the VIE purchases highly rated assets (such as asset-backed securities) and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit not held by the VIE. Credit-linked notes are issued by the VIE to transfer the risk of the referenced credit to the investors in the VIE. Clients and investors often prefer a VIE structure, since the credit-linked notes generally carry a higher credit rating than they would if issued directly by JPMorgan Chase.

The Firm is involved with municipal bond vehicles for the purpose of creating a series of secondary market trusts that allow tax-exempt investors to finance their investments at short-term tax-exempt rates. The VIE purchases fixed-rate, longer-term highly rated municipal bonds by issuing puttable floating-rate certificates and inverse floating-rate certificates; the investors that purchase the inverse floating-rate certificates are exposed to the residual losses of the VIE (the "residual interests"). For vehicles in which the Firm owns the residual interests, the Firm consolidates the VIE. In vehicles in which third-party investors own the residual interests, the Firm's exposure is limited because of the high credit quality of the underlying municipal bonds, the unwind triggers based upon the market value of the underlying collateral and the residual interests held by third parties. The Firm often serves as remarketing agent for the VIE and provides liquidity to support the remarketing.

Assets held by credit-linked and municipal bond vehicles at December 31, 2006 and 2005, were as follows:

December 31, (in billions)	**2006**	2005
Credit-linked note vehicles[a]	**$ 20.2**	$ 13.5
Municipal bond vehicles[b]	**16.9**	13.7

(a) Assets of $1.8 billion reported in the table above were recorded on the Firm's Consolidated balance sheets at December 31, 2006 and 2005, due to contractual relationships held by the Firm that relate to collateral held by the VIE.
(b) Total amounts consolidated due to the Firm owning residual interests were $4.7 billion and $4.9 billion at December 31, 2006 and 2005, respectively, and are reported in the table. Total liquidity commitments were $10.2 billion and $5.8 billion at December 31, 2006 and 2005, respectively. The Firm's maximum credit exposure to all municipal bond vehicles was $14.9 billion and $10.7 billion at December 31, 2006 and 2005, respectively.

The Firm may enter into transactions with VIEs structured by other parties. These transactions can include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, trustee or custodian. These transactions are conducted at arm's length, and individual credit decisions are based upon the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where these activities do not cause JPMorgan Chase to absorb a majority of the expected losses of the VIEs or to receive a majority of the residual returns of the VIE, JPMorgan Chase records and reports these positions similarly to any other third-party transaction. These transactions are not considered significant for disclosure purposes.

Consolidated VIE assets

The following table summarizes the Firm's total consolidated VIE assets, by classification, on the Consolidated balance sheets, as of December 31, 2006 and 2005:

December 31, (in billions)	**2006**[d]	2005
Consolidated VIE assets[a]		
Securities purchased under resale agreements[b]	**$ 8.0**	$ 2.6
Trading assets[c]	**9.8**	9.3
Investment securities	**0.2**	1.9
Interests in purchased receivables	**—**	29.6
Loans[b]	**15.9**	8.1
Other assets	**2.9**	0.4
Total consolidated assets	**$ 36.8**	$ 51.9

(a) The Firm also holds $3.5 billion and $3.9 billion of assets, at December 31, 2006 and 2005, respectively, primarily as a seller's interest, in certain consumer securitizations in a segregated entity, as part of a two-step securitization transaction. This interest is included in the securitization activities disclosed in Note 14 on pages 114–118 of this Annual Report.
(b) Includes activity conducted by the Firm in a principal capacity, primarily in the IB.
(c) Includes the fair value of securities and derivative receivables.
(d) Certain multi-seller conduits administered by the Firm were deconsolidated as of June 30, 2006; the assets deconsolidated consisted of $29 billion of Interests in purchased receivables, $3 billion of Loans and $1 billion of investment securities.

Interests in purchased receivables included interests in receivables purchased by Firm-administered conduits, which had been consolidated in accordance with FIN 46R. Interests in purchased receivables were carried at cost and reviewed to determine whether an other-than-temporary impairment existed.

The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item titled, "Beneficial interests issued by consolidated variable interest entities" on the Consolidated balance sheets. The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. See Note 19 on page 124 of this Annual Report for the maturity profile of FIN 46 long-term beneficial interests.

FIN 46(R)-6 Transition

In April 2006, the FASB issued FSP FIN 46(R)-6, which requires an analysis of the design of a VIE in determining the variability to be considered in the application of FIN 46(R). The Firm adopted the guidance in FSP FIN 46(R)-6 prospectively on July 1, 2006. The adoption of FSP FIN 46(R)-6 did not significantly change the way in which the Firm evaluated its interests in VIEs under FIN 46(R); thus, it had an immaterial impact on the Firm's consolidated financial statements.

Note 16 – Goodwill and other intangible assets

Goodwill is not amortized. It is instead tested for impairment in accordance with SFAS 142 at the reporting-unit segment, which is generally one level below the six major reportable business segments (as described in Note 33 on pages 139–141 of this Annual Report); plus Private Equity (which is included in Corporate). Goodwill is tested annually (during the fourth quarter) or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment. Intangible assets determined to have indefinite lives are not amortized but instead are tested for impairment at least annually, or more frequently if events or changes in circumstances indicate that the asset might be impaired. The impairment test compares the fair value of the indefinite-lived intangible asset to its carrying amount. Other acquired intangible assets determined to have finite lives, such as core deposits and credit card relationships, are amortized over their estimated useful lives in a manner that best reflects the economic benefits of the intangible asset. In addition, impairment testing is performed periodically on these amortizing intangible assets.

Goodwill and other intangible assets consist of the following:

December 31, (in millions)	2006	2005
Goodwill	**$ 45,186**	$ 43,621
Mortgage servicing rights	**7,546**	6,452
Purchased credit card relationships	**2,935**	3,275
All other intangibles:		
Other credit card–related intangibles	**$ 302**	$ 124
Core deposit intangibles	**2,623**	2,705
Other intangibles	**1,446**	2,003
Total All other intangible assets	**$ 4,371**	$ 4,832

Goodwill

As of December 31, 2006, Goodwill increased by $1.6 billion compared with December 31, 2005. The increase is due principally to the $1.8 billion of goodwill resulting from the acquisition of the consumer, business banking and middle-market banking businesses of The Bank of New York, as well as $510 million of goodwill resulting from the acquisition of Collegiate Funding Services. The increase from acquisitions was offset partially by a reduction to Goodwill: of $402 million due to the sale of selected corporate trust businesses to The Bank of New York; resulting from purchase accounting adjustments related to the acquisition of the Sears Canada credit card business; of $111 million due to the sale of the insurance business; and of $70 million related to reclassifying net assets of a subsidiary as held-for-sale.

Goodwill attributed to the business segments was as follows:

December 31, (in millions)	2006	2005
Investment Bank	**$ 3,526**	$ 3,531
Retail Financial Services	**16,955**	14,991
Card Services	**12,712**	12,984
Commercial Banking	**2,901**	2,651
Treasury & Securities Services	**1,605**	2,062
Asset Management	**7,110**	7,025
Corporate (Private Equity)	**377**	377
Total Goodwill	**$ 45,186**	$ 43,621

Mortgage servicing rights

JPMorgan Chase recognizes as intangible assets mortgage servicing rights, which represent the right to perform specified residential mortgage servicing activities for others. MSRs are either purchased from third parties or retained upon sale or securitization of mortgage loans. Servicing activities include collecting principal, interest, and escrow payments from borrowers; making tax and insurance payments on behalf of the borrowers; monitoring delinquencies and executing foreclosure proceedings; and accounting for and remitting principal and interest payments to the investors of the mortgage-backed securities.

The amount initially capitalized as MSRs represents the amount paid to third parties to acquire MSRs or is the estimate of fair value, if retained upon the sale or securitization of mortgage loans. The Firm estimates the fair value of MSRs for initial capitalization and ongoing valuation using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's proprietary prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenues, and costs to service, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. JPMorgan Chase uses or has used combinations of derivatives, AFS securities and trading instruments to manage changes in the fair value of MSRs. The intent is to offset any changes in the fair value of MSRs with changes in the fair value of the related risk management instruments. MSRs decrease in value when interest rates decline. Conversely, securities (such as mortgage-backed securities), principal-only certificates and certain derivatives (when the Firm receives fixed-rate interest payments) increase in value when interest rates decline.

In March 2006, the FASB issued SFAS 156, which permits an entity a one-time irrevocable election to adopt fair value accounting for a class of servicing assets. JPMorgan Chase elected to adopt the standard effective January 1, 2006, and defined MSRs as one class of servicing assets for this election. At the transition date, the fair value of the MSRs exceeded their carrying amount, net of any related valuation allowance, by $150 million net of taxes. This amount was recorded as a cumulative-effect adjustment to retained earnings as of January 1, 2006. MSRs are recognized in the Consolidated balance sheet at fair value, and changes in their fair value are recorded in current-period earnings. During 2006, as in prior years, revenue amounts related to MSRs and the financial instruments used to manage the risk of MSRs are recorded in Mortgage fees and related income.

For the years ended December 31, 2005 and 2004, MSRs were accounted for under SFAS 140, using a lower of cost or fair value approach. Under this approach, MSRs were amortized as a reduction of the actual servicing income received in proportion to, and over the period of, the estimated future net servicing income stream of the underlying mortgage loans. For purposes of evaluating and measuring impairment of MSRs, the Firm stratified the portfolio on the basis of the predominant risk characteristics, which are loan type and interest rate. Any indicated impairment was recognized as a reduction in revenue through a valuation allowance, which represented the extent to which the carrying value of an individual stratum exceeded its estimated fair value. Any gross carrying value and related valuation allowance amounts which were not expected to be recovered in the foreseeable future, based upon the interest rate scenario, were considered to be other-than-temporary.

Prior to the adoption of SFAS 156, the Firm designated certain derivatives used to risk manage MSRs (e.g., a combination of swaps, swaptions and floors) as SFAS 133 fair value hedges of benchmark interest rate risk. SFAS 133 hedge accounting allowed the carrying value of the hedged MSRs to be adjusted through earnings in the same period that the change in value of the hedging derivatives was recognized through earnings. The designated hedge period was daily. In designating the benchmark interest rate, the Firm considered the impact that the change in the benchmark rate had on the prepayment speed estimates in determining the fair value of the MSRs. Hedge effectiveness was assessed using a regression analysis of the change in fair value of the MSRs as a result of changes in benchmark interest rates and of the change in the fair value of the designated derivatives. The valuation adjustments to both the MSRs and SFAS 133 derivatives were recorded in Mortgage fees and related income. With the election to apply fair value accounting to the MSRs under SFAS 156, SFAS 133 hedge accounting is no longer necessary. For a further discussion on derivative instruments and hedging activities, see Note 28 on pages 131–132 of this Annual Report.

The following table summarizes MSR activity, certain key assumptions, and the sensitivity of the fair value of MSRs to adverse changes in those key assumptions for the year ended December 31, 2006, during which MSRs were accounted for under SFAS 156.

Year ended December 31, (in millions, except rates and where otherwise noted)	2006
Balance at beginning of period after valuation allowance	$ 6,452
Cumulative effect of change in accounting principle	230
Fair value at beginning of period	6,682
Originations of MSRs	1,512
Purchase of MSRs	627
Total additions	2,139
Sales	—
Change in valuation due to inputs and assumptions[a]	165
Other changes in fair value[b]	(1,440)
Fair value at December 31	$ 7,546
Weighted-average prepayment speed assumption (CPR)	17.02%
Impact on fair value of 10% adverse change	$ (381)
Impact on fair value of 20% adverse change	(726)
Weighted-average discount rate	9.32%
Impact on fair value of 10% adverse change	$ (254)
Impact on fair value of 20% adverse change	(491)
Contractual service fees, late fees and other ancillary fees included in Mortgage fees and related income	$ 2,038
Third-party Mortgage loans serviced at December 31 (in billions)	$ 527

CPR: Constant prepayment rate.

(a) Represents MSR asset fair value adjustments due to changes in inputs, such as interest rates and volatility, as well as updates to assumptions used in the valuation model.
(b) Includes changes in the MSR value due to servicing portfolio runoff (or time decay).

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based upon a 10% and 20% variation in assumptions generally cannot be easily extrapolated because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might magnify or counteract the sensitivities.

The following table summarizes MSR activity for the years ended December 31, 2005 and 2004, during which MSRs were accounted for under SFAS 140.

Year ended December 31, (in millions, except rates and where otherwise noted)	2005[c]	2004[d]
Balance at January 1	$ 6,111	$ 6,159
Originations of MSRs	1,301	1,089
Purchase of MSRs	596	668
Total additions	1,897	1,757
Bank One merger	NA	90
Sales	—	(3)
Other-than-temporary impairment	(1)	(149)
Amortization	(1,295)	(1,297)
SFAS 133 hedge valuation adjustments	90	(446)
Balance at December 31	6,802	6,111
Less: valuation allowance[a]	350	1,031
Balance at December 31, after valuation allowance	$ 6,452	$ 5,080
Estimated fair value at December 31	$ 6,682	$ 5,124
Weighted-average prepayment speed assumption (CPR)	17.56%	17.29%
Weighted-average discount rate	9.68%	7.93%
Valuation allowance at January 1	$ 1,031	$ 1,378
Other-than-temporary impairment[b]	(1)	(149)
SFAS 140 impairment (recovery) adjustment	(680)	(198)
Valuation allowance at December 31	$ 350	$ 1,031
Contractual service fees, late fees and other ancillary fees included in Mortgage fees and related income	$ 1,769	$ 1,721
Third-party Mortgage loans serviced at December 31 (in billions)	$ 468	$ 431

(a) The valuation allowance in the preceding table at December 31, 2005 and 2004, represented the extent to which the carrying value of MSRs exceeded the estimated fair value for its applicable SFAS 140 strata. Changes in the valuation allowance were the result of the recognition of impairment or the recovery of previously recognized impairment charges due to changes in market conditions during the period.
(b) The Firm recorded an other-than-temporary impairment of its MSRs of $1 million and $149 million in 2005 and 2004, respectively, which permanently reduced the gross carrying value of the MSRs and the related valuation allowance. The permanent reduction precluded subsequent reversals. This write-down had no impact on the results of operations or financial condition of the Firm.
(c) During the fourth quarter of 2005, the Firm began valuing MSRs using an option-adjusted spread ("OAS") valuation model. Prior to the fourth quarter of 2005, MSRs were valued using cash flows and discount rates determined by a "static" or single interest rate path valuation model.
(d) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
CPR: Constant prepayment rate

Purchased credit card relationships and All other intangible assets
During 2006, Purchased credit card relationship intangibles decreased by $340 million as a result of $731 million in amortization expense, partially offset by increases from various acquisitions of private-label portfolios and purchase accounting adjustments related to the November 2005 acquisition of the Sears Canada credit card business. During 2006, all other intangible assets declined $461 million, primarily as a result of amortization expense and a reduction of $436 million related to the transfer of selected corporate trust businesses to The Bank of New York, partially offset by an increase in core deposit intangibles of $485 million resulting from the acquisition of The Bank of New York's consumer, business banking and middle-market banking businesses, and further purchase accounting adjustments related to the acquisition of the Sears Canada credit card business. Except for $513 million of indefinite-lived intangibles related to asset management advisory contracts that are not amortized but instead are tested for impairment at least annually, the remainder of the Firm's other acquired intangible assets are subject to amortization.

The components of credit card relationships, core deposits and other intangible assets were as follows:

	2006			2005		
December 31, (in millions)	Gross amount	Accumulated amortization	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	**$ 5,716**	**$ 2,781**	**$ 2,935**	$ 5,325	$ 2,050	$ 3,275
All other intangibles:						
Other credit card–related intangibles	**367**	**65**	**302**	183	59	124
Core deposit intangibles	**4,283**	**1,660**	**2,623**	3,797	1,092	2,705
Other intangibles[a]	**1,961**	**515**[b]	**1,446**	2,582	579[b]	2,003

(a) Amounts at December 31, 2006, exclude, and amounts at December 31,2005, include, other intangibles and related accumulated amortization of selected corporate trust businesses related to the transaction with The Bank of New York.
(b) Includes $11 million and $14 million of amortization expense related to servicing assets on securitized automobile loans for the years ended December 31, 2006 and 2005, respectively.

Amortization expense
The following table presents amortization expense related to credit card relationships, core deposits and All other intangible assets.

Year ended December 31, (in millions)	**2006**	2005	2004[b]
Purchased credit card relationships	**$ 731**	$ 703	$ 476
All other intangibles:			
Other credit card–related intangibles	**6**	36	23
Core deposit intangibles	**568**	623	330
Other intangibles[a]	**123**	128	82
Total amortization expense	**$ 1,428**	$ 1,490	$ 911

(a) Amortization expense related to the aforementioned selected corporate trust businesses were reported in Income from discontinued operations for all periods presented.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Future amortization expense
The following table presents estimated future amortization expense related to credit card relationships, core deposits and All other intangible assets at December 31, 2006:

Year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	All other intangible assets	**Total**
2007	$ 700	$ 10	$ 555	$ 109	$ 1,374
2008	580	17	479	100	1,176
2009	428	23	397	92	940
2010	358	30	336	81	805
2011	289	35	293	73	690

Note 17 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or 10 years. JPMorgan Chase has recorded immaterial asset retirement obligations related to asbestos remediation under SFAS 143 and FIN 47 in those cases where it has sufficient information to estimate the obligations' fair value.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software under SOP 98-1. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life, and reviewed for impairment on an ongoing basis.

Note 18 – Deposits

At December 31, 2006 and 2005, time deposits in denominations of $100,000 or more were as follows:

December 31, (in millions)	**2006**	2005
U.S.	**$ 110,812**	$ 80,861
Non-U.S.	**51,138**	34,912
Total	**$ 161,950**	$ 115,773

At December 31, 2006, the maturities of time deposits were as follows:

December 31, 2006 (in millions)	U.S.	Non-U.S.	**Total**
2007	$ 132,313	$ 62,874	$195,187
2008	2,692	769	3,461
2009	1,200	653	1,853
2010	617	605	1,222
2011	621	486	1,107
After 5 years	735	784	1,519
Total	$ 138,178	$ 66,171	$204,349

Note 19 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. The following table is a summary of long-term debt carrying values (including unamortized original issue discount, SFAS 133 valuation adjustments and fair value adjustments, where applicable) by contractual maturity for the current year.

		2006				
By remaining maturity at December 31, 2006 (in millions, except rates)		Under 1 year	1–5 years	After 5 years	**Total**	2005 Total
Parent company						
Senior debt:[a]	Fixed rate	**$ 5,468**	**$ 12,162**	**$ 2,686**	**$ 20,316**	$ 24,920
	Variable rate	**3,299**	**22,506**	**2,459**	**28,264**	16,914
	Interest rates[b]	**4.13–5.50%**	**0.75–12.48%**	**1.25–10.37%**	**0.75–12.48%**	0.22–8.85%
Subordinated debt:	Fixed rate	**$ 1,858**	**$ 9,145**	**$ 15,009**	**$ 26,012**	$ 24,817
	Variable rate	**—**	**24**	**1,965**	**1,989**	1,823
	Interest rates[b]	**6.70–7.60%**	**1.60–10.00%**	**1.92–9.88%**	**1.60–10.00%**	1.92–10.00%
	Subtotal	**$ 10,625**	**$ 43,837**	**$ 22,119**	**$ 76,581**	$ 68,474
Subsidiaries						
Senior debt:[a]	Fixed rate	**$ 2,159**	**$ 4,080**	**$ 4,210**	**$ 10,449**	$ 6,744
	Variable rate	**15,488**	**20,459**	**5,269**	**41,216**	32,009
	Interest rates[b]	**3.59–5.57%**	**2.43–17.00%**	**1.76–9.00%**	**1.76–17.00%**	1.71–17.00%
Subordinated debt:	Fixed rate	**$ —**	**$ 828**	**$ 3,197**	**$ 4,025**	$ 1,130
	Variable rate	**—**	**—**	**1,150**	**1,150**	—
	Interest rates[b]	**—%**	**6.13–6.70%**	**4.38–8.25%**	**4.38–8.25%**	6.13–8.25%
	Subtotal	**$ 17,647**	**$ 25,367**	**$ 13,826**	**$ 56,840**	$ 39,883
Total long-term debt		**$ 28,272**	**$ 69,204**	**$ 35,945**	**$ 133,421**[d][e][f][g]	$ 108,357
FIN 46R long-term beneficial interests:[c]						
	Fixed rate	**$ 7**	**$ 347**	**$ 423**	**$ 777**	$ 465
	Variable rate	**63**	**129**	**7,367**	**7,559**	1,889
	Interest rates[b]	**5.85–7.12%**	**1.73–8.75%**	**3.26–12.79%**	**1.73–12.79%**	0.51–12.79%
Total FIN 46R long-term beneficial interests		**$ 70**	**$ 476**	**$ 7,790**	**$ 8,336**	$ 2,354

(a) Included are various equity-linked or other indexed instruments. Embedded derivatives separated from hybrid securities in accordance with SFAS 133 are reported at fair value and shown net with the host contract on the Consolidated balance sheets. Changes in fair value of separated derivatives are recorded in Principal transactions revenue. Hybrid securities which the Firm has elected to measure at fair value in accordance with SFAS 155 are classified in the line item of the host contract on the Consolidated balance sheets; changes in fair values are recorded in Principal transactions revenue in the Consolidated statements of income.

(b) The interest rates shown are the range of contractual rates in effect at year end, including non-U.S. dollar-fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in SFAS 133 hedge accounting relationships if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the SFAS 133 hedge accounting derivatives, the range of modified rates in effect at December 31, 2006, for total long-term debt was 0.11% to 17.00%, versus the contractual range of 0.75% to 17.00% presented in the table above.

(c) Included on the Consolidated balance sheets in Beneficial interests issued by consolidated variable interest entities.

(d) At December 31, 2006, long-term debt aggregating $27.3 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based upon the terms specified in the respective notes.

(e) The aggregate principal amount of debt that matures in each of the five years subsequent to 2006 is $28.3 billion in 2007, $22.9 billion in 2008, $18.1 billion in 2009, $10.6 billion in 2010 and $17.6 billion in 2011.

(f) Includes $3.0 billion of outstanding zero-coupon notes at December 31, 2006. The aggregate principal amount of these notes at their respective maturities was $6.8 billion.

(g) Includes $25.4 billion of outstanding structured notes accounted for at fair value under SFAS 155.

The weighted-average contractual interest rate for total Long-term debt was 4.89% and 4.62% as of December 31, 2006 and 2005, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rate for total long-term debt, including the effects of related derivative instruments, was 4.99% and 4.65% as of December 31, 2006 and 2005, respectively.

JPMorgan Chase & Co. (Parent Company) has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's trading activities. These guarantees rank on a parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities totaled $30 million and $170 million at December 31, 2006 and 2005, respectively.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities

At December 31, 2006, the Firm had established 22 wholly owned Delaware statutory business trusts ("issuer trusts") that had issued guaranteed capital debt securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $12.2 billion and $11.5 billion at December 31, 2006 and 2005, respectively, were reflected in the Firm's Consolidated balance sheets in the Liabilities section under the caption "Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities" (i.e., trust preferred capital debt securities). The Firm also records the common capital securities issued by the issuer trusts in Other assets in its Consolidated balance sheets at December 31, 2006 and 2005.

The debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, qualify as Tier 1 capital. The following is a summary of the outstanding capital debt securities, including unamortized original issue discount, issued by each trust and the junior subordinated deferrable interest debenture issued by JPMorgan Chase to each trust as of December 31, 2006:

December 31, 2006 (in millions)	Amount of capital debt securities issued by trust[a]	Principal amount of debenture issued to trust[b]	Issue date	Stated maturity of capital securities and debentures	Earliest redemption date	Interest rate of capital securities and debentures	Interest payment/ distribution dates
Bank One Capital III	$ 474	$ 623	2000	2030	Any time	8.75%	Semiannually
Bank One Capital VI	525	555	2001	2031	Any time	7.20%	Quarterly
Chase Capital II	495	511	1997	2027	2007	LIBOR + 0.50%	Quarterly
Chase Capital III	297	306	1997	2027	2007	LIBOR + 0.55%	Quarterly
Chase Capital VI	249	256	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	248	256	1997	2027	2007	LIBOR + 0.55%	Quarterly
First Chicago NBD Institutional Capital A	499	549	1996	2026	Any time	7.95%	Semiannually
First Chicago NBD Institutional Capital B	250	273	1996	2026	Any time	7.75%	Semiannually
First USA Capital Trust I	3	3	1996	2027	2007	9.33%	Semiannually
JPM Capital Trust I	750	773	1996	2027	2007	7.54%	Semiannually
JPM Capital Trust II	400	412	1997	2027	2007	7.95%	Semiannually
J.P. Morgan Chase Capital X	1,000	1,012	2002	2032	2007	7.00%	Quarterly
J.P. Morgan Chase Capital XI	1,075	982	2003	2033	2008	5.88%	Quarterly
J.P. Morgan Chase Capital XII	400	386	2003	2033	2008	6.25%	Quarterly
JPMorgan Chase Capital XIII	472	487	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XIV	600	579	2004	2034	2009	6.20%	Quarterly
JPMorgan Chase Capital XV	994	983	2005	2035	Any time	5.88%	Semiannually
JPMorgan Chase Capital XVI	500	488	2005	2035	2010	6.35%	Quarterly
JPMorgan Chase Capital XVII	496	467	2005	2035	Any time	5.85%	Semiannually
JPMorgan Chase Capital XVIII	748	749	2006	2036	Any time	6.95%	Semiannually
JPMorgan Chase Capital XIX	562	563	2006	2036	2011	6.63%	Quarterly
JPMorgan Chase Capital XX	995	996	2006	2036	Any time	6.55%	Semiannually
Total	$ 12,032	$ 12,209					

(a) Represents the amount of capital securities issued to the public by each trust, including unamortized original issue discount.
(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated financial statements.

Note 20 – Preferred stock

JPMorgan Chase is authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share. There was no outstanding preferred stock at December 31, 2006. Outstanding preferred stock at December 31, 2005, was 280,433 shares. On March 31, 2006, JPMorgan Chase redeemed all 280,433 shares of its 6.63% Series H cumulative preferred stock. Dividends on shares of the Series H preferred stock were payable quarterly.

The following is a summary of JPMorgan Chase's preferred stock outstanding as of December 31:

(in millions, except per share amounts and rates)	Stated value and redemption price per share[b]	Shares		Outstanding at December 31,		Earliest redemption date	Rate in effect at December 31, 2006
		2006	2005	**2006**	2005		
6.63% Series H cumulative[a]	$ 500.00	**—**	0.28	**$ —**	$ 139	NA	**NA**
Total preferred stock		**—**	0.28	**$ —**	$ 139		

(a) Represented by depositary shares.
(b) Redemption price includes amount shown in the table plus any accrued but unpaid dividends.

Note 21 – Common stock

At December 31, 2006, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a $1 par value per share. Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during 2006, 2005 and 2004 were as follows:

December 31, (in millions)	**2006**	2005	2004[b]
Issued – balance at January 1	**3,618.2**	3,584.8	2,044.4
Newly issued:			
Employee benefits and compensation plans	**39.3**	34.0	69.0
Employee stock purchase plans	**0.6**	1.4	3.1
Purchase accounting acquisitions and other	**—**	—	1,469.4
Total newly issued	**39.9**	35.4	1,541.5
Cancelled shares	**(0.3)**	(2.0)	(1.1)
Total issued – balance at December 31	**3,657.8**	3,618.2	3,584.8
Treasury – balance at January 1	**(131.5)**	(28.6)	(1.8)
Purchase of treasury stock	**(90.7)**	(93.5)	(19.3)
Share repurchases related to employee stock-based awards[a]	**(8.8)**	(9.4)	(7.5)
Issued from treasury:			
Employee benefits and compensation plans	**34.4**	—	—
Employee stock purchase plans	**0.5**	—	—
Total issued from treasury	**34.9**	—	—
Total treasury – balance at December 31	**(196.1)**	(131.5)	(28.6)
Outstanding	**3,461.7**	3,486.7	3,556.2

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes. The shares withheld amounted to 8.1 million, 8.2 million and 5.7 million for 2006, 2005 and 2004, respectively.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

During 2006, 2005 and 2004, the Firm repurchased 91 million shares, 94 million shares and 19 million shares, respectively, of common stock under stock repurchase programs approved by the Board of Directors.

As of December 31, 2006, approximately 464 million unissued shares of common stock were reserved for issuance under various employee or director incentive, compensation, option and stock purchase plans.

Note 22 – Earnings per share

SFAS 128 requires the presentation of basic and diluted earnings per share ("EPS") in the Consolidated statement of income. Basic EPS is computed by dividing net income applicable to common stock by the weighted-average number of common shares outstanding for the period. Diluted EPS is computed using the same method as basic EPS but, in the denominator, the number of common shares reflect, in addition to outstanding shares, the potential dilution that could occur if convertible securities or other contracts to issue common stock were converted or exercised into common stock. Net income available for common stock is the same for basic EPS and diluted EPS, as JPMorgan Chase had no convertible securities, and therefore, no adjustments to Net income available for common stock were necessary. The following table presents the calculation of basic and diluted EPS for 2006, 2005 and 2004:

Year ended December 31, (in millions, except per share amounts)	**2006**	2005	2004[b]
Basic earnings per share			
Income from continuing operations	**$ 13,649**	$ 8,254	$ 4,260
Discontinued operations	**795**	229	206
Net income	**14,444**	8,483	4,466
Less: preferred stock dividends	**4**	13	52
Net income applicable to common stock	**$ 14,440**	$ 8,470	$ 4,414
Weighted-average basic shares outstanding	**3,470.1**	3,491.7	2,779.9
Income from continuing operations per share	**$ 3.93**	$ 2.36	$ 1.51
Discontinued operations per share	**0.23**	0.07	0.08
Net income per share	**$ 4.16**	$ 2.43	$ 1.59
Diluted earnings per share			
Net income applicable to common stock	**$ 14,440**	$ 8,470	$ 4,414
Weighted-average basic shares outstanding	**3,470.1**	3,491.7	2,779.9
Add: Employee restricted stock, RSUs, stock options and SARs	**103.8**	65.6	70.7
Weighted-average diluted shares outstanding[a]	**3,573.9**	3,557.3	2,850.6
Income from continuing operations per share	**$ 3.82**	$ 2.32	$ 1.48
Discontinued operations per share	**0.22**	0.06	0.07
Net income per share	**$ 4.04**	$ 2.38	$ 1.55

(a) Options issued under employee stock-based incentive plans to purchase 150 million, 280 million and 300 million shares of common stock were outstanding for the years ended 2006, 2005 and 2004, respectively, but were not included in the computation of diluted EPS because the options were antidilutive.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Note 23 – Accumulated other comprehensive income (loss)

Accumulated other comprehensive income (loss) includes the after-tax change in unrealized gains and losses on AFS securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities and the net actuarial loss and prior service cost related to the Firm's defined benefit pension and OPEB plans.

(in millions)	Unrealized gains (losses) on AFS securities[b]	Translation adjustments, net of hedges	Cash flow hedges	Net actuarial loss and prior service (credit) of defined benefit pension and OPEB plans[f]	Accumulated other comprehensive income (loss)
Balance at December 31, 2003[a]	$ 19	$ (6)	$ (43)	$ —	$ (30)
Net change[a]	(80)[c]	(2)	(96)	—	(178)
Balance at December 31, 2004	(61)	(8)	(139)	—	(208)
Net change	(163)[d]	—	(255)	—	(418)
Balance at December 31, 2005	(224)	(8)	(394)	—	(626)
Net change	**253**[e]	**13**	**(95)**	**—**	**171**
Adjustment to initially apply SFAS 158, net of taxes	**—**	**—**	**—**	**(1,102)**	**(1,102)**
Balance at December 31, 2006	**$ 29**	**$ 5**	**$ (489)**	**$ (1,102)**	**$ (1,557)**

(a) Balance at December 31, 2003 reflects heritage JPMorgan Chase only. 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) Represents the after-tax difference between the fair value and amortized cost of the AFS securities portfolio and retained interests in securitizations recorded in Other assets.
(c) The net change during 2004 was due primarily to higher interest rates and recognition of unrealized gains from securities sales.
(d) The net change during 2005 was due primarily to higher interest rates, partially offset by the reversal of unrealized losses from securities sales.
(e) The net change during 2006 was due primarily to the reversal of unrealized losses from securities sales.
(f) For further discussion of SFAS 158, see Note 7 on pages 100–105 of this Annual Report.

The following table presents the after-tax changes in net unrealized holdings gains (losses), reclassification adjustments for realized gains and losses on AFS securities and cash flow hedges, and changes resulting from foreign currency translation adjustments (including the impact of related derivatives). The table also reflects the adjustment to Accumulated other comprehensive income (loss) resulting from the initial application of SFAS 158 to the Firm's defined benefit pension and OPEB plans. Reclassification adjustments include amounts recognized in Net income during the current year that had been recorded previously in Other comprehensive income (loss).

	2006			2005			2004[b]		
Year ended December 31, (in millions)	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Unrealized gains (losses) on AFS securities:									
Net unrealized holdings gains (losses) arising during the period	**$ (403)**	**$ 144**	**$ (259)**	$ (1,706)	$ 648	$ (1,058)	$ 68	$ (27)	$ 41
Reclassification adjustment for realized (gains) losses included in Net income	**797**	**(285)**	**512**	1,443	(548)	895	(200)	79	(121)
Net change	**394**	**(141)**	**253**	(263)	100	(163)	(132)	52	(80)
Translation adjustments:									
Translation	**590**	**(236)**	**354**	(584)	233	(351)	474	(194)	280
Hedges	**(563)**	**222**	**(341)**	584	(233)	351	(478)	196	(282)
Net change	**27**	**(14)**	**13**	—	—	—	(4)	2	(2)
Cash flow hedges:									
Net unrealized holdings gains (losses) arising during the period	**(250)**	**98**	**(152)**	(470)	187	(283)	57	(23)	34
Reclassification adjustment for realized (gains) losses included in Net income	**93**	**(36)**	**57**	46	(18)	28	(216)	86	(130)
Net change	**(157)**	**62**	**(95)**	(424)	169	(255)	(159)	63	(96)
Total Other comprehensive income	**$ 264**	**$ (93)**	**$ 171**	$ (687)	$ 269	$ (418)	$ (295)	$ 117	$ (178)
Net actuarial loss and prior service cost (credit) of defined benefit pension and OPEB plans:									
Adjustments to initially apply SFAS 158[a]	**$ (1,746)**	**$ 644**	**$ (1,102)**	NA	NA	NA	NA	NA	NA

(a) For further discussion of SFAS 158, see Note 7 on pages 100–105 of this Annual Report.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Note 24 – Income taxes

JPMorgan Chase and eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset-and-liability method required by SFAS 109 to provide income taxes on all transactions recorded in the Consolidated financial statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax liability or asset for each temporary difference is determined based upon the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different than those currently reported.

Deferred income tax expense (benefit) results from differences between assets and liabilities measured for financial reporting and for income-tax return purposes. The significant components of deferred tax assets and liabilities are reflected in the following table:

December 31, (in millions)	2006	2005
Deferred tax assets		
Employee benefits	**$ 5,175**	$ 3,381
Allowance for other than loan losses	**3,533**	3,554
Allowance for loan losses	**2,910**	2,745
Non-U.S. operations	**566**	807
Fair value adjustments	**427**	531
Gross deferred tax assets	**$ 12,611**	$11,018
Deferred tax liabilities		
Depreciation and amortization	**$ 3,668**	$ 3,683
Leasing transactions	**2,675**	3,158
Non-U.S. operations	**1,435**	1,297
Fee income	**1,216**	1,396
Other, net	**78**	149
Gross deferred tax liabilities	**$ 9,072**	$ 9,683
Valuation allowance	**$ 210**	$ 110
Net deferred tax asset	**$ 3,329**	$ 1,225

A valuation allowance has been recorded in accordance with SFAS 109, primarily relating to capital losses associated with certain portfolio investments.

The components of income tax expense included in the Consolidated statements of income were as follows:

Year ended December 31, (in millions)	2006	2005	2004[a]
Current income tax expense			
U.S. federal	**$ 5,512**	$ 4,178	$ 1,613
Non-U.S.	**1,656**	887	653
U.S. state and local	**879**	311	157
Total current income tax expense	**8,047**	5,376	2,423
Deferred income tax (benefit) expense			
U.S. federal	**(1,628)**	(2,063)	(382)
Non-U.S.	**194**	316	(322)
U.S. state and local	**(376)**	(44)	(123)
Total deferred income tax (benefit) expense	**(1,810)**	(1,791)	(827)
Total income tax expense from continuing operations	**6,237**	3,585	1,596
Total income tax expense from discontinued operations	**572**	147	132
Total income tax expense	**$ 6,809**	$ 3,732	$ 1,728

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Total income tax expense includes $367 million of tax benefits recorded in 2006 as a result of tax audit resolutions.

The preceding table does not reflect the tax effects of SFAS 52 foreign currency translation adjustments, SFAS 115 unrealized gains and losses on AFS securities, SFAS 133 hedge transactions and certain tax benefits associated with the Firm's employee stock-based compensation plans. Also not reflected are the cumulative tax effects of implementing in 2006, SFAS 155, which applies to certain hybrid financial instruments; SFAS 156, which accounts for servicing financial assets; and SFAS 158, which applies to defined benefit pension and OPEB plans. The tax effect of all items recorded directly in Stockholders' equity was an increase of $885 million, $425 million and $431 million in 2006, 2005 and 2004, respectively.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. For 2006, such earnings approximated $423 million on a pretax basis. At December 31, 2006, the cumulative amount of undistributed pretax earnings in these subsidiaries approximated $1.9 billion. It is not practicable at this time to determine the income tax liability that would result upon repatriation of these earnings.

On October 22, 2004, the American Jobs Creation Act of 2004 (the "Act") was signed into law. The Act created a temporary incentive for U.S. companies to repatriate accumulated foreign earnings at a substantially reduced U.S. effective tax rate by providing a dividends received deduction on the repatriation of certain foreign earnings to the U.S. taxpayer (the "repatriation provision"). The deduction was subject to a number of limitations and requirements. In the fourth quarter of 2005, the Firm applied the repatriation provision to $1.9 billion of cash from foreign earnings, resulting in a net tax benefit of $55 million. The $1.9 billion of cash was invested in accordance with the Firm's domestic reinvestment plan pursuant to the guidelines set forth in the Act.

The tax expense (benefit) applicable to securities gains and losses for the years 2006, 2005 and 2004 was $(219) million, $(536) million and $126 million, respectively.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for continuing operations for the past three years is shown in the following table:

Year ended December 31,	**2006**	2005	2004[a]
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase (decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of federal income tax benefit	**2.1**	1.4	0.2
Tax-exempt income	**(2.2)**	(3.1)	(4.2)
Non-U.S. subsidiary earnings	**(0.5)**	(1.4)	(1.4)
Business tax credits	**(2.5)**	(3.7)	(4.3)
Other, net	**(0.5)**	2.1	2.0
Effective tax rate	**31.4%**	30.3%	27.3%

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

The following table presents the U.S. and non-U.S. components of Income from continuing operations before income tax expense:

Year ended December 31, (in millions)	**2006**	2005	2004[b]
U.S.	**$ 12,934**	$ 8,683	$ 3,566
Non-U.S.[a]	**6,952**	3,156	2,290
Income from continuing operations before income tax expense	**$ 19,886**	$ 11,839	$ 5,856

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the United States of America.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Note 25 – Restrictions on cash and intercompany funds transfers

JPMorgan Chase Bank, N.A.'s business is subject to examination and regulation by the Office of the Comptroller of the Currency ("OCC"). The Bank is a member of the U.S. Federal Reserve System and its deposits are insured by the Federal Deposit Insurance Corporation ("FDIC").

The Federal Reserve Board requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $2.2 billion in 2006 and $2.7 billion in 2005.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company–only basis) are dividends and interest from JPMorgan Chase Bank, N.A. and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve Board, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2007 and 2006, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, $14.3 billion and $7.4 billion, respectively, in dividends to their respective bank holding companies without prior approval of their relevant banking regulators. The capacity to pay dividends in 2007 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2006 and 2005, cash in the amount of $8.6 billion and $6.4 billion, respectively, and securities with a fair value of $2.1 billion and $2.1 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers.

Note 26 – Capital

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital includes common stockholders' equity, qualifying preferred stock and minority interest less goodwill and other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1, subordinated long-term debt and other instruments qualifying as Tier 2, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total regulatory capital is subject to deductions for investments in certain subsidiaries. Under the risk-based capital guidelines of the Federal Reserve Board, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total (Tier 1 plus Tier 2) capital to risk weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital to average adjusted on–balance sheet assets). Failure to meet these minimum requirements could cause the Federal Reserve Board to take action. Banking subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2006 and 2005, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

The following table presents the risk-based capital ratios for JPMorgan Chase and its significant banking subsidiaries at December 31, 2006, and December 31, 2005:

(in millions, except ratios)	Tier 1 capital	Total capital	Risk-weighted assets[c]	Adjusted average assets[d]	Tier 1 capital ratio	Total capital ratio	Tier 1 leverage ratio
December 31, 2006							
JPMorgan Chase & Co.[a]	**$ 81,055**	**$ 115,265**	**$ 935,909**	**$ 1,308,699**	**8.7%**	**12.3%**	**6.2%**
JPMorgan Chase Bank, N.A.	**68,726**	**96,103**	**840,057**	**1,157,449**	**8.2**	**11.4**	**5.9**
Chase Bank USA, N.A.	**9,242**	**11,506**	**77,638**	**66,202**	**11.9**	**14.8**	**14.0**
December 31, 2005							
JPMorgan Chase & Co.[a]	$ 72,474	$ 102,437	$ 850,643	$ 1,152,546	8.5%	12.0%	6.3%
JPMorgan Chase Bank, N.A.	61,050	84,227	750,397	995,095	8.1	11.2	6.1
Chase Bank USA, N.A.	8,608	10,941	72,229	59,882	11.9	15.2	14.4
Well-capitalized ratios[b]					6.0%	10.0%	5.0%[e]
Minimum capital ratios[b]					4.0	8.0	3.0[f]

(a) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions, whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.
(b) As defined by the regulations issued by the Federal Reserve Board, OCC and FDIC.
(c) Includes off–balance sheet risk-weighted assets in the amounts of $305.3 billion, $290.1 billion and $12.7 billion, respectively, at December 31, 2006, and $279.2 billion, $260.0 billion and $15.5 billion, respectively, at December 31, 2005, for JPMorgan Chase and its significant banking subsidiaries.
(d) Average adjusted assets for purposes of calculating the leverage ratio include total average assets adjusted for unrealized gains/losses on securities, less deductions for disallowed goodwill and other intangible assets, investments in subsidiaries and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.
(e) Represents requirements for banking subsidiaries pursuant to regulations issued under the Federal Deposit Insurance Corporation Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.
(f) The minimum Tier 1 leverage ratio for bank holding companies and banks is 3% or 4% depending on factors specified in regulations issued by the Federal Reserve Board and OCC.

The following table shows the components of the Firm's Tier 1 and Total capital:

December 31, (in millions)	2006	2005
Tier 1 capital		
Total stockholders' equity	**$ 115,790**	$ 107,211
Effect of certain items in Accumulated other comprehensive income (loss) excluded from Tier 1 capital[a]	**1,562**	618
Adjusted stockholders' equity	**117,352**	107,829
Minority interest[b]	**12,970**	12,660
Less: Goodwill	**45,186**	43,621
Investments in certain subsidiaries	**420**	401
Nonqualifying intangible assets	**3,661**	3,993
Tier 1 capital	**$ 81,055**	$ 72,474
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	**$ 26,613**	$ 22,733
Qualifying allowance for credit losses	**7,803**	7,490
Less: Investments in certain subsidiaries and other	**206**	260
Tier 2 capital	**$ 34,210**	$ 29,963
Total qualifying capital	**$ 115,265**	$ 102,437

(a) Includes the effect of net unrealized gains (losses) on AFS securities, cash flow hedging activities and, at December 31, 2006, unrecognized amounts related to the Firm's pension and OPEB plans.
(b) Primarily includes trust preferred securities of certain business trusts.

Note 27 – Commitments and contingencies

At December 31, 2006, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes. Certain leases contain renewal options or escalation clauses providing for increased rental payments based upon maintenance, utility and tax increases or require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2006:

Year ended December 31, (in millions)	
2007	$ 1,058
2008	1,033
2009	962
2010	865
2011	791
After 2011	6,320
Total minimum payments required[a]	11,029
Less: Sublease rentals under noncancelable subleases	(1,177)
Net minimum payment required	$ 9,852

(a) Lease restoration obligations are accrued in accordance with SFAS 13, and are not reported as a required minimum lease payment.

Total rental expense was as follows:

Year ended December 31, (in millions)	2006	2005	2004[a]
Gross rental expense	**$ 1,266**	$ 1,239	$ 1,161
Sublease rental income	**(194)**	(192)	(158)
Net rental expense	**$ 1,072**	$ 1,047	$ 1,003

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

At December 31, 2006, assets were pledged to secure public deposits and for other purposes. The significant components of the assets pledged were as follows:

December 31, (in billions)	2006	2005
Reverse repurchase/securities borrowing agreements	**$ 291**	$ 320
Securities	**40**	24
Loans	**117**	74
Trading assets and other	**108**	99
Total assets pledged	**$ 556**	$ 517

Litigation reserve

The Firm maintains litigation reserves for certain of its outstanding litigation. In accordance with the provisions of SFAS 5, JPMorgan Chase accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. While the outcome of litigation is inherently uncertain, management believes, in light of all information known to it at December 31, 2006, the Firm's litigation reserves were adequate at such date. Management reviews litigation reserves periodically, and the reserves may be increased or decreased in the future to reflect further litigation developments. The Firm believes it has meritorious defenses to claims asserted against it in its currently outstanding litigation and, with respect to such litigation, intends to continue to defend itself vigorously, litigating or settling cases according to management's judgment as to what is in the best interests of stockholders.

Insurance recoveries related to certain material legal proceedings were $512 million and $208 million in 2006 and 2005, respectively. Charges related to certain material legal proceedings were $2.8 billion and $3.7 billion in 2005 and 2004, respectively. There were no charges in 2006 related to material legal proceedings.

Note 28 – Accounting for derivative instruments and hedging activities

Derivative instruments enable end users to increase, reduce or alter exposure to credit or market risks. The value of a derivative is derived from its reference to an underlying variable or combination of variables such as equity, foreign exchange, credit, commodity or interest rate prices or indices. JPMorgan Chase makes markets in derivatives for customers and also is an end-user of derivatives in order to hedge market exposures, modify the interest rate characteristics of related balance sheet instruments or meet longer-term investment objectives. The majority of the Firm's derivatives are entered into for trading purposes. Both trading and end-user derivatives are recorded at fair value in Trading assets and Trading liabilities as set forth in Note 4 on pages 98–99 of this Annual Report.

SFAS 133, as amended by SFAS 138, SFAS 149, and SFAS 155, establishes accounting and reporting standards for derivative instruments, including those used for trading and hedging activities, and derivative instruments embedded in other contracts. All free-standing derivatives, whether designated for hedging relationships or not, are required to be recorded on the Consolidated balance sheets at fair value. The accounting for changes in value of a derivative depends on whether the contract is for trading purposes or has been designated and qualifies for hedge accounting.

In order to qualify for hedge accounting, a derivative must be considered highly effective at reducing the risk associated with the exposure being hedged. In order for a derivative to be designated as a hedge, there must be documentation of the risk management objective and strategy, including identification of the hedging instrument, the hedged item and the risk exposure, and how effectiveness is to be assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a hedging instrument has been and is expected to continue to be effective at achieving offsetting changes in fair value or cash flows must be assessed and documented at least quarterly. Any ineffectiveness must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

For qualifying fair value hedges, all changes in the fair value of the derivative and in the fair value of the hedged item for the risk being hedged are recognized in earnings. If the hedge relationship is terminated, then the fair value adjustment to the hedged item continues to be reported as part of the basis of the item and continues to be amortized to earnings as a yield adjustment. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in Other comprehensive income and recognized in the Consolidated statement of income when the hedged cash flows affect earnings. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the change in fair value of the derivative recorded in Other comprehensive income is recognized when the cash flows that were hedged occur, consistent with the original hedge strategy. For hedge relationships discontinued because the forecasted transaction is not expected to occur according to the original strategy, any related derivative amounts recorded in Other comprehensive income are immediately recognized in earnings. For qualifying net investment hedges, changes in the fair value of the derivative or the revaluation of the foreign currency–denominated debt instrument are recorded in the translation adjustments account within Other comprehensive income.

JPMorgan Chase's fair value hedges primarily include hedges of fixed-rate long-term debt, loans, AFS securities and MSRs. Interest rate swaps are the most common type of derivative contract used to modify exposure to interest rate risk, converting fixed-rate assets and liabilities to a floating rate. Prior to the adoption of SFAS 156, interest rate options, swaptions and forwards were also used in combination with interest rate swaps to hedge the fair value of the Firm's MSRs in SFAS 133 hedge relationships. For a further discussion of MSR risk management activities, see Note 16 on pages 121–122 of this Annual Report. All amounts have been included in earnings consistent with the classification of the hedged item, primarily Net interest income, Mortgage fees and related income, and Other income. The Firm did not recognize any gains or losses during 2006, 2005 or 2004 on firm commitments that no longer qualify as fair value hedges.

JPMorgan Chase also enters into derivative contracts to hedge exposure to variability in cash flows from floating-rate financial instruments and forecasted transactions, primarily the rollover of short-term assets and liabilities, and foreign currency–denominated revenues and expenses. Interest rate swaps, futures and forward contracts are the most common instruments used to reduce the impact of interest rate and foreign exchange rate changes on future earnings. All amounts affecting earnings have been recognized consistent with the classification of the hedged item, primarily Net interest income.

The Firm uses forward foreign exchange contracts and foreign currency–denominated debt instruments to protect the value of net investments in subsidiaries whose functional currency is not the U.S. dollar. The portion of the hedging instruments excluded from the assessment of hedge effectiveness (forward points) is recorded in Net interest income.

The following table presents derivative instrument hedging-related activities for the periods indicated:

Year ended December 31, (in millions)	**2006**	2005	2004[b]
Fair value hedge ineffective net gains/(losses)[a]	**$ 51**	$ (58)	$ 199
Cash flow hedge ineffective net gains/(losses)[a]	**2**	(2)	—
Cash flow hedging gains/(losses) on forecasted transactions that failed to occur	**—**	—	1

(a) Includes ineffectiveness and the components of hedging instruments that have been excluded from the assessment of hedge effectiveness.
(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Over the next 12 months, it is expected that $67 million (after-tax) of net losses recorded in Other comprehensive income at December 31, 2006, will be recognized in earnings. The maximum length of time over which forecasted transactions are hedged is 10 years, and such transactions primarily relate to core lending and borrowing activities.

JPMorgan Chase does not seek to apply hedge accounting to all of the Firm's economic hedges. For example, the Firm does not apply hedge accounting to standard credit derivatives used to manage the credit risk of loans and commitments because of the difficulties in qualifying such contracts as hedges under SFAS 133. Similarly, the Firm does not apply hedge accounting to certain interest rate derivatives used as economic hedges.

Note 29 – Off-balance sheet lending-related financial instruments and guarantees

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparty draw down the commitment or the Firm fulfill its obligation under the guarantee, and the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without a default occurring or without being drawn. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. Further, certain commitments, primarily related to consumer financings, are cancelable, upon notice, at the option of the Firm.

To provide for the risk of loss inherent in wholesale-related contracts, an allowance for credit losses on lending-related commitments is maintained. See Note 13 on pages 113–114 of this Annual Report for further discussion of the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts of off–balance sheet lending-related financial instruments and guarantees and the related allowance for credit losses on lending-related commitments at December 31, 2006 and 2005:

Off–balance sheet lending-related financial instruments and guarantees

	Contractual amount		Allowance for lending-related commitments	
December 31, (in millions)	**2006**	2005	**2006**	2005
Lending-related				
Consumer[a]	**$ 747,535**	$ 655,596	**$ 25**	$ 15
Wholesale:				
Other unfunded commitments to extend credit[b][c][d]	**229,204**	208,469	**305**	208
Asset purchase agreements[e]	**67,529**	31,095	**6**	3
Standby letters of credit and guarantees[c][f][g]	**89,132**	77,199	**187**	173
Other letters of credit[c]	**5,559**	4,346	**1**	1
Total wholesale	**391,424**	321,109	**499**	385
Total lending-related	**$1,138,959**	$ 976,705	**$ 524**	$ 400
Other guarantees				
Securities lending guarantees[h]	**$ 318,095**	$ 244,316	**NA**	NA
Derivatives qualifying as guarantees	**71,531**	61,759	**NA**	NA

(a) Includes Credit card lending-related commitments of $657 billion at December 31, 2006, and $579 billion at December 31, 2005, which represent the total available credit to the Firm's cardholders. The Firm has not experienced, and does not anticipate, that all of its cardholders will utilize their entire available lines of credit at the same time. The Firm can reduce or cancel a credit card commitment by providing the cardholder prior notice or, in some cases, without notice as permitted by law.
(b) Includes unused advised lines of credit totaling $39.0 billion and $28.3 billion at December 31, 2006 and 2005, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable.
(c) Represents contractual amount net of risk participations totaling $32.8 billion and $29.3 billion at December 31, 2006 and 2005, respectively.
(d) Excludes unfunded commitments to private third-party equity funds of $589 million and $242 million at December 31, 2006, and December 31, 2005, respectively.
(e) Represents asset purchase agreements with the Firm's administered multi-seller asset-backed commercial paper conduits, which excludes $356 million and $32.4 billion at December 31, 2006 and 2005, respectively, related to conduits that were consolidated in accordance with FIN 46R, as the underlying assets of the conduits are reported in the Firm's Consolidated balance sheets. It also includes $1.4 billion and $1.3 billion of asset purchase agreements to other third-party entities at December 31, 2006 and 2005, respectively. Certain of the Firm's administered multi-seller conduits were deconsolidated as of June 2006; the assets deconsolidated were approximately $33 billion.
(f) JPMorgan Chase held collateral relating to $13.5 billion and $9.0 billion of these arrangements at December 31, 2006 and 2005, respectively.
(g) Includes unused commitments to issue standby letters of credit of $45.7 billion and $37.5 billion at December 31, 2006 and 2005, respectively.
(h) Collateral held by the Firm in support of securities lending indemnification agreements was $317.9 billion and $245.0 billion at December 31, 2006 and 2005, respectively.

Other unfunded commitments to extend credit

Unfunded commitments to extend credit are agreements to lend only when a customer has complied with predetermined conditions, and they generally expire on fixed dates.

FIN 45 establishes accounting and disclosure requirements for guarantees, requiring that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. FIN 45 defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party, based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off–balance sheet lending arrangements to be guarantees under FIN 45: certain asset purchase agreements, standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts. These guarantees are described in further detail below.

The fair value at inception of the obligation undertaken when issuing the guarantees and commitments that qualify under FIN 45 is typically equal to the net present value of the future amount of premium receivable under the contract. The Firm has recorded this amount in Other Liabilities with an offsetting entry recorded in Other Assets. As cash is received under the contract, it is applied to the premium receivable recorded in Other Assets, and the fair value of the liability recorded at inception is amortized into income as Lending & deposit related fees over the life of the guarantee contract. The amount of the liability related to FIN 45 guarantees recorded at December 31, 2006 and 2005, excluding the allowance for credit losses on lending-related commitments and derivative contracts discussed below, was approximately $297 million and $313 million, respectively.

Asset purchase agreements

The majority of the Firm's unfunded commitments are not guarantees as defined in FIN 45, except for certain asset purchase agreements that are principally used as a mechanism to provide liquidity to SPEs, primarily multi-seller conduits, as described in Note 15 on pages 118–120 of this Annual Report. Some of these asset purchase agreements can be exercised at any time by the SPE's administrator, while others require a triggering event to occur. Triggering events include, but are not limited to, a need for liquidity, a decline

in market value of the assets or a downgrade in the rating of JPMorgan Chase Bank, N.A. These agreements may cause the Firm to purchase an asset from the SPE at an amount above the asset's fair value, in effect providing a guarantee of the initial value of the reference asset as of the date of the agreement. In most instances, third-party credit enhancements of the SPE mitigate the Firm's potential losses on these agreements.

Standby letters of credit and financial guarantees

Standby letters of credit and financial guarantees are conditional lending commitments issued by JPMorgan Chase to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. Approximately 50% of these arrangements mature within three years. The Firm typically has recourse to recover from the customer any amounts paid under these guarantees; in addition, the Firm may hold cash or other highly liquid collateral to support these guarantees.

Securities lending indemnification

Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm issues securities lending indemnification agreements to the lender which protects it principally against the failure of the third-party borrower to return the lent securities. To support these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists or released to the borrower in the event of overcollateralization. If an indemnifiable default by a borrower occurs, the Firm would expect to use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

Also, as part of this program, the Firm invests cash collateral received from the borrower in accordance with approved guidelines. On an exceptional basis the Firm may indemnify the lender against this investment risk when certain types of investments are made.

Based upon historical experience, management believes that these risks of loss are remote.

Indemnification agreements – general

In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that may require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value; thus, such a clause would not require the Firm to make a payment under the indemnification agreement. Even without the termination clause, management does not expect such indemnification agreements to have a material adverse effect on the consolidated financial condition of JPMorgan Chase. The Firm may also enter into indemnification clauses when it sells a business or assets to a third party, pursuant to which it indemnifies that third party for losses it may incur due to actions taken by the Firm prior to the sale. See below for more information regarding the Firm's loan securitization activities. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based upon historical experience, management expects the risk of loss to be remote.

Securitization-related indemnifications

As part of the Firm's loan securitization activities, as described in Note 14 on pages 114–118 of this Annual Report, the Firm provides representations and warranties that certain securitized loans meet specific requirements. The Firm may be required to repurchase the loans and/or indemnify the purchaser of the loans against losses due to any breaches of such representations or warranties. Generally, the maximum amount of future payments the Firm would be required to make under such repurchase and/or indemnification provisions would be equal to the current amount of assets held by such securitization-related SPEs as of December 31, 2006, plus, in certain circumstances, accrued and unpaid interest on such loans and certain expenses. The potential loss due to such repurchase and/or indemnity is mitigated by the due diligence the Firm performs before the sale to ensure that the assets comply with the requirements set forth in the representations and warranties. Historically, losses incurred on such repurchases and/or indemnifications have been insignificant, and therefore management expects the risk of material loss to be remote.

Credit card charge-backs

The Firm is a partner with one of the leading companies in electronic payment services in a joint venture operating under the name of Chase Paymentech Solutions, LLC (the "joint venture"). The joint venture was formed in October 2005, as a result of an agreement by the Firm and First Data Corporation, its joint venture partner, to integrate the companies' jointly owned Chase Merchant Services ("CMS") and Paymentech merchant businesses. The joint venture provides merchant processing services in the United States and Canada. Under the rules of Visa USA, Inc. and Mastercard International, JPMorgan Chase Bank, N.A., is liable primarily for the amount of each processed credit card sales transaction that is the subject of a dispute between a cardmember and a merchant. The joint venture is contractually liable to JPMorgan Chase Bank, N.A. for these disputed transactions. If a dispute is resolved in the cardmember's favor, the joint venture will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If the joint venture is unable to collect the amount from the merchant, the joint venture will bear the loss for the amount credited or refunded to the cardmember. The joint venture mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) the joint venture does not have sufficient collateral from the merchant to provide customer refunds; and (3) the joint venture does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A. would be liable for the amount of the transaction, although it would have a contractual right to recover from its joint venture partner an amount proportionate to such partner's equity interest in the joint venture. For the year ended December 31, 2006, the joint venture incurred aggregate credit losses of $9 million on $661 billion of aggregate volume processed. At December 31, 2006, the joint venture held $893 million of collateral. For the year ended December 31, 2005, the CMS and Paymentech ventures incurred aggregate credit losses of $11 million on $563 billion of aggregate volume processed. At December 31, 2005, the joint venture held $909 million of collateral. The Firm believes that, based upon historical experience and the collateral held by the joint venture, the fair value of the Firm's chargeback-related obligations would not be different materially from the credit loss allowance recorded by the joint venture; therefore, the Firm has not recorded any allowance for losses in excess of the allowance recorded by the joint venture.

Exchange and clearinghouse guarantees

The Firm is a member of several securities and futures exchanges and clearinghouses, both in the United States and other countries. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to a members' guaranty fund, or, in a few cases, it may be unlimited. It is difficult to estimate the Firm's maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based upon historical experience, management expects the risk of loss to be remote.

Derivative guarantees

In addition to the contracts described above, there are certain derivative contracts to which the Firm is a counterparty that meet the characteristics of a guarantee under FIN 45. These derivatives are recorded on the Consolidated balance sheets at fair value. These contracts include written put options that require the Firm to purchase assets from the option holder at a specified price by a specified date in the future, as well as derivatives that effectively guarantee the return on a counterparty's reference portfolio of assets. The total notional value of the derivatives that the Firm deems to be guarantees was $72 billion and $62 billion at December 31, 2006 and 2005, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions or by entering into contracts that hedge the market risk related to these contracts. The fair value related to these contracts was a derivative receivable of $230 million and $198 million, and a derivative payable of $987 million and $767 million at December 31, 2006 and 2005, respectively. Finally, certain written put options and credit derivatives permit cash settlement and do not require the option holder or the buyer of credit protection to own the reference asset. The Firm does not consider these contracts to be guarantees under FIN 45.

Note 30 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of the credit risk portfolio to assess potential concentration risks and to obtain collateral when deemed necessary. In the Firm's wholesale portfolio, risk concentrations are evaluated primarily by industry and by geographic region. In the consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region.

The Firm does not believe exposure to any one loan product with varying terms (e.g., interest-only payments for an introductory period) or exposure to loans with high loan-to-value ratios would result in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its Allowance for loan losses.

For further information regarding on–balance sheet credit concentrations by major product and geography, see Note 12 on pages 112–113 of this Annual Report. For information regarding concentrations of off–balance sheet lending-related financial instruments by major product, see Note 29 on page 132 of this Annual Report. More information about concentrations can be found in the following tables or discussion in the MD&A:

Credit risk management – risk monitoring	Page 64
Wholesale exposure	Page 67
Wholesale selected industry concentrations	Page 68
Emerging markets country exposure	Page 72
Consumer real estate loan portfolio by geographic location	Page 74

The table below presents both on–balance sheet and off–balance sheet wholesale- and consumer-related credit exposure as of December 31, 2006 and 2005:

	2006			2005		
December 31, (in billions)	Credit exposure[b]	On-balance sheet[b][c]	Off-balance sheet[d]	Credit exposure[b]	On-balance sheet[b][c]	Off-balance sheet[d]
Wholesale-related:						
Banks and finance companies	**$ 63.6**	**$ 28.1**	**$ 35.5**	$ 51.1	$ 20.3	$ 30.8
Real estate	**35.9**	**21.6**	**14.3**	32.5	19.0	13.5
Healthcare	**30.1**	**6.1**	**24.0**	25.5	4.7	20.8
State and municipal governments	**27.5**	**6.9**	**20.6**	25.3	6.1	19.2
Consumer products	**27.1**	**9.1**	**18.0**	26.7	10.0	16.7
All other wholesale	**446.6**	**167.6**	**279.0**	389.6	169.5	220.1
Total wholesale-related	**630.8**	**239.4**	**391.4**	550.7	229.6	321.1
Consumer-related:						
Home equity	**155.2**	**85.7**	**69.5**	132.2	73.9	58.3
Mortgage	**66.3**	**59.7**	**6.6**	64.8	58.9	5.9
Auto loans and leases	**48.9**	**41.0**	**7.9**	51.8	46.1	5.7
All other loans	**33.5**	**27.1**	**6.4**	24.8	18.4	6.4
Card Services-reported[a]	**743.0**	**85.9**	**657.1**	651.0	71.7	579.3
Total consumer–related	**1,046.9**	**299.4**	**747.5**	924.6	269.0	655.6
Total exposure	**$ 1,677.7**	**$ 538.8**	**$ 1,138.9**	$ 1,475.3	$ 498.6	$ 976.7

(a) Excludes $67.0 billion and $70.5 billion of securitized credit card receivables at December 31, 2006 and 2005, respectively.
(b) Includes HFS loans.
(c) Represents loans, derivative receivables and interests in purchased receivables.
(d) Represents lending-related financial instruments.

Note 31 – Fair value of financial instruments

The fair value of a financial instrument is the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The accounting for an asset or liability may differ based upon the type of instrument and/or its use in a trading or investing strategy. Generally, the measurement framework in the consolidated financial statements is one of the following:

- at fair value on the Consolidated balance sheets, with changes in fair value recorded each period in the Consolidated statements of income;
- at fair value on the Consolidated balance sheets, with changes in fair value recorded each period in the Accumulated other comprehensive income component of Stockholders' equity and as part of Other comprehensive income;
- at cost (less other-than-temporary impairments), with changes in fair value not recorded in the consolidated financial statements but disclosed in the notes thereto; or
- at the lower of cost or fair value.

Determination of fair value

The Firm has an established and well-documented process for determining fair values. Fair value is based upon quoted market prices, where available. If listed prices or quotes are not available, fair value is based upon internally developed models that primarily use market-based or independent information as inputs to the valuation model. Valuation adjustments may be necessary to ensure that financial instruments are recorded at fair value. These adjustments include amounts to reflect counterparty credit quality, liquidity and concentration concerns and are based upon defined methodologies that are applied consistently over time.

- Credit valuation adjustments are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few derivative contracts are listed on an exchange, the majority of derivative positions are valued using internally developed models that use as their basis observable market parameters. Market practice is to quote parameters equivalent to a AA credit rating; thus, all counterparties are assumed to have the same credit quality. An adjustment is therefore necessary to reflect the credit quality of each derivative counterparty and to arrive at fair value.
- Liquidity adjustments are necessary when the Firm may not be able to observe a recent market price for a financial instrument that trades in inactive (or less active) markets. Thus, valuation adjustments for the risk of loss due to a lack of liquidity are applied to those positions to arrive at fair value. The Firm tries to ascertain the amount of uncertainty in the initial valuation based upon the degree of liquidity or illiquidity, as the case may be, of the market in which the instrument trades and makes liquidity adjustments to the financial instruments. The Firm measures the liquidity adjustment based upon the following factors: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quote; and (3) the volatility of the principal component of the financial instrument.
- Concentration valuation adjustments are necessary to reflect the cost of unwinding larger-than-normal market-size risk positions. The cost is determined based upon the size of the adverse market move that is likely to occur during the extended period required to bring a position down to a nonconcentrated level. An estimate of the period needed to reduce, without market disruption, a position to a nonconcentrated level is generally based upon the relationship of the position to the average daily trading volume of that position. Without these adjustments, larger positions would be valued at a price greater than the price at which the Firm could exit the positions.

Valuation adjustments are determined based upon established policies and are controlled by a price verification group, which is independent of the risk-taking function. Economic substantiation of models, prices, market inputs and revenue through price/input testing, as well as back-testing, is done to validate the appropriateness of the valuation methodology. Any changes to the valuation methodology are reviewed by management to ensure the changes are justified.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, the use of different methodologies to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Certain financial instruments and all nonfinancial instruments are excluded from the scope of SFAS 107. Accordingly, the fair value disclosures required by SFAS 107 provide only a partial estimate of the fair value of JPMorgan Chase. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

The following items describe the methodologies and assumptions used, by financial instrument, to determine fair value.

Financial assets

Assets for which fair value approximates carrying value

The Firm considers fair values of certain financial assets carried at cost – including cash and due from banks, deposits with banks, securities borrowed, short-term receivables and accrued interest receivable – to approximate their respective carrying values, due to their short-term nature and generally negligible credit risk.

Federal funds sold and securities purchased under resale agreements

Federal funds sold and securities purchased under resale agreements are typically short-term in nature and, as such, for a significant majority of the Firm's transactions, cost approximates carrying value. This balance sheet item also includes structured resale agreements and similar products with long-dated maturities. To estimate the fair value of these instruments, cash flows are discounted using the appropriate market rates for the applicable maturity.

Trading debt and equity instruments

The Firm's debt and equity trading instruments are carried at their estimated fair value. Quoted market prices, when available, are used to determine the fair value of trading instruments. If quoted market prices are not available, then fair values are estimated by using pricing models, quoted prices of instruments with similar characteristics, or discounted cash flows.

Securities

Fair values of actively traded securities are determined by quoted external dealer prices, while the fair values for nonactively traded securities are based upon independent broker quotations.

Derivatives
Fair value for derivatives is determined based upon the following:

- position valuation, principally based upon liquid market pricing as evidenced by exchange-traded prices, broker-dealer quotations or related input parameters, which assume all counterparties have the same credit rating;
- credit valuation adjustments to the resulting portfolio valuation, to reflect the credit quality of individual counterparties; and
- other fair value adjustments to take into consideration liquidity, concentration and other factors.

For those derivatives valued based upon models with significant unobservable market parameters, the Firm defers the initial trading profit for these financial instruments. The deferred profit is recognized in Trading revenue on a systematic basis (typically straight-line amortization over the life of the instruments) and when observable market data becomes available.

The fair value of derivative payables does not incorporate a valuation adjustment to reflect JPMorgan Chase's credit quality.

Interests in purchased receivables
The fair value of variable-rate interests in purchased receivables approximate their respective carrying amounts due to their variable interest terms and negligible credit risk. The estimated fair values for fixed-rate interests in purchased receivables are determined using a discounted cash flow analysis using appropriate market rates for similar instruments.

Loans
Fair value for loans is determined using methodologies suitable for each type of loan:

- Fair value for the wholesale loan portfolio is estimated, primarily using the cost of credit derivatives, which is adjusted to account for the differences in recovery rates between bonds, upon which the cost of credit derivatives is based, and loans.
- Fair values for consumer installment loans (including automobile financings) and consumer real estate, for which market rates for comparable loans are readily available, are based upon discounted cash flows adjusted for prepayments. The discount rates used for consumer installment loans are current rates offered by commercial banks. For consumer real estate, secondary market yields for comparable mortgage-backed securities, adjusted for risk, are used.
- Fair value for credit card receivables is based upon discounted expected cash flows. The discount rates used for credit card receivables incorporate only the effects of interest rate changes, since the expected cash flows already reflect an adjustment for credit risk.
- The fair value of loans in the held-for-sale and trading portfolios is generally based upon observable market prices and upon prices of similar instruments, including bonds, credit derivatives and loans with similar characteristics. If market prices are not available, the fair value is based upon the estimated cash flows adjusted for credit risk; that risk is discounted, using a rate appropriate for each maturity.

Other
Commodities inventory is carried at the lower of cost or fair value. For the majority of commodities inventory, fair value is determined by reference to prices in highly active and liquid markets. The fair value for other commodities inventory is determined primarily using pricing and data derived from the markets on which the underlying commodities are traded. Market prices used may be adjusted for liquidity. This caption also includes Private equity investments and MSRs. For discussion of the fair value methodology for Private equity investments, see Note 4 on pages 98–99 of this Annual Report.

For discussion of the fair value methodology for retained interests related to securitizations, see Note 14 on pages 114–118 of this Annual Report.

For discussion of the fair value methodology for MSRs, see Note 16 on pages 121–122 of this Annual Report.

Financial liabilities

Liabilities for which fair value approximates carrying value
SFAS 107 requires that the fair value for deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value. SFAS 107 does not allow for the recognition of the inherent funding value of these instruments.

Fair value of commercial paper, other borrowed funds, accounts payable and accrued liabilities is considered to approximate their respective carrying values due to their short-term nature.

Interest-bearing deposits
Fair values of interest-bearing deposits are estimated by discounting cash flows using the appropriate market rates for the applicable maturity.

Federal funds purchased and securities sold under repurchase agreements
Federal funds purchased and securities sold under repurchase agreements are typically short-term in nature; as such, for a significant majority of these transactions, cost approximates carrying value. This balance sheet item also includes structured repurchase agreements and similar products with long-dated maturities. To estimate the fair value of these instruments, the cash flows are discounted using the appropriate market rates for the applicable maturity.

Trading liabilities
For a discussion of the fair value methodology for trading debt and equity instruments and derivatives, see the related discussions in the Financial assets section of this Note.

Beneficial interests issued by consolidated VIEs
Beneficial interests issued by consolidated VIEs ("beneficial interests") are generally short-term in nature and, as such, for a significant majority of the Firm's transactions, cost approximates carrying value. The Consolidated balance sheets also include beneficial interests with long-dated maturities. The fair value of these instruments is based upon current market rates.

Long-term debt-related instruments
Fair value for long-term debt, including the junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities, is based upon current market rates and is adjusted for JPMorgan Chase's credit quality.

Lending-related commitments
Although there is no liquid secondary market for wholesale commitments, the Firm estimates the fair value of its wholesale lending-related commitments primarily using the cost of credit derivatives (which is adjusted to account for the difference in recovery rates between bonds, upon which the cost of credit derivatives is based, and loans) and loan equivalents (which represent the portion of an unused commitment expected, based upon the Firm's average portfolio historical experience, to become outstanding in the event an obligor defaults). The Firm estimates the fair value of its consumer commitments to extend credit based upon the primary market prices to originate new commitments. It is the change in current primary market prices that provides the estimate of the fair value of these commitments. On this basis, at December 31, 2006, the estimated fair value of the Firm's lending-related commitments was a liability of $0.2 billion, compared with $0.5 billion at December 31, 2005.

The following table presents the carrying value and estimated fair value of financial assets and liabilities valued under SFAS 107; accordingly, certain assets and liabilities that are not considered financial instruments are excluded from the table.

	2006			2005		
December 31, (in billions)	Carrying value	Estimated fair value	Appreciation/ (depreciation)	Carrying value	Estimated fair value	Appreciation/ (depreciation)
Financial assets						
Assets for which fair value approximates carrying value	**$ 150.5**	**$ 150.5**	**$ —**	$ 155.4	$ 155.4	$ —
Federal funds sold and securities purchased under resale agreements	**140.5**	**140.5**	**—**	134.0	134.3	0.3
Trading assets	**365.7**	**365.7**	**—**	298.4	298.4	—
Securities	**92.0**	**92.0**	**—**	47.6	47.6	—
Loans: Wholesale, net of Allowance for loan losses	**181.0**	**184.6**	**3.6**	147.7	150.2	2.5
Consumer, net of Allowance for loan losses	**294.8**	**294.8**	**—**	264.4	262.7	(1.7)
Interests in purchased receivables	**—**	**—**	**—**	29.7	29.7	—
Other	**61.8**	**62.4**	**0.6**	53.4	54.7	1.3
Total financial assets	**$ 1,286.3**	**$ 1,290.5**	**$ 4.2**	$ 1,130.6	$ 1,133.0	$ 2.4
Financial liabilities						
Liabilities for which fair value approximates carrying value	**$ 259.9**	**$ 259.9**	**$ —**	$ 241.0	$ 241.0	$ —
Interest-bearing deposits	**498.3**	**498.4**	**(0.1)**	411.9	411.7	0.2
Federal funds purchased and securities sold under repurchase agreements	**162.2**	**162.2**	**—**	125.9	125.9	—
Trading liabilities	**148.0**	**148.0**	**—**	145.9	145.9	—
Beneficial interests issued by consolidated VIEs	**16.2**	**16.2**	**—**	42.2	42.1	0.1
Long-term debt-related instruments	**145.6**	**147.1**	**(1.5)**	119.9	120.6	(0.7)
Total financial liabilities	**$ 1,230.2**	**$ 1,231.8**	**$ (1.6)**	$ 1,086.8	$ 1,087.2	$ (0.4)
Net appreciation			**$ 2.6**			$ 2.0

Note 32 – International operations

The following table presents income statement information of JPMorgan Chase by major geographic area. The Firm defines international activities as business transactions that involve customers residing outside of the U.S., and the information presented below is based primarily upon the domicile of the customer or the location from which the customer relationship is managed. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 33 on pages 139–141 of this Annual Report.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the U.S.

Year ended December 31, (in millions)	Revenue[b]	Expense[c]	Income from continuing operations before income taxes	Net income
2006				
Europe/Middle East and Africa	**$ 11,238**	**$ 7,367**	**$ 3,871**	**$ 2,774**
Asia and Pacific	**3,144**	**2,566**	**578**	**400**
Latin America and the Caribbean	**1,328**	**806**	**522**	**333**
Other	**381**	**240**	**141**	**90**
Total international	**16,091**	**10,979**	**5,112**	**3,597**
Total U.S.	**45,346**	**30,572**	**14,774**	**10,847**
Total	**$ 61,437**	**$ 41,551**	**$ 19,886**	**$ 14,444**
2005				
Europe/Middle East and Africa	$ 7,549	$ 5,379	$ 2,170	$ 1,547
Asia and Pacific	2,806	2,024	782	509
Latin America and the Caribbean	960	493	467	285
Other	165	89	76	44
Total international	11,480	7,985	3,495	2,385
Total U.S.	42,268	33,924	8,344	6,098
Total	$ 53,748	$ 41,909	$ 11,839	$ 8,483
2004[a]				
Europe/Middle East and Africa	$ 6,439	$ 4,587	$ 1,852	$ 1,305
Asia and Pacific	2,597	1,742	855	547
Latin America and the Caribbean	812	405	407	255
Other	112	77	35	25
Total international	9,960	6,811	3,149	2,132
Total U.S.	32,412	29,705	2,707	2,334
Total	$ 42,372	$ 36,516	$ 5,856	$ 4,466

(a) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.
(b) Revenue is composed of Net interest income and Noninterest revenue.
(c) Expense is composed of Noninterest expense and Provision for credit losses.

Note 33 – Business segments

JPMorgan Chase is organized into six major reportable business segments — Investment Bank, Retail Financial Services, Card Services, Commercial Banking ("CB"), Treasury & Securities Services and Asset Management, as well as a Corporate segment. The segments are based upon the products and services provided or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 32–33 of this Annual Report. For a further discussion concerning JPMorgan Chase's business segments, see Business segment results on pages 34–35 of this Annual Report.

Business segment financial disclosures

Effective January 1, 2006, JPMorgan Chase modified certain of its financial disclosures to reflect more closely the manner in which the Firm's business segments are managed and to provide improved comparability with competitors. These financial disclosure revisions are reflected in this Annual Report, and the financial information for prior periods has been revised to reflect the disclosure changes as if they had been in effect throughout all periods reported. A summary of the changes are described below.

Reported versus Operating Basis Changes

The presentation of operating earnings that excluded merger costs and material litigation reserve charges and recoveries from reported results has been eliminated. These items had been excluded previously from operating results because they were deemed nonrecurring; they are now included in the Corporate business segment's results. In addition, trading-related net interest income is no longer reclassified from Net interest income to trading revenue. As a result of these changes, effective January 1, 2006, management has discontinued reporting on an "operating" basis.

Business Segment Disclosures

Various wholesale banking clients, together with the related balance sheet and income statement items, were transferred among CB, IB and TSS. The primary client transfer was corporate mortgage finance from CB to IB and TSS.

Capital allocation changes

Effective January 1, 2006, the Firm refined its methodology for allocating capital (i.e., equity) to the business segments. As a result of this refinement, RFS, CS, CB, TSS and AM have higher amounts of capital allocated to them, commencing in the first quarter of 2006. The revised methodology considers for each line of business, among other things, goodwill associated with such business segment's acquisitions since the Merger. In management's view, the revised methodology assigns responsibility to the lines of business to generate returns on the amount of capital supporting acquisition-related goodwill. As part of this refinement in the capital allocation methodology, the Firm assigned to the Corporate segment an amount of equity capital equal to the then-current book value of goodwill from and prior to the Merger. As prior periods have not been revised to reflect the new capital allocations, capital allocated to the respective lines of business for 2006 is not comparable to prior periods and certain business metrics, such as ROE, are not comparable to the current presentation. The Firm may revise its equity capital allocation methodology again in the future.

Discontinued operations

As a result of the transaction with The Bank of New York, selected corporate trust businesses have been transferred from TSS to the Corporate segment and reported in discontinued operations for all periods reported.

Segment results

The following table provides a summary of the Firm's segment results for 2006, 2005 and 2004 on a managed basis. The impact of credit card securitizations and tax-equivalent adjustments have been included in Reconciling items so that the total Firm results are on a reported basis. The first six months of 2004 reflect heritage JPMorgan Chase–only results and have been restated to reflect the current business segment organization and reporting classifications.

Segment results and reconciliation[a] (table continued on next page)

Year ended December 31,[b]	Investment Bank			Retail Financial Services[e]			Card Services[f]			Commercial Banking		
(in millions, except ratios)	**2006**	2005	2004	**2006**	2005	2004	**2006**	2005	2004	**2006**	2005	2004
Noninterest revenue	**$ 17,778**	$ 13,010	$ 9,337	**$ 4,660**	$ 4,625	$ 3,077	**$ 2,944**	$ 3,563	$ 2,371	**$ 1,073**	$ 986	$ 685
Net interest income	**499**	1,603	3,296	**10,165**	10,205	7,714	**11,801**	11,803	8,374	**2,727**	2,502	1,593
Total net revenue	**18,277**	14,613	12,633	**14,825**	14,830	10,791	**14,745**	15,366	10,745	**3,800**	3,488	2,278
Provision for credit losses	**191**	(838)	(640)	**561**	724	449	**4,598**	7,346	4,851	**160**	73	41
Credit reimbursement (to)/from TSS[c]	**121**	154	90	**—**	—	—	**—**	—	—	**—**	—	—
Noninterest expense[d]	**12,304**	9,749	8,709	**8,927**	8,585	6,825	**5,086**	4,999	3,883	**1,979**	1,856	1,326
Income (loss) from continuing operations before income tax expense	**5,903**	5,856	4,654	**5,337**	5,521	3,517	**5,061**	3,021	2,011	**1,661**	1,559	911
Income tax expense (benefit)	**2,229**	2,183	1,698	**2,124**	2,094	1,318	**1,855**	1,114	737	**651**	608	350
Income (loss) from continuing operations	**3,674**	3,673	2,956	**3,213**	3,427	2,199	**3,206**	1,907	1,274	**1,010**	951	561
Income (loss) from discontinued operations	—	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Net income (loss)	**$ 3,674**	$ 3,673	$ 2,956	**$ 3,213**	$ 3,427	$ 2,199	**$ 3,206**	$ 1,907	$ 1,274	**$ 1,010**	$ 951	$ 561
Average equity	**$ 20,753**	$ 20,000	$ 17,290	**$ 14,629**	$ 13,383	$ 9,092	**$ 14,100**	$ 11,800	$ 7,608	**$ 5,702**	$ 3,400	$ 2,093
Average assets	**647,569**	599,761	474,436	**231,566**	226,368	185,928	**148,153**	141,933	94,741	**57,754**	52,358	32,547
Return on average equity	**18%**	18%	17%	**22%**	26%	24%	**23%**	16%	17%	**18%**	28%	27%
Overhead ratio	**67**	67	69	**60**	58	63	**34**	33	36	**52**	53	58

(a) In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's lines' of business results on a "managed basis," which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications that do not have any impact on Net income as reported by the lines of business or by the Firm as a whole.

(b) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

(c) TSS reimburses the IB for credit portfolio exposures the IB manages on behalf of clients the segments share. At the time of the Merger, the reimbursement methodology was revised to be based upon pretax earnings, net of the cost of capital related to those exposures. Prior to the Merger, the credit reimbursement was based upon pretax earnings, plus the allocated capital associated with the shared clients.

(d) Includes Merger costs which are reported in the Corporate segment. Merger costs attributed to the business segments for 2006, 2005 and 2004 were as follows:

Year ended December 31, (in millions)	**2006**	2005	2004[b]
Investment Bank	**$ 2**	$ 32	$ 74
Retail Financial Services	**24**	133	201
Card Services	**29**	222	79
Commercial Banking	**1**	3	23
Treasury & Securities Services	**117**	95	68
Asset Management	**23**	60	31
Corporate	**109**	177	889

(e) Effective January 1, 2006, RFS was reorganized into three businesses: Regional Banking, Mortgage Banking and Auto Finance.

(f) Managed results for CS exclude the impact of credit card securitizations on Total net revenue, Provision for credit losses and Average assets, as JPMorgan Chase treats the sold receivables as if they were still on the balance sheet in evaluating credit performance and the overall performance of CS' entire managed credit card portfolio as operations are funded, and decisions are made about allocating resources such as employees and capital, based upon managed information. These adjustments are eliminated in Reconciling items to arrive at the Firm's reported U.S. GAAP results. The related securitization adjustments were as follows:

Year ended December 31, (in millions)	**2006**	2005	2004[b]
Noninterest revenue	**$ (3,509)**	$ (2,718)	$ (2,353)
Net interest income	**5,719**	6,494	5,251
Provision for credit losses	**2,210**	3,776	2,898
Average assets	**65,266**	67,180	51,084

(table continued from previous page)

Treasury & Securities Services			Asset Management			Corporate			Reconciling items[f][h]			Total		
2006	2005	2004	**2006**	2005	2004	**2006**	2005	2004	**2006**	2005	2004	**2006**	2005	2004
$ 4,039	$ 3,659	$ 2,973	**$ 5,816**	$ 4,583	$ 3,383	**$ 1,052**	$ 1,620	$ 1,983	**$ 2,833**	$ 2,147	$ 2,036	**$ 40,195**	$ 34,193	$ 25,845
2,070	1,880	1,225	**971**	1,081	796	**(1,044)**	(2,756)	(1,214)	**(5,947)**	(6,763)	(5,257)	**21,242**	19,555	16,527
6,109	5,539	4,198	**6,787**	5,664	4,179	**8**	(1,136)	769	**(3,114)**	(4,616)	(3,221)	**61,437**	53,748	42,372
(1)	—	7	**(28)**	(56)	(14)	**(1)**	10	748[g]	**(2,210)**	(3,776)	(2,898)	**3,270**	3,483	2,544
(121)	(154)	(90)	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
4,266	4,050	3,726	**4,578**	3,860	3,133	**1,141**	5,327	6,370	**—**	—	—	**38,281**	38,426	33,972
1,723	1,335	375	**2,237**	1,860	1,060	**(1,132)**	(6,473)	(6,349)	**(904)**	(840)	(323)	**19,886**	11,839	5,856
633	472	98	**828**	644	379	**(1,179)**	(2,690)	(2,661)	**(904)**	(840)	(323)	**6,237**	3,585	1,596
1,090	863	277	**1,409**	1,216	681	**47**	(3,783)	(3,688)	**—**	—	—	**13,649**	8,254	4,260
—	—	—	**—**	—	—	**795**	229	206	**—**	—	—	**795**	229	206
$ 1,090	$ 863	$ 277	**$ 1,409**	$ 1,216	$ 681	**$ 842**	$ (3,554)	$ (3,482)	**$ —**	$ —	$ —	**$ 14,444**	$ 8,483	$ 4,466
$ 2,285	$ 1,525	$ 1,989	**$ 3,500**	$ 2,400	$ 3,902	**$ 49,728**	$ 52,999	$ 33,667	**$ —**	$ —	$ —	**$ 110,697**	$105,507	$ 75,641
31,760	28,206	24,815	**43,635**	41,599	37,751	**218,623**	162,021	163,422	**(65,266)**	(67,180)	(51,084)	**1,313,794**	1,185,066	962,556
48%	57%	14%	**40%**	51%	17%	**NM**	NM	NM	**NM**	NM	NM	**13%**	8%	6%
70	73	89	**67**	68	75	**NM**	NM	NM	**NM**	NM	NM	**62**	71	80

(g) Includes $858 million of accounting policy conformity adjustments consisting of approximately $1.4 billion related to the decertification of the seller's retained interest in credit card securitizations, partially offset by a benefit of $584 million related to conforming wholesale and consumer provision methodologies for the combined Firm.

(h) Segment managed results reflect revenues on a tax-equivalent basis with the corresponding income tax impact recorded within Income tax expense. These adjustments are eliminated in Reconciling items to arrive at the Firm's reported U.S. GAAP results.Tax-equivalent adjustments were as follows for the years ended December 31, 2006, 2005 and 2004:

Year ended December 31, (in millions)	**2006**	2005	2004[b]
Noninterest income	**$ 676**	$ 571	$ 317
Net interest income	**228**	269	6
Income tax expense	**904**	840	323

Note 34 – Parent company

Parent company – statements of income

Year ended December 31, (in millions)	2006	2005	2004[c]
Income			
Dividends from bank and bank holding company subsidiaries	**$ 2,935**	$ 2,361	$ 1,208
Dividends from nonbank subsidiaries[a]	**1,999**	791	773
Interest income from subsidiaries	**3,612**	2,369	1,370
Other interest income	**273**	209	137
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**220**	246	833
Nonbank	**739**	462	499
Other income	**(206)**	13	204
Total income	**9,572**	6,451	5,024
Expense			
Interest expense to subsidiaries[a]	**1,025**	846	603
Other interest expense	**4,536**	3,076	1,834
Compensation expense	**519**	369	353
Other noninterest expense	**295**	496	1,105
Total expense	**6,375**	4,787	3,895
Income before income tax benefit and undistributed net income of subsidiaries	**3,197**	1,664	1,129
Income tax benefit	**982**	852	556
Equity in undistributed net income (loss) of subsidiaries	**10,265**	5,967	2,781
Net income	**$ 14,444**	$ 8,483	$ 4,466

Parent company – balance sheets

December 31, (in millions)	2006	2005
Assets		
Cash and due from banks, primarily with bank subsidiaries	**$ 756**	$ 461
Deposits with banking subsidiaries	**18,759**	9,452
Securities purchased under resale agreements, primarily with nonbank subsidiaries	**—**	24
Trading assets	**7,975**	7,548
Available-for-sale securities	**257**	285
Loans	**971**	338
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**22,765**	22,673
Nonbank	**34,282**	31,342
Investments (at equity) in subsidiaries:		
Bank and bank holding company	**119,017**	110,745
Nonbank[a]	**22,552**	21,367
Goodwill and other intangibles	**853**	804
Other assets	**11,983**	10,553
Total assets	**$ 240,170**	$ 215,592
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries[a]	**$ 19,183**	$ 16,511
Other borrowed funds, primarily commercial paper	**21,011**	15,675
Other liabilities	**7,605**	7,721
Long-term debt[b]	**76,581**	68,474
Total liabilities	**124,380**	108,381
Stockholders' equity	**115,790**	107,211
Total liabilities and stockholders' equity	**$ 240,170**	$ 215,592

Parent company – statements of cash flows

Year ended December 31, (in millions)	2006	2005	2004[c]
Operating activities			
Net income	**$14,444**	$ 8,483	$ 4,466
Less: Net income of subsidiaries	**15,199**	9,119	4,762
Parent company net loss	**(755)**	(636)	(296)
Add: Cash dividends from subsidiaries[a]	**4,934**	2,891	1,964
Other, net	**(185)**	(130)	(81)
Net cash provided by operating activities	**3,994**	2,125	1,587
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**(9,307)**	1,251	1,851
Securities purchased under resale agreements, primarily with nonbank subsidiaries	**24**	(24)	355
Loans	**(633)**	(176)	407
Advances to subsidiaries	**(3,032)**	(483)	(5,772)
Investments (at equity) in subsidiaries	**579**	(2,949)	(4,015)
Other, net	**(1)**	34	11
Available-for-sale securities:			
Purchases	**—**	(215)	(392)
Proceeds from sales and maturities	**29**	124	114
Cash received in business acquisitions	**—**	—	4,608
Net cash used in investing activities	**(12,341)**	(2,438)	(2,833)
Financing activities			
Net change in borrowings from subsidiaries[a]	**2,672**	2,316	941
Net change in other borrowed funds	**5,336**	625	(1,510)
Proceeds from the issuance of long-term debt	**18,153**	15,992	12,816
Repayments of long-term debt	**(10,557)**	(10,864)	(6,149)
Net proceeds from the issuance of stock and stock-related awards	**1,659**	682	848
Excess tax benefits related to stock-based compensation	**302**	—	—
Redemption of preferred stock	**(139)**	(200)	(670)
Treasury stock purchased	**(3,938)**	(3,412)	(738)
Cash dividends paid	**(4,846)**	(4,878)	(3,927)
Net cash provided by financing activities	**8,642**	261	1,611
Net increase (decrease) in cash and due from banks	**295**	(52)	365
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	**461**	513	148
Cash and due from banks at the end of the year, primarily with bank subsidiaries	**$ 756**	$ 461	$ 513
Cash interest paid	**$ 5,485**	$ 3,838	$ 2,383
Cash income taxes paid	**$ 3,599**	$ 3,426	$ 701

(a) Subsidiaries include trusts that issued guaranteed capital debt securities ("issuer trusts"). As a result of FIN 46R, the Parent deconsolidated these trusts in 2003. The Parent received dividends of $23 million, $21 million and $15 million from the issuer trusts in 2006, 2005 and 2004, respectively. For further discussion on these issuer trusts, see Note 19 on page 125 of this Annual Report.

(b) At December 31, 2006, debt that contractually matures in 2007 through 2011 totaled $10.6 billion, $12.4 billion, $13.7 billion, $4.3 billion and $13.5 billion, respectively.

(c) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results. For further discussion of the Merger, see Note 2 on pages 95–96 of this Annual Report.

Selected quarterly financial data (unaudited)

(in millions, except per share, ratio and headcount data)	2006				2005			
As of or for the period ended	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Selected income statement data								
Noninterest revenue	**$ 10,362**	**$ 10,021**	**$ 9,762**	**$ 10,050**	$ 8,804	$ 9,482	$ 7,616	$ 8,291
Net interest income	**5,692**	**5,379**	**5,178**	**4,993**	4,678	4,783	4,932	5,162
Total net revenue	**16,054**	**15,400**	**14,940**	**15,043**	13,482	14,265	12,548	13,453
Provision for credit losses	**1,134**	**812**	**493**	**831**	1,224	1,245	587	427
Total noninterest expense	**9,746**	**9,651**	**9,236**	**9,648**	8,430	9,359	10,798	9,839
Income from continuing operations before income tax expense	**5,174**	**4,937**	**5,211**	**4,564**	3,828	3,661	1,163	3,187
Income tax expense	**1,268**	**1,705**	**1,727**	**1,537**	1,186	1,192	226	981
Income from continuing operations (after-tax)	**3,906**	**3,232**	**3,484**	**3,027**	2,642	2,469	937	2,206
Income from discontinued operations (after-tax)[a]	**620**	**65**	**56**	**54**	56	58	57	58
Net income	**$ 4,526**	**$ 3,297**	**$ 3,540**	**$ 3,081**	$ 2,698	$ 2,527	$ 994	$ 2,264
Per common share								
Basic earnings per share								
Income from continuing operations	**$ 1.13**	**$ 0.93**	**$ 1.00**	**$ 0.87**	$ 0.76	$ 0.71	$ 0.27	$ 0.63
Net income	**1.31**	**0.95**	**1.02**	**0.89**	0.78	0.72	0.28	0.64
Diluted earnings per share								
Income from continuing operations	**1.09**	**0.90**	**0.98**	**0.85**	0.74	0.70	0.26	0.62
Net income	**1.26**	**0.92**	**0.99**	**0.86**	0.76	0.71	0.28	0.63
Cash dividends declared per share	**0.34**	**0.34**	**0.34**	**0.34**	0.34	0.34	0.34	0.34
Book value per share	**33.45**	**32.75**	**31.89**	**31.19**	30.71	30.26	29.95	29.78
Common shares outstanding								
Average: Basic	**3,465**	**3,469**	**3,474**	**3,473**	3,472	3,485	3,493	3,518
Diluted	**3,579**	**3,574**	**3,572**	**3,571**	3,564	3,548	3,548	3,570
Common shares at period end	**3,462**	**3,468**	**3,471**	**3,473**	3,487	3,503	3,514	3,525
Selected ratios								
Return on common equity ("ROE")								
Income from continuing operations	**14%**	**11%**	**13%**	**11%**	10%	9%	4%	8%
Net income	**16**	**12**	**13**	**12**	10	9	4	9
Return on assets ("ROA")								
Income from continuing operations	**1.14**	**0.98**	**1.05**	**0.98**	0.87	0.82	0.32	0.77
Net income	**1.32**	**1.00**	**1.06**	**1.00**	0.89	0.84	0.34	0.79
Tier 1 capital ratio	**8.7**	**8.6**	**8.5**	**8.5**	8.5	8.2	8.2	8.6
Total capital ratio	**12.3**	**12.1**	**12.0**	**12.1**	12.0	11.3	11.3	11.9
Tier 1 leverage ratio	**6.2**	**6.3**	**5.8**	**6.1**	6.3	6.2	6.2	6.3
Overhead ratio	**61**	**63**	**62**	**64**	63	66	86	73
Selected balance sheet data (period-end)								
Total assets	**$ 1,351,520**	**$ 1,338,029**	**$1,328,001**	**$1,273,282**	$1,198,942	$1,203,033	$1,171,283	$1,178,305
Securities	**91,975**	**86,548**	**78,022**	**67,126**	47,600	68,697	58,573	75,251
Loans	**483,127**	**463,544**	**455,104**	**432,081**	419,148	420504	416,025	402,669
Deposits	**638,788**	**582,115**	**593,716**	**584,465**	554,991	535,123	534,640	531,379
Long-term debt	**133,421**	**126,619**	**125,280**	**112,133**	108,357	101,853	101,182	99,329
Total stockholders' equity	**115,790**	**113,561**	**110,684**	**108,337**	107,211	106,135	105,385	105,340
Credit quality metrics								
Allowance for credit losses	**$ 7,803**	**$ 7,524**	**$ 7,500**	**$ 7,659**	$ 7,490	$ 7,615	$ 7,233	$ 7,423
Nonperforming assets[b]	**2,341**	**2,300**	**2,384**	**2,348**	2,590	2,839	2,832	2,949
Allowance for loan losses to total loans[c]	**1.70%**	**1.65%**	**1.69%**	**1.83%**	1.84%	1.86%	1.76%	1.82%
Net charge-offs	**$ 930**	**$ 790**	**$ 654**	**$ 668**	$ 1,360	$ 870	$ 773	$ 816
Net charge-off rate[c]	**0.84%**	**0.74%**	**0.64%**	**0.69%**	1.39%	0.89%	0.82%	0.88%
Wholesale net charge-off (recovery) rate[c]	**0.07**	**(0.03)**	**(0.05)**	**(0.06)**	0.07	(0.12)	(0.16)	(0.03)
Managed Card net charge-off rate	**3.45**	**3.58**	**3.28**	**2.99**	6.39	4.70	4.87	4.83
Headcount	**174,360**	**171,589**	**172,423**	**170,787**	168,847	168,955	168,708	164,381
Share price[d]								
High	**$ 49.00**	**$ 47.49**	**$ 46.80**	**$ 42.43**	$ 40.56	$ 35.95	$ 36.50	$ 39.69
Low	**45.51**	**40.40**	**39.33**	**37.88**	32.92	33.31	33.35	34.32
Close	**48.30**	**46.96**	**42.00**	**41.64**	39.69	33.93	35.32	34.60
Market capitalization	**167,199**	**162,835**	**145,764**	**144,614**	138,387	118,871	124,112	121,975

(a) On October 1, 2006, the Firm completed the exchange of selected corporate trust businesses including trustee, paying agent, loan agency and document management services for the consumer, business banking and middle-market banking businesses of The Bank of New York. The results of operations of these corporate trust businesses are being reported as discontinued operations for each of the periods presented.

(b) Excludes wholesale held-for-sale ("HFS") loans purchased as part of the Investment Bank's proprietary activities.

(c) Excluded from the allowance coverage ratios were end-of-period loans held-for-sale; and excluded from the net charge-off rates were average loans held-for-sale.

(d) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.

Selected annual financial data (unaudited)

(in millions, except per share, headcount and ratio data)				Heritage JPMorgan Chase only	
As of or for the year ended December 31,	**2006**	2005	2004[e]	2003	2002
Selected income statement data					
Noninterest revenue	**$ 40,195**	$ 34,193	$ 25,845	$ 19,996	$ 17,064
Net interest income	**21,242**	19,555	16,527	12,807	12,012
Total net revenue	**61,437**	53,748	42,372	32,803	29,076
Provision for credit losses	**3,270**	3,483	2,544	1,540	4,331
Total noninterest expense	**38,281**	38,426	33,972	21,490	22,471
Income from continuing operations before income tax expense	**19,886**	11,839	5,856	9,773	2,274
Income tax expense	**6,237**	3,585	1,596	3,209	760
Income from continuing operations	**13,649**	8,254	4,260	6,564	1,514
Income from discontinued operations[a]	**795**	229	206	155	149
Net income	**$ 14,444**	$ 8,483	$ 4,466	$ 6,719	$ 1,663
Per common share					
Basic earnings per share					
Income from continuing operations	**$ 3.93**	$ 2.36	$ 1.51	$ 3.24	$ 0.74
Net income	**4.16**	2.43	1.59	3.32	0.81
Diluted earnings per share					
Income from continuing operations	**$ 3.82**	$ 2.32	$ 1.48	$ 3.17	$ 0.73
Net income	**4.04**	2.38	1.55	3.24	0.80
Cash dividends declared per share	**1.36**	1.36	1.36	1.36	1.36
Book value per share	**33.45**	30.71	29.61	22.10	20.66
Common shares outstanding					
Average: Basic	**3,470**	3,492	2,780	2,009	1,984
Diluted	**3,574**	3,557	2,851	2,055	2,009
Common shares at period-end	**3,462**	3,487	3,556	2,043	1,999
Selected ratios					
Return on common equity ("ROE"):					
Income from continuing operations	**12%**	8%	6%	15%	4%
Net income	**13**	8	6	16	4
Return on assets ("ROA"):					
Income from continuing operations	**1.04**	0.70	0.44	0.85	0.21
Net income	**1.10**	0.72	0.46	0.87	0.23
Tier 1 capital ratio	**8.7**	8.5	8.7	8.5	8.2
Total capital ratio	**12.3**	12.0	12.2	11.8	12.0
Overhead ratio	**62**	71	80	66	77
Selected balance sheet data (period-end)					
Total assets	**$ 1,351,520**	$ 1,198,942	$ 1,157,248	$ 770,912	$ 758,800
Securities	**91,975**	47,600	94,512	60,244	84,463
Loans	**483,127**	419,148	402,114	214,766	216,364
Deposits	**638,788**	554,991	521,456	326,492	304,753
Long-term debt	**133,421**	108,357	95,422	48,014	39,751
Common stockholders' equity	**115,790**	107,072	105,314	45,145	41,297
Total stockholders' equity	**115,790**	107,211	105,653	46,154	42,306
Credit quality metrics					
Allowance for credit losses	**$ 7,803**	$ 7,490	$ 7,812	$ 4,847	$ 5,713
Nonperforming assets[b]	**2,341**	2,590	3,231	3,161	4,821
Allowance for loan losses to total loans[c]	**1.70%**	1.84%	1.94%	2.33%	2.80%
Net charge-offs	**$ 3,042**	$ 3,819	$ 3,099	$ 2,272	$ 3,676
Net charge-off rate[c]	**0.73%**	1.00%	1.08%	1.19%	1.90%
Wholesale net charge-off (recovery) rate[c]	**(0.01)**	(0.06)	0.18	0.97	NA
Managed Card net charge-off rate	**3.33**	5.21	5.27	5.90	5.90
Headcount	**174,360**	168,847	160,968	96,367	97,124
Share price[d]					
High	**$ 49.00**	$ 40.56	$ 43.84	$ 38.26	$ 39.68
Low	**37.88**	32.92	34.62	20.13	15.26
Close	**48.30**	39.69	39.01	36.73	24.00
Market capitalization	**167,199**	138,387	138,727	75,025	47,969

(a) On October 1, 2006, the Firm completed the exchange of selected corporate trust businesses including trustee, paying agent, loan agency and document management services for the consumer, business banking and middle-market banking businesses of The Bank of New York. The results of operations of these corporate trust businesses are being reported as discontinued operations for each of the periods presented.

(b) Excludes wholesale held-for-sale ("HFS") loans purchased as part of the Investment Bank's proprietary activities.

(c) Excluded from the allowance coverage ratios were end-of-period loans held-for-sale; and excluded from the net charge-off rates were average loans held-for-sale.

(d) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.

(e) 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

NA – Data for 2002 is not available on a comparable basis.

ACH: Automated Clearing House.

APB 25: Accounting Principles Board Opinion No. 25. "Accounting for Stock Issued to Employees."

Assets under management: Represent assets actively managed by Asset Management on behalf of institutional, private banking, private client services and retail clients. Excludes assets managed by American Century Companies, Inc., in which the Firm has a 43% ownership interest.

Assets under supervision: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Average managed assets: Refers to total assets on the Firm's balance sheet plus credit card receivables that have been securitized.

Beneficial interest issued by consolidated VIEs: Represents the interest of third-party holders of debt/equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates under FIN 46R. The underlying obligations of the VIEs consist of short-term borrowings, commercial paper and long-term debt. The related assets consist of trading assets, available-for-sale securities, loans and other assets.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Contractual credit card charge-off: In accordance with the Federal Financial Institutions Examination Council policy, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification of the filing of bankruptcy, whichever is earlier.

Credit derivatives: Contractual agreements that provide protection against a credit event of one or more referenced credits. The nature of a credit event is established by the protection buyer and protection seller at the inception of a transaction, and such events include bankruptcy, insolvency or failure to meet payment obligations when due. The buyer of the credit derivative pays a periodic fee in return for a payment by the protection seller upon the occurrence, if any, of a credit event.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again. The duration of a credit cycle can vary from a couple of years to several years.

Discontinued operations: A component of an entity that is classified as held-for-sale or that has been disposed of from ongoing operations in its entirety or piecemeal, and for which the entity will not have any significant, continuing involvement. A discontinued operation may be a separate major business segment, a component of a major business segment or a geographical area of operations of the entity that can be separately distinguished operationally and for financial reporting purposes.

EITF: Emerging Issues Task Force.

EITF Issue 02-3: "Issues Involved in Accounting for Derivative Contracts Held for Trading Purposes and Contracts Involved in Energy Trading and Risk Management Activities."

EITF Issue 99-20: "Recognition of Interest Income and Impairment on Purchased and Retained Beneficial Interests in Securitized Financial Assets."

FASB: Financial Accounting Standards Board.

FIN 39: FASB Interpretation No. 39, "Offsetting of Amounts Related to Certain Contracts – an interpretation of APB Opinion No. 10 and FASB Statement No. 105."

FIN 41: FASB Interpretation No. 41, "Offsetting of Amounts Related to Certain Repurchase and Reverse Repurchase Agreements – an interpretation of APB Opinion No. 10 and a Modification of FASB Interpretation No. 39."

FIN 45: FASB Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, including Indirect Guarantees of Indebtedness of Others – an interpretation of FASB Statements No. 5, 57 and 107 and a rescission of FASB Interpretation No. 34."

FIN 46R: FASB Interpretation No. 46 (revised December 2003), "Consolidation of Variable Interest Entities – an interpretation of ARB No. 51."

FIN 47: FASB Interpretation No. 47, "Accounting for Conditional Asset Retirement Obligations – an interpretation of FASB Statement No. 143."

FIN 48: FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes – an interpretation of FASB Statement No. 109."

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

FSP: FASB Staff Position.

FSP FIN 46(R)-6: "Determining the Variability to Be Considered in Applying FASB Interpretation No. 46(R)."

FSP FAS 123(R)-3: "Transition Election Related to Accounting for the Tax Effects of Share-Based Payment Awards."

FSP FAS 13-2: "Accounting for a Change or Projected Change in the Timing of Cash Flows Relating to Income Taxes Generated by a Leveraged Lease Transaction."

Interchange income: A fee that is paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Interests in purchased receivables: Represent an ownership interest in cash flows of an underlying pool of receivables transferred by a third-party seller into a bankruptcy-remote entity, generally a trust.

Investment-grade: An indication of credit quality based upon JPMorgan Chase's internal risk assessment system. "Investment-grade" generally represents a risk profile similar to a rating of a BBB-/Baa3 or better, as defined by independent rating agencies.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications related to credit card securitizations and taxable equivalents. Management uses this non-GAAP financial measure at the segment level because it believes this provides information to investors in understanding the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Managed credit card receivables: Refers to credit card receivables on the Firm's balance sheet plus credit card receivables that have been securitized.

Mark-to-market exposure: A measure, at a point in time, of the value of a derivative or foreign exchange contract in the open market. When the mark-to-market value is positive, it indicates the counterparty owes JPMorgan Chase and, therefore, creates a repayment risk for the Firm. When the mark-to-market value is negative, JPMorgan Chase owes the counterparty. In this situation, the Firm does not have repayment risk.

Master netting agreement: An agreement between two counterparties that have multiple derivative contracts with each other that provides for the net settlement of all contracts through a single payment, in a single currency, in the event of default on or termination of any one contract. See FIN 39.

MSR risk management revenue: Includes changes in MSR asset fair value due to inputs or assumptions in model and derivative valuation adjustments.

Material legal proceedings: Refers to certain specific litigation originally discussed in the section "Legal Proceedings" in the Firm's Annual Report on Form 10-K for the year ended December 31, 2002. Of such legal proceedings, some lawsuits related to Enron, WorldCom and the IPO allocation allegations remain outstanding as of the date of this Annual Report, as discussed in Part I, Item 3, Legal proceedings in the Firm's Annual Report on Form 10-K for the year ended December 31, 2006, to which reference is hereby made; other such legal proceedings have been resolved.

NA: Data is not applicable or available for the period presented.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

OPEB: Other postretirement employee benefits.

Overhead ratio: Noninterest expense as a percentage of Total net revenue.

Principal transactions: Represents Trading revenue (which includes physical commodities carried at the lower of cost or fair value), primarily in the IB, plus Private equity gains (losses), primarily in the Private Equity business of Corporate.

Reported basis: Financial statements prepared under accounting principles generally accepted in the United States of America ("U.S. GAAP"). The reported basis includes the impact of credit card securitizations, but excludes the impact of taxable-equivalent adjustments.

Return on common equity less goodwill: Represents net income applicable to common stock divided by total average common equity (net of goodwill). The Firm uses return on equity less goodwill, a non-GAAP financial measure, to evaluate the operating performance of the Firm. The Firm also utilizes this measure to facilitate operating comparisons to other competitors.

SFAS: Statement of Financial Accounting Standards.

SFAS 5: "Accounting for Contingencies."

SFAS 13: "Accounting for Leases."

SFAS 52: "Foreign Currency Translation."

SFAS 87: "Employers' Accounting for Pensions."

SFAS 88: "Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits."

SFAS 106: "Employers' Accounting for Postretirement Benefits Other Than Pensions."

SFAS 107: "Disclosures about Fair Value of Financial Instruments."

SFAS 109: "Accounting for Income Taxes."

SFAS 114: "Accounting by Creditors for Impairment of a Loan – an amendment of FASB Statements No. 5 and 15."

SFAS 115: "Accounting for Certain Investments in Debt and Equity Securities."

SFAS 123: "Accounting for Stock-Based Compensation."

SFAS 123R: "Share-Based Payment."

SFAS 128: "Earnings per Share."

SFAS 133: "Accounting for Derivative Instruments and Hedging Activities."

SFAS 138: "Accounting for Certain Derivative Instruments and Certain Hedging Activities – an amendment of FASB Statement No. 133."

SFAS 140: "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities – a replacement of FASB Statement No. 125."

SFAS 142: "Goodwill and Other Intangible Assets."

SFAS 143: "Accounting for Asset Retirement Obligations."

SFAS 149: "Amendment of Statement No. 133 on Derivative Instruments and Hedging Activities."

SFAS 155: "Accounting for Certain Hybrid Financial Instruments – an amendment of FASB Statements No. 133 and 140."

SFAS 156: "Accounting for Servicing of Financial Assets – an amendment of FASB Statement No. 140."

SFAS 157: "Fair Value Measurements."

SFAS 158: "Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans – an amendment of FASB Statements No. 87, 88, 106, and 132(R)."

SFAS 159: "The Fair Value Option for Financial Assets and Financial Liabilities – Including an amendment of FASB Statement No. 115."

Staff Accounting Bulletin ("SAB") 107: "Application of Statement of Financial Accounting Standards No. 123 (revised 2004), Share-Based Payment."

Statement of Position ("SOP") 98-1: "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use."

Stress testing: A scenario that measures market risk under unlikely but plausible events in abnormal markets.

Transactor loan: Loan in which the outstanding balance is paid in full by payment due date.

Unaudited: The financial statements and information included throughout this document, which are labeled unaudited, have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion thereon.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. government and federal agency obligations: Obligations of the U.S. government or an instrumentality of the U.S. government whose obligations are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

Value-at-risk ("VAR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the Securities and Exchange Commission ("SEC"). In addition, the Firm's senior management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. Factors that could cause this difference – many of which are beyond the Firm's control – include the following: local, regional and international business, political or economic conditions; changes in trade, monetary and fiscal policies and laws; technological changes instituted by the Firm and by other entities which may affect the Firm's business; mergers and acquisitions, including the Firm's ability to integrate acquisitions; ability of the Firm to develop new products and services; acceptance of new products and services and the ability of the Firm to increase market share; the ability of the Firm to control expenses; competitive pressures; changes in laws and regulatory requirements; changes in applicable accounting policies; costs, outcomes and effects of litigation and regulatory investigations; changes in the credit quality of the Firm's customers; and adequacy of the Firm's risk management framework.

Additional factors that may cause future results to differ materially from forward-looking statements are discussed in Part I, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2006, to which reference is hereby made. There is no assurance that any list of risks and uncertainties or risk factors is complete.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

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Secretary

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Louis Rauchenberger
Controller

Corporate headquarters

270 Park Avenue
New York, New York 10017-2070
Telephone: 212-270-6000
http://www.jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
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Chase Bank USA,
National Association
J.P. Morgan Securities Inc.

Annual report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the Securities and Exchange Commission will be made available upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, New York 10017-2070

Stock listing

New York Stock Exchange, Inc.
London Stock Exchange Limited
Tokyo Stock Exchange

The New York Stock Exchange (NYSE) ticker symbol for the Common Stock of JPMorgan Chase & Co. is JPM.

Certifications by the Chairman and Chief Executive Officer and Chief Financial Officer of JPMorgan Chase & Co. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, have been filed as exhibits to the Firm's 2006 Annual Report on Form 10-K.

The NYSE requires that the Chief Executive Officer of a listed company certify annually that he or she was not aware of any violation by the company of the NYSE's Corporate Governance listing standards. Such certification was made on June 14, 2006.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations site of www.jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, New York 10017-2070
Telephone: 212-270-6000

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Directors

To contact any of the Board members or committee chairs, the Presiding Director, or the non-management directors as a group, please mail correspondence to:

JPMorgan Chase & Co.
Attention (Board member(s))
Office of the Secretary
270 Park Avenue
New York, New York 10017-2070

The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct and the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting www.jpmorganchase.com and clicking on "Governance." Stockholders may request a copy of such materials by writing to the Office of the Secretary at the above address.

Transfer agent and registrar

Mellon Investor Services LLC
480 Washington Blvd.
Jersey City, New Jersey 07310-1900
Telephone: 1-800-758-4651
https://vault.melloninvestor.com/isd

Investor Services Program

JPMorgan Chase & Co.'s Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorgan Chase & Co. common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, Mellon Investor Services LLC, by calling 1-800-758-4651, by writing them at the address indicated above or by visiting their Web site at www.melloninvestor.com.

Direct deposit of dividends

For information about direct deposit of dividends, please contact Mellon Investor Services LLC.

Stockholder inquiries

Contact Mellon Investor Services LLC

By telephone:

Within the United States, Canada and Puerto Rico: 1-800-758-4651 (toll-free)

From all other locations:
1-201-680-6645 (collect)

TDD service for the hearing impaired within the United States, Canada and Puerto Rico: 1-800-231-5469 (toll-free)

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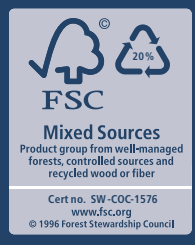
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FSC is an independent nonprofit organization devoted to encouraging responsible management of the world's forests. FSC sets high standards to ensure forestry is practiced in an environmentally responsible, socially beneficial and economically viable way.

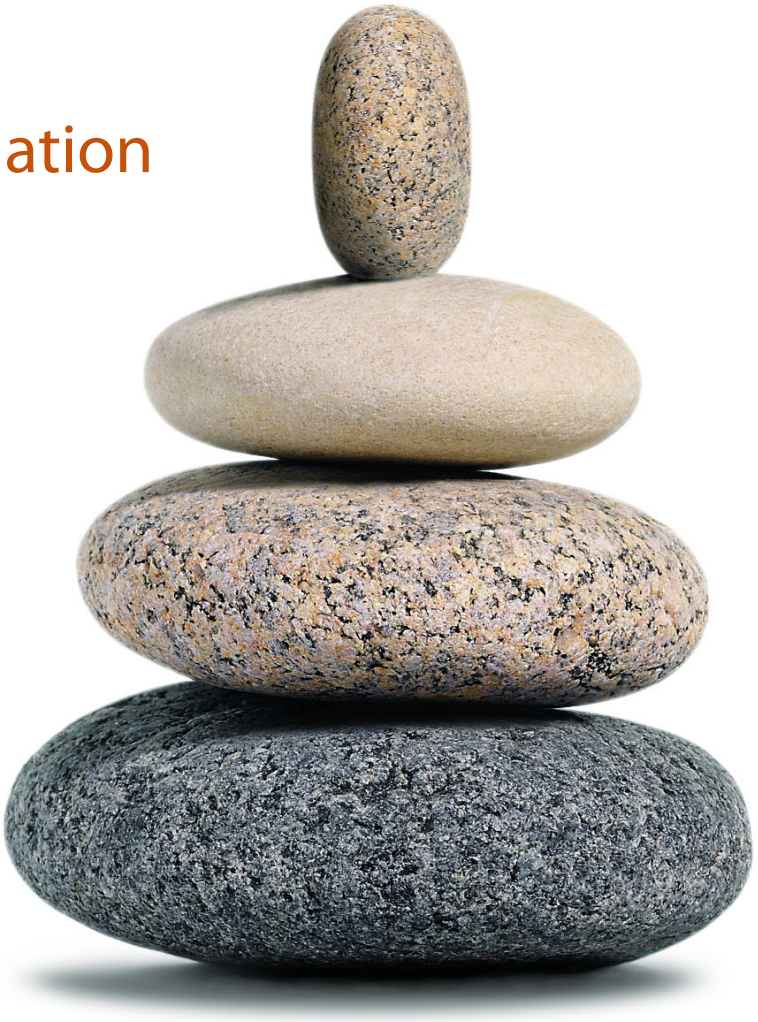


JPMORGAN CHASE & CO.

www.jpmorganchase.com

Annual Report 2007

Building a Strong Foundation



JPMorganChase & Co.

Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio and headcount data)	2007	2006
Reported basis [a]		
Total net revenue	**$ 71,372**	$ 61,999
Provision for credit losses	**6,864**	3,270
Total noninterest expense	**41,703**	38,843
Income from continuing operations	**15,365**	13,649
Net income	**$ 15,365**	$ 14,444
Per common share:		
Basic earnings per share		
Income from continuing operations	**$ 4.51**	$ 3.93
Net income	**4.51**	4.16
Diluted earnings per share		
Income from continuing operations	**$ 4.38**	$ 3.82
Net income	**4.38**	4.04
Cash dividends declared per share	**1.48**	1.36
Book value per share	**36.59**	33.45
Return on common equity		
Income from continuing operations	**13%**	12%
Net income	**13**	13
Return on common equity (net of goodwill)		
Income from continuing operations	**21%**	20%
Net income	**21**	22
Tier 1 capital ratio	**8.4**	8.7
Total capital ratio	**12.6**	12.3
Total assets	**$ 1,562,147**	$1,351,520
Loans	**519,374**	483,127
Deposits	**740,728**	638,788
Total stockholders' equity	**123,221**	115,790
Headcount	**180,667**	174,360

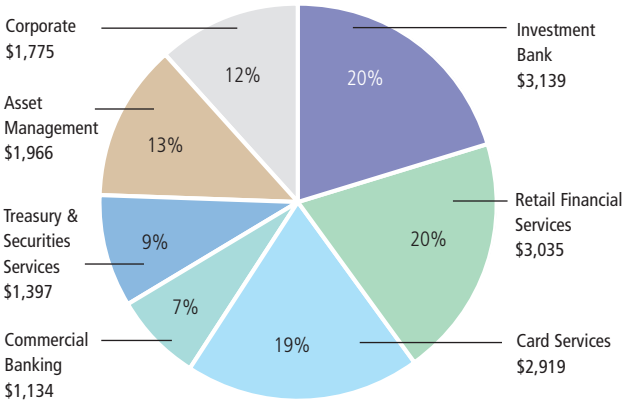
(a) Results are presented in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $1.6 trillion and operations in more than 60 countries. The firm is a leader in investment banking, financial services for consumers, small business and commercial banking, financial transaction processing, asset management and private equity. A component of the Dow Jones Industrial Average, JPMorgan Chase serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its JPMorgan and Chase brands.

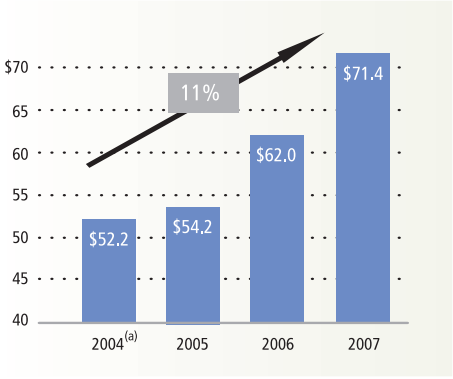
Information about JPMorgan capabilities can be found at www.jpmorgan.com and about Chase capabilities at www.chase.com. Information about the firm is available at www.jpmorganchase.com.

Financial Trends

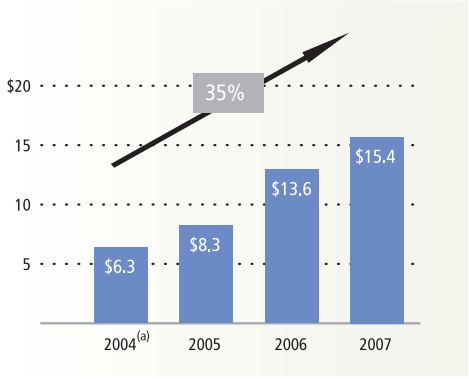
Income by Line of Business
(in millions)



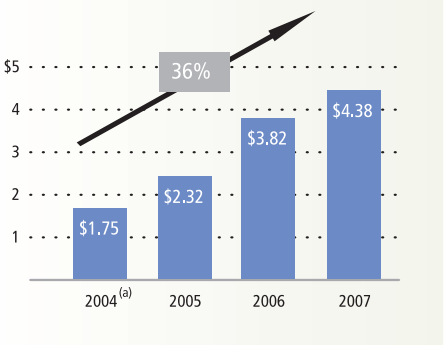
Net Revenue
(in billions)



Income
from continuing operations (in billions)



Earnings per Share
from continuing operations (fully diluted)



Return on Equity (net of goodwill)
from continuing operations



All information shown on a reported basis on continuing operations

Growth rates shown as compound annual growth rates (CAGRs)

(a) Presented on an unaudited pro forma combined basis that represents how the financial information of JPMorgan Chase & Co. and Bank One Corporation may have appeared on a combined basis had the two companies been merged for the full year

Dear Fellow Shareholders,

As I write this letter, the turbulence that began in the second half of 2007 continues to wreak havoc on the financial markets today. Given the magnitude and unprecedented nature of events as they continue to unfold, it is a year that will be written about for a long time. We do not know when this cycle will end or the extent of the damage it will cause. But we do know that no financial company operating under these conditions will emerge from them unchanged. And, while we are long-term optimists about the future of the U.S. economy and our company, we remain focused on the current crisis. In this context, I will review how we performed in 2007 and how we are preparing to weather the ongoing storm.

I would like to start by saying how gratifying it is that JPMorgan Chase was able to report record revenue and earnings for 2007 despite the intense credit and capital markets issues we faced during the second half of the year. These issues continue to confront us today, particularly in both our Investment Bank and home lending businesses. That said, we must be prepared for a severe economic downturn that could affect all of our businesses. We intend to navigate through the turbulence, protect our company and capitalize on any opportunities that present themselves. It is during these tough times that we can distinguish ourselves with our clients. As a firm, we have a history of showing leadership during times of financial crisis, and we will continue to build on that legacy.

As you read this letter, I hope you will agree that our expectations are rational, our approach is consistent and measured, and our operating philosophy is sound. I also hope you will feel as I do – that while our company still faces many risks in these challenging times, we will continue to grow our franchise, outperform many of our competitors and win where it matters most: with customers in the marketplace.



Jamie Dimon
Chairman and Chief Executive Officer

I. REVIEW OF 2007

Over the past few years, we have not only worked hard to instill management discipline, but we have also spent considerable time and resources developing a strong foundation for long-term growth. So when we measure our performance, we not only review financial results – by line of business and for the company overall – but we also look at multiple indicators of health. These measures help us gauge the progress we have made by expanding and extending our capabilities, geographic reach, client coverage, product offerings and technology and by attracting, training and retaining talented people. Meaningful progress in any of the areas mentioned above takes a considerable investment of time and money. We generate both by operating efficiently and maintaining a fortress balance sheet. So, there are three intrinsically linked imperatives that are fundamental to our success: **strong financial results**, **quality growth** and **capital strength**. I will focus on each in the following review of our 2007 results.

A. Financial Results by Line of Business

We delivered record 2007 full-year earnings of $15.4 billion on record revenue of $71.4 billion. This represented total revenue growth of 15%, most of which was organic. Earnings per share – also a record at $4.38 – were up 15% from 2006. Our return on tangible common equity was 23%. Record or near-record earnings in many of our businesses and the diversified nature of our company helped offset areas of cyclical weakness. Our results – by line of business – are reviewed below.

The Investment Bank reported net income of $3.1 billion with an ROE of 15%

The Investment Bank delivered a record first half of the year, with a return on equity (ROE) averaging about 26%. Difficult market conditions reduced our ROE to about 4% for the second half of 2007. Given the natural volatility of this business, these results are not surprising. That said, our goal remains to earn 20% ROE through a business cycle. Ideally, this means we'll produce ROE of 30% or higher in good years, 10% in tougher years and no worse than 0% in a particularly bad quarter. Our subjective assessment of how we performed in 2007 is that the 26% ROE in the beginning of the year was a solid result. However, our 4% ROE in the second half of the year could have been better, e.g., perhaps a 7%-10% ROE.

Even though we had hoped to do better, relative to the performance of most of our competitors, many of whom sustained large losses, our Investment Bank's results were rather good. Most of the adverse results in the second half were confined to the sales and trading areas of the Investment Bank. Within sales and trading, the majority of the issues were in mortgage-related trading and leveraged finance (which we will cover in a later section). Equities, rates and currencies had excellent full-year results.

We are particularly pleased to have ended the year ranked No. 1 in investment banking fees and with an increased market share in global equities and global debt. This performance is a testament to our capital raising capabilities and the quality of the coverage, support and advice we provide to corporations, institutions and investors around the world. JPMorgan is now a top-ranked player in virtually every major investment banking product. We are proud of this progress and are pleased to see it noted in several independent client surveys and reports (e.g., *Institutional Investor,* which rated JPMorgan the No. 1 Investment Bank, Greenwich Research and *Risk* magazine). We believe by working hard to earn our clients' trust, we will sustain our leadership position and build the best investment bank in the world.

Retail Financial Services (RFS) reported net income of $3 billion with an ROE of 19%

RFS, our retail bank, offers consumers and small businesses checking and savings accounts, credit cards, mortgages, home equity and business loans, and investments across our 17-state footprint from New York to Arizona. We also provide home lending products nationally through our 5,200 loan officers and our network of brokers and correspondents. Additionally, we work with more than 14,500 car dealerships to provide their customers with auto loans and with more than 5,200 colleges and universities to loan students the funds they need to complete their education. RFS had a good year and showed strong organic growth.

For example, in 2007:

- Total checking accounts grew 8% to almost 11 million accounts.
- Business banking loans grew 9% to more than $15 billion.
- Credit card and investment sales in the branches both increased 23%, while mortgage loans in the branches increased by 31%.
- Mortgage loan originations grew 34% overall (even with much tighter underwriting standards).
- Use of electronic payments rose, with more than a 20% increase in our online customer base. Nearly 6 million customers now use our electronic services to bank with us – anytime, anywhere.

Despite this progress, however, overall RFS earnings were down 6% year-over-year. This was largely a function of increased credit costs in our home equity business and in subprime home loans (which we will describe in detail later). However, unlike other lenders that are pulling back or closing down, we have not abandoned this business. To the contrary, while we have materially tightened our underwriting standards, we have also nearly doubled our home lending market share to 11% in the fourth quarter (up from 6% a year ago). We have done this because we believe it is a strong, sustainable business that continues to meet an important financial priority for many people throughout this country.

Card Services reported net income of $2.9 billion with an ROE of 21%

We are the second-largest credit card issuer in the United States, with approximately 155 million credit cards in circulation. In 2007, while growth in outstanding balances was relatively low at 4%, merchandise spending on our cards increased nicely, by 9%, particularly in our co-branded partner and small business card portfolios. We added more than 16 million new accounts and raised the level of charge volume by $15 billion. In addition, to drive growth and better serve cardmembers, the new CEO of Card Services reorganized the business into five units: the mass affluent segment, individuals of high net worth, small businesses, and co-brand and retail/private label partners. This customer-focused approach will enable us to specifically tailor products and services to meet the financial needs of these important customer groups.

While we're pleased with our 2007 performance in Card Services, we are preparing for the impact of a weakening economy on loan losses. We expect losses to increase by about 4.5%-5% of outstanding balances from about 3.7% in 2007. (In a prolonged recession, the losses could be considerably worse.)

Commercial Banking reported net income of $1.1 billion with an ROE of 17%

Commercial Banking serves more than 30,000 customers across America, including corporations, municipalities, financial institutions and not-for-profit entities. Commercial Banking produced record revenue, up 8%, and record profits, up 12%, from a year ago. Loans grew 14%, liability balances grew 19% and we added more than 2,200 new banking relationships.

Over the past few years – in addition to providing cash management products to its customers – Commercial Banking has been able to better meet our customers' needs by increasingly making investment banking products and

Earnings by Line of Business (in millions)

	2004[b]	2005	2006	2007
Investment Bank	$ 3,654	$ 3,673	$ 3,674	$ 3,139
Retail Financial Services	3,279	3,427	3,213	3,035
Card Services	1,681	1,907	3,206	2,919
Commercial Banking	992	951	1,010	1,134
Treasury & Securities Services	231	863	1,090	1,397
Asset Management	879	1,216	1,409	1,966
Corporate[a]	(4,378)	(3,783)	47	1,775
JPMorgan Chase[a]	$ 6,338	$ 8,254	$ 13,649	$ 15,365

(a) On a continuing operations basis

(b) 2004 data are pro forma combined, reflecting the merger of JPMorgan Chase and Bank One

services available to them. This includes M&A advisory and equity and debt underwriting, which are made possible by a strong collaboration between Commercial Banking and the Investment Bank. This capability is a competitive advantage for us. In 2005 – the year after the merger with Bank One – we generated about $550 million in Investment Bank-related revenue through this cross-sell opportunity. By the end of 2007, Commercial Banking had achieved record Investment Bank-related revenue of about $890 million. We also launched Chase Capital to provide equity and mezzanine debt financing to our customers to eliminate the need for them to seek such capital elsewhere. It is important to note that of the total revenue Commercial Banking generated in 2007, only 35% now relates to the lending product.

While we recognize the value of cross selling, we are also keenly aware of the risks associated with trying to drive growth in certain product areas. As such, we have resisted growth in areas where we felt inadequately compensated for that risk. For example, our real estate lending has actually shrunk over the past few years and currently represents only 12% of our total loans. Commercial Banking also increased loan loss reserves by $225 million, bringing total reserves to a very strong 2.8% of average loans at year-end.

Treasury & Securities Services (TSS) reported net income of $1.4 billion with an ROE of 47%

TSS is a business that holds, values, clears and services securities and provides cash management, corporate card and liquidity products and trade finance services to the world's leading companies and institutional investors. TSS delivered exceptional financial results, with record revenue, up 14%, and record profits, up 28%. This business has generated higher volume across all of its products, grown consistently over time, produced good margins, and maintained great global scale and long-standing client relationships. It is a business that would be extremely hard to duplicate. Notably, TSS assets under custody increased by 15% to $15.9 trillion, and average liability balances were up 21% to about $230 billion. The group grew its revenue from countries outside the U.S. by more than 26% over the past year. The ability to make significant progress on this important priority reflects the strong foundation we are building abroad. Highlights include receiving regulatory approval to connect to China's electronic clearing system, establishing a staff presence in 41 countries and branches in 25 countries worldwide, and extending our international capabilities for clients around the globe.

Asset Management reported net income of $2 billion with an ROE of 51%

Asset Management provides our institutional, high-net-worth and individual investor clients with global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity. The headline numbers for Asset Management were terrific. The business delivered strong growth in 2007, with profits up 40% and revenue up 27% – both record levels. Assets under management were up 18% (or $180 billion), driven mainly by $115 billion of new flows, and were further fueled by market growth during the year. We increased alternative assets (hedge funds, private equity, etc.) by more than 20%, to end the year with $121 billion in alternative assets under management.

As the world's largest manager of hedge funds, we grew our total hedge funds by 30% last year, including increasing assets under management in our Highbridge funds by 68% in 2007. Since late 2004, when JPMorgan acquired a majority interest in Highbridge, its assets under management have grown from $7 billion to about $28 billion in early 2008. In addition, the Private Bank and Private Client Services set a record by increasing assets under

supervision for clients by $80 billion in 2007. A note of caution, however: The earnings momentum of this business has slowed in 2008 and will continue to lag rates of growth produced in prior years. Investment performance, particularly in certain fixed income and statistical arbitrage funds, was affected by the extreme conditions of the latter half of the year. Last summer, when the five-year bull market ended, we began to see a shift in our clients' portfolios from higher-yielding assets (equities and alternative assets) to lower-yielding assets (fixed income and cash). We believe it is reasonable to assume that current market conditions will impede Asset Management's ability to deliver another year of record earnings in 2008.

In Private Equity, we had an outstanding year with pre-tax gains of more than $4 billion

One Equity Partners (OEP) delivered stellar results in 2007. I hope you all join me in giving them our gratitude for this banner-year performance, in which OEP contributed two-thirds of total private equity gains. OEP has now generated a life-to-date realized internal rate of return of more than 50% on its investments. We are thrilled with this achievement and happy to report the high returns of last year, but we also appreciate that this level of performance is exceptional. As such, we do not expect it to be repeated this year.

B. Leading Indicators of Real Growth

We are committed to achieving high quality of earnings. This means consistently investing in our businesses. This does not mean increasing short-term earnings by reducing investments for the future. So even while our margins went up, we continued to invest in geographic expansion, client coverage, product extensions, technology enhancements, employee development and corporate responsibility. These are areas we believe will drive good, strong growth in our businesses for decades to come. They are discussed in more detail below.

We expanded our footprint both internationally and domestically

Internationally, our growth strategy connects the wholesale businesses of the Investment Bank, Asset Management, Commercial Banking and TSS to deliver the right products and services in the right way to our customers. Because we look at the world from the point of view of the customer, we rely upon a local presence and regional operating models to develop, bundle and provide an appropriate level of financial support to our clients. So while one line of business can bring us into a market, our growth over time is intended to cut across all of these businesses.

In Japan, Korea, India and China, we are using this strategy to develop and tailor our wholesale platform of products and services across the region. From four branch locations in China – Beijing, Shanghai, Tianjin and Shenzhen – our 260 employees provide Investment Bank, TSS and Asset Management services. Commercial Banking opened new offices in Mumbai and Singapore in 2007. Our total headcount in Asia increased by 26% to more than 19,000 employees, and our overall revenue in the region increased by 47%. Three years ago, in mainland China, Asset Management had no clients and no assets under management. Today, our joint venture is a top-10 asset manager in China, with more than 5 million customers and $13 billion in assets under management. Our first Qualified Domestic Institutional Investor product (which allowed residents in mainland China to invest overseas), launched last year, was oversubscribed by almost four times. On the first day of the initial public offering (IPO), it raised a record $15.4 billion from 1.9 million customers. We were granted licenses and launched businesses in Korea and India and ended the year there with onshore assets under management of $700 million and $600 million, respectively.

On the domestic front, Commercial Banking opened new offices in North America, extending our presence to Atlanta, Nashville, Philadelphia, Seattle and Vancouver. We also opened 127 retail bank branches and added 680 ATMs and 2,568 in-branch salespeople to help our customers.

We increased client coverage

Over the years, the Investment Bank has invested hundreds of millions of dollars in Asia and in other emerging markets to increase our client coverage, particularly in countries like China, India and Russia. We will now be supporting more than 500 companies in those three countries, which will mean more research coverage, sales and trading capability, and, we anticipate, more revenue. Outside the emerging markets, we added experienced traders to our energy business. It is an important sector that continues to be a priority in 2008. We also added more than 200 new client advisors within the Private Bank and Private Client Services, a substantial increase of staff over prior years.

We extended products and expanded services to better meet our customers' needs

TSS completed various bolt-on acquisitions to expand parts of the business, including our healthcare electronic payment services and our U.S. fund services business, which provides fund accounting and reporting to mutual funds of various sizes. As asset managers and pension funds are increasingly investing in private equity and

hedge fund assets, TSS continues to build product capabilities to support the processing of these alternative investments for our clients. Over the past year, TSS has increased its alternative assets under administration by more than 80%, and we will be expanding these services internationally to support clients in Hong Kong, Australia, Luxembourg and the United Kingdom.

Card Services continues to increase its annual spending on credit card marketing and reward programs to build out its slate of innovative card products and refine the reward options (particularly on the Chase Freedom credit card). And we continue to improve our electronic systems, payments and services that offer 24/7 access. For example, we introduced Chase Mobile, a new text messaging service that gives U.S. customers easy access through their phones to account balances, payment histories and due dates.

We focused on technology to improve customer service, sales, marketing and innovation

In addition to increasing the number of new bankers, branches and salespeople and as part of our commitment to expand our products, services and international reach, we will continue to invest in technology. We believe this investment will be a key driver of growth over the next decade. Our first step was to operate from one platform. After a tremendous amount of work on our technology, systems and data centers, we can now essentially do that. This was an enormous accomplishment. Highlights this year include:

- Flawlessly completing a highly complex wholesale deposit conversion (the largest in the firm's history); in one weekend, we converted more than 250,000 corporate clients on all continents, representing $10 trillion a day in global deposit transactions, to a single deposit platform supporting both retail and wholesale clients with 19 million accounts and $393 billion in balances.
- Insourcing our credit card processing platform (another "biggest" in banking history) to improve flexibility and lower our cost structure.
- Seamlessly converting, in one weekend in the first quarter of 2007, all 339 Bank of New York branches, adding 1.2 million deposit accounts to our platform.
- Upgrading and consolidating our banking data centers over the last three years, from 109 to 67. Our goal is to continue to reduce our data centers to 39 by 2010.

Having accomplished the above, we can now refocus our technology and operational expertise and abilities to the important and complex process of improving customer service and quality.

We continued to get the most out of our model

We are a global bank with scale, diversification and collaboration across our six lines of business – all of which deliver financial services to individuals and institutions. That's our model. We have described this in detail in prior letters and will not repeat it here. But what really matters is how well we are able to leverage our collective strength to create the most value for our customers and shareholders. We invest in all of our businesses to ensure that each is a leader in its specific industry and is able to grow organically. While these businesses do well individually, we believe they all create great competitive advantage for each other, too. Over the course of 2007, we've clearly seen how each of our businesses benefits from the links across our product set and how every business gains from being a part of a strong, respected JPMorgan Chase. It is not about cross selling for the sake of cross selling. Rather, it is about focusing our resources and expertise on pursuing natural product extensions that make things easier and more cost-effective **for our customers**.

Below are a few of the tangible examples of how this approach has benefited our company and, more importantly, our clients:

- Asset Management's partnership with our other businesses reached record levels in 2007. Referrals from the Investment Bank and Commercial Banking resulted in new clients with $19 billion in assets, representing $48 million in annualized new revenue, an increase of 20% in new revenue and 46% in new assets from referrals in 2006.
- TSS continues to capitalize on the Investment Bank's IPO underwriting relationships to secure depositary receipt mandates worldwide. TSS also leverages the Investment Bank's advisory relationships to generate cash management and escrow business. On the other side of the ledger, TSS clients with sweep accounts have that money invested in money market funds with JPMorgan Asset Management (accounting for more than 20% of Asset Management's global money market fund assets).
- Our broad consumer businesses are collaboratively building our brand and investing in joint sales and marketing efforts. We launched a single new brand campaign across Retail Financial Services and Card Services under the "Chase What Matters" message. This unified message aligns our values with those of our customers – by focusing on what matters to them (e.g., access, protection, advocacy, rewards and value). Our goal is to make Chase the best brand in consumer financial services.

We advanced our ongoing efforts to recruit, train and retain top talent and enrich the diversity of our company

Our business, people and reputation are critically important assets. We are absolutely committed to attracting and retaining outstanding individuals. Today, throughout our company and at every level, you will find exceptionally talented people. This requires an ongoing commitment – not a stop-and-start approach. A strong pipeline of talent produces great managers. Over the past three years, we have been improving our recruiting efforts on campuses around the world. Our efforts are paying off. We have significantly increased the number of students who accept our full-time employment offers in the Investment Bank and have been recognized by *BusinessWeek* for the quality of our internship and training programs. Increasingly, outstanding students with considerable options agree that JPMorgan is "the place you want to be."

We have also continued to build on solid gains in 2007 to enhance the diversity of our employee base. To step up our employment efforts, we have asked one of our top executives to work directly with me and the human resources team to focus 100% of his time on recruiting and retaining outstanding minorities. And as a result, last year, our company was fortunate to hire more exceptional minority executives in senior positions than ever before. We have also increased supplier diversity spending by 32%. Last year, we did more than $700 million of business with diversely owned companies.

We intensified our corporate responsibility efforts

We believe an integral part of our growth strategy is to focus our resources where they will do the most good by supporting the organizations that can make a meaningful difference to the people who live in communities in which we operate. Our Foundation now provides more than $110 million in grants annually, more than doubling the amount from $45 million in 2000. Investments range from building affordable housing in Dallas and New Orleans to training New York City public school principals.

We are also committed to the environment. In developing our environmental footprint, we adhere to the most stringent guidelines. We also do our part to contribute innovative solutions to environmental issues. 2007 highlights include: creating several conservation programs in-house, piloting green branches, building a "LEED" platinum certificate building in London, and renovating our world headquarters in New York to meet the highest environmental standards.

We have also worked closely with the U.S. government and with a number of other institutions to create programs to help keep borrowers in their homes. Through our charitable support and in helping to develop strong public policies, we are determined to materially enhance our efforts in this area – whether it's through working with governments, not-for-profits or other community organizations. We have much more to say about the work we are doing in this area, which we will express in a detailed report on corporate responsibility over the coming months.

C. Operating Efficiency and Capital Strength

Our 2007 progress with regard to these two priorities is reviewed below.

We continued to boost efforts to increase operating efficiency and reinvest in the business

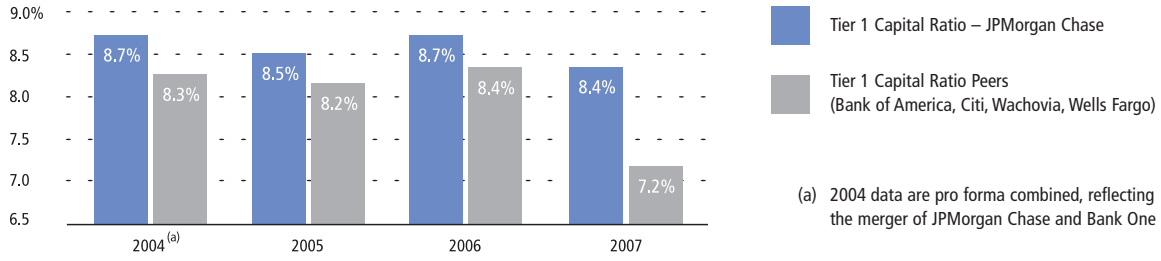
Many of the investments described in the previous section were funded by cost savings. By eliminating waste, we were not only able to run a more efficient and effective company, but we were also able to invest more where it counts most. For example, over the course of 2007, we shed 4.3 million square feet of excess real estate globally; since 2003, we have shed 13 million square feet of excess space. Eliminating this excess real estate has enabled us to become more, not less, accessible to our customers. In 2007, these redeployed savings were used to develop new branches, international presence and electronic capabilities. We will stay vigilant to reduce unnecessary expenses and invest in areas that will also make us stronger down the road.

We remained disciplined and committed to preserving a fortress balance sheet

We operate in risky businesses, and having a fortress balance sheet is a strategic imperative, not a philosophical bent. It is also a critical differentiator for us – especially in uncertain times. We achieved it through the following elements:

- Appropriately conservative accounting.
- Strong loan loss reserves.
- Diligent review of all assets and liabilities (on and off our balance sheet).
- Disciplined reporting and regular reviews across our businesses.
- A detailed and deep understanding of – and constant focus on – the margins and returns of each business (often at the product level).
- Recognition of market cyclicality and continuous analysis of our own businesses so that we deliver solid returns through the cycle – not just in good times.

Peer Comparison of Tier 1 Capital Ratios



We maintained strength to operate in any environment by:

- Sustaining a strong capital ratio, whether measured by Tier 1 capital (we had 8.4%) or tangible common equity to assets (we had a ratio of 5%). Under the new Basel II capital rules, we expect our Tier 1 capital ratio would be even stronger than we report today.
- Capitalizing on favorable market conditions early in 2007 to pre-fund a substantial amount of our company's need for capital and long-term debt. This gave us flexibility when evaluating financing alternatives during the second half of the year.
- Maintaining (and continuing to maintain) extremely high liquidity. This means that your company currently has on average a range of $20 billion to $50 billion in overnight investments. This has served us well under the current market conditions.
- Increasing our dividend by 12% from the previous year – for the first time in six years. We believe that paying out 30%-40% of earnings as dividends is generally the appropriate amount.
- Repurchasing approximately $8 billion of our stock because we believe it is a good investment and is consistent with our capital needs. To give us more flexibility as we entered a turbulent time, however, we essentially stopped buying back stock in the third and fourth quarters of last year.

We avoided seeking expensive capital from outside sources

We continually stress test our capital and liquidity needs. To simplify, what we essentially try to do is stay properly capitalized, at current levels, even if called to fund up to $100 billion of cash needs for our clients or for the corporation. We think these are conservative (if not worst-case) assumptions, but if the environment trends more negative, we think our Tier 1 ratio would remain very strong (particularly relative to our peers in this type of scenario). Our goal is to continue serving our clients and building our business without being pressured to seek expensive equity or debt capital elsewhere.

We used our strong foundation to further our objectives

Not only did our strong balance sheet and liquidity allow us to sleep better at night, but it also made it possible for us to:

- Support our clients by fulfilling their capital requirements prudently with credit – especially as the markets began to deteriorate in the latter half of 2007.
- Build our business. For example, we took advantage of what we believed was an opportune time to strengthen our presence in the mortgage business.
- Prepare ourselves to take advantage of emerging opportunities, which could include buying good assets at a reasonable price or evaluating other strategic acquisitions that make sense for our shareholders.

II. KEY ISSUES AND LESSONS OF 2007

In the fall of 2007, my daughter called and asked me, "Dad, what is a financial crisis?" I answered her by saying, without intending to be funny, "It's something that happens every five to 10 years." She then asked, "So why is everyone so surprised?"

The United States and the world have, in fact, had various financial crises every five to seven years, probably for as long as financial history has been recorded. In recent times, there was the recession of 1982; the stock market crash of 1987; the savings-and-loan and commercial real estate crisis of 1990-1991; the market panic of 1997-1998, brought about by the Long Term Capital Management and emerging-market crises. Finally, in 2001, the Internet bubble burst, knocking the stock market down 40%.

Looking at all of these crises, some attributes were different, but many were the same. The triggering event in 2007 was the bursting of the housing bubble and the related bad mortgage underwriting standards. In the 10 years from 1995-2005, housing prices in the U.S. rose

135%, far exceeding normal home price increases and outstripping traditional measures of affordability. While some thought the gains were justifiable, it is clear now that they were not. As of today, housing prices nationally are down on average almost 10% since the end of 2006, and it looks as if they will continue to deteriorate. It is also clear, in hindsight, that increasingly poor underwriting standards (e.g., loan-to-value ratios up to 100%, lax verification of income and inflated appraisals) added fuel to the speculation and froth in the markets. Many of these poor mortgage products were also repackaged and dispersed widely through various securities, thus distributing the problems more broadly.

As Warren Buffett says, "When the tide goes out, you can see who's swimming naked." In this crisis, as the tide went out, we saw subprime concerns first, then mortgage-related collateralized debt obligations (CDOs), structured investment vehicles (SIVs), Alt-A mortgages, mortgage real estate investment trusts (REITs), the impact on monolines and, finally, very unfortunately for us, home equity loans. And the tide is still going out.

As this chapter of history continues to be written, we cannot have the full benefit of hindsight. However, there are some lessons we have already learned and others we can draw upon from past crises. In the context of today's crisis, they are worth revisiting.

A. Issues and Insights Specific to the 2007 Financial Crisis

We generally avoided many – but not all – of the issues associated with the storm of 2007. Let's talk about some of them in detail.

SIVs served no business purpose

We deliberately steered clear of most SIVs because we viewed them as arbitrage vehicles with plenty of risk, a limited business purpose and a flawed design (we sold a small SIV back in 2005). We also minimized our financing to SIVs for the same reasons. SIVs will probably disappear – except for the few that demonstrate a sustainable business purpose – and the world will not miss them. That said, there were two things related to SIVs that did catch us by surprise:

- *Their growth and its impact.* SIVs had grown to a very large size as an industry segment – to approximately $500 billion. And they owned a substantial amount of mortgage securities, CDOs and bank securities.
- *Their propensity to fund long-dated and sometimes illiquid assets with short-term commercial paper.* When people started questioning the viability of SIVs, the markets became unwilling to refinance their commercial paper, and, therefore, many of the SIVs were forced to liquidate their assets. The banks and money market funds that were holding SIVs' commercial paper began to experience stress of their own. Fortunately, our Investment Bank was not directly affected by this issue because we provided almost no backup credit facilities to SIVs, and our Asset Management group contained its exposure to SIVs by limiting its investment to only the few high-quality, well-structured SIVs.

Subprime mortgages and subprime CDOs were more dangerous than we thought

In 2006, we thought we focused early on the subprime issue – and, in fact, we addressed the subject at length in last year's Shareholder letter. We became increasingly vigilant in our underwriting and avoided underwriting loans we were not comfortable holding to maturity. Even so, we still found ourselves having to tighten our underwriting of subprime mortgage loans six times through the end of 2007. (Yes, this means our standards were not tough enough the first five times.) In last year's letter, we thought our losses could increase substantially from 2006 levels. In fact, we saw them go up from $47 million in 2006 to $157 million in 2007. And we think they could significantly elevate in 2008 if economic conditions worsen.

Within our Investment Bank, we avoided large exposure to subprime loans, mostly by reducing our positions or actively hedging them. We also chose not to become a major player in subprime-related CDOs. Even so, we did lose substantially more than we expected: $1.4 billion on subprime mortgage and subprime-related CDOs. Although we generally treat off-balance sheet obligations like on-balance sheet obligations, a large share of our losses came in certain off-balance sheet transactions. We will redouble our efforts to ensure that this does not happen again.

Keeping the above in mind, we still believe that subprime mortgages are a good product. When subprime loans are properly underwritten, they serve a meaningful purpose. They can make a real difference to young families, to those who experienced financial problems earlier in life, to immigrants with little credit history and to the self-employed. These loans have helped many people achieve the American dream by buying homes they can afford. While tighter underwriting standards have now materially reduced our production of subprime mortgage loans, we will continue to find a prudent way to be in this business.

Home equity deteriorated dramatically

Home equity is important to our company. We retain all of our home equity production on our balance sheet, and, at the end of 2007, we had about $95 billion in our home

equity portfolio. The losses in this portfolio are increasing rapidly and rising at a higher rate than we ever could have expected, even in a severe recession. In 2007, our net charge-offs were $564 million, and we added $1.0 billion to reserves. In 2008, we think charge-offs in the first quarter could reach $450 million and possibly double by the fourth quarter (as a function of the level of home price depreciation). Since loan loss reserves reflect expected losses, this will require us to significantly increase these reserves.

There will undoubtedly be more lessons to come as the deterioration of the home equity business continues, but there are three lessons we have already learned the hard way:

- *We underestimated the size of the housing bubble and the rapid rate of depreciation.* While we recognized the existence of a housing bubble, the rate and severity of the housing price depreciation surprised us. We also missed the impact of increasingly aggressive underwriting standards on housing price appreciation and increased speculation and froth in the market. Finally, we did not see that the ever rising housing prices over the 10-year period were masking potential losses. When these losses came into clear view, as a result of the increasingly aggressive underwriting standards, much of the damage had already been done.

- *We misjudged the impact of more aggressive underwriting standards.* Over many years, loan-to-value (LTV) ratios had increased from 80% to 85% to 90%, etc.; income verification became a less important part of the process; and appraisals became overly optimistic. These trends led to far more aggressive underwriting. While each individual change seemed reasonable at the time and losses seemed to be contained, we now know that was a mirage. Multiple changes occurring over many years have essentially altered the nature of the product.

  We should have acted sooner and more substantially to reduce the LTV rates at which we lent, given the increased risk of falling prices in a market of highly inflated housing values. We also should have tightened all other standards (e.g., income verification) in response to growing speculation in the market and the increasing propensity of people to respond to aggressive lending standards by buying houses they could barely afford.

- *We would have been better off had we imposed tighter controls on the outside mortgage broker business.* We used the same underwriting guidelines for outside mortgage brokers as we did for our own mortgage bankers. In hindsight, this was a mistake. We wish we had applied tighter standards to outside brokers. Losses attributable to outside brokers have always been two to three times greater than losses on mortgages we produce internally. That is the reason we closed the broker business at Bank One. We have now materially tightened standards across the board, and our standards for outside brokers are even tighter. Although home equity production through the broker channel decreased by as much as 60% by the fourth quarter of 2007, we believe the quality of underwriting has improved significantly.

The home equity business seems to have fundamentally changed from the way it was meant to be: a means of conservatively giving people access to cash from equity in their house. It has since evolved into a business that has allowed people to take leveraged bets on the assumption that the value of their home will increase. When home equity returns to its original purpose and practice, it will be a very good business again. For that reason, we intend not only to stay in it but to become the best in the business.

Leveraged lending had a tough year, but it will continue to be part of our core business

In 2007, we continued to hold the No.1 market position in global syndicated finance and high-yield debt, and we intend to maintain these top rankings. Leveraged lending is an activity that has long been – and will continue to be – a critically important way for us to serve our clients. In total, over the last five years, our syndicated leveraged finance business has generated average annual revenue of $1.2 billion. In 2007, after taking losses of $1.3 billion, net of fees (which makes us very unhappy), this business still generated $475 million in revenue. We made some mistakes this past year, and we've learned the following:

- *We should have been more diligent when negotiating and structuring commitment letters.* A few years ago, commitments to fund future transactions were not reflected on our balance sheet until the details were finalized and the final, binding letter was signed. In the event of a material change in market conditions, this practice provided lenders with the ability to make important amendments to the letter and/or to the price at which it could be sold. Over time, however, this flexibility disappeared, but we were still held to the original terms of the commitment letters. This meant that when the market deteriorated, we still had to fund the transaction. Upon funding, instead of making an average fee of 2% to 3%, we lost 5%. These commitment letters had essentially become puts on the market. That is, if the markets were strong, things were fine, but if the markets collapsed (as they did), we would be stuck with the original price and could lose a substantial amount of money. This is a one-sided bet and one that subjects us to losses every time the markets crash – an occurrence that is as inevitable as it is painful. Now, having recognized the value of these puts, we fully acknowledge the risks we are taking when we sign these letters.

- *We cannot allow ourselves to be pushed into positions that are too risky.* We simply cannot follow the market like lemmings or allow ourselves to succumb to demands or pressures that compromise our credit standards and lead to bad decisions. In every deal we do, we must insist on fair treatment and adequate compensation for the risk we are asked to assume. A lot of people with whom we do business in leveraged finance are among the most sophisticated, creative and tough businesspeople we know. But true long-term partners understand that a healthy business relationship is a two-way street that must work for both parties over a long period of time. Bad financial practices, like equity bridges or excessive leverage, are not good for us or, ultimately, for our partners.

B. Lessons Learned: Some Old, Some New

Different triggering events ignite each financial crisis. Once under way, however, these crises have much in common. As they say, history may not repeat, but it rhymes. Hard lessons learned from past crises have relevance for us today. Let's revisit a number of them as follows:

Markets can get very volatile

For years, the financial industry had been the beneficiary of relatively stable financial conditions. From 2001 through the first half of 2007, markets were fairly benign, making it easier to get lulled into a false sense of security and to lose sight of how risky the financial environment can be. We must always remind ourselves that markets can become volatile very quickly and when least expected. For those traders who began their careers after the crisis of 1998, it was especially hard to accept that spreads and prices could widen by 250 basis points in a matter of days. Our responsibility as managers is to ensure, at every level of trading, there exists a consistency in our approach and a deep respect for unpredictability of markets.

There is no substitute for good judgment and strong oversight

Risk models are valuable tools, but they have limitations. Because they are backward-looking by design, they tend to miss certain factors. The value of stress testing is also a function of time frame. For example, scenarios may be compromised because the data may not go back far enough. We use value-at-risk (VAR) and stress testing, but they are only part of what we consider good risk management. Good, sound, old-fashioned human judgment is critical. Strong risk management entails constant reporting and review, exposure by exposure, and the ability to size up exposures instantly with the right systems. Managers must know the tough questions to ask – especially with regard to stress-test loss scenarios – and have the ability to stay on top of all the important issues. Intense oversight by and information-sharing with managers is absolutely key, as is access to the expertise of independent pricing and valuation groups. Finally, assumptions need to be tested constantly. That said, we all know even when everything is done right, there still will be volatile results and mistakes. But if things are not done correctly, then the outcomes can be disastrous.

When markets get volatile, almost all risky assets reprice

This is not a surprise – it has happened almost every time markets get volatile.

In difficult market conditions, liquid assets become illiquid

What happened to jumbo mortgages, commercial mortgage-backed securities, leveraged loans and CDOs are examples of this phenomenon. And because financial companies have assets that are no longer easily sold, they are less willing to take additional risk in the marketplace. This not only compounds the problem, but it also creates a new problem: skepticism about whether or not a company with illiquid assets can meet its short-term obligations.

Problems occur when there is too much short-term financing funding long-term assets

There is one financial commandment that cannot be violated: Do not borrow short to invest long – particularly against illiquid, long-term assets. As it turns out, some hedge funds, REITs, SIVs, CDOs and certain financial institutions did exactly that. In these kinds of markets, when the value of short-term investments is questioned, such as money market funds or commercial paper, a crisis can easily ensue. Individuals, acting rationally to protect their own interests, race to sell securities; but, in aggregate, this process by market participants can easily take on a life of its own and escalate into a panic.

A fortress balance sheet protects the franchise

As I mentioned earlier, a fortress balance sheet is a strategic imperative – especially in turbulent market conditions like these. No matter what conditions are, we always want to have the capital, liquidity, reserves and overall strength to be there for our clients and to continue investing wisely in the business.

Irrational expectations impede quality growth

Sometimes there's so much pressure on companies to expand their businesses that they end up pushing their own people to grow, grow, grow. Often people feel this

pressure most when market conditions are good. But it is when markets turn bad that such pressure can lead to dangerous outcomes for all businesses – and especially for volatile businesses like investment banking that take risks. Standards are reduced, too many compromises are made and there's a lack of focus on what is in the best interest of clients. It is easy to grow a business when taking on additional risk – but that is often the worst thing to do. Growth expectations need to be rational. We know there are times when we should not strive to grow certain areas of the business. This is an operating philosophy that protects us from the costly consequences of bad growth.

Risk models that rationalize a lower level of capital contribute to poor judgment

To maximize the size of a potential risk position, models are often designed to justify *as little capital* as possible. For example, numerous triple-A, super-senior CDOs drew little regulatory capital and, therefore, looked safe with good returns. That safety and those returns turned out to be an illusion. This is why it is important for us to understand our risks inside and out and to maintain sufficient economic capital against that risk. We measure risk by how bad things could be – not how good they are.

Financial turmoil increases the chance of recession – and the specter of recession weighs heavily on the market

It is important to note that the turbulence we've experienced occurred in a good economy. And while financial conditions have a serious impact on the global economy, they do not – in and of themselves – necessarily cause a recession. In fact, many severe financial crises have not resulted in recessions. That said, the weaker the economy gets, the greater the impact could be across all our lines of business. Tight financial conditions (e.g., the reduction of credit, the outright removal of credit in certain markets and the higher costs of credit) make it harder and more costly for individuals and companies to borrow money and, therefore, weaken the economy.

As these conditions worsen, the possibility of a deep recession increases. As the specter of a recession weighs more heavily on the normal functioning of capital markets, so too does the fear about the possibility of a recession. Why take additional risk when we might be in a recession? Investors decide they don't want to take the risk so they may remove money from banks, commercial paper and money market funds in order to buy treasuries. Such a reaction isn't necessarily unwise or inappropriate, but it does help to create a self-fulfilling prophesy.

III. ON TO 2008 (AND LOOKING FORWARD TO 2009)

In the summer of 2007, we began to prepare for a downturn in the market. While we have successfully weathered the storm thus far, we face new uncertainties every day. Despite the continued turmoil, we are encouraged to see many of the problems resolving at a fairly decent pace. Yet, while we hope the remaining issues will be sorted out expeditiously and a lengthy recession will be averted, we cannot count on this being the case. We need to confront the possibility that today's upheaval could result in serious market deterioration that the U.S. has not experienced since 1982. To prepare for this possibility, we need to have a clear sense of our risks.

A. Key Potential Risks

What follows is a discussion of the risks that concern us most and some of our thoughts about how to address them.

There is still substantial risk on our balance sheet

We are generally comfortable with the values, the hedging and the loan reserves on our balance sheet. But we also recognize that many of our positions, while somewhat hedged, are still quite risky. Hedges, by their very nature, are imperfect. We focus on this risk by viewing our assets on a gross basis. Relying solely upon a net basis implies that it is not possible to lose money on both sides of a complex trade. We know, however, that this is quite possible.

Some of our largest exposures in the Investment Bank as of year-end are listed below:

- $26.4 billion in funded and unfunded leveraged loans: We have written these loans down by more than 6% but acknowledge that they could easily deteriorate more in value. However, at current levels, we believe they represent a good long-term value. So, in early 2008, we decided to add $4.9 billion to the $3.2 billion of leveraged loans we were already holding as long-term investments.
- $15.5 billion in commercial mortgage-backed exposure: The majority of this exposure is securities and loans, actively credit-hedged and risk-managed; 64% is triple-A rated.
- $2.7 billion in subprime mortgage and subprime CDO-related exposure: Approximately $200 million of this exposure is subprime CDO; the remainder is comprised of subprime loans, residuals and bonds.
- $5.5 billion in CDO warehouse and unsold positions: 92% are corporate loan underlying; subprime is negligible.
- $6.4 billion in Alt-A mortgage exposure: Most are triple-A securities and first-lien mortgages.

Most of these exposures are marked-to-market daily. While they can fluctuate considerably in value on a single day and can dramatically affect any one quarter's results, we believe many of them now have decent long-term value. It is also worth noting that our gross exposures are, in general, lower than those of most of our competitors.

I have already discussed our subprime and home equity exposures. With regard to our Commercial Bank, an exposure worth bringing to your attention is the $16.5 billion in commercial real estate exposure. This position is well-diversified and represents only 12% of our total Commercial Bank credit portfolio. We have been very conservative in growing this exposure in recent years. On a percentage and absolute basis, it represents less than half the average exposure of our Commercial Bank peers.

The financial stability of some monoline bond insurers remains an issue

Some market analysts believe there could be a downgrading of the monoline bond insurers – from their triple-A rating status to double-A status or worse – and possibly one or more defaults. Our gross exposures to monolines are significant and cut across multiple product lines and businesses. However, in spite of the market talk around this issue, we do not regard a downgrade to double-A as a major event. While no one could know all of the ramifications of a worst-case default scenario, we believe the impact – while costly for JPMorgan Chase – would be manageable.

New products often will have problems

We need to keep a close eye on the design, trading and operational aspects of new financial products. Almost all new products go through periods of stress and market-testing, which, in turn, causes problems of one sort or another. At one time, even basic equity trading nearly brought Wall Street to its knees when the volume of trades exceeded the systems' processing capacity. There have been similar problems with exotic mortgage products, options, foreign exchange, high-yield bonds, hybrid derivatives and so on. In many cases, these issues were eventually resolved through the creation of standardized contracts and standard industry exchanges and clearinghouses. These, in turn, facilitated more efficiency in the clearing and netting of risk, provided better regulatory controls and led to stronger management oversight.

Many market participants expected derivatives to be at the heart of the next financial crisis. So far, most derivatives markets have averted the storm, and derivatives have served as an essential tool for some companies to use in shedding or hedging risk That said, there are some legitimate concerns. A severe economic downturn could put extreme pressure on the settlement and clearance functions in some of the derivatives markets. With this and other concerns in mind, we can assure you that we are paying close attention to our derivatives positions and exposure. In addition, we are strongly in favor of regulatory and industry efforts to coordinate and improve the control environment.

A recession will have a significant impact on credit

Our business is cyclical, and one of the largest risks we face is the impact of a recession on credit in general. In last year's letter, we addressed the recession and credit issue, and what we said then bears repeating now:

> *We continuously analyze and measure our risk. In fact, during budget planning, we ask our management teams to prepare – on all levels – for difficult operating environments. While the risk comes in many forms, such as recession, market turmoil and geopolitical turbulence, one of our largest risks is still the credit cycle. Credit losses, both consumer and wholesale, have been extremely low, perhaps among the best we'll see in our lifetimes. We must be prepared for a return to the norm in the credit cycle.*
>
> *In a tougher credit environment, credit losses could rise significantly, by as much as $5 billion over time, which may require increases in loan loss reserves. Investment Bank revenue could drop, and the yield curve could sharply invert. This could have a significant negative effect on JPMorgan Chase's earnings. That said, these events generally do not occur simultaneously, and there would likely be mitigating factors to lift our earnings (e.g., compensation pools would probably go down, some customer fees and spreads would probably go up, and funding costs could decrease).*
>
> *It's important to share these scenarios with you, not to worry you but to be as transparent as possible about the potential impact of these negative scenarios and to let you know how we are preparing for them. We do not know exactly what will occur or when, but we do know that bad things happen. There is no question that our company's earnings could go down substantially in a recessionary environment. But if we are prepared, we can both minimize the damage to our company and capitalize on opportunities in the marketplace.*
> (Shareholder letter, 2006)

Because of the extreme drop in home equity and subprime loan value, the losses I referred to last year could be even greater in 2008. However, we believe our strong capital and the increase of our loan loss reserves have put us in good shape. In 2007, we added $2 billion to loan loss reserves, and we expect to continue adding to those reserves in 2008. Our reserve positions across all of our businesses are among the best in the industry.

Managing in a downturn requires a different strategy

The impact of a downturn – and its effect on earnings – varies considerably by line of business. Therefore, it requires each of our businesses to develop its own strategy for dealing with the unique set of risks and mitigating factors it could face. In some cases, returns could actually increase (because of higher spreads), while in other cases they could decrease (because of lower volumes). In any case, however, we will remain committed to building the business. As such, we will not sacrifice long-term value and meaningful customer service to get better quarterly earnings. In fact, in certain situations, we may actually trade off near-term earnings to gain customers and build market share in businesses that are financially viable and of strategic importance. In those instances, we are also confident that healthy earnings will return. We believe the only time to sacrifice good growth is to protect the financial standing of the company. Fortunately, we are not in that position.

B. Looking Forward

We believe the mortgage business will rebound

In spite of all the difficulties in the mortgage markets, we remain committed to building the country's best mortgage company. The mortgage product is, and will continue to be, the largest and arguably one of the single most important financial products in the world. With our brand, scale, systems, retail branches and our ability to trade, hedge and underwrite mortgages (which include prime, subprime, Alt-A, jumbo and home equity loans), we have what it takes to be a winner in this business. During the latter part of 2007, we set out to increase our home lending market share and have, so far, succeeded. By the end of the fourth quarter of 2007, our share had grown to 11% from 6% a year earlier. As a result of our liquidity and capital strength, we were able to underwrite these loans when others could not. Although we may pay for probably starting this expansion a little too early, we remain committed to the goal.

The risks and rewards of highly structured products will be re-evaluated and changed, but "securitization" will remain viable

JPMorgan is a large participant in the asset-backed securities market (which includes CDOs), and we try to focus on products we believe are transparent and offer reasonable risks and rewards to investors. We deliberately chose to avoid the more structured CDO products because we believed the inherent risks were too high. Additionally, our knowledge of the subprime business informed our decision to remain very cautious about any subprime CDOs, where the bulk of the problems has occurred. We think there's a place for structured CDOs but not in their most complicated forms, such as "CDO-squared." Standards will be materially enhanced (in terms of accounting, operations and ratings guidelines), and many overly complex products will go the way of the dinosaur.

We also believe that while there will likely be changes to the securitization markets, securitization of assets will not go away. Securitization is a highly effective way to finance assets. In fact, many securitized products, like credit cards, have been tested through the market cycle and have not had significant problems. Securitization of subprime assets will probably reopen, too – but the standards will be more conservative, and there will be far more clarity (e.g., better underwriting standards, more capital, etc.). Market discipline, in some form, will also come to bear at each stage of the production chain – from the originator to the packager to the seller – and require each to have the right amount of skin in the game. We are not sure how it will change, but, between regulation and the market, we know it will – and probably for the better.

Accounting can be abused and misused

There's been a lot of discussion about the pros and cons of the mark-to-model versus the mark-to-market approach. We believe it is critically important to trust the value of the assets and liabilities on (and off) one's balance sheet. Regardless of the method one uses (mark-to-market, mark-to-model, etc.), accounting can be abused. This letter is not the right place in which to carry on this debate, but suffice it to say, accounting has become increasingly complex. Much of this complexity is unnecessary and leads to questionable results, adds to earnings volatility and creates **more** room for shenanigans, not less. More work needs to be done to fix this.

Many of our accounting and regulatory capital requirements are pro-cyclical

Many of the methods we use to calculate capital and loan loss reserves are pro-cyclical. In fact, loan loss reserves and capital are often at their lowest levels at precisely the point at which a cyclical downturn begins. In addition, I would argue that fair value accounting rules, margining requirements, rating agencies and regulatory rules add to pro-cyclical behavior. Thoughtful policy changes could provide a substantial cushion to the pro-cyclical forces that make a financial crisis worse. A comprehensive effort between all parties involved (regulators, government and financial institutions) is needed to develop and drive forward these important policy changes.

More assets on the books of banks or financial companies are illiquid (or can quickly become illiquid)

Given this trend, regulators and rating agencies will probably insist that the rise of illiquid assets requires higher levels of capital and proper funding with longer-term debt.

There will be a recovery

We simply cannot know how long this slowdown (or recession) will last or the extent of the damage it will cause. Today's most brilliant economists have various strong, well-argued current views on the subject – they just don't all agree. In any case, our goal is to be prepared.

In reality, our financial system has fairly rapidly and successfully, if not painfully, been dealing with most of the issues I've discussed in this letter. Losses have been taken, substantial capital has been raised and massive deleveraging has already taken place in hedge funds, SIVs, financial companies, REITs, collateralized loan obligations (CLOs) and CDOs. While all losses may not be recognized yet, our sense is that a lot have been (at least for U.S. companies). Importantly, the creation of new potential-problem assets (leveraged loans, subprime assets, CLOs, CDOs and commercial mortgage-backed securities) has virtually ceased.

So, demand will eventually catch up with an ever-diminishing supply of increasingly attractively priced assets. It is unlikely that the pace of deleveraging will intensify. Therefore, it is probable that the financial crisis will mitigate by year-end. In addition, fairly large fiscal and monetary stimulation and the new mortgage rules for Fannie Mae, Freddie Mac and the Federal Housing Authority (which will bring more capital to the mortgage market) could have a positive effect on the markets overall.

Yet, even if financial conditions improve, the economy could continue to erode, causing us to remain in a recessionary environment for a while. And it may sound peculiar (if, in fact, we are going into a recession) that we are also preparing for interest rates that may trend a lot higher over the next several years (we won't go into the reasons now).

We would also like to assure you, all of our shareholders, that while we are preparing for an extended financial crisis, we will never lose sight of our primary purpose to build a strong company and great franchise for the long term.

IV. IN CLOSING

Finally, I would like to make a few comments about your management team. You don't get to see these professionals in action as I do, but if you did, you would be extremely proud of them. Not only are they ethical, disciplined and thoughtful, but the tougher conditions became, the more they stepped up to support the firm. People canceled time off and worked or flew through the night to quickly respond to the extraordinary circumstances of the past year. Everyone shared information, offered to help and actively demonstrated how much they care about the work they do and the customers they serve. I am privileged to be part of this great team.

Our senior managers are all shareholders – they retain 75% of any restricted stock and options they receive as compensation. In this and countless other ways, the management team sets a stellar example for all employees of what it means to be invested in the company's long-term success. Currently, 140,000 out of 180,000 employees own stock in the company.

All of us are dedicated to building a great company of which you, our shareholders, our customers and all of our employees can be proud … and we are well on our way.



Jamie Dimon
Chairman and Chief Executive Officer

March 10, 2008

Leadership Team

OPERATING COMMITTEE

1 **Jamie Dimon**
Chairman and
Chief Executive Officer

2 **Frank Bisignano**
Chief Administrative Office

3 **Steve Black**
Investment Bank

4 **John Bradley**
Human Resources

5 **Mike Cavanagh**
Finance

6 **Steve Cutler**
Legal & Compliance

7 **Bill Daley**
Corporate Responsibility

8 **Ina Drew**
Chief Investment Office

9 **Todd Maclin**
Commercial Banking

10 **Jay Mandelbaum**
Strategy & Marketing

11 **Heidi Miller**
Treasury & Securities Services

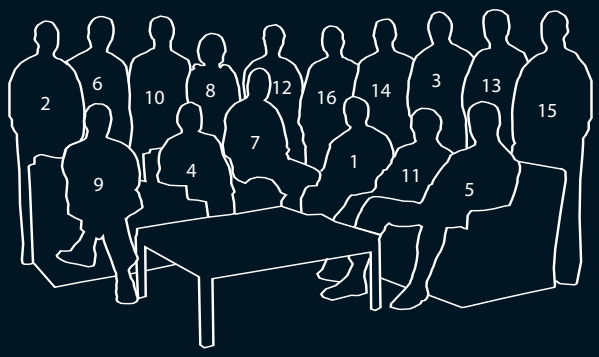
12 **Charlie Scharf**
Retail Financial Services

13 **Gordon Smith**
Card Services

14 **Jes Staley**
Asset Management

15 **Bill Winters**
Investment Bank

16 **Barry Zubrow**
Risk Management





Investment Bank

JPMorgan is one of the world's leading investment banks with one of the most extensive client lists in the world. Our full platform enables us to develop some of the most complete and innovative financial solutions in the industry.

We offer clients a full range of services, including strategic advice, capital raising, restructuring, risk management, market-making and research. We cover clients in more than 100 countries and have global leadership positions in our key products. JPMorgan also commits its own capital to proprietary investing and trading activities. We continue to strengthen our platform and develop new products to meet clients' needs.

(a) Dealogic
(b) Thomson Financial

2007 Highlights and Accomplishments

- *Institutional Investor*'s America's Investment Bank of the Year.
- *Risk* magazine's:
  - Derivatives House of the Year;
  - Best Derivatives House of the Past 20 Years; and
  - Best Credit Derivatives House – Pioneer and Modern Great.
- #1 in global investment banking fees.[(a)]
- #1 in global loan syndications and global high-yield bonds for the third year in a row.[(b)]
- #2 in equity underwriting, up from #6 in 2006.[(b)]
- Revenue of more than $5 billion in equity underwriting and equity markets.
- Record year-over-year revenue performance in:
  - Investment banking fees, 19% growth;
  - M&A advisory fees, 37% growth;
  - Equity underwriting fees, 45% growth; and
  - Equity markets revenue, 13% growth.
- Gross investment banking revenue from Commercial Banking clients up 24% from 2006.
- Strong progress on growth initiatives, including energy, emerging markets and retail structured products.
- Low subprime exposure relative to the financial industry.
- Outstanding first half offset by more difficult second half with leveraged loan and credit-related writedowns.



"Despite the industry-wide challenges we faced during the second half of 2007, we still produced record full-year revenue in several areas. Looking ahead to 2008, we believe having a fortress balance sheet will prove a sizable advantage at a time when capital is at a premium."

Steve Black (left)
co-CEO Investment Bank

"The risk management lessons we learned from the past paid dividends this year and helped us avoid some of the pitfalls that affected the industry. While we remain cautious about the near-term outlook, we believe we are extremely well-positioned for the long term with strong client relationships, global leadership positions and high capital ratios."

Bill Winters (right)
co-CEO Investment Bank

Retail Financial Services



"Capitalizing on the strength of the Chase brand, we'll continue to expand our branch and ATM network to increase convenience for our customers. We will strengthen our team of well-trained bankers and mortgage officers and improve our products to help customers handle their money, finance their homes, run their businesses and manage their investments, deepening their relationship with Chase.

"We have tightened our underwriting standards and are using our financial strength during this period of economic uncertainty to expand relationships, gain new customers and position ourselves for long-term growth across our businesses."

Charlie Scharf – CEO Retail Financial Services

Retail Financial Services serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking as well as through loan offices, auto dealerships and school financial aid offices.

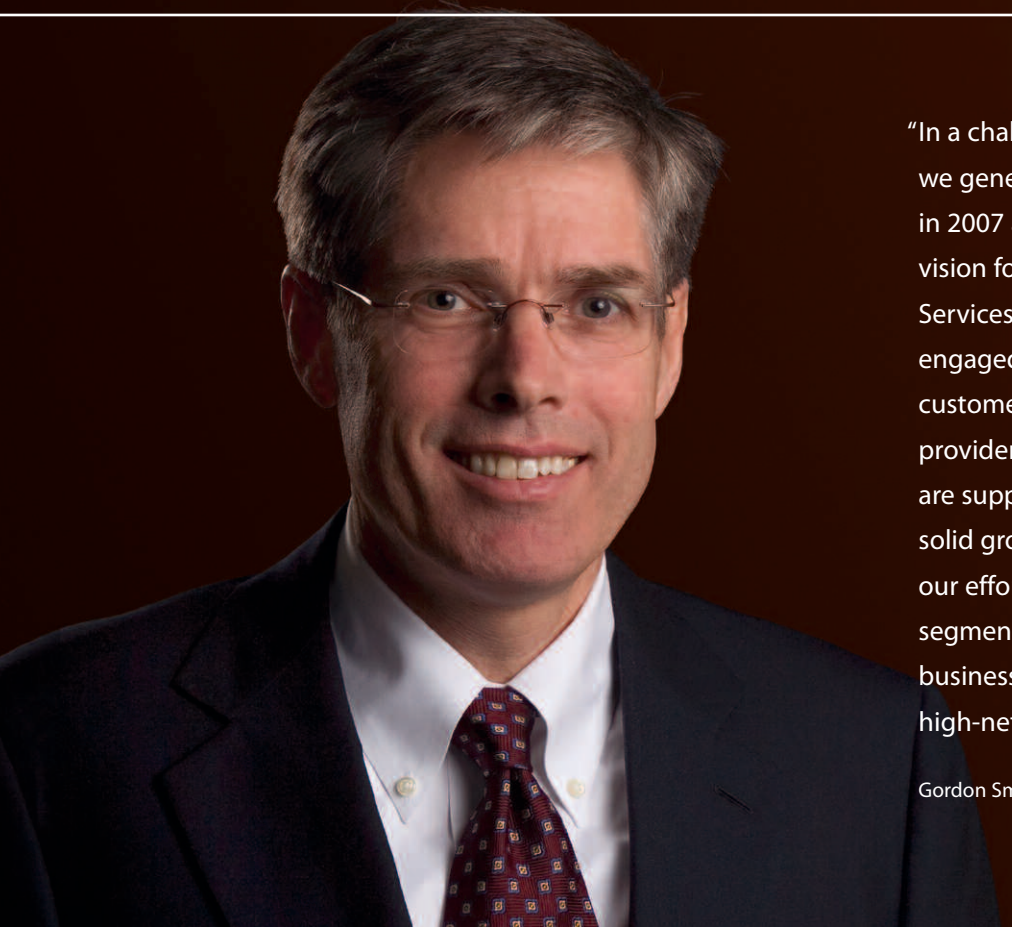
Customers can use more than 3,100 bank branches (fourth-largest nationally), 9,100 ATMs (#3) and 290 mortgage offices. More than 13,700 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 17-state footprint from New York to Arizona. Consumers also can obtain loans through more than 14,500 auto dealerships and 5,200 schools and universities nationwide.

2007 Highlights and Accomplishments

- Opened 127 new branches (and a total of 528 since 2004) and added 680 ATMs (2,536 since 2004) in major Chase markets.
- Increased in-branch personal bankers, business bankers, mortgage officers and investment specialists by a combined 2,568, or 23%, including additions from the 2006 acquisition of The Bank of New York branches.
- Increased in-branch sales of credit cards 23%, mortgages 31% and investments 23%.
- Increased checking accounts by 844,000, or 8%, and deposits 3% to $221 billion.
- Increased number of households with core retail relationships 12% to 10.3 million.
- Increased business banking loan originations 20% to $6.8 billion.
- Expanded market share in mortgages and home equity to 11% in the fourth quarter, up from 6% a year earlier.[(a)] Originated $208 billion in home loans during the year even as we tightened our underwriting standards.
- Increased third-party mortgage servicing portfolio 17% to $615 billion.
- Increased active online customer base 21%; generated 258 million online transactions, including bill payment and electronic payment, an increase of 38%.
- Improved customer experience and sales through refurbishment, rebranding, technology conversion and sales process enhancements at former Bank of New York branches.

(a) Source: *Inside Mortgage Finance*

Card Services



"In a challenging environment, we generated solid momentum in 2007 and established a clear vision for the future. Chase Card Services aims to create lifelong, engaged relationships with our customers by being a trusted provider of financial services. We are supporting our vision with a solid growth strategy – focusing our efforts on key marketplace segments, including the small business, mass affluent and high-net-worth markets."

Gordon Smith – CEO Card Services

With 155 million cards in circulation and more than $157 billion in managed loans, Chase Card Services is one of the nation's largest credit card issuers. Customers used Chase cards to meet more than $354 billion worth of their spending needs in 2007.

With hundreds of partnerships, Chase has a market leadership position in building loyalty programs with many of the world's most respected brands.

2007 Highlights and Accomplishments

- Added 16 million new Visa, MasterCard and private label accounts.
- Maintained Chase's position as the second-leading issuer of MasterCard and Visa cards in the U.S.
- Moved core processing platform in-house, allowing for greater technological innovation, more flexibility and reduced costs.
- Further enhanced the innovative Chase Freedom program, which gives cardmembers the choice of earning either cash or points and changing back and forth without leaving any rewards behind. The Chase Freedom program has generated more than one million new customers since its 2006 launch.
- Better leveraged the JPMorgan Chase franchise by increasing the number of credit cards sold through the Retail Financial Services network by 23% from 2006.
- Increased charge volume by $15 billion from 2006.
- Increased net revenue 3% and grew managed loans 3% while investing in activities to attract new customers and further engage current cardmembers.
- Increased merchant processing volume to $719 billion, up 9% from 2006, through Chase Paymentech Solutions, LLC, the nation's largest merchant processor.

Commercial Banking

Commercial Banking serves more than 30,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion. It is the #1 commercial bank in market penetration within Chase's retail branch footprint.[(a)]

Commercial Banking delivers extensive industry knowledge, local expertise and a dedicated service model. In partnership with the firm's other businesses, it provides comprehensive solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

2007 Highlights and Accomplishments

- Increased net income 12% to a record $1.1 billion and net revenue 8% to a record $4.1 billion.
- Achieved record results in gross investment banking revenue of $888 million, treasury services revenue of $2.4 billion, loan balances of $61.1 billion and liability balances of $87.7 billion.
- #1 commercial bank in market penetration within Chase's retail branch footprint.[(a)]
- #2 large middle-market lender in the U.S.[(b)]
- #2 asset-based lender in the U.S.[(b)]
- Launched seven new offices, expanding coverage in Atlanta, Nashville, Philadelphia and Seattle, including three international locations in Vancouver, Mumbai and Singapore.
- Added in excess of 2,200 new banking relationships through accelerated calling efforts and targeted marketing initiatives.
- Maintained favorable market position relative to the industry through conservative credit underwriting and strong credit reserves.
- Converted the wholesale New York Tri-State customer base of more than 332,000 deposit accounts, representing almost $28 billion, and migrated customers acquired from The Bank of New York to the firm's platforms.
- Delivered focused leadership training to more than 500 managers and enhanced employee diversity and performance initiatives.

(a) Barlow Footprint Study, 2007
(b) Loan Pricing Corporation, 2007

"Commercial Banking performed exceptionally well in a volatile and challenging economic environment, retaining a position of strength in our markets and resulting in record growth consistent with our 2007 plan.

"In 2008, we will redouble our prospecting efforts to broaden our market coverage, maintain a strong and well-managed loan portfolio, and continue to make smart credit decisions. We will also practice diligent expense control and remain vigilant over market conditions to provide insightful and disciplined advice to our clients."

Todd Maclin – CEO Commercial Banking



Treasury & Securities Services

Treasury & Securities Services is a global leader in transaction, investment and information services. We are one of the world's largest cash management providers and a leading global custodian, operating through two divisions:

Treasury Services provides cash management, trade, wholesale card and liquidity products and services to small- and mid-sized companies, multinational corporations, financial institutions and government entities.

Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers and manages depositary receipt programs globally.

(a) Ernst & Young
(b) NACHA
(c) The Clearing House
(d) Federal Reserve

2007 Highlights and Accomplishments

- Increased net income 28% year-over-year to a record $1.4 billion on the strength of record net revenue of $6.9 billion.
- Increased assets under custody 15% to $15.9 trillion and liability balances 21% to $228.9 billion.
- #1 in Sameday U.S. Dollar Funds Transfers[(a)], Automated Clearing House Originations[(b)], CHIPS[(c)] and Fedwire.[(d)]
- Grew revenue 26% outside the U.S. and strengthened our international presence, securing regulatory approval to connect to China's electronic clearing system and growing our hedge fund, image deposit, euro payment, private equity, commercial card and other capabilities in targeted markets.
- Migrated to a single U.S. dollar deposit platform in JPMorgan Chase's largest conversion, involving almost $180 billion in balances and nearly $10 trillion in daily transactions.
- Completed acquisitions of Xign Corporation, a leading provider of business-to-business on-demand financial settlement solutions; of FisaCure, Inc., a leading provider of electronic remittance services to the healthcare industry; and of the U.S. transfer agency services business of Integrated Investment Services.
- Introduced new offerings to support comprehensive financial supply chain and border logistics management; card-based invoice settlement for accounts payable; and the securities processing and fund administration needs of financial institutions.
- Industry awards included Best Overall Bank for Payments and Collections in North America (*Global Finance*), Best Investor Services (*Waters* magazine) and Best Liquidity Solution Provider (*The Asset*).



"Our businesses posted record results in 2007. Going forward, we see our most promising opportunities emerging in key markets outside the U.S., and we're confident we'll continue to effectively grow our businesses around the world.

"In 2008, we will expand on our success by enhancing our products and delivery of services to our clients – not only to improve efficiency and reduce costs but also to ensure we can adequately support the tremendous growth in business we continue to experience."

Heidi Miller
CEO Treasury & Securities Services

Asset Management



"Looking ahead, we see tremendous opportunity to build upon the momentum in our business. We will continue to expand our alternative asset class business, delivering innovative, best-in-class investment products to our clients. Our industry-leading Private Bank will capitalize on its strength, while we increase our focus on growth in Private Client Services. In Asia, we will broaden and deepen our reach, building on our unique leadership position in the region.

"Through our commitment to our values and our dedication to outstanding investment performance, we will continue to deliver the best of JPMorgan Asset Management to our clients."

Jes Staley – CEO Asset Management

With assets under supervision of $1.6 trillion, Asset Management is a global leader in investment and wealth management. Our clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world.

We offer global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity. We provide trust and estate and banking services to high-net-worth clients and retirement services for corporations and individuals. The majority of our client assets are in actively managed portfolios.

(a) iMoneyNet, December 2007

(b) *Absolute Return* magazine, March 2008 issue, data as of year-end 2007

(c) Derived from following rating services: Lipper for the United States and Taiwan; Micropal for the United Kingdom, Luxembourg and Hong Kong; and Nomura for Japan

(d) In conjunction with our joint venture partner, Shanghai International Trust and Investment Co., Ltd. (SITCO); quota of $4 billion

2007 Highlights and Accomplishments

- Record financial performance of 27% revenue growth and 40% earnings growth.
- Reached $1.2 trillion in assets under management and $1.6 trillion in assets under supervision. Net assets under management inflows were at a record level of $115 billion.
- JPMorgan Asset Management is the largest manager of AAA-rated global liquidity funds with more than $294 billion under management. Grew global liquidity balances 29%.[(a)]
- Experienced record growth in assets under supervision for the Private Bank and Private Client Services with an increase of $80 billion. Achieved second consecutive year of record growth in net new Private Bank clients.
- Retained position as largest manager of hedge funds with assets under management of $45 billion.[(b)]
- Grew alternative assets under management, including hedge funds, real estate and private equity 21% to $121 billion. Continued to experience strong investor interest in Highbridge funds with 68% growth in assets under management.
- Despite challenging markets throughout the second half of the year, maintained strong three- and five-year investment performance. Globally, the ranking of long-term mutual fund assets in the first or second quartiles was 76% for the five years and 75% for the three years ended December 31, 2007. One-year performance declined from 83% to 57%.[(c)]
- Launched our first Qualified Domestic Institutional Investor (QDII) product in China, raising a record $15.4 billion on the first day of IPO from 1.9 million clients.[(d)]

Corporate Responsibility



"Corporate responsibility is something that we all, as business leaders, ought to be thinking about every day. We need to continually review and ensure that we act in a way that focuses on the impact our businesses can and should have. Taking this seriously is a winning strategy for our consumers and clients, our company and the community."

Bill Daley –
Head of Corporate Responsibility

At JPMorgan Chase, corporate responsibility goes beyond philanthropy. It's about what we do every day in our businesses and how we do it. We are committed to managing our businesses to create value for our consumer and corporate clients, as well as our shareholders, communities and employees and to being a responsible corporate citizen.

From left to right:
Thelma Dye – *Director of Northside Center for Child Development,*
Bill Daley – *Corporate Responsibility, JPMorgan Chase,*
Kim Davis – *Philanthropy, JPMorgan Chase*

2007 Highlights and Accomplishments

- Established the Office of Corporate Responsibility to develop a comprehensive and identifiable platform driven by our business activities.
- Strengthened our focus on the environment by investing in alternative energy projects, helping our clients reduce carbon emissions and taking the lead in developing The Carbon Principles.
- Began the renovation of our NYC headquarters with the goal of Platinum LEED certification and opened pilot LEED-certified bank branches in Colorado and Texas.
- Helped shape federal legislation to protect homeowners and to serve a broader range of families through expanded mortgage-loan limits.
- Helped consumers understand our products' terms and fees through programs such as "Mortgage Nutrition Labels" in Home Lending and "Clear and Simple" in Card Services.
- Modified or refinanced $3 billion in subprime adjustable-rate mortgages to keep families in their homes. Shared expertise in helping lead national initiatives to prevent foreclosure (including HOPE NOW) and trained more than 1,300 non-profit counselors to assist struggling homeowners.
- Created a dedicated investment banking unit to support microfinance and social enterprises around the world.
- Invested $114 million in more than 2,400 not-for-profit organizations globally in nearly 500 cities across 33 countries.
- Invested more than $338 billion in low- and moderate-income communities across the U.S. in the first four years of our 10-year, $800 billion commitment. Will invest the additional $60 million allocation of New Markets Tax Credit in low-income communities.
- Increased supplier diversity spending, with more than $700 million going to minority- and women-owned businesses.

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FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

JPMorgan Chase & Co.

(unaudited) (in millions, except per share, headcount and ratio data) As of or for the year ended December 31,	2007	2006	2005	2004[c]	Heritage JPMorgan Chase only 2003
Selected income statement data					
Total net revenue	**$ 71,372**	$ 61,999	$ 54,248	$ 42,736	$ 33,191
Provision for credit losses	**6,864**	3,270	3,483	2,544	1,540
Total noninterest expense	**41,703**	38,843	38,926	34,336	21,878
Income from continuing operations before income tax expense	**22,805**	19,886	11,839	5,856	9,773
Income tax expense	**7,440**	6,237	3,585	1,596	3,209
Income from continuing operations	**15,365**	13,649	8,254	4,260	6,564
Income from discontinued operations[a]	**—**	795	229	206	155
Net income	**$ 15,365**	$ 14,444	$ 8,483	$ 4,466	$ 6,719
Per common share					
Basic earnings per share					
Income from continuing operations	**$ 4.51**	$ 3.93	$ 2.36	$ 1.51	$ 3.24
Net income	**4.51**	4.16	2.43	1.59	3.32
Diluted earnings per share					
Income from continuing operations	**$ 4.38**	$ 3.82	$ 2.32	$ 1.48	$ 3.17
Net income	**4.38**	4.04	2.38	1.55	3.24
Cash dividends declared per share	**1.48**	1.36	1.36	1.36	1.36
Book value per share	**36.59**	33.45	30.71	29.61	22.10
Common shares outstanding					
Average: Basic	**3,404#**	3,470#	3,492#	2,780#	2,009#
Diluted	**3,508**	3,574	3,557	2,851	2,055
Common shares at period-end	**3,367**	3,462	3,487	3,556	2,043
Share price[b]					
High	**$ 53.25**	$ 49.00	$ 40.56	$ 43.84	$ 38.26
Low	**40.15**	37.88	32.92	34.62	20.13
Close	**43.65**	48.30	39.69	39.01	36.73
Market capitalization	**146,986**	167,199	138,387	138,727	75,025
Selected ratios					
Return on common equity ("ROE"):					
Income from continuing operations	**13%**	12%	8%	6%	15%
Net income	**13**	13	8	6	16
Return on assets ("ROA"):					
Income from continuing operations	**1.06**	1.04	0.70	0.44	0.85
Net income	**1.06**	1.10	0.72	0.46	0.87
Tier 1 capital ratio	**8.4**	8.7	8.5	8.7	8.5
Total capital ratio	**12.6**	12.3	12.0	12.2	11.8
Overhead ratio	**58**	63	72	80	66
Selected balance sheet data (period-end)					
Total assets	**$1,562,147**	$1,351,520	$1,198,942	$1,157,248	$ 770,912
Loans	**519,374**	483,127	419,148	402,114	214,766
Deposits	**740,728**	638,788	554,991	521,456	326,492
Long-term debt	**183,862**	133,421	108,357	95,422	48,014
Total stockholders' equity	**123,221**	115,790	107,211	105,653	46,154
Headcount	**180,667**	174,360	168,847	160,968	96,367

(a) On October 1, 2006, JPMorgan Chase & Co. completed the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York Company Inc. The results of operations of these corporate trust businesses are being reported as discontinued operations for each of the periods presented.

(b) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.

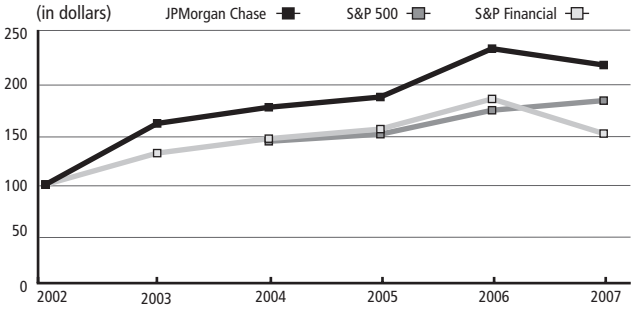
(c) On July 1, 2004, Bank One Corporation merged with and into JPMorgan Chase. Accordingly, 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Stock Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced U.S. equity benchmark consisting of leading companies from different economic sectors. The S&P Financial Index is an index of 92 financial companies, all of which are within the S&P 500. The Firm is a component of both industry indices.

The following table and graph assumes simultaneous investments of $100 on December 31, 2002, in JPMorgan Chase common stock and in each of the above S&P indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2002	2003	2004	2005	2006	2007
JPMorgan Chase	$ 100.00	$ 160.29	$ 176.27	$ 186.39	$ 234.10	**$ 217.95**
S&P Financial Index	100.00	131.03	145.29	154.74	184.50	**150.32**
S&P 500	100.00	128.68	142.68	149.69	173.33	**182.85**



This section of the Annual Report provides management's discussion and analysis ("MD&A") of the financial condition and results of operations of JPMorgan Chase. See the Glossary of terms on pages 181–183 of definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based upon the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause JPMorgan Chase's results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking statements on page 101 of this Annual Report) and in the JPMorgan Chase Annual Report on Form 10-K for the year ended December 31, 2007 ("2007 Form 10-K"), in Part I, Item 1A: Risk factors, to which reference is hereby made.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with $1.6 trillion in assets, $123.2 billion in stockholders' equity and operations worldwide. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing and asset management. Under the JPMorgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with branches in 17 states; and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national bank that is the Firm's credit card issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities Inc., the Firm's U.S. primary investment banking firm.

JPMorgan Chase's activities are organized, for management reporting purposes, into six business segments, as well as Corporate. The Firm's wholesale businesses comprise the Investment Bank, Commercial Banking, Treasury & Securities Services and Asset Management segments. The Firm's consumer businesses comprise the Retail Financial Services and Card Services segments. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows.

Investment Bank
JPMorgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The Investment Bank's clients are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments and research. The Investment Bank ("IB") also commits the Firm's own capital to proprietary investing and trading activities.

Retail Financial Services
Retail Financial Services ("RFS"), which includes the Regional Banking, Mortgage Banking and Auto Finance reporting segments, serves consumers and businesses through bank branches, ATMs, online banking and telephone banking. Customers can use more than 3,100 bank branches (fourth-largest nationally), 9,100 ATMs (third-largest nationally) and 290 mortgage offices. More than 13,700 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans and investments across the 17-state footprint from New York to Arizona. Consumers also can obtain loans through more than 14,500 auto dealerships and 5,200 schools and universities nationwide.

Card Services
With 155 million cards in circulation and more than $157 billion in managed loans, Card Services ("CS") is one of the nation's largest credit card issuers. Customers used Chase cards to meet more than $354 billion worth of their spending needs in 2007.

With hundreds of partnerships, Chase has a market leadership position in building loyalty programs with many of the world's most respected brands. The Chase-branded product line was strengthened in 2007 with enhancements to the popular Chase Freedom Program, which has generated more than one million new customers since its launch in 2006.

Chase Paymentech Solutions, LLC, a joint venture between JPMorgan Chase and First Data Corporation, is a processor of MasterCard and Visa payments, which handled more than 19 billion transactions in 2007.

Commercial Banking
Commercial Banking ("CB") serves more than 30,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion. Commercial Banking delivers extensive industry knowledge, local expertise and a dedicated service model. In partnership with the Firm's other businesses, it provides comprehensive solutions including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Treasury & Securities Services
Treasury & Securities Services ("TSS") is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services ("TS") provides cash management, trade, wholesale card and liquidity products and services to small and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with the Commercial Banking, Retail Financial Services and Asset Management businesses to serve clients firmwide. As a result, certain TS revenue is included in other segments' results. Worldwide Securities Services ("WSS") holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Asset Management
With assets under supervision of $1.6 trillion, Asset Management ("AM") is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including both money market instruments and bank deposits. AM also provides trust and estate and banking services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

EXECUTIVE OVERVIEW

This overview of management's discussion and analysis highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a more complete understanding of events, trends and uncertainties, as well as the capital, liquidity, credit and market risks, and the Critical accounting estimates, affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share and ratio data)	2007	2006	Change
Selected income statement data			
Total net revenue	**$ 71,372**	$ 61,999	15%
Provision for credit losses	**6,864**	3,270	110
Total noninterest expense	**41,703**	38,843	7
Income from continuing operations	**15,365**	13,649	13
Income from discontinued operations	**—**	795	NM
Net income	**15,365**	14,444	6
Diluted earnings per share			
Income from continuing operations	**$ 4.38**	$ 3.82	15%
Net income	**4.38**	4.04	8
Return on common equity			
Income from continuing operations	**13%**	12%	
Net income	**13**	13	

Business overview

JPMorgan Chase reported record Net income and record Total net revenue in 2007, exceeding the record levels achieved in 2006. Net income in 2007 was $15.4 billion, or $4.38 per share, and Total net revenue was $71.4 billion, compared with Net income of $14.4 billion, or $4.04 per share, and Total net revenue of $62.0 billion for 2006. The return on common equity was 13% in both years. Reported results in 2006 included $795 million of income from discontinued operations related to the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York. Income from continuing operations in 2006 was $13.6 billion, or $3.82 per share. For a detailed discussion of the Firm's consolidated results of operations, see pages 31–35 of this Annual Report.

The Firm's results over the past several years have benefited from growth in the global economy and, most importantly, from the management team's focus on driving organic revenue growth and improving operating margins by investing in each line of business, reducing waste, efficiently using the Firm's balance sheet and successfully completing the integration plan for the merger of Bank One Corporation with and into JPMorgan Chase on July 1, 2004 ("the Merger"). The success in executing on this agenda in 2007 is reflected in the strong organic growth experienced by all of our businesses including: record levels of advisory fees, equity underwriting fees and equity markets revenue; double-digit revenue growth in Retail Financial Services, Treasury & Securities Services and Asset Management; and improved operating margins in most businesses. This improved performance was driven by growth in key business metrics including: double-digit growth in deposit and loan balances; 127 new branches and 680 additional ATMs; 15% growth in assets under custody; $115 billion of net assets under management inflows; 16 million new credit card accounts with 1.4 million sold in branches; and nearly doubling real estate mortgage origination market share to 11% during the fourth quarter of 2007. At the same time the Firm increased loan loss reserve levels, and maintained strong capital ratios and ample levels of liquidity as part of its commitment to maintaining a strong balance sheet.

During 2007, the Firm also continued to create a stronger infrastructure. The Firm successfully completed the in-sourcing of its credit card processing platform, which will allow for faster introduction of new and enhanced products and services. In addition, with the successful completion of the systems conversion and rebranding for 339 former Bank of New York branches and the conversion of the wholesale deposit system (the last significant Merger event which affected more than $180 billion in customer balances), the Firm's consumer and wholesale customers throughout the U.S. now have access to over 3,100 branches and 9,100 ATMs in 17 states, all of which are on common computer systems. With Merger integration activity completed by the end of 2007, the Firm fully realized its established merger-related expense savings target of $3.0 billion. To achieve these merger-related savings, the Firm expensed Merger costs of $209 million during 2007, bringing the total cumulative amount expensed since the Merger announcement to approximately $3.6 billion (including costs associated with the Bank of New York transaction and capitalized costs). With the completion of all Merger integration activity, no further Merger costs will be incurred.

In 2007, the global economy continued to expand and inflation remained well-contained despite ongoing price pressures on energy and agricultural commodities. Developing economies maintained strong momentum throughout the year, but the industrial economies slowed in the second half of the year in response to weak housing conditions, monetary tightening by several central banks, rising petroleum prices and tightening credit conditions. The U.S. housing market for the first time in decades experienced a decline in average home prices with some specific markets declining by double-digit percentages. Despite the slowdown in the industrial economies, labor markets remained relatively healthy, supporting ongoing solid, though slowing consumer spending. Substantial financial losses related to U.S. subprime mortgage loans triggered a flight to quality in global financial markets late in the summer. In addition, during the second half of the year, pressures in interbank funding markets increased, credit spreads widened significantly and credit was difficult to obtain for some less creditworthy wholesale and consumer borrowers. Central banks took a number of actions to counter pressures in funding markets, including reducing interest rates and suspending further tightening actions. Capital markets activity increased significantly in the first half of 2007, but declined over the second half of the year amid difficult mortgage and credit market conditions. Despite the volatility in capital markets activity, U.S. and international equity markets performance was strong, with the U.S. stock market reaching an all-time record in October; however, the stock market pulled back from the record level by the end of the year. The S&P 500 and international indices were up, on average, approximately 8% during 2007.

The Firm's improved performance in 2007 benefited both from the investments made in each business and the overall global economic environment. The continued overall expansion of the U.S. and global economies, overall increased level of capital markets activity and positive performance in equity markets helped to drive new business volume and organic growth within each of the Firm's businesses. These

benefits were tempered by the capital markets environment in the second half of the year and the continued weakness in the U.S. housing market. The Investment Bank's lower results were significantly affected by the uncertain and extremely volatile capital markets environment, which resulted in significant markdowns on leveraged lending, subprime positions and securitized products. Retail Financial Services reported lower earnings, reflecting an increase in the Provision for credit losses and higher net charge-offs for the home equity and subprime mortgage loan portfolios related to the weak housing market. Card Services earnings also decreased driven by an increased Provision for credit losses, reflecting a higher level of net charge-offs. The other lines of business each posted improved results versus 2006. Asset Management, Treasury & Securities Services and Commercial Banking reported record revenue and earnings in 2007, and Private Equity posted very strong results.

The discussion that follows highlights the performance of each business segment compared with the prior year, and discusses results on a managed basis unless otherwise noted. For more information about managed basis, see Explanation and reconciliation of the Firm's use of non-GAAP financial measures on pages 36–37 of this Annual Report.

Investment Bank net income decreased from the prior year, driven by lower Total net revenue and a higher Provision for credit losses. The decline in Total net revenue was driven by lower Fixed Income Markets revenue due to markdowns on subprime positions, including subprime collateralized debt obligations ("CDOs"); markdowns on leverage lending funded loans and unfunded commitments; markdowns in securitized products on nonsubprime mortgages and weak credit trading performance. Partially offsetting the decline in revenue were strong investment banking fees, driven by record advisory and record equity underwriting fees; record Equity Markets revenue, which benefited from strong client activity and record trading results; and record revenue in currencies and strong revenue in rates. The Provision for credit losses rose due to an increase in the Allowance for credit losses, primarily resulting from portfolio activity, which included the effect of the weakening credit environment, and portfolio growth.

Retail Financial Services net income declined compared with the prior year. Growth in Total net revenue was more than offset by a significant increase in the Provision for credit losses and higher Total noninterest expense. The increase in Total net revenue was due to higher net mortgage servicing revenue; higher deposit-related fees; the absence of prior-year losses related to mortgage loans transferred to held-for-sale; wider spreads on loans; and higher deposit balances. Revenue also benefited from the Bank of New York transaction and the classification of certain mortgage loan origination costs as expense due to the adoption of SFAS 159. The increase in the Provision for credit losses was due primarily to an increase in the Allowance for loan losses related to home equity loans and subprime mortgage loans, as weak housing prices throughout the year resulted in an increase in estimated losses for both categories of loans. Total noninterest expense increased due to the Bank of New York transaction, the classification of certain loan origination costs as expense due to the adoption of SFAS 159 ("Fair Value Option"), investments in the retail distribution network and higher mortgage production and servicing expense. These increases were offset partially by the sale of the insurance business.

Card Services net income declined compared with the prior year due to an increase in the Provision for credit losses, partially offset by Total net managed revenue growth and a reduction in Total noninterest expense. The growth in Total net managed revenue reflected a higher level of fees, growth in average loan balances and increased net interchange income. These benefits were offset partially by narrower loan spreads, the discontinuation of certain billing practices (including the elimination of certain over-limit fees and the two-cycle billing method for calculating finance charges) and the effect of higher revenue reversals associated with higher charge-offs. The Managed provision for credit losses increased primarily due to a higher level of net charge-offs (the prior year benefited from the change in bankruptcy legislation in the fourth quarter of 2005) and an increase in the allowance for loan losses driven by higher estimated net charge-offs in the portfolio. Total noninterest expense declined from 2006, primarily due to lower marketing expense and lower fraud-related expense, partially offset by higher volume-related expense.

Commercial Banking posted record net income as record Total net revenue was offset partially by a higher Provision for credit losses. Total net revenue reflected growth in liability balances and loans, increased deposit-related fees and higher investment banking revenue. These benefits were offset partially by a continued shift to narrower-spread liability products and spread compression in the loan and liability portfolios. The Provision for credit losses increased from the prior year, reflecting portfolio activity, including slightly lower credit quality, as well as growth in loan balances. Total noninterest expense decreased slightly, as lower compensation expense was offset by higher volume-related expense related to the Bank of New York transaction.

Treasury & Securities Services generated record net income driven by record Total net revenue, partially offset by higher Total noninterest expense. Total net revenue benefited from increased product usage by new and existing clients, market appreciation, wider spreads in securities lending, growth in electronic volumes and higher liability balances. These benefits were offset partially by spread compression and a shift to narrower-spread liability products. Total noninterest expense increased due primarily to higher expense related to business and volume growth, as well as investment in new product platforms.

Asset Management produced record net income, which benefited from record Total net revenue, partially offset by higher Total noninterest expense. Total net revenue grew as a result of increased assets under management, higher performance and placement fees, and higher deposit and loan balances. Total noninterest expense was up, largely due to higher performance-based compensation expense and investments in all business segments.

Corporate net income increased from the prior year due primarily to increased Total net revenue. Total net revenue growth was driven by significantly higher Private Equity gains compared with the prior year, reflecting a higher level of gains and the change in classification of carried interest to compensation expense. Revenue also benefited from a higher level of security gains and an improved net interest spread. Total noninterest expense increased due primarily to higher net litigation expense driven by credit card-related litigation and higher compensation expense.

Income from discontinued operations was $795 million in 2006, which included a one-time gain of $622 million from the sale of selected corporate trust businesses. Discontinued operations (included in the Corporate segment results) included the income statement activity of selected corporate trust businesses sold to The Bank of New York in October 2006.

The Firm's Managed provision for credit losses was $9.2 billion compared with $5.5 billion in the prior year, reflecting increases in both the wholesale and consumer provisions. The total consumer Managed provision for credit losses was $8.3 billion, compared with $5.2 billion in the prior year. The higher provision primarily reflected increases in the Allowance for credit losses largely related to home equity, credit card and subprime mortgage loans and higher net charge-offs. Consumer managed net charge-offs were $6.8 billion in 2007, compared with $5.3 billion in 2006, resulting in managed net charge-off rates of 1.97% and 1.60%, respectively. The wholesale Provision for credit losses was $934 million, compared with $321 million in the prior year. The increase was due primarily to a higher Allowance for credit losses, resulting primarily from portfolio activity, including the effect of the weakening credit environment, and portfolio growth. Wholesale net charge-offs were $72 million in 2007 (net charge-off rate of 0.04%), compared with net recoveries of $22 million in 2006 (net recovery rate of 0.01%). In total, the Firm increased its Allowance for credit losses in 2007 by $2.3 billion, bringing the balance of the allowance to $10.1 billion at December 31, 2007.

The Firm had, at year end, Total stockholders' equity of $123.2 billion and a Tier 1 capital ratio of 8.4%. The Firm purchased $8.2 billion, or 168 million shares, of its common stock during the year.

2008 Business outlook

The following forward-looking statements are based upon the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause JPMorgan Chase's results to differ materially from those set forth in such forward-looking statements.

JPMorgan Chase's outlook for 2008 should be viewed against the backdrop of the global and U.S. economies (which currently are extremely volatile), financial markets activity (including interest rate movements), the geopolitical environment, the competitive environment and client activity levels. Each of these linked factors will affect the performance of the Firm's lines of business. The Firm currently anticipates a lower level of growth globally and in the U.S. during 2008 and increased credit costs in all businesses. The slower the growth is, or the weaker the economic conditions are, compared with current forecasts, the more the Firm's financial results could be adversely affected.

The consumer Provision for credit losses could increase substantially as a result of a higher level of losses in Retail Financial Services' $94.8 billion home equity loan portfolio and growth and increased losses in the $15.5 billion retained subprime mortgage loan portfolio. Given the potential stress on the consumer from continued downward pressure on housing prices and the elevated inventory of unsold houses nationally, management remains extremely cautious with respect to the home equity and subprime mortgage portfolios. Economic data released in early 2008, including continued declines in housing prices and increasing unemployment, indicate that losses will likely continue to rise in the home equity portfolio. In addition, the consumer provision could increase due to a higher level of net charge-offs in Card Services. Based on management's current economic outlook, home equity losses for the first quarter of 2008 could be approximately $450 million and net charge-offs could potentially double from this level by the fourth quarter of 2008, and the net charge-off rate for Card Services could potentially increase to approximately 4.50% of managed loans in the first half of 2008 and to approximately 5.00% by the end of 2008. Net charge-offs for home equity and card services could be higher than management's current expectations depending on such factors as changes in housing prices, unemployment levels and consumer behavior. The wholesale Provision for credit losses may also increase over time as a result of loan growth, portfolio activity and changes in underlying credit conditions.

The Investment Bank enters 2008 with the capital markets still being affected by the disruption in the credit and mortgage markets, as well as by overall lower levels of liquidity and wider credit spreads, all of which could potentially lead to reduced levels of client activity, difficulty in syndicating leveraged loans, lower investment banking fees and lower trading revenue. While some leveraged finance loans were sold during the fourth quarter of 2007, the Firm held $26.4 billion of leveraged loans and unfunded commitments as held-for-sale as of December 31, 2007. Markdowns in excess of 6% have been taken on the leveraged lending positions as of year-end 2007. These positions are difficult to hedge effectively and as market conditions have continued to deteriorate in the first quarter of 2008, it is likely there will be further markdowns on this asset class. In January 2008, the Firm decided, based on its view of potential relative returns, to retain for investment $4.9 billion of the leveraged lending portfolio that had been previously held-for-sale. The Investment Bank also held, at year end, an aggregate $2.7 billion of subprime CDOs and other subprime-related exposures which could also be negatively affected by market conditions during 2008. While these positions are substantially hedged (none of the hedges include insurance from monoline insurance companies), there can be no assurance that the Firm will not incur additional losses on these positions, as these markets are illiquid and further writedowns may be necessary. Other exposures as of December 31, 2007 that have higher levels of risk given the current market environment include CDO warehouse and trading positions of $5.5 billion (over 90% corporate loans and bonds); Commercial Mortgage-Backed Securities ("CMBS") exposure of $15.5 billion; and $6.4 billion of Alt-A mortgage positions.

A weaker economy and lower equity markets in 2008 would also adversely affect business volumes, assets under custody and assets under management in Asset Management and Treasury & Securities Services. Management continues to believe that the net loss in Treasury and Other Corporate on a combined basis will be approximately $50 million to $100 million per quarter over time. Private equity results, which are dependent upon the capital markets, could continue to be volatile and may be significantly lower in 2008 than in 2007. For the first quarter of 2008, private equity gains are expected to be minimal.

The following section provides a comparative discussion of JPMorgan Chase's Consolidated results of operations on a reported basis for the three-year period ended December 31, 2007. Factors that relate primarily to a single business segment are discussed in more detail within that business segment than they are in this consolidated section. For a discussion of the Critical accounting estimates used by the Firm that affect the Consolidated results of operations, see pages 96–98 of this Annual Report.

Revenue

Year ended December 31, (in millions)	**2007**	2006	2005
Investment banking fees	**$ 6,635**	$ 5,520	$ 4,088
Principal transactions	**9,015**	10,778	8,072
Lending & deposit-related fees	**3,938**	3,468	3,389
Asset management, administration and commissions	**14,356**	11,855	9,988
Securities gains (losses)	**164**	(543)	(1,336)
Mortgage fees and related income	**2,118**	591	1,054
Credit card income	**6,911**	6,913	6,754
Other income	**1,829**	2,175	2,684
Noninterest revenue	**44,966**	40,757	34,693
Net interest income	**26,406**	21,242	19,555
Total net revenue	**$71,372**	$61,999	$54,248

2007 compared with 2006

Total net revenue of $71.4 billion was up $9.4 billion, or 15%, from the prior year. Higher Net interest income, very strong private equity gains, record Asset management, administration and commissions revenue, higher Mortgage fees and related income and record Investment banking fees contributed to the revenue growth. These increases were offset partially by lower trading revenue.

Investment banking fees grew in 2007 to a level higher than the previous record set in 2006. Record advisory and equity underwriting fees drove the results, partially offset by lower debt underwriting fees. For a further discussion of Investment banking fees, which are primarily recorded in IB, see the IB segment results on pages 40–42 of this Annual Report.

Principal transactions revenue consists of trading revenue and private equity gains. Trading revenue declined significantly from the 2006 level, primarily due to markdowns in IB of $1.4 billion (net of hedges) on subprime positions, including subprime CDOs, and $1.3 billion (net of fees) on leveraged lending funded loans and unfunded commitments. Also in IB, markdowns in securitized products on nonsubprime mortgages and weak credit trading performance more than offset record revenue in currencies and strong revenue in both rates and equities. Equities benefited from strong client activity and record trading results across all products. IB's Credit Portfolio results increased compared with the prior year, primarily driven by higher revenue from risk management activities. The increase in private equity gains from 2006 reflected a significantly higher level of gains, the classification of certain private equity carried interest as Compensation expense and a fair value adjustment in the first quarter of 2007 on nonpublic private equity investments resulting from the adoption of SFAS 157 ("Fair Value Measurements"). For a further discussion of Principal transactions revenue, see the IB and Corporate segment results on pages 40–42 and 59–60, respectively, and Note 6 on page 122 of this Annual Report.

Lending & deposit-related fees rose from the 2006 level, driven primarily by higher deposit-related fees and the Bank of New York transaction. For a further discussion of Lending & deposit-related fees, which are mostly recorded in RFS, TSS and CB, see the RFS segment results on pages 43–48, the TSS segment results on pages 54–55, and the CB segment results on pages 52–53 of this Annual Report.

Asset management, administration and commissions revenue reached a level higher than the previous record set in 2006. Increased assets under management and higher performance and placement fees in AM drove the record results. The 18% growth in assets under management from year-end 2006 came from net asset inflows and market appreciation across all segments: Institutional, Retail, Private Bank and Private Client Services. TSS also contributed to the rise in Asset management, administration and commissions revenue, driven by increased product usage by new and existing clients and market appreciation on assets under custody. Finally, commissions revenue increased, due mainly to higher brokerage transaction volume (primarily included within Fixed Income and Equity Markets revenue of IB), which more than offset the sale of the insurance business by RFS in the third quarter of 2006 and a charge in the first quarter of 2007 resulting from accelerated surrenders of customer annuities. For additional information on these fees and commissions, see the segment discussions for IB on pages 40–42, RFS on pages 43–48, TSS on pages 54–55, and AM on pages 56–58, of this Annual Report.

The favorable variance resulting from Securities gains in 2007 compared with Securities losses in 2006 was primarily driven by improvements in the results of repositioning of the Treasury investment securities portfolio. Also contributing to the positive variance was a $234 million gain from the sale of MasterCard shares. For a further discussion of Securities gains (losses), which are mostly recorded in the Firm's Treasury business, see the Corporate segment discussion on pages 59–60 of this Annual Report.

Mortgage fees and related income increased from the prior year as mortgage servicing rights ("MSRs") asset valuation adjustments and growth in third-party mortgage loans serviced drove an increase in net mortgage servicing revenue. Production revenue also grew, as an increase in mortgage loan originations and the classification of certain loan origination costs as expense (loan origination costs previously netted against revenue commenced being recorded as an expense in the first quarter of 2007 due to the adoption of SFAS 159) more than offset markdowns on the mortgage warehouse and pipeline. For a discussion of Mortgage fees and related income, which is recorded primarily in RFS's Mortgage Banking business, see the Mortgage Banking discussion on pages 46–47 of this Annual Report.

Credit card income remained relatively unchanged from the 2006 level, as lower servicing fees earned in connection with securitization activities, which were affected unfavorably by higher net credit losses and narrower loan margins, were offset by increases in net interchange income earned on the Firm's credit and debit cards. For further discussion of Credit card income, see CS's segment results on pages 49–51 of this Annual Report.

Other income declined compared with the prior year, driven by lower gains from loan sales and workouts, and the absence of a $103 million gain in the second quarter of 2006 related to the sale of MasterCard shares in its initial public offering. (The 2007 gain on the sale of MasterCard shares was recorded in Securities gains (losses) as the shares were transferred to the available-for-sale ("AFS") portfolio subsequent to the IPO.) Increased income from automobile operating leases and higher gains on the sale of leveraged leases and education loans partially offset the decline.

Net interest income rose from the prior year, primarily due to the following: higher trading-related Net interest income, due to a shift of Interest expense to Principal transactions revenue (related to certain IB structured notes to which fair value accounting was elected in connection with the adoption of SFAS 159); growth in liability and deposit balances in the wholesale and consumer businesses; a higher level of credit card loans; the impact of the Bank of New York transaction; and an improvement in Treasury's net interest spread. These benefits were offset partly by a shift to narrower-spread deposit and liability products. The Firm's total average interest-earning assets for 2007 were $1.1 trillion, up 12% from the prior year. The increase was primarily driven by higher Trading assets – debt instruments, Loans, and AFS securities, partially offset by a decline in Interests in purchased receivables as a result of the restructuring and deconsolidation during the second quarter of 2006 of certain multi-seller conduits that the Firm administered. The net interest yield on these assets, on a fully taxable equivalent basis, was 2.39%, an increase of 23 basis points from the prior year, due in part to the adoption of SFAS 159.

2006 compared with 2005

Total net revenue for 2006 was $62.0 billion, up $7.8 billion, or 14%, from the prior year. The increase was due to higher Principal transactions revenue, primarily from strong trading results, higher Asset management, administration and commission revenue and growth in Investment banking fees. Also contributing to the increase was higher Net interest income and lower securities portfolio losses. These improvements were offset partially by a decline in Other income partly as a result of the gain recognized in 2005 on the sale of BrownCo, the on-line deep discount brokerage business, and lower Mortgage fees and related income.

The increase in Investment banking fees was driven by strong growth in debt and equity underwriting, as well as advisory fees. For further discussion of Investment banking fees, which are primarily recorded in IB, see the IB segment results on pages 40–42 of this Annual Report.

Revenue from Principal transactions activities increased compared with the prior year, partly driven by strong trading revenue results due to improved performance in IB Equity and Fixed income markets, partially offset by lower private equity gains. For a further discussion of Principal transactions revenue, see the IB and Corporate segment results on pages 40–42 and 59–60, respectively, and Note 6 on page 122 of this Annual Report.

Lending & deposit-related fees rose slightly in comparison with the prior year as a result of higher fee income on deposit-related fees and, in part, from the Bank of New York transaction. For a further discussion of Lending & deposit-related fees, which are mostly recorded in RFS, TSS and CB, see the RFS segment results on pages 43–48, the TSS segment results on pages 54–55, and the CB segment results on pages 52–53 of this Annual Report.

The increase in Asset management, administration and commissions revenue in 2006 was driven by growth in assets under management in AM, which exceeded $1 trillion at the end of 2006, higher equity-related commissions in IB and higher performance and placement fees. The growth in assets under management reflected new asset inflows in the Institutional and Retail segments. TSS also contributed to the rise in Asset management, administration and commissions revenue, driven by increased product usage by new and existing clients and market appreciation on assets under custody. In addition, commissions in the IB rose as a result of strength across regions, partly offset by the sale of the insurance business and BrownCo. For additional information on these fees and commissions, see the segment discussions for IB on pages 40–42, RFS on pages 43–48, TSS on pages 54–55, and AM on pages 56–58, of this Annual Report.

The favorable variance in Securities gains (losses) was due primarily to lower Securities losses in Treasury in 2006 from portfolio repositioning

activities in connection with the management of the Firm's assets and liabilities. For a further discussion of Securities gains (losses), which are mostly recorded in the Firm's Treasury business, see the Corporate segment discussion on pages 59–60 of this Annual Report.

Mortgage fees and related income declined in comparison with the prior year, reflecting a reduction in net mortgage servicing revenue and higher losses on mortgage loans transferred to held-for-sale. These declines were offset partly by growth in production revenue as a result of a higher volume of loan sales and wider gain on sale margins. For a discussion of Mortgage fees and related income, which is recorded primarily in RFS's Mortgage Banking business, see the Mortgage Banking discussion on pages 46–47 of this Annual Report.

Credit card income increased from the prior year, primarily from higher customer charge volume that favorably affected interchange income and servicing fees earned in connection with securitization activities, which benefited from lower credit losses incurred on securitized credit card loans. These increases were offset partially by increases in volume-driven payments to partners, expense related to reward programs, and interest paid to investors in securitized loans. Credit card income also was affected negatively by the deconsolidation of Paymentech in the fourth quarter of 2005.

The decrease in Other income compared with the prior year was due to a $1.3 billion pretax gain recognized in 2005 on the sale of BrownCo and lower gains from loan workouts. Partially offsetting these two items were higher automobile operating lease revenue; an increase in equity investment income, in particular, from Chase Paymentech Solutions, LLC; and a pretax gain of $103 million on the sale of MasterCard shares in its initial public offering.

Net interest income rose compared with the prior year due largely to improvement in Treasury's net interest spread and increases in wholesale liability balances, wholesale and consumer loans, AFS securities and consumer deposits. Increases in consumer and wholesale loans and deposits included the impact of the Bank of New York transaction. These increases were offset partially by narrower spreads on both trading-related assets and loans, a shift to narrower-spread deposits products, RFS's sale of the insurance business and the absence of BrownCo in AM. The Firm's total average interest-earning assets in 2006 were $995.5 billion, up 11% from the prior year, primarily as a result of an increase in loans and other liquid earning assets, partially offset by a decline in Interests in purchased receivables as a result of the restructuring and deconsolidation during the second quarter of 2006 of certain multi-seller conduits that the Firm administered. The net yield on interest-earning assets, on a fully taxable-equivalent basis, was 2.16%, a decrease of four basis points from the prior year.

Provision for credit losses

Year ended December 31, (in millions)	**2007**	2006	2005
Provision for credit losses	**$ 6,864**	$ 3,270	$ 3,483

2007 compared with 2006

The Provision for credit losses in 2007 rose $3.6 billion from the prior year due to increases in both the consumer and wholesale provisions. The increase in the consumer provision from the prior year was largely due to an increase in estimated losses related to home equity, credit card and subprime mortgage loans. Credit card net charge-offs in 2006 benefited following the change in bankruptcy legislation in the fourth quarter of 2005. The increase in the wholesale provision from the prior year primarily reflected an increase in the Allowance for credit losses due to portfolio activity, which included the effect of the weakening credit environment and portfolio growth. For a more detailed discussion of the loan portfolio and the Allowance for loan losses, see the segment discussions for RFS on pages 43–48, CS on pages 49–51, IB on pages 40–42, CB on pages 52–53 and Credit risk management on pages 73–89 of this Annual Report.

2006 compared with 2005

The Provision for credit losses in 2006 declined $213 million from the prior year due to a $1.3 billion decrease in the consumer Provision for credit losses, partly offset by a $1.1 billion increase in the wholesale Provision for credit losses. The decrease in the consumer provision was driven by CS, reflecting lower bankruptcy-related losses, partly offset by higher contractual net charge-offs. The 2005 consumer provision also reflected a $350 million special provision related to Hurricane Katrina, a portion of which was released in 2006. The increase in the wholesale provision was due primarily to portfolio activity, partly offset by a decrease in nonperforming loans. The benefit in 2005 was due to strong credit quality, reflected in significant reductions in criticized exposure and nonperforming loans. Credit quality in the wholesale portfolio was stable.

Noninterest expense

Year ended December 31, (in millions)	**2007**	2006	2005
Compensation expense	**$ 22,689**	$ 21,191	$ 18,065
Occupancy expense	**2,608**	2,335	2,269
Technology, communications and equipment expense	**3,779**	3,653	3,602
Professional & outside services	**5,140**	4,450	4,662
Marketing	**2,070**	2,209	1,917
Other expense	**3,814**	3,272	6,199
Amortization of intangibles	**1,394**	1,428	1,490
Merger costs[(a)]	**209**	305	722
Total noninterest expense	**$ 41,703**	$ 38,843	$ 38,926

(a) On July 1, 2004, Bank One Corporation merged with and into JPMorgan Chase.

2007 compared with 2006

Total noninterest expense for 2007 was $41.7 billion, up $2.9 billion, or 7%, from the prior year. The increase was driven by higher Compensation expense, as well as investments across the business segments and acquisitions.

The increase in Compensation expense from 2006 was primarily the result of investments and acquisitions in the businesses, including additional headcount from the Bank of New York transaction; the classification of certain private equity carried interest from Principal transactions revenue; the classification of certain loan origination costs (loan origination costs previously netted against revenue commenced being recorded as an expense in the first quarter of 2007 due to the adoption of SFAS 159); and higher performance-based incentives. Partially offsetting these increases were business divestitures and continuing business efficiencies.

The increase in Occupancy expense from 2006 was driven by ongoing investments in the businesses; in particular, the retail distribution network and the Bank of New York transaction.

Technology, communications and equipment expense increased compared with 2006, due primarily to higher depreciation expense on owned automobiles subject to operating leases in the Auto Finance business in RFS and technology investments to support business growth. Continuing business efficiencies partially offset these increases.

Professional & outside services rose from the prior year, primarily reflecting higher brokerage expense and credit card processing costs resulting from growth in transaction volume. Investments in the businesses and acquisitions also contributed to the increased expense.

Marketing expense declined compared with 2006 due largely to lower credit card marketing expense.

The increase in Other expense from the 2006 level was driven by increased net legal-related costs reflecting a lower level of insurance recoveries and higher expense, which included the cost of credit card-related litigation. Also contributing to the increase were business growth and investments in the businesses, offset partially by the sale of the insurance business at the beginning of the third quarter of 2006, lower credit card fraud-related losses and continuing business efficiencies.

For a discussion of Amortization of intangibles and Merger costs, refer to Note 18 and Note 11 on pages 154–157 and 134, respectively, of this Annual Report.

2006 compared with 2005

Total noninterest expense for 2006 was $38.8 billion, down slightly from the prior year. The decrease was due to material litigation-related insurance recoveries of $512 million in 2006 compared with a net charge of $2.6 billion (includes $208 million of material litigation-related insurance recoveries) in 2005, primarily associated with the settlement of the Enron Corp. and its subsidiaries ("Enron") and WorldCom class action litigations and for certain other material legal proceedings. Also contributing to the decrease were lower Merger costs, the deconsolidation of Paymentech, the sale of the insurance business, and merger-related savings and operating efficiencies. These items were offset mostly by higher performance-based compensation and incremental expense of $712 million related to the adoption of SFAS 123R, the impact of acquisitions and investments in the businesses, and higher marketing expenditures.

The increase in Compensation expense from the prior year was primarily a result of higher performance-based incentives, incremental expense related to SFAS 123R of $712 million for 2006, and additional headcount in connection with growth in business volume, acquisitions, and investments in the businesses. These increases were offset partially by merger-related savings and other expense efficiencies throughout the Firm. For a detailed discussion of the adoption of SFAS 123R and employee stock-based incentives, see Note 10 on pages 131–133 of this Annual Report.

The increase in Occupancy expense from the prior year was due to ongoing investments in the retail distribution network, which included the incremental expense from The Bank of New York branches, partially offset by merger-related savings and other operating efficiencies.

The slight increase in Technology, communications and equipment expense for 2006 was due primarily to higher depreciation expense on owned automobiles subject to operating leases and higher technology investments to support business growth, partially offset by merger-related savings and continuing business efficiencies.

Professional & outside services decreased from the prior year due to merger-related savings and continuing business efficiencies, lower legal fees associated with several legal matters settled in 2005 and the Paymentech deconsolidation. The decrease was offset partly by acquisitions and investments in the businesses.

Marketing expense was higher compared with the prior year, reflecting the costs of credit card campaigns.

Other expense was lower due to significant litigation-related charges of $2.8 billion in the prior year, associated with the settlement of the Enron and WorldCom class action litigations and certain other material legal proceedings. In addition, the Firm recognized insurance recoveries of $512 million and $208 million, in 2006 and 2005, respectively, pertaining to certain material litigation matters. For further discussion of litigation, refer to Note 29 on pages 167–168 of this Annual Report. Also contributing to the decline from the prior year were charges of $93 million in connection with the termination of a client contract in TSS in 2005; and in RFS, the sale of the insurance business in the third quarter of 2006. These items were offset partially by higher charges related to other litigation, and the impact of growth in business volume, acquisitions and investments in the businesses.

For a discussion of Amortization of intangibles and Merger costs, refer to Note 18 and Note 11 on pages 154–157 and 134, respectively, of this Annual Report.

Income tax expense

The Firm's Income from continuing operations before income tax expense, Income tax expense and effective tax rate were as follows for each of the periods indicated.

Year ended December 31, (in millions, except rate)	**2007**	2006	2005
Income from continuing operations before income tax expense	**$22,805**	$19,886	$11,839
Income tax expense	**7,440**	6,237	3,585
Effective tax rate	**32.6%**	31.4%	30.3%

2007 compared with 2006

The increase in the effective tax rate for 2007, as compared with the prior year, was primarily the result of higher reported pretax income combined with changes in the proportion of income subject to federal, state and local taxes. Also contributing to the increase in the effective tax rate was the recognition in 2006 of $367 million of benefits related to the resolution of tax audits.

For further discussion of income taxes, see Critical accounting estimates and Note 26 on pages 96–98 and 164–165, respectively, of this Annual Report.

2006 compared with 2005

The increase in the effective tax rate for 2006, as compared with the prior year, was primarily the result of higher reported pretax income combined with changes in the proportion of income subject to federal, state and local taxes. Also contributing to the increase in the effective tax rate were the litigation charges in 2005 and lower Merger costs, reflecting a tax benefit at a 38% marginal tax rate, partially offset by benefits related to tax audit resolutions of $367 million in 2006.

Income from discontinued operations

As a result of the transaction with The Bank of New York on October 1, 2006, the results of operations of the selected corporate trust businesses (i.e., trustee, paying agent, loan agency and document management services) were reported as discontinued operations.

The Firm's Income from discontinued operations was as follows for each of the periods indicated.

Year ended December 31, (in millions)	**2007**	2006	2005
Income from discontinued operations	**$ —**	$ 795	$ 229

The increase in 2006 was due primarily to a gain of $622 million from exiting selected corporate trust businesses in the fourth quarter of 2006.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its Consolidated financial statements using accounting principles generally accepted in the United States of America ("U.S. GAAP"); these financial statements appear on pages 104–107 of this Annual Report. That presentation, which is referred to as "reported basis," provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's and the lines' of business results on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications that assume credit card loans securitized by CS remain on the balance sheet and presents revenue on a fully taxable-equivalent ("FTE") basis. These adjustments do not have any impact on Net income as reported by the lines of business or by the Firm as a whole.

The presentation of CS results on a managed basis assumes that credit card loans that have been securitized and sold in accordance with SFAS 140 still remain on the Consolidated balance sheets and that the earnings on the securitized loans are classified in the same manner as the earnings on retained loans recorded on the Consolidated balance sheets. JPMorgan Chase uses the concept of managed basis to evaluate the credit performance and overall financial performance of the entire managed credit card portfolio. Operations are funded and decisions are made about allocating resources, such as employees and capital, based upon managed financial information. In addition, the same underwriting standards

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

(Table continues on next page)

	2007				2006			
Year ended December 31, (in millions, except per share and ratio data)	Reported results	Credit card[b]	Fully tax-equivalent adjustments	Managed basis	Reported results	Credit card[b]	Fully tax-equivalent adjustments	Managed basis
Revenue								
Investment banking fees	**$ 6,635**	**$ —**	**$ —**	**$ 6,635**	$ 5,520	$ —	$ —	$ 5,520
Principal transactions	**9,015**	**—**	**—**	**9,015**	10,778	—	—	10,778
Lending & deposit-related fees	**3,938**	**—**	**—**	**3,938**	3,468	—	—	3,468
Asset management, administration and commissions	**14,356**	**—**	**—**	**14,356**	11,855	—	—	11,855
Securities gains (losses)	**164**	**—**	**—**	**164**	(543)	—	—	(543)
Mortgage fees and related income	**2,118**	**—**	**—**	**2,118**	591	—	—	591
Credit card income	**6,911**	**(3,255)**	**—**	**3,656**	6,913	(3,509)	—	3,404
Other income	**1,829**	**—**	**683**	**2,512**	2,175	—	676	2,851
Noninterest revenue	**44,966**	**(3,255)**	**683**	**42,394**	40,757	(3,509)	676	37,924
Net interest income	**26,406**	**5,635**	**377**	**32,418**	21,242	5,719	228	27,189
Total net revenue	**71,372**	**2,380**	**1,060**	**74,812**	61,999	2,210	904	65,113
Provision for credit losses	**6,864**	**2,380**	**—**	**9,244**	3,270	2,210	—	5,480
Noninterest expense	**41,703**	**—**	**—**	**41,703**	38,843	—	—	38,843
Income from continuing operations before income tax expense	**22,805**	**—**	**1,060**	**23,865**	19,886	—	904	20,790
Income tax expense	**7,440**	**—**	**1,060**	**8,500**	6,237	—	904	7,141
Income from continuing operations	**15,365**	**—**	**—**	**15,365**	13,649	—	—	13,649
Income from discontinued operations	**—**	**—**	**—**	**—**	795	—	—	795
Net income	**$ 15,365**	**$ —**	**$ —**	**$ 15,365**	$ 14,444	$ —	$ —	$ 14,444
Income from continuing operations – diluted earnings per share	**$ 4.38**	**$ —**	**$ —**	**$ 4.38**	$ 3.82	$ —	$ —	$ 3.82
Return on common equity[a]	**13%**	**—%**	**—%**	**13%**	12%	—%	—%	12%
Return on common equity less goodwill[a]	**21**	**—**	**—**	**21**	20	—	—	20
Return on assets[a]	**1.06**	**NM**	**NM**	**1.01**	1.04	NM	NM	1.00
Overhead ratio	**58**	**NM**	**NM**	**56**	63	NM	NM	60
Loans–Period-end	**$ 519,374**	**$72,701**	**$ —**	**$ 592,075**	$ 483,127	$ 66,950	$ —	$ 550,077
Total assets – average	**1,455,044**	**66,780**	**—**	**1,521,824**	1,313,794	65,266	—	1,379,060

(a) Based on Income from continuing operations.
(b) The impact of credit card securitizations affects CS. See the segment discussion for CS on pages 49–51 of this Annual Report for further information.

and ongoing risk monitoring are used for both loans on the Consolidated balance sheets and securitized loans. Although securitizations result in the sale of credit card receivables to a trust, JPMorgan Chase retains the ongoing customer relationships, as the customers may continue to use their credit cards; accordingly, the customer's credit performance will affect both the securitized loans and the loans retained on the Consolidated balance sheets. JPMorgan Chase believes managed basis information is useful to investors, enabling them to understand both the credit risks associated with the loans reported on the Consolidated balance sheets and the Firm's retained interests in securitized loans. For a reconciliation of reported to managed basis results for CS, see CS segment results on pages 49–51 of this Annual Report. For information regarding the securitization process, and loans and residual interests sold and securitized, see Note 16 on pages 139–145 of this Annual Report.

Total net revenue for each of the business segments and the Firm is presented on an FTE basis. Accordingly, revenue from tax-exempt securities and investments that receive tax credits is presented in the managed results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to these items is recorded within Income tax expense.

Management also uses certain other non-GAAP financial measures at the business segment level because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and therefore facilitate a comparison of the business segment with the performance of its competitors.

(Table continued from previous page)

2005			
Reported results	Credit card[b]	Fully tax-equivalent adjustments	Managed basis
$ 4,088	$ —	$ —	$ 4,088
8,072	—	—	8,072
3,389	—	—	3,389
9,988	—	—	9,988
(1,336)	—	—	(1,336)
1,054	—	—	1,054
6,754	(2,718)	—	4,036
2,684	—	571	3,255
34,693	(2,718)	571	32,546
19,555	6,494	269	26,318
54,248	3,776	840	58,864
3,483	3,776	—	7,259
38,926	—	—	38,926
11,839	—	840	12,679
3,585	—	840	4,425
8,254	—	—	8,254
229	—	—	229
$ 8,483	$ —	$ —	$ 8,483
$ 2.32	$ —	$ —	$ 2.32
8%	—%	—%	8%
13	—	—	13
0.70	NM	NM	0.67
72	NM	NM	66
$ 419,148	$ 70,527	—	$ 489,675
1,185,066	67,180	—	1,252,246

Calculation of certain U.S. GAAP and non-GAAP metrics

The table below reflects the formulas used to calculate both the following U.S. GAAP and non-GAAP measures:

Return on common equity

Net income* / Average common stockholders' equity

Return on common equity less goodwill[a]

Net income* / Average common stockholders' equity less goodwill

Return on assets

Reported — Net income / Total average assets

Managed — Net income / Total average managed assets[b] (including average securitized credit card receivables)

Overhead ratio

Total noninterest expense / Total net revenue

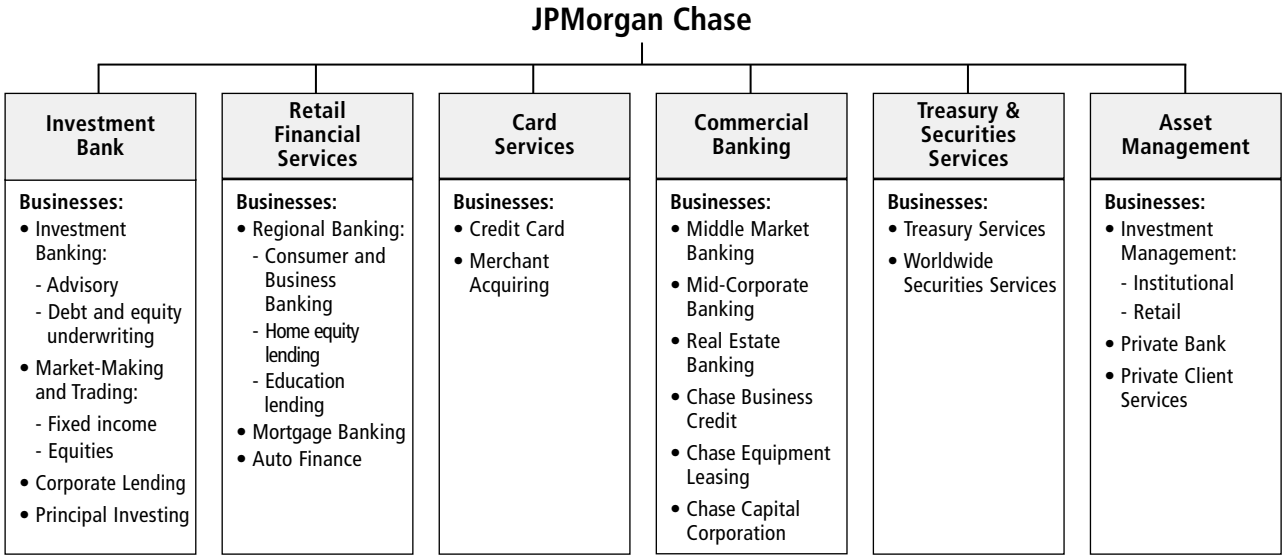
* Represents Net income applicable to common stock

(a) The Firm uses Return on common equity less goodwill, a non-GAAP financial measure, to evaluate the operating performance of the Firm and to facilitate comparisons to competitors.

(b) The Firm uses Return on managed assets, a non-GAAP financial measure, to evaluate the overall performance of the managed credit card portfolio, including securitized credit card loans.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line-of-business basis. The business segment financial results presented reflect the current organization of JPMorgan Chase. There are six major reportable business segments: the Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate segment. The business segments are determined based upon the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis.



Description of business segment reporting methodology
Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business.

The management reporting process that derives business segment results allocates income and expense using market-based methodologies. The Firm continues to assess the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods. Business segment reporting methodologies used by the Firm are discussed below.

Revenue sharing
When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing
Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to Treasury within the Corporate business segment. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment's stand-alone peers. This process is overseen by the Firm's Asset-Liability Committee ("ALCO"). Business segments may retain certain interest rate exposures, subject to management approval, that would be expected in the normal operation of a similar peer business.

Capital allocation
Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, economic risk measures and regulatory capital requirements. The amount of capital assigned to each business is referred to as equity. Effective January 1, 2006, the Firm refined its methodology for allocating capital to the business segments. As the 2005 period was not revised to reflect the new capital allocations, certain business metrics, such as ROE, are not comparable to the presentations in 2007 and 2006. For a further discussion of this change, see Capital management–Line of business equity on page 63 of this Annual Report.

Expense allocation
Where business segments use services provided by support units within the Firm, the costs of those support units are allocated to the business segments. The expense is allocated based upon their actual cost or the lower of actual cost or market, as well as upon usage of the services provided. In contrast, certain other expense related to certain corporate functions, or to certain technology and operations,

are not allocated to the business segments and are retained in Corporate. Retained expense includes: parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other one-time items not aligned with the business segments.

Segment results – Managed basis[a]

The following table summarizes the business segment results for the periods indicated.

Year ended December 31, (in millions, except ratios)	Total net revenue			Noninterest expense		
	2007	2006	2005	**2007**	2006	2005
Investment Bank	**$ 18,170**	$ 18,833	$ 15,110	**$ 13,074**	$ 12,860	$ 10,246
Retail Financial Services	**17,479**	14,825	14,830	**9,900**	8,927	8,585
Card Services	**15,235**	14,745	15,366	**4,914**	5,086	4,999
Commercial Banking	**4,103**	3,800	3,488	**1,958**	1,979	1,856
Treasury & Securities Services	**6,945**	6,109	5,539	**4,580**	4,266	4,050
Asset Management	**8,635**	6,787	5,664	**5,515**	4,578	3,860
Corporate	**4,245**	14	(1,133)	**1,762**	1,147	5,330
Total	**$ 74,812**	$ 65,113	$ 58,864	**$ 41,703**	$ 38,843	$ 38,926

Year ended December 31, (in millions, except ratios)	Net income (loss)			Return on equity		
	2007	2006	2005	**2007**	2006	2005
Investment Bank	**$ 3,139**	$ 3,674	$ 3,673	**15%**	18%	18%
Retail Financial Services	**3,035**	3,213	3,427	**19**	22	26
Card Services	**2,919**	3,206	1,907	**21**	23	16
Commercial Banking	**1,134**	1,010	951	**17**	18	28
Treasury & Securities Services	**1,397**	1,090	863	**47**	48	57
Asset Management	**1,966**	1,409	1,216	**51**	40	51
Corporate[b]	**1,775**	842	(3,554)	**NM**	NM	NM
Total	**$ 15,365**	$ 14,444	$ 8,483	**13%**	13%	8%

(a) Represents reported results on a tax-equivalent basis and excludes the impact of credit card securitizations.
(b) Net income included Income from discontinued operations of zero, $795 million and $229 million for 2007, 2006 and 2005, respectively.

INVESTMENT BANK

JPMorgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The Investment Bank's clients are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments and research. The IB also commits the Firm's own capital to proprietary investing and trading activities.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2007	2006	2005
Revenue			
Investment banking fees	**$ 6,616**	$ 5,537	$ 4,096
Principal transactions[a]	**4,409**	9,512	6,459
Lending & deposit-related fees	**446**	517	594
Asset management, administration and commissions	**2,701**	2,240	1,824
All other income[b]	**(78)**	528	534
Noninterest revenue	**14,094**	18,334	13,507
Net interest income[c]	**4,076**	499	1,603
Total net revenue[d]	**18,170**	18,833	15,110
Provision for credit losses	**654**	191	(838)
Credit reimbursement from TSS[e]	**121**	121	154
Noninterest expense			
Compensation expense	**7,965**	8,190	5,792
Noncompensation expense	**5,109**	4,670	4,454
Total noninterest expense	**13,074**	12,860	10,246
Income before income tax expense	**4,563**	5,903	5,856
Income tax expense	**1,424**	2,229	2,183
Net income	**$ 3,139**	$ 3,674	$ 3,673
Financial ratios			
ROE	**15%**	18%	18%
ROA	**0.45**	0.57	0.61
Overhead ratio	**72**	68	68
Compensation expense as % of total net revenue[f]	**44**	41	38

(a) In 2007, as a result of adopting SFAS 157, IB recognized a benefit of $1.3 billion in Principal transactions revenue from the widening of the Firm's credit spread for liabilities carried at fair value.
(b) All other income for 2007 decreased from the prior year due mainly to losses on loan sales and lower gains on sales of assets.
(c) Net interest income for 2007 increased from the prior year due primarily to an increase in interest earnings assets. The decline in net interest income in 2006 is largely driven by a decline in trading-related net interest income caused by a higher proportion of noninterest-bearing net trading assets to total net trading assets, higher funding costs compared with the prior year, and spread compression due to the inverted yield curve in place for most of 2006.
(d) Total Net revenue includes tax-equivalent adjustments, primarily due to tax-exempt income from municipal bond investments and income tax credits related to affordable housing investments, of $927 million, $802 million and $752 million for 2007, 2006 and 2005, respectively.
(e) TSS was charged a credit reimbursement related to certain exposures managed within the IB credit portfolio on behalf of clients shared with TSS.
(f) For 2006, the Compensation expense to Total net revenue ratio is adjusted to present this ratio as if SFAS 123R had always been in effect. IB management believes that adjusting the Compensation expense to Total net revenue ratio for the incremental impact of adopting SFAS 123R provides a more meaningful measure of IB's Compensation expense to Total net revenue ratio.

The following table provides the IB's Total net revenue by business segment.

Year ended December 31, (in millions)	2007	2006	2005
Revenue by business			
Investment banking fees:			
Advisory	**$ 2,273**	$ 1,659	$ 1,263
Equity underwriting	**1,713**	1,178	864
Debt underwriting	**2,630**	2,700	1,969
Total investment banking fees	**6,616**	5,537	4,096
Fixed income markets[a][b]	**6,339**	8,736	7,570
Equity markets[a][c]	**3,903**	3,458	1,998
Credit portfolio[a][d]	**1,312**	1,102	1,446
Total net revenue	**$ 18,170**	$18,833	$15,110

(a) In 2007, as a result of adopting SFAS 157, Fixed income markets, Equity markets and Credit portfolio had a benefit of $541 million, $346 million and $433 million, respectively, from the widening of the Firm's credit spread for liabilities carried at fair value.
(b) Fixed income markets include client and portfolio management revenue related to both market-making and proprietary risk-taking across global fixed income markets, including foreign exchange, interest rate, credit and commodities markets.
(c) Equities markets include client and portfolio management revenue related to market-making and proprietary risk-taking across global equity products, including cash instruments, derivatives and convertibles.
(d) Credit portfolio revenue includes Net interest income, fees and loan sale activity, as well as gains or losses on securities received as part of a loan restructuring, for the IB's credit portfolio. Credit portfolio revenue also includes the results of risk management related to the Firm's lending and derivative activities, and changes in the credit valuation adjustment, which is the component of the fair value of a derivative that reflects the credit quality of the counterparty. See pages 80–82 of the Credit risk management section of this Annual Report for further discussion.

2007 compared with 2006

Net income was $3.1 billion, a decrease of $535 million, or 15%, from the prior year. The decrease reflected lower fixed income revenue, a higher provision for credit losses and increased noninterest expense, partially offset by record investment banking fees and equity markets revenue.

Total net revenue was $18.2 billion, down $663 million, or 4%, from the prior year. Investment banking fees were $6.6 billion, up 19% from the prior year, driven by record fees across advisory and equity underwriting, partially offset by lower debt underwriting fees. Advisory fees were $2.3 billion, up 37%, and equity underwriting fees were $1.7 billion, up 45%; both were driven by record performance across all regions. Debt underwriting fees of $2.6 billion declined 3%, reflecting lower loan syndication and bond underwriting fees, which were negatively affected by market conditions in the second half of the year. Fixed Income Markets revenue decreased 27% from the prior year. The decrease was due to markdowns of $1.4 billion (net of hedges) on subprime positions, including subprime CDOs and markdowns of $1.3 billion (net of fees) on leverage lending funded loans and unfunded commitments. Fixed Income Markets revenue also decreased due to markdowns in securitized products on non-subprime mortgages and weak credit trading performance. These lower results were offset partially by record revenue in currencies and strong revenue in rates. Equity Markets revenue was $3.9 billion, up 13%, benefiting from strong client activity and record trading results across all

products. Credit Portfolio revenue was $1.3 billion, up 19%, primarily due to higher revenue from risk management activities, partially offset by lower gains from loan sales and workouts.

The Provision for credit losses was $654 million, an increase of $463 million from the prior year. The change was due to a net increase of $532 million in the Allowance for credit losses, primarily due to portfolio activity, which included the effect of the weakening credit environment, and an increase in allowance for unfunded leveraged lending commitments, as well as portfolio growth. In addition, there were $36 million of net charge-offs in the current year, compared with $31 million of net recoveries in the prior year. The Allowance for loan losses to average loans was 2.14% for 2007, compared with a ratio of 1.79% in the prior year.

Noninterest expense was $13.1 billion, up $214 million, or 2%, from the prior year.

Return on equity was 15% on $21.0 billion of allocated capital compared with 18% on $20.8 billion in 2006.

2006 compared with 2005

Net income of $3.7 billion was flat, as record revenue of $18.8 billion was offset largely by higher compensation expense, including the impact of SFAS 123R, and Provision for credit losses compared with a benefit in the prior year.

Total net revenue of $18.8 billion was up $3.7 billion, or 25%, from the prior year. Investment banking fees of $5.5 billion were a record, up 35% from the prior year, driven by record debt and equity underwriting as well as strong advisory fees, which were the highest since 2000. Advisory fees of $1.7 billion were up 31% over the prior year driven primarily by strong performance in the Americas. Debt underwriting fees of $2.7 billion were up 37% from the prior year driven by record performance in both loan syndications and bond underwriting. Equity underwriting fees of $1.2 billion were up 36% from the prior year driven by global equity markets. Fixed Income Markets revenue of $8.7 billion was also a record, up 15% from the prior year driven by strength in credit markets, emerging markets and currencies. Record Equity Markets revenue of $3.5 billion increased 73%, and was driven by strength in cash equities and equity derivatives. Credit Portfolio revenue of $1.1 billion was down 24%, primarily reflecting lower gains from loan workouts.

Provision for credit losses was $191 million compared with a benefit of $838 million in the prior year. The 2006 provision reflects portfolio activity; credit quality remained stable. The prior-year benefit reflected strong credit quality, a decline in criticized and nonperforming loans and a higher level of recoveries.

Total noninterest expense of $12.9 billion was up $2.6 billion, or 26%, from the prior year. This increase was due primarily to higher performance-based compensation, including the impact of an increase in the ratio of compensation expense to total net revenue, as well as the incremental expense related to SFAS 123R.

Return on equity was 18% on $20.8 billion of allocated capital compared with 18% on $20.0 billion in 2005.

Selected metrics

Year ended December 31, (in millions, except headcount)	2007	2006	2005
Revenue by region			
Americas	**$ 8,165**	$ 9,601	$ 8,462
Europe/Middle East/Africa	**7,301**	7,421	4,871
Asia/Pacific	**2,704**	1,811	1,777
Total net revenue	**$ 18,170**	$ 18,833	$ 15,110
Selected average balances			
Total assets	**$ 700,565**	$ 647,569	$ 599,761
Trading assets–debt and equity instruments[a]	**359,775**	275,077	231,303
Trading assets–derivative receivables	**63,198**	54,541	55,239
Loans:			
Loans retained[b]	**62,247**	58,846	44,813
Loans held-for-sale and loans at fair value[a]	**17,723**	21,745	11,755
Total loans	**79,970**	80,591	56,568
Adjusted assets[c]	**611,749**	527,753	456,920
Equity	**21,000**	20,753	20,000
Headcount	**25,543#**	23,729#	19,802#

(a) As a result of the adoption of SFAS 159 in the first quarter of 2007, $11.7 billion of loans were reclassified to trading assets. Loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratio and net charge-off (recovery) rate.

(b) Loans retained included credit portfolio loans, leveraged leases and other accrual loans, and excluded loans at fair value.

(c) Adjusted assets, a non-GAAP financial measure, equals Total assets minus (1) Securities purchased under resale agreements and Securities borrowed less Securities sold, not yet purchased; (2) assets of variable interest entities ("VIEs") consolidated under FIN 46R; (3) cash and securities segregated and on deposit for regulatory and other purposes; and (4) goodwill and intangibles. The amount of adjusted assets is presented to assist the reader in comparing IB's asset and capital levels to other investment banks in the securities industry. Asset-to-equity leverage ratios are commonly used as one measure to assess a company's capital adequacy. IB believes an adjusted asset amount that excludes the assets discussed above, which were considered to have a low risk profile, provide a more meaningful measure of balance sheet leverage in the securities industry.

Selected metrics

Year ended December 31, (in millions, except ratio data)	2007	2006	2005
Credit data and quality statistics			
Net charge-offs (recoveries)	**$ 36**	$ (31)	$ (126)
Nonperforming assets:[a]			
Nonperforming loans	**353**	231	594
Other nonperforming assets	**100**	38	51
Allowance for credit losses:			
Allowance for loan losses	**1,329**	1,052	907
Allowance for lending-related commitments	**560**	305	226
Total Allowance for credit losses	**1,889**	1,357	1,133
Net charge-off (recovery) rate[b][c]	**0.06%**	(0.05)%	(0.28)%
Allowance for loan losses to average loans[b][c]	**2.14**[e]	1.79	2.02
Allowance for loan losses to nonperforming loans[a]	**431**	461	187
Nonperforming loans to average loans	**0.44**	0.29	1.05
Market risk–average trading and credit portfolio VAR[d]			
Trading activities:			
Fixed income	**$ 80**	$ 56	$ 67
Foreign exchange	**23**	22	23
Equities	**48**	31	34
Commodities and other	**33**	45	21
Less: portfolio diversification	**(77)**	(70)	(59)
Total trading VAR	**107**	84	86
Credit portfolio VAR	**17**	15	14
Less: portfolio diversification	**(18)**	(11)	(12)
Total trading and credit portfolio VAR	**$ 106**	$ 88	$ 88

(a) Nonperforming loans included loans held-for-sale of $45 million, $3 million and $109 million at December 31, 2007, 2006 and 2005, respectively, which were excluded from the allowance coverage ratios. Nonperforming loans excluded distressed loans held-for-sale that were purchased as part of IB's proprietary activities.
(b) As a result of the adoption of SFAS 159 in the first quarter of 2007, $11.7 billion of loans were reclassified to trading assets. Loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratio and net charge-off (recovery) rate.
(c) Loans retained included credit portfolio loans, leveraged leases and other accrual loans, and excluded loans at fair value.
(d) For a more complete description of VAR, see page 91 of this Annual Report.
(e) The allowance for loan losses to period-end loans was 1.92% at December 31, 2007.

Market shares and rankings[a]

	2007		2006		2005	
December 31,	Market Share	Rankings	Market Share	Rankings	Market Share	Rankings
Global debt, equity and equity-related	**7%**	**#2**	7%	#2	7%	#2
Global syndicated loans	**13**	**1**	14	1	15	1
Global long-term debt	**7**	**2**	6	3	6	4
Global equity and equity-related	**9**	**2**	7	6	7	6
Global announced M&A	**24**	**4**	26	4	23	3
U.S. debt, equity and equity-related	**10**	**2**	9	2	8	3
U.S. syndicated loans	**24**	**1**	26	1	28	1
U.S. long-term debt	**12**	**2**	12	2	11	2
U.S. equity and equity-related[b]	**11**	**5**	8	6	9	6
U.S. announced M&A	**25**	**4**	29	3	26	3

(a) Source: Thomson Financial Securities data. Global announced M&A is based upon rank value; all other rankings are based upon proceeds, with full credit to each book manager/equal if joint. Because of joint assignments, market share of all participants will add up to more than 100%; Global and U.S. announced M&A market share and ranking for 2006 include transactions withdrawn since December 31, 2006.
(b) References U.S domiciled equity and equity-related transactions, per Thomson Financial.

According to Thomson Financial, in 2007, the Firm maintained its #2 position in Global Debt, Equity and Equity-related, its #1 position in Global Syndicated Loans and its #4 position in Global Announced M&A. The Firm improved its position to #2 in Global Equity & Equity-related transactions and Global Long-term Debt.

According to Dealogic, the Firm was ranked #1 in Investment Banking fees generated during 2007, based upon revenue.

Retail Financial Services, which includes the Regional Banking, Mortgage Banking and Auto Finance reporting segments, serves consumers and businesses through bank branches, ATMs, online banking and telephone banking. Customers can use more than 3,100 bank branches (fourth-largest nationally), 9,100 ATMs (third-largest nationally) and 290 mortgage offices. More than 13,700 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans and investments across the 17-state footprint from New York to Arizona. Consumers also can obtain loans through more than 14,500 auto dealerships and 5,200 schools and universities nationwide.

During the first quarter of 2006, RFS completed the purchase of Collegiate Funding Services, which contributed an education loan servicing capability and provided an entry into the Federal Family Education Loan Program consolidation market. On July 1, 2006, RFS sold its life insurance and annuity underwriting businesses to Protective Life Corporation. On October 1, 2006, JPMorgan Chase completed the Bank of New York transaction, significantly strengthening RFS's distribution network in the New York tri-state area.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2007	2006	2005
Revenue			
Lending & deposit-related fees	**$ 1,881**	$ 1,597	$ 1,452
Asset management, administration and commissions	**1,275**	1,422	1,498
Securities gains (losses)	**1**	(57)	9
Mortgage fees and related income[a]	**2,094**	618	1,104
Credit card income	**646**	523	426
Other income	**906**	557	136
Noninterest revenue	**6,803**	4,660	4,625
Net interest income	**10,676**	10,165	10,205
Total net revenue	**17,479**	14,825	14,830
Provision for credit losses	**2,610**	561	724
Noninterest expense			
Compensation expense[a]	**4,369**	3,657	3,337
Noncompensation expense[a]	**5,066**	4,806	4,748
Amortization of intangibles	**465**	464	500
Total noninterest expense	**9,900**	8,927	8,585
Income before income tax expense	**4,969**	5,337	5,521
Income tax expense	**1,934**	2,124	2,094
Net income	**$ 3,035**	$ 3,213	$ 3,427
Financial ratios			
ROE	**19%**	22%	26%
Overhead ratio[a]	**57**	60	58
Overhead ratio excluding core deposit intangibles[a][b]	**54**	57	55

(a) The Firm adopted SFAS 159 in the first quarter of 2007. As a result, certain loan-origination costs have been classified as expense (previously netted against revenue) for the year ended December 31, 2007.

(b) Retail Financial Services uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation results in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would result in an improving overhead ratio over time, all things remaining equal. This non-GAAP ratio excludes Regional Banking's core deposit intangible amortization expense related to The Bank of New York transaction and the Bank One merger of $460 million, $458 million and $496 million for the years ended December 31, 2007, 2006 and 2005, respectively.

2007 compared with 2006

Net income was $3.0 billion, a decrease of $178 million, or 6%, from the prior year, as declines in Regional Banking and Auto Finance were offset partially by improved results in Mortgage Banking.

Total net revenue was $17.5 billion, an increase of $2.7 billion, or 18%, from the prior year. Net interest income was $10.7 billion, up $511 million, or 5%, due to the Bank of New York transaction, wider loan spreads and higher deposit balances. These benefits were offset partially by the sale of the insurance business and a shift to narrower–spread deposit products. Noninterest revenue was $6.8 billion, up $2.1 billion, benefiting from valuation adjustments to the MSR asset; an increase in deposit-related fees; the absence of a prior-year $233 million loss related to $13.3 billion of mortgage loans transferred to held-for-sale; and increased mortgage loan servicing revenue. Noninterest revenue also benefited from the classification of certain mortgage loan origination costs as expense (loan origination costs previously netted against revenue commenced being recorded as an expense in the first quarter of 2007 due to the adoption of SFAS 159).

The Provision for credit losses was $2.6 billion, compared with $561 million in the prior year. The current-year provision includes a net increase of $1.0 billion in the Allowance for loan losses related to home equity loans as continued weak housing prices have resulted in an increase in estimated losses for high loan-to-value loans. Home equity net charge-offs were $564 million (0.62% net charge-off rate), compared with $143 million (0.18% net charge-off rate) in the prior year. In addition, the current-year provision includes a $166 million increase in the allowance for loan losses related to subprime mortgage loans, reflecting an increase in estimated losses and growth in the portfolio. Subprime mortgage net charge-offs were $157 million (1.55% net charge-off rate), compared with $47 million (0.34% net charge-off rate) in the prior year.

Noninterest expense was $9.9 billion, an increase of $973 million, or 11%, from the prior year due to the Bank of New York transaction; the classification of certain loan origination costs as expense due to the adoption of SFAS 159; investments in the retail distribution network; and higher mortgage production and servicing expense. These increases were offset partially by the sale of the insurance business.

2006 compared with 2005

Net income of $3.2 billion was down $214 million, or 6%, from the prior year. A decline in Mortgage Banking was offset partially by improved results in Regional Banking and Auto Finance.

Total net revenue of $14.8 billion was flat compared with the prior year. Net interest income of $10.2 billion was down slightly due to narrower spreads on loans and deposits in Regional Banking, lower auto

loan and lease balances and the sale of the insurance business. These declines were offset by the benefit of higher deposit and loan balances in Regional Banking, wider loan spreads in Auto Finance and the Bank of New York transaction. Noninterest revenue of $4.7 billion was up $35 million, or 1%, from the prior year. Results benefited from increases in deposit-related and branch production fees, higher automobile operating lease revenue and the Bank of New York transaction. This benefit was offset by lower net mortgage servicing revenue, the sale of the insurance business and losses related to loans transferred to held-for-sale. In 2006, losses of $233 million, compared with losses of $120 million in 2005, were recognized in Regional Banking related to mortgage loans transferred to held-for-sale; and losses of $50 million, compared with losses of $136 million in the prior year, were recognized in Auto Finance related to automobile loans transferred to held-for-sale.

The Provision for credit losses of $561 million was down $163 million from the prior-year provision due to the absence of a $250 million special provision for credit losses related to Hurricane Katrina in the prior year, partially offset by the establishment of additional allowance for loan losses related to loans acquired from The Bank of New York.

Total noninterest expense of $8.9 billion was up $342 million, or 4%, primarily due to the Bank of New York transaction, the acquisition of Collegiate Funding Services, investments in the retail distribution network and higher depreciation expense on owned automobiles subject to operating leases. These increases were offset partially by the sale of the insurance business and merger-related and other operating efficiencies and the absence of a $40 million prior-year charge related to the dissolution of an education loan joint venture.

Selected metrics

Year ended December 31, (in millions, except headcount and ratios)	**2007**	2006	2005
Selected ending balances			
Assets	**$225,908**	$237,887	$224,801
Loans:			
Loans retained	**181,016**	180,760	180,701
Loans held-for-sale and loans at fair value[a]	**16,541**	32,744	16,598
Total Loans	**197,557**	213,504	197,299
Deposits	**221,129**	214,081	191,415
Selected average balances			
Assets	**$217,564**	$231,566	$226,368
Loans:			
Loans retained	**168,166**	187,753	182,478
Loans held-for-sale and loans at fair value[a]	**22,587**	16,129	15,675
Total Loans	**190,753**	203,882	198,153
Deposits	**218,062**	201,127	186,811
Equity	**16,000**	14,629	13,383
Headcount	**69,465#**	65,570#	60,998#
Credit data and quality statistics			
Net charge-offs	**$ 1,327**	$ 576	$ 572
Nonperforming loans[b][c]	**2,704**	1,677	1,338
Nonperforming assets[b][c]	**3,190**	1,902	1,518
Allowance for loan losses	**2,634**	1,392	1,363
Net charge-off rate[d]	**0.79%**	0.31%	0.31%
Allowance for loan losses to ending loans[d]	**1.46**	0.77	0.75
Allowance for loan losses to nonperforming loans[d]	**100**	89	104
Nonperforming loans to total loans	**1.37**	0.79	0.68

(a) Loans included prime mortgage loans originated with the intent to sell, which, for new originations on or after January 1, 2007, were accounted for at fair value under SFAS 159. These loans, classified as Trading assets on the Consolidated balance sheets, totaled $12.6 billion at December 31, 2007. Average Loans included prime mortgage loans, classified as Trading assets on the Consolidated balance sheets, of $11.9 billion for the year ended December 31, 2007.

(b) Nonperforming loans included Loans held-for-sale and Loans accounted for at fair value under SFAS 159 of $69 million, $116 million and $27 million at December 31, 2007, 2006 and 2005, respectively. Certain of these loans are classified as Trading assets on the Consolidated balance sheet.

(c) Nonperforming loans and assets excluded (1) loans eligible for repurchase as well as loans repurchased from Governmental National Mortgage Association ("GNMA") pools that are insured by U.S. government agencies of $1.5 billion, $1.2 billion and $1.1 billion at December 31, 2007, 2006 and 2005, respectively, and (2) education loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $279 million and $219 million at December 31, 2007 and 2006, respectively. The education loans past due 90 days were insignificant at December 31, 2005. These amounts for GNMA and education loans were excluded, as reimbursement is proceeding normally.

(d) Loans held-for-sale and Loans accounted for at fair value under SFAS 159 were excluded when calculating the allowance coverage ratio and the Net charge-off rate.

Regional Banking

Selected income statement data

Year ended December 31, (in millions, except ratios)	2007	2006	2005
Noninterest revenue	**$ 3,723**	$ 3,204	$ 3,138
Net interest income	**9,283**	8,768	8,531
Total net revenue	**13,006**	11,972	11,669
Provision for credit losses	**2,216**	354	512
Noninterest expense	**7,023**	6,825	6,675
Income before income tax expense	**3,767**	4,793	4,482
Net income	**$ 2,301**	$ 2,884	$ 2,780
ROE	**20%**	27%	31%
Overhead ratio	**54**	57	57
Overhead ratio excluding core deposit intangibles[a]	**50**	53	53

(a) Regional Banking uses the overhead ratio (excluding the amortization of CDI), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation results in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would result in an improving overhead ratio over time, all things remaining equal. This non-GAAP ratio excludes Regional Banking's core deposit intangible amortization expense related to the Bank of New York transaction and the Bank One merger of $460 million, $458 million and $496 million for the years ended December 31, 2007, 2006 and 2005, respectively.

2007 compared with 2006

Regional Banking net income was $2.3 billion, a decrease of $583 million, or 20%, from the prior year. Total net revenue was $13.0 billion, up $1.0 billion, or 9%, benefiting from the following: the Bank of New York transaction; increased deposit-related fees; the absence of a prior-year $233 million loss related to $13.3 billion of mortgage loans transferred to held-for-sale; growth in deposits; and wider loan spreads. These benefits were offset partially by the sale of the insurance business and a shift to narrower–spread deposit products. The Provision for credit losses was $2.2 billion, compared with $354 million in the prior year. The increase in the provision was due to the home equity and subprime mortgage portfolios (see Retail Financial Services discussion of the Provision for credit losses for further detail). Noninterest expense was $7.0 billion, up $198 million, or 3%, from the prior year, as the Bank of New York transaction and investments in the retail distribution network were offset partially by the sale of the insurance business.

2006 compared with 2005

Regional Banking Net income of $2.9 billion was up $104 million from the prior year. Total net revenue of $12.0 billion was up $303 million, or 3%, including the impact of a $233 million 2006 loss resulting from $13.3 billion of mortgage loans transferred to held-for-sale and a prior-year loss of $120 million resulting from $3.3 billion of mortgage loans transferred to held-for-sale. Results benefited from the Bank of New York transaction; the acquisition of Collegiate Funding Services; growth in deposits and home equity loans; and increases in deposit-related fees and credit card sales. These benefits were offset partially by the sale of the insurance business, narrower spreads on loans, and a shift to narrower-spread deposit products. The Provision for credit losses decreased $158 million, primarily the result of a $230 million special provision in the prior year related to Hurricane Katrina, which was offset partially by additional Allowance for loan losses related to the acquisition of loans from The Bank of New York and increased net charge-offs due to portfolio seasoning and deterioration in subprime mortgages. Noninterest expense of $6.8 billion was up $150 million, or 2%, from the prior year. The increase was due to investments in the retail distribution network, the Bank of New York transaction and the acquisition of Collegiate Funding Services, partially offset by the sale of the insurance business, merger savings and operating efficiencies, and the absence of a $40 million prior-year charge related to the dissolution of an education loan joint venture.

Selected metrics

Year ended December 31, (in millions, except ratios and where otherwise noted)	2007	2006	2005
Business metrics (in billions)			
Selected ending balances			
Home equity origination volume	**$ 48.3**	$ 51.9	$ 54.1
End-of-period loans owned			
Home equity	**$ 94.8**	$ 85.7	$ 73.9
Mortgage[a]	**15.7**	30.1	44.6
Business banking	**15.4**	14.1	12.8
Education	**11.0**	10.3	3.0
Other loans[b]	**2.3**	2.7	2.6
Total end-of-period loans	**139.2**	142.9	136.9
End-of-period deposits			
Checking	**$ 67.0**	$ 68.7	$ 64.9
Savings	**96.0**	92.4	87.7
Time and other	**48.7**	43.3	29.7
Total end-of-period deposits	**211.7**	204.4	182.3
Average loans owned			
Home equity	**$ 90.4**	$ 78.3	$ 69.9
Mortgage[a]	**10.3**	45.1	45.4
Business banking	**14.7**	13.2	12.6
Education	**10.5**	8.3	2.8
Other loans[b]	**2.5**	2.6	3.1
Total average loans[c]	**128.4**	147.5	133.8
Average deposits			
Checking	**$ 66.0**	$ 62.8	$ 61.7
Savings	**97.1**	89.9	87.5
Time and other	**43.8**	37.5	26.1
Total average deposits	**206.9**	190.2	175.3
Average assets	**140.4**	160.8	150.8
Average equity	**11.8**	10.5	9.1
Credit data and quality statistics			
30+ day delinquency rate[d][e]	**3.03%**	2.02%	1.68%
Net charge-offs			
Home equity	**$ 564**	$ 143	$ 141
Mortgage	**159**	56	25
Business banking	**126**	91	101
Other loans	**116**	48	28
Total net charge-offs	**965**	338	295
Net charge-off rate			
Home equity	**0.62%**	0.18%	0.20%
Mortgage[f]	**1.52**	0.12	0.06
Business banking	**0.86**	0.69	0.80
Other loans	**1.26**	0.59	0.93
Total net charge-off rate[c][f]	**0.77**	0.23	0.23
Nonperforming assets[g]	**$ 2,879**	$ 1,714	$ 1,282

(a) As of January 1, 2007, $19.4 billion of held-for-investment prime mortgage loans were transferred from RFS to Treasury within the Corporate segment for risk man-

agement and reporting purposes. The transfer had no impact on the financial results of Regional Banking. Balances reported at December 31, 2007 primarily reflected subprime mortgage loans owned.
(b) Included commercial loans derived from community development activities and, prior to July 1, 2006, insurance policy loans.
(c) Average loans included loans held-for-sale of $3.8 billion, $2.8 billion and $2.9 billion for the years ended December 31, 2007, 2006 and 2005, respectively. These amounts were excluded when calculating in the Net charge-off rate.
(d) Excluded loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by U.S. government agencies of $1.2 billion, $960 million, and $896 million at December 31, 2007, 2006 and 2005, respectively. These amounts are excluded as reimbursement is proceeding normally.
(e) Excluded loans that are 30 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $663 million and $464 million at December 31, 2007 and 2006, respectively. The education loans past due 30 days were insignificant at December 31, 2005. These amounts are excluded as reimbursement is proceeding normally.
(f) The Mortgage and Total net charge-off rate for 2007, excluded $2 million of charge-offs related to prime mortgage loans held by Treasury in the Corporate sector.
(g) Excluded nonperforming assets related to education loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $279 million and $219 million at December 31, 2007 and 2006, respectively. The Education loans past due 90 days were insignificant at December 31, 2005. These amounts were excluded as reimbursement is proceeding normally.

Retail branch business metrics

Year ended December 31, (in millions, except where otherwise noted)	**2007**	2006	2005
Investment sales volume	**$18,360**	$14,882	$11,144
Number of:			
Branches	**3,152#**	3,079#	2,641#
ATMs	**9,186**	8,506	7,312
Personal bankers[a]	**9,650**	7,573	7,067
Sales specialists[a]	**4,105**	3,614	3,214
Active online customers (in thousands)[b]	**5,918**	4,909	3,756
Checking accounts (in thousands)	**10,839**	9,995	8,793

(a) Employees acquired as part of the Bank of New York transaction are included beginning in 2007.
(b) During 2007, RFS changed the methodology for determining active online customers to include all individual RFS customers with one or more online accounts who have been active within 90 days of period end, including customers who also have online accounts with Card Services. Prior periods have been revised to conform to this new methodology.

The following is a brief description of selected terms used by Regional Banking.

- **Personal bankers –** Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.
- **Sales specialists –** Retail branch office personnel who specialize in the marketing of a single product, including mortgages, investments, and business banking, by partnering with the personal bankers.

Mortgage Banking

Selected income statement data

Year ended December 31, (in millions, except ratios and where otherwise noted)	**2007**	2006	2005
Production revenue[a]	**$ 1,360**	$ 833	$ 744
Net mortgage servicing revenue:			
Servicing revenue	**2,510**	2,300	2,115
Changes in MSR asset fair value:			
Due to inputs or assumptions in model	**(516)**	165	770
Other changes in fair value	**(1,531)**	(1,440)	(1,295)
Total changes in MSR asset fair value	**(2,047)**	(1,275)	(525)
Derivative valuation adjustments and other	**879**	(544)	(494)
Total net mortgage servicing revenue	**1,342**	481	1,096
Total net revenue	**2,702**	1,314	1,840
Noninterest expense[a]	**1,987**	1,341	1,239
Income (loss) before income tax expense	**715**	(27)	601
Net income (loss)	**$ 439**	$ (17)	$ 379
ROE	**22%**	NM	24%
Business metrics (in billions)			
Third-party mortgage loans serviced (ending)	**$ 614.7**	$ 526.7	$ 467.5
MSR net carrying value (ending)	**8.6**	7.5	6.5
Average mortgage loans held-for-sale[b]	**18.8**	12.8	12.1
Average assets	**33.9**	25.8	22.4
Average equity	**2.0**	1.7	1.6
Mortgage origination volume by channel[c] (in billions)			
Retail	**$ 45.5**	$ 40.5	$ 46.3
Wholesale	**42.7**	32.8	34.2
Correspondent	**27.9**	13.3	14.1
CNT (negotiated transactions)	**43.3**	32.6	34.4
Total	**$ 159.4**	$ 119.2	$ 129.0

(a) The Firm adopted SFAS 159 in the first quarter of 2007. As a result, certain loan origination costs have been classified as expense (previously netted against revenue) for the year ended December 31, 2007.
(b) Included $11.9 billion of prime mortgage loans at fair value for the year ended December 31, 2007. These loans are classified as Trading assets on the Consolidated balance sheet for 2007.
(c) During the second quarter of 2007, RFS changed its definition of mortgage originations to include all newly originated mortgage loans sourced through RFS channels, and to exclude all mortgage loan originations sourced through IB channels. Prior periods have been revised to conform to this new definition.

2007 compared with 2006

Mortgage Banking Net income was $439 million, compared with a net loss of $17 million in the prior year. Total net revenue was $2.7 billion, up $1.4 billion. Total net revenue comprises production revenue and net mortgage servicing revenue. Production revenue was $1.4 billion, up $527 million, benefiting from an increase in mortgage loan originations and the classification of certain loan origination costs as expense (loan origination costs previously netted against revenue commenced being recorded as an expense in the first quarter of 2007 due to the adoption of SFAS 159). These bene-

fits were offset partially by markdowns of $241 million on the mortgage warehouse and pipeline. Net mortgage servicing revenue, which includes loan servicing revenue, MSR risk management results and other changes in fair value, was $1.3 billion, compared with $481 million in the prior year. Loan servicing revenue of $2.5 billion increased $210 million on 17% growth in third-party loans serviced. MSR risk management revenue of $363 million improved $742 million from the prior year, reflecting a $499 million current-year positive valuation adjustment to the MSR asset due to a decrease in estimated future mortgage prepayments; and the absence of a $235 million prior-year negative valuation adjustment to the MSR asset. Other changes in fair value of the MSR asset were negative $1.5 billion compared with negative $1.4 billion in the prior year. Noninterest expense was $2.0 billion, an increase of $646 million, or 48%. The increase reflected the classification of certain loan origination costs due to the adoption of SFAS 159, higher servicing costs due to increased delinquencies and defaults, and higher production expense due partly to growth in originations.

2006 compared with 2005

Mortgage Banking Net loss was $17 million compared with net income of $379 million in the prior year. Total net revenue of $1.3 billion was down $526 million from the prior year due to a decline in net mortgage servicing revenue offset partially by an increase in production revenue. Production revenue was $833 million, up $89 million, reflecting increased loan sales and wider gain on sale margins that benefited from a shift in the sales mix. Net mortgage servicing revenue, which includes loan servicing revenue, MSR risk management results and other changes in fair value, was $481 million compared with $1.1 billion in the prior year. Loan servicing revenue of $2.3 billion increased $185 million on a 13% increase in third-party loans serviced. MSR risk management revenue of negative $379 million was down $655 million from the prior year, including the impact of a $235 million negative valuation adjustment to the MSR asset in the third quarter of 2006 due to changes and refinements to assumptions used in the MSR valuation model. Other changes in fair value of the MSR asset, representing runoff of the asset against the realization of servicing cash flows, were negative $1.4 billion. Noninterest expense was $1.3 billion, up $102 million, or 8%, due primarily to higher compensation expense related to an increase in loan officers.

Mortgage Banking origination channels comprise the following:

Retail – Borrowers who are buying or refinancing a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by real estate brokers, home builders or other third parties.

Wholesale – A third-party mortgage broker refers loan applications to a mortgage banker at the Firm. Brokers are independent loan originators that specialize in finding and counseling borrowers but do not provide funding for loans.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Correspondent negotiated transactions ("CNT") – Mid- to large-sized mortgage lenders, banks and bank-owned companies that sell loans or servicing to the Firm on an as-originated basis, excluding bulk servicing transactions.

Production revenue – Includes net gains or losses on originations and sales of prime and subprime mortgage loans and other production-related fees.

Net Mortgage servicing revenue components:

Servicing revenue – Represents all gross income earned from servicing third-party mortgage loans, including stated service fees, excess service fees, late fees and other ancillary fees.

Changes in MSR asset fair value due to inputs or assumptions in model – Represents MSR asset fair value adjustments due to changes in market-based inputs, such as interest rates and volatility, as well as updates to valuation assumptions used in the valuation model.

Changes in MSR asset fair value due to other changes – Includes changes in the MSR value due to modeled servicing portfolio runoff (or time decay). Effective January 1, 2006, the Firm implemented SFAS 156, adopting fair value for the MSR asset. For the year ended December 31, 2005, this amount represents MSR asset amortization expense calculated in accordance with SFAS 140.

Derivative valuation adjustments and other – Changes in the fair value of derivative instruments used to offset the impact of changes in market-based inputs to the MSR valuation model.

MSR risk management results – Includes changes in MSR asset fair value due to inputs or assumptions and derivative valuation adjustments and other.

Auto Finance

Selected income statement data

Year ended December 31, (in millions, except ratios and where otherwise noted)	2007	2006	2005
Noninterest revenue	**$ 551**	$ 368	$ 86
Net interest income	**1,206**	1,171	1,235
Total net revenue	**1,757**	1,539	1,321
Provision for credit losses	**380**	207	212
Noninterest expense	**890**	761	671
Income before income tax expense	**487**	571	438
Net income	**$ 295**	$ 346	$ 268
ROE	**13%**	14%	10%
ROA	**0.68**	0.77	0.50
Business metrics (in billions)			
Auto originations volume	**$ 21.3**	$ 19.3	$ 18.1
End-of-period loans and lease-related assets			
Loans outstanding	**$ 42.0**	$ 39.3	$ 41.7
Lease financing receivables	**0.3**	1.7	4.3
Operating lease assets	**1.9**	1.6	0.9
Total end-of-period loans and lease-related assets	**44.2**	42.6	46.9
Average loans and lease-related assets			
Loans outstanding[(a)]	**$ 40.2**	$ 39.8	$ 45.5
Lease financing receivables	**0.9**	2.9	6.2
Operating lease assets	**1.7**	1.3	0.4
Total average loans and lease-related assets	**42.8**	44.0	52.1
Average assets	**43.3**	44.9	53.2
Average equity	**2.2**	2.4	2.7
Credit quality statistics			
30+ day delinquency rate	**1.85%**	1.72%	1.66%
Net charge-offs			
Loans	**$ 350**	$ 231	$ 257
Lease receivables	**4**	7	20
Total net charge-offs	**354**	238	277
Net charge-off rate			
Loans[(a)]	**0.87%**	0.59%	0.57%
Lease receivables	**0.44**	0.24	0.32
Total net charge-off rate[(a)]	**0.86**	0.56	0.54
Nonperforming assets	**$ 188**	$ 177	$ 236

(a) Average Loans held-for-sale were $530 million and $744 million for 2006 and 2005, respectively. Average Loans held-for-sale for 2007 were insignificant. These amounts are excluded when calculating the net charge-off rate.

2007 compared with 2006

Auto Finance Net income was $295 million, a decrease of $51 million, or 15%, from the prior year. Net revenue was $1.8 billion, up $218 million, or 14%, reflecting wider loan spreads and higher automobile operating lease revenue. The Provision for credit losses was $380 million, up $173 million, reflecting an increase in estimated losses. The net charge-off rate was 0.86% compared with 0.56% in the prior year. Noninterest expense of $890 million increased $129 million, or 17%, driven by increased depreciation expense on owned automobiles subject to operating leases.

2006 compared with 2005

Net income of $346 million was up $78 million from the prior year, including the impact of a $50 million 2006 loss and a $136 million prior-year loss related to loans transferred to held-for-sale. Total net revenue of $1.5 billion was up $218 million, or 17%, reflecting higher automobile operating lease revenue and wider loan spreads on lower loan and direct finance lease balances. The Provision for credit losses of $207 million decreased $5 million from the prior year. Noninterest expense of $761 million increased $90 million, or 13%, driven by increased depreciation expense on owned automobiles subject to operating leases, partially offset by operating efficiencies.

With 155 million cards in circulation and more than $157 billion in managed loans, Card Services is one of the nation's largest credit card issuers. Customers used Chase cards to meet more than $354 billion worth of their spending needs in 2007.

With hundreds of partnerships, Chase has a market leadership position in building loyalty programs with many of the world's most respected brands. The Chase-branded product line was strengthened in 2007 with enhancements to the popular Chase Freedom Program, which has generated more than one million new customers since its launch in 2006.

Chase Paymentech Solutions, LLC, a joint venture between JPMorgan Chase and First Data Corporation, is a processor of MasterCard and Visa payments, which handled more than 19 billion transactions in 2007.

JPMorgan Chase uses the concept of "managed basis" to evaluate the credit performance of its credit card loans, both loans on the balance sheet and loans that have been securitized. For further information, see Explanation and reconciliation of the Firm's use of non-GAAP financial measures on pages 36–37 of this Annual Report. Managed results exclude the impact of credit card securitizations on Total net revenue, the Provision for credit losses, net charge-offs and loan receivables. Securitization does not change reported Net income; however, it does affect the classification of items on the Consolidated statements of income and Consolidated balance sheets.

Selected income statement data – managed basis

Year ended December 31, (in millions, except ratios)	2007	2006	2005
Revenue			
Credit card income	**$ 2,685**	$ 2,587	$ 3,351
All other income	**361**	357	212
Noninterest revenue	**3,046**	2,944	3,563
Net interest income	**12,189**	11,801	11,803
Total net revenue	**15,235**	14,745	15,366
Provision for credit losses	**5,711**	4,598	7,346
Noninterest expense			
Compensation expense	**1,021**	1,003	1,081
Noncompensation expense	**3,173**	3,344	3,170
Amortization of intangibles	**720**	739	748
Total noninterest expense	**4,914**	5,086	4,999
Income before income tax expense	**4,610**	5,061	3,021
Income tax expense	**1,691**	1,855	1,114
Net income	**$ 2,919**	$ 3,206	$ 1,907
Memo: Net securitization gains	**$ 67**	$ 82	$ 56
Financial ratios			
ROE	**21%**	23%	16%
Overhead ratio	**32**	34	33

As a result of the integration of Chase Merchant Services and Paymentech merchant processing businesses into a joint venture, beginning in the fourth quarter of 2005, Total net revenue, Total noninterest expense and Income before income tax expense were reduced to reflect the deconsolidation of Paymentech. There was no impact to Net income. To illustrate underlying business trends, the following discussion of CS' performance assumes that the deconsolidation of Paymentech had occurred as of the beginning of 2005. For a further discussion of the deconsolidation of Paymentech, see Note 2 on pages 109–110, and Note 31 on pages 170–173, respectively, of this Annual Report. The following table presents a reconciliation of CS' managed basis to an adjusted basis to disclose the effect of the deconsolidation of Paymentech on CS' results for the periods presented.

Reconciliation of Card Services' managed results to an adjusted basis to disclose the effect of the Paymentech deconsolidation.

Year ended December 31, (in millions)	2007	2006	2005
Noninterest revenue			
Managed	**$ 3,046**	$ 2,944	$ 3,563
Adjustment for Paymentech	**—**	—	(422)
Adjusted Noninterest revenue	**$ 3,046**	$ 2,944	$ 3,141
Total net revenue			
Managed	**$ 15,235**	$14,745	$15,366
Adjustment for Paymentech	**—**	—	(435)
Adjusted Total net revenue	**$ 15,235**	$14,745	$14,931
Total noninterest expense			
Managed	**$ 4,914**	$ 5,086	$ 4,999
Adjustment for Paymentech	**—**	—	(389)
Adjusted Total noninterest expense	**$ 4,914**	$ 5,086	$ 4,610

2007 compared with 2006

Net income of $2.9 billion was down $287 million, or 9%, from the prior year. Prior-year results benefited from significantly lower net charge-offs following the change in bankruptcy legislation in the fourth quarter of 2005. The increase in net charge-offs was offset partially by higher revenue.

End-of-period managed loans of $157.1 billion increased $4.2 billion, or 3%, from the prior year. Average managed loans of $149.3 billion increased $8.2 billion, or 6%, from the prior year. The increases in both end-of-period and average managed loans resulted from organic growth.

Managed Total net revenue was $15.2 billion, an increase of $490 million, or 3%, from the prior year. Net interest income was $12.2 billion, up $388 million, or 3%, from the prior year. The increase in Net interest income was driven by a higher level of fees and higher average loan balances. These benefits were offset partially by narrower loan spreads, the discontinuation of certain billing practices (including the elimination of certain over-limit fees and the two-cycle billing method for calculating finance charges beginning in the second quarter of 2007) and the effect of higher revenue reversals associated with higher charge-offs. Noninterest revenue was $3.0 billion, an increase of $102 million, or 3%, from the prior year. The increase reflects a higher level of fee-based revenue and increased net interchange income, which benefited from higher charge volume. Charge volume growth of 4% reflected a 9% increase in sales volume, offset primarily by a lower level of balance transfers, the result of more targeted marketing efforts.

The managed Provision for credit losses was $5.7 billion, an increase of $1.1 billion, or 24%, from the prior year. The increase was primarily due to a higher level of net charge-offs (the prior year benefited from the change in bankruptcy legislation in the fourth quarter of 2005) and an increase in the Allowance for loan losses driven by higher estimated net charge-offs in the portfolio. The managed net charge-off rate was 3.68%, up from 3.33% in the prior year. The 30-day managed delinquency rate was 3.48%, up from 3.13% in the prior year.

Noninterest expense was $4.9 billion, a decrease of $172 million, or 3%, compared with the prior year, primarily due to lower marketing expense and lower fraud-related expense, partially offset by higher volume-related expense.

2006 compared with 2005

Net income of $3.2 billion was up $1.3 billion, or 68%, from the prior year. Results were driven by a lower Provision for credit losses due to significantly lower bankruptcy filings.

End-of-period managed loans of $152.8 billion increased $10.6 billion, or 7%, from the prior year. Average managed loans of $141.1 billion increased $4.7 billion, or 3%, from the prior year. Compared with the prior year, both average managed and end-of-period managed loans continued to be affected negatively by higher customer payment rates. Management believes that contributing to the higher payment rates are the new minimum payment rules and a higher proportion of customers in rewards-based programs.

2006 benefited from organic growth and reflected acquisitions of two loan portfolios. The first portfolio was the Sears Canada credit card business, which closed in the fourth quarter of 2005. The Sears Canada portfolio's average managed loan balances were $2.1 billion in 2006 and $291 million in the prior year. The second purchase was the Kohl's Corporation ("Kohl's") private label portfolio, which closed in the second quarter of 2006. The Kohl's portfolio average and period-end managed loan balances for 2006 were $1.2 billion and $2.5 billion, respectively.

Managed Total net revenue of $14.7 billion was down $186 million, or 1%, from the prior year. Net interest income of $11.8 billion was flat to the prior year. Net interest income benefited from an increase in average managed loan balances and lower revenue reversals associated with lower charge-offs. These increases were offset by attrition of mature, higher spread balances as a result of higher payment rates and higher cost of funds on balance growth in promotional, introductory and transactor loan balances, which increased due to continued investment in marketing. Noninterest revenue of $2.9 billion was down $197 million, or 6%. Interchange income increased, benefiting from 12% higher charge volume, but was more than offset by higher volume-driven payments to partners, including Kohl's, and increased rewards expense (both of which are netted against interchange income).

The managed Provision for credit losses was $4.6 billion, down $2.7 billion, or 37%, from the prior year. This benefit was due to a significant decrease in net charge-offs of $2.4 billion, reflecting the continued low level of bankruptcy losses, partially offset by an increase in contractual net charge-offs. The provision also benefited from a release in the Allowance for loan losses in 2006 of unused reserves related to Hurricane Katrina, compared with an increase in the Allowance for loan losses in the prior year. The managed net charge-off rate decreased to 3.33%, from 5.21% in the prior year. The 30-day managed delinquency rate was 3.13%, up from 2.79% in the prior year.

Noninterest expense of $5.1 billion was up $476 million, or 10%, from the prior year due largely to higher marketing spending and acquisitions offset partially by merger savings.

The following is a brief description of selected business metrics within Card Services.

- **Charge volume** – Represents the dollar amount of cardmember purchases, balance transfers and cash advance activity.
- **Net accounts opened** – Includes originations, purchases and sales.
- **Merchant acquiring business** – Represents an entity that processes bank card transactions for merchants. JPMorgan Chase is a partner in Chase Paymentech Solutions, LLC, a merchant acquiring business.
  - **Bank card volume** – Represents the dollar amount of transactions processed for merchants.
  - **Total transactions** – Represents the number of transactions and authorizations processed for merchants.

Selected metrics

Year ended December 31, (in millions, except headcount, ratios and where otherwise noted)	2007	2006	2005
Financial metrics			
% of average managed outstandings:			
Net interest income	**8.16%**	8.36%	8.65%
Provision for credit losses	**3.82**	3.26	5.39
Noninterest revenue	**2.04**	2.09	2.61
Risk adjusted margin[a]	**6.38**	7.19	5.88
Noninterest expense	**3.29**	3.60	3.67
Pretax income (ROO)[b]	**3.09**	3.59	2.21
Net income	**1.95**	2.27	1.40
Business metrics			
Charge volume (in billions)	**$ 354.6**	$ 339.6	$ 301.9
Net accounts opened (in millions)[c]	**16.4#**	45.9#	21.1#
Credit cards issued (in millions)	**155.0**	154.4	110.4
Number of registered Internet customers (in millions)	**28.3**	22.5	14.6
Merchant acquiring business[d]			
Bank card volume (in billions)	**$ 719.1**	$ 660.6	$ 563.1
Total transactions (in billions)	**19.7#**	18.2#	15.5#
Selected ending balances			
Loans:			
Loans on balance sheets	**$ 84,352**	$ 85,881	$ 71,738
Securitized loans	**72,701**	66,950	70,527
Managed loans	**$157,053**	$152,831	$142,265
Selected average balances			
Managed assets	**$155,957**	$148,153	$141,933
Loans:			
Loans on balance sheets	**$ 79,980**	$ 73,740	$ 67,334
Securitized loans	**69,338**	67,367	69,055
Managed average loans	**$149,318**	$141,107	$136,389
Equity	**$ 14,100**	$ 14,100	$ 11,800
Headcount	**18,554#**	18,639#	18,629#
Managed credit quality statistics			
Net charge-offs	**$ 5,496**	$ 4,698	$ 7,100
Net charge-off rate	**3.68%**	3.33%	5.21%
Managed delinquency ratios			
30+ days	**3.48%**	3.13%	2.79%
90+ days	**1.65**	1.50	1.27
Allowance for loan losses[e]	**$ 3,407**	$ 3,176	$ 3,274
Allowance for loan losses to period-end loans[e]	**4.04%**	3.70%	4.56%

(a) Represents Total net revenue less Provision for credit losses.
(b) Pretax return on average managed outstandings.
(c) 2006 included approximately 30 million accounts from loan portfolio acquisitions and 2005 included approximately 10 million accounts from portfolio acquisitions.
(d) Represents 100% of the merchant acquiring business.
(e) Loans on a reported basis.

The financial information presented below reconciles reported basis and managed basis to disclose the effect of securitizations.

Year ended December 31, (in millions)	2007	2006	2005
Income statement data[a]			
Credit card income			
Reported	**$ 5,940**	$ 6,096	$ 6,069
Securitization adjustments	**(3,255)**	(3,509)	(2,718)
Managed credit card income	**$ 2,685**	$ 2,587	$ 3,351
Net interest income			
Reported	**$ 6,554**	$ 6,082	$ 5,309
Securitization adjustments	**5,635**	5,719	6,494
Managed net interest income	**$ 12,189**	$ 11,801	$ 11,803
Total net revenue			
Reported	**$ 12,855**	$ 12,535	$ 11,590
Securitization adjustments	**2,380**	2,210	3,776
Managed total net revenue	**$ 15,235**	$ 14,745	$ 15,366
Provision for credit losses			
Reported	**$ 3,331**	$ 2,388	$ 3,570
Securitization adjustments	**2,380**	2,210	3,776
Managed provision for credit losses	**$ 5,711**	$ 4,598	$ 7,346
Balance sheet – average balances[a]			
Total average assets			
Reported	**$ 89,177**	$ 82,887	$ 74,753
Securitization adjustments	**66,780**	65,266	67,180
Managed average assets	**$155,957**	$148,153	$141,933
Credit quality statistics[a]			
Net charge-offs			
Reported	**$ 3,116**	$ 2,488	$ 3,324
Securitization adjustments	**2,380**	2,210	3,776
Managed net charge-offs	**$ 5,496**	$ 4,698	$ 7,100

(a) For a discussion of managed basis, see the non-GAAP financial measures discussion on pages 36–37 of this Annual Report.

COMMERCIAL BANKING

Commercial Banking serves more than 30,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion. Commercial Banking delivers extensive industry knowledge, local expertise and a dedicated service model. In partnership with the Firm's other businesses, it provides comprehensive solutions including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2007	2006	2005
Revenue			
Lending & deposit-related fees	**$ 647**	$ 589	$ 572
Asset management, administration and commissions	**92**	67	57
All other income[a]	**524**	417	357
Noninterest revenue	**1,263**	1,073	986
Net interest income	**2,840**	2,727	2,502
Total net revenue	**4,103**	3,800	3,488
Provision for credit losses[b]	**279**	160	73
Noninterest expense			
Compensation expense	**706**	740	654
Noncompensation expense	**1,197**	1,179	1,137
Amortization of intangibles	**55**	60	65
Total noninterest expense	**1,958**	1,979	1,856
Income before income tax expense	**1,866**	1,661	1,559
Income tax expense	**732**	651	608
Net income	**$1,134**	$1,010	$ 951
Financial ratios			
ROE	**17%**	18%	28%
Overhead ratio	**48**	52	53

(a) Investment banking-related and commercial card revenue is included in all other income.
(b) 2005 includes a $35 million special provision related to Hurricane Katrina.

On October 1, 2006, JPMorgan Chase completed the acquisition of The Bank of New York's consumer, business banking and middle-market banking businesses, adding approximately $2.3 billion in loans and $1.2 billion in deposits to the Commercial Bank.

2007 compared with 2006

Net income was $1.1 billion, an increase of $124 million, or 12%, from the prior year due primarily to growth in total net revenue, partially offset by higher Provision for credit losses.

Record total net revenue of $4.1 billion increased $303 million, or 8%. Net interest income of $2.8 billion increased $113 million, or 4%, driven by double-digit growth in liability balances and loans, which reflected organic growth and the Bank of New York transaction, largely offset by the continued shift to narrower–spread liability products and spread compression in the loan and liability portfolios.

Noninterest revenue was $1.3 billion, up $190 million, or 18%, due to increased deposit-related fees, higher investment banking revenue, and gains on sales of securities acquired in the satisfaction of debt.

On a segment basis, Middle Market Banking revenue was $2.7 billion, an increase of $154 million, or 6%, primarily due to the Bank of New York transaction, higher deposit-related fees and growth in investment banking revenue. Mid-Corporate Banking revenue was $815 million, an increase of $159 million, or 24%, reflecting higher lending revenue, investment banking revenue, and gains on sales of securities acquired in the satisfaction of debt. Real Estate Banking revenue of $421 million decreased $37 million, or 8%.

Provision for credit losses was $279 million, compared with $160 million in the prior year. The increase in the allowance for credit losses reflected portfolio activity including slightly lower credit quality as well as growth in loan balances. The Allowance for loan losses to average loans retained was 2.81%, compared with 2.86% in the prior year.

Noninterest expense was $2.0 billion, a decrease of $21 million, or 1%, largely due to lower Compensation expense driven by the absence of prior-year expense from the adoption of SFAS 123R, partially offset by expense growth related to the Bank of New York transaction.

2006 compared with 2005

Net income of $1.0 billion increased $59 million, or 6%, from the prior year due to higher revenue, partially offset by higher expense and Provision for credit losses.

Record total net revenue of $3.8 billion increased 9%, or $312 million. Net interest income increased to $2.7 billion, primarily driven by higher liability balances and loan volumes, partially offset by loan spread compression and a shift to narrower-spread liability products. Noninterest revenue was $1.1 billion, up $87 million, or 9%, due to record Investment banking revenue and higher commercial card revenue.

Revenue grew for each CB business compared with the prior year, driven by increased treasury services, investment banking and lending revenue. Compared with the prior year, Middle Market Banking revenue of $2.5 billion increased $177 million, or 8%. Mid-Corporate Banking revenue of $656 million increased $105 million, or 19%, and Real Estate Banking revenue of $458 million increased $24 million, or 6%.

Provision for credit losses was $160 million, up from $73 million in the prior year, reflecting portfolio activity and the establishment of additional Allowance for loan losses related to loans acquired from The Bank of New York, partially offset by a release of the unused portion of the special reserve established in 2005 for Hurricane Katrina. Net charge-offs were flat compared with the prior year. Nonperforming loans declined 56%, to $121 million.

Total noninterest expense of $2.0 billion increased $123 million, or 7%, from last year, primarily related to incremental compensation expense related to SFAS 123R and increased expense resulting from higher client usage of Treasury Services' products.

Selected metrics

Year ended December 31, (in millions, except headcount and ratios)	2007	2006	2005
Revenue by product:			
Lending	**$ 1,419**	$ 1,344	$ 1,215
Treasury services	**2,350**	2,243	2,062
Investment banking	**292**	253	206
Other	**42**	(40)	5
Total Commercial Banking revenue	**$ 4,103**	$ 3,800	$ 3,488
IB revenue, gross[a]	**$ 888**	$ 716	$ 552
Revenue by business:			
Middle Market Banking	**$ 2,689**	$ 2,535	$ 2,358
Mid-Corporate Banking	**815**	656	551
Real Estate Banking	**421**	458	434
Other	**178**	151	145
Total Commercial Banking revenue	**$ 4,103**	$ 3,800	$ 3,488
Selected average balances:			
Total assets	**$ 87,140**	$ 57,754	$ 52,358
Loans:			
Loans retained	**60,231**	53,154	47,834
Loans held-for-sale and loans at fair value	**863**	442	283
Total loans[b]	**61,094**	53,596	48,117
Liability balances[c]	**87,726**	73,613	66,055
Equity	**6,502**	5,702	3,400
Average loans by business:			
Middle Market Banking	**$ 37,333**	$ 33,225	$ 31,193
Mid-Corporate Banking	**12,481**	8,632	6,388
Real Estate Banking	**7,116**	7,566	6,909
Other	**4,164**	4,173	3,627
Total Commercial Banking loans	**$ 61,094**	$ 53,596	$ 48,117
Headcount	**4,125#**	4,459#	4,418#
Credit data and quality statistics:			
Net charge-offs	**$ 44**	$ 27	$ 26
Nonperforming loans	**146**	121	272
Allowance for credit losses:			
Allowance for loan losses	**1,695**	1,519	1,392
Allowance for lending-related commitments	**236**	187	154
Total allowance for credit losses	**1,931**	1,706	1,546
Net charge-off rate[b]	**0.07%**	0.05%	0.05%
Allowance for loan losses to average loans[b]	**2.81**	2.86	2.91
Allowance for loan losses to nonperforming loans	**1,161**	1,255	512
Nonperforming loans to average loans	**0.24**	0.23	0.57

(a) Represents the total revenue related to investment banking products sold to CB clients.
(b) Loans held-for-sale and loans accounted for at fair value under SFAS 159 were excluded when calculating the allowance coverage ratio and the net charge-off rate.
(c) Liability balances include deposits and deposits swept to on–balance sheet liabilities such as Commercial paper, Federal funds purchased and repurchase agreements.

Commercial Banking revenue comprises the following:

Lending includes a variety of financing alternatives, which are primarily provided on a basis secured by receivables, inventory, equipment, real estate or other assets. Products include:

- Term loans
- Revolving lines of credit
- Bridge financing
- Asset-based structures
- Leases

Treasury services includes a broad range of products and services enabling clients to transfer, invest and manage the receipt and disbursement of funds, while providing the related information reporting. These products and services include:

- U.S. dollar and multi-currency clearing
- ACH
- Lockbox
- Disbursement and reconciliation services
- Check deposits
- Other check and currency-related services
- Trade finance and logistics solutions
- Commercial card
- Deposit products, sweeps and money market mutual funds

Investment banking provides clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools, through:

- Advisory
- Equity underwriting
- Loan syndications
- Investment-grade debt
- Asset-backed securities
- Private placements
- High-yield bonds
- Derivatives
- Foreign exchange hedges
- Securities sales

TREASURY & SECURITIES SERVICES

TSS is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. TS provides cash management, trade, wholesale card and liquidity products and services to small and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with the Commercial Banking, Retail Financial Services and Asset Management businesses to serve clients firmwide. As a result, certain TS revenue is included in other segments' results. WSS holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

As a result of the transaction with The Bank of New York on October 1, 2006, selected corporate trust businesses were transferred from TSS to the Corporate segment and are reported in discontinued operations for all periods presented.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2007	2006	2005
Revenue			
Lending & deposit-related fees	**$ 923**	$ 735	$ 731
Asset management, administration and commissions	**3,050**	2,692	2,409
All other income	**708**	612	519
Noninterest revenue	**4,681**	4,039	3,659
Net interest income	**2,264**	2,070	1,880
Total net revenue	**6,945**	6,109	5,539
Provision for credit losses	**19**	(1)	—
Credit reimbursement to IB[a]	**(121)**	(121)	(154)
Noninterest expense			
Compensation expense	**2,353**	2,198	1,874
Noncompensation expense	**2,161**	1,995	2,095
Amortization of intangibles	**66**	73	81
Total noninterest expense	**4,580**	4,266	4,050
Income before income tax expense	**2,225**	1,723	1,335
Income tax expense	**828**	633	472
Net income	**$1,397**	$1,090	$ 863
Financial ratios			
ROE	**47%**	48%	57%
Overhead ratio	**66**	70	73
Pretax margin ratio[b]	**32**	28	24

(a) TSS was charged a credit reimbursement related to certain exposures managed within the IB credit portfolio on behalf of clients shared with TSS.
(b) Pretax margin represents Income before income tax expense divided by Total net revenue, which is a measure of pretax performance and another basis by which management evaluates its performance and that of its competitors.

2007 compared with 2006

Net income was a record $1.4 billion, an increase of $307 million, or 28%, from the prior year, driven by record net revenue, partially offset by higher noninterest expense.

Total net revenue was $6.9 billion, an increase of $836 million, or 14%, from the prior year. Worldwide Securities Services net revenue of $3.9 billion was up $615 million, or 19%. The growth was driven by increased product usage by new and existing clients (primarily custody, securities lending, depositary receipts and fund services), market appreciation on assets under custody, and wider spreads on securities lending. These gains were offset partially by spread compression on liability products. Treasury Services net revenue was $3.0 billion, an increase of $221 million, or 8%, from the prior year. The results were driven by growth in electronic transaction volumes and higher liability balances, offset partially by a shift to narrower-spread liability products. TSS firmwide net revenue, which includes Treasury Services net revenue recorded in other lines of business, grew to $9.6 billion, up $1.0 billion, or 12%. Treasury Services firmwide net revenue grew to $5.6 billion, up $391 million, or 7%.

Noninterest expense was $4.6 billion, an increase of $314 million, or 7%, from the prior year, reflecting higher expense related to business and volume growth, as well as investment in new product platforms.

2006 compared with 2005

Net income was $1.1 billion, an increase of $227 million, or 26%, from the prior year. Earnings benefited from increased net revenue and the absence of prior-year charges of $58 million (after-tax) related to the termination of a client contract, partially offset by higher compensation expense.

Total net revenue was $6.1 billion, an increase of $570 million, or 10%. Worldwide Securities Services net revenue of $3.3 billion grew by $473 million, or 17%. The growth was driven by increased product usage by new and existing clients (primarily custody, fund services, depositary receipts and securities lending) and market appreciation on assets under custody. Treasury Services net revenue of $2.8 billion was up 4%. The growth was driven by higher liability balances, offset partially by a shift to narrower-spread liability products. TSS firmwide net revenue, which includes Treasury Services net revenue recorded in other lines of business, grew to $8.6 billion, up $778 million, or 10%. Treasury Services firmwide net revenue grew to $5.2 billion, an increase of $305 million, or 6%.

Total noninterest expense was $4.3 billion, up $216 million, or 5%. The increase was due to higher compensation expense related to increased client activity, business growth, investment in new product platforms and incremental expense related to SFAS 123R, partially offset by the absence of prior-year charges of $93 million related to the termination of a client contract.

Selected metrics

Year ended December 31, (in millions, except headcount, ratio data and where otherwise noted)	2007	2006	2005
Revenue by business			
Treasury Services	**$ 3,013**	$ 2,792	$ 2,695
Worldwide Securities Services	**3,932**	3,317	2,844
Total net revenue	**$ 6,945**	$ 6,109	$ 5,539
Business metrics			
Assets under custody (in billions)	**$ 15,946**	$ 13,903	$ 10,662
Number of:			
US$ ACH transactions originated (in millions)	**3,870#**	3,503#	2,966#
Total US$ clearing volume (in thousands)	**111,036**	104,846	95,713
International electronic funds transfer volume (in thousands)[a]	**168,605**	145,325	89,537
Wholesale check volume (in millions)	**2,925**	3,409	3,735
Wholesale cards issued (in thousands)[b]	**18,722**	17,228	13,206
Selected balance sheets (average)			
Total assets	**$ 53,350**	$ 31,760	$ 28,206
Loans[c]	**20,821**	15,564	12,349
Liability balances[d]	**228,925**	189,540	154,731
Equity	**3,000**	2,285	1,525
Headcount	**25,669#**	25,423#	22,207#
TSS firmwide metrics			
Treasury Services firmwide revenue[e]	**$ 5,633**	$ 5,242	$ 4,937
Treasury & Securities Services firmwide revenue[e]	**9,565**	8,559	7,781
Treasury Services firmwide overhead ratio[f]	**56%**	56%	58%
Treasury & Securities Services firmwide overhead ratio[f]	**60**	62	65
Treasury Services firmwide liability balances (average)[g]	**$199,077**	$162,020	$139,579
Treasury & Securities Services firmwide liability balances[g]	**316,651**	262,678	220,781

(a) International electronic funds transfer includes non-US$ ACH and clearing volume.
(b) Wholesale cards issued include domestic commercial card, stored value card, prepaid card and government electronic benefit card products.
(c) Loan balances include wholesale overdrafts, commercial cards and trade finance loans.
(d) Liability balances include deposits and deposits swept to on-balance sheet liabilities such as Commercial paper, Federal funds purchased and repurchase agreements.
(e) Firmwide revenue includes TS revenue recorded in the CB, Regional Banking and AM lines of business (see below) and excludes FX revenue recorded in the IB for TSS-related FX activity.

(in millions)	2007	2006	2005
Treasury Services revenue reported in CB	**$ 2,350**	$2,243	$2,062
Treasury Services revenue reported in other lines of business	**270**	207	180

TSS firmwide FX revenue, which includes FX revenue recorded in TSS and FX revenue associated with TSS customers who are FX customers of the IB, was $552 million, $445 million and $382 million for the years ended December 31, 2007, 2006 and 2005, respectively.

(f) Overhead ratios have been calculated based upon firmwide revenue and TSS and TS expense, respectively, including those allocated to certain other lines of business. FX revenue and expense recorded in the IB for TSS-related FX activity are not included in this ratio.
(g) Firmwide liability balances include TS' liability balances recorded in certain other lines of business.

Treasury & Securities Services firmwide metrics include certain TSS product revenue and liability balances reported in other lines of business for customers who are also customers of those lines of business. Management reviews firmwide metrics such as liability balances, revenue and overhead ratios in assessing financial performance for TSS as such firmwide metrics capture the firmwide impact of TS' and TSS' products and services. Management believes such firmwide metrics are necessary in order to understand the aggregate TSS business.

ASSET MANAGEMENT

With assets under supervision of $1.6 trillion, AM is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including both money-market instruments and bank deposits. AM also provides trust and estate and banking services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2007	2006	2005
Revenue			
Asset management, administration and commissions	**$6,821**	$5,295	$4,189
All other income	**654**	521	394
Noninterest revenue	**7,475**	5,816	4,583
Net interest income	**1,160**	971	1,081
Total net revenue	**8,635**	6,787	5,664
Provision for credit losses	**(18)**	(28)	(56)
Noninterest expense			
Compensation expense	**3,521**	2,777	2,179
Noncompensation expense	**1,915**	1,713	1,582
Amortization of intangibles	**79**	88	99
Total noninterest expense	**5,515**	4,578	3,860
Income before income tax expense	**3,138**	2,237	1,860
Income tax expense	**1,172**	828	644
Net income	**$1,966**	$1,409	$1,216
Financial ratios			
ROE	**51%**	40%	51%
Overhead ratio	**64**	67	68
Pretax margin ratio[(a)]	**36**	33	33

(a) Pretax margin represents Income before income tax expense divided by Total net revenue, which is a measure of pretax performance and another basis by which management evaluates its performance and that of its competitors.

2007 compared with 2006

Net income was a record $2.0 billion, an increase of $557 million, or 40%, from the prior year. Results benefited from record net revenue, partially offset by higher noninterest expense.

Net revenue was $8.6 billion, an increase of $1.8 billion, or 27%, from the prior year. Noninterest revenue, primarily fees and commissions, was $7.5 billion, up $1.7 billion, or 29%, largely due to increased assets under management and higher performance and placement fees. Net interest income was $1.2 billion, up $189 million, or 19%, from the prior year, largely due to higher deposit and loan balances.

Institutional revenue grew 28%, to $2.5 billion, due to net asset inflows and performance fees. Private Bank revenue grew 37%, to $2.6 billion, due to higher assets under management, performance and placement fees, and increased loan and deposit balances. Retail revenue grew 28%, to $2.4 billion, primarily due to market appreciation and net asset inflows. Private Client Services revenue grew 7%, to $1.1 billion, reflecting higher assets under management and higher deposit balances.

The provision for credit losses was a benefit of $18 million, compared with a benefit of $28 million in the prior year.

Noninterest expense was $5.5 billion, an increase of $937 million, or 20%, from the prior year. The increase was due primarily to higher performance-based compensation expense and investments in all business segments.

2006 compared with 2005

Net income was a record $1.4 billion, up $193 million, or 16%, from the prior year. Improved results were driven by increased revenue offset partially by higher performance-based compensation expense, incremental expense from the adoption of SFAS 123R and the absence of a tax credit recognized in the prior year.

Total net revenue was a record $6.8 billion, up $1.1 billion, or 20%, from the prior year. Noninterest revenue, principally fees and commissions, of $5.8 billion was up $1.2 billion, or 27%. This increase was due largely to increased assets under management and higher performance and placement fees. Net interest income was $971 million, down $110 million, or 10%, from the prior year. The decline was due primarily to narrower spreads on deposit products and the absence of BrownCo, partially offset by higher deposit and loan balances.

Institutional revenue grew 41%, to $2.0 billion, due to net asset inflows and higher performance fees. Private Bank revenue grew 13%, to $1.9 billion, due to increased placement activity, higher asset management fees and higher deposit balances, partially offset by narrower average spreads on deposits. Retail revenue grew 22%, to $1.9 billion, primarily due to net asset inflows, partially offset by the sale of BrownCo. Private Client Services revenue decreased 1%, to $1.0 billion, as higher deposit and loan balances were more than offset by narrower average deposit and loan spreads.

Provision for credit losses was a benefit of $28 million compared with a benefit of $56 million in the prior year. The 2006 benefit reflects a high level of recoveries and stable credit quality.

Total noninterest expense of $4.6 billion was up $718 million, or 19%, from the prior year. The increase was due to higher performance-based compensation, incremental expense related to SFAS 123R, increased salaries and benefits related to business growth, and higher minority interest expense related to Highbridge, partially offset by the absence of BrownCo.

Selected metrics

Year ended December 31, (in millions, except headcount, ranking data, and where otherwise noted)	2007	2006	2005
Revenue by client segment			
Institutional	**$ 2,525**	$ 1,972	$ 1,395
Private Bank	**2,605**	1,907	1,689
Retail	**2,408**	1,885	1,544
Private Client Services	**1,097**	1,023	1,036
Total net revenue	**$ 8,635**	$ 6,787	$ 5,664
Business metrics			
Number of:			
Client advisors	**1,729#**	1,506#	1,484#
Retirement planning services participants	**1,501,000**	1,362,000	1,299,000
% of customer assets in 4 & 5 Star Funds[a]	**55%**	58%	46%
% of AUM in 1st and 2nd quartiles:[b]			
1 year	**57%**	83%	69%
3 years	**75%**	77%	68%
5 years	**76%**	79%	74%
Selected balance sheets data (average)			
Total assets	**$ 51,882**	$ 43,635	$ 41,599
Loans[c][d]	**29,496**	26,507	26,610
Deposits[d]	**58,863**	50,607	42,123
Equity	**3,876**	3,500	2,400
Headcount	**14,799#**	13,298#	12,127#
Credit data and quality statistics			
Net charge-offs (recoveries)	**$ (8)**	$ (19)	$ 23
Nonperforming loans	**12**	39	104
Allowance for loan losses	**112**	121	132
Allowance for lending-related commitments	**7**	6	4
Net charge-off (recovery) rate	**(0.03)%**	(0.07)%	0.09%
Allowance for loan losses to average loans	**0.38**	0.46	0.50
Allowance for loan losses to nonperforming loans	**933**	310	127
Nonperforming loans to average loans	**0.04**	0.15	0.39

(a) Derived from following rating services: Morningstar for the United States; Micropal for the United Kingdom, Luxembourg, Hong Kong and Taiwan; and Nomura for Japan.

(b) Derived from following rating services: Lipper for the United States and Taiwan; Micropal for the United Kingdom, Luxembourg and Hong Kong; and Nomura for Japan.

(c) Held-for-investment prime mortgage loans transferred from AM to Treasury within the Corporate segment during 2007 were $6.5 billion. There were no loans transferred during 2006 or 2005. Although the loans, together with the responsibility for the investment management of the portfolio, were transferred to Treasury, the transfer has no material impact on the financial results of AM.

(d) The sale of BrownCo, which closed on November 30, 2005, included $3.0 billion in both loans and deposits.

AM's client segments comprise the following:

Institutional brings comprehensive global investment services – including asset management, pension analytics, asset-liability management and active risk budgeting strategies – to corporate and public institutions, endowments, foundations, not-for-profit organizations and governments worldwide.

Retail provides worldwide investment management services and retirement planning and administration through third-party and direct distribution of a full range of investment vehicles.

The **Private Bank** addresses every facet of wealth management for ultra-high-net-worth individuals and families worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty-wealth advisory services.

Private Client Services offers high-net-worth individuals, families and business owners in the United States comprehensive wealth management solutions, including investment management, capital markets and risk management, tax and estate planning, banking and specialty-wealth advisory services.

JPMorgan Asset Management has established two high-level measures of its overall performance.

- Percentage of assets under management in funds rated 4 and 5 stars (3 year). Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5 star rating is the best and represents the top 10% of industry wide ranked funds. A 4 star rating represents the next 22% of industry wide ranked funds. The worst rating is a 1 star rating.
- Percentage of assets under management in first- or second-quartile funds (one, three and five years). Mutual fund rating services rank funds according to a peer-based performance system, which measures returns according to specific time and fund classification (small, mid, multi and large cap).

Assets under supervision

2007 compared with 2006

Assets under supervision ("AUS") were $1.6 trillion, an increase of $225 billion, or 17%, from the prior year. Assets under management ("AUM") were $1.2 trillion, up 18%, or $180 billion, from the prior year. The increase in AUM was the result of net asset inflows into liquidity and alternative products and market appreciation across all segments. Custody, brokerage, administration and deposit balances were $379 billion, up $45 billion. The Firm also has a 44% interest in American Century Companies, Inc., whose AUM totaled $102 billion and $103 billion at December 31, 2007 and 2006, respectively, which are excluded from the AUM above.

2006 compared with 2005

AUS were $1.3 trillion, up 17%, or $198 billion, from the prior year. AUM were $1.0 trillion, up 20%, or $166 billion, from the prior year. The increase in AUM was the result of net asset inflows in the Retail segment, primarily in equity-related products, Institutional segment flows, primarily in liquidity products and market appreciation. Custody, brokerage, administration and deposit balances were $334 billion, up $32 billion. The AUM of American Century Companies, Inc., totaled $103 billion and $101 billion at December 31, 2006 and 2005, respectively, which are excluded from the AUM above.

Assets under supervision[a]

As of or for the year ended December 31, (in billions)	2007	2006	2005
Assets by asset class			
Liquidity[b]	**$ 400**	$ 311	$ 238
Fixed income	**200**	175	165
Equities & balanced	**472**	427	370
Alternatives	**121**	100	74
Total Assets under management	**1,193**	1,013	847
Custody/brokerage/ administration/deposits	**379**	334	302
Total Assets under supervision	**$ 1,572**	$ 1,347	$ 1,149
Assets by client segment			
Institutional[c]	**$ 632**	$ 538	$ 481
Private Bank	**201**	159	145
Retail[c]	**300**	259	169
Private Client Services	**60**	57	52
Total Assets under management	**$ 1,193**	$ 1,013	$ 847
Institutional[c]	**$ 633**	$ 539	$ 484
Private Bank	**433**	357	318
Retail[c]	**394**	343	245
Private Client Services	**112**	108	102
Total Assets under supervision	**$ 1,572**	$ 1,347	$ 1,149
Assets by geographic region			
U.S./Canada	**$ 760**	$ 630	$ 562
International	**433**	383	285
Total Assets under management	**$ 1,193**	$ 1,013	$ 847
U.S./Canada	**$ 1,032**	$ 889	$ 805
International	**540**	458	344
Total Assets under supervision	**$ 1,572**	$ 1,347	$ 1,149
Mutual fund assets by asset class			
Liquidity	**$ 339**	$ 255	$ 182
Fixed income	**46**	46	45
Equities	**224**	206	150
Total mutual fund assets	**$ 609**	$ 507	$ 377
Assets under management rollforward			
Beginning balance, January 1	**$ 1,013**	$ 847	$ 791
Net asset flows:			
Liquidity	**78**	44	8
Fixed income	**9**	11	—
Equities, balanced and alternative	**28**	34	24
Market/performance/other impacts	**65**	77	24
Ending balance, December 31	**$ 1,193**	$ 1,013	$ 847
Assets under supervision rollforward			
Beginning balance, January 1	**$ 1,347**	$ 1,149	$ 1,106
Net asset flows	**143**	102	49
Acquisitions/divestitures[d]	**—**	—	(33)
Market/performance/other impacts	**82**	96	27
Ending balance, December 31	**$ 1,572**	$ 1,347	$ 1,149

(a) Excludes Assets under management of American Century Companies, Inc., in which the Firm had a 44% ownership at December 31, 2007.
(b) 2006 data reflects the reclassification of $19 billion of assets under management into liquidity from other asset classes. Prior period data were not restated.
(c) In 2006, assets under management of $22 billion from Retirement planning services has been reclassified from the Institutional client segment to the Retail client segment in order to be consistent with the revenue by client segment reporting.
(d) Reflects the sale of BrownCo ($33 billion) in 2005.

The Corporate sector comprises Private Equity, Treasury, corporate staff units and expense that is centrally managed. Private Equity includes the JPMorgan Partners and ONE Equity Partners businesses. Treasury manages capital, liquidity, interest rate and foreign exchange risk and the investment portfolio for the Firm. The corporate staff units include Central Technology and Operations, Internal Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Legal & Compliance, Corporate Real Estate and General Services, Risk Management and Strategy & Development. Other centrally managed expense includes the Firm's occupancy and pension-related expense, net of allocations to the business.

Selected income statement data

Year ended December 31, (in millions)	2007	2006	2005
Revenue			
Principal transactions[a][b]	**$ 4,552**	$ 1,181	$ 1,527
Securities gains (losses)	**39**	(608)	(1,487)
All other income[c]	**441**	485	1,583
Noninterest revenue	**5,032**	1,058	1,623
Net interest income (expense)	**(787)**	(1,044)	(2,756)
Total net revenue	**4,245**	14	(1,133)
Provision for credit losses	**(11)**	(1)	10
Noninterest expense			
Compensation expense[b]	**2,754**	2,626	3,148
Noncompensation expense[d]	**3,030**	2,357	5,965
Merger costs	**209**	305	722
Subtotal	**5,993**	5,288	9,835
Net expense allocated to other businesses	**(4,231)**	(4,141)	(4,505)
Total noninterest expense	**1,762**	1,147	5,330
Income (loss) from continuing operations before income tax expense	**2,494**	(1,132)	(6,473)
Income tax expense (benefit)[e]	**719**	(1,179)	(2,690)
Income (loss) from continuing operations	**1,775**	47	(3,783)
Income from discontinued operations[f]	**—**	795	229
Net income (loss)	**$ 1,775**	$ 842	$(3,554)

(a) The Firm adopted SFAS 157 in the first quarter of 2007. See Note 4 on pages 111–118 of this Annual Report for additional information.
(b) 2007 included the classification of certain private equity carried interest from Principal transactions to Compensation expense.
(c) Included a gain of $1.3 billion on the sale of BrownCo in 2005.
(d) Included insurance recoveries related to material legal proceedings of $512 million and $208 million in 2006 and 2005, respectively. Includes litigation reserve charges of $2.8 billion in 2005.
(e) Includes tax benefits recognized upon resolution of tax audits.
(f) Included a $622 million gain from the sale of selected corporate trust businesses in the fourth quarter of 2006.

2007 compared with 2006

Net income was $1.8 billion, compared with $842 million in the prior year, benefiting from strong Private Equity gains, partially offset by higher expense. Prior-year results also included Income from discontinued operations of $795 million, which included a one-time gain of $622 million from the sale of selected corporate trust businesses.

Net income for Private Equity was $2.2 billion, compared with $627 million in the prior year. Total net revenue was $4.0 billion, an increase of $2.8 billion. The increase was driven by Private Equity gains of $4.1 billion, compared with $1.3 billion, reflecting a higher level of gains and the change in classification of carried interest to compensation expense. Total noninterest expense was $589 million, an increase of $422 million from the prior year. The increase was driven by higher compensation expense reflecting the change in the classification of carried interest.

Net loss for Treasury and Other Corporate was $390 million compared with a net loss of $580 million in the prior year. Treasury and Other Corporate Total net revenue was $278 million, an increase of $1.4 billion. Revenue benefited from net security gains compared with net security losses in the prior year and improved net interest spread. Total noninterest expense was $1.2 billion, an increase of $193 million from the prior year. The increase reflected higher net litigation expense driven by credit card-related litigation and the absence of prior-year insurance recoveries related to certain material litigation partially offset by lower compensation expense.

2006 compared with 2005

On August 1, 2006, the buyout and growth equity professionals of JPMorgan Partners ("JPMP") formed an independent firm, CCMP Capital, LLC ("CCMP"), and the venture professionals separately formed an independent firm, Panorama Capital, LLC ("Panorama"). The investment professionals of CCMP and Panorama continue to manage the former JPMP investments pursuant to a management agreement with the Firm.

On October 1, 2006, the Firm completed the exchange of selected corporate trust businesses, including trustee, paying agent, loan agency and document management services, for the consumer, business banking and middle-market banking businesses of The Bank of New York. These corporate trust businesses, which were previously reported in TSS, are now reported as discontinued operations for all periods presented within Corporate. The related balance sheet and income statement activity were transferred to the Corporate segment commencing with the second quarter of 2006. Periods prior to the second quarter of 2006 were revised to reflect this transfer.

Net income was $842 million compared with a net loss of $3.6 billion in the prior year, benefiting from lower net litigation costs and improved Treasury investment performance. Prior-year results included a $752 million gain on the sale of BrownCo.

Net income for Private Equity was $627 million, compared with $821 million in the prior year. Net revenue was $1.1 billion, a decrease of $379 million. The decrease was driven by lower Private Equity gains. Noninterest expense was $167 million, a decrease of $78 million from the prior year.

Net loss for Treasury and Other Corporate was $580 million compared with a net loss of $4.6 billion. Treasury and Other Corporate net revenue was a negative $1.1 billion compared with negative $2.7 billion. The improvement reflected higher net interest income, which was driven by an improved net interest spread, an increase in AFS securities and lower security losses. Prior-year results included a gain of $1.3 billion on the sale of BrownCo. Noninterest expense was $980 million, a decrease of $4.1 billion from the prior year. Insurance recoveries relating to certain material litigation were $512 million in 2006, while the prior-year results included a material litigation charge of $2.8 billion and related insurance recoveries of $208 million. Merger costs were $305 million, compared with $722 million in the prior year.

Discontinued operations include the results of operations of selected corporate trust businesses that were sold to The Bank of New York on October 1, 2006. Prior to the sale, the selected corporate trust businesses produced $173 million of Income from discontinued operations in 2006, compared with $229 million in the prior year. Income from discontinued operations for 2006 also included a one-time gain of $622 million related to the sale of these businesses.

Selected metrics

Year ended December 31, (in millions, except headcount)	2007	2006	2005
Total net revenue			
Private equity[a][b]	**$ 3,967**	$ 1,142	$ 1,521
Treasury and Corporate other[c]	**278**	(1,128)	(2,654)
Total net revenue	**$ 4,245**	$ 14	$ (1,133)
Net income (loss)			
Private equity[a]	**$ 2,165**	$ 627	$ 821
Treasury and Corporate other[c][d][e]	**(260)**	(391)	(4,156)
Merger costs	**(130)**	(189)	(448)
Income (loss) from continuing operations	**1,775**	47	(3,783)
Income from discontinued operations (after-tax)[f]	**—**	795	229
Total net income (loss)	**$ 1,775**	$ 842	$ (3,554)
Headcount	**22,512#**	23,242#	30,666#

(a) The Firm adopted SFAS 157 in the first quarter of 2007. See Note 4 on pages 111–118 of this Annual Report for additional information.
(b) 2007 included the classification of certain private equity carried interest from Net revenue to Compensation expense.
(c) Included a gain of $752 million ($1.3 billion pretax) on the sale of BrownCo in 2005.
(d) Included insurance recoveries (after-tax) related to material legal proceedings of $317 million and $129 million in 2006 and 2005, respectively. Includes litigation reserve charges (after-tax) of $1.7 billion in 2005.
(e) Includes tax benefits recognized upon resolution of tax audits.
(f) Included a $622 million gain from the sale of selected corporate trust business in the fourth quarter of 2006.

Private equity portfolio

2007 compared with 2006

The carrying value of the private equity portfolio at December 31, 2007, was $7.2 billion, up from $6.1 billion from December 31, 2006. The portfolio increase was due primarily to favorable valuation adjustments on nonpublic investments and new investments, partially offset by sales activity. The portfolio represented 9.2% of the Firm's stockholders' equity less goodwill at December 31, 2007, up from 8.6% at December 31, 2006.

2006 compared with 2005

The carrying value of the private equity portfolio declined by $95 million to $6.1 billion as of December 31, 2006. This decline was due primarily to sales, partially offset by new investment activity. The portfolio represented 8.6% of the Firm's stockholder equity less goodwill at December 31, 2006, down from 9.7% at December 31, 2005.

Selected income statement and balance sheet data

Year ended December 31, (in millions)	2007	2006	2005
Treasury			
Securities gains (losses)[a]	**$ 37**	$ (619)	$ (1,486)
Investment portfolio (average)	**85,517**	63,361	46,520
Investment portfolio (ending)	**76,200**	82,091	30,741
Mortgage loans (average)[b]	**29,118**	—	—
Mortgage loans (ending)[b]	**36,942**	—	—
Private equity			
Realized gains	**$ 2,312**	$ 1,223	$ 1,969
Unrealized gains (losses)	**1,607**	(1)	(410)
Total direct investments[c]	**3,919**	1,222	1,559
Third-party fund investments	**165**	77	132
Total private equity gains[d]	**$ 4,084**	$ 1,299	$ 1,691
Private equity portfolio information[e]			
Direct investments			
Publicly held securities			
Carrying value	**$ 390**	$ 587	$ 479
Cost	**288**	451	403
Quoted public value	**536**	831	683
Privately held direct securities			
Carrying value	**5,914**	4,692	5,028
Cost	**4,867**	5,795	6,463
Third-party fund investments[f]			
Carrying value	**849**	802	669
Cost	**1,076**	1,080	1,003
Total private equity portfolio – Carrying value	**$ 7,153**	$ 6,081	$ 6,176
Total private equity portfolio – Cost	**$ 6,231**	$ 7,326	$ 7,869

(a) Losses reflected repositioning of the Treasury investment securities portfolio. Excludes gains/losses on securities used to manage risks associated with MSRs.
(b) In 2007, held-for-investment prime mortgage loans were transferred from RFS and AM. The transfer has no material impact on the financial results of Corporate.
(c) Private equity gains include a fair value adjustment related to the adoption of SFAS 157 in the first quarter of 2007.
(d) Included in Principal transactions revenue.
(e) For more information on the Firm's policies regarding the valuation of the private equity portfolio, see Note 4 on pages 111–118 of this Annual Report.
(f) Unfunded commitments to third-party equity funds were $881 million, $589 million and $242 million at December 31, 2007, 2006 and 2005, respectively.

Condensed consolidated balance sheet data

December 31, (in millions)	2007	2006
Assets		
Cash and due from banks	**$ 40,144**	$ 40,412
Deposits with banks	**11,466**	13,547
Federal funds sold and securities purchased under resale agreements	**170,897**	140,524
Securities borrowed	**84,184**	73,688
Trading assets:		
Debt and equity instruments	**414,273**	310,137
Derivative receivables	**77,136**	55,601
Securities	**85,450**	91,975
Loans	**519,374**	483,127
Allowance for loan losses	**(9,234)**	(7,279)
Loans, net of Allowance for loan losses	**510,140**	475,848
Accrued interest and accounts receivable	**24,823**	22,891
Goodwill	**45,270**	45,186
Other intangible assets	**14,731**	14,852
Other assets	**83,633**	66,859
Total assets	**$ 1,562,147**	$1,351,520
Liabilities		
Deposits	**$ 740,728**	$ 638,788
Federal funds purchased and securities sold under repurchase agreements	**154,398**	162,173
Commercial paper and other borrowed funds	**78,431**	36,902
Trading liabilities:		
Debt and equity instruments	**89,162**	90,488
Derivative payables	**68,705**	57,469
Accounts payable, accrued expense and other liabilities	**94,476**	88,096
Beneficial interests issued by consolidated VIEs	**14,016**	16,184
Long-term debt and trust preferred capital debt securities	**199,010**	145,630
Total liabilities	**1,438,926**	1,235,730
Stockholders' equity	**123,221**	115,790
Total liabilities and stockholders' equity	**$ 1,562,147**	$1,351,520

Consolidated balance sheets overview

The following is a discussion of the significant changes in the Consolidated balance sheet items from December 31, 2006.

Deposits with banks; Federal funds sold and securities purchased under resale agreements; Securities borrowed; Federal funds purchased and securities sold under repurchase agreements

The Firm utilizes Deposits with banks, Federal funds sold and securities purchased under resale agreements, Securities borrowed, and Federal funds purchased and securities sold under repurchase agreements as part of its liquidity management activities to manage the Firm's cash positions and risk-based capital requirements, and to support the Firm's trading activities and its risk management activities. In particular, Federal funds purchased and securities sold under repurchase agreements are used as short-term funding sources. The increase from December 31, 2006, in Federal funds sold and securities purchased under resale agreements and Securities borrowed reflected a higher level of funds that were available for short-term investment opportunities and a higher volume of securities needed for trading purposes. The decrease in Federal funds purchased and securities sold under repurchase agreements was due primarily to a lower level of AFS securities in Treasury, partly offset by higher amounts to fund trading positions. For additional information on the Firm's Liquidity risk management, see pages 70–73 of this Annual Report.

Trading assets and liabilities – debt and equity instruments

The Firm uses debt and equity trading instruments for both market-making and proprietary risk-taking activities. These instruments consist primarily of fixed income securities, including government and corporate debt; equity, including convertible securities; loans; and physical commodities inventories. The increase in trading assets from December 31, 2006, was due primarily to the more active capital markets environment, with growth in client-driven market-making activities, particularly for debt securities. In addition, a total of $33.8 billion of loans are now accounted for at fair value under SFAS 159 and classified as trading assets at December 31, 2007. The trading assets accounted for under SFAS 159 are primarily certain prime mortgage loans warehoused by RFS for sale or securitization purposes, and loans warehoused by IB. For additional information, refer to Note 5 and Note 6 on pages 119–121 and 122, respectively, of this Annual Report.

Trading assets and liabilities – derivative receivables and payables

The Firm utilizes various interest rate, foreign exchange, equity, credit and commodity derivatives for market-making, proprietary risk-taking and risk-management purposes. Both derivative receivables and derivative payables increased from December 31, 2006, primarily driven by increases in credit derivative and interest rate products due to increased credit spreads and lower interest rates, respectively, as well as a decline in the U.S. dollar. For additional information, refer to Derivative contracts, Note 6 and Note 30 on pages 79–82, 122 and 168–169, respectively, of this Annual Report.

Securities

Almost all of the Firm's securities portfolio is classified as AFS and is used primarily to manage the Firm's exposure to interest rate movements. The AFS portfolio decreased from December 31, 2006, primarily due to net sales and maturities of securities in Treasury. For additional information related to securities, refer to the Corporate segment discussion and to Note 12 on pages 59–60 and 134–136, respectively, of this Annual Report.

Loans and Allowance for loan losses
The Firm provides loans to customers of all sizes, from large corporate and institutional clients to individual consumers. The Firm manages the risk/reward relationship of each portfolio and discourages the retention of loan assets that do not generate a positive return above the cost of risk-adjusted capital. Loans increased $36.2 billion, or 8%, from December 31, 2006, primarily due to business growth in wholesale lending activity, mainly in IB, CB and AM; organic growth in the Home Equity portfolio; and the decision during the third quarter of 2007 to retain rather than sell subprime mortgage loans. These increases were offset partly by a decline in consumer loans as certain prime mortgage loans originated after January 1, 2007, are classified as Trading assets and accounted for at fair value under SFAS 159. In addition, certain loans warehoused in the IB were transferred to Trading assets on January 1, 2007, as part of the adoption of SFAS 159. The Allowance for loan losses increased $2.0 billion, or 27%, from December 31, 2006. The consumer and wholesale components of the allowance increased $1.5 billion and $443 million, respectively. The increase in the consumer portion of the allowance was due to increases of $1.2 billion in RFS, reflecting higher estimated losses related to home equity and subprime mortgage loans, and $231 million in CS, reflecting a higher level of estimated net charge-offs in the credit card portfolio. The increase in the wholesale portion of the allowance was primarily due to loan growth in IB and CB. For a more detailed discussion of the loan portfolio and the Allowance for loan losses, refer to Credit risk management on pages 73–89 of this Annual Report.

Goodwill
Goodwill arises from business combinations and represents the excess of the cost of an acquired entity over the net fair value amounts assigned to assets acquired and liabilities assumed. The increase in Goodwill primarily resulted from certain acquisitions by TSS and CS, and currency translation adjustments on the Sears Canada credit card acquisition. Partially offsetting these increases was a reduction resulting from the adoption of FIN 48, as well as tax-related purchase accounting adjustments. For additional information, see Notes 18 and 26 on pages 154–157 and 164–165, respectively, of this Annual Report.

Other intangible assets
The Firm's other intangible assets consist of MSRs, purchased credit card relationships, other credit card-related intangibles, core deposit intangibles and all other intangibles. The slight decline in Other intangible assets reflects amortization, primarily related to credit card business-related intangibles and core deposit intangibles. This decrease was offset largely by an increase in the MSR asset, as additions from loan sales and purchases were offset partially by fair value changes reflecting modeled servicing portfolio runoff and negative fair value adjustments, as declining interest rates during the second half of 2007 drove an increase in estimated future prepayments. For additional information on MSRs and other intangible assets, see RFS's Mortgage Banking business discussion and Note 18 on pages 46–47 and 154–157 of this Annual Report.

Deposits
The Firm's deposits represent a liability to customers, both retail and wholesale, for funds held on their behalf. Deposits are generally classified by location (U.S. and non-U.S.), whether they are interest or noninterest-bearing, and by type (i.e., demand, money market deposit accounts, savings, time or negotiable order of withdrawal accounts). Deposits help provide a stable and consistent source of funding for the Firm. Deposits rose from December 31, 2006, primarily due to a net increase in wholesale interest-bearing deposits in TSS, AM and CB, driven by growth in business volumes. For more information on deposits, refer to the RFS, TSS, and AM segment discussions and the Liquidity risk management discussion on pages 43–48, 54–55, 56–58, and 70–73, respectively, of this Annual Report. For more information on wholesale liability balances, including deposits, refer to the CB and TSS segment discussions on pages 52–53 and 54–55, respectively, of this Annual Report.

Commercial paper and other borrowed funds
The Firm utilizes Commercial paper and other borrowed funds as part of its liquidity management activities to cover short-term funding needs, and in connection with TSS's cash management product whereby clients' excess funds, primarily in TSS, CB and RFS, are transferred into commercial paper overnight sweep accounts. The increases in Commercial paper and other borrowed funds were due primarily to the Firm's ongoing efforts to build further liquidity, growth in the volume of liability balances in sweep accounts and higher short-term requirements to fund trading positions. For additional information on the Firm's Liquidity risk management, see pages 70–73 of this Annual Report.

Long-term debt and trust preferred capital debt securities
The Firm utilizes Long-term debt and trust preferred capital debt securities to build liquidity as part of its longer-term liquidity and capital management activities. Long-term debt and trust preferred capital debt securities increased from December 31, 2006, reflecting net new issuances, including client-driven structured notes in the IB. For additional information on the Firm's long-term debt activities, see the Liquidity risk management discussion on pages 70–73 of this Annual Report.

Stockholders' equity
Total stockholders' equity increased $7.4 billion from year-end 2006 to $123.2 billion at December 31, 2007. The increase was primarily the result of Net income for 2007, net shares issued under the Firm's employee stock-based compensation plans, and the cumulative effect on Retained earnings of changes in accounting principles of $915 million. These were offset partially by stock repurchases and the declaration of cash dividends. The $915 million increase in Retained earnings resulting from the adoption of new accounting principles primarily reflected $287 million related to SFAS 157, $199 million related to SFAS 159 and $436 million related to FIN 48 in the first quarter of 2007. For a further discussion of capital, see the Capital management section that follows; for a further discussion of the accounting changes, see Accounting and Reporting Developments on page 99, Note 4 on pages 111–118, Note 5 on pages 119–121 and Note 26 on pages 164–165 of this Form Annual Report.

The Firm's capital management framework is intended to ensure that there is capital sufficient to support the underlying risks of the Firm's business activities and to maintain "well-capitalized" status under regulatory requirements. In addition, the Firm holds capital above these requirements in amounts deemed appropriate to achieve management's regulatory and debt rating objectives. The process of assigning equity to the lines of business is integrated into the Firm's capital framework and is overseen by ALCO.

Line of business equity

The Firm's framework for allocating capital is based upon the following objectives:

- integrate firmwide capital management activities with capital management activities within each of the lines of business;
- measure performance consistently across all lines of business; and
- provide comparability with peer firms for each of the lines of business.

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, incorporating sufficient capital to address economic risk measures, regulatory capital requirements and capital levels for similarly rated peers. Capital is also allocated to each line of business for, among other things, goodwill associated with such line of business' acquisitions since the Merger. In management's view, this methodology assigns responsibility to the lines of business to generate returns on the amount of capital supporting acquisition-related goodwill. At the time of the Merger, the Firm assigned to the Corporate segment an amount of equity capital equal to the then-current book value of goodwill from and prior to the Merger. Return on equity is measured and internal targets for expected returns are established as a key measure of a business segment's performance. The Firm may revise its equity capital-allocation methodology again in the future.

In accordance with SFAS 142, the lines of business perform the required goodwill impairment testing. For a further discussion of goodwill and impairment testing, see Critical accounting estimates and Note 18 on pages 96–98 and 154–157, respectively, of this Annual Report.

Line of business equity	Yearly Average	
(in billions)	**2007**	2006
Investment Bank	**$ 21.0**	$ 20.8
Retail Financial Services	**16.0**	14.6
Card Services	**14.1**	14.1
Commercial Banking	**6.5**	5.7
Treasury & Securities Services	**3.0**	2.3
Asset Management	**3.9**	3.5
Corporate[a]	**54.2**	49.7
Total common stockholders' equity	**$118.7**	$110.7

(a) 2007 and 2006 include $41.7 billion of equity to offset goodwill and $12.5 billion and $8.0 billion, respectively, of equity, primarily related to Treasury, Private Equity and the Corporate Pension Plan.

Economic risk capital

JPMorgan Chase assesses its capital adequacy relative to the risks underlying the Firm's business activities, utilizing internal risk-assessment methodologies. The Firm measures economic capital primarily based upon four risk factors: credit risk, market risk, operational risk and private equity risk, principally for the Firm's private equity business.

Economic risk capital	Yearly Average	
(in billions)	**2007**	2006
Credit risk[a]	**$ 30.0**	$ 26.7
Market risk	**9.5**	9.9
Operational risk	**5.6**	5.7
Private equity risk	**3.7**	3.4
Economic risk capital	**48.8**	45.7
Goodwill	**45.2**	43.9
Other[b]	**24.7**	21.1
Total common stockholders' equity	**$118.7**	$110.7

(a) Incorporates a change to the wholesale credit risk methodology, which has been modified to include a through-the-cycle adjustment (described below). The prior period has been revised to reflect this methodology change.
(b) Reflects additional capital required, in management's view, to meet its regulatory and debt rating objectives.

Credit risk capital

Credit risk capital is estimated separately for the wholesale businesses (IB, CB, TSS and AM) and consumer businesses (RFS and CS).

Credit risk capital for the overall wholesale credit portfolio is defined in terms of unexpected credit losses, both from defaults and declines in the portfolio value due to credit deterioration, measured over a one-year period at a confidence level consistent with the level of capitalization necessary to achieve a targeted "AA" credit rating. Unexpected losses are losses in excess of those for which provisions for credit losses are maintained. The capital methodology is based upon several principal drivers of credit risk: exposure at default (or loan-equivalent amount), default likelihood, credit spreads, loss severity and portfolio correlation.

In 2007, an updated capital methodology was introduced for credit exposures in the IB and for certain non-IB credit exposures related to publicly traded entities. The updated methodology includes a through-the-cycle adjustment to capital levels that reflects capital that would be needed across the various credit cycles. Capital methodologies employed across all wholesale businesses now employ a through-the-cycle approach.

Credit risk capital for the consumer portfolio is based upon product and other relevant risk segmentation. Actual segment level default and severity experience are used to estimate unexpected losses for a one-year horizon at a confidence level equivalent to the targeted "AA" credit rating. Statistical results for certain segments or portfolios are adjusted to ensure that capital is consistent with external benchmarks, such as subordination levels on market transactions or capital held at representative monoline competitors, where appropriate.

Market risk capital

The Firm calculates market risk capital guided by the principle that capital should reflect the risk of loss in the value of portfolios and financial instruments caused by adverse movements in market variables, such as interest and foreign exchange rates, credit spreads, securities prices and commodities prices. Daily Value-at-Risk ("VAR"), monthly stress-test results and other factors are used to determine appropriate capital levels. The Firm allocates market risk capital to each business segment according to a formula that weights that segment's VAR and stress-test exposures. See Market risk management on pages 90–94 of this Annual Report for more information about these market risk measures.

Operational risk capital

Capital is allocated to the lines of business for operational risk using a risk-based capital allocation methodology which estimates operational risk on a bottom-up basis. The operational risk capital model is based upon actual losses and potential scenario-based stress losses, with adjustments to the capital calculation to reflect changes in the quality of the control environment or the use of risk-transfer products. The Firm believes its model is consistent with the new Basel II Framework and expects to propose it for qualification under the Basel II advanced measurement approach for operational risk.

Private equity risk capital

Capital is allocated to privately and publicly held securities, third-party fund investments and commitments in the Private Equity portfolio to cover the potential loss associated with a decline in equity markets and related asset devaluations. In addition to negative market fluctuations, potential losses in private equity investment portfolios can be magnified by liquidity risk. The capital allocation for the Private Equity portfolio is based upon measurement of the loss experience suffered by the Firm and other market participants over a prolonged period of adverse equity market conditions.

Regulatory capital

The Board of Governors of the Federal Reserve System (the "Federal Reserve Board") establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The Office of the Comptroller of the Currency establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A.

JPMorgan Chase maintained a well-capitalized position, based upon Tier 1 and Total capital ratios at December 31, 2007 and 2006 as indicated in the tables below.

Capital ratios

December 31,	**2007**	2006	Well-capitalized ratios
Tier 1 capital ratio	**8.4%**	8.7%	6.0%
Total capital ratio	**12.6**	12.3	10.0
Tier 1 leverage ratio	**6.0**	6.2	NA
Total stockholders' equity to assets	**7.9**	8.6	NA

Risk-based capital components and assets

December 31, (in millions)	**2007**	2006
Total Tier 1 capital	**$ 88,746**	$ 81,055
Total Tier 2 capital	**43,496**	34,210
Total capital	**$ 132,242**	$ 115,265
Risk-weighted assets	**$ 1,051,879**	$ 935,909
Total adjusted average assets	**1,473,541**	1,308,699

Tier 1 capital was $88.7 billion at December 31, 2007, compared with $81.1 billion at December 31, 2006, an increase of $7.7 billion. The increase was due primarily to net income of $15.4 billion; net issuances of common stock under the Firm's employee stock-based compensation plans of $3.9 billion; net issuances of $2.0 billion of qualifying trust preferred capital debt securities; and the after-tax effects of the adoption of new accounting principles reflecting increases of $287 million for SFAS 157, $199 million for SFAS 159 and $436 million for FIN 48. These increases were partially offset by decreases in Stockholders' equity net of Accumulated other comprehensive income (loss) due to common stock repurchases of $8.2 billion and dividends declared of $5.2 billion. In addition, the change in capital reflects the exclusion of an $882 million (after-tax) valuation adjustment to certain liabilities pursuant to SFAS 157 to reflect the credit quality of the Firm. Additional information regarding the Firm's capital ratios and the federal regulatory capital standards to which it is subject is presented in Note 28 on pages 166–167 of this Annual Report.

Basel II

The minimum risk-based capital requirements adopted by the federal banking agencies follow the Capital Accord of the Basel Committee on Banking Supervision. In 2004, the Basel Committee published a revision to the Accord ("Basel II"). The goal of the new Basel II Framework is to provide more risk-sensitive regulatory capital calculations and promote enhanced risk management practices among large, internationally active banking organizations. U.S. banking regulators published a final Basel II rule in December 2007, which will require JPMorgan Chase to implement Basel II at the holding company level, as well as at certain key U.S. bank subsidiaries.

Prior to full implementation of the new Basel II Framework, JPMorgan Chase will be required to complete a qualification period of four consecutive quarters during which it will need to demonstrate that it meets the requirements of the new rule to the satisfaction of its primary U.S. banking regulators. The U.S. implementation timetable consists of the qualification period, starting any time between April 1, 2008, and April 1, 2010, followed by a minimum transition period of three years. During the transition period Basel II risk-based capital requirements cannot fall below certain floors based on current ("Basel I") regulations. JPMorgan Chase expects to be in compliance with all relevant Basel II rules within the established timelines. In addition, the Firm will continue to adopt Basel II rules in certain non-U.S. jurisdictions, as required.

Dividends

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratios, need to maintain an adequate capital level and alternative investment opportunities. The Firm continues to target a dividend payout ratio of approximately 30–40% of Net income over time. On April 17, 2007, the Board of Directors increased the quarterly dividend to $0.38 per share.

The following table shows the common dividend payout ratio based upon reported Net income.

Common dividend payout ratio

Year ended December 31,	**2007**	2006	2005
Common dividend payout ratio	**34%**	34%	57%

For information regarding restrictions on JPMorgan Chase's ability to pay dividends, see Note 27 on pages 165–166 of this Annual Report.

Stock repurchases

On April 17, 2007, the Board of Directors approved a stock repurchase program that authorizes the repurchase of up to $10.0 billion of the Firm's common shares, which supersedes an $8.0 billion stock repurchase program approved in 2006. The $10.0 billion authorization includes shares to be repurchased to offset issuances under the Firm's employee stock-based plans. The actual number of shares repurchased is subject to various factors, including market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative potential investment opportunities. The repurchase program does not include specific price targets or timetables, may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs, and may be suspended at any time.

For the year ended December 31, 2007, under the respective stock repurchase programs then in effect, the Firm repurchased a total of 168 million shares for $8.2 billion at an average price per share of $48.60. During 2006, under the respective stock repurchase programs then in effect, the Firm repurchased 91 million shares for $3.9 billion at an average price per share of $43.41.

As of December 31, 2007, $6.2 billion of authorized repurchase capacity remained under the current stock repurchase program.

The Firm has determined that it may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate the repurchase of common stock in accordance with the repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase shares during periods when it would not otherwise be repurchasing common stock – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan that is established when the Firm is not aware of material nonpublic information.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5, Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on pages 13–14 of JPMorgan Chase's 2007 Form 10-K.

OFF–BALANCE SHEET ARRANGEMENTS AND CONTRACTUAL CASH OBLIGATIONS

JPMorgan Chase is involved with several types of off-balance sheet arrangements, including special purpose entities ("SPEs") and lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors in the form of commercial paper, short-term asset-backed notes, medium-term notes and other forms of interest. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

SPEs are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. These arrangements are integral to the markets for mortgage-backed securities, commercial paper and other asset-backed securities.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits and investor intermediation activities, and as a result of its loan securitizations, through qualifying special purpose entities ("QSPEs"). This discussion focuses mostly on multi-seller conduits and investor intermediation. For a detailed discussion of all SPEs with which the Firm is involved, and the related accounting, see Note 1 on page 108, Note 16 on pages 139–145 and Note 17 on pages 146–154 of this Annual Report.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, the Firm could be required to provide funding if the short-term credit rating of JPMorgan Chase Bank, N.A., was downgraded below specific levels, primarily "P-1", "A-1" and "F1" for Moody's, Standard & Poor's and Fitch, respectively. The amount of these liquidity commitments was $94.0 billion and $74.4 billion at December 31, 2007 and 2006, respectively. Alternatively, if JPMorgan Chase Bank, N.A., were downgraded, the Firm could be replaced by another liquidity provider in lieu of providing funding under the liquidity commitment, or in certain circumstances, the Firm could facilitate the sale or refinancing of the assets in the SPE in order to provide liquidity. These commitments are included in other unfunded commitments to extend credit and asset purchase agreements, as shown in the Off-balance sheet lending-related financial instruments and guarantees table on page 68 of this Annual Report.

As noted above, the Firm is involved with three types of SPEs. A summary of each type of SPE follows.

Multi-seller conduits

The Firm helps customers meet their financing needs by providing access to the commercial paper markets through VIEs known as multi-seller conduits. Multi-seller conduit entities are separate bankruptcy-remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper to third-party investors. The primary source of repayment of the commercial paper is the cash flow from the pools of assets. JPMorgan Chase receives fees related to the structuring of multi-seller conduit transactions and receives compensation from the multi-seller conduits for its role as administrative agent, liquidity provider, and provider of program-wide credit enhancement.

Investor intermediation

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions, typically derivative structures, with these VIEs to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in derivative instruments or liquidity commitments are managed similarly to other credit, market and liquidity risks to which the Firm is exposed. The principal types of VIEs the Firm uses in these structuring activities are municipal bond vehicles, credit-linked note vehicles and collateralized debt obligations vehicles.

Loan Securitizations

JPMorgan Chase securitizes and sells a variety of its consumer and wholesale loans, including warehouse loans that are classified in Trading assets, through SPEs that are structured to meet the definition of a QSPE (as discussed in Note 1 on page 108 of this Annual Report). The primary purpose of these vehicles is to meet investor needs and to generate liquidity for the Firm through the sale of the loans to the QSPEs. Consumer activities include securitizations of residential real estate, credit card, automobile and education loans that are originated or purchased by RFS and CS. Wholesale activities include securitizations of purchased residential real estate loans and commercial loans (primarily real estate-related) originated by the IB.

Consolidation and consolidation sensitivity analysis on capital

For more information regarding these programs and the Firm's other SPEs, as well as the Firm's consolidation analysis for these programs, see Note 16 and Note 17 on pages 139–145 and 146–154, respectively, of this Annual Report.

Special-purpose entities revenue

The following table summarizes certain revenue information related to consolidated and nonconsolidated VIEs and QSPEs with which the Firm has significant involvement. The revenue reported in the table below primarily represents contractual servicing and credit fee income (i.e., for income from acting as administrator, structurer, liquidity provider). It does not include mark-to-market gains and losses from changes in the fair value of trading positions (such as derivative transactions) entered into with VIEs. Those gains and losses are recorded in Principal transactions revenue.

Revenue from VIEs and QSPEs

Year ended December 31, (in millions)	2007	2006	2005
VIEs:[a]			
Multi-seller conduits	**$ 187**[b]	$ 160	$ 172
Investor intermediation	**33**	49	50
Total VIEs	**220**	209	222
QSPEs	**3,479**	3,183	2,940
Total	**$ 3,699**	$3,392	$3,162

(a) Includes revenue associated with consolidated VIEs and significant nonconsolidated VIEs.

(b) Excludes the markdown on subprime CDO assets that was recorded in Principal transaction revenue during the fourth quarter of 2007.

American Securitization Forum subprime adjustable rate mortgage loans modifications

In December 2007, the American Securitization Forum ("ASF") issued the "Streamlined Foreclosure and Loss Avoidance Framework for Securitized Subprime Adjustable Rate Mortgage Loans" ("the Framework"). The Framework provides guidance for servicers to streamline evaluation procedures of borrowers with certain subprime adjustable rate mortgage ("ARM") loans to more quickly and efficiently provide modification of such loans with terms that are more appropriate for the individual needs of such borrowers. The Framework applies to all first-lien subprime ARM loans that have a fixed rate of interest for an initial period of 36 months or less, are included in securitized pools, were originated between January 1, 2005, and July 31, 2007, and have an initial interest rate reset date between January 1, 2008, and July 31, 2010. JPMorgan Chase has adopted the Framework, and it expects to begin modifying eligible loans by the end of the first quarter of 2008. For additional discussion of the Framework, see Note 16 on page 145 of this Annual Report.

Off–balance sheet lending-related financial instruments and guarantees

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without a default occurring or without being drawn. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. Further, certain commitments, primarily related to consumer financings, are cancelable, upon notice, at the option of the Firm. For further discussion of lending-related commitments and guarantees and the Firm's accounting for them, see Credit risk management on pages 73–89 and Note 31 on pages 170–173 of this Annual Report.

Contractual cash obligations

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Commitments for future cash expenditures primarily include contracts to purchase future services and capital expenditures related to real estate–related obligations and equipment.

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's off–balance sheet lending-related financial instruments and significant contractual cash obligations at December 31, 2007. Contractual purchases and capital expenditures in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the following table are a number of obligations to be settled in cash, primarily in under one year. These obligations are reflected on the Firm's Consolidated balance sheets and include Federal funds purchased and securities sold under repurchase agreements; Commercial paper; Other borrowed funds; purchases of Debt and equity instruments; Derivative payables; and certain purchases of instruments that resulted in settlement failures. Also excluded are contingent payments associated with certain acquisitions that could not be estimated. For discussion regarding Long-term debt and trust preferred capital debt securities, see Note 21 on pages 159–160 of this Annual Report. For discussion regarding operating leases, see Note 29 on page 167 of this Annual Report.

The following table presents maturity information for off-balance sheet lending-related financial instruments and guarantees.

Off–balance sheet lending-related financial instruments and guarantees

By remaining maturity at December 31, (in millions)	2007 2008	2009-2010	2011-2012	After 2012	**Total**	2006 Total
Lending-related						
Consumer[a]	**$ 740,080**	**$ 2,852**	**$ 3,222**	**$ 69,782**	**$ 815,936**	$ 747,535
Wholesale:						
Other unfunded commitments to extend credit[b][c][d][e]	**97,459**	**61,710**	**73,725**	**18,060**	**250,954**	229,204
Asset purchase agreements[f]	**28,521**	**45,087**	**14,171**	**2,326**	**90,105**	67,529
Standby letters of credit and guarantees[c][g][h]	**24,970**	**26,704**	**40,792**	**7,756**	**100,222**	89,132
Other letters of credit[c]	**4,463**	**792**	**109**	**7**	**5,371**	5,559
Total wholesale	**155,413**	**134,293**	**128,797**	**28,149**	**446,652**	391,424
Total lending-related	**$ 895,493**	**$ 137,145**	**$ 132,019**	**$ 97,931**	**$ 1,262,588**	$ 1,138,959
Other guarantees						
Securities lending guarantees[i]	**$ 385,758**	**$ —**	**$ —**	**$ —**	**$ 385,758**	$ 318,095
Derivatives qualifying as guarantees[j]	**26,541**	**8,543**	**24,556**	**25,622**	**85,262**	71,531

Contractual cash obligations

By remaining maturity at December 31, (in millions)						
Time deposits	**$ 243,923**	**$ 3,246**	**$ 2,108**	**$ 600**	**$ 249,877**	$ 204,349
Long-term debt	**28,941**	**55,797**	**36,042**	**63,082**	**183,862**	133,421
Trust preferred capital debt securities	**—**	**—**	**—**	**15,148**	**15,148**	12,209
FIN 46R long-term beneficial interests[k]	**35**	**79**	**2,070**	**5,025**	**7,209**	8,336
Operating leases[l]	**1,040**	**1,943**	**1,644**	**6,281**	**10,908**	11,029
Contractual purchases and capital expenditures	**1,597**	**576**	**131**	**130**	**2,434**	1,584
Obligations under affinity and co-brand programs	**1,092**	**2,231**	**2,079**	**75**	**5,477**	6,115
Other liabilities[m]	**690**	**937**	**917**	**3,112**	**5,656**	5,302
Total	**$ 277,318**	**$ 64,809**	**$ 44,991**	**$ 93,453**	**$ 480,571**	$ 382,345

(a) Included credit card and home equity lending-related commitments of $714.8 billion and $74.2 billion, respectively, at December 31, 2007; and $657.1 billion and $69.6 billion, respectively, at December 31, 2006. These amounts for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.
(b) Includes unused advised lines of credit totaling $38.4 billion and $39.0 billion at December 31, 2007 and 2006, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable. See the Glossary of terms, on page 181 of this Annual Report, for the Firm's definition of advised lines of credit.
(c) Represents contractual amount net of risk participations totaling $28.3 billion and $32.8 billion at December 31, 2007 and 2006, respectively.
(d) Excludes unfunded commitments for private third-party equity investments of $881 million and $589 million at December 31, 2007 and 2006, respectively. Also excludes unfunded commitments for other equity investments of $903 million and $943 million at December 31, 2007 and 2006, respectively.
(e) Included in Other unfunded commitments to extend credit are commitments to investment and noninvestment grade counterparties in connection with leveraged acquisitions of $8.2 billion at December 31, 2007.
(f) Largely represents asset purchase agreements to the Firm's administered multi-seller, asset-backed commercial paper conduits. The maturity is based upon the weighted-average life of the underlying assets in the SPE, which are primarily asset purchase agreements to the Firm's administered multi-seller asset-backed commercial paper conduits. It also includes $1.1 billion and $1.4 billion of asset purchase agreements to other third-party entities at December 31, 2007 and 2006, respectively.
(g) JPMorgan Chase held collateral relating to $15.8 billion and $13.5 billion of these arrangements at December 31, 2007 and 2006, respectively.
(h) Included unused commitments to issue standby letters of credit of $50.7 billion and $45.7 billion at December 31, 2007 and 2006, respectively.
(i) Collateral held by the Firm in support of securities lending indemnification agreements was $390.5 billion and $317.9 billion at December 31, 2007 and 2006, respectively.
(j) Represents notional amounts of derivatives qualifying as guarantees. For further discussion of guarantees, see Note 31 on pages 170–173 of this Annual Report.
(k) Included on the Consolidated balance sheets in Beneficial interests issued by consolidated variable interest entities.
(l) Excluded benefit of noncancelable sublease rentals of $1.3 billion and $1.2 billion at December 31, 2007 and 2006, respectively.
(m) Included deferred annuity contracts. Excludes contributions for pension and other postretirement benefits plans, if any, as these contributions are not reasonably estimable at this time. Also excluded are unrecognized tax benefits of $4.8 billion at December 31, 2007, as the timing and amount of future cash payments is not determinable at this time.

Risk is an inherent part of JPMorgan Chase's business activities. The Firm's risk management framework and governance structure are intended to provide comprehensive controls and ongoing management of the major risks inherent in the Firm's business activities. The Firm's ability to properly identify, measure, monitor and report risk is critical to both its soundness and profitability.

- Risk identification: The Firm's exposure to risk through its daily business dealings, including lending, trading and capital markets activities, is identified and aggregated through the Firm's risk management infrastructure.
- Risk measurement: The Firm measures risk using a variety of methodologies, including calculating probable loss, unexpected loss and value-at-risk, and by conducting stress tests and making comparisons to external benchmarks. Measurement models and related assumptions are routinely reviewed with the goal of ensuring that the Firm's risk estimates are reasonable and reflect underlying positions.
- Risk monitoring/control: The Firm's risk management policies and procedures incorporate risk mitigation strategies and include approval limits by customer, product, industry, country and business. These limits are monitored on a daily, weekly and monthly basis, as appropriate.
- Risk reporting: Risk reporting is executed on a line of business and consolidated basis. This information is reported to management on a daily, weekly and monthly basis, as appropriate. There are eight major risk types identified in the business activities of the Firm: liquidity risk, credit risk, market risk, interest rate risk, private equity risk, operational risk, legal and fiduciary risk, and reputation risk.

Risk governance

The Firm's risk governance structure starts with each line of business being responsible for managing its own risks. Each line of business works closely with Risk Management through its own risk committee and, in most cases, its own chief risk officer to manage risk. Each line of business risk committee is responsible for decisions regarding the business' risk strategy, policies and controls.

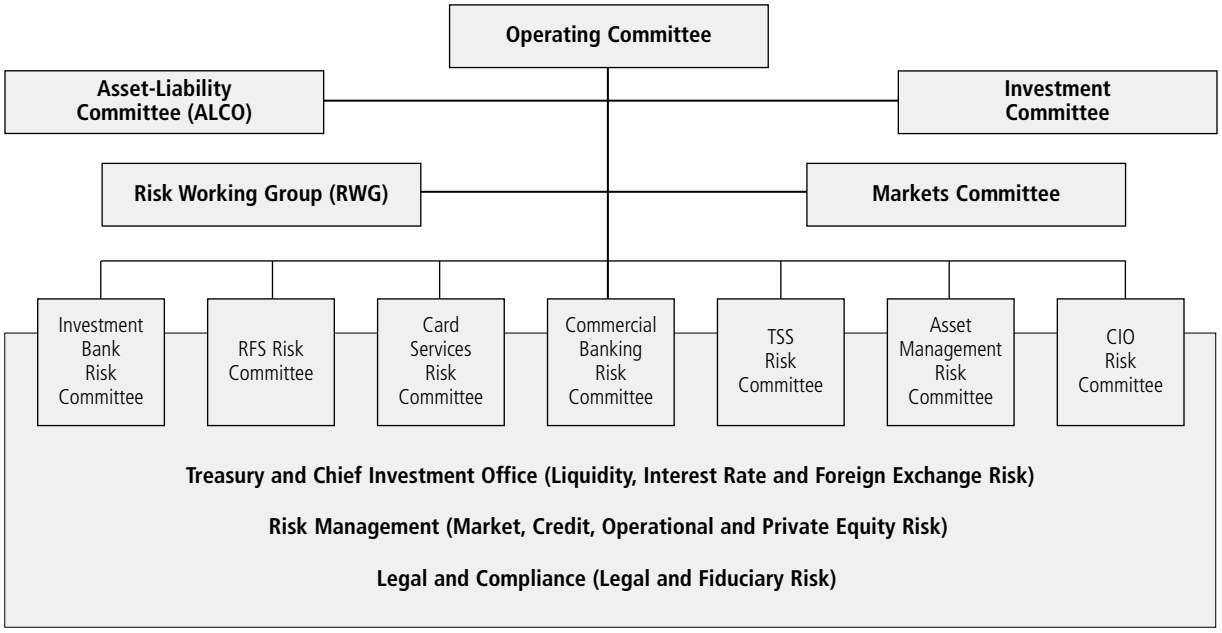
Overlaying the line of business risk management are four corporate functions with risk management–related responsibilities, including Treasury, the Chief Investment Office, Legal and Compliance and Risk Management.

Risk Management is headed by the Firm's Chief Risk Officer, who is a member of the Firm's Operating Committee and who reports to the Chief Executive Officer and the Board of Directors, primarily through the Board's Risk Policy Committee. Risk Management is responsible for providing a firmwide function of risk management and controls. Within Risk Management are units responsible for credit risk, market risk, operational risk and private equity risk, as well as Risk Management Services and Risk Technology and Operations. Risk Management Services is responsible for risk policy and methodology, risk reporting and risk education; and Risk Technology and Operations is responsible for building the information technology infrastructure used to monitor and manage risk.

Treasury and the Chief Investment Office are responsible for measuring, monitoring, reporting and managing the Firm's liquidity, interest rate and foreign exchange risk.

Legal and Compliance has oversight for legal and fiduciary risk.

In addition to the risk committees of the lines of business and the above-referenced corporate functions, the Firm also has an Investment Committee, an ALCO and two risk committees, namely, the Risk Working Group and the Markets Committee. The members of these committees are composed of senior management of the Firm, including representatives of line of business, Risk Management, Finance and other senior executives.



The Investment Committee oversees global merger and acquisition activities undertaken by JPMorgan Chase for its own account that fall outside the scope of the Firm's private equity and other principal finance activities.

The Asset-Liability Committee is responsible for approving the Firm's liquidity policy, including contingency funding planning and exposure to SPEs (and any required liquidity support by the Firm of such SPEs). The Asset-Liability Committee also oversees the Firm's capital management and funds transfer pricing policy (through which lines of business "transfer" interest and foreign exchange risk to Treasury in the Corporate segment).

The Risk Working Group meets monthly to review issues such as risk policy, risk methodology, Basel II and regulatory issues and topics referred to it by any line of business risk committee. The Markets Committee, chaired by the Chief Executive Officer, meets weekly to review and determine appropriate courses of action with respect to significant risk matters, including but not limited to: limits; credit, market and operational risk; large, high risk transactions; and hedging strategies.

The Board of Directors exercises its oversight of risk management, principally through the Board's Risk Policy Committee and Audit Committee. The Risk Policy Committee oversees senior management risk-related responsibilities, including reviewing management policies and performance against these policies and related benchmarks. The Audit Committee is responsible for oversight of guidelines and policies that govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal controls and financial reporting that is relied upon to provide reasonable assurance of compliance with the Firm's operational risk management processes.

LIQUIDITY RISK MANAGEMENT

The goal of liquidity risk management is to ensure that cost-effective funding is available to meet actual and contingent liquidity needs over time.

JPMorgan Chase uses a centralized approach for liquidity risk management. Global funding is managed by Treasury, using regional expertise as appropriate. Management believes that a centralized framework maximizes liquidity access, minimizes funding costs and permits global identification and coordination of liquidity risk.

Governance

ALCO approves and oversees the execution of the Firm's liquidity policy and contingency funding plan. Treasury formulates the Firm's liquidity and contingency planning strategies and is responsible for measuring, monitoring, reporting and managing the Firm's liquidity risk profile.

Liquidity monitoring and recent actions

Treasury monitors historical liquidity trends, tracks historical and prospective on- and off-balance sheet liquidity obligations, identifies and measures internal and external liquidity warning signals to permit early detection of liquidity issues, and manages contingency planning (including identification and testing of various company-specific and market-driven stress scenarios). Various tools, which together contribute to an overall liquidity perspective, are used to monitor and manage liquidity. These include analysis of the timing of liquidity sources versus liquidity uses (i.e., funding gaps) over periods ranging from overnight to one year; management of debt and capital issuance to ensure that the illiquid portion of the balance sheet can be funded by equity, long-term debt, trust preferred capital debt securities and deposits the Firm believes to be stable; and assessment of the Firm's capacity to raise incremental unsecured and secured funding.

Liquidity of the parent holding company and its nonbank subsidiaries is monitored separately from the Firm's bank subsidiaries. At the parent holding company level, long-term funding is managed to ensure that the parent holding company has sufficient liquidity to cover its obligations and those of its nonbank subsidiaries within the next 12 months. For bank subsidiaries, the focus of liquidity risk management is on maintenance of unsecured and secured funding capacity sufficient to meet on- and off-balance sheet obligations.

An extension of liquidity management is the Firm's contingency funding plan. The goal of the plan is to ensure appropriate liquidity during normal and stress periods. The plan considers various temporary and long-term stress scenarios where access to unsecured funding is severely limited or nonexistent, taking into account both on- and off-balance sheet exposures, and separately evaluates access to funds by the parent holding company, JPMorgan Chase Bank, N.A., Chase Bank USA, N.A., and J.P. Morgan Securities Inc.

In response to the market turmoil in the latter half of 2007, JPMorgan Chase took various actions to strengthen the Firm's liquidity position. In anticipation of possible incremental funding requirements that could have resulted from draws under unfunded revolving credit facilities and/or potential consolidation or purchase of assets from VIEs, the parent holding company increased issuance of commercial paper, long-term debt and trust preferred capital debt securities, and bank subsidiaries increased retail and wholesale unsecured funding liabilities. In addition, JPMorgan Chase Bank, N.A., maintained sufficient secured borrowing capacity, when aggregated with unsecured funding sources, to cover anticipated on- and off-balance sheet obligations of bank subsidiaries.

As of December 31, 2007, the Firm's liquidity position remained strong based upon its liquidity metrics.

Funding

Sources of funds

Management uses a variety of unsecured and secured funding sources to generate liquidity, taking into consideration, among other factors, market conditions, prevailing interest rates, liquidity needs and the desired maturity profile of liabilities. Markets are evaluated on an ongoing basis to achieve an appropriate global balance of unsecured and secured funding at favorable rates. The Firm's ability to generate funding from a broad range of sources in a variety of geographic locations enhances financial flexibility and limits dependence on any one source. Diversification of funding is an important component of the Firm's liquidity management strategy.

Deposits held by the RFS, CB, TSS and AM lines of business are generally a consistent source of unsecured funding for JPMorgan Chase Bank, N.A. As of December 31, 2007, total deposits for the Firm were $740.7 billion. A significant portion of the Firm's deposits are retail deposits, which are less sensitive to interest rate changes and therefore are considered more stable than market-based wholesale deposits. The Firm also benefits from stable wholesale liability balances originated by CB, TSS and AM through the normal course of business. Such liability balances include deposits that are swept to on–balance sheet liabilities (e.g., Commercial paper, Federal funds purchased and securities sold under repurchase agreements). These liability balances are also a stable and consistent source of funding due to the nature of the businesses from which they are generated. For further discussions of deposit and liability balance trends, see the discussion of the results for the Firm's business segments and the Balance Sheet Analysis on pages 40–58 and 61–62, respectively, of this Annual Report.

Additional sources of unsecured funds include a variety of short- and long-term instruments, including federal funds purchased, commercial paper, bank notes, long-term debt and trust preferred capital debt securities. Decisions concerning timing of issuance and the tenor of liabilities are based upon relative costs, general market conditions, prospective views of balance sheet growth and a targeted liquidity profile.

Funding flexibility is also provided by the Firm's ability to access secured funding from the repurchase and asset securitization markets. The Firm maintains reserves of unencumbered liquid securities that can be financed to generate liquidity. The ability to obtain collateralized financing against liquid securities is dependent on prevailing market conditions. The ability to securitize loans, and the associated gains on those securitizations, are principally dependent upon the credit quality and yields of the assets securitized and are generally not dependent upon the credit ratings of the issuing entity. Transactions between the Firm and its securitization structures are reflected in JPMorgan Chase's consolidated financial statements and are discussed in the notes to the consolidated financial statements. These relationships generally include retained interests in securitization trusts, liquidity facilities and derivative transactions. For further details, see Off–balance sheet arrangements and contractual cash obligations, Note 16 and Note 31 on pages 66–68, 139–145 and 170–173, respectively, of this Annual Report.

Bank subsidiaries' access to the Federal Reserve Account Window is an additional source of secured funding; however, management does not view this as a primary means of funding the Firm's bank subsidiaries.

Issuance

During 2007, JPMorgan Chase issued $95.1 billion of long-term debt and trust preferred capital debt securities. These issuances included $52.2 billion of IB structured notes, the issuances of which are generally client-driven and not for funding or capital management purposes, as the proceeds from such transactions are generally used to purchase securities to mitigate the risk associated with structured note exposure. The issuances of long-term debt and trust preferred capital debt securities were offset partially by $49.4 billion of long-term debt and trust preferred capital debt securities that matured or were redeemed during 2007, including IB structured notes. The increase in Treasury-issued long-term debt and trust preferred capital debt securities was used primarily to fund certain illiquid assets held by the Parent company and to build liquidity. During 2007, Commercial paper increased $30.7 billion and Other borrowed funds increased $10.8 billion. The growth in both Commercial paper and Other borrowed funds was used to build liquidity further by increasing the amounts held of liquid securities and of overnight investments that may be readily converted to cash. In addition, during 2007, the Firm securitized $28.9 billion of residential mortgage loans, $21.2 billion of credit card loans and $1.2 billion of education loans. The Firm did not securitize any auto loans during 2007. For further discussion of loan securitizations, see Note 16 on pages 139–145 of this Annual Report.

In connection with the issuance of certain of its trust preferred capital debt securities, the Firm has entered into Replacement Capital Covenants ("RCCs") granting certain rights to the holders of "covered debt," as defined in the RCCs, that prohibit the repayment, redemption or purchase of the trust preferred capital debt securities except, with limited exceptions, to the extent that JPMorgan Chase has received specified amounts of proceeds from the sale of certain qualifying securities. Currently the Firm's covered debt is its 5.875% Junior Subordinated Deferrable Interest Debentures, Series O, due in 2035. For more information regarding these covenants, reference is made to the respective RCCs entered into by the Firm in connection with the issuances of such trust preferred capital debt securities, which are filed with the U.S. Securities and Exchange Commission under cover of Forms 8-K.

Cash flows

For the years ended December 31, 2007, 2006 and 2005, Cash and due from banks decreased $268 million, and increased $3.7 billion and $1.5 billion, respectively. The following discussion highlights the major activities and transactions that affected JPMorgan Chase's cash flows during 2007, 2006 and 2005.

Cash Flows from Operating Activities

For the years ended December 31, 2007, 2006 and 2005, net cash used in operating activities was $110.6 billion, $49.6 billion and $30.2 billion, respectively. JPMorgan Chase's operating assets and liabilities support the Firm's capital markets and lending activities, including the origination or purchase of loans initially designated as held-for-sale. During each of the three years ended December 31, 2007, net cash was used to fund loans held-for-sale primarily in the IB and RFS. In 2007, there was a significant decline in cash flows from IB loan

originations/purchases and sale/securitization activities as a result of the difficult wholesale securitization market and capital markets for leveraged financings, which were affected by a significant deterioration in liquidity in the credit markets in the second half of 2007. Cash flows in 2007 associated with RFS residential mortgage activities grew reflecting an increase in originations. The amount and timing of cash flows related to the Firm's operating activities may vary significantly in the normal course of business as a result of the level of client-driven activities, market conditions and trading strategies. Management believes cash flows from operations, available cash balances and the Firm's ability to generate cash through short- and long-term borrowings will be sufficient to fund the Firm's operating liquidity needs.

Cash Flows from Investing Activities

The Firm's investing activities primarily involve AFS securities, loans initially designated as held-for-investment and Federal funds sold and securities purchased under resale agreements.

For the year ended December 31, 2007, net cash of $73.1 billion was used in investing activities, primarily to fund purchases in Treasury's AFS securities portfolio to manage the Firm's exposure to interest rate movements; net additions to the wholesale retained loan portfolios in the IB, CB and AM, mainly as a result of business growth; a net increase in the consumer retained loan portfolio, primarily reflecting growth in RFS in home equity loans and net additions to RFS's subprime mortgage loans portfolio, which was affected by management's decision in the third quarter to retain (rather than sell) new subprime mortgages, and growth in prime mortgage loans originated by RFS and AM (and held in Corporate) that cannot be sold to U.S. government agencies or U.S. government-sponsored enterprises; and increases in securities purchased under resale agreements as a result of a higher level of cash available for short-term investment opportunities in connection with Treasury's efforts to build the Firm's liquidity. These net uses of cash were partially offset by cash proceeds received from sales and maturities of AFS securities; and credit card, residential mortgage, education and wholesale loan sales and securitization activities, which grew in 2007 despite the difficult conditions in the credit markets.

For the year ended December 31, 2006, net cash of $99.6 billion was used in investing activities. Net cash was invested to fund net additions to the retained wholesale loan portfolio, mainly resulting from capital markets activity in IB leveraged financings; increases in CS loans reflecting strong organic growth; net additions in retail home equity loans; the acquisition of private-label credit card portfolios from Kohl's, BP and Pier 1 Imports, Inc.; the acquisition of Collegiate Funding Services, and Treasury purchases of AFS securities in connection with repositioning the portfolio in response to changes in interest rates. These uses of cash were partially offset by cash proceeds provided from credit card, residential mortgage, auto and wholesale loan sales and securitization activities; sales and maturities of AFS securities; the net decline in auto loans and leases, which was caused partially by management's decision to de-emphasize vehicle leasing; and the sale of the insurance business at the beginning of the second quarter.

For the year ended December 31, 2005, net cash of $12.9 billion was used in investing activities, primarily attributable to growth in consumer loans, primarily home equity and in CS, reflecting growth in new account originations and the acquisition of the Sears Canada credit card business, partially offset by securitization activity and a decline in auto loans reflecting a difficult auto lending market. Net cash was generated by the Treasury investment securities portfolio primarily from maturities of securities, as purchases and sales of securities essentially offset each other.

Cash Flows from Financing Activities

The Firm's financing activities primarily reflect transactions involving customer deposits and long-term debt (including client-driven structured notes in the IB), and its common stock and preferred stock.

In 2007, net cash provided by financing activities was $183.0 billion due to a net increase in wholesale deposits from growth in business volumes, in particular, interest-bearing deposits at TSS, AM and CB; net issuances by Treasury of Long-term debt and trust preferred capital debt securities primarily to fund certain illiquid assets held by the Parent company and to build liquidity and by the IB from client-driven structured notes transactions; and growth in Commercial paper issuances and Other borrowed funds in Treasury due to growth in the volume of liability balances in sweep accounts, in TSS and CB, higher short-term requirements to fund trading positions and to further build liquidity. Cash was used to repurchase common stock and to pay dividends on common stock, including an increase in the quarterly dividend in the second quarter of 2007.

In 2006, net cash provided by financing activities was $152.7 billion due to net cash received from growth in deposits, reflecting new retail account acquisitions and the ongoing expansion of the retail branch distribution network; higher wholesale business volumes; increases in securities sold under repurchase agreements to fund trading positions and higher AFS securities positions in Treasury; and net issuances of Long-term debt and trust preferred capital debt securities. The net cash provided was offset partially by the payment of cash dividends on stock and common stock repurchases.

In 2005, net cash provided by financing activities was $45.1 billion due to: growth in deposits, reflecting new retail account acquisitions, the ongoing expansion of the retail branch distribution network and higher wholesale business volumes; and net new issuances of Long-term debt and trust preferred capital debt securities; offset partially by the payment of cash dividends and common stock repurchases.

Credit ratings

The credit ratings of JPMorgan Chase's parent holding company and each of its significant banking subsidiaries as of December 31, 2007, were as follows.

	Short-term debt			Senior long-term debt		
	Moody's	S&P	Fitch	Moody's	S&P	Fitch
JPMorgan Chase & Co.	P-1	A-1+	F1+	Aa2	AA-	AA-
JPMorgan Chase Bank, N.A.	P-1	A-1+	F1+	Aaa	AA	AA-
Chase Bank USA, N.A.	P-1	A-1+	F1+	Aaa	AA	AA-

On February 14, 2007, S&P raised the senior long-term debt ratings on JPMorgan Chase & Co. and the principal bank subsidiaries to "AA-" and "AA", respectively, from "A+" and "AA-", respectively. S&P also raised the short-term debt rating of JPMorgan Chase & Co. to "A-1+" from "A-1". On February 16, 2007, Fitch raised the senior long-term debt ratings on JPMorgan Chase & Co. and the principal bank subsidiaries to "AA-" from "A+". Fitch also raised the short-term debt rating of JPMorgan Chase & Co. to "F1+" from "F1". On March 2, 2007, Moody's raised the senior long-term debt ratings on JPMorgan Chase & Co. and the operating bank subsidiaries to "Aa2" and "Aaa", respectively, from "Aa3" and "Aa2", respectively.

The cost and availability of unsecured financing are influenced by credit ratings. A reduction in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral requirements and decrease the number of investors and counterparties willing to lend. Key factors in maintaining high credit ratings include a stable and diverse earnings stream, leading market positions, strong capital ratios, strong credit quality and risk management controls, diverse funding sources and disciplined liquidity monitoring procedures.

If the Firm's ratings were downgraded by one notch, the Firm estimates the incremental cost of funds and the potential loss of funding to be negligible. Additionally, the Firm estimates the additional funding requirements for VIEs and other third-party commitments would not be material. Currently, the Firm believes a downgrade is unlikely. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on pages 66–67 and Ratings profile of derivative receivables mark-to-market ("MTM") on page 81, of this Annual Report.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit (for example, through loans, lending-related commitments and derivatives) to customers of all sizes, from large corporate clients to the individual consumer. The Firm manages the risk/reward relationship of each credit extension and discourages the retention of assets that do not generate a positive return above the cost of the Firm's risk-adjusted capital. In addition, credit risk management includes the distribution of the Firm's wholesale syndicated loan originations into the marketplace (primarily to IB clients), with retained exposure held by the Firm averaging less than 10%. Wholesale loans generated by CB and AM are generally retained on the balance sheet. With regard to the consumer credit market, the Firm focuses on creating a portfolio that is diversified from both a product and a geographic perspective. Within the mortgage business, originated loans are either retained in the mortgage portfolio, or securitized and sold selectively to U.S. government agencies and U.S. government-sponsored enterprises.

Credit risk organization

Credit risk management is overseen by the Chief Risk Officer and implemented within the lines of business. The Firm's credit risk management governance consists of the following functions:

- establishing a comprehensive credit risk policy framework
- calculating the allowance for credit losses and ensuring appropriate credit risk-based capital management
- assigning and managing credit authorities in connection with the approval of all credit exposure
- monitoring and managing credit risk across all portfolio segments
- managing criticized exposures

Risk identification

The Firm is exposed to credit risk through lending and capital markets activities. Credit risk management works in partnership with the business segments in identifying and aggregating exposures across all lines of business.

Risk measurement

To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Losses generated by consumer loans are more predictable than wholesale losses, but are subject to cyclical and seasonal factors. Although the frequency of loss is higher on consumer loans than on wholesale loans, the severity of loss is typically lower and more manageable on a portfolio basis. As a result of these differences, methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer installment versus wholesale loan), risk measurement parameters (e.g., delinquency status and credit bureau score versus wholesale risk rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based upon the amount of exposure should the obligor or the counterparty default, the proba-

bility of default and the loss severity given a default event. Based upon these factors and related market-based inputs, the Firm estimates both probable and unexpected losses for the wholesale and consumer portfolios. Probable losses, reflected in the Provision for credit losses, primarily are based upon statistical estimates of credit losses as a result of obligor or counterparty default. However, probable losses are not the sole indicators of risk. If losses were entirely predictable, the probable loss rate could be factored into pricing and covered as a normal and recurring cost of doing business. Unexpected losses, reflected in the allocation of credit risk capital, represent the potential volatility of actual losses relative to the probable level of losses. Risk measurement for the wholesale portfolio is assessed primarily on a risk-rated basis; for the consumer portfolio, it is assessed primarily on a credit-scored basis.

Risk-rated exposure
For portfolios that are risk-rated (generally held in IB, CB, TSS and AM), probable and unexpected loss calculations are based upon estimates of probability of default and loss given default. Probability of default is the expected default calculated on an obligor basis. Loss given default is an estimate of losses that are based upon collateral and structural support for each credit facility. Calculations and assumptions are based upon management information systems and methodologies which are under continual review. Risk ratings are assigned and reviewed on an ongoing basis by Credit Risk Management and revised, if needed, to reflect the borrowers' current risk profiles and the related collateral and structural positions.

Credit-scored exposure
For credit-scored portfolios (generally held in RFS and CS), probable loss is based upon a statistical analysis of inherent losses over discrete periods of time. Probable losses are estimated using sophisticated portfolio modeling, credit scoring and decision-support tools to project credit risks and establish underwriting standards. In addition, common measures of credit quality derived from historical loss experience are used to predict consumer losses. Other risk characteristics evaluated include recent loss experience in the portfolios, changes in origination sources, portfolio seasoning, loss severity and underlying credit practices, including charge-off policies. These analyses are applied to the Firm's current portfolios in order to estimate delinquencies and severity of losses, which determine the amount of probable losses. These factors and analyses are updated on a quarterly basis.

Risk monitoring
The Firm has developed policies and practices that are designed to preserve the independence and integrity of extending credit and are included to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposure. Wholesale credit risk is monitored regularly on both an aggregate portfolio level and on an individual customer basis. For consumer credit risk, the key focus items are trends and concentrations at the portfolio level, where potential problems can be remedied through changes in underwriting policies and portfolio guidelines. Consumer Credit Risk Management monitors trends against business expectations and industry benchmarks.

In order to meet credit risk management objectives, the Firm seeks to maintain a risk profile that is diverse in terms of borrower, product type, industry and geographic concentration. Management of the Firm's wholesale exposure is accomplished through loan syndication and participations, loan sales, securitizations, credit derivatives, use of master netting agreements and collateral and other risk-reduction techniques, which are further discussed in the following risk sections.

Risk reporting
To enable monitoring of credit risk and decision-making, aggregate credit exposure, credit metric forecasts, hold-limit exceptions and risk profile changes are reported regularly to senior credit risk management. Detailed portfolio reporting of industry, customer and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, senior management, as mentioned on page 69 of this Annual Report.

2007 Credit risk overview
Despite the volatile capital markets environment in the second half of 2007, the wholesale portfolio overall experienced continued low levels of nonperforming loans and criticized assets. However, in the second half of 2007, credit market liquidity levels declined significantly, which negatively affected loan syndication markets, resulting in an increase in funded and unfunded exposures, particularly related to leveraged lending, held on the balance sheet. This exposure is diversified across clients and industries and is performing, but subject to market volatility and potentially further writedowns. In response to these events, the Firm has strengthened underwriting standards with respect to its loan syndications and leveraged lending, consistent with evolving market practice. For additional information on unfunded leverage acquisitions related to loan syndications, see Note 31 on pages 170–173 of this Annual Report.

In 2007, the domestic consumer credit environment was also negatively affected by the deterioration in residential real estate valuations, leading to increased credit losses primarily for Home Equity and Subprime Mortgage loans with multiple risk elements ("risk layered loans"). The Firm responded to these changes in the credit environment through the elimination of certain products, changes and enhancements to credit underwriting criteria and refinement of pricing and risk management models.

More detailed discussion of the domestic consumer credit environment can be found on page 84 of this Annual Report.

CREDIT PORTFOLIO

The following table presents JPMorgan Chase's credit portfolio as of December 31, 2007 and 2006. Total credit exposure at December 31, 2007, increased $187.2 billion from December 31, 2006, reflecting an increase of $106.1 billion in the wholesale credit portfolio and $81.1 billion in the consumer credit portfolio as further described in the following pages. During 2007, lending-related commitments increased $123.6 billion ($55.2 billion and $68.4 billion in the wholesale and consumer portfolios, respectively), managed loans increased $42.0 billion ($29.3 billion and $12.7 billion in the wholesale and consumer portfolios, respectively) and derivatives increased $21.5 billion. Within loans, RFS loans accounted for at lower of cost or fair value declined, as prime mortgage loans originated with the intent to sell after January 1, 2007, were classified as Trading assets and accounted for at fair value under SFAS 159. In addition, certain loans warehoused in IB were transferred to Trading assets on January 1, 2007, as part of the adoption of SFAS 159. Also effective January 1, 2007, $24.7 billion of prime mortgages held-for-investment purposes were transferred from RFS ($19.4 billion) and AM ($5.3 billion) to the Corporate sector for risk management purposes. While this transfer had no impact on the RFS, AM or Corporate financial results, the AM prime mortgages that were transferred are now reported in consumer mortgage loans.

In the table below, reported loans include loans accounted for at fair value and loans held-for-sale, which are carried at lower of cost or fair value with changes in value recorded in Noninterest revenue. However, these held-for-sale loans and loans accounted for at fair value are excluded from the average loan balances used for the net charge-off rate calculations.

Total credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming assets[i]		Net charge-offs		Average annual net charge-off rate	
	2007	2006	**2007**	2006	**2007**	2006	**2007**	2006
Total credit portfolio								
Loans – retained[a]	**$ 491,736**	$ 427,876	**$ 3,536**[i]	$ 1,957[i]	**$ 4,538**	$ 3,042	**1.00%**	0.73%
Loans held-for-sale	**18,899**	55,251	**45**	120	**—**	—	**NA**	NA
Loans at fair value	**8,739**	—	**5**	—	**—**	—	**NA**	NA
Loans – reported[a]	**$ 519,374**	$ 483,127	**$ 3,586**	$ 2,077	**$ 4,538**	$ 3,042	**1.00%**	0.73%
Loans – securitized[b]	**72,701**	66,950	**—**	—	**2,380**	2,210	**3.43**	3.28
Total managed loans[c]	**592,075**	550,077	**3,586**	2,077	**6,918**	5,252	**1.33**	1.09
Derivative receivables	**77,136**	55,601	**29**	36	**NA**	NA	**NA**	NA
Total managed credit-related assets	**669,211**	605,678	**3,615**	2,113	**6,918**	5,252	**1.33**	1.09
Lending-related commitments[d][e]	**1,262,588**	1,138,959	**NA**	NA	**NA**	NA	**NA**	NA
Assets acquired in loan satisfactions	**NA**	NA	**622**	228	**NA**	NA	**NA**	NA
Total credit portfolio	**$ 1,931,799**	$1,744,637	**$ 4,237**	$ 2,341	**$ 6,918**	$ 5,252	**1.33%**	1.09%
Credit derivative hedges notional[f]	**$ (67,999)**	$ (50,733)	**$ (3)**	$ (16)	**NA**	NA	**NA**	NA
Collateral held against derivatives[g]	**(9,824)**	(6,591)	**NA**	NA	**NA**	NA	**NA**	NA
Memo:								
Nonperforming – purchased[h]	**—**	251	**NA**	NA	**NA**	NA	**NA**	NA

(a) Loans (other than those for which the SFAS 159 fair value option has been elected) are presented net of unearned income and net deferred loan fees of $1.0 billion and $1.3 billion at December 31, 2007 and 2006, respectively.
(b) Represents securitized credit card receivables. For further discussion of credit card securitizations, see Card Services on pages 49–51 of this Annual Report.
(c) Loans past-due 90 days and over and accruing includes credit card receivables – reported of $1.5 billion and $1.3 billion at December 31, 2007 and 2006, respectively, and related credit card securitizations of $1.1 billion and $962 million at December 31, 2007 and 2006, respectively.
(d) Included credit card and home equity lending-related commitments of $714.8 billion and $74.2 billion, respectively, at December 31, 2007; and $657.1 billion and $69.6 billion, respectively, at December 31, 2006. These amounts for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, nor does it anticipate, all available lines of credit being used at the same time. The Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.
(e) Included unused advised lines of credit totaling $38.4 billion and $39.0 billion at December 31, 2007 and 2006, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable.
(f) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133. Includes $31.1 billion and $22.7 billion at December 31, 2007 and 2006, respectively, which represents the notional amount of structured portfolio protection; the Firm retains a minimal first risk of loss on this portfolio.
(g) Represents other liquid securities collateral held by the Firm as of December 31, 2007 and 2006, respectively.
(h) Represents distressed wholesale loans held-for-sale purchased as part of IB's proprietary activities, which are excluded from nonperforming assets. During the first quarter of 2007, the Firm elected the fair value option of accounting for this portfolio of nonperforming loans. These loans are classified as Trading assets at December 31, 2007.
(i) Excluded nonperforming assets related to (1) loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by U.S. government agencies of $1.5 billion and $1.2 billion at December 31, 2007 and 2006, respectively, and (2) education loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program, of $279 million and $219 million at December 31, 2007 and 2006, respectively. These amounts for GNMA and education loans are excluded, as reimbursement is proceeding normally.

WHOLESALE CREDIT PORTFOLIO

As of December 31, 2007, wholesale exposure (IB, CB, TSS and AM) increased $106.1 billion from December 31, 2006, due to increases in lending-related commitments of $55.2 billion and loans of $29.3 billion. The increase in overall lending activity was partly due to growth in leveraged lending funded and unfunded exposures, mainly in IB. For further discussion of unfunded leveraged exposures, see Note 31, on pages 170–173 of this Annual Report.

Partly offsetting these increases was the first-quarter transfer of $11.7 billion of loans warehoused in IB to Trading assets upon the adoption of SFAS 159.

The $21.5 billion Derivative receivables increase from December 31, 2006, was primarily driven by increases in credit derivative and interest rate products due to increased credit spreads and lower interest rates, respectively, as well as a decline in the U.S. dollar.

Wholesale

As of or for the year ended December 31, (in millions)	Credit exposure		Nonperforming assets[e]	
	2007	2006	**2007**	2006
Loans retained[a]	**$ 189,427**	$ 161,235	**$ 464**	$ 387
Loans held-for-sale	**14,910**	22,507	**45**	4
Loans at fair value	**8,739**	—	**5**	—
Loans – reported[a]	**$ 213,076**	$ 183,742	**$ 514**	$ 391
Derivative receivables	**77,136**	55,601	**29**	36
Total wholesale credit-related assets	**290,212**	239,343	**543**	427
Lending-related commitments[b]	**446,652**	391,424	**NA**	NA
Assets acquired in loan satisfactions	**NA**	NA	**73**	3
Total wholesale credit exposure	**$ 736,864**	$ 630,767	**$ 616**	$ 430
Credit derivative hedges notional[c]	**$ (67,999)**	$ (50,733)	**$ (3)**	$ (16)
Collateral held against derivatives[d]	**(9,824)**	(6,591)	**NA**	NA
Memo:				
Nonperforming – purchased[e]	**—**	251	**NA**	NA

(a) As a result of the adoption of SFAS 159 in the first quarter of 2007, certain loans of $11.7 billion were reclassified to trading assets and were excluded from wholesale loans reported. Includes loans greater than or equal to 90 days past due that continue to accrue interest. The principal balance of these loans totaled $75 million and $29 million at December 31, 2007 and 2006, respectively. Also see Note 5 on pages 119–121 and Note 14 on pages 137–138 of this Annual Report.
(b) Includes unused advised lines of credit totaling $38.4 billion and $39.0 billion at December 31, 2007 and 2006, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable.
(c) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133. Includes $31.1 billion and $22.7 billion at December 31, 2007 and 2006, respectively, which represents the notional amount of structured portfolio protection; the Firm retains a minimal first risk of loss on this portfolio.
(d) Represents other liquid securities collateral held by the Firm as of December 31, 2007 and 2006, respectively.
(e) Represents distressed loans held-for-sale purchased as part of IB's proprietary activities, which are excluded from nonperforming assets. During the first quarter of 2007, the Firm elected the fair value option of accounting for this portfolio of nonperforming loans. These loans are classified as Trading assets at December 31, 2007.

Net charge-offs (recoveries)

Wholesale

Year ended December 31, (in millions, except ratios)	**2007**	2006
Loans – reported		
Net charge-offs (recoveries)	**$ 72**	$ (22)
Average annual net charge-off (recovery) rate[a]	**0.04%**	(0.01)%

(a) Excludes average wholesale loans held-for-sale and loans at fair value of $18.6 billion and $22.2 billion for the years ended December 31, 2007 and 2006, respectively.

Net charge-offs (recoveries) do not include gains from sales of nonperforming loans that were sold as shown in the following table. Gains from these sales were $1 million and $82 million during 2007 and 2006, respectively, which are reflected in Noninterest revenue.

Nonperforming loan activity

Wholesale

Year ended December 31, (in millions)	**2007**	2006
Beginning balance	**$ 391**	$ 992
Additions	**1,107**	480
Reductions:		
Paydowns and other	**(576)**	(578)
Charge-offs	**(185)**	(186)
Returned to performing	**(136)**	(133)
Sales	**(87)**	(184)
Total reductions	**(984)**	(1,081)
Net additions (reductions)	**123**	(601)
Ending balance	**$ 514**	$ 391

The following table presents summaries of the maturity and ratings profiles of the wholesale portfolio as of December 31, 2007 and 2006. The ratings scale is based upon the Firm's internal risk ratings and generally correspond to the ratings as defined by S&P and Moody's.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[c]				Ratings profile			
					Investment-grade ("IG")	Noninvestment-grade		
December 31, 2007 (in billions, except ratios)	<1 year	1–5 years	>5 years	Total	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	Total	Total % of IG
Loans	**44%**	**45%**	**11%**	**100%**	**$ 127**	**$ 62**	**$ 189**	**67%**
Derivative receivables	**17**	**39**	**44**	**100**	**64**	**13**	**77**	**83**
Lending-related commitments	**35**	**59**	**6**	**100**	**380**	**67**	**447**	**85**
Total excluding loans held-for-sale and loans at fair value	**36%**	**53%**	**11%**	**100%**	**$ 571**	**$ 142**	**713**	**80%**
Loans held-for-sale and loans at fair value[a]							**24**	
Total exposure							**$ 737**	
Net credit derivative hedges notional[b]	**39%**	**56%**	**5%**	**100%**	**$ (61)**	**$ (7)**	**$ (68)**	**89%**

	Maturity profile[c]				Ratings profile			
					Investment-grade ("IG")	Noninvestment-grade		
December 31, 2006 (in billions, except ratios)	<1 year	1–5 years	>5 years	Total	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	Total	Total % of IG
Loans	44%	41%	15%	100%	$ 104	$ 57	$ 161	65%
Derivative receivables	16	34	50	100	49	7	56	88
Lending-related commitments	36	58	6	100	338	53	391	86
Total excluding loans held-for-sale and loans at fair value	37%	51%	12%	100%	$ 491	$ 117	608	81%
Loans held-for-sale and loans at fair value[a]							23	
Total exposure							$ 631	
Net credit derivative hedges notional[b]	16%	75%	9%	100%	$ (45)	$ (6)	$ (51)	88%

(a) Loans held-for-sale relate primarily to syndication loans and loans transferred from the retained portfolio. During the first quarter of 2007, the Firm elected the fair value option of accounting for loans related to securitization activities, and these loans are classified as Trading assets.

(b) Ratings are based upon the underlying referenced assets. Represents the net notional amounts of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133. Includes $31.1 billion and $22.7 billion at December 31, 2007 and 2006, respectively, which represents the notional amount of structured portfolio protection; the Firm retains a minimal risk of losses on this portfolio.

(c) The maturity profile of Loans and lending-related commitments is based upon the remaining contractual maturity. The maturity profile of Derivative receivables is based upon the maturity profile of Average exposure. See page 80 of this Annual Report for a further discussion of Average exposure.

Wholesale credit exposure – selected industry concentration

The Firm focuses on the management and the diversification of its industry concentrations, with particular attention paid to industries with actual or potential credit concerns. At December 31, 2007, the top 10 industries to which the Firm is exposed remained unchanged from December 31, 2006. The increases across all industries were primarily due to portfolio growth. The notable rise in Asset managers was a result of portfolio growth and the Firm revising its industry classification during the third quarter of 2007 to better reflect risk correlations and enhance the Firm's management of industry risk. Below are summaries of the top 10 industry concentrations as of December 31, 2007 and 2006. For additional information on industry concentrations, see Note 32, on pages 173–174 of this Annual Report.

Wholesale credit exposure – selected industry concentration

December 31, 2007 (in millions, except ratios)	Credit exposure[d]	Investment grade	Noninvestment-grade		Net charge-offs	Credit derivative hedges[e]	Collateral held against derivative receivables[f]
			Noncriticized	Criticized			
Top 10 industries[a]							
Banks and finance companies	**$ 65,288**	**83%**	**$ 10,385**	**$ 498**	**$ 5**	**$ (6,368)**	**$ (1,793)**
Asset managers	**38,554**	**90**	**3,518**	**212**	**—**	**(293)**	**(2,148)**
Real estate	**38,295**	**54**	**16,626**	**1,070**	**36**	**(2,906)**	**(73)**
State and municipal governments	**31,425**	**98**	**591**	**12**	**10**	**(193)**	**(3)**
Healthcare	**30,746**	**84**	**4,741**	**246**	**—**	**(4,241)**	**(10)**
Consumer products	**29,941**	**74**	**7,492**	**239**	**5**	**(4,710)**	**(13)**
Utilities	**28,679**	**89**	**3,021**	**212**	**1**	**(6,371)**	**(43)**
Oil and gas	**26,082**	**72**	**7,166**	**125**	**—**	**(4,007)**	**—**
Retail and consumer services	**23,969**	**68**	**7,149**	**550**	**3**	**(3,866)**	**(55)**
Securities firms and exchanges	**23,274**	**87**	**3,083**	**1**	**—**	**(467)**	**(1,321)**
All other[b]	**376,962**	**80**	**71,211**	**3,673**	**12**	**(34,577)**	**(4,365)**
Total excluding loans held-for-sale and loans at fair value	**$ 713,215**	**80%**	**$ 134,983**	**$ 6,838**	**$ 72**	**$ (67,999)**	**$ (9,824)**
Loans held-for-sale and loans at fair value[c]	**23,649**						
Total	**$ 736,864**						

December 31, 2006 (in millions, except ratios)	Credit exposure[d]	Investment grade	Noninvestment-grade		Net charge-offs	Credit derivative hedges[e]	Collateral held against derivative receivables[f]
			Noncriticized	Criticized			
Top 10 industries[a]							
Banks and finance companies	$ 61,792	84%	$ 9,733	$ 74	$ (12)	$ (7,847)	$ (1,452)
Asset managers	24,570	88	2,956	31	—	—	(750)
Real estate	32,102	57	13,702	243	9	(2,223)	(26)
State and municipal governments	27,485	98	662	23	—	(801)	(12)
Healthcare	28,998	83	4,618	284	(1)	(3,021)	(5)
Consumer products	27,114	72	7,327	383	22	(3,308)	(14)
Utilities	24,938	88	2,929	183	(6)	(4,123)	(2)
Oil and gas	18,544	76	4,356	38	—	(2,564)	—
Retail and consumer services	22,122	70	6,268	278	(3)	(2,069)	(226)
Securities firms and exchanges	23,127	93	1,527	5	—	(784)	(1,207)
All other[b]	317,468	80	58,971	3,484	(31)	(23,993)	(2,897)
Total excluding loans held-for-sale and loans at fair value	$ 608,260	81%	$ 113,049	$ 5,026	$ (22)	$ (50,733)	$ (6,591)
Loans held-for-sale and loans at fair value[c]	22,507						
Total	$ 630,767						

(a) Rankings are based upon exposure at December 31, 2007.
(b) For more information on exposures to SPEs included in All other, see Note 17 on pages 146–154 of this Annual Report.
(c) Loans held-for-sale relate primarily to syndication loans and loans transferred from the retained portfolio. During the first quarter of 2007, the Firm elected the fair value option of accounting for loans related to securitization activities; these loans are classified as Trading assets at December 31, 2007.
(d) Credit exposure is net of risk participations and excludes the benefit of credit derivative hedges and collateral held against Derivative receivables or Loans.
(e) Ratings are based upon the underlying referenced assets. Represents the net notional amounts of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133. Includes $31.1 billion and $22.7 billion at December 31, 2007 and 2006, respectively, which represents the notional amount of structured portfolio protection; the Firm retains a minimal risk of losses on this portfolio.
(f) Represents other liquid securities collateral held by the Firm as of December 31, 2007 and 2006, respectively.

Wholesale criticized exposure

Exposures deemed criticized generally represent a ratings profile similar to a rating of "CCC+"/"Caa1" and lower, as defined by S&P and Moody's. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, increased to $6.8 billion at December 31, 2007, from $5.0 billion at year-end 2006. The increase was driven primarily by downgrades in the wholesale portfolio.

At December 31, 2007, Banks and finance companies, Building materials/ construction and Telecom services moved into the top 10 of wholesale criticized exposure, replacing Agriculture/paper manufacturing, Business services and Utilities.

Industry concentrations for wholesale criticized exposure as of December 31, 2007 and 2006, were as follows.

	2007		2006	
December 31, (in millions, except ratios)	Credit exposure	% of portfolio	Credit exposure	% of portfolio
Top 10 industries[a]				
Automotive	**$ 1,338**	**20%**	$ 1,442	29%
Real estate	**1,070**	**16**	243	5
Retail and consumer services	**550**	**8**	278	5
Banks and finance companies	**498**	**7**	74	1
Building materials/construction	**345**	**5**	113	2
Media	**303**	**4**	392	8
Chemicals/plastics	**288**	**4**	159	3
Healthcare	**246**	**4**	284	6
Consumer products	**239**	**4**	383	7
Telecom services	**219**	**3**	20	1
All other	**1,742**	**25**	1,638	33
Total excluding loans held-for-sale and loans at fair value	**$ 6,838**	**100%**	$ 5,026	100%
Loans held-for-sale and loans at fair value[b]	**205**		624	
Total	**$ 7,043**		$ 5,650	

(a) Rankings are based upon exposure at December 31, 2007.
(b) Loans held-for-sale relate primarily to syndication loans and loans transferred from the retained portfolio. During the first quarter of 2007, the Firm elected the fair value option of accounting for loans related to securitization activities; these loans are classified as Trading assets at December 31, 2007. Loans held-for-sale exclude purchased nonperforming loans held-for-sale.

Presented below is a discussion of several industries to which the Firm has significant exposure, as well as industries the Firm continues to monitor because of actual or potential credit concerns. For additional information, refer to the tables above and on the preceding page.

- Automotive: Automotive Original Equipment Manufacturers and suppliers based in North America continued to be affected by a challenging operating environment in 2007. As a result, the industry continued to be the largest segment of the Firm's wholesale criticized exposure; however, most of the criticized exposure remains undrawn, is performing and is substantially secured.
- Real estate: Exposure to this industry grew in 2007 mainly due to growth in leveraged lending activity, primarily in the IB. On a portfolio basis, the Firm's Real estate exposure is well-diversified by client, transaction type, geography and property type. Approximately half of this exposure is to large public and rated real estate companies and institutions (e.g., REITS), as well as real estate loans originated for sale into the commercial mortgage-backed securities market. CMBS exposure totaled 5% of the category at December 31, 2007. These positions are actively risk managed. The remaining Real estate exposure is primarily to professional real estate developers, owners, or service providers and generally involves real estate leased to third-party tenants. Exposure to national and regional single-family home builders represents 16% of the category, down from 21% in 2006, and is considered to be at a manageable level. The increase in criticized exposure was largely a result of downgrades to a small group of homebuilders within the Real estate portfolio.
- Retail and consumer services: In 2007, criticized exposure to this industry increased as a result of downgrades of select portfolio names. Overall, the majority of the exposure remains rated investment grade and the portfolio is diversified by client, geography and product market served. The bigger portfolio names in terms of exposure tend to be large cap companies with access to capital markets. For smaller cap clients with more reliance on bank debt, exposures are often highly structured and/or secured.
- Banks and finance companies: This industry group, primarily consisting of exposure to commercial banks, is the largest segment of the Firm's wholesale credit portfolio. Even though criticized exposures grew in 2007 due to downgrades to select names within the portfolio, credit quality overall remained high, as 83% of the exposure in this category is rated investment grade.
- All other: All other in the wholesale credit exposure concentration table on page 78 of this Annual Report at December 31, 2007 (excluding loans held-for-sale and loans at fair value) included $377.0 billion of credit exposure to 22 industry segments. Exposures related to SPEs and high-net-worth individuals were 34% and 14%, respectively, of this category. SPEs provide secured financing (generally backed by receivables, loans or bonds on a bankruptcy-remote, nonrecourse or limited-recourse basis) originated by a diverse group of companies in industries that are not highly correlated. For further discussion of SPEs, see Note 17 on pages 146–154 of this Annual Report. The remaining All other exposure is well-diversified across industries and none comprise more than 3% of total exposure.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments to meet the needs of customers; to generate revenue through trading activities; to manage exposure to fluctuations in interest rates, currencies and other markets; and to manage the Firm's credit exposure. For further discussion of these contracts, see Note 30 on pages 168–169 of this Annual Report.

The following tables summarize the aggregate notional amounts and the net derivative receivables MTM for the periods presented.

Notional amounts of derivative contracts

December 31, (in billions)	Notional amounts[a] 2007	2006
Interest rate contracts		
Interest rate and currency swaps[b]	**$ 53,458**	$ 40,629
Future and forwards	**4,548**	4,342
Purchased options	**5,349**	5,230
Total interest rate contracts	**63,355**	50,201
Credit derivatives	**$ 7,967**	$ 4,619
Commodity contracts		
Swaps	**$ 275**	$ 244
Future and forwards	**91**	68
Purchased options	**233**	195
Total commodity contracts	**599**	507
Foreign exchange contracts		
Future and forwards	**$ 3,424**	$ 1,824
Purchased options	**906**	696
Total foreign exchange contracts	**4,330**	2,520
Equity contracts		
Swaps	**$ 105**	$ 56
Future and forwards	**72**	73
Purchased options	**821**	680
Total equity contracts	**998**	809
Total derivative notional amounts	**$ 77,249**	$ 58,656

(a) Represents the sum of gross long and gross short third-party notional derivative contracts, excluding written options and foreign exchange spot contracts.
(b) Includes cross currency swap contract notional amounts of $1.4 trillion and $1.1 trillion at December 31, 2007 and 2006, respectively.

Derivative receivables marked to market ("MTM")

December 31, (in millions)	Derivative receivables MTM 2007	2006
Interest rate contracts	**$ 36,020**	$ 28,932
Credit derivatives	**22,083**	5,732
Commodity contracts	**9,419**	10,431
Foreign exchange contracts	**5,616**	4,260
Equity contracts	**3,998**	6,246
Total, net of cash collateral	**77,136**	55,601
Liquid securities collateral held against derivative receivables	**(9,824)**	(6,591)
Total, net of all collateral	**$ 67,312**	$ 49,010

The amount of Derivative receivables reported on the Consolidated balance sheets of $77.1 billion and $55.6 billion at December 31, 2007 and 2006, respectively, is the amount of the mark-to-market value ("MTM") or fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. These amounts represent the cost to the Firm to replace the contracts at current market rates should the counterparty default. However, in management's view, the appropriate measure of current credit risk should also reflect additional liquid securities held as collateral by the Firm of $9.8 billion and $6.6 billion at December 31, 2007 and 2006, respectively, resulting in total exposure, net of all collateral, of $67.3 billion and $49.0 billion at December 31, 2007 and 2006, respectively. Derivative receivables increased $18.3 billion from December 31, 2006, primarily driven by increases in credit derivative and interest rate products due to increased credit spreads and lower interest rates, respectively, as well as a decline in the U.S. dollar.

The Firm also holds additional collateral delivered by clients at the initiation of transactions, but this collateral does not reduce the credit risk of the derivative receivables in the table above. This additional collateral secures potential exposure that could arise in the derivatives portfolio should the MTM of the client's transactions move in the Firm's favor. As of December 31, 2007 and 2006, the Firm held $17.4 billion and $12.3 billion of this additional collateral, respectively. The derivative receivables MTM also does not include other credit enhancements in the form of letters of credit.

While useful as a current view of credit exposure, the net MTM value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. However, the total potential future credit risk embedded in the Firm's derivatives portfolio is not the simple sum of all Peak client credit risks. This is because, at the portfolio level, credit risk is reduced by the fact that when offsetting transactions are done with separate counterparties, only one of the two trades can generate a credit loss, even if both counterparties were to default simultaneously. The Firm refers to this effect as market diversification, and the Market-Diversified Peak ("MDP") measure is a portfolio aggregation of counterparty Peak measures, representing the maximum losses at the 97.5% confidence level that would occur if all counterparties defaulted under any one given market scenario and time frame.

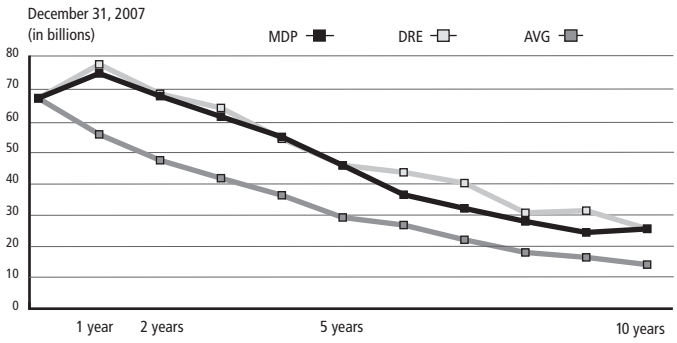
Derivative Risk Equivalent exposure is a measure that expresses the riskiness of derivative exposure on a basis intended to be equivalent to the riskiness of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, AVG is a measure of the expected MTM value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the Credit Valuation Adjustment ("CVA"), as further described below. Average exposure was $47.1 billion and $35.6 billion at December 31, 2007 and 2006, respectively, compared with derivative receivables MTM, net of all collateral, of $67.3 billion and $49.0 billion at December 31, 2007 and 2006, respectively.

The MTM value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based upon the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm takes into consideration the potential for correlation between the Firm's AVG to a counterparty and the counterparty's credit quality within the credit approval process. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The graph to the right shows exposure profiles to derivatives over the next 10 years as calculated by the MDP, DRE and AVG metrics. All three measures generally show declining exposure after the first year, if no new trades were added to the portfolio.

Exposure profile of derivatives measures



The following table summarizes the ratings profile of the Firm's derivative receivables MTM, net of other liquid securities collateral, for the dates indicated.

Ratings profile of derivative receivables MTM

Rating equivalent	**2007**		2006	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 38,314**	**57%**	$ 28,150	58%
A+/A1 to A-/A3	**9,855**	**15**	7,588	15
BBB+/Baa1 to BBB-/Baa3	**9,335**	**14**	8,044	16
BB+/Ba1 to B-/B3	**9,451**	**14**	5,150	11
CCC+/Caa1 and below	**357**	**—**	78	—
Total	**$ 67,312**	**100%**	$ 49,010	100%

The Firm actively pursues the use of collateral agreements to mitigate counterparty credit risk in derivatives. The percentage of the Firm's derivatives transactions subject to collateral agreements increased slightly to 82% as of December 31, 2007, from 80% at December 31, 2006.

The Firm posted $33.5 billion and $26.6 billion of collateral at December 31, 2007 and 2006, respectively. Certain derivative and collateral agreements include provisions that require the counterparty and/or the Firm, upon specified downgrades in their respective credit ratings, to post collateral for the benefit of the other party. The impact of a single-notch ratings downgrade to JPMorgan Chase Bank, N.A., from its rating of "AA" to "AA-" at December 31, 2007, would have required $237 million of additional collateral to be posted by the Firm. The impact of a six-notch ratings downgrade (from "AA" to "BBB") would have required $2.5 billion of additional collateral. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the then-existing MTM value of the derivative contracts.

Credit derivatives

The following table presents the Firm's notional amounts of credit derivatives protection purchased and sold as of December 31, 2007 and 2006.

	Notional amount				
	Credit portfolio		Dealer/client		
December 31, (in billions)	Protection purchased[(a)]	Protection sold	Protection purchased	Protection sold	**Total**
2007	**$ 70**	**$ 2**	**$ 3,999**	**$ 3,896**	**$ 7,967**
2006	$ 52	$ 1	$ 2,277	$ 2,289	$ 4,619

(a) Included $31.1 billion and $22.7 billion at December 31, 2007 and 2006, respectively, that represented the notional amount for structured portfolio protection; the Firm retains a minimal first risk of loss on this portfolio.

JPMorgan Chase has counterparty exposure as a result of credit derivatives transactions. Of the $77.1 billion of total Derivative receivables MTM at December 31, 2007, $22.1 billion, or 29%, was associated with credit derivatives, before the benefit of liquid securities collateral.

Dealer/client business

At December 31, 2007, the total notional amount of protection purchased and sold in the dealer/client business increased $3.3 trillion from year-end 2006 as a result of increased trade volume in the market. The risk positions are largely matched when securities used to risk-manage certain derivative positions are taken into consideration and the notional amounts are adjusted to a duration-based equivalent or to reflect different degrees of subordination in tranched structures.

Credit portfolio activities

In managing its wholesale credit exposure, the Firm purchases single-name and portfolio credit derivatives; this activity does not reduce the reported level of assets on the balance sheet or the level of reported off–balance sheet commitments. The Firm also diversifies its exposures by providing (i.e., selling) credit protection, which increases exposure to industries or clients where the Firm has little or no client-related exposure. This activity is not material to the Firm's overall credit exposure.

Use of single-name and portfolio credit derivatives

December 31, (in millions)	Notional amount of protection purchased	
	2007	2006
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 63,645**	$ 40,755
Derivative receivables	**6,462**	11,229
Total[a]	**$ 70,107**	$ 51,984

(a) Included $31.1 billion and $22.7 billion at December 31, 2007 and 2006, respectively, that represented the notional amount for structured portfolio protection; the Firm retains a minimal first risk of loss on this portfolio.

The credit derivatives used by JPMorgan Chase for credit portfolio management activities do not qualify for hedge accounting under SFAS 133, and therefore, effectiveness testing under SFAS 133 is not performed. These derivatives are reported at fair value, with gains and losses recognized in Principal transactions revenue. The MTM value incorporates both the cost of credit derivative premiums and changes in value due to movement in spreads and credit events; in contrast, the loans and lending-related commitments being risk managed are accounted for on an accrual basis. Loan interest and fees are generally recognized in Net interest income, and impairment is recognized in the Provision for credit losses. This asymmetry in accounting treatment between loans and lending-related commitments and the credit derivatives utilized in credit portfolio management activities causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure. The MTM related to the Firm's credit derivatives used for managing credit exposure, as well as the MTM related to the CVA, which reflects the credit quality of derivatives counterparty exposure, are included in the table below. These results can vary from period to period due to market conditions that impact specific positions in the portfolio.

Year ended December 31, (in millions)	**2007**	2006	2005
Hedges of lending-related commitments[a]	**$ 350**	$ (246)	$ 24
CVA and hedges of CVA[a]	**(363)**	133	84
Net gains (losses)[b]	**$ (13)**	$ (113)	$ 108

(a) These hedges do not qualify for hedge accounting under SFAS 133.
(b) Excludes gains of $373 million, $56 million and $8 million for the years ended December 31, 2007, 2006 and 2005, respectively, of other Principal transactions revenue that was not associated with hedging activities. The amount for 2007 incorporates an adjustment to the valuation of the Firm's derivative liabilities as a result of the adoption of SFAS 157 on January 1, 2008.

The Firm also actively manages wholesale credit exposure mainly through IB and CB loan and commitment sales. During 2007, 2006 and 2005, these sales of $4.9 billion, $4.0 billion and $4.9 billion of loans and commitments, respectively, resulted in losses of $7 million in 2007 and gains of $83 million and $81 million in 2006 and 2005, respectively. These results include gains on sales of nonperforming loans, as discussed on page 76 of this Annual Report. These activities are not related to the Firm's securitization activities, which are undertaken for liquidity and balance sheet management purposes.
For a further discussion of securitization activity, see Liquidity Risk Management and Note 16 on pages 70–73 and 139–145, respectively, of this Annual Report.

Lending-related commitments

Wholesale lending-related commitments were $446.7 billion at December 31, 2007, compared with $391.4 billion at December 31, 2006. The increase reflected greater overall lending activity. In the Firm's view, the total contractual amount of these instruments is not representative of the Firm's actual credit risk exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these instruments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based upon average portfolio historical experience, to become outstanding in the event of a default by an obligor. The loan-equivalent amount of the Firm's lending-related commitments was $238.7 billion and $212.3 billion as of December 31, 2007 and 2006, respectively.

Emerging markets country exposure

The Firm has a comprehensive internal process for measuring and managing exposures to emerging markets countries. There is no common definition of emerging markets but the Firm generally, though not exclusively, includes in its definition those countries whose sovereign debt ratings are equivalent to "A+" or lower. Exposures to a country include all credit-related lending, trading and investment activities, whether cross-border or locally funded. In addition to monitoring country exposures, the Firm uses stress tests to measure and manage the risk of extreme loss associated with sovereign crises.

The table below presents the Firm's exposure to the top five emerging markets countries. The selection of countries is based solely on the Firm's largest total exposures by country and not the Firm's view of any actual or potentially adverse credit conditions. Exposure is reported based on the country where the assets of the obligor, counterparty or guarantor are located. Exposure amounts are adjusted for collateral and for credit enhancements (e.g., guarantees and letters of credit) provided by third parties; outstandings supported by a guarantor outside the country or backed by collateral held outside the country are assigned to the country of the enhancement provider. In addition, the effect of credit derivative hedges and other short credit or equity trading positions are reflected in the table below. Total exposure includes exposure to both government and private sector entities in a country.

Top 5 emerging markets country exposure

At December 31, 2007	Cross-border					
(in billions)	Lending[a]	Trading[b]	Other[c]	Total	Local[d]	**Total exposure**
South Korea	$ 3.2	$ 2.6	$ 0.7	$ 6.5	$ 3.4	$ 9.9
Brazil	1.1	(0.7)	1.2	1.6	5.0	6.6
Russia	2.9	1.0	0.2	4.1	0.4	4.5
India	1.9	0.8	0.8	3.5	0.6	4.1
China	2.2	0.3	0.4	2.9	0.3	3.2

(a) Lending includes loans and accrued interest receivable, interest-bearing deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit.
(b) Trading includes (1) issuer exposure on cross-border debt and equity instruments, held both in trading and investment accounts, adjusted for the impact of issuer hedges, including credit derivatives; and (2) counterparty exposure on derivative and foreign exchange contracts as well as security financing trades (resale agreements and securities borrowed).
(c) Other represents mainly local exposure funded cross-border.
(d) Local exposure is defined as exposure to a country denominated in local currency, booked and funded locally.

CONSUMER CREDIT PORTFOLIO

JPMorgan Chase's consumer portfolio consists primarily of residential mortgages, home equity loans, credit cards, auto loans and leases, education loans and business banking loans, and reflects the benefit of diversification from both a product and a geographic perspective. The primary focus is serving the prime consumer credit market. RFS offers home equity lines of credit and mortgage loans with interest-only payment options to predominantly prime borrowers; there are no products in the real estate portfolios that result in negative amortization.

The domestic consumer credit environment in 2007 was negatively affected by the deterioration in valuations associated with residential real estate. For the first time in decades, average home prices declined on a national basis, with many specific real estate markets recording double-digit percentage declines in average home prices. The negative residential real estate environment has also had an effect on the performance of other consumer credit asset classes, including auto loans and credit card loans. Geographic areas that have seen the most material declines in home prices have exhibited higher delinquency and losses across the consumer credit product spectrum.

Significant actions have been taken to tighten credit underwriting and loan qualification standards, especially related to real estate lending. Maximum loan-to-value and debt-to-income ratios have been reduced, minimum required credit risk scores for loan qualification have been increased and collateral valuation methods have been tightened. These actions have resulted in significant reductions in new loan originations of risk layered loans, and improved alignment of loan pricing with the embedded risk.

Account management and loan servicing policies and actions have also been enhanced. Delinquency management, loss mitigation, and asset disposition efforts have been increased, while collection intensity, exposure management, debt restructuring, and other similar practices have been strengthened to effectively manage loss exposure.

The following table presents managed consumer credit–related information for the dates indicated.

Consumer portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming assets[f]		Net charge-offs		Average annual net charge-off rate[g]	
	2007	2006	**2007**	2006	**2007**	2006	**2007**	2006
Consumer loans – reported[a]								
Home equity	**$ 94,832**	$ 85,714	**$ 810**	$ 454	**$ 564**	$ 143	**0.62%**	0.18%
Mortgage	**55,461**	30,577	**1,798**	653	**190**	56	**0.45**	0.12
Auto loans and leases[b]	**42,350**	41,009	**116**	132	**354**	238	**0.86**	0.56
Credit card – reported[c]	**84,352**	85,881	**7**	9	**3,116**	2,488	**3.90**	3.37
All other loans	**25,314**	23,460	**341**	322	**242**	139	**1.01**	0.65
Loans held-for-sale	**3,989**	32,744	**—**	116	**NA**	NA	**NA**	NA
Total consumer loans – reported	**306,298**	299,385	**3,072**	1,686	**4,466**	3,064	**1.61**	1.17
Credit card – securitized[c][d]	**72,701**	66,950	**—**	—	**2,380**	2,210	**3.43**	3.28
Total consumer loans – managed[c]	**378,999**	366,335	**3,072**	1,686	**6,846**	5,274	**1.97**	1.60
Assets acquired in loan satisfactions	**NA**	NA	**549**	225	**NA**	NA	**NA**	NA
Total consumer-related assets – managed	**378,999**	366,335	**3,621**	1,911	**6,846**	5,274	**1.97**	1.60
Consumer lending-related commitments:								
Home equity[e]	**74,191**	69,559	**NA**	NA	**NA**	NA	**NA**	NA
Mortgage	**7,410**	6,618	**NA**	NA	**NA**	NA	**NA**	NA
Auto loans and leases	**8,058**	7,874	**NA**	NA	**NA**	NA	**NA**	NA
Credit card[e]	**714,848**	657,109	**NA**	NA	**NA**	NA	**NA**	NA
All other loans	**11,429**	6,375	**NA**	NA	**NA**	NA	**NA**	NA
Total lending-related commitments	**815,936**	747,535	**NA**	NA	**NA**	NA	**NA**	NA
Total consumer credit portfolio	**$1,194,935**	$1,113,870	**$ 3,621**	$ 1,911	**$ 6,846**	$ 5,274	**1.97%**	1.60%
Memo: Credit card – managed	**$ 157,053**	$ 152,831	**$ 7**	$ 9	**$ 5,496**	$ 4,698	**3.68%**	3.33%

(a) Includes RFS, CS and residential mortgage loans reported in the Corporate segment.
(b) Excludes operating lease-related assets of $1.9 billion and $1.6 billion for December 31, 2007 and 2006, respectively.
(c) Loans past-due 90 days and over and accruing include credit card receivables – reported of $1.5 billion and $1.3 billion for December 31, 2007 and 2006, respectively, and related credit card securitizations of $1.1 billion and $962 million for December 31, 2007 and 2006, respectively.
(d) Represents securitized credit card receivables. For a further discussion of credit card securitizations, see CS on pages 49–51 of this Annual Report.
(e) The credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit will be utilized at the same time. The Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.
(f) Excludes nonperforming assets related to (1) loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by U.S. government agencies of $1.5 billion for December 31, 2007 and $1.2 billion for December 31, 2006, and (2) education loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $279 million and $219 million as of December 31, 2007 and 2006, respectively. These amounts for GNMA and education loans are excluded, as reimbursement is proceeding normally.
(g) Net charge-off rates exclude average loans held-for-sale of $10.6 billion and $16.1 billion for 2007 and 2006, respectively.

The Firm regularly evaluates market conditions and overall economic returns and makes an initial determination of whether new originations will be held-for-investment or sold within the foreseeable future. The Firm also periodically evaluates the expected economic returns of previously originated loans under prevailing market conditions to determine whether their designation as held-for-sale or held-for-investment continues to be appropriate. When the Firm determines that a change in this designation is appropriate, the loans are transferred to the appropriate classification. During the third and fourth quarters of 2007, in response to changes in market conditions, the Firm designated as held-for-investment all new originations of subprime mortgage loans, as well as subprime mortgage loans that were previously designated held-for-sale. In addition, all new prime mortgage originations that cannot be sold to U.S. government agencies and U.S. government-sponsored enterprises have been designated as held-for-investment. Prime mortgage loans originated with the intent to sell are accounted for at fair value under SFAS 159 and are classified as Trading assets in the Consolidated Balance Sheets.

The following discussion relates to the specific loan and lending-related categories within the consumer portfolio.

Home equity: Home equity loans at December 31, 2007, were $94.8 billion, an increase of $9.1 billion from year-end 2006. The change in the portfolio from December 31, 2006, reflected organic growth. The Provision for credit losses for the Home equity portfolio includes net increases of $1.0 billion to the Allowance for loan losses for the year ended December 31, 2007, as risk layered loans, continued weak housing prices and slowing economic growth have resulted in a significant increase in nonperforming assets and estimated losses, especially with respect to recently originated high loan-to-value loans in specific geographic regions that have experienced significant declines in housing prices. The decline in housing prices and the second lien position for these types of loans results in minimal proceeds upon foreclosure, increasing the severity of losses. Although subprime Home equity loans do not represent a significant portion of the Home equity loan balance, the origination of subprime home equity loans was discontinued in the third quarter of 2007. In addition, loss mitigation activities continue to be intensified, underwriting standards have been tightened and pricing actions have been implemented to reflect elevated risks related to the home equity portfolio.

The following tables present the geographic distribution of consumer credit outstandings by product as of December 31, 2007 and 2006.

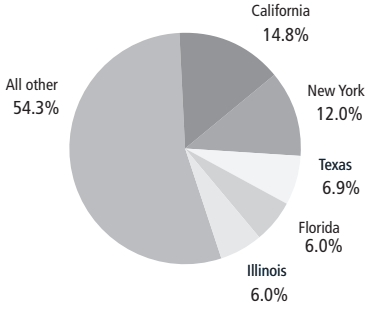
Consumer loans by geographic region

December 31, 2007 (in billions)	Home equity	Mortgage	Auto	Card reported	All other loans	Total consumer loans–reported	Card securitized	Total consumer loans–managed
Top 12 states								
California	$ 14.9	$ 13.4	$ 5.0	$11.0	$ 1.0	$ 45.3	$ 9.6	$ 54.9
New York	14.4	8.0	3.6	6.6	4.2	36.8	5.6	42.4
Texas	6.1	2.0	3.7	5.8	3.5	21.1	5.4	26.5
Florida	5.3	6.4	1.6	4.7	0.5	18.5	4.2	22.7
Illinois	6.7	3.0	2.2	4.5	1.9	18.3	3.9	22.2
Ohio	4.9	1.0	2.9	3.3	2.6	14.7	3.1	17.8
New Jersey	4.4	2.2	1.7	3.3	0.5	12.1	3.1	15.2
Michigan	3.7	1.6	1.3	2.9	2.3	11.8	2.5	14.3
Arizona	5.7	1.5	1.8	1.7	1.8	12.5	1.4	13.9
Pennsylvania	1.6	0.9	1.7	3.2	0.5	7.9	2.9	10.8
Colorado	2.3	1.3	1.0	2.0	0.8	7.4	1.7	9.1
Indiana	2.4	0.6	1.2	1.8	1.1	7.1	1.5	8.6
All other	22.4	14.1	14.7	33.6	8.0	92.8	27.8	120.6
Total	$ 94.8	$ 56.0	$ 42.4	$ 84.4	$ 28.7	$ 306.3	$ 72.7	$ 379.0

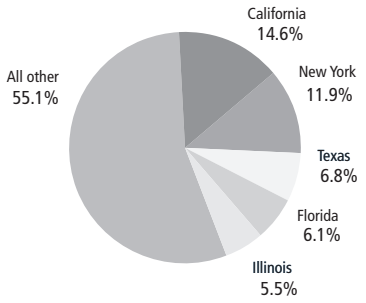
Consumer loans by geographic region

December 31, 2006 (in billions)	Home equity	Mortgage	Auto	Card reported	All other loans	Total consumer loans–reported	Card securitized	Total consumer loans–managed
Top 12 states								
California	$ 12.9	$ 14.5	$ 4.6	$ 10.8	$ 0.9	$ 43.7	$ 8.8	$ 52.5
New York	12.2	8.9	3.2	7.0	4.2	35.5	5.0	40.5
Texas	5.8	2.1	3.2	6.0	3.3	20.4	5.1	25.5
Florida	4.4	7.1	1.6	4.8	0.5	18.4	3.7	22.1
Illinois	6.2	2.4	1.9	4.4	1.7	16.6	3.7	20.3
Ohio	5.3	1.0	2.5	3.4	2.5	14.7	2.9	17.6
New Jersey	3.5	2.6	1.9	3.4	0.4	11.8	2.7	14.5
Michigan	3.8	1.5	1.2	3.0	2.3	11.8	2.3	14.1
Arizona	5.4	1.5	1.6	1.6	1.4	11.5	1.2	12.7
Pennsylvania	1.5	1.1	1.6	3.4	0.4	8.0	2.6	10.6
Colorado	2.1	1.1	0.8	1.9	0.7	6.6	1.6	8.2
Indiana	2.6	0.5	1.0	1.8	1.1	7.0	1.4	8.4
All other	20.0	15.4	15.9	34.4	7.7	93.4	25.9	119.3
Total	$ 85.7	$ 59.7	$ 41.0	$ 85.9	$ 27.1	$ 299.4	$ 66.9	$ 366.3

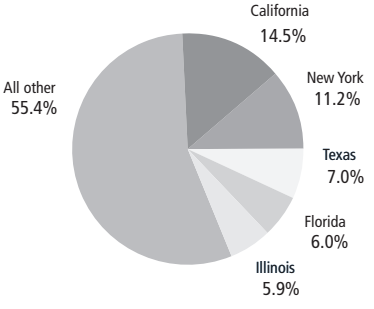
Top 5 States Total Consumer Loans - Reported
(at December 31, 2007)



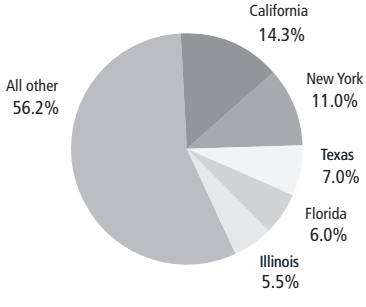
Top 5 States Total Consumer Loans - Reported
(at December 31, 2006)



Top 5 States Consumer Loans - Managed
(at December 31, 2007)



Top 5 States Consumer Loans - Managed
(at December 31, 2006)



Mortgage: Prior to the third quarter of 2007, subprime mortgage loans and substantially all of the Firm's prime mortgages, both fixed-rate and adjustable-rate, were originated with the intent to sell. Prime mortgage loans originated into the held-for-investment portfolio consisted primarily of adjustable-rate products. As a result of the decision to retain rather than sell subprime mortgage loans and new originations of prime mortgage loans that cannot be sold to U.S. government agencies and U.S. government-sponsored enterprises, both fixed-rate and adjustable-rate products are now being originated into the held-for-investment portfolio. Mortgages, irrespective of whether they are originated with the intent to sell or hold-for-investment, are underwritten to the same standards applicable to the respective type of mortgage.

Mortgage loans at December 31, 2007, including loans held-for-sale, were $56.0 billion, reflecting a $3.6 billion decrease from year-end 2006, primarily due to the change in classification to Trading assets for prime mortgages originated with the intent to sell and elected to be fair valued under SFAS 159 offset partially by the decision to retain rather than sell subprime mortgage loans and new originations of prime mortgage loans that cannot be sold to U.S. government agencies and U.S. government-sponsored enterprises. As of December 31, 2007, mortgage loans on the Consolidated balance sheet included $15.5 billion of subprime mortgage loans, representing 28% of the total mortgage loan balance. The Provision for credit losses for mortgage loans included $166 million in increases to the allowance for loan losses for the year ended December 31, 2007, as housing price declines in specific geographic regions and slowing economic growth have resulted in increases in nonperforming assets and estimated losses for the subprime product segment. The Provision for credit losses also reflects the decision to retain rather than sell subprime mortgage loans. Loss mitigation activities have been intensified, products have been eliminated and underwriting standards continue to be tightened to reflect management's expectation of elevated credit losses in the subprime market segment. Nonperforming assets have also increased in the prime product segment. Borrowers are generally required to obtain private mortgage insurance for prime mortgage loans with high loan to value ratios. Recoveries on these insurance policies offset credit losses on these loans to the extent foreclosure proceeds are greater than 80% of the loan to value ratio at the time of origination. Additional housing price declines could result in an increase in the number of foreclosures for which proceeds are less than 80% of the original loan to value ratio, resulting in increased losses for this product segment.

Auto loans and leases: As of December 31, 2007, Auto loans and leases of $42.4 billion increased slightly from year-end 2006. The Allowance for loan losses for the Auto loan portfolio was increased during 2007, reflecting an increase in estimated losses from low prior-year levels and deterioration in the credit environment.

All other loans

All other loans primarily include Business Banking loans (which are highly collateralized loans, often with personal loan guarantees), Education loans, Community Development loans and other secured and unsecured consumer loans. As of December 31, 2007, other loans, including loans held-for-sale, of $28.7 billion were up $1.6 billion from year-end 2006, primarily as a result of organic growth in Business Banking loans.

Credit Card

JPMorgan Chase analyzes its credit card portfolio on a managed basis, which includes credit card receivables on the Consolidated balance sheets and those receivables sold to investors through securitization. Managed credit card receivables were $157.1 billion at December 31, 2007, an increase of $4.2 billion from year-end 2006, reflecting organic growth in the portfolio.

The managed credit card net charge-off rate increased to 3.68% for 2007, from 3.33% in 2006. This increase was due primarily to lower bankruptcy-related net charge-offs in 2006. The 30-day delinquency rate increased slightly to 3.48% at December 31, 2007, from 3.13% at December 31, 2006. The Allowance for loan loss was increased due to higher estimated net charge-offs in the portfolio. The managed credit card portfolio continues to reflect a well-seasoned portfolio that has good U.S. geographic diversification.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for credit losses is intended to cover probable credit losses, including losses where the asset is not specifically identified or the size of the loss has not been fully determined. At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. The allowance is reviewed relative to the risk profile of the Firm's credit portfolio and current economic conditions and is adjusted if, in management's judgment, changes are warranted. The allowance includes an asset-specific and a formula-based component. For further discussion of the components of the allowance for credit losses, see Critical accounting estimates used by the Firm on pages 96–97 and Note 15 on pages 138–139 of this Annual Report. At December 31, 2007, management deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses that are inherent in the portfolio, including losses that are not specifically identified or for which the size of the loss has not yet been fully determined).

Summary of changes in the allowance for credit losses

Year ended December 31,	2007			2006		
(in millions)	Wholesale	Consumer	Total	Wholesale	Consumer	Total
Loans:						
Beginning balance at January 1,	**$ 2,711**	**$ 4,568**	**$ 7,279**	$ 2,453	$ 4,637	$7,090
Cumulative effect of change in accounting principles[a]	**(56)**	**—**	**(56)**	—	—	—
Beginning balance at January 1, adjusted	**2,655**	**4,568**	**7,223**	2,453	4,637	7,090
Gross charge-offs	**(185)**	**(5,182)**	**(5,367)**	(186)	(3,698)	(3,884)
Gross recoveries	**113**	**716**	**829**	208	634	842
Net (charge-offs) recoveries	**(72)**	**(4,466)**	**(4,538)**	22	(3,064)	(3,042)
Provision for loan losses	**598**	**5,940**	**6,538**	213	2,940	3,153
Other	**(27)**[b]	**38**[b]	**11**	23	55	78
Ending balance at December 31	**$3,154**[c]	**$6,080**[d]	**$ 9,234**	$2,711[c]	$ 4,568[d]	$7,279
Components:						
Asset-specific	**$ 108**	**$ 80**	**$ 188**	$ 51	$ 67[e]	$ 118
Formula-based	**3,046**	**6,000**	**9,046**	2,660	4,501[e]	7,161
Total Allowance for loan losses	**$ 3,154**	**$ 6,080**	**$ 9,234**	$ 2,711	$ 4,568	$7,279
Lending-related commitments:						
Beginning balance at January 1,	**$ 499**	**$ 25**	**$ 524**	$ 385	$ 15	$ 400
Provision for lending-related commitments	**336**	**(10)**	**326**	108	9	117
Other	**—**	**—**	**—**	6	1	7
Ending balance at December 31	**$ 835**	**$ 15**	**$ 850**	$ 499	$ 25	$ 524
Components:						
Asset-specific	**$ 28**	**$ —**	**$ 28**	$ 33	$ —	$ 33
Formula-based	**807**	**15**	**822**	466	25	491
Total allowance for lending-related commitments	**$ 835**	**$ 15**	**$ 850**	$ 499	$ 25	$ 524
Total allowance for credit losses	**$ 3,989**	**$ 6,095**	**$10,084**	$ 3,210	$ 4,593	$7,803

(a) Reflects the effect of the adoption of SFAS 159 at January 1, 2007. For a further discussion of SFAS 159, see Note 5 on pages 119–121 of this Annual Report.
(b) Partially related to the transfer of Allowance between wholesale and consumer in conjunction with prime mortgages transferred to the Corporate sector.
(c) The ratio of the wholesale Allowance for loan losses to total wholesale loans was 1.67% and 1.68%, excluding wholesale loans held-for-sale and loans accounted for at fair value at December 31, 2007 and 2006, respectively.
(d) The ratio of the consumer allowance for loan losses to total consumer loans was 2.01% and 1.71%, excluding consumer loans held-for-sale and loans accounted for at fair value at December 31, 2007 and 2006, respectively.
(e) Prior periods have been revised to reflect the current presentation.

The allowance for credit losses increased $2.3 billion from December 31, 2006. The consumer and wholesale components of the allowance increased $1.5 billion and $779 million, respectively. The increase in the consumer portion of the allowance included increases of $1.3 billion and $215 million in RFS and CS, respectively. The increase in the wholesale portion of the allowance was primarily due to loan growth in the IB and CB.

Excluding Loans held-for-sale and loans carried at fair value, the Allowance for loan losses represented 1.88% of loans at December 31, 2007, compared with 1.70% at December 31, 2006.

To provide for the risk of loss inherent in the Firm's process of extending credit, management also computes an asset-specific component and a formula-based component for wholesale lending-related commitments. These components are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown. This allowance, which is reported in Other liabilities, was $850 million and $524 million at December 31, 2007 and 2006, respectively. The increase reflected growth in lending-related commitments and updates to inputs used in the calculation.

Provision for credit losses

For a discussion of the reported Provision for credit losses, see page 33 of this Annual Report. The managed provision for credit losses includes credit card securitizations. For the year ended December 31, 2007, the increase in the Provision for credit losses was due to an increase year-over-year in the allowance for credit losses largely related to home equity loans, higher credit card net charge-offs in the consumer businesses and an increase in the wholesale businesses. The increase in the allowance in the wholesale businesses was due to the weakening credit environment as well as growth in the wholesale portfolio. The prior year benefited from a lower level of credit card net charge-offs, which reflected a lower level of losses following the change in bankruptcy legislation in the fourth quarter of 2005.

Year ended December 31,	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
(in millions)	**2007**	2006	2005	**2007**	2006	2005	**2007**	2006	2005
Investment Bank	**$ 376**	$ 112	$ (757)	**$ 278**	$ 79	$ (81)	**$ 654**	$ 191	$ (838)
Commercial Banking	**230**	133	87	**49**	27	(14)	**279**	160	73
Treasury & Securities Services	**11**	(1)	(1)	**8**	—	1	**19**	(1)	—
Asset Management	**(19)**	(30)	(55)	**1**	2	(1)	**(18)**	(28)	(56)
Corporate	**—**	(1)	10	**—**	—	—	**—**	(1)	10
Total Wholesale	**598**	213	(716)	**336**	108	(95)	**934**	321	(811)
Retail Financial Services	**2,620**	552	721	**(10)**	9	3	**2,610**	561	724
Card Services – reported	**3,331**	2,388	3,570	**—**	—	—	**3,331**	2,388	3,570
Corporate	**(11)**	—	—	**—**	—	—	**(11)**	—	—
Total Consumer	**5,940**	2,940	4,291	**(10)**	9	3	**5,930**	2,949	4,294
Total provision for credit losses – reported	**6,538**	3,153	3,575	**326**	117	(92)	**6,864**	3,270	3,483
Credit Services – securitized	**2,380**	2,210	3,776	**—**	—	—	**2,380**	2,210	3,776
Total provision for credit losses – managed	**$8,918**	$5,363	$7,351	**$ 326**	$117	$ (92)	**$ 9,244**	$5,480	$ 7,259

MARKET RISK MANAGEMENT

Market risk is the exposure to an adverse change in the market value of portfolios and financial instruments caused by a change in market prices or rates.

Market risk management
Market risk is identified, measured, monitored, and controlled by Market Risk, a corporate risk governance function independent of the lines of business. Market Risk seeks to facilitate efficient risk/return decisions, reduce volatility in operating performance and make the Firm's market risk profile transparent to senior management, the Board of Directors and regulators. Market Risk is overseen by the Chief Risk Officer and performs the following functions:

- Establishment of a comprehensive market risk policy framework
- Independent measurement, monitoring and control of business segment market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk identification and classification

Market Risk works in partnership with the business segments to identify market risks throughout the Firm and to define and monitor market risk policies and procedures. All business segments are responsible for comprehensive identification and verification of market risks within their units. Risk-taking businesses have functions that act independently from trading personnel and are responsible for verifying risk exposures that the business takes. In addition to providing independent oversight for market risk arising from the business segments, Market Risk is also responsible for identifying exposures which may not be large within individual business segments, but which may be large for the Firm in aggregate. Regular meetings are held between Market Risk and the heads of risk-taking businesses to discuss and decide on risk exposures in the context of the market environment and client flows.

Positions that expose the Firm to market risk can be classified into two categories: trading and nontrading risk. Trading risk includes positions that are held by the Firm as part of a business segment or unit, the main business strategy of which is to trade or make markets. Unrealized gains and losses in these positions are generally reported in Principal transactions revenue. Nontrading risk includes securities and other assets held for longer-term investment, mortgage servicing rights, and securities and derivatives used to manage the Firm's asset/liability exposures. Unrealized gains and losses in these positions are generally not reported in Principal transactions revenue.

Trading risk
Fixed income risk (which includes interest rate risk and credit spread risk), foreign exchange, equities and commodities and other trading risks involve the potential decline in Net income or financial condition due to adverse changes in market rates, whether arising from client activities or proprietary positions taken by the Firm.

Nontrading risk
Nontrading risk arises from execution of the Firm's core business strategies, the delivery of products and services to its customers, and the discretionary positions the Firm undertakes to risk-manage exposures.

These exposures can result from a variety of factors, including differences in the timing among the maturity or repricing of assets, liabilities and off–balance sheet instruments. Changes in the level and shape of market interest rate curves also may create interest rate risk, since the repricing characteristics of the Firm's assets do not necessarily match those of its liabilities. The Firm is also exposed to basis risk, which is the difference in the repricing characteristics of two floating-rate indices, such as the prime rate and 3-month LIBOR. In addition, some of the Firm's products have embedded optionality that impact pricing and balances.

The Firm's mortgage banking activities give rise to complex interest rate risks, as well as option and basis risk. Option risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing. Basis risk results from different relative movements between mortgage rates and other interest rates.

Risk measurement

Tools used to measure risk
Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- Nonstatistical risk measures
- Value-at-risk ("VAR")
- Loss advisories
- Drawdowns
- Economic value stress testing
- Earnings-at-risk stress testing
- Risk identification for large exposures ("RIFLE")

Nonstatistical risk measures

Nonstatistical risk measures other than stress testing include net open positions, basis point values, option sensitivities, market values, position concentrations and position turnover. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line of business and by risk type, and are used for monitoring limits, one-off approvals and tactical control.

Value-at-risk

JPMorgan Chase's primary statistical risk measure, VAR, estimates the potential loss from adverse market moves in an ordinary market environment and provides a consistent cross-business measure of risk profiles and levels of diversification. VAR is used for comparing risks across businesses, monitoring limits, one-off approvals, and as an input to economic capital calculations. VAR provides risk transparency in a normal trading environment. Each business day the Firm undertakes a comprehensive VAR calculation that includes both its trading and its nontrading risks. VAR for nontrading risk measures the amount of potential change in the fair values of the exposures related to these risks; however, for such risks, VAR is not a measure of reported revenue since nontrading activities are generally not marked to market through Net income.

To calculate VAR, the Firm uses historical simulation, which measures risk across instruments and portfolios in a consistent and comparable way. This approach assumes that historical changes in market values are representative of future changes. The simulation is based upon data for the previous 12 months. The Firm calculates VAR using a one-day time horizon and an expected tail-loss methodology, which approximates a 99% confidence level. This means the Firm would expect to incur losses greater than that predicted by VAR estimates only once in every 100 trading days, or about two to three times a year.

IB Trading and Credit Portfolio VAR

IB trading VAR by risk type and credit portfolio VAR

	2007			2006				
As of or for the year ended December 31, (in millions)	Average VAR	Minimum VAR	Maximum VAR	Average VAR	Minimum VAR	Maximum VAR	At December 31, 2007	At December 31, 2006
By risk type:								
Fixed income	**$ 80**	**$ 25**	**$ 135**	$ 56	$ 35	$ 94	**$ 106**	$ 44
Foreign exchange	**23**	**9**	**44**	22	14	42	**22**	27
Equities	**48**	**22**	**133**	31	18	50	**27**	49
Commodities and other	**33**	**21**	**66**	45	22	128	**27**	41
Less: portfolio diversification	**(77)**[c]	**NM**[d]	**NM**[d]	(70)[c]	NM[d]	NM[d]	**(82)**[c]	(62)[c]
Trading VAR[a]	**107**	**50**	**188**	84	55	137	**100**	99
Credit portfolio VAR[b]	**17**	**8**	**31**	15	12	19	**22**	15
Less: portfolio diversification	**(18)**[c]	**NM**[d]	**NM**[d]	(11)[c]	NM[d]	NM[d]	**(19)**[c]	(10)[c]
Total trading and credit portfolio VAR	**$ 106**	**$ 50**	**$ 178**	$ 88	$ 61	$ 138	**$ 103**	$ 104

(a) Trading VAR includes substantially all trading activities in IB; however, particular risk parameters of certain products are not fully captured, for example, correlation risk. Trading VAR does not include VAR related to held-for-sale funded loans and unfunded commitments, nor the DVA taken on derivative and structured liabilities to reflect the credit quality of the Firm. See the DVA Sensitivity table on page 92 of this Annual Report for further details. Trading VAR also does not include the MSR portfolio or VAR related to other corporate functions, such as Treasury and Private Equity. For a discussion of MSRs and the corporate functions, see Note 18 on pages 154–156, Note 4 on page 113 and Corporate on pages 59–60 of this Annual Report.

(b) Includes VAR on derivative credit valuation adjustments, hedges of the credit valuation adjustment and mark-to-market hedges of the retained loan portfolio, which are all reported in Principal transactions revenue. For a discussion of credit valuation adjustments, see Note 4 on pages 111–118 of this Annual Report. This VAR does not include the retained loan portfolio, which is not marked to market.

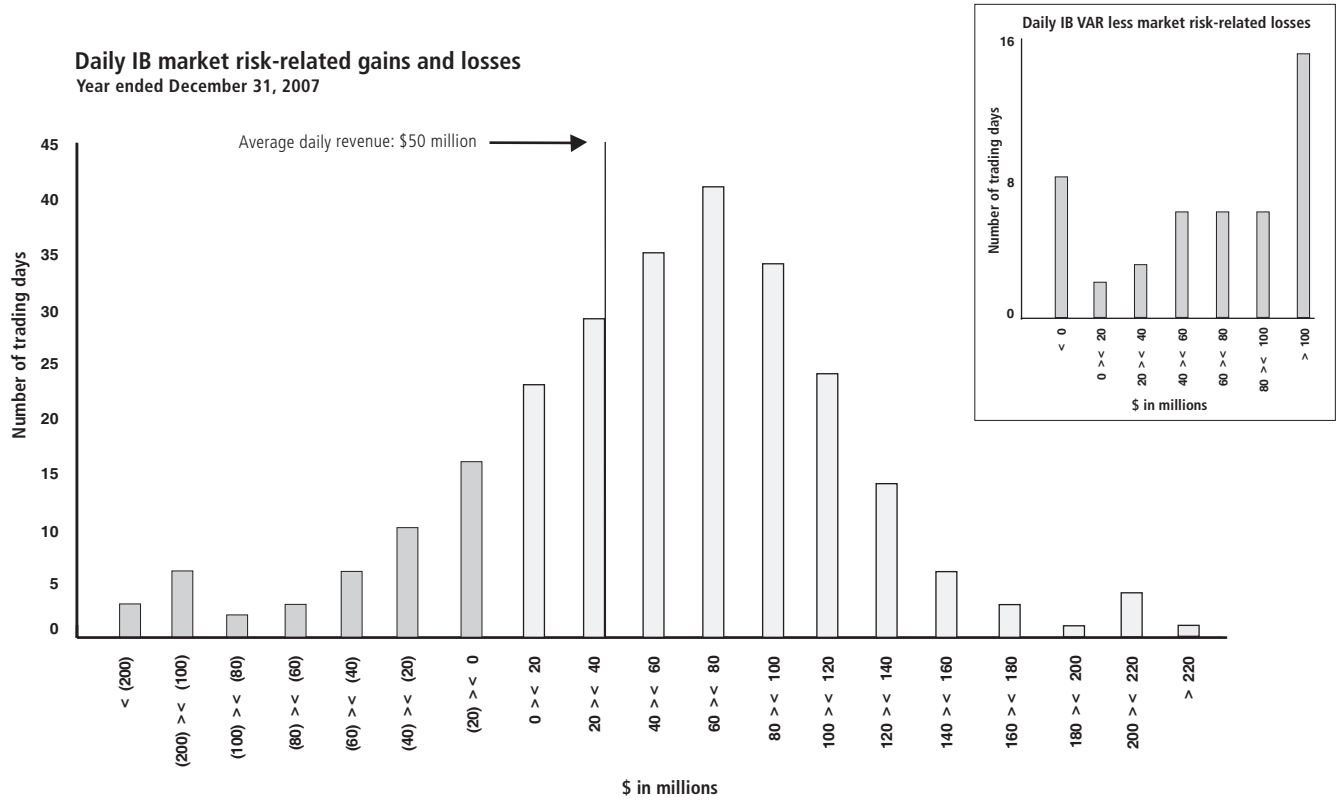
(c) Average and period-end VARs were less than the sum of the VARs of their market risk components, which was due to risk offsets resulting from portfolio diversification. The diversification effect reflected the fact that the risks were not perfectly correlated. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves.

(d) Designated as not meaningful ("NM") because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio diversification effect.

IB's average Total Trading and Credit Portfolio VAR was $106 million for 2007, compared with $88 million for 2006. Average VAR was higher during 2007 compared with the prior year, reflecting an increase in market volatility as well as increased risk positions, most notably in fixed income and equity markets. These changes also led to an increase in portfolio diversification, as Average Trading VAR diversification increased to $77 million during 2007, from $70 million during 2006. In general, over the course of the year, VAR exposures can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

VAR back-testing

To evaluate the soundness of its VAR model, the Firm conducts daily back-testing of VAR against daily IB market risk-related revenue, which is defined as the change in value of Principal transactions revenue less private equity gains/losses plus any trading-related net interest income, brokerage commissions, underwriting fees or other revenue. The daily IB market risk-related revenue excludes gains and losses on held-for-sale funded loans and unfunded commitments and from debit valuation adjustments ("DVA"). The following histogram illustrates the daily market risk–related gains and losses for IB trading businesses for the year ended December 31, 2007. The chart shows that IB posted market risk–related gains on 215 out of 261 days in this period, with 53 days exceeding $100 million. The inset graph looks at those days on which IB experienced losses and depicts the amount by which VAR exceeded the actual loss on each of those days. Losses were sustained on 46 days, with no loss greater than $225 million. During 2007, losses exceeded the VAR measure on eight days due to the high market volatility experienced during the year. No losses exceeded VAR measure during 2006.



The Firm does not include the impact of DVA taken on derivative and structured liabilities to reflect the credit quality of the Firm in its Trading VAR. The following table provides information about the sensitivity of DVA to a one basis point increase in JPMorgan Chase credit spreads.

Debit Valuation Adjustment Sensitivity

(in millions)	1 Basis Point Increase in JPMorgan Chase Credit Spread
December 31, 2007	**$ 38**

Loss advisories and drawdowns
Loss advisories and drawdowns are tools used to highlight to senior management trading losses above certain levels and are used to initiate discussion of remedies.

Economic value stress testing
While VAR reflects the risk of loss due to adverse changes in normal markets, stress testing captures the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm conducts economic-value stress tests for both its trading and its nontrading activities at least once a month using multiple scenarios that assume credit spreads widen significantly, equity prices decline and interest rates rise in the major currencies. Additional scenarios focus on the risks predominant in individual business segments and include scenarios that focus on the potential for adverse moves in complex portfolios. Periodically, scenarios are reviewed and updated to reflect changes in the Firm's risk profile and economic events. Along with VAR, stress testing is important in measuring and controlling risk. Stress testing enhances the understanding of the Firm's risk profile and loss potential, and stress losses are monitored against limits. Stress testing is also utilized in one-off approvals and cross-business risk measurement, as well as an input to economic capital allocation. Stress-test results, trends and explanations are provided each month to the Firm's senior management and to the lines of business to help them better measure and manage risks and to understand event risk-sensitive positions.

Earnings-at-risk stress testing
The VAR and stress-test measures described above illustrate the total economic sensitivity of the Firm's balance sheet to changes in market variables. The effect of interest rate exposure on reported Net income also is important. Interest rate risk exposure in the Firm's core nontrading business activities (i.e., asset/liability management positions) results from on– and off–balance sheet positions. The Firm conducts simulations of changes in NII from its nontrading activities under a variety of interest rate scenarios. Earnings-at-risk tests measure the potential change in the Firm's Net interest income over the next 12 months and highlight exposures to various rate-sensitive factors, such as the rates themselves (e.g., the prime lending rate), pricing strategies on deposits, optionality and changes in product mix. The tests include forecasted balance sheet changes, such as asset sales and securitizations, as well as prepayment and reinvestment behavior.

Earnings-at-risk also can result from changes in the slope of the yield curve, because the Firm has the ability to lend at fixed rates and borrow at variable or short-term fixed rates. Based upon these scenarios, the Firm's earnings would be affected negatively by a sudden and unanticipated increase in short-term rates without a corresponding increase in long-term rates. Conversely, higher long-term rates generally are beneficial to earnings, particularly when the increase is not accompanied by rising short-term rates.

Immediate changes in interest rates present a limited view of risk, and so a number of alternative scenarios also are reviewed. These scenarios include the implied forward curve, nonparallel rate shifts and severe interest rate shocks on selected key rates. These scenarios are intended to provide a comprehensive view of JPMorgan Chase's earnings-at-risk over a wide range of outcomes.

JPMorgan Chase's 12-month pretax earnings sensitivity profile as of December 31, 2007 and 2006, were as follows.

	Immediate change in rates			
(in millions)	+200bp	+100bp	-100bp	-200bp
December 31, 2007	**$ (26)**	**$ 55**	**$(308)**	**$ (664)**
December 31, 2006	$ (101)	$ 28	$ (21)	$ (182)

The primary change in earnings-at-risk from December 31, 2006, reflects increased prepayments on loans and securities due to lower market interest rates. The Firm is exposed to both rising and falling rates. The Firm's risk to rising rates is largely the result of increased funding costs. In contrast, the exposure to falling rates is the result of higher anticipated levels of loan and securities prepayments.

Risk identification for large exposures ("RIFLE")
Individuals who manage risk positions, particularly those that are complex, are responsible for identifying potential losses that could arise from specific, unusual events, such as a potential tax change, and estimating the probabilities of losses arising from such events. This information is entered into the Firm's RIFLE database. Trading management has access to RIFLE, thereby permitting the Firm to monitor further earnings vulnerability not adequately covered by standard risk measures.

Risk monitoring and control

Limits
Market risk is controlled primarily through a series of limits. Limits reflect the Firm's risk appetite in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity, business trends and management experience.

Market risk management regularly reviews and updates risk limits. Senior management, including the Firm's Chief Executive Officer and Chief Risk Officer, is responsible for reviewing and approving risk limits at least once a year.

The Firm maintains different levels of limits. Corporate-level limits include VAR and stress. Similarly, line-of-business limits include VAR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and instrument authorities. Businesses are responsible for adhering to established limits, against which exposures are monitored and reported. Limit breaches are reported in a timely manner to senior management, and the affected business segment is required either to reduce trading positions or consult with senior management on the appropriate action.

Qualitative review
The Market Risk Management group also performs periodic reviews as necessary of both businesses and products with exposure to market risk in order to assess the ability of the businesses to control their market risk. Strategies, market conditions, product details and risk controls are reviewed, and specific recommendations for improvements are made to management.

Model review

Some of the Firm's financial instruments cannot be valued based upon quoted market prices but are instead valued using pricing models. Such models are used for management of risk positions, such as reporting against limits, as well as for valuation. The Model Risk Group, independent of the businesses and market risk management, reviews the models the Firm uses and assesses model appropriateness and consistency. The model reviews consider a number of factors about the model's suitability for valuation and risk management of a particular product, including whether it accurately reflects the characteristics of the transaction and its significant risks, the suitability and convergence properties of numerical algorithms, reliability of data sources, consistency of the treatment with models for similar products, and sensitivity to input parameters and assumptions that cannot be priced from the market.

Reviews are conducted of new or changed models, as well as previously accepted models, to assess whether there have been any changes in the product or market that may impact the model's validity and whether there are theoretical or competitive developments that may require reassessment of the model's adequacy. For a summary of valuations based upon models, see Critical Accounting Estimates used by the Firm on pages 96–98 of this Annual Report.

Risk reporting

Nonstatistical exposures, value-at-risk, loss advisories and limit excesses are reported daily for each trading and nontrading business. Market risk exposure trends, value-at-risk trends, profit and loss changes, and portfolio concentrations are reported weekly. Stress-test results are reported monthly to business and senior management.

PRIVATE EQUITY RISK MANAGEMENT

Risk management

The Firm makes direct principal investments in private equity. The illiquid nature and long-term holding period associated with these investments differentiates private equity risk from the risk of positions held in the trading portfolios. The Firm's approach to managing private equity risk is consistent with the Firm's general risk governance structure. Controls are in place establishing target levels for total and annual investment in order to control the overall size of the portfolio. Industry and geographic concentration limits are in place and intended to ensure diversification of the portfolio. An independent valuation function is responsible for reviewing the appropriateness of the carrying values of private equity investments in accordance with relevant accounting policies. At December 31, 2007 and 2006, the carrying value of the private equity businesses were $7.2 billion and $6.1 billion, respectively, of which $390 million and $587 million, respectively, represented publicly traded positions. For further information on the Private equity portfolio, see page 60 of this Annual Report.

OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, fraudulent acts, business interruptions, inappropriate behavior of employees, or vendors that do not perform in accordance with outsourcing arrangements. These events could result in financial losses and other damage to the Firm, including reputational harm.

To monitor and control operational risk, the Firm maintains a system of comprehensive policies and a control framework designed to provide a sound and well-controlled operational environment. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject. Notwithstanding these control measures, the Firm incurs operational losses.

The Firm's approach to operational risk management is intended to mitigate such losses by supplementing traditional control-based approaches to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

The Firm's operational risk framework is supported by Phoenix, an internally designed operational risk software tool. Phoenix integrates the individual components of the operational risk management framework into a unified, web-based tool. Phoenix enhances the capture, reporting and analysis of operational risk data by enabling risk identification, measurement, monitoring, reporting and analysis to be done in an integrated manner, thereby enabling efficiencies in the Firm's monitoring and management of its operational risk.

For purposes of identification, monitoring, reporting and analysis, the Firm categorizes operational risk events as follows:

- Client service and selection
- Business practices
- Fraud, theft and malice
- Execution, delivery and process management
- Employee disputes
- Disasters and public safety
- Technology and infrastructure failures

Risk identification and measurement
Risk identification is the recognition of the operational risk events that management believes may give rise to operational losses. All businesses utilize the Firm's standard self-assessment process and supporting architecture as a dynamic risk management tool. The goal of the self-assessment process is for each business to identify the key operational risks specific to its environment and assess the degree to which it maintains appropriate controls. Action plans are developed for control issues identified, and businesses are held accountable for tracking and resolving these issues on a timely basis.

Risk monitoring
The Firm has a process for monitoring operational risk-event data, permitting analysis of errors and losses as well as trends. Such analysis, performed both at a line-of-business level and by risk-event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns. The data reported enables the Firm to back-test against self-assessment results. The Firm is a founding member of the Operational Risk Data Exchange, a not-for-profit industry association formed for the purpose of collecting operational loss data, sharing data in an anonymous form and benchmarking results back to members. Such information supplements the Firm's ongoing operational risk analysis.

Risk reporting and analysis
Operational risk management reports provide timely and accurate information, including information about actual operational loss levels and self-assessment results, to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and support areas.

Audit alignment
Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. Audit partners with business management and members of the control community in providing guidance on the operational risk framework and reviews the effectiveness and accuracy of the business self-assessment process as part of its business unit audits.

REPUTATION AND FIDUCIARY RISK MANAGEMENT

A firm's success depends not only on its prudent management of the liquidity, credit, market and operational risks that are part of its business risks, but equally on the maintenance among many constituents – clients, investors, regulators, as well as the general public – of a reputation for business practices of the highest quality. Attention to reputation always has been a key aspect of the Firm's practices, and maintenance of reputation is the responsibility of everyone at the Firm. JPMorgan Chase bolsters this individual responsibility in many ways, including through the Firm's Code of Conduct, training, maintaining adherence to policies and procedures, and oversight functions that approve transactions. These oversight functions include a Conflicts Office, which examines wholesale transactions with the potential to create conflicts of interest for the Firm, and regional reputation risk review committees, which review certain transactions with clients, especially complex derivatives and structured finance transactions, that have the potential to affect adversely the Firm's reputation. These regional committees, whose members are senior representatives of business and control function in the region, focus on the purpose and effect of its transactions from the client's point of view, with the goal that these transactions are not used to mislead investors or others.

Fiduciary risk management
The risk management committees within each line of business include in their mandate the oversight of the legal, reputational and, where appropriate, fiduciary risks in their businesses that may produce significant losses or reputational damage. The Fiduciary Risk Management function works with the relevant line-of-business risk committees with the goal of ensuring that businesses providing investment or risk management products or services that give rise to fiduciary duties to clients perform at the appropriate standard relative to their fiduciary relationship with a client. Of particular focus are the policies and practices that address a business' responsibilities to a client, including client suitability determination; disclosure obligations and communications; and performance expectations with respect to risk management products or services being provided by the Firm that give rise to such fiduciary duties. In this way, the relevant line-of-business risk committees, together with the Fiduciary Risk Management function, provide oversight of the Firm's efforts to monitor, measure and control the risks that may arise in the delivery of the products or services to clients that give rise to such duties, as well as those stemming from any of the Firm's fiduciary responsibilities to employees under the Firm's various employee benefit plans.

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the valuation of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the valuation of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the wholesale and consumer loan portfolios as well as the Firm's portfolio of wholesale lending-related commitments. The allowance for credit losses is intended to adjust the value of the Firm's loan assets for probable credit losses as of the balance sheet date. For further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Note 15 on pages 138–139 of this Annual Report.

Wholesale loans and lending-related commitments

The methodology for calculating both the Allowance for loan losses and the Allowance for lending-related commitments involves significant judgment. First and foremost, it involves the early identification of credits that are deteriorating. Second, it involves judgment in establishing the inputs used to estimate the allowances. Third, it involves management judgment to evaluate certain macroeconomic factors, underwriting standards, and other relevant internal and external factors affecting the credit quality of the current portfolio and to refine loss factors to better reflect these conditions.

The Firm uses a risk rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength and the industry and geography in which the obligor operates. These factors are based upon an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm to that loan.

The Firm applies its judgment to establish loss factors used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances. Many factors can affect estimates of loss, including volatility of loss given default, probability of default and rating migrations. Consideration is given as to whether the loss estimates should be calculated as an average over the entire credit cycle or at a particular point in the credit cycle, as well as to which external data should be used and when they should be used. Choosing data that are not reflective of the Firm's specific loan portfolio characteristics could also affect loss estimates. The application of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the loss factors derived, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors by creating estimated ranges using historical experience of both loss given default and probability of default. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based upon management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

As noted on page 77 of this Annual Report, the Firm's wholesale allowance is sensitive to the risk rating assigned to a loan. Assuming a one-notch downgrade in the Firm's internal risk ratings for its entire Wholesale portfolio, the Allowance for loan losses for the Wholesale portfolio would increase by approximately $1.5 billion as of December 31, 2007. This sensitivity analysis is hypothetical. In the Firm's view, the likelihood of a one-notch downgrade for all wholesale loans within a short timeframe is remote. The purpose of this analysis is to provide an indication of the impact of risk ratings on the estimate of the Allowance for loan losses for wholesale loans. It is not intended to imply management's expectation of future deterioration in risk ratings. Given the process the Firm follows in determining the risk ratings of its loans, management believes the risk ratings currently assigned to wholesale loans are appropriate.

Consumer loans

For consumer loans, the Allowance for loan losses is calculated for individual pools of loans with similar risk characteristics utilizing a methodology that is intended to estimate losses that have occurred, but are not yet apparent in the loan portfolios. Significant management judgment is involved in determining the allowance for loan losses. The allowance is sensitive to changes in the economic environment, delinquency status, credit bureau scores, the realizable value of collateral, borrower behavior and other risk factors. Significant differences in management's expectations for these factors could have a significant impact on the estimation of the allowance for loan losses.

The allowance is determined by applying statistical loss factors and other risk indicators to pools of loans by asset type to arrive at an estimate of incurred losses in the portfolio. Management applies judgment to the statistical loss estimates for each loan portfolio category using delinquency trends and other risk characteristics to estimate charge-offs. Management utilizes additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate.

The statistical calculation is adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but are not yet reflected in the factors used to derive the statistical calculation, and is accomplished in part by analyzing the historical loss experience for each major product segment. Management applies its judgment within estimated ranges in determining this adjustment. The estimated ranges and the determination of the appropriate point within the range are based upon management's judgment related to uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, and other relevant internal and external factors affecting the credit quality of the portfolio.

Fair value of financial instruments, MSRs and commodities inventory

A portion of JPMorgan Chase's assets and liabilities are carried at fair value, including trading assets and liabilities, AFS securities, certain loans, MSRs, private equity investments, structured notes and certain repurchase and resale agreements. Held-for-sale loans and physical commodities are carried at the lower of cost or fair value. At December 31, 2007, approximately $635.5 billion of the Firm's assets were recorded at fair value.

Fair value is based upon quoted market prices, where available. If listed prices or quotes are not available, fair value is based upon internally developed models that primarily use as inputs market-based or independently sourced market parameters. The Firm ensures that all applicable inputs are appropriately calibrated to market data, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models also incorporate transaction details, such as maturity. Fair value adjustments, including credit (counterparties' and the Firm's), liquidity, and input parameter uncertainty are included, as appropriate, to the model value to arrive at a fair value measurement. For further information, see Note 4 and Note 5 on pages 111–118 and 119–121, respectively, of this Annual Report.

On January 1, 2007, the Firm adopted SFAS 157, which established a three-level valuation hierarchy for disclosure of fair value measurements. An instrument's categorization within the hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Therefore, for instruments classified in level 1 and 2 of the hierarchy where inputs are principally based on observable market data, there is less judgment applied in arriving at a fair value measurement. For instruments classified within level 3 of the hierarchy, judgments are more significant. In arriving at an estimate of fair value for an instrument within level 3 management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs. Finally, management judgment must be applied to assess the appropriate level of valuation adjustments, where relevant. The judgments made are typically affected by the type of product and its specific contractual terms and the level of liquidity for the product or within the market as a whole.

The following table summarizes the Firm's assets accounted for at fair value on a recurring basis by level within the valuation hierarchy at December 31, 2007.

December 31, 2007	Debt and equity securities	Derivative receivables[a]	AFS securities	Mortgage servicing rights	Private equity	Other[b]	Total[a]
Level 1	49%	2%	84%	—%	1%	25%	21%
Level 2	45	96	16	—	5	48	74
Level 3	6	2	—	100	94	27	5
Total	100%	100%	100%	100%	100%	100%	100%
Total assets held at fair value on the balance sheet (in billions)	$ 414.3	$ 77.1	$ 85.4	$ 8.6	$ 7.2	$ 42.9	$ 635.5
Level 3 assets as a percentage of total Firm assets[c]							5%

(a) Based upon gross mark-to-market valuation of the Firm's derivatives portfolio prior to netting positions pursuant to FIN 39, as cross-product netting is not relevant to an analysis based upon valuation methodologies.
(b) Includes securities purchased under resale agreements, Loans (excluding loans classified within Trading assets – Debt and equity instruments), and certain retained interests in securitizations. For further information, see Note 4 on pages 111–118 of this Annual Report.
(c) Includes level 3 assets accounted for at fair value on a recurring basis and at the lower of cost or fair value.

Instruments for which unobservable inputs are significant to their fair value measurement include certain loans (including purchased non-performing loans, leveraged loans and unfunded commitments, and subprime loans); certain residual or retained interests in securitizations and less liquid securities including certain MBS assets; certain complex and structured derivative transactions, MSRs, and nonpublic private equity.

The Firm reviews and updates the fair value hierarchy classifications on a quarterly basis. Changes from one quarter to the next related to the observability of inputs to a fair value measurement may result in a reclassification between hierarchy levels.

Level 3 assets (including assets measured at the lower of cost or fair value) were 5% of total Firm assets at December 31, 2007. These assets increased during 2007 principally during the second half of the year, when liquidity in mortgages and other credit products fell

dramatically. The increase was primarily due to an increase in leveraged loan balances within level 3 as the ability of the Firm to syndicate this risk to third parties became limited by the credit environment. In addition, there were transfers from level 2 to level 3 during 2007. These transfers were principally for instruments within the mortgage market where inputs which are significant to their valuation became unobservable during the year. Subprime and Alt-A whole loans, subprime home equity securities, commercial mortgage-backed mezzanine loans and credit default swaps referenced to asset-backed securities constituted the majority of the affected instruments, reflecting a significant decline in liquidity in these instruments in the third and fourth quarters of 2007, as new issue activity was nonexistent and independent pricing information was no longer available for these assets.

To ensure that fair valuations are appropriate, the Firm has numerous controls in place to ensure that its fair valuations are appropriate. An independent model review group reviews the Firm's valuation models and approves them for use for specific products. All valuation models within the Firm are subject to this review process. A price verification group, independent from the risk taking functions, ensures observable market prices and market-based parameters are used for valuation wherever possible. For those products with material parameter risk for which observable market levels do not exist, an independent review of the assumptions made on pricing is performed. Additional review includes deconstruction of the model valuations for certain structured instruments into their components, and benchmarking valuations, where possible, to similar products; validating valuation estimates through actual cash settlement; and detailed review and explanation of recorded gains and losses, which are analyzed daily and over time. Valuation adjustments, which are also determined by the independent price verification group, are based upon established policies and are applied consistently over time. Any changes to the valuation methodology are reviewed by management to confirm the changes are justified. As markets and products develop and the pricing for certain products becomes more or less transparent, the Firm continues to refine its valuation methodologies.

Imprecision in estimating unobservable market inputs can impact the amount of revenue or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date. For a detailed discussion of the determination of fair value for individual financial instruments, see Note 4 on pages 111–118 of this Annual Report.

Goodwill impairment

Under SFAS 142, goodwill must be allocated to reporting units and tested for impairment. The Firm tests goodwill for impairment at least annually, and more frequently if events or circumstances, such as adverse changes in the business climate, indicate that there may be justification for conducting an interim test. Impairment testing is performed at the reporting-unit level (which is generally one level below the six major business segments identified in Note 34 on pages 175–177 of this Annual Report, plus Private Equity which is included in Corporate). The first part of the test is a comparison, at the reporting unit level, of the fair value of each reporting unit to its carrying amount, including goodwill. If the fair value is less than the carrying value, then the second part of the test is needed to measure the amount of potential goodwill impairment. The implied fair value of the reporting unit goodwill is calculated and compared with the carrying amount of goodwill recorded in the Firm's financial records. If the carrying value of reporting unit goodwill exceeds the implied fair value of that goodwill, then the Firm would recognize an impairment loss in the amount of the difference, which would be recorded as a charge against Net income.

The fair values of the reporting units are determined using discounted cash flow models based upon each reporting unit's internal forecasts. Management applies significant judgment when determining the fair value of its reporting units. Imprecision in estimating the future earnings potential of the Firm's reporting units can impact their estimated fair values. To assess the reasonableness of the valuations derived from the discounted cash flow models, the Firm also analyzes market-based trading and transaction multiples, where available. These trading and transaction comparables are used to assess the reasonableness of the estimated fair values, as observable market information is generally not available.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of its accounting for income taxes, including the provision for income tax expense and its unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events.

Disputes over interpretations with the various taxing authorities may be settled upon audit or administrative appeals. In some cases, the Firm's interpretations of tax laws may be subject to adjudication by the court systems of the tax jurisdictions in which it operates. The Firm's consolidated federal income tax returns are presently under examination by the Internal Revenue Service ("IRS") for the years 2003, 2004 and 2005. The consolidated federal income tax returns of heritage Bank One Corporation, which merged with and into JPMorgan Chase on July 1, 2004, are under examination for the years 2000 through 2003, and for the period January 1, 2004, through July 1, 2004. Both examinations are expected to conclude in the latter part of 2008. The IRS audit of the 2006 consolidated federal income tax return has not yet commenced. Certain administrative appeals are pending with the IRS relating to prior examination periods, for JPMorgan Chase for the years 2001 and 2002, and for Bank One and its predecessor entities for various periods from 1996 through 1999. For years prior to 2001, refund claims relating to income and credit adjustments, and to tax attribute carrybacks, for JPMorgan Chase and its predecessor entities, including Bank One, either have been or will be filed. Also, interest rate swap valuations by a Bank One predecessor entity for the years 1990 through 1993 are, and have been the subject of litigation in both the Tax Court and the U.S. Court of Appeals.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. The reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective tax rate in the period in which it occurs.

Accounting for uncertainty in income taxes
In June 2006, the FASB issued FIN 48, which clarifies the accounting for uncertainty regarding income taxes recognized under SFAS 109. FIN 48 addresses the recognition and measurement of tax positions taken or expected to be taken, and also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods and disclosure. The Firm adopted and applied FIN 48 under the transition provisions to all of its income tax positions at the required effective date of January 1, 2007, resulting in a $436 million cumulative effect increase to Retained earnings, a reduction in Goodwill of $113 million and a $549 million decrease in the liability for income taxes. For additional information related to the Firm's adoption of FIN 48, see Note 26 on page 164 of this Annual Report.

Changes in timing of cash flows related to income taxes generated by a leveraged lease
In July 2006, the FASB issued FSP FAS 13-2. FSP FAS 13-2 requires the recalculation of returns on leveraged leases if there is a change or projected change in the timing of cash flows relating to income taxes generated by a leveraged lease. The Firm adopted FSP FAS 13-2 at the required effective date of January 1, 2007. Implementation of FSP FAS 13-2 did not have a significant impact on the Firm's Consolidated balance sheet and results of operations.

Fair value measurements – adoption of SFAS 157
In September 2006, the FASB issued SFAS 157, which is effective for fiscal years beginning after November 15, 2007, with early adoption permitted. SFAS 157 defines fair value, establishes a framework for measuring fair value, and expands disclosures about assets and liabilities measured at fair value. JPMorgan Chase chose early adoption for SFAS 157 effective January 1, 2007 and recorded a cumulative effect increase to Retained earnings of $287 million, primarily related to the release of profit previously deferred in accordance with EITF 02-3. The adoption of SFAS 157 primarily affected IB and the Private Equity business within Corporate. For additional information related to the Firm's adoption of SFAS 157, see Note 4 on pages 111–118 of this Annual Report.

Fair value option for financial assets and financial liabilities – adoption of SFAS 159
In February 2007, the FASB issued SFAS 159, which is effective for fiscal years beginning after November 15, 2007, with early adoption permitted. SFAS 159 provides the option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments and written loan commitments. JPMorgan Chase chose early adoption for SFAS 159 effective January 1, 2007, and as a result, it recorded a cumulative effect increase to Retained earnings of $199 million. For additional information related to the Firm's adoption of SFAS 159, see Note 5 on page 119–121 of this Annual Report.

Derivatives netting – amendment of FASB Interpretation No. 39
In April 2007, the FASB issued FSP FIN 39-1, which permits offsetting of cash collateral receivables or payables with net derivative positions under certain circumstances. The Firm adopted FSP FIN 39-1 effective January 1, 2008. The FSP did not have a material impact on the Firm's Consolidated balance sheet.

Investment companies
In June 2007, the AICPA issued SOP 07-1. SOP 07-1 provides guidance for determining whether an entity is within the scope of the AICPA Audit and Accounting Guide *Investment Companies* (the "Guide"), and therefore qualifies to use the Guide's specialized accounting principles (referred to as "investment company accounting"). Additionally, SOP 07-1 provides guidelines for determining whether investment company accounting should be retained by a parent company in consolidation or by an equity method investor in an investment. In May 2007, the FASB issued FSP FIN 46(R)-7, which amends FIN 46R to permanently exempt entities within the scope of the Guide from applying the provisions of FIN 46R to their investments. In February 2008, the FASB agreed to an indefinite delay of the effective date of SOP 07-1 in order to address implementation issues, which effectively delays FSP FIN 46(R)-7 as well for those companies, such as the Firm, that have not adopted SOP 07-1.

Accounting for income tax benefits of dividends on share-based payment awards
In June 2007, the FASB ratified EITF 06-11, which must be applied prospectively for dividends declared in fiscal years beginning after December 15, 2007. EITF 06-11 requires that realized tax benefits from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings should be recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards. Prior to the issuance of EITF 06-11, the Firm did not include these tax benefits as part of this pool of excess tax benefits. The Firm adopted EITF 06-11 on January 1, 2008. The adoption of this consensus did not have an impact on the Firm's Consolidated balance sheet or results of operations.

Fair value measurements – written loan commitments
On November 5, 2007, the Securities and Exchange Commission ("SEC") issued SAB 109, which revises and rescinds portions of SAB 105, "Application of Accounting Principles to Loan Commitments." Specifically, SAB 109 states that the expected net future cash flows related to the associated servicing of the loan should be included in the measurement of all written loan commitments that are accounted for at fair value through earnings. The provisions of SAB 109 are applicable to written loan commitments issued or modified beginning on January 1, 2008. JPMorgan Chase does not expect the impact of adopting SAB 109 to be material.

Business combinations / Noncontrolling interests in consolidated financial statements
On December 4, 2007, the FASB issued SFAS 141R and SFAS 160, which amend the accounting and reporting of business combinations, as well as noncontrolling (i.e., minority) interests. JPMorgan Chase is currently evaluating the impact that SFAS 141R and SFAS 160 will have on its consolidated financial statements. For JPMorgan Chase, SFAS 141R is effective for business combinations that close on or after January 1, 2009. SFAS 160 is effective for JPMorgan Chase for fiscal years beginning on or after December 15, 2008.

NONEXCHANGE-TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, which are primarily based upon internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2007.

For the year ended December 31, 2007 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2007	$ 5,830	$ 3,906
Effect of legally enforceable master netting agreements	19,671	19,980
Gross fair value of contracts outstanding at January 1, 2007	25,501	23,886
Contracts realized or otherwise settled	(13,716)	(13,227)
Fair value of new contracts	18,699	16,962
Changes in fair values attributable to changes in valuation techniques and assumptions	—	—
Other changes in fair value	3,714	4,145
Gross fair value of contracts outstanding at December 31, 2007	34,198	31,766
Effect of legally enforceable master netting agreements	(26,108)	(25,957)
Net fair value of contracts outstanding at December 31, 2007	$ 8,090	$ 5,809

The following table indicates the schedule of maturities of nonexchange-traded commodity derivative contracts at December 31, 2007.

December 31, 2007 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 11,958	$ 10,662
Maturity 1–3 years	15,057	12,370
Maturity 4–5 years	5,484	3,804
Maturity in excess of 5 years	1,699	4,930
Gross fair value of contracts outstanding at December 31, 2007	34,198	31,766
Effects of legally enforceable master netting agreements	(26,108)	(25,957)
Net fair value of contracts outstanding at December 31, 2007	$ 8,090	$ 5,809

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the SEC. In addition, the Firm's senior management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements.

- local, regional and international business, economic and political conditions and geopolitical events;
- changes in trade, monetary and fiscal policies and laws;
- securities and capital markets behavior, including changes in market liquidity and volatility;
- changes in investor sentiment or consumer spending or saving behavior;
- ability of the Firm to manage effectively its liquidity;
- credit ratings assigned to the Firm or its subsidiaries;
- the Firm's reputation;
- ability of the Firm to deal effectively with an economic slowdown or other economic or market difficulty;
- technology changes instituted by the Firm, its counterparties or competitors;
- mergers and acquisitions, including the Firm's ability to integrate acquisitions;
- ability of the Firm to develop new products and services;
- acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to increase market share;
- ability of the Firm to attract and retain employees;
- ability of the Firm to control expense;
- competitive pressures;
- changes in the credit quality of the Firm's customers;
- adequacy of the Firm's risk management framework;
- changes in laws and regulatory requirements or adverse judicial proceedings;
- changes in applicable accounting policies;
- ability of the Firm to determine accurate values of certain assets and liabilities;
- occurrence of natural or man-made disasters or calamities or conflicts;
- the other risks and uncertainties detailed in Part 1, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2007.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

JPMorgan Chase & Co.

Management of JPMorgan Chase & Co. is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2007. In making the assessment, management used the framework in "Internal Control – Integrated Framework" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2007, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2007.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2007, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Michael J. Cavanagh
Executive Vice President and Chief Financial Officer

February 20, 2008

PRICEWATERHOUSECOOPERS
PRICEWATERHOUSECOOPERS LLP • 300 MADISON AVENUE • NEW YORK, NY 10017

Report of Independent Registered Public Accounting Firm
To the Board of Directors and Stockholders of
JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, changes in stockholders' equity and comprehensive income and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2007 and 2006, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2007 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2007, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting." Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As discussed in Note 4, Note 5, and Note 26 to the consolidated financial statements, effective January 1, 2007 the Firm adopted Statement of Financial Accounting Standards No. 157, "Fair Value Measurement," Statement of Financial Accounting Standards No. 159, "Fair Value Option for Financial Assets and Financial Liabilities," and FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes."

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



February 20, 2008

CONSOLIDATED STATEMENTS OF INCOME

JPMorgan Chase & Co.

Year ended December 31, (in millions, except per share data)	2007	2006	2005
Revenue			
Investment banking fees	**$ 6,635**	$ 5,520	$ 4,088
Principal transactions	**9,015**	10,778	8,072
Lending & deposit-related fees	**3,938**	3,468	3,389
Asset management, administration and commissions	**14,356**	11,855	9,988
Securities gains (losses)	**164**	(543)	(1,336)
Mortgage fees and related income	**2,118**	591	1,054
Credit card income	**6,911**	6,913	6,754
Other income	**1,829**	2,175	2,684
Noninterest revenue	**44,966**	40,757	34,693
Interest income	**71,387**	59,107	45,075
Interest expense	**44,981**	37,865	25,520
Net interest income	**26,406**	21,242	19,555
Total net revenue	**71,372**	61,999	54,248
Provision for credit losses	**6,864**	3,270	3,483
Noninterest expense			
Compensation expense	**22,689**	21,191	18,065
Occupancy expense	**2,608**	2,335	2,269
Technology, communications and equipment expense	**3,779**	3,653	3,602
Professional & outside services	**5,140**	4,450	4,662
Marketing	**2,070**	2,209	1,917
Other expense	**3,814**	3,272	6,199
Amortization of intangibles	**1,394**	1,428	1,490
Merger costs	**209**	305	722
Total noninterest expense	**41,703**	38,843	38,926
Income from continuing operations before income tax expense	**22,805**	19,886	11,839
Income tax expense	**7,440**	6,237	3,585
Income from continuing operations	**15,365**	13,649	8,254
Income from discontinued operations	**—**	795	229
Net income	**$15,365**	$ 14,444	$ 8,483
Net income applicable to common stock	**$15,365**	$ 14,440	$ 8,470
Per common share data			
Basic earnings per share			
Income from continuing operations	**$ 4.51**	$ 3.93	$ 2.36
Net income	**4.51**	4.16	2.43
Diluted earnings per share			
Income from continuing operations	**4.38**	3.82	2.32
Net income	**4.38**	4.04	2.38
Average basic shares	**3,404#**	3,470#	3,492#
Average diluted shares	**3,508**	3,574	3,557
Cash dividends per common share	**$ 1.48**	$ 1.36	$ 1.36

The Notes to consolidated financial statements are an integral part of these statements.

CONSOLIDATED BALANCE SHEETS

JPMorgan Chase & Co.

December 31, (in millions, except share data)	2007	2006
Assets		
Cash and due from banks	**$ 40,144**	$ 40,412
Deposits with banks	**11,466**	13,547
Federal funds sold and securities purchased under resale agreements (included $19,131 at fair value at December 31, 2007)	**170,897**	140,524
Securities borrowed	**84,184**	73,688
Trading assets (included assets pledged of $79,229 at December 31, 2007, and $82,474 at December 31, 2006)	**491,409**	365,738
Securities (included $85,406 and $91,917 at fair value at December 31, 2007 and 2006, respectively, and assets pledged of $3,958 and $39,571 at December 31, 2007 and 2006, respectively)	**85,450**	91,975
Loans (included $8,739 at fair value at December 31, 2007)	**519,374**	483,127
Allowance for loan losses	**(9,234)**	(7,279)
Loans, net of Allowance for loan losses	**510,140**	475,848
Accrued interest and accounts receivable	**24,823**	22,891
Premises and equipment	**9,319**	8,735
Goodwill	**45,270**	45,186
Other intangible assets:		
Mortgage servicing rights	**8,632**	7,546
Purchased credit card relationships	**2,303**	2,935
All other intangibles	**3,796**	4,371
Other assets (included $22,151 at fair value at December 31, 2007)	**74,314**	58,124
Total assets	**$ 1,562,147**	$ 1,351,520
Liabilities		
Deposits (included $6,389 at fair value at December 31, 2007)	**$ 740,728**	$ 638,788
Federal funds purchased and securities sold under repurchase agreements (included $5,768 at fair value at December 31, 2007)	**154,398**	162,173
Commercial paper	**49,596**	18,849
Other borrowed funds (included $10,777 at fair value at December 31, 2007)	**28,835**	18,053
Trading liabilities	**157,867**	147,957
Accounts payable, accrued expense and other liabilities (including the Allowance for lending-related commitments of $850 and $524 at December 31, 2007 and 2006, respectively, and $25 at fair value at December 31, 2007)	**94,476**	88,096
Beneficial interests issued by consolidated variable interest entities (included $3,004 at fair value at December 31, 2007)	**14,016**	16,184
Long-term debt (included $70,456 and $25,370 at fair value at December 31, 2007 and 2006, respectively)	**183,862**	133,421
Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities	**15,148**	12,209
Total liabilities	**1,438,926**	1,235,730
Commitments and contingencies (see Note 29 on pages 167–168 of this Annual Report)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares at December 31, 2007 and 2006; issued 0 shares at December 31, 2007 and 2006)	**—**	—
Common stock ($1 par value; authorized 9,000,000,000 shares at December 31, 2007 and 2006; issued 3,657,671,234 shares and 3,657,786,282 shares at December 31, 2007 and 2006, respectively)	**3,658**	3,658
Capital surplus	**78,597**	77,807
Retained earnings	**54,715**	43,600
Accumulated other comprehensive income (loss)	**(917)**	(1,557)
Treasury stock, at cost (290,288,540 shares and 196,102,381 shares at December 31, 2007 and 2006, respectively)	**(12,832)**	(7,718)
Total stockholders' equity	**123,221**	115,790
Total liabilities and stockholders' equity	**$ 1,562,147**	$ 1,351,520

The Notes to consolidated financial statements are an integral part of these statements.

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME

JPMorgan Chase & Co.

Year ended December 31, (in millions, except per share data)	2007	2006	2005
Preferred stock			
Balance at beginning of year	**$ —**	$ 139	$ 339
Redemption of preferred stock	**—**	(139)	(200)
Balance at end of year	**—**	—	139
Common stock			
Balance at beginning of year	**3,658**	3,618	3,585
Issuance of common stock	**—**	40	33
Balance at end of year	**3,658**	3,658	3,618
Capital surplus			
Balance at beginning of year	**77,807**	74,994	72,801
Shares issued and commitments to issue common stock for employee stock-based compensation awards and related tax effects	**790**	2,813	2,193
Balance at end of year	**78,597**	77,807	74,994
Retained earnings			
Balance at beginning of year	**43,600**	33,848	30,209
Cumulative effect of change in accounting principles	**915**	172	—
Balance at beginning of year, adjusted	**44,515**	34,020	30,209
Net income	**15,365**	14,444	8,483
Cash dividends declared:			
Preferred stock	**—**	(4)	(13)
Common stock ($1.48, $1.36 and $1.36 per share for 2007, 2006 and 2005, respectively)	**(5,165)**	(4,860)	(4,831)
Balance at end of year	**54,715**	43,600	33,848
Accumulated other comprehensive income (loss)			
Balance at beginning of year	**(1,557)**	(626)	(208)
Cumulative effect of change in accounting principles	**(1)**	—	—
Balance at beginning of year, adjusted	**(1,558)**	(626)	(208)
Other comprehensive income (loss)	**641**	171	(418)
Adjustment to initially apply SFAS 158	**—**	(1,102)	—
Balance at end of year	**(917)**	(1,557)	(626)
Treasury stock, at cost			
Balance at beginning of year	**(7,718)**	(4,762)	(1,073)
Purchase of treasury stock	**(8,178)**	(3,938)	(3,412)
Reissuance from treasury stock	**3,199**	1,334	—
Share repurchases related to employee stock-based compensation awards	**(135)**	(352)	(277)
Balance at end of year	**(12,832)**	(7,718)	(4,762)
Total stockholders' equity	**$123,221**	$115,790	$107,211
Comprehensive income			
Net income	**$ 15,365**	$ 14,444	$ 8,483
Other comprehensive income (loss)	**641**	171	(418)
Comprehensive income	**$ 16,006**	$ 14,615	$ 8,065

The Notes to consolidated financial statements are an integral part of these statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

JPMorgan Chase & Co.

Year ended December 31, (in millions)	2007	2006	2005
Operating activities			
Net income	**$ 15,365**	$ 14,444	$ 8,483
Adjustments to reconcile net income to net cash (used in) provided by operating activities:			
Provision for credit losses	**6,864**	3,270	3,483
Depreciation and amortization	**2,427**	2,149	2,828
Amortization of intangibles	**1,394**	1,428	1,490
Deferred tax expense (benefit)	**1,307**	(1,810)	(1,791)
Investment securities (gains) losses	**(164)**	543	1,336
Gains on disposition of businesses	**—**	(1,136)	(1,254)
Stock-based compensation	**2,025**	2,368	1,563
Originations and purchases of loans held-for-sale	**(116,471)**	(178,355)	(108,611)
Proceeds from sales and securitizations of loans held-for-sale	**105,731**	170,874	102,602
Net change in:			
Trading assets	**(121,240)**	(61,664)	(3,845)
Securities borrowed	**(10,496)**	916	(27,290)
Accrued interest and accounts receivable	**(1,932)**	(1,170)	(1,934)
Other assets	**(21,628)**	(7,193)	1,352
Trading liabilities	**12,681**	(4,521)	(12,578)
Accounts payable, accrued expense and other liabilities	**4,284**	7,815	5,532
Other operating adjustments	**9,293**	2,463	(1,602)
Net cash used in operating activities	**(110,560)**	(49,579)	(30,236)
Investing activities			
Net change in:			
Deposits with banks	**2,081**	8,168	104
Federal funds sold and securities purchased under resale agreements	**(29,814)**	(6,939)	(32,469)
Held-to-maturity securities:			
Proceeds	**14**	19	33
Available-for-sale securities:			
Proceeds from maturities	**31,143**	24,909	31,053
Proceeds from sales	**98,450**	123,750	82,902
Purchases	**(122,507)**	(201,530)	(81,749)
Proceeds from sales and securitizations of loans held-for-investment	**34,925**	20,809	23,861
Other changes in loans, net	**(83,437)**	(70,837)	(40,436)
Net cash received (used) in business acquisitions or dispositions	**(70)**	185	(1,039)
All other investing activities, net	**(3,903)**	1,839	4,796
Net cash used in investing activities	**(73,118)**	(99,627)	(12,944)
Financing activities			
Net change in:			
Deposits	**113,512**	82,105	31,415
Federal funds purchased and securities sold under repurchase agreements	**(7,833)**	36,248	(1,862)
Commercial paper and other borrowed funds	**41,412**	12,657	2,618
Proceeds from the issuance of long-term debt and capital debt securities	**95,141**	56,721	43,721
Repayments of long-term debt and capital debt securities	**(49,410)**	(34,267)	(26,883)
Net proceeds from the issuance of stock and stock-related awards	**1,467**	1,659	682
Excess tax benefits related to stock-based compensation	**365**	302	—
Redemption of preferred stock	**—**	(139)	(200)
Treasury stock purchased	**(8,178)**	(3,938)	(3,412)
Cash dividends paid	**(5,051)**	(4,846)	(4,878)
All other financing activities, net	**1,561**	6,247	3,868
Net cash provided by financing activities	**182,986**	152,749	45,069
Effect of exchange rate changes on cash and due from banks	**424**	199	(387)
Net (decrease) increase in cash and due from banks	**(268)**	3,742	1,502
Cash and due from banks at the beginning of the year	**40,412**	36,670	35,168
Cash and due from banks at the end of the year	**$ 40,144**	$ 40,412	$ 36,670
Cash interest paid	**$ 43,472**	$ 36,415	$ 24,583
Cash income taxes paid	**7,472**	5,563	4,758

Note: In 2006, the Firm exchanged selected corporate trust businesses for The Bank of New York's consumer, business banking and middle-market banking businesses. The fair values of the noncash assets exchanged was $2.15 billion.

The Notes to consolidated financial statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing and asset management. For a discussion of the Firm's business segment information, see Note 34 on pages 175–177 of this Annual Report.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the United States of America ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by bank regulatory authorities.

Certain amounts in the prior periods have been reclassified to conform to the current presentation.

Consolidation

The consolidated financial statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

The most usual condition for a controlling financial interest is the ownership of a majority of the voting interests of the entity. However, a controlling financial interest also may be deemed to exist with respect to entities, such as special purpose entities ("SPEs"), through arrangements that do not involve controlling voting interests.

SPEs are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. For example, they are critical to the functioning of the mortgage- and asset-backed securities and commercial paper markets. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction describe how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

There are two different accounting frameworks applicable to SPEs: the qualifying SPE ("QSPE") framework under SFAS 140 and the variable interest entity ("VIE") framework under FIN 46R. The applicable framework depends on the nature of the entity and the Firm's relation to that entity. The QSPE framework is applicable when an entity transfers (sells) financial assets to an SPE meeting certain criteria defined in SFAS 140. These criteria are designed to ensure that the activities of the entity are essentially predetermined at the inception of the vehicle and that the transferor of the financial assets cannot exercise control over the entity and the assets therein. Entities meeting these criteria are not consolidated by the transferor or other counterparties as long as they do not have the unilateral ability to liquidate or to cause the entity to no longer meet the QSPE criteria. The Firm primarily follows the QSPE model for securitizations of its residential and commercial mortgages, and credit card, automobile and education loans. For further details, see Note 16 on pages 139–145 of this Annual Report.

When an SPE does not meet the QSPE criteria, consolidation is assessed pursuant to FIN 46R. Under FIN 46R, a VIE is defined as an entity that: (1) lacks enough equity investment at risk to permit the entity to finance its activities without additional subordinated financial support from other parties; (2) has equity owners that lack the right to make significant decisions affecting the entity's operations; and/or (3) has equity owners that do not have an obligation to absorb the entity's losses or the right to receive the entity's returns.

FIN 46R requires a variable interest holder (i.e., a counterparty to a VIE) to consolidate the VIE if that party will absorb a majority of the expected losses of the VIE, receive the majority of the expected residual returns of the VIE, or both. This party is considered the primary beneficiary. In making this determination, the Firm thoroughly evaluates the VIE's design, capital structure and relationships among the variable interest holders. When the primary beneficiary cannot be identified through a qualitative analysis, the Firm performs a quantitative analysis, which computes and allocates expected losses or residual returns to variable interest holders. The allocation of expected cash flows in this analysis is based upon the relative rights and preferences of each variable interest holder in the VIE's capital structure. The Firm reconsiders whether it is the primary beneficiary of a VIE when certain events occur as required by FIN 46R. For further details, see Note 17 on pages 146–154 of this Annual Report.

All retained interests and significant transactions between the Firm, QSPEs and nonconsolidated VIEs are reflected on JPMorgan Chase's Consolidated balance sheets and in the Notes to consolidated financial statements.

Investments in companies that are considered to be voting-interest entities under FIN 46R in which the Firm has significant influence over operating and financing decisions are either accounted for in accordance with the equity method of accounting or at fair value if elected under SFAS 159 ("Fair Value Option"). These investments are generally included in Other assets with income or loss included in Other income.

For a discussion of the accounting for Private equity investments, see Note 6 on page 122 of this Annual Report.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included in the Consolidated balance sheets.

Use of estimates in the preparation of consolidated financial statements

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, of revenue and expense, and of disclosures of contingent assets and liabilities. Actual results could be different from these estimates. For discussion of Critical accounting estimates used by the Firm, see pages 96–98 of this Annual Report.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in foreign (i.e., non-U.S.) currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in Other comprehensive income (loss) within Stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated statements of income.

Statements of cash flows

For JPMorgan Chase's Consolidated statements of cash flows, cash is defined as those amounts included in Cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Fair value measurement	Note 4	Page 111
Fair value option	Note 5	Page 119
Principal transactions activities	Note 6	Page 122
Other noninterest revenue	Note 7	Page 123
Pension and other postretirement employee benefit plans	Note 9	Page 124
Employee stock-based incentives	Note 10	Page 131
Noninterest expense	Note 11	Page 134
Securities	Note 12	Page 134
Securities financing activities	Note 13	Page 136
Loans	Note 14	Page 137
Allowance for credit losses	Note 15	Page 138
Loan securitizations	Note 16	Page 139
Variable interest entities	Note 17	Page 146
Goodwill and other intangible assets	Note 18	Page 154
Premises and equipment	Note 19	Page 158
Income taxes	Note 26	Page 164
Commitments and contingencies	Note 29	Page 167
Accounting for derivative instruments and hedging activities	Note 30	Page 168
Off–balance sheet lending-related financial instruments and guarantees	Note 31	Page 170

Note 2 – Business changes and developments

Purchase of additional interest in Highbridge Capital Management

In January 2008, JPMorgan Chase acquired an additional equity interest in Highbridge Capital Management, LLC ("Highbridge"), a manager of hedge funds with $27 billion of assets under management. As a result, the Firm owns 77.5% of Highbridge as of January 2008. The Firm had acquired a majority interest in Highbridge in 2004.

Acquisition of the consumer, business banking and middle-market banking businesses of The Bank of New York in exchange for selected corporate trust businesses, including trustee, paying agent, loan agency and document management services

On October 1, 2006, JPMorgan Chase completed the acquisition of The Bank of New York Company, Inc.'s ("The Bank of New York") consumer, business banking and middle-market banking businesses in exchange for selected corporate trust businesses plus a cash payment of $150 million. The Firm also may make a future payment to The Bank of New York of up to $50 million depending on certain new account openings. The acquisition added 339 branches and more than 400 ATMs, and it significantly strengthened Retail Financial Services' distribution network in the New York tri-state area. The Bank of New York businesses acquired were valued at a premium of $2.3 billion; the Firm's corporate trust businesses that were transferred (i.e., trustee, paying agent, loan agency and document management services) were valued at a premium of $2.2 billion. This transaction included the acquisition of approximately $7.7 billion in loans net of Allowance for loan losses and $12.9 billion in deposits from The Bank of New York. The Firm also recognized core deposit intangibles of $485 million which will be amortized using an accelerated method over a 10-year period. JPMorgan Chase recorded an after-tax gain of $622 million related to this transaction in the fourth quarter of 2006. For additional discussion related to the transaction, see Note 3 on page 110 of this Annual Report.

JPMorgan Partners management

On August 1, 2006, the buyout and growth equity professionals of JPMorgan Partners ("JPMP") formed an independent firm, CCMP Capital, LLC ("CCMP"), and the venture professionals separately formed an independent firm, Panorama Capital, LLC ("Panorama"). The investment professionals of CCMP and Panorama continue to manage the former JPMP investments pursuant to a management agreement with the Firm.

Sale of insurance underwriting business

On July 1, 2006, JPMorgan Chase completed the sale of its life insurance and annuity underwriting businesses to Protective Life Corporation for cash proceeds of approximately $1.2 billion, consisting of $900 million of cash received from Protective Life Corporation and approximately $300 million of preclosing dividends received from the entities sold. The after-tax impact of this transaction was negligible. The sale included both the heritage Chase insurance business and the insurance business that Bank One had bought from Zurich Insurance in 2003.

Acquisition of private-label credit card portfolio from Kohl's Corporation

On April 21, 2006, JPMorgan Chase completed the acquisition of $1.6 billion of private-label credit card receivables and approximately 21 million accounts from Kohl's Corporation ("Kohl's"). JPMorgan Chase and Kohl's have also entered into an agreement under which JPMorgan Chase will offer private-label credit cards to both new and existing Kohl's customers.

Collegiate Funding Services

On March 1, 2006, JPMorgan Chase acquired, for approximately $663 million, Collegiate Funding Services, a leader in education loan servicing and consolidation. This acquisition included $6 billion of education loans and will enable the Firm to create a comprehensive education finance business.

BrownCo

On November 30, 2005, JPMorgan Chase sold BrownCo, an on-line deep-discount brokerage business, to E*TRADE Financial for a cash purchase price of $1.6 billion. JPMorgan Chase recognized an after-tax gain of $752 million on the sale. BrownCo's results of operations were reported in the Asset Management business segment; however, the gain on the sale, which was recorded in Other income in the Consolidated statements of income, was reported in the Corporate business segment.

Sears Canada credit card business

On November 15, 2005, JPMorgan Chase purchased Sears Canada Inc.'s credit card operation, including both private-label card accounts and co-branded Sears MasterCard® accounts, aggregating approximately 10 million accounts with $2.2 billion (CAD$2.5 billion) in managed loans. Sears Canada and JPMorgan Chase entered into an ongoing arrangement under which JPMorgan Chase will offer private-label and co-branded credit cards to both new and existing customers of Sears Canada.

Chase Merchant Services, Paymentech integration

On October 5, 2005, JPMorgan Chase and First Data Corp. completed the integration of the companies' jointly owned Chase Merchant Services and Paymentech merchant businesses, to be operated under the name Chase Paymentech Solutions, LLC. The joint venture is a financial transaction processor for businesses accepting credit card payments via traditional point of sale, Internet, catalog and recurring billing. As a result of the integration into a joint venture, Paymentech has been deconsolidated and JPMorgan Chase's ownership interest in this joint venture is accounted for in accordance with the equity method of accounting.

Cazenove

On February 28, 2005, JPMorgan Chase and Cazenove Group plc ("Cazenove") formed a business partnership which combined Cazenove's investment banking business and JPMorgan Chase's U.K.-based investment banking business in order to provide investment banking services in the United Kingdom and Ireland. The new company is called JPMorgan Cazenove Holdings.

Note 3 – Discontinued operations

On October 1, 2006, JPMorgan Chase completed the acquisition of The Bank of New York's consumer, small-business and middle-market banking businesses in exchange for selected corporate trust businesses plus a cash payment of $150 million. The Firm may also make a future payment to The Bank of New York of up to $50 million depending on certain new account openings.

The transfer of selected corporate trust businesses to The Bank of New York (see Note 2 above) included the trustee, paying agent, loan agency and document management services businesses. JPMorgan Chase recognized an after-tax gain of $622 million on this transaction. The results of operations of these corporate trust businesses were transferred from the Treasury & Securities Services ("TSS") segment to the Corporate segment effective with the second quarter of 2006, and reported as discontinued operations. Condensed financial information of the selected corporate trust businesses follows.

Selected income statements data[a]

Year ended December 31, (in millions)	2006	2005
Other noninterest revenue	$ 407	$ 509
Net interest income	264	276
Gain on sale of discontinued operations	1,081	—
Total net revenue	1,752	785
Noninterest expense	385	409
Income from discontinued operations before income taxes	1,367	376
Income tax expense	572	147
Income from discontinued operations	$ 795	$ 229

(a) There was no income from discontinued operations during 2007.

The following is a summary of the assets and liabilities associated with the selected corporate trust businesses related to the Bank of New York transaction that closed on October 1, 2006.

Selected balance sheet data (in millions)

	October 1, 2006
Goodwill and other intangibles	$ 838
Other assets	547
Total assets	$ 1,385
Deposits	$ 24,011
Other liabilities	547
Total liabilities	$ 24,558

JPMorgan Chase provides certain transitional services to The Bank of New York for a defined period of time after the closing date. The Bank of New York compensates JPMorgan Chase for these transitional services.

Note 4 – Fair value measurement

In September 2006, the FASB issued SFAS 157 ("Fair Value Measurements"), which is effective for fiscal years beginning after November 15, 2007, with early adoption permitted. The Firm chose early adoption for SFAS 157 effective January 1, 2007. SFAS 157:

- Defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, and establishes a framework for measuring fair value;
- Establishes a three-level hierarchy for fair value measurements based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date;
- Nullifies the guidance in EITF 02-3, which required the deferral of profit at inception of a transaction involving a derivative financial instrument in the absence of observable data supporting the valuation technique;
- Eliminates large position discounts for financial instruments quoted in active markets and requires consideration of the Firm's creditworthiness when valuing liabilities; and
- Expands disclosures about instruments measured at fair value.

The Firm also chose early adoption for SFAS 159 effective January 1, 2007. SFAS 159 provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments and written loan commitments not previously recorded at fair value. The Firm elected fair value accounting for certain assets and liabilities not previously carried at fair value. For more information, see Note 5 on pages 119–121 of this Annual Report.

Following is a description of the Firm's valuation methodologies for assets and liabilities measured at fair value. Such valuation methodologies were applied to all of the assets and liabilities carried at fair value effective January 1, 2007, whether as a result of the adoption of SFAS 159 or previously carried at fair value.

The Firm has an established and well-documented process for determining fair values. Fair value is based upon quoted market prices, where available. If listed prices or quotes are not available, fair value is based upon internally developed models that primarily use, as inputs, market-based or independently sourced market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models also incorporate transaction details, such as maturity. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. These adjustments include amounts to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters that are applied consistently over time.

- Credit valuation adjustments ("CVA") are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few classes of derivative contracts are listed on an exchange, the majority of derivative positions are valued using internally developed models that use as their basis observable market parameters. Market practice is to quote parameters equivalent to an "AA" credit rating; thus, all counterparties are assumed to have the same credit quality. Therefore, an adjustment is necessary to reflect the credit quality of each derivative counterparty to arrive at fair value.
- Debit valuation adjustments ("DVA") are necessary to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. This adjustment was incorporated into the Firm's valuations commencing January 1, 2007, in accordance with SFAS 157. The methodology to determine the adjustment is consistent with CVA and incorporates JPMorgan Chase's credit spread as observed through the credit default swap market.
- Liquidity valuation adjustments are necessary when the Firm may not be able to observe a recent market price for a financial instrument that trades in inactive (or less active) markets or to reflect the cost of exiting larger-than-normal market-size risk positions (liquidity adjustments are not taken for positions classified within level 1 of the fair value hierarchy). The Firm tries to ascertain the amount of uncertainty in the initial valuation based upon the degree of liquidity of the market in which the financial instrument trades and makes liquidity adjustments to the carrying value of the financial instrument. The Firm measures the liquidity adjustment based upon the following factors: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quote; and (3) the volatility of the principal risk component of the financial instrument. Costs to exit larger-than-normal market-size risk positions are determined based upon the size of the adverse market move that is likely to occur during the period required to bring a position down to a nonconcentrated level.
- Unobservable parameter valuation adjustments are necessary when positions are valued using internally developed models that use as their basis unobservable parameters – that is, parameters that must be estimated and are, therefore, subject to management judgment. These positions are normally traded less actively. Examples include certain credit products where parameters such as correlation and recovery rates are unobservable. Unobservable parameter valuation adjustments are applied to mitigate the possibility of error and revision in the estimate of the market price provided by the model.

The Firm has numerous controls in place intended to ensure that its fair valuations are appropriate. An independent model review group reviews the Firm's valuation models and approves them for use for specific products. All valuation models within the Firm are subject to this review process. A price verification group, independent from the risk taking function, ensures observable market prices and market-based parameters are used for valuation wherever possible. For those products with material parameter risk for which observable market levels do not exist, an independent review of the assumptions made

on pricing is performed. Additional review includes deconstruction of the model valuations for certain structured instruments into their components, and benchmarking valuations, where possible, to similar products; validating valuation estimates through actual cash settlement; and detailed review and explanation of recorded gains and losses, which are analyzed daily and over time. Valuation adjustments, which are also determined by the independent price verification group, are based upon established policies and are applied consistently over time. Any changes to the valuation methodology are reviewed by management to confirm the changes are justified. As markets and products develop and the pricing for certain products becomes more or less transparent, the Firm continues to refine its valuation methodologies.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Valuation Hierarchy

SFAS 157 establishes a three-level valuation hierarchy for disclosure of fair value measurements. The valuation hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

Following is a description of the valuation methodologies used for instruments measured at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Assets

Securities purchased under resale agreements ("resale agreements")

To estimate the fair value of resale agreements, cash flows are evaluated taking into consideration any derivative features of the resale agreement and are then discounted using the appropriate market rates for the applicable maturity. As the inputs into the valuation are primarily based upon readily observable pricing information, such resale agreements are generally classified within level 2 of the valuation hierarchy.

Loans and unfunded lending-related commitments

The fair value of corporate loans and unfunded lending-related commitments is calculated using observable market information including pricing from actual market transactions or broker quotations where available. Where pricing information is not available for the specific loan, the valuation is generally based upon quoted market prices of similar instruments, such as loans and bonds. These comparable instruments share characteristics that typically include industry, rating, capital structure, seniority, and consideration of counterparty credit risk. In addition, general market conditions, including prevailing market spreads for credit and liquidity risk, are also considered in the valuation process.

For certain loans that are expected to be securitized, such as commercial and residential mortgages, fair value is estimated based upon observable pricing of asset-backed securities with similar collateral and incorporates adjustments (i.e., reductions) to these prices to account for securitization uncertainties including portfolio composition, market conditions and liquidity to arrive at the whole loan price. When data from recent market transactions is available it is incorporated as appropriate. If particular loans are determined to be impaired because of poor borrower performance and hence are not qualified for securitization, they are marked for individual sale with consideration of potential liquidation proceeds and property repossession/liquidation information, as appropriate.

The Firm's loans carried at fair value and reported in Trading assets are generally classified within level 2 of the valuation hierarchy, although subprime loans reside in level 3. Loans carried at fair value and reported within Loans are predominantly classified within level 3 due to the lack of observable pricing. These loans include leveraged lending funded loans, high-yield bridge financing and purchased nonperforming loans.

Securities

Where quoted prices are available in an active market, securities are classified in level 1 of the valuation hierarchy. Level 1 securities included highly liquid government bonds, mortgage products for which there are quoted prices in active markets and exchange-traded equities. If quoted market prices are not available for the specific security, then fair values are estimated by using pricing models, quoted prices of securities with similar characteristics or discounted cash flows. Examples of such instruments are collateralized mortgage obligations and high-yield debt securities which would generally be classified within level 2 of the valuation hierarchy. In certain cases where there is limited activity or less transparency around inputs to the valuation, securities are classified within level 3 of the valuation hierarchy. For instance, in the valuation of certain collateralized mortgage and debt obligations and high-yield debt securities the determination of fair value may require benchmarking to similar instruments or analyzing default and recovery rates. For cash collateralized debt obligations ("CDOs"), external price information is not available. Therefore, cash CDOs are valued using market-standard models, such as Intex, to model the specific collateral composition and cash flow structure of each deal; key inputs to the model are market spreads data for each credit rating, collateral type and other relevant contractual features. Asset-backed securities are valued based on external prices or spread data, using current

market assumptions on prepayments and defaults. For those asset-backed securities where the external price data is not observable or the limited available data is opaque, the collateral performance is monitored and the value of the security is reviewed versus the ABX index, an index of mortgage-backed securities backed by subprime mortgages.

Commodities

Commodities inventory is carried at the lower of cost or fair value. The fair value for commodities inventory is determined primarily using pricing and data derived from the markets on which the underlying commodities are traded. Market prices may be adjusted for liquidity. The Firm also has positions in commodity-based derivatives that can be traded on an exchange or over-the-counter. The pricing inputs to these derivatives include forward curves of underlying commodities, basis curves, volatilities, correlations, and occasionally other model parameters. The valuation of these derivatives is based upon calibrating to market transactions, as well as to independent pricing information from sources such as brokers and dealer consensus pricing services. Where inputs are unobservable, they are benchmarked to observable market data based upon historic and implied correlations, then adjusted for uncertainty where appropriate. The majority of commodities inventory and commodities-based derivatives are classified within level 2 of the valuation hierarchy.

Derivatives

Exchange-traded derivatives valued using quoted prices are classified within level 1 of the valuation hierarchy. However, few classes of derivative contracts are listed on an exchange; thus, the majority of the Firm's derivative positions are valued using internally developed models that use as their basis readily observable market parameters – that is, parameters that are actively quoted and can be validated to external sources, including industry pricing services. Depending on the types and contractual terms of derivatives, fair value can be modeled using a series of techniques, such as the Black-Scholes option pricing model, simulation models or a combination of various models, which are consistently applied. Where derivative products have been established for some time, the Firm uses models that are widely accepted in the financial services industry. These models reflect the contractual terms of the derivatives, including the period to maturity, and market-based parameters such as interest rates, volatility, and the credit quality of the counterparty. Further, many of these models do not contain a high level of subjectivity as the methodologies used in the models do not require significant judgment, and inputs to the model are readily observable from actively quoted markets, as is the case for "plain vanilla" interest rate swaps and option contracts and credit default swaps. Such instruments are generally classified within level 2 of the valuation hierarchy.

Derivatives that are valued based upon models with significant unobservable market parameters and that are normally traded less actively, have trade activity that is one way, and/or are traded in less-developed markets are classified within level 3 of the valuation hierarchy. Level 3 derivatives include credit default swaps referenced to mortgage-backed securities, where valuations are benchmarked to implied spreads from similar underlying loans in the cash market, as well as relevant observable market indices. In addition, the prepayment and loss assumptions on the underlying loans are priced using a combination of historical data, prices on market transactions, and other prepayment and default scenarios and analysis. Other complex products, such as those sensitive to correlation between two or more underlyings, also fall within level 3 of the hierarchy. For instance, the correlation sensitivity is material to the overall valuation of options on baskets of single name stocks; the valuation of these instruments are typically not observable due to the customized nature. Correlation for products such as these are typically estimated based on an observable basket of stocks, then adjusted to reflect the differences between the underlying equities.

Mortgage servicing rights and certain retained interests in securitizations

Mortgage servicing rights ("MSRs") and certain retained interests from securitization activities do not trade in an active, open market with readily observable prices. While sales of MSRs do occur, the precise terms and conditions typically are not readily available. Accordingly, the Firm estimates the fair value of MSRs and certain other retained interests in securitizations using discounted cash flow ("DCF") models.

- For MSRs, the Firm uses an option adjusted spread ("OAS") valuation model in conjunction with the Firm's proprietary prepayment model to project MSR cash flows over multiple interest rate scenarios, which are then discounted at risk-adjusted rates to estimate an expected fair value of the MSRs. The OAS model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenue, costs to service and other economic factors. The Firm reassesses and periodically adjusts the underlying inputs and assumptions used in the OAS model to reflect market conditions and assumptions that a market participant would consider in valuing the MSR asset. Due to the nature of the valuation inputs, MSRs are classified within level 3 of the valuation hierarchy.
- For certain retained interests in securitizations (such as interest-only strips), a single interest rate path DCF model is used and generally includes assumptions based upon projected finance charges related to the securitized assets, estimated net credit losses, prepayment assumptions and contractual interest paid to third-party investors. Changes in the assumptions used may have a significant impact on the Firm's valuation of retained interests and such interests are therefore typically classified within level 3 of the valuation hierarchy.

For both MSRs and certain other retained interests in securitizations, the Firm compares its fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience. For further discussion of the most significant assumptions used to value retained interests in securitizations and MSRs, as well as the applicable stress tests for those assumptions, see Note 16 on pages 139–145 and Note 18 on pages 154–156 of this Annual Report.

Private equity investments

The valuation of nonpublic private equity investments, held primarily by the Private Equity business within Corporate, requires significant management judgment due to the absence of quoted market prices, inherent lack of liquidity and the long-term nature of such assets. As such, private equity investments are valued initially based upon cost. Each quarter, valuations are reviewed utilizing available market data to determine if the carrying value of these investments should be adjusted. Such market data primarily includes observations of the trading multiples of public companies considered comparable to the private companies being valued. Valuations are adjusted to account for company-specific issues, the lack of liquidity inherent in a nonpublic investment and the fact that comparable public companies are not identical to the companies being valued. Such valuation adjustments are necessary because in the absence of a committed buyer and completion of due diligence similar to that performed in an actual negotiated sale process, there may be company-specific issues that are not fully known that may affect value. In addition, a variety of additional factors are reviewed by management, including, but not limited to, financing and sales transactions with third parties, current operating performance and future expectations of the particular investment, changes in market outlook and the third-party financing environment. The Firm applies its valuation methodology consistently from period to period, and the Firm believes that its valuation methodology and associated valuation adjustments are appropriate and similar to those used by other market participants. Nonpublic private equity investments are included in level 3 of the valuation hierarchy.

Private equity investments also include publicly held equity investments, generally obtained through the initial public offering of privately held equity investments. Publicly held investments in liquid markets are marked-to-market at the quoted public value less adjustments for regulatory or contractual sales restrictions. Discounts for restrictions are quantified by analyzing the length of the restriction period and the volatility of the equity security. Publicly held investments are primarily classified in level 2 of the valuation hierarchy.

Liabilities

Securities sold under repurchase agreements ("repurchase agreements")

To estimate the fair value of repurchase agreements, cash flows are evaluated taking into consideration any derivative features and are then discounted using the appropriate market rates for the applicable maturity. As the inputs into the valuation are primarily based upon observable pricing information, repurchase agreements are classified within level 2 of the valuation hierarchy.

Beneficial interests issued by consolidated VIEs

The fair value of beneficial interests issued by consolidated VIEs (beneficial interests) is estimated based upon the fair value of the underlying assets held by the VIEs. The valuation of beneficial interests does not include an adjustment to reflect the credit quality of the Firm as the holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. As the inputs into the valuation are generally based upon readily observable pricing information, the majority of beneficial interests issued by consolidated VIEs are classified within level 2 of the valuation hierarchy.

Deposits, Other borrowed funds and Long-term debt

Included within Deposits, Other borrowed funds and Long-term debt are structured notes issued by the Firm that are financial instruments containing embedded derivatives. To estimate the fair value of structured notes, cash flows are evaluated taking into consideration any derivative features and are then discounted using the appropriate market rates for the applicable maturities. In addition, the valuation of structured notes includes an adjustment to reflect the credit quality of the Firm (i.e., the DVA). Where the inputs into the valuation are primarily based upon readily observable pricing information, the structured notes are classified within level 2 of the valuation hierarchy. Where significant inputs are unobservable, structured notes are classified within level 3 of the valuation hierarchy.

The following table presents the financial instruments carried at fair value as of December 31, 2007, by caption on the Consolidated balance sheet and by SFAS 157 valuation hierarchy (as described above).

Assets and liabilities measured at fair value on a recurring basis

December 31, 2007 (in millions)	Quoted market prices in active markets (Level 1)	Internal models with significant observable market parameters (Level 2)	Internal models with significant unobservable market parameters (Level 3)	FIN 39 netting[d]	Total carrying value in the Consolidated balance sheet
Federal funds sold and securities purchased under resale agreements	$ —	$ 19,131	$ —	$ —	$ 19,131
Trading assets:					
Debt and equity instruments[a][b]	202,483	187,724	24,066	—	414,273
Derivative receivables	18,574	871,105	20,188	(832,731)	77,136
Total trading assets	221,057	1,058,829	44,254	(832,731)	491,409
Available-for-sale securities	71,941	13,364	101	—	85,406
Loans	—	359	8,380	—	8,739
Mortgage servicing rights	—	—	8,632	—	8,632
Other assets:					
Private equity investments	68	322	6,763	—	7,153
All other	10,784	1,054	3,160	—	14,998
Total other assets	10,852	1,376	9,923	—	22,151
Total assets at fair value	$303,850	$ 1,093,059	$ 71,290	$(832,731)	$ 635,468
Deposits	$ —	$ 5,228	$ 1,161	$ —	$ 6,389
Federal funds purchased and securities sold under repurchase agreements	—	5,768	—	—	5,768
Other borrowed funds	—	10,672	105	—	10,777
Trading liabilities:					
Debt and equity instruments	73,023	15,659	480	—	89,162
Derivative payables	19,553	852,055	19,555	(822,458)	68,705
Total trading liabilities	92,576	867,714	20,035	(822,458)	157,867
Accounts payable, accrued expense and other liabilities[c]	—	—	25	—	25
Beneficial interests issued by consolidated VIEs	—	2,922	82	—	3,004
Long-term debt	—	48,518	21,938	—	70,456
Total liabilities at fair value	$ 92,576	$ 940,822	$ 43,346	$(822,458)	$ 254,286

(a) Included loans classified as Trading assets. For additional detail, see Note 6 on page 122 of this Annual Report.
(b) Included physical commodities inventory that are accounted for at the lower of cost or fair value.
(c) Included within Accounts payable, accrued expense and other liabilities is the fair value adjustment for unfunded lending-related commitments.
(d) FIN 39 permits the netting of Derivative receivables and Derivative payables when a legally enforceable master netting agreement exists between the Firm and a derivative counterparty. A master netting agreement is an agreement between two counterparties who have multiple derivative contracts with each other that provide for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

Changes in level 3 recurring fair value measurements

The table below includes a rollforward of the balance sheet amounts for the year ended December 31, 2007 (including the change in fair value), for financial instruments classified by the Firm within level 3 of the valuation hierarchy. When a determination is made to classify a financial instrument within level 3, the determination is based upon the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the valuation hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

	Fair value measurements using significant unobservable inputs[a]					
For the year ended December 31, 2007 (in millions)	Fair value, January 1, 2007	Total realized/unrealized gains/(losses)	Purchases, issuances settlements, net	Transfers in and/or out of Level 3	Fair value, December 31, 2007	Change in unrealized gains and (losses) related to financial instruments held at December 31, 2007
Assets:						
Trading assets:						
Debt and equity instruments	$ 9,320	$ (916)[b][c]	$ 5,902	$ 9,760	$ 24,066	$ (912)[b][c]
Net Derivative receivables	(2,800)	1,674[b]	257	1,502	633	1,979[b]
Available-for-sale securities	177	38[d]	(21)	(93)	101	(5)[d]
Loans	643	(346)[b]	8,013	70	8,380	(36)[b]
Other assets:						
Private equity investments	5,493	4,051[b]	(2,764)	(17)	6,763	1,711[b]
All other	1,591	37[e]	1,059	473	3,160	(19)[e]
Liabilities:						
Deposits	$ (385)	$ (42)[b]	$ (667)	$ (67)[f]	$ (1,161)	$ (38)[b]
Other borrowed funds	—	(67)	(34)	(4)[f]	(105)	(135)
Trading liabilities:						
Debt and equity instruments	(32)	383[b]	(125)	(706)[f]	(480)	(734)[b]
Accounts payable, accrued expense and other liabilities	—	(460)[b]	435	—	(25)	(25)[b]
Beneficial interests issued by consolidated VIEs	(8)	6	1	(81)[f]	(82)	—
Long-term debt	(11,386)	(1,142)[b]	(6,633)	(2,777)[f]	(21,938)	(468)[b]

(a) MSRs are classified within level 3 of the valuation hierarchy. For a rollforward of balance sheet amounts related to MSRs, see Note 18 on pages 154–157 of this Annual Report.
(b) Reported in Principal transactions revenue.
(c) Changes in fair value for Retail Financial Services mortgage loans originated with the intent to sell are measured at fair value under SFAS 159 and reported in Mortgage fees and related income.
(d) Realized gains (losses) are reported in Securities gains (losses). Unrealized gains (losses) are reported in Accumulated other comprehensive income (loss).
(e) Reported in Other income.
(f) Represents a net transfer of a liability balance.

Assets and liabilities measured at fair value on a nonrecurring basis

Certain assets, liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, the instruments are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment). The following table presents the financial instruments carried on the Consolidated balance sheet by caption and by level within the SFAS 157 valuation hierarchy (as described above) as of December 31, 2007, for which a nonrecurring change in fair value has been recorded during the year ended December 31, 2007.

December 31, 2007 (in millions)	Quoted market prices in active markets (Level 1)	Internal models with significant observable market parameters (Level 2)	Internal models with significant unobservable market parameters (Level 3)	Total carrying value in the Consolidated balance sheet
Loans[a]	$ —	$ 2,818	$ 16,196	$ 19,014
Other assets	—	267	126	393
Total assets at fair value on a nonrecurring basis	$ —	$ 3,085	$ 16,322	$ 19,407
Accounts payable, accrued expense and other liabilities	$ —	$ —	$ 103	$ 103[b]
Total liabilities at fair value on a nonrecurring basis	$ —	$ —	$ 103	$ 103

(a) Includes debt financing and other loan warehouses held-for-sale.
(b) Represents the fair value adjustment associated with $3.2 billion of unfunded held-for-sale lending-related commitments.

Nonrecurring fair value changes

The following table presents the total change in value of financial instruments for which a fair value adjustment has been included in the Consolidated statement of income for the year ended December 31, 2007, related to financial instruments held at December 31, 2007.

Year ended December 31, 2007

(in millions)	2007
Loans	$ (720)
Other assets	(161)
Accounts payable, accrued expense and other liabilities	2
Total nonrecurring fair value gains (losses)	$ (879)

In the above table, Loans principally include changes in fair value for loans carried on the balance sheet at the lower of cost or fair value; and Accounts payable, accrued expense and other liabilities principally includes the change in fair value for unfunded lending-related commitments within the leveraged lending portfolio.

Level 3 assets analysis

Level 3 assets (including assets measured at the lower of cost or fair value) were 5% of total Firm assets at December 31, 2007. These assets increased during 2007 principally during the second half of the year, when liquidity in mortgages and other credit products fell dramatically. The increase was primarily due to an increase in leveraged loan balances within level 3 as the ability of the Firm to syndicate this risk to third parties became limited by the credit environment. In addition, there were transfers from level 2 to level 3 during 2007. These transfers were principally for instruments within the mortgage market where inputs which are significant to their valuation became unobservable during the year. Subprime and Alt-A whole loans, subprime home equity securities, commercial mortgage-backed mezzanine loans and credit default swaps referenced to asset-backed securities constituted the majority of the affected instruments, reflecting a significant decline in liquidity in these instruments in the third and fourth quarters of 2007, as new issue activity was nonexistent and independent pricing information was no longer available for these assets.

Transition

In connection with the initial adoption of SFAS 157, the Firm recorded the following on January 1, 2007:

- A cumulative effect increase to Retained earnings of $287 million, primarily related to the release of profit previously deferred in accordance with EITF 02-3;
- An increase to pretax income of $166 million ($103 million after-tax) related to the incorporation of the Firm's creditworthiness in the valuation of liabilities recorded at fair value; and
- An increase to pretax income of $464 million ($288 million after-tax) related to valuations of nonpublic private equity investments.

Prior to the adoption of SFAS 157, the Firm applied the provisions of EITF 02-3 to its derivative portfolio. EITF 02-3 precluded the recognition of initial trading profit in the absence of: (a) quoted market prices, (b) observable prices of other current market transactions or (c) other observable data supporting a valuation technique. In accordance with EITF 02-3, the Firm recognized the deferred profit in Principal transactions revenue on a systematic basis (typically straight-line amortization over the life of the instruments) and when observable market data became available.

Prior to the adoption of SFAS 157 the Firm did not incorporate an adjustment into the valuation of liabilities carried at fair value on the Consolidated balance sheet. Commencing January 1, 2007, in accordance with the requirements of SFAS 157, an adjustment was made to the valuation of liabilities measured at fair value to reflect the credit quality of the Firm.

Prior to the adoption of SFAS 157, privately held investments were initially valued based upon cost. The carrying values of privately held investments were adjusted from cost to reflect both positive and negative changes evidenced by financing events with third-party capital providers. The investments were also subject to ongoing impairment reviews by private equity senior investment professionals. The increase in pretax income related to nonpublic Private equity investments in connection with the adoption of SFAS 157 was due to there being sufficient market evidence to support an increase in fair values using the SFAS 157 methodology, although there had not been an actual third-party market transaction related to such investments.

Financial disclosures required by SFAS 107

SFAS 107 requires disclosure of the estimated fair value of certain financial instruments and the methods and significant assumptions used to estimate their fair values. Many but not all of the financial instruments held by the Firm are recorded at fair value on the Consolidated balance sheets. Financial instruments within the scope of SFAS 107 that are not carried at fair value on the Consolidated balance sheets are discussed below. Additionally, certain financial instruments and all nonfinancial instruments are excluded from the scope of SFAS 107. Accordingly, the fair value disclosures required by SFAS 107 provide only a partial estimate of the fair value of JPMorgan Chase. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which fair value approximates carrying value

Certain financial instruments that are not carried at fair value on the Consolidated balance sheets are carried at amounts that approximate fair value due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks, deposits with banks, federal funds sold, securities purchased under resale agreements with short-dated maturities, securities borrowed, short-term receivables and accrued interest receivable, commercial paper, federal funds purchased, securities sold under repurchase agreements with short-dated maturities, other borrowed funds, accounts payable and accrued liabilities. In addition, SFAS 107 requires that the fair value for deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value. SFAS 107 does not allow for the recognition of the inherent funding value of these instruments.

Financial instruments for which fair value does not approximate carrying value

Loans

The majority of the Firm's loans are not carried at fair value on a recurring basis on the Consolidated balance sheets nor are they actively traded. The following describes the inputs and assumptions that the Firm considers in arriving at an estimate of fair value for the following portfolios of loans.

Wholesale

Fair value for the wholesale loan portfolio is estimated, primarily using the cost of credit derivatives, which is adjusted to account for the differences in recovery rates between bonds, upon which the cost of credit derivatives is based, and loans.

Consumer

- Fair values for consumer installment loans (including automobile financings and consumer real estate), for which market rates for comparable loans are readily available, are based upon discounted cash flows adjusted for prepayments. The discount rate used for consumer installment loans are based on the current market rates adjusted for credit, liquidity and other risks that are applicable to a particular asset class.
- Fair value for credit card receivables is based upon discounted expected cash flows. The discount rates used for credit card receivables incorporate only the effects of interest rate changes, since the expected cash flows already reflect an adjustment for credit risk.

Interest-bearing deposits

Fair values of interest-bearing time deposits are estimated by discounting cash flows using the appropriate market rates for the applicable maturity.

Long-term debt related instruments

Fair value for long-term debt, including the junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities, is based upon current market rates and is adjusted for JPMorgan Chase's credit quality.

Lending-related commitments

The majority of the Firm's unfunded lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets nor are they actively traded. Although there is no liquid secondary market for wholesale commitments, the Firm estimates the fair value of its wholesale lending-related commitments primarily using the cost of credit derivatives (which is adjusted to account for the difference in recovery rates between bonds, upon which the cost of credit derivatives is based, and loans) and loan equivalents (which represent the portion of an unused commitment expected, based upon the Firm's average portfolio historical experience, to become outstanding in the event an obligor defaults). The Firm estimates the fair value of its consumer commitments to extend credit based upon the primary market prices to originate new commitments. It is the change in current primary market prices that provides the estimate of the fair value of these commitments. On this basis, the estimated fair value of the Firm's lending-related commitments at December 31, 2007 and 2006, was a liability of $1.9 billion and $210 million, respectively.

The following table presents the carrying value and estimated fair value of financial assets and liabilities as required by SFAS 107.

	2007			2006		
December 31, (in billions)	Carrying value	Estimated fair value	Appreciation/ (depreciation)	Carrying value	Estimated fair value	Appreciation/ (depreciation)
Financial assets						
Assets for which fair value approximates carrying value	**$ 160.6**	**$ 160.6**	**$ —**	$ 150.5	$ 150.5	$ —
Federal funds sold and securities purchased under resale agreements (included $19.1 at fair value at December 31, 2007)	**170.9**	**170.9**	**—**	140.5	140.5	—
Trading assets	**491.4**	**491.4**	**—**	365.7	365.7	—
Securities	**85.4**	**85.4**	**—**	92.0	92.0	—
Loans	**510.1**	**510.7**	**0.6**	475.8	480.0	4.2
Mortgage servicing rights at fair value	**8.6**	**8.6**	**—**	7.5	7.5	—
Other (included $22.2 at fair value at December 31, 2007)	**66.6**	**67.1**	**0.5**	54.3	54.9	0.6
Total financial assets	**$ 1,493.6**	**$1,494.7**	**$ 1.1**	$ 1,286.3	$ 1,291.1	$ 4.8
Financial liabilities						
Deposits (included $6.4 at fair value at December 31, 2007)	**$ 740.7**	**$ 741.3**	**$ (0.6)**	$ 638.8	$ 638.9	$ (0.1)
Federal funds purchased and securities sold under repurchase agreements (included $5.8 at fair value at December 31, 2007)	**154.4**	**154.4**	**—**	162.2	162.2	—
Commercial paper	**49.6**	**49.6**	**—**	18.8	18.8	—
Other borrowed funds (included $10.8 at fair value at December 31, 2007)	**28.8**	**28.8**	**—**	18.1	18.1	—
Trading liabilities	**157.9**	**157.9**	**—**	148.0	148.0	—
Accounts payable, accrued expense and other liabilities	**89.0**	**89.0**	**—**	82.5	82.5	—
Beneficial interests issued by consolidated VIEs (included $3.0 at fair value at December 31, 2007)	**14.0**	**13.9**	**0.1**	16.2	16.2	—
Long-term debt and Junior subordinated deferrable interest debentures (included $70.5 and $25.4 at fair value at December 31, 2007 and 2006, respectively)	**199.0**	**198.7**	**0.3**	145.6	147.1	(1.5)
Total financial liabilities	**$ 1,433.4**	**$1,433.6**	**$ (0.2)**	$ 1,230.2	$ 1,231.8	$ (1.6)
Net appreciation			**$ 0.9**			$ 3.2

Note 5 – Fair value option

In February 2007, the FASB issued SFAS 159, which is effective for fiscal years beginning after November 15, 2007, with early adoption permitted. The Firm chose early adoption for SFAS 159 effective January 1, 2007. SFAS 159 provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments not previously carried at fair value.

The Firm's fair value elections were intended to mitigate the volatility in earnings that had been created by recording financial instruments and the related risk management instruments on a different basis of accounting or to eliminate the operational complexities of applying hedge accounting. The following table provides detail regarding the Firm's elections by consolidated balance sheet line as of January 1, 2007.

(in millions)	Carrying value of financial instruments as of January 1, 2007[c]	Transition gain/(loss) recorded in Retained earnings[d]	Adjusted carrying value of financial instruments as of January 1, 2007
Federal funds sold and securities purchased under resale agreements	$ 12,970	$ (21)	$ 12,949
Trading assets – Debt and equity instruments	28,841	32	28,873
Loans	759	55	814
Other assets[a]	1,176	14	1,190
Deposits[b]	(4,427)	21	(4,406)
Federal funds purchased and securities sold under repurchase agreements	(6,325)	20	(6,305)
Other borrowed funds	(5,502)	(4)	(5,506)
Beneficial interests issued by consolidated VIEs	(2,339)	5	(2,334)
Long-term debt	(39,025)	198	(38,827)
Pretax cumulative effect of adoption of SFAS 159		320	
Deferred income taxes		(122)	
Reclassification from Accumulated other comprehensive income (loss)		1	
Cumulative effect of adoption of SFAS 159		$ 199	

(a) Included in Other assets are items, such as receivables, that are eligible for the fair value option election but were not elected by the Firm as these assets are not managed on a fair value basis.
(b) Included within Deposits are structured deposits that are carried at fair value pursuant to the fair value option. Other time deposits which are eligible for election, but are not managed on a fair value basis, continue to be carried on an accrual basis. Demand deposits are not eligible for election under the fair value option.
(c) Included in the January 1, 2007, carrying values are certain financial instruments previously carried at fair value by the Firm such as structured liabilities elected pursuant to SFAS 155 and loans purchased as part of the Investment Bank's trading activities.
(d) When fair value elections were made, certain financial instruments were reclassified on the Consolidated balance sheet (for example, warehouse loans were moved from Loans to Trading assets). The transition adjustment for these financial instruments has been included in the line item in which they were classified subsequent to the fair value election.

Elections

The following is a discussion of the primary financial instruments for which fair value elections were made and the basis for those elections:

Loans and unfunded lending-related commitments
On January 1, 2007, the Firm elected to record, at fair value, the following:

- Loans and unfunded lending-related commitments that are extended as part of the Investment Bank's principal investing activities. The transition amount related to these loans included a reversal of the Allowance for loan losses of $56 million.
- Certain Loans held-for-sale. These loans were reclassified to Trading assets – Debt and equity instruments. This election enabled the Firm to record loans purchased as part of the Investment Bank's commercial mortgage securitization activity and proprietary activities at fair value and discontinue SFAS 133 fair value hedge relationships for certain originated loans.

Beginning on January 1, 2007, the Firm chose to elect fair value as the measurement attribute for the following loans originated or purchased after that date:

- Loans purchased or originated as part of the Investment Bank's securitization warehousing activities
- Prime mortgage loans originated with the intent to sell within Retail Financial Services ("RFS")

Warehouse loans elected to be reported at fair value are classified as Trading assets – Debt and equity instruments. For additional information regarding warehouse loans, see Note 16 on pages 139–145 of this Annual Report.

The election to fair value the above loans did not include loans within these portfolios that existed on January 1, 2007, based upon the short holding period of the loans and/or the negligible impact of the elections.

Beginning in the third quarter of 2007, the Firm elected the fair value option for newly originated bridge financing activity in the Investment Bank ("IB"). These elections were made to align further the accounting basis of the bridge financing activities with their related risk management practices. For these activities the loans continue to be classified within Loans on the Consolidated balance sheet; the fair value of the unfunded commitments is recorded within Accounts payable, accrued expense and other liabilities.

Resale and Repurchase Agreements

On January 1, 2007, the Firm elected to record at fair value resale and repurchase agreements with an embedded derivative or a maturity greater than one year. The intent of this election was to mitigate volatility due to the differences in the measurement basis for the agreements (which were previously accounted for on an accrual basis) and the associated risk management arrangements (which are accounted for on a fair value basis). An election was not made for short-term agreements as the carrying value for such agreements generally approximates fair value. For additional information regarding these agreements, see Note 13 on page 136 of this Annual Report.

Structured Notes

The IB issues structured notes as part of its client-driven activities. Structured notes are financial instruments that contain embedded derivatives and are included in Long-term debt. On January 1, 2007, the Firm elected to record at fair value all structured notes not previously elected or eligible for election under SFAS 155. The election was made to mitigate the volatility due to the differences in the measurement basis for structured notes and the associated risk management arrangements and to eliminate the operational burdens of having different accounting models for the same type of financial instrument.

Changes in Fair Value under the Fair Value option election

The following table presents the changes in fair value included in the Consolidated statement of income for the year ended December 31, 2007, for items for which the fair value election was made. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

Year ended December 31, 2007 (in millions)	Principal transactions[b]	Other	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	$ 580	$ —	$ 580
Trading assets:			
Debt and equity instruments, excluding loans	421	(1)[c]	420
Loans reported as trading assets:			
Changes in instrument-specific credit risk	(517)	(157)[c]	(674)
Other changes in fair value	188	1,033[c]	1,221
Loans:			
Changes in instrument-specific credit risk	102	—	102
Other changes in fair value	40	—	40
Other assets	—	30[d]	30
Deposits(a)	(906)	—	(906)
Federal funds purchased and securities sold under repurchase agreements	(78)	—	(78)
Other borrowed funds(a)	(412)	—	(412)
Trading liabilities	(17)	—	(17)
Accounts payable, accrued expense and other liabilities	(460)	—	(460)
Beneficial interests issued by consolidated VIEs	(228)	—	(228)
Long-term debt:			
Changes in instrument-specific credit risk(a)	771	—	771
Other changes in fair value	(2,985)	—	(2,985)

(a) Total changes in instrument-specific credit risk related to structured notes was $806 million for the year ended December 31, 2007, which includes adjustments for structured notes classified within Deposits and Other borrowed funds as well as Long-term debt.
(b) Included in the amounts are gains and losses related to certain financial instruments previously carried at fair value by the Firm such as structured liabilities elected pursuant to SFAS 155 and loans purchased as part of IB trading activities.
(c) Reported in Mortgage Fees and related income.
(d) Reported in Other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings during 2007 that were attributable to changes in instrument-specific credit risk were determined:

- Loans: for floating-rate instruments, changes in value are all attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based upon an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long term debt: changes in value attributable to instrument–specific credit risk were derived principally from observable changes in the Firm's credit spread. The gain for 2007, was attributable to the widening of the Firm's credit spread.
- Resale and repurchase agreements: generally, with a resale or repurchase agreement, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned. As a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2007, for Loans and Long-term debt for which the SFAS 159 fair value option has been elected. The loans were classified in Trading assets – debt and equity instruments or Loans.

December 31, 2007 (in millions)	Remaining aggregate contractual principal amount outstanding	Fair value	Fair value over (under) remaining aggregate contractual principal amount outstanding
Loans			
Performing loans 90 days or more past due			
Loans reported as Trading assets	$ —	$ —	$ —
Loans	11	11	—
Nonaccrual loans			
Loans reported as Trading assets	3,044	1,176	(1,868)
Loans	15	5	(10)
Subtotal	3,070	1,192	(1,878)
All other performing loans			
Loans reported as Trading assets	56,164	56,638	474
Loans	9,011	8,580	(431)
Total loans	$ 68,245	$ 66,410	$ (1,835)
Long-term debt			
Principal protected debt	$ (24,262)	$ (24,033)	$ (229)
Nonprincipal protected debt[(a)]	NA	(46,423)	NA
Total Long-term debt	NA	$ (70,456)	NA
FIN 46R long-term beneficial interests			
Principal protected debt	$ (58)	$ (58)	$ —
Nonprincipal protected debt[(a)]	NA	(2,946)	NA
Total FIN 46R long-term beneficial interests	NA	$ (3,004)	NA

(a) Remaining contractual principal not applicable as the return of principal is based upon performance of an underlying variable, and therefore may not occur in full.

At December 31, 2007, the fair value of unfunded lending-related commitments for which the fair value option was elected was a $25 million liability, which is included in Accounts payable, accrued expense and other liabilities. The contractual amount of such commitments was $1.0 billion.

Note 6 – Principal transactions

Principal transactions revenue consists of realized and unrealized gains and losses from trading activities (including physical commodities inventories that are accounted for at the lower of cost or fair value), changes in fair value associated with financial instruments held by the Investment Bank for which the SFAS 159 fair value option was elected, and loans held-for-sale within the wholesale lines of business. For loans measured at fair value under SFAS 159, origination costs are recognized in the associated expense category as incurred. Principal transactions revenue also includes private equity gains and losses.

The following table presents Principal transactions revenue.

Year ended December 31, (in millions)	**2007**	2006	2005
Trading revenue	**$ 4,736**	$ 9,418	$ 6,263
Private equity gains[a]	**4,279**	1,360	1,809
Principal transactions	**$ 9,015**	$ 10,778	$ 8,072

(a) Includes Private Equity revenue on investments held in the Private Equity business within Corporate and those held in other business segments.

Trading assets and liabilities

Trading assets include debt and equity instruments held for trading purposes that JPMorgan Chase owns ("long" positions), certain loans for which the Firm manages on a fair value basis and has elected the SFAS 159 fair value option and physical commodities inventories that are accounted for at the lower of cost or fair value. Trading liabilities include debt and equity instruments that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase instruments at a future date to cover the short positions. Included in Trading assets and Trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. Trading positions are carried at fair value on the Consolidated balance sheets. For a discussion of the valuation of Trading assets and Trading liabilities, see Note 4 on pages 111–118 of this Annual Report.

The following table presents the fair value of Trading assets and Trading liabilities for the dates indicated.

December 31, (in millions)	**2007**	2006
Trading assets		
Debt and equity instruments:		
U.S. government and federal agency obligations	**$ 36,535**	$ 17,358
U.S. government-sponsored enterprise obligations	**43,838**	28,544
Obligations of state and political subdivisions	**13,090**	9,569
Certificates of deposit, bankers' acceptances and commercial paper	**8,252**	8,204
Debt securities issued by non-U.S. governments	**69,606**	58,387
Corporate debt securities	**51,033**	62,064
Equity securities	**91,212**	86,862
Loans[a]	**57,814**	16,595
Other[b]	**42,893**	22,554
Total debt and equity instruments	**414,273**	310,137
Derivative receivables:[c]		
Interest rate	**36,020**	28,932
Credit derivatives	**22,083**	5,732
Commodity	**9,419**	10,431
Foreign exchange	**5,616**	4,260
Equity	**3,998**	6,246
Total derivative receivables	**77,136**	55,601
Total trading assets	**$491,409**	$365,738
Trading liabilities		
Debt and equity instruments[d]	**$ 89,162**	$ 90,488
Derivative payables:[c]		
Interest rate	**25,542**	22,738
Credit derivatives	**11,613**	6,003
Commodity	**6,942**	7,329
Foreign exchange	**7,552**	4,820
Equity	**17,056**	16,579
Total derivative payables	**68,705**	57,469
Total trading liabilities	**$157,867**	$147,957

(a) The increase from December 31, 2006, is primarily related to loans for which the SFAS 159 fair value option has been elected.
(b) Consists primarily of private-label mortgage-backed securities and asset-backed securities.
(c) Included in Trading assets and Trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. These amounts are reported net of cash received and paid of $34.9 billion and $24.6 billion, respectively, at December 31, 2007, and $23.0 billion and $18.8 billion, respectively, at December 31, 2006, under legally enforceable master netting agreements.
(d) Primarily represents securities sold, not yet purchased.

Average Trading assets and liabilities were as follows for the periods indicated.

Year ended December 31, (in millions)	**2007**	2006	2005
Trading assets – debt and equity instruments	**$ 381,415**	$ 280,079	$ 237,073
Trading assets – derivative receivables	**65,439**	57,368	57,365
Trading liabilities – debt and equity instruments[a]	**$ 94,737**	$ 102,794	$ 93,102
Trading liabilities – derivative payables	**65,198**	57,938	55,723

(a) Primarily represents securities sold, not yet purchased.

Private equity

Private equity investments are recorded in Other assets on the Consolidated balance sheet. The following table presents the carrying value and cost of the Private equity investment portfolio, held by the Private Equity business within Corporate, for the dates indicated.

December 31, (in millions)	**2007**		2006[a]	
	Carrying value	Cost	Carrying value	Cost
Total private equity investments	**$ 7,153**	**$ 6,231**	$ 6,081	$ 7,326

(a) 2006 has been revised to reflect the current presentation.

Private Equity includes investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines. Accordingly, these investments, irrespective of the percentage of equity ownership interest held, are carried on the Consolidated balance sheets at fair value. Realized and unrealized gains and losses arising from changes in value are reported in Principal transactions revenue in the Consolidated statements of income in the period that the gains or losses occur. For a discussion of the valuation of Private equity investments, see Note 4 on pages 111–118 of this Annual Report.

Note 7 – Other noninterest revenue

Investment banking fees

This revenue category includes advisory and equity and debt underwriting fees. Advisory fees are recognized as revenue when the related services have been performed. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee (e.g., the fee is not contingent upon the customer obtaining financing). Underwriting fees are net of syndicate expense. The Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria.

The following table presents the components of Investment banking fees.

Year ended December 31, (in millions)	**2007**	2006	2005
Underwriting:			
Equity	**$ 1,713**	$ 1,179	$ 864
Debt	**2,650**	2,703	1,969
Total Underwriting	**4,363**	3,882	2,833
Advisory	**2,272**	1,638	1,255
Total	**$ 6,635**	$ 5,520	$ 4,088

Lending & deposit-related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based upon exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met.

Mortgage fees and related income

This revenue category primarily reflects Retail Financial Services' mortgage banking revenue, including fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing; the impact of risk management activities associated with the mortgage pipeline, warehouse and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under SFAS 159. For loans measured at fair value under SFAS 159, origination costs are recognized in the associated expense category as incurred. Costs to originate loans held-for-sale and accounted for at the lower of cost or fair value are deferred and recognized as a component of the gain or loss on sale. Net interest income from mortgage loans and securities gains and losses on available-for-sale ("AFS") securities used in mortgage-related risk management activities are not included in Mortgage fees and related income. For a further discussion of MSRs, see Note 18 on pages 154–156 of this Annual Report.

Credit card income

This revenue category includes interchange income from credit and debit cards and servicing fees earned in connection with securitization activities. Volume-related payments to partners and expense for rewards programs are netted against interchange income. Expense related to rewards programs are recorded when the rewards are earned by the customer. Other fee revenue is recognized as earned, except for annual fees, which are deferred and recognized on a straight-line basis over the 12-month period to which they pertain. Direct loan origination costs are also deferred and recognized over a 12-month period.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous affinity organizations and co-brand partners, which grant the Firm exclusive rights to market to the members or customers of such organizations and partners. These organizations and partners endorse the credit card programs and provide their mailing lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to 10 years. The economic incentives the Firm pays to the endorsing organizations and partners typically include payments based upon new account originations, charge volumes, and the cost of the endorsing organizations' or partners' marketing activities and awards.

The Firm recognizes the payments made to the affinity organizations and co-brand partners based upon new account originations as direct loan origination costs. Payments based upon charge volumes are considered by the Firm as revenue sharing with the affinity organizations and co-brand partners, which are deducted from Credit card income as the related revenue is earned. Payments based upon marketing efforts undertaken by the endorsing organization or partner are expensed by the Firm as incurred. These costs are recorded within Noninterest expense.

Note 8 – Interest income and Interest expense

Details of Interest income and Interest expense were as follows.

Year ended December 31, (in millions)	2007	2006	2005
Interest income[a]			
Loans	**$36,660**	$ 33,121	$ 26,056
Securities	**5,232**	4,147	3,129
Trading assets	**17,041**	10,942	9,117
Federal funds sold and securities purchased under resale agreements	**6,497**	5,578	3,562
Securities borrowed	**4,539**	3,402	1,618
Deposits with banks	**1,418**	1,265	660
Interests in purchased receivables[b]	**—**	652	933
Total interest income	**71,387**	59,107	45,075
Interest expense[a]			
Interest-bearing deposits	**21,653**	17,042	9,986
Short-term and other liabilities	**16,142**	14,086	10,002
Long-term debt	**6,606**	5,503	4,160
Beneficial interests issued by consolidated VIEs	**580**	1,234	1,372
Total interest expense	**44,981**	37,865	25,520
Net interest income	**26,406**	21,242	19,555
Provision for credit losses	**6,864**	3,270	3,483
Net interest income after Provision for credit losses	**$19,542**	$ 17,972	$ 16,072

(a) Interest income and Interest expense include the current period interest accruals for financial instruments measured at fair value except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with SFAS 133 absent the SFAS 159 fair value election; for those instruments, all changes in value, including any interest elements, are reported in Principal transactions revenue.

(b) As a result of restructuring certain multi-seller conduits the Firm administers, JPMorgan Chase deconsolidated $29 billion of Interests in purchased receivables, $3 billion of Loans and $1 billion of Securities, and recorded $33 billion of lending-related commitments during the second quarter of 2006.

Note 9 – Pension and other postretirement employee benefit plans

The Firm's defined benefit pension plans are accounted for in accordance with SFAS 87 and SFAS 88, and its other postretirement employee benefit ("OPEB") plans are accounted for in accordance with SFAS 106. In September 2006, the FASB issued SFAS 158, which requires companies to recognize on their Consolidated balance sheets the overfunded or underfunded status of their defined benefit postretirement plans, measured as the difference between the fair value of plan assets and the benefit obligation. SFAS 158 requires unrecognized amounts (e.g., net loss and prior service costs) to be recognized in Accumulated other comprehensive income ("AOCI") and that these amounts be adjusted as they are subsequently recognized as components of net periodic benefit cost based upon the current amortization and recognition requirements of SFAS 87 and SFAS 106. The Firm prospectively adopted SFAS 158 on December 31, 2006, and recorded an after-tax charge to AOCI of $1.1 billion at that date.

SFAS 158 also eliminates the provisions of SFAS 87 and SFAS 106 that allow plan assets and obligations to be measured as of a date not more than three months prior to the reporting entity's balance sheet date. The Firm uses a measurement date of December 31 for its defined benefit pension and OPEB plans; therefore, this provision of SFAS 158 had no effect on the Firm's financial statements.

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10 percent of the greater of the projected benefit obligation or the fair value of the plan assets. Any excess, as well as prior service costs, are amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently 10 years. For OPEB plans, any excess net gains and losses also are amortized over the average future service period, which is currently six years; however, prior service costs are amortized over the average years of service remaining to full eligibility age, which is currently four years.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula, in the form of pay and interest credits, to determine the benefits to be provided at retirement, based upon eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after five years of service (effective January 1, 2008, benefits will vest after three years of service). The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based upon factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable employee benefit and local tax laws. The amount of potential 2008 contributions to its U.S. defined benefit pension plans, if any, is not reasonably estimable at this time. The amount of potential 2008 contributions to its non-U.S. defined benefit pension plans is $33 million.

JPMorgan Chase also has a number of defined benefit pension plans not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees earn pay and interest credits on compensation amounts above the maximum stipulated by law under a qualified plan. The Excess Retirement Plan is a nonqualified, noncontributory U.S. pension plan with an unfunded projected benefit obligation in the amount of $262 million and $301 million, at December 31, 2007 and 2006, respectively.

Defined contribution plans

JPMorgan Chase offers several defined contribution plans in the U.S. and in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is The JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. The 401(k) Savings Plan allows employees to make pretax and Roth 401(k) contributions to tax-deferred investment portfolios.

The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan. The Firm matches eligible employee contributions up to a certain percentage of benefits-eligible compensation per pay period, subject to plan and legal limits. Employees begin to receive matching contributions after completing a one-year-of-service requirement and are immediately vested in the Firm's contributions when made. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits ("OPEB") to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with length of service and date of hire and provide for limits on the Firm's share of covered medical benefits. The medical benefits are contributory, while the life insurance benefits are noncontributory. Postretirement medical benefits also are offered to qualifying U.K. employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations and plan assets, funded status and accumulated benefit obligations amounts reported on the Consolidated balance sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans:

As of or for the year ended December 31, (in millions)	Defined benefit pension plans				OPEB plans[d]	
	U.S.		Non-U.S.			
	2007	2006	**2007**	2006	**2007**	2006
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (8,098)**	$ (8,054)	**$ (2,917)**	$ (2,378)	**$ (1,443)**	$ (1,395)
Benefits earned during the year	**(270)**	(281)	**(36)**	(37)	**(7)**	(9)
Interest cost on benefit obligations	**(468)**	(452)	**(144)**	(120)	**(74)**	(78)
Plan amendments	**—**	—	**2**	2	**—**	—
Liabilities of newly material plans	**—**	—	**(5)**	(154)[c]	**—**	—
Employee contributions	**NA**	NA	**(3)**	(2)	**(57)**	(50)
Net gain (loss)	**494**	(200)	**327**	(23)	**231**	(55)
Benefits paid	**789**	856	**90**	68	**165**	177
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(11)**	(13)
Curtailments	**—**	33	**4**	2	**(6)**	(12)
Settlements	**—**	—	**24**	37	**—**	—
Special termination benefits	**—**	—	**(1)**	(1)	**(1)**	(2)
Foreign exchange impact and other	**(3)**	—	**(84)**	(311)	**(1)**	(6)
Benefit obligation, end of year	**$ (7,556)**	$ (8,098)	**$ (2,743)**	$ (2,917)	**$ (1,204)**	$ (1,443)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 9,955**	$ 9,617	**$ 2,813**	$ 2,223	**$ 1,351**	$ 1,329
Actual return on plan assets	**753**	1,151	**57**	94	**87**	120
Firm contributions	**37**	43	**92**	241	**3**	2
Employee contributions	**—**	—	**3**	2	**—**	—
Assets of newly material plans	**—**	—	**3**	67[c]	**—**	—
Benefits paid	**(789)**	(856)	**(90)**	(68)	**(35)**	(100)
Settlements	**—**	—	**(24)**	(37)	**—**	—
Foreign exchange impact and other	**4**	—	**79**	291	**—**	—
Fair value of plan assets, end of year	**$ 9,960**[b]	$ 9,955[b]	**$ 2,933**	$ 2,813	**$ 1,406**	$ 1,351
Funded (unfunded) status[a]	**$ 2,404**	$ 1,857	**$ 190**	$ (104)	**$ 202**	$ (92)
Accumulated benefit obligation, end of year	**$ (7,184)**	$ (7,679)	**$ (2,708)**	$ (2,849)	**NA**	NA

(a) Overfunded plans with an aggregate balance of $3.3 billion and $2.3 billion at December 31, 2007 and 2006, respectively, are recorded in Other assets. Underfunded plans with an aggregate balance of $491 million and $596 million at December 31, 2007 and 2006, respectively, are recorded in Accounts payable, accrued expense and other liabilities.
(b) At December 31, 2007 and 2006, approximately $299 million and $282 million, respectively, of U.S. plan assets related to participation rights under participating annuity contracts.
(c) Reflects adjustments related to pension plans in Germany and Switzerland, which have defined benefit pension obligations that were not previously measured under SFAS 87 due to immateriality.
(d) Includes an unfunded accumulated postretirement benefit obligation of $49 million and $52 million at December 31, 2007 and 2006, respectively, for the U.K. plan.

The following table presents pension and OPEB amounts recorded in Accumulated other comprehensive income (loss), before tax.

As of or for the year ended December 31, (in millions)	Defined benefit pension plans				OPEB plans	
	U.S.		Non-U.S.			
	2007	2006	**2007**	2006	**2007**	2006
Net loss	**$ (250)**	$ (783)	**$ (434)**	$ (669)	**$ (98)**	$ (335)
Prior service cost (credit)	**(31)**	(36)	**2**	—	**58**	77
Accumulated other comprehensive income (loss), before tax, end of year	**$ (281)**	$ (819)	**$ (432)**	$ (669)	**$ (40)**	$ (258)

The following table presents the components of Net periodic benefit costs reported in the Consolidated statements of income and Other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2007**	2006	2005	**2007**	2006	2005	**2007**	2006	2005
Components of Net periodic benefit cost									
Benefits earned during the year	**$ 270**	$ 281	$ 293	**$ 36**	$ 37	$ 25	**$ 7**	$ 9	$ 13
Interest cost on benefit obligations	**468**	452	453	**144**	120	104	**74**	78	81
Expected return on plan assets	**(714)**	(692)	(694)	**(153)**	(122)	(109)	**(93)**	(93)	(90)
Amortization:									
Net loss	**—**	12	4	**55**	45	38	**14**	29	12
Prior service cost (credit)	**5**	5	5	**—**	—	1	**(16)**	(19)	(10)
Curtailment (gain) loss	**—**	2	3	**—**	1	—	**2**	2	(17)
Settlement (gain) loss	**—**	—	—	**(1)**	4	—	**—**	—	—
Special termination benefits	**—**	—	—	**1**	1	—	**1**	2	1
Net periodic benefit cost	**29**	60	64	**82**	86	59	**(11)**	8	(10)
Other defined benefit pension plans[a]	**4**	2	3	**27**	36	39	**NA**	NA	NA
Total defined benefit plans	**33**	62	67	**109**	122	98	**(11)**	8	(10)
Total defined contribution plans	**268**	254	237	**219**	199	155	**NA**	NA	NA
Total pension and OPEB cost included in Compensation expense	**$ 301**	$ 316	$ 304	**$ 328**	$ 321	$ 253	**$ (11)**	$ 8	$ (10)
Changes in plan assets and benefit obligations recognized in Other comprehensive income									
Net gain arising during the year	**$(533)**	NA	NA	**$(176)**	NA	NA	**$(223)**	NA	NA
Prior service credit arising during the year	**—**	NA	NA	**(2)**	NA	NA	**—**	NA	NA
Amortization of net loss	**—**	NA	NA	**(55)**	NA	NA	**(14)**	NA	NA
Amortization of prior service cost (credit)	**(5)**	NA	NA	**—**	NA	NA	**16**	NA	NA
Curtailment (gain) loss	**—**	NA	NA	**(5)**	NA	NA	**3**	NA	NA
Settlement loss	**—**	NA	NA	**1**	NA	NA	**—**	NA	NA
Total recognized in Other comprehensive income	**(538)**	NA	NA	**(237)**	NA	NA	**(218)**	NA	NA
Total recognized in Net periodic benefit cost and Other comprehensive income	**$(509)**	NA	NA	**$(155)**	NA	NA	**$(229)**	NA	NA

(a) Includes various defined benefit pension plans, which are individually immaterial.

The estimated amounts that will be amortized from AOCI into Net periodic benefit cost, before tax, in 2008 are as follows.

	Defined benefit pension plans		OPEB plans	
Year ended December 31, 2008 (in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss	$ —	$ 27	$ —	$ —
Prior service cost (credit)	4	—	(15)	—
Total	$ 4	$ 27	$ (15)	$ —

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking building-block approach and are not strictly based upon historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on defined benefit pension plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class, selected by reference to the yield on long-term U.K. government bonds and "AA"-rated long-term corporate bonds, plus an equity risk premium above the risk-free rate.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was selected by reference to the yield on a portfolio of bonds with redemption dates and coupons that closely match each of the plan's projected cash flows; such portfolio is derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which this hypothetical bond portfolio generates excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension and OPEB plans represents a rate implied from the yield curve of the year-end iBoxx £ corporate "AA" 15-year-plus bond index with a duration corresponding to that of the underlying benefit obligations.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations and the components of net periodic benefit costs for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S.	
December 31,	**2007**	2006	**2007**	2006
Discount rate:				
Defined benefit pension plans	**6.60%**	5.95%	**2.25-5.80%**	2.25-5.10%
OPEB plans	**6.60**	5.90	**5.80**	5.10
Rate of compensation increase	**4.00**	4.00	**3.00-4.25**	3.00-4.00
Health care cost trend rate:				
Assumed for next year	**9.25**	10.00	**5.75**	6.63
Ultimate	**5.00**	5.00	**4.00**	4.00
Year when rate will reach ultimate	**2014**	2014	**2010**	2010

Weighted-average assumptions used to determine Net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2007**	2006	2005	**2007**	2006	2005
Discount rate:						
Defined benefit pension plans	**5.95%**	5.70%	5.75%	**2.25-5.10%**	2.00-4.70%	2.00-5.30%
OPEB plans	**5.90**	5.65	5.25-5.75[a]	**5.10**	4.70	5.30
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**7.50**	7.50	7.50	**3.25-5.60**	3.25-5.50	3.25-5.75
OPEB plans	**7.00**	6.84	6.80	**NA**	NA	NA
Rate of compensation increase	**4.00**	4.00	4.00	**3.00-4.00**	3.00-3.75	1.75-3.75
Health care cost trend rate:						
Assumed for next year	**10.00**	10.00	10.00	**6.63**	7.50	7.50
Ultimate	**5.00**	5.00	5.00	**4.00**	4.00	4.00
Year when rate will reach ultimate	**2014**	2013	2012	**2010**	2010	2010

(a) The OPEB plan was remeasured as of August 1, 2005, and a rate of 5.25% was used from the period of August 1, 2005, through December 31, 2005.

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's total service and interest cost and accumulated postretirement benefit obligation:

For the year ended **December 31, 2007** (in millions)	1-Percentage-point increase	1-Percentage-point decrease
Effect on total service and interest costs	**$ 4**	**$ (3)**
Effect on accumulated postretirement benefit obligation	**59**	**(51)**

At December 31, 2007, the Firm increased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans based upon current market interest rates, which will result in a decrease in expense of approximately $10 million for 2008. The 2008 expected long-term rate of return on U.S. pension plan assets and U.S. OPEB plan assets remained at 7.50% and 7.00%, respectively. The health care benefit obligation trend assumption declined from 10% in 2007 to 9.25% in 2008, declining to a rate of 5% in 2014. As of December 31, 2007, the interest crediting rate assumption and the assumed rate of compensation increase remained at 5.25% and 4.00%, respectively. At December 31, 2007, pension plan demographic assumptions were revised to reflect recent experience relating to form and timing of benefit distributions, and rates of turnover, which will result in a decrease in expense of approximately $9 million for 2008.

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is most sensitive to the expected long-term rate of return on plan assets. With all other assumptions held constant, a 25–basis point decline in the expected long-term rate of return on U.S. plan assets would result in an increase of approximately $27 million in 2008 U.S. defined benefit pension and OPEB plan expense. A 25–basis point decline in the discount rate for the U.S. plans would result in a decrease in 2008 U.S. defined benefit pension and OPEB plan expense of approximately $3 million and an increase in the related projected benefit obligations of approximately $171 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2008 non-U.S. defined benefit pension and OPEB plan expense of approximately $21 million. A 25-basis point increase in the interest crediting rate for the U.S. defined benefit pension plan would result in an increase in 2008 U.S. defined benefit pension expense of approximately $9 million and an increase in the related projected benefit obligations of approximately $64 million.

Investment strategy and asset allocation

The investment policy for the Firm's postretirement employee benefit plan assets is to optimize the risk-return relationship as appropriate to the respective plan's needs and goals, using a global portfolio of various asset classes diversified by market segment, economic sector and issuer. Specifically, the goal is to optimize the asset mix for future benefit obligations, while managing various risk factors and each plan's investment return objectives. For example, long-duration fixed income securities are included in the U.S. qualified pension plan's asset allocation, in recognition of its long-duration obligations. Plan assets are managed by a combination of internal and external investment managers and are rebalanced to within approved ranges, to the extent economically practical.

The Firm's U.S. defined benefit pension plan assets are held in various trusts and are invested in a well-diversified portfolio of equities (including U.S. large and small capitalization and international equities), fixed income (including corporate and government bonds), Treasury inflation-indexed and high-yield securities, real estate, cash equivalents and alternative investments. Non-U.S. defined benefit pension plan assets are held in various trusts and are similarly invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to fund partially the U.S. OPEB plan, are held in separate accounts with an insurance company and are invested in equity and fixed income index funds. In addition, tax-exempt municipal debt securities, held in a trust, were used to fund the U.S. OPEB plan in prior periods; as of December 31, 2006, there are no remaining assets in the trust. As of December 31, 2007, the assets used to fund the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except in connection with investments in third-party stock-index funds.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, and the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[b]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2007**	2006	Allocation	**2007**	2006[a]	Allocation	**2007**	2006
Asset category									
Debt securities	10-30%	**28%**	31%	69%	**70%**	70%	50%	**50%**	50%
Equity securities	25-60	**45**	55	26	**25**	26	50	**50**	50
Real estate	5-20	**9**	8	1	**1**	1	—	**—**	—
Alternatives	15-50	**18**	6	4	**4**	3	—	**—**	—
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Represents the U.K. defined benefit pension plans only.
(b) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
December 31,	**2007**	2006	2005	**2007**	2006	2005
Actual rate of return:						
Defined benefit pension plans	**7.96%**	13.40%	7.50%	**0.06-7.51%**	2.80-7.30%	2.70-15.90%
OPEB plans	**6.51**	9.30	3.30	**NA**	NA	NA

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2008	$ 902	$ 89	$ 119	$ 11
2009	922	93	120	12
2010	587	97	122	13
2011	603	105	123	14
2012	626	111	124	16
Years 2013–2017	3,296	626	597	95

Note 10 – Employee stock-based incentives

Effective January 1, 2006, the Firm adopted SFAS 123R and all related interpretations using the modified prospective transition method. SFAS 123R requires all share-based payments to employees, including employee stock options and stock appreciation rights ("SARs"), to be measured at their grant date fair values. Results for prior periods have not been retrospectively adjusted. The Firm also adopted the transition election provided by FSP FAS 123(R)-3.

JPMorgan Chase had previously adopted SFAS 123, effective January 1, 2003, using the prospective transition method. Under SFAS 123, the Firm accounted for its stock-based compensation awards at fair value, similar to the SFAS 123R requirements. However, under the prospective transition method, JPMorgan Chase continued to account for unmodified stock options that were outstanding as of December 31, 2002, using the APB 25 intrinsic value method. Under this method, no expense was recognized for stock options granted at an exercise price equal to the stock price on the grant date, since such options have no intrinsic value.

Upon adopting SFAS 123R, the Firm began to recognize in the Consolidated statements of income compensation expense for unvested stock options previously accounted for under APB 25. Additionally, JPMorgan Chase recognized as compensation expense an immaterial cumulative effect adjustment resulting from the SFAS 123R requirement to estimate forfeitures at the grant date instead of recognizing them as incurred. Finally, the Firm revised its accounting policies for share-based payments granted to employees eligible for continued vesting under specific age and service or service-related provisions ("full career eligible employees") under SFAS 123R. Prior to adopting SFAS 123R, the Firm's accounting policy for share-based payment awards granted to full career eligible employees was to recognize compensation cost over the award's stated service period. Beginning with awards granted to full career eligible employees in 2006, JPMorgan Chase recognized compensation expense on the grant date without giving consideration to the impact of post-employment restrictions. In the first quarter of 2006, the Firm also began to accrue the estimated cost of stock awards granted to full career eligible employees in the following year.

In June 2007, the FASB ratified EITF 06-11, which requires that realized tax benefits from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings should be recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards. Prior to the issuance of EITF 06-11, the Firm did not include these tax benefits as part of this pool of excess tax benefits. The Firm adopted EITF 06-11 on January 1, 2008. The adoption of this consensus did not have an impact on the Firm's Consolidated balance sheet or results of operations.

Employee stock-based awards

In 2007 and 2006, JPMorgan Chase granted long-term stock-based awards to certain key employees under the 2005 Long-Term Incentive Plan (the "2005 Plan"). In 2005, JPMorgan Chase granted long-term stock-based awards under the 1996 Long-Term Incentive Plan as amended (the "1996 plan") until May 2005, and after May 2005, under the 2005 Plan thereafter to certain key employees. These two plans, plus prior Firm plans and plans assumed as the result of acquisitions, constitute the Firm's stock-based compensation plans ("LTI Plans"). The 2005 Plan became effective on May 17, 2005, after approval by shareholders at the 2005 annual meeting. The 2005 Plan replaced three existing stock-based compensation plans – the 1996 Plan and two nonshareholder approved plans – all of which expired before the effectiveness of the 2005 Plan. Under the terms of the 2005 Plan, 275 million shares of common stock are available for issuance during its five-year term. The 2005 Plan is the only active plan under which the Firm is currently granting stock-based incentive awards.

Restricted stock units ("RSUs") are awarded at no cost to the recipient upon their grant. RSUs are generally granted annually and generally vest 50 percent after two years and 50 percent after three years and convert to shares of common stock at the vesting date. In addition, RSUs typically include full career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions. All of these awards are subject to forfeiture until the vesting date. An RSU entitles the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSU is outstanding.

Under the LTI Plans, stock options and SARs have been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm typically awards SARs to certain key employees once per year, and it also periodically grants discretionary share-based payment awards to individual employees, primarily in the form of both employee stock options and SARs. The 2007 grant of SARs to key employees vests ratably over five years (i.e., 20 percent per year) and the 2006 and 2005 awards vest one-third after each of years 3, 4 and 5. These awards do not include any full career eligibility provisions and all awards generally expire 10 years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. For each tranche granted (other than grants to employees who are full career eligible at the grant date), compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full career eligible during the vesting period. For each tranche granted to employees who will become full career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee share-based payment awards is to issue either new shares of common stock or treasury shares. On April 17, 2007, the Board of Directors approved a stock repurchase program that authorizes the repurchase of up to $10.0 billion of the Firm's common shares, which supersedes an $8.0 billion stock repurchase program approved in 2006. The $10.0 billion authorization includes shares to be repurchased to offset issuances under the Firm's employee stock-based plans. During 2007, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In December 2005, the Firm accelerated the vesting of approximately 41 million unvested, out-of-the-money employee stock options granted in 2001 under the Growth and Performance Incentive Program, which were scheduled to vest in January 2007. These options were not modified other than to accelerate vesting. The related expense was approximately $145 million, and was recognized as compensation expense in the fourth quarter of 2005. The Firm believed that at the time the options were accelerated they had limited economic value since the exercise price of the accelerated options was $51.22 and the closing price of the Firm's common stock on the effective date of the acceleration was $39.69.

RSU activity

Compensation expense for RSUs is measured based upon the number of shares granted multiplied by the stock price at the grant date, and is recognized in Net income as previously described. The following table summarizes JPMorgan Chase's RSU activity for 2007.

Year ended December 31, 2007

(in thousands, except weighted average data)	Number of Shares	Weighted-average grant date fair value
Outstanding, January 1	88,456#	$ 38.50
Granted	47,608	48.29
Vested	(30,925)	38.09
Forfeited	(6,122)	42.56
Outstanding, December 31	99,017#	$ 43.11

The total fair value of shares that vested during the years ended December 31, 2007, 2006 and 2005, was $1.5 billion, $1.3 billion and $1.1 billion, respectively.

Employee stock option and SARs activity

Compensation expense, which is measured at the grant date as the fair value of employee stock options and SARs, is recognized in Net income as described above.

The following table summarizes JPMorgan Chase's employee stock option and SARs activity for the year ended December 31, 2007, including awards granted to key employees and awards granted in prior years under broad-based plans.

Year ended December 31, 2007

(in thousands, except weighted-average data)	Number of options/SARs	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	376,227#	$ 40.31		
Granted	21,446	46.65		
Exercised	(64,453)	34.73		
Forfeited	(1,410)	40.13		
Canceled	(5,879)	48.10		
Outstanding, December 31	325,931#	$ 41.70	4.0	$ 1,601,780
Exercisable, December 31	281,327	41.44	3.2	1,497,992

The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2007, 2006 and 2005, was $13.38, $10.99 and $10.44, respectively. The total intrinsic value of options exercised during the years ended December 31, 2007, 2006 and 2005 was $937 million, $994 million and $364 million, respectively.

Impact of adoption of SFAS 123R

During 2006, the incremental expense related to the Firm's adoption of SFAS123R was $712 million. This amount represents an accelerated noncash recognition of costs that would otherwise have been incurred in future periods. Also as a result of adopting SFAS 123R, the Firm's Income from continuing operations (pretax) for the year ended December 31, 2006, was lower by $712 million, and each of Income from continuing operations (after-tax), and Net income for the year ended December 31, 2006, was lower by $442 million, than if the Firm had continued to account for share-based compensation under APB 25 and SFAS 123. Basic and diluted earnings per share from continuing operations, as well as basic and diluted Net income per share, for the year ended December 31, 2006 were $.13 and $.12 lower, respectively, than if the Firm had not adopted SFAS 123R.

The Firm recognized noncash compensation expense related to its various employee stock-based incentive awards of $2.0 billion, $2.4 billion (including the $712 million incremental impact of adopting SFAS 123R) and $1.6 billion for the years ended December 31, 2007, 2006, and 2005, respectively, in its Consolidated statements of income. These amounts included an accrual for the estimated cost of stock awards to be granted to full career eligible employees of $500 million and $498 million for the years ended December 31, 2007 and 2006 respectively. At December 31, 2007, approximately $1.3 billion (pretax) of compensation cost related to unvested awards has not yet been charged to Net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.4 years. The Firm does not capitalize any compensation cost related to share-based compensation awards to employees.

Cash flows and tax benefits

Prior to adopting SFAS 123R, the Firm presented all tax benefits of deductions resulting from share-based compensation awards as operating cash flows in its Consolidated statements of cash flows. Beginning in 2006, SFAS 123R requires the cash flows resulting from the tax benefits of tax deductions in excess of the compensation expense recognized for those share-based compensation awards (i.e., excess tax benefits) to be classified as financing cash flows.

The total income tax benefit related to stock-based compensation arrangements recognized in the Firm's Consolidated statements of income for the years ended December 31, 2007, 2006 and 2005, was $810 million, $947 million and $625 million, respectively.

The following table sets forth the cash received from the exercise of stock options under all share-based compensation arrangements and the actual tax benefit realized related to the tax deduction from the exercise of stock options.

Year ended December 31, (in millions)	**2007**	2006	2005
Cash received for options exercised	**$ 2,023**	$ 1,924	$ 635
Tax benefit realized	**238**	211	65

Comparison of the fair and intrinsic value measurement methods

The following table presents Net income and basic and diluted earnings per share as reported, and as if all 2005 share-based payment awards were accounted for at fair value. All 2007 and 2006 awards were accounted for at fair value.

Year ended December 31, (in millions, except per share data)	2005
Net income as reported	$ 8,483
Add: Employee stock-based compensation expense included in reported Net income, net of related tax effects	938
Deduct: Employee stock-based compensation expense determined under the fair value method for all awards, net of related tax effects	(1,015)
Pro forma Net income	$ 8,406
Earnings per share:	
Basic: As reported	$ 2.43
Pro forma	2.40
Diluted: As reported	$ 2.38
Pro forma	2.36

The following table presents the assumptions used to value employee stock options and SARs granted during the period under the Black-Scholes valuation model.

Year ended December 31,	**2007**	2006	2005
Weighted-average annualized valuation assumptions			
Risk-free interest rate	**4.78%**	5.11%	4.25%
Expected dividend yield	**3.18**	2.89	3.79
Expected common stock price volatility	**33**	23	37
Expected life (in years)	**6.8**	6.8	6.8

Prior to the adoption of SFAS 123R, the Firm used the historical volatility of its common stock price as the expected volatility assumption in valuing options. The Firm completed a review of its expected volatility assumption in 2006. Effective October 1, 2006, JPMorgan Chase began to value its employee stock options granted or modified after that date using an expected volatility assumption derived from the implied volatility of its publicly traded stock options.

The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled. The expected life assumption was developed using historic experience.

Note 11 – Noninterest expense

Merger costs

On July 1, 2004, Bank One Corporation merged with and into JPMorgan Chase ("the Merger"). Costs associated with the Merger and the Bank of New York transaction are reflected in the Merger costs caption of the Consolidated statements of income. A summary of such costs, by expense category, is shown in the following table for 2007, 2006 and 2005.

Year ended December 31, (in millions)	**2007**	2006	2005
Expense category			
Compensation	**$ (19)**	$ 26	$ 238
Occupancy	**17**	25	(77)
Technology and communications and other	**188**	239	561
Bank of New York transaction[a]	**23**	15	—
Total[b]	**$ 209**	$ 305	$ 722

(a) Represents Compensation and Technology and communications and other.
(b) With the exception of occupancy-related write-offs, all of the costs in the table require the expenditure of cash.

The table below shows the change in the liability balance related to the costs associated with the Merger.

Year ended December 31, (in millions)	**2007**	2006	2005
Liability balance, beginning of period	**$ 155**	$ 311	$ 952
Recorded as merger costs	**186**	290	722
Recorded as goodwill	**(60)**	—	(460)
Liability utilized	**(281)**	(446)	(903)
Liability balance, end of period[a]	**$ —**	$ 155	$ 311

(a) Excludes $10 million and $21 million at December 31, 2007 and 2006, respectively, related to the Bank of New York transaction.

Note 12 – Securities

Securities are classified as AFS, Held-to-maturity ("HTM") or Trading. Trading securities are discussed in Note 6 on page 122 of this Annual Report. Securities are classified primarily as AFS when purchased as part of the Firm's management of its structural interest rate risk. AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses after any applicable SFAS 133 hedge accounting adjustments are reported as net increases or decreases to Accumulated other comprehensive income (loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in Securities gains (losses) on the Consolidated statements of income. Securities that the Firm has the positive intent and ability to hold to maturity are classified as HTM and are carried at amortized cost on the Consolidated balance sheets. The Firm has not classified new purchases of securities as HTM for the past several years.

The following table presents realized gains and losses from AFS securities.

Year ended December 31, (in millions)	**2007**	2006	2005
Realized gains	**$ 667**	$ 399	$ 302
Realized losses	**(503)**	(942)	(1,638)
Net realized Securities gains (losses)[a]	**$ 164**	$ (543)	$ (1,336)

(a) Proceeds from securities sold were within approximately 2% of amortized cost.

The amortized cost and estimated fair value of AFS and HTM securities were as follows for the dates indicated.

	2007				2006			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale securities								
U.S. government and federal agency obligations:								
U.S. treasuries	**$ 2,470**	**$ 14**	**$ 2**	**$ 2,482**	$ 2,398	$ —	$ 23	$ 2,375
Mortgage-backed securities	**8**	**1**	**—**	**9**	32	2	1	33
Agency obligations	**73**	**9**	**—**	**82**	78	8	—	86
U.S. government-sponsored enterprise obligations	**62,511**	**643**	**55**	**63,099**	75,434	334	460	75,308
Obligations of state and political subdivisions	**92**	**1**	**2**	**91**	637	17	4	650
Debt securities issued by non-U.S. governments	**6,804**	**18**	**28**	**6,794**	6,150	7	52	6,105
Corporate debt securities	**1,927**	**1**	**4**	**1,924**	611	1	3	609
Equity securities	**4,124**	**55**	**1**	**4,178**	3,689	125	1	3,813
Other[a]	**6,779**	**48**	**80**	**6,747**	2,890	50	2	2,938
Total available-for-sale securities	**$ 84,788**	**$ 790**	**$ 172**	**$ 85,406**	$ 91,919	$ 544	$ 546	$ 91,917
Held-to-maturity securities[b]								
Total held-to-maturity securities	**$ 44**	**$ 1**	**$ —**	**$ 45**	$ 58	$ 2	$ —	$ 60

(a) Primarily includes privately issued mortgage-backed securities and negotiable certificates of deposit.
(b) Consists primarily of mortgage-backed securities issued by U.S. government-sponsored entities.

The following table presents the fair value and gross unrealized losses for AFS securities by aging category at December 31.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more		Total	
2007 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Total Gross unrealized losses
Available-for-sale securities						
U.S. government and federal agency obligations:						
U.S. treasuries	**$ 175**	**$ 2**	**$ —**	**$ —**	**$ 175**	**$ 2**
Mortgage-backed securities	**—**	**—**	**—**	**—**	**—**	**—**
Agency obligations	**—**	**—**	**—**	**—**	**—**	**—**
U.S. government-sponsored enterprise obligations	**—**	**—**	**1,345**	**55**	**1,345**	**55**
Obligations of state and political subdivisions	**21**	**2**	**—**	**—**	**21**	**2**
Debt securities issued by non-U.S. governments	**335**	**3**	**1,928**	**25**	**2,263**	**28**
Corporate debt securities	**1,126**	**3**	**183**	**1**	**1,309**	**4**
Equity securities	**—**	**—**	**4**	**1**	**4**	**1**
Other	**3,193**	**64**	**285**	**16**	**3,478**	**80**
Total securities with gross unrealized losses	**$ 4,850**	**$ 74**	**$ 3,745**	**$ 98**	**$ 8,595**	**$ 172**

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more		Total	
2006 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Total Gross unrealized losses
Available-for-sale securities						
U.S. government and federal agency obligations:						
U.S. treasuries	$ 2,268	$ 23	$ —	$ —	$ 2,268	$ 23
Mortgage-backed securities	8	1	—	—	8	1
Agency obligations	—	—	—	—	—	—
U.S. government-sponsored enterprise obligations	17,877	262	6,946	198	24,823	460
Obligations of state and political subdivisions	—	—	180	4	180	4
Debt securities issued by non-U.S. governments	3,141	13	2,354	39	5,495	52
Corporate debt securities	387	3	—	—	387	3
Equity securities	17	1	—	—	17	1
Other	1,556	1	82	1	1,638	2
Total securities with gross unrealized losses	$25,254	$304	$ 9,562	$242	$34,816	$ 546

Impairment of AFS securities is evaluated considering numerous factors, and their relative significance varies case-by-case. Factors considered include the length of time and extent to which the market value has been less than cost; the financial condition and near-term prospects of the issuer of a security; and the Firm's intent and ability to retain the security in order to allow for an anticipated recovery in fair value. If, based upon an analysis of each of the above factors, it is determined that the impairment is other-than-temporary, the carrying value of the security is written down to fair value, and a loss is recognized through earnings.

Included in the $172 million of gross unrealized losses on AFS securities at December 31, 2007, was $98 million of unrealized losses that have existed for a period greater than 12 months. These securities are predominately rated AAA and the unrealized losses are primarily due to overall increases in market interest rates and not concerns regarding the underlying credit of the issuers. The majority of the securities with unrealized losses aged greater than 12 months are obligations of U.S. government-sponsored enterprises and have a fair value at December 31, 2007, that is within 4% of their amortized cost basis.

Due to the issuers' continued satisfaction of their obligations under the contractual terms of the securities, the Firm's evaluation of the fundamentals of the issuers' financial condition and other objective evidence, and the Firm's consideration of its intent and ability to hold the securities for a period of time sufficient to allow for the anticipated recovery in the market value of the securities, the Firm believes that these securities were not other-than-temporarily impaired as of December 31, 2007 and 2006.

The following table presents the amortized cost, estimated fair value and average yield at December 31, 2007, of JPMorgan Chase's AFS and HTM securities by contractual maturity.

By remaining maturity at December 31, 2007 (in millions, except rates)	Available-for-sale securities			Held-to-maturity securities		
	Amortized cost	Fair value	Average yield[b]	Amortized cost	Fair value	Average yield[b]
Due in one year or less	$ 6,669	$ 6,673	4.28%	$ —	$ —	—%
Due after one year through five years	6,264	6,280	3.63	—	—	—
Due after five years through 10 years	1,315	1,286	4.66	40	41	6.88
Due after 10 years[a]	70,540	71,167	5.57	4	4	6.07
Total securities	$ 84,788	$ 85,406	5.31%	$ 44	$ 45	6.81%

(a) Includes securities with no stated maturity. Substantially all of the Firm's mortgage-backed securities and collateralized mortgage obligations are due in 10 years or more based upon contractual maturity. The estimated duration, which reflects anticipated future prepayments based upon a consensus of dealers in the market, is approximately four years for mortgage-backed securities and collateralized mortgage obligations.
(b) The average yield is based upon amortized cost balances at year-end. Yields are derived by dividing interest income by total amortized cost. Taxable-equivalent yields are used where applicable.

Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions, primarily to finance the Firm's inventory positions, acquire securities to cover short positions and settle other securities obligations. The Firm also enters into these transactions to accommodate customers' needs.

Resale agreements and repurchase agreements are generally treated as collateralized financing transactions carried on the Consolidated balance sheets at the amounts the securities will be subsequently sold or repurchased, plus accrued interest. On January 1, 2007, pursuant to the adoption of SFAS 159, the Firm elected fair value measurement for certain resale and repurchase agreements. For a further discussion of SFAS 159, see Note 5 on pages 119–121 of this Annual Report. These agreements continue to be reported within Securities purchased under resale agreements and Securities sold under repurchase agreements on the Consolidated balance sheets. Generally for agreements carried at fair value, current period interest accruals are recorded within Interest income and Interest expense with changes in fair value reported in Principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with SFAS 133, all changes in fair value, including any interest elements, are reported in Principal transactions revenue. Where appropriate, resale and repurchase agreements with the same counterparty are reported on a net basis in accordance with FIN 41. JPMorgan Chase takes possession of securities purchased under resale agreements. On a daily basis, JPMorgan Chase monitors the market value of the underlying collateral, primarily U.S. and non-U.S. government and agency securities that it has received from its counterparties, and requests additional collateral when necessary.

Transactions similar to financing activities that do not meet the SFAS 140 definition of a repurchase agreement are accounted for as "buys" and "sells" rather than financing transactions. These transactions are accounted for as a purchase (sale) of the underlying securities with a forward obligation to sell (purchase) the securities. The forward purchase (sale) obligation, a derivative, is recorded on the Consolidated balance sheets at its fair value, with changes in fair value recorded in Principal transactions revenue.

Securities borrowed and securities lent are recorded at the amount of cash collateral advanced or received. Securities borrowed consist primarily of government and equity securities. JPMorgan Chase monitors the market value of the securities borrowed and lent on a daily basis and calls for additional collateral when appropriate. Fees received or paid are recorded in Interest income or Interest expense.

December 31, (in millions)	**2007**	2006
Securities purchased under resale agreements[a]	**$169,305**	$122,479
Securities borrowed	**84,184**	73,688
Securities sold under repurchase agreements[b]	**$126,098**	$143,253
Securities loaned	**10,922**	8,637

(a) Included resale agreements of $19.1 billion accounted for at fair value at December 31, 2007.
(b) Included repurchase agreements of $5.8 billion accounted for at fair value at December 31, 2007.

JPMorgan Chase pledges certain financial instruments it owns to collateralize repurchase agreements and other securities financings. Pledged securities that can be sold or repledged by the secured party are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets.

At December 31, 2007, the Firm had received securities as collateral that could be repledged, delivered or otherwise used with a fair value of approximately $357.6 billion. This collateral was generally obtained under resale or securities borrowing agreements. Of these securities, approximately $333.7 billion were repledged, delivered or otherwise used, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales.

Note 14 – Loans

The accounting for a loan may differ based upon the type of loan and/or its use in an investing or trading strategy. The measurement framework for Loans in the consolidated financial statements is one of the following:

- At the principal amount outstanding, net of the Allowance for loan losses, unearned income and any net deferred loan fees for loans held-for-investment;
- At the lower of cost or fair value, with valuation changes recorded in Noninterest revenue for loans that are classified as held-for-sale; or
- At fair value, with changes in fair value recorded in Noninterest revenue for loans classified as Trading assets or risk managed on a fair value basis.

See Note 5 on pages 119–121 of this Annual Report for further information on the Firm's elections of fair value accounting under SFAS 159. See Note 6 on page 122 of this Annual Report for further information on loans carried at fair value and classified as trading assets.

Interest income is recognized using the interest method, or on a basis approximating a level rate of return over the term of the loan.

Loans within the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio. Transfers to held-for-sale are recorded at the lower of cost or fair value on the date of transfer. Losses attributed to credit losses are charged off to the Allowance for loan losses and losses due to changes in interest rates, or exchange rates, are recognized in Noninterest revenue.

Nonaccrual loans are those on which the accrual of interest is discontinued. Loans (other than certain consumer loans discussed below) are placed on nonaccrual status immediately if, in the opinion of management, full payment of principal or interest is in doubt, or when principal or interest is 90 days or more past due and collateral, if any, is insufficient to cover principal and interest. Interest accrued but not collected at the date a loan is placed on nonaccrual status is reversed against Interest income. In addition, the amortization of net deferred loan fees is suspended. Interest income on nonaccrual loans is recognized only to the extent it is received in cash. However, where there is doubt regarding the ultimate collectibility of loan principal, all cash thereafter received is applied to reduce the carrying value of such loans. Loans are restored to accrual status only when interest and principal payments are brought current and future payments are reasonably assured. Loans are charged off to the Allowance for loan losses when it is highly certain that a loss has been realized.

Consumer loans are generally charged to the Allowance for loan losses upon reaching specified stages of delinquency, in accordance with the Federal Financial Institutions Examination Council policy. For example, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification of the filing of bankruptcy, whichever is earlier. Residential mortgage products are generally charged off to net realizable value at no later than180 days past due. Other consumer products, if collateralized, are generally charged off to net realizable value at 120 days past due. Accrued interest on residential mortgage products, automobile financings, education financings and certain other consumer loans are accounted for in accordance with the nonaccrual loan policy discussed in the preceding paragraph. Interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. Accrued interest on all other consumer loans is generally reversed against Interest income when the loan is charged off. A collateralized loan is considered an in-substance foreclosure and is reclassified to assets acquired in loan satisfactions, within Other assets, only when JPMorgan Chase has taken physical possession of the collateral, regardless of whether formal foreclosure proceedings have taken place.

The composition of the loan portfolio at each of the dates indicated was as follows.

December 31, (in millions)	**2007**	2006
U.S. wholesale loans:		
Commercial and industrial	**$ 97,347**	$ 77,788
Real estate	**13,388**	14,237
Financial institutions	**14,760**	14,103
Lease financing	**2,353**	2,608
Other	**5,405**	9,950
Total U.S. wholesale loans	**133,253**	118,686
Non-U.S. wholesale loans:		
Commercial and industrial	**59,153**	43,428
Real estate	**2,110**	1,146
Financial institutions	**17,225**	19,163
Lease financing	**1,198**	1,174
Other	**137**	145
Total non-U.S. wholesale loans	**79,823**	65,056
Total wholesale loans:[(a)]		
Commercial and industrial	**156,500**	121,216
Real estate[(b)]	**15,498**	15,383
Financial institutions	**31,985**	33,266
Lease financing	**3,551**	3,782
Other	**5,542**	10,095
Total wholesale loans	**213,076**	183,742
Total consumer loans:[(c)]		
Home equity	**94,832**	85,730
Mortgage	**56,031**	59,668
Auto loans and leases	**42,350**	41,009
Credit card[(d)]	**84,352**	85,881
Other	**28,733**	27,097
Total consumer loans	**306,298**	299,385
Total loans[(e)(f)]	**$ 519,374**	$483,127
Memo:		
Loans held-for-sale	**$ 18,899**	$ 55,251
Loans at fair value	**8,739**	—
Total loans held-for-sale and loans at fair value	**$ 27,638**	$ 55,251

(a) Includes Investment Bank, Commercial Banking, Treasury & Securities Services and Asset Management.
(b) Represents credits extended for real estate–related purposes to borrowers who are primarily in the real estate development or investment businesses and for which the primary repayment is from the sale, lease, management, operations or refinancing of the property.
(c) Includes Retail Financial Services, Card Services and the Corporate segment.
(d) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(e) Loans (other than those for which SFAS 159 fair value option has been elected) are presented net of unearned income and net deferred loan fees of $1.0 billion and $1.3 billion at December 31, 2007 and 2006, respectively.
(f) As a result of the adoption of SFAS 159, certain loans are accounted for at fair value and reported in Trading assets and therefore, such loans are no longer included in loans at December 31, 2007.

The following table reflects information about the Firm's loan sales.

Year ended December 31, (in millions)	**2007**	2006[b]	2005[b]
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]	**$ 99**	$ 672	$ 464

(a) Excludes sales related to loans accounted for at fair value.
(b) Prior periods have been revised to reflect the current presentation.

Impaired loans

JPMorgan Chase accounts for and discloses nonaccrual loans as impaired loans and recognizes their interest income as discussed previously for nonaccrual loans. The following are excluded from impaired loans: small-balance, homogeneous consumer loans; loans carried at fair value or the lower of cost or fair value; debt securities; and leases.

The table below sets forth information about JPMorgan Chase's impaired loans. The Firm primarily uses the discounted cash flow method for valuing impaired loans.

December 31, (in millions)	**2007**	2006
Impaired loans with an allowance	**$ 782**	$ 623
Impaired loans without an allowance[a]	**28**	66
Total impaired loans	**$ 810**	$ 689
Allowance for impaired loans under SFAS 114[b]	**224**	153

(a) When the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan, then the loan does not require an allowance under SFAS 114.
(b) The allowance for impaired loans under SFAS 114 is included in JPMorgan Chase's Allowance for loan losses.

Year ended December 31, (in millions)	**2007**	2006	2005
Average balance of impaired loans during the period	**$ 645**	$ 990	$ 1,478
Interest income recognized on impaired loans during the period	**—**	2	5

Note 15 – Allowance for credit losses

JPMorgan Chase's Allowance for loan losses covers the wholesale (risk-rated) and consumer (scored) loan portfolios and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also computes an allowance for wholesale lending-related commitments using a methodology similar to that used for the wholesale loans.

The Allowance for loan losses includes an asset-specific component and a formula-based component. The asset-specific component relates to provisions for losses on loans considered impaired and measured pursuant to SFAS 114. An allowance is established when the discounted cash flows (or collateral value or observable market price) of the loan is lower than the carrying value of that loan. To compute the asset-specific component of the allowance, larger impaired loans are evaluated individually, and smaller impaired loans are evaluated as a pool using historical loss experience for the respective class of assets.

The formula-based component covers performing wholesale and consumer loans. It is based on a statistical calculation, which is adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but are not yet reflected in the factors used to derive the statistical calculation. The statistical calculation is the product of probability of default ("PD") and loss given default ("LGD"). For risk-rated loans (generally loans originated by the wholesale lines of business), these factors are differentiated by risk rating and maturity. PD estimates are based on observable external data, primarily credit-rating agency default statistics. LGD estimates are based on a study of actual credit losses over more than one credit cycle. For scored loans (generally loans originated by the consumer lines of business), loss is primarily determined by applying statistical loss factors and other risk indicators to pools of loans by asset type.

Management applies its judgment within estimated ranges to adjust the statistical calculation. Where adjustments are made to the statistical calculation for the risk-rated portfolios, the estimated ranges and the determination of the appropriate point within the range are based upon management's view of the quality of underwriting standards, relevant internal factors affecting the credit quality of the current portfolio and external factors such as current macroeconomic and political conditions that have occurred but are not yet reflected in the loss factors. Factors related to concentrated and deteriorating industries are also incorporated into the calculation where relevant. Adjustments to the statistical calculation for the scored loan portfolios are accomplished in part by analyzing the historical loss experience for each major product segment. The estimated ranges and the determination of the appropriate point within the range are based upon management's view of uncertainties that relate to current macroeconomic and political conditions, the quality of underwriting standards, and other relevant internal and external factors affecting the credit quality of the portfolio.

The Allowance for lending-related commitments represents management's estimate of probable credit losses inherent in the Firm's process of extending credit. Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2007, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses that are inherent in the portfolio, including those not yet identifiable).

The table below summarizes the changes in the Allowance for loan losses.

Year ended December 31, (in millions)	2007	2006	2005
Allowance for loan losses at January 1	**$ 7,279**	$ 7,090	$ 7,320
Cumulative effect of change in accounting principles[a]	**(56)**	—	—
Allowance for loan losses at January 1, adjusted	**7,223**	7,090	7,320
Gross charge-offs	**(5,367)**	(3,884)	(4,869)
Gross recoveries	**829**	842	1,050
Net charge-offs	**(4,538)**	(3,042)	(3,819)
Provision for loan losses	**6,538**	3,153	3,575
Other[b]	**11**	78	14
Allowance for loan losses at December 31	**$ 9,234**	$ 7,279	$ 7,090
Components:			
Asset-specific[c]	**$ 188**	$ 118	$ 247
Formula-based[c]	**9,046**	7,161	6,843
Total Allowance for loan losses	**$ 9,234**	$ 7,279	$ 7,090

(a) Reflects the effect of the adoption of SFAS 159 at January 1, 2007. For a further discussion of SFAS 159, see Note 5 on pages 119–121of this Annual Report.
(b) 2006 amount primarily relates to loans acquired in the Bank of New York transaction.
(c) Prior periods have been revised to reflect current presentation.

The table below summarizes the changes in the Allowance for lending-related commitments.

Year ended December 31, (in millions)	2007	2006	2005
Allowance for lending-related commitments at January 1	**$ 524**	$ 400	$ 492
Provision for lending-related commitments	**326**	117	(92)
Other[a]	**—**	7	—
Allowance for lending-related commitments at December 31	**$ 850**	$ 524	$ 400
Components:			
Asset-specific	**$ 28**	$ 33	$ 60
Formula-based	**822**	491	340
Total Allowance for lending-related commitments	**$ 850**	$ 524	$ 400

(a) 2006 amount relates to the Bank of New York transaction.

Note 16 – Loan securitizations

JPMorgan Chase securitizes and sells a variety of its consumer and wholesale loans, including warehouse loans that are classified in Trading assets. Consumer activities include securitizations of residential real estate, credit card, automobile and education loans that are originated or purchased by RFS and Card Services ("CS"). Wholesale activities include securitizations of purchased residential real estate loans and commercial loans (primarily real estate–related) originated by the IB.

JPMorgan Chase–sponsored securitizations utilize SPEs as part of the securitization process. These SPEs are structured to meet the definition of a QSPE (as discussed in Note 1 on page 108 of this Annual Report); accordingly, the assets and liabilities of securitization-related QSPEs are not reflected in the Firm's Consolidated balance sheets (except for retained interests, as described below) but are included on the balance sheet of the QSPE purchasing the assets. The primary purpose of these vehicles is to meet investor needs and to generate liquidity for the Firm through the sale of loans to the QSPEs. Assets held by JPMorgan Chase-sponsored securitization-related QSPEs as of December 31, 2007 and 2006, were as follows.

December 31, (in billions)	2007	2006
Consumer activities		
Credit card	**$ 92.7**	$ 86.4
Auto	**2.3**	4.9
Residential mortgage:		
Prime[a]	**51.1**	34.3
Subprime	**10.6**	6.4
Education loans	**1.1**	—
Wholesale activities		
Residential mortgage:		
Prime[a]	**20.5**	18.1
Subprime	**13.1**	25.7
Commercial and other[b][c]	**109.6**	87.1
Total	**$ 301.0**	$ 262.9

(a) Includes Alt-A loans.
(b) Cosponsored securitizations include non-JPMorgan Chase originated assets.
(c) Commercial and other consists of commercial loans (primarily real estate) and non-mortgage consumer receivables purchased from third parties.

The Firm records a loan securitization as a sale when the accounting criteria for a sale are met. Those criteria are: (1) the transferred assets are legally isolated from the Firm's creditors; (2) the entity can pledge or exchange the financial assets or, if the entity is a QSPE, its investors can pledge or exchange their interests; and (3) the Firm does not maintain effective control to repurchase the transferred assets before their maturity or have the ability to unilaterally cause the holder to return the transferred assets.

For loan securitizations that meet the accounting sales criteria, the gains or losses recorded depend, in part, on the carrying amount of the loans sold and are allocated between the loans sold and the retained interests, based upon their relative fair values at the date of sale. Gains on securitizations are reported in Noninterest revenue. When quoted market prices for the retained interests are not available, the Firm estimates the fair value for these retained interests by determining the present value of future expected cash flows using modeling techniques. Such models incorporate management's best estimates of key variables, such as expected credit losses, prepayment speeds and the discount rates appropriate for the risks involved.

Interests in the securitized loans may be retained by the Firm in the form of senior or subordinated interest-only strips, senior and subordinated tranches and escrow accounts. The classification of retained interests is dependent upon several factors, including the type of interest (e.g., whether the retained interest is represented by a security certificate) and when it was retained, due to the adoption of SFAS 155. The Firm has elected to fair value all interests in securitized loans retained after December 31, 2005, that have an embedded derivative required to be bifurcated under SFAS 155; these retained interests are classified primarily as Trading assets. Retained interests related to wholesale securitization activities are classified as Trading assets. Prior to the adoption of SFAS 155, for consumer activities, senior and subordinated retained interests represented by a security certificate were classified as AFS; retained interests not represented by a security certificate were classified in Other assets.

For those retained interests that are subject to prepayment risk (such that JPMorgan Chase may not recover substantially all of its investment) but are not required to be bifurcated under SFAS 155, the retained interests are recorded at fair value; subsequent adjustments are reflected in earnings or in Other comprehensive income (loss). Retained interests classified as AFS are subject to the impairment provisions of EITF 99-20.

Credit card securitization trusts require the Firm to maintain a minimum undivided interest in the trusts, representing the Firm's interests in the receivables transferred to the trust that have not been securitized. These seller's interests are not represented by security certificates. The Firm's undivided interests are carried at historical cost and are classified in Loans.

2007, 2006 and 2005 Securitization activity

The following tables summarize new securitization transactions that were completed during 2007, 2006 and 2005; the resulting gains arising from such securitizations; certain cash flows received from such securitizations; and the key economic assumptions used in measuring the retained interests (if any) other than residential MSRs (for a discussion of residential MSRs, see Note 18 on pages 154–157 of this Annual Report), as of the dates of such sales.

Year ended December 31, 2007 (in millions, except rates and where otherwise noted)	Consumer activities					Wholesale activities		
			Residential mortgage		Education	Residential mortgage		Commercial
	Credit card	Auto	Prime[c]	Subprime[f]	loans	Prime[c]	Subprime	and other
Principal securitized	**$ 21,160**	**$ —**	**$ 22,778**	**$ 6,150**	**$ 1,168**	**$ 9,306**	**$ 613**	**$ 12,797**
Pretax gains	**177**	**—**	**26**[d]	**43**	**51**	**2**[d]	**—**	**—**
Cash flow information:								
Proceeds from securitizations	**$ 21,160**	**$ —**	**$ 22,572**	**$ 6,236**	**$ 1,168**	**$ 9,219**	**$ 608**	**$ 13,038**
Servicing fees collected	**179**	**—**	**36**	**17**	**2**	**—**	**—**	**7**
Other cash flows received	**935**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Proceeds from collections reinvested in revolving securitizations	**148,946**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Key assumptions (rates per annum):								
Prepayment rate[a]	**20.4% PPR**		**14.8-24.2% CPR**		**1.0-8.0% CPR**	**13.7-37.2% CPR**	**30.0-48.0% CPR**	**0.0-8.0% CPR**
Weighted-average life (in years)	**0.4**		**3.2-4.0**		**9.3**	**1.3-5.4**	**2.3-2.8**	**1.3-10.2**
Expected credit losses	**3.5-3.9%**		**—%**[e]		**—%**[e]	**0.6-1.6%**	**1.2-2.2%**	**0.0-1.0%**[e]
Discount rate	**12.0%**		**5.8-13.8%**		**9.0%**	**6.3-20.0%**	**12.1-26.7%**	**10.0-14.0%**

Year ended December 31, 2006 (in millions, except rates and where otherwise noted)	Consumer activities					Wholesale activities		
			Residential mortgage		Education	Residential mortgage		Commercial
	Credit card	Auto	Prime[c]	Subprime[f]	loans	Prime[c]	Subprime	and other
Principal securitized	$ 9,735	$ 2,405	$ 14,179	$ 2,624	$ —	$ 16,075	$ 14,735	$ 13,858
Pretax gains (losses)	67	—	42	43	—	11	150	129
Cash flow information:								
Proceeds from securitizations	$ 9,735	$ 1,745	$ 14,102	$ 2,652	$ —	$ 16,065	$ 14,983	$ 14,248
Servicing fees collected	88	3	16	2	—	—	—	1
Other cash flows received	401	—	—	—	—	35	—	95
Proceeds from collections reinvested in revolving securitizations	151,186	—	—	—	—	—	—	—
Key assumptions (rates per annum):								
Prepayment rate[a]	20.0–22.2% PPR	1.4-1.5% ABS	18.2-24.6% CPR			10.0-41.3% CPR	36.0–45.0% CPR	0.0–36.2% CPR
Weighted-average life (in years)	0.4	1.4–1.9	3.0-3.6			1.7-4.0	1.5–2.4	1.5–6.1
Expected credit losses	3.3–4.2%	0.3–0.7%	—%[e]			0.1-3.3%	1.1-2.1%	0.0–0.9%[e]
Discount rate	12.0%	7.6–7.8%	8.4-12.7%			16.0-26.2%	15.1–22.0%	3.8–14.0%

Year ended December 31, 2005 (in millions, except rates and where otherwise noted)	Consumer activities					Wholesale activities		
			Residential mortgage		Education	Residential mortgage		Commercial
	Credit card	Auto	Prime[c]	Subprime[f]	loans	Prime[c]	Subprime	and other
Principal securitized	$ 15,145	$ 3,762	$ 18,125	$ —	$ —	$ 5,447	$ 5,952	$ 11,292
Pretax gains (losses)	101	9[b]	21	—	—	3	(6)	134
Cash flow information:								
Proceeds from securitizations	$ 14,844	$ 2,622	$ 18,093	$ —	$ —	$ 5,434	$ 6,060	$ 11,398
Servicing fees collected	94	4	17	—	—	—	—	—
Other cash flows received	298	—	—	—	—	—	—	3
Proceeds from collections reinvested in revolving securitizations	129,696	—	—	—	—	—	—	—
Key assumptions (rates per annum):								
Prepayment rate[a]	16.7–20.0% PPR	1.5% ABS	9.1-12.1% CPR				22.0–43.0% CPR	0.0–50.0% CPR
Weighted-average life (in years)	0.4–0.5	1.4–1.5	5.6-6.7				1.4–2.6	1.0–4.4
Expected credit losses	4.7–5.7%	0.6–0.7%	—%[e]				0.6–2.0%	—%[e]
Discount rate	12.0%	6.3–7.3%	13.0-13.3%				16.0–18.5%	0.6–0.9%

(a) PPR: principal payment rate; ABS: absolute prepayment speed; CPR: constant prepayment rate.
(b) The auto securitization gain of $9 million does not include the write-down of loans transferred to held-for-sale in 2005 and risk management activities intended to protect the economic value of the loans while held-for-sale.
(c) Includes Alt-A loans.
(d) As of January 1, 2007, the Firm adopted the fair value election for the IB warehouse and a portion of the RFS mortgage warehouse. The carrying value of these loans accounted for at fair value approximates the proceeds received from securitization.
(e) Expected credit losses for prime residential mortgage, education and certain wholesale securitizations are minimal and are incorporated into other assumptions.
(f) Interests in subprime residential mortgage securitizations for consumer activities are held by the Investment Bank and the key assumptions used in measuring these retailed interests are reported under subprime residential mortgages for wholesale activities.

In addition to the amounts reported for securitization activity in the preceding table, the Firm sold residential mortgage loans totaling $81.8 billion, $53.7 billion and $52.5 billion during 2007, 2006 and 2005, respectively, primarily for securitization by the Government National Mortgage Association ("GNMA"), Federal National Mortgage Association ("FNMA") and Federal Home Loan Mortgage Corporation ("Freddie Mac"); these sales resulted in pretax gains of $47 million, $251 million and $293 million, respectively.

Retained servicing

JPMorgan Chase retains servicing responsibilities for all originated and for certain purchased residential mortgage, credit card and automobile loan securitizations and for certain commercial activity securitizations it sponsors, and receives servicing fees based upon the securitized loan balance plus certain ancillary fees. The Firm also retains the right to service the residential mortgage loans it sells to GNMA, FNMA and Freddie Mac. For a discussion of mortgage servicing rights, see Note 18 on pages 154–157 of this Annual Report.

The Firm provides mortgage servicing on a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans such as FNMA or Freddie Mac or with a private investor, insurer or guarantor. Losses on recourse servicing occur primarily when foreclosure sale proceeds of the property underlying a defaulted mortgage are less than the outstanding principal balance and accrued interest of the loan and the cost of holding and disposing of the underlying property. The Firm's mortgage loan securitizations are primarily nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the securities issued by the trust. As of December 31, 2007 and 2006, the amount of recourse obligations totaled $557 million and $649 million, respectively.

Retained securitizations interest

At both December 31, 2007 and 2006, the Firm had, with respect to its credit card master trusts, $18.6 billion and $19.3 billion, respectively, related to undivided interests, and $2.7 billion and $2.5 billion, respectively, related to subordinated interests in accrued interest and fees on the securitized receivables, net of an allowance for uncollectible amounts. Credit card securitization trusts require the Firm to maintain a minimum undivided interest of 4% to 12% of the principal receivables in the trusts. The Firm maintained an average undivided interest in principal receivables in the trusts of approximately 19% for 2007 and 21% for 2006. The Firm also maintains escrow accounts up to predetermined limits for some credit card, automobile and education securitizations to cover the unlikely event of deficiencies in cash flows owed to investors. The amounts available in such escrow accounts are recorded in Other assets and, as of December 31, 2007, amounted to $97 million, $21 million and $3 million for credit card, automobile and education securitizations, respectively; as of December 31, 2006, these amounts were $153 million and $56 million for credit card and automobile securitizations, respectively.

The following table summarizes other retained securitization interests, which are primarily subordinated or residual interests, and are carried at fair value on the Firm's Consolidated balance sheets.

December 31, (in millions)	**2007**	2006
Consumer activities		
Credit card[a][b]	**$ 887**	$ 833
Auto[a][c]	**85**	168
Residential mortgage[a]:		
Prime[d]	**128**	43
Subprime	**93**	112
Education loans	**55**	—
Wholesale activities[e][f]		
Residential mortgages:		
Prime[d]	**253**	204
Subprime	**294**	828
Commercial and other	**42**	117
Total[g]	**$ 1,837**	$2,305

(a) Pretax unrealized gains/(losses) recorded in Stockholders' equity that relate to retained securitization interests on consumer activities totaled $(14) million and $3 million for credit card; $3 million and $4 million for automobile and $44 million and $51 million for residential mortgage at December 31, 2007 and 2006, respectively.

(b) The credit card retained interest amount noted above includes subordinated securities retained by the Firm totaling $284 million and $301 million at December 31, 2007 and 2006, respectively, that are classified as AFS securities. The securities are valued using quoted market prices and therefore are not included in the key economic assumptions and sensitivities table that follows.

(c) In addition to these auto retained interests, the Firm had $188 million of senior securities at December 31, 2006, that were classified as AFS securities. These securities were valued using quoted market prices and therefore were not included in the key economic assumption and sensitivities table that follows. The Firm did not have any such securities at December 31, 2007.

(d) Includes Alt-A loans.

(e) In addition to these wholesale retained interests, the Firm also retained subordinated securities totaling $22 million and $23 million at December 31, 2007 and 2006, respectively, predominately from resecuritizations activities that are classified as Trading assets. These securities are valued using quoted market prices and therefore are not included in the key assumptions and sensitivities table that follows.

(f) Some consumer activities securitization interests are retained by the Investment Bank and reported under Wholesale activities.

(g) In addition to the retained interests described above, the Firm also held investment-grade interests of $9.7 billion and $3.1 billion at December 31, 2007 and 2006, respectively, that the Firm expects to sell to investors in the normal course of its underwriting activity or that are purchased in connection with secondary market-making activities.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's retained interests other than residential MSRs (for a discussion of residential MSRs, see Note 18 on pages 154–157 of this Annual Report) in its securitizations at December 31, 2007 and 2006, respectively; and it outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in those assumptions.

December 31, 2007 (in millions, except rates and where otherwise noted)	Consumer activities					Wholesale activities		
			Residential mortgage			Residential mortgage		
	Credit card	Auto	Prime[c]	Subprime	Education loans	Prime[c]	Subprime	Commercial and other
Weighted-average life (in years)	**0.4–0.5**	**0.9**	**3.7**	**1.8**	**8.8**	**2.9-4.9**	**3.3**	**0.3–11.0**
Prepayment rate[a]	**15.6-18.9% PPR**	**1.4% ABS**	**21.1% CPR**	**26.2% CPR**	**1.0–8.0% CPR**	**19.0-25.3% CPR**	**25.6% CPR**	**0.0–50.0%[e] CPR**
Impact of 10% adverse change	**$ (59)**	**$ (1)**	**$ (8)**	**$ (1)**	**$ (1)**	**$ (6)**	**(29)**	**$ (1)**
Impact of 20% adverse change	**(118)**	**(1)**	**(13)**	**(1)**	**(2)**	**(12)**	**(53)**	**(2)**
Loss assumption	**3.3-4.6%**	**0.6%**	**—%[b]**	**1.0%**	**—%[b]**	**0.6-3.0%**	**4.1%**	**0.0–0.9%[b]**
Impact of 10% adverse change	**$ (117)**	**$ (2)**	**$ —**	**$ (2)**	**$ —**	**$ (13)**	**$ (66)**	**$ (1)**
Impact of 20% adverse change	**(234)**	**(3)**	**—**	**(5)**	**—**	**(25)**	**(115)**	**(1)**
Discount rate	**12.0%**	**6.8%**	**12.2%**	**15.0-30.0%[d]**	**9.0%**	**11.0-23.9%**	**19.3%**	**1.0–18.0%**
Impact of 10% adverse change	**$ (2)**	**$ —**	**$ (5)**	**$ (2)**	**$ (3)**	**$ (13)**	**$ (14)**	**$ —**
Impact of 20% adverse change	**(4)**	**(1)**	**(10)**	**(4)**	**(5)**	**(26)**	**(27)**	**(1)**

December 31, 2006 (in millions, except rates and where otherwise noted)	Consumer activities					Wholesale activities		
			Residential mortgage			Residential mortgage		
	Credit card	Auto	Prime[c]	Subprime	Education loans	Prime[c]	Subprime	Commercial and other
Weighted-average life (in years)	0.4–0.5	1.1	3.4	0.2-1.2	—	2.3-2.5	1.9	0.2–5.9
Prepayment rate[a]	17.5–20.4% PPR	1.4% ABS	19.3% CPR	31.1-41.8% CPR	—	10.0-33.6% CPR	42.9% CPR	0.0–50.0%[e] CPR
Impact of 10% adverse change	$ (52)	$ (1)	$ (2)	$ (2)	$ —	$ (9)	$ (35)	$ (1)
Impact of 20% adverse change	(104)	(3)	(5)	(2)	—	(17)	(45)	(2)
Loss assumption	3.5–4.1%	0.7%	—%[b]	1.4-5.1%	—	0.1-0.7%	2.2%	0.0–1.3%[b]
Impact of 10% adverse change	$ (87)	$ (4)	$ —	$ (4)	$ —	$ (3)	$ (42)	$ (1)
Impact of 20% adverse change	(175)	(7)	—	(8)	—	(7)	(82)	(1)
Discount rate	12.0%	7.6%	8.4%	15.0–30.0%[d]	—	16.0-20.0%	16.9%	0.5–14.0%
Impact of 10% adverse change	$ (2)	$ (1)	$ (1)	$ (2)	$ —	$ (7)	$ (18)	$ (1)
Impact of 20% adverse change	(3)	(2)	(3)	(4)	—	(16)	(32)	(2)

(a) PPR: principal payment rate; ABS: absolute prepayment speed; CPR: constant prepayment rate.
(b) Expected credit losses for prime residential mortgage, education loans and certain wholesale securitizations are minimal and are incorporated into other assumptions.
(c) Includes Alt-A loans.
(d) Residual interests from subprime mortgage Net Interest Margin securitizations are valued using a 30% discount rate.
(e) Prepayment risk on certain wholesale retained interests for commercial and other are minimal and are incorporated into other assumptions.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based upon a 10% or 20% variation in assumptions generally cannot be extrapolated easily because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in the table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might counteract or magnify the sensitivities.

Expected static-pool net credit losses include actual incurred losses plus projected net credit losses, divided by the original balance of the outstandings comprising the securitization pool. The table below displays the expected static-pool net credit losses for 2007, 2006 and 2005, based upon securitizations occurring in that year.

	Loans securitized in:[a]					
	2007		2006		2005	
	Residential mortgage[b]	Auto	Residential mortgage[b]	Auto	Residential mortgage[b]	Auto
December 31, 2007	**7.8%**	**NA**	16.1%	0.7%	11.6%	0.5%
December 31, 2006	**NA**	**NA**	4.4	0.6	3.5	0.7
December 31, 2005	**NA**	**NA**	NA	NA	3.3	0.9

(a) Static-pool losses are not applicable to credit card securitizations due to their revolving nature.
(b) Primarily includes subprime residential mortgages securitized as part of wholesale activities. Expected losses for prime residential mortgage securitizations are minimal for consumer activities.

The table below presents information about delinquencies, net charge-offs (recoveries) and components of reported and securitized financial assets at December 31, 2007 and 2006 (see footnote (c) below).

	Total Loans		Nonaccrual and 90 days or more past due[e]		Net loan charge-offs (recoveries) Year ended	
December 31, (in millions)	**2007**	2006	**2007**	2006	**2007**	2006
Home Equity	**$ 94,832**	$ 85,730	**$ 810**	$ 454	**$ 564**	$ 143
Mortgage	**56,031**	59,668	**1,798**	769	**190**	56
Auto loans and leases	**42,350**	41,009	**116**	132	**354**	238
Credit card	**84,352**	85,881	**1,554**	1,344	**3,116**	2,488
All other loans	**28,733**	27,097	**341**	322	**242**	139
Total consumer loans	**306,298**	299,385	**4,619**[f]	3,021[f]	**4,466**	3,064
Total wholesale loans	**213,076**	183,742	**589**	420	**72**	(22)
Total loans reported	**519,374**	483,127	**5,208**	3,441	**4,538**	3,042
Securitized consumer loans						
Residential mortgage:						
Prime[a]	**9,510**	4,180	**64**	1	**1**	1
Subprime	**2,823**	3,815	**146**	190	**46**	56
Automobile	**2,276**	4,878	**6**	10	**13**	15
Credit card	**72,701**	66,950	**1,050**	962	**2,380**	2,210
Other loans	**1,141**	—	**—**	—	**—**	—
Total consumer loans securitized	**88,451**	79,823	**1,266**	1,163	**2,440**	2,282
Securitized wholesale activities						
Residential mortgage:						
Prime[a]	**8,791**	12,528	**419**	63	**2**	—
Subprime	**12,156**	14,747	**2,710**	481	**361**	13
Commercial and other	**3,419**	13,756	**—**	6	**11**	3
Total securitized wholesale activities	**24,366**	41,031	**3,129**	550	**374**	16
Total loans securitized[b]	**112,817**	120,854	**4,395**	1,713	**2,814**	2,298
Total loans reported and securitized[c]	**$ 632,191**[d]	$ 603,981	**$ 9,603**	$ 5,154	**$ 7,352**	$ 5,340

(a) Includes Alt-A loans.
(b) Total assets held in securitization-related SPEs were $301.0 billion and $262.9 billion at December 31, 2007 and 2006, respectively. The $112.8 billion and $120.9 billion of loans securitized at December 31, 2007 and 2006, respectively, excludes $168.1 billion and $122.5 billion of securitized loans, in which the Firm's only continuing involvement is the servicing of the assets; $18.6 billion and $19.3 billion of seller's interests in credit card master trusts; and $1.5 billion and $256 million of escrow accounts and other assets, respectively.
(c) Represents both loans on the Consolidated balance sheets and loans that have been securitized, but excludes loans for which the Firm's only continuing involvement is servicing of the assets.
(d) Includes securitized loans that were previously recorded at fair value and classified as Trading assets.
(e) Includes nonperforming loans held-for-sale of $45 million and $120 million at December 31, 2007 and 2006, respectively.
(f) Excludes nonperforming assets related to (i) loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by U.S. government agencies of $1.5 billion and $1.2 billion at December 31, 2007 and 2006, respectively, and (ii) education loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $279 million and $219 million at December 31, 2007 and 2006, respectively. These amounts for GNMA and education loans are excluded, as reimbursement is proceeding normally.

Subprime adjustable-rate mortgage loan modifications

See the Glossary of Terms on page 183 of this Annual Report for the Firm's definition of subprime loans. Within the confines of the limited decision-making abilities of a QSPE under SFAS 140, the operating documents that govern existing subprime securitizations generally authorize the servicer to modify loans for which default is reasonably foreseeable, provided that the modification is in the best interests of the QSPE's beneficial interest holders, and would not result in a REMIC violation.

In December 2007, the American Securitization Forum ("ASF") issued the "Streamlined Foreclosure and Loss Avoidance Framework for Securitized Subprime Adjustable Rate Mortgage Loans" ("the Framework"). The Framework provides guidance for servicers to streamline evaluation procedures for borrowers with certain subprime adjustable rate mortgage ("ARM") loans to more efficiently provide modifications of such loans with terms that are more appropriate for the individual needs of such borrowers. The Framework applies to all first-lien subprime ARM loans that have a fixed rate of interest for an initial period of 36 months or less, are included in securitized pools, were originated between January 1, 2005, and July 31, 2007, and have an initial interest rate reset date between January 1, 2008, and July 31, 2010 ("ASF Framework Loans").

The Framework categorizes the population of ASF Framework Loans into three segments. Segment 1 includes loans where the borrower is current and is likely to be able to refinance into any available mortgage product. Segment 2 includes loans where the borrower is current, is unlikely to be able to refinance into any readily available mortgage industry product and meets certain defined criteria. Segment 3 includes loans where the borrower is not current, as defined, and does not meet the criteria for Segments 1 or 2.

ASF Framework Loans in Segment 2 of the Framework are eligible for fast-track modification under which the interest rate will be kept at the existing initial rate, generally for five years following the interest rate reset date. The Framework indicates that for Segment 2 loans, JPMorgan Chase, as servicer, may presume that the borrower will be unable to make payments pursuant to the original terms of the borrower's loan after the initial interest rate reset date. Thus, the Firm may presume that a default on that loan by the borrower is reasonably foreseeable unless the terms of the loan are modified. JPMorgan Chase has adopted the loss mitigation approaches under the Framework for securitized subprime loans that meet the specific Segment 2 screening criteria, and it expects to begin modifying Segment 2 loans by the end of the first quarter of 2008. The Firm believes that the adoption of the Framework will not affect the off-balance sheet accounting treatment of JPMorgan Chase-sponsored QSPEs that hold Segment 2 subprime loans.

The total amount of assets owned by Firm-sponsored QSPEs that hold ASF Framework Loans (including those loans that are not serviced by the Firm) as of December 31, 2007, was $20.0 billion. Of this amount, $9.7 billion relates to ASF Framework Loans serviced by the Firm. Based on current economic conditions, the Firm estimates that approximately 20%, 10% and 70% of the ASF Framework Loans it services that are owned by Firm-sponsored QSPEs will fall within Segments 1, 2 and 3, respectively. This estimate could change substantially as a result of unanticipated changes in housing values, economic conditions, investor/borrower behavior and other factors.

The total principal amount of beneficial interests issued by Firm-sponsored securitizations that hold ASF Framework Loans as of December 31, 2007, was as follows.

December 31, 2007 (in millions)	**2007**
Third-party	$19,636
Retained interest	412
Total	$20,048

Note 17 – Variable interest entities

Refer to Note 1 on page 108 of this Annual Report for a further description of JPMorgan Chase's policies regarding consolidation of variable interest entities.

JPMorgan Chase's principal involvement with VIEs occurs in the following business segments:

- Investment Bank: Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner. The IB is involved with VIEs through multi-seller conduits and for investor intermediation purposes as discussed below. The IB also securitizes loans through QSPEs, to create asset-backed securities, as further discussed in Note 16 on pages 139–145 of this Annual Report.
- Asset Management ("AM"): Provides investment management services to a limited number of the Firm's mutual funds deemed VIEs. AM earns a fixed fee based upon assets managed; the fee varies with each fund's investment objective and is competitively priced. For the limited number of funds that qualify as VIEs, AM's relationships with such funds are not considered significant variable interests under FIN 46R.
- Treasury & Securities Services: Provides services to a number of VIEs which are similar to those provided to non-VIEs. TSS earns market-based fees for the services it provides. The relationships resulting from TSS' services are not considered to be significant variable interests under FIN 46R.
- Commercial Banking ("CB"): Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner. This is often accomplished through the use of products similar to those offered in the IB. CB may assist in the structuring and/or ongoing administration of these VIEs and may provide liquidity, letters of credit and/or derivative instruments in support of the VIE. The relationships resulting from CB's services are not considered to be significant variable interests under FIN 46R.
- The Private Equity business, included in Corporate, may be involved with entities that could be deemed VIEs. Private equity activities are accounted for in accordance with the AICPA Audit and Accounting Guide *Investment Companies* (the "Guide"). In June 2007, the AICPA issued SOP 07-1, which provides guidance for determining whether an entity is within the scope of the Guide, and therefore qualifies to use the Guide's specialized accounting principles (referred to as "investment company accounting"). In May 2007, the FASB issued FSP FIN 46(R)-7, which amends FIN 46R to permanently exempt entities within the scope of the Guide from applying the provisions of FIN 46R to their investments. In February 2008, the FASB agreed to an indefinite delay of the effective date of SOP 07-1 in order to address implementation issues, which effectively delays FSP FIN 46(R)-7 as well for those companies, such as the Firm, that have not adopted SOP 07-1. Had FIN 46R been applied to VIEs subject to this deferral, the impact would have been immaterial to the Firm's consolidated financial statements as of December 31, 2007.

As noted above, the IB is primarily involved with multi-seller conduits and VIEs associated with investor intermediation activities. A discussion of these VIEs follows:

Multi-seller conduits

Funding and liquidity

The Firm is an active participant in the asset-backed securities business, and it helps customers meet their financing needs by providing access to the commercial paper markets through VIEs known as multi-seller conduits. Multi-seller conduit entities are separate bankruptcy-remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper to third-party investors. The primary source of repayment of the commercial paper is the cash flow from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided by the customers (i.e., sellers) to the conduits or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller, but also may include any combination of the following: recourse to the seller or originator, cash collateral accounts, letters of credit, excess spread, retention of subordinated interests or third-party guarantees. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

JPMorgan Chase receives fees related to the structuring of multi-seller conduit transactions and receives compensation from the multi-seller conduits for its role as administrative agent, liquidity provider, and provider of program-wide credit enhancement.

As a means of ensuring timely repayment of the commercial paper, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it. Deal-specific liquidity facilities are the primary source of liquidity support for the conduits. The deal-specific liquidity facilities are typically in the form of asset purchase agreements and are generally structured so that the liquidity that will be provided by the Firm as liquidity provider will be effected by the Firm purchasing, or lending against, a pool of nondefaulted, performing assets. In limited circumstances the Firm may provide unconditional liquidity.

The conduit's administrative agent can require the liquidity provider to perform under its asset purchase agreement with the conduit at any time. These agreements may cause the liquidity provider, including the Firm, to purchase an asset from the conduit at an amount above the asset's then current fair value – in effect providing a guarantee of the initial value of the reference asset as of the date of the agreement.

The Firm also provides the multi-seller conduit vehicles with program-wide liquidity facilities, in the form of uncommitted short-term revolving facilities that can be accessed by the conduits to handle funding increments too small to be funded by commercial paper, and in the form of uncommitted liquidity facilities that can be accessed by the conduits only in the event of short-term disruptions in the commercial paper market.

Because the majority of the liquidity facilities will only fund nondefaulted assets, program-wide credit enhancement is required to absorb losses on defaulted receivables in excess of losses absorbed by deal-specific credit enhancement. Program-wide credit enhancement may be provided by JPMorgan Chase in the form of standby letters of credit or by a third-party surety bond provider. The amount of program-wide credit enhancement required varies by conduit and ranges between 5% and 10% of total assets.

The following table summarizes the Firm's involvement with Firm-administered multi-seller conduits.

	Consolidated		Nonconsolidated		**Total**	
December 31, (in billions)	**2007**	2006	**2007**	2006	**2007**	2006
Total assets held by conduits	**$ —**	$ 3.4	**$ 61.2**	$ 43.6	**$ 61.2**	$ 47.0
Total commercial paper issued by conduits	**—**	3.4	**62.6**	44.1	**62.6**	47.5
Liquidity and credit enhancements						
Deal-specific liquidity facilities (Asset purchase agreements)	**—**	0.5	**87.3**	66.0	**87.3**	66.5
Program-wide liquidity facilities	**—**	1.0	**13.2**	4.0	**13.2**	5.0
Program-wide limited credit enhancements	**—**	—	**2.5**	1.6	**2.5**	1.6
Maximum exposure to loss[(a)]	**—**	1.0	**88.9**	67.0	**88.9**	68.0

(a) The Firm's maximum exposure to loss is limited to the amount of drawn commitments (i.e., sellers' assets held by the multi-seller conduits for which the Firm provides liquidity support) of $61.2 billion and $43.9 billion at December 31, 2007 and 2006, respectively, plus contractual but undrawn commitments of $27.7 billion and $24.1 billion at December 31, 2007 and 2006, respectively. Since the Firm provides credit enhancement and liquidity to Firm-administered, multi-seller conduits, the maximum exposure is not adjusted to exclude exposure that would be absorbed by third-party liquidity providers.

Assets funded by the multi-seller conduits

JPMorgan Chase's administered multi-seller conduits fund a variety of asset types for the Firm's clients. Asset types primarily include credit card receivables, auto loans and leases, trade receivables, education loans, commercial loans, residential mortgages, capital commitments (e.g., loans to private equity, mezzanine and real estate opportunity funds secured by capital commitments of highly rated institutional investors), and various other asset types. It is the Firm's intention that the assets funded by its administered multi-seller conduits be sourced only from the Firm's clients and not be originated by or transferred from JPMorgan Chase.

The following table presents information on the commitments and assets held by JPMorgan Chase's administered multi-seller conduits as of December 31, 2007 and 2006.

Summary of exposure to Firm-administered nonconsolidated multi-seller conduits

	2007				2006			
December 31, (in billions)	Unfunded commitments[a]	Funded assets	Liquidity provided by third parties	Total exposure	Unfunded commitments[a]	Funded assets	Liquidity provided by third parties	Total exposure
Asset types:								
Credit card	**$ 3.3**	**$ 14.2**	**$ —**	**$ 17.5**	$ 3.8	$ 10.6	$ —	$ 14.4
Automobile	**4.5**	**10.2**	**—**	**14.7**	4.2	8.2	—	12.4
Trade receivables	**6.0**	**6.6**	**—**	**12.6**	5.6	7.0	—	12.6
Education loans	**0.8**	**9.2**	**—**	**10.0**	0.3	0.9	—	1.2
Commercial	**2.7**	**5.5**	**(0.4)**	**7.8**	2.3	3.8	(0.5)	5.6
Residential mortgage	**4.6**	**3.1**	**—**	**7.7**	4.1	5.7	—	9.8
Capital commitments	**2.0**	**5.1**	**(0.6)**	**6.5**	0.8	2.0	(0.2)	2.6
Other	**3.8**	**7.3**	**(0.6)**	**10.5**	2.3	5.4	(0.3)	7.4
Total	**$ 27.7**	**$ 61.2**	**$ (1.6)**	**$ 87.3**	$ 23.4	$ 43.6	$ (1.0)	$ 66.0

	Ratings profile of VIE assets[b]						
	Investment-grade				Noninvestment-grade		
December 31, 2007 (in billions)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below	Funded assets	Wt. avg. expected life (years)[c]
Asset types:							
Credit card	**$ 4.2**	**$ 9.4**	**$ 0.6**	**$ —**	**$ —**	**$ 14.2**	**1.5**
Automobile	**1.8**	**6.9**	**1.4**	**—**	**0.1**	**10.2**	**2.3**
Trade receivables	**—**	**4.7**	**1.7**	**0.2**	**—**	**6.6**	**1.3**
Education loans	**1.0**	**8.1**	**0.1**	**—**	**—**	**9.2**	**0.5**
Commercial	**0.5**	**4.2**	**0.7**	**0.1**	**—**	**5.5**	**2.6**
Residential mortgage	**1.5**	**0.8**	**0.8**	**—**	**—**	**3.1**	**1.5**
Capital commitments	**—**	**5.1**	**—**	**—**	**—**	**5.1**	**3.4**
Other	**2.0**	**4.6**	**0.4**	**0.2**	**0.1**	**7.3**	**2.0**
Total	**$ 11.0**	**$ 43.8**	**$ 5.7**	**$ 0.5**	**$ 0.2**	**$ 61.2**	**1.8**

	Ratings profile of VIE assets[b]						
	Investment-grade				Noninvestment-grade		
December 31, 2006 (in billions)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below	Funded assets	Wt. avg. expected life (years)[c]
Asset types:							
Credit card	$ 1.0	$ 9.1	$ 0.4	$ 0.1	$ —	$ 10.6	1.1
Automobile	1.1	6.8	0.3	—	—	8.2	2.3
Trade receivables	0.1	5.0	1.7	0.2	—	7.0	1.1
Education loans	0.5	—	0.4	—	—	0.9	1.0
Commercial	0.7	2.2	0.9	—	—	3.8	3.0
Residential mortgage	—	5.1	0.6	—	—	5.7	0.9
Capital commitments	—	1.8	0.2	—	—	2.0	3.0
Other	2.0	3.1	0.1	0.2	—	5.4	2.0
Total	$ 5.4	$ 33.1	$ 4.6	$ 0.5	$ —	$ 43.6	1.7

(a) Unfunded commitments held by the conduits represent asset purchase agreements between the conduits and the Firm.
(b) The ratings scale is presented on an S&P equivalent basis.
(c) Weighted average expected life for each asset type is based upon the remainder of each conduit transaction's committed liquidity plus the expected weighted average life of the assets should the committed liquidity expire without renewal, or the expected time to sell the underlying assets in the securitization market.

The assets held by the multi-seller conduits are structured so that if the assets were rated, the Firm believes the majority of them would receive an "A" rating or better by external rating agencies. However, it is unusual for the assets held by the conduits to be explicitly rated by an external rating agency. Instead, the Firm's Credit Risk group assigns each asset purchase liquidity facility an internal risk-rating based on its assessment of the probability of default for the transaction. The ratings provided in the above table reflect the S&P-equivalent ratings of the internal rating grades assigned by the Firm.

The risk ratings are periodically reassessed as information becomes available. As a result of the deterioration in the credit markets during the second half of 2007, a number of asset purchase liquidity facilities had internal ratings downgrades. These downgrades involved facilities across various asset types. The largest concentration of downgrades related to residential mortgage and education loan exposures. As of December 31, 2007, 99% of the assets in the conduits were risk rated "A-" or better.

Commercial paper issued by the multi-seller conduits
The weighted average life of commercial paper issued by the multi-seller conduits was 51 days in 2007, compared with 36 days in 2006, and the average yield on the commercial paper was 5.3% in 2007, compared with 5.0% in 2006.

In the second half of 2007, the asset-backed commercial paper market was challenging as investors were concerned about potential subprime mortgage exposures. These concerns negatively affected the ability of many VIEs to reissue maturing commercial paper. However, investors have continued to purchase the commercial paper issued by the Firm-administered multi-seller conduits, although at higher yields and shorter maturities. Commercial paper spreads widened most significantly in December 2007, reflecting commercial paper investors' concerns about year-end redemptions and their need to have cash available.

In the normal course of business, JPMorgan Chase trades and invests in commercial paper, including commercial paper issued by the Firm-administered conduits. The percentage of commercial paper purchased by the Firm across all Firm-administered conduits during 2007 ranged from less than 1% to approximately 10% on any given day. The largest daily amount held by the Firm in any one multi-seller conduit during 2007 was approximately $2.7 billion, or 16%, of the conduit's commercial paper outstanding. Total commercial paper held by the Firm at December 31, 2007 and 2006, was $131 million and $1.3 billion, respectively. The Firm is not obligated under any agreement (contractual or noncontractual) to purchase the commercial paper issued by JPMorgan Chase-administered conduits.

Significant 2007 activity
In July 2007, a reverse repurchase agreement collateralized by prime residential mortgages held by a Firm-administered multi-seller conduit was put to JPMorgan Chase under its deal-specific liquidity facility. The asset was transferred to and recorded by JPMorgan Chase at its par value based on the fair value of the collateral that supported the reverse repurchase agreement. During the fourth quarter of 2007, additional information regarding the value of the collateral, including performance statistics, resulted in the determination by the Firm that the fair value of the collateral was impaired. Impairment losses will be allocated to the expected loss note ("ELN") holder (the party that absorbs the majority of the expected loss from the conduit) in accordance with the contractual provisions of the ELN note.

On October 29, 2007, certain structured CDO assets originated in the second quarter of 2007 and backed by subprime mortgages were transferred to the Firm from two Firm-administered multi-seller conduits. It became clear in October that commercial paper investors and rating agencies were becoming increasingly concerned about CDO assets backed by subprime mortgage exposures. Because of these concerns, and to ensure the continuing viability of the two conduits as financing vehicles for clients and as investment alternatives for commercial paper investors, the Firm, in its role as administrator, transferred the CDO assets out of the multi-seller conduits. The structured CDO assets were transferred to the Firm at their par value of $1.4 billion. As of December 31, 2007, the CDO assets were valued on the Consolidated balance sheet at $291 million.

There are no other structured CDO assets backed by subprime mortgages remaining in JPMorgan Chase-administered multi-seller conduits as of December 31, 2007. In addition, the Firm has no plans to permit the multi-seller conduits to purchase such assets in the future.

Consolidation analysis
The multi-seller conduits administered by the Firm are not consolidated at December 31, 2007, because each conduit had issued ELNs, the holders of which are committed to absorbing the majority of the expected loss of each respective conduit.

Implied support
The Firm's expected loss modeling treats all variable interests, other than the ELNs, as its own to determine consolidation. The Firm does not consider the October 2007 transfer of the structured CDO assets from the multi-seller conduits to JPMorgan Chase to be an indicator of JPMorgan Chase's intent to provide implicit support to the ELN holders. Instead, this action was a one-time, isolated event, limited to a specific type of asset that is not typically funded in the Firm's administered multi-seller conduits and for which the Firm has no plans (in its capacity as administrator) to allow the conduits to purchase in the future.

The Firm did not have and continues not to have any intent to protect any ELN holders from potential losses on any of the conduits' holdings and has no plans to remove any assets from any conduit unless required to do so in its role as administrator. Should such a transfer occur, the Firm would allocate losses on such assets between itself and the ELN holders in accordance with the terms of the applicable ELN.

Expected loss modeling
In 2006, the Firm restructured four multi-seller conduits that it administers. The restructurings included enhancing the Firm's expected loss model. In determining the primary beneficiary of the conduits it administers, the Firm uses a Monte Carlo–based model to estimate the expected losses of each of the conduits and considers the relative rights and obligations of each of the variable interest holders. The variability to be considered in the modeling of expected losses is based on the design of the entity. The Firm's traditional multi-seller conduits are designed to pass credit risk, not liquidity risk, to its variable interest holders, as the assets are intended to be held in the conduit for the longer term.

Under FIN 46R, the Firm is required to run the Monte Carlo-based expected loss model each time a reconsideration event occurs. In applying this guidance to the conduits, the following events are considered to be reconsideration events as they could affect the determination of the primary beneficiary of the conduits:

- New deals, including the issuance of new or additional variable interests (credit support, liquidity facilities, etc);
- Changes in usage, including the change in the level of outstanding variable interests (credit support, liquidity facilities, etc);
- Modifications of asset purchase agreements; and
- Sales of interests held by the primary beneficiary.

From an operational perspective, the Firm does not run its Monte Carlo-based expected loss model every time there is a reconsideration event due to the frequency of their occurrence. Instead, the Firm runs its expected loss model each quarter and includes a growth assumption for each conduit to ensure that a sufficient amount of ELNs exists for each conduit at any point during the quarter.

As part of its normal quarterly model review, the Firm reassesses the underlying assumptions and inputs of the expected loss model. During the second half of 2007, certain assumptions used in the model were adjusted to reflect the then current market conditions. Specifically, risk ratings and loss given default assumptions relating to residential subprime mortgage exposures were modified. For other nonmortgage-related asset classes, the Firm determined that the assumptions in the model required little adjustment. As a result of the updates to the model, during the fourth quarter of 2007 the terms of the ELNs were renegotiated to increase the level of commitment and funded amounts to be provided by the ELN holders. The total amount of expected loss notes outstanding at December 31, 2007 and 2006, were $130 million and $54 million, respectively. Management concluded that the model assumptions used were reflective of market participant's assumptions and appropriately considered the probability of a recurrence of recent market events.

Qualitative considerations
The multi-seller conduits are primarily designed to provide an efficient means for clients to access the commercial paper market. The Firm believes the conduits effectively disperse risk among all parties and that the preponderance of economic risk in the Firm's multi-seller conduits is not held by JPMorgan Chase. The percentage of assets in the multi-seller conduits that the Firm views as client-related represent 99% and 98% of the total conduits' holdings at December 31, 2007 and 2006, respectively.

Consolidated sensitivity analysis on capital
It is possible that the Firm could be required to consolidate a VIE if it were determined that the Firm became the primary beneficiary of the VIE under the provisions of FIN 46R. The factors involved in making the determination of whether or not a VIE should be consolidated are discussed above and in Note 1 on page 108 of this Annual Report.
The table below shows the impact on the Firm's reported assets, liabilities, Net income, Tier 1 capital ratio and Tier 1 leverage ratio if the Firm were required to consolidate all of the multi-seller conduits that it administers.

As of or for the year ending
December 31, 2007

(in billions, except ratios)	Reported	Pro forma
Assets	$1,562.1	$1,623.9
Liabilities	1,438.9	1,500.9
Net income	15.4	15.2
Tier 1 capital ratio	8.4%	8.4%
Tier 1 leverage ratio	6.0	5.8

The Firm could fund purchases of assets from VIEs should it become necessary.

Investor intermediation
As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions, typically derivative structures, with these VIEs to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in these structuring activities are municipal bond vehicles, credit-linked note vehicles and collateralized debt obligation vehicles.

Municipal bond vehicles
The Firm has created a series of secondary market trusts that provide short-term investors with qualifying tax-exempt investments, and that allow investors in tax-exempt securities to finance their investments at short-term tax-exempt rates. In a typical transaction, the vehicle purchases fixed-rate longer-term highly rated municipal bonds and funds the purchase by issuing two types of securities: (1) putable floating-rate certificates and (2) inverse floating-rate residual interests ("residual interests"). The maturity of each of the putable floating-rate certificates and the residual interests is equal to the life of the vehicle, while the maturity of the underlying municipal bonds is longer. Holders of the putable floating-rate certificates may "put", or tender, the certificates if the remarketing agent cannot successfully remarket the floating-rate certificates to another investor. A liquidity facility conditionally obligates the liquidity provider to fund the purchase of the tendered floating-rate certificates. Upon termination of the vehicle, if the proceeds from the sale of the underlying municipal bonds are not sufficient to repay the liquidity facility, the liquidity provider has recourse either to excess collateralization in the vehicle or the residual interest holders for reimbursement.

The third-party holders of the residual interests in these vehicles could experience losses if the face amount of the putable floating-rate certificates exceeds the market value of the municipal bonds upon termination of the vehicle. Certain vehicles require a smaller initial investment by the residual interest holders and thus do not result in excess collateralization. For these vehicles there exists a reimbursement obli-

gation which requires the residual interest holders to post, during the life of the vehicle, additional collateral to the vehicle on a daily basis as the market value of the municipal bonds declines.

JPMorgan Chase often serves as the sole liquidity provider and remarketing agent of the putable floating-rate certificates. As the liquidity provider, the Firm has an obligation to fund the purchase of the putable floating-rate certificates; this obligation is triggered by the failure to remarket the putable floating-rate certificates. The liquidity provider's obligation to perform is conditional and is limited by certain termination events which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, and the immediate downgrade of the municipal bond to below investment grade. In vehicles in which third-party investors own the residual interests, in addition to the termination events, the Firm's exposure as liquidity provider is further limited by the high credit quality of the underlying municipal bonds, and the excess collateralization in the vehicle or the reimbursement agreements with the residual interest holders.

As remarketing agent, the Firm may hold the putable floating-rate certificates; at December 31, 2007 and 2006, respectively, the Firm held $617 million and $275 million of these certificates on its Consolidated balance sheets. The largest amount held by the Firm at any time during 2007 was $1.0 billion, or 5%, of the municipal bond vehicles' outstanding putable floating-rate certificates. During 2007 and 2006, the Firm did not experience a draw on the liquidity facilities.

The long-term credit ratings of the putable floating-rate certificates are directly related to the credit ratings of the underlying municipal bonds, and to the credit rating of any insurer of the underlying municipal bond. A downgrade of a bond insurer would result in a downgrade of the insured municipal bonds, which would affect the rating of the putable floating-rate certificates. This could cause demand for these certificates by investors to decline or disappear, as putable floating-rate certificate holders typically require an "AA-" bond rating. At December 31, 2007 and 2006, 99% of the underlying municipal bonds held by vehicles to which the Firm served as liquidity provider were rated "AA-" or better. At December 31, 2007 and 2006, $702 million and $606 million, respectively, of the bonds were insured by a third party. During 2007 and 2006, the municipal bond vehicles did not experience any bankruptcy or downgrade termination events.

The Firm sometimes invests in the residual interests of municipal bond vehicles. For VIEs in which the Firm owns the residual interests, the Firm consolidates the VIEs. The likelihood that the Firm would have to consolidate VIEs where the Firm does not own the residual interests and that are currently off-balance sheet is remote.

Exposure to nonconsolidated municipal bond VIEs at December 31, 2007 and 2006, including the ratings profile of the VIE's assets, were as follows.

	2007				2006			
December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities[c]	Excess/ (deficit)[d]	Total exposure	Fair value of assets held by VIEs	Liquidity facilities[c]	Excess/ (deficit)[d]	Total exposure
Nonconsolidated Municipal bond vehicles[a][b]	**$ 19.2**	**$ 18.1**	**$ 1.1**	**$ 18.1**	$ 11.1	$ 10.3	$ 0.8	$ 10.3

	Ratings profile of VIE assets[e]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
Nonconsolidated municipal bond vehicles[a]							
2007	**$ 14.6**	**$ 4.4**	**$ 0.2**	**$ —**	**$ —**	**$ 19.2**	**10.0**
2006	9.4	1.6	0.1	—	—	11.1	10.0

(a) Excluded $6.9 billion and $4.6 billion at December 31, 2007 and 2006, respectively, which were consolidated due to the Firm owning the residual interests.
(b) Certain of the municipal bond vehicles are structured to meet the definition of a QSPE (as discussed in Note 1 on page 108 of this Annual Report); accordingly, the assets and liabilities of QSPEs are not reflected in the Firm's Consolidated balance sheets (except for retained interests that are reported at fair value). Excluded nonconsolidated amounts of $7.1 billion and $4.7 billion at December 31, 2007 and 2006, respectively, related to QSPE municipal bond vehicles in which the Firm owned the residual interests.
(c) The Firm may serve as credit enhancement provider in municipal bond vehicles in which it serves as liquidity provider. The Firm provided insurance on underlying municipal bonds in the form of letters of credit in the amount of $103 million and $82 million at December 31, 2007 and 2006, respectively.
(d) Represents the excess (deficit) of municipal bond asset fair value available to repay the liquidity facilities if drawn.
(e) The ratings scale is presented on an S&P equivalent basis.

Credit-linked note vehicles

The Firm structures transactions with credit-linked note ("CLN") vehicles in which the VIE purchases highly rated assets (such as asset-backed securities) and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit which the VIE otherwise does not hold. The VIE then issues CLNs with maturities predominantly ranging from one to 10 years in order to transfer the risk of the referenced credit to the VIE's investors. Clients and investors often prefer using a CLN vehicle since the CLNs issued by the VIE generally carry a higher credit rating than such notes would if issued directly by JPMorgan Chase. The Firm's exposure to the CLN vehicles is generally limited to its rights and obligations under the credit derivative contract with the VIE as the Firm does not provide any additional financial support to the VIE. Accordingly, the Firm typically does not consolidate the CLN vehicles. As a derivative counterparty in a credit-linked note structure, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its balance sheet at fair value. Substantially all of the collateral purchased by such VIEs is investment-grade, with a significant majority being rated "AAA". The Firm divides its credit-linked note structures broadly into two types: static and managed.

In a static credit-linked note structure, the CLNs and associated credit derivative contract either reference a single credit (e.g., a multinational corporation) or all or part of a fixed portfolio of credits. The Firm generally buys protection from the VIE under the credit derivative. As a net buyer of credit protection, the Firm pays a premium to the VIE in return for the receipt of a payment (up to the notional amount of the derivative) if one or more reference credits defaults, or if the losses resulting from the default of the reference credits exceed specified levels.

In a managed credit-linked note structure, the CLNs and associated credit derivative generally reference all or part of an actively managed portfolio of credits. An agreement exists between a portfolio manager and the VIE that gives the portfolio manager the ability to substitute each referenced credit in the portfolio for an alternative credit. By participating in a structure where a portfolio manager has the ability to substitute credits within pre-agreed terms, the investors who own the CLNs seek to reduce the risk that any single credit in the portfolio will default. The Firm does not act as portfolio manager; its involvement with the VIE is generally limited to being a derivative counterparty. As a net buyer of credit protection, the Firm pays a premium to the VIE in return for the receipt of a payment (up to the notional of the derivative) if one or more credits within the portfolio defaults, or if the losses resulting from the default of reference credits exceed specified levels. Exposure to nonconsolidated credit-linked note VIEs at December 31, 2007 and 2006, was as follows.

	2007				2006			
December 31, (in billions)	Derivative receivable	Trading assets[c]	Total exposure[d]	Par value of collateral held by VIEs	Derivative receivable	Trading assets[c]	Total exposure[d]	Par value of collateral held by VIEs
Credit-linked notes[a]								
Static structure	**$ 0.8**	**$ 0.4**	**$ 1.2**	**$ 13.5**	$ 0.2	$ 0.1	$ 0.3	$15.9
Managed structure[b]	**4.5**	**0.9**	**5.4**	**12.8**	0.4	0.2	0.6	8.9
Total	**$ 5.3**	**$ 1.3**	**$ 6.6**	**$ 26.3**	$ 0.6	$ 0.3	$ 0.9	$24.8

(a) Excluded fair value of collateral of $2.5 billion and $2.0 billion at December 31, 2007 and 2006, respectively, which were consolidated.
(b) Includes synthetic CDO vehicles, which have similar risk characteristics to managed CLN vehicles; 2006 amounts have been revised to reflect this presentation. 2007 trading assets amounts include $291 million of transactions with subprime collateral.
(c) Trading assets principally comprise notes issued by VIEs, which from time to time are held as part of the termination of a deal or to support limited market-making.
(d) On-balance sheet exposure that includes Derivative receivables and trading assets.

Collateralized Debt Obligations vehicles

A CDO typically refers to a security that is collateralized by a pool of bonds, loans, equity, derivatives or other assets. The Firm's involvement with a particular CDO vehicle may take one or more of the following forms: arranger, warehouse funding provider, placement agent or underwriter, secondary market-maker for securities issued, or derivative counterparty.

Prior to the formal establishment of a CDO vehicle, there is a warehousing period where a VIE may be used to accumulate the assets which will be subsequently securitized and will serve as the collateral for the securities to be issued to investors. During this warehousing period, the Firm may provide all or a portion of the financing to the VIE, for which the Firm earns interest on the amounts it finances. A third-party asset manager that will serve as the manager for the CDO vehicle uses the warehouse funding provided by the Firm to purchase the financial assets. The funding commitments generally are one year in duration. In the event that the securitization of assets does not occur within the committed financing period, the warehoused assets are generally liquidated.

Because of the varied levels of support provided by the Firm during the warehousing period, which typically averages six to nine months, each CDO warehouse VIE is assessed in accordance with FIN 46(R) to determine whether the Firm is considered the primary beneficiary that should consolidate the VIE. In general, the Firm would consolidate the warehouse VIE unless another third party, typically the asset manager,

provides significant protection for potential declines in the value of the assets held by the VIE. In those cases, the third party that provides the protection to the warehouse VIE would consolidate the VIE.

Once the portfolio of warehoused assets is large enough, the VIE will issue securities. The proceeds from the securities issuance will be used to repay the warehouse financing obtained from the Firm and other counterparties. In connection with the establishment of the CDO vehicle, the Firm typically earns a fee for arranging the CDO vehicle and distributing the securities (as placement agent and/or underwriter) and does not typically own any equity tranches issued. Once the CDO vehicle closes and issues securities, the Firm has no further obligation to provide further support to the vehicle. At the time of closing, the Firm may hold unsold positions that the Firm was not able to place with third-party investors. The amount of unsold positions at December 31, 2007, was insignificant. In addition, the Firm may on occasion hold some of the CDO vehicles' securities as a secondary market-maker or as a principal investor, or it may be a derivative counterparty to the vehicles. At December 31, 2007 and 2006, these amounts were not significant.

Exposures to CDO warehouse VIEs at December 31, 2007 and 2006, were as follows.

December 31, 2007 (in billions)	Funded loans	Unfunded commitments[a]	Total exposure[b]
CDO warehouse VIEs			
Consolidated	**$ 2.4**	**$ 1.9**	**$ 4.3**
Nonconsolidated	**2.7**	**3.4**	**6.1**
Total	**$ 5.1**	**$ 5.3**	**$ 10.4**

December 31, 2006 (in billions)	Funded loans	Unfunded commitments[a]	Total exposure[b]
CDO warehouse VIEs			
Consolidated	$ 2.3	$ 2.5	$ 4.8
Nonconsolidated	3.6	5.9	9.5
Total	$ 5.9	$ 8.4	$ 14.3

	Ratings profile of VIE assets[c]					
	Investment-grade				Noninvestment-grade	
December 31, (in billions)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below	Total exposure
Nonconsolidated CDO warehouse VIEs						
2007	**$ —**	**$ —**	**$ —**	**$ —**	**$ 2.7**	**$ 2.7**
2006	—	—	—	0.8	2.8	3.6

(a) Typically contingent upon certain asset-quality conditions being met by asset managers.
(b) The aggregate of the fair value of loan exposure and any unfunded contractually committed financing.
(c) The ratings scale is based upon JPMorgan Chase's internal risk ratings and is presented on an S&P equivalent basis.

Consolidated VIE assets

The following table summarizes the Firm's total consolidated VIE assets, by classification, on the Consolidated balance sheets, as of December 31, 2007 and 2006.

December 31, (in billions)	**2007**	2006
Consolidated VIE assets		
Securities purchased under resale agreements[a]	**$ 0.1**	$ 8.0
Trading assets[b]	**14.4**	9.8
Investment securities	**—**	0.2
Loans[a]	**4.4**	15.9
Other assets	**0.7**	2.9
Total consolidated assets	**$ 19.6**	$ 36.8

(a) Included activity conducted by the Firm in a principal capacity, primarily in the IB.
(b) Included the fair value of securities and derivative receivables.

The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item titled, "Beneficial interests issued by consolidated variable interest entities" on the Consolidated balance sheets. The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. See Note 21 on page 159 of this Annual Report for the maturity profile of FIN 46 long-term beneficial interests.

Other topics related to VIEs

VIEs Structured by Unrelated Parties

The Firm enters into transactions with VIEs structured by other parties. These transactions include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, trustee or custodian. These transactions are conducted at arm's length, and individual credit decisions are based upon the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where these activities do not cause JPMorgan Chase to absorb a majority of the expected losses of the VIEs or to receive a majority of the residual returns of the VIEs, JPMorgan Chase records and reports these positions on its balance sheet similar to the way it would record and report positions from any other third-party transaction. These transactions are not considered significant for disclosure purposes under FIN 46(R).

Note 18 – Goodwill and other intangible assets

Goodwill is not amortized. It is instead tested for impairment in accordance with SFAS 142 at the reporting-unit segment, which is generally one level below the six major reportable business segments (as described in Note 34 on pages 175–177 of this Annual Report); plus Private Equity (which is included in Corporate). Goodwill is tested annually (during the fourth quarter) or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment. Intangible assets determined to have indefinite lives are not amortized but instead are tested for impairment at least annually, or more frequently if events or changes in circumstances indicate that the asset might be impaired. The impairment test compares the fair value of the indefinite-lived intangible asset to its carrying amount. Other acquired intangible assets determined to have finite lives, such as core deposits and credit card relationships, are amortized over their estimated useful lives in a manner that best reflects the economic benefits of the intangible asset. In addition, impairment testing is performed periodically on these amortizing intangible assets.

Goodwill and other intangible assets consist of the following.

December 31, (in millions)	**2007**	2006
Goodwill	**$ 45,270**	$ 45,186
Mortgage servicing rights	**8,632**	7,546
Purchased credit card relationships	**2,303**	2,935
All other intangibles:		
Other credit card–related intangibles	**$ 346**	$ 302
Core deposit intangibles	**2,067**	2,623
Other intangibles	**1,383**	1,446
Total All other intangible assets	**$ 3,796**	$ 4,371

Goodwill

The $84 million increase in Goodwill from 2006 primarily resulted from certain acquisitions by TSS and CS, and currency translation adjustments on the Sears Canada credit card acquisition. Partially offsetting these increases was a reduction in Goodwill from the adoption of FIN 48, as well as tax-related purchase accounting adjustments. For additional information see Note 26 on pages 164–165 of this Annual Report.

Goodwill was not impaired at December 31, 2007, or 2006, nor was any goodwill written off due to impairment during 2007 and 2006.

Goodwill attributed to the business segments was as follows.

December 31, (in millions)	**2007**	2006
Investment Bank	**$ 3,578**	$ 3,526
Retail Financial Services	**16,848**	16,955
Card Services	**12,810**	12,712
Commercial Banking	**2,873**	2,901
Treasury & Securities Services	**1,660**	1,605
Asset Management	**7,124**	7,110
Corporate (Private Equity)	**377**	377
Total Goodwill	**$ 45,270**	$ 45,186

Mortgage servicing rights

JPMorgan Chase recognizes as intangible assets mortgage servicing rights, which represent the right to perform specified residential mortgage servicing activities for others. MSRs are either purchased from third parties or retained upon sale or securitization of mortgage loans. Servicing activities include collecting principal, interest, and escrow payments from borrowers; making tax and insurance payments on behalf of the borrowers; monitoring delinquencies and executing foreclosure proceedings; and accounting for and remitting principal and interest payments to the investors of the mortgage-backed securities.

The amount initially capitalized as MSRs represents the amount paid to third parties to acquire MSRs or is the estimate of fair value, if retained upon the sale or securitization of mortgage loans. The Firm estimates the fair value of MSRs for initial capitalization and ongoing valuation using an option-adjusted spread model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's proprietary prepayment model, and then discounts these cash

flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenue and costs to service, and other economic factors. The Firm reassesses and periodically adjusts the underlying inputs and assumptions used in the OAS model to reflect market conditions and assumptions that a market participant would consider in valuing the MSR asset. During the fourth quarter of the 2007, the Firm's proprietary prepayment model was refined to reflect a decrease in estimated future mortgage prepayments based upon a number of market related factors including a downward trend in home prices, general tightening of credit underwriting standards and the associated impact on refinancing activity. The Firm compares fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. JPMorgan Chase uses or has used combinations of derivatives, AFS securities and trading instruments to manage changes in the fair value of MSRs. The intent is to offset any changes in the fair value of MSRs with changes in the fair value of the related risk management instruments. MSRs decrease in value when interest rates decline. Conversely, securities (such as mortgage-backed securities), principal-only certificates and certain derivatives (when the Firm receives fixed-rate interest payments) increase in value when interest rates decline.

In March 2006, the FASB issued SFAS 156, which permits an entity a one-time irrevocable election to adopt fair value accounting for a class of servicing assets. JPMorgan Chase elected to adopt the standard effective January 1, 2006, and defined MSRs as one class of servicing assets for this election. At the transition date, the fair value of the MSRs exceeded their carrying amount, net of any related valuation allowance, by $150 million net of taxes. This amount was recorded as a cumulative-effect adjustment to retained earnings as of January 1, 2006. MSRs are recognized in the Consolidated balance sheet at fair value, and changes in their fair value are recorded in current-period earnings. Revenue amounts related to MSRs and the financial instruments used to manage the risk of MSRs are recorded in Mortgage fees and related income.

For the year ended December 31, 2005, MSRs were accounted for under SFAS 140, using a lower of cost or fair value approach. Under this approach, MSRs were amortized as a reduction of the actual servicing income received in proportion to, and over the period of, the estimated future net servicing income stream of the underlying mortgage loans. For purposes of evaluating and measuring impairment of MSRs, the Firm stratified the portfolio on the basis of the predominant risk characteristics, which are loan type and interest rate. Any indicated impairment was recognized as a reduction in revenue through a valuation allowance, which represented the extent to which the carrying value of an individual stratum exceeded its estimated fair value. Any gross carrying value and related valuation allowance amounts which were not expected to be recovered in the foreseeable future, based upon the interest rate scenario, were considered to be other-than-temporary.

Prior to the adoption of SFAS 156, the Firm designated certain derivatives used to risk manage MSRs (e.g., a combination of swaps, swaptions and floors) as SFAS 133 fair value hedges of benchmark interest rate risk. SFAS 133 hedge accounting allowed the carrying value of the hedged MSRs to be adjusted through earnings in the same period that the change in value of the hedging derivatives was recognized through earnings. The designated hedge period was daily. In designating the benchmark interest rate, the Firm considered the impact that the change in the benchmark rate had on the prepayment speed estimates in determining the fair value of the MSRs. Hedge effectiveness was assessed using a regression analysis of the change in fair value of the MSRs as a result of changes in benchmark interest rates and of the change in the fair value of the designated derivatives. The valuation adjustments to both the MSRs and SFAS 133 derivatives were recorded in Mortgage fees and related income. With the election to apply fair value accounting to the MSRs under SFAS 156, SFAS 133 hedge accounting is no longer necessary. For a further discussion on derivative instruments and hedging activities, see Note 30 on pages 168–169 of this Annual Report.

The following table summarizes MSR activity, certain key assumptions, and the sensitivity of the fair value of MSRs to adverse changes in those key assumptions for the years ended December 31, 2007 and 2006, during which period MSRs were accounted for under SFAS 156.

Year ended December 31, (in millions)	**2007**	2006
Balance at beginning of period after valuation allowance	**$ 7,546**	$ 6,452
Cumulative effect of change in accounting principle	**—**	230
Fair value at beginning of period	**7,546**	6,682
Originations of MSRs	**2,335**	1,512
Purchase of MSRs	**798**	627
Total additions	**3,133**	2,139
Change in valuation due to inputs and assumptions[(a)]	**(516)**	165
Other changes in fair value[(b)]	**(1,531)**	(1,440)
Total change in fair value	**(2,047)**	(1,275)
Fair value at December 31	**$ 8,632**	$ 7,546
Change in unrealized (losses) gains included in income related to MSRs held at December 31	**$ (516)**	NA

(a) Represents MSR asset fair value adjustments due to changes in market-based inputs, such as interest rates and volatility, as well as updates to assumptions used in the MSR valuation model. This caption also represents total realized and unrealized gains (losses) included in Net income per the SFAS 157 disclosure for fair value measurement using significant unobservable inputs (level 3). These changes in fair value are recorded in Mortgage fees and related income.

(b) Includes changes in the MSR value due to modeled servicing portfolio runoff (or time decay). This caption represents the impact of cash settlements per the SFAS 157 disclosure for fair value measurement using significant unobservable inputs (level 3). These changes in fair value are recorded in Mortgage fees and related income.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2007 and 2006, respectively; and it outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in those assumptions.

Year ended December 31, (in millions, except rates and where otherwise noted)	**2007**	2006
Weighted-average prepayment speed assumption (CPR)	**12.49%**	17.02%
Impact on fair value of 10% adverse change	**$ (481)**	$ (381)
Impact on fair value of 20% adverse change	**(926)**	(726)
Weighted-average discount rate	**10.53%**	9.32%
Impact on fair value of 10% adverse change	**$ (345)**	$ (254)
Impact on fair value of 20% adverse change	**(664)**	(491)
Contractual service fees, late fees and other ancillary fees included in Mortgage fees and related income	**$ 2,429**	$ 2,038
Third-party Mortgage loans serviced at December 31 (in billions)	**$ 614.7**	$ 526.7

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based upon a 10% and 20% variation in assumptions generally cannot be easily extrapolated because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might magnify or counteract the sensitivities.

The following table summarizes MSR activity for the year ended December 31, 2005, during which period MSRs were accounted for under SFAS 140.

Year ended December 31, (in millions, except rates and where otherwise noted)	2005[c]
Balance at January 1	$ 6,111
Originations of MSRs	1,301
Purchase of MSRs	596
Total additions	1,897
Other-than-temporary impairment	(1)
Amortization	(1,295)
SFAS 133 hedge valuation adjustments	90
Balance at December 31	6,802
Less: valuation allowance[a]	350
Balance at December 31, after valuation allowance	$ 6,452
Estimated fair value at December 31	$ 6,682
Weighted-average prepayment speed assumption (CPR)	17.56%
Weighted-average discount rate	9.68%
Valuation allowance at January 1	$ 1,031
Other-than-temporary impairment[b]	(1)
SFAS 140 impairment (recovery) adjustment	(680)
Valuation allowance at December 31	$ 350
Contractual service fees, late fees and other ancillary fees included in Mortgage fees and related income	$ 1,769
Third-party Mortgage loans serviced at December 31 (in billions)	$ 467.5

(a) The valuation allowance in the preceding table at December 31, 2005, represented the extent to which the carrying value of MSRs exceeded the estimated fair value for its applicable SFAS 140 strata. Changes in the valuation allowance were the result of the recognition of impairment or the recovery of previously recognized impairment charges due to changes in market conditions during the period.
(b) The Firm recorded an other-than-temporary impairment of its MSRs of $1 million in 2005, which permanently reduced the gross carrying value of the MSRs and the related valuation allowance. The permanent reduction precluded subsequent reversals. This write-down had no impact on the results of operations or financial condition of the Firm.
(c) During the fourth quarter of 2005, the Firm began valuing MSRs using an OAS valuation model. Prior to the fourth quarter of 2005, MSRs were valued using cash flows and discount rates determined by a "static" or single interest rate path valuation model.
CPR: Constant prepayment rate

Purchased credit card relationships and All other intangible assets

During 2007, Purchased credit card relationships and all other intangible assets decreased $632 million and $575 million, respectively, primarily as a result of amortization expense.

Except for $513 million of indefinite-lived intangibles related to asset management advisory contracts which are not amortized, but instead are tested for impairment at least annually, the remainder of the Firm's other acquired intangible assets are subject to amortization.

The components of credit card relationships, core deposits and other intangible assets were as follows.

	2007			2006		
December 31, (in millions)	Gross amount	Accumulated amortization	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	**$ 5,794**	**$ 3,491**	**$ 2,303**	$ 5,716	$ 2,781	$ 2,935
All other intangibles:						
Other credit card–related intangibles	**422**	**76**	**346**	367	65	302
Core deposit intangibles	**4,281**	**2,214**	**2,067**	4,283	1,660	2,623
Other intangibles	**2,026**	**643**[a]	**1,383**	1,961	515[a]	1,446

(a) Includes amortization expense related to servicing assets on securitized automobile loans, which is recorded in Lending & deposit-related fees, of $9 million and $11 million for the years ended December 31, 2007 and 2006, respectively.

Amortization expense

The following table presents amortization expense related to credit card relationships, core deposits and All other intangible assets.

Year ended December 31, (in millions)	2007	2006	2005
Purchased credit card relationships	**$ 710**	$ 731	$ 703
All other intangibles:			
Other credit card–related intangibles	**11**	6	36
Core deposit intangibles	**554**	568	623
Other intangibles[a]	**119**	123	128
Total amortization expense	**$1,394**	$ 1,428	$ 1,490

(a) Amortization expense related to the aforementioned selected corporate trust businesses were reported in Income from discontinued operations for all periods presented.

Future amortization expense

The following table presents estimated future amortization expense related to credit card relationships, core deposits and All other intangible assets at December 31, 2007.

Year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	All other intangible assets	**Total**
2008	$ 615	$ 23	$ 479	$ 114	$ 1,231
2009	438	29	397	103	967
2010	356	38	336	86	816
2011	293	43	293	76	705
2012	254	51	251	73	629

Note 19 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset. JPMorgan Chase has recorded immaterial asset retirement obligations related to asbestos remediation under SFAS 143 and FIN 47 in those cases where it has sufficient information to estimate the obligations' fair value.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software under SOP 98-1. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life, and reviewed for impairment on an ongoing basis.

Note 20 – Deposits

At December 31, 2007 and 2006, Noninterest-bearing and Interest-bearing deposits were as follows.

December 31, (in millions)	**2007**	2006
U.S. offices:		
Noninterest-bearing	**$ 129,406**	$ 132,781
Interest-bearing (included $1,909 at fair value at December 31, 2007)	**376,194**	337,812
Non-U.S. offices:		
Noninterest-bearing	**6,342**	7,662
Interest-bearing (included $4,480 at fair value at December 31, 2007)	**228,786**	160,533
Total	**$ 740,728**	$ 638,788

At December 31, 2007 and 2006, time deposits in denominations of $100,000 or more were as follows.

December 31, (in millions)	**2007**	2006
U.S.	**$134,529**	$ 110,812
Non-U.S.	**69,171**	51,138
Total	**$203,700**	$ 161,950

At December 31, 2007, the maturities of time deposits were as follows.

December 31, 2007 (in millions)	U.S.	Non-U.S.	**Total**
2008	$ 159,663	$ 84,260	$ 243,923
2009	2,040	307	2,347
2010	819	80	899
2011	530	156	686
2012	1,211	211	1,422
After 5 years	347	253	600
Total	$ 164,610	$ 85,267	$ 249,877

Note 21 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. The following table is a summary of long-term debt carrying values (including unamortized original issue discount, SFAS 133 valuation adjustments and fair value adjustments, where applicable) by contractual maturity for the current year.

By remaining maturity at **December 31, 2007** (in millions, except rates)		2007 Under 1 year	1–5 years	After 5 years	**Total**	2006 Total
Parent company						
Senior debt:[a]	Fixed rate	**$ 5,466**	**$ 14,669**	**$ 9,251**	**$ 29,386**	$ 20,316
	Variable rate	**11,406**	**29,022**	**7,118**	**47,546**	28,264
	Interest rates[b]	**0.96–6.63%**	**0.75–7.43%**	**1.25–6.00%**	**0.75–7.43%**	0.75–12.48%
Subordinated debt:	Fixed rate	**$ 903**	**$ 9,387**	**$ 17,471**	**$ 27,761**	$ 26,012
	Variable rate	**24**	**36**	**1,828**	**1,888**	1,989
	Interest rates[b]	**5.75–6.75%**	**5.90–10.00%**	**1.92–9.88%**	**1.92–10.00%**	1.60–10.00%
	Subtotal	**$ 17,799**	**$ 53,114**	**$ 35,668**	**$ 106,581**	$ 76,581
Subsidiaries						
Senior debt:[a]	Fixed rate	**$ 1,493**	**$ 2,588**	**$ 2,325**	**$ 6,406**	$ 10,449
	Variable rate	**8,603**	**36,263**	**15,690**	**60,556**	41,216
	Interest rates[b]	**3.70–6.67%**	**4.38–4.87%**	**3.85–14.21%**	**3.70–14.21%**	1.76–17.00%
Subordinated debt:	Fixed rate	**$ 801**	**$ 9**	**$ 8,359**	**$ 9,169**	$ 4,025
	Variable rate	**—**	**—**	**1,150**	**1,150**	1,150
	Interest rates[b]	**6.13–6.70%**	**6.25%**	**4.38–8.25%**	**4.38–8.25%**	4.38–8.25%
	Subtotal	**$ 10,897**	**$ 38,860**	**$ 27,524**	**$ 77,281**	$ 56,840
Total long-term debt[c]		**$ 28,696**	**$ 91,974**	**$ 63,192**	**$ 183,862**[e)(f)(g)]	$ 133,421
FIN 46R long-term beneficial interests:						
	Fixed rate	**$ 26**	**$ 503**	**$ 172**	**$ 701**	$ 777
	Variable rate	**9**	**1,646**	**4,853**	**6,508**	7,559
	Interest rates	**3.63–6.50%**	**1.73–8.75%**	**3.40–12.79%**	**1.73–12.79%**	1.73–12.79%
Total FIN 46R long-term beneficial interests[d]		**$ 35**	**$ 2,149**	**$ 5,025**	**$ 7,209**	$ 8,336

(a) Included are various equity-linked or other indexed instruments. Embedded derivatives separated from hybrid securities in accordance with SFAS 133 are reported at fair value and shown net with the host contract on the Consolidated balance sheets. Changes in fair value of separated derivatives are recorded in Principal transactions revenue. Hybrid securities which the Firm has elected to measure at fair value are classified in the line item of the host contract on the Consolidated balance sheets; changes in fair values are recorded in Principal transactions revenue in the Consolidated statements of income.

(b) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar-fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in SFAS 133 hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the SFAS 133 hedge accounting derivatives, the range of modified rates in effect at December 31, 2007, for total long-term debt was 0.11% to 14.21%, versus the contractual range of 0.75% to 14.21% presented in the table above.

(c) Included $70.5 billion and $25.4 billion of outstanding structured notes accounted for at fair value at December 31, 2007 and 2006, respectively.

(d) Included on the Consolidated balance sheets in Beneficial interests issued by consolidated variable interest entities. Also included $3.0 billion of outstanding structured notes accounted for at fair value at December 31, 2007.

(e) At December 31, 2007, long-term debt aggregating $10.8 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based upon the terms specified in the respective notes.

(f) The aggregate principal amount of debt that matures in each of the five years subsequent to 2007 is $28.7 billion in 2008, $30.6 billion in 2009, $25.3 billion in 2010, $15.1 billion in 2011 and $21.0 billion in 2012.

(g) Included $4.6 billion and $3.0 billion of outstanding zero-coupon notes at December 31, 2007 and 2006, respectively. The aggregate principal amount of these notes at their respective maturities was $7.7 billion and $6.8 billion, respectively.

The weighted-average contractual interest rate for total Long-term debt was 5.20% and 4.89% as of December 31, 2007 and 2006, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rate for total long-term debt, including the effects of related derivative instruments, was 5.13% and 4.99% as of December 31, 2007 and 2006, respectively.

JPMorgan Chase & Co. (Parent Company) has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's trading activities. These guarantees rank on a parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities totaled $46 million and $30 million at December 31, 2007 and 2006, respectively.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities

At December 31, 2007, the Firm had established 22 wholly owned Delaware statutory business trusts ("issuer trusts") that had issued guaranteed capital debt securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $15.1 billion and $12.2 billion at December 31, 2007 and 2006, respectively, were reflected in the Firm's Consolidated balance sheets in the Liabilities section under the caption "Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities" (i.e., trust preferred capital debt securities). The Firm also records the common capital securities issued by the issuer trusts in Other assets in its Consolidated balance sheets at December 31, 2007 and 2006.

The debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, qualify as Tier1 capital. The following is a summary of the outstanding trust preferred capital debt securities, including unamortized original issue discount, issued by each trust and the junior subordinated deferrable interest debenture issued by JPMorgan Chase to each trust as of December 31, 2007.

December 31, 2007 (in millions)	Amount of capital debt securities issued by trust[a]	Principal amount of debenture issued to trust[b]	Issue date	Stated maturity of capital securities and debentures	Earliest redemption date	Interest rate of capital securities and debentures	Interest payment/ distribution dates
Bank One Capital III	$ 474	$ 623	2000	2030	Any time	8.75%	Semiannually
Bank One Capital VI	525	554	2001	2031	Any time	7.20%	Quarterly
Chase Capital II	496	511	1997	2027	Any time	LIBOR + 0.50%	Quarterly
Chase Capital III	297	306	1997	2027	Any time	LIBOR + 0.55%	Quarterly
Chase Capital VI	249	256	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	248	256	1997	2027	Any time	LIBOR + 0.55%	Quarterly
J.P. Morgan Chase Capital X	1,000	1,013	2002	2032	Any time	7.00%	Quarterly
J.P. Morgan Chase Capital XI	1,075	990	2003	2033	2008	5.88%	Quarterly
J.P. Morgan Chase Capital XII	400	387	2003	2033	2008	6.25%	Quarterly
JPMorgan Chase Capital XIII	472	487	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XIV	600	581	2004	2034	2009	6.20%	Quarterly
JPMorgan Chase Capital XV	995	1,024	2005	2035	Any time	5.88%	Semiannually
JPMorgan Chase Capital XVI	500	489	2005	2035	2010	6.35%	Quarterly
JPMorgan Chase Capital XVII	496	467	2005	2035	Any time	5.85%	Semiannually
JPMorgan Chase Capital XVIII	748	749	2006	2036	Any time	6.95%	Semiannually
JPMorgan Chase Capital XIX	562	564	2006	2036	2011	6.63%	Quarterly
JPMorgan Chase Capital XX	995	996	2006	2036	Any time	6.55%	Semiannually
JPMorgan Chase Capital XXI	844	846	2007	2037	2012	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXII	996	997	2007	2037	Any time	6.45%	Semiannually
JPMorgan Chase Capital XXIII	746	746	2007	2047	2012	LIBOR + 1.00%	Quarterly
JPMorgan Chase Capital XXIV	700	700	2007	2047	2012	6.88%	Quarterly
JPMorgan Chase Capital XXV	1,491	1,606	2007	2037	2037	6.80%	Semiannually
Total	$14,909	$15,148					

(a) Represents the amount of capital securities issued to the public by each trust, including unamortized original issue discount.
(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated financial statements.

Note 22 – Preferred stock

JPMorgan Chase is authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share. There was no preferred stock outstanding at December 31, 2007 and 2006. Preferred stock outstanding at December 31, 2005, was 280,433 shares of 6.63% Series H cumulative preferred stock. On March 31, 2006, JPMorgan Chase redeemed all 280,433 shares. Dividends on shares of the Series H preferred stock were payable quarterly.

Note 23 – Common stock

At December 31, 2007, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a $1 par value per share. Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during 2007, 2006 and 2005 were as follows.

December 31, (in millions)	**2007**	2006	2005
Issued – balance at January 1	**3,657.8#**	3,618.2#	3,584.8#
Newly issued:			
Employee benefits and compensation plans	**—**	39.3	34.0
Employee stock purchase plans	**—**	0.6	1.4
Total newly issued	**—**	39.9	35.4
Canceled shares	**(0.1)**	(0.3)	(2.0)
Total issued – balance at December 31	**3,657.7#**	3,657.8#	3,618.2#
Treasury – balance at January 1	**(196.1)#**	(131.5)#	(28.6)#
Purchase of treasury stock	**(168.2)**	(90.7)	(93.5)
Share repurchases related to employee stock-based awards[a]	**(2.7)**	(8.8)	(9.4)
Issued from treasury:			
Employee benefits and compensation plans	**75.7**	34.4	—
Employee stock purchase plans	**1.0**	0.5	—
Total issued from treasury	**76.7**	34.9	—
Total treasury – balance at December 31	**(290.3)**	(196.1)	(131.5)
Outstanding	**3,367.4#**	3,461.7#	3,486.7#

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes. The shares withheld amounted to 2.7 million, 8.1 million and 8.2 million for 2007, 2006 and 2005, respectively.

On April 17, 2007, the Board of Directors approved a stock repurchase program that authorizes the repurchase of up to $10.0 billion of the Firm's common shares, which supersedes an $8.0 billion stock repurchase program approved in 2006. The $10.0 billion authorization includes shares to be repurchased to offset issuances under the Firm's employee stock-based plans. The actual number of shares repurchased is subject to various factors, including market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation and alternative potential investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time. During 2007, 2006 and 2005, the Firm repurchased 168 million shares, 91 million shares and 94 million shares, respectively, of common stock under stock repurchase programs approved by the Board of Directors.

As of December 31, 2007, approximately 431 million unissued shares of common stock were reserved for issuance under various employee or director incentive, compensation, option and stock purchase plans.

Note 24 – Earnings per share

SFAS 128 requires the presentation of basic and diluted earnings per share ("EPS") in the Consolidated statement of income. Basic EPS is computed by dividing net income applicable to common stock by the weighted-average number of common shares outstanding for the period. Diluted EPS is computed using the same method, for the numerator, as basic EPS but, in the denominator, the number of common shares reflect, in addition to outstanding shares, the potential dilution that could occur if convertible securities or other contracts to issue common stock were converted or exercised into common stock. Net income available for common stock is the same for basic EPS and diluted EPS, as JPMorgan Chase had no convertible securities, and therefore, no adjustments to Net income available for common stock were necessary. The following table presents the calculation of basic and diluted EPS for 2007, 2006 and 2005.

Year ended December 31, (in millions, except per share amounts)	**2007**	2006	2005
Basic earnings per share			
Income from continuing operations	**$ 15,365**	$ 13,649	$ 8,254
Discontinued operations	**—**	795	229
Net income	**15,365**	14,444	8,483
Less: preferred stock dividends	**—**	4	13
Net income applicable to common stock	**$ 15,365**	$ 14,440	$ 8,470
Weighted-average basic shares outstanding	**3,404#**	3,470#	3,492#
Income from continuing operations per share	**$ 4.51**	$ 3.93	$ 2.36
Discontinued operations per share	**—**	0.23	0.07
Net income per share	**$ 4.51**	$ 4.16	$ 2.43
Diluted earnings per share			
Net income applicable to common stock	**$ 15,365**	$ 14,440	$ 8,470
Weighted-average basic shares outstanding	**3,404#**	3,470#	3,492#
Add: Employee restricted stock, RSUs, stock options and SARs	**104**	104	65
Weighted-average diluted shares outstanding[a]	**3,508#**	3,574#	3,557#
Income from continuing operations per share	**$ 4.38**	$ 3.82	$ 2.32
Discontinued operations per share	**—**	0.22	0.06
Net income per share	**$ 4.38**	$ 4.04	$ 2.38

(a) Options issued under employee benefit plans to purchase 129 million, 150 million and 280 million shares of common stock were outstanding for the years ended December 31, 2007, 2006 and 2005, respectively, but were not included in the computation of diluted EPS because the options were antidilutive.

Note 25 – Accumulated other comprehensive income (loss)

Accumulated other comprehensive income (loss) includes the after-tax change in SFAS 115 unrealized gains and losses on AFS securities, SFAS 52 foreign currency translation adjustments (including the impact of related derivatives), SFAS 133 cash flow hedging activities and SFAS 158 net loss and prior service cost (credit) related to the Firm's defined benefit pension and OPEB plans.

(in millions)	Unrealized gains (losses) on AFS securities[a]	Translation adjustments, net of hedges	Cash flow hedges	Net loss and prior service (credit) of defined benefit pension and OPEB plans[e]	Accumulated other comprehensive income (loss)
Balance at December 31, 2004	$ (61)	$ (8)	$ (139)	$ —	$ (208)
Net change	(163)[b]	—	(255)	—	(418)
Balance at December 31, 2005	(224)	(8)	(394)	—	(626)
Net change	253[c]	13	(95)	—	171
Adjustment to initially apply SFAS 158, net of taxes	—	—	—	(1,102)	(1,102)
Balance at December 31, 2006	29	5	(489)	(1,102)	(1,557)
Cumulative effect of changes in accounting principles (SFAS 159)	**(1)**	**—**	**—**	**—**	**(1)**
Balance at January 1, 2007, adjusted	**28**	**5**	**(489)**	**(1,102)**	**(1,558)**
Net change	**352**[d]	**3**	**(313)**	**599**	**641**
Balance at December 31, 2007	**$ 380**	**$ 8**	**$ (802)**	**$ (503)**	**$ (917)**

(a) Represents the after-tax difference between the fair value and amortized cost of the AFS securities portfolio and retained interests in securitizations recorded in Other assets.
(b) The net change during 2005 was due primarily to higher interest rates, partially offset by the reversal of unrealized losses from securities sales.
(c) The net change during 2006 was due primarily to the reversal of unrealized losses from securities sales.
(d) The net change during 2007 was due primarily to a decline in interest rates.
(e) For further discussion of SFAS 158, see Note 9 on pages 124–130 of this Annual Report.

The following table presents the after-tax changes in net unrealized holdings gains (losses), reclassification adjustments for realized gains and losses on AFS securities and cash flow hedges, changes resulting from foreign currency translation adjustments (including the impact of related derivatives), net gains and losses and prior service costs from pension and OPEB plans, and amortization of pension and OPEB amounts into Net income. The table also reflects the adjustment to Accumulated other comprehensive income (loss) resulting from the initial application of SFAS 158 to the Firm's defined benefit pension and OPEB plans. Reclassification adjustments include amounts recognized in Net income that had been recorded previously in Other comprehensive income (loss).

	2007			2006			2005		
Year ended December 31, (in millions)	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Unrealized gains (losses) on AFS securities:									
Net unrealized holdings gains (losses) arising during the period	**$ 431**	**$ (176)**	**$ 255**	$ (403)	$ 144	$ (259)	$(1,706)	$ 648	$(1,058)
Reclassification adjustment for realized (gains) losses included in Net income	**164**	**(67)**	**97**	797	(285)	512	1,443	(548)	895
Net change	**595**	**(243)**	**352**	394	(141)	253	(263)	100	(163)
Translation adjustments:									
Translation	**754**	**(281)**	**473**	590	(236)	354	(584)	233	(351)
Hedges	**(780)**	**310**	**(470)**	(563)	222	(341)	584	(233)	351
Net change	**(26)**	**29**	**3**	27	(14)	13	—	—	—
Cash flow hedges:									
Net unrealized holdings gains (losses) arising during the period	**(737)**	**294**	**(443)**	(250)	98	(152)	(470)	187	(283)
Reclassification adjustment for realized (gains) losses included in Net income	**217**	**(87)**	**130**	93	(36)	57	46	(18)	28
Net change	**(520)**	**207**	**(313)**	(157)	62	(95)	(424)	169	(255)
Net loss and prior service cost (credit) of defined benefit pension and OPEB plans:[a]									
Net gains and prior service credits arising during the period	**934**	**(372)**	**562**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Reclassification adjustment for net loss and prior service credit included in Net income	**59**	**(22)**	**37**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Net change	**993**	**(394)**	**599**	NA	NA	NA	NA	NA	NA
Total Other comprehensive income (loss)	**$1,042**	**$ (401)**	**$ 641**	$ 264	$ (93)	$ 171	$ (687)	$ 269	$ (418)
Net loss and prior service cost (credit) of defined benefit pension and OPEB plans:									
Adjustments to initially apply SFAS 158[a]	**NA**	**NA**	**NA**	$(1,746)	$ 644	$(1,102)	NA	NA	NA

(a) For further discussion of SFAS 158 and details of changes to Accumulated other comprehensive income (loss), see Note 9 on pages 124–130 of this Annual Report.

Note 26 – Income taxes

In June 2006, the FASB issued FIN 48, which clarifies the accounting for uncertainty in income taxes recognized under SFAS 109. FIN 48 addresses the recognition and measurement of tax positions taken or expected to be taken, and also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods and disclosure. The Firm adopted and applied FIN 48 under the transition provisions to all of its income tax positions at the required effective date of January 1, 2007, resulting in a $436 million cumulative effect increase to Retained earnings, a reduction in Goodwill of $113 million and a $549 million decrease in the liability for income taxes.

JPMorgan Chase and eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset-and-liability method required by SFAS 109 to provide income taxes on all transactions recorded in the Consolidated financial statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax liability or asset for each temporary difference is determined based upon the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different than those currently reported.

At December 31, 2007, and January 1, 2007, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, was $4.8 billion and $4.7 billion, respectively, of which $1.3 billion and $1.0 billion, if recognized, would reduce the annual effective tax rate. As JPMorgan Chase is presently under audit by a number of tax authorities, it is reasonably possible that unrecognized tax benefits could change significantly over the next 12 months. JPMorgan Chase does not expect that any such changes would have a material impact on its annual effective tax rate.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the year ended December 31, 2007.

Unrecognized tax benefits
Year ended December 31, 2007 (in millions)

Balance at January 1, 2007	$ 4,677
Increases based on tax positions related to the current period	434
Decreases based on tax positions related to the current period	(241)
Increases based on tax positions related to prior periods	903
Decreases based on tax positions related to prior periods	(791)
Decreases related to settlements with taxing authorities	(158)
Decreases related to a lapse of applicable statute of limitations	(13)
Balance at December 31, 2007	$ 4,811

Pretax interest expense and penalties related to income tax liabilities recognized in Income tax expense was $516 million ($314 million after-tax) in 2007. Included in Accounts payable, accrued expense and other liabilities at January 1, 2007, in addition to the Firm's liability for unrecognized tax benefits, was $1.3 billion for income tax-related interest and penalties, of which the penalty component was insignificant. Accrued income tax-related interest and penalties increased to $1.6 billion at December 31, 2007, due to the continuing outstanding status of the unrecognized tax benefit liability, the penalty component of which remains insignificant.

JPMorgan Chase is subject to ongoing tax examinations by the tax authorities of the various jurisdictions in which it operates, including U.S. federal, state and non-U.S. jurisdictions. The Firm's consolidated federal income tax returns are presently under examination by the Internal Revenue Service (IRS) for the years 2003, 2004 and 2005. The consolidated federal income tax returns of heritage Bank One Corporation, which merged with and into JPMorgan Chase on July 1, 2004, are under examination for the years 2000 through 2003, and for the period January 1, 2004, through July 1, 2004. Both examinations are expected to conclude in the latter part of 2008. The IRS audit of the 2006 consolidated federal income tax return has not yet commenced. Certain administrative appeals are pending with the IRS relating to prior examination periods, for JPMorgan Chase for the years 2001 and 2002, and for Bank One and its predecessor entities for various periods from 1996 through 1999. For years prior to 2001, refund claims relating to income and credit adjustments, and to tax attribute carrybacks, for JPMorgan Chase and its predecessor entities, including Bank One, either have been or will be filed. Also, interest rate swap valuations by a Bank One predecessor entity for the years 1990 through 1993 are, and have been, the subject of litigation in both the Tax Court and the U.S. Court of Appeals.

Deferred income tax expense (benefit) results from differences between assets and liabilities measured for financial reporting and for income-tax return purposes. The significant components of deferred tax assets and liabilities are reflected in the following table.

December 31, (in millions)	**2007**	2006
Deferred tax assets		
Allowance for loan losses	**$ 3,800**	$ 2,910
Allowance for other than loan losses	**3,635**	3,533
Employee benefits	**3,391**	5,175
Non-U.S. operations	**285**	566
Fair value adjustments	**—**	427
Gross deferred tax assets	**$11,111**	$12,611
Deferred tax liabilities		
Depreciation and amortization	**$ 2,966**	$ 3,668
Leasing transactions	**2,304**	2,675
Non-U.S. operations	**1,790**	1,435
Fair value adjustments	**570**	—
Fee income	**548**	1,216
Other, net	**207**	78
Gross deferred tax liabilities	**$ 8,385**	$ 9,072
Valuation allowance	**$ 220**	$ 210
Net deferred tax asset	**$ 2,506**	$ 3,329

A valuation allowance has been recorded in accordance with SFAS 109, primarily relating to capital losses associated with certain portfolio investments.

The components of income tax expense included in the Consolidated statements of income were as follows.

Year ended December 31, (in millions)	2007	2006	2005
Current income tax expense			
U.S. federal	**$ 2,805**	$ 5,512	$ 4,178
Non-U.S.	**2,985**	1,656	887
U.S. state and local	**343**	879	311
Total current income tax expense	**6,133**	8,047	5,376
Deferred income tax expense (benefit)			
U.S. federal	**1,122**	(1,628)	(2,063)
Non-U.S.	**(185)**	194	316
U.S. state and local	**370**	(376)	(44)
Total deferred income tax expense (benefit)	**1,307**	(1,810)	(1,791)
Total income tax expense from continuing operations	**7,440**	6,237	3,585
Total income tax expense from discontinued operations	**—**	572	147
Total income tax expense	**$ 7,440**	$ 6,809	$ 3,732

Total income tax expense includes $367 million of tax benefits recorded in 2006 as a result of tax audit resolutions.

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in Stockholders' equity as prescribed by SFAS 52, SFAS 115, SFAS 133 and SFAS 158, and certain tax benefits associated with the Firm's employee stock-based compensation plans. Also not reflected are the cumulative tax effects of initially implementing in 2007, SFAS 157, SFAS 159 and FIN 48, and in 2006, SFAS 155, SFAS 156 and SFAS 158. The tax effects of all items recorded directly to Stockholders' equity was an increase in Stockholders' equity of $159 million, $885 million, and $425 million in 2007, 2006, and 2005, respectively.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. For 2007, such earnings approximated $1.4 billion on a pretax basis. At December 31, 2007, the cumulative amount of undistributed pretax earnings in these subsidiaries approximated $3.4 billion. It is not practicable at this time to determine the income tax liability that would result upon repatriation of these earnings.

On October 22, 2004, the American Jobs Creation Act of 2004 (the "Act") was signed into law. The Act created a temporary incentive for U.S. companies to repatriate accumulated foreign earnings at a substantially reduced U.S. effective tax rate by providing a dividends received deduction on the repatriation of certain foreign earnings to the U.S. taxpayer (the "repatriation provision"). The deduction was subject to a number of limitations and requirements. In the fourth quarter of 2005, the Firm applied the repatriation provision to $1.9 billion of cash from foreign earnings, resulting in a net tax benefit of $55 million. The $1.9 billion of cash was invested in accordance with the Firm's domestic reinvestment plan pursuant to the guidelines set forth in the Act.

The tax expense (benefit) applicable to securities gains and losses for the years 2007, 2006 and 2005 was $60 million, $(219) million and $(536) million, respectively.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for continuing operations for the past three years is shown in the following table.

Year ended December 31,	2007	2006	2005
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase (decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of federal income tax benefit	**2.0**	2.1	1.4
Tax-exempt income	**(2.4)**	(2.2)	(3.1)
Non-U.S. subsidiary earnings	**(1.1)**	(0.5)	(1.4)
Business tax credits	**(2.5)**	(2.5)	(3.7)
Other, net	**1.6**	(0.5)	2.1
Effective tax rate	**32.6%**	31.4%	30.3%

The following table presents the U.S. and non-U.S. components of Income from continuing operations before income tax expense.

Year ended December 31, (in millions)	2007	2006	2005
U.S.	**$ 13,720**	$ 12,934	$ 8,683
Non-U.S.[(a)]	**9,085**	6,952	3,156
Income from continuing operations before income tax expense	**$ 22,805**	$ 19,886	$ 11,839

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the United States.

Note 27 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the Office of the Comptroller of the Currency ("OCC"). The Bank is a member of the U.S. Federal Reserve System and its deposits are insured by the Federal Deposit Insurance Corporation ("FDIC").

The Board of Governors of the Federal Reserve System (the "Federal Reserve Board") requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $1.6 billion in 2007 and $2.2 billion in 2006.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company–only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve Board, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2008 and 2007, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, $16.3 billion and $14.3 billion, respectively, in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2008 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2007 and 2006, cash in the amount of $16.0 billion and $8.6 billion, respectively, and securities with a fair value of $3.4 billion and $2.1 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers.

Note 28 – Capital

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital includes common stockholders' equity, qualifying preferred stock and minority interest less goodwill and other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1, subordinated long-term debt and other instruments qualifying as Tier 2, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total regulatory capital is subject to deductions for investments in certain subsidiaries. Under the risk-based capital guidelines of the Federal Reserve Board, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total (Tier 1 plus Tier 2) capital to risk weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital to average adjusted on–balance sheet assets). Failure to meet these minimum requirements could cause the Federal Reserve Board to take action. Banking subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2007 and 2006, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

The following table presents the risk-based capital ratios for JPMorgan Chase and its significant banking subsidiaries at December 31, 2007 and 2006.

(in millions, except ratios)	Tier 1 capital	Total capital	Risk-weighted assets[c]	Adjusted average assets[d]	Tier 1 capital ratio	Total capital ratio	Tier 1 leverage ratio
December 31, 2007[a]							
JPMorgan Chase & Co.	**$ 88,746**	**$ 132,242**	**$ 1,051,879**	**$ 1,473,541**	**8.4%**	**12.6%**	**6.0%**
JPMorgan Chase Bank, N.A.	**78,453**	**112,253**	**950,001**	**1,268,304**	**8.3**	**11.8**	**6.2**
Chase Bank USA, N.A.	**9,407**	**10,720**	**73,169**	**60,905**	**12.9**	**14.7**	**15.5**
December 31, 2006[a]							
JPMorgan Chase & Co.	$ 81,055	$ 115,265	$ 935,909	$ 1,308,699	8.7%	12.3%	6.2%
JPMorgan Chase Bank, N.A.	68,726	96,103	840,057	1,157,449	8.2	11.4	5.9
Chase Bank USA, N.A.	9,242	11,506	77,638	66,202	11.9	14.8	14.0
Well-capitalized ratios[b]					6.0%	10.0%	5.0%[e]
Minimum capital ratios[b]					4.0	8.0	3.0[f]

(a) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions, whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.
(b) As defined by the regulations issued by the Federal Reserve Board, OCC and FDIC.
(c) Includes off–balance sheet risk-weighted assets in the amounts of $352.7 billion, $336.8 billion and $13.4 billion, respectively, at December 31, 2007, and $305.3 billion, $290.1 billion and $12.7 billion, respectively, at December 31, 2006, for JPMorgan Chase and its significant banking subsidiaries.
(d) Average adjusted assets for purposes of calculating the leverage ratio include total average assets adjusted for unrealized gains/losses on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.
(e) Represents requirements for banking subsidiaries pursuant to regulations issued under the Federal Deposit Insurance Corporation Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.
(f) The minimum Tier 1 leverage ratio for bank holding companies and banks is 3% or 4% depending on factors specified in regulations issued by the Federal Reserve Board and OCC.

The following table shows the components of the Firm's Tier 1 and Total capital.

December 31, (in millions)	2007	2006
Tier 1 capital		
Total stockholders' equity	**$123,221**	$115,790
Effect of certain items in Accumulated other comprehensive income (loss) excluded from Tier 1 capital	**925**	1,562
Adjusted stockholders' equity	**124,146**	117,352
Minority interest[a]	**15,005**	12,970
Less: Goodwill	**45,270**	45,186
SFAS 157 DVA	**882**	—
Investments in certain subsidiaries	**782**	420
Nonqualifying intangible assets	**3,471**	3,661
Tier 1 capital	**88,746**	81,055
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	**32,817**	26,613
Qualifying allowance for credit losses	**10,084**	7,803
Adjustment for investments in certain subsidiaries and other	**595**	(206)
Tier 2 capital	**43,496**	34,210
Total qualifying capital	**$132,242**	$115,265

(a) Primarily includes trust preferred capital debt securities of certain business trusts.

Note 29 – Commitments and contingencies

At December 31, 2007, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes. Certain leases contain renewal options or escalation clauses providing for increased rental payments based upon maintenance, utility and tax increases or require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2007.

Year ended December 31, (in millions)	
2008	$1,040
2009	1,009
2010	934
2011	850
2012	794
After 2012	6,281
Total minimum payments required[a]	10,908
Less: Sublease rentals under noncancelable subleases	(1,330)
Net minimum payment required	$ 9,578

(a) Lease restoration obligations are accrued in accordance with SFAS 13, and are not reported as a required minimum lease payment.

Total rental expense was as follows.

Year ended December 31, (in millions)	2007	2006	2005
Gross rental expense	**$1,380**	$1,266	$1,239
Sublease rental income	**(175)**	(194)	(192)
Net rental expense	**$1,205**	$1,072	$1,047

At December 31, 2007, assets were pledged to secure public deposits and for other purposes. The significant components of the assets pledged were as follows.

December 31, (in billions)	2007	2006
Reverse repurchase/securities borrowing agreements	**$333.7**	$290.5
Securities	**4.5**	40.0
Loans	**160.4**	117.0
Trading assets and other	**102.2**	108.0
Total assets pledged	**$600.8**	$555.5

The Bank of New York Mellon Corporation ("BNYM"), formerly known as The Bank of New York, has informed the Firm of difficulties in locating certain documentation, including IRS Forms W-8 and W-9, related to certain accounts transferred to BNYM in connection with the Firm's sale of its corporate trust business. The Firm could have liability to the IRS if it is determined that there was noncompliance with IRS tax reporting and withholding requirements, and to BNYM if it is determined that there was noncompliance with the sales agreements. The Firm is working with BNYM to locate and verify documents, and to obtain replacement documentation where necessary. The Firm and BNYM have jointly notified the IRS of the matter and are working cooperatively to address the issues and resolve any outstanding reporting and withholding issues with the IRS. Although the Firm currently does not expect that any amounts payable would be material, it is too early to precisely determine the extent of any potential liability relating to this matter.

Litigation reserve

Insurance recoveries related to certain material legal proceedings were $36 million, $512 million and $208 million in 2007, 2006 and 2005, respectively. Charges related to certain material legal proceedings were $2.8 billion in 2005. There were no charges in 2007 and 2006 related to certain material legal proceedings.

The Firm maintains litigation reserves for certain of its outstanding litigation. In accordance with the provisions of SFAS 5, JPMorgan Chase accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. When the Firm is named a defendant in a litigation and may be subject to joint and several liability and a judgment sharing agreement is in place, the Firm recognizes expense and obligations net of amounts expected to be paid by other signatories to the judgment sharing agreement.

While the outcome of litigation is inherently uncertain, management believes, in light of all information known to it at December 31, 2007, the Firm's litigation reserves were adequate at such date. Management reviews litigation reserves periodically, and the reserves may be increased or decreased in the future to reflect further relevant developments. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding litigation and, with respect to such litigation, intends to continue to defend itself vigorously, litigating or settling cases according to management's judgment as to what is in the best interests of stockholders.

Note 30 – Accounting for derivative instruments and hedging activities

Derivative instruments enable end users to increase, reduce or alter exposure to credit or market risks. The value of a derivative is derived from its reference to an underlying variable or combination of variables such as equity, foreign exchange, credit, commodity or interest rate prices or indices. JPMorgan Chase makes markets in derivatives for customers and also is an end-user of derivatives in order to hedge market exposures, modify the interest rate characteristics of related balance sheet instruments or meet longer-term investment objectives. The majority of the Firm's derivatives are entered into for trading purposes. Both trading and end-user derivatives are recorded at fair value in Trading assets and Trading liabilities as set forth in Note 6 on page 122 of this Annual Report.

Interest rate contracts, which are generally interest rate swaps, forwards and futures are utilized in the Firm's risk management activities in order to minimize significant fluctuations in earnings that are caused by interest rate volatility. As a result of interest rate fluctuations, fixed-rate assets and liabilities appreciate or depreciate in market value. Gains or losses on the derivative instruments that are linked to the fixed-rate assets and liabilities being hedged are expected to substantially offset this unrealized appreciation or depreciation. Interest income and Interest expense on variable-rate assets and liabilities increase or decrease as a result of interest rate fluctuations. Gains and losses on the derivative instruments that are linked to the assets and liabilities being hedged are expected to substantially offset this variability in earnings. Interest rate swaps involve the exchange of fixed-rate and variable-rate interest payments based on the contractual underlying notional amount. Forward contracts used for the Firm's interest rate risk management activities are primarily arrangements to exchange cash in the future based on price movements in securities. Futures contracts used are primarily index futures providing for cash payments based upon the movements of an underlying rate index.

The Firm uses foreign currency contracts to manage the foreign exchange risk associated with certain foreign currency-denominated assets and liabilities, forecasted transactions denominated in a foreign currency, as well as the Firm's equity investments in foreign subsidiaries. As a result of foreign currency fluctuations, the U.S. dollar equivalent values of the foreign currency-denominated assets and liabilities or forecasted transactions change. Gains or losses on the derivative instruments that are linked to the foreign currency denominated assets or liabilities or forecasted transactions being hedged are expected to substantially offset this variability. Foreign exchange forward contracts represent agreements to exchange the currency of one country for the currency of another country at an agreed-upon price on an agreed-upon settlement date.

The Firm uses forward contracts to manage the overall price risk associated with its gold inventory. As a result of gold price fluctuations, the fair value of the gold inventory changes. Gains or losses on the derivative instruments that are linked to the gold inventory being hedged are expected to offset this unrealized appreciation or depreciation. Forward contracts used for the Firm's gold inventory risk management activities are arrangements to deliver gold in the future.

SFAS 133, as amended by SFAS 138, SFAS 149, and SFAS 155, establishes accounting and reporting standards for derivative instruments, including those used for trading and hedging activities, and derivative instruments embedded in other contracts. All free-standing derivatives, whether designated for hedging relationships or not, are required to be recorded on the Consolidated balance sheets at fair value. The accounting for changes in value of a derivative depends on whether the contract is for trading purposes or has been designated and qualifies for hedge accounting.

In order to qualify for hedge accounting, a derivative must be considered highly effective at reducing the risk associated with the exposure being hedged. In order for a derivative to be designated as a hedge, there must be documentation of the risk management objective and strategy, including identification of the hedging instrument, the hedged item and the risk exposure, and how effectiveness is to be assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a hedging instrument has been and is expected to continue to be effective at achieving offsetting changes in fair value or cash flows must be assessed and documented at least quarterly. Any ineffectiveness must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

For qualifying fair value hedges, all changes in the fair value of the derivative and in the fair value of the hedged item for the risk being hedged are recognized in earnings. If the hedge relationship is terminated, then the fair value adjustment to the hedged item continues to be reported as part of the basis of the item and continues to be amortized to earnings as a yield adjustment. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in Other comprehensive income and recognized in the Consolidated statement of income when the hedged cash flows affect earnings. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the change in fair value of the derivative recorded in Other comprehensive income is recognized when the cash flows that were hedged occur, consistent with the original hedge strategy. For hedge relationships discontinued because the forecasted transaction is not expected to occur according to the original strategy, any related derivative amounts recorded in Other comprehensive income are immediately recognized in earnings. For qualifying net investment hedges, changes in the fair value of the derivative or the revaluation of the foreign currency–denominated debt instrument are recorded in the translation adjustments account within Other comprehensive income.

JPMorgan Chase's fair value hedges primarily include hedges of fixed-rate long-term debt, warehouse loans, AFS securities, MSRs and gold inventory. Interest rate swaps are the most common type of derivative contract used to modify exposure to interest rate risk, converting fixed-rate assets and liabilities to a floating-rate. Prior to the adoption of SFAS 156, interest rate options, swaptions and forwards were also used in combination with interest rate swaps to hedge the fair value of the Firm's MSRs in SFAS 133 hedge relationships. For a further discussion of MSR risk management activities, see Note 18 on pages 154–156 of this Annual Report. All amounts have been included in earnings consistent with the classification of the hedged item, primarily Net interest income for Long-term debt and AFS securities; Mortgage fees and related income for MSRs, Other income for warehouse loans; and Principal transactions for gold inventory. The Firm did not recognize any gains or losses during 2007, 2006 or 2005 on firm commitments that no longer qualify as fair value hedges.

JPMorgan Chase also enters into derivative contracts to hedge exposure to variability in cash flows from floating-rate financial instruments and forecasted transactions, primarily the rollover of short-term assets and liabilities, and foreign currency–denominated revenue and expense. Interest rate swaps, futures and forward contracts are the most common instruments used to reduce the impact of interest rate and foreign exchange rate changes on future earnings. All amounts affecting earnings have been recognized consistent with the classification of the hedged item, primarily Net interest income.

The Firm uses forward foreign exchange contracts and foreign currency–denominated debt instruments to protect the value of net investments in subsidiaries, the functional currency of which is not the U.S. dollar. The portion of the hedging instruments excluded from the assessment of hedge effectiveness (forward points) is recorded in Net interest income.

The following table presents derivative instrument hedging-related activities for the periods indicated.

Year ended December 31, (in millions)	**2007**	2006	2005
Fair value hedge ineffective net gains/(losses)[a]	**$111**	$51	$(58)
Cash flow hedge ineffective net gains/(losses)[a]	**29**	2	(2)
Cash flow hedging net gains/(losses) on forecasted transactions that failed to occur[b]	**15**	—	—

(a) Includes ineffectiveness and the components of hedging instruments that have been excluded from the assessment of hedge effectiveness.
(b) During the second half of 2007, the Firm did not issue short-term fixed rate Canadian dollar denominated notes due to the weak credit market for Canadian short-term debt.

Over the next 12 months, it is expected that $263 million (after-tax) of net losses recorded in Other comprehensive income at December 31, 2007, will be recognized in earnings. The maximum length of time over which forecasted transactions are hedged is 10 years, and such transactions primarily relate to core lending and borrowing activities.

JPMorgan Chase does not seek to apply hedge accounting to all of the Firm's economic hedges. For example, the Firm does not apply hedge accounting to standard credit derivatives used to manage the credit risk of loans and commitments because of the difficulties in qualifying such contracts as hedges under SFAS 133. Similarly, the Firm does not apply hedge accounting to certain interest rate derivatives used as economic hedges.

Note 31 – Off–balance sheet lending-related financial instruments and guarantees

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparty draw down the commitment or the Firm fulfill its obligation under the guarantee, and the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without a default occurring or without being drawn. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. Further, certain commitments, primarily related to consumer financings, are cancelable, upon notice, at the option of the Firm.

To provide for the risk of loss inherent in wholesale-related contracts, an allowance for credit losses on lending-related commitments is maintained. See Note 15 on pages 138–139 of this Annual Report for further discussion of the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts of off–balance sheet lending-related financial instruments and guarantees and the related allowance for credit losses on lending-related commitments at December 31, 2007 and 2006.

Off–balance sheet lending-related financial instruments and guarantees

	Contractual amount		Allowance for lending-related commitments	
December 31, (in millions)	**2007**	2006	**2007**	2006
Lending-related				
Consumer[a]	**$ 815,936**	$ 747,535	**$ 15**	$ 25
Wholesale:				
Other unfunded commitments to extend credit[b][c][d][e]	**250,954**	229,204	**571**	305
Asset purchase agreements[f]	**90,105**	67,529	**9**	6
Standby letters of credit and financial guarantees[c][g][h]	**100,222**	89,132	**254**	187
Other letters of credit[c]	**5,371**	5,559	**1**	1
Total wholesale	**446,652**	391,424	**835**	499
Total lending-related	**$ 1,262,588**	$ 1,138,959	**$ 850**	$ 524
Other guarantees				
Securities lending guarantees[i]	**$ 385,758**	$ 318,095	**NA**	NA
Derivatives qualifying as guarantees[j]	**85,262**	71,531	**NA**	NA

(a) Includes credit card and home equity lending-related commitments of $714.8 billion and $74.2 billion, respectively, at December 31, 2007; and $657.1 billion and $69.6 billion, respectively, at December 31, 2006. These amounts for credit card and home equity lending–related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.
(b) Includes unused advised lines of credit totaling $38.4 billion and $39.0 billion at December 31, 2007 and 2006, respectively, which are not legally binding. In regulatory filings with the Federal Reserve Board, unused advised lines are not reportable.
(c) Represents contractual amount net of risk participations totaling $28.3 billion and $32.8 billion at December 31, 2007 and 2006, respectively.
(d) Excludes unfunded commitments for private third-party equity investments of $881 million and $589 million at December 31, 2007 and 2006, respectively. Also excludes unfunded commitments for other equity investments of $903 million and $943 million at December 31, 2007 and 2006, respectively.
(e) Included in Other unfunded commitments to extend credit are commitments to investment and noninvestment grade counterparties in connection with leveraged acquisitions of $8.2 billion.
(f) Largely represents asset purchase agreements to the Firm's administered multi-seller, asset-backed commercial paper conduits. It also includes $1.1 billion and $1.4 billion of asset purchase agreements to other third-party entities at December 31, 2007 and 2006, respectively.
(g) JPMorgan Chase held collateral relating to $15.8 billion and $13.5 billion of these arrangements at December 31, 2007 and 2006, respectively.
(h) Included unused commitments to issue standby letters of credit of $50.7 billion and $45.7 billion at December 31, 2007 and 2006, respectively.
(i) Collateral held by the Firm in support of securities lending indemnification agreements was $390.5 billion and $317.9 billion at December 31, 2007 and 2006, respectively.
(j) Represents notional amounts of derivatives qualifying as guarantees.

Other unfunded commitments to extend credit

Unfunded commitments to extend credit are agreements to lend only when a customer has complied with predetermined conditions, and they generally expire on fixed dates.

Included in Other unfunded commitments to extend credit are commitments to investment and noninvestment grade borrowers in connection with leveraged acquisitions. These commitments are dependent on whether the acquisition by the borrower is successful, tend to be short-term in nature and, in most cases, are subject to certain conditions based on the borrower's financial condition or other factors. Additionally, the Firm often syndicates portions of the initial position to other investors, depending on market conditions. These commitments generally contain flexible pricing features to adjust for changing market conditions prior to closing. Alternatively, the borrower may turn to the capital markets for required funding instead of drawing on the commitment provided by the Firm, and the commitment may expire unused. As such, these commitments are not necessarily indicative of the Firm's actual risk and the total commitment amount may not reflect actual future cash flow requirements. The amount of these commitments at December 31, 2007, was $8.2 billion. For further information, see Note 4 and Note 5 on pages 111–118 and 119–121, respectively, of this Annual Report.

FIN 45 guarantees

FIN 45 establishes accounting and disclosure requirements for guarantees, requiring that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. FIN 45 defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party, based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off–balance sheet lending arrangements to be guarantees under FIN 45: certain asset purchase agreements, standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts. These guarantees are described in further detail below.

The fair value at inception of the obligation undertaken when issuing the guarantees and commitments that qualify under FIN 45 is typically equal to the net present value of the future amount of premium receivable under the contract. The Firm has recorded this amount in Other Liabilities with an offsetting entry recorded in Other Assets. As cash is received under the contract, it is applied to the premium receivable recorded in Other Assets, and the fair value of the liability recorded at inception is amortized into income as Lending & deposit-related fees over the life of the guarantee contract. The amount of the liability related to FIN 45 guarantees recorded at December 31, 2007 and 2006, excluding the allowance for credit losses on lending-related commitments and derivative contracts discussed below, was approximately $335 million and $297 million, respectively.

Asset purchase agreements

The majority of the Firm's unfunded commitments are not guarantees as defined in FIN 45, except for certain asset purchase agreements that are principally used as a mechanism to provide liquidity to SPEs, primarily multi-seller conduits, as described in Note 17 on pages 146–154 of this Annual Report. The conduit's administrative agent can require the liquidity provider to perform under their asset purchase agreement with the conduit at any time. These agreements may cause the Firm to purchase an asset from the SPE at an amount above the asset's then fair value, in effect providing a guarantee of the initial value of the reference asset as of the date of the agreement. In most instances, third-party credit enhancements of the SPE mitigate the Firm's potential losses on these agreements.

Standby letters of credit and financial guarantees

Standby letters of credit and financial guarantees are conditional lending commitments issued by JPMorgan Chase to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. Approximately 50% of these arrangements mature within three years. The Firm typically has recourse to recover from the customer any amounts paid under these guarantees; in addition, the Firm may hold cash or other highly liquid collateral to support these guarantees.

Securities lending indemnification

Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm issues securities lending indemnification agreements to the lender which protects it principally against the failure of the third-party borrower to return the lent securities. To support these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists or released to the borrower in the event of overcollateralization. If an indemnifiable default by a borrower occurs, the Firm would expect to use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

Also, as part of this program, the Firm invests cash collateral received from the borrower in accordance with approved guidelines. On an exception basis the Firm may indemnify the lender against this investment risk when certain types of investments are made.

Based upon historical experience, management believes that these risks of loss are remote.

Indemnification agreements – general

In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that may require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value; thus, such a clause would not require the Firm to make a payment under the indemnification agreement. Even without the termination clause, management does not expect such indemnification agreements to have a material adverse effect on the consolidated financial condition of JPMorgan Chase. See below for more information regarding the Firm's loan securitization activities. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damage that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based upon historical experience, management expects the risk of loss to be remote.

Securitization-related indemnifications

As part of the Firm's loan securitization activities, as described in Note 16 on pages 139–145 of this Annual Report, the Firm provides representations and warranties that certain securitized loans meet specific requirements. The Firm may be required to repurchase the loans and/or indemnify the purchaser of the loans against losses due to any breaches of such representations or warranties. Generally, the maximum amount of future payments the Firm would be required to make under such repurchase and/or indemnification provisions would be equal to the current amount of assets held by such securitization-related SPEs as of December 31, 2007, plus, in certain circumstances, accrued and unpaid interest on such loans and certain expense. The potential loss due to such repurchase and/or indemnity is mitigated by the due diligence the Firm performs before the sale to ensure that the assets comply with the requirements set forth in the representations and warranties. Historically, losses incurred on such repurchases and/or indemnifications have been insignificant, and therefore management expects the risk of material loss to be remote.

Credit card charge-backs

The Firm is a partner with one of the leading companies in electronic payment services in a joint venture operating under the name of Chase Paymentech Solutions, LLC (the "joint venture"). The joint venture was formed in October 2005, as a result of an agreement by the Firm and First Data Corporation, its joint venture partner, to integrate the companies' jointly owned Chase Merchant Services and Paymentech merchant businesses. The joint venture provides merchant processing services in the United States and Canada. Under the rules of Visa USA, Inc., and Mastercard International, JPMorgan Chase Bank, N.A., is liable primarily for the amount of each processed credit card sales transaction that is the subject of a dispute between a cardmember and a merchant. The joint venture is contractually liable to JPMorgan Chase Bank, N.A., for these disputed transactions. If a dispute is resolved in the cardmember's favor, the joint venture will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If the joint venture is unable to collect the amount from the merchant, the joint venture will bear the loss for the amount credited or refunded to the cardmember. The joint venture mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) the joint venture does not have sufficient collateral from the merchant to provide customer refunds; and (3) the joint venture does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would be liable for the amount of the transaction, although it would have a contractual right to recover from its joint venture partner an amount proportionate to such partner's equity interest in the joint venture. For the year ended December 31, 2007, the joint venture incurred aggregate credit losses of $10 million on $719.1 billion of aggregate volume processed. At December 31, 2007, the joint venture held $779 million of collateral. For the year ended December 31, 2006, the joint venture incurred aggregate credit losses of $9 million on $660.6 billion of aggregate volume processed. At December 31, 2006, the joint venture held $893 million of collateral. The Firm believes that, based upon historical experience and the collateral held by the joint venture, the fair value of the Firm's chargeback-related obligations would not be different materially from the credit loss allowance recorded by the joint venture; therefore, the Firm has not recorded any allowance for losses in excess of the allowance recorded by the joint venture.

Exchange, clearinghouse and credit card association guarantees

The Firm is a member of several securities and futures exchanges and clearinghouses, both in the United States and other countries. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to a members' guaranty fund, or, in a few cases, the obligation may be unlimited. It is difficult to estimate the Firm's maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based upon historical experience, management expects the risk of loss to be remote.

The Firm is an equity member of VISA Inc. During October 2007, certain VISA related entities completed a series of restructuring transactions to combine their operations, including VISA USA, under one holding company, VISA Inc. Upon the restructuring, the Firm's membership interest in VISA USA was converted into an equity interest in VISA Inc. VISA Inc. intends to issue and sell shares via an initial public offering and to use a portion of the proceeds from the offering to redeem a portion of the Firm's equity interest in Visa Inc.

Prior to the restructuring, VISA USA's by-laws obligated the Firm upon demand by VISA to indemnify VISA for, among other things, litigation obligations of Visa. The accounting for that guarantee was not subject to fair value accounting under FIN 45 because the guarantee was in effect prior to the effective date of FIN 45. Upon the restructuring event, the Firm's obligation to indemnify Visa was limited to certain identified litigations. Such a limitation is deemed a modification of the indemnity by-law and, accordingly, is now subject to the provisions of FIN 45. The value of the litigation guarantee has been recorded in the Firm's financial statements based on its fair value; the net amount recorded (within Other Liabilities) did not have a material adverse effect on the Firm's financial statements.

Derivative guarantees

In addition to the contracts described above, there are certain derivative contracts to which the Firm is a counterparty that meet the characteristics of a guarantee under FIN 45. These derivatives are recorded on the Consolidated balance sheets at fair value. These contracts include written put options that require the Firm to purchase assets from the option holder at a specified price by a specified date in the future, as well as derivatives that effectively guarantee the return on a counterparty's reference portfolio of assets. The total notional value of the derivatives that the Firm deems to be guarantees was $85.3 billion and $71.5 billion at December 31, 2007 and 2006, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions or by entering into contracts that hedge the market risk related to these contracts. The fair value related to these contracts was a derivative receivable of $213 million and $230 million, and a derivative payable of $2.5 billion and $987 million at December 31, 2007 and 2006, respectively.

Finally, certain written put options and credit derivatives permit cash settlement and do not require the option holder or the buyer of credit protection to own the reference asset. The Firm does not consider these contracts to be guarantees under FIN 45.

Note 32 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolio to assess potential concentration risks and to obtain collateral when deemed necessary. In the Firm's wholesale portfolio, risk concentrations are evaluated primarily by industry and by geographic region. In the consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region.

The Firm does not believe exposure to any one loan product with varying terms (e.g., interest-only payments for an introductory period) or exposure to loans with high loan-to-value ratios would result in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its Allowance for loan losses.

For further information regarding on–balance sheet credit concentrations by major product and geography, see Note 14 on page 137 of this Annual Report. For information regarding concentrations of off–balance sheet lending-related financial instruments by major product, see Note 31 on pages 170–173 of this Annual Report. More information about concentrations can be found in the following tables or discussion in the Management's Discussion and Analysis.

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The table below presents both on–balance sheet and off–balance sheet wholesale- and consumer-related credit exposure as of December 31, 2007 and 2006.

	2007			2006		
December 31, (in billions)	Credit exposure[b]	On-balance sheet[b][c]	Off-balance sheet[d]	Credit exposure[b]	On-balance sheet[b][c]	Off-balance sheet[d]
Wholesale-related:						
Banks and finance companies	**$ 65.5**	**$ 29.5**	**$ 36.0**	$ 63.6	$ 28.1	$ 35.5
Real estate	**38.8**	**21.7**	**17.1**	35.9	21.6	14.3
Asset managers	**38.7**	**16.4**	**22.3**	25.0	12.0	13.0
Healthcare	**31.9**	**7.7**	**24.2**	30.1	6.1	24.0
Consumer products	**31.5**	**11.6**	**19.9**	27.1	9.1	18.0
State & Municipal Govt	**31.4**	**8.9**	**22.5**	27.5	6.9	20.6
Utilities	**30.0**	**9.0**	**21.0**	25.1	5.6	19.5
Retail & Consumer Services	**27.8**	**11.0**	**16.8**	22.2	5.3	16.9
Oil & Gas	**26.5**	**12.3**	**14.2**	18.6	5.9	12.7
Securities Firms & Exchanges	**23.6**	**16.5**	**7.1**	23.1	15.1	8.0
All other wholesale	**391.2**	**145.6**	**245.6**	332.6	123.7	208.9
Total wholesale-related	**736.9**	**290.2**	**446.7**	630.8	239.4	391.4
Consumer-related:						
Home equity	**169.0**	**94.8**	**74.2**	155.2	85.7	69.5
Mortgage	**63.4**	**56.0**	**7.4**	66.3	59.7	6.6
Auto loans and leases	**50.5**	**42.4**	**8.1**	48.9	41.0	7.9
Credit card – reported[a]	**799.2**	**84.4**	**714.8**	743.0	85.9	657.1
All other loans	**40.1**	**28.7**	**11.4**	33.5	27.1	6.4
Total consumer–related	**1,122.2**	**306.3**	**815.9**	1,046.9	299.4	747.5
Total exposure	**$1,859.1**	**$ 596.5**	**$1,262.6**	$ 1,677.7	$ 538.8	$ 1,138.9

(a) Excludes $72.7 billion and $67.0 billion of securitized credit card receivables at December 31, 2007 and 2006, respectively.
(b) Includes loans held-for-sale and loans at fair value.
(c) Represents loans and derivative receivables.
(d) Represents lending-related financial instruments.

Note 33 – International operations

The following table presents income statement information of JPMorgan Chase by major geographic area. The Firm defines international activities as business transactions that involve customers residing outside of the U.S., and the information presented below is based primarily upon the domicile of the customer or the location from which the customer relationship is managed. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 34 on pages 175–177 of this Annual Report.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the U.S.

Year ended December 31, (in millions)	Revenue[a]	Expense[b]	Income from continuing operations before income taxes	Net income
2007				
Europe/Middle East and Africa	**$ 12,070**	**$ 8,445**	**$ 3,625**	**$ 2,585**
Asia and Pacific	**4,730**	**3,117**	**1,613**	**945**
Latin America and the Caribbean	**2,028**	**975**	**1,053**	**630**
Other	**407**	**289**	**118**	**79**
Total international	**19,235**	**12,826**	**6,409**	**4,239**
Total U.S.	**52,137**	**35,741**	**16,396**	**11,126**
Total	**$ 71,372**	**$ 48,567**	**$ 22,805**	**$ 15,365**
2006				
Europe/Middle East and Africa	$ 11,342	$ 7,471	$ 3,871	$ 2,774
Asia and Pacific	3,227	2,649	578	400
Latin America and the Caribbean	1,342	820	522	333
Other	381	240	141	90
Total international	16,292	11,180	5,112	3,597
Total U.S.	45,707	30,933	14,774	10,847
Total	$ 61,999	$ 42,113	$ 19,886	$ 14,444
2005				
Europe/Middle East and Africa	$ 7,795	$ 5,625	$ 2,170	$ 1,547
Asia and Pacific	2,857	2,075	782	509
Latin America and the Caribbean	973	506	467	285
Other	165	89	76	44
Total international	11,790	8,295	3,495	2,385
Total U.S.	42,458	34,114	8,344	6,098
Total	$ 54,248	$ 42,409	$ 11,839	$ 8,483

(a) Revenue is composed of Net interest income and Noninterest revenue.
(b) Expense is composed of Noninterest expense and Provision for credit losses.

Note 34 – Business segments

JPMorgan Chase is organized into six major reportable business segments — Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate segment. The segments are based upon the products and services provided or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 36–37 of this Annual Report. For a further discussion concerning JPMorgan Chase's business segments, see Business segment results on pages 38–39 of this Annual Report.

Business segment financial disclosures

Capital allocation changes

Effective January 1, 2006, the Firm refined its methodology for allocating capital (i.e., equity) to the business segments. As a result of this refinement, RFS, CS, CB, TSS and AM have higher amounts of capital allocated to them commencing in the first quarter of 2006. The revised methodology considers for each line of business, among other things, goodwill associated with such business segment's acquisitions since the Merger. In management's view, the revised methodology assigns responsibility to the lines of business to generate returns on the amount of capital supporting acquisition-related goodwill. As part of this refinement in the capital allocation methodology, the Firm assigned to the Corporate segment an amount of equity capital equal to the then-current book value of goodwill from and prior to the Merger. As prior periods have not been revised to reflect the new capital allocations, capital allocated to the respective lines of business for 2005 is not comparable to subsequent periods and certain business metrics, such as return on common equity, are not comparable to the current presentation. The Firm may revise its equity capital allocation methodology again in the future.

Discontinued operations

As a result of the transaction with The Bank of New York, selected corporate trust businesses have been transferred from TSS to the Corporate segment and reported in discontinued operations for all periods reported.

Segment results

The following table provides a summary of the Firm's segment results for 2007, 2006 and 2005 on a managed basis. The impact of credit card securitizations and tax-equivalent adjustments have been included in Reconciling items so that the total Firm results are on a reported basis.

Segment results and reconciliation[a] (table continued on next page)

Year ended December 31,	Investment Bank			Retail Financial Services			Card Services[d]			Commercial Banking		
(in millions, except ratios)	**2007**	2006	2005	**2007**	2006	2005	**2007**	2006	2005	**2007**	2006	2005
Noninterest revenue	**$ 14,094**	$ 18,334	$ 13,507	**$ 6,803**	$ 4,660	$ 4,625	**$ 3,046**	$ 2,944	$ 3,563	**$ 1,263**	$ 1,073	$ 986
Net interest income	**4,076**	499	1,603	**10,676**	10,165	10,205	**12,189**	11,801	11,803	**2,840**	2,727	2,502
Total net revenue	**18,170**	18,833	15,110	**17,479**	14,825	14,830	**15,235**	14,745	15,366	**4,103**	3,800	3,488
Provision for credit losses	**654**	191	(838)	**2,610**	561	724	**5,711**	4,598	7,346	**279**	160	73
Credit reimbursement (to)/from TSS[b]	**121**	121	154	**—**	—	—	**—**	—	—	**—**	—	—
Noninterest expense[c]	**13,074**	12,860	10,246	**9,900**	8,927	8,585	**4,914**	5,086	4,999	**1,958**	1,979	1,856
Income (loss) from continuing operations before income tax expense	**4,563**	5,903	5,856	**4,969**	5,337	5,521	**4,610**	5,061	3,021	**1,866**	1,661	1,559
Income tax expense (benefit)	**1,424**	2,229	2,183	**1,934**	2,124	2,094	**1,691**	1,855	1,114	**732**	651	608
Income (loss) from continuing operations	**3,139**	3,674	3,673	**3,035**	3,213	3,427	**2,919**	3,206	1,907	**1,134**	1,010	951
Income from discontinued operations	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Net income (loss)	**$ 3,139**	$ 3,674	$ 3,673	**$ 3,035**	$ 3,213	$ 3,427	**$ 2,919**	$ 3,206	$ 1,907	**$ 1,134**	$ 1,010	$ 951
Average equity	**$ 21,000**	$ 20,753	$ 20,000	**$ 16,000**	$ 14,629	$ 13,383	**$ 14,100**	$ 14,100	$ 11,800	**$ 6,502**	$ 5,702	$ 3,400
Average assets	**700,565**	647,569	599,761	**217,564**	231,566	226,368	**155,957**	148,153	141,933	**87,140**	57,754	52,358
Return on average equity	**15%**	18%	18%	**19%**	22%	26%	**21%**	23%	16%	**17%**	18%	28%
Overhead ratio	**72**	68	68	**57**	60	58	**32**	34	33	**48**	52	53

(a) In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's lines' of business results on a "managed basis," which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications that do not have any impact on Net income as reported by the lines of business or by the Firm as a whole.

(b) TSS reimburses the IB for credit portfolio exposures the IB manages on behalf of clients the segments share.

(c) Includes Merger costs which are reported in the Corporate segment. Merger costs attributed to the business segments for 2007, 2006 and 2005 were as follows.

Year ended December 31, (in millions)	**2007**	2006	2005
Investment Bank	**$ (2)**	$ 2	$ 32
Retail Financial Services	**14**	24	133
Card Services	**(1)**	29	222
Commercial Banking	**(1)**	1	3
Treasury & Securities Services	**121**	117	95
Asset Management	**20**	23	60
Corporate	**58**	109	177

(d) Managed results for CS exclude the impact of credit card securitizations on Total net revenue, Provision for credit losses and Average assets, as JPMorgan Chase treats the sold receivables as if they were still on the balance sheet in evaluating credit performance and the overall performance of CS' entire managed credit card portfolio as operations are funded, and decisions are made about allocating resources such as employees and capital, based upon managed information. These adjustments are eliminated in Reconciling items to arrive at the Firm's reported U.S. GAAP results. The related securitization adjustments were as follows.

Year ended December 31, (in millions)	**2007**	2006	2005
Noninterest revenue	**$ (3,255)**	$ (3,509)	$ (2,718)
Net interest income	**5,635**	5,719	6,494
Provision for credit losses	**2,380**	2,210	3,776
Average assets	**66,780**	65,266	67,180

(table continued from previous page)

Treasury & Securities Services			Asset Management			Corporate			Reconciling items[d][e]			Total		
2007	2006	2005	**2007**	2006	2005	**2007**	2006	2005	**2007**	2006	2005	**2007**	2006	2005
$ 4,681	$ 4,039	$ 3,659	**$ 7,475**	$ 5,816	$ 4,583	**$ 5,032**	$ 1,058	$ 1,623	**$ 2,572**	$ 2,833	$ 2,147	**$ 44,966**	$ 40,757	$ 34,693
2,264	2,070	1,880	**1,160**	971	1,081	**(787)**	(1,044)	(2,756)	**(6,012)**	(5,947)	(6,763)	**26,406**	21,242	19,555
6,945	6,109	5,539	**8,635**	6,787	5,664	**4,245**	14	(1,133)	**(3,440)**	(3,114)	(4,616)	**71,372**	61,999	54,248
19	(1)	—	**(18)**	(28)	(56)	**(11)**	(1)	10	**(2,380)**	(2,210)	(3,776)	**6,864**	3,270	3,483
(121)	(121)	(154)	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
4,580	4,266	4,050	**5,515**	4,578	3,860	**1,762**	1,147	5,330	**—**	—	—	**41,703**	38,843	38,926
2,225	1,723	1,335	**3,138**	2,237	1,860	**2,494**	(1,132)	(6,473)	**(1,060)**	(904)	(840)	**22,805**	19,886	11,839
828	633	472	**1,172**	828	644	**719**	(1,179)	(2,690)	**(1,060)**	(904)	(840)	**7,440**	6,237	3,585
1,397	1,090	863	**1,966**	1,409	1,216	**1,775**	47	(3,783)	**—**	—	—	**15,365**	13,649	8,254
—	—	—	**—**	—	—	**—**	795	229	**—**	—	—	**—**	795	229
$ 1,397	$ 1,090	$ 863	**$ 1,966**	$ 1,409	$ 1,216	**$ 1,775**	$ 842	$ (3,554)	**$ —**	$ —	$ —	**$ 15,365**	$ 14,444	$ 8,483
$ 3,000	$ 2,285	$ 1,525	**$ 3,876**	$ 3,500	$ 2,400	**$ 54,245**	$ 49,728	$ 52,999	**$ —**	$ —	$ —	**$ 118,723**	$ 110,697	$105,507
53,350	31,760	28,206	**51,882**	43,635	41,599	**255,366**	218,623	162,021	**(66,780)**	(65,266)	(67,180)	**1,455,044**	1,313,794	1,185,066
47%	48%	57%	**51%**	40%	51%	**NM**	NM	NM	**NM**	NM	NM	**13%**	13%	8%
66	70	73	**64**	67	68	**NM**	NM	NM	**NM**	NM	NM	**58**	63	72

(e) Segment managed results reflect revenue on a tax-equivalent basis with the corresponding income tax impact recorded within Income tax expense. These adjustments are eliminated in Reconciling items to arrive at the Firm's reported U.S. GAAP results. Tax-equivalent adjustments were as follows for the years ended December 31, 2007, 2006 and 2005.

Year ended December 31, (in millions)	**2007**	2006	2005
Noninterest income	**$ 683**	$ 676	$ 571
Net interest income	**377**	228	269
Income tax expense	**1,060**	904	840

Note 35 – Parent company

Parent company – statements of income

Year ended December 31, (in millions)	2007	2006	2005
Income			
Dividends from bank and bank holding company subsidiaries	**$ 5,834**	$ 2,935	$ 2,361
Dividends from nonbank subsidiaries[a]	**2,463**	1,999	791
Interest income from subsidiaries	**5,082**	3,612	2,369
Other interest income	**263**	273	209
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**182**	220	246
Nonbank	**960**	739	462
Other income (loss)	**(131)**	(206)	13
Total income	**14,653**	9,572	6,451
Expense			
Interest expense to subsidiaries[a]	**1,239**	1,025	846
Other interest expense	**6,427**	4,536	3,076
Compensation expense	**125**	519	369
Other noninterest expense	**998**	295	496
Total expense	**8,789**	6,375	4,787
Income before income tax benefit and undistributed net income of subsidiaries	**5,864**	3,197	1,664
Income tax benefit	**828**	982	852
Equity in undistributed net income of subsidiaries	**8,673**	10,265	5,967
Net income	**$15,365**	$ 14,444	$ 8,483

Parent company – balance sheets

December 31, (in millions)	2007	2006
Assets		
Cash and due from banks, primarily with bank subsidiaries	**$ 110**	$ 756
Deposits with banking subsidiaries	**52,972**	18,759
Trading assets	**9,563**	7,975
Available-for-sale securities	**43**	257
Loans	**1,423**	971
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**28,705**	22,765
Nonbank	**52,895**	34,282
Investments (at equity) in subsidiaries:		
Bank and bank holding company	**128,711**	119,017
Nonbank[a]	**25,710**	22,552
Goodwill and other intangibles	**850**	853
Other assets	**13,241**	11,983
Total assets	**$ 314,223**	$ 240,170
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries[a]	**$ 23,938**	$ 19,183
Other borrowed funds, primarily commercial paper	**52,440**	21,011
Other liabilities	**8,043**	7,605
Long-term debt[b]	**106,581**	76,581
Total liabilities	**191,002**	124,380
Stockholders' equity	**123,221**	115,790
Total liabilities and stockholders' equity	**$ 314,223**	$ 240,170

Parent company – statements of cash flows

Year ended December 31, (in millions)	2007	2006	2005
Operating activities			
Net income	**$15,365**	$ 14,444	$ 8,483
Less: Net income of subsidiaries	**16,970**	15,199	9,119
Parent company net loss	**(1,605)**	(755)	(636)
Add: Cash dividends from subsidiaries[a]	**8,061**	4,934	2,891
Other, net	**3,496**	(185)	(130)
Net cash provided by operating activities	**9,952**	3,994	2,125
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**(34,213)**	(9,307)	1,251
Securities purchased under resale agreements, primarily with nonbank subsidiaries	**—**	24	(24)
Loans	**(452)**	(633)	(176)
Advances to subsidiaries	**(24,553)**	(3,032)	(483)
Investments (at equity) in subsidiaries	**(3,705)**	579	(2,949)
Other, net	**—**	(1)	34
Available-for-sale securities:			
Purchases	**(104)**	—	(215)
Proceeds from sales and maturities	**318**	29	124
Net cash used in investing activities	**(62,709)**	(12,341)	(2,438)
Financing activities			
Net change in borrowings from subsidiaries[a]	**4,755**	2,672	2,316
Net change in other borrowed funds	**31,429**	5,336	625
Proceeds from the issuance of long-term debt	**38,986**	18,153	15,992
Repayments of long-term debt	**(11,662)**	(10,557)	(10,864)
Net proceeds from the issuance of stock and stock-related awards	**1,467**	1,659	682
Excess tax benefits related to stock-based compensation	**365**	302	—
Redemption of preferred stock	**—**	(139)	(200)
Treasury stock purchased	**(8,178)**	(3,938)	(3,412)
Cash dividends paid	**(5,051)**	(4,846)	(4,878)
Net cash provided by financing activities	**52,111**	8,642	261
Net increase (decrease) in cash and due from banks	**(646)**	295	(52)
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	**756**	461	513
Cash and due from banks at the end of the year, primarily with bank subsidiaries	**$ 110**	$ 756	$ 461
Cash interest paid	**$ 7,470**	$5,485	$ 3,838
Cash income taxes paid	**$ 5,074**	$3,599	$ 3,426

(a) Subsidiaries include trusts that issued guaranteed capital debt securities ("issuer trusts"). As a result of FIN 46R, the Parent deconsolidated these trusts in 2003. The Parent received dividends of $18 million, $23 million and $21 million from the issuer trusts in 2007, 2006 and 2005, respectively. For further discussion on these issuer trusts, see Note 21 on page 160 of this Annual Report.

(b) At December 31, 2007, debt that contractually matures in 2008 through 2012 totaled $17.8 billion, $17.5 billion, $13.3 billion, $9.5 billion and $12.8 billion, respectively.

Selected quarterly financial data (unaudited)

(in millions, except per share, ratio and headcount data)	2007				2006			
As of or for the period ended	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Selected income statement data								
Noninterest revenue[a][b]	**$ 10,161**	**$ 9,199**	**$ 12,740**	**$ 12,866**	$ 10,501	$ 10,166	$ 9,908	$ 10,182
Net interest income[b]	**7,223**	**6,913**	**6,168**	**6,102**	5,692	5,379	5,178	4,993
Total net revenue	**17,384**	**16,112**	**18,908**	**18,968**	16,193	15,545	15,086	15,175
Provision for credit losses	**2,542**	**1,785**	**1,529**	**1,008**	1,134	812	493	831
Total noninterest expense	**10,720**	**9,327**	**11,028**	**10,628**	9,885	9,796	9,382	9,780
Income from continuing operations before income tax expense	**4,122**	**5,000**	**6,351**	**7,332**	5,174	4,937	5,211	4,564
Income tax expense	**1,151**	**1,627**	**2,117**	**2,545**	1,268	1,705	1,727	1,537
Income from continuing operations (after-tax)	**2,971**	**3,373**	**4,234**	**4,787**	3,906	3,232	3,484	3,027
Income from discontinued operations (after-tax)[c]	**—**	**—**	**—**	**—**	620	65	56	54
Net income	**$ 2,971**	**$ 3,373**	**$ 4,234**	**$ 4,787**	$ 4,526	$ 3,297	$ 3,540	$ 3,081
Per common share								
Basic earnings per share								
Income from continuing operations	**$ 0.88**	**$ 1.00**	**$ 1.24**	**$ 1.38**	$ 1.13	$ 0.93	$ 1.00	$ 0.87
Net income	**0.88**	**1.00**	**1.24**	**1.38**	1.31	0.95	1.02	0.89
Diluted earnings per share								
Income from continuing operations	**$ 0.86**	**$ 0.97**	**$ 1.20**	**$ 1.34**	$ 1.09	$ 0.90	$ 0.98	$ 0.85
Net income	**0.86**	**0.97**	**1.20**	**1.34**	1.26	0.92	0.99	0.86
Cash dividends declared per share	**0.38**	**0.38**	**0.38**	**0.34**	0.34	0.34	0.34	0.34
Book value per share	**36.59**	**35.72**	**35.08**	**34.45**	33.45	32.75	31.89	31.19
Common shares outstanding								
Average: Basic	**3,367#**	**3,376#**	**3,415#**	**3,456#**	3,465#	3,469#	3,474#	3,473#
Diluted	**3,472**	**3,478**	**3,522**	**3,560**	3,579	3,574	3,572	3,571
Common shares at period end	**3,367**	**3,359**	**3,399**	**3,416**	3,462	3,468	3,471	3,473
Share price[d]								
High	**$ 48.02**	**$ 50.48**	**$ 53.25**	**$ 51.95**	$ 49.00	$ 47.49	$ 46.80	$ 42.43
Low	**40.15**	**42.16**	**47.70**	**45.91**	45.51	40.40	39.33	37.88
Close	**43.65**	**45.82**	**48.45**	**48.38**	48.30	46.96	42.00	41.64
Market capitalization	**146,986**	**153,901**	**164,659**	**165,280**	167,199	162,835	145,764	144,614
Financial ratios								
Return on common equity:								
Income from continuing operations	**10%**	**11%**	**14%**	**17%**	14%	11%	13%	11%
Net income	**10**	**11**	**14**	**17**	16	12	13	12
Return on assets:								
Income from continuing operations	**0.77**	**0.91**	**1.19**	**1.41**	1.14	0.98	1.05	0.98
Net income	**0.77**	**0.91**	**1.19**	**1.41**	1.32	1.00	1.06	1.00
Tier 1 capital ratio	**8.4**	**8.4**	**8.4**	**8.5**	8.7	8.6	8.5	8.5
Total capital ratio	**12.6**	**12.5**	**12.0**	**11.8**	12.3	12.1	12.0	12.1
Tier 1 leverage ratio	**6.0**	**6.0**	**6.2**	**6.2**	6.2	6.3	5.8	6.1
Overhead ratio	**62**	**58**	**58**	**56**	61	63	62	64
Selected balance sheet data (period-end)								
Total assets	**$ 1,562,147**	**$ 1,479,575**	**$1,458,042**	**$1,408,918**	$1,351,520	$1,338,029	$1,328,001	$1,273,282
Securities	**85,450**	**97,706**	**95,984**	**97,029**	91,975	86,548	78,022	67,126
Loans	**519,374**	**486,320**	**465,037**	**449,765**	483,127	463,544	455,104	432,081
Deposits	**740,728**	**678,091**	**651,370**	**626,428**	638,788	582,115	593,716	584,465
Long-term debt	**183,862**	**173,696**	**159,493**	**143,274**	133,421	126,619	125,280	112,133
Total stockholders' equity	**123,221**	**119,978**	**119,211**	**117,704**	115,790	113,561	110,684	108,337
Headcount	**180,667#**	**179,847#**	**179,664#**	**176,314#**	174,360#	171,589#	172,423#	170,787#
Credit quality metrics								
Allowance for credit losses	**$ 10,084**	**$ 8,971**	**$ 8,399**	**$ 7,853**	$ 7,803	$ 7,524	$ 7,500	$ 7,659
Nonperforming assets[e]	**4,237**	**3,181**	**2,586**	**2,421**	2,341	2,300	2,384	2,348
Allowance for loan losses to total loans[f]	**1.88%**	**1.76%**	**1.71%**	**1.74%**	1.70%	1.65%	1.69%	1.83%
Net charge-offs	**$ 1,429**	**$ 1,221**	**$ 985**	**$ 903**	$ 930	$ 790	$ 654	$ 668
Net charge-off rate[f]	**1.19%**	**1.07%**	**0.90%**	**0.85%**	0.84%	0.74%	0.64%	0.69%
Wholesale net charge-off (recovery) rate[f]	**0.05**	**0.19**	**(0.07)**	**(0.02)**	0.07	(0.03)	(0.05)	(0.06)
Managed Card net charge-off rate	**3.89**	**3.64**	**3.62**	**3.57**	3.45	3.58	3.28	2.99

(a) The Firm adopted SFAS 157 in the first quarter of 2007. See Note 4 on pages 111–118 of this Annual Report for additional information.

(b) For certain trading-related positions, amounts have been revised between Noninterest revenue and Net interest income; there is no impact to Net revenue as a result of these revisions.

(c) On October 1, 2006, JPMorgan Chase & Co. completed the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York Company Inc. The results of operations of these corporate trust businesses are reported as discontinued operations for each 2006 period.

(d) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.

(e) Excludes purchased wholesale loans held-for-sale.

(f) End-of-period and average Loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratios and net charge-off rates, respectively.

Selected annual financial data (unaudited)

(in millions, except per share, headcount and ratio data)					Heritage JPMorgan Chase only
As of or for the year ended December 31,	**2007**	2006	2005	2004[f]	2003
Selected income statement data					
Noninterest revenue[a]	**$ 44,966**	$ 40,757	$ 34,693	$ 26,209	$ 20,384
Net interest income	**26,406**	21,242	19,555	16,527	12,807
Total net revenue	**71,372**	61,999	54,248	42,736	33,191
Provision for credit losses	**6,864**	3,270	3,483	2,544	1,540
Total noninterest expense	**41,703**	38,843	38,926	34,336	21,878
Income from continuing operations before income tax expense	**22,805**	19,886	11,839	5,856	9,773
Income tax expense	**7,440**	6,237	3,585	1,596	3,209
Income from continuing operations	**15,365**	13,649	8,254	4,260	6,564
Income from discontinued operations[b]	**—**	795	229	206	155
Net income	**$ 15,365**	$ 14,444	$ 8,483	$ 4,466	$ 6,719
Per common share					
Basic earnings per share					
Income from continuing operations	**$ 4.51**	$ 3.93	$ 2.36	$ 1.51	$ 3.24
Net income	**4.51**	4.16	2.43	1.59	3.32
Diluted earnings per share					
Income from continuing operations	**$ 4.38**	$ 3.82	$ 2.32	$ 1.48	$ 3.17
Net income	**4.38**	4.04	2.38	1.55	3.24
Cash dividends declared per share	**1.48**	1.36	1.36	1.36	1.36
Book value per share	**36.59**	33.45	30.71	29.61	22.10
Common shares outstanding					
Average: Basic	**3,404#**	3,470#	3,492#	2,780#	2,009#
Diluted	**3,508**	3,574	3,557	2,851	2,055
Common shares at period-end	**3,367**	3,462	3,487	3,556	2,043
Share price[c]					
High	**$ 53.25**	$ 49.00	$ 40.56	$ 43.84	$ 38.26
Low	**40.15**	37.88	32.92	34.62	20.13
Close	**43.65**	48.30	39.69	39.01	36.73
Market capitalization	**146,986**	167,199	138,387	138,727	75,025
Financial ratios					
Return on common equity:					
Income from continuing operations	**13%**	12%	8%	6%	15%
Net income	**13**	13	8	6	16
Return on assets:					
Income from continuing operations	**1.06**	1.04	0.70	0.44	0.85
Net income	**1.06**	1.10	0.72	0.46	0.87
Tier 1 capital ratio	**8.4**	8.7	8.5	8.7	8.5
Total capital ratio	**12.6**	12.3	12.0	12.2	11.8
Tier 1 leverage ratio	**6.0**	6.2	6.3	6.2	5.6
Overhead ratio	**58**	63	72	80	66
Selected balance sheet data (period-end)					
Total assets	**$ 1,562,147**	$ 1,351,520	$ 1,198,942	$1,157,248	$ 770,912
Securities	**85,450**	91,975	47,600	94,512	60,244
Loans	**519,374**	483,127	419,148	402,114	214,766
Deposits	**740,728**	638,788	554,991	521,456	326,492
Long-term debt	**183,862**	133,421	108,357	95,422	48,014
Common stockholders' equity	**123,221**	115,790	107,072	105,314	45,145
Total stockholders' equity	**123,221**	115,790	107,211	105,653	46,154
Headcount	**180,667#**	174,360#	168,847#	160,968#	96,367#
Credit quality metrics					
Allowance for credit losses	**$ 10,084**	$ 7,803	$ 7,490	$ 7,812	$ 4,847
Nonperforming assets[d]	**4,237**	2,341	2,590	3,231	3,161
Allowance for loan losses to total loans[e]	**1.88%**	1.70%	1.84%	1.94%	2.33%
Net charge-offs	**$ 4,538**	$ 3,042	$ 3,819	$ 3,099	$ 2,272
Net charge-off rate[e]	**1.00%**	0.73%	1.00%	1.08%	1.19%
Wholesale net charge-off (recovery) rate[e]	**0.04**	(0.01)	(0.06)	0.18	0.97
Managed Card net charge-off rate	**3.68**	3.33	5.21	5.27	5.90

(a) The Firm adopted SFAS 157 in the first quarter of 2007. See Note 4 on pages 111–118 of this Annual Report for additional information.

(b) On October 1, 2006, JPMorgan Chase & Co. completed the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York Company Inc. The results of operations of these corporate trust businesses are reported as discontinued operations for each period prior to 2007.

(c) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.

(d) Excludes purchased wholesale loans held-for-sale.

(e) End-of-period and average Loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratios and net charge-off rates, respectively.

(f) On July 1, 2004, Bank One Corporation merged with and into JPMorgan Chase. Accordingly, 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

ACH: Automated Clearing House.

AICPA: American Institute of Certified Public Accountants.

AICPA Statement of Position ("SOP") 07-1: "Clarification of the Scope of the Audit and Accounting Guide Investment Companies and Accounting by Parent Companies and Equity Method Investors for Investments in Investment Companies."

AICPA Statement of Position ("SOP") 98-1: "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use."

APB 25: Accounting Principles Board Opinion No. 25. "Accounting for Stock Issued to Employees."

Advised lines of credit: An authorization which specifies the maximum amount of a credit facility the Firm has made available to an obligor on a revolving but non-binding basis. The borrower receives written or oral advice of this facility. The Firm may cancel this facility at any time.

Assets under management: Represent assets actively managed by Asset Management on behalf of institutional, private banking, private client services and retail clients. Excludes assets managed by American Century Companies, Inc., in which the Firm has a 44% ownership interest as of December 31, 2007

Assets under supervision: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Average managed assets: Refers to total assets on the Firm's Consolidated balance sheets plus credit card receivables that have been securitized.

Beneficial interest issued by consolidated VIEs: Represents the interest of third-party holders of debt/equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates under FIN 46R. The underlying obligations of the VIEs consist of short-term borrowings, commercial paper and long-term debt. The related assets consist of trading assets, available-for-sale securities, loans and other assets.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Contractual credit card charge-off: In accordance with the Federal Financial Institutions Examination Council policy, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification of the filing of bankruptcy, whichever is earlier.

Credit card securitizations: Card Services' managed results excludes the impact of credit card securitizations on Total net revenue, the Provision for credit losses, net charge-offs and Loan receivables. Through securitization, the Firm transforms a portion of its credit card receivables into securities, which are sold to investors. The credit card receivables are removed from the Consolidated balance sheets through the transfer of the receivables to a trust, and the sale of undivided interests to investors that entitle the investors to specific cash flows generated from the credit card receivables. The Firm retains the remaining undivided interests as seller's interests, which are recorded in Loans on the Consolidated balance sheets. A gain or loss on the sale of credit card receivables to investors is recorded in Other Income. Securitization also affects the Firm's Consolidated statements of income as the aggregate amount of interest income, certain fee revenue and recoveries that is in excess of the aggregate amount of interest paid to the investors, gross credit losses and other trust expense related to the securitized receivables are reclassified into Credit card income in the Consolidated statements of income.

Credit derivatives: Contractual agreements that provide protection against a credit event on one or more referenced credits. The nature of a credit event is established by the protection buyer and protection seller at the inception of a transaction, and such events include bankruptcy, insolvency or failure to meet payment obligations when due. The buyer of the credit derivative pays a periodic fee in return for a payment by the protection seller upon the occurrence, if any, of a credit event.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again. The duration of a credit cycle can vary from a couple of years to several years.

Discontinued operations: A component of an entity that is classified as held-for-sale or that has been disposed of from ongoing operations in its entirety or piecemeal, and for which the entity will not have any significant, continuing involvement. A discontinued operation may be a separate major business segment, a component of a major business segment or a geographical area of operations of the entity that can be separately distinguished operationally and for financial reporting purposes.

EITF: Emerging Issues Task Force.

EITF Issue 06-11: "Accounting for Income Tax Benefits of Dividends on Share-Based Payment Awards."

EITF Issue 02-3: "Issues Involved in Accounting for Derivative Contracts Held for Trading Purposes and Contracts Involved in Energy Trading and Risk Management Activities."

EITF Issue 99-20: "Recognition of Interest Income and Impairment on Purchased and Retained Beneficial Interests in Securitized Financial Assets."

FASB: Financial Accounting Standards Board.

FIN 39: FASB Interpretation No. 39, "Offsetting of Amounts Related to Certain Contracts – an interpretation of APB Opinion No. 10 and FASB Statement No. 105."

FIN 41: FASB Interpretation No. 41, "Offsetting of Amounts Related to Certain Repurchase and Reverse Repurchase Agreements – an interpretation of APB Opinion No. 10 and a Modification of FASB Interpretation No. 39."

FIN 45: FASB Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, including Indirect Guarantees of Indebtedness of Others – an interpretation of FASB Statements No. 5, 57 and 107 and a rescission of FASB Interpretation No. 34."

FIN 46R: FASB Interpretation No. 46 (revised December 2003), "Consolidation of Variable Interest Entities – an interpretation of ARB No. 51."

FIN 47: FASB Interpretation No. 47, "Accounting for Conditional Asset Retirement Obligations – an interpretation of FASB Statement No. 143."

FIN 48: FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes – an interpretation of FASB Statement No. 109."

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

FSP: FASB Staff Position.

FSP FAS 123(R)-3: "Transition Election Related to Accounting for the Tax Effects of Share-Based Payment Awards."

FSP FAS 13-2: "Accounting for a Change or Projected Change in the Timing of Cash Flows Relating to Income Taxes Generated by a Leveraged Lease Transaction."

FSP FIN 39-1: "Amendment of FASB Interpretation No. 39."

FSP FIN 46(R)-7: "Application of FASB Interpretation No. 46(R) to Investment Companies."

Interchange income: A fee that is paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Interests in purchased receivables: Represent an ownership interest in cash flows of an underlying pool of receivables transferred by a third-party seller into a bankruptcy-remote entity, generally a trust.

Investment-grade: An indication of credit quality based upon JPMorgan Chase's internal risk assessment system. "Investment-grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications related to credit card securitizations and to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Managed credit card receivables: Refers to credit card receivables on the Firm's Consolidated balance sheets plus credit card receivables that have been securitized.

Mark-to-market exposure: A measure, at a point in time, of the value of a derivative or foreign exchange contract in the open market. When the mark-to-market value is positive, it indicates the counterparty owes JPMorgan Chase and, therefore, creates a repayment risk for the Firm. When the mark-to-market value is negative, JPMorgan Chase owes the counterparty; in this situation, the Firm does not have repayment risk.

Master netting agreement: An agreement between two counterparties that have multiple derivative contracts with each other that provides for the net settlement of all contracts through a single payment, in a single currency, in the event of default on or termination of any one contract. See FIN 39.

MSR risk management revenue: Includes changes in MSR asset fair value due to inputs or assumptions in model and derivative valuation adjustments.

Material legal proceedings: Refers to certain specific litigation originally discussed in the section "Legal Proceedings" in the Firm's Annual Report on Form 10-K for the year ended December 31, 2002. Of such legal proceedings, some lawsuits related to Enron and the IPO allocation allegations remain outstanding as of the date of this Annual Report, as discussed in Part I, Item 3, Legal proceedings in the Firm's Annual Report on Form 10-K for the year ended December 31, 2007, to which reference is hereby made; other such legal proceedings have been resolved.

Merger: On July 1, 2004, Bank One Corporation merged with and into JPMorgan Chase.

NA: Data is not applicable or available for the period presented.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

OPEB: Other postretirement employee benefits.

Overhead ratio: Noninterest expense as a percentage of Total net revenue.

Portfolio activity: Describes changes to the risk profile of existing lending-related exposures and their impact on the allowance for credit losses from changes in customer profiles and inputs used to estimate the allowances.

Principal transactions (revenue): Realized and unrealized gains and losses from trading activities (including physical commodities inventories that are accounted for at the lower of cost or fair value) and changes in fair value associated with financial instruments held by the Investment Bank for which the SFAS 159 fair value option was elected. Principal transactions revenue also include private equity gains and losses.

REMIC: Investment vehicles that hold commercial and residential mortgages in trust, and issues securities representing an undivided interest in these mortgages. A REMIC, which can be a corporation, trust, association, or partnership, assembles mortgages into pools and issues pass-through certificates, multiclass bonds similar to a collateralized mortgage obligation (CMO), or other securities to investors in the secondary mortgage market.

Reported basis: Financial statements prepared under accounting principles generally accepted in the United States of America ("U.S. GAAP"). The reported basis includes the impact of credit card securitizations, but excludes the impact of taxable-equivalent adjustments.

Return on common equity less goodwill: Represents net income applicable to common stock divided by total average common equity (net of goodwill). The Firm uses return on common equity less goodwill, a non-GAAP financial measure, to evaluate the operating performance of the Firm. The Firm also utilizes this measure to facilitate operating comparisons to other competitors.

SAB: Staff Accounting Bulletin

SAB 109: "Written Loan Commitments Recorded at Fair Value Through Earnings."

SFAS: Statement of Financial Accounting Standards.

SFAS 5: "Accounting for Contingencies."

SFAS 13: "Accounting for Leases."

SFAS 52: "Foreign Currency Translation."

SFAS 87: "Employers' Accounting for Pensions."

SFAS 88: "Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits."

SFAS 106: "Employers' Accounting for Postretirement Benefits Other Than Pensions."

SFAS 107: "Disclosures about Fair Value of Financial Instruments."

SFAS 109: "Accounting for Income Taxes."

SFAS 114: "Accounting by Creditors for Impairment of a Loan – an amendment of FASB Statements No. 5 and 15."

SFAS 115: "Accounting for Certain Investments in Debt and Equity Securities."

SFAS 123: "Accounting for Stock-Based Compensation."

SFAS 123R: "Share-Based Payment."

SFAS 128: "Earnings per Share."

SFAS 133: "Accounting for Derivative Instruments and Hedging Activities."

SFAS 138: "Accounting for Certain Derivative Instruments and Certain Hedging Activities – an amendment of FASB Statement No. 133."

SFAS 140: "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities – a replacement of FASB Statement No. 125."

SFAS 141R: "Business Combinations"

SFAS 142: "Goodwill and Other Intangible Assets."

SFAS 143: "Accounting for Asset Retirement Obligations."

SFAS 149: "Amendment of Statement No. 133 on Derivative Instruments and Hedging Activities."

SFAS 155: "Accounting for Certain Hybrid Financial Instruments – an amendment of FASB Statements No. 133 and 140."

SFAS 156: "Accounting for Servicing of Financial Assets – an amendment of FASB Statement No. 140."

SFAS 157: "Fair Value Measurements."

SFAS 158: "Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans – an amendment of FASB Statements No. 87, 88, 106, and 132(R)."

SFAS 159: "The Fair Value Option for Financial Assets and Financial Liabilities – Including an amendment of FASB Statement No. 115."

SFAS 160: "Noncontrolling Interests in Consolidated Financial Statements – an amendment of ARB No. 51."

Stress testing: A scenario that measures market risk under unlikely but plausible events in abnormal markets.

Subprime loans: Although a standard definition for Subprime loans (including subprime mortgage loans) does not exist, the Firm defines subprime loans as specific product offerings for higher risk borrowers, including individuals with one or a combination of high credit risk factors, such as low FICO scores (generally less than 620 for secured products and 660 for unsecured products) and high debt to income ratios. The Firm also evaluates the types and severity of historical delinquencies in evaluating whether a subprime product is appropriate for a particular customer. Higher interest rates and additional fees are typically assessed for subprime loans to compensate for the increased credit risk associated with these types of products.

Transactor loan: Loan in which the outstanding balance is paid in full by payment due date.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. government and federal agency obligations: Obligations of the U.S. government or an instrumentality of the U.S. government whose obligations are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

Value-at-risk ("VAR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

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Corporate headquarters

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Principal subsidiaries

JPMorgan Chase Bank,
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Chase Bank USA,
National Association
J.P. Morgan Securities Inc.

Annual report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the Securities and Exchange Commission will be made available without charge upon request to:

Office of the Secretary
JPMorgan Chase & Co.
277 Park Avenue
New York, New York 10172

Stock listing

New York Stock Exchange, Inc.
London Stock Exchange Limited
Tokyo Stock Exchange

The New York Stock Exchange (NYSE) ticker symbol for the Common Stock of JPMorgan Chase & Co. is JPM.

Certifications by the Chairman and Chief Executive Officer and Chief Financial Officer of JPMorgan Chase & Co. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, have been filed as exhibits to the Firm's 2007 Annual Report on Form 10-K.

The NYSE requires that the Chief Executive Officer of a listed company certify annually that he or she was not aware of any violation by the company of the NYSE's Corporate Governance listing standards. Such certification was made on June 14, 2007.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations site of www.jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
277 Park Avenue
New York, New York 10172
Telephone: 212-270-6000

Directors

To contact any of the Board members or committee chairs, the Presiding Director, or the non-management directors as a group, please mail correspondence to:

JPMorgan Chase & Co.
Attention (Board member(s))
Office of the Secretary
277 Park Avenue
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The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct and the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting www.jpmorganchase.com and clicking on "Governance." Stockholders may request a copy of such materials by writing to the Office of the Secretary at the above address.

Transfer agent and registrar

Mellon Investor Services LLC
480 Washington Blvd.
Jersey City, New Jersey 07310-1900
Telephone: 1-800-758-4651
https://vault.melloninvestor.com/isd

Investor Services Program

JPMorgan Chase & Co.'s Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorgan Chase & Co. common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, Mellon Investor Services LLC, by calling 1-800-758-4651, by writing them at the address indicated above or by visiting their Web site at www.melloninvestor.com.

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Within the United States, Canada and Puerto Rico: 1-800-758-4651 (toll-free)

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Annual Report 2008

THE WAY FORWARD



JPMorgan Chase & Co.

Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio and headcount data)	2008	2007
Reported basis[a]		
Total net revenue	$ **67,252**	$ 71,372
Provision for credit losses	**20,979**	6,864
Total noninterest expense	**43,500**	41,703
Income from continuing operations	**3,699**	15,365
Extraordinary gain	**1,906**	–
Net income	$ **5,605**	$ 15,365
Per common share:		
Basic earnings per share		
Income from continuing operations	$ **0.86**	$ 4.51
Net income	**1.41**	4.51
Diluted earnings per share		
Income from continuing operations	$ **0.84**	$ 4.38
Net income	**1.37**	4.38
Cash dividends declared per share	**1.52**	1.48
Book value per share	**36.15**	36.59
Return on common equity		
Income from continuing operations	**2%**	13%
Net income	**4**	13
Return on common equity (net of goodwill)		
Income from continuing operations	**4%**	21%
Net income	**6**	21
Tier 1 capital ratio	**10.9**	8.4
Total capital ratio	**14.8**	12.6
Total assets	$ **2,175,052**	$ 1,562,147
Loans	**744,898**	519,374
Deposits	**1,009,277**	740,728
Total stockholders' equity	**166,884**	123,221
Headcount	**224,961**	180,667

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $2.2 trillion and operations in more than 60 countries. The firm is a leader in investment banking, financial services for consumers, small business and commercial banking, financial transaction processing, asset management and private equity. A component of the Dow Jones Industrial Average, JPMorgan Chase serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands.

Information about J.P. Morgan capabilities can be found at www.jpmorgan.com and about Chase capabilities at www.chase.com. Information about the firm is available at www.jpmorganchase.com.

We do our best to manage and operate our company with a consistent set of business principles and core values. First and foremost, this means always trying to do the right thing.

It means continuing to focus on maintaining a fortress balance sheet, strong capital ratios and strong credit ratings. It means being willing to sacrifice short-term growth for long-term opportunity. During these turbulent times, this approach is vital.

As we move forward, we believe that shareholders will benefit as we do the right thing for our customers and the communities we serve.



While we haven't avoided every obstacle, we're proud our clients have been able to rely on our relative strength and stability during these tough economic times.

We will continue to provide creditworthy businesses of all sizes the capital and financial tools they need to drive growth.

For individuals and families, we will continue to help with their credit, savings and investment needs. This means helping our customers put a roof over their heads, pay for their education and build their small businesses. And, as always, we will adhere to safe and sound lending standards.

With our core beliefs as our foundation, we will do our part to restore our financial system, strengthen the vitality of our company and help move us all forward.

DEAR FELLOW SHAREHOLDERS,



Jamie Dimon,
Chairman and
Chief Executive Officer

In last year's shareholder letter, I referred to the "turbulence" and "unprecedented" nature of events that had taken place during the preceding months. We did not know when the cycle would end or the extent of the damage it would cause. But we did know that we had to "prepare for a severe economic downturn." Collectively, we resolved to navigate through the tough conditions, to help our clients in every way we could and to show leadership in the industry, as has been our legacy during times of crisis.

It is now a year later. What transpired was largely unprecedented and virtually inconceivable. Our firm tried to meet every challenge, and, in the process, we distinguished ourselves in our service to clients and communities. Although our financial results were weak in absolute terms (but fairly good in relative terms), reflecting terrible market conditions, I believe—and I hope you agree—that this year may have been one of our finest.

The way forward will not be easy. We do not know what the future will bring, but we do know that it will require everyone—the banks, the regulators and the government—to work together and get it right. As we prepare for a very tough 2009, with most signs pointing to continued deterioration of the economy, we still remain long-term optimists about our future and that of our country. Whatever may come, we will meet the challenge.

In this letter, I will describe our 2008 performance by line of business and review the many critical events of the previous year. I also will focus on where the industry went wrong and what the implications for the future may be. I hope, after reading this letter, you will share my confidence in our ability to build a stronger, more vibrant company for the future.

I. REVIEW OF 2008 FINANCIAL PERFORMANCE AND BUSINESS RESULTS

JPMorgan Chase earned nearly $6 billion in 2008, down 64% from the $15 billion we earned in the prior year. During a "normal" credit cycle and environment, we should earn more than $15 billion. So clearly, this was not a great year financially. Essentially, the year's financial results were marred by two issues, both of which were highlighted as major risks in last year's letter. The first related to increasing credit costs, mostly for consumer and mortgage loans. The second resulted from Investment Bank write-downs of more than $10 billion, primarily from leveraged lending and mortgage exposures.

Throughout this financial crisis, we have benefited from a fortress balance sheet. We started this year with Tier 1 capital of 8.4% and ended it with 10.9%. We increased credit loss reserves to $24 billion (up almost $14 billion, including $4 billion related to Washington Mutual (WaMu)). Even without the infusion of government capital in the year's final quarter, our Tier 1 capital at year-end would have been 8.9%. Across all other measures of capital, we have remained relatively conservative. Although we did not anticipate all of the extraordinary events of the year, our strong balance sheet, general conservatism and constant focus on risk management served us well and enabled us to weather this terrible environment.

While we are disappointed with our 2008 financial results, we have not lost sight of our important achievements. We are extremely gratified that we were able to grow and gain healthy market share in virtually *all* of our businesses. And we never stopped investing in our systems and infrastructure and adding bankers, branches and products.

Regardless of what 2009 will bring, this emphasis on serving clients and growing our businesses will drive our results for years to come.

A. Results by Line of Business

The Investment Bank reported a loss of $1.2 billion

Our Investment Bank (IB) had disappointing financial results on an absolute basis but performed relatively well compared with most of our competitors. The results reflect a tough operating environment and suffered from the aforementioned $10 billion in write-downs on leveraged lending and mortgage-related assets, partially related to the acquisition of Bear Stearns. While those write-downs were painful, they were among the lowest in our industry. Moreover, our underlying business performed solidly, and in some notable areas, it outperformed. Several core businesses – Rates and Currencies, Commodities, Emerging Markets and Credit Trading – reported record results.

We also were able to make significant progress across our IB business. At the end of May, we closed our acquisition of Bear Stearns, which I will discuss in more detail later in this letter. Throughout the year, we stayed completely focused on servicing our corporate and investor clients, and in spite of the credit crisis, we continued to be there for our clients when they needed our advice and responsible capital support. J.P. Morgan was engaged in nearly all of the largest and most complex deals of the year, and we solidly established ourselves as the first call for clients on their most important challenges.

We try not to overemphasize market share tables or awards, but years of focus and discipline did lead to some extraordinary industry recognition that is worth noting. We earned our best rankings ever across the league tables, finishing first in global investment banking fees; mergers and acquisitions; global syndicated loans; debt; equity; and debt and equity-related transactions – the only firm ever to finish No. 1 in all of these categories in a given year. In our Markets businesses, client revenue increased 40% year-over-year, as clients shifted more of their business to us in uncertain times. In addition, J.P. Morgan received top awards from *International Financing Review*, *Risk* and *Financial News* and received a leading number of distinctions in the Greenwich Associates' 2008 Quality Leader survey – a record number of industry honors for us.

As we move into 2009, we are not resting on our laurels. We know we operate in a risky business with many tough competitors who inevitably will come back strong – even if some currently are distracted. We also know that the investment banking business, in many ways, will never be the same. Leverage will be lower, and certain structured financial products will likely cease to exist. But the fundamental business will remain the same: advising corporations and investors, raising capital, executing trades, providing research, making markets, and giving our clients the best ideas and the financing to make those plans a reality.

Retail Financial Services reported net income of $880 million with an ROE of 5%

With $880 million in earnings, Retail Financial Services (RFS) had a poor year overall. For its two primary businesses – Retail Banking and Consumer Lending – it was a tale of two cities.

On the plus side, Retail Banking, which includes Consumer Banking and Business Banking, earned $3 billion and, more important, grew its franchise – both organically and through the acquisition of Washington Mutual. We expect the WaMu acquisition to contribute more than $2 billion in annual earnings, and it has extended our branch network to more than 5,000 branches in 23 states, adding 7,200 bankers and increasing our ATMs to 14,500, the second-largest ATM network nationally. In Retail Banking, since the Bank One merger and the addition of The Bank of New York and WaMu branch networks, we have exponentially grown our footprint, adding 4,400 branches through acquisition and 500 organically. This five-year expansion is reflected in more checking accounts (from 2.3 million to 24 million), more deposits (from $89 billion to $342 billion) and more states in which we operate (from four to 23).

On the negative side, Consumer Lending, which includes the Mortgage, Home Equity, Student Loan and Auto Finance businesses, reported a loss of $2.1 billion, driven by a 274% increase, to $9.5 billion, in the provision for credit losses, primarily in the home lending businesses. Despite these losses, Consumer Lending remains core to what we do. It enables us to serve customers across many products and extend $352 billion in loans. However, continued pressure on home prices, the effects of past poor underwriting standards and the deepening recession have pushed up, and, unfortunately, will continue to push up, credit costs. Our current expectation is that quarterly charge-offs for the Mortgage and Home Equity portfolios could range from $1.8 billion to $2.4 billion (an extremely high annualized loss rate of 3.5% to 5%). By the end of 2008, we had reserves of more than $8 billion across all of RFS, and, with the expectation of higher charge-offs, we also expect to build additional reserves in 2009. However, there is one area that has shown an improving trend: third-party mortgage servicing. This business relies on scale and efficiency and, including the addition of the WaMu portfolio, it grew 91% to $1.17 trillion of loans.

We believe we have corrected for the underwriting mistakes of the past. Essentially, by the end of 2008, we saw a return to old-fashioned home lending standards (a maximum of 80% loan-to-value, with fully documented income). In addition, we closed down all business originated by mortgage brokers. My worst mistake of the past several years was not doing this sooner. In general, the credit losses in the broker-originated business are two to three times worse than that of our own directly originated business. Unfortunately, approximately 30% of our home loans were originated through the broker channel. Although we will be paying for this bad underwriting for years to come, we will continue to build the Consumer Lending business with new standards in place.

We have always loved the Retail Banking business and believe that the exceptional economics of the branch-based businesses will fuel growth and earn a return on equity (ROE) of more than 30% over time. As for the Consumer Lending business, it should produce returns of 15%-20%, especially as we capitalize on the benefits of cross-selling and cross-underwriting.

Earnings by Line of Business (in millions)

	2004[a]	2005	2006	2007	2008
Investment Bank	$ 3,654	$ 3,673	$ 3,674	$ 3,139	$ (1,175)
Retail Financial Services	3,279	3,427	3,213	2,925	880
Card Services	1,681	1,907	3,206	2,919	780
Commercial Banking	992	951	1,010	1,134	1,439
Treasury & Securities Services	231	863	1,090	1,397	1,767
Asset Management	879	1,216	1,409	1,966	1,357
Corporate	(4,172)	(3,554)	842	1,885	557
JPMorgan Chase	$ 6,544	$ 8,483	$ 14,444	$ 15,365	$ 5,605

(a) 2004 data are unaudited pro forma combined, reflecting the merger of JPMorgan Chase and Bank One

Card Services reported net income of $780 million with an ROE of 5%

Card Services' full-year net income was $780 million, down 73% year-over-year as charge-offs increased from $5.5 billion in 2007 to $8.2 billion in 2008 (up 48%). The net charge-off rate was approximately 5% of loans. In 2008, Card Services increased net revenue by 8% and grew managed loans by 3% (excluding WaMu).

In 2008, we added 14.9 million new credit card accounts. By investing in activities to further engage current cardmembers and attract new customers, we continued growing the business. These activities included renewing contracts with important partners (AARP, Continental, Disney, Marriott and United) and enhancing our customer service. Equally important, Chase kept credit open and available to customers and businesses in a safe and sound manner and extended more than $84 billion in new credit.

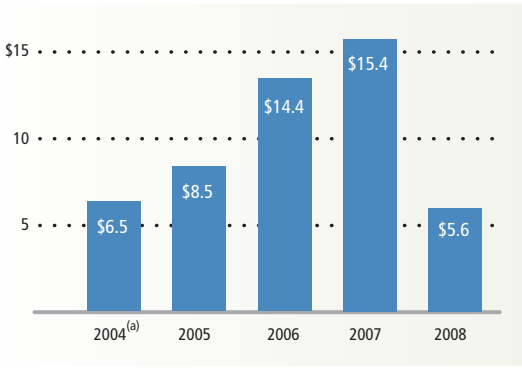
With the WaMu acquisition, Chase became the largest credit card issuer in the nation, with more than 168 million cards in circulation and more than $190 billion in managed loans. Yet, being the biggest does not mean we are the best. We will continue to invest in areas that will make us the best in the business. Specifically, our focus will be on responsive customer service, valued loyalty and rewards programs, and upgraded systems and infrastructure. In addition, our ability to do a better job underwriting and to give our customers added value through cross-selling is a huge competitive advantage in both the card and retail banking businesses.

Our focus on sound risk management extends to the card business. Early in this crisis, we responded quickly to leading indicators of change and made considerable risk management improvements. This included: raising the credit-score threshold for direct-mail marketing and increasing the number of applications that are subject to our thorough review process. We regularly manage our customers' credit lines, based on their willingness and ability to pay. While we are lowering credit lines for customers who show signs of increased risk or inactivity, we also are raising lines for our most creditworthy customers. In addition, we are closing accounts that have been inactive for long periods of time because we know from experience that these accounts are extremely risky.

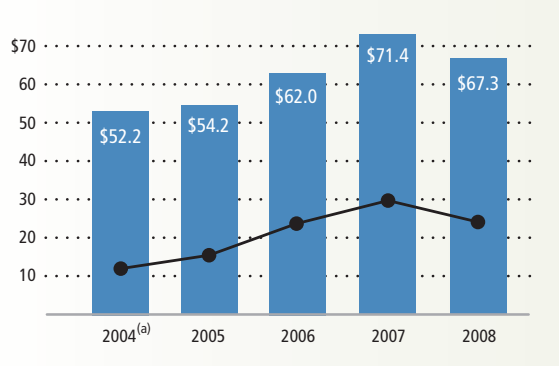
Looking ahead, we expect losses will continue to increase from 5% to 9%, essentially tracking the rate of unemployment. To prepare for higher losses, we increased our reserves from $3 billion to $8 billion and are intensifying our collections efforts. At the same time, we have expanded our use of flexible payment programs to help those customers experiencing financial distress: In 2008, we saw 600,000 new enrollments in payment programs, and we anticipate, and are prepared for, that number to increase.

We do not expect 2009 to be a good year for the credit card business. In fact, we do not expect to make any money in Card Services this year. However, once this crisis is over, we believe that our ongoing investments in service quality, rewards programs and enhanced infrastructure will ultimately make us one of the best credit card companies in America.

Net Income
(in billions)



Net Revenue
(in billions)



Pretax preprovision profit

(a) 2004 data are unaudited pro forma combined, reflecting the merger of JPMorgan Chase and Bank One

Commercial Banking reported net income of $1.4 billion with an ROE of 20%

Commercial Banking delivered strong results, outperforming its peer group and even exceeding our 2008 plan in a tough year. Strong credit quality, risk management, client service, operational efficiency, expense control and effective pricing all contributed to the strong result: a 27% increase to a record $1.4 billion of net income, on a record $4.8 billion in revenue. And instead of relying on lending to be the key driver of revenue, Commercial Banking achieved record results in gross investment banking revenue of $966 million (up 9%), treasury services revenue of $2.6 billion (up 13%), average liability balances of $103.1 billion (up 18%) and average loan balances of $82.3 billion (up 35%). It also is notable that only 36% of Commercial Banking's revenue relates to loans.

In addition to ranking among the top three commercial banks nationally in market penetration and lead share and being the No. 2 large middle-market lender in the United States, Commercial Banking maintained a favorable market position relative to peers in risk management and deposit growth. We also are encouraged by the prospects for the Commercial Term Lending business we acquired from WaMu and the expansion of our middle-market model across the West and Southeast footprints. As ever, client selection is critical to our success, and Commercial Banking has not only created more than 1,800 new relationships but also has expanded nearly 10,000 existing relationships – a sign of the continued vitality of our business.

That said, due to our clients' waning loan demand and higher credit losses, 2009 will be a tough year for the Commercial Banking business. While we expect problems in commercial construction and real estate to worsen for the rest of this year, we are fortunate to have limited exposure and strong reserves. The turbulence in the economy and its anticipated impact on the broader Commercial Banking portfolio have led us to shift into a recession-management mode and dedicate many of our best resources into critically important workout units, where expert senior managers are involved on a daily basis.

Commercial Banking is a business with excellent long-term value for us. We play a critical role in serving so many great companies across this nation. And as this important and vibrant sector of the economy grows, so will we.

Treasury & Securities Services reported record net income of $1.8 billion

Treasury & Securities Services (TSS) delivered exceptional financial results in 2008. Its net income has more than doubled since 2005. For 2008, it stands at $1.8 billion (up 26%), with a 47% return on equity, on record revenue (up 17%). We value this business tremendously and appreciate how it has grown consistently over time, produced good margins, and maintained great global scale and long-standing client relationships.

The business maintains a leading position in holding, valuing, clearing and servicing securities and providing cash management, corporate card and liquidity prod-

ucts, and trade finance services to the world's leading companies and institutional investors. We now serve more than 2,800 clients around the world. In 2008, TSS brought in more than 250 significant new client relationships, representing more than $80 million in annualized revenue. In a business with global scale, 50% of TSS' revenue is from business outside the United States, and in 2008, this revenue grew by 15%. TSS further strengthened its international presence, expanding services in more than 20 countries throughout Europe, the Middle East, Africa, Asia and Latin America – we now do business in more than 45 countries.

Notably, TSS also broke its single-day U.S. dollar-clearing volume record – by clearing a staggering $5 trillion in a single day, 59% over its average. Due to market conditions, TSS assets under custody decreased by 17% to $13.2 trillion. Yet, at the same time, average liability balances were up 22% to $280 billion, reflecting a flight to quality as clients were drawn to the stability of J.P. Morgan.

TSS is preparing for continued stress in the equity markets in 2009, declining securities lending balances and the negative impact of 0% interest rates. Nevertheless, it remains an excellent business, serving clients from all five of our other businesses, and we expect it to produce strong results for years to come.

Asset Management reported net income of $1.4 billion with an ROE of 24%

Asset Management, with assets under supervision of $1.5 trillion, experienced a turbulent year in 2008. As anticipated in this letter last year, earnings dropped (by 31%). But overall, the year's results were the result of three trends: continued strong growth in Private Banking, a small reduction in assets under management (but a large change in the mix of asset types) and a rigorous management of risk.

Private Banking had an exceptional year, bringing in a record number of new clients and a record level of net new assets (approximately $80 billion, for a total of $538 billion). Earnings grew 12%. Over the past two years, more than 235 new bankers have joined the Private Bank and promise to contribute significantly to its future growth.

Assets under management were $1.13 trillion at the end of 2008 versus $1.19 trillion in 2007. Net new inflows were a healthy $151 billion, up 31% from the prior year. Unfortunately, this was more than offset by the declines in market values. In addition, there was a large change in the mix of assets. The cash we manage for all our clients increased dramatically, with liquidity balances growing by $210 billion to reach $613 billion by year-end, as clients globally sought safety away from higher-risk investments. Equities and alternatives went in the opposite direction, with a 49% decline to $240 billion from $472 billion, largely due to a 41% drop in the value of equity markets. Finally, alternative assets dropped 17% to $100 billion from $121 billion.

The current turmoil has reinforced the importance of managing risk. Our culture of strong risk management (proper due diligence, documentation, auditing, among other measures) is consistent with our philosophy of putting clients' interests first and has enabled us to avoid many of the negative developments that surfaced last year.

We anticipate another difficult year in 2009, with earnings continuing to be affected by market conditions. But this is a great business, and we intend to keep it that way by focusing on helping our clients through the current environment.

The Corporate sector reported net income of $557 million

In 2008, we reported a net loss of $700 million in Private Equity – a different story from 2007, when we reported pre-tax private equity gains of more than $4 billion. We love the private equity business, but as we indicated in prior years, private equity returns are by their nature lumpy, and we did not expect the stellar 2007 results to be repeated in 2008. We will remain patient and still expect this business to deliver in excess of 20% return on equity for us over time.

Aside from Private Equity, our Corporate sector, excluding merger-related items, produced $1.5 billion in net income. This includes unallocated corporate expense of approximately $500 million, which we expect to continue at approximately the same level in 2009, as well as a myriad of other items that are disclosed in detail in our financial statements.

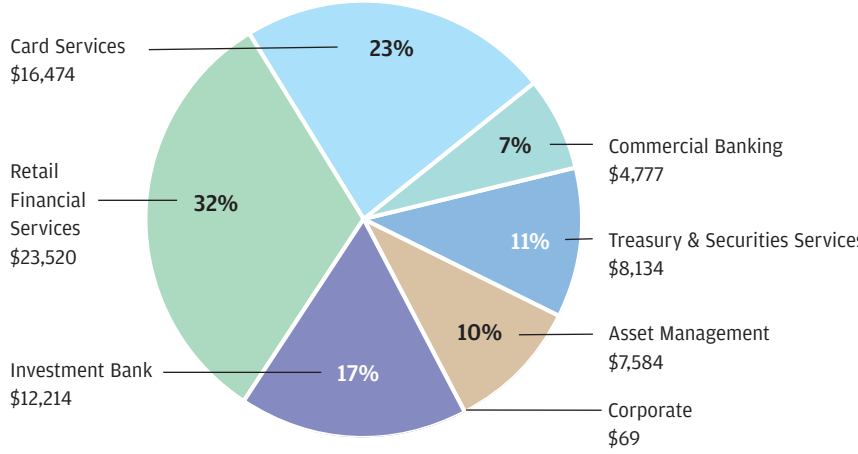
B. Strong strategic positions of all our businesses

One important and critical point to highlight is that each of our businesses now ranks as one of the top three players in its respective industry. As ever, our goal is to be the best, not necessarily the biggest. That said, we know that size matters in businesses where economies of scale – in areas such as systems, operations, innovation, branding and risk diversification – can be critical to success. The only reason to get bigger and gain economies of scale is when doing so enables you to do a better job for your clients; i.e., by giving them more, better and faster at a lower cost. Ultimately, this is also the only real reason to do a merger – the client gets something better. If this isn't the case, big can be bad. If bureaucracy, hubris, lack of attention to detail – or other ailments of large corporations – overwhelm the benefits of size, then failure will ultimately result.

We are also keenly aware of the value added at more detailed levels in our businesses. For example, in Retail Financial Services, we gained share with small businesses as we expanded our brand footprint. Our Investment Bank has become a top player in both Prime Brokerage and Energy, previously two of our weak spots. Commercial Banking added WaMu's Commercial and Community Lending businesses to its portfolio, representing $44.5 billion in loans. And Private Banking's record in net new asset flows showed the strength of the J.P. Morgan franchise, as high-net-worth individuals worldwide chose us to manage their investments. We also continue to upgrade our infrastructure by improving systems, data centers, products and services.

Suffice it to say, we like our market position and believe that each business is strong and getting stronger. Even in tough years like 2008 and 2009, we did not – and will not – stop doing all the things that make our businesses better.

Managed Net Revenue[(a)] by Line of Business
(in millions)



(a) For a discussion of managed basis presentation and a reconciliation to reported net revenue, see pages 50-51 of this Annual Report.

II. REVIEW OF CRITICAL EVENTS OF THE YEAR

In this section, I want to review some of the critical events for us this past year:

- The purchase of Bear Stearns
- The purchase of Washington Mutual
- The gathering storm that arrived with a vengeance
- The acceptance of government TARP

A. The purchase of Bear Stearns

On May 30, 2008, we closed our acquisition of Bear Stearns – a deal completed in record time under truly extraordinary circumstances.

Over the weekend of March 15, we were asked by the U.S. government to assist in preventing Bear Stearns from going bankrupt before the opening of the Asian markets on Monday morning. The possibility was real that if Bear Stearns had been allowed to go bankrupt, it could have had a cataclysmic effect on the financial markets. (Many believe that later experiences with Lehman Brothers essentially proved this to be true.) To a person, our Board of Directors felt JPMorgan Chase had a special obligation to do all we could to help, especially knowing that we were among the few companies – if not the only one – in a position to do so. However, this deal posed more risks and threatened to be more backbreaking than any other acquisition we had done in the past. And it had to make sense for our shareholders.

Going into this deal, we had two things in our favor: the strength of our balance sheet and capital base and the skill of our people.

Our first priority was to quickly reduce our downside risk. This required us to massively de-risk Bear Stearns quickly and in potentially dangerous markets. Bear Stearns had approximately $400 billion in assets that we needed to consolidate into our financial and risk systems and reduce quickly to approximately $200 billion of assets. We had to manage this reduction so that the remaining risk was manageable and well-controlled. The potential downside – given the treacherous markets – was enormous. We asked the government to finance and assume the risk on approximately $30 billion of mortgage assets (compared with our $370 billion of total assets acquired from Bear Stearns). The portion that the government agreed to take comprised the less risky mortgage assets (we kept the most risky mortgage assets). We simply could not and would not take on any more mortgage risk – it would have been extremely irresponsible. And remember, the government could finance the assets much more cheaply than we could and could hold them as it saw fit, whereas we would have been forced to sell them immediately.

Under normal conditions, the price we ultimately paid for Bear Stearns would have been considered low by most standards. But these were not normal conditions, and because of the risk we were taking, we needed a huge margin for error. We were not buying a house – we were buying a house on fire.

We paid $1.5 billion for Bear Stearns, a company that had reported a little more than $11 billion in common equity. We knew that most – but we hoped not all – of the common equity we were buying would be used for close-down costs, litigation expenses, severance costs and, most important, quickly eliminating the risk on the balance sheet. We have largely completed this task, but, unfortunately, all of the equity was used up in this process, and several billions more in losses ran through our income statement in the second half of 2008.

Despite these additional costs, we still believe that Bear Stearns has added significantly to our franchise. In particular, it completed our franchise in two areas where we were weak, Prime Brokerage and Commodities, and it enhanced our broader equity and fixed income businesses. Ultimately, we expect the businesses we acquired to add approximately $1 billion of annual earnings to the company.

The truly impressive part of the Bear Stearns deal was the human side – seeing our people rise to the challenge under a great deal of strain. On Thursday night, March 13, I called our investment banking heads, Steve Black and Bill Winters, who then called our finance, audit, tax, trading and banking professionals as well as legal, real estate and systems teams around the world – many of whom got out of bed and went back to work.

Soon, hundreds returned to work that night. By the weekend, thousands of people from around the world were working around the clock. These professionals ably managed the due diligence work and gave us the confidence we needed to complete the deal. Their Herculean effort over that weekend and the next several months made it possible for us to sign and close the deal in about 75 days. If you could have seen what I saw during that intensely stressful time, you would have been very proud of the team at JPMorgan Chase.

B. The purchase of WaMu

On September 25, the Federal Deposit Insurance Corporation (FDIC) seized the banking assets of Washington Mutual in the largest bank failure in history. Moments later, we acquired the deposits, assets and certain liabilities of Washington Mutual for approximately $1.9 billion. We now know that JPMorgan Chase was the only bank prepared to act immediately. We acquired WaMu's 2,200 branches, 5,000 ATMs and 12.6 million checking accounts, as well as savings, mortgage and credit card accounts. Importantly, we did not acquire the assets or liabilities of the bank's holding company or assume the $14 billion of senior unsecured debt and subordinated debt of Washington Mutual's banks.

The deal was financially compelling – it was immediately accretive to earnings, and it will add an estimated $2 billion or 50 cents per share to our 2009 results and increasingly more thereafter. To achieve these anticipated earnings, we did not rely on heroic revenue assumptions. Instead, we mostly relied on expected cost savings (net of the large investments in the technology and refurbishment of the branches) of $1.5 billion. We now expect to achieve cost savings of more than $2 billion. We also plan to complete all rebranding and system conversions by the end of this year.

With the acquisition of WaMu, we purchased approximately $240 billion of mortgage and mortgage-related assets, with $160 billion in deposits and $38 billion in equity. We immediately wrote down most of the bad or impaired assets (approximately $31 billion), properly reserved for the remaining assets, and established reserves for severance and close-down costs. After recognizing all of these costs, we believe that we now have a relatively "clean" company that came with approximately $4 billion in "good" common equity.

Our due diligence on WaMu's assets was extensive, and our assumptions were conservative. We assumed that home prices would go down another 10% (from the day we closed), providing a healthy margin for error. However, if home prices go down more than expected, say 20%, all other things being equal, this could cost us $5 billion-$10 billion more. Even under these circumstances, we think the transaction will remain a great deal, at a great price for our shareholders. We are confident that it will add enormous value to JPMorgan Chase in the future.

Given our conservative nature, we sold $11.5 billion in common stock the morning after the deal announcement to maintain our strong capital base. The capital raise – upsized due to strong response from investors – was the largest U.S. common stock follow-on offering ever executed. In addition, WaMu's retail deposits contributed to our stable funding base and liquidity position.

In prior years, we consistently expressed our desire to broaden our retail footprint to attractive regions such as the West Coast and Florida – as long as the plan made good sense financially and we could execute the transaction effectively. The WaMu transaction aligned perfectly with this criteria. Specifically, it expands our retail franchise into fast-growing new markets with established branches; bolsters our presence in our significant footprint states; and, over time, will allow us to extend the reach of our commercial banking, business banking, credit card and wealth management efforts. These additional businesses were not heritage strengths of WaMu but, in effect, can be built on top of the WaMu branches and we hope eventually will add another $500 million to our earnings (this will take many years and was not built into our original assumptions). An expanded product line, together with enhanced systems, will benefit former WaMu customers tremendously.

Our people across the business – together with our experts in systems, marketing, legal, finance, audit and human resources – did an outstanding job executing this transaction, making it possible for us to take this important strategic step.

C. The gathering storm arrived with a vengeance – and how JPMorgan Chase fared

In 2008, Bear Stearns collapsed; Lehman Brothers declared bankruptcy; Fannie Mae and Freddie Mac were placed into government conservatorship; the government assumed majority ownership of AIG; Merrill Lynch sold itself to Bank of America; Wells Fargo took over a struggling Wachovia; IndyMac and WaMu went into receivership by the Federal Deposit Insurance Corporation; Countrywide and the U.S. mortgage business virtually collapsed; the two remaining major investment banks, Goldman Sachs and Morgan Stanley, became bank holding companies; around the globe, French, British, Swiss and German banks were rescued by their governments; and the world entered the sharpest, most globalized downturn since the Great Depression.

As for JPMorgan Chase, we had large credit and operational exposures in virtually every situation mentioned above, affecting nearly every line of business. Our firm's management teams, credit officers, risk officers, and legal, finance, audit and compliance teams worked tirelessly to protect the company. We believe it is a considerable sign of strength that we could manage through such extraordinary problems with minimal losses to the company.

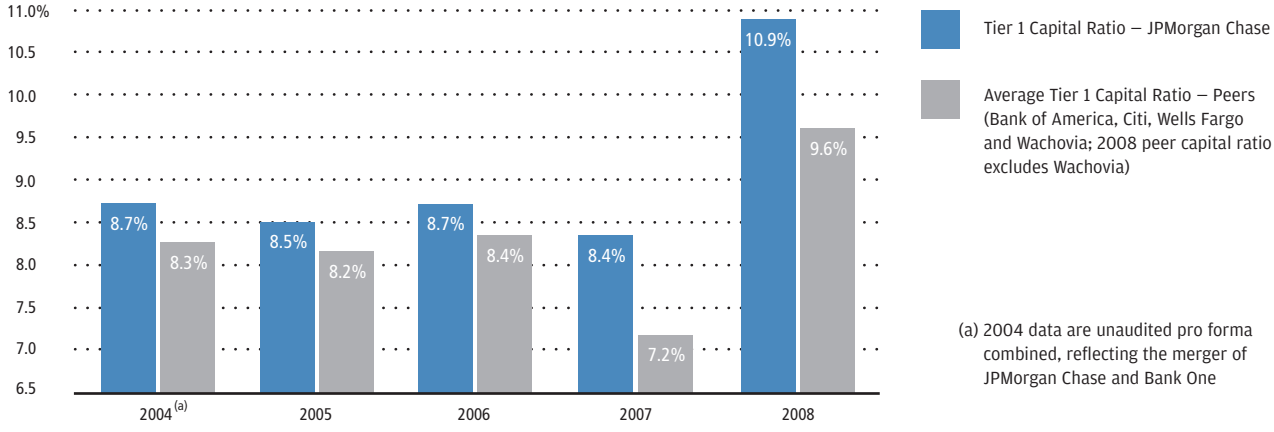
We avoided many critical problems that would have made things far worse

In last year's letter, we focused on our problems – including mortgage issues in Retail Financial Services and write-downs in the Investment Bank of leveraged loans and mortgage securities. Those issues cost us a considerable amount of money in 2008 and will continue to cost us money in 2009. But it also is instructive to focus on how we were able to avoid certain problems, control the damage and minimize the cost.

In 2008:

- We essentially stayed away from sponsoring structured investment vehicles (SIV) because we viewed them as arbitrage vehicles with plenty of risk and a limited business purpose. We also minimized our financing to SIVs for the same reasons, and back in 2005, we sold the only small SIV we had sponsored.
- We didn't write option ARMs (adjustable rate mortgages) because we did not think they were a consumer-friendly product. Although we made plenty of mistakes in the mortgage business, this was not one of them.
- We substantially cut back on subprime early in the crisis. While subprime mortgages cost us nearly $1 billion in 2008, we avoided far worse results because we had significantly reduced our exposures in 2006. This was true both in the mortgage business and in the Investment Bank.
- We never built up the structured finance business. While we are a large player in the asset-backed securities market, we deliberately avoided the structured collateralized debt obligation (CDO) business because we believed the associated risks were too high. Structured finance in its most complicated forms, such as "CDO-squared," has largely disappeared after unleashing a myriad of problems on the financial system. They will not be missed.
- We did not unduly leverage our capital, nor did we rely on low-quality forms of capital. We always had high targets of 8% to 8.5% Tier 1 capital. We always believed in "high-quality" capital, which, among other things, means conservative accounting, strong loan loss reserves and a high component of tangible common equity. The higher the quality of capital, the more prepared one is for tough times.
- We maintained a high level of liquidity – and were always prepared for unexpected draws (i.e., collateral calls). Strong liquidity is a constant for us. The fact that we have total deposits of $1 trillion across our retail and wholesale businesses positions the firm advantageously overall and has helped us weather

Peer Comparison of Tier 1 Capital Ratios



(a) 2004 data are unaudited pro forma combined, reflecting the merger of JPMorgan Chase and Bank One

the worst of the crisis. We will do whatever it takes to ensure that our liquidity remains a strong part of our fortress balance sheet so that we can maintain flexibility during challenging times to be in a position to support our clients.

- We avoided short-term funding of illiquid assets, and we essentially do not rely on wholesale funding. (Of our $1 trillion of deposits, approximately $300 billion is referred to as "wholesale," but it essentially is comprised of deposits that corporate clients leave with us in the normal course of business – i.e., they are "sticky" and not like brokered certificates of deposit or "hot money" that move on a whim for one basis point.) Simply put, we still follow the financial commandment: Do not borrow short to invest long.

D. The acceptance of government TARP

On October 13, 2008, I went to Washington, D.C., with eight chief executives of other financial firms. There, we were asked by the Secretary of the Treasury, the Chairman of the Federal Reserve, the Office of the Comptroller of the Currency (OCC), the FDIC and the New York Federal Reserve Bank to agree to accept a package of capital from the government. As part of its Troubled Asset Relief Program (TARP), the U.S. government was proposing some powerful measures to help fix the collapse in the credit and lending markets. They prevailed upon the nine of us to set an example for others by accepting this capital infusion as a sign of our unanimous support of these measures. The logic was that a massive infusion of capital into the U.S. banking system would pave the way for the industry as a whole to extend more credit than they otherwise would have provided. The government's view was also that if any of the banks declined the TARP funds, then many of the additional banks might not want to be tainted by their acceptance of the TARP money because it might be viewed as a sign of weakness.

We felt then that accepting the TARP funds was the right thing to do for the U.S. financial system – even though it may not have been as beneficial for JPMorgan Chase as it was for some of the others

In short, we did not ask for the TARP capital infusion, and we did not feel we needed it (our Tier 1 capital at year-end would have been 8.9% without it). In fact, the TARP program had asymmetric benefits to those accepting it; i.e., it was least beneficial to strong companies like ours and vice versa. That said, we believe that accepting the TARP funds was the right thing to do for the U.S. financial system – and that JPMorgan Chase should not be parochial or selfish and stand in the way of actions that the government wanted to take to help the whole financial system.

We think the government acted boldly in a very tough situation, the outcome of which could have possibly been far worse had it not taken such steps

The government acted quickly and boldly – taking unorthodox steps to try to right the ship. It had to act with urgency while dealing with complex and rapidly changing problems that did not lend themselves to simplistic solutions. While we will never actually know, we believe, as many economists and analysts do, that without these and other actions the government has taken to date, things could have been much worse.

So while it is easy to criticize the timing, marketing or consistency of the effort – we also recognize how hard it is to act boldly in difficult and dangerous times. We should remind ourselves of what President Theodore Roosevelt expressed nearly a century ago:

"*It is not the critic who counts; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, who comes short again and again, because there is no effort without error and shortcoming; but who does actually strive to do the deeds; who knows great enthusiasms, the great devotions; who spends himself in a worthy cause; who at the best knows in the end the triumph of high achievement, and who at the worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who neither know victory nor defeat.*"

We hope that our leaders will continue to be bold and brave in seeking solutions to these once-in-a-generation problems.

Banks are lending, and the TARP is probably helping

It is important to recognize that TARP capital is only 14% of our total capital. It is also important to recognize that to the extent we use the money and lose it, the risk is 100% ours because we still owe the money back to the government. Despite that, we, and other banks, are trying to use TARP capital to benefit shareholders, clients and communities. In the fourth quarter of 2008 alone, we extended more than $150 billion in new credit to consumers, businesses, municipalities and not-for-profit organizations, including nearly $30 billion in home lending and $2.8 billion in auto lending. We increased loans and commitments to government units, health care companies and not-for-profits by 33% in 2008 and plan to increase lending to these groups by $5 billion in 2009. We also completed several major syndicated leveraged finance loans, and, in one critical instance, we bought the entire $1.4 billion bond issue from the state of Illinois when no one else would bid for it, giving Illinois the financing for payroll and other important needs. Finally, we remain very active in the interbank market (where banks lend to each other) and have had on average $40 billion to $50 billion out in the interbank market each night.

While total lending by banks fluctuates according to the markets and changing credit conditions, we do believe that TARP has enabled many banks to increase their lending in certain key areas – more than they otherwise would have done.

While we clearly understood that there might be potential (mostly political) unintended consequences of TARP, we believed that it would help the U.S. financial system at that critical moment.

III. FUNDAMENTAL CAUSES AND CONTRIBUTIONS TO THE FINANCIAL CRISIS

After Lehman's collapse, the global financial system went into cardiac arrest. There is much debate over whether Lehman's crash caused it – but looking back, I believe the cumulative trauma of all the aforementioned events and some large flaws in the financial system are what caused the meltdown. If it hadn't been Lehman, something else would have been the straw that broke the camel's back.

The causes of the financial crisis will be written about, analyzed and subject to historical revisions for decades. Any view that I express at this moment will likely be proved incomplete or possibly incorrect over time. However, I still feel compelled to attempt to do so because regulation will be written soon, in the next year or so, that will have an enormous impact on our country and our company. If we are to deal properly with this crisis moving forward, we must be brutally honest and have a full understanding of what caused it in the first place. The strength of the United States lies not in its ability to avoid problems but in our ability to face problems, to reform and to change. So it is in that spirit that I share my views.

Albert Einstein once said, "Make everything as simple as possible, but not simpler." Simplistic answers or blanket accusations will lead us astray. Any plan for the future must be based on a clear and comprehensive understanding of the key underlying causes of – and multiple contributors to – the crisis, which include the following:

- The burst of a major housing bubble
- Excessive leverage pervaded the system
- The dramatic growth of structural risks and the unanticipated damage they caused
- Regulatory lapses and mistakes
- The pro-cyclical nature of virtually all policies, actions and events
- The impact of huge trade and financing imbalances on interest rates, consumption and speculation

Each main cause had multiple contributing factors. As I wrote about these causes, it became clear to me that each main cause and the related contributors could easily be rearranged and still be fairly accurate.

It was also surprising to realize that many of the main causes, in fact, were known and discussed abundantly before the crisis. However, no one predicted that all of these issues would come together in the way that they did and create the largest financial and economic crisis of our lifetime.

Even the more conservative of us, and I consider myself to be among them, looked at the past major crises (the 1974, 1982 and 1990 recessions; the 1987 and 2001 market crashes) or some mix of them as the worst-case events for which we needed to be prepared. We even knew that the next one would be different – but we missed the ferocity and magnitude that was lurking beneath. It also is possible that had this crisis played out differently, the massive and multiple vicious cycles of asset price reductions, a declining economy and a housing price collapse all might have played out differently – either more benignly or more violently.

It is critical to understand that the capital markets today are *fundamentally* different than they were after World War II. This is not your grandfather's economy. The role of banks in the capital markets has changed considerably. And this change is not well-understood – in fact, it is fraught with misconceptions. Traditional banks now provide only 20% of total lending in the economy (approximately $14 trillion of the total credit provided by all financial intermediaries). Right after World War II, that number was almost 60%. The other lending has been provided by what many call the "shadow banking" system. "Shadow" implies nefarious and in the dark, but only part of this shadow banking system was in the dark (i.e., SIVs and conduits) – the rest was right in front of us. Money market funds, which had grown to $4 trillion of assets, directly lend to corporations by buying commercial paper (they owned $700 billion of commercial paper). Bond funds, which had grown to approximately $2 trillion, also were direct buyers of corporate credit and securitizations. Securitizations, which came in many forms (including CDOs, collateralized loan obligations and

commercial mortgage-backed securities), either directly or indirectly bought consumer and commercial loans. Asset securitizations simply were a conduit by which investment and commercial banks passed the loans onto the ultimate buyers.

In the two weeks after the Lehman bankruptcy, money market and bond funds *withdrew approximately $700 billion from the credit markets*. They did this because investors (i.e., individuals and institutions) withdrew money from these funds. At the same time, bank lending actually went up as corporations needed to increasingly rely on their banks for lending. With this as a backdrop, let's revisit the main causes of this crisis in more detail.

A. The burst of a major housing bubble

U.S. home prices have been appreciating for almost 10 years – essentially doubling over that time. While some appreciation is normal, the large appreciation, in this case, and the ultimate damage it caused were compounded by the factors discussed below.

New and poorly underwritten mortgage products (i.e., option ARMs, subprime mortgages) helped fuel asset appreciation, excessive speculation and far higher credit losses

As the housing bubble grew, increasingly aggressive underwriting standards helped drive housing price appreciation and market speculation to unprecedented levels. Poor underwriting standards (including little or no verification of income and loan-to-value ratios as high as 100%) and poorly designed new products (like option ARMs) contributed directly to the bubble and its disastrous aftermath.

Mortgage securitization had two major flaws

In many securitizations, no one along the chain, from originator to distributor, had ultimate responsibility for the *results* of the underwriting. In addition, the poorly constructed tranches of securitizations that comprised these transactions effectively converted a large portion of poorly underwritten loans into Triple A-rated securities. Clearly, the rating agencies also played a key role in this flawed process. These securitizations ended up in many forms; the one most discussed is CDOs. Essentially, these just added a lot more fuel to the fire.

While most people are honorable, excess speculation and dishonesty were far greater than ever seen before, on the part of both brokers and consumers

The combination of no-money-down mortgages, speculation on home prices, and some dishonest brokers and consumers who out-and-out lied will cause damage for years to come. This, in no way, absolves the poor underwriting judgments made by us and other institutions, and it certainly doesn't absolve anyone who mis-sold loans to consumers.

B. Excessive leverage pervaded the system

Over many years, consumers were adding to their leverage (mostly as a function of the housing bubble), some commercial banks increased theirs, most of the U.S. investment banks dramatically increased theirs and many foreign banks had the most leverage of all. In addition, increasing leverage appeared in:

- Hedge funds, many using high leverage, grew dramatically over time. Some of that leverage was the result of global banks and investment banks lending them too much money.
- Private equity firms were increasingly leveraging up their buyouts. Again, some banks and the capital markets lent them too much money.
- Some banks (and other entities) added to their leverage by using off-balance sheet arbitrage vehicles, like SIVs and leveraged puts.
- Nonbank entities, including mortgage banks, CDO managers, consumer and commercial finance companies, and even some bond funds, all increased their leverage over time.
- Even pension plans and universities added to their leverage, often in effect, by making large "forward-commitments."

Basically, the whole world was at the party, high on leverage – and enjoying it while it lasted.

C. The dramatic growth of structural risks and the unanticipated damage they caused

I believe there are four structural risks or imbalances that grew and coalesced to cause a "run on the bank." But this was not a traditional bank run – it was a run on our capital markets, the likes of which we had never experienced. After Lehman's bankruptcy, many parts of our capital markets system stopped providing any capital to the market at all. If the crisis had unfolded differently, then perhaps the events that followed would not have occurred. Surely no one deliberately built a system with these fundamental flaws and imbalances. Clearer heads will understand that much of this was not malfeasance – our world had changed a lot and in ways that we didn't understand the full potential risk. But when the panic started, it was too much for the system to bear.

Many structures increasingly allowed short-term financing to support illiquid assets

In essence, too much longer-term, non-investment grade product was converted into shorter-term Triple A-rated product. Some banks, hedge funds, SIVs and CDOs were using short-term financing to support illiquid, long-term assets. When the markets froze, these entities were unable to get short-term financing. As a result, they were forced to sell these illiquid assets. One of the functions of banking and the capital markets is to intermediate between the needs of investors and issuers. This triggers a normal conversion, either directly or indirectly (through securitizations) of longer-term, illiquid assets held by the issuers, who need to finance the business into the shorter-term, higher-grade product that most investors want. Clearly, over time, this imbalance had grown too large and unsupportable.

Money market funds had a small structural risk, which became a critical point of failure

Money market funds promise to pay back 100% to the investor *on demand*. Many money market funds invested in 30- to-180-day commercial paper or asset-backed securities that under *typical* circumstances could be sold back at par. In normal times, investors demanded their money in fairly predictable ways, and funds were able to meet their demands. Over time, money market funds grew dramatically to exceed $4 trillion. After Lehman collapsed, one money fund in particular, which held a lot of Lehman paper, was unable to meet the withdrawal demands. As word of that situation spread, investors in many funds responded by demanding their money. In a two-week period, investors pulled $500 billion from many money funds, which were forced to sell assets aggressively. To raise liquidity, these money funds essentially were forced to sell assets. As investors moved away from credit funds and into government funds, the banks simply were unable to make up the difference. This became one more huge rupture in the dike.

Repo financing terms got too loose, and too many illiquid assets were repo'ed

Over time, in those markets where financial companies financed their liquid assets, financial terms had become too lax. For example, to buy non-agency mortgage securities, financial institutions only had to put up 2%-5% versus a more traditional 15%-25%. The repo markets also had begun to finance fairly esoteric securities, and when things got scary, they simply stopped doing so. In the two weeks after Lehman's bankruptcy, more than $200 billion was removed from this type of financing, by both investors and banks. Once again, financial institutions had to liquidate securities to pay back short-term borrowing – thus, another rupture in the dike.

Investors acted wisely to protect themselves, but the system couldn't handle them all doing it at the same time

Individual investors, corporations, pension plans, bond and loan funds, money market funds and others – all acted in their own self-interest, and all individually acted wisely. But collectively, they caused enormous flows out of the banking and credit system. Regardless of whether the funds came out of a bank, a money fund, or a bond or loan fund, the fact remains that the cumulative result was a severe shortage of necessary credit that was removed from the system.

Clearly, things had changed. In the past, regulators had focused on preventing a systemic collapse of the main intermediaries in the financial system; i.e., the banks. In this new world, however, we need to discuss how to protect ourselves not only from runs on banks but also from runs on other critical vehicles in the capital and financial markets.

D. Regulatory lapses and mistakes

With great hesitation, I would like to point out that mistakes also were made by the regulatory system. That said, I do not blame the regulators for what happened. In each and every circumstance, the responsibility for a company's actions rests with us, the CEO and the company's management. Just because regulators let you do something, it does not mean you should do it. But regulators have a responsibility, too. And if we are ever to get this right, it is important to examine what the regulators could have done better. In many instances, good regulation could have prevented some of the problems. And had some of these problems not happened, perhaps things would not have gotten this bad.

Unregulated or lightly regulated parts of the market contributed to the crisis

I've already discussed some of the flaws with money market funds and hedge funds – the latter were not regulated, and the former were lightly regulated. In addition, there are two large segments, among others, that – had they been regulated – could have helped the system avoid some problems.

- Much of the mortgage business was largely unregulated. While the banks in this business were regulated, most mortgage brokers essentially were not. In fact, no major commercial bank that was regulated by the OCC wrote option ARMs (possibly the worst mortgage product). A very good argument could be made that the lower standards of the unregulated parts of the business put a lot of pressure on those players in the regulated part of the business to reduce their standards so they could compete. In this case, bad regulation trumped good regulation.
- Insurance regulators essentially missed the large and growing one-sided credit insurance and credit derivative bets being made by AIG and the monoline insurers. This allowed these companies to take huge one-sided bets, in some cases, by insuring various complex mortgage securities.

Basel II, which was adopted by global banks and U.S. investment banks, allowed too much leverage

It is quite clear now that the second of the Accords by the Basel Committee on Banking Supervision (known as Basel II), published in 2004, was highly flawed. It was applied differently in different jurisdictions, allowed too much leverage, had an over-reliance on published credit ratings and failed to account for how a company was being funded (i.e., it allowed too much short-term wholesale funding). In 2004, the five independent U.S. investment banks adopted Basel II under the jurisdiction of the Securities and Exchange Commission (this was not allowed by the banks regulated by the Federal Reserve or the OCC, which remained under Basel I). The investment banks jettisoned prior conservative net capital requirements and greatly increased their leverage under Basel II. And the rest is history.

Perhaps the largest regulatory failure of all time was the inadequate regulation of Fannie Mae and Freddie Mac

The extraordinary growth and high leverage of Fannie Mae and Freddie Mac were well-known. Many talked about these issues, including their use of derivatives. Surprisingly, they had their own regulator, which clearly was not up to the task. These government-sponsored entities had grown to become larger than the Federal Reserve. Both had dramatically increased their leverage over the last 20 years. And, amazingly, a situation was allowed to exist where the very fundamental premise of their credit was implicit, not explicit. This should never happen again. Their collapse caused damage to the mortgage markets and the financial system. And, had the Treasury not stepped in, it would have caused damage to the credit of the United States itself.

Too many regulators – with overlapping responsibilities and inadequate authorities – were ill-equipped to handle the crisis

Our current regulatory system is poorly organized and archaic. Overlapping responsibilities have led to a diffusion of responsibility and an unproductive competition among regulators, which probably accelerated a race to the bottom. Many regulators also did not have the appropriate statutory authority (through no fault of their own) to deal with some of the problems they were about to face. One large, glaring example revealed by the collapse of Bear Stearns and Lehman was the lack of a resolution process in place to deal with failure of investment banks. If commercial banks fail, the FDIC can take them over. This was not the case with investment banks. In addition, a resolution process needs to be in place for large, global financial companies that operate in many jurisdictions and use many different regulatory licenses.

E. The pro-cyclical nature of virtually all policies, actions and events

In a crisis, pro-cyclical policies make things worse. I cannot think of one single policy that acted as a counterbalance to all of the pro-cyclical forces. Although regulation can go only so far in minimizing the impact of pro-cyclical forces in times of crisis, we still must be aware of the impact they have. For example:

- Loan loss reserving causes reserves to be at their lowest level right when things take a turn for the worse. Therefore, as a crisis unfolds, a bank not only faces higher charge-offs but also has to add to its level of reserves, depleting precious capital.
- Although we are proponents of fair value accounting in trading books (a lot of the mark-to-market losses that people complained about will end up being real losses), we also recognize that market levels resulting from large levels of forced liquidations may not reflect underlying values. Certain applications of fair value accounting can contribute to a downward spiral where losses deplete capital, and lower capital causes people to respond by selling more, at increasingly lower values.
- The rating agencies made mistakes (like the rest of us) that clearly helped fuel a CDO and mortgage debacle. They also, in the midst of a crisis, continually downgraded credits. Lower ratings, in turn, required many financial institutions to raise more capital, thus adding to the vicious cycle.
- In bad times, the market itself demands both an increase in capital and more conservative lending. We may not be able to change this phenomenon, but there are steps we can take to ensure that the system is better prepared for it.
- Financing arrangements allow the most leverage in good times, but they force a dramatic reduction in leverage in bad times.
- As capital markets volatility increases, Basel II capital calculations and many risk management tools, like Value-at-Risk, demand that more capital be held to own securities or loans.

F. The impact of huge trade and financing imbalances on interest rates, consumption and speculation

I suspect when analysts and economists study the fundamental causes of this crisis, they will point to the enormous U.S. trade deficit as one of the main underlying culprits. Over an eight-year period, the United States ran a trade deficit of $3 trillion. This means that Americans bought $3 trillion more than they sold overseas. Dollars were used to pay for the goods. Foreign countries took these dollars and purchased, for the most part, U.S. Treasuries and mortgage-backed securi-

ties. It also is likely that this process kept U.S. interest rates very low, even beyond Federal Reserve policy, for an extended period of time. It is likely that this excess demand also kept risk premiums (i.e., credit spreads) at an all-time low for an extended period of time. Low interest rates and risk premiums probably fueled excessive leverage and speculation. Excess consumption could be financed cheaply. And adding fuel to the fire, in the summer of 2008, the United States had its third energy crisis – further imbalancing capital flows.

There have been times when large imbalances – such as those in trade – sort themselves out without causing massive global disruption. However, it is bad planning and wishful thinking to assume that this will always be the case. These imbalances shouldn't be allowed to get that large – they create too much potential risk.

Many other factors may have added to this storm – an expensive war in Iraq, short-selling, high energy prices, and irrational pressure on corporations, money managers and hedge funds to show increasingly better returns. It also is clear that excessive, poorly designed and short-term oriented compensation practices added to the problem by rewarding a lot of bad behavior.

The modern financial world has had its first major financial crisis. So far, many major actors are gone: many of the mortgage brokers, numerous hedge funds, Wachovia, WaMu, Bear Stearns, Lehman and many others. Some of the survivors are struggling, particularly as we face a truly global, massive recession – and it still is not over.

The extent of the damage and the magnitude of the systemic problems make it clear that our rules and regulations must be completely overhauled. Such changes to the regulatory system *could* have huge implications on the long-term health, and strategies, of our business.

While unprecedented actions have been taken by both the Federal Reserve and the Treasury, my hope is that new policies are grounded in a thorough analysis of what happened and what we need to do about it. Political agendas or simplistic views will not serve us well.

Often we hear the debate around the need for more or less regulation. What we need is better and more forward-looking regulation. Someone has famously said that a crisis should not go to waste. But what is also true is that it shouldn't take a crisis to solve our problems. During a crisis, people panic. This can make it harder, not easier, to do the right thing. From our perspective, certain improvements would make a big difference. We would like to share with you some of our suggestions.

A. The need for a systemic regulator with much broader authority

We agree with our leaders in government that we should move ahead quickly to establish a systemic regulator. In the short term, this would allow us to focus attention on correcting some underlying weaknesses in our system and filling the gaps in regulation that contributed to the current situation. It also is clear that U.S. policy must be coordinated with the proper set of international regulators. When the crisis emerged, the actions of individual countries had a critical impact on numerous other countries. International coordination is essential in resolving this kind of crisis.

There should be procedures in place to deal with systemically important institutions – failure is fine as long as it's orderly and controlled and ***doesn't cause systemic failure***

Size is not the issue; rather, it is when institutions are too interconnected that an uncontrolled failure has the potential to bring the whole system down. What we need is a resolution process that *allows failure without causing damage to the whole system.* In the case of Bear

Stearns or Lehman – both investment banks – regulators did not have this protocol. They do have it, however, for commercial banks. Even more important, regulators are going to need a resolution process for large, global corporations that operate in many jurisdictions around the world.

The first goal should be to regulate financial institutions so they don't fail. If they do fail, a proper resolution process would ensure that action is swift, appropriate and consistent. The lack of consistency alone caused great confusion in the marketplace. For example, when some of the recent failures took place, there was inconsistent treatment among capital-holders (preferred stock and debt holders were treated very differently in different circumstances). It would have been better if the regulators had a resolution process that defined, *a priori*, what forms of aid companies would get and what the impact would be on capital-holders. The FDIC resolution process for banks provides a very good example of how a well-functioning process works.

Various liquidity and "lender of last resort" facilities, like some of those put into place during this crisis, also could be in place on an *a priori* basis. These controls would reduce risk and maximize confidence.

Regulation needs to be administered by product and economic substance, not by legal entity

We have experienced the unintended consequences of redundant regulation; i.e., different agencies regulating the same product in the mortgage business, in the derivatives business and in lending overall. If, on the other hand, similar products were overseen by a single regulator, that regulator would have much deeper knowledge of the products and full information that extends across institutions. The "regulatory competition" that could have caused a race to the bottom would be eliminated.

Hedge funds, private equity funds and off-balance sheet vehicles must be included in our regulatory apparatus without compromising their freedoms and positive attributes

Certain vehicles like hedge funds and private equity funds need to be regulated but only to protect the system against risk. These vehicles do not need to be heavily regulated like a deposit-gathering bank. We should consider requiring hedge funds over a certain size (say, $1 billion of equity) to register, provide quarterly audited reports, disclose total leverage and certain risk attributes – like volatility and investment categories – and outline operational procedures. They also could be required to show their regulators (not their competitors) any concentrated "trades" that could cause excessive systemic risk. This all could be done without compromising flexibility or disclosing confidential positions while allowing these vehicles to move capital – as freely and aggressively – as they see fit.

The systemic regulator needs the ability to anticipate risk and do something about it if necessary

There, undoubtedly, are financial products in the market today that – if unchecked – could have a destabilizing effect. A systemic regulator, had it been closely watching the mortgage industry, might have identified the unregulated mortgage business as a critical point of failure. This regulator also might have been able to limit the leverage of Fannie and Freddie once they were deemed to pose major systemic risks. Such a regulator might have been in the position to recognize the one-sided credit derivative exposures of AIG and the monoline insurers and do something about it.

A systemic regulator also should be on the lookout for new or potential structural risks in our capital markets, such as the structural flaw that grew in money market funds.

B. The need to simplify our regulatory system

Everyone agrees that the existing system is fragmented and overly complex. We have too many regulators and too many regulatory gaps. No one agency has access to all the relevant information. Responsibility often is highly diffused. This problem could be relatively easy to fix but only if we have the political will to fix it.

C. The need to regulate the mortgage business — including commercial mortgages — in its entirety

Many of the same gaps in regulation that helped lead us into this mess still exist today – for example, in the

mortgage business. Mortgages are the largest financial product in the United States, and while we do not want to squelch innovation, the entire mortgage business clearly needs to be regulated. This is not the first time that mortgages and real estate have led this country and many of its financial institutions into deep trouble. Proper regulation would go a long way toward standardizing products, testing new ones, improving customer disclosure and clarifying responsibility.

D. The need to fix securitization

We believe that securitization still is a highly effective way to finance assets. But some securitizations, particularly mortgage securitizations, had an enormous flaw built into them: No one was responsible for the actual quality of the underwriting. Even mortgage servicing contracts were not standardized such that if something went wrong, the customer would get consistent resolution. We cannot rely on market discipline (i.e., eliminating bad practices) alone to fix this problem.

We have heard several reasonable suggestions on how the originator, packager and seller of securitizations could be appropriately incentivized to ensure good underwriting. For example, requiring the relevant parties to keep part of the securitizations, much like we do with syndicated loans today, would help manage resolution if something were to go wrong and could go a long way to re-establish market confidence and proper accountability.

E. The need to fix Basel II — leading to higher capital ratios but a more stable system

As discussed earlier, Basel II has many flaws – it has taken too long to implement, it responds slowly to market changes and it is applied unevenly across global borders. Perhaps its worst failing is that, in its current construct, Basel II does not include liquidity, which allowed commercial and investment banks to buy liquid or illiquid assets and fund them short. While this practice did not appear quite so dangerous in benign times, it created huge issues for many financial institutions during the market crisis. Basel II also has relied too heavily on rating agencies and, by its nature, has been highly pro-cyclical in its capital requirements for assets. It would be easy to make these capital requirements less pro-cyclical and require Basel II to recognize the risk of short-term funding, particularly that of wholesale funding. Finally, Basel II should be applied consistently, reviewed continuously and updated regularly. The world changes quickly.

F. The need to get accounting under control

We at JPMorgan Chase are strong believers in good, conservative accounting. Accounting should always reflect true underlying economics, which actually is how we run the company. However, accounting practices are not widely understood, are changed too frequently and are too susceptible to interpretation and manipulation. Sometimes, they even inadvertently determine U.S. government policy.

We generally like fair value accounting

For assets that are bought and sold, fair value accounting creates the best discipline. Fair value accounting (often referred to as mark-to-market accounting) already provides for some flexibility if recent prices are under highly distressed conditions. In such cases, good judgment and sound fundamental cash flow-type evaluations can be employed to value certain assets. However, in our opinion, the application of fair value accounting for certain categories needs to be reconsidered. For example:

- We now have to mark to market our private equity investments by using potentially artificial benchmarks. These investments, by their nature, are very illiquid and are intentionally held for several years. To mark them to market, proxies made up of comparable companies are used, and appropriate discounts and judgments are applied. Essentially, we write these investments up when markets are good and write them down when markets are bad. But I am fairly confident that this approach is not always right. In many instances, cost is the best proxy for fair value. We would rather describe our investments to our shareholders, tell them when we think these investments might be worth more and, certainly, write them down on our financial statements when they have become impaired.

- A new mark-to-market rule addresses "debit valuation adjustments." Essentially, we now have to mark to market credit spreads on certain JPMorgan Chase bonds that we issue. For example, when bond spreads widen on JPMorgan Chase debt, we actually can book a gain. Of course, when these spreads narrow, we book a loss. The theory is interesting, but, in practice, it is absurd. Taken to the extreme, if a company is on its way to bankruptcy, it will be booking huge profits on its own outstanding debt, right up until it actually declares bankruptcy – at which point it doesn't matter.
- It is becoming increasingly more difficult to compare mark-to-market values of certain instruments across different companies. While it's too involved to go into detail here, different companies may account for similar mark-to-market assets differently. This needs to be addressed by ensuring that companies adhere to consistent valuation principles while applying the rules.
- Fair value accounting does not and should not apply to all assets. Investments or certain illiquid assets that are intended to be held for the longer term (like real estate or plant and equipment) or loans and certain assets that are shorter term (like receivables or inventory) all could actually be marked to market. There are, in fact, markets for some of these assets, and others could be calculated based on reasonable assumptions; for example, a farm would be worth more when corn prices go up, and a semiconductor plant would be worth less when semiconductor prices go down. However, if we marked these assets in this way, they would have wildly different prices depending on the health of the economy or the swings in prices for their output. While accounting should recognize the real impairment in the value of assets, marking the aforementioned assets to market every day would be a waste of time. Under this scenario, it would be quite hard for companies to invest in anything illiquid or to make long-term investments.

New accounting rules that have the potential to inadvertently affect how the capital markets function or change fundamental long-term U.S. government policies should be made thoughtfully, deliberately and with broad input

For example, we all believe that companies should have fully funded pension plans; i.e., the actual assets in the plan should be enough to meet a fair estimate of the liabilities. Years ago, if this wasn't the case, companies were allowed to maintain a "deficit" and fund it over several years. That deficit was not recorded on the financial statement of the company.

A change in accounting rules dictated that the deficit should not just be a footnote in the financial statements but that it should be reflected directly in the equity account of the corporation. Clearly, in very bad markets, these deficits grow dramatically, thus depleting the increasingly precious capital that companies have. (This is just another example of a pro-cyclical force). When companies realized they were getting enormous volatility in their capital account, they began to curtail or eliminate their pension plans in favor of 401(k) plans (where the individual bears all the investment risk). This was a rational, precautionary step. But it, in effect, transferred the risk from the company to the individual. No longer did the large corporations assume the risk of providing a steady income stream to retired employees. Instead, the risk was passed to the individuals – many of whom could not afford it.

This is a perfect example of how accounting inadvertently sets policy. And, in my opinion, this was probably the wrong policy for the country. There would have been many ways to be true to the economic purpose of accounting without making a detrimental policy change. There are countless other examples, and we hope regulators and accountants will eventually find better ways to apply accounting principles.

G. The need for appropriate counter-cyclical policies

During this crisis, it became evident that our system created enormous pro-cyclical tendencies. In fact, I can't think of one counter-cyclical policy at all (other than emergency actions taken by the government).

Accounting policies such as mark-to-market and loan loss reserving are pro-cyclical. Basel II capital requirements are pro-cyclical. Regulatory and legal requirements are pro-cyclical. Repo and short-term financing are pro-cyclical. The one pro-cyclical tendency we probably can never correct is that of the market itself (i.e., the cost of capital goes way up in a downturn or investors refuse to finance less liquid assets). I have heard many good ideas about how to create some counter-cyclical policies and will focus on three here.

Loan loss reserving can easily be made counter-cyclical

I find it absurd that loan loss reserves tend to be at their lowest point precisely when things are about to get worse. As things get worse and charge-offs rise dramatically, one must dramatically increase loan loss reserves, thus depleting capital rapidly. This problem would be solved if banks were allowed to estimate credit losses over the life of their loan portfolios. Reserves should be maintained to absorb those losses. This would enable banks to increase reserves when losses are low and utilize reserves when losses are high. Transparency would be fully preserved because investors and regulators would still see actual charge-offs and nonperformers. This would require a rational explanation about the appropriateness of the lifetime loss estimates. It also would have the positive effect of constantly reminding CEOs, management teams and investors that bad times, in fact, do happen – and that they should be prepared for such events.

Repo and short-term financing can easily be made counter-cyclical

All banks now have access to the standard financing facilities for securities and loans via the Federal Reserve (i.e., the Fed will lend a specific amount of money against specific assets). A suggestion is this: If an institution provides financing to clients in excess of what the Fed would lend to the bank for the same securities, it would have to be disclosed to risk committees and the company's Board of Directors. The Fed then would have two major tools to reduce leverage and in a way that is counter-cyclical – it could charge higher capital costs to a bank when the bank is lending more than the Fed would lend or the Fed could reduce the amount it would lend to the banks. Market players would still be free to provide credit and leverage as they see fit.

Banks should have the ability to implement counter-cyclical capital raising with rapid rights offerings

Banks and possibly other companies would be aided by having the ability to effect rights offerings at a moment's notice. Regulations should facilitate such offerings – with the proper disclosure – in a matter of days rather than weeks. This would allow a company to raise capital and repair a balance sheet that might have been stretched by unanticipated market events and to do so in a manner that is fair and does not dilute the company's existing shareholder base.

H. The need for policies in health care, pensions, energy and the environment, infrastructure and education that will serve us well over time

Beyond the financial crisis, there are several important issues that will dictate whether or not the United States will continue to thrive over the next century. We believe our nation can and should be able to provide health care coverage for all. It is the right thing to do, it will help us build a stronger nation, and, if done properly and efficiently, we believe it ultimately will be cheaper than the current course we are on. On energy, we now have experienced our third major crisis, and we, as a nation, still have not executed a sensible long-term energy policy. Again, we believe that done right, an energy policy could be economically efficient, create great innovation, reduce geopolitical tensions and improve our environment. Similarly, we need to improve our nation's infrastructure and develop an education system that befits our heritage.

We can't fall into the trap of institutional sclerosis – now is the time to act. In the past, this nation has shown the fortitude to work together to accomplish great things, and we need to do that again. For our part, we at JPMorgan Chase are doing everything we can to be helpful to our leaders on all these issues.

V. WHAT COMES NEXT FOR JPMORGAN CHASE

Your management team is deeply engaged and is acting with extreme caution in navigating these uncharted waters. The U.S. Treasury and the Federal Reserve have continued to take bold and dramatic action, as have central banks and governments around the world. In this next section, we will discuss some of the important issues for JPMorgan Chase.

A. Our leadership in mortgage modifications and support for the administration's mortgage programs

JPMorgan Chase is at the forefront of foreclosure prevention and mortgage modifications nationally. Our foreclosure prevention efforts are intended to reach both the $300 billion of loans that we own and the $1.2 trillion of investor-owned loans that we service. We already have helped keep 330,000 borrowers in their homes and expect to help avert 650,000 foreclosures by the end of 2010. We are committed to keeping borrowers in their homes by making sustainable, properly written loan modifications, in many cases before a default occurs.

We believe it is in the best interests of both the homeowner and the mortgage-holder to take corrective action as soon as possible. Our re-default rates are half the rates that the OCC has said are experienced by national servicers. Re-default rates in the industry generally will come down once modifications are done with proper underwriting and as the economy and home prices start to improve. If re-default rates were extremely low, we probably should be doing more modifications.

We strongly support the Obama administration's mortgage modification program. The plan's features are aligned with the program we already had implemented, extending them to more struggling homeowners and providing us and other servicers with more options to keep families in their homes. We also support the program because the guidelines establish a clear, fair and consistent set of standards for all servicers to follow. It is intended for borrowers with mortgages below $729,750; and all borrowers must fully document their income, clearly demonstrate financial hardship and live in the home.

We believe these mortgage modifications are economically and morally the right thing to do and that the program underscores the importance of mutual respect – by treating others in the way that we would like to be treated in the same situation – while upholding the essential principle that individuals, businesses and corporations should repay their loans if they can afford to do so. In our view, its completeness eliminates the need for judicial modification in bankruptcy proceedings. However, if legislated, judicial modifications should be consistent with this plan and focus only on borrowers who either don't qualify or have not been offered a modification. Beyond that, it is time to quickly implement the mortgage modification program – even if it is not perfect in everyone's view – and to move on.

B. Comments on the derivatives business

Derivatives have become an essential and widely used risk management tool. The International Swaps and Derivatives Association estimates that 90% of the Fortune 500, 50% of mid-sized companies and thousands of other, smaller U.S. companies use derivatives to manage certain risks, including currency and interest rate risk. As such, derivatives are a large business for JPMorgan Chase and for firms around the world. It is important to note that derivatives in and of themselves did not cause this crisis. In fact, derivatives have performed fairly well in this crisis environment. However, it is clear that derivatives, at least in financial reporting, are hard to understand, lack transparency and did contribute somewhat to the crisis. At JPMorgan Chase, we believe derivatives, when used properly, play an important role in managing risk, and we are trying to address the concerns about derivatives.

- We have been standard setters in bringing more transparency to our financial reporting and will continue to be. In this report, you will find extensive details on our counterparty exposures and other risk considerations that are central to understanding our derivatives and other trading businesses.
- Some of the concerns about derivatives have to do with the large notional amounts. But those figures are reference measurements and do not reflect actual

counterparty credit risk. Actual risk is the mark-to-market value of the contract after taking into account netting of risk across all transactions with a counterparty, collateral and hedging. Actual risk projections also take into account the potential future exposure coming from market moves.

- Our counterparty exposures net of collateral and hedges are $133 billion, and the company manages those exposures name by name – like a hawk. The figure is large, but we get paid to take the risks, we reserve and account for them conservatively, and we manage them in conjunction with all of our other credit exposures.
- As the overall amount of counterparty credit risk has grown, so has the concern that this growth has increased systemic risk. To address this issue, we support the development of clearinghouses, which we believe will reduce the counterparty risk and increase transparency for standardized contracts. We already clear a significant portion of our interest rate and commodities derivatives through clearinghouses, and we have been active in the development of a clearinghouse for credit default swaps. Those derivatives that are too customized to be cleared can easily be monitored by regulators to ensure they do not cause systemic risk.
- AIG's downfall wasn't due to its use of derivatives per se but to its poor risk management practices. The insurer took concentrated risks through credit default swaps insuring mortgage-related assets. On the other side of the equation, some dealers bought this insurance from AIG without requiring them to post collateral until such time as their credit rating deteriorated. This is a case where bad risk management on the part of AIG was compounded by bad counterparty risk management by AIG's counterparties. The potential systemic impact was substantial. JPMorgan Chase did business with AIG, but, in line with our general policies, we kept our credit exposure relatively small so that our firm would not be compromised if AIG had been allowed to fail. With hindsight, the problem itself could have been better contained and dramatically mitigated had AIG been properly regulated and required to provide collateral (to a clearinghouse or its counterparties).
- There are regulatory gaps that need serious attention, as was evident with AIG. A way to prevent a future AIG is by empowering a systemic risk regulator (as described earlier). Such a regulator would have been in a position to see the risk piling up and address it before the company failed.
- Recognizing upfront profits for derivative transactions can be problematic. Even though it is not standard accounting, we believe the profits relating to the risk positions associated with derivatives should be booked over the life of the transaction, proportionate to the risk remaining.

With proper management, systemic risks created by derivatives can be dramatically reduced without compromising the ability of companies to use them in managing their exposures.

C. The reasons for maintaining a fortress balance sheet and cutting the dividend

Maintaining a fortress balance sheet will always be essential to us. Our Tier 1 ratio is 10.9%, with tangible common equity of $81 billion, and we will continue to increase our loan loss reserves, as appropriate. With $24 billion in allowance for credit losses at the end of 2008, we believe our loan loss reserves across all our businesses are among the strongest in the industry.

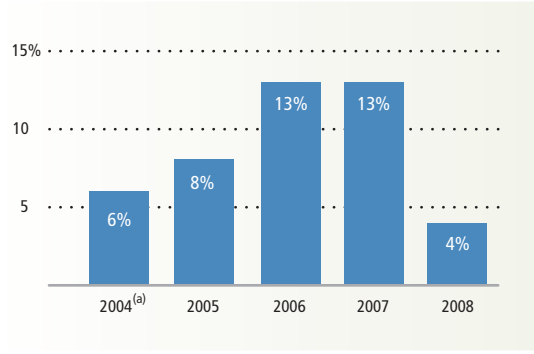
Out of an abundance of caution to be prepared for the future during this uncertain environment, we believed it was prudent to reduce our quarterly dividend from $0.38 to $0.05 per share, effective with our next scheduled dividend payment.

We did not take this action lightly, and we recognize our tremendous obligation to shareholders to seek to maintain dividend levels. But extraordinary times require extraordinary measures. So while our performance and capital are solid, we have an even higher obligation to ensure that our fortress balance sheet remains intact. This will enable us to stay flexible to

Earnings per Share
(fully diluted)



Return on Equity



(a) 2004 data are unaudited pro forma combined, reflecting the merger of JPMorgan Chase and Bank One

seize opportunities and continue to build and invest in our market-leading businesses, even in a highly stressed environment.

We maintain a long-term commitment to the dividend and still view a 30%-40% payout ratio of normalized earnings as ultimately reasonable. We will continue to review all relevant criteria to ensure the ongoing strength of our capital base and will await a more stable economic environment before increasing the dividend.

D. Comments on TARP

While the decision to reduce our dividend was not directly related to accepting TARP, it does provide us with additional capital – about $5 billion per year – which could position us to repay TARP funds sooner than otherwise would have been possible. We, of course, would do this in consultation with our regulators.

Many people would like us to repay the TARP funds as soon as we can; some are angry over the changing government conditions relating to the acceptance of TARP funds; and some would like to see swift repayment as a matter of principle.

The reason we accepted TARP still stands – we believed it was in the best interests of the United States and the banking system overall. We will not react capriciously or out of anger in determining when to repay the TARP funds. We will repay them only if doing so is consistent with the best interests of our country and our company.

E. The impact of a deep recession, and the government's stress test

We have been forthright and consistent in letting our shareholders know that a recession will impact our financial results, a severe recession even more so. And that's if we do everything right. Last year, we noted that the recession would have a significant impact on credit and that in a difficult environment, "credit losses could rise significantly, by as much as $5 billion over time, which would require increases in loan loss reserves." Managed net charge-offs were $13 billion in 2008, up from $7 billion in 2007. Our current view is that 2009 charge-offs will be even higher.

The recession will ripple through and affect all of our consumer and commercial credit exposures – some worse than others. In addition to higher charge-offs, it will require substantial additions to reserves, which we have increased from $10 billion at the end of 2007 to $24 billion at the end of 2008. We already said last year how bad we thought mortgage and home equity losses might get, and, unfortunately, they have become even worse. The severity of this recession also could have a dramatic impact on credit card losses; we now expect a 9% unemployment rate to lead to charge-offs of higher than 9%. (In the past, we would expect unemployment of 9% to lead to charge-offs of 7% or more. Now, however, we believe that the combined effect of unemployment with the major housing downturn will lead to a higher charge-off rate.)

The Treasury, in conjunction with the OCC, FDIC and Federal Reserve, has launched a stress test program to ensure that the 19 largest banks (those with more than

$100 billion in assets) have the capacity to remain properly capitalized in a highly stressed environment. The government's adverse economic environment envisions a two-year recession, where unemployment reaches 10.4% and the housing price index declines 48% from peak to trough. While some banks may need additional capital or support, a successful completion of the stress test program should eliminate the need to guess which banks are properly capitalized and which are not. In the best case, it will affirm the banks' capital, accounting and reserve ratios, which will remove uncertainty in the marketplace and increase financial stability. (Unfortunately, the announcement of the stress test, which is expected to be presented in late April, is causing enormous consternation in the markets that would have been better to avoid.)

We regularly do stress tests for our company, always projecting forward our capital and liquidity. We think our capital ratios will maintain their extremely strong levels throughout the government's "adverse economic environment."

You also should know that your company will be prepared for an environment even worse than the one just described.

F. Recent government actions and the potential power of concerted efforts

Governments around the world have taken dramatic actions during this crisis. The Federal Reserve and Treasury of the United States have provided $5 trillion of liquidity facilities to finance various types of assets and – to stabilize individual companies and the overall system – have guaranteed almost $1 trillion of assets on the balance sheets of certain institutions and injected $1 trillion of capital into the financial system. In addition, the government is trying to reduce the mortgage rate by buying mortgages, making it easier to refinance; reducing consumer payments; and aggressively pushing mortgage modification programs. We believe the recent Term Asset-Backed Securities Loan Facility, or TALF program, which allows private investors to get non-recourse financing on asset-backed securities, will aid the securitization markets. This program eventually may lend up to $1 trillion to finance new securitized loans. It can also be modified and extended as appropriate. It should be noted that many of the government's programs are not only replacing bank lending but are also filling the gaps left by many of the nonbank lenders in the capital markets.

We know that these government actions will have unintended consequences and can lead to political interference and that we will need to remove these forms of support over time, intelligently. All these concerns add to our worries, particularly about potential future inflation, but we'll reserve such a discussion for another time.

There is no silver bullet: We believe that all of these actions, if implemented properly and executed – in a timely way and in conjunction with the U.S. fiscal stimulus program – could have an enormous positive impact. The sum of the parts can be a lot more powerful than each individual action.

We see that the largest global economic downturn is being met with massive global government actions – and while the specific outcome is uncertain, there is good reason to think that the governments will eventually win.

This country has had its defining moments: the Civil War; the Great Depression; World War II. This may also be one of them. President Abraham Lincoln said, "A house divided against itself cannot stand." Just as our military acts in concert – across the Army, Navy, Air Force and Marines, under one commander-in-chief – now, so too, should we. This means coordination across the House and Senate, Democrats and Republicans. If we rise to the challenge now, *we will prevail.*

VI. GETTING COMPENSATION RIGHT IS CRITICAL

Looking back at last year, I continue to reflect on how proud I am of the people in this company. It often is in the toughest of times that one learns what people are really made of. Our employees worked harder than ever and performed admirably for the company, for our clients and even for our country under enormously challenging conditions. Throughout the unexpected events and incredible pressure of 2008, it was hard not to be impressed by the intellect, work ethic and strength of character of the individuals at this firm.

I know many Americans are concerned about compensation practices across the financial services industry, and many of the concerns are quite legitimate. At JPMorgan Chase, we believe we have been at the forefront of sensible compensation practices. Our process is disciplined and rigorous, and we have always sought to reward the long-term performance of our employees. Our practices reflect this:

- We pay our people for performing well over multiple years and for helping to build a company with long-term, sustainable performance.
- In looking at performance, we always try to properly account for risk being taken. We are also mindful that a rising tide lifts all boats, and we do not want to pay people on that basis.
- Performance to us has never been simply a financial measure. It has always included the broader contribution a person brings to a company, such as maintaining integrity and compliance; recruiting and training a diverse, outstanding workforce; and building better systems and innovation.
- We have had in place a bonus recoupment policy beyond that required by Sarbanes-Oxley.
- We don't have: change-of-control agreements, special executive retirement plans, golden parachutes, special severance packages for senior executives or merger bonuses.
- We have always paid a significant percentage of our incentive compensation in stock, approximately 50% for our senior management team. That stock vests over multiple years.
- Our senior management team generally must retain and hold approximately 75% of all stock ever received from the company.

There are a lot of legitimate complaints about compensation – not just at financial firms but at all types of companies. Good companies know that compensation can cause bad incentives. They know there is no magic to a calendar year and that they must be careful not to pay people too much in a current year – due to either exuberance or real market pressures. Compensation is one of the most complex issues we deal with because it is important to the individuals and the company. Improperly done, it can destroy a company. We strive mightily to hire, train and retain the best talent – smart, ethical, hard-working, entrepreneurial individuals – and getting compensation right is a critical part of this process.

We believe we have a deep responsibility to you, our shareholders, and to our creditors, our clients and all our employees. We work incredibly hard to uphold all our obligations every day.

Our commitment to corporate citizenship

We have always been deeply committed to being good corporate citizens. It is an essential part of what we do – and who we are – as a firm. As such, we have intensified our corporate responsibility efforts, directing resources to make a meaningful difference to the people who live and work in the communities in which we operate.

While some may think of us as a Wall Street firm, we also are very much a part of Main Street: We employ 225,000 people worldwide in 48 U.S. states and more than 60 countries. Our 5,000 branches serve customers in 23 states. We provide health care coverage for 400,000 people. On average, we pay more than $10 billion a year in taxes to the U.S. government, as well as to state and local jurisdictions.

Last year alone, our firm and our Foundation made charitable contributions of approximately $100 million in our markets across the United States. And over the past five years, we have given more than $600 million to 13,500 organizations globally. These tremendously important investments help inner-city young adults get jobs, fund educational programs, build affordable housing and support rebuilding efforts after a tsunami, earthquake or hurricane hits one of our global communities. Our people are devoted to the communities they serve – and, in a mutually beneficial relationship, we thrive when those communities are healthy, secure and prosperous.

The Way Forward: Stepping up our game

We strive to help our clients and our customers in every way – and especially during these difficult times. This overall effort, part of an initiative called The Way Forward, represents our commitment to the actions we have taken and are willing to take to move America and the global economy forward.

Throughout our history, we have always believed that our obligation extends beyond simply serving shareholders, clients and employees. For us, public service means working with government officials, in a nonpartisan way, to fully identify, analyze and overcome our problems. We believe the right solutions come only when we participate in a constructive dialogue, get beyond the words, "It's not politically feasible," and take bold steps.

Ensuring the health and vibrancy of this company for the next 200 years is paramount

The real measure of strength for a country – or a company – is not whether we have problems but how we learn from them, overcome them and emerge better for it. For more than 200 years, the world has turned to JPMorgan Chase in times of difficulty and turmoil, counting on our people to support our country, our clients and our communities around the world. We feel that obligation more intensely than ever and are focused on doing everything in our power to make sure this company remains strong, healthy and vibrant so that it can continue to do what it does best for the next 200 years.



Jamie Dimon
Chairman and Chief Executive Officer

March 23, 2009

Investment Bank



Throughout the global credit crisis, J.P. Morgan's Investment Bank has actively supported our clients' financing and liquidity needs. In 2008, we provided more than $300 billion in loans to companies and over $11 billion in credit to states, municipalities, hospitals and higher education institutions. We also helped our clients raise billions more in the capital markets.

J.P. Morgan is one of the world's leading investment banks with one of the most extensive client franchises in the world. Our scale and global footprint enable us to help our clients address their full range of financial needs.

We offer clients a complete platform of financial services, including strategic advice, capital raising, restructuring, risk management, market-making and research. We cover clients in more than 100 countries and have global leadership positions in every key product. J.P. Morgan also selectively commits our own capital to principal investing and trading activities.

2008 Highlights and Accomplishments

- First investment bank in history to be ranked #1 in global investment banking fees[(a)]; debt, equity and equity-related[(b)]; announced M&A[(a)]; equity and equity-related[(b)]; debt[(b)]; as well as loans.[(b)]
- Led the market with more than $300 billion in corporate loans to over 630 companies; the firm's average loan size was roughly $475 million, significantly higher than the market's average size of $400 million.[(b)]
- Renewed, restructured or developed new credit facilities totaling over $11 billion for states, municipalities, hospitals and higher education institutions. The firm also led or participated in the issuance of more than $700 billion in bonds for municipal clients.[(c)]
- The only bank ever to win six top *International Financing Review* awards in one year: Bank of the Year, Bond House of the Year, Equity House of the Year, Derivatives House of the Year, Securitisation House of the Year and Leveraged Finance House of the Year.
- *Risk* magazine's Bank Risk Manager of the Year and Derivatives House of the Year, and *Financial News*' European Investment Bank of the Year.
- Received 15 Greenwich Associates' 2008 Quality Leader distinctions, more than any other firm.
- Client revenue across J.P. Morgan's Markets businesses increased 40% year-over-year:
  - Record performance in Rates and Currencies, Commodities and Emerging Markets.
- Prime Services acquired from Bear Stearns more than doubled the number of $1 billion+ relationships from June to December.
- Reduced legacy leveraged lending funded and unfunded commitments by 52% and mortgage-related exposures by 69% since year-end 2007, while integrating the Bear Stearns portfolio.
- Gross investment banking revenue from Commercial Banking clients of $1 billion, up 9% from 2007.

(a) Dealogic
(b) Thomson Reuters
(c) Internal reporting

Retail Financial Services

Retail Financial Services serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking as well as through retail mortgage correspondents, auto dealerships and school financial aid offices.

Customers can use more than 5,000 bank branches (third largest nationally) and 14,500 ATMs (second largest nationally) as well as online and mobile banking around the clock. More than 21,400 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. Consumers also can obtain loans through more than 16,000 auto dealerships and 4,800 schools and universities nationwide.

2008 Highlights and Accomplishments

- Expanded branch network to more than 5,000 with addition of Washington Mutual branches in new Chase markets such as California and Florida as well as strengthening our network in New York Tri-State, Texas, Illinois and Arizona.
- Increased deposits to more than $360 billion.
- Generated retail banking net revenue of $4.5 billion in the fourth quarter – the first quarter that included WaMu.
- Made key decisions about systems, facilities and people in first three months after WaMu acquisition – and began to implement them.
- Added more than 7,700 personal bankers, business bankers, investment representatives and mortgage officers, including 7,000 from WaMu, to the branches.
- Increased in-branch sales of credit cards 14% excluding WaMu or 20% including WaMu.
- Increased Chase checking accounts 9% – or 1.1 million – and added 12.6 million checking accounts from WaMu for a total of 24.5 million.
- Opened 126 new Chase and WaMu branches and added more than 5,300 ATMs, including 5,000 from the WaMu acquisition.
- Increased third-party mortgage servicing portfolio 91%, including the addition of the WaMu and EMC portfolios.
- Launched extensive efforts to keep families in their homes whenever possible in leading The Way Forward. Efforts included adding hundreds of loan counselors, making proactive loan modification offers, developing robust financial modeling tools and working with government agencies on streamlined modification programs.
- Opened in early 2009 a total of 24 Homeownership Centers in areas with high mortgage delinquencies so counselors can work face to face with struggling homeowners.



As consumers faced financial uncertainty and challenging mortgage payments, Chase honored 100% of Washington Mutual's deposits – including uninsured deposits – and seeks to help avert more than 650,000 foreclosures, keeping families in their homes whenever possible.

Card Services

Chase Card Services is one of the nation's largest credit card issuers with more than 168 million credit cards in circulation and over $190 billion in managed loans. Customers used Chase cards to meet more than $368 billion worth of their spending needs in 2008.

Chase has a market leadership position in building loyalty and rewards programs with many of the world's most respected brands and through its proprietary products, which include the Chase Freedom program. Through its merchant acquiring business, Chase Paymentech, Chase is one of the leading processors of MasterCard and Visa payments.

2008 Highlights and Accomplishments

- Became the nation's leading MasterCard and Visa issuer with the acquisition of WaMu.
- Added 14.9 million new Visa, MasterCard and private label credit card accounts (excluding WaMu).
- Renewed relationships with several top card partners, including AARP, Continental Airlines, The Walt Disney Company, Marriott International and United Airlines.
- Continued to drive improvements in acquisitions through the retail bank network, resulting in a 14% year-over-year increase of credit cards sold.
- Increased year-over-year charge volume by more than $14 billion in extremely challenging economic environment for U.S. consumers.
- Increased net revenue by 8% and grew managed loans by 3% (excluding WaMu) while investing in activities to attract new customers and further engage current cardmembers.
- Acquired complementary merchant acquiring business through the termination of the Chase Paymentech Solutions joint venture.
- Expanded non-U.S. presence by launching partner card programs in Canada and establishing a joint venture with Ixe Banco in Mexico.
- Continued improvements in risk management, customer satisfaction, and systems and infrastructure.



Card Services offers customers clear and simple tools, resources and business practices designed to help customers avoid fees, maintain their best interest rates and more effectively manage their credit card accounts.

Commercial Banking



By extending more than $32 billion in credit to clients in municipalities, not-for-profit organizations, health care facilities and higher education institutions – a 50% increase over the previous year – and allocating an incremental $5 billion for 2009, we continue our support of local communities and the U.S. economy.

Commercial Banking (CB) serves more than 26,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and nearly 30,000 real estate investors/owners. CB ranks among the Top 3 commercial banks nationally in market penetration and lead share.[a]

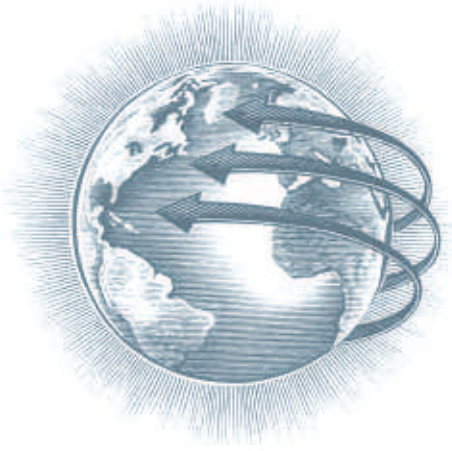
Delivering extensive industry knowledge, local expertise and dedicated service, CB partners with the firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

2008 Highlights and Accomplishments

- Increased net income 27% to a record $1.4 billion and net revenue 16% to a record $4.8 billion.
- Achieved record results in gross investment banking revenue of $966 million, treasury services revenue of $2.6 billion, loan balances of $82.3 billion and liability balances of $103.1 billion.
- Top 3 commercial bank nationally in market penetration and lead share.[a]
- #2 large middle market lender in the United States.[b]
- Added in excess of 1,800 new relationships and expanded nearly 10,000 existing relationships through targeted calling and strategic marketing efforts.
- Maintained favorable market position relative to our peers in the key areas of risk management, profitable growth, expense discipline and deposit growth.
- Acquired WaMu's Commercial Term Lending, Commercial Real Estate Lending and Community Lending & Investment businesses representing $44.5 billion in loans, and expect to complete the integration by early 2010.
- Aligned the domestic middle market banking and treasury services sales forces, providing more effective client coverage while improving efficiency.

(a) TNS Study, 3Q08 YTD
(b) Loan Pricing Corporation, 4Q08 YTD

Treasury & Securities Services



During the financial crisis, Treasury & Securities Services (TSS) has actively worked with our clients to fully optimize their working capital, manage their collateral and help mitigate their risk effectively. Most recently, TSS was proud to be selected by the Federal Reserve as custodian for its program to purchase up to $500 billion in mortgage-backed securities aimed at supporting mortgage and housing markets and fostering improved conditions in financial markets.

J.P. Morgan's Treasury & Securities Services division is a global leader in transaction, investment and information services. We are one of the world's largest cash management providers, processing a market-leading average of $3.7 trillion in U.S. dollar transfers daily as well as a leading global custodian with $13.2 trillion in assets under custody. We operate through two divisions:

Treasury Services provides cash management, trade, wholesale card and liquidity products and services to small- and mid-sized companies, multinational corporations, financial institutions and government entities.

Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers and manages depositary receipt programs globally.

2008 Highlights and Accomplishments

- Named top Global Custodian *(AsianInvestor, Global Pensions, The Asset, International Custody and Fund Administration)*; received more than 110 best-in-class recognitions (*Global Custodian*); named European Cash Management Provider of the Year *(International Custody and Fund Administration)*; awarded Best Cash Management Specialist (*The Asset*).
- #1 in Automated Clearing House Originations[(a)] and in U.S. Dollar Treasury Clearing and Commercial Payments Globally.[(b)]
- Increased net income 26% year-over-year to a record $1.8 billion and net revenue 17% to a record $8.1 billion.
- Grew revenue 15% outside the U.S. and further strengthened our international presence with expanded services offered in over 20 countries throughout Europe, the Middle East, Africa, Asia and Latin America.
- Remained #1 clearer of U.S. dollars globally, averaging $3.7 trillion in U.S. dollar transfers daily. Broke single-day clearing volume record by clearing $5.05 trillion, 59% over the bank's average.
- Announced global investment initiative to enhance cash management and global treasury liquidity capabilities, expand global footprint and reinvest in technology solutions to make it easier for clients to move, concentrate, invest and manage their cash worldwide.
- Completed acquisition of the institutional global custody portfolio of Nordea; J.P. Morgan is the region's leading non-Nordic global custodian.
- Major new business included a deal to provide asset pooling services for Royal Dutch Shell and to provide SmartPay Charge card services to the U.S. General Services Administration covering nearly 35 federal agencies and organizations with a projected annual spend of more than $4.5 billion.

(a) Ernst & Young
(b) Flmetrix

Asset Management

Asset Management, with assets under supervision of $1.5 trillion, is a global leader in investment and wealth management. Our clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world.

We offer global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity. We provide trust and estate, banking and brokerage services to high-net-worth clients and retirement services for corporations and individuals.

2008 Highlights and Accomplishments

- J.P. Morgan Asset Management liquidity balances grew more than 50% in 2008 to $613 billion, retaining its position as the largest manager of Triple A-rated global liquidity funds. Global Institutional market share grew to 17%, almost twice that of the next competitor.[a]
- Private Banking achieved record net new asset flows of approximately $80 billion throughout the course of the year as high-net-worth individuals around the world chose J.P. Morgan as their wealth manager. Private Banking benefited from a record year of net new clients and net new assets and achieved a 7% revenue growth year-on-year.
- J.P. Morgan Asset Management retained its position as one of the largest managers of hedge funds with $32.9 billion in assets under management.[b]
- Through our Global Real Assets group, J.P. Morgan Asset Management invests client capital in infrastructure projects that are vital to the economic health of communities around the world. Over the past few years, we have invested client capital in projects that include airports, hospitals, drinking and wastewater facilities, and renewable energy (such as wind farms, electricity transmission, and natural gas generation and transmission facilities) valued in excess of $4 billion. The Global Real Assets group recently expanded its footprint with the addition of the Asia infrastructure team and now manages $51 billion of real estate and infrastructure across the United States, Europe and Asia.
- Despite the challenging market environment throughout the year, maintained strong three- and five-year investment performance. Globally, the ranking of long-term mutual fund assets in the first or second quartiles was 76% for the five years and 65% for the three years ended December 31, 2008.[c]

(a) iMoneyNet, December 2008

(b) *Absolute Return* magazine, March 2009 issue, data as of year-end 2008

(c) Derived from the following rating services: Lipper for the United States and Taiwan; Micropal for the United Kingdom, Luxembourg and Hong Kong; and Nomura for Japan



Throughout the credit crisis, considerable strain on short-term debt markets threatened the viability of money market funds – critical to the day-to-day functioning of the global economy. J.P. Morgan worked closely with industry groups and regulators around the world to help protect these funds and stabilize the industry.

Corporate Responsibility



Our commitment to corporate responsibility extends to every facet of our business – in both good economic times and bad. We are proactively assisting customers and clients as well as supporting efforts to achieve financial market stability throughout these unprecedented economic times. As we look to the future, we remain committed to doing business in a responsible way, to being responsible stewards of shareholder capital and to being a good corporate partner to our communities across the globe.

At JPMorgan Chase, corporate responsibility is about what we do every day in our businesses and how we do it. We are committed to managing our businesses to create value for our consumer and corporate clients as well as our shareholders, communities and employees and to being a responsible corporate citizen.

2008 Highlights and Accomplishments

- Took numerous steps to help stabilize the U.S. financial system, including significantly enhancing mortgage modification and home foreclosure prevention efforts and ongoing lending to consumers, businesses, municipalities and not-for-profits as well as acquiring Bear Stearns and Washington Mutual.
- Invested more than $450 billion in low- and moderate-income communities in the first five years of our 10-year, $800 billion public commitment and also earned the highest possible rating of "Outstanding" in our latest Community Reinvestment Act examination.
- Brought financial services to microfinance enterprises via advisory services and principal investing. Sponsored Grameen Foundation's Bankers without Borders, a new program linking private sector talent with the microfinance sector.
- Spent over $1 billion with diverse suppliers for the first time in our history.
- Committed to reducing our greenhouse gas emissions 20% by 2012. Began program that will purchase carbon credits to offset 100% of the carbon dioxide resulting from employee global air travel.
- Have $2.4 billion invested in renewable energy projects and raised another $3.4 billion from other institutions for investment. Portfolio includes interests in 54 wind farms as well as several solar projects that together can power close to 1.5 million U.S. homes annually.
- Adopted and published the JPMorgan Chase Human Rights Statement in support of the fundamental principles of human rights.
- Strategically invested more than $100 million and contributed thousands of employee volunteer hours in high-need neighborhoods across the U.S. while supporting hundreds of not-for-profits that are strengthening communities we serve in 28 other countries.

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Five-year summary of consolidated financial highlights

(unaudited)
(in millions, except per share, headcount and ratio data)

As of or for the year ended December 31,	2008[f]	2007	2006	2005	2004[g]
Selected income statement data					
Total net revenue	**$ 67,252**	$ 71,372	$ 61,999	$ 54,248	$ 42,736
Provision for credit losses	**19,445**	6,864	3,270	3,483	1,686
Provision for credit losses – accounting conformity[a]	**1,534**	—	—	—	858
Total noninterest expense	**43,500**	41,703	38,843	38,926	34,336
Income from continuing operations before income tax expense (benefit)	**2,773**	22,805	19,886	11,839	5,856
Income tax expense (benefit)[b]	**(926)**	7,440	6,237	3,585	1,596
Income from continuing operations	**3,699**	15,365	13,649	8,254	4,260
Income from discontinued operations[c]	**—**	—	795	229	206
Income before extraordinary gain	**3,699**	15,365	14,444	8,483	4,466
Extraordinary gain[d]	**1,906**	—	—	—	—
Net income	**$ 5,605**	$ 15,365	$ 14,444	$ 8,483	$ 4,466
Per common share					
Basic earnings per share					
Income from continuing operations	**$ 0.86**	$ 4.51	$ 3.93	$ 2.36	$ 1.51
Net income	**1.41**	4.51	4.16	2.43	1.59
Diluted earnings per share					
Income from continuing operations	**$ 0.84**	$ 4.38	$ 3.82	$ 2.32	$ 1.48
Net income	**1.37**	4.38	4.04	2.38	1.55
Cash dividends declared per share	**1.52**	1.48	1.36	1.36	1.36
Book value per share	**36.15**	36.59	33.45	30.71	29.61
Common shares outstanding					
Average: Basic	**3,501**	3,404	3,470	3,492	2,780
Diluted	**3,605**	3,508	3,574	3,557	2,851
Common shares at period-end	**3,733**	3,367	3,462	3,487	3,556
Share price[e]					
High	**$ 50.63**	$ 53.25	$ 49.00	$ 40.56	$ 43.84
Low	**19.69**	40.15	37.88	32.92	34.62
Close	**31.53**	43.65	48.30	39.69	39.01
Market capitalization	**117,695**	146,986	167,199	138,387	138,727
Selected ratios					
Return on common equity ("ROE"):					
Income from continuing operations	**2%**	13%	12%	8%	6%
Net income	**4**	13	13	8	6
Return on assets ("ROA"):					
Income from continuing operations	**0.21**	1.06	1.04	0.70	0.44
Net income	**0.31**	1.06	1.10	0.72	0.46
Overhead ratio	**65**	58	63	72	80
Tier 1 capital ratio	**10.9**	8.4	8.7	8.5	8.7
Total capital ratio	**14.8**	12.6	12.3	12.0	12.2
Tier 1 leverage ratio	**6.9**	6.0	6.2	6.3	6.2
Selected balance sheet data (period-end)					
Trading assets	**$ 509,983**	$ 491,409	$ 365,738	$ 298,377	$ 288,814
Securities	**205,943**	85,450	91,975	47,600	94,512
Loans	**744,898**	519,374	483,127	419,148	402,114
Total assets	**2,175,052**	1,562,147	1,351,520	1,198,942	1,157,248
Deposits	**1,009,277**	740,728	638,788	554,991	521,456
Long-term debt	**252,094**	183,862	133,421	108,357	95,422
Common stockholders' equity	**134,945**	123,221	115,790	107,072	105,314
Total stockholders' equity	**166,884**	123,221	115,790	107,211	105,653
Headcount	**224,961**	180,667	174,360	168,847	160,968

(a) Results for 2008 and 2004 included an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual Bank's banking operations and the merger with Bank One Corporation, respectively.

(b) The income tax benefit in 2008 is the result of the release of previously established deferred tax liabilities on non-U.S. earnings and business tax credits.

(c) On October 1, 2006, JPMorgan Chase & Co. completed the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York Company Inc. The results of operations of these corporate trust businesses are being reported as discontinued operations for each of the periods presented.

(d) Effective September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank for $1.9 billion. The fair value of the net assets acquired exceeded the purchase price which resulted in negative goodwill. In accordance with SFAS 141, nonfinancial assets that are not held-for-sale were written down against that negative goodwill. The negative goodwill that remained after writing down nonfinancial assets was recognized as an extraordinary gain in 2008.

(e) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange Limited and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.

(f) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank. On May 30, 2008, the merger with The Bear Stearns Companies, Inc. was consummated. Each of these transactions was accounted for as a purchase and their respective results of operations are included in the Firm's results from each respective transaction date. For additional information on these transactions, see Note 2 on pages 135–140 of this Annual Report.

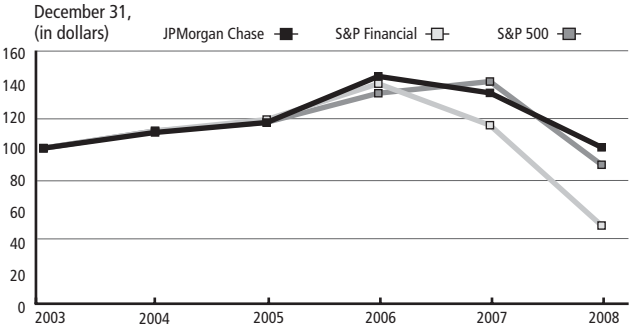
(g) On July 1, 2004, Bank One Corporation merged with and into JPMorgan Chase. Accordingly, 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Stock Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced U.S. equity benchmark consisting of leading companies from different economic sectors. The S&P Financial Index is an index of 81 financial companies, all of which are within the S&P 500. The Firm is a component of both industry indices.

The following table and graph assumes simultaneous investments of $100 on December 31, 2003, in JPMorgan Chase common stock and in each of the above S&P indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2003	2004	2005	2006	2007	**2008**
JPMorgan Chase	$ 100.00	$ 109.92	$ 116.02	$ 145.36	$ 134.91	**$ 100.54**
S&P Financial Index	100.00	110.89	118.07	140.73	114.51	**51.17**
S&P 500	100.00	110.88	116.33	134.70	142.10	**89.53**



This section of the JPMorgan Chase's Annual Report for the year ended December 31, 2008 ("Annual Report") provides management's discussion and analysis of the financial condition and results of operations ("MD&A") of JPMorgan Chase. See the Glossary of terms on pages 230–233 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based upon the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause JPMorgan Chase's results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking statements on page 127 of this Annual Report) and in the JPMorgan Chase Annual Report on Form 10-K for the year ended December 31, 2008 ("2008 Form 10-K"), in Part I, Item 1A: Risk factors, to which reference is hereby made.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with $2.2 trillion in assets, $166.9 billion in stockholders' equity and operations in more than 60 countries as of December 31, 2008. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with branches in 23 states in the U.S.; and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national bank that is the Firm's credit card issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities Inc., the Firm's U.S. investment banking firm.

JPMorgan Chase's activities are organized, for management reporting purposes, into six business segments, as well as Corporate/Private Equity. The Firm's wholesale businesses comprise the Investment Bank, Commercial Banking, Treasury & Securities Services and Asset Management segments. The Firm's consumer businesses comprise the Retail Financial Services and Card Services segments. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows.

Investment Bank

J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The Investment Bank's clients are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage and research. The Investment Bank ("IB") also selectively commits the Firm's own capital to principal investing and trading activities.

Retail Financial Services

Retail Financial Services ("RFS"), which includes the Retail Banking and Consumer Lending reporting segments, serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking as well as through auto dealerships and school financial aid offices. Customers can use more than 5,400 bank branches (third-largest nationally) and 14,500 ATMs (second-largest nationally) as well as online and mobile banking around the clock. More than 21,400 branch salespeople assist

customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. Consumers also can obtain loans through more than 16,000 auto dealerships and 4,800 schools and universities nationwide.

Card Services
Chase Card Services ("CS") is one of the nation's largest credit card issuers with more than 168 million cards in circulation and more than $190 billion in managed loans. Customers used Chase cards to meet more than $368 billion worth of their spending needs in 2008. Chase has a market leadership position in building loyalty and rewards programs with many of the world's most respected brands and through its proprietary products, which include the Chase Freedom program.

Through its merchant acquiring business, Chase Paymentech Solutions, Chase is one of the leading processors of MasterCard and Visa payments.

Commercial Banking
Commercial Banking ("CB") serves more than 26,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and nearly 30,000 real estate investors/owners. Delivering extensive industry knowledge, local expertise and dedicated service, CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Treasury & Securities Services
Treasury & Securities Services ("TSS") is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services ("TS") provides cash management, trade, wholesale card and liquidity products and services to small and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with the Commercial Banking, Retail Financial Services and Asset Management businesses to serve clients firmwide. As a result, certain TS revenue is included in other segments' results. Worldwide Securities Services ("WSS") holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Asset Management
Asset Management ("AM"), with assets under supervision of $1.5 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including money market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

This overview of management's discussion and analysis highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of events, trends and uncertainties, as well as the capital, liquidity, credit and market risks, and the critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share and ratio data)	2008[c]	2007	Change
Selected income statement data			
Total net revenue	**$ 67,252**	$ 71,372	(6)%
Provision for credit losses[a]	**20,979**	6,864	206
Total noninterest expense	**43,500**	41,703	4
Income before extraordinary gain	**3,699**	15,365	(76)
Extraordinary gain[b]	**1,906**	—	NM
Net income	**5,605**	15,365	(64)
Diluted earnings per share			
Income before extraordinary gain	**$ 0.84**	$ 4.38	(81)
Net income	**1.37**	4.38	(69)
Return on common equity			
Income before extraordinary gain	**2%**	13%	
Net income	**4%**	13%	

(a) Includes an accounting conformity provision for credit losses of $1.5 billion related to the acquisition of Washington Mutual Bank's banking operations in 2008.

(b) JPMorgan Chase acquired the banking operations of Washington Mutual Bank from the Federal Deposit Insurance Corporation ("FDIC") for $1.9 billion. The fair value of the net assets acquired from the FDIC exceeded the purchase price which resulted in negative goodwill. In accordance with SFAS 141, nonfinancial assets that are not held-for-sale were written down against that negative goodwill. The negative goodwill that remained after writing down nonfinancial assets was recognized as an extraordinary gain in 2008. The allocation of the purchase price to the net assets acquired (based on their respective fair values at September 25, 2008) and the resulting negative goodwill may be modified through September 25, 2009, as more information is obtained about the fair value of assets acquired and liabilities assumed.

(c) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank. On May 30, 2008, the merger with The Bear Stearns Companies, Inc. was consummated. Each of these transactions was accounted for as a purchase and their respective results of operations are included in the Firm's results from each respective transaction date. For additional information on these transactions, see Note 2 on pages 135–140 of this Annual Report.

Business overview

JPMorgan Chase reported 2008 net income of $5.6 billion, or $1.37 per share, and total net revenue of $67.3 billion, compared with record net income of $15.4 billion, or $4.38 per share, and record total net revenue of $71.4 billion, for 2007. Return on common equity was 4% in 2008, compared with 13% in 2007. Results in 2008 include the acquisition of The Bear Stearns Companies Inc. ("Bear Stearns") on May 30, 2008, and the acquisition of the banking operations of Washington Mutual Bank ("Washington Mutual") on September 25, 2008.

The decline in net income for the year was the result of a significantly higher provision for credit losses, reflecting the addition of $13.7 billion to the Firm's allowance for credit losses in 2008; a decline in total net revenue driven by over $10 billion of markdowns on mortgage-related positions and leveraged lending exposures in the Investment Bank; and an increase in total noninterest expense due to the impact of the Washington Mutual transaction and the Bear Stearns merger.

The business environment for financial services firms was extremely challenging in 2008. The global economy slowed, with many countries, including the U.S., slipping into recession. Financial conditions worsened throughout the year amid a number of unprecedented developments that undermined the economic outlook and eroded confidence in global financial markets. JPMorgan Chase acquired Bear Stearns through a merger consummated in May and acquired the banking operations of Washington Mutual from the Federal Deposit Insurance Corporation ("FDIC") in September. The U.S. federal government placed the Federal Home Loan Mortgage Corporation ("Freddie Mac") and the Federal National Mortgage Association ("Fannie Mae") under its control. Lehman Brothers Holdings Inc. declared bankruptcy. The Bank of America Corporation acquired Merrill Lynch & Co., Inc. and Wells Fargo & Company acquired Wachovia Corporation. The government provided a loan to American International Group, Inc. ("AIG") in exchange for an equity interest in AIG to prevent the insurer's failure. Morgan Stanley, The Goldman Sachs Group, Inc., GMAC, American Express, Discover Financial Services and CIT Group received approval from the Board of Governors of the Federal Reserve System (the "Federal Reserve") to become federal bank holding companies. In other industries, the U.S. government provided temporary loans to General Motors Corporation and Chrysler LLC.

These events accompanied severe strains in term funding markets, reflecting heightened concerns about counterparty risk. As a result, LIBOR rates rose significantly in the fall, despite a round of coordinated rate cuts by a number of central banks. By year-end, LIBOR rates eased in response to proposals to insure deposits and selected debt of financial institutions. The turmoil in financial markets during 2008 led to tighter credit conditions and diminished liquidity, causing consumers and businesses around the world to become more cautious and curtail spending and investment activity. As a result, the U.S. economy contracted sharply, 2.8 million jobs were lost in 2008, and the U.S. unemployment rate rose significantly, to 7.2% by year-end.

The continued economic and financial disruption led the Federal Reserve to reduce its target overnight interest rates to near zero in the fourth quarter of 2008, capping off a year of near-continuous rate reductions. In addition, the U.S. Department of the Treasury (the "U.S. Treasury"), the Federal Reserve and the FDIC, working in cooperation with foreign governments and other central banks, including the Bank of England, the European Central Bank and the Swiss National Bank, began, in the fourth quarter of 2008, to take a variety of extraordinary measures designed to restore confidence in the financial markets and strengthen financial institutions, including capital injections, guarantees of bank liabilities and the acquisition of illiquid assets from banks. In particular, on October 3, 2008, the Emergency Economic Stabilization Act of 2008 (the "EESA") was signed into law. Pursuant to the EESA, the U.S. Treasury has the authority to take a range of

actions to stabilize and provide liquidity to the U.S. financial markets, including the purchase by the U.S. Treasury of certain troubled assets from financial institutions (the "Troubled Asset Relief Program") and the direct purchase by the U.S. Treasury of equity of financial institutions (the "Capital Purchase Program").

The efforts to restore confidence in the financial markets and promote economic growth continue in 2009, with initiatives including a fiscal stimulus bill, the American Reinvestment and Recovery Act of 2009, which was signed into law by President Barack Obama on February 17, 2009. Also in February, the U.S. Treasury outlined a plan to restore stability to the financial system and President Obama proposed a plan to help distressed homeowners. The Federal Reserve, working with other government and regulatory agencies, has also implemented a number of new programs to promote the proper functioning of the credit markets and reintroduce liquidity to the financial system. Such actions taken by U.S. regulatory agencies include the introduction of programs to restore liquidity to money market mutual funds, the commercial paper market, and other fixed-income securities markets. In addition, the FDIC issued a temporary liquidity guarantee program (the "TLG Program") for the senior debt of all FDIC-insured institutions, as well as deposits in noninterest-bearing transaction deposit accounts.

Despite the difficult operating environment and overall drop in earnings, JPMorgan Chase maintained a strong balance sheet and produced underlying growth in many business areas. The Tier 1 capital ratio was 10.9% at year-end; Treasury & Securities Services and Commercial Banking each reported record revenue and net income for the second straight year; the consumer businesses opened millions of new checking and credit card accounts; Asset Management experienced record net inflows in assets under management; and the Investment Bank gained market share in all major fee categories. The diversified nature of the Firm's businesses and its strong capital position enabled it to weather the recessionary environment during 2008.

JPMorgan Chase has taken a leadership role in helping to stabilize the financial markets. It assumed the risk and expended the necessary resources to acquire Bear Stearns and the banking operations of Washington Mutual. In October 2008, the Firm agreed to accept a $25 billion capital investment by the U.S. Treasury under the Capital Purchase Program. JPMorgan Chase has continued to lend to clients in a safe and sound manner and to provide liquidity to multiple financial markets. The Firm has implemented programs that have prevented more than 300,000 foreclosures, with plans to help more than 400,000 more families keep their homes through Chase-owned mortgage modifications over the next two years. The Firm has expanded this effort to include over $1.1 trillion of investor-owned mortgages.

The discussion that follows highlights the performance of each business segment compared with the prior year, and discusses results on a managed basis unless otherwise noted. For more information about managed basis, see Explanation and reconciliation of the Firm's use of non-GAAP financial measures on pages 50–51 of this Annual Report.

Investment Bank reported a net loss for the year, compared with net income in 2007. The significant decline in results reflected lower total net revenue, a higher provision for credit losses and higher total noninterest expense. Markdowns of over $10 billion on mortgage-related positions and leveraged lending funded and unfunded commitments drove fixed income trading revenue lower; investment banking fees and equity trading revenue declined as well. These decreases were offset by record performance in rates and currencies, credit trading, commodities and emerging markets, as well as strong equity client revenue, and gains from the widening of the Firm's credit spread on certain structured liabilities and derivatives. The provision for credit losses rose from the 2007 level, predominantly reflecting a higher allowance for credit losses, driven by a weakening credit environment, as well as the effect of the transfer of $4.9 billion of funded and unfunded leveraged lending commitments to retained loans from held-for-sale in the first quarter of 2008. The increase in total noninterest expense was largely driven by additional expense relating to the Bear Stearns merger, offset partially by lower performance-based compensation expense. In addition, IB benefited from a reduction in deferred tax liabilities on overseas earnings.

Retail Financial Services net income declined, reflecting a significant increase in the provision for credit losses, predominantly offset by positive mortgage servicing rights ("MSR") risk management results and the positive impact of the Washington Mutual transaction. Additional drivers of revenue growth included wider loan and deposit spreads and higher loan and deposit balances. The provision for credit losses increased as housing price declines have continued to result in significant increases in estimated losses, particularly for high loan-to-value home equity and mortgage loans. The provision was also affected by an increase in estimated losses for the auto, student and business banking loan portfolios. Total noninterest expense rose from the 2007 level, reflecting the impact of the Washington Mutual transaction, higher mortgage reinsurance losses, increased mortgage servicing expense and investments in the retail distribution network.

Card Services net income declined, driven by a higher provision for credit losses partially offset by higher managed total net revenue. The growth in managed total net revenue was driven by the impact of the Washington Mutual transaction, higher average managed loan balances, wider loan spreads and increased interchange income, offset predominantly by increased rewards expense and higher volume-driven payments to partners, as well as the effect of higher revenue reversals associated with higher charge-offs. The managed provision for credit losses increased from the prior year due to an increase in the allowance for loan losses and a higher level of charge-offs. Total noninterest expense rose from last year, largely due to the impact of the Washington Mutual transaction.

Commercial Banking net income increased, surpassing the record level posted in 2007. The results were driven by record total net revenue, partially offset by an increase in the provision for credit losses. The increase in revenue was driven by double-digit growth in liability and loan balances, the impact of the Washington Mutual transaction, higher deposit and lending-related fees, and increases in other fee

income. These were partially offset by spread compression in the liability and loan portfolios. The increase in the provision for credit losses reflected a weakening credit environment and growth in loan balances. Total noninterest expense decreased from the prior year, due to lower performance-based incentive compensation and volume-based charges from service providers, predominantly offset by the impact of the Washington Mutual transaction.

Treasury & Securities Services net income increased over the record level set in 2007, driven by record total net revenue, partially offset by higher noninterest expense. Worldwide Securities Services posted record net revenue, driven by wider spreads in securities lending, foreign exchange and liability products, increased product usage by new and existing clients, and higher liability balances. These benefits were partially offset by market depreciation. Treasury Services posted record net revenue, reflecting higher liability balances and volume growth in electronic funds transfer products and trade loans. Total noninterest expense increased, reflecting higher expense related to business and volume growth, as well as continued investment in new product platforms.

Asset Management net income decreased, driven by lower total net revenue, offset partially by lower total noninterest expense. The decline in revenue was due to lower performance fees and the effect of lower markets, including the impact of lower market valuations of seed capital investments. Partially offsetting these revenue declines were higher deposit and loan balances, the benefit of the Bear Stearns merger, increased revenue from net asset inflows and wider deposit spreads. The provision for credit losses rose from the prior year, reflecting an increase in loan balances, higher net charge-offs and a weakening credit environment. Total noninterest expense declined compared with 2007, driven by lower performance-based compensation, largely offset by the effect of the Bear Stearns merger and higher compensation expense resulting from increased average headcount.

Corporate/Private Equity net income declined from the 2007 level and included an extraordinary gain related to the Washington Mutual transaction and a conforming loan loss provision. Excluding these items, the decrease in net income from the prior year was driven by private equity losses in 2008, compared with gains in 2007, losses on preferred securities of Fannie Mae and Freddie Mac, and a charge related to the offer to repurchase auction-rate securities. These declines were partially offset by the proceeds from the sale of Visa shares in its initial public offering and a gain on the dissolution of the Chase Paymentech Solutions joint venture and the gain from the sale of MasterCard shares. The decrease in total noninterest expense reflected a reduction of credit card-related litigation expense, partially offset by higher merger costs.

The Firm's managed provision for credit losses was $24.6 billion for 2008, compared with $9.2 billion for 2007. The total consumer-managed provision for credit losses was $21.3 billion, compared with $8.3 billion in the prior year, reflecting increases in the allowance for credit losses related to home equity, mortgage and credit card loans, as well as higher net charge-offs. Consumer-managed net charge-offs were $13.0 billion, compared with $6.8 billion in the prior year, resulting in managed net charge-off rates of 3.06% and 1.97%, respectively. The wholesale provision for credit losses was $3.3 billion, compared with $934 million in the prior year, due to an increase in the allowance for credit losses reflecting the effect of a weakening credit environment and loan growth. Wholesale net charge-offs were $402 million, compared with net charge-offs of $72 million in the prior year, resulting in net charge-off rates of 0.18% and 0.04%, respectively. The Firm had total nonperforming assets of $12.7 billion at December 31, 2008, up from the prior-year level of $3.9 billion.

Total stockholders' equity at December 31, 2008, was $166.9 billion, and the Tier 1 capital ratio was 10.9%. During 2008, the Firm raised $11.5 billion of common equity and $32.8 billion of preferred equity, including a warrant issued to the U.S. Treasury.

2009 Business outlook

The following forward-looking statements are based upon the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause JPMorgan Chase's actual results to differ materially from those set forth in such forward-looking statements.

JPMorgan Chase's outlook for 2009 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment and client activity levels. Each of these linked factors will affect the performance of the Firm and its lines of business. In addition, as a result of recent market conditions and events, Congress and regulators have increased their focus on the regulation of financial institutions. The Firm's current expectations are for the global and U.S. economic environments to weaken further and potentially faster, capital markets to remain under stress, for there to be continued decline in U.S. housing prices, and for Congress and regulators to continue to adopt legislation and regulations that could limit or restrict the Firm's operations, or impose additional costs upon the Firm in order to comply with such new laws or rules. These factors are likely to continue to adversely impact the Firm's revenue, credit costs, overall business volumes and earnings.

Given the potential stress on the consumer from rising unemployment, the continued downward pressure on housing prices and the elevated national inventory of unsold homes, management remains extremely cautious with respect to the credit outlook for home equity, mortgage and credit card portfolios. Management expects continued deterioration in credit trends for the home equity, mortgage and credit card portfolios, which will likely require additions to the consumer loan loss allowance in 2009 or beyond. Economic data released in early 2009 indicated that housing prices and the labor market have weakened further since year-end, and that deterioration could continue into late 2009. Based on management's current economic outlook, quarterly net charge-offs could, over the next several quarters, reach $1.0 billion to $1.4 billion for the home equity portfolio, $375 million to $475 million for the prime mortgage portfolio, and $375 million to $475 million for the subprime mortgage portfolio. Management expects the managed net charge-off rate for Card Services (excluding the impact resulting from the acquisition of Washington Mutual's banking operations) to approach 7% in the first quarter of 2009 and likely higher by the end of the year depending on unemployment levels. These charge-off rates could increase even further if the economic environment continues to deteriorate

further than management's current expectations. The wholesale provision for credit losses and nonperforming assets are likely to increase over time as a result of the deterioration in underlying credit conditions. Wholesale net charge-offs in 2008 increased from historic lows in 2007 and are likely to increase materially in 2009 as a result of increasing weakness in the credit environment.

The Investment Bank continues to be negatively affected by the disruption in the credit and mortgage markets, as well as by overall lower levels of liquidity. The continuation of these factors could potentially lead to reduced levels of client activity, lower investment banking fees and lower trading revenue. In addition, if the Firm's own credit spreads tighten, as they did in the fourth quarter of 2008, the change in the fair value of certain trading liabilities would also negatively affect trading results. The Firm held $12.6 billion (gross notional) of legacy leveraged loans and unfunded commitments as held-for-sale as of December 31, 2008. Markdowns averaging 45% of the gross notional value have been taken on these legacy positions as of December 31, 2008, resulting in a net carrying value of $6.9 billion. Leveraged loans and unfunded commitments are difficult to hedge effectively, and if market conditions further deteriorate, additional markdowns may be necessary on this asset class. The Investment Bank also held, at December 31, 2008, an aggregate $6.1 billion of prime and Alt-A mortgage exposure, which is also difficult to hedge effectively, and $875 million of subprime mortgage exposure. In addition, the Investment Bank had $7.7 billion of commercial mortgage exposure. In spite of active hedging, mortgage exposures could be adversely affected by worsening market conditions and further deterioration in the housing market. The combination of credit costs and additional markdowns on the various exposures noted above could reach or exceed $2.0 billion for the first quarter of 2009.

Earnings in Commercial Banking and Treasury & Securities Services could decline due to the impact of tighter spreads in the low interest rate environment or a decline in the level of liability balances. Earnings in Treasury & Securities Services and Asset Management will likely deteriorate if market levels continue to decline, due to reduced levels of assets under management, supervision and custody. Earnings in the Corporate/Private Equity segment could be more volatile due to increases in the size of the Firm's investment portfolio, which is largely comprised of investment-grade securities. Private Equity results are dependent upon the capital markets and at current market levels, management believes additional write-downs of $400 million or more are likely in the first quarter of 2009.

Assuming economic conditions do not worsen beyond management's current expectations, management continues to believe that the net income impact of the acquisition of Washington Mutual's banking operations could be approximately $0.50 per share in 2009; the Bear Stearns merger could contribute $1 billion (after-tax) annualized after 2009; and merger-related items, which include both the Washington Mutual transaction and the Bear Stearns merger, could be approximately $600 million (after-tax) in 2009.

Recent developments

On February 23, 2009, the Board of Directors reduced the Firm's quarterly common stock dividend from $0.38 to $0.05 per share, effective for the dividend payable April 30, 2009, to shareholders of record on April 6, 2009. The action taken will enable the Firm to retain an additional $5.0 billion in common equity per year. The Firm expects to maintain the dividend at this level for the time being. The action was taken in order to help ensure that the Firm's balance sheet retained the capital strength necessary to weather a further decline in economic conditions. The Firm intends to return to a more normalized dividend payout ratio as soon as feasible after the environment has stabilized.

CONSOLIDATED RESULTS OF OPERATIONS

The following section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2008. Factors that related primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 119–123 of this Annual Report.

Revenue

Year ended December 31, (in millions)	**2008**[a]	2007	2006
Investment banking fees	**$ 5,526**	$ 6,635	$ 5,520
Principal transactions	**(10,699)**	9,015	10,778
Lending & deposit-related fees	**5,088**	3,938	3,468
Asset management, administration and commissions	**13,943**	14,356	11,855
Securities gains (losses)	**1,560**	164	(543)
Mortgage fees and related income	**3,467**	2,118	591
Credit card income	**7,419**	6,911	6,913
Other income	**2,169**	1,829	2,175
Noninterest revenue	**28,473**	44,966	40,757
Net interest income	**38,779**	26,406	21,242
Total net revenue	**$67,252**	$ 71,372	$ 61,999

(a) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank. On May 30, 2008, the Bear Stearns merger was consummated. Each of these transactions was accounted for as a purchase and their respective results of operations are included in the Firm's results from each respective transaction date. For additional information on these transactions, see Note 2 on pages 135–140 of this Annual Report.

2008 compared with 2007

Total net revenue of $67.3 billion was down $4.1 billion, or 6%, from the prior year. The decline resulted from the extremely challenging business environment for financial services firms in 2008. Principal transactions revenue decreased significantly and included net markdowns on mortgage-related positions and leveraged lending funded and unfunded commitments, losses on preferred securities of Fannie Mae and Freddie Mac, and losses on private equity investments. Also contributing to the decline in total net revenue were other losses and markdowns recorded in other income, including the Firm's share of Bear Stearns' losses from April 8 to May 30, 2008. These declines were largely offset by higher net interest income, proceeds from the sale of Visa shares in its initial public offering, and the gain on the dissolution of the Chase Paymentech Solutions joint venture.

Investment banking fees were down from the record level of the prior year due to lower debt underwriting fees, as well as lower advisory and equity underwriting fees, both of which were at record levels in 2007. These declines were attributable to reduced market activity. For a further discussion of investment banking fees, which are primarily recorded in IB, see IB segment results on pages 54–56 of this Annual Report.

In 2008, principal transactions revenue, which consists of revenue from the Firm's trading and private equity investing activities, declined by $19.7 billion from the prior year. Trading revenue decreased $14.5 billion to a negative $9.8 billion compared with a positive $4.7 billion in 2007. The decline in trading revenue was largely driven by higher net markdowns of $5.9 billion on mortgage-related exposures compared with $1.4 billion in the prior year; higher net markdowns of $4.7 billion on leveraged lending funded and unfunded commitments compared with $1.3 billion in the prior year; losses of $1.1 billion on preferred securities of Fannie Mae and Freddie Mac; and weaker equity trading results compared with a record level in 2007. In addition, trading revenue was adversely impacted by the Bear Stearns merger. Partially offsetting the decline in trading revenue were record results in rates and currencies, credit trading, commodities and emerging markets, as well as strong equity client revenue across products and total gains of $2.0 billion from the widening of the Firm's credit spread on certain structured liabilities and derivatives, compared with $1.3 billion in 2007. Private equity results also declined substantially from the prior year, swinging to losses of $908 million in 2008 from gains of $4.3 billion in 2007. In addition, the first quarter of 2007 included a fair value adjustment related to the adoption of SFAS 157. For a further discussion of principal transactions revenue, see IB and Corporate/Private Equity segment results on pages 54–56 and 73–75, respectively, and Note 6 on pages 158–160 of this Annual Report.

Lending & deposit-related fees rose from the prior year, predominantly resulting from higher deposit-related fees and the impact of the Washington Mutual transaction. For a further discussion of lending & deposit-related fees, which are mostly recorded in RFS, TSS and CB, see the RFS segment results on pages 57–62, the TSS segment results on pages 68–69, and the CB segment results on pages 66–67 of this Annual Report.

The decline in asset management, administration and commissions revenue compared with 2007 was driven by lower asset management fees in AM due to lower performance fees and the effect of lower markets on assets under management. This decline was partially offset by an increase in commissions revenue related predominantly to higher brokerage transaction volume within IB's equity markets revenue, which included additions from Bear Stearns' Prime Services business; and higher administration fees in TSS driven by wider spreads in securities lending and increased product usage by new and existing clients. For additional information on these fees and commissions, see the segment discussions for IB on pages 54–56, RFS on pages 57–62, TSS on pages 68–69, and AM on pages 70–72 of this Annual Report.

The increase in securities gains compared with the prior year was due to the repositioning of the Corporate investment securities portfolio as a result of lower interest rates as part of managing the structural interest rate risk of the Firm, and higher gains from the sale of MasterCard shares. For a further discussion of securities gains, which are mostly recorded in the Firm's Corporate business, see the Corporate/Private Equity segment discussion on pages 73–75 of this Annual Report.

Mortgage fees and related income increased from the prior year, driven by higher net mortgage servicing revenue, which benefited from an improvement in MSR risk management results and increased loan servicing revenue. Mortgage production revenue increased slightly, as the impact of growth in originations was predominantly

offset by markdowns on the mortgage warehouse and increased reserves related to the repurchase of previously sold loans. For a discussion of mortgage fees and related income, which is recorded primarily in RFS's Consumer Lending business, see the Consumer Lending discussion on pages 59–62 of this Annual Report.

Credit card income rose compared with the prior year, driven by increased interchange income due to higher customer charge volume in CS and higher debit card transaction volume in RFS, the impact of the Washington Mutual transaction, and increased servicing fees resulting from a higher level of securitized receivables. These results were partially offset by increases in volume-driven payments to partners and expense related to rewards programs. For a further discussion of credit card income, see CS' segment results on pages 63–65 of this Annual Report.

Other income increased compared with the prior year, due predominantly to the proceeds from the sale of Visa shares in its initial public offering of $1.5 billion, the gain on the dissolution of the Chase Paymentech Solutions joint venture of $1.0 billion, and gains on sales of certain other assets. These proceeds and gains were partially offset by markdowns on certain investments, including seed capital in AM; a $464 million charge related to the offer to repurchase auction-rate securities at par; losses of $423 million reflecting the Firm's 49.4% ownership in Bear Stearns' losses from April 8 to May 30, 2008; and lower securitization income at CS.

Net interest income rose from the prior year, due predominantly to the following: higher trading-related net interest income in IB, the impact of the Washington Mutual transaction, wider net interest spread in Corporate/Private Equity, growth in liability and deposit balances in the wholesale and RFS businesses, higher consumer and wholesale loan balances, and wider spreads on consumer loans in RFS. The Firm's total average interest-earning assets for 2008 were $1.4 trillion, up 23% from the prior year, driven by higher loans, available-for-sale ("AFS") securities, securities borrowed, brokerage receivables and other interest-earning assets balances. The Firm's total average interest-bearing liabilities for 2008 were $1.3 trillion, up 24% from the prior year, driven by higher deposits, long-term debt, brokerage payables and other borrowings balances. The net interest yield on the Firm's interest-earning assets, on a fully taxable equivalent basis, was 2.87%, an increase of 48 basis points from the prior year.

2007 compared with 2006

Total net revenue of $71.4 billion was up $9.4 billion, or 15%, from the prior year. Higher net interest income, very strong private equity gains, record asset management, administration and commissions revenue, higher mortgage fees and related income, and record investment banking fees contributed to the revenue growth. These increases were offset partially by lower trading revenue.

Investment banking fees grew in 2007 to a level higher than the previous record set in 2006. Record advisory and equity underwriting fees drove the results, partially offset by lower debt underwriting fees. For a further discussion of investment banking fees, which are primarily recorded in IB, see IB segment results on pages 54–56 of this Annual Report.

Principal transactions revenue consists of trading revenue and private equity gains. Trading revenue declined significantly from the 2006 level, primarily due to net markdowns in IB of $1.4 billion on subprime positions, including subprime collateralized debt obligations ("CDOs"), and $1.3 billion on leveraged lending funded loans and unfunded commitments. Also in IB, markdowns of securitized products related to nonsubprime mortgages and weak credit trading performance more than offset record revenue in currencies and strong revenue in both rates and equities. Equities benefited from strong client activity and record trading results across all products. IB's Credit Portfolio results increased compared with the prior year, primarily driven by higher revenue from risk management activities. The increase in private equity gains from 2006 reflected a significantly higher level of gains, the classification of certain private equity carried interest as compensation expense and a fair value adjustment in the first quarter of 2007 on nonpublic private equity investments resulting from the adoption of SFAS 157 ("Fair Value Measurements"). For a further discussion of principal transactions revenue, see IB and Corporate/Private Equity segment results on pages 54–56 and 73–75, respectively, and Note 6 on pages 158–160 of this Annual Report.

Lending & deposit-related fees rose from the 2006 level, driven primarily by higher deposit-related fees and the Bank of New York transaction. For a further discussion of lending & deposit-related fees, which are mostly recorded in RFS, TSS and CB, see the RFS segment results on pages 57–62, the TSS segment results on pages 68–69, and the CB segment results on pages 66–67 of this Annual Report.

Asset management, administration and commissions revenue reached a level higher than the previous record set in 2006. Increased assets under management and higher performance and placement fees in AM drove the record results. The 18% growth in assets under management from year-end 2006 came from net asset inflows and market appreciation across all segments: Institutional, Retail, Private Bank and Private Wealth Management. TSS also contributed to the rise in asset management, administration and commissions revenue, driven by increased product usage by new and existing clients and market appreciation on assets under custody. Finally, commissions revenue increased, due mainly to higher brokerage transaction volume (primarily included within Fixed Income and Equity Markets revenue of IB), which more than offset the sale of the insurance business by RFS in the third quarter of 2006 and a charge in the first quarter of 2007 resulting from accelerated surrenders of customer annuities. For additional information on these fees and commissions, see the segment discussions for IB on pages 54–56, RFS on pages 57–62, TSS on pages 68–69, and AM on pages 70–72 of this Annual Report.

The favorable variance resulting from securities gains in 2007 compared with securities losses in 2006 was primarily driven by improvements in the results of repositioning of the Corporate investment securities portfolio. Also contributing to the positive variance was a $234 million gain from the sale of MasterCard shares. For a further discussion of securities gains (losses), which are mostly recorded in the Firm's Corporate business, see the Corporate/Private Equity segment discussion on pages 73–75 of this Annual Report.

Mortgage fees and related income increased from the prior year as MSRs asset valuation adjustments and growth in third-party mortgage loans serviced drove an increase in net mortgage servicing revenue. Production revenue also grew, as an increase in mortgage loan originations and the classification of certain loan origination costs as expense (loan origination costs previously netted against revenue commenced being recorded as an expense in the first quarter of 2007 due to the adoption of SFAS 159) more than offset markdowns on the mortgage warehouse and pipeline. For a discussion of mortgage fees and related income, which is recorded primarily in RFS' Consumer Lending business, see the Consumer Lending discussion on pages 59–62 of this Annual Report.

Credit card income remained relatively unchanged from the 2006 level, as lower servicing fees earned in connection with securitization activities, which were affected unfavorably by higher net credit losses and narrower loan margins, were offset by increases in net interchange income earned on the Firm's credit and debit cards. For further discussion of credit card income, see CS' segment results on pages 63–65 of this Annual Report.

Other income declined compared with the prior year, driven by lower gains from loan sales and workouts, and the absence of a $103 million gain in the second quarter of 2006 related to the sale of MasterCard shares in its initial public offering. (The 2007 gain on the sale of MasterCard shares was recorded in securities gains (losses) as the shares were transferred to the AFS portfolio subsequent to the IPO.) Increased income from automobile operating leases and higher gains on the sale of leveraged leases and student loans partially offset the decline.

Net interest income rose from the prior year, primarily due to the following: higher trading-related net interest income, due to a shift of Interest expense to principal transactions revenue (related to certain IB structured notes to which fair value accounting was elected in connection with the adoption of SFAS 159); growth in liability and deposit balances in the wholesale and consumer businesses; a higher level of credit card loans; the impact of the Bank of New York transaction; and an improvement in Corporate's net interest spread. The Firm's total average interest-earning assets for 2007 were $1.1 trillion, up 12% from the prior year. The increase was primarily driven by higher trading assets – debt instruments, loans, and AFS securities, partially offset by a decline in interests in purchased receivables as a result of the restructuring and deconsolidation during the second quarter of 2006 of certain multi-seller conduits that the Firm administered. The net interest yield on these assets, on a fully taxable equivalent basis, was 2.39%, an increase of 23 basis points from the prior year, due in part to the adoption of SFAS 159.

Provision for credit losses

Year ended December 31, (in millions)	2008[b]	2007	2006
Wholesale:			
Provision for credit losses	**$ 2,681**	$ 934	$ 321
Provision for credit losses – accounting conformity[a]	**646**	—	—
Total wholesale provision for credit losses	**3,327**	934	321
Consumer:			
Provision for credit losses	**16,764**	5,930	2,949
Provision for credit losses – accounting conformity[a]	**888**	—	—
Total consumer provision for credit losses	**17,652**	5,930	2,949
Total provision for credit losses	**$ 20,979**	$ 6,864	$ 3,270

(a) 2008 included adjustments to the provision for credit losses to conform the Washington Mutual loan loss reserve methodologies to the Firm's methodologies in connection with the Washington Mutual transaction.

(b) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank. On May 30, 2008, the Bear Stearns merger was consummated. Each of these transactions was accounted for as a purchase and their respective results of operations are included in the Firm's results from each respective transaction date. For additional information on these transactions, see Note 2 on pages 135–140 of this Annual Report.

2008 compared with 2007

The provision for credit losses in 2008 rose by $14.1 billion compared with the prior year due to increases in both the consumer and wholesale provisions. The increase in the consumer provision reflected higher estimated losses for home equity and mortgages resulting from declining housing prices; an increase in estimated losses for the auto, student and business banking loan portfolios; and an increase in the allowance for loan losses and higher charge-offs of credit card loans. The increase in the wholesale provision was driven by a higher allowance resulting from a weakening credit environment and growth in retained loans. The wholesale provision in the first quarter of 2008 also included the effect of the transfer of $4.9 billion of funded and unfunded leveraged lending commitments to retained loans from held-for-sale. In addition, in 2008 both the consumer and wholesale provisions were affected by a $1.5 billion charge to conform assets acquired from Washington Mutual to the Firm's loan loss methodologies. For a more detailed discussion of the loan portfolio and the allowance for loan losses, see the segment discussions for RFS on pages 57–62, CS on pages 63–65, IB on pages 54–56 and CB on pages 66–67, and the Credit Risk Management section on pages 92–111 of this Annual Report.

2007 compared with 2006

The provision for credit losses in 2007 rose $3.6 billion from the prior year due to increases in both the consumer and wholesale provisions. The increase in the consumer provision from the prior year was largely due to an increase in estimated losses related to home equity, credit card and subprime mortgage loans. Credit card net charge-offs in 2006 benefited following the change in bankruptcy legislation in the fourth quarter of 2005. The increase in the wholesale provision from the prior year primarily reflected an increase in the allowance for

credit losses due to portfolio activity, which included the effect of a weakening credit environment and portfolio growth. For a more detailed discussion of the loan portfolio and the allowance for loan losses, see the segment discussions for RFS on pages 57–62, CS on pages 63–65, IB on pages 54–56, CB on pages 66–67 and Credit Risk Management on pages 92–111 of this Annual Report.

Noninterest expense

Year ended December 31, (in millions)	**2008**[(a)]	2007	2006
Compensation expense	**$ 22,746**	$ 22,689	$ 21,191
Noncompensation expense:			
Occupancy expense	**3,038**	2,608	2,335
Technology, communications and equipment expense	**4,315**	3,779	3,653
Professional & outside services	**6,053**	5,140	4,450
Marketing	**1,913**	2,070	2,209
Other expense	**3,740**	3,814	3,272
Amortization of intangibles	**1,263**	1,394	1,428
Total noncompensation expense	**20,322**	18,805	17,347
Merger costs	**432**	209	305
Total noninterest expense	**$ 43,500**	$ 41,703	$ 38,843

(a) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank. On May 30, 2008, the Bear Stearns merger was consummated. Each of these transactions was accounted for as a purchase and their respective results of operations are included in the Firm's results from each respective transaction date. For additional information on these transactions, see Note 2 on pages 135–140 of this Annual Report.

2008 compared with 2007

Total noninterest expense for 2008 was $43.5 billion, up $1.8 billion, or 4%, from the prior year. The increase was driven by the additional operating costs related to the Washington Mutual transaction and Bear Stearns merger, and investments in the businesses, partially offset by lower performance-based incentives.

Compensation expense increased slightly from the prior year predominantly driven by investments in the businesses, including headcount additions associated with the Bear Stearns merger and Washington Mutual transaction, largely offset by lower performance-based incentives.

Noncompensation expense increased from the prior year as a result of the Bear Stearns merger and Washington Mutual transaction. Excluding the effect of these transactions, noncompensation expense decreased due to a net reduction in other expense related to litigation; lower credit card and consumer lending marketing expense; and a decrease in the amortization of intangibles as certain purchased credit card relationships were fully amortized in 2007 and the amortization rate for core deposit intangibles declined in accordance with the amortization schedule. These decreases were offset partially by increases in professional & outside services, driven by investments in new product platforms in TSS, business and volume growth in CS credit card processing and IB brokerage, clearing and exchange transaction processing. Also contributing to the increases were an increase in other expense due to higher mortgage reinsurance losses and mortgage servicing expense due to increased delinquencies and defaults in RFS; an increase in technology, communications and equipment expense reflecting higher depreciation expense on owned automobiles subject to operating leases in RFS, and other technology-related investments across the businesses; and, an increase in occupancy expense partly for the expansion of RFS' retail distribution network. For a further discussion of amortization of intangibles, refer to Note 18 on pages 198–201 of this Annual Report.

For information on merger costs, refer to Note 11 on page 170 of this Annual Report.

2007 compared with 2006

Total noninterest expense for 2007 was $41.7 billion, up $2.9 billion, or 7%, from the prior year. The increase was driven by higher compensation expense, as well as investments across the business segments and acquisitions.

The increase in compensation expense from 2006 was primarily the result of investments and acquisitions in the businesses, including additional headcount from the Bank of New York transaction; the classification of certain private equity carried interest from principal transactions revenue; the classification of certain loan origination costs (loan origination costs previously netted against revenue commenced being recorded as an expense in the first quarter of 2007 due to the adoption of SFAS 159); and higher performance-based incentives. Partially offsetting these increases were business divestitures and continuing business efficiencies.

Noncompensation expense increased from 2006 due to higher professional & outside services primarily reflecting higher brokerage expense and credit card processing costs resulting from growth in transaction volume, as well as investments in the businesses and acquisitions. Also contributing to the increase was higher other expense due to increased net legal-related costs, reflecting a lower level of insurance recoveries and increased costs of credit card-related litigation, and other increases driven by business growth and investments in the businesses. Other noncompensation expense increases also included higher occupancy expense driven by ongoing investments in the businesses, in particular, the retail distribution network and the Bank of New York transaction; and higher technology, communications and equipment expense due primarily to higher depreciation expense on owned automobiles subject to operating leases in RFS, and other technology-related investments in the businesses to support business growth. These increases were offset partially by lower credit card marketing expense; decreases due to the sale of the insurance business at the beginning of the third quarter of 2006 and lower credit card fraud-related losses, both in other expense. In addition, expense in general was reduced by the effect of continuing business efficiencies. For a discussion of amortization of intangibles, refer to Note 18 on pages 198–201 of this Annual Report.

For information on merger costs, refer to Note 11 on page 170 of this Annual Report.

Income tax expense

The Firm's income from continuing operations before income tax expense (benefit), income tax expense (benefit) and effective tax rate were as follows for each of the periods indicated.

Year ended December 31, (in millions, except rate)	**2008**[a]	2007	2006
Income from continuing operations before income tax expense (benefit)	**$ 2,773**	$ 22,805	$ 19,886
Income tax expense (benefit)	**(926)**	7,440	6,237
Effective tax rate	**(33.4)%**	32.6%	31.4%

(a) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank. On May 30, 2008, the Bear Stearns merger was consummated. Each of these transactions was accounted for as a purchase and their respective results of operations are included in the Firm's results from each respective transaction date. For additional information on these transactions, see Note 2 on pages 135–140 of this Annual Report.

2008 compared with 2007

The decrease in the effective tax rate in 2008 compared with the prior year was the result of significantly lower reported pretax income combined with changes in the proportion of income subject to U.S. federal taxes. Also contributing to the decrease in the effective tax rate was increased business tax credits and the realization of a $1.1 billion benefit from the release of deferred tax liabilities. These deferred tax liabilities were associated with the undistributed earnings of certain non-U.S. subsidiaries that were deemed to be reinvested indefinitely. These decreases were partially offset by changes in state and local taxes, and equity losses representing the Firm's 49.4% ownership interest in Bear Stearns' losses from April 8 to May 30, 2008, for which no income tax benefit was recorded. For a further discussion of income taxes, see Critical Accounting Estimates Used by the Firm on pages 119–123 and Note 28 on pages 209–211 of this Annual Report.

2007 compared with 2006

The increase in the effective tax rate for 2007, as compared with the prior year, was primarily the result of higher reported pretax income combined with changes in the proportion of income subject to federal, state and local taxes. Also contributing to the increase in the effective tax rate was the recognition in 2006 of $367 million of benefits related to the resolution of tax audits.

Income from discontinued operations

As a result of the transaction with The Bank of New York on October 1, 2006, the results of operations of the selected corporate trust businesses (i.e., trustee, paying agent, loan agency and document management services) were reported as discontinued operations.

Income from discontinued operations in 2006 was due predominantly to a gain of $622 million from exiting selected corporate trust businesses in the fourth quarter of 2006. No income from discontinued operations was recorded in 2008 or 2007.

Extraordinary gain

The Firm recorded an extraordinary gain of $1.9 billion in 2008 associated with the acquisition of the banking operations of Washington Mutual. The transaction is being accounted for under the purchase method of accounting in accordance with SFAS 141. The adjusted fair value of net assets of the banking operations, after purchase accounting adjustments, was higher than JPMorgan Chase's purchase price. There were no extraordinary gains recorded in 2007 or 2006.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its consolidated financial statements using accounting principles generally accepted in the United States of America ("U.S. GAAP"); these financial statements appear on pages 130–133 of this Annual Report. That presentation, which is referred to as "reported basis," provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications that assume credit card loans securitized by CS remain on the balance sheet and presents revenue on a fully taxable-equivalent ("FTE") basis. These adjustments do not have any impact on net income as reported by the lines of business or by the Firm as a whole.

The presentation of CS results on a managed basis assumes that credit card loans that have been securitized and sold in accordance with SFAS 140 remain on the Consolidated Balance Sheets and that the earnings on the securitized loans are classified in the same manner as the earnings on retained loans recorded on the Consolidated Balance Sheets. JPMorgan Chase uses the concept of managed basis to evaluate the credit performance and overall financial performance of the entire managed credit card portfolio. Operations are funded and decisions are made about allocating resources, such as employees and capital, based upon managed financial information. In addition, the same underwriting standards and ongoing risk monitoring

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.
(Table continues on next page)

	2008				2007			
Year ended December 31, (in millions, except per share and ratio data)	Reported results	Credit card[c]	Fully tax-equivalent adjustments	Managed basis	Reported results	Credit card[c]	Fully tax-equivalent adjustments	Managed basis
Revenue								
Investment banking fees	**$ 5,526**	**$ —**	**$ —**	**$ 5,526**	$ 6,635	$ —	$ —	$ 6,635
Principal transactions	**(10,699)**	**—**	**—**	**(10,699)**	9,015	—	—	9,015
Lending & deposit-related fees	**5,088**	**—**	**—**	**5,088**	3,938	—	—	3,938
Asset management, administration and commissions	**13,943**	**—**	**—**	**13,943**	14,356	—	—	14,356
Securities gains (losses)	**1,560**	**—**	**—**	**1,560**	164	—	—	164
Mortgage fees and related income	**3,467**	**—**	**—**	**3,467**	2,118	—	—	2,118
Credit card income	**7,419**	**(3,333)**	**—**	**4,086**	6,911	(3,255)	—	3,656
Other income	**2,169**	**—**	**1,329**	**3,498**	1,829	—	683	2,512
Noninterest revenue	**28,473**	**(3,333)**	**1,329**	**26,469**	44,966	(3,255)	683	42,394
Net interest income	**38,779**	**6,945**	**579**	**46,303**	26,406	5,635	377	32,418
Total net revenue	**67,252**	**3,612**	**1,908**	**72,772**	71,372	2,380	1,060	74,812
Provision for credit losses	**19,445**	**3,612**	**—**	**23,057**	6,864	2,380	—	9,244
Provision for credit losses – accounting conformity[a]	**1,534**	**—**	**—**	**1,534**	—	—	—	—
Noninterest expense	**43,500**	**—**	**—**	**43,500**	41,703	—	—	41,703
Income from continuing operations before income tax expense	**2,773**	**—**	**1,908**	**4,681**	22,805	—	1,060	23,865
Income tax expense (benefit)	**(926)**	**—**	**1,908**	**982**	7,440	—	1,060	8,500
Income from continuing operations	**3,699**	**—**	**—**	**3,699**	15,365	—	—	15,365
Income from discontinued operations	**—**	**—**	**—**	**—**	—	—	—	—
Income before extraordinary gain	**3,699**	**—**	**—**	**3,699**	15,365	—	—	15,365
Extraordinary gain	**1,906**	**—**	**—**	**1,906**	—	—	—	—
Net income	**$ 5,605**	**$ —**	**$ —**	**$ 5,605**	$ 15,365	$ —	$ —	$ 15,365
Diluted earnings per share[b]	**$ 0.84**	**$ —**	**$ —**	**$ 0.84**	$ 4.38	$ —	$ —	$ 4.38
Return on common equity[b]	**2%**	**—%**	**—%**	**2%**	13%	—%	—%	13%
Return on common equity less goodwill[b]	**4**	**—**	**—**	**4**	21	—	—	21
Return on assets[b]	**0.21**	**NM**	**NM**	**0.20**	1.06	NM	NM	1.01
Overhead ratio	**65**	**NM**	**NM**	**60**	58	NM	NM	56
Loans–Period-end	**$ 744,898**	**$85,571**	**$ —**	**$ 830,469**	$ 519,374	$ 72,701	$ —	$ 592,075
Total assets – average	**1,791,617**	**76,904**	**—**	**1,868,521**	1,455,044	66,780	—	1,521,824

(a) 2008 included an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual's banking operations.
(b) Based on income from continuing operations.
(c) Credit card securitizations affect CS. See pages 63–65 of this Annual Report for further information.

are used for both loans on the Consolidated Balance Sheets and securitized loans. Although securitizations result in the sale of credit card receivables to a trust, JPMorgan Chase retains the ongoing customer relationships, as the customers may continue to use their credit cards; accordingly, the customer's credit performance will affect both the securitized loans and the loans retained on the Consolidated Balance Sheets. JPMorgan Chase believes managed basis information is useful to investors, enabling them to understand both the credit risks associated with the loans reported on the Consolidated Balance Sheets and the Firm's retained interests in securitized loans. For a reconciliation of reported to managed basis results for CS, see CS segment results on pages 63–65 of this Annual Report. For information regarding the securitization process, and loans and residual interests sold and securitized, see Note 16 on pages 180–188 of this Annual Report.

Total net revenue for each of the business segments and the Firm is presented on a FTE basis. Accordingly, revenue from tax-exempt securities and investments that receive tax credits is presented in the managed results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to these items is recorded within income tax expense.

Management also uses certain non-GAAP financial measures at the business segment level because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and therefore facilitate a comparison of the business segment with the performance of its competitors.

(Table continued from previous page)

2006			
Reported results	Credit card[c]	Fully tax-equivalent adjustments	Managed basis
$ 5,520	$ —	$ —	$ 5,520
10,778	—	—	10,778
3,468	—	—	3,468
11,855	—	—	11,855
(543)	—	—	(543)
591	—	—	591
6,913	(3,509)	—	3,404
2,175	—	676	2,851
40,757	(3,509)	676	37,924
21,242	5,719	228	27,189
61,999	2,210	904	65,113
3,270	2,210	—	5,480
—	—	—	—
38,843	—	—	38,843
19,886	—	904	20,790
6,237	—	904	7,141
13,649	—	—	13,649
795	—	—	795
14,444	—	—	14,444
—	—	—	—
$ 14,444	$ —	$ —	$ 14,444
$ 3.82	$ —	$ —	$ 3.82
12%	—%	—%	12%
20	—	—	20
1.04	NM	NM	1.00
63	NM	NM	60
$ 483,127	$ 66,950	$ —	$ 550,077
1,313,794	65,266	—	1,379,060

Calculation of certain U.S. GAAP and non-GAAP metrics

The table below reflects the formulas used to calculate both the following U.S. GAAP and non-GAAP measures:

Return on common equity

Net income* / Average common stockholders' equity

Return on common equity less goodwill[d]

Net income* / Average common stockholders' equity less goodwill

Return on assets

Reported: Net income / Total average assets

Managed: Net income / Total average managed assets[e] (including average securitized credit card receivables)

Overhead ratio

Total noninterest expense / Total net revenue

* Represents net income applicable to common stock

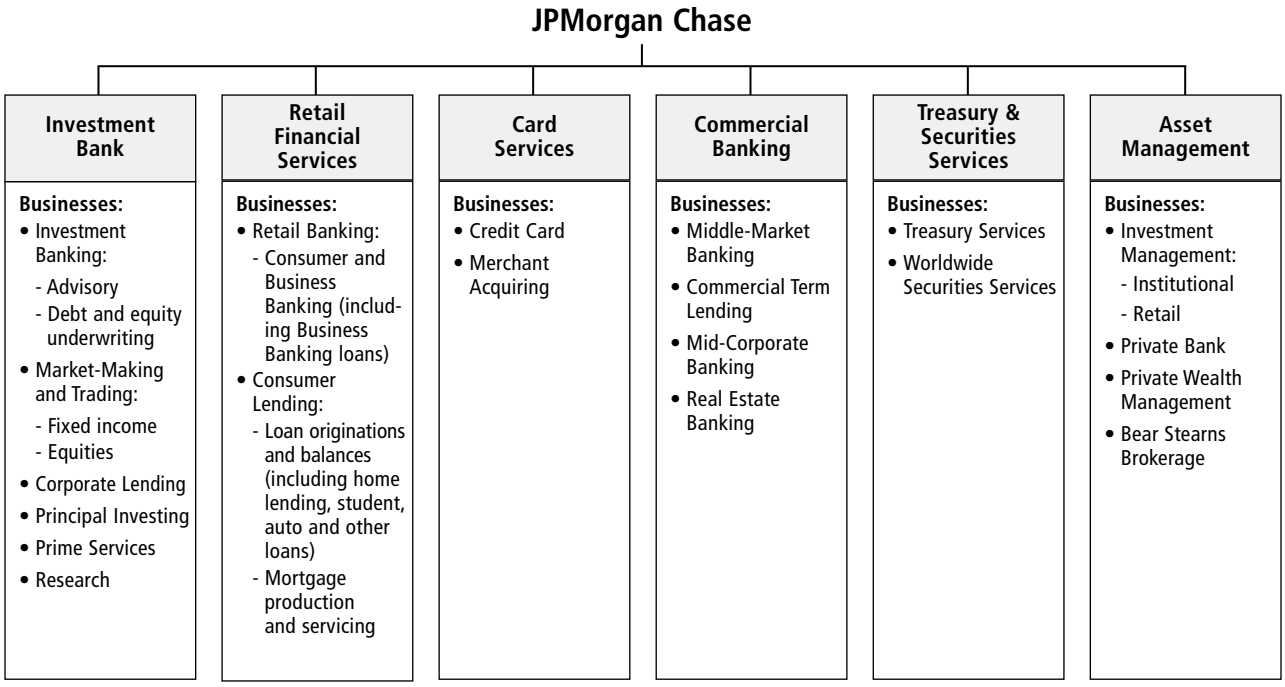
(d) The Firm uses return on common equity less goodwill, a non-GAAP financial measure, to evaluate the operating performance of the Firm and to facilitate comparisons to competitors.

(e) The Firm uses return on managed assets, a non-GAAP financial measure, to evaluate the overall performance of the managed credit card portfolio, including securitized credit card loans.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line-of-business basis. The business segment financial results presented reflect the current organization of JPMorgan Chase. There are six major reportable business segments: the Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate/Private Equity segment.

The business segments are determined based upon the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis.



Business segment changes

Commencing October 1, 2008, RFS was reorganized into the following two reporting segments: Retail Banking and Consumer Lending. Previously, RFS consisted of three reporting segments: Regional Banking, Mortgage Banking and Auto Finance. The new Retail Banking reporting segment now comprises consumer banking and business banking activities, which previously were reported in Regional Banking. The new Consumer Lending reporting segment now comprises: (a) the prior Mortgage Banking and Auto Finance reporting segments, (b) the home equity, student and other lending business activities which were previously reported in the Regional Banking reporting segment and (c) loan activity related to prime mortgages that were originated by RFS, but reported in the Corporate/Private Equity business segment. This reorganization is reflected in this Annual Report and the financial information for prior periods has been revised to reflect the changes as if they had been in effect throughout all periods reported.

Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies.

Business segment reporting methodologies used by the Firm are discussed below. The Firm continues to assess the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing

Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Treasury group within the Corporate/Private Equity business segment. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment's stand-alone peers. This process is overseen by the Firm's Asset-Liability Committee ("ALCO"). Business segments may retain certain interest rate exposures, subject to management approval, that would be expected in the normal operation of a similar peer business.

Capital allocation

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, economic risk measures and regulatory capital requirements. The amount of capital assigned to each business is referred to as equity. Line of business equity increased during the second quarter of 2008 in IB and AM due to the Bear Stearns merger and, for AM, the purchase of the additional equity interest in Highbridge. At the end of the third quarter of 2008, equity was increased for each line of business with a view toward the future implementation of the new Basel II capital rules. For further details on these rules, see Basel II on page 84 of this Annual Report. In addition, equity allocated to RFS, CS and CB was increased as a result of the Washington Mutual transaction. For a further discussion, see Capital management–Line of business equity on page 82 of this Annual Report.

Expense allocation

Where business segments use services provided by support units within the Firm, the costs of those support units are allocated to the business segments. The expense is allocated based upon their actual cost or the lower of actual cost or market, as well as upon usage of the services provided. In contrast, certain other expense related to certain corporate functions, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Retained expense includes: parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other one-time items not aligned with the business segments.

Segment results – Managed basis[a][b]

The following table summarizes the business segment results for the periods indicated.

Year ended December 31, (in millions, except ratios)	Total net revenue			Noninterest expense		
	2008	2007	2006	**2008**	2007	2006
Investment Bank	**$ 12,214**	$ 18,170	$ 18,833	**$ 13,844**	$ 13,074	$ 12,860
Retail Financial Services	**23,520**	17,305	14,825	**12,077**	9,905	8,927
Card Services	**16,474**	15,235	14,745	**5,140**	4,914	5,086
Commercial Banking	**4,777**	4,103	3,800	**1,946**	1,958	1,979
Treasury & Securities Services	**8,134**	6,945	6,109	**5,223**	4,580	4,266
Asset Management	**7,584**	8,635	6,787	**5,298**	5,515	4,578
Corporate/Private Equity	**69**	4,419	14	**(28)**	1,757	1,147
Total	**$ 72,772**	$ 74,812	$ 65,113	**$ 43,500**	$ 41,703	$ 38,843

Year ended December 31, (in millions, except ratios)	Net income (loss)			Return on equity		
	2008	2007	2006	**2008**	2007	2006
Investment Bank	**$ (1,175)**	$ 3,139	$ 3,674	**(5)%**	15%	18%
Retail Financial Services	**880**	2,925	3,213	**5**	18	22
Card Services	**780**	2,919	3,206	**5**	21	23
Commercial Banking	**1,439**	1,134	1,010	**20**	17	18
Treasury & Securities Services	**1,767**	1,397	1,090	**47**	47	48
Asset Management	**1,357**	1,966	1,409	**24**	51	40
Corporate/Private Equity[c]	**557**	1,885	842	**NM**	NM	NM
Total	**$ 5,605**	$ 15,365	$ 14,444	**4%**	13%	13%

(a) Represents reported results on a tax-equivalent basis and excludes the impact of credit card securitizations.
(b) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank. On May 30, 2008, the Bear Stearns merger was consummated. Each of these transactions was accounted for as a purchase and their respective results of operations are included in the Firm's results from each respective transaction date. For additional information on these transactions, see Note 2 on pages 135–140 of this Annual Report.
(c) Net income included an extraordinary gain of $1.9 billion related to the Washington Mutual transaction for 2008 and income from discontinued operations of $795 million for 2006.

INVESTMENT BANK

J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The Investment Bank's clients are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage and research. IB also selectively commits the Firm's own capital to principal investing and trading activities.

On May 30, 2008, JPMorgan Chase merged with The Bear Stearns Companies, Inc. The merger provided IB with a leading global prime brokerage business and expanded the existing energy platform. It also strengthened IB's franchise in Equity and Fixed Income Markets, as well as client coverage.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2008[g]	2007	2006
Revenue			
Investment banking fees	**$ 5,907**	$ 6,616	$ 5,537
Principal transactions[a]	**(7,042)**	4,409	9,512
Lending & deposit-related fees	**463**	446	517
Asset management, administration and commissions	**3,064**	2,701	2,240
All other income[b]	**(462)**	(78)	528
Noninterest revenue	**1,930**	14,094	18,334
Net interest income[c]	**10,284**	4,076	499
Total net revenue[d]	**12,214**	18,170	18,833
Provision for credit losses	**2,015**	654	191
Credit reimbursement from TSS[e]	**121**	121	121
Noninterest expense			
Compensation expense	**7,701**	7,965	8,190
Noncompensation expense	**6,143**	5,109	4,670
Total noninterest expense	**13,844**	13,074	12,860
Income (loss) before income tax expense (benefit)	**(3,524)**	4,563	5,903
Income tax expense (benefit)[f]	**(2,349)**	1,424	2,229
Net income (loss)	**$ (1,175)**	$ 3,139	$ 3,674
Financial ratios			
ROE	**(5)%**	15%	18%
ROA	**(0.14)**	0.45	0.57
Overhead ratio	**113**	72	68
Compensation expense as % of total net revenue	**63**	44	41

(a) The 2008 results include net markdowns on mortgage-related exposures and leveraged lending funded and unfunded commitments of $5.9 billion and $4.7 billion, respectively, compared with $1.4 billion and $1.3 billion, respectively, in 2007.
(b) All other income for 2008 decreased from the prior year due to increased revenue sharing agreements with other business segments. All other income for 2007 decreased from the prior year due mainly to losses on loan sales and lower gains on sales of assets.
(c) Net interest income for 2008 increased from the prior year due to an increase in interest-earning assets, including the addition of the Bear Stearns' Prime Services business combined with wider spreads on certain fixed income products. The increase in 2007 from the prior year was due primarily to an increase in interest-earning assets.
(d) Total net revenue included tax-equivalent adjustments, predominantly due to income tax credits related to affordable housing investments and tax-exempt income from municipal bond investments of $1.7 billion, $927 million and $802 million for 2008, 2007 and 2006, respectively.
(e) TSS is charged a credit reimbursement related to certain exposures managed within IB credit portfolio on behalf of clients shared with TSS.
(f) The income tax benefit in 2008 includes the result of reduced deferred tax liabilities on overseas earnings.
(g) Results for 2008 include seven months of the combined Firm's (JPMorgan Chase's and Bear Stearns') results and five months of heritage JPMorgan Chase results. All prior periods reflect heritage JPMorgan Chase results.

The following table provides IB's total net revenue by business segment.

Year ended December 31, (in millions)	2008[d]	2007	2006
Revenue by business			
Investment banking fees:			
Advisory	**$ 2,008**	$ 2,273	$ 1,659
Equity underwriting	**1,749**	1,713	1,178
Debt underwriting	**2,150**	2,630	2,700
Total investment banking fees	**5,907**	6,616	5,537
Fixed income markets[a]	**1,957**	6,339	8,736
Equity markets[b]	**3,611**	3,903	3,458
Credit portfolio[c]	**739**	1,312	1,102
Total net revenue	**$ 12,214**	$ 18,170	$ 18,833
Revenue by region			
Americas	**$ 2,530**	$ 8,165	$ 9,601
Europe/Middle East/Africa	**7,681**	7,301	7,421
Asia/Pacific	**2,003**	2,704	1,811
Total net revenue	**$ 12,214**	$ 18,170	$ 18,833

(a) Fixed income markets include client and portfolio management revenue related to both market-making and proprietary risk-taking across global fixed income markets, including foreign exchange, interest rate, credit and commodities markets.
(b) Equities markets include client and portfolio management revenue related to market-making and proprietary risk-taking across global equity products, including cash instruments, derivatives and convertibles.
(c) Credit portfolio revenue includes net interest income, fees and the impact of loan sales activity, as well as gains or losses on securities received as part of a loan restructuring, for IB's credit portfolio. Credit portfolio revenue also includes the results of risk management related to the Firm's lending and derivative activities, and changes in the credit valuation adjustment, which is the component of the fair value of a derivative that reflects the credit quality of the counterparty. Additionally, credit portfolio revenue incorporates an adjustment to the valuation of the Firm's derivative liabilities as a result of the adoption of SFAS 157 on January 1, 2007. See pages 92–111 of the Credit Risk Management section of this Annual Report for further discussion.
(d) Results for 2008 include seven months of the combined Firm's (JPMorgan Chase's and Bear Stearns') results and five months of heritage JPMorgan Chase results. All prior periods reflect heritage JPMorgan Chase results.

2008 compared with 2007

Net loss was $1.2 billion, a decrease of $4.3 billion from the prior year, driven by lower total net revenue, a higher provision for credit losses and higher noninterest expense, partially offset by a reduction in deferred tax liabilities on overseas earnings.

Total net revenue was $12.2 billion, down $6.0 billion, or 33%, from the prior year. Investment banking fees were $5.9 billion, down 11% from the prior year, driven by lower debt underwriting and advisory fees reflecting reduced market activity. Debt underwriting fees were $2.2 billion, down 18% from the prior year, driven by lower loan syndication and bond underwriting fees. Advisory fees of $2.0 billion declined 12% from the prior year. Equity underwriting fees were $1.7 billion, up 2% from the prior year driven by improved market share. Fixed Income Markets revenue was $2.0 billion, compared with $6.3 billion in the prior year. The decrease was driven by $5.9

billion of net markdowns on mortgage-related exposures and $4.7 billion of net markdowns on leveraged lending funded and unfunded commitments. Revenue was also adversely impacted by additional losses and cost to risk reduce related to Bear Stearns' positions. These results were offset by record performance in rates and currencies, credit trading, commodities and emerging markets as well as $814 million of gains from the widening of the Firm's credit spread on certain structured liabilities and derivatives. Equity Markets revenue was $3.6 billion, down 7% from the prior year, reflecting weak trading results, partially offset by strong client revenue across products including prime services, as well as $510 million of gains from the widening of the Firm's credit spread on certain structured liabilities and derivatives. Credit portfolio revenue was $739 million, down 44%, driven by losses from widening counterparty credit spreads.

The provision for credit losses was $2.0 billion, an increase of $1.4 billion from the prior year, predominantly reflecting a higher allowance for credit losses, driven by a weakening credit environment, as well as the effect of the transfer of $4.9 billion of funded and unfunded leveraged lending commitments to retained loans from held-for-sale in the first quarter of 2008. Net charge-offs for the year were $105 million, compared with $36 million in the prior year. Total nonperforming assets were $2.5 billion, an increase of $2.0 billion compared with the prior year, reflecting a weakening credit environment. The allowance for loan losses to average loans was 4.71% for 2008, compared with a ratio of 2.14% in the prior year.

Noninterest expense was $13.8 billion, up $770 million, or 6%, from the prior year, reflecting higher noncompensation expense driven primarily by additional expense relating to the Bear Stearns merger, offset partially by lower performance-based compensation expense.

Return on equity was a negative 5% on $26.1 billion of average allocated capital, compared with 15% on $21.0 billion in the prior year.

2007 compared with 2006

Net income was $3.1 billion, a decrease of $535 million, or 15%, from the prior year. The decrease reflected lower fixed income revenue, a higher provision for credit losses and increased noninterest expense, partially offset by record investment banking fees and equity markets revenue.

Total net revenue was $18.2 billion, down $663 million, or 4%, from the prior year. Investment banking fees were $6.6 billion, up 19% from the prior year, driven by record fees across advisory and equity underwriting, partially offset by lower debt underwriting fees. Advisory fees were $2.3 billion, up 37%, and equity underwriting fees were $1.7 billion, up 45%; both were driven by record performance across all regions. Debt underwriting fees of $2.6 billion declined 3%, reflecting lower loan syndication and bond underwriting fees, which were negatively affected by market conditions in the second half of the year. Fixed Income Markets revenue decreased 27% from the prior year. The decrease was due to net markdowns of $1.4 billion on subprime positions, including subprime CDOs and net markdowns of $1.3 billion on leveraged lending funded loans and unfunded commitments. Fixed Income Markets revenue also decreased due to markdowns in securitized products on nonsubprime mortgages and weak credit trading performance. These lower results were offset partially by record revenue in currencies and strong revenue in rates. Equity Markets revenue was $3.9 billion, up 13%, benefiting from strong client activity and record trading results across all products. Credit Portfolio revenue was $1.3 billion, up 19%, primarily due to higher revenue from risk management activities, partially offset by lower gains from loan sales and workouts.

The provision for credit losses was $654 million, an increase of $463 million from the prior year. The change was due to a net increase of $532 million in the allowance for credit losses, primarily due to portfolio activity, which included the effect of a weakening credit environment, and an increase in allowance for unfunded leveraged lending commitments, as well as portfolio growth. In addition, there were $36 million of net charge-offs in 2007, compared with $31 million of net recoveries in the prior year. The allowance for loan losses to average loans was 2.14% for 2007, compared with a ratio of 1.79% in the prior year.

Noninterest expense was $13.1 billion, up $214 million, or 2%, from the prior year.

Return on equity was 15% on $21.0 billion of allocated capital compared with 18% on $20.8 billion in 2006.

Selected metrics

Year ended December 31, (in millions, except headcount)	2008	2007	2006
Selected balance sheet data (period-end)			
Equity	**$ 33,000**	$ 21,000	$ 21,000
Selected balance sheet data (average)			
Total assets	**$832,729**	$ 700,565	$ 647,569
Trading assets–debt and equity instruments[a]	**350,812**	359,775	275,077
Trading assets–derivative receivables	**112,337**	63,198	54,541
Loans:			
Loans retained[b]	**73,108**	62,247	58,846
Loans held-for-sale and loans at fair value[a]	**18,502**	17,723	21,745
Total loans	**91,610**	79,970	80,591
Adjusted assets[c]	**679,780**	611,749	527,753
Equity	**26,098**	21,000	20,753
Headcount	**27,938**	25,543	23,729

(a) As a result of the adoption of SFAS 159 in the first quarter of 2007, $11.7 billion of loans were reclassified to trading assets. Loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratio and net charge-off (recovery) rate.

(b) Loans retained included credit portfolio loans, leveraged leases and other accrual loans, and excluded loans at fair value.

(c) Adjusted assets, a non-GAAP financial measure, equals total assets minus (1) securities purchased under resale agreements and securities borrowed less securities sold, not yet purchased; (2) assets of variable interest entities ("VIEs") consolidated under FIN 46R; (3) cash and securities segregated and on deposit for regulatory and other purposes; (4) goodwill and intangibles; (5) securities received as collateral; and (6) investments purchased under the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility. The amount of adjusted assets is presented to assist the reader in comparing IB's asset and capital levels to other investment banks in the securities industry. Asset-to-equity leverage ratios are commonly used as one measure to assess a company's capital adequacy. IB believes an adjusted asset amount that excludes the assets discussed above, which were considered to have a low risk profile, provides a more meaningful measure of balance sheet leverage in the securities industry.

Selected metrics

Year ended December 31, (in millions, except ratio data)	2008	2007	2006
Credit data and quality statistics			
Net charge-offs (recoveries)	**$ 105**	$ 36	$ (31)
Nonperforming assets:			
Nonperforming loans[a]	**1,175**	353	231
Other nonperforming assets	**1,326**	100	38
Total nonperforming assets	**2,501**	453	269
Allowance for credit losses:			
Allowance for loan losses	**3,444**	1,329	1,052
Allowance for lending-related commitments	**360**	560	305
Total allowance for credit losses	**3,804**	1,889	1,357
Net charge-off (recovery) rate[a][b][c]	**0.14%**	0.06%	(0.05)%
Allowance for loan losses to average loans[a][b][c]	**4.71**[h]	2.14[h]	1.79
Allowance for loan losses to nonperforming loans[a]	**301**	439	461
Nonperforming loans to average loans	**1.28**	0.44	0.29
Market risk–average trading and credit portfolio VaR – 99% confidence level[d]			
Trading activities:			
Fixed income	**$ 181**	$ 80	$ 56
Foreign exchange	**34**	23	22
Equities	**57**	48	31
Commodities and other	**32**	33	45
Diversification[e]	**(108)**	(77)	(70)
Total trading VaR[f]	**196**	107	84
Credit portfolio VaR[g]	**69**	17	15
Diversification[e]	**(63)**	(18)	(11)
Total trading and credit portfolio VaR	**$ 202**	$ 106	$ 88

(a) Nonperforming loans included loans held-for-sale and loans at fair value of $32 million, $50 million and $3 million at December 31, 2008, 2007 and 2006, respectively, which were excluded from the allowance coverage ratios. Nonperforming loans at December 31, 2006, excluded distressed loans held-for-sale that were purchased as part of IB's proprietary activities. As a result of the adoption of SFAS 159 in the first quarter of 2007, these loans were reclassified to trading assets.

(b) As a result of the adoption of SFAS 159 in the first quarter of 2007, $11.7 billion of loans were reclassified to trading assets.

(c) Loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratio and net charge-off (recovery) rate.

(d) Results for 2008 include seven months of the combined Firm's (JPMorgan Chase's and Bear Stearns') results and five months of heritage JPMorgan Chase results. All prior periods reflect heritage JPMorgan Chase results. For a more complete description of value-at-risk ("VaR"), see pages 112–115 of this Annual Report.

(e) Average VaRs were less than the sum of the VaRs of their market risk components, which was due to risk offsets resulting from portfolio diversification. The diversification effect reflected the fact that the risks were not perfectly correlated. The risk of a portfolio of positions is usually less than the sum of the risks of the positions themselves.

(f) Trading VaR includes predominantly all trading activities in IB; however, particular risk parameters of certain products are not fully captured, for example, correlation risk. Trading VaR does not include VaR related to held-for-sale funded loans and unfunded commitments, nor the debit valuation adjustments ("DVA") taken on derivative and structured liabilities to reflect the credit quality of the Firm. See the DVA Sensitivity table on page 115 of this Annual Report for further details. Trading VaR also does not include the MSR portfolio or VaR related to other corporate functions, such as Corporate/Private Equity. Beginning in the fourth quarter of 2008, trading VaR includes the estimated credit spread sensitivity of certain mortgage products.

(g) Included VaR on derivative credit valuation adjustments ("CVA"), hedges of the CVA and mark-to-market hedges of the retained loan portfolio, which were all reported in principal transactions revenue. This VaR does not include the retained loan portfolio.

(h) Excluding the impact of a loan originated in March 2008 to Bear Stearns, the adjusted ratio would be 4.84% for 2008. The average balance of the loan extended to Bear Stearns was $1.9 billion for 2008. The allowance for loan losses to period-end loans was 4.83% and 1.92% at December 31, 2008 and 2007, respectively.

Market shares and rankings[a]

	2008		2007		2006	
December 31,	Market share	Rankings	Market share	Rankings	Market share	Rankings
Global debt, equity and equity-related	**10%**	**#1**	8%	#2	7%	#2
Global syndicated loans	**12**	**1**	13	1	14	1
Global long-term debt[b]	**9**	**2**	7	3	6	3
Global equity and equity-related[c]	**12**	**1**	9	2	7	6
Global announced M&A[d]	**27**	**2**	27	4	26	4
U.S. debt, equity and equity-related	**16**	**1**	10	2	9	2
U.S. syndicated loans	**26**	**1**	24	1	26	1
U.S. long-term debt[b]	**15**	**1**	10	2	9	2
U.S. equity and equity-related[c]	**16**	**1**	11	5	8	6
U.S. announced M&A[d]	**33**	**3**	28	3	29	3

(a) Source: Thomson Reuters. The results for 2008 are pro forma for the Bear Stearns merger. The results for 2007 and 2006 represent heritage JPMorgan Chase only.

(b) Includes asset-backed securities, mortgage-backed securities and municipal securities.

(c) Includes rights offerings; U.S. domiciled equity and equity-related transactions.

(d) Global announced M&A is based upon rank value; all other rankings are based upon proceeds, with full credit to each book manager/equal if joint. Because of joint assignments, market share of all participants will add up to more than 100%. Global and U.S. announced M&A market share and rankings for 2007 and 2006 include transactions withdrawn since December 31, 2007 and 2006. U.S. announced M&A represents any U.S. involvement ranking.

According to Thomson Reuters, in 2008, the Firm improved its positions to #1 in Global Debt, Equity and Equity-related transactions and Global Equity and Equity-related transactions; and improved its position to #2 in Global Long-term Debt and Global Announced M&A. The Firm maintained its #1 position in Global Syndicated Loans.

According to Dealogic, the Firm was ranked #1 in Investment Banking fees generated during 2008, based upon revenue.

Retail Financial Services, which includes the Retail Banking and Consumer Lending reporting segments, serves consumers and businesses through multiple channels. Customers can use more than 5,400 bank branches (third-largest nationally), 14,500 ATMs (second-largest nationally) as well as online and mobile banking. More than 21,400 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. Consumers also can obtain loans through more than 16,000 auto dealerships and 4,800 schools and universities nationwide.

On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual from the FDIC for $1.9 billion through a purchase of substantially all of the assets and assumption of specified liabilities of Washington Mutual. Washington Mutual's banking operations consisted of a retail bank network of 2,244 branches, a nationwide credit card lending business, a multi-family and commercial real estate lending business, and nationwide mortgage banking activities. The transaction expanded the Firm's U.S. consumer branch network in California, Florida, Washington, Georgia, Idaho, Nevada and Oregon and created the nation's third-largest branch network.

During the first quarter of 2006, RFS completed the purchase of Collegiate Funding Services, which contributed a student loan servicing capability and provided an entry into the Federal Family Education Loan Program consolidation market. On July 1, 2006, RFS sold its life insurance and annuity underwriting businesses to Protective Life Corporation. On October 1, 2006, JPMorgan Chase completed the Bank of New York transaction, significantly strengthening RFS' distribution network in the New York tri-state area.

Selected income statement data

Year ended December 31, (in millions)	2008	2007	2006
Revenue			
Lending & deposit-related fees	**$ 2,546**	$ 1,881	$ 1,597
Asset management, administration and commissions	**1,510**	1,275	1,422
Securities gains (losses)	**—**	1	(57)
Mortgage fees and related income[a]	**3,621**	2,094	618
Credit card income	**939**	646	523
Other income	**739**	882	557
Noninterest revenue	**9,355**	6,779	4,660
Net interest income	**14,165**	10,526	10,165
Total net revenue	**23,520**	17,305	14,825
Provision for credit losses	**9,905**	2,610	561
Noninterest expense			
Compensation expense[a]	**5,068**	4,369	3,657
Noncompensation expense[a]	**6,612**	5,071	4,806
Amortization of intangibles	**397**	465	464
Total noninterest expense	**12,077**	9,905	8,927
Income before income tax expense	**1,538**	4,790	5,337
Income tax expense	**658**	1,865	2,124
Net income	**$ 880**	$ 2,925	$ 3,213
Financial ratios			
ROE	**5%**	18%	22%
Overhead ratio	**51**	57	60
Overhead ratio excluding core deposit intangibles[b]	**50**	55	57

(a) The Firm adopted SFAS 159 in the first quarter of 2007. As a result, beginning in the first quarter of 2007, certain loan-origination costs have been classified as expense.

(b) Retail Financial Services uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation results in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would result in an improving overhead ratio over time, all things remaining equal. This non-GAAP ratio excludes Retail Banking's core deposit intangible amortization expense related to the Bank of New York transaction and the Bank One merger of $394 million, $460 million and $458 million for the years ended December 31, 2008, 2007 and 2006, respectively.

2008 compared with 2007

Net income was $880 million, a decrease of $2.0 billion, or 70%, from the prior year, as a significant increase in the provision for credit losses was partially offset by positive MSR risk management results and the positive impact of the Washington Mutual transaction.

Total net revenue was $23.5 billion, an increase of $6.2 billion, or 36%, from the prior year. Net interest income was $14.2 billion, up $3.6 billion, or 35%, benefiting from the Washington Mutual transaction, wider loan and deposit spreads, and higher loan and deposit balances. Noninterest revenue was $9.4 billion, up $2.6 billion, or 38%, as positive MSR risk management results, the impact of the Washington Mutual transaction, higher mortgage origination volume and higher deposit-related fees were partially offset by an increase in reserves related to the repurchase of previously sold loans and markdowns on the mortgage warehouse.

The provision for credit losses was $9.9 billion, an increase of $7.3 billion from the prior year. Delinquency rates have increased due to overall weak economic conditions, while housing price declines have continued to drive increased loss severities, particularly for high loan-to-value home equity and mortgage loans. The provision includes $4.7 billion in additions to the allowance for loan losses for the heritage Chase home equity and mortgage portfolios. Home equity net charge-offs were $2.4 billion (2.23% net charge-off rate; 2.39% excluding purchased credit-impaired loans), compared with $564 million (0.62% net charge-off rate) in the prior year. Subprime mortgage net charge-offs were $933 million (5.49% net charge-off rate; 6.10% excluding purchased credit-impaired loans), compared with $157 million (1.55% net charge-off rate) in the prior year. Prime mortgage net charge-offs were $526 million (1.05% net charge-off rate; 1.18% excluding purchased credit-impaired loans), compared with $33 million (0.13% net charge-off rate) in the prior year. The provision for credit losses was also affected by an increase in estimated losses for the auto, student and business banking loan portfolios.

Total noninterest expense was $12.1 billion, an increase of $2.2 billion, or 22%, from the prior year, reflecting the impact of the Washington Mutual transaction, higher mortgage reinsurance losses, higher mortgage servicing expense and investments in the retail distribution network.

2007 compared with 2006

Net income was $2.9 billion, a decrease of $288 million, or 9%, from the prior year, as a decline in Consumer Lending was offset partially by improved results in Retail Banking.

Total net revenue was $17.3 billion, an increase of $2.5 billion, or 17%, from the prior year. Net interest income was $10.5 billion, up $361 million, or 4%, due to the Bank of New York transaction, wider loan spreads and higher deposit balances. These benefits were offset partially by the sale of the insurance business and a shift to narrower–spread deposit products. Noninterest revenue was $6.8 billion, up $2.1 billion, benefiting from positive MSR risk management results; an increase in deposit-related fees; and the absence of a prior-year $233 million loss related to $13.3 billion of mortgage loans transferred to held-for-sale. Noninterest revenue also benefited from the classification of certain mortgage loan origination costs as expense (loan origination costs previously netted against revenue commenced being recorded as an expense in the first quarter of 2007 due to the adoption of SFAS 159).

The provision for credit losses was $2.6 billion, compared with $561 million in the prior year. The current year provision includes a net increase of $1.0 billion in the allowance for loan losses related to home equity loans as continued weak housing prices have resulted in an increase in estimated losses for high loan-to-value loans. Home equity net charge-offs were $564 million (0.62% net charge-off rate), compared with $143 million (0.18% net charge-off rate) in the prior year. In addition, the current-year provision includes a $166 million increase in the allowance for loan losses related to subprime mortgage loans, reflecting an increase in estimated losses and growth in the portfolio. Subprime mortgage net charge-offs were $157 million (1.55% net charge-off rate), compared with $47 million (0.34% net charge-off rate) in the prior year.

Total noninterest expense was $9.9 billion, an increase of $978 million, or 11%, from the prior year due to the Bank of New York transaction; the classification of certain loan origination costs as expense due to the adoption of SFAS 159; investments in the retail distribution network; and higher mortgage production and servicing expense. These increases were offset partially by the sale of the insurance business.

Selected metrics

Year ended December 31, (in millions, except headcount and ratios)	**2008**	2007	2006
Selected balance sheet data – period-end			
Assets	**$419,831**	$256,351	$237,887
Loans:			
Loans retained	**368,786**	211,324	180,760
Loans held-for-sale and loans at fair value[a]	**9,996**	16,541	32,744
Total loans	**378,782**	227,865	213,504
Deposits	**360,451**	221,129	214,081
Equity	**25,000**	16,000	16,000
Selected balance sheet data (average)			
Assets	**$304,442**	$241,112	$231,566
Loans:			
Loans retained	**257,083**	191,645	187,753
Loans held-for-sale and loans at fair value[a]	**17,056**	22,587	16,129
Total loans	**274,139**	214,232	203,882
Deposits	**258,362**	218,062	201,127
Equity	**19,011**	16,000	14,629
Headcount	**102,007**	69,465	65,570
Credit data and quality statistics			
Net charge-offs	**$ 4,877**	$ 1,350	$ 576
Nonperforming loans[b][c][d][e]	**6,784**	2,828	1,677
Nonperforming assets[b][c][d][e]	**9,077**	3,378	1,902
Allowance for loan losses	**8,918**	2,668	1,392
Net charge-off rate[f]	**1.90%**	0.70%	0.31%
Net charge-off rate excluding credit-impaired loans[f][g]	**2.08**	0.70	0.31
Allowance for loan losses to ending loans[f]	**2.42**	1.26	0.77
Allowance for loan losses to ending loans excluding purchased credit-impaired loans[f][g]	**3.19**	1.26	0.77
Allowance for loan losses to nonperforming loans[f]	**136**	97	89
Nonperforming loans to total loans	**1.79**	1.24	0.79

(a) Loans included prime mortgage loans originated with the intent to sell, which, for new originations on or after January 1, 2007, were accounted for at fair value under SFAS 159. These loans, classified as trading assets on the Consolidated Balance Sheets, totaled $8.0 billion and $12.6 billion at December 31, 2008 and 2007, respectively. Average loans included prime mortgage loans, classified as trading assets on the Consolidated Balance Sheets, of $14.2 billion and $11.9 billion for the years ended December 31, 2008 and 2007, respectively.

(b) Excludes purchased credit-impaired loans accounted for under SOP 03-3 that were acquired as part of the Washington Mutual transaction. These loans were accounted for on a pool basis and the pools are considered to be performing under SOP 03-3.

(c) Nonperforming loans and assets included loans held-for-sale and loans accounted for at fair value of $236 million, $69 million and $116 million at December 31, 2008, 2007 and 2006, respectively. Certain of these loans are classified as trading assets on the Consolidated Balance Sheets.

(d) Nonperforming loans and assets excluded (1) loans eligible for repurchase as well as loans repurchased from Government National Mortgage Association ("GNMA") pools that are insured by U.S. government agencies of $3.3 billion, $1.5 billion and $1.2 billion at December 31, 2008, 2007 and 2006, respectively, and (2) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $437 million, $417 million and $387 million at December 31, 2008, 2007 and 2006, respectively. These amounts were excluded, as reimbursement is proceeding normally.

(e) During the second quarter of 2008, the policy for classifying subprime mortgage and home equity loans as nonperforming was changed to conform to all other home lending products. Amounts for 2007 have been revised to reflect this change. Amounts for 2006 have not been revised as the impact was not material.
(f) Loans held-for-sale and loans accounted for at fair value were excluded when calculating the allowance coverage ratio and the net charge-off rate.
(g) Excludes the impact of purchased credit-impaired loans accounted for under SOP 03-3 that were acquired as part of the Washington Mutual transaction at December 31, 2008. These loans were accounted for at fair value on the acquisition date, which included the impact of credit losses over the remaining life of the portfolio. Accordingly, no allowance for loan losses has been recorded for these loans.

Retail Banking

Selected income statement data

Year ended December 31, (in millions, except ratios)	2008	2007	2006
Noninterest revenue	**$ 4,951**	$ 3,763	$ 3,259
Net interest income	**7,659**	6,193	5,698
Total net revenue	**12,610**	9,956	8,957
Provision for credit losses	**449**	79	114
Noninterest expense	**7,232**	6,166	5,667
Income before income tax expense	**4,929**	3,711	3,176
Net income	**$ 2,982**	$ 2,245	$ 1,922
Overhead ratio	**57%**	62%	63%
Overhead ratio excluding core deposit intangibles[a]	**54**	57	58

(a) Retail Banking uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation results in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would result in an improving overhead ratio over time, all things remaining equal. This ratio excludes Retail Banking's core deposit intangible amortization expense related to the Bank of New York transaction and the Bank One merger of $394 million, $460 million and $458 million for the years ended December 31, 2008, 2007 and 2006, respectively.

2008 compared with 2007

Retail Banking net income was $3.0 billion, up $737 million, or 33%, from the prior year. Total net revenue was $12.6 billion, up $2.7 billion, or 27%, reflecting the impact of the Washington Mutual transaction, wider deposit spreads, higher deposit-related fees, and higher deposit balances. The provision for credit losses was $449 million, compared with $79 million in the prior year, reflecting an increase in the allowance for loan losses for Business Banking loans due to higher estimated losses on the portfolio. Noninterest expense was $7.2 billion, up $1.1 billion, or 17%, from the prior year, due to the Washington Mutual transaction and investments in the retail distribution network.

2007 compared with 2006

Retail Banking net income was $2.2 billion, an increase of $323 million, or 17%, from the prior year. Total net revenue was $10.0 billion, up $1.0 billion, or 11%, benefiting from the following: the Bank of New York transaction; increased deposit-related fees; and growth in deposits. These benefits were offset partially by a shift to narrower-spread deposit products. The provision for credit losses was $79 million, compared with $114 million in the prior year. Noninterest expense was $6.2 billion, up $499 million, or 9%, from the prior year, driven by the Bank of New York transaction and investments in the retail distribution network.

Selected metrics

Year ended December 31, (in billions, except ratios and where otherwise noted)	2008	2007	2006
Business metrics			
Selected ending balances			
Business banking origination volume	**$ 5.5**	$ 6.9	$ 5.7
End-of-period loans owned	**18.4**	15.6	14.0
End-of-period deposits			
Checking	**$ 109.2**	$ 66.9	$ 67.1
Savings	**144.0**	96.0	91.5
Time and other	**89.1**	48.6	43.2
Total end-of-period deposits	**342.3**	211.5	201.8
Average loans owned	**$ 16.7**	$ 14.9	$ 13.4
Average deposits			
Checking	**$ 77.1**	$ 65.8	$ 62.7
Savings	**114.3**	97.1	89.7
Time and other	**53.2**	43.8	37.5
Total average deposits	**244.6**	206.7	189.9
Deposit margin	**2.89%**	2.72%	2.74%
Average assets	**$ 26.3**	$ 25.0	$ 20.5
Credit data and quality statistics (in millions, except ratio)			
Net charge-offs	**$ 346**	$ 163	$ 114
Net charge-off rate	**2.07%**	1.09%	0.85%
Nonperforming assets	**$ 424**	$ 294	$ 244

Retail branch business metrics

Year ended december 31,	2008	2007	2006
Investment sales volume (in millions)	**$17,640**	$18,360	$14,882
Number of:			
Branches	**5,474**	3,152	3,079
ATMs	**14,568**	9,186	8,506
Personal bankers[a]	**15,825**	9,650	7,573
Sales specialists[a]	**5,661**	4,105	3,614
Active online customers (in thousands)	**11,710**	5,918	4,909
Checking accounts (in thousands)	**24,499**	10,839	9,995

(a) Employees acquired as part of the Bank of New York transaction are included beginning in 2007.

Consumer Lending

Selected income statement data

Year ended December 31, (in millions, except ratio)	2008	2007	2006
Noninterest revenue	**$ 4,404**	$ 3,016	$ 1,401
Net interest income	**6,506**	4,333	4,467
Total net revenue	**10,910**	7,349	5,868
Provision for credit losses	**9,456**	2,531	447
Noninterest expense	**4,845**	3,739	3,260
Income (loss) before income tax expense	**(3,391)**	1,079	2,161
Net income (loss)	**$ (2,102)**	$ 680	$ 1,291
Overhead ratio	**44%**	51%	56%

2008 compared with 2007

Consumer Lending net loss was $2.1 billion, compared with net income of $680 million in the prior year. Total net revenue was $10.9 billion, up $3.6 billion, or 48%, driven by higher mortgage fees and related income (due primarily to positive MSR risk management results), the impact of the Washington Mutual transaction, higher loan balances and wider loan spreads.

The increase in mortgage fees and related income was primarily driven by higher net mortgage servicing revenue. Mortgage production revenue of $898 million was up $18 million, as higher mortgage origination volume was predominantly offset by an increase in reserves related to the repurchase of previously sold loans and markdowns of the mortgage warehouse. Net mortgage servicing revenue (which includes loan servicing revenue, MSR risk management results and other changes in fair value) was $2.7 billion, an increase of $1.5 billion, or 124%, from the prior year. Loan servicing revenue was $3.3 billion, an increase of $924 million. Third-party loans serviced increased 91%, primarily due to the Washington Mutual transaction. MSR risk management results were $1.5 billion, compared with $411 million in the prior year. Other changes in fair value of the MSR asset were negative $2.1 billion, compared with negative $1.5 billion in the prior year.

The provision for credit losses was $9.5 billion, compared with $2.5 billion in the prior year. The provision reflected weakness in the home equity and mortgage portfolios (see Retail Financial Services discussion of the provision for credit losses for further detail).

Noninterest expense was $4.8 billion, up $1.1 billion, or 30%, from the prior year, reflecting higher mortgage reinsurance losses, the impact of the Washington Mutual transaction and higher servicing expense due to increased delinquencies and defaults.

2007 compared with 2006

Consumer Lending net income was $680 million, a decrease of $611 million, or 47%, from the prior year. Total net revenue was $7.3 billion, up $1.5 billion, or 25%, benefiting from positive MSR risk management results, increased mortgage production revenue, wider loan spreads and the absence of a prior-year $233 million loss related to $13.3 billion of mortgage loans transferred to held-for-sale. These benefits were offset partially by the sale of the insurance business.

Mortgage production revenue was $880 million, up $576 million, reflecting the impact of an increase in mortgage loan originations and the classification of certain loan origination costs as expense (loan origination costs previously netted against revenue commenced being recorded as an expense in the first quarter of 2007 due to the adoption of SFAS 159). These benefits were offset partially by markdowns of $241 million on the mortgage warehouse and pipeline. Net mortgage servicing revenue, which includes loan servicing revenue, MSR risk management results and other changes in fair value, was $1.2 billion, compared with $314 million in the prior year. Loan servicing revenue of $2.3 billion increased $195 million on 17% growth in third-party loans serviced. MSR risk management results were positive $411 million compared with negative $385 million in the prior year. Other changes in fair value of the MSR asset were negative $1.5 billion, compared with negative $1.4 billion in the prior year.

The provision for credit losses was $2.5 billion, compared with $447 million in the prior year. The increase in the provision was due to the home equity and subprime mortgage portfolios (see Retail Financial Services discussion of the provision for credit losses for further detail).

Noninterest expense was $3.7 billion, an increase of $479 million, or 15%. The increase reflected the classification of certain loan origination costs due to the adoption of SFAS 159; higher servicing costs due to increased delinquencies and defaults; higher production expense due to growth in originations; and increased depreciation expense on owned automobiles subject to operating leases. These increases were offset partially by the sale of the insurance business.

Selected metrics

Year ended December 31, (in billions)	2008	2007	2006
Business metrics			
Selected ending balances			
Loans excluding purchased credit-impaired			
End-of-period loans owned			
Home equity	**$ 114.3**	$ 94.8	$ 85.7
Prime mortgage	**65.2**	34.0	46.5
Subprime mortgage	**15.3**	15.5	13.2
Option ARMs	**9.0**	—	—
Student loans	**15.9**	11.0	10.3
Auto	**42.6**	42.3	41.0
Other	**1.3**	2.1	2.8
Total end-of-period loans	**$ 263.6**	$ 199.7	$ 199.5
Average loans owned			
Home equity	**$ 99.9**	$ 90.4	$ 78.3
Prime mortgage	**45.0**	30.4	43.3
Subprime mortgage	**15.3**	12.7	15.4
Option ARMs	**2.3**	—	—
Student loans	**13.6**	10.5	8.3
Auto	**43.8**	41.1	42.7
Other loans	**1.1**	2.3	2.4
Total average loans	**$ 221.0**	$ 187.4	$ 190.4

Year ended December 31, (in billions)	2008	2007	2006
Purchased credit-impaired loans[a]			
End-of-period loans owned			
Home equity	**$ 28.6**	$ —	$ —
Prime mortgage	**21.8**	—	—
Subprime mortgage	**6.8**	—	—
Option ARMs	**31.6**	—	—
Total end-of-period loans	**$ 88.8**	$ —	$ —
Average loans owned			
Home equity	**$ 7.1**	$ —	$ —
Prime mortgage	**5.4**	—	—
Subprime mortgage	**1.7**	—	—
Option ARMs	**8.0**	—	—
Total average loans	**$ 22.2**	$ —	$ —

Year ended December 31, (in billions)	2008	2007	2006
Total consumer lending portfolio			
End-of-period loans owned			
Home equity	**$ 142.9**	$ 94.8	$ 85.7
Prime mortgage	**87.0**	34.0	46.5
Subprime mortgage	**22.1**	15.5	13.2
Option ARMs	**40.6**	—	—
Student loans	**15.9**	11.0	10.3
Auto loans	**42.6**	42.3	41.0
Other	**1.3**	2.1	2.8
Total end-of-period loans	**$ 352.4**	$ 199.7	$ 199.5
Average loans owned			
Home equity	**$ 107.0**	$ 90.4	$ 78.3
Prime mortgage	**50.4**	30.4	43.3
Subprime mortgage	**17.0**	12.7	15.4
Option ARMs	**10.3**	—	—
Student loans	**13.6**	10.5	8.3
Auto loans	**43.8**	41.1	42.7
Other	**1.1**	2.3	2.4
Total average loans owned[(b)]	**$ 243.2**	$ 187.4	$ 190.4

(a) Purchased credit-impaired loans represent loans acquired in the Washington Mutual transaction that are accounted for under SOP 03-3.
(b) Total average loans owned includes loans held-for-sale of $2.8 billion, $10.6 billion and $16.1 billion for the years ended December 31, 2008, 2007 and 2006, respectively.

Credit data and quality statistics

(in millions, except ratios)	2008	2007	2006
Net charge-offs excluding purchased credit-impaired[(a)]			
Home equity	**$ 2,391**	$ 564	$ 143
Prime mortgage	**526**	33	9
Subprime mortgage	**933**	157	47
Option ARMs	**—**	—	—
Auto loans	**568**	354	238
Other	**113**	79	25
Total net charge-offs	**$ 4,531**	1,187	462
Net charge-off rate excluding purchased credit-impaired[(a)]			
Home equity	**2.39%**	0.62%	0.18%
Prime mortgage	**1.18**	0.13	0.03
Subprime mortgage	**6.10**	1.55	0.34
Option ARMs	**—**	—	—
Auto loans	**1.30**	0.86	0.56
Other	**0.93**	0.88	0.31
Total net charge-off rate excluding purchased credit-impaired[(b)]	**2.08**	0.67	0.27
Net charge-off rate – reported			
Home equity	**2.23%**	0.62%	0.18%
Prime mortgage	**1.05**	0.13	0.03
Subprime mortgage	**5.49**	1.55	0.34
Option ARMs	**—**	—	—
Auto loans	**1.30**	0.86	0.56
Other	**0.93**	0.88	0.31
Total net charge-off rate[(b)]	**1.89**	0.67	0.27
30+ day delinquency rate excluding purchased credit-impaired[(c)(d)(e)]	**4.21%**	3.10%	1.80%
Nonperforming assets[(f)(g)(h)]	**$ 8,653**	$ 3,084	$ 1,658
Allowance for loan losses to ending loans	**2.36%**	1.24%	0.64%
Allowance for loan losses to ending loans excluding purchased credit-impaired loans[(a)]	**3.16**	1.24	0.64

(a) Excludes the impact of purchased credit-impaired loans accounted for under SOP 03-3 that were acquired as part of the Washington Mutual transaction. Under SOP 03-3, these loans were accounted for at fair value on the acquisition date, which includes the impact of estimated credit losses over the remaining lives of the loans. Accordingly, no charge-offs and no allowance for loan losses has been recorded for these loans.
(b) Average loans included loans held-for-sale of $2.8 billion, $10.6 billion and $16.1 billion for the years ended December 31, 2008, 2007 and 2006, respectively. These amounts were excluded when calculating the net charge-off rate.
(c) Excluded loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by U.S. government agencies of $3.2 billion, $1.2 billion and $960 million, at December 31, 2008, 2007 and 2006, respectively. These amounts were excluded, as reimbursement is proceeding normally.
(d) Excluded loans that are 30 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $824 million, $663 million and $464 million at December 31, 2008, 2007 and 2006, respectively. These amounts are excluded as reimbursement is proceeding normally.
(e) Excludes purchased credit-impaired loans. The 30+ day delinquency rate for these loans was 17.89% at December 31, 2008. There were no purchased credit-impaired loans at December 31, 2007 and 2006.
(f) Nonperforming assets excluded (1) loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by U.S. government agencies of $3.3 billion, $1.5 billion and $1.2 billion at December 31, 2008, 2007 and 2006, respectively, and (2) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $437 million, $417 million and $387 million at December 31, 2008, 2007 and 2006, respectively. These amounts for GNMA and student loans are excluded, as reimbursement is proceeding normally.
(g) During the second quarter of 2008, the policy for classifying subprime mortgage and home equity loans as nonperforming was changed to conform to all other home lending products. Amounts for 2007 have been revised to reflect this change. Amounts for 2006 have not been revised as the impact was not material.
(h) Excludes purchased credit-impaired loans accounted for under SOP 03-3 that were acquired as part of the Washington Mutual transaction. These loans are accounted for on a pool basis, and the pools are considered to be performing under SOP 03-3.

Consumer Lending (continued) (in billions, except ratios and where otherwise noted)	2008	2007	2006
Origination volume			
Mortgage origination volume by channel			
Retail	**$ 41.1**	$ 45.5	$ 40.5
Wholesale	**29.4**	42.7	32.8
Correspondent	**55.5**	27.9	13.3
CNT (negotiated transactions)	**43.0**	43.3	32.6
Total mortgage origination volume	**169.0**	159.4	119.2
Home equity	**16.3**	48.3	51.9
Student loans	**6.9**	7.0	8.1
Auto	**19.4**	21.3	19.3
Avg. mortgage loans held-for-sale and loans at fair value[(a)]	**14.6**	18.8	12.9
Average assets	**278.1**	216.1	211.1
Third-party mortgage loans serviced (ending)	**1,172.6**	614.7	526.7
MSR net carrying value (ending)	**9.3**	8.6	7.5
Supplemental mortgage fees and related income details (in millions)			
Production revenue	**$ 898**	$ 880	$ 304
Net mortgage servicing revenue:			
Loan servicing revenue	**3,258**	2,334	2,139
Changes in MSR asset fair value:			
Due to inputs or assumptions in model	**(6,849)**	(516)	165
Other changes in fair value	**(2,052)**	(1,531)	(1,440)
Total changes in MSR asset fair value	**(8,901)**	(2,047)	(1,275)
Derivative valuation adjustments and other	**8,366**	927	(550)
Total net mortgage servicing revenue	**2,723**	1,214	314
Mortgage fees and related income	**3,621**	2,094	618

(a) Included $14.2 billion and $11.9 billion of prime mortgage loans at fair value for the years ended December 31, 2008 and 2007, respectively.

Mortgage origination channels comprise the following:

Retail – Borrowers who are buying or refinancing a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by real estate brokers, home builders or other third parties.

Wholesale – A third-party mortgage broker refers loan applications to a mortgage banker at the Firm. Brokers are independent loan originators that specialize in finding and counseling borrowers but do not provide funding for loans.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Correspondent negotiated transactions ("CNT") – Mid-to large-sized mortgage lenders, banks and bank-owned companies that sell loans or servicing to the Firm on an as-originated basis, excluding bulk servicing transactions.

Production revenue – Includes net gains or losses on originations and sales of prime and subprime mortgage loans and other production-related fees.

Net mortgage servicing revenue components: Servicing revenue – Represents all gross income earned from servicing third-party mortgage loans, including stated service fees, excess service fees, late fees and other ancillary fees.

Changes in MSR asset fair value due to inputs or assumptions in model – Represents MSR asset fair value adjustments due to changes in market-based inputs, such as interest rates and volatility, as well as updates to valuation assumptions used in the valuation model.

Changes in MSR asset fair value due to other changes – Includes changes in the MSR value due to modeled servicing portfolio runoff (or time decay).

Derivative valuation adjustments and other – Changes in the fair value of derivative instruments used to offset the impact of changes in market-based inputs to the MSR valuation model.

MSR risk management results – Includes changes in MSR asset fair value due to inputs or assumptions and derivative valuation adjustments and other.

Chase Card Services is one of the nation's largest card issuers with more than 168 million credit cards in circulation and more than $190 billion in managed loans. Customers used Chase cards to meet more than $368 billion worth of their spending needs in 2008. Chase has a market leadership position in building loyalty and rewards programs with many of the world's most respected brands and through its proprietary products, which include the Chase Freedom program.

Through its merchant acquiring business, Chase Paymentech Solutions, Chase is one of the leading processors of MasterCard and Visa payments.

JPMorgan Chase uses the concept of "managed basis" to evaluate the credit performance of its credit card loans, both loans on the balance sheet and loans that have been securitized. For further information, see Explanation and reconciliation of the Firm's use of non-GAAP financial measures on pages 50–51 of this Annual Report. Managed results exclude the impact of credit card securitizations on total net revenue, the provision for credit losses, net charge-offs and loan receivables. Securitization does not change reported net income; however, it does affect the classification of items on the Consolidated Statements of Income and Consolidated Balance Sheets.

The following discussion of CS' financial results reflects the acquisition of Washington Mutual's credit card operations, including $28.3 billion of managed credit card loans, as a result of the Washington Mutual transaction on September 25, 2008, and the dissolution of the Chase Paymentech Solutions joint venture on November 1, 2008. See Note 2 on pages 135–140 of this Annual Report for more information concerning these transactions.

Selected income statement data – managed basis

Year ended December 31, (in millions, except ratios)	2008	2007	2006
Revenue			
Credit card income	**$ 2,768**	$ 2,685	$ 2,587
All other income	**(49)**	361	357
Noninterest revenue	**2,719**	3,046	2,944
Net interest income	**13,755**	12,189	11,801
Total net revenue	**16,474**	15,235	14,745
Provision for credit losses	**10,059**	5,711	4,598
Noninterest expense			
Compensation expense	**1,127**	1,021	1,003
Noncompensation expense	**3,356**	3,173	3,344
Amortization of intangibles	**657**	720	739
Total noninterest expense	**5,140**	4,914	5,086
Income before income tax expense	**1,275**	4,610	5,061
Income tax expense	**495**	1,691	1,855
Net income	**$ 780**	$ 2,919	$ 3,206
Memo: Net securitization gains (amortization)	**$ (183)**	$ 67	$ 82
Financial ratios			
ROE	**5%**	21%	23%
Overhead ratio	**31**	32	34

2008 compared with 2007

Net income was $780 million, a decline of $2.1 billion, or 73%, from the prior year. The decrease was driven by a higher provision for credit losses, partially offset by higher total net revenue.

Average managed loans were $162.9 billion, an increase of $13.5 billion, or 9%, from the prior year. Excluding Washington Mutual, average managed loans were $155.9 billion. End-of-period managed loans were $190.3 billion, an increase of $33.3 billion, or 21%, from the prior year. Excluding Washington Mutual, end-of-period managed loans were $162.1 billion. The increases in both average managed loans and end-of-period managed loans were predominantly due to the impact of the Washington Mutual transaction and organic portfolio growth.

Managed total net revenue was $16.5 billion, an increase of $1.2 billion, or 8%, from the prior year. Net interest income was $13.8 billion, up $1.6 billion, or 13%, from the prior year, driven by the Washington Mutual transaction, higher average managed loan balances, and wider loan spreads. These benefits were offset partially by the effect of higher revenue reversals associated with higher charge-offs. Noninterest revenue was $2.7 billion, a decrease of $327 million, or 11%, from the prior year, driven by increased rewards expense, lower securitization income driven by higher credit losses, and higher volume-driven payments to partners; these were largely offset by increased interchange income, benefiting from a 4% increase in charge volume, as well as the impact of the Washington Mutual transaction.

The managed provision for credit losses was $10.1 billion, an increase of $4.3 billion, or 76%, from the prior year, due to an increase of $1.7 billion in the allowance for loan losses and a higher level of charge-offs. The managed net charge-off rate increased to 5.01%, up from 3.68% in the prior year. The 30-day managed delinquency rate was 4.97%, up from 3.48% in the prior year. Excluding Washington Mutual, the managed net charge-off rate was 4.92% and the 30-day delinquency rate was 4.36%.

Noninterest expense was $5.1 billion, an increase of $226 million, or 5%, from the prior year, predominantly due to the impact of the Washington Mutual transaction.

2007 compared with 2006

Net income of $2.9 billion was down $287 million, or 9%, from the prior year. Prior-year results benefited from significantly lower net charge-offs following the change in bankruptcy legislation in the fourth quarter of 2005. The increase in net charge-offs was offset partially by higher revenue.

End-of-period managed loans of $157.1 billion increased $4.2 billion, or 3%, from the prior year. Average managed loans of $149.3 billion increased $8.2 billion, or 6%, from the prior year. The increases in both end-of-period and average managed loans resulted from organic growth.

Managed total net revenue was $15.2 billion, an increase of $490 million, or 3%, from the prior year. Net interest income was $12.2 billion, up $388 million, or 3%, from the prior year. The increase in net interest income was driven by a higher level of fees and higher average loan balances. These benefits were offset partially by narrower loan spreads, the discontinuation of certain billing practices (including the elimination of certain over-limit fees and the two-cycle billing method for calculating finance charges beginning in the second quarter of 2007) and the effect of higher revenue reversals associated with higher charge-offs. Noninterest revenue was $3.0 billion, an increase of $102 million, or 3%, from the prior year. The increase reflected a higher level of fee-based revenue and increased net interchange income, which benefited from higher charge volume. Charge volume growth was 4%, reflecting a 9% increase in sales volume, offset primarily by a lower level of balance transfers, the result of more targeted marketing efforts.

The managed provision for credit losses was $5.7 billion, an increase of $1.1 billion, or 24%, from the prior year. The increase was primarily due to a higher level of net charge-offs (the prior year benefited from the change in bankruptcy legislation in the fourth quarter of 2005) and an increase in the allowance for loan losses, driven by higher estimated net charge-offs in the portfolio. The managed net charge-off rate was 3.68%, up from 3.33% in the prior year. The 30-day managed delinquency rate was 3.48%, up from 3.13% in the prior year.

Noninterest expense was $4.9 billion, a decrease of $172 million, or 3%, compared with the prior year, primarily due to lower marketing expense and lower fraud-related expense, partially offset by higher volume-related expense.

The following are brief descriptions of selected business metrics within Card Services.

- **Charge volume** – Represents the dollar amount of cardmember purchases, balance transfers and cash advance activity.
- **Net accounts opened** – Includes originations, purchases and sales.
- **Merchant acquiring business** – Represents a business that processes bank card transactions for merchants.
  - –**Bank card volume** – Represents the dollar amount of transactions processed for merchants.
  - –**Total transactions** – Represents the number of transactions and authorizations processed for merchants.

Selected metrics

Year ended December 31, (in millions, except headcount, ratios and where otherwise noted)	2008	2007	2006
Financial metrics			
% of average managed outstandings:			
Net interest income	**8.45%**	8.16%	8.36%
Provision for credit losses	**6.18**	3.82	3.26
Noninterest revenue	**1.67**	2.04	2.09
Risk adjusted margin[a]	**3.94**	6.38	7.19
Noninterest expense	**3.16**	3.29	3.60
Pretax income (ROO)[b]	**0.78**	3.09	3.59
Net income	**0.48**	1.95	2.27
Business metrics			
Charge volume (in billions)	**$ 368.9**	$ 354.6	$ 339.6
Net accounts opened (in millions)[c]	**27.9**	16.4	45.9
Credit cards issued (in millions)	**168.7**	155.0	154.4
Number of registered Internet customers (in millions)	**35.6**	28.3	22.5
Merchant acquiring business[d]			
Bank card volume (in billions)	**$ 713.9**	$ 719.1	$ 660.6
Total transactions (in billions)	**21.4**	19.7	18.2
Selected balance sheet data (period-end)			
Loans:			
Loans on balance sheets	**$ 104,746**	$ 84,352	$ 85,881
Securitized loans	**85,571**	72,701	66,950
Managed loans	**$ 190,317**	$ 157,053	$152,831
Equity	**$ 15,000**	$ 14,100	$ 14,100
Selected balance sheet data (average)			
Managed assets	**$ 173,711**	$ 155,957	$148,153
Loans:			
Loans on balance sheets	**$ 83,293**	$ 79,980	$ 73,740
Securitized loans	**79,566**	69,338	67,367
Managed average loans	**$ 162,859**	$ 149,318	$141,107
Equity	**$ 14,326**	$ 14,100	$ 14,100
Headcount	**24,025**	18,554	18,639
Managed credit quality statistics			
Net charge-offs	**$ 8,159**	$ 5,496	$ 4,698
Net charge-off rate[e]	**5.01%**	3.68%	3.33%
Managed delinquency ratios			
30+ day[e]	**4.97%**	3.48%	3.13%
90+ day[e]	**2.34**	1.65	1.50
Allowance for loan losses[f][i]	**$ 7,692**	$ 3,407	$ 3,176
Allowance for loan losses to period-end loans[f]	**7.34%**	4.04%	3.70%
Key stats – Washington Mutual only[g]			
Managed loans	**$ 28,250**		
Managed average loans	**6,964**		
Net interest income[h]	**14.87%**		
Risk adjusted margin[a][h]	**4.18**		
Net charge-off rate[e]	**7.11**		
30+ day delinquency rate[e]	**8.50**		
90+ day delinquency rate[e]	**3.75**		

Year ended December 31, (in millions, except headcount, ratios and where otherwise noted)	2008	2007	2006
Key stats – excluding Washington Mutual			
Managed loans	**$162,067**	$ 157,053	$152,831
Managed average loans	**155,895**	149,318	141,107
Net interest income[h]	**8.16%**	8.16%	8.36%
Risk adjusted margin[a][h]	**3.93**	6.38	7.19
Net charge-off rate	**4.92**	3.68	3.33
30+ day delinquency rate	**4.36**	3.48	3.13
90+ day delinquency rate	**2.09**	1.65	1.50

(a) Represents total net revenue less provision for credit losses.
(b) Pretax return on average managed outstandings.
(c) Results for 2008 included approximately 13 million credit card accounts acquired in the Washington Mutual transaction. Results for 2006 included approximately 30 million accounts from loan portfolio acquisitions.
(d) The Chase Paymentech Solutions joint venture was dissolved effective November 1, 2008. For the period January 1, 2008 through October 31, 2008, the data presented represent activity for the Chase Paymentech Solutions joint venture and for the period November 1, 2008 through December 31, 2008, the data presented represent activity for Chase Paymentech Solutions.
(e) Results for 2008 reflect the impact of purchase accounting adjustments related to the Washington Mutual transaction.
(f) Based on loans on a reported basis.
(g) Statistics are only presented for periods after September 25, 2008, the date of the Washington Mutual transaction.
(h) As a percentage of average managed outstandings.
(i) The 2008 allowance for loan losses included an amount related to loans acquired in the Washington Mutual transaction.

The financial information presented below reconciles reported basis and managed basis to disclose the effect of securitizations.

Year ended December 31, (in millions)	2008	2007	2006
Income statement data[a]			
Credit card income			
Reported	**$ 6,082**	$ 5,940	$ 6,096
Securitization adjustments	**(3,314)**	(3,255)	(3,509)
Managed credit card income	**$ 2,768**	$ 2,685	$ 2,587
Net interest income			
Reported	**$ 6,838**	$ 6,554	$ 6,082
Securitization adjustments	**6,917**	5,635	5,719
Managed net interest income	**$ 13,755**	$ 12,189	$ 11,801
Total net revenue			
Reported	**$ 12,871**	$ 12,855	$ 12,535
Securitization adjustments	**3,603**	2,380	2,210
Managed total net revenue	**$ 16,474**	$ 15,235	$ 14,745
Provision for credit losses			
Reported	**$ 6,456**	$ 3,331	$ 2,388
Securitization adjustments	**3,603**	2,380	2,210
Managed provision for credit losses	**$ 10,059**	$ 5,711	$ 4,598
Balance sheet – average balances[a]			
Total average assets			
Reported	**$ 96,807**	$ 89,177	$ 82,887
Securitization adjustments	**76,904**	66,780	65,266
Managed average assets	**$173,711**	$155,957	$148,153
Credit quality statistics[a]			
Net charge-offs			
Reported	**$ 4,556**	$ 3,116	$ 2,488
Securitization adjustments	**3,603**	2,380	2,210
Managed net charge-offs	**$ 8,159**	$ 5,496	$ 4,698

(a) For a discussion of managed basis, see the non-GAAP financial measures discussion on pages 50–51 of this Annual Report.

COMMERCIAL BANKING

Commercial Banking serves more than 26,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and nearly 30,000 real estate investors/owners. Delivering extensive industry knowledge, local expertise and dedicated service, CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management, to meet its clients' domestic and international financial needs.

On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual from the FDIC, adding approximately $44.5 billion in loans to the Commercial Term Lending, Real Estate Banking and Other businesses in Commercial Banking. On October 1, 2006, JPMorgan Chase completed the acquisition of The Bank of New York's consumer, business banking and middle-market banking businesses, adding approximately $2.3 billion in loans and $1.2 billion in deposits in Commercial Banking.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2008	2007	2006
Revenue			
Lending & deposit-related fees	**$ 854**	$ 647	$ 589
Asset management, administration and commissions	**113**	92	67
All other income[a]	**514**	524	417
Noninterest revenue	**1,481**	1,263	1,073
Net interest income	**3,296**	2,840	2,727
Total net revenue	**4,777**	4,103	3,800
Provision for credit losses	**464**	279	160
Noninterest expense			
Compensation expense	**692**	706	740
Noncompensation expense	**1,206**	1,197	1,179
Amortization of intangibles	**48**	55	60
Total noninterest expense	**1,946**	1,958	1,979
Income before income tax expense	**2,367**	1,866	1,661
Income tax expense	**928**	732	651
Net income	**$1,439**	$1,134	$1,010
Financial ratios			
ROE	**20%**	17%	18%
Overhead ratio	**41**	48	52

(a) Revenue from investment banking products sold to CB clients and commercial card revenue is included in all other income.

2008 compared with 2007

Net income was $1.4 billion, an increase of $305 million, or 27%, from the prior year, due to growth in total net revenue including the impact of the Washington Mutual transaction, partially offset by a higher provision for credit losses.

Record total net revenue of $4.8 billion increased $674 million, or 16%. Net interest income of $3.3 billion increased $456 million, or 16%, driven by double-digit growth in liability and loan balances and the impact of the Washington Mutual transaction, partially offset by spread compression in the liability and loan portfolios. Noninterest revenue was $1.5 billion, up $218 million, or 17%, due to higher deposit and lending-related fees.

On a client segment basis, Middle Market Banking revenue was $2.9 billion, an increase of $250 million, or 9%, from the prior year due predominantly to higher deposit-related fees and growth in liability and loan balances. Revenue from Commercial Term Lending, a new client segment established as a result of the Washington Mutual transaction encompassing multi-family and commercial mortgage loans, was $243 million. Mid-Corporate Banking revenue was $921 million, an increase of $106 million, or 13%, reflecting higher loan balances, investment banking revenue, and deposit-related fees. Real Estate Banking revenue of $413 million decreased $8 million, or 2%.

Provision for credit losses was $464 million, an increase of $185 million, or 66%, compared with the prior year, reflecting a weakening credit environment and loan growth. Net charge-offs were $288 million (0.35% net charge-off rate), compared with $44 million (0.07% net charge-off rate) in the prior year, predominantly related to an increase in real estate charge-offs. The allowance for loan losses increased $1.1 billion, which primarily reflected the impact of the Washington Mutual transaction. Nonperforming assets were $1.1 billion, an increase of $1.0 billion compared with the prior year, predominantly reflecting the Washington Mutual transaction and higher real estate-related balances.

Noninterest expense was $1.9 billion, a decrease of $12 million, or 1%, from the prior year, due to lower performance-based incentive compensation and volume-based charges from service providers, predominantly offset by the impact of the Washington Mutual transaction.

2007 compared with 2006

Net income was $1.1 billion, an increase of $124 million, or 12%, from the prior year due primarily to growth in total net revenue, partially offset by higher provision for credit losses.

Record total net revenue of $4.1 billion increased $303 million, or 8%. Net interest income of $2.8 billion increased $113 million, or 4%, driven by double-digit growth in liability balances and loans, which reflected organic growth and the Bank of New York transaction, largely offset by the continued shift to narrower-spread liability products and spread compression in the loan and liability portfolios. Noninterest revenue was $1.3 billion, up $190 million, or 18%, due to increased deposit-related fees, higher investment banking revenue, and gains on sales of securities acquired in the satisfaction of debt.

On a segment basis, Middle Market Banking revenue was $2.7 billion, an increase of $154 million, or 6%, primarily due to the Bank of New York transaction, higher deposit-related fees and growth in investment banking revenue. Mid-Corporate Banking revenue was $815 million, an increase of $159 million, or 24%, reflecting higher

lending revenue, investment banking revenue, and gains on sales of securities acquired in the satisfaction of debt. Real Estate Banking revenue of $421 million decreased $37 million, or 8%.

Provision for credit losses was $279 million, compared with $160 million in the prior year. The increase in the allowance for credit losses reflected portfolio activity including slightly lower credit quality as well as growth in loan balances. The allowance for loan losses to average loans retained was 2.81%, compared with 2.86% in the prior year.

Noninterest expense was $2.0 billion, a decrease of $21 million, or 1%, largely due to lower compensation expense driven by the absence of prior-year expense from the adoption of SFAS 123R, partially offset by expense growth related to the Bank of New York transaction.

Selected metrics

Year ended December 31, (in millions)	2008	2007	2006
Revenue by product:			
Lending	**$ 1,743**	$ 1,419	$ 1,344
Treasury services	**2,648**	2,350	2,243
Investment banking	**334**	292	253
Other	**52**	42	(40)
Total Commercial Banking revenue	**$ 4,777**	$ 4,103	$ 3,800
IB revenue, gross[a]	**$ 966**	$ 888	$ 716
Revenue by business:			
Middle Market Banking	**$ 2,939**	$ 2,689	$ 2,535
Commercial Term Lending[b]	**243**	—	—
Mid-Corporate Banking	**921**	815	656
Real Estate Banking[b]	**413**	421	458
Other[b]	**261**	178	151
Total Commercial Banking revenue	**$ 4,777**	$ 4,103	$ 3,800
Selected balance sheet data (period-end)			
Equity	**$ 8,000**	$ 6,700	$ 6,300
Selected balance sheet data (average)			
Total assets	**$ 114,299**	$ 87,140	$ 57,754
Loans:			
Loans retained	**81,931**	60,231	53,154
Loans held-for-sale and loans at fair value	**406**	863	442
Total loans	**$ 82,337**	$ 61,094	$ 53,596
Liability balances[c]	**103,121**	87,726	73,613
Equity	**7,251**	6,502	5,702

Year ended December 31, (in millions, except headcount and ratios)	2008	2007	2006
Average loans by business:			
Middle Market Banking	**$ 42,193**	$ 37,333	$ 33,225
Commercial Term Lending[b]	**9,310**	—	—
Mid-Corporate Banking	**16,297**	12,481	8,632
Real Estate Banking[b]	**9,008**	7,116	7,566
Other[b]	**5,529**	4,164	4,173
Total Commercial Banking loans	**$ 82,337**	$ 61,094	$ 53,596
Headcount	**5,206**	4,125	4,459
Credit data and quality statistics:			
Net charge-offs	**$ 288**	$ 44	$ 27
Nonperforming loans[d]	**1,026**	146	121
Nonperforming assets	**1,142**	148	122
Allowance for credit losses:			
Allowance for loan losses[e]	**$ 2,826**	$ 1,695	$ 1,519
Allowance for lending-related commitments	**206**	236	187
Total allowance for credit losses	**$ 3,032**	$ 1,931	$ 1,706
Net charge-off rate[f]	**0.35%**	0.07%	0.05%
Allowance for loan losses to average loans[d][f]	**3.04**[g]	2.81	2.86
Allowance for loan losses to nonperforming loans[d]	**275**	1,161	1,255
Nonperforming loans to average loans[d]	**1.10**[g]	0.24	0.23

(a) Represents the total revenue related to investment banking products sold to CB clients.

(b) Results for 2008 include total net revenue and average loans acquired in the Washington Mutual transaction.

(c) Liability balances include deposits and deposits swept to on-balance sheet liabilities such as commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements.

(d) Purchased credit-impaired wholesale loans accounted for under SOP 03-3 that were acquired in the Washington Mutual transaction are considered nonperforming loans because the timing and amount of expected cash flows are not reasonably estimable. These nonperforming loans were included when calculating the allowance coverage ratio, the allowance for loan losses to nonperforming loans ratio, and the nonperforming loans to average loans ratio. The carrying amount of these purchased credit-impaired loans was $224 million at December 31, 2008.

(e) Beginning in 2008, the allowance for loan losses included an amount related to loans acquired in the Washington Mutual transaction and the Bear Stearns merger.

(f) Loans held-for-sale and loans accounted for at fair value were excluded when calculating the allowance coverage ratio and the net charge-off rate.

(g) The September 30, 2008, ending loan balance of $44.5 billion acquired in the Washington Mutual transaction is treated as if it had been part of the loan balance for the entire third quarter of 2008.

TREASURY & SECURITIES SERVICES

TSS is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. TS provides cash management, trade, wholesale card and liquidity products and services to small and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with the Commercial Banking, Retail Financial Services and Asset Management businesses to serve clients firmwide. As a result, certain TS revenue is included in other segments' results. WSS holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

As a result of the transaction with the Bank of New York on October 1, 2006, selected corporate trust businesses were transferred from TSS to the Corporate/Private Equity segment and are reported in discontinued operations.

Selected income statement data

Year ended December 31, (in millions, except ratio data)	2008	2007	2006
Revenue			
Lending & deposit-related fees	**$ 1,146**	$ 923	$ 735
Asset management, administration and commissions	**3,133**	3,050	2,692
All other income	**917**	708	612
Noninterest revenue	**5,196**	4,681	4,039
Net interest income	**2,938**	2,264	2,070
Total net revenue	**8,134**	6,945	6,109
Provision for credit losses	**82**	19	(1)
Credit reimbursement to IB[a]	**(121)**	(121)	(121)
Noninterest expense			
Compensation expense	**2,602**	2,353	2,198
Noncompensation expense	**2,556**	2,161	1,995
Amortization of intangibles	**65**	66	73
Total noninterest expense	**5,223**	4,580	4,266
Income before income tax expense	**2,708**	2,225	1,723
Income tax expense	**941**	828	633
Net income	**$ 1,767**	$ 1,397	$ 1,090
Revenue by business			
Treasury Services	**$ 3,555**	$ 3,013	$ 2,792
Worldwide Securities Services	**4,579**	3,932	3,317
Total net revenue	**$ 8,134**	$ 6,945	$ 6,109
Financial ratios			
ROE	**47%**	47%	48%
Overhead ratio	**64**	66	70
Pretax margin ratio[b]	**33**	32	28

Year ended December 31, (in millions, except headcount)	2008	2007	2006
Selected balance sheet data (period-end)			
Equity	**$ 4,500**	$ 3,000	$ 2,200
Selected balance sheet data (average)			
Total assets	**$ 54,563**	$ 53,350	$ 31,760
Loans[c]	**26,226**	20,821	15,564
Liability balances[d]	**279,833**	228,925	189,540
Equity	**3,751**	3,000	2,285
Headcount	**27,070**	25,669	25,423

(a) TSS is charged a credit reimbursement related to certain exposures managed within IB credit portfolio on behalf of clients shared with TSS. Beginning in first quarter 2009, income statement and balance sheet items for credit portfolio activity related to joint IB/TSS clients will be reflected proportionally in the respective IB and TSS financials. This will replace the previous approach whereby a credit reimbursement was charged to TSS by IB.

(b) Pretax margin represents income before income tax expense divided by total net revenue, which is a measure of pretax performance and another basis by which management evaluates its performance and that of its competitors.

(c) Loan balances include wholesale overdrafts, commercial card and trade finance loans.

(d) Liability balances include deposits and deposits swept to on-balance sheet liabilities such as commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements.

2008 compared with 2007

Net income was a record $1.8 billion, an increase of $370 million, or 26%, from the prior year, driven by higher total net revenue. This increase was largely offset by higher noninterest expense.

Total net revenue was a record $8.1 billion, an increase of $1.2 billion, or 17%, from the prior year. Worldwide Securities Services posted record net revenue of $4.6 billion, an increase of $647 million, or 16%, from the prior year. The growth was driven by wider spreads in securities lending, foreign exchange and liability products, increased product usage by new and existing clients (largely in custody, fund services, alternative investment services and depositary receipts) and higher liability balances, reflecting increased client deposit activity resulting from recent market conditions. These benefits were offset partially by market depreciation. Treasury Services posted record net revenue of $3.6 billion, an increase of $542 million, or 18%, reflecting higher liability balances and volume growth in electronic funds transfer products and trade loans. Revenue growth from higher liability balances reflects increased client deposit activity resulting from recent market conditions as well as organic growth. TSS firmwide net revenue, which includes Treasury Services net revenue recorded in other lines of business, grew to $11.1 billion, an increase of $1.5 billion, or 16%. Treasury Services firmwide net revenue grew to $6.5 billion, an increase of $869 million, or 15%.

Noninterest expense was $5.2 billion, an increase of $643 million, or 14%, from the prior year, reflecting higher expense related to business and volume growth as well as continued investment in new product platforms.

2007 compared with 2006

Net income was a record $1.4 billion, an increase of $307 million, or 28%, from the prior year, driven by record total net revenue, partially offset by higher noninterest expense.

Total net revenue was $6.9 billion, an increase of $836 million, or 14%, from the prior year. Worldwide Securities Services net revenue of $3.9 billion was up $615 million, or 19%. The growth was driven by increased product usage by new and existing clients (primarily custody, securities lending, depositary receipts and fund services), market appreciation on assets under custody, and wider spreads on securities lending. These gains were offset partially by spread compression on liability products. Treasury Services net revenue was $3.0 billion, an increase of $221 million, or 8%, from the prior year. The results were driven by growth in electronic transaction volumes and higher liability balances, offset partially by a shift to narrower-spread liability products. TSS firmwide net revenue, which includes Treasury Services net revenue recorded in other lines of business, grew to $9.6 billion, up $1.0 billion, or 12%. Treasury Services firmwide net revenue grew to $5.6 billion, up $391 million, or 7%.

Noninterest expense was $4.6 billion, an increase of $314 million, or 7%, from the prior year, reflecting higher expense related to business and volume growth, as well as investment in new product platforms.

Treasury & Securities Services firmwide metrics include revenue recorded in the CB, Retail Banking and AM lines of business and excludes foreign exchange ("FX") revenue recorded in IB for TSS-related FX activity. In order to capture the firmwide impact of TS and TSS products and revenue, management reviews firmwide metrics such as liability balances, revenue and overhead ratios in assessing financial performance for TSS. Firmwide metrics are necessary in order to understand the aggregate TSS business.

Selected metrics

Year ended December 31, (in millions, except ratio data)	2008	2007	2006
TSS firmwide disclosures			
Treasury Services revenue – reported	**$ 3,555**	$ 3,013	$ 2,792
Treasury Services revenue reported in Commercial Banking	**2,648**	2,350	2,243
Treasury Services revenue reported in other lines of business	**299**	270	207
Treasury Services firmwide revenue[a]	**6,502**	5,633	5,242
Worldwide Securities Services revenue	**4,579**	3,932	3,317
Treasury & Securities Services firmwide revenue[a]	**$ 11,081**	$ 9,565	$ 8,559
Treasury Services firmwide liability balances (average)[b]	**$242,706**	$199,077	$162,020
Treasury & Securities Services firmwide liability balances (average)[b]	**382,947**	316,651	262,678
TSS firmwide financial ratios			
Treasury Services firmwide overhead ratio[c]	**51%**	56%	56%
Treasury & Securities Services firmwide overhead ratio[c]	**57**	60	62
Firmwide business metrics			
Assets under custody (in billions)	**$ 13,205**	$ 15,946	$ 13,903
Number of:			
U.S.$ ACH transactions originated (in millions)	**4,000**	3,870	3,503
Total U.S.$ clearing volume (in thousands)	**115,742**	111,036	104,846
International electronic funds transfer volume (in thousands)[d]	**171,036**	168,605	145,325
Wholesale check volume (in millions)	**2,408**	2,925	3,409
Wholesale cards issued (in thousands)[e]	**22,784**	18,722	17,228
Credit data and quality statistics			
Net charge-offs (recoveries)	**$ (2)**	$ —	$ 1
Nonperforming loans	**30**	—	—
Allowance for loan losses	**74**	18	7
Allowance for lending-related commitments	**63**	32	1
Net charge-off (recovery) rate	**(0.01)%**	—%	0.01%
Allowance for loan losses to average loans	**0.28**	0.09	0.04
Allowance for loan losses to nonperforming loans	**247**	NM	NM
Nonperforming loans to average loans	**0.11**	—	—

(a) TSS firmwide FX revenue, which includes FX revenue recorded in TSS and FX revenue associated with TSS customers who are FX customers of IB, was $880 million, $552 million and $445 million for the years ended December 31, 2008, 2007 and 2006, respectively.

(b) Firmwide liability balances include TS' liability balances recorded in the Commercial Banking line of business.

(c) Overhead ratios have been calculated based upon firmwide revenue and TSS and TS expense, respectively, including those allocated to certain other lines of business. FX revenue and expense recorded in IB for TSS-related FX activity are not included in this ratio.

(d) International electronic funds transfer includes non-U.S. dollar ACH and clearing volume.

(e) Wholesale cards issued include domestic commercial card, stored value card, prepaid card and government electronic benefit card products.

ASSET MANAGEMENT

AM, with assets under supervision of $1.5 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including money market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

On May 30, 2008, JPMorgan Chase merged with The Bear Stearns Companies, Inc. The merger resulted in the addition of a new client segment, Bear Stearns Brokerage, but did not materially affect balances or business metrics.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2008	2007	2006
Revenue			
Asset management, administration and commissions	**$6,004**	$6,821	$5,295
All other income	**62**	654	521
Noninterest revenue	**6,066**	7,475	5,816
Net interest income	**1,518**	1,160	971
Total net revenue	**7,584**	8,635	6,787
Provision for credit losses	**85**	(18)	(28)
Noninterest expense			
Compensation expense	**3,216**	3,521	2,777
Noncompensation expense	**2,000**	1,915	1,713
Amortization of intangibles	**82**	79	88
Total noninterest expense	**5,298**	5,515	4,578
Income before income tax expense	**2,201**	3,138	2,237
Income tax expense	**844**	1,172	828
Net income	**$1,357**	$1,966	$1,409
Revenue by client segment			
Private Bank[a]	**$2,565**	$2,362	$1,686
Institutional	**1,775**	2,525	1,972
Retail	**1,620**	2,408	1,885
Private Wealth Management[a]	**1,387**	1,340	1,244
Bear Stearns Brokerage	**237**	—	—
Total net revenue	**$7,584**	$8,635	$6,787
Financial ratios			
ROE	**24%**	51%	40%
Overhead ratio	**70**	64	67
Pretax margin ratio[b]	**29**	36	33

(a) In 2008, certain clients were transferred from Private Bank to Private Wealth Management. Prior periods have been revised to conform to this change.
(b) Pretax margin represents income before income tax expense divided by total net revenue, which is a measure of pretax performance and another basis by which management evaluates its performance and that of its competitors.

2008 compared with 2007

Net income was $1.4 billion, a decline of $609 million, or 31%, from the prior year, driven by lower total net revenue offset partially by lower noninterest expense.

Total net revenue was $7.6 billion, a decrease of $1.1 billion, or 12%, from the prior year. Noninterest revenue was $6.1 billion, a decline of $1.4 billion, or 19%, due to lower performance fees and the effect of lower markets, including the impact of lower market valuations of seed capital investments. The lower results were offset partially by the benefit of the Bear Stearns merger and increased revenue from net asset inflows. Net interest income was $1.5 billion, up $358 million, or 31%, from the prior year, due to higher deposit and loan balances and wider deposit spreads.

Private Bank revenue grew 9% to $2.6 billion, due to increased deposit and loan balances and net asset inflows, partially offset by the effect of lower markets and lower performance fees. Institutional revenue declined 30% to $1.8 billion due to lower performance fees, partially offset by net liquidity inflows. Retail revenue declined 33% to $1.6 billion due to the effect of lower markets, including the impact of lower market valuations of seed capital investments and net equity outflows. Private Wealth Management revenue grew 4% to $1.4 billion due to higher deposit and loan balances. Bear Stearns Brokerage contributed $237 million to revenue.

The provision for credit losses was $85 million, compared with a benefit of $18 million in the prior year, reflecting an increase in loan balances, higher net charge-offs and a weakening credit environment.

Noninterest expense was $5.3 billion, down $217 million, or 4%, compared with the prior year due to lower performance-based compensation, largely offset by the effect of the Bear Stearns merger and higher compensation expense resulting from increased average headcount.

2007 compared with 2006

Net income was a record $2.0 billion, an increase of $557 million, or 40%, from the prior year. Results benefited from record total net revenue, partially offset by higher noninterest expense.

Total net revenue was $8.6 billion, an increase of $1.8 billion, or 27%, from the prior year. Noninterest revenue, primarily fees and commissions, was $7.5 billion, up $1.7 billion, or 29%, largely due to increased assets under management and higher performance and placement fees. Net interest income was $1.2 billion, up $189 million, or 19%, from the prior year, largely due to higher deposit and loan balances.

Institutional revenue grew 28% to $2.5 billion, due to net asset inflows and performance fees. Private Bank revenue grew 40% to $2.4 billion, due to higher assets under management, performance and placement fees, and increased loan and deposit balances. Retail revenue grew 28%, to $2.4 billion, primarily due to market appreciation and net asset inflows. Private Wealth Management revenue grew 8% to $1.3 billion, reflecting higher assets under management and higher deposit balances.

The provision for credit losses was a benefit of $18 million, compared with a benefit of $28 million in the prior year.

Noninterest expense was $5.5 billion, an increase of $937 million, or 20%, from the prior year. The increase was due primarily to higher performance-based compensation expense and investments in all business segments.

Selected metrics

Year ended December 31, (in millions, except headcount, ranking data, and where otherwise noted)	2008	2007	2006
Business metrics			
Number of:			
Client advisors	**1,705**	1,729	1,506
Retirement planning services participants	**1,531,000**	1,501,000	1,362,000
Bear Stearns brokers	**324**	—	—
% of customer assets in 4 & 5 Star Funds[a]	**42%**	55%	58%
% of AUM in 1st and 2nd quartiles:[b]			
1 year	**54%**	57%	83%
3 years	**65%**	75%	77%
5 years	**76%**	76%	79%
Selected balance sheet data (period-end)			
Equity	**$ 7,000**	$ 4,000	$ 3,500
Selected balance sheet data (average)			
Total assets	**$ 65,550**	$ 51,882	$ 43,635
Loans[c]	**38,124**	29,496	26,507
Deposits	**70,179**	58,863	50,607
Equity	**5,645**	3,876	3,500
Headcount	**15,339**	14,799	13,298
Credit data and quality statistics			
Net charge-offs (recoveries)	**$ 11**	$ (8)	$ (19)
Nonperforming loans	**147**	12	39
Allowance for loan losses	**191**	112	121
Allowance for lending-related commitments	**5**	7	6
Net charge-off (recovery) rate	**0.03%**	(0.03)%	(0.07)%
Allowance for loan losses to average loans	**0.50**	0.38	0.46
Allowance for loan losses to nonperforming loans	**130**	933	310
Nonperforming loans to average loans	**0.39**	0.04	0.15

(a) Derived from following rating services: Morningstar for the United States; Micropal for the United Kingdom, Luxembourg, Hong Kong and Taiwan; and Nomura for Japan.

(b) Derived from following rating services: Lipper for the United States and Taiwan; Micropal for the United Kingdom, Luxembourg and Hong Kong; and Nomura for Japan.

(c) Reflects the transfer in 2007 of held-for-investment prime mortgage loans transferred from AM to Corporate within the Corporate/Private Equity segment.

AM's client segments comprise the following:

Institutional brings comprehensive global investment services – including asset management, pension analytics, asset-liability management and active risk budgeting strategies – to corporate and public institutions, endowments, foundations, not-for-profit organizations and governments worldwide.

Retail provides worldwide investment management services and retirement planning and administration through third-party and direct distribution of a full range of investment vehicles.

The **Private Bank** addresses every facet of wealth management for ultra-high-net-worth individuals and families worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty-wealth advisory services.

Private Wealth Management offers high-net-worth individuals, families and business owners in the United States comprehensive wealth management solutions, including investment management, capital markets and risk management, tax and estate planning, banking and specialty-wealth advisory services.

Bear Stearns Brokerage provides investment advice and wealth management services to high-net-worth individuals, money managers, and small corporations.

J.P. Morgan Asset Management has established two measures of its overall performance.

- Percentage of assets under management in funds rated 4 and 5 stars (3 year). Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5 star rating is the best and represents the top 10% of industry wide ranked funds. A 4 star rating represents the next 22% of industry wide ranked funds. The worst rating is a 1 star rating.
- Percentage of assets under management in first- or second-quartile funds (one, three and five years). Mutual fund rating services rank funds according to a peer-based performance system, which measures returns according to specific time and fund classification (small, mid, multi and large cap).

Assets under supervision

2008 compared with 2007

Assets under supervision ("AUS") were $1.5 trillion, a decrease of $76 billion, or 5%, from the prior year. Assets under management ("AUM") were $1.1 trillion, down $60 billion, or 5%, from the prior year. The decrease was due to the effect of lower markets and non-liquidity outflows, predominantly offset by liquidity product inflows across all segments and the addition of Bear Stearns assets under management. Custody, brokerage, administration and deposit balances were $363 billion, down $16 billion due to the effect of lower markets on brokerage and custody balances, offset by the addition of Bear Stearns Brokerage. The Firm also has a 43% interest in American Century Companies, Inc., whose AUM totaled $70 billion and $102 billion at December 31, 2008 and 2007, respectively, which are excluded from the AUM above.

2007 compared with 2006

AUS were $1.6 trillion, an increase of $225 billion, or 17%, from the prior year. AUM were $1.2 trillion, up 18%, or $180 billion, from the prior year. The increase in AUM was the result of net asset inflows into liquidity and alternative products and market appreciation across all segments. Custody, brokerage, administration and deposit balances were $379 billion, up $45 billion. The Firm also has a 44% interest in American Century Companies, Inc., whose AUM totaled $102 billion and $103 billion at December 31, 2007 and 2006, respectively, which are excluded from the AUM above.

Assets under supervision[a]

As of or for the year ended December 31, (in billions)	2008	2007	2006
Assets by asset class			
Liquidity	**$ 613**	$ 400	$ 311
Fixed income	**180**	200	175
Equities & balanced	**240**	472	427
Alternatives	**100**	121	100
Total assets under management	**1,133**	1,193	1,013
Custody/brokerage/ administration/deposits	**363**	379	334
Total assets under supervision	**$ 1,496**	$ 1,572	$1,347
Assets by client segment			
Institutional	**$ 681**	$ 632	$ 538
Private Bank[b]	**181**	183	142
Retail	**194**	300	259
Private Wealth Management[b]	**71**	78	74
Bear Stearns Brokerage	**6**	—	—
Total assets under management	**$ 1,133**	$ 1,193	$1,013
Institutional	**$ 682**	$ 633	$ 539
Private Bank[b]	**378**	403	328
Retail	**262**	394	343
Private Wealth Management[b]	**124**	142	137
Bear Stearns Brokerage	**50**	—	—
Total assets under supervision	**$ 1,496**	$ 1,572	$1,347

Assets by geographic region

As of or for the year ended December 31, (in billions)	2008	2007	2006
U.S./Canada	**$ 798**	$ 760	$ 630
International	**335**	433	383
Total assets under management	**$ 1,133**	$ 1,193	$1,013
U.S./Canada	**$ 1,084**	$ 1,032	$ 889
International	**412**	540	458
Total assets under supervision	**$ 1,496**	$ 1,572	$1,347
Mutual fund assets by asset class			
Liquidity	**$ 553**	$ 339	$ 255
Fixed income	**41**	46	46
Equities	**99**	224	206
Total mutual fund assets	**$ 693**	$ 609	$ 507
Assets under management rollforward			
Beginning balance, January 1	**$ 1,193**	$ 1,013	$ 847
Net asset flows:			
Liquidity	**210**	78	44
Fixed income	**(12)**	9	11
Equities, balanced and alternative	**(47)**	28	34
Market/performance/other impacts[c]	**(211)**	65	77
Ending balance, December 31	**$ 1,133**	$ 1,193	$1,013
Assets under supervision rollforward			
Beginning balance, January 1	**$ 1,572**	$ 1,347	$1,149
Net asset flows	**181**	143	102
Market/performance/other impacts[c]	**(257)**	82	96
Ending balance, December 31	**$ 1,496**	$ 1,572	$1,347

(a) Excludes assets under management of American Century Companies, Inc., in which the Firm had a 43%, 44% and 43% ownership at December 31, 2008, 2007 and 2006, respectively.
(b) In 2008, certain clients were transferred from Private Bank to Private Wealth Management. Prior periods have been revised to conform to this change.
(c) Includes $15 billion for assets under management and $68 billion for assets under supervision from the Bear Stearns merger in the second quarter of 2008.

The Corporate/Private Equity sector comprises Private Equity, Treasury, corporate staff units and expense that is centrally managed. Treasury manages capital, liquidity, interest rate and foreign exchange risk and the investment portfolio for the Firm. The corporate staff units include Central Technology and Operations, Internal Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Legal & Compliance, Corporate Real Estate and General Services, Risk Management, Corporate Responsibility and Strategy & Development. Other centrally managed expense includes the Firm's occupancy and pension-related expense, net of allocations to the business.

Selected income statement data

Year ended December 31, (in millions)	2008	2007	2006
Revenue			
Principal transactions[a][b]	**$ (3,588)**	$ 4,552	$ 1,181
Securities gains (losses)[c]	**1,637**	39	(608)
All other income[d]	**1,673**	465	485
Noninterest revenue	**(278)**	5,056	1,058
Net interest income (expense)	**347**	(637)	(1,044)
Total net revenue	**69**	4,419	14
Provision for credit losses	**447**[j][k]	(11)	(1)
Provision for credit losses – accounting conformity[e]	**1,534**	—	—
Noninterest expense			
Compensation expense	**2,340**	2,754	2,626
Noncompensation expense[f]	**1,841**	3,025	2,357
Merger costs	**432**	209	305
Subtotal	**4,613**	5,988	5,288
Net expense allocated to other businesses	**(4,641)**	(4,231)	(4,141)
Total noninterest expense	**(28)**	1,757	1,147
Income (loss) from continuing operations before income tax expense (benefit)	**(1,884)**	2,673	(1,132)
Income tax expense (benefit)[g]	**(535)**	788	(1,179)
Income (loss) from continuing operations	**(1,349)**	1,885	47
Income from discontinued operations[h]	**—**	—	795
Income before extraordinary gain	**(1,349)**	1,885	842
Extraordinary gain[i]	**1,906**	—	—
Net income	**$ 557**	$ 1,885	$ 842

(a) Included losses on preferred equity interests in Fannie Mae and Freddie Mac in 2008.
(b) The Firm adopted SFAS 157 in the first quarter of 2007. See Note 4 on pages 141–155 of this Annual Report for additional information.
(c) Included gain on sale of MasterCard shares in 2008.
(d) Included a gain from the dissolution of the Chase Paymentech Solutions joint venture and proceeds from the sale of Visa shares in its initial public offering in 2008.
(e) Represents an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual Bank's banking operations. For a further discussion, see Consumer Credit Portfolio on page 104 of this Annual Report.
(f) Included a release of credit card litigation reserves in 2008 and insurance recoveries related to settlement of the Enron and WorldCom class action litigations and for certain other material legal proceedings of $512 million for full year 2006.
(g) Includes tax benefits recognized upon resolution of tax audits.
(h) Included a $622 million gain from the sale of selected corporate trust businesses in 2006.
(i) Effective September 25, 2008, JPMorgan Chase acquired Washington Mutual's banking operations from the FDIC for $1.9 billion. The fair value of the Washington Mutual net assets acquired exceeded the purchase price, which resulted in negative goodwill. In accordance with SFAS 141, nonfinancial assets that are not held-for-sale were written down against that negative goodwill. The negative goodwill that remained after writing down nonfinancial assets was recognized as an extraordinary gain in 2008.
(j) In November 2008, the Firm transferred $5.8 billion of higher quality credit card loans from the legacy Chase portfolio to a securitization trust previously established by Washington Mutual ("the Trust"). As a result of converting higher credit quality Chase-originated on-book receivables to the Trust's seller's interest which has a higher overall loss rate reflective of the total assets within the Trust, approximately $400 million of incremental provision expense was recorded during the fourth quarter. This incremental provision expense was recorded in the Corporate segment as the action related to the acquisition of Washington Mutual's banking operations. For further discussion of credit card securitizations, see Note 16 on page 182 of this Annual Report.
(k) Includes $9 million for credit card securitizations related to the Washington Mutual transaction.

2008 compared with 2007

Net income for Corporate/Private Equity was $557 million, compared with net income of $1.9 billion in the prior year. This segment includes the results of Private Equity and Corporate business segments, as well as merger-related items.

Net loss for Private Equity was $690 million, compared with net income of $2.2 billion in the prior year. Net revenue was negative $963 million, a decrease of $4.9 billion, reflecting Private Equity losses of $894 million, compared with gains of $4.1 billion in the prior year. Noninterest expense was negative $120 million, a decrease of $469 million from the prior year, reflecting lower compensation expense.

Net income for Corporate was $1.5 billion, compared with a net loss of $150 million in the prior year. Net revenue was $1.0 billion, an increase of $580 million. Excluding merger-related items, net revenue was $1.7 billion, an increase of $1.2 billion. Net revenue included a gain of $1.5 billion on the proceeds from the sale of Visa shares in its initial public offering, $1.0 billion on the dissolution of the Chase Paymentech Solutions joint venture, and $668 million from the sale of MasterCard shares, partially offset by losses of $1.1 billion on preferred securities of Fannie Mae and Freddie Mac and $464 million related to the offer to repurchase auction-rate securities. 2007 included a gain of $234 million on the sale of MasterCard shares. Noninterest expense was negative $736 million, compared with $959 million in the prior year, driven mainly by lower litigation expense.

Merger-related items were a net loss of $2.1 billion compared with a net loss of $130 million in the prior year. Washington Mutual merger-related items included conforming loan loss reserve of $1.5 billion, credit card related loan loss reserves of $403 million and net merger-related costs of $138 million. Bear Stearns merger-related included a net loss of $423 million, which represented JPMorgan Chase's 49.4% ownership in Bear Stearns losses from April 8 to May 30, 2008, and net merger-related costs of $665 million. 2007 included merger costs of $209 million related to the Bank One and Bank of New York transactions.

2007 compared with 2006

Net income was $1.9 billion, compared with $842 million in the prior year, benefiting from strong Private Equity gains, partially offset by higher expense. Prior-year results also included Income from discontinued operations of $795 million, which included a one-time gain of $622 million from the sale of selected corporate trust businesses.

Net income for Private Equity was $2.2 billion, compared with $627 million in the prior year. Total net revenue was $4.0 billion, an increase of $2.8 billion. The increase was driven by Private Equity gains of $4.1 billion, compared with $1.3 billion, reflecting a higher level of gains and the change in classification of carried interest to compensation expense. Total noninterest expense was $589 million, an increase of $422 million from the prior year. The increase was driven by higher compensation expense, reflecting the change in the classification of carried interest.

Net loss for Corporate was $150 million, compared with a net loss of $391 million in the prior year. Corporate total net revenue was $452 million, an increase of $1.6 billion. Revenue benefited from net security gains compared with net security losses in the prior year and improved net interest spread. Total noninterest expense was $959 million, an increase of $284 million from the prior year. The increase reflected higher net litigation expense, driven by credit card-related litigation and the absence of prior-year insurance recoveries related to certain material litigation, partially offset by lower compensation expense.

Net loss for merger costs related to the Bank One and the Bank of New York transactions were $130 million, compared with a loss of $189 million in the prior year. Merger costs were $209 million, compared with $305 million in the prior year.

Selected metrics

Year ended December 31, (in millions, except headcount)	**2008**	2007	2006
Total net revenue			
Private equity[a]	**$ (963)**	$ 3,967	$ 1,142
Corporate	**1,032**	452	(1,128)
Total net revenue	**$ 69**	$ 4,419	$ 14
Net income (loss)			
Private equity[a]	**$ (690)**	$ 2,165	$ 627
Corporate[b][c]	**1,458**	(150)	(391)
Merger-related items[d]	**(2,117)**	(130)	(189)
Income (loss) from continuing operations	**(1,349)**	1,885	47
Income from discontinued operations (after-tax)[e]	**—**	—	795
Income before extraordinary gain	**(1,349)**	1,885	842
Extraordinary gain	**1,906**	—	—
Total net income	**$ 557**	$ 1,885	$ 842
Headcount	**23,376**	22,512	23,242

(a) The Firm adopted SFAS 157 in the first quarter of 2007. See Note 4 on pages 141–155 of this Annual Report for additional information.
(b) Included a release of credit card litigation reserves in 2008 and insurance recoveries related to settlement of the Enron and WorldCom class action litigations and for certain other material legal proceedings of $512 million for full year 2006.
(c) Includes tax benefits recognized upon resolution of tax audits.
(d) Includes an accounting conformity loan loss reserve provision related to the Washington Mutual transaction in 2008. 2008 also reflects items related to the Bear Stearns merger, which included Bear Stearns' losses, merger costs, Bear Stearns asset management liquidation costs and Bear Stearns private client services broker retention expense. Prior periods represent costs related to the Bank One transaction in 2004 and the Bank of New York transaction in 2006.
(e) Included a $622 million gain from the sale of selected corporate trust business in 2006.

Private equity portfolio

2008 compared with 2007

The carrying value of the private equity portfolio at December 31, 2008, was $6.9 billion, down from $7.2 billion at December 31, 2007. The portfolio decrease was primarily driven by unfavorable valuation adjustments on existing investments, partially offset by new investments, and the addition of the Bear Stearns portfolios. The portfolio represented 5.8% of the Firm's stockholders' equity less goodwill at December 31, 2008, down from 9.2% at December 31, 2007.

2007 compared with 2006

The carrying value of the private equity portfolio at December 31, 2007, was $7.2 billion, up from $6.1 billion at December 31, 2006. The portfolio increase was due primarily to favorable valuation adjustments on nonpublic investments and new investments, partially offset by sales activity. The portfolio represented 9.2% of the Firm's stockholders' equity less goodwill at December 31, 2007, up from 8.6% at December 31, 2006.

Selected income statement and balance sheet data

Year ended December 31, (in millions)	2008	2007	2006
Corporate			
Securities gains (losses)[a]	**$ 1,652**	$ 37	$ (619)
Investment securities portfolio (average)[b]	**106,801**	85,517	63,361
Investment securities portfolio (ending)[b]	**166,662**	76,200	82,091
Mortgage loans (average)[c]	**7,059**	5,639	—
Mortgage loans (ending)[c]	**7,292**	6,635	—
Private equity			
Realized gains	**$ 1,717**	$ 2,312	$ 1,223
Unrealized gains (losses)[d][e]	**(2,480)**	1,607	(1)
Total direct investments	**(763)**	3,919	1,222
Third-party fund investments	**(131)**	165	77
Total private equity gains (losses)[f]	**$ (894)**	$ 4,084	$ 1,299
Private equity portfolio information[g]			
Direct investments			
Publicly held securities			
Carrying value	**$ 483**	$ 390	$ 587
Cost	**792**	288	451
Quoted public value	**543**	536	831
Privately held direct securities			
Carrying value	**5,564**	5,914	4,692
Cost	**6,296**	4,867	5,795
Third-party fund investments[h]			
Carrying value	**805**	849	802
Cost	**1,169**	1,076	1,080
Total private equity portfolio – Carrying value	**$ 6,852**	$ 7,153	$ 6,081
Total private equity portfolio – Cost	**$ 8,257**	$ 6,231	$ 7,326

(a) Results for 2008 included a gain on the sale of MasterCard shares. All periods reflect repositioning of the Corporate investment securities portfolio and exclude gains/losses on securities used to manage risk associated with MSRs.
(b) Includes Chief Investment Office investment securities only.
(c) Held-for-investment prime mortgage loans were transferred from AM to the Corporate/Private Equity segment for risk management and reporting purposes. The initial transfer in 2007 had no material impact on the financial results of Corporate/Private Equity.
(d) Unrealized gains (losses) contain reversals of unrealized gains and losses that were recognized in prior periods and have now been realized.
(e) The Firm adopted SFAS 157 in the first quarter of 2007. For additional information, see Note 4 on pages 141–155 of this Annual Report.
(f) Included in principal transactions revenue in the Consolidated Statements of Income.
(g) For more information on the Firm's policies regarding the valuation of the private equity portfolio, see Note 4 on pages 141–155 of this Annual Report.
(h) Unfunded commitments to third-party equity funds were $1.4 billion, $881 million and $589 million at December 31, 2008, 2007 and 2006, respectively.

BALANCE SHEET ANALYSIS

Selected balance sheet data

December 31, (in millions)	2008	2007
Assets		
Cash and due from banks	**$ 26,895**	$ 40,144
Deposits with banks	**138,139**	11,466
Federal funds sold and securities purchased under resale agreements	**203,115**	170,897
Securities borrowed	**124,000**	84,184
Trading assets:		
Debt and equity instruments	**347,357**	414,273
Derivative receivables	**162,626**	77,136
Securities	**205,943**	85,450
Loans	**744,898**	519,374
Allowance for loan losses	**(23,164)**	(9,234)
Loans, net of allowance for loan losses	**721,734**	510,140
Accrued interest and accounts receivable	**60,987**	24,823
Goodwill	**48,027**	45,270
Other intangible assets	**14,984**	14,731
Other assets	**121,245**	83,633
Total assets	**$ 2,175,052**	$1,562,147
Liabilities		
Deposits	**$ 1,009,277**	$ 740,728
Federal funds purchased and securities loaned or sold under repurchase agreements	**192,546**	154,398
Commercial paper and other borrowed funds	**170,245**	78,431
Trading liabilities:		
Debt and equity instruments	**45,274**	89,162
Derivative payables	**121,604**	68,705
Accounts payable and other liabilities	**187,978**	94,476
Beneficial interests issued by consolidated VIEs	**10,561**	14,016
Long-term debt and trust preferred capital debt securities	**270,683**	199,010
Total liabilities	**2,008,168**	1,438,926
Stockholders' equity	**166,884**	123,221
Total liabilities and stockholders' equity	**$ 2,175,052**	$1,562,147

Consolidated Balance Sheets overview

The following is a discussion of the significant changes in the Consolidated Balance Sheets from December 31, 2007.

Deposits with banks; federal funds sold and securities purchased under resale agreements; securities borrowed; federal funds purchased and securities loaned or sold under repurchase agreements

The Firm utilizes deposits with banks, federal funds sold and securities purchased under resale agreements, securities borrowed, and federal funds purchased and securities loaned or sold under repurchase agreements as part of its liquidity management activities to manage the Firm's cash positions and risk-based capital requirements and to support the Firm's trading and risk management activities. In particular, the Firm uses securities purchased under resale agreements and securities borrowed to provide funding or liquidity to clients by purchasing and borrowing clients' securities for the short-term. Federal funds purchased and securities loaned or sold under repurchase agreements are used as short-term funding sources for the Firm and to make securities available to clients for their short-term purposes. The increase from December 31, 2007, in deposits with banks reflected a higher level of interbank lending; a reclassification of deposits with the Federal Reserve Bank from cash and due from banks to deposits with banks reflecting a policy change of the Federal Reserve Bank to pay interest to depository institutions on reserve balances, and assets acquired as a result of the Bear Stearns merger. The increase in securities borrowed and securities purchased under resale agreements was related to assets acquired as a result of the Bear Stearns merger and growth in demand from clients for liquidity. The increase in securities sold under repurchase agreements reflected higher short-term funding requirements to fulfill clients' demand for liquidity and finance the Firm's AFS securities inventory, and the effect of the liabilities assumed in connection with the Bear Stearns merger. For additional information on the Firm's Liquidity Risk Management, see pages 88–92 of this Annual Report.

Trading assets and liabilities – debt and equity instruments

The Firm uses debt and equity trading instruments for both market-making and proprietary risk-taking activities. These instruments consist predominantly of fixed income securities, including government and corporate debt; equity, including convertible securities; loans, including certain prime mortgage and other loans warehoused by RFS and IB for sale or securitization purposes and accounted for at fair value under SFAS 159; and physical commodities inventories. The decreases in trading assets and liabilities – debt and equity instruments from December 31, 2007, reflected the effect of the challenging capital markets environment, particularly for debt securities, partially offset by positions acquired as a result of the Bear Stearns merger. For additional information, refer to Note 4 and Note 6 on pages 141–155 and 158–160, respectively, of this Annual Report.

Trading assets and liabilities – derivative receivables and payables

Derivative instruments enable end-users to increase, reduce or alter exposure to credit or market risks. The value of a derivative is derived from its reference to an underlying variable or combination of variables such as interest rate, credit, foreign exchange, equity or commodity prices or indices. JPMorgan Chase makes markets in derivatives for customers, is an end-user of derivatives for its principal risk-taking activities, and is also an end-user of derivatives to hedge or manage risks of market and credit exposures, modify the interest rate characteristics of related balance sheet instruments or meet longer-term investment objectives. The majority of the Firm's derivatives are entered into for market-making purposes. The increase in derivative receivables and payables from December 31, 2007, was primarily related to the decline in interest rates, widening credit spreads and volatile foreign exchange rates reflected in interest rate, credit and foreign exchange derivatives, respectively. The increase also included positions acquired in the Bear Stearns merger. For additional information, refer to derivative contracts, Note 4, Note 6 and Note 32 on pages 141–155, 158–160, and 214–217, respectively, of this Annual Report.

Securities
Almost all of the Firm's securities portfolio is classified as AFS and is used predominantly to manage the Firm's exposure to interest rate movements, as well as to make strategic longer-term investments. The AFS portfolio increased from December 31, 2007, predominantly as a result of purchases, partially offset by sales and maturities. For additional information related to securities, refer to the Corporate/Private Equity segment discussion, Note 4 and Note 12 on pages 73–75, 141–155 and 170–174, respectively, of this Annual Report.

Loans and allowance for loan losses
The Firm provides loans to a variety of customers, from large corporate and institutional clients to individual consumers. Loans increased from December 31, 2007, largely due to loans acquired in the Washington Mutual transaction, organic growth in lending in the wholesale businesses, particularly CB, and growth in the consumer prime mortgage portfolio driven by the decision to retain, rather than sell, new originations of nonconforming mortgage loans.

Both the consumer and wholesale components of the allowance for loan losses increased from the prior year reflecting the addition of noncredit-impaired loans acquired in the Washington Mutual transaction, including an increase to conform the allowance applicable to assets acquired from Washington Mutual to the Firm's loan loss methodologies. Excluding the Washington Mutual transaction the consumer allowance rose due to an increase in estimated losses for home equity, subprime mortgage, prime mortgage and credit card loans due to the effects of continued housing price declines, rising unemployment and a weakening economic environment. Excluding the Washington Mutual transaction, the increase in the wholesale allowance was due to the impact of the transfer of $4.9 billion of funded and unfunded leveraged lending loans in IB to the retained loan portfolio from the held-for-sale loan portfolio, the effect of a weakening credit environment and loan growth. For a more detailed discussion of the loan portfolio and the allowance for loan losses, refer to Credit Risk Management on pages 92–111, and Notes 4, 5, 14 and 15 on pages 141–155, 156–158, 175–178 and 178–180, respectively, of this Annual Report.

Accrued interest and accounts receivable; accounts payable and other liabilities
The Firm's accrued interest and accounts receivable consist of accrued interest receivable from interest-earning assets; receivables from customers (primarily from activities related to IB's Prime Services business); receivables from brokers, dealers and clearing organizations; and receivables from failed securities sales. The Firm's accounts payable and other liabilities consist of accounts payable to customers (primarily from activities related to IB's Prime Services business), payables to brokers, dealers and clearing organizations; payables from failed securities purchases; accrued expense, including for interest-bearing liabilities; and all other liabilities, including obligations to return securities received as collateral. The increase in accrued interest and accounts receivable from December 31, 2007, was due largely to the Bear Stearns merger, reflecting higher customer receivables in IB's Prime Services business and the Washington Mutual transaction. The increase in accounts payable and other liabilities was predominantly due to the Bear Stearns merger, reflecting higher customer payables (primarily related to IB's Prime Services business), as well as higher obligations to return securities received as collateral. For additional information, see Note 22 on page 202 of this Annual Report.

Goodwill
Goodwill arises from business combinations and represents the excess of the cost of an acquired entity over the net fair value amounts assigned to assets acquired and liabilities assumed. The increase in goodwill was due predominantly to the dissolution of Chase Paymentech Solutions joint venture, the merger with Bear Stearns, the purchase of an additional equity interest in Highbridge and tax-related purchase accounting adjustments associated with the Bank One merger, which increased goodwill attributed to IB. These items were offset partially by a decrease in goodwill attributed to TSS predominantly resulting from the sale of a previously consolidated subsidiary. For additional information, see Note 18 on pages 198–201 of this Annual Report.

Other intangible assets
The Firm's other intangible assets consist of MSRs, purchased credit card relationships, other credit card-related intangibles, core deposit intangibles, and other intangibles. MSRs increased due to the Washington Mutual transaction and the Bear Stearns merger; sales in RFS of originated loans; and purchases of MSRs. These increases in MSRs were partially offset by markdowns of the fair value of the MSR asset due to changes to inputs and assumptions in the MSR valuation model, including updates to prepayment assumptions to reflect current expectations, and to servicing portfolio run-offs. The decrease in other intangible assets reflects amortization expense associated with credit card-related and core deposit intangibles, partially offset by increases due to the dissolution of the Chase Paymentech Solutions joint venture, the purchase of an additional equity interest in Highbridge, and the acquisition of an institutional global custody portfolio. For additional information on MSRs and other intangible assets, see Note 18 on pages 198–201 of this Annual Report.

Other assets
The Firm's other assets consist of private equity and other investments, collateral received, corporate and bank-owned life insurance policies, premises and equipment, assets acquired in loan satisfaction (including real estate owned), and all other assets. The increase in other assets from December 31, 2007, was due to the Bear Stearns merger, which partly resulted in a higher volume of collateral received from customers, the Washington Mutual transaction, and the purchase of asset-backed commercial paper from money market mutual funds in connection with the Federal Reserve's Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility ("AML Facility"), which was established by the Federal Reserve on September 19, 2008, as a temporary lending facility to provide liquidity to eligible U.S. money market mutual funds. For additional information regarding the AML Facility, see Executive Overview and Note 21 on pages 41–44 and 202 respectively, of this Annual Report.

Deposits

The Firm's deposits represent a liability to customers, both retail and wholesale, related to non-brokerage funds held on their behalf. Deposits are generally classified by location (U.S. and non-U.S.), whether they are interest or noninterest-bearing, and by type (i.e., demand, money market deposit, savings, time or negotiable order of withdrawal accounts). Deposits help provide a stable and consistent source of funding for the Firm. Deposits were at a higher level compared with the level at December 31, 2007, predominantly from the deposits assumed in the Washington Mutual transaction, net increases in wholesale interest- and noninterest-bearing deposits in TSS, AM and CB. The increase in TSS was driven by both new and existing clients, and due to the deposit inflows related to the heightened volatility and credit concerns affecting the markets. For more information on deposits, refer to the TSS and RFS segment discussions on pages 68–69 and 57–62, respectively, and the Liquidity Risk Management discussion on pages 88–92 of this Annual Report. For more information on wholesale liability balances, including deposits, refer to the CB and TSS segment discussions on pages 66–67 and 68–69 of this Annual Report.

Commercial paper and other borrowed funds

The Firm utilizes commercial paper and other borrowed funds as part of its liquidity management activities to meet short-term funding needs, and in connection with a TSS liquidity management product whereby excess client funds, are transferred into commercial paper overnight sweep accounts. The increase in other borrowed funds was predominantly due to advances from Federal Home Loan Banks of $70.2 billion (net of maturities of $10.4 billion) that were assumed as part of the Washington Mutual transaction and nonrecourse advances from the Federal Reserve Bank of Boston ("FRBB") to fund purchases of asset-backed commercial paper from money market mutual funds, and other borrowings from the Federal Reserve under the Term Auction Facility program. For additional information on the Firm's Liquidity Risk Management and other borrowed funds, see pages 88–92 and Note 21 on page 202 of this Annual Report.

Long-term debt and trust preferred capital debt securities

The Firm utilizes long-term debt and trust preferred capital debt securities to provide cost-effective and diversified sources of funds and as critical components of the Firm's liquidity and capital management. Long-term debt and trust preferred capital debt securities increased from December 31, 2007, predominantly due to debt assumed in both the Bear Stearns merger and the Washington Mutual transaction, and debt issuances of $20.8 billion, which are guaranteed by the FDIC under its TLG Program. These increases were partially offset by net maturities and redemptions, including IB structured notes, the issuances of which are generally client-driven. For additional information on the Firm's long-term debt activities, see the Liquidity Risk Management discussion on pages 88–92 and Note 23 on pages 203–204 of this Annual Report.

Stockholders' equity

The increase in total stockholders' equity from December 31, 2007, was predominantly due to the issuance of preferred and common equity securities during 2008. In the fourth quarter of 2008, JPMorgan Chase participated in the Capital Purchase Program and issued preferred stock and a warrant to purchase common stock to the U.S. Treasury, resulting in a $25.0 billion increase to stockholders' equity. Additional preferred stock issuances and a common stock issuance during 2008 increased equity by $19.3 billion. Equity from issuances of stock awards under the Firm's employee stock-based compensation plans, the Bear Stearns merger, and net income for 2008 was more than offset by the declaration of cash dividends and net losses recorded within accumulated other comprehensive income related to AFS securities and defined benefit pension and other postretirement employee benefit plans. For a further discussion, see the Capital Management section that follows, and Note 24 and Note 27 on pages 205–206 and 208, respectively, of this Annual Report.

JPMorgan Chase is involved with several types of off-balance sheet arrangements, including special purpose entities ("SPEs") and lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors in the form of commercial paper, short-term asset-backed notes, medium-term notes and other forms of interest. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

SPEs are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. These arrangements are integral to the markets for mortgage-backed securities, commercial paper and other asset-backed securities.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits and investor intermediation activities, and as a result of its loan securitizations, through qualifying special purpose entities ("QSPEs"). This discussion focuses mostly on multi-seller conduits and investor intermediation. For a detailed discussion of all SPEs with which the Firm is involved, and the related accounting, see Note 1, Note 16 and Note 17 on pages 134–145, 180–188 and 189–198, respectively of this Annual Report.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.
For certain liquidity commitments to SPEs, the Firm could be required to provide funding if the short-term credit rating of JPMorgan Chase Bank, N.A., was downgraded below specific levels, primarily "P-1", "A-1" and "F1" for Moody's, Standard & Poor's and Fitch, respectively. The amount of these liquidity commitments was $61.0 billion and $94.0 billion at December 31, 2008 and 2007, respectively. Alternatively, if JPMorgan Chase Bank, N.A., were downgraded, the Firm could be replaced by another liquidity provider in lieu of providing funding under the liquidity commitment, or in certain circumstances, the Firm could facilitate the sale or refinancing of the assets in the SPE in order to provide liquidity. These commitments are included in other unfunded commitments to extend credit and asset purchase agreements, as shown in the Off-balance sheet lending-related financial instruments and guarantees table on page 81 of this Annual Report.

As noted above, the Firm is involved with three types of SPEs. A summary of each type of SPE follows.

Multi-seller conduits
The Firm helps customers meet their financing needs by providing access to the commercial paper markets through variable interest entities ("VIEs") known as multi-seller conduits. Multi-seller conduit entities are separate bankruptcy-remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper to third-party investors. The primary source of repayment of the commercial paper is the cash flow from the pools of assets. JPMorgan Chase receives fees related to the structuring of multi-seller conduit transactions and receives compensation from the multi-seller conduits for its role as administrative agent, liquidity provider, and provider of program-wide credit enhancement.

Investor intermediation
As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions, typically derivative structures, with these VIEs to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in derivative instruments or liquidity commitments are managed similarly to other credit, market and liquidity risks to which the Firm is exposed. The principal types of VIEs the Firm uses in these structuring activities are municipal bond vehicles, credit-linked note vehicles and collateralized debt obligation vehicles.

Loan securitizations
JPMorgan Chase securitizes and sells a variety of loans, including residential mortgages, credit cards, automobile, student, and commercial loans (primarily related to real estate). JPMorgan Chase-sponsored securitizations utilize SPEs as part of the securitization process. These SPEs are structured to meet the definition of a QSPE (as discussed in Note 1 on page 134 of this Annual Report); accordingly, the assets and liabilities of securitization-related QSPEs are not reflected on the Firm's Consolidated Balance Sheets (except for retained interests, as described below). The primary purpose of these vehicles is to meet investor needs and generate liquidity for the Firm through the sale of loans to the QSPEs. These QSPEs are financed through the issuance of fixed or floating-rate asset-backed securities that are sold to third-party investors or held by the Firm.

Consolidation and consolidation sensitivity analysis on capital
For more information regarding these programs and the Firm's other SPEs, as well as the Firm's consolidation analysis for these programs, see Note 16 and Note 17 on pages 180–188 and 189–198, respectively, of this Annual Report.

Special-purpose entities revenue

The following table summarizes certain revenue information related to consolidated and nonconsolidated VIEs and QSPEs with which the Firm has significant involvement. The revenue reported in the table below primarily represents contractual servicing and credit fee income (i.e., for income from acting as administrator, structurer, liquidity provider). It does not include mark-to-market gains and losses from changes in the fair value of trading positions (such as derivative transactions) entered into with VIEs. Those gains and losses are recorded in principal transactions revenue.

Revenue from VIEs and QSPEs

Year ended December 31, (in millions)	**2008**	2007	2006
VIEs:[a]			
Multi-seller conduits	**$ 314**	$ 187[b]	$ 160
Investor intermediation	**18**	33	49
Total VIEs	**332**	220	209
QSPEs[c]	**1,746**	1,420	1,131
Total	**$ 2,078**	$ 1,640	$ 1,340

(a) Includes revenue associated with consolidated VIEs and significant nonconsolidated VIEs.
(b) Excludes the markdown on subprime CDO assets that was recorded in principal transactions revenue in 2007.
(c) Excludes servicing revenue from loans sold to and securitized by third parties. Prior period amounts have been revised to conform to the current period presentation.

American Securitization Forum subprime adjustable rate mortgage loans modifications

In December 2007, the American Securitization Forum ("ASF") issued the "Streamlined Foreclosure and Loss Avoidance Framework for Securitized Subprime Adjustable Rate Mortgage Loans" ("the Framework"). The Framework provides guidance for servicers to streamline evaluation procedures of borrowers with certain subprime adjustable rate mortgage ("ARM") loans to more efficiently provide modification of such loans with terms that are more appropriate for the individual needs of such borrowers. The Framework applies to all first-lien subprime ARM loans that have a fixed rate of interest for an initial period of 36 months or less; are included in securitized pools; were originated between January 1, 2005, and July 31, 2007; and have an initial interest rate reset date between January 1, 2008, and July 31, 2010. The Framework categorizes the population of ASF Framework Loans into three segments. Segment 1 includes loans where the borrower is current and likely to be able to refinance into any available mortgage product. Segment 2 includes loans where the borrower is current, unlikely to be able to refinance into any readily available mortgage industry product and meets certain defined criteria. Segment 3 includes loans where the borrower is not current, as defined, and does not meet the criteria for Segments 1 or 2. JPMorgan Chase adopted the Framework during the first quarter of 2008. For those AFS Framework Loans serviced by the Firm and owned by Firm-sponsored QSPEs, the Firm modified principal amounts of $1.7 billion of Segment 2 subprime mortgages during the year ended December 31, 2008. The following table presents selected information relating to the principal amount of Segment 3 loans for the year ended December 31, 2008, including those that have been modified, subjected to other loss mitigation activities or have been prepaid by the borrower.

Year ended December 31, 2008 (in millions)	
Loan modifications	$ 2,384
Other loss mitigation activities	865
Prepayments	219

For additional discussion of the Framework, see Note 16 on page 188 of this Annual Report.

Off-balance sheet lending-related financial instruments and guarantees

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and the counterparty subsequently fail to perform according to the terms of the contract. These commitments and guarantees historically expire without being drawn and even higher proportions expire without a default. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. Further, certain commitments, primarily related to consumer financings, are cancelable, upon notice, at the option of the Firm. For further discussion of lending-related commitments and guarantees and the Firm's accounting for them, see lending-related commitments in Credit Risk Management on page 102 and Note 33 on pages 218–222 of this Annual Report.

Contractual cash obligations

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Commitments for future cash expenditures primarily include contracts to purchase future services and capital expenditures related to real estate–related obligations and equipment.

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's off-balance sheet lending-related financial instruments and significant contractual cash obligations at December 31, 2008. Contractual purchases and capital expenditures in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the following table are a number of obligations to be settled in cash, primarily in under one year. These obligations are reflected on the Firm's Consolidated Balance Sheets and include federal funds purchased and securities loaned or sold under repurchase agreements; commercial paper; other borrowed funds; purchases of debt and equity instruments; derivative payables; and certain purchases of instruments that resulted in settlement failures. Also excluded are contingent payments associated with certain acquisitions that could not be estimated. For discussion regarding long-term debt and trust preferred capital debt securities, see Note 23 on pages 203–204 of this Annual Report. For discussion regarding operating leases, see Note 31 on page 213 of this Annual Report.

The following table presents maturity information for off-balance sheet lending-related financial instruments, guarantees and commitments.

Off-balance sheet lending-related financial instruments and guarantees

By remaining maturity at December 31, (in millions)	2008 2009	2010-2011	2012-2013	After 2013	**Total**	2007 Total
Lending-related						
Consumer[a]	**$ 642,978**	**$ 4,098**	**$ 9,916**	**$ 84,515**	**$ 741,507**	$ 815,936
Wholesale:						
Other unfunded commitments to extend credit[b][c][d][e]	**93,307**	**69,479**	**53,567**	**9,510**	**225,863**	250,954
Asset purchase agreements[f]	**16,467**	**25,574**	**9,983**	**1,705**	**53,729**	90,105
Standby letters of credit and guarantees[c][g][h]	**25,998**	**35,288**	**30,650**	**3,416**	**95,352**	100,222
Other letters of credit[c]	**3,889**	**718**	**240**	**80**	**4,927**	5,371
Total wholesale	**139,661**	**131,059**	**94,440**	**14,711**	**379,871**	446,652
Total lending-related	**$ 782,639**	**$ 135,157**	**$ 104,356**	**$ 99,226**	**$ 1,121,378**	$ 1,262,588
Other guarantees						
Securities lending guarantees[i]	**$ 169,281**	**$ —**	**$ —**	**$ —**	**$ 169,281**	$ 385,758
Residual value guarantees	**—**	**670**	**—**	**—**	**670**	NA
Derivatives qualifying as guarantees[j]	**9,537**	**28,970**	**15,452**	**29,876**	**83,835**	85,262

Contractual cash obligations

By remaining maturity at December 31, (in millions)						
Time deposits	**$ 278,520**	**$ 11,414**	**$ 8,139**	**$ 1,028**	**$ 299,101**	$ 249,877
Advances from the Federal Home Loan Banks	**47,406**	**21,089**	**738**	**954**	**70,187**	450
Long-term debt	**36,026**	**78,199**	**51,275**	**86,594**	**252,094**	183,862
Trust preferred capital debt securities	**—**	**—**	**—**	**18,589**	**18,589**	15,148
FIN 46R long-term beneficial interests[k]	**67**	**199**	**1,289**	**3,450**	**5,005**	7,209
Operating leases[l]	**1,676**	**3,215**	**2,843**	**9,134**	**16,868**	10,908
Contractual purchases and capital expenditures	**1,356**	**878**	**219**	**234**	**2,687**	2,434
Obligations under affinity and co-brand programs	**1,174**	**2,086**	**1,999**	**2,879**	**8,138**	5,477
Other liabilities[m]	**666**	**809**	**865**	**2,665**	**5,005**	5,656
Total	**$ 366,891**	**$ 117,889**	**$ 67,367**	**$125,527**	**$ 677,674**	$ 481,021

(a) Includes credit card and home equity lending-related commitments of $623.7 billion and $95.7 billion, respectively, at December 31, 2008; and $714.8 billion and $74.2 billion, respectively, at December 31, 2007. These amounts for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.

(b) Includes unused advised lines of credit totaling $36.3 billion and $38.4 billion at December 31, 2008 and 2007, respectively, which are not legally binding. In regulatory filings with the Federal Reserve, unused advised lines are not reportable. See the Glossary of terms, on page 230 of this Annual Report, for the Firm's definition of advised lines of credit.

(c) Represents contractual amount net of risk participations totaling $28.3 billion at both December 31, 2008 and 2007.

(d) Excludes unfunded commitments to third-party private equity funds of $1.4 billion and $881 million at December 31, 2008 and 2007, respectively. Also excluded unfunded commitments for other equity investments of $1.0 billion and $903 million at December 31, 2008 and 2007, respectively.

(e) Includes commitments to investment and noninvestment grade counterparties in connection with leveraged acquisitions of $3.6 billion and $8.2 billion at December 31, 2008 and 2007, respectively.

(f) Largely represents asset purchase agreements to the Firm's administered multi-seller, asset-backed commercial paper conduits. The maturity is based upon the weighted-average life of the underlying assets in the SPE, which are based upon the remainder of each conduit transaction's committed liquidity plus either the expected weighted average life of the assets should the committed liquidity expire without renewal, or the expected time to sell the underlying assets in the securitization market. It also includes $96 million and $1.1 billion of asset purchase agreements to other third-party entities at December 31, 2008 and 2007, respectively.

(g) JPMorgan Chase held collateral relating to $31.0 billion and $31.5 billion of these arrangements at December 31, 2008 and 2007, respectively. Prior periods have been revised to conform to the current presentation.

(h) Includes unissued standby letters of credit commitments of $39.5 billion and $50.7 billion at December 31, 2008 and 2007, respectively.

(i) Collateral held by the Firm in support of securities lending indemnification agreements was $170.1 billion and $390.5 billion at December 31, 2008 and 2007, respectively. Securities lending collateral comprises primarily cash, securities issued by governments that are members of the Organisation for Economic Co-operation and Development and U.S. government agencies.

(j) Represents notional amounts of derivatives qualifying as guarantees. For further discussion of guarantees, see Note 33 on pages 218–222 of this Annual Report.

(k) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated variable interest entities.

(l) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of $2.3 billion and $1.3 billion at December 31, 2008 and 2007, respectively.

(m) Includes deferred annuity contracts. Excludes the $1.3 billion discretionary contribution to the Firm's U.S. defined benefit pension plan that was made on January 15, 2009 (for further discussion, see Note 9 on pages 161–167), and contributions to the U.S. and non-U.S. other postretirement benefits plans, if any, as these contributions are not reasonably estimable at this time. Also excluded are unrecognized tax benefits of $5.9 billion and $4.8 billion at December 31, 2008 and 2007, respectively, as the timing and amount of future cash payments are not determinable at this time.

CAPITAL MANAGEMENT

The Firm's capital management framework is intended to ensure that there is capital sufficient to support the underlying risks of the Firm's business activities and to maintain "well-capitalized" status under regulatory requirements. In addition, the Firm holds capital above these requirements in amounts deemed appropriate to achieve the Firm's regulatory and debt rating objectives. The process of assigning equity to the lines of business is integrated into the Firm's capital framework and is overseen by the ALCO.

Line of business equity

The Firm's framework for allocating capital is based upon the following objectives:

- integrate firmwide capital management activities with capital management activities within each of the lines of business
- measure performance consistently across all lines of business
- provide comparability with peer firms for each of the lines of business

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, incorporating sufficient capital to address economic risk measures, regulatory capital requirements and capital levels for similarly rated peers. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. Return on common equity is measured and internal targets for expected returns are established as a key measure of a business segment's performance.

Relative to 2007, line of business equity increased during 2008, reflecting growth across the businesses. In addition, at the end of the third quarter of 2008, equity was increased for each line of business in anticipation of the future implementation of the new Basel II capital rules. For further details on these rules, see Basel II on page 84 of this Annual Report. Finally, during 2008, capital allocated to RFS, CS, and CB was increased as a result of the Washington Mutual transaction; capital allocated to AM was increased due to the Bear Stearns merger and the purchase of the additional equity interest in Highbridge; and capital allocated to IB was increased due to the Bear Stearns merger.

In accordance with SFAS 142, the lines of business perform the required goodwill impairment testing. For a further discussion of goodwill and impairment testing, see Critical Accounting Estimates Used by the Firm and Note 18 on pages 119–123 and 198–201, respectively, of this Annual Report.

Line of business equity December 31, (in billions)	**2008**	2007
Investment Bank	**$ 33.0**	$ 21.0
Retail Financial Services	**25.0**	16.0
Card Services	**15.0**	14.1
Commercial Banking	**8.0**	6.7
Treasury & Securities Services	**4.5**	3.0
Asset Management	**7.0**	4.0
Corporate/Private Equity	**42.4**	58.4
Total common stockholders' equity	**$134.9**	$ 123.2

Line of business equity (in billions)	Yearly Average **2008**	2007
Investment Bank	**$ 26.1**	$ 21.0
Retail Financial Services	**19.0**	16.0
Card Services	**14.3**	14.1
Commercial Banking	**7.3**	6.5
Treasury & Securities Services	**3.8**	3.0
Asset Management	**5.6**	3.9
Corporate/Private Equity[(a)]	**53.0**	54.2
Total common stockholders' equity	**$129.1**	$ 118.7

(a) 2008 and 2007 include $41.9 billion and $41.7 billion, respectively, of equity to offset goodwill, and $11.1 billion and $12.5 billion, respectively, of equity, primarily related to Treasury, Private Equity and the Corporate pension plan.

Economic risk capital

JPMorgan Chase assesses its capital adequacy relative to the risks underlying the Firm's business activities, utilizing internal risk-assessment methodologies. The Firm assigns economic capital primarily based upon four risk factors: credit risk, market risk, operational risk and private equity risk. In 2008, the growth in economic risk capital was driven by higher credit risk capital, which was increased primarily due to a combination of higher derivative exposure, a weakening credit environment, and asset growth related to the Bear Stearns and Washington Mutual transactions.

Economic risk capital (in billions)	Yearly Average **2008**	2007
Credit risk	**$ 37.8**	$ 30.0
Market risk	**10.5**	9.5
Operational risk	**6.3**	5.6
Private equity risk	**5.3**	3.7
Economic risk capital	**59.9**	48.8
Goodwill	**46.1**	45.2
Other[(a)]	**23.1**	24.7
Total common stockholders' equity	**$129.1**	$ 118.7

(a) Reflects additional capital required, in the Firm's view, to meet its regulatory and debt rating objectives.

Credit risk capital
Credit risk capital is estimated separately for the wholesale businesses (IB, CB, TSS and AM) and consumer businesses (RFS and CS).

Credit risk capital for the overall wholesale credit portfolio is defined in terms of unexpected credit losses, both from defaults and declines in the portfolio value due to credit deterioration, measured over a one-year period at a confidence level consistent with an "AA" credit rating standard. Unexpected losses are losses in excess of those for which provisions for credit losses are maintained. The capital methodology is based upon several principal drivers of credit risk: exposure at default (or loan-equivalent amount), default likelihood, credit spreads, loss severity and portfolio correlation.

Credit risk capital for the consumer portfolio is based upon product and other relevant risk segmentation. Actual segment level default and severity experience are used to estimate unexpected losses for a one-year horizon at a confidence level consistent with an "AA" credit rating standard. Statistical results for certain segments or portfolios are adjusted to ensure that capital is consistent with external benchmarks, such as subordination levels on market transactions or capital held at representative monoline competitors, where appropriate.

Market risk capital
The Firm calculates market risk capital guided by the principle that capital should reflect the risk of loss in the value of portfolios and financial instruments caused by adverse movements in market variables, such as interest and foreign exchange rates, credit spreads, securities prices and commodities prices. Daily Value-at-Risk ("VaR"), biweekly stress-test results and other factors are used to determine appropriate capital levels. The Firm allocates market risk capital to each business segment according to a formula that weights that segment's VaR and stress-test exposures. See Market Risk Management on pages 111–116 of this Annual Report for more information about these market risk measures.

Operational risk capital
Capital is allocated to the lines of business for operational risk using a risk-based capital allocation methodology which estimates operational risk on a bottom-up basis. The operational risk capital model is based upon actual losses and potential scenario-based stress losses, with adjustments to the capital calculation to reflect changes in the quality of the control environment or the use of risk-transfer products. The Firm believes its model is consistent with the new Basel II Framework.

Private equity risk capital
Capital is allocated to privately and publicly held securities, third-party fund investments and commitments in the private equity portfolio to cover the potential loss associated with a decline in equity markets and related asset devaluations. In addition to negative market fluctuations, potential losses in private equity investment portfolios can be magnified by liquidity risk. The capital allocation for the private equity portfolio is based upon measurement of the loss experience suffered by the Firm and other market participants over a prolonged period of adverse equity market conditions.

Regulatory capital

The Board of Governors of the Federal Reserve System (the "Federal Reserve") establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A.

The Federal Reserve granted the Firm, for a period of 18 months following the Bear Stearns merger, relief up to a certain specified amount and subject to certain conditions from the Federal Reserve's risk-based capital and leverage requirements with respect to Bear Stearns' risk-weighted assets and other exposures acquired. The amount of such relief is subject to reduction by one-sixth each quarter subsequent to the merger and expires on October 1, 2009. The OCC granted JPMorgan Chase Bank, N.A. similar relief from its risk-based capital and leverage requirements.

JPMorgan Chase maintained a well-capitalized position, based upon Tier 1 and Total capital ratios at December 31, 2008 and 2007, as indicated in the tables below. For more information, see Note 30 on pages 212–213 of this Annual Report.

Risk-based capital components and assets

December 31, (in millions)	**2008**	2007
Total Tier 1 capital[(a)]	**$ 136,104**	$ 88,746
Total Tier 2 capital	**48,616**	43,496
Total capital	**$ 184,720**	$ 132,242
Risk-weighted assets	**$ 1,244,659**	$ 1,051,879
Total adjusted average assets	**1,966,895**	1,473,541

(a) The FASB has been deliberating certain amendments to both SFAS 140 and FIN 46R that may impact the accounting for transactions that involve QSPEs and VIEs. Based on the provisions of the current proposal and the Firm's interpretation of the proposal, the Firm estimates that the impact of consolidation could be up to $70 billion of credit card receivables, $40 billion of assets related to Firm-sponsored multi-seller conduits, and $50 billion of other loans (including residential mortgages); the decrease in the Tier 1 capital ratio could be approximately 80 basis points. The ultimate impact could differ significantly due to the FASB's continuing deliberations on the final requirements of the rule and market conditions.

Tier 1 capital was $136.1 billion at December 31, 2008, compared with $88.7 billion at December 31, 2007, an increase of $47.4 billion.

The following table presents the changes in Tier 1 capital for the year ended December 31, 2008.

Tier 1 capital, December 31, 2007 (in millions)	$ 88,746
Net income	5,605
Issuance of cumulative perpetual preferred stock to U.S. Treasury	23,750
Warrant issued to U.S. Treasury in connection with issuance of preferred stock	1,250
Issuance of noncumulative perpetual preferred stock	7,800
Issuance of preferred stock – conversion of Bear Stearns preferred stock	352
Net issuance of common stock	11,485
Net issuance of common stock under employee stock-based compensation plans	3,317
Net issuance of common stock in connection with the Bear Stearns merger	1,198
Dividends declared	(6,307)
Net issuance of qualifying trust preferred capital debt securities	2,619
DVA on structured debt and derivative liabilities	(1,475)
Goodwill and other nonqualifying intangibles (net of deferred tax liabilities)	(1,357)
Other	(879)
Increase in Tier 1 capital	**47,358**
Tier 1 capital, December 31, 2008	**$136,104**

Additional information regarding the Firm's capital ratios and the federal regulatory capital standards to which it is subject, and the capital ratios for the Firm's significant banking subsidiaries at December 31, 2008 and 2007, are presented in Note 30 on pages 212–213 of this Annual Report.

Capital Purchase Program

Pursuant to the Capital Purchase Program, on October 28, 2008, the Firm issued to the U.S. Treasury, for total proceeds of $25.0 billion, (i) 2.5 million shares of Series K Preferred Stock, and (ii) a warrant to purchase up to 88,401,697 shares of the Firm's common stock, at an exercise price of $42.42 per share, subject to certain antidilution and other adjustments. The Series K Preferred Stock qualifies as Tier 1 capital.

The Series K Preferred Stock bears cumulative dividends at a rate of 5% per year for the first five years and 9% per year thereafter. The Series K Preferred Stock ranks equally with the Firm's existing 6.15% Cumulative Preferred Stock, Series E; 5.72% Cumulative Preferred Stock, Series F; 5.49% Cumulative Preferred Stock, Series G; Fixed-to-Floating Rate Noncumulative Perpetual Preferred Stock, Series I; and 8.63% Noncumulative Perpetual Preferred Stock, Series J, in terms of dividend payments and upon liquidation of the Firm.

Any accrued and unpaid dividends on the Series K Preferred Stock must be fully paid before dividends may be declared or paid on stock ranking junior or equally with the Series K Preferred Stock. Pursuant to the Capital Purchase Program, until October 28, 2011, the U.S. Treasury's consent is required for any increase in dividends on the Firm's common stock from the amount of the last quarterly stock dividend declared by the Firm prior to October 14, 2008, unless the Series K Preferred Stock is redeemed in whole before then, or the U.S. Treasury has transferred all of the Series K Preferred Stock it owns to third parties.

The Firm may not repurchase or redeem any common stock or other equity securities of the Firm, or any trust preferred securities issued by the Firm or any of its affiliates, without the prior consent of the U.S. Treasury (other than (i) repurchases of the Series K Preferred Stock and (ii) repurchases of junior preferred shares or common stock in connection with any employee benefit plan in the ordinary course of business consistent with past practice).

Basel II

The minimum risk-based capital requirements adopted by the U.S. federal banking agencies follow the Capital Accord of the Basel Committee on Banking Supervision. In 2004, the Basel Committee published a revision to the Accord ("Basel II"). The goal of the new Basel II Framework is to provide more risk-sensitive regulatory capital calculations and promote enhanced risk management practices among large, internationally active banking organizations. U.S. banking regulators published a final Basel II rule in December 2007, which will require JPMorgan Chase to implement Basel II at the holding company level, as well as at certain of its key U.S. bank subsidiaries.

Prior to full implementation of the new Basel II Framework, JPMorgan Chase will be required to complete a qualification period of four consecutive quarters during which it will need to demonstrate that it meets the requirements of the new rule to the satisfaction of its primary U.S. banking regulators. The U.S. implementation timetable consists of the qualification period, starting any time between April 1, 2008, and April 1, 2010, followed by a minimum transition period of three years. During the transition period, Basel II risk-based capital requirements cannot fall below certain floors based on current ("Basel I") regulations. JPMorgan Chase expects to be in compliance with all relevant Basel II rules within the established timelines. In addition, the Firm has adopted, and will continue to adopt, based upon various established timelines, Basel II in certain non-U.S. jurisdictions, as required.

Broker-dealer regulatory capital

JPMorgan Chase's principal U.S. broker-dealer subsidiaries are J.P. Morgan Securities Inc. ("JPMorgan Securities") and J.P. Morgan Clearing Corp. (formerly known as Bear Stearns Securities Corp.). JPMorgan Securities and J.P. Morgan Clearing Corp. are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 ("Net Capital Rule"). JPMorgan Securities and J.P. Morgan Clearing Corp. are also registered as futures commission merchants and subject to Rule 1.17 under the Commodity Futures Trading Commission ("CFTC").

JPMorgan Securities and J.P. Morgan Clearing Corp. have elected to compute their minimum net capital requirements in accordance with the "Alternative Net Capital Requirement" of the Net Capital Rule. At December 31, 2008, JPMorgan Securities' net capital, as defined by the Net Capital Rule, of $7.2 billion exceeded the minimum requirement by $6.6 billion. In addition to its net capital requirements, JPMorgan Securities is required to hold tentative net capital in excess

of $1.0 billion and is also required to notify the Securities and Exchange Commission ("SEC") in the event that tentative net capital is less than $5.0 billion in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2008, JPMorgan Securities had tentative net capital in excess of the minimum and the notification requirements. On October 1, 2008, J.P. Morgan Securities Inc. merged with and into Bear, Stearns & Co. Inc., and the surviving entity changed its name to J.P. Morgan Securities Inc.

J.P. Morgan Clearing Corp., a subsidiary of JPMorgan Securities provides clearing and settlement services. At December 31, 2008, J.P. Morgan Clearing Corp.'s net capital, as defined by the Net Capital Rule, of $4.7 billion exceeded the minimum requirement by $3.3 billion.

Dividends

On February 23, 2009, the Board of Directors reduced the Firm's quarterly common stock dividend from $0.38 to $0.05 per share, effective for the dividend payable April 30, 2009, to shareholders of record on April 6, 2009. JPMorgan Chase declared quarterly cash dividends on its common stock in the amount of $0.38 for each quarter of 2008 and the second, third and fourth quarters of 2007, and $0.34 per share for the first quarter of 2007 and for each quarter of 2006.

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratios, need to maintain an adequate capital level and alternative investment opportunities. The Firm's ability to pay dividends is subject to restrictions. For information regarding such restrictions, see page 84 and Note 24 and Note 29 on pages 205–206 and 211, respectively, of this Annual Report and for additional information regarding the reduction of the dividend, see page 44.

The following table shows the common dividend payout ratio based upon reported net income.

Common dividend payout ratio

Year ended December 31,	**2008**	2007	2006
Common dividend payout ratio	**114%**	34%	34%

Issuance

The Firm issued $6.0 billion and $1.8 billion of noncumulative perpetual preferred stock on April 23, 2008, and August 21, 2008, respectively. Pursuant to the Capital Purchase Program, on October 28, 2008, the Firm issued to the U.S. Treasury $25.0 billion of cumulative preferred stock and a warrant to purchase up to 88,401,697 shares of the Firm's common stock. For additional information regarding preferred stock, see Note 24 on pages 205–206 of this Annual Report.

On September 30, 2008, the Firm issued $11.5 billion, or 284 million shares, of common stock at $40.50 per share. For additional information regarding common stock, see Note 25 on pages 206–207 of this Annual Report.

Stock repurchases

During the year ended December 31, 2008, the Firm did not repurchase any shares of its common stock. During 2007, under the respective stock repurchase programs then in effect, the Firm repurchased 168 million shares for $8.2 billion at an average price per share of $48.60.

The Board of Directors approved in April 2007, a stock repurchase program that authorizes the repurchase of up to $10.0 billion of the Firm's common shares, which superseded an $8.0 billion stock repurchase program approved in 2006. The $10.0 billion authorization includes shares to be repurchased to offset issuances under the Firm's employee stock-based plans. The actual number of shares that may be repurchased is subject to various factors, including market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative potential investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time. A Rule 10b5-1 repurchase plan allows the Firm to repurchase shares during periods when it would not otherwise be repurchasing common stock – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan that is established when the Firm is not aware of material nonpublic information.

As of December 31, 2008, $6.2 billion of authorized repurchase capacity remained under the current stock repurchase program.

For a discussion of restrictions on stock repurchases, see Capital Purchase Program on page 84 and Note 24 on pages 205–206 of this Annual Report.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5, Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on page 17 of JPMorgan Chase's 2008 Form 10-K.

RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase's business activities. The Firm's risk management framework and governance structure are intended to provide comprehensive controls and ongoing management of the major risks inherent in its business activities. The Firm's ability to properly identify, measure, monitor and report risk is critical to both its soundness and profitability.

- Risk identification: The Firm's exposure to risk through its daily business dealings, including lending, trading and capital markets activities, is identified and aggregated through the Firm's risk management infrastructure. In addition, individuals who manage risk positions, particularly those positions that are complex, are responsible for identifying and estimating potential losses that could arise from specific or unusual events, that may not be captured in other models, and those risks are communicated to senior management.
- Risk measurement: The Firm measures risk using a variety of methodologies, including calculating probable loss, unexpected loss and value-at-risk, and by conducting stress tests and making comparisons to external benchmarks. Measurement models and related assumptions are routinely reviewed with the goal of ensuring that the Firm's risk estimates are reasonable and reflect underlying positions.
- Risk monitoring/control: The Firm's risk management policies and procedures incorporate risk mitigation strategies and include approval limits by customer, product, industry, country and business. These limits are monitored on a daily, weekly and monthly basis, as appropriate.
- Risk reporting: Risk reporting is executed on a line of business and consolidated basis. This information is reported to management on a daily, weekly and monthly basis, as appropriate. There are eight major risk types identified in the business activities of the Firm: liquidity risk, credit risk, market risk, interest rate risk, private equity risk, operational risk, legal and fiduciary risk, and reputation risk.

Risk governance

The Firm's risk governance structure starts with each line of business being responsible for managing its own risks. Each line of business works closely with Risk Management through its own risk committee and, in most cases, its own chief risk officer to manage risk. Each line of business risk committee is responsible for decisions regarding the business' risk strategy, policies and controls.

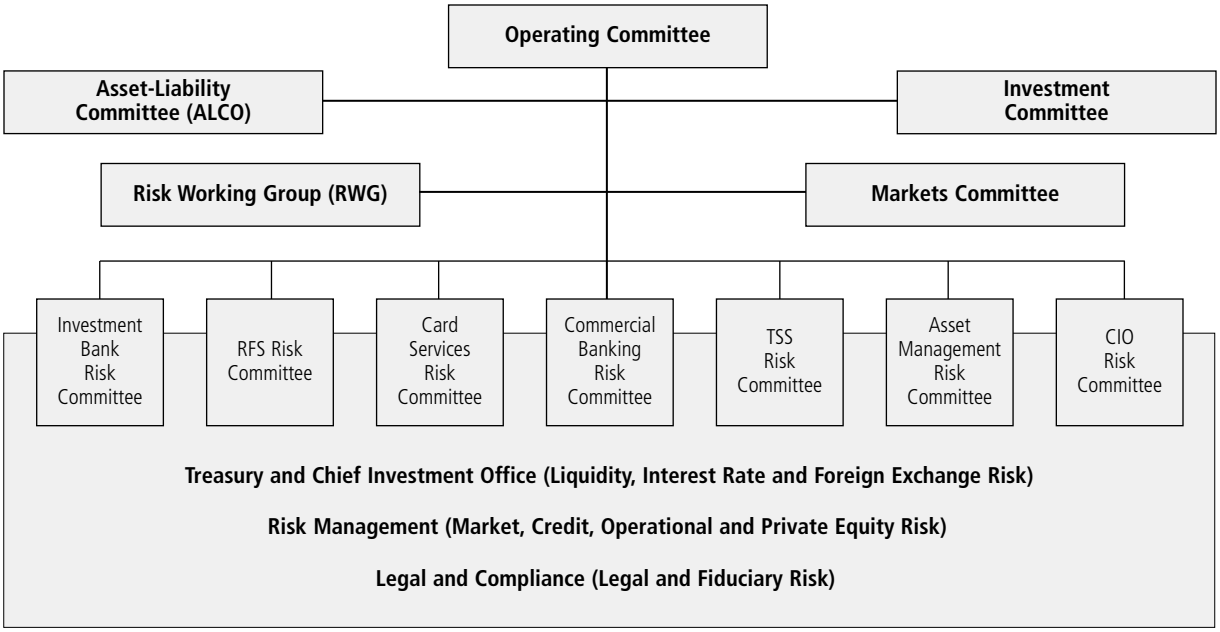
Overlaying the line of business risk management are four corporate functions with risk management–related responsibilities: Treasury, the Chief Investment Office, Legal and Compliance and Risk Management.

Risk Management is headed by the Firm's Chief Risk Officer, who is a member of the Firm's Operating Committee and who reports to the Chief Executive Officer and the Board of Directors, primarily through the Board's Risk Policy Committee. Risk Management is responsible for providing a firmwide function of risk management and controls. Within Risk Management are units responsible for credit risk, market risk, operational risk and private equity risk, as well as Risk Management Services and Risk Technology and Operations. Risk Management Services is responsible for risk policy and methodology, risk reporting and risk education; and Risk Technology and Operations is responsible for building the information technology infrastructure used to monitor and manage risk.

Treasury and the Chief Investment Office are responsible for measuring, monitoring, reporting and managing the Firm's liquidity, interest rate and foreign exchange risk.

Legal and Compliance has oversight for legal and fiduciary risk.

In addition to the risk committees of the lines of business and the above-referenced corporate functions, the Firm also has an Investment Committee, ALCO and two other risk-related committees, namely, the Risk Working Group and the Markets Committee. The members of these committees are composed of senior management of the Firm, including representatives of line of business, Risk Management, Finance and other senior executives. Members of these risk committees meet frequently to discuss a broad range of topics including, for example, current market conditions and other external events, current risk exposures and concentrations to ensure that the impact of current risk factors are considered broadly across the Firm's businesses.



The Investment Committee oversees global merger and acquisition activities undertaken by JPMorgan Chase for its own account that fall outside the scope of the Firm's private equity and other principal finance activities.

The Asset-Liability Committee is responsible for approving the Firm's liquidity policy, including contingency funding planning and exposure to SPEs (and any required liquidity support by the Firm of such SPEs). The Asset-Liability Committee also oversees the Firm's capital management and funds transfer pricing policy (through which lines of business "transfer" interest and foreign exchange risk to Treasury in the Corporate/Private Equity segment).

The Risk Working Group meets monthly to review issues such as risk policy, risk methodology, Basel II and regulatory issues and topics referred to it by any line of business risk committee. The Markets Committee, chaired by the Chief Risk Officer, meets at least weekly to review and determine appropriate courses of action with respect to significant risk matters, including but not limited to: limits; credit, market and operational risk; large, high risk transactions; and hedging strategies.

The Board of Directors exercises its oversight of risk management, principally through the Board's Risk Policy Committee and Audit Committee. The Risk Policy Committee oversees senior management risk-related responsibilities, including reviewing management policies and performance against these policies and related benchmarks. The Audit Committee is responsible for oversight of guidelines and policies that govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal controls and financial reporting that is relied upon to provide reasonable assurance of compliance with the Firm's operational risk management processes.

LIQUIDITY RISK MANAGEMENT

The ability to maintain a sufficient level of liquidity is crucial to financial services companies, particularly maintaining appropriate levels of liquidity during periods of adverse conditions. The Firm's funding strategy is to ensure liquidity and diversity of funding sources to meet actual and contingent liabilities through both stable and adverse conditions.

JPMorgan Chase uses a centralized approach for liquidity risk management. Global funding is managed by Corporate Treasury, using regional expertise as appropriate. Management believes that a centralized framework maximizes liquidity access, minimizes funding costs and permits identification and coordination of global liquidity risk.

Recent events

During the second half of 2008, global markets exhibited extraordinary levels of volatility and increasing signs of stress. Throughout this period, access by market participants to the debt, equity, and consumer loan securitization markets was constrained and funding spreads widened sharply. In response to strains in financial markets, U.S. government and regulatory agencies introduced various programs to inject liquidity into the financial system. JPMorgan Chase participated in a number of these programs, two of which were the Capital Purchase Program and the FDIC's TLG Program. On October 28, 2008, JPMorgan Chase issued $25.0 billion of preferred stock as well as a warrant to purchase up to 88,401,697 shares of the Firm's common stock to the U.S. Treasury under the Capital Purchase Program, which enhanced the Firm's capital and liquidity positions. In addition, on December 4, 2008, JPMorgan Chase elected to continue to participate in the FDIC's TLG Program, which facilitated long-term debt issuances at rates (including the guarantee fee charged by the FDIC) more favorable than those for non-FDIC guaranteed debt issuances. Under the TLG Program, the FDIC guarantees certain senior unsecured debt of JPMorgan Chase, and in return for the guarantees, the FDIC is paid a fee based on the amount and maturity of the debt. Under the TLG Program, the FDIC will pay the unpaid principal and interest on an FDIC-guaranteed debt instrument upon the uncured failure of the participating entity to make a timely payment of principal or interest in accordance with the terms of the instrument. During the fourth quarter of 2008, pursuant to the TLG Program, the Firm issued $20.8 billion of bonds guaranteed by the FDIC, further enhancing the Firm's liquidity position. At December 31, 2008, all of the FDIC-guaranteed debt was outstanding and had a carrying value of $21.0 billion, net of hedges. In the interest of promoting deposit stability, during the fourth quarter, the FDIC also (i) temporarily increased, through 2009, insurance coverage on bank deposits to $250,000 per customer from $100,000 per customer, and (ii) for qualified institutions who participated in the TLG Program (such as the Firm), provided full deposit insurance coverage for noninterest-bearing transaction accounts.

During the second half of 2008, the Firm's deposits (excluding those assumed in connection with the Washington Mutual transaction) increased substantially, as the Firm benefited from the heightened volatility and credit concerns affecting the markets.

On May 30, 2008, JPMorgan Chase completed the merger with Bear Stearns. Due to the structure of the transaction and the de-risking of positions over time, the merger with Bear Stearns had no material impact on the Firm's liquidity. On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual from the FDIC. As part of the Washington Mutual transaction, JPMorgan Chase assumed Washington Mutual's deposits as well as its obligations to its credit card securitization-related master trusts, covered bonds, and liabilities to certain Federal Home Loan Banks. The Washington Mutual transaction had an insignificant impact on the Firm's overall liquidity position.

Both S&P and Moody's lowered the Firm's ratings one notch on December 19, 2008 and January 15, 2009, respectively. These rating actions did not have a material impact on the cost or availability of funding to the Firm. For a further discussion of credit ratings, see the Credit Ratings caption of this Liquidity Risk Management section on pages 91–92 of this Annual Report.

Notwithstanding the market events during the latter half of 2008, the Firm's liquidity position remained strong based on its liquidity metrics as of December 31, 2008. The Firm believes that its unsecured and secured funding capacity is sufficient to meet on- and off- balance sheet obligations. JPMorgan Chase's long-dated funding, including core liabilities, exceeded illiquid assets. In addition, during the course of 2008, the Firm raised funds at the parent holding company in excess of its minimum threshold to cover its obligations and those of its nonbank subsidiaries that mature over the next 12 months.

Governance

The Asset-Liability Committee approves and oversees the execution of the Firm's liquidity policy and contingency funding plan. Corporate Treasury formulates the Firm's liquidity and contingency planning strategies and is responsible for measuring, monitoring, reporting and managing the Firm's liquidity risk profile.

Liquidity monitoring

The Firm monitors liquidity trends, tracks historical and prospective on- and off-balance sheet liquidity obligations, identifies and measures internal and external liquidity warning signals to permit early detection of liquidity issues, and manages contingency planning (including identification and testing of various company-specific and market-driven stress scenarios). Various tools, which together contribute to an overall firmwide liquidity perspective, are used to monitor and manage liquidity. Among others, these include: (i) analysis of the timing of liquidity sources versus liquidity uses (i.e., funding gaps) over periods ranging from overnight to one year; (ii) management of debt and capital issuances to ensure that the illiquid portion of the balance sheet can be funded by equity, long-term debt, trust preferred capital debt securities and deposits the Firm believes to be stable; and (iii) assessment of the Firm's capacity to raise incremental unsecured and secured funding.

Liquidity of the parent holding company and its nonbank subsidiaries is monitored independently as well as in conjunction with the liquidity of the Firm's bank subsidiaries. At the parent holding company level, long-term funding is managed to ensure that the parent holding company has, at a minimum, sufficient liquidity to cover its obligations and those of its nonbank subsidiaries within the next 12 months. For bank subsidiaries, the focus of liquidity risk management is on maintenance of unsecured and secured funding capacity sufficient to meet on- and off-balance sheet obligations.

A component of liquidity management is the Firm's contingency funding plan. The goal of the plan is to ensure appropriate liquidity during normal and stress periods. The plan considers various temporary and long-term stress scenarios where access to unsecured funding is severely limited or nonexistent, taking into account both on- and off-balance sheet exposures, and separately evaluates access to funds by the parent holding company and the Firm's banks.

Funding

Sources of funds

The deposits held by the RFS, CB, TSS and AM lines of business are a generally consistent source of funding for JPMorgan Chase Bank, N.A. As of December 31, 2008, total deposits for the Firm were $1.0 trillion, compared with $740.7 billion at December 31, 2007. A significant portion of the Firm's deposits are retail deposits, which are less sensitive to interest rate changes or market volatility and therefore are considered more stable than market-based (i.e., wholesale) liability balances. The Washington Mutual transaction added approximately $159.9 billion of deposits to the Firm, a significant majority of which are retail deposits. In addition, through the normal course of business, the Firm benefits from substantial liability balances originated by RFS, CB, TSS and AM. These franchise-generated liability balances include deposits and funds that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements), a significant portion of which are considered to be stable and consistent sources of funding due to the nature of the businesses from which they are generated. For further discussions of deposit and liability balance trends, see the discussion of the results for the Firm's business segments and the Balance sheet analysis on pages 54–72 and 76–78, respectively, of this Annual Report.

Additional sources of funding include a variety of unsecured short- and long-term instruments, including federal funds purchased, certificates of deposits, time deposits, bank notes, commercial paper, long-term debt, trust preferred capital debt securities, preferred stock and common stock. Secured sources of funding include securities loaned or sold under repurchase agreements, asset securitizations, borrowings from the Federal Reserve (including discount window borrowings, the Primary Dealer Credit Facility and the Term Auction Facility) and borrowings from the Chicago, Pittsburgh and, as a result of the Washington Mutual transaction, the San Francisco Federal Home Loan Banks. However, the Firm does not view borrowings from the Federal Reserve as a primary means of funding the Firm.

Issuance

Funding markets are evaluated on an ongoing basis to achieve an appropriate global balance of unsecured and secured funding at favorable rates. Generating funding from a broad range of sources in a variety of geographic locations enhances financial flexibility and limits dependence on any one source.

During 2008, JPMorgan Chase issued approximately $42.6 billion of long-term debt for funding or capital management purposes, including $20.8 billion of FDIC-guaranteed notes issued under the TLG Program. The Firm also issued $28.0 billion of IB structured notes, the issuances of which are generally client-driven and not for funding or capital management purposes, as the proceeds from such transactions are generally used to purchase securities to mitigate the risk associated with structured note exposure. In addition, during the year, the Firm issued $1.8 billion of trust preferred capital debt securities. During the same period, the Firm redeemed or had maturities of $62.7 billion of securities, including $35.8 billion of IB structured notes.

Preferred stock issuances included $6.0 billion and $1.8 billion of noncumulative perpetual preferred stock issued on April 23 and August 21, 2008, respectively, as well as preferred stock issued to the U.S. Treasury on October 28, 2008, under the Capital Purchase Program. In connection with preferred stock issuance under the Capital Purchase Program, the Firm also issued to the U.S. Treasury on October 28, 2008, a warrant to purchase up to 88,401,697 shares of the Firm's common stock, at an exercise price of $42.42 per share, subject to certain antidilution and other adjustments. The Firm has in the past, and may continue in the future, to repurchase from time to time its debt or trust preferred capital debt securities in open market purchases or privately negotiated transactions subject to regulatory and contractual restrictions.

Finally, during 2008, the Firm securitized $21.4 billion of credit card loans. The ability to securitize loans, and the associated gains on those securitizations, are principally dependent upon the credit quality and other characteristics of the assets securitized as well as upon prevailing market conditions. Given the volatility and stress in the financial markets in the second half of 2008, the Firm did not securitize any residential mortgage loans, auto loans or student loans during 2008.

Replacement Capital Covenants

In connection with the issuance of certain of its trust preferred capital debt securities and noncumulative perpetual preferred stock, the Firm entered into Replacement Capital Covenants ("RCCs") granting certain rights to the holders of "covered debt," as defined in the RCCs, that prohibit the repayment, redemption or purchase of the trust preferred capital debt securities and noncumulative perpetual preferred stock except, with limited exceptions, to the extent that JPMorgan Chase has received, in each such case, specified amounts of proceeds from the sale of certain qualifying securities. Currently the Firm's covered debt is its 5.875% Junior Subordinated Deferrable Interest Debentures, Series O, due in 2035. For more information regarding these covenants, reference is made to the respective RCCs entered into by the Firm in connection with the issuances of such trust preferred capital debt securities and noncumulative perpetual

preferred stock, which are filed with the U.S. Securities and Exchange Commission under cover of Forms 8-K.

Cash flows

For the years ended December 31, 2008, 2007 and 2006, cash and due from banks decreased $13.2 billion, $268 million, and increased $3.7 billion, respectively. The following discussion highlights the major activities and transactions that affected JPMorgan Chase's cash flows during 2008, 2007 and 2006.

Cash Flows from Operating Activities

JPMorgan Chase's operating assets and liabilities support the Firm's capital markets and lending activities, including the origination or purchase of loans initially designated as held-for-sale. The operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven activities, market conditions and trading strategies. Management believes cash flows from operations, available cash balances and the Firm's ability to generate cash through short-and long-term borrowings are sufficient to fund the Firm's operating liquidity needs.

For the year ended December 31, 2008, net cash provided by operating activities was $23.1 billion, while for the years ended December 31, 2007 and 2006, net cash used in operating activities was $110.6 billion and $49.6 billion, respectively. In 2008, net cash generated from operating activities was higher than net income, largely as a result of adjustments for operating items such as the provision for credit losses, depreciation and amortization, stock-based compensation, and certain other expense. During 2006, 2007 and 2008, cash was used to fund loans held-for-sale, primarily in IB and RFS. During 2008, proceeds from sales of loans originated or purchased with an initial intent to sell were slightly higher than cash used to acquire such loans; but the cash flows from these activities were at a significantly lower level than for the same periods in 2007 and 2006 as a result of current market conditions. In 2007 and 2006, cash used to acquire such loans was slightly higher than proceeds from sales.

For the years ended December 31, 2007 and 2006, the net cash used in operating activities supported growth in the Firm's lending and capital markets activities. In 2007, when compared with 2006, there was a significant decline in cash flows from IB loan originations/purchases and sale/securitization activities as a result of the difficult wholesale securitization market and capital markets for leveraged financings, which were affected by a significant deterioration in liquidity in the second half of 2007. Cash flows in 2007 associated with RFS residential mortgage activities grew, reflecting an increase in originations.

Cash Flows from Investing Activities

The Firm's investing activities predominantly include originating loans to be held for investment, other receivables, the available-for-sale investment portfolio and other short-term investment vehicles. For the year ended December 31, 2008, net cash of $286.3 billion was used in investing activities, primarily for: purchases of investment securities in Corporate's AFS portfolio to manage the Firm's exposure to interest rate movements, as well as to make strategic longer-term investments; increased deposits with banks as the result of the availability of excess cash for short-term investment opportunities through interbank lending, and from deposits with the Federal Reserve (which is now an investing activity, reflecting a policy change of the Federal Reserve to pay interest to depository institutions on reserve balances); net additions to the wholesale loan portfolio, from organic growth in CB; additions to the consumer prime mortgage portfolio as a result of the decision to retain, rather than sell, new originations of nonconforming prime mortgage loans; an increase in securities purchased under resale agreements reflecting growth in demand from clients for liquidity; and net purchases of asset-backed commercial paper from money market mutual funds in connection with a temporary Federal Reserve Bank of Boston lending facility. Partially offsetting these uses of cash were proceeds from sales and maturities of AFS securities; loan sales and credit card securitization activities, which were at a lower level than for the same periods in 2007 as a result of the adverse market conditions that have continued since the last half of 2007; and net cash received from acquisitions and the sale of an investment. Additionally, in June 2008, in connection with the merger with Bear Stearns, the Firm sold assets acquired from Bear Stearns to the FRBNY and received cash proceeds of $28.85 billion (for additional information see Note 2 on pages 135–140 of this Annual Report).

For the year ended December 31, 2007, net cash of $73.1 billion was used in investing activities, primarily to fund purchases in the AFS securities portfolio to manage the Firm's exposure to interest rate movements; net additions to the wholesale retained loan portfolios in IB, CB and AM, mainly as a result of business growth; a net increase in the consumer retained loan portfolio, primarily reflecting growth in RFS in home equity loans and net additions to RFS' subprime mortgage loans portfolio (which was affected by management's decision in the third quarter to retain (rather than sell) new subprime mortgages), and growth in prime mortgage loans originated by RFS and AM that cannot be sold to U.S. government agencies or U.S. government-sponsored enterprises; and increases in securities purchased under resale agreements as a result of a higher level of cash that was available for short-term investment opportunities in connection with the Firm's efforts to build liquidity. These net uses of cash were partially offset by cash proceeds received from sales and maturities of AFS securities; and credit card, residential mortgage, student and wholesale loan sales and securitization activities, which grew in 2007 despite the difficult conditions in the credit markets.

For the year ended December 31, 2006, net cash of $99.6 billion was used in investing activities. Net cash was invested to fund net additions to the retained wholesale loan portfolio, mainly resulting from capital markets activity in IB leveraged financings; increases in CS loans reflecting strong organic growth; net additions in retail home equity loans; the acquisition of private-label credit card portfolios from Kohl's, BP and Pier 1 Imports, Inc.; the acquisition of Collegiate Funding Services; and purchases of AFS securities in connection with repositioning the portfolio in response to changes in interest rates. These uses of cash were partially offset by cash proceeds provided from credit card, residential mortgage, auto and

wholesale loan sales and securitization activities; sales and maturities of AFS securities; the net decline in auto loans, which was caused partially by management's decision to de-emphasize vehicle leasing; and the sale of the insurance business at the beginning of the second quarter.

Cash Flows from Financing Activities

The Firm's financing activities primarily reflect cash flows related to customer deposits, issuances of long-term debt and trust preferred capital debt securities, and issuances of preferred and common stock. In 2008, net cash provided by financing activities was $250.5 billion due to: growth in wholesale deposits, in particular, interest- and noninterest-bearing deposits in TSS (driven by both new and existing clients, and due to the deposit inflows related to the heightened volatility and credit concerns affecting the global markets), as well as increases in AM and CB (due to organic growth); proceeds of $25.0 billion from the issuance of preferred stock and a warrant to the U.S. Treasury under the Capital Purchase Program; additional issuances of common stock and preferred stock used for general corporate purposes; an increase in other borrowings due to nonrecourse secured advances from the Federal Reserve Bank of Boston to fund the purchase of asset-backed commercial paper from money market mutual funds; increases in federal funds purchased and securities loaned or sold under repurchase agreements in connection with higher short-term requirements to fulfill client demand for liquidity and finance the Firm's AFS securities inventory; and a net increase in long-term debt due to a combination of non-FDIC guaranteed debt and trust preferred capital debt securities issued prior to December 4, 2008, and the issuance of $20.8 billion of FDIC-guaranteed long-term debt issued during the fourth quarter of 2008. The fourth-quarter FDIC-guaranteed issuance was offset partially by maturities of non-FDIC guaranteed long-term debt during the same period. The increase in long-term debt and trust preferred capital debt securities was used primarily to fund certain illiquid assets held by the parent holding company and build liquidity. Cash was also used to pay dividends on common and preferred stock. The Firm did not repurchase any shares of its common stock in the open market during 2008 in order to maintain its capital objectives.

In 2007, net cash provided by financing activities was $183.0 billion due to a net increase in wholesale deposits from growth in business volumes, in particular, interest-bearing deposits at TSS, AM and CB; net issuances of long-term debt and trust preferred capital debt securities primarily to fund certain illiquid assets held by the parent holding company and build liquidity, and by IB from client-driven structured notes transactions; and growth in commercial paper issuances and other borrowed funds due to growth in the volume of liability balances in sweep accounts in TSS and CB, and to fund trading positions and to further build liquidity. Cash was used to repurchase common stock and pay dividends on common stock, including an increase in the quarterly dividend in the second quarter of 2007.

In 2006, net cash provided by financing activities was $152.7 billion due to net cash received from growth in deposits, reflecting new retail account acquisitions and the ongoing expansion of the retail branch distribution network; higher wholesale business volumes; increases in securities sold under repurchase agreements to fund trading positions and higher AFS securities positions; and net issuances of long-term debt and trust preferred capital debt securities. The net cash provided was offset partially by the payment of cash dividends on stock and common stock repurchases.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on pages 79–80 and Ratings profile of derivative receivables marked to market ("MTM") on page 100 of this Annual Report.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures.

The credit ratings of the parent holding company and each of the Firm's significant banking subsidiaries as of January 15, 2009, were as follows.

	Short-term debt			Senior long-term debt		
	Moody's	S&P	Fitch	Moody's	S&P	Fitch
JPMorgan Chase & Co.	P-1	A-1	F1+	Aa3	A+	AA-
JPMorgan Chase Bank, N.A.	P-1	A-1+	F1+	Aa1	AA-	AA-
Chase Bank USA, N.A.	P-1	A-1+	F1+	Aa1	AA-	AA-

On December 19, 2008, S&P lowered the senior long-term debt ratings on JPMorgan Chase & Co. and its principal bank subsidiaries one notch from "AA-" and "AA", respectively; lowered the short-term debt rating of JPMorgan Chase & Co. from "A-1+"; and affirmed the short-term debt ratings of its principal bank subsidiaries. These actions were primarily the result of S&P's belief that the Firm's earnings are likely to decline over the next couple of years in response to increasing loan losses associated with the Firm's exposure to consumer lending, as well as declining business volumes. S&P's current outlook is negative. On January 15, 2009, Moody's lowered the senior long-term debt ratings on JPMorgan Chase & Co. and its principal bank subsidiaries from "Aa2" and "Aaa", respectively. These actions were primarily the result of Moody's view that, in the current economic environment, the Firm may experience difficulties generating capital and could face significant earnings pressure. Moody's affirmed the short-term debt ratings of JPMorgan Chase & Co. and its principal bank subsidiaries at "P-1". Moody's also revised the outlook to stable from negative due to the Firm's strong capital ratios, significant loan loss reserves, and strong franchise. Ratings from Fitch on JPMorgan Chase & Co. and its principal bank subsidiaries remained unchanged from December 31, 2007, and Fitch's outlook remained stable. The recent rating actions by S&P and Moody's did not have a material impact on the cost or availability of the Firm's funding. If the Firm's senior long-term debt ratings were downgraded by one additional notch, the Firm believes the incremental cost of funds or loss of funding would be manageable within the context of current market conditions and the Firm's liquidity resources. JPMorgan Chase's unsecured debt, other than in certain cases IB structured notes, does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, nor contain collateral provisions or the creation of an additional financial obligation, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, cash flows or stock price. To the extent any IB structured notes do contain such provisions, the Firm believes that, in the event of an acceleration of payments or maturities or provision of collateral, the securities used by the Firm to risk manage such structured notes, together with other liquidity resources, are expected to generate funds sufficient to satisfy the Firm's obligations.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit (for example, through loans, lending-related commitments and derivatives) to a variety of customers, from large corporate and institutional clients to the individual consumer. For the wholesale business, credit risk management includes the distribution of syndicated loans originated by the Firm into the marketplace (primarily to IB clients), with exposure held in the retained portfolio averaging less than 10% of the total originated loans. Wholesale loans generated by CB and AM are generally retained on the balance sheet. With regard to the consumer credit market, the Firm focuses on creating a portfolio that is diversified from both a product and a geographic perspective. Loss mitigation strategies are being employed for all home lending portfolios. These strategies include rate reductions, principal forgiveness, forbearance and other actions intended to minimize the economic loss and avoid foreclosure. In the mortgage business, originated loans are either retained in the mortgage portfolio or securitized and sold to U.S. government agencies and U.S. government-sponsored enterprises.

Credit risk organization

Credit risk management is overseen by the Chief Risk Officer and implemented within the lines of business. The Firm's credit risk management governance consists of the following functions:

- establishing a comprehensive credit risk policy framework
- monitoring and managing credit risk across all portfolio segments, including transaction and line approval
- assigning and managing credit authorities in connection with the approval of all credit exposure
- managing criticized exposures
- calculating the allowance for credit losses and ensuring appropriate credit risk-based capital management

Risk identification

The Firm is exposed to credit risk through lending and capital markets activities. The credit risk management organization works in partnership with the business segments in identifying and aggregating exposures across all lines of business.

Risk measurement

To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer installment versus wholesale loan), risk measurement parameters (e.g., delinquency status and credit bureau score versus wholesale risk rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based upon the amount of exposure should the obligor or the counterparty default, the probability of default and the loss severity given a default event. Based upon these factors and related market-based inputs, the Firm estimates both probable and unexpected losses for the wholesale and consumer portfolios. Probable losses, reflected in the provision for credit losses, are based primarily upon statistical estimates of credit losses as a result of obligor or counterparty default. However, probable losses are not the sole indicators of risk. If losses were entirely predictable, the probable loss rate could be factored into pricing and covered as a normal and recurring cost of doing business. Unexpected losses, reflected in the allocation of credit risk capital, represent the potential volatility of actual losses relative to the probable level of losses. Risk measurement for the wholesale portfolio is assessed primarily on a risk-rated basis; for the consumer portfolio, it is assessed primarily on a credit-scored basis.

Risk-rated exposure

For portfolios that are risk-rated (generally held in IB, CB, TSS and AM), probable and unexpected loss calculations are based upon estimates of probability of default and loss given default. Probability of default is the expected default calculated on an obligor basis. Loss given default is an estimate of losses given a default event and takes into consideration collateral and structural support for each credit facility. Calculations and assumptions are based upon management information systems and methodologies which are under continual review. Risk ratings are assigned to differentiate risk within the portfolio and are reviewed on an ongoing basis by credit risk management and revised, if needed, to reflect the borrowers' current risk profiles and the related collateral and structural positions.

Credit-scored exposure

For credit-scored portfolios (generally held in RFS and CS), probable loss is based upon a statistical analysis of inherent losses over discrete periods of time. Probable losses are estimated using sophisticated portfolio modeling, credit scoring and decision-support tools to project credit risks and establish underwriting standards. In addition, common measures of credit quality derived from historical loss experience are used to predict consumer losses. Other risk characteristics evaluated include recent loss experience in the portfolios, changes in origination sources, portfolio seasoning, loss severity and underlying credit practices, including charge-off policies. These analyses are applied to the Firm's current portfolios in order to estimate delinquencies and severity of losses, which determine the amount of probable losses. These factors and analyses are updated at least on a quarterly basis or more frequently as market conditions dictate.

Risk monitoring

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision making of extending credit and are intended to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposure. Wholesale credit risk is monitored regularly on both an aggregate portfolio level and on an individual customer basis. Management of the Firm's wholesale exposure is accomplished through a number of means including loan syndication and participations, loan sales, securitizations, credit derivatives, use of master netting agreements and collateral and other risk-reduction techniques, which are further discussed in the following risk sections. For consumer credit risk, the key focus items are trends and concentrations at the portfolio level, whereby potential problems can be remedied through changes in underwriting policies and portfolio guidelines. Consumer Credit Risk Management monitors trends against business expectations and industry benchmarks.

Risk reporting

To enable monitoring of credit risk and decision-making, aggregate credit exposure, credit quality forecasts, concentrations levels and risk profile changes are reported regularly to senior credit risk management. Detailed portfolio reporting of industry, customer and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, senior management, for further information, see page 86 of this Annual Report.

2008 Credit risk overview

During 2008, credit markets experienced deterioration and increased defaults and downgrades reflecting, among other things, reduced liquidity. The liquidity and credit crisis has adversely affected many financial institutions, resulting in the failure of some in both the U.S. and Europe, and has impacted the functioning of credit markets, particularly, the loan syndication and asset-backed securitization markets. The Firm's credit portfolio was affected by these market conditions and experienced deteriorating credit quality, especially in the latter part of the year, generally consistent with the market. In 2008, for the wholesale portfolio, criticized assets and NPAs increased, from historical lows, 301% and 525%, respectively, from the previous year. Charge-offs, which typically lag other portfolio deterioration, have increased from historical lows by 458% over 2007. The Firm has remained focused on aggressively managing the portfolio, including ongoing, in-depth reviews of credit quality, as well as of revisions of industry, product and client concentrations. Risk levels are adjusted as needed to reflect the Firm's risk tolerance. Underwriting standards across all areas of lending have been strengthened, consistent with evolving market conditions in order to permit the Firm to lend in a safe and prudent manner. In light of the current market conditions, the wholesale allowance for loan loss coverage ratio has been strengthened to 2.64%, from 1.67% at the end of 2007.

Consumer portfolio credit performance continues to be negatively affected by the economic environment, particularly the weak labor market and the decline in housing prices which occurred nationally. As a result, the Firm took actions throughout the year to reduce risk exposure by tightening underwriting and loan qualification standards in those markets most affected by the housing downturn. In the fourth quarter of 2008, the Firm announced plans to significantly expand loss mitigation efforts related to its mortgage and home equity portfolios. During the implementation period of these expanded loss mitigation efforts, which was substantially in place in early 2009, the Firm did not place loans into foreclosure. These loss mitigation efforts are expected to result in additional increases in the balance of modified loans carried on the Firm's balance sheet, including loans accounted for as troubled debt restructurings, while minimizing the economic loss to the Firm and assisting homeowners to remain in their homes.

More detailed discussion of the domestic consumer credit environment can be found on pages 103–108 of this Annual Report.

CREDIT PORTFOLIO

The following table presents JPMorgan Chase's credit portfolio as of December 31, 2008 and 2007. Total credit exposure at December 31, 2008, increased $198.8 billion from December 31, 2007, reflecting an increase of $115.0 billion in the consumer credit portfolio and $83.8 billion in the wholesale credit portfolio. The increase in total credit exposure from the prior year reflects $319.2 billion and $54.3 billion of additional credit exposure acquired in connection with the Washington Mutual and Bear Stearns transactions, respectively. The exposure from the Washington Mutual transaction consisted of $271.7 billion in the consumer portfolio and $47.5 billion in the wholesale portfolio, which was primarily commercial lending. The exposure from the Bear Stearns acquisition was included in the wholesale portfolio. Excluding these two transactions, there was a decrease of $174.7 billion in overall credit exposure, which was largely driven by decreases in lending-related commitments, partly offset by increases in derivative receivables and managed loans.

While overall portfolio exposure declined when excluding the Washington Mutual and Bear Stearns transactions, the Firm provided over $150 billion in new loans and lines of credit to retail and wholesale clients in the fourth quarter of 2008, including individual consumers, small businesses, large corporations, not-for-profit organizations, states and municipalities, and other financial institutions.

In the table below, reported loans include loans accounted for at fair value and loans held-for-sale, which are carried at lower of cost or fair value, with changes in value recorded in noninterest revenue. However, these held-for-sale loans and loans accounted for at fair value are excluded from the average loan balances used for the net charge-off rate calculations.

Total credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming assets[h][i][j][k]		90 days past due and still accruing		Net charge-offs		Average annual net charge-off rate	
	2008	2007	**2008**	2007	**2008**	2007	**2008**	2007	**2008**	2007
Total credit portfolio										
Loans retained[a]	**$ 728,915**	$ 491,736	**$ 8,921**[j]	$ 3,232[j]	**$3,275**	$ 2,043	**$ 9,835**	$ 4,538	**1.73%**	1.00%
Loans held-for-sale	**8,287**	18,899	**12**	45	**—**	—	**NA**	NA	**NA**	NA
Loans at fair value	**7,696**	8,739	**20**	5	**—**	—	**NA**	NA	**NA**	NA
Loans – reported[a]	**$ 744,898**	$ 519,374	**$ 8,953**	$ 3,282	**$3,275**	$ 2,043	**$ 9,835**	$ 4,538	**1.73%**	1.00%
Loans – securitized[b]	**85,571**	72,701	**—**	—	**1,802**	1,050	**3,612**	2,380	**4.53**	3.43
Total managed loans	**830,469**	592,075	**8,953**	3,282	**5,077**	3,093	**13,447**	6,918	**2.08**	1.33
Derivative receivables	**162,626**	77,136	**1,079**	29	**—**	—	**NA**	NA	**NA**	NA
Receivables from customers[c]	**16,141**	—	**—**	—	**—**	—	**NA**	NA	**NA**	NA
Total managed credit-related assets	**1,009,236**	669,211	**10,032**	3,311	**5,077**	3,093	**13,447**	6,918	**2.08**	1.33
Lending-related commitments[d][e]	**1,121,378**	1,262,588	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Assets acquired in loan satisfactions										
Real estate owned	**NA**	NA	**2,533**[k]	546	**NA**	NA	**NA**	NA	**NA**	NA
Other	**NA**	NA	**149**[k]	76	**NA**	NA	**NA**	NA	**NA**	NA
Total assets acquired in loan satisfactions	**NA**	NA	**2,682**	622	**NA**	NA	**NA**	NA	**NA**	NA
Total credit portfolio	**$ 2,130,614**	$ 1,931,799	**$12,714**	$ 3,933	**$5,077**	$ 3,093	**$ 13,447**	$ 6,918	**2.08%**	1.33%
Net credit derivative hedges notional[f]	**$ (91,451)**	$ (67,999)	**$ —**	$ (3)	**NA**	NA	**NA**	NA	**NA**	NA
Collateral held against derivatives[g]	**(19,816)**	(9,824)	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA

(a) Loans (other than those for which the SFAS 159 fair value option has been elected) are presented net of unearned income and net deferred loan fees of $694 million and $1.0 billion at December 31, 2008 and 2007, respectively.
(b) Represents securitized credit card receivables. For further discussion of credit card securitizations, see Card Services on pages 63–65 of this Annual Report.
(c) Primarily represents margin loans to prime and retail brokerage customers included in accrued interest and accounts receivable on the Consolidated Balance Sheets.
(d) Includes credit card and home equity lending-related commitments of $623.7 billion and $95.7 billion, respectively, at December 31, 2008, and $714.8 billion and $74.2 billion, respectively, at December 31, 2007. These amounts for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, nor does it anticipate, all available lines of credit being used at the same time. The Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.
(e) Includes unused advised lines of credit totaling $36.3 billion and $38.4 billion at December 31, 2008 and 2007, respectively, which are not legally binding. In regulatory filings with the Federal Reserve, unused advised lines are not reportable. See the Glossary of Terms on page 230 of this Annual Report for the Firm's definition of advised lines of credit.
(f) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133. For additional information, see page 101 of this Annual Report.
(g) Represents other liquid securities collateral held by the Firm as of December 31, 2008 and 2007, respectively.
(h) Excludes nonperforming assets related to (1) loans eligible for repurchase as well as loans repurchased from GNMA pools that are insured by U.S. government agencies of $3.3 billion and $1.5 billion at December 31, 2008, and 2007, respectively, and (2) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program, of $437 million and $417 million at December 31, 2008 and 2007, respectively. These amounts for GNMA and student loans are excluded, as reimbursement is proceeding normally.
(i) During the second quarter of 2008, the policy for classifying subprime mortgage and home equity loans as nonperforming was changed to conform to all other home lending products. Amounts for 2007 have been revised to reflect this change.
(j) Excludes home lending purchased credit-impaired home loans accounted for under SOP 03-3 that were acquired as part of the Washington Mutual transaction. These loans are accounted for on a pool basis and the pools are considered to be performing under SOP 03-3. Also excludes loans held-for-sale and loans at fair value.
(k) Includes $1.5 billion of assets acquired in the Washington Mutual transaction.

WHOLESALE CREDIT PORTFOLIO

As of December 31, 2008, wholesale exposure (IB, CB, TSS and AM) increased $83.8 billion from December 31, 2007, primarily due to the Bear Stearns merger, which added $54.3 billion of wholesale exposure in the second quarter of 2008 ($26.0 billion of receivables from customers, $18.9 billion of derivative receivables, $5.0 billion of lending-related commitments and $4.4 billion of loans) and the Washington Mutual transaction (which added $47.5 billion of wholesale exposure in the third quarter of 2008, mainly consisting of loans). Excluding these two transactions, the portfolio decreased $18.0 billion, largely driven by decreases of $73.7 billion in lending-related commitments and $9.9 billion in receivables from customers. Partly offsetting these decreases was an increase of $65.5 billion in derivative receivables. The decrease in lending-related commitments was largely related to a reduction in multi-seller conduit-related commitments. The increase in derivative receivables was primarily related to the decline in interest rates, widening credit spreads and volatile foreign exchange rates reflected in interest rate, credit and foreign exchange derivatives, respectively. For additional information regarding conduit-related commitments, see Note 17 on pages 189–198 of this Annual Report.

Excluding the Washington Mutual and Bear Stearns transactions, retained loans increased $11.0 billion reflecting increases in traditional lending activity while loans held-for-sale and loans at fair value decreased reflecting sales, reduced carrying values and lower volumes in the syndication market.

Wholesale

As of or for the year ended December 31, (in millions)	Credit exposure		Nonperforming loans[f]		90 days past due and accruing	
	2008	2007	**2008**	2007	**2008**	2007
Loans retained[a]	**$ 248,089**	$ 189,427	**$ 2,350**	$ 464	**$ 163**	$ 75
Loans held-for-sale	**6,259**	14,910	**12**	45	**—**	—
Loans at fair value	**7,696**	8,739	**20**	5	**—**	—
Loans – reported	**$ 262,044**	$ 213,076	**$ 2,382**	$ 514	**$ 163**	$ 75
Derivative receivables	**162,626**	77,136	**1,079**	29	**—**	—
Receivables from customers[b]	**16,141**	—	**—**	—	**—**	—
Total wholesale credit-related assets	**440,811**	290,212	**3,461**	543	**163**	75
Lending-related commitments[c]	**379,871**	446,652	**NA**	NA	**NA**	NA
Total wholesale credit exposure	**$ 820,682**	$ 736,864	**$ 3,461**	$ 543	**$ 163**	$ 75
Credit derivative hedges notional[d]	**$ (91,451)**	$ (67,999)	**$ —**	$ (3)	**NA**	NA
Collateral held against derivatives[e]	**(19,816)**	(9,824)	**NA**	NA	**NA**	NA

(a) Includes $224 million of purchased credit-impaired loans at December 31, 2008, which are accounted for in accordance with SOP 03-3. They are considered nonperforming loans because the timing and amount of expected future cash flows is not reasonably estimable. For additional information, see Note 14 on pages 175–178 of this Annual Report.
(b) Primarily represents margin loans to prime and retail brokerage customers, which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.
(c) Includes unused advised lines of credit totaling $36.3 billion and $38.4 billion at December 31, 2008 and 2007, respectively, which are not legally binding. In regulatory filings with the Federal Reserve, unused advised lines are not reportable.
(d) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133. For additional information, see page 101 of this Annual Report.
(e) Represents other liquid securities collateral held by the Firm as of December 31, 2008 and 2007, respectively.
(f) Assets acquired in loan satisfactions have been excluded in this presentation. See the wholesale nonperforming assets by line of business segment table for additional information.

The following table presents net charge-offs (excluding gains from sales of nonperforming loans), for the years ended December 31, 2008 and 2007.

Net charge-offs

Wholesale

Year ended December 31, (in millions, except ratios)	**2008**	2007
Loans – reported		
Net charge-offs	**$ 402**	$ 72
Average annual net charge-off rate[a]	**0.18%**	0.04%

(a) Excludes average wholesale loans held-for-sale and loans at fair value of $18.9 billion and $18.6 billion for the years ended December 31, 2008 and 2007, respectively.

The following table presents the change in the wholesale nonperforming loan portfolio for the years ended December 31, 2008 and 2007.

Nonperforming loan activity

Wholesale

Year ended December 31, (in millions)	**2008**	2007
Beginning balance	**$ 514**	$ 391
Additions	**3,381**	1,107
Reductions:		
Paydowns and other	**859**	576
Charge-offs	**521**	185
Returned to performing	**93**	136
Sales	**40**	87
Total reductions	**1,513**	984
Net additions	**1,868**	123
Ending balance	**$ 2,382**	$ 514

The following table presents the wholesale nonperforming assets by business segment as of December 31, 2008 and 2007.

	2008				2007			
		Assets acquired in loan satisfactions				Assets acquired in loan satisfactions		
As of December 31, (in millions)	Nonperforming loans	Real estate owned	Other	Nonperforming assets	Nonperforming loans	Real estate owned	Other	Nonperforming assets
Investment Bank	**$ 1,175**	**$ 247**	**$ 1,079**[a]	**$ 2,501**	$ 353	$ 67	$ 33[a]	$ 453
Commercial Banking	**1,026**	**102**	**14**	**1,142**	146	2	—	148
Treasury & Securities Services	**30**	**—**	**—**	**30**	—	—	—	—
Asset Management	**147**	**—**	**25**	**172**	12	—	—	12
Corporate/Private Equity	**4**	**—**	**—**	**4**	3	—	—	3
Total	**$ 2,382**	**$ 349**	**$ 1,118**	**$ 3,849**	$ 514	$ 69	$ 33	$ 616

(a) Includes derivative receivables of $1.1 billion and $29 million as of December 31, 2008 and 2007, respectively.

The following table presents summaries of the maturity and ratings profiles of the wholesale portfolio as of December 31, 2008 and 2007. The increase in the proportion of loans maturing after five years was predominantly due to the Washington Mutual transaction. The ratings scale is based upon the Firm's internal risk ratings and generally correspond to the ratings as defined by S&P and Moody's.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[c]				Ratings profile			
December 31, 2008 (in billions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	Investment-grade ("IG") AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	Total	Total % of IG
Loans	**32%**	**43%**	**25%**	**100%**	**$ 161**	**$ 87**	**$ 248**	**65%**
Derivative receivables	**31**	**36**	**33**	**100**	**127**	**36**	**163**	**78**
Lending-related commitments	**37**	**59**	**4**	**100**	**317**	**63**	**380**	**83**
Total excluding loans held-for-sale and loans at fair value	**34%**	**50%**	**16%**	**100%**	**$ 605**	**$ 186**	**791**	**77%**
Loans held-for-sale and loans at fair value[a]							**14**	
Receivables from customers							**16**	
Total exposure							**$ 821**	
Net credit derivative hedges notional[b]	**47%**	**47%**	**6%**	**100%**	**$ (82)**	**$ (9)**	**$ (91)**	**90%**

	Maturity profile[c]				Ratings profile			
December 31, 2007 (in billions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	Investment-grade ("IG") AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	Total	Total % of IG
Loans	44%	45%	11%	100%	$ 127	$ 62	$ 189	67%
Derivative receivables	17	39	44	100	64	13	77	83
Lending-related commitments	35	59	6	100	380	67	447	85
Total excluding loans held-for-sale and loans at fair value	36%	53%	11%	100%	$ 571	$ 142	713	80%
Loans held-for-sale and loans at fair value[a]							24	
Total exposure							$ 737	
Net credit derivative hedges notional[b]	39%	56%	5%	100%	$ (68)	$ —	$ (68)	100%

(a) Loans held-for-sale and loans at fair value relate primarily to syndicated loans and loans transferred from the retained portfolio.
(b) Represents the net notional amounts of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133.
(c) The maturity profile of loans and lending-related commitments is based upon the remaining contractual maturity. The maturity profile of derivative receivables is based upon the maturity profile of average exposure. See page 99 of this Annual Report for a further discussion of average exposure.

Wholesale credit exposure – selected industry concentration

The Firm focuses on the management and diversification of its industry concentrations, with particular attention paid to industries with actual or potential credit concerns. At December 31, 2008, the top 15 industries to which the Firm is exposed remained largely unchanged from December 31, 2007. The Firm's real estate industry exposure increased from the prior year due to the Washington Mutual transaction. Customer receivables of $16.1 billion in the table below represents primarily margin loans to prime and retail brokerage clients acquired in the Bear Stearns merger. These margin loans are generally fully collateralized by cash or highly liquid securities to satisfy daily minimum collateral requirements. For additional information on industry concentrations, see Note 34 on pages 222–223 of this Annual Report.

Wholesale credit exposure – selected industry concentration

December 31, 2008 (in millions, except ratios)	Credit exposure[d]	Investment grade	Noninvestment-grade		Net charge-offs/ (recoveries)	Credit derivative hedges[e]	Collateral held against derivative receivables[f]
			Noncriticized	Criticized			
Exposure by industry[a]							
Real estate	**$ 83,799**	**68%**	**$ 19,346**	**$ 7,737**	**$ 212**	**$ (2,677)**	**$ (48)**
Banks and finance companies	**75,577**	**79**	**12,953**	**2,849**	**28**	**(5,016)**	**(9,457)**
Asset managers	**49,256**	**85**	**6,418**	**819**	**15**	**(115)**	**(5,303)**
Healthcare	**38,032**	**83**	**6,092**	**436**	**2**	**(5,338)**	**(199)**
State and municipal governments	**35,954**	**94**	**1,278**	**847**	**—**	**(677)**	**(134)**
Utilities	**34,246**	**83**	**5,844**	**114**	**3**	**(9,007)**	**(65)**
Retail and consumer services	**32,714**	**67**	**9,546**	**1,311**	**(6)**	**(6,120)**	**(1,214)**
Consumer products	**29,766**	**65**	**9,504**	**792**	**32**	**(8,114)**	**(54)**
Securities firms and exchanges	**25,590**	**81**	**4,744**	**138**	**—**	**(151)**	**(898)**
Oil and gas	**24,746**	**75**	**5,940**	**231**	**15**	**(6,627)**	**(7)**
Insurance	**17,744**	**78**	**3,138**	**712**	**—**	**(5,016)**	**(846)**
Technology	**17,555**	**68**	**5,420**	**230**	**—**	**(4,209)**	**(3)**
Media	**17,254**	**56**	**5,994**	**1,674**	**26**	**(4,238)**	**(7)**
Central government	**15,259**	**98**	**276**	**—**	**—**	**(4,548)**	**(35)**
Metals/mining	**14,980**	**61**	**5,579**	**262**	**(7)**	**(3,149)**	**(3)**
All other[b]	**278,114**	**77**	**57,307**	**7,845**	**82**	**(26,449)**	**(1,543)**
Subtotal	**$ 790,586**	**77%**	**$ 159,379**	**$25,997**	**$ 402**	**$ (91,451)**	**$ (19,816)**
Loans held-for-sale and loans at fair value[c]	**13,955**						
Receivables from customers	**16,141**						
Total	**$ 820,682**						

December 31, 2007 (in millions, except ratios)	Credit exposure[d]	Investment grade	Noninvestment-grade		Net charge-offs/ (recoveries)	Credit derivative hedges[e]	Collateral held against derivative receivables[f]
			Noncriticized	Criticized			
Exposure by industry[a]							
Real estate	$ 38,295	54%	$ 16,626	$ 1,070	$ 36	$ (2,906)	$ (73)
Banks and finance companies	65,288	83	10,385	498	5	(6,368)	(1,793)
Asset managers	38,554	90	3,518	212	—	(293)	(2,148)
Healthcare	30,746	84	4,741	246	—	(4,241)	(10)
State and municipal governments	31,425	98	591	12	10	(193)	(3)
Utilities	28,679	89	3,021	212	1	(6,371)	(43)
Retail and consumer services	23,969	68	7,149	550	3	(3,866)	(55)
Consumer products	29,941	74	7,492	239	5	(4,710)	(13)
Securities firms and exchanges	23,274	87	3,083	1	—	(467)	(1,321)
Oil and gas	26,082	72	7,166	125	—	(4,007)	—
Insurance	16,782	93	1,104	17	—	(4,277)	(1,000)
Technology	18,335	70	5,418	77	1	(3,636)	(1)
Media	16,253	58	6,561	303	3	(2,707)	(31)
Central government	9,075	99	112	—	—	(2,536)	(7)
Metals/mining	17,714	70	5,119	111	—	(2,486)	—
All other[b]	298,803	80	52,897	3,165	8	(18,935)	(3,326)
Subtotal	$ 713,215	80%	$ 134,983	$ 6,838	$ 72	$ (67,999)	$ (9,824)
Loans held-for-sale and loans at fair value[c]	23,649						
Receivables from customers	—						
Total	$ 736,864						

(a) Rankings are based upon exposure at December 31, 2008. The industries presented in 2007 table reflect the rankings in the 2008 table.
(b) For more information on exposures to SPEs included in all other, see Note 17 on pages 189–198 of this Annual Report.
(c) Loans held-for-sale and loans at fair value relate primarily to syndicated loans and loans transferred from the retained portfolio.
(d) Credit exposure is net of risk participations and excludes the benefit of credit derivative hedges and collateral held against derivative receivables or loans.
(e) Represents the net notional amounts of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under SFAS 133.
(f) Represents other liquid securities collateral held by the Firm as of December 31, 2008 and 2007, respectively.

Wholesale criticized exposure

Exposures deemed criticized generally represent a ratings profile similar to a rating of "CCC+"/"Caa1" and lower, as defined by S&P and Moody's. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, increased to $26.0 billion at December 31, 2008, from $6.8 billion at year-end 2007. The increase was driven primarily by downgrades in the wholesale portfolio.

Industry concentrations for wholesale criticized exposure as of December 31, 2008 and 2007, were as follows.

	2008		2007	
December 31, (in millions, except ratios)	Credit exposure	% of portfolio	Credit exposure	% of portfolio
Exposure by industry[a]				
Real estate	**$ 7,737**	**30%**	$ 1,070	16%
Banks and finance companies	**2,849**	**11**	498	7
Automotive	**1,775**	**7**	1,338	20
Media	**1,674**	**6**	303	4
Building materials/construction	**1,363**	**5**	345	5
Retail and consumer services	**1,311**	**5**	550	8
State and municipal government	**847**	**3**	12	—
Asset managers	**819**	**3**	212	3
Consumer products	**792**	**3**	239	4
Agriculture/paper manufacturing	**726**	**3**	138	2
Insurance	**712**	**3**	17	—
Chemicals/plastics	**591**	**2**	288	4
Healthcare	**436**	**2**	246	4
Transportation	**319**	**1**	74	1
Metals/mining	**262**	**1**	111	2
All other	**3,784**	**15**	1,397	20
Total excluding loans held-for-sale and loans at fair value	**$25,997**	**100%**	$ 6,838	100%
Loans held-for-sale and loans at fair value[b]	**2,258**		205	
Receivables from customers	**—**		—	
Total	**$28,255**		$ 7,043	

(a) Rankings are based upon exposure at December 31, 2008. The industries presented in the 2007 table reflect the rankings in the 2008 table.
(b) Loans held-for-sale and loans at fair value relate primarily to syndicated loans and loans transferred from the retained portfolio.

Presented below is a discussion of several industries to which the Firm has significant exposure, as well as industries the Firm continues to monitor because of actual or potential credit concerns. For additional information, refer to the tables above and on the preceding page.

- Real estate: Exposure to this industry grew in 2008 due to the Washington Mutual transaction, with approximately 70% of this increase consisting of exposure to multi-family lending. Approximately 45% of the real estate exposure is to large real estate companies and institutions (e.g. REITS), professional real estate developers, owners, or service providers, and generally involves real estate leased to third-party tenants. Commercial construction and development accounted for approximately 13% of the real estate portfolio at 2008 year-end. Exposure to national and regional single family homebuilders decreased 31% from 2007 and represented 5% of the portfolio at 2008 year-end. The increase in criticized exposure was largely a result of downgrades to select names within the portfolio, primarily in IB, reflecting the weakening credit environment. The remaining increase in criticized exposure reflected exposures acquired in the Washington Mutual transaction.

- Banks and finance companies: Exposure to this industry increased primarily as a result of higher derivative exposure to commercial banks due to higher volatility and greater trade volume and to the addition of derivative positions from the Bear Stearns merger. The percentage of the portfolio that is investment grade has declined slightly from 2007 as a result of the impact of the weakening credit environment on financial counterparties. The growth in criticized exposure was primarily a result of downgrades to specialty finance companies, reflected in loans and lending-related commitments.

- Automotive: Industry conditions deteriorated significantly in 2008, particularly in North America, and are expected to remain under pressure in 2009. The largest percentage of the Firm's wholesale criticized exposure in this segment is related to Original Equipment Manufacturers. However, a majority of the year-over-year increase in criticized exposure related to automotive suppliers which were negatively affected by significant declines in automotive production. Most of the Firm's criticized exposure in this segment remains performing and is substantially secured.

- Asset Managers: Exposure in this industry grew from 2007 as a result of increased derivative exposure to primarily investment grade funds and the acquisition of loans and lending-related commitments to this industry due to the Bear Stearns merger.

- All other: All other in the wholesale credit exposure concentration table on page 97 of this Annual Report at December 31, 2008 included $278.1 billion of credit exposure to 17 industry segments. Exposures related to SPEs and high-net-worth individuals were 37% and 19%, respectively, of this category. SPEs provide secured financing (generally backed by receivables, loans or

bonds on a bankruptcy-remote, nonrecourse or limited-recourse basis) originated by a diverse group of companies in industries that are not highly correlated. For further discussion of SPEs, see Note 17 on pages 189–198 of this Annual Report. The remaining all other exposure is well-diversified across industries and none comprise more than 2% of total exposure.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments to meet the needs of customers; generate revenue through trading activities; manage exposure to fluctuations in interest rates, currencies and other markets; and manage the Firm's credit exposure. The notional amount of the Firm's derivative contracts outstanding significantly exceeded, in the Firm's view, the possible credit losses that could arise from such transactions. For most derivative transactions, the notional amount does not change hands; it is used simply as a reference to calculate payments. For further discussion of these contracts, see Note 32 and Note 34 on pages 214–217 and 222–223 of this Annual Report.

The following tables summarize the aggregate notional amounts and the net derivative receivables MTM for the periods presented.

Notional amounts of derivative contracts

December 31, (in billions)	Notional amounts[a] 2008	2007
Interest rate contracts		
Interest rate and currency swaps[b]	**$ 56,206**	$ 53,458
Future and forwards	**6,277**	4,548
Written options[c]	**4,803**	5,742
Purchased options	**4,656**	5,349
Total interest rate contracts	**71,942**	69,097
Credit derivatives	**8,388**	7,967
Foreign exchange contracts		
Future and forwards	**3,354**	3,424
Foreign exchange spot contracts	**389**	40
Written options[c]	**972**	909
Purchased options	**959**	906
Total foreign exchange contracts	**5,674**	5,279
Commodity contracts		
Swaps	**234**	275
Future and forwards	**115**	91
Written options[c]	**206**	228
Purchased options	**198**	233
Total commodity contracts	**753**	827
Equity contracts		
Swaps	**77**	105
Future and forwards	**56**	72
Written options[c]	**628**	739
Purchased options	**652**	821
Total equity contracts	**1,413**	1,737
Total derivative notional amounts	**$ 88,170**	$ 84,907

(a) Represents the sum of gross long and gross short third-party notional derivative contracts.
(b) Includes cross currency swap contract notional amounts of $1.7 trillion and $1.4 trillion at December 31, 2008 and 2007, respectively.
(c) Written options do not result in counterparty credit risk.

Derivative receivables marked to market ("MTM")

December 31, (in millions)	Derivative receivables MTM 2008	2007
Interest rate contracts	**$ 64,101**	$ 36,020
Credit derivatives	**44,695**	22,083
Foreign exchange contracts	**24,715**	5,616
Commodity contracts	**14,830**	9,419
Equity contracts	**14,285**	3,998
Total, net of cash collateral	**162,626**	77,136
Liquid securities collateral held against derivative receivables	**(19,816)**	(9,824)
Total, net of all collateral	**$ 142,810**	$ 67,312

The amount of derivative receivables reported on the Consolidated Balance Sheets of $162.6 billion and $77.1 billion at December 31, 2008 and 2007, respectively, is the amount of the mark-to-market value ("MTM") or fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. These amounts represent the cost to the Firm to replace the contracts at current market rates should the counterparty default. However, in management's view, the appropriate measure of current credit risk should also reflect additional liquid securities held as collateral by the Firm of $19.8 billion and $9.8 billion at December 31, 2008 and 2007, respectively, resulting in total exposure, net of all collateral, of $142.8 billion and $67.3 billion at December 31, 2008 and 2007, respectively. Derivative receivables, net of collateral, increased $75.5 billion from December 31, 2007, primarily related to the decline in interest rates, widening credit spreads and volatile foreign exchange rates reflected in interest rate, credit and foreign exchange derivatives, respectively. The increase in 2008 also included positions acquired in the Bear Stearns merger.

The Firm also holds additional collateral delivered by clients at the initiation of transactions, and although this collateral does not reduce the balances noted in the table above, it is available as security against potential exposure that could arise should the MTM of the client's transactions move in the Firm's favor. As of December 31, 2008 and 2007, the Firm held $22.2 billion and $17.4 billion of this additional collateral, respectively. The derivative receivables MTM also do not include other credit enhancements in the form of letters of credit.

While useful as a current view of credit exposure, the net MTM value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak exposure to a counterparty is a measure of exposure calculated at a 97.5% confidence level. Derivative Risk Equivalent exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss

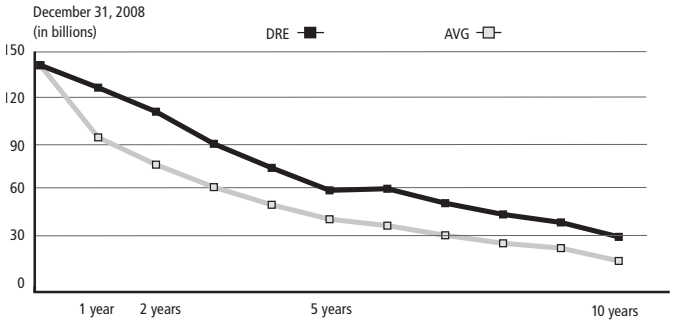
volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, AVG is a measure of the expected MTM value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the Credit Valuation Adjustment ("CVA"), as further described below. Average exposure was $83.7 billion and $47.1 billion at December 31, 2008 and 2007, respectively, compared with derivative receivables MTM, net of all collateral, of $142.8 billion and $67.3 billion at December 31, 2008 and 2007, respectively.

The MTM value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based upon the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm takes into consideration the potential for correlation between the Firm's AVG to a counterparty and the counterparty's credit quality within the credit approval process. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The graph below shows exposure profiles to derivatives over the next ten years as calculated by the DRE and AVG metrics. The two measures generally show declining exposure after the first year, if no new trades were added to the portfolio.

Exposure profile of derivatives measures



The following table summarizes the ratings profile of the Firm's derivative receivables MTM, net of other liquid securities collateral, for the dates indicated.

Ratings profile of derivative receivables MTM

Rating equivalent	**2008**		2007	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 68,708**	**48%**	$ 38,314	57%
A+/A1 to A-/A3	**24,748**	**17**	9,855	15
BBB+/Baa1 to BBB-/Baa3	**15,747**	**11**	9,335	14
BB+/Ba1 to B-/B3	**28,186**	**20**	9,451	14
CCC+/Caa1 and below	**5,421**	**4**	357	—
Total	**$ 142,810**	**100%**	$ 67,312	100%

The increase in noninvestment grade derivative receivables reflects a weakening credit environment. The Firm actively pursues the use of collateral agreements to mitigate counterparty credit risk in derivatives. The percentage of the Firm's derivatives transactions subject to collateral agreements was 83% as of December 31, 2008, largely unchanged from 82% at December 31, 2007.

The Firm posted $99.1 billion and $33.5 billion of collateral at December 31, 2008 and 2007, respectively.

Certain derivative and collateral agreements include provisions that require the counterparty and/or the Firm, upon specified downgrades in their respective credit ratings, to post collateral for the benefit of the other party. The impact of a single-notch ratings downgrade to JPMorgan Chase Bank, N.A., from its rating of "AA-" to "A+" at December 31, 2008, would have required $2.2 billion of additional collateral to be posted by the Firm. The impact of a six-notch ratings downgrade (from "AA-" to "BBB-") would have required $6.4 billion of additional collateral. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the then-existing MTM value of the derivative contracts.

Credit derivatives

Credit derivatives are financial contracts that isolate credit risk from an underlying instrument (such as a loan or security) and transfer that risk from one party (the buyer of credit protection) to another (the seller of credit protection). The Firm is both a purchaser and seller of credit protection. As a purchaser of credit protection, the Firm has risk that the counterparty providing the credit protection will default. As a seller of credit protection, the Firm has risk that the underlying instrument referenced in the contract will be subject to a credit event. Of the Firm's $162.6 billion of total derivative receivables MTM at December 31, 2008, $44.7 billion, or 27%, was associated with credit derivatives, before the benefit of liquid securities collateral.

One type of credit derivatives the Firm enters into with counterparties are credit default swaps ("CDS"). For further detailed discussion of these and other types of credit derivatives, see Note 32 on pages 214–217 of this Annual Report. The large majority of CDS are subject to collateral arrangements to protect the Firm from counterparty credit risk. In 2008, the frequency and size of defaults for both trading counterparties and the underlying debt referenced in credit derivatives were well above historical norms. The use of collateral to settle against defaulting counterparties generally performed as designed in significantly mitigating the Firm's exposure to these counterparties.

During 2008, the Firm worked with other significant market participants to develop mechanisms to reduce counterparty credit risk, including the cancellation of offsetting trades. In 2009, it is anticipated that one or more central counterparties for CDS will be established and JPMorgan Chase will face these central counterparties, or clearing houses, for an increasing portion of its CDS business.

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker in the dealer/client business to meet the needs of customers; and second, in order to mitigate the Firm's own credit risk associated with its overall derivative receivables and traditional commercial credit lending exposures (loans and unfunded commitments), as well as its exposure to residential and commercial mortgages.

The following table presents the Firm's notional amounts of credit derivatives protection purchased and sold as of December 31, 2008 and 2007, distinguishing between dealer/client activity and credit portfolio activity.

	Notional amount				
	Dealer/client		Credit portfolio		
December 31, (in billions)	Protection purchased[a]	Protection sold[a]	Protection purchased[b]	Protection sold	**Total**
2008	**$4,097**	**$4,198**	**$92**	**$1**	**$8,388**
2007	$ 3,999	$ 3,896	$ 70	$ 2	$ 7,967

(a) Includes $3.9 trillion at December 31, 2008, of notional exposure within protection purchased and protection sold where the underlying reference instrument is identical. The remaining exposure includes single name and index CDS which the Firm purchased to manage the remaining net protection sold. For a further discussion on credit derivatives, see Note 32 on pages 214–217 of this Annual Report.

(b) Includes $34.9 billion and $31.1 billion at December 31, 2008 and 2007, respectively, that represented the notional amount for structured portfolio protection; the Firm retains a minimal first risk of loss on this portfolio.

Dealer/client business

Within the dealer/client business, the Firm actively utilizes credit derivatives by buying and selling credit protection, predominantly on corporate debt obligations, in response to client demand for credit risk protection on the underlying reference instruments. Protection may be bought or sold by the Firm on single reference debt instruments ("single-name" credit derivatives), portfolios of referenced instruments ("portfolio" credit derivatives) or quoted indices ("indexed" credit derivatives).The risk positions are largely matched as the Firm's exposure to a given reference entity under a contract to sell protection to a counterparty may be offset partially, or entirely, with a contract to purchase protection from another counterparty on the same underlying instrument. Any residual default exposure and spread risk is actively managed by the Firm's various trading desks.

At December 31, 2008, the total notional amount of protection purchased and sold increased $421 billion from year-end 2007. The increase was primarily as a result of the merger with Bear Stearns, partially offset by the impact of industry efforts to reduce offsetting trade activity.

Credit portfolio activities

In managing its wholesale credit exposure the Firm purchases protection through single-name and portfolio credit derivatives to manage the credit risk associated with loans, lending-related commitments and derivative receivables. Gains or losses on the credit derivatives are expected to offset the unrealized increase or decrease in

credit risk on the loans, lending-related commitments or derivative receivables. This activity does not reduce the reported level of assets on the balance sheet or the level of reported off-balance sheet commitments, though it does provide the Firm with credit risk protection. The Firm also diversifies its exposures by selling credit protection, which increases exposure to industries or clients where the Firm has little or no client-related exposure, however, this activity is not material to the Firm's overall credit exposure.

Use of single-name and portfolio credit derivatives

December 31, (in millions)	Notional amount of protection purchased	
	2008	2007
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 81,227**	$ 63,645
Derivative receivables	**10,861**	6,462
Total[a]	**$ 92,088**	$ 70,107

(a) Included $34.9 billion and $31.1 billion at December 31, 2008 and 2007, respectively, that represented the notional amount for structured portfolio protection; the Firm retains a first risk of loss on this portfolio.

The credit derivatives used by JPMorgan Chase for credit portfolio management activities do not qualify for hedge accounting under SFAS 133, and therefore, effectiveness testing under SFAS 133 is not performed. Loan interest and fees are generally recognized in net interest income, and impairment is recognized in the provision for credit losses. This asymmetry in accounting treatment between loans and lending-related commitments and the credit derivatives utilized in credit portfolio management activities causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure. The MTM related to the Firm's credit derivatives used for managing credit exposure, as well as the MTM related to the CVA, which reflects the credit quality of derivatives counterparty exposure, are included in the table below. These results can vary from period to period due to market conditions that impact specific positions in the portfolio. For a further discussion of credit derivatives, see Note 32 on pages 214–217 of this Annual Report.

Year ended December 31, (in millions)	**2008**	2007	2006
Hedges of lending-related commitments[a]	**$ 2,216**	$ 350	$ (246)
CVA and hedges of CVA[a]	**(2,359)**	(363)	133
Net gains (losses)[b]	**$ (143)**	$ (13)	$ (113)

(a) These hedges do not qualify for hedge accounting under SFAS 133.
(b) Excludes gains of $530 million, $373 million and $56 million for the years ended December 31, 2008, 2007 and 2006, respectively, of other principal transactions revenue that are not associated with hedging activities. The amount for 2008 and 2007 incorporates an adjustment to the valuation of the Firm's derivative liabilities as a result of the adoption of SFAS 157 on January 1, 2007.

The Firm also actively manages wholesale credit exposure through IB and CB loan and commitment sales. During 2008, 2007 and 2006, these sales of $3.9 billion, $4.9 billion and $4.0 billion of loans and commitments, respectively, resulted in losses of $41 million and $7 million in 2008 and 2007 and gains of $83 million in 2006, respectively. These results include gains on sales of nonperforming loans, as discussed on page 95 of this Annual Report. These activities are not related to the Firm's securitization activities, which are undertaken for liquidity and balance sheet management purposes. For a further discussion of securitization activity, see Liquidity Risk Management and Note 16 on pages 88–92 and 180–188, respectively, of this Annual Report.

Lending-related commitments

Wholesale lending-related commitments were $379.9 billion at December 31, 2008, compared with $446.7 billion at December 31, 2007. The decrease was largely related to a reduction in multi-seller conduit-related commitments. In the Firm's view, the total contractual amount of these instruments is not representative of the Firm's actual credit risk exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these instruments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based upon average portfolio historical experience, to become outstanding in the event of a default by an obligor. The loan-equivalent amount of the Firm's lending-related commitments was $204.3 billion and $238.7 billion as of December 31, 2008 and 2007, respectively.

Emerging markets country exposure

The Firm has a comprehensive internal process for measuring and managing exposures to emerging markets countries. There is no common definition of emerging markets but the Firm generally, though not exclusively, includes in its definition those countries whose sovereign debt ratings are equivalent to "A+" or lower. Exposures to a country include all credit-related lending, trading and investment activities, whether cross-border or locally funded. In addition to monitoring country exposures, the Firm uses stress tests to measure and manage the risk of extreme loss associated with sovereign crises.

The following table presents the Firm's exposure to the top five emerging markets countries. The selection of countries is based solely on the Firm's largest total exposures by country and not the Firm's view of any actual or potentially adverse credit conditions. Exposure is reported based upon the country where the assets of the obligor, counterparty or guarantor are located. Exposure amounts are adjusted for collateral and for credit enhancements (e.g., guarantees and letters of credit) provided by third parties; outstandings supported by a guarantor outside the country or backed by collateral held outside the country are assigned to the country of the enhancement provider. In addition, the effects of credit derivative hedges and other short credit or equity trading positions are reflected in the following table. Total exposure includes exposure to both government and private sector entities in a country.

Top 5 emerging markets country exposure

At December 31, 2008 (in billions)	Cross-border Lending[a]	Trading[b]	Other[c]	Total	Local[d]	Total exposure
South Korea	**$2.9**	**$1.6**	**$0.9**	**$ 5.4**	**$2.3**	**$ 7.7**
India	**2.2**	**2.8**	**0.9**	**5.9**	**0.6**	**6.5**
China	**1.8**	**1.6**	**0.3**	**3.7**	**0.8**	**4.5**
Brazil	**1.8**	**—**	**0.5**	**2.3**	**1.3**	**3.6**
Taiwan	**0.1**	**0.2**	**0.3**	**0.6**	**2.5**	**3.1**

At December 31, 2007 (in billions)	Cross-border Lending[a]	Trading[b]	Other[c]	Total	Local[d]	Total exposure
South Korea	$ 3.2	$ 2.6	$ 0.7	$ 6.5	$ 3.4	$ 9.9
Brazil	1.1	(0.7)	1.2	1.6	5.0	6.6
Russia	2.9	1.0	0.2	4.1	0.4	4.5
India	1.9	0.8	0.8	3.5	0.6	4.1
China	2.2	0.3	0.4	2.9	0.3	3.2

(a) Lending includes loans and accrued interest receivable, interest-bearing deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit.
(b) Trading includes: (1) issuer exposure on cross-border debt and equity instruments, held both in trading and investment accounts, adjusted for the impact of issuer hedges, including credit derivatives; and (2) counterparty exposure on derivative and foreign exchange contracts as well as security financing trades (resale agreements and securities borrowed).
(c) Other represents mainly local exposure funded cross-border.
(d) Local exposure is defined as exposure to a country denominated in local currency, booked and funded locally. Any exposure not meeting these criteria is defined as cross-border exposure.

CONSUMER CREDIT PORTFOLIO

JPMorgan Chase's consumer portfolio consists primarily of residential mortgages, home equity loans, credit cards, auto loans, student loans and business banking loans, with a primary focus on serving the prime consumer credit market. The consumer credit portfolio also includes certain loans acquired in the Washington Mutual transaction, primarily mortgage, home equity and credit card loans. The RFS portfolio includes home equity lines of credit and mortgage loans with interest-only payment options to predominantly prime borrowers, as well as certain payment option loans acquired from Washington Mutual that may result in negative amortization.

A substantial portion of the consumer loans acquired in the Washington Mutual transaction were identified as credit-impaired in the third quarter of 2008 based on a preliminary analysis of the acquired portfolio. In addition, as of the acquisition date, a $1.4 billion accounting conformity provision was recorded to reflect the Firm's preliminary estimate of incurred losses related to the portion of the acquired consumer loans that were not considered to be credit-impaired. During the fourth quarter of 2008, the analysis of acquired loans was substantially completed, resulting in a $12.4 billion increase in the credit-impaired loan balances and a corresponding decrease in the non-credit-impaired loan balances. In addition, the estimate of incurred losses related to the non-credit-impaired portfolio was finalized, resulting in a $476 million decrease in the accounting conformity provision for these loans. The purchased credit-impaired loans, which were identified as impaired based on an analysis of risk characteristics, including product type, loan-to-value ratios, FICO scores and delinquency status, are accounted for under SOP 03-3 and were recorded at fair value under SOP 03-3 as of the acquisition date. The fair value of these loans includes an estimate of losses that are expected to be incurred over the estimated remaining lives of the loans, and therefore no allowance for loan losses was recorded for these loans as of the transaction date.

The credit performance of the consumer portfolio across the entire consumer credit product spectrum continues to be negatively affected by the economic environment. High unemployment and weaker overall economic conditions have resulted in increased delinquencies, and continued weak housing prices have driven a significant increase in loss severity. Nonperforming loans and assets continued to increase through year-end 2008, a key indicator that charge-offs will continue to rise in 2009. Additional deterioration in the overall economic environment, including continued deterioration in the labor market, could cause delinquencies to increase beyond the Firm's current expectations, resulting in significant increases in losses in 2009.

Over the past year, the Firm has taken actions to reduce risk exposure by tightening both underwriting and loan qualification standards for real estate lending, as well as for consumer lending for non-real estate products. Tighter income verification, more conservative collateral valuation, reduced loan-to-value maximums and higher FICO and custom risk score requirements are just some of the actions taken to date to mitigate risk. These actions have resulted in significant reductions in new originations of "risk layered" loans (e.g., loans with high loan-to-value ratios to borrowers with low FICO scores) and improved alignment of loan pricing. New originations of subprime mortgage loans, option ARMs and broker originated-mortgage and home equity loans have been eliminated entirely.

In the fourth quarter of 2008, the Firm announced plans to significantly expand loss mitigation efforts related to its mortgage and home equity portfolios, including a systematic review of the real estate portfolio to identify homeowners most in need of assistance. In addition, the Firm announced plans to open regional counseling centers, hire additional loan counselors, introduce new financing alternatives, proactively reach out to borrowers to offer pre-qualified modifications, and commence a new process to independently review each

loan before moving it into the foreclosure process. During the implementation period of these loss mitigation efforts, which were substantially complete in early 2009, the Firm did not place loans into foreclosure. These loss mitigation efforts, which generally represent various forms of term extensions, rate reductions and forbearances, are expected to result in additional increases in the balances of modified loans carried on the Firm's balance sheet, including loans accounted for as troubled debt restructurings, while minimizing the economic loss to the Firm and assisting homeowners to remain in their homes.

The following table presents managed consumer credit–related information for the dates indicated.

Consumer portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming loans[g][h][i]		90 days past due and still accruing		Net charge-offs		Average annual net charge-off rate[j]	
	2008	2007	**2008**	2007	**2008**	2007	**2008**	2007	**2008**	2007
Consumer loans – excluding purchased credit-impaired[a]										
Home equity	**$ 114,335**	$ 94,832	**$ 1,394**	$ 786	**$ —**	$ —	**$ 2,391**	$ 564	**2.39%**	0.62%
Prime mortgage	**72,266**	39,988	**1,895**	501	**—**	—	**526**	33	**1.02**	0.10
Subprime mortgage	**15,330**	15,473	**2,690**	1,017	**—**	—	**933**	157	**6.10**	1.55
Option ARMs	**9,018**	—	**10**	—	**—**	—	**—**	—	**—**	—
Auto loans[b]	**42,603**	42,350	**148**	116	**—**	—	**568**	354	**1.30**	0.86
Credit card – reported	**104,746**	84,352	**4**	7	**2,649**	1,547	**4,556**	3,116	**5.47**	3.90
All other loans	**33,715**	25,314	**430**	341	**463**	421	**459**	242	**1.58**	1.01
Loans held-for-sale[c]	**2,028**	3,989	**—**	—	**—**	—	**NA**	NA	**NA**	NA
Total consumer loans – excluding purchased credit-impaired[d]	**394,041**	306,298	**6,571**	2,768	**3,112**	1,968	**9,433**	4,466	**2.90**	1.61
Consumer loans – purchased credit impaired[d]										
Home equity	**28,555**	NA	**NA**	NA	**—**	—	**NA**	NA	**NA**	NA
Prime mortgage	**21,855**	NA	**NA**	NA	**—**	—	**NA**	NA	**NA**	NA
Subprime mortgage	**6,760**	NA	**NA**	NA	**—**	—	**NA**	NA	**NA**	NA
Option ARMs	**31,643**	NA	**NA**	NA	**—**	—	**NA**	NA	**NA**	NA
Total purchased credit-impaired	**88,813**	NA	**NA**	NA	**—**	—	**NA**	NA	**NA**	NA
Total consumer loans – reported	**482,854**	306,298	**6,571**	2,768	**3,112**	1,968	**9,433**	4,466	**2.71**	1.61
Credit card – securitized[e]	**85,571**	72,701	**—**	—	**1,802**	1,050	**3,612**	2,380	**4.53**	3.43
Total consumer loans – managed	**568,425**	378,999	**6,571**	2,768	**4,914**	3,018	**13,045**	6,846	**3.06**	1.97
Consumer lending-related commitments:										
Home equity[f]	**95,743**	74,191								
Prime mortgage	**5,079**	7,394								
Subprime mortgage	**—**	16								
Option ARMs	**—**	—								
Auto loans	**4,726**	8,058								
Credit card[f]	**623,702**	714,848								
All other loans	**12,257**	11,429								
Total lending-related commitments	**741,507**	815,936								
Total consumer credit portfolio	**$ 1,309,932**	$1,194,935								
Memo: Credit card – managed	**$ 190,317**	$ 157,053	**$ 4**	$ 7	**$ 4,451**	$ 2,597	**$ 8,168**	$ 5,496	**5.01%**	3.68%

(a) Includes RFS, CS and residential mortgage loans reported in the Corporate/Private Equity segment, as well as approximately $80.0 billion in non-credit-impaired consumer loans acquired in the Washington Mutual transaction.
(b) Excludes operating lease-related assets of $2.2 billion and $1.9 billion for December 31, 2008 and 2007, respectively.
(c) Includes loans for prime mortgage and other (largely student loans) of $206 million and $1.8 billion at December 31, 2008, respectively, and $570 million and $3.4 billion at December 31, 2007, respectively.
(d) Purchased credit-impaired loans represent loans acquired in the Washington Mutual transaction that were considered credit-impaired under SOP 03-3, and include $6.4 billion of loans that were considered nonperforming by Washington Mutual prior to the transaction closing. Under SOP 03-3, these loans are considered to be performing loans as of the transaction date and accrete interest income over the estimated life of the loan when cash flows are reasonably estimable, even if the underlying loans are contractually past due. For additional information, see Note 14 on pages 175–178 of this Annual Report.
(e) Represents securitized credit card receivables. For a further discussion of credit card securitizations, see CS on pages 63–65 of this Annual Report.
(f) The credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit will be utilized at the same time. For credit card commitments and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.
(g) Excludes purchased credit-impaired loans accounted for under SOP 03-3 that were acquired as part of the Washington Mutual transaction. These loans are accounted for on a pool basis and the pools are considered to be performing under SOP 03-3.
(h) Excludes nonperforming assets related to: (1) loans eligible for repurchase, as well as loans repurchased from GNMA pools that are insured by U.S. government agencies of $3.3 billion for December 31, 2008 and $1.5 billion for December 31, 2007; and (2) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $437 million and $417 million as of December 31, 2008 and 2007, respectively. These amounts for GNMA and student loans are excluded, as reimbursement is proceeding normally.
(i) During the second quarter of 2008, the Firm's policy for classifying subprime mortgage and home equity loans as nonperforming was changed to conform to all the other home lending products. Amounts for 2007 have been revised to reflect this change.
(j) Net charge-off rates exclude average loans held-for-sale of $2.8 billion and $10.6 billion for 2008 and 2007, respectively.

The following table presents the consumer nonperforming assets by business segment as of December 31, 2008 and 2007.

	2008				2007			
		Assets acquired loan satisfactions				Assets acquired in loan satisfactions		
As of December 31, (in millions)	Nonperforming loans	Real estate owned	Other	Nonperforming assets	Nonperforming loans	Real estate owned	Other	Nonperforming assets
Retail Financial Services	**$ 6,548**	**$ 2,183**	**$ 110**	**$ 8,841**	$ 2,760	$ 477	$ 72	$ 3,309
Card Services	**4**	**—**	**—**	**4**	7	—	—	7
Corporate/Private Equity	**19**	**1**	**—**	**20**	1	—	—	1
Total	**$ 6,571**	**$ 2,184**	**$ 110**	**$ 8,865**	$ 2,768	$ 477	$ 72	$ 3,317

The Firm regularly evaluates market conditions and overall economic returns and makes an initial determination of whether new originations will be held-for-investment or sold within the foreseeable future. The Firm also periodically evaluates the expected economic returns of previously originated loans under prevailing market conditions to determine whether their designation as held-for-sale or held-for-investment continues to be appropriate. When the Firm determines that a change in this designation is appropriate, the loans are transferred to the appropriate classification. During the third and fourth quarters of 2007, in response to changes in market conditions, the Firm designated as held-for-investment all new originations of subprime mortgage loans, as well as subprime mortgage loans that were previously designated held-for-sale. In addition, all new prime mortgage originations that cannot be sold to U.S. government agencies and U.S. government-sponsored enterprises have been designated as held-for-investment. Prime mortgage loans originated with the intent to sell are accounted for at fair value under SFAS 159 and are classified as trading assets in the Consolidated Balance Sheets.

The following discussion relates to the specific loan and lending-related categories within the consumer portfolio. Information regarding combined loan-to-value ratios ("CLTVs") and loan-to-value ratios ("LTVs") were estimated based on the initial appraisal obtained at the time of origination, adjusted using relevant market indicies for housing price changes that have occurred since origination. The estimated value of the homes could vary from actual market values due to changes in condition of the underlying property, variations in housing price changes within metropolitan statistical areas ("MSAs") and other factors.

Home equity: Home equity loans at December 31, 2008, were $114.3 billion, excluding purchased credit-impaired loans, an increase of $19.5 billion from year-end 2007, primarily reflecting the addition of loans acquired in the Washington Mutual transaction. The 2008 provision for credit losses for the home equity portfolio includes net increases of $2.2 billion to the allowance for loan losses for 2008 for the heritage JPMorgan Chase portfolio as a result of the economic environment noted above. The Firm estimates that loans with effective CLTVs in excess of 100% represented approximately 22% of the home equity portfolio. In response to continued economic weakness, loan underwriting and account management criteria have been tightened, with a particular focus on MSAs with the most significant housing price declines. New originations of home equity loans have decreased significantly, as additional loss mitigation strategies have been employed; these strategies include the elimination of stated income and broker originated loans, a significant reduction of maximum CLTVs for new originations, which now range from 50% to 70%, and additional restrictions on new originations in geographic areas experiencing the greatest housing price depreciation and highest unemployment. Other loss mitigation strategies include the reduction or closure of outstanding credit lines for borrowers who have experienced significant increases in CLTVs or decreases in creditworthiness (e.g. declines in FICO scores.)

Mortgage: Mortgage loans at December 31, 2008, which include prime mortgages, subprime mortgages, option ARMs and loans held-for-sale, were $96.8 billion, excluding purchased credit-impaired loans, reflecting a $40.8 billion increase from year-end 2007, primarily reflecting the addition of loans acquired in the Washington Mutual transaction.

Prime mortgages of $72.5 billion increased $31.9 billion from December 2007 as a result of loans acquired in the Washington Mutual transaction and, to a lesser extent, additional originations into the portfolio. The 2008 provision for credit losses includes a net increase of $1.1 billion to the allowance for loan losses for the heritage JPMorgan Chase portfolio as a result of the economic environment noted above. The Firm estimates that loans with effective LTVs in excess of 100% represented approximately 18% of the prime mortgage portfolio. The Firm has tightened underwriting standards for nonconforming prime mortgages in recent quarters, including eliminating stated income products, reducing LTV maximums, and eliminating the broker origination channel.

Subprime mortgages of $15.3 billion, excluding purchased credit-impaired loans, decreased slightly from December 31, 2007, as the discontinuation of new originations was predominantly offset by loans acquired in the Washington Mutual transaction. The year-to-date provision for credit losses includes a net increase of $1.4 billion to the allowance for loan losses for the heritage JPMorgan Chase portfolio as a result of the economic environment noted above. The Firm estimates that loans with effective LTVs in excess of 100% represented approximately 27% of the subprime mortgage portfolio.

Option ARMs of $9.0 billion, excluding purchased credit-impaired loans, were acquired in the Washington Mutual transaction. New originations of option ARMs were discontinued by Washington

Mutual prior to the date of the Washington Mutual transaction. This portfolio is primarily comprised of loans with low LTVs and high borrower FICOs and for which the Firm currently expects substantially lower losses in comparison with the purchased credit-impaired portfolio. The Firm has not, and does not, originate option ARMs.

Option ARMs are adjustable-rate mortgage products that provide the borrower with the option to make a fully amortizing, interest-only, or minimum payment. The minimum payment is based upon the interest rate charged during the introductory period. This introductory rate is typically well below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate. If the borrower continues to make the minimum monthly payment after the introductory period ends, the payment may not be sufficient to cover interest accrued in the previous month. In this case, the loan will "negatively amortize" as unpaid interest is deferred and added to the principal balance of the loan. Option ARMs typically become fully amortizing loans upon reaching a negative amortization cap or on dates specified in the borrowing agreement, at which time the required monthly payment generally increases substantially.

Auto loans: As of December 31, 2008, auto loans of $42.6 billion increased slightly from year-end 2007. The allowance for loan losses for the auto loan portfolio was increased during 2008, reflecting an increase in estimated losses due to an increase in loss severity and further deterioration of older vintage loans as a result of the worsening credit environment and declines in auto resale values. The auto loan portfolio reflects a high concentration of prime quality credits. In response to recent increases in loan delinquencies and credit losses, particularly in MSAs experiencing the greatest housing price depreciation and highest unemployment, credit underwriting criteria have been tightened, which has resulted in the reduction of both extended-term and high loan-to-value financing.

Credit card: JPMorgan Chase analyzes its credit card portfolio on a managed basis, which includes credit card receivables on the Consolidated Balance Sheets and those receivables sold to investors through securitization. Managed credit card receivables were $190.3 billion at December 31, 2008, an increase of $33.3 billion from year-end 2007, reflecting the acquisition of credit card loans as part of the Washington Mutual transaction, as well as organic growth in the portfolio.

The managed credit card net charge-off rate increased to 5.01% for 2008 from 3.68% in 2007. This increase was due primarily to higher charge-offs as a result of the current economic environment, especially in areas experiencing the greatest housing price depreciation and highest unemployment. The 30-day managed delinquency rate increased to 4.97% at December 31, 2008, from 3.48% at December 31, 2007, partially as a result of the addition of credit card loans acquired in the Washington Mutual transaction. Excluding the Washington Mutual portfolio, the 30-day managed delinquency rate was 4.36%. The Allowance for loan losses was increased due to higher estimated net charge-offs in the portfolio. As a result of continued weakness in housing markets, account acquisition credit criteria and account management credit practices have been tightened, particularly in MSAs experiencing significant home price declines. The managed credit card portfolio continues to reflect a well-seasoned, largely rewards-based portfolio that has good U.S. geographic diversification.

All other loans: All other loans primarily include business banking loans (which are highly collateralized loans, often with personal loan guarantees), student loans, and other secured and unsecured consumer loans. As of December 31, 2008, other loans, including loans held-for-sale, of $35.5 billion were up $6.8 billion from year-end 2007, primarily as a result of organic growth in business banking loans and student loans, as well as an increase in business banking loans as a result of the Washington Mutual transaction.

Purchased credit-impaired loans: Purchased credit-impaired loans of $88.8 billion in the home lending portfolio represent loans acquired in the Washington Mutual transaction that were recorded at fair value at the time of acquisition under SOP 03-3. The fair value of these loans includes an estimate of losses that are expected to be incurred over the estimated remaining lives of the loans, and therefore no allowance for loan losses was recorded for these loans as of the transaction date. Through year-end 2008, the credit performance of these loans has generally been consistent with the assumptions used in determining the initial fair value of these loans, and the Firm's original expectations regarding the amounts and timing of future cash flows has not changed. A probable decrease in management's expectation of future cash collections related to these loans could result in the need to record an allowance for credit losses related to these loans in the future. A significant and probable increase in expected cash flows would generally result in an increase in interest income recognized over the remaining life of the underlying pool of loans.

Other real estate owned: As part of the residential real estate foreclosure process, loans are written down to net realizable value less a cost to sell the asset. In those instances where the Firm gains title, ownership and possession of individual properties at the completion of the foreclosure process, these Other Real Estate Owned (OREO) assets are managed for prompt sale and disposition at the best possible economic value. Any further gain or loss on sale of the disposition of OREO assets are recorded as part of other income.

The following tables present the geographic distribution of consumer credit outstandings by product as of December 31, 2008 and 2007, excluding purchased credit-impaired loans.

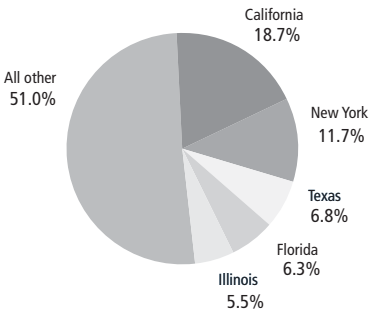
Consumer loans by geographic region

December 31, 2008 (in billions)	Home equity	Prime mortgage	Subprime mortgage	Option ARMs	Total home loan portfolio	Auto	Card reported	All other loans	Total consumer loans–reported	Card securitized	Total consumer loans–managed
Excluding purchased credit-impaired											
California	**$ 23.2**	**$ 22.8**	**$ 2.2**	**$ 3.8**	**$ 52.0**	**$ 4.7**	**$ 14.8**	**$ 2.0**	**$ 73.5**	**$ 12.5**	**$ 86.0**
New York	**16.3**	**10.4**	**1.7**	**0.9**	**29.3**	**3.7**	**8.3**	**4.7**	**46.0**	**6.6**	**52.6**
Texas	**8.1**	**2.7**	**0.4**	**0.2**	**11.4**	**3.8**	**7.4**	**4.1**	**26.7**	**6.1**	**32.8**
Florida	**6.3**	**6.0**	**2.3**	**0.9**	**15.5**	**1.5**	**6.8**	**0.9**	**24.7**	**5.2**	**29.9**
Illinois	**7.2**	**3.3**	**0.7**	**0.3**	**11.5**	**2.2**	**5.3**	**2.5**	**21.5**	**4.6**	**26.1**
Ohio	**4.6**	**0.7**	**0.4**	**—**	**5.7**	**3.3**	**4.1**	**3.3**	**16.4**	**3.4**	**19.8**
New Jersey	**5.0**	**2.5**	**0.8**	**0.3**	**8.6**	**1.6**	**4.2**	**0.9**	**15.3**	**3.6**	**18.9**
Michigan	**3.6**	**1.3**	**0.4**	**—**	**5.3**	**1.5**	**3.4**	**2.8**	**13.0**	**2.8**	**15.8**
Arizona	**5.9**	**1.6**	**0.4**	**0.2**	**8.1**	**1.6**	**2.3**	**1.9**	**13.9**	**1.8**	**15.7**
Pennsylvania	**1.6**	**0.7**	**0.5**	**0.1**	**2.9**	**1.7**	**3.9**	**0.7**	**9.2**	**3.2**	**12.4**
Washington	**3.8**	**2.3**	**0.3**	**0.5**	**6.9**	**0.6**	**2.0**	**0.4**	**9.9**	**1.6**	**11.5**
Colorado	**2.4**	**1.9**	**0.3**	**0.3**	**4.9**	**0.9**	**2.1**	**0.9**	**8.8**	**2.1**	**10.9**
All other	**26.3**	**16.3**	**4.9**	**1.5**	**49.0**	**15.5**	**40.1**	**10.5**	**115.1**	**32.1**	**147.2**
Total – excluding purchased credit-impaired	**$114.3**	**$ 72.5**	**$15.3**	**$ 9.0**	**$ 211.1**	**$ 42.6**	**$104.7**	**$ 35.6**	**$ 394.0**	**$ 85.6**	**$ 479.6**

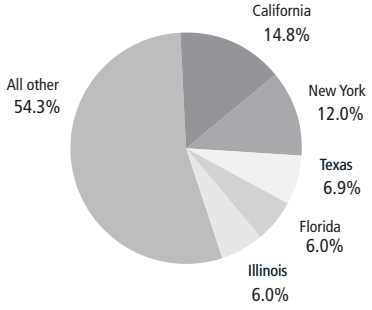
Consumer loans by geographic region

December 31, 2007 (in billions)	Home equity	Prime mortgage	Subprime mortgage	Option ARMs	Total home loan portfolio	Auto	Card reported	All other loans	Total consumer loans–reported	Card securitized	Total consumer loans–managed
Excluding purchased credit-impaired											
California	$14.9	$11.4	$ 2.0	$ —	$ 28.3	$ 5.0	$11.0	$ 1.0	$ 45.3	$ 9.6	$ 54.9
New York	14.4	6.4	1.6	—	22.4	3.6	6.6	4.2	36.8	5.6	42.4
Texas	6.1	1.7	0.3	—	8.1	3.7	5.8	3.5	21.1	5.4	26.5
Florida	5.3	3.9	2.5	—	11.7	1.6	4.7	0.5	18.5	4.2	22.7
Illinois	6.7	2.2	0.8	—	9.7	2.2	4.5	1.9	18.3	3.9	22.2
Ohio	4.9	0.5	0.5	—	5.9	2.9	3.3	2.6	14.7	3.1	17.8
New Jersey	4.4	1.4	0.8	—	6.6	1.7	3.3	0.5	12.1	3.1	15.2
Michigan	3.7	1.0	0.6	—	5.3	1.3	2.9	2.3	11.8	2.5	14.3
Arizona	5.7	1.1	0.4	—	7.2	1.8	1.7	1.8	12.5	1.4	13.9
Pennsylvania	1.6	0.4	0.5	—	2.5	1.7	3.2	0.5	7.9	2.9	10.8
Washington	1.6	0.4	0.3	—	2.3	0.6	1.4	0.2	4.5	1.3	5.8
Colorado	2.3	1.0	0.3	—	3.6	1.0	2.0	0.8	7.4	1.7	9.1
All other	23.2	9.2	4.8	—	37.2	15.3	34.0	8.9	95.4	28.0	123.4
Total – excluding purchased credit-impaired	$94.8	$40.6	$15.4	$ —	$150.8	$ 42.4	$84.4	$28.7	$306.3	$ 72.7	$ 379.0

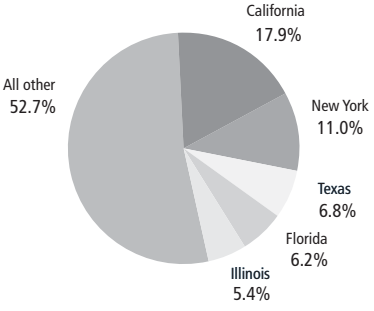
Top 5 States Total Consumer Loans - Reported[(a)]
(at December 31, 2008)



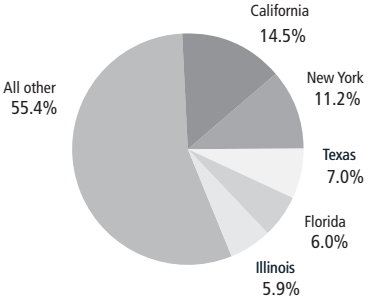
Top 5 States Total Consumer Loans - Reported
(at December 31, 2007)



Top 5 States Consumer Loans - Managed[(a)]
(at December 31, 2008)



Top 5 States Consumer Loans - Managed
(at December 31, 2007)



(a) Excluding the purchased credit-impaired loans acquired in the Washington Mutual transaction.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for credit losses is intended to cover probable credit losses, including losses where the asset is not specifically identified or the size of the loss has not been fully determined. At least quarterly, the allowance for credit losses is reviewed by the Chief Executive Officer, the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. The allowance is reviewed relative to the risk profile of the Firm's credit portfolio and current economic conditions and is adjusted if, in management's judgment, changes are warranted. The allowance includes an asset-specific and a formula-based component. For further discussion of the components of the allowance for credit losses, see Critical Accounting Estimates Used by the Firm on pages 119–123 and Note 15 on pages 178–180 of this Annual Report. At December 31, 2008, management deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses that are inherent in the portfolio, including losses that are not specifically identified or for which the size of the loss has not yet been fully determined).

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions)	2008 Wholesale	2008 Consumer	2008 Total	2007 Wholesale	2007 Consumer	2007 Total
Loans:						
Beginning balance at January 1,	**$ 3,154**	**$ 6,080**	**$ 9,234**	$ 2,711	$ 4,568	$ 7,279
Cumulative effect of change in accounting principles[a]	**—**	**—**	**—**	(56)	—	(56)
Beginning balance at January 1, adjusted	**3,154**	**6,080**	**9,234**	2,655	4,568	7,223
Gross charge-offs	**521**	**10,243**	**10,764**	185	5,182	5,367
Gross recoveries	**(119)**	**(810)**	**(929)**	(113)	(716)	(829)
Net charge-offs	**402**	**9,433**	**9,835**	72	4,466	4,538
Provision for loan losses:						
Provision excluding accounting conformity	**2,895**	**16,765**	**19,660**	598	5,940	6,538
Accounting conformity[b]	**641**	**936**	**1,577**	—	—	—
Total provision for loan losses	**3,536**	**17,701**	**21,237**	598	5,940	6,538
Acquired allowance resulting from Washington Mutual transaction	**229**	**2,306**	**2,535**	—	—	—
Other	**28**[c]	**(35)**[c]	**(7)**	(27)[i]	38[i]	11
Ending balance at December 31	**$ 6,545**	**$16,619**	**$23,164**	$ 3,154	$ 6,080	$ 9,234
Components:						
Asset-specific	**$ 712**	**$ 74**	**$ 786**	$ 108	$ 80	$ 188
Formula-based	**5,833**	**16,545**	**22,378**	3,046	6,000	9,046
Total allowance for loan losses	**$ 6,545**	**$16,619**	**$23,164**	$ 3,154	$ 6,080	$ 9,234
Lending-related commitments:						
Beginning balance at January 1,	**$ 835**	**$ 15**	**$ 850**	$ 499	$ 25	$ 524
Provision for lending-related commitments						
Provision excluding accounting conformity	**(214)**	**(1)**	**(215)**	336	(10)	326
Accounting conformity[b]	**5**	**(48)**	**(43)**	—	—	—
Total provision for lending-related commitments	**(209)**	**(49)**	**(258)**	336	(10)	326
Acquired allowance resulting from Washington Mutual transaction	**—**	**66**	**66**	—	—	—
Other	**8**[c]	**(7)**[c]	**1**	—	—	—
Ending balance at December 31	**$ 634**	**$ 25**	**$ 659**	$ 835	$ 15	$ 850
Components:						
Asset-specific	**$ 29**	**$ —**	**$ 29**	$ 28	$ —	$ 28
Formula-based	**605**	**25**	**630**	807	15	822
Total allowance for lending-related commitments	**$ 634**	**$ 25**	**$ 659**	$ 835	$ 15	$ 850
Total allowance for credit losses	**$ 7,179**	**$16,644**	**$23,823**	$ 3,989	$ 6,095	$10,084
Allowance for loan losses to loans	**2.64%**[d]	**3.46%**[e][h]	**3.18%**[d][e][h]	1.67%[d]	2.01%[e]	1.88%[d][e]
Allowance for loan losses to loans excluding purchased credit-impaired loans	**2.64**[d]	**4.24**[e]	**3.62**[d][e]	1.67[d]	2.01[e]	1.88[d][e]
Net charge-off rates	**0.18**[f]	**2.71**[g][h]	**1.73**[f][g][h]	0.04[f]	1.61[g]	1.00[f][g]
Net charge-off rates excluding purchased credit-impaired loans	**0.18**[f]	**2.90**[g]	**1.81**[f][g]	0.04[f]	1.61[g]	1.00[f][g]

(a) Reflects the effect of the adoption of SFAS 159 at January 1, 2007. For a further discussion of SFAS 159, see Note 5 on pages 156–158 of this Annual Report.
(b) Related to the Washington Mutual transaction in 2008.
(c) Primarily related to the transfer of loans and lending-related commitments from RFS to CB during the first quarter of 2008.
(d) Wholesale loans held-for-sale and loans at fair value were $14.0 billion and $23.6 billion at December 31, 2008 and 2007, respectively. These amounts were excluded when calculating the allowance coverage ratios.
(e) Consumer loans held-for-sale were $2.0 billion and $4.0 billion at December 31, 2008 and 2007, respectively. These amounts were excluded when calculating the allowance coverage ratios.
(f) Average wholesale loans held-for-sale and loans at fair value were $18.9 billion and $18.6 billion for the years ended December 31, 2008 and 2007, respectively. These amounts were excluded when calculating the net charge-off rates.
(g) Average consumer (excluding card) loans held-for-sale and loans at fair value were $2.8 billion and $10.6 billion for the years ended December 31, 2008 and 2007, respectively. These amounts were excluded when calculating the net charge-off rates.
(h) Includes $88.8 billion of home lending credit-impaired loans acquired in the Washington Mutual transaction and accounted for under SOP 03-3 at December 31, 2008. These loans were accounted for at fair value on the acquisition date, which reflected expected cash flows (including credit losses) over the remaining life of the portfolio. No allowance for loan losses has been recorded for these loans as of December 31, 2008.
(i) Partially related to the transfer of allowance between wholesale and consumer in conjunction with prime mortgages transferred to the Corporate/Private Equity sector.

The allowance for credit losses increased $13.7 billion from the prior year to $23.8 billion. The increase included $4.1 billion of allowance related to noncredit-impaired loans acquired in the Washington Mutual transaction and the related accounting conformity provision. Excluding held-for-sale loans, loans carried at fair value, and purchased credit-impaired consumer loans, the allowance for loan losses represented 3.62% of loans at December 31, 2008, compared with 1.88% at December 31, 2007.

The consumer allowance for loan losses increased $10.5 billion from the prior year as a result of the Washington Mutual transaction and increased allowance for loan loss in residential real estate and credit card. The increase included additions to the allowance for loan losses of $4.7 billion driven by higher estimated losses for residential mortgage and home equity loans as the weak labor market and weak overall economic conditions have resulted in increased delinquencies, while continued weak housing prices have driven a significant increase in loss severity. The allowance for loan losses related to credit card increased $4.3 billion from the prior year primarily due to the acquired allowance and subsequent conforming provision for loan loss related to the Washington Mutual Bank acquisition and an increase in provision for loan losses of $2.3 billion in 2008 over 2007, as higher estimated net charge-offs are expected in the portfolio resulting from the current economic conditions.

The wholesale allowance for loan losses increase of $3.4 billion from December 31, 2007, reflected the effect of a weakening credit environment and the transfer of $4.9 billion of funded and unfunded leveraged lending commitments to retained loans from held-for-sale.

To provide for the risk of loss inherent in the Firm's process of extending credit, an allowance for lending-related commitments is held for both wholesale and consumer, which is reported in other liabilities. The wholesale component is computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown and has an asset-specific component and a formula-based component. For a further discussion on the allowance for lending-related commitment see Note 15 on pages 178–180 of this Annual Report. The allowance for lending-related commitments for both wholesale and consumer was $659 million and $850 million at December 31, 2008 and 2007, respectively. The decrease reflects the reduction in lending-related commitments at December 31, 2008. For more information, see page 102 of this Annual Report.

The following table presents the allowance for loan losses and net charge-offs (recoveries) by business segment at December 31, 2008 and 2007.

December 31,	Allowance for loan losses		Net charge-offs (recoveries) year ended	
(in millions)	**2008**	2007	**2008**	2007
Investment Bank	**$ 3,444**	$ 1,329	**$ 105**	$ 36
Commercial Banking	**2,826**	1,695	**288**	44
Treasury & Securities Services	**74**	18	**(2)**	—
Asset Management	**191**	112	**11**	(8)
Corporate/Private Equity	**10**	—	**—**	—
Total Wholesale	**6,545**	3,154	**402**	72
Retail Financial Services	**8,918**	2,668	**4,877**	1,350
Card Services	**7,692**	3,407	**4,556**	3,116
Corporate/Private Equity	**9**	5	**—**	—
Total Consumer – reported	**16,619**	6,080	**9,433**	4,466
Credit card – securitized	**—**	—	**3,612**	2,380
Total Consumer – managed	**16,619**	6,080	**13,045**	6,846
Total	**$ 23,164**	$ 9,234	**$ 13,477**	$ 6,918

Provision for credit losses

The managed provision for credit losses includes amounts related to credit card securitizations. For the year ended December 31, 2008, the increase in the provision for credit losses was due to year-over-year increase in the allowance for credit losses largely related to the home equity, subprime mortgage, prime mortgage and credit card loan portfolios in the consumer businesses as well as in the allowance for credit losses related to the wholesale portfolio. The increase in the allowance for credit losses related to the wholesale provision for loan losses from the prior year was due to the weakening credit environment, loan growth and the transfer of $4.9 billion of funded and unfunded leveraged lending commitments to retained loans from held-for-sale. The decrease in provision for lending-related commitments from the prior year benefited from reduced balances of lending-related commitments.

Year ended December 31,	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
(in millions)	**2008**	2007	2006	**2008**	2007	2006	**2008**	2007	2006
Investment Bank	**$ 2,216**	$ 376	$ 112	**$ (201)**	$ 278	$ 79	**$ 2,015**	$ 654	$ 191
Commercial Banking	**505**	230	133	**(41)**	49	27	**464**	279	160
Treasury & Securities Services	**52**	11	(1)	**30**	8	—	**82**	19	(1)
Asset Management	**87**	(19)	(30)	**(2)**	1	2	**85**	(18)	(28)
Corporate/Private Equity[a][b]	**676**	—	(1)	**5**	—	—	**681**	—	(1)
Total Wholesale	**3,536**	598	213	**(209)**	336	108	**3,327**	934	321
Retail Financial Services	**9,906**	2,620	552	**(1)**	(10)	9	**9,905**	2,610	561
Card Services – reported	**6,456**	3,331	2,388	**—**	—	—	**6,456**	3,331	2,388
Corporate/Private Equity[a][c][d]	**1,339**	(11)	—	**(48)**	—	—	**1,291**	(11)	—
Total Consumer	**17,701**	5,940	2,940	**(49)**	(10)	9	**17,652**	5,930	2,949
Total provision for credit losses – reported	**21,237**	6,538	3,153	**(258)**	326	117	**20,979**	6,864	3,270
Credit card – securitized	**3,612**	2,380	2,210	**—**	—	—	**3,612**	2,380	2,210
Total provision for credit losses – managed	**$ 24,849**	$ 8,918	$ 5,363	**$ (258)**	$ 326	$117	**$ 24,591**	$ 9,244	$ 5,480

(a) Includes accounting conformity provisions related to the Washington Mutual transaction in 2008.
(b) Includes provision expense related to loans acquired in the Bear Stearns merger in the second quarter of 2008.
(c) Includes amounts related to held-for-investment prime mortgages transferred from AM to the Corporate/Private Equity segment.
(d) In November 2008, the Firm transferred $5.8 billion of higher quality credit card loans from the legacy Chase portfolio to a securitization trust previously established by Washington Mutual ("the Trust"). As a result of converting higher credit quality Chase-originated on-book receivables to the Trust's seller's interest which has a higher overall loss rate reflective of the total assets within the Trust, approximately $400 million of incremental provision expense was recorded during the fourth quarter. This incremental provision expense was recorded in the Corporate segment as the action related to the acquisition of Washington Mutual's banking operations. For further discussion of credit card securitizations, see Note 16 on pages 180–188 of this Annual Report.

MARKET RISK MANAGEMENT

Market risk is the exposure to an adverse change in the market value of portfolios and financial instruments caused by a change in market prices or rates.

Market risk management

Market risk is identified, measured, monitored, and controlled by Market Risk, a corporate risk governance function independent of the lines of business. Market Risk seeks to facilitate efficient risk/return decisions, reduce volatility in operating performance and make the Firm's market risk profile transparent to senior management, the Board of Directors and regulators. Market Risk is overseen by the Chief Risk Officer and performs the following functions:

- Establishment of a comprehensive market risk policy framework
- Independent measurement, monitoring and control of business segment market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk identification and classification

Market Risk works in partnership with the business segments to identify market risks throughout the Firm and define and monitor market risk policies and procedures. All business segments are responsible for the comprehensive identification and verification of market risks within their units. Risk-taking businesses have functions that act independently from trading personnel and are responsible for verifying risk exposures that the business takes. In addition to providing independent oversight for market risk arising from the business segments, Market Risk is also responsible for identifying exposures which may not be large within individual business segments but which may be large for the Firm in the aggregate. Regular meetings are held between Market Risk and the heads of risk-taking businesses to discuss and decide on risk exposures in the context of the market environment and client flows.

Positions that expose the Firm to market risk can be classified into two categories: trading and nontrading risk. Trading risk includes positions that are held by the Firm as part of a business segment or unit, the main business strategy of which is to trade or make markets. Unrealized gains and losses in these positions are generally reported in principal transactions revenue. Nontrading risk includes securities and other assets held for longer-term investment, mortgage servicing rights, and securities and derivatives used to manage the Firm's asset/liability exposures. Unrealized gains and losses in these positions are generally not reported in principal transactions revenue.

Trading risk
The Firm makes markets and trades its products across several different asset classes. These asset classes include primarily fixed income (which includes interest rate risk and credit spread risk), foreign exchange, equities and commodities. Trading risk arises from positions in these asset classes and may lead to the potential decline in net income (i.e., economic sensitivity) due to adverse changes in market rates, whether arising from client activities or proprietary positions taken by the Firm.

Nontrading risk
Nontrading risk arises from execution of the Firm's core business strategies, the delivery of products and services to its customers, and the positions the Firm undertakes to risk-manage its exposures.

These exposures can result from a variety of factors, including differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments. Changes in the level and shape of market interest rate curves also may create interest rate risk, since the repricing characteristics of the Firm's assets do not necessarily match those of its liabilities. The Firm is also exposed to basis risk, which is the difference in the repricing characteristics of two floating-rate indices, such as the prime rate and 3-month LIBOR. In addition, some of the Firm's products have embedded optionality that impact pricing and balances.

The Firm's mortgage banking activities give rise to complex interest rate risks, as well as option and basis risk. Option risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing. Basis risk results from different relative movements between mortgage rates and other interest rates.

Risk measurement

Tools used to measure risk
Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- Nonstatistical risk measures
- Value-at-risk ("VaR")
- Loss advisories
- Drawdowns
- Economic value stress testing
- Earnings-at-risk stress testing
- Risk identification for large exposures ("RIFLE")

Nonstatistical risk measures
Nonstatistical risk measures other than stress testing include net open positions, basis point values, option sensitivities, market values, position concentrations and position turnover. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line of business and by risk type, and are used for monitoring limits, one-off approvals and tactical control.

Value-at-risk ("VaR")
JPMorgan Chase's primary statistical risk measure, VaR, estimates the potential loss from adverse market moves in an ordinary market environment and provides a consistent cross-business measure of risk profiles and levels of diversification. VaR is used for comparing risks across businesses, monitoring limits, and as an input to economic capital calculations. VaR provides risk transparency in a normal trading environment. Each business day the Firm undertakes a comprehensive VaR calculation that includes both its trading and its nontrading risks. VaR for nontrading risk measures the amount of potential change in the fair values of the exposures related to these risks; however, for such risks, VaR is not a measure of reported revenue since nontrading activities are generally not marked to market through net income. Hedges of nontrading activities may be included in trading VaR since they are marked to market.

To calculate VaR, the Firm uses historical simulation, based on a one-day time horizon and an expected tail-loss methodology, which measures risk across instruments and portfolios in a consistent and comparable way. The simulation is based upon data for the previous 12 months. This approach assumes that historical changes in market values are representative of future changes; this is an assumption that may not always be accurate, particularly given the volatility in the current market environment. For certain products, an actual price time series is not available. In such cases, the historical simulation is done using a proxy time series to estimate the risk. It is likely that using an actual price time series for these products, if available, would impact the VaR results presented. In addition, certain risk parameters, such as correlation risk among certain IB trading instruments, are not fully captured in VaR.

In the third quarter of 2008, the Firm revised its VaR measurement to include additional risk positions previously excluded from VaR, thus creating, in the Firm's view, a more comprehensive view of its market risks. In addition, the Firm moved to calculating VaR using a 95% confidence level to provide a more stable measure of the VaR for day-to-day risk management. The following sections describe JPMorgan Chase's VaR measures under both the legacy 99% confidence level as well as the new 95% confidence level. The Firm intends to solely present the VaR at the 95% confidence level once information for two complete year-to-date periods is available.

99% Confidence Level VaR

IB trading VaR by risk type and credit portfolio VaR

As of or for the year ended December 31,[a] (in millions)	2008			2007			At December 31,	
	Average	Minimum	Maximum	Average	Minimum	Maximum	**2008**	2007
By risk type:								
Fixed income	**$ 181**	**$ 99**	**$ 409**	$ 80	$ 25	$ 135	**$ 253**	$ 106
Foreign exchange	**34**	**13**	**90**	23	9	44	**70**	22
Equities	**57**	**19**	**187**	48	22	133	**69**	27
Commodities and other	**32**	**24**	**53**	33	21	66	**26**	27
Diversification	**(108)**[b]	**NM**[c]	**NM**[c]	(77)[b]	NM[c]	NM[c]	**(152)**[b]	(82)[b]
Trading VaR	**$ 196**	**$ 96**	**$ 420**	$ 107	$ 50	$ 188	**$ 266**	$ 100
Credit portfolio VaR	**69**	**20**	**218**	17	8	31	**171**	22
Diversification	**(63)**[b]	**NM**[c]	**NM**[b]	(18)[b]	NM[c]	NM[c]	**(120)**[b]	(19)[b]
Total trading and credit portfolio VaR	**$ 202**	**$ 96**	**$ 449**	$ 106	$ 50	$ 178	**$ 317**	$ 103

(a) The results for the year ended December 31, 2008, include five months of heritage JPMorgan Chase only results and seven months of results for the combined JPMorgan Chase and Bear Stearns; 2007 reflects heritage JPMorgan Chase results only.
(b) Average and period-end VaRs were less than the sum of the VaRs of its market risk components, which is due to risk offsets resulting from portfolio diversification. The diversification effect reflects the fact that the risks were not perfectly correlated. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves.
(c) Designated as not meaningful ("NM") because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio diversification effect.

Trading VaR includes substantially all trading activities in IB. Beginning in the fourth quarter of 2008, the credit spread sensitivities of certain mortgage products were included in trading VaR. This change had an insignificant net impact on the average fourth quarter 2008 VaR. However, trading VaR does not include: held-for-sale funded loan and unfunded commitments positions (however, it does include hedges of those positions); the debit valuation adjustments ("DVA") taken on derivative and structured liabilities to reflect the credit quality of the Firm; the MSR portfolio; and securities and instruments held by corporate functions, such as Corporate/Private Equity. See the DVA Sensitivity table on page 115 of this Annual Report for further details. For a discussion of MSRs and the corporate functions, see Note 4 on pages 141–155, Note 18 on pages 198–201 and Corporate/ Private Equity on pages 73–75 of this Annual Report.

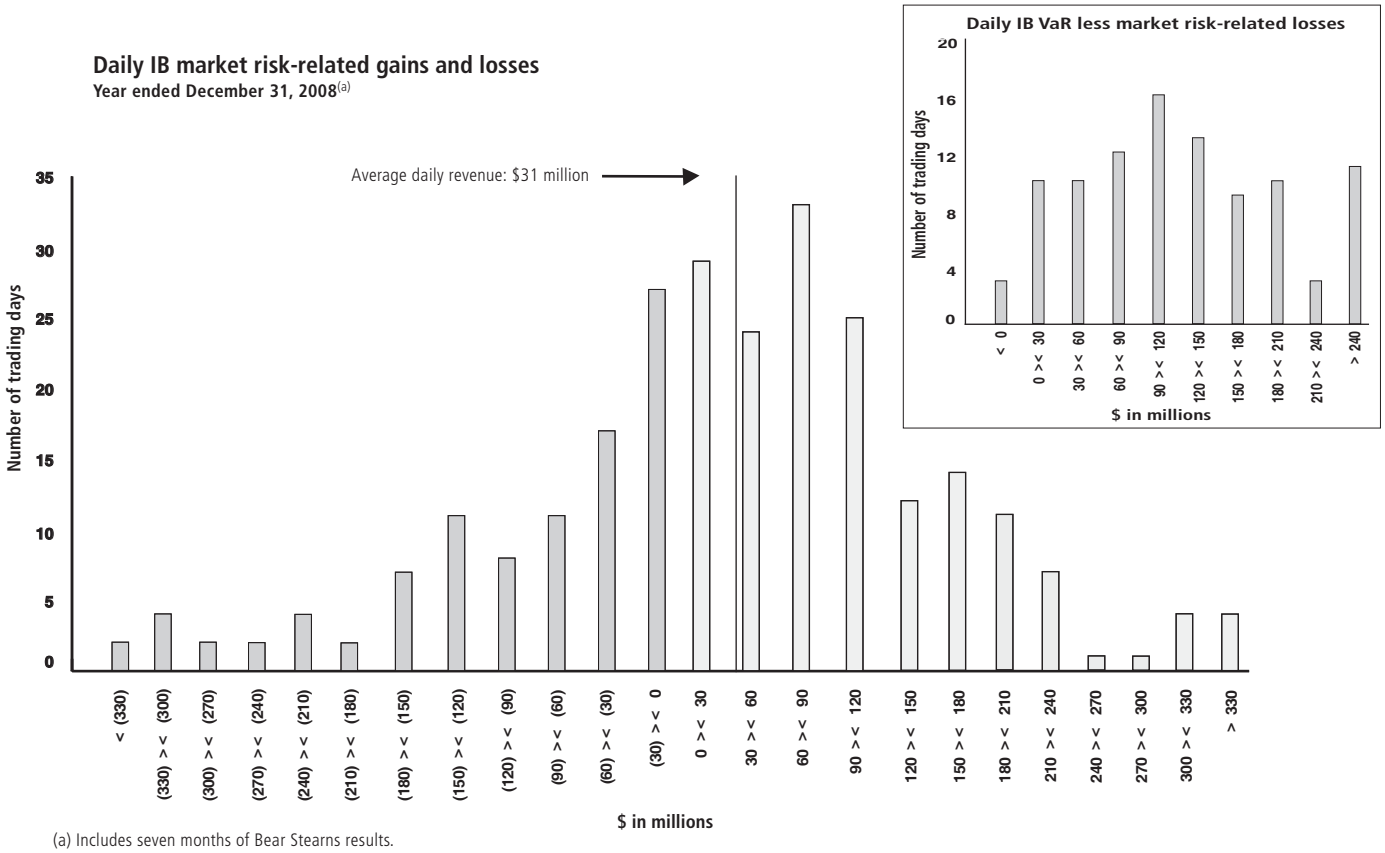
2008 VaR results

IB's average total trading and credit portfolio VaR was $202 million for 2008, compared with $106 million for 2007, and includes the positions from the Bear Stearns merger since May 31, 2008. The increase in average and maximum VaR during 2008 compared with the prior year was primarily due to increased volatility across virtually all asset classes. In addition, increased hedges of positions not specifically captured in VaR – for example, macro hedge strategies that have been deployed to mitigate the consequences of a systemic risk event and hedges of loans held-for-sale – significantly increased the VaR compared with the prior period.

For 2008, compared with the prior year, average trading VaR diversification increased to $108 million from $77 million, reflecting the impact of the Bear Stearns merger. In general, over the course of the year, VaR exposures can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

VaR backtesting

To evaluate the soundness of its VaR model, the Firm conducts daily back-testing of VaR against daily IB market risk-related revenue, which is defined as the change in value of principal transactions revenue (less Private Equity gains/losses) plus any trading-related net interest income, brokerage commissions, underwriting fees or other revenue. The daily IB market risk-related revenue excludes gains and losses on held-for-sale funded loans and unfunded commitments and from DVA. The following histogram illustrates the daily market risk-related gains and losses for IB trading businesses for the year ended 2008. The chart shows that IB posted market risk-related gains on 165 of the 262 days in this period, with 54 days exceeding $120 million. The inset graph looks at those days on which IB experienced losses and depicts the amount by which 99% confidence level VaR exceeded the actual loss on each of those days. During the year ended December 31, 2008, losses were sustained on 97 days; losses exceeded the VaR measure on three of those days compared with eight days for the year ended 2007. The Firm would expect to incur losses greater than those predicted by the 99% confidence level VaR estimates once in every 100 trading days, or about two to three times a year.



(a) Includes seven months of Bear Stearns results.

95% Confidence Level VaR

Total IB trading VaR by risk type, credit portfolio VaR and other VaR

	Six months ended December 31, 2008	
(in millions)	Average	At December 31
IB VaR by risk type:		
Fixed income	$ 162	$ 180
Foreign exchange	23	38
Equities	47	39
Commodities and other	23	25
Diversification benefit to IB trading VaR	(88)	(108)
IB Trading VaR	$ 167	$ 174
Credit portfolio VaR	45	77
Diversification benefit to IB trading and credit portfolio VaR	(36)	(57)
Total IB trading and credit portfolio VaR	$ 176	$ 194
Consumer Lending VaR	37	112
Corporate Risk Management VaR	48	114
Diversification benefit to total other VaR	(19)	(48)
Total other VaR	$ 66	$ 178
Diversification benefit to total IB and other VaR	(40)	(86)
Total IB and other VaR	$ 202	$ 286

The Firm's new 95% VaR measure includes all the risk positions taken into account under the 99% confidence level VaR measure, as well as syndicated lending facilities the Firm intends to distribute (and, beginning in the fourth quarter of 2008, the credit spread sensitivities of certain mortgage products). The Firm utilizes proxies to estimate the VaR for these mortgage and credit products since daily time series are largely not available. In addition, the new VaR measure includes certain actively managed positions utilized as part of the Firm's risk management function within Corporate and in the Consumer Lending businesses to provide a total IB and other VaR

measure. In the Firm's view, including these items in VaR produces a more complete perspective of the Firm's risk profile for items with market risk that can impact the income statement. The Consumer Lending VaR includes the Firm's mortgage pipeline and warehouse loans, MSRs and all related hedges.

The revised VaR measure continues to exclude the DVA taken on derivative and structured liabilities to reflect the credit quality of the Firm. It also excludes certain nontrading activity such as Private Equity, principal investing (e.g., mezzanine financing, tax-oriented investments, etc.) and Corporate balance sheet and capital management positions, as well as longer-term corporate investments. Corporate positions are managed through the Firm's earnings-at-risk and other cash flow monitoring processes rather than by using a VaR measure. Nontrading principal investing activities and Private Equity positions are managed using stress and scenario analyses.

Changing to the 95% confidence interval caused the average VaR to drop by $85 million in the third quarter when the new measure was implemented. Under the 95% confidence interval, the Firm would expect to incur daily losses greater than those predicted by VaR estimates about twelve times a year.

The following table provides information about the sensitivity of DVA to a one basis point increase in JPMorgan Chase's credit spreads. The sensitivity of DVA at December 31, 2008, represents the Firm (including Bear Stearns), while the sensitivity of DVA for December 31, 2007, represents heritage JPMorgan Chase only.

Debit Valuation Adjustment Sensitivity

(in millions)	1 Basis Point Increase in JPMorgan Chase Credit Spread
December 31, 2008	**$ 32**
December 31, 2007	$ 38

Loss advisories and drawdowns

Loss advisories and drawdowns are tools used to highlight to senior management trading losses above certain levels and initiate discussion of remedies.

Economic value stress testing

While VaR reflects the risk of loss due to adverse changes in normal markets, stress testing captures the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm conducts economic value stress tests for both its trading and nontrading activities at least every two weeks using multiple scenarios that assume credit spreads widen significantly, equity prices decline and interest rates rise in the major currencies. Additional scenarios focus on the risks predominant in individual business segments and include scenarios that focus on the potential for adverse moves in complex portfolios. Periodically, scenarios are reviewed and updated to reflect changes in the Firm's risk profile and economic events. Along with VaR, stress testing is important in measuring and controlling risk. Stress testing enhances the understanding of the Firm's risk profile and loss potential, and stress losses are monitored against limits. Stress testing is also utilized in one-off approvals and cross-business risk measurement, as well as an input to economic capital allocation. Stress-test results, trends and explanations are provided at least every two weeks to the Firm's senior management and to the lines of business to help them better measure and manage risks and understand event risk-sensitive positions.

Earnings-at-risk stress testing

The VaR and stress-test measures described above illustrate the total economic sensitivity of the Firm's balance sheet to changes in market variables. The effect of interest rate exposure on reported net income is also important. Interest rate risk exposure in the Firm's core nontrading business activities (i.e., asset/liability management positions) results from on- and off-balance sheet positions and can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments. For example, if liabilities reprice quicker than assets and funding interest rates are declining, earnings will increase initially.
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time. For example, if more deposit liabilities are repricing than assets when general interest rates are declining, earnings will increase initially.
- Differences in the amounts by which short-term and long-term market interest rates change. For example, changes in the slope of the yield curve because the Firm has the ability to lend at long-term fixed rates and borrow at variable or short-term fixed rates. Based upon these scenarios, the Firm's earnings would be affected negatively by a sudden and unanticipated increase in short-term rates paid on its liabilities (e.g., deposits) without a corresponding increase in long-term rates received on its assets (e.g., loans). Conversely, higher long-term rates received on assets generally are beneficial to earnings, particularly when the increase is not accompanied by rising short-term rates paid on liabilities.
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change. For example, if more borrowers than forecasted pay down higher rate loan balances when general interest rates are declining, earnings may decrease initially.

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, corporate-wide basis. Business units transfer their interest rate risk to Treasury through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for re-pricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm conducts simulations of changes in net interest income from its nontrading activities under a variety of interest rate scenarios. Earnings-at-risk tests measure the potential change in the Firm's net interest income, and the corresponding impact to the Firm's pre-

tax earnings, over the following 12 months. These tests highlight exposures to various rate-sensitive factors, such as the rates themselves (e.g., the prime lending rate), pricing strategies on deposits, optionality and changes in product mix. The tests include forecasted balance sheet changes, such as asset sales and securitizations, as well as prepayment and reinvestment behavior.

Immediate changes in interest rates present a limited view of risk, and so a number of alternative scenarios are also reviewed. These scenarios include the implied forward curve, nonparallel rate shifts and severe interest rate shocks on selected key rates. These scenarios are intended to provide a comprehensive view of JPMorgan Chase's earnings-at-risk over a wide range of outcomes.

JPMorgan Chase's 12-month pretax earnings sensitivity profile as of December 31, 2008 and 2007, is as follows.

	Immediate change in rates			
(in millions)	+200bp	+100bp	-100bp	-200bp
December 31, 2008	**$ 336**	**$ 672**	**$ NM**[a]	**$ NM**[a]
December 31, 2007	$ (26)	$ 55	$ (308)	$ (664)

(a) Down 100 and 200 basis point parallel shocks result in a Fed Funds target rate of zero, and negative three- and six-month Treasury rates. The earnings-at-risk results of such a low probability scenario are not meaningful ("NM").

The change in earnings-at-risk from December 31, 2007, results from a higher level of AFS securities and lower market interest rates. The benefit to the Firm of an increase in rates results from a widening of deposit margins which are currently compressed due to very low short-term interest rates. This benefit would be partially offset by the effect of reduced mortgage prepayments. The impact to the Firm's pretax earnings of reduced mortgage prepayments would become more pronounced under a +200 bp parallel shock.

Additionally, another sensitivity involving a steeper yield curve, with long-term rates rising 100 basis points and short-term rates staying at current levels, results in a 12-month pretax earnings benefit of $740 million. The increase in earnings is due to reinvestment of maturing assets at the higher long-term rates with funding costs remaining unchanged.

Risk identification for large exposures ("RIFLE")
Individuals who manage risk positions, particularly those that are complex, are responsible for identifying potential losses that could arise from specific, unusual events, such as a potential tax change, and estimating the probabilities of losses arising from such events. This information is entered into the Firm's RIFLE database. Management of trading businesses control RIFLE entries, thereby permitting the Firm to monitor further earnings vulnerability not adequately covered by standard risk measures.

Risk monitoring and control

Limits
Market risk is controlled primarily through a series of limits. Limits reflect the Firm's risk appetite in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity, business trends and management experience.

Market risk management regularly reviews and updates risk limits. Senior management, including the Firm's Chief Executive Officer and Chief Risk Officer, is responsible for reviewing and approving risk limits at least once a year.

The Firm maintains different levels of limits. Corporate-level limits include VaR and stress limits. Similarly, line-of-business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and instrument authorities. Businesses are responsible for adhering to established limits, against which exposures are monitored and reported. Limit breaches are reported in a timely manner to senior management, and the affected business segment is required to reduce trading positions or consult with senior management on the appropriate action.

Qualitative review
The Market Risk Management group also performs periodic reviews as necessary of both businesses and products with exposure to market risk to assess the ability of the businesses to control their market risk. Strategies, market conditions, product details and risk controls are reviewed, and specific recommendations for improvements are made to management.

Model review
Some of the Firm's financial instruments cannot be valued based upon quoted market prices but are instead valued using pricing models. Such models are used for management of risk positions, such as reporting against limits, as well as for valuation. The Model Risk Group, independent of the businesses and market risk management, reviews the models the Firm uses and assesses model appropriateness and consistency. The model reviews consider a number of factors about the model's suitability for valuation and risk management of a particular product, including whether it accurately reflects the characteristics of the transaction and its significant risks, the suitability and convergence properties of numerical algorithms, reliability of data sources, consistency of the treatment with models for similar products, and sensitivity to input parameters and assumptions that cannot be priced from the market.

Reviews are conducted of new or changed models, as well as previously accepted models, to assess whether there have been any changes in the product or market that may impact the model's validity and whether there are theoretical or competitive developments that may require reassessment of the model's adequacy. For a summary of valuations based upon models, see Critical Accounting Estimates Used by the Firm on pages 119–123 of this Annual Report.

Risk reporting

Nonstatistical exposures, value-at-risk, loss advisories and limit excesses are reported daily for each trading and nontrading business. Market risk exposure trends, value-at-risk trends, profit and loss changes, and portfolio concentrations are reported weekly. Stress-test results are reported at least every two weeks to business and senior management.

PRIVATE EQUITY RISK MANAGEMENT

Risk management

The Firm makes direct principal investments in private equity. The illiquid nature and long-term holding period associated with these investments differentiates private equity risk from the risk of positions held in the trading portfolios. The Firm's approach to managing private equity risk is consistent with the Firm's general risk governance structure. Controls are in place establishing expected levels for total and annual investment in order to control the overall size of the portfolio. Industry and geographic concentration limits are in place and intended to ensure diversification of the portfolio. All investments are approved by an investment committee that includes executives who are not part of the investing businesses. An independent valuation function is responsible for reviewing the appropriateness of the carrying values of private equity investments in accordance with relevant accounting policies. At December 31, 2008 and 2007, the carrying value of the private equity businesses was $6.9 billion and $7.2 billion, respectively, of which $483 million and $390 million, respectively, represented publicly traded positions. For further information on the Private equity portfolio, see page 75 of this Annual Report.

OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, fraudulent acts, business interruptions, inappropriate behavior of employees, or vendors that do not perform in accordance with their arrangements. These events could result in financial losses and other damage to the Firm, including reputational harm.

To monitor and control operational risk, the Firm maintains a system of comprehensive policies and a control framework designed to provide a sound and well-controlled operational environment. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject. Notwithstanding these control measures, the Firm incurs operational losses.

The Firm's approach to operational risk management is intended to mitigate such losses by supplementing traditional control-based approaches to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

The Firm's operational risk framework is supported by Phoenix, an internally designed operational risk software tool. Phoenix integrates the individual components of the operational risk management framework into a unified, web-based tool. Phoenix enhances the capture, reporting and analysis of operational risk data by enabling risk identification, measurement, monitoring, reporting and analysis to be done in an integrated manner, thereby enabling efficiencies in the Firm's monitoring and management of its operational risk.

For purposes of identification, monitoring, reporting and analysis, the Firm categorizes operational risk events as follows:

- Client service and selection
- Business practices
- Fraud, theft and malice
- Execution, delivery and process management
- Employee disputes
- Disasters and public safety
- Technology and infrastructure failures

Risk identification and measurement

Risk identification is the recognition of the operational risk events that management believes may give rise to operational losses. All businesses utilize the Firm's standard self-assessment process and supporting architecture as a dynamic risk management tool. The goal of the self-assessment process is for each business to identify the key operational risks specific to its environment and assess the degree to which it maintains appropriate controls. Action plans are developed for control issues identified, and businesses are held accountable for tracking and resolving these issues on a timely basis.

Risk monitoring

The Firm has a process for monitoring operational risk-event data, permitting analysis of errors and losses as well as trends. Such analysis, performed both at a line-of-business level and by risk-event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns. The data reported enables the Firm to back-test against self-assessment results. The Firm is a founding member of the Operational Riskdata eXchange Association, a not-for-profit industry association formed for the purpose of collecting operational loss data, sharing data in an anonymous form and benchmarking results back to members. Such information supplements the Firm's ongoing operational risk measurement and analysis.

Risk reporting and analysis
Operational risk management reports provide timely and accurate information, including information about actual operational loss levels and self-assessment results, to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and support areas.

Audit alignment
Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. This includes reviewing the operational risk framework, the effectiveness and accuracy of the business self-assessment process and the loss data collection and reporting activities.

REPUTATION AND FIDUCIARY RISK MANAGEMENT

A firm's success depends not only on its prudent management of the liquidity, credit, market and operational risks that are part of its business risks, but equally on the maintenance among many constituents – clients, investors, regulators, as well as the general public – of a reputation for business practices of the highest quality. Attention to reputation always has been a key aspect of the Firm's practices, and maintenance of the Firm's reputation is the responsibility of everyone at the Firm. JPMorgan Chase bolsters this individual responsibility in many ways, including through the Firm's Code of Conduct, training, maintaining adherence to policies and procedures, and oversight functions that approve transactions. These oversight functions include a Conflicts Office, which examines wholesale transactions with the potential to create conflicts of interest for the Firm, and regional reputation risk review committees, which review certain transactions with clients, especially complex derivatives and structured finance transactions, that have the potential to affect adversely the Firm's reputation. These regional committees, whose members are senior representatives of businesses and control functions in the region, focus on the purpose and effect of the transactions from the client's point of view, with the goal that these transactions are not used to mislead investors or others.

Fiduciary risk management
The risk management committees within each line of business include in their mandate the oversight of the legal, reputational and, where appropriate, fiduciary risks in their businesses that may produce significant losses or reputational damage. The Fiduciary Risk Management function works with the relevant line-of-business risk committees with the goal of ensuring that businesses providing investment or risk management products or services that give rise to fiduciary duties to clients perform at the appropriate standard relative to their fiduciary relationship with a client. Of particular focus are the policies and practices that address a business' responsibilities to a client, including client suitability determination; disclosure obligations and communications; and performance expectations with respect to risk management products or services being provided. In this way, the relevant line-of-business risk committees, together with the Fiduciary Risk Management function, provide oversight of the Firm's efforts to monitor, measure and control the risks that may arise in the delivery of the products or services to clients that give rise to such fiduciary duties, as well as those stemming from any of the Firm's fiduciary responsibilities to employees under the Firm's various employee benefit plans.

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the value of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the wholesale and consumer loan portfolios, as well as the Firm's portfolio of lending-related commitments. The allowance for credit losses is intended to adjust the value of the Firm's loan assets for probable credit losses as of the balance sheet date. For further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Note 15 on pages 178–180 of this Annual Report.

Wholesale loans and lending-related commitments

The methodology for calculating both the allowance for loan losses and the allowance for lending-related commitments involves significant judgment. First and foremost, it involves the early identification of credits that are deteriorating. Second, it involves judgment in establishing the inputs used to estimate the allowances. Third, it involves management judgment to evaluate certain macroeconomic factors, underwriting standards, and other relevant internal and external factors affecting the credit quality of the current portfolio and to refine loss factors to better reflect these conditions.

The Firm uses a risk-rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength and the industry and geography in which the obligor operates. These factors are based upon an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm to that loan.

The Firm applies its judgment to establish loss factors used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances. Many factors can affect estimates of loss, including volatility of loss given default, probability of default and rating migrations. Consideration is given as to whether the loss estimates should be calculated as an average over the entire credit cycle or at a particular point in the credit cycle, as well as to which external data should be used and when they should be used. Choosing data that are not reflective of the Firm's specific loan portfolio characteristics could also affect loss estimates. The application of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the loss factors derived, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors by establishing ranges using historical experience of both loss given default and probability of default. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based upon management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

As noted on page 96 of this Annual Report, the Firm's wholesale allowance is sensitive to the risk rating assigned to a loan. Assuming a one-notch downgrade in the Firm's internal risk ratings for its entire wholesale portfolio, the allowance for loan losses for the wholesale portfolio would increase by approximately $1.8 billion as of December 31, 2008. This sensitivity analysis is hypothetical. In the Firm's view, the likelihood of a one-notch downgrade for all wholesale loans within a short timeframe is remote. The purpose of this analysis is to provide an indication of the impact of risk ratings on the estimate of the allowance for loan losses for wholesale loans. It is not intended to imply management's expectation of future deterioration in risk ratings. Given the process the Firm follows in determining the risk ratings of its loans, management believes the risk ratings currently assigned to wholesale loans are appropriate.

Consumer loans and lending-related commitments

The allowance for credit losses for the consumer portfolio is sensitive to changes in the economic environment, delinquency status, credit bureau scores, the realizable value of collateral, borrower behavior and other risk factors, and is intended to represent management's best estimate of incurred losses as of the balance sheet date. The credit performance of the consumer portfolio across the entire consumer credit product spectrum continues to be negatively affected by the economic environment, as the weak labor market and weak overall economic conditions have resulted in increased delinquencies, while continued weak housing prices have driven a significant increase in loss severity. Significant judgment is required to estimate the duration and severity of the current economic downturn, as well as its potential impact on housing prices and the labor market. While the allowance for credit losses is highly sensitive to both home prices and unemployment rates, in the current market it is difficult to estimate how potential changes in one or both of these factors might impact the allowance for credit losses. For example, while both factors are important determinants of overall allowance levels, changes in one factor or the other may not occur at the same rate, or changes may be directionally inconsistent such that improvement in one factor

may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across geographies or product types. Finally, it is difficult to predict the extent to which changes in both or either of these factors will ultimately impact the frequency of losses, the severity of losses, or both, and overall loss rates are a function of both the frequency and severity of individual loan losses.

The allowance is calculated by applying statistical loss factors and other risk indicators to pools of loans with similar risk characteristics to arrive at an estimate of incurred losses in the portfolio. Management applies judgment to the statistical loss estimates for each loan portfolio category using delinquency trends and other risk characteristics to estimate charge-offs. Management utilizes additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate.

The statistical calculation is adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but are not yet reflected in the factors used to derive the statistical calculation, and is accomplished in part by analyzing the historical loss experience for each major product segment. In the current economic environment, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment within estimated ranges in determining this adjustment, taking into account the numerous uncertainties inherent in the current economic environment. The estimated ranges and the determination of the appropriate point within the range are based upon management's judgment related to uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, and other relevant internal and external factors affecting the credit quality of the portfolio.

Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of it assets and liabilities at fair value. The majority of such assets and liabilities are carried at fair value on a recurring basis. In addition, certain assets are carried at fair value on a nonrecurring basis, including loans accounted for at the lower of cost or fair value that are only subject to fair value adjustments under certain circumstances.

On January 1, 2007, the Firm adopted SFAS 157, which established a three-level valuation hierarchy for disclosure of fair value measurements. An instrument's categorization within the hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Therefore, for instruments classified in levels 1 and 2 of the hierarchy, where inputs are principally based on observable market data, there is less judgment applied in arriving at a fair value measurement. For instruments classified within level 3 of the hierarchy, judgments are more significant. The Firm reviews and updates the fair value hierarchy classifications on a quarterly basis. Changes from one quarter to the next related to the observability of inputs to a fair value measurement may result in a reclassification between hierarchy levels.

Assets carried at fair value

The table that follows includes the Firm's assets carried at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy.

December 31,	2008		2007	
(in billions)	Total at fair value	Level 3 total	Total at fair value	Level 3 total
Trading debt and equity securities[a]	**$ 347.4**	**$ 41.4**	$ 414.3	$ 24.1
Derivative receivables – gross	**2,741.7**	**53.0**	909.8	20.2
Netting adjustment	**(2,579.1)**	**—**	(832.7)	—
Derivative receivables – net	**162.6**	**53.0**[e]	77.1	20.2[e]
AFS Securities	**205.9**	**12.4**	85.4	0.1
Loans	**7.7**	**2.7**	8.7	8.4
MSRs	**9.4**	**9.4**	8.6	8.6
Private equity investments	**6.9**	**6.4**	7.2	6.8
Other[b]	**46.5**	**5.0**	34.2	3.1
Total assets carried at fair value on a recurring basis	**786.4**	**130.3**	635.5	71.3
Total assets carried at fair value on a nonrecurring basis[c]	**11.0**	**4.3**	14.9	11.8
Total assets carried at fair value	**$ 797.4**	**$ 134.6**[f]	$ 650.4	$ 83.1
Less: level 3 assets for which the Firm does not bear economic exposure[d]		**21.2**		
Total level 3 assets for which the Firm bears economic exposure		**$ 113.4**		
Total Firm assets	**$ 2,175.1**		$ 1,562.1	
Level 3 assets as a percentage of total Firm assets		**6%**		5%
Level 3 assets for which the Firm bears economic exposure as a percentage of total Firm assets		**5**		
Level 3 assets as a percentage of total Firm assets at fair value		**17**		13
Level 3 assets for which the Firm bears economic exposure as a percentage of total assets at fair value		**14**		

(a) Includes physical commodities carried at the lower of cost or fair value.
(b) Includes certain securities purchased under resale agreements, certain securities borrowed and certain other investments.
(c) Predominantly consists of debt financing and other loan warehouses held-for-sale and other assets.
(d) Balances for which the Firm did not bear economic exposure at December 31, 2007, were not significant.
(e) The Firm does not allocate the FIN 39 netting adjustment across the levels of the fair value hierarchy. As such, the level 3 derivative receivables balance included in the level 3 total balance is reported gross of any netting adjustments.
(f) Included in the table above are $95.1 billion of level 3 assets, consisting of recurring and nonrecurring assets, carried by IB at December 31, 2008. This includes $21.2 billion of assets for which the Firm serves as an intermediary between two parties and does not bear economic exposure.

Valuation

For instruments classified within level 3 of the hierarchy, judgments may be significant. In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models also incorporate transaction details, such as maturity. Finally, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters, where relevant. The judgments made are typically affected by the type of product and its specific contractual terms and the level of liquidity for the product or within the market as a whole.

Imprecision in estimating unobservable market inputs can impact the amount of revenue or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date. For a detailed discussion of the determination of fair value for individual financial instruments, see Note 4 on pages 141–145 of this Annual Report. In addition, for a further discussion of the significant judgments and estimates involved in the determination of the Firm's mortgage-related exposures, see "Mortgage-related exposures carried at fair value" in Note 4 on pages 151–153 of this Annual Report.

Purchased credit-impaired loans

JPMorgan Chase acquired, in connection with the Washington Mutual transaction, certain loans with evidence of deterioration of credit quality since origination and for which it was probable, at acquisition, that the Firm would be unable to collect all contractually required payments receivable. These purchased credit-impaired loans are accounted for in accordance with SOP 03-3. Many of the assumptions and estimates underlying the application of SOP 03-3 are both significant and judgmental, particularly considering the current economic environment. The level of future home price declines, the duration and severity of the current economic downturn and the lack of market liquidity and transparency are factors that have impacted and may continue to impact these assumptions and estimates.

Determining which loans are included in the scope of SOP 03-3 is highly subjective and requires the application of significant judgment. In the Washington Mutual transaction, consumer loans with certain attributes (e.g., higher loan-to-value ratios, borrowers with lower FICO scores, delinquencies) were determined to be credit-impaired, provided that those attributes arose subsequent to loan origination. Wholesale loans were determined to be credit-impaired if they met the definition of an impaired loan under SFAS 114 at the acquisition date. Applying SOP 03-3 to the appropriate population of loans is important because loans that are not within the scope of SOP 03-3 are subject to different accounting standards. Choosing different attributes in making the management assessment of which loans were credit-impaired and within the scope of SOP 03-3 could have resulted in a different (i.e., larger or smaller) population of loans deemed credit-impaired at the transaction date.

Loans determined to be within the scope of SOP 03-3 are initially recorded at fair value. The Firm has estimated the fair value of these loans by discounting the cash flows expected to be collected at a market observable discount rate, when available, adjusted for factors that a market participant would consider in determining fair value. The initial estimate of cash flows expected to be collected entails significant management judgment, as such cash flows were derived from assumptions such as default rates, loss severities and the amount and timing of prepayments. Particularly in the current economic environment, estimating the initial fair value of these loans was highly subjective. The application of different assumptions by management would have resulted in different initial fair values.

The Firm has elected to aggregate the purchased credit-impaired consumer loans into pools of loans with common risk characteristics. Significant judgment is required in evaluating whether individual loans have common risk characteristics for purposes of establishing these pools. Each resulting pool is considered one loan with a composite interest rate and estimation of cash flows expected to be collected for purposes of applying SOP 03-3 subsequent to acquisition. The process of estimating cash flows expected to be collected subsequent to acquisition is both subjective and judgmental and may have an impact on the recognition and measurement of impairment losses and/or interest income. In addition, the decision to pool these loans and the manner in which they were pooled may have an impact on the recognition, measurement and/or classification of interest income and/or impairment losses.

Goodwill impairment

Under SFAS 142, goodwill must be allocated to reporting units and tested for impairment. SFAS 142 defines reporting units of an entity as either SFAS 131 operating segments (i.e., one level below the SFAS 131 reportable segments as disclosed in Note 37 of this Annual Report) or one level below the SFAS 131 operating segments. JPMorgan Chase generally determined its reporting units to be one level below the six major business segments identified in Note 37 on pages 226–227 of this Annual Report, plus Private Equity which is included in Corporate. This determination was based on how the Firm's operating segments are managed and how they are reviewed by the Firm's Operating Committee.

The Firm tests goodwill for impairment at least annually or more frequently if events or circumstances, such as adverse changes in the business climate, indicate that there may be justification for conducting an interim test. The first part of the test is a comparison, at the reporting unit level, of the fair value of each reporting unit to its carrying amount, including goodwill. If the fair value is less than the carrying value, then the second part of the test is needed to measure the amount of potential goodwill impairment. The implied fair value of the reporting unit goodwill is calculated and compared with the carrying amount of goodwill recorded in the Firm's financial records. If the carrying value of the reporting unit goodwill exceeds the implied fair value of that goodwill, then the Firm would recognize an impairment loss in the amount of the difference, which would be recorded as a charge against net income.

If the fair value of the reporting unit in the first part of the test is determined to be greater than the carrying amount of the reporting unit including goodwill, then and in accordance with SFAS 142 goodwill is deemed not to be impaired. During the fourth quarter of 2008, the Firm performed its annual goodwill impairment testing and concluded that the fair value of each of its reporting units was in excess of their respective carrying values including goodwill. Accordingly, the Firm concluded that its goodwill was not impaired at December 31, 2008.

The Firm considers discounted cash flow models to be its primary method of determining the fair value of its reporting units. The models project levered cash flows for five years and use the perpetuity growth method to calculate terminal values. The first year's projected cash flows are based on the reporting units' internal budget forecasts for the upcoming calendar year (which are reviewed with the Operating Committee of the Firm). To assess the reasonableness of the valuations derived from the discounted cash flow models, the Firm also analyzes market-based trading and transaction multiples, where available. These trading and transaction comparables are used to assess the reasonableness of the estimated fair values, as observable market information is generally not available.

JPMorgan Chase's stock price, consistent with stock prices in the broader financial services sector, declined significantly during the last half of 2008. JPMorgan Chase's market capitalization fell below its recorded book value, principally during the fourth quarter of 2008. Although the Firm believes it is reasonable to conclude that market capitalization could be an indicator of fair value over time, the Firm is of the view that short-term fluctuations in market capitalization do not reflect the long-term fair value of its reporting units.

Management applies significant judgment when determining the fair value of its reporting units. Imprecision in estimating the future cash flows of the Firm's reporting units as well as the appropriate cost of equity used to discount those cash flows can impact their estimated fair values. If JPMorgan Chase's common stock were to trade at the level it was at the end of 2008 over a sustained period and weak economic market conditions persist, these factors could indicate that the long-term earnings potential of the Firm's reporting units could be adversely affected – which could result in supplemental impairment testing during interim reporting periods and possible impairment of goodwill in the future.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of its accounting for income taxes, including the provision for income tax expense and its unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events. Disputes over interpretations with the various taxing authorities may be settled upon audit or administrative appeals. In some cases, the Firm's interpretations of tax laws may be subject to adjudication by the court systems of the tax jurisdictions in which it operates. JPMorgan Chase regularly reviews whether the Firm may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate.

The Firm does not anticipate that current market events will adversely impact the realizability of its deferred tax assets.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. The reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective tax rate in the period in which it occurs.

ACCOUNTING AND REPORTING DEVELOPMENTS

Derivatives netting – amendment of FASB Interpretation No. 39

In April 2007, the FASB issued FSP FIN 39-1, which permits offsetting of cash collateral receivables or payables with net derivative positions under certain circumstances. The Firm adopted FSP FIN 39-1 effective January 1, 2008. The FSP did not have a material impact on the Firm's Consolidated Balance Sheets.

Accounting for income tax benefits of dividends on share-based payment awards

In June 2007, the FASB ratified EITF 06-11, which must be applied prospectively for dividends declared in fiscal years beginning after December 15, 2007. EITF 06-11 requires that realized tax benefits from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings be recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards. Prior to the issuance of EITF 06-11, the Firm did not include these tax benefits as part of this pool of excess tax benefits. The Firm adopted EITF 06-11 on January 1, 2008. The adoption of this consensus did not have an impact on the Firm's Consolidated Balance Sheets or results of operations.

Fair value measurements – written loan commitments

In November 2007, the SEC issued SAB 109, which revises and rescinds portions of SAB 105. Specifically, SAB 109 states that the expected net future cash flows related to the associated servicing of the loan should be included in the measurement of all written loan commitments that are accounted for at fair value through earnings. The provisions of SAB 109 are applicable to written loan commitments issued or modified beginning on January 1, 2008. The Firm adopted SAB 109 on January 1, 2008. The adoption of this pronouncement did not have a material impact on the Firm's Consolidated Balance Sheets or results of operations.

Business combinations/noncontrolling interests in consolidated financial statements

In December 2007, the FASB issued SFAS 141R and SFAS 160, which amend the accounting and reporting of business combinations, as well as noncontrolling (i.e., minority) interests. For JPMorgan Chase, SFAS 141R is effective for business combinations that close on or after January 1, 2009. SFAS 160 is effective for JPMorgan Chase for fiscal years beginning on or after December 15, 2008.

SFAS 141R will generally only impact the accounting for future business combinations and will impact certain aspects of business combination accounting, such as transaction costs and certain merger-related restructuring reserves, as well as the accounting for partial acquisitions where control is obtained by JPMorgan Chase. One exception to the prospective application of SFAS 141R relates to accounting for income taxes associated with business combinations that closed prior to January 1, 2009. Once the purchase accounting measurement period closes for these acquisitions, any further adjustments to income taxes recorded as part of these business combinations will impact income tax expense. Previously, further adjustments were predominately recorded as adjustments to Goodwill. JPMorgan Chase will continue to evaluate the impact that SFAS 141R will have on its consolidated financial statements.

SFAS 160 requires that noncontrolling interests be accounted for and presented as equity, rather than as a liability or mezzanine equity. Changes to how the income statement is presented will also result. SFAS 160 presentation and disclosure requirements are to be applied retrospectively. The adoption of this pronouncement is not expected to have a material impact on the Firm's Consolidated Balance Sheets, results of operations or ratios.

Accounting for transfers of financial assets and repurchase financing transactions

In February 2008, the FASB issued FSP FAS 140-3, which requires an initial transfer of a financial asset and a repurchase financing that was entered into contemporaneously with, or in contemplation of, the initial transfer to be evaluated together as a linked transaction under SFAS 140, unless certain criteria are met. The Firm adopted FSP FAS 140-3 on January 1, 2009, for new transactions entered into after the date of adoption. The adoption of FSP FAS 140-3 is not expected to have a material impact on the Consolidated Balance Sheets or results of operations.

Disclosures about derivative instruments and hedging activities – FASB Statement No. 161

In March 2008, the FASB issued SFAS 161, which amends the disclosure requirements of SFAS 133. SFAS 161 requires increased disclosures about derivative instruments and hedging activities and their effects on an entity's financial position, financial performance and cash flows. SFAS 161 is effective for fiscal years beginning after November 15, 2008, with early adoption permitted. SFAS 161 will only affect JPMorgan Chase's disclosures of derivative instruments and related hedging activities, and not its Consolidated Balance Sheets, Consolidated Statements of Income or Consolidated Statements of Cash Flows.

Determining whether instruments granted in share-based payment transactions are participating securities

In June 2008, the FASB issued FSP EITF 03-6-1, which addresses whether instruments granted in share-based payment transactions are participating securities prior to vesting and, therefore, need to be included in the earnings allocation in computing earnings per share under the two-class method. FSP EITF 03-6-1 is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those years. Adoption of FSP EITF 03-6-1 does not affect net income or results of operations but may result in a reduction of basic and/or diluted earnings per share in certain periods.

Disclosures about credit derivatives and certain guarantees

In September 2008, the FASB issued FSP FAS 133-1 and FIN 45-4. The FSP requires enhanced disclosures about credit derivatives and guarantees to address the potential adverse effects of changes in credit risk on the financial position, financial performance and cash flows of the sellers of these instruments. The FSP is effective for reporting periods ending after November 15, 2008, with earlier application permitted. The disclosures required by this FSP are incorporated in this Annual Report. FSP FAS 133-1 and FIN 45-4 only affects JPMorgan Chase's disclosures of credit derivatives and guarantees and not its Consolidated Balance Sheets, Consolidated Statements of Income or Consolidated Statements of Cash Flows.

Determining whether an instrument (or embedded feature) is indexed to an entity's own stock

In September 2008, the EITF issued EITF 07-5, which establishes a two-step process for evaluating whether equity-linked financial instruments and embedded features are indexed to a company's own stock for purposes of determining whether the derivative scope exception in SFAS 133 should be applied. EITF 07-5 is effective for fiscal years beginning after December 2008. The adoption of this EITF is not expected to have a material impact on the Firm's Consolidated Balance Sheets or results of operations.

Accounting for transfers of financial assets and consolidation of variable interest entities

The FASB has been deliberating certain amendments to both SFAS 140 and FIN 46R that may impact the accounting for transactions that involve QSPEs and VIEs. Among other things, the FASB is proposing to eliminate the concept of QSPEs from both SFAS 140 and FIN 46R and make key changes to the consolidation model of FIN 46R that will change the method of determining which party to a VIE should consolidate the VIE. A final standard is expected to be issued in the second quarter of 2009, with an

expected effective date in January 2010. Entities expected to be impacted include revolving securitization entities, bank-administered asset-backed commercial paper conduits, and certain mortgage securitization entities. The Firm is monitoring the FASB's deliberations on these proposed amendments and continues to evaluate their potential impact. The ultimate impact of the Firm will depend upon the guidance issued by the FASB in a final statement amending SFAS 140 and FIN 46R.

Determining the fair value of an asset when the market for that asset is not active

In October 2008, the FASB issued FSP FAS 157-3, which clarifies the application of SFAS 157 in a market that is not active and provides an example to illustrate key considerations in determining the fair value of a financial instrument when the market for that financial asset is not active. The FSP was effective upon issuance, including prior periods for which financial statements have not been issued. The application of this FSP did not have an impact on the Firm's Consolidated Balance Sheets or results of operations.

Disclosure about transfers of financial assets and interests in VIEs

On December 11, 2008, the FASB issued FSP FAS 140-4 and FIN 46(R)-8, which requires additional disclosures relating to transfers of financial assets and interests in securitization entities and other variable interest entities. The purpose of this FSP is to require improved disclosure by public enterprises prior to the effective dates of the proposed amendments to SFAS 140 and FIN 46(R). The effective date for the FSP is for reporting periods (interim and annual) beginning with the first reporting period that ends after December 15, 2008. The disclosures required by this FSP are incorporated in this Annual Report. FSP SFAS 140-4 and FIN 46(R)-8 only affects JPMorgan Chase's disclosure of transfers of financial assets and interests in securitization entities and other variable interest entities and not its Consolidated Balance Sheets, Consolidated Statements of Income or Consolidated Statements of Cash Flows.

Employers' disclosures about postretirement benefit plan assets

In December 2008, the FASB issued FSP FAS 132(R)-1, which requires more detailed disclosures about employers' plan assets, including investment strategies, major categories of plan assets, concentrations of risk within plan assets, and valuation techniques used to measure the fair value of plan assets. This FSP is effective for fiscal years ending after December 15, 2009. The Firm intends to adopt these additional disclosure requirements on the effective date.

Amendments to the impairment guidance of EITF Issue No. 99-20

In January 2009, the FASB issued FSP EITF 99-20-1, which amends the impairment guidance in EITF 99-20 to make the investment security impairment model in EITF 99-20 more consistent with the securities impairment model in SFAS 115. FSP EITF 99-20-1 removes the requirement that a holder's best estimate of cash flows be based exclusively upon those that a market participant would use and allows for reasonable judgment to be applied in considering whether an adverse change in cash flows has occurred based on all available information relevant to the collectibility of the security. FSP EITF 99-20-1 is effective for interim and annual periods ending after December 15, 2008, and therefore the Firm has adopted FSP EITF 99-20-1 as of December 31, 2008. The adoption of this FSP did not have a material impact on the Firm's Consolidated Balance Sheets or results of operations.

NONEXCHANGE-TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based upon internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2008.

For the year ended December 31, 2008 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2008	$ 8,090	$ 5,809
Effect of legally enforceable master netting agreements	26,108	25,957
Gross fair value of contracts outstanding at January 1, 2008	34,198	31,766
Contracts realized or otherwise settled	(12,773)	(12,802)
Fair value of new contracts	40,916	39,194
Changes in fair values attributable to changes in valuation techniques and assumptions	—	—
Other changes in fair value	(6,818)	(4,293)
Gross fair value of contracts outstanding at December 31, 2008	55,523	53,865
Effect of legally enforceable master netting agreements	(48,091)	(48,726)
Net fair value of contracts outstanding at December 31, 2008	$ 7,432	$ 5,139

The following table indicates the schedule of maturities of nonexchange-traded commodity derivative contracts at December 31, 2008.

December 31, 2008 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 27,282	$ 24,381
Maturity 1–3 years	22,463	20,047
Maturity 4–5 years	3,954	3,609
Maturity in excess of 5 years	1,824	5,828
Gross fair value of contracts outstanding at December 31, 2008	55,523	53,865
Effects of legally enforceable master netting agreements	(48,091)	(48,726)
Net fair value of contracts outstanding at December 31, 2008	$ 7,432	$ 5,139

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the SEC. In addition, the Firm's senior management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements.

- local, regional and international business, economic and political conditions and geopolitical events;
- changes in trade, monetary and fiscal policies and laws;
- securities and capital markets behavior, including changes in market liquidity and volatility;
- changes in investor sentiment or consumer spending or saving behavior;
- ability of the Firm to manage effectively its liquidity;
- credit ratings assigned to the Firm or its subsidiaries;
- the Firm's reputation;
- ability of the Firm to deal effectively with an economic slowdown or other economic or market difficulty;
- technology changes instituted by the Firm, its counterparties or competitors;
- mergers and acquisitions, including the Firm's ability to integrate acquisitions;
- ability of the Firm to develop new products and services;
- acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to increase market share;
- ability of the Firm to attract and retain employees;
- ability of the Firm to control expense;
- competitive pressures;
- changes in the credit quality of the Firm's customers and counterparties;
- adequacy of the Firm's risk management framework;
- changes in laws and regulatory requirements or adverse judicial proceedings;
- changes in applicable accounting policies;
- ability of the Firm to determine accurate values of certain assets and liabilities;
- occurrence of natural or man-made disasters or calamities or conflicts, including any effect of any such disasters, calamities or conflicts on the Firm's power generation facilities and the Firm's other commodity-related activities;
- the other risks and uncertainties detailed in Part 1, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2008.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

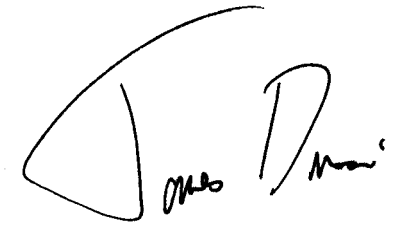
JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

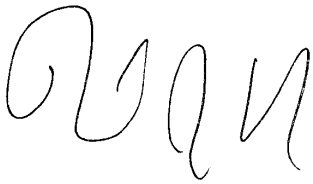
Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2008. In making the assessment, management used the framework in "Internal Control – Integrated Framework" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2008, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2008.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2008, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Michael J. Cavanagh
Executive Vice President and Chief Financial Officer

February 27, 2009

Report of independent registered public accounting firm

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Report of Independent Registered Public Accounting Firm To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, changes in stockholders' equity and comprehensive income and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2008 and 2007, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2008 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting." Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As discussed in Note 4, Note 5, and Note 28 to the Consolidated Financial Statements, effective January 1, 2007 the Firm adopted Statement of Financial Accounting Standards No. 157, "Fair Value Measurement," Statement of Financial Accounting Standards No. 159, "Fair Value Option for Financial Assets and Financial Liabilities," and FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes."

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



February 27, 2009

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2008	2007	2006
Revenue			
Investment banking fees	**$ 5,526**	$ 6,635	$ 5,520
Principal transactions	**(10,699)**	9,015	10,778
Lending & deposit-related fees	**5,088**	3,938	3,468
Asset management, administration and commissions	**13,943**	14,356	11,855
Securities gains (losses)	**1,560**	164	(543)
Mortgage fees and related income	**3,467**	2,118	591
Credit card income	**7,419**	6,911	6,913
Other income	**2,169**	1,829	2,175
Noninterest revenue	**28,473**	44,966	40,757
Interest income	**73,018**	71,387	59,107
Interest expense	**34,239**	44,981	37,865
Net interest income	**38,779**	26,406	21,242
Total net revenue	**67,252**	71,372	61,999
Provision for credit losses	**20,979**	6,864	3,270
Noninterest expense			
Compensation expense	**22,746**	22,689	21,191
Occupancy expense	**3,038**	2,608	2,335
Technology, communications and equipment expense	**4,315**	3,779	3,653
Professional & outside services	**6,053**	5,140	4,450
Marketing	**1,913**	2,070	2,209
Other expense	**3,740**	3,814	3,272
Amortization of intangibles	**1,263**	1,394	1,428
Merger costs	**432**	209	305
Total noninterest expense	**43,500**	41,703	38,843
Income from continuing operations before income tax expense (benefit)	**2,773**	22,805	19,886
Income tax expense (benefit)	**(926)**	7,440	6,237
Income from continuing operations	**3,699**	15,365	13,649
Income from discontinued operations	**—**	—	795
Income before extraordinary gain	**3,699**	15,365	14,444
Extraordinary gain	**1,906**	—	—
Net income	**$ 5,605**	$15,365	$14,444
Net income applicable to common stock	**$ 4,931**	$15,365	$14,440
Per common share data			
Basic earnings per share:			
Income from continuing operations	**$ 0.86**	$ 4.51	$ 3.93
Net income	**1.41**	4.51	4.16
Diluted earnings per share:			
Income from continuing operations	**0.84**	4.38	3.82
Net income	**1.37**	4.38	4.04
Average basic shares	**3,501**	3,404	3,470
Average diluted shares	**3,605**	3,508	3,574
Cash dividends per common share	**$ 1.52**	$ 1.48	$ 1.36

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2008	2007
Assets		
Cash and due from banks	**$ 26,895**	$ 40,144
Deposits with banks	**138,139**	11,466
Federal funds sold and securities purchased under resale agreements (included $20,843 and $19,131 at fair value at December 31, 2008 and 2007, respectively)	**203,115**	170,897
Securities borrowed (included $3,381 and zero at fair value at December 31, 2008 and 2007, respectively)	**124,000**	84,184
Trading assets (included assets pledged of $75,063 and $79,229 at December 31, 2008 and 2007, respectively)	**509,983**	491,409
Securities (included $205,909 and $85,406 at fair value at December 31, 2008 and 2007, respectively, and assets pledged of $25,942 and $3,958 at December 31, 2008 and 2007, respectively)	**205,943**	85,450
Loans (included $7,696 and $8,739 at fair value at December 31, 2008 and 2007, respectively)	**744,898**	519,374
Allowance for loan losses	**(23,164)**	(9,234)
Loans, net of allowance for loan losses	**721,734**	510,140
Accrued interest and accounts receivable	**60,987**	24,823
Premises and equipment	**10,045**	9,319
Goodwill	**48,027**	45,270
Other intangible assets:		
Mortgage servicing rights	**9,403**	8,632
Purchased credit card relationships	**1,649**	2,303
All other intangibles	**3,932**	3,796
Other assets (included $29,199 and $22,151 at fair value at December 31, 2008 and 2007, respectively)	**111,200**	74,314
Total assets	**$ 2,175,052**	$ 1,562,147
Liabilities		
Deposits (included $5,605 and $6,389 at fair value at December 31, 2008 and 2007, respectively)	**$ 1,009,277**	$ 740,728
Federal funds purchased and securities loaned or sold under repurchase agreements (included $2,993 and $5,768 at fair value at December 31, 2008 and 2007, respectively)	**192,546**	154,398
Commercial paper	**37,845**	49,596
Other borrowed funds (included $14,713 and $10,777 at fair value at December 31, 2008 and 2007, respectively)	**132,400**	28,835
Trading liabilities	**166,878**	157,867
Accounts payable and other liabilities (including the allowance for lending-related commitments of $659 and $850 at December 31, 2008 and 2007, respectively, and zero and $25 at fair value at December 31, 2008 and 2007, respectively)	**187,978**	94,476
Beneficial interests issued by consolidated variable interest entities (included $1,735 and $3,004 at fair value at December 31, 2008 and 2007, respectively)	**10,561**	14,016
Long-term debt (included $58,214 and $70,456 at fair value at December 31, 2008 and 2007, respectively)	**252,094**	183,862
Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities	**18,589**	15,148
Total liabilities	**2,008,168**	1,438,926
Commitments and contingencies (see Note 31 on page 213 of this Annual Report)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares at December 31, 2008 and 2007; issued 5,038,107 and 0 shares at December 31, 2008 and 2007, respectively)	**31,939**	—
Common stock ($1 par value; authorized 9,000,000,000 shares at December 31, 2008 and 2007; issued 3,941,633,895 shares and 3,657,671,234 shares at December 31, 2008 and 2007, respectively)	**3,942**	3,658
Capital surplus	**92,143**	78,597
Retained earnings	**54,013**	54,715
Accumulated other comprehensive income (loss)	**(5,687)**	(917)
Shares held in RSU Trust, at cost (4,794,723 shares at December 31, 2008)	**(217)**	—
Treasury stock, at cost (208,833,260 shares and 290,288,540 shares at December 31, 2008 and 2007, respectively)	**(9,249)**	(12,832)
Total stockholders' equity	**166,884**	123,221
Total liabilities and stockholders' equity	**$ 2,175,052**	$ 1,562,147

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity and comprehensive income

Year ended December 31, (in millions, except per share data)	2008	2007	2006
Preferred stock			
Balance at beginning of year	**$ —**	$ —	$ 139
Issuance of preferred stock	**31,550**	—	—
Issuance of preferred stock – conversion of the Bear Stearns preferred stock	**352**	—	—
Accretion of preferred stock discount on issuance to U.S. Treasury	**37**	—	—
Redemption of preferred stock	**—**	—	(139)
Balance at end of year	**31,939**	—	—
Common stock			
Balance at beginning of year	**3,658**	3,658	3,618
Issuance of common stock	**284**	—	40
Balance at end of year	**3,942**	3,658	3,658
Capital surplus			
Balance at beginning of year	**78,597**	77,807	74,994
Issuance of common stock	**11,201**	—	—
Shares issued and commitments to issue common stock for employee stock-based compensation awards and related tax effects	**859**	790	2,813
Net change from the Bear Stearns merger:			
Reissuance of treasury stock and the Share Exchange agreement	**48**	—	—
Employee stock awards	**242**	—	—
Warrant issued to U.S. Treasury in connection with issuance of preferred stock	**1,250**	—	—
Preferred stock issue cost	**(54)**	—	—
Balance at end of year	**92,143**	78,597	77,807
Retained earnings			
Balance at beginning of year	**54,715**	43,600	33,848
Cumulative effect of change in accounting principles	**—**	915	172
Balance at beginning of year, adjusted	**54,715**	44,515	34,020
Net income	**5,605**	15,365	14,444
Dividends declared:			
Preferred stock	**(674)**	**—**	(4)
Common stock ($1.52, $1.48 and $1.36 per share for the years ended December 31, 2008, 2007 and 2006, respectively)	**(5,633)**	(5,165)	(4,860)
Balance at end of year	**54,013**	54,715	43,600
Accumulated other comprehensive income (loss)			
Balance at beginning of year	**(917)**	(1,557)	(626)
Cumulative effect of change in accounting principles	**—**	(1)	—
Balance at beginning of year, adjusted	**(917)**	(1,558)	(626)
Other comprehensive income (loss)	**(4,770)**	641	171
Adjustment to initially apply SFAS 158	**—**	—	(1,102)
Balance at end of year	**(5,687)**	(917)	(1,557)
Shares held in RSU Trust			
Balance at beginning of year	**—**	—	—
Resulting from the Bear Stearns merger	**(269)**	—	—
Reissuance from RSU Trust	**52**	—	—
Balance at end of year	**(217)**	—	—
Treasury stock, at cost			
Balance at beginning of year	**(12,832)**	(7,718)	(4,762)
Purchase of treasury stock	**—**	(8,178)	(3,938)
Reissuance from treasury stock	**2,454**	3,199	1,334
Share repurchases related to employee stock-based compensation awards	**(21)**	(135)	(352)
Net change from the Bear Stearns merger as a result of the reissuance of treasury stock and the Share Exchange agreement	**1,150**	—	—
Balance at end of year	**(9,249)**	(12,832)	(7,718)
Total stockholders' equity	**$166,884**	$123,221	$115,790
Comprehensive income			
Net income	**$ 5,605**	$ 15,365	$ 14,444
Other comprehensive income (loss)	**(4,770)**	641	171
Comprehensive income	**$ 835**	$ 16,006	$ 14,615

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2008	2007	2006
Operating activities			
Net income	**$ 5,605**	$ 15,365	$ 14,444
Adjustments to reconcile net income to net cash (used in) provided by operating activities:			
Provision for credit losses	**20,979**	6,864	3,270
Depreciation and amortization	**3,143**	2,427	2,149
Amortization of intangibles	**1,263**	1,394	1,428
Deferred tax (benefit) expense	**(2,637)**	1,307	(1,810)
Investment securities (gains) losses	**(1,560)**	(164)	543
Proceeds on sale of investment	**(1,540)**	—	—
Gains on disposition of businesses	**(199)**	—	(1,136)
Stock-based compensation	**2,637**	2,025	2,368
Originations and purchases of loans held-for-sale	**(34,902)**	(116,471)	(178,355)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**38,036**	107,350	173,448
Net change in:			
Trading assets	**(12,787)**	(121,240)	(61,664)
Securities borrowed	**15,408**	(10,496)	916
Accrued interest and accounts receivable	**10,221**	(1,932)	(1,170)
Other assets	**(33,629)**	(21,628)	(7,193)
Trading liabilities	**24,061**	12,681	(4,521)
Accounts payable and other liabilities	**1,012**	4,284	7,815
Other operating adjustments	**(12,013)**	7,674	(111)
Net cash provided by (used in) operating activities	**23,098**	(110,560)	(49,579)
Investing activities			
Net change in:			
Deposits with banks	**(118,929)**	2,081	8,168
Federal funds sold and securities purchased under resale agreements	**(44,597)**	(29,814)	(6,939)
Held-to-maturity securities:			
Proceeds	**10**	14	19
Available-for-sale securities:			
Proceeds from maturities	**44,414**	31,143	24,909
Proceeds from sales	**96,806**	98,450	123,750
Purchases	**(248,599)**	(122,507)	(201,530)
Proceeds from sales and securitizations of loans held-for-investment	**27,531**	34,925	20,809
Other changes in loans, net	**(59,123)**	(83,437)	(70,837)
Net cash received (used) in business acquisitions or dispositions	**2,128**	(70)	185
Proceeds from assets sale to the FRBNY	**28,850**	—	—
Net purchases of asset-backed commercial paper guaranteed by the FRBB	**(11,228)**	—	—
All other investing activities, net	**(3,609)**	(3,903)	1,839
Net cash used in investing activities	**(286,346)**	(73,118)	(99,627)
Financing activities			
Net change in:			
Deposits	**177,331**	113,512	82,105
Federal funds purchased and securities loaned or sold under repurchase agreements	**15,250**	(7,833)	36,248
Commercial paper and other borrowed funds	**9,186**	41,412	12,657
Proceeds from the issuance of long-term debt and capital debt securities	**72,407**	95,141	56,721
Repayments of long-term debt and capital debt securities	**(62,691)**	(49,410)	(34,267)
Excess tax benefits related to stock-based compensation	**148**	365	302
Proceeds from issuance of common stock	**11,969**	1,467	1,659
Proceeds from issuance of preferred stock and warrant to the U.S. Treasury	**25,000**	—	—
Proceeds from issuance of preferred stock	**7,746**	—	—
Redemption of preferred stock	**—**	—	(139)
Repurchases of treasury stock	**—**	(8,178)	(3,938)
Cash dividends paid	**(5,911)**	(5,051)	(4,846)
All other financing activities, net	**71**	1,561	6,247
Net cash provided by financing activities	**250,506**	182,986	152,749
Effect of exchange rate changes on cash and due from banks	**(507)**	424	199
Net (decrease) increase in cash and due from banks	**(13,249)**	(268)	3,742
Cash and due from banks at the beginning of the year	**40,144**	40,412	36,670
Cash and due from banks at the end of the year	**$ 26,895**	$ 40,144	$ 40,412
Cash interest paid	**$ 37,267**	$ 43,472	$ 36,415
Cash income taxes paid	**2,280**	7,472	5,563

Note: In 2008, the fair values of noncash assets acquired and liabilities assumed in the merger with Bear Stearns were $288.2 billion and $287.7 billion, respectively; approximately 26 million shares of common stock, valued at approximately $1.2 billion, were issued in connection with the Bear Stearns merger. Also, in 2008 the fair values of noncash assets acquired and liabilities assumed in the Washington Mutual transaction were $260.0 billion and $259.8 billion, respectively. In 2006, the Firm exchanged selected corporate trust businesses for The Bank of New York's consumer, business banking and middle-market banking businesses. The fair values of the noncash assets exchanged were $2.15 billion.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing and asset management. For a discussion of the Firm's business segment information, see Note 37 on pages 226–227 of this Annual Report.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the United States of America ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by bank regulatory authorities.

Certain amounts in prior periods have been reclassified to conform to the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

The usual condition for a controlling financial interest is the ownership of a majority of the voting interests of the entity. However, a controlling financial interest also may be deemed to exist with respect to entities, such as special purpose entities ("SPEs"), through arrangements that do not involve controlling voting interests.

SPEs are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. For example, they are critical to the functioning of the mortgage- and asset-backed securities and commercial paper markets. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

There are two different accounting frameworks applicable to SPEs: The qualifying SPE ("QSPE") framework under SFAS 140 and the variable interest entity ("VIE") framework under FIN 46R. The applicable framework depends on the nature of the entity and the Firm's relation to that entity. The QSPE framework is applicable when an entity transfers (sells) financial assets to an SPE meeting certain criteria defined in SFAS 140. These criteria are designed to ensure that the activities of the entity are essentially predetermined at the inception of the vehicle and that the transferor of the financial assets cannot exercise control over the entity and the assets therein. Entities meeting these criteria are not consolidated by the transferor or other counterparties as long as they do not have the unilateral ability to liquidate or to cause the entity to no longer meet the QSPE criteria. The Firm primarily follows the QSPE model for securitizations of its residential and commercial mortgages, and credit card, automobile and student loans. For further details, see Note 16 on pages 180–188 of this Annual Report.

When an SPE does not meet the QSPE criteria, consolidation is assessed pursuant to FIN 46R. Under FIN 46R, a VIE is defined as an entity that: (1) lacks enough equity investment at risk to permit the entity to finance its activities without additional subordinated financial support from other parties; (2) has equity owners that lack the right to make significant decisions affecting the entity's operations; and/or (3) has equity owners that do not have an obligation to absorb the entity's losses or the right to receive the entity's returns.

FIN 46R requires a variable interest holder (i.e., a counterparty to a VIE) to consolidate the VIE if that party will absorb a majority of the expected losses of the VIE, receive the majority of the expected residual returns of the VIE, or both. This party is considered the primary beneficiary. In making this determination, the Firm thoroughly evaluates the VIE's design, capital structure and relationships among the variable interest holders. When the primary beneficiary cannot be identified through a qualitative analysis, the Firm performs a quantitative analysis, which computes and allocates expected losses or residual returns to variable interest holders. The allocation of expected cash flows in this analysis is based upon the relative rights and preferences of each variable interest holder in the VIE's capital structure. The Firm reconsiders whether it is the primary beneficiary of a VIE when certain events occur as required by FIN 46R. For further details, see Note 17 on pages 189–198 of this Annual Report.

All retained interests and significant transactions between the Firm, QSPEs and nonconsolidated VIEs are reflected on JPMorgan Chase's Consolidated Balance Sheets and in the Notes to consolidated financial statements.

Investments in companies that are considered to be voting-interest entities under FIN 46R in which the Firm has significant influence over operating and financing decisions are either accounted for in accordance with the equity method of accounting or at fair value if elected under SFAS 159 ("Fair Value Option"). These investments are generally included in other assets, with income or loss included in other income.

For a discussion of the accounting for private equity investments, see Note 6 on pages 159–160 of this Annual Report.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included in the Consolidated Balance Sheets.

Use of estimates in the preparation of consolidated financial statements

The preparation of Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures

of contingent assets and liabilities. Actual results could be different from these estimates. For discussion of Critical Accounting Estimates used by the Firm, see pages 119–123 of this Annual Report.

Foreign currency translation
JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in other comprehensive income (loss) within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated Statements of Income.

Foreclosed property
The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., land, buildings, and fixtures) and personal property (e.g., aircraft, railcars, and ships). Acquired property is valued at fair value less costs to sell at acquisition. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary. Any adjustments to fair value in the first 90 days are credited/charged to the allowance for loan losses and thereafter to other expense.

Statements of cash flows
For JPMorgan Chase's Consolidated Statements of Cash Flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies
The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Fair value measurement	Note 4	Page 141
Fair value option	Note 5	Page 156
Principal transactions activities	Note 6	Page 158
Other noninterest revenue	Note 7	Page 160
Pension and other postretirement employee benefit plans	Note 9	Page 161
Employee stock-based incentives	Note 10	Page 167
Noninterest expense	Note 11	Page 170
Securities	Note 12	Page 170
Securities financing activities	Note 13	Page 174
Loans	Note 14	Page 175
Allowance for credit losses	Note 15	Page 178
Loan securitizations	Note 16	Page 180
Variable interest entities	Note 17	Page 189
Goodwill and other intangible assets	Note 18	Page 198
Premises and equipment	Note 19	Page 201
Other borrowed funds	Note 21	Page 202
Accounts payable and other liabilities	Note 22	Page 202
Income taxes	Note 28	Page 209
Commitments and contingencies	Note 31	Page 213
Accounting for derivative instruments and hedging activities	Note 32	Page 214
Off-balance sheet lending-related financial instruments and guarantees	Note 33	Page 218

Note 2 – Business changes and developments

Decrease in Common Stock Dividend
On February 23, 2009, the Board of Directors reduced the Firm's quarterly common stock dividend from $0.38 to $0.05 per share, effective for the dividend payable April 30, 2009, to shareholders of record on April 6, 2009.

Acquisition of the banking operations of Washington Mutual Bank
On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank ("Washington Mutual") from the Federal Deposit Insurance Corporation ("FDIC") for $1.9 billion. The acquisition expands JPMorgan Chase's consumer branch network into several states, including California, Florida and Washington, among others. The acquisition also extends the reach of the Firm's business banking, commercial banking, credit card, consumer lending and wealth management businesses. The acquisition was accounted for under the purchase method of accounting in accordance with SFAS 141.

The $1.9 billion purchase price was allocated to the Washington Mutual assets acquired and liabilities assumed using preliminary allocated values as of September 25, 2008, which resulted in negative goodwill. The initial allocation of the purchase price was presented on a preliminary basis at September 30, 2008, due to the short time period between the closing of the transaction (which occurred simultaneously with its announcement on September 25, 2008) and the end of the third quarter. In accordance with SFAS 141, noncurrent nonfinancial assets that are not held-for-sale, such as the premises and equipment and other intangibles, acquired in the Washington Mutual transaction were written down against the negative goodwill. The negative goodwill that remained after writing down the nonfinancial assets was recognized as an extraordinary gain. As a result of the refinement of the purchase price allocation during the fourth quarter of 2008, the initial extraordinary gain of $581 million was increased $1.3 billion to $1.9 billion.

The computation of the purchase price and the allocation of the purchase price to the net assets acquired in the Washington Mutual transaction – based upon their respective values as of September 25, 2008, and the resulting negative goodwill – are presented below. The allocation of the purchase price may be modified through September 25, 2009, as more information is obtained about the fair value of assets acquired and liabilities assumed.

(in millions)		
Purchase price		
Purchase price		$ 1,938
Direct acquisition costs		3
Total purchase price		1,941
Net assets acquired		
Washington Mutual's net assets before fair value adjustments	$ 38,766	
Washington Mutual's goodwill and other intangible assets	(7,566)	
Subtotal	31,200	
Adjustments to reflect assets acquired at fair value:		
Securities	(20)	
Trading assets	(591)	
Loans	(31,018)	
Allowance for loan losses	8,216	
Premises and equipment	680	
Accrued interest and accounts receivable	(295)	
Other assets	4,125	
Adjustments to reflect liabilities assumed at fair value:		
Deposits	(683)	
Other borrowed funds	68	
Accounts payable and other liabilities	(900)	
Long-term debt	1,127	
Fair value of net assets acquired		11,909
Negative goodwill before allocation to nonfinancial assets		(9,968)
Negative goodwill allocated to nonfinancial assets[(a)]		8,062
Negative goodwill resulting from the acquisition[(b)]		$ (1,906)

(a) The acquisition was accounted for as a purchase business combination in accordance with SFAS 141. SFAS 141 requires the assets (including identifiable intangible assets) and liabilities (including executory contracts and other commitments) of an acquired business as of the effective date of the acquisition to be recorded at their respective fair values and consolidated with those of JPMorgan Chase. The fair value of the net assets of Washington Mutual's banking operations exceeded the $1.9 billion purchase price, resulting in negative goodwill. In accordance with SFAS 141, noncurrent, nonfinancial assets not held-for-sale, such as premises and equipment and other intangibles, were written down against the negative goodwill. The negative goodwill that remained after writing down transaction related core deposit intangibles of approximately $4.9 billion and premises and equipment of approximately $3.2 billion was recognized as an extraordinary gain of $1.9 billion.

(b) The extraordinary gain was recorded in Corporate/Private Equity.

The following condensed statement of net assets acquired reflects the value assigned to the Washington Mutual net assets as of September 25, 2008.

(in millions)	September 25, 2008
Assets	
Cash and due from banks	**$ 3,680**
Deposits with banks	**3,517**
Federal funds sold and securities purchased under resale agreements	**1,700**
Trading assets	**5,691**
Securities	**17,220**
Loans (net of allowance for loan losses)	**206,436**
Accrued interest and accounts receivable	**3,201**
Mortgage servicing rights	**5,874**
All other assets	**16,330**
Total assets	**$ 263,649**
Liabilities	
Deposits	**$ 159,869**
Federal funds purchased and securities loaned or sold under repurchase agreements	**4,549**
Other borrowed funds	**81,622**
Trading liabilities	**585**
Accounts payable and other liabilities	**6,523**
Long-term debt	**6,654**
Total liabilities	**259,802**
Washington Mutual net assets acquired	**$ 3,847**

Merger with The Bear Stearns Companies Inc.

Effective May 30, 2008, BSC Merger Corporation, a wholly owned subsidiary of JPMorgan Chase, merged with The Bear Stearns Companies Inc. ("Bear Stearns") pursuant to the Agreement and Plan of Merger, dated as of March 16, 2008, as amended March 24, 2008, and Bear Stearns became a wholly owned subsidiary of JPMorgan Chase. The merger provided the Firm with a leading global prime brokerage platform; strengthened the Firm's equities and asset management businesses; enhanced capabilities in mortgage origination, securitization and servicing; and expanded the platform of the Firm's energy business. The merger is being accounted for under the purchase method of accounting, which requires that the assets and liabilities of Bear Stearns be fair valued. The total purchase price to complete the merger was $1.5 billion.

The merger with Bear Stearns was accomplished through a series of transactions that were reflected as step acquisitions in accordance with SFAS 141. On April 8, 2008, pursuant to the share exchange agreement, JPMorgan Chase acquired 95 million newly issued shares of Bear Stearns common stock (or 39.5% of Bear Stearns common stock after giving effect to the issuance) for 21 million shares of JPMorgan Chase common stock. Further, between March 24, 2008, and May 12, 2008, JPMorgan Chase acquired approximately 24 million shares of Bear Stearns common stock in the open market at an average purchase price of $12.37 per share. The share exchange and cash purchase transactions resulted in JPMorgan Chase owning approximately 49.4% of Bear Stearns common stock immediately prior to consummation of the merger. Finally, on May 30, 2008, JPMorgan Chase completed the merger. As a result of the merger, each outstanding share of Bear Stearns common stock (other than shares then held by JPMorgan Chase) was converted into the right to receive 0.21753 shares of common stock of JPMorgan Chase. Also, on May 30, 2008, the shares of common stock that JPMorgan Chase and Bear Stearns acquired from each other in the share exchange transaction were cancelled. From April 8, 2008, through May 30, 2008, JPMorgan Chase accounted for the investment in Bear Stearns under the equity method of accounting in accordance with APB 18. During this period, JPMorgan Chase recorded reductions to its investment in Bear Stearns representing its share of Bear Stearns net losses, which was recorded in other income and accumulated other comprehensive income.

In conjunction with the Bear Stearns merger, in June 2008, the Federal Reserve Bank of New York (the "FRBNY") took control, through a limited liability company ("LLC") formed for this purpose, of a portfolio of $30 billion in assets acquired from Bear Stearns, based on the value of the portfolio as of March 14, 2008. The assets of the LLC were funded by a $28.85 billion term loan from the FRBNY, and a $1.15 billion subordinated loan from JPMorgan Chase. The JPMorgan Chase note is subordinated to the FRBNY loan and will bear the first $1.15 billion of any losses of the portfolio. Any remaining assets in the portfolio after repayment of the FRBNY loan, the JPMorgan Chase note and the expense of the LLC will be for the account of the FRBNY.

As a result of step acquisition accounting, the total $1.5 billion purchase price was allocated to the Bear Stearns assets acquired and liabilities assumed using their fair values as of April 8, 2008, and May 30, 2008, respectively. The summary computation of the purchase price and the allocation of the purchase price to the net assets of Bear Stearns are presented below. The allocation of the purchase price may be modified through May 30, 2009, as more information is obtained about the fair value of assets acquired and liabilities assumed.

(in millions, except for shares (in thousands), per share amounts and where otherwise noted)

Purchase price		
Shares exchanged in the Share Exchange transaction (April 8, 2008)	95,000	
Other Bear Stearns shares outstanding	145,759	
Total Bear Stearns stock outstanding	240,759	
Cancellation of shares issued in the Share Exchange transaction	(95,000)	
Cancellation of shares acquired by JPMorgan Chase for cash in the open market	(24,061)	
Bear Stearns common stock exchanged as of May 30, 2008	121,698	
Exchange ratio	0.21753	
JPMorgan Chase common stock issued	26,473	
Average purchase price per JPMorgan Chase common share[a]	$ 45.26	
Total fair value of JPMorgan Chase common stock issued		$ 1,198
Bear Stearns common stock acquired for cash in the open market (24 million shares at an average share price of $12.37 per share)		298
Fair value of employee stock awards (largely to be settled by shares held in the RSU Trust[b])		242
Direct acquisition costs		27
Less: Fair value of Bear Stearns common stock held in the RSU Trust and included in the exchange of common stock		(269)[b]
Total purchase price		1,496
Net assets acquired		
Bear Stearns common stockholders' equity	$ 6,052	
Adjustments to reflect assets acquired at fair value:		
Trading assets	(3,831)	
Premises and equipment	497	
Other assets	(235)	
Adjustments to reflect liabilities assumed at fair value:		
Long-term debt	504	
Other liabilities	(2,252)	
Fair value of net assets acquired excluding goodwill		735
Goodwill resulting from the merger[c]		$ 761

(a) The value of JPMorgan Chase common stock was determined by averaging the closing prices of JPMorgan Chase's common stock for the four trading days during the period March 19, 2008, through March 25, 2008.

(b) Represents shares of Bear Stearns common stock held in an irrevocable grantor trust (the "RSU Trust") to be used to settle stock awards granted to selected employees and certain key executives under certain heritage Bear Stearns employee stock plans. Shares in the RSU Trust were exchanged for 6 million shares of JPMorgan Chase common stock at the merger exchange ratio of 0.21753. For further discussion of the RSU trust, see Note 10 on pages 167–169 of this Annual Report.

(c) The goodwill was recorded in the Investment Bank.

Condensed statement of net assets acquired

The following reflects the value assigned to Bear Stearns net assets as of the merger date.

(in millions)	May 30, 2008
Assets	
Cash and due from banks	**$ 534**
Federal funds sold and securities purchased under resale agreements	**21,204**
Securities borrowed	**55,195**
Trading assets	**136,535**
Loans	**4,407**
Accrued interest and accounts receivable	**34,677**
Goodwill	**761**
All other assets	**35,418**
Total assets	**$ 288,731**
Liabilities	
Federal funds purchased and securities loaned or sold under repurchase agreements	**$ 54,643**
Other borrowings	**16,166**
Trading liabilities	**24,267**
Beneficial interests issued by consolidated VIEs	**47,042**
Long-term debt	**67,015**
Accounts payable and other liabilities	**78,532**
Total liabilities	**287,665**
Bear Stearns net assets[a]	**$ 1,066**

(a) Reflects the fair value assigned to 49.4% of the Bear Stearns net assets acquired on April 8, 2008 (net of related amortization), and the fair value assigned to the remaining 50.6% of the Bear Stearns net assets acquired on May 30, 2008. The difference between the Bear Stearns net assets acquired as presented above and the fair value of the net assets acquired (including goodwill) presented in the previous table represents JPMorgan Chase's net losses recorded under the equity method of accounting.

Unaudited pro forma condensed combined financial information reflecting Bear Stearns merger and Washington Mutual transaction

The following unaudited pro forma condensed combined financial information presents the results of operations of the Firm as they may have appeared if the Bear Stearns merger and the Washington Mutual transaction had been completed on January 1, 2008, and January 1, 2007.

Year ended December 31, (in millions, except per share data)	**2008**	2007
Total net revenue	**$ 68,071**	$ 92,052
Income (loss) before extraordinary gain	**(14,141)**	17,733
Net income (loss)	**(12,235)**	17,733
Net income per common share data:		
Basic earnings per share		
Income (loss) before extraordinary gain	**$ (4.22)**	$ 5.16
Net income (loss)	**(3.68)**	5.16
Diluted earnings per share[a]		
Income (loss) before extraordinary gain	**(4.22)**	5.01
Net income (loss)	**(3.68)**	5.01
Average common shares issued and outstanding		
Basic	**3,511**	3,430
Diluted[a]	**3,511**	3,534

(a) Common equivalent shares have been excluded from the pro forma computation of diluted loss per share for the year ended December 31, 2008, as the effect would be antidilutive.

The unaudited pro forma combined financial information is presented for illustrative purposes only and does not indicate the financial results of the combined company had the companies actually been combined as of January 1, 2008, or as of January 1, 2007, nor is it indicative of the results of operations in future periods. Included in the unaudited pro forma combined financial information for the years ended December 31, 2008 and 2007, were pro forma adjustments to reflect the results of operations of Bear Stearns, and Washington Mutual's banking operations, considering the purchase accounting, valuation and accounting conformity adjustments related to each transaction. For the Washington Mutual transaction, the amortization of purchase accounting adjustments to report interest-earning assets acquired and interest-bearing liabilities assumed at current interest rates is reflected in all periods presented. Valuation adjustments and the adjustment to conform allowance methodologies in the Washington Mutual transaction, and valuation and accounting conformity adjustments related to the Bear Stearns merger are reflected in the results for the years ended December 31, 2008 and 2007.

Internal reorganization related to the Bear Stearns merger

On June 30, 2008, JPMorgan Chase fully and unconditionally guaranteed each series of outstanding preferred stock of Bear Stearns, as well as all of Bear Stearns' outstanding Securities and Exchange Commission ("SEC") registered U.S. debt securities and obligations relating to trust preferred capital debt securities. Subsequently, on July 15, 2008, JPMorgan Chase completed an internal merger transaction, which resulted in each series of outstanding preferred stock of Bear Stearns being automatically exchanged into newly issued shares of JPMorgan Chase preferred stock having substantially identical terms. Depositary shares, which formerly had represented a one-fourth interest in a share of Bear Stearns preferred stock, continue to trade on the New York Stock Exchange but following completion of this internal merger transaction, represent a one-fourth interest in a share of JPMorgan Chase preferred stock. In addition, on July 31, 2008, JPMorgan Chase assumed (1) all of Bear Stearns' then-outstanding SEC-registered U.S. debt securities; (2) Bear Stearns' obligations relating to trust preferred capital debt securities; (3) certain of Bear Stearns' then-outstanding foreign debt securities; and (4) certain of Bear Stearns' guarantees of then-outstanding foreign debt securities issued by subsidiaries of Bear Stearns, in each case, in accordance with the agreements and indentures governing these securities. JPMorgan Chase also guaranteed Bear Stearns' obligations under Bear Stearns' U.S. $30.0 billion Euro Medium Term Note Programme and U.S. $4.0 billion Euro Note Issuance Programme.

Other business events

Termination of Chase Paymentech Solutions joint venture

The dissolution of Chase Paymentech Solutions joint venture, a global payments and merchant acquiring joint venture between JPMorgan Chase and First Data Corporation, was completed on November 1, 2008. JPMorgan Chase retained approximately 51% of the business and will operate the business under the name Chase Paymentech Solutions. The dissolution of Chase Paymentech

Solutions joint venture was accounted for as a step acquisition in accordance with SFAS 141, and the Firm recognized an after-tax gain of $627 million in the fourth quarter of 2008 as a result of the dissolution. The gain represents the amount by which the fair value of the net assets acquired (predominantly intangible assets and goodwill) exceeded JPMorgan Chase's book basis in the net assets transferred to First Data Corporation. Upon dissolution, the Firm began to consolidate the retained Chase Paymentech Solutions business.

Proceeds from Visa Inc. shares
On March 19, 2008, Visa Inc. ("Visa") completed its initial public offering ("IPO"). Prior to the IPO, JPMorgan Chase held approximately a 13% equity interest in Visa. On March 28, 2008, Visa used a portion of the proceeds from the offering to redeem a portion of the Firm's equity interest, which resulted in the recognition of a pretax gain of $1.5 billion (recorded in other income). In conjunction with the IPO, Visa placed $3.0 billion in escrow to cover liabilities related to certain litigation matters. The escrow was increased by $1.1 billion in the fourth quarter of 2008. JPMorgan Chase's interest in the escrow was recorded as a reduction of other expense and reported net to the extent of established litigation reserves.

Purchase of additional interest in Highbridge Capital Management
In January 2008, JPMorgan Chase purchased an additional equity interest in Highbridge Capital Management, LLC ("Highbridge"). As a result, the Firm currently owns 77.5% of Highbridge.

Acquisition of the consumer, business banking and middle-market banking businesses of The Bank of New York in exchange for selected corporate trust businesses, including trustee, paying agent, loan agency and document management services
On October 1, 2006, JPMorgan Chase completed the acquisition of The Bank of New York Company, Inc.'s ("The Bank of New York") consumer, business and middle-market banking businesses in exchange for selected corporate trust businesses plus a cash payment of $150 million. The transaction also included a contingent payment payable to The Bank of New York; the amount due of $25 million was paid in 2008. The acquisition added 339 branches and more than 400 ATMs, and it significantly strengthened Retail Financial Services' distribution network in the New York tri-state area. The Bank of New York businesses acquired were valued at a premium of $2.3 billion; the Firm's corporate trust businesses that were transferred (i.e., trustee, paying agent, loan agency and document management services) were valued at a premium of $2.2 billion. This transaction included the acquisition of approximately $7.7 billion in loans net of allowance for loan losses and $12.9 billion in deposits from the Bank of New York. The Firm also recognized core deposit intangibles of $485 million, which are being amortized using an accelerated method over a 10-year period. JPMorgan Chase recorded an after-tax gain of $622 million on this transaction in the fourth quarter of 2006. For additional discussion related to the transaction, see Note 3 on pages 140–141 of this Annual Report.

JPMorgan Partners management
On August 1, 2006, the buyout and growth equity professionals of JPMorgan Partners ("JPMP") formed an independent firm, CCMP Capital, LLC ("CCMP"), and the venture professionals separately formed an independent firm, Panorama Capital, LLC ("Panorama"). The investment professionals of CCMP and Panorama continue to manage the former JPMP investments pursuant to a management agreement with the Firm.

Sale of insurance underwriting business
On July 1, 2006, JPMorgan Chase completed the sale of its life insurance and annuity underwriting businesses to Protective Life Corporation for cash proceeds of approximately $1.2 billion, consisting of $900 million of cash received from Protective Life Corporation and approximately $300 million of preclosing dividends received from the entities sold. The after-tax impact of this transaction was negligible. The sale included both the heritage Chase insurance business and the insurance business that Bank One had bought from Zurich Insurance in 2003.

Acquisition of private-label credit card portfolio from Kohl's Corporation
On April 21, 2006, JPMorgan Chase completed the acquisition of $1.6 billion of private-label credit card receivables and approximately 21 million accounts from Kohl's Corporation ("Kohl's"). JPMorgan Chase and Kohl's also entered into an agreement under which JPMorgan Chase is offering private-label credit cards to both new and existing Kohl's customers.

Collegiate Funding Services
On March 1, 2006, JPMorgan Chase acquired, for approximately $663 million, Collegiate Funding Services, a leader in student loan servicing and consolidation. This acquisition included $6 billion of student loans.

Note 3 – Discontinued operations

On October 1, 2006, JPMorgan Chase completed the acquisition of The Bank of New York's consumer, small-business and middle-market banking businesses in exchange for selected corporate trust businesses. Refer to Note 2 on pages 135–140 of this Annual Report for additional information.

In anticipation of the close of the transaction on October 1, 2006, effective with the second quarter of 2006, the results of operations of these corporate trust businesses were transferred from the Treasury & Securities Services ("TSS") segment to the Corporate/Private Equity segment, and reported as discontinued operations. Condensed financial information of the selected corporate trust businesses follows.

Selected income statements data[(a)]

Year ended December 31, (in millions)	2006
Other noninterest revenue	$ 407
Net interest income	264
Gain on sale of discontinued operations	1,081
Total net revenue	1,752
Noninterest expense	385
Income from discontinued operations before income taxes	1,367
Income tax expense	572
Income from discontinued operations	$ 795

(a) There was no income from discontinued operations during 2008 or 2007.

The following is a summary of the assets and liabilities associated with the selected corporate trust businesses related to the Bank of New York transaction that closed on October 1, 2006.

Selected balance sheet data

(in millions)	October 1, 2006
Goodwill and other intangibles	$ 838
Other assets	547
Total assets	$ 1,385
Deposits	$ 24,011
Other liabilities	547
Total liabilities	$ 24,558

JPMorgan Chase provides certain transitional services to The Bank of New York for a defined period of time after the closing date. The Bank of New York compensates JPMorgan Chase for these transitional services.

Note 4 – Fair value measurement

In September 2006, the FASB issued SFAS 157 ("Fair Value Measurements"), which was effective for fiscal years beginning after November 15, 2007, with early adoption permitted. The Firm chose early adoption for SFAS 157 effective January 1, 2007. SFAS 157:

- Defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, and establishes a framework for measuring fair value;
- Establishes a three-level hierarchy for fair value measurements based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date;
- Nullifies the guidance in EITF 02-3, which required the deferral of profit at inception of a transaction involving a derivative financial instrument in the absence of observable data supporting the valuation technique;
- Eliminates large position discounts for financial instruments quoted in active markets and requires consideration of the Firm's creditworthiness when valuing liabilities; and
- Expands disclosures about instruments measured at fair value.

The Firm also chose early adoption for SFAS 159 effective January 1, 2007. SFAS 159 provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments and written loan commitments not previously recorded at fair value. The Firm elected fair value accounting for certain assets and liabilities not previously carried at fair value. For more information, see Note 5 on pages 156–158 of this Annual Report.

The following is a description of the Firm's valuation methodologies for assets and liabilities measured at fair value.

The Firm has an established and well-documented process for determining fair values. Fair value is based upon quoted market prices, where available. If listed prices or quotes are not available, fair value is based upon internally developed models that primarily use, as inputs, market-based or independently sourced market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models also incorporate transaction details, such as maturity of the instrument. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. These adjustments include amounts to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters. Valuation adjustments are applied consistently over time.

- Credit valuation adjustments ("CVA") are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few classes of derivative contracts are listed on an exchange, the majority of derivative positions are valued using internally developed models that use as their basis observable market parameters. Market practice is to quote parameters equivalent to an "AA" credit rating whereby all counterparties are assumed to have the same credit quality. Therefore, an adjustment is necessary to reflect the credit quality of each derivative counterparty to arrive at fair value. The adjustment also takes into account contractual factors designed to reduce the Firm's credit exposure to each counterparty, such as collateral and legal rights of offset.
- Debit valuation adjustments ("DVA") are necessary to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. This adjustment was incorporated into the Firm's valuations commencing January 1, 2007, in accordance with SFAS 157. The methodology to determine the adjustment is consistent with CVA and incorporates JPMorgan Chase's credit spread as observed through the credit default swap market.
- Liquidity valuation adjustments are necessary when the Firm may not be able to observe a recent market price for a financial instrument that trades in inactive (or less active) markets or to

reflect the cost of exiting larger-than-normal market-size risk positions (liquidity adjustments are not taken for positions classified within level 1 of the fair value hierarchy). The Firm tries to ascertain the amount of uncertainty in the initial valuation based upon the degree of liquidity of the market in which the financial instrument trades and makes liquidity adjustments to the carrying value of the financial instrument. The Firm measures the liquidity adjustment based upon the following factors: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quote; and (3) the volatility of the principal risk component of the financial instrument. Costs to exit larger-than-normal market-size risk positions are determined based upon the size of the adverse market move that is likely to occur during the period required to bring a position down to a nonconcentrated level.

- Unobservable parameter valuation adjustments are necessary when positions are valued using internally developed models that use as their basis unobservable parameters – that is, parameters that must be estimated and are, therefore, subject to management judgment. These positions are normally traded less actively. Examples include certain credit products where parameters such as correlation and recovery rates are unobservable. Unobservable parameter valuation adjustments are applied to mitigate the possibility of error and revision in the estimate of the market price provided by the model.

The Firm has numerous controls in place intended to ensure that its fair valuations are appropriate. An independent model review group reviews the Firm's valuation models and approves them for use for specific products. All valuation models within the Firm are subject to this review process. A price verification group, independent from the risk-taking function, ensures observable market prices and market-based parameters are used for valuation wherever possible. For those products with material parameter risk for which observable market levels do not exist, an independent review of the assumptions made on pricing is performed. Additional review includes deconstruction of the model valuations for certain structured instruments into their components, and benchmarking valuations, where possible, to similar products; validating valuation estimates through actual cash settlement; and detailed review and explanation of recorded gains and losses, which are analyzed daily and over time. Valuation adjustments, which are also determined by the independent price verification group, are based upon established policies and are applied consistently over time. Any changes to the valuation methodology are reviewed by management to confirm the changes are justified. As markets and products develop and the pricing for certain products becomes more or less transparent, the Firm continues to refine its valuation methodologies. During 2008, no material changes were made to the Firm's valuation models.

The methods described above to estimate fair value may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Valuation Hierarchy

SFAS 157 establishes a three-level valuation hierarchy for disclosure of fair value measurements. The valuation hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – inputs to the valuation methodology are unobservable and significant to the fair value measurement. For a level 3 analysis, see pages 150–151 of this Note.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

Following is a description of the valuation methodologies used for instruments measured at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Assets

Securities purchased under resale agreements ("resale agreements")

To estimate the fair value of resale agreements, cash flows are evaluated taking into consideration any derivative features of the resale agreement and are then discounted using the appropriate market rates for the applicable maturity. As the inputs into the valuation are primarily based upon readily observable pricing information, such resale agreements are generally classified within level 2 of the valuation hierarchy.

Loans and unfunded lending-related commitments

The majority of the Firm's loans and lending-related commitments are not carried at fair value on a recurring basis on the Consolidated Balance Sheets, nor are they actively traded. The fair value of such loans and lending-related commitments is included in the disclosures required by SFAS 107 on pages 154–155 of this Note. Loans carried at fair value on a recurring and nonrecurring basis are included in the applicable tables that follow.

Wholesale

The fair value of loans and lending-related commitments is calculated using observable market information, including pricing from actual market transactions or broker quotations where available. Where pricing information is not available for the specific loan, the valuation is generally based upon quoted market prices of similar instruments, such as loans and bonds. These comparable instruments share characteristics that typically include industry, rating, capital structure, seniority, and consideration of counterparty credit risk. In addition, general market conditions, including prevailing market spreads for credit and liquidity risk, are also considered in the valuation process.

For certain loans that are expected to be securitized, such as commercial and residential mortgages, fair value is estimated based upon observable pricing of asset-backed securities ("ABS") with similar collateral and incorporates adjustments (i.e., reductions) to these prices to account for securitization uncertainties including portfolio composition, market conditions and liquidity to arrive at the whole loan price. When data from recent market transactions is available it is incorporated as appropriate. If particular loans are not expected to be securitized they are marked for individual sale taking into consideration potential liquidation proceeds and property repossession/liquidation information, as appropriate. For further discussion of the valuation of mortgage loans carried at fair value, see the "Mortgage-related exposures carried at fair value" section of this Note on pages 151–153.

The Firm's loans carried at fair value and reported in trading assets are largely classified within level 3 due to the lack of observable pricing. Loans carried at fair value and reported in loans including leveraged lending funded loans, high-yield bridge financing and purchased nonperforming loans held in the Investment Bank ("IB") are classified within level 2 or 3 of the valuation hierarchy depending on the level of liquidity and activity in the markets for a particular product.

Consumer

Fair values for consumer installment loans (including automobile financings and consumer real estate not expected to be securitized), for which market rates for comparable loans are readily available, are based upon discounted cash flows adjusted for prepayment assumptions. The discount rates used for consumer installment loans are based on current market rates for new originations of comparable loans. Fair value for credit card receivables is based upon discounted expected cash flows. The discount rates used for credit card receivables incorporate only the effects of interest rate changes, since the expected cash flows already reflect an adjustment for credit risk. Consumer installment loans and credit card receivables that are not carried on the balance sheet at fair value are not classified within the fair value hierarchy. For further discussion of the valuation of mortgage loans carried at fair value, see the "Mortgage-related exposures carried at fair value" section of this Note.

Securities

Where quoted prices for identical securities are available in an active market, securities are classified in level 1 of the valuation hierarchy. Level 1 securities include highly liquid government bonds, mortgage products for which there are quoted prices in active markets (such as U.S. government agency or U.S. government-sponsored enterprise pass-through mortgage-backed securities) and exchange-traded equities.

If quoted market prices are not available for the specific security, the Firm may estimate the value of such instruments using a combination of observed transaction prices, independent pricing services and relevant broker quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided from independent pricing services. The Firm may also use pricing models or discounted cash flows. In cases where there is limited activity or less transparency around inputs to the valuation, securities are classified within level 3 of the valuation hierarchy.

For certain collateralized mortgage and debt obligations, asset-backed securities and high-yield debt securities the determination of fair value may require benchmarking to similar instruments or analyzing default and recovery rates. For "cash" collateralized debt obligations ("CDOs"), external price information is not available. Therefore, cash CDOs are valued using market-standard models, such as Intex, to model the specific collateral composition and cash flow structure of each deal; key inputs to the model are market spread data for each credit rating, collateral type and other relevant contractual features. Asset-backed securities are valued based on external prices or market spread data, using current market assumptions on prepayments and defaults. For those asset-backed securities where the external price data is not observable or the limited available data is opaque, the collateral performance is monitored and the value of the security is assessed. To benchmark its valuations, the Firm looks to transactions for similar instruments and utilizes independent pricing provided by third-party vendors, broker quotes and relevant market indices such as the ABX index, as applicable. While none of those sources are solely indicative of fair value, they serve as directional indicators for the appropriateness of the Firm's estimates. The majority of collateralized mortgage and debt obligations, high-yield debt securities and asset-backed securities are currently classified in level 3 of the valuation hierarchy. For further discussion of the valuation of mortgage securities carried at fair value see the "Mortgage-related exposures carried at fair value" section of this Note on pages 151–153.

Commodities

Commodities inventory is carried at the lower of cost or fair value. The fair value for commodities inventory is determined primarily using pricing and data derived from the markets on which the underlying commodities are traded. Market prices may be adjusted for liquidity. The Firm also has positions in commodity-based derivatives that can be traded on an exchange or over-the-counter. The pricing inputs to these derivatives include forward curves of underlying commodities, basis curves, volatilities, correlations, and occasionally other model parameters. The valuation of these derivatives is based upon calibrating to market transactions, as well as to independent pricing information from sources such as brokers and dealer consensus pricing services. Where inputs are unobservable, they are benchmarked to observable market data based upon historic and implied correlations, then adjusted for uncertainty where appropriate. The majority of commodities inventory and commodities-based derivatives are classified within level 2 of the valuation hierarchy.

Derivatives

Exchange-traded derivatives valued using quoted prices are classified within level 1 of the valuation hierarchy. However, few classes of derivative contracts are listed on an exchange; thus, the majority of the Firm's derivative positions are valued using internally developed models that use as their basis readily observable market parameters – that is, parameters that are actively quoted and can be validated to external sources, including industry pricing services. Depending on the types and contractual terms of derivatives, fair value can be modeled using a series of techniques, such as the Black-Scholes option pricing model, simulation models or a combination of various mod-

els, which are consistently applied. Where derivative products have been established for some time, the Firm uses models that are widely accepted in the financial services industry. These models reflect the contractual terms of the derivatives, including the period to maturity, and market-based parameters such as interest rates, volatility, and the credit quality of the counterparty. Further, many of these models do not contain a high level of subjectivity, as the methodologies used in the models do not require significant judgment, and inputs to the model are readily observable from actively quoted markets, as is the case for "plain vanilla" interest rate swaps and option contracts and credit default swaps ("CDS"). Such instruments are generally classified within level 2 of the valuation hierarchy.

Derivatives that are valued based upon models with significant unobservable market parameters and that are normally traded less actively, have trade activity that is one way, and/or are traded in less-developed markets are classified within level 3 of the valuation hierarchy. Level 3 derivatives, for example, include credit default swaps referenced to mortgage-backed securities, certain types of CDO transactions, options on baskets of single-name stocks, and callable exotic interest rate options. Such derivatives are primarily used for risk management purposes.

For certain derivative products, such as credit default swaps referenced to mortgage-backed securities, the value is based on the underlying mortgage risk. As these instruments are not actively quoted, the estimate of fair value considers the valuation of the underlying collateral (mortgage loans). Inputs to the valuation will include available information on similar underlying loans or securities in the cash market. The prepayments and loss assumptions on the underlying loans or securities are estimated using a combination of historical data, prices on market transactions, and other prepayment and default scenarios and analysis. Relevant observable market indices such as the ABX or CMBX, are considered, as well as any relevant transaction activity.

Other complex products, such as those sensitive to correlation between two or more underlyings, also fall within level 3 of the hierarchy. Such instruments include complex credit derivative products which are illiquid and non-standard in nature, including CDOs and CDO-squared. A CDO is a debt security collateralized by a variety of debt obligations, including bonds and loans of different maturities and credit qualities. The repackaging of such securities and loans within a CDO results in the creation of tranches, which are instruments with differing risk profiles. In a CDO-squared, the instrument is a CDO where the underlying debt instruments are also CDOs. For CDO-squared transactions, while inputs such as CDS spreads and recovery rates may be observable, the correlation between the underlying debt instruments is unobservable. The correlation levels are not only modeled on a portfolio basis but are also calibrated at a transaction level to liquid benchmark tranches. For all complex credit derivative products, actual transactions, where available, are used to regularly recalibrate all unobservable parameters.

Correlation sensitivity is also material to the overall valuation of options on baskets of single-name stocks; the valuation of these baskets is typically not observable due to their non-standardized structuring. Correlation for products such as these are typically estimated based on an observable basket of stocks and then adjusted to reflect the differences between the underlying equities.

For callable exotic interest rate options, while most of the assumptions in the valuation can be observed in active markets (e.g. interest rates and volatility), the callable option transaction flow is essentially one-way, and as such, price observability is limited. As pricing information is limited, assumptions are based upon the dynamics of the underlying markets (e.g. the interest rate markets) including the range and possible outcomes of the applicable inputs. In addition, the models used are calibrated, as relevant, to liquid benchmarks and valuation is tested against monthly independent pricing services and actual transactions.

Mortgage servicing rights and certain retained interests in securitizations

Mortgage servicing rights ("MSRs") and certain retained interests from securitization activities do not trade in an active, open market with readily observable prices. While sales of MSRs do occur, the precise terms and conditions typically are not readily available. Accordingly, the Firm estimates the fair value of MSRs and certain other retained interests in securitizations using discounted cash flow ("DCF") models.

- For MSRs, the Firm uses an option-adjusted spread ("OAS") valuation model in conjunction with the Firm's proprietary prepayment model to project MSR cash flows over multiple interest rate scenarios, which are then discounted at risk-adjusted rates to estimate an expected fair value of the MSRs. The OAS model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenue, costs to service and other economic factors. The Firm reassesses and periodically adjusts the underlying inputs and assumptions used in the OAS model to reflect market conditions and assumptions that a market participant would consider in valuing the MSR asset. Due to the nature of the valuation inputs, MSRs are classified within level 3 of the valuation hierarchy.
- For certain retained interests in securitizations (such as interest-only strips), a single interest rate path discounted cash flow model is used and generally includes assumptions based upon projected finance charges related to the securitized assets, estimated net credit losses, prepayment assumptions and contractual interest paid to third-party investors. Changes in the assumptions used may have a significant impact on the Firm's valuation of retained interests, and such interests are therefore typically classified within level 3 of the valuation hierarchy.

For both MSRs and certain other retained interests in securitizations, the Firm compares its fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience. For further discussion of the most significant assumptions used to value retained interests in securitizations and MSRs, as well as the applicable stress tests for those assumptions, see Note 16 and Note 18 on pages 180–188 and 198–201, respectively, of this Annual Report.

Private equity investments

The valuation of nonpublic private equity investments, held primarily by the Private Equity business within Corporate, requires significant management judgment due to the absence of quoted market prices, the inherent lack of liquidity and the long-term nature of such assets. As such, private equity investments are valued initially based upon cost. Each quarter, valuations are reviewed utilizing available and relevant market data to determine if the carrying value of these investments should be adjusted. Such market data primarily includes observations of the trading multiples of public companies considered comparable to the private companies being valued and the operating performance of the underlying portfolio company, including its historical and projected net income and earnings before interest, taxes, depreciation and amortization ("EBITDA"). Valuations are adjusted to account for company-specific issues, the lack of liquidity inherent in a nonpublic investment and the fact that comparable public companies are not identical to the companies being valued. In addition, a variety of additional factors are reviewed by management, including, but not limited to, financing and sales transactions with third parties, future expectations of the particular investment, changes in market outlook and the third-party financing environment. The Firm applies its valuation methodology consistently from period to period and believes that the methodology and associated valuation adjustments are appropriate. Nonpublic private equity investments are included in level 3 of the valuation hierarchy.

Private equity investments also include publicly held equity investments, generally obtained through the initial public offering of privately held equity investments. Publicly held investments in liquid markets are marked to market at the quoted public value less adjustments for regulatory or contractual sales restrictions. Discounts for restrictions are quantified by analyzing the length of the restriction period and the volatility of the equity security. Publicly held investments are largely classified in level 2 of the valuation hierarchy.

Other assets

The fair value of asset-backed commercial paper ("ABCP") investments purchased under the Federal Reserve's Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility ("AML Facility") for U.S. money market mutual funds is determined based on observable market information and is classified in level 2 of the valuation hierarchy.

Liabilities

Securities sold under repurchase agreements ("repurchase agreements")

To estimate the fair value of repurchase agreements, cash flows are evaluated taking into consideration any derivative features and are then discounted using the appropriate market rates for the applicable maturity. Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to, or in excess of, the principal amount loaned; as a result, there would be no adjustment, or an immaterial adjustment, to reflect the credit quality of the Firm (i.e., DVA) related to these agreements. As the inputs into the valuation are primarily based upon observable pricing information, repurchase agreements are classified within level 2 of the valuation hierarchy.

Beneficial interests issued by consolidated VIEs

The fair value of beneficial interests issued by consolidated VIEs ("beneficial interests") is estimated based upon the fair value of the underlying assets held by the VIEs. The valuation of beneficial interests does not include an adjustment to reflect the credit quality of the Firm, as the holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. As the inputs into the valuation are generally based upon readily observable market pricing information, the majority of beneficial interests issued by consolidated VIEs are classified within level 2 of the valuation hierarchy.

Deposits, other borrowed funds and long-term debt

Included within deposits, other borrowed funds and long-term debt are structured notes issued by the Firm that are financial instruments containing embedded derivatives. To estimate the fair value of structured notes, cash flows are evaluated taking into consideration any derivative features and are then discounted using the appropriate market rates for the applicable maturities. In addition, the valuation of structured notes includes an adjustment to reflect the credit quality of the Firm (i.e., the DVA). Where the inputs into the valuation are primarily based upon readily observable market pricing information, the structured notes are classified within level 2 of the valuation hierarchy. Where significant inputs are unobservable, structured notes are classified within level 3 of the valuation hierarchy.

The following table presents the financial instruments carried at fair value as of December 31, 2008 and 2007, by caption on the Consolidated Balance Sheets and by SFAS 157 valuation hierarchy (as described above).

Assets and liabilities measured at fair value on a recurring basis

December 31, 2008 (in millions)	Quoted market prices in active markets (Level 1)	Internal models with significant observable market parameters (Level 2)	Internal models with significant unobservable market parameters (Level 3)	FIN 39 netting[d]	Total carrying value in the Consolidated Balance Sheets
Federal funds sold and securities purchased under resale agreements	$ —	$ 20,843	$ —	$ —	$ 20,843
Securities borrowed	—	3,381	—	—	3,381
Trading assets:					
Debt and equity instruments:					
U.S. government, agency, sponsored enterprise and non-U.S. governments	98,393	29,597	870	—	128,860
State and municipal securities	—	10,361	2,641	—	13,002
Certificates of deposit, bankers' acceptances and commercial paper	1,180	6,312	—	—	7,492
Corporate debt and other	5	61,230	6,506	—	67,741
Equity securities	73,174	3,992	1,380	—	78,546
Loans	—	14,711	17,091	—	31,802
Mortgage- and asset-backed securities	—	3,401	12,932	—	16,333
Physical commodities[a]	—	3,581	—	—	3,581
Total debt and equity instruments:	172,752	133,185	41,420	—	347,357
Derivative receivables	3,630	2,685,101	52,991	(2,579,096)	162,626
Total trading assets	176,382	2,818,286	94,411	(2,579,096)	509,983
Available-for-sale securities	118,823	74,695	12,391	—	205,909
Loans	—	5,029	2,667	—	7,696
Mortgage servicing rights	—	—	9,403	—	9,403
Other assets:					
Private equity investments	151	332	6,369	—	6,852
All other	5,977	11,355	5,015	—	22,347
Total other assets	6,128	11,687	11,384	—	29,199
Total assets at fair value	$ 301,333	$ 2,933,921	$ 130,256	$ (2,579,096)	$ 786,414
Less: Level 3 assets for which the Firm does not bear economic exposure[b]			21,169		
Total level 3 assets for which the Firm bears economic exposure			$ 109,087		
Deposits	$ —	$ 4,370	$ 1,235	$ —	$ 5,605
Federal funds purchased and securities loaned or sold under repurchase agreements	—	2,993	—	—	2,993
Other borrowed funds	—	14,612	101	—	14,713
Trading liabilities:					
Debt and equity instruments	34,568	10,418	288	—	45,274
Derivative payables	3,630	2,622,371	43,484	(2,547,881)	121,604
Total trading liabilities	38,198	2,632,789	43,772	(2,547,881)	166,878
Accounts payable and other liabilities	—	—	—	—	—
Beneficial interests issued by consolidated VIEs	—	1,735	—	—	1,735
Long-term debt	—	41,666	16,548	—	58,214
Total liabilities at fair value	$ 38,198	$ 2,698,165	$ 61,656	$ (2,547,881)	$ 250,138

Assets and liabilities measured at fair value on a recurring basis

December 31, 2007 (in millions)	Quoted market prices in active markets (Level 1)	Internal models with significant observable market parameters (Level 2)	Internal models with significant unobservable market parameters (Level 3)	FIN 39 netting[d]	Total carrying value in the Consolidated Balance Sheets
Federal funds sold and securities purchased under resale agreements	$ —	$ 19,131	$ —	$ —	$ 19,131
Trading assets:					
Debt and equity instruments:					
U.S. government, agency, sponsored enterprise and non-U.S. governments	106,572	40,362	258	—	147,192
State and municipal securities	7,230	5,860	—	—	13,090
Certificates of deposit, bankers' acceptances and commercial paper	3,019	5,233	—	—	8,252
Corporate debt and other	6	52,137	7,972	—	60,115
Equity securities	82,499	9,552	1,197	—	93,248
Loans	—	46,038	11,776	—	57,814
Mortgage- and asset-backed securities	—	27,209	2,863	—	30,072
Physical commodities[a]	—	4,490	—	—	4,490
Total debt and equity instruments:	199,326	190,881	24,066	—	414,273
Derivative receivables	18,574	871,105	20,188	(832,731)	77,136
Total trading assets	217,900	1,061,986	44,254	(832,731)	491,409
Available-for-sale securities	71,941	13,364	101	—	85,406
Loans	—	359	8,380	—	8,739
Mortgage servicing rights	—	—	8,632	—	8,632
Other assets:					
Private equity investments	68	322	6,763	—	7,153
All other	10,784	1,054	3,160	—	14,998
Total other assets	10,852	1,376	9,923	—	22,151
Total assets at fair value	$300,693	$ 1,096,216	$ 71,290	$(832,731)	$ 635,468
Deposits	$ —	$ 5,228	$ 1,161	$ —	$ 6,389
Federal funds purchased and securities loaned or sold under repurchase agreements	—	5,768	—	—	5,768
Other borrowed funds	—	10,672	105	—	10,777
Trading liabilities:					
Debt and equity instruments	73,023	15,659	480	—	89,162
Derivative payables	19,553	852,055	19,555	(822,458)	68,705
Total trading liabilities	92,576	867,714	20,035	(822,458)	157,867
Accounts payable and other liabilities[c]	—	—	25	—	25
Beneficial interests issued by consolidated VIEs	—	2,922	82	—	3,004
Long-term debt	—	48,518	21,938	—	70,456
Total liabilities at fair value	$ 92,576	$ 940,822	$ 43,346	$(822,458)	$ 254,286

(a) Physical commodities inventories are accounted for at the lower of cost or fair value.
(b) Includes assets for which the Firm serves as an intermediary between two parties and does not bear market risk. The assets are predominantly reflected within derivative receivables.
(c) Includes the fair value adjustment for unfunded lending-related commitments accounted for at fair value.
(d) As permitted under FIN 39, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. The increase in FIN 39 netting from December 31, 2007, primarily relates to the decline in interest rates, widening credit spreads and volatile foreign exchange rates reflected in interest rate, credit and foreign exchange derivatives, respectively.

Balances for which the Firm did not bear economic exposure at December 31, 2007, were not significant.

Changes in level 3 recurring fair value measurements

The tables below include a rollforward of the balance sheet amounts for the years ended December 31, 2008 and 2007 (including the change in fair value), for financial instruments classified by the Firm within level 3 of the valuation hierarchy. When a determination is made to classify a financial instrument within level 3, the determination is based upon the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the valuation hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

	Fair value measurements using significant unobservable inputs					
For the year ended December 31, 2008 (in millions)	Fair value, January 1, 2008	Total realized/unrealized gains/(losses)[c]	Purchases, issuances settlements, net	Transfers into and/or out of level 3[c]	Fair value, December 31, 2008	Change in unrealized gains and (losses) related to financial instruments held at December 31, 2008
Assets:						
Trading assets:						
Debt and equity instruments	**$ 24,066**	**$ (12,805)**[d][e]	**$ 6,201**	**$ 23,958**	**$ 41,420**	**$ (9,860)**[d][e]
Net derivative receivables	**633**	**4,556**[d]	**2,290**	**2,028**	**9,507**	**1,814**[d]
Available-for-sale securities	**101**	**(1,232)**[f]	**3,772**	**9,750**	**12,391**	**(422)**[f]
Loans	**8,380**	**(1,547)**[d]	**12**	**(4,178)**	**2,667**	**(1,324)**[d]
Mortgage servicing rights	**8,632**	**(6,933)**[e]	**7,704**	**—**	**9,403**	**(6,933)**[e]
Other assets:						
Private equity investments[a]	**6,763**	**(638)**[d]	**320**	**(76)**	**6,369**	**(1,089)**[d]
All other	**3,160**	**(930)**[g]	**2,802**	**(17)**	**5,015**	**(742)**[g]
Liabilities[b]**:**						
Deposits	**$ (1,161)**	**$ 57**[d]	**$ (79)**	**$ (52)**	**$ (1,235)**	**$ 69**[d]
Other borrowed funds	**(105)**	**7**[d]	**(53)**	**50**	**(101)**	**24**[d]
Trading liabilities:						
Debt and equity instruments	**(480)**	**73**[d]	**33**	**86**	**(288)**	**125**[d]
Accounts payable and other liabilities	**(25)**	**25**[d]	**—**	**—**	**—**	**—**[d]
Beneficial interests issued by consolidated VIEs	**(82)**	**24**[d]	**603**	**(545)**	**—**	**—**[d]
Long-term debt	**(21,938)**	**4,502**[d]	**1,717**	**(829)**	**(16,548)**	**3,682**[d]

For the year ended December 31, 2007 (in millions)	Fair value measurements using significant unobservable inputs: Fair value, January 1, 2007	Total realized/unrealized gains/(losses)[c]	Purchases, issuances settlements, net	Transfers into and/or out of level 3[c]	Fair value, December 31, 2007	Change in unrealized gains and (losses) related to financial instruments held at December 31, 2007
Assets:						
Trading assets:						
Debt and equity instruments	$ 9,320	$ (916)[d][e]	$ 5,902	$ 9,760	$ 24,066	$ (912)[d][e]
Net derivative receivables	(2,800)	1,674[d]	257	1,502	633	1,979[d]
Available-for-sale securities	177	38[f]	(21)	(93)	101	(5)[f]
Loans	643	(346)[d]	8,013	70	8,380	(36)[d]
Mortgage servicing rights	7,546	(516)[e]	1,602	—	8,632	(516)[e]
Other assets:						
Private equity investments[a]	5,493	4,051[d]	(2,764)	(17)	6,763	1,711[d]
All other	1,591	37[g]	1,059	473	3,160	(19)[g]
Liabilities[b]:						
Deposits	$ (385)	$ (42)[d]	$ (667)	$ (67)	$ (1,161)	$ (38)[d]
Other borrowed funds	—	(67)[d]	(34)	(4)	(105)	(135)[d]
Trading liabilities:						
Debt and equity instruments	(32)	383[d]	(125)	(706)	(480)	(734)[d]
Accounts payable and other liabilities	—	(460)[d]	435	—	(25)	(25)[d]
Beneficial interests issued by consolidated VIEs	(8)	6[d]	1	(81)	(82)	—
Long-term debt	(11,386)	(1,142)[d]	(6,633)	(2,777)	(21,938)	(468)[d]

(a) Private equity instruments represent investments within the Corporate/Private Equity line of business.
(b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities carried at fair value on a nonrecurring basis) were 25% and 17% at December 31, 2008 and 2007, respectively. The Firm does not allocate the FIN 39 netting adjustment across the levels of the fair value hierarchy. As such, the level 3 derivative payables balance included in the level 3 total balance is gross of any netting adjustments.
(c) Beginning January 1, 2008, all transfers in and out of level 3 are assumed to occur at the beginning of the reporting period.
(d) Reported in principal transactions revenue.
(e) Changes in fair value for Retail Financial Services mortgage loans originated with the intent to sell and MSRs are measured at fair value and reported in mortgage fees and related income.
(f) Realized gains (losses) are reported in securities gains (losses). Unrealized gains (losses) are reported in accumulated other comprehensive income (loss).
(g) Reported in other income.

Assets and liabilities measured at fair value on a nonrecurring basis

Certain assets, liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, the instruments are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment). The following tables present the financial instruments carried on the Consolidated Balance Sheets by caption and level within the SFAS 157 valuation hierarchy (as described above) as of December 31, 2008 and 2007, for which a nonrecurring change in fair value has been recorded during the reporting period.

December 31, 2008 (in millions)	Quoted market prices in active markets (Level 1)	Internal models with significant observable market parameters (Level 2)	Internal models with significant unobservable market parameters (Level 3)	Total carrying value in the Consolidated Balance Sheets
Loans[a]	**$ —**	**$ 4,991**	**$ 3,999**	**$ 8,990**
Other assets	**—**	**1,763**	**291**	**2,054**
Total assets at fair value on a nonrecurring basis	**$ —**	**$ 6,754**	**$ 4,290**	**$ 11,044**
Accounts payable and other liabilities[b]	**$ —**	**$ 212**	**$ 98**	**$ 310**
Total liabilities at fair value on a nonrecurring basis	**$ —**	**$ 212**	**$ 98**	**$ 310**

December 31, 2007 (in millions)	Quoted market prices in active markets (Level 1)	Internal models with significant observable market parameters (Level 2)	Internal models with significant unobservable market parameters (Level 3)	Total carrying value in the Consolidated Balance Sheets
Loans[a][c]	$ —	$ 2,818	$ 16,196	$ 19,014
Other assets	—	267	126	393
Total assets at fair value on a nonrecurring basis	$ —	$ 3,085	$ 16,322	$ 19,407
Accounts payable and other liabilities[b]	$ —	$ —	$ 103	$ 103
Total liabilities at fair value on a nonrecurring basis	$ —	$ —	$ 103	$ 103

(a) Includes leveraged lending and other loan warehouses held-for-sale.
(b) Represents the fair value adjustment associated with $1.5 billion and $3.2 billion of unfunded held-for-sale lending-related commitments within the leveraged lending portfolio at December 31, 2008 and 2007, respectively.
(c) Includes $4.5 billion of level 3 held-for-sale loans reclassified to held-for-investment during 2007.

Nonrecurring fair value changes

The following table presents the total change in value of financial instruments for which a fair value adjustment has been included in the Consolidated Statements of Income for the years ended December 31, 2008 and 2007, related to financial instruments held at December 31, 2008 and 2007.

Year ended December 31, (in millions)	**2008**	2007
Loans	**$ (3,887)**	$ (720)
Other assets	**(685)**	(161)
Accounts payable and other liabilities	**(285)**	2
Total nonrecurring fair value gains (losses)	**$ (4,857)**	$ (879)

In the above table, loans predominantly include the change in fair value for IB leveraged lending and warehouse loans carried on the balance sheet at the lower of cost or fair value; and accounts payable and other liabilities predominantly include the change in fair value for unfunded lending-related commitments within the leveraged lending portfolio.

Level 3 analysis

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 6% of total Firm assets at December 31, 2008. The following describes significant changes to level 3 assets during the year.

Level 3 assets increased $46.9 billion in 2008, largely due to the following:

- Acquisition of $41.5 billion of level 3 assets as a result of the merger with Bear Stearns.
- Acquisition of $5.9 billion of MSRs related to the Washington Mutual transaction.
- Purchase of approximately $4.4 billion of reverse mortgages in the first quarter of 2008, for which there is limited pricing information and a lack of market liquidity.
- Transfers of $14.0 billion of AAA-rated CLOs backed by corporate loans, based upon a significant reduction in new deal issuance and price transparency; $10.5 billion of mortgage-related assets, including commercial mortgage-backed securities with a rating below "AAA", other noninvestment grade mortgage securities and certain prime mortgages; and $2.8 billion of auction-rate securities, in each case due to a significant reduction in market liquidity.

The increases in level 3 assets described above were partially offset by:

- Approximately $20.0 billion of sales and markdowns of residential mortgage-backed securities, prime residential mortgage loans and Alt-A residential mortgage loans.
- $11.5 billion of sales and markdowns of leveraged loans, as well as transfers of similar loans to level 2 due to the increased price transparency for such assets.

- $3.5 billion of transfers of bridge loans to level 2 due to increased price transparency for such assets.

Gains and Losses

Gains and losses in the tables above for 2008 include:

- Losses on trading debt and equity instruments of approximately $12.8 billion, principally from mortgage-related transactions and auction-rate securities.
- A $6.9 billion decline in the fair value of the MSR asset.
- Losses of approximately $3.9 billion on leveraged loans. Leveraged loans are typically classified as held-for-sale and measured at the lower of cost or fair value and therefore included in the nonrecurring fair value assets.
- Gains of $4.5 billion related to structured notes, principally due to significant volatility in the equity markets.
- Net gains of $4.6 billion related to derivatives, principally due to changes in credit spreads and rate curves.

The Firm risk manages level 3 financial instruments using securities and derivative positions classified within level 1 or 2 of the valuation hierarchy; the effect of these risk management activities is not reflected in the level 3 gains and losses included in the tables above.

For further information on changes in the fair value of the MSRs, see Note 18 on pages 199–200 of this Annual Report.

Credit adjustments

When determining the fair value of an instrument, it may be necessary to record a valuation adjustment to arrive at an exit price in accordance with SFAS 157. Valuation adjustments include, but are not limited to, amounts to reflect counterparty credit quality and the Firm's own creditworthiness. For a detailed discussion of the valuation adjustments the Firm considers, see the valuation discussion at the beginning of this Note.

The following table provides the credit adjustments, gross of hedges where risk is actively managed, as reflected within the Consolidated Balance Sheets of the Firm as of the dates indicated.

Year ended December 31, (in millions)	**2008**	2007
Derivatives receivables balance	**$ 162,626**	$ 77,136
Derivatives CVA[(a)]	**(9,566)**	(1,265)
Derivatives payable balance	**121,604**	68,705
Derivatives DVA	**1,389**	518
Structured notes balance	**67,340**	87,622
Structured notes DVA[(b)]	**2,413**	896

(a) Derivative CVA, gross of hedges, includes results managed by Credit Portfolio and other lines of business within IB.

(b) Structured notes are carried at fair value based upon the Firm's election under SFAS 159. For further information on these elections, see Note 5 on page 156 of this Annual Report.

The following table provides the impact of credit adjustments, gross of hedges where risk is actively managed, on earnings in the respective periods.

Year ended December 31, (in millions)	**2008**	2007
Credit adjustments:		
Derivatives CVA[(a)]	**$ (7,561)**	$ (803)
Derivatives DVA	**789**	514
Structured Notes DVA[(b)]	**1,211**	806

(a) Derivative CVA, gross of hedges, includes results managed by Credit Portfolio and other lines of business within IB.

(b) Structured notes are carried at fair value based upon the Firm's election under SFAS 159. For further information on these elections, see Note 5 on page 156 of this Annual Report.

The market's view of the Firm's credit quality is reflected in credit spreads observed in the credit default swap market. These credit spreads are affected by a number of factors, such as the performance of the assets the Firm holds. Consequently, significant deterioration in the value of sizable exposures held by the Firm are likely to result in wider credit default swap spreads. This will lead to an increase in the Firm's credit adjustment (i.e., DVA) for liabilities carried at fair value.

Mortgage-related exposures carried at fair value

As noted above, certain of the Firm's wholesale and consumer loans are carried at fair value including mortgage-related loans. Since the second half of 2007, liquidity in certain sectors of the mortgage markets has decreased, thereby limiting the price transparency of certain mortgage-related instruments. The table below summarizes the Firm's mortgage-related exposures that are carried at fair value through earnings or at the lower of cost or fair value; the table excludes securities held in the available-for-sale portfolio.

	Exposure as of December 31, 2008		
(in millions)	Gross	Net of risk management activities[(d)]	Net gains/(losses)[(e)] reported in income – year ended December 31, 2008
U.S. Residential Mortgage:[(a)(b)(c)]			
Prime	$ 11,221	$ 5,044	
Alt-A	3,934	3,917	
	15,155	8,961	$ (1,468)
Subprime	941	(28)	(369)
Non-U.S. Residential	1,591	951	(292)
Commercial Mortgage:			
Securities	2,836	1,438	(792)
Loans	4,338	2,179	(752)

(a) Included exposures in IB and Retail Financial Services segments.

(b) Excluded from the table above are certain mortgage-related assets that are carried at fair value and recorded in trading assets, such as: (i) U.S. government agency and U.S. government-sponsored enterprise securities that are liquid and of high credit quality of $58.9 billion at December 31, 2008; and (ii) reverse mortgages of $4.3 billion at December 31, 2008, for which the principal risk is mortality risk. Also excluded are mortgage servicing rights, which are reported in Note 18 on pages 199–200 of this Annual Report.

(c) Also excluded from the table above are certain mortgage-related financing transactions, which are collateralized by mortgage-related assets, of $5.7 billion at December 31, 2008. These financing transactions are excluded from the table as they are accounted for on an accrual basis of accounting. For financings deemed to be impaired, impairment is measured and recognized based upon the fair value of the collateral. Of these financing transactions, $1.2 billion at December 31, 2008, was considered impaired.

(d) The amounts presented reflect the effects of derivatives utilized to risk manage the gross exposures arising from cash-based instruments and are presented on a bond or loan equivalent (notional) basis. Derivatives are excluded from the gross exposure as they are principally used for risk management purposes.

(e) Net gains and losses include all revenue related to the positions (i.e., interest income, changes in fair value of the assets, changes in fair value of the related risk management positions, and interest expense related to the liabilities funding the positions).

Residential mortgages

Prime Mortgage – The Firm had exposure of $11.2 billion to prime mortgages carried at fair value through earnings or at the lower of cost or fair value at December 31, 2008, which consisted of $2.9 billion of securities (including $1.2 billion of forward purchase commitments), largely rated "AAA", and $8.3 billion of first-lien mortgages.

Alt-A mortgage – The Firm had exposure of $3.9 billion to Alt-A mortgages carried at fair value through earnings or at the lower of cost or fair value at December 31, 2008, which consisted of $787 million of securities and $3.1 billion of first-lien mortgages.

Subprime mortgage – The Firm had exposure of $941 million to subprime mortgages carried at fair value through earnings or at the lower of cost or fair value at December 31, 2008, which included $680 million of securities and $261 million of first-lien mortgages.

Classification and Valuation

Residential mortgage loans and mortgage-backed securities are classified within level 2 or level 3 of the valuation hierarchy depending on the level of liquidity and activity in the markets for a particular product. Level 3 assets include residential whole loans, prime and Alt-A residential mortgage-backed securities rated below "AAA", subprime residential mortgage-backed securities and single-name CDS on ABS. Products that continue to have reliable price transparency as evidenced by consistent market transactions, such as AAA-rated prime and Alt-A securities, as well as agency securities, continue to be classified in level 2.

For those products classified within level 2 of the valuation hierarchy, the Firm estimates the value of such instruments using a combination of observed transaction prices, independent pricing services and relevant broker quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided from independent pricing services.

When relevant market activity is not occurring or is limited, the fair value is estimated as follows:

Residential mortgage loans – Fair value of residential mortgage loans is estimated by projecting the expected cash flows and discounting those cash flows at a rate reflective of current market liquidity. To estimate the projected cash flows (inclusive of assumptions of prepayment, default rates and loss severity), specific consideration is given to both borrower-specific and other market factors including, but not limited to: the borrower's FICO score; the type of collateral supporting the loan; an estimate of the current value of the collateral supporting the loan; the level of documentation for the loan; and market-derived expectations for home price appreciation or depreciation in the respective geography of the borrower.

Residential mortgage-backed securities – Fair value of residential mortgage-backed securities is estimated considering the value of the collateral and the specific attributes of the securities held by the Firm. The value of the collateral pool supporting the securities is analyzed using the same techniques and factors described above for residential mortgage loans, albeit in a more aggregated manner across the pool. For example, average FICO scores, average delinquency rates, average loss severities and prepayment rates, among other metrics, may be evaluated. In addition, as each securitization vehicle distributes cash in a manner or order that is predetermined at the inception of the vehicle, the priority in which each particular mortgage-backed security is allocated cash flows, and the level of credit enhancement that is in place to support those cash flows, are key considerations in deriving the value of residential mortgage-backed securities. Finally, the risk premium that investors demand for securitized products in today's market is factored into the valuation. To benchmark its valuations, the Firm looks to transactions for similar instruments and utilizes independent pricing provided by third-party vendors, broker quotes and relevant market indices such as the ABX index, as applicable. While none of those sources are solely indicative of fair value, they serve as directional indicators for the appropriateness of the Firm's estimates.

Commercial mortgages

Commercial mortgages are loans to companies backed by commercial real estate. Commercial mortgage-backed securities are securities collateralized by a pool of commercial mortgages. Typically, commercial mortgages have lock-out periods, where the borrower is restricted from prepaying the loan for a specified timeframe, or periods where there are disincentives for the borrower to prepay the loan due to prepayment penalties. These features reduce prepayment risk for commercial mortgages relative to that of residential mortgages.

The Firm had exposure to $7.2 billion of commercial mortgage-backed assets carried at fair value through earnings or at the lower of cost or fair value at December 31, 2008, which consisted of $2.8 billion of securities, largely rated "AAA", and $4.4 billion of first-lien mortgages, largely in the U.S.

Classification and Valuation

While commercial mortgages and commercial mortgage-backed securities are classified within level 2 or level 3 of the valuation hierarchy, depending on the level of liquidity and activity in the markets, the majority of these mortgages, including both loans and lower-rated securities, are currently classified in level 3. Level 2 assets include AAA-rated fixed-rate commercial mortgage-backed securities.

Commercial mortgage loans – Fair value of commercial mortgage loans is estimated by projecting the expected cash flows and discounting those cash flows at a rate reflective of current market liquidity. To estimate the projected cash flows, consideration is given to both borrower-specific and other market factors including, but not limited to: the borrower's debt-to-service coverage ratio; the type of commercial property (e.g., retail, office, lodging, multi-family, etc.); an estimate of the current loan-to-value ratio; and market-derived expectations for property price appreciation or depreciation in the respective geographic location.

Commercial mortgage-backed securities – When relevant market activity is not present or is limited, the value of commercial mortgage-backed securities is estimated considering the value of the collateral and the specific attributes of the securities held by the Firm. The value of the collateral pool supporting the securities is analyzed using the same techniques and factors described above for the valuation of commercial mortgage loans, albeit in a more aggregated manner across the pool. For example, average delinquencies, loan or geographic concentrations and average debt-service coverage ratios, among other metrics, may be evaluated. In addition, as each securitization vehicle distributes cash in a manner or order that is predetermined at the inception of the vehicle, the priority in which each particular mortgage-backed security is allocated cash flows, and the level of credit enhancement that is in place to support those cash flows, are key considerations in deriving the value of commercial mortgage-backed securities. Finally, the risk premium that investors demand for securitized products in today's market is factored into the valuation. To benchmark its valuations, the Firm utilizes independent pricing provided by third-party vendors, and broker quotes, as applicable. While none of those sources are solely indicative of fair value, they serve as directional indicators for the appropriateness of the Firm's estimates.

The following table presents mortgage-related activities within the available-for-sale securities portfolio.

(in millions)	Exposures as of December 31, 2008	Net gains/(losses) reported in income – year ended December 31, 2008[(a)]	Unrealized gains/(losses) included in other comprehensive income (pretax) – year ended December 31, 2008
U.S. residential mortgage:			
Prime	$ 6,027	$ (32)	$ (1,769)
Alt-A	868	—	(196)
Subprime	194	(89)	(32)
Non-U.S. residential	2,075	2	(156)
Commercial mortgage	3,939	—	(684)
U.S. government and federal agency obligations:			
Mortgage-backed securities	$ 6,424	$ 23	$ 165
Collateralized mortgage obligations	558	(5)	(4)
U.S. government-sponsored enterprise obligations:			
Mortgage-backed securities	110,403	458	1,915
Direct obligations	9,657	11	(54)

(a) Excludes related net interest income.

Exposures in the table above include $140.1 billion of mortgage-backed securities classified as available-for-sale in the Firm's Consolidated Balance Sheets at December 31, 2008. These investments are primarily used as part of the Firm's centralized risk management of structural interest rate risk (the sensitivity of the Firm's aggregate balance sheet to changes in interest rates). Changes in the Firm's structural interest rate position, as well as changes in the overall interest rate environment, are continually monitored, resulting in periodic repositioning of mortgage-backed securities classified as available-for-sale. Given that this portfolio is primarily used to manage interest rate risk, predominantly all of these securities are backed by either U.S. government agencies, government sponsored entities, or they are rated "AAA".

Investment securities in the available-for-sale portfolio include:

- $6.9 billion of prime and Alt-A securities, principally rated "AAA". The fair value of these securities is determined based upon independent pricing services supported by relevant and observable market data for similar securities. The Firm classifies these securities in level 2 of the valuation hierarchy.
- $3.9 billion of commercial mortgage-backed securities, principally rated "AAA". The fair value of these securities is determined using a third party pricing service that uses relevant and observable market data. The Firm classifies these securities in level 2 of the valuation hierarchy.
- $127.0 billion of U.S. government agencies or U.S. government-sponsored enterprise mortgage-backed securities. Where these securities trade in active markets and there is market-observable pricing, they are classified in level 1 of the valuation hierarchy. Where the determination of fair value is based on broker quotes and independent pricing services, supported by relevant and observable market data, the Firm classifies such securities in level 2 of the valuation hierarchy.

SFAS 157 Transition
In connection with the initial adoption of SFAS 157, the Firm recorded the following on January 1, 2007:

- a cumulative effect increase to retained earnings of $287 million, primarily related to the release of profit previously deferred in accordance with EITF 02-3;
- an increase to pretax income of $166 million ($103 million after-tax) related to the incorporation of the Firm's creditworthiness in the valuation of liabilities recorded at fair value; and
- an increase to pretax income of $464 million ($288 million after-tax) related to valuations of nonpublic private equity investments.

Prior to the adoption of SFAS 157, the Firm applied the provisions of EITF 02-3 to its derivative portfolio. EITF 02-3 precluded the recognition of initial trading profit in the absence of: (a) quoted market prices, (b) observable prices of other current market transactions or (c) other observable data supporting a valuation technique. In accordance with EITF 02-3, the Firm recognized the deferred profit in principal transactions revenue on a systematic basis (typically straight-line amortization over the life of the instruments) and when observable market data became available.

Prior to the adoption of SFAS 157 the Firm did not incorporate an adjustment into the valuation of liabilities carried at fair value on the Consolidated Balance Sheets. Commencing January 1, 2007, in accordance with the requirements of SFAS 157, an adjustment was made to the valuation of liabilities measured at fair value to reflect the credit quality of the Firm.

Prior to the adoption of SFAS 157, privately held investments were initially valued based upon cost. The carrying values of privately held investments were adjusted from cost to reflect both positive and negative changes evidenced by financing events with third-party capital providers. The investments were also subject to ongoing impairment reviews by private equity senior investment professionals. The increase in pretax income related to nonpublic private equity investments in connection with the adoption of SFAS 157 was due to there being sufficient market evidence to support an increase in fair values using the SFAS 157 methodology, although there had not been an actual third-party market transaction related to such investments.

Financial disclosures required by SFAS 107
Many but not all of the financial instruments held by the Firm are recorded at fair value on the Consolidated Balance Sheets. SFAS 107 requires disclosure of the estimated fair value of certain financial instruments and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of SFAS 107 are included in the table below. Additionally, certain financial instruments and all nonfinancial instruments are excluded from the scope of SFAS 107. Accordingly, the fair value disclosures required by SFAS 107 provide only a partial estimate of the fair value of JPMorgan Chase. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which fair value approximates carrying value
Certain financial instruments that are not carried at fair value on the Consolidated Balance Sheets are carried at amounts that approximate fair value due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks, deposits with banks, federal funds sold and securities purchased under resale agreements and securities borrowed with short-dated maturities, short-term receivables and accrued interest receivable, commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements with short-dated maturities, other borrowed funds (excluding advances from Federal Home Loan Banks), accounts payable and accrued liabilities. In addition, SFAS 107 requires that the fair value for deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value. SFAS 107 does not allow for the recognition of the inherent funding value of these instruments.

The following table presents the carrying value and estimated fair value of financial assets and liabilities as required by SFAS 107 (a discussion of the valuation of the individual instruments can be found at the beginning of this Note or following the table below).

	2008			2007		
December 31, (in billions)	Carrying value	Estimated fair value	Appreciation/ (depreciation)	Carrying value	Estimated fair value	Appreciation/ (depreciation)
Financial assets						
Assets for which fair value approximates carrying value	**$ 226.0**	**$ 226.0**	**$ —**	$ 76.4	$ 76.4	$ —
Federal funds sold and securities purchased under resale agreements (included $20.8 and $19.1 at fair value at December 31, 2008 and 2007, respectively)	**203.1**	**203.1**	—	170.9	170.9	—
Securities borrowed (included $3.4 and zero at fair value at December 31, 2008 and 2007, respectively)	**124.0**	**124.0**	—	84.2	84.2	—
Trading assets	**510.0**	**510.0**	—	491.4	491.4	—
Securities	**205.9**	**205.9**	—	85.4	85.4	—
Loans (included $7.7 and $8.7 at fair value at December 31, 2008 and 2007, respectively)	**721.7**	**700.0**	**(21.7)**	510.1	510.7	0.6
Mortgage servicing rights at fair value	**9.4**	**9.4**	—	8.6	8.6	—
Other (included $29.2 and $22.2 at fair value at December 31, 2008 and 2007, respectively)	**104.6**	**104.7**	**0.1**	66.6	67.1	0.5
Total financial assets	**$ 2,104.7**	**$2,083.1**	**$(21.6)**	$ 1,493.6	$ 1,494.7	$ 1.1
Financial liabilities						
Deposits (included $5.6 and $6.4 at fair value at December 31, 2008 and 2007, respectively)[a]	**$ 1,009.3**	**$1,010.2**	**$ (0.9)**	$ 740.7	$ 741.3	$ (0.6)
Federal funds purchased and securities loaned or sold under repurchase agreements (included $3.0 and $5.8 at fair value at December 31, 2008 and 2007, respectively)	**192.5**	**192.5**	—	154.4	154.4	—
Commercial paper	**37.8**	**37.8**	—	49.6	49.6	—
Other borrowed funds (included $14.7 and $10.8 at fair value at December 31, 2008 and 2007, respectively)	**132.4**	**134.1**	**(1.7)**	28.8	28.8	—
Trading liabilities	**166.9**	**166.9**	—	157.9	157.9	—
Accounts payable and other liabilities	**183.3**	**183.3**	—	89.0	89.0	—
Beneficial interests issued by consolidated VIEs (included $1.7 and $3.0 at fair value at December 31, 2008 and 2007, respectively)	**10.6**	**10.5**	**0.1**	14.0	13.9	0.1
Long-term debt and junior subordinated deferrable interest debentures (included $58.2 and $70.5 at fair value at December 31, 2008 and 2007, respectively)[b]	**270.7**	**262.1**	**8.6**	199.0	198.7	0.3
Total financial liabilities	**$ 2,003.5**	**$1,997.4**	**$ 6.1**	$ 1,433.4	$ 1,433.6	$ (0.2)
Net (depreciation) appreciation			**$(15.5)**			$ 0.9

(a) The fair value of interest-bearing deposits are estimated by discounting cash flows using the appropriate market rates for the applicable maturity.
(b) Fair value for long-term debt, including junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities, is based upon current market rates and adjusted for JPMorgan Chase's credit quality.

The majority of the Firm's unfunded lending-related commitments are not carried at fair value on a recurring basis on the Consolidated Balance Sheets nor are they actively traded. Although there is no liquid secondary market for wholesale commitments, the Firm estimates the fair value of its wholesale lending-related commitments primarily using the cost of credit derivatives (which is adjusted to account for the difference in recovery rates between bonds, upon which the cost of credit derivatives is based, and loans) and loan equivalents (which represent the portion of an unused commitment expected, based upon the Firm's average portfolio historical experience, to become outstanding in the event an obligor defaults). On this basis, the estimated fair value of the Firm's lending-related commitments at December 31, 2008 and 2007, was a liability of $7.5 billion and $1.9 billion, respectively. The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower prior notice, or, in some cases, without notice as permitted by law.

Note 5 – Fair value option

In February 2007, the FASB issued SFAS 159, which was effective for fiscal years beginning after November 15, 2007, with early adoption permitted. The Firm chose early adoption for SFAS 159 effective January 1, 2007. SFAS 159 provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments not previously carried at fair value.

Elections

The following is a discussion of the primary financial instruments for which fair value elections were made and the basis for those elections:

Loans and unfunded lending-related commitments

On January 1, 2007, the Firm elected to record, at fair value, the following:

- Loans and unfunded lending-related commitments that are extended as part of IB's principal investing activities. The transition amount related to these loans included a reversal of the allowance for loan losses of $56 million.
- Certain loans held-for-sale. These loans were reclassified to trading assets – debt and equity instruments. This election enabled the Firm to record loans purchased as part of the Investment Bank's commercial mortgage securitization activity and proprietary activities at fair value and discontinue SFAS 133 fair value hedge relationships for certain originated loans.

Beginning on January 1, 2007, the Firm chose to elect fair value as the measurement attribute for the following loans originated or purchased after that date:

- Loans purchased or originated as part of IB's securitization warehousing activities.
- Prime mortgage loans originated with the intent to sell within Retail Financial Services ("RFS").

The election to fair value the above loans did not include loans within these portfolios that existed on January 1, 2007, based upon the short holding period of the loans and/or the negligible impact of the elections.

Warehouse loans elected to be reported at fair value are classified as trading assets – debt and equity instruments. For additional information regarding warehouse loans, see Note 16 on pages 180–188 of this Annual Report.

Beginning in the third quarter of 2007, the Firm elected the fair value option for newly originated bridge financing activity in IB. These elections were made to align further the accounting basis of the bridge financing activities with their related risk management practices. For these activities, the loans continue to be classified within loans on the Consolidated Balance Sheets; the fair value of the unfunded commitments is recorded within accounts payable and other liabilities.

Securities Financing Arrangements

On January 1, 2007, the Firm elected to record at fair value resale and repurchase agreements with an embedded derivative or a maturity of greater than one year. The intent of this election was to mitigate volatility due to the differences in the measurement basis for the agreements (which were previously accounted for on an accrual basis) and the associated risk management arrangements (which are accounted for on a fair value basis). An election was not made for short-term agreements, as the carrying value for such agreements generally approximates fair value. For additional information regarding these agreements, see Note 13 on pages 174–175 of this Annual Report.

In the second quarter of 2008, the Firm began electing the fair value option for newly transacted securities borrowed and securities lending agreements with a maturity of greater than one year. An election was not made for any short-term agreements, as the carrying value for such agreements generally approximates fair value.

Structured Notes

IB issues structured notes as part of its client-driven activities. Structured notes are financial instruments that contain embedded derivatives and are included in long-term debt. On January 1, 2007, the Firm elected to record at fair value all structured notes not previously elected or eligible for election under SFAS 155. The election was made to mitigate the volatility due to the differences in the measurement basis for structured notes and the associated risk management arrangements as well as to eliminate the operational burdens of having different accounting models for the same type of financial instrument.

Other

In the third quarter of 2008, the Firm elected the fair value option for the ABCP investments purchased under the Federal Reserve's AML Facility for U.S. money market mutual funds, as well as the related nonrecourse advance from the Federal Reserve Bank of Boston ("FRBB"). At December 31, 2008, ABCP investments of $11.2 billion were recorded in other assets; the corresponding nonrecourse liability to the FRBB in the same amount was recorded in other borrowed funds. For further discussion, see Note 21 on page 202 of this Annual Report.

In 2008, the Firm elected the fair value option for certain loans acquired as part of the Bear Stearns merger that were included in the trading portfolio and for prime mortgages previously designated as held-for-sale by Washington Mutual as part of the Washington Mutual transaction. In addition, the Firm elected the fair value option for certain tax credit and other equity investments acquired as part of the Washington Mutual transaction.

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated Statements of Income for the years ended December 31, 2008 and 2007, for items for which the fair value election was made. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2008			2007		
December 31, (in millions)	Principal transactions[c]	Other income[c]	Total changes in fair value recorded	Principal transactions[c]	Other income[c]	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	**$ 1,139**	**$ —**	**$ 1,139**	$ 580	$ —	$ 580
Securities borrowed	**29**	**—**	**29**	—	—	—
Trading assets:						
Debt and equity instruments, excluding loans	**(870)**	**(58)**[d]	**(928)**	421	(1)[d]	420
Loans reported as trading assets:						
Changes in instrument-specific credit risk	**(9,802)**	**(283)**[d]	**(10,085)**	(517)	(157)[d]	(674)
Other changes in fair value	**696**	**1,178**[d]	**1,874**	188	1,033[d]	1,221
Loans:						
Changes in instrument-specific credit risk	**(1,991)**	**—**	**(1,991)**	102	—	102
Other changes in fair value	**(42)**	**—**	**(42)**	40	—	40
Other assets	**—**	**(660)**[e]	**(660)**	—	30[e]	30
Deposits[a]	**(132)**	**—**	**(132)**	(906)	—	(906)
Federal funds purchased and securities loaned or sold under repurchase agreements	**(127)**	**—**	**(127)**	(78)	—	(78)
Other borrowed funds[a]	**1,888**	**—**	**1,888**	(412)	—	(412)
Trading liabilities	**35**	**—**	**35**	(17)	—	(17)
Accounts payable and other liabilities	**—**	**—**	**—**	(460)	—	(460)
Beneficial interests issued by consolidated VIEs	**355**	**—**	**355**	(228)	—	(228)
Long-term debt:						
Changes in instrument-specific credit risk[a]	**1,174**	**—**	**1,174**	771	—	771
Other changes in fair value[b]	**16,202**	**—**	**16,202**	(2,985)	—	(2,985)

(a) Total changes in instrument-specific credit risk related to structured notes were $1.2 billion and $806 million for the years ended December 31, 2008 and 2007, respectively, which includes adjustments for structured notes classified within deposits and other borrowed funds, as well as long-term debt.

(b) Structured notes are debt instruments with embedded derivatives that are tailored to meet a client's need for derivative risk in funded form. The embedded derivative is the primary driver of risk. The 2008 gain included in "Other changes in fair value" results from a significant decline in the value of certain structured notes where the embedded derivative is principally linked to either equity indices or commodity prices, both of which declined sharply during the second half of 2008. Although the risk associated with the structured notes is actively managed, the balance reported in this table does not include the income statement impact of such risk management instruments.

(c) Included in the amounts are gains and losses related to certain financial instruments previously carried at fair value by the Firm, such as structured liabilities elected pursuant to SFAS 155 and loans purchased as part of the Investment Bank's trading activities.

(d) Reported in mortgage fees and related income.

(e) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings during 2008 and 2007, which were attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based upon an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread. The gain for 2008 and 2007 was attributable to the widening of the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2008 and 2007, for loans and long-term debt for which the SFAS 159 fair value option has been elected. The loans were classified in trading assets – debt and equity instruments or in loans.

	2008			2007		
December 31, (in millions)	Remaining aggregate contractual principal amount outstanding	Fair value	Fair value over (under) remaining aggregate contractual principal amount outstanding	Remaining aggregate contractual principal amount outstanding	Fair value	Fair value over (under) remaining aggregate contractual principal amount outstanding
Loans						
Performing loans 90 days or more past due						
Loans reported as trading assets	**$ —**	**$ —**	**$ —**	$ —	$ —	$ —
Loans	**—**	**—**	**—**	11	11	—
Nonaccrual loans						
Loans reported as trading assets	**7,454**	**1,519**	**(5,935)**	3,044	1,176	(1,868)
Loans	**189**	**51**	**(138)**	15	5	(10)
Subtotal	**7,643**	**1,570**	**(6,073)**	3,070	1,192	(1,878)
All other performing loans						
Loans reported as trading assets	**34,038**	**30,283**	**(3,755)**	56,164	56,638	474
Loans	**10,206**	**7,441**	**(2,765)**	9,011	8,580	(431)
Total loans	**$ 51,887**	**$ 39,294**	**$(12,593)**	$ 68,245	$ 66,410	$ (1,835)
Long-term debt						
Principal protected debt	**$ (27,043)**[b]	**$ (26,241)**	**$ (802)**	$ (24,262)[b]	$ (24,033)	$ (229)
Nonprincipal protected debt[a]	**NA**	**(31,973)**	**NA**	NA	(46,423)	NA
Total long-term debt	**NA**	**$ (58,214)**	**NA**	NA	$ (70,456)	NA
FIN 46R long-term beneficial interests						
Principal protected debt	**$ —**	**$ —**	**$ —**	$ (58)	$ (58)	$ —
Nonprincipal protected debt[a]	**NA**	**(1,735)**	**NA**	NA	(2,946)	NA
Total FIN 46R long-term beneficial interests	**NA**	**$ (1,735)**	**NA**	NA	$ (3,004)	NA

(a) Remaining contractual principal is not applicable to nonprincipal protected notes. Unlike principal protected notes for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal protected notes do not obligate the Firm to return a stated amount of principal at maturity but to return an amount based upon the performance of an underlying variable or derivative feature embedded in the note.

(b) Where the Firm issues principal protected zero coupon or discount notes, the balance reflected as the remaining contractual principal is the final principal payment at maturity.

The contractual amount of unfunded lending-related commitments for which the fair value option was elected was negligible at December 31, 2008. At December 31, 2007, the contractual amount of unfunded lending-related commitments for which the fair value option was elected was $1.0 billion with a corresponding fair value of $25 million. Such commitments are reflected as liabilities and included in accounts payable and other liabilities.

Note 6 – Principal transactions

Principal transactions revenue consists of realized and unrealized gains and losses from trading activities (including physical commodities inventories that are accounted for at the lower of cost or fair value), changes in fair value associated with financial instruments held by the Investment Bank for which the SFAS 159 fair value option was elected, and loans held-for-sale within the wholesale lines of business. For loans measured at fair value under SFAS 159, origination costs are recognized in the associated expense category as incurred. Principal transactions revenue also includes private equity gains and losses.

The following table presents principal transactions revenue.

Year ended December 31, (in millions)	**2008**	2007	2006
Trading revenue	**$ (9,791)**	$ 4,736	$ 9,418
Private equity gains (losses)[a]	**(908)**	4,279	1,360
Principal transactions	**$ (10,699)**	$ 9,015	$10,778

(a) Includes revenue on private equity investments held in the Private Equity business within Corporate/Private Equity and those held in other business segments.

Trading assets and liabilities

Trading assets include debt and equity instruments held for trading purposes that JPMorgan Chase owns ("long" positions), certain loans for which the Firm manages on a fair value basis and has elected the SFAS 159 fair value option, and physical commodities inventories that are accounted for at the lower of cost or fair value. Trading liabilities include debt and equity instruments that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase instruments at a future date to cover the short positions. Included in trading assets and trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. Trading assets and liabilities are carried at fair value on the Consolidated Balance Sheets. For a discussion of the valuation of trading assets and trading liabilities, see Note 5 on pages 156–158 of this Annual Report.

The following table presents the fair value of trading assets and trading liabilities for the dates indicated.

December 31, (in millions)	2008	2007
Trading assets		
Debt and equity instruments:[a]		
U.S. government and federal agency obligations:		
U.S. treasuries	**$ 22,121**	$ 32,378
Mortgage-backed securities	**6,037**	791
Agency obligations	**35**	2,264
U.S. government-sponsored enterprise obligations:		
Mortgage-backed securities	**52,871**	33,910
Direct obligations	**9,149**	9,928
Obligations of state and political subdivisions	**13,002**	13,090
Certificates of deposit, bankers' acceptances and commercial paper	**7,492**	8,252
Debt securities issued by non-U.S. governments	**38,647**	67,921
Corporate debt securities	**60,323**	53,941
Equity securities	**78,546**	93,248
Loans	**31,802**	57,814
Mortgage-backed securities:		
Prime	**1,725**	6,136
Alt-A	**787**	3,572
Subprime	**680**	1,459
Non-U.S. residential	**805**	974
Commercial	**2,816**	8,256
Asset-backed securities:		
Credit card receivables	**1,296**	321
Automobile loans	**722**	605
Other consumer loans	**1,343**	2,675
Commercial and industrial loans	**1,604**	169
Collateralized debt obligations	**3,868**	4,879
Other	**687**	1,026
Physical commodities	**3,581**	4,490
Other	**7,418**	6,174
Total debt and equity instruments	**347,357**	414,273
Derivative receivables:		
Interest rate	**64,101**	36,020
Credit	**44,695**	22,083
Commodity	**14,830**	9,419
Foreign exchange	**24,715**	5,616
Equity	**14,285**	3,998
Total derivative receivables	**162,626**	77,136
Total trading assets	**$ 509,983**	$ 491,409

December 31, (in millions)	2008	2007
Trading liabilities		
Debt and equity instruments[b]	**$ 45,274**	$ 89,162
Derivative payables:		
Interest rate	**48,449**	25,542
Credit	**23,566**	11,613
Commodity	**11,921**	6,942
Foreign exchange	**20,352**	7,552
Equity	**17,316**	17,056
Total derivative payables	**121,604**	68,705
Total trading liabilities	**$166,878**	$157,867

(a) Prior periods have been revised to reflect the current presentation.
(b) Primarily represents securities sold, not yet purchased.

Included in trading assets and trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. As permitted under FIN 39, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. The netted amount of cash collateral received and paid was $103.6 billion and $72.4 billion, respectively, at December 31, 2008, and $34.9 billion and $24.6 billion, respectively, at December 31, 2007. The Firm received and paid excess collateral of $22.2 billion and $3.7 billion, respectively, at December 31, 2008, and $17.4 billion and $2.4 billion, respectively, at December 31, 2007. This additional collateral received and paid secures potential exposure that could arise in the derivatives portfolio should the mark-to-market of the transactions move in the Firm's favor or the client's favor, respectively, and is not nettable against the derivative receivables or payables in the table above. The above amounts also exclude liquid securities held and posted as collateral by the Firm to secure derivative receivables and derivative payables. Collateral amounts held and posted in securities form are not recorded on the Firm's balance sheet, and are therefore not nettable against derivative receivables. The Firm held securities collateral of $19.8 billion and $9.8 billion at December 31, 2008 and 2007, respectively, related to derivative receivables. The Firm posted $11.8 billion and $5.9 billion of securities collateral at December 31, 2008 and 2007, respectively, related to derivative payables.

Average trading assets and liabilities were as follows for the periods indicated.

Year ended December 31, (in millions)	2008	2007	2006
Trading assets – debt and equity instruments	**$ 384,102**	$ 381,415	$ 280,079
Trading assets – derivative receivables	**121,417**	65,439	57,368
Trading liabilities – debt and equity instruments[a]	**$ 78,841**	$ 94,737	$ 102,794
Trading liabilities – derivative payables	**93,200**	65,198	57,938

(a) Primarily represent securities sold, not yet purchased.

Private equity investments

Private equity investments are recorded in other assets on the Consolidated Balance Sheets. The following table presents the carrying value and cost of the private equity investment portfolio held by the Private Equity business within Corporate/Private Equity for the dates indicated.

December 31,	2008		2007	
(in millions)	Carrying value	Cost	Carrying value	Cost
Total private equity investments	**$6,852**	**$8,257**	$7,153	$6,231

The above private equity investments include investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines. Accordingly, these investments, irrespective of the percentage of equity ownership interest held, are carried on the Consolidated Balance Sheets at fair value. Realized and unrealized gains and losses arising from changes in fair

value are reported in principal transactions revenue in the Consolidated Statements of Income in the period that the gains or losses are recognized. For a discussion of the valuation of private equity investments, see Note 5 on pages 156–158 of this Annual Report.

Note 7 – Other noninterest revenue

Investment banking fees

This revenue category includes advisory and equity and debt underwriting fees. Advisory fees are recognized as revenue when the related services have been performed. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee (e.g., the fee is not contingent upon the customer obtaining financing). Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria.

The following table presents the components of Investment banking fees.

Year ended December 31, (in millions)	**2008**	2007	2006
Underwriting:			
Equity	**$ 1,477**	$ 1,713	$ 1,179
Debt	**2,094**	2,650	2,703
Total underwriting	**3,571**	4,363	3,882
Advisory	**1,955**	2,272	1,638
Total investment banking fees	**$ 5,526**	$ 6,635	$ 5,520

Lending & deposit-related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan-servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions, and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based upon exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met.

The following table presents components of asset management, administration and commissions.

Year ended December 31, (in millions)	**2008**	2007	2006
Asset management:			
Investment management fees	**$ 5,562**	$ 6,364	$ 4,429
All other asset management fees	**432**	639	567
Total asset management fees	**5,994**	7,003	4,996
Total administration fees[(a)]	**2,452**	2,401	2,430
Commission and other fees:			
Brokerage commissions	**3,141**	2,702	2,184
All other commissions and fees	**2,356**	2,250	2,245
Total commissions and fees	**5,497**	4,952	4,429
Total asset management, administration and commissions	**$13,943**	$14,356	$11,855

(a) Includes fees for custody, securities lending, funds services and broker-dealer clearance.

Mortgage fees and related income

This revenue category primarily reflects Retail Financial Services' mortgage banking revenue, including: fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing; the impact of risk management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under SFAS 159. For loans measured at fair value under SFAS 159, origination costs are recognized in the associated expense category as incurred. Costs to originate loans held-for-sale and accounted for at the lower of cost or fair value are deferred and recognized as a component of the gain or loss on sale. Net interest income from mortgage loans and securities gains and losses on available-for-sale ("AFS") securities used in mortgage-related risk management activities are recorded in interest income and securities gains (losses), respectively. For a further discussion of MSRs, see Note 18 on pages 199–200 of this Annual Report.

Credit card income

This revenue category includes interchange income from credit and debit cards and servicing fees earned in connection with securitization activities. Volume-related payments to partners and expense for rewards programs are netted against interchange income; expense related to rewards programs are recorded when the rewards are earned by the customer, as more fully described below. Other fee revenue is recognized as earned, except for annual fees, which are deferred and recognized on a straight-line basis over the 12-month period to which they pertain. Direct loan origination costs are also deferred and recognized over a 12-month period. In addition, due to the consolidation of Chase Paymentech Solutions in the fourth quarter of 2008, this category now includes net fees earned for processing card transactions for merchants.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous affinity organizations and co-brand partners, which grant the Firm exclusive rights to market to the members or customers of such organizations and partners. These organizations and partners endorse the credit card programs and provide their mailing lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to ten years. The economic incentives the Firm pays to the endorsing organizations and partners typically include payments based upon new account originations, charge volumes, and the cost of the endorsing organizations' or partners' marketing activities and awards.

The Firm recognizes the payments made to the affinity organizations and co-brand partners based upon new account originations as direct loan origination costs. Payments based upon charge volumes are considered by the Firm as revenue sharing with the affinity organizations and co-brand partners, which are deducted from interchange income as the related revenue is earned. Payments based upon marketing efforts undertaken by the endorsing organization or partner are expensed by the Firm as incurred. These costs are recorded within noninterest expense.

Note 8 – Interest income and Interest expense

Details of interest income and interest expense were as follows.

Year ended December 31, (in millions)	**2008**	2007	2006
Interest income[a]			
Loans[b]	**$38,347**	$ 36,660	$ 33,121
Securities[b]	**6,344**	5,232	4,147
Trading assets	**17,236**	17,041	10,942
Federal funds sold and securities purchased under resale agreements	**5,983**	6,497	5,578
Securities borrowed	**2,297**	4,539	3,402
Deposits with banks	**1,916**	1,418	1,265
Interests in purchased receivables[b]	—	—	652
Other assets[c]	**895**	—	—
Total interest income	**73,018**	71,387	59,107
Interest expense[a]			
Interest-bearing deposits	**14,546**	21,653	17,042
Short-term and other liabilities[d]	**10,933**	16,142	14,086
Long-term debt	**8,355**	6,606	5,503
Beneficial interests issued by consolidated VIEs	**405**	580	1,234
Total interest expense	**34,239**	44,981	37,865
Net interest income	**38,779**	26,406	21,242
Provision for credit losses	**19,445**	6,864	3,270
Provision for credit losses – accounting conformity[e]	**1,534**	—	—
Total provision for credit losses	**$20,979**	$ 6,864	$ 3,270
Net interest income after provision for credit losses	**$17,800**	$ 19,542	$ 17,972

(a) Interest income and interest expense include the current period interest accruals for financial instruments measured at fair value except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with SFAS 133 absent the SFAS 159 fair value election; for those instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

(b) As a result of restructuring certain multi-seller conduits the Firm administers, JPMorgan Chase deconsolidated $29 billion of interests in purchased receivables, $3 billion of loans and $1 billion of securities and recorded $33 billion of lending-related commitments during 2006.

(c) Predominantly margin loans.

(d) Includes brokerage customer payables.

(e) Includes accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual's banking operations.

Note 9 – Pension and other postretirement employee benefit plans

The Firm's defined benefit pension plans are accounted for in accordance with SFAS 87 and SFAS 88, and its other postretirement employee benefit ("OPEB") plans are accounted for in accordance with SFAS 106. In September 2006, the FASB issued SFAS 158, which requires companies to recognize on their Consolidated Balance Sheets the overfunded or underfunded status of their defined benefit postretirement plans, measured as the difference between the fair value of plan assets and the benefit obligation. SFAS 158 requires unrecognized amounts (e.g., net loss and prior service costs) to be recognized in accumulated other comprehensive income (loss) ("AOCI") and that these amounts be adjusted as they are subsequently recognized as components of net periodic benefit cost based upon the current amortization and recognition requirements of SFAS 87 and SFAS 106. The Firm prospectively adopted SFAS 158 on December 31, 2006, and recorded an after-tax charge to AOCI of $1.1 billion at that date.

SFAS 158 also eliminates the provisions of SFAS 87 and SFAS 106 that allow plan assets and obligations to be measured as of a date not more than three months prior to the reporting entity's balance sheet date. The Firm uses a measurement date of December 31 for its defined benefit pension and OPEB plans; therefore, this provision of SFAS 158 had no effect on the Firm's financial statements.

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10 percent of the greater of the projected benefit obligation or the fair value of the plan assets. Any excess, as well as prior service costs, are amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently nine years (the decrease of one year from the prior year in the assumptions is related to pension plan demographic assumption revisions at December 31, 2007, to reflect recent experience relating to the form and timing of benefit distributions and rates of turnover). For OPEB plans, any excess net gains and losses also are amortized over the average future service period, which is currently six years; however, prior service costs are amortized over the average years of service remaining to full eligibility age, which is currently four years. The amortization periods for net gains and losses and prior service costs for OPEB are unchanged from the prior year.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based upon eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and beginning January 1, 2008, benefits generally vest after three years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based upon factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable employee benefit and local tax laws. On January 15, 2009, the Firm made a discretionary cash contribution to its U.S. defined benefit pension plan of $1.3 billion, funding the plan to the maximum allowable amount under applicable tax law. The expected amount of 2009 contributions to its non-U.S. defined benefit pension plans is $44 million, of which $20 million is contractually required. The amount of potential 2009 contributions to the United Kingdom ("U.K.") defined benefit plans is not reasonably estimable at this time.

JPMorgan Chase also has a number of defined benefit pension plans not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees earn pay and interest credits on compensation amounts above the maximum stipulated by law under a qualified plan. The Excess Retirement Plan had an unfunded projected benefit obligation in the amount of $273 million and $262 million, at December 31, 2008 and 2007, respectively.

Defined contribution plans

JPMorgan Chase offers several defined contribution plans in the U.S. and in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is The JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. The 401(k) Savings Plan allows employees to make pretax and Roth 401(k) contributions to tax-deferred investment portfolios. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan. The Firm matches eligible employee contributions up to a certain percentage of benefits-eligible compensation per pay period, subject to plan and legal limits. Employees begin to receive matching contributions after completing a one-year-of-service requirement and are immediately vested in the Firm's contributions when made. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with length of service and date of hire and provide for limits on the Firm's share of covered medical benefits. The medical benefits are contributory, while the life insurance benefits are noncontributory. Postretirement medical benefits also are offered to qualifying U.K. employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations and plan assets and funded status amounts reported on the Consolidated Balance Sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

As of or for the year ended December 31, (in millions)	Defined benefit pension plans				OPEB plans[d]	
	U.S.		Non-U.S.			
	2008	2007	**2008**	2007	**2008**	2007
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (7,556)**	$ (8,098)	**$ (2,743)**	$ (2,917)	**$ (1,204)**	$ (1,443)
Benefits earned during the year	**(278)**	(270)	**(29)**	(36)	**(5)**	(7)
Interest cost on benefit obligations	**(488)**	(468)	**(142)**	(144)	**(74)**	(74)
Plan amendments	**—**	—	**—**	2	**—**	—
Business combinations	**—**	—	**—**	—	**(1)**[e]	—
Liabilities of newly material plans	**—**	—	**—**	(5)	**—**	—
Employee contributions	**NA**	NA	**(3)**	(3)	**(61)**	(57)
Net gain (loss)	**(147)**	494	**214**	327	**99**	231
Benefits paid	**673**	789	**105**	90	**154**	165
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(10)**	(11)
Curtailments	**—**	—	**—**	4	**(6)**	(6)
Settlements	**—**	—	**—**	24	**—**	—
Special termination benefits	**—**	—	**(3)**	(1)	**—**	(1)
Foreign exchange impact and other	**—**	(3)	**594**	(84)	**13**	(1)
Benefit obligation, end of year	**$ (7,796)**	$ (7,556)	**$ (2,007)**	$ (2,743)	**$ (1,095)**	$ (1,204)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 9,960**	$ 9,955	**$ 2,933**	$ 2,813	**$ 1,406**	$ 1,351
Actual return on plan assets	**(2,377)**	753	**(298)**	57	**(246)**	87
Firm contributions	**38**	37	**88**	92	**3**	3
Employee contributions	**—**	—	**3**	3	**—**	—
Assets of newly material plans	**—**	—	**—**	3	—	—
Benefits paid	**(673)**	(789)	**(105)**	(90)	**(37)**	(35)
Settlements	**—**	—	**—**	(24)	**—**	—
Foreign exchange impact and other	**—**	4	**(613)**	79	**—**	—
Fair value of plan assets, end of year	**$ 6,948**[c]	$ 9,960[c]	**$ 2,008**	$ 2,933	**$ 1,126**	$ 1,406
Funded (unfunded) status[a][b]	**$ (848)**	$ 2,404	**$ 1**	$ 190	**$ 31**	$ 202
Accumulated benefit obligation, end of year	**$ (7,413)**	$ (7,184)	**$ (1,977)**	$ (2,708)	**NA**	NA

(a) Represents overfunded plans with an aggregate balance of $122 million and $3.3 billion at December 31, 2008 and 2007, respectively, and underfunded plans with an aggregate balance of $938 million and $491 million at December 31, 2008 and 2007, respectively.
(b) The table above does not include any amounts attributable to the Washington Mutual Pension and OPEB plans. The disposition of those plans has not been determined.
(c) At December 31, 2008 and 2007, approximately $313 million and $299 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.
(d) Includes an unfunded accumulated postretirement benefit obligation of $32 million and $49 million at December 31, 2008 and 2007, respectively, for the U.K. plan.
(e) Represents change resulting from the Bear Stearns merger.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

As of the year ended December 31, (in millions)	Defined benefit pension plans				OPEB plans	
	U.S.		Non-U.S.			
	2008	2007	**2008**	2007	**2008**	2007
Net loss	**$ (3,493)**	$ (250)	**$ (492)**	$ (434)	**$ (349)**	$ (98)
Prior service cost (credit)	**(26)**	(31)	**2**	2	**40**	58
Accumulated other comprehensive income (loss), pretax, end of year	**$ (3,519)**	$ (281)	**$ (490)**	$ (432)	**$ (309)**	$ (40)

The following table presents the components of net periodic benefit costs reported in the Consolidated Statements of Income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2008**	2007	2006	**2008**	2007	2006	**2008**	2007	2006
Components of net periodic benefit cost									
Benefits earned during the year	**$ 278**	$ 270	$ 281	**$ 29**	$ 36	$ 37	**$ 5**	$ 7	$ 9
Interest cost on benefit obligations	**488**	468	452	**142**	144	120	**74**	74	78
Expected return on plan assets	**(719)**	(714)	(692)	**(152)**	(153)	(122)	**(98)**	(93)	(93)
Amortization:									
Net loss	**—**	—	12	**25**	55	45	**—**	14	29
Prior service cost (credit)	**4**	5	5	**—**	—	—	**(16)**	(16)	(19)
Curtailment (gain) loss	**1**	—	2	**—**	—	1	**4**	2	2
Settlement (gain) loss	**—**	—	—	**—**	(1)	4	**—**	—	—
Special termination benefits	**—**	—	—	**3**	1	1	**—**	1	2
Net periodic benefit cost	**52**	29	60	**47**	82	86	**(31)**	(11)	8
Other defined benefit pension plans[a]	**11**	4	2	**14**	27	36	**NA**	NA	NA
Total defined benefit plans	**63**	33	62	**61**	109	122	**(31)**	(11)	8
Total defined contribution plans	**263**	268	254	**286**	219	199	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 326**	$ 301	$ 316	**$ 347**	$ 328	$321	**$ (31)**	$ (11)	$ 8
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain) loss arising during the year	**$3,243**	$ (533)	NA	**$ 235**	$(176)	NA	**$ 248**	$(223)	NA
Prior service credit arising during the year	**—**	—	NA	**—**	(2)	NA	**—**	—	NA
Amortization of net loss	**—**	—	NA	**(27)**	(55)	NA	**—**	(14)	NA
Amortization of prior service (cost) credit	**(5)**	(5)	NA	**—**	—	NA	**15**	16	NA
Curtailment (gain) loss	**—**	—	NA	**—**	(5)	NA	**3**	3	NA
Settlement loss	**—**	—	NA	**—**	1	NA	**—**	—	NA
Foreign exchange impact and other	**—**	—	NA	**(150)**	—	NA	**3**	—	NA
Total recognized in other comprehensive income	**3,238**	(538)	NA	**58**	(237)	NA	**269**	(218)	NA
Total recognized in net periodic benefit cost and other comprehensive income	**$3,290**	$ (509)	NA	**$ 105**	$(155)	NA	**$ 238**	$(229)	NA

(a) Includes various defined benefit pension plans, which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2009 are as follows.

	Defined benefit pension plans		OPEB plans	
Year ended December 31, 2009 (in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss	$ 301	$ 42	$ —	$ —
Prior service cost (credit)	4	—	(14)	—
Total	$ 305	$ 42	$ (14)	$ —

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking building-block approach and are not strictly based upon historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration was also given to current market conditions and the short-term portfolio mix of each Plan; as a result, the Firm has generally maintained the same expected return on assets from the prior year.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected

long-term rate of return on defined benefit pension plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The return on "AA"-rated long-term corporate bonds has been taken as the average yield on such bonds, adjusted for the expected downgrades and the expected narrowing of credit spreads over the long term.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension and OPEB plans represents a rate implied from the yield curve of the year-end iBoxx £ corporate "AA" 15-year-plus bond index (adjusted for expected downgrades in the underlying bonds comprising the index) with a duration corresponding to that of the underlying benefit obligations.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations and the components of net periodic benefit costs for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S.	
December 31,	**2008**	2007	**2008**	2007
Discount rate:				
Defined benefit pension plans	**6.65%**	6.60%	**2.00-6.20%**	2.25-5.80%
OPEB plans	**6.70**	6.60	**6.20**	5.80
Rate of compensation increase	**4.00**	4.00	**3.00-4.00**	3.00-4.25
Health care cost trend rate:				
Assumed for next year	**8.50**	9.25	**7.00**	5.75
Ultimate	**5.00**	5.00	**5.50**	4.00
Year when rate will reach ultimate	**2014**	2014	**2012**	2010

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2008**	2007	2006	**2008**	2007	2006
Discount rate:						
Defined benefit pension plans	**6.60%**	5.95%	5.70%	**2.25-5.80%**	2.25-5.10%	2.00-4.70%
OPEB plans	**6.60**	5.90	5.65	**5.80**	5.10	4.70
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**7.50**	7.50	7.50	**3.25-5.75**	3.25-5.60	3.25-5.50
OPEB plans	**7.00**	7.00	6.84	**NA**	NA	NA
Rate of compensation increase	**4.00**	4.00	4.00	**3.00-4.25**	3.00-4.00	3.00-3.75
Health care cost trend rate:						
Assumed for next year	**9.25**	10.00	10.00	**5.75**	6.63	7.50
Ultimate	**5.00**	5.00	5.00	**4.00**	4.00	4.00
Year when rate will reach ultimate	**2014**	2014	2013	**2010**	2010	2010

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's total service and interest cost and accumulated postretirement benefit obligation.

Year ended December 31, 2008 (in millions)	1-Percentage-point increase	1-Percentage-point decrease
Effect on total service and interest cost	$ 3	$ (3)
Effect on accumulated postretirement benefit obligation	45	(40)

At December 31, 2008, the Firm increased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans based upon current market interest rates, which will result in a decrease in expense of approximately $1.6 million for 2009. The 2009 expected long-term rate of return on U.S. pension plan assets and U.S. OPEB plan assets remained at 7.5% and 7.0%, respectively. The health care benefit obligation trend assumption declined from 9.25% in 2008 to 8.5% in 2009, declining to a rate of 5% in 2014. As of December 31, 2008, the interest crediting rate assumption and the assumed rate of compensation increase remained at 5.25% and 4.0%, respectively.

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an increase of approximately $23 million in 2009 U.S. defined benefit pension and OPEB plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2009 U.S. defined benefit pension and OPEB plan expense of approximately $9 million and an increase in the related projected benefit obligations of approximately $159 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2009 non-U.S. defined benefit pension and OPEB plan expense of approximately $10 million. A 25-basis point increase in the interest crediting rate for the U.S. defined benefit pension plan would result in an increase in 2009 U.S. defined benefit pension expense of approximately $16 million and an increase in the related projected benefit obligations of approximately $66 million.

Investment strategy and asset allocation

The investment policy for the Firm's postretirement employee benefit plan assets is to optimize the risk-return relationship as appropriate to the respective plan's needs and goals, using a global portfolio of various asset classes diversified by market segment, economic sector and issuer. Specifically, the goal is to optimize the asset mix for future benefit obligations, while managing various risk factors and each plan's investment return objectives. For example, long-duration fixed income securities are included in the U.S. qualified pension plan's asset allocation, in recognition of its long-duration obligations. Plan assets are managed by a combination of internal and external investment managers and are rebalanced within approved ranges on a continued basis. The Firm reviews the allocation daily and all factors that impact portfolio changes to ensure the Plan stays within these ranges, rebalancing when deemed necessary.

The Firm's U.S. defined benefit pension plan assets are held in trust and invested in a well-diversified portfolio of equities (including U.S. large and small capitalization and international equities), fixed income (including corporate and government bonds, Treasury inflation-indexed and high-yield securities), real estate, cash equivalents and alternative investments. Non-U.S. defined benefit pension plan assets are held in various trusts and similarly invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to fund partially the U.S. OPEB plan, are held in separate accounts with an insurance company and are invested in equity and fixed income index funds. As of December 31, 2008, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except in connection with investments in third-party stock-index funds.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[a]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2008**	2007	Allocation	**2008**	2007	Allocation	**2008**	2007
Asset category									
Debt securities	10-30%	**25%**	28%	68%	**73%**	70%	50%	**50%**	50%
Equity securities	25-60	**36**	45	27	**21**	25	50	**50**	50
Real estate	5-20	**7**	9	1	**1**	1	—	**—**	—
Alternatives	15-50	**32**	18	4	**5**	4	—	**—**	—
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
December 31,	**2008**	2007	2006	**2008**	2007	2006
Actual rate of return:						
Defined benefit pension plans	**(25.17)%**	7.96%	13.40%	**(21.58)-5.06%**	0.06-7.51%	2.80-7.30%
OPEB plans	**(17.89)**	6.51	9.30	**NA**	NA	NA

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2009	$ 917	$ 88	$ 109	$ 11
2010	928	94	111	12
2011	597	99	112	13
2012	616	102	110	14
2013	629	107	109	15
Years 2014–2018	3,333	571	513	87

Note 10 – Employee stock-based incentives

Effective January 1, 2006, the Firm adopted SFAS 123R and all related interpretations using the modified prospective transition method. SFAS 123R requires all share-based payments to employees, including employee stock options and stock appreciation rights ("SARs"), to be measured at their grant date fair values. The Firm also adopted the transition election provided by FSP FAS 123(R)-3.

Upon adopting SFAS 123R, the Firm began to recognize in the Consolidated Statements of Income compensation expense for unvested stock options previously accounted for under APB 25. Additionally, JPMorgan Chase recognized as compensation expense an immaterial cumulative effect adjustment resulting from the SFAS 123R requirement to estimate forfeitures at the grant date instead of recognizing them as incurred. Finally, the Firm revised its accounting policies for share-based payments granted to employees eligible for continued vesting under specific age and service or service-related provisions ("full-career eligible employees") under SFAS 123R. Prior to adopting SFAS 123R, the Firm's accounting policy for share-based payment awards granted to full-career eligible employees was to recognize compensation cost over the award's stated service period. Beginning with awards granted to full-career eligible employees in 2006, JPMorgan Chase recognized compensation expense on the grant date without giving consideration to the impact of post-employment restrictions. In the first quarter of 2006, the Firm also began to accrue the estimated cost of stock awards granted to full-career eligible employees in the following year.

In June 2007, the FASB ratified EITF 06-11, which requires that realized tax benefits from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings be recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards. Prior to the issuance of EITF 06-11, the Firm did not include these tax benefits as part of this pool of excess tax benefits. The Firm adopted EITF 06-11 on January 1, 2008. The adoption of this consensus did not have an impact on the Firm's Consolidated Balance Sheets or results of operations.

In connection with the Bear Stearns merger, 46 million Bear Stearns employee stock awards, principally restricted stock units ("RSUs"), capital appreciation plan units and stock options, were exchanged for equivalent JPMorgan Chase awards using the merger exchange ratio of 0.21753. The fair value of these employee stock awards was included in the purchase price since substantially all of the awards were fully vested immediately after the merger date under provisions that provided for accelerated vesting upon a change of control of Bear Stearns. However, Bear Stearns vested employee stock options had no impact on the purchase price; since the employee stock options were significantly out of the money at the merger date, the fair value of these awards was equal to zero upon their conversion into JPMorgan Chase options.

The Firm also exchanged 6 million shares of its common stock for 27 million shares of Bear Stearns common stock held in an irrevocable grantor trust (the "RSU Trust") using the merger exchange ratio of 0.21753. The RSU Trust was established to hold common stock underlying awards granted to selected employees and key executives under certain Bear Stearns employee stock plans. The RSU Trust was consolidated on JPMorgan Chase's Consolidated Balance Sheets as of June 30, 2008, and the shares held in the RSU Trust were recorded in "Shares held in RSU Trust," which reduced stockholders' equity, similar to the treatment for treasury stock. A related obligation to issue stock under these employee stock plans is reported in capital surplus. The issuance of shares held in the RSU Trust to employees will not have any effect on the Firm's total stockholders' equity, net

income or earnings per share. Shares in the RSU Trust were distributed in 2008 with approximately half of the shares in the RSU Trust distributed in January 2009. The remaining shares are expected to be distributed over the next four years.

Employee stock-based awards

In 2008, 2007 and 2006, JPMorgan Chase granted long-term stock-based awards to certain key employees under the 2005 Long-Term Incentive Plan (the "2005 Plan"). The 2005 Plan, plus prior Firm plans and plans assumed as the result of acquisitions, constitute the Firm's stock-based incentive plans ("LTI Plan"). The 2005 Plan became effective on May 17, 2005, after approval by shareholders at the 2005 annual meeting. In May 2008, the 2005 Plan was amended and under the terms of the amended plan as of December 31, 2008, 348 million shares of common stock are available for issuance through May 2013. The amended 2005 Plan is the only active plan under which the Firm is currently granting stock-based incentive awards.

RSUs are awarded at no cost to the recipient upon their grant. RSUs are generally granted annually and generally vest 50 percent after two years and 50 percent after three years and convert to shares of common stock at the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions. All of these awards are subject to forfeiture until the vesting date. An RSU entitles the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSU is outstanding.

Under the LTI Plan, stock options and SARs have been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm typically awards SARs to certain key employees once per year, and it also periodically grants discretionary stock-based incentive awards to individual employees, primarily in the form of both employee stock options and SARs. The 2008 and 2007 grants of SARs to key employees vest ratably over five years (i.e., 20% per year) and the 2006 awards vest one-third after each of years three, four, and five. These awards do not include any full-career eligibility provisions and all awards generally expire ten years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. For each tranche granted (other than grants to employees who are full-career eligible at the grant date), compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2008 and 2007, the Firm settled all of its employee stock-based awards by issuing treasury shares. During 2006, the Firm settled all of its employee stock-based awards by issuing new shares of common stock from January 1 through May 31, 2006, and by issuing treasury shares thereafter.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to two million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. The SARs, which have a ten-year term, will become exercisable no earlier than January 22, 2013, and have an exercise price of $39.83, the price of JPMorgan Chase common stock on the date of the award. The number of SARs that will become exercisable (ranging from none to the full two million) and their exercise date or dates may be determined by the Board of Directors based on an assessment of the performance of both the CEO and JPMorgan Chase. That assessment will be made by the Board in the year prior to the fifth anniversary of the date of the award, relying on such factors that in its sole discretion the Board deems appropriate. Due to the substantial uncertainty surrounding the number of SARs that will ultimately be granted and their exercise dates, a grant date has not been established for accounting purposes. However, since the service inception date precedes the grant date, the Firm will recognize this award ratably over an assumed five-year service period, subject to a requirement to recognize changes in the fair value of the award through the grant date. The Firm recognized $1 million in compensation expense in 2008 for this award.

RSU activity

Compensation expense for RSUs is measured based upon the number of shares granted multiplied by the stock price at the grant date and is recognized in net income as previously described. The following table summarizes JPMorgan Chase's RSU activity for 2008.

Year ended December 31, 2008 (in thousands, except weighted average data)	Number of Shares	Weighted-average grant date fair value
Outstanding, January 1	99,017	$ 43.11
Granted	85,890	40.37
Bear Stearns conversion	5,975	42.24
Vested	(36,606)	38.95
Forfeited	(6,232)	42.90
Outstanding, December 31	148,044	$ 42.53

The total fair value of shares that vested during the years ended December 31, 2008, 2007 and 2006, was $1.6 billion, $1.5 billion and $1.3 billion, respectively.

Employee stock option and SARs activity

Compensation expense, which is measured at the grant date as the fair value of employee stock options and SARs, is recognized in net income as described above.

The following table summarizes JPMorgan Chase's employee stock option and SARs activity for the year ended December 31, 2008, including awards granted to key employees and awards granted in prior years under broad-based plans.

Year ended December 31, 2008

(in thousands, except weighted-average data)	Number of options/SARs	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	325,931	$ 41.70		
Granted	9,341	41.37		
Bear Stearns conversion	3,906	399.91		
Exercised	(34,761)	33.73		
Forfeited	(3,382)	44.13		
Canceled	(17,666)	47.61		
Outstanding, December 31	283,369	$ 47.21	3.5	$ 224,632
Exercisable, December 31	242,653	47.85	2.7	224,632

The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2008, 2007 and 2006, was $10.36, $13.38 and $10.99, respectively. The total intrinsic value of options exercised during the years ended December 31, 2008, 2007 and 2006 was $391 million, $937 million and $994 million, respectively.

Impact of adoption of SFAS 123R

During 2006, the incremental expense related to the Firm's adoption of SFAS 123R was $712 million. This amount represents an accelerated noncash recognition of costs that would otherwise have been incurred in future periods. Also, as a result of adopting SFAS 123R, the Firm's income from continuing operations (pretax) for the year ended December 31, 2006, was lower by $712 million, and each of income from continuing operations (after-tax) and net income for the year ended December 31, 2006, was lower by $442 million, than if the Firm had continued to account for stock-based incentives under APB 25 and SFAS 123. Basic and diluted earnings per share from continuing operations, as well as basic and diluted net income per share, for the year ended December 31, 2006 were $.13 and $.12 lower, respectively, than if the Firm had not adopted SFAS 123R.

Compensation expense

The Firm recognized noncash compensation expense related to its various employee stock-based incentive awards of $2.6 billion, $2.0 billion and $2.4 billion (including the $712 million incremental impact of adopting SFAS 123R) for the years ended December 31, 2008, 2007, and 2006, respectively, in its Consolidated Statements of Income. These amounts included an accrual for the estimated cost of stock awards to be granted to full-career eligible employees of $409 million, $500 million and $498 million for the years ended December 31, 2008, 2007 and 2006, respectively. At December 31, 2008, approximately $1.9 billion (pretax) of compensation cost related to unvested awards has not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.3 years. The Firm does not capitalize any compensation cost related to share-based compensation awards to employees.

Cash flows and tax benefits

The total income tax benefit related to stock-based incentive arrangements recognized in the Firm's Consolidated Statements of Income for the years ended December 31, 2008, 2007 and 2006, was $1.1 billion, $810 million and $947 million, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements and the actual tax benefit realized related to the tax deduction from the exercise of stock options.

Year ended December 31, (in millions)	**2008**	2007	2006
Cash received for options exercised	**$ 1,026**	$ 2,023	$ 1,924
Tax benefit realized	**72**	238	211

Valuation assumptions

The following table presents the assumptions used to value employee stock options and SARs granted during the period under the Black-Scholes valuation model.

Year ended December 31,	**2008**	2007	2006
Weighted-average annualized valuation assumptions			
Risk-free interest rate	**3.90%**	4.78%	5.11%
Expected dividend yield	**3.57**	3.18	2.89
Expected common stock price volatility	**34**	33	23
Expected life (in years)	**6.8**	6.8	6.8

Prior to the adoption of SFAS 123R, the Firm used the historical volatility of its common stock price as the expected volatility assumption in valuing options. The Firm completed a review of its expected volatility assumption in 2006. Effective October 1, 2006, JPMorgan Chase began to value its employee stock options granted or modified after that date using an expected volatility assumption derived from the implied volatility of its publicly traded stock options.

The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled. The expected life assumption was developed using historic experience.

Note 11 – Noninterest expense

Merger costs

Costs associated with the Bear Stearns merger and the Washington Mutual transaction in 2008, the 2004 merger with Bank One Corporation, and The Bank of New York, Inc. ("The Bank of New York") transaction in 2006 are reflected in the merger costs caption of the Consolidated Statements of Income. For a further discussion of the Bear Stearns merger and the Washington Mutual transaction, see Note 2 on pages 135–140 of this Annual Report. A summary of merger-related costs is shown in the following table.

	2008				
Year ended December 31, (in millions)	Bear Stearns	Washington Mutual	Total	2007[b]	2006[b]
Expense category					
Compensation	**$ 181**	**$ 113**	**$ 294**	$ (19)	$ 26
Occupancy	**42**	**—**	**42**	17	25
Technology and communications and other	**85**	**11**	**96**	188	239
The Bank of New York transaction	**—**	**—**	**—**	23	15
Total[a]	**$ 308**	**$ 124**	**$ 432**	$ 209	$ 305

(a) With the exception of occupancy and technology-related write-offs, all of the costs in the table required the expenditure of cash.
(b) The 2007 and 2006 activity reflect the 2004 merger with Bank One Corporation and the Bank of New York transaction.

The table below shows the change in the merger reserve balance related to the costs associated with the transactions.

	2008				
Year ended December 31, (in millions)	Bear Stearns	Washington Mutual	Total	2007[a]	2006[a]
Merger reserve balance, beginning of period	**$ —**	**$ —**	**$ —**	$ 155	$ 311
Recorded as merger costs	**308**	**124**	**432**	186	290
Included in net assets acquired	**1,112**	**435**	**1,547**	(60)	—
Utilization of merger reserve	**(1,093)**	**(118)**	**(1,211)**	(281)	(446)
Merger reserve balance, end of period	**$ 327**	**$ 441**	**$ 768**	$ —[b]	$ 155[b]

(a) The 2007 and 2006 activity reflect the 2004 merger with Bank One Corporation.
(b) Excludes $10 million and $21 million at December 31, 2007 and 2006, respectively, related to the Bank of New York transaction.

Note 12 – Securities

Securities are classified as AFS, held-to-maturity ("HTM") or trading. Trading securities are discussed in Note 6 on pages 158–160 of this Annual Report. Securities are classified primarily as AFS when used to manage the Firm's exposure to interest rate movements, as well as to make strategic longer-term investments. AFS securities are carried at fair value on the Consolidated Balance Sheets. Unrealized gains and losses, after any applicable SFAS 133 hedge accounting adjustments, are reported as net increases or decreases to accumulated other comprehensive income (loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains (losses) on the Consolidated Statements of Income. Securities that the Firm has the positive intent and ability to hold to maturity are classified as HTM and are carried at amortized cost on the Consolidated Balance Sheets. The Firm has not classified new purchases of securities as HTM for the past several years.

The following table presents realized gains and losses from AFS securities.

Year ended December 31, (in millions)	**2008**	2007	2006
Realized gains	**$ 1,890**	$ 667	$ 399
Realized losses	**(330)**[b]	(503)	(942)
Net realized securities gains (losses)[a]	**$ 1,560**	$ 164	$ (543)

(a) Proceeds from securities sold were within approximately 2% of amortized cost.
(b) 2008 includes $76 million of losses due to the other-than-temporary impairment of subprime mortgage-backed securities.

The amortized cost and estimated fair value of AFS and HTM securities were as follows for the dates indicated.

	2008				2007			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale securities								
U.S. government and federal agency obligations:								
U.S. treasuries	**$ 616**	**$ 2**	**$ 7**	**$ 611**	$ 2,470	$ 14	$ 2	$ 2,482
Mortgage-backed securities	**6,281**	**148**	**5**	**6,424**	8	1	—	9
Agency obligations	**69**	**13**	**—**	**82**	73	9	—	82
Collateralized mortgage obligations	**557**	**9**	**8**	**558**	—	—	—	—
U.S. government-sponsored enterprise obligations:								
Mortgage-backed securities	**108,360**	**2,257**	**214**	**110,403**	62,505	641	55	63,091
Direct obligations[a]	**9,717**	**37**	**90**	**9,664**	6	2	—	8
Obligations of state and political subdivisions	**3,479**	**94**	**238**	**3,335**	92	1	2	91
Certificates of deposit	**17,226**	**64**	**8**	**17,282**	2,040	—	—	2,040
Debt securities issued by non-U.S. governments	**8,173**	**173**	**2**	**8,344**	6,804	18	28	6,794
Corporate debt securities	**9,358**	**257**	**61**	**9,554**	1,927	1	4	1,924
Equity securities	**3,073**	**2**	**7**	**3,068**	4,124	55	1	4,178
Mortgage-backed securities:								
Prime	**7,762**	**4**	**1,739**	**6,027**	3,551	7	5	3,553
Subprime	**213**	**—**	**19**	**194**	384	41	28	397
Alt-A	**1,064**	**—**	**196**	**868**	—	—	—	—
Non-U.S. residential	**2,233**	**24**	**182**	**2,075**	—	—	—	—
Commercial	**4,623**	**—**	**684**	**3,939**	—	—	—	—
Asset-backed securities:								
Credit card receivables	**13,651**	**8**	**2,268**	**11,391**	775	—	47	728
Other consumer loans	**1,008**	**4**	**134**	**878**	—	—	—	—
Commercial and industrial loans	**11,847**	**168**	**820**	**11,195**	—	—	—	—
Other	**18**	**—**	**1**	**17**	29	—	—	29
Total available-for-sale securities	**$209,328**	**$3,264**	**$6,683**	**$205,909**	$ 84,788	$ 790	$ 172	$ 85,406
Held-to-maturity securities[b]	**$ 34**	**$ 1**	**$ —**	**$ 35**	$ 44	$ 1	$ —	$ 45

(a) Consists primarily of mortgage-related obligations.
(b) Consists primarily of mortgage-backed securities issued by U.S. government-sponsored entities.

The following table presents the fair value and gross unrealized losses for AFS securities by aging category at December 31.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2008 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total Fair value	Total Gross unrealized losses
Available-for-sale securities						
U.S. government and federal agency obligations:						
U.S. treasuries	**$ 249**	**$ 7**	**$ —**	**$ —**	**$ 249**	**$ 7**
Mortgage-backed securities	**2,042**	**5**	**1**	**—**	**2,043**	**5**
Agency obligations	**—**	**—**	**—**	**—**	**—**	**—**
Collateralized mortgage obligations	**427**	**8**	**—**	**—**	**427**	**8**
U.S. government-sponsored enterprise obligations:						
Mortgage-backed securities	**3,547**	**211**	**468**	**3**	**4,015**	**214**
Direct obligations	**7,410**	**90**	**—**	**—**	**7,410**	**90**
Obligations of state and political subdivisions	**1,129**	**232**	**16**	**6**	**1,145**	**238**
Certificates of deposit	**382**	**8**	**—**	**—**	**382**	**8**
Debt securities issued by non-U.S. governments	**308**	**1**	**74**	**1**	**382**	**2**
Corporate debt securities	**558**	**54**	**30**	**7**	**588**	**61**
Equity securities	**19**	**7**	**—**	**—**	**19**	**7**
Mortgage-backed securities:						
Prime	**5,386**	**1,642**	**333**	**97**	**5,719**	**1,739**
Subprime	**—**	**—**	**151**	**19**	**151**	**19**
Alt-A	**868**	**196**	**—**	**—**	**868**	**196**
Non-U.S. residential	**1,908**	**182**	**—**	**—**	**1,908**	**182**
Commercial	**3,939**	**684**	**—**	**—**	**3,939**	**684**
Asset-backed securities:						
Credit card receivables	**10,267**	**1,964**	**472**	**304**	**10,739**	**2,268**
Other consumer loans	**813**	**134**	**—**	**—**	**813**	**134**
Commercial and industrial loans	**9,059**	**820**	**—**	**—**	**9,059**	**820**
Other	**—**	**—**	**17**	**1**	**17**	**1**
Total securities with gross unrealized losses	**$48,311**	**$ 6,245**	**$ 1,562**	**$ 438**	**$ 49,873**	**$ 6,683**

December 31, 2007 (in millions)	Securities with gross unrealized losses					
	Less than 12 months		12 months or more		Total	
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total Fair value	Total Gross unrealized losses
Available-for-sale securities						
U.S. government and federal agency obligations:						
U.S. treasuries	$ 175	$ 2	$ —	$ —	$ 175	$ 2
Mortgage-backed securities	—	—	—	—	—	—
Agency obligations	—	—	—	—	—	—
Collateralized mortgage obligations	—	—	—	—	—	—
U.S. government-sponsored enterprise obligations:						
Mortgage-backed securities	—	—	1,345	55	1,345	55
Direct obligations	—	—	—	—	—	—
Obligations of state and political subdivisions	21	2	—	—	21	2
Certificates of deposit	1,102	—	—	—	1,102	—
Debt securities issued by non-U.S. governments	335	3	1,928	25	2,263	28
Corporate debt securities	1,126	3	183	1	1,309	4
Equity securities	—	—	4	1	4	1
Mortgage-backed securities:						
Prime	1,313	5	—	—	1,313	5
Subprime	306	28	—	—	306	28
Alt-A	—	—	—	—	—	—
Non-U.S. residential	—	—	—	—	—	—
Commercial	—	—	—	—	—	—
Asset-backed securities:						
Credit card receivables	443	31	285	16	728	47
Other consumer loans	—	—	—	—	—	—
Commercial and industrial loans	—	—	—	—	—	—
Other	29	—	—	—	29	—
Total securities with gross unrealized losses	$ 4,850	$ 74	$ 3,745	$ 98	$ 8,595	$ 172

AFS securities in unrealized loss positions are analyzed in depth as part of the Firm's ongoing assessment of other-than-temporary impairment. Potential other-than-temporary impairment of AFS securities is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; the financial condition and near-term prospects of the issuer or underlying collateral of a security; and the Firm's intent and ability to retain the security in order to allow for an anticipated recovery in fair value. Where applicable under EITF Issue 99-20, the Firm estimates the cash flows over the life of the security to determine if any adverse changes have occurred that require an other-than-temporary impairment charge. The Firm applies EITF Issue 99-20 to beneficial interests in securitizations that are rated below "AA" at acquisition or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment. The Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its recorded investment, including as applicable under EITF Issue 99-20, when an adverse change in cash flows has occurred.

The Firm's analysis of the financial condition and near term prospects of the issuer or underlying collateral of a security noted above includes analysis of performance indicators relevant to the specific investment. For asset-backed investments, such relevant performance indicators may include ratings, valuation of subordinated positions in current and/or stress scenarios, excess spread or overcollateralization levels, and whether certain protective triggers have been reached. For mortgage-backed investments, such relevant performance indicators may include ratings, prepayment speeds, delinquencies, default rates, loss severities, geographic concentration, and forecasted performance under various home price decline stress scenarios.

As of December 31, 2008, approximately $438 million of the unrealized losses relate to securities that have been in an unrealized loss position for longer than 12 months, and primarily relate to prime mortgage-backed securities and credit card-related asset-backed securities. The prime mortgage-backed securities are primarily rated "AAA", while the credit card-related asset-backed securities are rated "BBB". Based upon the analyses described above, which have been applied to these securities, the Firm believes that the unrealized losses result from liquidity conditions in the current market environment and not from concerns regarding the credit of the issuers or underlying collateral. The Firm does not believe it is probable that it will not recover its investments, given the current levels of collateral and credit enhancements that exist to protect the investments. For securities analyzed for impairment under EITF 99-20, the collateral and credit enhancement features are at levels sufficient to ensure that an adverse change in expected future cash flows has not occurred.

As of December 31, 2008, approximately $6.2 billion of the unrealized losses relate to securities that have been in an unrealized loss position for less than 12 months; these losses largely relate to credit

card-related asset-backed securities, mortgage-backed securities issued by private issuers and commercial and industrial asset-backed securities. Of the $2.0 billion of unrealized losses related to credit card-related asset-backed securities, $1.7 billion relates to purchased credit card-related asset-backed securities, and $304 million relates to retained interests in the Firm's own credit card receivable securitizations. The credit card-related asset-backed securities include "AAA", "A" and "BBB" ratings. Based on the levels of excess spread available to absorb credit losses, and based on the value of interests subordinate to the Firm's interests where applicable, the Firm does not believe it is probable that it will not recover its investments. Where applicable under EITF 99-20, the collateral and credit enhancement features are at levels sufficient to ensure that an adverse change in expected future cash flows has not occurred. Of the remaining unrealized losses as of December 31, 2008, related to securities that have been in an unrealized loss position for less than 12 months, $2.7 billion relates to mortgage-backed securities issued by private issuers and $820 million relates to commercial and industrial asset-backed securities. The mortgage-backed securities and commercial and industrial asset-backed securities are predominantly rated "AAA". Based on an analysis of the performance indicators noted above for mortgage-backed securities and asset-backed securities, which have been applied to the loans underlying these securities, the Firm does not believe it is probable that it will not recover its investments in these securities.

The Firm intends to hold the securities in an unrealized loss position for a period of time sufficient to allow for an anticipated recovery in fair value or maturity. The Firm has sufficient capital and liquidity to hold these securities until recovery in fair value or maturity. Based on the Firm's evaluation of the factors and other objective evidence described above, the Firm believes that the securities are not other-than-temporarily impaired as of December 31, 2008.

The following table presents the amortized cost, estimated fair value and average yield at December 31, 2008, of JPMorgan Chase's AFS and HTM securities by contractual maturity.

By remaining maturity at **December 31, 2008** (in millions, except ratios)	Available-for-sale securities			Held-to-maturity securities		
	Amortized cost	Fair value	Average yield[(b)]	Amortized cost	Fair value	Average yield[(b)]
Due in one year or less	$ 24,163	$ 24,056	2.80%	$ —	$ —	—%
Due after one year through five years	26,115	25,075	2.46	—	—	—
Due after five years through ten years	13,105	12,436	3.78	31	32	6.89
Due after ten years[(a)]	145,945	144,342	5.19	3	3	5.69
Total securities	$ 209,328	$ 205,909	4.49%	$ 34	$ 35	6.78%

(a) Includes securities with no stated maturity. Substantially all of the Firm's mortgage-backed securities and collateralized mortgage obligations are due in ten years or more based upon contractual maturity. The estimated duration, which reflects anticipated future prepayments based upon a consensus of dealers in the market, is approximately four years for mortgage-backed securities and collateralized mortgage obligations.

(b) The average yield is based upon amortized cost balances at year-end. Yields are derived by dividing interest income by total amortized cost. Taxable-equivalent yields are used where applicable.

Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions, primarily to finance the Firm's inventory positions, acquire securities to cover short positions and settle other securities obligations. The Firm also enters into these transactions to accommodate customers' needs.

Resale agreements and repurchase agreements are generally treated as collateralized financing transactions carried on the Consolidated Balance Sheets at the amounts the securities will be subsequently sold or repurchased, plus accrued interest. On January 1, 2007, pursuant to the adoption of SFAS 159, the Firm elected fair value measurement for certain resale and repurchase agreements. In 2008, the Firm elected fair value measurement for certain newly transacted securities borrowed and securities lending agreements. For a further discussion of SFAS 159, see Note 5 on pages 156–158 of this Annual Report. The securities financing agreements for which the fair value option was elected continue to be reported within securities purchased under resale agreements; securities loaned or sold under repurchase agreements; securities borrowed; and other borrowed funds on the Consolidated Balance Sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with SFAS 133, all changes in fair value, including any interest elements, are reported in principal transactions revenue. Where appropriate, resale and repurchase agreements with the same counterparty are reported on a net basis in accordance with FIN 41. JPMorgan Chase takes possession of securities purchased under resale agreements. On a daily basis, JPMorgan Chase monitors the market value of the underlying collateral, primarily U.S. and non-U.S. government and agency securities, that it has received from its counterparties, and requests additional collateral when necessary.

Transactions similar to financing activities that do not meet the SFAS 140 definition of a repurchase agreement are accounted for as "buys" and "sells" rather than financing transactions. These transactions are accounted for as a purchase (sale) of the underlying securities with a forward obligation to sell (purchase) the securities. The forward purchase (sale) obligation, a derivative, is recorded on the Consolidated Balance Sheets at its fair value, with changes in fair value recorded in principal transactions revenue.

Securities borrowed and securities lent are recorded at the amount of cash collateral advanced or received. Securities borrowed consist primarily of government and equity securities. JPMorgan Chase monitors the market value of the securities borrowed and lent on a daily basis and calls for additional collateral when appropriate. Fees received or paid in connection with securities borrowed and lent are recorded in interest income or interest expense.

The following table details the components of collateralized financings.

December 31, (in millions)	**2008**	2007
Securities purchased under resale agreements[a]	**$ 200,265**	$ 169,305
Securities borrowed[b]	**124,000**	84,184
Securities sold under repurchase agreements[c]	**$ 174,456**	$ 126,098
Securities loaned	**6,077**	10,922

(a) Includes resale agreements of $20.8 billion and $19.1 billion accounted for at fair value at December 31, 2008 and 2007, respectively.
(b) Includes securities borrowed of $3.4 billion accounted for at fair value at December 31, 2008.
(c) Includes repurchase agreements of $3.0 billion and $5.8 billion accounted for at fair value at December 31, 2008 and 2007, respectively.

JPMorgan Chase pledges certain financial instruments it owns to collateralize repurchase agreements and other securities financings. Pledged securities that can be sold or repledged by the secured party are identified as financial instruments owned (pledged to various parties) on the Consolidated Balance Sheets.

At December 31, 2008, the Firm received securities as collateral that could be repledged, delivered or otherwise used with a fair value of approximately $511.9 billion. This collateral was generally obtained under resale or securities borrowing agreements. Of these securities, approximately $456.6 billion were repledged, delivered or otherwise used, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales.

Note 14 – Loans

The accounting for a loan may differ based upon whether it is originated or purchased and as to whether the loan is used in an investing or trading strategy. For purchased loans held-for-investment, the accounting also differs depending on whether a loan is credit-impaired at the date of acquisition. Purchased loans with evidence of credit deterioration since the origination date and for which it is probable, at acquisition, that all contractually required payments receivable will not be collected are considered to be credit-impaired. The measurement framework for loans in the Consolidated Financial Statements is one of the following:

- At the principal amount outstanding, net of the allowance for loan losses, unearned income and any net deferred loan fees or costs, for loans held for investment (other than purchased credit-impaired loans);
- At the lower of cost or fair value, with valuation changes recorded in noninterest revenue, for loans that are classified as held-for-sale; or
- At fair value, with changes in fair value recorded in noninterest revenue, for loans classified as trading assets or risk managed on a fair value basis;
- Purchased credit-impaired loans held for investment are accounted for under SOP 03-3 and initially measured at fair value, which includes estimated future credit losses. Accordingly, an allowance for loan losses related to these loans is not recorded at the acquisition date.

See Note 5 on pages 156–158 of this Annual Report for further information on the Firm's elections of fair value accounting under SFAS 159. See Note 6 on pages 158–160 of this Annual Report for further information on loans carried at fair value and classified as trading assets.

For loans held for investment, other than purchased credit-impaired loans, interest income is recognized using the interest method or on a basis approximating a level rate of return over the term of the loan.

Loans within the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio. Transfers to held-for-sale are recorded at the lower of cost or fair value on the date of transfer. Credit-related losses are charged off to the allowance for loan losses and losses due to changes in interest rates, or exchange rates, are recognized in noninterest revenue.

Loans within the held-for-sale portfolio that management decides to retain are transferred to the held-for-investment portfolio at the lower of cost or fair value. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 15 on pages 178–180 of this Annual Report.

Nonaccrual loans are those on which the accrual of interest is discontinued. Loans (other than certain consumer and purchased credit-impaired loans discussed below) are placed on nonaccrual status immediately if, in the opinion of management, full payment of principal or interest is in doubt, or when principal or interest is 90 days or more past due and collateral, if any, is insufficient to cover principal and interest. Loans are charged off to the allowance for loan losses when it is highly certain that a loss has been realized. Interest accrued but not collected at the date a loan is placed on nonaccrual status is reversed against interest income. In addition, the amortization of net deferred loan fees is suspended. Interest income on nonaccrual loans is recognized only to the extent it is received in cash. However, where there is doubt regarding the ultimate collectibility of loan principal, all cash thereafter received is applied to reduce the carrying value of such loans (i.e., the cost recovery method). Loans are restored to accrual status only when future payments of interest and principal are reasonably assured.

Consumer loans, other than purchased credit-impaired loans, are generally charged to the allowance for loan losses upon reaching specified stages of delinquency, in accordance with the Federal Financial Institutions Examination Council policy. For example, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification of the filing of bankruptcy, whichever is earlier. Residential mortgage products are generally charged off to net realizable value at no later than 180 days past due. Other consumer

products, if collateralized, are generally charged off to net realizable value at 120 days past due. Accrued interest on residential mortgage products, automobile financings, student loans and certain other consumer loans are accounted for in accordance with the nonaccrual loan policy discussed in the preceding paragraph. Interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. Accrued interest on all other consumer loans is generally reversed against interest income when the loan is charged off. A collateralized loan is reclassified to assets acquired in loan satisfactions, within other assets, only when JPMorgan Chase has taken physical possession of the collateral, regardless of whether formal foreclosure proceedings have taken place.

For purchased credit-impaired loans, the excess of the loan's cash flows expected to be collected over the initial fair value (i.e., the accretable yield) is accreted into interest income at a level rate of return over the term of the loan, provided that the timing and amount of future cash flows is reasonably estimable. On a periodic basis, the Firm updates the amount of cash flows expected to be collected for these loans, incorporating assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current market conditions. Probable and significant increases in cash flows previously expected to be collected would first be used to reverse any related valuation allowance; any remaining increases are recognized prospectively as interest income. Probable decreases in expected cash flows after the acquisition date, excluding decreases related to repricings of variable rate loans, are recognized through the allowance for loan losses. Disposals of loans, which may include sales of loans, receipt of payments in full by the borrower, or foreclosure, result in removal of the loan from the SOP 03-3 portfolio.

With respect to purchased credit-impaired loans, when the timing and/or amounts of expected cash flows on such loans are not reasonably estimable, no interest is accreted and the loan is reported as a nonperforming loan; otherwise, if the timing and amounts of expected cash flows for purchased credit-impaired loans are reasonably estimable, then interest is accreted and the loans are reported as performing loans.

The composition of the Firm's aggregate loan portfolio at each of the dates indicated was as follows.

December 31, (in millions)	2008	2007
U.S. wholesale loans:		
Commercial and industrial	**$ 68,709**	$ 55,655
Real estate	**64,214**	16,748
Financial institutions	**20,615**	14,757
Government agencies	**5,918**	5,770
Other	**22,330**	25,883
Loans held-for-sale and at fair value	**4,990**	14,440
Total U.S. wholesale loans	**186,776**	133,253
Non-U.S. wholesale loans:		
Commercial and industrial	**27,941**	27,659
Real estate	**2,667**	3,527
Financial institutions	**16,381**	16,740
Government agencies	**603**	720
Other	**18,711**	21,968
Loans held-for-sale and at fair value	**8,965**	9,209
Total non-U.S. wholesale loans	**75,268**	79,823
Total wholesale loans:[a][b]		
Commercial and industrial	**96,650**	83,314
Real estate[c]	**66,881**	20,275
Financial institutions	**36,996**	31,497
Government agencies	**6,521**	6,490
Other	**41,041**	47,851
Loans held-for-sale and at fair value[d]	**13,955**	23,649
Total wholesale loans	**262,044**	213,076
Total consumer loans:[e]		
Home equity	**114,335**	94,832
Prime mortgage	**72,266**	39,988
Subprime mortgage	**15,330**	15,473
Option ARMs	**9,018**	—
Auto loans	**42,603**	42,350
Credit card[f]	**104,746**	84,352
Other	**33,715**	25,314
Loans held-for-sale[g]	**2,028**	3,989
Total consumer loans – excluding purchased credit-impaired	**394,041**	306,298
Consumer loans – purchased credit-impaired	**88,813**	NA
Total consumer loans	**482,854**	306,298
Total loans[b][h]	**$ 744,898**	$ 519,374

(a) Includes Investment Bank, Commercial Banking, Treasury & Securities Services and Asset Management.
(b) Includes purchased credit-impaired loans of $224 million at December 31, 2008, acquired in the Washington Mutual transaction.
(c) Represents credits extended for real estate-related purposes to borrowers who are primarily in the real estate development or investment businesses and which the repayment is predominantly from the sale, lease, management, operations or refinancing of the property.
(d) Includes loans for commercial & industrial, real estate, financial institutions and other of $11.0 billion, $428 million, $1.5 billion and $995 million at December 31, 2008, respectively, and $19.6 billion, $548 million, $862 million and $2.7 billion at December 31, 2007 respectively.
(e) Includes Retail Financial Services, Card Services and the Corporate/Private Equity segment.
(f) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(g) Includes loans for prime mortgage and other (largely student loans) of $206 million and $1.8 billion at December 31, 2008, respectively, and $570 million and $3.4 billion at December 31, 2007, respectively.
(h) Loans (other than purchased loans and those for which the SFAS 159 fair value option has been elected) are presented net of unearned income and net deferred loan fees of $694 million and $1.0 billion at December 31, 2008 and 2007, respectively.

The following table reflects information about the Firm's loan sales.

Year ended December 31, (in millions)	**2008**	2007	2006
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]	**$(2,508)**	$ 99	$ 672

(a) Excludes sales related to loans accounted for at fair value.

Purchased credit-impaired loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain loans that it deemed to be credit-impaired under SOP 03-3. Wholesale loans with a carrying amount of $224 million at December 31, 2008, were determined to be credit-impaired at the date of acquisition in accordance with SFAS 114. These wholesale loans are being accounted for individually (not on a pooled basis) and are reported as nonperforming loans since cash flows for each individual loan are not reasonably estimable. Such loans are excluded from the remainder of the following discussion, which relates solely to purchased credit-impaired consumer loans.

Purchased credit-impaired consumer loans were determined to be credit-impaired based upon specific risk characteristics of the loan, including product type, loan-to-value ratios, FICO scores, and past due status. SOP 03-3 allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer loans were aggregated into pools of loans with common risk characteristics.

The table below sets forth information about these purchased credit-impaired consumer loans at the acquisition date.

(in millions)	September 25, 2008[a][b]
Contractually required payments receivable (including interest)	$ 168,460
Less: Nonaccretable difference	(45,690)
Cash flows expected to be collected[c]	122,770
Less: Accretable yield[d]	(32,662)
Fair value of loans acquired	$ 90,108

(a) Date of the Washington Mutual transaction.
(b) The amounts in the table above were revised in the fourth quarter of 2008 due to the Firm's refinement of both estimates and its application of certain provisions of SOP 03-3.
(c) Represents undiscounted principal and interest cash flows expected at acquisition.
(d) This amount is recognized into interest income over the estimated life of the underlying loans.

The Firm determined the fair value of the purchased credit-impaired consumer loans by discounting the cash flows expected to be collected at a market observable discount rate, when available, adjusted for factors that a market participant would consider in determining fair value. In determining the cash flows expected to be collected, management incorporated assumptions regarding default rates, loss severities and the amounts and timing of prepayments. Contractually required payments were determined following the same process used to estimate cash flows expected to be collected, but without incorporating assumptions related to default rates and loss severities.

Purchased credit-impaired loans acquired in the Washington Mutual transaction are reported in loans on the Firm's Consolidated Balance Sheets. Following the initial acquisition date of these loans, the allowance for loan losses, if any is required, would be reported as a reduction of the carrying amount of the loans. No allowance has been recorded for these loans as of December 31, 2008. The outstanding balance and the carrying value of the purchased credit-impaired consumer loans were as follows.

December 31, 2008 (in millions)	
Outstanding balance[a]	$ 118,180
Carrying amount	88,813

(a) Represents the sum of principal and earned interest at the reporting date.

Interest income is being accreted on the purchased credit-impaired consumer loans based on the Firm's belief that both the timing and amount of cash flows expected to be collected is reasonably estimable. For variable rate loans, expected future cash flows are based on the current contractual rate of the underlying loans.

The table below sets forth the accretable yield activity for these loans for the year ended December 31, 2008.

Accretable Yield Activity
(in millions)

Balance, September 30, 2008	$ 32,662
Accretion into interest income	(1,292)
Changes in interest rates on variable rate loans	(4,877)
Balance, December 31, 2008	**$ 26,493**

Impaired loans

A loan is considered impaired when, based upon current information and events, it is probable that the Firm will be unable to collect all amounts due (including principal and interest) according to the contractual terms of the loan agreement. Impaired loans include certain nonaccrual wholesale loans and loans for which a charge-off has been recorded based upon the fair value of the underlying collateral. Impaired loans also include loans that have been modified in troubled debt restructurings as a concession to borrowers experiencing financial difficulties. Troubled debt restructurings typically result from the Firm's loss mitigation activities and could include rate reductions, principal forgiveness, forbearance and other actions intended to minimize the economic loss and to avoid foreclosure or repossession of collateral. When the Firm modifies home equity lines of credit in troubled debt restructurings, future lending commitments related to the modified loans are canceled as part of the terms of the modification. Accordingly, the Firm does not have future commitments to lend additional funds related to these modified loans. Purchased credit-impaired loans are not required to be reported as impaired loans as long as it is probable that the Firm expects to collect all cash flows expected at acquisition, plus additional cash flows expected to be collected arising from changes in estimates after acquisition. Accordingly, none of the credit-impaired loans acquired in the Washington Mutual transaction are reported in the following tables.

Interest income on impaired loans is recognized based on the Firm's policy for recognizing interest on accrual and nonaccrual loans. Certain loans that have been modified through troubled debt restructurings accrue interest under this policy.

The tables below set forth information about JPMorgan Chase's impaired loans, excluding credit card loans which are discussed below. The Firm primarily uses the discounted cash flow method for valuing impaired loans.

December 31, (in millions)	2008	2007
Impaired loans with an allowance:		
Wholesale	**$ 2,026**	$ 429
Consumer[a]	**2,252**	322
Total impaired loans with an allowance[b]	**4,278**	751
Impaired loans without an allowance:[c]		
Wholesale	**62**	28
Consumer[a]	**—**	—
Total impaired loans without an allowance	**62**	28
Total impaired loans[b]	**$ 4,340**	$ 779
Allowance for impaired loans under SFAS 114:		
Wholesale	**$ 712**	$ 108
Consumer[a]	**379**	116
Total allowance for impaired loans under SFAS 114[d]	**$ 1,091**	$ 224

Year ended December 31, (in millions)	2008	2007	2006
Average balance of impaired loans during the period:			
Wholesale	**$ 896**	$ 316	$ 697
Consumer[a]	**1,211**	317	300
Total impaired loans[b]	**$ 2,107**	$ 633	$ 997
Interest income recognized on impaired loans during the period:			
Wholesale	**$ —**	$ —	$ 2
Consumer[a]	**57**	—	—
Total interest income recognized on impaired loans during the period	**$ 57**	$ —	$ 2

(a) Excludes credit card loans.
(b) In 2008, methodologies for calculating impaired loans have changed. Prior periods have been revised to conform to current presentation.
(c) When the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan, then the loan does not require an allowance under SFAS 114.
(d) The allowance for impaired loans under SFAS 114 is included in JPMorgan Chase's allowance for loan losses. The allowance for certain consumer impaired loans has been categorized in the allowance for loan losses as formula-based.

During 2008, loss mitigation efforts related to delinquent mortgage and home equity loans increased substantially, resulting in a significant increase in consumer troubled debt restructurings. In the fourth quarter of 2008, the Firm announced plans to further expand loss mitigation efforts related to these portfolios, including plans to open regional counseling centers, hire additional loan counselors, introduce new financing alternatives, proactively reach out to borrowers to offer pre-qualified modifications, and commence a new process to independently review each loan before moving it into the foreclosure process. These loss mitigation efforts, which generally represent various forms of term extensions, rate reductions and forbearances, are expected to result in additional increases in the balance of modified loans carried on the Firm's balance sheet, including loans accounted for as troubled debt restructurings, while minimizing the economic loss to the Firm and providing alternatives to foreclosure.

JPMorgan Chase may modify the terms of its credit card loan agreements with borrowers who have experienced financial difficulty. Such modifications may include canceling the customer's available line of credit on the credit card, reducing the interest rate on the card, and placing the customer on a fixed payment plan not exceeding 60 months. If the cardholder does not comply with the modified terms, then the credit card loan agreement will revert back to its original terms, with the amount of any loan outstanding reflected in the appropriate delinquency "bucket" and the loan amounts then charged-off in accordance with the Firm's standard charge-off policy. Under these procedures, $2.4 billion and $1.4 billion of on-balance sheet credit card loan outstandings have been modified at December 31, 2008 and 2007, respectively. In accordance with the Firm's methodology for determining its consumer allowance for loan losses, the Firm had already provisioned for these credit card loans; the modifications to these credit card loans had no incremental impact on the Firm's allowance for loan losses.

Note 15 – Allowance for credit losses

During 2008, in connection with the Washington Mutual transaction, the Firm recorded adjustments to its provision for credit losses in the aggregate amount of $1.5 billion to conform the Washington Mutual loan loss reserve methodologies to the appropriate JPMorgan Chase methodology, based upon the nature and characteristics of the underlying loans. This amount included an adjustment of $646 million to the wholesale provision for credit losses and an adjustment of $888 million to the consumer provision for credit losses. The Firm's methodologies for determining its allowance for credit losses, which have been applied to the Washington Mutual loans, are described more fully below.

JPMorgan Chase's allowance for loan losses covers the wholesale (risk-rated) and consumer (scored) loan portfolios and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also computes an allowance for wholesale lending-related commitments using a methodology similar to that used for the wholesale loans.

The allowance for loan losses includes an asset-specific component and a formula-based component. The asset-specific component relates to provisions for losses on loans considered impaired and measured pursuant to SFAS 114. An allowance is established when the discounted cash flows (or collateral value or observable market price) of the loan is lower than the carrying value of that loan. To compute the asset-specific component of the allowance, larger impaired loans are evaluated individually, and smaller impaired loans are evaluated as a pool using historical loss experience for the respective class of assets. An allowance for loan losses will also be recorded for purchased credit-impaired loans accounted for in accordance with SOP 03-3 if there are probable decreases in expected future cash flows other than decreases related to repricing of variable rate loans. Any required allowance would be measured based on the present value of expected cash flows discounted at the loan's (or pool's) effective interest rate. For additional information on purchased credit-impaired loans, see Note 14 on pages 175–178 of this Annual Report.

The formula-based component covers performing wholesale and consumer loans. For risk-rated loans (generally loans originated by the wholesale lines of business), it is based on a statistical calculation, which is adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but are not yet reflected in the factors used to derive the statistical calculation. The statistical calculation is the product of probability of default ("PD") and loss given default ("LGD"). These factors are differentiated by risk rating and expected maturity. PD estimates are based on observable external data, primarily credit-rating agency default statistics. LGD estimates are based on a study of actual credit losses over more than one credit cycle. For scored loans (generally loans originated by the consumer lines of business), loss is primarily determined by applying statistical loss factors, including loss frequency and severity factors, to pools of loans by asset type. In developing loss frequency and severity assumptions, known and anticipated changes in the economic environment, including changes in housing prices, unemployment rates and other risk indicators, are considered. Multiple forecasting methods are used to estimate statistical losses, including credit loss forecasting models and vintage-based loss forecasting.

Management applies its judgment within specified ranges to adjust the statistical calculation. Where adjustments are made to the statistical calculation for the risk-rated portfolios, the determination of the appropriate point within the range are based upon management's quantitative and qualitative assessment of the quality of underwriting standards; relevant internal factors affecting the credit quality of the current portfolio; and external factors such as current macroeconomic and political conditions that have occurred but are not yet reflected in the loss factors. Factors related to concentrated and deteriorating industries are also incorporated into the calculation, where relevant. Adjustments to the statistical calculation for the scored loan portfolios are accomplished in part by analyzing the historical loss experience for each major product segment. The specific ranges and the determination of the appropriate point within the range are based upon management's view of uncertainties that relate to current macroeconomic and political conditions, the quality of underwriting standards, and other relevant internal and external factors affecting the credit quality of the portfolio.

The allowance for lending-related commitments represents management's estimate of probable credit losses inherent in the Firm's process of extending credit. Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2008, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses that are inherent in the portfolio, including those not yet identifiable).

The table below summarizes the changes in the allowance for loan losses.

Year ended December 31, (in millions)	**2008**	2007	2006
Allowance for loan losses at January 1	**$ 9,234**	$ 7,279	$ 7,090
Cumulative effect of change in accounting principles(a)	**—**	(56)	—
Allowance for loan losses at January 1, adjusted	**9,234**	7,223	7,090
Gross charge-offs	**10,764**	5,367	3,884
Gross (recoveries)	**(929)**	(829)	(842)
Net charge-offs	**9,835**	4,538	3,042
Provision for loan losses			
Provision excluding accounting conformity	**19,660**	6,538	3,153
Provision for loan losses – accounting conformity(b)	**1,577**	—	—
Total provision for loan losses	**21,237**	6,538	3,153
Addition resulting from Washington Mutual transaction	**2,535**	—	—
Other(c)	**(7)**	11	78
Allowance for loan losses at December 31	**$ 23,164**	$ 9,234	$ 7,279
Components:			
Asset-specific	**$ 786**	$ 188	$ 118
Formula-based	**22,378**	9,046	7,161
Total Allowance for loan losses	**$ 23,164**	$ 9,234	$ 7,279

(a) Reflects the effect of the adoption of SFAS 159 at January 1, 2007. For a further discussion of SFAS 159, see Note 5 on pages 156–158 of this Annual Report.
(b) Relates to the Washington Mutual transaction in 2008.
(c) The 2008 amount represents foreign-exchange translation. The 2007 amount represents assets acquired of $5 million and $5 million of foreign-exchange translation. The 2006 amount represents the Bank of New York transaction.

The table below summarizes the changes in the allowance for lending-related commitments.

Year ended December 31, (in millions)	2008	2007	2006
Allowance for lending-related commitments at January 1	**$ 850**	$ 524	$ 400
Provision for lending-related commitments			
Provision excluding accounting conformity	**(215)**	326	117
Provision for lending-related commitments – accounting conformity[a]	**(43)**	—	—
Total provision for lending-related commitments	**(258)**	326	117
Addition resulting from Washington Mutual	**66**	—	—
Other[b]	**1**	—	7
Allowance for lending-related commitments at December 31	**$ 659**	$ 850	$ 524
Components:			
Asset-specific	**$ 29**	$ 28	$ 33
Formula-based	**630**	822	491
Total allowance for lending-related commitments	**$ 659**	$ 850	$ 524

(a) Related to the Washington Mutual transaction.
(b) The 2006 amount represents the Bank of New York transaction.

Note 16 – Loan securitizations

JPMorgan Chase securitizes and sells a variety of loans, including residential mortgage, credit card, automobile, student, and commercial loans (primarily related to real estate). JPMorgan Chase-sponsored securitizations utilize SPEs as part of the securitization process. These SPEs are structured to meet the definition of a QSPE (as discussed in Note 1 on page 134 of this Annual Report); accordingly, the assets and liabilities of securitization-related QSPEs are not reflected on the Firm's Consolidated Balance Sheets (except for retained interests, as described below). The primary purpose of these securitization vehicles is to meet investor needs and to generate liquidity for the Firm through the sale of loans to the QSPEs. These QSPEs are financed through the issuance of fixed, or floating-rate asset-backed securities.

The Firm records a loan securitization as a sale when the accounting criteria for a sale are met. Those criteria are: (1) the transferred assets are legally isolated from the Firm's creditors; (2) the entity can pledge or exchange the financial assets, or if the entity is a QSPE, its investors can pledge or exchange their interests; and (3) the Firm does not maintain effective control to repurchase the transferred assets before their maturity or have the ability to unilaterally cause the holder to return the transferred assets.

For loan securitizations that meet the accounting sales criteria, the gains or losses recorded depend, in part, on the carrying amount of the loans sold except for servicing assets which are initially recorded at fair value. At the time of sale, any retained servicing asset is initially recognized at fair value. The remaining carrying amount of the loans sold is allocated between the loans sold and the other interests retained, based upon their relative fair values on the date of sale. Gains on securitizations are reported in noninterest revenue.

When quoted market prices are not available, the Firm estimates the fair value for these retained interests by calculating the present value of future expected cash flows using modeling techniques. Such models incorporate management's best estimates of key variables, such as expected credit losses, prepayment speeds and the discount rates appropriate for the risks involved. See Note 4 on page 144 of this Annual Report for further information on the valuation of retained interests.

The Firm may retain interests in the securitized loans in the form of undivided seller's interest, senior or subordinated interest-only strips, debt and equity tranches, escrow accounts and servicing rights. The classification of retained interests is dependent upon several factors, including the type of interest, whether or not the retained interest is represented by a security certificate and when it was retained. Interests retained by IB are classified as trading assets. See credit card securitizations and mortgage securitizations sections of the note for further information on the classification of their related retained interests. Retained interests classified as AFS that are rated below "AA" by an external rating agency are subject to the impairment provisions of EITF 99-20, as discussed in Note 12 on page 174 of this Annual Report.

The following table presents the total unpaid principal amount of assets held in JPMorgan Chase-sponsored securitization entities, for which sale accounting was achieved and to which the Firm has continuing involvement, at December 31, 2008 and 2007. Continuing involvement includes servicing the loans, holding senior or subordinated interests, recourse or guarantee arrangements and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. Certain of the Firm's retained interests (trading assets, AFS securities and other assets) are reflected at their fair value.

	Principal amount outstanding		JPMorgan Chase interest in securitized assets[f][g][h][i]				
December 31, 2008 (in billions)	Total assets held by Firm-sponsored QSPEs	Assets held in QSPEs with continuing involvement	Trading assets	AFS securities	Loans	Other assets	Total interests held by JPMorgan Chase
Securitized related:							
Credit card	**$ 121.6**	**$ 121.6**[e]	**$ 0.5**	**$ 5.6**	**$ 33.3**	**$ 5.6**	**$ 45.0**
Residential mortgage:							
Prime[a]	**233.9**	**212.3**	**1.7**	**0.7**	**—**	**—**	**2.4**
Subprime	**61.0**	**58.6**	**—**	**0.1**	**—**	**—**	**0.1**
Option ARMs	**48.3**	**48.3**	**0.1**	**0.3**	**—**	**—**	**0.4**
Commercial and other[b]	**174.1**	**45.7**	**2.0**	**0.5**	**—**	**—**	**2.5**
Student loans	**1.1**	**1.1**	**—**	**—**	**—**	**0.1**	**0.1**
Auto	**0.8**	**0.8**	**—**	**—**	**—**	**—**	**—**
Total[c][d]	**$ 640.8**	**$ 488.4**	**$ 4.3**	**$ 7.2**	**$ 33.3**	**$ 5.7**	**$ 50.5**

	Principal amount outstanding		JPMorgan Chase interest in securitized assets[f][i][j]				
December 31, 2007 (in billions)	Total assets held by Firm-sponsored QSPEs	Assets held in QSPEs with continuing involvement	Trading assets	AFS securities	Loans	Other assets	Total interests held by JPMorgan Chase
Securitized related:							
Credit card	$ 92.7	$ 92.7[e]	$ —	$ 0.3	$ 18.6	$ 4.6	$ 23.5
Residential mortgage:							
Prime[a]	78.3	77.7	0.4	—	—	—	0.4
Subprime	23.7	22.7	0.3	0.1	—	—	0.4
Option ARMs	—	—	—	—	—	—	—
Commercial and other[b]	109.6	3.4	—	—	—	—	—
Student loans	1.1	1.1	—	—	—	0.1	0.1
Auto	2.3	2.3	—	—	—	0.1	0.1
Total[c]	$ 307.7	$ 199.9	$ 0.7	$ 0.4	$ 18.6	$ 4.8	$ 24.5

(a) Includes Alt-A loans.
(b) Includes co-sponsored commercial securitizations and, therefore, includes non-JPMorgan Chase originated commercial mortgage loans. Commercial and other consists of securities backed by commercial loans (predominantly real estate) and non-mortgage related consumer receivables purchased from third parties. The Firm generally does not retain a residual interest in the Firm's sponsored commercial mortgage securitization transactions.
(c) Includes securitized loans where the Firm owns less than a majority of the subordinated or residual interests in the securitizations.
(d) Includes securitization-related QSPEs sponsored by heritage Bear Stearns and heritage Washington Mutual at December 31, 2008.
(e) Includes credit card loans, accrued interest and fees, and cash amounts on deposit.
(f) Excludes retained servicing (for a discussion of MSRs, see Note 18 on pages 199–200 of this Annual Report).
(g) Excludes senior and subordinated securities of $974 million at December 31, 2008, that the Firm purchased in connection with IB's secondary market-making activities.
(h) Includes investments acquired in the secondary market, but predominantly held-for-investment purposes of $1.8 billion as of December 31, 2008. This is comprised of $1.4 billion of investments classified as available-for-sale, including $172 million in credit cards, $693 million of residential mortgages and $495 million of commercial and other; and $452 million of investments classified as trading, including $112 million of credit cards, $303 million of residential mortgages, and $37 million of commercial and other.
(i) Excludes interest rate and foreign exchange derivatives that are primarily used to manage the interest rate and foreign exchange risks of the securitization entities. See Note 6 and Note 32 on pages 158–159 and 214–217, respectively, of this Annual Report for further information on derivatives.
(j) Excludes senior and subordinated securities of $9.8 billion at December 31, 2007, that were retained at the time of securitization in connection with IB's underwriting activity or that are purchased in connection with IB's secondary market-making activities.

Securitization activity by major product type

The following discussion describes the nature of the Firm's securitization activities by major product type.

Credit Card Securitizations

The Card Services ("CS") business securitizes originated and purchased credit card loans. The Firm's primary continuing involvement includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and the maintenance of escrow accounts.

CS maintains servicing responsibilities for all credit card securitizations that it sponsors. As servicer and transferor, the Firm receives contractual servicing fees based upon the securitized loan balance plus excess servicing fees, which are recorded in credit card income as discussed in Note 7 on pages 160–161 of this Annual Report.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the trusts (which generally ranges from 4% to 12%). At December 31, 2008 and 2007, the Firm had $33.3 billion and $18.6 billion, respectively, related to its undivided interests in the trusts. The Firm maintained an average undivided interest in principal receivables in the trusts of approximately 22% and 19% for the years ended December 31, 2008 and 2007, respectively. These undivided interests in the trusts represent the Firm's undivided interests in the receivables transferred to the trust that have not been securitized; these undivided interests are not represented by security certificates, are carried at historical cost, and are classified within loans.

Additionally, the Firm retained subordinated interest in accrued interest and fees on the securitized receivables totaling $3.0 billion and $2.7 billion (net of an allowance for uncollectible amounts) as of December 31, 2008 and 2007, respectively, which are classified in other assets.

The Firm retained subordinated securities in credit card securitization trusts totaling $2.3 billion and $284 million at December 31, 2008 and 2007, respectively, and senior securities totaling $3.5 billion at December 31, 2008. Of the securities retained, $5.4 billion and $284 million were classified as AFS securities at December 31, 2008 and 2007, respectively. Securities of $389 million that were acquired in the Washington Mutual Bank transaction were classified as trading assets at December 31, 2008. The senior AFS securities were used by the Firm as collateral for a secured financing transaction.

The Firm also maintains escrow accounts up to predetermined limits for some credit card securitizations to cover deficiencies in cash flows owed to investors. The amounts available in such escrow accounts related to credit cards are recorded in other assets and amounted to $74 million and $97 million as of December 31, 2008 and 2007, respectively.

Mortgage Securitizations

The Firm securitizes originated and purchased residential mortgages and originated commercial mortgages.

RFS securitizes residential mortgage loans that it originates and purchases and it typically retains servicing for all of its originated and purchased residential mortgage loans. Additionally, RFS may retain servicing for certain mortgage loans purchased by IB. As servicer, the Firm receives servicing fees based upon the securitized loan balance plus ancillary fees. The Firm also retains the right to service the residential mortgage loans it sells to the Government National Mortgage Association ("GNMA"), Federal National Mortgage Association ("Fannie Mae") and Federal Home Loan Mortgage Corporation ("Freddie Mac") in accordance with their servicing guidelines and standards. For a discussion of MSRs, see Note 18 on pages 199–200 of this Annual Report. In a limited number of securitizations, RFS may retain an interest in addition to servicing rights. The amount of interest retained related to these securitizations totaled $939 million and $221 million at December 31, 2008 and 2007, respectively. These retained interests are accounted for as trading or AFS securities; the classification depends on whether the retained interest is represented by a security certificate, has an embedded derivative, and when it was retained (i.e., prior to the adoption of SFAS 155).

IB securitizes residential mortgage loans (including those that it purchased and certain mortgage loans originated by RFS) and commercial mortgage loans that it originated. Upon securitization, IB may engage in underwriting and trading activities of the securities issued by the securitization trust. IB may retain unsold senior and/or subordinated interests (including residual interests) in both residential and commercial mortgage securitizations at the time of securitization. These retained interests are accounted for at fair value and classified as trading assets. The amount of residual interests retained was $155 million and $547 million at December 31, 2008 and 2007, respectively. Additionally, IB retained $2.8 billion of senior and subordinated interests as of December 31, 2008; these securities were retained at securitization in connection with the Firm's underwriting activity.

In addition to the amounts reported in the securitization activity tables below, the Firm sold residential mortgage loans totaling $122.0 billion, $81.8 billion and $53.7 billion during the years ended December 31, 2008, 2007 and 2006, respectively. The majority of these loan sales were for securitization by the GNMA, Fannie Mae and Freddie Mac. These sales resulted in pretax gains of $32 million, $47 million and $251 million, respectively.

The Firm's mortgage loan sales are primarily nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the loans. However, for a limited number of loan sales, the Firm is obligated to share up to 100% of the credit risk associated with the sold loans with the purchaser. See Note 33 on page 221 of this Annual Report for additional information on loans sold with recourse.

Other Securitizations

The Firm also securitizes automobile and student loans originated by RFS and purchased consumer loans (including automobile and student loans). The Firm retains servicing responsibilities for all originated and certain purchased student and automobile loans. It may also hold a retained interest in these securitizations; such residual interests are classified as other assets. At December 31, 2008 and 2007, the Firm held $37 million and $85 million, respectively, of retained interests in securitized automobile loans and $52 million and $55 million, respectively, of retained interests in securitized student loans.

The Firm also maintains escrow accounts up to predetermined limits for some automobile and student loan securitizations to cover deficiencies in cash flows owed to investors. These escrow accounts are classified within other assets and carried at fair value. The amounts available in such escrow accounts as of December 31, 2008, were $3 million for both automobile and student loan securitizations; as of December 31, 2007, these amounts were $21 million and $3 million for automobile and student loan securitizations, respectively.

Securitization activity

The following tables provide information related to the Firm's securitization activities for the years ended December 31, 2008, 2007 and 2006. For the periods presented there were no cash flows from the Firm to the QSPEs related to recourse or guarantee arrangements.

Year ended December 31, 2008 (in millions, except for ratios and where otherwise noted)	Credit card	Residential mortgage[g]			Commercial and other	Student loans	Auto
		Prime[h]	Subprime	Option ARMs			
Principal securitized	**$ 21,390**	**$ —**	**$ —**	**$ —**	**$1,023**	**$ —**	**$ —**
Pretax gains	**151**	**—**	**—**	**—**	**—**	**—**	**—**
All cash flows during the period:							
Proceeds from new securitizations	**$ 21,389**[f]	**$ —**	**$ —**	**$ —**	**$ 989**	**$ —**	**$ —**
Servicing fees collected	**1,162**	**279**	**146**	**129**	**11**	**4**	**15**
Other cash flows received[a]	**4,985**	**23**	**16**	**—**	**—**	**—**	**—**
Proceeds from collections reinvested in revolving securitizations	**152,399**	**—**	**—**	**—**	**—**	**—**	**—**
Purchases of previously transferred financial assets (or the underlying collateral)[b][c]	**—**	**217**	**13**	**6**	**—**	**—**	**359**
Cash flows received on the interests that continue to be held by the Firm[d]	**117**	**267**	**23**	**53**	**455**	**—**	**43**
Key assumptions used to measure retained interests originated during the year (rates per annum):							
Prepayment rate[e]	**17.9-20.0% PPR**				**1.5% CPR**		
Weighted-average life (in years)	**0.4-0.5**				**2.1**		
Expected credit losses	**4.2-4.8%**				**1.5%**		
Discount rate	**12.0-13.0%**				**25.0%**		

Year ended December 31, 2007 (in millions, except for ratios and where otherwise noted)	Credit card	Residential mortgage Prime[h]	Residential mortgage Subprime	Residential mortgage Option ARMs	Commercial and other	Student loans	Auto
Principal securitized	$ 21,160	$ 32,084	$ 6,763	$ —	$ 12,797	$ 1,168	$ —
Pretax gains	177	28[i]	43	—	—	51	—
All cash flows during the period:							
Proceeds from new securitizations	$ 21,160	$ 31,791	$ 6,844	$ —	$ 13,038	$ 1,168	$ —
Servicing fees collected	1,005	124	246	—	7	2	36
Other cash flows received[a]	4,963	—	—	—	—	—	—
Proceeds from collections reinvested in revolving securitizations	148,946	—	—	—	—	—	—
Purchases of previously transferred financial assets (or the underlying collateral)[b]	—	58	598	—	—	—	431
Cash flows received on the interests that continue to be held by the Firm[d]	18	140	278	—	256	—	89
Key assumptions used to measure retained interests originated during the year (rates per annum):							
Prepayment rate[e]	20.4% PPR	13.7-37.2% CPR	30.0-48.0% CPR		0.0-8.0% CPR	1.0-8.0% CPR	
Weighted-average life (in years)	0.4	1.3-5.4	2.3-2.8		1.3-10.2	9.3	
Expected credit losses	3.5-3.9%	0.0-1.6%[j]	1.2-2.2%		0.0-1.0%[j]	—%[j]	
Discount rate	12.0%	5.8-20.0%	12.1-26.7%		10.0-14.0%	9.0%	

Year ended December 31, 2006 (in millions, except for ratios and where otherwise noted)	Credit card	Residential mortgage Prime[h]	Residential mortgage Subprime	Residential mortgage Option ARMs	Commercial and other	Student loans	Auto
Principal securitized	$ 9,735	$ 30,254	$ 17,359	$ —	$ 13,858	$ —	$ 2,405
Pretax gains	67	53	193	—	129	—	—
All cash flows during the period:							
Proceeds from new securitizations	$ 9,735	$ 30,167	$ 17,635	$ —	$ 14,248	$ —	$ 1,745
Servicing fees collected	973	76	29	—	1	—	52
Other cash flows received[a]	5,281	35	—	—	95	—	—
Proceeds from collections reinvested in revolving securitizations	151,186	—	—	—	—	—	—
Purchases of previously transferred financial assets (or the underlying collateral)[b]	—	31	31	—	—	—	138
Cash flows received on the interests that continue to be held by the Firm[d]	76	48	258	—	73	—	96
Key assumptions used to measure retained interests originated during the year (rates per annum):							
Prepayment rate[e]	20.0-22.2% PPR	10.0-41.3% CPR	36.0-45.0% CPR		0.0-36.2% CPR		1.4-1.5% ABS
Weighted-average life (in years)	0.4	1.7-4.0	1.5-2.4		1.5-6.1		1.4-1.9
Expected credit losses	3.3-4.2%	0.1-3.3%[j]	1.1-2.1%		0.0-0.9%[j]		0.3-0.7%
Discount rate	12.0%	8.4-26.2%	15.1-22.0%		3.8-14.0%		7.6-7.8%

(a) Other cash flows received include excess servicing fees and other ancillary fees received.
(b) Includes cash paid by the Firm to reacquire assets from the QSPEs, for example, servicer clean-up calls.
(c) Excludes a random removal of $6.2 billion of credit card loans from a securitization trust previously established by Washington Mutual and an account addition of $5.8 billion of higher quality credit card loans from the legacy Chase portfolio to the legacy Washington Mutual trust in November 2008. These are noncash transactions that are permitted by the trust documents in order to maintain the appropriate level of undivided seller's interest.
(d) Includes cash flows received on retained interests including, for example, principal repayments, and interest payments.
(e) PPR: principal payment rate; CPR: constant prepayment rate; ABS: absolute prepayment speed.
(f) Includes $5.5 billion of securities retained by the Firm.
(g) Includes securitizations sponsored by Bear Stearns and Washington Mutual as of their respective acquisition dates.
(h) Includes Alt-A loans.
(i) As of January 1, 2007, the Firm adopted the fair value election for IB warehouse and the RFS prime mortgage warehouse. The carrying value of these loans accounted for at fair value approximates the proceeds received from securitization.
(j) Expected credit losses for consumer prime residential mortgage, and student and certain other securitizations are minimal and are incorporated into other assumptions.

Retained securitization interests

The following table summarizes the Firm's retained securitization interests, which are carried at fair value on the Firm's Consolidated Balance Sheets at December 31, 2008. As of December 31, 2008, 55% of the Firm's retained securitization interests, which are carried at fair value, were risk rated "A" or better.

	Ratings profile of retained interests[c][d]		
	2008		
December 31, (in billions)	Investment Grade	Noninvestment grade	Retained interest
Asset types:			
Credit card[a]	**$ 5.5**	**$ 3.8**	**$ 9.3**
Residential mortgage:			
Prime[b]	**1.1**	**0.3**	**1.4**
Subprime	**—**	**0.1**	**0.1**
Option ARMs	**0.4**	**—**	**0.4**
Commercial and other	**1.7**	**0.3**	**2.0**
Student loans	**—**	**0.1**	**0.1**
Auto	**—**	**—**	**—**
Total	**$ 8.7**	**$ 4.6**	**$ 13.3**

(a) Includes retained subordinated interests carried at fair value, including CS' accrued interests and fees, escrow accounts, and other residual interests. Excludes undivided seller interest in the trusts of $33.3 billion at December 31, 2008, which is carried at historical cost, and unencumbered cash amounts on deposit of $2.1 billion at December 31, 2008.
(b) Includes Alt-A loans.
(c) The ratings scale is presented on an S&P-equivalent basis.
(d) Excludes $1.8 billion of investments acquired in the secondary market, but predominantly held for investment purposes. Of this amount $1.7 billion is classified as investment grade.

The table below outlines the key economic assumptions used at December 31, 2008 and 2007, to determine the fair value as of December 31, 2008 and 2007, respectively, of the Firm's retained interests, other than MSRs, that are valued using modeling techniques; it excludes securities that are valued using quoted market prices. The table below also outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in assumptions used to determine fair value. For a discussion of residential MSRs, see Note 18 on pages 199–200 of this Annual Report.

		Residential mortgage					
December 31, 2008 (in millions, except rates and where otherwise noted)	Credit card	Prime[c]	Subprime	Option ARMs	Commercial and other	Student loans	Auto
Retained interests	**$ 3,463**[b]	**$ 1,420**	**$ 68**	**$ 436**	**$ 1,966**	**$ 55**	**$ 40**
Weighted-average life (in years)	**0.5**	**5.3**	**1.5**	**7.3**	**3.5**	**8.2**	**0.7**
Prepayment rates[a]	**15.4-16.7%**	**0.0-50.6%**[d]	**1.0-53.1%**	**5.0-15.0%**	**0.0-100.0%**[g]	**5.0%**	**1.2-1.4%**
Weighted-average prepayment rate	**16.6 PPR**	**17.7 CPR**	**25.1 CPR**	**7.6 CPR**	**0.7 CPR**	**5.0 CPR**	**1.3 ABS**
Impact of 10% adverse change	**$ (42)**	**$ (31)**	**$ (5)**	**$ (4)**	**$ (1)**	**$ (1)**	**$ —**
Impact of 20% adverse change	**(85)**	**(57)**	**(6)**	**(11)**	**(1)**	**(2)**	**(1)**
Loss assumptions	**4.7-7.6%**	**0.0-78.1%**[d]	**0.0-78.1%**[f]	**0.0-26.3%**	**0.0-5.0%**	**—%**[e]	**0.4-0.7%**
Weighted-average loss assumption	**7.0**	**4.4**	**3.4**	**0.3**	**0.3**	**—**	**0.5**
Impact of 10% adverse change	**$ (235)**	**$ (25)**	**$ (7)**	**$ —**	**$ (12)**	**$ —**	**$ —**
Impact of 20% adverse change	**(426)**	**(49)**	**(13)**	**(1)**	**(24)**	**—**	**(1)**
Discount rates	**18.0%**	**9.9-67.7%**[d]	**10.6-30.0%**	**3.6-71.7%**	**3.3-47.8%**[g]	**9.0%**	**4.1-4.2%**
Weighted-average discount rate	**18.0**	**14.5**	**21.5**	**17.3**	**12.4**	**9.0**	**4.1**
Impact of 10% adverse change	**$ (10)**	**$ (52)**	**$ (3)**	**$ (16)**	**$ (26)**	**$ (2)**	**$ —**
Impact of 20% adverse change	**(20)**	**(102)**	**(5)**	**(28)**	**(49)**	**(4)**	**—**

December 31, 2007 (in millions, except rates and where otherwise noted)	Credit card	Residential mortgage: Prime[c]	Residential mortgage: Subprime	Residential mortgage: Option ARMs	Commercial and other	Student loans	Auto
Retained interests	$ 3,324	$ 381	$ 387	$ —	$ 42	$ 58	$ 106
Weighted-average life (in years)	0.4-0.5	2.9-4.9	2.9	—	0.3-11.0	8.8	0.9
Prepayment rates[a]	15.6-18.9% PPR	19.0-25.3% CPR	25.7% CPR	—%	0.0-50.0% CPR	1.0-8.0% CPR	1.4% ABS
Impact of 10% adverse change	$ (59)	$ (14)	$ (30)	$ —	$ (1)	$ (1)	$ (1)
Impact of 20% adverse change	(118)	(25)	(54)	—	(2)	(2)	(1)
Loss assumptions	3.3-4.6%	0.0-3.0%[e]	3.3%	—%	0.0-0.9%	—%[e]	0.6%
Impact of 10% adverse change	$ (117)	$ (13)	$ (68)	$ —	$ (1)	$ —	$ (2)
Impact of 20% adverse change	(234)	(25)	(120)	—	(1)	—	(3)
Discount rates	12.0%	11.0-23.9%	15.0-30.0%	—%	1.0-18.0%	9.0%	6.8%
Impact of 10% adverse change	$ (2)	$ (18)	$ (16)	$ —	$ —	$ (3)	$ —
Impact of 20% adverse change	(4)	(36)	(31)	—	(1)	(5)	(1)

(a) PPR: principal payment rate; ABS: absolute prepayment speed; CPR: constant prepayment rate.
(b) Excludes certain interests that are not valued using modeling techniques.
(c) Includes Alt-A loans.
(d) Including the valuation assumptions used to determine the fair value for a limited amount of retained interests resulted in a wider range than those used for the majority of the portfolio. Excluding these retained interests, the range of assumptions used to value the prime/Alt A mortgage retained interests would have been 0.0-29.4% for prepayment rates; 0.0-25.0% for loss assumptions; and 9.9-21.4% for discount rates.
(e) Expected losses for prime residential mortgage, student loans and certain wholesale securitizations are minimal and are incorporated into other assumptions.
(f) Including the loss assumptions used to determine the fair value for a limited amount of retained interests resulted in a wider range than those used for the majority of the portfolio. Excluding these retained interests, the range of loss assumption used to value the subprime mortgage retained interests would have been 0.2-43.5%.
(g) The valuation assumptions used to determine the fair value for a limited amount of retained interests were higher than the majority of the portfolio. Excluding these retained interests, the range of assumptions used to value the commercial and other retained interests would have been 0.0-22.0% for prepayment rates and 3.3-30.4% for the discount rates.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based upon a 10% or 20% variation in assumptions generally cannot be extrapolated easily because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in the table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might counteract or magnify the sensitivities. The above sensitivities also do not reflect the Firm's risk management practices that may be undertaken to mitigate such risks.

The table below includes information about delinquencies, net charge-offs and components of reported and securitized financial assets at December 31, 2008 and 2007.

December 31, (in millions)	Total Loans		90 days past due and still accruing		Nonaccrual assets[g][h]		Net loan charge-offs Year ended	
	2008	2007	**2008**	2007	**2008**	2007	**2008**	2007
Home Equity	**$ 114,335**	$ 94,832	**$ —**	$ —	**$ 1,394**	$ 786	**$ 2,391**	$ 564
Prime mortgage[a]	**72,266**	39,988	**—**	—	**1,895**	501	**526**	33
Subprime mortgage	**15,330**	15,473	**—**	—	**2,690**	1,017	**933**	157
Option ARMs	**9,018**	—	**—**	—	**10**	—	**—**	—
Auto loans	**42,603**	42,350	**—**	—	**148**	116	**568**	354
Credit card	**104,746**	84,352	**2,649**	1,547	**4**	7	**4,556**	3,116
All other loans	**33,715**	25,314	**463**	421	**430**	341	**459**	242
Loans held-for-sale[b]	**2,028**	3,989	**—**	—	**—**	—	**NA**	NA
Total consumer loans – excluding purchased credit-impaired	**394,041**	306,298	**3,112**	1,968	**6,571**	2,768	**9,433**	4,466
Consumer loans – purchased credit-impaired[c]	**88,813**	—	**—**	—	**—**	—	**—**	**—**
Total consumer loans	**482,854**	306,298	**3,112**	1,968	**6,571**	2,768	**9,433**	4,466
Total wholesale loans	**262,044**	213,076	**163**	75	**2,382**[i]	514[i]	**402**	72
Total loans reported	**744,898**	519,374	**3,275**	2,043	**8,953**	3,282	**9,835**	4,538
Securitized loans:								
Residential mortgage:								
Prime mortgage[a]	**212,274**	77,582	**—**	—	**21,130**	1,215	**5,645**	7
Subprime mortgage	**58,607**	22,692	**—**	—	**13,301**	3,238	**4,797**	413
Option ARMs	**48,328**	—	**—**	—	**6,440**	—	**270**	—
Automobile	**791**	2,276	**—**	—	**2**	6	**15**	13
Credit card	**85,571**	72,701	**1,802**	1,050	**—**	—	**3,612**	2,380
Student	**1,074**	1,141	**66**	—	**—**	—	**1**	—
Commercial and other	**45,677**	3,419	**28**	—	**166**	—	**8**	11
Total loans securitized[d]	**$ 452,322**	$ 179,811	**$ 1,896**	$ 1,050	**$41,039**	$ 4,459	**$14,348**	$ 2,824
Total loans reported and securitized[e]	**$ 1,197,220**[f]	$ 699,185[f]	**$ 5,171**	$ 3,093	**$49,992**	$ 7,741	**$24,183**	$ 7,362

(a) Includes Alt-A loans.
(b) Includes loans for prime mortgage and other (largely student loans) of $206 million and $1.8 billion at December 31, 2008, respectively, and $570 million and $3.4 billion at December 31, 2007, respectively.
(c) Purchased credit-impaired loans represent loans acquired in the Washington Mutual acquisition that were considered credit-impaired under SOP 03-3, and include $6.4 billion of loans that were nonperforming immediately prior to the acquisition. Under SOP 03-3, these loans are considered to be performing loans as of the acquisition date; they accrete interest income over the estimated life of the loan when cash flows are reasonably estimable, even if the underlying loans are contractually past due. For additional information, see Note 14 on pages 175–178 of this Annual Report.
(d) Total assets held in securitization-related SPEs were $640.8 billion and $307.7 billion at December 31, 2008 and 2007, respectively. The $452.3 billion and $179.8 billion of loans securitized at December 31, 2008 and 2007, respectively, excludes $152.4 billion and $107.8 billion of securitized loans, respectively, in which the Firm has no continuing involvement; $33.3 billion and $18.6 billion of seller's interests in credit card master trusts, respectively; and $2.8 billion and $1.5 billion of cash amounts on deposit and escrow accounts.
(e) Represents both loans on the Consolidated Balance Sheets and loans that have been securitized.
(f) Includes securitized loans that were previously recorded at fair value and classified as trading assets.
(g) During the second quarter of 2008, the policy for classifying subprime mortgage and home equity loans as nonperforming was changed to conform to all other home lending products. Amounts for 2007 have been revised to reflect this change.
(h) Excludes nonperforming assets related to (i) loans eligible for repurchase, as well as loans repurchased from GNMA pools that are insured by U.S. government agencies, of $3.3 billion and $1.5 billion at December 31, 2008 and 2007, respectively, and (ii) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program, of $437 million and $417 million at December 31, 2008 and 2007, respectively. These amounts for GNMA and student loans are excluded, as reimbursement is proceeding normally.
(i) Includes nonperforming loans held-for-sale and loans at fair value of $32 million and $50 million at December 31, 2008 and 2007, respectively.

Subprime adjustable-rate mortgage loan modifications

See the Glossary of Terms on page 232 of this Annual Report for the Firm's definition of subprime loans. Within the confines of the limited decision-making abilities of a QSPE under SFAS 140, the operating documents that govern existing subprime securitizations generally authorize the servicer to modify loans for which default is reasonably foreseeable, provided that the modification is in the best interests of the QSPE's beneficial interest holders and would not result in a REMIC violation.

In December 2007, the American Securitization Forum ("ASF") issued the "Streamlined Foreclosure and Loss Avoidance Framework for Securitized Subprime Adjustable Rate Mortgage Loans" (the "Framework"). The Framework provides guidance for servicers to streamline evaluation procedures for borrowers with certain subprime adjustable rate mortgage ("ARM") loans to more efficiently provide modifications of such loans with terms that are more appropriate for the individual needs of such borrowers. The Framework applies to all first-lien subprime ARM loans that have a fixed rate of interest for an initial period of 36 months or less, are included in securitized pools, were originated between January 1, 2005, and July 31, 2007, and have an initial interest rate reset date between January 1, 2008, and July 31, 2010 ("ASF Framework Loans").

The Framework categorizes the population of ASF Framework Loans into three segments: Segment 1 includes loans where the borrower is current and is likely to be able to refinance into any readily available mortgage product; Segment 2 includes loans where the borrower is current, is unlikely to be able to refinance into any readily available mortgage industry product and meets certain defined criteria; and Segment 3 includes loans where the borrower is not current, as defined, and does not meet the criteria for Segments 1 or 2.

ASF Framework Loans in Segment 2 of the Framework are eligible for fast-track modification under which the interest rate will be kept at the existing initial rate, generally for five years following the interest rate reset date. The Framework indicates that for Segment 2 loans, JPMorgan Chase, as servicer, may presume that the borrower will be unable to make payments pursuant to the original terms of the borrower's loan after the initial interest rate reset date. Thus, the Firm may presume that a default on that loan by the borrower is reasonably foreseeable unless the terms of the loan are modified. JPMorgan Chase has adopted the loss mitigation approaches under the Framework for securitized subprime ARM loans that meet the specific Segment 2 criteria and began modifying Segment 2 loans during the first quarter of 2008. The adoption of the Framework did not affect the off-balance sheet accounting treatment of JPMorgan Chase-sponsored QSPEs that hold Segment 2 subprime loans.

The total dollar amount of assets owned by Firm-sponsored QSPEs that hold subprime adjustable rate mortgage loans as of December 31, 2008 and 2007, was $30.8 billion and $20.0 billion, respectively. Of these amounts, $12.7 billion and $9.7 billion, respectively, are related to ASF Framework Loans serviced by the Firm. Included within the assets owned by Firm-sponsored QSPEs was foreclosure-related real estate owned, for which JPMorgan Chase is the servicer, in the amount of $3.5 billion and $637 million at December 31, 2008 and 2007, respectively. The growth in real estate owned in 2008 is attributable to the Washington Mutual transaction and increased foreclosures resulting from current housing market conditions. The following table presents the principal amounts of ASF Framework Loans, serviced by the Firm, that are owned by Firm-sponsored QSPEs that fell within Segments 1, 2 and 3 as of December 31, 2008 and 2007, respectively.

December 31, (in millions, except ratios)	2008		2007	
	Amount	%	Amount	%
Segment 1	**$ 1,940**	**15%**	$ 1,940	20%
Segment 2	**2,930**	**23**	970	10
Segment 3	**7,806**	**62**	6,790	70
Total	**$ 12,676**	**100%**	$ 9,700	100%

The estimates of segment classification could change substantially in the future as a result of future changes in housing values, economic conditions, borrower/investor behavior and other factors.

The total principal amount of beneficial interests issued by the Firm-sponsored securitizations that hold ASF Framework Loans as of December 31, 2008 and 2007, was as follows.

December 31, (in millions)	2008	2007
Third-party	**$ 44,401**	$ 19,636
Retained interest	**99**	412
Total	**$ 44,500**	$ 20,048

For those ASF Framework Loans serviced by the Firm and owned by Firm-sponsored QSPEs, the Firm modified principal amounts of $1.7 billion of Segment 2 subprime mortgages during the year ended December 31, 2008. There were no Segment 2 subprime mortgages modified during the year ended December 31, 2007. For Segment 3 loans, the Firm has adopted a loss mitigation approach, without employing the fast-track modifications prescribed for Segment 2 subprime mortgages, that is intended to maximize the recoveries of the securitization trust. The loss mitigation approach chosen by JPMorgan Chase is consistent with the applicable servicing agreements and could include rate reductions, principal forgiveness, forbearance and other actions intended to minimize economic loss and avoid foreclosure. The table below presents selected information relating to the principal amount of Segment 3 loans for the year ended December 31, 2008, including those that have been modified, subjected to other loss mitigation activities or have been prepaid by the borrower.

Year ended December 31, 2008 (in millions)	
Loan modifications	$ 2,384
Other loss mitigation activities	865
Prepayments	219

The impact of loss mitigation efforts on the fair value of the Firm's retained interests in ASF Framework loans was not material at December 31, 2008.

Note 17 – Variable interest entities

Refer to Note 1 on page 134 of this Annual Report for a further description of JPMorgan Chase's policies regarding consolidation of variable interest entities.

JPMorgan Chase's principal involvement with VIEs occurs in the following business segments:

- Investment Bank: Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner. IB is involved with VIEs through multi-seller conduits and for investor intermediation purposes, as discussed below. IB also securitizes loans through QSPEs, to create asset-backed securities, as further discussed in Note 16 on pages 180–188 of this Annual Report.
- Asset Management ("AM"): Provides investment management services to a limited number of the Firm's funds deemed VIEs. AM earns a fixed fee based upon assets managed; the fee varies with each fund's investment objective and is competitively priced. For the limited number of funds that qualify as VIEs, AM's relationships with such funds are not considered significant variable interests under FIN 46(R).
- Treasury & Securities Services: Provides services to a number of VIEs that are similar to those provided to non-VIEs. TSS earns market-based fees for the services it provides. The relationships resulting from TSS' services are not considered to be significant variable interests under FIN 46(R).
- Commercial Banking ("CB"): Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner. This is often accomplished through the use of products similar to those offered in IB. CB may assist in the structuring and/or ongoing administration of these VIEs and may provide liquidity, letters of credit and/or derivative instruments in support of the VIE. The relationships resulting from CB's services are not considered to be significant variable interests under FIN 46(R).
- Corporate/Private Equity: Corporate utilizes VIEs to issue guaranteed capital debt securities. See Note 23 on page 203 for further information. The Private Equity business, also included in Corporate, may be involved with entities that could be deemed VIEs. Private equity activities are accounted for in accordance with the AICPA Audit and Accounting Guide *Investment Companies* (the "Guide"). In June 2007, the AICPA issued SOP 07-1, which provides guidance for determining whether an entity is within the scope of the Guide, and therefore qualifies to use the Guide's specialized accounting principles (referred to as "investment company accounting"). In May 2007, the FASB issued FSP FIN 46(R)-7, which amends FIN 46(R) to permanently exempt entities within the scope of the Guide from applying the provisions of FIN 46(R) to their investments. In February 2008, the FASB agreed to an indefinite delay of the effective date of SOP 07-1 in order to address implementation issues, which effectively delays FSP FIN 46(R)-7 as well for those companies, such as the Firm, that have not adopted SOP 07-1. Had FIN 46(R) been applied to VIEs subject to this deferral, the impact would have been immaterial to the Firm's consolidated financial statements as of December 31, 2008.

As noted above, IB is predominantly involved with multi-seller conduits and VIEs associated with investor intermediation activities. These nonconsolidated VIEs that are sponsored by JPMorgan Chase are discussed below. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the principal beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments associated with the JPMorgan Chase brand name; or (4) the entity is a JPMorgan Chase administered ABCP conduit.

Multi-seller conduits

Funding and liquidity

The Firm is an active participant in the asset-backed securities business, and it helps customers meet their financing needs by providing access to the commercial paper markets through VIEs known as multi-seller conduits. Multi-seller conduit entities are separate bankruptcy-remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper to third-party investors. The primary source of repayment of the commercial paper is the cash flow from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided by the customers (i.e., sellers) to the conduits or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller, but also may include any combination of the following: recourse to the seller or originator, cash collateral accounts, letters of credit, excess spread, retention of subordinated interests or third-party guarantees. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

JPMorgan Chase receives fees related to the structuring of multi-seller conduit transactions and compensation from the multi-seller conduits for its role as administrative agent, liquidity provider, and provider of program-wide credit enhancement.

As a means of ensuring timely repayment of the commercial paper, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it. Deal-specific liquidity facilities are the primary source of liquidity support for the conduits. The deal-specific liquidity facilities are typically in the form of asset purchase agreements and generally structured so the liquidity that will be provided by the Firm as liquidity provider will be effected by the Firm purchasing, or lending against, a pool of nondefaulted, performing assets.

The conduit's administrative agent can require the liquidity provider to perform under its asset purchase agreement with the conduit at any time. These agreements may cause the liquidity provider, including the Firm, to purchase an asset from the conduit at an amount above the asset's then current fair value – in effect providing a guarantee of the initial value of the reference asset as of the date of the agreement. In limited circumstances, the Firm may provide unconditional liquidity.

The Firm also provides the multi-seller conduit vehicles with program-wide liquidity facilities in the form of uncommitted short-term revolving facilities that can be accessed by the conduits to handle funding increments too small to be funded by commercial paper and in the form of uncommitted liquidity facilities that can be accessed by the conduits only in the event of short-term disruptions in the commercial paper market.

Because the majority of the deal-specific liquidity facilities will only fund nondefaulted assets, program-wide credit enhancement is required to absorb losses on defaulted receivables in excess of losses absorbed by any deal-specific credit enhancement. Program-wide credit enhancement may be provided by JPMorgan Chase in the form of standby letters of credit or by third-party surety bond providers. The amount of program-wide credit enhancement required varies by conduit and ranges between 5% and 10% of applicable commercial paper outstanding.

The following table summarizes the Firm's involvement with nonconsolidated Firm-administered multi-seller conduits. There were no consolidated Firm-administered multi-seller conduits as of December 31, 2008 or 2007.

December 31, (in billions)	**2008**	2007
Total assets held by conduits	**$ 42.9**	$ 61.2
Total commercial paper issued by conduits	**43.1**	62.6
Liquidity and credit enhancements[a]		
Deal-specific liquidity facilities (primary asset purchase agreements)	**55.4**	87.3
Program-wide liquidity facilities	**17.0**	13.2
Program-wide credit enhancements	**3.0**	2.5
Maximum exposure to loss[b]	**56.9**	88.9

(a) The accounting for these agreements is further discussed in Note 33 on pages 218–222. The carrying value related to asset purchase agreements was $147 million at December 31, 2008, of which $138 million represented the remaining fair value of the guarantee under FIN 45. The Firm has recognized this guarantee in other liabilities with an offsetting entry recognized in other assets for the net present value of the future premium receivable under the contracts.

(b) The Firm's maximum exposure to loss is limited to the amount of drawn commitments (i.e., sellers' assets held by the multi-seller conduits for which the Firm provides liquidity support) of $42.9 billion and $61.2 billion at December 31, 2008 and 2007, respectively, plus contractual but undrawn commitments of $14.0 billion and $27.7 billion at December 31, 2008 and 2007, respectively. Since the Firm provides credit enhancement and liquidity to Firm-administered, multi-seller conduits, the maximum exposure is not adjusted to exclude exposure that would be absorbed by third-party liquidity providers.

Assets funded by the multi-seller conduits

JPMorgan Chase's administered multi-seller conduits fund a variety of asset types for the Firm's clients. Asset types primarily include credit card receivables, auto loans, trade receivables, student loans, commercial loans, residential mortgages, capital commitments (e.g., loans to private equity, mezzanine and real estate opportunity funds secured by capital commitments of highly rated institutional investors), and various other asset types. It is the Firm's intention that the assets funded by its administered multi-seller conduits be sourced only from the Firm's clients and not originated by, or transferred from, JPMorgan Chase.

The following table presents information on the commitments and assets held by JPMorgan Chase's administered multi-seller conduits as of December 31, 2008 and 2007.

Summary of exposure to Firm-administered nonconsolidated multi-seller conduits

	2008				2007			
December 31, (in billions)	Unfunded commitments to Firm's clients	Commercial paper funded assets	Liquidity provided by third parties	Liquidity provided by Firm	Unfunded commitments to Firm's clients	Commercial paper funded assets	Liquidity provided by third parties	Liquidity provided by Firm
Asset types:								
Credit card	**$ 3.0**	**$ 8.9**	**$ 0.1**	**$ 11.8**	$ 3.3	$ 14.2	$ —	$ 17.5
Vehicle loans and leases	**1.4**	**10.0**	**—**	**11.4**	4.5	10.2	—	14.7
Trade receivables	**3.8**	**5.5**	**—**	**9.3**	6.0	6.6	—	12.6
Student loans	**0.7**	**4.6**		**5.3**	0.8	9.2	—	10.0
Commercial	**1.5**	**4.0**	**0.4**	**5.1**	2.1	4.8	0.4	6.5
Residential mortgage	—	**0.7**	**—**	**0.7**	4.6	3.1	—	7.7
Capital commitments	**1.3**	**3.9**	**0.6**	**4.6**	2.0	5.1	0.6	6.5
Rental car finance	**0.2**	**0.4**	**—**	**0.6**	0.6	0.7	—	1.3
Equipment loans and leases	**0.7**	**1.6**	**—**	**2.3**	1.1	2.5	—	3.6
Floorplan – vehicle	**0.7**	**1.8**	**—**	**2.5**	1.3	1.3	—	2.6
Floorplan – other	**—**	**—**	**—**	**—**	—	0.5	—	0.5
Consumer	**0.1**	**0.7**	**0.1**	**0.7**	0.7	1.7	0.2	2.2
Other	**0.6**	**0.8**	**0.3**	**1.1**	0.7	1.3	0.4	1.6
Total	**$ 14.0**	**$ 42.9**	**$ 1.5**	**$ 55.4**	$ 27.7	$ 61.2	$ 1.6	$ 87.3

December 31, 2008 (in billions)	Ratings profile of VIE assets of the multi-seller conduits[a]					Commercial paper funded assets	Wt. avg. expected life (years)[b]
	Investment-grade				Noninvestment-grade		
	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below		
Asset types:							
Credit card	**$ 4.8**	**$ 3.9**	**$ 0.1**	**$ 0.1**	**$ —**	**$ 8.9**	**1.5**
Vehicle loans and leases	**4.1**	**4.1**	**1.8**	**—**	**—**	**10.0**	**2.5**
Trade receivables	**—**	**4.0**	**1.5**	**—**	**—**	**5.5**	**1.0**
Student loans	**3.6**	**0.9**	**—**	**0.1**	**—**	**4.6**	**1.8**
Commercial	**1.1**	**2.0**	**0.6**	**0.3**	**—**	**4.0**	**2.7**
Residential mortgage	**—**	**0.6**	**—**	**0.1**	**—**	**0.7**	**4.0**
Capital commitments	**—**	**3.6**	**0.3**	**—**	**—**	**3.9**	**2.4**
Rental car finance	**—**	**—**	**0.4**	**—**	**—**	**0.4**	**1.5**
Equipment loans and leases	**0.4**	**1.2**	**—**	**—**	**—**	**1.6**	**2.2**
Floorplan – vehicle	**0.1**	**1.0**	**0.7**	**—**	**—**	**1.8**	**1.1**
Floorplan – other	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Consumer	**0.1**	**0.4**	**0.2**	**—**	**—**	**0.7**	**1.6**
Other	**0.5**	**0.3**	**—**	**—**	**—**	**0.8**	**3.7**
Total	**$ 14.7**	**$ 22.0**	**$ 5.6**	**$ 0.6**	**$ —**	**$ 42.9**	**2.0**

December 31, 2007 (in billions)	Ratings profile of VIE assets of the multi-seller conduits[a]					Commercial paper funded assets	Wt. avg. expected life (years)[b]
	Investment-grade				Noninvestment-grade		
	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below		
Asset types:							
Credit card	$ 4.2	$ 9.4	$ 0.6	$ —	$ —	$ 14.2	1.5
Vehicle loans and leases	1.8	6.9	1.4	—	0.1	10.2	2.3
Trade receivables	—	4.7	1.7	0.2	—	6.6	1.3
Student loans	1.0	8.1	0.1	—	—	9.2	0.5
Commercial	0.5	3.5	0.7	0.1	—	4.8	2.8
Residential mortgage	1.5	0.8	0.8	—	—	3.1	1.5
Capital commitments	—	5.1	—	—	—	5.1	3.4
Rental car finance	—	0.7	—	—	—	0.7	1.1
Equipment loans and leases	0.4	1.9	—	0.2	—	2.5	2.2
Floorplan – vehicle	0.4	0.7	0.2	—	—	1.3	0.8
Floorplan – other	—	0.5	—	—	—	0.5	0.7
Consumer	—	1.4	0.2	—	0.1	1.7	1.8
Other	1.2	0.1	—	—	—	1.3	3.7
Total	**$ 11.0**	**$ 43.8**	**$ 5.7**	**$ 0.5**	**$ 0.2**	**$ 61.2**	**1.8**

(a) The ratings scale is presented on an S&P equivalent basis.
(b) Weighted average expected life for each asset type is based upon the remaining term of each conduit transaction's committed liquidity plus either the expected weighted average life of the assets should the committed liquidity expire without renewal or the expected time to sell the underlying assets in the securitization market.

The assets held by the multi-seller conduits are structured so that if they were rated, the Firm believes the majority of them would receive an "A" rating or better by external rating agencies. However, it is unusual for the assets held by the conduits to be explicitly rated by an external rating agency. Instead, the Firm's Credit Risk group assigns each asset purchase liquidity facility an internal risk-rating based upon its assessment of the probability of default for the transaction. The ratings provided in the above table reflect the S&P-equivalent ratings of the internal rating grades assigned by the Firm.

The risk ratings are periodically reassessed as information becomes available. As of December 31, 2008 and 2007, 90% and 93%, respectively, of the assets in the conduits were risk-rated "A" or better.

Commercial paper issued by the multi-seller conduits

The weighted average life of commercial paper issued by the multi-seller conduits at December 31, 2008 and 2007, was 27 days and 26 days, respectively, and the average yield on the commercial paper at December 31, 2008 and 2007, was 0.6% and 5.7%, respectively.

In the normal course of business, JPMorgan Chase trades and invests in commercial paper, including paper issued by the Firm-administered conduits. The percentage of commercial paper purchased by the Firm across all Firm-administered conduits during the year ended December 31, 2008, ranged from less than 1% to approximately 20% on any given day. The largest daily amount of commercial paper outstanding held by the Firm in any one multi-seller conduit during the years ended December 31, 2008 and 2007, was approximately $2.7 billion, or 23%, for 2008, and $2.7 billion, or 16%, for 2007, of the conduit's commercial paper outstanding. On average, the Firm held approximately 3% of daily multi-seller conduit issued commercial paper outstanding during 2008. Total multi-seller conduit issued commercial paper held by the Firm at December 31, 2008 and 2007, was $360 million and $131 million, respectively.

The Firm is not obligated under any agreement (contractual or non-contractual) to purchase the commercial paper issued by JPMorgan Chase-administered conduits.

Consolidation analysis
The multi-seller conduits administered by the Firm were not consolidated at December 31, 2008 and 2007, because each conduit had issued expected loss notes ("ELNs"), the holders of which are committed to absorbing the majority of the expected loss of each respective conduit.

Implied support
The Firm did not have and continues not to have any intent to protect any ELN holders from potential losses on any of the conduits' holdings and has no plans to remove any assets from any conduit unless required to do so in its role as administrator. Should such a transfer occur, the Firm would allocate losses on such assets between itself and the ELN holders in accordance with the terms of the applicable ELN.

Expected loss modeling
In determining the primary beneficiary of the conduits the Firm uses a Monte Carlo–based model to estimate the expected losses of each of the conduits and considers the relative rights and obligations of each of the variable interest holders. The Firm's expected loss modeling treats all variable interests, other than the ELNs, as its own to determine consolidation. The variability to be considered in the modeling of expected losses is based on the design of the entity. The Firm's traditional multi-seller conduits are designed to pass credit risk, not liquidity risk, to its variable interest holders, as the assets are intended to be held in the conduit for the longer term.

Under FIN 46(R), the Firm is required to run the Monte Carlo-based expected loss model each time a reconsideration event occurs. In applying this guidance to the conduits, the following events, are considered to be reconsideration events, as they could affect the determination of the primary beneficiary of the conduits:

- New deals, including the issuance of new or additional variable interests (credit support, liquidity facilities, etc);
- Changes in usage, including the change in the level of outstanding variable interests (credit support, liquidity facilities, etc);
- Modifications of asset purchase agreements; and
- Sales of interests held by the primary beneficiary.

From an operational perspective, the Firm does not run its Monte Carlo-based expected loss model every time there is a reconsideration event due to the frequency of their occurrence. Instead, the Firm runs its expected loss model each quarter and includes a growth assumption for each conduit to ensure that a sufficient amount of ELNs exists for each conduit at any point during the quarter.

As part of its normal quarterly modeling, the Firm updates, when applicable, the inputs and assumptions used in the expected loss model. Specifically, risk ratings and loss given default assumptions are continually updated. The total amount of expected loss notes outstanding at December 31, 2008 and 2007, were $136 million and $130 million, respectively. Management has concluded that the model assumptions used were reflective of market participants' assumptions and appropriately considered the probability of changes to risk ratings and loss given defaults.

Qualitative considerations
The multi-seller conduits are primarily designed to provide an efficient means for clients to access the commercial paper market. The Firm believes the conduits effectively disperse risk among all parties and that the preponderance of the economic risk in the Firm's multi-seller conduits is not held by JPMorgan Chase.

Consolidated sensitivity analysis on capital
The table below shows the impact on the Firm's reported assets, liabilities, Tier 1 capital ratio and Tier 1 leverage ratio if the Firm were required to consolidate all of the multi-seller conduits that it administers at their current carrying value.

December 31, 2008

(in billions, except ratios)	Reported	Pro forma[a][b]
Assets	$ 2,175.1	$ 2,218.2
Liabilities	2,008.2	2,051.3
Tier 1 capital ratio	10.9%	10.9%
Tier 1 leverage ratio	6.9	6.8

(a) The table shows the impact of consolidating the assets and liabilities of the multi-seller conduits at their current carrying value; as such, there would be no income statement or capital impact at the date of consolidation. If the Firm were required to consolidate the assets and liabilities of the conduits at fair value, the Tier 1 capital ratio would be approximately 10.8%. The fair value of the assets is primarily based upon pricing for comparable transactions. The fair value of these assets could change significantly because the pricing of conduit transactions is renegotiated with the client, generally, on an annual basis and due to changes in current market conditions.
(b) Consolidation is assumed to occur on the first day of the quarter, at the quarter-end levels, in order to provide a meaningful adjustment to average assets in the denominator of the leverage ratio.

The Firm could fund purchases of assets from VIEs should it become necessary.

2007 activity
In July 2007, a reverse repurchase agreement collateralized by prime residential mortgages held by a Firm-administered multi-seller conduit was put to JPMorgan Chase under its deal-specific liquidity facility. The asset was transferred to and recorded by JPMorgan Chase at its par value based on the fair value of the collateral that supported the reverse repurchase agreement. During the fourth quarter of 2007, additional information regarding the value of the collateral, including performance statistics, resulted in the determination by the Firm that the fair value of the collateral was impaired. Impairment losses were allocated to the ELN holder (the party that absorbs the majority of the expected loss from the conduit) in accordance with the contractual provisions of the ELN note.

On October 29, 2007, certain structured CDO assets originated in the second quarter of 2007 and backed by subprime mortgages were transferred to the Firm from two Firm-administered multi-seller conduits. It became clear in October that commercial paper investors and rating agencies were becoming increasingly concerned about CDO assets backed by subprime mortgage exposures. Because of these concerns, and to ensure the continuing viability of the two conduits as financing vehicles for clients and as investment alternatives for commercial paper investors, the Firm, in its role as administrator, transferred the CDO assets out of the multi-seller conduits. The structured CDO assets were transferred to the Firm at

their par value of $1.4 billion. As of December 31, 2008 and 2007, the CDO assets were valued on the Consolidated Balance Sheets at $5 million and $291 million, respectively.

There were no other structured CDO assets backed by subprime mortgages remaining in JPMorgan Chase-administered multi-seller conduits as of December 31, 2008 and 2007.

The Firm does not consider the October 2007 transfer of the structured CDO assets from the multi-seller conduits to JPMorgan Chase to be an indicator of JPMorgan Chase's intent to provide implicit support to the ELN holders. This transfer was a one-time, isolated event, limited to a specific type of asset that is not typically funded in the Firm's administered multi-seller conduits. In addition, the Firm has no plans to permit multi-seller conduits to purchase such assets in the future.

Investor intermediation

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions, typically derivative structures, with these VIEs to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in these structuring activities are municipal bond vehicles, credit-linked note vehicles, asset swap vehicles and collateralized debt obligation vehicles.

Municipal bond vehicles

The Firm has created a series of secondary market trusts that provide short-term investors with qualifying tax-exempt investments, and that allow investors in tax-exempt securities to finance their investments at short-term tax-exempt rates. In a typical transaction, the vehicle purchases fixed-rate longer-term highly rated municipal bonds and funds the purchase by issuing two types of securities: (1) putable floating-rate certificates and (2) inverse floating-rate residual interests ("residual interests"). The maturity of each of the putable floating-rate certificates and the residual interests is equal to the life of the vehicle, while the maturity of the underlying municipal bonds is longer. Holders of the putable floating-rate certificates may "put," or tender, the certificates if the remarketing agent cannot successfully remarket the floating-rate certificates to another investor. A liquidity facility conditionally obligates the liquidity provider to fund the purchase of the tendered floating-rate certificates. Upon termination of the vehicle, if the proceeds from the sale of the underlying municipal bonds are not sufficient to repay the liquidity facility, the liquidity provider has recourse either to excess collateralization in the vehicle or the residual interest holders for reimbursement.

The third-party holders of the residual interests in these vehicles could experience losses if the face amount of the putable floating-rate certificates exceeds the market value of the municipal bonds upon termination of the vehicle. Certain vehicles require a smaller initial investment by the residual interest holders and thus do not result in excess collateralization. For these vehicles there exists a reimbursement obligation which requires the residual interest holders to post, during the life of the vehicle, additional collateral to the vehicle on a daily basis as the market value of the municipal bonds declines.

JPMorgan Chase often serves as the sole liquidity provider and remarketing agent of the putable floating-rate certificates. As the liquidity provider, the Firm has an obligation to fund the purchase of the putable floating-rate certificates; this obligation is triggered by the failure to remarket the putable floating-rate certificates. The liquidity provider's obligation to perform is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, and the immediate downgrade of the municipal bond to below investment grade. A downgrade of the JPMorgan Chase Bank, N.A.'s short-term rating does not affect the Firm's obligation under the liquidity facility. However, in the event of a downgrade in the Firm's credit ratings, holders of the putable floating-rate instruments supported by those liquidity facility commitments might choose to sell their instruments, which could increase the likelihood that the liquidity commitments could be drawn. In vehicles in which third-party investors own the residual interests, in addition to the termination events, the Firm's exposure as liquidity provider is further limited by the high credit quality of the underlying municipal bonds, and the excess collateralization in the vehicle or the reimbursement agreements with the residual interest holders. In the fourth quarter of 2008, a drawdown occurred on one liquidity facility as a result of a failure to remarket putable floating-rate certificates. The Firm was required to purchase $19 million of putable floating-rate certificates. Subsequently, the municipal bond vehicle was terminated and the proceeds from the sales of the municipal bonds, together with the collateral posted by the residual interest holder, were sufficient to repay the putable floating-rate certificates. In 2007, the Firm did not experience a drawdown on the liquidity facilities.

As remarketing agent, the Firm may hold the putable floating-rate certificates. At December 31, 2008 and 2007, respectively, the Firm held $293 million and $617 million of these certificates on its Consolidated Balance Sheets. The largest amount held by the Firm at any time during 2008 and 2007 was $2.2 billion and $1.0 billion, respectively, or 11% and 5%, respectively, of the municipal bond vehicles' outstanding putable floating-rate certificates. The Firm did not have and continues not to have any intent to protect any residual interest holder from potential losses on any of the municipal bond holdings.

The long-term credit ratings of the putable floating-rate certificates are directly related to the credit ratings of the underlying municipal bonds, and to the credit rating of any insurer of the underlying municipal bond. A downgrade of a bond insurer would result in a downgrade of the insured municipal bonds, which would affect the rating of the putable floating-rate certificates. This could cause demand for these certificates by investors to decline or disappear, as putable floating-rate certificate holders typically require an "AA-" bond rating. At December 31, 2008 and 2007, 97% and 99%, respectively, of the municipal bonds held by vehicles to which the Firm served as liquidity provider were rated "AA-" or better, based upon either the rating of the underlying municipal bond itself, or the rating including any credit enhancement. At December 31, 2008 and 2007, $2.6 billion and $12.0 billion, respectively, of the bonds were

insured by monoline bond insurers. In addition, the municipal bond vehicles did not experience any bankruptcy or downgrade termination events during 2008 and 2007.

The Firm sometimes invests in the residual interests of municipal bond vehicles. For VIEs in which the Firm owns the residual interests, the Firm consolidates the VIEs.

The likelihood that the Firm would have to consolidate VIEs where the Firm does not own the residual interests and that are currently off-balance sheet is remote.

Exposure to nonconsolidated municipal bond VIEs at December 31, 2008 and 2007, including the ratings profile of the VIEs' assets, were as follows.

	2008				2007			
December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities[d]	Excess/ (deficit)[e]	Maximum exposure	Fair value of assets held by VIEs	Liquidity facilities[d]	Excess/ (deficit)[e]	Maximum exposure
Nonconsolidated Municipal bond vehicles[a][b][c]	**$ 10.0**	**$ 6.9**	**$ 3.1**	**$ 6.9**	$ 19.2	$ 18.1	$ 1.1	$ 18.1

	Ratings profile of VIE assets[f]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
Nonconsolidated municipal bond vehicles[a]							
2008	**$ 3.8**	**$ 5.9**	**$ 0.2**	**$ 0.1**	**$ —**	**$ 10.0**	**22.3**
2007	14.6	4.4	0.2	—	—	19.2	10.0

(a) Excluded $6.0 billion and $6.9 billion at December 31, 2008 and 2007, respectively, which were consolidated due to the Firm owning the residual interests.
(b) Certain of the municipal bond vehicles are structured to meet the definition of a QSPE (as discussed in Note 1 on page 134 of this Annual Report); accordingly, the assets and liabilities of QSPEs are not reflected in the Firm's Consolidated Balance Sheets (except for retained interests that are reported at fair value). Excluded nonconsolidated amounts of $603 million and $7.1 billion at December 31, 2008 and 2007, respectively, related to QSPE municipal bond vehicles in which the Firm owned the residual interests.
(c) The decline in balances at December 31, 2008, compared with December 31, 2007, was due to third-party residual interest holders exercising their right to terminate the municipal bond vehicles. The proceeds from the sales of municipal bonds were sufficient to repay the putable floating-rate certificates, and the Firm did not incur losses as a result of these terminations.
(d) The Firm may serve as credit enhancement provider in municipal bond vehicles in which it serves as liquidity provider. The Firm provided insurance on underlying municipal bonds in the form of letters of credit of $10 million and $103 million at December 31, 2008 and 2007, respectively.
(e) Represents the excess (deficit) of municipal bond asset fair value available to repay the liquidity facilities, if drawn.
(f) The ratings scale is based upon the Firm's internal risk ratings and presented on an S&P equivalent basis.

Credit-linked note vehicles

The Firm structures transactions with credit-linked note ("CLN") vehicles in which the VIE purchases highly rated assets, such as asset-backed securities, and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit which the VIE otherwise does not hold. The VIE then issues CLNs with maturities predominantly ranging from one to ten years in order to transfer the risk of the referenced credit to the VIE's investors. Clients and investors often prefer using a CLN vehicle since the CLNs issued by the VIE generally carry a higher credit rating than such notes would if issued directly by JPMorgan Chase. The Firm's exposure to the CLN vehicles is generally limited to its rights and obligations under the credit derivative contract with the VIE, as the Firm does not provide any additional contractual financial support to the VIE. In addition, the Firm has not historically provided any financial support to the CLN vehicles over and above its contractual obligations. Accordingly, the Firm typically does not consolidate the CLN vehicles. As a derivative counterparty in a credit-linked note structure, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its balance sheet at fair value. The collateral purchased by such VIEs is largely investment-grade, with a majority being rated "AAA". The Firm divides its credit-linked note structures broadly into two types: static and managed.

In a static credit-linked note structure, the CLNs and associated credit derivative contract either reference a single credit (e.g., a multinational corporation) or all or part of a fixed portfolio of credits. The Firm generally buys protection from the VIE under the credit derivative. As a net buyer of credit protection, the Firm pays a premium to the VIE in return for the receipt of a payment (up to the notional amount of the derivative) if one or more of the reference credits defaults, or if the losses resulting from the default of the reference credits exceed specified levels.

In a managed credit-linked note structure, the CLNs and associated credit derivative generally reference all or part of an actively managed portfolio of credits. An agreement exists between a portfolio manager and the VIE that gives the portfolio manager the ability to substitute each referenced credit in the portfolio for an alternative credit. By participating in a structure where a portfolio manager has the ability to substitute credits within pre-agreed terms, the investors who own the CLNs seek to reduce the risk that any single credit in the portfolio will default. The Firm does not act as portfolio manager; its involvement with the VIE is generally limited to being a derivative counterparty. As a net buyer of credit protection, the Firm pays a premium to the VIE in return for the receipt of a payment (up to the notional of the derivative) if one or more of the credits within the portfolio defaults, or if the losses resulting from the default of reference credits exceed specified levels.

Exposure to nonconsolidated credit-linked note VIEs at December 31, 2008 and 2007, was as follows.

	2008				2007			
December 31, (in billions)	Derivative receivables	Trading assets[c]	Total exposure[d]	Par value of collateral held by VIEs[e]	Derivative receivables	Trading assets[c]	Total exposure[d]	Par value of collateral held by VIEs[e]
Credit-linked notes[a]								
Static structure	**$ 3.6**	**$ 0.7**	**$ 4.3**	**$ 14.5**	$ 0.8	$ 0.4	$ 1.2	$ 13.5
Managed structure[b]	**7.7**	**0.3**	**8.0**	**16.6**	4.5	0.9	5.4	12.8
Total	**$11.3**	**$ 1.0**	**$12.3**	**$ 31.1**	$ 5.3	$ 1.3	$ 6.6	$ 26.3

(a) Excluded fair value of collateral of $2.1 billion and $2.5 billion at December 31, 2008 and 2007, respectively, which was consolidated as the Firm, in its role as secondary market maker, held a majority of the issued CLNs of certain vehicles.
(b) Includes synthetic collateralized debt obligation vehicles, which have similar risk characteristics to managed credit-linked note vehicles. At December 31, 2008 and 2007, trading assets included $7 million and $291 million, respectively, of transactions with subprime collateral.
(c) Trading assets principally comprise notes issued by VIEs, which from time to time are held as part of the termination of a deal or to support limited market-making.
(d) On-balance sheet exposure that includes derivative receivables and trading assets.
(e) The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies upon the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts.

Asset Swap Vehicles

The Firm also structures and executes transactions with asset swap vehicles on behalf of investors. In such transactions, the VIE purchases a specific asset or assets and then enters into a derivative with the Firm in order to tailor the interest rate or currency risk, or both, of the assets according to investors' requirements. Generally, the assets are held by the VIE to maturity, and the tenor of the derivatives would match the maturity of the assets. Investors typically invest in the notes issued by such VIEs in order to obtain exposure to the credit risk of the specific assets as well as exposure to foreign exchange and interest rate risk that is tailored to their specific needs; for example, an interest rate derivative may add additional interest rate exposure into the VIE in order to increase the return on the issued notes; or to convert an interest bearing asset into a zero-coupon bond.

The Firm's exposure to the asset swap vehicles is generally limited to its rights and obligations under the interest rate and/or foreign exchange derivative contracts, as the Firm does not provide any contractual financial support to the VIE. In addition, the Firm historically has not provided any financial support to the asset swap vehicles over and above its contractual obligations. Accordingly, the Firm typically does not consolidate the asset swap vehicles. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its balance sheet at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Exposure to nonconsolidated asset swap VIEs at December 31, 2008 and 2007, was as follows.

	2008				2007			
December 31, (in billions)	Derivative receivables (payables)	Trading assets[a]	Total exposure[b]	Par value of collateral held by VIEs[c]	Derivative receivables (payables)	Trading assets[a]	Total exposure[b]	Par value of collateral held by VIEs[c]
Nonconsolidated Asset swap vehicles[d]	**$ (0.2)**	**$ —**	**$ (0.2)**	**$ 7.3**	$ 0.2	$ —	$ 0.2	$ 5.6

(a) Trading assets principally comprise notes issued by VIEs, which from time to time are held as part of the termination of a deal or to support limited market-making.
(b) On-balance sheet exposure that includes derivative receivables (payables) and trading assets.
(c) The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies upon the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts.
(d) Excluded fair value of collateral of $1.0 billion and $976 million at December 31, 2008 and 2007, respectively, which was consolidated as the Firm, in its role as secondary market maker, held a majority of the issued notes of certain vehicles.

Collateralized Debt Obligations vehicles

A CDO typically refers to a security that is collateralized by a pool of bonds, loans, equity, derivatives or other assets. The Firm's involvement with a particular CDO vehicle may take one or more of the following forms: arranger, warehouse funding provider, placement agent or underwriter, secondary market-maker for securities issued, or derivative counterparty.

Prior to the formal establishment of a CDO vehicle, there is a warehousing period where a VIE may be used to accumulate the assets which will be subsequently securitized and serve as the collateral for the securities to be issued to investors. During this warehousing period, the Firm may provide all or a portion of the financing to the VIE, for which the Firm earns interest on the amounts it finances. A third-party asset manager that will serve as the manager for the CDO vehicle uses the warehouse funding provided by the Firm to purchase the financial assets. The funding commitments generally are one year in duration. In the event that the securitization of assets does not occur within the committed financing period, the warehoused assets are generally liquidated.

Because of the varied levels of support provided by the Firm during the warehousing period, which typically averages six to nine months, each CDO warehouse VIE is assessed in accordance with FIN 46(R) to determine whether the Firm is considered the primary beneficiary that should consolidate the VIE. In general, the Firm would consolidate the warehouse VIE unless another third party, typically the asset manager, provides significant protection for potential declines in the value of the assets held by the VIE. In those cases, the third party that provides the protection to the warehouse VIE would consolidate the VIE.

Once the portfolio of warehoused assets is large enough, the VIE will issue securities where market conditions permit. The proceeds from the issuance of securities will be used to repay the warehouse financing obtained from the Firm and other counterparties. In connection with the establishment of the CDO vehicle, the Firm typically earns a fee for arranging the CDO vehicle and distributing the securities (as placement agent and/or underwriter) and does not typically own any equity tranches issued. Once the CDO vehicle closes and issues securities, the Firm has no further obligation to provide further support to the vehicle. At the time of closing, the Firm may hold unsold securities that the Firm was not able to place with third-party investors. The amount of unsold securities at December 31, 2008 and 2007, was insignificant. In addition, the Firm may on occasion hold some of the CDO vehicles' securities, including equity interests, as a secondary market-maker or as a principal investor, or it may be a derivative counterparty to the vehicles. At December 31, 2008 and 2007, these amounts were not significant.

Exposures to CDO warehouse VIEs at December 31, 2008 and 2007, were as follows.

December 31, 2008 (in billions)	Funded loans	Unfunded commitments[a]	Maximum exposure[b]
CDO warehouse VIEs			
Consolidated	**$ 0.4**	**$ —**	**$ 0.4**
Nonconsolidated	**0.4**	**0.7**	**1.1**
Total	**$ 0.8**	**$ 0.7**	**$ 1.5**

December 31, 2007 (in billions)	Funded loans	Unfunded commitments[a]	Maximum exposure[b]
CDO warehouse VIEs			
Consolidated	$ 2.4	$ 1.9	$ 4.3
Nonconsolidated	2.7	3.4	6.1
Total	$ 5.1	$ 5.3	$ 10.4

	Ratings profile of VIE assets[c]					
	Investment-grade				Noninvestment-grade	
December 31, (in billions)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below	Total exposure
Nonconsolidated CDO warehouse VIEs						
2008	**$ —**	**$ —**	**$ —**	**$ —**	**$ 0.4**	**$ 0.4**
2007	—	—	—	—	2.7	2.7

(a) Typically contingent upon certain asset-quality conditions being met by asset managers.
(b) The aggregate of the fair value of loan exposure and any unfunded, contractually committed financing.
(c) The ratings scale is based upon JPMorgan Chase's internal risk ratings and presented on an S&P equivalent basis.

VIEs sponsored by third parties

Investment in a third-party credit card securitization trust

The Firm holds a note in a third-party-sponsored VIE, which is a credit card securitization trust (the "Trust"), that owns credit card receivables issued by a national retailer. The note is structured so that the principal amount can float up to 47% of the principal amount of the receivables held by the Trust not to exceed $4.2 billion. The Firm is not the primary beneficiary of the Trust and accounts for its investment as an AFS security, which is recorded at fair value. At December 31, 2008, the amortized cost of the note was $3.6 billion and the fair value was $2.6 billion. For more information on accounting for AFS securities, see Note 12 on pages 170–174 of this Annual Report.

VIE used in FRBNY transaction

In conjunction with the Bear Stearns merger, in June 2008, the FRBNY took control, through an LLC formed for this purpose, of a portfolio of $30.0 billion in assets, based upon the value of the portfolio as of March 14, 2008. The assets of the LLC were funded by a $28.85 billion term loan from the FRBNY, and a $1.15 billion subordinated loan from JPMorgan Chase. The JPMorgan Chase loan is subordinated to the FRBNY loan and will bear the first $1.15 billion of any losses of the portfolio. Any remaining assets in the portfolio after repayment of the FRBNY loan, the JPMorgan Chase loan and the expense of the LLC, will be for the account of the FRBNY.

Other VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These transactions include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, trustee or custodian. These transactions are conducted at arm's length, and individual credit decisions are based upon the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where these activities do not cause JPMorgan Chase to absorb a majority of the expected losses of the VIEs or to receive a majority of the residual returns of the VIEs, JPMorgan Chase records and reports these positions on its Consolidated Balance Sheets similar to the way it would record and report positions from any other third-party transaction. These transactions are not considered significant for disclosure purposes under FIN 46(R).

Consolidated VIE assets and liabilities

The following table presents information on assets, liabilities and commitments related to VIEs that are consolidated by the Firm.

	Consolidated VIEs			
	Assets			
December 31, 2008 (in billions)	Trading debt and equity	Loans	Other[b]	Total assets[c]
VIE program type				
Municipal bond vehicles	**$ 5.9**	**$ —**	**$ 0.1**	**$ 6.0**
Credit-linked notes	**1.9**	**—**	**0.2**	**2.1**
CDO warehouses[a]	**0.2**	**—**	**0.1**	**0.3**
Student loans	**—**	**4.0**	**0.1**	**4.1**
Employee funds	**—**	**—**	**0.5**	**0.5**
Energy investments	**—**	**—**	**0.4**	**0.4**
Other	**2.8**	**1.3**	**1.1**	**5.2**
Total	**$10.8**	**$ 5.3**	**$ 2.5**	**$ 18.6**

	Consolidated VIEs			
	Assets			
December 31, 2007 (in billions)	Trading debt and equity	Loans	Other[b]	Total assets[c]
VIE program type				
Municipal bond vehicles	$ 6.8	$ —	$ 0.1	$ 6.9
Credit-linked notes	2.3	—	0.2	2.5
CDO warehouses[a]	2.2	0.3	0.1	2.6
Student loans	—	4.1	—	4.1
Employee funds	—	—	—	—
Energy investments	—	—	—	—
Other	3.0	—	0.5	3.5
Total	$ 14.3	$ 4.4	$ 0.9	$ 19.6

	Liabilities		
December 31, 2008 (in billions)	Beneficial interests in VIE Assets[d]	Other[e]	Total liabilities
VIE program type			
Municipal bond vehicles	**$ 5.5**	**$ 0.4**	**$ 5.9**
Credit-linked notes	**1.3**	**0.6**	**1.9**
CDO warehouses	**—**	**—**	**—**
Student loans	**2.8**	**1.1**	**3.9**
Employee funds	**0.1**	**—**	**0.1**
Energy investments	**0.2**	**—**	**0.2**
Other	**0.7**	**1.8**	**2.5**
Total	**$ 10.6**	**$ 3.9**	**$ 14.5**

	Liabilities		
December 31, 2007 (in billions)	Beneficial interests in VIE Assets[d]	Other[e]	Total liabilities
VIE program type			
Municipal bond vehicles	$ 6.2	$ 0.6	$ 6.8
Credit-linked notes	2.3	0.5	2.8
CDO warehouses	—	—	—
Student loans	4.1	—	4.1
Employee funds	—	—	—
Energy investments	—	—	—
Other	1.4	0.5	1.9
Total	$ 14.0	$ 1.6	$ 15.6

(a) Excluded from total assets was $1.9 billion of unfunded commitments at December 31, 2007. There were no unfunded commitments at December 31, 2008.
(b) Included assets classified as resale agreements and other assets within the Consolidated Balance Sheets.
(c) Assets of each consolidated VIE included in the program types above are generally used to satisfy the liabilities to third parties. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.
(d) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item titled, "Beneficial interests issued by consolidated variable interest entities" on the Consolidated Balance Sheets. The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $5.0 billion and $7.2 billion at December 31, 2008 and 2007, respectively. See Note 23 on page 203 of this Annual Report for the maturity profile of FIN 46 long-term beneficial interests.
(e) Included liabilities classified as other borrowed funds, long-term debt and other liabilities in the Consolidated Balance Sheets.

Note 18 – Goodwill and other intangible assets

Goodwill is not amortized. Instead, it is tested for impairment in accordance with SFAS 142 at the reporting-unit segment, which is generally one level below the six major reportable business segments (as described in Note 37 on pages 226–227 of this Annual Report); plus Private Equity (which is included in Corporate). Goodwill is tested annually (during the fourth quarter) or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment. Management applies significant judgment when determining the fair value of its reporting units. Imprecision in estimating the future earnings potential of the Firm's reporting units can affect their estimated fair value. In addition, if the current period of weak economic market conditions persists, then this could adversely impact the estimates management used to determine the fair value of its reporting units. Intangible assets determined to have indefinite lives are not amortized but are tested for impairment at least annually, or more frequently if events or changes in circumstances indicate that the asset might be impaired. The impairment test compares the fair value of the indefinite-lived intangible asset to its carrying amount. Other acquired intangible assets determined to have finite lives, such as core deposits and credit card relationships, are amortized over their estimated useful lives in a manner that best reflects the economic benefits of the intangible asset; impairment testing is performed periodically on these amortizing intangible assets.

Goodwill and other intangible assets consist of the following.

December 31, (in millions)	2008	2007
Goodwill	**$ 48,027**	$ 45,270
Mortgage servicing rights	**9,403**	8,632
Purchased credit card relationships	**1,649**	2,303
All other intangibles:		
Other credit card–related intangibles	**$ 743**	$ 346
Core deposit intangibles	**1,597**	2,067
Other intangibles	**1,592**	1,383
Total all other intangible assets	**$ 3,932**	$ 3,796

Goodwill

The $2.8 billion increase in goodwill from the prior year primarily resulted from the dissolution of the Chase Paymentech Solutions joint venture, the merger with Bear Stearns, the purchase of an additional equity interest in Highbridge and the tax-related purchase accounting adjustments associated with the Bank One merger, which increased goodwill attributed to IB. The decrease in goodwill attributed to TSS predominantly resulted from the sale of a previously consolidated subsidiary. For additional information see Note 2 on pages 135–140 of this Annual Report.

Goodwill was not impaired at December 31, 2008, or 2007, nor was any goodwill written off due to impairment during 2008 and 2007.

Goodwill attributed to the business segments was as follows.

December 31, (in millions)	2008	2007
Investment Bank	**$ 4,765**	$ 3,578
Retail Financial Services	**16,840**	16,848
Card Services	**13,977**	12,810
Commercial Banking	**2,870**	2,873
Treasury & Securities Services	**1,633**	1,660
Asset Management	**7,565**	7,124
Corporate/Private Equity	**377**	377
Total goodwill	**$ 48,027**	$ 45,270

Mortgage servicing rights

JPMorgan Chase recognizes as intangible assets mortgage servicing rights, which represent the right to perform specified mortgage servicing activities (predominantly with respect to residential mortgages) for others. MSRs are either purchased from third parties or retained upon sale or securitization of mortgage loans. Servicing activities include collecting principal, interest, and escrow payments from borrowers; making tax and insurance payments on behalf of borrowers; monitoring delinquencies and executing foreclosure proceedings; and accounting for and remitting principal and interest payments to the investors of the mortgage-backed securities.

As permitted by SFAS 156, the Firm elected to fair value MSRs as one class of servicing assets. The Firm defined MSRs as one class based on the availability of market inputs to measure MSR fair value and its treatment of MSRs as one aggregate pool for risk management purposes.

The Firm initially capitalizes MSRs based on the estimated fair value at the time of initial recognition. The Firm estimates the fair value of MSRs for initial capitalization and ongoing valuation using an option-adjusted spread model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's proprietary prepayment model and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenue and costs to service, and other economic factors. The Firm reassesses and periodically adjusts the underlying inputs and assumptions used in the OAS model to reflect market conditions and assumptions that a market participant would consider in valuing the MSR asset. During 2007 and 2008, the Firm continued to refine its proprietary payment model based upon a number of market-related factors, including a downward trend in home prices, general tightening of credit underwriting standards and the associated impact on refinancing activity. The Firm compares fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. JPMorgan Chase uses or has used combinations of derivatives and trading instruments to manage changes in the fair value of MSRs. The intent is to offset any changes in the fair value of MSRs with changes in the fair value of the related risk management instruments. MSRs decrease in value when interest rates decline. Conversely, securities (such as mortgage-backed securities), principal-only certificates and certain derivatives (when the Firm receives fixed-rate interest payments) increase in value when interest rates decline.

The following table summarizes MSR activity for the years ended December 31, 2008, 2007 and 2006.

Year ended December 31, (in millions, except where otherwise noted)	2008	2007	2006
Balance at beginning of period after valuation allowance	**$ 8,632**	$ 7,546	$ 6,452
Cumulative effect of change in accounting principle	**—**	—	230
Fair value at beginning of period	**8,632**	7,546	6,682
MSR activity			
Originations of MSRs	**3,061**	2,335	1,512
Purchase of MSRs	**6,755**[c]	798	627
Total additions	**9,816**	3,133	2,139
Change in valuation due to inputs and assumptions[a]	**(6,933)**	(516)	165
Other changes in fair value[b]	**(2,112)**	(1,531)	(1,440)
Total change in fair value of MSRs	**(9,045)**[d]	(2,047)	(1,275)
Fair value at December 31	**$ 9,403**	$ 8,632	$ 7,546
Change in unrealized gains (losses) included in income related to MSRs held at December 31	**$ (6,933)**	$ (516)	NA
Contractual service fees, late fees and other ancillary fees included in income	**$ 3,353**	$ 2,429	$ 2,038
Third-party mortgage loans serviced at December 31, (in billions)	**$ 1,185.0**	$ 614.7	$ 526.7

(a) Represents MSR asset fair value adjustments due to changes in inputs, such as interest rates and volatility, as well as updates to assumptions used in the valuation model. This caption also represents total realized and unrealized gains (losses) included in net income per the SFAS 157 disclosure for fair value measurement using significant unobservable inputs (level 3).
(b) Includes changes in the MSR value due to modeled servicing portfolio runoff (or time decay). This caption represents the impact of cash settlements per the SFAS 157 disclosure for fair value measurement using significant unobservable inputs (level 3).
(c) Includes MSRs acquired as a result of the Washington Mutual transaction (of which, $59 million related to commercial real estate) and the Bear Stearns merger. For further discussion, see Note 2 on pages 135–140 of this Annual Report.
(d) Includes $4 million related to commercial real estate.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2008 and 2007, respectively; and it outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in those assumptions.

Year ended December 31 (in millions, except rates)	2008	2007
Weighted-average prepayment speed assumption (CPR)	**35.21%**	12.49%
Impact on fair value of 10% adverse change	**$(1,039)**	$ (481)
Impact on fair value of 20% adverse change	**(1,970)**	(926)
Weighted-average option adjusted spread	**3.80%**	3.00%
Impact on fair value of 100 basis points adverse change	**$ (311)**	$ (311)
Impact on fair value of 200 basis points adverse change	**(606)**	(599)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based upon a 10% and 20% variation in assumptions generally cannot be easily extrapolated because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might magnify or counteract the sensitivities.

Purchased credit card relationships and all other intangible assets

During 2008, purchased credit card relationships, other credit card-related intangibles and core deposit intangibles decreased $727 million, primarily as a result of amortization expense, partially offset by an increase in intangibles recognized related to the dissolution of the Chase Paymentech Solutions joint venture. Other intangibles (net of amortization) increased $209 million primarily as a result of the purchase of an additional equity interest in Highbridge as well as the acquisition of an institutional global custody portfolio.

Except for $517 million of indefinite-lived intangibles related to asset management advisory contracts, which are not amortized but are tested for impairment at least annually, the remainder of the Firm's other acquired intangible assets are subject to amortization.

The components of credit card relationships, core deposits and other intangible assets were as follows.

	2008			2007		
December 31, (in millions)	Gross amount	Accumulated amortization	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	**$5,765**	**$4,116**	**$ 1,649**	$ 5,794	$ 3,491	$ 2,303
All other intangibles:						
Other credit card-related intangibles	**$ 852**	**$ 109**	**$ 743**	$ 422	$ 76	$ 346
Core deposit intangibles	**4,280**	**2,683**	**1,597**	4,281	2,214	2,067
Other intangibles	**2,376**	**784**[(a)]	**1,592**	2,026	643[(a)]	1,383

(a) Includes amortization expense related to servicing assets on securitized automobile loans, which is recorded in lending & deposit-related fees, of $5 million and $9 million for the years ended December 31, 2008 and 2007, respectively.

Amortization expense

The following table presents amortization expense related to credit card relationships, core deposits and all other intangible assets.

Year ended December 31, (in millions)	**2008**	2007	2006
Purchased credit card relationships	**$ 625**	$ 710	$ 731
All other intangibles:			
Other credit card-related intangibles	**33**	11	6
Core deposit intangibles	**469**	554	568
Other intangibles	**136**	119	123[(a)]
Total amortization expense	**$1,263**	$ 1,394	$ 1,428

(a) Amortization expense related to the aforementioned selected corporate trust businesses were reported in income from discontinued operations for 2006.

Future amortization expense

The following table presents estimated future amortization expense related to credit card relationships, core deposits and all other intangible assets at December 31, 2008.

Year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	All other intangible assets	**Total**
2009	$ 419	$ 93	$ 390	$ 123	$ 1,025
2010	350	98	329	106	883
2011	287	97	285	96	765
2012	249	98	239	93	679
2013	210	97	196	90	593

Note 19 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset. JPMorgan Chase has recorded immaterial asset retirement obligations related to asbestos remediation under SFAS 143 and FIN 47 in those cases where it has sufficient information to estimate the obligations' fair value.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software under SOP 98-1. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 20 – Deposits

At December 31, 2008 and 2007, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	2008	2007
U.S. offices:		
Noninterest-bearing	**$ 210,899**	$129,406
Interest-bearing (included $1,849 and $1,909 at fair value at December 31, 2008 and 2007, respectively)	**511,077**	376,194
Non-U.S. offices:		
Noninterest-bearing	**7,697**	6,342
Interest-bearing (included $3,756 and $4,480 at fair value at December 31, 2008 and 2007, respectively)	**279,604**	228,786
Total	**$ 1,009,277**	$740,728

At December 31, 2008 and 2007, time deposits in denominations of $100,000 or more were as follows.

December 31, (in millions)	2008	2007
U.S.	**$ 147,493**	$134,529
Non-U.S.	**58,247**	69,171
Total	**$ 205,740**	$203,700

At December 31, 2008, the maturities of time deposits were as follows.

December 31, 2008 (in millions)	U.S.	Non-U.S.	**Total**
2009	$ 200,586	$ 77,934	$ 278,520
2010	5,388	916	6,304
2011	4,299	811	5,110
2012	4,418	429	4,847
2013	2,767	525	3,292
After 5 years	802	226	1,028
Total	$ 218,260	$ 80,841	$ 299,101

On October 3, 2008, the Emergency Economic Stabilization Act of 2008 was signed into law. The Act increased FDIC deposit insurance from $100,000 to $250,000 per depositor through December 31, 2009. In addition, on November 21, 2008, the FDIC released the Final Rule for the FDIC Temporary Liquidity Guarantee Program ("TLG Program"), which provides unlimited deposit insurance through December 31, 2009, for noninterest-bearing transaction deposit accounts at FDIC-insured participating institutions. The Firm elected to continue to participate in the TLG Program and, as a result, will be required to pay additional insurance premiums to the FDIC in an amount equal to an annualized 10-basis points on balances in nointerest-bearing transaction accounts that exceed the $250,000 FDIC deposit insurance limits, as determined on a quarterly basis.

Note 21 – Other borrowed funds

The following table details the components of other borrowed funds.

December 31, (in millions)	2008	2007
Advances from Federal Home Loan Banks[a]	**$ 70,187**	$ 450
Nonrecourse advances – FRBB[b]	**11,192**	—
Other	**51,021**[c]	28,385
Total	**$ 132,400**	$ 28,835

(a) Maturities of advances from the Federal Home Loan Banks were $47.4 billion, $18.5 billion, $2.6 billion, and $714 million in each of the 12-month periods ending December 31, 2009, 2010, 2011, and 2013, respectively, and $1.0 billion maturing after December 31, 2013. Maturities for the 12-month period ending December 31, 2012 were not material.

(b) On September 19, 2008, the Federal Reserve Board established a temporary lending facility, the AML Facility, to provide liquidity to eligible U.S. money market mutual funds ("MMMFs"). Under the AML Facility, banking organizations must use the loan proceeds to finance their purchases of eligible high-quality ABCP investments from MMMFs, which are pledged to secure nonrecourse advances from the FRBB. Participating banking organizations do not bear any credit or market risk related to the ABCP investments they hold under this facility; therefore, the ABCP investments held are not assessed any regulatory capital. The AML Facility will be in effect until October 30, 2009. The nonrecourse advances from the FRBB were elected under the fair value option and recorded in other borrowed funds; the corresponding ABCP investments were also elected under the fair value option and recorded in other assets.

(c) Includes $30.0 billion of advances from the Federal Reserve under the Federal Reserve's Term Auction Facility ("TAF"), pursuant to which the Federal Reserve auctions term funds to depository institutions that are eligible to borrow under the primary credit program. The TAF allows all eligible depository institutions to place a bid for an advance from its local Federal Reserve Bank at an interest rate set by an auction. All advances are required to be fully collateralized. The TAF is designed to improve liquidity by making it easier for sound institutions to borrow when the markets are not operating efficiently. The TAF does not have a fixed expiration date.

Note 22 – Accounts payable and other liabilities

The following table details the components of accounts payable and other liabilities at each of the dates indicated.

December 31, (in millions)	2008	2007
Accounts payable and other liabilities:		
Accounts payable	**$ 48,019**	$ 39,785
Brokerage payables[a]	**88,585**	14,612
Other liabilities	**51,374**	40,079
Total	**$ 187,978**	$ 94,476

(a) Includes payables to customers, brokers, dealers and clearing organizations, and securities fails.

Note 23 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. The following table is a summary of long-term debt carrying values (including unamortized original issue discount, SFAS 133 valuation adjustments and fair value adjustments, where applicable) by contractual maturity as of December 31, 2008.

By remaining maturity at December 31, (in millions, except rates)		2008 Under 1 year	1–5 years	After 5 years	Total	2007 Total
Parent company						
Senior debt:[a]	Fixed rate	**$ 5,030**	**$ 47,606**[f]	**$ 27,272**	**$ 79,908**	$ 29,386
	Variable rate	**16,999**	**39,050**[g]	**9,185**	**65,234**	47,546
	Interest rates[b]	**0.20–7.63%**	**0.42–7.00%**	**1.40–7.50%**	**0.20–7.63%**	0.75–7.43%
Subordinated debt:	Fixed rate	**$ 3,732**	**$ 8,296**	**$ 16,938**	**$ 28,966**	$ 27,761
	Variable rate	**—**	**37**	**1,749**	**1,786**	1,888
	Interest rates[b]	**6.00–9.88%**	**5.25–10.00%**	**1.92–9.88%**	**1.92–10.00%**	1.92–10.00%
	Subtotal	**$ 25,761**	**$ 94,989**	**$ 55,144**	**$ 175,894**	$ 106,581
Subsidiaries						
Senior debt:[a]	Fixed rate	**$ 1,052**	**$ 4,433**	**$ 2,885**	**$ 8,370**	$ 6,406
	Variable rate[c]	**9,213**	**30,050**	**18,717**	**57,980**	60,556
	Interest rates[b]	**0.03–4.45%**	**0.05–5.75%**	**0.44–14.21%**	**0.03–14.21%**	3.70–14.21%
Subordinated debt:	Fixed rate	**$ —**	**$ 2**	**$ 8,698**	**$ 8,700**	$ 9,169
	Variable rate	**—**	**—**	**1,150**	**1,150**	1,150
	Interest rates[b]	**—**	**6.25%**	**2.33–8.25%**	**2.33–8.25%**	4.38–8.25%
	Subtotal	**$ 10,265**	**$ 34,485**	**$ 31,450**	**$ 76,200**	$ 77,281
Total long-term debt[d]		**$ 36,026**	**$ 129,474**	**$ 86,594**	**$ 252,094**[h][i][j]	$ 183,862[j]
FIN 46R long-term beneficial interests:						
	Fixed rate	**$ 16**	**$ 486**	**$ 69**	**$ 571**	$ 701
	Variable rate	**51**	**1,002**	**3,381**	**4,434**	6,508
	Interest rates	**3.51–7.75%**	**3.05–8.75%**	**3.40–9.16%**	**3.05–9.16%**	1.73–12.79%
Total FIN 46R long-term beneficial interests[e]		**$ 67**	**$ 1,488**	**$ 3,450**	**$ 5,005**	$ 7,209

(a) Included are various equity-linked or other indexed instruments. Embedded derivatives, separated from hybrid securities in accordance with SFAS 133, are reported at fair value and shown net with the host contract on the Consolidated Balance Sheets. Changes in fair value of separated derivatives are recorded in principal transactions revenue. Hybrid securities which the Firm has elected to measure at fair value are classified in the line item of the host contract on the Consolidated Balance Sheets; changes in fair value are recorded in principal transactions revenue in the Consolidated Statements of Income.

(b) The interest rates shown are the range of contractual rates in effect at year-end, including non U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in SFAS 133 hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the SFAS 133 hedge accounting derivatives, the range of modified rates in effect at December 31, 2008, for total long-term debt was 0.18% to 14.21%, versus the contractual range of 0.03% to 14.21% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value under SFAS 155 or SFAS 159.

(c) Included $7.8 billion principal amount of U.S. dollar-denominated floating-rate mortgage bonds issued to an unaffiliated statutory trust, which in turn issued €6.0 billion in covered bonds secured by mortgage loans at December 31, 2008.

(d) Included $58.2 billion and $70.5 billion of outstanding structured notes accounted for at fair value at December 31, 2008 and 2007, respectively.

(e) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated VIEs. Also included $1.7 billion and $3.0 billion of outstanding structured notes accounted for at fair value at December 31, 2008 and 2007, respectively.

(f) Included $14.1 billion as of December 31, 2008, guaranteed under the TLG Program whereby newly issued senior, unsecured debt is guaranteed by the FDIC, which is discussed below.

(g) Included $6.9 billion as of December 31, 2008, guaranteed by the FDIC under the TLG Program, which is discussed below.

(h) At December 31, 2008, long-term debt aggregating $7.4 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based upon the terms specified in the respective notes.

(i) The aggregate principal amount of debt that matures in each of the five years subsequent to 2008 is $36.0 billion in 2009, $38.5 billion in 2010, $39.7 billion in 2011, $32.7 billion in 2012 and $18.6 billion in 2013.

(j) Included $3.4 billion and $4.6 billion of outstanding zero-coupon notes at December 31, 2008 and 2007, respectively. The aggregate principal amount of these notes at their respective maturities was $7.1 billion and $7.7 billion, respectively.

The weighted-average contractual interest rate for total long-term debt was 4.06% and 5.20% as of December 31, 2008 and 2007, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rate for total long-term debt, including the effects of related derivative instruments, was 3.53% and 5.13% as of December 31, 2008 and 2007, respectively.

JPMorgan Chase has elected to continue to participate in the TLG Program, which is available to, among others, all U.S. depository institutions insured by the FDIC and all U.S. bank holding companies, unless they have opted out of the TLG Program or the FDIC has terminated their participation. Under the TLG Program, the FDIC guarantees certain senior unsecured debt of JPMorgan Chase through the earlier of maturity and June 30, 2012, and in return for the guarantees, the FDIC is paid a fee based on the amount and maturity of the debt.

Under the TLG Program, the FDIC will pay the unpaid principal and interest on an FDIC-guaranteed debt instrument upon the uncured failure of the participating entity to make a timely payment of principal or interest in accordance with the terms of the instrument. The guarantee of new obligations under the TLG Program is scheduled to expire in October 2009.

JPMorgan Chase & Co. (Parent Company) has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees rank on a parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities totaled $4.8 billion and $4.7 billion at December 31, 2008 and 2007, respectively. For additional information, see Note 2 on pages 135–140 of this Annual Report.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities

At December 31, 2008, the Firm had established 24 wholly-owned Delaware statutory business trusts ("issuer trusts") that had issued guaranteed capital debt securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $18.6 billion and $15.1 billion at December 31, 2008 and 2007, respectively, were reflected in the Firm's Consolidated Balance Sheets in the liabilities section under the caption "Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities" (i.e., trust preferred capital debt securities). The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated Balance Sheets at December 31, 2008 and 2007.

The debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, qualify as Tier 1 capital.

The following is a summary of the outstanding trust preferred capital debt securities, including unamortized original issue discount, issued by each trust, and the junior subordinated deferrable interest debenture issued to each trust as of December 31, 2008.

December 31, 2008 (in millions)	Amount of capital debt securities issued by trust[a]	Principal amount of debenture issued to trust[b]	Issue date	Stated maturity of capital securities and debentures	Earliest redemption date	Interest rate of capital securities and debentures	Interest payment/ distribution dates
Bank One Capital III	$ 474	$ 764	2000	2030	Any time[c]	8.75%	Semiannually
Bank One Capital VI	525	554	2001	2031	Any time[c]	7.20%	Quarterly
Bear Stearns Capital Trust III	263	262	2001	2031	Any time[c]	7.80%	Quarterly
Chase Capital II	496	511	1997	2027	Any time[c]	LIBOR + 0.50%	Quarterly
Chase Capital III	297	306	1997	2027	Any time[c]	LIBOR + 0.55%	Quarterly
Chase Capital VI	249	256	1998	2028	Any time[c]	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	248	256	1997	2027	Any time[c]	LIBOR + 0.55%	Quarterly
J.P. Morgan Chase Capital X	1,000	1,014	2002	2032	Any time[c]	7.00%	Quarterly
J.P. Morgan Chase Capital XI	1,075	995	2003	2033	Any time[c]	5.88%	Quarterly
J.P. Morgan Chase Capital XII	400	388	2003	2033	Any time[c]	6.25%	Quarterly
JPMorgan Chase Capital XIII	472	487	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XIV	600	583	2004	2034	2009	6.20%	Quarterly
JPMorgan Chase Capital XV	995	1,370	2005	2035	Any time[c]	5.88%	Semiannually
JPMorgan Chase Capital XVI	500	490	2005	2035	2010	6.35%	Quarterly
JPMorgan Chase Capital XVII	496	696	2005	2035	Any time[c]	5.85%	Semiannually
JPMorgan Chase Capital XVIII	748	749	2006	2036	Any time[c]	6.95%	Semiannually
JPMorgan Chase Capital XIX	562	564	2006	2036	2011	6.63%	Quarterly
JPMorgan Chase Capital XX	995	996	2006	2036	Any time[c]	6.55%	Semiannually
JPMorgan Chase Capital XXI	845	846	2007	2037	2012	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXII	996	997	2007	2037	Any time[c]	6.45%	Semiannually
JPMorgan Chase Capital XXIII	746	746	2007	2047	2012	LIBOR + 1.00%	Quarterly
JPMorgan Chase Capital XXIV	700	700	2007	2047	2012	6.88%	Quarterly
JPMorgan Chase Capital XXV	1,492	2,244	2007	2037	2037	6.80%	Semiannually
JPMorgan Chase Capital XXVI	1,815	1,815	2008	2048	2013	8.00%	Quarterly
Total	$16,989	$18,589					

(a) Represents the amount of capital securities issued to the public by each trust, including unamortized original issue discount.
(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated Financial Statements.
(c) Subject to Series K Preferred Stock restrictions, which are discussed in Note 24 below.

Note 24 – Preferred stock

JPMorgan Chase is authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share.

On April 23, 2008, the Firm issued 600,000 shares of Fixed to Floating Rate Noncumulative Perpetual Preferred Stock, Series I ("Series I").

On July 15, 2008, each series of Bear Stearns preferred stock then issued and outstanding was exchanged into a series of JPMorgan Chase preferred stock (Cumulative Preferred Stock, Series E, Series F and Series G) having substantially identical terms. As a result of the exchange, these preferred shares rank equally with the other series of the Firm's preferred stock.

On August 21, 2008, the Firm issued 180,000 shares of 8.625% Noncumulative Perpetual Preferred Stock, Series J ("Series J").

On October 28, 2008, pursuant to the U.S. Department of the Treasury's (the "U.S. Treasury") Capital Purchase Program (the "Capital Purchase Program"), the Firm issued to the U.S. Treasury, in exchange for total proceeds of $25.0 billion, (i) 2.5 million shares of the Firm's Fixed Rate Cumulative Perpetual Preferred Stock, Series K, par value $1 per share and liquidation preference $10,000 per share (the "Series K Preferred Stock"), and (ii) a warrant to purchase 88,401,697 shares of the Firm's common stock at an exercise price of $42.42 per share (the "Warrant"). The $25.0 billion proceeds were allocated to the Series K Preferred Stock and the Warrant based on the relative fair value of the instruments. The difference between the initial carrying value of $23.7 billion that was allocated to the Series K Preferred Stock and its redemption value of $25.0 billion will be charged to retained earnings (with a corresponding increase in the carrying value of the Series K Preferred Stock) over the first five years of the contract as an adjustment to the dividend yield using the effective yield method. The Series K Preferred Stock is nonvoting, qualifies as Tier 1 capital and ranks equally with the Firm's other series of preferred stock.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock for the payment of dividends and the distribution of assets.

Generally, dividends on shares of outstanding series of preferred stock are payable quarterly. Dividends on the shares of Series I preferred stock are payable semiannually at a fixed annual dividend rate of 7.90% through April 2018, and then become payable quarterly at an annual dividend rate of three-month LIBOR plus 3.47%. Dividends are payable quarterly on the Series K Preferred Stock at a fixed annual dividend rate of 5% for the first five years, and a fixed annual dividend rate of 9% thereafter. The effective dividend yield of Series K Preferred stock is 6.16%.

The following is a summary of JPMorgan Chase preferred stock outstanding as of December 31, 2008. There was no preferred stock outstanding at December 31, 2007.

	Share value and redemption price per share[b]	Shares	Outstanding at December 31, 2008 (in millions)	Earliest redemption date	Contractual rate in effect at December 31, 2008
Cumulative Preferred Stock, Series E[a]	$ 200	818,113	$ 164	Any time[d]	6.15%
Cumulative Preferred Stock, Series F[a]	200	428,825	86	Any time[d]	5.72
Cumulative Preferred Stock, Series G[a]	200	511,169	102	Any time[d]	5.49
Fixed to Floating Rate Noncumulative Perpetual Preferred Stock, Series I[a]	10,000	600,000	6,000	4/30/2018	7.90
Noncumulative Perpetual Preferred Stock, Series J[a]	10,000	180,000	1,800	9/1/2013	8.63
Fixed Rate Cumulative Perpetual Preferred Stock, Series K	10,000	2,500,000	23,787[c]	12/1/2011[e]	5.00
Total preferred stock		5,038,107	$ 31,939		

(a) Represented by depositary shares.
(b) Redemption price includes amount shown in the table plus any accrued but unpaid dividends.
(c) Represents the carrying value as of December 31, 2008. The redemption value is $25.0 billion.
(d) Subject to Series K Preferred Stock restrictions, which are discussed below.
(e) Generally, the Firm may not redeem Series K Preferred Stock prior to the first dividend payment date falling on or after October 28, 2011. However, prior to this date, the Firm may redeem the securities up to the amount of the aggregate gross proceeds from a "qualified equity offering" if it has received aggregate gross proceeds from such offerings above an amount agreed with the U.S. Treasury and received approval from the applicable federal banking agencies.

Series K Preferred Stock

Dividend restrictions

For as long as any shares of Series K Preferred Stock are outstanding, no dividends may be declared or paid on stock ranking junior or equally with the Series K Preferred Stock, unless all accrued and unpaid dividends for all past dividend periods on the Series K Preferred Stock are fully paid. Pursuant to the Capital Purchase Program, until October 28, 2011, the U.S. Treasury's consent is required for any increase in dividends on the Firm's common stock from the amount of the last quarterly stock dividend declared by the Firm prior to October 14, 2008, unless the Series K Preferred Stock is redeemed in whole before then, or the U.S. Treasury has transferred all of the Series K Preferred Stock it owns to third parties.

Stock repurchase restrictions

The Firm may not repurchase or redeem any common stock or other equity securities of the Firm, or any trust preferred capital debt securities issued by the Firm or any of its affiliates, without the prior consent of the U.S. Treasury (other than (i) repurchases of the Series K Preferred Stock and (ii) repurchases of junior preferred shares or common stock in connection with any employee benefit plan in the ordinary course of business consistent with past practice) until October 28, 2011, unless the Series K Preferred Stock is redeemed in whole before then, or the U.S. Treasury has transferred all of the Series K Preferred Stock it owns to third parties.

Note 25 – Common stock

At December 31, 2008, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a $1 par value per share.

On September 30, 2008, the Firm issued $11.5 billion of new shares of common stock at $40.50 per share, representing 284 million shares.

On April 8, 2008, pursuant to the Share Exchange Agreement dated March 24, 2008, between JPMorgan Chase and Bear Stearns, 20.7 million newly issued shares of JPMorgan Chase common stock were issued to Bear Stearns in a transaction that was exempt from registration under the Securities Act of 1933, pursuant to Section 4(2) thereof, in exchange for 95.0 million newly issued shares of Bear Stearns common stock (or 39.5% of Bear Stearns common stock after giving effect to the issuance). Upon the consummation of the Bear Stearns merger, on May 30, 2008, the 20.7 million shares of JPMorgan Chase common stock and 95.0 million shares of Bear Stearns common stock were cancelled. For a further discussion of this transaction, see Note 2 on pages 135–140 of this Annual Report.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during 2008, 2007 and 2006 were as follows.

December 31, (in millions)	**2008**	2007	2006
Issued – balance at January 1	**3,657.7**	3,657.8	3,618.2
Newly issued:			
Common stock:			
Open market issuance	**283.9**	—	—
Bear Stearns Share Exchange Agreement	**20.7**	—	—
Employee benefits and compensation plans	**—**	—	39.3
Employee stock purchase plans	**—**	—	0.6
Total newly issued	**304.6**	—	39.9
Canceled shares	**(20.7)**	(0.1)	(0.3)
Total issued – balance at December 31	**3,941.6**	3,657.7	3,657.8
Treasury – balance at January 1	**(290.3)**	(196.1)	(131.5)
Purchases of treasury stock	**—**	(168.2)	(90.7)
Share repurchases related to employee stock-based awards[a]	**(0.5)**	(2.7)	(8.8)
Issued from treasury:			
Change from the Bear Stearns merger as a result of the reissuance of Treasury stock and the Share Exchange Agreement	**26.5**	—	—
Employee benefits and compensation plans	**54.4**	75.7	34.4
Employee stock purchase plans	**1.1**	1.0	0.5
Total issued from treasury	**82.0**	76.7	34.9
Total treasury – balance at December 31	**(208.8)**	(290.3)	(196.1)
Outstanding	**3,732.8**	3,367.4	3,461.7

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes. The shares withheld amounted to 0.5 million, 2.7 million and 8.1 million for 2008, 2007 and 2006, respectively.

Pursuant to the Capital Purchase Program, the Firm issued to the U.S. Treasury a Warrant to purchase up to 88,401,697 shares of the Firm's common stock at an exercise price of $42.42 per share. Based upon its fair value relative to the Series K Preferred Stock as discussed in Note 24 on pages 205–206 of this Annual Report, the Warrant was recorded in capital surplus at a value of $1.3 billion and is accounted for as equity. The Warrant is exercisable, in whole or in part, at any time and from time to time until the tenth anniversary of the issue date.

During the year ended December 31, 2008, the Firm did not repurchase any shares of common stock. During 2007 and 2006, the Firm repurchased 168 million shares and 91 million shares, respectively, of common stock under stock repurchase programs approved by the Board of Directors.

The Board of Directors approved in April 2007, a stock repurchase program that authorizes the repurchase of up to $10.0 billion of the Firm's common shares, which superseded an $8.0 billion stock repurchase program approved in 2006. The $10.0 billion authorization includes shares to be repurchased to offset issuances under the Firm's employee stock-based plans. The actual number of shares that may be repurchased is subject to various factors, including market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative potential investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time. A Rule 10b5-1 repurchase plan allows the Firm to repurchase shares during periods when it would not otherwise be repurchasing common stock – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan that is established when the Firm is not aware of material nonpublic information.

For a discussion of restrictions on the Firm's ability to repurchase the Firm's common stock, see Note 24 above.

As of December 31, 2008, approximately 524 million unissued shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans and the Warrant issued to the U.S. Treasury under the Capital Purchase Program as discussed above.

Note 26 – Earnings per share

SFAS 128 requires the presentation of basic and diluted earnings per share ("EPS") in the Consolidated Statements of Income. Basic EPS is computed by dividing net income applicable to common stock by the weighted-average number of common shares outstanding for the period. Diluted EPS is computed using the same method for the numerator as basic EPS but, in the denominator, the number of common shares reflect, in addition to outstanding shares, the potential dilution that could occur if convertible securities or other contracts to issue common stock were converted or exercised into common stock. Net income available for common stock is the same for basic EPS and diluted EPS, as JPMorgan Chase had no convertible securities, and therefore, no adjustments to net income applicable to common stock were necessary. The following table presents the calculation of basic and diluted EPS for 2008, 2007 and 2006.

Year ended December 31, (in millions, except per share amounts)	2008	2007	2006
Basic earnings per share			
Income from continuing operations	**$ 3,699**	$ 15,365	$ 13,649
Income from discontinued operations	**—**	—	795
Income before extraordinary gain	**$ 3,699**	$ 15,365	$ 14,444
Extraordinary gain	**1,906**	—	—
Net income	**5,605**	15,365	14,444
Less: preferred stock dividends	**674**	—	4
Net income applicable to common stock	**$ 4,931**	$ 15,365	$ 14,440
Weighted-average basic shares outstanding	**3,501**	3,404	3,470
Income from continuing operations per share	**$ 0.86**	$ 4.51	$ 3.93
Discontinued operations per share	**—**	—	0.23
Extraordinary gain per share	**0.55**	—	—
Net income per share	**$ 1.41**	$ 4.51	$ 4.16

Year ended December 31, (in millions, except per share amounts)	2008	2007	2006
Diluted earnings per share			
Net income applicable to common stock	**$ 4,931**	$ 15,365	$ 14,440
Weighted-average basic shares outstanding	**3,501**	3,404	3,470
Add: Employee restricted stock, RSUs, stock options and SARs	**104**	104	104
Weighted-average diluted shares outstanding[a]	**3,605**	3,508	3,574
Income from continuing operations per share	**$ 0.84**	$ 4.38	$ 3.82
Discontinued operations per share	**—**	—	0.22
Extraordinary gain per share	**0.53**	—	—
Net income per share	**$ 1.37**	$ 4.38	$ 4.04

(a) Options issued under employee benefit plans and, in 2008, the warrant issued under the U.S. Treasury's Capital Purchase Program to purchase an aggregate 209 million, 129 million and 150 million shares of common stock were outstanding for the years ended December 31, 2008, 2007 and 2006, respectively, but were not included in the computation of diluted EPS, because the options and warrant were antidilutive.

Note 27 – Accumulated other comprehensive income (loss)

Accumulated other comprehensive income (loss) includes the after-tax change in unrealized gains and losses on AFS securities, SFAS 52 foreign currency translation adjustments (including the impact of related derivatives), SFAS 133 cash flow hedging activities and SFAS 158 net loss and prior service cost (credit) related to the Firm's defined benefit pension and OPEB plans.

(in millions)	Unrealized gains (losses) on AFS securities[a]	Translation adjustments, net of hedges	Cash flow hedges	Net loss and prior service costs (credit) of defined benefit pension and OPEB plans[e]	Accumulated other comprehensive income (loss)
Balance at December 31, 2005	$ (224)	$ (8)	$ (394)	$ —	$ (626)
Net change	253[b]	13	(95)	—	171
Adjustment to initially apply SFAS 158, net of taxes	—	—	—	(1,102)	(1,102)
Balance at December 31, 2006	29	5	(489)	(1,102)	(1,557)
Cumulative effect of changes in accounting principles (SFAS 159)	(1)	—	—	—	(1)
Balance at January 1, 2007, adjusted	28	5	(489)	(1,102)	(1,558)
Net change	352[c]	3	(313)	599	641
Balance at December 31, 2007	380	8	(802)	(503)	(917)
Net change	**(2,481)**[d]	**(606)**	**600**	**(2,283)**	**(4,770)**
Balance at December 31, 2008	**$ (2,101)**	**$ (598)**	**$ (202)**	**$ (2,786)**	**$ (5,687)**

(a) Represents the after-tax difference between the fair value and amortized cost of the AFS securities portfolio and retained interests in securitizations recorded in other assets.
(b) The net change during 2006 was due primarily to the reversal of unrealized losses from securities sales.
(c) The net change during 2007 was due primarily to a decline in interest rates.
(d) The net change during 2008 was due primarily to spread widening in credit card asset-backed securities, non-agency mortgage-backed securities and collateralized loan obligations.
(e) For further discussion of SFAS 158, see Note 9 on pages 161–167 of this Annual Report.

The following table presents the after-tax changes in net unrealized gains (losses); and reclassification adjustments for realized (gains) losses on AFS securities and cash flow hedges; changes resulting from foreign currency translation adjustments (including the impact of related derivatives); net gains (losses) and prior service costs from pension and OPEB plans; and amortization of pension and OPEB amounts into net income. The table also reflects the adjustment to accumulated other comprehensive income (loss) resulting from the initial application of SFAS 158 to the Firm's defined benefit pension and OPEB plans. Reclassification adjustments include amounts recognized in net income that had been recorded previously in other comprehensive income (loss).

	2008			2007			2006		
Year ended December 31, (in millions)	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Unrealized gains (losses) on AFS securities:									
Net unrealized gains (losses) arising during the period	**$ (3,071)**	**$ 1,171**	**$ (1,900)**	$ 759	$ (310)	$ 449	$ (403)	$ 144	$ (259)
Reclassification adjustment for realized (gains) losses included in net income	**(965)**	**384**	**(581)**	(164)	67	(97)	797	(285)	512
Net change	**(4,036)**	**1,555**	**(2,481)**	595	(243)	352	394	(141)	253
Translation adjustments:									
Translation	**(1,781)**	**682**	**(1,099)**	754	(281)	473	590	(236)	354
Hedges	**820**	**(327)**	**493**	(780)	310	(470)	(563)	222	(341)
Net change	**(961)**	**355**	**(606)**	(26)	29	3	27	(14)	13
Cash flow hedges:									
Net unrealized gains (losses) arising during the period	**584**	**(226)**	**358**	(737)	294	(443)	(250)	98	(152)
Reclassification adjustment for realized (gains) losses included in net income	**402**	**(160)**	**242**	217	(87)	130	93	(36)	57
Net change	**986**	**(386)**	**600**	(520)	207	(313)	(157)	62	(95)
Net loss and prior service cost (credit) of defined benefit pension and OPEB plans:[a]									
Net gains (losses) and prior service credits arising during the period	**(3,579)**	**1,289**	**(2,290)**	934	(372)	562	NA	NA	NA
Reclassification adjustment for net loss and prior service credit included in net income	**14**	**(7)**	**7**	59	(22)	37	NA	NA	NA
Net change	**(3,565)**	**1,282**	**(2,283)**	993	(394)	599	NA	NA	NA
Total other comprehensive income (loss)	**$ (7,576)**	**$ 2,806**	**$ (4,770)**	$ 1,042	$ (401)	$ 641	$ 264	$ (93)	$ 171
Net loss and prior service cost (credit) of defined benefit pension and OPEB plans:									
Adjustments to initially apply SFAS 158[a]	**NA**	**NA**	**NA**	NA	NA	NA	$ (1,746)	$ 644	$ (1,102)

(a) For further discussion of SFAS 158 and details of changes to accumulated other comprehensive income (loss), see Note 9 on pages 161–167 of this Annual Report.

Note 28 – Income taxes

JPMorgan Chase and eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset-and-liability method required by SFAS 109 as amended by FIN 48 to provide income taxes on all transactions recorded in the consolidated financial statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax liability or asset for each temporary difference is determined based upon the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different than those currently reported.

The components of income tax expense (benefit) included in the Consolidated Statements of Income were as follows.

Year ended December 31, (in millions)	**2008**	2007	2006
Current income tax expense			
U.S. federal	**$ 395**	$ 2,805	$ 5,512
Non-U.S.	**1,009**	2,985	1,656
U.S. state and local	**307**	343	879
Total current income tax expense	**1,711**	6,133	8,047
Deferred income tax expense (benefit)			
U.S. federal	**(3,015)**	1,122	(1,628)
Non-U.S.	**1**	(185)	194
U.S. state and local	**377**	370	(376)
Total deferred income tax expense (benefit)	**(2,637)**	1,307	(1,810)
Total income tax expense (benefit) from continuing operations	**(926)**	7,440	6,237
Total income tax expense from discontinued operations	**—**	—	572
Total income tax expense (benefit)	**$ (926)**	$ 7,440	$ 6,809

Total income tax expense includes $55 million, $74 million, and $367 million of tax benefits recorded in 2008, 2007 and 2006, respectively, as a result of tax audit resolutions.

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity and certain tax benefits associated with the Firm's employee stock-based compensation plans. The table does not reflect the cumulative tax effects of initially implementing new accounting pronouncements in 2007 and 2006. The tax effect of all items recorded directly to stockholders' equity was an increase in stockholders' equity of $3.0 billion, $159 million and $885 million in 2008, 2007 and 2006, respectively.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. During 2008, as part of JPMorgan Chase's periodic review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill these requirements and needs, the Firm determined that the undistributed earnings of certain of its subsidiaries, for which U.S. federal income taxes had been provided, will remain indefinitely reinvested to fund the current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. This determination resulted in the release of deferred tax liabilities and the recognition of an income tax benefit of $1.1 billion associated with these undistributed earnings. For 2008, pretax earnings of approximately $2.5 billion were generated that will remain indefinitely invested in these subsidiaries. At December 31, 2008, the cumulative amount of undistributed pretax earnings in these subsidiaries approximated $12.9 billion. If the Firm were to record a deferred tax liability associated with these undistributed earnings, the amount would be $2.9 billion at December 31, 2008.

The tax expense (benefit) applicable to securities gains and losses for the years 2008, 2007 and 2006 was $608 million, $60 million and $(219) million, respectively.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for continuing operations for the past three years is shown in the following table.

Year ended December 31,	**2008**	2007	2006
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase (decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of federal income tax benefit	**16.0**	2.0	2.1
Tax-exempt income	**(14.8)**	(2.4)	(2.2)
Non-U.S. subsidiary earnings	**(53.6)**	(1.1)	(0.5)
Business tax credits	**(24.5)**	(2.5)	(2.5)
Bear Stearns equity losses	**5.7**	—	—
Other, net	**2.8**	1.6	(0.5)
Effective tax rate	**(33.4)%**	32.6%	31.4%

Deferred income tax expense (benefit) results from differences between assets and liabilities measured for financial reporting and for income-tax return purposes. The significant components of deferred tax assets and liabilities are reflected in the following table.

December 31, (in millions)	2008	2007
Deferred tax assets		
Allowance for loan losses	**$ 8,029**	$ 3,800
Employee benefits	**4,841**	3,391
Allowance for other than loan losses	**3,686**	3,635
Fair value adjustments	**2,565**	—
Non-U.S. operations	**2,504**	285
Tax attribute carryforwards	**1,383**	—
Gross deferred tax assets	**$23,008**	$11,111
Deferred tax liabilities		
Depreciation and amortization	**$ 4,681**	$ 2,966
Leasing transactions	**1,895**	2,304
Fee income	**1,015**	548
Non-U.S. operations	**946**	1,790
Fair value adjustments	**—**	570
Other, net	**202**	207
Gross deferred tax liabilities	**$ 8,739**	$ 8,385
Valuation allowance	**1,266**	220
Net deferred tax asset	**$13,003**	$ 2,506

JPMorgan Chase has recorded deferred tax assets of $1.4 billion in connection with net operating loss and business tax credit carry forwards. The U.S. federal net operating loss carryforward of approximately $1.3 billion, the state and local net operating loss carryforwards of approximately $7.2 billion, and the business tax credit carryforward of approximately $300 million are subject to annual limitations on utilization. If not utilized, the net operating losses would expire in 2026, 2027 and 2028, and the business tax credits would expire in 2028. In addition, an alternative minimum tax credit carryforward has been recorded for approximately $200 million and has an indefinite carryforward period.

A valuation allowance has been recorded relating to state and local net operating losses, losses associated with non-U.S. subsidiaries and losses associated with certain portfolio investments. The increase in the valuation allowance from the prior year to 2008 is largely related to Bear Stearns.

The Firm adopted and applied FIN 48, which addresses the recognition and measurement of tax positions taken or expected to be taken, and also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods and disclosure, to all of its income tax positions at the required effective date of January 1, 2007, resulting in a $436 million cumulative effect increase to retained earnings, a reduction in goodwill of $113 million and a $549 million decrease in the liability for income taxes.

At December 31, 2008 and 2007, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $5.9 billion and $4.8 billion, respectively, of which $2.9 billion and $1.3 billion, if recognized, would reduce the annual effective tax rate. As JPMorgan Chase is presently under audit by a number of tax authorities, it is reasonably possible that unrecognized tax benefits could significantly change over the next 12 months, which could also significantly impact JPMorgan Chase's quarterly and annual effective tax rates.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years 2008 and 2007.

Unrecognized tax benefits

Year ended December 31, (in millions)	2008	2007
Balance at January 1,	**$4,811**	$ 4,677
Increases based on tax positions related to the current period	**890**	434
Decreases based on tax positions related to the current period	**(109)**	(241)
Increases associated with the Bear Stearns merger	**1,387**	—
Increases based on tax positions related to prior periods	**501**	903
Decreases based on tax positions related to prior periods	**(1,386)**	(791)
Decreases related to settlements with taxing authorities	**(181)**	(158)
Decreases related to a lapse of applicable statute of limitations	**(19)**	(13)
Balance at December 31,	**$5,894**	$ 4,811

Pretax interest expense and penalties related to income tax liabilities recognized in income tax expense were $571 million ($346 million after-tax) in 2008 and $516 million ($314 million after-tax) in 2007. Included in accounts payable and other liabilities at December 31, 2008 and 2007, in addition to the Firm's liability for unrecognized tax benefits, was $2.3 billion and $1.6 billion, respectively, for income tax-related interest and penalties, of which the penalty component was insignificant.

JPMorgan Chase is subject to ongoing tax examinations by the tax authorities of the various jurisdictions in which it operates, including U.S. federal and state and non-U.S. jurisdictions. The Firm's consolidated federal income tax returns are presently under examination by the Internal Revenue Service ("IRS") for the years 2003, 2004 and 2005. The consolidated federal income tax returns of Bank One Corporation, which merged with and into JPMorgan Chase on July 1, 2004, are under examination for the years 2000 through 2003, and for the period January 1, 2004, through July 1, 2004. The consolidated federal income tax returns of Bear Stearns for the years ended November 30, 2003, 2004 and 2005, are also under examination. All three examinations are expected to conclude in 2009. The IRS audits of the consolidated federal income tax returns of JPMorgan Chase for the years 2006 and 2007, and for Bear Stearns for the years ended November 30, 2006 and 2007, are expected to commence in 2009. Administrative appeals are pending with the IRS relating to prior examination periods. For 2002 and prior years, refund claims relating to income and credit adjustments, and to tax attribute carrybacks, for JPMorgan Chase and its predecessor entities, including Bank One, have been filed. Amended returns to reflect refund claims primarily attributable to net operating losses and tax credit carrybacks will be filed for the final Bear Stearns federal consolidated tax return for the period December 1, 2007, through May 30, 2008, and for prior years.

The following table presents the U.S. and non-U.S. components of income from continuing operations before income tax expense (benefit).

Year ended December 31, (in millions)	**2008**	2007	2006
U.S.	**$ (2,094)**	$ 13,720	$12,934
Non-U.S.[(a)]	**4,867**	9,085	6,952
Income from continuing operations before income tax expense (benefit)	**$ 2,773**	$ 22,805	$19,886

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

Note 29 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the Office of the Comptroller of the Currency ("OCC"). The Bank is a member of the U.S. Federal Reserve System, and its deposits are insured by the FDIC as discussed in Note 20 on page 202 of this Annual Report.

The Board of Governors of the Federal Reserve System (the "Federal Reserve") requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $1.6 billion in 2008 and 2007.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company–only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2009 and 2008, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, $17.0 billion and $16.2 billion, respectively, in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2009 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2008 and 2007, cash in the amount of $20.8 billion and $16.0 billion, respectively, and securities with a fair value of $12.1 billion and $3.4 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers.

Note 30 – Capital

The Federal Reserve establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A.

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital includes common stockholders' equity, qualifying preferred stock and minority interest less goodwill and other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1, subordinated long-term debt and other instruments qualifying as Tier 2, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total regulatory capital is subject to deductions for investments in certain subsidiaries. Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total (Tier 1 plus Tier 2) capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital to average adjusted on-balance sheet assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Banking subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2008 and 2007, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

The Federal Reserve granted the Firm, for a period of 18 months following the Bear Stearns merger, relief up to a certain specified amount and subject to certain conditions from the Federal Reserve's risk-based capital and leverage requirements with respect to Bear Stearns' risk-weighted assets and other exposures acquired. The amount of such relief is subject to reduction by one-sixth each quarter subsequent to the merger and expires on October 1, 2009. The OCC granted JPMorgan Chase Bank, N.A. similar relief from its risk-based capital and leverage requirements.

The following table presents the risk-based capital ratios for JPMorgan Chase and its significant banking subsidiaries at December 31, 2008 and 2007.

(in millions, except ratios)	Tier 1 capital	Total capital	Risk-weighted assets[c]	Adjusted average assets[d]	Tier 1 capital ratio	Total capital ratio	Tier 1 leverage ratio
December 31, 2008[a]							
JPMorgan Chase & Co.	**$136,104**	**$ 184,720**	**$ 1,244,659**	**$ 1,966,895**	**10.9%**	**14.8%**	**6.9%**
JPMorgan Chase Bank, N.A.	**100,594**	**143,854**	**1,153,039**	**1,705,750**	**8.7**	**12.5**	**5.9**
Chase Bank USA, N.A.	**11,190**	**12,901**	**101,472**	**87,286**	**11.0**	**12.7**	**12.8**
December 31, 2007[a]							
JPMorgan Chase & Co.	$ 88,746	$ 132,242	$ 1,051,879	$ 1,473,541	8.4%	12.6%	6.0%
JPMorgan Chase Bank, N.A.	78,453	112,253	950,001	1,268,304	8.3	11.8	6.2
Chase Bank USA, N.A.	9,407	10,720	73,169	60,905	12.9	14.7	15.5
Well-capitalized ratios[b]					6.0%	10.0%	5.0%[e]
Minimum capital ratios[b]					4.0	8.0	3.0[f]

(a) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions, whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.
(b) As defined by the regulations issued by the Federal Reserve, OCC and FDIC.
(c) Includes off-balance sheet risk-weighted assets in the amounts of $357.5 billion, $332.2 billion and $18.6 billion, respectively, at December 31, 2008, and $352.7 billion, $336.8 billion and $13.4 billion, respectively, at December 31, 2007, for JPMorgan Chase, JPMorgan Bank, N.A. and Chase Bank USA, N.A.
(d) Adjusted average assets, for purposes of calculating the leverage ratio, include total average assets adjusted for unrealized gains/losses on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.
(e) Represents requirements for banking subsidiaries pursuant to regulations issued under the Federal Deposit Insurance Corporation Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.
(f) The minimum Tier 1 leverage ratio for bank holding companies and banks is 3% or 4% depending on factors specified in regulations issued by the Federal Reserve and OCC.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities which have resulted from both nontaxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from nontaxable business combinations totaling $1.1 billion at December 31, 2008, and $2.0 billion at December 31, 2007. Additionally, the Firm had deferred tax liabilities resulting from tax-deductible goodwill of $1.6 billion at December 31, 2008, and $939 million at December 31, 2007.

The following table shows the components of the Firm's Tier 1 and Total capital.

December 31, (in millions)	2008	2007
Tier 1 capital		
Total stockholders' equity	**$166,884**	$123,221
Effect of certain items in accumulated other comprehensive income (loss) excluded from Tier 1 capital	**5,084**	925
Adjusted stockholders' equity	**171,968**	124,146
Minority interest[a]	**17,257**	15,005
Less: Goodwill	**48,027**	45,270
SFAS 157 DVA	**2,358**	882
Investments in certain subsidiaries	**679**	782
Nonqualifying intangible assets	**2,057**	3,471
Tier 1 capital	**136,104**	88,746
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	**31,659**	32,817
Qualifying allowance for credit losses	**17,187**	10,084
Adjustment for investments in certain subsidiaries and other	**(230)**	595
Tier 2 capital	**48,616**	43,496
Total qualifying capital	**$184,720**	$132,242

(a) Primarily includes trust preferred capital debt securities of certain business trusts.

Note 31 – Commitments and contingencies

At December 31, 2008, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based upon maintenance, utility and tax increases or require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2008.

Year ended December 31, (in millions)	
2009	$ 1,676
2010	1,672
2011	1,543
2012	1,456
2013	1,387
After 2013	9,134
Total minimum payments required[a]	16,868
Less: Sublease rentals under noncancelable subleases	(2,266)
Net minimum payment required	$ 14,602

(a) Lease restoration obligations are accrued in accordance with SFAS 13, and are not reported as a required minimum lease payment.

Total rental expense was as follows.

Year ended December 31, (in millions)	2008	2007	2006
Gross rental expense	**$1,917**	$1,380	$1,266
Sublease rental income	**(415)**	(175)	(194)
Net rental expense	**$1,502**	$1,205	$1,072

At December 31, 2008, assets were pledged to secure public deposits and for other purposes. The significant components of the assets pledged were as follows.

December 31, (in billions)	2008	2007
Reverse repurchase/securities borrowing agreements	**$ 456.6**	$ 333.7
Securities	**31.0**	4.5
Loans	**342.3**	160.4
Trading assets and other	**98.0**	102.2
Total assets pledged[a]	**$ 927.9**	$ 600.8

(a) Total assets pledged do not include assets of consolidated VIEs. These assets are generally used to satisfy liabilities to third parties. See Note 17 on pages 189–198 of this Annual Report for additional information on assets and liabilities of consolidated VIEs.

The Firm has resolved with the IRS issues related to compliance with reporting and withholding requirements for certain accounts transferred to The Bank of New York Mellon Corporation ("BNYM") in connection with the Firm's sale to BNYM of its corporate trust business. The resolution of these issues did not have a material effect on the Firm.

Note 32 – Accounting for derivative instruments and hedging activities

Derivative instruments enable end-users to increase, reduce or alter exposure to credit or market risks. The value of a derivative is derived from its reference to an underlying variable or combination of variables such as equity, foreign exchange, credit, commodity or interest rate prices or indices. JPMorgan Chase makes markets in derivatives for customers and also is an end-user of derivatives in order to hedge or manage risks of market exposures, modify the interest rate characteristics of related balance sheet instruments or meet longer-term investment objectives. The majority of the Firm's derivatives are entered into for market-making purposes. SFAS 133, as amended by SFAS 138, SFAS 149, SFAS 155 and FSP FAS 133-1, establishes accounting and reporting standards for derivative instruments, including those used for trading and hedging activities and derivative instruments embedded in other contracts. All free-standing derivatives are required to be recorded on the Consolidated Balance Sheets at fair value. The accounting for changes in value of a derivative depends on whether or not the contract has been designated and qualifies for hedge accounting. Derivative receivables and payables, whether designated for hedging relationships or not, are recorded in trading assets and trading liabilities as set forth in Note 6 on page 159 of this Annual Report.

Derivatives used for trading purposes

The Firm makes markets in derivatives for customers seeking to modify, or reduce interest rate, credit, foreign exchange, equity and commodity and other market risks or for risk-taking purposes. The Firm typically manages its exposure from such derivatives by entering into derivatives or other financial instruments that partially or fully offset the exposure from the client transaction. The Firm actively manages any residual exposure and seeks to earn a spread between the client derivatives and offsetting positions. For the Firm's own account, the Firm uses derivatives to take risk positions or to benefit from differences in prices between derivative markets and markets for other financial instruments.

Derivatives used for risk management purposes

Interest rate contracts, which are generally interest rate swaps, forwards and futures are utilized in the Firm's risk management activities to minimize fluctuations in earnings caused by interest rate volatility. As a result of interest rate fluctuations, fixed-rate assets and liabilities appreciate or depreciate in market value. Gains or losses on the derivative instruments that are linked to fixed-rate assets and liabilities and forecasted transactions are expected to offset substantially this unrealized appreciation or depreciation. Interest income and interest expense on variable-rate assets and liabilities and on forecasted transactions increase or decrease as a result of interest rate fluctuations. Gains and losses on the derivative instruments that are linked to assets and liabilities and forecasted transactions are expected to offset substantially this variability in earnings. Interest rate swaps involve the exchange of fixed-rate and variable-rate interest payments based on the contracted notional amount. Forward contracts used for the Firm's interest rate risk management activities are primarily arrangements to exchange cash in the future based on price movements of specified financial instruments. Futures contracts used are primarily index futures which provide for cash payments based upon the movements of an underlying rate index.

The Firm uses foreign currency contracts to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S.) assets and liabilities and forecasted transactions denominated in a foreign currency, as well as the Firm's equity investments in foreign subsidiaries. As a result of foreign currency fluctuations, the U.S. dollar equivalent values of the foreign currency-denominated assets and liabilities or forecasted transactions change. Gains or losses on the derivative instruments that are linked to the foreign currency denominated assets or liabilities or forecasted transactions are expected to offset substantially this variability. Foreign exchange forward contracts represent agreements to exchange the currency of one country for the currency of another country at an agreed-upon price on an agreed-upon settlement date.

The Firm uses forward contracts to manage the overall price risk associated with the gold inventory in its commodities portfolio. As a result of gold price fluctuations, the fair value of the gold inventory changes. Gains or losses on the derivative instruments that are linked to gold inventory are expected to substantially offset this unrealized appreciation or depreciation. Forward contracts used for the Firm's gold inventory risk management activities are arrangements to deliver gold in the future.

The Firm uses credit derivatives to manage the credit risk associated with loans, lending-related commitments and derivative receivables, as well as exposure to residential and commercial mortgages. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event such as bankruptcy or a failure to pay an obligation when due. For a further discussion of credit derivatives, see the discussion below.

In order to qualify for hedge accounting, a derivative must be considered highly effective at reducing the risk associated with the exposure being hedged. In order for a derivative to be designated as a hedge, there must be documentation of the risk management objective and strategy, including identification of the hedging instrument, the hedged item and the risk exposure, and how effectiveness is to be assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a hedging instrument has been and is expected to continue to be effective at achieving offsetting changes in fair value or cash flows must be assessed and documented at least quarterly. Any ineffectiveness must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

For qualifying fair value hedges, all changes in the fair value of the derivative and in the fair value of the hedged item for the risk being hedged are recognized in earnings. If the hedge relationship is terminated, then the fair value adjustment to the hedged item continues

to be reported as part of the basis of the item and continues to be amortized to earnings as a yield adjustment. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in other comprehensive income (loss) and recognized in the Consolidated Statements of Income when the hedged cash flows affect earnings. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the change in fair value of the derivative recorded in accumulated other comprehensive income (loss) is recognized when the cash flows that were hedged occur, consistent with the original hedge strategy. For hedge relationships that are discontinued because the forecasted transaction is not expected to occur according to the original strategy, any related derivative amounts recorded in accumulated other comprehensive income (loss) are immediately recognized in earnings. For qualifying net investment hedges, changes in the fair value of the derivative or the revaluation of the foreign currency–denominated debt instrument are recorded in the translation adjustments account within accumulated other comprehensive income (loss).

JPMorgan Chase's fair value hedges primarily include hedges of the interest rate risk inherent in fixed-rate long-term debt, warehouse loans, AFS securities, and the overall price of gold inventory. All changes in the hedging derivative's fair value are included in earnings consistent with the classification of the hedged item, primarily net interest income for long-term debt and AFS securities; other income for warehouse loans; and principal transactions revenue for gold inventory. The Firm did not recognize any gains or losses during 2008, 2007 or 2006 on firm commitments that no longer qualified as fair value hedges.

JPMorgan Chase also enters into derivative contracts to hedge exposure to variability in cash flows from floating-rate financial instruments and forecasted transactions, primarily the rollover of short-term assets and liabilities, and foreign currency–denominated revenue and expense. All hedging derivative amounts affecting earnings are recognized consistent with the classification of the hedged item, primarily net interest income.

The Firm uses forward foreign exchange contracts and foreign currency–denominated debt instruments to protect the value of net investments in subsidiaries whose functional currency is not the U.S. dollar. The portion of the hedging derivative excluded from the assessment of hedge effectiveness (i.e., forward points) is recorded in net interest income.

JPMorgan Chase does not seek to apply hedge accounting to all of the Firm's economic hedges. For example, the Firm does not apply hedge accounting to purchased credit default swaps used to manage the credit risk of loans and commitments because of the difficulties in qualifying such contracts as hedges under SFAS 133. Similarly, the Firm does not apply hedge accounting to certain interest rate derivatives used as economic hedges.

The following table presents derivative instrument hedging-related activities for the periods indicated.

Year ended December 31, (in millions)	**2008**	2007	2006
Fair value hedge ineffective net gains[a]	**$ 434**	$ 111	$ 51
Cash flow hedge ineffective net gains[a]	**18**	29	2
Cash flow hedging net gains on forecasted transactions that failed to occur	**—**	15[b]	—

(a) Includes ineffectiveness and the components of hedging instruments that have been excluded from the assessment of hedge effectiveness.
(b) During the second half of 2007, the Firm did not issue short-term fixed rate Canadian dollar denominated notes due to the weak credit market for Canadian short-term debt.

Over the next 12 months, it is expected that $348 million (after-tax) of net losses recorded in accumulated other comprehensive income (loss) at December 31, 2008, will be recognized in earnings. The maximum length of time over which forecasted transactions are hedged is ten years, and such transactions primarily relate to core lending and borrowing activities.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, failure to pay its obligation, or a restructuring. The seller of credit protection receives a premium for providing protection, but has the risk that the underlying instrument referenced in the contract will be subjected to a credit event.

The Firm is both a purchaser and seller of credit protection in the credit derivatives market and uses credit derivatives for two primary purposes. First, in its capacity as a market-maker in the dealer/client business, the Firm actively risk manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. As a seller of protection, the Firm's exposure to a given reference entity may be offset partially, or entirely, with a contract to purchase protection from another counterparty on the same or similar reference entity. Second, the Firm uses credit derivatives in order to mitigate the Firm's credit risk associated with the overall derivative receivables and traditional commercial credit lending exposures (loans and unfunded commitments) as well as to manage its exposure to residential and commercial mortgages. See Note 4 on pages 141–155 of this Annual Report for further information on the Firm's mortgage-related exposures. In accomplishing the above, the Firm uses different types of credit derivatives. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index, as described further below. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name credit default swaps ("CDS") and index CDS contracts are both OTC derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while CDS index are used to manage credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index is comprised of a portfolio of CDS across many reference entities. New series of CDS indices are established approximately every six months with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index and is replaced with another reference entity. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at the time of settling the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-linked notes

A credit linked note ("CLN") is a funded credit derivative where the issuer of the CLN purchases credit protection on a referenced entity from the note investor. Under the contract, the investor pays the issuer par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity experiences a specified credit event. In that event, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the CLN has recourse to the defaulting reference entity. For a further discussion of CLNs, see Note 17 on pages 194–195 of this Annual Report.

The following table presents a summary of the notional amounts of credit derivatives and credit-linked notes the Firm sold and purchased, and the net position as of December 31, 2008. Upon a credit event, the Firm as seller of protection would typically pay out only a percentage of the full notional of net protection sold; as the amount that is actually required to be paid on the contracts take into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities; as such other protection purchased referenced in the following table includes credit derivatives bought on related, but not identical reference positions, including indices, portfolio coverage and other reference points, which further mitigates the risk associated with the net protection sold.

Total credit derivatives and credit-linked notes

	Maximum payout/Notional amount			
December 31, 2008 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (4,194,707)	$ 3,876,890	$ (317,817)	$ 302,160
Other credit derivatives[a]	(4,026)	—	(4,026)	10,096
Total credit derivatives	(4,198,733)	3,876,890	(321,843)	312,256
Credit-linked notes	(1,263)	141	(1,122)	1,792
Total	$ (4,199,996)	$ 3,877,031	$ (322,965)	$ 314,048

(a) Primarily consists of total return swaps and options to enter into credit default swap contracts.
(b) Represents the notional amount of purchased credit derivatives where the underlying reference instrument is identical to the reference instrument on which the Firm has sold credit protection.
(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(d) Represents single-name and index CDS protection the Firm purchased primarily to risk manage the net protection sold.

The following table summarizes the notional and fair value amounts of credit derivatives and credit-linked notes as of December 31, 2008, where JPMorgan Chase is the seller of protection. The maturity profile presents the years to maturity based upon the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of protection purchased is comparable to the profile reflected below.

Protection sold – credit derivatives and credit-linked notes ratings/maturity profile[a]

December 31, 2008 (in millions)	< 1 year	1-5 years	> 5 years	Total notional amount	Fair value[c]
Risk rating of reference entity					
Investment grade (AAA to BBB-)[b]	$ (177,404)	$ (1,767,004)	$ (713,555)	$ (2,657,963)	$ (215,217)
Noninvestment grade (BB+ and below)[b]	(121,040)	(992,098)	(428,895)	(1,542,033)	(244,975)
Total	$ (298,444)	$ (2,759,102)	$ (1,142,450)	$ (4,199,996)	$ (460,192)

(a) The contractual maturity for single-name CDS contract generally ranges from three months to ten years and the contractual maturity for index CDS is generally five years. The contractual maturity for CLNs typically ranges from three to five years.
(b) Ratings scale is based upon the Firm's internal ratings, which generally correspond to ratings defined by S&P and Moody's.
(c) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral held by the Firm.

Note 33 – Off-balance sheet lending-related financial instruments and guarantees

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligation under these guarantees, and the counterparties subsequently fail to perform according to the terms of these contracts. Most of these commitments and guarantees expire without a default occurring or without being drawn. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. Further, certain commitments, predominantly related to consumer financings, are cancelable, upon notice, at the option of the Firm.

To provide for the risk of loss inherent in wholesale related contracts, an allowance for credit losses on lending-related commitments is maintained. See Note 15 on pages 178–180 of this Annual Report for further discussion of the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts of off-balance sheet lending-related financial instruments and guarantees and the related allowance for credit losses on lending-related commitments at December 31, 2008 and 2007.

Off-balance sheet lending-related financial instruments and guarantees

	Contractual amount		Allowance for lending-related commitments	
December 31, (in millions)	**2008**	2007	**2008**	2007
Lending-related				
Consumer[a]	**$ 741,507**	$ 815,936	**$ 25**	$ 15
Wholesale:				
Other unfunded commitments to extend credit[b][c][d][e]	**225,863**	250,954	**349**	571
Asset purchase agreements[f]	**53,729**	90,105	**9**	9
Standby letters of credit and financial guarantees[c][g][h]	**95,352**	100,222	**274**	254
Other letters of credit[c]	**4,927**	5,371	**2**	1
Total wholesale	**379,871**	446,652	**634**	835
Total lending-related	**$ 1,121,378**	$ 1,262,588	**$ 659**	$ 850
Other guarantees				
Securities lending guarantees[i]	**$ 169,281**	$ 385,758	**NA**	NA
Residual value guarantees	**670**	NA	**NA**	NA
Derivatives qualifying as guarantees[j]	**83,835**	85,262	**NA**	NA

(a) Includes credit card and home equity lending-related commitments of $623.7 billion and $95.7 billion, respectively, at December 31, 2008; and $714.8 billion and $74.2 billion, respectively, at December 31, 2007. These amounts for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.

(b) Includes unused advised lines of credit totaling $36.3 billion and $38.4 billion at December 31, 2008 and 2007, respectively, which are not legally binding. In regulatory filings with the Federal Reserve, unused advised lines are not reportable.

(c) Represents contractual amount net of risk participations totaling $28.3 billion at both December 31, 2008 and 2007.

(d) Excludes unfunded commitments to third-party private equity funds of $1.4 billion and $881 million at December 31, 2008 and 2007, respectively. Also excludes unfunded commitments for other equity investments of $1.0 billion and $903 million at December 31, 2008 and 2007, respectively.

(e) Includes commitments to investment and noninvestment grade counterparties in connection with leveraged acquisitions of $3.6 billion and $8.2 billion at December 31, 2008 and 2007, respectively.

(f) Largely represents asset purchase agreements with the Firm's administered multi-seller, asset-backed commercial paper conduits. It also includes $96 million and $1.1 billion of asset purchase agreements to other third-party entities at December 31, 2008 and 2007, respectively.

(g) JPMorgan Chase held collateral relating to $31.0 billion and $31.5 billion of these arrangements at December 31, 2008 and 2007, respectively. Prior periods have been revised to conform to the current presentation.

(h) Includes unissued standby letters of credit commitments of $39.5 billion and $50.7 billion at December 31, 2008 and 2007, respectively.

(i) Collateral held by the Firm in support of securities lending indemnification agreements was $170.1 billion and $390.5 billion at December 31, 2008 and 2007, respectively. Securities lending collateral comprises primarily cash, securities issued by governments that are members of the Organisation for Economic Co-operation and Development and U.S. government agencies.

(j) Represents notional amounts of derivatives qualifying as guarantees.

Other unfunded commitments to extend credit

Unfunded commitments to extend credit are agreements to lend or to purchase securities only when a customer has complied with predetermined conditions, and they generally expire on fixed dates.

Other unfunded commitments to extend credit include commitments to U.S. domestic states and municipalities, hospitals and other not-for-profit entities to provide funding for periodic tenders of their variable-rate demand bond obligations or commercial paper. Performance by the Firm is required in the event that the variable-rate demand bonds or commercial paper cannot be remarketed to new investors. The performance required of the Firm under these agreements is conditional and limited by certain termination events, which include bankruptcy and the credit rating downgrade of the issuer of the variable-rate demand bonds or commercial paper to below certain predetermined thresholds. The commitment period is generally one to three years. The amount of commitments related to variable-rate demand bonds and commercial paper of U.S. domestic states and municipalities, hospitals and not-for-profit entities at December 31, 2008 and 2007, was $23.5 billion and $24.1 billion, respectively.

Included in other unfunded commitments to extend credit are commitments to investment and noninvestment grade counterparties in connection with leveraged acquisitions. These commitments are dependent on whether the acquisition by the borrower is successful, tend to be short-term in nature and, in most cases, are subject to certain conditions based on the borrower's financial condition or other factors. Additionally, the Firm often syndicates portions of the commitment to other investors, depending on market conditions. These commitments often contain flexible pricing features to adjust for changing market conditions prior to closing. Alternatively, the borrower may turn to the capital markets for required funding instead of drawing on the commitment provided by the Firm, and the commitment may expire unused. As such, these commitments may not necessarily be indicative of the Firm's actual risk, and the total commitment amount may not reflect actual future cash flow requirements. The amount of commitments related to leveraged acquisitions at December 31, 2008 and 2007, was $3.6 billion and $8.2 billion, respectively. For further information, see Note 4 and Note 5 on pages 141–155 and 156–158, respectively, of this Annual Report.

FIN 45 guarantees

FIN 45 establishes accounting and disclosure requirements for guarantees, requiring that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. FIN 45 defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party, based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off-balance sheet lending-related arrangements to be guarantees under FIN 45: certain asset purchase agreements, standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts. These guarantees are described in further detail below.

The fair value at inception of the obligation undertaken when issuing the guarantees and commitments that qualify under FIN 45 is typically equal to the net present value of the future amount of premium receivable under the contract. The Firm has recorded this amount in other liabilities with an offsetting entry recorded in other assets. As cash is received under the contract, it is applied to the premium receivable recorded in other assets, and the fair value of the liability recorded at inception is amortized into income as lending & deposit-related fees over the life of the guarantee contract. The amount of the liability related to FIN 45 guarantees recorded at December 31, 2008 and 2007, excluding the allowance for lending-related commitments and derivative contracts discussed below, was approximately $535 million and $335 million, respectively.

Asset purchase agreements

The majority of the Firm's unfunded commitments are not guarantees as defined in FIN 45, except for certain asset purchase agreements that are principally used as a mechanism to provide liquidity to SPEs, predominantly multi-seller conduits, as described in Note 17 on pages 189–198 of this Annual Report. The conduit's administrative agent can require the liquidity provider to perform under their asset purchase agreement with the conduit at any time. These agreements may cause the Firm to purchase an asset from the SPE at an amount above the asset's then fair value, in effect providing a guarantee of the initial value of the reference asset as of the date of the agreement. In most instances, third-party credit enhancements of the SPE mitigate the Firm's potential losses on these agreements.

The carrying value of asset purchase agreements of $147 million at December 31, 2008, classified in accounts payable and other liabilities on the Consolidated Balance Sheets, includes $9 million for the allowance for lending-related commitments and $138 million for the FIN 45 guarantee liability.

Standby letters of credit

Standby letters of credit ("SBLC") and financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The majority of SBLCs mature in 5 years or less; as of December 31, 2008 and 2007, 64% and 52%, respectively, of these arrangements mature within three years. The Firm has recourse to recover from the customer any amounts paid under these guarantees; in addition, the Firm may hold cash or other highly liquid collateral to support these guarantees. The carrying value of standby letters of credit of $673 million and $590 million at December 31, 2008 and 2007, respectively, which is classified in accounts payable and other liabilities in the Consolidated Balance Sheets, includes $276 million and $255 million at December 31, 2008 and 2007, respectively, for the allowance for lending-related commitments, and $397 million and $335 million at December 31, 2008 and 2007, respectively, for the FIN 45 guarantee.

The following table summarizes the type of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's customers as of December 31, 2008 and 2007. The ratings scale is representative of the payment or performance risk to the Firm under the guarantee and is based upon the Firm's internal risk ratings, which generally correspond to ratings defined by S&P and Moody's.

	2008		2007	
December 31, (in millions)	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade[a]	**$ 73,394**	**$ 4,165**	$ 71,904	$ 4,153
Noninvestment-grade[a]	**21,958**	**762**	28,318	1,218
Total contractual amount	**$ 95,352**[b]	**$ 4,927**	$ 100,222[b]	$ 5,371
Allowance for lending-related commitments	**$ 274**	**$ 2**	$ 254	$ 1
Commitments with collateral	**30,972**	**1,000**	31,502	809

(a) Ratings scale is based upon the Firm's internal ratings which generally correspond to ratings defined by S&P and Moody's.
(b) Represents contractual amount net of risk participations totaling $28.3 billion at both December 31, 2008 and 2007.

Derivatives qualifying as guarantees

In addition to the contracts described above, the Firm transacts certain derivative contracts that meet the characteristics of a guarantee under FIN 45. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for trading purposes. The terms of written put options are typically five years or less. Derivative guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps", are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio, and typically have a longer-term maturity or allow either party to terminate the contract subject to contractually specified terms.

Derivative guarantees are recorded on the Consolidated Balance Sheets at fair value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was $83.8 billion and $85.3 billion at December 31, 2008 and 2007, respectively. The notional value generally represents the Firm's maximum exposure to derivatives qualifying as guarantees, although exposure to certain stable value derivatives is contractually limited to a substantially lower percentage of the notional value. The fair value of the contracts reflects the probability of whether the Firm will be required to perform under the contract. The fair value related to derivative guarantees was a derivative receivable of $184 million and $213 million, and a derivative payable of $5.6 billion and $2.5 billion at December 31, 2008 and 2007, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

In addition to derivative contracts that meet the characteristics of a guarantee under FIN 45, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 32 on pages 214–217 of this Annual Report.

Securities lending indemnification

Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the third-party borrower to return the lent securities in the event the Firm did not obtain sufficient collateral. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

Also, as part of this program, the Firm invests cash collateral received from the borrower in accordance with approved guidelines.

Based upon historical experience, management believes that risk of loss under its indemnification obligations is remote.

Indemnification agreements – general

In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that may require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based upon historical experience, management expects the risk of loss to be remote.

Loan sale and securitization-related indemnifications

Indemnifications for breaches of representations and warranties

As part of the Firm's loan sale and securitization activities, as described in Note 14 and Note 16 on pages 175–178 and 180–188, respectively, of this Annual Report, the Firm generally makes representations and warranties in its loan sale and securitization agreements that the loans sold meet certain requirements. These agreements may require the Firm (including in its roles as a servicer) to repurchase the loans and/or indemnify the purchaser of the loans against losses due to any breaches of such representations or warranties. Generally, the maximum amount of future payments the Firm would be required to make for breaches under these representations and warranties would be equal to the current amount of assets held by such securitization-related SPEs plus, in certain circumstances, accrued and unpaid interest on such loans and certain expense.

At December 31, 2008 and 2007, the Firm had recorded a repurchase liability of $1.1 billion and $15 million, respectively.

Loans sold with recourse

The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as the Federal National Mortgage Association or the Federal Home Loan Mortgage Corporation or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's loan sale transactions have primarily been executed on a nonrecourse basis, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2008 and 2007, the unpaid principal balance of loans sold with recourse totaled $15.0 billion and $557 million, respectively. The increase in loans sold with recourse between December 31, 2008 and 2007, was driven by the Washington Mutual transaction. The carrying value of the related liability that the Firm had recorded, which is representative of the Firm's view of the likelihood it will have to perform under this guarantee, was $241 million and zero at December 31, 2008 and 2007, respectively.

Credit card charge-backs

Prior to November 1, 2008, the Firm was a partner with one of the leading companies in electronic payment services in a joint venture operating under the name of Chase Paymentech Solutions, LLC (the "joint venture"). The joint venture was formed in October 2005, as a result of an agreement by the Firm and First Data Corporation, its joint venture partner, to integrate the companies' jointly-owned Chase Merchant Services and Paymentech merchant businesses. The joint venture provided merchant processing services in the United States and Canada. The dissolution of the joint venture was completed on November 1, 2008, and JPMorgan Chase retained approximately 51% of the business under the Chase Paymentech Solutions name.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is liable primarily for the amount of each processed credit card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Chase Paymentech Solutions will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Chase Paymentech Solutions is unable to collect the amount from the merchant, Chase Paymentech Solutions will bear the loss for the amount credited or refunded to the cardmember. Chase Paymentech Solutions mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Chase Paymentech Solutions does not have sufficient collateral from the merchant to provide customer refunds; and (3) Chase Paymentech Solutions does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would be liable for the amount of the transaction. For the year ended December 31, 2008, Chase Paymentech Solutions incurred aggregate credit losses of $13 million on $713.9 billion of aggregate volume processed, and at December 31, 2008, it held $222 million of collateral. For the year ended December 31, 2007, the joint venture incurred aggregate credit losses of $10 million on $719.1 billion of aggregate volume processed, and at December 31, 2007, the joint venture held $779 million of collateral. The Firm believes that, based upon historical experience and the collateral held by Chase Paymentech Solutions, the amount of the Firm's charge back-related obligations, which is representative of the payment or performance risk to the Firm, is immaterial.

Credit card association, exchange and clearinghouse guarantees

The Firm holds an equity interest in VISA Inc. During October 2007, certain VISA-related entities completed a series of restructuring transactions to combine their operations, including VISA USA, under one holding company, VISA Inc. Upon the restructuring, the Firm's membership interest in VISA USA was converted into an equity interest in VISA Inc. VISA Inc. sold shares via an initial public offering and used a portion of the proceeds from the offering to redeem a portion of the Firm's equity interest in Visa Inc. Prior to the restructuring, VISA USA's by-laws obligated the Firm upon demand by VISA USA to indemnify VISA USA for, among other things, litigation obligations of Visa USA. The accounting for that guarantee was not subject to fair value accounting under FIN 45, because the guarantee was in effect prior to the effective date of FIN 45. Upon the restructuring event, the Firm's obligation to indemnify Visa Inc. was limited to certain identified litigations. Such a limitation is deemed a modification of the indemnity by-law and, accordingly, is now subject to the provisions of FIN 45. The value of the litigation guarantee has been recorded in the Firm's financial statements based on its fair value; the net amount recorded (within other liabilities) did not have a material adverse effect on the Firm's financial statements.

In addition to Visa, the Firm is a member of other associations, including several securities and futures exchanges and clearinghouses, both in the United States and other countries. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to a member's guarantee fund, or, in a few cases, the obligation may be unlimited. It is difficult to estimate the Firm's maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based upon historical experience, management expects the risk of loss to be remote.

Residual value guarantee

In connection with the Bear Stearns merger, the Firm succeeded to an operating lease arrangement for the building located at 383 Madison Avenue in New York City (the "Synthetic Lease"). Under the terms of the Synthetic Lease, the Firm is obligated to make periodic payments based on the lessor's underlying interest costs. The Synthetic Lease expires on November 1, 2010. Under the terms of the Synthetic Lease, the Firm has the right to purchase the building for the amount of the then outstanding indebtedness of the lessor, or to arrange for the sale of the building, with the proceeds of the sale to be used to satisfy the lessor's debt obligation. If the sale does not generate sufficient proceeds to satisfy the lessor's debt obligation, the Firm is required to fund the shortfall up to a maximum residual value guarantee. As of December 31, 2008, there was no expected shortfall, and the maximum residual value guarantee was approximately $670 million. Under a separate ground lease, the land on which the building is built was leased to an affiliate of Bear Stearns which, as part of the Synthetic Lease, assigned this position to the Synthetic Lease lessor. The owner of the land sued the Firm, alleging that certain provisions of the merger agreement violated a "right of first offer" provision of the ground lease. The Firm's motion to dismiss the lawsuit was granted, and a judgment of dismissal was entered on January 12, 2009. The owner has filed a notice of appeal.

Note 34 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolio to assess potential concentration risks and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect management's risk tolerance.

In the Firm's wholesale portfolio, risk concentrations are evaluated primarily by industry and geographic region, and monitored regularly on both an aggregate portfolio level and on an individual customer basis. Management of the Firm's wholesale exposure is accomplished through loan syndication and participation, loan sales, securitizations, credit derivatives, use of master netting agreements, and collateral and other risk-reduction techniques. In the consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines.

The Firm does not believe exposure to any one loan product with varying terms (e.g., interest-only payments for an introductory period, option ARMs) or exposure to loans with high loan-to-value ratios would result in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

For further information regarding on-balance sheet credit concentrations by major product and geography, see Note 14 on pages 175–178 and Note 15 on pages 178–180 of this Annual Report. For information regarding concentrations of off-balance sheet lending-related financial instruments by major product, see Note 33 on pages 218–222 of this Annual Report.

The table below presents both on- and off-balance sheet wholesale- and consumer-related credit exposure as of December 31, 2008 and 2007.

	2008				2007			
		On-balance sheet				On-balance sheet		
December 31, (in millions)	Credit exposure	Loans	Derivatives	Off-balance sheet[c]	Credit exposure	Loans	Derivatives	Off-balance sheet[c]
Wholesale-related:								
Real estate	**$ 83,799**	**$ 66,881**	**$ 2,289**	**$ 14,629**	$ 38,295	$ 20,274	$ 893	$ 17,128
Banks and finance companies	**75,577**	**19,055**	**33,457**	**23,065**	65,288	16,776	12,502	36,010
Asset managers	**49,256**	**9,640**	**18,806**	**20,810**	38,554	8,534	7,763	22,257
Healthcare	**38,032**	**7,004**	**3,723**	**27,305**	30,746	5,644	885	24,217
State & municipal governments	**35,954**	**5,873**	**9,427**	**20,654**	31,425	5,699	3,205	22,521
Utilities	**34,246**	**9,184**	**4,664**	**20,398**	28,679	5,840	1,870	20,969
Retail & consumer services	**32,714**	**8,433**	**3,079**	**21,202**	23,969	6,665	517	16,787
Consumer products	**29,766**	**10,081**	**2,225**	**17,460**	29,941	8,915	1,084	19,942
Securities firms & exchanges	**25,590**	**6,360**	**14,111**	**5,119**	23,274	5,120	11,022	7,132
Oil & gas	**24,746**	**8,796**	**2,220**	**13,730**	26,082	10,348	1,570	14,164
Insurance	**17,744**	**1,942**	**5,494**	**10,308**	16,782	1,067	2,442	13,273
Technology	**17,555**	**5,028**	**1,361**	**11,166**	18,335	4,674	1,309	12,352
Media	**17,254**	**7,535**	**1,248**	**8,471**	16,253	4,909	1,268	10,076
Central government	**15,259**	**555**	**10,537**	**4,167**	9,075	583	3,989	4,503
Metals/mining	**14,980**	**6,470**	**1,991**	**6,519**	17,714	7,282	2,673	7,759
All other wholesale	**278,114**	**75,252**	**47,994**	**154,868**	298,803	77,097	24,144	197,562
Loans held-for-sale and loans at fair value	**13,955**	**13,955**	**—**	**—**	23,649	23,649	—	—
Receivables from customers[a]	**16,141**	**—**	**—**	**—**	—	—	—	—
Total wholesale-related	**820,682**	**262,044**	**162,626**	**379,871**	736,864	213,076	77,136	446,652
Consumer-related:								
Home equity	**238,633**	**142,890**	**—**	**95,743**	169,023	94,832	—	74,191
Prime mortgage	**99,200**	**94,121**	**—**	**5,079**	47,382	39,988	—	7,394
Subprime mortgage	**22,090**	**22,090**	**—**	**—**	15,489	15,473	—	16
Option ARMs	**40,661**	**40,661**	**—**	**—**	—	—	—	—
Auto loans	**47,329**	**42,603**	**—**	**4,726**	50,408	42,350	—	8,058
Credit card[b]	**728,448**	**104,746**	**—**	**623,702**	799,200	84,352	—	714,848
All other loans	**45,972**	**33,715**	**—**	**12,257**	36,743	25,314	—	11,429
Loans held-for-sale	**2,028**	**2,028**	**—**	**—**	3,989	3,989	—	—
Total consumer-related	**1,224,361**	**482,854**	**—**	**741,507**	1,122,234	306,298	—	815,936
Total exposure	**$ 2,045,043**	**$ 744,898**	**$ 162,626**	**$ 1,121,378**	$1,859,098	$ 519,374	$ 77,136	$ 1,262,588

(a) Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.
(b) Excludes $85.6 billion and $72.7 billion of securitized credit card receivables at December 31, 2008 and 2007, respectively.
(c) Represents lending-related financial instruments.

Note 35 – International operations

The following table presents income statement information of JPMorgan Chase by major international geographic area. The Firm defines international activities as business transactions that involve customers residing outside of the U.S., and the information presented below is based primarily upon the domicile of the customer or the location from which the customer relationship is managed. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 37 on pages 226–227 of this Annual Report.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the United States.

Year ended December 31, (in millions)	Revenue[a]	Expense[b]	Income (loss) from continuing operations before income tax expense (benefit)	Net income
2008				
Europe/Middle East and Africa	**$ 11,449**	**$ 8,403**	**$ 3,046**	**$ 2,483**
Asia and Pacific	**4,097**	**3,580**	**517**	**672**
Latin America and the Caribbean	**1,353**	**903**	**450**	**274**
Other	**499**	**410**	**89**	**21**
Total international	**17,398**	**13,296**	**4,102**	**3,450**
Total U.S.	**49,854**	**51,183**	**(1,329)**	**2,155**
Total	**$ 67,252**	**$ 64,479**	**$ 2,773**	**$ 5,605**
2007				
Europe/Middle East and Africa	$ 12,070	$ 8,445	$ 3,625	$ 2,585
Asia and Pacific	4,730	3,117	1,613	945
Latin America and the Caribbean	2,028	975	1,053	630
Other	407	289	118	79
Total international	19,235	12,826	6,409	4,239
Total U.S.	52,137	35,741	16,396	11,126
Total	$ 71,372	$ 48,567	$ 22,805	$ 15,365
2006				
Europe/Middle East and Africa	$ 11,342	$ 7,471	$ 3,871	$ 2,774
Asia and Pacific	3,227	2,649	578	400
Latin America and the Caribbean	1,342	820	522	333
Other	381	240	141	90
Total international	16,292	11,180	5,112	3,597
Total U.S.	45,707	30,933	14,774	10,847
Total	$ 61,999	$ 42,113	$ 19,886	$ 14,444

(a) Revenue is composed of net interest income and noninterest revenue.
(b) Expense is composed of noninterest expense and provision for credit losses.

Note 36 – Parent company

Parent company – statements of income

Year ended December 31, (in millions)	2008	2007	2006
Income			
Dividends from bank and bank holding company subsidiaries	**$ 3,085**	$ 5,834	$ 2,935
Dividends from nonbank subsidiaries[a]	**1,687**	2,463	1,999
Interest income from subsidiaries	**4,539**	5,082	3,612
Other interest income	**212**	263	273
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**244**	182	220
Nonbank	**95**	960	739
Other income (loss)	**(1,038)**	(131)	(206)
Total income	**8,824**	14,653	9,572
Expense			
Interest expense to subsidiaries[a]	**1,302**	1,239	1,025
Other interest expense	**6,879**	6,427	4,536
Compensation expense	**43**	125	519
Other noninterest expense[b]	**732**	329	295
Total expense	**8,956**	8,120	6,375
Income (loss) before income tax benefit and undistributed net income of subsidiaries	**(132)**	6,533	3,197
Income tax benefit[b]	**2,582**	589	982
Equity in undistributed net income of subsidiaries[b]	**3,155**	8,243	10,265
Net income	**$ 5,605**	$ 15,365	$14,444

Parent company – balance sheets

December 31, (in millions)	2008	2007
Assets		
Cash and due from banks	**$ 35**	$ 110
Deposits with banking subsidiaries	**60,551**	52,972
Trading assets	**12,487**	9,563
Available-for-sale securities	**1,587**	43
Loans	**1,525**	1,423
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**33,293**	28,705
Nonbank	**131,032**	52,895
Investments (at equity) in subsidiaries:		
Bank and bank holding company	**153,140**	128,711
Nonbank[a]	**27,968**	25,710
Goodwill and other intangibles	**1,616**	850
Other assets	**12,934**	13,241
Total assets	**$ 436,168**	$ 314,223
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries[a]	**$ 44,467**	$ 23,938
Other borrowed funds, primarily commercial paper	**39,560**	52,440
Other liabilities	**9,363**	8,043
Long-term debt[c]	**175,894**	106,581
Total liabilities	**269,284**	191,002
Stockholders' equity	**166,884**	123,221
Total liabilities and stockholders' equity	**$ 436,168**	$ 314,223

Parent company – statements of cash flows

Year ended December 31, (in millions)	2008	2007	2006
Operating activities			
Net income	**$ 5,605**	$ 15,365	$ 14,444
Less: Net income of subsidiaries[a][b]	**7,927**	16,540	15,199
Parent company net loss	**(2,322)**	(1,175)	(755)
Add: Cash dividends from subsidiaries[a]	**4,648**	8,061	4,934
Other, net	**1,920**	3,496	(185)
Net cash provided by operating activities	**4,246**	10,382	3,994
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**(7,579)**	(34,213)	(9,307)
Securities purchased under resale agreements, primarily with nonbank subsidiaries	**—**	—	24
Loans	**(102)**	(452)	(633)
Advances to subsidiaries	**(82,725)**	(24,553)	(3,032)
Investments (at equity) in subsidiaries[a][b]	**(26,212)**	(4,135)	579
Other, net	**—**	—	(1)
Available-for-sale securities:			
Purchases	**(1,475)**	(104)	—
Proceeds from sales and maturities	**—**	318	29
Net cash used in investing activities	**(118,093)**	(63,139)	(12,341)
Financing activities			
Net change in borrowings from subsidiaries[a]	**20,529**	4,755	2,672
Net change in other borrowed funds	**(12,880)**	31,429	5,336
Proceeds from the issuance of long-term debt[d]	**89,791**	38,986	18,153
Repayments of long-term debt	**(22,972)**	(11,662)	(10,557)
Excess tax benefits related to stock-based compensation	**148**	365	302
Proceeds from issuance of common stock	**11,969**	1,467	1,659
Proceeds from issuance of preferred stock and warrant to the U.S. Treasury	**25,000**	—	—
Proceeds from issuance of preferred stock[e]	**8,098**	—	—
Redemption of preferred stock	**—**	—	(139)
Repurchases of treasury stock	**—**	(8,178)	(3,938)
Cash dividends paid	**(5,911)**	(5,051)	(4,846)
Net cash provided by financing activities	**113,772**	52,111	8,642
Net (decrease) increase in cash and due from banks	**(75)**	(646)	295
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	**110**	756	461
Cash and due from banks at the end of the year, primarily with bank subsidiaries	**$ 35**	$ 110	$ 756
Cash interest paid	**$ 7,485**	$ 7,470	$ 5,485
Cash income taxes paid	**156**	5,074	3,599

(a) Subsidiaries include trusts that issued guaranteed capital debt securities ("issuer trusts"). As a result of FIN 46R, the Parent Company deconsolidated these trusts in 2003. The Parent Company received dividends of $15 million, $18 million and $23 million from the issuer trusts in 2008, 2007 and 2006, respectively. For further discussion on these issuer trusts, see Note 23 on page 204 of this Annual Report.

(b) Amounts for 2007 have been revised to reflect the push down of certain litigation expense, which had previously been recorded at the parent company level, to the bank subsidiary level. There was no change to net income as the increase in Parent Company profitability was offset by a decrease in the net income of subsidiaries.

(c) At December 31, 2008, debt that contractually matures in 2009 through 2013 totaled $25.8 billion, $28.6 billion, $29.3 billion, $25.3 billion and $11.8 billion, respectively.

(d) Includes $39.8 billion of Bear Stearns' long-term debt assumed by JPMorgan Chase & Co.

(e) Includes the conversion of Bear Stearns' preferred stock into JPMorgan Chase preferred stock.

Note 37 – Business segments

JPMorgan Chase is organized into six major reportable business segments — Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate/Private Equity segment. The segments are based upon the products and services provided or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 50–51 of this Annual Report. For a further discussion concerning JPMorgan Chase's business segments, see Business segment results on pages 52–53 of this Annual Report.

Segment results

The following table provides a summary of the Firm's segment results for 2008, 2007 and 2006 on a managed basis. The impact of credit card securitizations and tax-equivalent adjustments have been included in Reconciling items so that the total Firm results are on a reported basis.

Segment results and reconciliation[a] (table continued on next page)

Year ended December 31,	Investment Bank			Retail Financial Services			Card Services			Commercial Banking		
(in millions, except ratios)	**2008**	2007	2006	**2008**	2007	2006	**2008**	2007	2006	**2008**	2007	2006
Noninterest revenue	**$ 1,930**	$ 14,094	$ 18,334	**$ 9,355**	$ 6,779	$ 4,660	**$ 2,719**	$ 3,046	$ 2,944	**$ 1,481**	$ 1,263	$ 1,073
Net interest income	**10,284**	4,076	499	**14,165**	10,526	10,165	**13,755**	12,189	11,801	**3,296**	2,840	2,727
Total net revenue	**12,214**	18,170	18,833	**23,520**	17,305	14,825	**16,474**	15,235	14,745	**4,777**	4,103	3,800
Provision for credit losses	**2,015**	654	191	**9,905**	2,610	561	**10,059**	5,711	4,598	**464**	279	160
Credit reimbursement (to)/from TSS[b]	**121**	121	121	**—**	—	—	**—**	—	—	**—**	—	—
Noninterest expense[c]	**13,844**	13,074	12,860	**12,077**	9,905	8,927	**5,140**	4,914	5,086	**1,946**	1,958	1,979
Income (loss) from continuing operations before income tax expense (benefit)	**(3,524)**	4,563	5,903	**1,538**	4,790	5,337	**`1,275**	4,610	5,061	**2,367**	1,866	1,661
Income tax expense (benefit)	**(2,349)**	1,424	2,229	**658**	1,865	2,124	**495**	1,691	1,855	**928**	732	651
Income (loss) from continuing operations	**(1,175)**	3,139	3,674	**880**	2,925	3,213	**780**	2,919	3,206	**1,439**	1,134	1,010
Income from discontinued operations	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Income (loss) before extraordinary gain	**(1,175)**	3,139	3,674	**880**	2,925	3,213	**780**	2,919	3,206	**1,439**	1,134	1,010
Extraordinary gain[d]	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Net income (loss)	**$ (1,175)**	$ 3,139	$ 3,674	**$ 880**	$ 2,925	$ 3,213	**$ 780**	$ 2,919	$ 3,206	**$ 1,439**	$ 1,134	$ 1,010
Average common equity	**$ 26,098**	$ 21,000	$ 20,753	**$ 19,011**	$ 16,000	$ 14,629	**$ 14,326**	$ 14,100	$ 14,100	**$ 7,251**	$ 6,502	$ 5,702
Average assets	**832,729**	700,565	647,569	**304,442**	241,112	231,566	**173,711**	155,957	148,153	**114,299**	87,140	57,754
Return on average common equity	**(5)%**	15%	18%	**5%**	18%	22%	**5%**	21%	23%	**20%**	17%	18%
Overhead ratio	**113**	72	68	**51**	57	60	**31**	32	34	**41**	48	52

(a) In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed basis," which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications that do not have any impact on net income as reported by the lines of business or by the Firm as a whole.

(b) TSS is charged a credit reimbursement related to certain exposures managed within IB credit portfolio on behalf of clients shared with TSS.

(c) Includes merger costs which are reported in the Corporate/Private Equity segment. Merger costs attributed to the business segments for 2008, 2007 and 2006 were as follows.

Year ended December 31, (in millions)	**2008**	2007	2006
Investment Bank	**$183**	$ (2)	$ 2
Retail Financial Services	**90**	14	24
Card Services	**20**	(1)	29
Commercial Banking	**4**	(1)	1
Treasury & Securities Services	**—**	121	117
Asset Management	**3**	20	23
Corporate/Private Equity	**132**	58	109

(d) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual from the FDIC for $1.9 billion. The fair value of the net assets acquired exceeded the purchase price, which resulted in negative goodwill. In accordance with SFAS 141, nonfinancial assets that are not held-for-sale, such as premises and equipment and other intangibles, acquired in the Washington Mutual transaction were written down against that negative goodwill. The negative goodwill that remained after writing down nonfinancial assets was recognized as an extraordinary gain.

(e) Included a $1.5 billion charge to conform Washington Mutual's loan loss reserve to JPMorgan Chase's allowance methodology.

Line of business equity increased during the second quarter of 2008 in IB and AM due to the Bear Stearns merger and, for AM, the purchase of the additional equity interest in Highbridge. At the end of the third quarter of 2008, equity was increased for each line of business with a view toward the future implementation of the new Basel II capital rules. In addition, equity allocated to RFS, CS and CB was increased as a result of the Washington Mutual transaction.

Discontinued operations

As a result of the transaction with The Bank of New York, selected corporate trust businesses have been transferred from TSS to the Corporate/Private Equity segment and reported in discontinued operations for all periods reported.

(table continued from previous page)

Treasury & Securities Services			Asset Management			Corporate/Private Equity			Reconciling items[g][h]			**Total**		
2008	2007	2006	**2008**	2007	2006	**2008**	2007	2006	**2008**	2007	2006	**2008**	2007	2006
$ 5,196	$ 4,681	$ 4,039	**$ 6,066**	$ 7,475	$ 5,816	**$ (278)**	$ 5,056	$ 1,058	**$ 2,004**	$ 2,572	$ 2,833	**$ 28,473**	$ 44,966	$ 40,757
2,938	2,264	2,070	**1,518**	1,160	971	**347**	(637)	(1,044)	**(7,524)**	(6,012)	(5,947)	**38,779**	26,406	21,242
8,134	6,945	6,109	**7,584**	8,635	6,787	**69**	4,419	14	**(5,520)**	(3,440)	(3,114)	**67,252**	71,372	61,999
82	19	(1)	**85**	(18)	(28)	**1,981**[e][f]	(11)	(1)	**(3,612)**	(2,380)	(2,210)	**20,979**	6,864	3,270
(121)	(121)	(121)	**—**	—	—	—	—	—	**—**	—	—	**—**	—	—
5,223	4,580	4,266	**5,298**	5,515	4,578	**(28)**	1,757	1,147	**—**	—	—	**43,500**	41,703	38,843
2,708	2,225	1,723	**2,201**	3,138	2,237	**(1,884)**	2,673	(1,132)	**(1,908)**	(1,060)	(904)	**2,773**	22,805	19,886
941	828	633	**844**	1,172	828	**(535)**	788	(1,179)	**(1,908)**	(1,060)	(904)	**(926)**	7,440	6,237
1,767	1,397	1,090	**1,357**	1,966	1,409	**(1,349)**	1,885	47	**—**	—	—	**3,699**	15,365	13,649
—	—	—	**—**	—	—	**—**	—	795	**—**	—	—	**—**	—	795
1,767	1,397	1,090	**1,357**	1,966	1,409	**(1,349)**	1,885	842	**—**	—	—	**3,699**	15,365	14,444
—	—	—	**—**	—	—	**1,906**	—	—	**—**	—	—	**1,906**	—	—
$ 1,767	$ 1,397	$ 1,090	**$ 1,357**	$ 1,966	$ 1,409	**$ 557**	$ 1,885	$ 842	**$ —**	$ —	$ —	**$ 5,605**	$ 15,365	$ 14,444
$ 3,751	$ 3,000	$ 2,285	**$ 5,645**	$ 3,876	$ 3,500	**$ 53,034**	$ 54,245	$ 49,728	**$ —**	$ —	$ —	**$ 129,116**	$ 118,723	$ 110,697
54,563	53,350	31,760	**65,550**	51,882	43,635	**323,227**	231,818	218,623	**(76,904)**	(66,780)	(65,266)	**1,791,617**	1,455,044	1,313,794
47%	47%	48%	**24%**	51%	40%	**NM**	NM	NM	**NM**	NM	NM	**4%**[i]	13%	13%[i]
64	66	70	**70**	64	67	**NM**	NM	NM	**NM**	NM	NM	**65**	58	63

(f) In November 2008, the Firm transferred $5.8 billion of higher quality credit card loans from the legacy Chase portfolio to a securitization trust previously established by Washington Mutual ("the Trust"). As a result of converting higher credit quality Chase-originated on-book receivables to the Trust's seller's interest which has a higher overall loss rate reflective of the total assets within the Trust, approximately $400 million of incremental provision expense was recorded during the fourth quarter. This incremental provision expense was recorded in Corporate segment as the action related to the acquisition of Washington Mutual's banking operations. For further discussion of credit card securitizations, see Note 16 on page 182 of this Annual Report.

(g) Managed results for credit card exclude the impact of CS securitizations on total net revenue, provision for credit losses and average assets, as JPMorgan Chase treats the sold receivables as if they were still on the balance sheet in evaluating the credit performance of the entire managed credit card portfolio as operations are funded, and decisions are made about allocating resources such as employees and capital, based upon managed information. These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results. The related securitization adjustments were as follows.

Year ended December 31, (in millions)	**2008**	2007	2006
Noninterest revenue	**$ (3,333)**	$ (3,255)	$ (3,509)
Net interest income	**6,945**	5,635	5,719
Provision for credit losses	**3,612**	2,380	2,210
Average assets	**76,904**	66,780	65,266

(h) Segment managed results reflect revenue on a tax-equivalent basis with the corresponding income tax impact recorded within income tax expense (benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results. Tax-equivalent adjustments for the years ended December 31, 2008, 2007 and 2006 were as follows.

Year ended December 31, (in millions)	**2008**	2007	2006
Noninterest revenue	**$ 1,329**	$ 683	$ 676
Net interest income	**579**	377	228
Income tax expense	**1,908**	1,060	904

(i) Ratio is based upon net income.

Selected quarterly financial data (unaudited)

(in millions, except per share, ratio and headcount data)	2008[i]				2007			
As of or for the period ended	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Selected income statement data								
Noninterest revenue[a]	**$ 3,394**	**$ 5,743**	**$ 10,105**	**$ 9,231**	$ 10,161	$ 9,199	$ 12,740	$ 12,866
Net interest income	**13,832**	**8,994**	**8,294**	**7,659**	7,223	6,913	6,168	6,102
Total net revenue	**17,226**	**14,737**	**18,399**	**16,890**	17,384	16,112	18,908	18,968
Provision for credit losses	**7,755**	**3,811**	**3,455**	**4,424**	2,542	1,785	1,529	1,008
Provision for credit losses – accounting conformity[b]	**(442)**	**1,976**	**—**	**—**	—	—	—	—
Total noninterest expense	**11,255**	**11,137**	**12,177**	**8,931**	10,720	9,327	11,028	10,628
Income (loss) before income tax expense (benefit) and extraordinary gain	**(1,342)**	**(2,187)**	**2,767**	**3,535**	4,122	5,000	6,351	7,332
Income tax expense (benefit)	**(719)**	**(2,133)**	**764**	**1,162**	1,151	1,627	2,117	2,545
Income (loss) before extraordinary gain	**(623)**	**(54)**	**2,003**	**2,373**	2,971	3,373	4,234	4,787
Extraordinary gain[c]	**1,325**	**581**	**—**	**—**	—	—	—	—
Net income	**$ 702**	**$ 527**	**$ 2,003**	**$ 2,373**	$ 2,971	$ 3,373	$ 4,234	$ 4,787
Per common share								
Basic earnings								
Income (loss) before extraordinary gain	**$ (0.28)**	**$ (0.06)**	**$ 0.56**	**$ 0.70**	$ 0.88	$ 1.00	$ 1.24	$ 1.38
Net income	**0.07**	**0.11**	**0.56**	**0.70**	0.88	1.00	1.24	1.38
Diluted earnings								
Income (loss) before extraordinary gain	**$ (0.28)**	**$ (0.06)**	**$ 0.54**	**$ 0.68**	$ 0.86	$ 0.97	$ 1.20	$ 1.34
Net income	**0.07**	**0.11**	**0.54**	**0.68**	0.86	0.97	1.20	1.34
Cash dividends declared per share	**0.38**	**0.38**	**0.38**	**0.38**	0.38	0.38	0.38	0.34
Book value per share	**36.15**	**36.95**	**37.02**	**36.94**	36.59	35.72	35.08	34.45
Common shares outstanding								
Average: Basic	**3,738**	**3,445**	**3,426**	**3,396**	3,367	3,376	3,415	3,456
Diluted	**3,738**[h]	**3,445**[h]	**3,531**	**3,495**	3,472	3,478	3,522	3,560
Common shares at period end	**3,733**	**3,727**	**3,436**	**3,401**	3,367	3,359	3,399	3,416
Share price[d]								
High	**$ 50.63**	**$ 49.00**	**$ 49.95**	**$ 49.29**	$ 48.02	$ 50.48	$ 53.25	$ 51.95
Low	**19.69**	**29.24**	**33.96**	**36.01**	40.15	42.16	47.70	45.91
Close	**31.53**	**46.70**	**34.31**	**42.95**	43.65	45.82	48.45	48.38
Market capitalization	**117,695**	**174,048**	**117,881**	**146,066**	146,986	153,901	164,659	165,280
Financial ratios								
Return on common equity:								
Income (loss) before extraordinary gain	**(3)%**	**(1)%**	**6%**	**8%**	10%	11%	14%	17%
Net income	**1**	**1**	**6**	**8**	10	11	14	17
Return on assets:								
Income (loss) before extraordinary gain	**(0.11)**	**(0.01)**	**0.48**	**0.61**	0.77	0.91	1.19	1.41
Net income	**0.13**	**0.12**	**0.48**	**0.61**	0.77	0.91	1.19	1.41
Tier 1 capital ratio	**10.9**	**8.9**	**9.2**	**8.3**	8.4	8.4	8.4	8.5
Total capital ratio	**14.8**	**12.6**	**13.4**	**12.5**	12.6	12.5	12.0	11.8
Tier 1 leverage ratio	**6.9**	**7.2**	**6.4**	**5.9**	6.0	6.0	6.2	6.2
Overhead ratio	**65**	**76**	**66**	**53**	62	58	58	56
Selected balance sheet data (period-end)								
Trading assets	**$ 509,983**	**$ 520,257**	**$ 531,997**	**$ 485,280**	$ 491,409	$ 453,711	$ 450,546	$ 423,331
Securities	**205,943**	**150,779**	**119,173**	**101,647**	85,450	97,706	95,984	97,029
Loans	**744,898**	**761,381**	**538,029**	**537,056**	519,374	486,320	465,037	449,765
Total assets	**2,175,052**	**2,251,469**	**1,775,670**	**1,642,862**	1,562,147	1,479,575	1,458,042	1,408,918
Deposits	**1,009,277**	**969,783**	**722,905**	**761,626**	740,728	678,091	651,370	626,428
Long-term debt	**252,094**	**238,034**	**260,192**	**189,995**	183,862	173,696	159,493	143,274
Common stockholders' equity	**134,945**	**137,691**	**127,176**	**125,627**	123,221	119,978	119,211	117,704
Total stockholders' equity	**166,884**	**145,843**	**133,176**	**125,627**	123,221	119,978	119,211	117,704
Headcount	**224,961**	**228,452**	**195,594**	**182,166**	180,667	179,847	179,664	176,314
Credit quality metrics								
Allowance for credit losses	**$ 23,823**	**$ 19,765**	**$ 13,932**	**$ 12,601**	$ 10,084	$ 8,971	$ 8,399	$ 7,853
Nonperforming assets[e][f]	**12,714**	**9,520**	**6,233**	**5,143**	3,933	3,009	2,423	2,212
Allowance for loan losses to total loans[g]	**3.18%**	**2.56%**	**2.57%**	**2.29%**	1.88%	1.76%	1.71%	1.74%
Net charge-offs	**$ 3,315**	**$ 2,484**	**$ 2,130**	**$ 1,906**	$ 1,429	$ 1,221	$ 985	$ 903
Net charge-off rate[g]	**1.80%**	**1.91%**	**1.67%**	**1.53%**	1.19%	1.07%	0.90%	0.85%
Wholesale net charge-off (recovery) rate[g]	**0.33**	**0.10**	**0.08**	**0.18**	0.05	0.19	(0.07)	(0.02)
Consumer net charge-off rate[g]	**2.59**	**3.13**	**2.77**	**2.43**	1.93	1.62	1.50	1.37
Managed card net charge-off rate	**5.56**	**5.00**	**4.98**	**4.37**	3.89	3.64	3.62	3.57

(a) The Firm adopted SFAS 157 in the first quarter of 2007. See Note 4 on pages 141–155 of this Annual Report for additional information.
(b) For a discussion of accounting conformity, see provision for credit losses on page 47 and consumer credit portfolio discussion on page 103.
(c) For a discussion of the extraordinary gain, see Note 2 on pages 135–140.
(d) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.
(e) Excludes purchased wholesale loans held-for-sale.
(f) During the second quarter of 2008, the policy for classifying subprime mortgage and home equity loans as nonperforming was changed to conform to all other home lending products. Amounts for 2007 have been revised to reflect this change.
(g) End-of-period and average loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratios and net charge-off rates, respectively.
(h) Common equivalent shares have been excluded from the computation of diluted earnings per share for the third quarter of 2008, as the effect on income (loss) before extraordinary gain would be antidilutive.
(i) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank. On May 30, 2008, the Bear Stearns merger was consummated. Each of these transactions was accounted for as a purchase and their respective results of operations are included in the Firm's results from each respective transaction date. For additional information on these transactions, see Note 2 on pages 135–140 of this Annual Report.

Selected annual financial data (unaudited)

(in millions, except per share, headcount and ratio data)

As of or for the year ended December 31,	2008[i]	2007	2006	2005	2004[j]
Selected income statement data					
Noninterest revenue[a]	**$ 28,473**	$ 44,966	$ 40,757	$ 34,693	$ 26,209
Net interest income	**38,779**	26,406	21,242	19,555	16,527
Total net revenue	**67,252**	71,372	61,999	54,248	42,736
Provision for credit losses	**19,445**	6,864	3,270	3,483	1,686
Provision for credit losses – accounting conformity[b]	**1,534**	—	—	—	858
Total noninterest expense	**43,500**	41,703	38,843	38,926	34,336
Income from continuing operations before income tax expense (benefit)	**2,773**	22,805	19,886	11,839	5,856
Income tax expense (benefit)	**(926)**	7,440	6,237	3,585	1,596
Income from continuing operations	**3,699**	15,365	13,649	8,254	4,260
Income from discontinued operations[c]	**—**	—	795	229	206
Income before extraordinary gain	**3,699**	15,365	14,444	8,483	4,466
Extraordinary gain[d]	**1,906**	—	—	—	—
Net income	**$ 5,605**	$ 15,365	$ 14,444	$ 8,483	$ 4,466
Per common share					
Basic earnings per share					
Income from continuing operations	**$ 0.86**	$ 4.51	$ 3.93	$ 2.36	$ 1.51
Net income	**1.41**	4.51	4.16	2.43	1.59
Diluted earnings per share					
Income from continuing operations	**$ 0.84**	$ 4.38	$ 3.82	$ 2.32	$ 1.48
Net income	**1.37**	4.38	4.04	2.38	1.55
Cash dividends declared per share	**1.52**	1.48	1.36	1.36	1.36
Book value per share	**36.15**	36.59	33.45	30.71	29.61
Common shares outstanding					
Average: Basic	**3,501**	3,404	3,470	3,492	2,780
Diluted	**3,605**	3,508	3,574	3,557	2,851
Common shares at period end	**3,733**	3,367	3,462	3,487	3,556
Share price[e]					
High	**$ 50.63**	$ 53.25	$ 49.00	$ 40.56	$ 43.84
Low	**19.69**	40.15	37.88	32.92	34.62
Close	**31.53**	43.65	48.30	39.69	39.01
Market capitalization	**117,695**	146,986	167,199	138,387	138,727
Financial ratios					
Return on common equity:					
Income from continuing operations	**2%**	13%	12%	8%	6%
Net income	**4**	13	13	8	6
Return on assets:					
Income from continuing operations	**0.21**	1.06	1.04	0.70	0.44
Net income	**0.31**	1.06	1.10	0.72	0.46
Tier 1 capital ratio	**10.9**	8.4	8.7	8.5	8.7
Total capital ratio	**14.8**	12.6	12.3	12.0	12.2
Tier 1 leverage ratio	**6.9**	6.0	6.2	6.3	6.2
Overhead ratio	**65**	58	63	72	80
Selected balance sheet data (period-end)					
Trading assets	**$ 509,983**	$ 491,409	$ 365,738	$ 298,377	$ 288,814
Securities	**205,943**	85,450	91,975	47,600	94,512
Loans	**744,898**	519,374	483,127	419,148	402,114
Total assets	**2,175,052**	1,562,147	1,351,520	1,198,942	1,157,248
Deposits	**1,009,277**	740,728	638,788	554,991	521,456
Long-term debt	**252,094**	183,862	133,421	108,357	95,422
Common stockholders' equity	**134,945**	123,221	115,790	107,072	105,314
Total stockholders' equity	**166,884**	123,221	115,790	107,211	105,653
Headcount	**224,961**	180,667	174,360	168,847	160,968
Credit quality metrics					
Allowance for credit losses	**$ 23,823**	$ 10,084	$ 7,803	$ 7,490	$ 7,812
Nonperforming assets[f][g]	**12,714**	3,933	2,341	2,590	3,231
Allowance for loan losses to total loans[h]	**3.18%**	1.88%	1.70%	1.84%	1.94%
Net charge-offs	**$ 9,835**	$ 4,538	$ 3,042	$ 3,819	$ 3,099
Net charge-off rate[h]	**1.73%**	1.00%	0.73%	1.00%	1.08%
Wholesale net charge-off (recovery) rate[h]	**0.18**	0.04	(0.01)	(0.06)	0.18
Consumer net charge-off rate[h]	**2.71**	1.61	1.17	1.56	1.56
Managed card net charge-off rate	**5.01**	3.68	3.33	5.21	5.27

(a) The Firm adopted SFAS 157 in the first quarter of 2007. See Note 4 on pages 141–155 of this Annual Report for additional information.
(b) For a discussion of accounting conformity, see provision for credit losses on page 47 and consumer credit portfolio discussion on page 103.
(c) On October 1, 2006, JPMorgan Chase & Co. completed the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York Company Inc. The results of operations of these corporate trust businesses are reported as discontinued operations for each period prior to 2007.
(d) For a discussion of the extraordinary gain, see Note 2 on pages 135–140.
(e) JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange, the London Stock Exchange and the Tokyo Stock Exchange. The high, low and closing prices of JPMorgan Chase's common stock are from The New York Stock Exchange Composite Transaction Tape.
(f) Excludes purchased wholesale loans held-for-sale.
(g) During the second quarter of 2008, the policy for classifying subprime mortgage and home equity loans as nonperforming was changed to conform to all other home lending products. Amounts for 2007 have been revised to reflect this change. Periods prior to 2007 have not been revised as the impact was not material.
(h) End-of-period and average loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratios and net charge-off rates, respectively.
(i) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank. On May 30, 2008, the Bear Stearns merger was consummated. Each of these transactions was accounted for as a purchase and their respective results of operations are included in the Firm's results from each respective transaction date. For additional information on these transactions, see Note 2 on pages 135–140 of this Annual Report.
(j) On July 1, 2004, Bank One Corporation merged with and into JPMorgan Chase. Accordingly, 2004 results include six months of the combined Firm's results and six months of heritage JPMorgan Chase results.

Glossary of terms

ACH: Automated Clearing House.

Advised lines of credit: An authorization which specifies the maximum amount of a credit facility the Firm has made available to an obligor on a revolving but non-binding basis. The borrower receives written or oral advice of this facility. The Firm may cancel this facility at any time.

AICPA: American Institute of Certified Public Accountants.

AICPA Statement of Position ("SOP") 03-3: "Accounting for Certain Loans or Debt Securities Acquired in a Transfer."

AICPA SOP 07-1: "Clarification of the Scope of the Audit and Accounting Guide Investment Companies and Accounting by Parent Companies and Equity Method Investors for Investments in Investment Companies."

AICPA SOP 98-1: "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use."

Alternative assets: The following types of assets constitute alternative investments – hedge funds, currency, real estate and private equity.

APB 18: Accounting Principles Board Opinion No. 18, "The Equity Method of Accounting for Investments in Common Stock."

APB 25: Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees."

Assets under management: Represent assets actively managed by Asset Management on behalf of Institutional, Retail, Private Banking, Private Wealth Management and Bear Stearns Brokerage clients. Excludes assets managed by American Century Companies, Inc., in which the Firm has a 43% ownership interest as of December 31, 2008.

Assets under supervision: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Average managed assets: Refers to total assets on the Firm's Consolidated Balance Sheets plus credit card receivables that have been securitized.

Beneficial interest issued by consolidated VIEs: Represents the interest of third-party holders of debt/equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates under FIN 46R. The underlying obligations of the VIEs consist of short-term borrowings, commercial paper and long-term debt. The related assets consist of trading assets, available-for-sale securities, loans and other assets.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Combined effective loan-to-value ratio: For residential real estate loans, an indicator of how much equity a borrower has in a secured borrowing based on current estimates of the value of the collateral and considering all lien positions related to the property.

Contractual credit card charge-off: In accordance with the Federal Financial Institutions Examination Council policy, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification of the filing of bankruptcy, whichever is earlier.

Credit card securitizations: Card Services' managed results excludes the impact of credit card securitizations on total net revenue, the provision for credit losses, net charge-offs and loan receivables. Through securitization, the Firm transforms a portion of its credit card receivables into securities, which are sold to investors. The credit card receivables are removed from the Consolidated Balance Sheets through the transfer of the receivables to a trust, and through the sale of undivided interests to investors that entitle the investors to specific cash flows generated from the credit card receivables. The Firm retains the remaining undivided interests as seller's interests, which are recorded in loans on the Consolidated Balance Sheets. A gain or loss on the sale of credit card receivables to investors is recorded in other income. Securitization also affects the Firm's Consolidated Statements of Income, as the aggregate amount of interest income, certain fee revenue and recoveries that is in excess of the aggregate amount of interest paid to investors, gross credit losses and other trust expense related to the securitized receivables are reclassified into credit card income in the Consolidated Statements of Income.

Credit derivatives: Contractual agreements that provide protection against a credit event on one or more referenced credits. The nature of a credit event is established by the protection buyer and protection seller at the inception of a transaction, and such events include bankruptcy, insolvency or failure to meet payment obligations when due. The buyer of the credit derivative pays a periodic fee in return for a payment by the protection seller upon the occurrence, if any, of a credit event.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again. The duration of a credit cycle can vary from a couple of years to several years.

Deposit margin: Represents net interest income on deposits expressed as a percentage of average deposits.

Discontinued operations: A component of an entity that is classified as held-for-sale or that has been disposed of from ongoing operations in its entirety or piecemeal, and for which the entity will not have any significant, continuing involvement. A discontinued operation may be a separate major business segment, a component of a major business segment or a geographical area of operations of the entity that can be separately distinguished operationally and for financial reporting purposes.

EITF: Emerging Issues Task Force.

EITF Issue 06-11: "Accounting for Income Tax Benefits of Dividends on Share-Based Payment Awards."

EITF Issue 02-3: "Issues Involved in Accounting for Derivative Contracts Held for Trading Purposes and Contracts Involved in Energy Trading and Risk Management Activities."

EITF Issue 99-20: "Recognition of Interest Income and Impairment on Purchased and Retained Beneficial Interests in Securitized Financial Assets."

FASB: Financial Accounting Standards Board.

FICO: Fair Isaac Corporation.

FIN 39: FASB Interpretation No. 39, "Offsetting of Amounts Related to Certain Contracts – an interpretation of APB Opinion No. 10 and FASB Statement No. 105."

FIN 41: FASB Interpretation No. 41, "Offsetting of Amounts Related to Certain Repurchase and Reverse Repurchase Agreements – an interpretation of APB Opinion No. 10 and a Modification of FASB Interpretation No. 39."

FIN 45: FASB Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, including Indirect Guarantees of Indebtedness of Others – an interpretation of FASB Statements No. 5, 57 and 107 and a rescission of FASB Interpretation No. 34."

FIN 46R: FASB Interpretation No. 46 (revised December 2003), "Consolidation of Variable Interest Entities – an interpretation of ARB No. 51."

FIN 47: FASB Interpretation No. 47, "Accounting for Conditional Asset Retirement Obligations – an interpretation of FASB Statement No. 143."

FIN 48: FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes – an interpretation of FASB Statement No. 109."

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

FSP: FASB Staff Position.

FSP FAS 123(R)-3: "Transition Election Related to Accounting for the Tax Effects of Share-Based Payment Awards."

FSP FAS 132(R)-1: "Employers' Disclosures about Postretirement Benefit Plan Assets."

FSP FAS 133-1 and FIN 45-4: "Disclosures about Credit Derivatives and Certain Guarantees: An Amendment of FASB Statement No. 133 and FASB Interpretation No. 45; and Clarification of the Effective Date of FASB Statement No. 161."

FSP FAS 140-4 and FIN 46(R)-8: "Disclosures by Public Entities (Enterprises) about Transfers of Financial Assets and Interests in Variable Interest Entities."

FSP EITF 03-6-1: "Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities."

FSP FAS 140-3: "Accounting for Transfers of Financial Assets and Repurchase Financing Transactions."

FSP FIN 39-1: "Amendment of FASB Interpretation No. 39."

FSP FIN 46(R)-7: "Application of FASB Interpretation No. 46(R) to Investment Companies."

Interchange income: A fee that is paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Interests in purchased receivables: Represent an ownership interest in cash flows of an underlying pool of receivables transferred by a third-party seller into a bankruptcy-remote entity, generally a trust.

Investment-grade: An indication of credit quality based upon JPMorgan Chase's internal risk assessment system. "Investment-grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications related to credit card securitizations and to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Managed credit card receivables: Refers to credit card receivables on the Firm's Consolidated Balance Sheets plus credit card receivables that have been securitized.

Mark-to-market exposure: A measure, at a point in time, of the value of a derivative or foreign exchange contract in the open market. When the mark-to-market value is positive, it indicates the counterparty owes JPMorgan Chase and, therefore, creates a repayment risk for the Firm. When the mark-to-market value is negative, JPMorgan Chase owes the counterparty; in this situation, the Firm does not have repayment risk.

Master netting agreement: An agreement between two counterparties that have multiple derivative contracts with each other that provides for the net settlement of all contracts through a single payment, in a single currency, in the event of default on or termination of any one contract. See FIN 39.

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) high combined-loan-to-value ("CLTV") ratio; (iii) loans secured by non-owner occupied properties; or (iv) debt-to-income ratio above normal limits. Perhaps the most important characteristic is limited documentation. A substantial proportion of traditional Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM home loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make

a fully amortizing, interest-only, or minimum payment. The minimum payment on an option ARM loan is based upon the interest rate charged during the introductory period. This introductory rate has usually been significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan.

Prime
Prime mortgage loans generally have low default risk and are made to borrowers with good credit records and a monthly income that is at least three to four times greater than their monthly housing expense (mortgage payments plus taxes and other debt payments). These borrowers provide full documentation and generally have reliable payment histories.

Subprime
Subprime loans are designed for customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) high loan-to-value ("LTV") ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) high debt-to-income ratio; (iv) the occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

MSR risk management revenue: Includes changes in MSR asset fair value due to inputs or assumptions in model and derivative valuation adjustments.

Material legal proceedings: Refers to certain specific litigation originally discussed in the section "Legal Proceedings" in the Firm's Annual Report on Form 10-K for the year ended December 31, 2002. Of such legal proceedings, some lawsuits related to Enron and the IPO allocation allegations remain outstanding as of the date of this Annual Report, as discussed in Part I, Item 3, legal proceedings in the Firm's Annual Report on Form 10-K for the year ended December 31, 2008, to which reference is hereby made; other such legal proceedings have been resolved.

NA: Data is not applicable or available for the period presented.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

Nonconforming mortgage loans: Mortgage loans that do not meet the requirements for sale to U.S. government agencies and U.S. government sponsored enterprises. These requirements include limits on loan-to-value ratios, loan terms, loan amounts, down payments, borrower creditworthiness and other requirements.

OPEB: Other postretirement employee benefits.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Personal bankers: Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.

Portfolio activity: Describes changes to the risk profile of existing lending-related exposures and their impact on the allowance for credit losses from changes in customer profiles and inputs used to estimate the allowances.

Principal transactions: Realized and unrealized gains and losses from trading activities (including physical commodities inventories that are accounted for at the lower of cost or fair value) and changes in fair value associated with financial instruments held by the Investment Bank for which the SFAS 159 fair value option was elected. Principal transactions revenue also include private equity gains and losses.

Purchased credit-impaired loans: Acquired loans deemed to be credit-impaired under SOP 03-3. SOP 03-3 allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., FICO score, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. Wholesale loans were determined to be credit-impaired if they met the definition of an impaired loan under SFAS 114 at the acquisition date. Consumer loans are determined to be purchased credit-impaired based upon specific risk characteristics of the loan, including product type, loan-to-value ratios, FICO scores, and past due status.

Receivables from customers: Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets for the wholesale lines of business.

REMIC: Investment vehicles that hold commercial and residential mortgages in trust and issues securities representing an undivided interest in these mortgages. A REMIC, which can be a corporation, trust, association, or partnership, assembles mortgages into pools and issues pass-through certificates, multiclass bonds similar to a collateralized mortgage obligation ("CMO") or other securities to investors in the secondary mortgage market.

Reported basis: Financial statements prepared under accounting principles generally accepted in the United States of America ("U.S. GAAP"). The reported basis includes the impact of credit card securitizations but excludes the impact of taxable-equivalent adjustments.

Return on common equity less goodwill: Represents net income applicable to common stock divided by total average common equity (net of goodwill). The Firm uses return on common equity less goodwill, a non-GAAP financial measure, to evaluate the operating performance of the Firm. The Firm also utilizes this measure to facilitate operating comparisons to other competitors.

Risk layered loans: Loans with multiple high risk elements.

Glossary of terms

SAB: Staff Accounting Bulletin.

SAB 105: "Application of Accounting Principles to Loan Commitments."

SAB 109: "Written Loan Commitments Recorded at Fair Value Through Earnings."

Sales specialists: Retail branch office personnel who specialize in the marketing of a single product, including mortgages, investments, and business banking, by partnering with the personal bankers.

SFAS: Statement of Financial Accounting Standards.

SFAS 5: "Accounting for Contingencies."

SFAS 13: "Accounting for Leases."

SFAS 52: "Foreign Currency Translation."

SFAS 87: "Employers' Accounting for Pensions."

SFAS 88: "Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits."

SFAS 106: "Employers' Accounting for Postretirement Benefits Other Than Pensions."

SFAS 107: "Disclosures about Fair Value of Financial Instruments."

SFAS 109: "Accounting for Income Taxes."

SFAS 114: "Accounting by Creditors for Impairment of a Loan – an amendment of FASB Statements No. 5 and 15."

SFAS 115: "Accounting for Certain Investments in Debt and Equity Securities."

SFAS 123: "Accounting for Stock-Based Compensation."

SFAS 123R: "Share-Based Payment."

SFAS 128: "Earnings per Share."

SFAS 133: "Accounting for Derivative Instruments and Hedging Activities."

SFAS 138: "Accounting for Certain Derivative Instruments and Certain Hedging Activities – an amendment of FASB Statement No. 133."

SFAS 140: "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities – a replacement of FASB Statement No. 125."

SFAS 141: "Business Combinations."

SFAS 141R: "Business Combinations."

SFAS 142: "Goodwill and Other Intangible Assets."

SFAS 143: "Accounting for Asset Retirement Obligations."

SFAS 149: "Amendment of Statement No. 133 on Derivative Instruments and Hedging Activities."

SFAS 155: "Accounting for Certain Hybrid Financial Instruments – an amendment of FASB Statements No. 133 and 140."

SFAS 156: "Accounting for Servicing of Financial Assets – an amendment of FASB Statement No. 140."

SFAS 157: "Fair Value Measurements."

SFAS 158: "Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans – an amendment of FASB Statements No. 87, 88, 106, and 132(R)."

SFAS 159: "The Fair Value Option for Financial Assets and Financial Liabilities – Including an amendment of FASB Statement No. 115."

SFAS 160: "Noncontrolling Interests in Consolidated Financial Statements – an amendment of ARB No. 51."

SFAS 161: "Disclosures About Derivative Instruments and Hedging Activities – an amendment of FASB Statement No. 133."

Stress testing: A scenario that measures market risk under unlikely but plausible events in abnormal markets.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. government and federal agency obligations: Obligations of the U.S. government or an instrumentality of the U.S. government whose obligations are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

Value-at-risk ("VaR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

J.P. Morgan International Council

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New York, New York

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President
JPMorgan Chase International
New York, New York

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Vice Chairman
JPMorgan Chase & Co.
Chairman of the Midwest Region
Chicago, Illinois

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Vice Chairman
JPMorgan Chase & Co.
Chairman
JPMorgan Chase EMEA
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Chief Executive Officer
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Chief Executive Officer
R.A.B. Holdings, Inc.

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President
Windmill Distributing Company L.P.

Robert B. Catell
Chairman
National Grid

Christopher B. Combe
Chairman and President
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President and
Chief Executive Officer
CONMED Corporation

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Senior Executive Vice President
and Chief Financial Officer
Lifetime Healthcare Company/
Excellus Health Plan Inc.

Roger N. Farah
President and Chief Operating
Officer
Polo Ralph Lauren

James Fernandez
Executive Vice President and CFO
Tiffany & Company

Neil Golub
President and CEO
The Golub Corporation

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Chairman and
Chief Executive Officer
The NPD Group, Inc.

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Chief Financial Officer
The Estée Lauder Companies Inc.

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Chairman and
Chief Executive Officer
LeFrak Organization

Richard B. Leventhal
Chairman and
Chief Executive Officer
Fedway Associates, Inc.

John LiDestri
Chief Executive Officer
LiDestri Foods, Inc.

Leo Liebowitz
Chief Executive Officer
Getty Realty Corp.

William L. Mack
Founder and Senior Partner
AREA Property Partners

Peter Markson
Chairman and
Chief Executive Officer
Paris Accessories, Inc.

James F. McCann
Chief Executive Officer
1-800-Flowers.com

John Morphy
Senior Vice President,
Chief Financial Officer
and Secretary
Paychex, Inc.

Michael C. Nahl
Executive Vice President
and Chief Financial Officer
Albany International Corp.

James L. Nederlander
President
Nederlander Producing Company
of America, Inc.

Samuel I. Newhouse III
General Manager
Advance Publications Inc.

William C. Rudin
President
Rudin Management Company, Inc.

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President and CEO
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John Shalam
Chairman
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President and COO
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Marie Toulantis
Former Chief Executive Officer
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Chairman, President and
Chief Executive Officer
Central National-Gottesman Inc.

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Sterling Equities, Inc.

Frank Lourenso
Chairman
Regional Advisory Board

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Communications, Inc.
(Cable television)

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Chief Executive Officer
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manufacturing)

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President
Henry Crown and Company
(Diversified investments)

James Dimon
Chairman and
Chief Executive Officer
JPMorgan Chase & Co.

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President and Trustee
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Natural History
(Museum)

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Amani Group
(Consulting and advisory)

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Chairman and
Chief Executive Officer
Yum! Brands, Inc.
(Franchised restaurants)

Lee R. Raymond [2, 3]
Retired Chairman and
Chief Executive Officer
Exxon Mobil Corporation
(Oil and gas)

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Chairman and
Chief Executive Officer
Johnson & Johnson
(Health care products)

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2. Compensation & Management Development Committee
3. Corporate Governance & Nominating Committee
4. Public Responsibility Committee
5. Risk Policy Committee

Executive Committee (*denotes member of Operating Committee)

James Dimon*
Chairman and
Chief Executive Officer

Gaby A. Abdelnour
Asia Pacific

Paul T. Bateman
Investment Management

Anthony J. Best
Investment Bank

Frank J. Bisignano*
Chief Administrative Office

Steven D. Black*
Investment Bank

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Commercial Banking

Enrico M. Bombieri
Investment Bank

Douglas L. Braunstein
Investment Bank

Clive S. Brown
Investment Management

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Pacific Northwest

Richard M. Cashin
One Equity Partners

Michael J. Cavanagh*
Chief Financial Officer

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Technology

Andrew D. Crockett
JPMorgan Chase International

Stephen M. Cutler*
Legal & Compliance

William M. Daley*
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Philanthropy

Klaus Diederichs
Investment Bank

John L. Donnelly*
Human Resources

Ina R. Drew*
Chief Investment Office

Althea L. Duersten
Chief Investment Office

Mary E. Erdoes
Wealth Management

Joseph M. Evangelisti
Corporate Communications

Martha J. Gallo
Audit

Walter A. Gubert
Europe, Middle East and Africa

Evelyn E. Guernsey
Investment Management

Carlos M. Hernandez
Investment Bank

John J. Hogan
Investment Bank/Risk Management

Conrad J. Kozak
Treasury & Securities Services

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Investment Bank

David B. Lowman
Home Lending

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Commercial Banking

Achilles O. Macris
Chief Investment Office

Jay Mandelbaum*
Strategy & Marketing

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Investment Bank

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Finance

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Stephanie B. Mudick
International Consumer

Nicholas P. O'Donohoe
Investment Bank

Daniel E. Pinto
Investment Bank

Scott E. Powell
Consumer Banking

Louis Rauchenberger
Controller

Richard Sabo
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Peter L. Scher
Global Government Relations &
Public Policy

Eileen M. Serra
Card Services

Marc Sheinbaum
Auto & Education Finance

Gordon A. Smith*
Card Services

James E. Staley*
Asset Management

William S. Wallace
Card Services

Kevin P. Watters
Business Banking

William T. Winters*
Investment Bank

Matthew E. Zames
Investment Bank

Barry L. Zubrow*
Risk Management

Other Corporate Officers

Anthony J. Horan
Secretary

Norma C. Corio
Treasurer

JPMorgan Chase & Co.

Corporate headquarters

270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000
www.jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities Inc.

Annual report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the Securities and Exchange Commission will be made available without charge upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017

Stock listing

New York Stock Exchange, Inc.
London Stock Exchange Limited
Tokyo Stock Exchange

The New York Stock Exchange (NYSE) ticker symbol for the Common Stock of JPMorgan Chase & Co. is JPM.

Certifications by the Chairman and Chief Executive Officer and Chief Financial Officer of JPMorgan Chase & Co. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 have been filed as exhibits to the Firm's 2008 Annual Report on Form 10-K.

The NYSE requires that the Chief Executive Officer of a listed company certify annually that he or she was not aware of any violation by the company of the NYSE's Corporate Governance listing standards. Such certification was made on June 18, 2008.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations site of www.jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017
Telephone: 212-270-6000

Directors

To contact any of the Board members or committee chairs, the Presiding Director or the non-management directors as a group, please mail correspondence to:

JPMorgan Chase & Co.
Attention (Board member(s))
Office of the Secretary
270 Park Avenue
New York, NY 10017

The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct and the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting www.jpmorganchase.com and clicking on "Governance." Stockholders may request a copy of such materials by writing to the Office of the Secretary at the above address.

Transfer agent and registrar

Mellon Investor Services LLC
480 Washington Blvd.
Jersey City, NJ 07310-1900
Telephone: 1-800-758-4651
https://vault.melloninvestor.com/isd

Investor Services Program

JPMorgan Chase & Co.'s Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorgan Chase & Co. common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, Mellon Investor Services LLC, by calling 1-800-758-4651, by writing them at the address indicated above or by visiting their Web site at www.melloninvestor.com.

Direct deposit of dividends

For information about direct deposit of dividends, please contact Mellon Investor Services LLC.

Stockholder inquiries

Contact Mellon Investor Services LLC:

By telephone:

Within the United States, Canada and Puerto Rico: 1-800-758-4651 (toll free)

From all other locations: 1-201-680-6578 (collect)

TDD service for the hearing impaired within the United States, Canada and Puerto Rico: 1-800-231-5469 (toll free)

All other locations: 1-201-680-6610 (collect)

By mail:

Mellon Investor Services LLC
480 Washington Blvd.
Jersey City, NJ 07310-1900

Duplicate mailings

If you receive duplicate mailings because you have more than one account listing and you wish to consolidate your accounts, please write to Mellon Investor Services LLC at the address above.

Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, NY 10017

JPMorgan Chase distributes shareholder information under the Securities and Exchange Commission "Notice and Access" rule. Compared with previous years, the Firm printed 750,000 fewer annual reports and proxy statements, which saved approximately 7,000 trees and 900 metric tons of CO_2 emissions.

This annual report is printed on paper made from well-managed forests and other controlled sources, and the paper is independently certified by BVQI to the Forest Stewardship Council (FSC) standards. The paper contains 20% post-consumer waste recycled fibers.



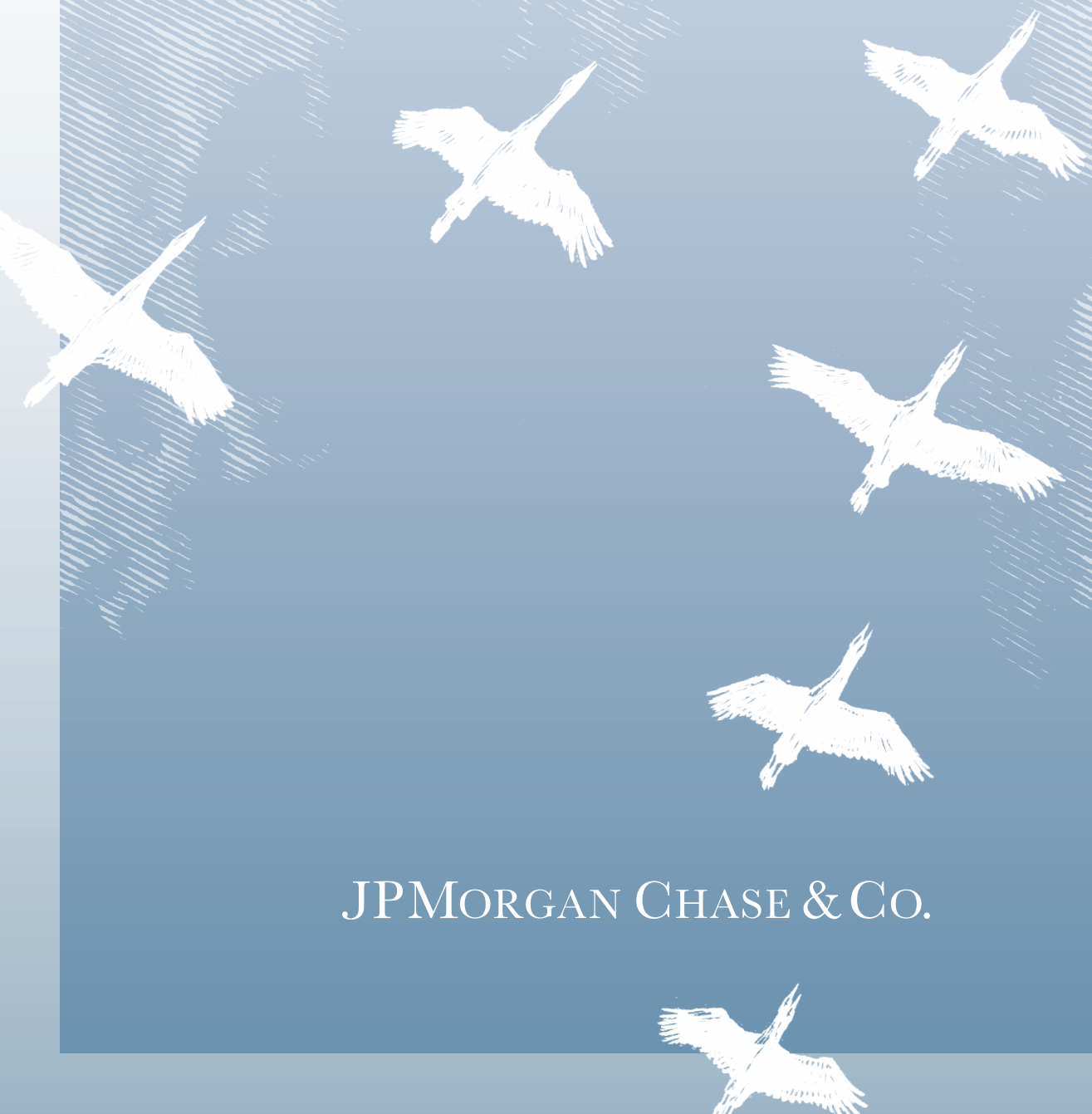
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JPMorgan Chase & Co.

www.jpmorganchase.com

Annual Report 2009

THE WAY FORWARD › › ›



JPMorgan Chase & Co.

Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio and headcount data)	2009	2008
Reported basis [a]		
Net revenue	**$ 100,434**	$ 67,252
Noninterest expense	**52,352**	43,500
Pre-provision profit	**48,082**	23,752
Provision for credit losses	**32,015**	20,979
Income before extraordinary gain	**11,652**	3,699
Extraordinary gain	**76**	1,906
Net income	**$ 11,728**	$ 5,605
Per common share:		
Basic earnings per share		
Income before extraordinary gain	**$ 2.25**	$ 0.81
Net income	**2.27**	1.35
Diluted earnings per share		
Income before extraordinary gain	**$ 2.24**	$ 0.81
Net income	**2.26**	1.35
Cash dividends declared per share	**0.20**	1.52
Book value per share	**39.88**	36.15
Return on common equity		
Income before extraordinary gain	**6%**	2%
Net income	**6**	4
Return on tangible common equity [b]		
Income before extraordinary gain	**10%**	4%
Net income	**10**	6
Tier 1 capital ratio	**11.1**	10.9
Total capital ratio	**14.8**	14.8
Tier 1 common capital ratio [b]	**8.8**	7.0
Total assets	**$ 2,031,989**	$ 2,175,052
Loans	**633,458**	744,898
Deposits	**938,367**	1,009,277
Total stockholders' equity	**165,365**	166,884
Headcount	**222,316**	224,961

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America, except where otherwise noted.
(b) Non-GAAP financial measure. For further discussion see "Explanation and reconciliation of the firm's use of non-GAAP financial measures" and "Regulatory capital" in this Annual Report.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $2.0 trillion and operations in more than 60 countries. The firm is a leader in investment banking, financial services for consumers, small business and commercial banking, financial transaction processing, asset management and private equity. A component of the Dow Jones Industrial Average, JPMorgan Chase serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands.

Information about J.P. Morgan capabilities can be found at www.jpmorgan.com and about Chase capabilities at www.chase.com. Information about the firm is available at www.jpmorganchase.com.

At JPMorgan Chase, we're focused on doing our part to lead the way forward during these difficult times.

While we continue to face challenges in the financial systems in the United States and around the world, we maintain a fortress balance sheet and are well-positioned for the future.

We are confident that we will continue to reinvest in our businesses for the benefit of our stakeholders, as we do the right thing for our customers and for the communities we serve.

AND WE ARE COMMITTED TO STAYING THE COURSE:

- By continuing to lend to creditworthy businesses of all sizes – including state and local governments, healthcare companies, universities and not-for-profits – to help them create jobs, fund medical research, and improve social services and job training.
- By helping struggling homeowners stay in their homes by opening additional loan-counseling centers and by offering mortgage modifications.
- By promoting responsible management of personal finances through innovative services, like Chase Blueprint, and more customer-friendly practices, like our new overdraft policy.
- By maintaining strong capital levels and always following responsible business practices.
- By continuing to provide grants to thousands of not-for-profit organizations around the world through the JPMorgan Chase Foundation.



As we move forward, JPMorgan Chase remains a long-term optimist about our future and our country. We have a strong platform for progress, and we look forward to working with our customers and our stakeholders to seize the opportunities that lie ahead of us.





Dear Fellow Shareholders,

The past two years have been among the most extraordinary and challenging in recent history for JPMorgan Chase, the financial services industry and the global economy. We have endured a once-in-a-generation economic, political and social storm, the impact of which will continue to be felt for years or even decades to come. As we see signs of recovery and the debates about financial reform wage on, it's easy for us to forget the fear and panic we felt a year ago. The market was down an astonishing 50% from its 2008 highs to its low on March 9, 2009. More important, as I write this letter, our country has lost 8.4 million jobs in what has turned out to be a more serious, sustained economic crisis than most of us have ever experienced before — or may experience again.

For JPMorgan Chase, these past two years have been part of a challenging, yet defining, decade. We began it as three separate companies: Bank One, Chase and J.P. Morgan, with each facing serious strategic and competitive challenges. Today, our strategic position is clear, and JPMorgan Chase is a leader in all of its businesses. If you had been a Bank One shareholder from 2000 to year-end 2009 (this represents approximately 40% of the current company) and you held on to your stock, you would have received a total return on your investment of 131%. Over the same time period, if you were a Chase or J.P. Morgan shareholder, your returns would have been 12% and 70%, respectively. By comparison, the Standard & Poor's 500 Index was down 9% over the same period.

Throughout this decade, we made and executed on many transformative decisions. When the global financial crisis unfolded in 2008, the people of JPMorgan Chase understood the vital role our firm needed to play and felt a deep responsibility to our many stakeholders. It is this sense of responsibility that enables us to move beyond the distractions of the moment and stay focused on what really matters: taking care of our clients, helping the communities in which we operate and protecting our company.

It is because of this focus — even amid the daunting and ongoing challenges — that we are able to weather this economic crisis and continue to play a central, if sometimes misunderstood, role in rebuilding the U.S. economy. This is a testimony to the collective strength of character and commitment of our people. Since those first chaotic days in early 2008, many of our people have worked around the clock, seven days a week, for months on end.



Jamie Dimon,
Chairman and
Chief Executive Officer

On March 16, 2008, we announced our acquisition of Bear Stearns at the request of the U.S. government; on September 25, 2008, 10 days after the collapse of Lehman Brothers, we bought Washington Mutual. We loaned $70 billion in the global interbank market when it was needed the most. With markets in complete turmoil, we were the only bank willing to commit to lend $4 billion to the state of California, $2 billion to the state of New Jersey and $1 billion to the state of Illinois. Additionally – and, frequently, when no one else would – we loaned or raised for our clients $1.3 trillion, providing more than $100 billion to local governments, municipalities, schools, hospitals and not-for-profits over the course of 2009.

Our industry and our country are continuing to face some serious challenges, but we believe that the strengths of our nation – our resiliency, ability to reform and innovate, work ethic and culture – will put us on the right track again to global financial soundness. JPMorgan Chase will remain focused, and we will continue doing our part.

In the following sections of this letter, I'll talk about a range of issues that bear on our company, our industry and our country:

I. How our company fared in 2009 – with a focus on what we *actually* do as a bank to serve our clients and customers and what we did to respond to the crisis and help the communities in which we operate
II. How we manage our people – JPMorgan Chase's most valuable asset
III. Our support of financial reform that will strengthen the financial system
IV. Our responsibility and America's success

Overall results – performance improved from 2008 but still was not great

Our revenue this year was a record $100 billion, up from $67 billion in 2008. The large increase in revenue was due primarily to the inclusion for the full year of Washington Mutual (WaMu) and the dramatic turnaround in revenue in our Investment Bank. Profits were $12 billion, up from $6 billion in the prior year but down from $15 billion in the year before that. While these results represent a large improvement over 2008, they still are an inadequate return on capital – a return on tangible equity of only 10%. Relative to our competition, our company fared extremely well. We did not suffer a loss in any single quarter over the two-year crisis (we may have been one of the few major global financial firms to achieve this). In absolute financial terms, however, our results were mediocre.

Maintaining our fortress balance sheet and commenting on our dividend

During this difficult year, the strategic imperatives that have defined and distinguished our company continued to serve us well. We maintained our focus on risk management; high-quality capital; strong loan loss reserves; honest, transparent reporting; and appropriately conservative accounting. We maintained an extremely strong Tier 1 Common ratio, which stood at 8.8% at year-end. We also increased our loan loss reserves over the course of the year from $23.2 billion to $31.6 billion, an extremely strong 5.5% of total loans outstanding. Our relentless focus on our balance sheet has always enabled us to prevail through tough times and seize opportunities while continuing to invest in our businesses. It served us extremely well over this period.

Early in 2009, we cut our annual dividend from $1.52 to $0.20 per share – a drastic move premised on the need to be prepared for a prolonged and potentially terrible economy. We hope to be able to increase the dividend to an annual range of $0.75 to $1.00 per share. To do so, we would like to see three specific things happen: several months of actual improvement in U.S. employment; a significant reduction in consumer charge-offs (which improves earnings and diminishes the need for additional loan loss reserves); and more certainty around the regulatory requirements for bank capital levels. Possible changes in capital and liquidity requirements as well as some tax proposals are creating uncertainty around our future capital needs. We hope there will be more clarity regarding these issues soon.

Many companies had to measurably dilute their shareholders because of this crisis. We did not. The only time we issued a material amount of stock was when we did it offensively to finance the WaMu purchase (and maintain our very high capital ratios). We also hope to be in a position to resume stock buybacks in the near future. But our first priority is – and always has been – to invest our capital to grow our businesses organically and, secondarily, to make valuable acquisitions. We buy back stock only when we think it is a good value for our shareholders relative to the value of other opportunities. And if we use our stock in an acquisition, we do so because we believe the value we're getting is at least equal to the value we're giving.

Increasing our efficiency

Overall, we are a far more efficient company than we were five years ago, following the JPMorgan Chase-Bank One merger. Since then, we've consolidated virtually all of our operating platforms, networks and data centers, and we have excellent technology and best-in-class financial and risk systems. We also have exceptional legal, finance, compliance, risk, human resources and audit staff. Today,

the cost of this improved level of operation and service per dollar of revenue is significantly lower than in the past. To give just one example, our total technology and operations and corporate overhead costs would be more than $9 billion higher today if they were running at the same cost per dollar of revenue as in 2005.

Continuing to invest

Through the worst of the past two years, we never stopped investing. This has included acquisitions, foremost among them Bear Stearns and Washington Mutual; investments in infrastructure, including systems and technology; new products, for example in Card Services; and the addition of bankers and branches around the world. These investments set us up for continued organic growth.

Preparing for tougher global competition

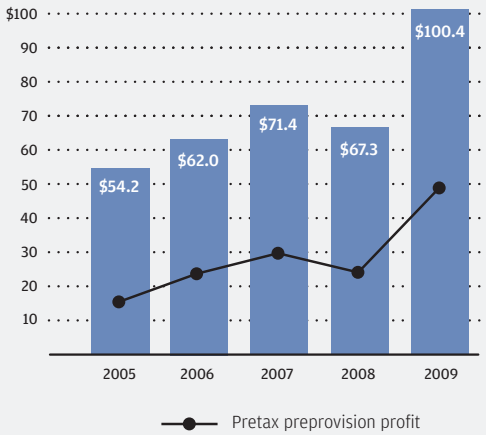
The competitive landscape is rapidly changing. Many companies did not make it or had to be dramatically restructured. We expect this trend to continue in both the United States and Europe. We and others who survived benefited from market share gains (in fact, we gained market share in virtually all of our businesses). But we must be prepared for all of our competitors to come roaring back. With certain competitors and in certain parts of the world, this already is happening. We do not take this lightly.

Protecting the company in uncertain times

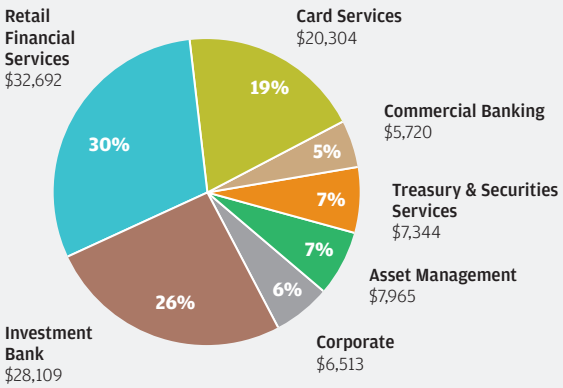
You read about it every day: continued global trade imbalances, higher fiscal deficits run by governments around the world, uncertain interest rate movements and potential regulatory changes, among other issues. I could go on for pages. Rest assured, we are paying very close attention to the difficult issues we still face.

Following is a recap of our line of business results. In this section, I will focus on describing what we as a bank *actually* do, which seems to be so often misunderstood. As you read these results, I hope you will feel as I do – that we have excellent franchises, focused on doing a great job for our customers (even though we do make mistakes), and that we have been continuously and deliberately investing for future growth.

Net revenue
(in billions)



Managed net revenue* by line of business
Full year 2009
(in millions)



* For a discussion of managed basis presentation and a reconciliation to reported net revenue, see pages 58-59 of this Annual Report.

Results by line of business: Great leadership amid great challenges

The Investment Bank reported net income of $6.9 billion with an ROE of 21%

Overall results

The Investment Bank (IB) delivered record performance across the board: net income of $6.9 billion on revenue of $28.1 billion. These results were led by best-ever Global Markets revenue of $22 billion and record investment banking fees of $7.2 billion. The IB generated a return on equity of 21% on $33 billion of allocated capital, our best result in five years. We clearly benefited from higher bid-offer spreads and higher volumes as the industry consolidated and vulnerable companies were distracted. In terms of market share, we achieved a #1 ranking in every major global capital-raising league table category. We do not, however, take this position for granted and understand that maintaining and growing our market share will undoubtedly be tough going forward. We believe our success was due to the dedication of our 25,000 employees, who were working hard to serve our clients every day.

What we do in Corporate Finance

Globally, we have more than 2,000 investment bankers, who serve the corporate finance needs of 5,000 institutions around the world. More than 1,000 of these clients are sovereign governments, state and municipal governments, international quasi-government agencies, hospitals, schools and not-for-profits; the others are generally corporations and financial institutions. Our job is to help these clients find appropriate financing, make strategic acquisitions or divestitures, and help manage their balance sheets and other exposures – such as exposure to interest rates, foreign exchange or commodity prices.

In 2009, among their many activities, our investment bankers:

- Advised on 322 mergers and acquisitions globally – more than any other bank.
- Loaned or syndicated loans of more than $200 billion to 295 companies, helping them grow and create jobs.
- Raised $620 billion of equity or bonds in public markets for clients around the world.
- Raised $178 billion for the financial industry, or nearly 10% of the capital needed to rebuild the financial system.
- Raised $102 billion for states, municipalities, hospitals, schools and not-for-profits – to help build roads and bridges, improve social services, renovate local hospitals and train people for employment. This financing included $19 billion to educational organizations and $14 billion to healthcare organizations.
- Committed to provide financing when others were not able to do so; for example:
  – $4 billion to California;
  – $2 billion to New Jersey; and
  – $1 billion to Illinois.
- Arranged $60 billion to restructure stressed companies and help them recover (and keep their employees at work).
- Invested in 58 U.S. wind farms spread across 16 states. This portfolio can produce 5,843 megawatts of capacity – enough energy to power some 1.6 million U.S. homes. We also are a leader in sourcing, developing and trading emission-reduction credits, primarily through our investments in ClimateCare and EcoSecurities.

In difficult times, extending this level and type of credit is exceedingly risky and costly. For example, in 2008 and 2009, we wrote off or reserved for approximately $8.9 billion of credit-related losses related to IB lending activities.

Key earnings metrics

(in millions, except for ratio and per share data)

	2005	2006	2007	2008	2009
Investment Bank	$ 3,673	$ 3,674	$ 3,139	$ (1,175)	$ 6,899
Retail Financial Services	3,427	3,213	2,925	880	97
Card Services	1,907	3,206	2,919	780	(2,225)
Commercial Banking	951	1,010	1,134	1,439	1,271
Treasury & Securities Services	863	1,090	1,397	1,767	1,226
Asset Management	1,216	1,409	1,966	1,357	1,430
Corporate*	(3,554)	842	1,885	557	3,030
Total net income	$ 8,483	$ 14,444	$ 15,365	$ 5,605	$ 11,728
Return on tangible equity	15%	24%	22%	6%	10%
Earnings per share – diluted	$ 2.35	$ 4.00	$ 4.33	$ 1.35	$ 2.26

* Includes extraordinary gains and merger costs. For more details on the Corporate sector, see page 82.

What we do in Sales and Trading

Trading is perhaps the least understood area of our investment banking activities. We have 6,500 professionals on approximately 120 trading desks in 25 trading centers around the world; these professionals include more than 800 research analysts who educate investors on nearly 4,000 companies and provide insight on 40 developed and emerging markets. The job of our sales and trading professionals is to provide 16,000 investor clients globally with research expertise, advice and execution capabilities to help them buy and sell securities and other financial instruments. These investors range from state and municipal pension plans to corporations and governments. We have experienced specialists who are prepared to buy or sell large amounts of stocks and bonds, foreign currencies or commodities for clients and to give them immediate cash or liquidity when they need it – something we *never stopped* doing even at the most trying moments of the financial crisis. Additionally, we help organizations manage and hedge their risk through providing a range of derivatives products.

Although we run our sales and trading business to support clients, it is a risky business. We execute approximately 2 million trades and buy and sell close to $2.5 trillion of cash and securities each day. On an average day, we own, for our account, approximately $440 billion in securities – to us this is akin to the inventory of a store. We hold the securities so we can meet client demand. Our sales and trading functions not only play a critical role in helping to maintain large, liquid and well-functioning markets, but they are indispensable to institutions of all types seeking to raise capital in the first place.

As more clients chose to work with us in 2009, our sales and trading teams gained market share. We estimate that our market share of the top 10 players in Fixed Income and Equity Markets combined grew from approximately 9% in 2008 to more than 12% in 2009. Deservedly, these groups also received a lot of accolades – most gratifyingly, from client-based surveys.

How we intend to grow

In 2010, we will continue to focus on the fundamentals of investment banking: advising companies and investors, raising capital, making markets and executing for our clients worldwide. If we do this well, we are helping not only our clients but the global economic recovery as well.

We also are aggressively and organically growing many parts of our business. For example, the Prime Services business we acquired from Bear Stearns – which provides mostly large investors with custody, financing

and trade execution – largely was concentrated in the United States. We now are growing this business in Europe and Asia. Across the business, we will continue to invest in enhancing our technology, spending $1 billion this year on upgrades and innovations. We also are expanding our coverage in key markets, including China, India and Brazil – essentially by adding investment banking and trading professionals and providing them with the corresponding support they need (i.e., credit and systems) to cover more corporate and investor clients in these markets. For example, in the last five years in India, we have gone from covering 36 companies to 180 companies. We will simply grow with the emerging economies.

Cazenove

At the end of 2009, we announced that our U.K. joint venture with Cazenove Group Limited would become a wholly owned part of J.P. Morgan. Our initial investment in Cazenove in 2005 was extremely successful – among other things, it increased our U.K. investment banking market share* from 5% to 13%. We welcome all of these employees to J.P. Morgan – Cazenove's long tradition of integrity and client service sets a standard for all of us.

Commodities

We continue to build out our Commodities franchise. Price fluctuations in commodities like oil, gas and electricity affect many companies throughout the world. We help our corporate clients manage this risk by enhancing our trading and warehousing capacity. Since 2006, our Commodities business has more than doubled its revenue from serving clients. In February 2010, we announced our agreement to purchase a portion of RBS Sempra's commodities business for $1.7 billion. This acquisition will give us the ability in Europe to trade oil, gas and electricity far more extensively than we can now; it will enhance all of our prior U.S. capabilities; and it will add a capability to warehouse metals for clients. It also will nearly double the number of corporate clients we serve in Commodities, to more than 2,000.

Retail Financial Services reported net income of $97 million with an ROE of 0%

Overall results

Retail Financial Services (RFS) continued to be a tale of two cities. Retail Banking, which includes Consumer and Business Banking, earned $3.9 billion, primarily by serving customers through bank branches in 23 states. Consumer Lending lost $3.8 billion because of continued high charge-offs in the home lending business.

In our fastest conversion ever, we upgraded 1,800 Washington Mutual branches and more than 40 million accounts to Chase's systems, products and branding. As a result of these conversions, customers today have full access to 5,154 Chase branches across the country (from New York and Florida to California). Former WaMu customers have received greater access to better systems and products, and we did it at greatly reduced cost to the firm (approximately $2 billion firmwide). We now have one of the most attractive franchises in the country, with enormous opportunities to grow.

What we do in Retail Banking

Last year, our 61,000 people in 5,154 Chase branches in 23 states served more than 30 million U.S. consumers and small businesses by providing checking and savings accounts and investments, as well as home, business, auto and student loans. For our RFS professionals, 2009 was a year of numerous accomplishments:

- Retail operations teams processed 700 million teller transactions, 3.5 billion debit card purchases, 100 million ATM deposits, close to 6 billion checks and more than 1.3 billion statements.
- Investment advisors oversaw $120 billion in assets under management to help consumers toward their goals.
- We added 4.2 million mobile banking customers and another 5.2 million new online banking customers.

* Market share as measured in total fees.

- We also added 2,400 branch sales staff last year – personal and business bankers, mortgage officers and investment representatives – to better serve our customers.

In addition, we are revamping our overdraft policies to meet regulatory requirements, to make them clearer and simpler, and to give customers more control. Customers now can choose if they want overdraft services for their debit cards, and they will have a real-time ability to see their balances over the course of the day. These changes are ongoing and complex. We hope to complete them with minimal disruption and maximum consumer satisfaction. While costly (we estimate these changes will reduce our after-tax income by approximately $500 million annually), we believe these moves will strengthen our long-term relationship with our customers.

What we do in Small Business Banking

In 2009, our nearly 2,000 business bankers provided approximately $2.3 billion in new loans (our total outstanding loans are $17 billion) and other services to help 2 million business owners nationwide manage their businesses. Loan origination in 2009 was down 58%, as customer demand decreased significantly and our underwriting standards became more disciplined. We expect a substantial turnaround in 2010, and, in fact, we already are seeing increased demand from more qualified customers.

We are renewing our efforts to get more credit into the marketplace, including adding 375 small business bankers to our current workforce. In late 2009, we committed to boosting lending to small businesses by $4 billion in 2010 (to a total of $10 billion) through increased access to working capital, term loans for expansion, commercial mortgages, lines of credit and business credit cards.

What we do in Consumer Lending

Our Consumer Lending business includes home and auto loans for consumers. In terms of overall results, it was another difficult year for Consumer Lending, with losses of $3.8 billion, driven by increased charge-offs and additions to loan loss reserves in our home lending portfolios. As discussed last year, these losses were the result of departures from our traditional (and well-tested) underwriting standards, sharply falling home prices and the deepening recession. While there has been some improvement in delinquencies and home prices in some markets, we believe that significant improvement will depend largely on an improving economy.

As expected, charge-offs in Home Lending continued to rise during 2009, and we added $5.2 billion in reserves to our portfolio. We anticipate that this portfolio will continue to lose money for the next three years (excluding reserve changes) as we work through a backlog of problem loans. The losses come not only from charge-offs but from the costs of managing delinquencies and foreclosures (though we were able to reduce the number of homes that we own from 12,700 in 2008 to 7,400 in 2009).

More positively, we took a leadership role in helping American homeowners through the most difficult housing market of a generation. We added 6,000 people just to help homeowners through modification programs and other actions to prevent foreclosure. We also opened 34 Chase Homeownership Centers to allow struggling borrowers to talk with loan counselors face to face and have begun opening 17 more in early 2010. These efforts have allowed us to begin the mortgage modification process for nearly 600,000 homeowners (approximately one-third of which are modifications under the government's new Home Affordable Modification Program, or HAMP).

The mortgage business essentially has returned to the more disciplined underwriting of many years ago: 80% loan-to-value ratios and income verification. In 2009, we originated more than $150 billion in new home

loans, much of it refinancing that allowed homeowners to lower their payments by taking advantage of historically low interest rates. Most of the loans that we originate are sold to Fannie Mae, Freddie Mac or Ginnie Mae. We still underwrite jumbo loans (those with loan amounts larger than those permitted in government programs), but we have been very cautious. The home lending business will one day return to being a good business – it certainly is critical to the proper functioning of America's financial markets – and we intend to be a leader in it.

In 2009, we also became the largest U.S. auto lender, financing more than 1.1 million auto loans for consumers, up 25% from 2008. Our auto loans outstanding totaled $46 billion at the end of 2009.

How we intend to grow

To provide better service to our millions of customers, we plan to *add* 2,700 personal bankers and more than 400 investment sales representatives in 2010. These efforts should help us earn new customers and broaden our relationships with existing customers beyond checking accounts and other basic services. In addition, we expect to open at least 120 more branches in 2010 and to ramp up our pace of openings in 2011 and 2012 – especially in California and Florida, two of the fastest-growing U.S. markets, which were introduced to us through the WaMu acquisition.

Card Services reported a net loss of $2.2 billion

Overall results

By all measures, 2009 was a terrible year for our credit card business. The economic environment drove charge-off rates to all-time highs. Card Services lost $2.2 billion (compared with last year's profit of $780 million). While I don't want to diminish the negative overall results, there were some positives. We were able to grow market share in terms of accounts and customer spending; and our credit loss performance – 8.5% on Chase cards – while poor, was better than our competitors' performance.

What we do in Card Services

Our 23,000 Card Services employees around the world provide financial flexibility and convenience to customers who, in 2009, used Chase credit cards to meet more than $328 billion of their spending needs. With more than 145 million cards in circulation held by approximately 50 million customers with $163.4 billion in loan outstandings, Chase is among the largest U.S. card issuers, with a wide variety of general purpose credit cards for individual consumers and small businesses. We also issue cards with a number of partner organizations, such as the American Association of Retired Persons (AARP), Continental Airlines, Marriott, Southwest Airlines, United Airlines and Walt Disney.

How we dealt with new regulation

In 2009, in addition to the terrible environment, the U.S. credit card business faced fairly dramatic changes because of a new law enacted by Congress in May. The new law restricts issuers' ability to change rates and prohibits certain practices that were not considered consumer-friendly. These changes alone are expected to reduce our after-tax income by approximately $500 million to $750 million – but this could possibly change as both consumers and competitors change their behavior.

We believe that many, but not all, of the changes made were completely appropriate. In fact, we had voluntarily eliminated certain of the targeted practices – like double-cycle billing, which resulted in greater interest charges for customers who revolve a balance for the first time (2007); and universal default pricing, in which creditors consider credit histories with other lenders in setting rates (2008). However, because the new law makes it harder to raise rates on customers who have become far riskier and because all payments now must go toward reducing users' highest-rate balances (vs. lower-rate balances), we and other competitors have had to make some fairly drastic changes in the business:

- We have substantially reduced very low introductory or promotional balance transfers. This change alone reduced our outstanding balances by $20 billion.
- In the future, we no longer will be offering credit cards to approximately 15% of the customers to whom we currently offer them. This is mostly because we deem them too risky in light of new regulations restricting our ability to make adjustments over time as the client's risk profile changes.
- We reduced limits on credit lines, and we canceled credit cards for customers who had not done business with us over an extended period.

In fact, the industry as a whole reduced limits from a peak of $4.7 trillion to $3.3 trillion. While we believe this was proper action to protect both consumers and card issuers, doing so in the midst of a recession did reduce a source of liquidity for some people. Ultimately, however, the change may make the card business a more stable and better business.

How we intend to grow

Aggressive product innovation is fundamental to the development of the credit card business. Even through the recent tumultuous times, we never stopped investing in new products and services to meet our customers' needs. In 2009, Chase launched more products at one time than any other issuer. New products and services included two Chase-branded card programs, a rewards platform, and a new feature to help better manage spending and borrowing. Here are some of the highlights:

- The Chase Sapphire℠ card was developed from the ground up to address the needs of affluent consumers, with premium rewards and exceptional service.
- Ink℠ from Chase is a suite of business cards offering flexible payment options and resources for small business owners.
- Our new Ultimate Rewards℠ program offers countless redemption options through a single website: www.ultimaterewards.com.
- Blueprint℠ is an industry-first set of features to improve the way Chase customers manage their spending and borrowing, with tools to help consumers take charge of their finances, pay down balances and manage spending.

These new products* and programs would be considered major innovations at any time; but the fact that we launched them in one of the worst-ever U.S. consumer environments is especially noteworthy. By delivering convenience, customization and great service, we will build stronger customer relationships. Even as the credit card business has seen more than its share of difficulties during the past year, we believe our new products will help us rebuild trust with our customers. It's a process that will take time, but if we focus on delivering useful products and making financing easier for our customers, Card Services will return to being a business that is good for our customers and profitable for our company.

* If you would like to review any of our new products, go to our website: www.chase.com.

Commercial Banking reported net income of $1.3 billion with an ROE of 16%

Overall results

In 2009, Commercial Banking overcame many challenges to deliver exceptional financial performance. Even as substantially higher credit costs negatively affected quarterly results, the business exceeded its annual plan by focusing on client selection, marketing its business aggressively, managing risks and expenses, and excelling in client service. Highlights included a 20% boost in revenue to $5.7 billion; a 25% improvement in operating margin to $3.5 billion; double-digit increases in both average liability balances, up 10%, and average loan balances, up 30%; and a 20% jump in gross investment banking revenue to $1.2 billion – a full 25% above plan. These were *fabulous* results in any environment.

What we do in Commercial Banking

More than 1,400 bankers help fulfill the financing needs of nearly 25,000 clients and over 30,000 real estate investors and owners. The average length of a Commercial Banking client relationship with us is more than 18 years. In 2009, we added over 1,700 new Commercial Banking clients and expanded more than 7,600 relationships. With a team of banking, treasury and client service professionals situated in local markets coast to coast and around the world, Commercial Banking delivers financial services while steadfastly supporting communities. Last year, Commercial Banking extended more than $73 billion in new financing, which included nearly $8 billion to the government, not-for-profit and healthcare (GNPH) and education sectors. For example:

- We helped finance the construction of a $22.3 million healthcare center in the Bronx, New York, to serve an additional 18,000 patients per year.
- As part of more than $384 million in new and renewed commitments to GNPH and educational entities in Ohio, we provided Kent State University with needed financing.
- We assisted Children's Memorial Hospital in Chicago in financing the construction of a new $915 million building with a $196 million credit facility.

How we intend to grow

Having successfully completed the conversion of commercial client accounts acquired through Washington Mutual, Commercial Banking is well-positioned to grow. The business already is taking advantage of Chase's retail branch network to expand its offerings into five new states – California, Washington, Oregon, Georgia and Florida. We'll now cover these new markets by supporting a full range of clients, from middle market companies to large corporations. We are achieving this by hiring exceptional commercial bankers – more than 50 employees by the end of 2010 alone – to serve these additional markets. Several years from now, when this expansion ultimately is completed, we expect it will generate hundreds of millions of dollars in additional profits annually.

On another front, when JPMorgan Chase and Bank One merged, we set a target of more than $1 billion in revenue from investment banking products sold to Commercial Banking clients (up from $552 million). This year, we exceeded the goal and are poised to continue growing this business.

Treasury & Securities Services reported net income of $1.2 billion with an ROE of 25%

Overall results

Treasury & Securities Services (TSS) delivered solid but lower results, producing 2009 profits of $1.2 billion vs. $1.8 billion in the prior year. The business delivered net revenue of $7.3 billion, down 10% from the previous year. We describe TSS as our "Warren Buffett-style" business because it grows with our clients and with inflation; delivers excellent margins and high returns on capital; and is hard for would-be competitors to replicate because of its global scale, long-term client relationships and complex technology.

Our 2009 performance largely was driven by weakened market conditions and lower interest rates. Securities lending and foreign exchange volumes and spreads, in particular, saw significant declines. TSS also saw deposits level off after an exceptional period in late 2008 and early 2009, when we were a huge beneficiary of the markets' flight to quality. Despite the headwinds of 2009, the underlying business drivers remained strong: International electronic funds transfer volumes grew 13%, assets under custody increased 13% and the number of wholesale cards issued grew 19%.

What we do in Treasury & Securities Services

More than 6,000 TSS bankers serve more than 40,000 clients from all of our other lines of business in 60 locations around the world. TSS provides clients with critical products and services, including global custody in more than 90 global markets, holding nearly $15 trillion in assets; corporate cash management, moving an astounding $10 trillion a day of cash transactions around the world for clients; corporate card services, providing 27 million cards to more than 5,000 corporate clients and government agencies; and trade services, guaranteeing international payments for our clients, who are many of the world's largest global companies. Following are some specific examples of how TSS supports a range of clients:

- We delivered unemployment and other benefits to more than 12 million individuals in 2009, as the national leader in bringing electronic banking services to low-income households through electronic benefits transfer and debit and stored-value cards.
- We were selected by the Federal Reserve to serve as custodian for its program to purchase up to $1.25 trillion in mortgage-backed securities in order to provide support to the mortgage and housing markets.
- We are the leading cash management provider to the U.S. Postal Service, providing cash and check depository services to nearly one-third of the U.S. Postal Service's 80 districts.

How we intend to grow

TSS essentially grows by following its clients around the world, which means opening new branches and constantly improving products. In 2009, TSS opened new branches in China, Denmark, Finland, Norway and Sweden; launched new services in Tokyo, South Korea, Brazil and Mexico; and expanded capabilities in Australia, India, Europe, the Middle East and Africa. We will continue this expansion for the foreseeable future.

In addition, more than three years ago, TSS and the Investment Bank formed a joint venture to create our Global Corporate Bank. With a team of more than 100 corporate bankers, the Global Corporate Bank serves multinational clients by giving them access to TSS products and services and certain IB products, including derivatives, foreign exchange and debt. We intend to expand the Global Corporate Bank aggressively over the next several years by opening 20-30 locations and adding 150 corporate bankers, allowing us to cover approximately 1,000 new clients (3,100 total, up from 2,100).

Asset Management reported net income of $1.4 billion with an ROE of 20%

Overall results

Asset Management, with assets under supervision of $1.7 trillion, saw earnings increase by 5% in a year that began with strong negative headwinds and finished with a market rally. Overall, the year's results reflected several trends, including strong investment performance, continued growth in Private Banking, excellent investment performance from Highbridge Capital Management and a breakout year for our U.S. retail mutual funds business. All of these trends reflected an improving story from the challenges of the past two years.

What we do in Asset Management

Our Asset Management franchise consists of two primary businesses. The first is Investment Management, in which 6,500 employees help institutions and retail investors worldwide manage their cash; provide equity, fixed income and alternative investment strategies; and administer 401(k) services for large and mid-size U.S. employers. Overall, we manage more than $1.2 trillion in assets for our clients.

Our second primary business is Private Banking. Our 1,900 private bankers help the world's wealthiest individuals and families grow, manage and sustain their wealth with investing, portfolio structuring, capital advisory, philanthropy and banking services.

Throughout 2009, our Asset Management professionals advised institutions on how to strengthen pension plans for the benefit of their employees; advised more than 1.6 million 401(k) participants on achieving a secure retirement; executed comprehensive financial plans for family enterprises and business owners; distributed more than $100 million to charities on behalf of fiduciary clients; and brought market insight and top-performing products to financial advisors who guide millions of individual investors worldwide.

Within Asset Management, our Fixed Income group solidified its position as the #1 provider of global liquidity (we manage $590 billion), and our U.S. Equity platform had 82% of assets under management in the top two quartiles of peer fund group investment performance over five years. Our U.S. retail business had an exceptional year despite clients' broadly based risk aversion, bringing in record net asset flows and ranking third in net new long-term flows in the industry – due principally to the sale of strong-performing fixed income products.

Private Banking experienced record revenue due to inflows from clients and solid investing, lending and banking activity, as well as the addition of nearly 100 client advisors and five new Private Wealth Management offices (in Miami, Philadelphia, San Francisco, Seattle and Washington, D.C.).

In mid-2009, J.P. Morgan assumed 100% ownership of Highbridge Capital Management, one of the largest alternative asset managers in the United States, with $21 billion in client assets. We acquired Highbridge in 2004 to augment our alternative investment offerings for clients. Highbridge delivered the best investment performance in its history in 2009, and just five years into our partnership, its assets have grown threefold.

Importantly, rigorous risk management enabled Asset Management to provide valuable support to our clients and avoid many of the negative developments that surfaced during the financial crisis and damaged an untold number of investors.

How we intend to grow

Our Investment Management business is developing new global strategies, including funds focused on maritime investments, commodities, distressed debt and China. We also plan to enhance Investment Management's global distribution with the addition of more than 200 employees and increased budgets for marketing and client outreach.

In 2010, we plan to expand Private Banking globally by adding more than 500 bankers, investors and client service employees. In addition, we intend to continue to invest in the growth of the brokerage business we acquired from Bear Stearns. We anticipate a slowly improving but volatile investment environment in 2010 – yet, nonetheless, we expect Asset Management to continue to thrive by helping millions of individuals, families and institutions achieve their financial goals.

The Corporate sector reported net income of $3.7 billion

Our Corporate sector, excluding merger-related items, produced net income of $3.7 billion compared with $768 million in the prior year. The Corporate sector comprises three segments: Private Equity, unallocated corporate expenses and our corporate investment portfolio. Our Private Equity segment reported a net loss of $78 million vs. a net loss of $690 million in 2008. Remember, however, in 2007, we had an outstanding year with pretax Private Equity gains of more than $4 billion. We know that Private Equity returns, by their nature, are lumpy, but we expect to average 20% returns over the years.

Our corporate investment portfolio, which we own in order to manage excess cash, our collateral needs and interest rate exposure, grew from a low of $91 billion in March 2008 to an average of $324 billion in 2009. Our investment portfolio produced exceptional performance, the result of both managing interest rate exposures and buying securities that we thought were extremely safe investments and were trading at large discounts to fair value (e.g., mortgage ABS, Triple-A credit card ABS and Triple-A CLOs). The pretax unrealized gain of this portfolio went from a loss of $3.4 billion at the beginning of 2009 to a gain of $3.3 billion at year-end. It's important to note that your company manages its interest rate exposure extremely carefully and believes that taking this exposure is fundamentally not how we make our money. Any investor can take on interest rate exposure – we do not consider that a business. We do not borrow "cheap" from the Federal Reserve or any other source; we borrow at market rates, like everyone else does.

We may realize some of these Corporate investment gains in 2010, but we do not expect these exceptional results to continue. Over the course of the year, Corporate quarterly net income (excluding Private Equity, merger-related items and any significant nonrecurring items) is expected to decline to approximately $300 million.

II. HOW WE MANAGE OUR PEOPLE – JPMORGAN CHASE'S MOST VALUABLE ASSET

Nothing is more vital to the long-term growth of JPMorgan Chase than our ability to attract and retain talented and dedicated employees. Ours is a complicated business. Managing it requires complex systems, extensive quantitative skills and risk discipline. The pressure can be enormous and wide-ranging – from a trader dealing with large positions to a call center employee helping a customer modify a mortgage loan that no longer is affordable. Being smart is not enough; it also takes a high level of social intelligence and skill to handle all types of customers facing all kinds of challenging circumstances.

Success at our firm requires that employees treat clients and customers respectfully and fairly and stay true to the values embedded in our culture: personal commitment, honesty, teamwork, diversity and community awareness.

Ensuring we have the best people, training and leadership requires that we do many things right, from recruiting and training to recognizing, rewarding and developing leaders. This is what enables us to attract, retain and develop the best people.

Recruiting and training talent

The breadth, complexity and variety in the work our people do are impressive by any measure but are not well-understood. We have 220,000 employees around the world. While some of us have high-profile jobs and receive great attention – not always for the better these days – many others are not in the public eye. These individuals are essential to our global operations and include:

- Nineteen thousand programmers, application developers and information technology employees who tirelessly keep our 80 data centers, 55,000 servers, 225,000 desktops and global network up and running – and who were a major part of completing the Bear Stearns and WaMu conversions in record time.
- Eighty thousand employees fulfilling operations functions globally and thousands of customer service colleagues. In 2009, they responded to more than 245 million phone calls – to help customers stay in their homes, understand credit card payment plans and avoid financial problems during these difficult times.
- Thirteen thousand people in Legal & Compliance, Risk, Audit, Human Resources and Finance in 60 countries who rigorously analyze facts and figures, thoughtfully review the policies we have and address the issues we face. For example, we rely upon hundreds of credit risk officers to manage our various exposures, including $2 billion of new loans we make on average every day.
- Thousands more of our colleagues working behind the scenes to keep our operations safe and efficient, including mailroom attendants, mechanics and engineers, executive assistants, receptionists, security personnel and those who manage our facilities worldwide.

To fill these jobs, we hire thousands of employees each year, all of whom must be trained in our products, services and procedures in order to do their jobs well. Annually, we hire 1,800 people with advanced degrees (including M.B.A.s and Ph.D.s). Thousands of our people have advanced degrees in math, science and physics. While many of these people work in the Investment Bank, others work in Asset Management, Credit and Risk Analysis, Consumer Lending and Treasury & Securities Services, as well as in data centers across the firm.

Employees of JPMorgan Chase receive ongoing training and development to ensure they are well-equipped to manage the complex systems, risk management disciplines and client relationships that are critical to our franchise. Additionally, many are prepared to assume managerial and leadership roles over time. Our company has 94 management develop-

ment programs and more than 20,000 training programs (including online courses) that enable our people to hone and expand their skills in a rapidly changing business.

Ongoing assessment and development

At JPMorgan Chase, we are fortunate to attract world-class talent. We owe it to our employees, our customers and our shareholders to create an environment in which our people can do their best work. Toward this end, we believe in assessing their strengths and weaknesses and regularly giving them honest and thorough feedback. Additionally, we know that in order to sustain our strong competitive position, we must focus on developing exceptional leaders. This starts with a clear and shared understanding about the attributes we value most in senior managers. These qualities must be intentionally fostered and reinforced through a rigorous talent assessment process. This process now is embedded as part of how we operate. We also are developing a general management program for M.B.A. students to help us add to our bench and build general management talent on an ongoing basis.

Encouraging mobility and multiple careers

Talent mobility and optimization are key to our long-term success. We have to clearly outline what people need to do to move to the next level at JPMorgan Chase. We are working to do away with statements such as, "My boss won't let me go ... or my boss won't let me look at positions in other divisions." People have the right to explore different career opportunities and follow their dreams. While it's also an individual's responsibility to manage his or her own career, it's our job to help facilitate that. We strive to be proactive and thoughtful in that regard.

Intense focus on succession

We need to be honest and thoughtful about potential successors, particularly for senior jobs. We have redoubled our efforts to ensure that we have people in the pipeline who are capable of assuming senior levels of responsibility three, five or even seven years out or right away if necessary (the "hit by a truck" emergency scenario). This is true for my job as well.

Poor CEO succession has destroyed many a company. CEO and management succession often seems more like a psychological drama or a Shakespearean tragedy than the reasoned and mature process it should be. It is in our best interest to avoid such drama.

I want to assure you, our shareholders, that your Board believes that we have within the organization some outstanding people who could do my job today; and we will continue to rotate some of our senior people across the business to ensure that others are fully developed to take my job in the future. The Board of Directors not only believes that this is a priority but that it is of the utmost importance. And you can rest assured that your Board members are on the case. They personally know all of the Operating Committee members of the company (and many others), and the Board members periodically review – with and without me – your company's key succession plans.

Getting compensation right

Compensation is one of the most complex issues we confront – it is important to our employees, our company, our shareholders and, increasingly, the public at large. A poorly conceived compensation strategy can devastate a company by attracting the wrong people and incenting them to do the wrong things for the wrong reasons. At JPMorgan Chase, we put a great deal of time and thought into designing compensation plans that attract and motivate good people and reward good behavior. Of course, compensation aside, we always expect our people to do the right thing. A badly designed compensation plan never is an excuse for bad behavior.

Many people are concerned and angry about compensation practices across the financial services industry – and many of these concerns are quite legitimate. Senior leaders at some companies made a great deal of

money while their companies failed and, in the process, helped contribute to the crisis in our country. This angers me, too. But not all companies were reckless – and not all companies had bad compensation practices.

In this section, I'm going to describe how our overall 2009 compensation related to other industries, present some overall principles that guide us and explain how we apply these principles in compensating our people.

Comparing JPMorgan Chase with other industries

In 2009, JPMorgan Chase's total expenses were $52 billion. The total compensation (salaries and benefits and incentives) your company paid out was $27 billion.

JPMorgan Chase compensation – 2009

	Total (in billions)	Average per employee (in thousands)
Salaries	$ 12.5	$ 56
Benefits*	3.9	18
Incentive compensation**	10.6	46
Total compensation and benefits***	$ 27.0	$ 120

As seen above, we paid salaries and benefits of approximately $74,000 per person and incentive compensation on average of $46,000 per person for a total of $120,000 per person. These salary and benefit numbers are generally in line with other major companies – financial and non-financial.

The incentive awards come in various forms (cash, commissions, restricted stock, options, etc.). Approximately 32% of the incentive compensation for 2009 was in restricted stock and options that vest over a number of years. At JPMorgan Chase, the use of stock options is very restricted – we only use stock options for approximately 500 people a year – and represents just 1%-2% of the company's total compensation expense.

Many commentators, in an attempt to measure fairness and reasonableness of a company's compensation payouts, have looked at total compensation as a percentage of revenue. On this basis, JPMorgan Chase's total compensation (salaries, benefits and bonuses) was 27% for 2009; this number averaged 33% over the previous several years. For our Investment Bank alone – the part of the company receiving the most scrutiny – compensation was 33% of revenue, down from an average of 44% over the last five years.

The chart on the next page compares these same percentages with a wide mix of businesses. For the average U.S. business, total compensation as a percentage of revenue is approximately 16%. In general, at businesses that are people-intensive and not capital- or intellectual property-intensive, such as professional services companies, a high percentage of the company's revenue is paid out to the employees. Law firms, for example (which are not included in the following table), pay out more than 80% of their revenue to their employees. In highly capital-intensive companies, like telecommunications or certain manufacturing companies, payout ratios are considerably lower.

Some commentators also have looked at total compensation as a percent of profits. Here you see a similarly wide range of results.

Essentially, the financial dynamics and structures of various businesses are very different, and looking at these ratios always will produce divergent conclusions – they alone do not reveal very much.

It also is important to point out that at many companies, a significant amount of incentive compensation generally is paid regardless of whether or not the overall company does well. Many companies pay certain individuals based on their specific performance (sales and service employees) and not necessarily on the performance of the company.

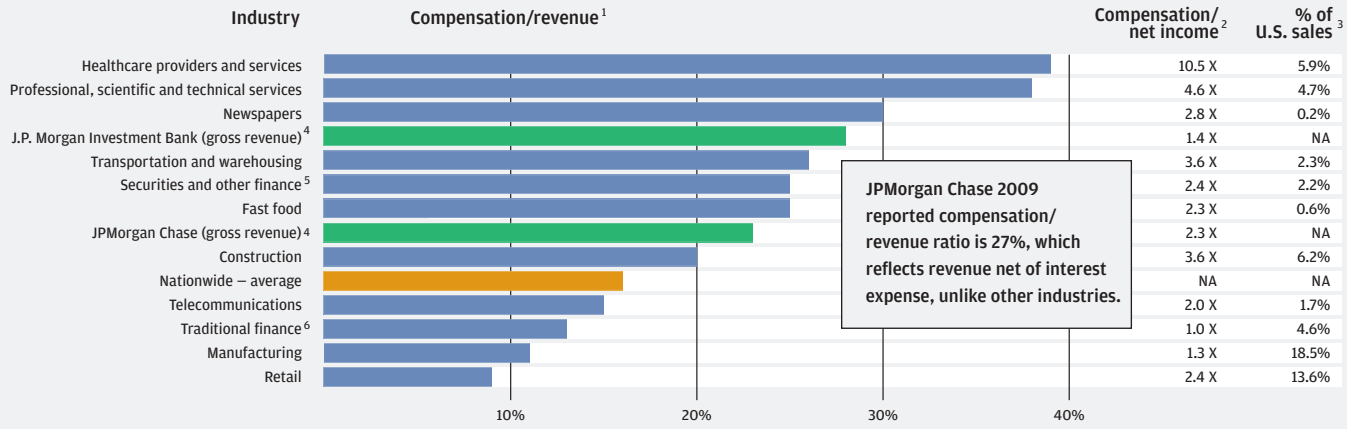
JPMorgan Chase does employ a number of highly compensated individuals, probably more than in many other industries – but not

* This includes what JPMorgan Chase contributes to various benefits programs (i.e., 401(k) match, pension, health and welfare, etc.) and employment-related taxes.

** Represents 2009 expense based on U.S. GAAP.

*** While we have 220,000 employees, our health plan covers 400,000 people, which includes covered family members.

Compensation ratios by industry



The industry compensation ratios in the table above reflect 2007 information contained in U.S. Census Bureau data, Capital IQ Compustat records and company filings and are based on revenue before deducting interest expense, whereas JPMorgan Chase and other financial services firms report their compensation ratios based on revenue net of interest expense.

1 Compensation/revenue based on U.S. data only; JPMorgan Chase data based on worldwide totals.

2 Net income margin based on 2004-2008 average for S&P 500 companies and adjusted for exceptional losses/gains.

3 Compensation/sales based on U.S. Census Bureau data.

4 Revenue based on 2009 gross revenue before interest expense.

5 Includes investment banks, asset management firms, capital markets firms and other non-lending financial institutions.

6 Includes regional banks, credit card companies and other credit/lending institutions.

NA – Not applicable.

all. We are unable to find real comparisons. Much of the anger about highly compensated individuals at banks relates to the argument that all of these companies would have failed, which we do not believe is true (more detail on this in the next section). Finally, the more highly paid the individual is at JPMorgan Chase, the higher the percentage of compensation awarded in restricted stock and options.

Before we speak specifically about how we compensate individuals at JPMorgan Chase, it's appropriate to outline our principles.

Some key compensation principles at JPMorgan Chase

We believe the compensation principles we use are best practices and compare favorably with those outlined by outside authorities, such as the G-20, the Financial Services Authority, the Financial Stability Board, the Federal Reserve and the U.S. Treasury. Our principles are as follows:

- Pay a significant percentage of our incentive compensation in stock: at least 67% for the Operating Committee members and approximately 50% for the remainder of our senior management team.
- Structure the stock we grant – restricted stock units or options – to vest over multiple years.
- Require Operating Committee members to retain and hold approximately 75% of the stock they receive from the company after the stock vests.
- Generally do not provide multi-year guarantees to new hires and almost never to current employees.
- Institute meaningful recoupment policies, some of which we enhanced in 2008 and 2009 and are progressively more stringent at higher levels of management. For all employees, if anyone causes material financial or reputational harm to the firm or its business activities, we can recoup the employee's incentives, including stock.
- For approximately 500 senior individuals, unvested stock also can be recouped for failure to properly identify, raise or assess, in a timely manner and as reasonably expected, material risks to the firm.
- For the Operating Committee and for me, unvested stock or options can be recouped not only for the reasons mentioned above but also if reasonable progress toward personal and company goals is not met. This is at the discretion of the Board of Directors.

- Pay our people for performing well over multiple years and for helping to build enduring performance.
- Ensure that financial results – a key metric (but not the only one) we use to pay our people – always include profits adjusted for risk; that is, the more capital a business uses, the more it is assessed a charge for that capital.
- Recognize revenue for complex and long-dated trades or products over multiple years to properly reflect the risk. Try to be as conservative as possible regarding accounting – aiming not to recognize profits at all when we think doing so is inappropriate.

Some of our other compensation principles go beyond what regulators have asked for but, we believe, are equally important. For example:

- We do not have change-of-control agreements, special executive retirement plans or golden parachutes, or special severance packages for senior executives.
- We do not pay bonuses for completing a merger, which we regard as part of the job. When the merger has proved to be successful, compensation might go up.
- We feel strongly that financial outcomes alone do not represent a comprehensive picture of performance. Broader contributions – such as continually honing leadership skills; maintaining integrity and compliance; recruiting and training a diverse, outstanding workforce; building better systems; and fostering innovation, to name just some important qualities – matter a great deal. In fact, in our business, basing compensation solely on financial or quantitative measures, and ignoring qualitative measures, can be disastrous. Good performance in a particular year does not necessarily indicate that the individual did a good job.
- We are mindful that a rising tide lifts all boats so we take into account how much a strong market, as opposed to the initiative of the individual or group, contributed to the results.
- We must be highly competitive on compensation, which is absolutely crucial to being a great company. While we aim to be a company that pays its employees well, it should be because we have been a well-performing company.
- We want our employees to be shareholders. All of the policies described above have been effective in this regard: Our employees own 488 million shares and options, a significant portion of which is unvested – i.e., of no value to the individual if he or she were to leave the company for a competitor. Ownership does not guarantee that our employees will act like owners, but it certainly improves the odds.

How we pay individuals

Our starting point when it comes to compensation is, as it should be, risk-adjusted financial performance. We keep thousands of profit-and-loss statements (by branch, by trading desk, etc.). While we don't maintain incentive compensation pools at such a granular level, we do have hundreds of such pools; we try to maintain a very disciplined approach to relate compensation as closely as possible to performance.

However, we do not stop there. We make adjustments based on our own judgments about how the company is doing (in absolute and in competitive terms) and for very specific business decisions, such as additions to staff or large, new investments that affect profits. In some cases, the impact of these sorts of discretionary factors will be negligible. In other cases, the discretion we exercise may have a significant effect on the size of an incentive compensation pool. If we feel the pool amount was not earned, we do not pay it.

Some individuals are paid incentive compensation based on very specific metrics; for example, people in our call centers, retail branches and operating centers. These metrics may be increased or reduced somewhat by the company's performance. There also are a few senior people who are paid on specific metrics. For example, bankers who manage money for our clients have their compensation tightly tied to the kind of job they did for their clients. I think you would agree that this is completely appropriate.

Most of our senior people are *not* paid by formula – we use multiple metrics to assess performance and then apply a great deal of judgment. In general, the more senior the executive, the more the compensation should relate to the company's performance overall. This is especially true for the leadership team of each business.

When it comes to an individual, we look at his or her performance, the unit results and the overall performance of the company. Since we generally know these individuals well, we evaluate their performance over a multi-year period. It is important that we recognize our best people – many of those in senior positions have generally proved themselves over many, many years.

We also are keenly aware of our competition and know what it would take to replace a person if we had to hire someone new. We cannot operate in a vacuum.

Our most senior people – members of our Operating Committee – have their compensation tightly tied to the company's performance, and they also are evaluated on their leadership skills. In 2008, when the company's earnings were down 64%, your senior management's compensation was down 67% (this doesn't include me; I received no year-end incentive).

We know there are people in this industry who have been extraordinarily well-paid – and, in some cases, overpaid. Some of these people have benefited from profits that turned out to be ephemeral or were the result of excessive leverage in the system. Some benefited from extreme competition for their specific talents, often from hedge funds and other such businesses. While no firm can claim it gets compensation right every time, we at JPMorgan Chase do think we have generally been disciplined when it comes to our decisions. We believe we have the right compensation practices, but that is only one part of building a great company. The most important part is developing great leaders.

Developing leaders

Earlier in this section, I mentioned that my number one priority is to put a healthy and productive succession process in place. As I will be increasingly focused on this process, I would like to share my thoughts about the essential qualities a leader must have, particularly as they relate to a large multinational corporation like JPMorgan Chase.

Leadership is an honor, a privilege and a deep obligation. When leaders make mistakes, a lot of people can get hurt. Being true to oneself and avoiding self-deception are as important to a leader as having people to turn to for thoughtful, unbiased advice. I believe social intelligence and "emotional quotient," or EQ, matter in management. EQ can include empathy, clarity of thought, compassion and strength of character.

Good people want to work for good leaders. Bad leaders can drive out almost anyone who's good because they are corrosive to an organization; and since many are manipulative and deceptive, it often is a challenge to find them and root them out.

At many of the best companies throughout history, the constant creation of good leaders is what has enabled the organizations to stand the true test of greatness – the test of time.

Below are some essential hallmarks of a good leader. While we cannot be great at all of these traits – I know I'm not – to be successful, a leader needs to get most of them right.

Discipline

This means holding regular business reviews, talent reviews and team meetings and constantly striving for improvement – from having a strong work ethic to making lists and doing real, detailed follow-up. Leadership is like exercise; the effect has to be sustained for it to do any good.

Fortitude

This attribute often is missing in leaders: They need to have a fierce resolve to act. It means driving change, fighting bureaucracy and politics, and taking ownership and responsibility.

High standards

Abraham Lincoln said, "Things may come to those who wait ... but only the things left by those who hustle." Leaders must set high standards of performance all the time, at a detailed level and with a real sense of urgency. Leaders must compare themselves with the best. Huge institutions have a tendency toward slowing things down, which demands that leaders push forward constantly. True leaders must set the highest standards of integrity – those standards are not embedded in the business but require conscious choices. Such standards demand that we treat customers and employees the way we would want to be treated ourselves or the way we would want our own mother to be treated.

Ability to face facts

In a cold-blooded, honest way, leaders emphasize the negatives at management meetings and focus on what can be improved (of course, it's okay to celebrate the successes, too). All reporting must be accurate, and all relevant facts must be reported, with full disclosure and on one set of books.

Openness

Sharing information all the time is vital – we should debate the issues and alternative approaches, not the facts. The best leaders kill bureaucracy – it can cripple an organization – and watch for signs of politics, like sidebar meetings after the real meeting because people wouldn't speak their mind at the right time. Equally important, leaders get out in the field regularly so as not to lose touch. Anyone in a meeting should feel free to speak his or her mind without fear of offending anyone else. I once heard someone describe the importance of having "at least one truth-teller at the table." Well, if there is just one truth-teller at the table, you're in trouble – *everyone* should be a truth-teller.

Setup for success

An effective leader makes sure all the right people are in the room – from Legal, Systems and Operations to Human Resources, Finance and Risk. It's also necessary to set up the right structure. When tri-heads report to co-heads, all decisions become political – a setup for failure, not success.

Morale-building

High morale is developed through fixing problems, dealing directly and honestly with issues, earning respect and winning. It does not come from overpaying people or delivering sweet talk, which permits the avoidance of hard decision making and fosters passive-aggressive behaviors.

Loyalty, meritocracy and teamwork

While I deeply believe in loyalty, it often is misused. Loyalty should be to the principles for which someone stands and to the institution: Loyalty to an individual frequently is another form of cronyism. Leaders demand a lot from their employees and should be loyal to them – but loyalty and mutual respect are two-way streets. Loyalty to employees does not mean that a manager owes them a particular job. Loyalty to employees means building a healthy, vibrant company; telling them the truth; and giving them meaningful work, training and opportunities. If employees fall down, we should get them the help they need. Meritocracy and teamwork also are critical but frequently misunderstood. Meritocracy means putting the best person in the job, which promotes a sense of justice in the organization rather than the appearance of cynicism: "Here they go again, taking care of their friends." Finally, while teamwork is important and often

code for "getting along," equally important is an individual's ability to have the courage to stand alone and do the right thing.

Fair treatment

The best leaders treat all people properly and respectfully, from clerks to CEOs. Everyone needs to help everyone else at the company because everyone's collective purpose is to serve clients. When strong leaders consider promoting people, they pick those who are respected and ask themselves, *Would I want to work for him? Would I want my kid to report to her?*

Humility

Leaders need to acknowledge those who came before them and helped shape the enterprise – it's not all their own doing. There's a lot of luck involved in anyone's success, and a little humility is important. The overall goal must be to help build a great company – then we can do more for our employees, our customers and our communities.

The grey area of leadership

There are many aspects of the leadership process that are open for interpretation. This grey area contributes to the complexity of the challenges that leaders – and those who govern them – face. I would like to share with you where I stand with regard to a few of these issues.

Successful leaders are hard to find

There are examples of individuals who have been thrust, wholly unprepared, into positions of leadership and actually perform well – I think of President Harry Truman, among others. I would submit, however, that relying on luck is a risky proposition. History shows that bad or inexperienced leaders can produce disastrous results. While there are possibly innate and genetic parts of leadership (perhaps broad intelligence and natural energy), other parts are deeply embedded in the internal values of an individual; for example, work ethic, integrity, knowledge and good judgment. Many leaders have worked their entire lives to get where they are, and while perhaps some achieved their stature through accident or politics, that is not true for most. Anyone on a sports team, in government or in virtually any other endeavor knows when he or she encounters the rare combination of emotional skill, integrity and knowledge that makes a leader.

Successful leaders are working to build something

Most leaders I know are working to build something of which they can be proud. They usually work hard, not because they must but because they want to do so; they set high standards because as long as leaders are going to do something, they are going to do the best they can. They believe in things larger than themselves, and the highest obligation is to the team or the organization. Leaders demand loyalty, not to themselves but to the cause for which they stand.

Nonetheless, compensation does matter

While I agree that money should not be the primary motivation for leaders, it is not realistic to say that compensation should not count at any level. People have responsibilities to themselves and to their families. They also have a deep sense of "compensation justice," which means they often are upset when they feel they are not fairly compensated against peers both within and outside the company. There are markets for talent, just like products, and a company must pay a reasonable price to compete.

Big business needs entrepreneurs, too

The popular perception is that entrepreneurs – those who believe in free enterprise – exist only in small companies and that entrepreneurs in small companies should be free to pursue happiness or monetary gain as appropriate. Free enterprise, entrepreneurship and the pursuit of happiness also exist in most large enterprises. And you, our shareholders, should insist on it. Without the capacity to innovate, respond to new and rapidly changing markets, and anticipate enormous challenges, large companies would cease to exist. The people who achieve these objectives want to be compensated fairly, just as they would be if they had built a successful start-up.

Performance isn't always easy to judge

Managers responsible for businesses must necessarily evaluate individuals along a spectrum of factors. Did these individuals act with integrity? Did they hire and train good people? Did they build the systems and products that will strengthen the company, not just in the current year but in future years? Did they develop real management teams? In essence, are they building something with sustainable, long-term value? Making these determinations requires courage and judgment.

Sometimes leaders should be supported and paid even when a unit does poorly

If a company's largest, and perhaps most important, business unit is under enormous stress and strain, unlikely to earn money regardless of who is running it, a manager might ask his best leader to take on the job. This may be the toughest job in the company, one that will take years to work through before the ship has been righted. When the manager asks a leader to take on the responsibility, she quite appropriately will want to know whether she will be supported in the toughest of times: "Will you make sure the organization doesn't desert me?" "Will you stop the politics of people using my unit's poor performance against me?" "Will you compensate me fairly?" My answer to all of these questions would be yes. And as long as I thought she were doing the job well, I would want to pay her like our best leaders, profits aside. Conversely, we all know that a rising tide lifts all boats. When that's the case, paying that leader too much is possibly the worst thing one can do – because it teaches people the wrong lesson.

Evaluating the CEO

The CEO should be held strictly accountable by the Board of Directors. The Board should continually review the CEO's performance and give feedback (and coaching). The Board alone should determine the compensation for the CEO. At every regularly scheduled Board meeting at JPMorgan Chase, the directors also have a private meeting without me. Compensation committees and the Board need to be independent thinkers – and yours are. They review lots of data to evaluate the performance of the company, including reviewing competitors' performance and their compensation practices. Our Board members do not rely on compensation consultants to make decisions for them. The Board members believe that determining how to compensate the CEO (and all of our senior management) is their responsibility and cannot be outsourced.

In two of the last 10 years, I received no bonus, which I thought was absolutely appropriate. In 2000, Bank One was in terrible shape – we had to lay off approximately 10,000 people, and I thought it completely inappropriate that I take a bonus. That year, my first at Bank One, I had a guarantee – I gave it up. The second time was in 2008, and our financial results were just too mediocre to contemplate a bonus for the CEO. Since we did pay many other people in those two years, we also lived by the principle that the CEO does not have to be the highest paid person in the company.

In all the years I've worked at this company, much of my compensation (approximately 65%) has been in stock. I've never sold a share and do not intend to do so as long as I'm in this job. In fact, when I joined Bank One, I bought a lot of stock outright, not because I thought it was cheap (in fact, I thought it was overvalued) but because I wanted to be tethered tightly to the company and its performance.

III. OUR SUPPORT OF FINANCIAL REFORM THAT WILL STRENGTHEN THE FINANCIAL SYSTEM

We need rational policies based on facts and analysis

The recent financial crisis has caused great distress across the country and around the world, but it also has provided us with a path for going forward. The era of bailouts must end, and the oversight of system-wide risk must increase, among other changes. David Hume said, "Reason is ... slave of the passions ..." But if we rewrite the rules for banks out of anger or populism, we'll end up with the wrong solutions and put barriers in the way of future economic growth. Good policy and financial reform must be based on facts and analysis and need to be comprehensive, coordinated, consistent and relevant.

As *New York Times* columnist Thomas L. Friedman noted earlier this year, "We need a new banking regulatory regime that reduces recklessness without reducing risk-taking, which is the key to capitalism." In striking this regulatory balance, the details matter. We should focus on building good regulation – not simply more or less of it. The last thing we need is to enact new policies that over-regulate and work at cross-purposes without reducing system-wide risk. None of us can afford the costs of unnecessary or bad regulation.

While we acknowledge that making good decisions takes time, we think it is important to complete financial reform this year. The lack of regulatory clarity is creating problems for banks and for the entire economy. Businesses need confidence and certainty to grow (and to create jobs). Passing sensible financial reforms will provide some of the certainty the business sector needs. With this in mind, I would like to discuss the critical lessons learned and how they are central to getting regulatory reform right.

The crisis had many causes

In my 2008 letter to shareholders, I discussed the fundamental causes and contributors to the financial crisis. I won't repeat them in detail here, but, broadly speaking, they were as follows:

- The burst of a major housing bubble, caused by bad mortgage underwriting, a somewhat unregulated mortgage business and some misguided government policies.
- Excessive, pervasive leverage across the system, including banks, investment banks, hedge funds, consumers and the shadow banking system.
- The dramatic growth of structural risks and the unanticipated damage they caused (the flaws of money market funds and the repo system). Remember, we had a "run" on the capital markets.
- Regulatory lapses and mistakes: Basel capital rules that required too little capital and didn't account for liquidity and relied too much on rating agencies; the Securities and Exchange Commission allowing U.S. investment banks to get too leveraged; and poor regulation of Fannie Mae and Freddie Mac, among many elements of an archaic, siloed regulatory system. However, we should not and do not blame regulators for the failures of individual companies, ever – management is solely to blame.
- The pro-cyclical nature of virtually all policies, actions and events (e.g., loan loss reserving, capital requirements and the market itself).
- The impact of huge trade and financing imbalances on interest rates, consumption and speculation levels.

The heart of the problem – across all sectors – was bad risk management. Many market participants improperly used value-at-risk (VaR) measurements; they did not run stress tests to be prepared for the possibility of a highly stressed environment; they excessively relied on rating agencies; they stretched too much for current earnings; and they didn't react quickly when markets got bad.

At JPMorgan Chase, we never overly relied on VaR, and we regularly ran stress tests to make sure we were prepared for bad environments. Our goal was and is to remain profitable every quarter.

While it is tempting to identify a scapegoat – banks, businesses, the government or consumers – it is pretty obvious that no one was solely to blame and that no one should be completely absolved from blame.

Yes, we made mistakes ...

... and we have identified and described them in great detail in prior years' chairman's letters. Our two largest mistakes were making too many leveraged loans and lowering our mortgage underwriting standards. While our mortgage underwriting was considerably better than many others', we did underwrite some high loan-to-value mortgages based on stated, not verified, income. We accept complete responsibility for any and all mistakes we made or may have made.

There also are many mistakes that we did not make, among them: structured investment vehicles (SIVs), extreme leverage, excessive reliance on short-term funding, collateralized debt obligations and improper management of our derivatives book.

Some of the mistakes we made may have contributed to the crisis. For those, of course, we are sorry – to both the public and our shareholders. However, it would be a huge stretch to say that these mistakes *caused* the crisis. In fact, at the height of the crisis, we aggressively took actions that we believed helped mitigate some of the fallout from the crisis and contributed to the stabilization and recovery (e.g., our purchase of Bear Stearns and WaMu and our interbank lending; that is, loans that banks make directly to each other).

Yes, we should thank the government for its extraordinary actions

As noted in last year's letter, we think the government acted boldly and urgently in dealing with a complex and rapidly changing situation. Without many of these actions, we believe the outcome could have been much worse. A great number of the actions that the Treasury and the Federal Reserve took, directly and indirectly, benefited a number of institutions and may have saved many from failure and bankruptcy.

Without these actions, however, not all banks would have failed

The premise that all banks would have failed had it not been for the government's actions is incorrect. This premise is behind much of the anger toward banks and some of the policy recommendations that are meant to punish banks. We should acknowledge that the worst offenders among financial companies no longer are in existence. And while it is true that some of the surviving banks would not, or might not, have survived, not all banks would have failed. I know I speak for a number of banks when I say that some of us accepted the Troubled Asset Relief Program (TARP) capital not because we needed it to survive but because we believed we were doing the right thing to help the country and the economy. We were told the government wanted even the healthy banks to take TARP to set an example for all banks and to make it easier for the weaker institutions to accept the capital without being stigmatized. JPMorgan Chase and many other banks were in a position to try to help, and that is what we did.

At the worst point in the crisis, we aggressively provided credit

Throughout the financial crisis, JPMorgan Chase never posted a quarterly loss. We served as a safe haven for depositors, worked closely with the federal government and remained an active lender.

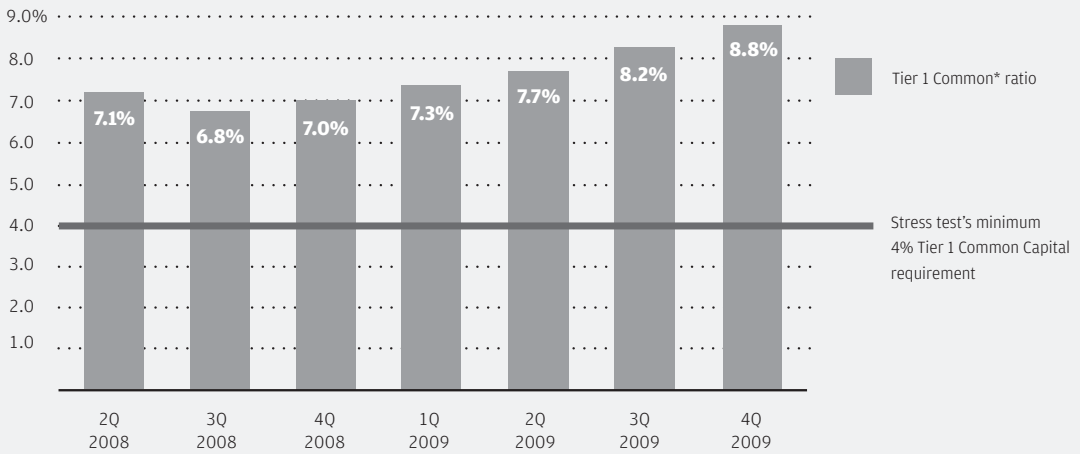
Our fortress balance sheet enabled us to buy Bear Stearns in March 2008, adding $289 billion in assets; then we acquired Washington Mutual just six months later, adding a further $264 billion of assets. Through it all, JPMorgan Chase absorbed the stress of higher consumer and wholesale credit losses while maintaining high liquidity and acceptable growth in our capital. We acquired Washington Mutual *just 10 days after* Lehman Brothers' collapse on September 15, 2008, and, in order to maintain our fortress balance sheet, immediately sold $11.5 billion in common stock the following morning. The takeover of Bear Stearns and WaMu provided essential credit and support to the system and minimized a potentially disastrous disruption that could have resulted from their failures. In the several months after Lehman's failure, our interbank lending grew from almost nothing to as high as $70 billion, and our average lending was approximately $100 billion per month, even higher than it had been in the prior months. We also purchased, at one point, a net $250 billion of securities, which helped facilitate much-needed liquidity in the marketplace.

We consistently maintained extremely high capital levels

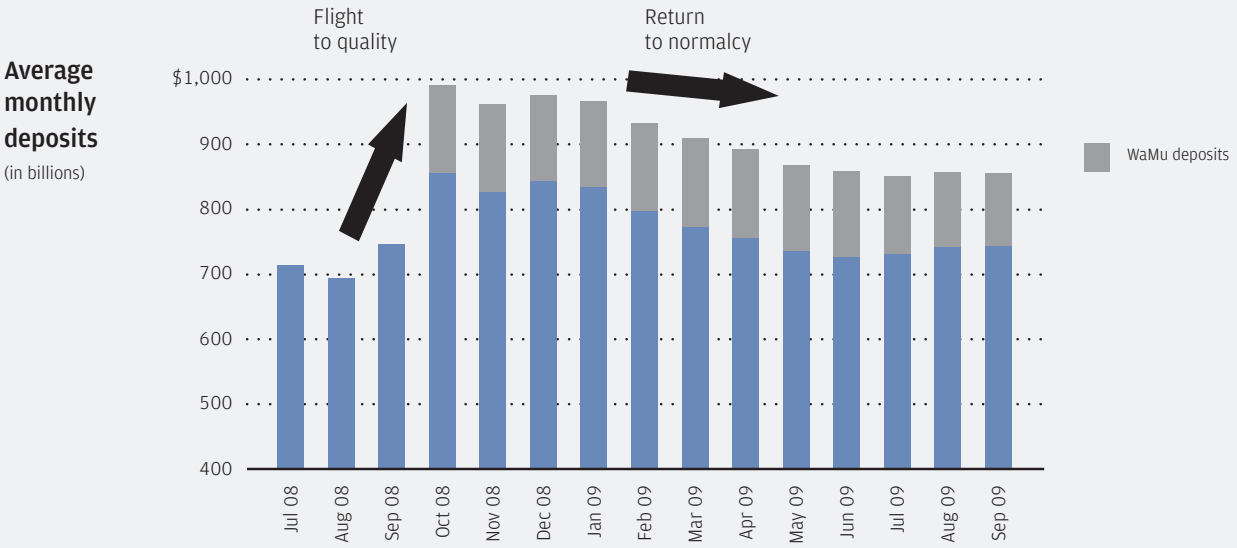
As the chart below shows, we ended 2008 with Tier 1 Common Capital of 7.0% (the critical measure used by the Federal Reserve for its bank stress tests), and we ended 2009 with Tier 1 Common Capital of 8.8%.

In May 2009, the U.S. government ran a stress test on 19 banks. The test assumed an adverse environment of 10.4% unemployment and a 48% peak-to-trough decline in the housing price index across a two-year time span. Upon completion of the test, the results required 10 banks to raise common equity to maintain 4% Tier 1 Common Capital through the end of the stress scenarios. Under the government's test, JPMorgan Chase always had common equity of $40 billion *in excess* of the 4% minimum (for the record, the $25 billion of TARP capital we accepted was preferred stock and, therefore, never was part of this calculation). The bottom line is that we passed the stress test with flying colors.

Quarterly capital levels



* The Tier 1 Common ratio is Tier 1 Common Capital divided by risk-weighted assets. Tier 1 Common Capital is predominantly Tier 1 Capital less preferred equity, noncontrolling interests and trust preferred capital debt securities. Tier 1 Common Capital is the first element of capital to absorb losses. See page 90 for further discussion.



We kept our liquidity extremely high

As we entered the most tumultuous financial markets since the Great Depression, we experienced the opposite of a "run on the bank" as deposits flowed in (in a two-month period, $150 billion flowed in – we barely knew what to do with it). At JPMorgan Chase, our deposits always exceeded our loans; deposits always have been considered one of the safest sources of funding for a bank. The average bank has loans that are generally greater than 110% of its deposits. For JPMorgan Chase, loans were approximately 75% of deposits. In fact, our excess deposits greatly reduced the need to finance ourselves in riskier wholesale markets.

In the long-term wholesale unsecured markets, we borrowed on average $270 billion. Only $40 billion was borrowed unsecured in the short-term credit markets – an extraordinarily low amount for a company of our size. When we borrow in the secured markets, we do so under the assumption that we would have access to some, not all, of that funding in a crisis.

We always maintained excess liquidity at the bank holding company. We had and continue to have enough cash or cash equivalents on hand to fund ourselves for more than two years, even in the event that we are unable to borrow from the unsecured credit markets at all.

We were prepared for things to get even worse

While the economic environment had become as bad as any of us had ever seen, we reluctantly prepared for the situation to get worse, with a possible U.S. unemployment rate of 15% or higher. Such an adverse environment would have required drastic actions: a large headcount reduction, elimination of marketing and other investments, and a decrease in lending to preserve capital. Steps like these would have saved more than $12 billion in expenses and created considerable additional capital. However, it also would have imposed deep hardship on many of our employees, suppliers and customers. Fortunately, we never had to execute such a drastic plan. This was precisely what the government was trying to avoid, and I believe its actions helped prevent many companies from taking steps like those mentioned above.

Government programs were a mixed blessing

While we deeply appreciate the government's actions – and they clearly had benefits for the system and for JPMorgan Chase – they also were a mixed blessing.

In June 2009, we paid back the TARP capital in full. The $25 billion we borrowed for eight months cost us money, because we never were able to lend the $25 billion and earn a rate

higher than the 5% coupon we were paying on the preferred shares. In addition, we gave the government warrants worth almost $1 billion – a direct cost to our shareholders.

We did participate in the Federal Deposit Insurance Corporation (FDIC) guarantee program, under which we issued $40 billion of debt with an FDIC guarantee. Many banks that used this program would not have had access to the capital markets without this guarantee and possibly could have failed. For JPMorgan Chase, it was not a question of access or need – to the extent we needed it, the markets always were open to us – but the program did save us money. As part of this program, we have paid the FDIC $1.3 billion, and, after paying the FDIC, it will save us a significant amount of money over the next few years.

Our company was highly criticized for accepting the TARP capital and for using the FDIC program. After April 1, 2009, even though we were eligible to continue using the FDIC program, we stopped using it. There were many other government programs (with acronyms such as TALF and PPIP) that we believe were beneficial to the capital markets, but that we did not need and chose not to use, so as to avoid the stigma. (We did use the Term Auction Facility (TAF), a special government-sponsored depository facility, but this was done at the request of the Federal Reserve to help motivate others to use the system.)

While no one knows what would have happened in the absence of all these government programs, there is a strong argument that those that entered the crisis in a position of strength may have gathered huge benefits at the expense of failing competitors – but it is hard to argue that this would have been good for the country.

We did not anticipate the anger or backlash the acceptance of TARP capital would evoke from the public, politicians and the media – but, even with hindsight, I think we would have had to accept TARP capital because doing so was in the best interest of the country. I do wish it would have been possible to distinguish between the healthy and unhealthy banks in a way that didn't damage the success of the program – so as not to create a situation where the public was left with the impression that all banks were bailed out. Last, I do regret having used the FDIC guarantee because we didn't need it, and it just added to the argument that all banks had been bailed out and fueled the anger directed toward banks.

The government runs the FDIC, but the banks pay for it

While the FDIC is a government institution that insures bank deposits, our shareholders should know that the costs associated with failed banks are borne in full by the banks, not by taxpayers. We think this is completely appropriate. Even if the FDIC's special Temporary Liquidity Guarantee Program (TLGP) had lost money, those losses would have been charged back to the surviving banks. Therefore, it is these surviving banks that have paid for the cost to the FDIC of the approximately 200 bank failures since the beginning of 2008.

Of those failures, the largest one, WaMu (with assets exceeding $260 billion), has cost the FDIC nothing. That is because JPMorgan Chase bought WaMu. All of the other banks that have failed were far smaller (the next largest failure was IndyMac, with $32 billion). All of these failures combined have cost the FDIC an estimated $55 billion.

Between deposit insurance and TLGP funding for 2008 and 2009, plus estimates for our share of assessments over the next three years, JPMorgan Chase alone will have given the FDIC a total of approximately $6 billion to cover the cost of failed banks.

Banks are lending – a little less but more responsibly

A great deal of media attention recently has focused on what it will take to get banks lending again. The reality is that banks never have stopped lending: As of the end of February 2010, according to the latest data from the regulatory reports, total loans held by commercial banks stood at $6.5 trillion – higher than at the end of June 2007 and more than 30% higher than in 2004.

How is it that businesses and consumers clearly feel they have less access to bank credit while the banks claim they are still lending? This disconnect can be explained as follows:

1. The flow of non-bank lending, which has accounted for 65% of the credit supplied in the United States, dried up. Many non-bank lenders (think of the shadow banking system, SIVs, the asset-backed commercial paper market and the securitization markets) virtually collapsed. These sources of credit alone – and they were funded by insurance companies, pension plans, and corporate and foreign investors – reduced the credit they were providing to the system by nearly half a trillion dollars.

2. Bank lending did go up in the months immediately after Lehman's collapse, but during the course of 2009, bank lending started to decline in total. While more than 100 banks, including JPMorgan Chase, stepped up and acquired failing banks, they could not and did not fully replace the extension of credit the failing banks had been providing. For example, at JPMorgan Chase, we did not continue the subprime lending and option-ARM mortgages that WaMu had been providing.

3. Many banks also tightened their loan standards, which further reduced new loans.

4. Additionally, customer demand for loans decreased across large and small businesses. In fact, at JPMorgan Chase alone, loans to large companies dropped (from $85 billion to $50 billion). This was not due to our reluctance to make the loans but rather to large companies taking advantage of the ability to finance at lower rates in the reopened capital markets.

Banks have a responsibility to make sound loans. Bad loans are one of the things that got us into this mess in the first place. And, unfortunately, making good loans often means declining applications for loans that do not meet safe and sound lending criteria. While it may not seem obvious at the time, turning down an application that fails to meet these criteria actually may be in both our and our client's best interest. We have a responsibility to lend only to those who can handle the debt. Unlike many other businesses, this puts us in the unpopular position of saying no to some of our customers.

Banks are not fighting regulation

We at JPMorgan Chase and at other banks have consistently acknowledged the need for proper regulatory reform, and I also spoke about this topic in great detail in last year's letter.

Looking back, one of the surprising aspects about the recent crisis is that most of the specific problems associated with it (global trade imbalances, the housing bubble, excessive leverage, money market funds, etc.) were individually well-known and discussed. But no one, as far as I know, put together all of the factors and predicted the toxic combination it would become – and the crisis it would cause.

So what can we do to help fix the situation going forward? We must focus on the problem: bad risk management. This not only caused financial institutions to fail, but it also revealed fundamental flaws in the system itself. These flaws existed at both a macro level, where the interplay of the numerous critical factors was missed, and a micro level: for example, the failure to prevent AIG from taking excessive, one-sided positions in trading derivatives and the failure to limit mortgages to families who could afford them and to keep loan-to-value ratios to a more reasonable 80%-90%.

Over the last 50 years, we have allowed our regulatory system to become dangerously outdated. The structure is archaic and leaves huge gaps in the system. Today, in America, banks account for only one-third of the credit outstanding, with all kinds of non-banks taking and trading risks and providing credit to the system. So the idea that banking is confined to deposit-holding entities is inaccurate and deceptive. The failure of so many firms in a range of sizes and categories – from Bear Stearns and Lehman Brothers to IndyMac and WaMu to Fannie Mae, Freddie Mac and AIG, as well as local community banks – proves that regulation needs to be administered by product and economic substance, not by legal entity. We have a chance to simplify and strengthen our regulatory system, and, if we do it right, it will not only be able to handle the complex challenges we face today but will be able to do so in a way that will be flexible enough to continuously adapt to our changing world.

We support a systemic regulator

Going forward, we will need a systemic regulator charged with effectively monitoring the spread and level of risk across the financial system in its entirety. Think of it as a "super risk" regulator. Such a regulator would not eliminate all future problems, but it would be able to mitigate them. If we had eliminated just *some* of the problems, it might have stopped the crisis from getting this bad. Congress appears to be well on its way to creating just such a regulator, and we hope it succeeds.

Some issues the systemic risk regulator should keep in mind are the following:

- Focusing the process on managing risk. This should not be a political process. It should function like a strong risk management committee.
- Eliminating gaps and overlaps in the system. For example, mortgages were regulated by multiple entities, some of which did a terrible job, causing a "race to the bottom" as even good companies started to do bad things to maintain market share.
- Analyzing areas like the mortgage market and other elements of the consumer-finance system to ensure that when new rules are written, they create a sound, safe, effective and consumer-friendly mortgage market.
- Carefully tracking new products, as they often are the source of many problems.
- Reviewing credit across the whole system – including "hidden" extensions of credit, such as enhanced money market funds and SIVs.
- Aggressively monitoring financial markets and potential excesses, or bubbles. It may be hard to detect bubbles, and it may be inadvisable, once detected, to exert a direct influence on them with macro economic policy. However, it is appropriate to try to minimize the collateral damage bubbles can cause. It also would be appropriate to try to manage bubbles, not by using monetary policy but by restricting credit on specific markets (i.e., it would have been appropriate to ask lenders to reduce loan-to-value ratios in mortgages or to minimize speculation in the financial markets by reducing the leverage used in the repo markets).
- Recognizing distortions as they develop in the broader economy (fiscal deficits, trade imbalances, structural state budget deficits) and forcing policy bodies to anticipate the problems that may result.
- Encouraging international coordination as much as possible – not only so companies compete on a level playing field but also because crises don't stop at national borders.

These are just some of the ways a systemic regulator could help fix the flaws in our regulatory framework and create a system that *continually adapts and improves itself.*

We support an enhanced resolution authority – and the elimination of "too big to fail"

Even if we achieve the primary goal of regulating financial firms to prevent them from failing, we still have to get government out of the business of rescuing poorly managed firms. All firms should be allowed to fail no matter how big or interconnected they are to other firms. That's why we at JPMorgan Chase have argued for an enhanced resolution authority that would let regulators wind down failing firms in a controlled way that minimizes damage to the economy and will never cost the taxpayer anything. Fixing the "too big to fail" problem alone would go a long way toward solving many of the issues at the heart of the crisis. Just giving regulators this authority, in and of itself, would reduce the likelihood of failure as managements and boards would recognize there is no safety net. Think of this enhanced resolution as "specialized bankruptcy" for financial companies. The principles of such a system would be as follows:

- A failure should be based on a company's inability to finance itself.
- The regulator (or specialized bankruptcy court) should be able to terminate managements and boards.
- Shareholders *should* be wiped out when a bank fails – just like in a bankruptcy.
- The regulator could operate the company both to minimize damage to the company and to protect the resolution fund.
- The regulator could liquidate assets or sell parts of the company as it sees fit.
- Unsecured creditors *should* recover money only after everyone else is paid – like in a bankruptcy. (In fact, the resolution authority should keep a significant amount of the recovery to pay for its efforts and to fund future resolutions.)
- In essence, secured creditors should be treated like they are treated in a bankruptcy.
- The resolution fund should be paid for by the financial industry (like the FDIC is today).
- All institutions under this regime should live with *the exact same rules.*
- Regulators should make sure that companies have enough equity and unsecured debt to prevent the resolution fund from ever running out of money. To give an example, while Lehman had $26 billion in equity, it also had $128 billion in unsecured debt. A resolution regulator, in my opinion, would clearly have been able to let Lehman meet its obligations, wind it down and/or sell it off and still have plenty of money left over to return some money to the unsecured creditors. Had this been done wisely, the economy would have been better off.
- If a firm fails, there should be enough clarity about the financial, legal and tax structures of that firm to allow regulators, cooperating across international boundaries, to wind it down in a controlled manner – what some refer to as "living wills."
- While there is no argument about who should pay for the resolution (i.e., banks), there are some technical issues about how it should be funded. The resolution regulator does need to be able to fund these companies while they are being wound down, and there are plenty of appropriate ways to accomplish this.

Once it is established that any firm can fail, firms of all sizes and shapes should be allowed to thrive. It is wrong to assume that big firms inherently are risky. Banks shouldn't be big for the sake of being big, but scale can create value for shareholders and for consumers who are beneficiaries of better products that are delivered more quickly and less expensively. These benefits extend beyond individuals to include businesses that are bank clients, particularly those that are global in scale and reach, and the economy as a whole.

Many banks' capabilities, size and diversity enabled them to withstand the crisis and emerge from it as stronger firms. This strength, in turn, made it possible for many firms to acquire weaker firms at the government's request and help to alleviate potential damage to the economy.

Closing comments on regulation

While we support the general principles behind enhanced regulation of derivatives, securitizations and enhanced consumer protections, we do not support each and every part of what is being recommended. The devil is in the details, and it is critical that the reforms actually provide the important safeguards without unnecessarily disrupting the health of the overall financial system.

We also believe there are some serious ideas that need attention if the system is to be made more fail-safe:

- Repo markets could be better structured, monitored and controlled.
- Loan reserving could be made far less pro-cyclical.
- Securitization markets could be fixed so that both originators and distributors have skin in the game.
- A system could be put into place to prevent a "run" on money market funds.
- The ability to buy shareholder or creditor voting rights without owning and being exposed to the risks of owning the underlying securities should be extremely limited. Investors should not have the ability to vote the capital securities actually owned if the investors are voting for the failure of the company and stand to gain more on their short positions than on their long positions.
- Finally, we support strong controls on so-called "naked short selling."

During the past year's discussion among regulators and legislators, many other ideas have been proposed or recommended – from the Volcker Rule to new bank taxes to changes in Basel capital. These ideas are all in varying stages of development and are too undefined to comment on here. What we would urge our regulators and legislators to do is proceed with clarity and purpose and avoid broadly penalizing all firms alike – regardless of whether they were reckless or prudent.

IV. OUR RESPONSIBILITY AND AMERICA'S SUCCESS

As we grapple with the enormity of the issues facing the nation, we must not lose sight of our strengths. America has successfully brought these strengths to bear on crises in the past – some much bigger than the current one – and I am optimistic about our ability to do so again.

America's success as a nation requires a strong and growing economy. A strong and growing economy requires the right kind of government policies and a private sector that is innovative as well as responsible. Responsible businesses can be both small and large – and, in a global economy, it behooves America to have large multinational companies that are operating on a global stage. Creating a culture that ties it all together requires a greater sense of shared responsibility.

America's success is not a God-given right – it is something we always must work hard to achieve.

The need for a strong economy and good government

America's success depends upon many things, including good government (and the strength of our exceptional military). But it cannot succeed without a healthy and vibrant economy. That is what allows us to share the rewards of success, defend our nation, educate our children and build a better future.

A strong U.S. economy, one with the ability to continually improve and reform itself, depends on good government. Bureaucracy is lethal, and we cannot let it drain the energy, talent, creativity, drive and goodwill of our citizens – or those we encourage through our example, many of whom come to work and innovate in America. To thrive, our country and our economy need:

- Legal clarity and consistency.
- The fair application and steadfast enforcement of the rule of law.
- Trade policies conducive to growing the American economy and the global competitiveness of U.S. companies.
- Immigration policies that allow America to attract the world's best and brightest – an essential ingredient of our success as a nation.
- Sensible and effective regulation that protects investors and the public.
- A strong and efficient infrastructure (from highways and bridges to electrical grids, etc.).
- The proactive promotion of economic growth and rules that foster U.S. capital accumulation.
- Policies facilitating job growth, as opposed to those that inadvertently make it harder to hire.

Countries can have different social values and objectives (though I believe most countries and most citizens would like to reduce poverty and suffering). But countries should not confuse values and objectives with maintaining a strong economy.

Healthy and growing countries can do wonderful things for their people. And countries that fail to create healthy economies frequently relegate their people to increasing levels of pain and suffering. Many countries have professed wanting to help their people but, instead, have damaged their countries and hurt their people. Maybe the intentions were real, but, even if they were, the road to hell is often paved with good intentions.

Brazil is an example of a country that seems to be successfully using pro-growth policies to expand its economy while using the wealth from that economic growth to finance important social programs. Over the last 20 years, Brazil has adopted many policies that dramatically strengthened its economy. It also bolstered its institutions, privatized its businesses, improved the rule of law, left the bulk of capital allocation to the private capital markets and developed world-class companies.

Eight years ago, Brazil elected a left-leaning president, but he continued policies to strengthen the economy. He also used some of the wealth to start a program called Bolsa Familia that gave Brazil's poorest citizens vaccinations, education and $80 a month for food.

The lesson is clear: Good policies and economic growth are not the enemy of social progress – they are the fuel for progress.

Businesses need to be responsible – and healthy and vibrant

At JPMorgan Chase, we feel a deep responsibility to build a company that benefits our customers, our employees, our shareholders and the communities in which we operate around the world. The best companies don't make decisions for short-term profits. Contrary to public opinion, corporations are not in business solely to maximize quarterly earnings but rather to serve clients and earn their trust over a long period of time and, in so doing, earn a fair profit. Profits in any one year, in effect, are a reflection of decisions that may go back decades.

We always have been deeply committed to being good corporate citizens and adhering to the following practices:

- Treating our customers and employees with the respect they deserve.
- Building safe and useful products.
- Maintaining ethical and responsible business practices.
- Meeting our fiduciary responsibilities and creating real value for shareholders.
- Developing a company for the long run – one that stands the test of time.
- Making a meaningful difference through philanthropic endeavors in supporting our communities.
- Acknowledging our mistakes (which are a natural part of doing business), fixing them and learning from them.
- Supporting the economies in which we work through job creation and appropriate tax payments. JPMorgan Chase, on average, pays more than $12 billion a year in taxes to governments around the world.

Building a great company allows investment in the future, provides opportunities to employees, builds better products for customers and serves communities. Companies that are not healthy and vibrant cannot do these things.

Businesses – small to large – are one of America's key strengths

A healthy business sector is fundamental to our economic strength: Of the 130 million people who go to work every day in the United States, nearly 110 million are employed by private businesses. These private businesses are and always have been the nation's primary drivers of job creation and innovation.

The strength of the business sector is rooted in its diversity, from the smallest start-up or family-owned firm to the largest multinational corporation.

Indeed, the relationship between larger and smaller businesses is symbiotic. Studies show that for every one job created at a larger business, five jobs are created at smaller businesses that provide supporting goods and services. At JPMorgan Chase, in particular, we spend more than $15 billion per year with approximately 40,000 vendors, who provide jobs to millions of employees.

We need global flagship companies – including banks

In the current political environment, size in the business community has been demonized, but the fact is that some businesses require size in order to make necessary investments, take extraordinary risks and provide vital support globally. America's largest companies operate around the world and employ millions of people. This includes companies that can make huge investments – as much as $10 billion to $20 billion a year – and compete in as many as 50 to 100 countries to assure Amer-

ica's long-term success. Combined, big and small businesses spend $1.5 trillion per year on capital expenditures and $300 billion on research and development. It is estimated that more than 70% of the capital expenditures are made by large companies.

The productivity of our workers and the huge economies of scale of our corporations (generated from years of investing and innovating) are what ultimately drive our economy and income growth. Employees at large companies share in that productivity: Compensation and benefits for employees at large companies are substantially higher than at small firms.*

It is estimated that large enterprises and large foreign multinationals active in the United States have accounted for the majority of U.S. productivity growth since 1995.

Companies such as Ford, Boeing, Pfizer, Caterpillar, Apple, Microsoft and Google are exemplars of initiative and innovation worldwide. Cutting-edge companies like Hewlett-Packard underpin vibrant networks of small and mid-size suppliers and vendors. Academic research shows that these investments abroad actually create more jobs in the United States.

Large companies such as the ones mentioned above need banking partners with large enough balance sheets to finance transactions around the world. And it's not just multinational corporations that rely on such scale: States and municipalities also depend on the capital that a firm like JPMorgan Chase can provide. To be sure, smaller banks play a vital role in our nation's economy but cannot always provide the type of service, capital, breadth of products and speed of execution that clients need. Only large banks have the scale and resources to connect markets around the globe, in places like China, India, Brazil, South Africa and Russia; to execute diverse and large-scale transactions; to offer a range of products and services, from loan underwriting and risk management to local lines of credit; to process terabytes of financial data; and to provide financing in the billions.

U.S. banks actually are less consolidated than those in the rest of the world, and our financial system is less dominated by large banks than that of almost any other nation. For example, in 2007, the three largest U.S. banks held 34% of total U.S. bank assets – the second-lowest figure among Organisation for Economic Co-operation and Development (OECD) nations, just ahead of Luxembourg; the average for the rest of the OECD nations was more than double, at 69%. Not only is our banking system not particularly concentrated, but our large banks are not relatively large compared with the size of the U.S. economy. The arguments that "big is bad" and that "too consolidated is bad" are refuted by many examples of countries with large, consolidated banking systems that did not have problems at all (e.g., Canada).

Capping the size of America's largest banks won't change the needs of big business. Instead, it will force these companies to turn to foreign banks that won't face the same restrictions. JPMorgan Chase's capabilities, size and diversity were essential to withstanding the financial crisis in 2008 and emerging as a stronger firm.

Everyone needs to be responsible

America was built on the principles of rugged individualism and self-responsibility. We need to continue to foster a sense of responsibility in all participants in the economy. Bad outcomes are not always someone else's fault – we need to cultivate an environment where consumers, lenders, borrowers, businesses and investors all take responsibility for their actions and don't look for someone else to blame. We have to stop slipping into a cacophony of finger-pointing and blame. And while bad actors always should be punished, we also should note that not all who got into trouble were irresponsible. We fully acknowledge, for example, that many individuals found themselves in a difficult position that was caused by a medical condition or loss of employment beyond their control, and they should be treated fairly and respectfully.

The crisis of the past couple of years has had far-reaching consequences, among them the declining public image of banks and bankers.

* The U.S. Bureau of Labor Statistics shows that employees of large firms (with 500 or more employees) have average hourly earnings ($25/hour, including wages and salaries) 46% higher than employees of small firms (with fewer than 50 employees). Similarly, large firms provide 88% of their employees access to medical benefits compared with 55% at small firms.

While JPMorgan Chase certainly made its share of mistakes in this tumultuous time, our firm always has remained focused on the fundamentals of banking and the part we can play to support our clients and communities. Our 220,000 people go to work every day to do a great job serving clients, whose trust we have to earn over many years. The vast majority of our people, customers, operations and shareholders are far from Wall Street – they actually are part of the everyday life of Main Street, in virtually every part of the country. And they are active and contributing members of society in communities around the world.

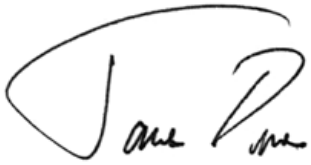
Very often, when the public or politicians take punitive efforts against banks like ours, they think they are punishing only the senior management team, when, in fact, they are punishing ordinary shareholders as well. Contrary to popular perception, Main Street owns our biggest banks and corporations through savings and retirement funds. Our shareholders represent a true cross section of America, including teachers, retirees and public employees. When we reduce the debate over responsibility and regulation to simplistic and inaccurate notions, such as Main Street vs. Wall Street, big business vs. small business or big banks vs. small banks, we are indiscriminately blaming the good and the bad – this is simply another form of ignorance and prejudice.

By extension, when we vilify whole industries or all of the business community, we are denigrating ourselves and much of what made this country successful. We also should refrain from indiscriminate blame of any whole group of people, including politicians or the media. We need to focus a bit less on daily media and polls and more on the books that will be written after this crisis subsides. We all should ask ourselves whether we, in a time of stress, did the right things the right way for the right reasons.

Conclusion

The United States faces many challenges. In the short run, overcoming this economic crisis and getting our unemployed back to work are most important. In the long run, we must confront our health and education systems; develop a real, substantive energy policy; and build the infrastructure for the future. We also must confront the large U.S. deficit, being honest about the facts and being fiscally responsible for ourselves – it is dangerous to wait for the global markets to pressure us into that discipline. These are all serious challenges, but, if we work together, we can fix them.

Your company continues to do everything it can, in every community in which we work, to help the world recover as quickly as possible. In 2009, as they have so many times before, our people rose to the challenge, working amid tremendous uncertainty in a fragile economic and political environment. They also have coped with the anger directed toward the financial services industry. Through it all, they did not lose focus on why we are all here: to serve clients and, therefore, our communities around the world. On behalf of JPMorgan Chase and its management and shareholders, I express my deepest gratitude to our people. I am proud to be their partner.



Jamie Dimon
Chairman and Chief Executive Officer

March 26, 2010

Investment Bank

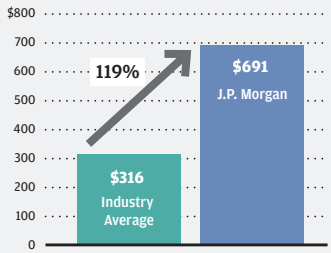
Across our business, our goal is to help clients succeed, contribute to orderly and well-functioning markets, and support global economic growth. One of the most important functions we serve is extending credit to companies to help them grow.

J.P. Morgan is a leading global investment bank with one of the largest client bases in the world. We serve more than 20,000 clients, including corporations, governments, states, municipalities, healthcare organizations, educational institutions, banks and investors. Our clients operate in more than 100 countries. We offer a complete range of financial services to help clients achieve their goals. We provide strategic advice, lend money, raise capital, help manage risk, make markets and extend liquidity, and we hold global leadership positions in all of our major business lines.

2009 HIGHLIGHTS AND ACCOMPLISHMENTS

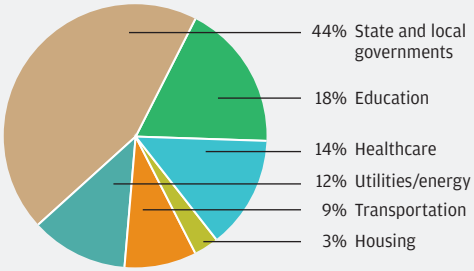
- Delivered record net income of $6.9 billion on record revenue of $28.1 billion, led by record Global Markets revenue of $22 billion and record reported IB fees of $7.2 billion.
- Earned a return on equity of 21% on $33 billion of average allocated capital.
- As the market leader, arranged and raised $204 billion in corporate loans for 295 issuer clients globally.[a] The average size of loans led by J.P. Morgan was roughly $691 million, more than double the market's average size of $316 million.

Average corporate loan size:
J.P. Morgan deals vs. industry average[a]
(in millions)



- Helped clients issue $620 billion of stocks and bonds, $170 billion more than any other bank in the world.[a] As the top underwriter in each category, J.P. Morgan raised $105 billion and $515 billion in the global equity and debt markets, respectively.[a] Excluding self-led bank deals, J.P. Morgan was a lead underwriter on eight of the 10 largest transactions in both the equity and debt markets.
- Arranged and raised $178 billion of capital for banks and financial institutions around the world; that amounts to nearly 10% of the capital raised in 2009 to restore the global banking system to health.[a]
- Advised clients on 322 mergers and acquisitions globally, more than any other bank.[a] In fact, J.P. Morgan acted as advisor on 11 of the year's largest 25 deals[a], including advising on the year's largest deal, Pfizer's acquisition of Wyeth, and serving as sole advisor to ExxonMobil on its acquisition of XTO Energy. J.P. Morgan also advised on 119 cross-border deals, more than any other bank.[a]
- In the U.S., helped raise approximately $102 billion, including $19 billion of extended credit, for state and local governments, healthcare organizations and educational institutions, to help build local infrastructure, improve social services, expand universities and hospitals, and fund medical research. In addition, committed to provide financing urgently needed to fund cash flow shortfalls, including $4 billion to the state of California and $2 billion to the state of New Jersey.

J.P. Morgan helped raise $102 billion for governments, public sector organizations and institutions



- Invested in renewable energy projects, including 58 wind farms across 16 U.S. states, as well as in environmentally responsible companies; in 2009, J.P. Morgan acquired EcoSecurities, a leader in sourcing and developing emission reduction credits.

(a) Dealogic

Retail Financial Services

Our bankers work with consumers and small business owners to meet everyday financial needs and to pursue lifetime dreams. They can use an ATM, debit card or credit card, save, pay bills, borrow for a car, a home, a business expansion or college, and invest for a well-earned retirement.

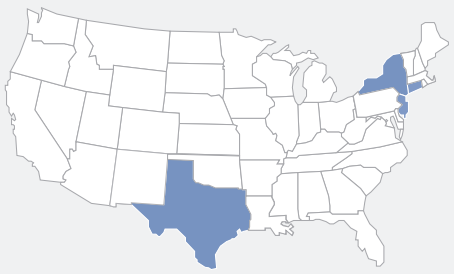
Retail Financial Services serves consumers and businesses through personal service at branches, through ATMs and online, mobile and telephone banking, and through retail mortgage correspondents, auto dealerships and school financial aid offices.

Customers can use more than 5,100 bank branches (third largest nationally) and 15,400 ATMs (second largest nationally), as well as online and mobile banking around the clock. Nearly 24,000 personal bankers and specialists assist customers with checking and savings accounts, mortgages, business loans and investments across the 23-state footprint from New York and Florida to California. Consumers also can obtain loans through more than 15,700 auto dealerships and nearly 2,100 schools and universities nationwide.

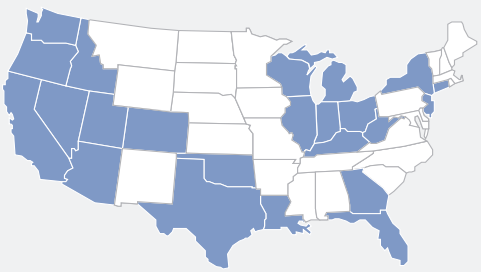
2009 HIGHLIGHTS AND ACCOMPLISHMENTS

- Provided customers full access to 5,154 bank branches in 23 states after converting the computer systems in 1,800 Washington Mutual branches and rebranding them Chase.
- Added 2,400 personal bankers, business bankers, investment specialists and mortgage officers in bank branches to serve customers better.
- Increased in-branch sales of mortgages by 84%, investments by 23% and credit cards by 3%.
- Expanded convenience for Chase customers by opening 117 new branches.
- Increased the total number of checking accounts 5% to 26 million.
- Added more than 800 ATMs and made nearly 4,300 additional ATMs deposit-friendly by eliminating envelopes and providing images of deposited checks on the screen and on receipts.
- Expanded mobile banking capabilities by adding iPhone applications.
- Generated Retail Banking revenue of $18 billion, up 42% from 2008.
- Originated $150.7 billion of mortgage loans to help families to lower their payments by refinancing or to purchase a home.
- Offered nearly 600,000 mortgage modifications in an unprecedented initiative to help struggling homeowners stay in their homes.
- Opened 34 face-to-face loan-counseling centers – with 17 more opening in early 2010 – and sent counselors to 388 public reach-out events.
- Originated $23.7 billion of auto financing to become the largest U.S. auto lender while maintaining disciplined underwriting.

Chase has expanded its network from 540 branches in four states in early 2004 to more than 5,100 branches in 23 states by the end of 2009 to serve customers better



Retail branch network in early 2004



Retail branch network by end of 2009

Card Services

We deliver products and services that meet both the spending and borrowing needs of our more than 50 million customers in the U.S. In addition to offering industry-leading products through the Chase brand, we are one of the largest issuers of co-brand credit cards, partnering with many of the world's most prominent brands.

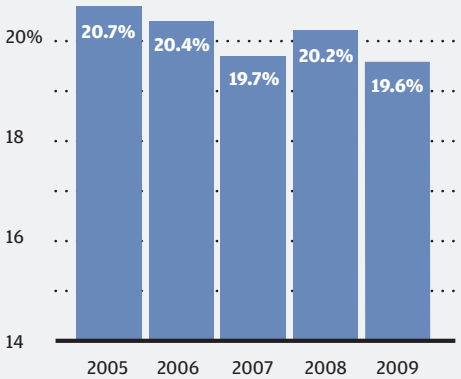
Card Services is one of the nation's largest credit card issuers, with more than 145 million credit cards in circulation and over $163 billion in managed loans. Customers used Chase cards to meet more than $328 billion of their spending needs in 2009.

Chase continues to innovate despite a very difficult business environment, launching new products and services, such as Blueprint℠, Ultimate Rewards℠, Chase Sapphire℠ and Ink℠ from Chase, and earning a market leadership position in building loyalty and rewards programs. Through its merchant acquiring business, Chase Paymentech Solutions, Chase is one of the leading processors of credit card payments.

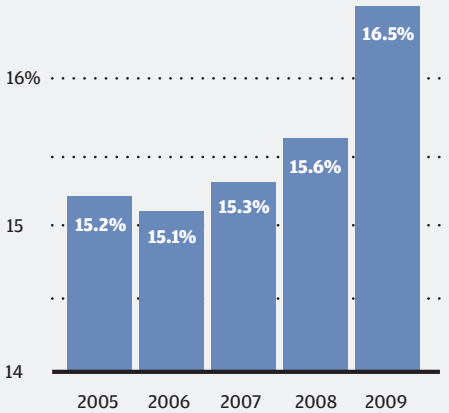
2009 HIGHLIGHTS AND ACCOMPLISHMENTS

- Added 10.2 million new Visa, MasterCard and private label credit card accounts.
- Launched Blueprint℠, an innovative feature that allows customers to have more control of their spending and borrowing. Blueprint℠ is designed to help customers pay down balances, manage everyday spending and pay off major purchases.
- Invested in activities – such as the launch of Ultimate Rewards℠, a new rewards platform for Chase's proprietary credit cards – designed to attract new customers and further engage current cardmembers.
- Introduced Chase Sapphire℠, a new rewards product designed for affluent cardholders.
- Launched Ink℠ from Chase, a new product suite of cards for small business owners.
- Successfully completed the conversion of the Washington Mutual credit card portfolio to the Chase platform.
- Continued improvements in risk management, customer satisfaction, and systems and infrastructure.
- Processed 18 billion transactions through Chase Paymentech Solutions.

*End-of-period outstandings market share of general purpose credit cards**



*Sales volume market share of general purpose credit cards**



* Source: Earnings releases; internal reporting, excluding the Washington Mutual and private label portfolios

Commercial Banking

With offices in more than 100 U.S. cities and eight countries around the world, we are a stable and dependable local banking partner with access to global financial solutions. Our bankers build long-term relationships to help our clients succeed by supporting their lending, treasury, investment banking and asset management needs.

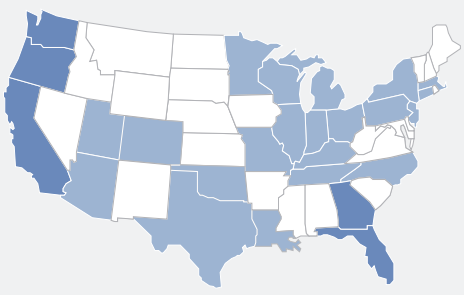
Commercial Banking serves nearly 25,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and more than 30,000 real estate investors/owners.

Delivering extensive industry knowledge, local expertise and dedicated service, Commercial Banking partners with the firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management, to meet its clients' domestic and international financial needs.

2009 HIGHLIGHTS AND ACCOMPLISHMENTS

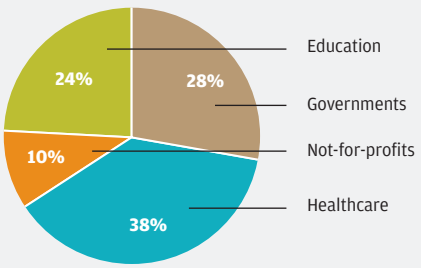
- Maintained Top 3 leadership position nationally in market penetration and lead share.(a)
- Ranked #1 multi-family lender(b) and #2 asset-based lead left arranger.(c)
- Delivered more than $1 billion in gross investment banking fees.
- Increased revenue by 20% to a record $5.7 billion.
- Improved operating margin by 25% to $3.5 billion on record revenue and continued focus on expense management.
- Delivered a double-digit increase in average liability balances, up 10%.
- Added in excess of 1,700 new clients and expanded more than 7,600 existing relationships.
- Expanded into five additional states across the United States with local middle market bankers delivering complete lending and treasury solutions.
- Demonstrated credit and risk management discipline with an allowance coverage ratio of more than 3% of retained loans and a decrease of more than 12% in real estate exposure.
- Achieved the second lowest nonperforming loan ratio in our peer group.
- Experienced online banking revenue growth of nearly 10% and remote deposit volume of nearly $6 billion.
- Recognized for our commitment to fiscal responsibility by earning a 2009 National Greenwich Excellence Award for Financial Stability in Middle Market Banking.(d)
- Successfully completed the conversion of Washington Mutual clients' commercial accounts onto Chase platforms.
- Continued to support communities by extending nearly $8 billion in new financing to more than 500 government entities, healthcare companies, educational institutions and not-for-profit organizations.

Commercial Banking serves nearly 25,000 clients in 26 states across the country



States with expanded middle market presence

Nearly $8 billion in new financing has been extended to help support our communities



(a) Greenwich Associates, Full Year 2009

(b) FDIC, September 2009

(c) Loan Pricing Corporation, Full Year 2009

(d) Greenwich Associates, 2009

Treasury & Securities Services

We actively work with clients on a global basis to fully optimize their working capital, manage their collateral and help mitigate their risk effectively.

J.P. Morgan's Treasury & Securities Services division is a global leader in transaction, investment and information services. We are one of the world's largest cash management providers, processing a market-leading average of $3.1 trillion in U.S. dollar transfers daily, as well as a leading global custodian with $14.9 trillion in assets under custody. We operate through two divisions:

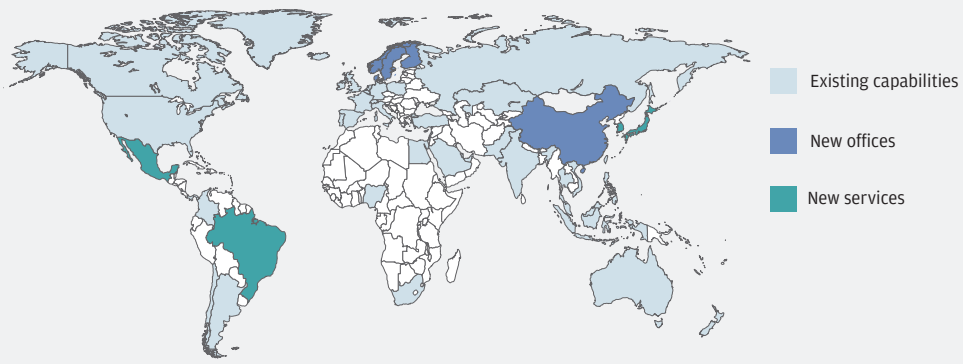
Treasury Services provides cash management, trade, wholesale card and liquidity products and services to small- and mid-sized companies, multinational corporations, financial institutions and government entities.

Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers and manages depositary receipt programs globally.

2009 HIGHLIGHTS AND ACCOMPLISHMENTS

- Continued strong underlying growth in the following key business drivers: international electronic funds transfer volumes grew 13%, assets under custody grew 13% and the number of wholesale cards issued grew 19%.
- Received more than 100 industry awards and top rankings, including Securities Lending Manager of the Year (*Global Pensions*), Best Overall Hedge Fund Administrator (*HFMWeek*), Pension Fund Custodian of the Year (*ICFA* magazine), Fund Administrator of the Year: Europe (*ICFA* magazine), Best Depositary Receipt Bank (*The Asset*), Best Overall Bank for Cash Management: North America (*Global Finance*), Best Liquidity Solutions Provider (*The Asset*), Best Global Cash Management Services in Asia Pacific (*Asiamoney*) and many others.
- The only financial institution invited by the U.S. Department of the Treasury's Financial Management Service (FMS) and the Department of Defense to participate in a series of meetings in the U.S., Kuwait and Afghanistan to assist FMS and the U.S. Army toward implementing a prepaid card program that would not only help U.S. troops but also benefit the local population in Afghanistan.
- Strengthened our international presence: Opened branches in China, Denmark, Finland, Norway and Sweden; launched services in Tokyo, South Korea, Brazil and Mexico; and expanded capabilities in Australia, India, Europe, the Middle East and Africa.
- Acquired ANZ's Custodian Services business, including access to more than 100 clients and AUD99 billion in assets under custody, further strengthening our position as one of the leading providers of third-party custodial services in the Australian and New Zealand marketplace.
- Remained the #1 clearer of U.S. dollars in the world and have been #1 in Automated Clearing House originations for the past 34 years.
- Announced the formation of the Prime-Custody Solutions Group, a team responsible for delivering the firm's integrated prime brokerage and custody platform to clients.
- Led depositary receipt initial public offering (IPO) capital raising with a 77% market share and three of the five largest IPOs of the year, including landmark deals from both Brazil and China.

We expanded our global footprint to better serve clients around the world



Asset Management

Our business has been built upon our core principle of putting our clients' interests first. Inherent in that commitment is a fiduciary responsibility of successfully managing our clients' assets – which is the foundation of what we do – every minute of every day.

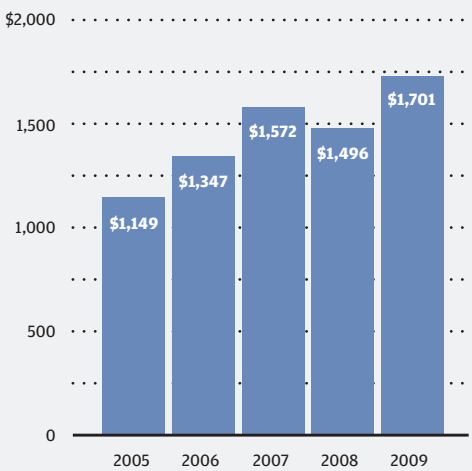
Asset Management, with assets under supervision of $1.7 trillion, is a global leader in investment and wealth management.

Asset Management clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. Asset Management offers its clients global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including money market instruments and bank deposits. Asset Management also provides trust and estate, banking and brokerage services to high-net-worth clients and retirement services to corporations and individuals. The majority of Asset Management's client assets are in actively managed portfolios.

2009 HIGHLIGHTS AND ACCOMPLISHMENTS

- As the #1 money market fund manager in the world, managed more than $500 billion in global liquidity assets on behalf of clients. In 2009, the J.P. Morgan US Dollar Liquidity Fund became the largest mutual fund in Europe and the first of its kind to reach $100 billion in assets.
- Achieved record revenue of $2.6 billion in the Private Bank led by strong brokerage activity as we put timely, innovative investment opportunities to work for clients.
- Provided clients with superior risk-adjusted returns. The percentage of global long-term mutual fund assets under management in the first or second quartiles was 74% for the five-year period and 62% for the three-year period ended December 31, 2009.
- Ranked third in long-term U.S. mutual fund flows as retail investors sought the stability and performance of J.P. Morgan Funds.

Assets under supervision
(in billions)



- Ranked #4 U.S. Mutual Fund Family based on investment performance over five-year period.(a)
- Expanded Private Wealth Management into five new markets: Miami, Philadelphia, San Francisco, Seattle and Washington, D.C.
- Granted more than $100 million to charities throughout the world on behalf of Private Bank fiduciary clients.
- *Euromoney* rated the Private Bank as the top private bank for ultra-high-net-worth clients globally.
- China International Fund Management, the joint venture between J.P. Morgan Asset Management and Shanghai International Trust & Investment Co., was named the best overall performing foreign asset manager operating in China by a PricewaterhouseCoopers survey.
- Received the Gold Standard Award for Funds Management in the United Kingdom for the seventh year in a row from leading publishing house Incisive Media.
- Named Asset Management Company of the Year in Asia and Hong Kong by *The Asset* magazine.
- Completed the acquisition of Highbridge Capital Management. In 2009, Highbridge clients experienced the best investment performance in its 17-year operating history. Since the formation of the partnership in 2004, client assets under management have grown threefold.

(a) *Barron's*

Corporate Responsibility

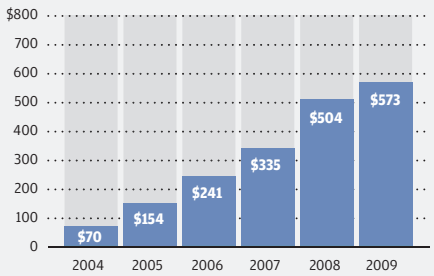
We do our best to manage and operate our company with a consistent set of business principles and core values. First and foremost, this means always trying to do the right thing.

At JPMorgan Chase, corporate responsibility is about what we do every day in our businesses and how we do it. We are committed to managing our businesses to create value for our consumer, small business and corporate clients, as well as our shareholders, communities and employees, and to being a responsible corporate citizen.

2009 HIGHLIGHTS AND ACCOMPLISHMENTS

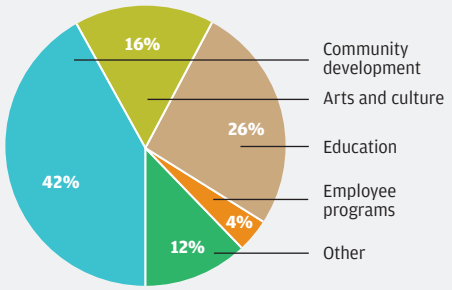
- Invested more than $573 billion in low- and moderate-income families and communities in the first six years of our 10-year, $800 billion Community Development commitment and also earned the highest possible rating of Outstanding in our latest Community Reinvestment Act examination.

First six years of cumulative spend of our 10-year, $800 billion commitment to invest in low- and moderate-income families and communities
(in billions)



- Provided in excess of $690 million in financing for the construction or preservation of more than 5,500 units of affordable housing and made investments in low-income communities through our New Markets Tax Credits. Recognized leader in supporting community development financial institutions.
- Demonstrated our support for impact investing through our principal investment and placements activity in the microfinance sector, through our research on microfinance issues, and as a founding sponsor of the Global Impact Investing Network. Expanded commitment to Grameen Foundation's Bankers without Borders®, an innovative program bringing private sector talent to the microfinance sector.
- Launched the innovative philanthropic campaign, Chase Community Giving, engaging more than 2 million Facebook users in helping to direct over $5 million to small and local charities.
- Strategically contributed more than $100 million in high-need neighborhoods across the globe while supporting thousands of not-for-profits charged with strengthening the communities we serve. Multiplied the impact of our philanthropic investments through active partnership with employee volunteers, community leaders, and other private and public funders.

*2009 charitable contributions**



* Percentages include charitable giving from JPMorgan Chase & Co. and the JPMorgan Chase Foundation

- Continued energy efficiency programs to meet our 20% greenhouse gas reduction target. Bought 100,000 carbon credits to offset emissions from employee air travel. Increased number of branches built to smart and responsible construction practices to more than 90, including 13 LEED certified branches. Significantly increased procurement of paper from certified responsibly managed sources from 8% of total volume to over 69% and continued efforts to eliminate paper statements across the firm.
- Reviewed more than 180 financial transactions to determine and, where possible, mitigate adverse environmental and social impacts.
- Maintained more than $1 billion in annual spend with diverse suppliers despite a reduction in firmwide spend.

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Five-year summary of consolidated financial highlights

(unaudited)
(in millions, except per share, headcount and ratio data)

As of or for the year ended December 31,	2009	2008(d)	2007	2006	2005
Selected income statement data					
Total net revenue	**$ 100,434**	$ 67,252	$ 71,372	$ 61,999	$ 54,248
Total noninterest expense	**52,352**	43,500	41,703	38,843	38,926
Pre-provision profit (a)	**48,082**	23,752	29,669	23,156	15,322
Provision for credit losses	**32,015**	19,445	6,864	3,270	3,483
Provision for credit losses – accounting conformity (b)	**—**	1,534	—	—	—
Income from continuing operations before income tax expense/(benefit)	**16,067**	2,773	22,805	19,886	11,839
Income tax expense/(benefit)	**4,415**	(926)	7,440	6,237	3,585
Income from continuing operations	**11,652**	3,699	15,365	13,649	8,254
Income from discontinued operations (c)	**—**	—	—	795	229
Income before extraordinary gain	**11,652**	3,699	15,365	14,444	8,483
Extraordinary gain (d)	**76**	1,906	—	—	—
Net income	**$ 11,728**	$ 5,605	$ 15,365	$ 14,444	$ 8,483
Per common share data					
Basic earnings (e)					
Income from continuing operations	**$ 2.25**	$ 0.81	$ 4.38	$ 3.83	$ 2.30
Net income	**2.27**	1.35	4.38	4.05	2.37
Diluted earnings (e)(f)					
Income from continuing operations	**$ 2.24**	$ 0.81	$ 4.33	$ 3.78	$ 2.29
Net income	**2.26**	1.35	4.33	4.00	2.35
Cash dividends declared per share	**0.20**	1.52	1.48	1.36	1.36
Book value per share	**39.88**	36.15	36.59	33.45	30.71
Common shares outstanding					
Average: Basic (e)	**3,862.8**	3,501.1	3,403.6	3,470.1	3,491.7
Diluted (e)	**3,879.7**	3,521.8	3,445.3	3,516.1	3,511.9
Common shares at period-end	**3,942.0**	3,732.8	3,367.4	3,461.7	3,486.7
Share price					
High	**$ 47.47**	$ 50.63	$ 53.25	$ 49.00	$ 40.56
Low	**14.96**	19.69	40.15	37.88	32.92
Close	**41.67**	31.53	43.65	48.30	39.69
Market capitalization	**164,261**	117,695	146,986	167,199	138,387
Selected ratios					
Return on common equity ("ROE") (f)					
Income from continuing operations	**6%**	2%	13%	12%	8%
Net income	**6**	4	13	13	8
Return on tangible common equity ("ROTCE") (f)(g)					
Income from continuing operations	**10**	4	22	24	15
Net income	**10**	6	22	24	15
Return on assets ("ROA"):					
Income from continuing operations	**0.58**	0.21	1.06	1.04	0.70
Net income	**0.58**	0.31	1.06	1.10	0.72
Overhead ratio	**52**	65	58	63	72
Tier 1 capital ratio	**11.1**	10.9	8.4	8.7	8.5
Total capital ratio	**14.8**	14.8	12.6	12.3	12.0
Tier 1 leverage ratio	**6.9**	6.9	6.0	6.2	6.3
Tier 1 common capital ratio (h)	**8.8**	7.0	7.0	7.3	7.0
Selected balance sheet data (period-end)					
Trading assets	**$ 411,128**	$ 509,983	$ 491,409	$ 365,738	$ 298,377
Securities	**360,390**	205,943	85,450	91,975	47,600
Loans	**633,458**	744,898	519,374	483,127	419,148
Total assets	**2,031,989**	2,175,052	1,562,147	1,351,520	1,198,942
Deposits	**938,367**	1,009,277	740,728	638,788	554,991
Long-term debt	**266,318**	270,683	199,010	145,630	119,886
Common stockholders' equity	**157,213**	134,945	123,221	115,790	107,072
Total stockholders' equity	**165,365**	166,884	123,221	115,790	107,211
Headcount	**222,316**	224,961	180,667	174,360	168,847

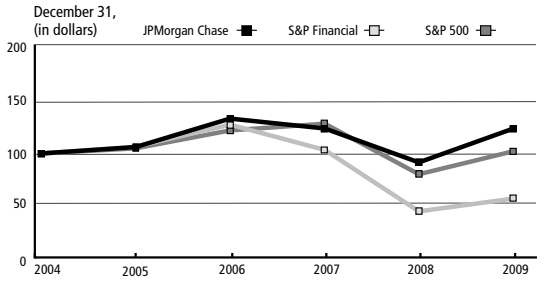
(a) Pre-provision profit is total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.
(b) Results for 2008 included an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual Bank's banking operations.
(c) On October 1, 2006, JPMorgan Chase & Co. completed the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York Company Inc. The results of operations of these corporate trust businesses are being reported as discontinued operations for each of the periods presented.
(d) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual. On May 30, 2008, a wholly-owned subsidiary of JPMorgan Chase merged with and into The Bear Stearns Companies Inc. ("Bear Stearns"), and Bear Stearns became a wholly-owned subsidiary of JPMorgan Chase. The Washington Mutual acquisition resulted in negative goodwill, and accordingly, the Firm recorded an extraordinary gain. For additional information on these transactions, see Note 2 on pages 151–156 of this Annual Report.
(e) Effective January 1, 2009, the Firm implemented new FASB guidance for participating securities. Accordingly, prior-period amounts have been revised as required. For further discussion of the guidance, see Note 25 on page 232 of this Annual Report.
(f) The calculation of 2009 earnings per share and net income applicable to common equity include a one-time, noncash reduction of $1.1 billion, or $0.27 per share, resulting from repayment of U.S. Troubled Asset Relief Program ("TARP") preferred capital in the second quarter of 2009. Excluding this reduction, the adjusted ROE and ROTCE were 7% and 11% for 2009. For further discussion, see "Explanation and reconciliation of the Firm's use of non-GAAP financial measures" on pages 58–60 of this Annual Report.
(g) For further discussion of ROTCE, a non-GAAP financial measure, see "Explanation and reconciliation of the Firm's use of non-GAAP financial measures" on pages 58–60 of this Annual Report.
(h) Tier 1 common is calculated as Tier 1 capital less qualifying perpetual preferred stock, qualifying trust preferred securities and qualifying minority interest in subsidiaries. The Firm uses the Tier 1 common capital ratio, a non-GAAP financial measure, to assess and compare the quality and composition of the Firm's capital with the capital of other financial services companies. For further discussion, see Regulatory capital on pages 90–92 of this Annual Report.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Stock Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced U.S. equity benchmark consisting of leading companies from different economic sectors. The S&P Financial Index is an index of 78 financial companies, all of which are within the S&P 500. The Firm is a component of both industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2004, in JPMorgan Chase common stock and in each of the above S&P indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2004	2005	2006	2007	2008	**2009**
JPMorgan Chase	$100.00	$ 105.68	$ 132.54	$ 123.12	$ 91.84	**$ 123.15**
S&P Financial Index	100.00	106.48	126.91	103.27	46.14	**54.09**
S&P 500 Index	100.00	104.91	121.48	128.16	80.74	**102.11**



This section of the JPMorgan Chase's Annual Report for the year ended December 31, 2009 ("Annual Report") provides management's discussion and analysis ("MD&A") of the financial condition and results of operations of JPMorgan Chase. See the Glossary of terms on pages 251–253 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking statements on page 143 of this Annual Report) and in the JPMorgan Chase Annual Report on Form 10-K for the year ended December 31, 2009 ("2009 Form 10-K"), in Part I, Item 1A: Risk factors, to which reference is hereby made.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with $2.0 trillion in assets, $165.4 billion in stockholders' equity and operations in more than 60 countries as of December 31, 2009. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national bank with branches in 23 states in the U.S.; and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national bank that is the Firm's credit card issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities Inc., the Firm's U.S. investment banking firm.

JPMorgan Chase's activities are organized, for management reporting purposes, into six business segments, as well as Corporate/Private Equity. The Firm's wholesale businesses comprise the Investment Bank, Commercial Banking, Treasury & Securities Services and Asset Management segments. The Firm's consumer businesses comprise the Retail Financial Services and Card Services segments. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows.

Investment Bank

J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The clients of the Investment Bank ("IB") are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage, and research. IB also commits the Firm's own capital to principal investing and trading activities on a limited basis.

Retail Financial Services

Retail Financial Services ("RFS"), which includes the Retail Banking and Consumer Lending businesses, serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking, as well as through auto dealerships and school financial-aid offices. Customers can use more than 5,100 bank branches (third-largest nationally) and 15,400 ATMs (second-largest nationally), as well as online and mobile banking around the clock. More than 23,900 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. Consumers also can obtain loans through more than 15,700 auto dealerships and nearly 2,100 schools and universities nationwide.

Card Services
Card Services ("CS") is one of the nation's largest credit card issuers, with more than 145 million credit cards in circulation and over $163 billion in managed loans. Customers used Chase cards to meet more than $328 billion of their spending needs in 2009.

Chase continues to innovate, despite a very difficult business environment, launching new products and services such as Blueprint, Ultimate Rewards, Chase Sapphire and Ink from Chase, and earning a market leadership position in building loyalty and rewards programs. Through its merchant acquiring business, Chase Paymentech Solutions, Chase is one of the leading processors of credit-card payments.

Commercial Banking
Commercial Banking ("CB") serves nearly 25,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and more than 30,000 real estate investors/owners. Delivering extensive industry knowledge, local expertise and dedicated service, CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Treasury & Securities Services
Treasury & Securities Services ("TSS") is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services ("TS") provides cash management, trade, wholesale card and liquidity products and services to small and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with the Commercial Banking, Retail Financial Services and Asset Management businesses to serve clients firmwide. As a result, certain TS revenue is included in other segments' results. Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and it manages depositary receipt programs globally.

Asset Management
Asset Management ("AM"), with assets under supervision of $1.7 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity products, including money-market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

This executive overview of management's discussion and analysis highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of events, trends and uncertainties, as well as the capital, liquidity, credit, operational and market risks and the critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	2009	2008	Change
Selected income statement data			
Total net revenue	**$100,434**	$ 67,252	49%
Total noninterest expense	**52,352**	43,500	20
Pre-provision profit	**48,082**	23,752	102
Provision for credit losses	**32,015**	20,979	53
Income before extraordinary gain	**11,652**	3,699	215
Extraordinary gain	**76**	1,906	(96)
Net income	**11,728**	5,605	109
Diluted earnings per share			
Income before extraordinary gain	**$ 2.24**	$ 0.81	177
Net income	**2.26**	1.35	67
Return on common equity			
Income before extraordinary gain	**6%**	2%	
Net income	**6**	4	
Capital ratios			
Tier 1 capital	**11.1**	10.9	
Tier 1 common capital	**8.8**	7.0	

Business overview

JPMorgan Chase reported 2009 net income of $11.7 billion, or $2.26 per share, compared with net income of $5.6 billion, or $1.35 per share, in 2008. Total net revenue in 2009 was $100.4 billion, compared with $67.3 billion in 2008. Return on common equity was 6% in 2009 and 4% in 2008. Results benefited from the impact of the acquisition of the banking operations of Washington Mutual Bank ("Washington Mutual") on September 25, 2008, and the impact of the merger with The Bear Stearns Companies Inc. ("Bear Stearns") on May 30, 2008.

The increase in net income for the year was driven by record net revenue, including record revenue in the Investment Bank reflecting modest net gains on legacy leveraged-lending and mortgage-related positions compared with net markdowns in the prior year. Partially offsetting the growth in the Firm's revenue was an increase in the provision for credit losses, driven by an increase in the consumer provision, and higher noninterest expense reflecting the impact of the Washington Mutual transaction.

The business environment in 2009 gradually improved throughout the year. The year began with a continuation of the weak conditions experienced in 2008 – the global economy contracted sharply in the first quarter, labor markets deteriorated rapidly and unemployment rose, credit was tight, liquidity was diminished, and businesses continued to downsize and cut inventory levels rapidly. Throughout the year, the Board of Governors of the Federal Reserve System ("Federal Reserve") took actions to stabilize the financial markets and promote an economic revival. It held its policy rate close to zero and indicated that this policy was likely to remain in place for some time, given economic conditions. In addition, it greatly expanded a program it launched at the end of 2008, with a plan to buy up to $1.7 trillion of securities, including Treasury securities, mortgage-backed securities and obligations of government-sponsored agencies. The U.S. government and various regulators continued their efforts to stabilize the U.S. economy, putting in place a financial rescue plan that supplemented the interest rate and other actions that had been taken by the Federal Reserve and the U.S. Department of the Treasury (the "U.S. Treasury") in the second half of 2008. These efforts began to take effect during 2009. Developing economies rebounded significantly and contraction in developed economies slowed. Credit conditions improved in the summer, with most credit spreads narrowing dramatically. By the third quarter of the year, many spreads had returned to pre-crisis levels. By the fourth quarter, economic activity was expanding and signs emerged that the deterioration in the labor market was abating, although by the end of the year unemployment reached 10%, its highest level since 1983. The housing sector showed some signs of improvement and household spending appeared to be expanding at a moderate rate, though it remained constrained by a weak labor market, modest income growth, lower housing wealth, and tight credit. Businesses were continuing to reduce capital investment, though at a slower pace, and remained reluctant to add to payrolls. Financial market conditions in the fourth quarter became more supportive of economic growth.

Amidst this difficult operating environment, JPMorgan Chase benefited from the diversity of its leading franchises, as demonstrated by the continued earnings strength of its Investment Bank, Commercial Banking, Asset Management, and Retail Banking franchises. Significant market share and efficiency gains helped all of the Firm's businesses maintain leadership positions: the Investment Bank ranked #1 for Global Investment Banking fees for 2009; in Commercial Banking, at year-end 2009, the total revenue related to investment banking products sold to CB clients doubled from its level at the time of the JPMorgan Chase–Bank One merger. In addition, the Firm completed the integration of Washington Mutual and continued to invest in its businesses, demonstrated by growth in checking and credit card accounts.

Throughout 2009, the Firm remained focused on maintaining a strong balance sheet. In addition to the capital generated from earnings, the Firm issued $5.8 billion of common stock and reduced its quarterly dividend. The Firm also increased its consumer allowance for credit losses by $7.8 billion, bringing the total allowance for credit losses to $32.5 billion, or 5.5% of total loans. The Firm recorded a $1.1 billion one-time noncash adjustment to common stockholders' equity related to the redemption of the $25.0 billion of Series K Preferred Stock issued to the U.S. Treasury under the Capital Purchase Program. Even with this adjustment, the

Firm ended 2009 with a very strong Tier 1 Capital ratio of 11.1% and a Tier 1 Common ratio of 8.8%.

Throughout this turbulent financial period, JPMorgan Chase supported and served its 90 million customers and the communities in which it operates; delivered consumer-friendly products and policies; and continued to lend. The Firm extended nearly $250 billion in new credit to consumers during the year and for its corporate and municipal clients, either lent or assisted them in raising approximately $1 trillion in loans, stocks or bonds. The Firm also remained committed to helping homeowners meet the challenges of declining home prices and rising unemployment. Since 2007, the Firm has initiated over 900,000 actions to prevent foreclosures through its own programs and through government mortgage-modification programs. During 2009 alone, JPMorgan Chase offered approximately 600,000 loan modifications to struggling homeowners. Of these, 89,000 loans have achieved permanent modification. By March 31, 2010, the Firm will have opened 51 Chase Homeownership Centers across the country and already has over 14,000 employees dedicated to mortgage loss mitigation.

Management remains confident that JPMorgan Chase's capital and reserve strength, combined with its significant earnings power, will allow the Firm to meet the uncertainties that lie ahead and still continue investing in its businesses and serving its clients and shareholders over the long term.

The discussion that follows highlights the performance of each business segment compared with the prior year and presents results on a managed basis unless otherwise noted. For more information about managed basis, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 58–60 of this Annual Report.

Investment Bank reported record net income in 2009 compared with a net loss in 2008. The significant rebound in earnings was driven by record net revenue, partially offset by increases in both noninterest expense and the provision for credit losses. The increase in net revenue was driven by record Fixed Income Markets revenue, reflecting strong results across most products, as well as modest net gains on legacy leveraged lending and mortgage-related positions, compared with over $10 billion of net markdowns in the prior year. Investment banking fees rose to record levels, as higher equity and debt underwriting fees were partially offset by lower advisory fees. Record Equity Markets revenue was driven by solid client revenue, particularly in prime services, and strong trading results. The net revenue results for IB in 2009 included losses from the tightening of the Firm's credit spread on certain structured liabilities and derivatives, compared with gains in 2008 from the widening of the spread on those liabilities. The provision for credit losses increased, driven by continued weakness in the credit environment. IB ended the year with a ratio of allowance for loan losses to end-of-period loans retained of 8.25%. Noninterest expense increased, reflecting higher performance-based compensation offset partially by lower headcount-related expense.

Retail Financial Services net income decreased from the prior year, as an increase in the provision for credit losses and higher noninterest expense were predominantly offset by double-digit growth in net revenue. Higher net revenue reflected the impact of the Washington Mutual transaction, wider loan and deposit spreads, and higher net mortgage servicing revenue. The provision for credit losses increased from the prior year as weak economic conditions and housing price declines continued to drive higher estimated losses for the home equity and mortgage loan portfolios. RFS ended the year with a ratio of allowance for loan losses to ending loans, excluding purchased credit-impaired loans of 5.09%. Noninterest expense was higher, reflecting the impact of the Washington Mutual transaction and higher servicing and default-related expense.

Card Services reported a net loss for the year, compared with net income in 2008. The decline was driven by a significantly higher provision for credit losses, partially offset by higher net revenue. The double-digit growth in managed net revenue was driven by the impact of the Washington Mutual transaction, wider loan spreads and higher merchant servicing revenue related to the dissolution of the Chase Paymentech Solutions joint venture; these were partially offset by higher revenue reversals associated with higher charge-offs, a decreased level of fees and lower average loan balances. The provision for credit losses increased, reflecting continued weakness in the credit environment. CS ended the year with a ratio of allowance for loan losses to end-of-period loans of 12.28%. Noninterest expense increased due to the dissolution of the Chase Paymentech Solutions joint venture and the impact of the Washington Mutual transaction, partially offset by lower marketing expense.

Commercial Banking net income decreased from 2008, as an increase in provision for credit losses and higher noninterest expense were predominantly offset by higher net revenue. Double-digit growth in net revenue reflected the impact of the Washington Mutual transaction and record levels of lending- and deposit-related and investment banking fees. Revenue rose in all business segments: Middle Market Banking, Commercial Term Lending, Mid-Corporate Banking and Real Estate Banking. The provision for credit losses increased, reflecting continued weakness throughout the year in the credit environment across all business segments, predominantly in real estate–related segments. CB ended the year with a ratio of allowance for loan losses to end-of-period loans retained of 3.12%. Noninterest expense increased due to the impact of the Washington Mutual transaction and higher Federal Deposit Insurance Corporation ("FDIC") insurance premiums.

Treasury & Securities Services net income declined from the prior year, driven by lower net revenue. The decrease in net revenue reflected lower Worldwide Securities Services net revenue, driven by lower balances and spreads on liability products; lower securities lending balances, primarily as a result of declines in asset valuations and demand; and the effect of market depreciation on certain custody assets. Treasury Services net revenue also declined, reflecting lower deposit balances and spreads, offset by higher trade revenue driven by wider spreads and growth across cash management and card product volumes. Noninterest expense rose slightly compared with the prior year, reflecting higher FDIC insurance premiums offset by lower headcount-related expense.

Asset Management net income increased from the prior year, due to higher net revenue, offset largely by higher noninterest expense and a higher provision for credit losses. The increase in net revenue reflected higher valuations of the Firm's seed capital investments, net inflows, wider loan spreads and higher deposit balances, offset partially by the effect of lower market levels and narrower deposit spreads. Asset Management's businesses reported mixed revenue results: Institutional and Private Bank revenue were up while Retail and Private Wealth Management revenue were down. Assets under supervision increased for the year, due to the effect of higher market valuations and inflows in fixed income and equity products offset partially by outflows in cash products. The provision for credit losses increased compared with the prior year, reflecting continued weakness in the credit environment. Noninterest expense was higher, reflecting the effect of the Bear Stearns merger, higher performance-based compensation and higher FDIC insurance premiums, offset largely by lower headcount-related expense.

Corporate/Private Equity net income increased in 2009, reflecting elevated levels of trading gains and net interest income, securities gains, an after-tax gain from the sale of MasterCard shares and reduced losses from Private Equity compared with 2008. Trading gains and net interest income increased due to the Firm's significant purchases of mortgage-backed securities guaranteed by U.S. government agencies, corporate debt securities, U.S. Treasury and government agency securities and other asset-backed securities. These investments were generally associated with the Chief Investment Office's management of interest rate risk and investment of cash resulting from the excess funding the Firm continued to experience during 2009. The increase in securities was partially offset by sales of higher-coupon instruments (part of repositioning the investment portfolio) as well as prepayments and maturities.

Firmwide, the managed provision for credit losses was $38.5 billion, up by $13.9 billion, or 56%, from the prior year. The prior year included a $1.5 billion charge to conform Washington Mutual's allowance for loan losses, which affected both the consumer and wholesale portfolios. For the purposes of the following analysis, this charge is excluded. The consumer-managed provision for credit losses was $34.5 billion, compared with $20.4 billion in the prior year, reflecting an increase in the allowance for credit losses in the home lending and credit card loan portfolios. Consumer-managed net charge-offs were $26.3 billion, compared with $13.0 billion in the prior year, resulting in managed net charge-off rates of 5.85% and 3.22%, respectively. The wholesale provision for credit losses was $4.0 billion, compared with $2.7 billion in the prior year, reflecting continued weakness in the credit environment throughout 2009. Wholesale net charge-offs were $3.1 billion, compared with $402 million in the prior year, resulting in net charge-off rates of 1.40% and 0.18%, respectively. The Firm's nonperforming assets totaled $19.7 billion at December 31, 2009, up from $12.7 billion. The total allowance for credit losses increased by $8.7 billion from the prior year-end, resulting in a loan loss coverage ratio at December 31, 2009, of 5.51%, compared with 3.62% at December 31, 2008.

Total stockholders' equity at December 31, 2009, was $165.4 billion.

2010 Business outlook

The following forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements.

JPMorgan Chase's outlook for 2010 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment and client activity levels. Each of these linked factors will affect the performance of the Firm and its lines of business. The Firm continues to monitor the U.S. and international economies and political environments. The outlook for capital markets remains uncertain, and further declines in U.S. housing prices in certain markets and increases in the unemployment rate, either of which could adversely affect the Firm's financial results, are possible. In addition, as a result of recent market conditions, the U.S. Congress and regulators have increased their focus on the regulation of financial institutions; any legislation or regulations that may be adopted as a result could limit or restrict the Firm's operations, and could impose additional costs on the Firm in order to comply with such new laws or rules.

Given the potential stress on consumers from rising unemployment and continued downward pressure on housing prices, management remains cautious with respect to the credit outlook for the consumer loan portfolios. Possible continued weakness in credit trends could result in higher credit costs and require additions to the consumer allowance for credit losses. Based on management's current economic outlook, quarterly net charge-offs could reach $1.4 billion for the home equity portfolio, $600 million for the prime mortgage portfolio and $500 million for the subprime mortgage portfolio over the next several quarters. The managed net charge-off rate for Card Services (excluding the Washington Mutual credit card portfolio) could approach 11% by the first quarter of 2010, including the adverse timing effect of a payment holiday program of approximately 60 basis points. The managed net charge-off rate for the Washington Mutual credit card portfolio could approach 24% over the next several quarters. These charge-off rates are likely to move even higher if the economic environment deteriorates beyond management's current expectations. Similarly, wholesale credit costs and net charge-offs could increase in the next several quarters if the credit environment deteriorates.

The Investment Bank continues to operate in an uncertain environment, and as noted above, results could be adversely affected if the credit environment were to deteriorate further. Trading results can be volatile and 2009 included elevated client volumes and spread levels. As such, management expects Fixed Income and Equity Markets revenue to normalize over time as conditions stabilize.

In the Retail Banking segment within Retail Financial Services, although management expects underlying growth, results will be under pressure from the credit environment and ongoing lower consumer spending levels. In addition, the Firm has made changes, consistent with (and in certain respects, beyond) the requirements of newly-enacted legislation, in its policies relating to non-sufficient

funds and overdraft fees. Although management estimates are, at this point in time, preliminary and subject to change, such changes are expected to result in an annualized reduction in net income of approximately $500 million, beginning in the first quarter of 2010.

In the Consumer Lending segment within Retail Financial Services, at current production and estimated run-off levels, the Home Lending portfolio of $263 billion at December 31, 2009, is expected to decline by approximately 10–15% and could possibly average approximately $240 billion in 2010 and approximately $200 billion in 2011. Based on management's preliminary estimate, which is subject to change, the effect of such a reduction in the Home Lending portfolio is expected to reduce 2010 net interest income in the portfolio by approximately $1 billion from the 2009 level. Additionally, revenue could be negatively affected by elevated levels of repurchases of mortgages previously sold to, for example, government-sponsored enterprises.

Management expects noninterest expense in Retail Financial Services to remain at or above 2009 levels, reflecting investments in new branch builds and sales force hires as well as continued elevated servicing, default and foreclosed asset related costs.

Card Services faces rising credit costs in 2010, as well as continued pressure on both charge volumes and credit card receivables growth, reflecting continued lower levels of consumer spending. In addition, as a result of the recently-enacted credit card legislation, management estimates, which are preliminary and subject to change, are that CS's annual net income may be adversely affected by approximately $500 million to $750 million. Further, management expects average Card outstandings to decline by approximately 10–15% in 2010 due to the run-off of the Washington Mutual portfolio and lower balance transfer levels. As a result of all these factors, management currently expects CS to report net losses in each of the first two quarters of 2010 (of approximately $1 billion in the first quarter and somewhat less than that in the second quarter) before the effect of any potential reserve actions. Results in the second half of 2010 will likely be dependent on the economic environment and potential reserve actions.

Commercial Banking results could be negatively affected by rising credit costs, a decline in loan demand and reduced liability balances.

Earnings in Treasury & Securities Services and Asset Management will be affected by the impact of market levels on assets under management, supervision and custody. Additionally, earnings in Treasury & Securities Services could be affected by liability balance flows.

Earnings in Private Equity (within the Corporate/Private Equity segment) will likely be volatile and continue to be influenced by capital markets activity, market levels, the performance of the broader economy and investment-specific issues. Corporate's net interest income levels and securities gains will generally trend with the size of the investment portfolio in Corporate; however, the high level of trading gains in Corporate in the second half of 2009 is not likely to continue. In the near-term, Corporate quarterly net income (excluding Private Equity, merger-related items and any significant nonrecurring items) is expected to decline to approximately $300 million, subject to the size and duration of the investment securities portfolio.

Lastly, with regard to any decision by the Firm's Board of Directors concerning any increase in the level of the common stock dividend, their determination will be subject to their judgment that the likelihood of another severe economic downturn has sufficiently diminished, that overall business performance has stabilized, and that such action is warranted taking into consideration the Firm's earnings outlook, need to maintain adequate capital levels, alternative investment opportunities, and appropriate dividend payout ratios. When in the Board's judgment, based on the foregoing, the Board believes it appropriate to increase the dividend to an annual payout level in the range of $0.75 to $1.00 per share, the Board would likely move forward with such an increase, and follow at some later time with an additional increase or additional increases sufficient to return to the Firm's historical dividend ratio of approximately 30% to 40% of normalized earnings over time.

This following section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2009. Factors that related primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 135–139 of this Annual Report.

Revenue

Year ended December 31, (in millions)	2009	2008	2007
Investment banking fees	**$ 7,087**	$ 5,526	$ 6,635
Principal transactions	**9,796**	(10,699)	9,015
Lending- and deposit-related fees	**7,045**	5,088	3,938
Asset management, administration and commissions	**12,540**	13,943	14,356
Securities gains	**1,110**	1,560	164
Mortgage fees and related income	**3,678**	3,467	2,118
Credit card income	**7,110**	7,419	6,911
Other income	**916**	2,169	1,829
Noninterest revenue	**49,282**	28,473	44,966
Net interest income	**51,152**	38,779	26,406
Total net revenue	**$100,434**	$ 67,252	$ 71,372

2009 compared with 2008

Total net revenue was $100.4 billion, up by $33.2 billion, or 49%, from the prior year. The increase was driven by higher principal transactions revenue, primarily related to improved performance across most fixed income and equity products, and the absence of net markdowns on legacy leveraged lending and mortgage positions in IB, as well as higher levels of trading gains and investment securities income in Corporate/Private Equity. Results also benefited from the impact of the Washington Mutual transaction, which contributed to increases in net interest income, lending- and deposit-related fees, and mortgage fees and related income. Lastly, higher investment banking fees also contributed to revenue growth. These increases in revenue were offset partially by reduced fees and commissions from the effect of lower market levels on assets under management and custody, and the absence of proceeds from the sale of Visa shares in its initial public offering in the first quarter of 2008.

Investment banking fees increased from the prior year, due to higher equity and debt underwriting fees. For a further discussion of investment banking fees, which are primarily recorded in IB, see IB segment results on pages 63–65 of this Annual Report.

Principal transactions revenue, which consists of revenue from trading and private equity investing activities, was significantly higher compared with the prior year. Trading revenue increased, driven by improved performance across most fixed income and equity products; modest net gains on legacy leveraged lending and mortgage-related positions, compared with net markdowns of $10.6 billion in the prior year; and gains on trading positions in Corporate/Private Equity, compared with losses in the prior year of $1.1 billion on markdowns of Federal National Mortgage Association ("Fannie Mae") and Federal Home Loan Mortgage Corporation ("Freddie Mac") preferred securities. These increases in revenue were offset partially by an aggregate loss of $2.3 billion from the tightening of the Firm's credit spread on certain structured liabilities and derivatives, compared with gains of $2.0 billion in the prior year from widening spreads on these liabilities and derivatives. The Firm's private equity investments produced a slight net loss in 2009, a significant improvement from a larger net loss in 2008. For a further discussion of principal transactions revenue, see IB and Corporate/Private Equity segment results on pages 63–65 and 82–83, respectively, and Note 3 on pages 156–173 of this Annual Report.

Lending- and deposit-related fees rose from the prior year, predominantly reflecting the impact of the Washington Mutual transaction and organic growth in both lending- and deposit-related fees in RFS, CB, IB and TSS. For a further discussion of lending- and deposit-related fees, which are mostly recorded in RFS, TSS and CB, see the RFS segment results on pages 66–71, the TSS segment results on pages 77–78, and the CB segment results on pages 75–76 of this Annual Report.

The decline in asset management, administration and commissions revenue compared with the prior year was largely due to lower asset management fees in AM from the effect of lower market levels. Also contributing to the decrease were lower administration fees in TSS, driven by the effect of market depreciation on certain custody assets and lower securities lending balances; and lower brokerage commissions revenue in IB, predominantly related to lower transaction volume. For additional information on these fees and commissions, see the segment discussions for TSS on pages 77–78, and AM on pages 79–81 of this Annual Report.

Securities gains were lower in 2009 and included credit losses related to other-than-temporary impairment and lower gains on the sale of MasterCard shares of $241 million in 2009, compared with $668 million in 2008. These decreases were offset partially by higher gains from repositioning the Corporate investment securities portfolio in connection with managing the Firm's structural interest rate risk. For a further discussion of securities gains, which are mostly recorded in Corporate/Private Equity, see the Corporate/Private Equity segment discussion on pages 82–83 of this Annual Report.

Mortgage fees and related income increased slightly from the prior year, as higher net mortgage servicing revenue was largely offset by lower production revenue. The increase in net mortgage servicing revenue was driven by growth in average third-party loans serviced as a result of the Washington Mutual transaction. Mortgage production revenue declined from the prior year, reflecting an increase in estimated losses from the repurchase of previously-sold loans, offset partially by wider margins on new originations. For a discussion of mortgage fees and related income, which is recorded primarily in RFS's Consumer Lending business, see the Consumer Lending discussion on pages 68–71 of this Annual Report.

Credit card income, which includes the impact of the Washington Mutual transaction, decreased slightly compared with the prior year,

due to lower servicing fees earned in connection with CS securitization activities, largely as a result of higher credit losses. The decrease was partially offset by wider loan margins on securitized credit card loans; higher merchant servicing revenue related to the dissolution of the Chase Paymentech Solutions joint venture; and higher interchange income. For a further discussion of credit card income, see the CS segment results on pages 72–74 of this Annual Report.

Other income decreased from the prior year, due predominantly to the absence of $1.5 billion in proceeds from the sale of Visa shares during its initial public offering in the first quarter of 2008, and a $1.0 billion gain on the dissolution of the Chase Paymentech Solutions joint venture in the fourth quarter of 2008; and lower net securitization income in CS. These items were partially offset by a $464 million charge recognized in 2008 related to the repurchase of auction-rate securities at par; the absence of a $423 million loss incurred in the second quarter of 2008, reflecting the Firm's 49.4% share of Bear Stearns' losses from April 8 to May 30, 2008; and higher valuations on certain investments, including seed capital in AM.

Net interest income increased from the prior year, driven by the Washington Mutual transaction, which contributed to higher average loans and deposits. The Firm's interest-earning assets were $1.7 trillion, and the net yield on those assets, on a fully taxable-equivalent ("FTE") basis, was 3.12%, an increase of 25 basis points from 2008. Excluding the impact of the Washington Mutual transaction, the increase in net interest income in 2009 was driven by a higher level of investment securities, as well as a wider net interest margin, which reflected the overall decline in market interest rates during the year. Declining interest rates had a positive effect on the net interest margin, as rates paid on the Firm's interest-bearing liabilities decreased faster relative to the decline in rates earned on interest-earning assets. These increases in net interest income were offset partially by lower loan balances, which included the effect of lower customer demand, repayments and charge-offs.

2008 compared with 2007

Total net revenue of $67.3 billion was down $4.1 billion, or 6%, from the prior year. The decline resulted from the extremely challenging business environment for financial services firms in 2008. Principal transactions revenue decreased significantly and included net markdowns on mortgage-related positions and leveraged lending funded and unfunded commitments, losses on preferred securities of Fannie Mae and Freddie Mac, and losses on private equity investments. Also contributing to the decline in total net revenue were losses and markdowns recorded in other income, including the Firm's share of Bear Stearns' losses from April 8 to May 30, 2008. These declines were largely offset by higher net interest income, proceeds from the sale of Visa shares in its initial public offering, and the gain on the dissolution of the Chase Paymentech joint venture.

Investment banking fees were down from the record level of the prior year due to lower debt underwriting fees, as well as lower advisory and equity underwriting fees, both of which were at record levels in 2007. These declines were attributable to reduced market activity. For a further discussion of investment banking fees, which are primarily recorded in IB, see IB segment results on pages 63–65 of this Annual Report.

In 2008, principal transactions revenue declined by $19.7 billion from the prior year. Trading revenue decreased by $14.5 billion to a negative $9.8 billion, compared with positive $4.7 billion in 2007. The decline in trading revenue was largely driven by net markdowns of $5.9 billion on mortgage-related exposures, compared with $1.4 billion in net markdowns in the prior year; net markdowns of $4.7 billion on leveraged lending funded and unfunded commitments, compared with $1.3 billion in net markdowns in the prior year; losses of $1.1 billion on preferred securities of Fannie Mae and Freddie Mac; and weaker equity trading results, compared with a record level in 2007. In addition, trading revenue was adversely affected by additional losses and costs to reduce risk related to Bear Stearns positions. Partially offsetting the decline in trading revenue were record results in rates and currencies, credit trading, commodities and emerging markets, as well as strong Equity Markets client revenue; and total gains of $2.0 billion from the widening of the Firm's credit spread on certain structured liabilities and derivatives, compared with $1.3 billion in 2007. Private equity results also declined substantially from the prior year, recording losses of $908 million in 2008, compared with gains of $4.3 billion in 2007. In addition, the first quarter of 2007 included a fair value adjustment related to the adoption of new FASB guidance on fair value measurement. For a further discussion of principal transactions revenue, see IB and Corporate/Private Equity segment results on pages 63–65 and 82–83, respectively, and Note 3 on pages 156–173 of this Annual Report.

Lending- and deposit-related fees rose from 2007, predominantly resulting from higher deposit-related fees and the impact of the Washington Mutual transaction. For a further discussion of Lending- and deposit-related fees, which are mostly recorded in RFS, TSS and CB, see the RFS segment results on pages 66–71, the TSS segment results on pages 77–78 and the CB segment results on pages 75–76 of this Annual Report.

The decline in asset management, administration and commissions revenue compared with 2007 was driven by lower asset management fees in AM, due to lower performance fees and the effect of lower market levels. This decline was partially offset by an increase in commissions revenue, related predominantly to higher brokerage transaction volume within IB's Equity Markets revenue, which included additions from Bear Stearns' Prime Services business; and higher administration fees in TSS, driven by wider spreads in securities lending and increased product usage by new and existing clients. For additional information on these fees and commissions, see the segment discussions for IB on pages 63–65, RFS on pages 66–71, TSS on pages 77–78 and AM on pages 79–81 of this Annual Report.

The increase in securities gains compared with the prior year was due to the repositioning of the Corporate investment securities portfolio, as part of managing the structural interest rate risk of the

Firm; and higher gains from the sale of MasterCard shares. For a further discussion of securities gains, which are mostly recorded in the Firm's Corporate/Private Equity business, see the Corporate/Private Equity segment discussion on pages 82–83 of this Annual Report.

Mortgage fees and related income increased from the prior year, driven by higher net mortgage servicing revenue, which benefited from an improvement in mortgage servicing rights ("MSR") risk management results and increased loan servicing revenue. Mortgage production revenue increased slightly, as growth in originations was predominantly offset by markdowns on the mortgage warehouse and increased losses related to the repurchase of previously sold loans. For a discussion of mortgage fees and related income, which is recorded primarily in RFS's Consumer Lending business, see the Consumer Lending discussion on pages 68–71 of this Annual Report.

Credit card income rose compared with the prior year, driven by increased interchange income, due to higher customer charge volume in CS and higher debit card transaction volume in RFS; the impact of the Washington Mutual transaction; and increased servicing fees resulting from a higher level of securitized receivables. These results were partially offset by increases in volume-driven payments to partners and expense related to rewards programs. For a further discussion of credit card income, see CS's segment results on pages 72–74 of this Annual Report.

Other income increased compared with the prior year, due predominantly to the proceeds from the sale of Visa shares in its initial public offering of $1.5 billion, the gain on the dissolution of the Chase Paymentech joint venture of $1.0 billion, and gains on sales of certain other assets. These proceeds and gains were partially offset by lower valuations on certain investments, including seed capital in AM; a $464 million charge related to the offer to repurchase auction-rate securities at par; losses of $423 million reflecting the Firm's 49.4% ownership in Bear Stearns' losses from April 8 to May 30, 2008; and lower net securitization income in CS.

Net interest income increased from the prior year driven, in part, by the Washington Mutual transaction, which contributed to higher average loans and deposits, and, to a lesser extent, by the Bear Stearns merger. The Bear Stearns Prime Services business contributed to higher net interest income, as this business increased average balances in other interest-earning assets (primarily customer receivables) and other interest-bearing liabilities (primarily customer payables). The Firm's interest-earning assets were $1.4 trillion, and the net yield on those assets, on an FTE basis, was 2.87%, an increase of 48 basis points from 2007. Excluding the impact of the Washington Mutual transaction and the Bear Stearns merger, the increase in net interest income in 2008 was driven by a wider net interest margin, which reflected the overall decline in market interest rates during the year. The decline in rates had a positive effect on the net interest margin, as rates paid on the Firm's interest-bearing liabilities decreased faster relative to the decrease in rates earned on interest-earning assets. Growth in consumer and wholesale loan balances also contributed to the increase in net interest income.

Provision for credit losses

Year ended December 31, (in millions)	2009	2008	2007
Wholesale	**$ 3,974**	$ 3,327	$ 934
Consumer	**28,041**	17,652	5,930
Total provision for credit losses	**$ 32,015**	$ 20,979	$ 6,864

2009 compared with 2008

The provision for credit losses in 2009 rose by $11.0 billion compared with the prior year, predominantly due to a significant increase in the consumer provision. The prior year included a $1.5 billion charge to conform Washington Mutual's allowance for loan losses, which affected both the consumer and wholesale portfolios. For the purpose of the following analysis, this charge is excluded. The consumer provision reflected additions to the allowance for loan losses for the home equity, mortgage and credit card portfolios, as weak economic conditions, housing price declines and higher unemployment rates continued to drive higher estimated losses for these portfolios. Included in the 2009 addition to the allowance for loan losses was a $1.6 billion provision related to estimated deterioration in the Washington Mutual purchased credit-impaired portfolio. The wholesale provision increased from the prior year, reflecting continued weakness in the credit environment in 2009 compared with the prior year. For a more detailed discussion of the loan portfolio and the allowance for loan losses, see the segment discussions for RFS on pages 66–71, CS on pages 72–74, IB on pages 63–65 and CB on pages 75–76, and the Allowance for Credit Losses section on pages 123–125 of this Annual Report.

2008 compared with 2007

The provision for credit losses in 2008 rose by $14.1 billion compared with the prior year, due to increases in both the consumer and wholesale provisions. The increase in the consumer provision reflected higher estimated losses for home equity and mortgages resulting from declining housing prices; an increase in estimated losses for the auto, student and business banking loan portfolios; and an increase in the allowance for loan losses and higher charge-offs of credit card loans. The increase in the wholesale provision was driven by a higher allowance resulting from a weakening credit environment and growth in retained loans. The wholesale provision in the first quarter of 2008 also included the effect of the transfer of $4.9 billion of funded and unfunded leveraged lending commitments to retained loans from the held-for-sale portfolio. In addition, in 2008 both the consumer and wholesale provisions were affected by a $1.5 billion charge to conform assets acquired from Washington Mutual to the Firm's loan loss methodologies. For a more detailed discussion of the loan portfolio and the allowance for loan losses, see the segment discussions for RFS on pages 66–71, CS on pages 72–74, IB on pages 63–65 and CB on pages 75–76, and the Credit Risk Management section on pages 101–125 of this Annual Report.

Noninterest expense

The following table presents the components of noninterest expense.

Year ended December 31, (in millions)	2009	2008	2007
Compensation expense	**$ 26,928**	$ 22,746	$ 22,689
Noncompensation expense:			
Occupancy expense	**3,666**	3,038	2,608
Technology, communications and equipment expense	**4,624**	4,315	3,779
Professional & outside services	**6,232**	6,053	5,140
Marketing	**1,777**	1,913	2,070
Other expense[a][b]	**7,594**	3,740	3,814
Amortization of intangibles	**1,050**	1,263	1,394
Total noncompensation expense	**24,943**	20,322	18,805
Merger costs	**481**	432	209
Total noninterest expense	**$ 52,352**	$ 43,500	$ 41,703

(a) Includes a $675 million FDIC special assessment in 2009.
(b) Includes foreclosed property expense of $1.4 billion, $213 million and $56 million for 2009, 2008 and 2007, respectively. For additional information regarding foreclosed property, see Note 13 on pages 200–204 of this Annual Report.

2009 compared with 2008

Total noninterest expense was $52.4 billion, up $8.9 billion, or 20%, from the prior year. The increase was driven by the impact of the Washington Mutual transaction, higher performance-based compensation expense, higher FDIC-related costs and increased mortgage servicing and default-related expense. These items were offset partially by lower headcount-related expense, including salary and benefits but excluding performance-based incentives, and other noncompensation costs related to employees.

Compensation expense increased in 2009 compared with the prior year, reflecting higher performance-based incentives, as well as the impact of the Washington Mutual transaction. Excluding these two items, compensation expense decreased as a result of a reduction in headcount, particularly in the wholesale businesses and in Corporate.

Noncompensation expense increased from the prior year, due predominantly to the following: the impact of the Washington Mutual transaction; higher ongoing FDIC insurance premiums and an FDIC special assessment of $675 million recognized in the second quarter of 2009; higher mortgage servicing and default-related expense, which included an increase in foreclosed property expense of $1.2 billion; higher litigation costs; and the effect of the dissolution of the Chase Paymentech Solutions joint venture. The increase was partially offset by lower headcount-related expense, particularly in IB, TSS and AM; a decrease in amortization of intangibles, predominantly related to purchased credit card relationships; lower mortgage reinsurance losses; and a decrease in credit card marketing expense. For a discussion of amortization of intangibles, refer to Note 17 on pages 222–225 of this Annual Report.

For information on merger costs, refer to Note 10 on page 194 of this Annual Report.

2008 compared with 2007

Total noninterest expense for 2008 was $43.5 billion, up $1.8 billion, or 4%, from the prior year. The increase was driven by the additional operating costs related to the Washington Mutual transaction and Bear Stearns merger and investments in the businesses, partially offset by lower performance-based incentives.

Compensation expense increased slightly from the prior year, predominantly driven by investments in the businesses, including headcount additions associated with the Bear Stearns merger and Washington Mutual transaction, largely offset by lower performance-based incentives.

Noncompensation expense increased from the prior year as a result of the Bear Stearns merger and Washington Mutual transaction. Excluding the effect of these transactions, noncompensation expense decreased due to a net reduction in other expense related to litigation; lower credit card and consumer lending marketing expense; and a decrease in the amortization of intangibles, as certain purchased credit card relationships were fully amortized in 2007, and the amortization rate for core deposit intangibles declined in accordance with the amortization schedule. These decreases were offset partially by increases in professional & outside services, driven by investments in new product platforms in TSS, and business and volume growth in CS credit card processing and IB brokerage, clearing and exchange transaction processing. Also contributing to the increases were the following: an increase in other expense due to higher mortgage reinsurance losses and mortgage servicing expense due to increased delinquencies and defaults in RFS; an increase in technology, communications and equipment expense, reflecting higher depreciation expense on owned automobiles subject to operating leases in RFS, and other technology-related investments across the businesses; and an increase in occupancy expense, partly related to the expansion of RFS's retail distribution network. For a further discussion of amortization of intangibles, refer to Note 17 on pages 222–225 of this Annual Report.

For information on merger costs, refer to Note 10 on page 194 of this Annual Report.

Income tax expense

The following table presents the Firm's income before income tax expense/(benefit) and extraordinary gain, income tax expense/(benefit) and effective tax rate.

Year ended December 31, (in millions, except rate)	**2009**	2008	2007
Income before income tax expense/ (benefit) and extraordinary gain	**$ 16,067**	$ 2,773	$ 22,805
Income tax expense/(benefit)	**4,415**	(926)	7,440
Effective tax rate	**27.5%**	(33.4)%	32.6%

2009 compared with 2008

The change in the effective tax rate compared with the prior year was primarily the result of higher reported pretax income and changes in the proportion of income subject to U.S. federal and state and local taxes. Benefits related to tax-exempt income, business tax credits and tax audit settlements increased in 2009 relative to 2008; however, the impact of these items on the effective tax rate was reduced by the significantly higher level of pretax income in 2009. In addition, 2008 reflected the realization of benefits of $1.1 billion from the release of deferred tax liabilities associated with the undistributed earnings of certain non-U.S. subsidiaries that were deemed to be reinvested indefinitely. For a further discussion of income taxes, see Critical Accounting Estimates Used by the Firm on pages 135–139 and Note 27 on pages 234–236 of this Annual Report.

2008 compared with 2007

The decrease in the effective tax rate in 2008 compared with the prior year was the result of significantly lower reported pretax income, combined with changes in the proportion of income subject to U.S. federal taxes. Also contributing to the decrease in the effective tax rate was increased business tax credits and the realization of a $1.1 billion benefit from the release of deferred tax liabilities. These deferred tax liabilities were associated with the undistributed earnings of certain non-U.S. subsidiaries that were deemed to be reinvested indefinitely. These decreases were partially offset by changes in state and local taxes, and equity losses representing the Firm's 49.4% ownership interest in Bear Stearns' losses from April 8 to May 30, 2008, for which no income tax benefit was recorded.

Extraordinary gain

On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual. This transaction was accounted for under the purchase method of accounting for business combinations. The adjusted net asset value of the banking operations after purchase accounting adjustments was higher than the consideration paid by JPMorgan Chase, resulting in an extraordinary gain. The preliminary gain recognized in 2008 was $1.9 billion. In the third quarter of 2009, the Firm recognized a $76 million increase in the extraordinary gain associated with the final purchase accounting adjustments for the acquisition. For a further discussion of the Washington Mutual transaction, see Note 2 on pages 151–156 of this Annual Report.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its consolidated financial statements using accounting principles generally accepted in the United States of America ("U.S. GAAP"); these financial statements appear on pages 146–149 of this Annual Report. That presentation, which is referred to as "reported basis," provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications that assume credit card loans securitized by CS remain on the balance sheets, and presents revenue on a FTE basis. These adjustments do not have any impact on net income as reported by the lines of business or by the Firm as a whole.

The presentation of CS results on a managed basis assumes that credit card loans that have been securitized and sold in accordance with U.S. GAAP remain on the Consolidated Balance Sheets, and that the earnings on the securitized loans are classified in the same manner as the earnings on retained loans recorded on the Consolidated Balance Sheets. JPMorgan Chase uses the concept of managed basis to evaluate the credit performance and overall financial performance of the entire managed credit card portfolio. Operations are funded and decisions are made about allocating resources, such as employees and capital, based on managed financial information. In addition, the same underwriting standards and ongoing risk monitoring are used for both loans on the Consolidated Balance Sheets and securitized loans. Although securitizations result in the sale of credit card receivables to a trust, JPMorgan Chase retains the ongoing customer relationships, as the customers may continue to use their credit cards; accordingly, the customer's credit performance will affect both the securitized loans and the loans retained on the Consolidated Balance Sheets. JPMorgan Chase believes managed basis information is useful to investors, enabling them to understand both the credit risks associated with the loans reported on the Consolidated Balance Sheets and the Firm's retained interests in securitized loans. For a reconciliation of reported to managed basis results for CS, see CS segment results on pages 72–74 of this Annual Report. For information regarding the securitization process, and loans and residual interests sold and securitized, see Note 15 on pages 206–213 of this Annual Report.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

(Table continues on next page)

Year ended December 31, (in millions, except per share and ratio data)	2009 Reported results	2009 Credit card (d)	2009 Fully tax-equivalent adjustments	2009 Managed basis	2008 Reported results	2008 Credit card (d)	2008 Fully tax-equivalent adjustments	2008 Managed basis
Revenue								
Investment banking fees	**$ 7,087**	**$ —**	**$ —**	**$ 7,087**	$ 5,526	$ —	$ —	$ 5,526
Principal transactions	**9,796**	**—**	**—**	**9,796**	(10,699)	—	—	(10,699)
Lending- and deposit-related fees	**7,045**	**—**	**—**	**7,045**	5,088	—	—	5,088
Asset management, administration and commissions	**12,540**	**—**	**—**	**12,540**	13,943	—	—	13,943
Securities gains	**1,110**	**—**	**—**	**1,110**	1,560	—	—	1,560
Mortgage fees and related income	**3,678**	**—**	**—**	**3,678**	3,467	—	—	3,467
Credit card income	**7,110**	**(1,494)**	**—**	**5,616**	7,419	(3,333)	—	4,086
Other income	**916**	**—**	**1,440**	**2,356**	2,169	—	1,329	3,498
Noninterest revenue	**49,282**	**(1,494)**	**1,440**	**49,228**	28,473	(3,333)	1,329	26,469
Net interest income	**51,152**	**7,937**	**330**	**59,419**	38,779	6,945	579	46,303
Total net revenue	**100,434**	**6,443**	**1,770**	**108,647**	67,252	3,612	1,908	72,772
Noninterest expense	**52,352**	**—**	**—**	**52,352**	43,500	—	—	43,500
Pre-provision profit	**48,082**	**6,443**	**1,770**	**56,295**	23,752	3,612	1,908	29,272
Provision for credit losses	**32,015**	**6,443**	**—**	**38,458**	19,445	3,612	—	23,057
Provision for credit losses – accounting conformity[a]	**—**	**—**	**—**	**—**	1,534	—	—	1,534
Income before income tax expense/ (benefit) and extraordinary gain	**16,067**	**—**	**1,770**	**17,837**	2,773	—	1,908	4,681
Income tax expense/(benefit)	**4,415**	**—**	**1,770**	**6,185**	(926)	—	1,908	982
Income before extraordinary gain	**11,652**	**—**	**—**	**11,652**	3,699	—	—	3,699
Extraordinary gain	**76**	**—**	**—**	**76**	1,906	—	—	1,906
Net income	**$ 11,728**	**$ —**	**$ —**	**$ 11,728**	$ 5,605	$ —	$ —	$ 5,605
Diluted earnings per share[b][c]	**$ 2.24**	**$ —**	**$ —**	**$ 2.24**	$ 0.81	$ —	$ —	$ 0.81
Return on assets[c]	**0.58%**	**NM**	**NM**	**0.55%**	0.21%	NM	NM	0.20%
Overhead ratio	**52**	**NM**	**NM**	**48**	65	NM	NM	60
Loans – period-end	**$ 633,458**	**$ 84,626**	**$ —**	**$ 718,084**	$ 744,898	$ 85,571	$ —	$ 830,469
Total assets – average	**2,024,201**	**82,233**	**—**	**2,106,434**	1,791,617	76,904	—	1,868,521

(a) 2008 included an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual's banking operations.
(b) Effective January 1, 2009, the Firm implemented new FASB guidance for participating securities. Accordingly, prior-period amounts have been revised. For further discussion of the guidance, see Note 25 on page 232 of this Annual Report.
(c) Based on income before extraordinary gain.
(d) See pages 72–74 of this Annual Report for a discussion of the effect of credit card securitizations on CS.

On January 1, 2010, the Firm adopted the new consolidation accounting guidance for VIE's. As the Firm will be deemed to be the primary beneficiary of its credit card securitization trusts as a result of this guidance, the Firm will consolidate the assets and liabilities of these credit card securitization trusts at their carrying values on January 1, 2010, and credit card–related income and credit costs associated with these securitization activities will be prospectively recorded on the 2010 Consolidated Statements of Income in the same classifications that are currently used to report such items on a managed basis. For additional information on the new accounting guidance, see "Accounting and reporting developments" on pages 140–142 of this Annual Report.

Total net revenue for each of the business segments and the Firm is presented on a FTE basis. Accordingly, investments that receive tax credits and revenue from tax-exempt securities are presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources.

The corresponding income tax impact related to these items is recorded within income tax expense.

Tangible common equity ("TCE") represents common stockholders' equity (i.e., total stockholders' equity less preferred stock) less identifiable intangible assets (other than MSRs) and goodwill, net of related deferred tax liabilities. ROTCE, a non-GAAP financial ratio, measures the Firm's earnings as a percentage of TCE and is, in management's view, another meaningful measure to assess the Firm's use of equity.

Management also uses certain non-GAAP financial measures at the business-segment level, because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and therefore facilitate a comparison of the business segment with the performance of its competitors.

(Table continued from previous page)

	2007			
	Reported results	Credit card[d]	Fully tax-equivalent adjustments	Managed basis
	$ 6,635	$ —	$ —	$ 6,635
	9,015	—	—	9,015
	3,938	—	—	3,938
	14,356	—	—	14,356
	164	—	—	164
	2,118	—	—	2,118
	6,911	(3,255)	—	3,656
	1,829	—	683	2,512
	44,966	(3,255)	683	42,394
	26,406	5,635	377	32,418
	71,372	2,380	1,060	74,812
	41,703	—	—	41,703
	29,669	2,380	1,060	33,109
	6,864	2,380	—	9,244
	—	—	—	—
	22,805	—	1,060	23,865
	7,440	—	1,060	8,500
	15,365	—	—	15,365
	—	—	—	—
	$ 15,365	$ —	$ —	$ 15,365
	$ 4.33	$ —	$ —	$ 4.33
	1.06%	NM	NM	1.01%
	58	NM	NM	56
	$ 519,374	$ 72,701	$ —	$ 592,075
	1,455,044	66,780	—	1,521,824

Calculation of certain U.S. GAAP and non-GAAP metrics

The table below reflects the formulas used to calculate both the following U.S. GAAP and non-GAAP measures.

Return on common equity
Net income* / Average common stockholders' equity

Return on tangible common equity[e]
Net income* / Average tangible common equity

Return on assets
Reported net income / Total average assets
Managed net income / Total average managed assets[f] (including average securitized credit card receivables)

Overhead ratio
Total noninterest expense / Total net revenue

* Represents net income applicable to common equity

(e) The Firm uses ROTCE, a non-GAAP financial measure, to evaluate the Firm's use of equity and to facilitate comparisons with competitors. Refer to the following page for the calculation of average tangible common equity.

(f) The Firm uses return on managed assets, a non-GAAP financial measure, to evaluate the overall performance of the managed credit card portfolio, including securitized credit card loans.

Average tangible common equity

Year ended December 31, (in millions)	2009	2008
Common stockholders' equity	**$ 145,903**	$129,116
Less: Goodwill	**48,254**	46,068
Less: Certain identifiable intangible assets	**5,095**	5,779
Add: Deferred tax liabilities[(a)]	**2,547**	2,369
TCE	**$ 95,101**	$ 79,638

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in non-taxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Impact on ROE of redemption of TARP preferred stock issued to the U.S. Treasury

The calculation of 2009 net income applicable to common equity includes a one-time, noncash reduction of $1.1 billion resulting from the repayment of TARP preferred capital. Excluding this reduction, ROE would have been 7% for 2009. The Firm views adjusted ROE, a non-GAAP financial measure, as meaningful because it enables the comparability to prior periods.

Year ended December 31, 2009 (in millions, except ratios)	As reported	Excluding the TARP redemption
Return on equity		
Net income	$ 11,728	$ 11,728
Less: Preferred stock dividends	1,327	1,327
Less: Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	1,112	—
Net income applicable to common equity	$ 9,289	$ 10,401
Average common stockholders' equity	$ 145,903	$ 145,903
ROE	6%	7%

Impact on diluted earnings per share of redemption of TARP preferred stock issued to the U.S. Treasury

Net income applicable to common equity for the year ended December 31, 2009, included a one-time, noncash reduction of approximately $1.1 billion resulting from the repayment of TARP preferred capital. The following table presents the effect on net income applicable to common stockholders and the $0.27 reduction to diluted earnings per share for the year ended December 31, 2009.

Year ended December 31, 2009 (in millions, except per share)	As reported	Effect of TARP redemption
Diluted earnings per share		
Net income	$ 11,728	$ —
Less: Preferred stock dividends	1,327	—
Less: Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	1,112	1,112
Net income applicable to common equity	$ 9,289	$ (1,112)
Less: Dividends and undistributed earnings allocated to participating securities	515	(62)
Net income applicable to common stockholders	$ 8,774	$ (1,050)
Total weighted average diluted shares outstanding	3,879.7	3,879.7
Net income per share	$ 2.26	$ (0.27)

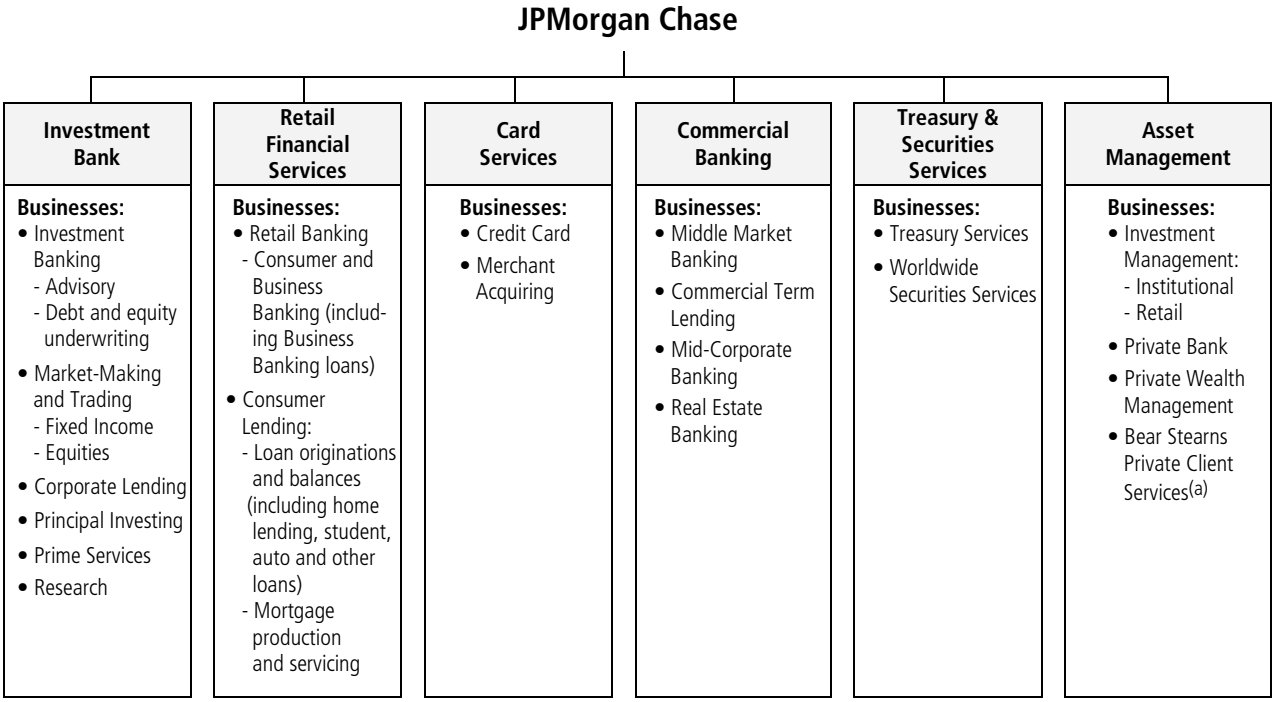
Other financial measures

The Firm also discloses the allowance for loan losses to total retained loans, excluding home lending purchased credit-impaired loans and loans held by the Washington Mutual Master Trust. For a further discussion of this credit metric, see Allowance for Credit Losses on pages 123–125 of this Annual Report.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line-of-business basis. The business segment financial results presented reflect the current organization of JPMorgan Chase. There are six major reportable business segments: the Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate/Private Equity segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis.



(a) Bear Stearns Private Client Services was renamed to JPMorgan Securities at the beginning of 2010.

Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies. Business segment reporting methodologies used by the Firm are discussed below. The Firm continues to assess the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing

Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Treasury group within the Corporate/Private Equity business segment. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment's stand-alone peers. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO"). Business segments may retain certain interest rate exposures, subject to management approval, that would be expected in the normal operation of a similar peer business.

Capital allocation

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, economic risk measures and regulatory capital requirements. The amount of capital assigned to each business is referred to as equity. For a further discussion, see Capital management–Line of business equity on pages 92–93 of this Annual Report.

Expense allocation

Where business segments use services provided by support units within the Firm, the costs of those support units are allocated to the business segments. The expense is allocated based on their

actual cost or the lower of actual cost or market, as well as upon usage of the services provided. In contrast, certain other expense related to certain corporate functions, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Retained expense includes: parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other one-time items not aligned with the business segments.

Segment results – Managed basis[a]

The following table summarizes the business segment results for the periods indicated.

Year ended December 31,	Total net revenue			Noninterest expense		
(in millions)	**2009**	2008	2007	**2009**	2008	2007
Investment Bank[b]	**$ 28,109**	$ 12,335	$18,291	**$ 15,401**	$ 13,844	$ 13,074
Retail Financial Services	**32,692**	23,520	17,305	**16,748**	12,077	9,905
Card Services	**20,304**	16,474	15,235	**5,381**	5,140	4,914
Commercial Banking	**5,720**	4,777	4,103	**2,176**	1,946	1,958
Treasury & Securities Services	**7,344**	8,134	6,945	**5,278**	5,223	4,580
Asset Management	**7,965**	7,584	8,635	**5,473**	5,298	5,515
Corporate/Private Equity[b]	**6,513**	(52)	4,298	**1,895**	(28)	1,757
Total	**$ 108,647**	$ 72,772	$74,812	**$ 52,352**	$ 43,500	$ 41,703

Year ended December 31,	Net income/(loss)			Return on equity		
(in millions)	**2009**	2008	2007	**2009**	2008	2007
Investment Bank[b]	**$ 6,899**	$ (1,175)	$ 3,139	**21%**	(5)%	15%
Retail Financial Services	**97**	880	2,925	**—**	5	18
Card Services	**(2,225)**	780	2,919	**(15)**	5	21
Commercial Banking	**1,271**	1,439	1,134	**16**	20	17
Treasury & Securities Services	**1,226**	1,767	1,397	**25**	47	47
Asset Management	**1,430**	1,357	1,966	**20**	24	51
Corporate/Private Equity[b][c]	**3,030**	557	1,885	**NM**	NM	NM
Total	**$ 11,728**	$ 5,605	$15,365	**6%**	4%	13%

(a) Represents reported results on a tax-equivalent basis and excludes the impact of credit card securitizations.

(b) In the second quarter of 2009, IB began reporting its credit reimbursement from TSS as a component of its total net revenue, whereas TSS continues to report its credit reimbursement to IB as a separate line item on its income statement (not part of total net revenue). Corporate/Private Equity includes an adjustment to offset IB's inclusion of the credit reimbursement in total net revenue. Prior periods have been revised for IB and Corporate/Private Equity to reflect this presentation.

(c) Net income included an extraordinary gain of $76 million and $1.9 billion related to the Washington Mutual transaction for 2009 and 2008, respectively.

J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The Investment Bank's clients are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage, research and thought leadership. IB also commits the Firm's own capital to principal investing and trading activities on a limited basis.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2009	2008[e]	2007
Revenue			
Investment banking fees	**$ 7,169**	$ 5,907	$ 6,616
Principal transactions[a]	**8,154**	(7,042)	4,409
Lending- and deposit-related fees	**664**	463	446
Asset management, administration and commissions	**2,650**	3,064	2,701
All other income[b]	**(115)**	(341)	43
Noninterest revenue	**18,522**	2,051	14,215
Net interest income	**9,587**	10,284	4,076
Total net revenue[c]	**28,109**	12,335	18,291
Provision for credit losses	**2,279**	2,015	654
Noninterest expense			
Compensation expense	**9,334**	7,701	7,965
Noncompensation expense	**6,067**	6,143	5,109
Total noninterest expense	**15,401**	13,844	13,074
Income/(loss) before income tax expense/(benefit)	**10,429**	(3,524)	4,563
Income tax expense/(benefit)[d]	**3,530**	(2,349)	1,424
Net income/(loss)	**$ 6,899**	$ (1,175)	$ 3,139
Financial ratios			
ROE	**21%**	(5)%	15%
ROA	**0.99**	(0.14)	0.45
Overhead ratio	**55**	112	71
Compensation expense as % of total net revenue	**33**	62	44

(a) The 2009 results reflect modest net gains on legacy leveraged lending and mortgage-related positions, compared with net markdowns of $10.6 billion and $2.7 billion in 2008 and 2007, respectively.

(b) TSS was charged a credit reimbursement related to certain exposures managed within IB credit portfolio on behalf of clients shared with TSS. IB recognizes this credit reimbursement in its credit portfolio business in all other income. Prior periods have been revised to conform to the current presentation.

(c) Total net revenue included tax-equivalent adjustments, predominantly due to income tax credits related to affordable housing and alternative energy investments as well as tax-exempt income from municipal bond investments of $1.4 billion, $1.7 billion and $927 million for 2009, 2008 and 2007, respectively.

(d) The income tax benefit in 2008 includes the result of reduced deferred tax liabilities on overseas earnings.

(e) Results for 2008 include seven months of the combined Firm's (JPMorgan Chase & Co.'s and Bear Stearns') results and five months of heritage JPMorgan Chase results. 2007 reflects heritage JPMorgan Chase & Co. results only.

The following table provides IB's total net revenue by business segment.

Year ended December 31, (in millions)	2009	2008[d]	2007
Revenue by business			
Investment banking fees:			
Advisory	**$ 1,867**	$ 2,008	$ 2,273
Equity underwriting	**2,641**	1,749	1,713
Debt underwriting	**2,661**	2,150	2,630
Total investment banking fees	**7,169**	5,907	6,616
Fixed income markets[a]	**17,564**	1,957	6,339
Equity markets[b]	**4,393**	3,611	3,903
Credit portfolio[c]	**(1,017)**	860	1,433
Total net revenue	**$ 28,109**	$12,335	$18,291
Revenue by region			
Americas	**$ 15,156**	$ 2,610	$ 8,245
Europe/Middle East/Africa	**9,790**	7,710	7,330
Asia/Pacific	**3,163**	2,015	2,716
Total net revenue	**$ 28,109**	$12,335	$18,291

(a) Fixed income markets primarily include client and portfolio management revenue related to market-making across global fixed income markets, including foreign exchange, interest rate, credit and commodities markets.

(b) Equities markets primarily include client and portfolio management revenue related to market-making across global equity products, including cash instruments, derivatives and convertibles.

(c) Credit portfolio revenue includes net interest income, fees and the impact of loan sales activity, as well as gains or losses on securities received as part of a loan restructuring, for IB's credit portfolio. Credit portfolio revenue also includes the results of risk management related to the Firm's lending and derivative activities, and changes in the credit valuation adjustment, which is the component of the fair value of a derivative that reflects the credit quality of the counterparty. Additionally, credit portfolio revenue incorporates an adjustment to the valuation of the Firm's derivative liabilities. See pages 101–125 of the Credit Risk Management section of this Annual Report for further discussion.

(d) Results for 2008 include seven months of the combined Firm's (JPMorgan Chase & Co.'s and Bear Stearns') results and five months of heritage JPMorgan Chase & Co. results. 2007 reflects heritage JPMorgan Chase & Co.'s results only.

2009 compared with 2008

Net income was $6.9 billion, compared with a net loss of $1.2 billion in the prior year. These results reflected significantly higher total net revenue, partially offset by higher noninterest expense and a higher provision for credit losses.

Total net revenue was $28.1 billion, compared with $12.3 billion in the prior year. Investment banking fees were up 21% to $7.2 billion, consisting of debt underwriting fees of $2.7 billion (up 24%), equity underwriting fees of $2.6 billion (up 51%), and advisory fees of $1.9 billion (down 7%). Fixed Income Markets revenue was $17.6 billion, compared with $2.0 billion in the prior year, reflecting improved performance across most products and modest net gains on legacy leveraged lending and mortgage-related positions, compared with net markdowns of $10.6 billion in the prior year. These results also included losses of $1.0 billion from the tightening of the Firm's credit spread on certain structured liabilities, compared with gains of $814 million in the prior year. Equity Markets revenue was $4.4 billion, up 22% from the prior year, driven by strong client revenue across products, particularly prime services, and improved trading results. These results also included losses of $536 million from the tightening of the Firm's credit spread on certain structured liabilities, compared with gains

of $510 million in the prior year. Credit Portfolio revenue was a loss of $1.0 billion versus a gain of $860 million in the prior year, driven by mark-to-market losses on hedges of retained loans compared with gains in the prior year, partially offset by the positive net impact of credit spreads on derivative assets and liabilities.

The provision for credit losses was $2.3 billion, compared with $2.0 billion in the prior year, reflecting continued weakness in the credit environment. The allowance for loan losses to end-of-period loans retained was 8.25%, compared with 4.83% in the prior year. Net charge-offs were $1.9 billion, compared with $105 million in the prior year. Total nonperforming assets were $4.2 billion, compared with $2.5 billion in the prior year.

Noninterest expense was $15.4 billion, up $1.6 billion, or 11%, from the prior year, driven by higher performance-based compensation expense, partially offset by lower headcount-related expense.

Return on Equity was 21% on $33.0 billion of average allocated capital, compared with negative 5% on $26.1 billion of average allocated capital in the prior year.

2008 compared with 2007

Net loss was $1.2 billion, a decrease of $4.3 billion from the prior year, driven by lower total net revenue, a higher provision for credit losses and higher noninterest expense, partially offset by a reduction in deferred tax liabilities on overseas earnings.

Total net revenue was $12.3 billion, down $6.0 billion, or 33%, from the prior year. Investment banking fees were $5.9 billion, down 11% from the prior year, driven by lower debt underwriting and advisory fees reflecting reduced market activity. Debt underwriting fees were $2.2 billion, down 18% from the prior year, driven by lower loan syndication and bond underwriting fees. Advisory fees of $2.0 billion declined 12% from the prior year. Equity underwriting fees were $1.7 billion, up 2% from the prior year driven by improved market share. Fixed Income Markets revenue was $2.0 billion, compared with $6.3 billion in the prior year. The decrease was driven by $5.9 billion of net markdowns on mortgage-related exposures and $4.7 billion of net markdowns on leveraged lending funded and unfunded commitments. Revenue was also adversely impacted by additional losses and costs to reduce risk related to Bear Stearns' positions. These results were offset by record performance in rates and currencies, credit trading, commodities and emerging markets as well as $814 million of gains from the widening of the Firm's credit spread on certain structured liabilities and derivatives. Equity Markets revenue was $3.6 billion, down 7% from the prior year, reflecting weak trading results, partially offset by strong client revenue across products including prime services, as well as $510 million of gains from the widening of the Firm's credit spread on certain structured liabilities and derivatives. Credit portfolio revenue was $860 million, down 40%, driven by losses from widening counterparty credit spreads.

The provision for credit losses was $2.0 billion, an increase of $1.4 billion from the prior year, predominantly reflecting a higher allowance for credit losses, driven by a weakening credit environment, as well as the effect of the transfer of $4.9 billion of funded and unfunded leveraged lending commitments to retained loans from held-for-sale in the first quarter of 2008. Net charge-offs for the year were $105 million, compared with $36 million in the prior year. Total nonperforming assets were $2.5 billion, an increase of $2.0 billion compared with the prior year, reflecting a weakening credit environment. The allowance for loan losses to average loans was 4.71% for 2008, compared with a ratio of 2.14% in the prior year.

Noninterest expense was $13.8 billion, up $770 million, or 6%, from the prior year, reflecting higher noncompensation expense driven primarily by additional expense relating to the Bear Stearns merger, offset partially by lower performance-based compensation expense.

Return on equity was negative 5% on $26.1 billion of average allocated capital, compared with 15% on $21.0 billion in the prior year.

Selected metrics

Year ended December 31, (in millions, except headcount)	2009	2008	2007
Selected balance sheet data (period-end)			
Loans:			
Loans retained[a]	**$ 45,544**	$ 71,357	$ 67,528
Loans held-for-sale and loans at fair value	**3,567**	13,660	22,283
Total loans	**49,111**	85,017	89,811
Equity	**$ 33,000**	$ 33,000	$ 21,000
Selected balance sheet data (average)			
Total assets	**$699,039**	$ 832,729	$ 700,565
Trading assets – debt and equity instruments	**273,624**	350,812	359,775
Trading assets – derivative receivables	**96,042**	112,337	63,198
Loans:			
Loans retained[a]	**62,722**	73,108	62,247
Loans held-for-sale and loans at fair value	**7,589**	18,502	17,723
Total loans	**70,311**	91,610	79,970
Adjusted assets[b]	**538,724**	679,780	611,749
Equity	**33,000**	26,098	21,000
Headcount	**24,654**	27,938	25,543

(a) Loans retained included credit portfolio loans, leveraged leases and other accrual loans, and excluded loans held-for-sale and loans at fair value.

(b) Adjusted assets, a non-GAAP financial measure, equals total assets minus (1) securities purchased under resale agreements and securities borrowed less securities sold, not yet purchased; (2) assets of variable interest entities ("VIEs"); (3) cash and securities segregated and on deposit for regulatory and other purposes; (4) goodwill and intangibles; (5) securities received as collateral; and (6) investments purchased under the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility ("AML Facility"). The amount of adjusted assets is presented to assist the reader in comparing IB's asset and capital levels to other investment banks in the securities industry. Asset-to-equity leverage ratios are commonly used as one measure to assess a company's capital adequacy. IB believes an adjusted asset amount that excludes the assets discussed above, which were considered to have a low risk profile, provides a more meaningful measure of balance sheet leverage in the securities industry.

Selected metrics

Year ended December 31, (in millions, except ratios)	2009	2008	2007
Credit data and quality statistics			
Net charge-offs	**$ 1,904**	$ 105	$ 36
Nonperforming assets:			
Nonperforming loans:			
Nonperforming loans retained[a][b]	**3,196**	1,143	303
Nonperforming loans held-for-sale and loans at fair value	**308**	32	50
Total nonperforming loans	**3,504**	1,175	353
Derivative receivables	**529**	1,079	29
Assets acquired in loan satisfactions	**203**	247	71
Total nonperforming assets	**4,236**	2,501	453
Allowance for credit losses:			
Allowance for loan losses	**3,756**	3,444	1,329
Allowance for lending-related commitments	**485**	360	560
Total allowance for credit losses	**4,241**	3,804	1,889
Net charge-off rate[a][c]	**3.04%**	0.14%	0.06%
Allowance for loan losses to period-end loans retained[a][d]	**8.25**	4.83	1.97
Allowance for loan losses to average loans retained[a][c]	**5.99**	4.71[h]	2.14
Allowance for loan losses to nonperforming loans retained[a][b]	**118**	301	439
Nonperforming loans to total period-end loans	**7.13**	1.38	0.39
Nonperforming loans to average loans	**4.98**	1.28	0.44
Market risk–average trading and credit portfolio VaR – 99% confidence level[d]			
Trading activities:			
Fixed income	**$ 221**	$ 181	$ 80
Foreign exchange	**30**	34	23
Equities	**75**	57	48
Commodities and other	**32**	32	33
Diversification[e]	**(131)**	(108)	(77)
Total trading VaR[f]	**227**	196	107
Credit portfolio VaR[g]	**101**	69	17
Diversification[e]	**(80)**	(63)	(18)
Total trading and credit portfolio VaR	**$ 248**	$ 202	$ 106

(a) Loans retained included credit portfolio loans, leveraged leases and other accrual loans, and excluded loans held-for-sale and loans accounted for at fair value.
(b) Allowance for loan losses of $1.3 billion and $430 million were held against these nonperforming loans at December 31, 2009 and 2008, respectively.
(c) Loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratio and net charge-off rate.
(d) Results for 2008 include seven months of the combined Firm's (JPMorgan Chase & Co.'s and Bear Stearns') results and five months of heritage JPMorgan Chase & Co.'s results only. 2007 reflects heritage JPMorgan Chase & Co. results. For a more complete description of value-at-risk ("VaR"), see pages 126–130 of this Annual Report.
(e) Average VaRs were less than the sum of the VaRs of their market risk components, due to risk offsets resulting from portfolio diversification. The diversification effect reflected the fact that the risks were not perfectly correlated. For further discussion of VaR, see pages 126–130 of this Annual Report. The risk of a portfolio of positions is usually less than the sum of the risks of the positions themselves.
(f) Trading VaR includes predominantly all trading activities in IB; however, particular risk parameters of certain products are not fully captured, for example, correlation risk. Trading VaR does not include VaR related to held-for-sale funded loans and unfunded commitments, nor the debit valuation adjustments ("DVA") taken on derivative and structured liabilities to reflect the credit quality of the Firm. See VaR discussion on pages 126–130 and the DVA Sensitivity table on page 130 of this Annual Report for further details. Trading VaR also does not include the MSR portfolio or VaR related to other corporate functions, such as Corporate/Private Equity. Beginning in the fourth quarter of 2008, trading VaR includes the estimated credit spread sensitivity of certain mortgage products.
(g) Included VaR on derivative credit valuation adjustments ("CVA"), hedges of the CVA and mark-to-market hedges of the retained loan portfolio, which were all reported in principal transactions revenue. This VaR does not include the retained loan portfolio.
(h) Excluding the impact of a loan originated in March 2008 to Bear Stearns, the adjusted ratio would be 4.84% for 2008. The average balance of the loan extended to Bear Stearns was $1.9 billion for 2008.

Market shares and rankings[a]

	2009		2008		2007	
December 31,	Market share	Rankings	Market share	Rankings	Market share	Rankings
Global debt, equity and equity-related	**10%**	**#1**	9%	#1	8%	#2
Global syndicated loans	**10**	**1**	11	1	13	1
Global long-term debt[b]	**9**	**1**	9	3	7	3
Global equity and equity-related[c]	**13**	**1**	10	1	9	2
Global announced M&A[d]	**24**	**3**	28	2	27	4
U.S. debt, equity and equity-related	**14**	**1**	15	2	10	2
U.S. syndicated loans	**23**	**1**	24	1	24	1
U.S. long-term debt[b]	**14**	**1**	15	2	10	2
U.S. equity and equity-related[c]	**13**	**1**	11	1	11	5
U.S. announced M&A[d]	**35**	**3**	35	2	28	3

(a) Source: Thomson Reuters. Results for 2008 are pro forma for the Bear Stearns merger. Results for 2007 represent heritage JPMorgan Chase & Co. only.
(b) Includes asset-backed securities, mortgage-backed securities and municipal securities.
(c) Includes rights offerings; U.S.- domiciled equity and equity-related transactions.
(d) Global announced M&A is based on rank value; all other rankings are based on proceeds, with full credit to each book manager/equal if joint. Because of joint assignments, market share of all participants will add up to more than 100%. Global and U.S. announced M&A market share and rankings for 2008 and 2007 include transactions withdrawn since December 31, 2008 and 2007. U.S. announced M&A represents any U.S. involvement ranking.

According to Thomson Reuters, in 2009, the Firm was ranked #1 in Global Debt, Equity and Equity-related; #1 in Global Equity and Equity-related; #1 in Global Long-Term Debt: #1 in Global Syndicated Loans and #3 in Global Announced M&A, based on volume.

According to Dealogic, the Firm was ranked #1 in Global Investment Banking Fees generated during 2009, based on revenue.

RETAIL FINANCIAL SERVICES

Retail Financial Services, which includes the Retail Banking and Consumer Lending businesses, serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking, as well as through auto dealerships and school financial-aid offices. Customers can use more than 5,100 bank branches (third-largest nationally) and 15,400 ATMs (second-largest nationally), as well as online and mobile banking around the clock. More than 23,900 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. Consumers also can obtain loans through more than 15,700 auto dealerships and nearly 2,100 schools and universities nationwide.

On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual from the FDIC for $1.9 billion through a purchase of substantially all of the assets and assumption of specified liabilities of Washington Mutual. Washington Mutual's banking operations consisted of a retail bank network of 2,244 branches, a nationwide credit card lending business, a multi-family and commercial real estate lending business, and nationwide mortgage banking activities. The transaction expanded the Firm's U.S. consumer branch network in California, Florida, Washington, Georgia, Idaho, Nevada and Oregon and created the nation's third-largest branch network.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2009	2008	2007
Revenue			
Lending- and deposit-related fees	**$ 3,969**	$ 2,546	$ 1,881
Asset management, administration and commissions	**1,674**	1,510	1,275
Mortgage fees and related income	**3,794**	3,621	2,094
Credit card income	**1,635**	939	646
Other income	**1,128**	739	883
Noninterest revenue	**12,200**	9,355	6,779
Net interest income	**20,492**	14,165	10,526
Total net revenue	**32,692**	23,520	17,305
Provision for credit losses	**15,940**	9,905	2,610
Noninterest expense			
Compensation expense	**6,712**	5,068	4,369
Noncompensation expense	**9,706**	6,612	5,071
Amortization of intangibles	**330**	397	465
Total noninterest expense	**16,748**	12,077	9,905
Income before income tax expense/(benefit)	**4**	1,538	4,790
Income tax expense/(benefit)	**(93)**	658	1,865
Net income	**$ 97**	$ 880	$ 2,925

Financial ratios			
ROE	**—%**	5%	18%
Overhead ratio	**51**	51	57
Overhead ratio excluding core deposit intangibles[(a)]	**50**	50	55

(a) Retail Financial Services uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation would result in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would therefore result in an improving overhead ratio over time, all things remaining equal. The non-GAAP ratio excludes Retail Banking's core deposit intangible amortization expense related to the Bank of New York transaction and the Bank One merger of $328 million, $394 million and $460 million for the years ended December 31, 2009, 2008 and 2007, respectively.

2009 compared with 2008

Net income was $97 million, a decrease of $783 million from the prior year, as the increase in provision for credit losses more than offset the positive impact of the Washington Mutual transaction.

Net revenue was $32.7 billion, an increase of $9.2 billion, or 39%, from the prior year. Net interest income was $20.5 billion, up by $6.3 billion, or 45%, reflecting the impact of the Washington Mutual transaction, and wider loan and deposit spreads. Noninterest revenue was $12.2 billion, up by $2.8 billion, or 30%, driven by the impact of the Washington Mutual transaction, wider margins on mortgage originations and higher net mortgage servicing revenue, partially offset by $1.6 billion in estimated losses related to the repurchase of previously sold loans.

The provision for credit losses was $15.9 billion, an increase of $6.0 billion from the prior year. Weak economic conditions and housing price declines continued to drive higher estimated losses for the home equity and mortgage loan portfolios. The provision included an addition of $5.8 billion to the allowance for loan losses, compared with an addition of $5.0 billion in the prior year. Included in the 2009 addition to the allowance for loan losses was a $1.6 billion increase related to estimated deterioration in the Washington Mutual purchased credit-impaired portfolio. To date, no charge-offs have been recorded on purchased credit-impaired loans; see page 70 of this Annual Report for the net charge-off rates, as reported. Home equity net charge-offs were $4.7 billion (4.32% excluding purchased credit-impaired loans), compared with $2.4 billion (2.39% excluding purchased credit-impaired loans) in the prior year. Subprime mortgage net charge-offs were $1.6 billion (11.86% excluding purchased credit-impaired loans), compared with $933 million (6.10% excluding purchased credit-impaired loans) in the prior year. Prime mortgage net charge-offs were $1.9 billion (3.05% excluding purchased credit-impaired loans), compared with $526 million (1.18% excluding purchased credit-impaired loans) in the prior year.

Noninterest expense was $16.7 billion, an increase of $4.7 billion, or 39%. The increase reflected the impact of the Washington Mutual transaction and higher servicing and default-related expense.

2008 compared with 2007

Net income was $880 million, a decrease of $2.0 billion, or 70%, from the prior year, as a significant increase in the provision for credit losses was partially offset by positive MSR risk management results and the positive impact of the Washington Mutual transaction.

Total net revenue was $23.5 billion, an increase of $6.2 billion, or 36%, from the prior year. Net interest income was $14.2 billion, up $3.6 billion, or 35%, benefiting from the Washington Mutual transaction, wider loan and deposit spreads, and higher loan and deposit balances. Noninterest revenue was $9.4 billion, up $2.6 billion, or 38%, as positive MSR risk management results, the impact of the Washington Mutual transaction, higher mortgage origination volume and higher deposit-related fees were partially offset by an increase in losses related to the repurchase of previously sold loans and markdowns on the mortgage warehouse.

The provision for credit losses was $9.9 billion, an increase of $7.3 billion from the prior year. Delinquency rates have increased due to overall weak economic conditions, while housing price declines have continued to drive increased loss severities, particularly for high loan-to-value home equity and mortgage loans. The provision includes $4.7 billion in additions to the allowance for loan losses for the heritage Chase home equity and mortgage portfolios. Home equity net charge-offs were $2.4 billion (2.23% net charge-off rate; 2.39% excluding purchased credit-impaired loans), compared with $564 million (0.62% net charge-off rate) in the prior year. Subprime mortgage net charge-offs were $933 million (5.49% net charge-off rate; 6.10% excluding purchased credit-impaired loans), compared with $157 million (1.55% net charge-off rate) in the prior year. Prime mortgage net charge-offs were $526 million (1.05% net charge-off rate; 1.18% excluding purchased credit-impaired loans), compared with $33 million (0.13% net charge-off rate) in the prior year. The provision for credit losses was also affected by an increase in estimated losses for the auto, student and business banking loan portfolios.

Total noninterest expense was $12.1 billion, an increase of $2.2 billion, or 22%, from the prior year, reflecting the impact of the Washington Mutual transaction, higher mortgage reinsurance losses, higher mortgage servicing expense and investments in the retail distribution network.

Selected metrics

Year ended December 31, (in millions, except headcount and ratios)	2009	2008	2007
Selected balance sheet data (period-end)			
Assets	**$ 387,269**	$ 419,831	$ 256,351
Loans:			
Loans retained	**340,332**	368,786	211,324
Loans held-for-sale and loans at fair value[a]	**14,612**	9,996	16,541
Total loans	**354,944**	378,782	227,865
Deposits	**357,463**	360,451	221,129
Equity	**25,000**	25,000	16,000
Selected balance sheet data (average)			
Assets	**$ 407,497**	$ 304,442	$ 241,112
Loans:			
Loans retained	**354,789**	257,083	191,645
Loans held-for-sale and loans at fair value[a]	**18,072**	17,056	22,587
Total loans	**372,861**	274,139	214,232
Deposits	**367,696**	258,362	218,062
Equity	**25,000**	19,011	16,000
Headcount	**108,971**	102,007	69,465
Credit data and quality statistics			
Net charge-offs	**$ 10,113**	$ 4,877	$ 1,350
Nonperforming loans:			
Nonperforming loans retained	**10,611**	6,548	2,760
Nonperforming loans held-for-sale and loans at fair value	**234**	236	68
Total nonperforming loans[b][c][d]	**10,845**	6,784	2,828
Nonperforming assets[b][c][d]	**12,098**	9,077	3,378
Allowance for loan losses	**14,776**	8,918	2,668
Net charge-off rate[f]	**2.85%**	1.90%	0.70%
Net charge-off rate excluding purchased credit-impaired loans[e][f]	**3.75**	2.08	0.70
Allowance for loan losses to ending loans retained[f]	**4.34**	2.42	1.26
Allowance for loan losses to ending loans excluding purchased credit-impaired loans[e][f]	**5.09**	3.19	1.26
Allowance for loan losses to nonperforming loans retained[b][e][f]	**124**	136	97
Nonperforming loans to total loans	**3.06**	1.79	1.24
Nonperforming loans to total loans excluding purchased credit-impaired loans	**3.96**	2.34	1.24

(a) Loans at fair value consist of prime mortgage loans originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets. These loans totaled $12.5 billion, $8.0 billion and $12.6 billion at December 31, 2009, 2008 and 2007, respectively. Average balances of these loans totaled $15.8 billion, $14.2 billion and $11.9 billion for the years ended December 31, 2009, 2008 and 2007, respectively.

(b) Excludes purchased credit-impaired loans that were acquired as part of the Washington Mutual transaction. These loans were accounted for on a pool basis, and the pools are considered to be performing.

(c) Certain of these loans are classified as trading assets on the Consolidated Balance Sheets.

(d) At December 31, 2009, 2008 and 2007, nonperforming loans and assets excluded: (1) mortgage loans insured by U.S. government agencies of $9.0 billion, $3.0 billion and $1.1 billion, respectively; (2) real estate owned insured

by U.S. government agencies of $579 million, $364 million and $452 million, respectively; and (3) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program, of $542 million, $437 million and $417 million, respectively. These amounts are excluded, as reimbursement is proceeding normally.

(e) Excludes the impact of purchased credit-impaired loans that were acquired as part of the Washington Mutual transaction. These loans were accounted for at fair value on the acquisition date, which incorporated management's estimate, as of that date, of credit losses over the remaining life of the portfolio. During 2009, an allowance for loan losses of $1.6 billion was recorded for these loans, which has also been excluded from applicable ratios. To date, no charge-offs have been recorded for these loans.

(f) Loans held-for-sale and loans accounted for at fair value were excluded when calculating the allowance coverage ratio and net charge-off rate.

Retail Banking

Selected income statement data

Year ended December 31, (in millions, except ratios)	2009	2008	2007
Noninterest revenue	**$ 7,169**	$ 4,951	$ 3,763
Net interest income	**10,781**	7,659	6,193
Total net revenue	**17,950**	12,610	9,956
Provision for credit losses	**1,142**	449	79
Noninterest expense	**10,357**	7,232	6,166
Income before income tax expense	**6,451**	4,929	3,711
Net income	**$ 3,903**	$ 2,982	$ 2,245
Overhead ratio	**58%**	57%	62%
Overhead ratio excluding core deposit intangibles[a]	**56**	54	57

(a) Retail Banking uses the overhead ratio (excluding the amortization of CDI), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation would result in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would therefore result in an improving overhead ratio over time, all things remaining equal. The non-GAAP ratio excludes Retail Banking's core deposit intangible amortization expense related to the Bank of New York transaction and the Bank One merger of $328 million, $394 million and $460 million for the years ended December 31, 2009, 2008 and 2007, respectively.

2009 compared with 2008

Retail Banking reported net income of $3.9 billion, up by $921 million, or 31%, from the prior year. Total net revenue was $18.0 billion, up by $5.3 billion, or 42%, from the prior year. The increase reflected the impact of the Washington Mutual transaction, wider deposit spreads, higher average deposit balances and higher debit card income. The provision for credit losses was $1.1 billion, compared with $449 million in the prior year, reflecting higher estimated losses in the Business Banking portfolio. Noninterest expense was $10.4 billion, up by $3.1 billion, or 43%. The increase reflected the impact of the Washington Mutual transaction, higher FDIC insurance premiums and higher headcount-related expense.

2008 compared with 2007

Retail Banking net income was $3.0 billion, up $737 million, or 33%, from the prior year. Total net revenue was $12.6 billion, up $2.7 billion, or 27%, reflecting the impact of the Washington Mutual transaction, wider deposit spreads, higher deposit-related fees, and higher deposit balances. The provision for credit losses was $449 million, compared with $79 million in the prior year, reflecting an increase in the allowance for loan losses for Business Banking loans due to higher estimated losses on the portfolio. Noninterest expense was $7.2 billion, up $1.1 billion, or 17%, from the prior year, due to the Washington Mutual transaction and investments in the retail distribution network.

Selected metrics

Year ended December 31, (in billions, except ratios and where otherwise noted)	2009	2008	2007
Business metrics			
Business banking origination volume	**$ 2.3**	$ 5.5	$ 6.9
End-of-period loans owned	**17.0**	18.4	15.6
End-of-period deposits			
Checking	**$ 121.9**	$ 109.2	$ 66.9
Savings	**153.4**	144.0	96.0
Time and other	**58.0**	89.1	48.6
Total end-of-period deposits	**333.3**	342.3	211.5
Average loans owned	**$ 17.8**	$ 16.7	$ 14.9
Average deposits			
Checking	**$ 113.5**	$ 77.1	$ 65.8
Savings	**150.9**	114.3	97.1
Time and other	**76.4**	53.2	43.8
Total average deposits	**340.8**	244.6	206.7
Deposit margin	**2.96%**	2.89%	2.72%
Average assets	**$ 28.9**	$ 26.3	$ 25.0
Credit data and quality statistics (in millions, except ratio)			
Net charge-offs	**$ 842**	$ 346	$ 163
Net charge-off rate	**4.73%**	2.07%	1.09%
Nonperforming assets	**$ 839**	$ 424	$ 294

Retail branch business metrics

Year ended December 31,	2009	2008	2007
Investment sales volume (in millions)	**$ 21,784**	$ 17,640	$ 18,360
Number of:			
Branches	**5,154**	5,474	3,152
ATMs	**15,406**	14,568	9,186
Personal bankers	**17,991**	15,825	9,650
Sales specialists	**5,912**	5,661	4,105
Active online customers (in thousands)	**15,424**	11,710	5,918
Checking accounts (in thousands)	**25,712**	24,499	10,839

Consumer Lending

Selected income statement data

Year ended December 31, (in millions, except ratios)	2009	2008	2007
Noninterest revenue	**$ 5,031**	$ 4,404	$ 3,016
Net interest income	**9,711**	6,506	4,333
Total net revenue	**14,742**	10,910	7,349
Provision for credit losses	**14,798**	9,456	2,531
Noninterest expense	**6,391**	4,845	3,739
Income/(loss) before income tax expense/(benefit)	**(6,447)**	(3,391)	1,079
Net income/(loss)	**$ (3,806)**	$ (2,102)	$ 680
Overhead ratio	**43%**	44%	51%

2009 compared with 2008

Consumer Lending reported a net loss of $3.8 billion, compared with a net loss of $2.1 billion in the prior year.

Net revenue was $14.7 billion, up by $3.8 billion, or 35%, from the prior year. The increase was driven by the impact of the Washington Mutual transaction, wider loan spreads and higher mortgage fees and related income, partially offset by lower heritage Chase loan balances. Mortgage production revenue was $503 million,

down $395 million from the prior year, as an increase in losses from the repurchase of previously-sold loans was predominantly offset by wider margins on new originations. Operating revenue, which represents loan servicing revenue net of other changes in fair value of the MSR asset, was $1.7 billion, compared with $1.2 billion in the prior year, reflecting growth in average third-party loans serviced as a result of the Washington Mutual transaction. MSR risk management results were $1.6 billion, compared with $1.5 billion in the prior year, reflecting the positive impact of a decrease in estimated future mortgage prepayments during 2009.

The provision for credit losses was $14.8 billion, compared with $9.5 billion in the prior year, reflecting continued weakness in the home equity and mortgage loan portfolios (see Retail Financial Services discussion of the provision for credit losses, above on page 66 and Allowance for Credit Losses on pages 123–125 of this Annual Report, for further detail).

Noninterest expense was $6.4 billion, up by $1.5 billion, or 32%, from the prior year, reflecting higher servicing and default-related expense and the impact of the Washington Mutual transaction.

2008 compared with 2007

Consumer Lending net loss was $2.1 billion, compared with net income of $680 million in the prior year. Total net revenue was $10.9 billion, up $3.6 billion, or 48%, driven by higher mortgage fees and related income, the impact of the Washington Mutual transaction, higher loan balances and wider loan spreads.

The increase in mortgage fees and related income was primarily driven by higher net mortgage servicing revenue. Mortgage production revenue of $898 million was up $18 million, as higher mortgage origination volume was predominantly offset by an increase in losses related to the repurchase of previously sold loans and markdowns of the mortgage warehouse. Operating revenue, which represents loan servicing revenue net of other changes in fair value of the MSR asset was $1.2 billion, an increase of $403 million, or 50%, from the prior year reflecting growth in average third-party loans serviced which increased 42%, primarily due to the Washington Mutual transaction. MSR risk management results were $1.5 billion, compared with $411 million in the prior year.

The provision for credit losses was $9.5 billion, compared with $2.5 billion in the prior year. The provision reflected weakness in the home equity and mortgage portfolios (see Retail Financial Services discussion of the provision for credit losses for further detail).

Noninterest expense was $4.8 billion, up $1.1 billion, or 30%, from the prior year, reflecting higher mortgage reinsurance losses, the impact of the Washington Mutual transaction and higher servicing expense due to increased delinquencies and defaults.

Selected metrics

Year ended December 31, (in billions)	2009	2008	2007
Business metrics			
Loans excluding purchased credit-impaired loans[a]			
End-of-period loans owned			
Home equity	**$ 101.4**	$ 114.3	$ 94.8
Prime mortgage	**59.4**	65.2	34.0
Subprime mortgage	**12.5**	15.3	15.5
Option ARMs	**8.5**	9.0	—
Student loans	**15.8**	15.9	11.0
Auto loans	**46.0**	42.6	42.3
Other	**0.7**	1.3	2.1
Total end-of-period loans owned	**$ 244.3**	$ 263.6	$ 199.7
Average loans owned			
Home equity	**$ 108.3**	$ 99.9	$ 90.4
Prime mortgage	**62.2**	45.0	30.4
Subprime mortgage	**13.9**	15.3	12.7
Option ARMs	**8.9**	2.3	—
Student loans	**16.1**	13.6	10.5
Auto loans	**43.6**	43.8	41.1
Other	**1.0**	1.1	2.3
Total average loans owned	**$ 254.0**	$ 221.0	$ 187.4
Purchased credit-impaired loans[a]			
End-of-period loans owned			
Home equity	**$ 26.5**	$ 28.6	$ —
Prime mortgage	**19.7**	21.8	—
Subprime mortgage	**6.0**	6.8	—
Option ARMs	**29.0**	31.6	—
Total end-of-period loans owned	**$ 81.2**	$ 88.8	$ —
Average loans owned			
Home equity	**$ 27.6**	$ 7.1	$ —
Prime mortgage	**20.8**	5.4	—
Subprime mortgage	**6.3**	1.7	—
Option ARMs	**30.5**	8.0	—
Total average loans owned	**$ 85.2**	$ 22.2	$ —
Total consumer lending portfolio			
End-of-period loans owned			
Home equity	**$ 127.9**	$ 142.9	$ 94.8
Prime mortgage	**79.1**	87.0	34.0
Subprime mortgage	**18.5**	22.1	15.5
Option ARMs	**37.5**	40.6	—
Student loans	**15.8**	15.9	11.0
Auto loans	**46.0**	42.6	42.3
Other	**0.7**	1.3	2.1
Total end-of-period loans owned	**$ 325.5**	$ 352.4	$ 199.7
Average loans owned			
Home equity	**$ 135.9**	$ 107.0	$ 90.4
Prime mortgage	**83.0**	50.4	30.4
Subprime mortgage	**20.2**	17.0	12.7
Option ARMs	**39.4**	10.3	—
Student loans	**16.1**	13.6	10.5
Auto loans	**43.6**	43.8	41.1
Other	**1.0**	1.1	2.3
Total average loans owned[b]	**$ 339.2**	$ 243.2	$ 187.4

(a) Purchased credit-impaired loans represent loans acquired in the Washington Mutual transaction for which a deterioration in credit quality occurred between the origination date and JPMorgan Chase acquisition date.

(b) Total average loans owned includes loans held-for-sale of $2.2 billion, $2.8 billion and $10.6 billion for the years ended December 31, 2009, 2008 and 2007, respectively.

Consumer Lending (continued)

Credit data and quality statistics

(in millions, except ratios)	2009	2008	2007
Net charge-offs excluding purchased credit-impaired loans[a]			
Home equity	**$ 4,682**	$ 2,391	$ 564
Prime mortgage	**1,886**	526	33
Subprime mortgage	**1,648**	933	157
Option ARMs	**63**	—	—
Auto loans	**627**	568	354
Other	**365**	113	79
Total net charge-offs	**$ 9,271**	$ 4,531	$ 1,187
Net charge-off rate excluding purchased credit-impaired loans[a]			
Home equity	**4.32%**	2.39%	0.62%
Prime mortgage	**3.05**	1.18	0.13
Subprime mortgage	**11.86**	6.10	1.55
Option ARMs	**0.71**	—	—
Auto loans	**1.44**	1.30	0.86
Other	**2.39**	0.93	0.88
Total net charge-off rate excluding purchased credit-impaired loans[b]	**3.68**	2.08	0.67
Net charge-off rate – reported			
Home equity	**3.45%**	2.23%	0.62%
Prime mortgage	**2.28**	1.05	0.13
Subprime mortgage	**8.16**	5.49	1.55
Option ARMs	**0.16**	—	—
Auto loans	**1.44**	1.30	0.86
Other	**2.39**	0.93	0.88
Total net charge-off rate[b]	**2.75**	1.89	0.67
30+ day delinquency rate excluding purchased credit-impaired loans[c][d][e]	**5.93%**	4.21%	3.10%
Allowance for loan losses	**$ 13,798**	$ 8,254	$ 2,418
Nonperforming assets[f][g]	**11,259**	8,653	3,084
Allowance for loan losses to ending loans	**4.27%**	2.36%	1.24%
Allowance for loan losses to ending loans excluding purchased credit-impaired loans[a]	**5.04**	3.16	1.24

(a) Excludes the impact of purchased credit-impaired loans that were acquired as part of the Washington Mutual transaction. These loans were accounted for at fair value on the acquisition date, which incorporated management's estimate, as of that date, of the credit losses over the remaining life of the portfolio. During 2009, an allowance for loan losses of $1.6 billion was recorded for these loans, which has also been excluded from applicable ratios. To date, no charge-offs have been recorded for these loans.

(b) Average loans included loans held-for-sale of $2.2 billion, $2.8 billion and $10.6 billion for the years ended December 31, 2009, 2008 and 2007, respectively, which were excluded when calculating the net charge-off rate.

(c) Excluded mortgage loans that are insured by U.S. government agencies of $9.7 billion, $3.5 billion and $1.4 billion at December 31, 2009, 2008 and 2007, respectively. These amounts were excluded, as reimbursement is proceeding normally.

(d) Excluded loans that are 30 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $942 million, $824 million and $663 million at December 31, 2009, 2008 and 2007, respectively. These amounts are excluded, as reimbursement is proceeding normally.

(e) The delinquency rate for purchased credit-impaired loans was 27.79% and 17.89% at December 31, 2009 and 2008, respectively.

(f) At December 31, 2009, 2008 and 2007, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $9.0 billion, $3.0 billion and $1.1 billion, respectively; (2) real estate owned insured by U.S. government agencies of $579 million, $364 million and $452 million, respectively; and (3) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program, of $542 million, $437 million and $417 million, respectively. These amounts are excluded, as reimbursement is proceeding normally.

(g) Excludes purchased credit-impaired loans that were acquired as part of the Washington Mutual transaction. These loans are accounted for on a pool basis, and the pools are considered to be performing.

(in billions, except ratios and where otherwise noted)	2009	2008	2007
Origination volume			
Mortgage origination volume by channel			
Retail	**$ 53.9**	$ 41.1	$ 45.5
Wholesale[a]	**11.8**	29.4	42.7
Correspondent	**72.8**	55.5	27.9
CNT (negotiated transactions)	**12.2**	43.0	43.3
Total mortgage origination volume	**150.7**	169.0	159.4
Home equity	**2.4**	16.3	48.3
Student loans	**4.2**	6.9	7.0
Auto	**23.7**	19.4	21.3
Application volume			
Mortgage application volume by channel			
Retail	**90.9**	89.1	80.7
Wholesale[a]	**16.4**	63.0	86.7
Correspondent	**99.3**	82.5	41.5
Total mortgage application volume	**206.6**	234.6	208.9
Average mortgage loans held-for-sale and loans at fair value[b]	**16.2**	14.6	18.8
Average assets	**378.6**	278.1	216.1
Third-party mortgage loans serviced (ending)	**1,082.1**	1,172.6	614.7
Third-party mortgage loans serviced (average)	**1,119.1**	810.9	571.5
MSR net carrying value (ending)	**15.5**	9.3	8.6
Ratio of MSR net carrying value (ending) to third-party mortgage loans serviced (ending)	**1.43%**	0.79%	1.40%

Supplemental mortgage fees and related income details (in millions)

Production revenue	**$ 503**	$ 898	$ 880
Net mortgage servicing revenue:			
Operating revenue:			
Loan servicing revenue	**4,942**	3,258	2,334
Other changes in MSR asset fair value	**(3,279)**	(2,052)	(1,531)
Total operating revenue	**1,663**	1,206	803
Risk management:			
Changes in MSR asset fair value due to inputs or assumptions in model	**5,804**	(6,849)	(516)
Derivative valuation adjustments and other	**(4,176)**	8,366	927
Total risk management	**1,628**	1,517	411
Total net mortgage servicing revenue	**3,291**	2,723	1,214
Mortgage fees and related income	**3,794**	3,621	2,094
Ratio of annualized loan servicing revenue to third-party mortgage loans serviced (average)	**0.44%**	0.40%	0.41%
MSR revenue multiple[c]	**3.25x**	1.98x	3.41x

(a) Includes rural housing loans sourced through brokers and underwritten under U.S. Department of Agriculture guidelines.

(b) Loans at fair value consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets. Average balances of these loans totaled $15.8 billion, $14.2 billion and $11.9 billion for the years ended December 31, 2009, 2008 and 2007, respectively.

(c) Represents the ratio of MSR net carrying value (ending) to third-party mortgage loans serviced (ending) divided by the ratio of annualized loan servicing revenue to third-party mortgage loans serviced (average).

Mortgage origination channels comprise the following:

Retail – Borrowers who are buying or refinancing a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Wholesale – A third-party mortgage broker refers loan applications to a mortgage banker at the Firm. Brokers are independent loan originators that specialize in finding and counseling borrowers but do not provide funding for loans. The Firm exited the broker channel during 2008.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Correspondent negotiated transactions ("CNTs") – These transactions occur when mid- to large-sized mortgage lenders, banks and bank-owned mortgage companies sell servicing to the Firm on an as-originated basis, and exclude purchased bulk servicing transactions. These transactions supplement traditional production channels and provide growth opportunities in the servicing portfolio in stable and rising-rate periods.

Production revenue – Includes net gains or losses on originations and sales of prime and subprime mortgage loans, other production-related fees and losses related to the repurchase of previously sold loans.

Net mortgage servicing revenue includes the following components:

(a) Operating revenue comprises:
- all gross income earned from servicing third-party mortgage loans including stated service fees, excess service fees, late fees and other ancillary fees.
- modeled servicing portfolio runoff (or time decay).

(b) Risk management comprises:
- changes in MSR asset fair value due to market-based inputs such as interest rates and volatility, as well as updates to assumptions used in the MSR valuation model.
- derivative valuation adjustments and other, which represents changes in the fair value of derivative instruments used to offset the impact of changes in the market-based inputs to the MSR valuation model.

CARD SERVICES

Card Services is one of the nation's largest credit card issuers, with more than 145 million credit cards in circulation and over $163 billion in managed loans. Customers used Chase cards to meet more than $328 billion of their spending needs in 2009.

Chase continues to innovate, despite a very difficult business environment, launching new products and services such as Blueprint, Ultimate Rewards, Chase Sapphire and Ink from Chase, and earning a market leadership position in building loyalty and rewards programs. Through its merchant acquiring business, Chase Paymentech Solutions, Chase is one of the leading processors of credit-card payments.

JPMorgan Chase uses the concept of "managed basis" to evaluate the credit performance of its credit card loans, both loans on the balance sheet and loans that have been securitized. For further information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 58–60 of this Annual Report. Managed results exclude the impact of credit card securitizations on total net revenue, the provision for credit losses, net charge-offs and loan receivables. Securitization does not change reported net income; however, it does affect the classification of items on the Consolidated Statements of Income and Consolidated Balance Sheets.

The following discussion of CS's financial results reflects the acquisition of Washington Mutual's credit cards operations, as a result of the Washington Mutual transaction on September 25, 2008, and the dissolution of the Chase Paymentech Solutions joint venture on November 1, 2008. See Note 2 on pages 151–156 of this Annual Report for more information concerning these transactions.

Selected income statement data – managed basis

Year ended December 31, (in millions, except ratios)	2009	2008	2007
Revenue			
Credit card income	**$ 3,612**	$ 2,768	$ 2,685
All other income	**(692)**	(49)	361
Noninterest revenue	**2,920**	2,719	3,046
Net interest income	**17,384**	13,755	12,189
Total net revenue	**20,304**	16,474	15,235
Provision for credit losses	**18,462**	10,059	5,711
Noninterest expense			
Compensation expense	**1,376**	1,127	1,021
Noncompensation expense	**3,490**	3,356	3,173
Amortization of intangibles	**515**	657	720
Total noninterest expense	**5,381**	5,140	4,914
Income/(loss) before income tax expense/(benefit)	**(3,539)**	1,275	4,610
Income tax expense/(benefit)	**(1,314)**	495	1,691
Net income/(loss)	**$ (2,225)**	$ 780	$ 2,919
Memo: Net securitization income/(loss)	**$ (474)**	$ (183)	$ 67
Financial ratios			
ROE	**(15)%**	5%	21%
Overhead ratio	**27**	31	32

2009 compared with 2008

Card Services reported a net loss of $2.2 billion, compared with net income of $780 million in the prior year. The decrease was driven by a higher provision for credit losses, partially offset by higher total net revenue.

End-of-period managed loans were $163.4 billion, a decrease of $26.9 billion, or 14%, from the prior year, reflecting lower charge volume and a higher level of charge-offs. Average managed loans were $172.4 billion, an increase of $9.5 billion, or 6%, from the prior year, primarily due to the impact of the Washington Mutual transaction. Excluding the impact of the Washington Mutual transaction, end-of-period and average managed loans for 2009 were $143.8 billion and $148.8 billion, respectively.

Managed total net revenue was $20.3 billion, an increase of $3.8 billion, or 23%, from the prior year. Net interest income was $17.4 billion, up by $3.6 billion, or 26%, from the prior year, driven by wider loan spreads and the impact of the Washington Mutual transaction. These benefits were offset partially by higher revenue reversals associated with higher charge-offs, a decreased level of fees, lower average managed loan balances, and the impact of legislative changes. Noninterest revenue was $2.9 billion, an increase of $201 million, or 7%, from the prior year. The increase was driven by higher merchant servicing revenue related to the dissolution of the Chase Paymentech Solutions joint venture and the impact of the Washington Mutual transaction, partially offset by lower securitization income.

The managed provision for credit losses was $18.5 billion, an increase of $8.4 billion from the prior year, reflecting a higher level of charge-offs and an addition of $2.4 billion to the allowance for loan losses, reflecting continued weakness in the credit environment. The managed net charge-off rate was 9.33%, up from 5.01% in the prior year. The 30-day managed delinquency rate was 6.28%, up from 4.97% in the prior year. Excluding the impact of the Washington Mutual transaction, the managed net charge-off rate was 8.45%, and the 30-day managed delinquency rate was 5.52%.

Noninterest expense was $5.4 billion, an increase of $241 million, or 5%, from the prior year, due to the dissolution of the Chase Paymentech Solutions joint venture and the impact of the Washington Mutual transaction, partially offset by lower marketing expense.

2008 compared with 2007

Net income was $780 million, a decline of $2.1 billion, or 73%, from the prior year. The decrease was driven by a higher provision for credit losses, partially offset by higher total net revenue.

Average managed loans were $162.9 billion, an increase of $13.5 billion, or 9%, from the prior year. End-of-period managed loans were $190.3 billion, an increase of $33.3 billion, or 21%, from the prior year. Excluding Washington Mutual, average managed loans were $155.9 billion and end-of-period managed loans were $162.1

billion. The increases in both average managed loans and end-of-period managed loans were predominantly due to the impact of the Washington Mutual transaction and organic portfolio growth.

Managed total net revenue was $16.5 billion, an increase of $1.2 billion, or 8%, from the prior year. Net interest income was $13.8 billion, up $1.6 billion, or 13%, from the prior year, driven by the Washington Mutual transaction, higher average managed loan balances, and wider loan spreads. These benefits were offset partially by the effect of higher revenue reversals associated with higher charge-offs. Noninterest revenue was $2.7 billion, a decrease of $327 million, or 11%, from the prior year, driven by increased rewards expense, lower securitization income driven by higher credit losses, and higher volume-driven payments to partners; these were largely offset by increased interchange income, benefiting from a 4% increase in charge volume, as well as the impact of the Washington Mutual transaction.

The managed provision for credit losses was $10.1 billion, an increase of $4.3 billion, or 76%, from the prior year, due to an increase of $1.7 billion in the allowance for loan losses and a higher level of charge-offs. The managed net charge-off rate increased to 5.01%, up from 3.68% in the prior year. The 30-day managed delinquency rate was 4.97%, up from 3.48% in the prior year. Excluding Washington Mutual, the managed net charge-off rate was 4.92% and the 30-day delinquency rate was 4.36%.

Noninterest expense was $5.1 billion, an increase of $226 million, or 5%, from the prior year, predominantly due to the impact of the Washington Mutual transaction.

The following are brief descriptions of selected business metrics within Card Services.

- **Charge volume** – Dollar amount of cardmember purchases, balance transfers and cash advance activity.
- **Net accounts opened** – Includes originations, purchases and sales.
- **Merchant acquiring business** – A business that processes bank card transactions for merchants.
- **Bank card volume** – Dollar amount of transactions processed for merchants.
- **Total transactions** – Number of transactions and authorizations processed for merchants.

Selected metrics Year ended December 31, (in millions, except headcount, ratios and where otherwise noted)	2009	2008	2007
Financial metrics			
Percentage of average managed outstandings:			
Net interest income	**10.08%**	8.45%	8.16%
Provision for credit losses	**10.71**	6.18	3.82
Noninterest revenue	**1.69**	1.67	2.04
Risk adjusted margin[a]	**1.07**	3.94	6.38
Noninterest expense	**3.12**	3.16	3.29
Pretax income/(loss) (ROO)[b]	**(2.05)**	0.78	3.09
Net income/(loss)	**(1.29)**	0.48	1.95
Business metrics			
Charge volume (in billions)	**$ 328.3**	$ 368.9	$ 354.6
Net accounts opened (in millions)[c]	**10.2**	27.9	16.4
Credit cards issued (in millions)	**145.3**	168.7	155.0
Number of registered internet customers (in millions)	**32.3**	35.6	28.3
Merchant acquiring business[d]			
Bank card volume (in billions)	**$ 409.7**	$ 713.9	$ 719.1
Total transactions (in billions)	**18.0**	21.4	19.7
Selected balance sheet data (period-end)			
Loans:			
Loans on balance sheets	**$ 78,786**	$ 104,746	$ 84,352
Securitized loans	**84,626**	85,571	72,701
Managed loans	**$ 163,412**	$ 190,317	$ 157,053
Equity	**$ 15,000**	$ 15,000	$ 14,100
Selected balance sheet data (average)			
Managed assets	**$ 192,749**	$ 173,711	$ 155,957
Loans:			
Loans on balance sheets	**$ 87,029**	$ 83,293	$ 79,980
Securitized loans	**85,378**	79,566	69,338
Managed average loans	**$ 172,407**	$ 162,859	$ 149,318
Equity	**$ 15,000**	$ 14,326	$ 14,100
Headcount	**22,676**	24,025	18,554
Managed credit quality statistics			
Net charge-offs	**$ 16,077**	$ 8,159	$ 5,496
Net charge-off rate[e]	**9.33%**	5.01%	3.68%
Managed delinquency rates			
30+ day[e]	**6.28%**	4.97%	3.48%
90+ day[e]	**3.59**	2.34	1.65
Allowance for loan losses[f][g]	**$ 9,672**	$ 7,692	$ 3,407
Allowance for loan losses to period-end loans[f][h]	**12.28%**	7.34%	4.04%
Key stats – Washington Mutual only[i]			
Managed loans	**$ 19,653**	$ 28,250	
Managed average loans	**23,642**	6,964	
Net interest income[j]	**17.11%**	14.87%	
Risk adjusted margin[a][j]	**(0.93)**	4.18	
Net charge-off rate[k]	**18.79**	12.09	
30+ day delinquency rate[k]	**12.72**	9.14	
90+ day delinquency rate[k]	**7.76**	4.39	
Key stats – excluding Washington Mutual			
Managed loans	**$ 143,759**	$ 162,067	$ 157,053
Managed average loans	**148,765**	155,895	149,318
Net interest income[j]	**8.97%**	8.16%	8.16%
Risk adjusted margin[a][j]	**1.39**	3.93	6.38
Net charge-off rate	**8.45**	4.92	3.68
30+ day delinquency rate	**5.52**	4.36	3.48
90+ day delinquency rate	**3.13**	2.09	1.65

(a) Represents total net revenue less provision for credit losses.

(b) Pretax return on average managed outstandings.

(c) Results for 2008 included approximately 13 million credit card accounts acquired by JPMorgan Chase in the Washington Mutual transaction.

(d) The Chase Paymentech Solutions joint venture was dissolved effective November 1, 2008. JPMorgan Chase retained approximately 51% of the business and operates the business under the name Chase Paymentech Solutions. For the period January 1 through October 31, 2008, the data presented represents activity for the Chase Paymentech Solutions joint venture, and for the period November 1, 2008, through December 31, 2009, the data presented represents activity for Chase Paymentech Solutions.

(e) Results for 2009 and 2008 reflect the impact of purchase accounting adjustments related to the Washington Mutual transaction and the consolidation of the Washington Mutual Master Trust.

(f) Based on loans on balance sheets ("reported basis").

(g) The 2008 allowance for loan losses included an amount related to loans acquired in the Washington Mutual transaction.

(h) Includes $1.0 billion of loans at December 31, 2009, held by the Washington Mutual Master Trust, which were consolidated onto the Card Services balance sheet at fair value during the second quarter of 2009. No allowance for loan losses was recorded for these loans as of December 31, 2009. Excluding these loans, the allowance for loan losses to period-end loans was 12.43%.

(i) Statistics are only presented for periods after September 25, 2008, the date of the Washington Mutual transaction.

(j) As a percentage of average managed outstandings.

(k) Excludes the impact of purchase accounting adjustments related to the Washington Mutual transaction and the consolidation of the Washington Mutual Master Trust.

The financial information presented below reconciles reported basis and managed basis to disclose the effect of securitizations.

Year ended December 31, (in millions)	2009	2008	2007
Income statement data[a]			
Credit card income			
Reported	**$ 5,106**	$ 6,082	$ 5,940
Securitization adjustments	**(1,494)**	(3,314)	(3,255)
Managed credit card income	**$ 3,612**	$ 2,768	$ 2,685
Net interest income			
Reported	**$ 9,447**	$ 6,838	$ 6,554
Securitization adjustments	**7,937**	6,917	5,635
Managed net interest income	**$ 17,384**	$ 13,755	$ 12,189
Total net revenue			
Reported	**$ 13,861**	$ 12,871	$ 12,855
Securitization adjustments	**6,443**	3,603	2,380
Managed total net revenue	**$ 20,304**	$ 16,474	$ 15,235
Provision for credit losses			
Reported	**$ 12,019**	$ 6,456	$ 3,331
Securitization adjustments	**6,443**	3,603	2,380
Managed provision for credit losses	**$ 18,462**	$ 10,059	$ 5,711
Balance sheet – average balances[a]			
Total average assets			
Reported	**$ 110,516**	$ 96,807	$ 89,177
Securitization adjustments	**82,233**	76,904	66,780
Managed average assets	**$ 192,749**	$ 173,711	$ 155,957
Credit quality statistics[a]			
Net charge-offs			
Reported	**$ 9,634**	$ 4,556	$ 3,116
Securitization adjustments	**6,443**	3,603	2,380
Managed net charge-offs	**$ 16,077**	$ 8,159	$ 5,496
Net charge-off rates			
Reported	**11.07%**	5.47%	3.90%
Securitized	**7.55**	4.53	3.43
Managed net charge-off rate	**9.33**	5.01	3.68

(a) For a discussion of managed basis, see the non-GAAP financial measures discussion on pages 58–60 of this Annual Report.

Commercial Banking serves nearly 25,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and more than 30,000 real estate investors/owners. Delivering extensive industry knowledge, local expertise and dedicated service, CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual from the FDIC, adding approximately $44.5 billion in loans to the Commercial Term Lending, Real Estate Banking and Other businesses in Commercial Banking.

Commercial Banking is divided into four primary client segments: Middle Market Banking, Commercial Term Lending, Mid-Corporate Banking, and Real Estate Banking. Middle Market Banking covers corporate, municipal, financial institution and not-for-profit clients, with annual revenue generally ranging between $10 million and $500 million. Mid-Corporate Banking covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs. Commercial Term Lending primarily provides term financing to real estate investors/owners for multi-family properties as well as financing office, retail and industrial properties. Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate properties.

Selected income statement data

Year ended December 31, (in millions)	2009	2008	2007
Revenue			
Lending- and deposit-related fees	**$ 1,081**	$ 854	$ 647
Asset management, administration and commissions	**140**	113	92
All other income[a]	**596**	514	524
Noninterest revenue	**1,817**	1,481	1,263
Net interest income	**3,903**	3,296	2,840
Total net revenue	**5,720**	4,777	4,103
Provision for credit losses	**1,454**	464	279
Noninterest expense			
Compensation expense	**776**	692	706
Noncompensation expense	**1,359**	1,206	1,197
Amortization of intangibles	**41**	48	55
Total noninterest expense	**2,176**	1,946	1,958
Income before income tax expense	**2,090**	2,367	1,866
Income tax expense	**819**	928	732
Net income	**$ 1,271**	$ 1,439	$ 1,134
Revenue by product:			
Lending	**$ 2,663**	$ 1,743	$ 1,419
Treasury services	**2,642**	2,648	2,350
Investment banking	**394**	334	292
Other	**21**	52	42
Total Commercial Banking revenue	**$ 5,720**	$ 4,777	$ 4,103

Selected income statement data

Year ended December 31, (in millions, except ratios)	2009	2008	2007
IB revenue, gross[b]	**$ 1,163**	$ 966	$ 888
Revenue by business:			
Middle Market Banking	**$ 3,055**	$ 2,939	$ 2,689
Commercial Term Lending[c]	**875**	243	—
Mid-Corporate Banking	**1,102**	921	815
Real Estate Banking[c]	**461**	413	421
Other[c]	**227**	261	178
Total Commercial Banking revenue	**$ 5,720**	$ 4,777	$ 4,103
Financial ratios			
ROE	**16%**	20%	17%
Overhead ratio	**38**	41	48

(a) Revenue from investment banking products sold to CB clients and commercial card revenue is included in all other income.
(b) Represents the total revenue related to investment banking products sold to CB clients.
(c) Results for 2009 and 2008 include total net revenue on net assets acquired in the Washington Mutual transaction.

2009 compared with 2008

Net income was $1.3 billion, a decrease of $168 million, or 12%, from the prior year, as higher provision for credit losses and noninterest expense was partially offset by higher net revenue, reflecting the impact of the Washington Mutual transaction.

Record net revenue of $5.7 billion increased $943 million, or 20%, from the prior year. Net interest income of $3.9 billion increased $607 million, or 18%, driven by the impact of the Washington Mutual transaction. Noninterest revenue was $1.8 billion, an increase of $336 million, or 23%, from the prior year, reflecting higher lending- and deposit-related fees and higher investment banking fees and other income.

On a client-segment basis, revenue from Middle Market Banking was $3.1 billion, an increase of $116 million, or 4%, from the prior year due to higher liability balances, a shift to higher-spread liability products, wider loan spreads, higher lending- and deposit-related fees, and higher other income, partially offset by a narrowing of spreads on liability products and reduced loan balances. Revenue from Commercial Term Lending (a new client segment acquired in the Washington Mutual transaction encompassing multi-family and commercial mortgage loans) was $875 million, an increase of $632 million. Mid-Corporate Banking revenue was $1.1 billion, an increase of $181 million, or 20%, driven by higher investment banking fees, increased loan spreads, and higher lending- and deposit-related fees. Real Estate Banking revenue was $461 million, an increase of $48 million, or 12%, due to the impact of the Washington Mutual transaction.

The provision for credit losses was $1.5 billion, compared with $464 million in the prior year, reflecting continued weakness in the credit environment, predominantly in real estate-related segments. Net charge-offs were $1.1 billion (1.02% net charge-off rate), compared with $288 million (0.35% net charge-off rate) in the prior year. The allowance for loan losses to end-of-period loans retained was 3.12%, up from 2.45% in the prior year. Nonperforming loans were $2.8 billion, an increase of $1.8 billion from the prior year.

Noninterest expense was $2.2 billion, an increase of $230 million, or 12%, from the prior year, due to the impact of the Washington Mutual transaction and higher FDIC insurance premiums.

2008 compared with 2007

Net income was $1.4 billion, an increase of $305 million, or 27%, from the prior year, due to growth in total net revenue including the impact of the Washington Mutual transaction, partially offset by a higher provision for credit losses.

Record total net revenue of $4.8 billion increased $674 million, or 16%. Net interest income of $3.3 billion increased $456 million, or 16%, driven by double-digit growth in liability and loan balances and the impact of the Washington Mutual transaction, partially offset by spread compression in the liability and loan portfolios. Noninterest revenue was $1.5 billion, up $218 million, or 17%, due to higher deposit- and lending-related fees.

On a client-segment basis, Middle Market Banking revenue was $2.9 billion, an increase of $250 million, or 9%, from the prior year due predominantly to higher deposit-related fees and growth in liability and loan balances. Revenue from Commercial Term Lending, a new client segment acquired in the Washington Mutual transaction, was $243 million. Mid-Corporate Banking revenue was $921 million, an increase of $106 million, or 13%, reflecting higher loan balances, investment banking revenue and deposit-related fees. Real Estate Banking revenue of $413 million decreased $8 million, or 2%.

Provision for credit losses was $464 million, an increase of $185 million, or 66%, compared with the prior year, reflecting a weakening credit environment and loan growth. Net charge-offs were $288 million (0.35% net charge-off rate), compared with $44 million (0.07% net charge-off rate) in the prior year, predominantly related to an increase in real estate charge-offs. The allowance for loan losses increased by $1.1 billion, which primarily reflected the impact of the Washington Mutual transaction. Nonperforming assets were $1.1 billion, an increase of $1.0 billion compared with the prior year, predominantly reflecting the Washington Mutual transaction and higher real estate–related balances.

Noninterest expense was $1.9 billion, a decrease of $12 million, or 1%, from the prior year, due to lower performance-based incentive compensation and volume-based charges from service providers, predominantly offset by the impact of the Washington Mutual transaction.

Selected metrics

Year ended December 31, (in millions)	2009	2008	2007
Selected balance sheet data (period-end):			
Loans:			
Loans retained	**$ 97,108**	$ 115,130	$ 64,835
Loans held-for-sale and loans at fair value	**324**	295	1,366
Total loans	**$ 97,432**	$ 115,425	$ 66,201
Equity	**8,000**	8,000	6,700

Selected metrics

Year ended December 31, (in millions, except headcount and ratio data)	2009	2008	2007
Selected balance sheet data (average):			
Total assets	**$ 135,408**	$ 114,299	$ 87,140
Loans:			
Loans retained	**106,421**	81,931	60,231
Loans held-for-sale and loans at fair value	**317**	406	863
Total loans	**$ 106,738**	$ 82,337	$ 61,094
Liability balances[a]	**113,152**	103,121	87,726
Equity	**$ 8,000**	$ 7,251	$6,502
Average loans by business:			
Middle Market Banking	**$ 37,459**	$ 42,193	$ 37,333
Commercial Term Lending[b]	**36,806**	9,310	—
Mid-Corporate Banking	**15,951**	16,297	12,481
Real Estate Banking[b]	**12,066**	9,008	7,116
Other[b]	**4,456**	5,529	4,164
Total Commercial Banking loans	**$ 106,738**	$ 82,337	$ 61,094
Headcount	**4,151**	5,206	4,125
Credit data and quality statistics:			
Net charge-offs	**$ 1,089**	$ 288	$ 44
Nonperforming loans:			
Nonperforming loans retained[c]	**2,764**	1,026	146
Nonperforming loans held-for-sale and loans held at fair value	**37**	—	—
Total nonperforming loans	**2,801**	1,026	146
Nonperforming assets	**2,989**	1,142	148
Allowance for credit losses:			
Allowance for loan losses[d]	**3,025**	2,826	1,695
Allowance for lending-related commitments	**349**	206	236
Total allowance for credit losses	**3,374**	3,032	1,931
Net charge-off rate	**1.02%**	0.35%	0.07%
Allowance for loan losses to period-end loans retained	**3.12**	2.45	2.61
Allowance for loan losses to average loans retained	**2.84**	3.04[e]	2.81
Allowance for loan losses to nonperforming loans retained	**109**	275	1,161
Nonperforming loans to total period-end loans	**2.87**	0.89	0.22
Nonperforming loans to total average loans	**2.62**	1.10[e]	0.24

(a) Liability balances include deposits and deposits swept to on–balance sheet liabilities such as commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements.

(b) Results for 2009 and 2008 include loans acquired in the Washington Mutual transaction.

(c) Allowance for loan losses of $581 million, $208 million and $32 million were held against nonperforming loans retained for the periods ended December 31, 2009, 2008, and 2007, respectively.

(d) Beginning in 2008, the allowance for loan losses included an amount related to loans acquired in the Washington Mutual transaction and the Bear Stearns merger.

(e) Average loans in the calculation of this ratio were adjusted to include $44.5 billion of loans acquired in the Washington Mutual transaction as if the transaction occurred on July 1, 2008. Excluding this adjustment, the unadjusted allowance for loan losses to average loans retained and nonperforming loans to total average loans ratios would have been 3.45% and 1.25%, respectively, for the period ended December 31, 2008.

Treasury & Securities Services is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services provides cash management, trade, wholesale card and liquidity products and services to small and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with the Commercial Banking, Retail Financial Services and Asset Management businesses to serve clients firmwide. As a result, certain TS revenue is included in other segments' results. Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and it manages depositary receipt programs globally.

Selected income statement data

Year ended December 31, (in millions, except ratio data)	2009	2008	2007
Revenue			
Lending- and deposit-related fees	**$ 1,285**	$ 1,146	$ 923
Asset management, administration and commissions	**2,631**	3,133	3,050
All other income	**831**	917	708
Noninterest revenue	**4,747**	5,196	4,681
Net interest income	**2,597**	2,938	2,264
Total net revenue	**7,344**	8,134	6,945
Provision for credit losses	**55**	82	19
Credit reimbursement to IB[a]	**(121)**	(121)	(121)
Noninterest expense			
Compensation expense	**2,544**	2,602	2,353
Noncompensation expense	**2,658**	2,556	2,161
Amortization of intangibles	**76**	65	66
Total noninterest expense	**5,278**	5,223	4,580
Income before income tax expense	**1,890**	2,708	2,225
Income tax expense	**664**	941	828
Net income	**$ 1,226**	$ 1,767	$ 1,397
Revenue by business			
Treasury Services[b]	**$ 3,702**	$ 3,779	$ 3,190
Worldwide Securities Services[b]	**3,642**	4,355	3,755
Total net revenue	**$ 7,344**	$ 8,134	$ 6,945
Financial ratios			
ROE	**25%**	47%	47%
Overhead ratio	**72**	64	66
Pretax margin ratio[c]	**26**	33	32

Year ended December 31, (in millions, except headcount)	2009	2008	2007
Selected balance sheet data (period-end)			
Loans[d]	**$ 18,972**	$ 24,508	$ 18,562
Equity	**5,000**	4,500	3,000
Selected balance sheet data (average)			
Total assets	**$ 35,963**	$ 54,563	$ 53,350
Loans[d]	**18,397**	26,226	20,821
Liability balances[e]	**248,095**	279,833	228,925
Equity	**5,000**	3,751	3,000
Headcount	**26,609**	27,070	25,669

(a) IB credit portfolio group manages certain exposures on behalf of clients shared with TSS. TSS reimburses IB for a portion of the total cost of managing the credit portfolio. IB recognizes this credit reimbursement as a component of noninterest revenue.

(b) Reflects an internal reorganization for escrow products from Worldwide Securities Services to Treasury Services revenue of $168 million, $224 million and $177 million for the years ended December 31, 2009, 2008 and 2007, respectively.

(c) Pretax margin represents income before income tax expense divided by total net revenue, which is a measure of pretax performance and another basis by which management evaluates its performance and that of its competitors.

(d) Loan balances include wholesale overdrafts, commercial card and trade finance loans.

(e) Liability balances include deposits and deposits swept to on–balance sheet liabilities, such as commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements.

2009 compared with 2008

Net income was $1.2 billion, a decrease of $541 million, or 31%, from the prior year, driven by lower net revenue.

Net revenue was $7.3 billion, a decrease of $790 million, or 10%, from the prior year. Worldwide Securities Services net revenue was $3.6 billion, a decrease of $713 million, or 16%. The decrease was driven by lower securities lending balances, primarily as a result of declines in asset valuations and demand, lower balances and spreads on liability products, and the effect of market depreciation on certain custody assets. Treasury Services net revenue was $3.7 billion, a decrease of $77 million, or 2%, reflecting spread compression on deposit products, offset by higher trade revenue driven by wider spreads and growth across cash management and card product volumes.

TSS generated firmwide net revenue of $10.2 billion, including $6.6 billion of net revenue in Treasury Services; of that amount, $3.7 billion was recorded in the Treasury Services business, $2.6 billion was recorded in the Commercial Banking business, and $245 million was recorded in other lines of business. The remaining $3.6 billion of net revenue was recorded in Worldwide Securities Services.

The provision for credit losses was $55 million, a decrease of $27 million from the prior year.

Noninterest expense was $5.3 billion, an increase of $55 million from the prior year. The increase was driven by higher FDIC insurance premiums, predominantly offset by lower headcount-related expense.

2008 compared with 2007

Net income was a record $1.8 billion, an increase of $370 million, or 26%, from the prior year, driven by higher total net revenue. This increase was largely offset by higher noninterest expense.

Total net revenue was a record $8.1 billion, an increase of $1.2 billion, or 17%, from the prior year. Worldwide Securities Services posted record net revenue of $4.4 billion, an increase of $600 million, or 16%, from the prior year. The growth was driven by wider spreads in securities lending, foreign exchange and liability products, increased product usage by new and existing clients (largely in custody, fund services, alternative investment services and depositary receipts) and higher liability balances, reflecting increased client deposit activity resulting from recent market conditions. These benefits were offset partially by market depreciation. Treasury Services posted record net revenue of $3.8 billion, an increase of $589 million, or 18%, reflecting higher liability balances and volume growth in electronic funds transfer products and trade loans. Revenue growth from higher liability balances reflects increased client deposit activity resulting from recent market conditions as well as organic growth. TSS firmwide net revenue, which includes Treasury Services net revenue recorded in other lines of business, grew to $11.1 billion, an increase of $1.5 billion, or 16%. Treasury Services firmwide net revenue grew to $6.7 billion, an increase of $916 million, or 16%.

Noninterest expense was $5.2 billion, an increase of $643 million, or 14%, from the prior year, reflecting higher expense related to business and volume growth as well as continued investment in new product platforms.

Selected metrics

Year ended December 31, (in millions, except ratio data)	2009	2008	2007
TSS firmwide disclosures			
Treasury Services revenue – reported[a]	**$ 3,702**	$ 3,779	$ 3,190
Treasury Services revenue reported in CB	**2,642**	2,648	2,350
Treasury Services revenue reported in other lines of business	**245**	299	270
Treasury Services firmwide revenue[a][b]	**6,589**	6,726	5,810
Worldwide Securities Services revenue[a]	**3,642**	4,355	3,755
Treasury & Securities Services firmwide revenue[b]	**$ 10,231**	$ 11,081	$ 9,565
Treasury Services firmwide liability balances (average)[c][d]	**$ 274,472**	$ 264,195	$ 217,142
Treasury & Securities Services firmwide liability balances (average)[c]	**361,247**	382,947	316,651
TSS firmwide financial ratios			
Treasury Services firmwide overhead ratio[e]	**53%**	50%	55%
Treasury & Securities Services firmwide overhead ratio[e]	**62**	57	60

Selected metrics

Year ended December 31, (in millions, except ratio data and where otherwise noted)	2009	2008	2007
Firmwide business metrics			
Assets under custody (in billions)	**$ 14,885**	$ 13,205	$ 15,946
Number of:			
U.S.$ ACH transactions originated (in millions)	**3,896**	4,000	3,870
Total U.S.$ clearing volume (in thousands)	**113,476**	115,742	111,036
International electronic funds transfer volume (in thousands)[f]	**193,348**	171,036	168,605
Wholesale check volume (in millions)	**2,184**	2,408	2,925
Wholesale cards issued (in thousands)[g]	**27,138**	22,784	18,722
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ 19**	$ (2)	$ —
Nonperforming loans	**14**	30	—
Allowance for credit losses:			
Allowance for loan losses	**88**	74	18
Allowance for lending-related commitments	**84**	63	32
Total allowance for credit losses	**172**	137	50
Net charge-off/(recovery) rate	**0.10%**	(0.01)%	—%
Allowance for loan losses to period-end loans	**0.46**	0.30	0.10
Allowance for loan losses to average loans	**0.48**	0.28	0.09
Allowance for loan losses to nonperforming loans	**NM**	247	NM
Nonperforming loans to period-end loans	**0.07**	0.12	—
Nonperforming loans to average loans	**0.08**	0.11	—

(a) Reflects an internal reorganization for escrow products from Worldwide Securities Services to Treasury Services revenue of $168 million, $224 million and $177 million for the years ended December 31, 2009, 2008 and 2007, respectively.

(b) TSS firmwide revenue includes FX revenue recorded in TSS and FX revenue associated with TSS customers who are FX customers of IB. However, some of the FX revenue associated with TSS customers who are FX customers of IB is not included in TS and TSS firmwide revenue. These amounts were $661 million, $880 million and $552 million, for the years ended December 31, 2009, 2008 and 2007, respectively.

(c) Firmwide liability balances include liability balances recorded in CB.

(d) Reflects an internal reorganization for escrow products, from Worldwide Securities Services to TS liability balances, of $15.6 billion, $21.5 billion and $18.1 billion for the years ended December 31, 2009, 2008 and 2007, respectively.

(e) Overhead ratios have been calculated based on firmwide revenue and TSS and TS expense, respectively, including those allocated to certain other lines of business. FX revenue and expense recorded in IB for TSS-related FX activity are not included in this ratio.

(f) International electronic funds transfer includes non-U.S. dollar ACH and clearing volume.

(g) Wholesale cards issued include domestic commercial, stored value, prepaid and government electronic benefit card products.

Asset Management, with assets under supervision of $1.7 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including money market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2009	2008	2007
Revenue			
Asset management, administration and commissions	**$ 5,621**	$ 6,004	$ 6,821
All other income	**751**	62	654
Noninterest revenue	**6,372**	6,066	7,475
Net interest income	**1,593**	1,518	1,160
Total net revenue	**7,965**	7,584	8,635
Provision for credit losses	**188**	85	(18)
Noninterest expense			
Compensation expense	**3,375**	3,216	3,521
Noncompensation expense	**2,021**	2,000	1,915
Amortization of intangibles	**77**	82	79
Total noninterest expense	**5,473**	5,298	5,515
Income before income tax expense	**2,304**	2,201	3,138
Income tax expense	**874**	844	1,172
Net income	**$ 1,430**	$ 1,357	$ 1,966
Revenue by client segment			
Private Bank[a]	**$ 2,585**	$ 2,565	$ 2,362
Institutional	**2,065**	1,775	2,525
Retail	**1,580**	1,620	2,408
Private Wealth Management[a]	**1,316**	1,387	1,340
Bear Stearns Private Client Services[b]	**419**	237	—
Total net revenue	**$ 7,965**	$ 7,584	$ 8,635
Financial ratios			
ROE	**20%**	24%	51%
Overhead ratio	**69**	70	64
Pretax margin ratio[c]	**29**	29	36

(a) In 2008, certain clients were transferred from Private Bank to Private Wealth Management. Prior periods have been revised to conform to this change.
(b) Bear Stearns Private Client Services was renamed to JPMorgan Securities at the beginning of 2010.
(c) Pretax margin represents income before income tax expense divided by total net revenue, which is a measure of pretax performance and another basis by which management evaluates its performance and that of its competitors.

2009 compared with 2008

Net income was $1.4 billion, an increase of $73 million, or 5%, from the prior year, due to higher total net revenue, offset largely by higher noninterest expense and provision for credit losses.

Total net revenue was $8.0 billion, an increase of $381 million, or 5%, from the prior year. Noninterest revenue was $6.4 billion, an increase of $306 million, or 5%, due to higher valuations of seed capital investments and net inflows, offset largely by lower market levels. Net interest income was $1.6 billion, up by $75 million, or 5%, from the prior year, due to wider loan spreads and higher deposit balances, offset partially by narrower deposit spreads.

Revenue from the Private Bank was $2.6 billion, up 1% from the prior year due to wider loan spreads and higher deposit balances, offset partially by the effect of lower market levels. Revenue from Institutional was $2.1 billion, up 16% due to higher valuations of seed capital investments and net inflows, offset partially by the effect of lower market levels. Revenue from Retail was $1.6 billion, down 2% due to the effect of lower market levels, offset largely by higher valuations of seed capital investments. Revenue from Private Wealth Management was $1.3 billion, down 5% due to narrower deposit spreads and the effect of lower market levels, offset partially by higher deposit balances and wider loan spreads. Bear Stearns Private Client Services contributed $419 million to revenue.

The provision for credit losses was $188 million, an increase of $103 million from the prior year, reflecting continued weakness in the credit environment.

Noninterest expense was $5.5 billion, an increase of $175 million, or 3%, from the prior year due to the effect of the Bear Stearns merger, higher performance-based compensation and higher FDIC insurance premiums, offset largely by lower headcount-related expense.

2008 compared with 2007

Net income was $1.4 billion, a decline of $609 million, or 31%, from the prior year, driven by lower total net revenue offset partially by lower noninterest expense.

Total net revenue was $7.6 billion, a decrease of $1.1 billion, or 12%, from the prior year. Noninterest revenue was $6.1 billion, a decline of $1.4 billion, or 19%, due to lower performance fees and the effect of market levels, including the impact of lower market valuations of seed capital investments. The lower results were offset partially by the benefit of the Bear Stearns merger and increased revenue from net asset inflows. Net interest income was $1.5 billion, up $358 million, or 31%, from the prior year, due to higher deposit and loan balances and wider deposit spreads.

Private Bank revenue grew 9% to $2.6 billion, due to increased deposit and loan balances and net asset inflows, partially offset by the effect of lower markets and lower performance fees. Institutional revenue declined 30% to $1.8 billion due to lower performance fees, partially offset by net liquidity inflows. Retail revenue declined 33% to $1.6 billion due to the effect of lower markets, including the impact of lower market valuations of seed capital investments and net equity outflows. Private Wealth Management revenue grew 4% to $1.4 billion due to higher deposit and loan balances. Bear Stearns Brokerage contributed $237 million to revenue.

The provision for credit losses was $85 million, compared with a benefit of $18 million in the prior year, reflecting a weakening credit environment.

Noninterest expense was $5.3 billion, down $217 million, or 4%, compared with the prior year due to lower performance-based compensation, largely offset by the effect of the Bear Stearns merger and higher compensation expense resulting from increased average headcount.

Selected metrics

Year ended December 31, (in millions, except headcount, ranking data, and where otherwise noted)	**2009**	2008	2007
Business metrics			
Number of:			
Client advisors[a]	**1,934**	1,840	1,868
Retirement planning services participants (in thousands)	**1,628**	1,531	1,501
Bear Stearns brokers[b]	**376**	324	—
% of customer assets in 4 & 5 Star Funds[c]	**42%**	42%	55%
% of AUM in 1st and 2nd quartiles:[d]			
1 year	**57%**	54%	57%
3 years	**62%**	65%	75%
5 years	**74%**	76%	76%
Selected balance sheet data (period-end)			
Loans	**$ 37,755**	$ 36,188	$ 36,089
Equity	**7,000**	7,000	4,000
Selected balance sheet data (average)			
Total assets	**$ 60,249**	$ 65,550	$ 51,882
Loans	**34,963**	38,124	29,496
Deposits	**77,005**	70,179	58,863
Equity	**7,000**	5,645	3,876
Headcount	**15,136**	15,339	14,799
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ 117**	$ 11	$ (8)
Nonperforming loans	**580**	147	12
Allowance for credit losses:			
Allowance for loan losses	**269**	191	112
Allowance for lending-related commitments	**9**	5	7
Total allowance for credit losses	**$ 278**	$ 196	$ 119
Net charge-off/(recovery) rate	**0.33%**	0.03%	(0.03)%
Allowance for loan losses to period-end loans	**0.71**	0.53	0.31
Allowance for loan losses to average loans	**0.77**	0.50	0.38
Allowance for loan losses to nonperforming loans	**46**	130	933
Nonperforming loans to period-end loans	**1.54**	0.41	0.03
Nonperforming loans to average loans	**1.66**	0.39	0.04

(a) Prior periods have been restated to conform to current methodologies.
(b) Bear Stearns Private Client Services was renamed to JPMorgan Securities at the beginning of 2010.
(c) Derived from following rating services: Morningstar for the United States; Micropal for the United Kingdom, Luxembourg, Hong Kong and Taiwan; and Nomura for Japan.
(d) Derived from following rating services: Lipper for the United States and Taiwan; Micropal for the United Kingdom, Luxembourg and Hong Kong; and Nomura for Japan.

AM's client segments comprise the following:

Institutional brings comprehensive global investment services – including asset management, pension analytics, asset-liability management and active risk-budgeting strategies – to corporate and public institutions, endowments, foundations, not-for-profit organizations and governments worldwide.

Retail provides worldwide investment management services and retirement planning and administration, through third-party and direct distribution of a full range of investment vehicles.

The **Private Bank** addresses every facet of wealth management for ultra-high-net-worth individuals and families worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty-wealth advisory services.

Private Wealth Management offers high-net-worth individuals, families and business owners in the United States comprehensive wealth management solutions, including investment management, capital markets and risk management, tax and estate planning, banking and specialty-wealth advisory services.

Bear Stearns Private Client Services (renamed to JPMorgan Securities at the beginning of 2010) provides investment advice and wealth management services to high-net-worth individuals, money managers, and small corporations.

J.P. Morgan Asset Management has established two high-level measures of its overall performance.

- Percentage of assets under management in funds rated 4 and 5 stars (3 year). Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5 star rating is the best and represents the top 10% of industry wide ranked funds. A 4 star rating represents the next 22% of industry wide ranked funds. The worst rating is a 1 star rating.
- Percentage of assets under management in first- or second-quartile funds (one, three and five years). Mutual fund rating services rank funds according to a peer-based performance system, which measures returns according to specific time and fund classification (small, mid, multi and large cap).

Assets under supervision

2009 compared with 2008

Assets under supervision were $1.7 trillion, an increase of $205 billion, or 14%, from the prior year. Assets under management were $1.2 trillion, an increase of $116 billion, or 10%, from the prior year. The increases were due to the effect of higher market valuations and inflows in fixed income and equity products offset partially by outflows in cash products. Custody, brokerage, administration and deposit balances were $452 billion, up by $89 billion, due to the effect of higher market levels on custody and brokerage balances, and brokerage inflows in the Private Bank. The Firm also has a 42% interest in American Century Companies, Inc., whose AUM totaled $86 billion and $70 billion at December 31, 2009 and 2008, respectively, which are excluded from the AUM above.

2008 compared with 2007

Assets under supervision were $1.5 trillion, a decrease of $76 billion, or 5%, from the prior year. Assets under management were $1.1 trillion, down $60 billion, or 5%, from the prior year. The decrease was due to the effect of lower market valuations and non-liquidity outflows, predominantly offset by liquidity product inflows across all segments and the addition of Bear Stearns assets under management. Custody, brokerage, administration and deposit balances were $363 billion, down $16 billion due to the effect of lower markets on brokerage and custody balances, offset by the addition of Bear Stearns Brokerage. The Firm also has a 43% interest in American Century Companies, Inc., whose AUM totaled $70 billion and $102 billion at December 31, 2008 and 2007, respectively, which are excluded from the AUM above.

Assets under supervision[a]

As of or for the year ended December 31, (in billions)	2009	2008	2007
Assets by asset class			
Liquidity	**$ 591**	$ 613	$ 400
Fixed income	**226**	180	200
Equities & multi-asset	**339**	240	472
Alternatives	**93**	100	121
Total assets under management	**1,249**	1,133	1,193
Custody/brokerage/administration/ deposits	**452**	363	379
Total assets under supervision	**$ 1,701**	$ 1,496	$ 1,572
Assets by client segment			
Institutional	**$ 709**	$ 681	$ 632
Private Bank[b]	**187**	181	183
Retail	**270**	194	300
Private Wealth Management[b]	**69**	71	78
Bear Stearns Private Client Services[c]	**14**	6	—
Total assets under management	**$ 1,249**	$ 1,133	$ 1,193
Institutional	**$ 710**	$ 682	$ 633
Private Bank[b]	**452**	378	403
Retail	**355**	262	394
Private Wealth Management[b]	**129**	124	142
Bear Stearns Private Client Services[c]	**55**	50	—
Total assets under supervision	**$ 1,701**	$ 1,496	$ 1,572

Assets by geographic region

As of or for the year ended December 31, (in billions)	2009	2008	2007
U.S./Canada	**$ 837**	$ 798	$ 760
International	**412**	335	433
Total assets under management	**$ 1,249**	$ 1,133	$ 1,193
U.S./Canada	**$ 1,182**	$ 1,084	$ 1,032
International	**519**	412	540
Total assets under supervision	**$ 1,701**	$ 1,496	$ 1,572

Mutual fund assets by asset class

Liquidity	**$ 539**	$ 553	$ 339
Fixed income	**67**	41	46
Equities	**143**	92	218
Alternatives	**9**	7	6
Total mutual fund assets	**$ 758**	$ 693	$ 609

Assets under management rollforward

Beginning balance, January 1	**$ 1,133**	$ 1,193	$ 1,013
Net asset flows:			
Liquidity	**(23)**	210	78
Fixed income	**34**	(12)	9
Equities, multi-asset and alternative	**17**	(47)	28
Market/performance/other impacts[d]	**88**	(211)	65
Ending balance, December 31	**$ 1,249**	$ 1,133	$ 1,193

Assets under supervision rollforward

Beginning balance, January 1	**$ 1,496**	$ 1,572	$ 1,347
Net asset flows	**50**	181	143
Market/performance/other impacts[d]	**155**	(257)	82
Ending balance, December 31	**$ 1,701**	$ 1,496	$ 1,572

(a) Excludes assets under management of American Century Companies, Inc., in which the Firm had a 42%, 43% and 44% ownership at December 31, 2009, 2008 and 2007, respectively.
(b) In 2008, certain clients were transferred from Private Bank to Private Wealth Management. Prior periods have been revised to conform to this change.
(c) Bear Stearns Private Client Services was renamed to JPMorgan Securities at the beginning of 2010.
(d) Includes $15 billion for assets under management and $68 billion for assets under supervision from the Bear Stearns merger in the second quarter of 2008.

CORPORATE/PRIVATE EQUITY

The Corporate/Private Equity sector comprises Private Equity, Treasury, the Chief Investment Office, corporate staff units and expense that is centrally managed. Treasury and the Chief Investment Office manage capital, liquidity, interest rate and foreign exchange risk and the investment portfolio for the Firm. The corporate staff units include Central Technology and Operations, Internal Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Legal & Compliance, Corporate Real Estate and General Services, Risk Management, Corporate Responsibility and Strategy & Development. Other centrally managed expense includes the Firm's occupancy and pension-related expense, net of allocations to the business.

Selected income statement data

Year ended December 31, (in millions)	2009	2008	2007
Revenue			
Principal transactions[a][b]	**$ 1,574**	$ (3,588)	$ 4,552
Securities gains/(losses)[c]	**1,139**	1,637	39
All other income[d]	**58**	1,673	465
Noninterest revenue	**2,771**	(278)	5,056
Net interest income/(expense)	**3,863**	347	(637)
Total net revenue	**6,634**	69	4,419
Provision for credit losses	**80**	447[i][j]	(11)
Provision for credit losses – accounting conformity[e]	**—**	1,534	—
Noninterest expense			
Compensation expense	**2,811**	2,340	2,754
Noncompensation expense[f]	**3,597**	1,841	3,025
Merger costs	**481**	432	209
Subtotal	**6,889**	4,613	5,988
Net expense allocated to other businesses	**(4,994)**	(4,641)	(4,231)
Total noninterest expense	**1,895**	(28)	1,757
Income/(loss) before income tax expense/(benefit) and extraordinary gain	**4,659**	(1,884)	2,673
Income tax expense/(benefit)[g]	**1,705**	(535)	788
Income/(loss) before extraordinary gain	**2,954**	(1,349)	1,885
Extraordinary gain[h]	**76**	1,906	—
Net income	**$ 3,030**	$ 557	$ 1,885

(a) Included losses on preferred equity interests in Fannie Mae and Freddie Mac in 2008.
(b) The Firm adopted the new guidance for fair value in the first quarter of 2007. See Note 3 on pages 156–173 of this Annual Report for additional information.
(c) Included gain on sale of MasterCard shares in 2008.
(d) Included a gain from the dissolution of the Chase Paymentech Solutions joint venture and proceeds from the sale of Visa shares in its initial public offering in 2008.
(e) Represents an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual Bank's banking operations.
(f) Included $675 million FDIC special assessment during second quarter of 2009 and a release of credit card litigation reserves in 2008 and insurance recoveries related to settlement of the Enron and WorldCom class action litigations.
(g) Includes tax benefits recognized upon resolution of tax audits.
(h) Effective September 25, 2008, JPMorgan Chase acquired Washington Mutual's banking operations from the FDIC for $1.9 billion. The fair value of the Washington Mutual net assets acquired exceeded the purchase price, which resulted in negative goodwill. In accordance with U.S. GAAP for business combinations, nonfinancial assets that are not held-for-sale were written down against that negative goodwill. The negative goodwill that remained after writing down nonfinancial assets was recognized as an extraordinary gain in 2008. As a result of the final refinement of the purchase price allocation during the third quarter of 2009, the Firm recognized a $76 million increase in the extraordinary gain.
(i) In November 2008, the Firm transferred $5.8 billion of higher quality credit card loans from the legacy Chase portfolio to a securitization trust previously established by Washington Mutual ("the Trust"). As a result of converting higher credit quality Chase-originated on-book receivables to the Trust's seller's interest which has a higher overall loss rate reflective of the total assets within the Trust, approximately $400 million of incremental provision expense was recorded during the fourth quarter. This incremental provision expense was recorded in the Corporate segment as the action related to the acquisition of Washington Mutual's banking operations. For further discussion of credit card securitizations, see Note 15 on pages 206–213 of this Annual Report.
(j) Includes $9 million of credit card securitizations related to the Washington Mutual transaction.

2009 compared with 2008

Net income was $3.0 billion compared with $557 million in the prior year.

Net loss for Private Equity was $78 million compared with a net loss of $690 million in the prior year. Net revenue was $18 million, an increase of $981 million, reflecting Private Equity losses of $54 million compared with losses of $894 million. Noninterest expense was $141 million, an increase of $21 million.

Net income for Corporate was $3.7 billion, compared with $1.5 billion in the prior year. Current year results reflect higher levels of trading gains and net interest income, securities gains, an after-tax gain of $150 million from the sale of MasterCard shares, partially offset by a $419 million FDIC special assessment. Trading gains and net interest income increased due to the Chief Investment Office's ("CIO") significant purchases of mortgage-backed securities guaranteed by U.S. government agencies, corporate debt securities, U.S. Treasury and government agency securities and other asset-backed securities. These investments were generally associated with the management of interest rate risk and investment of cash resulting from the excess funding the Firm continued to experience during 2009. The increase in securities was partially offset by sales of higher-coupon instruments (part of repositioning the investment portfolio) as well as prepayments and maturities.

Selected income statement and balance sheet data for Treasury and CIO

Year ended December 31, (in millions)	2009	2008	2007
Treasury			
Securities gains[a]	**$ 1,147**	$ 1,652	$ 37
Investment securities portfolio (average)[b]	**324,037**	113,010	88,037
Investment securities portfolio (ending)[b]	**340,163**	192,564	76,480
Mortgage loans (average)	**7,427**	7,059	5,639
Mortgage loans (ending)	**8,023**	7,292	6,635

(a) Results for 2008 included a gain on the sale of MasterCard shares. All periods reflect repositioning of the Corporate investment securities portfolio and exclude gains/losses on securities used to manage risk associated with MSRs.
(b) Beginning in second quarter 2009, balances reflect Treasury and Chief Investment Office securities. Prior periods have been revised to conform with this change.

For further information on the investment portfolio, see Note 3 and Note 11 on pages 156–173 and 195–199, respectively, of this Annual Report. For further information on CIO VaR and the Firm's earnings-at-risk, see the Market Risk Management section on pages 126–132 of this Annual Report.

Prior year results included $955 million proceeds from the sale of Visa shares in its initial public offering, $627 million from the dissolution

of the Chase Payment Solutions joint venture, partially offset by losses of $642 million on preferred securities of Fannie Mae and Freddie Mac and a $248 million charge related to the offer to repurchases auction-rate securities.

Merger-related items were a net loss of $635 million compared with a loss of $211 million in the prior year. Bear Stearns net merger-related costs were $425 million compared with $836 million. The prior year included a net loss of $423 million, which represented JPMorgan Chase's 49.4% ownership in Bear Stearn's losses from April 8 to May 30, 2008. Washington Mutual net merger-related costs were $210 million, which included an extraordinary gain of $76 million, compared with a net gain of $625 million. The prior year included an extraordinary gain of $1.9 billion, conforming loan loss reserves of $911 million, credit card related loan loss reserves of $250 million and net merger-related costs of $120 million.

2008 compared with 2007

Net income for Corporate/Private Equity was $557 million, compared with net income of $1.9 billion in the prior year.

Net loss for Private Equity was $690 million, compared with net income of $2.2 billion in the prior year. Net revenue was a loss of $963 million, a decrease of $4.9 billion, reflecting Private Equity losses of $894 million, compared with gains of $4.1 billion in the prior year. Noninterest expense was $120 million, a decrease of $469 million from the prior year, reflecting lower compensation expense.

Net income for Corporate was $1.5 billion, compared with a net loss of $150 million in the prior year. 2008 included a gain of $955 million on the proceeds from the sale of Visa shares in its initial public offering, $627 million on the dissolution of the Chase Paymentech Solutions joint venture, and $414 million from the sale of MasterCard shares, partially offset by losses of $642 million on preferred securities of Fannie Mae and Freddie Mac and $303 million related to the offer to repurchase auction-rate securities. 2007 included a gain of $145 million on the sale of MasterCard shares.

Merger-related items were a net loss of $211 million, compared with a net loss of $130 million in the prior year. Items related to the Washington Mutual transaction included a $1.9 billion extraordinary gain, conforming loan loss reserves of $911 million, credit card related loan loss reserves of $250 million and net merger-related costs of $120 million. Bear Stearns merger-related items included a net loss of $423 million, which represented JPMorgan Chase's 49.4% ownership in Bear Stearn's losses from April 8 to May 30, 2008 and net merger-related costs of $413 million. Results for 2007 include merger costs of $130 million related to the Bank One and Bank of New York Transactions.

Selected metrics

Year ended December 31, (in millions, except headcount)	2009	2008	2007
Total net revenue			
Private equity[a]	**$ 18**	$ (963)	$ 3,967
Corporate	**6,616**	1,032	452
Total net revenue	**$ 6,634**	$ 69	$ 4,419
Net income/(loss)			
Private equity[a]	**$ (78)**	$ (690)	$ 2,165
Corporate[b][c]	**3,743**	1,458	(150)
Merger – related items[d]	**(635)**	(211)	(130)
Total net income	**$ 3,030**	$ 557	$ 1,885
Headcount	**20,199**	23,376	22,512

(a) The Firm adopted the new guidance for fair value in the first quarter of 2007. See Note 3 on pages 156–173 of this Annual Report for additional information.
(b) Included $675 million FDIC special assessment during second quarter of 2009 and a release of credit card litigation reserves in 2008 and insurance recoveries related to settlement of the Enron and WorldCom class action litigations.
(c) Includes tax benefits recognized upon resolution of tax audits.
(d) Includes an accounting conformity loan loss reserve provision and an extraordinary gain related to the Washington Mutual transaction in 2008. 2008 also reflects items related to the Bear Stearns merger, which included Bear Stearns' equity earnings, merger costs, Bear Stearns asset management liquidation costs and Bear Stearns private client services broker retention expense. 2007 represent costs related to the Bank One transaction in 2004 and the Bank of New York transaction in 2006.

Private equity portfolio

2009 compared with 2008

The carrying value of the private equity portfolio at December 31, 2009, was $7.3 billion, up from $6.9 billion at December 31, 2008. The portfolio increase was primarily driven by additional follow-on investments and net unrealized gains on the existing portfolio, partially offset by sales during 2009. The portfolio represented 6.3% of the Firm's stockholders' equity less goodwill at December 31, 2009, up from 5.8% at December 31, 2008.

2008 compared with 2007

The carrying value of the private equity portfolio at December 31, 2008, was $6.9 billion, down from $7.2 billion at December 31, 2007. The portfolio decrease was primarily driven by unfavorable valuation adjustments on existing investments, partially offset by new investments, and the addition of the Bear Stearns portfolios. The portfolio represented 5.8% of the Firm's stockholders' equity less goodwill at December 31, 2008, down from 9.2% at December 31, 2007.

Selected income statement and balance sheet data

Year ended December 31, (in millions)	2009	2008	2007
Private equity			
Realized gains	**$ 109**	$ 1,717	$ 2,312
Unrealized gains/(losses)[a][b]	**(81)**	(2,480)	1,607
Total direct investments	**28**	(763)	3,919
Third-party fund investments	**(82)**	(131)	165
Total private equity gains/(losses)[c]	**$ (54)**	$ (894)	$ 4,084
Private equity portfolio information[d]			
Direct investments			
Publicly held securities			
Carrying value	**$ 762**	$ 483	$ 390
Cost	**743**	792	288
Quoted public value	**791**	543	536
Privately held direct securities			
Carrying value	**5,104**	5,564	5,914
Cost	**5,959**	6,296	4,867
Third-party fund investments[e]			
Carrying value	**1,459**	805	849
Cost	**2,079**	1,169	1,076
Total private equity portfolio – Carrying value	**$ 7,325**	$ 6,852	$ 7,153
Total private equity portfolio – Cost	**$ 8,781**	$ 8,257	$ 6,231

(a) Unrealized gains/(losses) contain reversals of unrealized gains and losses that were recognized in prior periods and have now been realized.
(b) The Firm adopted the new guidance for fair value in the first quarter of 2007. For additional information, see Note 3 on pages 156–173 of this Annual Report.
(c) Included in principal transactions revenue in the Consolidated Statements of Income.
(d) For more information on the Firm's policies regarding the valuation of the private equity portfolio, see Note 3 on pages 156–173 of this Annual Report.
(e) Unfunded commitments to third-party equity funds were $1.5 billion, $1.4 billion and $881 million at December 31, 2009, 2008 and 2007, respectively.

BALANCE SHEET ANALYSIS

Selected Consolidated Balance Sheets data

December 31, (in millions)	2009	2008
Assets		
Cash and due from banks	**$ 26,206**	$ 26,895
Deposits with banks	**63,230**	138,139
Federal funds sold and securities purchased under resale agreements	**195,404**	203,115
Securities borrowed	**119,630**	124,000
Trading assets:		
Debt and equity instruments	**330,918**	347,357
Derivative receivables	**80,210**	162,626
Securities	**360,390**	205,943
Loans	**633,458**	744,898
Allowance for loan losses	**(31,602)**	(23,164)
Loans, net of allowance for loan losses	**601,856**	721,734
Accrued interest and accounts receivable	**67,427**	60,987
Premises and equipment	**11,118**	10,045
Goodwill	**48,357**	48,027
Mortgage servicing rights	**15,531**	9,403
Other intangible assets	**4,621**	5,581
Other assets	**107,091**	111,200
Total assets	**$ 2,031,989**	$ 2,175,052
Liabilities		
Deposits	**$ 938,367**	$ 1,009,277
Federal funds purchased and securities loaned or sold under repurchase agreements	**261,413**	192,546
Commercial paper	**41,794**	37,845
Other borrowed funds	**55,740**	132,400
Trading liabilities:		
Debt and equity instruments	**64,946**	45,274
Derivative payables	**60,125**	121,604
Accounts payable and other liabilities	**162,696**	187,978
Beneficial interests issued by consolidated VIEs	**15,225**	10,561
Long-term debt	**266,318**	270,683
Total liabilities	**1,866,624**	2,008,168
Stockholders' equity	**165,365**	166,884
Total liabilities and stockholders' equity	**$ 2,031,989**	$ 2,175,052

Consolidated Balance Sheets overview

The following is a discussion of the significant changes in the Consolidated Balance Sheets from December 31, 2008.

Deposits with banks; federal funds sold and securities purchased under resale agreements; and securities borrowed

The Firm uses these instruments as part of its liquidity management activities, to manage the Firm's cash positions and risk-based capital requirements, and to support the Firm's trading and risk management activities. In particular, the Firm uses securities purchased under resale agreements and securities borrowed to provide funding or liquidity to clients by purchasing and borrowing their securities for the short-term. The decrease in deposits with banks primarily reflected lower demand for interbank lending and lower deposits with the Federal Reserve Bank relative to the elevated levels at the end of 2008. The decrease in securities purchased under resale agreements was largely due to a shift by the Firm of its excess cash to the available-for-sale ("AFS") securities portfolio, offset partially by higher securities purchased under resale agreements in IB due to improved and more liquid market conditions.

For additional information on the Firm's Liquidity Risk Management, see pages 96–100 of this Annual Report.

Trading assets and liabilities – debt and equity instruments

Debt and equity trading instruments are used for both market-making and, to a limited extent, proprietary risk-taking activities. These instruments consist predominantly of fixed-income securities, including government and corporate debt; equity securities, including convertible securities; loans, including prime mortgage and other loans warehoused by RFS and IB for sale or securitization purposes and accounted for at fair value; and physical commodities inventories carried at the lower of cost or fair value. The decrease in trading assets – debt and equity instruments reflected the effect of balance sheet management activities and the impact of the challenging capital markets environment that existed during the latter part of 2008, which continued into the first half of 2009, partially offset by stabilization in the capital markets during the second half of 2009. Trading liabilities – debt and equity instruments increased as market conditions improved and capital markets stabilized from the prior year. For additional information, refer to Note 3 on pages 156–173 of this Annual Report.

Trading assets and liabilities – derivative receivables and payables

Derivative instruments enable end-users to transform or mitigate exposure to credit or market risks. The value of a derivative is derived from its reference to an underlying variable or combination of variables, such as interest rate, credit, foreign exchange, equity or commodity prices or indices. JPMorgan Chase makes markets in derivatives for customers and also uses derivatives to hedge or manage risks of market exposures and to make investments. The majority of the Firm's derivatives are entered into for market-making purposes. The decrease in derivative receivables and payables was primarily related to tightening credit spreads, volatile foreign exchange rates and rising rates on interest rate swaps. For additional information, refer to Derivative contracts on pages 110–112, and Note 3 and Note 5 on pages 156–173 and 175–183, respectively, of this Annual Report.

Securities

Substantially all of the securities portfolio is classified as AFS and is used primarily to manage the Firm's exposure to interest rate movements and to invest cash resulting from excess funding positions. The increase in the securities portfolio was due to elevated levels of excess cash, which was used to purchase mortgage-backed securities guaranteed by U.S. government agencies, corporate debt securities, U.S. Treasury and government agency securities and other asset-backed securities. The increase in securities was partially offset by sales of higher-coupon instruments, as part of positioning of the portfolio, as well as prepayments and maturities. For additional information related to securities, refer to the Corporate/Private Equity segment on pages 82–83, and Note 3 and Note 11 on pages 156–173 and 195–199, respectively, of this Annual Report.

Loans and allowance for loan losses
The Firm provides loans to a variety of customers, from large corporate and institutional clients to individual consumers. Loans decreased across most lines of business. Although gross new lending volumes remained at levels consistent with 2008, continued lower customer demand, repayments and charge-offs in the wholesale and consumer businesses resulted in lower balances. Lower charge volume on credit cards and the effect of tighter underwriting and loan qualification standards, also contributed to the decrease in loans.

The allowance for loan losses increased in both the consumer and wholesale businesses, as weak economic conditions, housing price declines and higher unemployment rates continued to drive higher estimated losses for most of the Firm's loan portfolios. For a more detailed discussion of the loan portfolio and the allowance for loan losses, refer to Credit Risk Management on pages 101–125, and Notes 3, 4, 13 and 14 on pages 156–173, 173–175, 200–204 and 204–206, respectively, of this Annual Report.

Accrued interest and accounts receivable
Accrued interest and accounts receivable consist of accrued interest receivables from interest-earning assets; receivables from customers (primarily from activities related to IB's Prime Services business); receivables from brokers, dealers and clearing organizations; and receivables from failed securities sales. The increase in accrued interest and accounts receivable primarily reflected higher accounts receivable associated with maturities of credit card securitizations, as well as slightly higher failed securities sales.

Other assets
Other assets consist of private equity and other investments, collateral received, corporate and bank-owned life insurance policies, assets acquired in loan satisfactions (including real estate owned) and all other assets, including receivables for securities provided as collateral. The decrease in other assets was primarily due to a decline to zero in the balance related to the Federal Reserve Bank of Boston AML Facility. This Facility was ended by the Federal Reserve Bank of Boston on February 1, 2010.

Goodwill
Goodwill arises from business combinations and represents the excess of the purchase price of an acquired entity over the fair value amounts assigned to assets acquired and liabilities assumed. The increase in goodwill was largely due to final purchase accounting adjustments related to the Bear Stearns merger, foreign currency translation adjustments related to the Firm's Canadian credit card operations, and IB's acquisition of a commodities business. For additional information on goodwill, see Note 17 on pages 222–225 of this Annual Report.

Mortgage servicing rights
MSRs represent the fair value of future cash flows for performing specified mortgage servicing activities (predominantly with respect to residential mortgages) for others. MSRs are either purchased from third parties or retained upon sale or securitization of mortgage loans. Servicing activities include collecting principal, interest, and escrow payments from borrowers; making tax and insurance payments on behalf of borrowers; monitoring delinquencies and executing foreclosure proceedings; and accounting for and remitting principal and interest payments to the investors of the mortgage-backed securities. MSRs increased due to increases in the fair value of the MSR asset, related primarily to market interest rate and other changes affecting the Firm's estimate of future prepayments, as well as sales in RFS of originated loans for which servicing rights were retained. These increases were offset partially by servicing portfolio run-off. For additional information on MSRs, see Note 17 on pages 222–225 of this Annual Report.

Other intangible assets
Other intangible assets consist of purchased credit card relationships, other credit card–related intangibles, core deposit intangibles and other intangibles. The decrease in other intangible assets primarily reflected amortization expense, partially offset by foreign currency translation adjustments related to the Firm's Canadian credit card operations. For additional information on other intangible assets, see Note 17 on pages 222–225 of this Annual Report.

Deposits
Deposits represent a liability to customers, both retail and wholesale, related to non-brokerage funds held on their behalf. Deposits are classified by location (U.S. and non-U.S.), whether they are interest- or noninterest-bearing, and by type (i.e., demand, money market, savings, time or negotiable order of withdrawal accounts). Deposits help provide a stable and consistent source of funding for the Firm. Wholesale deposits in TSS declined from the elevated levels at December 31, 2008, reflecting the continued normalization of deposit levels following the strong inflows resulting from the heightened volatility and credit concerns affecting the markets during the latter part of 2008. Organic growth in deposits in CB and RFS was offset partially by the maturity of high rate interest-bearing CDs that were acquired as part of the Washington Mutual transaction. For more information on deposits, refer to the RFS and AM segment discussions on pages 66–71 and 79–81, respectively; the Liquidity Risk Management discussion on pages 96–100; and Note 19 on page 226 of this Annual Report. For more information on wholesale liability balances, including deposits, refer to the CB and TSS segment discussions on pages 75–76 and 77–78, respectively, of this Annual Report.

Federal funds purchased and securities loaned or sold under repurchase agreements
The Firm uses these instruments as part of its liquidity management activities and to support the Firm's trading and risk management activities. In particular, the Firm uses federal funds purchased and securities loaned or sold under repurchase agreements as short-term funding sources and to make securities available to clients for their short-term liquidity purposes. The increase in securities sold under repurchase agreements was primarily attributable to favorable pricing and the financing of the increase in the AFS securities portfolio. For additional information on the Firm's Liquidity Risk Management, see pages 96–100 of this Annual Report.

Commercial paper and other borrowed funds
The Firm uses commercial paper and other borrowed funds as part of its liquidity management activities to meet short-term funding needs, and in connection with a TSS liquidity management product, whereby excess client funds are transferred into commercial paper overnight sweep accounts. The decrease in other borrowed funds was predominantly due to lower advances from Federal Home Loan Banks; the absence of borrowings from the Federal Reserve under the Term

Auction Facility program and a decline to zero in the balance related to the Federal Reserve Bank of Boston AML Facility, which was ended on February 1, 2010. For additional information on the Firm's Liquidity Risk Management and other borrowed funds, see pages 96–100, and Note 20 on page 227 of this Annual Report.

Accounts payable and other liabilities
Accounts payable and other liabilities consist of accounts payable to customers (primarily from activities related to IB's Prime Services business); payables to brokers, dealers and clearing organizations; payables from failed securities purchases; accrued expense, including interest-bearing liabilities; and all other liabilities, including obligations to return securities received as collateral. The decrease in accounts payable and other liabilities primarily reflected lower customer payables due predominantly to lower balances in the brokerage accounts of IB's Prime Services customers.

Beneficial interests issued by consolidated VIEs
JPMorgan Chase uses VIEs to assist clients in accessing the financial markets in a cost-efficient manner. A VIE is consolidated if the Firm will absorb a majority of a VIE's expected losses, receive a majority of a VIE's expected residual returns, or both. Included in the caption "beneficial interests issued by consolidated VIEs" are interest-bearing beneficial-interest liabilities issued by the consolidated VIEs, which increased as a result of the consolidation during the second quarter of 2009 of a multi-seller conduit and a credit card loan securitization trust (Washington Mutual Master Trust). For additional information on Firm-sponsored VIEs and loan securitization trusts, see Off–Balance Sheet Arrangements and Contractual Cash Obligations below, and Note 16 on pages 214–222 of this Annual Report.

Long-term debt
The Firm uses long-term debt (including trust preferred capital debt securities) to provide cost-effective and diversified sources of funds and as critical components of the Firm's liquidity and capital management activities. Long-term debt decreased slightly, predominantly due to net redemptions and maturities. The Firm also issued $11.0 billion and $2.6 billion of non-FDIC guaranteed debt in the U.S. and European markets, respectively, and $2.5 billion of trust preferred capital debt securities. For additional information on the Firm's long-term debt activities, see the Liquidity Risk Management discussion on pages 96–100 of this Annual Report.

Stockholders' equity
The decrease in total stockholders' equity was largely due to the redemption in the second quarter of 2009 of the $25.0 billion Series K Preferred Stock issued to the U.S. Treasury pursuant to TARP, and the declaration of cash dividends on preferred and common stock. The decrease was almost entirely offset by net income for 2009; the issuance of $5.8 billion of common equity in the public markets; a net increase in accumulated other comprehensive income, due primarily to net unrealized gains from overall market spread and market liquidity improvement, as well as changes in the composition of investments in the AFS securities portfolio; and net issuances under the Firm's employee stock-based compensation plans. For a further discussion, see the Capital Management section on pages 90–93, Note 23 on pages 230–231 and Note 26 on page 233 of this Annual Report.

OFF–BALANCE SHEET ARRANGEMENTS AND CONTRACTUAL CASH OBLIGATIONS

JPMorgan Chase is involved with several types of off–balance sheet arrangements, including special purpose entities ("SPEs") and lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors in the form of commercial paper, short-term asset-backed notes, medium-term notes and other forms of interest. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

SPEs are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. These arrangements are integral to the markets for mortgage-backed securities, commercial paper and other asset-backed securities.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits and investor intermediation activities, and as a result of its loan securitizations, through qualifying special purpose entities ("QSPEs"). This discussion focuses mostly on multi-seller conduits and investor intermediation. For a detailed discussion of all SPEs with which the Firm is involved, and the related accounting, see Note 1, Note 15 and Note 16 on pages 150–151, 206–213 and 214–222, respectively, of this Annual Report.

During the quarter ended June 30, 2009, the Firm took certain actions related to both the Chase Issuance Trust (the "Trust") and the Washington Mutual Master Trust (the "WMM Trust"). These actions and their impact on the Firm's Consolidated Balance Sheets and results of operations are further discussed in Note 15 on pages 206–213 of this Annual Report.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm modifies loans that it services, and that were sold to off-balance sheet SPEs, pursuant to the U.S. Treasury's Making Home Affordable ("MHA") programs and the Firm's other loss mitigation programs. For both the Firm's on–balance sheet loans and loans serviced for others, approximately 600,000 mortgage modifications had been offered to borrowers in 2009. Of these, 89,000 have

achieved permanent modification. Substantially all of the loans contractually modified to date were modified under the Firm's other loss mitigation programs. See Consumer Credit Portfolio on pages 114–123 of this Annual Report for more details on these loan modifications.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, the Firm could be required to provide funding if the short-term credit rating of JPMorgan Chase Bank, N.A., was downgraded below specific levels, primarily "P-1", "A-1" and "F1" for Moody's, Standard & Poor's and Fitch, respectively. The amount of these liquidity commitments was $34.2 billion and $61.0 billion at December 31, 2009 and 2008, respectively. Alternatively, if JPMorgan Chase Bank, N.A., were downgraded, the Firm could be replaced by another liquidity provider in lieu of providing funding under the liquidity commitment or, in certain circumstances, the Firm could facilitate the sale or refinancing of the assets in the SPE in order to provide liquidity. The Firm's liquidity commitments to SPEs are included in other unfunded commitments to extend credit and asset purchase agreements, as shown in the Off-balance sheet lending-related financial instruments and guarantees table on page 89 of this Annual Report.

As noted above, the Firm is involved with three types of SPEs: multi-seller conduits, investor intermediation, and its own loan securitization activities. A summary of each type of SPE follows.

Multi-seller conduits

The Firm helps customers meet their financing needs by providing access to the commercial paper markets through VIEs known as multi-seller conduits. Multi-seller conduit entities are separate bankruptcy-remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly-rated commercial paper to third-party investors. The primary source of repayment of the commercial paper is the cash flow from the pools of assets. JPMorgan Chase receives fees related to the structuring of multi-seller conduit transactions and receives compensation from the multi-seller conduits for its role as administrative agent, liquidity provider, and provider of program-wide credit enhancement.

Investor intermediation

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions, typically derivative structures, with these VIEs to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in derivative instruments or liquidity commitments are managed similarly to other credit, market and liquidity risks to which the Firm is exposed. The principal types of VIEs the Firm uses in these structuring activities are municipal bond vehicles, credit-linked note vehicles, asset swap vehicles and collateralized debt obligation vehicles.

Loan securitizations

JPMorgan Chase securitizes and sells a variety of loans, including residential mortgages, credit cards, automobile, student, and commercial loans (primarily related to real estate). JPMorgan Chase-sponsored securitizations utilize SPEs as part of the securitization process. These SPEs were structured to meet the definition of a QSPE (as discussed in Note 1 on pages 150–151 of this Annual Report); accordingly, the assets and liabilities of securitization-related QSPEs were not reflected on the Firm's Consolidated Balance Sheets (except for retained interests, as described below) as of December 31, 2009. The primary purpose of these vehicles is to meet investor needs and generate liquidity for the Firm through the sale of loans to the QSPEs. These QSPEs are financed through the issuance of fixed- or floating-rate asset-backed securities that are sold to third-party investors or held by the Firm. For a discussion regarding the new consolidation guidance for VIEs including securitization entities, see "Accounting for transfers of financial assets and consolidation of variable interest entities" on page 141 of this Annual Report.

Special-purpose entities revenue

The following table summarizes certain revenue information related to consolidated and nonconsolidated VIEs and QSPEs with which the Firm has significant involvement. The revenue reported in the table below primarily represents contractual servicing and credit fee income (i.e., for income from acting as administrator, structurer, liquidity provider). It does not include mark-to-market gains and losses from changes in the fair value of trading positions (such as derivative transactions) entered into with VIEs. Those gains and losses are recorded in principal transactions revenue.

Revenue from VIEs and Securitization Entities[a]

Year ended December 31, (in millions)	**2009**	2008	2007
Multi-seller conduits	**$ 460**	$ 314	$ 187[c]
Investor intermediation	**34**	22	33
QSPEs and other securitization entities[b]	**2,510**	1,742	1,420
Total	**$ 3,004**	$ 2,078	$ 1,640

(a) Includes revenue associated with both consolidated VIEs and significant nonconsolidated VIEs.
(b) Excludes servicing revenue from loans sold to and securitized by third parties.
(c) Excludes the markdown on subprime CDO assets that was recorded in principal transactions revenue in 2007.

Off–balance sheet lending-related financial instruments and guarantees

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and the counterparty subsequently fail to perform according to the terms of the contract. These commitments and guarantees often expire without being drawn and even higher proportions expire without a default. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. For further discussion of lending-related commitments and guarantees and the Firm's accounting for them, see page 113 and Note 31 on pages 238–242 of this Annual Report.

The accompanying table on the next page presents, as of December 31, 2009, the contractual maturity amounts of off–balance sheet lending-related financial instruments and guarantees. The amounts in the table for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products would be utilized at the same time. The Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law. The accompanying table excludes certain commitments and guarantees that do not have a contractual maturity date (e.g., loan sale and securitization-related indemnifications). For further discussion, see Note 31 on pages 238–242 of this Annual Report. Asset purchase agreements are agreements with the Firm's administered multi-seller, asset-backed commercial paper conduits, and other third-party entities. In 2009, the Firm consolidated a multi-seller conduit due to the redemption of the expected loss note. As a result, asset purchase agreements, in the following table, exclude $7.9 billion at December 31, 2009, related to this consolidated multi-seller conduit. The maturities, in the accompanying table, are based on the weighted-average life of the underlying assets in the SPE, which are based on the remainder of each conduit transaction's committed liquidity facility plus either the expected weighted average life of the assets should the committed liquidity facility expire without renewal, or the expected time to sell the underlying assets in the securitization market.

Contractual cash obligations

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Commitments for future cash expenditures primarily include contracts to purchase future services and capital expenditures related to real estate–related obligations and equipment.

The accompanying table on the next page summarizes, by remaining maturity, JPMorgan Chase's off–balance sheet lending-related financial instruments and significant contractual cash obligations at December 31, 2009. Contractual purchases and capital expenditures in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the following table are a number of obligations to be settled in cash, primarily in under one year. These obligations are reflected on the Firm's Consolidated Balance Sheets and include federal funds purchased and securities loaned or sold under repurchase agreements; commercial paper; other borrowed funds; purchases of debt and equity instruments; derivative payables; and certain purchases of instruments that resulted in settlement failures. Also excluded are contingent payments associated with certain acquisitions that could not be estimated. For discussion regarding long-term debt (including trust preferred capital debt securities), see Note 22 on pages 228–229 of this Annual Report. For discussion regarding operating leases, see Note 30 on page 238 of this Annual Report.

The following table presents maturity information for off-balance sheet lending-related financial instruments, guarantees and other commitments.

Off–balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity at December 31, (in millions)	2009					2008
	2010	2011-2012	2013-2014	After 2014	**Total**	Total
Lending-related						
Consumer:						
Home equity — senior lien	**$ 293**	**$ 1,650**	**$ 5,603**	**$ 11,700**	**$ 19,246**	$ 27,998
Home equity — junior lien	**647**	**3,998**	**12,050**	**20,536**	**37,231**	67,745
Prime mortgage	**1,654**	**—**	**—**	**—**	**1,654**	5,079
Subprime mortgage	**—**	**—**	**—**	**—**	**—**	—
Option ARMs	**—**	**—**	**—**	**—**	**—**	—
Auto loans	**5,380**	**84**	**3**	**—**	**5,467**	4,726
Credit card	**569,113**	**—**	**—**	**—**	**569,113**	623,702
All other loans	**9,907**	**207**	**109**	**1,006**	**11,229**	12,257
Total consumer	**586,994**	**5,939**	**17,765**	**33,242**	**643,940**	741,507
Wholesale:						
Other unfunded commitments to extend credit[a]	**71,855**	**94,977**	**20,728**	**4,585**	**192,145**	189,563
Asset purchase agreements	**8,659**	**11,134**	**2,755**	**137**	**22,685**	53,729
Standby letters of credit and financial guarantees[a][b][c]	**25,568**	**47,203**	**16,349**	**2,365**	**91,485**	95,352
Unused advised lines of credit	**31,826**	**3,569**	**62**	**216**	**35,673**	36,300
Other letters of credit[a][b]	**3,713**	**1,183**	**255**	**16**	**5,167**	4,927
Total wholesale	**141,621**	**158,066**	**40,149**	**7,319**	**347,155**	379,871
Total lending-related	**$ 728,615**	**$ 164,005**	**$ 57,914**	**$ 40,561**	**$ 991,095**	$ 1,121,378
Other guarantees						
Securities lending guarantees[d]	**$ 170,777**	**$ —**	**$ —**	**$ —**	**$ 170,777**	$ 169,281
Residual value guarantees	**670**	**1**	**1**	**—**	**672**	670
Derivatives qualifying as guarantees[e]	**20,310**	**18,608**	**8,759**	**39,514**	**87,191**	83,835

Contractual cash obligations

By remaining maturity at December 31, (in millions)						
Time deposits	**$ 211,377**	**$ 14,479**	**$ 4,865**	**$ 938**	**$ 231,659**	$ 299,101
Advances from the Federal Home Loan Banks	**23,597**	**2,583**	**741**	**926**	**27,847**	70,187
Long-term debt	**37,075**	**95,915**	**42,805**	**90,523**	**266,318**	270,683
Long-term beneficial interests[f]	**3,957**	**2,515**	**407**	**3,559**	**10,438**	10,561
Operating leases[g]	**1,652**	**3,179**	**2,857**	**8,264**	**15,952**	16,868
Equity investment commitments[h]	**1,477**	**2**	**—**	**895**	**2,374**	2,424
Contractual purchases and capital expenditures	**2,005**	**862**	**419**	**488**	**3,774**	2,687
Obligations under affinity and co-brand programs	**1,091**	**2,144**	**1,604**	**2,059**	**6,898**	8,138
Other liabilities[i]	**906**	**891**	**873**	**2,690**	**5,360**	5,005
Total	**$ 283,137**	**$ 122,570**	**$ 54,571**	**$ 110,342**	**$ 570,620**	$ 685,654

(a) Represents the contractual amount net of risk participations totaling $24.6 billion and $26.4 billion for standby letters of credit and other financial guarantees at December 31, 2009 and 2008, respectively, $690 million and $1.1 billion for other letters of credit at December 31, 2009 and 2008, respectively, and $643 million and $789 million for other unfunded commitments to extend credit at December 31, 2009 and 2008, respectively. In regulatory filings with the Federal Reserve Board these commitments are shown gross of risk participations.

(b) JPMorgan Chase held collateral relating to $31.5 billion and $31.0 billion of standby letters of credit, respectively, and $1.3 billion and $1.0 billion of other letters of credit at December 31, 2009 and 2008, respectively.

(c) Includes unissued standby letters-of-credit commitments of $38.4 billion and $39.5 billion at December 31, 2009 and 2008, respectively.

(d) Collateral held by the Firm in support of securities lending indemnification agreements was $173.2 billion and $170.1 billion at December 31, 2009 and 2008, respectively. Securities lending collateral comprises primarily cash, and securities issued by governments that are members of the Organisation for Economic Co-operation and Development ("OECD") and U.S. government agencies.

(e) Represents notional amounts of derivatives qualifying as guarantees. For further discussion of guarantees, see Note 5 on pages 175–183 and Note 31 on pages 238–242 of this Annual Report.

(f) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated variable interest entities.

(g) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of $1.8 billion and $2.3 billion at December 31, 2009 and 2008, respectively.

(h) Includes unfunded commitments to third-party private equity funds of $1.5 billion and $1.4 billion at December 31, 2009 and 2008, respectively. Also includes unfunded commitments for other equity investments of $897 million and $1.0 billion at December 31, 2009 and 2008, respectively. These commitments include $1.5 billion at December 31, 2009, related to investments that are generally fair valued at net asset value as discussed in Note 3 on pages 156–173 of this Annual Report.

(i) Includes deferred annuity contracts. Excluded contributions to the U.S. pension and other postretirement benefits plans, as these contributions are not reasonably estimable at this time. Also excluded are unrecognized tax benefits of $6.6 billion and $5.9 billion at December 31, 2009 and 2008, respectively, as the timing and amount of future cash payments are not determinable at this time.

CAPITAL MANAGEMENT

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables it to build and invest in market-leading businesses, even in a highly stressed environment. Senior management considers the implications on the Firm's capital strength prior to making any decision on future business activities. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital and makes decisions to vary any source or use to preserve the Firm's capital strength.

The Firm's capital management objectives are to hold capital sufficient to:

- Cover all material risks underlying the Firm's business activities;
- Maintain "well-capitalized" status under regulatory requirements;
- Achieve debt rating targets;
- Remain flexible to take advantage of future opportunities; and
- Build and invest in businesses, even in a highly stressed environment.

The quality and composition of capital are key factors in senior management's evaluation of the Firm's capital adequacy. The Firm strongly emphasizes the quality of its capital and, accordingly, holds a significant amount of its capital in the form of common equity. The Firm uses the following three capital disciplines:

- *Regulatory capital* – The capital required according to standards stipulated by U.S. bank regulatory agencies.
- *Economic risk capital* – A bottoms-up assessment of the underlying risks of the Firm's business activities, utilizing internal risk-assessment methodologies.
- *Line of business equity* – The amount the Firm believes each business segment would require if it were operating independently, which incorporates sufficient capital to address economic risk measures, regulatory capital requirements and capital levels for similarly rated peers.

Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

In connection with the U.S. Government's Supervisory Capital Assessment Program in 2009, U.S. banking regulators developed a new measure of capital, Tier 1 common capital, which is defined as Tier 1 capital less elements of Tier 1 capital not in the form of common equity – such as perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred capital debt securities. Tier 1 common capital, a non-GAAP financial measure, is used by banking regulators, investors and analysts to assess and compare the quality and composition of the Firm's capital with the capital of other financial services companies. The Firm uses Tier 1 common capital along with the other capital measures presented below to assess and monitor its capital position.

The Federal Reserve granted the Firm, for a period of 18 months following the Bear Stearns merger, relief up to a certain specified amount and subject to certain conditions from the Federal Reserve's risk-based capital and leverage requirements with respect to Bear Stearns' risk-weighted assets and other exposures acquired. The OCC granted JPMorgan Chase Bank, N.A. similar relief from its risk-based capital and leverage requirements. The relief would have ended, by its terms, on September 30, 2009. Commencing in the second quarter of 2009, the Firm no longer adjusted its risk-based capital ratios to take into account the relief in the calculation of its risk-based capital ratios as of June 30, 2009.

JPMorgan Chase maintained Tier 1 and Total capital ratios at December 31, 2009 and 2008, in excess of the well-capitalized standards established by the Federal Reserve, as indicated in the tables below. In addition, the Firm's Tier 1 common ratio was significantly above the 4% well-capitalized standard that was established at the time of the Supervisory Capital Assessment Program. For more information, see Note 29 on pages 236–237 of this Annual Report.

Risk-based capital ratios

December 31, (in millions)	**2009**	2008
Tier 1 capital[(a)]	**11.1%**	10.9%
Total capital	**14.8**	14.8
Tier 1 leverage	**6.9**	6.9
Tier 1 common	**8.8**	7.0

(a) On January 1, 2010, the Firm adopted new accounting standards which required the consolidation of the Firm's credit card securitization trusts, bank-administered asset-backed commercial paper conduits, and certain mortgage and other consumer securitization entities. Refer to Note 16 on pages 214–222 of this Annual Report for additional information about the impact to the Firm of the new guidance.

A reconciliation of Total stockholders' equity to Tier 1 common capital, Tier 1 capital and Total qualifying capital is presented in the table below:

Risk-based capital components and assets

December 31, (in millions)	2009	2008
Tier 1 capital		
Tier 1 common capital:		
Total stockholders' equity	**$ 165,365**	$ 166,884
Less: Preferred stock	**8,152**	31,939
Common stockholders' equity	**157,213**	134,945
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 common equity	**75**	5,084
Less: Goodwill[a]	**46,630**	46,417
Fair value DVA on derivative and structured note liabilities related to the Firm's credit quality	**912**	2,358
Investments in certain subsidiaries	**802**	679
Other intangible assets	**3,660**	3,667
Tier 1 common capital	**105,284**	86,908
Preferred stock	**8,152**	31,939
Qualifying hybrid securities and noncontrolling interests[b]	**19,535**	17,257
Total Tier 1 capital	**132,971**	136,104
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2 capital	**28,977**	31,659
Qualifying allowance for credit losses	**15,296**	17,187
Adjustment for investments in certain subsidiaries and other	**(171)**	(230)
Total Tier 2 capital	**44,102**	48,616
Total qualifying capital	**$ 177,073**	$ 184,720
Risk-weighted assets[c]	**$ 1,198,006**	$ 1,244,659
Total adjusted average assets[d]	**$ 1,933,767**	$ 1,966,895

(a) Goodwill is net of any associated deferred tax liabilities.
(b) Primarily includes trust preferred capital debt securities of certain business trusts.
(c) Includes off–balance sheet risk-weighted assets at December 31, 2009 and 2008, of $367.4 billion and $357.5 billion, respectively. Risk-weighted assets are calculated in accordance with U.S. federal regulatory capital standards.
(d) Adjusted average assets, for purposes of calculating the leverage ratio, include total average assets adjusted for unrealized gains/(losses) on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries, and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.

The Firm's Tier 1 common capital was $105.3 billion at December 31, 2009, compared with $86.9 billion at December 31, 2008, an increase of $18.4 billion. The increase was due to net income (adjusted for DVA) of $13.2 billion, a $5.8 billion issuance of common stock in June 2009, and net issuances of common stock under the Firm's employee stock-based compensation plans of $2.7 billion. The increase was partially offset by $2.1 billion of dividends on preferred and common stock and the $1.1 billion one-time noncash adjustment to common stockholders' equity related to the redemption of the $25.0 billion Series K Preferred Stock issued to the U.S. Treasury under the Capital Purchase Program. On June 5, 2009, the Firm issued $5.8 billion, or 163 million shares, of common stock to satisfy a regulatory condition requiring the Firm to demonstrate it could access the equity capital markets in order to be eligible to redeem the Series K Preferred Stock issued to the U.S. Treasury. The proceeds from this issuance were used for general corporate purposes.

The Firm's Tier 1 capital was $133.0 billion at December 31, 2009, compared with $136.1 billion at December 31, 2008, a decrease of $3.1 billion. The decrease in Tier 1 capital reflects the redemption of the Series K Preferred Stock, partially offset by the increase in Tier 1 common capital and $2.3 billion net issuances of qualifying trust preferred capital debt securities.

Additional information regarding the Firm's regulatory capital ratios and the related federal regulatory capital requirements and the capital ratios of the Firm's significant banking subsidiaries at December 31, 2009 and 2008, are presented in Note 29 on pages 236–237 of this Annual Report.

Capital Purchase Program

Pursuant to the Capital Purchase Program, on October 28, 2008, the Firm issued to the U.S. Treasury, for total proceeds of $25.0 billion, (i) 2.5 million shares of Series K Preferred Stock, and (ii) a Warrant to purchase up to 88,401,697 shares of the Firm's common stock, at an exercise price of $42.42 per share, subject to certain antidilution and other adjustments. On June 17, 2009, the Firm redeemed all of the outstanding shares of Series K Preferred Stock, and repaid the full $25.0 billion principal amount together with accrued dividends. The U.S. Treasury exchanged the Warrant for 88,401,697 warrants, each of which is a warrant to purchase a share of the Firm's common stock at an exercise price of $42.42 per share and, on December 11, 2009, sold the warrants in a secondary public offering for $950 million. The Firm did not purchase any of the warrants sold by the U.S. Treasury.

Basel II

The minimum risk-based capital requirements adopted by the U.S. federal banking agencies follow the Capital Accord of the Basel Committee on Banking Supervision. In 2004, the Basel Committee published a revision to the Accord ("Basel II"). The goal of the new Basel II Framework is to provide more risk-sensitive regulatory capital calculations and promote enhanced risk management practices among large, internationally active banking organizations. U.S. banking regulators published a final Basel II rule in December 2007, which will require JPMorgan Chase to implement Basel II at the holding company level, as well as at certain of its key U.S. bank subsidiaries.

Prior to full implementation of the new Basel II Framework, JPMorgan Chase will be required to complete a qualification period of four consecutive quarters during which it will need to demonstrate that it meets the requirements of the new rule to the satisfaction of its primary U.S. banking regulators. The U.S. implementation timetable consists of the qualification period, starting no later than April 1, 2010, followed by a minimum transition period of three years. During the transition period, Basel II risk-based capital requirements cannot fall below certain floors based on current ("Basel I") regulations. JPMorgan Chase expects to be in compliance with all relevant Basel II rules within the established timelines. In addition, the Firm has adopted, and will continue to adopt, based on various established timelines, Basel II rules in certain non-U.S. jurisdictions, as required.

Broker-dealer regulatory capital

JPMorgan Chase's principal U.S. broker-dealer subsidiaries are J.P. Morgan Securities Inc. ("JPMorgan Securities") and J.P. Morgan Clearing Corp. JPMorgan Securities and J.P. Morgan Clearing Corp. are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 ("Net Capital Rule"). JPMorgan Securities and J.P. Morgan Clearing Corp. are also registered as futures commission merchants and subject to Rule 1.17 under the Commodity Futures Trading Commission ("CFTC"). J.P. Morgan Clearing Corp., a subsidiary of JPMorgan Securities, provides clearing and settlement services.

JPMorgan Securities and J.P. Morgan Clearing Corp. have elected to compute their minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule. At December 31, 2009, JPMorgan Securities' net capital, as defined by the Net Capital Rule, of $7.4 billion exceeded the minimum requirement by $6.9 billion. J.P. Morgan Clearing Corp.'s net capital of $5.2 billion exceeded the minimum requirement by $3.6 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of $1.0 billion and is also required to notify the Securities and Exchange Commission ("SEC") in the event that tentative net capital is less than $5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2009, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

Economic risk capital

JPMorgan Chase assesses its capital adequacy relative to the risks underlying its business activities, using internal risk-assessment methodologies. The Firm measures economic capital primarily based on four risk factors: credit, market, operational and private equity risk. The growth in economic risk capital from 2008 was primarily driven by higher credit risk capital within the consumer businesses, due to the full year effect of the Washington Mutual transaction and revised performance data in light of the recent weak economic environment.

Economic risk capital	Yearly Average	
(in billions)	**2009**	2008
Credit risk	**$ 51.3**	$ 37.8
Market risk	**15.4**	10.5
Operational risk	**8.5**	6.3
Private equity risk	**4.7**	5.3
Economic risk capital	**79.9**	59.9
Goodwill	**48.3**	46.1
Other[a]	**17.7**	23.1
Total common stockholders' equity	**$ 145.9**	$ 129.1

(a) Reflects additional capital required, in the Firm's view, to meet its regulatory and debt rating objectives.

Credit risk capital

Credit risk capital is estimated separately for the wholesale businesses (IB, CB, TSS and AM) and consumer businesses (RFS and CS).

Credit risk capital for the overall wholesale credit portfolio is defined in terms of unexpected credit losses, both from defaults and declines in the portfolio value due to credit deterioration, measured over a one-year period at a confidence level consistent with an "AA" credit rating standard. Unexpected losses are losses in excess of those for which allowance for credit losses are maintained. The capital methodology is based on several principal drivers of credit risk: exposure at default (or loan-equivalent amount), default likelihood, credit spreads, loss severity and portfolio correlation.

Credit risk capital for the consumer portfolio is based on product and other relevant risk segmentation. Actual segment level default and severity experience are used to estimate unexpected losses for a one-year horizon at a confidence level consistent with an "AA" credit rating standard. Results for certain segments or portfolios are derived from available benchmarks and are not model-driven.

Market risk capital

The Firm calculates market risk capital guided by the principle that capital should reflect the risk of loss in the value of portfolios and financial instruments caused by adverse movements in market variables, such as interest and foreign exchange rates, credit spreads, securities prices and commodities prices, taking into account the liquidity of the financial instruments. Results from daily VaR, biweekly stress-test, issuer credit spread and default risk calculations as well as other factors are used to determine appropriate capital levels. Market risk capital is allocated to each business segment based on its risk contribution. See Market Risk Management on pages 126–132 of this Annual Report for more information about these market risk measures.

Operational risk capital

Capital is allocated to the lines of business for operational risk using a risk-based capital allocation methodology which estimates operational risk on a bottoms-up basis. The operational risk capital model is based on actual losses and potential scenario-based stress losses, with adjustments to the capital calculation to reflect changes in the quality of the control environment or the use of risk-transfer products. The Firm believes its model is consistent with the new Basel II Framework. See Operational Risk Management on page 133 of this Annual Report for more information about operational risk.

Private equity risk capital

Capital is allocated to privately- and publicly- held securities, third-party fund investments, and commitments in the private equity portfolio to cover the potential loss associated with a decline in equity markets and related asset devaluations. In addition to negative market fluctuations, potential losses in private equity investment portfolios can be magnified by liquidity risk. The capital allocation for the private equity portfolio is based on measurement of the loss experience suffered by the Firm and other market participants over a prolonged period of adverse equity market conditions.

Line of business equity

The Firm's framework for allocating capital is based on the following objectives:

- Integrate firmwide capital management activities with capital management activities within each of the lines of business

- Measure performance consistently across all lines of business
- Provide comparability with peer firms for each of the lines of business

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, incorporating sufficient capital to address economic risk measures, regulatory capital requirements and capital levels for similarly rated peers. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. Return on common equity is measured and internal targets for expected returns are established as a key measure of a business segment's performance.

Relative to 2008, line of business equity remained largely unchanged during 2009.

Line of business equity

December 31, (in billions)	**2009**	2008
Investment Bank	**$ 33.0**	$ 33.0
Retail Financial Services	**25.0**	25.0
Card Services	**15.0**	15.0
Commercial Banking	**8.0**	8.0
Treasury & Securities Services	**5.0**	4.5
Asset Management	**7.0**	7.0
Corporate/Private Equity	**64.2**	42.4
Total common stockholders' equity	**$ 157.2**	$ 134.9

Line of business equity	Yearly Average	
(in billions)	**2009**	2008
Investment Bank	**$ 33.0**	$ 26.1
Retail Financial Services	**25.0**	19.0
Card Services	**15.0**	14.3
Commercial Banking	**8.0**	7.3
Treasury & Securities Services	**5.0**	3.8
Asset Management	**7.0**	5.6
Corporate/Private Equity	**52.9**	53.0
Total common stockholders' equity	**$ 145.9**	$ 129.1

In 2010, the Firm will enhance its line of business equity framework to better align equity assigned to each line of business with the anticipated changes in the business, as well as changes in the competitive and regulatory landscape. The lines of business will be capitalized based on the Tier 1 common standard, rather than the Tier 1 Capital standard.

Capital actions

Dividends

On February 23, 2009, the Board of Directors reduced the Firm's quarterly common stock dividend from $0.38 to $0.05 per share, effective with the dividend paid on April 30, 2009, to shareholders of record on April 6, 2009. The action enabled the Firm to retain approximately $5 billion in common equity during 2009, and was taken to ensure the Firm had sufficient capital strength in the event the very weak economic conditions that existed at the beginning of the year further deteriorated.

For information regarding dividend restrictions, see Note 23 and Note 28 on pages 230–231 and 236, respectively, of this Annual Report.

The following table shows the common dividend payout ratio based on reported net income.

Common dividend payout ratio

Year ended December 31,	**2009**	2008	2007
Common dividend payout ratio	**9%**	114%	34%

Issuance

On June 5, 2009, the Firm issued $5.8 billion, or 163 million shares, of common stock at $35.25 per share. On September 30, 2008, the Firm issued $11.5 billion, or 284 million shares, of common stock at $40.50 per share. The proceeds from these issuances were used for general corporate purposes. For additional information regarding common stock, see Note 24 on pages 231–232 of this Annual Report.

Stock repurchases

In April 2007, the Board of Directors approved a stock repurchase program that authorizes the repurchase of up to $10.0 billion of the Firm's common shares. In connection with the U.S. Treasury's sale of the warrants it received as part of the Capital Purchase Program, the Board of Directors amended the Firm's securities repurchase program to authorize the repurchase of warrants for its stock. During the years ended December 31, 2009 and 2008, the Firm did not repurchase any shares of its common stock. As of December 31, 2009, $6.2 billion of authorized repurchase capacity remained under the repurchase program with respect to repurchases of common stock, and all the authorized repurchase capacity remained with respect to the warrants.

The authorization to repurchase common stock and warrants will be utilized at management's discretion, and the timing of purchases and the exact number of shares and warrants purchased is subject to various factors, including market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative potential investment opportunities. The repurchase program does not include specific price targets or timetables, may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common stock – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan that is established when the Firm is not aware of material nonpublic information.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5, Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on page 18 of JPMorgan Chase's 2009 Form 10-K.

RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase's business activities and the Firm's overall risk tolerance is established in the context of the Firm's earnings power, capital, and diversified business model. The Firm's risk management framework and governance structure are intended to provide comprehensive controls and ongoing management of the major risks inherent in its business activities. It is also intended to create a culture of risk awareness and personal responsibility throughout the Firm. The Firm's ability to properly identify, measure, monitor and report risk is critical to both its soundness and profitability.

- Risk identification: The Firm's exposure to risk through its daily business dealings, including lending, trading and capital markets activities, is identified and aggregated through the Firm's risk management infrastructure. In addition, individuals who manage risk positions, particularly those that are complex, are responsible for identifying and estimating potential losses that could arise from specific or unusual events that may not be captured in other models, and those risks are communicated to senior management.
- Risk measurement: The Firm measures risk using a variety of methodologies, including calculating probable loss, unexpected loss and value-at-risk, and by conducting stress tests and making comparisons to external benchmarks. Measurement models and related assumptions are routinely reviewed with the goal of ensuring that the Firm's risk estimates are reasonable and reflect underlying positions.
- Risk monitoring/control: The Firm's risk management policies and procedures incorporate risk mitigation strategies and include approval limits by customer, product, industry, country and business. These limits are monitored on a daily, weekly and monthly basis, as appropriate.
- Risk reporting: Executed on both a line of business and a consolidated basis. This information is reported to management on a daily, weekly and monthly basis, as appropriate. There are eight major risk types identified in the business activities of the Firm: liquidity risk, credit risk, market risk, interest rate risk, private equity risk, operational risk, legal and fiduciary risk, and reputation risk.

Risk governance

The Firm's risk governance structure starts with each line of business being responsible for managing its own risks. Each line of business works closely with Risk Management through its own risk committee and its own chief risk officer to manage its risk. Each line of business risk committee is responsible for decisions regarding the business' risk strategy, policies and controls. The Firm's Chief Risk Officer is a member of the line of business risk committees.

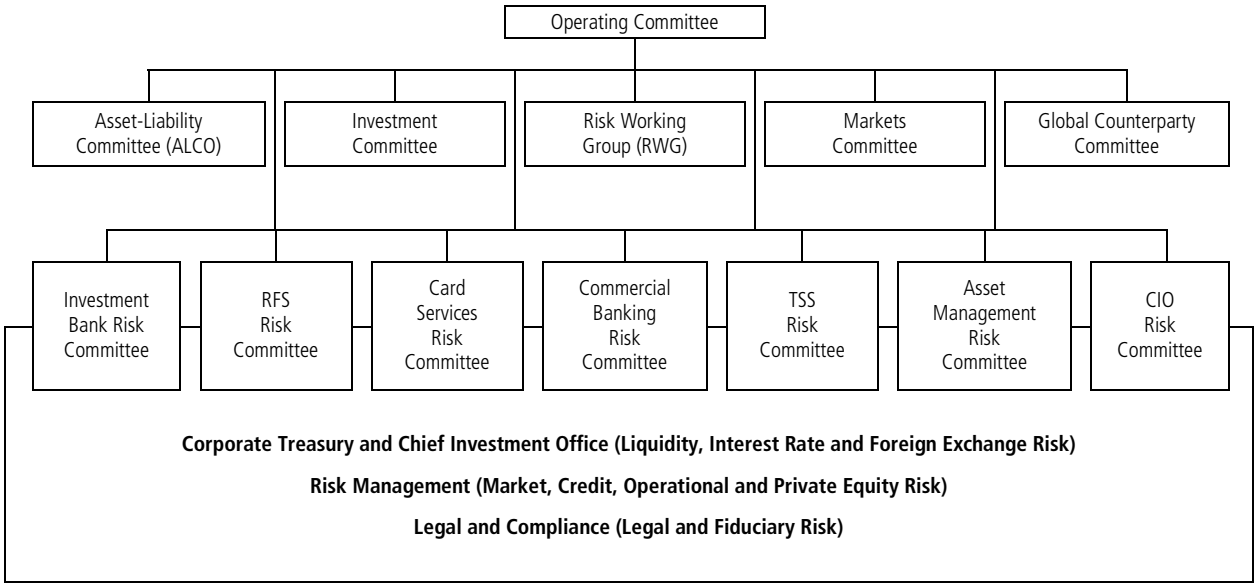
Overlaying the line of business risk management are four corporate functions with risk management–related responsibilities, including the Chief Investment Office, Corporate Treasury, Legal and Compliance and Risk Management.

Risk Management is headed by the Firm's Chief Risk Officer, who is a member of the Firm's Operating Committee and who reports to the Chief Executive Officer and the Board of Directors, primarily through the Board's Risk Policy Committee. Risk Management is responsible for providing an independent firmwide function of risk management and controls. Within the Firm's Risk Management function are units responsible for credit risk, market risk, operational risk and private equity risk, as well as risk reporting, risk policy and risk technology and operations. Risk technology and operations is responsible for building the information technology infrastructure used to monitor and manage risk.

The Chief Investment Office and Corporate Treasury are responsible for measuring, monitoring, reporting and managing the Firm's liquidity, interest rate and foreign exchange risk.

Legal and Compliance has oversight for legal and fiduciary risk.

In addition to the risk committees of the lines of business and the above-referenced risk management functions, the Firm also has an Investment Committee, an Asset-Liability Committee and three other risk-related committees – the Risk Working Group, the Global Counterparty Committee and the Markets Committee. All of these committees are accountable to the Operating Committee which is involved in setting the Firm's overall risk appetite. The membership of these committees are composed of senior management of the Firm, including representatives of lines of business, Risk Management, Finance and other senior executives. The committees meet frequently to discuss a broad range of topics including, for example, current market conditions and other external events, risk exposures, and risk concentrations to ensure that the impact of risk factors are considered broadly across the Firm's businesses.



The Asset-Liability Committee monitors the Firm's overall interest rate risk and liquidity risk. ALCO is responsible for reviewing and approving the Firm's liquidity policy and contingency funding plan. ALCO also reviews the Firm's funds transfer pricing policy (through which lines of business "transfer" interest rate and foreign exchange risk to Corporate Treasury in the Corporate/Private Equity segment), earnings at risk, overall interest rate position, funding requirements and strategy, and the Firm's securitization programs (and any required liquidity support by the Firm of such programs).

The Investment Committee, chaired by the Firm's Chief Financial Officer, oversees global merger and acquisition activities undertaken by JPMorgan Chase for its own account that fall outside the scope of the Firm's private equity and other principal finance activities.

The Risk Working Group is chaired by the Firm's Chief Risk Officer and meets monthly to review issues that cross lines of business such as risk policy, risk methodology, Basel II and other regulatory issues, and such other topics referred to it by line-of-business risk committees or the Firm's Chief Risk Officer.

The Markets Committee, chaired by the Chief Risk Officer, meets weekly to review, monitor and discuss significant risk matters, which may include credit, market and operational risk issues; market moving events; large transactions; hedging strategies; reputation risk; conflicts of interest; and other issues.

The Global Counterparty Committee designates to the Chief Risk Officer of the Firm certain counterparties with which the Firm may trade at exposure levels above portfolio-established thresholds when deemed appropriate to support the Firm's trading activities. The Committee meets quarterly to review total exposures with these counterparties, with particular focus on counterparty trading exposures, and to direct changes in exposure levels as needed.

The Board of Directors exercises its oversight of risk management, principally through the Board's Risk Policy Committee and Audit Committee. The Risk Policy Committee oversees senior management risk-related responsibilities, including reviewing management policies and performance against these policies and related benchmarks. The Audit Committee is responsible for oversight of guidelines and policies that govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal controls and financial reporting that is relied upon to provide reasonable assurance of compliance with the Firm's operational risk management processes.

LIQUIDITY RISK MANAGEMENT

The ability to maintain a sufficient level of liquidity is crucial to financial services companies, particularly their ability to maintain appropriate levels of liquidity during periods of adverse conditions. JPMorgan Chase's primary sources of liquidity include a diversified deposit base and access to the long-term debt (including trust preferred capital debt securities) and equity capital markets. The Firm's funding strategy is intended to ensure liquidity and diversity of funding sources to meet actual and contingent liabilities during both normal and stress periods. Consistent with this strategy, JPMorgan Chase maintains large pools of highly liquid unencumbered assets and significant sources of secured funding, and monitors its capacity in the wholesale funding markets across various geographic regions and in various currencies. The Firm also maintains access to secured funding capacity through overnight borrowings from various central banks. Throughout the recent financial crisis, the Firm successfully raised both secured and unsecured funding.

Governance

The Firm's governance process is designed to ensure that its liquidity position remains strong. The Asset-Liability Committee reviews and approves the Firm's liquidity policy and contingency funding plan. Corporate Treasury formulates and is responsible for executing the Firm's liquidity policy and contingency funding plan as well as measuring, monitoring, reporting and managing the Firm's liquidity risk profile. JPMorgan Chase uses a centralized approach for liquidity risk management to maximize liquidity access, minimize funding costs and permit identification and coordination of global liquidity risk. This approach involves frequent communication with the business segments, disciplined management of liquidity at the parent holding company, comprehensive market-based pricing of all assets and liabilities, continuous balance sheet management, frequent stress testing of liquidity sources, and frequent reporting to and communication with senior management and the Board of Directors regarding the Firm's liquidity position.

Liquidity monitoring

The Firm monitors liquidity trends, tracks historical and prospective on– and off–balance sheet liquidity obligations, identifies and measures internal and external liquidity warning signals to permit early detection of liquidity issues, and manages contingency planning (including identification and testing of various company-specific and market-driven stress scenarios). Various tools, which together contribute to an overall firmwide liquidity perspective, are used to monitor and manage liquidity. Among others, these include: (i) analysis of the timing of liquidity sources versus liquidity uses (i.e., funding gaps) over periods ranging from overnight to one year; (ii) management of debt and capital issuances to ensure that the illiquid portion of the balance sheet can be funded by equity, long-term debt (including trust preferred capital debt securities) and deposits the Firm believes to be stable; and (iii) assessment of the Firm's capacity to raise incremental unsecured and secured funding.

Liquidity of the parent holding company and its nonbank subsidiaries is monitored independently as well as in conjunction with the liquidity of the Firm's bank subsidiaries. At the parent holding company level, long-term funding is managed to ensure that the parent holding company has, at a minimum, sufficient liquidity to cover its obligations and those of its nonbank subsidiaries within the next 12 months. For bank subsidiaries, the focus of liquidity risk management is on maintenance of unsecured and secured funding capacity sufficient to meet on– and off–balance sheet obligations.

A component of liquidity management is the Firm's contingency funding plan. The goal of the plan is to ensure appropriate liquidity during normal and stress periods. The plan considers various temporary and long-term stress scenarios where access to wholesale unsecured funding is severely limited or nonexistent, taking into account both on– and off–balance sheet exposures, and separately evaluates access to funding sources by the parent holding company and the Firm's bank subsidiaries.

Recent events

The extraordinary levels of volatility exhibited in global markets during the second half of 2008 began to subside in 2009. Market participants were able to regain access to the debt, equity and consumer loan securitization markets as spreads tightened and liquidity returned to the markets.

The Firm believes its liquidity position is strong, based on its liquidity metrics as of December 31, 2009. The Firm believes that its unsecured and secured funding capacity is sufficient to meet its on– and off–balance sheet obligations. JPMorgan Chase's long-dated funding, including core liabilities, exceeded illiquid assets.

On March 30, 2009, the Federal Reserve announced that, effective April 27, 2009, it would reduce the amount it lent against certain loans pledged as collateral to the Federal Reserve Banks for discount window or payment-system risk purposes, in order to reflect recent trends in the values of those types of collateral. On October 19, 2009, the Federal Reserve further reduced the amount it lent against such collateral. These changes by the Federal Reserve did not have a material impact on the Firm's aggregate funding capacity.

The Firm participated in the FDIC's Temporary Liquidity Guarantee Program (the "TLG Program"), which was implemented in late 2008 as a temporary measure to help restore confidence in the financial system. This program is comprised of two components: the Debt Guarantee Program that provided an FDIC guarantee for certain senior unsecured debt issued through October 31, 2009, and the Transaction Account Guarantee Program (the "TAG Program") that provides unlimited insurance on certain noninterest-bearing transaction accounts. The expiration date of the TAG Program was extended by six months, from December 31, 2009, to June 30, 2010, to provide continued support to those institutions most affected by the recent financial crisis and to phase out

the program in an orderly manner. On October 22, 2009, the Firm notified the FDIC that, as of January 1, 2010, it would no longer participate in the TAG Program. As a result of the Firm's decision to opt out of the program, after December 31, 2009, funds held in noninterest-bearing transaction accounts will no longer be guaranteed in full, but will be insured up to $250,000 under the FDIC's general deposit rules. The insurance amount of $250,000 per depositor is in effect through December 31, 2013. On January 1, 2014, the insurance amount will return to $100,000 per depositor for all account categories except Individual Retirement Accounts ("IRAs") and certain other retirement accounts, which will remain at $250,000 per depositor.

Funding

Sources of funds

The deposits held by the RFS, CB, TSS and AM lines of business are generally stable sources of funding for JPMorgan Chase Bank, N.A. As of December 31, 2009, total deposits for the Firm were $938.4 billion, compared with $1.0 trillion at December 31, 2008. A significant portion of the Firm's deposits are retail deposits (38% at December 31, 2009), which are less sensitive to interest rate changes or market volatility and therefore are considered more stable than market-based (i.e., wholesale) liability balances. In addition, through the normal course of business, the Firm benefits from substantial liability balances originated by RFS, CB, TSS and AM. These franchise-generated liability balances include deposits, as well as deposits that are swept to on–balance sheet liabilities (e.g., commercial paper, federal funds purchased, and securities loaned or sold under repurchase agreements), a significant portion of which are considered to be stable and consistent sources of funding due to the nature of the businesses from which they are generated. For further discussions of deposit and liability balance trends, see the discussion of the results for the Firm's business segments and the Balance sheet analysis on pages 63–81 and 84–86, respectively, of this Annual Report.

Additional sources of funding include a variety of unsecured short- and long-term instruments, including federal funds purchased, certificates of deposit, time deposits, bank notes, commercial paper, long-term debt, trust preferred capital debt securities, preferred stock and common stock. Secured sources of funding include securities loaned or sold under repurchase agreements, asset-backed securitizations, and borrowings from the Chicago, Pittsburgh and San Francisco Federal Home Loan Banks. The Firm also borrows from the Federal Reserve (including discount-window borrowings, the Primary Dealer Credit Facility and the Term Auction Facility); however, the Firm does not view such borrowings from the Federal Reserve as a primary means of funding.

Issuance

Funding markets are evaluated on an ongoing basis to achieve an appropriate global balance of unsecured and secured funding at favorable rates. Generating funding from a broad range of sources in a variety of geographic locations enhances financial flexibility and limits dependence on any one source.

During 2009 and 2008, the Firm issued $19.7 billion and $20.8 billion, respectively, of FDIC-guaranteed long-term debt under the TLG Program, which became effective in October 2008. In 2009 the Firm also issued non-FDIC guaranteed debt of $16.1 billion, including $11.0 billion of senior notes and $2.5 billion of trust preferred capital debt securities, in the U.S. market, and $2.6 billion of senior notes in the European markets. In 2008 the Firm issued non-FDIC guaranteed debt of $23.6 billion, including $12.2 billion of senior notes and $1.8 billion of trust preferred capital debt securities in the U.S. market and $9.6 billion of senior notes in non-U.S. markets. Issuing non-FDIC guaranteed debt in the capital markets in 2009 was a prerequisite to redeeming the $25.0 billion of Series K Preferred Stock. In addition, during 2009 and 2008, JPMorgan Chase issued $15.5 billion and $28.0 billion, respectively, of IB structured notes that are included within long-term debt. During 2009 and 2008, $55.7 billion and $62.7 billion, respectively, of long-term debt (including trust preferred capital debt securities) matured or was redeemed, including $27.2 billion and $35.8 billion, respectively, of IB structured notes; the maturities or redemptions in 2009 offset the issuances during the period. During 2009 and 2008, the Firm also securitized $26.5 billion and $21.4 billion, respectively, of credit card loans.

Replacement capital covenants

In connection with the issuance of certain of its trust preferred capital debt securities and its noncumulative perpetual preferred stock, the Firm has entered into Replacement Capital Covenants ("RCCs"). These RCCs grant certain rights to the holders of "covered debt," as defined in the RCCs, that prohibit the repayment, redemption or purchase of such trust preferred capital debt securities and noncumulative perpetual preferred stock except, with limited exceptions, to the extent that JPMorgan Chase has received, in each such case, specified amounts of proceeds from the sale of certain qualifying securities. Currently, the Firm's covered debt is its 5.875% Junior Subordinated Deferrable Interest Debentures, Series O, due in 2035. For more information regarding these covenants, reference is made to the respective RCCs (including any supplements thereto) entered into by the Firm in relation to such trust preferred capital debt securities and noncumulative perpetual preferred stock, which are available in filings made by the Firm with the U.S. Securities and Exchange Commission.

Cash flows

For the years ended December 31, 2009, 2008 and 2007, cash and due from banks decreased $689 million, $13.2 billion and $268 million, respectively. The following discussion highlights the major activities and transactions that affected JPMorgan Chase's cash flows during 2009, 2008 and 2007.

Cash flows from operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's capital markets and lending activities, including the origination or purchase of loans initially designated as held-for-sale. Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven activities, market conditions

and trading strategies. Management believes cash flows from operations, available cash balances and the Firm's ability to generate cash through short- and long-term borrowings are sufficient to fund the Firm's operating liquidity needs.

For the years ended December 31, 2009 and 2008, net cash provided by operating activities was $121.9 billion and $23.1 billion, respectively, while for the year ended December 31, 2007, net cash used in operating activities was $110.6 billion. In 2009, the net decline in trading assets and liabilities was affected by balance sheet management activities and the impact of the challenging capital markets environment that existed at December 31, 2008, and continued into the first half of 2009. In 2009 and 2008, net cash generated from operating activities was higher than net income, largely as a result of adjustments for non-cash items such as the provision for credit losses. In addition, for 2009 and 2008 proceeds from sales, securitizations and paydowns of loans originated or purchased with an initial intent to sell were higher than cash used to acquire such loans, but the cash flows from these loan activities remained at reduced levels as a result of the lower activity in these markets since the second half of 2007.

For the year ended December 31, 2007, the net cash used in trading activities reflected a more active capital markets environment, largely from client-driven market-making activities. Also during 2007, cash used to originate or purchase loans held-for-sale was higher than proceeds from sales, securitizations and paydowns of such loans, although these activities were affected by a significant deterioration in liquidity in the second half of 2007.

Cash flows from investing activities

The Firm's investing activities predominantly include originating loans to be held for investment, the AFS securities portfolio and other short-term interest-earning assets. For the year ended December 31, 2009, net cash of $29.4 billion was provided by investing activities, primarily from: a decrease in deposits with banks reflecting lower demand for inter-bank lending and lower deposits with the Federal Reserve Bank relative to the elevated levels at the end of 2008; a net decrease in the loan portfolio across most businesses, driven by continued lower customer demand and loan sales in the wholesale businesses, lower charge volume on credit cards, slightly higher credit card securitizations, and paydowns; and the maturity of all asset-backed commercial paper issued by money market mutual funds in connection with the AML facility of the Federal Reserve Bank of Boston. Largely offsetting these cash proceeds were net purchases of AFS securities associated with the Firm's management of interest rate risk and investment of cash resulting from an excess funding position.

For the year ended December 31, 2008, net cash of $283.7 billion was used in investing activities, primarily for: increased deposits with banks as the result of the availability of excess cash for short-term investment opportunities through interbank lending, and reserve balances held by the Federal Reserve (which became an investing activity in 2008, reflecting a policy change of the Federal Reserve to pay interest to depository institutions on reserve balances); net purchases of investment securities in the AFS portfolio to manage the Firm's exposure to interest rate movements; net additions to the wholesale loan portfolio from organic growth in CB; additions to the consumer prime mortgage portfolio as a result of the decision to retain, rather than sell, new originations of nonconforming prime mortgage loans; an increase in securities purchased under resale agreements reflecting growth in demand from clients for liquidity; and net purchases of asset-backed commercial paper from money market mutual funds in connection with the AML facility of the Federal Reserve Bank of Boston. Partially offsetting these uses of cash were proceeds from loan sales and securitization activities as well as net cash received from acquisitions and the sale of an investment. Additionally, in June 2008, in connection with the Bear Stearns merger, the Firm sold assets acquired from Bear Stearns to the FRBNY and received cash proceeds of $28.85 billion.

For the year ended December 31,2007, net cash of $74.2 billion was used in investing activities, primarily for: funding purchases in the AFS securities portfolio to manage the Firm's exposure to interest rate movements; net additions to the wholesale retained loan portfolios in IB, CB and AM, mainly as a result of business growth; a net increase in the consumer retained loan portfolio, primarily reflecting growth in RFS in home equity loans and net additions to the RFS's subprime mortgage loans portfolio (which was affected by management's decision in the third quarter to retain (rather than sell) new subprime mortgages); growth in prime mortgage loans originated by RFS and AM that were not eligible to be sold to U.S. government agencies or U.S. government-sponsored enterprises; and increases in securities purchased under resale agreements as a result of a higher level of cash that was available for short-term investment opportunities in connection with the Firm's efforts to build liquidity. These net uses of cash were partially offset by cash proceeds received from sales and maturities of AFS securities and from credit card, residential mortgage, student and wholesale loan sales and securitization activities.

Cash flows from financing activities

The Firm's financing activities primarily reflect cash flows related to raising customer deposits, and issuing long-term debt (including trust preferred capital debt securities) as well as preferred and common stock. In 2009, net cash used in financing activities was $152.2 billion; this reflected a decline in wholesale deposits, predominantly in TSS, driven by the continued normalization of wholesale deposit levels resulting from the mitigation of credit concerns, compared with the heightened market volatility and credit concerns in the latter part of 2008; a decline in other borrowings, due to the absence of borrowings from the Federal Reserve under the Term Auction Facility program; net repayments of advances from Federal Home Loan Banks and the maturity of the nonrecourse advances under the Federal Reserve Bank of Boston AML Facility; the June 17, 2009, repayment in full of the $25.0 billion principal amount of Series K Preferred Stock issued to the U.S. Treasury; and the payment of cash dividends on common and preferred stock. Cash was also used for the net repayment of long-term debt and trust pre-

ferred capital debt securities, as issuances of FDIC-guaranteed debt and non-FDIC guaranteed debt in both the U.S. and European markets were more than offset by redemptions. Cash proceeds resulted from an increase in securities loaned or sold under repurchase agreements, partly attributable to favorable pricing and to financing the increased size of the Firm's AFS securities portfolio; and the issuance of $5.8 billion of common stock. There were no repurchases in the open market of common stock or the warrants during 2009.

In 2008, net cash provided by financing activities was $247.8 billion due to: growth in wholesale deposits, in particular, interest- and noninterest-bearing deposits in TSS (driven by both new and existing clients, and due to the deposit inflows related to the heightened volatility and credit concerns affecting the global markets that began in the third quarter of 2008), as well as increases in AM and CB (due to organic growth); proceeds of $25.0 billion from the issuance of preferred stock and the Warrant to the U.S. Treasury under the Capital Purchase Program; additional issuances of common stock and preferred stock used for general corporate purposes; an increase in other borrowings due to nonrecourse secured advances under the Federal Reserve Bank of Boston AML Facility to fund the purchase of asset-backed commercial paper from money market mutual funds; increases in federal funds purchased and securities loaned or sold under repurchase agreements in connection with higher client demand for liquidity and to finance growth in the Firm's AFS securities portfolio; and a net increase in long-term debt due to a combination of non-FDIC guaranteed debt and trust preferred capital debt securities issued prior to December 4, 2008, and the issuance of $20.8 billion of FDIC-guaranteed long-term debt issued during the fourth quarter of 2008. The fourth-quarter FDIC-guaranteed debt issuance was offset partially by maturities of non-FDIC guaranteed long-term debt during the same period. The increase in long-term debt (including trust preferred capital debt securities) was used primarily to fund certain illiquid assets held by the parent holding company and to build liquidity. Cash was also used to pay dividends on common and preferred stock. The Firm did not repurchase any shares of its common stock during 2008.

In 2007, net cash provided by financing activities was $184.1 billion due to a net increase in wholesale deposits from growth in business volumes, in particular, interest-bearing deposits at TSS, AM and CB; net issuances of long-term debt (including trust preferred capital debt securities) primarily to fund certain illiquid assets held by the parent holding company and build liquidity, and by IB from client-driven structured notes transactions; and growth in commercial paper issuances and other borrowed funds due to growth in the volume of liability balances in sweep accounts in TSS and CB, and to fund trading positions and to further build liquidity. Cash was used to repurchase common stock and pay dividends on common stock.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on pages 86–87 and Ratings profile of derivative receivables marked to market ("MTM"), and Note 5 on page 111 and pages 175–183, respectively, of this Annual Report.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures.

The credit ratings of the parent holding company and each of the Firm's significant banking subsidiaries as of January 15, 2010, were as follows.

	Short-term debt			Senior long-term debt		
	Moody's	S&P	Fitch	Moody's	S&P	Fitch
JPMorgan Chase & Co.	P-1	A-1	F1+	Aa3	A+	AA-
JPMorgan Chase Bank, N.A.	P-1	A-1+	F1+	Aa1	AA-	AA-
Chase Bank USA, N.A.	P-1	A-1+	F1+	Aa1	AA-	AA-

Ratings actions affecting the Firm

On March 4, 2009, Moody's revised the outlook on the Firm to negative from stable. This action was the result of Moody's view that the Firm's ability to generate capital would be adversely affected by higher credit costs due to the global recession. The rating action by Moody's in the first quarter of 2009 did not have a material impact on the cost or availability of the Firm's funding. At December 31, 2009, Moody's outlook remained negative.

Ratings from S&P and Fitch on JPMorgan Chase and its principal bank subsidiaries remained unchanged at December 31, 2009, from December 31, 2008. At December 31, 2009, S&P's outlook remained negative, while Fitch's outlook remained stable.

Following the Firm's earnings release on January 15, 2010, S&P and Moody's announced that their ratings on the Firm remained unchanged.

If the Firm's senior long-term debt ratings were downgraded by one additional notch, the Firm believes the incremental cost of funds or loss of funding would be manageable, within the context of current market conditions and the Firm's liquidity resources. JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable

changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

On February 24, 2009, S&P lowered the ratings on the trust preferred capital debt securities and other hybrid securities of 45 U.S. financial institutions, including those of JPMorgan Chase & Co. The Firm's ratings on trust preferred capital debt and noncumulative perpetual preferred securities were lowered from A- to BBB+. This action was the result of S&P's general view that there is an increased likelihood of issuers suspending interest and dividend payments in the current environment. This action by S&P did not have a material impact on the cost or availability of the Firm's funding.

On December 22, 2009, Moody's lowered the ratings on certain of the Firm's hybrid securities. The downgrades were consistent with Moody's revised guidelines for rating hybrid securities and subordinated debt. The ratings of junior subordinated debt securities with cumulative deferral features were lowered to A2 from A1, while those of cumulative preferred securities were downgraded to A3 from A2, and ratings for non-cumulative preferred securities were lowered to Baa1 from A2.

On January 29, 2010, Fitch downgraded 592 hybrid capital instruments issued by banks and other non-bank financial institutions, including those issued by the Firm. This action was in line with Fitch's revised hybrid ratings methodology. The Firm's trust preferred debt and hybrid preferred securities were downgraded by one notch to A.

Ratings actions affecting Firm-sponsored securitization trusts
In 2009, in light of increasing levels of losses in the Firm-sponsored securitization trusts due to the then worsening economic environment, S&P, Moody's and Fitch took various ratings actions with respect to the securities issued by the Firm's credit card securitization trusts, including the Chase Issuance Trust, Chase Credit Card Master Trust, Washington Mutual Master Note Trust and SCORE Credit Card Trust, including placing the ratings of certain securities of such Trusts on negative credit watch or review for possible downgrade, and, in a few circumstances, downgrading the ratings of some of the securities.

On May 12, 2009, the Firm took certain actions to increase the credit enhancement underlying the credit card asset-backed securities of the Chase Issuance Trust. As a result of these actions, the ratings of all asset-backed credit card securities of the Chase Issuance Trust were affirmed by the credit rating agencies, except for a negative rating outlook by Fitch which remains, as of December 31, 2009, on the subordinated securities of the Chase Issuance Trust.

On May 19, 2009, the Firm removed from the Washington Mutual Master Note Trust all remaining credit card receivables that had been originated by Washington Mutual. As a result of this action, the ratings of all asset-backed credit card securities of the Washington Mutual Master Note Trust were raised or affirmed by the credit rating agencies, with the exception that the senior securities of the Washington Mutual Master Note Trust were downgraded by S&P on December 23, 2009. S&P's action was the result of their consideration of a linkage between the ratings of the securities of Washington Mutual Master Note Trust and the Firm's own ratings as a result of the consolidation onto the Firm's Consolidated Balance Sheet of the assets and liabilities of the Washington Mutual Master Note Trust following the Firm's actions on May 19, 2009 (please refer to page 208 under Note 15 of this Annual Report).

The Firm did not take any actions to increase the credit enhancement underlying securitizations issued by the Chase Credit Card Master Trust and the SCORE Credit Card Trust during 2009. Certain mezzanine securities and subordinated securities of the Chase Credit Card Master Trust were downgraded by S&P and Moody's on August 6, 2009, and July 10, 2009, respectively. The senior and subordinated securities of the SCORE Credit Card Trust were placed on review for possible downgrade by Moody's on January 20, 2010.

The Firm believes the ratings actions described above did not have a material impact on the Firm's liquidity and ability to access the asset-backed securitization market.

With the exception of the Washington Mutual Master Note Trust as described above, the ratings on the Firm's asset-backed securities programs are currently independent of the Firm's own ratings. However, no assurance can be given that the credit rating agencies will not in the future consider there being a linkage between the ratings of the Firm's asset-backed securities programs and the Firm's own ratings as a result of accounting guidance for QSPEs and VIEs that became effective January 1, 2010. For a further discussion of the new FASB guidance, see "Accounting and reporting developments" and Note 16 on pages 140–142 and 214–222, respectively, of this Annual Report.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit (for example, through loans, lending-related commitments, guarantees and derivatives) to a variety of customers, from large corporate and institutional clients to the individual consumer. For the wholesale business, credit risk management includes the distribution of the Firm's syndicated loan originations into the marketplace with exposure held in the retained portfolio averaging less than 10%. Wholesale loans generated by CB and AM are generally retained on the balance sheet. With regard to the consumer credit market, the Firm focuses on creating a portfolio that is diversified from both a product and a geographic perspective. Loss mitigation strategies are being employed for all home lending portfolios. These strategies include rate reductions, forbearance and other actions intended to minimize economic loss and avoid foreclosure. In the mortgage business, originated loans are either retained in the mortgage portfolio or securitized and sold to U.S. government agencies and U.S. government-sponsored enterprises.

Credit risk organization

Credit risk management is overseen by the Chief Risk Officer and implemented within the lines of business. The Firm's credit risk management governance consists of the following functions:

- establishing a comprehensive credit risk policy framework
- monitoring and managing credit risk across all portfolio segments, including transaction and line approval
- assigning and managing credit authorities in connection with the approval of all credit exposure
- managing criticized exposures and delinquent loans
- calculating the allowance for credit losses and ensuring appropriate credit risk-based capital management

Risk identification

The Firm is exposed to credit risk through lending and capital markets activities. Credit risk management works in partnership with the business segments in identifying and aggregating exposures across all lines of business.

Risk measurement

To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer installment versus wholesale loan), risk measurement parameters (e.g., delinquency status and credit bureau score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the amount of exposure should the obligor or the counterparty default, the probability of default and the loss severity given a default event. Based on these factors and related market-based inputs, the Firm estimates both probable and unexpected losses for the wholesale and consumer portfolios. Probable losses, reflected in the provision for credit losses, are based primarily upon statistical estimates of credit losses as a result of obligor or counterparty default. However, probable losses are not the sole indicators of risk. If losses were entirely predictable, the probable loss rate could be factored into pricing and covered as a normal and recurring cost of doing business. Unexpected losses, reflected in the allocation of credit risk capital, represent the potential volatility of actual losses relative to the probable level of losses. Risk measurement for the wholesale portfolio is assessed primarily on a risk-rated basis; for the consumer portfolio, it is assessed primarily on a credit-scored basis.

Risk-rated exposure

For portfolios that are risk-rated (generally held in IB, CB, TSS and AM), probable and unexpected loss calculations are based on estimates of probability of default and loss given default. Probability of default is the expected default calculated on an obligor basis. Loss given default is an estimate of losses given a default event and takes into consideration collateral and structural support for each credit facility. Calculations and assumptions are based on management information systems and methodologies which are under continual review. Risk ratings are assigned to differentiate risk within the portfolio and are reviewed on an ongoing basis by Credit Risk Management and revised, if needed, to reflect the borrowers' current financial position, risk profiles and the related collateral and structural positions.

Credit-scored exposure

For credit-scored portfolios (generally held in RFS and CS), probable loss is based on a statistical analysis of inherent losses over discrete periods of time. Probable losses are estimated using sophisticated portfolio modeling, credit scoring and decision-support tools to project credit risks and establish underwriting standards. In addition, common measures of credit quality derived from historical loss experience are used to predict consumer losses. Other risk characteristics evaluated include recent loss experience in the portfolios, changes in origination sources, portfolio seasoning, loss severity and underlying credit practices, including charge-off policies. These analyses are applied to the Firm's current portfolios in order to estimate delinquencies and severity of losses, which determine the amount of probable losses. These factors and analyses are updated at least on a quarterly basis or more frequently as market conditions dictate.

Risk monitoring

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit, and to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposure. Wholesale credit risk is monitored regularly on both an aggregate portfolio level and on an individual customer basis. Management of the Firm's wholesale exposure is accomplished through a number

of means including loan syndication and participations, loan sales, securitizations, credit derivatives, use of master netting agreements and collateral and other risk-reduction techniques, which are further discussed in the following risk sections. For consumer credit risk, the key focus items are trends and concentrations at the portfolio level, where potential problems can be remedied through changes in underwriting policies and portfolio guidelines. Consumer Credit Risk Management monitors trends against business expectations and industry benchmarks.

Risk reporting

To enable monitoring of credit risk and decision-making, aggregate credit exposure, credit quality forecasts, concentrations levels and risk profile changes are reported regularly to senior credit risk management. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, senior management, as mentioned on page 94 of this Annual Report.

2009 Credit risk overview

During 2009, the credit environment experienced further deterioration compared with 2008, resulting in increased defaults, downgrades and reduced liquidity. In the first part of the year, the pace of deterioration increased, adversely affecting many financial institutions and impacting the functioning of credit markets, which remained weak. The pace of deterioration also gave rise to a high level of uncertainty regarding the ultimate extent of the downturn. The Firm's credit portfolio was affected by these market conditions and experienced continued deteriorating credit quality, especially in the first part of the year, generally consistent with the market.

For the wholesale portfolio, criticized assets, nonperforming assets and charge-offs increased significantly from 2008, reflecting continued weakness in the portfolio, particularly in commercial real estate. In the latter part of the year, there were some positive indicators, for example, loan origination activity and market liquidity improved and credit spreads tightened. The wholesale businesses have remained focused on actively managing the portfolio, including ongoing, in-depth reviews of credit quality and industry, product and client concentrations. Underwriting standards across all areas of lending have remained under review and strengthened where appropriate, consistent with evolving market conditions and the Firm's risk management activities. In light of the current market conditions, the wholesale allowance for loan loss coverage ratio has been strengthened to 3.57% from 2.64% at the end of 2008.

The consumer portfolio credit performance continued to be negatively affected by the economic environment of 2009. Higher unemployment and weaker overall economic conditions have led to a significant increase in the number of loans charged off, while continued weak housing prices have driven a significant increase in the severity of loss recognized on real estate loans that defaulted. During 2009, the Firm took proactive action to assist homeowners most in need of financial assistance, including participation in the U.S. Treasury Making Home Affordable ("MHA") programs, which are designed to assist eligible homeowners in a number of ways, one of which is by modifying the terms of their mortgages. The MHA programs and the Firm's other loss-mitigation programs for financially troubled borrowers generally represent various concessions, such as term extensions, rate reductions and deferral of principal payments that would have been required under the terms of the original agreement. The Firm's loss-mitigation programs are intended to minimize economic loss to the Firm, while providing alternatives to foreclosure.

More detailed discussion of the domestic consumer credit environment can be found in Consumer Credit Portfolio on pages 114–123 of this Annual Report.

CREDIT PORTFOLIO

The following table presents JPMorgan Chase's credit portfolio as of December 31, 2009 and 2008. Total credit exposure at December 31, 2009, decreased by $322.6 billion from December 31, 2008, reflecting decreases of $170.5 billion in the wholesale portfolio and $152.1 billion in the consumer portfolio. During 2009, lending-related commitments decreased by $130.3 billion, managed loans decreased by $112.4 billion and derivative receivables decreased by $82.4 billion.

While overall portfolio exposure declined, the Firm provided more than $600 billion in new loans and lines of credit to consumer and wholesale clients in 2009, including individuals, small businesses, large corporations, not-for-profit organizations, U.S. states and municipalities, and other financial institutions.

In the table below, reported loans include loans retained; loans held-for-sale (which are carried at the lower of cost or fair value, with changes in value recorded in noninterest revenue); and loans accounted for at fair value. Loans retained are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs; for additional information, see Note 13 on pages 200–204 of this Annual Report. Nonperforming assets include nonaccrual loans and assets acquired in satisfaction of debt (primarily real estate owned). Nonaccrual loans are those for which the accrual of interest has been suspended in accordance with the Firm's accounting policies, which are described in Note 13 on pages 200–204 of this Annual Report. Average retained loan balances are used for the net charge-off rate calculations.

Total credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming assets[c][d]		90 days or more past due and still accruing[d]		Net charge-offs		Average annual net charge-off rate[e][f]	
	2009	2008	**2009**	2008	**2009**	2008	**2009**	2008	**2009**	2008
Total credit portfolio										
Loans retained	**$ 627,218**	$ 728,915	**$ 17,219**	$ 8,921	**$ 4,355**	$ 3,275	**$ 22,965**	$ 9,835	**3.42%**	1.73 %
Loans held-for-sale	**4,876**	8,287	**234**	12	**—**	—	**—**	—	**—**	—
Loans at fair value	**1,364**	7,696	**111**	20	**—**	—	**—**	—	**—**	—
Loans – reported	**633,458**	744,898	**17,564**	8,953	**4,355**	3,275	**22,965**	9,835	**3.42**	1.73
Loans – securitized[a]	**84,626**	85,571	**—**	—	**2,385**	1,802	**6,443**	3,612	**7.55**	4.53
Total managed loans	**718,084**	830,469	**17,564**	8,953	**6,740**	5,077	**29,408**	13,447	**3.88**	2.08
Derivative receivables	**80,210**	162,626	**529**	1,079	**—**	—	**NA**	NA	**NA**	NA
Receivables from customers	**15,745**	16,141	**—**	—	**—**	—	**NA**	NA	**NA**	NA
Interests in purchased receivables	**2,927**	—	**—**	—	**—**	—	**—**	—	**—**	—
Total managed credit-related assets	**816,966**	1,009,236	**18,093**	10,032	**6,740**	5,077	**29,408**	13,447	**3.88**	2.08
Lending-related commitments	**991,095**	1,121,378	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Assets acquired in loan satisfactions										
Real estate owned	**NA**	NA	**1,548**	2,533	**NA**	NA	**NA**	NA	**NA**	NA
Other	**NA**	NA	**100**	149	**NA**	NA	**NA**	NA	**NA**	NA
Total assets acquired in loan satisfactions	**NA**	NA	**1,648**	2,682	**NA**	NA	**NA**	NA	**NA**	NA
Total credit portfolio	**$ 1,808,061**	$ 2,130,614	**$ 19,741**	$12,714	**$ 6,740**	$ 5,077	**$ 29,408**	$ 13,447	**3.88%**	2.08 %
Net credit derivative hedges notional[b]	**$ (48,376)**	$ (91,451)	**$ (139)**	$ —	**NA**	NA	**NA**	NA	**NA**	NA
Liquid securities collateral held against derivatives	**(15,519)**	(19,816)	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA

(a) Represents securitized credit card receivables. For further discussion of credit card securitizations, see Note 15 on pages 206–213 of this Annual Report.

(b) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage both performing and nonperforming credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on pages 111–112 and Note 5 on pages 175–183 of this Annual Report.

(c) At December 31, 2009 and 2008, nonperforming loans and assets excluded: (1) mortgage loans insured by U.S. government agencies of $9.0 billion and $3.0 billion, respectively; (2) real estate owned insured by U.S. government agencies of $579 million and $364 million, respectively; and (3) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program of $542 million and $437 million, respectively. These amounts are excluded, as reimbursement is proceeding normally. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance. Under guidance issued by the Federal Financial Institutions Examination Council, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

(d) Excludes purchased credit-impaired loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

(e) Net charge-off ratios were calculated using: (1) average retained loans of $672.3 billion and $567.0 billion for the years ended December 31, 2009 and 2008, respectively; (2) average securitized loans of $85.4 billion and $79.6 billion for the years ended December 31, 2009 and 2008, respectively; and (3) average managed loans of $757.7 billion and $646.6 billion for the years ended December 31, 2009 and 2008, respectively.

(f) Firmwide net charge-off ratios were calculated including average purchased credit-impaired loans of $85.4 billion and $22.3 billion at December 31, 2009 and 2008, respectively. Excluding the impact of purchased credit-impaired loans, the total Firm's managed net charge-off rate would have been 4.37% and 2.15% respectively.

WHOLESALE CREDIT PORTFOLIO

As of December 31, 2009, wholesale exposure (IB, CB, TSS and AM) decreased by $170.5 billion from December 31, 2008. The $170.5 billion decrease was primarily driven by decreases of $82.4 billion of derivative receivables, $57.9 billion of loans and $32.7 billion of lending-related commitments. The decrease in derivative receivables was primarily related to tightening credit spreads, volatile foreign exchange rates and rising rates on interest rate swaps. Loans and lending-related commitments decreased across most wholesale lines of business, as lower customer demand continued to affect the level of lending activity.

Wholesale

As of or for the year ended December 31,	Credit exposure		Nonperforming loans[b]		90 days past due and still accruing	
(in millions)	**2009**	2008	**2009**	2008	**2009**	2008
Loans retained	**$ 200,077**	$ 248,089	**$ 6,559**	$ 2,350	**$ 332**	$ 163
Loans held-for-sale	**2,734**	6,259	**234**	12	**—**	—
Loans at fair value	**1,364**	7,696	**111**	20	**—**	—
Loans – reported	**$ 204,175**	$ 262,044	**$ 6,904**	$ 2,382	**$ 332**	$ 163
Derivative receivables	**80,210**	162,626	**529**	1,079	**—**	—
Receivables from customers	**15,745**	16,141	**—**	—	**—**	—
Interests in purchased receivables	**2,927**	—	**—**	—	**—**	—
Total wholesale credit-related assets	**303,057**	440,811	**7,433**	3,461	**332**	163
Lending-related commitments	**347,155**	379,871	**NA**	NA	**NA**	NA
Total wholesale credit exposure	**$ 650,212**	$ 820,682	**$ 7,433**	$ 3,461	**$ 332**	$ 163
Net credit derivative hedges notional[a]	**$ (48,376)**	$ (91,451)	**$ (139)**	$ —	**NA**	NA
Liquid securities collateral held against derivatives	**(15,519)**	(19,816)	**NA**	NA	**NA**	NA

(a) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage both performing and nonperforming credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on pages 111–112, and Note 5 on pages 175–183 of this Annual Report.

(b) Excludes assets acquired in loan satisfactions. For additional information, see the wholesale nonperforming assets by line of business segment table on pages 108–109 of this Annual Report.

The following table presents summaries of the maturity and ratings profiles of the wholesale portfolio as of December 31, 2009 and 2008. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings as defined by S&P and Moody's.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[c]				Ratings profile			
December 31, 2009 (in billions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	Investment-grade ("IG") AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	Total	Total % of IG
Loans	**29%**	**40%**	**31%**	**100%**	**$ 118**	**$ 82**	**$ 200**	**59%**
Derivative receivables	**12**	**42**	**46**	**100**	**61**	**19**	**80**	**76**
Lending-related commitments	**41**	**57**	**2**	**100**	**281**	**66**	**347**	**81**
Total excluding loans held-for-sale and loans at fair value	**34%**	**50%**	**16%**	**100%**	**$ 460**	**$ 167**	**627**	**73%**
Loans held-for-sale and loans at fair value[a]							**4**	
Receivables from customers							**16**	
Interests in purchased receivables							**3**	
Total exposure							**$ 650**	
Net credit derivative hedges notional[b]	**49%**	**42%**	**9%**	**100%**	**$ (48)**	**$ —**	**$ (48)**	**100%**

	Maturity profile[c]				Ratings profile			
December 31, 2008 (in billions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	Investment-grade ("IG") AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	Total	Total % of IG
Loans	32%	43%	25%	100%	$ 161	$ 87	$ 248	65%
Derivative receivables	31	36	33	100	127	36	163	78
Lending-related commitments	37	59	4	100	317	63	380	83
Total excluding loans held-for-sale and loans at fair value	34%	50%	16%	100%	$ 605	$ 186	791	77%
Loans held-for-sale and loans at fair value[a]							14	
Receivables from customers							16	
Total exposure							$ 821	
Net credit derivative hedges notional[b]	47%	47%	6%	100%	$ (82)	$ (9)	$ (91)	90%

(a) Loans held-for-sale and loans at fair value relate primarily to syndicated loans and loans transferred from the retained portfolio.
(b) Represents the net notional amounts of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP.
(c) The maturity profile of loans and lending-related commitments is based on the remaining contractual maturity. The maturity profile of derivative receivables is based on the maturity profile of average exposure. See Derivative contracts on pages 110–112 of this Annual Report for further discussion of average exposure.

Wholesale credit exposure – selected industry exposures

The Firm focuses on the management and diversification of its industry exposures, with particular attention paid to industries with actual or potential credit concerns. Customer receivables representing primarily margin loans to prime and retail brokerage clients of $15.7 billion are included in the table. These margin loans are generally fully collateralized by cash or highly liquid securities to satisfy daily minimum collateral requirements. Exposures deemed criticized generally represent a ratings profile similar to a rating of "CCC+"/"Caa1" and lower, as defined by S&P and Moody's. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, increased to $33.2 billion at December 31, 2009, from $26.0 billion at year-end 2008. The increase was primarily related to downgrades within the portfolio.

During the fourth quarter of 2009, the Firm revised certain industry classifications to better reflect risk correlations and enhance the Firm's management of industry risk. Below are summaries of the top 25 industry exposures as of December 31, 2009 and 2008. For additional information on industry concentrations, see Note 32 on pages 242–243 of this Annual Report.

Wholesale credit exposure – selected industry exposures

December 31, 2009 (in millions, except ratios)	Credit exposure(d)	% of portfolio	Investment grade	Noninvestment-grade		% of criticized portfolio	Net charge-offs/ (recoveries)	Credit derivative hedges(e)	Collateral held against derivative receivables(f)
				Noncriticized	Criticized				
Top 25 industries[a]									
Real estate	$ 68,509	11%	55%	$ 18,810	$ 11,975	36%	$ 688	$ (1,168)	$ (35)
Banks and finance companies	54,053	9	81	8,424	2,053	6	719	(3,718)	(8,353)
Healthcare	35,605	6	83	5,700	329	1	10	(2,545)	(125)
State and municipal governments	34,726	5	93	1,850	466	1	—	(204)	(193)
Utilities	27,178	4	81	3,877	1,238	4	182	(3,486)	(360)
Consumer products	27,004	4	64	9,105	515	2	35	(3,638)	(4)
Asset managers	24,920	4	82	3,742	680	2	7	(40)	(2,105)
Oil and gas	23,322	4	73	5,854	386	1	16	(2,567)	(6)
Retail and consumer services	20,673	3	58	7,867	782	2	35	(3,073)	—
Holding companies	16,018	3	86	2,107	110	—	275	(421)	(320)
Technology	14,169	2	63	4,004	1,288	4	28	(1,730)	(130)
Insurance	13,421	2	69	3,601	599	2	7	(2,735)	(793)
Machinery and equipment manufacturing	12,759	2	57	5,122	350	1	12	(1,327)	(1)
Metals/mining	12,547	2	56	4,906	639	2	24	(1,963)	—
Media	12,379	2	55	3,898	1,692	5	464	(1,606)	—
Telecom services	11,265	2	69	3,273	251	1	31	(3,455)	(62)
Securities firms and exchanges	10,832	2	76	2,467	145	—	—	(289)	(2,139)
Business services	10,667	2	61	3,859	344	1	8	(107)	—
Building materials/construction	10,448	2	43	4,537	1,399	4	98	(1,141)	—
Chemicals/plastics	9,870	2	67	2,626	611	2	22	(1,357)	—
Transportation	9,749	1	66	2,745	588	2	61	(870)	(242)
Central government	9,557	1	99	77	—	—	—	(4,814)	(30)
Automotive	9,357	1	41	4,252	1,240	4	52	(1,541)	—
Leisure	6,822	1	40	2,274	1,798	5	151	(301)	—
Agriculture/paper manufacturing	5,801	1	37	3,132	500	2	10	(897)	—
All other[b]	135,791	22	86	15,448	3,205	10	197	(3,383)	(621)
Subtotal	$ 627,442	100%	73%	$ 133,557	$ 33,183	100%	$ 3,132	$ (48,376)	$ (15,519)
Loans held-for-sale and loans at fair value	4,098				1,545				
Receivables from customers	15,745								
Interest in purchased receivables[c]	2,927								
Total	$ 650,212			$ 133,557	$ 34,728		$ 3,132	$ (48,376)	$ (15,519)

December 31, 2008 (in millions, except ratios)	Credit exposure(d)	% of portfolio	Investment grade	Noninvestment-grade		% of criticized portfolio	Net charge-offs/ (recoveries)	Credit derivative hedges(e)	Collateral held against derivative receivables(f)
				Noncriticized	Criticized				
Top 25 industries[a]									
Real estate	$ 80,284	10%	70%	$ 17,849	$ 5,961	23%	$ 212	$ (2,141)	$ (48)
Banks and finance companies	75,577	10	79	12,953	2,849	11	28	(5,016)	(9,457)
Healthcare	38,032	5	83	6,092	436	2	2	(5,338)	(199)
State and municipal governments	36,772	5	94	1,278	847	3	—	(677)	(134)
Utilities	34,246	4	83	5,844	114	—	3	(9,007)	(65)
Consumer products	29,766	4	65	9,504	792	3	32	(8,114)	(54)
Asset managers	49,256	6	85	6,418	819	3	15	(115)	(5,303)
Oil and gas	24,746	3	75	5,940	231	1	15	(6,627)	(7)
Retail and consumer services	23,223	3	54	9,357	1,311	5	(6)	(6,120)	(55)
Holding companies	14,466	2	70	4,182	116	1	(1)	(689)	(309)
Technology	17,025	2	67	5,391	230	1	—	(3,922)	(3)
Insurance	17,744	2	78	3,138	712	3	—	(5,016)	(846)
Machinery and equipment manufacturing	14,501	2	64	5,095	100	—	22	(3,743)	(6)
Metals/mining	14,980	2	61	5,579	262	1	(7)	(3,149)	(3)
Media	13,177	2	61	3,779	1,305	5	26	(3,435)	—
Telecom services	13,237	2	63	4,368	499	2	(5)	(7,073)	(92)
Securities firms and exchanges	25,590	3	81	4,744	138	1	—	(151)	(898)
Business services	11,247	1	64	3,885	145	1	46	(357)	—
Building materials/construction	12,065	2	49	4,925	1,342	5	22	(2,601)	—
Chemicals/plastics	11,719	1	66	3,357	591	2	5	(2,709)	—
Transportation	10,253	1	64	3,364	319	1	—	(1,567)	—
Central government	14,441	2	98	276	—	—	—	(4,548)	(35)
Automotive	11,448	1	52	3,687	1,775	7	(1)	(2,975)	(1)
Leisure	8,158	1	42	2,827	1,928	7	(1)	(721)	—
Agriculture/paper manufacturing	6,920	1	43	3,226	726	3	1	(835)	—
All other[b]	181,713	23	86	22,321	2,449	9	(6)	(4,805)	(2,301)
Subtotal	$ 790,586	100%	77%	$ 159,379	$ 25,997	100%	$ 402	$ (91,451)	$ (19,816)
Loans held-for-sale and loans at fair value	13,955				2,258				
Receivables from customers	16,141								
Interest in purchased receivables[c]	—								
Total	$ 820,682			$ 159,379	$ 28,255		$ 402	$ (91,451)	$ (19,816)

(a) Rankings are based on exposure at December 31, 2009. The rankings of the industries presented in the 2008 table are based on the rankings of such industries at year-end 2009, not actual rankings in 2008.
(b) For more information on exposures to SPEs included in all other, see Note 16 on pages 214–222 of this Annual Report.
(c) Represents undivided interests in pools of receivables and similar types of assets due to the consolidation during 2009 of one of the Firm-administered multi-seller conduits.
(d) Credit exposure is net of risk participations and excludes the benefit of credit derivative hedges and collateral held against derivative receivables or loans.
(e) Represents the net notional amounts of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting.
(f) Represents other liquid securities collateral held by the Firm as of December 31, 2009 and 2008, respectively.

Presented below is a discussion of several industries to which the Firm has significant exposure, as well as industries the Firm continues to monitor because of actual or potential credit concerns. For additional information, refer to the tables above and on the preceding page.

- Real estate: Exposure to this industry decreased by 15% or $11.8 billion from 2008 as loans and commitments were managed down, predominantly through repayments and loans sales. This sector continues to be challenging as property values in the U.S. remain under pressure, particularly in certain regions. The ratios of nonperforming loans and net charge-offs to loans have increased from 2008 due to deterioration in the commercial real estate portfolio, particularly in the latter half of 2009. The multi-family portfolio, which represents almost half of the commercial real estate exposure, accounts for the smallest proportion of nonperforming loans and net charge-offs. The commercial lessors portfolio involves real estate leased to retail, industrial and office space tenants, while the commercial construction and development portfolio includes financing for the construction of office and professional buildings and malls. Commercial real estate exposure in CB is predominantly secured; CB's exposure represents the majority of the Firm's commercial real estate exposure. IB manages less than one fifth of the total Firm's commercial real estate exposure; IB's exposure represents primarily unsecured lending to Real Estate Investment Trust ("REITs"), lodging, and homebuilding clients. The increase in criticized real estate exposure was largely a result of downgrades within the overall portfolio reflecting the continued weakening credit environment.

The following table presents additional information on the wholesale real estate industry for the periods ended December 31, 2009 and 2008.

December 31, 2009 (in millions, except ratios)	Credit exposure	% of credit portfolio	Criticized exposure	Nonperforming loans	% of nonperforming loans to total loans[b]	Net charge-offs/ (recoveries)	% of net charge-offs to total loans[b]
Commercial real estate subcategories							
Multi-family	**$ 32,073**	**47%**	**$ 3,986**	**$ 1,109**	**3.57%**	**$ 199**	**0.64%**
Commercial lessors	**18,512**	**27**	**4,017**	**1,057**	**6.97**	**232**	**1.53**
Commercial construction and development	**6,593**	**10**	**1,518**	**313**	**6.81**	**105**	**2.28**
Other[a]	**11,331**	**16**	**2,454**	**409**	**6.44**	**152**	**2.39**
Total commercial real estate	**$ 68,509**	**100%**	**$ 11,975**	**$ 2,888**	**5.05%**	**$ 688**	**1.20%**

December 31, 2008 (in millions, except ratios)	Credit exposure	% of credit portfolio	Criticized exposure	Nonperforming loans	% of nonperforming loans to total loans[b]	Net charge-offs/ (recoveries)	% of net charge-offs to total loans[b]
Commercial real estate subcategories							
Multi-family	$ 36,188	45%	$ 1,191	$ 293	0.87%	$ (1)	—%
Commercial lessors	21,037	26	1,649	74	0.43	4	0.02
Commercial construction and development	6,688	8	706	82	1.95	4	0.10
Other[a]	16,371	21	2,415	357	3.89	205	2.23
Total commercial real estate	$ 80,284	100%	$ 5,961	$ 806	1.25%	$ 212	0.33%

(a) Other includes lodging, REITs, single family, homebuilders and other real estate.
(b) Ratios were calculated using end-of-period retained loans of $57.2 billion and $64.5 billion for the years ended December 31, 2009 and 2008, respectively.

- Banks and finance companies: Exposure to this industry decreased by 28% or $21.5 billion from 2008, primarily as a result of lower derivative exposure to commercial banks.
- Automotive: Conditions in the U.S. had improved by the end of 2009, largely as a result of the government supported restructuring of General Motors and Chrysler in the first half of 2009 and the related effects on automotive suppliers. Exposure to this industry decreased by 18% or $2.1 billion and criticized exposure decreased 30% or $535 million from 2008, largely due to loan repayments and sales. Most of the Firm's remaining criticized exposure in this segment remains performing and is substantially secured.
- Leisure: Exposure to this industry decreased by 16% or $1.3 billion from 2008 due to loan repayments and sales, primarily in gaming. While exposure to this industry declined, the criticized component remained elevated due to the continued weakness in the industry, particularly in gaming. The gaming portfolio continues to be managed actively.
- All other: All other in the wholesale credit exposure concentration table on pages 106–107 of this Annual Report at December 31, 2009 (excluding loans held-for-sale and loans at fair value) included $135.8 billion of credit exposure to seven industry segments. Exposures related to SPEs and to Individuals, Private Education & Civic Organizations were 44% and 47%, respectively, of this category. SPEs provide secured financing (generally backed by receivables, loans or bonds) originated by a diverse group of companies in industries that are not highly correlated. For further discussion of SPEs, see Note 16 on pages 214–222 of this Annual Report. The remaining all other exposure is well-diversified across industries and none comprise more than 1.0% of total exposure.

Loans

The following table presents wholesale loans and nonperforming assets by business segment as of December 31, 2009 and 2008.

	December 31, 2009							
	Loans			Nonperforming		Assets acquired in loan satisfactions		
(in millions)	Retained	Held-for-sale and fair value	Total	Loans	Derivatives	Real estate owned	Other	Nonperforming assets
Investment Bank	**$ 45,544**	**$ 3,567**	**$ 49,111**	**$ 3,504**	**$ 529**[b]	**$ 203**	**$ —**	**$ 4,236**
Commercial Banking	**97,108**	**324**	**97,432**	**2,801**	**—**	**187**	**1**	**2,989**
Treasury & Securities Services	**18,972**	**—**	**18,972**	**14**	**—**	**—**	**—**	**14**
Asset Management	**37,755**	**—**	**37,755**	**580**	**—**	**2**	**—**	**582**
Corporate/Private Equity	**698**	**207**	**905**	**5**	**—**	**—**	**—**	**5**
Total	**$ 200,077**	**$ 4,098**	**$ 204,175**	**$ 6,904**[a]	**$ 529**	**$ 392**	**$ 1**	**$ 7,826**

	December 31, 2008							
	Loans			Nonperforming		Assets acquired in loan satisfactions		
(in millions)	Retained	Held-for-sale and fair value	Total	Loans	Derivatives	Real estate owned	Other	Nonperforming assets
Investment Bank	$ 71,357	$ 13,660	$ 85,017	$ 1,175	$ 1,079[b]	$ 247	$ —	$ 2,501
Commercial Banking	115,130	295	115,425	1,026	—	102	14	1,142
Treasury & Securities Services	24,508	—	24,508	30	—	—	—	30
Asset Management	36,188	—	36,188	147	—	—	25	172
Corporate/Private Equity	906	—	906	4	—	—	—	4
Total	$ 248,089	$ 13,955	$ 262,044	$ 2,382[a]	$ 1,079	$ 349	$ 39	$ 3,849

(a) The Firm held allowance for loan losses of $2.0 billion and $712 million related to nonperforming retained loans resulting in allowance coverage ratios of 31% and 30%, at December 31, 2009 and 2008, respectively. Wholesale nonperforming loans represent 3.38% and 0.91% of total wholesale loans at December 31, 2009 and 2008, respectively.

(b) Nonperforming derivatives represent less than 1.0% of the total derivative receivables net of cash collateral at both December 31, 2009 and 2008.

In the normal course of business, the Firm provides loans to a variety of customers, from large corporate and institutional clients to high-net-worth individuals.

Retained wholesale loans were $200.1 billion at December 31, 2009, compared with $248.1 billion at December 31, 2008. The $48.0 billion decrease, across most wholesale lines of business, reflected lower customer demand. Loans held-for-sale and loans at fair value relate primarily to syndicated loans and loans transferred from the retained portfolio. Held-for-sale loans and loans carried at fair value were $4.1 billion and $14.0 billion at December 31, 2009 and 2008, respectively. The decreases in both held-for-sale loans and loans at fair value reflected sales, reduced carrying values and lower volumes in the syndication market.

The Firm actively manages wholesale credit exposure through loan and commitment sales. During 2009 and 2008, the Firm sold $3.9 billion of loans and commitments in each year, recognizing losses of $38 million and $41 million in each period, respectively. These results include gains or losses on sales of nonperforming loans, if any, as discussed on page 110 of this Annual Report. These activities are not related to the Firm's securitization activities, which are undertaken for liquidity and balance sheet–management purposes. For further discussion of securitization activity, see Liquidity Risk Management and Note 15 on pages 96–100 and 206–213, respectively, of this Annual Report.

Nonperforming wholesale loans were $6.9 billion at December 31, 2009, an increase of $4.5 billion from December 31, 2008, reflecting continued deterioration in the credit environment, predominantly related to loans in the real estate, leisure and banks and finance companies industries. As of December 31, 2009, wholesale loans restructured as part of a troubled debt restructuring were approximately $1.1 billion.

The following table presents the geographic distribution of wholesale loans and nonperforming loans as of December 31, 2009 and 2008. The geographic distribution of the wholesale portfolio is determined based predominantly on the domicile of the borrower.

Loans and nonperforming loans, U.S. and Non-U.S.

	December 31, 2009		December 31, 2008	
Wholesale (in millions)	Loans	Nonperforming loans	Loans	Nonperforming loans
U.S.	**$ 149,085**	**$ 5,844**	$ 186,776	$ 2,123
Non-U.S.	**55,090**	**1,060**	75,268	259
Ending balance	**$ 204,175**	**$ 6,904**	$ 262,044	$ 2,382

The following table presents the change in the nonperforming loan portfolio for the years ended December 31, 2009 and 2008.

Nonperforming loan activity

Wholesale Year ended December 31, (in millions)	2009	2008
Beginning balance	**$ 2,382**	$ 514
Additions	**13,591**	3,381
Reductions:		
Paydowns and other	**4,964**	859
Gross charge-offs	**2,974**	521
Returned to performing	**341**	93
Sales	**790**	40
Total reductions	**9,069**	1,513
Net additions	**4,522**	1,868
Ending balance	**$ 6,904**	$ 2,382

The following table presents net charge-offs, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2009 and 2008. The amounts in the table below do not include gains from sales of nonperforming loans.

Net charge-offs

Wholesale Year ended December 31, (in millions, except ratios)	2009	2008
Loans – reported		
Average loans retained	**$ 223,047**	$ 219,612
Net charge-offs	**3,132**	402
Average annual net charge-off rate	**1.40%**	0.18%

Derivative contracts

In the normal course of business, the Firm uses derivative instruments to meet the needs of customers; to generate revenue through trading activities; to manage exposure to fluctuations in interest rates, currencies and other markets; and to manage the Firm's credit exposure. For further discussion of these contracts, see Note 5 and Note 32 on pages 175–183 and 242–243 of this Annual Report.

The following tables summarize the net derivative receivables MTM for the periods presented.

Derivative receivables marked to market

December 31, (in millions)	Derivative receivables MTM 2009	2008
Interest rate[a]	**$ 26,777**	$ 49,996
Credit derivatives	**18,815**	44,695
Foreign exchange[a]	**21,984**	38,820
Equity	**6,635**	14,285
Commodity	**5,999**	14,830
Total, net of cash collateral	**80,210**	162,626
Liquid securities collateral held against derivative receivables	**(15,519)**	(19,816)
Total, net of all collateral	**$ 64,691**	$ 142,810

(a) In 2009, cross-currency interest rate swaps previously reported in interest rate contracts were reclassified to foreign exchange contracts to be more consistent with industry practice. The effect of this change resulted in a reclassification of $14.1 billion of cross-currency interest rate swaps to foreign exchange contracts as of December 31, 2008.

The amount of derivative receivables reported on the Consolidated Balance Sheets of $80.2 billion and $162.6 billion at December 31, 2009 and 2008, respectively, are the amount of the MTM or fair value of the derivative contracts after giving effect to legally enforceable master netting agreements, cash collateral held by the Firm and CVA. These amounts on the Consolidated Balance Sheets represent the cost to the Firm to replace the contracts at current market rates should the counterparty default. However, in management's view, the appropriate measure of current credit risk should also reflect additional liquid securities held as collateral by the Firm of $15.5 billion and $19.8 billion at December 31, 2009 and 2008, respectively, resulting in total exposure, net of all collateral, of $64.7 billion and $142.8 billion at December 31, 2009 and 2008, respectively. The decrease of $78.1 billion in derivative receivables MTM, net of the above mentioned collateral, from December 31, 2008, was primarily related to tightening credit spreads, volatile foreign exchange rates and rising rates on interest rate swaps.

The Firm also holds additional collateral delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Though this collateral does not reduce the balances noted in the table above, it is available as security against potential exposure that could arise should the MTM of the client's derivative transactions move in the Firm's favor. As of December 31, 2009 and 2008, the Firm held $16.9 billion and $22.2 billion of this additional collateral, respectively. The derivative receivables MTM, net of all collateral, also do not include other credit enhancements, such as letters of credit.

While useful as a current view of credit exposure, the net MTM value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, AVG is a measure of the expected MTM value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the CVA, as further described below. AVG exposure was $49.0 billion and $83.7 billion at December 31, 2009 and 2008, respectively, compared with derivative receivables MTM, net of all collateral, of $64.7 billion and $142.8 billion at December 31, 2009 and 2008, respectively.

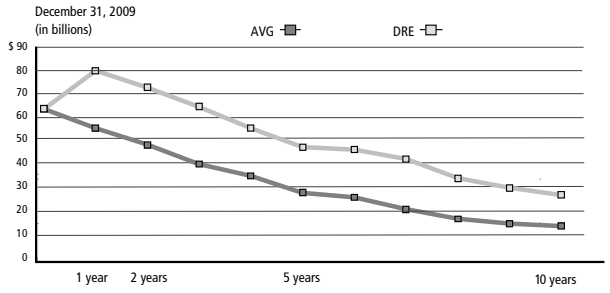
The MTM value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties.

The CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm takes into consideration the potential for correlation between the Firm's AVG to a counterparty and the counterparty's credit quality within the credit approval process. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to derivatives over the next ten years as calculated by the DRE and AVG metrics.

The two measures generally show declining exposure after the first year, if no new trades were added to the portfolio.

Exposure profile of derivatives measures



The following table summarizes the ratings profile of the Firm's derivative receivables MTM, net of other liquid securities collateral, for the dates indicated.

Ratings profile of derivative receivables MTM

Rating equivalent	**2009**		2008	
December 31, (in millions, except ratios)	Exposure net of of all collateral	% of exposure net of all collateral	Exposure net of of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 25,530**	**40%**	$ 68,708	48%
A+/A1 to A-/A3	**12,432**	**19**	24,748	17
BBB+/Baa1 to BBB-/Baa3	**9,343**	**14**	15,747	11
BB+/Ba1 to B-/B3	**14,571**	**23**	28,186	20
CCC+/Caa1 and below	**2,815**	**4**	5,421	4
Total	**$ 64,691**	**100%**	$ 142,810	100%

The Firm actively pursues the use of collateral agreements to mitigate counterparty credit risk in derivatives. The percentage of the Firm's derivatives transactions subject to collateral agreements – excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity – was 89% as of December 31, 2009, largely unchanged from 88% at December 31, 2008.

The Firm posted $56.7 billion and $99.1 billion of collateral at December 31, 2009 and 2008, respectively.

Certain derivative and collateral agreements include provisions that require the counterparty and/or the Firm, upon specified downgrades in the respective credit ratings of their legal entities, to post collateral for the benefit of the other party. At December 31, 2009, the impact of a single-notch and six-notch ratings downgrade to JPMorgan Chase & Co., and its subsidiaries, primarily JPMorgan Chase Bank, N.A., would have required $1.2 billion and $3.6 billion, respectively, of additional collateral to be posted by the Firm. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade to a specified rating of either the Firm or the counterparty, at the then-existing MTM value of the derivative contracts.

Credit derivatives

Credit derivatives are financial contracts that isolate credit risk from an underlying instrument (such as a loan or security) and transfers that risk from one party (the buyer of credit protection) to another (the seller of credit protection). The Firm is both a purchaser and seller of credit protection. As a purchaser of credit protection, the Firm has risk that the counterparty providing the credit protection will default. As a seller of credit protection, the Firm has risk that the underlying instrument referenced in the contract will be subject to a credit event. Of the Firm's $80.2 billion of total derivative receivables MTM at December 31, 2009, $18.8 billion, or 23%, was associated with credit derivatives, before the benefit of liquid securities collateral.

One type of credit derivatives the Firm enters into with counterparties are credit default swaps ("CDS"). For further detailed discussion of these and other types of credit derivatives, see Note 5 on pages 175–183 of this Annual Report. The large majority of CDS are subject to collateral arrangements to protect the Firm from counterparty credit risk. In 2009, the frequency and size of defaults for both trading counterparties and the underlying debt referenced in credit derivatives were well above historical norms. The use of collateral to settle against defaulting counterparties generally performed as designed in significantly mitigating the Firm's exposure to these counterparties.

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker in the dealer/client business to meet the needs of customers; and second, in order to mitigate the Firm's own credit risk associated with its overall derivative receivables and traditional commercial credit lending exposures (loans and unfunded commitments).

The following table presents the Firm's notional amounts of credit derivatives protection purchased and sold as of December 31, 2009 and 2008, distinguishing between dealer/client activity and credit portfolio activity.

	Notional amount				
	Dealer/client		Credit portfolio		
December 31, (in billions)	Protection purchased[a]	Protection sold	Protection purchased[a][b]	Protection sold	Total
2009	**$2,997**	**$2,947**	**$ 49**	**$ 1**	**$ 5,994**
2008	$ 4,193	$ 4,102	$ 92	$ 1	$ 8,388

(a) Included $3.0 trillion and $4.0 trillion at December 31, 2009 and 2008, respectively, of notional exposure within protection purchased where the Firm has protection sold with identical underlying reference instruments. For a further discussion on credit derivatives, see Note 5 on pages 175–183 of this Annual Report.

(b) Included $19.7 billion and $34.9 billion at December 31, 2009 and 2008, respectively, that represented the notional amount for structured portfolio protection; the Firm retains the first risk of loss on this portfolio.

Dealer/client business

Within the dealer/client business, the Firm actively manages credit derivatives by buying and selling credit protection, predominantly on corporate debt obligations, according to client demand for credit risk protection on the underlying reference instruments. Protection may be bought or sold by the Firm on single reference debt instruments ("single-name" credit derivatives), portfolios of referenced instruments ("portfolio" credit derivatives) or quoted indices ("indexed" credit derivatives). The risk positions are largely matched as the Firm's exposure to a given reference entity under a contract to sell protection to a counterparty may be offset partially, or entirely, with a contract to purchase protection from another counterparty on the same underlying instrument. Any residual default exposure and spread risk is actively managed by the Firm's various trading desks.

At December 31, 2009, the total notional amount of protection purchased and sold decreased by $2.4 trillion from year-end 2008. The decrease was primarily due to the impact of industry efforts to reduce offsetting trade activity.

Credit portfolio activities

Management of the Firm's wholesale exposure is accomplished through a number of means including loan syndication and participations, loan sales, securitizations, credit derivatives, use of master netting agreements, and collateral and other risk-reduction techniques. The Firm also manages its wholesale credit exposure by purchasing protection through single-name and portfolio credit derivatives to manage the credit risk associated with loans, lending-related commitments and derivative receivables. Gains or losses on the credit derivatives are expected to offset the unrealized increase or decrease in credit risk on the loans, lending-related commitments or derivative receivables. This activity does not reduce the reported level of assets on the balance sheet or the level of reported off–balance sheet commitments, although it does provide the Firm with credit risk protection. The Firm also diversifies its exposures by selling credit protection, which increases exposure to industries or clients where the Firm has little or no client-related exposure; however, this activity is not material to the Firm's overall credit exposure.

Use of single-name and portfolio credit derivatives

	Notional amount of protection purchased and sold	
December 31, (in millions)	**2009**	2008
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 36,873**	$ 81,227
Derivative receivables	**11,958**	10,861
Total protection purchased[a]	**$ 48,831**	$ 92,088
Total protection sold	**455**	637
Credit derivatives hedges notional	**$ 48,376**	$ 91,451

(a) Included $19.7 billion and $34.9 billion at December 31, 2009 and 2008, respectively, that represented the notional amount for structured portfolio protection; the Firm retains the first risk of loss on this portfolio.

The credit derivatives used by JPMorgan Chase for credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure. The MTM related to the Firm's credit derivatives used for managing credit exposure, as well as the MTM related to the CVA (which reflects the credit quality of derivatives counterparty exposure) are included in the gains and losses realized on credit derivatives disclosed in the table below. These results can vary from period to period due to market conditions that affect specific positions in the portfolio.

Year ended December 31, (in millions)	**2009**	2008	2007
Hedges of lending-related commitments[a]	**$ (3,258)**	$ 2,216	$ 350
CVA and hedges of CVA[a]	**1,920**	(2,359)	(363)
Net gains/(losses)[b]	**$ (1,338)**	$ (143)	$ (13)

(a) These hedges do not qualify for hedge accounting under U.S. GAAP.

(b) Excludes losses of $2.7 billion and gains of $530 million and $373 million for the years ended December 31, 2009, 2008 and 2007, respectively, of other principal transactions revenue that are not associated with hedging activities.

Lending-related commitments

JPMorgan Chase uses lending-related financial instruments, such as commitments and guarantees, to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligation under these guarantees, and the counterparties subsequently fail to perform according to the terms of these contracts.

Wholesale lending-related commitments were $347.2 billion at December 31, 2009, compared with $379.9 billion at December 31, 2008, reflecting lower customer demand. In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's actual credit risk exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these commitments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn upon in an event of a default by an obligor. The loan-equivalent amounts of the Firm's lending-related commitments were $179.8 billion and $204.3 billion as of December 31, 2009 and 2008, respectively.

Emerging markets country exposure

The Firm has a comprehensive internal process for measuring and managing exposures to emerging markets countries. There is no common definition of emerging markets, but the Firm generally includes in its definition those countries whose sovereign debt ratings are equivalent to "A+" or lower. Exposures to a country include all credit-related lending, trading and investment activities, whether cross-border or locally funded. In addition to monitoring country exposures, the Firm uses stress tests to measure and manage the risk of extreme loss associated with sovereign crises.

The table below presents the Firm's exposure, by country, to the top ten emerging markets. The selection of countries is based solely on the Firm's largest total exposures by country and not the Firm's view of any actual or potentially adverse credit conditions. Exposure is reported based on the country where the assets of the obligor, counterparty or guarantor are located. Exposure amounts are adjusted for collateral and for credit enhancements (e.g., guarantees and letters of credit) provided by third parties; outstandings supported by a guarantor located outside the country or backed by collateral held outside the country are assigned to the country of the enhancement provider. In addition, the effect of credit derivative hedges and other short credit or equity trading positions are reflected in the table below. Total exposure includes exposure to both government and private-sector entities in a country.

Top 10 emerging markets country exposure

At December 31, 2009	Cross-border					**Total**
(in billions)	Lending[a]	Trading[b]	Other[c]	Total	Local[d]	**exposure**
South Korea	**$ 2.7**	**$ 1.7**	**$ 1.3**	**$ 5.7**	**$3.3**	**$ 9.0**
India	**1.5**	**2.7**	**1.1**	**5.3**	**0.3**	**5.6**
Brazil	**1.8**	**(0.5)**	**1.0**	**2.3**	**2.2**	**4.5**
China	**1.8**	**0.4**	**0.8**	**3.0**	**—**	**3.0**
Taiwan	**0.1**	**0.8**	**0.3**	**1.2**	**1.8**	**3.0**
Hong Kong	**1.1**	**0.2**	**1.3**	**2.6**	**—**	**2.6**
Mexico	**1.2**	**0.8**	**0.4**	**2.4**	**—**	**2.4**
Chile	**0.8**	**0.6**	**0.5**	**1.9**	**—**	**1.9**
Malaysia	**0.1**	**1.3**	**0.3**	**1.7**	**0.2**	**1.9**
South Africa	**0.4**	**0.8**	**0.5**	**1.7**	**—**	**1.7**

At December 31, 2008	Cross-border					**Total**
(in billions)	Lending[a]	Trading[b]	Other[c]	Total	Local[d]	**exposure**
South Korea	$ 2.9	$ 1.6	$ 0.9	$ 5.4	$2.3	$ 7.7
India	2.2	2.8	0.9	5.9	0.6	6.5
China	1.8	1.6	0.3	3.7	0.8	4.5
Brazil	1.8	—	0.5	2.3	1.3	3.6
Taiwan	0.1	0.2	0.3	0.6	2.5	3.1
Hong Kong	1.3	0.3	1.2	2.8	—	2.8
United Arab Emirates	1.8	0.7	—	2.5	—	2.5
Mexico	1.9	0.3	0.3	2.5	—	2.5
South Africa	0.9	0.5	0.4	1.8	—	1.8
Russia	1.3	0.2	0.3	1.8	—	1.8

(a) Lending includes loans and accrued interest receivable, interest-bearing deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit.
(b) Trading includes: (1) issuer exposure on cross-border debt and equity instruments, held both in trading and investment accounts and adjusted for the impact of issuer hedges, including credit derivatives; and (2) counterparty exposure on derivative and foreign exchange contracts as well as securities financing trades (resale agreements and securities borrowed).
(c) Other represents mainly local exposure funded cross-border, including capital investments in local entities.
(d) Local exposure is defined as exposure to a country denominated in local currency and booked locally. Any exposure not meeting these criteria is defined as cross-border exposure.

CONSUMER CREDIT PORTFOLIO

JPMorgan Chase's consumer portfolio consists primarily of residential mortgages, home equity loans, credit cards, auto loans, student loans and business banking loans, with a primary focus on serving the prime consumer credit market. The portfolio also includes home equity loans and lines of credit secured by junior liens, mortgage loans with interest-only payment options to predominantly prime borrowers, as well as certain payment-option loans acquired from Washington Mutual that may result in negative amortization.

A substantial portion of the consumer loans acquired in the Washington Mutual transaction were identified as credit-impaired based on an analysis of high-risk characteristics, including product type, loan-to-value ratios, FICO scores and delinquency status. These purchased credit-impaired loans are accounted for on a pool basis, and the pools are considered to be performing. At the time of the acquisition, these loans were recorded at fair value, including an estimate of losses that were expected to be incurred over the estimated remaining lives of the loan pools. Therefore, no allowance for loan losses was recorded for these loans as of the transaction date. In 2009, management concluded that it was probable that higher expected future credit losses for certain pools of the purchased credit-impaired portfolio would result in a decrease in expected future cash flows for these pools. As a result, an allowance for loan losses of $1.6 billion was established.

The credit performance of the consumer portfolio across the entire product spectrum continues to be negatively affected by the economic environment. Higher unemployment and weaker overall economic conditions have led to a significant increase in the number of loans charged off, while continued weak housing prices have driven a significant increase in the severity of loss recognized on real estate loans that default. Delinquencies and nonperforming loans continued to increase in 2009. The increases in these credit quality metrics were due, in part, to foreclosure moratorium programs, which ended in early 2009. These moratoriums halted stages of the foreclosure process while the U.S. Treasury developed its homeowner assistance program (i.e., MHA) and the Firm enhanced its foreclosure-prevention programs. Due to a high volume of foreclosures after the moratoriums, processing timelines for foreclosures were elongated by approximately 100 days. Losses related to these loans continued to be recognized in accordance with the Firm's normal charge-off practices, but some delinquent loans that would have otherwise been foreclosed upon remain in the mortgage and home equity loan portfolios. Additional deterioration in the overall economic environment, including continued deterioration in the labor and residential real estate markets, could cause delinquencies and losses to increase beyond the Firm's current expectations.

Since mid-2007, the Firm has taken actions to reduce risk exposure to consumer loans by tightening both underwriting and loan qualification standards for both real estate and non-real estate lending products. For residential real estate lending, tighter income verification, more conservative collateral valuation, reduced loan-to-value maximums, and higher FICO and custom risk score requirements are just some of the actions taken to date to mitigate risk related to new originations. The Firm believes that these actions have better aligned loan pricing with the underlying credit risk of the loans. In addition, originations of subprime mortgage loans, stated income and broker-originated mortgage and home equity loans have been eliminated entirely to further reduce originations with high-risk characteristics. The Firm has never originated option adjustable-rate mortgages. The tightening of underwriting criteria for auto loans has resulted in the reduction of both extended-term and high loan-to-value financing.

As a further action to reduce risk associated with lending-related commitments, the Firm has reduced or canceled certain lines of credit as permitted by law. For example, the Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property or when there has been a demonstrable decline in the creditworthiness of the borrower. Similarly, certain inactive credit card lines have been closed and a number of active credit card lines have been reduced.

The following table presents managed consumer credit–related information (including RFS, CS and residential real estate loans reported in the Corporate/Private Equity segment) for the dates indicated. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 13 on pages 200–204 of this Annual Report.

Consumer portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming loans[i][j]		90 days or more past due and still accruing[j]		Net charge-offs		Average annual net charge-off rate[k]	
	2009	2008	**2009**	2008	**2009**	2008	**2009**	2008	**2009**	2008
Consumer loans – excluding purchased credit-impaired loans and loans held-for-sale										
Home equity – senior lien[a]	**$ 27,376**	$ 29,793	**$ 477**	$ 291	**$ —**	$ —	**$ 234**	$ 86	**0.80%**	0.33%
Home equity – junior lien[b]	**74,049**	84,542	**1,188**	1,103	**—**	—	**4,448**	2,305	**5.62**	3.12
Prime mortgage	**66,892**	72,266	**4,355**	1,895	**—**	—	**1,894**	526	**2.74**	1.02
Subprime mortgage	**12,526**	15,330	**3,248**	2,690	**—**	—	**1,648**	933	**11.86**	6.10
Option ARMs	**8,536**	9,018	**312**	10	**—**	—	**63**	—	**0.71**	—
Auto loans[c]	**46,031**	42,603	**177**	148	—	—	**627**	568	**1.44**	1.30
Credit card – reported[d][e]	**78,786**	104,746	**3**	4	**3,481**	2,649	**9,634**	4,556	**11.07**	5.47
All other loans	**31,700**	33,715	**900**	430	**542**	463	**1,285**	459	**3.88**	1.58
Total consumer loans	**345,896**	392,013	**10,660**	6,571	**4,023**	3,112	**19,833**	9,433	**5.45**	2.90
Consumer loans – purchased credit-impaired[f]										
Home equity	**26,520**	28,555	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Prime mortgage	**19,693**	21,855	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Subprime mortgage	**5,993**	6,760	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Option ARMs	**29,039**	31,643	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Total consumer loans – purchased credit-impaired	**81,245**	88,813	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Total consumer loans – retained	**427,141**	480,826	**10,660**	6,571	**4,023**	3,112	**19,833**	9,433	**4.41**	2.71
Loans held-for-sale	**2,142**	2,028	**—**	—	**—**	—	**—**	—	**—**	—
Total consumer loans – reported	**429,283**	482,854	**10,660**	6,571	**4,023**	3,112	**19,833**	9,433	**4.41**	2.71
Credit card – securitized[g]	**84,626**	85,571	**—**	—	**2,385**	1,802	**6,443**	3,612	**7.55**	4.53
Total consumer loans – managed	**513,909**	568,425	**10,660**	6,571	**6,408**	4,914	**26,276**	13,045	**4.91**	3.06
Total consumer loans – managed – excluding purchased credit-impaired loans[f]	**432,664**	479,612	**10,660**	6,571	**6,408**	4,914	**26,276**	13,045	**5.85**	3.22
Consumer lending-related commitments:										
Home equity – senior lien[a][h]	**19,246**	27,998								
Home equity – junior lien[b][h]	**37,231**	67,745								
Prime mortgage	**1,654**	5,079								
Subprime mortgage	**—**	—								
Option ARMs	**—**	—								
Auto loans	**5,467**	4,726								
Credit card[h]	**569,113**	623,702								
All other loans	**11,229**	12,257								
Total lending-related commitments	**643,940**	741,507								
Total consumer credit portfolio	**$1,157,849**	$1,309,932								
Memo: Credit card – managed	**$ 163,412**	$ 190,317	**$ 3**	$ 4	**$ 5,866**	$ 4,451	**$ 16,077**	$ 8,168	**9.33%**	5.01%

(a) Represents loans where JPMorgan Chase holds the first security interest on the property.
(b) Represents loans where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.
(c) Excludes operating lease-related assets of $2.9 billion and $2.2 billion for December 31, 2009 and 2008, respectively.
(d) Includes $1.0 billion of loans at December 31, 2009, held by the Washington Mutual Master Trust, which were consolidated onto the Firm's Consolidated Balance Sheets at fair value during the second quarter of 2009.
(e) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(f) Charge-offs are not recorded on purchased credit-impaired loans until actual losses exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. To date, no charge-offs have been recorded for these loans. If charge-offs were reported comparable to the non-credit impaired portfolio, life-to-date principal charge-offs would have been $16.7 billion.
(g) Represents securitized credit card receivables. For a further discussion of credit card securitizations, see CS on pages 72–74 of this Annual Report.

(h) The credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be utilized at the same time. For credit card commitments and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.

(i) At December 31, 2009 and 2008, nonperforming loans excluded: (1) mortgage loans insured by U.S. government agencies of $9.0 billion and $3.0 billion, respectively; and (2) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program, of $542 million and $437 million, respectively. These amounts are excluded, as reimbursement is proceeding normally. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance. Under guidance issued by the Federal Financial Institutions Examination Council, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

(j) Excludes purchased credit-impaired loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

(k) Average consumer loans held-for-sale and loans at fair value were $2.2 billion and $2.8 billion for the years ended December 31, 2009 and 2008, respectively. These amounts were excluded when calculating the net charge-off rates.

The following table presents consumer nonperforming assets by business segment as of December 31, 2009 and 2008.

Consumer nonperforming assets

	2009				2008			
		Assets acquired in loan satisfactions				Assets acquired in loan satisfactions		
As of December 31, (in millions)	Nonperforming loans	Real estate owned	Other	Nonperforming assets	Nonperforming loans	Real estate owned	Other	Nonperforming assets
Retail Financial Services[a]	**$10,611**	**$ 1,154**	**$ 99**	**$11,864**	$ 6,548	$ 2,183	$ 110	$ 8,841
Card Services[a]	**3**	**—**	**—**	**3**	4	—	—	4
Corporate/Private Equity	**46**	**2**	**—**	**48**	19	1	—	20
Total	**$10,660**	**$ 1,156**	**$ 99**	**$11,915**	$ 6,571	$ 2,184	$ 110	$ 8,865

(a) At December 31, 2009 and 2008, nonperforming loans and assets excluded: (1) mortgage loans insured by U.S. government agencies of $9.0 billion and $3.0 billion, respectively; (2) real estate owned insured by U.S. government agencies of $579 million and $364 million, respectively; and (3) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program, of $542 million and $437 million, respectively. These amounts are excluded, as reimbursement is proceeding normally. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance. Under guidance issued by the Federal Financial Institutions Examination Council, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

The following discussion relates to the specific loan product and lending-related categories within the consumer portfolio. Purchased credit-impaired loans are excluded from individual loan product discussions and addressed separately below.

Home equity: Home equity loans at December 31, 2009 were $101.4 billion, a decrease of $12.9 billion from year-end 2008. The decrease primarily reflected lower loan originations, coupled with loan paydowns and charge-offs. The 2009 provision for credit losses for the home equity portfolio included net increases of $2.1 billion to the allowance for loan losses, reflecting the impact of the weak housing prices and higher unemployment. Senior lien nonperforming loans increased from the prior year due to the weak economic environment, while junior lien nonperforming loans were relatively unchanged. Net charge-offs have increased from the prior year due to higher frequency and severity of losses.

Mortgage: Mortgage loans at December 31, 2009, which include prime mortgages, subprime mortgages, adjustable-rate mortgages ("option ARMs") acquired in the Washington Mutual transaction and mortgage loans held-for-sale, were $88.3 billion, representing an $8.5 billion decrease from year-end 2008. The decrease is due to lower prime mortgage loans retained in the portfolio and higher loan charge-offs, as well as the run-off of the subprime and option ARM portfolios. Net charge-offs have increased from the prior year across all segments of the mortgage portfolio due to both higher frequency and a significant increase in the severity of losses.

Prime mortgages of $67.3 billion decreased $5.2 billion from December 31, 2008. The 2009 provision for credit losses included a net increase of $1.0 billion to the allowance for loan losses reflecting the impact of the weak economic environment. Early-stage delinquencies improved in the latter part of the year, while late-stage delinquencies have increased as a result of prior foreclosure moratoriums and ongoing trial modification activity, driving an increase in nonperforming loans.

Subprime mortgages of $12.5 billion decreased $2.8 billion from December 31, 2008, as a result of paydowns, discontinuation of new originations and charge-offs on delinquent loans. The 2009 provision for credit losses included a net increase of $625 million to the allowance for loan losses, reflecting the impact of high loss severities driven by declining home prices.

Option ARMs of $8.5 billion represent less than 5% of non-purchased credit-impaired real estate loans and were $482 million lower than December 31, 2008, due to run-off of the portfolio. This portfolio is primarily comprised of loans with low loan-to-value ratios and high borrower FICOs. Accordingly, the Firm currently expects substantially lower losses on this portfolio when compared with the purchased credit-impaired option ARM portfolio. The cumulative amount of unpaid interest added to the unpaid principal balance due to negative amortization of option ARMs was $78 million at December 31, 2009. New originations of option ARMs were discontinued by Washington Mutual prior to the date of JPMorgan Chase's acquisition of Washington Mutual. The Firm has not originated, and does not originate, option ARMs.

Auto loans: As of December 31, 2009, auto loans were $46.0 billion, an increase of $3.4 billion from year-end 2008, partially as a result of new originations in connection with the U.S. government's "cash for clunkers" program in the third quarter. Delinquent loans were slightly lower than the prior year. Loss severities also decreased as a result of higher used-car prices nationwide. The auto loan portfolio reflects a high concentration of prime quality credits.

Credit card: JPMorgan Chase analyzes its credit card portfolio on a managed basis, which includes credit card receivables on the Consolidated Balance Sheets and those receivables sold to investors through securitizations. Managed credit card receivables were $163.4 billion at December 31, 2009, a decrease of $26.9 billion from year-end 2008, reflecting lower charge volume and a higher level of charge-offs.

The 30-day managed delinquency rate increased to 6.28% at December 31, 2009, from 4.97% at December 31, 2008, and the managed credit card net charge-off rate increased to 9.33% in 2009, from 5.01% in 2008. These increases reflect the current weak economic environment, especially in metropolitan statistical areas ("MSAs") experiencing the greatest housing price depreciation and highest unemployment and to the credit performance of loans acquired in the Washington Mutual transaction. The allowance for loan losses was increased by $2.0 billion for 2009, reflecting a provision for loan losses of $2.4 billion, partially offset by the reclassification of $298 million related to an issuance and retention of securities from the Chase Issuance Trust. The managed credit card portfolio continues to reflect a well-seasoned, largely rewards-based portfolio that has good U.S. geographic diversification.

Managed credit card receivables, excluding the Washington Mutual portfolio, were $143.8 billion at December 31, 2009, compared with $162.1 billion at December 31, 2008. The 30-day managed delinquency rate was 5.52% at December 31, 2009, up from 4.36% at December 31, 2008; the managed credit card net charge-off rate, excluding the Washington Mutual portfolio increased to 8.45% in 2009 from 4.92% in 2008.

Managed credit card receivables of the Washington Mutual portfolio were $19.7 billion at December 31, 2009, compared with $28.3 billion at December 31, 2008. Excluding the impact of the purchase accounting adjustments related to the Washington Mutual transaction and the consolidation of the Washington Mutual Master Trust, the Washington Mutual portfolio's 30-day managed delinquency rate was 12.72% at December 31, 2009, compared with 9.14% at December 31, 2008, and the 2009 net charge-off rate was 18.79%.

All other: All other loans primarily include business banking loans (which are highly collateralized loans, often with personal loan guarantees), student loans, and other secured and unsecured consumer loans. As of December 31, 2009, other loans, including loans held-for-sale, were $33.6 billion, down $2.0 billion from year-end 2008, primarily as a result of lower business banking loans. The 2009 provision for credit losses reflected a net increase of $580 million to the allowance for loan losses and an increase in net charge-offs of $826 million related to the business banking and student loan portfolios, reflecting the impact of the weak economic environment.

Purchased credit-impaired: Purchased credit-impaired loans were $81.2 billion at December 31, 2009, compared with $88.8 billion at December 31, 2008. This portfolio represents loans acquired in the Washington Mutual transaction that were recorded at fair value at the time of acquisition. The fair value of these loans included an estimate of credit losses expected to be realized over the remaining lives of the loans, and therefore no allowance for loan losses was recorded for these loans as of the acquisition date.

The Firm regularly updates the amount of expected loan principal and interest cash flows to be collected for these loans. Probable decreases in expected loan principal cash flows trigger the recognition of impairment through the provision for loan losses. Probable and significant increases in expected loan principal cash flows would first result in the reversal of any allowance for loan losses. Any remaining increase in the expected principal cash flows would be recognized prospectively in interest income over the remaining lives of the underlying loans.

During 2009, management concluded that it was probable that higher expected principal credit losses for the purchased credit-impaired prime mortgage and option ARM pools would result in a decrease in expected cash flows for these pools. As a result, an allowance for loan losses of $1.1 billion and $491 million, respectively, was established for these pools. The credit performance of the other pools has generally been consistent with the estimate of losses at the acquisition date. Accordingly, no impairment for these other pools has been recognized.

Concentrations of credit risk – consumer loans other than purchased credit-impaired loans

Following is tabular information and, where appropriate, supplemental discussions about certain concentrations of credit risk for the Firm's consumer loans, other than purchased credit-impaired loans, including:

- Geographic distribution of loans, including certain residential real estate loans with high loan-to-value ratios; and
- Loans that are 30+ days past due.

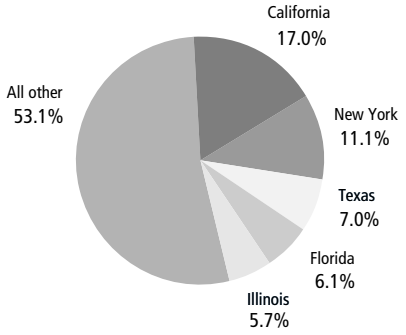
The following tables present the geographic distribution of managed consumer credit outstandings by product as of December 31, 2009 and 2008, excluding purchased credit-impaired loans.

Consumer loans by geographic region – excluding purchased credit-impaired loans

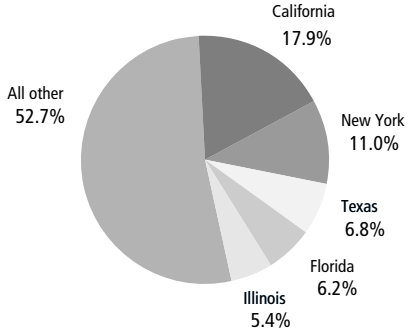
December 31, 2009 (in billions)	Home equity – senior lien	Home equity – junior lien	Prime mortgage	Subprime mortgage	Option ARMs	Total home loan portfolio	Auto	Card reported	All other loans	Total consumer loans– reported	Card securitized	Total consumer loans– managed
California	**$ 3.6**	**$16.9**	**$ 19.1**	**$ 1.7**	**$ 3.8**	**$ 45.1**	**$ 4.4**	**$ 11.0**	**$ 1.8**	**$ 62.3**	**$ 11.4**	**$ 73.7**
New York	**3.4**	**12.4**	**9.2**	**1.5**	**0.9**	**27.4**	**3.8**	**6.0**	**4.2**	**41.4**	**6.7**	**48.1**
Texas	**4.2**	**2.7**	**2.5**	**0.4**	**0.2**	**10.0**	**4.3**	**5.6**	**3.8**	**23.7**	**6.5**	**30.2**
Florida	**1.2**	**4.1**	**6.0**	**1.9**	**0.7**	**13.9**	**1.8**	**5.2**	**0.9**	**21.8**	**4.8**	**26.6**
Illinois	**1.8**	**4.8**	**3.4**	**0.6**	**0.4**	**11.0**	**2.4**	**3.9**	**2.4**	**19.7**	**4.9**	**24.6**
Ohio	**2.3**	**1.9**	**0.8**	**0.3**	**—**	**5.3**	**3.2**	**3.1**	**2.9**	**14.5**	**3.4**	**17.9**
New Jersey	**0.8**	**3.8**	**2.3**	**0.6**	**0.3**	**7.8**	**1.8**	**3.0**	**0.9**	**13.5**	**3.6**	**17.1**
Michigan	**1.3**	**1.9**	**1.4**	**0.3**	**—**	**4.9**	**2.1**	**2.4**	**2.5**	**11.9**	**2.9**	**14.8**
Arizona	**1.6**	**3.6**	**1.6**	**0.3**	**0.1**	**7.2**	**1.5**	**1.7**	**1.6**	**12.0**	**2.1**	**14.1**
Pennsylvania	**0.2**	**1.2**	**0.7**	**0.4**	**0.1**	**2.6**	**2.0**	**2.8**	**0.8**	**8.2**	**3.2**	**11.4**
Washington	**0.9**	**2.4**	**1.9**	**0.3**	**0.4**	**5.9**	**0.6**	**1.5**	**0.4**	**8.4**	**1.5**	**9.9**
Colorado	**0.4**	**1.7**	**1.8**	**0.2**	**0.2**	**4.3**	**1.0**	**1.6**	**0.8**	**7.7**	**2.1**	**9.8**
All other	**5.7**	**16.6**	**16.6**	**4.0**	**1.4**	**44.3**	**17.1**	**31.0**	**10.6**	**103.0**	**31.5**	**134.5**
Total	**$ 27.4**	**$ 74.0**	**$ 67.3**	**$ 12.5**	**$ 8.5**	**$ 189.7**	**$ 46.0**	**$ 78.8**	**$ 33.6**	**$ 348.1**	**$ 84.6**	**$ 432.7**

December 31, 2008 (in billions)	Home equity – senior lien	Home equity – junior lien	Prime mortgage	Subprime mortgage	Option ARMs	Total home loan portfolio	Auto	Card reported	All other loans	Total consumer loans – reported	Card securitized	Total consumer loans – managed
California	$ 3.9	$ 19.3	$ 22.8	$ 2.2	$ 3.8	$ 52.0	$ 4.7	$ 14.8	$ 2.0	$ 73.5	$ 12.5	$ 86.0
New York	3.3	13.0	10.4	1.7	0.9	29.3	3.7	8.3	4.7	46.0	6.6	52.6
Texas	5.0	3.1	2.7	0.4	0.2	11.4	3.8	7.4	4.1	26.7	6.1	32.8
Florida	1.3	5.0	6.0	2.3	0.9	15.5	1.5	6.8	0.9	24.7	5.2	29.9
Illinois	1.9	5.3	3.3	0.7	0.3	11.5	2.2	5.3	2.5	21.5	4.6	26.1
Ohio	2.6	2.0	0.7	0.4	—	5.7	3.3	4.1	3.3	16.4	3.4	19.8
New Jersey	0.8	4.2	2.5	0.8	0.3	8.6	1.6	4.2	0.9	15.3	3.6	18.9
Michigan	1.4	2.2	1.3	0.4	—	5.3	1.5	3.4	2.8	13.0	2.8	15.8
Arizona	1.7	4.2	1.6	0.4	0.2	8.1	1.6	2.3	1.9	13.9	1.8	15.7
Pennsylvania	0.2	1.4	0.7	0.5	0.1	2.9	1.7	3.9	0.7	9.2	3.2	12.4
Washington	1.0	2.8	2.3	0.3	0.5	6.9	0.6	2.0	0.4	9.9	1.6	11.5
Colorado	0.5	1.9	1.9	0.3	0.3	4.9	0.9	2.1	0.9	8.8	2.1	10.9
All other	6.2	20.1	16.3	4.9	1.5	49.0	15.5	40.1	10.5	115.1	32.1	147.2
Total	$ 29.8	$ 84.5	$ 72.5	$ 15.3	$ 9.0	$ 211.1	$ 42.6	$ 104.7	$ 35.6	$ 394.0	$ 85.6	$ 479.6

Top 5 States Consumer Loans - Managed[a]
(at December 31, 2009)



Top 5 States Consumer Loans - Managed[a]
(at December 31, 2008)



(a) Excluding the purchased credit-impaired loans acquired in the Washington Mutual transaction.

The following table presents the geographic distribution of certain residential real estate loans with current estimated combined loan-to-value ratios ("LTVs") in excess of 100% as of December 31, 2009 and 2008, excluding purchased credit-impaired loans acquired in the Washington Mutual transaction. The estimated collateral values used to calculate the current estimated combined LTV ratios in the following table were derived from a nationally recognized home price index measured at the MSAs level. Because home price indices can have wide variability and such derived real estate values do not represent actual appraised loan-level collateral values, the resulting ratios are necessarily imprecise and should therefore be viewed as estimates.

Geographic distribution of residential real estate loans with current estimated combined LTVs > 100%[a]

December 31, 2009 (in billions, except ratios)	Home equity – junior lien[c]	Prime mortgage[c][d]	Subprime mortgage[c]	Total	% of total loans[e]
California	**$ 8.3**	**$ 9.4**	**$ 1.1**	**$ 18.8**	**50%**
New York	**2.3**	**1.3**	**0.3**	**3.9**	**17**
Arizona	**2.8**	**1.1**	**0.2**	**4.1**	**75**
Florida	**2.8**	**3.9**	**1.3**	**8.0**	**67**
Michigan	**1.3**	**0.9**	**0.2**	**2.4**	**67**
All other	**8.1**	**6.1**	**1.8**	**16.0**	**22**
Total combined LTV >100%	**$ 25.6**	**$ 22.7**	**$ 4.9**	**$ 53.2**	**35%**
As a percentage of total loans	**35%**	**34%**	**39%**	**35%**	
Total portfolio average combined LTV at origination	**74**	**74**	**79**		
Total portfolio average current estimated combined LTV[b]	**97**	**93**	**101**		

December 31, 2008[f] (in billions, except ratios)	Home equity – junior lien[c]	Prime mortgage[c][d]	Subprime mortgage[c]	Total	% of total loans[e]
California	$ 8.4	$ 7.9	$ 1.3	$ 17.6	40%
New York	1.8	0.6	0.3	2.7	11
Arizona	2.9	0.9	0.2	4.0	65
Florida	2.9	2.9	1.5	7.3	55
Michigan	1.3	0.6	0.3	2.2	56
All other	7.5	3.3	1.6	12.4	16
Total combined LTV >100%	$ 24.8	$ 16.2	$ 5.2	$ 46.2	27%
As a percentage of total loans	29%	22%	34%	27%	
Total portfolio average combined LTV at origination	75	72	79		
Total portfolio average current estimated combined LTV[b]	91	83	91		

(a) Home equity–junior lien, prime mortgage and subprime mortgage loans with current estimated combined LTVs greater than 80% up to and including 100% were $17.9 billion, $17.6 billion and $3.5 billion, respectively, at December 31, 2009.
(b) The average current estimated combined LTV ratio reflects the outstanding balance at the balance sheet date, divided by the estimated current property value. Current property values are estimated based on home valuation models utilizing nationally recognized home price index valuation estimates.
(c) Represents combined loan-to-value, which considers all available lien positions related to the property.
(d) Includes mortgage loans insured by the U.S. government agencies of $5.3 billion and $1.8 billion at December 31, 2009 and 2008, respectively.
(e) Represents total loans of the product types noted in this table by geographic location.
(f) December 2008 estimated collateral values for the heritage Washington Mutual portfolio have been changed to conform to values derived from the home price index used for the JPMorgan Chase portfolio. Home price indices generally have different valuation methods and assumptions and therefore can yield a wide range of estimates.

The consumer credit portfolio is geographically diverse. The greatest concentration of loans is in California, which represents 18% of total on-balance sheet consumer loans and 24% of total residential real estate loans at December 2009, compared to 19% and 25%, respectively, at December 2008. Of the total on-balance sheet consumer loan portfolio, $149.4 billion, or 43%, are concentrated in California, New York, Arizona, Florida and Michigan at December 2009 compared to $171.1 billion, or 43%, at December 2008.

Declining home prices have had a significant impact on the estimated collateral value underlying the Firm's residential real estate loan portfolio. In general, the delinquency rate for loans with high current estimated combined LTV ratios is greater than the delinquency rate for loans in which the borrower has equity in the collateral. While a large portion of the loans with current estimated combined LTV ratios greater than 100% continue to pay and are current, the continued willingness and ability of these borrowers to pay is currently uncertain. Nonperforming loans in the residential real estate portfolio totaled $9.6 billion, of which 64% was greater than 150 days past due at December 31, 2009. Of the nonperforming loans that were greater than 150 days past due at December 31, 2009, approximately 36% of the unpaid principal balance of these loans has been charged-down to estimated collateral value.

Consumer 30+ day delinquency information

	30+ day delinquent loans		30+ day delinquency rate	
December 31, (in millions, except ratios)	**2009**	2008	**2009**	2008
Consumer loans – excluding purchased credit-impaired loans[a]				
Home equity – senior lien	**$ 833**	$ 585	**3.04%**	1.96%
Home equity – junior lien	**2,515**	2,563	**3.40**	3.03
Prime mortgage	**5,532**[b]	3,180[b]	**8.21**[d]	4.39[d]
Subprime mortgage	**4,232**	3,760	**33.79**	24.53
Option ARMs	**438**	68	**5.13**	0.75
Auto loans	**750**	963	**1.63**	2.26
Credit card – reported	**6,093**	5,653	**7.73**	5.40
All other loans	**1,306**[c]	708[c]	**3.91**	1.99
Total consumer loans – excluding purchased credit-impaired loans – reported	**$ 21,699**	$ 17,480	**6.23%**	4.44%
Credit card – securitized	**4,174**	3,811	**4.93**	4.45
Total consumer loans – excluding purchased credit-impaired loans – managed	**$ 25,873**	$ 21,291	**5.98%**	4.44%
Memo: Credit card – managed	**$ 10,267**	$ 9,464	**6.28%**	4.97%

(a) The delinquency rate for purchased credit-impaired loans, which is based on the unpaid principal balance, was 27.79% and 17.89% at December 31, 2009 and 2008, respectively.

(b) Excludes 30+ day delinquent mortgage loans that are insured by U.S. government agencies of $9.7 billion and $3.5 billion at December 31, 2009 and 2008, respectively. These amounts are excluded, as reimbursement is proceeding normally.

(c) Excludes 30+ day delinquent loans that are 30 days or more past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program, of $942 million and $824 million at December 31, 2009 and 2008, respectively. These amounts are excluded as reimbursement is proceeding normally.

(d) The denominator for the calculation of the 30+ day delinquency rate includes: (1) residential real estate loans reported in the Corporate/Private Equity segment; and (2) mortgage loans insured by U.S. government agencies. The 30+ day delinquency rate excluding these loan balances was 11.24% and 5.14% at December 31, 2009 and 2008, respectively.

Consumer 30+ day delinquencies have increased to 6.23% of the consumer loan portfolio at December 31, 2009, in comparison to 4.44% at December 31, 2008, driven predominately by an increase in residential real estate delinquencies which increased $3.4 billion. Late stage delinquencies (150+ days delinquent) increased significantly reflecting the impacts of trial loan modifications and foreclosure moratorium backlogs. Losses related to these loans continue to be recognized in accordance with the Firm's normal charge-off practices; as such, these loans are reflected at their estimated collateral value. Early stage delinquencies (30 - 89 days delinquent) in the residential real estate portfolios have remained relatively flat year over year.

Concentrations of credit risk – purchased credit-impaired loans

The following table presents the current estimated combined LTV ratio, as well as the ratio of the carrying value of the underlying loans to the current estimated collateral value, for purchased credit-impaired loans. Because such loans were initially measured at fair value, the ratio of the carrying value to the current estimated collateral value will be lower than the current estimated combined LTV ratio, which is based on the unpaid principal balance. The estimated collateral values used to calculate these ratios were derived from a nationally recognized home price index measured at the MSA level. Because home price indices can have wide variability, and such derived real estate values do not represent actual appraised loan-level collateral values, the resulting ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratios and ratios of carrying values to current estimated collateral values – purchased credit-impaired

December 31, 2009 (in billions, except ratios)	Unpaid principal balance[b]	Current estimated combined LTV ratio[c][d]	Carrying value[e]	Ratio of carrying value to current estimated collateral value
Option ARMs[a]	**$ 37.4**	**128%**	**$ 29.0**	**98%**[f]
Home equity	**32.9**	**127**	**26.5**	**102**
Prime mortgage	**22.0**	**121**	**19.7**	**102**[f]
Subprime mortgage	**9.0**	**122**	**6.0**	**81**

December 31, 2008[g] (in billions, except ratios)	Unpaid principal balance[b]	Current estimated combined LTV ratio[c][d]	Carrying value[e]	Ratio of carrying value to current estimated collateral value
Option ARMs	$ 41.6	113%	$ 31.6	86%
Home equity	39.8	115	28.6	82
Prime mortgage	25.0	107	21.8	94
Subprime mortgage	10.3	112	6.8	73

(a) The cumulative amount of unpaid interest that has been added to the unpaid principal balance of option ARMs was $1.9 billion at December 31, 2009. Assuming market interest rates, the Firm would expect the following balance of current loans to experience a payment recast: $6.3 billion in 2010 and $3.9 billion in 2011, of which $4.8 billion and $3.7 billion relate to the purchased credit-impaired portfolio.

(b) Represents the contractual amount of principal owed.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated based on home valuation models utilizing nationally recognized home price index valuation estimates.

(d) Represents current estimated combined loan-to-value, which considers all available lien positions related to the property.

(e) Carrying values include the effect of fair value adjustments that were applied to the consumer purchased credit-impaired portfolio at the date of acquisition.

(f) Ratios of carrying value to current estimated collateral value for the prime mortgage and option ARM portfolios are net of the allowance for loan losses of $1.1 billion and $491 million, respectively, as of December 31, 2009.

(g) December 2008 estimated collateral values for the heritage Washington Mutual portfolio have been changed to conform to values derived from home price index used for the JPMorgan Chase portfolio. Home price indices generally have different valuation methods and assumptions and therefore can yield a wide range of estimates.

Purchased credit-impaired loans in the states of California and Florida represented 54% and 11%, respectively, of total purchased credit-impaired loans at December 31, 2009, compared with 53% and 11%, respectively, at December 31, 2008. The current estimated combined LTV ratios were 137% and 149% for California and Florida loans, respectively, at December 31, 2009, compared with 121% and 125%, respectively, at December 31, 2008. Loan concentrations in California and Florida, as well as the continuing decline in housing prices in those states, have contributed negatively to both the current estimated combined LTV ratio and the ratio of carrying value to current collateral value for loans in the purchased credit-impaired portfolio.

While the carrying value of the purchased credit-impaired loans is marginally below the current collateral value of the loans, the ultimate performance of this portfolio is highly dependent on the borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity as well as the cost of alternative housing. The purchased credit-impaired portfolio was recorded at fair value at the time of acquisition which included an estimate of losses expected to be incurred over the estimated remaining lives of the loan pools. During 2009, management concluded that it was probable that higher than expected future principal credit losses would result in a decrease in the expected future cash flows of the prime and option ARM pools. As a result an allowance for loan losses of $1.6 billion was established.

Residential real estate loan modification activities: During 2009, the Firm reviewed its residential real estate portfolio to identify homeowners most in need of assistance, opened new regional counseling centers, hired additional loan counselors, introduced new financing alternatives, proactively reached out to borrowers to offer pre-qualified modifications, and commenced a new process to independently review each loan before moving it into the foreclosure process. In addition, during the first quarter of 2009, the U.S. Treasury introduced the MHA programs, which are designed to assist eligible homeowners in a number of ways, one of which is by modifying the terms of their mortgages. The Firm is participating in the MHA programs while continuing to expand its other loss-mitigation efforts for financially distressed borrowers who do not qualify for the MHA programs. The MHA programs and the Firm's other loss-mitigation programs for financially troubled borrowers generally represent various concessions such as term extensions, rate reductions and deferral of principal payments that would have otherwise been required under the terms of the original agreement. When the Firm modifies home equity lines of credit in troubled debt restructurings, future lending commitments related to the modified loans are canceled as part of the terms of the modification. Under all of these programs, borrowers must make at least three payments under the revised contractual terms during a trial modification period and be successfully re-underwritten with income verification before their loans can be permanently modified. The Firm's loss-mitigation programs are intended to minimize economic loss to the Firm, while providing alternatives to foreclosure. The success of these programs is highly dependent on borrowers' ongoing ability and willingness to repay in accordance with the modified terms and could be adversely affected by additional deterioration in the economic environment or shifts in borrower behavior. For both the Firm's on-balance sheet loans and loans serviced for others, approximately 600,000 mortgage modifications had been offered to borrowers in 2009. Of these, 89,000 have achieved permanent modification. Substantially all of the loans contractually modified to date were modified under the Firm's other loss mitigation programs.

The following table presents information relating to restructured on-balance sheet residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty as of December 31, 2009. Modifications of purchased credit-impaired loans continue to be accounted for and reported as purchased credit-impaired loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of whether a probable and/or significant change in estimated future principal cash flows has occurred. Modifications of loans other than purchased credit-impaired are generally accounted for and reported as troubled debt restructurings.

Restructured residential real estate loans[a]

December 31, 2009 (in millions)	On–balance sheet loans	Nonperforming on–balance sheet loans[d]
Restructured residential real estate loans – excluding purchased credit-impaired loans[b]		
Home equity – senior lien	$ 168	$ 30
Home equity – junior lien	222	43
Prime mortgage	634	243
Subprime mortgage	1,998	598
Option ARMs	8	6
Total restructured residential real estate loans – excluding purchased credit-impaired loans	$ 3,030	$ 920
Restructured purchased credit-impaired loans[c]		
Home equity	$ 453	NA
Prime mortgage	1,526	NA
Subprime mortgage	1,954	NA
Option ARMs	2,972	NA
Total restructured purchased credit-impaired loans	$ 6,905	NA

(a) Restructured residential real estate loans were immaterial at December 31, 2008.
(b) Amounts represent the carrying value of restructured residential real estate loans.
(c) Amounts represent the unpaid principal balance of restructured purchased credit-impaired loans.
(d) Nonperforming loans modified in a troubled debt restructuring may be returned to accrual status when repayment is reasonably assured and the borrower has made a minimum of six payments under the new terms.

Real estate owned ("REO"): As part of the residential real estate foreclosure process, loans are written down to the fair value of the underlying real estate asset, less costs to sell. In those instances where the Firm gains title, ownership and possession of individual properties at the completion of the foreclosure process, these REO assets are managed for prompt sale and disposition at the best possible economic value. Any further gains or losses on REO assets are recorded as part of other income. Operating expense, such as real estate taxes and maintenance, are charged to other expense. REO assets declined from year-end 2008 as a result of the foreclosure moratorium in early 2009 and the subsequent increase in loss mitigation activities. It is anticipated that REO assets will increase over the next several quarters, as loans moving through the foreclosure process are expected to increase.

Portfolio transfers: The Firm regularly evaluates market conditions and overall economic returns and makes an initial determination as to whether new originations will be held-for-investment or sold within the foreseeable future. The Firm also periodically evaluates the expected economic returns of previously originated loans under prevailing market conditions to determine whether their designation as held-for-sale or held-for-investment continues to be appropriate. When the Firm determines that a change in this designation is appropriate, the loans are transferred to the appropriate classification. Since the second half of 2007, all new prime mortgage originations that cannot be sold to U.S. government agencies and U.S. government-sponsored enterprises have been designated as held-for-investment. Prime mortgage loans originated with the intent to sell are accounted for at fair value and classified as trading assets in the Consolidated Balance Sheets.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers the wholesale (risk-rated) and consumer (primarily scored) loan portfolios and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also computes an allowance for wholesale lending-related commitments using a methodology similar to that used for the wholesale loans. During 2009, the Firm did not make any significant changes to the methodologies or policies described in the following paragraphs.

Wholesale loans are charged off to the allowance for loan losses when it is highly certain that a loss has been realized; this determination considers many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan, and valuation of the borrower's equity. Consumer loans, other than purchased credit-impaired loans, are generally charged off to the allowance for loan losses upon reaching specified stages of delinquency, in accordance with the Federal Financial Institutions Examination Council policy. For example, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days of receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier. Residential mortgage products are generally charged off to an amount equal to the net realizable value of the underlying collateral, no later than the date the loan becomes 180 days past due. Other consumer products, if collateralized, are generally charged off to the net realizable value of the underlying collateral at 120 days past due.

Determining the appropriateness of the allowance is complex and requires judgment about the effect of matters that are inherently uncertain. Assumptions about unemployment rates, housing prices and overall economic conditions could have a significant impact on the Firm's determination of loan quality. Subsequent evaluations of the loan portfolio, in light of then-prevailing factors, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods. At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2009, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses inherent in the portfolio, including those not yet identifiable).

For a further discussion of the components of the allowance for credit losses, see Critical Accounting Estimates Used by the Firm on pages 135–139 and Note 14 on pages 204–206 of this Annual Report.

The allowance for credit losses increased by $8.7 billion from the prior year to $32.5 billion. Excluding held-for-sale loans, loans carried at fair value, and purchased credit-impaired consumer loans, the allowance for loan losses represented 5.51% of loans at December 31, 2009, compared with 3.62% at December 31, 2008.

The consumer allowance for loan losses increased by $7.8 billion from the prior year, primarily as a result of an increased allowance for loan losses in residential real estate and credit card. The increase included additions to the allowance for loan losses of $5.2 billion, driven by higher estimated losses for residential mortgage and home equity loans as the weak labor market and weak overall economic conditions have resulted in increased delinquencies, and continued weak housing prices have driven a significant increase in loss severity. The allowance for loan losses related to credit card increased $2.0 billion from the prior year, reflecting continued weakness in the credit environment. The increase reflects an addition of $2.4 billion through the provision for loan losses, partially offset by the reclassification of $298 million related to the issuance and retention of securities from the Chase Issuance Trust.

The wholesale allowance for loan losses increased by $600 million from December 31, 2008, reflecting the effect of a continued weakening credit environment.

To provide for the risk of loss inherent in the Firm's process of extending credit an allowance for lending-related commitments is held for the Firm, which is reported in other liabilities. The allowance is computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown. For a further discussion on the allowance for lending-related commitments, see Note 14 on page 204–206 of this Annual Report.

The allowance for lending-related commitments for both wholesale and consumer, which is reported in other liabilities, was $939 million and $659 million at December 31, 2009 and 2008, respectively. The increase reflects downgrades within the wholesale portfolio due to the continued weakening credit environment during 2009.

The credit ratios in the table below are based on retained loan balances, which exclude loans held-for-sale and loans accounted for at fair value. As of December 31, 2009 and 2008, wholesale retained loans were $200.1 billion and $248.1 billion, respectively; and consumer retained loans were $427.1 billion and $480.8 billion, respectively. For the years ended December 31, 2009 and 2008, average wholesale retained loans were $223.0 billion and $219.6 billion, respectively; and average consumer retained loans were $449.2 billion and $347.4 billion, respectively.

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions)	2009 Wholesale	2009 Consumer	2009 Total	2008 Wholesale	2008 Consumer	2008 Total
Allowance for loan losses:						
Beginning balance at January 1,	**$ 6,545**	**$ 16,619**	**$ 23,164**	$ 3,154	$ 6,080	$ 9,234
Gross charge-offs	**3,226**	**20,792**	**24,018**	521	10,243	10,764
Gross (recoveries)	**(94)**	**(959)**	**(1,053)**	(119)	(810)	(929)
Net charge-offs	**3,132**	**19,833**	**22,965**	402	9,433	9,835
Provision for loan losses:						
Provision excluding accounting conformity	**3,684**	**28,051**	**31,735**	2,895	16,765	19,660
Accounting conformity[a]	**—**	**—**	**—**	641	936	1,577
Total provision for loan losses	**3,684**	**28,051**	**31,735**	3,536	17,701	21,237
Acquired allowance resulting from Washington Mutual transaction	**—**	**—**	**—**	229	2,306	2,535
Other[b]	**48**	**(380)**	**(332)**	28	(35)	(7)
Ending balance at December 31	**$ 7,145**	**$ 24,457**	**$ 31,602**	$ 6,545	$ 16,619	$ 23,164
Components:						
Asset-specific[c][d]	**$ 2,046**	**$ 996**	**$ 3,042**	$ 712	$ 379	$ 1,091
Formula-based	**5,099**	**21,880**	**26,979**	5,833	16,240	22,073
Purchased credit-impaired	**—**	**1,581**	**1,581**	—	—	—
Total allowance for loan losses	**$ 7,145**	**$ 24,457**	**$ 31,602**	$ 6,545	$ 16,619	$ 23,164
Allowance for lending-related commitments:						
Beginning balance at January 1,	**$ 634**	**$ 25**	**$ 659**	$ 835	$ 15	$ 850
Provision for lending-related commitments						
Provision excluding accounting conformity	**290**	**(10)**	**280**	(214)	(1)	(215)
Accounting conformity[a]	**—**	**—**	**—**	5	(48)	(43)
Total provision for lending-related commitments	**290**	**(10)**	**280**	(209)	(49)	(258)
Acquired allowance resulting from Washington Mutual transaction	**—**	**—**	**—**	—	66	66
Other[b]	**3**	**(3)**	**—**	8	(7)	1
Ending balance at December 31	**$ 927**	**$ 12**	**$ 939**	$ 634	$ 25	$ 659
Components:						
Asset-specific	**$ 297**	**$ —**	**$ 297**	$ 29	$ —	$ 29
Formula-based	**630**	**12**	**642**	605	25	630
Total allowance for lending-related commitments	**$ 927**	**$ 12**	**$ 939**	$ 634	$ 25	$ 659
Total allowance for credit losses	**$ 8,072**	**$ 24,469**	**$ 32,541**	$ 7,179	$ 16,644	$ 23,823
Credit ratios:						
Allowance for loan losses to retained loans	**3.57%**	**5.73%**	**5.04%**	2.64%	3.46%	3.18%
Net charge-off rates[e]	**1.40**	**4.41**	**3.42**	0.18	2.71	1.73
Credit ratios excluding home lending purchased credit-impaired loans and loans held by the Washington Mutual Master Trust						
Allowance for loan losses to retained loans[f]	**3.57**	**6.63**	**5.51**	2.64	4.24	3.62

(a) Related to the Washington Mutual transaction in 2008.
(b) Predominantly includes a reclassification in 2009 related to the issuance and retention of securities from the Chase Issuance Trust, as well as reclassifications of allowance balances related to business transfers between wholesale and consumer businesses in the first quarter of 2008.
(c) Relates to risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a troubled debt restructuring.
(d) The asset-specific consumer allowance for loan losses includes troubled debt restructuring reserves of $754 million and $258 million at December 31, 2009 and 2008, respectively. Prior period amounts have been reclassified to conform to the current presentation.
(e) Charge-offs are not recorded on purchased credit-impaired loans until actual losses exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition.
(f) Excludes the impact of purchased credit-impaired loans that were acquired as part of the Washington Mutual transaction and loans held by the Washington Mutual Master Trust, which were consolidated onto the Firm's balance sheet at fair value during the second quarter of 2009. As of December 31, 2009, an allowance for loan losses of $1.6 billion was recorded for the purchased credit-impaired loans, which has also been excluded from applicable ratios. No allowance was recorded for the loans that were consolidated from the Washington Mutual Master Trust as of December 31, 2009. To date, no charge-offs have been recorded for any of these loans.

The following table includes a credit ratio excluding the following items: home lending purchased credit-impaired loans acquired in the Washington Mutual transaction; and credit card loans held by the Washington Mutual Master Trust, which were consolidated onto the Firm's balance sheet at fair value during the second quarter of 2009. The purchased credit-impaired loans were accounted for at fair value on the acquisition date, which incorporated management's estimate, as of that date, of credit losses over the remaining life of the portfolio. Accordingly, no allowance for loan losses was recorded for these loans as of the acquisition date. Subsequent evaluations of estimated credit deterioration in this portfolio resulted in the recording of an allowance for loan losses of $1.6 billion at December 31, 2009. For more information on home lending purchased credit-impaired loans, see pages 117 and 121 of this Annual Report. For more information on the consolidation of assets from the Washington Mutual Master Trust, see Note 15 on pages 206–213 of this Annual Report.

The calculation of the allowance for loan losses to total retained loans, excluding both home lending purchased credit-impaired loans and loans held by the Washington Mutual Master Trust, is presented below.

December 31, (in millions, except ratios)	2009	2008
Allowance for loan losses	**$ 31,602**	$ 23,164
Less: Allowance for purchased credit-impaired loans	**1,581**	—
Adjusted allowance for loan losses	**$ 30,021**	$ 23,164
Total loans retained	**$ 627,218**	$ 728,915
Less: Firmwide purchased credit-impaired loans	**81,380**	89,088
Loans held by the Washington Mutual Master Trust	**1,002**	—
Adjusted loans	**$ 544,836**	$ 639,827
Allowance for loan losses to ending loans excluding purchased credit-impaired loans and loans held by the Washington Mutual Master Trust	**5.51%**	3.62%

The following table presents the allowance for credit losses by business segment at December 31, 2009 and 2008.

	Allowance for credit losses					
	2009			2008		
December 31, (in millions)	Loan losses	Lending-related commitments	Total	Loan losses	Lending-related commitments	Total
Investment Bank	**$ 3,756**	**$ 485**	**$ 4,241**	$ 3,444	$ 360	$ 3,804
Commercial Banking	**3,025**	**349**	**3,374**	2,826	206	3,032
Treasury & Securities Services	**88**	**84**	**172**	74	63	137
Asset Management	**269**	**9**	**278**	191	5	196
Corporate/Private Equity	**7**	**—**	**7**	10	—	10
Total Wholesale	**7,145**	**927**	**8,072**	6,545	634	7,179
Retail Financial Services	**14,776**	**12**	**14,788**	8,918	25	8,943
Card Services	**9,672**	**—**	**9,672**	7,692	—	7,692
Corporate/Private Equity	**9**	**—**	**9**	9	—	9
Total Consumer	**24,457**	**12**	**24,469**	16,619	25	16,644
Total	**$ 31,602**	**$ 939**	**$ 32,541**	$ 23,164	$ 659	$ 23,823

Provision for credit losses

The managed provision for credit losses was $38.5 billion for the year ended December 31, 2009, up by $13.9 billion from the prior year. The prior-year included a $1.5 billion charge to conform Washington Mutual's allowance for loan losses, which affected both the consumer and wholesale portfolios. For the purpose of the following analysis, this charge is excluded. The consumer-managed provision for credit losses was $34.5 billion for the year ended December 31, 2009, compared with $20.4 billion in the prior year, reflecting an increase in the allowance for credit losses in the home lending and credit card loan portfolios. Included in the 2009 addition to the allowance for loan losses was a $1.6 billion increase related to estimated deterioration in the Washington Mutual purchased credit-impaired portfolio. The wholesale provision for credit losses was $4.0 billion for the year ended December 31, 2009, compared with $2.7 billion in the prior year, reflecting continued weakness in the credit environment.

Year ended December 31, (in millions)	Provision for credit losses								
	Loan losses			Lending-related commitments			Total		
	2009	2008	2007	**2009**	2008	2007	**2009**	2008	2007
Investment Bank	**$ 2,154**	$ 2,216	$ 376	**$ 125**	$ (201)	$ 278	**$ 2,279**	$ 2,015	$ 654
Commercial Banking	**1,314**	505	230	**140**	(41)	49	**1,454**	464	279
Treasury & Securities Services	**34**	52	11	**21**	30	8	**55**	82	19
Asset Management	**183**	87	(19)	**5**	(2)	1	**188**	85	(18)
Corporate/Private Equity[a][b]	**(1)**	676	—	**(1)**	5	—	**(2)**	681	—
Total Wholesale	**3,684**	3,536	598	**290**	(209)	336	**3,974**	3,327	934
Retail Financial Services	**15,950**	9,906	2,620	**(10)**	(1)	(10)	**15,940**	9,905	2,610
Card Services – reported	**12,019**	6,456	3,331	**—**	—	—	**12,019**	6,456	3,331
Corporate/Private Equity[a][c][d]	**82**	1,339	(11)	**—**	(48)	—	**82**	1,291	(11)
Total Consumer	**28,051**	17,701	5,940	**(10)**	(49)	(10)	**28,041**	17,652	5,930
Total provision for credit losses – reported	**31,735**	21,237	6,538	**280**	(258)	326	**32,015**	20,979	6,864
Credit card – securitized	**6,443**	3,612	2,380	**—**	—	—	**6,443**	3,612	2,380
Total provision for credit losses – managed	**$ 38,178**	$ 24,849	$ 8,918	**$ 280**	$ (258)	$ 326	**$ 38,458**	$ 24,591	$ 9,244

(a) Includes accounting conformity provisions related to the Washington Mutual transaction in 2008.

(b) Includes provision expense related to loans acquired in the Bear Stearns merger in the second quarter of 2008.

(c) Includes amounts related to held-for-investment prime mortgages transferred from AM to the Corporate/Private Equity segment.

(d) In November 2008, the Firm transferred $5.8 billion of higher quality credit card loans from the legacy Chase portfolio to a securitization trust previously established by Washington Mutual ("the Trust"). As a result of converting higher credit quality Chase-originated on-book receivables to the Trust's seller's interest which has a higher overall loss rate reflective of the total assets within the Trust, approximately $400 million of incremental provision expense was recorded during the fourth quarter. This incremental provision expense was recorded in the Corporate segment as the action related to the acquisition of Washington Mutual's banking operations. For further discussion of credit card securitizations, see Note 15 on pages 206–213 of this Annual Report.

MARKET RISK MANAGEMENT

Market risk is the exposure to an adverse change in the market value of portfolios and financial instruments caused by a change in market prices or rates.

Market risk management

Market Risk is an independent risk management function, aligned primarily with each of the Firm's business segments. Market Risk works in partnership with the business segments to identify and monitor market risks throughout the Firm as well as to define market risk policies and procedures. The risk management function is headed by the Firm's Chief Risk Officer.

Market Risk seeks to facilitate efficient risk/return decisions, reduce volatility in operating performance and make the Firm's market risk profile transparent to senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- Establishing a comprehensive market risk policy framework
- Independent measurement, monitoring and control of business segment market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk identification and classification

Each business segment is responsible for the comprehensive identification and verification of market risks within its units. The highest concentrations of market risk are found in IB, Consumer Lending, and the Firm's Chief Investment Office in the Corporate/Private Equity segment.

IB makes markets and trades its products across several different asset classes. These asset classes primarily include fixed income risk (both interest rate risk and credit spread risk), foreign exchange, equities and commodities risk. These trading risks may lead to the potential decline in net income due to adverse changes in market rates. In addition to these trading risks, there are risks in IB's credit portfolio from retained loans and commitments, derivative credit valuation adjustments, hedges of the credit valuation adjustments and mark-to-market hedges of the retained loan portfolio. Additional risk positions result from the debit valuation adjustments taken on certain structured liabilities and derivatives to reflect the credit quality of the Firm.

The Firm's Consumer Lending business unit includes the Firm's mortgage pipeline and warehouse loans, MSRs and all related hedges. These activities give rise to complex interest rate risks, as well as option and basis risk. Option risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing. Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates.

The Chief Investment Office is primarily concerned with managing structural market risks which arise out of the various business activities of the Firm. These include structural interest rate risk, and foreign exchange risk. Market Risk measures and monitors the gross structural exposures as well as the net exposures related to these activities.

Risk measurement

Tools used to measure risk

Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- Nonstatistical risk measures
- Value-at-risk
- Loss advisories
- Drawdowns
- Economic value stress testing
- Earnings-at-risk stress testing
- Risk identification for large exposures ("RIFLE")

Nonstatistical risk measures

Nonstatistical risk measures other than stress testing include net open positions, basis point values, option sensitivities, market values, position concentrations and position turnover. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line of business and by risk type, and are used for monitoring limits, one-off approvals and tactical control.

Value-at-risk

JPMorgan Chase's primary statistical risk measure, VaR, estimates the potential loss from adverse market moves in a normal market environment and provides a consistent cross-business measure of risk profiles and levels of diversification. VaR is used for comparing risks across businesses, monitoring limits, and as an input to economic capital calculations. Each business day, as part of its risk management activities, the Firm undertakes a comprehensive VaR calculation that includes the majority of its market risks. These VaR results are reported to senior management.

To calculate VaR, the Firm uses historical simulation, based on a one-day time horizon and an expected tail-loss methodology, which measures risk across instruments and portfolios in a consistent and comparable way. The simulation is based on data for the previous 12 months. This approach assumes that historical changes in market values are representative of future changes; this assumption may not always be accurate, particularly when there is volatility in the market environment. For certain products, such as lending facilities and some mortgage-related securities for which price-based time series are not readily available, market-based data are used in conjunction with sensitivity factors to estimate the risk. It is likely that using an actual price-based time series for these products, if available, would impact the VaR results presented. In addition, certain risk parameters, such as correlation risk among certain instruments, are not fully captured in VaR.

In the third quarter of 2008, the Firm revised its reported IB Trading and credit portfolio VaR measure to include additional risk positions previously excluded from VaR, thus creating a more comprehensive view of the Firm's market risks. In addition, the Firm moved to calculating VaR using a 95% confidence level to provide a more stable measure of the VaR for day-to-day risk management. The following sections describe JPMorgan Chase's VaR measures under both the legacy 99% confidence level as well as the new 95% confidence level. The Firm intends to present VaR solely at the 95% confidence level commencing in the first quarter of 2010, as information for two complete year-to-date periods will then be available.

The table below shows the results of the Firm's VaR measure using the legacy 99% confidence level.

99% Confidence-Level VaR
IB trading VaR by risk type and credit portfolio VaR

As of or for the year ended	**2009**			2008			At December 31,	
December 31,[a] (in millions)	Average	Minimum	Maximum	Average	Minimum	Maximum	**2009**	2008
By risk type:								
Fixed income	**$ 221**	**$ 112**	**$ 289**	$ 181	$ 99	$ 409	**$ 123**	$ 253
Foreign exchange	**30**	**10**	**67**	34	13	90	**18**	70
Equities	**75**	**13**	**248**	57	19	187	**64**	69
Commodities and other	**32**	**16**	**58**	32	24	53	**23**	26
Diversification	**(131)**[b]	**NM**[c]	**NM**[c]	(108)[b]	NM[c]	NM[c]	**(99)**[b]	(152)[b]
Trading VaR	**$ 227**	**$ 103**	**$ 357**	$ 196	$ 96	$ 420	**$ 129**	$ 266
Credit portfolio VaR	**101**	**30**	**221**	69	20	218	**37**	171
Diversification	**(80)**[b]	**NM**[c]	**NM**[c]	(63)[b]	NM[c]	NM[c]	**(20)**[b]	(120)[b]
Total trading and credit portfolio VaR	**$ 248**	**$ 132**	**$ 397**	$ 202	$ 96	$ 449	**$ 146**	$ 317

(a) The results for the year ended December 31, 2008, include five months of heritage JPMorgan Chase & Co. only results and seven months of combined JPMorgan Chase & Co. and Bear Stearns results.
(b) Average and period-end VaRs were less than the sum of the VaRs of its market risk components, which is due to risk offsets resulting from portfolio diversification. The diversification effect reflects the fact that the risks were not perfectly correlated. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves.
(c) Designated as not meaningful ("NM") because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio diversification effect.

The 99% confidence level trading VaR includes substantially all trading activities in IB. Beginning in the fourth quarter of 2008, the credit spread sensitivities of certain mortgage products were included in trading VaR. This change had an insignificant impact on the average fourth quarter VaR. For certain other products included in the trading VaR, particular risk parameters are not fully captured – for example, correlation risk. Trading VaR does not include: held-for-sale funded loan and unfunded commitments positions (however, it does include hedges of those positions); the DVA taken on derivative and structured liabilities to reflect the credit quality of the Firm; the MSR portfolio; and securities and instruments held by other corporate functions, such as Private Equity. See the DVA Sensitivity table on page 130 of this Annual Report for further details. For a discussion of MSRs and the corporate functions, see Note 3 on pages 156–173, Note 17 on pages 222–225 and Corporate/ Private Equity on pages 82–83 of this Annual Report.

2009 VaR results (99% confidence level VaR)

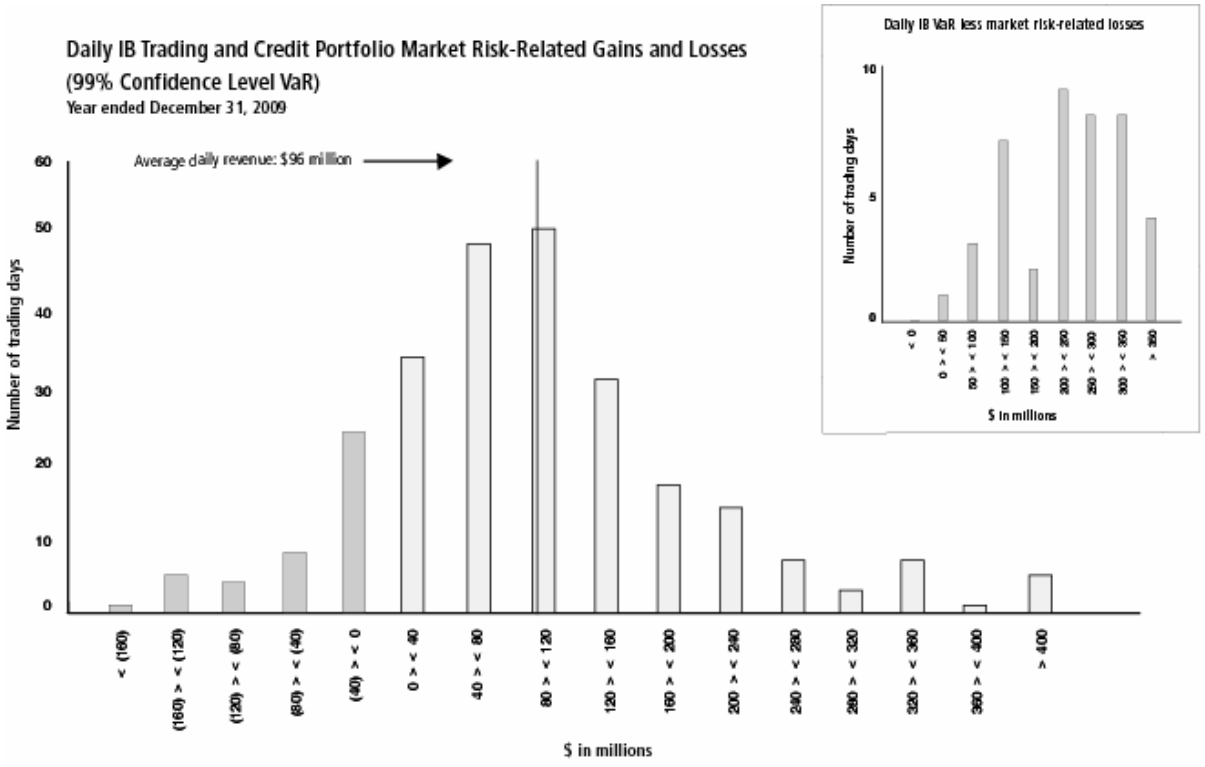
IB's average total trading and credit portfolio VaR was $248 million for 2009, compared with $202 million for 2008, primarily driven by market volatility. Volatility began to significantly increase across all asset classes from late 2008 and persisted through the first quarter of 2009. From the second quarter of 2009 onwards, volatility in the markets gradually declined; however, the impact of the volatile periods was still reflected in the 2009 VaR numbers.

Spot total trading and credit portfolio VaR as of December 31, 2009, was $146 million, compared with $317 million as of December 31, 2008. The decrease in the spot VaR in 2009 reflects the reduction in overall risk levels as well as the aforementioned decline in market volatility by the end of 2009 when compared to the end of 2008.

For 2009, compared with the prior year, average trading VaR diversification increased to $131 million, or 37% of the sum of the components, from $108 million, or 36% of the sum of the components in the prior year. In general, over the course of the year, VaR exposures can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

VaR backtesting (99% confidence level VaR)

To evaluate the soundness of its VaR model, the Firm conducts daily back-testing of VaR against daily IB market risk–related revenue, which is defined as the change in value of principal transactions revenue (excluding private equity gains/(losses)) plus any trading-related net interest income, brokerage commissions, underwriting fees or other revenue. The daily IB market risk–related revenue excludes gains and losses on held-for-sale funded loans and unfunded commitments and from DVA. The following histogram illustrates the daily market risk–related gains and losses for IB trading businesses for the year ended 2009. The chart shows that IB posted market risk–related gains on 219 out of 261 days in this period, with 54 days exceeding $160 million. The inset graph looks at those days on which IB experienced losses and depicts the amount by which 99% confidence level VaR exceeded the actual loss on each of those days. Losses were sustained on 42 days during the year ended December 31, 2009, with no loss exceeding the VaR measure. The Firm would expect to incur losses greater than that predicted by VaR estimates once in every 100 trading days, or about two to three times a year.



The table below shows the results of the Firm's VaR measure using a 95% confidence level.

95% Confidence Level VaR
Total IB trading VaR by risk type, credit portfolio VaR and other VaR

(in millions)	At December 31, 2009	At December 31, 2008	Year ended December 31, Average(a) 2009
IB VaR by risk type:			
Fixed income	**$ 80**	$ 180	**$ 160**
Foreign exchange	**10**	38	**18**
Equities	**43**	39	**47**
Commodities and other	**14**	25	**20**
Diversification benefit to IB trading VaR	**(54)**	(108)	**(91)**
IB Trading VaR	**$ 93**	$ 174	**$ 154**
Credit portfolio VaR	**21**	77	**52**
Diversification benefit to IB trading and credit portfolio VaR	**(9)**	(57)	**(42)**
Total IB trading and credit portfolio VaR	**$ 105**	$ 194	**$ 164**
Consumer Lending VaR	**28**	112	**57**
Chief Investment Office (CIO) VaR	**76**	114	**103**
Diversification benefit to total other VaR	**(13)**	(48)	**(36)**
Total other VaR	**$ 91**	$ 178	**$ 124**
Diversification benefit to total IB and other VaR	**(73)**	(86)	**(82)**
Total IB and other VaR	**$ 123**	$ 286	**$ 206**

(a) Results for the year ended December 31, 2008, are not available.

VaR measurement

The Firm's 95% VaR measure above includes all the risk positions taken into account under the 99% confidence level VaR measure, as well as syndicated lending facilities that the Firm intends to distribute. The Firm utilizes proxies to estimate the VaR for these products since daily time series are largely not available. In addition, the 95% VaR measure also includes certain positions utilized as part of the Firm's risk management function within the Chief Investment Office ("CIO") and in the Consumer Lending businesses to provide a Total IB and other VaR measure. The CIO VaR includes positions, primarily in debt securities and credit products, used to manage structural risk and other risks, including interest rate, credit and mortgage risks arising from the Firm's ongoing business activities. The Consumer Lending VaR includes the Firm's mortgage pipeline and warehouse loans, MSRs and all related hedges. In the Firm's view, including these items in VaR produces a more complete perspective of the Firm's market risk profile.

The 95% VaR measure continues to exclude the DVA taken on certain structured liabilities and derivatives to reflect the credit quality of the Firm. It also excludes certain activities such as Private Equity, principal investing (e.g., mezzanine financing, tax-oriented investments, etc.) and balance sheet, capital management positions and longer-term investments managed by the CIO. These longer-term positions are managed through the Firm's earnings-at-risk and other cash flow–monitoring processes rather than by using a VaR measure. Principal investing activities and Private Equity positions are managed using stress and scenario analysis.

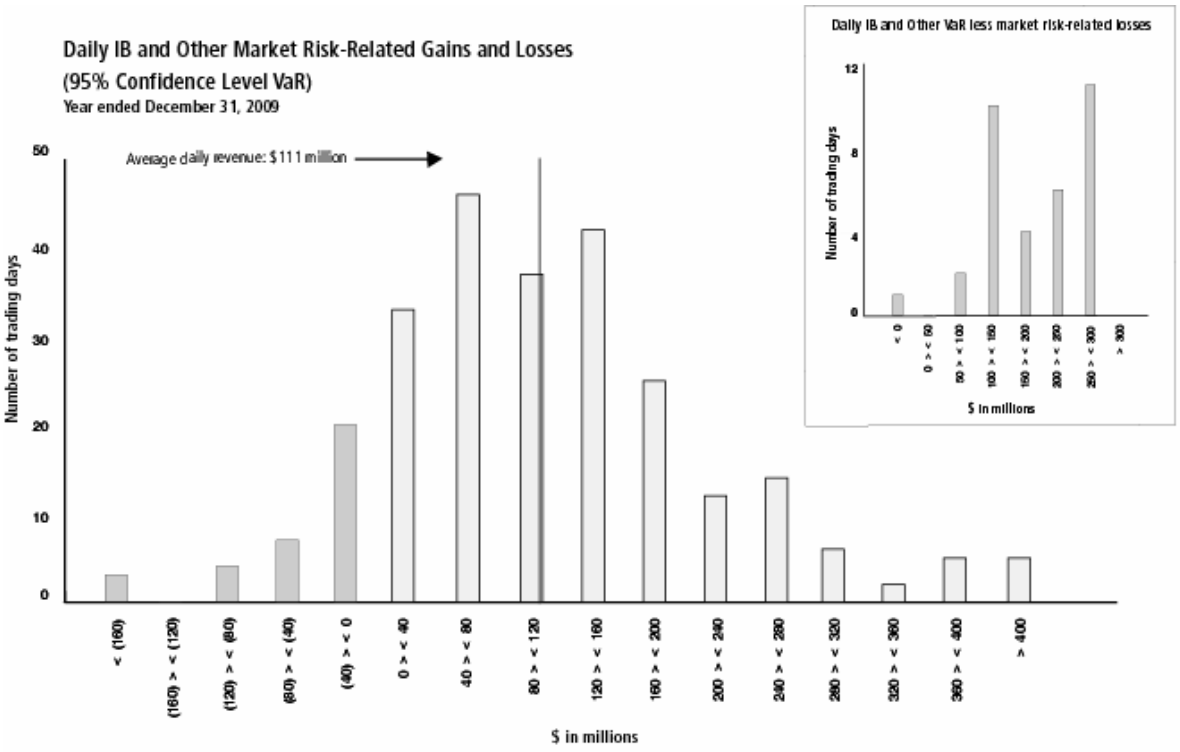
2009 VaR results (95% confidence level VaR)

Spot IB and other VaR as of December 31, 2009, was $123 million, compared with $286 million as of December 31, 2008. The decrease in spot VaR in 2009 is a consequence of reductions in overall risk as well as declining market volatility. In general, over the course of the year, VaR exposures can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

VaR backtesting (95% confidence level VaR)

To evaluate the soundness of its VaR model, the Firm conducts daily back-testing of VaR against the Firm's market risk–related revenue, which is defined as follows: the change in value of principal transactions revenue for IB and CIO (excluding private equity gains/(losses) and revenue from longer-term CIO investments); trading-related net interest income for IB, RFS and CIO (excluding longer-term CIO investments); IB brokerage commissions, underwriting fees or other revenue; revenue from syndicated lending facilities that the Firm intends to distribute; and mortgage fees and related income for the Firm's mortgage pipeline and warehouse loans, MSRs and all related hedges. The daily firmwide market risk–related revenue excludes gains and losses from DVA.

The following histogram illustrates the daily market risk–related gains and losses for IB and Consumer/CIO positions for 2009. The chart shows that the Firm posted market risk–related gains on 227 out of 261 days in this period, with 69 days exceeding $160 million. The inset graph looks at those days on which the Firm experienced losses and depicts the amount by which the 95% confidence level VaR exceeded the actual loss on each of those days. Losses were sustained on 34 days during 2009 and exceeded the VaR measure on one day due to high market volatility in the first quarter of 2009. Under the 95% confidence interval, the Firm would expect to incur daily losses greater than that predicted by VaR estimates about twelve times a year.



The following table provides information about the gross sensitivity of DVA to a one-basis-point increase in JPMorgan Chase's credit spreads. This sensitivity represents the impact from a one-basis-point parallel shift in JPMorgan Chase's entire credit curve. As credit curves do not typically move in a parallel fashion, the sensitivity multiplied by the change in spreads at a single maturity point may not be representative of the actual revenue recognized.

Debit valuation adjustment sensitivity

(in millions)	1 Basis Point Increase in JPMorgan Chase Credit Spread
December 31, 2009	**$ 39**
December 31, 2008	$ 37

Loss advisories and drawdowns

Loss advisories and drawdowns are tools used to highlight to senior management trading losses above certain levels and initiate discussion of remedies.

Economic value stress testing

While VaR reflects the risk of loss due to adverse changes in normal markets, stress testing captures the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm conducts economic-value stress tests using multiple scenarios that assume credit spreads widen significantly, equity prices decline and significant changes in interest rates across the major currencies. Other scenarios focus on the risks predominant in individual business segments and include scenarios that focus on the potential for adverse movements in complex portfolios. Scenarios were updated more frequently in 2009 and, in some cases, redefined to reflect the significant market volatility which began in late 2008. Along with VaR, stress testing is important in measuring and controlling risk. Stress testing enhances the understanding of the Firm's risk profile and loss potential, and stress losses are monitored against limits. Stress testing is also utilized in one-off approvals and cross-business risk measurement, as well as an input to economic capital allocation. Stress-test results, trends and explanations based on current market risk positions are reported to the Firm's senior management and to the lines of business to help them better measure and manage risks and to understand event risk–sensitive positions.

Earnings-at-risk stress testing

The VaR and stress-test measures described above illustrate the total economic sensitivity of the Firm's Consolidated Balance Sheets to changes in market variables. The effect of interest rate exposure on reported net income is also important. Interest rate risk exposure in the Firm's core nontrading business activities (i.e., asset/liability management positions) results from on–and off–balance sheet positions and can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off–balance sheet instruments. For example, if liabilities reprice quicker than assets and funding interest rates are declining, earnings will increase initially.
- Differences in the amounts of assets, liabilities and off–balance sheet instruments that are repricing at the same time. For example, if more deposit liabilities are repricing than assets when general interest rates are declining, earnings will increase initially.
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve, because the Firm has the ability to lend at long-term fixed rates and borrow at variable or short-term fixed rates). Based on these scenarios, the Firm's earnings would be affected negatively by a sudden and unanticipated increase in short-term rates paid on its liabilities (e.g., deposits) without a corresponding increase in long-term rates received on its assets (e.g., loans). Conversely, higher long-term rates received on assets generally are beneficial to earnings, particularly when the increase is not accompanied by rising short-term rates paid on liabilities.
- The impact of changes in the maturity of various assets, liabilities or off–balance sheet instruments as interest rates change. For example, if more borrowers than forecasted pay down higher-rate loan balances when general interest rates are declining, earnings may decrease initially.

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, corporate-wide basis. Business units transfer their interest rate risk to Treasury through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm conducts simulations of changes in net interest income from its nontrading activities under a variety of interest rate scenarios. Earnings-at-risk tests measure the potential change in the Firm's net interest income, and the corresponding impact to the Firm's pretax earnings, over the following 12 months. These tests highlight exposures to various rate-sensitive factors, such as the rates themselves (e.g., the prime lending rate), pricing strategies on deposits, optionality and changes in product mix. The tests include forecasted balance sheet changes, such as asset sales and securitizations, as well as prepayment and reinvestment behavior.

Immediate changes in interest rates present a limited view of risk, and so a number of alternative scenarios are also reviewed. These scenarios include the implied forward curve, nonparallel rate shifts and severe interest rate shocks on selected key rates. These scenarios are intended to provide a comprehensive view of JPMorgan Chase's earnings at risk over a wide range of outcomes.

JPMorgan Chase's 12-month pretax earnings sensitivity profile as of December 31, 2009 and 2008, is as follows.

	Immediate change in rates			
(in millions)	+200bp	+100bp	-100bp	-200bp
December 31, 2009	**$ (1,594)**	**$ (554)**	**NM**[a]	**NM**[a]
December 31, 2008	$ 336	$ 672	NM[a]	NM[a]

(a) Down 100- and 200-basis-point parallel shocks result in a Fed Funds target rate of zero, and negative three- and six-month Treasury rates. The earnings-at-risk results of such a low-probability scenario are not meaningful.

The change in earnings at risk from December 31, 2008, results from a higher level of AFS securities and an updated baseline scenario that uses higher short-term interest rates. The Firm's risk to rising rates is largely the result of increased funding costs on assets, partially offset by widening deposit margins, which are currently compressed due to very low short-term interest rates.

Additionally, another interest rate scenario, involving a steeper yield curve with long-term rates rising 100 basis points and short-term rates staying at current levels, results in a 12-month pretax earnings benefit of $449 million. The increase in earnings is due to reinvestment of maturing assets at the higher long-term rates, with funding costs remaining unchanged.

Risk identification for large exposures

Individuals who manage risk positions, particularly those that are complex, are responsible for identifying potential losses that could arise from specific, unusual events, such as a potential tax change, and estimating the probabilities of losses arising from such events. This information is entered into the Firm's RIFLE database. Management of trading businesses control RIFLE entries, thereby permitting the Firm to monitor further earnings vulnerability not adequately covered by standard risk measures.

Risk monitoring and control

Limits

Market risk is controlled primarily through a series of limits. Limits reflect the Firm's risk appetite in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity, business trends and management experience.

Market risk management regularly reviews and updates risk limits. Senior management, including the Firm's Chief Executive Officer and Chief Risk Officer, is responsible for reviewing and approving risk limits on an ongoing basis.

The Firm maintains different levels of limits. Corporate-level limits include VaR and stress limits. Similarly, line-of-business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and instrument authorities. Businesses are responsible for adhering to established limits, against which exposures are monitored and reported. Limit breaches are reported in a timely manner to senior management, and the affected business segment is required to reduce trading positions or consult with senior management on the appropriate action.

Qualitative review

The Market Risk Management group also performs periodic reviews as necessary of both businesses and products with exposure to market risk to assess the ability of the businesses to control their market risk. Strategies, market conditions, product details and risk controls are reviewed and specific recommendations for improvements are made to management.

Model review

Some of the Firm's financial instruments cannot be valued based on quoted market prices but are instead valued using pricing models. Such models are used for management of risk positions, such as reporting against limits, as well as for valuation. The Model Risk Group, which is independent of the businesses and market risk management, reviews the models the Firm uses and assesses model appropriateness and consistency. The model reviews consider a number of factors about the model's suitability for valuation and risk management of a particular product, including whether it accurately reflects the characteristics of the transaction and its significant risks, the suitability and convergence properties of numerical algorithms, reliability of data sources, consistency of the treatment with models for similar products, and sensitivity to input parameters and assumptions that cannot be priced from the market.

Reviews are conducted of new or changed models, as well as previously accepted models, to assess whether there have been any changes in the product or market that may impact the model's validity and whether there are theoretical or competitive developments that may require reassessment of the model's adequacy. For a summary of valuations based on models, see Critical Accounting Estimates Used by the Firm on pages 135–139 of this Annual Report.

Risk reporting

Nonstatistical exposures, value-at-risk, loss advisories and limit excesses are reported daily to senior management. Market risk exposure trends, value-at-risk trends, profit-and-loss changes and portfolio concentrations are reported weekly. Stress-test results are reported at least every two weeks to the businesses and senior management.

PRIVATE EQUITY RISK MANAGEMENT

Risk management

The Firm makes principal investments in private equity. The illiquid nature and long-term holding period associated with these investments differentiates private equity risk from the risk of positions held in the trading portfolios. The Firm's approach to managing private equity risk is consistent with the Firm's general risk governance structure. Controls are in place establishing expected levels for total and annual investment in order to control the overall size of the portfolio. Industry and geographic concentration limits are in place and intended to ensure diversification of the portfolio. All investments are approved by an investment committee that includes executives who are not part of the investing businesses. An independent valuation function is responsible for reviewing the appropriateness of the carrying values of private equity investments in accordance with relevant accounting policies. At December 31, 2009 and 2008, the carrying value of the Private Equity portfolio was $7.3 billion and $6.9 billion, respectively, of which $762 million and $483 million, respectively, represented publicly-traded positions. For further information on the Private Equity portfolio, see page 83 of this Annual Report.

OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, fraudulent acts, business interruptions, inappropriate behavior of employees, or vendors that do not perform in accordance with their arrangements. These events could result in financial losses and other damage to the Firm, including reputational harm.

To monitor and control operational risk, the Firm maintains a system of comprehensive policies and a control framework designed to provide a sound and well-controlled operational environment. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject. Notwithstanding these control measures, the Firm incurs operational losses.

The Firm's approach to operational risk management is intended to mitigate such losses by supplementing traditional control-based approaches to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

One of the ways operational risk is mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations, as well as to serve other needs of the Firm. Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

The Firm's operational risk framework is supported by Phoenix, an internally designed operational risk software tool. Phoenix integrates the individual components of the operational risk management framework into a unified, web-based tool. Phoenix enhances the capture, reporting and analysis of operational risk data by enabling risk identification, measurement, monitoring, reporting and analysis to be done in an integrated manner, thereby enabling efficiencies in the Firm's monitoring and management of its operational risk.

For purposes of identification, monitoring, reporting and analysis, the Firm categorizes operational risk events as follows:

- Client service and selection
- Business practices
- Fraud, theft and malice
- Execution, delivery and process management
- Employee disputes
- Disasters and public safety
- Technology and infrastructure failures

Risk identification

Risk identification is the recognition of the operational risk events that management believes may give rise to operational losses. All businesses utilize the Firm's standard self-assessment process and supporting architecture as a dynamic risk management tool. The goal of the self-assessment process is for each business to identify the key operational risks specific to its environment and assess the degree to which it maintains appropriate controls. Action plans are developed for control issues identified, and businesses are held accountable for tracking and resolving these issues on a timely basis.

Risk measurement

Operational risk is measured for each business on the basis of historical loss experience using a statistically based loss-distribution approach. The current business environment, potential stress scenarios and measures of the control environment are then factored into the statistical measure in determining the Firmwide operational risk capital. This methodology is designed to comply with the advanced measurement rules under the new Basel II Framework.

Risk monitoring

The Firm has a process for monitoring operational risk-event data, permitting analysis of errors and losses as well as trends. Such analysis, performed both at a line-of-business level and by risk-event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns. The data reported enables the Firm to back-test against self-assessment results. The Firm is a founding member of the Operational Riskdata eXchange Association, a not-for-profit industry association formed for the purpose of collecting operational loss data, sharing data in an anonymous form and benchmarking results back to members. Such information supplements the Firm's ongoing operational risk measurement and analysis.

Risk reporting and analysis

Operational risk management reports provide timely and accurate information, including information about actual operational loss levels and self-assessment results, to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and support areas.

Audit alignment

Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. This includes reviewing the operational risk framework, the effectiveness and accuracy of the business self-assessment process and the loss data-collection and reporting activities.

REPUTATION AND FIDUCIARY RISK MANAGEMENT

A firm's success depends not only on its prudent management of the liquidity, credit, market and operational risks that are part of its business risks, but equally on the maintenance among many constituents – clients, investors, regulators, as well as the general public – of a reputation for business practices of the highest quality. Attention to reputation always has been a key aspect of the Firm's practices, and maintenance of the Firm's reputation is the responsibility of everyone at the Firm. JPMorgan Chase bolsters this individual responsibility in many ways, including through the Firm's Code of Conduct, training, maintaining adherence to policies and procedures, and oversight functions that approve transactions. These oversight functions include line-of-businesses risk committees, a Conflicts Office, which examines wholesale transactions with the potential to create conflicts of interest for the Firm; and a Reputation Risk Office and regional Reputation Risk Committees, which review certain transactions that have the potential to affect adversely the Firm's reputation. These regional committees, whose members are senior representatives of businesses and control functions in the region, focus among other things on complex derivatives and structured finance transactions with clients with the goal that these transactions not be used to mislead the client's investors or others.

Fiduciary risk management

The risk management committees within each line of business include in their mandate oversight of the legal, reputational and, where appropriate, fiduciary risks in their businesses that may produce significant losses or reputational damage. The Fiduciary Risk Management function works with the relevant line-of-business risk committees, with the goal of ensuring that businesses providing investment or risk management products or services that give rise to fiduciary duties to clients perform at the appropriate standard relative to their fiduciary relationship with a client. Of particular focus are the policies and practices that address a business' responsibilities to a client, including client suitability determination; disclosure obligations and communications; and performance expectations with respect to risk management products or services being provided. In this way, the relevant line-of-business risk committees, together with the Fiduciary Risk Management function, provide oversight of the Firm's efforts to monitor, measure and control the risks that may arise in the delivery of products or services to clients that give rise to such fiduciary duties, as well as those stemming from any of the Firm's fiduciary responsibilities to employees under the Firm's various employee benefit plans.

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the value of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained wholesale and consumer loan portfolios, as well as the Firm's portfolio of wholesale and consumer lending-related commitments. The allowance for loan losses is intended to adjust the value of the Firm's loan assets to reflect probable credit losses as of the balance sheet date. For a further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Note 14 on pages 204–206 of this Annual Report.

Wholesale loans and lending-related commitments

The methodology for calculating the allowance for loan losses and the allowance for lending-related commitments involves significant judgment. First and foremost, it involves the early identification of credits that are deteriorating. Second, it involves judgment in establishing the inputs used to estimate the allowances. Third, it involves management judgment to evaluate certain macroeconomic factors, underwriting standards, and other relevant internal and external factors affecting the credit quality of the current portfolio, and to refine loss factors to better reflect these conditions.

The Firm uses a risk-rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm to that loan.

The Firm applies its judgment to establish loss factors used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances. Many factors can affect estimates of loss, including volatility of loss given default, probability of default and rating migrations. Consideration is given as to whether the loss estimates should be calculated as an average over the entire credit cycle or at a particular point in the credit cycle, as well as to which external data should be used and when they should be used. Choosing data that are not reflective of the Firm's specific loan portfolio characteristics could also affect loss estimates. The application of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the loss factors derived, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both loss given default and probability of default are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

As noted above, the Firm's wholesale allowance is sensitive to the risk rating assigned to a loan. As of December 31, 2009, assuming a one-notch downgrade in the Firm's internal risk ratings for its entire wholesale portfolio, the allowance for loan losses for the wholesale portfolio would increase by approximately $1.8 billion. This sensitivity analysis is hypothetical. In the Firm's view, the likelihood of a one-notch downgrade for all wholesale loans within a short timeframe is remote. The purpose of this analysis is to provide an indication of the impact of risk ratings on the estimate of the allowance for loan losses for wholesale loans. It is not intended to imply management's expectation of future deterioration in risk ratings. Given the process the Firm follows in determining the risk ratings of its loans, management believes the risk ratings currently assigned to wholesale loans are appropriate.

Consumer loans and lending-related commitments

The allowance for credit losses for the consumer portfolio is sensitive to changes in the economic environment, delinquency status, FICO scores, the realizable value of collateral, borrower behavior and other risk factors, and it is intended to represent management's best estimate of incurred losses as of the balance sheet date. The credit performance of the consumer portfolio across the entire consumer credit product spectrum continues to be negatively affected by the economic environment, as the weak labor market and overall economic conditions have resulted in increased delinquencies, while continued weak housing prices have driven a significant increase in loss severity. Significant judgment is required to estimate the duration and severity of the current economic downturn, as well as its potential impact on housing prices and the labor market. While the allowance for credit losses is highly sensitive to both home prices and unemployment rates, in the current market it is difficult to estimate how potential changes in one or both of these factors might affect

the allowance for credit losses. For example, while both factors are important determinants of overall allowance levels, changes in one factor or the other may not occur at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across geographies or product types. Finally, it is difficult to predict the extent to which changes in both or either of these factors would ultimately affect the frequency of losses, the severity of losses or both; and overall loss rates are a function of both the frequency and severity of individual loan losses.

The allowance is calculated by applying statistical loss factors and other risk indicators to pools of loans with similar risk characteristics to arrive at an estimate of incurred losses in the portfolio. Management applies judgment to the statistical loss estimates for each loan portfolio category using delinquency trends and other risk characteristics to estimate charge-offs. Management uses additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate. The statistical calculation is adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but are not yet reflected in the factors used to derive the statistical calculation, and is accomplished in part by analyzing the historical loss experience for each major product segment. In the current economic environment, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment in determining this adjustment, taking into account the uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, and other relevant internal and external factors affecting the credit quality of the portfolio.

Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are carried at fair value on a recurring basis. Certain assets and liabilities are carried at fair value on a nonrecurring basis, including loans accounted for at the lower of cost or fair value that are only subject to fair value adjustments under certain circumstances.

Under U.S. GAAP there is a three-level valuation hierarchy for disclosure of fair value measurements. An instrument's categorization within the hierarchy is based on the lowest level of input that is significant to the fair value measurement. Therefore, for instruments classified in levels 1 and 2 of the hierarchy, where inputs are principally based on observable market data, there is less judgment applied in arriving at a fair value measurement. For instruments classified within level 3 of the hierarchy, judgments are more significant. The Firm reviews and updates the fair value hierarchy classifications on a quarterly basis. Changes from one quarter to the next related to the observability of inputs to a fair value measurement may result in a reclassification between hierarchy levels.

Assets carried at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy.

December 31,	2009		2008	
(in billions, except ratio data)	Total at fair value	Level 3 total	Total at fair value	Level 3 total
Trading debt and equity securities[a]	**$ 330.9**	**$ 35.2**	$ 347.4	$ 41.4
Derivative receivables – gross	**1,565.5**	**46.7**	2,741.7	53.0
Netting adjustment	**(1,485.3)**	**—**	(2,579.1)	—
Derivative receivables – net	**80.2**	**46.7**[d]	162.6	53.0[d]
Available-for-sale securities	**360.4**	**13.2**	205.9	12.4
Loans	**1.4**	**1.0**	7.7	2.7
MSRs	**15.5**	**15.5**	9.4	9.4
Private equity investments	**7.3**	**6.6**	6.9	6.4
Other[b]	**44.4**	**9.5**	49.6	8.1
Total assets measured at fair value on a recurring basis	**840.1**	**127.7**	789.5	133.4
Total assets measured at fair value on a nonrecurring basis[c]	**8.2**	**2.7**	11.0	4.3
Total assets measured at fair value	**$ 848.3**	**$ 130.4**[e]	$ 800.5	$ 137.7[e]
Less: level 3 assets for which the Firm does not bear economic exposure		**2.1**		21.2
Total level 3 assets for which the Firm bears economic exposure		**$ 128.3**		$ 116.5
Total Firm assets	**$ 2,032.0**		$ 2,175.1	
Level 3 assets as a percentage of total Firm assets		**6%**		6%
Level 3 assets for which the Firm bears economic exposure as a percentage of total Firm assets		**6**		5
Level 3 assets as a percentage of total Firm assets at fair value		**15**		17
Level 3 assets for which the Firm bears economic exposure as a percentage of total assets at fair value		**15**		15

(a) Includes physical commodities carried at the lower of cost or fair value.
(b) Includes certain securities purchased under resale agreements, securities borrowed, accrued interest receivable and other investments.
(c) Predominantly includes delinquent mortgage and home equity loans, where impairment is based on the fair value of the underlying collateral, and leveraged lending loans carried on the Consolidated Balance Sheets at the lower of cost or fair value.

(d) Derivative receivable and derivative payable balances are presented net on the Consolidated Balance Sheets where there is a legally enforceable master netting agreement in place with counterparties. For purposes of the table above, the Firm does not reduce derivative receivable and derivative payable balances for netting adjustments, either within or across the levels of the fair value hierarchy, as such an adjustment is not relevant to a presentation that is based on the transparency of inputs to the valuation of an asset or liability. Therefore, the derivative balances reported in the fair value hierarchy levels are gross of any netting adjustments. However, if the Firm were to net such balances, the reduction in the level 3 derivative receivable and derivative payable balances would be $16.0 billion at December 31, 2009.

(e) Included in the table above are, at December 31, 2009 and 2008, $80.0 billion and $95.1 billion, respectively, of level 3 assets, consisting of recurring and nonrecurring assets carried by IB. This includes $2.1 billion and $21.2 billion, respectively, of assets for which the Firm serves as an intermediary between two parties and does not bear economic exposure.

Valuation

The Firm has an established and well-documented process for determining fair value. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on internally developed models that primarily use as inputs market-based or independently sourced market parameters. The Firm's process is intended to ensure that all applicable inputs are appropriately calibrated to market data, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models also incorporate transaction details, such as maturity. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. These adjustments include amounts to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters that are applied consistently over time.

For instruments classified within level 3 of the hierarchy, judgments used to estimate fair value may be significant. In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs – including, but not limited to, yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models also incorporate transaction details, such as maturity. Finally, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters, where relevant. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. The Firm has numerous controls in place to ensure that its valuations are appropriate. An independent model review group reviews the Firm's valuation models and approves them for use for specific products. All valuation models of the Firm are subject to this review process. A price verification group, independent from the risk-taking functions, ensures observable market prices and market-based parameters are used for valuation whenever possible. For those products with material parameter risk for which observable market levels do not exist, an independent review of the assumptions made on pricing is performed. Additional review includes deconstruction of the model valuations for certain structured instruments into their components; benchmarking valuations, where possible, to similar products; validating valuation estimates through actual cash settlement; and detailed review and explanation of recorded gains and losses, which are analyzed daily and over time. Valuation adjustments, which are also determined by the independent price verification group, are based on established policies and applied consistently over time. Any changes to the valuation methodology are reviewed by management to confirm the changes are justified. As markets and products develop and the pricing for certain products becomes more transparent, the Firm continues to refine its valuation methodologies. During 2009, no changes were made to the Firm's valuation models that had, or are expected to have, a material impact on the Firm's Consolidated Balance Sheets or results of operations.

Imprecision in estimating unobservable market inputs can affect the amount of revenue or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date. For a detailed discussion of the determination of fair value for individual financial instruments, see Note 3 on pages 156–173 of this Annual Report. In addition, for a further discussion of the significant judgments and estimates involved in the determination of the Firm's mortgage-related exposures, see "Mortgage-related exposures carried at fair value" in Note 3 on pages 169–170 of this Annual Report.

Purchased credit-impaired loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain loans with evidence of deterioration of credit quality since the origination and for which it was probable, at acquisition, that the Firm would be unable to collect all contractually required payments receivable. These purchased credit-impaired loans are accounted for on a pool basis, and the pools are considered to be performing. At the time of the acquisition, these loans were recorded at fair value, including an estimate of losses that are expected to be incurred over the estimated remaining lives of the loan pools. Many of the assumptions and estimates underlying the estimation of the initial fair value and the ongoing updates to management's expectation of future cash flows are both significant and subjective, particularly considering the current economic environment. The level of future home price declines, the duration and severity of the current economic downturn, and the lack of market liquidity and transparency are factors that have influenced, and may continue to affect, these assumptions and estimates.

Determining which loans are included in the scope is highly subjective and requires significant judgment. In the Washington Mutual transaction, consumer loans with certain attributes (e.g., higher loan-to-value ratios, borrowers with lower FICO scores, delinquencies) were determined to be credit-impaired, provided that those attributes arose subsequent to the loans' origination dates. A wholesale loan was determined to be credit-impaired if it was risk-rated such that it would otherwise have required an asset-specific allowance for loan losses.

Loans determined to be purchased credit-impaired were initially recorded at fair value, which included estimated future credit losses.

If such loans had not been within the scope of the accounting guidance for purchased credit-impaired loans, they would have been recorded at the present values of amounts to be received determined at appropriate current interest rates, less an allowance for loan losses (i.e., the Washington Mutual allowance for loan losses would have been carried over at the acquisition date).

The Firm estimated the fair value of its purchased credit-impaired loans at the acquisition date by discounting the cash flows expected to be collected at a market-observable discount rate, when available, adjusted for factors that a market participant would consider in determining fair value. The initial estimate of cash flows to be collected was derived from assumptions such as default rates, loss severities and the amount and timing of prepayments.

The accounting guidance for these loans provides that the excess of the cash flows initially expected to be collected over the fair value of the loans at the acquisition date (i.e., the accretable yield) should be accreted into interest income at a level rate of return over the term of the loan, provided that the timing and amount of future cash flows is reasonably estimable. The initial estimate of cash flows expected to be collected must be updated each subsequent reporting period based on updated assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current market conditions. Probable decreases in expected loan principal cash flows after acquisition trigger the recognition of impairment, through the provision and allowance for loan losses, which is then measured based on the present value of the expected principal loss, plus any related foregone interest cash flows discounted at the pool's effective interest rate. Probable and significant increases in expected principal cash flows would first reverse any related allowance for loan losses; any remaining increases must be recognized prospectively as interest income over the remaining lives of the loans. The impacts of (i) prepayments, (ii) changes in variable interest rates and (iii) other changes in timing of expected cash flows are recognized prospectively as adjustments to interest income. As described above, the process of estimating cash flows expected to be collected has a significant impact on the initial recorded amount of the purchased credit-impaired loans and on subsequent recognition of impairment losses and/or interest income. Estimating these cash flows requires a significant level of management judgment. In addition, certain of the underlying assumptions are highly subjective. As of December 31, 2009, a 1% decrease in expected future principal cash payments for the entire portfolio of purchased credit-impaired loans would result in the recognition of an allowance for loan losses for these loans of approximately $800 million.

Finally, the accounting guidance states that investors may aggregate loans into pools that have common risk characteristics and thereby use a composite interest rate and estimate of cash flows expected to be collected for the pools. The Firm has aggregated substantially all of the purchased credit-impaired loans identified in the Washington Mutual transaction (i.e., the residential real estate loans) into pools with common risk characteristics. The pools then become the unit of accounting and are considered one loan for purposes of accounting for these loans at and subsequent to acquisition. Once a pool is assembled, the integrity of the pool must be maintained. Significant judgment is required in evaluating whether individual loans have common risk characteristics for purposes of establishing pools of loans.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 17 on pages 222–225 of this Annual Report.

Management applies significant judgment when estimating the fair value of its reporting units. Imprecision in estimating (a) the future earnings potential of the Firm's reporting units and (b) the relevant cost of equity or terminal value growth rates can affect the estimated fair value of the reporting units. The fair values of a significant majority of the Firm's reporting units exceeded their carrying values by substantial amounts (fair value as a percent of carrying value ranged from 140% to 500%) and thus, did not indicate a significant risk of goodwill impairment based on current projections and valuations.

However, the goodwill associated with the Firm's consumer lending businesses in RFS and CS have elevated risk due to their exposure to U.S. consumer credit risk. The valuation of these businesses and their assets are particularly dependent upon economic conditions (including unemployment rates and home prices) that affect consumer credit risk and behavior, as well as potential legislative and regulatory changes that could affect the Firm's consumer lending businesses. The assumptions used in the valuation of these businesses include portfolio outstanding balances, net interest margin, operating expense and forecasted credit losses and were made using management's best projections. The cost of equity used in the discounted cash flow model reflected the estimated risk and uncertainty for these businesses and was evaluated in comparison with relevant market peers. The fair value of the credit card lending business within CS exceeded its carrying value by approximately 8%. The fair value of a consumer lending business within RFS did not exceed its carrying value; however, implied fair value of the goodwill allocated to this consumer lending business within RFS significantly exceeded its carrying value.

The Firm did not recognize goodwill impairment as of December 31, 2009, based on management's best estimates. However, prolonged weakness or deterioration in economic market conditions, or additional regulatory or legislative changes, may result in declines in projected business performance beyond management's expectations. This could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline, which may result in a material impairment charge to earnings in a future period related to some portion of their associated goodwill.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication by the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations and tax planning strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. The Firm has also recognized deferred tax assets in connection with certain net operating losses. The Firm performs regular reviews to ascertain the realizability of its deferred tax assets. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize net operating losses before they expire. In connection with these reviews, if a deferred tax asset is determined to be unrealizable, a valuation allowance is established. As of December 31, 2009, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective tax rate in the period in which the reassessment occurs.

ACCOUNTING AND REPORTING DEVELOPMENTS

FASB Accounting Standards Codification

In July 2009, the FASB implemented the FASB Accounting Standards Codification (the "Codification") as the single source of authoritative U.S. generally accepted accounting principles. The Codification simplifies the classification of accounting standards into one online database under a common referencing system, organized into eight areas, ranging from industry-specific to general financial statement matters. Use of the Codification is effective for interim and annual periods ending after September 15, 2009. The Firm began to use the Codification on the effective date, and it had no impact on the Firm's Consolidated Financial Statements. However, throughout this Annual Report, all references to prior FASB, AICPA and EITF accounting pronouncements have been removed, and all non-SEC accounting guidance is referred to in terms of the applicable subject matter.

Business combinations/noncontrolling interests in consolidated financial statements

In December 2007, the FASB issued guidance which amended the accounting and reporting of business combinations, as well as noncontrolling (i.e., minority) interests. For JPMorgan Chase, the guidance became effective for business combinations that close on or after January 1, 2009. The guidance for noncontrolling interests, as amended, became effective for JPMorgan Chase for fiscal periods beginning January 1, 2009. In April 2009, the FASB issued additional guidance, which amends the accounting for contingencies acquired in a business combination.

The amended guidance for business combinations generally only impacts the accounting for transactions that closed after December 31, 2008, and generally only impacts certain aspects of business combination accounting, such as the accounting for transaction costs and certain merger-related restructuring reserves, as well as the accounting for partial acquisitions where control is obtained by JPMorgan Chase. One exception to the prospective application of the business-combination guidance relates to accounting for income taxes associated with transactions that closed prior to January 1, 2009. Once the purchase accounting measurement period closes for these acquisitions, any further adjustments to income taxes recorded as part of these business combinations will impact income tax expense. Previously, these adjustments were predominantly recorded as adjustments to goodwill.

The guidance for noncontrolling interests, as amended, requires that they be accounted for and presented as equity if material, rather than as a liability or mezzanine equity. The presentation and disclosure requirements for noncontrolling interests are to be applied retrospectively. The adoption of the reporting requirements for noncontrolling interests was not material to the Firm's Consolidated Balance Sheets or results of operations.

Accounting for transfers of financial assets and repurchase financing transactions

In February 2008, the FASB issued guidance which requires an initial transfer of a financial asset and a repurchase financing that was entered into contemporaneously with, or in contemplation of, the initial transfer to be evaluated together as a linked transaction, unless certain criteria are met. The Firm adopted the guidance on January 1, 2009, for transactions entered into after the date of adoption. The adoption of the guidance did not have a material impact on the Firm's Consolidated Balance Sheets or results of operations.

Disclosures about derivative instruments and hedging activities

In March 2008, the FASB issued guidance which amends the prior disclosure requirements for derivatives. The guidance, which is effective for fiscal years beginning after November 15, 2008, requires increased disclosures about derivative instruments and hedging activities and their effects on an entity's financial position, financial performance and cash flows. The Firm adopted the guidance on January 1, 2009, and it only affected JPMorgan Chase's disclosures of derivative instruments and related hedging activities, and not its Consolidated Balance Sheets or results of operations.

Determining whether instruments granted in share-based payment transactions are participating securities

In June 2008, the FASB issued guidance for participating securities, which clarifies that unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), are considered participating securities and therefore included in the two-class method calculation of EPS. Under this method, all earnings (distributed and undistributed) are allocated to common shares and participating securities based on their respective rights to receive dividends. The guidance is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those years. The Firm adopted the guidance retrospectively effective January 1, 2009, and EPS data for all prior periods have been revised. Adoption of the guidance did not affect the Firm's results of operations, but basic and diluted EPS were reduced as disclosed in Note 25 on page 232 of this Annual Report.

Determining whether an instrument (or embedded feature) is indexed to an entity's own stock

In June 2008, the FASB issued guidance which establishes a two-step process for evaluating whether equity-linked financial instruments and embedded features are indexed to a company's own stock for purposes of determining whether the derivative scope exception should be applied. The guidance is effective for fiscal years beginning after December 2008. The adoption of this guidance on January 1, 2009, did not have an impact on the Firm's Consolidated Balance Sheets or results of operations.

Employers' disclosures about postretirement benefit plan assets

In December 2008, the FASB issued guidance requiring more detailed disclosures about employers' plan assets, including investment strategies, classes of plan assets, concentrations of risk within plan assets and valuation techniques used to measure their fair value. This guidance is effective for fiscal years ending after December 15, 2009. The Firm adopted these additional disclosure requirements on December 31, 2009, and it only affected JPMorgan Chase's disclosures and not its Consolidated Balance Sheets or results of operations. Refer to Note 8 on pages 184–191 of this Annual Report for additional information.

The recognition and presentation of other-than-temporary impairment

In April 2009, the FASB issued guidance which amends the other-than-temporary impairment model for debt securities. Under the guidance, an other-than-temporary-impairment must be recognized if an investor has the intent to sell the debt security or if it is more likely than not that it will be required to sell the debt security before recovery of its amortized cost basis. In addition, the guidance changes the amount of impairment to be recognized in current-period earnings when an investor does not have the intent to sell, or if it is more likely than not that it will not be required to sell the debt security, as in these cases only the amount of the impairment associated with credit losses is recognized in income. The guidance also requires additional disclosures regarding the calculation of credit losses, as well as factors considered in reaching a conclusion that an investment is not other-than-temporarily impaired. The guidance is effective for interim and annual reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The Firm elected to early adopt the guidance as of January 1, 2009. For additional information regarding the impact on the Firm of the adoption of the guidance, see Note 11 on pages 195–199 of this Annual Report.

Determining fair value when the volume and level of activity for the asset or liability have significantly decreased, and identifying transactions that are not orderly

In April 2009, the FASB issued guidance for estimating fair value when the volume and level of activity for an asset or liability have significantly declined. The guidance also includes identifying circumstances that indicate a transaction is not orderly. The guidance is effective for interim and annual reporting periods ending after June 15, 2009, with early adoption permitted. The Firm elected to early adopt the guidance in the first quarter of 2009. The application of the guidance did not have an impact on the Firm's Consolidated Balance Sheets or results of operations.

Interim disclosures about fair value of financial instruments

In April 2009, the FASB issued guidance that requires disclosures about the fair value of certain financial instruments (including financial instruments not carried at fair value) to be presented in interim financial statements in addition to annual financial statements. The guidance is effective for interim reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The Firm adopted the additional disclosure requirements for second-quarter 2009 reporting.

Subsequent events

In May 2009, the FASB issued guidance that established general standards of accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued or are available to be issued. The guidance was effective for interim or annual financial periods ending after June 15, 2009. The Firm adopted the guidance in the second quarter of 2009. The application of the guidance did not have any impact on the Firm's Consolidated Balance Sheets or results of operations.

Accounting for transfers of financial assets and consolidation of variable interest entities

In June 2009, the FASB issued guidance which amends the accounting for the transfers of financial assets and the consolidation of VIEs. The guidance eliminates the concept of QSPEs and provides additional guidance with regard to accounting for transfers of financial assets. The guidance also changes the approach for determining the primary beneficiary of a VIE from a quantitative risk and rewards-based model to a qualitative model, based on control and economics. The guidance became effective for annual reporting periods beginning after November 15, 2009, including all interim periods within the first annual reporting period. The Firm adopted the new guidance for VIEs on January 1, 2010, which required the consolidation of the Firm's credit card securitization trusts, bank-administered asset-backed commercial paper conduits, and certain mortgage and other consumer securitization entities. At adoption, the Firm added approximately $88 billion of U.S. GAAP assets, and stockholders' equity decreased by approximately $4 billion.

In February 2010, the FASB finalized an amendment that defers the requirements of the new consolidation guidance for determining the primary beneficiary of a VIE for certain investment funds, including mutual funds, private equity funds and hedge funds. For the funds included in the deferral, the Firm will continue to apply other existing authoritative guidance to determine whether such funds should be consolidated; as such, these funds are not included in the above disclosure of the impact of adopting the new guidance for VIEs.

For additional information about the impact to the Firm of the adoption of the new guidance on January 1, 2010, see Note 16 on pages 214–222 of this Annual Report.

Measuring liabilities at fair value

In August 2009, the FASB issued guidance clarifying how to develop fair value measurements for liabilities, particularly where there may be a lack of observable market information. This guidance is effective for interim or annual periods beginning after August 26, 2009. The Firm adopted the guidance in the third quarter of 2009, and it did not have an impact on the Firm's Consolidated Balance Sheets or results of operations.

Measuring fair value of certain alternative investments
In September 2009, the FASB issued guidance which amends the guidance on fair value measurements and offers a practical expedient for measuring the fair value of investments in certain entities that calculate net asset value ("NAV") per share when the fair value is not readily determinable. This guidance is effective for the first interim or annual reporting period ending after December 15, 2009. The Firm adopted the guidance in the fourth quarter of 2009, and it did not have a material impact on the Firm's Consolidated Balance Sheets or results of operations.

Fair value measurements and disclosures
In January 2010, the FASB issued guidance that requires new disclosures, and clarifies existing disclosure requirements, about fair value measurements. The clarifications and the requirement to separately disclose transfers of instruments between level 1 and level 2 of the fair value hierarchy are effective for interim reporting periods beginning after December 15, 2009; however, the requirement to provide purchases, sales, issuances and settlements in the level 3 rollforward on a gross basis is effective for fiscal years beginning after December 15, 2010. Early adoption of the guidance is permitted.

NONEXCHANGE-TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based on internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2009.

For the year ended December 31, 2009 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2009	$ 7,432	$ 5,139
Effect of legally enforceable master netting agreements	48,091	48,726
Gross fair value of contracts outstanding at January 1, 2009	55,523	53,865
Contracts realized or otherwise settled	(31,444)	(30,248)
Fair value of new contracts	12,050	10,192
Changes in fair values attributable to changes in valuation techniques and assumptions	—	—
Other changes in fair value	(5,820)	(5,582)
Gross fair value of contracts outstanding at December 31, 2009	30,309	28,227
Effect of legally enforceable master netting agreements	(25,282)	(26,490)
Net fair value of contracts outstanding at December 31, 2009	$ 5,027	$ 1,737

The following table indicates the maturities of nonexchange-traded commodity derivative contracts at December 31, 2009.

December 31, 2009 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 14,130	$ 11,544
Maturity 1–3 years	12,352	9,962
Maturity 4–5 years	2,787	1,960
Maturity in excess of 5 years	1,040	4,761
Gross fair value of contracts outstanding at December 31, 2009	30,309	28,227
Effect of legally enforceable master netting agreements	(25,282)	(26,490)
Net fair value of contracts outstanding at December 31, 2009	$ 5,027	$ 1,737

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," "assume" or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the SEC. In addition, the Firm's senior management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- local, regional and international business, economic and political conditions and geopolitical events;
- changes in financial services regulation;
- changes in trade, monetary and fiscal policies and laws;
- securities and capital markets behavior, including changes in market liquidity and volatility;
- changes in investor sentiment or consumer spending or savings behavior;
- ability of the Firm to manage effectively its liquidity;
- credit ratings assigned to the Firm or its subsidiaries;
- the Firm's reputation;
- ability of the Firm to deal effectively with an economic slowdown or other economic or market difficulty;
- technology changes instituted by the Firm, its counterparties or competitors;
- mergers and acquisitions, including the Firm's ability to integrate acquisitions;
- ability of the Firm to develop new products and services;
- acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to increase market share;
- ability of the Firm to attract and retain employees;
- ability of the Firm to control expense;
- competitive pressures;
- changes in the credit quality of the Firm's customers and counterparties;
- adequacy of the Firm's risk management framework;
- changes in laws and regulatory requirements;
- adverse judicial proceedings;
- changes in applicable accounting policies;
- ability of the Firm to determine accurate values of certain assets and liabilities;
- occurrence of natural or man-made disasters or calamities or conflicts, including any effect of any such disasters, calamities or conflicts on the Firm's power generation facilities and the Firm's other commodity-related activities;
- the other risks and uncertainties detailed in Part 1, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2009.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2009. In making the assessment, management used the framework in "Internal Control – Integrated Framework" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2009, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2009.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2009, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Michael J. Cavanagh
Executive Vice President and Chief Financial Officer

February 24, 2010

Report of independent registered public accounting firm



PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Report of Independent Registered Public Accounting Firm To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, changes in stockholders' equity and comprehensive income and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2009 and 2008, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2009, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting." Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



February 24, 2010

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2009	2008	2007
Revenue			
Investment banking fees	**$ 7,087**	$ 5,526	$ 6,635
Principal transactions	**9,796**	(10,699)	9,015
Lending- and deposit-related fees	**7,045**	5,088	3,938
Asset management, administration and commissions	**12,540**	13,943	14,356
Securities gains[(a)]	**1,110**	1,560	164
Mortgage fees and related income	**3,678**	3,467	2,118
Credit card income	**7,110**	7,419	6,911
Other income	**916**	2,169	1,829
Noninterest revenue	**49,282**	28,473	44,966
Interest income	**66,350**	73,018	71,387
Interest expense	**15,198**	34,239	44,981
Net interest income	**51,152**	38,779	26,406
Total net revenue	**100,434**	67,252	71,372
Provision for credit losses	**32,015**	20,979	6,864
Noninterest expense			
Compensation expense	**26,928**	22,746	22,689
Occupancy expense	**3,666**	3,038	2,608
Technology, communications and equipment expense	**4,624**	4,315	3,779
Professional and outside services	**6,232**	6,053	5,140
Marketing	**1,777**	1,913	2,070
Other expense	**7,594**	3,740	3,814
Amortization of intangibles	**1,050**	1,263	1,394
Merger costs	**481**	432	209
Total noninterest expense	**52,352**	43,500	41,703
Income before income tax expense/(benefit) and extraordinary gain	**16,067**	2,773	22,805
Income tax expense/(benefit)	**4,415**	(926)	7,440
Income before extraordinary gain	**11,652**	3,699	15,365
Extraordinary gain	**76**	1,906	—
Net income	**$ 11,728**	$ 5,605	$ 15,365
Net income applicable to common stockholders	**$ 8,774**	$ 4,742	$ 14,927
Per common share data			
Basic earnings per share			
Income before extraordinary gain	**$ 2.25**	$ 0.81	$ 4.38
Net income	**2.27**	1.35	4.38
Diluted earnings per share			
Income before extraordinary gain	**2.24**	0.81	4.33
Net income	**2.26**	1.35	4.33
Weighted-average basic shares	**3,863**	3,501	3,404
Weighted-average diluted shares	**3,880**	3,522	3,445
Cash dividends declared per common share	**$ 0.20**	$ 1.52	$ 1.48

(a) Securities gains for the year ended December 31, 2009, included credit losses of $578 million, consisting of $946 million of total other-than-temporary impairment losses, net of $368 million of other-than-temporary impairment losses recorded in other comprehensive income.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2009	2008
Assets		
Cash and due from banks	**$ 26,206**	$ 26,895
Deposits with banks	**63,230**	138,139
Federal funds sold and securities purchased under resale agreements (included $20,536 and $20,843 at fair value at December 31, 2009 and 2008, respectively)	**195,404**	203,115
Securities borrowed (included $7,032 and $3,381 at fair value at December 31, 2009 and 2008, respectively)	**119,630**	124,000
Trading assets (included assets pledged of $38,315 and $75,063 at December 31, 2009 and 2008, respectively)	**411,128**	509,983
Securities (included $360,365 and $205,909 at fair value at December 31, 2009 and 2008, respectively, and assets pledged of $100,931 and $25,942 at December 31, 2009 and 2008, respectively)	**360,390**	205,943
Loans (included $1,364 and $7,696 at fair value at December 31, 2009 and 2008, respectively)	**633,458**	744,898
Allowance for loan losses	**(31,602)**	(23,164)
Loans, net of allowance for loan losses	**601,856**	721,734
Accrued interest and accounts receivable (included $5,012 and $3,099 at fair value at December 31, 2009 and 2008, respectively)	**67,427**	60,987
Premises and equipment	**11,118**	10,045
Goodwill	**48,357**	48,027
Mortgage servicing rights	**15,531**	9,403
Other intangible assets	**4,621**	5,581
Other assets (included $19,165 and $29,199 at fair value at December 31, 2009 and 2008, respectively)	**107,091**	111,200
Total assets	**$ 2,031,989**	$ 2,175,052
Liabilities		
Deposits (included $4,455 and $5,605 at fair value at December 31, 2009 and 2008, respectively)	**$ 938,367**	$ 1,009,277
Federal funds purchased and securities loaned or sold under repurchase agreements (included $3,396 and $2,993 at fair value at December 31, 2009 and 2008, respectively)	**261,413**	192,546
Commercial paper	**41,794**	37,845
Other borrowed funds (included $5,637 and $14,713 at fair value at December 31, 2009 and 2008, respectively)	**55,740**	132,400
Trading liabilities	**125,071**	166,878
Accounts payable and other liabilities (included the allowance for lending-related commitments of $939 and $659 at December 31, 2009 and 2008, respectively, and $357 and zero at fair value at December 31, 2009 and 2008, respectively)	**162,696**	187,978
Beneficial interests issued by consolidated variable interest entities (included $1,410 and $1,735 at fair value at December 31, 2009 and 2008, respectively)	**15,225**	10,561
Long-term debt (included $48,972 and $58,214 at fair value at December 31, 2009 and 2008, respectively)	**266,318**	270,683
Total liabilities	**1,866,624**	2,008,168
Commitments and contingencies (see Note 30 on page 238 of this Annual Report)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares at December 31, 2009 and 2008; issued 2,538,107 and 5,038,107 shares at December 31, 2009 and 2008, respectively)	**8,152**	31,939
Common stock ($1 par value; authorized 9,000,000,000 shares at December 31, 2009 and 2008; issued 4,104,933,895 shares and 3,941,633,895 shares at December 31, 2009 and 2008, respectively)	**4,105**	3,942
Capital surplus	**97,982**	92,143
Retained earnings	**62,481**	54,013
Accumulated other comprehensive income/(loss)	**(91)**	(5,687)
Shares held in RSU Trust, at cost (1,526,944 shares and 4,794,723 shares at December 31, 2009 and 2008, respectively)	**(68)**	(217)
Treasury stock, at cost (162,974,783 shares and 208,833,260 shares at December 31, 2009 and 2008, respectively)	**(7,196)**	(9,249)
Total stockholders' equity	**165,365**	166,884
Total liabilities and stockholders' equity	**$ 2,031,989**	$ 2,175,052

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity and comprehensive income

Year ended December 31, (in millions, except per share data)	2009	2008	2007
Preferred stock			
Balance at January 1	**$ 31,939**	$ —	$ —
Issuance of preferred stock	**—**	31,550	—
Issuance of preferred stock – conversion of the Bear Stearns preferred stock	**—**	352	—
Accretion of preferred stock discount on issuance to the U.S. Treasury	**1,213**	37	—
Redemption of preferred stock issued to the U.S. Treasury	**(25,000)**	—	—
Balance at December 31	**8,152**	31,939	—
Common stock			
Balance at January 1	**3,942**	3,658	3,658
Issuance of common stock	**163**	284	—
Balance at December 31	**4,105**	3,942	3,658
Capital surplus			
Balance at January 1	**92,143**	78,597	77,807
Issuance of common stock	**5,593**	11,201	—
Warrant issued to U.S. Treasury in connection with issuance of preferred stock	**—**	1,250	—
Preferred stock issue cost	**—**	(54)	—
Shares issued and commitments to issue common stock for employee stock-based compensation awards and related tax effects	**474**	859	790
Net change from the Bear Stearns merger:			
Reissuance of treasury stock and the Share Exchange agreement	**—**	48	—
Employee stock awards	**—**	242	—
Other	**(228)**	—	—
Balance at December 31	**97,982**	92,143	78,597
Retained earnings			
Balance at January 1	**54,013**	54,715	43,600
Cumulative effect of change in accounting principles	**—**	—	915
Balance at January 1, adjusted	**54,013**	54,715	44,515
Net income	**11,728**	5,605	15,365
Dividends declared:			
Preferred stock	**(1,328)**	(674)	—
Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	**(1,112)**	—	—
Common stock ($0.20, $1.52 and $1.48 per share for 2009, 2008 and 2007, respectively)	**(820)**	(5,633)	(5,165)
Balance at December 31	**62,481**	54,013	54,715
Accumulated other comprehensive income/(loss)			
Balance at January 1	**(5,687)**	(917)	(1,557)
Cumulative effect of change in accounting principles	**—**	—	(1)
Balance at January 1, adjusted	**(5,687)**	(917)	(1,558)
Other comprehensive income/(loss)	**5,596**	(4,770)	641
Balance at December 31	**(91)**	(5,687)	(917)
Shares held in RSU Trust			
Balance at January 1	**(217)**	—	—
Resulting from the Bear Stearns merger	**—**	(269)	—
Reissuance from RSU Trust	**149**	52	—
Balance at December 31	**(68)**	(217)	—
Treasury stock, at cost			
Balance at January 1	**(9,249)**	(12,832)	(7,718)
Purchase of treasury stock	**—**	—	(8,178)
Reissuance from treasury stock	**2,079**	2,454	3,199
Share repurchases related to employee stock-based compensation awards	**(26)**	(21)	(135)
Net change from the Bear Stearns merger as a result of the reissuance of treasury stock and the Share Exchange agreement	**—**	1,150	—
Balance at December 31	**(7,196)**	(9,249)	(12,832)
Total stockholders' equity	**$ 165,365**	$ 166,884	$ 123,221
Comprehensive income			
Net income	**$ 11,728**	$ 5,605	$ 15,365
Other comprehensive income/(loss)	**5,596**	(4,770)	641
Comprehensive income	**$ 17,324**	$ 835	$ 16,006

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2009	2008	2007
Operating activities			
Net income	**$ 11,728**	$ 5,605	$ 15,365
Adjustments to reconcile net income to net cash provided by (used in) operating activities:			
Provision for credit losses	**32,015**	20,979	6,864
Depreciation and amortization	**2,783**	3,143	2,427
Amortization of intangibles	**1,050**	1,263	1,394
Deferred tax (benefit) expense	**(3,622)**	(2,637)	1,307
Investment securities gains	**(1,110)**	(1,560)	(164)
Proceeds on sale of investment	**—**	(1,540)	—
Stock-based compensation	**3,355**	2,637	2,025
Originations and purchases of loans held-for-sale	**(22,417)**	(34,902)	(116,471)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**33,902**	38,036	107,350
Net change in:			
Trading assets	**133,488**	(12,787)	(121,240)
Securities borrowed	**4,452**	15,408	(10,496)
Accrued interest and accounts receivable	**(6,312)**	10,221	(1,932)
Other assets	**32,182**	(33,629)	(21,628)
Trading liabilities	**(79,314)**	24,061	12,681
Accounts payable and other liabilities	**(26,450)**	1,012	4,284
Other operating adjustments	**6,167**	(12,212)	7,674
Net cash provided by (used in) operating activities	**121,897**	23,098	(110,560)
Investing activities			
Net change in:			
Deposits with banks	**74,829**	(118,929)	2,081
Federal funds sold and securities purchased under resale agreements	**7,082**	(44,597)	(29,814)
Held-to-maturity securities:			
Proceeds	**9**	10	14
Available-for-sale securities:			
Proceeds from maturities	**87,712**	44,414	31,143
Proceeds from sales	**114,041**	96,806	98,450
Purchases	**(346,372)**	(248,599)	(122,507)
Proceeds from sales and securitizations of loans held-for-investment	**30,434**	27,531	34,925
Other changes in loans, net	**51,251**	(59,123)	(83,437)
Net cash received (used) in business acquisitions or dispositions	**(97)**	2,128	(70)
Proceeds from assets sale to the FRBNY	**—**	28,850	—
Net maturities (purchases) of asset-backed commercial paper guaranteed by the FRBB	**11,228**	(11,228)	—
All other investing activities, net	**(762)**	(934)	(4,973)
Net cash provided by (used in) investing activities	**29,355**	(283,671)	(74,188)
Financing activities			
Net change in:			
Deposits	**(107,700)**	177,331	113,512
Federal funds purchased and securities loaned or sold under repurchase agreements	**67,785**	15,250	(7,833)
Commercial paper and other borrowed funds	**(76,727)**	9,186	41,412
Beneficial interests issued by consolidated variable interest entities	**(7,275)**	(2,675)	1,070
Proceeds from issuance of long-term debt and trust preferred capital debt securities	**51,324**	72,407	95,141
Repayments of long-term debt and trust preferred capital debt securities	**(55,713)**	(62,691)	(49,410)
Proceeds from issuance of common stock	**5,756**	11,500	—
Excess tax benefits related to stock-based compensation	**17**	148	365
Proceeds from issuance of preferred stock and Warrant to the U.S. Treasury	**—**	25,000	—
Proceeds from issuance of preferred stock	**—**	7,746	—
Redemption of preferred stock issued to the U.S. Treasury	**(25,000)**	—	—
Repurchases of treasury stock	**—**	—	(8,178)
Dividends paid	**(3,422)**	(5,911)	(5,051)
All other financing activities, net	**(1,224)**	540	3,028
Net cash (used in) provided by financing activities	**(152,179)**	247,831	184,056
Effect of exchange rate changes on cash and due from banks	**238**	(507)	424
Net decrease in cash and due from banks	**(689)**	(13,249)	(268)
Cash and due from banks at the beginning of the year	**26,895**	40,144	40,412
Cash and due from banks at the end of the year	**$ 26,206**	$ 26,895	$ 40,144
Cash interest paid	**$ 16,875**	$ 37,267	$ 43,472
Cash income taxes paid	**5,434**	2,280	7,472

Note: In 2008, the fair values of noncash assets acquired and liabilities assumed in: (1) the merger with Bear Stearns were $288.2 billion and $287.7 billion, respectively (approximately 26 million shares of common stock valued at approximately $1.2 billion were issued in connection with the Bear Stearns merger); and (2) the Washington Mutual transaction were $260.3 billion and $260.1 billion, respectively.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and businesses, financial transaction processing and asset management. For a discussion of the Firm's business segment information, see Note 34 on pages 245–247 of this Annual Report.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the United States of America ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by bank regulatory authorities.

Certain amounts in prior periods have been reclassified to conform to the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

The usual condition for a controlling financial interest is ownership of a majority of the voting interests of the entity. However, a controlling financial interest also may be deemed to exist with respect to entities, such as special purpose entities ("SPEs"), through arrangements that do not involve controlling voting interests.

SPEs are an important part of the financial markets, providing market liquidity by facilitating investors' access to specific portfolios of assets and risks. For example, they are critical to the functioning of the mortgage- and asset-backed securities and commercial paper markets. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

There are two different accounting frameworks applicable to SPEs: the qualifying SPE ("QSPE") framework and the variable interest entity ("VIE") framework. The applicable framework depends on the nature of the entity and the Firm's relation to that entity. The QSPE framework is applicable when an entity transfers (sells) financial assets to an SPE meeting certain defined criteria. These criteria are designed to ensure that the activities of the entity are essentially predetermined at the inception of the vehicle and that the transferor of the financial assets cannot exercise control over the entity and the assets therein. Entities meeting these criteria are not consolidated by the transferor or other counterparties as long as they do not have the unilateral ability to liquidate or to cause the entity to no longer meet the QSPE criteria. The Firm primarily follows the QSPE model for securitizations of its residential and commercial mortgages, and credit card, automobile and student loans. For further details, see Note 15 on pages 206–213 of this Annual Report.

When an SPE does not meet the QSPE criteria, consolidation is assessed pursuant to the VIE framework. A VIE is defined as an entity that: (1) lacks enough equity investment at risk to permit the entity to finance its activities without additional subordinated financial support from other parties; (2) has equity owners that lack the right to make significant decisions affecting the entity's operations; and/or (3) has equity owners that do not have an obligation to absorb the entity's losses or the right to receive the entity's returns.

U.S. GAAP requires a variable interest holder (i.e., a counterparty to a VIE) to consolidate the VIE if that party will absorb a majority of the expected losses of the VIE, receive the majority of the expected residual returns of the VIE, or both. This party is considered the primary beneficiary. In making this determination, the Firm thoroughly evaluates the VIE's design, capital structure and relationships among the variable interest holders. When the primary beneficiary cannot be identified through a qualitative analysis, the Firm performs a quantitative analysis, which computes and allocates expected losses or residual returns to variable interest holders. The allocation of expected cash flows in this analysis is based on the relative rights and preferences of each variable interest holder in the VIE's capital structure. The Firm reconsiders whether it is the primary beneficiary of a VIE when certain events occur. For further details, see Note 16 on pages 214–222 of this Annual Report.

All retained interests and significant transactions between the Firm, QSPEs and nonconsolidated VIEs are reflected on JPMorgan Chase's Consolidated Balance Sheets and in the Notes to consolidated financial statements.

Investments in companies that are considered to be voting-interest entities in which the Firm has significant influence over operating and financing decisions are either accounted for in accordance with the equity method of accounting or at fair value if elected under fair value option. These investments are generally included in other assets, with income or loss included in other income.

Generally, Firm-sponsored asset management funds are considered voting entities as the funds do not meet the conditions to be VIEs. In instances where the Firm is the general partner or managing member of limited partnerships or limited liability companies, the non-affiliated partners or members have the substantive ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple unaffiliated majority vote, or have substantive participating rights. Accordingly, the Firm does not consolidate these funds. In limited cases where the non-affiliated partners or members do not have substantive kick-outs or participating right, the Firm consolidates the funds.

Private equity investments, which are recorded in other assets on the Consolidated Balance Sheets, include investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines. Accordingly, these investments, irrespective of the percentage of equity ownership interest held, are carried on the Consolidated Balance Sheets at fair value.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included in the Consolidated Balance Sheets.

Use of estimates in the preparation of consolidated financial statements

The preparation of Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in other comprehensive income/(loss) within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated Statements of Income.

Statements of cash flows

For JPMorgan Chase's Consolidated Statements of Cash Flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Fair value measurement	Note 3	Page 156
Fair value option	Note 4	Page 173
Derivative instruments	Note 5	Page 175
Noninterest revenue	Note 6	Page 183
Pension and other postretirement employee benefit plans	Note 8	Page 184
Employee stock-based incentives	Note 9	Page 192
Noninterest expense	Note 10	Page 194
Securities	Note 11	Page 195
Securities financing activities	Note 12	Page 200
Loans	Note 13	Page 200
Allowance for credit losses	Note 14	Page 204
Loan securitizations	Note 15	Page 206
Variable interest entities	Note 16	Page 214
Goodwill and other intangible assets	Note 17	Page 222
Premises and equipment	Note 18	Page 226
Other borrowed funds	Note 20	Page 227
Accounts payable and other liabilities	Note 21	Page 227
Income taxes	Note 27	Page 234
Commitments and contingencies	Note 30	Page 238
Off–balance sheet lending-related financial instruments and guarantees	Note 31	Page 238

Note 2 – Business changes and developments

Decrease in Common Stock Dividend

On February 23, 2009, the Board of Directors reduced the Firm's quarterly common stock dividend from $0.38 to $0.05 per share, effective for the dividend payable April 30, 2009, to shareholders of record on April 6, 2009.

Acquisition of the banking operations of Washington Mutual Bank

On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank ("Washington Mutual") from the Federal Deposit Insurance Corporation ("FDIC") for $1.9 billion. The acquisition expanded JPMorgan Chase's consumer branch network into several states, including California, Florida Washington, Georgia, Idaho, Nevada and Oregon and created the third largest branch network in the U.S. The acquisition also extends the reach of the Firm's business banking, commercial banking, credit card, consumer lending and wealth management businesses. The acquisition was accounted for under the purchase method of accounting, which requires that the assets and liabilities of Washington Mutual be initially reported at fair value.

In 2008, the $1.9 billion purchase price was preliminarily allocated to the Washington Mutual assets acquired and liabilities assumed, which resulted in negative goodwill. In accordance with U.S. GAAP for business combinations, that was in effect at the time of this acquisition, noncurrent nonfinancial assets that were not held-for-sale, such as the premises and equipment and other intangibles, acquired in the Washington Mutual transaction were written down against the negative goodwill. The negative goodwill that remained after writing down the nonfinancial assets was recognized as an extraordinary gain of $1.9 billion at December 31, 2008. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion.

The final summary computation of the purchase price and the allocation of the final total purchase price of $1.9 billion to the net assets acquired of Washington Mutual – based on their respective fair values as of September 25, 2008, and the resulting final negative goodwill of $2.0 billion are presented below.

(in millions)		
Purchase price		
Purchase price		$ 1,938
Direct acquisition costs		3
Total purchase price		1,941
Net assets acquired		
Washington Mutual's net assets before fair value adjustments	$ 39,186	
Washington Mutual's goodwill and other intangible assets	(7,566)	
Subtotal	31,620	
Adjustments to reflect assets acquired at fair value:		
Securities	(16)	
Trading assets	(591)	
Loans	(30,998)	
Allowance for loan losses	8,216	
Premises and equipment	680	
Accrued interest and accounts receivable	(243)	
Other assets	4,010	
Adjustments to reflect liabilities assumed at fair value:		
Deposits	(686)	
Other borrowed funds	68	
Accounts payable, accrued expense and other liabilities	(1,124)	
Long-term debt	1,063	
Fair value of net assets acquired		11,999
Negative goodwill before allocation to nonfinancial assets		(10,058)
Negative goodwill allocated to nonfinancial assets[a]		8,076
Negative goodwill resulting from the acquisition[b]		$ (1,982)

(a) The acquisition was accounted for as a purchase business combination, which requires the assets (including identifiable intangible assets) and liabilities (including executory contracts and other commitments) of an acquired business to be recorded at their respective fair values as of the effective date of the acquisition and consolidated with those of JPMorgan Chase. The fair value of the net assets of Washington Mutual's banking operations exceeded the $1.9 billion purchase price, resulting in negative goodwill. Noncurrent, nonfinancial assets not held-for-sale, such as premises and equipment and other intangibles, were written down against the negative goodwill. The negative goodwill that remained after writing down transaction-related core deposit intangibles of approximately $4.9 billion and premises and equipment of approximately $3.2 billion was recognized as an extraordinary gain of $2.0 billion.

(b) The extraordinary gain was recorded net of tax expense in Corporate/Private Equity.

Condensed statement of net assets acquired

The following condensed statement of net assets acquired reflects the final value assigned to the Washington Mutual net assets as of September 25, 2008.

(in millions)	September 25, 2008
Assets	
Cash and due from banks	**$ 3,680**
Deposits with banks	**3,517**
Federal funds sold and securities purchased under resale agreements	**1,700**
Trading assets	**5,691**
Securities	**17,224**
Loans (net of allowance for loan losses)	**206,456**
Accrued interest and accounts receivable	**3,253**
Mortgage servicing rights	**5,874**
All other assets	**16,596**
Total assets	**$ 263,991**
Liabilities	
Deposits	**$ 159,872**
Federal funds purchased and securities loaned or sold under repurchase agreements	**4,549**
Other borrowed funds	**81,636**
Trading liabilities	**585**
Accounts payable, accrued expense and other liabilities	**6,708**
Long-term debt	**6,718**
Total liabilities	**260,068**
Washington Mutual net assets acquired	**$ 3,923**

Merger with The Bear Stearns Companies Inc.

Effective May 30, 2008, BSC Merger Corporation, a wholly owned subsidiary of JPMorgan Chase, merged with The Bear Stearns Companies Inc. ("Bear Stearns") pursuant to the Agreement and Plan of Merger, dated as of March 16, 2008, as amended March 24, 2008, and Bear Stearns became a wholly owned subsidiary of JPMorgan Chase. The merger provided the Firm with a leading global prime brokerage platform; strengthened the Firm's equities and asset management businesses; enhanced capabilities in mortgage origination, securitization and servicing; and expanded the platform of the Firm's energy business. The merger was accounted for under the purchase method of accounting, which requires that the assets and liabilities of Bear Stearns be fair valued. The final total purchase price to complete the merger was $1.5 billion.

The merger with Bear Stearns was accomplished through a series of transactions that were reflected as step acquisitions. On April 8, 2008, pursuant to the share exchange agreement, JPMorgan Chase acquired 95 million newly issued shares of Bear Stearns common stock (or 39.5% of Bear Stearns common stock after giving effect to the issuance) for 21 million shares of JPMorgan Chase common stock. Further, between March 24, 2008, and May 12, 2008, JPMorgan Chase acquired approximately 24 million shares of Bear Stearns common stock in the open market at an average purchase price of $12.37 per share. The share exchange and cash purchase transactions resulted in JPMorgan Chase owning approximately 49.4% of Bear Stearns common stock immediately prior to consummation of the merger. Finally, on May 30, 2008, JPMorgan Chase completed the merger. As a result of the merger, each outstanding share of Bear Stearns common stock (other than shares then held by JPMorgan Chase) was converted into the right to receive 0.21753 shares of common stock of JPMorgan Chase. Also, on May 30, 2008, the shares of common stock that JPMorgan Chase and Bear Stearns acquired from each other in the share exchange transaction were cancelled. From April 8, 2008, through May 30, 2008, JPMorgan Chase accounted for the investment in Bear Stearns under the equity method of accounting. During this period, JPMorgan Chase recorded reductions to its investment in Bear Stearns representing its share of Bear Stearns net losses, which was recorded in other income and accumulated other comprehensive income.

In conjunction with the Bear Stearns merger, in June 2008, the Federal Reserve Bank of New York (the "FRBNY") took control, through a limited liability company ("LLC") formed for this purpose, of a portfolio of $30 billion in assets acquired from Bear Stearns, based on the value of the portfolio as of March 14, 2008. The assets of the LLC were funded by a $28.85 billion term loan from the FRBNY, and a $1.15 billion subordinated loan from JPMorgan Chase. The JPMorgan Chase note is subordinated to the FRBNY loan and will bear the first $1.15 billion of any losses of the portfolio. Any remaining assets in the portfolio after repayment of the FRBNY loan, the JPMorgan Chase note and the expense of the LLC will be for the account of the FRBNY.

As a result of step acquisition accounting, the final total purchase price of $1.5 billion was allocated to the Bear Stearns assets acquired and liabilities assumed using their fair values as of April 8, 2008, and May 30, 2008, respectively. The final summary computation of the purchase price and the allocation of the final total purchase price of $1.5 billion to the net assets acquired of Bear Stearns are presented below.

(in millions, except for shares (in thousands), per share amounts and where otherwise noted)		
Purchase price		
Shares exchanged in the Share Exchange transaction (April 8, 2008)	95,000	
Other Bear Stearns shares outstanding	145,759	
Total Bear Stearns stock outstanding	240,759	
Cancellation of shares issued in the Share Exchange transaction	(95,000)	
Cancellation of shares acquired by JPMorgan Chase for cash in the open market	(24,061)	
Bear Stearns common stock exchanged as of May 30, 2008	121,698	
Exchange ratio	0.21753	
JPMorgan Chase common stock issued	26,473	
Average purchase price per JPMorgan Chase common share[a]	$ 45.26	
Total fair value of JPMorgan Chase common stock issued		$ 1,198
Bear Stearns common stock acquired for cash in the open market (24 million shares at an average share price of $12.37 per share)		298
Fair value of employee stock awards (largely to be settled by shares held in the RSU Trust[b])		242
Direct acquisition costs		27
Less: Fair value of Bear Stearns common stock held in the RSU Trust and included in the exchange of common stock		(269)[b]
Total purchase price		1,496
Net assets acquired		
Bear Stearns common stockholders' equity	$ 6,052	
Adjustments to reflect assets acquired at fair value:		
Trading assets	(3,877)	
Premises and equipment	509	
Other assets	(288)	
Adjustments to reflect liabilities assumed at fair value:		
Long-term debt	504	
Other liabilities	(2,289)	
Fair value of net assets acquired excluding goodwill		611
Goodwill resulting from the merger[c]		$ 885

(a) The value of JPMorgan Chase common stock was determined by averaging the closing prices of JPMorgan Chase's common stock for the four trading days during the period March 19 through 25, 2008.

(b) Represents shares of Bear Stearns common stock held in an irrevocable grantor trust (the "RSU Trust"), to be used to settle stock awards granted to selected employees and certain key executives under certain heritage Bear Stearns employee stock plans. Shares in the RSU Trust were exchanged for 6 million shares of JPMorgan Chase common stock at the merger exchange ratio of 0.21753. For further discussion of the RSU Trust, see Note 9 on pages 192–194 of this Annual Report.

(c) The goodwill was recorded in Investment Bank ("IB") and is not tax-deductible.

Condensed statement of net assets acquired

The following condensed statement of net assets acquired reflects the final values assigned to the Bear Stearns net assets as of May 30, 2008.

(in millions)	May 30, 2008
Assets	
Cash and due from banks	**$ 534**
Federal funds sold and securities purchased under resale agreements	**21,204**
Securities borrowed	**55,195**
Trading assets	**136,489**
Loans	**4,407**
Accrued interest and accounts receivable	**34,677**
Goodwill	**885**
All other assets	**35,377**
Total assets	**$ 288,768**
Liabilities	
Federal funds purchased and securities loaned or sold under repurchase agreements	**$ 54,643**
Other borrowings	**16,166**
Trading liabilities	**24,267**
Beneficial interests issued by consolidated VIEs	**47,042**
Long-term debt	**67,015**
Accounts payable and other liabilities	**78,569**
Total liabilities	**287,702**
Bear Stearns net assets[a]	**$ 1,066**

(a) Reflects the fair value assigned to 49.4% of the Bear Stearns net assets acquired on April 8, 2008 (net of related amortization), and the fair value assigned to the remaining 50.6% of the Bear Stearns net assets acquired on May 30, 2008. The difference between the net assets acquired, as presented above, and the fair value of the net assets acquired (including goodwill), presented in the previous table, represents JPMorgan Chase's net losses recorded under the equity method of accounting.

Unaudited pro forma condensed combined financial information reflecting the Bear Stearns merger and Washington Mutual transaction

The following unaudited pro forma condensed combined financial information presents the 2008 and 2007 results of operations of the Firm as they may have appeared, if the Bear Stearns merger and the Washington Mutual transaction had been completed on January 1, 2008, and January 1, 2007.

Year ended December 31, (in millions, except per share data)	2008	2007
Total net revenue	$ 68,149	$ 92,052
Income/(loss) before extraordinary gain	(14,090)	17,733
Net income/(loss)	(12,184)	17,733
Net income per common share data:		
Basic earnings per share[a]		
Income/(loss) before extraordinary gain	$ (4.26)	$ 5.02
Net income/(loss)	(3.72)	5.02
Diluted earnings per share[a][b]		
Income/(loss) before extraordinary gain	(4.26)	4.96
Net income/(loss)	(3.72)	4.96
Average common shares issued and outstanding		
Basic	3,510.5	3,429.6
Diluted	3,510.5	3,471.3

(a) Effective January 1, 2009, the Firm implemented FASB guidance for participating securities. Accordingly, prior-period amounts have been revised. For further discussion of the guidance, see Note 25 on page 232 of this Annual Report.

(b) Common equivalent shares have been excluded from the pro forma computation of diluted loss per share for the year ended December 31, 2008, as the effect would be antidilutive.

The unaudited pro forma combined financial information is presented for illustrative purposes only and does not indicate the financial results of the combined company had the companies actually been combined as of January 1, 2008, and as of January 1, 2007, nor is it indicative of the results of operations in future periods. Included in the unaudited pro forma combined financial information for the years ended December 31, 2008 and 2007, were pro forma adjustments to reflect the results of operations of Bear Stearns and Washington Mutual's banking operations, considering the purchase accounting, valuation and accounting conformity adjustments related to each transaction. For the Washington Mutual transaction, the amortization of purchase accounting adjustments to report interest-earning assets acquired and interest-bearing liabilities assumed at current interest rates is reflected for the years ended December 31, 2008 and 2007. Valuation adjustments and the adjustment to conform allowance methodologies in the Washington Mutual transaction, and valuation and accounting conformity adjustments related to the Bear Stearns merger are reflected in the results for the years ended December 31, 2008 and 2007.

Internal reorganization related to the Bear Stearns merger

On June 30, 2008, JPMorgan Chase fully and unconditionally guaranteed each series of outstanding preferred stock of Bear Stearns, as well as all of Bear Stearns' outstanding U.S. Securities and Exchange Commission ("SEC") registered U.S. debt securities and obligations relating to trust preferred capital debt securities. Subsequently, on July 15, 2008, JPMorgan Chase completed an internal merger transaction, which resulted in each series of outstanding preferred stock of Bear Stearns being automatically exchanged into newly-issued shares of JPMorgan Chase preferred stock having substantially identical terms. Depositary shares, which formerly had represented a one-fourth interest in a share of Bear Stearns preferred stock, continue to trade on the New York Stock Exchange but following completion of this internal merger transaction, represent a one-fourth interest in a share of JPMorgan Chase preferred stock. In addition, pursuant to internal transactions in July 2008 and the first quarter 2009, JPMorgan Chase assumed or guaranteed the remaining outstanding securities of Bear Stearns and its subsidiaries, in each case in accordance with the indentures and other agreements governing those securities.

Other business events

Purchase of remaining interest in J.P. Morgan Cazenove

On January 4, 2010, JPMorgan Chase purchased the remaining interest in J.P. Morgan Cazenove, an investment banking business partnership formed in 2005, which will result in an adjustment to the Firm's capital surplus.

Termination of Chase Paymentech Solutions joint venture

The dissolution of Chase Paymentech Solutions joint venture, a global payments and merchant acquiring joint venture between JPMorgan Chase and First Data Corporation, was completed on November 1, 2008. JPMorgan Chase retained approximately 51% of the business, which it operates under the name Chase Paymentech Solutions. The dissolution of the Chase Paymentech Solutions joint venture was accounted for as a step acquisition in accordance with U.S. GAAP for business combinations, and the Firm recognized an after-tax gain of $627 million in the fourth quarter of 2008 as a result of the dissolution. The gain represents the amount by which the fair value of the net assets acquired (predominantly intangible assets and goodwill) exceeded JPMorgan Chase's carrying value in the net assets transferred to First

Data Corporation. Upon dissolution, the Firm consolidated the retained Chase Paymentech Solutions business.

Proceeds from Visa Inc. shares

On March 19, 2008, Visa Inc. ("Visa") completed its initial public offering ("IPO"). Prior to the IPO, JPMorgan Chase held approximately a 13% equity interest in Visa. On March 28, 2008, Visa used a portion of the proceeds from the offering to redeem a portion of the Firm's equity interest, which resulted in the recognition of a pretax gain of $1.5 billion (recorded in other income). In conjunction with the IPO, Visa placed $3.0 billion in escrow to cover liabilities related to certain litigation matters. The escrow was increased by $1.1 billion in 2008 and by $700 million in 2009. JPMorgan Chase's interest in the escrow was recorded as a reduction of other expense and reported net to the extent of established litigation reserves.

Purchase of remaining interest in Highbridge Capital Management

In January 2008, JPMorgan Chase purchased an additional equity interest in Highbridge Capital Management, LLC ("Highbridge"), which resulted in the Firm owning 77.5% of Highbridge. In July 2009, JPMorgan Chase completed its purchase of the remaining interest in Highbridge, which resulted in a $228 million adjustment to capital surplus.

Subsequent events

The Firm has performed an evaluation of events that have occurred subsequent to December 31, 2009, and through February 24, 2010 (the date of the filing of this Annual Report). There have been no material subsequent events that occurred during such period that would require disclosure in this Annual Report, or would be required to be recognized in the Consolidated Financial Statements, as of or for the year ended December 31, 2009.

Note 3 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are carried at fair value on a recurring basis. Certain assets and liabilities are carried at fair value on a nonrecurring basis, including loans accounted for at the lower of cost or fair value that are only subject to fair value adjustments under certain circumstances.

The Firm has an established and well-documented process for determining fair values. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on internally developed models that primarily use, as inputs, market-based or independently sourced market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models also incorporate transaction details, such as maturity of the instrument. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. These adjustments include amounts to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters. Valuation adjustments are applied consistently over time.

- Credit valuation adjustments ("CVA") are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few classes of derivative contracts are listed on an exchange, the majority of derivative positions are valued using internally developed models that use as their basis observable market parameters. Market practice is to quote parameters equivalent to an "AA" credit rating whereby all counterparties are assumed to have the same credit quality. Therefore, an adjustment is necessary to reflect the credit quality of each derivative counterparty to arrive at fair value. The adjustment also takes into account contractual factors designed to reduce the Firm's credit exposure to each counterparty, such as collateral and legal rights of offset.
- Debit valuation adjustments ("DVA") are necessary to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. The methodology to determine the adjustment is consistent with CVA and incorporates JPMorgan Chase's credit spread as observed through the credit default swap market.
- Liquidity valuation adjustments are necessary when the Firm may not be able to observe a recent market price for a financial instrument that trades in inactive (or less active) markets or to reflect the cost of exiting larger-than-normal market-size risk positions (liquidity adjustments are not taken for positions classified within level 1 of the fair value hierarchy). The Firm tries to ascertain the amount of uncertainty in the initial valuation based on the degree of liquidity in the market in which the financial instrument trades and makes liquidity adjustments to the carrying value of the financial instrument. The Firm measures the liquidity adjustment based on the following factors: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quote; and (3) the volatility of the principal risk component of the financial instrument. Costs to exit larger-than-normal market-size risk positions are determined based on the size of the adverse market move that is likely to occur during the period required to bring a position down to a nonconcentrated level.
- Unobservable parameter valuation adjustments are necessary when positions are valued using internally developed models that use as their basis unobservable parameters – that is, parameters that must be estimated and are, therefore, subject to management judgment. These positions are normally traded less actively. Examples include certain credit products where parameters such as correlation and recovery rates are unobservable. Unobservable parameter valuation adjustments are applied to mitigate the possibility of error and revision in the estimate of the market price provided by the model.

The Firm has numerous controls in place intended to ensure that its fair valuations are appropriate. An independent model review group reviews the Firm's valuation models and approves them for

use for specific products. All valuation models within the Firm are subject to this review process. A price verification group, independent from the risk-taking function, ensures observable market prices and market-based parameters are used for valuation wherever possible. For those products with material parameter risk for which observable market levels do not exist, an independent review of the assumptions made on pricing is performed. Additional review includes deconstruction of the model valuations for certain structured instruments into their components, and benchmarking valuations, where possible, to similar products; validating valuation estimates through actual cash settlement; and detailed review and explanation of recorded gains and losses, which are analyzed daily and over time. Valuation adjustments, which are also determined by the independent price verification group, are based on established policies and are applied consistently over time. Any changes to the valuation methodology are reviewed by management to confirm that the changes are justified. As markets and products develop and the pricing for certain products becomes more or less transparent, the Firm continues to refine its valuation methodologies. During 2009, no changes were made to the Firm's valuation models that had, or are expected to have, a material impact on the Firm's Consolidated Balance Sheets or results of operations.

The methods described above to estimate fair value may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Valuation Hierarchy

A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

Following is a description of the valuation methodologies used by the Firm to measure instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Assets

Securities purchased under resale agreements ("resale agreements") and securities borrowed

To estimate the fair value of resale agreements and securities borrowed transactions, cash flows are evaluated taking into consideration any derivative features of the resale agreement and are then discounted using the appropriate market rates for the applicable maturity. As the inputs into the valuation are primarily based on readily observable pricing information, such resale agreements are classified within level 2 of the valuation hierarchy.

Loans and unfunded lending-related commitments

The majority of the Firm's loans and lending-related commitments are not carried at fair value on a recurring basis on the Consolidated Balance Sheets, nor are they actively traded. The fair value of such loans and lending-related commitments is included in the additional disclosures of fair value of certain financial instruments required by U.S. GAAP on pages 171–172 of this Note. Loans carried at fair value on a recurring and nonrecurring basis are included in the applicable tables that follow.

Wholesale

There is no liquid secondary market for most loans and lending-related commitments in the Firm's wholesale portfolio. In the limited circumstances where direct secondary market information, including pricing of actual market transactions, broker quotations or quoted market prices for similar instruments, is available (principally for loans in the Firm's secondary trading portfolio), such information is used in the determination of fair value. For the remainder of the portfolio, fair value is estimated using a discounted cash flow ("DCF") model. In addition to the characteristics of the underlying loans (including principal, customer rate and contractual fees), key inputs to the model include interest rates, prepayment rates, and credit spreads. The credit spread input is derived from the cost of credit default swaps ("CDS") and, as a result, also incorporates the effects of secondary market liquidity. As many of the Firm's clients do not have bonds traded with sufficient liquidity in the public markets to have observable CDS spreads, the Firm principally develops benchmark credit curves by industry and credit rating to estimate fair value. Additional adjustments to account for the difference in recovery rates between bonds, on which the cost of credit derivatives is based, and loans as well as loan equivalents (which represent the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become outstanding prior to an obligor default) are also incorporated into the valuation process.

For a discussion of the valuation of mortgage loans carried at fair value, see the "Mortgage-related exposures carried at fair value" section of this Note on pages 169–170.

The Firm's loans carried at fair value are classified within level 2 or 3 of the valuation hierarchy depending on the level of liquidity and activity in the markets for a particular product.

Consumer

The only products in the Firm's consumer loan portfolio with a meaningful level of secondary market activity in the current economic environment are certain conforming residential mortgages. These loans are classified as trading assets and carried at fair value on the Consolidated Balance Sheets. They are predominantly classified within level 2 of the valuation hierarchy based on the level of market liquidity and activity. For further discussion of the valuation of mortgage loans carried at fair value see the "Mortgage-related exposures carried at fair value" section on pages 169–170 of this Note.

The fair value of the Firm's other consumer loans (except for credit card receivables) is generally determined by discounting the loan principal and interest cash flows expected to be collected at a market observable discount rate, when available. Portfolio-specific factors that a market participant would consider in determining fair value (e.g., expected lifetime credit losses, estimated prepayments, servicing costs and market liquidity) are either modeled into the cash flow projections or incorporated as an adjustment to the discount rate. For products that continue to be offered in the market, discount rates are derived from market-observable primary origination spreads. Where primary origination spreads are not available (i.e., subprime mortgages, subprime home equity and option adjustable-rate mortgages ("option ARMs"), the valuation is based on the Firm's estimate of a market participant's required return on equity for similar products (i.e., a hypothetical origination spread). Estimated lifetime credit losses consider expected and current default rates for existing portfolios, collateral prices (where applicable) and expectations about changes in the economic environment (e.g., unemployment rates).

The fair value of credit card receivables is determined using a discounted expected cash flow methodology. Key estimates and assumptions include: projected interest income and late fee revenue, funding, servicing, credit costs, and loan payment rates. The projected loan payment rates are used to determine the estimated life of the credit card loan receivables, which are then discounted using a risk-appropriate discount rate. The discount rate is derived from the Firm's estimate of a market participant's expected return on credit card receivables. As the credit card receivables have a short-term life, an amount equal to the allowance for credit losses is considered to be a reasonable proxy for the credit cost component.

Loans that are not carried on the Consolidated Balance Sheets at fair value are not classified within the fair value hierarchy.

Securities

Where quoted prices for identical securities are available in an active market, securities are classified in level 1 of the valuation hierarchy. Level 1 securities include highly liquid government bonds, mortgage products for which there are quoted prices in active markets such as U.S. government agency or U.S. government-sponsored enterprise (collectively, "U.S. government agencies"), pass-through mortgage-backed securities ("MBS"), and exchange-traded equities (e.g., common and preferred stocks).

If quoted market prices are not available for the specific security, the Firm may estimate the value of such instruments using a combination of observed transaction prices, independent pricing services and relevant broker quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided from independent pricing services. The Firm may also use pricing models or discounted cash flows. The majority of such instruments are classified within level 2 of the valuation hierarchy; however, in cases where there is limited activity or less transparency around inputs to the valuation, securities are classified within level 3 of the valuation hierarchy.

For certain collateralized mortgage and debt obligations, asset-backed securities ("ABS") and high-yield debt securities, the determination of fair value may require benchmarking to similar instruments or analyzing default and recovery rates. For "cash" collateralized debt obligations ("CDOs"), external price information is not available. Therefore, cash CDOs are valued using market-standard models, such as Intex, to model the specific collateral composition and cash flow structure of each deal; key inputs to the model are market spread data for each credit rating, collateral type and other relevant contractual features. ABS are valued based on external prices or market spread data, using current market assumptions on prepayments and defaults. For those ABS where the external price data is not observable or the limited available data is opaque, the collateral performance is monitored and the value of the security is assessed. To benchmark its valuations, the Firm looks to transactions for similar instruments and utilizes independent prices provided by third-party vendors, broker quotes and relevant market indices, such as the ABX index, as applicable. While none of those sources are solely indicative of fair value, they serve as directional indicators for the appropriateness of the Firm's estimates. The majority of collateralized mortgage and debt obligations, high-yield debt securities and ABS are currently classified in level 3 of the valuation hierarchy. For further discussion of the valuation of mortgage securities carried at fair value see the "Mortgage-related exposures carried at fair value" section of this Note on pages 169–170.

Commodities

Commodities inventory are carried at the lower of cost or fair value. The fair value of commodities inventory is determined primarily using pricing and data derived from the markets on which the underlying commodities are traded. The majority of commodities inventory is classified within level 1 of the valuation hierarchy.

The Firm also has positions in commodities-based derivatives that can be traded on an exchange or over-the-counter ("OTC") and carried at fair value. The pricing inputs to these derivatives include forward curves of underlying commodities, basis curves, volatilities, correlations, and occasionally other model parameters. The valuation of these derivatives is based on calibrating to market transactions, as well as to independent pricing information from sources such as brokers and dealer consensus pricing services. Where inputs are unobservable, they are benchmarked to observable market data based on historic and implied correlations, then adjusted for uncertainty where appropriate. The majority of commodities-based derivatives are classified within level 2 of the valuation hierarchy.

Derivatives

Exchange-traded derivatives valued using quoted prices are classified within level 1 of the valuation hierarchy. However, few classes of derivative contracts are listed on an exchange; thus, the majority of the Firm's derivative positions are valued using internally developed models that use as their basis readily observable market parameters – that is, parameters that are actively quoted and can be validated to external sources, including industry pricing services. Depending on the types and contractual terms of derivatives, fair value can be modeled using a series of techniques, such as the Black-Scholes option pricing model, simulation models or a combination of various models, which are consistently applied. Where derivative products have been established for some time, the Firm uses models that are widely accepted in the financial services industry. These models reflect the contractual terms of the derivatives, including the period to maturity, and market-based parameters such as interest rates, volatility, and the credit quality of the counterparty. Further, many of these models do not contain a high level of subjectivity, as the methodologies used in the models do not require significant judgment, and inputs to the models are readily observable from actively quoted markets, as is the case for "plain vanilla" interest rate swaps, option contracts and CDS. Such instruments are generally classified within level 2 of the valuation hierarchy.

Derivatives that are valued based on models with significant unobservable market parameters and that are normally traded less actively, have trade activity that is one way, and/or are traded in less-developed markets are classified within level 3 of the valuation hierarchy. Level 3 derivatives include, for example, CDS referenced to certain MBS, certain types of CDO transactions, options on baskets of single-name stocks, and callable exotic interest rate options.

Other complex products, such as those sensitive to correlation between two or more underlying parameters, also fall within level 3 of the valuation hierarchy. Such instruments include complex credit derivative products which are illiquid and non-standard in nature, including CDOs and CDO-squared. A CDO is a debt instrument collateralized by a variety of debt obligations, including CDS, bonds and loans of different maturities and credit qualities. The repackaging of such securities and loans within a CDO results in the creation of tranches, which are instruments with different risk profiles. In a CDO-squared transaction, the instrument is a CDO where the underlying debt instruments are also CDOs. For most CDO and CDO-squared transactions, while inputs such as CDS spreads and recovery rates may be observable, the correlation between the underlying debt instruments is unobservable. The correlation levels are not only modeled on a portfolio basis but are also calibrated at a transaction level to liquid benchmark tranches. For all complex credit derivative products, actual transactions, where available, are used to regularly recalibrate all unobservable parameters.

Correlation sensitivity is also material to the overall valuation of options on baskets of single-name stocks; the valuation of these baskets is typically not observable due to their non-standardized structuring. Correlation for products such as these is typically estimated based on an observable basket of stocks and then adjusted to reflect the differences between the underlying equities.

For callable exotic interest rate options, while most of the assumptions in the valuation can be observed in active markets (e.g. interest rates and volatility), the callable option transaction flow is essentially one-way, and as such, price observability is limited. As pricing information is limited, assumptions are based on the dynamics of the underlying markets (e.g., the interest rate markets) including the range and possible outcomes of the applicable inputs. In addition, the models used are calibrated, as relevant, to liquid benchmarks, and valuation is tested against monthly independent pricing services and actual transactions.

Mortgage servicing rights and certain retained interests in securitizations

Mortgage servicing rights ("MSRs") and certain retained interests from securitization activities do not trade in an active, open market with readily observable prices. Accordingly, the Firm estimates the fair value of MSRs and certain other retained interests in securitizations using DCF models.

- For MSRs, the Firm uses an option-adjusted spread ("OAS") valuation model in conjunction with the Firm's proprietary prepayment model to project MSR cash flows over multiple interest rate scenarios, which are then discounted at risk-adjusted rates to estimate the fair value of the MSRs. The OAS model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenue, costs to service and other economic factors. The Firm reassesses and periodically adjusts the underlying inputs and assumptions used in the OAS model to reflect market conditions and assumptions that a market participant would consider in valuing the MSR asset. Due to the nature of the valuation inputs, MSRs are classified within level 3 of the valuation hierarchy.
- For certain retained interests in securitizations, the Firm estimates the fair value for those retained interests by calculating the present value of future expected cash flows using modeling techniques. Such models incorporate management's best estimates of key variables, such as expected credit losses, prepayment speeds and the discount rates appropriate for the risks involved. Changes in the assumptions used may have a significant impact on the Firm's valuation of retained interests,

and such interests are therefore typically classified within level 3 of the valuation hierarchy.

For both MSRs and certain other retained interests in securitizations, the Firm compares its fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience. For further discussion of the most significant assumptions used to value retained interests and MSRs, as well as the applicable stress tests for those assumptions, see Note 17 on pages 222–225 of this Annual Report.

Private equity investments

The valuation of nonpublic private equity investments, which are held primarily by the Private Equity business within the Corporate/Private Equity line of business, requires significant management judgment due to the absence of quoted market prices, the inherent lack of liquidity and the long-term nature of such assets. As such, private equity investments are valued initially based on cost. Each quarter, valuations are reviewed utilizing available and relevant market data to determine if the carrying value of these investments should be adjusted. Such market data primarily include observations of the trading multiples of public companies considered comparable to the private companies being valued and the operating performance of the underlying portfolio company, including its historical and projected net income and earnings before interest, taxes, depreciation and amortization ("EBITDA"). Valuations are adjusted to account for company-specific issues, the lack of liquidity inherent in a nonpublic investment and the fact that comparable public companies are not identical to the companies being valued. In addition, a variety of additional factors are reviewed by management, including, but not limited to, financing and sales transactions with third parties, future expectations of the particular investment, changes in market outlook and the third-party financing environment. Nonpublic private equity investments are included in level 3 of the valuation hierarchy.

Private equity investments also include publicly held equity investments, generally obtained through the initial public offering of privately held equity investments. Publicly held investments in liquid markets are marked to market at the quoted public value less adjustments for regulatory or contractual sales restrictions. Discounts for restrictions are quantified by analyzing the length of the restriction period and the volatility of the equity security. Publicly held investments are largely classified in level 2 of the valuation hierarchy.

Other fund investments

The Firm holds investments in mutual/collective investment funds, private equity funds, hedge funds and real estate funds. Where the funds produce a daily net asset value ("NAV") that is validated by a sufficient level of observable activity (purchases and sales at NAV), the NAV is used to value the fund investment and it is classified in level 1 of the valuation hierarchy. Where adjustments to the NAV are required, for example, with respect to interests in funds subject to restrictions on redemption (such as lock-up periods or withdrawal limitations) and/or observable activity for the fund investment is limited, investments are classified within level 2 or 3 of the valuation hierarchy.

Liabilities

Securities sold under repurchase agreements ("repurchase agreements")

To estimate the fair value of repurchase agreements, cash flows are evaluated taking into consideration any derivative features of the repurchase agreements and are then discounted using the appropriate market rates for the applicable maturity. Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to, or in excess of, the principal amount loaned; as a result, there would be no adjustment, or an immaterial adjustment, to reflect the credit quality of the Firm (i.e., DVA) related to these agreements. As the inputs into the valuation are primarily based on observable pricing information, repurchase agreements are classified within level 2 of the valuation hierarchy.

Beneficial interests issued by consolidated VIEs

The fair value of beneficial interests issued by consolidated VIEs ("beneficial interests") is estimated based on the fair value of the underlying assets held by the VIEs. The valuation of beneficial interests does not include an adjustment to reflect the credit quality of the Firm, as the holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Where the inputs into the valuation are based on observable market pricing information, the beneficial interests are classified within level 2 of the valuation hierarchy. Where significant inputs into the valuation are unobservable, the beneficial interests are classified within level 3 of the valuation hierarchy.

Deposits, other borrowed funds and long-term debt

Included within deposits, other borrowed funds and long-term debt are structured notes issued by the Firm that are financial instruments containing embedded derivatives. To estimate the fair value of structured notes, cash flows are evaluated taking into consideration any derivative features and are then discounted using the appropriate market rates for the applicable maturities. In addition, the valuation of structured notes includes an adjustment to reflect the credit quality of the Firm (i.e., the DVA). Where the inputs into the valuation are primarily based on observable market prices, the structured notes are classified within level 2 of the valuation hierarchy. Where significant inputs are unobservable, the structured notes are classified within level 3 of the valuation hierarchy.

The following tables present financial instruments measured at fair value as of December 31, 2009 and 2008, by major product category on the Consolidated Balance Sheets and by the fair value hierarchy (as described above).

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2009 (in millions)	Level 1	Level 2	Level 3	Netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ —	$ 20,536	$ —	$ —	$ 20,536
Securities borrowed	—	7,032	—	—	7,032
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	33,092	8,373	260	—	41,725
Residential – nonagency[b]	—	2,284	1,115	—	3,399
Commercial – nonagency[b]	—	537	1,770	—	2,307
Total mortgage-backed securities	33,092	11,194	3,145	—	47,431
U.S. Treasury and government agencies[a]	23,033	227	—	—	23,260
Obligations of U.S. states and municipalities	—	5,681	1,971	—	7,652
Certificates of deposit, bankers' acceptances and commercial paper	—	5,419	—	—	5,419
Non-U.S. government debt securities	25,684	32,487	734	—	58,905
Corporate debt securities	—	48,754	5,241	—	53,995
Loans[c]	—	18,330	13,218	—	31,548
Asset-backed securities	—	1,428	7,975	—	9,403
Total debt instruments	81,809	123,520	32,284	—	237,613
Equity securities	75,053	3,450	1,956	—	80,459
Physical commodities[d]	9,450	586	—	—	10,036
Other	—	1,884	926	—	2,810
Total debt and equity instruments	166,312	129,440	35,166	—	330,918
Derivative receivables[e]	2,344	1,516,490	46,684	(1,485,308)	80,210
Total trading assets	168,656	1,645,930	81,850	(1,485,308)	411,128
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	158,957	8,941	—	—	167,898
Residential – nonagency[b]	—	14,773	25	—	14,798
Commercial – nonagency[b]	—	4,590	—	—	4,590
Total mortgage-backed securities	158,957	28,304	25	—	187,286
U.S. Treasury and government agencies[a]	405	29,592	—	—	29,997
Obligations of U.S. states and municipalities	—	6,188	349	—	6,537
Certificates of deposit	—	2,650	—	—	2,650
Non-U.S. government debt securities	5,506	18,997	—	—	24,503
Corporate debt securities	1	62,007	—	—	62,008
Asset-backed securities:					
Credit card receivables	—	25,742	—	—	25,742
Collateralized debt and loan obligations	—	5	12,144	—	12,149
Other	—	6,206	588	—	6,794
Equity securities	2,466	146	87	—	2,699
Total available-for-sale securities	167,335	179,837	13,193	—	360,365
Loans	—	374	990	—	1,364
Mortgage servicing rights	—	—	15,531	—	15,531
Other assets:					
Private equity investments[f]	165	597	6,563	—	7,325
All other[g]	7,241	90	9,521	—	16,852
Total other assets	7,406	687	16,084	—	24,177
Total assets measured at fair value on a recurring basis[h]	$ 343,397	$ 1,854,396	$ 127,648	$ (1,485,308)	$ 840,133
Less: Level 3 assets for which the Firm does not bear economic exposure[i]			2,118		
Total recurring level 3 assets for which the Firm bears economic exposure			$ 125,530		

	Fair value hierarchy				
December 31, 2009 (in millions)	Level 1	Level 2	Level 3	Netting adjustments	Total fair value
Deposits	**$ —**	**$ 3,979**	**$ 476**	**$ —**	**$ 4,455**
Federal funds purchased and securities loaned or sold under repurchase agreements	**—**	**3,396**	**—**	**—**	**3,396**
Other borrowed funds	**—**	**5,095**	**542**	**—**	**5,637**
Trading liabilities:					
Debt and equity instruments	**54,077**	**10,859**	**10**	**—**	**64,946**
Derivative payables[e]	**2,038**	**1,481,813**	**35,332**	**(1,459,058)**	**60,125**
Total trading liabilities	**56,115**	**1,492,672**	**35,342**	**(1,459,058)**	**125,071**
Accounts payable and other liabilities	**—**	**2**	**355**	**—**	**357**
Beneficial interests issued by consolidated VIEs	**—**	**785**	**625**	**—**	**1,410**
Long-term debt	**—**	**30,685**	**18,287**	**—**	**48,972**
Total liabilities measured at fair value on a recurring basis	**$ 56,115**	**$ 1,536,614**	**$ 55,627**	**$ (1,459,058)**	**$ 189,298**

December 31, 2008 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ —	$ 20,843	$ —	$ —	$ 20,843
Securities borrowed	—	3,381	—	—	3,381
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	48,761	9,984	163	—	58,908
Residential – nonagency[b]	—	658	3,339	—	3,997
Commercial – nonagency[b]	—	329	2,487	—	2,816
Total mortgage-backed securities	48,761	10,971	5,989	—	65,721
U.S. Treasury and government agencies[a]	29,646	1,659	—	—	31,305
Obligations of U.S. states and municipalities	—	10,361	2,641	—	13,002
Certificates of deposit, bankers' acceptances and commercial paper	1,180	6,312	—	—	7,492
Non-U.S. government debt securities	19,986	17,954	707	—	38,647
Corporate debt securities	1	55,042	5,280	—	60,323
Loans[c]	—	14,711	17,091	—	31,802
Asset-backed securities	—	2,414	7,106	—	9,520
Total debt instruments	99,574	119,424	38,814	—	257,812
Equity securities	73,174	3,992	1,380	—	78,546
Physical commodities[d]	3,455	126	—	—	3,581
Other	4	6,188	1,226	—	7,418
Total debt and equity instruments	176,207	129,730	41,420	—	347,357
Derivative receivables[e]	3,630	2,685,101	52,991	(2,579,096)	162,626
Total trading assets	179,837	2,814,831	94,411	(2,579,096)	509,983
Available-for-sale securities :					
Mortgage-backed securities:					
U.S. government agencies[a]	109,009	8,376	—	—	117,385
Residential – nonagency[b]	—	9,115	49	—	9,164
Commercial – nonagency[b]	—	3,939	—	—	3,939
Total mortgage-backed securities	109,009	21,430	49	—	130,488
U.S. Treasury and government agencies[a]	615	9,742	—	—	10,357
Obligations of U.S. states and municipalities	34	2,463	838	—	3,335
Certificates of deposit	—	17,282	—	—	17,282
Non-U.S. government debt securities	6,112	2,232	—	—	8,344
Corporate debt securities	—	9,497	57	—	9,554
Asset-backed securities:					
Credit card receivables	—	11,391	—	—	11,391
Collateralized debt and loan obligations	—	—	11,195	—	11,195
Other	—	643	252	—	895
Equity securities	3,053	15	—	—	3,068
Total available-for-sale securities	118,823	74,695	12,391	—	205,909
Loans	—	5,029	2,667	—	7,696
Mortgage servicing rights	—	—	9,403	—	9,403
Other assets:					
Private equity investments[f]	151	332	6,369	—	6,852
All other[g]	5,977	11,355	8,114	—	25,446
Total other assets	6,128	11,687	14,483	—	32,298
Total assets measured at fair value on a recurring basis	$ 304,788	$ 2,930,466	$ 133,355	$ (2,579,096)	$ 789,513
Less: Level 3 assets for which the Firm does not bear economic exposure[i]			21,169		
Total recurring level 3 assets for which the Firm bears economic exposure			$ 112,186		

December 31, 2008 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Netting adjustments	Total fair value
Deposits	$ —	$ 4,370	$ 1,235	$ —	$ 5,605
Federal funds purchased and securities loaned or sold under repurchase agreements	—	2,993	—	—	2,993
Other borrowed funds	—	14,612	101	—	14,713
Trading liabilities:					
Debt and equity instruments	34,568	10,418	288	—	45,274
Derivative payables[e]	3,630	2,622,371	43,484	(2,547,881)	121,604
Total trading liabilities	38,198	2,632,789	43,772	(2,547,881)	166,878
Accounts payable and other liabilities	—	—	—	—	—
Beneficial interests issued by consolidated VIEs	—	1,735	—	—	1,735
Long-term debt	—	41,666	16,548	—	58,214
Total liabilities measured at fair value on a recurring basis	$ 38,198	$ 2,698,165	$ 61,656	$ (2,547,881)	$ 250,138

(a) Includes total U.S. government-sponsored enterprise obligations of $195.8 billion and $182.1 billion at December 31, 2009 and 2008, respectively, which were predominantly mortgage-related.
(b) For further discussion of residential and commercial MBS, see the "Mortgage-related exposure carried at fair value" section of this Note on pages 169–170.
(c) Included within trading loans at December 31, 2009 and 2008, respectively, are $15.7 billion and $12.1 billion of residential first-lien mortgages and $2.7 billion and $4.3 billion of commercial first-lien mortgages. For further discussion of residential and commercial loans carried at fair value or the lower of cost or fair value, see the "Mortgage-related exposure carried at fair value" section of this Note on pages 169–170.
(d) Physical commodities inventories are accounted for at the lower of cost or fair value.
(e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. Therefore, the balances reported in the fair value hierarchy table are gross of any counterparty netting adjustments. However, if the Firm were to net such balances, the reduction in the level 3 derivative receivable and derivative payable balances would be $16.0 billion at December 31, 2009.
(f) Private equity instruments represent investments within the Corporate/Private Equity line of business. The cost basis of the private equity investment portfolio was $8.8 billion and $8.3 billion at December 31, 2009 and 2008, respectively.
(g) Includes assets within accrued interest receivable and other assets at December 31, 2009 and 2008.
(h) Balances include investments valued at NAV at December 31, 2009, of $16.8 billion, of which $9.0 billion is classified in level 1, $3.2 billion in level 2 and $4.6 billion in level 3.
(i) Includes assets for which the Firm serves as an intermediary between two parties and does not bear market risk. The assets are predominantly reflected within derivative receivables.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the activity for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2009, 2008 and 2007 (including changes in fair value). Level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2009 (in millions)	Fair value, January 1, 2009	Total realized/ unrealized gains/(losses)	Purchases, issuances settlements, net	Transfers into and/or out of level 3[g]	Fair value, December 31, 2009	Change in unrealized gains/(losses) related to financial instruments held at December 31, 2009
	Fair value measurements using significant unobservable inputs					
Assets:						
Trading assets:						
Debt instruments:						
Mortgage-backed securities:						
U.S. government agencies	**$ 163**	**$ (38)**	**$ 62**	**$ 73**	**$ 260**	**$ (38)**
Residential – nonagency[a]	**3,339**	**(782)**	**(245)**	**(1,197)**	**1,115**	**(871)**
Commercial – nonagency[a]	**2,487**	**(242)**	**(325)**	**(150)**	**1,770**	**(313)**
Total mortgage-backed securities	**5,989**	**(1,062)**	**(508)**	**(1,274)**	**3,145**	**(1,222)**
Obligations of U.S. states and municipalities	**2,641**	**(22)**	**(648)**	**—**	**1,971**	**(123)**
Non-U.S. government debt securities	**707**	**38**	**(75)**	**64**	**734**	**34**
Corporate debt securities	**5,280**	**38**	**(3,416)**	**3,339**	**5,241**	**(72)**
Loans	**17,091**	**(871)**	**(3,497)**	**495**	**13,218**	**(1,167)**
Asset-backed securities	**7,106**	**1,436**	**(378)**	**(189)**	**7,975**	**734**
Total debt instruments	**38,814**	**(443)**	**(8,522)**	**2,435**	**32,284**	**(1,816)**
Equity securities	**1,380**	**(149)**	**(512)**	**1,237**	**1,956**	**(51)**
Other	**1,226**	**(79)**	**(253)**	**32**	**926**	**(119)**
Total debt and equity instruments	**41,420**	**(671)[c]**	**(9,287)**	**3,704**	**35,166**	**(1,986)[c]**
Net derivative receivables	**9,507**	**(11,406)[c]**	**(3,448)**	**16,699**	**11,352**	**(10,835)[c]**
Available-for-sale securities:						
Asset-backed securities	**11,447**	**(2)**	**1,112**	**175**	**12,732**	**(48)**
Other	**944**	**(269)**	**302**	**(516)**	**461**	**43**
Total available-for-sale securities	**12,391**	**(271)[d]**	**1,414**	**(341)**	**13,193**	**(5)[d]**
Loans	**2,667**	**(448)[c]**	**(1,906)**	**677**	**990**	**(488)[c]**
Mortgage servicing rights	**9,403**	**5,807[e]**	**321**	**—**	**15,531**	**5,807[e]**
Other assets:						
Private equity investments	**6,369**	**(407)[c]**	**582**	**19**	**6,563**	**(369)[c]**
All other[b]	**8,114**	**(676)[f]**	**2,439**	**(356)**	**9,521**	**(612)[f]**

Year ended December 31, 2009 (in millions)	Fair value, January 1, 2009	Total realized/ unrealized (gains)/losses	Purchases, issuances settlements, net	Transfers into and/or out of level 3[g]	Fair value, December 31, 2009	Change in unrealized (gains)/losses related to financial instruments held at December 31, 2009
	Fair value measurements using significant unobservable inputs					
Liabilities[h]:						
Deposits	**$ 1,235**	**$ 47[c]**	**$ (870)**	**$ 64**	**$ 476**	**$ (36)[c]**
Other borrowed funds	**101**	**(73)[c]**	**621**	**(107)**	**542**	**9[c]**
Trading liabilities:						
Debt and equity instruments	**288**	**64[c]**	**(339)**	**(3)**	**10**	**12[c]**
Accounts payable and other liabilities	**—**	**(55)[c]**	**410**	**—**	**355**	**(29)[c]**
Beneficial interests issued by consolidated VIEs	**—**	**344[c]**	**(598)**	**879**	**625**	**327[c]**
Long-term debt	**16,548**	**1,367[c]**	**(2,738)**	**3,110**	**18,287**	**1,728[c]**

Year ended December 31, 2008 (in millions)	Fair value, January 1, 2008	Total realized/ unrealized gains/(losses)	Purchases, issuances settlements, net	Transfers into and/or out of level 3[g]	Fair value, December 31, 2008	Change in unrealized gains/(losses) related to financial instruments held at December 31, 2008
	Fair value measurements using significant unobservable inputs					
Assets:						
Trading assets:						
Debt and equity instruments	$ 24,066	$ (12,805)[c]	$ 6,201	$ 23,958	$ 41,420	$ (9,860)[c]
Net derivative receivables	633	4,556[c]	2,290	2,028	9,507	1,814[c]
Available-for-sale securities	101	(1,232)[d]	3,772	9,750	12,391	(422)[d]
Loans	8,380	(1,547)[c]	12	(4,178)	2,667	(1,324)[c]
Mortgage servicing rights	8,632	(6,933)[e]	7,704	—	9,403	(6,933)[e]
Other assets:						
Private equity investments	6,763	(638)[c]	320	(76)	6,369	(1,089)[c]
All other[b]	5,978	(940)[f]	2,787	289	8,114	(753)[f]

Year ended December 31, 2008 (in millions)	Fair value, January 1, 2008	Total realized/ unrealized (gains)/losses	Purchases, issuances settlements, net	Transfers into and/or out of level 3[g]	Fair value, December 31, 2008	Change in unrealized (gains)/losses related to financial instruments held at December 31, 2008
	Fair value measurements using significant unobservable inputs					
Liabilities[h]:						
Deposits	$ 1,161	$ (57)[c]	$ 79	$ 52	$ 1,235	$ (69)[c]
Other borrowed funds	105	(7)[c]	53	(50)	101	(24)[c]
Trading liabilities:						
Debt and equity instruments	480	(73)[c]	(33)	(86)	288	(125)[c]
Accounts payable and other liabilities	25	(25)[c]	—	—	—	—
Beneficial interests issued by consolidated VIEs	82	(24)[c]	(603)	545	—	—
Long-term debt	21,938	(4,502)[c]	(1,717)	829	16,548	(3,682)[c]

Year ended December 31, 2007 (in millions)	Fair value, January 1, 2007	Total realized/ unrealized gains/(losses)	Purchases, issuances settlements, net	Transfers into and/or out of level 3	Fair value, December 31, 2007	Change in unrealized gains/(losses) related to financial instruments held at December 31, 2007
	Fair value measurements using significant unobservable inputs					
Assets:						
Trading assets:						
Debt and equity instruments	$ 9,320	$ (916)[c]	$ 5,902	$ 9,760	$ 24,066	$ (912)[c]
Net derivative receivables	(2,800)	1,674[c]	257	1,502	633	1,979[c]
Available-for-sale securities	177	38[d]	(21)	(93)	101	(5)[d]
Loans	643	(346)[c]	8,013	70	8,380	(36)[c]
Mortgage servicing rights	7,546	(516)[e]	1,602	—	8,632	(516)[e]
Other assets:						
Private equity investments	5,493	4,051[c]	(2,764)	(17)	6,763	1,711[c]
All other[b]	4,274	35[f]	1,196	473	5,978	(21)[f]

Year ended December 31, 2007 (in millions)	Fair value, January 1, 2007	Total realized/ unrealized (gains)/losses	Purchases, issuances settlements, net	Transfers into and/or out of level 3	Fair value, December 31, 2007	Change in unrealized (gains)/losses related to financial instruments held at December 31, 2007
	Fair value measurements using significant unobservable inputs					
Liabilities[h]**:**						
Deposits	$ 385	$ 42[c]	$ 667	$ 67	$ 1,161	$ 38[c]
Other borrowed funds	—	67[c]	34	4	105	135[c]
Trading liabilities:						
Debt and equity instruments	32	(383)[c]	125	706	480	734[c]
Accounts payable and other liabilities	—	460[c]	(435)	—	25	25[c]
Beneficial interests issued by consolidated VIEs	8	(6)[c]	(1)	81	82	—
Long-term debt	11,386	1,142[c]	6,633	2,777	21,938	468[c]

(a) For further discussion of residential and commercial MBS, see the "Mortgage-related exposures carried at fair value" section of this Note on pages 169–170.
(b) Includes assets within accrued interest receivable and other assets at December 31, 2009, 2008 and 2007.
(c) Reported in principal transactions revenue, except for changes in fair value for Retail Financial Services ("RFS") mortgage loans originated with the intent to sell, which are reported in mortgage fees and related income.
(d) Realized gains and losses on available-for-sale securities, as well as other-than-temporary impairment losses that are recorded in earnings, are reported in securities gains. Unrealized gains and losses are reported in other comprehensive income.
(e) Changes in fair value for RFS mortgage servicing rights are measured at fair value and reported in mortgage fees and related income.
(f) Predominantly reported in other income.
(g) Beginning January 1, 2008, all transfers into and/or out of level 3 are assumed to occur at the beginning of the reporting period.
(h) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities carried at fair value on a nonrecurring basis) were 29%, 25% and 17% at December 31, 2009, 2008 and 2007, respectively.

Assets and liabilities measured at fair value on a nonrecurring basis

Certain assets, liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, the instruments are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment). The following tables present the financial instruments carried on the Consolidated Balance Sheets by caption and level within the valuation hierarchy (as described above) as of December 31, 2009 and 2008, for which a nonrecurring change in fair value has been recorded during the reporting period.

December 31, 2009 (in millions)	Level 1	Level 2	Level 3	Total fair value
	Fair value hierarchy			
Loans retained[a]	**$ —**	**$ 4,544**	**$ 1,137**	**$ 5,681**
Loans held-for-sale[b]	**—**	**601**	**1,029**	**1,630**
Total loans	**—**	**5,145**	**2,166**	**7,311**
Other real estate owned	**—**	**307**	**387**	**694**
Other assets	**—**	**—**	**184**	**184**
Total other assets	**—**	**307**	**571**	**878**
Total assets at fair value on a nonrecurring basis	**$ —**	**$ 5,452**	**$ 2,737**	**$ 8,189**
Accounts payable and other liabilities[c]	**$ —**	**$ 87**	**$ 39**	**$ 126**
Total liabilities at fair value on a nonrecurring basis	**$ —**	**$ 87**	**$ 39**	**$ 126**

December 31, 2008 (in millions)	Level 1	Level 2	Level 3	Total fair value
	Fair value hierarchy			
Loans retained[a]	$ —	$ 2,344	$ 345	$ 2,689
Loans held-for-sale[b]	—	2,647	3,654	6,301
Total loans	—	4,991	3,999	8,990
Other real estate owned	—	706	103	809
Other assets	—	1,057	188	1,245
Total other assets	—	1,763	291	2,054
Total assets at fair value on a nonrecurring basis	$ —	$ 6,754	$ 4,290	$ 11,044
Accounts payable and other liabilities[c]	$ —	$ 212	$ 98	$ 310
Total liabilities at fair value on a nonrecurring basis	$ —	$ 212	$ 98	$ 310

(a) Reflects delinquent mortgage and home equity loans where the carrying value is based on the fair value of the underlying collateral.
(b) Predominantly includes leveraged lending loans carried on the Consolidated Balance Sheets at the lower of cost or fair value.
(c) Represents, at December 31, 2009 and 2008, the fair value adjustment associated with $648 million and $1.5 billion, respectively, of unfunded held-for-sale lending-related commitments within the leveraged lending portfolio.

Nonrecurring fair value changes

The following table presents the total change in value of financial instruments for which a fair value adjustment has been included in the Consolidated Statements of Income for the years ended December 31, 2009, 2008 and 2007, related to financial instruments held at these dates.

Year ended December 31, (in millions)	2009	2008	2007
Loans retained	**$ (3,550)**	$ (1,159)	$ (218)
Loans held-for-sale	**(389)**	(2,728)	(502)
Total loans	**(3,939)**	(3,887)	(720)
Other assets	**(104)**	(685)	(161)
Accounts payable and other liabilities	**31**	(285)	2
Total nonrecurring fair value gains/(losses)	**$ (4,012)**	$ (4,857)	$ (879)

In the above table, loans predominantly include: (1) write-downs of delinquent mortgage and home equity loans where impairment is based on the fair value of the underlying collateral; and (2) the change in fair value for leveraged lending loans carried on the Consolidated Balance Sheets at the lower of cost or fair value. Accounts payable and other liabilities predominantly include the change in fair value for unfunded lending-related commitments within the leveraged lending portfolio.

Level 3 analysis

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 6% of total Firm assets at both December 31, 2009 and 2008. Level 3 assets were $130.4 billion at December 31, 2009, reflecting a decrease of $7.3 billion in 2009, due to the following:

- A net decrease of $6.3 billion in gross derivative receivables, predominantly driven by the tightening of credit spreads. Offsetting a portion of the decrease were net transfers into level 3 during the year, most notably a transfer into level 3 of $41.3 billion of structured credit derivative receivables, and a transfer out of level 3 of $17.7 billion of single-name CDS on ABS. The fair value of the receivables transferred into level 3 during the year was $22.1 billion at December 31, 2009. The fair value of structured credit derivative payables with a similar underlying risk profile to the previously noted receivables, that are also classified in level 3, was $12.5 billion at December 31, 2009. These derivatives payables offset the receivables, as they are modeled and valued the same way with the same parameters and inputs as the assets.
- A net decrease of $3.5 billion in loans, predominantly driven by sales of leveraged loans and transfers of similar loans to level 2, due to increased price transparency for such assets. Leveraged loans are typically classified as held-for-sale and measured at the lower of cost or fair value and, therefore, included in the nonrecurring fair value assets.
- A net decrease of $6.3 billion in trading assets – debt and equity instruments, primarily in loans and residential- and commercial-MBS, principally driven by sales and markdowns, and by sales and unwinds of structured transactions with hedge funds. The declines were partially offset by a transfer from level 2 to level 3 of certain structured notes reflecting lower liquidity and less pricing observability, and also increases in the fair value of other ABS.
- A net increase of $6.1 billion in MSRs, due to increases in the fair value of the asset, related primarily to market interest rate and other changes affecting the Firm's estimate of future prepayments, as well as sales in RFS of originated loans for which servicing rights were retained. These increases were offset partially by servicing portfolio runoff.
- A net increase of $1.9 billion in accrued interest and accounts receivable related to increases in subordinated retained interests from the Firm's credit card securitization activities.

Gains and Losses

Gains and losses included in the tables for 2009 and 2008 included:

2009

- $11.4 billion of net losses on derivatives, primarily related to the tightening of credit spreads.
- Net losses on trading–debt and equity instruments of $671 million, consisting of $2.1 billion of losses, primarily related to residential and commercial loans and MBS, principally driven by markdowns and sales, partially offset by gains of $1.4 billion, reflecting increases in the fair value of other ABS. (For a further discussion of the gains and losses on mortgage-related exposures, inclusive of risk management activities, see the "Mortgage-related exposures carried at fair value" discussion below.)
- $5.8 billion of gains on MSRs.
- $1.4 billion of losses related to structured note liabilities, predominantly due to volatility in the equity markets.

2008

- Losses on trading-debt and equity instruments of approximately $12.8 billion, principally from mortgage-related transactions and auction-rate securities.
- Losses of $6.9 billion on MSRs.
- Losses of approximately $3.9 billion on leveraged loans.
- Net gains of $4.6 billion related to derivatives, principally due to changes in credit spreads and rate curves.
- Gains of $4.5 billion related to structured notes, principally due to significant volatility in the fixed income, commodities and equity markets.
- Private equity losses of $638 million.

For further information on changes in the fair value of the MSRs, see Note 17 on pages 223–224 of this Annual Report.

Mortgage-related exposures carried at fair value

The following table provides a summary of the Firm's mortgage-related exposures, including the impact of risk management activities. These exposures include all mortgage-related securities and loans carried at fair value regardless of their classification within the fair value hierarchy, and that are carried at fair value through earnings or at the lower of cost or fair value. The table excludes securities held in the available-for-sale portfolio, which are reported on page 170 of this Note.

	Exposure as of **December 31, 2009**		Exposure as of December 31, 2008		Net gains/(losses)[e]	
(in millions)	Gross	Net of risk management activities[d]	Gross	Net of risk management activities[d]	Reported in income – year ended **December 31, 2009**	Reported in income – year ended December 31, 2008
U.S. Residential Mortgage: [a][b][c]						
Prime	**$ 3,482**	**$ 3,482**	$ 4,612	$ 4,612		
Alt-A	**3,030**	**3,030**	3,934	3,917		
	6,512	**6,512**	8,546	8,529	**$ 537**	$ (4,093)
Subprime	**569**	**137**	941	(28)	**(76)**	(369)
Non-U.S. Residential[c]	**1,702**	**1,321**	1,591	951	**86**	(292)
Commercial Mortgage:						
Securities	**2,337**	**1,898**	2,836	1,438	**257**	(792)
Loans	**2,699**	**2,035**	4,338	2,179	**(333)**	(752)

(a) Excluded at December 31, 2009 and 2008, are certain mortgages and mortgage-related assets that are carried at fair value and recorded in trading assets, such as: (i) U.S. government agency securities that are liquid and of high credit quality of $41.7 billion and $58.9 billion, respectively; (ii) conforming mortgage loans originated with the intent to sell to U.S. government agencies of $11.1 billion and $6.2 billion, respectively; and (iii) reverse mortgages of $4.5 billion and $4.3 billion, respectively, for which the principal risk is mortality risk. Also excluded are MSRs, which are reported in Note 17 on pages 222–225 of this Annual Report.

(b) Excluded certain mortgage-related financing transactions, which are collateralized by mortgage-related assets, of $4.1 billion and $5.7 billion at December 31, 2009 and 2008, respectively. These financing transactions are excluded from the table, as they are accounted for on an accrual basis of accounting. For certain financings deemed to be impaired, impairment is measured and recognized based on the fair value of the collateral. Of these financing transactions, $136 million and $1.2 billion were considered impaired at December 31, 2009 and 2008, respectively.

(c) Total residential mortgage exposures at December 31, 2009 and 2008, include: (i) securities of $3.4 billion and $4.0 billion, respectively; (ii) loans carried at fair value or the lower of cost or fair value of $5.0 billion and $5.9 billion, respectively; and (iii) forward purchase commitments included in derivative receivables of $358 million and $1.2 billion, respectively.

(d) Amounts reflect the effects of derivatives used to manage the credit risk of the gross exposures arising from cash-based instruments. The amounts are presented on a bond- or loan-equivalent (notional) basis. Derivatives are excluded from the gross exposure, as they are principally used for risk management purposes.

(e) Net gains and losses include all revenue related to the positions (i.e., interest income, changes in fair value of the assets, changes in fair value of the related risk management positions, and interest expense related to the liabilities funding those positions).

Residential mortgages

Classification and Valuation – Residential mortgage loans and MBS are classified within level 2 or level 3 of the valuation hierarchy, depending on the level of liquidity and activity in the markets for a particular product. Level 3 assets include nonagency residential whole loans and subordinated nonagency residential MBS. Products that continue to have reliable price transparency as evidenced by consistent market transactions, such as senior nonagency securities, as well as agency securities, are classified in level 2.

For those products classified within level 2 of the valuation hierarchy, the Firm estimates the value of such instruments using a combination of observed transaction prices, independent pricing services and relevant broker quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided from independent pricing services.

When relevant market activity is not occurring or is limited, the fair value is estimated as follows:

Residential mortgage loans – Fair value of residential mortgage loans is estimated by projecting the expected cash flows and discounting those cash flows at a rate reflective of current market liquidity. To estimate the projected cash flows (inclusive of assumptions of prepayment, default rates and loss severity), specific consideration is given to both borrower-specific and other market factors, including, but not limited to: the borrower's FICO score; the type of collateral supporting the loan; an estimate of the current value of the collateral supporting the loan; the level of documentation for the loan; and market-derived expectations for home price appreciation or depreciation in the respective geography of the borrower.

Residential mortgage-backed securities – Fair value of residential MBS is estimated considering the value of the collateral and the specific attributes of the securities held by the Firm. The value of the collateral pool supporting the securities is analyzed using the same techniques and factors described above for residential mortgage loans, albeit in a more aggregated manner across the pool. For example, average FICO scores, average delinquency rates, average loss severities and prepayment rates, among other metrics, may be evaluated. In addition, as each securitization vehicle distributes cash in a manner or order that is predetermined at the inception of the vehicle, the priority in which each particular MBS is allocated cash flows, and the level of credit enhancement that is in place to support those cash flows, are key considerations in deriving the value of residential MBS. Finally, the risk premium that investors demand for securitized products in the current market is factored into the valuation. To benchmark its valuations, the Firm looks to transactions for similar instruments and utilizes independ-

ent pricing provided by third-party vendors, broker quotes and relevant market indices, such as the ABX index, as applicable. While none of those sources are solely indicative of fair value, they serve as directional indicators for the appropriateness of the Firm's estimates.

Commercial mortgages

Commercial mortgages are loans to companies backed by commercial real estate. Commercial MBS are securities collateralized by a pool of commercial mortgages. Typically, commercial mortgages have lock-out periods where the borrower is restricted from prepaying the loan for a specified timeframe, or periods where there are disincentives for the borrower to prepay the loan due to prepayment penalties. These features reduce prepayment risk for commercial mortgages relative to that of residential mortgages.

Classification and Valuation

While commercial mortgages and commercial MBS are classified within level 2 or level 3 of the valuation hierarchy, depending on the level of liquidity and activity in the markets, the majority of these mortgages, including both loans and lower-rated securities, are currently classified in level 3. Level 2 assets include fixed-rate commercial MBS.

Commercial mortgage loans – Fair value of commercial mortgage loans is estimated by projecting the expected cash flows and discounting those cash flows at a rate reflective of current market liquidity. To estimate the projected cash flows, consideration is given to both borrower-specific and other market factors, including, but not limited to: the borrower's debt-to-service coverage ratio; the type of commercial property (e.g., retail, office, lodging, multi-family, etc.); an estimate of the current loan-to-value ratio; and market-derived expectations for property price appreciation or depreciation in the respective geographic location.

Commercial mortgage-backed securities – When relevant market activity is not present or is limited, the value of commercial MBS is estimated considering the value of the collateral and the specific attributes of the securities held by the Firm. The value of the collateral pool supporting the securities is analyzed using the same techniques and factors described above for the valuation of commercial mortgage loans, albeit in a more aggregated manner across the pool. For example, average delinquencies, loan or geographic concentrations, and average debt-service coverage ratios, among other metrics, may be evaluated. In addition, as each securitization vehicle distributes cash in a manner or order that is predetermined at the inception of the vehicle, the priority in which each particular MBS security is allocated cash flows, and the level of credit enhancement that is in place to support those cash flows, are key considerations in deriving the value of commercial MBS. Finally, the risk premium that investors demand for securitized products in the current market is factored into the valuation. To benchmark its valuations, the Firm utilizes independent pricing provided by third-party vendors, and broker quotes, as applicable. While none of those sources are solely indicative of fair value, they serve as directional indicators for the appropriateness of the Firm's estimates.

The following table presents mortgage-related activities within the available-for-sale securities portfolio.

As of or for the year ended December 31,	Exposures		Net gains/(losses) reported in income during the year[b]		Unrealized gains/(losses) included in other comprehensive income (pretax) during the year	
(in millions)	**2009**	2008	**2009**	2008	**2009**	2008
Mortgage-backed securities:						
U.S. government agencies	**$ 167,898**	$ 117,385	**$ 1,232**	$ 476	**$ 849**	$ 2,076
Residential:						
Prime and Alt-A	**4,523**	6,895	**(364)**	(32)	**856**	(1,965)
Subprime	**17**	194	**(49)**	(89)	**19**	(32)
Non-U.S.	**10,258**	2,075	**(1)**	2	**412**	(156)
Commercial	**4,590**	3,939	**(9)**	—	**744**	(684)
Total mortgage-backed securities	**$ 187,286**	$ 130,488	**$ 809**	$ 357	**$ 2,880**	$ (761)
U.S. government agencies[a]	**29,562**	9,657	**5**	11	**(55)**	(54)

(a) Represents direct mortgage-related obligations of government-sponsored enterprises.
(b) Excludes related net interest income.

Exposures in the table above include $216.8 billion and $140.1 billion of MBS classified as available-for-sale in the Firm's Consolidated Balance Sheets at December 31, 2009 and 2008, respectively. These investments are primarily used as part of the Firm's centralized risk management of structural interest rate risk (the sensitivity of the Firm's Consolidated Balance Sheets to changes in interest rates). Changes in the Firm's structural interest rate position, as well as changes in the overall interest rate environment, are continually monitored, resulting in periodic repositioning of securities classified as available-for-sale. Given that this portfolio is primarily used to manage the Firm's structural interest rate risk, nearly all of these securities are either backed by U.S. government agencies or are rated "AAA."

For additional information on investment securities in the available-for-sale portfolio, see Note 11 on pages 195–199 of this Annual Report.

Credit adjustments

When determining the fair value of an instrument, it may be necessary to record a valuation adjustment to arrive at an exit price under U.S. GAAP. Valuation adjustments include, but are not limited to, amounts to reflect counterparty credit quality and the Firm's own creditworthiness. The market's view of the Firm's credit quality is reflected in credit spreads observed in the CDS market. For a detailed discussion of the valuation adjustments the Firm considers, see the valuation discussion at the beginning of this Note.

The following table provides the credit adjustments, excluding the effect of any hedging activity, as reflected within the Consolidated Balance Sheets of the Firm as of the dates indicated.

December 31, (in millions)	2009	2008
Derivative receivables balance	**$ 80,210**	$ 162,626
Derivatives CVA[a]	**(3,697)**	(9,566)
Derivative payables balance	**60,125**	121,604
Derivatives DVA	**(629)**	(1,389)
Structured notes balance[b][c]	**59,064**	67,340
Structured notes DVA	**(840)**	(2,413)

(a) Derivatives CVA, gross of hedges, includes results managed by credit portfolio and other lines of business within IB.
(b) Structured notes are recorded within long-term debt, other borrowed funds, or deposits on the Consolidated Balance Sheets, based on the tenor and legal form of the note.
(c) Structured notes are carried at fair value based on the Firm's election under the fair value option. For further information on these elections, see Note 4 on pages 173–175 of this Annual Report

The following table provides the impact of credit adjustments on earnings in the respective periods, excluding the effect of any hedging activity.

Year ended December 31, (in millions)	2009	2008	2007
Credit adjustments:			
Derivatives CVA[a]	**$ 5,869**	$ (7,561)	$ (803)
Derivatives DVA	**(760)**	789	514
Structured notes DVA[b]	**(1,573)**	1,211	806

(a) Derivatives CVA, gross of hedges, includes results managed by credit portfolio and other lines of business within IB.
(b) Structured notes are carried at fair value based on the Firm's election under the fair value option. For further information on these elections, see Note 4 on pages 173–175 of this Annual Report.

Fair value measurement transition

In connection with the initial adoption of FASB guidance on fair value measurement, the Firm recorded the following on January 1, 2007:

- a cumulative effect increase to retained earnings of $287 million, primarily related to the release of profit previously deferred in accordance with previous FASB guidance for certain derivative contracts;
- an increase to pretax income of $166 million ($103 million after-tax) related to the incorporation of the Firm's creditworthiness in the valuation of liabilities recorded at fair value; and
- an increase to pretax income of $464 million ($288 million after-tax) related to valuations of nonpublic private equity investments.

Additional disclosures about the fair value of financial instruments (including financial instruments not carried at fair value)

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table; other financial instruments and all nonfinancial instruments are excluded from the scope. Accordingly, the fair value disclosures required provide only a partial estimate of the fair value of JPMorgan Chase. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated Balance Sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include: cash and due from banks; deposits with banks, federal funds sold, securities purchased under resale agreements and securities borrowed with short-dated maturities; short-term receivables and accrued interest receivable; commercial paper; federal funds purchased, and securities loaned or sold under repurchase agreements with short-dated maturities; other borrowed funds (excluding advances from Federal Home Loan Banks); accounts payable; and accrued liabilities. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not allowed.

The following table presents the carrying value and estimated fair value of financial assets and liabilities.

	2009			2008		
December 31, (in billions)	Carrying value	Estimated fair value	Appreciation/ (depreciation)	Carrying value	Estimated fair value	Appreciation/ (depreciation)
Financial assets						
Assets for which fair value approximates carrying value	**$ 89.4**	**$ 89.4**	**$ —**	$ 165.0	$ 165.0	$ —
Accrued interest and accounts receivable (included $5.0 and $3.1 at fair value at December 31, 2009 and 2008, respectively)	**67.4**	**67.4**	**—**	61.0	61.0	—
Federal funds sold and securities purchased under resale agreements (included $20.5 and $20.8 at fair value at December 31, 2009 and 2008, respectively)	**195.4**	**195.4**	**—**	203.1	203.1	—
Securities borrowed (included $7.0 and $3.4 at fair value at December 31, 2009 and 2008, respectively)	**119.6**	**119.6**	**—**	124.0	124.0	—
Trading assets	**411.1**	**411.1**	**—**	510.0	510.0	—
Securities (included $360.4 and $205.9 at fair value at December 31, 2009 and 2008, respectively)	**360.4**	**360.4**	**—**	205.9	205.9	—
Loans (included $1.4 and $7.7 at fair value at December 31, 2009 and 2008, respectively)	**601.9**	**598.3**	**(3.6)**	721.7	700.0	(21.7)
Mortgage servicing rights at fair value	**15.5**	**15.5**	**—**	9.4	9.4	—
Other (included $19.2 and $29.2 at fair value at December 31, 2009 and 2008, respectively)	**73.4**	**73.2**	**(0.2)**	83.0	83.1	0.1
Total financial assets	**$ 1,934.1**	**$ 1,930.3**	**$ (3.8)**	$ 2,083.1	$ 2,061.5	$ (21.6)
Financial liabilities						
Deposits (included $4.5 and $5.6 at fair value at December 31, 2009 and 2008, respectively)	**$ 938.4**	**$ 939.5**	**$ (1.1)**	$ 1,009.3	$ 1,010.2	$ (0.9)
Federal funds purchased and securities loaned or sold under repurchase agreements (included $3.4 and $3.0 at fair value at December 31, 2009 and 2008, respectively)	**261.4**	**261.4**	**—**	192.5	192.5	—
Commercial paper	**41.8**	**41.8**	**—**	37.8	37.8	—
Other borrowed funds (included $5.6 and $14.7 at fair value at December 31, 2009 and 2008, respectively)	**55.7**	**55.9**	**(0.2)**	132.4	134.1	(1.7)
Trading liabilities	**125.1**	**125.1**	**—**	166.9	166.9	—
Accounts payable and other liabilities (included $0.4 and zero at fair value at December 31, 2009 and 2008, respectively)	**136.8**	**136.8**	**—**	167.2	167.2	—
Beneficial interests issued by consolidated VIEs (included $1.4 and $1.7 at fair value at December 31, 2009 and 2008, respectively)	**15.2**	**15.2**	**—**	10.6	10.5	0.1
Long-term debt and junior subordinated deferrable interest debentures (included $49.0 and $58.2 at fair value at December 31, 2009 and 2008, respectively)	**266.3**	**268.4**	**(2.1)**	270.7	262.1	8.6
Total financial liabilities	**$ 1,840.7**	**$ 1,844.1**	**$ (3.4)**	$ 1,987.4	$ 1,981.3	$ 6.1
Net (depreciation)/appreciation			**$ (7.2)**			$ (15.5)

The majority of the Firm's unfunded lending-related commitments are not carried at fair value on a recurring basis on the Consolidated Balance Sheets, nor are they actively traded. The estimated fair values of the Firm's wholesale lending-related commitments at December 31, 2009 and 2008, were liabilities of $1.3 billion and $7.5 billion, respectively. The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower prior notice or, in some cases, without notice as permitted by law.

Trading assets and liabilities

Trading assets include debt and equity instruments held for trading purposes that JPMorgan Chase owns ("long" positions), certain loans for which the Firm manages on a fair value basis and has elected the fair value option, and physical commodities inventories that are accounted for at the lower of cost or fair value. Trading liabilities include debt and equity instruments that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase instruments at a future date to cover the short positions. Included in trading assets and trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. Trading assets and liabilities are carried at fair value on the Consolidated Balance Sheets. For a discussion of the valuation and a summary of trading assets and trading liabilities, including derivative receivables and payables, see Note 4 on pages 173–175 and Note 5 on pages 175–183 of this Annual Report.

Trading assets and liabilities average balances

Average trading assets and liabilities were as follows for the periods indicated.

Year ended December 31, (in millions)	**2009**	2008	2007
Trading assets – debt and equity instruments	**$ 318,063**	$ 384,102	$ 381,415
Trading assets – derivative receivables	**110,457**	121,417	65,439
Trading liabilities – debt and equity instruments[(a)]	**$ 60,224**	$ 78,841	$ 94,737
Trading liabilities – derivative payables	**77,901**	93,200	65,198

(a) Primarily represent securities sold, not yet purchased.

Note 4 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments not previously carried at fair value.

Elections

Elections were made by the Firm to:

- mitigate income statement volatility caused by the differences in the measurement basis of elected instruments (for example, certain instruments elected were previously accounted for on an accrual basis) while the associated risk management arrangements are accounted for on a fair value basis;
- eliminate the complexities of applying certain accounting models (e.g., hedge accounting or bifurcation accounting for hybrid instruments); and
- better reflect those instruments that are managed on a fair value basis.

Elections include:

- Securities financing arrangements with an embedded derivative and/or a maturity of greater than one year.
- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis.
- Structured notes issued as part of IB's client-driven activities. (Structured notes are financial instruments that contain embedded derivatives.)
- Certain tax credits and other equity investments acquired as part of the Washington Mutual transaction.

The cumulative effect on retained earnings of the adoption of the fair value option on January 1, 2007, was $199 million.

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated Statements of Income for the years ended December 31, 2009, 2008 and 2007, for items for which the fair value option was elected. Profit and loss information for related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2009			2008			2007		
December 31, (in millions)	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	**$ (553)**	**$ —**	**$ (553)**	$ 1,139	$ —	$ 1,139	$ 580	$ —	$ 580
Securities borrowed	**82**	**—**	**82**	29	—	29	—	—	—
Trading assets:									
Debt and equity instruments, excluding loans	**619**	**25**[c]	**644**	(870)	(58)[c]	(928)	421	(1)[c]	420
Loans reported as trading assets:									
Changes in instrument-specific credit risk	**(300)**	**(177)**[c]	**(477)**	(9,802)	(283)[c]	(10,085)	(517)	(157)[c]	(674)
Other changes in fair value	**1,132**	**3,119**[c]	**4,251**	696	1,178[c]	1,874	188	1,033[c]	1,221
Loans:									
Changes in instrument-specific credit risk	**(78)**	**—**	**(78)**	(1,991)	—	(1,991)	102	—	102
Other changes in fair value	**(343)**	**—**	**(343)**	(42)	—	(42)	40	—	40
Other assets	**—**	**(731)**[d]	**(731)**	—	(660)[d]	(660)	—	30[d]	30
Deposits[a]	**(766)**	**—**	**(766)**	(132)	—	(132)	(906)	—	(906)
Federal funds purchased and securities loaned or sold under repurchase agreements	**116**	**—**	**116**	(127)	—	(127)	(78)	—	(78)
Other borrowed funds[a]	**(1,277)**	**—**	**(1,277)**	1,888	—	1,888	(412)	—	(412)
Trading liabilities	**(3)**	**—**	**(3)**	35	—	35	(17)	—	(17)
Accounts payable and other liabilities	**64**	**—**	**64**	—	—	—	(460)	—	(460)
Beneficial interests issued by consolidated VIEs	**(351)**	**—**	**(351)**	355	—	355	(228)	—	(228)
Long-term debt:									
Changes in instrument-specific credit risk[a]	**(1,543)**	**—**	**(1,543)**	1,174	—	1,174	771	—	771
Other changes in fair value[b]	**(2,393)**	**—**	**(2,393)**	16,202	—	16,202	(2,985)	—	(2,985)

(a) Total changes in instrument-specific credit risk related to structured notes were $(1.6) billion, $1.2 billion and $806 million for the years ended December 31, 2009, 2008 and 2007, respectively. These totals include adjustments for structured notes classified within deposits and other borrowed funds, as well as long-term debt.

(b) Structured notes are debt instruments with embedded derivatives that are tailored to meet a client's need for derivative risk in funded form. The embedded derivative is the primary driver of risk. The 2008 gain included in "Other changes in fair value" results from a significant decline in the value of certain structured notes where the embedded derivative is principally linked to either equity indices or commodity prices, both of which declined sharply during the third quarter of 2008. Although the risk associated with the structured notes is actively managed, the gains reported in this table do not include the income statement impact of such risk management instruments.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings during 2009, 2008 and 2007, which were attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2009 and 2008, for loans and long-term debt for which the fair value option has been elected. The loans were classified in trading assets – loans or in loans.

	2009			2008		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding
Loans						
Performing loans 90 days or more past due						
Loans reported as trading assets	**$ —**	**$ —**	**$ —**	$ —	$ —	$ —
Loans	**—**	**—**	**—**	—	—	—
Nonaccrual loans						
Loans reported as trading assets	**7,264**	**2,207**	**(5,057)**	5,156	1,460	(3,696)
Loans	**1,126**	**151**	**(975)**	189	51	(138)
Subtotal	**8,390**	**2,358**	**(6,032)**	5,345	1,511	(3,834)
All other performing loans						
Loans reported as trading assets	**35,095**	**29,341**	**(5,754)**	36,336	30,342	(5,994)
Loans	**2,147**	**1,000**	**(1,147)**	10,206	7,441	(2,765)
Total loans	**$ 45,632**	**$32,699**	**$ (12,933)**	$ 51,887	$ 39,294	$(12,593)
Long-term debt						
Principal protected debt	**$ 26,765**[b]	**$26,378**	**$ (387)**	$ 27,043[b]	$ 26,241	$ (802)
Nonprincipal protected debt[a]	**NA**	**22,594**	**NA**	NA	31,973	NA
Total long-term debt	**NA**	**48,972**	**NA**	NA	58,214	NA
Long-term beneficial interests						
Principal protected debt	**$ 90**	**$ 90**	**$ —**	$ —	$ —	$ —
Nonprincipal protected debt[a]	**NA**	**1,320**	**NA**	NA	1,735	NA
Total long-term beneficial interests	**NA**	**$ 1,410**	**NA**	NA	$ 1,735	NA

(a) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note.

(b) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflected as the remaining contractual principal is the final principal payment at maturity.

Note 5 – Derivative instruments

Derivative instruments enable end-users to modify or mitigate exposure to credit or market risks. Counterparties to a derivative contract seek to obtain risks and rewards similar to those that could be obtained from purchasing or selling a related cash instrument without having to exchange the full purchase or sales price upfront. JPMorgan Chase makes markets in derivatives for customers and also uses derivatives to hedge or manage risks of market exposures. The majority of the Firm's derivatives are entered into for market-making purposes.

Trading derivatives

The Firm transacts in a variety of derivatives in its trading portfolios to meet the needs of customers (both dealers and clients) and to generate revenue through this trading activity. The Firm makes markets in derivatives for its customers (collectively, "client derivatives"), seeking to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives. The Firm also seeks to earn a spread between the client derivatives and offsetting positions, and from the remaining open risk positions.

Risk management derivatives

The Firm manages its market exposures using various derivative instruments.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increase or decrease as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency–denominated (i.e., non-U.S.) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar–equivalent values of the foreign currency–denominated assets and liabilities or forecasted revenue or expense increase or decrease. Gains or losses on the derivative instruments related to

these foreign currency–denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities based forward and futures contracts are used to manage the price risk of certain inventory, including gold and base metals, in the Firm's commodities portfolio. Gains or losses on the forwards and futures are expected to substantially offset the depreciation or appreciation of the related inventory. Also in the commodities portfolio, electricity and natural gas futures and forwards contracts are used to manage price risk associated with energy-related tolling and load-serving contracts and investments.

The Firm uses credit derivatives to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 181–183 of this Annual Report.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 180 of this Annual Report.

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2009 and 2008.

	Notional amounts[c]	
December 31, (in billions)	**2009**	2008
Interest rate contracts		
Swaps[a]	**$ 47,663**	$ 54,524
Futures and forwards	**6,986**	6,277
Written options	**4,553**	4,803
Purchased options	**4,584**	4,656
Total interest rate contracts	**63,786**	70,260
Credit derivatives[b]	**5,994**	8,388
Foreign exchange contracts		
Cross-currency swaps[a]	**2,217**	1,681
Spot, futures and forwards	**3,578**	3,744
Written options	**685**	972
Purchased options	**699**	959
Total foreign exchange contracts	**7,179**	7,356
Equity contracts		
Swaps	**81**	77
Futures and forwards	**45**	56
Written options	**502**	628
Purchased options	**449**	652
Total equity contracts	**1,077**	1,413
Commodity contracts		
Swaps	**178**	234
Spot, futures and forwards	**113**	115
Written options	**201**	206
Purchased options	**205**	198
Total commodity contracts	**697**	753
Total derivative notional amounts	**$ 78,733**	$ 88,170

(a) In 2009, cross-currency interest rate swaps previously reported in interest rate contracts were reclassified to foreign exchange contracts to be more consistent with industry practice. The effect of this change resulted in a reclassification of $1.7 trillion in notional amount of cross-currency swaps from interest rate contracts to foreign exchange contracts as of December 31, 2008.
(b) Primarily consists of credit default swaps. For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 181–183 of this Note.
(c) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivative activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount does not change hands; it is used simply as a reference to calculate payments.

Accounting for derivatives

All free-standing derivatives are required to be recorded on the Consolidated Balance Sheets at fair value. The accounting for changes in value of a derivative depends on whether or not the contract has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are marked to market through earnings. The tabular disclosures on pages 177–183 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 3 and 4 on pages 156–173 and 173–175, respectively, of this Annual Report.

Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – typically interest rate, foreign exchange and gold and base metal derivatives, as described above. JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased credit default swaps used to manage the credit risk of loans and commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate derivatives used for risk management purposes, or to commodity derivatives used to manage the price risk of tolling and load-serving contracts.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be

assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, available-for-sale ("AFS") securities and gold and base metal inventory. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item, for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the fair value adjustment to the hedged item continues to be reported as part of the basis of the hedged item and for interest-bearing instruments is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges to hedge the exposure to variability in cash flows from floating-rate financial instruments and forecasted transactions, primarily the rollover of short-term assets and liabilities, and foreign currency–denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in other comprehensive income/(loss) ("OCI") and recognized in the Consolidated Statements of Income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in accumulated other comprehensive income/(loss) ("AOCI") is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses foreign currency hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

Impact of derivatives on the Consolidated Balance Sheets

The following table summarizes information on derivative fair values that are reflected on the Firm's Consolidated Balance Sheets as of December 31, 2009, by accounting designation (e.g., whether the derivatives were designated as hedges or not) and contract type.

Free-standing derivatives[a]

	Derivative receivables			Derivative payables		
December 31, 2009 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Not designated as hedges	Designated as hedges	Total derivative payables
Trading assets and liabilities						
Interest rate	$ 1,148,901	$ 6,568	$ 1,155,469	$ 1,121,978	$ 427	$ 1,122,405
Credit	170,864	—	170,864	164,790	—	164,790
Foreign exchange	141,790	2,497	144,287	137,865	353	138,218
Equity	57,871	—	57,871	58,494	—	58,494
Commodity	36,988	39	37,027	35,082	194[c]	35,276
Gross fair value of trading assets and liabilities	$ 1,556,414	$ 9,104	$ 1,565,518	$ 1,518,209	$ 974	$ 1,519,183
Netting adjustment[b]			(1,485,308)			(1,459,058)
Carrying value of derivative trading assets and trading liabilities on the Consolidated Balance Sheets			$ 80,210			$ 60,125

(a) Excludes structured notes for which the fair value option has been elected. See Note 4 on pages 173–175 of this Annual Report for further information.

(b) U.S. GAAP permits the netting of derivative receivables and payables, and the related cash collateral received and paid when a legally enforceable master netting agreement exists between the Firm and a derivative counterparty.

(c) Excludes $1.3 billion related to separated commodity derivatives used as fair value hedging instruments that are recorded in the line item of the host contract (i.e., other borrowed funds).

Derivative receivables and payables mark-to-market

The following table summarizes the fair values of derivative receivables and payables by contract type after netting adjustments as of December 31, 2009 and 2008.

December 31, (in millions)	2009	2008
Derivative receivables:		
Interest rate[a]	**$ 26,777**	$ 49,996
Credit	**18,815**	44,695
Foreign exchange[a]	**21,984**	38,820
Equity	**6,635**	14,285
Commodity	**5,999**	14,830
Total derivative receivables	**$ 80,210**	$ 162,626
Trading liabilities		
Derivative payables:		
Interest rate[a]	**$ 15,220**	$ 27,645
Credit	**10,504**	23,566
Foreign exchange[a]	**19,818**	41,156
Equity	**11,554**	17,316
Commodity	**3,029**	11,921
Total derivative payables	**$ 60,125**	$ 121,604

(a) In 2009, cross-currency interest rate swaps previously reported in interest rate contracts were reclassified to foreign exchange contracts to be more consistent with industry practice. The effect of this change resulted in reclassifications of $14.1 billion of derivative receivables and $20.8 billion of derivative payables, between cross-currency interest rate swaps and foreign exchange contracts, as of December 31, 2008.

Impact of derivatives and hedged items on the income statement and on other comprehensive income

The following table summarizes the total pretax impact of JPMorgan Chase's derivative-related activities on the Firm's Consolidated Statements of Income and Other Comprehensive Income for the year ended December 31, 2009, by accounting designation.

	Derivative-related gains/(losses)					
Consolidated Statements of Income (in millions)	Fair value hedges[a]	Cash flow hedges	Net investment hedges	Risk management activities	Trading activities[a]	Total
Year ended December 31, 2009	**$ 801**	**$ 62**	**$ (112)**	**$ (6,590)**	**$ 16,254**	**$ 10,415**

	Derivative-related net changes in other comprehensive income					
Other Comprehensive Income/(loss)	Fair value hedges	Cash flow hedges	Net investment hedges	Risk management activities	Trading activities	Total
Year ended December 31, 2009	**$ —**	**$ 643**	**$ (259)**	**$ —**	**$ —**	**$ 384**

(a) Includes the hedge accounting impact of the hedged item for fair value hedges, and includes cash instruments within trading activities.

The tables that follow reflect more detailed information regarding the derivative-related income statement impact by accounting designation for the year ended December 31, 2009.

Fair value hedge gains and losses

The following table presents derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pretax gains/(losses) recorded on such derivatives and the related hedged items for the year ended December 31, 2009. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated Statements of Income.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2009 (in millions)	Derivatives	Hedged items	Total income statement impact[d]	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	$ (3,830)	$ 4,638	$ 808	$ (466)	$ 1,274
Foreign exchange[b]	(1,421)	1,445	24	—	24
Commodity[c]	(430)	399	(31)	—	(31)
Total	$ (5,681)	$ 6,482	$ 801	$ (466)	$ 1,267

(a) Primarily consists of hedges of the benchmark (e.g., LIBOR) interest rate risk of fixed-rate long-term debt. Gains and losses were recorded in net interest income.
(b) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in spot foreign currency rates, were recorded in principal transactions revenue.
(c) Consists of overall fair value hedges of physical gold and base metal inventory. Gains and losses were recorded in principal transactions revenue.
(d) Total income statement impact for fair value hedges consists of hedge ineffectiveness and any components excluded from the assessment of hedge effectiveness. The related amounts for the years ended December 31, 2008 and 2007 were net gains of $434 million and $111 million, respectively.
(e) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.
(f) Certain components of hedging derivatives and hedged items are permitted to be excluded from the assessment of hedge effectiveness. Amounts related to excluded components are recorded in current-period income and primarily consist of the impact of the passage of time on the fair value of the hedging derivative and hedged item.

Cash flow hedge gains and losses

The following table presents derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives, for the year ended December 31, 2009. The Firm includes the gain/(loss) on the hedging derivative in the same line item as the offsetting change in cash flows on the hedged item in the Consolidated Statements of Income.

	Gains/(losses) recorded in income and other comprehensive income/(loss) [c]				
Year ended December 31, 2009 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (158)	$ (62)	$ (220)	$ 61	$ 219
Foreign exchange[b]	282	—	282	706	424
Total	$ 124	$ (62)	$ 62	$ 767	$ 643

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income.
(b) Primarily consists of hedges of the foreign currency risk of non–U.S. dollar–denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily net interest income, compensation expense and other expense.
(c) The Firm incurred $15 million of cash flow hedging net gains/(losses) on forecasted transactions that failed to occur for the year-ended December 31, 2007. The Firm did not experience forecasted transactions that failed to occur for the years ended December 31, 2009 and 2008, respectively.
(d) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk. Hedge ineffectiveness recorded directly in income for cash flow hedges were net gains of $18 million and $29 million for the years ended December 31, 2008 and 2007, respectively.

Over the next 12 months, the Firm expects that $245 million (after-tax) of net losses recorded in AOCI at December 31, 2009, related to cash flow hedges will be recognized in income. The maximum length of time over which forecasted transactions are hedged is 10 years, and such transactions primarily relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives for the year ended December 31, 2009.

	Gains/(losses) recorded in income and other comprehensive income/(loss)	
Year ended December 31, 2009 (in millions)	Derivatives – excluded components recorded directly in income[a]	Derivatives – effective portion recorded in OCI
Contract type		
Foreign exchange	$ (112)	$ (259)
Total	$ (112)	$ (259)

(a) Certain components of derivatives used as hedging instruments are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on a futures or forwards contract. Amounts related to excluded components are recorded in current-period income. There was no ineffectiveness for net investment hedge accounting relationships during 2009.

Risk management derivatives gains and losses (not designated as hedging instruments)

The following table presents nontrading derivatives, by contract type, that were not designated in hedge relationships, and the pretax gains/(losses) recorded on such derivatives for the year ended December 31, 2009. These derivatives are risk management instruments used to mitigate or transform the risk of market exposures arising from banking activities other than trading activities, which are discussed separately below.

Year ended December 31, 2009 (in millions)	Derivatives gains/(losses) recorded in income
Contract type	
Interest rate[a]	$ (3,113)
Credit[b]	(3,222)
Foreign exchange[c]	(197)
Equity[b]	(8)
Commodity[b]	(50)
Total	$ (6,590)

(a) Gains and losses were recorded in principal transactions revenue, mortgage fees and related income, and net interest income.
(b) Gains and losses were recorded in principal transactions revenue.
(c) Gains and losses were recorded in principal transactions revenue and net interest income.

Trading derivative gains and losses

The Firm has elected to present derivative gains and losses related to its trading activities together with the cash instruments with which they are risk managed. All amounts are recorded in principal transactions revenue in the Consolidated Statements of Income for the year ended December 31, 2009.

Year ended December 31, 2009 (in millions)	Gains/(losses) recorded in principal transactions revenue
Type of instrument	
Interest rate	$ 4,375
Credit	5,022
Foreign exchange	4,053
Equity	1,475
Commodity	1,329
Total	$ 16,254

Credit risk, liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk – the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to enter into legally enforceable master netting agreements as well as to actively pursue the use of collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated Balance Sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. These amounts represent the cost to the Firm to replace the contracts at then-current market rates should the counterparty default.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the mark-to-market ("MTM") moves in the counterparties' favor, or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. At December 31, 2009, the impact of a single-notch and six-notch ratings downgrade to JPMorgan Chase & Co. and its subsidiaries, primarily JPMorgan Chase Bank, N.A., would have required $1.2 billion and $3.6 billion, respectively, of additional collateral to be posted by the Firm. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. At December 31, 2009, the impact of single-notch and six-notch ratings downgrades to JPMorgan Chase & Co. and its subsidiaries, primarily JPMorgan Chase Bank, N.A., related to contracts with termination triggers would have required the Firm to settle trades with a fair value of $260 million and $4.7 billion, respectively. The aggregate fair value of net derivative payables that contain contingent collateral or termination features triggered upon a downgrade was $22.6 billion at December 31, 2009, for which the Firm has posted collateral of $22.3 billion in the normal course of business.

The following table shows the current credit risk of derivative receivables after netting adjustments, and the current liquidity risk of derivative payables after netting adjustments, as of December 31, 2009.

December 31, 2009 (in millions)	Derivative receivables	Derivative payables
Gross derivative fair value	$ 1,565,518	$ 1,519,183
Netting adjustment – offsetting receivables/payables	(1,419,840)	(1,419,840)
Netting adjustment – cash collateral received/paid	(65,468)	(39,218)
Carrying value on Consolidated Balance Sheets	$ 80,210	$ 60,125

In addition to the collateral amounts reflected in the table above, at December 31, 2009, the Firm had received and posted liquid securities collateral in the amount of $15.5 billion and $11.7 billion, respectively. The Firm also receives and delivers collateral at the initiation of derivative transactions, which is available as security against potential exposure that could arise should the fair value of the transactions move in the Firm's or client's favor, respectively. Furthermore, the Firm and its counterparties hold collateral related to contracts that have a non-daily call frequency for collateral to be posted, and collateral that the Firm or a counterparty has agreed to return but has not yet settled as of the reporting date. At December 31, 2009, the Firm had received $16.9 billion and delivered $5.8 billion of such additional collateral. These amounts were not netted against the derivative receivables and payables in the table above, because, at an individual counterparty level, the collateral exceeded the fair value exposure at December 31, 2009.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker in the dealer/client business, the Firm actively risk manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. As a seller of protection, the Firm's exposure to a given reference entity may be offset partially, or entirely, with a contract to purchase protection from another counterparty on the same or similar reference entity. Second, the Firm uses credit derivatives to mitigate credit risk associated with its overall derivative receivables and traditional commercial credit lending exposures (loans and unfunded commitments) as well as to manage its exposure to residential and commercial mortgages. See Note 3 on pages 156–173 of this Annual Report for further information on the Firm's mortgage-related exposures. In accomplishing the above, the Firm uses different types of credit derivatives. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index, as described further below. The Firm purchases and sells protection on both single- name and index-reference obligations. Single-name CDS and index CDS contracts are both OTC derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while CDS index are used to manage credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index is comprised of a portfolio of CDS across many reference entities. New series of CDS indices are established approximately every six months with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at the time of settling the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-linked notes

A credit linked note ("CLN") is a funded credit derivative where the issuer of the CLN purchases credit protection on a referenced entity from the note investor. Under the contract, the investor pays the issuer par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity experiences a specified credit event. In that event, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note

and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the CLN has recourse to the defaulting reference entity. For a further discussion of CLNs, see Note 16 on pages 214–222 of this Annual Report.

The following table presents a summary of the notional amounts of credit derivatives and credit-linked notes the Firm sold and purchased as of December 31, 2009 and 2008. Upon a credit event, the Firm as seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. As such, other purchased protection referenced in the following table includes credit derivatives bought on related, but not identical, reference positions; these include indices, and portfolio coverage. The Firm does not use notional amounts as the primary measure of risk management for credit derivatives, because notional amounts do not take into account the probability of the occurrence of a credit event, recovery value of the reference obligation, or related cash instruments and economic hedges.

Total credit derivatives and credit-linked notes

	Maximum payout/Notional amount			
December 31, 2009 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (2,937,442)	$ 2,978,044	$ 40,602	$ 28,064
Other credit derivatives[a]	(10,575)	9,290	(1,285)	30,473
Total credit derivatives	(2,948,017)	2,987,334	39,317	58,537
Credit-linked notes	(4,031)	—	(4,031)	1,728
Total	$ (2,952,048)	$ 2,987,334	$ 35,286	$ 60,265

	Maximum payout/Notional amount			
December 31, 2008 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (4,099,141)	$ 3,973,616	$ (125,525)	$ 288,751
Other credit derivatives[a]	(4,026)	—	(4,026)	22,344
Total credit derivatives	(4,103,167)	3,973,616	(129,551)	311,095
Credit-linked notes	(4,080)	—	(4,080)	2,373
Total	$ (4,107,247)	$ 3,973,616	$ (133,631)	$ 313,468

(a) Primarily consists of total return swaps and credit default swap options.
(b) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(d) Represents single-name and index CDS protection the Firm purchased.

The following table summarizes the notional and fair value amounts of credit derivatives and credit-linked notes as of December 31, 2009, and 2008, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of protection purchased are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-linked notes ratings[a] /maturity profile

December 31, 2009 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value[b]
Risk rating of reference entity					
Investment-grade (AAA/Aaa to BBB-/Baa3)	**$ (215,580)**	**$ (1,140,133)**	**$ (367,015)**	**$ (1,722,728)**	**$ (16,607)**
Noninvestment-grade (BB+/Ba1 and below)	**(150,122)**	**(806,139)**	**(273,059)**	**(1,229,320)**	**(90,410)**
Total	**$ (365,702)**	**$ (1,946,272)**	**$ (640,074)**	**$ (2,952,048)**	**$ (107,017)**

December 31, 2008 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value[b]
Risk rating of reference entity					
Investment-grade (AAA/Aaa to BBB-/Baa3)	$ (179,379)	$ (1,743,283)	$ (701,775)	$ (2,624,437)	$ (222,318)
Noninvestment-grade (BB+/Ba1 and below)	(118,734)	(950,619)	(413,457)	(1,482,810)	(253,326)
Total	$ (298,113)	$ (2,693,902)	$ (1,115,232)	$ (4,107,247)	$ (475,644)

(a) Ratings scale is based on the Firm's internal ratings, which generally correspond to ratings defined by S&P and Moody's.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral held by the Firm.

Note 6 – Noninterest revenue

Investment banking fees

This revenue category includes advisory and equity and debt underwriting fees. Advisory fees are recognized as revenue when the related services have been performed. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee (e.g., the fee is not contingent upon the customer obtaining financing). Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria.

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	**2009**	2008	2007
Underwriting:			
Equity	**$ 2,487**	$ 1,477	$ 1,713
Debt	**2,739**	2,094	2,650
Total underwriting	**5,226**	3,571	4,363
Advisory	**1,861**	1,955	2,272
Total investment banking fees	**$ 7,087**	$ 5,526	$ 6,635

Principal transactions

Principal transactions revenue consists of realized and unrealized gains and losses from trading activities (including physical commodities inventories that are accounted for at the lower of cost or fair value), changes in fair value associated with financial instruments held by IB for which the fair value option was elected, and loans held-for-sale within the wholesale lines of business. For loans measured at fair value under the fair value option, origination costs are recognized in the associated expense category as incurred. Principal transactions revenue also includes private equity gains and losses.

The following table presents principal transactions revenue.

Year ended December 31, (in millions)	**2009**	2008	2007
Trading revenue	**$ 9,870**	$ (9,791)	$ 4,736
Private equity gains/(losses)[a]	**(74)**	(908)	4,279
Principal transactions	**$ 9,796**	$ (10,699)	$ 9,015

(a) Includes revenue on private equity investments held in the Private Equity business within Corporate/Private Equity, and those held in other business segments.

Lending- and deposit-related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan-servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions, and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met.

The following table presents the components of asset management, administration and commissions.

Year ended December 31, (in millions)	**2009**	2008	2007
Asset management:			
Investment management fees	**$ 4,997**	$ 5,562	$ 6,364
All other asset management fees	**356**	432	639
Total asset management fees	**5,353**	5,994	7,003
Total administration fees[a]	**1,927**	2,452	2,401
Commission and other fees:			
Brokerage commissions	**2,904**	3,141	2,702
All other commissions and fees	**2,356**	2,356	2,250
Total commissions and fees	**5,260**	5,497	4,952
Total asset management, administration and commissions	**$12,540**	$ 13,943	$ 14,356

(a) Includes fees for custody, securities lending, funds services and securities clearance.

Mortgage fees and related income

This revenue category primarily reflects RFS's mortgage banking revenue, including: fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously sold loans; the impact of risk management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. For loans measured at fair value under the fair value option, origination costs are recognized in the associated expense category as

incurred. Costs to originate loans held-for-sale and accounted for at the lower of cost or fair value are deferred and recognized as a component of the gain or loss on sale. Net interest income from mortgage loans, and securities gains and losses on AFS securities used in mortgage-related risk management activities, are recorded in interest income and securities gains/(losses), respectively. For a further discussion of MSRs, see Note 17 on pages 222–225 of this Annual Report.

Credit card income

This revenue category includes interchange income from credit and debit cards and servicing fees earned in connection with securitization activities. Volume-related payments to partners and expense for rewards programs are netted against interchange income; expense related to rewards programs are recorded when the rewards are earned by the customer. Other fee revenue is recognized as earned, except for annual fees, which are deferred and recognized on a straight-line basis over the 12-month period to which they pertain. Direct loan origination costs are also deferred and recognized over a 12-month period. In addition, due to the consolidation of Chase Paymentech Solutions in the fourth quarter of 2008, this category now includes net fees earned for processing card transactions for merchants.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous affinity organizations and co-brand partners, which grant the Firm exclusive rights to market to the members or customers of such organizations and partners. These organizations and partners endorse the credit card programs and provide their mailing lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to ten years. The economic incentives the Firm pays to the endorsing organizations and partners typically include payments based on new account originations, charge volumes, and the cost of the endorsing organizations' or partners' marketing activities and awards.

The Firm recognizes the payments made to the affinity organizations and co-brand partners based on new account originations as direct loan origination costs. Payments based on charge volumes are considered by the Firm as revenue sharing with the affinity organizations and co-brand partners, which are deducted from interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the endorsing organization or partner are expensed by the Firm as incurred. These costs are recorded within noninterest expense.

Note 7 – Interest income and Interest expense

Details of interest income and interest expense were as follows.

Year ended December 31, (in millions)	2009	2008	2007
Interest income[a]			
Loans	**$ 38,704**	$ 38,347	$ 36,660
Securities	**12,377**	6,344	5,232
Trading assets	**12,098**	17,236	17,041
Federal funds sold and securities purchased under resale agreements	**1,750**	5,983	6,497
Securities borrowed	**4**	2,297	4,539
Deposits with banks	**938**	1,916	1,418
Other assets[b]	**479**	895	—
Total interest income	**66,350**	73,018	71,387
Interest expense[a]			
Interest-bearing deposits	**4,826**	14,546	21,653
Short-term and other liabilities[c]	**3,845**	10,933	16,142
Long-term debt	**6,309**	8,355	6,606
Beneficial interests issued by consolidated VIEs	**218**	405	580
Total interest expense	**15,198**	34,239	44,981
Net interest income	**$ 51,152**	$ 38,779	$ 26,406
Provision for credit losses	**32,015**	19,445	6,864
Provision for credit losses – accounting conformity[d]	**—**	1,534	—
Total provision for credit losses	**$ 32,015**	$ 20,979	$ 6,864
Net interest income after provision for credit losses	**$ 19,137**	$ 17,800	$ 19,542

(a) Interest income and interest expense include the current-period interest accruals for financial instruments measured at fair value, except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP absent the fair value option election; for those instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.
(b) Predominantly margin loans.
(c) Includes brokerage customer payables.
(d) 2008 includes an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual's banking operations.

Note 8 – Pension and other postretirement employee benefit plans

The Firm's defined benefit pension plans and its other postretirement employee benefit ("OPEB") plans are accounted for in accordance with U.S. GAAP for retirement benefits.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based on eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after three years of service. In November 2009, the Firm announced certain changes to the pay credit schedule and amount of eligible compensation recognized under the U.S. plan effective February 1, 2010. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable employee benefit and local tax laws. On January 15, 2009, and August 28, 2009, the Firm made discretionary deductible cash contributions to its U.S. defined benefit pension plan of $1.3 billion and $1.5 billion, respectively. The amount of potential 2010 contributions to the U.S. defined benefit pension plans, if any, is not reasonably estimable at this time. The expected amount of 2010 contributions to the non-U.S. defined benefit pension plans is $171 million of which $148 million is contractually required.

JPMorgan Chase also has a number of defined benefit pension plans not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees earn pay and interest credits on compensation amounts above the maximum stipulated by law under a qualified plan. The Firm announced that, effective May 1, 2009, pay credits would no longer be provided on compensation amounts above the maximum stipulated by law. The Excess Retirement Plan had an unfunded projected benefit obligation in the amount of $267 million and $273 million, at December 31, 2009 and 2008, respectively.

Defined contribution plans

JPMorgan Chase offers several defined contribution plans in the U.S. and in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is The JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. The 401(k) Savings Plan allows employees to make pretax and Roth 401(k) contributions to tax-deferred investment portfolios. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan. The Firm matches eligible employee contributions up to a certain percentage of benefits-eligible compensation per pay period, subject to plan and legal limits. Employees begin to receive matching contributions after completing a one-year-of-service requirement and are immediately vested in the Firm's contributions when made. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

The Firm announced that, effective May 1, 2009, for employees earning $50,000 or more per year, matching contributions to the 401(k) Savings Plan will be made at the discretion of the Firm's management, depending on the Firm's earnings for the year. Additionally, the Firm amended the matching contribution feature to provide that: (i) matching contributions, if any, will be calculated and credited on an annual basis following the end of the calendar year; and (ii) matching contributions will vest after three years of service for employees hired on or after May 1, 2009. The Firm announced in November 2009 that, for 2009, it will contribute the full matching contributions for all eligible employees earning less than $250,000 based on their contributions to the 401(k) Savings Plan, but not to exceed 5% of their eligible compensation (e.g., base pay).

Effective August 10, 2009, JPMorgan Chase Bank, N.A. became the sponsor of the WaMu Savings Plan.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with length of service and date of hire and provide for limits on the Firm's share of covered medical benefits. The medical and life insurance benefits are both contributory. Postretirement medical benefits also are offered to qualifying U.K. employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations and plan assets and funded status amounts reported on the Consolidated Balance Sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

As of or for the year ended December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans[f]	
(in millions)	**2009**	2008	**2009**	2008	**2009**	2008
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (7,796)**	$ (7,556)	**$(2,007)**	$ (2,743)	**$(1,095)**	$(1,204)
Benefits earned during the year	**(313)**	(278)	**(30)**	(29)	**(3)**	(5)
Interest cost on benefit obligations	**(514)**	(488)	**(122)**	(142)	**(64)**	(74)
Plan amendments	**384**	—	**1**	—	**—**	—
Business combinations	**(4)**[b]	—	**—**	—	**(40)**[b]	(1)[b]
Employee contributions	**NA**	NA	**(3)**	(3)	**(64)**	(61)
Net gain/(loss)	**(408)**	(147)	**(287)**	214	**101**	99
Benefits paid	**674**	673	**95**	105	**160**	154
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(9)**	(10)
Curtailments	**—**	—	**1**	—	**(7)**	(6)
Settlements	**—**	—	**4**	—	**—**	—
Special termination benefits	**—**	—	**(1)**	(3)	**—**	—
Foreign exchange impact and other	**—**	—	**(187)**	594	**(4)**	13
Benefit obligation, end of year	**$ (7,977)**	$ (7,796)	**$ (2,536)**	$ (2,007)	**$ (1,025)**	$ (1,095)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 6,948**	$ 9,960	**$ 2,008**	$ 2,933	**$ 1,126**	$ 1,406
Actual return on plan assets	**1,145**	(2,377)	**218**	(298)	**172**	(246)
Firm contributions	**2,799**	38	**115**	88	**2**	3
Employee contributions	**—**	—	**3**	3	**—**	—
Benefits paid	**(674)**	(673)	**(95)**	(105)	**(31)**	(37)
Settlements	**—**	—	**(4)**	—	**—**	—
Foreign exchange impact and other	**—**	—	**187**	(613)	**—**	—
Fair value of plan assets, end of year	**$ 10,218**[c][d]	$ 6,948[c]	**$ 2,432**[d]	$ 2,008	**$ 1,269**	$ 1,126
Funded/(unfunded) status[a]	**$ 2,241**[e]	$ (848)[e]	**$ (104)**	$ 1	**$ 244**	$ 31
Accumulated benefit obligation, end of year	**$ (7,964)**	$ (7,413)	**$ (2,510)**	$ (1,977)	**NA**	NA

(a) Represents overfunded plans with an aggregate balance of $3.0 billion and $122 million at December 31, 2009 and 2008, respectively, and underfunded plans with an aggregate balance of $623 million and $938 million at December 31, 2009 and 2008, respectively.
(b) Represents change resulting from the Washington Mutual plan in 2009 and the Bear Stearns plan in 2008.
(c) At December 31, 2009 and 2008, approximately $332 million and $313 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.
(d) At December 31, 2009, includes accrued receivables of $82 million and $8 million for U.S. plans and non-U.S. plans, respectively, and accrued liabilities of $265 million and $30 million for U.S. plans and non-U.S. plans, respectively, which are not measured at fair value.
(e) Does not include any amounts attributable to the Washington Mutual Qualified Pension plan in 2009 and the Washington Mutual Pension and OPEB plans in 2008. The disposition of those plans was not determinable.
(f) Includes an unfunded accumulated postretirement benefit obligation of $29 million and $32 million at December 31, 2009 and 2008, respectively, for the U.K. plan.

Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the projected benefit obligation or the fair value of the plan assets. Any excess, as well as prior service costs, are amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently nine years. For OPEB plans, any excess net gains and losses also are amortized over the average future service period, which is currently five years; however, prior service costs are amortized over the average years of service remaining to full eligibility age, which is currently four years.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans	
(in millions)	**2009**	2008	**2009**	2008	**2009**	2008
Net gain/(loss)	**$ (3,039)**	$ (3,493)	**$ (666)**	$ (492)	**$ (171)**	$ (349)
Prior service credit/(cost)	**364**	(26)	**3**	2	**22**	40
Accumulated other comprehensive income/ (loss), pretax, end of year	**$ (2,675)**	$ (3,519)	**$ (663)**	$ (490)	**$ (149)**	$ (309)

The following table presents the components of net periodic benefit costs reported in the Consolidated Statements of Income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2009**	2008	2007	**2009**	2008	2007	**2009**	2008	2007
Components of net periodic benefit cost									
Benefits earned during the year	**$ 313**	$ 278	$ 270	**$ 28**	$ 29	$ 36	**$ 3**	$ 5	$ 7
Interest cost on benefit obligations	**514**	488	468	**122**	142	144	**65**	74	74
Expected return on plan assets	**(585)**	(719)	(714)	**(115)**	(152)	(153)	**(97)**	(98)	(93)
Amortization:									
Net loss	**304**	—	—	**44**	25	55	**—**	—	14
Prior service cost/(credit)	**4**	4	5	**—**	—	—	**(14)**	(16)	(16)
Curtailment (gain)/loss	**1**	1	—	**—**	—	—	**5**	4	2
Settlement (gain)/loss	**—**	—	—	**1**	—	(1)	**—**	—	—
Special termination benefits	**—**	—	—	**1**	3	1	**—**	—	1
Net periodic benefit cost	**551**	52	29	**81**	47	82	**(38)**	(31)	(11)
Other defined benefit pension plans[a]	**15**	11	4	**12**	14	27	**NA**	NA	NA
Total defined benefit plans	**566**	63	33	**93**	61	109	**(38)**	(31)	(11)
Total defined contribution plans	**359**	263	268	**226**	286	219	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 925**	$ 326	$ 301	**$ 319**	$ 347	$ 328	**$ (38)**	$ (31)	$ (11)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	**$ (168)**	$3,243	$ (533)	**$ 183**	$ 235	$ (176)	**$ (176)**	$ 248	$ (223)
Prior service credit arising during the year	**(384)**	—	—	**(1)**	—	(2)	**—**	—	—
Amortization of net loss	**(304)**	—	—	**(44)**	(27)	(55)	**—**	—	(14)
Amortization of prior service (cost)/credit	**(6)**	(5)	(5)	**—**	—	—	**15**	15	16
Curtailment (gain)/loss	**—**	—	—	**—**	—	(5)	**2**	3	3
Settlement loss/(gain)	**—**	—	—	**(1)**	—	1	**—**	—	—
Foreign exchange impact and other	**18**	—	—	**36**	(150)	—	**(1)**	3	—
Total recognized in other comprehensive income	**(844)**	3,238	(538)	**173**	58	(237)	**(160)**	269	(218)
Total recognized in net periodic benefit cost and other comprehensive income	**$ (293)**	$3,290	$ (509)	**$ 254**	$ 105	$ (155)	**$ (198)**	$ 238	$ (229)

(a) Includes various defined benefit pension plans, which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2010 are as follows.

	Defined benefit pension plans		OPEB plans	
Year ended December 31, 2010 (in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss	$ 226	$ 58	$ —	$ (1)
Prior service cost/(credit)	(43)	—	(13)	—
Total	$ 183	$ 58	$ (13)	$ (1)

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
December 31,	**2009**	2008	2007	**2009**	2008	2007
Actual rate of return:						
Defined benefit pension plans	**13.78%**	(25.17)%	7.96%	**3.17-22.43%**	(21.58)-5.06%	0.06-7.51%
OPEB plans	**15.93**	(17.89)	6.51	**NA**	NA	NA

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking building-block approach and are not strictly based on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration is also given to current market conditions and the short-term portfolio mix of each plan; as a

result, in 2009 the Firm generally maintained the same expected return on assets as in the prior year.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on defined benefit pension plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The return on "AA"-rated long-term corporate bonds has been taken as the average yield on such bonds.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension and OPEB plans represents a rate implied from the yield curve of the year-end iBoxx £ corporate "AA" 15-year-plus bond index.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S	
December 31,	**2009**	2008	**2009**	2008
Discount rate:				
Defined benefit pension plans	**6.00%**	6.65%	**2.00-5.70%**	2.00-6.20%
OPEB plans	**6.00**	6.70	**5.70**	6.20
Rate of compensation increase	**4.00**	4.00	**3.00-4.50**	3.00-4.00
Health care cost trend rate:				
Assumed for next year	**7.75**	8.50	**5.40**	7.00
Ultimate	**5.00**	5.00	**4.50**	5.50
Year when rate will reach ultimate	**2014**	2014	**2014**	2012

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2009**	2008	2007	**2009**	2008	2007
Discount rate:						
Defined benefit pension plans	**6.65%**	6.60%	5.95%	**2.00-6.20%**	2.25-5.80%	2.25-5.10%
OPEB plans	**6.70**	6.60	5.90	**6.20**	5.80	5.10
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**7.50**	7.50	7.50	**2.50-6.90**	3.25-5.75	3.25-5.60
OPEB plans	**7.00**	7.00	7.00	**NA**	NA	NA
Rate of compensation increase	**4.00**	4.00	4.00	**3.00-4.00**	3.00-4.25	3.00-4.00
Health care cost trend rate:						
Assumed for next year	**8.50**	9.25	10.00	**7.00**	5.75	6.63
Ultimate	**5.00**	5.00	5.00	**5.50**	4.00	4.00
Year when rate will reach ultimate	**2014**	2014	2014	**2012**	2010	2010

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's total service and interest cost and accumulated postretirement benefit obligation.

Year ended December 31, 2009 (in millions)	1-Percentage-point increase	1-Percentage-point decrease
Effect on total service and interest cost	$ 2	$ (2)
Effect on accumulated postretirement benefit obligation	36	(31)

At December 31, 2009, the Firm decreased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will result in an increase in expense of approximately $31 million for 2010. The 2010 expected long-term rate of return on U.S. pension plan assets and U.S. OPEB plan assets remained at 7.5% and 7.0%, respectively**.** The health care benefit obligation trend assumption declined from 8.5% in 2009 to 7.75% in 2010, declining to a rate of 5% in 2014. As of December 31, 2009, the interest crediting rate assumption and the assumed rate of compensation increase remained at 5.25% and 4.0%, respectively.

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an increase of approximately $28 million in 2010 U.S. defined benefit pension and OPEB

plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2010 U.S. defined benefit pension and OPEB plan expense of approximately $12 million and an increase in the related benefit obligations of approximately $170 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2010 non-U.S. defined benefit pension and OPEB plan expense of approximately $10 million. A 25-basis point increase in the interest crediting rate for the U.S. defined benefit pension plan would result in an increase in 2010 U.S. defined benefit pension expense of approximately $16 million and an increase in the related projected benefit obligations of approximately $67 million.

Investment strategy and asset allocation

The Firm's U.S. defined benefit pension plan assets are held in trust and are invested in a well-diversified portfolio of equities (including U.S. large and small capitalization and international equities), fixed income (e.g., corporate and government bonds, including U.S. Treasury inflation-indexed and high-yield securities), real estate, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity funds, and real estate funds). Non-U.S. defined benefit pension plan assets are held in various trusts and are also invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to fund partially the U.S. OPEB plan, are held in separate accounts with an insurance company and are invested in equity and fixed income index funds. As of December 31, 2009, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except in connection with investments in third-party stock-index funds. In addition, the plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $1.6 billion and $1.1 billion for U.S. plans and $474 million and $354 million for non-U.S. plans, as of December 31, 2009 and 2008, respectively.

The investment policy for the Firm's U.S. postretirement employee benefit plan assets is to optimize the risk-return relationship as appropriate to the plan's needs and goals using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Periodically the Firm performs a comprehensive analysis on the plan's asset allocations, incorporating projected asset and liability data, which focuses on the short-and long-term impact of the plan's asset allocation on cumulative pension expense, economic cost, present value of contributions and funded status. Currently, approved asset allocation ranges are: U.S. equity 15 – 35%, international equity 15 – 25%, debt securities 10 – 30%, hedge funds 10 – 30%, real estate 5 – 20%, and private equity 5 – 20%. The plan does not manage to a specific target asset allocation, but seeks to shift asset class allocations within these stated ranges. Plan assets are managed by a combination of internal and external investment managers. Asset allocation decisions also incorporate the economic outlook and anticipated implications of the macroeconomic environment on the plan's various asset classes and managers. Maintaining an appropriate level of liquidity, which takes into consideration forecasted requirements for cash is a major consideration in the asset allocation process. The Firm regularly reviews the asset allocations and all factors that continuously impact portfolio changes to ensure the plan stays within these asset allocation ranges. The asset allocations are rebalanced when deemed necessary.

The plan's investments include financial instruments which are exposed to various risks such as interest rate, market and credit risks. The plan's exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, the assets are invested to maximize returns subject to an appropriate level of risk relative to the plan's liabilities. In order to reduce the volatility in returns relative to the plan's liability profiles, the U.K. defined benefit pension plan's largest asset allocations are to debt securities of appropriate durations. Other assets are then invested for capital appreciation, mainly equity securities, to provide long-term investment growth. The plan's asset allocations are reviewed on a regular basis.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[c]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2009**	2008	Allocation	**2009**	2008	Allocation	**2009**	2008
Asset category									
Debt securities[a]	10-30%	**29%**	25%	72%	**75%**	73%	50%	**50%**	50%
Equity securities	25-60	**40**	36	26	**23**	21	50	**50**	50
Real estate	5-20	**4**	7	1	**1**	1	—	**—**	—
Alternatives[b]	15-50	**27**	32	1	**1**	5	—	**—**	—
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Debt securities primarily include corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.
(b) Alternatives primarily include limited partnerships.
(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

Fair value measurement of the plans' assets and liabilities
The following details the instruments measured at fair value, including the general classification of such instruments pursuant to the valuation hierarchy, as described in Note 3 on pages 156–173 of this Annual Report.

Cash and cash equivalents
Cash and cash equivalents includes currency on hand, demand deposits with banks or other financial institutions, and any short-term, highly liquid investments readily convertible into cash (i.e., investments with original maturities of three months or less). Due to the highly liquid nature of these assets they are classified within level 1 of the valuation hierarchy.

Equity securities
Common and preferred stocks are valued at the closing price reported on the major stock exchange on which the individual securities are traded and are generally classified within level 1 of the valuation hierarchy.

Common/collective trust funds
These investments are public investment fund vehicles valued based on the quoted NAV, and they are generally classified within level 2 of the valuation hierarchy.

Limited partnerships
Limited partnerships include investments in hedge funds, private equity funds and real estate funds. Hedge funds are valued based on quoted NAV and are classified within level 2 or 3 of the valuation hierarchy depending on the level of liquidity and activity in the markets for each investment. Certain of these investments are subject to restrictions on redemption (such as initial lock-up periods, withdrawal limitations and illiquid assets) and are therefore classified within level 3 of the valuation hierarchy. The valuation of private equity investments and real estate funds require significant management judgment due to the absence of quoted market prices, the inherent lack of liquidity and the long-term nature of such assets and therefore, they are generally classified within level 3 of the valuation hierarchy.

Corporate debt securities and U.S. federal, state, local and non-government debt securities
A limited number of these investments are valued at the closing price reported on the major exchange on which the individual securities are traded. Where quoted prices are available in an active market, the investments are classified within level 1 of the valuation hierarchy. If quoted market prices are not available for the specific security, then fair values are estimated by using pricing models, quoted prices of securities with similar characteristics or discounted cash flows. Such securities are generally classified within level 2 of the valuation hierarchy.

Mortgage-backed securities
Mortgage-backed securities include both U.S. government agency and nonagency securities. U.S. government agency securities are valued based on quoted prices in active markets and are therefore classified in level 1 of the valuation hierarchy. Nonagency securities are primarily "AAA" rated residential and commercial mortgage-based securities valued using a combination of observed transaction prices, independent pricing services and relevant broker quotes. Consideration is given to the nature of the quotes and the relationships of recently evidenced market activity to the prices provided from independent pricing services. Such securities are generally classified within level 2 of the valuation hierarchy.

Derivative receivables and derivative payables
In the normal course of business, foreign exchange, credit derivative, interest rate and equity derivative contracts are used by the plans to minimize fluctuations in the value of plan assets caused by foreign exchange, credit, interest rate, and equity risks. These instruments may also be used in lieu of investing in cash instruments. These derivative instruments are primarily valued using internally developed models that use as their basis readily observable market parameters and are therefore classified within level 2 of the valuation hierarchy.

Other
Other consists of exchange traded funds ("ETFs"), mutual fund investments, and participating and non-participating annuity contracts (the "Annuity Contracts"). ETFs and mutual fund investments are valued using NAV. Those fund investments with a daily NAV that are validated by a sufficient level of observable activity (purchases and sales at NAV) are classified in level 1 of the valuation hierarchy. Where adjustments to the NAV are required, for example, for fund investments subject to restrictions on redemption (such as lock-up periods or withdrawal limitations), and/or observable activity for the fund investment is limited, fund investments are classified in level 2 or 3 of the valuation hierarchy. Annuity Contracts are valued at the amount by which the fair value of the assets held in the separate account exceeds the actuarially determined guaranteed benefit obligation covered under the Annuity Contracts. Annuity Contracts lack market mechanisms for transferring each individual policy and generally include restrictions on the timing of surrender; therefore, these investments are classified within level 3 of the valuation hierarchy.

Pension and OPEB plan assets and liabilities measured at fair value

December 31, 2009 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans			
	Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total	Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Cash and cash equivalents	$ 71	$ —	$ —	$ 71	$ 27	$ —	$ —	$ 27
Equity securities[a]	2,772	14	—	2,786	493	75	—	568
Common/collective trust funds[b]	—	2,478	—	2,478	23	185	—	208
Limited partnerships[c]	—	912	1,697	2,609	—	—	—	—
Corporate debt securities[d]	—	941	—	941	—	685	—	685
U.S. federal, state, local and non-U.S. government debt securities	—	406	—	406	—	841	—	841
Mortgage-backed securities[e]	169	54	—	223	—	—	—	—
Derivative receivables[f]	—	90	—	90	—	5	—	5
Other	348	115	334	797	18	89	13	120
Total assets at fair value	$ 3,360	$ 5,010	$ 2,031	$ 10,401[g]	$ 561	$ 1,880	$ 13	$ 2,454[g]
Derivative payables	—	(76)	—	(76)	—	(30)	—	(30)
Total liabilities at fair value	$ —	$ (76)	$ —	$ (76)[h]	$ —	$ (30)	$ —	$ (30)

(a) This class is generally invested in 84% large cap funds and 16% small/mid cap funds.
(b) This class generally includes commingled funds that are issued for investment by qualified pension plans. They primarily include 39% short-term investment funds, 24% equity (index) and 15% international investments.
(c) This class includes U.S. and non-U.S. assets, which are invested as follows: 59% in hedge funds, 34% in private equity funds, and 7% in real estate funds.
(d) This class includes debt securities of U.S. and non-U.S. corporations.
(e) This class is generally invested in 72% debt securities issued by U.S. government agencies.
(f) This class primarily includes 80% foreign exchange contracts and 16% equity warrants.
(g) Excludes receivables for investments sold and dividends and interest receivables of $82 million and $8 million for U.S. and non-U.S., respectively.
(h) Excludes payables for investments purchased of $177 million and other liabilities of $12 million.

The Firm's OPEB plan is funded with COLI policies of $1.3 billion, which are classified in level 3 of the valuation hierarchy.

Changes in level 3 fair value measurements using significant unobservable inputs

	Fair value, January 1, 2009	Total realized/ (unrealized) gains/(losses)[a]	Purchases, sales and settlements	Transfers into and/or out of level 3	Fair value, December 31, 2009
U.S. defined benefit pension plans					
Limited partnerships	$ 1,537	$ 4	$ 171	$ (15)	$ 1,697
Other	315	19	—	—	334
Total U.S. plans	1,852	23	171	(15)	2,031
Non-U.S. defined benefit pension plans					
Other	14	(1)	—	—	13
Total non-U.S. plans	$ 14	$ (1)	$ —	$ —	$ 13
OPEB plans					
COLI	1,126	172	(29)	—	1,269
Total OPEB plans	$ 1,126	$ 172	$ (29)	$ —	$ 1,269

(a) Total realized (unrealized) gains/(losses) is the change in unrealized gains or losses relating to assets held at December 31, 2009.

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2010	$ 974	$ 90	$ 103	$ 10
2011	979	83	103	11
2012	576	93	101	12
2013	579	100	99	13
2014	584	103	97	14
Years 2015–2019	2,939	627	443	66

Note 9 – Employee stock-based incentives

Employee stock-based awards

In 2009, 2008, and 2007, JPMorgan Chase granted long-term stock-based awards to certain key employees under the 2005 Long-Term Incentive Plan (the "2005 Plan"). The 2005 Plan, plus prior Firm plans and plans assumed as the result of acquisitions, constitute the Firm's stock-based incentive plans (collectively, "LTI Plan"). The 2005 Plan became effective on May 17, 2005, and was amended in May 2008. Under the terms of the amended 2005 plan, as of December 31, 2009, 199 million shares of common stock are available for issuance through May 2013. The amended 2005 Plan is the only active plan under which the Firm is currently granting stock-based incentive awards.

Restricted stock units ("RSUs") are awarded at no cost to the recipient upon their grant. RSUs are generally granted annually and generally vest at a rate of 50% after two years and 50% after three years and convert into shares of common stock at the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All of these awards are subject to forfeiture until the vesting date. An RSU entitles the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSU is outstanding and, as such, are considered participating securities as discussed in Note 25 on page 232 of this Annual Report.

Under the LTI Plan, stock options and stock appreciation rights ("SARs") have been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm typically awards SARs to certain key employees once per year, and it also periodically grants discretionary stock-based incentive awards to individual employees, primarily in the form of both employee stock options and SARs. The 2009, 2008 and 2007 grants of SARs to key employees vest ratably over 5 years (i.e., 20% per year) and do not include any full-career eligibility provisions. These awards generally expire 10 years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions, the Firm accrues the estimated value of awards expected to be awarded to employees who will be retirement-eligible as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2009, 2008 and 2007, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. The SARs, which have a 10-year term, will become exercisable no earlier than January 22, 2013, and have an exercise price of $39.83. The number of SARs that will become exercisable (ranging from none to the full 2 million) and their exercise date or dates may be determined by the Board of Directors based on an annual assessment of the performance of both the CEO and JPMorgan Chase. The Firm recognizes this award ratably over an assumed five-year service period, subject to a requirement to recognize changes in the fair value of the award through the grant date. The Firm recognized $9 million and $1 million in compensation expense in 2009 and 2008, respectively, for this award.

In connection with the Bear Stearns merger, 46 million Bear Stearns employee stock awards, principally RSUs, capital appreciation plan units and stock options, were exchanged for equivalent JPMorgan Chase awards using the merger exchange ratio of 0.21753. The fair value of these employee stock awards was included in the Bear Stearns purchase price, since substantially all of the awards were fully vested immediately after the merger date under provisions that provided for accelerated vesting upon a change of control of Bear Stearns. However, Bear Stearns vested employee stock options had no impact on the purchase price; since the employee stock options were significantly out of the money at the merger date, the fair value of these awards was equal to zero upon their conversion into JPMorgan Chase options.

The Firm also exchanged 6 million shares of its common stock for 27 million shares of Bear Stearns common stock held in an irrevocable grantor trust (the "RSU Trust"), using the merger exchange ratio of 0.21753. The RSU Trust was established to hold common stock underlying awards granted to selected employees and key executives under certain Bear Stearns employee stock plans. The RSU Trust was consolidated on JPMorgan Chase's Consolidated Balance Sheets as of June 30, 2008, and the shares held in the RSU Trust were recorded in "Shares held in RSU Trust," which reduced stockholders' equity, similar to the treatment for treasury stock. A related obligation to issue stock under these employee stock plans is reported in capital surplus. The issuance of shares held in the RSU Trust to employees has no effect on the Firm's total stockholders' equity, net income or earnings per share. Shares held in the RSU Trust were distributed in 2008 and 2009, with a majority of the shares in the RSU Trust distributed through December 2009. There were 2 million shares in the RSU Trust as of December 31, 2009. The remaining shares are expected to be distributed over the next three years.

RSU activity

Compensation expense for RSUs is measured based on the number of shares granted multiplied by the stock price at the grant date and is recognized in income as previously described. The following table summarizes JPMorgan Chase's RSU activity for 2009.

Year ended December 31, 2009 (in thousands, except weighted average data)	Number of shares	Weighted-average grant date fair value
Outstanding, January 1	148,044	$ 42.53
Granted	131,145	19.68
Vested	(49,822)	43.34
Forfeited	(8,102)	29.58
Outstanding, December 31	221,265	$ 29.32

The total fair value of shares that vested during the years ended December 31, 2009, 2008 and 2007, was $1.3 billion, $1.6 billion and $1.5 billion, respectively.

Employee stock option and SARs activity

Compensation expense, which is measured at the grant date as the fair value of employee stock options and SARs, is recognized in net income as described above.

The following table summarizes JPMorgan Chase's employee stock option and SARs activity for the year ended December 31, 2009, including awards granted to key employees and awards granted in prior years under broad-based plans.

Year ended December 31, 2009 (in thousands, except weighted-average data)	Number of options/SARs	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	283,369	$ 47.21		
Granted	24,821	20.83		
Exercised	(17,406)	30.81		
Forfeited	(1,913)	39.85		
Canceled	(22,303)	47.88		
Outstanding, December 31	266,568	$ 45.83	3.4	$ 1,311,897
Exercisable, December 31	214,443	48.94	2.2	765,276

The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2009, 2008 and 2007, was $8.24, $10.36 and $13.38, respectively. The total intrinsic value of options exercised during the years ended December 31, 2009, 2008 and 2007, was $154 million, $391 million and $937 million, respectively.

Compensation expense

The Firm recognized noncash compensation expense related to its various employee stock-based incentive awards of $3.4 billion, $2.6 billion and $2.0 billion for the years ended December 31, 2009, 2008 and 2007, respectively, in its Consolidated Statements of Income. These amounts included an accrual for the estimated cost of stock awards to be granted to full-career eligible employees of $845 million, $409 million and $500 million for the years ended December 31, 2009, 2008 and 2007, respectively. At December 31, 2009, approximately $1.6 billion (pretax) of compensation cost related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.2 years. The Firm does not capitalize any compensation cost related to share-based compensation awards to employees.

Cash flows and tax benefits

Income tax benefits related to stock-based incentive arrangements recognized in the Firm's Consolidated Statements of Income for the years ended December 31, 2009, 2008 and 2007, were $1.3 billion, $1.1 billion and $810 million, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements, and the actual income tax benefit realized related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	**2009**	2008	2007
Cash received for options exercised	**$ 437**	$1,026	$2,023
Tax benefit realized	**11**	72	238

In June 2007, the FASB ratified guidance which requires that realized tax benefits from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings be recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards. Prior to the issuance of this guidance, the Firm did not include these tax benefits as part of this pool of excess tax benefits. The Firm adopted this guidance on January 1, 2008, and it did not have an impact on the Firm's Consolidated Balance Sheets or results of operations.

The following table presents the assumptions used to value employee stock options and SARs granted during the years ended December 31, 2009, 2008 and 2007, under the Black-Scholes valuation model.

Valuation assumptions

Year ended December 31,	**2009**	2008	2007
Weighted-average annualized valuation assumptions			
Risk-free interest rate	**2.33%**	3.90%	4.78%
Expected dividend yield[a]	**3.40**	3.57	3.18
Expected common stock price volatility	**56**	34	33
Expected life (in years)	**6.6**	6.8	6.8

(a) In 2009, the expected dividend yield was determined using historical dividend yields.

The expected volatility assumption is derived from the implied volatility of JPMorgan Chase's publicly traded stock options. The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled, and the assumption is based on the Firm's historic experience.

Note 10 – Noninterest expense

The following table presents the components of noninterest expense.

Year ended December 31, (in millions)	**2009**	2008	2007
Compensation expense	**$ 26,928**	$ 22,746	$ 22,689
Noncompensation expense:			
Occupancy expense	**3,666**	3,038	2,608
Technology, communications and equipment expense	**4,624**	4,315	3,779
Professional and outside services	**6,232**	6,053	5,140
Marketing	**1,777**	1,913	2,070
Other expense[a][b]	**7,594**	3,740	3,814
Amortization of intangibles	**1,050**	1,263	1,394
Total noncompensation expense	**24,943**	20,322	18,805
Merger costs	**481**	432	209
Total noninterest expense	**$ 52,352**	$ 43,500	$ 41,703

(a) Includes a $675 million FDIC special assessment in 2009.
(b) Included foreclosed property expense of $1.4 billion, $213 million and $56 million for 2009, 2008 and 2007, respectively. For additional information regarding foreclosed property, see Note 13 on pages 200–204 of this Annual Report.

Merger costs

Costs associated with the Bear Stearns merger and the Washington Mutual transaction in 2008, the 2004 merger with Bank One Corporation and The Bank of New York, Inc. ("The Bank of New York") transaction in 2006 are reflected in the merger costs caption of the Consolidated Statements of Income. For a further discussion of the Bear Stearns merger and the Washington Mutual transaction, see Note 2 on pages 151–156 of this Annual Report. A summary of merger-related costs is shown in the following table.

	2009			2008			
Year ended December 31, (in millions)	Bear Stearns	Washington Mutual	Total	Bear Stearns	Washington Mutual	Total	2007[b]
Expense category							
Compensation	**$ (9)**	**$ 256**	**$ 247**	$ 181	$ 113	$ 294	$ (19)
Occupancy	**(3)**	**15**	**12**	42	—	42	17
Technology and communications and other	**38**	**184**	**222**	85	11	96	188
The Bank of New York transaction	**—**	**—**	**—**	—	—	—	23
Total[a]	**$ 26**	**$ 455**	**$ 481**	$ 308	$ 124	$ 432	$ 209

(a) With the exception of occupancy- and technology-related write-offs, all of the costs in the table required the expenditure of cash.
(b) The 2007 activity reflects the 2004 merger with Bank One Corporation and the transaction with The Bank of New York.

The table below shows changes in the merger reserve balance related to costs associated with the above transactions.

	2009			2008			
Year ended December 31, (in millions)	Bear Stearns	Washington Mutual	Total	Bear Stearns	Washington Mutual	Total	2007[a]
Merger reserve balance, beginning of period	**$ 327**	**$ 441**	**$ 768**	$ —	$ —	$ —	$ 155
Recorded as merger costs	**26**	**455**	**481**	308	124	432	186
Recorded as goodwill	**(5)**	**—**	**(5)**	1,112	435	1,547	(60)
Utilization of merger reserve	**(316)**	**(839)**	**(1,155)**	(1,093)	(118)	(1,211)	(281)
Merger reserve balance, end of period	**$ 32**	**$ 57**	**$ 89**	$ 327	$ 441	$ 768	$ —[b]

(a) The 2007 activity reflects the 2004 merger with Bank One Corporation.
(b) Excludes $10 million at December 31, 2007, related to the Bank of New York transaction.

Note 11 – Securities

Securities are classified as AFS, held-to-maturity ("HTM") or trading. Trading securities are discussed in Note 3 on pages 156–173 of this Annual Report. Securities are classified primarily as AFS when used to manage the Firm's exposure to interest rate movements, as well as to make strategic longer-term investments. AFS securities are carried at fair value on the Consolidated Balance Sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to accumulated other comprehensive income/(loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated Statements of Income. Securities that the Firm has the positive intent and ability to hold to maturity are classified as HTM and are carried at amortized cost on the Consolidated Balance Sheets. The Firm has not classified new purchases of securities as HTM for the past several years.

The following table presents realized gains and losses from AFS securities.

Year ended December 31, (in millions)	**2009**	2008	2007
Realized gains	**$ 2,268**	$ 1,890	$ 667
Realized losses	**(580)**	(254)	(503)
Net realized gains[a]	**1,688**	1,636	164
Credit losses included in securities gains[b]	**(578)**	(76)	—
Net securities gains	**$ 1,110**	$ 1,560	$ 164

(a) Proceeds from securities sold were within approximately 3% of amortized cost in 2009 and approximately 2% of amortized cost in 2008 and 2007.
(b) Includes other-than-temporary impairment losses recognized in income on certain prime and subprime mortgage-backed securities and obligations of U.S. states and municipalities.

The amortized costs and estimated fair values of AFS and HTM securities were as follows for the dates indicated.

	2009				2008			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities[a]:								
U.S. government agencies[b]	**$ 166,094**	**$ 2,412**	**$ 608**	**$ 167,898**	$ 115,198	$ 2,414	$ 227	$ 117,385
Residential:								
Prime and Alt-A	**5,234**	**96**	**807**[d]	**4,523**	8,826	4	1,935	6,895
Subprime	**17**	**—**	**—**	**17**	213	—	19	194
Non-U.S.	**10,003**	**320**	**65**	**10,258**	2,233	24	182	2,075
Commercial	**4,521**	**132**	**63**	**4,590**	4,623	—	684	3,939
Total mortgage-backed securities	**$ 185,869**	**$ 2,960**	**$ 1,543**	**$ 187,286**	$ 131,093	$ 2,442	$ 3,047	$ 130,488
U.S. Treasury and government agencies[b]	**30,044**	**88**	**135**	**29,997**	10,402	52	97	10,357
Obligations of U.S. states and municipalities	**6,270**	**292**	**25**	**6,537**	3,479	94	238	3,335
Certificates of deposit	**2,649**	**1**	**—**	**2,650**	17,226	64	8	17,282
Non-U.S. government debt securities	**24,320**	**234**	**51**	**24,503**	8,173	173	2	8,344
Corporate debt securities	**61,226**	**812**	**30**	**62,008**	9,358	257	61	9,554
Asset-backed securities[a]:								
Credit card receivables	**25,266**	**502**	**26**	**25,742**	13,651	8	2,268	11,391
Collateralized debt and loan obligations	**12,172**	**413**	**436**	**12,149**	11,847	168	820	11,195
Other	**6,719**	**129**	**54**	**6,794**	1,026	4	135	895
Total available-for-sale debt securities	**$ 354,535**	**$ 5,431**	**$ 2,300**[d]	**$ 357,666**	$ 206,255	$ 3,262	$ 6,676	$ 202,841
Available-for-sale equity securities	**2,518**	**185**	**4**	**2,699**	3,073	2	7	3,068
Total available-for-sale securities	**$ 357,053**	**$ 5,616**	**$ 2,304**[d]	**$ 360,365**	$ 209,328	$ 3,264	$ 6,683	$ 205,909
Total held-to-maturity securities[c]	**$ 25**	**$ 2**	**$ —**	**$ 27**	$ 34	$ 1	$ —	$ 35

(a) Prior periods have been revised to conform to the current presentation.
(b) Includes total U.S. government-sponsored enterprise obligations with fair values of $153.0 billion and $120.1 billion at December 31, 2009 and 2008, respectively, which were predominantly mortgage-related.
(c) Consists primarily of mortgage-backed securities issued by U.S. government-sponsored enterprises.
(d) Includes a total of $368 million (before tax) of unrealized losses related to prime mortgage-backed securities reported in accumulated comprehensive income not related to credit on debt securities for which credit losses have been recognized in income.

Securities impairment

The following table presents the fair value and gross unrealized losses for AFS securities by aging category at December 31.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2009 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	**$ 43,235**	**$ 603**	**$ 644**	**$ 5**	**$ 43,879**	**$ 608**
Residential:						
Prime and Alt-A	**183**	**27**	**3,032**	**780**	**3,215**	**807**
Subprime	**—**	**—**	**—**	**—**	**—**	**—**
Non-U.S.	**391**	**1**	**1,773**	**64**	**2,164**	**65**
Commercial	**679**	**34**	**229**	**29**	**908**	**63**
Total mortgage-backed securities	**44,488**	**665**	**5,678**	**878**	**50,166**	**1,543**
U.S. Treasury and government agencies	**8,433**	**135**	**—**	**—**	**8,433**	**135**
Obligations of U.S. states and municipalities	**472**	**11**	**389**	**14**	**861**	**25**
Certificates of deposit	**—**	**—**	**—**	**—**	**—**	**—**
Non-U.S. government debt securities	**2,471**	**46**	**835**	**5**	**3,306**	**51**
Corporate debt securities	**1,831**	**12**	**4,634**	**18**	**6,465**	**30**
Asset-backed securities:						
Credit card receivables	**—**	**—**	**745**	**26**	**745**	**26**
Collateralized debt and loan obligations	**42**	**1**	**7,883**	**435**	**7,925**	**436**
Other	**767**	**8**	**1,767**	**46**	**2,534**	**54**
Total available-for-sale debt securities	**58,504**	**878**	**21,931**	**1,422**	**80,435**	**2,300**
Available-for-sale equity securities	**1**	**1**	**3**	**3**	**4**	**4**
Total securities with gross unrealized losses	**$ 58,505**	**$ 879**	**$ 21,934**	**$ 1,425**	**$ 80,439**	**$ 2,304**

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2008 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities[a]:						
U.S. government agencies	$ 6,016	$ 224	$ 469	$ 3	$ 6,485	$ 227
Residential:						
Prime and Alt-A	6,254	1,838	333	97	6,587	1,935
Subprime	—	—	151	19	151	19
Non-U.S.	1,908	182	—	—	1,908	182
Commercial	3,939	684	—	—	3,939	684
Total mortgage-backed securities	18,117	2,928	953	119	19,070	3,047
U.S. Treasury and government agencies[a]	7,659	97	—	—	7,659	97
Obligations of U.S. states and municipalities	1,129	232	16	6	1,145	238
Certificates of deposit	382	8	—	—	382	8
Non-U.S. government debt securities	308	1	74	1	382	2
Corporate debt securities	558	54	30	7	588	61
Asset-backed securities[a]:						
Credit card receivables	10,267	1,964	472	304	10,739	2,268
Collateralized debt and loan obligations	9,059	820	—	—	9,059	820
Other	813	134	17	1	830	135
Total available-for-sale debt securities	48,292	6,238	1,562	438	49,854	6,676
Available-for-sale equity securities	19	7	—	—	19	7
Total securities with gross unrealized losses	$ 48,311	$ 6,245	$1,562	$ 438	$ 49,873	$ 6,683

(a) Prior periods have been revised to conform to the current presentation.

Other-than-temporary impairment

In April 2009, the FASB amended the other-than-temporary impairment ("OTTI") model for debt securities. The impairment model for equity securities was not affected. Under the new guidance, OTTI losses must be recognized in earnings if an investor has the intent to sell the debt security, or if it is more likely than not that the investor will be required to sell the debt security before recovery of its amortized cost basis. However, even if an investor does not expect to sell a debt security, it must evaluate expected cash flows to be received and determine if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI. The guidance also requires additional disclosures regarding the calculation of credit losses, as well as factors considered in reaching a conclusion that an investment is not other-than-temporarily impaired. JPMorgan Chase early adopted the new guidance effective for the period ending March 31, 2009. The Firm did not record a transition adjustment for securities held at March 31, 2009, which were previously considered other-than-temporarily impaired, as the Firm intended to sell the securities for which it had previously recognized other-than-temporary impairments.

AFS securities in unrealized loss positions are analyzed as part of the Firm's ongoing assessment of OTTI. When the Firm intends to sell AFS securities, it recognizes an impairment loss equal to the full difference between the amortized cost basis and the fair value of those securities.

When the Firm does not intend to sell AFS equity or debt securities in an unrealized loss position, potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and changes in fair value of the security after the balance sheet date. For debt securities, the Firm estimates cash flows over the remaining lives of the underlying collateral to assess whether credit losses exist and, where applicable for purchased or retained beneficial interests in securitized assets, to determine if any adverse changes in cash flows have occurred. The Firm's cash flow estimates take into account expectations of relevant market and economic data as of the end of the reporting period – including, for example, for securities issued in a securitization, underlying loan-level data, and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement. The Firm compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss on the AFS debt security exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios. For debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. The Firm also considers an OTTI to have occurred when there is an adverse change in cash flows to beneficial interests in securitizations that are rated below "AA" at acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment. For equity securities, the Firm considers the above factors, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the carrying value. The Firm considers a decline in fair value of AFS equity securities to be other-than-temporary if it is probable that the Firm will not recover its amortized cost basis.

The following table presents credit losses that are included in the securities gains and losses table above.

Year ended December 31, (in millions)	2009
Debt securities the Firm does not intend to sell that have credit losses	
Total losses[a]	$ (946)
Losses recorded in/(reclassified from) other comprehensive income	368
Credit losses recognized in income[b][c]	$ (578)

(a) For initial other-than-temporary impairments, represents the excess of the amortized cost over the fair value of AFS debt securities. For subsequent impairments of the same security, represents additional declines in fair value subsequent to the previously recorded other-than-temporary impairment(s), if applicable.

(b) Represents the credit loss component of certain prime and subprime mortgage-backed securities and obligations of U.S. states and municipalities that the Firm does not intend to sell. Subsequent credit losses may be recorded on securities without a corresponding further decline in fair value if there has been a decline in expected cash flows.

(c) Excluded from this table are OTTI losses of $7 million that were recognized in income in 2009, related to subprime mortgage-backed debt securities the Firm intended to sell. These securities were sold in 2009, resulting in the recognition of a recovery of $1 million.

Changes in the credit loss component of credit-impaired debt securities

The following table presents a rollforward of the credit loss component of OTTI losses that were recognized in income in 2009, related to debt securities that the Firm does not intend to sell.

Year ended December 31, (in millions)	2009
Balance, beginning of period	$ —
Additions:	
Newly credit-impaired securities	578
Increase in losses on previously credit-impaired securities reclassified from other comprehensive income	—
Balance, end of period	$ 578

During 2009, the Firm continued to increase the size of its AFS securities portfolio. Unrealized losses have decreased since December 31, 2008, due primarily to overall market spread and market liquidity improvements, which resulted in increased pricing across asset classes. As of December 31, 2009, the Firm does not intend to sell the securities with a loss position in AOCI, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities reported in the table above for which credit losses have been recognized in

income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2009.

Following is a description of the Firm's primary security investments and the key assumptions used in its estimate of the present value of the cash flows most likely to be collected from these investments.

Mortgage-backed securities – U.S. government agencies
As of December 31, 2009, gross unrealized losses on mortgage-backed securities related to U.S. agencies were $608 million, of which $5 million related to securities that have been in an unrealized loss position for longer than 12 months. These mortgage-backed securities do not have any credit losses, given the explicit and implicit guarantees provided by the U.S. federal government.

Mortgage-backed securities – Prime and Alt-A nonagency
As of December 31, 2009, gross unrealized losses related to prime and Alt-A residential mortgage-backed securities issued by private issuers were $807 million, of which $780 million related to securities that have been in an unrealized loss position for longer than 12 months. Overall losses have decreased since December 31, 2008, due to increased market stabilization, resulting from increased demand for higher-yielding asset classes and new U.S. government programs. Approximately one-third of these positions (by amortized cost) are currently rated "AAA." The remaining two-thirds have experienced downgrades since purchase, and approximately half of the positions are currently rated below investment-grade. In analyzing prime and Alt-A residential mortgage-backed securities for potential credit losses, the Firm utilizes a methodology that focuses on loan-level detail to estimate future cash flows, which are then applied to the various tranches of issued securities based on their respective contractual provisions of the securitization trust. The loan-level analysis considers prepayment, home price, default rate and loss severity assumptions. Given this level of granularity, the underlying assumptions vary significantly taking into consideration such factors as the financial condition of the borrower, loan to value ratio, loan type and geographical location of the underlying property. The weighted average underlying default rate on the positions was 19% and the related weighted average loss severity was 51%. Based on this analysis, the Firm has recognized $138 million of OTTI losses in earnings in 2009, related to securities that have experienced increased delinquency rates associated to specific collateral types and origination dates. The unrealized loss of $807 million on the remaining securities is considered temporary, based on management's assessment that the credit enhancement levels for those securities remain sufficient to support the Firm's investment.

Mortgage-backed securities – Commercial
As of December 31, 2009, gross unrealized losses related to commercial mortgage-backed securities were $63 million, of which $29 million related to securities that have been in an unrealized loss position for longer than 12 months. The Firm's commercial mortgage-backed securities are rated "AAA," "AA," "A" and "BBB" and possess, on average, 29% subordination (a form of credit enhancement for the benefit of senior securities, expressed here as the percentage of pool losses that can occur before a senior asset-backed security will incur its first dollar of principal loss). In considering whether potential credit-related losses exist, the Firm conducted a scenario analysis, using high levels of delinquencies and losses over the near term, followed by lower levels over the longer term. Specific assumptions included: (i) default of all loans more than 60 days delinquent; (ii) additional default rates for the remaining portfolio forecasted to be up to 8% in the near term and 2% in the longer term; and (iii) loss severity assumptions ranging from 45% in the near term to 40% in later years.

Asset-backed securities – Credit card receivables
As of December 31, 2009, gross unrealized losses related to credit card receivables asset-backed securities were $26 million, which relate to securities that were in an unrealized loss position for longer than 12 months. One of the key metrics the Firm reviews for credit card–related asset-backed securities is each trust's excess spread, which is the credit enhancement resulting from cash that remains each month after payments are made to investors for principal and interest and to servicers for servicing fees, and after credit losses are allocated. The average excess spread for the issuing trusts in which the Firm holds interests ranges from 3.8% to 13.8% with a weighted average of 6.9%.

Asset-backed securities – Collateralized debt and loan obligations
As of December 31, 2009, gross unrealized losses related to collateralized debt and loan obligations were $436 million, of which $435 million related to securities that were in an unrealized loss position for longer than 12 months. Overall losses have decreased since December 31, 2008, mainly as a result of, lower default forecasts and spread tightening across various asset classes. Substantially all of these securities are rated "AAA" and "AA" and have an average credit enhancement of 29%. Credit enhancement in CLOs is primarily in the form of overcollateralization, which is the excess of the par amount of collateral over the par amount of securities. The key assumptions considered in analyzing potential credit losses were underlying loan and debt security defaults and loss severity. Based on current default trends, the Firm assumed collateral default rates of 5% for 2009 and thereafter. Further, loss severities were assumed to be 50% for loans and 80% for debt securities. Losses on collateral were estimated to occur approximately 18 months after default.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2009, of JPMorgan Chase's AFS and HTM securities by contractual maturity.

	2009				
By remaining maturity December 31, (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities[b]					
Amortized cost	$ 1	$ 321	$ 6,707	$ 178,840	$ 185,869
Fair value	1	335	6,804	180,146	187,286
Average yield[a]	3.40%	5.17%	4.75%	4.54%	4.54 %
U.S. Treasury and government agencies[b]					
Amortized cost	$ 307	$ 23,985	$ 5,527	$ 225	$ 30,044
Fair value	307	24,044	5,423	223	29,997
Average yield[a]	0.34%	2.34%	3.34%	5.38%	2.53 %
Obligations of U.S. states and municipalities					
Amortized cost	$ 14	$ 249	$ 353	$ 5,654	$ 6,270
Fair value	14	260	364	5,899	6,537
Average yield[a]	0.25%	4.80%	5.13%	4.75%	4.75 %
Certificates of deposit					
Amortized cost	$ 2,649	—	—	—	$ 2,649
Fair value	2,650	—	—	—	2,650
Average yield[a]	3.12%	—	—	—	3.12 %
Non-U.S. government debt securities					
Amortized cost	$ 10,726	$ 12,830	$ 616	$ 148	$ 24,320
Fair value	10,732	12,994	627	150	24,503
Average yield[a]	0.95%	2.13%	3.21%	1.71%	1.64 %
Corporate debt securities					
Amortized cost	$ 6,694	$ 53,081	$ 1,253	$ 198	$ 61,226
Fair value	6,786	53,706	1,308	208	62,008
Average yield[a]	1.78%	2.15%	5.88%	6.15%	2.19 %
Asset-backed securities					
Amortized cost	$ 13,826	$ 8,365	$ 10,386	$ 11,580	$ 44,157
Fair value	13,902	8,646	10,507	11,630	44,685
Average yield[a]	2.04%	1.70%	1.38%	1.43%	1.66 %
Total available-for-sale debt securities					
Amortized cost	$ 34,217	$ 98,831	$ 24,842	$ 196,645	$ 354,535
Fair value	34,392	99,985	25,033	198,256	357,666
Average yield[a]	1.72%	2.17%	3.05%	4.36%	3.40 %
Available-for-sale equity securities					
Amortized cost	—	—	—	$ 2,518	$ 2,518
Fair value	—	—	—	2,699	2,699
Average yield[a]	—	—	—	0.42%	0.42 %
Total available-for-sale securities					
Amortized cost	$ 34,217	$ 98,831	$ 24,842	$ 199,163	$ 357,053
Fair value	34,392	99,985	25,033	200,955	360,365
Average yield[a]	1.72%	2.17%	3.05%	4.31%	3.38 %
Total held-to-maturity securities					
Amortized cost	—	$ 3	$ 20	$ 2	$ 25
Fair value	—	3	22	2	27
Average yield[a]	—	6.96%	6.87%	6.49%	6.85 %

(a) Average yield was based on amortized cost balances at the end of the period and did not give effect to changes in fair value reflected in accumulated other comprehensive income/(loss). Yields are derived by dividing interest/dividend income (including the effect of related derivatives on available-for-sale securities and the amortization of premiums and accretion of discounts) by total amortized cost. Taxable-equivalent yields are used where applicable.

(b) U.S. government agencies and U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2009.

(c) Includes securities with no stated maturity. Substantially all of the Firm's mortgage-backed securities and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated duration, which reflects anticipated future prepayments based on a consensus of dealers in the market, is approximately five years for nonagency mortgage-backed securities and three years for collateralized mortgage obligations.

Note 12 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions, primarily to finance the Firm's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Resale agreements and repurchase agreements are generally treated as collateralized financing transactions carried on the Consolidated Balance Sheets at the amounts at which the securities will be subsequently sold or repurchased, plus accrued interest. On January 1, 2007, pursuant to the adoption of the fair value option, the Firm elected fair value measurement for certain resale and repurchase agreements. In 2008, the Firm elected fair value measurement for certain newly transacted securities borrowed and securities lending agreements. For a further discussion of the fair value option, see Notes 4 and 20 on pages 173–175 and 227, respectively, of this Annual Report. The securities financing agreements for which the fair value option was elected are reported within securities purchased under resale agreements; securities loaned or sold under repurchase agreements; securities borrowed; and other borrowed funds on the Consolidated Balance Sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with FASB guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue. Where appropriate, resale and repurchase agreements with the same counterparty are reported on a net basis. JPMorgan Chase takes possession of securities purchased under resale agreements. On a daily basis, JPMorgan Chase monitors the market value of the underlying collateral, primarily U.S. and non-U.S. government and agency securities, that it has received from its counterparties, and requests additional collateral when necessary.

Transactions similar to financing activities that do not meet the definition of a repurchase agreement are accounted for as "buys" and "sells" rather than financing transactions. These transactions are accounted for as a purchase/(sale) of the underlying securities with a forward obligation to sell/(purchase) the securities. The forward purchase/(sale) obligation is a derivative that is recorded on the Consolidated Balance Sheets at fair value, with changes in fair value recorded in principal transactions revenue.

Securities borrowed and securities lent are recorded at the amount of cash collateral advanced or received. Securities borrowed consist primarily of government and equity securities. JPMorgan Chase monitors the market value of the securities borrowed and lent on a daily basis and calls for additional collateral when appropriate. Fees received or paid in connection with securities borrowed and lent are recorded in interest income or interest expense.

The following table details the components of collateralized financings.

December 31, (in millions)	2009	2008
Securities purchased under resale agreements[a]	**$ 195,328**	$ 200,265
Securities borrowed[b]	**119,630**	124,000
Securities sold under repurchase agreements[c]	**$ 245,692**	$ 174,456
Securities loaned	**7,835**	6,077

(a) Includes resale agreements of $20.5 billion and $20.8 billion accounted for at fair value at December 31, 2009 and 2008, respectively.
(b) Includes securities borrowed of $7.0 billion and $3.4 billion accounted for at fair value at December 31, 2009 and 2008, respectively.
(c) Includes repurchase agreements of $3.4 billion and $3.0 billion accounted for at fair value at December 31, 2009 and 2008, respectively.

JPMorgan Chase pledges certain financial instruments it owns to collateralize repurchase agreements and other securities financings. Pledged securities that can be sold or repledged by the secured party are identified as financial instruments owned (pledged to various parties) on the Consolidated Balance Sheets.

At December 31, 2009, the Firm received securities as collateral that could be repledged, delivered or otherwise used with a fair value of approximately $614.4 billion. This collateral was generally obtained under resale agreements, securities borrowing agreements and customer margin loans. Of these securities, approximately $392.9 billion were repledged, delivered or otherwise used, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales.

Note 13 – Loans

The accounting for a loan may differ based on whether it is originated or purchased and whether the loan is used in an investing or trading strategy. For purchased loans held-for-investment, the accounting also differs depending on whether a loan is credit-impaired at the date of acquisition. Purchased loans with evidence of credit deterioration since the origination date and for which it is probable, at acquisition, that all contractually required payments receivable will not be collected are considered to be credit-impaired. The measurement framework for loans in the Consolidated Financial Statements is one of the following:

- At the principal amount outstanding, net of the allowance for loan losses, unearned income, unamortized discounts and premiums, and any net deferred loan fees or costs, for loans held for investment (other than purchased credit-impaired loans);
- At the lower of cost or fair value, with valuation changes recorded in noninterest revenue, for loans that are classified as held-for-sale;
- At fair value, with changes in fair value recorded in noninterest revenue, for loans classified as trading assets or risk managed on a fair value basis; or
- Purchased credit-impaired loans held-for-investment are initially measured at fair value, which includes estimated future credit losses. Accordingly, an allowance for loan losses related to these loans is not recorded at the acquisition date.

See Note 4 on pages 173–175 of this Annual Report for further information on the Firm's elections of fair value accounting under

the fair value option. See Note 3 and Note 4 on pages 156–173 and 173–175 of this Annual Report for further information on loans carried at fair value and classified as trading assets.

For loans held-for-investment, other than purchased credit-impaired loans, interest income is recognized using the interest method or on a basis approximating a level rate of return over the term of the loan.

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans, certain consumer loans insured by U.S. government agencies and purchased credit-impaired loans, which are discussed below) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is in doubt, or when principal or interest is 90 days or more past due and collateral, if any, is insufficient to cover principal and interest. Interest accrued but not collected at the date a loan is placed on nonaccrual status is reversed against interest income. In addition, the amortization of net deferred loan fees is suspended. Interest income on nonaccrual loans may be recognized only to the extent it is received in cash. However, where there is doubt regarding the ultimate collectibility of loan principal, cash receipts are applied to reduce the carrying value of such loans (i.e., the cost recovery method). Interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full.

Loans may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loans.

Wholesale and business banking loans (which are risk-rated) are charged off to the allowance for loan losses when it is highly certain that a loss has been realized. This determination includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity.

Consumer loans, other than business banking and purchased credit-impaired loans, are generally charged off to the allowance for loan losses upon reaching specified stages of delinquency, in accordance with the Federal Financial Institutions Examination Council policy. For example, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), which ever is earlier. Residential mortgage products are generally charged off to net realizable value no later than 180 days past due. Other consumer products, if collateralized, are generally charged off to net realizable value at 120 days past due.

In addition, any impaired loan that is determined to be collateral-dependent is charged-off to an amount equal to the fair value of the collateral less costs to sell. Loans are identified as collateral-dependent when management believes that collateral is the sole source of repayment.

A collateralized loan is reclassified to assets acquired in loan satisfactions, within other assets, at the lower of the recorded investment in the loan or the fair value of the collateral less estimated costs to sell, only when JPMorgan Chase has taken physical possession of the collateral, regardless of whether formal foreclosure proceedings have taken place.

Loans within the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio. Transfers to held-for-sale are recorded at the lower of cost or fair value on the date of transfer. Credit-related losses are charged off to the allowance for loan losses and losses due to changes in interest rates or exchange rates are recognized in noninterest revenue.

Loans within the held-for-sale portfolio that management decides to retain are transferred to the held-for-investment portfolio at the lower of cost or fair value. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 14 on pages 204–206 of this Annual Report.

The composition of the Firm's aggregate loan portfolio at each of the dates indicated was as follows.

December 31, (in millions)	2009	2008
U.S. wholesale loans:		
Commercial and industrial	**$ 49,103**	$ 70,208
Real estate	**54,968**	61,888
Financial institutions	**13,372**	20,615
Government agencies	**5,634**	5,918
Other	**23,383**	23,157
Loans held-for-sale and at fair value	**2,625**	4,990
Total U.S. wholesale loans	**149,085**	186,776
Non-U.S. wholesale loans:		
Commercial and industrial	**19,138**	27,977
Real estate	**2,227**	2,623
Financial institutions	**11,755**	16,381
Government agencies	**1,707**	603
Other	**18,790**	18,719
Loans held-for-sale and at fair value	**1,473**	8,965
Total non-U.S. wholesale loans	**55,090**	75,268
Total wholesale loans: [a][b]		
Commercial and industrial	**68,241**	98,185
Real estate[c]	**57,195**	64,511
Financial institutions	**25,127**	36,996
Government agencies	**7,341**	6,521
Other	**42,173**	41,876
Loans held-for-sale and at fair value[d]	**4,098**	13,955
Total wholesale loans	**204,175**	262,044
Consumer loans:[e]		
Home equity – senior lien[f]	**27,376**	29,793
Home equity – junior lien[g]	**74,049**	84,542
Prime mortgage	**66,892**	72,266
Subprime mortgage	**12,526**	15,330
Option ARMs	**8,536**	9,018
Auto loans	**46,031**	42,603
Credit card[h][i]	**78,786**	104,746
Other	**31,700**	33,715
Loans held-for-sale[j]	**2,142**	2,028
Total consumer loans – excluding purchased credit-impaired	**348,038**	394,041
Consumer loans – purchased credit-impaired	**81,245**	88,813
Total consumer loans	**429,283**	482,854
Total loans[k]	**$ 633,458**	$ 744,898

(a) Includes Investment Bank, Commercial Banking, Treasury & Securities Services and Asset Management.
(b) During the fourth quarter of 2009, certain industry classifications were modified to better reflect risk correlations and enhance the Firm's management of industry risk. Prior periods have been revised to reflect the current presentation.
(c) Represents credit extended for real estate-related purposes to borrowers who are primarily in the real estate development or investment businesses, and for which the repayment is predominantly from the sale, lease, management, operations or refinancing of the property.
(d) Includes loans for commercial and industrial, real estate, financial institutions and other of $3.1 billion, $44 million, $278 million and $715 million, respectively, at December 31, 2009, and $11.0 billion, $428 million, $1.5 billion and $995 million, respectively, at December 31, 2008.
(e) Includes Retail Financial Services, Card Services and the Corporate/Private Equity segment.
(f) Represents loans where JPMorgan Chase holds the first security interest on the property.
(g) Represents loans where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.
(h) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(i) Includes $1.0 billion of loans at December 31, 2009, held by the Washington Mutual Master Trust, which were consolidated onto the Firm's balance sheet at fair value during the second quarter of 2009. See Note 15 on pages 206–213 of this Annual Report.
(j) Includes loans for prime mortgage and other (largely student loans) of $450 million and $1.7 billion at December 31, 2009, respectively, and $206 million and $1.8 billion at December 31, 2008, respectively.
(k) Loans (other than purchased credit-impaired loans and those for which the fair value option has been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs of $1.4 billion and $2.0 billion at December 31, 2009 and 2008, respectively. Prior periods have been revised to conform to the current presentation.

The following table reflects information about the Firm's loan sales.

Year ended December 31, (in millions)	**2009**	2008	2007
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]	**$ 439**	$ (2,508)	$ 99

(a) Excludes sales related to loans accounted for at fair value.

Impaired loans

Impaired loans include the following:

- Risk-rated loans that have been placed on nonaccrual status and/or that have been modified in a troubled debt restructuring.
- Consumer loans that have been modified in a troubled debt restructuring.

Loans with insignificant delays or insignificant short falls in the amount of payments expected to be collected are not considered to be impaired.

All impaired loans are evaluated for an asset-specific allowance as described in Note 14 on pages 204–206 of this Annual Report. Both wholesale and consumer loans are deemed impaired upon being contractually modified in a troubled debt restructuring. Troubled debt restructurings typically result from the Firm's loss mitigation activities and occur when JPMorgan Chase grants a concession to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss and to avoid foreclosure or repossession of collateral. Once restructured in a troubled debt restructuring, a loan is generally considered impaired until its maturity, regardless of whether the borrower performs under the modified terms. Although such a loan may be returned to accrual status if the criteria set forth in the Firm's accounting policy are met, the loan would continue to be evaluated for an asset-specific allowance for loan losses and the Firm would continue to report the loan in the impaired loan table below.

The tables below set forth information about the Firm's impaired loans, excluding both purchased credit-impaired loans and modified credit card loans, which are separately discussed below.

December 31, (in millions)	**2009**	2008
Impaired loans with an allowance:		
Wholesale	**$ 6,216**	$ 2,026
Consumer[a]	**3,978**	2,252
Total impaired loans with an allowance	**10,194**	4,278
Impaired loans without an allowance:[b]		
Wholesale	**760**	62
Consumer[a]	**—**	—
Total impaired loans without an allowance	**760**	62
Total impaired loans	**$ 10,954**	$ 4,340
Allowance for impaired loans:		
Wholesale	**$ 2,046**	$ 712
Consumer[a]	**996**	379
Total allowance for impaired loans[c]	**$ 3,042**	$ 1,091

Year ended December 31, (in millions)	**2009**	2008	2007
Average balance of impaired loans :			
Wholesale	**$ 4,719**	$ 896	$ 316
Consumer[a]	**3,518**	1,211	317
Total average impaired loans	**$ 8,237**	$ 2,107	$ 633
Interest income recognized on impaired loans:			
Wholesale	**$ 15**	$ —	$ —
Consumer[a]	**138**	57	—
Total interest income recognized on impaired loans	**$ 153**	$ 57	$ —

(a) Excludes credit card loans.
(b) When the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan, then the loan does not require an allowance.
(c) The allowance for impaired loans is included in JPMorgan Chase's allowance for loan losses.

As of December 31, 2009, wholesale loans restructured in troubled debt restructurings were approximately $1.1 billion.

During 2009, the Firm reviewed its residential real estate portfolio to identify homeowners most in need of assistance, opened new regional counseling centers, hired additional loan counselors, introduced new financing alternatives, proactively reached out to borrowers to offer prequalified modifications, and commenced a new process to independently review each loan before moving it into the foreclosure process. In addition, during the first quarter of 2009, the U.S. Treasury introduced the Making Home Affordable ("MHA") programs, which are designed to assist eligible homeowners in a number of ways, one of which is by modifying the terms of their mortgages. The Firm is participating in the MHA programs while continuing to expand its other loss mitigation efforts for financially distressed borrowers who do not qualify for the MHA programs. The MHA programs and the Firm's other loss-mitigation programs for financially troubled borrowers generally represent various concessions, such as term extensions, rate reductions and deferral of principal payments, that would have otherwise been required under the terms of the original agreement. When the Firm modifies home equity lines of credit in troubled debt restructurings, future lending commitments related to the modified loans are canceled as part of the terms of the modification. Under all of

these programs, borrowers must make at least three payments under the revised contractual terms during a trial period and be successfully re-underwritten with income verification before their loan can be permanently modified. Upon contractual modification, retained residential real estate loans, other than purchased credit-impaired loans, are accounted for as troubled debt restructurings.

Consumer loans with balances of approximately $3.1 billion and $1.8 billion have been permanently modified and accounted for as troubled debt restructurings as of December 31, 2009 and 2008, respectively. Of these loans, $966 million and $853 million were classified as nonperforming at December 31, 2009 and 2008, respectively.

JPMorgan Chase has also modified the terms of credit card loan agreements with borrowers who have experienced financial difficulty. Such modifications may include reducing the interest rate on the card and/or placing the customer on a fixed payment plan not exceeding 60 months; in all cases, the Firm cancels the customer's available line of credit on the credit card. If the cardholder does not comply with the modified payment terms, then the credit card loan agreement will revert back to its original payment terms, with the amount of any loan outstanding reflected in the appropriate delinquency "bucket." The loan amount may then be charged-off in accordance with the Firm's standard charge-off policy. Under these modification programs, $5.1 billion and $2.4 billion of on-balance sheet credit card loans outstandings have been modified at December 31, 2009 and 2008, respectively. In accordance with the Firm's methodology for determining its consumer allowance for loan losses, the Firm had already recognized a provision for loan losses on these credit card loans; accordingly the modifications to these credit card loans had no incremental impact on the Firm's allowance for loan losses.

Purchased credit-impaired loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain loans that it deemed to be credit-impaired. Wholesale loans with a carrying amount of $135 million at December 31, 2009, down from $224 million at December 31, 2008, were determined to be credit-impaired at the date of acquisition. These wholesale loans are being accounted for individually (not on a pooled basis) and are reported as nonperforming loans since cash flows for each individual loan are not reasonably estimable. Such loans are excluded from the remainder of the following discussion, which relates solely to purchased credit-impaired consumer loans.

Purchased credit-impaired consumer loans were determined to be credit-impaired based on specific risk characteristics of the loan, including product type, loan-to-value ratios, FICO scores, and past due status. Purchasers are permitted to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer loans were aggregated into pools of loans with common risk characteristics.

The table below sets forth information about these purchased credit-impaired consumer loans at the acquisition date.

(in millions)	September 25, 2008[d]
Contractually required payments receivable (including interest)	$ 188,958
Less: Nonaccretable difference	(59,396)
Cash flows expected to be collected[a][b]	129,562
Less: Accretable yield[b][c]	(39,454)
Fair value of loans acquired	$ 90,108

(a) Represents undiscounted principal and interest cash flows expected at acquisition.
(b) During the first quarter of 2009, the Firm continued to refine its model to estimate future cash flows for its purchased credit-impaired consumer loans, which resulted in an adjustment of the initial estimate of cash flows expected to be collected. These refinements, which primarily affected the amount of the undiscounted interest cash flows expected to be received over the life of the loans, resulted in a $6.8 billion increase in the Firm's initial estimates of cash flows expected to be collected and the accretable yield.
(c) This amount is recognized into interest income over the estimated lives of the underlying pools of loans.
(d) Date of the Washington Mutual transaction.

The Firm determined the fair value of the purchased credit-impaired consumer loans at the acquisition date by discounting the cash flows expected to be collected at a market observable discount rate, when available, adjusted for factors that a market participant would consider in determining fair value. In determining the cash flows expected to be collected, management incorporated assumptions regarding default rates, loss severities and the amounts and timing of prepayments. Contractually required payments receivable represent the total undiscounted amount of all uncollected contractual principal and interest payments, both past due and due in the future, adjusted for the effect of estimated prepayments.

The accretable yield represents the excess of cash flows expected to be collected over the carrying value of the purchased credit-impaired loans. This amount is not reported on the Firm's Consolidated Balance Sheets but is accreted into interest income at a level rate of return over the expected lives of the underlying pools of loans. For variable rate loans, expected future cash flows were initially based on the rate in effect at acquisition; expected future cash flows are recalculated as rates change over the lives of the loans.

The table below sets forth the accretable yield activity for these loans for the years ended December 31, 2009 and 2008.

Accretable Yield Activity

(in millions)	**2009**	2008
Balance, January 1	**$ 32,619**	$ —
Washington Mutual acquisition[a]	**—**	39,454
Accretion into interest income	**(4,363)**	(1,292)
Changes in interest rates on variable rate loans	**(4,849)**	(5,543)
Other changes in expected cash flows[b]	**2,137**	—
Balance, December 31,	**$ 25,544**	$ 32,619
Accretable yield percentage	**5.14%**	5.81%

(a) During the first quarter of 2009, the Firm continued to refine its model to estimate future cash flows for its purchased credit-impaired consumer loans, which resulted in an adjustment of the initial estimate of cash flows expected to be collected. These refinements, which primarily affected the amount of undiscounted interest cash flows expected to be received over the life of the loans, resulted in a $6.8 billion increase in the Firm's initial estimate of cash flows expected to be collected and the accretable yield. However, on a discounted basis, these refinements did not have a material impact on the fair value of the purchased credit-impaired loans as of the September 25, 2008, acquisition date; nor did they have a material impact

on the amount of interest income recognized in the Firm's Consolidated Statements of Income since that date.

(b) Other changes in expected cash flows include the net impact of changes in estimated prepayments and reclassifications to the nonaccretable difference.

On a quarterly basis, the Firm updates the amount of loan principal and interest cash flows expected to be collected, incorporating assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current market conditions. Probable decreases in expected loan principal cash flows trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related foregone interest cash flows discounted at the pool's effective interest rate. Impairments that occur after the acquisition date are recognized through the provision and allowance for loan losses. Probable and significant increases in expected principal cash flows would first reverse any previously recorded allowance for loan losses; any remaining increases are recognized prospectively as interest income. The impacts of (i) prepayments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are recognized prospectively as adjustments to interest income. Disposals of loans, which may include sales of loans, receipt of payments in full by the borrower, or foreclosure, result in removal of the loan from the purchased credit-impaired portfolio.

If the timing and/or amounts of expected cash flows on these purchased credit-impaired loans were determined not to be reasonably estimable, no interest would be accreted and the loans would be reported as nonperforming loans; however, since the timing and amounts of expected cash flows for these purchased credit-impaired loans are reasonably estimable, interest is being accreted and the loans are being reported as performing loans.

Charge-offs are not recorded on purchased credit-impaired loans until actual losses exceed the estimated losses that were recorded as purchase accounting adjustments at acquisition date. To date, no charge-offs have been recorded for these loans.

Purchased credit-impaired loans acquired in the Washington Mutual transaction are reported in loans on the Firm's Consolidated Balance Sheets. In 2009, an allowance for loan losses of $1.6 billion was recorded for the prime mortgage and option ARM pools of loans. The net aggregate carrying amount of the pools that have an allowance for loan losses was $47.2 billion at December 31, 2009. This allowance for loan losses is reported as a reduction of the carrying amount of the loans in the table below.

The table below provides additional information about these purchased credit-impaired consumer loans.

December 31, (in millions)	**2009**	2008
Outstanding balance[a]	**$ 103,369**	$ 118,180
Carrying amount	**79,664**	88,813

(a) Represents the sum of contractual principal, interest and fees earned at the reporting date.

Purchased credit-impaired loans are also being modified under the MHA programs and the Firm's other loss mitigation programs. For these loans, the impact of the modification is incorporated into the Firm's quarterly assessment of whether a probable and/or significant change in estimated future cash flows has occurred, and the loans continue to be accounted for as and reported as purchased credit-impaired loans.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures, which is recorded in other assets on the Consolidated Balance Sheets. Property acquired may include real property (e.g., land, buildings, and fixtures) and commercial and personal property (e.g., aircraft, railcars, and ships). Acquired property is valued at fair value less costs to sell at acquisition. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary. Any adjustments to fair value in the first 90 days are charged to the allowance for loan losses and thereafter adjustments are charged/credited to noninterest revenue–other. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Note 14 – Allowance for credit losses

The allowance for loan losses includes an asset-specific component, a formula-based component and a component related to purchased credit-impaired loans.

The asset-specific component relates to loans considered to be impaired, which includes any loans that have been modified in a troubled debt restructuring as well as risk-rated loans that have been placed on nonaccrual status. An asset-specific allowance for impaired loans is established when the loan's discounted cash flows (or, when available, the loan's observable market price) is lower than the recorded investment in the loan. To compute the asset-specific component of the allowance, larger loans are evaluated individually, while smaller loans are evaluated as pools using historical loss experience for the respective class of assets. Risk-rated loans (primarily wholesale loans) are pooled by risk rating, while scored loans (i.e., consumer loans) are pooled by product type.

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in measured impairment due to the impact of discounting are reported as an adjustment to the provision for loan losses, not as an adjustment to interest income. An asset-specific allowance for an impaired loan with an observable market price is measured as the difference between the recorded investment in the loan and the loan's fair value.

Certain impaired loans that are determined to be collateral-dependent are charged-off to the fair value of the collateral less costs to sell. When collateral-dependent commercial real-estate loans are determined to be impaired, updated appraisals are typically obtained and updated every six to twelve months. The Firm also considers both borrower- and market-specific factors, which

may result in obtaining appraisal updates at more frequent intervals or broker-price opinions in the interim.

The formula-based component is based on a statistical calculation and covers performing risk-rated loans and consumer loans, except for loans restructured in troubled debt restructurings and purchased credit-impaired loans. See Note 13 on pages 203–204 of this Annual Report for more information on purchased credit-impaired loans.

For risk-rated loans, the statistical calculation is the product of an estimated probability of default ("PD") and an estimated loss given default ("LGD"). These factors are differentiated by risk rating and expected maturity. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm to that loan. PD estimates are based on observable external through-the-cycle data, using credit-rating agency default statistics. LGD estimates are based on a study of actual credit losses over more than one credit cycle.

For scored loans, the statistical calculation is performed on pools of loans with similar risk characteristics (e.g., product type) and generally computed as the product of actual outstandings, an expected-loss factor and an estimated-loss coverage period. Expected-loss factors are statistically derived and consider historical factors such as loss frequency and severity. In developing loss frequency and severity assumptions, the Firm considers known and anticipated changes in the economic environment, including changes in housing prices, unemployment rates and other risk indicators. A nationally recognized home price index measure is used to develop loss severity estimates on defaulted residential real estate loans at the metropolitan statistical areas ("MSA") level. These loss severity estimates are regularly validated by actual losses recognized on defaulted loans, market-specific real estate appraisals and property sales activity. Real estate appraisals are updated when the loan is charged-off, annually thereafter, and at the time of the final foreclosure sale. Forecasting methods are used to estimate expected-loss factors, including credit loss forecasting models and vintage-based loss forecasting.

The economic impact of potential modifications of residential real estate loans is not included in the formula-based allowance because of the uncertainty regarding the level and results of such modifications. As discussed in Note 13 on pages 200–204 of this Annual Report, modified residential real estate loans are generally accounted for as troubled debt restructurings upon contractual modification and are evaluated for an asset-specific allowance at and subsequent to modification. Assumptions regarding the loans' expected re-default rates are incorporated into the measurement of the asset-specific allowance.

Management applies judgment within an established framework to adjust the results of applying the statistical calculation described above. For the risk-rated portfolios, any adjustments made to the statistical calculation are based on management's quantitative and qualitative assessment of the quality of underwriting standards; relevant internal factors affecting the credit quality of the current portfolio; and external factors, such as current macroeconomic and political conditions that have occurred but are not yet reflected in the loss factors. Factors related to unemployment, housing prices, and both concentrated and deteriorating industries are also incorporated into the calculation, where relevant. For the scored loan portfolios, adjustments to the statistical calculation are accomplished in part by analyzing the historical loss experience for each major product segment. The determination of the appropriate adjustment is based on management's view of uncertainties that relate to current macroeconomic and political conditions, the quality of underwriting standards, and other relevant internal and external factors affecting the credit quality of the portfolio.

Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2009, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses that are inherent in the portfolio, including those not yet identifiable).

The table below summarizes the changes in the allowance for loan losses.

Year ended December 31, (in millions)	2009	2008	2007
Allowance for loan losses at January 1	$ 23,164	$ 9,234	$ 7,279
Cumulative effect of change in accounting principles[a]	—	—	(56)
Allowance for loan losses at January 1, adjusted	23,164	9,234	7,223
Gross charge-offs	24,018	10,764	5,367
Gross/(recoveries)	(1,053)	(929)	(829)
Net charge-offs	22,965	9,835	4,538
Provision for loan losses:			
Provision excluding accounting conformity	31,735	19,660	6,538
Provision for loan losses – accounting conformity[b]	—	1,577	—
Total provision for loan losses	31,735	21,237	6,538
Addition resulting from Washington Mutual transaction	—	2,535	—
Other[c]	(332)	(7)	11
Allowance for loan losses at December 31	$ 31,602	$ 23,164	$ 9,234
Components:			
Asset-specific[d][e]	$ 3,042	$ 1,091	$ 188
Formula-based	26,979	22,073	9,046
Purchased credit-impaired	1,581	—	—
Total allowance for loan losses	$ 31,602	$ 23,164	$ 9,234

(a) Reflects the effect of the adoption of the fair value option at January 1, 2007. For a further discussion of the fair value option, see Note 4 on pages 173–175 of this Annual Report.
(b) Related to the Washington Mutual transaction in 2008.
(c) The 2009 amount predominantly represents a reclassification related to the issuance and retention of securities from the Chase Issuance Trust. See Note 15 on pages 206–213 of this Annual Report. The 2008 amount represents foreign exchange translation. The 2007 amount includes assets acquired of $5 million and $5 million of foreign exchange translation.
(d) Relates to risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a troubled debt restructuring.
(e) The asset-specific consumer allowance for loan losses includes troubled debt restructuring reserves of $754 million and $258 million at December 31, 2009 and 2008, respectively and none at December 31, 2007. Prior period amounts have been reclassified to conform to the current presentation.

The table below summarizes the changes in the allowance for lending-related commitments.

Year ended December 31, (in millions)	2009	2008	2007
Allowance for lending-related commitments at January 1	$ 659	$ 850	$ 524
Provision for lending-related commitments			
Provision excluding accounting conformity	280	(215)	326
Provision for lending-related commitments accounting conformity[a]	—	(43)	—
Total provision for lending-related commitments	280	(258)	326
Addition resulting from Washington Mutual transaction	—	66	—
Other	—	1	—
Allowance for lending-related commitments at December 31	$ 939	$ 659	$ 850
Components:			
Asset-specific	$ 297	$ 29	$ 28
Formula-based	642	630	822
Total allowance for lending-related commitments	$ 939	$ 659	$ 850

(a) Related to the Washington Mutual transaction in 2008.

Note 15 – Loan securitizations

JPMorgan Chase securitizes and sells a variety of loans, including residential mortgage, credit card, automobile, student, and commercial loans (primarily related to real estate). JPMorgan Chase-sponsored securitizations utilize SPEs as part of the securitization process. These SPEs are structured to meet the definition of a QSPE (as discussed in Note 1 on page 150 of this Annual Report); accordingly, the assets and liabilities of securitization-related QSPEs are not reflected on the Firm's Consolidated Balance Sheets (except for retained interests, as described below). The primary purpose of these securitization vehicles is to meet investor needs and to generate liquidity for the Firm through the sale of loans to the QSPEs. These QSPEs are financed through the issuance of fixed- or floating-rate asset-backed securities. See Note 16 on pages 221–222 for further information on the new accounting guidance, effective January 1, 2010, which eliminates the concept of QSPEs and revises the criteria for the consolidation of VIEs.

The Firm records a loan securitization as a sale when the accounting criteria for a sale are met. Those criteria are: (1) the transferred assets are legally isolated from the Firm's creditors; (2) the entity can pledge or exchange the financial assets, or if the entity is a QSPE, its investors can pledge or exchange their interests; and (3) the Firm does not maintain effective control to repurchase the transferred assets before their maturity, or have the ability to unilaterally cause the holder to return the transferred assets.

For loan securitizations that meet the accounting sales criteria, the gains or losses recorded depend, in part, on the carrying amount of the loans sold except for servicing assets which are initially recorded at fair value. At the time of sale, any retained servicing asset is initially recognized at fair value. The remaining carrying amount of the loans sold is allocated between the loans sold and the other interests retained, based on their relative fair values on the date of sale. Gains on securitizations are reported in noninterest revenue.

When quoted market prices are not available, the Firm estimates the fair value for these retained interests by calculating the present value of future expected cash flows using modeling techniques. Such models incorporate management's best estimates of key variables, such as expected credit losses, prepayment speeds and the discount rates appropriate for the risks involved.

The Firm may retain interests in the securitized loans in the form of undivided seller's interest, senior or subordinated interest-only strips, debt and equity tranches, escrow accounts and servicing rights. The classification of retained interests is dependent upon several factors, including the type of interest, whether or not the retained interest is represented by a security certificate and when it was retained. Interests retained by IB are classified as trading assets. See credit card securitizations and mortgage securitizations sections of this Note for further information on the classification of their related retained interests. Retained interests classified as AFS that are rated below "AA" by an external rating agency are subject to impairment evaluations, as discussed in Note 11 on page 197 of this Annual Report.

The following table presents the total unpaid principal amount of assets held in JPMorgan Chase-sponsored securitization entities, for which sale accounting was achieved and to which the Firm has continuing involvement, at December 31, 2009 and 2008. Continuing involvement includes servicing the loans, holding senior or subordinated interests acquired at the time of securitization, recourse or guarantee arrangements and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. In the table below, the amount of beneficial interests held by third parties and the total retained interests held by JPMorgan Chase will not equal the assets held in QSPEs because the beneficial interests held by third party are reflected at their current outstanding par amounts and a portion of the Firm's retained interests (trading assets, AFS securities and other assets) are reflected at their fair value.

	Principal amount outstanding		JPMorgan Chase interests in securitized assets[e][f][g][h]				
December 31, 2009 (in billions)	Total assets held by Firm-sponsored QSPEs	Assets held in QSPEs with continuing involvement	Trading assets	AFS securities	Loans	Other assets[i]	Total retained interests held by JPMorgan Chase
Securitization related:							
Credit card	**$ 109.6**	**$ 109.6**[d]	**$ 0.1**	**$ 15.5**	**$ 16.7**	**$ 11.6**	**$ 43.9**
Residential mortgage:							
Prime[a]	**183.3**	**171.5**	**0.9**	**0.2**	**—**	**—**	**1.1**
Subprime	**50.0**	**47.3**	**—**	**—**	**—**	**—**	**—**
Option ARMs	**42.0**	**42.0**	**—**	**0.1**	**—**	**—**	**0.1**
Commercial and other[b]	**155.3**	**24.8**	**1.6**	**0.8**	**—**	**—**	**2.4**
Student loans	**1.0**	**1.0**	**—**	**—**	**—**	**0.1**	**0.1**
Auto	**0.2**	**0.2**	**—**	**—**	**—**	**—**	**—**
Total[c]	**$ 541.4**	**$ 396.4**	**$ 2.6**	**$ 16.6**	**$ 16.7**	**$ 11.7**	**$ 47.6**

	Principal amount outstanding		JPMorgan Chase interests in securitized assets[e][f][g][h]				
December 31, 2008 (in billions)	Total assets held by Firm-sponsored QSPEs	Assets held in QSPEs with continuing involvement	Trading assets	AFS securities	Loans	Other assets[i]	Total retained interests held by JPMorgan Chase
Securitization related:							
Credit card	$ 121.6	$ 121.6[d]	$ 0.5	$ 5.6	$ 33.3	$ 5.6	$ 45.0
Residential mortgage:							
Prime[a]	233.9	212.3	1.7	0.7	—	—	2.4
Subprime	61.0	58.6	—	0.1	—	—	0.1
Option ARMs	48.3	48.3	0.1	0.3	—	—	0.4
Commercial and other[b]	174.1	45.7	2.0	0.5	—	—	2.5
Student loans	1.1	1.1	—	—	—	0.1	0.1
Auto	0.8	0.8	—	—	—	—	—
Total[c]	$ 640.8	$ 488.4	$ 4.3	$ 7.2	$ 33.3	$ 5.7	$ 50.5

(a) Includes Alt-A loans.
(b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties. The Firm generally does not retain a residual interest in its sponsored commercial mortgage securitization transactions. Also, includes co-sponsored commercial securitizations and, therefore, includes non–JPMorgan Chase–originated commercial mortgage loans.
(c) Includes securitized loans where the Firm owns less than a majority of the subordinated or residual interests in the securitizations.
(d) Includes credit card loans, accrued interest and fees, and cash amounts on deposit.
(e) Excludes retained servicing (for a discussion of MSRs, see Note 17 on pages 222–225 of this Annual Report).
(f) Excludes senior and subordinated securities of $875 million and $974 million at December 31, 2009 and 2008, respectively, which the Firm purchased in connection with IB's secondary market-making activities.
(g) Includes investments acquired in the secondary market, predominantly for held-for-investment purposes, of $2.0 billion and $1.8 billion as of December 31, 2009 and 2008, respectively. This is comprised of $1.8 billion and $1.4 billion of investments classified as available-for-sale, including $1.7 billion and $172 million in credit cards, zero and $693 million of residential mortgages, and $91 million and $495 million of commercial and other; and $152 million and $452 million of investments classified as trading, including $104 million and $112 million of credit cards, $47 million and $303 million of residential mortgages, and $1 million and $37 million of commercial and other, all at December 31, 2009 and 2008, respectively.
(h) Excludes interest rate and foreign exchange derivatives primarily used to manage the interest rate and foreign exchange risks of the securitization entities. See Note 5 on pages 175–183 of this Annual Report for further information on derivatives.
(i) Certain of the Firm's retained interests are reflected at their fair values.

Securitization activity by major product type

The following discussion describes the nature of the Firm's securitization activities by major product type.

Credit Card Securitizations

The Card Services ("CS") business securitizes originated and purchased credit card loans, primarily through the Chase Issuance Trust (the "Trust"). In connection with the Washington Mutual transaction, the Firm acquired the seller's interest in the Washington Mutual Master Trust (the "WMM Trust") and also became its sponsor. The Firm's primary continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and the maintenance of escrow accounts. CS maintains servicing responsibilities for all credit card securitizations that it sponsors. As servicer and transferor, the Firm receives contractual servicing fees based on the securitized loan balance plus excess servicing fees, which are recorded in credit card income as discussed in Note 6 on page 184 of this Annual Report.

Actions taken in the second quarter of 2009

During the quarter ended June 30, 2009, the overall performance of the Firm's credit card securitization trusts declined, primarily due to the increase in credit losses incurred on the underlying credit card receivables.

Chase Issuance Trust: The Chase Issuance Trust (the Firm's primary issuance trust), which holds prime quality credit card receivables, maintained positive excess spread, a key metric for evaluating the performance of a card trust, through the first six months of 2009. In spite of this positive excess spread, the Firm took certain actions, as permitted by the Trust agreements, in the second quarter of 2009 to enhance the performance of the Trust due to continuing market uncertainty concerning projected credit costs in the credit card industry, and to mitigate any further deterioration in the performance of the Trust. On May 12, 2009, the Firm increased the required credit enhancement level for each tranche of outstanding notes issued by the Trust, by increasing the minimum required amount of subordinated notes and the funding requirements for the Trust's cash escrow accounts. On June 1, 2009, the Firm began designating as "discount receivables" a percentage of new credit card receivables for inclusion in the Trust, thereby requiring collections of such discounted receivables to be applied as finance charge collections in the Trust, which increased the excess spread for the Trust. The Firm expects to discontinue designating a percentage of new receivables as discount receivables on July 1, 2010. Also, during the second quarter of 2009, the Firm exchanged $3.5 billion of its undivided seller's interest in the Trust for $3.5 billion par value of zero-coupon subordinated securities issued by the Trust and retained by the Firm. The issuance of the zero-coupon securities by the Trust also increased the excess spread for the Trust. These actions resulted in the addition of approximately $40 billion of risk-weighted assets for regulatory capital purposes, which decreased the Firm's Tier 1 capital ratio by approximately 40 basis points, but did not have a material impact on the Firm's Consolidated Balance Sheets or results of operations.

WMM Trust: At the time of the acquisition of the Washington Mutual banking operations, the assets of the WMM Trust were comprised of Washington Mutual subprime credit card receivables. The quality of the assets in the WMM Trust was much lower than the quality of the credit card receivables that JPMorgan Chase has historically securitized in the public markets.

In order to more closely conform the WMM Trust to the overall quality typical of a JPMorgan Chase–sponsored credit card securitization master trust, during the fourth quarter of 2008 the Firm randomly removed $6.2 billion of credit card loans held by the WMM Trust and replaced them with $5.8 billion of higher-quality receivables from the Firm's portfolio.

However, as a result of continued deterioration during 2009 in the credit quality of the remaining Washington Mutual–originated assets in the WMM Trust, the performance of the portfolio indicated that an early amortization event was likely to occur unless additional actions were taken. On May 15, 2009, JPMorgan Chase, as seller and servicer, and the Bank of New York Mellon, as trustee, amended the pooling and servicing agreement to permit non-random removals of credit card accounts. On May 19, 2009, the Firm removed all remaining credit card receivables originated by Washington Mutual. Following this removal, the WMM Trust collateral was entirely composed of receivables originated by JPMorgan Chase. As a result of the actions taken by the Firm, the assets and liabilities of the WMM Trust were consolidated on the balance sheet of JPMorgan Chase; as a result, during the second quarter of 2009, the Firm recorded additional assets with an initial fair value of $6.0 billion, liabilities with an initial fair value of $6.1 billion, and a pretax loss of approximately $64 million.

Retained interests in nonconsolidated credit card securitizations

The following is a description of the Firm's retained interests in credit card securitizations that were not consolidated at the dates presented. Accordingly, the Firm's retained interests in the WMM Trust are included in the amounts reported at December 31, 2008, but no longer included at December 31, 2009, due to the second quarter actions noted above. For further information regarding the WMM Trust assets and liabilities, see Note 16 on pages 214–222 of this Annual Report.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the trusts (which generally ranges from 4% to 12%). These undivided interests in the trusts represent the Firm's undivided interests in the receivables transferred to the trust that have not been securitized; these undivided interests are not represented by security certificates, are carried at historical cost, and are classified within loans. At December 31, 2009 and 2008, the Firm had $16.7 billion and $33.3 billion, respectively, related to its undivided interests in the trusts. The Firm maintained an average undivided interest in principal receivables in the trusts of approximately 16% and 22% for the years ended December 31, 2009 and 2008, respectively.

The Firm retained a subordinated interest in accrued interest and fees on the securitized receivables totaling $3.2 billion and $3.0 billion as of December 31, 2009 and 2008, respectively, which is reported at fair value in other assets.

The Firm retained subordinated securities in its credit card securitization trusts with aggregate fair values of $6.6 billion and $2.3 billion at December 31, 2009 and 2008, respectively, and senior securities with aggregate fair values of $7.2 billion and $3.5 billion at December 31, 2009 and 2008, respectively. Of the securities retained, $13.8 billion and $5.4 billion were classified as AFS securities at December 31, 2009 and 2008, respectively. The senior AFS securities were used by the Firm as collateral for a secured financing transaction. The retained subordinated interests that were acquired in the Washington Mutual transaction and classified as trading assets had a carrying value of $389 million on December 31, 2008. These retained subordinated interests were subsequently repaid or valued at zero before the Firm consolidated the WMM Trust in the second quarter of 2009, as discussed above.

The Firm also maintains escrow accounts up to predetermined limits for some credit card securitizations to cover deficiencies in cash flows owed to investors. The amounts available in such escrow accounts related to credit cards are recorded in other assets and amounted to $1.0 billion and $74 million as of December 31, 2009 and 2008, respectively. The increase in the balance of these escrow accounts primarily relates to the Trust actions described above that the Firm took on May 12, 2009. JPMorgan Chase has also recorded $854 million representing receivables that have been transferred to the Trust and designated as "discount receivables." All of these residual interests are reported at fair value in other assets.

Mortgage Securitizations

The Firm securitizes originated and purchased residential mortgages and originated commercial mortgages.

RFS securitizes residential mortgage loans that it originates and purchases and it generally retains servicing for all of its originated and purchased residential mortgage loans and certain commercial mortgage loans. Additionally, RFS may retain servicing for certain mortgage loans purchased by IB. As servicer, the Firm receives servicing fees based on the securitized loan balance plus ancillary fees. In a limited number of securitizations, RFS may retain an interest in addition to servicing rights. The amount of interest retained related to these securitizations totaled $537 million and $939 million at December 31, 2009 and 2008, respectively. These retained interests are accounted for as trading or AFS securities (if represented by a security certificate) or other assets (if not represented by a security certificate).

IB securitizes residential mortgage loans (including those that it purchased and certain mortgage loans originated by RFS), and commercial mortgage loans that it originated. Residential loans securitized by IB are often serviced by RFS. Upon securitization, IB may engage in underwriting and trading activities of the securities issued by the securitization trust. IB may retain unsold senior and/or subordinated interests (including residual interests) in both residential and commercial mortgage securitizations at the time of securitization. These retained interests are accounted for at fair value and classified as trading assets. The amount of residual interests retained was $24 million and $155 million at December 31, 2009 and 2008, respectively. Additionally, IB retained $2.3 billion and $2.8 billion of senior and subordinated interests as of December 31, 2009 and 2008, respectively.

In addition to the amounts reported in the securitization activity tables below, the Firm sold residential mortgage loans totaling $147.9 billion, $122.0 billion and $81.8 billion during the years ended December 31, 2009, 2008 and 2007, respectively. The majority of these loan sales were for securitization by Government National Mortgage Association ("GNMA"), Federal National Mortgage Association ("Fannie Mae") and Federal Home Loan Mortgage Corporation ("Freddie Mac"). The Firm retains the right to service these loans and they are serviced in accordance with the agency's servicing guidelines and standards. These sales resulted in pretax gains of $92 million, $32 million and $47 million, respectively.

For a limited number of loan sales, the Firm is obligated to share up to 100% of the credit risk associated with the sold loans with the purchaser. See Note 31 on page 241 of this Annual Report for additional information on loans sold with recourse and other securitization related indemnifications.

Other Securitizations

The Firm also securitizes automobile and student loans originated by RFS and purchased consumer loans (including automobile and student loans). The Firm retains servicing responsibilities for all originated and certain purchased student and automobile loans. It may also hold a retained interest in these securitizations; such residual interests are classified as other assets. At December 31, 2009 and 2008, the Firm held $9 million and $37 million, respectively, of retained interests in securitized automobile loan securitizations and $49 million and $52 million, respectively, of residual interests in securitized student loans.

Securitization activity

The following tables provide information related to the Firm's securitization activities for the years ended December 31, 2009, 2008 and 2007. For the periods presented, there were no cash flows from the Firm to the QSPEs related to recourse or guarantee arrangements.

Year ended December 31, 2009 (in millions, except for ratios and where otherwise noted)	Credit card	Residential mortgage[g] Prime[h]	Subprime	Option ARMs	Commercial and other	Student loans	Auto
Principal securitized	**$ 26,538**	**$ —**	**$ —**	**$ —**	**$ 500**	**$ —**	**$ —**
Pretax gains	**22**	**—**	**—**	**—**	**—**[i]	**—**	**—**
All cash flows during the period:							
Proceeds from new securitizations	**$ 26,538**[e][f]	**$ —**	**$ —**	**$ —**	**$ 542**[e]	**$ —**	**$ —**
Servicing fees collected	**1,251**	**432**	**185**	**494**	**11**	**3**	**4**
Other cash flows received[a]	**5,000**	**7**	**4**	**—**	**—**	**—**	**—**
Proceeds from collections reinvested in revolving securitizations	**161,428**	**—**	**—**	**—**	**—**	**—**	**—**
Purchases of previously transferred financial assets (or the underlying collateral)[b]	**—**	**136**	**—**	**29**	**—**	**—**	**249**
Cash flows received on the interests that continue to be held by the Firm[c]	**261**	**475**	**25**	**38**	**109**	**7**	**4**
Key assumptions used to measure retained interests originated during the year (rates per annum):							
Prepayment rate[d]	**16.7% PPR**				**100%**[j] **CPY**		
Weighted-average life (in years)	**0.5**				**9.0**		
Expected credit losses	**8.9%**				**—%**[j]		
Discount rate	**16.0%**				**10.7%**		

Year ended December 31, 2008 (in millions, except for ratios and where otherwise noted)	Credit card	Residential mortgage[g] Prime[h]	Subprime	Option ARMs	Commercial and other	Student loans	Auto
Principal securitized	$ 21,390	$ —	$ —	$ —	$ 1,023	$ —	$ —
Pretax gains	151	—	—	—	—	—	—
All cash flows during the period:							
Proceeds from new securitizations	$ 21,389[e]	$ —	$ —	$ —	$ 989[e]	$ —	$ —
Servicing fees collected	1,162	279	146	129	11	4	15
Other cash flows received[a]	4,985	23	16	—	—	—	—
Proceeds from collections reinvested in revolving securitizations	152,399	—	—	—	—	—	—
Purchases of previously transferred financial assets (or the underlying collateral)[b]	—	217	13	6	—	—	359
Cash flows received on the interests that continue to be held by the Firm[c]	117	267	23	53	455	—	43
Key assumptions used to measure retained interests originated during the year (rates per annum):							
Prepayment rate[d]	19.1% PPR				1.5% CPR		
Weighted-average life (in years)	0.4				2.1		
Expected credit losses	4.6%				1.5%[k]		
Discount rate	12.5%				25.0%		

Year ended December 31, 2007 (in millions, except for ratios and where otherwise noted)	Credit card	Residential mortgage Prime[h]	Subprime	Option ARMs	Commercial and other	Student loans	Auto
Principal securitized	$ 21,160	$ 32,084	$ 6,763	$ —	$ 12,797	$ 1,168	$ —
Pretax gains	177	28[i]	43	—	—	51	—
All cash flows during the period:							
Proceeds from new securitizations	$ 21,160	$ 31,791	$ 6,844	$ —	$ 13,038	$ 1,168	$ —
Servicing fees collected	1,005	124	246	—	7	2	36
Other cash flows received[a]	4,963	—	—	—	—	—	—
Proceeds from collections reinvested in revolving securitizations	148,946	—	—	—	—	—	—
Purchases of previously transferred financial assets (or the underlying collateral)[b]	—	58	598	—	—	—	431
Cash flows received on the interests that continue to be held by the Firm[c]	18	140	278	—	256	—	89
Key assumptions used to measure retained interests originated during the year (rates per annum):							
Prepayment rate[d]	20.4% PPR	13.7-37.2% CPR	30.0-48.0% CPR		0.0-8.0% CPR	1.0-8.0% CPR	
Weighted-average life (in years)	0.4	1.3-5.4	2.3-2.8		1.3-10.2	9.3	
Expected credit losses	3.7%	0.0-1.6%[k]	1.2-2.2%		0.0-1.0%[k]	—%[k]	
Discount rate	12.0%	5.8-20.0%	12.1-26.7%		10.0-14.0%	9.0%	

(a) Includes excess servicing fees and other ancillary fees received.
(b) Includes cash paid by the Firm to reacquire assets from the QSPEs – for example, servicer clean-up calls.
(c) Includes cash flows received on retained interests including – for example, principal repayments, and interest payments.
(d) PPR: principal payment rate; CPR: constant prepayment rate; CPY: constant prepayment yield.
(e) Includes $12.8 billion and $5.5 billion of securities in credit cards; and $47 million and zero of securities in commercial and other; retained by the Firm for the years ended December 31, 2009 and 2008, respectively.
(f) As required under the terms of the transaction documents, $1.6 billion of proceeds from new securitizations were deposited to cash escrow accounts during the year ended December 31, 2009.
(g) Includes securitizations sponsored by Bear Stearns and Washington Mutual as of their respective acquisition dates.
(h) Includes Alt-A loans.
(i) As of January 1, 2007, the Firm elected the fair value option for IB warehouse and the RFS prime mortgage warehouse. The carrying value of these loans accounted for at fair value approximates the proceeds received from securitization.
(j) Represents a senior interest-only security that is expected to prepay in full as soon as permitted, as such there is no expected credit loss on this security. Market convention is to utilize a 100% prepayment rate for this type of interest.
(k) Expected credit losses for consumer prime residential mortgage, and student and certain other securitizations are incorporated into other assumptions.

JPMorgan Chase's interest in securitized assets held at fair value

The following table summarizes the Firm's retained securitization interests, which are carried at fair value on the Firm's Consolidated Balance Sheets. The risk ratings are periodically reassessed as information becomes available. As of December 31, 2009 and 2008, 59% and 55%, respectively, of the Firm's retained securitization interests, which are carried at fair value, were risk rated "A" or better.

	Ratings profile of interests held [c][d][e]					
	2009			2008		
December 31, (in billions)	Investment grade	Noninvestment grade	Retained interests	Investment grade	Noninvestment grade	Retained interests
Asset types:						
Credit card[a]	**$ 15.6**	**$ 5.0**	**$ 20.6**	$ 5.8	$ 3.8	$ 9.6
Residential mortgage:						
Prime[b]	**0.7**	**0.4**	**1.1**	2.0	0.4	2.4
Subprime	**—**	**—**	**—**	—	0.1	0.1
Option ARMs	**0.1**	**—**	**0.1**	0.4	—	0.4
Commercial and other	**2.2**	**0.2**	**2.4**	2.2	0.3	2.5
Student loans	**—**	**0.1**	**0.1**	—	0.1	0.1
Auto	**—**	**—**	**—**	—	—	—
Total	**$ 18.6**	**$ 5.7**	**$ 24.3**	$ 10.4	$ 4.7	$ 15.1

(a) Includes retained subordinated interests carried at fair value, including CS's accrued interests and fees, escrow accounts, and other residual interests. Excludes at December 31, 2009 and 2008, undivided seller interest in the trusts of $16.7 billion and $33.3 billion, respectively, and unencumbered cash amounts and deposits of $6.6 billion and $2.1 billion, respectively, which are carried at historical cost.
(b) Includes Alt-A loans.
(c) The ratings scale is presented on an S&P-equivalent basis.
(d) Includes $2.0 billion and $1.8 billion of investments acquired in the secondary market, but predominantly held for investment purposes, as of December 31, 2009 and 2008, respectively. Of these amounts, $2.0 billion and $1.7 billion were classified as investment-grade as of December 31, 2009 and 2008, respectively.
(e) Excludes senior and subordinated securities of $875 million and $1.0 billion at December 31, 2009 and 2008, respectively, which the Firm purchased in connection with IB's secondary market-making activities.

The table below outlines the key economic assumptions used to determine the fair value as of December 31, 2009 and 2008, respectively, of the Firm's retained interests, other than MSRs, that are valued using modeling techniques. The table below also outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in assumptions used to determine fair value. For a discussion of MSRs, see Note 17 on pages 223–224 of this Annual Report.

		Residential mortgage					
December 31, 2009 (in millions, except rates, and where otherwise noted)	Credit card	Prime[d]	Subprime	Option ARMs	Commercial and other	Student	Auto
JPMorgan Chase interests in securitized assets[a]	**$ 4,016**[c]	**$ 1,143**	**$ 27**	**$ 113**	**$ 2,361**	**$ 51**	**$ 9**
Weighted-average life (in years)	**0.6**	**8.3**	**4.3**	**5.1**	**3.5**	**8.1**	**0.6**
Weighted-average prepayment rate[b]	**14.3%**	**4.9%**	**21.8%**	**15.7%**	**—%**	**5.0%**	**1.4%**
	PPR	**CPR**	**CPR**	**CPR**	**CPR**	**CPR**	**ABS**
Impact of 10% adverse change	**$ (1)**	**$ (15)**	**$ (2)**	**$ —**	**$ —**	**$ (1)**	**$ —**
Impact of 20% adverse change	**(2)**	**(31)**	**(3)**	**(1)**	**—**	**(2)**	**(1)**
Weighted-average loss assumption	**6.8%**	**3.2%**	**2.7%**	**0.7%**	**1.4%**	**—%**[e]	**0.8%**
Impact of 10% adverse change	**$ (1)**	**$ (15)**	**$ (4)**	**$ —**	**$ (41)**	**$ —**	**$ —**
Impact of 20% adverse change	**(3)**	**(29)**	**(7)**	**—**	**(100)**	**—**	**—**
Weighted-average discount rate	**12.0%**	**11.4%**	**23.2%**	**5.4%**	**12.5%**	**9.0%**	**2.8%**
Impact of 10% adverse change	**$ (10)**	**$ (41)**	**$ (2)**	**$ (1)**	**$ (72)**	**$ (2)**	**$ —**
Impact of 20% adverse change	**(20)**	**(82)**	**(4)**	**(3)**	**(139)**	**(4)**	**—**

		Residential mortgage					
December 31, 2008 (in millions, except rates, and where otherwise noted)	Credit card	Prime[d]	Subprime	Option ARMs	Commercial and other	Student	Auto
JPMorgan Chase interests in securitized assets[a]	$ 3,463[c]	$ 1,420	$ 77	$ 436	$ 1,966	$ 55	$ 40
Weighted-average life (in years)	0.5	5.3	1.5	7.3	3.5	8.2	0.7
Weighted-average prepayment rate[b]	16.6%	17.7%	25.1%	7.6%	0.7%	5.0%	1.3%
	PPR	CPR	CPR	CPR	CPR	CPR	ABS
Impact of 10% adverse change	$ (42)	$ (31)	$ (9)	$ (4)	$ (1)	$ (1)	$ —
Impact of 20% adverse change	(85)	(57)	(10)	(11)	(1)	(2)	(1)
Weighted-average loss assumption	7.0%	4.4%	3.4%	0.3%	0.3%[e]	—%[e]	0.5%
Impact of 10% adverse change	$ (235)	$ (25)	$ (11)	$ —	$ (12)	$ —	$ —
Impact of 20% adverse change	(426)	(49)	(17)	(1)	(24)	—	(1)
Weighted-average discount rate	18.0%	14.5%	21.5%	17.3%	12.4%	9.0%	4.1%
Impact of 10% adverse change	$ (10)	$ (52)	$ (7)	$ (16)	$ (26)	$ (2)	$ —
Impact of 20% adverse change	(20)	(102)	(9)	(28)	(49)	(4)	—

(a) As of December 31, 2008, certain investments acquired in the secondary market but predominantly held for investment purposes are included.
(b) PPR: principal payment rate; ABS: absolute prepayment speed; CPR: constant prepayment rate.
(c) Excludes the Firm's retained senior and subordinated AFS securities in its credit card securitization trusts, which are discussed in Note 11 on pages 195–199 of this Annual Report.
(d) Includes Alt-A loans.
(e) Expected losses for student loans and certain wholesale securitizations are minimal and are incorporated into other assumptions.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based on a 10% or 20% variation in assumptions generally cannot be extrapolated easily, because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in the table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might counteract or magnify the sensitivities. The above sensitivities also do not reflect the Firm's risk management practices that may be undertaken to mitigate such risks.

Loan delinquencies and net charge-offs

The table below includes information about delinquencies, net charge-offs/(recoveries) and components of reported and securitized financial assets at December 31, 2009 and 2008.

Year ended December 31,	Credit exposure		Nonperforming loans[h][i]		90 days or more past due and still accruing[i]		Net loan charge-offs	
(in millions)	**2009**	2008	**2009**	2008	**2009**	2008	**2009**	2008
Consumer loans – excluding purchased credit-impaired loans and loans held-for-sale:								
Home equity – senior lien	**$ 27,376**	$ 29,793	**$ 477**	$ 291	**$ —**	$ —	**$ 234**	$ 86
Home equity – junior lien	**74,049**	84,542	**1,188**	1,103	**—**	—	**4,448**	2,305
Prime mortgage[a]	**66,892**	72,266	**4,355**	1,895	**—**	—	**1,894**	526
Subprime mortgage	**12,526**	15,330	**3,248**	2,690	**—**	—	**1,648**	933
Option ARMs	**8,536**	9,018	**312**	10	**—**	—	**63**	—
Auto loans	**46,031**	42,603	**177**	148	**—**	—	**627**	568
Credit card[b]	**78,786**	104,746	**3**	4	**3,481**	2,649	**9,634**	4,556
All other loans	**31,700**	33,715	**900**	430	**542**	463	**1,285**	459
Total consumer loans	**345,896**	392,013	**10,660**	6,571	**4,023**	3,112	**19,833**	9,433
Consumer loans – purchased credit-impaired[c]								
Home equity	**26,520**	28,555	**NA**	NA	**NA**	NA	**NA**	NA
Prime mortgage	**19,693**	21,855	**NA**	NA	**NA**	NA	**NA**	NA
Subprime mortgage	**5,993**	6,760	**NA**	NA	**NA**	NA	**NA**	NA
Option ARMs	**29,039**	31,643	**NA**	NA	**NA**	NA	**NA**	NA
Total consumer loans – purchased credit-impaired[c]	**81,245**	88,813	**NA**	NA	**NA**	NA	**NA**	NA
Total consumer loans – retained	**427,141**	480,826	**10,660**	6,571	**4,023**	3,112	**19,833**	9,433
Loans held-for-sale[d]	**2,142**	2,028	**—**	—	**—**	—	**—**	—
Total consumer loans – reported	**429,283**	482,854	**10,660**	6,571	**4,023**	3,112	**19,833**	9,433
Total wholesale loans	**204,175**	262,044	**6,904**[j]	2,382[j]	**332**	163	**3,132**	402
Total loans reported	**633,458**	744,898	**17,564**	8,953	**4,355**	3,275	**22,965**	9,835
Securitized loans:								
Residential mortgage:								
Prime mortgage[a]	**171,547**	212,274	**33,838**	21,130	**—**	—	**9,333**	5,645
Subprime mortgage	**47,261**	58,607	**19,505**	13,301	**—**	—	**7,123**	4,797
Option ARMs	**41,983**	48,328	**10,973**	6,440	**—**	—	**2,287**	270
Automobile	**218**	791	**1**	2	**—**	—	**4**	15
Credit card	**84,626**	85,571	**—**	—	**2,385**	1,802	**6,443**	3,612
Student	**1,008**	1,074	**—**	—	**64**	66	**1**	1
Commercial and other	**24,799**	45,677	**1,244**	166	**—**	28	**15**	8
Total loans securitized[e]	**371,442**	452,322	**65,561**	41,039	**2,449**	1,896	**25,206**	14,348
Total loans reported and securitized[f]	**$ 1,004,900**[g]	$ 1,197,220[g]	**$ 83,125**	$ 49,992	**$ 6,804**	$ 5,171	**$48,171**	$ 24,183

(a) Includes Alt-A loans.

(b) Includes billed finance charges and fees net of an allowance for uncollectible amounts, and $1.0 billion of loans at December 31, 2009, held by the Washington Mutual Master Trust, which were consolidated onto the Firm's Consolidated Balance Sheets at fair value during the second quarter of 2009.

(c) Purchased credit-impaired loans represent loans acquired in the Washington Mutual transaction for which a deterioration in credit quality occurred between the origination date and JPMorgan Chase's acquisition date. These loans were initially recorded at fair value and accrete interest income over the estimated life of the loan when cash flows are reasonably estimable, even if the underlying loans are contractually past due. For additional information, see Note 13 on pages 200–204 of this Annual Report.

(d) Includes loans for prime mortgages and other (largely student loans) of $450 million and $1.7 billion at December 31, 2009, respectively, and $206 million and $1.8 billion at December 31, 2008, respectively.

(e) Total assets held in securitization-related SPEs were $541.4 billion and $640.8 billion at December 31, 2009 and 2008, respectively. The $371.4 billion and $452.3 billion of loans securitized at December 31, 2009 and 2008, respectively, excludes: $145.0 billion and $152.4 billion of securitized loans, in which the Firm has no continuing involvement; $16.7 billion and $33.3 billion of seller's interests in credit card master trusts; and $8.3 billion and $2.8 billion of cash amounts on deposit and escrow accounts, all respectively.

(f) Represents both loans on the Consolidated Balance Sheets and loans that have been securitized.

(g) Includes securitized loans that were previously recorded at fair value and classified as trading assets.

(h) At December 31, 2009 and 2008, nonperforming loans excluded: (1) mortgage loans insured by U.S. government agencies of $9.0 billion and $3.0 billion, respectively; (2) student loans that were 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program, of $542 million and $437 million, respectively. These amounts are excluded, as reimbursement is proceeding normally. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance. Under guidance issued by the Federal Financial Institutions Examination Council, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

(i) Excludes purchased credit-impaired loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past due status of the pools, or that of individual loans within the pools, in not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

(j) Includes nonperforming loans held-for-sale and loans at fair value of $345 million and $32 million at December 31, 2009 and 2008, respectively.

Note 16 – Variable interest entities

Refer to Note 1 on page 150 of this Annual Report for a further description of JPMorgan Chase's policies regarding consolidation of variable interest entities.

JPMorgan Chase's principal involvement with VIEs occurs in the following business segments:

- Investment Bank: Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner. IB is involved with VIEs through multi-seller conduits and for investor intermediation purposes, as discussed below. IB also securitizes loans through QSPEs, to create asset-backed securities, as further discussed in Note 15 on pages 206–213 of this Annual Report.
- Asset Management ("AM"): The legal entity structures for a limited number of funds sponsored and managed by asset management include certain entities within the structure which are deemed VIEs. As asset manager of the funds, AM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For those limited number of funds that qualify as VIEs, AM's relationship with such funds are not considered significant variable interests under U.S. GAAP.
- Treasury & Securities Services: Provides services to a number of VIEs that are similar to those provided to non-VIEs. TSS earns market-based fees for the services it provides. The relationships resulting from TSS' services are not considered to be significant variable interests.
- Commercial Banking ("CB"): Utilizes VIEs to assist clients in accessing the financial markets in a cost-efficient manner. This is often accomplished through the use of products similar to those offered in IB. CB may assist in the structuring and/or ongoing administration of these VIEs and may provide liquidity, letters of credit and/or derivative instruments in support of the VIE. The relationships resulting from CB's services are not considered to be significant variable interests.
- Corporate/Private Equity: Corporate utilizes VIEs to issue guaranteed capital debt securities. See Note 22 on pages 228–229 for further information. The Private Equity business, within Corporate/Private Equity, may be involved with entities that could be deemed VIEs. Private equity entities are typically investment companies as defined in the investment company accounting guidance and, as such, are not required to utilize the accounting guidance for the consolidation of VIEs. Had the guidance for consolidation of VIEs been applied to these entities, the impact would have been immaterial to the Firm's Consolidated Financial Statements as of December 31, 2009.

As noted above, IB is predominantly involved with multi-seller conduits and VIEs associated with investor intermediation activities. These nonconsolidated VIEs that are sponsored by JPMorgan Chase are discussed below. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the principal beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments associated with the JPMorgan Chase brand name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper ("ABCP") conduit.

Multi-seller conduits

Funding and liquidity

The Firm is an active participant in the asset-backed securities business, and it helps customers meet their financing needs by providing access to the commercial paper markets through VIEs known as multi-seller conduits. Multi-seller conduit entities are separate bankruptcy remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper to third-party investors. The primary source of repayment of the commercial paper is the cash flow from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided by the customers (i.e., sellers) to the conduits or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller, but also may include any combination of the following: recourse to the seller or originator, cash collateral accounts, letters of credit, excess spread, retention of subordinated interests or third-party guarantees. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

JPMorgan Chase receives fees for structuring multi-seller conduit transactions and compensation from the multi-seller conduits for its role as administrative agent, liquidity provider, and provider of program-wide credit enhancement.

To ensure timely repayment of the commercial paper, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it. Deal-specific liquidity facilities are the primary source of liquidity support for the conduits. The deal-specific liquidity facilities are typically in the form of asset purchase agreements and generally structured so the liquidity that will be provided by the Firm as liquidity provider will be affected by the Firm purchasing, or lending against, a pool of nondefaulted, performing assets. In limited circumstances, the Firm may provide unconditional liquidity.

The conduit's administrative agent can require the liquidity provider to perform under its asset purchase agreement with the conduit at any time. These agreements may cause the liquidity provider, including the Firm, to purchase an asset from the conduit at an amount above the asset's then current fair value – in effect, providing a guarantee of the initial value of the reference asset as of the date of the agreement.

The Firm also provides the multi-seller conduit vehicles with program-wide liquidity facilities in the form of uncommitted short-term revolving facilities that can be accessed by the conduits to handle funding increments too small to be funded by commercial paper and in the form of uncommitted liquidity facilities that can be accessed by the conduits only in the event of short-term disruptions in the commercial paper market.

Because the majority of the deal-specific liquidity facilities will only fund nondefaulted assets, program-wide credit enhancement is required to absorb losses on defaulted receivables in excess of losses absorbed by any deal-specific credit enhancement. Program-wide credit enhancement may be provided by JPMorgan Chase in the form of standby letters of credit or by third-party surety bond providers. The amount of program-wide credit enhancement required varies by conduit and ranges between 5% and 10% of the applicable commercial paper that is outstanding.

The following table summarizes Firm-administered multi-seller conduits. On May 31, 2009, the Firm consolidated one of these multi-seller conduits due to the redemption of the expected loss note ("ELN"). There were no consolidated Firm-administered multi-seller conduits as of December 31, 2008.

	2009		2008
December 31, (in billions)	Consolidated	Nonconsolidated	Nonconsolidated
Total assets funded by conduits	**$ 5.1**	**$ 17.8**	$ 42.9
Total commercial paper issued by conduits	**5.1**	**17.8**	43.1
Liquidity and credit enhancements			
Deal-specific liquidity facilities (primarily asset purchase agreements)	**8.0**	**24.2**(b)	55.4(b)
Program-wide liquidity facilities	**4.0**	**13.0**	17.0
Program-wide credit enhancements	**0.4**	**2.0**	3.0
Maximum exposure to loss(a)	**8.0**	**24.8**	56.9

(a) Maximum exposure to loss, calculated separately for each multi-seller conduit, includes the Firm's exposure to both deal-specific liquidity facilities and program-wide credit enhancements. For purposes of calculating maximum exposure to loss, the Firm-provided, program-wide credit enhancement is limited to deal-specific liquidity facilities provided by third parties.

(b) The accounting for the guarantees reflected in these agreements is further discussed in Note 31 on pages 238–242 of this Annual Report.

Assets funded by the multi-seller conduits

JPMorgan Chase's administered multi-seller conduits fund a variety of asset types for the Firm's clients. Asset types primarily include credit card receivables, auto loans, trade receivables, student loans, commercial loans, residential mortgages, capital commitments (e.g., loans to private equity, mezzanine and real estate funds, secured by capital commitments of highly rated institutional investors), and various other asset types. It is the Firm's intention that the assets funded by its administered multi-seller conduits be sourced only from the Firm's clients and not originated by, or transferred from, JPMorgan Chase.

The following table presents information on the commitments and assets held by JPMorgan Chase's administered nonconsolidated multi-seller conduits as of December 31, 2009 and 2008.

	2009				2008			
December 31, (in billions)	Unfunded commitments to the Firm's clients	Commercial paper funded assets	Liquidity provided by third parties	Liquidity provided by the Firm	Unfunded commitments to the Firm's clients	Commercial paper funded assets	Liquidity provided by third parties	Liquidity provided by the Firm
Asset types:								
Credit card	**$ 1.1**	**$ 5.2**	**$ —**	**$ 6.3**	$ 3.0	$ 8.9	$ 0.1	$ 11.8
Vehicle loans and leases	**1.8**	**5.0**	**—**	**6.8**	1.4	10.0	—	11.4
Trade receivables	**2.8**	**1.8**	**—**	**4.6**	3.8	5.5	—	9.3
Student loans	**0.3**	**1.3**	**—**	**1.6**	0.7	4.6	—	5.3
Commercial	**0.2**	**1.2**	**—**	**1.4**	1.5	4.0	0.4	5.1
Residential mortgage	**—**	**0.6**	**—**	**0.6**	—	0.7	—	0.7
Capital commitments	**0.2**	**1.7**	**0.6**	**1.3**	1.3	3.9	0.6	4.6
Rental car finance	**0.4**	**—**	**—**	**0.4**	0.2	0.4	—	0.6
Equipment loans and leases	**0.2**	**0.4**	**—**	**0.6**	0.7	1.6	—	2.3
Floorplan – vehicle	**—**	**—**	**—**	**—**	0.7	1.8	—	2.5
Consumer	**—**	**0.2**	**—**	**0.2**	0.1	0.7	0.1	0.7
Other	**—**	**0.4**	**—**	**0.4**	0.6	0.8	0.3	1.1
Total	**$ 7.0**	**$ 17.8**	**$ 0.6**	**$ 24.2**	$ 14.0	$ 42.9	$ 1.5	$ 55.4

December 31, 2009 (in billions)	Ratings profile of VIE assets of the nonconsolidated multi-seller conduits[a]					Commercial paper funded assets	Wt. avg. expected life (years)[b]
	Investment-grade				Noninvestment-grade		
	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below		
Asset types:							
Credit card	**$ 3.1**	**$ 2.0**	**$ 0.1**	**$ —**	**$ —**	**$ 5.2**	**1.6**
Vehicle loans and leases	**2.9**	**2.1**	**—**	**—**	**—**	**5.0**	**2.3**
Trade receivables	**—**	**1.6**	**0.1**	**—**	**0.1**	**1.8**	**0.8**
Student loans	**1.3**	**—**	**—**	**—**	**—**	**1.3**	**0.8**
Commercial	**0.6**	**0.2**	**0.1**	**—**	**0.3**	**1.2**	**2.2**
Residential mortgage	**—**	**0.5**	**—**	**—**	**0.1**	**0.6**	**3.3**
Capital commitments	**—**	**—**	**1.7**	**—**	**—**	**1.7**	**2.0**
Rental car finance	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Equipment loans and leases	**0.2**	**0.2**	**—**	**—**	**—**	**0.4**	**2.0**
Floorplan – vehicle	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Consumer	**0.2**	**—**	**—**	**—**	**—**	**0.2**	**2.3**
Other	**—**	**0.4**	**—**	**—**	**—**	**0.4**	**4.9**
Total	**$ 8.3**	**$ 7.0**	**$ 2.0**	**$ —**	**$ 0.5**	**$ 17.8**	**1.9**

December 31, 2008 (in billions)	Ratings profile of VIE assets of the nonconsolidated multi-seller conduits[a]					Commercial paper funded assets	Wt. avg. expected life (years)[b]
	Investment-grade				Noninvestment-grade		
	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below		
Asset types:							
Credit card	$ 4.8	$ 3.9	$ 0.1	$ 0.1	$ —	$ 8.9	1.5
Vehicle loans and leases	4.1	4.1	1.8	—	—	10.0	2.5
Trade receivables	—	4.0	1.5	—	—	5.5	1.0
Student loans	3.6	0.9	—	0.1	—	4.6	1.8
Commercial	1.1	2.0	0.6	0.3	—	4.0	2.7
Residential mortgage	—	0.6	—	0.1	—	0.7	4.0
Capital commitments	—	3.6	0.3	—	—	3.9	2.4
Rental car finance	—	—	0.4	—	—	0.4	1.5
Equipment loans and leases	0.4	1.2	—	—	—	1.6	2.2
Floorplan – vehicle	0.1	1.0	0.7	—	—	1.8	1.1
Consumer	0.1	0.4	0.2	—	—	0.7	1.6
Other	0.5	0.3	—	—	—	0.8	3.7
Total	$ 14.7	$ 22.0	$ 5.6	$ 0.6	$ —	$ 42.9	2.0

(a) The ratings scale is presented on an S&P equivalent basis.
(b) Weighted average expected life for each asset type is based on the remaining term of each conduit transaction's committed liquidity plus either the expected weighted average life of the assets should the committed liquidity expire without renewal or the expected time to sell the underlying assets.

The assets held by the multi-seller conduits are structured so that if they were rated, the Firm believes the majority of them would receive an "A" rating or better by external rating agencies. However, it is unusual for the assets held by the conduits to be explicitly rated by an external rating agency. Instead, the Firm's Credit Risk group assigns each asset purchase liquidity facility an internal risk rating based on its assessment of the probability of default for the transaction. The ratings provided in the above table reflect the S&P-equivalent ratings of the internal rating grades assigned by the Firm.

The risk ratings are periodically reassessed as information becomes available. As of December 31, 2009 and 2008, 95% and 90%, respectively, of the assets in the nonconsolidated conduits were risk-rated "A" or better.

Commercial paper issued by multi-seller conduits

The weighted-average life of commercial paper issued by nonconsolidated multi-seller conduits at December 31, 2009 and 2008, was 19 days and 27 days, respectively, and the average yield on the commercial paper was 0.2% and 0.6%, respectively. In the normal course of business, JPMorgan Chase trades and invests in commercial paper, including paper issued by the Firm-administered conduits. The percentage of commercial paper purchased by the Firm from all Firm-administered conduits during 2009 ranged from less than 1% to approximately 5.8% on any given day. The largest daily amount of commercial paper outstanding held by the Firm in any one multi-seller conduit during 2009 was approximately $852 million, or 11.6%, of the conduit's commercial paper outstanding. The Firm is not obligated under any agreement (contractual or noncontractual) to purchase the commercial paper issued by nonconsolidated JPMorgan Chase–administered conduits.

Consolidation analysis

Each nonconsolidated multi-seller conduit administered by the Firm at December 31, 2009 and 2008, had issued ELNs, the holders of which are committed to absorbing the majority of the expected loss of each respective conduit. The total amounts of ELNs outstanding for nonconsolidated conduits at December 31, 2009 and 2008, were $96 million and $136 million, respectively.

The Firm could fund purchases of assets from nonconsolidated, Firm-administered multi-seller conduits should it become necessary.

Implied support

The Firm did not have and continues not to have any intent to protect any ELN holders from potential losses on any of the conduits' holdings and has no plans to remove any assets from any conduit unless required to do so in its role as administrator. Should such a transfer occur, the Firm would allocate losses on such assets between itself and the ELN holders in accordance with the terms of the applicable ELN.

Expected loss modeling

In determining the primary beneficiary of the conduits the Firm uses a Monte Carlo–based model to estimate the expected losses of each of the conduits and considers the relative rights and obligations of each of the variable interest holders. The Firm's expected loss modeling treats all variable interests, other than the ELNs, as its own to determine consolidation. The variability to be considered in the modeling of expected losses is based on the design of the entity. The Firm's traditional multi-seller conduits are designed to pass credit risk, not liquidity risk, to its variable interest holders, as the assets are intended to be held in the conduit for the longer term.

The Firm is required to run the Monte Carlo–based expected loss model each time a reconsideration event occurs. In applying this guidance to the conduits, the following events are considered to be reconsideration events, as they could affect the determination of the primary beneficiary of the conduits:

- New deals, including the issuance of new or additional variable interests (credit support, liquidity facilities, etc.);
- Changes in usage, including the change in the level of outstanding variable interests (credit support, liquidity facilities, etc.);
- Modifications of asset purchase agreements; and
- Sales of interests held by the primary beneficiary.

From an operational perspective, the Firm does not run its Monte Carlo–based expected loss model every time there is a reconsideration event due to the frequency of their occurrence. Instead, the Firm runs its expected loss model each quarter and includes a growth assumption for each conduit to ensure that a sufficient amount of ELNs exists for each conduit at any point during the quarter.

As part of its normal quarterly modeling, the Firm updates, when applicable, the inputs and assumptions used in the expected loss model. Specifically, risk ratings and loss given default assumptions are continually updated. Management has concluded that the model assumptions used were reflective of market participants' assumptions and appropriately considered the probability of changes to risk ratings and loss given defaults.

Qualitative considerations

The multi-seller conduits are primarily designed to provide an efficient means for clients to access the commercial paper market. The Firm believes the conduits effectively disperse risk among all parties and that the preponderance of the economic risk in the Firm's multi-seller conduits is not held by JPMorgan Chase.

Investor intermediation

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions, typically derivative structures, with these VIEs to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in these structuring activities are municipal bond vehicles, credit-linked note vehicles, asset swap vehicles and collateralized debt obligation vehicles.

Municipal bond vehicles

The Firm has created a series of secondary market trusts that provide short-term investors with qualifying tax-exempt investments, and that allow investors in tax-exempt securities to finance their investments at short-term tax-exempt rates. In a typical transaction, the vehicle purchases fixed-rate longer-term highly rated municipal bonds and funds the purchase by issuing two types of securities: (1) putable floating-rate certificates and (2) inverse floating-rate residual interests ("residual interests"). The maturity of each of the putable floating-rate certificates and the residual interests is equal to the life of the vehicle, while the maturity of the underlying municipal bonds is longer. Holders of the putable floating-rate certificates may "put," or tender, the certificates if the remarketing agent cannot successfully remarket the floating-rate certificates to another investor. A liquidity facility conditionally obligates the liquidity provider to fund the purchase of the tendered floating-rate certificates. Upon termination of the vehicle, if the proceeds from the sale of the underlying municipal bonds are not sufficient to repay the liquidity facility, the liquidity provider has recourse either to excess collateralization in the vehicle or the residual interest holders for reimbursement.

The third-party holders of the residual interests in these vehicles could experience losses if the face amount of the putable floating-rate certificates exceeds the market value of the municipal bonds upon termination of the vehicle. Certain vehicles require a smaller initial investment by the residual interest holders and thus do not result in excess collateralization. For these vehicles there exists a reimbursement obligation which requires the residual interest holders to post, during the life of the vehicle, additional collateral to the vehicle on a daily basis as the market value of the municipal bonds declines.

JPMorgan Chase often serves as the sole liquidity provider and remarketing agent of the putable floating-rate certificates. The liquidity provider's obligation to perform is conditional and is limited by certain termination events; which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, and the immediate downgrade of the municipal bond to below investment grade. A downgrade of JPMorgan Chase Bank, N.A.'s short-term rating does not affect the Firm's obligation under the liquidity facility. However, in the event of a downgrade in the Firm's credit ratings, holders of the putable floating-rate instruments supported by those liquidity facility commitments might choose to sell their instruments, which could increase the likelihood that the liquidity commitments could be drawn. In vehicles in which third-party investors own the residual interests, in addition to the termination events, the Firm's exposure as liquidity provider is further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or the reimbursement agreements with the residual interest holders. In the fourth quarter of 2008, a drawdown occurred on one liquidity facility as a result of a failure to remarket putable floating-rate certificates. The Firm was required to purchase $19 million of putable floating-rate certificates. Subsequently, the municipal bond vehicle was terminated and the proceeds from the sales of the municipal bonds, together with the collateral posted by the residual interest holder, were sufficient to repay the putable floating-rate certificates. In 2009, the Firm did not experience a drawdown on the liquidity facilities.

As remarketing agent, the Firm may hold putable floating-rate certificates of the municipal bond vehicles. At December 31, 2009 and 2008, respectively, the Firm held $72 million and $293 million of these certificates on its Consolidated Balance Sheets. The largest amount held by the Firm at any time during 2009 was $1.0 billion, or 6.7%, of the municipal bond vehicles' outstanding putable floating-rate certificates. The Firm did not have and continues not to have any intent to protect any residual interest holder from potential losses on any of the municipal bond holdings.

The long-term credit ratings of the putable floating-rate certificates are directly related to the credit ratings of the underlying municipal bonds, and to the credit rating of any insurer of the underlying municipal bond. A downgrade of a bond insurer would result in a downgrade of the insured municipal bonds, which would affect the rating of the putable floating-rate certificates. This could cause demand for these certificates by investors to decline or disappear, as putable floating-rate certificate holders typically require an "AA-" bond rating. At December 31, 2009 and 2008, 98% and 97%, respectively, of the municipal bonds held by vehicles to which the Firm served as liquidity provider were rated "AA-" or better, based on either the rating of the underlying municipal bond itself, or the rating including any credit enhancement. At December 31, 2009 and 2008, $2.3 billion and $2.6 billion, respectively, of the bonds were insured by monoline bond insurers.

The Firm sometimes invests in the residual interests of municipal bond vehicles. For VIEs in which the Firm owns the residual interests, the Firm consolidates the VIEs.

The likelihood is remote that the Firm would have to consolidate VIEs in which the Firm does not own the residual interests and that are currently off–balance sheet.

Exposure to nonconsolidated municipal bond VIEs at December 31, 2009 and 2008, including the ratings profile of the VIEs' assets, were as follows.

	2009				2008			
December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities[c]	Excess/ (deficit)[d]	Maximum exposure	Fair value of assets held by VIEs	Liquidity facilities[c]	Excess/ (deficit)[d]	Maximum exposure
Nonconsolidated municipal bond vehicles[a][b]	**$ 13.2**	**$ 8.4**	**$ 4.8**	**$ 8.4**	$ 10.0	$ 6.9	$ 3.1	$ 6.9

	Ratings profile of VIE assets[e]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of asset (years)
Nonconsolidated municipal bond vehicles[a]							
2009	**$ 1.6**	**$ 11.4**	**$ 0.2**	**$ —**	**$ —**	**$ 13.2**	**10.1**
2008	3.8	5.9	0.2	0.1	—	10.0	22.3

(a) Excluded $2.8 billion and $6.0 billion at December 31, 2009 and 2008, respectively, which were consolidated due to the Firm owning the residual interests.
(b) Certain of the municipal bond vehicles are structured to meet the definition of a QSPE (as discussed in Note 1 on page 150 of this Annual Report); accordingly, the assets and liabilities of QSPEs are not reflected on the Firm's Consolidated Balance Sheets (except for retained interests reported at fair value). At December 31, 2008, excluded collateral with a fair value of $603 million related to QSPE municipal bond vehicles in which the Firm owned the residual interests. The Firm did not own residual interests in QSPE municipal bond vehicles at December 31, 2009.
(c) The Firm may serve as credit enhancement provider for municipal bond vehicles for which it serves as liquidity provider. The Firm provided insurance on underlying municipal bonds, in the form of letters of credit, of $10 million at both December 31, 2009 and 2008, respectively.
(d) Represents the excess/(deficit) of the fair value of municipal bond assets available to repay the liquidity facilities, if drawn.
(e) The ratings scale is based on the Firm's internal risk ratings and presented on an S&P-equivalent basis.

Credit-linked note vehicles

The Firm structures transactions with credit-linked note vehicles in which the VIE purchases highly rated assets, such as asset-backed securities, and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit which the VIE otherwise does not hold. The VIE then issues CLNs with maturities predominantly ranging from one to ten years in order to transfer the risk of the referenced credit to the VIE's investors. Clients and investors often prefer using a CLN vehicle since the CLNs issued by the VIE generally carry a higher credit rating than such notes would if issued directly by JPMorgan Chase. The Firm's exposure to the CLN vehicles is generally limited to its rights and obligations under the credit derivative contract with the VIE, as the Firm does not provide any additional contractual financial support to the VIE. In addition, the Firm has not historically provided any financial support to the CLN vehicles over and above its contractual obligations. Accordingly, the Firm typically does not consolidate the CLN vehicles. As a derivative counterparty in a credit-linked note structure, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its balance sheet at fair value. The collateral purchased by such VIEs is largely investment-grade, with a significant amount being rated "AAA." The Firm divides its credit-linked note structures broadly into two types: static and managed.

In a static credit-linked note structure, the CLNs and associated credit derivative contract either reference a single credit (e.g., a multi-national corporation), or all or part of a fixed portfolio of credits. The Firm generally buys protection from the VIE under the credit derivative. In a managed credit-linked note structure, the CLNs and associated credit derivative generally reference all or part of an actively managed portfolio of credits. An agreement exists between a portfolio manager and the VIE that gives the portfolio manager the ability to substitute each referenced credit in the portfolio for an alternative credit. By participating in a structure where a portfolio manager has the ability to substitute credits within pre-agreed terms, the investors who own the CLNs seek to reduce the risk that any single credit in the portfolio will default. The Firm does not act as portfolio manager; its involvement with the VIE is generally limited to being a derivative counterparty. As a net buyer of credit protection, in both static and managed credit-linked note structures, the Firm pays a premium to the VIE in return for the receipt of a payment (up to the notional of the derivative) if one or more of the credits within the portfolio defaults, or if the losses resulting from the default of reference credits exceed specified levels.

Exposure to nonconsolidated credit-linked note VIEs at December 31, 2009 and 2008, was as follows.

	2009				2008			
December 31, (in billions)	Derivative receivables	Trading assets[b]	Total exposure[c]	Par value of collateral held by VIEs[d]	Derivative receivables	Trading assets[b]	Total exposure[c]	Par value of collateral held by VIEs[d]
Credit-linked notes[a]								
Static structure	**$ 1.9**	**$ 0.7**	**$ 2.6**	**$ 10.8**	$ 3.6	$ 0.7	$ 4.3	$ 14.5
Managed structure	**5.0**	**0.6**	**5.6**	**15.2**	7.7	0.3	8.0	16.6
Total	**$ 6.9**	**$ 1.3**	**$ 8.2**	**$ 26.0**	$ 11.3	$ 1.0	$ 12.3	$ 31.1

(a) Excluded collateral with a fair value of $1.5 billion and $2.1 billion at December 31, 2009 and 2008, respectively, which was consolidated as the Firm, in its role as secondary market maker, held a majority of the issued credit-linked notes of certain vehicles.
(b) Trading assets principally comprise notes issued by VIEs, which from time to time are held as part of the termination of a deal or to support limited market-making.
(c) On–balance sheet exposure that includes derivative receivables and trading assets.
(d) The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies on the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts.

Asset Swap Vehicles

The Firm also structures and executes transactions with asset swap vehicles on behalf of investors. In such transactions, the VIE purchases a specific asset or assets and then enters into a derivative with the Firm in order to tailor the interest rate or currency risk, or both, of the assets according to investors' requirements. Generally, the assets are held by the VIE to maturity, and the tenor of the derivatives would match the maturity of the assets. Investors typically invest in the notes issued by such VIEs in order to obtain exposure to the credit risk of the specific assets, as well as exposure to foreign exchange and interest rate risk that is tailored to their specific needs. The derivative transaction between the Firm and the VIE may include currency swaps to hedge assets held by the VIE denominated in foreign currency into the investors' home or investment currency or interest rate swaps to hedge the interest rate risk of assets held by the VIE; to add additional interest rate exposure into the VIE in order to increase the return on the issued notes; or to convert an interest-bearing asset into a zero-coupon bond.

The Firm's exposure to the asset swap vehicles is generally limited to its rights and obligations under the interest rate and/or foreign exchange derivative contracts, as the Firm does not provide any contractual financial support to the VIE. In addition, the Firm historically has not provided any financial support to the asset swap vehicles over and above its contractual obligations. Accordingly, the Firm typically does not consolidate the asset swap vehicles. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its balance sheet at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Exposure to nonconsolidated asset swap VIEs at December 31, 2009 and 2008, was as follows.

December 31, (in billions)	2009 Derivative receivables/ (payables)	2009 Trading assets[b]	2009 Total exposure[c]	2009 Par value of collateral held by VIEs[d]	2008 Derivative receivables/ (payables)	2008 Trading assets[b]	2008 Total exposure[c]	2008 Par value of collateral held by VIEs[d]
Nonconsolidated asset swap vehicles[a]	**$ 0.1**	**$ —**	**$ 0.1**	**$ 10.2**	$ (0.2)	$ —	$ (0.2)	$ 7.3

(a) Excluded fair value of collateral of $623 million and $1.0 billion at December 31, 2009 and 2008, respectively, which was consolidated as the Firm, in its role as secondary market maker, held a majority of the issued notes of certain vehicles.
(b) Trading assets principally comprise notes issued by VIEs, which from time to time are held as part of the termination of a deal or to support limited market-making.
(c) On-balance sheet exposure that includes derivative receivables and trading assets.
(d) The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies upon the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts.

Collateralized Debt Obligations vehicles

A CDO typically refers to a security that is collateralized by a pool of bonds, loans, equity, derivatives or other assets. The Firm's involvement with a particular CDO vehicle may take one or more of the following forms: arranger, warehouse funding provider, placement agent or underwriter, secondary market-maker for securities issued, or derivative counterparty.

As of December 31, 2009 and 2008, the Firm had funded noninvestment-grade loans of $156 million and $405 million, respectively, to nonconsolidated CDO warehouse VIEs. The Firm's maximum exposure to loss related to the nonconsolidated CDO warehouse VIEs was $156 million and $1.1 billion as of December 31, 2009 and 2008, respectively.

Once the CDO vehicle closes and issues securities, the Firm has no obligation to provide further support to the vehicle. At the time of closing, the Firm may hold unsold securities that it was not able to place with third-party investors. In addition, the Firm may on occasion hold some of the CDO vehicles' securities as a secondary market-maker or as a principal investor, or it may be a derivative counterparty to the vehicles. At December 31, 2009 and 2008, these amounts were not significant.

VIEs sponsored by third parties

Investment in a third-party credit card securitization trust

The Firm holds a note in a third-party-sponsored VIE, which is a credit card securitization trust that owns credit card receivables issued by a national retailer. The note is structured so that the principal amount can float up to 47% of the principal amount of the receivables held by the trust, not to exceed $4.2 billion.

The Firm is not the primary beneficiary of the trust and accounts for its investment at fair value within AFS investment securities. At December 31, 2009 and 2008, the amortized cost of the note was $3.5 billion and $3.6 billion, respectively, and the fair value was $3.5 billion and $2.6 billion, respectively. For more information on AFS securities, see Note 11 on pages 195–199 of this Annual Report.

VIE used in FRBNY transaction

In conjunction with the Bear Stearns merger, in June 2008, the Federal Reserve Bank of New York ("FRBNY") took control, through an LLC formed for this purpose, of a portfolio of $30.0 billion in assets, based on the value of the portfolio as of March 14, 2008. The assets of the LLC were funded by a $28.85 billion term loan from the FRBNY and a $1.15 billion subordinated loan from JPMorgan Chase. The JPMorgan Chase loan is subordinated to the FRBNY loan and will bear the first $1.15 billion of any losses of the portfolio. Any remaining assets in the portfolio after repayment of the FRBNY loan, repayment of the JPMorgan Chase loan and the expense of the LLC will be for the account of the FRBNY. The extent to which the FRBNY and JPMorgan Chase loans will be repaid will depend on the value of the asset portfolio and the liquidation strategy directed by the FRBNY.

Other VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, trustee or custodian. These transactions are conducted at arm's length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where these activities do not cause JPMorgan Chase to absorb a majority of the expected losses, or to receive a majority of the residual returns, the Firm records and reports these positions on its Consolidated Balance Sheets, similarly to the way it would record and report positions from any other third-party transaction. These transactions are not considered significant.

Consolidated VIE assets and liabilities

The following table presents information on assets, liabilities and commitments related to VIEs that are consolidated by the Firm.

	Assets			
December 31, 2009 (in billions)	Trading assets–debt and equity instruments	Loans	Other[b]	Total assets[c]
VIE program type				
Multi-seller conduits	**$ —**	**$ 2.2**	**$ 2.9**	**$ 5.1**
Credit card loans[a]	**—**	**6.1**	**0.8**	**6.9**
Municipal bond vehicles	**2.8**	**—**	**—**	**2.8**
Credit-linked notes	**1.3**	**—**	**0.2**	**1.5**
CDO warehouses	**0.1**	**—**	**—**	**0.1**
Other	**2.2**	**4.7**	**1.1**	**8.0**
Total	**$ 6.4**	**$ 13.0**	**$ 5.0**	**$ 24.4**

	Assets			
December 31, 2008 (in billions)	Trading assets–debt and equity instruments	Loans	Other[b]	Total assets[c]
VIE program type				
Multi-seller conduits	$ —	$ —	$ —	$ —
Credit card loans[a]	—	—	—	—
Municipal bond vehicles	5.9	—	0.1	6.0
Credit-linked notes	1.9	—	0.5	2.4
CDO warehouses	0.2	—	0.1	0.3
Other	2.5	5.3	2.1	9.9
Total	$ 10.5	$ 5.3	$ 2.8	$ 18.6

	Liabilities		
December 31, 2009 (in billions)	Beneficial interests in VIE assets[d]	Other[e]	Total liabilities
VIE program type			
Multi-seller conduits	**$ 4.8**	**$ —**	**$ 4.8**
Credit card loans[a]	**3.9**	**—**	**3.9**
Municipal bond vehicles	**2.7**	**—**	**2.7**
Credit-linked notes	**0.3**	**0.1**	**0.4**
CDO warehouses	**—**	**—**	**—**
Other	**3.5**	**2.1**	**5.6**
Total	**$ 15.2**	**$ 2.2**	**$ 17.4**

	Liabilities		
December 31, 2008 (in billions)	Beneficial interests in VIE assets[d]	Other[e]	Total liabilities
VIE program type			
Multi-seller conduits	$ —	$ —	$ —
Credit card loans[a]	—	—	—
Municipal bond vehicles	5.5	0.4	5.9
Credit-linked notes	1.3	0.6	1.9
CDO warehouses	—	—	—
Other	3.8	2.9	6.7
Total	$ 10.6	$ 3.9	$ 14.5

(a) Represents consolidated securitized credit card loans related to the WMM Trust, as well as loans that were represented by the Firm's undivided interest and subordinated interest and fees, which were previously recorded on the Firm's Consolidated Balance Sheets prior to consolidation. For further discussion, see Note 15 on pages 206–213 respectively, of this Annual Report.

(b) Included assets classified as resale agreements and other assets within the Consolidated Balance Sheets.

(c) Assets of each consolidated VIE are generally used to satisfy the liabilities to third parties. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.

(d) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated Balance Sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $10.4 billion and $10.6 billion at December 31, 2009 and 2008, respectively.

(e) Included liabilities classified as other borrowed funds, long-term debt, and accounts payable and other liabilities in the Consolidated Balance Sheets.

New accounting guidance for consolidation of variable interest entities (including securitization entities)

In June 2009, the FASB issued guidance which amends the accounting for the transfers of financial assets and the consolidation of VIEs. The guidance eliminates the concept of QSPEs and provides additional guidance with regard to accounting for transfers of financial assets. The guidance also changes the approach for determining the primary beneficiary of a VIE from a quantitative risk and reward model to a qualitative model, based on control and economics.

The Firm adopted this guidance for VIEs on January 1, 2010, which required the consolidation of the Firm's credit card securitization trusts, bank-administered asset-backed commercial paper conduits, and certain mortgage and other consumer securitization entities. The consolidation of these VIEs added approximately $88 billion and $92 billion of assets and liabilities, respectively, which were not previously consolidated on the Firm's Consolidated Balance Sheets in accordance with prior accounting guidance. The net impact of adopting this new accounting guidance was a reduction in stockholders' equity of approximately $4 billion and in Tier 1 capital ratio by approximately 30 basis points, driven predominantly by the establishment of an allowance for loan losses of approximately $7 billion (pre-tax) related to the receivables held in the credit card securitization trusts that were consolidated at the adoption date.

The U.S. GAAP consolidation of these entities did not have a significant impact on risk-weighted assets on the adoption date; this was due to the consolidation, for regulatory capital purposes, of the Chase Issuance Trust (the Firm's primary credit card securitization trust) in the second quarter of 2009, which added approximately $40 billion of risk-weighted assets. For further discussion, see Note 15 on pages 206–213 of this Annual Report.

In addition, the banking regulatory agencies issued regulatory capital rules relating to the adoption of this guidance for VIEs that permitted an optional two-quarter implementation delay, which defers the effect of this accounting guidance on risk-weighted assets and risk-based capital requirements. The Firm elected this regulatory implementation delay, as permitted under these new regulatory capital rules, for its bank-administered asset-backed commercial paper conduits and certain mortgage and other securitization entities.

In February 2010, the FASB finalized an amendment that defers the requirements of the consolidation guidance for certain investment funds, including mutual funds, private equity funds, and hedge funds. For the funds included in the deferral, the Firm will continue to analyze consolidation under other existing authoritative guidance; these funds are not included in the impact noted above.

Note 17 – Goodwill and other intangible assets

Goodwill and other intangible assets consist of the following.

December 31, (in millions)	2009	2008	2007
Goodwill	**$ 48,357**	$ 48,027	$ 45,270
Mortgage servicing rights	**15,531**	9,403	8,632
Other intangible assets:			
Purchased credit card relationships	**$ 1,246**	$ 1,649	$ 2,303
Other credit card–related intangibles	**691**	743	346
Core deposit intangibles	**1,207**	1,597	2,067
Other intangibles	**1,477**	1,592	1,383
Total other intangible assets	**$ 4,621**	$ 5,581	$ 6,099

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Other intangible assets are recorded at their fair value upon completion of a business combination or certain other transactions, and generally represent the value of customer relationships or arrangements.

The increase in goodwill during 2009 was primarily due to final purchase accounting adjustments related to the Bear Stearns merger, and the acquisition of a commodities business, each primarily allocated to IB, and foreign currency translation adjustments related to the Firm's Canadian credit card operations, which were allocated to Card Services. The increase in goodwill during 2008 was primarily due to the dissolution of the Chase Paymentech Solutions joint venture (allocated to Card Services), the merger with Bear Stearns, the purchase of an additional equity interest in Highbridge and tax-related purchase accounting adjustments associated with the Bank One merger (which were primarily attributed to IB).

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	2009	2008	2007
Investment Bank	**$ 4,959**	$ 4,765	$ 3,578
Retail Financial Services	**16,831**	16,840	16,848
Card Services	**14,134**	13,977	12,810
Commercial Banking	**2,868**	2,870	2,873
Treasury & Securities Services	**1,667**	1,633	1,660
Asset Management	**7,521**	7,565	7,124
Corporate/Private Equity	**377**	377	377
Total goodwill	**$ 48,357**	$ 48,027	$ 45,270

The following table presents changes in the carrying amount of goodwill.

(in millions)	Total
Balance at December 31, 2007[a]:	$ 45,270
Changes during 2008 from:	
Business combinations	2,481
Dispositions	(38)
Other[b]	314
Balance at December 31, 2008[a]:	$ 48,027
Changes during 2009 from:	
Business combinations	**271**
Dispositions	**—**
Other[b]	**59**
Balance at December 31, 2009[a]	**$ 48,357**

(a) Reflects gross goodwill balances as the Firm has not recognized any impairment losses to date.
(b) Includes foreign currency translation adjustments and other tax-related adjustments.

Impairment Testing

Subsequent to initial recognition, goodwill is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment. Goodwill was not impaired at December 31, 2009 or 2008, nor was any goodwill written off due to impairment during 2009, 2008 or 2007.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. The models project levered cash flows for the forecast period and use the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' forecasts and reviewed with the Operating Committee of the Firm. The Firm's cost of equity is determined using the Capital Asset Pricing Model, which

is consistent with methodologies and assumptions the Firm uses when advising clients. The discount rate used for each reporting unit represents an estimate of the cost of equity capital for that reporting unit and is determined based on the Firm's overall cost of equity, as adjusted for the risk characteristics specific to each reporting unit, for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions. To assess the reasonableness of the discount rates used for each reporting unit, management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firms' overall cost of equity to ensure reasonableness.

The valuations derived from the discounted cash flow models are then compared with market-based trading and transaction multiples for relevant competitors. Precise conclusions generally can not be drawn from these comparisons due to the differences that naturally exist between the Firm's businesses and competitor institutions. However, trading and transaction comparables are used as general indicators to assess the general reasonableness of the estimated fair values. Management also takes into consideration a comparison between the aggregate fair value of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (a) a control premium that would exist in a market transaction, (b) factors related to the level of execution risk that would exist at the firm-wide level that do not exist at the reporting unit level and (c) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

While no impairment of goodwill was recognized during 2009, the Firm's consumer lending businesses in RFS and Card Services have elevated risk of potential goodwill impairment due to their exposure to U.S. consumer credit risk. The valuation of these businesses are particularly dependent upon economic conditions (including unemployment rates, and home prices) and potential legislative and regulatory changes that affect consumer credit risk and their business models. The assumptions used in the discounted cash flow models for these businesses, and the values of the associated net assets, were determined using management's best estimates, and the cost of equity reflected the risk and uncertainty for these businesses and was evaluated in comparison to relevant market peers. Deterioration in these assumptions could cause the estimated fair values of these reporting units or their associated goodwill to decline, which may result in a material impairment charge to earnings in a future period related to some portion of their associated goodwill.

Mortgage servicing rights

Mortgage servicing rights represent the fair value of future cash flows for performing specified mortgage servicing activities (predominantly with respect to residential mortgage) for others. MSRs are either purchased from third parties or retained upon sale or securitization of mortgage loans. Servicing activities include collecting principal, interest, and escrow payments from borrowers; making tax and insurance payments on behalf of borrowers; monitoring delinquencies and executing foreclosure proceedings; and accounting for and remitting principal and interest payments to the investors of the mortgage-backed securities.

The Firm has one class of servicing assets. JPMorgan Chase made this determination based on the availability of market inputs used to measure its MSR asset at fair value and its treatment of MSRs as one aggregate pool for risk management purposes. As permitted by U.S. GAAP, the Firm elected to account for this one class of servicing assets at fair value. The Firm estimates the fair value of MSRs using an option-adjusted spread model ("OAS"), which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenue and costs to service, and other economic factors. The Firm reassesses and periodically adjusts the underlying inputs and assumptions used in the OAS model to reflect market conditions and assumptions that a market participant would consider in valuing the MSR asset. During 2009 and 2008, the Firm continued to refine its proprietary prepayment model based on a number of market-related factors, including a downward trend in home prices, general tightening of credit underwriting standards and the associated impact on refinancing activity. The Firm compares fair value estimates and assumptions to observable market data where available, and to recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. JPMorgan Chase uses or has used combinations of derivatives and securities to manage changes in the fair value of MSRs. The intent is to offset any changes in the fair value of MSRs with changes in the fair value of the related risk management instruments. MSRs decrease in value when interest rates decline. Conversely, securities (such as mortgage-backed securities), principal-only certificates and certain derivatives (when the Firm receives fixed-rate interest payments) increase in value when interest rates decline.

The following table summarizes MSR activity for the years ended December 31, 2009, 2008 and 2007.

Year ended December 31, (in millions, except where otherwise noted)	2009	2008	2007
Fair value at beginning of period	**$ 9,403**	$ 8,632	$ 7,546
MSR activity			
Originations of MSRs	**3,615**	3,061	2,335
Purchase of MSRs	**2**	6,755[d]	798
Disposition of MSRs	**(10)**	—	—
Total net additions	**3,607**	9,816	3,133
Change in valuation due to inputs and assumptions[a]	**5,807**	(6,933)	(516)
Other changes in fair value[b]	**(3,286)**	(2,112)	(1,531)
Total change in fair value of MSRs	**2,521**	(9,045)	(2,047)
Fair value at December 31	**$ 15,531**[c]	$ 9,403[c]	$ 8,632
Change in unrealized gains/(losses) included in income related to MSRs held at December 31	**$ 5,807**	$ (6,933)	$ (516)
Contractual service fees, late fees and other ancillary fees included in income	**$ 4,818**	$ 3,353	$ 2,429
Third-party mortgage loans serviced at December 31 (in billions)	**$ 1,091**	$ 1,185	$ 615

(a) Represents MSR asset fair value adjustments due to changes in inputs, such as interest rates and volatility, as well as updates to assumptions used in the valuation model. Also represents total realized and unrealized gains/(losses) included in net income using significant unobservable inputs (level 3).
(b) Includes changes in the MSR value due to modeled servicing portfolio runoff (or time decay). Represents the impact of cash settlements using significant unobservable inputs (level 3).
(c) Includes $41 million and $55 million related to commercial real estate at December 31, 2009 and 2008, respectively.
(d) Includes MSRs acquired as a result of the Washington Mutual transaction (of which $59 million related to commercial real estate) and the Bear Stearns merger. For further discussion, see Note 2 on pages 151–156 of this Annual Report.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2009, 2008 and 2007.

Year ended December 31, (in millions)	2009	2008	2007
RFS net mortgage servicing revenue			
Production revenue	**$ 503**	$ 898	$ 880
Net mortgage servicing revenue			
Operating revenue:			
Loan servicing revenue	**4,942**	3,258	2,334
Other changes in MSR asset fair value[a]	**(3,279)**	(2,052)	(1,531)
Total operating revenue	**1,663**	1,206	803
Risk management:			
Changes in MSR asset fair value due to inputs or assumptions in model[b]	**5,804**	(6,849)	(516)
Derivative valuation adjustments and other	**(4,176)**	8,366	927
Total risk management	**1,628**	1,517	411
Total RFS net mortgage servicing revenue	**3,291**	2,723	1,214
All other[c]	**(116)**	(154)	24
Mortgage fees and related income	**$ 3,678**	$ 3,467	$ 2,118

(a) Includes changes in the MSR value due to modeled servicing portfolio runoff (or time decay). Represents the impact of cash settlements using significant unobservable inputs (level 3).
(b) Represents MSR asset fair value adjustments due to changes in inputs, such as interest rates and volatility, as well as updates to assumptions used in the valuation model. Also represents total realized and unrealized gains/(losses) included in net income using significant unobservable inputs (level 3).
(c) Primarily represents risk management activities performed by the Chief Investment Office ("CIO") in the Corporate sector.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2009, and 2008, respectively; it also outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in those assumptions.

Year ended December 31, (in millions, except rates)	2009	2008
Weighted-average prepayment speed assumption (CPR)	**11.37%**	35.21%
Impact on fair value of 10% adverse change	**$ (896)**	$(1,039)
Impact on fair value of 20% adverse change	**(1,731)**	(1,970)
Weighted-average option adjusted spread	**4.63%**	3.80%
Impact on fair value of 100 basis points adverse change	**$ (641)**	$ (311)
Impact on fair value of 200 basis points adverse change	**(1,232)**	(606)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on a 10% and 20% variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might magnify or counteract the sensitivities.

Other intangible assets

During 2009, purchased credit card relationships, other credit card-related intangibles, core deposit intangibles and other intangibles decreased $960 million, primarily reflecting amortization expense, partially offset by foreign currency translation adjustments related to the Firm's Canadian credit card operations.

The components of credit card relationships, core deposits and other intangible assets were as follows.

	2009			2008		
December 31, (in millions)	Gross amount	Accumulated amortization	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	**$ 5,783**	**$ 4,537**	**$ 1,246**	$ 5,765	$ 4,116	$ 1,649
Other credit card–related intangibles	**894**	**203**	**691**	852	109	743
Core deposit intangibles	**4,280**	**3,073**	**1,207**	4,280	2,683	1,597
Other intangibles[a]	**2,200**	**723**	**1,477**	2,376	784	1,592

(a) The decrease in other intangibles gross amount and accumulated amortization from December 2008 was primarily attributable to the removal of fully amortized assets.

Amortization expense

The Firm's intangible assets with finite lives are amortized over their useful lives in a manner that best reflects the economic benefits of the intangible asset. $517 million of intangible assets related to asset management advisory contracts were determined to have an indefinite life and are not amortized.

The following table presents amortization expense related to credit card relationships, core deposits and all other intangible assets.

Year ended December 31, (in millions)	2009	2008	2007
Purchased credit card relationships	**$ 421**	$ 625	$ 710
Other credit card–related intangibles	**94**	33	11
Core deposit intangibles	**390**	469	554
Other intangibles[a]	**145**	136	119
Total amortization expense	**$ 1,050**	$ 1,263	$ 1,394

(a) Excludes amortization expense related to servicing assets on securitized automobile loans, which is recorded in lending and deposit-related fees, of $2 million, $5 million and $9 million, for the years ended 2009, 2008, and 2007, respectively.

Future amortization expense

The following table presents estimated future amortization expense related to credit card relationships, core deposits and all other intangible assets at December 31, 2009.

Year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	All other intangible assets	**Total**
2010	$ 354	$ 103	$ 329	$ 127	$ 913
2011	290	102	284	117	793
2012	252	105	240	113	710
2013	213	104	195	109	621
2014	109	100	106	105	420

Impairment

The Firm's intangible assets with indefinite lives are tested for impairment on an annual basis, or more frequently if events or changes in circumstances indicate that the asset might be impaired. The impairment test for indefinite-lived intangible assets compares the fair value of the intangible asset to its carrying amount. If the carrying value exceeds the fair value, then an impairment charge is recognized for the difference. Core deposits and credit card relationships as well as other acquired intangible assets determined to have finite lives, are amortized over their estimated useful lives in a manner that best reflects the economic benefits of the intangible asset. The impairment test for a finite-lived intangible asset compares the undiscounted cash flows associated with the use or disposition of the intangible asset to its carrying value. If the sum of the undiscounted cash flows exceeds its carrying value, then no impairment charge is recorded. If the sum of the undiscounted cash flows is less than its carrying value, then an impairment charge is recognized to the extent the carrying amount of the asset exceeds its fair value.

Note 18 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset. JPMorgan Chase has recorded immaterial asset retirement obligations related to asbestos remediation in those cases where it has sufficient information to estimate the obligations' fair value.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 19 – Deposits

At December 31, 2009 and 2008, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	**2009**	2008
U.S. offices:		
Noninterest-bearing	**$ 204,003**	$ 210,899
Interest-bearing (included $1,463 and $1,849 at fair value at December 31, 2009 and 2008, respectively)	**439,104**	511,077
Non-U.S. offices:		
Noninterest-bearing	**8,082**	7,697
Interest-bearing (included $2,992 and $3,756 at fair value at December 31, 2009 and 2008, respectively)	**287,178**	279,604
Total	**$ 938,367**	$ 1,009,277

At December 31, 2009 and 2008, time deposits in denominations of $100,000 or more were as follows.

December 31, (in millions)	**2009**	2008
U.S.	**$ 90,552**	$ 147,493
Non-U.S.	**77,887**	58,247
Total	**$ 168,439**	$ 205,740

At December 31, 2009, the maturities of time deposits were as follows.

December 31, 2009 (in millions)	U.S.	Non-U.S.	**Total**
2010	$ 113,912	$ 97,465	$ 211,377
2011	9,489	654	10,143
2012	3,851	485	4,336
2013	2,783	634	3,417
2014	1,321	127	1,448
After 5 years	671	267	938
Total	$ 132,027	$ 99,632	$ 231,659

On October 3, 2008, the Emergency Economic Stabilization Act of 2008 (the "2008 Act") was signed into law. The 2008 Act temporarily increased the standard maximum FDIC deposit insurance from $100,000 to $250,000 per depositor per institution through December 31, 2009. On May 20, 2009, the Helping Families Save Their Homes Act of 2009 (the "2009 Act") was signed into law. The 2009 Act extends through December 31, 2013, the FDIC's temporary standard maximum deposit insurance amount of $250,000 per depositor. On January 1, 2014, the standard maximum deposit insurance amount will return to $100,000 per depositor for all deposit accounts except Individual Retirement Accounts ("IRAs") and certain other retirement accounts, which will remain at $250,000 per depositor.

In addition, on November 21, 2008, the FDIC released a final rule on the FDIC Temporary Liquidity Guarantee Program (the "TLG Program"). Under one component of this program, the Transaction Account Guarantee Program (the "TAG Program") provides unlimited deposit insurance through December 31, 2009, on certain noninterest-bearing transaction accounts at FDIC-insured participating institutions. On December 4, 2008, the Firm elected to participate in the TLG Program and, as a result, was required to pay additional insurance premiums to the FDIC in an amount equal to an annualized 10 basis points on balances in noninterest-bearing transaction accounts that exceeded the $250,000 FDIC deposit insurance limits, as determined on a quarterly basis. The expiration date of the program was extended by six months, from December 31, 2009, to June 30, 2010, to provide continued support to those institutions most affected by the recent financial crisis and phase out the program in an orderly manner. On October 22, 2009, the Firm notified the FDIC that, as of January 1, 2010, it would no longer participate in the TAG Program. As a result of the Firm's decision to opt out of the program, after December 31, 2009, funds held in noninterest-bearing transaction accounts will no longer be guaranteed in full, but will be insured up to $250,000 under the FDIC's general deposit rules.

Note 20 – Other borrowed funds

The following table details the components of other borrowed funds.

At December 31, (in millions)	2009	2008
Advances from Federal Home Loan Banks[a]	**$ 27,847**	$ 70,187
Nonrecourse advances – FRBB[b]	**—**	11,192
Other[c]	**27,893**	51,021
Total[d]	**$ 55,740**	$ 132,400

(a) Maturities of advances from the FHLBs are $23.6 billion, $2.6 billion, and $716 million in each of the 12-month periods ending December 31, 2010, 2011, and 2013, respectively, and $926 million maturing after December 31, 2014. Maturities for the 12-month period ending December 31, 2012 and 2014 were not material.

(b) On September 19, 2008, the Federal Reserve Board established a special lending facility, the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility ("AML Facility"), to provide liquidity to eligible U.S. money market mutual funds. Under the AML Facility, banking organizations must use the loan proceeds to finance their purchases of eligible high-quality ABCP investments from money market mutual funds, which are pledged to secure nonrecourse advances from the Federal Reserve Bank of Boston ("FRBB"). Participating banking organizations do not bear any credit or market risk related to the ABCP investments they hold under this facility; therefore, the ABCP investments held are not assessed any regulatory capital. The AML Facility ended on February 1, 2010. The nonrecourse advances from the FRBB were elected under the fair value option and recorded in other borrowed funds; the corresponding ABCP investments were also elected under the fair value option and recorded in other assets. The fair value of ABCP investments purchased under the AML Facility for U.S. money market mutual funds is determined based on observable market information and is classified in level 2 of the valuation hierarchy.

(c) Includes zero and $30 billion of advances from the Federal Reserve under the Federal Reserve's Term Auction Facility ("TAF") at December 31, 2009 and 2008, respectively, pursuant to which the Federal Reserve auctions term funds to depository institutions that are eligible to borrow under the primary credit program. The TAF allows all eligible depository institutions to place a bid for an advance from its local Federal Reserve Bank at an interest rate set by an auction. All advances are required to be fully collateralized. The TAF is designed to improve liquidity by making it easier for sound institutions to borrow when the markets are not operating efficiently.

(d) Includes other borrowed funds of $5.6 billion and $14.7 billion accounted for at fair value at December 31, 2009 and 2008, respectively.

Note 21 – Accounts payable and other liabilities

The following table details the components of accounts payable and other liabilities at each of the dates indicated.

At December 31, (in millions)	2009	2008
Brokerage payables[a]	**$ 92,848**	$ 115,483
Accounts payable and other liabilities[b]	**69,848**	72,495
Total	**$ 162,696**	$ 187,978

(a) Includes payables to customers, brokers, dealers and clearing organizations, and securities fails.

(b) Includes $357 million and zero accounted for at fair value at December 31, 2009 and 2008, respectively.

Note 22 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. The following table is a summary of long-term debt carrying values (including unamortized original issue discount, valuation adjustments and fair value adjustments, where applicable) by contractual maturity as of December 31, 2009.

By remaining maturity at December 31, 2009 (in millions, except rates)		2009 Under 1 year	1–5 years	After 5 years	Total	2008 Total
Parent company						
Senior debt:[a]	Fixed rate[b]	**$ 11,645**	**$ 57,292**	**$ 24,792**	**$ 93,729**	$ 79,908
	Variable rate[c]	**16,892**	**47,308**	**9,135**	**73,335**	65,234
	Interest rates[d]	**0.28–6.00%**	**0.35–7.00%**	**0.22–7.50%**	**0.22–7.50%**	0.20–7.63%
Subordinated debt:	Fixed rate	**$ 1,713**	**$ 9,625**	**$ 13,513**	**$ 24,851**	$ 28,966
	Variable rate	**—**	**41**	**1,797**	**1,838**	1,786
	Interest rates[d]	**7.88–10.00%**	**1.92–6.75%**	**1.14–8.53%**	**1.14–10.00%**	1.92–10.00%
	Subtotal	**$ 30,250**	**$ 114,266**	**$ 49,237**	**$ 193,753**	$ 175,894
Subsidiaries						
Senior debt:[a]	Fixed rate	**$ 96**	**$ 1,695**	**$ 1,519**	**$ 3,310**	$ 8,370
	Variable rate[e]	**6,729**	**22,759**	**10,347**	**39,835**	57,980
	Interest rates[d]	**0.22–0.23%**	**0.16–2.10%**	**0.18–14.21%**	**0.16–14.21%**	0.03–14.21%
Subordinated debt:	Fixed rate	**$ —**	**$ —**	**$ 8,655**	**$ 8,655**	$ 8,700
	Variable rate	**—**	**—**	**1,150**	**1,150**	1,150
	Interest rates[d]	**—**	**—**	**0.58–8.25%**	**0.58–8.25%**	2.33–8.25%
	Subtotal	**$ 6,825**	**$ 24,454**	**$ 21,671**	**$ 52,950**	$ 76,200
Junior subordinated debt:	Fixed rate	**$ —**	**$ —**	**$ 16,349**	**$ 16,349**	$ 15,180
	Variable rate	**—**	**—**	**3,266**	**3,266**	3,409
	Interest rates[d]	**—**	**—**	**0.78–8.75%**	**0.78–8.75%**	2.42–8.75%
	Subtotal	**$ —**	**$ —**	**$ 19,615**	**$ 19,615**	$ 18,589
Total long-term debt[f]		**$ 37,075**	**$ 138,720**	**$ 90,523**	**$ 266,318**[h][i][j]	$ 270,683[j]
Long-term beneficial interests:						
	Fixed rate	**$ 596**	**$ 373**	**$ 65**	**$ 1,034**	$ 571
	Variable rate	**3,361**	**2,549**	**3,494**	**9,404**	9,990
	Interest rates	**0.26–5.20%**	**0.25–7.13%**	**0.25–5.50%**	**0.25–7.13%**	0.80–9.16%
Total long-term beneficial interests[g]		**$ 3,957**	**$ 2,922**	**$ 3,559**	**$ 10,438**	$ 10,561

(a) Included are various equity-linked or other indexed instruments. Embedded derivatives, separated from hybrid securities in accordance with U.S.GAAP, are reported at fair value and shown net with the host contract on the Consolidated Balance Sheets. Changes in fair value of separated derivatives are recorded in principal transactions revenue. Hybrid securities which the Firm has elected to measure at fair value are classified in the line item of the host contract on the Consolidated Balance Sheets; changes in fair value are recorded in principal transactions revenue in the Consolidated Statements of Income.

(b) Included $21.6 billion and $14.1 billion as of December 31, 2009 and 2008, respectively, guaranteed by the FDIC under the TLG Program.

(c) Included $19.3 billion and $6.9 billion as of December 31, 2009 and 2008, respectively, guaranteed by the FDIC under the TLG Program.

(d) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2009, for total long-term debt was (0.17)% to 14.21%, versus the contractual range of 0.16% to 14.21% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.

(e) Included $7.8 billion principal amount of U.S. dollar-denominated floating-rate mortgage bonds issued to an unaffiliated statutory trust, which in turn issued €6.0 billion in covered bonds secured by mortgage loans.

(f) Included $49.0 billion and $58.2 billion of outstanding structured notes accounted for at fair value at December 31, 2009 and 2008, respectively.

(g) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated VIEs. Also included $1.4 billion and $1.7 billion of outstanding structured notes accounted for at fair value at December 31, 2009 and 2008, respectively. Excluded short-term commercial paper beneficial interests of $4.8 billion at December 31, 2009.

(h) At December 31, 2009, long-term debt aggregating $33.2 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective notes.

(i) The aggregate principal amount of debt that matures in each of the five years subsequent to 2009 is $37.1 billion in 2010, $49.1 billion in 2011, $46.8 billion in 2012, $18.4 billion in 2013 and $24.4 billion in 2014.

(j) Included $3.4 billion and $3.4 billion of outstanding zero-coupon notes at December 31, 2009 and 2008, respectively. The aggregate principal amount of these notes at their respective maturities was $6.6 billion and $7.1 billion, respectively.

The weighted-average contractual interest rates for total long-term debt were 3.52% and 4.25% as of December 31, 2009 and 2008, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 1.86% and 3.70% as of December 31, 2009 and 2008, respectively.

On December 4, 2008, the Firm elected to participate in the TLG Program, which was available to, among others, all U.S. depository institutions insured by the FDIC and all U.S. bank holding companies, unless they opted out of the TLG Program or the FDIC terminated their participation. Under the TLG Program, the FDIC guaranteed through the earlier of maturity or June 30, 2012, certain senior unsecured debt issued though October 31, 2009, in return for a fee to be paid based on the amount and maturity of the debt. Under the TLG Program, the FDIC would pay the unpaid principal and interest on an FDIC-guaranteed debt instrument upon the failure of the participating entity to make a timely payment of principal or interest in accordance with the terms of the instrument.

JPMorgan Chase & Co. (Parent Company) has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees rank on a parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities totaled $4.5 billion and $4.8 billion at December 31, 2009 and 2008, respectively. For additional information, see Note 2 on pages 151–156 of this Annual Report.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities

At December 31, 2009, the Firm had established 25 wholly-owned Delaware statutory business trusts ("issuer trusts") that had issued guaranteed capital debt securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $19.6 billion and $18.6 billion at December 31, 2009 and 2008, respectively, were reflected in the Firm's Consolidated Balance Sheets in long-term debt, and in the table on the preceding page under the caption "Junior subordinated debt" (i.e., trust preferred capital debt securities). The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated Balance Sheets at December 31, 2009 and 2008. The debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, qualify as Tier 1 capital.

The following is a summary of the outstanding trust preferred capital debt securities, including unamortized original issue discount, issued by each trust, and the junior subordinated deferrable interest debenture issued to each trust, as of December 31, 2009.

December 31, 2009 (in millions)	Amount of trust preferred capital debt securities issued by trust (a)	Principal amount of debenture issued to trust (b)	Issue date	Stated maturity of trust preferred capital securities and debentures	Earliest redemption date	Interest rate of trust preferred capital securities and debentures	Interest payment/ distribution dates
Bank One Capital III	$ 474	$ 650	2000	2030	Any time	8.75%	Semiannually
Bank One Capital VI	525	553	2001	2031	Any time	7.20%	Quarterly
Chase Capital II	481	497	1997	2027	Any time	LIBOR + 0.50%	Quarterly
Chase Capital III	295	304	1997	2027	Any time	LIBOR + 0.55%	Quarterly
Chase Capital VI	241	249	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	248	256	1997	2027	Any time	LIBOR + 0.55%	Quarterly
J.P. Morgan Chase Capital X	1,000	1,014	2002	2032	Any time	7.00%	Quarterly
J.P. Morgan Chase Capital XI	1,075	1,000	2003	2033	Any time	5.88%	Quarterly
J.P. Morgan Chase Capital XII	400	389	2003	2033	Any time	6.25%	Quarterly
JPMorgan Chase Capital XIII	465	480	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XIV	600	584	2004	2034	2009	6.20%	Quarterly
JPMorgan Chase Capital XV	995	1,101	2005	2035	Any time	5.88%	Semiannually
JPMorgan Chase Capital XVI	500	491	2005	2035	2010	6.35%	Quarterly
JPMorgan Chase Capital XVII	496	517	2005	2035	Any time	5.85%	Semiannually
JPMorgan Chase Capital XVIII	748	749	2006	2036	Any time	6.95%	Semiannually
JPMorgan Chase Capital XIX	563	564	2006	2036	2011	6.63%	Quarterly
JPMorgan Chase Capital XX	995	996	2006	2036	Any time	6.55%	Semiannually
JPMorgan Chase Capital XXI	836	837	2007	2037	2012	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXII	996	997	2007	2037	Any time	6.45%	Semiannually
JPMorgan Chase Capital XXIII	643	643	2007	2047	2012	LIBOR + 1.00%	Quarterly
JPMorgan Chase Capital XXIV	700	700	2007	2047	2012	6.88%	Quarterly
JPMorgan Chase Capital XXV	1,492	1,734	2007	2037	2037	6.80%	Semiannually
JPMorgan Chase Capital XXVI	1,815	1,815	2008	2048	2013	8.00%	Quarterly
JPMorgan Chase Capital XXVII	995	995	2009	2039	2039	7.00%	Semiannually
JPMorgan Chase Capital XXVIII	1,500	1,500	2009	2039	2014	7.20%	Quarterly
Total	$ 19,078	$ 19,615					

(a) Represents the amount of trust preferred capital debt securities issued to the public by each trust, including unamortized original issue discount.

(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original-issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated Financial Statements.

Note 23 – Preferred stock

JPMorgan Chase is authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share.

On April 23, 2008, the Firm issued 600,000 shares of Fixed to Floating Rate Noncumulative Preferred Stock, Series I ("Series I"), for total proceeds of $6.0 billion.

On July 15, 2008, each series of Bear Stearns preferred stock then issued and outstanding was exchanged into a series of JPMorgan Chase preferred stock (Cumulative Preferred Stock, Series E, Series F and Series G) having substantially identical terms. As a result of the exchange, these preferred shares rank equally with the other series of the Firm's preferred stock.

On August 21, 2008, the Firm issued 180,000 shares of 8.625% Noncumulative Preferred Stock, Series J ("Series J"), for total proceeds of $1.8 billion.

On October 28, 2008, pursuant to the U.S. Department of the Treasury's (the "U.S. Treasury") Capital Purchase Program (the "Capital Purchase Program"), the Firm issued to the U.S. Treasury, for total proceeds of $25.0 billion, (i) 2.5 million shares of the Firm's Fixed Rate Cumulative Perpetual Preferred Stock, Series K, par value $1 per share and liquidation preference $10,000 per share (the "Series K Preferred Stock"); and (ii) a warrant to purchase up to 88,401,697 shares of the Firm's common stock at an exercise price of $42.42 per share (the "Warrant"), subject to certain anti-dilution and other adjustments. The $25.0 billion proceeds were allocated to the Series K Preferred Stock and the Warrant based on the relative fair value of the instruments. The difference between the initial carrying value of $23.7 billion allocated to the Series K Preferred Stock and its redemption value of $25.0 billion was being amortized to retained earnings (with a corresponding increase in the carrying value of the Series K Preferred Stock) over the first five years of the contract as an adjustment to the dividend yield, using the effective-yield method. The Series K Preferred Stock was nonvoting, qualified as Tier 1 capital and ranked equally with the Firm's other series of preferred stock. On June 17, 2009, the Firm redeemed all of the outstanding shares of Series K Preferred Stock and repaid the full $25.0 billion principal amount together with accrued but unpaid dividends.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock for the payment of dividends and the distribution of assets.

Generally, dividends on shares of outstanding series of preferred stock are payable quarterly. Dividends on the shares of Series I preferred stock are payable semiannually at a fixed annual dividend rate of 7.90% through April 2018, and then become payable quarterly at an annual dividend rate of three-month LIBOR plus 3.47%. The Series K Preferred Stock bore cumulative dividends, payable quarterly, at a rate of 5% per year for the first five years and 9% per year thereafter. Dividends could only be paid if, as and when declared by the Firm's Board of Directors. The effective dividend yield on the Series K Preferred Stock was 6.16%. The Series K Preferred Stock ranked equally with the Firm's existing 6.15% Cumulative Preferred Stock, Series E; 5.72% Cumulative Preferred Stock, Series F; 5.49% Cumulative Preferred Stock, Series G; Fixed-to-Floating Rate Noncumulative Perpetual Preferred Stock, Series I; and 8.63% Noncumulative Perpetual Preferred Stock, Series J, in terms of dividend payments and upon liquidation of the Firm.

The following is a summary of JPMorgan Chase's preferred stock outstanding as of December 31, 2009 and 2008.

December 31,	Share value and redemption price per share[b]	Shares		Amount (in millions)		Earliest redemption date	**Contractual rate in effect at December 31, 2009**
		2009	2008	**2009**	2008		
Cumulative Preferred Stock, Series E[a]	$ 200	**818,113**	818,113	**$ 164**	$ 164	Any time	**6.15%**
Cumulative Preferred Stock, Series F[a]	200	**428,825**	428,825	**86**	86	Any time	**5.72**
Cumulative Preferred Stock, Series G[a]	200	**511,169**	511,169	**102**	102	Any time	**5.49**
Fixed to Floating Rate Noncumulative Perpetual Preferred Stock, Series I[a]	10,000	**600,000**	600,000	**6,000**	6,000	4/30/2018	**7.90**
Noncumulative Perpetual Preferred Stock, Series J[a]	10,000	**180,000**	180,000	**1,800**	1,800	9/1/2013	**8.63**
Fixed Rate Cumulative Perpetual Preferred Stock, Series K	10,000	**—**	2,500,000	**—**	23,787[c]	—	**NA**
Total preferred stock		**2,538,107**	5,038,107	**$ 8,152**	$ 31,939		

(a) Represented by depositary shares.
(b) Redemption price includes amount shown in the table plus any accrued but unpaid dividends.
(c) Represents the carrying value as of December 31, 2008. The redemption value was $25.0 billion.

Dividend restrictions

Prior to the redemption of the Series K Preferred Stock, any accrued and unpaid dividends on the Series K Preferred Stock were required to be fully paid before dividends could be declared or paid on stock ranking junior or equally with the Series K Preferred Stock. In addition, the U.S. Treasury's consent was required for any increase in dividends on common stock from the $0.38 per share quarterly dividend paid on October 31, 2008. As a result of the redemption of the Series K Preferred Stock, JPMorgan Chase is no longer subject to any of these restrictions.

Stock repurchase restrictions

Prior to the redemption of the Series K Preferred Stock, the Firm could not repurchase or redeem any common stock or other equity securities of the Firm, or any trust preferred capital debt securities issued by the Firm or any of its affiliates, without the prior consent of the U.S. Treasury (other than (i) repurchases of the Series K Preferred Stock, and (ii) repurchases of junior preferred shares or common stock in connection with any employee benefit plan in the ordinary course of business consistent with past practice). As a result of the redemption of the Series K Preferred Stock, JPMorgan Chase is no longer subject to any of these restrictions.

Note 24 – Common stock

At December 31, 2009, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share. On June 5, 2009, the Firm issued $5.8 billion, or 163 million new shares, of its common stock at $35.25 per share. On September 30, 2008, the Firm issued $11.5 billion, or 284 million new shares, of its common stock at $40.50 per share.

On April 8, 2008, pursuant to the Share Exchange Agreement dated March 24, 2008, between JPMorgan Chase and Bear Stearns, 20.7 million newly issued shares of JPMorgan Chase common stock were issued to Bear Stearns in a transaction that was exempt from registration under the Securities Act of 1933, pursuant to Section 4(2) thereof, in exchange for 95.0 million newly issued shares of Bear Stearns common stock (or 39.5% of Bear Stearns common stock after giving effect to the issuance). Upon the consummation of the Bear Stearns merger, on May 30, 2008, the 20.7 million shares of JPMorgan Chase common stock and 95.0 million shares of Bear Stearns common stock were cancelled. For a further discussion of this transaction, see Note 2 on pages 151–156 of this Annual Report.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during the years ended December 31, 2009, 2008 and 2007 were as follows.

December 31, (in millions)	**2009**	2008	2007
Issued – balance at January 1	**3,941.6**	3,657.7	3,657.8
Newly issued:			
Common stock:			
Open market issuance	**163.3**	283.9	—
Bear Stearns Share Exchange Agreement	**—**	20.7	—
Total newly issued	**163.3**	304.6	—
Canceled shares	**—**	(20.7)	(0.1)
Total issued – balance at December 31	**4,104.9**	3,941.6	3,657.7
Treasury – balance at January 1	**(208.8)**	(290.3)	(196.1)
Purchase of treasury stock	**—**	—	(168.2)
Share repurchases related to employee stock-based awards (a)	**(1.1)**	(0.5)	(2.7)
Issued from treasury:			
Net change from the Bear Stearns merger as a result of the reissuance of Treasury stock and the Share Exchange Agreement	**—**	26.5	—
Employee benefits and compensation plans	**45.7**	54.4	75.7
Employee stock purchase plans	**1.3**	1.1	1.0
Total issued from treasury	**47.0**	82.0	76.7
Total treasury – balance at December 31	**(162.9)**	(208.8)	(290.3)
Outstanding	**3,942.0**	3,732.8	3,367.4

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes.

Pursuant to the Capital Purchase Program, the Firm issued to the U.S. Treasury a Warrant to purchase up to 88,401,697 shares of the Firm's common stock, at an exercise price of $42.42 per share, subject to certain antidilution and other adjustments. Based on the Warrant's fair value relative to the fair value of the Series K Preferred Stock on October 28, 2008, as discussed in Note 23 on pages 230–231 of this Annual Report, the Warrant was recorded at a value of $1.3 billion. The U.S. Treasury exchanged the Warrant for 88,401,697 warrants, each of which was a warrant to purchase a share of the Firm's common stock at an exercise price of $42.42 per share and, on December 11, 2009, sold the warrants in a secondary public offering for $950 million. The warrants are exercisable, in whole or in part, at any time and from time to time until October 28, 2018. The Firm did not purchase any of the warrants sold by the U.S. Treasury.

In April 2007, the Board of Directors approved a stock repurchase program that authorizes the repurchase of up to $10.0 billion of the Firm's common shares. In connection with the U.S. Treasury's sale of the warrants, the Board of Directors amended the Firm's securities repurchase program to authorize the repurchase of warrants for its stock. During the years ended December 31, 2009 and 2008, the Firm did not repurchase any shares of its common stock. During 2007, the Firm repurchased 168 million shares of common stock under stock repurchase programs approved by the Board of Directors. As of December 31, 2009, $6.2 billion of authorized repurchase capacity remained under the repurchase program with respect to repurchases of common stock, and all the authorized repurchase capacity remained with respect to the warrants.

The authorization to repurchase common stock and warrants will be utilized at management's discretion, and the timing of purchases and

the exact number of shares and warrants purchased is subject to various factors, including: market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position, taking into account goodwill and intangibles; internal capital generation; and alternative potential investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common stock – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan that is established when the Firm is not aware of material nonpublic information.

As of December 31, 2009, approximately 582 million unissued shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the Warrants issued under the Capital Purchase Program as discussed above.

Note 25 – Earnings per share

Effective January 1, 2009, the Firm implemented new FASB guidance for participating securities, which clarifies that unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends") are participating securities and should be included in the earnings per share ("EPS") calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends. EPS data for the prior periods were revised as required by the FASB's guidance.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2009, 2008 and 2007.

Year ended December 31, (in millions, except per share amounts)	**2009**	2008	2007
Basic earnings per share			
Income before extraordinary gain	**$ 11,652**	$ 3,699	$ 15,365
Extraordinary gain	**76**	1,906	—
Net income	**11,728**	5,605	15,365
Less: Preferred stock dividends	**1,327**	674	—
Less: Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	**1,112**[e]	—	—
Net income applicable to common equity	**9,289**	4,931	15,365
Less: Dividends and undistributed earnings allocated to participating securities	**515**	189	441
Net income applicable to common stockholders[a]	**8,774**	4,742	14,924
Total weighted-average basic shares outstanding	**3,862.8**	3,501.1	3,403.6
Per share			
Income before extraordinary gain	**$ 2.25**	$ 0.81	$ 4.38
Extraordinary gain	**0.02**	0.54	—
Net income[b]	**$ 2.27**[e]	$ 1.35	$ 4.38

Year ended December 31, (in millions, except per share amounts)	**2009**	2008	2007
Diluted earnings per share			
Net income applicable to common equity	**$ 9,289**	$ 4,931	$ 15,365
Less: Dividends and undistributed earnings allocated to participating securities	**515**	189	438
Net income applicable to common stockholders[a]	**8,774**	4,742	14,927
Total weighted-average basic shares outstanding	**3,862.8**	3,501.1	3,403.6
Add: Employee stock options, SARs and Warrants[c]	**16.9**	20.7	41.7
Total weighted-average diluted shares outstanding[d]	**3,879.7**	3,521.8	3,445.3
Per share			
Income before extraordinary gain	**$ 2.24**	$ 0.81	$ 4.33
Extraordinary gain	**0.02**	0.54	—
Net income per share[b]	**$ 2.26**[e]	$ 1.35	$ 4.33

(a) Net income applicable to common stockholders for diluted and basic EPS may differ under the two-class method as a result of adding common stock equivalents for options, SARs and warrants to dilutive shares outstanding, which alters the ratio used to allocate earnings to common stockholders and participating securities for purposes of calculating diluted EPS.

(b) EPS data has been revised to reflect the retrospective application of new FASB guidance for participating securities, which resulted in a reduction of basic and diluted EPS for the year ended December 31, 2009, of $0.13 and $0.05, respectively; for the year ended December 31, 2008, of $0.06 and $0.02, respectively; and for the year ended December 31, 2007, of $0.13 and $0.05, respectively.

(c) Excluded from the computation of diluted EPS (due to the antidilutive effect) were options issued under employee benefit plans and, for 2008, the Warrant issued under the U.S. Treasury's Capital Purchase Program to purchase shares of the Firm's common stock totaling 266 million, 209 million and 129 million for the years ended December 31, 2009, 2008 and 2007, respectively.

(d) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury-stock method.

(e) The calculation of basic and diluted EPS for the year ended December 31, 2009, includes a one-time noncash reduction of $1.1 billion, or $0.27 per share, resulting from the redemption of the Series K Preferred Stock issued to the U.S. Treasury.

Note 26 – Accumulated other comprehensive income/(loss)

Accumulated other comprehensive income/(loss) includes the after-tax change in unrealized gains/(losses) on AFS securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities and net loss and prior service cost/(credit) related to the Firm's defined benefit pension and OPEB plans.

(in millions)	Unrealized gains/(losses) on AFS securities[a]	Translation adjustments, net of hedges	Cash flow hedges	Net loss and prior service costs/(credit) of defined benefit pension and OPEB plans	Accumulated other comprehensive income/(loss)
Balance at December 31, 2006	$ 29	$ 5	$ (489)	$ (1,102)	$ (1,557)
Cumulative effect of changes in accounting principles (for fair value option elections)	(1)	—	—	—	(1)
Balance at January 1, 2007, adjusted	28	5	(489)	(1,102)	(1,558)
Net change	352[b]	3	(313)	599	641
Balance at December 31, 2007	380	8	(802)	(503)	(917)
Net change	(2,481)[c]	(606)	600	(2,283)	(4,770)
Balance at December 31, 2008	(2,101)	(598)	(202)	(2,786)	(5,687)
Net change	**4,133**[d]	**582**	**383**	**498**	**5,596**
Balance at December 31, 2009	**$ 2,032**[e]	**$ (16)**	**$ 181**	**$ (2,288)**	**$ (91)**

(a) Represents the after-tax difference between the fair value and amortized cost of the AFS securities portfolio and retained interests in securitizations recorded in other assets.
(b) The net change during 2007 was due primarily to a decline in interest rates.
(c) The net change during 2008 was due primarily to spread widening related to credit card asset-backed securities, nonagency mortgage-backed securities and collateralized loan obligations.
(d) The net change during 2009 was due primarily to overall market spread and market liquidity improvement as well as changes in the composition of investments.
(e) Includes after-tax unrealized losses of $(226) million not related to credit on debt securities for which credit losses have been recognized in income.

The following table presents the before- and after-tax changes in net unrealized gains/(losses); and reclassification adjustments for realized (gains)/losses on AFS securities and cash flow hedges; changes resulting from foreign currency translation adjustments (including the impact of related derivatives); net gains/(losses) and prior service costs/(credits) from pension and OPEB plans; and amortization of pension and OPEB amounts into net income. Reclassification adjustments include amounts recognized in net income that had been recorded previously in other comprehensive income/(loss).

	2009			2008			2007		
Year ended December 31, (in millions)	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Unrealized gains/(losses) on AFS securities:									
Net unrealized gains/(losses) arising during the period	**$ 7,870**	**$ (3,029)**	**$ 4,841**	$ (3,071)	$ 1,171	$ (1,900)	$ 759	$ (310)	$ 449
Reclassification adjustment for realized (gains)/losses included in net income	**(1,152)**	**444**	**(708)**	(965)	384	(581)	(164)	67	(97)
Net change	**6,718**	**(2,585)**	**4,133**	(4,036)	1,555	(2,481)	595	(243)	352
Translation adjustments:									
Translation	**1,139**	**(398)**	**741**	(1,781)	682	(1,099)	754	(281)	473
Hedges	**(259)**	**100**	**(159)**	820	(327)	493	(780)	310	(470)
Net change	**880**	**(298)**	**582**	(961)	355	(606)	(26)	29	3
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**767**	**(308)**	**459**	584	(226)	358	(737)	294	(443)
Reclassification adjustment for realized (gains)/losses included in net income	**(124)**	**48**	**(76)**	402	(160)	242	217	(87)	130
Net change	**643**	**(260)**	**383**	986	(386)	600	(520)	207	(313)
Net loss and prior service cost/(credit) of defined benefit pension and OPEB plans:									
Net gains/(losses) and prior service credits arising during the period	**494**	**(200)**	**294**	(3,579)	1,289	(2,290)	934	(372)	562
Reclassification adjustment for net loss and prior service credits included in net income	**337**	**(133)**	**204**	14	(7)	7	59	(22)	37
Net change	**831**	**(333)**	**498**	(3,565)	1,282	(2,283)	993	(394)	599
Total Other comprehensive income/(loss)	**$ 9,072**	**$ (3,476)**	**$ 5,596**	$ (7,576)	$ 2,806	$ (4,770)	$ 1,042	$ (401)	$ 641

Note 27 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

The components of income tax expense/(benefit) included in the Consolidated Statements of Income were as follows for each of the years ended December 31, 2009, 2008 and 2007.

Year ended December 31, (in millions)	**2009**	2008	2007
Current income tax expense			
U.S. federal	**$ 4,698**	$ 395	$ 2,805
Non-U.S.	**2,368**	1,009	2,985
U.S. state and local	**971**	307	343
Total current income tax expense	**8,037**	1,711	6,133
Deferred income tax expense/ (benefit)			
U.S. federal	**(2,867)**	(3,015)	1,122
Non-U.S.	**(454)**	1	(185)
U.S. state and local	**(301)**	377	370
Total deferred income tax expense/(benefit)	**(3,622)**	(2,637)	1,307
Total income tax expense/ (benefit) before extraordinary gain	**$ 4,415**	$ (926)	$ 7,440

Total income tax expense includes $280 million, $55 million and $74 million of tax benefits recorded in 2009, 2008 and 2007, respectively, as a result of tax audit resolutions.

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity and certain tax benefits associated with the Firm's employee stock-based compensation plans. The table also does not reflect the cumulative tax effects of initially implementing new accounting pronouncements in 2007. The tax effect of all items recorded directly to stockholders' equity resulted in a decrease of $3.7 billion in 2009 and an increase in stockholders' equity of $3.0 billion and $159 million in 2008 and 2007, respectively.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. During 2008, as part of JPMorgan Chase's periodic review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill these requirements and needs, the Firm determined that the undistributed earnings of certain of its subsidiaries, for which U.S. federal income taxes had been provided, will be indefinitely reinvested to fund the current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. This determination resulted in the release of deferred tax liabilities and the recognition of an income tax benefit of $1.1 billion associated with these undistributed earnings. For 2009, pretax earnings of approximately $2.8 billion were generated that will be indefinitely reinvested in these subsidiaries. At December 31, 2009, the cumulative amount of undistributed pretax earnings in these subsidiaries approximated $15.7 billion. If the Firm were to record a deferred tax liability associated with these undistributed earnings, the amount would be $3.6 billion at December 31, 2009.

The tax expense applicable to securities gains and losses for the years 2009, 2008 and 2007 was $427 million, $608 million, and $60 million, respectively.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for each of the years ended December 31, 2009, 2008 and 2007, is presented in the following table.

Year ended December 31,	**2009**	2008	2007
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	**2.7**	16.0	2.0
Tax-exempt income	**(3.9)**	(14.8)	(2.4)
Non-U.S. subsidiary earnings	**(1.7)**	(53.6)	(1.1)
Business tax credits	**(5.5)**	(24.5)	(2.5)
Bear Stearns equity losses	**—**	5.7	—
Other, net	**0.9**	2.8	1.6
Effective tax rate	**27.5%**	(33.4)%	32.6%

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting versus income-tax return purposes. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2009 and 2008.

December 31, (in millions)	2009	2008
Deferred tax assets		
Allowance for loan losses	**$ 12,376**	$ 8,029
Employee benefits	**4,424**	4,841
Allowance for other than loan losses	**3,995**	3,686
Non-U.S. operations	**1,926**	2,504
Tax attribute carryforwards	**912**	1,383
Fair value adjustments[a]	**—**	2,565
Gross deferred tax assets	**$ 23,633**	$ 23,008
Deferred tax liabilities		
Depreciation and amortization	**$ 4,832**	$ 4,681
Leasing transactions	**2,054**	1,895
Non-U.S. operations	**1,338**	946
Fee income	**670**	1,015
Fair value adjustments[a]	**328**	—
Other, net	**147**	202
Gross deferred tax liabilities	**$ 9,369**	$ 8,739
Valuation allowance	**1,677**	1,266
Net deferred tax asset	**$ 12,587**	$ 13,003

(a) Includes fair value adjustments related to AFS securities, cash flows hedging activities and other portfolio investments.

JPMorgan Chase has recorded deferred tax assets of $912 million at December 31, 2009, in connection with U.S. federal, state and local and non-U.S. subsidiary net operating loss carryforwards. At December 31, 2009, the U.S. federal net operating loss carryforward was approximately $1.2 billion, the state and local net operating loss carryforwards were approximately $4.4 billion and the non-U.S. subsidiary net operating loss carryforward was $768 million.

If not utilized, the U.S. federal net operating loss carryforward will expire in 2027 and the state and local net operating loss carryforwards will expire in years 2026, 2027 and 2028. The non-U.S. subsidiary net operating loss carryforward has an unlimited carryforward period.

A valuation allowance has been recorded for losses associated with non-U.S. subsidiaries and certain portfolio investments, and certain state and local tax benefits. The increase in the valuation allowance from 2008 was predominantly related to non-U.S. subsidiaries.

At December 31, 2009, 2008 and 2007, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $6.6 billion, $5.9 billion and $4.8 billion, respectively, of which $3.5 billion, $2.9 billion and $1.3 billion, respectively, if recognized, would reduce the annual effective tax rate. As JPMorgan Chase is presently under audit by a number of tax authorities, it is reasonably possible that unrecognized tax benefits could significantly change over the next 12 months, which could also significantly impact JPMorgan Chase's quarterly and annual effective tax rates.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2009, 2008 and 2007.

Unrecognized tax benefits

Year ended December 31, (in millions)	2009	2008	2007
Balance at January 1,	**$ 5,894**	$ 4,811	$ 4,677
Increases based on tax positions related to the current period	**584**	890	434
Decreases based on tax positions related to the current period	**(6)**	(109)	(241)
Increases associated with the Bear Stearns merger	**—**	1,387	—
Increases based on tax positions related to prior periods	**703**	501	903
Decreases based on tax positions related to prior periods	**(322)**	(1,386)	(791)
Decreases related to settlements with taxing authorities	**(203)**	(181)	(158)
Decreases related to a lapse of applicable statute of limitations	**(42)**	(19)	(13)
Balance at December 31,	**$ 6,608**	$ 5,894	$ 4,811

Pretax interest expense and penalties related to income tax liabilities recognized in income tax expense were $154 million ($101 million after-tax) in 2009; $571 million ($346 million after-tax) in 2008; and $516 million ($314 million after-tax) in 2007. Included in accounts payable and other liabilities at December 31, 2009 and 2008, in addition to the Firm's liability for unrecognized tax benefits, was $2.4 billion and $2.3 billion, respectively, for income tax-related interest and penalties, of which the penalty component was insignificant.

JPMorgan Chase is subject to ongoing tax examinations by the tax authorities of the various jurisdictions in which it operates, including U.S. federal, state and local, and non-U.S. jurisdictions. The Firm's consolidated federal income tax returns are presently under examination by the Internal Revenue Service ("IRS") for the years 2003, 2004 and 2005. The consolidated federal income tax returns of Bear Stearns for the years ended November 30, 2003, 2004 and 2005, are also under examination. Both examinations are expected to conclude in 2010.

The IRS audits of the consolidated federal income tax returns of JPMorgan Chase for the years 2006, 2007 and 2008, and for Bear Stearns for the years ended November 30, 2006, November 30, 2007, and for the period December 1, 2007, through May 30, 2008, are expected to commence in 2010. Administrative appeals are pending with the IRS relating to prior periods that were examined. For 2002 and prior years, refund claims relating to income and credit adjustments, and to tax attribute carrybacks, for JPMorgan Chase and its predecessor entities, including Bank One, have been filed. Amended returns to reflect refund claims primarily attributable to net operating losses and tax credit carrybacks will be filed for the final Bear Stearns U.S. federal consolidated tax return for the period December 1, 2007, through May 30, 2008, and for prior years.

On January 1, 2007, the Firm adopted FASB guidance which addresses the recognition and measurement of tax positions taken or expected to be taken, and also guidance on derecognition, classification, interest and penalties, accounting in interim periods and disclosure, to all of its income tax positions, resulting in a $436 million cumulative effect increase to retained earnings, a reduction in goodwill of $113 million and a $549 million decrease in the liability for income taxes.

The following table presents the U.S. and non-U.S. components of income before income tax expense/(benefit) and extraordinary gain for the years ended December 31, 2009, 2008 and 2007.

Year ended December 31, (in millions)	2009	2008	2007
U.S.	**$ 6,263**	$ (2,094)	$ 13,720
Non-U.S.[a]	**9,804**	4,867	9,085
Income before income tax expense/(benefit) and extraordinary gain	**$ 16,067**	$ 2,773	$ 22,805

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

Note 28 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the Office of the Comptroller of the Currency ("OCC"). The Bank is a member of the U.S. Federal Reserve System, and its deposits are insured by the FDIC.

The Board of Governors of the Federal Reserve System (the "Federal Reserve") requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $821 million and $1.6 billion in 2009 and 2008, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company–only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2010 and 2009, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, $3.6 billion and $17.0 billion, respectively, in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2010 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2009 and 2008, cash in the amount of $24.0 billion and $34.8 billion, respectively, and securities with a fair value of $10.2 billion and $23.4 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers.

Note 29 – Capital

The Federal Reserve establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A.

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital includes common stockholders' equity, qualifying preferred stock and minority interest less goodwill and other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1, subordinated long-term debt and other instruments qualifying as Tier 2, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total regulatory capital is subject to deductions for investments in certain subsidiaries. Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total (Tier 1 plus Tier 2) capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital to average adjusted on–balance sheet assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Banking subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2009 and 2008, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

The following table presents the risk-based capital ratios for JPMorgan Chase and its significant banking subsidiaries at December 31, 2009 and 2008.

December 31,	JPMorgan Chase & Co.[c]		JPMorgan Chase Bank, N.A.[c]		Chase Bank USA, N.A.[c]		Well-capitalized ratios[f]	Minimum capital ratios[f]
(in millions, except ratios)	**2009**	2008	**2009**	2008	**2009**	2008		
Regulatory capital:								
Tier 1	**$ 132,971**	$ 136,104	**$ 96,372**	$ 100,597	**$ 15,534**	$ 11,190		
Total	**177,073**	184,720	**136,646**	143,832	**19,198**	12,901		
Assets:								
Risk-weighted[a]	**1,198,006**[d]	1,244,659[e]	**1,011,995**	1,150,938[e]	**114,693**	101,472		
Adjusted average[b]	**1,933,767**[d]	1,966,895[e]	**1,609,081**	1,705,754[e]	**74,087**	87,286		
Capital ratios:								
Tier 1 capital	**11.1%**[d]	10.9%	**9.5%**	8.7%	**13.5%**	11.0%	6.0%	4.0%
Total capital	**14.8**	14.8	**13.5**	12.5	**16.7**	12.7	10.0	8.0
Tier 1 leverage	**6.9**	6.9	**6.0**	5.9	**21.0**	12.8	5.0[g]	3.0[h]

(a) Includes off–balance sheet risk-weighted assets at December 31, 2009, of $367.4 billion, $312.3 billion and $49.9 billion, and at December 31, 2008, of $357.5 billion, $330.1 billion and $18.6 billion, for JPMorgan Chase, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., respectively. Risk-weighted assets are calculated in accordance with U.S. federal regulatory capital standards.

(b) Adjusted average assets, for purposes of calculating the leverage ratio, include total average assets adjusted for unrealized gains/(losses) on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries, and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.

(c) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions, whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

(d) On January 1, 2010 the Firm adopted new accounting standards, which required the consolidation of the Firm's credit card securitization trusts, bank-administered asset-backed commercial paper conduits and certain mortgage and other consumer securitization VIEs. At adoption, the Firm added approximately $88 billion of U.S. GAAP assets and decreased the Tier 1 capital ratio by approximately 30 basis points. The impact to the Tier 1 capital ratio predominantly reflects the establishment of allowance for loan losses of approximately $7 billion (pretax) related to the receivables held in the credit card securitization trusts that were consolidated at the adoption date. The impact to the Tier 1 capital ratio does not include guidance issued by the banking regulators that changed the regulatory treatment for consolidated ABCP conduits, since the Firm elected the optional two-quarter implementation delay, which may be followed by a two-quarter partial (50%) implementation of the effect on risk-weighted assets and risk-based capital requirements for entities where the Firm has not provided implicit or voluntary support. As a result of the election of the implementation delay as well as certain actions taken by the Firm during the second quarter of 2009 that resulted in the regulatory capital consolidation of the Chase Issuance Trust (the Firm's primary credit card securitization trust) which added approximately $40 billion of risk-weighted assets, the U.S. GAAP consolidation of these entities did not have a significant impact on risk-weighted assets at the adoption date.

(e) The Federal Reserve granted the Firm, for a period of 18 months following the Bear Stearns merger, relief up to a certain specified amount, and subject to certain conditions from the Federal Reserve's risk-based capital and leverage requirements, with respect to Bear Stearns' risk-weighted assets and other exposures acquired. The OCC granted JPMorgan Chase Bank, N.A. similar relief from its risk-based capital and leverage requirements. The relief would have ended, by its terms, on September 30, 2009. Commencing in the second quarter of 2009, the Firm no longer adjusted its risk-based capital ratios to take into account the relief in the calculation of its risk-based capital ratios as of June 30, 2009.

(f) As defined by the regulations issued by the Federal Reserve, OCC and FDIC.

(g) Represents requirements for banking subsidiaries pursuant to regulations issued under the FDIC Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.

(h) The minimum Tier 1 leverage ratio for bank holding companies and banks is 3% or 4%, depending on factors specified in regulations issued by the Federal Reserve and OCC.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both nontaxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from nontaxable business combinations totaling $812 million and $1.1 billion at December 31, 2009 and 2008, respectively. Additionally, the Firm had deferred tax liabilities resulting from tax-deductible goodwill of $1.7 billion and $1.6 billion at December 31, 2009 and 2008, respectively.

A reconciliation of the Firm's total stockholders' equity to Tier 1 capital and Total qualifying capital is presented in the following table.

December 31, (in millions)	**2009**	2008
Tier 1 capital		
Total stockholders' equity	**$ 165,365**	$ 166,884
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 capital	**75**	5,084
Qualifying hybrid securities and noncontrolling interests[a]	**19,535**	17,257
Less: Goodwill[b]	**46,630**	46,417
Fair value DVA on derivative and structured note liabilities related to the Firm's credit quality	**912**	2,358
Investments in certain subsidiaries	**802**	679
Other intangible assets	**3,660**	3,667
Total Tier 1 capital	**132,971**	136,104
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2 capital	**28,977**	31,659
Qualifying allowance for credit losses	**15,296**	17,187
Adjustment for investments in certain subsidiaries and other	**(171)**	(230)
Total Tier 2 capital	**44,102**	48,616
Total qualifying capital	**$ 177,073**	$ 184,720

(a) Primarily includes trust preferred capital debt securities of certain business trusts.

(b) Goodwill is net of any associated deferred tax liabilities.

Note 30 – Commitments and contingencies

At December 31, 2009, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2009.

Year ended December 31, (in millions)	
2010	$ 1,652
2011	1,629
2012	1,550
2013	1,478
2014	1,379
After 2014	8,264
Total minimum payments required[a]	15,952
Less: Sublease rentals under noncancelable subleases	(1,800)
Net minimum payment required	$ 14,152

(a) Lease restoration obligations are accrued in accordance with U.S. GAAP, and are not reported as a required minimum lease payment.

Total rental expense was as follows.

Year ended December 31, (in millions)	**2009**	2008	2007
Gross rental expense	**$ 1,884**	$ 1,917	$ 1,380
Sublease rental income	**(172)**	(415)	(175)
Net rental expense	**$ 1,712**	$ 1,502	$ 1,205

At December 31, 2009, assets were pledged to secure public deposits and for other purposes. The significant components of the assets pledged were as follows.

December 31, (in billions)	**2009**	2008
Reverse repurchase/securities borrowing agreements	**$ 392.9**	$ 456.6
Securities	**115.6**	31.0
Loans	**289.0**	342.3
Trading assets and other	**76.8**	98.0
Total assets pledged[a]	**$ 874.3**	$ 927.9

(a) Total assets pledged do not include assets of consolidated VIEs. These assets are not generally used to satisfy liabilities to third parties. See Note 16 on pages 214–222 of this Annual Report for additional information on assets and liabilities of consolidated VIEs.

In 2008, the Firm resolved with the IRS issues related to compliance with reporting and withholding requirements for certain accounts transferred to The Bank of New York Mellon Corporation ("BNYM") in connection with the Firm's sale to BNYM of its corporate trust business. The resolution of these issues did not have a material effect on the Firm.

Litigation reserve

The Firm maintains litigation reserves for certain of its outstanding litigation. JPMorgan Chase accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. When the Firm is named as a defendant in a litigation and may be subject to joint and several liability, and a judgment-sharing agreement is in place, the Firm recognizes expense and obligations net of amounts expected to be paid by other signatories to the judgment-sharing agreement.

While the outcome of litigation is inherently uncertain, management believes, in light of all information known to it at December 31, 2009, the Firm's litigation reserves were adequate at such date. Management reviews litigation reserves at least quarterly, and the reserves may be increased or decreased in the future to reflect further relevant developments. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding litigation and, with respect to such litigation, intends to continue to defend itself vigorously, litigating or settling cases according to management's judgment as to what is in the best interests of JPMorgan Chase stockholders.

Note 31 – Off–balance sheet lending-related financial instruments, guarantees and other commitments

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparties draw down the commitment or the Firm fulfill its obligation under the guarantee, and the counterparties subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without a default occurring or without being drawn. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. Further, certain commitments, predominantly related to consumer financings, are cancelable, upon notice, at the option of the Firm.

To provide for the risk of loss inherent in wholesale-related contracts, an allowance for credit losses on lending-related commitments is maintained. See Note 14 on pages 204–206 of this Annual Report for further discussion of the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts of off–balance sheet lending-related financial instruments and guarantees and the related allowance for credit losses on lending-related commitments at December 31, 2009 and 2008. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.

Off–balance sheet lending-related financial instruments, guarantees and other commitments

	Contractual amount		Carrying Value [h]	
December 31, (in millions)	**2009**	2008	**2009**	2008
Lending-related				
Consumer:				
Home equity — senior lien	**$ 19,246**	$ 27,998	**$ —**	$ —
Home equity — junior lien	**37,231**	67,745	**—**	—
Prime mortgage	**1,654**	5,079	**—**	—
Subprime mortgage	**—**	—	**—**	—
Option ARMs	**—**	—	**—**	—
Auto loans	**5,467**	4,726	**7**	3
Credit card	**569,113**	623,702	**—**	—
All other loans	**11,229**	12,257	**5**	22
Total consumer	**643,940**	741,507	**12**	25
Wholesale:				
Other unfunded commitments to extend credit[a]	**192,145**	189,563	**356**	349
Asset purchase agreements	**22,685**	53,729	**126**	147
Standby letters of credit and financial guarantees[a][b][c]	**91,485**	95,352	**919**	671
Unused advised lines of credit	**35,673**	36,300	**—**	—
Other letters of credit[a][b]	**5,167**	4,927	**1**	2
Total wholesale	**347,155**	379,871	**1,402**	1,169
Total lending-related	**$ 991,095**	$ 1,121,378	**$ 1,414**	$ 1,194
Other guarantees and commitments				
Securities lending guarantees[d]	**$ 170,777**	$ 169,281	**$ NA**	$ NA
Residual value guarantees	**672**	670	**—**	—
Derivatives qualifying as guarantees[e]	**87,191**	83,835	**762**	5,418
Equity investment commitments[f]	**2,374**	2,424	**—**	—
Loan sale and securitization-related indemnifications:				
Repurchase liability[g]	**NA**	NA	**1,705**	1,093
Loans sold with recourse	**13,544**	15,020	**271**	241

(a) Represents the contractual amount net of risk participations totaling $24.6 billion and $26.4 billion for standby letters of credit and other financial guarantees at December 31, 2009 and 2008, respectively, $690 million and $1.1 billion for other letters of credit at December 31, 2009 and 2008, respectively, and $643 million and $789 million for other unfunded commitments to extend credit at December 31, 2009 and 2008, respectively. In regulatory filings with the Federal Reserve Board these commitments are shown gross of risk participations.

(b) JPMorgan Chase held collateral relating to $31.5 billion and $31.0 billion of standby letters of credit and $1.3 billion and $1.0 billion of other letters of credit at December 31, 2009 and 2008, respectively.

(c) Includes unissued standby letter of credit commitments of $38.4 billion and $39.5 billion at December 31, 2009 and 2008, respectively.

(d) Collateral held by the Firm in support of securities lending indemnification agreements was $173.2 billion and $170.1 billion at December 31, 2009 and 2008, respectively. Securities lending collateral comprises primarily cash, and securities issued by governments that are members of the Organization for Economic Co-operation and Development ("OECD") and U.S. government agencies.

(e) Represents notional amounts of derivatives qualifying as guarantees. The carrying value at December 31, 2009 and 2008, reflects derivative payables of $981 million and $5.6 billion, respectively, less derivative receivables of $219 million and $184 million, respectively.

(f) Includes unfunded commitments to third-party private equity funds of $1.5 billion and $1.4 billion at December 31, 2009 and 2008, respectively. Also includes unfunded commitments for other equity investments of $897 million and $1.0 billion at December 31, 2009 and 2008, respectively. These commitments include $1.5 billion at December 31, 2009, related to investments that are generally fair valued at net asset value as discussed in Note 3 on pages 156–173 of this Annual Report.

(g) Indemnifications for breaches of representations and warranties in loan sale and securitization agreements. For additional information, see Loan sale and securitization-related indemnifications on page 241 of this Note.

(h) For lending-related products the carrying value represents the allowance for lending-related commitments and the fair value of the guarantee liability, for derivative-related products the carrying value represents the fair value, and for all other products the carrying value represents the valuation reserve.

Other unfunded commitments to extend credit

Other unfunded commitments to extend credit include commitments to U.S. domestic states and municipalities, hospitals and other not-for-profit entities to provide funding for periodic tenders of their variable-rate demand bond obligations or commercial paper. Performance by the Firm is required in the event that the variable-rate demand bonds or commercial paper cannot be remarketed to new investors. The amount of commitments related to variable-rate demand bonds and commercial paper of U.S. domestic states and municipalities, hospitals and not-for-profit entities was $23.3 billion and $23.5 billion at December 31, 2009 and 2008, respectively. Similar commitments exist to extend credit in the form of liquidity facility agreements with nonconsolidated municipal bond VIEs. For further information, see Note 16 on pages 214–222 of this Annual Report.

Also included in other unfunded commitments to extend credit are commitments to investment- and noninvestment-grade counterparties in connection with leveraged acquisitions. These commitments are dependent on whether the acquisition by the borrower is successful, tend to be short-term in nature and, in most cases, are subject to certain conditions based on the borrower's financial condition or other factors. The amounts of commitments related to leveraged acquisitions at December 31, 2009 and 2008, were $2.9 billion and $3.6 billion, respectively. For further information, see Note 3 and Note 4 on pages 156–173 and 173–175 respectively, of this Annual Report.

Guarantees

The Firm considers the following off–balance sheet lending-related arrangements to be guarantees under U.S. GAAP: certain asset

purchase agreements, standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts. The amount of the liability related to guarantees recorded at December 31, 2009 and 2008, excluding the allowance for credit losses on lending-related commitments and derivative contracts discussed below, was $475 million and $535 million, respectively.

Asset purchase agreements

Asset purchase agreements are principally used as a mechanism to provide liquidity to SPEs, predominantly multi-seller conduits, as described in Note 16 on pages 214–222 of this Annual Report.

The carrying value of asset purchase agreements was $126 million and $147 million at December 31, 2009 and 2008, respectively, which was classified in accounts payable and other liabilities on the Consolidated Balance Sheets; the carrying values include $18 million and $9 million, respectively, for the allowance for lending-related commitments, and $108 million and $138 million, respectively, for the fair value of the guarantee liability.

Standby letters of credit

Standby letters of credit ("SBLC") and financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were $920 million and $673 million at December 31, 2009 and 2008, respectively, which was classified in accounts payable and other liabilities on the Consolidated Balance Sheets; these carrying values include $553 million and $276 million, respectively, for the allowance for lending-related commitments, and $367 million and $397 million, respectively, for the fair value of the guarantee liability.

The following table summarizes the type of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's customers as of December 31, 2009 and 2008. The ratings scale represents the current status of the payment or performance risk of the guarantee, and is based on the Firm's internal risk ratings, which generally correspond to ratings defined by S&P and Moody's.

	2009		2008	
December 31, (in millions)	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit(d)
Investment-grade[a]	**$ 66,786**	**$ 3,861**	$ 73,394	$ 3,772
Noninvestment-grade[a]	**24,699**	**1,306**	21,958	1,155
Total contractual amount[b]	**$ 91,485**[c]	**$ 5,167**	$ 95,352[c]	$ 4,927
Allowance for lending-related commitments	**$ 552**	**$ 1**	$ 274	$ 2
Commitments with collateral	**31,454**	**1,315**	30,972	1,000

(a) Ratings scale is based on the Firm's internal ratings which generally correspond to ratings defined by S&P and Moody's.
(b) Represents the contractual amount net of risk participations totaling $24.6 billion and $26.4 billion for standby letters of credit and other financial guarantees at December 31, 2009 and 2008, respectively, and $690 million and $1.1 billion for other letters of credit at December 31, 2009 and 2008, respectively. In regulatory filings with the Federal Reserve Board these commitments are shown gross of risk participations.
(c) Includes unissued standby letters of credit commitments of $38.4 billion and $39.5 billion at December 31, 2009 and 2008, respectively.
(d) The investment-grade and noninvestment-grade amounts have been revised from previous disclosures.

Derivatives qualifying as guarantees

In addition to the contracts described above, the Firm transacts certain derivative contracts that meet the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for trading purposes. The terms of written put options are typically five years or less. Derivative guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps", are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio and are typically longer-term or may have no stated maturity, but allow the Firm to terminate the contract under certain conditions.

Derivative guarantees are recorded on the Consolidated Balance Sheets at fair value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was $87.2 billion and $83.8 billion at December 31, 2009 and 2008, respectively. The notional value generally represents the Firm's maximum exposure to derivatives qualifying as guarantees, although exposure to certain stable value derivatives is contractually limited to a substantially lower percentage of the notional value. The fair value of the contracts reflects the probability of whether the Firm will be required to perform under the contract. The fair value related to derivative guarantees were derivative receivables of $219 million and $184 million and derivative payables of $981 million and $5.6 billion at December 31, 2009 and 2008, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 5 on pages 175–183 of this Annual Report.

Securities lending indemnification

Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to

third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the third-party borrower to return the lent securities in the event the Firm did not obtain sufficient collateral. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof. Also, as part of this program, the Firm invests cash collateral received from the borrower in accordance with approved guidelines.

Indemnification agreements – general

In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Loan sale and securitization-related indemnifications

Indemnifications for breaches of representations and warranties

As part of the Firm's loan sale and securitization activities, as described in Note 13 and Note 15 on pages 200–204 and 206–213, respectively, of this Annual Report, the Firm generally makes representations and warranties in its loan sale and securitization agreements that the loans sold meet certain requirements. These agreements may require the Firm (including in its roles as a servicer) to repurchase the loans and/or indemnify the purchaser of the loans against losses due to any breaches of such representations or warranties. Generally, the maximum amount of future payments the Firm would be required to make for breaches under these representations and warranties would be equal to the unpaid principal balance of such loans held by purchasers, including securitization-related SPEs, that are deemed to have defects plus, in certain circumstances, accrued and unpaid interest on such loans and certain expense.

At December 31, 2009 and 2008, the Firm had recorded repurchase liabilities of $1.7 billion and $1.1 billion, respectively. The repurchase liabilities are intended to reflect the likelihood that JPMorgan Chase will have to perform under these representations and warranties and is based on information available at the reporting date. The estimate incorporates both presented demands and probable future demands and is the product of an estimated cure rate, an estimated loss severity and an estimated recovery rate from third parties, where applicable. The liabilities have been reported net of probable recoveries from third-parties and predominately as a reduction of mortgage fees and related income. During 2009, the Firm settled certain current and future claims for certain loans originated and sold by Washington Mutual Bank.

Loans sold with recourse

The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2009 and 2008, the unpaid principal balance of loans sold with recourse totaled $13.5 billion and $15.0 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it will have to perform under this guarantee, was $271 million and $241 million at December 31, 2009 and 2008, respectively.

Credit card charge-backs

Prior to November 1, 2008, the Firm was a partner with one of the leading companies in electronic payment services in a joint venture operating under the name of Chase Paymentech Solutions, LLC (the "joint venture"). The joint venture was formed in October 2005, as a result of an agreement by the Firm and First Data Corporation, its joint venture partner, to integrate the companies' jointly owned Chase Merchant Services and Paymentech merchant businesses. The joint venture provided merchant processing services in the United States and Canada. The dissolution of the joint venture was completed on November 1, 2008, and JPMorgan Chase retained approximately 51% of the business under the Chase Paymentech name.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is liable primarily for the amount of each processed credit card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Chase Paymentech will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Chase Paymentech is unable to collect the amount from the merchant, Chase Paymentech will bear the loss for the amount credited or refunded to the cardmember. Chase Paymentech mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Chase Paymentech does not have sufficient collateral from the merchant to pro-

vide customer refunds; and (3) Chase Paymentech does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would be liable for the amount of the transaction. For the year ended December 31, 2009, Chase Paymentech incurred aggregate credit losses of $11 million on $409.7 billion of aggregate volume processed, and at December 31, 2009, it held $213 million of collateral. For the year ended December 31, 2008, Chase Paymentech incurred aggregate credit losses of $13 million on $713.9 billion of aggregate volume processed, and at December 31, 2008, it held $222 million of collateral. The Firm believes that, based on historical experience and the collateral held by Chase Paymentech, the fair value of the Firm's charge back-related obligations, which are representative of the payment or performance risk to the Firm is immaterial.

Credit card association, exchange and clearinghouse guarantees

The Firm holds an equity interest in VISA Inc. During October 2007, certain VISA-related entities completed a series of restructuring transactions to combine their operations, including VISA USA, under one holding company, VISA Inc. Upon the restructuring, the Firm's membership interest in VISA USA was converted into an equity interest in VISA Inc. VISA Inc. sold shares via an initial public offering and used a portion of the proceeds from the offering to redeem a portion of the Firm's equity interest in Visa Inc. Prior to the restructuring, VISA USA's by-laws obligated the Firm upon demand by VISA USA to indemnify VISA USA for, among other things, litigation obligations of Visa USA. The accounting for that guarantee was not subject to initial recognition at fair value. Upon the restructuring event, the Firm's obligation to indemnify Visa Inc. was limited to certain identified litigations. Such a limitation is deemed a modification of the indemnity by-law and, accordingly, became subject to initial recognition at fair value. The value of the litigation guarantee has been recorded in the Firm's financial statements based on its then fair value; the net amount recorded (within other liabilities) did not have a material adverse effect on the Firm's financial statements. In addition to Visa, the Firm is a member of other associations, including several securities and futures exchanges and clearinghouses, both in the United States and other countries. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to a member's guarantee fund, or, in a few cases, the obligation may be unlimited. It is difficult to estimate the Firm's maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Residual value guarantee

In connection with the Bear Stearns merger, the Firm succeeded to an operating lease arrangement for the building located at 383 Madison Avenue in New York City (the "Synthetic Lease"). Under the terms of the Synthetic Lease, the Firm is obligated to make periodic payments based on the lessor's underlying interest costs. The Synthetic Lease expires on November 1, 2010. Under the terms of the Synthetic Lease, the Firm has the right to purchase the building for the amount of the then outstanding indebtedness of the lessor, or to arrange for the sale of the building, with the proceeds of the sale to be used to satisfy the lessor's debt obligation. If the sale does not generate sufficient proceeds to satisfy the lessor's debt obligation, the Firm is required to fund the shortfall, up to a maximum residual value guarantee. As of December 31, 2009, there was no expected shortfall and the maximum residual value guarantee was approximately $670 million.

Note 32 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolio to assess potential concentration risks and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect management's risk tolerance.

In the Firm's wholesale portfolio, risk concentrations are evaluated primarily by industry and geographic region, and monitored regularly on both an aggregate portfolio level and on an individual customer basis. Management of the Firm's wholesale exposure is accomplished through loan syndication and participation, loan sales, securitizations, credit derivatives, use of master netting agreements, and collateral and other risk-reduction techniques. In the consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines.

The Firm does not believe that its exposure to any particular loan product (e.g., option ARMs), portfolio segment (e.g., commercial real estate) or its exposure to residential real estate loans with high loan-to-value ratios results in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

For further information regarding on–balance sheet credit concentrations by major product and geography, see Note 13 on pages 200–204 of this Annual Report. For information regarding concentrations of off–balance sheet lending-related financial instruments by major product, see Note 31 on pages 238–242 of this Annual Report.

The table below presents both on–balance sheet and off–balance sheet wholesale- and consumer-related credit exposure as of December 31, 2009 and 2008.

	2009				2008			
		On-balance sheet				On-balance sheet		
December 31, (in millions)	Credit exposure	Loans	Derivatives	Off-balance sheet (d)	Credit exposure	Loans	Derivatives	Off-balance sheet(d)
Wholesale-related[a]:								
Real estate	**$ 68,509**	**$ 57,195**	**$ 1,112**	**$ 10,202**	$ 80,284	$ 64,510	$ 2,021	$ 13,753
Banks and finance companies	**54,053**	**14,396**	**17,957**	**21,700**	75,577	19,055	33,457	23,065
Healthcare	**35,605**	**4,992**	**1,917**	**28,696**	38,032	7,004	3,723	27,305
State and municipal governments	**34,726**	**5,687**	**4,979**	**24,060**	36,772	5,882	10,191	20,699
Utilities	**27,178**	**5,451**	**3,073**	**18,654**	34,246	9,184	4,664	20,398
Consumer products	**27,004**	**7,880**	**1,094**	**18,030**	29,766	10,081	2,225	17,460
Asset managers	**24,920**	**5,930**	**6,640**	**12,350**	49,256	9,640	18,806	20,810
Oil and gas	**23,322**	**5,895**	**2,309**	**15,118**	24,746	8,796	2,220	13,730
Retail & consumer services	**20,673**	**5,611**	**769**	**14,293**	23,223	7,597	1,537	14,089
Holding companies	**16,018**	**4,360**	**1,042**	**10,616**	14,466	6,247	2,846	5,373
Technology	**14,169**	**3,802**	**1,409**	**8,958**	17,025	4,965	1,340	10,720
Insurance	**13,421**	**1,292**	**2,511**	**9,618**	17,744	1,942	5,494	10,308
Machinery and equipment manufacturing	**12,759**	**3,189**	**456**	**9,114**	14,501	4,642	943	8,916
Metals/mining	**12,547**	**3,410**	**1,158**	**7,979**	14,980	6,470	1,991	6,519
Media	**12,379**	**4,173**	**329**	**7,877**	13,177	6,486	480	6,211
Telecom services	**11,265**	**2,042**	**1,273**	**7,950**	13,237	3,828	1,298	8,111
Securities firms and exchanges	**10,832**	**3,457**	**4,796**	**2,579**	25,590	6,360	14,111	5,119
Business services	**10,667**	**3,627**	**397**	**6,643**	11,247	3,677	757	6,813
Building materials/construction	**10,448**	**3,252**	**281**	**6,915**	12,065	4,625	613	6,827
Chemicals/plastics	**9,870**	**2,719**	**392**	**6,759**	11,719	3,745	1,201	6,773
Transportation	**9,749**	**3,141**	**1,238**	**5,370**	10,253	3,904	1,651	4,698
Central government	**9,557**	**1,703**	**5,501**	**2,353**	14,441	545	9,773	4,123
Automotive	**9,357**	**2,510**	**357**	**6,490**	11,448	3,746	1,111	6,591
Leisure	**6,822**	**2,718**	**353**	**3,751**	8,158	4,051	659	3,448
Agriculture/paper manufacturing	**5,801**	**1,928**	**251**	**3,622**	6,920	2,593	653	3,674
All other	**135,791**	**39,717**	**18,616**	**77,458**	181,713	38,514	38,861	104,338
Loans held-for-sale and loans at fair value	**4,098**	**4,098**	**—**	**—**	13,955	13,955	—	—
Receivables from customers[b]	**15,745**	**—**	**—**	**—**	16,141	—	—	—
Interests in purchased receivables	**2,927**	**—**	**—**	**—**	—	—	—	—
Total wholesale-related	**650,212**	**204,175**	**80,210**	**347,155**	820,682	262,044	162,626	379,871
Consumer-related excluding purchased credit-impaired loans:								
Home equity – senior lien	**46,622**	**27,376**	**—**	**19,246**	57,791	29,793	—	27,998
Home equity – junior lien	**111,280**	**74,049**	**—**	**37,231**	152,287	84,542	—	67,745
Prime mortgage	**68,546**	**66,892**	**—**	**1,654**	77,345	72,266	—	5,079
Subprime mortgage	**12,526**	**12,526**	**—**	**—**	15,330	15,330	—	—
Option ARMs	**8,536**	**8,536**	**—**	**—**	9,018	9,018	—	—
Auto loans	**51,498**	**46,031**	**—**	**5,467**	47,329	42,603	—	4,726
Credit card – reported[c]	**647,899**	**78,786**	**—**	**569,113**	728,448	104,746	—	623,702
All other loans	**42,929**	**31,700**	**—**	**11,229**	45,972	33,715	—	12,257
Loans held-for-sale	**2,142**	**2,142**	**—**	**—**	2,028	2,028	—	—
Total consumer–related excluding purchased credit-impaired loans	**991,978**	**348,038**	**—**	**643,940**	1,135,548	394,041	—	741,507
Consumer-related purchased credit-impaired loans								
Home equity	**26,520**	**26,520**	**—**	**—**	28,555	28,555	—	—
Prime mortgage	**19,693**	**19,693**	**—**	**—**	21,855	21,855	—	—
Subprime mortgage	**5,993**	**5,993**	**—**	**—**	6,760	6,760	—	—
Option ARMs	**29,039**	**29,039**	**—**	**—**	31,643	31,643	—	—
Total consumer-related purchased credit-impaired loans	**81,245**	**81,245**	**—**	**—**	88,813	88,813	—	—
Total consumer	**1,073,223**	**429,283**	**—**	**643,940**	1,224,361	482,854	—	741,507
Total exposure	**$ 1,723,435**	**$ 633,458**	**$ 80,210**	**$ 991,095**	$ 2,045,043	$ 744,898	$ 162,626	$ 1,121,378

(a) During the fourth quarter of 2009, certain industry classifications were modified to better reflect risk correlations and enhance the Firm's management of industry risk. Prior periods have been revised to reflect the current presentation.
(b) Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.
(c) Excludes $84.6 billion and $85.6 billion of securitized credit card receivables at December 31, 2009 and 2008, respectively.
(d) Represents lending-related financial instruments.

Note 33 – International operations

The following table presents income statement–related information for JPMorgan Chase by major international geographic area. The Firm defines international activities as business transactions that involve customers residing outside of the U.S., and the information presented below is based primarily upon the domicile of the customer, the location from which the customer relationship is managed or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 34 on pages 245–247 of this Annual Report.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the United States.

Year ended December 31, (in millions)	Revenue[a]	Expense[b]	Income before income tax expense/(benefit) and extraordinary gain	Net income
2009				
Europe/Middle East and Africa	**$ 16,915**	**$ 8,610**	**$ 8,290**	**$ 5,485**
Asia and Pacific	**5,088**	**3,438**	**1,646**	**1,119**
Latin America and the Caribbean	**1,982**	**1,112**	**861**	**513**
Other	**659**	**499**	**160**	**105**
Total international	**24,644**	**13,659**	**10,957**	**7,222**
Total U.S.	**75,790**	**70,708**	**5,110**	**4,506**
Total	**$ 100,434**	**$ 84,367**	**$ 16,067**	**$ 11,728**
2008				
Europe/Middle East and Africa	$ 11,449	$ 8,403	$ 3,046	$ 2,483
Asia and Pacific	4,097	3,580	517	672
Latin America and the Caribbean	1,353	903	450	274
Other	499	410	89	21
Total international	17,398	13,296	4,102	3,450
Total U.S.	49,854	51,183	(1,329)	2,155
Total	$ 67,252	$ 64,479	$ 2,773	$ 5,605
2007				
Europe/Middle East and Africa	$ 12,070	$ 8,445	$ 3,625	$ 2,585
Asia and Pacific	4,730	3,117	1,613	945
Latin America and the Caribbean	2,028	975	1,053	630
Other	407	289	118	79
Total international	19,235	12,826	6,409	4,239
Total U.S.	52,137	35,741	16,396	11,126
Total	$ 71,372	$ 48,567	$ 22,805	$ 15,365

(a) Revenue is composed of net interest income and noninterest revenue.
(b) Expense is composed of noninterest expense and the provision for credit losses.

Note 34 – Business segments

The Firm is managed on a line-of-business basis. There are six major reportable business segments — Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate/Private Equity segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 58–60 of this Annual Report. For a further discussion concerning JPMorgan Chase's business segments, see Business segment results on pages 61–62 of this Annual Report.

The following is a description of each of the Firm's business segments:

Investment Bank
J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The clients of the Investment Bank ("IB") are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage, and research. IB also commits the Firm's own capital to principal investing and trading activities on a limited basis.

Retail Financial Services
Retail Financial Services ("RFS"), which includes the Retail Banking and Consumer Lending businesses, serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking as well as through auto dealerships and school financial-aid offices. Customers can use more than 5,100 bank branches (third-largest nationally) and 15,400 ATMs (second-largest nationally), as well as online and mobile banking around the clock. More than 23,900 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. Consumers also can obtain loans through 15,700 auto dealerships and nearly 2,100 schools and universities nationwide.

Card Services
Card Services is one of the nation's largest credit card issuers, with more than 145 million credit cards in circulation and over $163 billion in managed loans. Customers used Chase cards to meet more than $328 billion of their spending needs in 2009.

Chase continues to innovate, despite a very difficult business environment, launching new products and services such as Blueprint, Ultimate Rewards, Chase Sapphire and Ink from Chase, and earning a market leadership position in building loyalty and rewards programs. Through its merchant acquiring business, Chase Paymentech Solutions, Chase is one of the leading processors of credit-card payments.

Commercial Banking
Commercial Banking serves nearly 25,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and more than 30,000 real estate investors/owners. Delivering extensive industry knowledge, local expertise and dedicated service, CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Treasury & Securities Services
Treasury & Securities Services ("TSS") is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services ("TS") provides cash management, trade, wholesale card and liquidity products and services to small and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with the Commercial Banking, Retail Financial Services and Asset Management businesses to serve clients firmwide. As a result, certain TS revenue is included in other segments' results. Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and it manages depositary receipt programs globally.

Asset Management
AM, with assets under supervision of $1.7 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including money market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

Corporate/Private Equity
The Corporate/Private Equity sector comprises Private Equity, Treasury, the Chief Investment Office, corporate staff units and expense that is centrally managed. Treasury and the Chief Investment Office manage capital, liquidity, interest rate and foreign exchange risk and the investment portfolio for the Firm. The corporate staff units include Central Technology and Operations, Internal Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Legal & Compliance, Corporate Real Estate and General Services, Risk Management, Corporate Responsibility and Strategy & Development. Other centrally managed expense includes the Firm's occupancy and pension-related expense, net of allocations to the business.

Line of business equity increased during the second quarter of 2008 in IB and AM due to the Bear Stearns merger and for AM, the purchase of the additional equity interest in Highbridge. At the end of the third quarter of 2008, equity was increased for each line of business with a view toward the future implementation of the new Basel II capital rules. In addition, equity allocated to RFS, CS and CB was increased as a result of the Washington Mutual transaction.

Segment results

The following table provides a summary of the Firm's segment results for 2009, 2008 and 2007 on a managed basis. The impacts of credit card securitizations and tax-equivalent adjustments have been included in Reconciling items so that the total Firm results are on a reported basis.

Segment results and reconciliation[a]

(table continued on next page)

Year ended December 31,	Investment Bank			Retail Financial Services			Card Services			Commercial Banking		
(in millions, except ratios)	**2009**	2008	2007	**2009**	2008	2007	**2009**	2008	2007	**2009**	2008	2007
Noninterest revenue	**$ 18,522**	$ 2,051	$ 14,215	**$ 12,200**	$ 9,355	$ 6,779	**$ 2,920**	$ 2,719	$ 3,046	**$ 1,817**	$ 1,481	$ 1,263
Net interest income	**9,587**	10,284	4,076	**20,492**	14,165	10,526	**17,384**	13,755	12,189	**3,903**	3,296	2,840
Total net revenue	**28,109**	12,335	18,291	**32,692**	23,520	17,305	**20,304**	16,474	15,235	**5,720**	4,777	4,103
Provision for credit losses	**2,279**	2,015	654	**15,940**	9,905	2,610	**18,462**	10,059	5,711	**1,454**	464	279
Credit reimbursement (to)/from TSS[b]	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Noninterest expense[c]	**15,401**	13,844	13,074	**16,748**	12,077	9,905	**5,381**	5,140	4,914	**2,176**	1,946	1,958
Income/(loss) before income tax expense/ (benefit) and extraordinary gain	**10,429**	(3,524)	4,563	**4**	1,538	4,790	**(3,539)**	1,275	4,610	**2,090**	2,367	1,866
Income tax expense/(benefit)	**3,530**	(2,349)	1,424	**(93)**	658	1,865	**(1,314)**	495	1,691	**819**	928	732
Income/(loss) before extraordinary gain	**6,899**	(1,175)	3,139	**97**	880	2,925	**(2,225)**	780	2,919	**1,271**	1,439	1,134
Extraordinary gain[d]	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Net income/(loss)	**$ 6,899**	$ (1,175)	$ 3,139	**$ 97**	$ 880	$ 2,925	**$ (2,225)**	$ 780	$ 2,919	**$ 1,271**	$ 1,439	$ 1,134
Average common equity	**$ 33,000**	$ 26,098	$ 21,000	**$ 25,000**	$ 19,011	$ 16,000	**$ 15,000**	$ 14,326	$ 14,100	**$ 8,000**	$ 7,251	$ 6,502
Average assets	**699,039**	832,729	700,565	**407,497**	304,442	241,112	**192,749**	173,711	155,957	**135,408**	114,299	87,140
Return on average equity	**21%**	(5)%	15%	**—%**	5%	18%	**(15)%**	5%	21%	**16%**	20%	17%
Overhead ratio	**55**	112	71	**51**	51	57	**27**	31	32	**38**	41	48

(a) In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's lines of business results on a "managed basis," which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications that do not have any impact on net income as reported by the lines of business or by the Firm as a whole.

(b) In the second quarter of 2009, IB began reporting credit reimbursement from TSS as a component of total net revenue, whereas TSS continues to report its credit reimbursement to IB as a separate line item on its income statement (not part of net revenue). Reconciling items include an adjustment to offset IB's inclusion of the credit reimbursement in total net revenue. Prior periods have been revised for IB and Reconciling items to reflect this presentation.

(c) Includes merger costs, which are reported in the Corporate/Private Equity segment. Merger costs attributed to the business segments for 2009, 2008 and 2007 were as follows.

Year ended December 31, (in millions)	**2009**	2008	2007
Investment Bank	**$ 27**	$ 183	$ (2)
Retail Financial Services	**228**	90	14
Card Services	**40**	20	(1)
Commercial Banking	**6**	4	(1)
Treasury & Securities Services	**11**	—	121
Asset Management	**6**	3	20
Corporate/Private Equity	**163**	132	58

(d) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual from the FDIC for $1.9 billion. The fair value of the net assets acquired exceeded the purchase price, which resulted in negative goodwill. In accordance with U.S. GAAP for business combinations, nonfinancial assets that are not held-for-sale, such as premises and equipment and other intangibles, acquired in the Washington Mutual transaction were written down against that negative goodwill. The negative goodwill that remained after writing down nonfinancial assets was recognized as an extraordinary gain.

(e) Included a $1.5 billion charge to conform Washington Mutual's loan loss reserve to JPMorgan Chase's allowance methodology.

(table continued from previous page)

Treasury & Securities Services			Asset Management			Corporate/Private Equity			Reconciling items(g)(h)			**Total**		
2009	2008	2007	**2009**	2008	2007	**2009**	2008	2007	**2009**	2008	2007	**2009**	2008	2007
$ 4,747	$ 5,196	$ 4,681	**$ 6,372**	$ 6,066	$ 7,475	**$ 2,771**	$ (278)	$ 5,056	**$ (67)**	$ 1,883	$ 2,451	**$ 49,282**	$ 28,473	$ 44,966
2,597	2,938	2,264	**1,593**	1,518	1,160	**3,863**	347	(637)	**(8,267)**	(7,524)	(6,012)	**51,152**	38,779	26,406
7,344	8,134	6,945	**7,965**	7,584	8,635	**6,634**	69	4,419	**(8,334)**	(5,641)	(3,561)	**100,434**	67,252	71,372
55	82	19	**188**	85	(18)	**80**	1,981(e)(f)	(11)	**(6,443)**	(3,612)	(2,380)	**32,015**	20,979	6,864
(121)	(121)	(121)	**—**	—	—	**—**	—	—	**121**	121	121	**—**	—	—
5,278	5,223	4,580	**5,473**	5,298	5,515	**1,895**	(28)	1,757	**—**	—	—	**52,352**	43,500	41,703
1,890	2,708	2,225	**2,304**	2,201	3,138	**4,659**	(1,884)	2,673	**(1,770)**	(1,908)	(1,060)	**16,067**	2,773	22,805
664	941	828	**874**	844	1,172	**1,705**	(535)	788	**(1,770)**	(1,908)	(1,060)	**4,415**	(926)	7,440
1,226	1,767	1,397	**1,430**	1,357	1,966	**2,954**	(1,349)	1,885	**—**	—	—	**11,652**	3,699	15,365
—	—	—	**—**	—	—	**76**	1,906	—	**—**	—	—	**76**	1,906	—
$ 1,226	$ 1,767	$ 1,397	**$ 1,430**	$ 1,357	$ 1,966	**$ 3,030**	$ 557	$ 1,885	**$ —**	$ —	$ —	**$ 11,728**	$ 5,605	$ 15,365
$ 5,000	$ 3,751	$ 3,000	**$ 7,000**	$ 5,645	$ 3,876	**$ 52,903**	$ 53,034	$ 54,245	**$ —**	$ —	$ —	**$ 145,903**	$ 129,116	$ 118,723
35,963	54,563	53,350	**60,249**	65,550	51,882	**575,529**	323,227	231,818	**(82,233)**	(76,904)	(66,780)	**2,024,201**	1,791,617	1,455,044
25%	47%	47%	**20%**	24%	51%	**NM**	NM	NM	**NM**	NM	NM	**6%**	4%(i)	13%
72	64	66	**69**	70	64	**NM**	NM	NM	**NM**	NM	NM	**52**	65	58

(f) In November 2008, the Firm transferred $5.8 billion of higher quality credit card loans from the legacy Chase portfolio to a securitization trust previously established by Washington Mutual ("the Trust"). As a result of converting higher credit quality Chase-originated on-book receivables to the Trust's seller's interest which has a higher overall loss rate reflective of the total assets within the Trust, approximately $400 million of incremental provision for credit losses was recorded during the fourth quarter of 2008. This incremental provision for credit losses was recorded in the Corporate/Private Equity segment as the action related to the acquisition of Washington Mutual's banking operations. For further discussion of credit card securitizations, see Note 15 on page 208 of this Annual Report.

(g) Managed results for credit card exclude the impact of credit card securitizations on total net revenue, provision for credit losses and average assets, as JPMorgan Chase treats the sold receivables as if they were still on the balance sheet in evaluating the credit performance of the entire managed credit card portfolio as operations are funded, and decisions are made about allocating resources such as employees and capital, based on managed information. These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results. The related securitization adjustments were as follows.

Year ended December 31, (in millions)	**2009**	2008	2007
Noninterest revenue	**$ (1,494)**	$ (3,333)	$ (3,255)
Net interest income	**7,937**	6,945	5,635
Provision for credit losses	**6,443**	3,612	2,380
Average assets	**82,233**	76,904	66,780

(h) Segment managed results reflect revenue on a tax-equivalent basis with the corresponding income tax impact recorded within income tax expense/(benefit). The adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results. Tax-equivalent adjustments for the years ended December 31, 2009, 2008 and 2007 were as follows.

Year ended December 31, (in millions)	**2009**	2008	2007
Noninterest revenue	**$ 1,440**	$ 1,329	$ 683
Net interest income	**330**	579	377
Income tax expense	**1,770**	1,908	1,060

(i) Ratio is based on net income.

Note 35 – Parent company

Parent company – statements of income

Year ended December 31, (in millions)	2009	2008	2007
Income			
Dividends from subsidiaries:			
Bank and bank holding company	**$ 15,235**	$ 3,085	$ 5,834
Nonbank[a]	**1,036**	1,687	2,463
Interest income from subsidiaries	**1,501**	4,539	5,082
Other interest income	**266**	212	263
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**233**	244	182
Nonbank	**742**	95	960
Other income/(loss)	**844**	(1,038)	(131)
Total income	**19,857**	8,824	14,653
Expense			
Interest expense to subsidiaries[a]	**1,118**	1,302	1,239
Other interest expense	**4,696**	6,879	6,427
Compensation expense	**574**	43	125
Other noninterest expense	**414**	732	329
Total expense	**6,802**	8,956	8,120
Income/(loss) before income tax benefit and undistributed net income of subsidiaries	**13,055**	(132)	6,533
Income tax benefit	**1,269**	2,582	589
Equity in undistributed net income of subsidiaries	**(2,596)**	3,155	8,243
Net income	**$ 11,728**	$ 5,605	$ 15,365

Parent company – balance sheets

December 31, (in millions)	2009	2008
Assets		
Cash and due from banks	**$ 102**	$ 35
Deposits with banking subsidiaries	**87,893**	60,551
Trading assets	**14,808**	12,487
Available-for-sale securities	**2,647**	1,587
Loans	**1,316**	1,525
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**54,152**	33,293
Nonbank	**81,365**	131,032
Investments (at equity) in subsidiaries:		
Bank and bank holding company	**157,412**	153,140
Nonbank[a]	**32,547**	27,968
Goodwill and other intangibles	**1,104**	1,616
Other assets	**14,793**	12,934
Total assets	**$ 448,139**	$ 436,168
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries[a]	**$ 39,532**	$ 44,467
Other borrowed funds, primarily commercial paper	**41,454**	39,560
Other liabilities	**8,035**	9,363
Long-term debt[b]	**193,753**	175,894
Total liabilities	**282,774**	269,284
Total stockholders' equity	**165,365**	166,884
Total liabilities and stockholders' equity	**$ 448,139**	$ 436,168

Parent company – statements of cash flows

Year ended December 31, (in millions)	2009	2008	2007
Operating activities			
Net income	**$ 11,728**	$ 5,605	$ 15,365
Less: Net income of subsidiaries[a]	**13,675**	7,927	16,540
Parent company net loss	**(1,947)**	(2,322)	(1,175)
Add: Cash dividends from subsidiaries[a]	**16,054**	4,648	8,061
Other, net	**1,852**	1,920	3,496
Net cash provided by operating activities	**15,959**	4,246	10,382
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**(27,342)**	(7,579)	(34,213)
Available-for-sale securities:			
Purchases	**(1,454)**	(1,475)	(104)
Proceeds from sales and maturities	**522**	—	318
Loans, net	**209**	(102)	(452)
Advances to subsidiaries, net	**28,808**	(82,725)	(24,553)
Investments (at equity) in subsidiaries, net[a]	**(6,582)**	(26,212)	(4,135)
Net cash used in investing activities	**(5,839)**	(118,093)	(63,139)
Financing activities			
Net change in borrowings from subsidiaries[a]	**(4,935)**	20,529	4,755
Net change in other borrowed funds	**1,894**	(12,880)	31,429
Proceeds from the issuance of long-term debt	**32,304**	50,013	38,986
Proceeds from the assumption of subsidiaries long-term debt[c]	**15,264**	39,778	—
Repayments of long-term debt	**(31,964)**	(22,972)	(11,662)
Proceeds from issuance of common stock	**5,756**	11,500	—
Excess tax benefits related to stock-based compensation	**17**	148	365
Proceeds from issuance of preferred stock and Warrant to the U.S. Treasury	**—**	25,000	—
Proceeds from issuance of preferred stock[d]	**—**	8,098	—
Redemption of preferred stock issued to the U.S. Treasury	**(25,000)**	—	—
Repurchases of treasury stock	**—**	—	(8,178)
Dividends paid	**(3,422)**	(5,911)	(5,051)
All other financing activities, net	**33**	469	1,467
Net cash provided by financing activities	**(10,053)**	113,772	52,111
Net increase/(decrease) in cash and due from banks	**67**	(75)	(646)
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	**35**	110	756
Cash and due from banks at the end of the year, primarily with bank subsidiaries	**$ 102**	$ 35	$ 110
Cash interest paid	**$ 5,629**	$ 7,485	$ 7,470
Cash income taxes paid	**3,124**	156	5,074

(a) Subsidiaries include trusts that issued guaranteed capital debt securities ("issuer trusts"). The Parent received dividends of $14 million, $15 million and $18 million from the issuer trusts in 2009, 2008 and 2007, respectively. For further discussion on these issuer trusts, see Note 22 on page 229 of this Annual Report.

(b) At December 31, 2009, long-term debt that contractually matures in 2010 through 2014 totaled $30.2 billion, $38.3 billion, $41.7 billion, $15.1 billion and $19.2 billion, respectively.

(c) Represents the assumption of Bear Stearns long-term debt by JPMorgan Chase & Co.

(d) 2008 included the conversion of Bear Stearns' preferred stock into JPMorgan Chase preferred stock.

Selected quarterly financial data (unaudited)

As of or for the period ended	2009				2008			
(in millions, except per-share, ratio and headcount data)	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Selected income statement data								
Noninterest revenue	**$ 10,786**	**$ 13,885**	**$ 12,953**	**$ 11,658**	$ 3,394	$ 5,743	$ 10,105	$ 9,231
Net interest income	**12,378**	**12,737**	**12,670**	**13,367**	13,832	8,994	8,294	7,659
Total net revenue	**23,164**	**26,622**	**25,623**	**25,025**	17,226	14,737	18,399	16,890
Total noninterest expense	**12,004**	**13,455**	**13,520**	**13,373**	11,255	11,137	12,177	8,931
Pre-provision profit (a)	**11,160**	**13,167**	**12,103**	**11,652**	5,971	3,600	6,222	7,959
Provision for credit losses	**7,284**	**8,104**	**8,031**	**8,596**	7,755	3,811	3,455	4,424
Provision for credit losses – accounting conformity (b)	**—**	**—**	**—**	**—**	(442)	1,976	—	—
Income/(loss) before income tax expense/(benefit) and extraordinary gain	**3,876**	**5,063**	**4,072**	**3,056**	(1,342)	(2,187)	2,767	3,535
Income tax expense/(benefit)	**598**	**1,551**	**1,351**	**915**	(719)	(2,133)	764	1,162
Income/(loss) before extraordinary gain	**3,278**	**3,512**	**2,721**	**2,141**	(623)	(54)	2,003	2,373
Extraordinary gain (c)	**—**	**76**	**—**	**—**	1,325	581	—	—
Net income	**$ 3,278**	**$ 3,588**	**$ 2,721**	**$ 2,141**	$ 702	$ 527	$ 2,003	$ 2,373
Per-common-share data								
Basic earnings (d)								
Income/(loss) before extraordinary gain	**$ 0.75**	**$ 0.80**	**$ 0.28**	**$ 0.40**	$ (0.29)	$ (0.08)	$ 0.54	$ 0.67
Net income	**0.75**	**0.82**	**0.28**	**0.40**	0.06	0.09	0.54	0.67
Diluted earnings (d)(e)								
Income/(loss) before extraordinary gain	**$ 0.74**	**$ 0.80**	**$ 0.28**	**$ 0.40**	$ (0.29)	$ (0.08)	$ 0.53	$ 0.67
Net income	**0.74**	**0.82**	**0.28**	**0.40**	0.06	0.09	0.53	0.67
Cash dividends declared per share	**0.05**	**0.05**	**0.05**	**0.05**	0.38	0.38	0.38	0.38
Book value per share	**39.88**	**39.12**	**37.36**	**36.78**	36.15	36.95	37.02	36.94
Common shares outstanding								
Average: Basic	**3,946.1**	**3,937.9**	**3,811.5**	**3,755.7**	3,737.5	3,444.6	3,426.2	3,396.0
Diluted (d)	**3,974.1**	**3,962.0**	**3,824.1**	**3,758.7**	3,737.5(h)	3,444.6(h)	3,453.1	3,423.3
Common shares at period-end	**3,942.0**	**3,938.7**	**3,924.1**	**3,757.7**	3,732.8	3,726.9	3,435.7	3,400.8
Share price								
High	**$ 47.47**	**$ 46.50**	**$ 38.94**	**$ 31.64**	$ 50.63	$ 49.00	$ 49.95	$ 49.29
Low	**40.04**	**31.59**	**25.29**	**14.96**	19.69	29.24	33.96	36.01
Close	**41.67**	**43.82**	**34.11**	**26.58**	31.53	46.70	34.31	42.95
Market capitalization	**164,261**	**172,596**	**133,852**	**99,881**	117,695	174,048	117,881	146,066
Financial ratios								
Return on common equity: (e)								
Income/(loss) before extraordinary gain	**8%**	**9%**	**3%**	**5%**	(3)%	(1)%	6%	8%
Net income	**8**	**9**	**3**	**5**	1	1	6	8
Return on tangible common equity								
Income/(loss) before extraordinary gain	**12**	**13**	**5**	**8**	(5)	(1)	10	13
Net income	**12**	**14**	**5**	**8**	1	2	10	13
Return on assets:								
Income/(loss) before extraordinary gain	**0.65**	**0.70**	**0.54**	**0.42**	(0.11)	(0.01)	0.48	0.61
Net income	**0.65**	**0.71**	**0.54**	**0.42**	0.13	0.12	0.48	0.61
Tier 1 capital ratio	**11.1**	**10.2**	**9.7**	**11.4**	10.9	8.9	9.2	8.3
Total capital ratio	**14.8**	**13.9**	**13.3**	**15.2**	14.8	12.6	13.4	12.5
Tier 1 leverage ratio	**6.9**	**6.5**	**6.2**	**7.1**	6.9	7.2	6.4	5.9
Tier 1 common capital ratio (f)	**8.8**	**8.2**	**7.7**	**7.3**	7.0	6.8	7.1	6.9
Overhead ratio	**52**	**51**	**53**	**53**	65	76	66	53
Selected balance sheet data (period-end)								
Trading assets	**$ 411,128**	**$ 424,435**	**$ 395,626**	**$ 429,700**	$ 509,983	$ 520,257	$ 531,997	$ 485,280
Securities	**360,390**	**372,867**	**345,563**	**333,861**	205,943	150,779	119,173	101,647
Loans	**633,458**	**653,144**	**680,601**	**708,243**	744,898	761,381	538,029	537,056
Total assets	**2,031,989**	**2,041,009**	**2,026,642**	**2,079,188**	2,175,052	2,251,469	1,775,670	1,642,862
Deposits	**938,367**	**867,977**	**866,477**	**906,969**	1,009,277	969,783	722,905	761,626
Long-term debt	**266,318**	**272,124**	**271,939**	**261,845**	270,683	255,432	277,455	205,367
Common stockholders' equity	**157,213**	**154,101**	**146,614**	**138,201**	134,945	137,691	127,176	125,627
Total stockholders' equity	**165,365**	**162,253**	**154,766**	**170,194**	166,884	145,843	133,176	125,627
Headcount	**222,316**	**220,861**	**220,255**	**219,569**	224,961	228,452	195,594	182,166
Credit quality metrics								
Allowance for credit losses	**$ 32,541**	**$ 31,454**	**$ 29,818**	**$ 28,019**	$ 23,823	$ 19,765	$ 13,932	$ 12,601
Allowance for loan losses to total retained loans	**5.04%**	**4.74%**	**4.33%**	**3.95%**	3.18%	2.56%	2.57%	2.29%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans (g)	**5.51**	**5.28**	**5.01**	**4.53**	3.62	2.87	2.57	2.29
Nonperforming assets	**$ 19,741**	**$ 20,362**	**$ 17,517**	**$ 14,654**	$ 12,714	$ 9,520	$ 6,233	$ 5,143
Net charge-offs	**6,177**	**6,373**	**6,019**	**4,396**	3,315	2,484	2,130	1,906
Net charge-off rate	**3.85%**	**3.84%**	**3.52%**	**2.51%**	1.80%	1.91%	1.67%	1.53%
Wholesale net charge-off rate	**2.31**	**1.93**	**1.19**	**0.32**	0.33	0.10	0.08	0.18
Consumer net charge-off rate	**4.60**	**4.79**	**4.69**	**3.61**	2.59	3.13	2.77	2.43

(a) Pre-provision profit is total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.
(b) The third and fourth quarters of 2008 included an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual's banking operations.
(c) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual. On May 30, 2008, a wholly-owned subsidiary of JPMorgan Chase merged with and into The Bear Stearns Companies, Inc. ("Bear Stearns"), and Bear Stearns became a wholly-owned subsidiary of JPMorgan Chase. The Washington Mutual acquisition resulted in negative goodwill, and accordingly, the Firm recorded an extraordinary gain. For additional information of these transactions, see Note 2 on pages 151–156 of this Annual Report.
(d) Effective January 1, 2009, the Firm implemented new FASB guidance for participating securities. Accordingly, prior-period amounts have been revised as required. For further discussion of the Guidance, see Note 25 on page 232 of this Annual Report.
(e) The calculation of second-quarter 2009 earnings per share and net income applicable to common equity include a one-time, noncash reduction of $1.1 billion, or $0.27 per share, resulting from repayment of U.S. Troubled Asset Relief Program ("TARP") preferred capital. Excluding this reduction, the adjusted Return on common equity ("ROE") and Return on tangible common equity ("ROTCE") were 6% and 10% for second-quarter 2009. For further discussion, see "Explanation and reconciliation of the Firm's use of non-GAAP financial measures" on page 58–60 of this Annual Report.
(f) Tier 1 common is calculated as Tier 1 capital less qualifying perpetual preferred stock, qualifying trust preferred securities and qualifying minority interest in subsidiaries. The Firm uses the Tier 1 common capital ratio, a non-GAAP financial measure, to assess and compare the quality and composition of the Firm's capital with the capital of other financial services companies. For further discussion, see Regulatory capital on pages 90–92 of this Annual Report.
(g) Excludes the impact of home lending purchased credit-impaired loans and loans held by the Washington Mutual Master Trust. For further discussion, see Allowance for credit losses on pages 123–125 of this Annual Report.
(h) Common equivalent shares have been excluded from the computation of diluted earnings per share for the third and fourth quarters of 2008, as the effect on income/(loss) before extraordinary gain would be antidilutive.

Selected annual financial data (unaudited)

As of or for the year ended December 31, (in millions, except per-share, headcount and ratio data),	2009	2008(d)	2007	2006	2005
Selected income statement data					
Noninterest revenue	**$ 49,282**	$ 28,473	$ 44,966	$ 40,757	$ 34,693
Net interest income	**51,152**	38,779	26,406	21,242	19,555
Total net revenue	**100,434**	67,252	71,372	61,999	54,248
Total noninterest expense	**52,352**	43,500	41,703	38,843	38,926
Pre-provision profit (a)	**48,082**	23,752	29,669	23,156	15,322
Provision for credit losses	**32,015**	19,445	6,864	3,270	3,483
Provision for credit losses – accounting conformity (b)	**—**	1,534	—	—	—
Income from continuing operations before income tax expense/ (benefit) and extraordinary gain	**16,067**	2,773	22,805	19,886	11,839
Income tax expense/(benefit)	**4,415**	(926)	7,440	6,237	3,585
Income from continuing operations	**11,652**	3,699	15,365	13,649	8,254
Income from discontinued operations (c)	**—**	—	—	795	229
Income before extraordinary gain	**11,652**	3,699	15,365	14,444	8,483
Extraordinary gain (d)	**76**	1,906	—	—	—
Net income	**$ 11,728**	$ 5,605	$ 15,365	$ 14,444	$ 8,483
Per-common-share data					
Basic earnings (e)					
Income from continuing operations	**$ 2.25**	$ 0.81	$ 4.38	$ 3.83	$ 2.30
Net income	**2.27**	1.35	4.38	4.05	2.37
Diluted earnings (e)(f)					
Income from continuing operations	**$ 2.24**	$ 0.81	$ 4.33	$ 3.78	$ 2.29
Net income	**2.26**	1.35	4.33	4.00	2.35
Cash dividends declared per share	**0.20**	1.52	1.48	1.36	1.36
Book value per share	**39.88**	36.15	36.59	33.45	30.71
Common shares outstanding					
Average: Basic (e)	**3,862.8**	3,501.1	3,403.6	3,470.1	3,491.7
Diluted (e)	**3,879.7**	3,521.8	3,445.3	3,516.1	3,511.9
Common shares at period-end	**3,942.0**	3,732.8	3,367.4	3,461.7	3,486.7
Share price					
High	**$ 47.47**	$ 50.63	$ 53.25	$ 49.00	$ 40.56
Low	**14.96**	19.69	40.15	37.88	32.92
Close	**41.67**	31.53	43.65	48.30	39.69
Market capitalization	**164,261**	117,695	146,986	167,199	138,387
Financial ratios					
Return on common equity: (f)					
Income from continuing operations	**6%**	2%	13%	12%	8%
Net income	**6**	4	13	13	8
Return on tangible common equity (f)(g)					
Income from continuing operations	**10**	4	22	24	15
Net income	**10**	6	22	24	15
Return on assets:					
Income from continuing operations	**0.58**	0.21	1.06	1.04	0.70
Net income	**0.58**	0.31	1.06	1.10	0.72
Tier 1 capital ratio	**11.1**	10.9	8.4	8.7	8.5
Total capital ratio	**14.8**	14.8	12.6	12.3	12.0
Tier 1 leverage ratio	**6.9**	6.9	6.0	6.2	6.3
Tier 1 common capital ratio (h)	**8.8**	7.0	7.0	7.3	7.0
Overhead ratio	**52**	65	58	63	72
Selected balance sheet data (period-end)					
Trading assets	**$ 411,128**	$ 509,983	$ 491,409	$ 365,738	$ 298,377
Securities	**360,390**	205,943	85,450	91,975	47,600
Loans	**633,458**	744,898	519,374	483,127	419,148
Total assets	**2,031,989**	2,175,052	1,562,147	1,351,520	1,198,942
Deposits	**938,367**	1,009,277	740,728	638,788	554,991
Long-term debt	**266,318**	270,683	199,010	145,630	119,886
Common stockholders' equity	**157,213**	134,945	123,221	115,790	107,072
Total stockholders' equity	**165,365**	166,884	123,221	115,790	107,211
Headcount	**222,316**	224,961	180,667	174,360	168,847
Credit quality metrics					
Allowance for credit losses	**$ 32,541**	$ 23,823	$ 10,084	$ 7,803	$ 7,490
Allowance for loan losses to total retained loans	**5.04%**	3.18%	1.88%	1.70%	1.84%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans (i)	**5.51**	3.62	1.88	1.70	1.84
Nonperforming assets	**19,741**	12,714	3,933	2,341	2,590
Net charge-offs	**$ 22,965**	$ 9,835	$ 4,538	$ 3,042	$ 3,819
Net charge-off rate	**3.42%**	1.73%	1.00%	0.73%	1.00%
Wholesale net charge-off/(recovery) rate	**1.40**	0.18	0.04	(0.01)	(0.06)
Consumer net charge-off rate	**4.41**	2.71	1.61	1.17	1.56

(a) Pre-provision profit is total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.
(b) Results for 2008 included an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual Bank's banking operations.
(c) On October 1, 2006, JPMorgan Chase & Co. completed the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York Company Inc. The results of operations of these corporate trust businesses are reported as discontinued operations for each of the periods presented.
(d) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual. On May 30, 2008, a wholly-owned subsidiary of JPMorgan Chase merged with and into Bear Stearns and Bear Stearns became a wholly-owned subsidiary of JPMorgan Chase. The Washington Mutual acquisition resulted in negative goodwill, and accordingly, the Firm recorded an extraordinary gain. For additional information on these transactions, see Note 2 on pages 151-156 of this Annual Report.
(e) Effective January 1, 2009, the Firm implemented new FASB guidance for participating securities. Accordingly, prior-period amounts have been revised as required. For further discussion of the guidance, see Note 25 on page 232 of this Annual Report.
(f) The calculation of 2009 earnings per share and net income applicable to common equity include a one-time, noncash reduction of $1.1 billion, or $0.27 per share, resulting from repayment of TARP preferred capital in the second quarter of 2009. Excluding this reduction, the adjusted ROE and ROTCE were 7% and 11% for 2009. For further discussion, see "Explanation and reconciliation of the Firm's use of non-GAAP financial measures" on pages 58–60 of this Annual Report.
(g) For a further discussion of ROTCE, a non-GAAP financial measure, see "Explanation and reconciliation of the Firm's use of non-GAAP financial measures" on page 58–60 of this Annual Report.
(h) Tier 1 common is calculated as Tier 1 capital less qualifying perpetual preferred stock, qualifying trust preferred securities and qualifying minority interest in subsidiaries. The Firm uses the Tier 1 common capital ratio, a non-GAAP financial measure, to assess and compare the quality and composition of the Firm's capital with the capital of other financial services companies. For further discussion, see Regulatory capital on pages 90–92 of this Annual Report.
(i) Excludes the impact of home lending purchased credit-impaired loans and loans held by the Washington Mutual Master Trust. For further discussion, see Allowance for credit losses on pages 123–125 of this Annual Report.

Glossary of terms

ACH: Automated Clearing House.

Advised lines of credit: An authorization which specifies the maximum amount of a credit facility the Firm has made available to an obligor on a revolving but non-binding basis. The borrower receives written or oral advice of this facility. The Firm may cancel this facility at any time.

AICPA: American Institute of Certified Public Accountants.

Alternative assets: The following types of assets constitute alternative investments – hedge funds, currency, real estate and private equity.

Assets under management: Represent assets actively managed by Asset Management on behalf of Institutional, Retail, Private Banking, Private Wealth Management and Bear Stearns Private Client Services clients. Includes Committed Capital not Called, on which we earn fees. Excludes assets managed by American Century Companies, Inc., in which the Firm has a 42% ownership interest as of December 31, 2009.

Assets under supervision: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Average managed assets: Refers to total assets on the Firm's Consolidated Balance Sheets plus credit card receivables that have been securitized and removed from the Firm's Consolidated Balance Sheets.

Beneficial interest issued by consolidated VIEs: Represents the interest of third-party holders of debt/equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates. The underlying obligations of the VIEs consist of short-term borrowings, commercial paper and long-term debt. The related assets consist of trading assets, available-for-sale securities, loans and other assets.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Combined effective loan-to-value ratio: For residential real estate loans, an indicator of how much equity a borrower has in a secured borrowing based on current estimates of the value of the collateral and considering all lien positions related to the property.

Contractual credit card charge-off: In accordance with the Federal Financial Institutions Examination Council policy, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specific event (e.g., bankruptcy of the borrower), whichever is earlier.

Credit card securitizations: Card Services' managed results excludes the impact of credit card securitizations on total net revenue, the provision for credit losses, net charge-offs and loan receivables. Through securitization, the Firm transforms a portion of its credit card receivables into securities, which are sold to investors. The credit card receivables are removed from the Consolidated Balance Sheets through the transfer of the receivables to a trust, and through the sale of undivided interests to investors that entitle the investors to specific cash flows generated from the credit card receivables. The Firm retains the remaining undivided interests as seller's interests, which are recorded in loans on the Consolidated Balance Sheets. A gain or loss on the sale of credit card receivables to investors is recorded in other income. Securitization also affects the Firm's Consolidated Statements of Income, as the aggregate amount of interest income, certain fee revenue and recoveries that is in excess of the aggregate amount of interest paid to investors, gross credit losses and other trust expense related to the securitized receivables are reclassified into credit card income in the Consolidated Statements of Income.

Credit derivatives: Contractual agreements that provide protection against a credit event on one or more referenced credits. The nature of a credit event is established by the protection buyer and protection seller at the inception of a transaction, and such events include bankruptcy, insolvency or failure to meet payment obligations when due. The buyer of the credit derivative pays a periodic fee in return for a payment by the protection seller upon the occurrence, if any, of a credit event.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again. The duration of a credit cycle can vary from a couple of years to several years.

Deposit margin: Represents net interest income expressed as a percentage of average deposits.

Discontinued operations: A component of an entity that is classified as held-for-sale or that has been disposed of from ongoing operations in its entirety or piecemeal, and for which the entity will not have any significant, continuing involvement. A discontinued operation may be a separate major business segment, a component of a major business segment or a geographical area of operations of the entity that can be separately distinguished operationally and for financial reporting purposes.

EITF: Emerging Issues Task Force.

FASB: Financial Accounting Standards Board.

FICO: Fair Isaac Corporation.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

Interchange income: A fee that is paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Interests in purchased receivables: Represents an ownership interest in cash flows of an underlying pool of receivables transferred by a third-party seller into a bankruptcy-remote entity, generally a trust.

Glossary of terms

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications related to credit card securitizations and to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Managed credit card receivables: Refers to credit card receivables on the Firm's Consolidated Balance Sheets plus credit card receivables that have been securitized and removed from the Firm's Consolidated Balance Sheets.

Mark-to-market exposure: A measure, at a point in time, of the value of a derivative or foreign exchange contract in the open market. When the mark-to-market value is positive, it indicates the counterparty owes JPMorgan Chase and, therefore, creates a repayment risk for the Firm. When the mark-to-market value is negative, JPMorgan Chase owes the counterparty; in this situation, the Firm does not have repayment risk.

Master netting agreement: An agreement between two counterparties that have multiple derivative contracts with each other that provides for the net settlement of all contracts through a single payment, in a single currency, in the event of default on or termination of any one contract.

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) high combined-loan-to-value ("CLTV") ratio; (iii) loans secured by non-owner occupied properties; or (iv) debt-to-income ratio above normal limits. Perhaps the most important characteristic is limited documentation. A substantial proportion of traditional Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM residential real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only, or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate has usually been significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan.

Prime

Prime mortgage loans generally have low default risk and are made to borrowers with good credit records and a monthly income that is at least three to four times greater than their monthly housing expense (mortgage payments plus taxes and other debt payments). These borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are designed for customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) high loan-to-value ("LTV") ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) high debt-to-income ratio; (iv) the occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

MSR risk management revenue: Includes changes in MSR asset fair value due to inputs or assumptions in model and derivative valuation adjustments.

NA: Data is not applicable or available for the period presented.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

Nonconforming mortgage loans: Mortgage loans that do not meet the requirements for sale to U.S. government agencies and U.S. government sponsored enterprises. These requirements include limits on loan-to-value ratios, loan terms, loan amounts, down payments, borrower credit worthiness and other requirements.

OPEB: Other postretirement employee benefits.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Personal bankers: Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.

Portfolio activity: Describes changes to the risk profile of existing lending-related exposures and their impact on the allowance for credit losses from changes in customer profiles and inputs used to estimate the allowances.

Glossary of terms

Principal transactions: Realized and unrealized gains and losses from trading activities (including physical commodities inventories that are accounted for at the lower of cost or fair value) and changes in fair value associated with financial instruments held by the Investment Bank for which the fair value option was elected. Principal transactions revenue also include private equity gains and losses.

Purchased credit-impaired loans: Acquired loans deemed to be credit-impaired under the FASB guidance for purchased credit-impaired loans. The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., FICO score, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. Wholesale loans were determined to be credit-impaired if they meet the definition of an impaired loan under U.S. GAAP at the acquisition date. Consumer loans are determined to be purchased credit-impaired based on specific risk characteristics of the loan, including product type, loan-to-value ratios, FICO scores, and past due status.

Receivables from customers: Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets for the wholesale lines of business.

Reported basis: Financial statements prepared under U.S. GAAP. The reported basis includes the impact of credit card securitizations but excludes the impact of taxable-equivalent adjustments.

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a commercially attractive track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Stress testing: A scenario that measures market risk under unlikely but plausible events in abnormal markets.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. government and federal agency obligations: Obligations of the U.S. government or an instrumentality of the U.S. government whose obligations are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

Value-at-risk ("VaR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

J.P. Morgan International Council

As of December 31, 2009

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JPMorgan Chase & Co.
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* As of December 31, 2009, Hon. George P. Shultz retired as Chairman from the Council, and as of January 1, 2010, The Rt Hon. Tony Blair was appointed incoming Chairman.

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LeFrak Organization

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(Museum)

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Chairman and
Chief Executive Officer
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(Franchised restaurants)

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Chief Executive Officer
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(Oil and gas)

William C. Weldon [2, 3]
Chairman and
Chief Executive Officer
Johnson & Johnson
(Health care products)

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2 Compensation & Management Development Committee
3 Corporate Governance & Nominating Committee
4 Public Responsibility Committee
5 Risk Policy Committee

Executive Committee (*denotes member of Operating Committee)

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Chief Executive Officer

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Phil Di Iorio
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Human Resources

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Chief Investment Officer

Althea L. Duersten
Chief Investment Office

Mary Callahan Erdoes*
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Dr. Jacob A. Frenkel
JPMorgan Chase International

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Audit

Walter A. Gubert
Europe, Middle East and Africa

Evelyn E. Guernsey
Investment Management

Carlos M. Hernandez
Investment Bank

John J. Hogan
Investment Bank/Risk Management

Catherine M. Keating
Asset Management

Conrad J. Kozak
Worldwide Securities Services

James B. Lee, Jr.
Investment Bank

David B. Lowman
Home Lending

Samuel Todd Maclin*
Commercial Banking

Achilles O. Macris
Chief Investment Office

Jay Mandelbaum*
Strategy & Marketing

Blythe S. Masters
Investment Bank

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Finance

Heidi Miller*
Treasury & Securities Services

Melissa J. Moore
Treasury Services

Stephanie B. Mudick
Corporate Responsibility

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Investment Bank

Daniel E. Pinto
Investment Bank

Scott E. Powell
Consumer Banking

Louis Rauchenberger
Controller

Richard Sabo
Chief Investment Office

Emilio Saracho
Investment Bank

Charles W. Scharf*
Retail Financial Services

Peter L. Scher
Global Government Relations & Public Policy

Eileen M. Serra
Card Services

Marc Sheinbaum
Auto & Education Finance

Gordon A. Smith*
Card Services

James E. Staley*
Investment Bank

William S. Wallace
Card Services

Kevin P. Watters
Business Banking

Douglas Wurth
Asset Management

Matthew E. Zames
Investment Bank

Barry L. Zubrow*
Chief Risk Officer

Other Corporate Officers

Anthony J. Horan
Secretary

Norma C. Corio
Treasurer

Lauren M. Tyler
Investor Relations

JPMorgan Chase & Co.

Corporate headquarters

270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000
www.jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities Inc.

Annual Report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the U.S. Securities and Exchange Commission will be made available without charge upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070

Stock listing

New York Stock Exchange, Inc.
London Stock Exchange Group plc
Tokyo Stock Exchange

The New York Stock Exchange (NYSE) ticker symbol for the common stock of JPMorgan Chase & Co. is JPM.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations web site at www.jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000

Directors

To contact any of the Board members or committee chairs, the Presiding Director or the non-management directors as a group, please mail correspondence to:

JPMorgan Chase & Co.
Attention (Board member(s))
Office of the Secretary
270 Park Avenue
New York, NY 10017-2070

The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct, the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting our web site at www.jpmorganchase.com and clicking on "Governance" under the "About us" tab.

Transfer agent and registrar

BNY Mellon
480 Washington Boulevard
Jersey City, NJ 07310-1900
Telephone: 800-758-4651
Web: www.bnymellon.com/shareowner/isd

Investor Services Program

JPMorgan Chase & Co.'s Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorgan Chase & Co. common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, BNY Mellon, by calling 800-758-4651, by writing to the address indicated above or by visiting its web site at www.bnymellon.com/shareowner/isd.

Direct deposit of dividends

For information about direct deposit of dividends, please contact BNY Mellon.

Stockholder inquiries

Contact BNY Mellon:

By telephone:

Within the United States, Canada and Puerto Rico: 800-758-4651 (toll free)

From all other locations: 201-680-6578 (collect)

TDD service for the hearing impaired within the United States, Canada and Puerto Rico: 800-231-5469 (toll free)

All other locations: 201-680-6610 (collect)

By mail:

BNY Mellon
480 Washington Boulevard
Jersey City, NJ 07310-1900

Duplicate mailings

If you receive duplicate mailings because you have more than one account listing and you wish to consolidate your accounts, please write to BNY Mellon at the address above.

Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, NY 10017-6204

As of the beginning of 2009, JPMorgan Chase has distributed shareholder information under the U.S. Securities and Exchange Commission "Notice and Access" rule. As a result, the firm prints 600,000 fewer Annual Reports and Proxy Statements, which saves on an annual basis approximately 5,500 trees and 700 metric tons of CO_2 emissions.

This Annual Report is printed on paper made from well-managed forests and other controlled sources. The paper is independently certified by BVQI to the Forest Stewardship Council (FSC) standards. The paper contains a minimum of 20% post-consumer waste recycled fibers.

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JPMorgan Chase & Co.

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2010 Annual Report

THE WAY FORWARD › › ›



JPMorgan Chase & Co.

Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio data and headcount)	2010	2009
Reported basis [a]		
Total net revenue	**$ 102,694**	$ 100,434
Total noninterest expense	**61,196**	52,352
Pre-provision profit	**41,498**	48,082
Provision for credit losses	**16,639**	32,015
Income before extraordinary gain	**17,370**	11,652
Extraordinary gain	**—**	76
Net income	**$ 17,370**	$ 11,728
Per common share data		
Basic earnings		
Income before extraordinary gain	**$ 3.98**	$ 2.25
Net income	**3.98**	2.27
Diluted earnings		
Income before extraordinary gain	**$ 3.96**	$ 2.24
Net income	**3.96**	2.26
Cash dividends declared	**0.20**	0.20
Book value	**43.04**	39.88
Selected ratios		
Return on common equity		
Income before extraordinary gain	**10%**	6%
Net income	**10**	6
Return on tangible common equity [b]		
Income before extraordinary gain	**15%**	10%
Net income	**15**	10
Tier 1 Capital ratio	**12.1**	11.1
Total Capital ratio	**15.5**	14.8
Tier 1 Common Capital ratio [b]	**9.8**	8.8
Selected balance sheet data (period-end)		
Total assets	**$ 2,117,605**	$ 2,031,989
Loans	**692,927**	633,458
Deposits	**930,369**	938,367
Total stockholders' equity	**176,106**	165,365
Headcount	**239,831**	222,316

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America, except where otherwise noted.
(b) Non-GAAP financial measure. For further discussion, see "Explanation and reconciliation of the firm's use of non-GAAP financial measures" and "Regulatory capital" in this Annual Report.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $2.1 trillion and operations in more than 60 countries. The firm is a leader in investment banking, financial services for consumers, small business and commercial banking, financial transaction processing, asset management and private equity. A component of the Dow Jones Industrial Average, JPMorgan Chase & Co. serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands.

Information about J.P. Morgan capabilities can be found at jpmorgan.com and about Chase capabilities at chase.com. Information about the firm is available at jpmorganchase.com.



We continue to focus on the way forward.

Throughout 2010, JPMorgan Chase supported the economic recovery while also preparing for the future.

- We provided and raised $1.6 trillion for creditworthy businesses and consumers.
- We became the nation's largest Small Business Administration lender, more than doubling our loan volume over 2009. And we approved more than $250 million in loans to small businesses through our second review process, making it possible to turn "no" into "yes."
- We helped hundreds of thousands of homeowners avoid foreclosure through our outreach counseling. And we committed more than $3 billion to affordable housing developments for those in need.
- We supported not-for-profits and public services, raising nearly $100 billion in 2010 for hospitals, schools and communities across the country. Additionally, we gave in excess of $190 million* through grants and sponsorships to thousands of not-for-profit organizations across the United States and in more than 25 countries.

Over the past year, we, as always, have relied on our core values, our commitment to clients and our fortress balance sheet to guide our actions. We will continue to serve our customers and the communities where they live and work.

This is the way JPMorgan Chase is making a difference.

This is the way forward.

* Contributions include charitable giving from JPMorgan Chase & Co. and the JPMorgan Chase Foundation, and this giving is inclusive of $41.8 million in grants to Community Development Financial Institutions.

Dear Fellow Shareholders,

Your company earned a record $17 billion in 2010, up 48% from $12 billion in 2009. As points of reference: In 2008 – which, as you know, was a year filled with unprecedented challenges – we earned $6 billion; and the year before, we earned $15 billion, a then-record for us. The performance of our JPMorgan Chase stock during this period of time – and over the past decade (including heritage company Bank One) – is shown in the chart on page 4.

Our return on tangible equity for 2010 was 15%. Given your company's earnings power, these returns should be higher. In a more normal environment, we believe we could earn approximately $22 billion to $24 billion. Your company's earnings, particularly because of the business we are in, will always be somewhat volatile. The main reason for the difference between what we *should be* earning and what we *are* earning is the extraordinarily high losses we still are bearing on mortgages and mortgage-related issues. These losses have been running at a rate of approximately $4 billion a year, after-tax, and, while they should come down over time, they, unfortunately, will continue at elevated levels for a while.

On the brighter side, we increased our annual dividend to $1 per share and have re-established the ability to buy back stock if and when we think it's appropriate to do so.

Looking at these results in the context of the last three difficult years, what particularly pleases me is how exceptionally our company performed, not in absolute financial terms but in human terms. No matter how tough the circumstances or how difficult the events, we were there for our clients and our communities – providing credit and raising capital. We provided credit and raised capital of approximately $1.6 trillion for our clients in 2010 alone. Those clients included hospitals, schools, local governments, municipalities, corporations, small businesses and individuals. While helping our clients – large and small – prepare for the future, we continued to actively support the economic recovery. At the same time, we continued to invest in your company's future and to build our businesses – opening branches and offices and adding bankers across the globe, including hiring more than 8,000 people in the United States alone. As a result, we gained market share and became a better competitor in almost every single business.

Jamie Dimon,
Chairman and
Chief Executive Officer



The outstanding efforts of our 240,000 employees around the world enabled our firm to weather the worst economic storm in recent history and to emerge stronger than ever. And — while we are proud of the many ways we rose to meet the untold challenges we faced — we also are keenly aware of the ongoing imperative to continually innovate and improve — to get smarter, better, faster — in service to our clients. This is the only way we will be able to thrive going forward and to overcome the challenges ahead.

I've asked the chief executive of each of our lines of business to write you a letter about his or her respective business, both to review the 2010 results and to offer an outlook for the future. I hope as you read their letters in the section following this letter that you get the same sense that I do: Across your company, we have talented leaders and great opportunities; we are performing well financially against our competition; we are investing in our organic growth; and, perhaps most important, we are focused on building quality businesses.

Stock and Book Value Performance

Stock Total Return Analysis if You Became a Shareholder of the Respective Firms at December 31, 2000

	Bank One	Chase	J.P. Morgan	S&P 500
10-Year Performance:				
Compounded Annual Gain	7.0%	2.5%	2.7%	1.4%
Overall Gain	97.4	28.1	30.1	15.1

This chart shows actual returns of the stock, with dividends included, for heritage shareholders of the company vs. the Standard & Poor's 500 Index (S&P 500).

Bank One/JPMorgan Chase Tangible Book Value per Share Performance vs. S&P 500 (2001-2010)

	Tangible Book Value per Share of Bank One/JPMorgan Chase with Dividends Included (A)	S&P 500 with Dividends Included (B)	Relative Results (A) – (B)
10-Year Performance:			
Compounded Annual Gain	13.6%	1.4%	12.2%
Overall Gain	256.5	15.1	241.4

In addition to stock performance, we looked at tangible book value performance over the past 10 years. Tangible book value over time captures the company's use of capital, balance sheet and profitability. In this chart, we are looking at heritage Bank One shareholders. The chart shows the increase in tangible book value per share; it is an after-tax number assuming all dividends were retained vs. the S&P 500 (a pretax number with dividends reinvested).

Quality business, to us, means good clients; excellent products; constant innovation; state-of-the-art systems; and dedicated, capable, well-trained employees who care about the customers we serve. It means building consistently, not overreacting to short-term factors, and being trusted and respected by our clients in all the communities where we do business. In a risk-taking business, it is easy to generate increasingly better results in the short run by taking on excessive risk or by building lower quality business – but you will pay for that in the long run. That is not what we are after.

In this letter, I will focus my comments on issues of great impact to our business:

I. The Post-crisis Environment: How We View the Significant Challenges Ahead

II. Big Opportunities: How We Will Grow in U.S. and International Markets

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I. THE POST-CRISIS ENVIRONMENT: HOW WE VIEW THE SIGNIFICANT CHALLENGES AHEAD

As we enter 2011, we find ourselves having weathered an epic storm – not just the global financial crisis itself but its effect on the global financial system and our industry. As a nation, we may have averted disaster thanks to a great collective effort, but many challenges remain. A lot of work has been done – some of which has been excellent and necessary. Other aspects are less satisfactory and even potentially harmful, and we need to face and fix them in a thorough, balanced, intelligent manner. Suffice it to say that a good deal of work remains to be done.

In our meetings with shareholders, we often are asked the following tough questions:

- What will be the fallout from the European sovereign exposures and the geopolitical risks, particularly in the Middle East?
- How are we going to deal with all the litigation around mortgages, municipalities, Bear Stearns, the bankruptcies of Lehman Brothers, Washington Mutual (WaMu) and others?
- Will the American economy recover in the short run? How will abnormal monetary policies and looming fiscal deficits affect us? Does America have the capacity in the long run to deal effectively with other important problems it faces, including immigration, our energy policy, the environment, our education and health systems, our infrastructure and our still-unbalanced trade and capital flows?
- Will the role of banks change in this new environment? Will they be able to grow profitably? Will American banks be able to freely compete with increasingly formidable foreign banks, some of which are the beneficiaries of powerful state support?
- How will the mortgage and mortgage-related issues end up? How much will they cost us? And how will they be resolved? Charlie Scharf deals with some of these questions in his letter later in this Annual Report. These issues are extremely complex and will take years to resolve. There is plenty of misinformation and a number of misconceptions around mortgages, and your company is going to make a dedicated effort to describe in detail what we do, how we do it, what the right things to do are, what the mistakes we made are and how we will rectify them. I will not go into the details in this letter, but, rest assured, we are fully engaged on this issue of mortgages, and you will be hearing more from us about it in the future.

In thinking about the answers to the questions posed, it would be naive to be blindly and irrationally optimistic – or to be blindly and irrationally pessimistic. We cannot predict the future with any real certainty, but we can offer our shareholders some insight into how we think about these issues, what they mean for the company and how we manage through them. Remember, our goal is not to guess the future; our goal is to be prepared to thrive under widely variable conditions.

We Face the Future in a Strong Position

Our businesses and management team are among the best in the industry. It is difficult to replicate our franchises and the intelligence embedded in our expertise, in our systems and in the experience of our people. Our fortress balance sheet provides us with strong and growing capital – and we always are thinking far ahead about the best ways to deploy it.

We believe we have the foresight and fortitude to use our capital wisely. Our first priority was to restore a decent dividend – this is what our shareholders wanted (if it were up to me personally, I would reinvest

all the capital into our company and not pay any dividend – but this is not what most shareholders want). We would like to be completely clear about how we prioritize our use of capital. These priorities are:

- First and foremost, to invest in organic growth – building great, long-term profitable businesses. We see significant opportunities for organic growth in each of our businesses.
- Second, to make acquisitions – both small add-ons and larger ones, but only if the price is right and we have a clear ability to manage the risks and execute properly. (If we are not running our own businesses well, we should not be doing acquisitions.)
- And third, to buy back stock – as a discipline, we always will buy back the stock we issue for compensation. However, we will buy back additional stock only when, looking forward, we see few opportunities to invest in organic growth and acquisitions. And we will buy back stock only when we believe it benefits our remaining shareholders – not the ones who are selling (i.e., we will be price sensitive).

We also believe that strength creates good opportunities in bad times. And, yes, we know we have made and will continue to make mistakes – all businesses do – but we hope to catch them early, fix them quickly and learn from them.

We are not complacent about renewed, intense competition everywhere we operate – in fact, it's already here. Whatever the future brings – and it will bring both good and bad – we are prepared, and we expect to emerge among the leaders.

How We View European Sovereign and Geopolitical Risk

The European Union (EU) is one of the great collective endeavors of all time – where participating countries are striving to form a permanent union of nations for the benefit of all their citizens.

In the short run, i.e., in the next year or two, we believe that the Euro Zone, in fits and starts, will work through its problems. It has the will and wherewithal to do so. The politicians of Europe seem to be completely devoted to making this work – as their predecessors were for the past 60 years. The process will be messy, but the consequence of giving up could be far worse: Sovereign defaults could lead to a bank crisis with serious economic consequences. Since it is the same money (if sovereign nations default on their debt, the EU will have to recapitalize its banks by approximately the same amount), it is better to fix the problem without causing additional complications.

Once the short-term issues are addressed, there likely will be some restructuring of the fiscal and monetary agreements between the nations and possibly the restructuring of some of the nations' debt. We believe there are ways to do this with minimal damage – particularly if the EU is able to achieve economic growth.

When the sovereign crisis started, JPMorgan Chase's gross exposures to Greece, Ireland, Portugal, Spain and Italy totaled approximately $40 billion – but net of collateral and hedges, our real exposures were approximately $20 billion. We did not run or panic – we stayed the course. While we reduced some of our exposures (essentially, the investment of excess cash for the company), we did not reduce the exposures associated with serving our clients, and we continued to actively conduct business in those nations. Our position was clear and consistent: to be there for our clients, not just in good times, but in bad times as well.

Going forward, this mission will not change. We know the risks, and we are prepared to take them. For example, in the unlikely occurrence of extremely bad outcomes in all these countries, JPMorgan Chase ultimately

could lose approximately $3 billion, after-tax. But we are in the business of taking risks in support of our clients and believe that this is a risk worth bearing since we hope to be growing our business in these countries for decades to come.

Our broader perspective on geopolitical uncertainty is that it is a constant state of affairs, which has been and always will be there, whether immediately visible or not. Such uncertainty is one of the main reasons we control our credit exposures and maintain extremely strong capital and liquidity at all times.

Before turning to the economic impact of the crisis in the Middle East, we hope, first and foremost, that the outcome of these historic movements will be to enhance the life and rights of the people in the region.

For our company, in particular, our direct exposures are manageable. The key economic impact is if extreme turmoil leads to extraordinarily high oil prices, which then could cause a global recession. As you know, however, we always run this company to be prepared to deal with the effects of a global recession.

How We View Our Legal Exposures

Unfortunately, we will be dealing with legal issues – the detritus of the storm – for years to come. They range from mortgage-related litigation to lawsuits concerning Bear Stearns and the bankruptcies of WaMu, Lehman Brothers and others.

Our strategy is simple: When we are right, we will fight mightily to ensure a just outcome. When we are not, we will say so.

Some of the legal challenges we face stem from our acquisitions of Bear Stearns and WaMu, where we inherited some of their exposures. Had we not acquired these firms, there would be no lawsuits because there would be no money to pay – our deep pockets are an attractive target to plaintiffs. While the American legal system is one of the world's best, it also is one of the only legal systems that does not require the losing party to pay the winning party's legal costs. Large actions against big companies, whether justified or not, have the potential to deliver large payoffs. This lack of balance and fairness too often results in outrageous claims. Why not? Plaintiffs have little to lose. Our shareholders should know that we have set aside significant reserves to handle many of these exposures.

How We View the American Economy – Short Term and Long Term

Five years ago, very few people seemed to worry about outsized risk, black swans and fat tails. Today, people see a black swan with a fat tail behind every rock.

The U.S. economy was, is and will remain for the foreseeable future the mightiest economic machine on this planet. America is home to many of the best universities and companies in the world. It still is one of the greatest innovators. The volume and variation of our inventions created in America are extraordinary – from bold new technologies, like the Internet, to thousands of small, incremental improvements in processes and products that, in aggregate, dramatically improve productivity. America also has an exceptional legal system (notwithstanding my many reservations about the class-action and tort system) and the best and deepest capital markets. The American people have a great work ethic, from farmers and factory workers to engineers and businessmen (even bankers and CEOs). And it still has the most entrepreneurial population on earth. American ingenuity is alive and well.

I mention all this because we need to put our current problems – and they are real – into proper context. Our problems may be daunting, but they also are resolvable. As a nation, we have overcome far worse challenges, from the Civil War to the Great Depression to World War II. Even amid our current challenges, we have begun to see clear signs of stability and growth returning to the capital markets and the U.S. economy. Almost everything is better than it was a year or two ago.

It's conceivable that we are at the beginning of a self-sustaining recovery that could power through many of the negatives we've

been focusing on recently. Consumers are getting stronger, spending at levels similar to those two-and-a-half years ago, but, instead of spending more than their income, they now are saving 5% of their income. And consumer debt service costs, i.e., how much they spend of their income to service their debt, have returned to levels seen in the 1990s (due to debt repayment, charge-offs and debt forgiveness, lower interest rates, etc.).

Businesses, large and small, are getting stronger. Large companies have plenty of cash. Medium sized and small businesses are in better financial condition and are starting to borrow again. Global trade is growing – U.S. exports were up 16% in 2010. Job growth seems to have begun. Financial markets are wide open – and banks are lending more freely. U.S. businesses, large and small, are investing more than $2 trillion a year in capital expenditures and research and development. They have the ability to do more, and, at the end of the day, the growth in the economy ultimately is driven by increased capital investment.

The biggest negative that people point to is that home prices are continuing to decline, new home sales are at record lows and foreclosures are on the rise. Our data indicates that the rate of foreclosures will start to come down later this year. Approximately 30% of the homes in America do not have mortgages – and of those that do, approximately 90% of mortgage-holding homeowners are paying their loans on time. Housing affordability is at an all-time high. The U.S. population is growing at over 3 million a year, and those people eventually will need housing. Additionally, the fact that fewer homes are being built means that supply and demand will come into balance sooner than it otherwise would have. That said, housing prices likely will continue to go down modestly because of the continuous high levels of homes for sale. The ultimate recovery of the housing market and housing prices likely will follow job growth and a general recovery in the economy.

Yes, America still is facing headwinds and uncertainties – including abnormal monetary policy and looming fiscal deficits. And while we can't really predict what the economy will do in the next year or two (though we think it is getting stronger), we are confident that the world's greatest economy will regain its footing and grow over the ensuing decade.

But we must take serious action to ensure our success in the decades ahead

While our confidence in the next decade is high, for America to thrive after that, it soon must confront some of the serious issues facing it. We need to redouble our efforts to develop an immigration policy and a real, sustainable energy policy; protect our environment; improve our education and health systems; rebuild our infrastructure for the future; and find solutions for our still-unbalanced trade and capital flows.

The sooner we address these issues, the better – America does not have a divine right to success, and it can't rely on wishful thinking and its great heritage alone to get the country where it needs to go. But I remain, perhaps naively, optimistic. As Winston Churchill once said, "You can always count on Americans to do the right thing – after they've tried everything else."

Will the Role of Banks Change in This New Environment?

Banks serve a critical function in society, but it often is difficult to describe that function in basic terms. When I was traveling in Ghana with one of our daughters (yes, the same daughter who asked me what a financial crisis was three years ago), she pointed out all the buildings and projects that had been started but never finished.

All the money that went into Ghana's unfinished buildings was needlessly wasted and, in fact, had damaged the citizens of the country. This sorry sight provided me with a concrete example of how to describe what banks actually should do. I explained to our daughter that had banks (or investors) been doing their job, they would have made sure that before money was invested in a project or enterprise, it had good prospects of success: It would be built for good

reasons, it would be appropriately utilized, it would be properly constructed, it would be insured and, if something went wrong, the asset would be put to the best possible use afterward. At the microlevel of one building or one small business, it is easy to understand what banks do. They lend or invest, having done their homework, to maximize the chance of success. Sometimes they are wrong, and unforeseen circumstances can derail that success, but if they do their job well, this lending improves the general health of an economy.

At the macrolevel, we talk about having lent, invested or raised approximately $1.6 trillion for companies, not-for-profits and individuals over the course of 2010. But at the human level, here's some of what we did last year:

- We originated mortgages to over 720,000 people.
- We provided new credit cards to more than 11 million people.
- We lent or increased credit to nearly 30,000 small businesses.
- We lent to over 1,500 not-for-profit and government entities, including states, municipalities, hospitals and universities.
- We extended or increased loan limits to approximately 6,500 middle market companies.
- We lent to or raised capital for more than 8,500 corporations.

We take calculated risks when we do this lending, and sometimes we make mistakes. But I can assure you that this never is our intent. We do this banking activity in all 50 states in the United States and in more than 140 countries around the world. To ensure that we do it right and comply with the laws of the land, we have risk committees, credit committees, underwriting committees, compliance and legal reviews, and more.

Banks play a critical role in our economic system by properly allocating, underwriting and understanding risk as credit is given to various entities and by helping to manage, move and invest capital for clients. The key question is how will all the regulatory changes affect the banks' ability to do this?

What will not change: Clients still will need our services

From the point of view of the customer – always the best way to look at a business – the services we offer, which are not easy to duplicate, will remain essential. Economies, markets, technology and trends will change, but we know companies and consumers still will need the financial services we provide.

When consumers walk into our retail branches, they still will need checking and savings accounts, mortgages, investments, and credit and debit cards.

When small business customers walk into our branches, they still will need cash management services, loans and investment advice.

When the CEOs of middle market companies are called upon by our bankers, they still will need cash management, loans, trade finance and investment advice. Some even may require derivatives or foreign exchange services to help manage their exposures.

Finally, when large companies work with our bankers, they will continue to need merger and acquisition or other financial advice and access to the global equity and debt markets. Given the increasing complexity of their business, they also will require derivatives to help manage various exposures, e.g., the changing prices of interest rates, foreign currencies and commodities.

In fact, the opportunities are large. A growing world still will need large-scale capital creation and bank lending and will increasingly require financial services. Several factors underscore just how pressing these capital-intensive needs will be in the future:

- Global credit outstanding will grow by approximately $100 trillion over the next 10 years across both emerging markets and developed nations, an 80% increase.
- Analysts from McKinsey and the World Economic Forum suggest that global financial wealth could grow by approximately $160 trillion over the next 10 years, a 100% increase.
- U.S. financial wealth is expected to increase by more than $30 trillion over the next 10 years, a 70% increase.

- Global gross domestic product is expected to grow by approximately $50 trillion in nominal terms ($25 trillion in real 2010 dollar-value terms) over the next 10 years, an approximately 80% increase.
- Annual corporate investments in plant and equipment (globally running at approximately $8 trillion a year) should at least double over the next 10 years – our multinational clients account for approximately 50% of this.

Effectively delivering on this growing demand requires strong, healthy financial institutions. This bodes well for JPMorgan Chase – we are in exactly the right place.

What will not change: Banks will continue to need to earn adequate market-demanded returns on capital

Like all businesses, banks must continue to earn adequate returns on capital – investors demand it. Some argue, however, that if regulation results in better capitalized banks and a more stable financial system, returns demanded on capital would be lower to reflect the lower risk involved. This probably is true but not likely to be materially significant.

What will change: New regulation *will* affect products and their pricing

A likely outcome of the new regulations is that products and their pricing will change. Some products will go away, some will be redesigned and some will be repriced.

Last year, we spoke about how we would adjust our products and services for the new credit card pricing rules and new overdraft rules. So I will not repeat them here. In a later section, I will talk about how we will adjust to the new restrictions on the pricing of debit cards.

Higher capital and liquidity standards that are required under Basel III likely will affect the pricing of many products and services.

Two examples come to mind:

Current Basel III rules require banks to hold more capital and maintain more liquidity to support the revolving credit they provide to both middle market and large institutions. In some cases, the liquidity rules alone require us to hold 100% of highly liquid assets to support a revolver. For example, to support a $100 million revolver, we would be required to own $100 million of highly liquid securities with very short maturities. We estimate this would increase our incremental cost on a three-year revolver by approximately 60 basis points a year. That leaves us with three options: 1) pass the cost on to the customer, 2) lose money on that revolver, or 3) not make the loan. In the real world, the likely outcome is that some borrowers will have less or no access to credit, some borrowers will pay a lot more for credit, some would pay only a little bit more and some highly rated companies might find it cheaper to provide liquidity on their own, i.e., hold more excess cash on their balance sheet as opposed to relying on banks for credit liquidity backup.

Certain products may disappear completely because they simply are too expensive to provide. (Some, like the "CDO-squares" will not be missed.) For example, capital charges on certain securitizations will be so high for banks that either these transactions no longer will be done or they will migrate to other credit intermediaries (think hedge funds) that can more cheaply invest in them. I will have more to say on regulation in the fourth section of this letter.

What we don't know (and we have a healthy fear of unintended consequences)

Around the world and all at once, policymakers and regulators are making countless changes, from guidelines around market-making, derivatives rules, capital and liquidity standards, and more. Many of the rules have yet to be defined in detail, and it is likely that they will not be applied evenly around the world. The combined impact of so much change – so much unknown about the interplay among all these factors and an uneven

global playing field – potentially is large. These unpredictable outcomes and unintended consequences could affect far more than products and pricing. For example, if a business cannot sell certain products or if the cost of selling them is so high that it cannot be adequately recouped, that business risks losing all of its clients. A simple analogy: If a restaurant that sells burgers can't sell french fries, it risks losing all of its customers.

Like it or not, we will adjust to the impact of new regulation on financial products and pricing. But we will remain vigilant about the changes that could threaten or undermine entire businesses. Three of our main concerns are:

First, and most important, we want to ensure that our clients are not negatively affected in a material way and that our ability to properly serve them is not unduly compromised.

Second, we need to be cautious about the creation of non-banks or new shadow banks. This could happen if the cumulative effect of all the regulations not only hampers banks from conducting their business but restricts them so much that the business slowly and inevitably moves to non-banks.

And, third, we need to ensure that American banks are not significantly disadvantaged relative to their global counterparts. The cumulative effect of higher capital standards, too restrictive market-making and derivatives rules, price control and arbitrary bank taxes could significantly impede our ability to compete over the long run.

We don't expect any of these three outcomes to occur – nor do we believe that it was or is the intent of the lawmakers or regulators – but it bears paying close attention.

Although we tend to focus on the downside of unintended consequences, we should recognize that there may be some positive consequences. For example, large changes in business regulations and dynamics often lead to new businesses, innovations and new products. Also, our ability to compete may be hampered in some instances but actually helped in others. For example, the cost and complexity of all the recent regulations, ironically, could create greater barriers for new entrants and new competitors.

II. BIG OPPORTUNITIES: HOW WE WILL GROW IN U.S. AND INTERNATIONAL MARKETS

Each of our business heads has articulated compelling growth strategies for his or her respective business (see their letters on pages 34–47 of this Annual Report). Across the firm, the opportunities to grow organically are huge. And we intend to pursue them aggressively – every day, every quarter and every year by building new branches; launching new products and tools and introducing new technology; and relentlessly hiring and developing good people.

We know that building our businesses organically can be challenging to execute, but it is critical – and the potential payoff is enormous. Organic growth also will continue to fuel cross line-of-business opportunities. For example, when Retail Financial Services opens a branch, it provides Card Services with the opportunity to offer more credit cards. And when Commercial Banking develops a new client relationship, these clients often require Investment Banking services. These are just two examples – there are many more.

In addition to "normal" growth, we want to highlight a few specific initiatives – each of which could add $500 million or more to profits over the next five to ten years. These include:

- Accelerating Commercial Banking's and Business Banking's growth in the heritage WaMu footprint: Essentially, WaMu did not do this type of business. Ultimately, we will have added more than 1,500 bankers in states from California and Washington to Florida. We already are well on our way to building into this branch network the same kind of middle market banking and small business banking that we have established in other markets across the country.
- Expanding out our Commodities franchise: In our commodities business, we now have a full array of physical trading and financial products and services to support our 3,000 clients who trade in these markets around the world. When all our efforts are completely integrated and are running at full capacity, profits of this business will grow even more strongly. (And this should happen in the next two to three years.)
- Dramatically increasing our branch openings: We will move from an average of 120 new branches a year to more than 200 in 2011 and probably more than that in subsequent years. This aggressive build-out is a coordinated effort between our real estate teams; our technology and operations teams; and our management, development and training staff. New branches typically break even by the end of the second year, and, when fully established, which takes several more years, each branch ultimately should earn more than $1 million in profits a year. Yes, we are concerned about technology reducing the need for physical branches, but all our research shows that we still will need branches to serve our customers. While use of the Internet and ATMs has skyrocketed, branch traffic essentially has remained steady. Over time, branches may become smaller, but we still think they will remain essential.
- Growing our Chase Private Client Services business: We estimate that approximately 2 million customers who use our branches are fairly affluent and need investment services tailored to the high-net-worth segment. We have tested this concept, and it seems to be working well. Therefore, we intend to open approximately 150 Private Client Services locations over the next few years to better support our affluent clients. At these offices, dedicated bankers will work with customers and provide them with investment products that are tailored to their needs.
- Continuing to expand our international wholesale businesses, including our Global Corporate Bank (GCB): This effort is described in the next section.

Our Resolute Commitment to Expanding Our International Wholesale Businesses

One of the greatest opportunities before us is to grow our wholesale businesses globally. This opportunity exists not just in developed markets but also in developing, emerging and even the so-called "frontier" markets. The reasons are simple: As the world grows, our clients generally grow even faster, as do trade volumes, capital, cross-border investing and global wealth.

A recent McKinsey study estimates that global investment, with accompanying growth in credit and capital needs, will grow by two times or some $13 trillion over the next 20 years in real terms – a multiple of what we saw in the early 1980s. Global investment will amount to $24 trillion in 2030 compared with $11 trillion in recent years. Developing economies are embarking on one of the biggest building booms in history. Rapid urbanization is increasing demand for new roads and other public infrastructure. Companies are building new plants and buying machinery. The McKinsey report, in fact, warns of potential capital and credit shortages as this exponential growth occurs.

Banks will play a vital role in financing these investments and in connecting savers and borrowers around the world. Much of this capital and investing will be cross-border and will be done by the very institutions that our bank already serves, i.e., multinational corporations, large investors, sovereign wealth funds and others.

Rest assured, we are going about this effort with our eyes open. We do not harbor any false notions that it is easy or risk free. And you cannot have stop-and-start strategies. Countries will want to know you are there for the long run – you cannot be a fair-weather friend!

International expansion is a long, tough and sometimes tedious job. Execution often requires lengthy lead times, and differences in cultures and laws present many challenges. By necessity, we end up bearing additional sovereign and political risk. But the effort clearly is worth it: The opportunities are great, and the risk can be managed. Here's how and why we think so.

We essentially are following our customers around the world

Our wholesale bankers around the world do business with essentially most of the global Fortune 2000 plus some 400 of large sovereign wealth funds and public or quasi-public entities (these include governments, central banks, government pension plans and government infrastructure entities).

As these entities expand globally – adding countries and locations to where these organizations do business – we essentially grow with them. We already bank these companies and simply need to be where they are going to need us.

We will grow by adding bankers, branches and products

The overwhelming majority of our worldwide expansion will come through organic growth – adding bankers, branches and products. Some examples of our recent efforts include:

- Our GCB has hired 100 bankers since January 1, 2010, and, by the end of 2012, we expect to grow to 300 bankers covering more than 3,000 clients globally.
- In Brazil, China and India, we continue to enhance the firm's presence by adding bankers and increasing our client coverage. Five years ago, we covered approximately 200 clients in those countries, and, today, we cover approximately 700 clients in those three countries. We are expanding this kind of coverage in many other countries, too.
- In China, over the last two years, we added two new branches (Guangzhou and Chengdu) to our existing three (Shanghai, Tianjin and Beijing), and we are continuing our expansion with more branch openings planned for 2011. Our expanded footprint enhances our ability to serve both local companies and foreign multinationals as they grow their businesses in China. In addition to the domestic renminbi capabilities, J.P. Morgan is at the forefront of the internationalization of the renminbi, a product that more and more clients are demanding for cross-border trade.
- Around the world, we opened new branches in Australia, Bangladesh, Brazil, China, Great Britain, Japan, the Netherlands, Qatar, Switzerland and the United Arab Emirates, among others, and we plan nearly 20 more to be added by 2013.

This build-out of our additional locations results in a huge network effect. For example, Chinese capital is moving into Brazil – and we already are on the ground in both places. When we build out our capabilities in Africa, we also are improving our service to European clients who may be looking at investing in Africa.

Alongside these expansion efforts, we are adding many products. For example:

- We are building our capability to provide local credit – by establishing capital lines for subsidiaries of multinational companies and providing credit to large local companies.
- We also are able to offer our clients sophisticated supply chain finance products (we recently helped finance Caterpillar's suppliers around the world).

Of course, we also are building the proper systems, legal teams and operational capabilities to support this bigger network.

In addition to these organic efforts, we are on the lookout for smaller acquisitions that can help us accelerate our strategy. For example, our acquisition of the world-class Brazilian hedge fund Gávea Investimentos, as part of our Highbridge business, dramatically improves our ability to manage money both for local investors and for those around the world seeking to invest in Brazil and emerging markets.

We see global growth opportunities for decades to come

In the business community and across the media, we have seen a tremendous focus on the emerging markets in advanced stages of development; specifically, Brazil, Russia, India and China. But this opportunity also is large in countries like Turkey, Indonesia, Malaysia and many others – in fact, some parts of the world are on the brink of meaningful development.

A quick look at sub-Saharan Africa provides a bit of perspective on the opportunities before us over the next 20 years. Economic activity in the region is expected to grow annually by approximately 4.7% over the next 20 years, from $800 billion to $2 trillion, as its population grows by 370 million to 1.2 billion. Many nations in sub-Saharan Africa are adopting better and stronger governance, and they are fortified by great natural and other resources, which will benefit their future prosperity.

We estimate that more than 80% of our top multinational clients are doing business in sub-Saharan Africa and expect their number and footprint to grow steadily over the next 20 years. While we currently do business in 21 of the 49 sub-Saharan nations, we are on the ground only in South Africa and Nigeria. We anticipate that our clients will need us on the ground in Angola, Kenya, Tanzania and several other African countries over the next couple of decades. The investments we make over the years to enter sub-Saharan Africa will not materially affect profits in the short run but will produce a real payoff in decades to come. We will start planting the field now, to be reaped by future generations.

While Developing Consumer and Commercial Banking Operations Abroad Is an Option, It Is Not a Strategic Imperative

Over the long term, expanding our consumer and commercial banking footprint outside the United States is the next logical step. This aspiration is a strategic option – not a necessity. Some businesses need to be competitive internationally to be successful – think investment banking, commercial aircraft and mobile device manufacturers. But some businesses do not need to be – think retail and commercial banking. We can be very successful in the United States in retail and commercial banking and never take them internationally. Therefore, this aspiration is a strategic option, not a strategic imperative, to be carried out only if and when it makes sense.

International acquisitions are riskier than U.S. acquisitions: There are far fewer opportunities for cost savings, terms for investing vary from country to country, there is higher legal and cultural risk, and execution is more difficult. Therefore, we will acquire these businesses internationally only if we can do it right, which means the price needs to be right, we need to have an adequate margin for error and we have to have the ability to execute properly.

The WaMu Acquisition: A Bit Worse than Expected but Clearly Still Worth It

With more than two years' perspective, I'd like to take a look back at how we did with the acquisition of Washington Mutual – particularly relative to how we thought the deal would play out at the time of the acquisition.

WaMu's ongoing operating earnings were approximately what we expected – but not in the way we expected

When we completed the WaMu acquisition on September 25, 2008, we thought it was financially compelling and immediately accretive to earnings, though clearly not without risk. We acquired WaMu's 2,200 branches, 5,000 ATMs and 12.6 million checking accounts, as well as savings, mortgage and credit card accounts. At that time, we estimated that it would add $3 billion to 2010 net income.

Operating Earnings, Excluding One-Time Items
(in billions)

	Initial Expectations	Actual
2009	$2.4	$2.8
2010	3.0	2.7
2011	3.4	3.1*

* 2011 budget

The chart above shows what we said would happen over time vs. what actually happened. These numbers do not include one-time gains or losses, which I describe in the following paragraph. In the numbers above, the mortgage origination and servicing business did better than expected, mostly due to higher volumes and spreads. And the retail business did significantly worse, mostly due to curtailing fees on nonsufficient funds and overdrafts. We expect the business to perform in the future as we originally thought.

One-time, after-tax gains and losses are a negative and still could get slightly worse

One-Time Items (After-Tax)

- $3.2 billion higher mortgage losses
- $1.0 billion lower credit card losses
- $1.0 billion gain on purchase

When we acquired WaMu, we acquired approximately $240 billion of mortgage and credit card loans, which we immediately wrote down by $30 billion. We knew when we did the transaction that the depth and severity of the recession in the housing market could drive mortgage losses even higher than our estimates (which, at the time, we thought were conservative). We thought losses could wind up being $10 billion worse (pretax), and we have experienced about half of that. We anticipate some further potential downside, depending on the health of the U.S. economy, as well as some other one-time gains and losses relating to litigation and other unresolved matters. The heritage WaMu credit card business essentially is liquidating with approximately the results we expected.

The WaMu acquisition has created future opportunities that we would not have had if we did not do this acquisition – and these are better than we anticipated

The expansion of our Middle Market Commercial Banking business, within the WaMu footprint, which we are managing and growing carefully, can deliver more than $500 million in pretax profits annually, though this could take more than five years. And the Commercial Term Lending Business, which essentially is making mortgage loans on multifamily houses – a business we previously didn't know very well – also will be able to grow its earnings to more than $500 million a year – significantly better than we expected. We think the Small Business Banking opportunity is even larger than we thought and could be as much as $1 billion pretax annually over the long term.

III. THE CUSTOMER EXPERIENCE: HOW WE WILL CONTINUE TO IMPROVE IT

We are only in business to serve our clients – and this is true of every aspect of our business. Every loan we make or service, every account we maintain, every financing we do and any investing we do is to serve our clients. Our job is to consistently strive to do a better job for all our clients – and to do it faster, smarter and better.

Doing a great job for our clients requires us to be discerning about who our clients are and clear about what doing a good job means. In our business in particular, client selection is critical. Unlike other businesses, we often have to turn away clients. Sometimes we, by necessity, are put in the uncomfortable position of advising or even requiring our clients to do things they don't want to do, such as: restructuring or selling assets or making payments to avoid penalties. Careful client selection leads to quality clients. And in conjunction with conservative accounting, it leads to a high-quality business. J.P. Morgan, Jr., said it best when he declared the firm's mission was to do "first-class business in a first-class way."

Below are some of the ways we will strive to continue delivering on that promise.

Doing a Better Job Serving Complex Global Corporate Clients

We do a good job advising and servicing our complex global corporate clients. But we want to do an even better job – a great job – under all circumstances. So we are redoubling our efforts by:

- Improving our information: We are building robust systems to put key information about our corporate client relationships at our fingertips – for example, all the services we provide them, which markets they are in and what their needs are.
- Coordinating global coverage: Better information and coordination enable us to do a better – and, often, more cost-effective – job for the client. As a global financial institution, we may have 30 to 40 bankers from our offices globally calling on a large corporate client. That's because we provide such a broad set of products and services in multiple locations around the world: M&A and advisory services; asset management; sales and trading or pension plans; management of cash flows, foreign exchange and interest rate exposure; and more.
- Building out our coverage: We are systematically expanding the depth and breadth of our international coverage of the large, multinational companies that we cover around the world. We are embarking on a granular, detailed review, name by name and subsidiary by subsidiary, of the multinational companies we support for the purpose of developing a game plan – from the ground up – for how we will build out our coverage going forward.
- Bringing the whole firm to bear: For all our clients, we want to make available the best that JPMorgan Chase has to offer everywhere. We want these clients to know that the full force and power of the company are behind them and their goals, that we will be there in good times and bad, and that our advice is unconflicted and trustworthy.
- Ensuring that solutions and innovations are client driven: We recognize that our business works only if it works for the client, not just for JPMorgan Chase. Cross-selling, for example, is good only when it benefits the client.

Doing a Better Job Serving Consumers and Small Business Customers

All businesses claim to focus on better serving their clients. Most can show you the service metrics by which they judge themselves – as can we. We intend to do more than that by taking a step back and looking at the customer experience holistically – from every angle, including:

- Product design: In a business as complex as ours, often we find ourselves adding more features and complexity without going back to see how it looks from the customer's standpoint. We strive to follow the example set by companies like Apple, which always aims to make its products and services as simple and intuitive as possible for the customer.

  For example, at one point, our customers were getting notifications from us in the mail and by phone. Then we innovated the process by reaching out to them in real time through text alerts whenever their account balance fell below a specified amount. However, at first, our customers could not respond to these alerts. Then we developed Chase Instant Action Alerts℠, our two-way text alerts that allow customers to send a text back to us in order to transfer money between accounts and help avoid overdraft fees. This product has been wildly successful. We currently have more than 10 million mobile customers, and we are adding over 500,000 new mobile banking customers each month.

- Selling and cross-selling: The goal of cross-selling is to better and more completely serve customers' needs and help them realize their goals in ways that save them time, money and aggravation. Properly done, what we sell our customers should be good for them because we are listening to them, figuring out their needs, and trying to meet those needs in the most efficient and effective manner possible. Getting customers into the right accounts, the right credit cards, online bill payment and alert systems allows us to give our customers more and be more efficient. But selling and cross-selling must work for the customer – improperly done, these efforts are annoyances and, at worst, do customers a great disservice. To do this right, we need to educate our salespeople and constantly try to align our incentive systems to support doing what is right for the customer.

- Consumer advocacy: In each of our consumer businesses, we've created Consumer Practice groups, managed by very senior people. We expect these groups to review all our policies, products and procedures – ranging from pricing and fee decisions to clear disclosure and transparency of terms associated with each product – and to ensure we are treating our customers fairly and are delivering great service. These Consumer Practice teams have the power both to right a wrong for any of our customers and to help change processes going forward.

- Streamlined customer communications: We are striving to be as clear and simple as possible and not get caught up in legalese in our communications. (Of course, we need to provide the proper legal disclosures, many of which are required by regulators.)

- Systems upgrades: All the above improvements require changes to our systems, both those that are visible to our customers and those that are helpful to our employees to better serve those customers. We have improved customer convenience on everyday needs such as completing the rollout of over 10,000 Deposit Friendly ATMs, which take cash and check deposits without deposit slips or envelopes. Additionally, the system our bankers use has been enhanced to quickly access a customer's account history, including any issues reported by customers or actions taken on the customer's behalf by branch employees in the last 90 days.

- Learning more from customer complaints and employee suggestions: We also are redoubling our efforts to learn from customer complaints and employee ideas. Customer complaints often can be gifts: They frequently tell us how we can improve our products and services. As for employees, they often have great ideas on what can be done better but usually aren't asked. We will use this feedback from customers and employees to improve products and services across the firm.

Innovating for Our Customers

Financial services have been highly innovative over the past 20 years.

On the consumer side, we have seen ATMs and debit cards lead the way to online bill paying and other Internet-enabled technologies. We also are particularly proud of our most recent consumer innovations, including:

- Our new credit card products include Chase Blueprint℠, a flexible payment tool that allows our card customers to better manage expenses on their own terms; Ink℠ from Chase for business card users; and Chase Sapphire℠ and Palladium for the affluent market.
- Our Chase QuickDeposit℠ iPhone banking application allows customers to deposit checks simply by taking a picture from their iPhones. This app was the winner of nine Best of 2010 smartphone awards. In 2010, 336,000 customers made deposits via QuickDeposit, and 46,000 business customers made deposits with our Classic QuickDeposit scanner. We also recently have added the QuickDeposit app to Android phones.
- Our Internet bill payment system allows customers to make payments in a variety of ways, including Quick Pay for electronic person-to-person payments and traditional online bill payments. In 2010, 16.3 million customers made 445 million payments using chase.com.
- For Private Banking and high-net-worth clients, we launched an iPad application that lets customers see, in one place, their credit card, checking and investment accounts. Soon these clients will be able to buy and sell securities online through this application.

In wholesale banking, innovation has been equally apparent over time:

- Treasurers can accumulate global cash and move it with the flick of a finger to where it can be most productive.
- Last November, we launched the J.P. Morgan Research iPad app, which gives clients reports and analysis from more than 1,000 analysts on economic indicators, markets, companies and asset classes around the world. Unlike other research apps of its kind, users will be able to access content offline and receive instant alerts when new content they pre-select becomes available.
- Corporations now have the ability to raise money quickly and often simultaneously in markets around the world.
- Corporations have the ability to hedge, quickly and cost-effectively, large exposures like interest rates, foreign exchange, commodity prices, credit exposures, etc.
- Stocks now can be bought and sold virtually instantaneously on markets around the world, at a cost of pennies or less a share.

Acknowledging and Fixing Mistakes

Unfortunately, we make mistakes. They range from innocuous errors to some egregious ones. They range from paperwork errors to systems failures to rude service. Sometimes we make loans we shouldn't make, and sometimes we don't make loans that we should. Some of these are individual mistakes, and some are more systemic.

There always are reasons for these mistakes. Sometimes they are readily understandable. Other times, they leave you shaking your head. But we never should make these mistakes deliberately or with venal intent. Some mistakes are made out of a simple misjudgment. And, unfortunately, and very infrequently – sometimes someone in our company knowingly does something wrong. Of course, such activity would never, ever be condoned or permitted by senior management. And when it does happen, we take immediate and firm action.

We know that when we make mistakes, we should hold ourselves accountable, and we should rectify them.

Here are the principles we abide by in dealing with our mistakes:

Senior management should actively be on the lookout for problems

At all times, senior management must be vigilant about errors made across the firm – we ask lots of questions, read customer complaints, and make sure our own people are allowed to question our products and services. Generally, we all know how we would want to be treated, and management should strive to treat our customers this way.

This particularly applies to long-standing practices. Just because something always has been done a certain way does not mean that it is still right.

We need to acknowledge mistakes to ourselves

We cannot fix problems if we deny them. Acknowledging an error, however, isn't enough. We need to figure out why it happened. Was it isolated or embedded in one of our systems? Was it the result of poor training of our people? Or, perhaps, in our desire to keep up with the competition, did we start doing things with which we were uncomfortable?

There is one error, in particular, from our recent past that I would like to highlight: the mistakes we made in servicing mortgages held by U.S. military families. Our firm has a great history of honoring our military and veterans, and the errors we made on these loans, including foreclosures, were a painful aberration from that track record. We deeply regret this, we have apologized to our military customers and their families, and we have tried to rectify these mistakes as best we can. I want to reiterate that apology here and now.

We recently have announced a new program for the military and veteran community that includes many initiatives, from recruiting veterans into our firm, with our corporate partners, to providing enhanced products and services for the military and their families. As a company, we aim to serve members of our armed services with the respect and special benefits they deserve because we recognize the sacrifice and hardships they bear to protect our nation and our freedoms.

We should acknowledge our mistakes to our customers

Customers know that any company can make mistakes. What they hate is when the company denies it. If we make a mistake with a customer, we should acknowledge it and take the proper remedial action.

When we find mistakes, we should fully disclose them to those who should know

When we make mistakes, we self-report them, as appropriate, to our regulators and to our Board of Directors as appropriate.

We also take appropriate and timely action with those involved

This can mean fixing an error-prone system, retraining our people, or modifying products or services. Unfortunately, this sometimes means firing an individual or replacing management, but only if such action is warranted due to bad behavior or real incompetence.

IV. GLOBAL FINANCIAL REFORM: HOW THE KEY ASPECTS WILL AFFECT OUR BUSINESSES AND OUR COUNTRY

The crisis of the last few years was proof enough that many aspects of our financial system needed to be fixed and reformed to minimize the chance of such a crisis reoccurring.

As I have discussed in prior letters, a multitude of issues caused, or contributed to, this crisis: structural issues, such as a critical lack of liquidity in some of our country's money market funds and in short-term financing markets; high leverage, which was omnipresent in the system; unregulated shadow banking; poor mortgage underwriting; huge trade imbalances; and ineffective regulation of Fannie Mae and Freddie Mac, among other factors.

A great number of the regulatory changes adopted in 2010 were essential. Foremost among them were higher capital and liquidity standards and the establishment of a Financial Stability Oversight Council. This body has the critical mandate of monitoring the financial system in its entirety, eliminating gaps and ensuring that all financial firms are properly regulated while anticipating future problems. Resolution Authority also was necessary in order to give regulators both the legal authority and the capability to manage and unwind large financial firms, just as the Federal Deposit Insurance Corporation (FDIC) has done with smaller U.S. banks for years. We also supported stress testing and well-managed clearinghouses for standard derivatives.

In addition, we have been very supportive of certain changes in compensation rules. In fact, long before they were mandated, JPMorgan Chase already had instituted most of these compensation practices. One particularly good new rule, a practice we had established but only for our Operating Committee, was the ability to clawback compensation from senior executives when appropriate. We now have extended these clawback rules to cover more senior managers at our firm. Had this clawback regime been in place before the crisis, many senior executives who ultimately were responsible for the failure of their companies would have had to return much of their ill-gotten gains.

With regard to the Dodd-Frank Wall Street Reform and Consumer Protection Act, however, we do have some concerns. The extensive reforms introduced by this legislation represent the most wide-ranging changes to the U.S. regulatory framework for financial services since the 1930s, and we likely will have to live with these reforms for the next 50 years. Dodd-Frank is a significant and thorough rewrite of the rules that our industry must follow. The impact of this legislation will be significant, and the outcomes – both positive and negative – will be a function of how the reforms are implemented.

It is of vital importance that Dodd-Frank implementation – along with the finalization of Basel Committee capital standards and other regulatory changes affecting our industry – is thoughtful and proportionate and takes into account the cumulative effect of the major changes that already have taken place since the crisis began. This is the only way we can hope to avoid unintended negative consequences, nurture a stable economic recovery, build a strong financial system and create a fair playing field for all.

Our System Was on the Edge of Chaos, and Governments and Regulators Deserve Enormous Credit for Preventing the Collapse

I have long been on record giving huge credit to the U.S. government and governments around the world for the drastic, bold actions they took to stop this rapidly moving crisis from getting considerably worse. A great number of the actions that the Treasury and the Federal Reserve took, both directly and indirectly, helped sustain numerous institutions and probably prevented many

from failure and bankruptcy. These actions were done to save the economy and to safeguard jobs. While we should try to do everything in our power to stop a crisis from happening again, we should recognize two critical points. Markets can be rational or irrational, and fear could freeze markets again. And when there are severe problems, only the government, in some form, has the wherewithal, power and liquidity to be the backstop of last resort.

Effectively changing our exceedingly complex global economic system requires great care

When this crisis began, it looked as "normal" as any crisis can, but it quickly careened into a global catastrophe. Most observers pinpoint the key moment as Lehman Brothers' failure in September 2008. But one of the things that made Lehman's failure so bad was that it came after the failure of Bear Stearns, Fannie Mae and Freddie Mac, among others. It was the cumulative effect of the collapse of all these institutions, many of which were overleveraged, that was so damaging. Had Lehman's failure occurred at another time, and been an isolated event, its failure would not likely have been so devastating.

Complex systems – and our global economic system surely is one – often oscillate within relatively normal confines. Our complex economic system regularly has produced "normal" recessions and booms and occasionally a devastating one like the Great Depression or the recent economic crisis. The factors that occasionally and devastatingly derail a system at any point in time may have contributed only because the table already had been set; at other times, the same factor would have had no effect at all. This phenomenon shows up in complex systems throughout nature.

Scientists dealing with complex systems try to isolate the impact of changing one input while holding all other elements constant. They know that if they change everything at once, it may be impossible to identify cause and effect.

As we try to remake our complex economic system, we need to be cautious and respectful of what the cumulative effect will be of making multiple changes at the same time.

A Great Deal Already Has Been Done to Improve the System – by Regulators and Governments – and by the Market Itself

As all the rules and regulations of Dodd-Frank and Basel III are being completed, a tremendous amount already has been done to strengthen the financial system.

Capital and liquidity standards already have been strengthened

Before the crisis, we believe the thresholds for capital and liquidity requirements were far too low. This was one of the key underlying causes of the crisis (and the reason JPMorgan Chase always held far more capital than was required). It clearly needed to be fixed.

These standards already have been increased several times: When the Treasury conducted the stress test in February of 2009, it raised the minimum Tier 1 Common Capital requirement from 2% to 4%. The recent stress test raised the capital requirement to 5% and imposed a more stringent test: Banks now must demonstrate that they can maintain a capital level of 5% throughout a highly stressed environment. The new Basel III requirements effectively will raise the 5% to 10%. (I will talk more about capital standards later in this section.)

Substantial improvements already have been made in the standards for residential and commercial mortgages and secured financing, among others

The marketplace, investors, banks, regulators and rating agencies already have significantly upgraded the standards by which many products and institutions operate. For example:

- All new mortgages are being written to comply with standards that existed many years ago, before the worst of the past decade's excesses. These mortgages include sensible features such as loan-to-value ratios mostly below 80%, true income verification and more conservative home-value appraisals.
- Money market funds now are required to disclose more information, hold higher-rated paper and maintain much more liquidity as a safeguard against potential runs. This was a critical systemic flaw around the Lehman collapse.

- Financial firms now disclose a great deal more information. Some of the information provided is quite useful, such as disclosures on funding, liquidity of assets and greater detail on credit. (Unfortunately, much of this information is of little use to anybody.)
- The repurchase agreement or repo markets – in which large investors, institutions and financial firms use short-term, collateralized borrowing to finance some of their investments – now require more conservative "haircuts," and no longer finance exotic securities.

Shadow banking essentially is gone

People mean very different things when they talk about the "shadow banking system." When discussing it, I divide this so-called system into two pieces: The first piece is one most observers barely knew existed. It consisted of largely off-balance sheet instruments like structured investment vehicles (SIV). The second piece is comprised of on-balance sheet instruments that were fairly well-known, such as asset-backed commercial paper, money market funds and repos.

The off-balance sheet vehicles, like SIVs, essentially are gone. The on-balance sheet instruments like money market funds, repos and asset-backed commercial paper are smaller in size, less leveraged, more conservatively managed and far more transparent.

There are more regulators with proper Resolution Authority and comprehensive oversight

Today, a greater number of regulatory bodies are providing an unprecedented level of oversight. New resolution laws and living wills will give regulators even more tools to use in handling a future crisis.

Banks' trading businesses are far more conservative

Banks in the United States have effectively eliminated proprietary trading. In addition, exotic products are smaller in size and more transparent, and trading books require far more capital and liquidity to support.

Standardized derivatives already are moving to clearinghouses

It is a common misperception that derivatives were not regulated. They actually were: by the U.S. Commodity Futures Trading Commission (CFTC), the U.S. Securities and Exchange Commission (SEC) and various other bank regulators. It also is a misconception that derivatives pricing lacked transparency; accurate market data on the vast majority of all derivatives were readily available and easy to access.

Nonetheless, we agree it is a good thing that standardized derivatives are moving to clearinghouses. This will help standardize contracts, simplify operational procedures, improve regulatory transparency and reduce aggregate counterparty risk. I will discuss this issue in more detail later.

Boards, management and regulators are more attentive to risk

At the corporate board and management levels, risk management now involves much greater attention to detail. Risk reviews are increasingly thorough, risk disclosures are deeper and any executive responsible for risk taking is the recipient of extensive oversight.

Collectively, these substantial changes have materially reduced risk to each individual financial institution and to the system as a whole. While some of the improvements still need to be codified, they may go a long way in creating the very strong kind of financial system we all want.

We Need to Get the Rest of It Right – Based on Facts and Analysis, Not Anger or Specious Arguments

In their book, *This Time Is Different: Eight Centuries of Financial Folly*, economists Carmen Reinhart and Kenneth Rogoff studied eight large economic crises over the past 800 years. These crises generally emanated from trade imbalances, foreign exchange issues and real estate speculation. Included among their observations was the fact that when the crisis also involved the collapse of the financial system – in four of the eight crises they studied – recovery took longer than expected (on average, four years instead of two years). But we should not assume that this historic pattern is preordained or predictive. It also seems likely that bad policy decisions made inadvertently and without forethought – during and after these crises – may very well have increased the level, length and severity of the economic stress attributed to these crises.

For the implementation of Dodd-Frank to be effective, it must recognize the improvements that already have been made and focus on resolving what remains to be done. Dodd-Frank creates several additional regulators and sets forth more than 400 rules and regulations that need to be implemented by various regulatory bodies. In addition to these rules, there will be rules from European governments and new capital and liquidity requirements emanating from Basel.

We all have a huge interest in both the stability and growth of the system. And we know that our chances for a strong global recovery are maximized if we get the rest of the regulatory reform effort right. We're getting close – let's not blow it. Moving forward, here are some important issues that need to be handled carefully.

The new oversight board — the Financial Stability Oversight Council — needs to require coordination among all the regulators, both domestic and global

Ideally, America should have streamlined its regulatory system. Instead, our legislators have created several additional regulators. This makes domestic and international coordination both more complex and even more critical. In fact, many of the regulators are setting up departments to deal with the other regulatory departments (if that is not the very definition of bureaucracy, I don't know what is).

It makes it all the more important that the new oversight board, the Financial Stability Oversight Council (FSOC), fosters true coordination among the regulators' activities. Unfortunately, there already is some evidence that the CFTC and the SEC are moving in different directions in their regulation of like products. The FSOC should nip this problem in the bud.

In addition to domestic coordination, the FSOC must ensure that the rules and regulations coming from Basel and the G20 are implemented in a consistent and coordinated fashion. The FSOC also must be vigilant in identifying imbalances within the system that generate excessive risk – and be ready to take rapid action to fix such imbalances. Finally, it needs to be aware of the development of new shadow banks and be prepared to intervene when they pose potential risks to the system.

Regulators should build a system that creates continuous improvement

There are implicit difficulties in trying to create "perfect" rules. What regulators need to do is put a system in place that can respond in real time to changes in the marketplace, create a culture that promotes continuous improvement, and design effective tools that operate as both gas pedals and brakes. This is what will enable them to do a better job managing the economy.

Here are just a few examples of effective tools and uses: The ability of regulators to change mortgage loan-to-value ratios up or down if they thought the housing market was becoming too frothy; change capital requirements immediately on specific loans, investments or securities when specific asset classes showed signs of becoming problematic; and dial up or down certain liquidity requirements and repo haircuts when excesses were taking place.

The Volcker Rule needs to leave ample room for market-making — the lifeblood of our capital markets

The Volcker Rule has various components. We have no issue with two of these: the component eliminating pure proprietary trading; and the component limiting banks from investing substantial amounts of their own capital into hedge funds.

Our concern largely is with a third aspect regarding capital and market-making. It's critical that the rules regarding market-making allow properly priced risk to be taken so we can serve clients and maintain liquidity. The recently proposed higher capital and liquidity standards for market-making operations – the new Basel II and Basel III capital rules – approximately triple the amount of regulatory capital for trading portfolios inclusive of market-making and hedging activities. For the most part, these capital rules protect against excessive risk taking. We don't believe any additional rules are needed, under the Volcker Rule or otherwise. However, if there must be more rules, these rules need to be carefully constructed (e.g., they should distinguish between liquid and illiquid securities, allow for hedging either on a specific-name or portfolio basis,

etc.). When market-makers are able to aggressively buy and sell securities in size, investors are able to get the best possible prices for their securities.

Derivatives regulation must allow for true end-user exemptions and for transparency rules that don't restrict liquidity

As I already stated, we completely agree with the creation of clearinghouses for standard derivatives. That said, clearinghouses do not eliminate risk; they standardize and concentrate it. Therefore, it is essential that these clearinghouses be strong, operate under sound rules and have well-capitalized member institutions. We do not want weak clearinghouses to become the next systemic problem.

It's also important to maintain a category of non-standardized derivatives contracts. These contracts are not fit for a clearinghouse because the clearinghouse cannot adequately value, margin or settle them. However, these custom, over-the-counter contracts are important to very sophisticated institutions (of course, such contracts should be fully disclosed to the regulators and properly regulated).

Additionally, client margin requirements need to be clarified. If clients are required to post margin, either their liquidity will be reduced or these clients will migrate their derivatives trades to overseas markets that do not have such posting requirements.

Regulators also must seek to strike the right balance between the need for transparency and the need to protect investors' interests. To the extent that transparency rules reduce liquidity and widen spreads, they actually can damage the very investors the regulators are trying to help. If market-makers are required to quickly disclose the price at which they are buying a large amount of securities or a small amount of very illiquid securities, they will necessarily be more conservative about the amount of risk they take. As a result, they will bid for less and price the risk higher since the whole world will know their position.

Finally, there is a truly misguided element of Dodd-Frank regarding derivatives. This so-called "spin-out provision" requires firms like ours to move credit, equity and commodity derivatives outside the bank. This requirement necessitates our creating a separately capitalized subsidiary and requiring our clients to establish new legal contracts with this new subsidiary. This is an operational nightmare (which we can handle) but makes it harder to service clients. It runs completely counter to recent efforts by regulators to reduce banks' exposure to counterparty default. This provision creates a lot of costs and *no* benefits. We believe that it makes our system riskier – not safer.

We need to create a Consumer Financial Protection Bureau that is effective for both consumers and banks

It has been widely reported that we were against the creation of a Consumer Financial Protection Bureau (CFPB). We were not – we were against the creation of a standalone CFPB, operating separately and apart from whatever regulatory agency already had oversight authority over banks. We thought that a CFPB should have been housed within the banking regulators and with proper authority within that regulator. This would have avoided the overlap, confusion and bureaucracy created by competing agencies.

However, we fully acknowledge that there were many good reasons that led to the creation of the CFPB and believe that if the CFPB does its job well, the agency will benefit American consumers and the system. Strong regulatory standards, adequate review of new products and transparency to consumers all are good things. Indeed, had there been stronger standards in the mortgage markets, one huge cause of the recent crisis might have been avoided. Other countries with stricter limits on mortgages, such as higher loan-to-value ratios, didn't experience a mortgage crisis comparable with ours. As recently as five years ago, most Americans would have called the U.S. mortgage market one of the best in the world – boy, was that wrong! What happened to our system did not work well for any market participant – lender or borrower – and a careful rewriting of the rules would benefit all.

The Durbin Amendment was passed with no fact-finding, analysis or debate, had nothing to do with the crisis and potentially will harm consumers

The Durbin Amendment, which regulates debit interchange fees, was added belatedly to the Dodd-Frank Act. It is an example of a policy that has little basis in fact or analysis. When policymakers undertake such a significant rewrite of the rules, there often is a tendency to adopt ideas with surface appeal. In this case, some potentially significant, unintended consequences exist, particularly for consumers.

Most analysis of the costs and benefits of debit cards shows that the debit card provides more total value (after fairly looking at *all* the costs *and* benefits) to retailers than cash, checks or many other forms of payment. In addition, merchants negotiate fees (if they agree to accept debit cards at all – 20% don't), and some pay as low as 35 basis points while other merchants pay considerably more.

The law that passed, and has been interpreted by the Fed in its proposed rule, permits a bank to charge only its "incremental" interchange cost. This cost does not include the direct costs of issuing debit cards, such as the printing and mailing of the cards, operational and call center support to service the cards, and the cost of fraud. Also absent from the analysis are the costs of ATMs and branches, which are part of the fixed costs of servicing checking accounts and debit cards. Any business that is allowed to charge only enough to recover its products' variable costs would soon be in bankruptcy.

The harm will fall largely on consumers; banks will be forced to lose money on debit interchange transactions and likely will compensate by increasing fees in some way for deposit customers. While the primary effect on consumers will be higher prices for banking services, there also will be secondary effects. Some customers may opt out of the banking system (even though the cost of being unbanked is much higher).* The law will disproportionately affect lower income consumers. Some analysts estimate that as many as 5% of U.S. families currently in the mainstream banking system will leave and become unbanked. The Durbin Amendment undoes a generation of hard work to decrease the cost and increase the efficiencies of banking for ordinary Americans and to reduce the ranks of the unbanked.

Finally, it's a terrible mistake and also bad policy for the government to get involved in price fixing and regulating business-to-business contracts. The Durbin Amendment is price fixing at its worst. It is arbitrary and discriminatory – it stipulates that only large banks (those with assets of $10 billion or more) will be affected by its price fixing. But while the law purports to exempt smaller banks, credit unions and prepaid government benefit cards, the reality is that not one of these groups will be immune to the negative implications of this rule.

The debit card has been a tremendous boon to both merchants and consumers. Before policymakers undertake these types of actions that pose such profound effects, they need to fully understand the consequences of their actions. The Durbin Amendment was passed in the middle of the night with limited fact-finding, little analysis and minimal debate, and I think it appropriate that we return to fact-finding and analysis in the full light of day.

Resolution Authority needs to be properly designed

Simply put, Resolution Authority essentially provides a bankruptcy process for big banks that is controlled and minimizes damage to the economy. We made a mistake when we called this aspect of financial reform "Resolution Authority," which sounds to the general public very much like a bailout. Perhaps a better name for it would have been "Minimally Damaging Bankruptcy For Big Dumb Banks" (MDBFBDB). Banks entering this process should do so with the understanding and certainty that the equity will be wiped out, the clawbacks on compensation will be fully invoked, and the company will be dismembered and eventually sold or liquidated.

* There is an interesting Associated Press article written on the cost of being unbanked.

When the FDIC takes over a bank, it has full authority to fire the management and Board of Directors and wipe out equity and unsecured debt – in a way that does not damage the economy. Controlled failure of large financial institutions should work the same way. It is complex because these companies are big and global and require international coordination. However, if the process is carefully constructed (and completely apolitical), controlled failure can be achieved.

In the process, the role of preferred equity and unsecured debt needs to be clarified. This may require corresponding accounting changes. My preference would be, at the point of failure, to convert preferred equity and unsecured debt to pure, new common equity. For example: When Lehman went bankrupt, it had $26 billion of equity and $128 billion of unsecured debt. If, on the day of bankruptcy, the regulators had converted that unsecured debt to equity, Lehman would have been massively overcapitalized and possibly able to secure funding to continue its operations and meet its obligations. The process to sell or liquidate the company would have been far more orderly. And the effect on the global economy would have been less damaging.

Payouts received on liquidation of the assets of the company would have been paid first to the "new" equity holders before payment was made to the "old" common equity holders – this essentially is what happens in bankruptcy (and would eliminate the need for contingent convertible securities). It is unlikely that this orderly liquidation would have resulted in losses exceeding the $150 billion of "new" equity. Therefore, it would not have cost the FDIC any money. However, even in the unlikely event of a loss to the FDIC, we believe that the loss should be charged back to the banks, not to the taxpayers, just as the FDIC does today.

Banks should pay for the failure of banks (as the FDIC is structured today), which is far better than arbitrary, punitive or excessive taxes

Systemically important financial institutions (SIFI), not the taxpayers, should pay the cost of resolving their fellow large institutions' failures. This is not a new idea – banks already bear this responsibility (through the cost of FDIC deposit insurance). Contrary to what some folks may believe, the FDIC is a government program, but the U.S. government does not pay for it – 100% of the cost for the FDIC is paid for by U.S. banks. (JPMorgan Chase's share alone of the FDIC's costs relating to the crisis will exceed $6 billion.)

Charging banks additional costs – proportionally and fairly allocated – for maintaining the banking system seems to be both proper and just. In our opinion, this is far more preferable than trying to create additional taxes to SIFIs, as some countries are discussing. Banks should pay for the failure of banks but not through arbitrary, punitive or excessive taxes.

Critical accounting and capital rules need to be redesigned to ensure better transparency and less pro-cyclicality

If properly designed, countercyclical accounting and capital rules can serve as stabilizers in a turbulent economy. I will mention two issues that underscore the need for this approach, although there are many more.

First, loan loss reserving currently is highly pro-cyclical: When losses are at their lowest point, so are loan loss reserves and vice versa. There are many ways to fix this intelligently while adhering to rational accounting rules.

Second, capital rules even under Basel III require less capital in benign markets than in turbulent times. So at precisely the time when things can only get worse, we require the least amount of capital. This also is easy to fix.

And one additional observation from outside our industry: Federal, state and local governments need to change their accounting standards (as corporations did decades ago) to reflect obligations made today that don't come due for many years. This one accounting issue allows governments to take on commitments today but not recognize them on financial statements as obligations or liabilities.

We need to beware of backward-looking models and "group think"

We need to be highly conscious of the limitations of backward-looking models. And we need to be even more conscious and suspect of what will happen when all market participants essentially are using the same models. While we want a level, global playing field – and fair application of rules to all participants, including common and consistent ways of calculating risk-weighted assets – we need to guard against the risk of "group think." If all participants use the same models and capital-allocation standards, this potentially plants the seeds of the next crisis. That is essentially what happened with mortgages in this last crisis.

The mortgage business needs to be radically overhauled

We need to rethink the mortgage industry from the ground up. I've already spoken about why we need stronger standards, including loan-to-value ratios and income verification, but we also need servicing contracts that are more consistent from both the consumer and investor standpoints. In addition, it would be beneficial to have foreclosure processes and standards that are common and consistent across all 50 states.

Most critically, it is incumbent upon us to resolve the status of the government-sponsored entities, Fannie Mae and Freddie Mac, and the "skin in the game" rules with regard to securitizations. We generally believe in these rules regarding securitizations (requiring mortgage originators to hold 5% of the risk of the loans they make). That said, the devil will be in the details, but we generally are supportive. Additionally, the government recently rolled out three models of how government-sponsored enterprises (GSE) might be reformed over time. Any of these models could be designed to work for consumers and investors and effectively could create a strong and stable mortgage finance system. Alternatively, any one could be designed in a way that could lead to disaster.

The key is for policymakers and market participants to get all elements right. If they succeed, then mortgage products will be much improved for both consumers and investors. Also, if the roles of the GSEs were to be better clarified and more limited, there would be lower risk of damage to the economy, and the taxpayers would not be left footing the bill for failure.

Getting to the Right Capital and Liquidity Levels

Of all the changes being made in the financial system, we believe it is most important to have higher, but proper, capital and liquidity requirements for banks. But these levels cannot be arbitrary or political – they must be rooted in logic and designed for the fundamental purpose of best preparing banks to be able to handle extremely stressed environments – a purpose that always has been central to JPMorgan Chase's capital and liquidity positions. We also believe that if the levels of capital are set too high, they can both impede economic growth and push more of what we refer to as banking into the hands of non-banks.

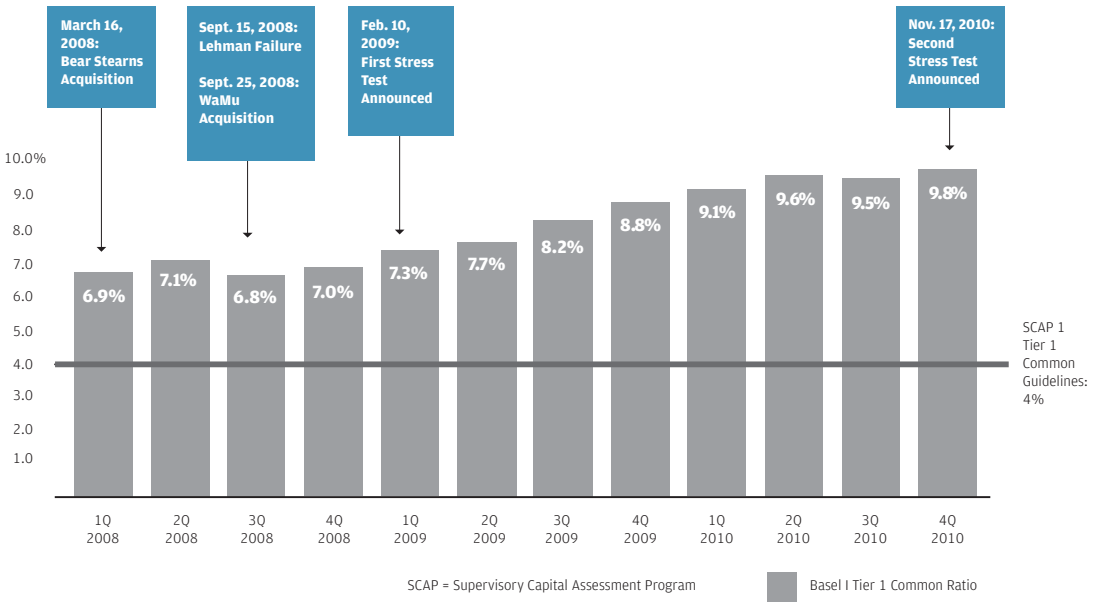
JPMorgan Chase had adequate capital both to deal with the government's new stress test, and, more important, to deal with the real stress test of the past few years – we don't see the need for more

Stress tests – both forward- and backward-looking ones – show that 7% Basel I Tier 1 Common Capital provided plenty of capital. When the government did its first stress test in February of 2009, it required banks to have 4% Tier 1 Common Capital. As shown in the chart on the next page, JPMorgan Chase went into the crisis with 7%. With that level of equity, we were able to acquire both Bear Stearns and WaMu while simultaneously powering through the crisis. Throughout the entire period, our capital ratio barely dropped.

The Basel III rules effectively would require JPMorgan Chase to hold approximately 50% more capital than the already high level of capital held during the crisis. The call under Basel III for a standard 7% of Tier 1 Common Capital essentially is equivalent to the 10% standard or more under Basel I. This is

As shown in the chart below, JPMorgan Chase maintained plenty of capital throughout the financial crisis.

JPMorgan Chase Quarterly Capital Levels



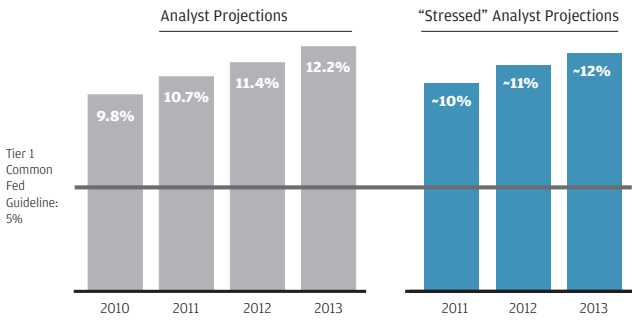
because the regulators tightened up the definitions for all types of capital – rightly so – and increased standards for the calculation of risk-weighted assets (mostly for trading assets, counterparty exposures and securitizations).

Basel III's higher capital requirements provide more than enough capacity to withstand extreme stress. We do not believe that we should be required to hold even more capital. The chart below presents a forward-looking stress test on JPMorgan Chase's capital. Using analysts' estimates, we show what our Basel I and Basel III Tier 1 Capital ratios would be. These are estimates, but they give you a sense of the strength of our capital generation, even under stress. A great deal of detailed analysis goes into these tests, including the assumptions that home prices would drop another 15% from peak levels and unemployment would go to 12%. This stress test is a more severe case than in the Federal Reserve's stress test.

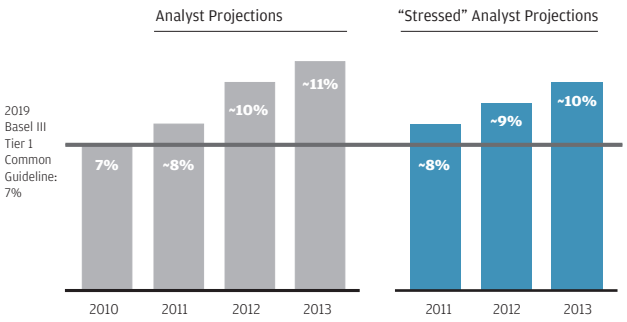
So in the "real" stress test of the past few years – one of the worst environments of all time – JPMorgan Chase did fine. In forward-looking stress tests, we are in excellent shape.

The whole purpose of capital is to be able to protect the firm under conditions of extreme stress. We understand why, after this crisis, the capital standards should be increased.

Basel I Tier 1 Common Ratio



Basel III Tier 1 Common Ratio



We now will have 50% more capital than we clearly needed during the crisis. And multiple other improvements have been made to protect our system. We simply do not see the need for *even more* capital, and we believe the facts prove it.

Banks did not benefit from any kind of implicit guarantee

The argument that systemically important financial institutions should hold more capital than small banks is predicated on two false notions: first, that SIFIs borrow money more cheaply because of an implicit guarantee (and that the cost of higher capital requirements will offset this "benefit"); and, second, that all SIFIs needed to be bailed out because they were too big to fail.

The notion that SIFIs had an implied guarantee is completely disproved by the chart below. It shows the borrowing costs of Fannie Mae and Freddie Mac – companies with a true implied guarantee from the federal government – vs. the borrowing costs of AA-rated banks and industrial companies. As you see, the borrowing costs of these banks were similar to those of AA-rated industrials, neither of which benefited from an implicit government guarantee of any kind. Surprisingly, even *after* the government said that it was not going to allow any additional banks to fail, the high borrowing costs for banks continued.

While it is true that some banks could have failed during this crisis, that is not true for all banks. Many banks around the world, including JPMorgan Chase, were ports of stability in the storm and proved to be great stabilizers at the height of the crisis in late 2008 and early 2009. Remember, also, that some of the banks identified as too big to fail, in reality, were too big to fail *at the time* after so much cumulative damage. At that time, the too-big-to-fail moniker was extended to large industrial companies, money market funds, just about any company that issued commercial paper, insurance companies and others.

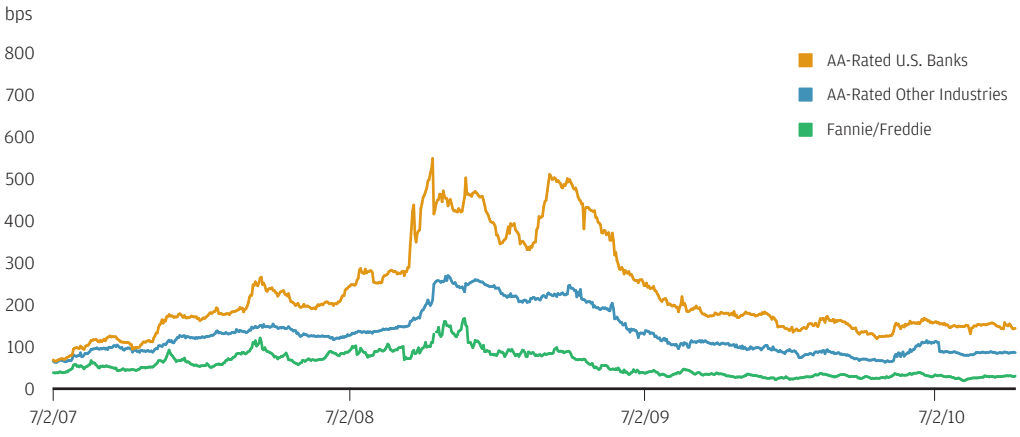
We should be very thoughtful about demanding that global SIFIs hold more capital

Presumably, risk-weighted assets reflect the riskiness of the company. If there are to be extra capital charges for SIFIs and global SIFIs, such decisions should be based upon logic and proof that SIFIs and global SIFIs pose a greater risk to the system. Some SIFIs posed a great risk while other SIFIs did not. And these variations in "riskiness" were not strictly a function of size. Also, if Resolution Authority is meant to take care of the too-big-to-fail problem, then what purpose does further raising capital levels serve other than to fix a problem that already has been fixed?

AA-Rated U.S. Banks' and Other Industries' Spreads above Treasury: Crisis/Post-crisis (7/2007–9/2010)

Average Spread over Period:
AA-Rated U.S. Banks – 229 bps
AA-Rated Other Industries – 131 bps
Fannie/Freddie – 58 bps

bps = basis points



Source: Morgan Markets

Even the identification of SIFIs or global SIFIs creates issues: Does this status make you a better credit? Won't it cause distortions in the future as some people decide that it will be safer to bank with SIFIs? Are the regulators going to make it clear what a company could do to give up the SIFI or global SIFI status and reduce your capital requirements? Are there going to be specific ways for specific SIFIs to reduce their capital requirements? Will the identification of global SIFIs be done fairly across countries? Will there be bright-line tests or will it be up to the judgment of various bureaucracies? Won't the identification of SIFIs simply become a political process as you travel to Washington, D.C., to argue why you should not be a SIFI?

In short, we at JPMorgan Chase see the value of higher capital and liquidity and the wisdom of resolution plans and living wills that make it easier to let big banks fail. We even believe that banks should continue to pay for bank failures. We just don't believe in arbitrary and increasingly higher capital ratios.

The Need for Large Global Banks and America's Competitive Position

Companies come in various sizes, shapes and forms. There are many reasons for this. At JPMorgan Chase, we benefit from huge economies of scale in our businesses. The same goes for most large enterprises. Economies of scale in our industry generally come from technology, including data centers, networks and software; the benefits of global branding; the ability to make huge investments; and the true diversification of risks. The beneficiaries of these economies of scale ultimately are the consumers who these companies serve.

Moreover, in many ways, the size of our company is directly related to the size of the clients we serve globally. Our size supports the level of resources needed to service these large, multinational clients – and enables us to take on the necessary risk to support them.

For some of our wholesale clients, we are asked to make bridge loans or underwrite securities of $10 billion or more. We buy and sell trillions of dollars of securities a day and move some $10 trillion of cash around the world every day. When we provide credit to a client, it may include revolving credit, trade finance, trading lines, intraday lines and derivatives lines – often in multiple locations globally – and often in the billions.

In our retail business, buying WaMu enabled us to improve branches in many ways: adding salespeople; retrofitting and upgrading each location; adding improved products, services and systems; and saving some $1 million at each branch. Ultimately, this allowed us to offer our clients better products and services.

In a free market economy, companies grow over time because they are winning customers. These companies win customers and grow market share because they – relative to the competition – are doing a better and faster (and at times less expensive) job of providing customers with what they want.

Consolidation does not cause crises, and the U.S. banking system is far less consolidated than most other countries

The U.S. banking system has gone from approximately 20,000 banks 30 years ago to approximately 7,000 today. That trend likely will continue as banks seek out economies of scale and competitive advantage. That does not mean there won't be start-ups and successful community banks. It just means that, in general, consolidation will continue, as it has in many industries.

The U.S. system is still far less consolidated than most other countries (see chart on next page on top).

In any case, the degree of industry consolidation has not, in and of itself, been a driving force behind the financial crisis. In fact, some countries that were far more consolidated (Canada, Australia, Brazil, China and Japan, to name a few) had no problems during this crisis so there is not compelling evidence to back up the notion that consolidation was a major cause of the problem.

Top 20 Countries by Gross Domestic Product

Deposit Market Share for Top 10 Banks in Each Respective Country	% Share
Canada	97%
Mexico	93
Turkey	92
South Korea	91
Australia	90
France[1]	88
Brazil	85
Spain	84
Sweden[1]	84
Argentina	76
The Netherlands[1]	76
China	67
Japan	62
India	61
Russia	61
Italy	53
United Kingdom	48
United States	**41**
Switzerland[1]	35
Germany[1]	26

Notes: Deposit market share data are related to the operations/ transactions conducted by banks domiciled in each respective country, including branches and subsidiaries of foreign banks

1 Deposit market share is based on the top eight banks in France, top seven banks in Sweden, top four banks in the Netherlands, top three banks in Germany and top two banks in Switzerland

Sources: J.P. Morgan and J.P. Morgan Cazenove research estimates; company filings and reports; and Central Bank and trade association data

We should be concerned about American banks losing global market share – because they are

Two facts support this contention:

U.S. investment banking services are increasingly being provided by foreign banks. While it is gratifying to see J.P. Morgan go from nowhere to become #1 in U.S. investment banking, it is notable how much U.S. investment banking has changed. Twenty years ago, U.S. investment banks dominated U.S. investment banking – occupying all of the top 10 positions. A decade ago, they held nine of the top 10. Last year, U.S. investment banks held only five – half – of the top 10 slots (see chart below).

U.S. banks also have lost significant position. In 1989, U.S. banks represented 44 of the 50 largest financial firms in the world (by market capitalization). More than 20 years later, American banks now number only six of the top 50. While much of this change has to do with the growth of the rest of the world, it is striking both how fast and how dramatic the change has been.

It's important that we make sure that American banks stay competitive

We believe that it is good for America – the world's leading global economy – to have leading global banks. Being involved in the capital flows between corporations and investors across the globe is a critical function. Large, sophisticated institutions will be required to manage these flows and to intermediate or invest directly if necessary. Global markets will require sophisticated analysis, tools and execution.

The impact of ceding this role to banks based outside the United States could be detrimental to the U.S. economy and to U.S.

Market-Leading Franchises — Investment Bank

U.S. Equity, Equity-Related and Debt

Rank	1990	2000	2010
1	Merrill Lynch	Merrill Lynch	J.P. Morgan
2	Goldman Sachs	Salomon Smith Barney	Barclays Capital
3	Salomon Brothers	Morgan Stanley	Bank of America Merrill Lynch
4	First Boston	Credit Suisse	Deutsche Bank
5	Morgan Stanley	Goldman Sachs	Goldman Sachs
6	Kidder Peabody	Lehman Brothers	Citi
7	Bear Stearns	Chase	Royal Bank of Scotland
8	Shearson Lehman	J.P. Morgan	UBS
9	Prudential-Bache Capital	Bank of America	Morgan Stanley
10	Donaldson Lufkin & Jenrette	Deutsche Bank	Credit Suisse

Source: Thomson Reuters. Data as of 12/31/10. Rankings based on dollar volume run on March 14, 2011
Note: Light gray font designates firms that no longer exist; orange font indicates non-U.S.-based firms

companies. For a long time, the United States has had the deepest and best capital markets on the planet. These markets match investors with companies, large and small, who innovate, invest and grow around the world. They have helped build some of the best companies in the world and the best economy on the planet. America's financial institutions have been a critical part of this success.

While mistakes were made and change was clearly required, we should not throw out the baby with the bath water.

Some of the laws that were written and some of the possible interpretations of rules to come could create competitive disadvantages for American banks. They are adding up, and they bear watching. They are:

- American banks no longer have the ability to use tax-deductible preferred stock as capital (overseas banks do).
- Most other countries have made it clear that they will not accept the Volcker Rule (despite Paul Volcker's testimony that international regulators would adopt it once they understood it).
- Many of the rules regarding derivatives being adopted in the United States are unlikely to be adopted universally. Certain countries are licking their chops at the prospect of U.S. banks being unable to compete in derivatives. Remember, the clients will go to the place that is the cheapest and most effective for them.
- There are concentration limits, old and new, that constrain American banks' ability from making acquisitions both here and abroad. Some of these constraints will not apply to foreign banks.
- There are proposed bank taxes or other arbitrary taxes that could disadvantage large banks – even the FDIC has skewed its deposit insurance to increase the charge to bigger banks.
- Many of the leading economies of the world may not have their large banks maintain additional capital requirements in excess of the 7% called for in Basel III.
- It is clear that some countries' regulation allows for a much less conservative calculation on risk-weighted assets.

We do not believe that the Federal Reserve or the Treasury would want to leave American banks at a disadvantage. We need American leadership to be forceful and engaged to ensure a fair outcome.

We all have a vested interest in getting this right

The government took great action to stop the crisis from getting worse. Lawmakers and regulators have and will take much action to fix what clearly was a broken system. As quickly as we reasonably can, we should finish the remaining rules and requirements and create the certainty that will help the system to heal faster. Nothing is more important than getting our economy growing and getting Americans back to work. And the regulators should remember that they always have the right to change things again – if and when appropriate.

V. CONCLUSION

You can rest assured that your management team and Board of Directors are completely focused on all the opportunities, issues and risks that we have ahead of us.

Regarding the regulatory changes, we have some 70 projects and work teams – fully staffed with lawyers; accountants; credit officers; compliance, systems and operations specialists; and bankers and traders – analyzing and preparing for each of the new regulatory requirements. All in all, thousands of our people around the world are partially or fully engaged in these endeavors.

We will ensure that we meet all the new rules and requirements, both in letter and spirit, and we will make sure that everything we do, wherever we can, is done with the customer foremost in mind. While we expect to make numerous changes in our products, services and prices, we will strive to do so in the most customer-friendly way possible.

As we look toward the future, we see incredible opportunities for your company, and our teams around the world are fully engaged in pursuing them.

In every way we can, we continue to actively support the economic recovery. We know that communities are built when everyone does his or her part. And we intend to do ours by being a responsible corporate citizen and helping our communities across the globe. You can read more about our extensive efforts on jpmorganchase.com/forward.

Our people have done an extraordinary job, often under difficult circumstances. I hope you are as proud of them as I am.



Jamie Dimon
Chairman and Chief Executive Officer

April 4, 2011

Investment Bank

"J.P. Morgan's financial strength, client base and capabilities are unparalleled ... we are positioned to serve clients as they expand globally."



In late 2009, I rejoined the Investment Bank after 10 years in Asset Management. Obviously, there were many changes during that decade as world GDP nearly doubled and the digital revolution impacted consumers, businesses and countries on a global scale.

I'd like to highlight three changes that are particularly meaningful for our business. First, technology ceased to be "support" for trading and banking; it now is part of J.P. Morgan's client offering. Second, countries like China, long tagged "emerging," today are powerful and important; this antique label no longer applies. Third, J.P. Morgan became both a universal bank and a leading investment bank, with financial strength, capabilities and a client base unparalleled in global finance.

The Investment Bank now serves approximately 16,000 investor clients and 5,000 issuer clients. No doubt the financial crisis helped us gain share – we were the safe harbor and, subsequently, as the recovery took hold, a port of opportunity.

Fortunately, it isn't in our nature to take success for granted – it's our firm's culture to continually earn and re-earn client trust.

2010 Results: Near Record Performance

The Investment Bank generated solid returns. Net income was $6.6 billion on revenue of $26 billion, just short of 2009's record levels. ROE was 17% on $40 billion of capital – our through-the-cycle target.

J.P. Morgan's debt markets leadership, combined with investor confidence and low interest rates, enabled corporates to prepare their balance sheets for long-term growth. Clients made good progress, although the Gulf oil spill, sovereign debt concerns and regulatory uncertainty challenged markets. As well, the mid-year "flash crash" was a healthy reminder that technology can outpace control.

Customers, spearheading the recovery, selected J.P. Morgan for numerous public and private capital raises. We were privileged to work for many prominent clients like General Motors, the Agricultural Bank of China and Novartis.

We expanded our market-making footprint, adding local capabilities in important countries like Russia and Brazil. China's approval of our securities joint venture means a larger in-country presence and the ability to participate in domestic underwriting. Three of the top five exchanges for IPOs last year were in China, accounting for nearly 40% of dollar volume.

An emphasis on liquidity, derivative book repositioning and trading discipline led to our best-ever revenue-to-risk relationship. There were no trading-day losses in three of the last four quarters.

The Sempra acquisition added skill and capacity, particularly in oil and base metals, and 1,000 clients. J.P. Morgan now serves client needs across all important physical and financial commodity markets.

The formation of our Markets Strategies group, with senior management and advanced quantitative and programming talent, brought focus and momentum to electronic trading and related initiatives.

Finally, we made great strides toward delivering the highest proportion of risk-adjusted earnings to shareholders per dollar of compensation in our industry.

2011 Priorities: Serving Clients with Complex Global Needs

While it's gratifying that we maintained a #1 ranking in investment banking fees last year, I'm mindful that league tables do not capture all that we do nor what is necessarily most important to clients. It is the quality of our work and our long-term focus that serves clients, and therefore us, well.

We must prepare for Global Markets revenue to stabilize – although growth is available in some businesses, notably commodities and equities. We are off to a good start; client flows and deal pipelines are strong compared with this time last year. Financing activity and M&A should accelerate as clients gain confidence and deploy balance sheet cash. We're positioned well for an expected comeback in cross-border, transformative acquisitions.

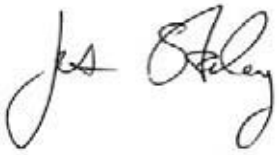
Our greatest opportunity, and challenge, is to deliver the firm to customers with increasingly complex global needs. We've added experienced people to provide management leadership and 360-degree supervision to reinforce client coverage. The Global Corporate Bank initiative helps us to better serve existing and emerging multinational clients.

The multiyear technology program is well under way, building our electronic capabilities, consolidating platforms and increasing efficiency. There is no finish line in technology – it drives efficiency, innovation and competitiveness.

An inclusive environment is the key to winning the war for talent. The best people from the broadest pool mean more points of view, better client solutions and financial performance for shareholders.

Exceptional employees, the right tools, good momentum and impressive leadership in our related businesses (Asset Management, Commercial Banking, Retail Financial Services and Treasury & Securities Services) – it all adds up to a wealth of inner resources that we mine with increasing effectiveness for clients and, ultimately, for our shareholders.

I'm grateful to be a part of this outstanding organization; there has never been a more exciting time to be an investment banker at J.P. Morgan.

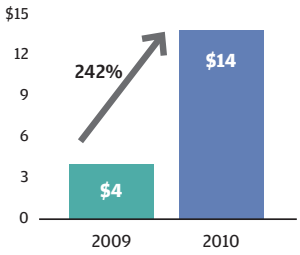


Jes Staley
CEO, Investment Bank

2010 Highlights and Accomplishments

- 5,500 sales and trading professionals, 2,000 bankers and 800 research analysts serving clients that operate in more than 100 countries[(a)]
- 110 trading desks and 23 trading centers around the world executing 3 million trades daily[(a)]
- Expanded internationally; headcount in China and Brazil increased more than 40%[(a)]
- Nearly doubled Global Markets revenue since 2007[(a)]
- Retained #1 global IB fees ranking with 8% market share[(b)]
- Helped clients raise $505 billion[(b)] of capital, $18 billion more than any other firm:
  - Almost $440 billion in global debt markets
  - Over $65 billion in global equity markets
- Raised nearly $90 billion[(a)] for U.S. state and local governments, not-for-profits, healthcare organizations and educational institutions
- Assisted California with a $10 billion bond issuance, the largest municipal transaction of 2010[(c)]
- Led the market in arranging or loaning more than $350 billion to 420 clients globally[(b)]

J.P. Morgan-Led Non-U.S. Exchange IPO Volume[(b)]
(in billions)



- Executed 353 equity transactions, including the two largest ever:[(b)]
  - General Motors: $23 billion
  - Agricultural Bank of China: $22 billion
- Advised clients on 311 announced mergers and acquisitions globally with a 16% share[(b)]
- Completed the acquisition of select Sempra assets, enabling us to offer comprehensive commodities solutions
- Won both U.S. Equity and Fixed Income polls in *Institutional Investor's* All-America Research surveys for the first time
- Named Best Financial Services Firm by global undergraduate business students in a poll conducted by Universum

(a) Internal reporting
(b) Dealogic
(c) SDC Thomson

Retail Financial Services

"I would not trade our franchise for anyone else's."



JPMorgan Chase possesses one of the most attractive retail financial services franchises in America, with ample opportunities to grow even after one of the most challenging periods in our history. We have the scale, technology and people to continue to deliver great service for our customers and terrific value to our shareholders.

Retail Financial Services (RFS) serves consumers and small businesses through a range of venues: in-person service at bank branches, auto dealerships and school financial aid offices; telephone banking; automated teller machines; and online and mobile banking. The strength of RFS derives from its scope across two businesses: Retail Banking, and Mortgage Banking, Auto & Other Consumer Lending.

Our 29,000 branch salespeople assist 30 million RFS customers with checking and savings accounts, credit and debit cards, mortgages, home equity and business loans, auto loans and investment advice. Across 23 states, our customers use our 5,300 bank branches and 16,000 ATMs, one of the largest networks nationwide. Our branches also are used to serve customers from other lines of business, including the Commercial Bank and the Private Bank.

Mortgage Banking, Auto & Other Consumer Lending services almost 9 million mortgages and provides new loans through loan officers and correspondents. Our customers also can obtain auto financing through more than 16,000 auto dealerships and student loans at more than 2,200 schools and universities nationwide.

While I remain confident of the value of Chase's retail franchise, I know we can do better than the results we've achieved over the past two years. Fortunately, the core strength of our franchise gives RFS a foundation upon which to grow in 2011 and beyond: We will continue to expand both our branch network and our offerings within those branches, as our mortgage portfolio works its way back toward profitability.

2010 Results: Solid Retail Earnings Offset by Ongoing Mortgage Losses

For 2010, RFS generated net income of $2.5 billion on revenue of $31.8 billion and a return on equity of 9%. These results, while an improvement from 2009, are well below what these businesses are capable of producing and what you should expect from us.

Our core banking and lending businesses performed well and saw solid organic growth throughout the year, but these results were partially offset by elevated credit losses and mortgage repurchase expenses. As well, we made additions to our loan loss reserves for the home loan portfolios, much of which are in run-off mode.

For comparison's sake, if we exclude our Home Lending portfolios and repurchase expenses, RFS earnings were $6.7 billion, with ROE of 37%. This represents the earnings power of RFS, as losses in the mortgage portfolios will decrease significantly in size and, eventually, contribute positively to earnings.

Home Lending
Our Home Lending business continues to go through a turbulent period. Loans acquired from Washington Mutual, as well as some of the Chase-originated loans, continued to perform terribly. While losses and delinquencies decreased from their peaks, they still are at unacceptably high levels.

Our Home Lending portfolios lost $4.2 billion in 2010 (including repurchase expenses). At the same time, we benefited from the refinancing boom, and net income in production (excluding repurchase losses) increased by 58%. We will need to continue managing these two very different issues for the next several years, as losses likely will remain high in the legacy portfolio while we focus on gaining profitable new business.

(Please see my accompanying discussion of the mortgage business on page 38.)

Retail Banking
For 2010, Retail Banking reported net income of $3.6 billion, down 7% from the prior year. Net revenue was down 2% to $17.6 billion, driven by lower deposit-related fees, largely offset by higher debit card income and a shift to wider-spread deposit products.

Adding 3 million new customers every year, our Retail Banking franchise continues its growth trajectory, with strong and increasing brand recognition across the country. Excluding acquisitions, our net income has grown at a compound annual growth rate of 9% since 2005. To deliver that growth, we have maintained our long-standing focus on acquiring and deepening customer relationships and continually investing for the future.

In 2010, we opened 154 new branches and added 3,700 personal bankers, nearly 600 loan officers and 450 business bankers to better serve our customers. We opened 1.5 million net new checking accounts and increased our sales production per branch by 16%. Our cross-sell ratio, at nearly seven products per household, is one of the highest in the industry.

We are not just getting bigger but we are constantly working to serve our customers better – for example, in 2010, innovation in mobile banking with convenient new smartphone applications. More than 17 million customers use our online services, representing a compound annual growth rate of more than 36% since 2006. Finally, the personal touch for which Chase branches are renowned – thanks to our great employees, who constantly strive to provide better advice and service – remains a cornerstone of our business.

2011 Priorities: Growing Our Branch Business with Expanded Offerings across Our Network

The results of the past year validate the essential soundness of our approach to growing our business. Going forward, we intend to remain focused on our customers and our people, which have sustained us during these challenging times.

Continuing to focus on organic growth is our primary goal. We already have more to offer consumers and businesses than most of our competitors, not to mention the stability of JPMorgan Chase standing behind us.

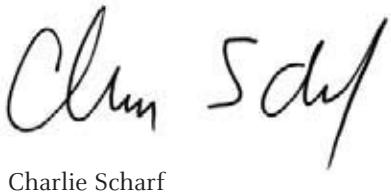
2010 Highlights and Accomplishments

- Despite a difficult environment in 2010, we had strong growth across our Retail Banking franchise, including:
  - Business Banking originations up 104% year over year
  - Branch mortgage originations up 48%
  - End-of-period deposits of $344.2 billion, up 3%
  - Checking accounts of 27.3 million, up 6%
  - Investment sales up 8%
- Exceeded our goal of providing $10 billion of new credit to American small businesses in 2010. We extended credit to more than 250,000 small businesses with annual sales of less than $20 million through Business Banking, Commercial Bank and Business Card businesses. In 2010, Chase's lending to small businesses across the firm was up more than 50%. We were ranked the #1 Small Business Administration lender in America
- Auto Finance achieved record 2010 performance earning net income of $832 million, up 117%, on total revenue of $2.8 billion, up 20%
- Deepened our customer relationships by increasing the number of products and services held by our customers by 7% (from 6.26 to 6.68)
- Held the #1 deposit market share in key cities in our footprint, including New York (16.7%), Dallas (13.6%), Houston (16.2%) and Chicago (12.9%)
- Increased our origination market share in Home Lending to 10.4% from 8.6%
- To date, we have prevented nearly 500,000 foreclosures and offered more than 1 million modifications
- Opened 17 Chase Homeownership Centers across the country to provide one-on-one counseling to borrowers, bringing the total number of centers to 51 and counting

In 2011, we are continuing to add sales staff in our branches to serve customers. As for the branches themselves, we have had great success growing our nationwide footprint – the 1,000 branches built since 2002 have added $150 million to our pretax profits as of 2010, a number expected to grow to more than $1 billion by 2018. Over the next five years, we anticipate building another 1,500-2,000 branches in our existing markets, generating an additional $1.5 billion to $2.0 billion in pretax income when seasoned.

Across the business, we also are pursuing several growth initiatives with great potential for our bottom line. For affluent customers, we plan to open 50 new Chase Private Client locations in 2011, with corresponding investments in staff, technology, products and customized service; we will have more than 150 locations by the end of 2013, primarily in New York, Chicago and Los Angeles. We also are expanding our Business Banking segment, especially in the heritage WaMu footprint. In those markets alone, Business Banking lent $878 million in 2010, up from almost zero a year earlier; our expansion could generate $1 billion in annual pretax income over time. Finally, we continue to advance our leadership in developing new products and services for our customers, such as instant-issue debit cards, QuickDeposit℠ and Chase Instant Action Alerts℠.

The experiences of the past few years have shown beyond a doubt that we have an excellent franchise built on strong business fundamentals. It is a franchise that has weathered a significant economic storm and is built to withstand future shocks. But more important, it is positioned to grow and to strengthen. I would not trade our franchise for anyone else's. This is a great time to be part of Chase, and I look forward to what I believe are even better days to come.



Charlie Scharf
CEO, Retail Financial Services

A Q&A WITH CHARLIE SCHARF ON MORTGAGES

We have learned a great deal from the mistakes of the last few years and are working every day to get the firm's troubled mortgage portfolios into better shape. Here, I answer a number of questions of the kind regularly posed by our customers and shareholders.

What mistakes did the firm make in mortgages, and how can it avoid them in the future?

Frankly, we missed some real basics. Our stress scenarios were not nearly severe enough. We relied too much on backward-looking statistical data to gauge our risk. Over several years, we changed many underwriting processes and requirements, usually in small ways – but, cumulatively, over time, these small changes combined to dramatically change our risk profile in ways we did not fully understand. Most important, we did not understand the ultimate effect these gradual changes (along with government policy) were having on housing prices broadly. All these factors contributed to a risk profile that became outsized relative to our earnings. We know we were not alone in the industry in making these mistakes, but we hold ourselves to a higher standard and know we cannot miss these basics again. We have changed our underwriting standards, processes, analytics and the way we think about risk, and we believe that we will avoid these problems and others like them in the future.

Should JPMorgan Chase still originate and service home loans, given all of the risks?

Yes. Homeownership has been and will continue to be a goal of most people in America, and we want to be there to support it. We are very supportive of mortgage reform and believe a healthy, vibrant mortgage market that supports responsible homeownership can be achieved.

We also believe that being the primary provider of financial products to our customers means we must be a great provider of home lending products. The distribution capacity we have through our bank branches and the relationships we have with more than 55 million customers positions us to be a primary U.S. provider of home loans. Through our retail and credit card businesses, we have contact with these millions of customers nearly every day, and we know their financial health and, often, their long-term financial aspirations. Our goal is to excel at providing these customers with mortgages in the same way as with our other products and services.

Given everything we've read about the health of the mortgage market, what is the current state of JPMorgan Chase's mortgage portfolio?

Speaking just for our firm, we service $1.2 trillion in mortgages and home equity loans – a bit less than 9 million in number – which represents about 12% of the entire market.

You likely have read many alarming things about the mortgage servicing industry, some of which are true but many of which are not. This statistic may surprise you: More than 90% of the mortgage customers we service continue to make timely payments, regardless of the value of their home. And that's true across most of the industry. Fortunately, most people who borrow money – whether it's a mortgage or another type of debt – honor their obligation to pay it back.

Unfortunately, the economic environment has made it difficult for some customers to make their payments. Hard-working people have lost their jobs or seen their income reduced. We have a responsibility to our shareholders, to the communities we serve and to our customers to work with those who want to stay in their homes but are having trouble making payments because of temporary economic hardship. And we have a number of programs to help those people.

When does JPMorgan Chase have to foreclose on a homeowner?

Simply put, we don't want to foreclose on homes. Foreclosure is the last and worst alternative for everyone: the individual, the community, the housing market and the economy more broadly – as well as the firm. We lose around six times more money on foreclosure than on modification.

Sadly, it is the only path for some borrowers. The average loan is over 14 months delinquent when we ultimately foreclose. Of the homes we foreclose on, 57% are not owner-occupied, of which over half were vacant at foreclosure. Another 10% were owner-occupied but vacant at foreclosure, and a further subset of borrowers either did not respond to our efforts to contact them, did not apply for a modification or did not submit the required documentation.

We go to great lengths to prevent foreclosure. We aggressively attempt to contact every customer shortly after becoming delinquent. For a customer having difficulty paying for and still living in his or her home, our goal is to modify the loan. To date, we have prevented nearly 500,000 foreclosures through modifications, forbearance, short sales and other programs; and we have offered more than 1 million modifications, with 285,000 completed. We have prevented two times as many foreclosures as we have completed.

All that said, we do not view it as our responsibility to help those who can pay but choose not to pay simply because the value of their home has fallen.

So why does the firm foreclose on a homeowner?

Generally, for those who we cannot help with modification or other solutions, there are three reasons we foreclose:

1. The mortgage-holder doesn't respond. We cannot help people who don't respond to us or don't send us required information. Regrettably, roughly 20% of these borrowers never respond to more than 100 attempts by Chase to get in touch with them when they go delinquent.

2. We don't receive proper documentation. Approximately 70% of these borrowers either do not send us any or all of the required documentation to apply for a modification. The modification program requires specific documentation from each borrower in order to properly identify the people who can afford a modification. This is easier said than done.

3. The mortgage-holder simply can't afford the mortgage. Finally, of the 10% remaining, the majority are offered a modification but do not make all the necessary payments. And a smaller percentage of mortgage-holders are declined for a modification because it is determined they can afford their current mortgage payment.

   As well, we've learned that not every customer who can afford to continue to live in his or her home wants to do so. In these situations, the best solution is for us to help that customer get out of their existing home through a short sale or deed in lieu. In order to facilitate these solutions, we often offer relocation assistance to another residence.

In addition to the above three reasons, it also must be said that some people knowingly misrepresented facts on their mortgage applications. For example, they overstated income or were purchasing real estate for investment rather than as a residence. Those people hurt the system for everyone. And we are trying hard to ensure such individuals don't receive assistance that should go to homeowners who truly are struggling and are trying to stay in their homes.

What steps has JPMorgan Chase taken to help troubled borrowers?

We have committed significant resources, including adding 6,400 people and reassigning 2,600 current staff, to help with troubled borrowers. We also have opened 51 Chase Homeownership Centers across the country to offer face-to-face counseling, and we plan to open 30 more by the end of 2011. We have assisted more than 120,000 customers through these centers to date. We also host large-scale borrower outreach events and have seen more than 60,000 homeowners through these events.

There is no question that the mortgage market has been through a very painful period for everyone over the past few years. We are seeing signs of a recovery in some parts of the country and are eager to put the foreclosure problems behind all of us. We want to do our part to get the economy moving again.

Card Services

"As we enter 2011, more customers are using our products than at any time in history."



In 2010, Chase Card Services made strong progress in positioning its business for the future, as we gained customers and increased market share of consumer payments. As we enter 2011, more customers are using our products than at any time in history.

The strength of JPMorgan Chase gave Card Services the ability, during the worst three years in the credit card industry's history, to make bold investments across its portfolio: innovative new products, such as our suite of resources for business card holders; a broader-based rewards platform than any other card provider; and ground-breaking services that directly respond to consumer needs. These products and services enable us to build strong and enduring relationships with Chase cardmembers, who not only see everyday value in our offerings but also depend on us to help them make progress toward their goals.

Chase's recently introduced proprietary products and features are targeted at vital, profitable segments of the consumer market. Chase Freedom℠, which targets savvy rewards-oriented consumers; Chase Sapphire℠, targeting the affluent market; Ink℠ from Chase, aimed at business card users; Chase Blueprint℠, which helps consumers take charge of their finances; and our Ultimate Rewards℠ program all have shown encouraging early success, with customers using our products for more of their spending.

Even after several challenging years, I never have been more confident about the outlook for Card Services. As we work to help customers manage (and not become overwhelmed by) their personal finances, Card Services enters 2011 in a strong position as credit markets improve and as we strive to make our offerings ever more indispensable.

2010 Results: Sales and Market Share Up amid Product Growth

Card Services ended 2010 with improvements in several key areas across all customer segments. Net income was $2.1 billion compared with a net loss of $2.2 billion in 2009. The improved results were driven by a lower provision for credit losses, partially offset by lower net revenue. Sales volume for 2010, excluding the Washington Mutual (WaMu) portfolio, was $302 billion – a record high and a measure that shows customers are using our products more frequently for their daily needs.

Beginning in 2008, which was the year the financial crisis began, we have consistently gained sales market share for Chase card products. We have gained 234 basis points of market share over those three years, which is 74 basis points more than our closest

competitor. Chase's card products are winning in the marketplace and are gaining share across key customer segments.

We continued to streamline our co-brand partnerships, from some 200 in 2008 to approximately 80 in 2010, focused exclusively on aligning Chase with some of the world's best brands, such as Hyatt Hotels and Ritz-Carlton.

Our credit line management strategy has helped improve credit loss trends, as we have closed inactive accounts, removing approximately $50 billion of unused credit lines since 2008; lowered credit lines for high-risk customers; and reduced average credit lines for new accounts. We've changed our approach to risk assessment, looking at customers' debt-to-income and total bankcard debt, as well as their FICO score.

2011 Priorities: Benefiting from Customer Relationships as Consumer Markets Improve

Looking ahead, we continue to be concerned about elevated unemployment levels, an uncertain regulatory environment and the ever-present challenges of driving growth. However, our new products and services are providing plenty of reasons for our customers to use Chase for everyday spending, and we believe growth will come through delivering the best customer service in our industry. In light of this, I have reaffirmed our 20% return on equity target on reduced equity of $13 billion.

A key part of our growth strategy is launching premier products and rewards programs in partnership with brands known worldwide for best-in-class service and value to our joint customers.

To make every interaction an outstanding one, we're looking at every policy, practice, communication and conversation through the customers' eyes. This customer filter is in place throughout our organization, from our Treating Customers Fairly principles; to our new Consumer Practices organization, charged with ensuring that all our marketing promises are clear, simple and transparent; to customer treatment strategies focused on individual needs; to employee accountability for immediately raising issues that affect the customer experience.

Chase Card Services is excited about the momentum we are building. As evidenced by our sales share gains, the response from our customers to our new products and services has been terrific. Our business is well positioned to continue to gain profitable market share.

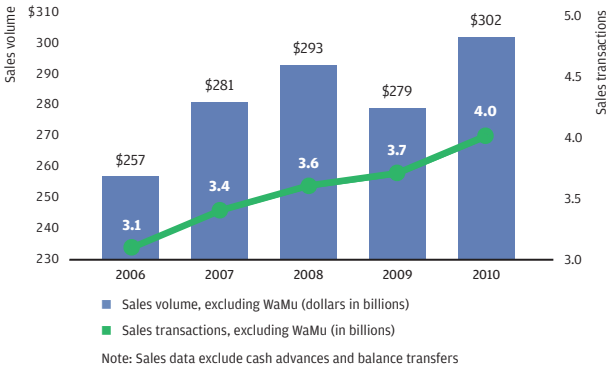


Gordon Smith
CEO, Card Services

2010 Highlights and Accomplishments

- Attained record high sales volume of $302 billion (excluding WaMu)
- Attained record high transaction volume of 4 billion (excluding WaMu)
- Increased market share of sales by 234 basis points from 2008 through 2010 (excluding WaMu)
- Added 11.3 million new Visa, MasterCard and private label credit card accounts
- Processed 20.5 billion transactions through Chase Paymentech, a global leader in payment processing and merchant acquiring
- Chase branch network continued to generate approximately 1.5 million new card accounts and more than 40% of revenue from new merchants for Chase Paymentech
- Launched, with Hyatt Hotels, the global hospitality company's first-ever rewards credit card

Sales Volume and Transactions Hit Record Levels in 2010



Note: Sales data exclude cash advances and balance transfers

Commercial Banking

"Even more than the sheer size of our client base, I take pride in our focus on building long-term relationships."



During my 32 years in the industry, I never have been more proud and excited to be a JPMorgan Chase commercial banker. Our business has achieved transformational growth since 2005, the year following the JPMorgan Chase and Bank One merger. In this time, we grew revenue by 73%, loans by 102% and liabilities by 110%, and we more than doubled our operating margin and earnings. We also have expanded our geographic footprint and now operate across 28 states and in more than 115 of the largest cities in the United States and Canada.

Dedicated client service and personalized local banker coverage are fundamental to our banking model. Our client turnover is minimal, and our average client relationship tenor is greater than 14 years. Although our relationships are local, we rely on the global reach of JPMorgan Chase's lending, Treasury Services, Investment Banking (IB) and Asset Management businesses. This partnership across our businesses results in very strong cross-sell, and, on average, our clients use more than eight products per relationship.

2010 Results: Record Earnings amid Strong Cross-Sell and Reduction in Nonaccruing Assets

For Commercial Banking, 2010 proved to be another year of exceptional performance. By staying true to our steadfast discipline in client selection and actively managing our risk, we delivered record revenue of $6 billion, record earnings of $2.1 billion and an ROE of 26%. We also continued to diligently manage expenses – up only 1% from 2009 – resulting in operating margin growth of 8% and a best-in-class overhead ratio of 36%.

This year, our clients generated record gross Investment Banking revenue, up 15% from 2009 to $1.3 billion. This partnership accounted for almost a quarter of the firm's domestic IB fees in 2010. There's still room left to grow, and we are working closely with our IB partners to actively identify new opportunities.

In 2010, we lowered nonaccrual loans by nearly 30% through an aggressive reduction in troubled assets. Charge-offs remained somewhat elevated, at 0.94% of total loans, but were significantly below their 2009 peak of 1.02%. Even through the most challenging period of the financial crisis, Commercial Banking maintained a fortress balance sheet with strong reserve levels. We ended 2010 with more than $2.5 billion reserved for loan losses, or 2.61% of ending loan balances. As we enter 2011, credit costs are approaching normalized levels.

At JPMorgan Chase, we are proud members of the communities we serve and are committed to strengthening the economy. I always am surprised when people say banks aren't lending to small businesses. In fact, companies with annual revenue of $50 million or less represent nearly 70% of our middle market client base. This year alone, we extended $92 billion in new financing across our businesses, including over $9 billion to more than 600 government entities, not-for-profit organizations, healthcare companies and educational institutions. Additionally, we recently introduced a program called Lending Our Strength, a financing initiative specifically designed to support our clients' growth by offering flexible structures and terms for the purchase of equipment and owner-occupied real estate.

Through our Community Development Banking group, we also committed nearly $1.5 billion to create and retain more than 12,000 units of affordable housing for low- and moderate-income families.

2011 Priorities: U.S. and Global Market Expansions and an Even Higher Cross-Sell Target

While we are pleased with our track record of strong performance, we are even more enthusiastic about what lies ahead. We are actively pursuing four key areas of growth:

U.S. Market Expansion – California, Washington, Oregon, Florida and Georgia represent attractive new growth markets for us. With over 250 dedicated resources in place, this expansion is well under way and has the potential to generate more than $1 billion in additional revenue for Commercial Banking. We also have over 40 commercial bankers covering key markets outside our branch footprint, including Philadelphia, Boston, Washington D.C., St. Louis and Minneapolis.

International Growth – As U.S. companies increase global commerce, serving their commercial banking needs has become a key differentiator that sets us apart from the competition. Since 2005, we have added more than 1,400 clients outside the United States and will continue to increase our office and branch locations around the world as our customers expand their reach.

Investment Banking – Six years ago, we set a target of $1 billion in revenue from IB products sold to commercial clients. Since that time, we have more than doubled this revenue, achieving $1.3 billion in gross IB revenue in 2010. We are confident that we will continue to gain share and have set a new goal of $2 billion in gross IB revenue within the next five years.

Commercial Real Estate – Finally, we are seeing improved opportunities in each of our three real estate businesses: Commercial Term Lending, Real Estate Banking and Community Development Banking. Through the most recent cycle of market stress, we significantly outperformed our peers, giving us the confidence and resolve to capitalize on future real estate demand. As we move forward, we will diligently maintain our conservative underwriting approach and prudent risk management so that we are able to grow our real estate portfolios responsibly as the market recovers.

As I look back over the last few years, I am very pleased with Commercial Banking's progress since the merger. Together, we have achieved an unparalleled combination of competitive advantages: exceptional people, critical branch footprint, product and service superiority, capital strength and large scale. All our accomplishments, both past and present, not only validate our status as an industry leader but also position us to continue to meet the needs of our clients and grow our business well into the future.

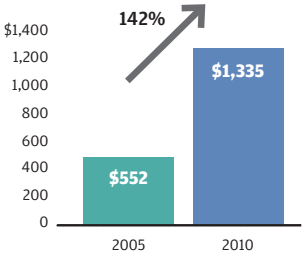


Todd Maclin
CEO, Commercial Banking

2010 Highlights and Accomplishments

- Retained top 3 leadership position nationally in market penetration and lead share[(a)]
- Maintained our ranking as the nation's #1 multifamily lender[(b)] and improved our ranking to become the nation's #2 large middle market lender[(c)]
- Achieved the #1 return on equity in our peer group at 26%
- Produced record revenue of $6 billion and record net income through continued focus on long-term performance
- Continued to be a leader in asset-based lending by closing more than $3 billion in loans
- Delivered a record $1.3 billion in gross Investment Banking revenue

Gross Investment Banking Revenue
(in millions)



- Increased new and renewed lending to middle market companies
- Continued to outperform peers in credit quality with the lowest net charge-off ratio
- Maintained the lowest loan-to-deposit ratio – only bank under 100%
- Demonstrated our commitment to supporting communities by extending more than $9 billion to over 600 government, not-for-profit, healthcare and educational institutions
- Added more than 1,500 new middle market clients and grew our international business by adding nearly 500 new clients overseas
- Acquired a highly performing and immediately accretive $3.5 billion multifamily loan portfolio from Citibank
- Committed nearly $1.5 billion to create and retain more than 12,000 units of affordable housing in over 100 U.S. cities

(a) Greenwich Market Study, 2010
(b) Federal Deposit Insurance Corporation, 12/31/10
(c) Thomson Reuters, 2010

Treasury & Securities Services

"Treasury & Securities Services is notable not only for its inherently attractive business characteristics but also for its global potential."



During the six years that I had the privilege of serving as JPMorgan Chase's Chief Financial Officer, I gained perspective on all the firm's businesses. Treasury & Securities Services (TSS) is notable not only for its inherently attractive business characteristics but also for its global potential.

TSS has tremendous capacity for profitable overseas growth like the firm's other international wholesale businesses – Investment Banking and Asset Management. That potential resides in both of TSS' operating units: Treasury Services (TS), comprising cash management, payments and receivables, liquidity management and trade finance; and Worldwide Securities Services (WSS), comprising asset custody and administration.

Now that I have the equally great privilege of serving as CEO of TSS, I would like to talk about the strengths of this business and discuss how we are going to realize its potential.

Across the industry, treasury and securities servicing are attractive businesses with strong fundamental characteristics. They provide stable earnings with excellent margins and high returns on capital. They also grow as global economies grow, trade activity increases and clients' activities in international markets expand. And such businesses are hard to replicate: Success requires scale of investment in people, systems and services. Having made the necessary investment, TSS is a leader in each of our businesses and one of the very few firms with the financial strength and resources to maintain that leadership.

That said, we have work to do. Given TSS' intrinsic strengths, our performance is not where it has the potential to be. The TSS leadership team is highly focused on closing this gap between the quality of our business and the financial results we deliver. We will do so by improving our operating margins through increased efficiency and product innovation; benefiting, where possible, from higher interest-rate environments; and, most critically, extending our higher-margin international business.

2010 Results: Volume Up and Revenue Flat, with Strategic Investment for the Future

TSS reported 2010 net income of $1.1 billion, down from $1.2 billion in 2009. Revenue was flat, at $7.4 billion, as spreads remained low and securities lending revenue fell by 30%. Expenses rose on higher business volume and investment in global expansion.

Revenue was roughly even between TS and WSS, each at approximately $3.7 billion. Just under half of total TSS revenue was generated outside the United States.

Despite the challenging market environment, there was strong growth in the underlying revenue drivers for both operating units. In WSS, assets under custody grew 8% to $16.1 trillion. In TS, deposits or liability balances totaled $169.2 billion, 5% higher than in 2009.

To support growth initiatives, we invested heavily in 2010 in our people, products and infrastructure, fueling a 6% rise in expense. Most notably, we hired nearly 150 new sales and relationship managers around the world, bringing our total to nearly 1,100 globally, and we increased technology expenditures by 23%.

2011 Priorities: Primed to Capture Growth Globally

We expect to increase earnings over the next few years as we reach our operating margin target of 35%, a considerable step up from 2010's margin of 23%. Some of that improvement will come as interest rates normalize, boosting our net interest income and fees; and some will result from improved operating efficiency and upgraded product offerings.

The area of greatest potential, however, is our international business. As our clients expand rapidly into new markets around the world, they need local access to the operating services TSS provides. We are investing in our firm-wide network so we can be where our clients are, serving them seamlessly as they expand geographically.

The accelerating globalization of our clients was a key impetus for the recently launched J.P. Morgan Global Corporate Bank (GCB), which serves current and prospective wholesale clients in nearly every major world market. In tandem with the GCB initiative, we are aggressively expanding the international capabilities of the TS unit. Over the next three years, we will add approximately 20 locations outside the United States, primarily in emerging markets, and we will have hired approximately 200 new corporate bankers since the end of 2009. This investment is critical to support companies based in emerging economies that are expanding into developed international markets, as well as global corporations moving into new markets and emerging economies.

In TSS' other operating unit, WSS, approximately 60% of revenue already comes from outside the United States, with client service and relationship management functions in 30 markets. WSS will continue to grow by deepening our service coverage, strengthening client relationships and expanding its local capabilities to serve our clients as they extend their asset management activities around the world. Further growth will occur as capital markets in emerging economies continue to open and develop.

I am confident and excited about the future of TSS. We have the resources, capital and opportunities to grow. Improving economic fundamentals – combined with the higher revenue we expect from our international expansion and lower investment spending as our strategic initiatives are completed – position us very well for the next stage of growth.

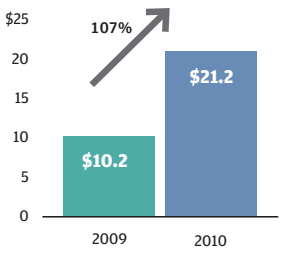


Mike Cavanagh
CEO, Treasury & Securities Services

2010 Highlights and Accomplishments

- Serve world-class clients in more than 140 countries and territories:
  - 80% of Global Fortune 500 companies
  - Top 25 banks in the world and nine out of 10 largest central banks
  - 68% of top 50 global asset managers and 25% of top 300 global pension funds
- WSS ranked #2 in assets under custody with $16.1 trillion, serving clients in 90+ markets, with direct custody in seven markets and clearing on 40+ exchanges and 57 over-the-counter markets

Trade Loans Up $11.0 Billion
(in billions)



- Processed approximately $10 trillion of daily cash transfers
- Opened new representative offices in Bangladesh, Abu Dhabi, and Guernsey
- Launched first-ever Hong Kong Depositary Receipt listing on the Hong Kong Stock Exchange for Brazilian mining company Vale, S.A.
- Earned more than 100 industry awards and top rankings, including:
  - #1 clearer of U.S. dollars in the world, with more than 20% market share
  - #1 in Automated Clearing House originations for the last three decades
  - Global Financial Supply Chain Bank of the Year (third consecutive year), *Treasury Management International*, 2011
  - Best Transaction Banking Business in Asia Pacific, *The Asian Banker*
  - Best Trade Bank in the World, *Trade & Forfaiting Review*
  - Fund Administrator of the Year, *Global Investor*
  - European Securities Services and Custodian of the Year, *International Custody & Fund Administration*
- Initiated a Go Green campaign with more than 10,000 clients, which has eliminated over 141 million documents – the equivalent of 4 million pounds of paper, 47,000 trees or 69 million pounds of greenhouse gases

Asset Management

"Our success ultimately is measured by our ability to generate superior risk-adjusted returns for our clients over the long term and across business cycles."



When I joined J.P. Morgan Asset Management in 1996, it was a much different business. We managed $179 billion of assets, generating about $1 billion in revenue for the firm. Of our few thousand clients, most were very large institutions and ultra-high-net-worth individuals that were invested primarily in stocks and bonds.

Fifteen years later, by virtually any measure, Asset Management has become one of the leading global money managers and private banks, serving individuals, institutions, pension funds, endowments, foundations, central banks and sovereign entities globally.

Today, we have $1.3 trillion in assets under management (AUM) and $1.8 trillion in assets under supervision. Our revenue has grown to nearly $9 billion. We now deliver our products and services locally through more than 200 offices around the world to over 7,000 institutions and more than 5 million individuals.

Through our J.P. Morgan Private Bank, Private Wealth Management, J.P. Morgan Securities, J.P. Morgan Asset Management, JF Asset Management, Highbridge and Gávea franchises, we count among us many of the world's top portfolio managers, research analysts, traders and client advisors. They invest in a full range of stock and bond strategies, as well as offer a comprehensive range of investments from leading hedge fund, private equity and real estate managers. With this broader platform, we are better able to serve an increasingly sophisticated and engaged client base.

2010: A Record Year

Despite sweeping regulatory changes to our industry during the past year, little has changed in the way we conduct our investment businesses. In 2010, we continued our tradition of client and shareholder focus and delivered record revenue of nearly $9 billion, up from almost $8 billion in 2009. Net income rose 20% to $1.7 billion, our highest annual earnings in three years, with return on equity of 26% and a healthy margin of 31%. These results were produced while continuing to invest in our people, systems and risk management; improving our operations; and leading the industry in developing best-in-class legal and compliance practices.

After the 2008 financial crisis, we saw tremendous cash inflows into our firm as part of a "flight to quality" from many places in the world. As risk appetite began to rebound, clients – many of them new to our firm – diversified into solutions across our platform, driving our long-term net new AUM flows to a record $69 billion and the highest levels of total AUM ($1.3 trillion) in our history. We continue to attract new assets in many of these areas because of our strong long-term investment performance, with 80% of our funds ranking in the top two quartiles in the industry over a five-year period.[(a)]

While our primary goal is to be the most respected asset manager – not the biggest – our business cannot be successful without continuous investment in talented new professionals. In Private Banking, we grew our client advisor team by 15% globally and 32% outside the United States. In our Global Institutional and Sovereigns businesses, we strengthened our senior sales management by putting top talent in key leadership positions.

(a) Quartile ranking sourced from Lipper for the U.S. and Taiwan; Morningstar for the U.K., Luxembourg, France and Hong Kong; and Nomura for Japan

In retail distribution, we increased our sales teams by 20% across the United States; Europe, Middle East and Africa; and Asia Pacific.

Finally, in the investment arena, as part of our commitment to increasing local coverage in important emerging markets, we purchased a majority stake in Gávea Investimentos, a leading alternative investments company in Brazil run by Arminio Fraga, former president of the Central Bank of Brazil. Through its hedge funds, private equity and longer-term investments, and wealth management services, Gávea invests across both emerging and broader international markets, with a macroeconomic, research-intensive investment process.

This transaction was particularly important as our clients are increasingly looking to access Brazil's rapidly growing economy. Together with Gávea, we now can provide our clients with a powerful combination of local emerging markets expertise and a global platform. We've had the pleasure of getting to know Arminio over the last decade as he's served on J.P. Morgan's International Council. During that time, I've seen firsthand the unique perspective he and his team bring to investment decisions in Brazil, as well as the government experience the team applies to macroinvestment decisions. I'm thrilled that our clients globally now are able to benefit from Gávea's investment expertise.

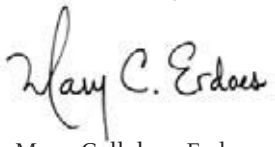
Strategic Priorities for 2011

Our success ultimately is measured by our ability to generate superior risk-adjusted returns for our clients over the long term and across business cycles. With very strong and consistent investment performance across most products, our priorities are focused on three areas that will further strengthen our leadership:

- First, we must maintain our strong investment performance in existing products and improve any areas of underperformance.
- Second, we need to continue to maintain our leadership position in innovation of new products and bring creative ideas quickly to market, especially in an increasingly global and interconnected environment.
- Third, we have to continue to invest in local delivery of our products and services to the myriad markets we serve, especially in our under-penetrated international markets.

Throughout our more than 175 years of constant evolution and expansion, what never has changed is our commitment to delivering "first-class business in a first-class way." Whether we are investing assets, providing trust and estate services or lending money, we take our responsibility to clients very seriously. Clients come to us because we deliver best-in-class investment management. But clients stay with us because they trust we always will uphold our obligations to them.

We look forward to continuing to invest in the best people and technology to provide superior investment advice to our clients around the world for generations to come.



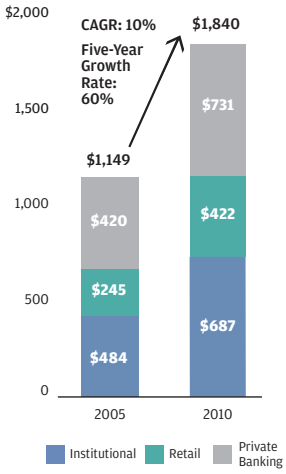
Mary Callahan Erdoes
CEO, Asset Management

2010 Highlights and Accomplishments

- #1 in U.S. Real Estate Equity and Infrastructure, *Pensions & Investments*
- Second-largest manager of absolute return strategies, *Absolute Return*
- Second-largest recipient of long-term U.S. mutual fund flows in the industry, *Strategic Insight*
- Asset Management Company of the Year in Asia and Hong Kong, *The Asset*
- Gold Standard Award for Funds Management in the United Kingdom for eighth year in a row, Incisive Media

Assets under Supervision — 2005 to 2010

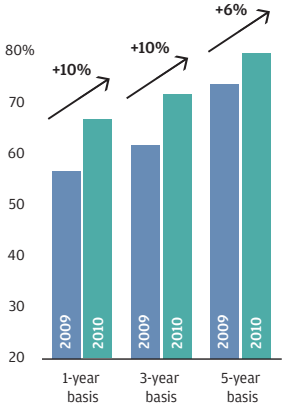
(in billions)



- Leading Pan-European Fund Management Firm, Thomson Reuters
- 3,500+ net new clients added to Private Banking in 2010
- 453 front-facing client professionals hired around the world — the most ever
- Institutional Hedge Fund Manager of the Year (Highbridge), *Institutional Investor*
- U.S. Large Cap Core PM Tom Luddy named Money Manager of the Year, *Institutional Investor*

Global Mutual Fund Performance Metrics

(percentage)



Total assets under management in 1st/2nd quartiles

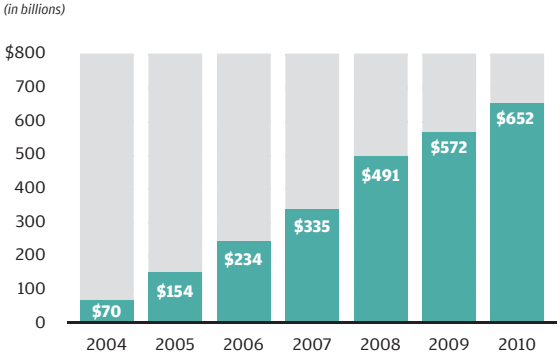
Corporate Responsibility

At JPMorgan Chase, corporate responsibility is a part of how we do what we do every day for customers and the communities we serve. We are committed to responsibly managing our businesses in a manner that creates value for our consumer, small business and corporate clients, as well as our shareholders, communities and employees.

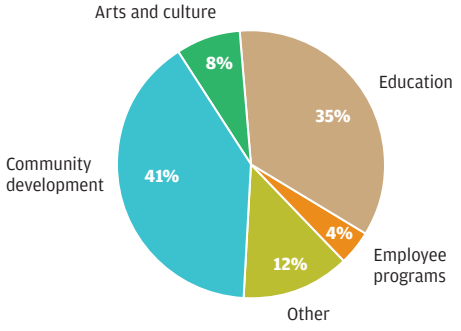
2010 Highlights and Accomplishments

- Launched a series of programs to help our nation's veterans manage their financial needs. Initiated assistance programs to educate, employ and provide homes to military members and veterans. For instance, we committed to donate 1,000 homes to our veterans over the next five years. We have partnered with Syracuse University to provide a technology certificate to veterans seeking a technology career and formed an alliance with 10 major corporate employers to commit to hiring at least 100,000 veterans by 2020. In addition, we offer career, work-life, disability and child care services to our employees transitioning back to work after military service.
- Provided more than $3 billion in Low-Income Housing Tax Credits and other community development loans and investments to preserve or construct more than 28,000 units of affordable housing.
- Stayed on track to meet our 20% greenhouse gas reduction target. Offset 140,000 metric tons of emissions from employee air travel with carbon credits. Increased the number of branches built to smart and responsible construction practices to 198, including 13 LEED-certified branches since 2008. Continued our focus on procuring paper from certified responsibly managed sources, raising the proportion from 70% of total volume to nearly 90%, and continued efforts to eliminate paper statements.
- Reviewed 245 financial transactions in an effort to mitigate adverse environmental and social impacts.
- Invested more than $190 million* in our communities, including contributions from the JPMorgan Chase Foundation, supporting programs focused toward community development, quality education and access to the arts.
- Engaged more than 2.5 million Facebook users in the innovative, philanthropic crowd-sourcing program, Chase Community Giving. The program directed $10 million to small and grassroots charities across the United States.
- Helped bring private sector talent to the microfinance sector through partnership with Grameen Foundation's Bankers without Borders®. Coordinated training for not-for-profits on establishing for-profit private equity funds and hosted a capital markets leadership conference for women bankers. Employee-driven philanthropy programs span five continents and advocates for causes such as children's wellness, cancer research and environmental preservation.
- Provided nearly 275,000 hours of volunteer service by employees through the Good Works program in local communities.
- Committed $15 million in investments in social venture and micro-insurance funds in Latin America, Africa and Asia. Our Social Finance business targets investments that generate social and financial returns.
- Provided Feeding America with its largest one-time corporate gift, helping it to provide 40 million additional meals to hungry families with 34 new refrigerated trucks and operational support to 19 Feeding America food banks in 13 states.
- Donated $3.5 million to support the expansion of JobAct®, a unique skills development and youth employment initiative in Germany. JobAct® helps long-term unemployed youth enter the job market or pursue further education.
- Continued our commitment to annually spend more than $1 billion with diverse suppliers.

Chase is on track to deliver on its 10-year, $800 billion pledge of investment in low- and moderate-income communities. Seven years into the pledge, we already have invested more than $650 billion.



2010 Charitable Contributions*



* Contributions include charitable giving from JPMorgan Chase & Co. and the JPMorgan Chase Foundation, and this giving is inclusive of $41.8 million in grants to Community Development Financial Institutions.

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FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

(unaudited)
(in millions, except per share, headcount and ratio data)

As of or for the year ended December 31,	2010	2009	2008(d)	2007	2006
Selected income statement data					
Total net revenue	**$ 102,694**	$ 100,434	$ 67,252	$ 71,372	$ 61,999
Total noninterest expense	**61,196**	52,352	43,500	41,703	38,843
Pre-provision profit(a)	**41,498**	48,082	23,752	29,669	23,156
Provision for credit losses	**16,639**	32,015	19,445	6,864	3,270
Provision for credit losses – accounting conformity (b)	**—**	—	1,534	—	—
Income from continuing operations before income tax expense/(benefit) and extraordinary gain	**24,859**	16,067	2,773	22,805	19,886
Income tax expense/(benefit)	**7,489**	4,415	(926)	7,440	6,237
Income from continuing operations	**17,370**	11,652	3,699	15,365	13,649
Income from discontinued operations (c)	**—**	—	—	—	795
Income before extraordinary gain	**17,370**	11,652	3,699	15,365	14,444
Extraordinary gain(d)	**—**	76	1,906	—	—
Net income	**$ 17,370**	$ 11,728	$ 5,605	$ 15,365	$ 14,444
Per common share data					
Basic earnings					
Income from continuing operations	**$ 3.98**	$ 2.25	$ 0.81	$ 4.38	$ 3.83
Net income	**3.98**	2.27	1.35	4.38	4.05
Diluted earnings (e)					
Income from continuing operations	**$ 3.96**	$ 2.24	$ 0.81	$ 4.33	$ 3.78
Net income	**3.96**	2.26	1.35	4.33	4.00
Cash dividends declared per share	**0.20**	0.20	1.52	1.48	1.36
Book value per share	**43.04**	39.88	36.15	36.59	33.45
Common shares outstanding					
Average: Basic	**3,956.3**	3,862.8	3,501.1	3,403.6	3,470.1
Diluted	**3,976.9**	3,879.7	3,521.8	3,445.3	3,516.1
Common shares at period-end	**3,910.3**	3,942.0	3,732.8	3,367.4	3,461.7
Share price (f)					
High	**$ 48.20**	$ 47.47	$ 50.63	$ 53.25	$ 49.00
Low	**35.16**	14.96	19.69	40.15	37.88
Close	**42.42**	41.67	31.53	43.65	48.30
Market capitalization	**165,875**	164,261	117,695	146,986	167,199
Selected ratios					
Return on common equity ("ROE") (e)					
Income from continuing operations	**10%**	6%	2%	13%	12%
Net income	**10**	6	4	13	13
Return on tangible common equity ("ROTCE") (e)					
Income from continuing operations	**15**	10	4	22	24
Net income	**15**	10	6	22	24
Return on assets ("ROA")					
Income from continuing operations	**0.85**	0.58	0.21	1.06	1.04
Net income	**0.85**	0.58	0.31	1.06	1.10
Overhead ratio	**60**	52	65	58	63
Deposits-to-loans ratio	**134**	148	135	143	132
Tier 1 capital ratio (g)	**12.1**	11.1	10.9	8.4	8.7
Total capital ratio	**15.5**	14.8	14.8	12.6	12.3
Tier 1 leverage ratio	**7.0**	6.9	6.9	6.0	6.2
Tier 1 common capital ratio (h)	**9.8**	8.8	7.0	7.0	7.3
Selected balance sheet data (period-end) (g)					
Trading assets	**$ 489,892**	$ 411,128	$ 509,983	$ 491,409	$ 365,738
Securities	**316,336**	360,390	205,943	85,450	91,975
Loans	**692,927**	633,458	744,898	519,374	483,127
Total assets	**2,117,605**	2,031,989	2,175,052	1,562,147	1,351,520
Deposits	**930,369**	938,367	1,009,277	740,728	638,788
Long-term debt	**247,669**	266,318	270,683	199,010	145,630
Common stockholders' equity	**168,306**	157,213	134,945	123,221	115,790
Total stockholders' equity	**176,106**	165,365	166,884	123,221	115,790
Headcount	**239,831**	222,316	224,961	180,667	174,360

(a) Pre-provision profit is total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

(b) Results for 2008 included an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual Bank's ("Washington Mutual ") banking operations.

(c) On October 1, 2006, JPMorgan Chase & Co. completed the exchange of selected corporate trust businesses for the consumer, business banking and middle-market banking businesses of The Bank of New York Company Inc. The results of operations of these corporate trust businesses were reported as discontinued operations.

(d) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual. On May 30, 2008, a wholly-owned subsidiary of JPMorgan Chase merged with and into The Bear Stearns Companies Inc. ("Bear Stearns"), and Bear Stearns became a wholly-owned subsidiary of JPMorgan Chase. The Washington Mutual acquisition resulted in negative goodwill, and accordingly, the Firm recorded an extraordinary gain. A preliminary gain of $1.9 billion was recognized at December 31, 2008. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion. For additional information on these transactions, see Note 2 on pages 166–170 of this Annual Report.

(e) The calculation of 2009 earnings per share ("EPS") and net income applicable to common equity includes a one-time, noncash reduction of $1.1 billion, or $0.27 per share, resulting from repayment of U.S. Troubled Asset Relief Program ("TARP") preferred capital in the second quarter of 2009. Excluding this reduction, the adjusted ROE and ROTCE were 7% and 11%, respectively, for 2009. The Firm views the adjusted ROE and ROTCE, both non-GAAP financial measures, as meaningful because they enable the comparability to prior periods. For further discussion, see "Explanation and reconciliation of the Firm's use of non-GAAP financial measures" on pages 64–66 of this Annual Report.

(f) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.

(g) Effective January 1, 2010, the Firm adopted accounting guidance that amended the accounting for the transfer of financial assets and the consolidation of variable interest entities ("VIEs"). Upon adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related, adding $87.7 billion and $92.2 billion of assets and liabilities, respectively, and decreasing stockholders' equity and the Tier 1 capital ratio by $4.5 billion and 34 basis points, respectively. The reduction to stockholders' equity was driven by the establishment of an allowance for loan losses of $7.5 billion (pretax) primarily related to receivables held in credit card securitization trusts that were consolidated at the adoption date.

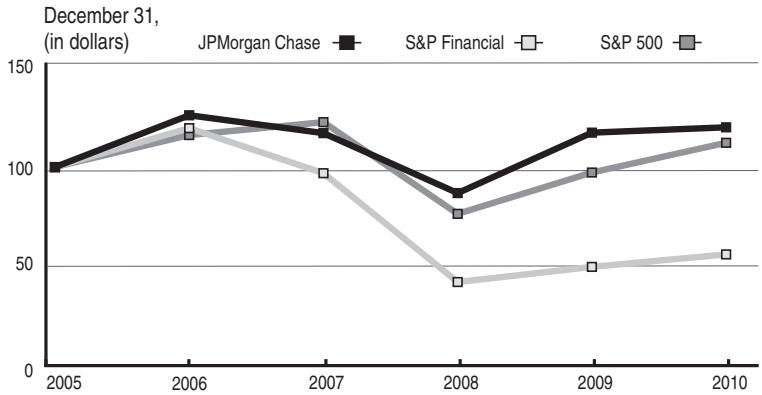
(h) The Firm uses Tier 1 common capital ("Tier 1 common") along with the other capital measures to assess and monitor its capital position. The Tier 1 common capital ratio ("Tier 1 common ratio") is Tier 1 common divided by risk-weighted assets. For further discussion, see Regulatory capital on pages 102–104 of this Annual Report.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Stock Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced U.S. equity benchmark consisting of leading companies from different economic sectors. The S&P Financial Index is an index of 81 financial companies, all of which are within the S&P 500. The Firm is a component of both industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2005, in JPMorgan Chase common stock and in each of the above S&P indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2005	2006	2007	2008	2009	2010
JPMorgan Chase	$ 100.00	$ 125.55	$ 116.75	$ 87.19	$ 116.98	$ 119.61
S&P Financial Index	100.00	119.19	96.99	43.34	50.80	56.96
S&P 500 Index	100.00	115.79	122.16	76.96	97.33	111.99



This section of JPMorgan Chase's Annual Report for the year ended December 31, 2010 ("Annual Report") provides management's discussion and analysis ("MD&A") of the financial condition and results of operations of JPMorgan Chase. See the Glossary of terms on pages 300–303 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 157 of this Annual Report) and in the JPMorgan Chase Annual Report on Form 10-K for the year ended December 31, 2010 ("2010 Form 10-K"), in Part I, Item 1A: Risk factors, to which reference is hereby made.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with $2.1 trillion in assets, $176.1 billion in stockholders' equity and operations in more than 60 countries as of December 31, 2010. The Firm is a leader in investment banking, financial services for consumers, small business and commercial banking, financial transaction processing, asset management and private equity. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national bank with branches in 23 states in the U.S.; and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national bank that is the Firm's credit card issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"; formerly J.P. Morgan Securities Inc.), the Firm's U.S. investment banking firm.

JPMorgan Chase's activities are organized, for management reporting purposes, into six business segments, as well as Corporate/Private Equity. The Firm's wholesale businesses comprise the Investment Bank, Commercial Banking, Treasury & Securities Services and Asset Management segments. The Firm's consumer businesses comprise the Retail Financial Services and Card Services segments. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows.

Investment Bank
J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The clients of the Investment Bank ("IB") are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage, and research.

Retail Financial Services
Retail Financial Services ("RFS") serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking, as well as through auto dealerships and school financial-aid offices. Customers can use more than 5,200 bank branches (third-largest nationally) and 16,100 ATMs (second-largest nationally), as well as online and mobile banking around the clock. More than 28,900 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. Consumers also can obtain loans through more than 16,200 auto dealerships and 2,200 schools and universities nationwide.

Card Services
Card Services ("CS") is one of the nation's largest credit card issuers, with over $137 billion in loans and over 90 million open accounts. Customers used Chase cards to meet $313 billion of their spending needs in 2010. Through its merchant acquiring business, Chase Paymentech Solutions, CS is a global leader in payment processing and merchant acquiring.

Commercial Banking
Commercial Banking ("CB") delivers extensive industry knowledge, local expertise and dedicated service to nearly 24,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and nearly 35,000 real estate investors/owners. CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Treasury & Securities Services
Treasury & Securities Services ("TSS") is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services ("TS") provides cash management, trade, wholesale card and liquidity products and services to small- and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with IB, CB, RFS and Asset Management businesses to serve clients firmwide. Certain TS revenue is included in other segments' results. Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Asset Management
Asset Management ("AM"), with assets under supervision of $1.8 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity products, including money-market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

This executive overview of MD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of events, trends and uncertainties, as well as the capital, liquidity, credit, operational and market risks, and the critical accounting estimates, affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Economic environment

The business environment in 2010 continued to improve, as signs of growth and stability returned to both the global capital markets and the U.S. economy. The year began with a continuation of the trends seen at the end of 2009: although unemployment had reached 10%, its highest level since 1983, signs were emerging that deterioration in the labor markets was abating and economic activity was beginning to expand. The housing sector also showed some signs of improvement, which was helped by a new round of home-buyer credits. Overall, during 2010, the business environment continued to improve and the U.S. economy grew, though the pace of growth was not sufficient to meaningfully affect unemployment which, at year-end 2010, stood at 9.4%. Consumer spending expanded at a moderate rate early in the year and accelerated as the year progressed, as households continued to reduce debt and increase savings. Businesses began to spend aggressively, with outlays for equipment and software expanding at a double-digit pace over the course of the year. Additionally, businesses cautiously added to payrolls in every month of the year.

Low inflation allowed the Federal Reserve to maintain its accommodative stance throughout 2010, in order to help promote the U.S. economic recovery. The Federal Reserve maintained the target range for the federal funds rate at zero to one-quarter percent and continued to indicate that economic conditions were likely to warrant a low federal funds rate for an extended period.

The U.S. and global economic recovery paused briefly during the second quarter of 2010 as concerns arose that European countries would have to take measures to address their worsening fiscal positions. Equity markets fell sharply, and bond yields tumbled. Concerns about the developed economies, particularly in Europe, persisted throughout 2010 and have continued into 2011. However, fears that the U.S. recovery was faltering proved unfounded, and the U.S. economy continued to grow over the second half of the year. At the same time, growth in the emerging economies remained robust. During the fourth quarter, the Federal Reserve announced a program to purchase longer-term Treasury securities through 2011 in order to restrain interest rates and boost the economy. These developments, combined with record U.S. corporate profit margins and rapid international growth, continued to support stock markets as financial market conditions improved and risk spreads continued to narrow.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	2010	2009	Change
Selected income statement data			
Total net revenue	**$102,694**	$ 100,434	2%
Total noninterest expense	**61,196**	52,352	17
Pre-provision profit	**41,498**	48,082	(14)
Provision for credit losses	**16,639**	32,015	(48)
Income before extraordinary gain	**17,370**	11,652	49
Extraordinary gain	**—**	76	NM
Net income	**17,370**	11,728	48
Diluted earnings per share			
Income before extraordinary gain	**$ 3.96**	$ 2.24	77
Net income	**3.96**	2.26	75
Return on common equity			
Income before extraordinary gain	**10%**	6%	
Net income	**10**	6	
Capital ratios			
Tier 1 capital	**12.1**	11.1	
Tier 1 common capital	**9.8**	8.8	

Business overview

Against the backdrop of the improvement in the business environment during the year, JPMorgan Chase reported full-year 2010 record net income of $17.4 billion, or $3.96 per share, on net revenue of $102.7 billion. Net income was up 48% compared with net income of $11.7 billion, or $2.26 per share, in 2009. Return on common equity was 10% for the year, compared with 6% for the prior year.

The increase in net income for 2010 was driven by a lower provision for credit losses and higher net revenue, partially offset by higher noninterest expense. The lower provision for credit losses reflected improvements in both the consumer and wholesale provisions. The increase in net revenue was due predominantly to higher securities gains in the Corporate/Private Equity segment, increased other income and increased principal transactions revenue, partially offset by lower credit card income. The increase in noninterest expense was largely due to higher litigation expense.

JPMorgan Chase benefited from an improvement in the credit environment during 2010. Compared with 2009, delinquency trends were more favorable and estimated losses were lower in the consumer businesses, although they remained at elevated levels. The credit quality of the commercial and industrial loan portfolio across the Firm's wholesale businesses improved. In addition, for the year, net charge-offs were lower across all businesses, though the level of net charge-offs in the Firm's mortgage portfolio remained very high and continued to be a significant drag on returns. These positive credit trends resulted in reductions in the allowance for credit losses in Card Services, the loan portfolio in Retail Financial Services (excluding purchased credit-impaired loans), and in the Investment Bank and Commercial Banking. Nevertheless, the allowance for loan losses associated with the Washington Mutual purchased credit-impaired loan portfolio in

Retail Financial Services increased, reflecting an increase in estimated future credit losses largely related to home equity, and, to a lesser extent, option ARM loans. Total firmwide credit reserves at December 31, 2010, were $33.0 billion, resulting in a firmwide loan loss coverage ratio of 4.5% of total loans.

Strong client relationships and continued investments for growth resulted in good results across most of the Firm's businesses, including record revenue and net income in Commercial Banking, record revenue in Asset Management and solid results across most other businesses. For the year, the Investment Bank ranked #1 for Global Investment Banking Fees; Retail Financial Services added more than 150 new branches and 5,000 salespeople, and opened more than 1.5 million net new checking accounts; Card Services rolled out new products and opened 11.3 million new accounts; Treasury & Securities Services grew assets under custody to $16.1 trillion; and Asset Management reported record long-term AUM net inflows of $69 billion.

The Firm also continued to strengthen its balance sheet during 2010, ending the year with a Tier 1 Common ratio of 9.8% and a Tier 1 Capital ratio of 12.1%. Total stockholders' equity at December 31, 2010, was $176.1 billion.

Throughout 2010, JPMorgan Chase continued to support the economic recovery by providing capital, financing and liquidity to its clients in the U.S. and around the world. During the year, the Firm loaned or raised capital of more than $1.4 trillion for its clients, which included more than $10 billion of credit provided to more than 250,000 small businesses in the U.S., an increase of more than 50% over 2009. JPMorgan Chase also made substantial investments in the future of its businesses, including hiring more than 8,000 people in the U.S. alone. The Firm remains committed to helping homeowners and preventing foreclosures. Since the beginning of 2009, the Firm has offered 1,038,000 trial modifications to struggling homeowners. Of the 285,000 modifications that the Firm has completed, more than half were modified under Chase programs, and the remainder were offered under government-sponsored or agency programs.

Although the Firm continues to face challenges, there are signs of stability and growth returning to both the global capital markets and the U.S. economy. The Firm intends to continue to innovate and invest in the products that support and serve its clients and the communities where it does business.

The discussion that follows highlights the performance of each business segment compared with the prior year and presents results on a managed basis. Managed basis starts with the reported U.S. GAAP results and, for each line of business and the Firm as a whole, includes certain reclassifications to present total net revenue on a tax-equivalent basis. Effective January 1, 2010, the Firm adopted accounting guidance that required it to consolidate its Firm-sponsored credit card securitization trusts; as a result, reported and managed basis relating to credit card securitizations are equivalent for periods beginning after January 1, 2010. Prior to the adoption of this accounting guidance, in 2009 and all other prior periods, U.S. GAAP results for CS and the Firm were also adjusted for certain reclassifications that assumed credit card loans that had been securitized and sold by CS remained on the Consolidated Balance Sheets. These adjustments ("managed basis") had no impact on net income as reported by the Firm as a whole or by the lines of business. For more information about managed basis, as well as other non-GAAP financial measures used by management to evaluate the performance of each line of business, see pages 64–66 of this Annual Report.

Investment Bank net income decreased from the prior year, reflecting lower net revenue and higher noninterest expense, partially offset by a benefit from the provision for credit losses and gains of $509 million from the widening of the Firm's credit spread on certain structured and derivative liabilities (compared with losses of $2.3 billion on the tightening of the spread on those liabilities in the prior year). The decrease in net revenue was driven by a decline in Fixed Income Markets revenue as well as lower investment banking fees. The provision for credit losses was a benefit in 2010, compared with an expense in 2009, and reflected a reduction in the allowance for loan losses, largely related to net repayments and loan sales. Noninterest expense increased, driven by higher noncompensation expense, including increased litigation reserves, as well as higher compensation expense, including the impact of the U.K. Bank Payroll Tax.

Retail Financial Services net income increased significantly from the prior year, driven by a lower provision for credit losses, partially offset by increased noninterest expense and lower net revenue. Net revenue decreased, driven by lower deposit-related fees (including the impact of the legislative changes related to non-sufficient funds and overdraft fees), and lower loan balances. These decreases were partially offset by a shift to wider-spread deposit products, and growth in debit card income and auto operating lease income. The provision for credit losses decreased from the 2009 level, reflecting improved delinquency trends and reduced net charge-offs. The provision also reflected an increase in the allowance for loan losses for the purchased credit-impaired portfolio, partially offset by a reduction in the allowance for loan losses, predominantly for the mortgage loan portfolios. Noninterest expense increased from the prior year, driven by higher default-related expense for mortgage loans serviced, and sales force increases in Business Banking and bank branches.

Card Services reported net income compared with a net loss in the prior year, as a lower provision for credit losses was partially offset by lower net revenue. The decrease in net revenue was driven by a decline in net interest income, reflecting lower average loan balances, the impact of legislative changes and a decreased level of fees. These decreases were partially offset by a decrease in revenue reversals associated with lower net charge-offs. The provision for credit losses decreased from the prior year, reflecting lower net charge-offs and a reduction in the allowance for loan losses due to lower estimated losses. The prior-year provision included an increase to the allowance for loan losses. Noninterest expense increased due to higher marketing expense.

Commercial Banking reported record net income, driven by a reduction in the provision for credit losses and record net revenue. The increase in net revenue was driven by growth in liability balances, wider loan spreads, higher net gains from asset sales, higher lending-related fees, an improvement in the market conditions impacting the value of investments held at fair value, and higher investment banking fees; these were largely offset by spread compression on liability products and lower loan balances. Results also included the impact of the purchase of a $3.5 billion loan portfolio during the third quarter of 2010. The provision for credit losses decreased from 2009 and reflected a reduction in the allowance for credit losses, primarily due to stabilization in the credit quality of the loan portfolio and refinements to credit loss estimates. Noninterest expense increased slightly, reflecting higher headcount-related expense.

Treasury and Securities Services net income decreased from the prior year, driven by higher noninterest expense, partially offset by a benefit from the provision for credit losses and higher net revenue. Worldwide Securities Services net revenue was relatively flat, as higher market levels and net inflows of assets under custody were offset by lower spreads in securities lending, lower volatility on foreign exchange, and lower balances on liability products. Treasury Services net revenue was relatively flat, as lower spreads on liability products were offset by higher trade loan and card product volumes. Assets under custody grew to $16.1 trillion during 2010, an 8% increase. Noninterest expense for TSS increased, driven by continued investment in new product platforms, primarily related to international expansion, and higher performance-based compensation expense.

Asset Management net income increased from the prior year on record revenue, largely offset by higher noninterest expense. The growth in net revenue was driven by the effect of higher market levels, net inflows to products with higher margins, higher loan originations, higher deposit and loan balances, and higher performance fees, partially offset by narrower deposit spreads. Assets under supervision increased 8% during 2010 driven by the effect of higher market valuations, record net inflows of $69 billion to long-term products, and inflows in custody and brokerage products, offset partially by net outflows from liquidity products. Noninterest expense increased due to higher headcount and performance-based compensation.

Corporate/Private Equity net income decreased from the prior year, driven by higher noninterest expense partially offset by higher net revenue. The increase in net revenue reflected higher securities gains, primarily associated with actions taken to reposition the Corporate investment securities portfolio in connection with managing the Firm's structural interest rate risk, and higher private equity gains. These gains were partially offset by lower net interest income from the investment portfolio. The increase in noninterest expense was due to an increase in litigation reserves, including those for mortgage-related matters, partially offset by the absence of a $675 million FDIC special assessment in 2009.

2011 Business outlook

The following forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. As noted above, these risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking Statements on page 157 and Risk Factors on pages 5–12 of this Annual Report.

JPMorgan Chase's outlook for 2011 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these linked factors will affect the performance of the Firm and its lines of business. Economic and macroeconomic factors, such as market and credit trends, customer behavior, client business strategies and competition, are all expected to affect the Firm's businesses. The outlook for RFS and CS, in particular, reflects the expected effect of current economic trends in the U.S relating to high unemployment levels and the continuing stress and uncertainty in the housing markets. The Firm's wholesale businesses will be affected by market levels and volumes, which are volatile and quickly subject to change.

In the Mortgage Banking, Auto & Other Consumer Lending business within RFS, management expects mortgage fees and related income to be $1 billion or less for the first quarter of 2011, given the levels of mortgage interest rates and production volumes experienced year-to-date. If mortgage interest rates remain at current levels or rise in the future, loan production and margins could continue to be negatively affected resulting in lower revenue for the full year 2011. In addition, revenue could continue to be negatively affected by continued elevated levels of repurchases of mortgages previously sold, predominantly to U.S. government-sponsored entities ("GSEs"). Management estimates that realized repurchase losses could total approximately $1.2 billion in 2011. In addition, the Firm is dedicating significant resources to address, correct and enhance its mortgage loan foreclosure procedures and is cooperating with various state and federal investigations into its procedures. As a result, the Firm expects to incur additional costs and expenses in resolving these issues.

In the Real Estate Portfolios business within RFS, management believes that, based on the current outlook for delinquencies and loss severity, it is possible that total quarterly net charge-offs could be approximately $1.2 billion during 2011. Given current origination and production levels, combined with management's current estimate of portfolio runoff levels, the residential real estate portfolio is expected to decline by approximately 10% to 15% annually for the foreseeable future. The annual reductions in the residential real estate portfolio are expected to reduce net interest income in each period, including a reduction of approximately $700 million in 2011 from the 2010 level; however, over time the reduction in net interest income is expected to be more than offset by an improvement in credit costs and lower expenses. As the

portfolio continues to run off, management anticipates that approximately $1.0 billion of capital may become available for redeployment each year, subject to the capital requirements associated with the remaining portfolio.

Also, in RFS, management expects noninterest expense in 2011 to remain modestly above 2010 levels, reflecting investments in new branch builds and sales force hires, as well as continued elevated servicing-, default- and foreclosed asset-related costs.

In CS, management expects end-of-period outstandings for the Chase portfolio (excluding the Washington Mutual portfolio) to continue to decline in 2011. This decline may be as much as $10 billion in the first quarter, reflecting both continued portfolio run-off and seasonal activity. The decline in the Chase portfolio is expected to bottom out in the third quarter of 2011, and by the end of 2011, outstandings in the portfolio are anticipated to be approximately $120 billion and reflect a better mix of customers. The Washington Mutual portfolio declined to approximately $14 billion at the end of 2010, from $20 billion at the end of 2009. Management estimates that the Washington Mutual portfolio could decline to $10 billion by the end of 2011. The effect of such reductions in the Chase and Washington Mutual portfolios is expected to reduce 2011 net interest income in CS by approximately $1.4 billion from the 2010 level.

The net charge-off rates for both the Chase and Washington Mutual credit card portfolios are anticipated to continue to improve. If current delinquency trends continue, the net charge-off rate for the Chase portfolio (excluding the Washington Mutual portfolio) could be below 6.5% in the first quarter of 2011.

Despite these positive economic trends, results for RFS and CS will depend on the economic environment. Although the positive economic data seen in 2010 seemed to imply that the U.S. economy was not falling back into recession, high unemployment rates and the difficult housing market have been persistent. Even as consumer lending net charge-offs and delinquencies have improved, the consumer credit portfolio remains under stress. Further declines in U.S. housing prices and increases in the unemployment rate remain possible; if this were to occur, results for both RFS and CS could be adversely affected.

In IB, TSS and AM, revenue will be affected by market levels, volumes and volatility, which will influence client flows and assets under management, supervision and custody. In addition, IB and CB results will continue to be affected by the credit environment, which will influence levels of charge-offs, repayments and provision for credit losses.

In Private Equity (within the Corporate/Private Equity segment), earnings will likely continue to be volatile and be influenced by capital markets activity, market levels, the performance of the broader economy and investment-specific issues. Corporate's net interest income levels will generally trend with the size and duration of the investment securities portfolio. Corporate net income (excluding Private Equity, and excluding merger-related items, material litigation expenses and significant nonrecurring items, if any) is anticipated to trend toward a level of approximately $300 million per quarter.

Furthermore, continued repositioning of the investment securities portfolio in Corporate could result in modest downward pressure on the Firm's net interest margin in the first quarter of 2011.

Regarding regulatory reform, JPMorgan Chase intends to continue to work with the Firm's regulators as they proceed with the extensive rulemaking required to implement financial reform. The Firm will continue to devote substantial resources to achieving implementation of regulatory reforms in a way that preserves the value the Firm delivers to its clients.

Management and the Firm's Board of Directors continually evaluate ways to deploy the Firm's strong capital base in order to enhance shareholder value. Such alternatives could include the repurchase of common stock, increasing the common stock dividend and pursuing alternative investment opportunities. Management and the Board will continue to assess and make decisions regarding these alternatives, as appropriate, over the course of the year.

This following section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2010. Factors that related primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates used by the Firm that affect the Consolidated Results of Operations, see pages 149–154 of this Annual Report.

Revenue

Year ended December 31, (in millions)	2010	2009	2008
Investment banking fees	**$ 6,190**	$ 7,087	$ 5,526
Principal transactions	**10,894**	9,796	(10,699)
Lending- and deposit-related fees	**6,340**	7,045	5,088
Asset management, administration and commissions	**13,499**	12,540	13,943
Securities gains	**2,965**	1,110	1,560
Mortgage fees and related income	**3,870**	3,678	3,467
Credit card income	**5,891**	7,110	7,419
Other income	**2,044**	916	2,169
Noninterest revenue	**51,693**	49,282	28,473
Net interest income	**51,001**	51,152	38,779
Total net revenue	**$102,694**	$100,434	$ 67,252

2010 compared with 2009

Total net revenue for 2010 was $102.7 billion, up by $2.3 billion, or 2%, from 2009. Results for 2010 were driven by a higher level of securities gains and private equity gains in Corporate/Private Equity, higher asset management fees in AM and administration fees in TSS, and higher other income in several businesses, partially offset by lower credit card income.

Investment banking fees decreased from 2009 due to lower equity underwriting and advisory fees, partially offset by higher debt underwriting fees. Competitive markets combined with flat industry-wide equity underwriting and completed M&A volumes, resulted in lower equity underwriting and advisory fees; while strong industry-wide loan syndication and high-yield bond volumes drove record debt underwriting fees in IB. For additional information on investment banking fees, which are primarily recorded in IB, see IB segment results on pages 69–71 of this Annual Report.

Principal transactions revenue, which consists of revenue from the Firm's trading and private equity investing activities, increased compared with 2009. This was driven by the Private Equity business, which had significant private equity gains in 2010, compared with a small loss in 2009, reflecting improvements in market conditions. Trading revenue decreased, reflecting lower results in Corporate, offset by higher revenue in IB primarily reflecting gains from the widening of the Firm's credit spread on certain structured and derivative liabilities. For additional information on principal transactions revenue, see IB and Corporate/Private Equity segment results on pages 69–71 and 89–90, respectively, and Note 7 on pages 199–200 of this Annual Report.

Lending- and deposit-related fees decreased in 2010 from 2009 levels, reflecting lower deposit-related fees in RFS associated, in part, with newly-enacted legislation related to non-sufficient funds and overdraft fees; this was partially offset by higher lending-related service fees in IB, primarily from growth in business volume, and in CB, primarily from higher commitment and letter-of-credit fees. For additional information on lending- and deposit-related fees, which are mostly recorded in IB, RFS, CB and TSS, see segment results for IB on pages 69–71, RFS on pages 72–78, CB on pages 82–83 and TSS on pages 84–85 of this Annual Report.

Asset management, administration and commissions revenue increased from 2009. The increase largely reflected higher asset management fees in AM, driven by the effect of higher market levels, net inflows to products with higher margins and higher performance fees; and higher administration fees in TSS, reflecting the effects of higher market levels and net inflows of assets under custody. This increase was partially offset by lower brokerage commissions in IB, as a result of lower market volumes. For additional information on these fees and commissions, see the segment discussions for AM on pages 86–88 and TSS on pages 84–85 of this Annual Report.

Securities gains were significantly higher in 2010 compared with 2009, resulting primarily from the repositioning of the portfolio in response to changes in the interest rate environment and to rebalance exposure. For additional information on securities gains, which are mostly recorded in the Firm's Corporate segment, see the Corporate/Private Equity segment discussion on pages 89–90 of this Annual Report.

Mortgage fees and related income increased in 2010 compared with 2009, driven by higher mortgage production revenue, reflecting increased mortgage origination volumes in RFS and AM, and wider margins, particularly in RFS. This increase was largely offset by higher repurchase losses in RFS (recorded as contra-revenue), which were attributable to higher estimated losses related to repurchase demands, predominantly from GSEs. For additional information on mortgage fees and related income, which is recorded primarily in RFS, see RFS's Mortgage Banking, Auto & Other Consumer Lending discussion on pages 74–77 of this Annual Report. For additional information on repurchase losses, see the repurchase liability discussion on pages 98–101 and Note 30 on pages 275–280 of this Annual Report.

Credit card income decreased during 2010, predominantly due to the impact of the accounting guidance related to VIEs, effective January 1, 2010, that required the Firm to consolidate the assets and liabilities of its Firm-sponsored credit card securitization trusts. Adoption of the new guidance resulted in the elimination of all servicing fees received from Firm-sponsored credit card securitization trusts (which was offset by related increases in net

interest income and the provision for credit losses, and the elimination of securitization income/(losses) in other income). Lower income from other fee-based products also contributed to the decrease in credit card income. Excluding the impact of the adoption of the new accounting guidance, credit card income increased in 2010, reflecting higher customer charge volume on credit and debit cards. For a more detailed discussion of the impact of the adoption of the new accounting guidance on the Consolidated Statements of Income, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 64–66 of this Annual Report. For additional information on credit card income, see the CS and RFS segment results on pages 79–81, and pages 72–78, respectively, of this Annual Report.

Other income increased in 2010, largely due to the write-down of securitization interests during 2009 and higher auto operating lease income in RFS.

Net interest income was relatively flat in 2010 compared with 2009. The effect of lower loan balances was predominantly offset by the effect of the adoption of the new accounting guidance related to VIEs (which increased net interest income by approximately $5.8 billion in 2010). Excluding the impact of the adoption of the new accounting guidance, net interest income decreased, driven by lower average loan balances, primarily in CS, RFS and IB, reflecting the continued runoff of the credit card balances and residential real estate loans, and net repayments and loan sales; lower yields and fees on credit card receivables, reflecting the impact of legislative changes; and lower yields on securities in Corporate resulting from investment portfolio repositioning. The Firm's average interest-earning assets were $1.7 trillion in 2010, and the net yield on those assets, on a FTE basis, was 3.06%, a decrease of 6 basis points from 2009. For a more detailed discussion of the impact of the adoption of the new accounting guidance related to VIEs on the Consolidated Statements of Income, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 64–66 of this Annual Report. For further information on the impact of the legislative changes on the Consolidated Statements of Income, see CS discussion on Credit Card Legislation on page 79 of this Annual Report.

2009 compared with 2008

Total net revenue was $100.4 billion, up by $33.2 billion, or 49%, from the prior year. The increase was driven by higher principal transactions revenue, primarily related to improved performance across most fixed income and equity products, and the absence of net markdowns on legacy leveraged lending and mortgage positions in IB, as well as higher levels of trading gains and investment securities income in Corporate/Private Equity. Results also benefited from the impact of the Washington Mutual transaction, which contributed to increases in net interest income, lending- and deposit-related fees, and mortgage fees and related income. Lastly, higher investment banking fees also contributed to revenue growth. These increases in revenue were offset partially by reduced fees and commissions from the effect of lower market levels on assets under management and custody, and the absence of proceeds from the sale of Visa shares in its initial public offering in the first quarter of 2008.

Investment banking fees increased from the prior year, due to higher equity and debt underwriting fees. For a further discussion of investment banking fees, which are primarily recorded in IB, see IB segment results on pages 69–71 of this Annual Report.

Principal transactions revenue, which consists of revenue from trading and private equity investing activities, was significantly higher compared with the prior year. Trading revenue increased, driven by improved performance across most fixed income and equity products; modest net gains on legacy leveraged lending and mortgage-related positions, compared with net markdowns of $10.6 billion in the prior year; and gains on trading positions in Corporate/Private Equity, compared with losses in the prior year of $1.1 billion on markdowns of Federal National Mortgage Association ("Fannie Mae") and Federal Home Loan Mortgage Corporation ("Freddie Mac") preferred securities. These increases in revenue were offset partially by an aggregate loss of $2.3 billion from the tightening of the Firm's credit spread on certain structured liabilities and derivatives, compared with gains of $2.0 billion in the prior year from widening spreads on these liabilities and derivatives. The Firm's private equity investments produced a slight net loss in 2009, a significant improvement from a larger net loss in 2008. For a further discussion of principal transactions revenue, see IB and Corporate/Private Equity segment results on pages 69–71 and 89–90, respectively, and Note 7 on pages 199–200 of this Annual Report.

Lending- and deposit-related fees rose from the prior year, predominantly reflecting the impact of the Washington Mutual transaction and organic growth in both lending- and deposit-related fees in RFS, CB, IB and TSS. For a further discussion of lending- and deposit-related fees, which are mostly recorded in RFS, TSS and CB, see the RFS segment results on pages 72–78, the TSS segment results on pages 84–85, and the CB segment results on pages 82–83 of this Annual Report.

The decline in asset management, administration and commissions revenue compared with the prior year was largely due to lower asset management fees in AM from the effect of lower market levels. Also contributing to the decrease were lower administration fees in TSS, driven by the effect of market depreciation on certain custody assets and lower securities lending balances; and lower brokerage commissions revenue in IB, predominantly related to lower transaction volume. For additional information on these fees and commissions, see the segment discussions for TSS and AM on pages 84–85 and pages 86–88, respectively, of this Annual Report.

Securities gains were lower in 2009 and included credit losses related to other-than-temporary impairment and lower gains on the sale of MasterCard shares totaling $241 million in 2009, compared with $668 million in 2008. These decreases were offset partially by higher gains from repositioning the Corporate investment securities portfolio in connection with managing the Firm's structural interest rate risk. For a further discussion of securities gains, which are mostly recorded in Corporate/Private Equity, see the Corporate/Private Equity segment discussion on pages 89–90 of this Annual Report.

Mortgage fees and related income increased slightly from the prior year, as higher net mortgage servicing revenue was largely offset by lower production revenue. The increase in net mortgage servicing revenue was driven by growth in average third-party loans serviced as a result of the Washington Mutual transaction. Mortgage production revenue declined from the prior year, reflecting an increase in estimated losses from the repurchase of previously-sold loans, offset partially by wider margins on new originations. For a discussion of mortgage fees and related income, which is recorded primarily in RFS, see RFS's Mortgage Banking, Auto & Other Consumer Lending discussion on pages 74–77 of this Annual Report.

Credit card income, which includes the impact of the Washington Mutual transaction, decreased slightly compared with the prior year, due to lower servicing fees earned in connection with CS securitization activities, largely as a result of higher credit losses. The decrease was partially offset by wider loan margins on securitized credit card loans; higher merchant servicing revenue related to the dissolution of the Chase Paymentech Solutions joint venture; and higher interchange income. For a further discussion of credit card income, see the CS segment results on pages 79–81 of this Annual Report.

Other income decreased from the prior year, due predominantly to the absence of $1.5 billion in proceeds from the sale of Visa shares as part of its initial public offering in the first quarter of 2008; a $1.0 billion gain on the dissolution of the Chase Paymentech Solutions joint venture in the fourth quarter of 2008; and lower net securitization income in CS. These items were partially offset by a $464 million charge recognized in 2008 related to the repurchase of auction-rate securities at par; the absence of a $423 million loss incurred in the second quarter of 2008, reflecting the Firm's 49.4% share of Bear Stearns's losses from April 8 to May 30, 2008; and higher valuations on certain investments, including seed capital in AM.

Net interest income increased from the prior year, driven by the Washington Mutual transaction, which contributed to higher average loans and deposits. The Firm's interest-earning assets were $1.7 trillion, and the net yield on those assets, on a fully taxable-equivalent ("FTE") basis, was 3.12%, an increase of 25 basis points from 2008. Excluding the impact of the Washington Mutual transaction, the increase in net interest income in 2009 was driven by a higher level of investment securities, as well as a wider net interest margin, which reflected the overall decline in market interest rates during the year. Declining interest rates had a positive effect on the net interest margin, as rates paid on the Firm's interest-bearing liabilities decreased faster relative to the decline in rates earned on interest-earning assets. These increases in net interest income were offset partially by lower loan balances, which included the effect of lower customer demand, repayments and charge-offs.

Provision for credit losses

Year ended December 31, (in millions)	2010	2009	2008
Wholesale	**$ (850)**	$ 3,974	$ 3,327
Consumer, excluding credit card[a]	**9,452**	16,022	10,610
Credit card[a]	**8,037**	12,019	7,042
Total provision for credit losses	**$16,639**	$ 32,015	$ 20,979

(a) Includes adjustments to the provision for credit losses recognized in the Corporate/Private Equity segment related to the Washington Mutual transaction in 2008.

2010 compared with 2009

The provision for credit losses declined by $15.4 billion compared with 2009, due to decreases in both the consumer and wholesale provisions. The decreases in the consumer provisions reflected reductions in the allowance for credit losses for mortgages and credit cards as a result of improved delinquency trends and lower estimated losses. This was partially offset by an increase in the allowance for credit losses associated with the Washington Mutual purchased credit-impaired loans portfolio, resulting from increased estimated future credit losses. The decrease in the wholesale provision in 2010 reflected a reduction in the allowance for credit losses, predominantly as a result of continued improvement in the credit quality of the commercial and industrial loan portfolio, reduced net charge-offs, and net repayments and loan sales. For a more detailed discussion of the loan portfolio and the allowance for credit losses, see the segment discussions for RFS on pages 72–78, CS on pages 79–81, IB on pages 69–71 and CB on pages 82–83, and the Allowance for Credit Losses section on pages 139–141 of this Annual Report.

2009 compared with 2008

The provision for credit losses in 2009 rose by $11.0 billion compared with the prior year, predominantly due to a significant increase in the consumer provision. The prior year included a $1.5 billion charge to conform Washington Mutual's allowance for loan losses, which affected both the consumer and wholesale portfolios. For the purpose of the following analysis, this charge is excluded. The consumer provision reflected additions to the allowance for loan losses for the home equity, mortgage and credit card portfolios, as weak economic conditions, housing price declines and higher unemployment rates continued to drive higher estimated losses for these portfolios. Included in the 2009 addition to the allowance for loan losses was a $1.6 billion provision related to estimated deterioration in the Washington Mutual purchased credit-impaired portfolio. The wholesale provision increased from the prior year, reflecting continued weakness in the credit environment in 2009 compared with the prior year. For a more detailed discussion of the loan portfolio and the allowance for loan losses, see the segment discussions for RFS on pages 72–78, CS on pages 79–81, IB on pages 69–71 and CB on pages 82–83, and the Allowance for Credit Losses section on pages 139–141 of this Annual Report.

Noninterest expense

Year ended December 31, (in millions)	2010	2009	2008
Compensation expense[a]	**$ 28,124**	$ 26,928	$ 22,746
Noncompensation expense:			
Occupancy expense	**3,681**	3,666	3,038
Technology, communications and equipment	**4,684**	4,624	4,315
Professional and outside services	**6,767**	6,232	6,053
Marketing	**2,446**	1,777	1,913
Other expense[b][c][d]	**14,558**	7,594	3,740
Amortization of intangibles	**936**	1,050	1,263
Total noncompensation expense	**33,072**	24,943	20,322
Merger costs	**—**	481	432
Total noninterest expense	**$ 61,196**	$ 52,352	$ 43,500

(a) Expense for 2010 included a payroll tax expense related to the U.K. Bank Payroll Tax on certain compensation awarded from December 9, 2009, to April 5, 2010, to relevant banking employees.
(b) In 2010, 2009 and 2008, included litigation expense of $7.4 billion, $161 million and a net benefit of $781 million, respectively.
(c) In 2010, 2009 and 2008, included foreclosed property expense of $1.0 billion, $1.4 billion and $213 million, respectively. For additional information regarding foreclosed property, see Note 11 on page 213 of this Annual Report.
(d) Expense for 2009 included a $675 million FDIC special assessment.

2010 compared with 2009

Total noninterest expense for 2010 was $61.2 billion, up by $8.8 billion, or 17%, from 2009. The increase was driven by higher noncompensation expense, largely due to higher litigation expense, and the effect of investments in the businesses.

Compensation expense increased from the prior year, predominantly due to higher salary expense related to investments in the businesses, including additional sales staff in RFS and client advisors in AM, and the impact of the U.K. Bank Payroll Tax.

In addition to the aforementioned higher litigation expense, which was largely for mortgage-related matters in Corporate and IB, the increase in noncompensation expense was driven by higher marketing expense in CS; higher professional services expense, due to continued investments in new product platforms in the businesses, including those related to international expansion; higher default-related expense, including costs associated with foreclosure affidavit-related suspensions (recorded in other expense), for the serviced portfolio in RFS; and higher brokerage, clearing and exchange transaction processing expense in IB. Partially offsetting these increases was the absence of a $675 million FDIC special assessment recognized in 2009. For a further discussion of litigation expense, see the Litigation reserve discussion in Note 32 pages 282–289 of this Annual Report. For a discussion of amortization of intangibles, refer to Note 17 on pages 260–263 of this Annual Report.

There were no merger costs recorded in 2010, compared with merger costs of $481 million in 2009. For additional information on merger costs, refer to Note 11 on page 213 of this Annual Report.

2009 compared with 2008

Total noninterest expense was $52.4 billion, up by $8.9 billion, or 20%, from the prior year. The increase was driven by the impact of the Washington Mutual transaction, higher performance-based compensation expense, higher FDIC-related costs, and increased mortgage servicing and default-related expense. These items were offset partially by lower headcount-related expense, including salary and benefits but excluding performance-based incentives, and other noncompensation costs related to employees.

Compensation expense increased in 2009 compared with the prior year, reflecting higher performance-based incentives, as well as the impact of the Washington Mutual transaction. Excluding these two items, compensation expense decreased as a result of a reduction in headcount, particularly in the wholesale businesses and in Corporate.

Noncompensation expense increased from the prior year, due predominantly to the following: the impact of the Washington Mutual transaction; higher ongoing FDIC insurance premiums and an FDIC special assessment of $675 million recognized in the second quarter of 2009; higher mortgage servicing and default-related expense, which included an increase in foreclosed property expense of $1.2 billion; higher litigation costs; and the effect of the dissolution of the Chase Paymentech Solutions joint venture. These increases were partially offset by lower headcount-related expense, particularly in IB, TSS and AM; a decrease in amortization of intangibles, predominantly related to purchased credit card relationships; lower mortgage reinsurance losses; and a decrease in credit card marketing expense. For a discussion of amortization of intangibles, refer to Note 17 on pages 260–263 of this Annual Report.

For information on merger costs, refer to Note 11 on page 213 of this Annual Report.

Income tax expense

Year ended December 31, (in millions, except rate)	**2010**	2009	2008
Income before income tax expense/ (benefit) and extraordinary gain	**$ 24,859**	$ 16,067	$ 2,773
Income tax expense/(benefit)	**7,489**	4,415	(926)
Effective tax rate	**30.1%**	27.5%	(33.4)%

2010 compared with 2009

The increase in the effective tax rate compared with the prior year was primarily the result of higher reported pretax book income, as well as changes in the proportion of income subject to U.S. federal and state and local taxes. These increases were partially offset by increased benefits associated with the undistributed earnings of certain non-U.S. subsidiaries that were deemed to be reinvested indefinitely, as well as tax benefits recognized upon the resolution of tax audits in 2010. For additional information on income taxes, see Critical Accounting Estimates Used by the Firm on pages 149–154 and Note 27 on pages 271–273 of this Annual Report.

2009 compared with 2008

The change in the effective tax rate compared with the prior year was primarily the result of higher reported pretax income and changes in the proportion of income subject to U.S. federal, state and local taxes. Benefits related to tax-exempt income, business tax credits and tax audit settlements increased in 2009 relative to 2008; however, the impact of these items on the effective tax rate was reduced by the significantly higher level of pretax income in 2009. In addition, 2008 reflected the realization of benefits of $1.1 billion from the release of deferred tax liabilities associated with the undistributed earnings of certain non-U.S. subsidiaries that were deemed to be reinvested indefinitely.

Extraordinary gain

On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual. This transaction was accounted for under the purchase method of accounting for business combinations. The adjusted net asset value of the banking operations after purchase accounting adjustments was higher than the consideration paid by JPMorgan Chase, resulting in an extraordinary gain. The preliminary gain recognized in 2008 was $1.9 billion. In the third quarter of 2009, the Firm recognized an additional $76 million extraordinary gain associated with the final purchase accounting adjustments for the acquisition. For a further discussion of the Washington Mutual transaction, see Note 2 on pages 166–170 of the Firm's 2009 Annual Report.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its consolidated financial statements using accounting principles generally accepted in the U.S. ("U.S. GAAP"); these financial statements appear on pages 160–163 of this Annual Report. That presentation, which is referred to as "reported basis," provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a FTE basis. Accordingly, revenue from tax-exempt securities and investments that receive tax credits is presented in the managed results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to these items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Prior to January 1, 2010, the Firm's managed-basis presentation also included certain reclassification adjustments that assumed credit card loans securitized by CS remained on the balance sheet. Effective January 1, 2010, the Firm adopted accounting guidance that required the Firm to consolidate its Firm-sponsored credit card securitization trusts. The income, expense and credit costs associated with these securitization activities are now recorded in the 2010 Consolidated Statements of Income in the same classifications that were previously used to report such items on a managed basis. As a result of the consolidation of the credit card securitization trusts, reported and managed basis relating to credit card securitizations are equivalent for periods beginning after January 1, 2010. For additional information on the accounting guidance, see Note 16 on pages 244–259 of this Annual Report.

The presentation in 2009 and 2008 of CS results on a managed basis assumed that credit card loans that had been securitized and sold in accordance with U.S. GAAP remained on the Consolidated Balance

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

(Table continues on next page)

	2010				2009			
Year ended December 31, (in millions, except per share and ratio data)	Reported results	Credit card(c)	Fully tax-equivalent adjustments	Managed basis	Reported results	Credit card(c)	Fully tax-equivalent adjustments	Managed basis
Revenue								
Investment banking fees	**$ 6,190**	**NA**	**$ —**	**$ 6,190**	$ 7,087	$ —	$ —	$ 7,087
Principal transactions	**10,894**	**NA**	**—**	**10,894**	9,796	—	—	9,796
Lending- and deposit-related fees	**6,340**	**NA**	**—**	**6,340**	7,045	—	—	7,045
Asset management, administration and commissions	**13,499**	**NA**	**—**	**13,499**	12,540	—	—	12,540
Securities gains	**2,965**	**NA**	**—**	**2,965**	1,110	—	—	1,110
Mortgage fees and related income	**3,870**	**NA**	**—**	**3,870**	3,678	—	—	3,678
Credit card income	**5,891**	**NA**	**—**	**5,891**	7,110	(1,494)	—	5,616
Other income	**2,044**	**NA**	**1,745**	**3,789**	916	—	1,440	2,356
Noninterest revenue	**51,693**	**NA**	**1,745**	**53,438**	49,282	(1,494)	1,440	49,228
Net interest income	**51,001**	**NA**	**403**	**51,404**	51,152	7,937	330	59,419
Total net revenue	**102,694**	**NA**	**2,148**	**104,842**	100,434	6,443	1,770	108,647
Noninterest expense	**61,196**	**NA**	**—**	**61,196**	52,352	—	—	52,352
Pre-provision profit	**41,498**	**NA**	**2,148**	**43,646**	48,082	6,443	1,770	56,295
Provision for credit losses	**16,639**	**NA**	**—**	**16,639**	32,015	6,443	—	38,458
Provision for credit losses – accounting conformity[a]	**—**	**NA**	**—**	**—**	—	—	—	—
Income before income tax expense/ (benefit) and extraordinary gain	**24,859**	**NA**	**2,148**	**27,007**	16,067	—	1,770	17,837
Income tax expense/(benefit)	**7,489**	**NA**	**2,148**	**9,637**	4,415	—	1,770	6,185
Income before extraordinary gain	**17,370**	**NA**	**—**	**17,370**	11,652	—	—	11,652
Extraordinary gain	**—**	**NA**	**—**	**—**	76	—	—	76
Net income	**$ 17,370**	**NA**	**$ —**	**$ 17,370**	$ 11,728	$ —	$ —	$ 11,728
Diluted earnings per share[b]	**$ 3.96**	**NA**	**$ —**	**$ 3.96**	$ 2.24	$ —	$ —	$ 2.24
Return on assets[b]	**0.85%**	**NA**	**NM**	**0.85%**	0.58%	NM	NM	0.55%
Overhead ratio	**60**	**NA**	**NM**	**58**	52	NM	NM	48
Loans – period-end	**$ 692,927**	**NA**	**$ —**	**$ 692,927**	$ 633,458	$ 84,626	$ —	$ 718,084
Total assets – average	**2,053,251**	**NA**	**—**	**2,053,251**	2,024,201	82,233	—	2,106,434

(a) 2008 included an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual's banking operations.
(b) Based on income before extraordinary gain.
(c) See pages 79–81 of this Annual Report for a discussion of the effect of credit card securitizations on CS results.

NA: Not applicable

Sheets, and that the earnings on the securitized loans were classified in the same manner as the earnings on retained loans recorded on the Consolidated Balance Sheets. JPMorgan Chase had used this managed-basis information to evaluate the credit performance and overall financial performance of the entire managed credit card portfolio. Operations were funded and decisions were made about allocating resources, such as employees and capital, based on managed financial information. In addition, the same underwriting standards and ongoing risk monitoring are used for both loans on the Consolidated Balance Sheets and securitized loans. Although securitizations result in the sale of credit card receivables to a trust, JPMorgan Chase retains the ongoing customer relationships, as the customers may continue to use their credit cards; accordingly, the customer's credit performance affects both the securitized loans and the loans retained on the Consolidated Balance Sheets. JPMorgan Chase believed that this managed-basis information was useful to investors, as it enabled them to understand both the credit risks associated with the loans reported on the Consolidated Balance Sheets and the Firm's retained interests in securitized loans. For a reconciliation of 2009 and 2008 reported to managed basis results for CS, see CS segment results on pages 79–81 of this Annual Report. For information regarding the securitization process, and loans and residual interests sold and securitized, see Note 16 on pages 244–259 of this Annual Report.

Tangible common equity ("TCE") represents common stockholders' equity (i.e., total stockholders' equity less preferred stock) less identifiable intangible assets (other than mortgage servicing rights ("MSRs")) and goodwill, net of related deferred tax liabilities. ROTCE, a non-GAAP financial ratio, measures the Firm's earnings as a percentage of TCE and is, in management's view, a meaningful measure to assess the Firm's use of equity.

Management also uses certain non-GAAP financial measures at the business-segment level, because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and, therefore, facilitate a comparison of the business segment with the performance of its competitors. Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

(Table continued from previous page)

	2008		
Reported results	Credit card[c]	Fully tax-equivalent adjustments	Managed basis
$ 5,526	$ —	$ —	$ 5,526
(10,699)	—	—	(10,699)
5,088	—	—	5,088
13,943	—	—	13,943
1,560	—	—	1,560
3,467	—	—	3,467
7,419	(3,333)	—	4,086
2,169	—	1,329	3,498
28,473	(3,333)	1,329	26,469
38,779	6,945	579	46,303
67,252	3,612	1,908	72,772
43,500	—	—	43,500
23,752	3,612	1,908	29,272
19,445	3,612	—	23,057
1,534	—	—	1,534
2,773	—	1,908	4,681
(926)	—	1,908	982
3,699	—	—	3,699
1,906	—	—	1,906
$ 5,605	$ —	$ —	$ 5,605
$ 0.81	$ —	$ —	$ 0.81
0.21%	NM	NM	0.20%
65	NM	NM	60
$ 744,898	$ 85,571	$ —	$ 830,469
1,791,617	76,904	—	1,868,521

Calculation of certain U.S. GAAP and non-GAAP metrics

The table below reflects the formulas used to calculate both the following U.S. GAAP and non-GAAP measures.

Return on common equity
Net income* / Average common stockholders' equity

Return on tangible common equity[d]
Net income* / Average tangible common equity

Return on assets
Reported net income / Total average assets
Managed net income / Total average managed assets[e] (including average securitized credit card receivables)

Overhead ratio
Total noninterest expense / Total net revenue

* Represents net income applicable to common equity

(d) The Firm uses ROTCE, a non-GAAP financial measure, to evaluate its use of equity and to facilitate comparisons with competitors. Refer to the following page for the calculation of average tangible common equity.

(e) The Firm uses return on managed assets, a non-GAAP financial measure, to evaluate the overall performance of the managed credit card portfolio, including securitized credit card loans.

Average tangible common equity

Year ended December 31, (in millions)	2010	2009	2008
Common stockholders' equity	**$ 161,520**	$ 145,903	$ 129,116
Less: Goodwill	**48,618**	48,254	46,068
Less: Certain identifiable intangible assets	**4,178**	5,095	5,779
Add: Deferred tax liabilities[a]	**2,587**	2,547	2,369
Tangible Common Equity	**$ 111,311**	$ 95,101	$ 79,638

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in non-taxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Impact of TARP preferred stock issued to the U.S. Treasury

The calculation of 2009 net income applicable to common equity included a one-time, noncash reduction of $1.1 billion resulting from the repayment of TARP preferred capital. Excluding this reduction, ROE would have been 7% for 2009. The Firm views adjusted ROE, a non-GAAP financial measure, as meaningful because it enables the comparability to prior periods.

Year ended December 31, 2009 (in millions, except ratios)	As reported	Excluding the TARP redemption
Return on equity		
Net income	$ 11,728	$ 11,728
Less: Preferred stock dividends	1,327	1,327
Less: Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	1,112	—
Net income applicable to common equity	9,289	10,401
Average common stockholders' equity	$145,903	$ 145,903
ROE	6%	7%

In addition, the calculated net income applicable to common equity for the year ended December 31, 2009, was also affected by the TARP repayment. The following table presents the effect on net income applicable to common stockholders and the $0.27 reduction to diluted earnings per share ("EPS") for the year ended December 31, 2009.

Year ended December 31, 2009 (in millions, except per share)	As reported	Effect of TARP redemption
Diluted earnings per share		
Net income	$ 11,728	$ —
Less: Preferred stock dividends	1,327	—
Less: Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	1,112	1,112
Net income applicable to common equity	9,289	(1,112)
Less: Dividends and undistributed earnings allocated to participating securities	515	(62)
Net income applicable to common stockholders	8,774	(1,050)
Total weighted average diluted shares outstanding	3,879.7	3,879.7
Net income per share	$ 2.26	$ (0.27)

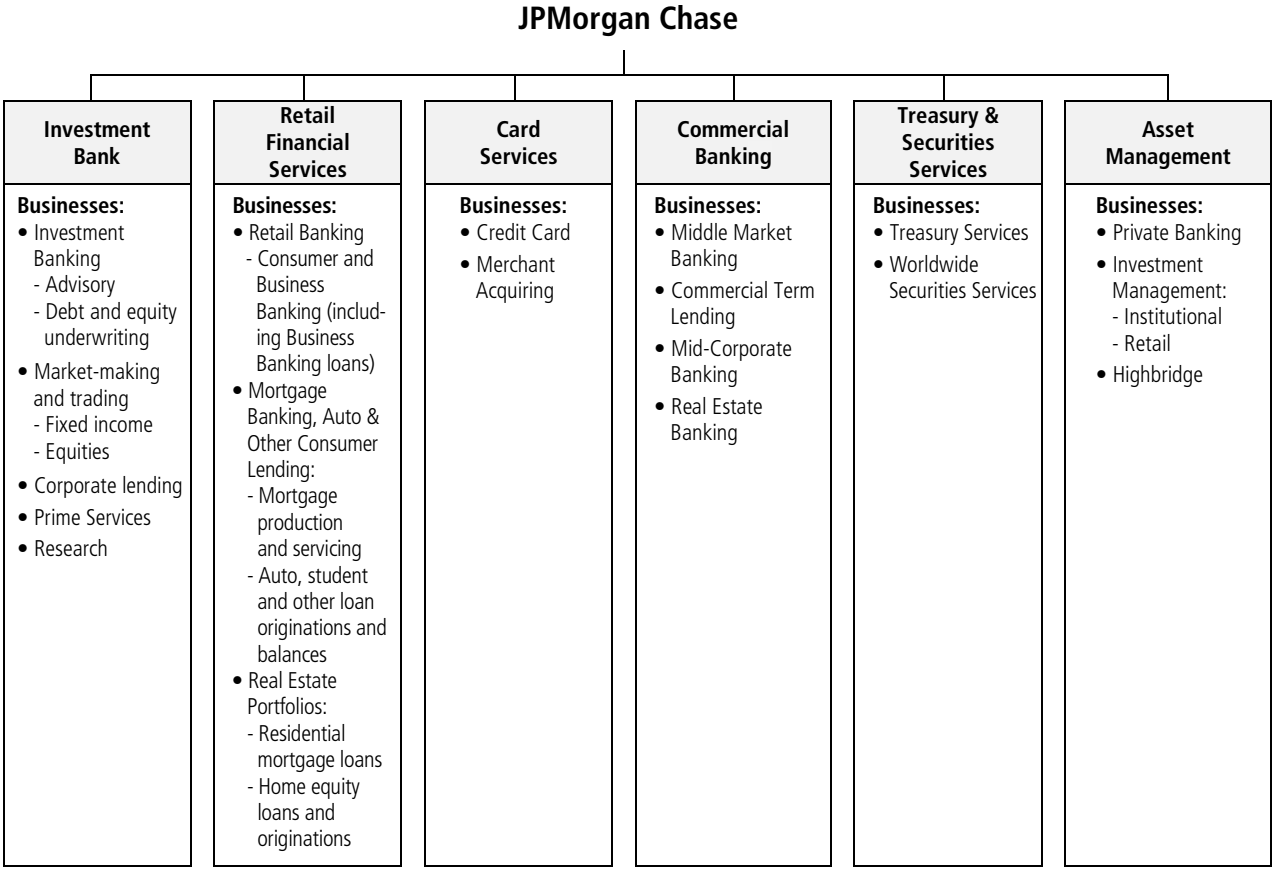
Other financial measures

The Firm also discloses the allowance for loan losses to total retained loans, excluding home lending purchased credit-impaired loans and loans held by the Washington Mutual Master Trust ("WMMT"). For a further discussion of this credit metric, see Allowance for Credit Losses on pages 139–141 of this Annual Report.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line of business basis. The business segment financial results presented reflect the current organization of JPMorgan Chase. There are six major reportable business segments: Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate/Private Equity segment.

The business segments are determined based on the products and services provided, or the type of customer served, and reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis.



Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies. Business segment reporting methodologies used by the Firm are discussed below. The Firm continues to assess the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing

Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Treasury group within the Corporate/Private Equity business segment. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment's stand-alone peers. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO"). Business segments may be permitted to retain certain interest rate exposures subject to management approval.

Capital allocation

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, economic risk measures and regulatory capital requirements. The amount of capital assigned to each business is referred to as equity. Effective January 1, 2010, the Firm enhanced its line-of-business equity framework to better align equity assigned to each line of business as a result of the changes anticipated to occur in the business, and in the competitive and regulatory landscape. The lines of business are now capitalized based on the Tier 1 common standard, rather than the Tier 1 capital standard. For a further discussion of the changes, see Capital Management – Line of business equity on page 105 of this Annual Report.

Expense allocation

Where business segments use services provided by support units within the Firm, the costs of those support units are allocated to the business segments. The expense is allocated based on their actual cost or the lower of actual cost or market, as well as upon usage of the services provided. In contrast, certain other expense related to certain corporate functions, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Retained expense includes: parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other one-time items not aligned with a particular business segment.

Segment results – Managed basis[a]

The following table summarizes the business segment results for the periods indicated.

Year ended December 31,	Total net revenue			Noninterest expense		
(in millions)	**2010**	2009	2008	**2010**	2009	2008
Investment Bank[b]	**$ 26,217**	$ 28,109	$ 12,335	**$ 17,265**	$ 15,401	$ 13,844
Retail Financial Services	**31,756**	32,692	23,520	**17,864**	16,748	12,077
Card Services	**17,163**	20,304	16,474	**5,797**	5,381	5,140
Commercial Banking	**6,040**	5,720	4,777	**2,199**	2,176	1,946
Treasury & Securities Services	**7,381**	7,344	8,134	**5,604**	5,278	5,223
Asset Management	**8,984**	7,965	7,584	**6,112**	5,473	5,298
Corporate/Private Equity[b]	**7,301**	6,513	(52)	**6,355**	1,895	(28)
Total	**$104,842**	$ 108,647	$ 72,772	**$ 61,196**	$ 52,352	$ 43,500

Year ended December 31,	Pre-provision profit[d]			Provision for credit losses		
(in millions)	**2010**	2009	2008	**2010**	2009	2008
Investment Bank[b]	**$ 8,952**	$ 12,708	$ (1,509)	**$ (1,200)**	$ 2,279	$ 2,015
Retail Financial Services	**13,892**	15,944	11,443	**9,452**	15,940	9,905
Card Services	**11,366**	14,923	11,334	**8,037**	18,462	10,059
Commercial Banking	**3,841**	3,544	2,831	**297**	1,454	464
Treasury & Securities Services	**1,777**	2,066	2,911	**(47)**	55	82
Asset Management	**2,872**	2,492	2,286	**86**	188	85
Corporate/Private Equity[b]	**946**	4,618	(24)	**14**	80	1,981
Total	**$ 43,646**	$ 56,295	$ 29,272	**$ 16,639**	$ 38,458	$ 24,591

Year ended December 31,	Net income/(loss)			Return on equity		
(in millions)	**2010**	2009	2008	**2010**	2009	2008
Investment Bank[b]	**$ 6,639**	$ 6,899	$ (1,175)	**17%**	21%	(5)%
Retail Financial Services	**2,526**	97	880	**9**	—	5
Card Services	**2,074**	(2,225)	780	**14**	(15)	5
Commercial Banking	**2,084**	1,271	1,439	**26**	16	20
Treasury & Securities Services	**1,079**	1,226	1,767	**17**	25	47
Asset Management	**1,710**	1,430	1,357	**26**	20	24
Corporate/Private Equity[b][c]	**1,258**	3,030	557	**NM**	NM	NM
Total	**$ 17,370**	$ 11,728	$ 5,605	**10%**	6%	4%

(a) Represents reported results on a tax-equivalent basis. The managed basis also assumes that credit card loans in Firm-sponsored credit card securitization trusts remained on the balance sheet for 2009 and 2008. Firm-sponsored credit card securitizations were consolidated at their carrying values on January 1, 2010, under the accounting guidance related to VIEs.

(b) IB reports its credit reimbursement from TSS as a component of its total net revenue, whereas TSS reports its credit reimbursement to IB as a separate line item on its income statement (not part of total net revenue). Corporate/Private Equity includes an adjustment to offset IB's inclusion of the credit reimbursement in total net revenue.

(c) Net income included an extraordinary gain of $76 million and $1.9 billion related to the Washington Mutual transaction for 2009 and 2008, respectively.

(d) Pre-provision profit is total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The clients of IB are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage, and research.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2010	2009	2008[e]
Revenue			
Investment banking fees	**$ 6,186**	$ 7,169	$ 5,907
Principal transactions[a]	**8,454**	8,154	(7,042)
Lending- and deposit-related fees	**819**	664	463
Asset management, administration and commissions	**2,413**	2,650	3,064
All other income[b]	**381**	(115)	(341)
Noninterest revenue	**18,253**	18,522	2,051
Net interest income	**7,964**	9,587	10,284
Total net revenue[c]	**26,217**	28,109	12,335
Provision for credit losses	**(1,200)**	2,279	2,015
Noninterest expense			
Compensation expense	**9,727**	9,334	7,701
Noncompensation expense	**7,538**	6,067	6,143
Total noninterest expense	**17,265**	15,401	13,844
Income/(loss) before income tax expense/(benefit)	**10,152**	10,429	(3,524)
Income tax expense/(benefit)[d]	**3,513**	3,530	(2,349)
Net income/(loss)	**$ 6,639**	$ 6,899	$ (1,175)
Financial ratios			
ROE	**17%**	21%	(5)%
ROA	**0.91**	0.99	(0.14)
Overhead ratio	**66**	55	112
Compensation expense as % of total net revenue[f]	**37**	33	62

(a) The 2009 results reflect modest net gains on legacy leveraged lending and mortgage-related positions, compared with net markdowns of $10.6 billion in 2008.
(b) TSS was charged a credit reimbursement related to certain exposures managed within IB's credit portfolio on behalf of clients shared with TSS. IB recognizes this credit reimbursement in its credit portfolio business in all other income.
(c) Total net revenue included tax-equivalent adjustments, predominantly due to income tax credits related to affordable housing and alternative energy investments as well as tax-exempt income from municipal bond investments of $1.7 billion, $1.4 billion and $1.7 billion for 2010, 2009 and 2008, respectively.
(d) The income tax benefit in 2008 includes the result of reduced deferred tax liabilities on overseas earnings.
(e) Results for 2008 include seven months of the combined Firm's (JPMorgan Chase & Co.'s and Bear Stearns') results and five months of heritage JPMorgan Chase results.
(f) The compensation expense as a percentage of total net revenue ratio includes the impact of the U.K. Bank Payroll Tax on certain compensation awarded from December 9, 2009 to April 5, 2010 to relevant banking employees. For comparability to prior periods, IB excludes the impact of the U.K. Bank Payroll Tax expense, which results in a compensation expense as a percentage of total net revenue for 2010 of 35%, which is a non-GAAP financial measure.

The following table provides IB's total net revenue by business segment.

Year ended December 31, (in millions)	2010	2009	2008[e]
Revenue by business			
Investment banking fees:			
Advisory	**$ 1,469**	$ 1,867	$ 2,008
Equity underwriting	**1,589**	2,641	1,749
Debt underwriting	**3,128**	2,661	2,150
Total investment banking fees	**6,186**	7,169	5,907
Fixed income markets[a]	**15,025**	17,564	1,957
Equity markets[b]	**4,763**	4,393	3,611
Credit portfolio[c][d]	**243**	(1,017)	860
Total net revenue	**$ 26,217**	$ 28,109	$12,335
Revenue by region[d]			
Americas	**$ 15,189**	$ 15,156	$ 2,610
Europe/Middle East/Africa	**7,405**	9,790	7,710
Asia/Pacific	**3,623**	3,163	2,015
Total net revenue	**$ 26,217**	$ 28,109	$12,335

(a) Fixed income markets primarily include revenue related to market-making across global fixed income markets, including foreign exchange, interest rate, credit and commodities markets.
(b) Equities markets primarily include revenue related to market-making across global equity products, including cash instruments, derivatives, convertibles and prime services.
(c) Credit portfolio revenue includes net interest income, fees and loan sale activity, as well as gains or losses on securities received as part of a loan restructuring, for IB's credit portfolio. Credit portfolio revenue also includes the results of risk management related to the Firm's lending and derivative activities. See pages 116–118 of the Credit Risk Management section of this Annual Report for further discussion.
(d) TSS was charged a credit reimbursement related to certain exposures managed within IB's credit portfolio on behalf of clients shared with TSS. IB recognizes this credit reimbursement in its credit portfolio business in all other income.
(e) Results for 2008 include seven months of the combined Firm's (JPMorgan Chase & Co.'s and Bear Stearns') results and five months of heritage JPMorgan Chase & Co. results.

2010 compared with 2009

Net income was $6.6 billion, down 4% compared with the prior year. These results primarily reflected lower net revenue as well as higher noninterest expense, largely offset by a benefit from the provision for credit losses, compared with an expense in the prior year.

Net revenue was $26.2 billion, compared with $28.1 billion in the prior year. Investment banking fees were $6.2 billion, down 14% from the prior year; these consisted of record debt underwriting fees of $3.1 billion (up 18%), equity underwriting fees of $1.6 billion (down 40%), and advisory fees of $1.5 billion (down 21%). Fixed Income Markets revenue was $15.0 billion, compared with $17.6 billion in the prior year. The decrease from the prior year largely reflected lower results in rates and credit markets, partially offset by gains of $287 million from the widening of the Firm's credit spread on certain structured liabilities, compared with losses of $1.1 billion in the prior year. Equity Markets revenue was $4.8 billion, compared with $4.4 billion in the prior year, reflecting solid client revenue, as well as gains of $181 million from the widening of the Firm's credit spread on certain structured liabilities, compared with losses of $596 million in the prior year. Credit Portfolio revenue was $243 million, primarily reflecting net interest income and fees on loans, partially offset by the negative impact of

credit spreads on derivative assets and mark-to-market losses on hedges of retained loans.

The provision for credit losses was a benefit of $1.2 billion, compared with an expense of $2.3 billion in the prior year. The current-year provision reflected a reduction in the allowance for loan losses, largely related to net repayments and loan sales. Net charge-offs were $735 million, compared with $1.9 billion in the prior year.

Noninterest expense was $17.3 billion, up $1.9 billion from the prior year, driven by higher noncompensation expense, which included increased litigation reserves, and higher compensation expense which included the impact of the U.K. Bank Payroll Tax.

Return on Equity was 17% on $40.0 billion of average allocated capital.

2009 compared with 2008

Net income was $6.9 billion, compared with a net loss of $1.2 billion in the prior year. These results reflected significantly higher total net revenue, partially offset by higher noninterest expense and a higher provision for credit losses.

Total net revenue was $28.1 billion, compared with $12.3 billion in the prior year. Investment banking fees were up 21% to $7.2 billion, consisting of debt underwriting fees of $2.7 billion (up 24%), equity underwriting fees of $2.6 billion (up 51%), and advisory fees of $1.9 billion (down 7%). Fixed Income Markets revenue was $17.6 billion, compared with $2.0 billion in the prior year, reflecting improved performance across most products and modest net gains on legacy leveraged lending and mortgage-related positions, compared with net markdowns of $10.6 billion in the prior year. Equity Markets revenue was $4.4 billion, up 22% from the prior year, driven by strong client revenue across products, particularly prime services, and improved trading results. Fixed Income and Equity Markets results also included losses of $1.7 billion from the tightening of the Firm's credit spread on certain structured liabilities, compared with gains of $1.2 billion in the prior year. Credit Portfolio revenue was a loss of $1.0 billion versus a gain of $860 million in the prior year, driven by mark-to-market losses on hedges of retained loans compared with gains in the prior year, partially offset by the positive net impact of credit spreads on derivative assets and liabilities.

The provision for credit losses was $2.3 billion, compared with $2.0 billion in the prior year, reflecting continued weakness in the credit environment. The allowance for loan losses to end-of-period loans retained was 8.25%, compared with 4.83% in the prior year. Net charge-offs were $1.9 billion, compared with $105 million in the prior year. Total nonperforming assets were $4.2 billion, compared with $2.5 billion in the prior year.

Noninterest expense was $15.4 billion, up $1.6 billion, or 11%, from the prior year, driven by higher performance-based compensation expense, partially offset by lower headcount-related expense.

Return on Equity was 21% on $33.0 billion of average allocated capital, compared with negative 5% on $26.1 billion of average allocated capital in the prior year.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2010	2009	2008
Selected balance sheet data (period-end)			
Loans:(a)			
Loans retained(b)	**$ 53,145**	$ 45,544	$ 71,357
Loans held-for-sale and loans at fair value	**3,746**	3,567	13,660
Total loans	**56,891**	49,111	85,017
Equity	**40,000**	33,000	33,000
Selected balance sheet data (average)			
Total assets	**$ 731,801**	$ 699,039	$ 832,729
Trading assets – debt and equity instruments	**307,061**	273,624	350,812
Trading assets – derivative receivables	**70,289**	96,042	112,337
Loans: (a)			
Loans retained(b)	**54,402**	62,722	73,108
Loans held-for-sale and loans at fair value	**3,215**	7,589	18,502
Total loans	**57,617**	70,311	91,610
Adjusted assets(c)	**540,449**	538,724	679,780
Equity	**40,000**	33,000	26,098
Headcount	**26,314**	24,654	27,938

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated its Firm-administered multi-seller conduits. As a result, $15.1 billion of related loans were recorded in loans on the Consolidated Balance Sheets.

(b) Loans retained included credit portfolio loans, leveraged leases and other accrual loans, and excluded loans held-for-sale and loans at fair value.

(c) Adjusted assets, a non-GAAP financial measure, equals total assets minus (1) securities purchased under resale agreements and securities borrowed less securities sold, not yet purchased; (2) assets of variable interest entities ("VIEs"); (3) cash and securities segregated and on deposit for regulatory and other purposes; (4) goodwill and intangibles; (5) securities received as collateral; and (6) investments purchased under the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility ("AML Facility"). The amount of adjusted assets is presented to assist the reader in comparing IB's asset and capital levels to other investment banks in the securities industry. Asset-to-equity leverage ratios are commonly used as one measure to assess a company's capital adequacy. IB believes an adjusted asset amount that excludes the assets discussed above, which were considered to have a low risk profile, provides a more meaningful measure of balance sheet leverage in the securities industry.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2010	2009	2008
Credit data and quality statistics			
Net charge-offs	**$ 735**	$ 1,904	$ 105
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[a][b]	**3,159**	3,196	1,143
Nonaccrual loans held-for-sale and loans at fair value	**460**	308	32
Total nonperforming loans	**3,619**	3,504	1,175
Derivative receivables	**34**	529	1,079
Assets acquired in loan satisfactions	**117**	203	247
Total nonperforming assets	**3,770**	4,236	2,501
Allowance for credit losses:			
Allowance for loan losses	**1,863**	3,756	3,444
Allowance for lending-related commitments	**447**	485	360
Total allowance for credit losses	**2,310**	4,241	3,804
Net charge-off rate[a][c]	**1.35%**	3.04%	0.14%
Allowance for loan losses to period-end loans retained[a][c]	**3.51**	8.25	4.83
Allowance for loan losses to average loans retained[a][c][d]	**3.42**	5.99	4.71[i]
Allowance for loan losses to nonaccrual loans retained[a][b][c]	**59**	118	301
Nonaccrual loans to total period-end loans	**6.36**	7.13	1.38
Nonaccrual loans to average loans	**6.28**	4.98	1.28
Market risk–average trading and credit portfolio VaR – 95% confidence level[e]			
Trading activities:			
Fixed income	**$ 65**	$ 160	$ 162
Foreign exchange	**11**	18	23
Equities	**22**	47	47
Commodities and other	**16**	20	23
Diversification[f]	**(43)**	(91)	(88)
Total trading VaR[g]	**71**	154	167
Credit portfolio VaR[h]	**26**	52	45
Diversification[f]	**(10)**	(42)	(36)
Total trading and credit portfolio VaR	**$ 87**	$ 164	$ 176

(a) Loans retained included credit portfolio loans, leveraged leases and other accrual loans, and excluded loans held-for-sale and loans accounted for at fair value.
(b) Allowance for loan losses of $1.1 billion, $1.3 billion and $430 million were held against these nonaccural loans at December 31, 2010, 2009 and 2008, respectively.
(c) Loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratio and net charge-off rate.
(d) Results for 2008 include seven months of the combined Firm's (JPMorgan Chase & Co.'s and Bear Stearns') results and five months of heritage JPMorgan Chase & Co.'s results only.
(e) For 2008, 95% VaR reflects data only for the last six months of the year as the Firm began to calculate VaR using a 95% confidence level effective in the third quarter of 2008, rather than the prior 99% confidence level.
(f) Average value-at-risk ("VaR") was less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects the fact that the risks were not perfectly correlated. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves.
(g) Trading VaR includes predominantly all trading activities in IB, as well as syndicated lending facilities that the Firm intends to distribute; however, particular risk parameters of certain products are not fully captured, for example, correlation risk. Trading VaR does not include the debit valuation adjustments ("DVA") taken on derivative and structured liabilities to reflect the credit quality of the Firm. See VaR discussion on pages 142–146 and the DVA Sensitivity table on page 144 of this Annual Report for further details. Trading VaR includes the estimated credit spread sensitivity of certain mortgage products.
(h) Credit portfolio VaR includes the derivative credit valuation adjustments ("CVA"), hedges of the CVA and mark-to-market ("MTM") hedges of the retained loan portfolio, which were all reported in principal transactions revenue. This VaR does not include the retained loan portfolio.
(i) Excluding the impact of a loan originated in March 2008 to Bear Stearns, the adjusted ratio would be 4.84% for 2008. The average balance of the loan extended to Bear Stearns was $1.9 billion for 2008.

Market shares and rankings[a]

Year ended December 31,	2010 Market share	2010 Rankings	2009 Market share	2009 Rankings	2008 Market share	2008 Rankings
Global investment banking fees [b]	**8%**	**#1**	9%	#1	9%	#2
Debt, equity and equity-related						
Global	**7**	**1**	9	1	8	2
U.S.	**11**	**2**	15	1	14	2
Syndicated loans						
Global	**9**	**1**	8	1	9	1
U.S.	**19**	**2**	22	1	22	1
Long-term debt [c]						
Global	**7**	**2**	8	1	8	3
U.S.	**11**	**2**	14	1	14	2
Equity and equity-related						
Global[d]	**7**	**3**	12	1	12	2
U.S.	**13**	**2**	16	2	16	2
Announced M&A[e]						
Global	**16**	**4**	24	3	25	1
U.S.	**23**	**3**	36	2	31	2

(a) Source: Dealogic. Global Investment Banking fees reflects ranking of fees and market share. Remainder of rankings reflects transaction volume rank and market share. Results for 2008 are pro forma for the Bear Stearns merger.
(b) Global IB fees exclude money market, short-term debt and shelf deals.
(c) Long-term debt tables include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities and mortgage-backed securities; and exclude money market, short-term debt, and U.S. municipal securities.
(d) Equity and equity-related rankings include rights offerings and Chinese A-Shares.
(e) Global announced M&A is based on transaction value at announcement; all other rankings are based on transaction proceeds, with full credit to each book manager/equal if joint. Because of joint assignments, market share of all participants will add up to more than 100%. M&A for 2010, 2009 and 2008, reflects the removal of any withdrawn transactions. U.S. announced M&A represents any U.S. involvement ranking.

According to Dealogic, the Firm was ranked #1 in Global Investment Banking Fees generated during 2010, based on revenue; #1 in Global Debt, Equity and Equity-related; #1 in Global Syndicated Loans; #2 in Global Long-Term Debt; #3 in Global Equity and Equity-related; and #4 in Global Announced M&A, based on volume.

RETAIL FINANCIAL SERVICES

Retail Financial Services ("RFS") serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking, as well as through auto dealerships and school financial-aid offices. Customers can use more than 5,200 bank branches (third-largest nationally) and 16,100 ATMs (second-largest nationally), as well as online and mobile banking around the clock. More than 28,900 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. Consumers also can obtain loans through more than 16,200 auto dealerships and 2,200 schools and universities nationwide.

Prior to January 1, 2010, RFS was reported as: Retail Banking and Consumer Lending. Commencing in 2010, Consumer Lending is presented as: (1) Mortgage Banking, Auto & Other Consumer Lending, and (2) Real Estate Portfolios. Mortgage Banking, Auto & Other Consumer Lending comprises mortgage production and servicing, auto finance, and student and other lending activities. Real Estate Portfolios comprises residential mortgages and home equity loans, including the purchased credit-impaired portfolio acquired in the Washington Mutual transaction. These reporting revisions were intended to provide further clarity around the Real Estate Portfolios. Retail Banking, which includes branch banking and business banking activities, was not affected by these reporting revisions.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2010	2009	2008
Revenue			
Lending- and deposit-related fees	**$ 3,117**	$ 3,969	$ 2,546
Asset management, administration and commissions	**1,784**	1,674	1,510
Mortgage fees and related income	**3,855**	3,794	3,621
Credit card income	**1,956**	1,635	939
Other income	**1,516**	1,128	739
Noninterest revenue	**12,228**	12,200	9,355
Net interest income	**19,528**	20,492	14,165
Total net revenue(a)	**31,756**	32,692	23,520
Provision for credit losses	**9,452**	15,940	9,905
Noninterest expense			
Compensation expense	**7,432**	6,712	5,068
Noncompensation expense	**10,155**	9,706	6,612
Amortization of intangibles	**277**	330	397
Total noninterest expense	**17,864**	16,748	12,077
Income before income tax expense/(benefit)	**4,440**	4	1,538
Income tax expense/(benefit)	**1,914**	(93)	658
Net income	**$ 2,526**	$ 97	$ 880
Financial ratios			
ROE	**9%**	—%	5%
Overhead ratio	**56**	51	51
Overhead ratio excluding core deposit intangibles(b)	**55**	50	50

(a) Total net revenue included tax-equivalent adjustments associated with tax-exempt loans to municipalities and other qualified entities of $15 million, $22 million and $23 million for the years ended December 31, 2010, 2009 and 2008, respectively.

(b) RFS uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation would result in a higher overhead ratio in the earlier years and a lower overhead ratio in later years. This method would therefore result in an improving overhead ratio over time, all things remaining equal. The non-GAAP ratio excludes Retail Banking's CDI amortization expense related to prior business combination transactions of $276 million, $328 million and $394 million for the years ended December 31, 2010, 2009 and 2008, respectively.

2010 compared with 2009

Net income was $2.5 billion, compared with $97 million in the prior year.

Net revenue was $31.8 billion, a decrease of $936 million, or 3%, compared with the prior year. Net interest income was $19.5 billion, down by $964 million, or 5%, reflecting the impact of lower loan and deposit balances and narrower loan spreads, partially offset by a shift to wider-spread deposit products. Noninterest revenue was $12.2 billion, flat to the prior year, as lower deposit-related fees were largely offset by higher debit card income and auto operating lease income.

The provision for credit losses was $9.5 billion, compared with $15.9 billion in the prior year. The current-year provision reflected an addition to the allowance for loan losses of $3.4 billion for the purchased credit-impaired ("PCI") portfolio and a reduction in the allowance for loan losses of $1.8 billion, predominantly for the mortgage loan portfolios. In comparison, the prior-year provision reflected an addition to the allowance for loan losses of $5.8 billion, predominantly for the home equity and mortgage portfolios, but which also included an addition of $1.6 billion for the PCI portfolio. While delinquency trends and net charge-offs improved compared with the prior year, the provision continued to reflect elevated losses for the mortgage and home equity portfolios. See page 130 of this Annual Report for the net charge-off amounts and rates. To date, no charge-offs have been recorded on PCI loans.

Noninterest expense was $17.9 billion, an increase of $1.1 billion, or 7%, from the prior year, reflecting higher default-related expense.

2009 compared with 2008

The following discussion of RFS's financial results reflects the acquisition of Washington Mutual's retail bank network and mortgage banking activities as a result of the Washington Mutual transaction on September 25, 2008. See Note 2 on pages 166–170 of this Annual Report for more information concerning this transaction.

Net income was $97 million, a decrease of $783 million from the prior year, as the increase in provision for credit losses more than offset the positive impact of the Washington Mutual transaction.

Net revenue was $32.7 billion, an increase of $9.2 billion, or 39%, from the prior year. Net interest income was $20.5 billion, up by $6.3 billion, or 45%, reflecting the impact of the Washington Mutual transaction, and wider loan and deposit spreads.

Noninterest revenue was $12.2 billion, up by $2.8 billion, or 30%, driven by the impact of the Washington Mutual transaction, wider margins on mortgage originations and higher net mortgage servicing revenue, partially offset by $1.6 billion in estimated losses related to the repurchase of previously sold loans.

The provision for credit losses was $15.9 billion, an increase of $6.0 billion from the prior year. Weak economic conditions and housing price declines continued to drive higher estimated losses for the home equity and mortgage loan portfolios. The provision included an addition of $5.8 billion to the allowance for loan losses, compared with an addition of $5.0 billion in the prior year. Included in the 2009 addition to the allowance for loan losses was a $1.6 billion increase related to estimated deterioration in the Washington Mutual PCI portfolio. See page 130 of this Annual Report for the net charge-off amounts and rates. To date, no charge-offs have been recorded on PCI loans.

Noninterest expense was $16.7 billion, an increase of $4.7 billion, or 39%. The increase reflected the impact of the Washington Mutual transaction and higher servicing and default-related expense.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount and ratios)	2010	2009	2008
Selected balance sheet data (period-end)			
Assets	**$ 366,841**	$ 387,269	$ 419,831
Loans:			
Loans retained	**316,725**	340,332	368,786
Loans held-for-sale and loans at fair value[a]	**14,863**	14,612	9,996
Total loans	**331,588**	354,944	378,782
Deposits	**370,819**	357,463	360,451
Equity	**28,000**	25,000	25,000
Selected balance sheet data (average)			
Assets	**$ 381,337**	$ 407,497	$ 304,442
Loans:			
Loans retained	**331,330**	354,789	257,083
Loans held-for-sale and loans at fair value[a]	**16,515**	18,072	17,056
Total loans	**347,845**	372,861	274,139
Deposits	**362,386**	367,696	258,362
Equity	**28,000**	25,000	19,011
Headcount	**121,876**	108,971	102,007

As of or for the year ended December 31, (in millions, except headcount and ratios)	2010	2009	2008
Credit data and quality statistics			
Net charge-offs	**$ 7,906**	$ 10,113	$ 4,877
Nonaccrual loans:			
Nonaccrual loans retained	**8,768**	10,611	6,548
Nonaccrual loans held-for-sale and loans at fair value	**145**	234	236
Total nonaccrual loans[b][c][d]	**8,913**	10,845	6,784
Nonperforming assets[b][c][d]	**10,266**	12,098	9,077
Allowance for loan losses	**16,453**	14,776	8,918
Net charge-off rate[e]	**2.39%**	2.85%	1.90%
Net charge-off rate excluding PCI loans[e][f]	**3.11**	3.75	2.08
Allowance for loan losses to ending loans retained[e]	**5.19**	4.34	2.42
Allowance for loan losses to ending loans excluding PCI loans[e][f]	**4.72**	5.09	3.19
Allowance for loan losses to nonaccrual loans retained[b][e][f]	**131**	124	136
Nonaccrual loans to total loans	**2.69**	3.06	1.79
Nonaccrual loans to total loans excluding PCI loans[b]	**3.44**	3.96	2.34

(a) Loans at fair value consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets. These loans totaled $14.7 billion, $12.5 billion and $8.0 billion at December 31, 2010, 2009 and 2008, respectively. Average balances of these loans totaled $15.2 billion, $15.8 billion and $14.2 billion for the years ended December 31, 2010, 2009 and 2008, respectively.

(b) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of the individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

(c) Certain of these loans are classified as trading assets on the Consolidated Balance Sheets.

(d) At December 31, 2010, 2009 and 2008, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $10.5 billion, $9.0 billion and $3.0 billion, respectively, that are 90 days past due and accruing at the guaranteed reimbursement rate; (2) real estate owned insured by U.S. government agencies of $1.9 billion, $579 million and $364 million, respectively; and (3) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP"), of $625 million, $542 million and $437 million, respectively. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

(e) Loans held-for-sale and loans accounted for at fair value were excluded when calculating the allowance coverage ratio and the net charge-off rate.

(f) Excludes the impact of PCI loans that were acquired as part of the Washington Mutual transaction. These loans were accounted for at fair value on the acquisition date, which incorporated management's estimate, as of that date, of credit losses over the remaining life of the portfolio. An allowance for loan losses of $4.9 billion and $1.6 billion was recorded for these loans at December 31, 2010 and 2009, respectively, which has also been excluded from the applicable ratios. No allowance for loan losses was recorded for these loans at December 31, 2008. To date, no charge-offs have been recorded for these loans.

Retail Banking

Selected income statement data

Year ended December 31, (in millions, except ratios)	2010	2009	2008
Noninterest revenue	$ 6,792	$ 7,169	$ 4,951
Net interest income	10,785	10,781	7,659
Total net revenue	17,577	17,950	12,610
Provision for credit losses	607	1,142	449
Noninterest expense	10,657	10,357	7,232
Income before income tax expense	6,313	6,451	4,929
Net income	$ 3,614	$ 3,903	$ 2,982
Overhead ratio	61%	58%	57%
Overhead ratio excluding core deposit intangibles[a]	59	56	54

(a) Retail Banking uses the overhead ratio (excluding the amortization of CDI), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation would result in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would therefore result in an improving overhead ratio over time, all things remaining equal. The non-GAAP ratio excludes Retail Banking's CDI amortization expense related to prior business combination transactions of $276 million, $328 million and $394 million for the years ended December 31, 2010, 2009 and 2008, respectively.

Selected metrics

As of or for the year ended December 31, (in billions, except ratios and where otherwise noted)	2010	2009	2008
Business metrics			
Business banking origination volume (in millions)	$ 4,688	$ 2,299	$ 5,531
End-of-period loans owned	16.8	17.0	18.4
End-of-period deposits:			
Checking	$ 131.7	$ 121.9	$ 109.2
Savings	166.6	153.4	144.0
Time and other	45.9	58.0	89.1
Total end-of-period deposits	344.2	333.3	342.3
Average loans owned	$ 16.7	$ 17.8	$ 16.7
Average deposits:			
Checking	$ 123.4	$ 113.5	$ 77.1
Savings	162.1	150.9	114.3
Time and other	51.0	76.4	53.2
Total average deposits	336.5	340.8	244.6
Deposit margin	3.03%	2.96%	2.89%
Average assets	$ 28.3	$ 28.9	$ 26.3
Credit data and quality statistics (in millions, except ratios)			
Net charge-offs	$ 707	$ 842	$ 346
Net charge-off rate	4.23%	4.73%	2.07%
Nonperforming assets	$ 846	$ 839	$ 424

Retail branch business metrics

Year ended December 31,	2010	2009	2008
Investment sales volume (in millions)	$ 23,579	$ 21,784	$17,640
Number of:			
Branches	5,268	5,154	5,474
ATMs	16,145	15,406	14,568
Personal bankers	21,715	17,991	15,825
Sales specialists	7,196	5,912	5,661
Active online customers (in thousands)	17,744	15,424	11,710
Checking accounts (in thousands)	27,252	25,712	24,499

2010 compared with 2009

Retail Banking reported net income of $3.6 billion, a decrease of $289 million, or 7%, compared with the prior year. Total net revenue was $17.6 billion, down 2% compared with the prior year. The decrease was driven by lower deposit-related fees, largely offset by higher debit card income and a shift to wider-spread deposit products. The provision for credit losses was $607 million, down $535 million compared with the prior year. The current-year provision reflected lower net charge-offs and a reduction of $100 million to the allowance for loan losses due to lower estimated losses, compared with a $300 million addition to the allowance for loan losses in the prior year. Retail Banking net charge-offs were $707 million, compared with $842 million in the prior year. Noninterest expense was $10.7 billion, up 3% compared with the prior year, resulting from sales force increases in Business Banking and bank branches.

2009 compared with 2008

Retail Banking reported net income of $3.9 billion, up by $921 million, or 31%, from the prior year. Total net revenue was $18.0 billion, up by $5.3 billion, or 42%, from the prior year. The increase reflected the impact of the Washington Mutual transaction, wider deposit spreads, higher average deposit balances and higher debit card income. The provision for credit losses was $1.1 billion, compared with $449 million in the prior year, reflecting higher estimated losses in the Business Banking portfolio. Noninterest expense was $10.4 billion, up by $3.1 billion, or 43%. The increase reflected the impact of the Washington Mutual transaction, higher FDIC insurance premiums and higher headcount-related expense.

Mortgage Banking, Auto & Other Consumer Lending

Selected income statement data

Year ended December 31, (in millions, except ratios)	2010	2009	2008
Noninterest revenue	$ 5,321	$ 5,057	$ 4,689
Net interest income	3,311	3,165	2,279
Total net revenue	8,632	8,222	6,968
Provision for credit losses	614	1,235	895
Noninterest expense	5,580	4,544	3,956
Income before income tax expense	2,438	2,443	2,117
Net income	$ 1,405	$ 1,643	$ 1,286
Overhead ratio	65%	55%	57%

2010 compared with 2009

Mortgage Banking, Auto & Other Consumer Lending reported net income of $1.4 billion, a decrease of $238 million, or 14%, from the prior year.

Net revenue was $8.6 billion, up by $410 million, or 5%, from the prior year. Mortgage Banking net revenue was $5.2 billion, flat to the prior year. Other Consumer Lending net revenue, comprising Auto and Student Lending, was $3.5 billion, up by $447 million, predominantly as a result of higher auto loan and lease balances.

Mortgage Banking net revenue included $904 million of net interest income, $3.9 billion of mortgage fees and related income,

and $413 million of other noninterest revenue. Mortgage fees and related revenue comprised $528 million of net production revenue, $2.2 billion of servicing operating revenue and $1.1 billion of MSR risk management revenue. Production revenue, excluding repurchase losses, was $3.4 billion, an increase of $1.3 billion, reflecting wider mortgage margins and higher origination volumes. Total production revenue was reduced by $2.9 billion of repurchase losses, compared with $1.6 billion in the prior year, and included a $1.6 billion increase in the repurchase reserve during the current year, reflecting higher estimated future repurchase demands. Servicing operating revenue was $2.2 billion, an increase of $528 million, reflecting an improvement in other changes in the MSR asset fair value driven by lower runoff of the MSR asset due to time decay, partially offset by lower loan servicing revenue as a result of lower third-party loans serviced. MSR risk management revenue was $1.1 billion, a decrease of $492 million.

The provision for credit losses, predominantly related to the student and auto loan portfolios, was $614 million, compared with $1.2 billion in the prior year. The current-year provision reflected lower net charge-offs and a reduction of $135 million to the allowance for loan losses due to lower estimated losses, compared with a $307 million addition to the allowance for loan losses in the prior year. See page 130 of this Annual Report for the net charge-off amounts and rates.

Noninterest expense was $5.6 billion, up by $1.0 billion, or 23%, from the prior year, driven by an increase in default-related expense for the serviced portfolio, including costs associated with foreclosure affidavit-related suspensions.

2009 compared with 2008

Mortgage Banking, Auto & Other Consumer Lending reported net income of $1.6 billion, an increase of $357 million, or 28%, from the prior year.

Net revenue was $8.2 billion, up by $1.3 billion, or 18%, from the prior year. Mortgage Banking net revenue was $5.2 billion, up by $701 million. Other Consumer Lending net revenue, comprising Auto and Student Lending, was $3.0 billion, up by $553 million, largely as a result of wider loan spreads.

Mortgage Banking net revenue included $973 million of net interest income, $3.8 billion of mortgage fees and related income, and $442 million of other noninterest revenue. Mortgage fees and related income comprised $503 million of net production revenue, $1.7 billion of servicing operating revenue and $1.6 billion of MSR risk management revenue. Production revenue, excluding repurchase losses, was $2.1 billion, an increase of $965 million, reflecting wider margins on new originations. Total production revenue was reduced by $1.6 billion of repurchase losses, compared with repurchase losses of $252 million in the prior year. Servicing operating revenue was $1.7 billion, an increase of $457 million, reflecting growth in average third-party loans serviced as a result of the Washington Mutual transaction. MSR risk management revenue was $1.6 billion, an increase of $111 million, reflecting the positive impact of a decrease in estimated future prepayments during 2009.

The provision for credit losses, predominantly related to the student and auto loan portfolios, was $1.2 billion, compared with $895 million in the prior year. The current- and prior-year provision reflected an increase in the allowance for loan losses for student and auto loans. See page 130 of this Annual Report for the net charge-off amounts and rates.

Noninterest expense was $4.5 billion, up by $588 million, or 15%, from the prior year, driven by higher servicing and default-related expense and the impact of the Washington Mutual transaction.

Selected metrics

As of or for the year ended December 31, (in billions, except ratios and where otherwise noted)	2010	2009	2008
Business metrics			
End-of-period loans owned:			
Auto	**$ 48.4**	$ 46.0	$ 42.6
Mortgage[a]	**14.2**	11.9	6.5
Student and other	**14.4**	15.8	16.3
Total end-of-period loans owned	**$ 77.0**	$ 73.7	$ 65.4
Average loans owned:			
Auto	**$ 47.6**	$ 43.6	$ 43.8
Mortgage[a]	**13.4**	8.8	4.3
Student and other	**16.2**	16.3	13.8
Total average loans owned[b]	**$ 77.2**	$ 68.7	$ 61.9
Credit data and quality statistics (in millions)			
Net charge-offs:			
Auto	**$ 298**	$ 627	$ 568
Mortgage	**41**	14	5
Student and other	**410**	287	64
Total net charge-offs	**$ 749**	$ 928	$ 637
Net charge-off rate:			
Auto	**0.63%**	1.44%	1.30%
Mortgage	**0.31**	0.17	0.13
Student and other	**2.72**	1.98	0.57
Total net charge-off rate[b]	**0.99**	1.40	1.08
30+ day delinquency rate[c][d]	**1.69**	1.75	1.91
Nonperforming assets (in millions)[e]	**$ 996**	$ 912	$ 866
Origination volume:			
Mortgage origination volume by channel:			
Retail	**$ 68.8**	$ 53.9	$ 41.1
Wholesale[f]	**1.3**	3.6	26.7
Correspondent[f]	**75.3**	81.0	58.2
CNT (negotiated transactions)	**10.2**	12.2	43.0
Total mortgage origination volume	**$155.6**	$ 150.7	$169.0
Student	**1.9**	4.2	6.9
Auto	**23.0**	23.7	19.4

Selected metrics

As of or for the year ended December 31, (in billions, except ratios)	2010	2009	2008
Application volume:			
Mortgage application volume by channel:			
Retail	**$ 115.1**	$ 90.9	$ 89.1
Wholesale[f]	**2.4**	4.9	58.6
Correspondent[f]	**97.3**	110.8	86.9
Total mortgage application volume	**$ 214.8**	$ 206.6	$ 234.6
Average mortgage loans held-for-sale and loans at fair value[g]	**$ 15.4**	$ 16.2	$ 14.6
Average assets	**126.0**	115.0	98.8
Repurchase reserve (ending)	**3.0**	1.4	1.0
Third-party mortgage loans serviced (ending)	**967.5**	1,082.1	1,172.6
Third-party mortgage loans serviced (average)	**1,037.6**	1,119.1	774.9
MSR net carrying value (ending)	**13.6**	15.5	9.3
Ratio of MSR net carrying value (ending) to third-party mortgage loans serviced (ending)	**1.41%**	1.43%	0.79%
Ratio of annualized loan servicing revenue to third-party mortgage loans serviced (average)	**0.44**	0.44	0.42
MSR revenue multiple[h]	**3.20x**	3.25x	1.88x

Supplemental mortgage fees and related income details

As of or for the year ended December 31, (in millions)	2010	2009	2008
Net production revenue:			
Production revenue	**$ 3,440**	$ 2,115	$ 1,150
Repurchase losses	**(2,912)**	(1,612)	(252)
Net production revenue	**528**	503	898
Net mortgage servicing revenue:			
Operating revenue:			
Loan servicing revenue	**4,575**	4,942	3,258
Other changes in MSR asset fair value	**(2,384)**	(3,279)	(2,052)
Total operating revenue	**2,191**	1,663	1,206
Risk management:			
Changes in MSR asset fair value due to inputs or assumptions in model	**(2,268)**	5,804	(6,849)
Derivative valuation adjustments and other	**3,404**	(4,176)	8,366
Total risk management	**1,136**	1,628	1,517
Total net mortgage servicing revenue	**3,327**	3,291	2,723
Mortgage fees and related income	**$ 3,855**	$ 3,794	$ 3,621

(a) Predominantly represents prime loans repurchased from Government National Mortgage Association ("Ginnie Mae") pools, which are insured by U.S. government agencies. See further discussion of loans repurchased from Ginnie Mae pools in Repurchase liability on pages 98–101 of this Annual Report.

(b) Total average loans owned includes loans held-for-sale of $1.3 billion, $2.2 billion and $2.8 billion for the years ended December 31, 2010, 2009 and 2008, respectively. These amounts are excluded when calculating the net charge-off rate.

(c) Excludes mortgage loans that are insured by U.S. government agencies of $11.4 billion, $9.7 billion and $3.5 billion at December 31, 2010, 2009 and 2008, respectively. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

(d) Excludes loans that are 30 days past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $1.1 billion, $942 million and $824 million at December 31, 2010, 2009 and 2008, respectively. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

(e) At December 31, 2010, 2009 and 2008, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $10.5 billion, $9.0 billion and $3.0 billion, respectively, that are 90 days past due and accruing at the guaranteed reimbursement rate; (2) real estate owned insured by U.S. government agencies of $1.9 billion, $579 million and $364 million, respectively; and (3) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $625 million, $542 million and $437 million, respectively. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

(f) Includes rural housing loans sourced through brokers and correspondents, which are underwritten under U.S. Department of Agriculture guidelines. Prior period amounts have been revised to conform with the current period presentation.

(g) Loans at fair value consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets. Average balances of these loans totaled $15.2 billion, $15.8 billion and $14.2 billion for the years ended December 31, 2010, 2009 and 2008, respectively.

(h) Represents the ratio of MSR net carrying value (ending) to third-party mortgage loans serviced (ending) divided by the ratio of annualized loan servicing revenue to third-party mortgage loans serviced (average).

Mortgage origination channels comprise the following:

Retail – Borrowers who are buying or refinancing a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Wholesale – A third-party mortgage broker refers loan applications to a mortgage banker at the Firm. Brokers are independent loan originators that specialize in finding and counseling borrowers but do not provide funding for loans. The Firm exited the broker channel during 2008.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Correspondent negotiated transactions ("CNTs") – These transactions occur when mid- to large-sized mortgage lenders, banks and bank-owned mortgage companies sell servicing to the Firm, on an as-originated basis, and exclude purchased bulk servicing transactions. These transactions supplement traditional production channels and provide growth opportunities in the servicing portfolio in stable and periods of rising interest rates.

Net production revenue – Includes net gains or losses on originations and sales of prime and subprime mortgage loans, other production-related fees and losses related to the repurchase of previously-sold loans.

Net mortgage servicing revenue includes the following components:

(a) Operating revenue comprises:
- all gross income earned from servicing third-party mortgage loans including stated service fees, excess service fees, late fees and other ancillary fees; and
- modeled servicing portfolio runoff (or time decay).

(b) Risk management comprises:
- changes in MSR asset fair value due to market-based inputs such as interest rates and volatility, as well as updates to assumptions used in the MSR valuation model.
- derivative valuation adjustments and other, which represents changes in the fair value of derivative instruments used to offset the impact of changes in the market-based inputs to the MSR valuation model.

Real Estate Portfolios

Selected income statement data

Year ended December 31, (in millions, except ratios)	2010	2009	2008
Noninterest revenue	**$ 115**	$ (26)	$ (285)
Net interest income	**5,432**	6,546	4,227
Total net revenue	**5,547**	6,520	3,942
Provision for credit losses	**8,231**	13,563	8,561
Noninterest expense	**1,627**	1,847	889
Income/(loss) before income tax expense/(benefit)	**(4,311)**	(8,890)	(5,508)
Net income/(loss)	**$ (2,493)**	$ (5,449)	$ (3,388)
Overhead ratio	**29%**	28%	23%

2010 compared with 2009

Real Estate Portfolios reported a net loss of $2.5 billion, compared with a net loss of $5.4 billion in the prior year. The improvement was driven by a lower provision for credit losses, partially offset by lower net interest income.

Net revenue was $5.5 billion, down by $973 million, or 15%, from the prior year. The decrease was driven by a decline in net interest income as a result of lower loan balances, reflecting net portfolio runoff.

The provision for credit losses was $8.2 billion, compared with $13.6 billion in the prior year. The current-year provision reflected a $1.9 billion reduction in net charge-offs and a $1.6 billion reduction in the allowance for the mortgage loan portfolios. This reduction in the allowance for loan losses included the effect of $632 million of charge-offs related to an adjustment of the estimated net realizable value of the collateral underlying delinquent residential home loans. For additional information, refer to Portfolio analysis on page 131 of this Annual Report. The remaining reduction of the allowance of approximately $950 million was a result of an improvement in delinquencies and lower estimated losses, compared with prior year additions of $3.6 billion for the home equity and mortgage portfolios. Additionally, the current-year provision reflected an addition to the allowance for loan losses of $3.4 billion for the PCI portfolio, compared with a prior year addition of $1.6 billion for this portfolio. (For further detail, see the RFS discussion of the provision for credit losses on page 72 of this Annual Report.)

Noninterest expense was $1.6 billion, down by $220 million, or 12%, from the prior year, reflecting lower default-related expense.

2009 compared with 2008

Real Estate Portfolios reported a net loss of $5.4 billion, compared with a net loss of $3.4 billion in the prior year.

Net revenue was $6.5 billion, up by $2.6 billion, or 65%, from the prior year. The increase was driven by the impact of the Washington Mutual transaction and wider loan spreads, partially offset by lower heritage Chase loan balances.

The provision for credit losses was $13.6 billion, compared with $8.6 billion in the prior year. The provision reflected weakness in the home equity and mortgage portfolios. (For further detail, see the RFS discussion of the provision for credit losses for further detail) on pages 72–73 of this Annual Report.

Noninterest expense was $1.8 billion, compared with $889 million in the prior year, reflecting higher default-related expense.

Included within Real Estate Portfolios are PCI loans that the Firm acquired in the Washington Mutual transaction. For PCI loans, the excess of the undiscounted gross cash flows expected to be collected over the carrying value of the loans ("the accretable yield") is accreted into interest income at a level rate of return over the expected life of the loans.

The net spread between the PCI loans and the related liabilities are expected to be relatively constant over time, except for any basis risk or other residual interest rate risk that remains and for certain changes in the accretable yield percentage (e.g. from extended loan liquidation periods and from prepayments). As of December 31, 2010, the remaining weighted-average life of the PCI loan portfolio is expected to be 7.0 years. For further information, see Note 14, PCI loans, on pages 233–236 of this Annual Report. The loan balances are expected to decline more rapidly in the earlier years as the most troubled loans are liquidated, and more slowly thereafter as the remaining troubled borrowers have limited refinancing opportunities. Similarly, default and servicing expense are expected to be higher in the earlier years and decline over time as liquidations slow down.

To date the impact of the PCI loans on Real Estate Portfolios' net income has been modestly negative. This is due to the current net spread of the portfolio, the provision for loan losses recognized subsequent to its acquisition, and the higher level of default and servicing expense associated with the portfolio. Over time, the Firm expects that this portfolio will contribute positively to net income.

Selected metrics

As of or for the year ended December 31, (in billions)	2010	2009	2008
Loans excluding PCI loans[a]			
End-of-period loans owned:			
Home equity	**$ 88.4**	$ 101.4	$ 114.3
Prime mortgage	**41.7**	47.5	58.7
Subprime mortgage	**11.3**	12.5	15.3
Option ARMs	**8.1**	8.5	9.0
Other	**0.8**	0.7	0.9
Total end-of-period loans owned	**$ 150.3**	$ 170.6	$ 198.2
Average loans owned:			
Home equity	**$ 94.8**	$ 108.3	$ 99.9
Prime mortgage	**44.9**	53.4	40.7
Subprime mortgage	**12.7**	13.9	15.3
Option ARMs	**8.5**	8.9	2.3
Other	**1.0**	0.8	0.9
Total average loans owned	**$ 161.9**	$ 185.3	$ 159.1
PCI loans[a]			
End-of-period loans owned:			
Home equity	**$ 24.5**	$ 26.5	$ 28.6
Prime mortgage	**17.3**	19.7	21.8
Subprime mortgage	**5.4**	6.0	6.8
Option ARMs	**25.6**	29.0	31.6
Total end-of-period loans owned	**$ 72.8**	$ 81.2	$ 88.8
Average loans owned:			
Home equity	**$ 25.5**	$ 27.6	$ 7.1
Prime mortgage	**18.5**	20.8	5.4
Subprime mortgage	**5.7**	6.3	1.7
Option ARMs	**27.2**	30.5	8.0
Total average loans owned	**$ 76.9**	$ 85.2	$ 22.2
Total Real Estate Portfolios			
End-of-period loans owned:			
Home equity	**$ 112.9**	$ 127.9	$ 142.9
Prime mortgage	**59.0**	67.2	80.5
Subprime mortgage	**16.7**	18.5	22.1
Option ARMs	**33.7**	37.5	40.6
Other	**0.8**	0.7	0.9
Total end-of-period loans owned	**$ 223.1**	$ 251.8	$ 287.0
Average loans owned:			
Home equity	**$ 120.3**	$ 135.9	$ 107.0
Prime mortgage	**63.4**	74.2	46.1
Subprime mortgage	**18.4**	20.2	17.0
Option ARMs	**35.7**	39.4	10.3
Other	**1.0**	0.8	0.9
Total average loans owned	**$ 238.8**	$ 270.5	$ 181.3
Average assets	**$ 227.0**	$ 263.6	$ 179.3
Home equity origination volume	**1.2**	2.4	16.3

(a) PCI loans represent loans acquired in the Washington Mutual transaction for which a deterioration in credit quality occurred between the origination date and JPMorgan Chase's acquisition date. These loans were initially recorded at fair value and accrete interest income over the estimated lives of the loans as long as cash flows are reasonably estimable, even if the underlying loans are contractually past due.

Credit data and quality statistics

As of or for the year ended December 31, (in millions, except ratios)	2010	2009	2008
Net charge-offs excluding PCI loans[a]:			
Home equity	**$ 3,444**	$ 4,682	$ 2,391
Prime mortgage	**1,475**	1,872	521
Subprime mortgage	**1,374**	1,648	933
Option ARMs	**98**	63	—
Other	**59**	78	49
Total net charge-offs	**$ 6,450**	$ 8,343	$ 3,894
Net charge-off rate excluding PCI loans[a]:			
Home equity	**3.63%**	4.32%	2.39%
Prime mortgage	**3.29**	3.51	1.28
Subprime mortgage	**10.82**	11.86	6.10
Option ARMs	**1.15**	0.71	—
Other	**5.90**	9.75	5.44
Total net charge-off rate excluding PCI loans	**3.98**	4.50	2.45
Net charge-off rate – reported:			
Home equity	**2.86%**	3.45%	2.23%
Prime mortgage	**2.33**	2.52	1.13
Subprime mortgage	**7.47**	8.16	5.49
Option ARMs	**0.27**	0.16	—
Other	**5.90**	9.75	5.44
Total net charge-off rate – reported	**2.70**	3.08	2.15
30+ day delinquency rate excluding PCI loans[b]	**6.45%**	7.73%	4.97%
Allowance for loan losses	**$14,659**	$ 12,752	$ 7,510
Nonperforming assets[c]	**8,424**	10,347	7,787
Allowance for loan losses to ending loans retained	**6.57%**	5.06%	2.62%
Allowance for loan losses to ending loans retained excluding PCI loans[a]	**6.47**	6.55	3.79

(a) Excludes the impact of PCI loans that were acquired as part of the Washington Mutual transaction. These loans were accounted for at fair value on the acquisition date, which incorporated management's estimate, as of that date, of credit losses over the remaining life of the portfolio. An allowance for loan losses of $4.9 billion and $1.6 billion was recorded for these loans at December 31, 2010 and 2009, respectively, which has also been excluded from the applicable ratios. No allowance for loan losses was recorded for these loans at December 31, 2008. To date, no charge-offs have been recorded for these loans.

(b) The delinquency rate for PCI loans was 28.20%, 27.62% and 17.89% at December 31, 2010, 2009 and 2008, respectively.

(c) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of the individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

Card Services is one of the nation's largest credit card issuers, with over $137 billion in loans and over 90 million open accounts. Customers used Chase cards to meet $313 billion of their spending needs in 2010.

Chase continues to innovate, despite a very difficult business environment, offering products and services such as Blueprint, Chase Freedom, Ultimate Rewards, Chase Sapphire and Ink from Chase, and earning a market leadership position in building loyalty and rewards programs. Through its merchant acquiring business, Chase Paymentech Solutions, CS is a global leader in payment processing and merchant acquiring.

Selected income statement data – managed basis[a]

Year ended December 31, (in millions, except ratios)	2010	2009	2008
Revenue			
Credit card income	**$ 3,513**	$ 3,612	$ 2,768
All other income[b]	**(236)**	(692)	(49)
Noninterest revenue	**3,277**	2,920	2,719
Net interest income	**13,886**	17,384	13,755
Total net revenue	**17,163**	20,304	16,474
Provision for credit losses	**8,037**	18,462	10,059
Noninterest expense			
Compensation expense	**1,291**	1,376	1,127
Noncompensation expense	**4,040**	3,490	3,356
Amortization of intangibles	**466**	515	657
Total noninterest expense	**5,797**	5,381	5,140
Income/(loss) before income tax expense/(benefit)	**3,329**	(3,539)	1,275
Income tax expense/(benefit)	**1,255**	(1,314)	495
Net income/(loss)	**$ 2,074**	$ (2,225)	$ 780
Memo: Net securitization income/(loss)	**NA**	$ (474)	$ (183)
Financial ratios			
ROE	**14%**	(15)%	5%
Overhead ratio	**34**	27	31

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. As a result of the consolidation of the securitization trusts, reported and managed basis are equivalent for periods beginning after January 1, 2010. See Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 64–66 of this Annual Report for additional information. Also, for further details regarding the Firm's application and impact of the VIE guidance, see Note 16 on pages 244–259 of this Annual Report.

(b) Includes the impact of revenue sharing agreements with other JPMorgan Chase business segments. For periods prior to January 1, 2010, net securitization income/(loss) is also included.

NA: Not applicable

2010 compared with 2009

Net income was $2.1 billion, compared with a net loss of $2.2 billion in the prior year. The improved results were driven by a lower provision for credit losses, partially offset by lower net revenue.

End-of-period loans were $137.7 billion, a decrease of $25.7 billion, or 16%, from the prior year. Average loans were $144.4 billion, a decrease of $28.0 billion, or 16%, from the prior year. The declines in both end-of-period and average loans were due to a decline in lower-yielding promotional balances and the Washington Mutual portfolio runoff.

Net revenue was $17.2 billion, a decrease of $3.1 billion, or 15%, from the prior year. Net interest income was $13.9 billion, down by $3.5 billion, or 20%. The decrease in net interest income was driven by lower average loan balances, the impact of legislative changes, and a decreased level of fees. These decreases were offset partially by lower revenue reversals associated with lower charge-offs. Noninterest revenue was $3.3 billion, an increase of $357 million, or 12%, driven by the prior-year write-down of securitization interests, offset partially by lower revenue from fee-based products.

The provision for credit losses was $8.0 billion, compared with $18.5 billion in the prior year. The current-year provision reflected lower net charge-offs and a reduction of $6.0 billion to the allowance for loan losses due to lower estimated losses. The prior-year provision included an addition of $2.4 billion to the allowance for loan losses. Including the Washington Mutual portfolio, the net charge-off rate was 9.72%, including loans held-for-sale, up from 9.33% in the prior year; and the 30-day delinquency rate was 4.07%, down from 6.28% in the prior year. Excluding the Washington Mutual portfolio, the net charge-off rate was 8.72%, including loans held-for-sale, up from 8.45% in the prior year; and the 30-day delinquency rate was 3.66%, down from 5.52% in the prior year.

Noninterest expense was $5.8 billion, an increase of $416 million, or 8%, due to higher marketing expense.

Credit Card Legislation

In May 2009, the CARD Act was enacted. Management estimates that the total reduction in net income resulting from the CARD Act is approximately $750 million annually. The run-rate impact of this reduction in net income is reflected in results as of the end of the fourth quarter of 2010. The full year impact on 2010 net income was approximately $300 million.

The most significant effects of the CARD Act include: (a) the inability to change the pricing of existing balances; (b) the allocation of customer payments above the minimum payment to the existing balance with the highest annual percentage rate ("APR"); (c) the requirement that customers opt-in in order to receive, for a fee, overlimit protection that permits an authorized transaction over their credit limit; (d) the requirement that statements must be mailed or delivered not later than 21 days before the payment due date; (e) the limiting of the amount of penalty fees that can be assessed; and (f) the requirement to review customer accounts for potential interest rate reductions in certain circumstances.

As a result of the CARD Act, CS has implemented certain changes to its business practices to manage its inability to price loans to customers at rates that are commensurate with their risk over time. These changes include: (a) selectively increasing pricing; (b) reducing the volume and duration of low-rate promotional pricing offered to customers; and (c) reducing the amount of credit that is granted to certain new and existing customers.

2009 compared with 2008

The following discussion of CS's financial results reflects the acquisition of Washington Mutual's credit cards operations as a result of the Washington Mutual transaction on September 25, 2008, and the dissolution of the Chase Paymentech Solutions joint venture on November 1, 2008. See Note 2 on pages 166–170 of this Annual Report for more information concerning these transactions.

Card Services reported a net loss of $2.2 billion, compared with net income of $780 million in the prior year. The decrease was driven by a higher provision for credit losses, partially offset by higher total net revenue.

End-of-period managed loans were $163.4 billion, a decrease of $26.9 billion, or 14%, from the prior year, reflecting lower charge volume and a higher level of charge-offs. Average managed loans were $172.4 billion, an increase of $9.5 billion, or 6%, from the prior year, primarily due to the impact of the Washington Mutual transaction. Excluding the impact of the Washington Mutual transaction, end-of-period and average managed loans for 2009 were $143.8 billion and $148.8 billion, respectively.

Managed total net revenue was $20.3 billion, an increase of $3.8 billion, or 23%, from the prior year. Net interest income was $17.4 billion, up by $3.6 billion, or 26%, from the prior year, driven by wider loan spreads and the impact of the Washington Mutual transaction. These benefits were offset partially by higher revenue reversals associated with higher charge-offs, a decreased level of fees, lower average managed loan balances, and the impact of legislative changes. Noninterest revenue was $2.9 billion, an increase of $201 million, or 7%, from the prior year. The increase was driven by higher merchant servicing revenue related to the dissolution of the Chase Paymentech Solutions joint venture and the impact of the Washington Mutual transaction, partially offset by a larger write-down of securitization interests.

The managed provision for credit losses was $18.5 billion, an increase of $8.4 billion from the prior year, reflecting a higher level of charge-offs and an addition of $2.4 billion to the allowance for loan losses, reflecting continued weakness in the credit environment. The managed net charge-off rate was 9.33%, up from 5.01% in the prior year. The 30-day managed delinquency rate was 6.28%, up from 4.97% in the prior year. Excluding the impact of the Washington Mutual transaction, the managed net charge-off rate was 8.45%, and the 30-day managed delinquency rate was 5.52%.

Noninterest expense was $5.4 billion, an increase of $241 million, or 5%, from the prior year, due to the dissolution of the Chase Paymentech Solutions joint venture and the impact of the Washington Mutual transaction, partially offset by lower marketing expense.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount, ratios and where otherwise noted)	2010	2009	2008
Financial ratios[a]			
Percentage of average outstandings:			
Net interest income	**9.62%**	10.08%	8.45%
Provision for credit losses	**5.57**	10.71	6.18
Noninterest revenue	**2.27**	1.69	1.67
Risk adjusted margin[b]	**6.32**	1.07	3.94
Noninterest expense	**4.02**	3.12	3.16
Pretax income/(loss) (ROO)[c]	**2.31**	(2.05)	0.78
Net income/(loss)	**1.44**	(1.29)	0.48
Business metrics			
Sales volume (in billions)	**$ 313.0**	$ 294.1	$ 298.5
New accounts opened	**11.3**	10.2	14.9
Open accounts	**90.7**	93.3	109.5
Merchant acquiring business[d]			
Bank card volume (in billions)	**$ 469.3**	$ 409.7	$ 713.9
Total transactions (in billions)	**20.5**	18.0	21.4
Selected balance sheet data (period-end)			
Loans:			
Loans on balance sheets	**$ 137,676**	$ 78,786	$ 104,746
Securitized loans[a]	**NA**	84,626	85,571
Total loans	**137,676**	163,412	190,317
Equity	**15,000**	15,000	15,000
Selected balance sheet data (average)			
Managed assets	**$ 145,750**	$ 192,749	$ 173,711
Loans:			
Loans on balance sheets	**144,367**	87,029	83,293
Securitized loans[a]	**NA**	85,378	79,566
Total average loans	**144,367**	172,407	162,859
Equity	**$ 15,000**	$ 15,000	$ 14,326
Headcount	**20,739**	22,676	24,025
Credit quality statistics[a]			
Net charge-offs	**$ 14,037**	$ 16,077	$ 8,159
Net charge-off rate[e][f]	**9.73%**	9.33%	5.01%
Delinquency rates[a][e]			
30+ day	**4.07**	6.28	4.97
90+ day	**2.22**	3.59	2.34
Allowance for loan losses[a][g]	**$ 11,034**	$ 9,672	$ 7,692
Allowance for loan losses to period-end loans[a][g][h][i]	**8.14%**	12.28%	7.34%
Key stats – Washington Mutual only[j]			
Loans	**$ 13,733**	$ 19,653	$ 28,250
Average loans	**16,055**	23,642	6,964
Net interest income[k]	**15.66%**	17.11%	14.87%
Risk adjusted margin[b][k]	**10.42**	(0.93)	4.18
Net charge-off rate[l]	**18.73**	18.79	12.09
30+ day delinquency rate[l]	**7.74**	12.72	9.14
90+ day delinquency rate[l]	**4.40**	7.76	4.39
Key stats – excluding Washington Mutual			
Loans	**$ 123,943**	$ 143,759	$ 162,067
Average loans	**128,312**	148,765	155,895
Net interest income[k]	**8.86%**	8.97%	8.16%
Risk adjusted margin[b][k]	**5.81**	1.39	3.93
Net charge-off rate	**8.72**	8.45	4.92
30+ day delinquency rate	**3.66**	5.52	4.36
90+ day delinquency rate	**1.98**	3.13	2.09

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. As a result of the consolidation of the credit card securitization trusts, reported and managed basis relating to credit card securitizations are equivalent for periods beginning after January 1, 2010. For further details regarding the Firm's application and impact of the guidance, see Note 16 on pages 244–259 of this Annual Report.

(b) Represents total net revenue less provision for credit losses.

(c) Pretax return on average managed outstandings.
(d) The Chase Paymentech Solutions joint venture was dissolved effective November 1, 2008. JPMorgan Chase retained approximately 51% of the business and operates the business under the name Chase Paymentech Solutions. For the period January 1 through October 31, 2008, the data presented represents activity for the Chase Paymentech Solutions joint venture, and for the period November 1, 2008, through December 31, 2010, the data presented represents activity for Chase Paymentech Solutions.
(e) Results reflect the impact of purchase accounting adjustments related to the Washington Mutual transaction and the consolidation of the WMMT in the second quarter of 2009. The delinquency rates as of December 31, 2010, were not affected.
(f) Total average loans includes loans held-for-sale of $148 million for full year 2010. These amounts are excluded when calculating the net charge-off rate. The net charge-off rate including loans held-for-sale, which is a non-GAAP financial measure, would have been 9.72% for the full year 2010.
(g) Based on loans on the Consolidated Balance Sheets.
(h) Includes $1.0 billion of loans at December 31, 2009, held by the WMMT, which were consolidated onto the Card Services balance sheet at fair value during the second quarter of 2009. No allowance for loan losses was recorded for these loans as of December 31, 2009. Excluding these loans, the allowance for loan losses to period-end loans would have been 12.43% as of December 31, 2009.
(i) Total period-end loans includes loans held-for-sale of $2.2 billion at December 31, 2010. No allowance for loan losses was recorded for these loans as of December 31, 2010. The loans held-for-sale are excluded when calculating the allowance for loan losses to period-end loans.
(j) Statistics are only presented for periods after September 25, 2008, the date of the Washington Mutual transaction.
(k) As a percentage of average managed outstandings.
(l) Excludes the impact of purchase accounting adjustments related to the Washington Mutual transaction and the consolidation of the WMMT in the second quarter of 2009.
NA: Not applicable

Reconciliation from reported basis to managed basis

The financial information presented in the following table reconciles reported basis and managed basis to disclose the effect of securitizations reported in 2009 and 2008. Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. As a result of the consolidation of the credit card securitization trusts, reported and managed basis relating to credit card securitizations are equivalent for periods beginning after January 1, 2010. For further details regarding the Firm's application and impact of the guidance, see Note 16 on pages 244–259 of this Annual Report.

Year ended December 31, (in millions, except ratios)	2010	2009	2008
Income statement data			
Credit card income			
Reported	**$ 3,513**	$ 5,106	$ 6,082
Securitization adjustments	**NA**	(1,494)	(3,314)
Managed credit card income	**$ 3,513**	$ 3,612	$ 2,768
Net interest income			
Reported	**$ 13,886**	$ 9,447	$ 6,838
Securitization adjustments	**NA**	7,937	6,917
Managed net interest income	**$ 13,886**	$ 17,384	$ 13,755
Total net revenue			
Reported	**$ 17,163**	$ 13,861	$ 12,871
Securitization adjustments	**NA**	6,443	3,603
Managed total net revenue	**$ 17,163**	$ 20,304	$ 16,474
Provision for credit losses			
Reported	**$ 8,037**	$ 12,019	$ 6,456
Securitization adjustments	**NA**	6,443	3,603
Managed provision for credit losses	**$ 8,037**	$ 18,462	$ 10,059
Balance sheet – average balances			
Total average assets			
Reported	**$ 145,750**	$ 110,516	$ 96,807
Securitization adjustments	**NA**	82,233	76,904
Managed average assets	**$ 145,750**	$ 192,749	$ 173,711
Credit quality statistics			
Net charge-offs			
Reported	**$ 14,037**	$ 9,634	$ 4,556
Securitization adjustments	**NA**	6,443	3,603
Managed net charge-offs	**$ 14,037**	$ 16,077	$ 8,159
Net charge-off rates			
Reported	**9.73%**	11.07%	5.47%
Securitized	**NA**	7.55	4.53
Managed net charge-off rate	**9.73**	9.33	5.01

NA: Not applicable

The following are brief descriptions of selected business metrics within Card Services.

- **Sales volume** – Dollar amount of cardmember purchases, net of returns.
- **Open accounts** – Cardmember accounts with charging privileges.
- **Merchant acquiring business** – A business that processes bank card transactions for merchants.
- **Bank card volume** – Dollar amount of transactions processed for merchants.
- **Total transactions** – Number of transactions and authorizations processed for merchants.

COMMERCIAL BANKING

Commercial Banking delivers extensive industry knowledge, local expertise and dedicated service to nearly 24,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and nearly 35,000 real estate investors/owners. CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Commercial Banking is divided into four primary client segments: Middle Market Banking, Commercial Term Lending, Mid-Corporate Banking, and Real Estate Banking. Middle Market Banking covers corporate, municipal, financial institution and not-for-profit clients, with annual revenue generally ranging between $10 million and $500 million. Mid-Corporate Banking covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs. Commercial Term Lending primarily provides term financing to real estate investors/owners for multi-family properties as well as financing office, retail and industrial properties. Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate properties.

Selected income statement data

Year ended December 31, (in millions)	2010	2009	2008
Revenue			
Lending- and deposit-related fees	**$ 1,099**	$ 1,081	$ 854
Asset management, administration and commissions	**144**	140	113
All other income[a]	**957**	596	514
Noninterest revenue	**2,200**	1,817	1,481
Net interest income	**3,840**	3,903	3,296
Total net revenue[b]	**6,040**	5,720	4,777
Provision for credit losses	**297**	1,454	464
Noninterest expense			
Compensation expense	**820**	776	692
Noncompensation expense	**1,344**	1,359	1,206
Amortization of intangibles	**35**	41	48
Total noninterest expense	**2,199**	2,176	1,946
Income before income tax expense	**3,544**	2,090	2,367
Income tax expense	**1,460**	819	928
Net income	**$ 2,084**	$ 1,271	$1,439
Revenue by product:			
Lending	**$ 2,749**	$ 2,663	$1,743
Treasury services	**2,632**	2,642	2,648
Investment banking	**466**	394	334
Other[c]	**193**	21	52
Total Commercial Banking revenue	**$ 6,040**	$ 5,720	$4,777

Selected income statement data

Year ended December 31, (in millions, except ratios)	2010	2009	2008
IB revenue, gross[d]	**$ 1,335**	$ 1,163	$ 966
Revenue by client segment:			
Middle Market Banking	**$ 3,060**	$ 3,055	$ 2,939
Commercial Term Lending[e]	**1,023**	875	243
Mid-Corporate Banking	**1,154**	1,102	921
Real Estate Banking[e]	**460**	461	413
Other[e][f]	**343**	227	261
Total Commercial Banking revenue	**$ 6,040**	$ 5,720	$ 4,777
Financial ratios			
ROE	**26%**	16%	20%
Overhead ratio	**36**	38	41

(a) CB client revenue from investment banking products and commercial card transactions is included in all other income.
(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities as well as tax-exempt income from municipal bond activity of $238 million, $170 million and $125 million for the years ended December 31, 2010, 2009 and 2008, respectively.
(c) Other product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking segment activity and certain income derived from principal transactions.
(d) Represents the total revenue related to investment banking products sold to CB clients.
(e) 2008 results reflect the partial year impact of the Washington Mutual transaction.
(f) Other primarily includes revenue related to the Community Development Banking and Chase Capital segments.

2010 compared with 2009

Record net income was $2.1 billion, an increase of $813 million, or 64%, from the prior year. The increase was driven by a reduction in the provision for credit losses and higher net revenue.

Net revenue was a record $6.0 billion, up by $320 million, or 6%, compared with the prior year. Net interest income was $3.8 billion, down by $63 million, or 2%, driven by spread compression on liability products and lower loan balances, predominantly offset by growth in liability balances and wider loan spreads. Noninterest revenue was $2.2 billion, an increase of $383 million, or 21%, from the prior year, reflecting higher net gains from asset sales, higher lending-related fees, an improvement in the market conditions impacting the value of investments held at fair value, higher investment banking fees and increased community development investment-related revenue.

On a client segment basis, revenue from Middle Market Banking was $3.1 billion, flat compared with the prior year. Revenue from Commercial Term Lending was $1.0 billion, an increase of $148 million, or 17%, and includes the impact of the purchase of a $3.5 billion loan portfolio during the third quarter of 2010 and higher net gains from asset sales. Mid-Corporate Banking revenue was $1.2 billion, an increase of $52 million, or 5%, compared with the prior year due to wider loan spreads, higher lending-related fees and higher investment banking fees offset partially by reduced loan balances. Real Estate Banking revenue was $460 million, flat compared with the prior year.

The provision for credit losses was $297 million, compared with $1.5 billion in the prior year. The decline was mainly due to stabilization in the credit quality of the loan portfolio and refinements to credit loss estimates. Net charge-offs were $909 million (0.94% net charge-off rate), compared with $1.1 billion (1.02% net charge-off rate) in the prior year. The allowance for loan losses to period-end loans retained was 2.61%, down from 3.12% in the prior year. Nonaccrual loans were $2.0 billion, a decrease of $801 million, or 29%, from the prior year.

Noninterest expense was $2.2 billion, an increase of $23 million, or 1%, compared with the prior year reflecting higher headcount-related expense partially offset by lower volume-related expense.

2009 compared with 2008

The following discussion of CB's results reflects the September 25, 2008 acquisition of the commercial banking operations of Washington Mutual from the FDIC. The Washington Mutual transaction added approximately $44.5 billion in loans to the Commercial Term Lending, Real Estate Banking, and Other client segments in Commercial Banking.

Net income was $1.3 billion, a decrease of $168 million, or 12%, from the prior year, as higher provision for credit losses and noninterest expense was partially offset by higher net revenue, reflecting the impact of the Washington Mutual transaction.

Record net revenue of $5.7 billion increased $943 million, or 20%, from the prior year. Net interest income of $3.9 billion increased $607 million, or 18%, driven by the impact of the Washington Mutual transaction. Noninterest revenue was $1.8 billion, an increase of $336 million, or 23%, from the prior year, reflecting higher lending- and deposit-related fees and higher investment banking fees and other income.

On a client segment basis, revenue from Middle Market Banking was $3.1 billion, an increase of $116 million, or 4%, from the prior year due to higher liability balances, a shift to higher-spread liability products, wider loan spreads, higher lending- and deposit-related fees, and higher other income, partially offset by a narrowing of spreads on liability products and reduced loan balances. Revenue from Commercial Term Lending (a new client segment acquired in the Washington Mutual transaction encompassing multi-family and commercial mortgage loans) was $875 million, an increase of $632 million. Mid-Corporate Banking revenue was $1.1 billion, an increase of $181 million, or 20%, driven by higher investment banking fees, increased loan spreads, and higher lending- and deposit-related fees. Real Estate Banking revenue was $461 million, an increase of $48 million, or 12%, due to the impact of the Washington Mutual transaction.

The provision for credit losses was $1.5 billion, compared with $464 million in the prior year, reflecting continued weakness in the credit environment, predominantly in real estate-related segments. Net charge-offs were $1.1 billion (1.02% net charge-off rate), compared with $288 million (0.35% net charge-off rate) in the prior year. The allowance for loan losses to end-of-period loans retained was 3.12%, up from 2.45% in the prior year. Nonperforming loans were $2.8 billion, an increase of $1.8 billion from the prior year.

Noninterest expense was $2.2 billion, an increase of $230 million, or 12%, from the prior year, due to the impact of the Washington Mutual transaction and higher FDIC insurance premiums.

Selected metrics

Year ended December 31, (in millions, except headcount and ratio data)	2010	2009	2008
Selected balance sheet data (period-end):			
Loans:			
Loans retained	**$ 97,900**	$ 97,108	$ 115,130
Loans held-for-sale and loans at fair value	**1,018**	324	295
Total loans	**$ 98,918**	$ 97,432	$ 115,425
Equity	**8,000**	8,000	8,000
Selected balance sheet data (average):			
Total assets	**$ 133,654**	$ 135,408	$ 114,299
Loans:			
Loans retained	**$ 96,584**	$ 106,421	$ 81,931
Loans held-for-sale and loans at fair value	**422**	317	406
Total loans	**$ 97,006**	$ 106,738	$ 82,337
Liability balances[a]	**138,862**	113,152	103,121
Equity	**8,000**	8,000	7,251
Average loans by client segment:			
Middle Market Banking	**$ 35,059**	$ 37,459	$ 42,193
Commercial Term Lending[b]	**36,978**	36,806	9,310
Mid-Corporate Banking	**11,926**	15,951	16,297
Real Estate Banking[b]	**9,344**	12,066	9,008
Other[b][c]	**3,699**	4,456	5,529
Total Commercial Banking loans	**$ 97,006**	$ 106,738	$ 82,337
Headcount	**4,881**	4,151	5,206
Credit data and quality statistics:			
Net charge-offs	**$ 909**	$ 1,089	$ 288
Nonaccrual loans:			
Nonaccrual loans retained[d]	**1,964**	2,764	1,026
Nonaccrual loans held-for-sale and loans held at fair value	**36**	37	—
Total nonaccrual loans	**2,000**	2,801	1,026
Assets acquired in loan satisfactions	**197**	188	116
Total nonperforming assets	**2,197**	2,989	1,142
Allowance for credit losses:			
Allowance for loan losses	**2,552**	3,025	2,826
Allowance for lending-related commitments	**209**	349	206
Total allowance for credit losses	**2,761**	3,374	3,032
Net charge-off rate	**0.94%**	1.02%	0.35%
Allowance for loan losses to period-end loans retained	**2.61**	3.12	2.45
Allowance for loan losses to average loans retained	**2.64**	2.84	3.04[e]
Allowance for loan losses to nonaccrual loans retained	**130**	109	275
Nonaccrual loans to total period-end loans	**2.02**	2.87	0.89
Nonaccrual loans to total average loans	**2.06**	2.62	1.10[e]

(a) Liability balances include deposits, as well as deposits that are swept to on–balance sheet liabilities (e.g., commercial paper, federal funds purchased, time deposits and securities loaned or sold under repurchase agreements) as part of customer cash management programs.

(b) 2008 results reflect the partial year impact of the Washington Mutual transaction.

(c) Other primarily includes lending activity within the Community Development Banking and Chase Capital segments.

(d) Allowance for loan losses of $340 million, $581 million and $208 million were held against nonaccrual loans retained for the periods ended December 31, 2010, 2009, and 2008, respectively.

(e) Average loans in the calculation of this ratio were adjusted to include $44.5 billion of loans acquired in the Washington Mutual transaction as if the transaction occurred on July 1, 2008. Excluding this adjustment, the unadjusted allowance for loan losses to average loans retained and nonaccrual loans to total average loans ratios would have been 3.45% and 1.25%, respectively, for the period ended December 31, 2008.

TREASURY & SECURITIES SERVICES

Treasury & Securities Services is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services provides cash management, trade, wholesale card and liquidity products and services to small- and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with IB, CB, RFS and AM businesses to serve clients firmwide. Certain TS revenue is included in other segments' results. Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Selected income statement data

Year ended December 31, (in millions, except ratio data)	2010	2009	2008
Revenue			
Lending- and deposit-related fees	**$ 1,256**	$ 1,285	$ 1,146
Asset management, administration and commissions	**2,697**	2,631	3,133
All other income	**804**	831	917
Noninterest revenue	**4,757**	4,747	5,196
Net interest income	**2,624**	2,597	2,938
Total net revenue	**7,381**	7,344	8,134
Provision for credit losses	**(47)**	55	82
Credit reimbursement to IB[a]	**(121)**	(121)	(121)
Noninterest expense			
Compensation expense	**2,734**	2,544	2,602
Noncompensation expense	**2,790**	2,658	2,556
Amortization of intangibles	**80**	76	65
Total noninterest expense	**5,604**	5,278	5,223
Income before income tax expense	**1,703**	1,890	2,708
Income tax expense	**624**	664	941
Net income	**$ 1,079**	$ 1,226	$ 1,767
Revenue by business			
Treasury Services	**$ 3,698**	$ 3,702	$ 3,779
Worldwide Securities Services	**3,683**	3,642	4,355
Total net revenue	**$ 7,381**	$ 7,344	$ 8,134
Financial ratios			
ROE	**17%**	25%	47%
Overhead ratio	**76**	72	64
Pretax margin ratio	**23**	26	33

As of or for the year ended December 31, (in millions, except headcount)	2010	2009	2008
Selected balance sheet data (period-end)			
Loans[b]	**$ 27,168**	$ 18,972	$ 24,508
Equity	**6,500**	5,000	4,500
Selected balance sheet data (average)			
Total assets	**$ 42,494**	$ 35,963	$ 54,563
Loans[b]	**23,271**	18,397	26,226
Liability balances	**248,451**	248,095	279,833
Equity	**6,500**	5,000	3,751
Headcount	**29,073**	26,609	27,070

(a) IB credit portfolio group manages certain exposures on behalf of clients shared with TSS. TSS reimburses IB for a portion of the total cost of managing the credit portfolio. IB recognizes this credit reimbursement as a component of noninterest revenue.

(b) Loan balances include wholesale overdrafts, commercial card and trade finance loans.

2010 compared with 2009

Net income was $1.1 billion, a decrease of $147 million, or 12%, from the prior year. These results reflected higher noninterest expense partially offset by the benefit from the provision for credit losses and higher net revenue.

Net revenue was $7.4 billion, an increase of $37 million, or 1%, from the prior year. Treasury Services net revenue was $3.7 billion, relatively flat compared with the prior year as lower spreads on liability products were offset by higher trade loan and card product volumes. Worldwide Securities Services net revenue was $3.7 billion, relatively flat compared with the prior year as higher market levels and net inflows of assets under custody were offset by lower spreads in securities lending, lower volatility on foreign exchange, and lower balances on liability products.

TSS generated firmwide net revenue of $10.3 billion, including $6.6 billion by Treasury Services; of that amount, $3.7 billion was recorded in Treasury Services, $2.6 billion in Commercial Banking and $247 million in other lines of business. The remaining $3.7 billion of firmwide net revenue was recorded in Worldwide Securities Services.

The provision for credit losses was a benefit of $47 million, compared with an expense of $55 million in the prior year. The decrease in the provision expense was primarily due to an improvement in credit quality.

Noninterest expense was $5.6 billion, up $326 million, or 6%, from the prior year. The increase was driven by continued investment in new product platforms, primarily related to international expansion and higher performance-based compensation.

2009 compared with 2008

Net income was $1.2 billion, a decrease of $541 million, or 31%, from the prior year, driven by lower net revenue.

Net revenue was $7.3 billion, a decrease of $790 million, or 10%, from the prior year. Worldwide Securities Services net revenue was $3.6 billion, a decrease of $713 million, or 16%. The decrease was driven by lower securities lending balances, primarily as a result of declines in asset valuations and demand, lower balances and spreads on liability products, and the effect of market depreciation on certain custody assets. Treasury Services net revenue was $3.7 billion, a decrease of $77 million, or 2%, reflecting spread compression on deposit products, offset by higher trade revenue driven by wider spreads and growth across cash management and card product volumes.

TSS generated firmwide net revenue of $10.2 billion, including $6.6 billion of net revenue in Treasury Services; of that amount, $3.7 billion was recorded in the Treasury Services business, $2.6 billion was recorded in the Commercial Banking business, and $245 million was recorded in other lines of business. The remaining $3.6 billion of net revenue was recorded in Worldwide Securities Services.

The provision for credit losses was $55 million, a decrease of $27 million from the prior year.

Noninterest expense was $5.3 billion, an increase of $55 million from the prior year. The increase was driven by higher FDIC insurance premiums, predominantly offset by lower headcount-related expense.

Selected metrics

Year ended December 31, (in millions, except ratio data)	2010	2009	2008
TSS firmwide disclosures			
Treasury Services revenue – reported	**$ 3,698**	$ 3,702	$ 3,779
Treasury Services revenue reported in CB	**2,632**	2,642	2,648
Treasury Services revenue reported in other lines of business	**247**	245	299
Treasury Services firmwide revenue[a]	**6,577**	6,589	6,726
Worldwide Securities Services revenue	**3,683**	3,642	4,355
Treasury & Securities Services firmwide revenue[a]	**$ 10,260**	$ 10,231	$ 11,081
Treasury Services firmwide liability balances (average)[b]	**$ 308,028**	$ 274,472	$ 264,195
Treasury & Securities Services firmwide liability balances (average)[b]	**387,313**	361,247	382,947
TSS firmwide financial ratios			
Treasury Services firmwide overhead ratio[c]	**55%**	53%	50%
Treasury & Securities Services firmwide overhead ratio[c]	**65**	62	57

Selected metrics

As of or for the year ended December 31, (in millions, except ratio data and where otherwise noted)	2010	2009	2008
Firmwide business metrics			
Assets under custody (in billions)	**$ 16,120**	$ 14,885	$ 13,205
Number of:			
U.S.$ ACH transactions originated	**3,892**	3,896	4,000
Total U.S.$ clearing volume (in thousands)	**122,123**	113,476	115,742
International electronic funds transfer volume (in thousands)[d]	**232,453**	193,348	171,036
Wholesale check volume	**2,060**	2,184	2,408
Wholesale cards issued (in thousands)[e]	**29,785**	27,138	22,784
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ 1**	$ 19	$ (2)
Nonaccrual loans	**12**	14	30
Allowance for credit losses:			
Allowance for loan losses	**65**	88	74
Allowance for lending-related commitments	**51**	84	63
Total allowance for credit losses	**116**	172	137
Net charge-off/(recovery) rate	**—%**	0.10%	(0.01)%
Allowance for loan losses to period-end loans	**0.24**	0.46	0.30
Allowance for loan losses to average loans	**0.28**	0.48	0.28
Allowance for loan losses to nonaccrual loans	**NM**	NM	247
Nonaccrual loans to period-end loans	**0.04**	0.07	0.12
Nonaccrual loans to average loans	**0.05**	0.08	0.11

(a) TSS firmwide revenue includes foreign exchange ("FX") revenue recorded in TSS and FX revenue associated with TSS customers who are FX customers of IB. However, some of the FX revenue associated with TSS customers who are FX customers of IB is not included in TS and TSS firmwide revenue. The total FX revenue generated was $636 million, $661 million and $880 million, for the years ended December 31, 2010, 2009 and 2008, respectively.

(b) Firmwide liability balances include liability balances recorded in CB.

(c) Overhead ratios have been calculated based on firmwide revenue and TSS and TS expense, respectively, including those allocated to certain other lines of business. FX revenue and expense recorded in IB for TSS-related FX activity are not included in this ratio.

(d) International electronic funds transfer includes non-U.S. dollar Automated Clearing House ("ACH") and clearing volume.

(e) Wholesale cards issued and outstanding include U.S. domestic commercial, stored value, prepaid and government electronic benefit card products.

ASSET MANAGEMENT

Asset Management, with assets under supervision of $1.8 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity, including money market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2010	2009	2008
Revenue			
Asset management, administration and commissions	**$ 6,374**	$ 5,621	$ 6,004
All other income	**1,111**	751	62
Noninterest revenue	**7,485**	6,372	6,066
Net interest income	**1,499**	1,593	1,518
Total net revenue	**8,984**	7,965	7,584
Provision for credit losses	**86**	188	85
Noninterest expense			
Compensation expense	**3,763**	3,375	3,216
Noncompensation expense	**2,277**	2,021	2,000
Amortization of intangibles	**72**	77	82
Total noninterest expense	**6,112**	5,473	5,298
Income before income tax expense	**2,786**	2,304	2,201
Income tax expense	**1,076**	874	844
Net income	**$ 1,710**	$ 1,430	$ 1,357
Revenue by client segment			
Private Banking[(a)]	**$ 4,860**	$ 4,320	$ 4,189
Institutional	**2,180**	2,065	1,775
Retail	**1,944**	1,580	1,620
Total net revenue	**$ 8,984**	$ 7,965	$ 7,584
Financial ratios			
ROE	**26%**	20%	24%
Overhead ratio	**68**	69	70
Pretax margin ratio	**31**	29	29

(a) Private Banking is a combination of the previously disclosed client segments: Private Bank, Private Wealth Management and JPMorgan Securities.

2010 compared with 2009

Net income was $1.7 billion, an increase of $280 million, or 20%, from the prior year, due to higher net revenue and a lower provision for credit losses, largely offset by higher noninterest expense.

Net revenue was a record $9.0 billion, an increase of $1.0 billion, or 13%, from the prior year. Noninterest revenue was $7.5 billion, an increase of $1.1 billion, or 17%, due to the effect of higher market levels, net inflows to products with higher margins, higher loan originations, and higher performance fees. Net interest income was $1.5 billion, down by $94 million, or 6%, from the prior year, due to narrower deposit spreads, largely offset by higher deposit and loan balances.

Revenue from Private Banking was $4.9 billion, up 13% from the prior year due to higher loan originations, higher deposit and loan balances, the effect of higher market levels and net inflows to products with higher margins, partially offset by narrower deposit spreads. Revenue from Institutional was $2.2 billion, up 6% due to the effect of higher market levels, partially offset by liquidity outflows. Revenue from Retail was $1.9 billion, up 23% due to the effect of higher market levels and net inflows to products with higher margins, partially offset by lower valuations of seed capital investments.

The provision for credit losses was $86 million, compared with $188 million in the prior year, reflecting an improving credit environment.

Noninterest expense was $6.1 billion, an increase of $639 million, or 12%, from the prior year, resulting from increased headcount and higher performance-based compensation.

2009 compared with 2008

Net income was $1.4 billion, an increase of $73 million, or 5%, from the prior year, due to higher total net revenue, offset largely by higher noninterest expense and provision for credit losses.

Total net revenue was $8.0 billion, an increase of $381 million, or 5%, from the prior year. Noninterest revenue was $6.4 billion, an increase of $306 million, or 5%, due to higher valuations of seed capital investments and net inflows, offset largely by lower market levels. Net interest income was $1.6 billion, up by $75 million, or 5%, from the prior year, due to wider loan spreads and higher deposit balances, offset partially by narrower deposit spreads.

Revenue from Private Banking was $4.3 billion, up 3% from the prior year due to wider loan spreads and higher deposit balances, offset largely by the effect of lower market levels. Revenue from Institutional was $2.1 billion, up 16% due to higher valuations of seed capital investments and net inflows, offset partially by the effect of lower market levels. Revenue from Retail was $1.6 billion, down 2% due to the effect of lower market levels, offset largely by higher valuations of seed capital investments.

The provision for credit losses was $188 million, an increase of $103 million from the prior year, reflecting continued weakness in the credit environment.

Noninterest expense was $5.5 billion, an increase of $175 million, or 3%, from the prior year due to the effect of the Bear Stearns merger, higher performance-based compensation and higher FDIC insurance premiums, offset largely by lower headcount-related expense.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount, ranking data, and where otherwise noted)	2010	2009	2008
Business metrics			
Number of:			
Client advisors	**2,245**	1,934	1,840
Retirement planning services participants (in thousands)	**1,580**	1,628	1,531
JPMorgan Securities brokers[a]	**415**	376	324
% of customer assets in 4 & 5 Star Funds[b]	**49%**	42%	42%
% of AUM in 1st and 2nd quartiles:[c]			
1 year	**67%**	57%	54%
3 years	**72%**	62%	65%
5 years	**80%**	74%	76%
Selected balance sheet data (period-end)			
Loans	**$ 44,084**	$ 37,755	$ 36,188
Equity	**6,500**	7,000	7,000
Selected balance sheet data (average)			
Total assets	**$ 65,056**	$ 60,249	$ 65,550
Loans	**38,948**	34,963	38,124
Deposits	**86,096**	77,005	70,179
Equity	**6,500**	7,000	5,645
Headcount	**16,918**	15,136	15,339
Credit data and quality statistics			
Net charge-offs	**$ 76**	$ 117	$ 11
Nonaccrual loans	**375**	580	147
Allowance for credit losses:			
Allowance for loan losses	**267**	269	191
Allowance for lending-related commitments	**4**	9	5
Total allowance for credit losses	**$ 271**	$ 278	$ 196
Net charge-off rate	**0.20%**	0.33%	0.03%
Allowance for loan losses to period-end loans	**0.61**	0.71	0.53
Allowance for loan losses to average loans	**0.69**	0.77	0.50
Allowance for loan losses to nonaccrual loans	**71**	46	130
Nonaccrual loans to period-end loans	**0.85**	1.54	0.41
Nonaccrual loans to average loans	**0.96**	1.66	0.39

(a) JPMorgan Securities was formerly known as Bear Stearns Private Client Services prior to January 1, 2010.
(b) Derived from Morningstar for the U.S., the U.K., Luxembourg, France, Hong Kong and Taiwan; and Nomura for Japan.
(c) Quartile ranking sourced from: Lipper for the U.S. and Taiwan; Morningstar for the U.K., Luxembourg, France and Hong Kong; and Nomura for Japan.

AM's client segments comprise the following:

Private Banking offers investment advice and wealth management services to high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty-wealth advisory services.

Institutional brings comprehensive global investment services – including asset management, pension analytics, asset-liability management and active risk-budgeting strategies – to corporate and public institutions, endowments, foundations, not-for-profit organizations and governments worldwide.

Retail provides worldwide investment management services and retirement planning and administration, through third-party and direct distribution of a full range of investment vehicles.

J.P. Morgan Asset Management has two high-level measures of its overall fund performance.

- Percentage of assets under management in funds rated 4 and 5 stars (three year). Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5 star rating is the best and represents the top 10% of industry wide ranked funds. A 4 star rating represents the next 22% of industry wide ranked funds. The worst rating is a 1 star rating.
- Percentage of assets under management in first- or second-quartile funds (one, three and five years). Mutual fund rating services rank funds according to a peer-based performance system, which measures returns according to specific time and fund classification (small-, mid-, multi- and large-cap).

Assets under supervision

2010 compared with 2009

Assets under supervision were $1.8 trillion at December 31, 2010, an increase of $139 billion, or 8%, from the prior year. Assets under management were $1.3 trillion, an increase of $49 billion, or 4%, due to the effect of higher market levels and net inflows in long-term products, largely offset by net outflows in liquidity products. Custody, brokerage, administration and deposit balances were $542 billion, up by $90 billion, or 20%, due to custody and brokerage inflows and the effect of higher market levels. The Firm also has a 41% interest in American Century Companies, Inc., whose AUM totaled $103 billion and $86 billion at December 31, 2010 and 2009, respectively; these are excluded from the AUM above.

2009 compared with 2008

Assets under supervision were $1.7 trillion at December 31, 2009, an increase of $205 billion, or 14%, from the prior year. Assets under management were $1.2 trillion, an increase of $116 billion, or 10%, from the prior year. The increases were due to the effect of higher market valuations and inflows in fixed income and equity products offset partially by outflows in cash products. Custody, brokerage, administration and deposit balances were $452 billion, up by $89 billion, due to the effect of higher market levels on custody and brokerage balances, and brokerage inflows in Private Banking. The Firm also had a 42% interest in American Century Companies, Inc. at December 31, 2009, whose AUM totaled $86 billion and $70 billion at December 31, 2009 and 2008, respectively; these are excluded from the AUM above.

Assets under supervision[a]

As of or for the year ended December 31, (in billions)	2010	2009	2008
Assets by asset class			
Liquidity	**$ 497**	$ 591	$ 613
Fixed income	**289**	226	180
Equities and multi-asset	**404**	339	240
Alternatives	**108**	93	100
Total assets under management	**1,298**	1,249	1,133
Custody/brokerage/administration/ deposits	**542**	452	363
Total assets under supervision	**$ 1,840**	$ 1,701	$ 1,496
Assets by client segment			
Private Banking[b]	**$ 284**	$ 270	$ 258
Institutional	**686**	709	681
Retail	**328**	270	194
Total assets under management	**$ 1,298**	$ 1,249	$ 1,133
Private Banking[b]	**$ 731**	$ 636	$ 552
Institutional	**687**	710	682
Retail	**422**	355	262
Total assets under supervision	**$ 1,840**	$ 1,701	$ 1,496

Assets by geographic region

December 31, (in billions)	2010	2009	2008
U.S./Canada	**$ 862**	$ 837	$ 798
International	**436**	412	335
Total assets under management	**$ 1,298**	$ 1,249	$ 1,133
U.S./Canada	**$ 1,271**	$ 1,182	$ 1,084
International	**569**	519	412
Total assets under supervision	**$ 1,840**	$ 1,701	$ 1,496

Mutual fund assets by asset class

Liquidity	**$ 446**	$ 539	$ 553
Fixed income	**92**	67	41
Equities and multi-asset	**169**	143	92
Alternatives	**7**	9	7
Total mutual fund assets	**$ 714**	$ 758	$ 693

Assets under management rollforward

Year ended December 31, (in billions)	2010	2009	2008
Beginning balance, January 1	**$ 1,249**	$ 1,133	$ 1,193
Net asset flows:			
Liquidity	**(89)**	(23)	210
Fixed income	**50**	34	(12)
Equities, multi-asset and alternatives	**19**	17	(47)
Market/performance/other impacts[c]	**69**	88	(211)
Ending balance, December 31	**$ 1,298**	$ 1,249	$ 1,133

Assets under supervision rollforward

Beginning balance, January 1	**$ 1,701**	$ 1,496	$ 1,572
Net asset flows	**28**	50	181
Market/performance/other impacts[c]	**111**	155	(257)
Ending balance, December 31	**$ 1,840**	$ 1,701	$ 1,496

(a) Excludes assets under management of American Century Companies, Inc., in which the Firm had a 41%, 42% and 43% ownership at December 31, 2010, 2009 and 2008, respectively.
(b) Private Banking is a combination of the previously disclosed client segments: Private Bank, Private Wealth Management and JPMorgan Securities.
(c) Includes $15 billion for assets under management and $68 billion for assets under supervision, which were acquired in the Bear Stearns merger in the second quarter of 2008.

CORPORATE/PRIVATE EQUITY

The Corporate/Private Equity sector comprises Private Equity, Treasury, the Chief Investment Office, corporate staff units and expense that is centrally managed. Treasury and the Chief Investment Office manage capital, liquidity and structural risks of the Firm. The corporate staff units include Central Technology and Operations, Internal Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Legal & Compliance, Corporate Real Estate and General Services, Risk Management, Corporate Responsibility and Strategy & Development. Other centrally managed expense includes the Firm's occupancy and pension-related expense, net of allocations to the business.

Selected income statement data

Year ended December 31, (in millions, except headcount)	2010	2009	2008
Revenue			
Principal transactions[a]	**$ 2,208**	$ 1,574	$ (3,588)
Securities gains[b]	**2,898**	1,139	1,637
All other income[c]	**253**	58	1,673
Noninterest revenue	**5,359**	2,771	(278)
Net interest income	**2,063**	3,863	347
Total net revenue[d]	**7,422**	6,634	69
Provision for credit losses	**14**	80	447[j]
Provision for credit losses – accounting conformity[e]	**—**	—	1,534
Noninterest expense			
Compensation expense	**2,357**	2,811	2,340
Noncompensation expense[f]	**8,788**	3,597	1,841
Merger costs	**—**	481	432
Subtotal	**11,145**	6,889	4,613
Net expense allocated to other businesses	**(4,790)**	(4,994)	(4,641)
Total noninterest expense	**6,355**	1,895	(28)
Income/(loss) before income tax expense/(benefit) and extraordinary gain	**1,053**	4,659	(1,884)
Income tax expense/(benefit)[g]	**(205)**	1,705	(535)
Income/(loss) before extraordinary gain	**1,258**	2,954	(1,349)
Extraordinary gain[h]	**—**	76	1,906
Net income	**$ 1,258**	$ 3,030	$ 557
Total net revenue			
Private equity	**$ 1,239**	$ 18	$ (963)
Corporate	**6,183**	6,616	1,032
Total net revenue	**$ 7,422**	$ 6,634	$ 69
Net income/(loss)			
Private equity	**$ 588**	$ (78)	$ (690)
Corporate[i]	**670**	3,108	1,247
Total net income	**$ 1,258**	$ 3,030	$ 557
Headcount	**20,030**	20,119	23,376

(a) Included losses on preferred equity interests in Fannie Mae and Freddie Mac in 2008.
(b) Included gain on sale of MasterCard shares in 2008.
(c) Included a gain from the dissolution of the Chase Paymentech Solutions joint venture and proceeds from the sale of Visa shares in its initial public offering in 2008.
(d) Total net revenue included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $226 million, $151 million and $57 million for 2010, 2009 and 2008, respectively.
(e) Represents an accounting conformity credit loss reserve provision related to the acquisition of Washington Mutual Bank's banking operations.
(f) Includes litigation expense of $5.7 billion for 2010, compared with net benefits of $0.3 billion and $1.0 billion for 2009 and 2008, respectively. Included in the net benefits were a release of credit card litigation reserves in 2008 and insurance recoveries related to settlement of the Enron and WorldCom class action litigations. Also included a $675 million FDIC special assessment during 2009.
(g) Includes tax benefits recognized upon the resolution of tax audits.
(h) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank. The acquisition resulted in negative goodwill, and accordingly, the Firm recognized an extraordinary gain. A preliminary gain of $1.9 billion was recognized at December 31, 2008. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion.
(i) 2009 and 2008 included merger costs and the extraordinary gain related to the Washington Mutual transaction, as well as items related to the Bear Stearns merger, including merger costs, asset management liquidation costs and JPMorgan Securities broker retention expense.
(j) In November 2008, the Firm transferred $5.8 billion of higher quality credit card loans from the legacy Chase portfolio to a securitization trust previously established by Washington Mutual ("the Trust"). As a result of converting higher credit quality Chase-originated on-book receivables to the Trust's seller's interest which had a higher overall loss rate reflective of the total assets within the Trust, approximately $400 million of incremental provision expense was recorded during the fourth quarter of 2008. This incremental provision expense was recorded in the Corporate segment as the action related to the acquisition of Washington Mutual's banking operations. For further discussion of credit card securitizations, see Note 16 on pages 244–259 of this Annual Report.

2010 compared with 2009

Net income was $1.3 billion compared with $3.0 billion in the prior year. The decrease was driven by higher litigation expense, partially offset by higher net revenue.

Net income for Private Equity was $588 million, compared with a net loss of $78 million in the prior year, reflecting the impact of improved market conditions on certain investments in the portfolio. Net revenue was $1.2 billion compared with $18 million in the prior year, reflecting private equity gains of $1.3 billion compared with losses of $54 million. Noninterest expense was $323 million, an increase of $182 million, driven by higher compensation expense.

Net income for Corporate was $670 million, compared with $3.1 billion in the prior year. Current year results reflect after-tax litigation expense of $3.5 billion, lower net interest income and trading gains, partially offset by a higher level of securities gains, primarily driven by repositioning of the portfolio in response to changes in the interest rate environment and to rebalance exposure. The prior year included merger-related net loss of $635 million and a $419 million FDIC assessment.

2009 compared with 2008

Net income was $3.0 billion compared with $557 million in the prior year. The increase was driven by higher net revenue, partially offset by higher litigation expense.

Net loss for Private Equity was $78 million compared with a net loss of $690 million in the prior year. Net revenue was $18 million, an increase of $981 million, reflecting private equity losses of $54 million compared with losses of $894 million. Noninterest expense was $141 million, an increase of $21 million.

Net income for Corporate, including merger-related items, was $3.1 billion, compared with $1.2 billion in the prior year. Results in 2009 reflected higher levels of trading gains, net interest income and an after-tax gain of $150 million from the sale of MasterCard shares, partially offset by $635 million merger-related losses, a $419 million FDIC special assessment, lower securities gains and the absence of the $1.9 billion extraordinary gain related to the Washington Mutual merger in 2008. Trading gains and net interest income increased due to the Chief Investment Office's ("CIO") significant purchases of mortgage-backed securities guaranteed by U.S. government agencies, corporate debt securities, U.S. Treasury and government agency securities and other asset-backed securities. These investments were generally associated with the management of interest rate risk and investment of cash resulting from the excess funding the Firm continued to experience during 2009. The increase in securities was partially offset by sales of higher-coupon instruments (part of repositioning the investment portfolio) as well as prepayments and maturities.

After-tax results in 2008 included $955 million in proceeds from the sale of Visa shares in its initial public offering and $627 million from the dissolution of the Chase Paymentech Solutions joint venture. These items were partially offset by losses of $642 million on preferred securities of Fannie Mae and Freddie Mac, a $248 million charge related to the offer to repurchase auction-rate securities and $211 million net merger costs.

Treasury and CIO

Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	2010	2009	2008
Securities gains[a]	**$ 2,897**	$ 1,147	$ 1,652
Investment securities portfolio (average)	**323,673**	324,037	113,010
Investment securities portfolio (ending)	**310,801**	340,163	192,564
Mortgage loans (average)	**9,004**	7,427	7,059
Mortgage loans (ending)	**10,739**	8,023	7,292

(a) Results for 2008 included a gain on the sale of MasterCard shares. All periods reflect repositioning of the Corporate investment securities portfolio.

For further information on the investment securities portfolio, see Note 3 and Note 12 on pages 170–187 and 214–218, respectively, of this Annual Report. For further information on CIO VaR and the Firm's earnings-at-risk, see the Market Risk Management section on pages 142–146 of this Annual Report.

Private Equity Portfolio

Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	2010	2009	2008
Private equity gains/(losses)			
Realized gains	**$ 1,409**	$ 109	$ 1,717
Unrealized gains/(losses)[a]	**(302)**	(81)	(2,480)
Total direct investments	**1,107**	28	(763)
Third-party fund investments	**241**	(82)	(131)
Total private equity gains/(losses)[b]	**$ 1,348**	$ (54)	$ (894)
Private equity portfolio information[c]			
Direct investments			
Publicly held securities			
Carrying value	**$ 875**	$ 762	$ 483
Cost	**732**	743	792
Quoted public value	**935**	791	543
Privately held direct securities			
Carrying value	**5,882**	5,104	5,564
Cost	**6,887**	5,959	6,296
Third-party fund investments[d]			
Carrying value	**1,980**	1,459	805
Cost	**2,404**	2,079	1,169
Total private equity portfolio			
Carrying value	**$ 8,737**	$ 7,325	$ 6,852
Cost	**$10,023**	$ 8,781	$ 8,257

(a) Unrealized gains/(losses) contain reversals of unrealized gains and losses that were recognized in prior periods and have now been realized.
(b) Included in principal transactions revenue in the Consolidated Statements of Income.
(c) For more information on the Firm's policies regarding the valuation of the private equity portfolio, see Note 3 on pages 170–187 of this Annual Report.
(d) Unfunded commitments to third-party equity funds were $1.0 billion, $1.5 billion and $1.4 billion at December 31, 2010, 2009 and 2008, respectively.

2010 compared with 2009

The carrying value of the private equity portfolio at December 31, 2010, was $8.7 billion, up from $7.3 billion at December 31, 2009. The portfolio increase was primarily due to incremental follow-on investments. The portfolio represented 6.9% of the Firm's stockholders' equity less goodwill at December 31, 2010, up from 6.3% at December 31, 2009.

2009 compared with 2008

The carrying value of the private equity portfolio at December 31, 2009, was $7.3 billion, up from $6.9 billion at December 31, 2008. The portfolio increase was primarily driven by additional follow-on investments and net unrealized gains on the existing portfolio, partially offset by sales during 2009. The portfolio represented 6.3% of the Firm's stockholders' equity less goodwill at December 31, 2009, up from 5.8% at December 31, 2008.

INTERNATIONAL OPERATIONS

In 2010, the Firm reported approximately $22.2 billion of revenue involving clients, customers and counterparties residing outside of the United States. Of that amount, approximately 64% was derived from Europe/Middle East/Africa ("EMEA"), approximately 26% from Asia Pacific, approximately 8% from Latin America/Caribbean, and the balance from other geographies outside the United States.

The Firm is committed to further expanding its wholesale businesses (IB, AM and TSS) outside the United States and intends to add additional client-serving bankers, as well as product and sales support personnel, to address the needs of the Firm's clients located in these regions. With a comprehensive and coordinated international business strategy and growth plan, efforts and investments for growth will be accelerated and prioritized.

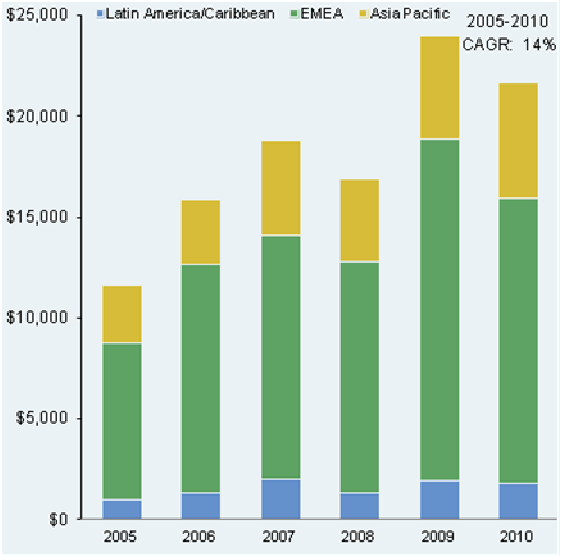
Set forth below are certain key metrics related to the Firm's wholesale international operations including, for each of EMEA, Latin America/Caribbean and Asia Pacific, the number of countries in each such region in which it operates, front office headcount, number of clients and selected revenue and balance sheet data. For additional information regarding international operations, see Note 33 on page 290 of this Annual Report.

Asia Pacific	Latin America/ Caribbean	EMEA
• 2010 revenue of $5.8 billion • 2005 – 2010 CAGR: 15% • Operating in 16 countries in the region • 6 new offices opened in 2010 • Headcount of 15,419[a] • 4,366 front office • 450+ significant clients[b] • $49.1 billion in deposits[c] • $20.6 billion in loans outstanding[d] • $118 billion in AUM	• 2010 revenue of $1.8 billion • 2005 – 2010 CAGR: 13% • Operating in 8 countries in the region • 2 new offices opened in 2010 • Headcount of 1,770[a] • 1,024 front office • 160+ significant clients[b] • $1.7 billion in deposits[c] • $16.5 billion in loans outstanding[d] • $32 billion in AUM	• 2010 revenue of $14.1 billion • 2005 – 2010 CAGR: 13% • Operating in 33 countries in the region • 5 new offices opened in 2010 • Headcount of 16,312[a] • 6,192 front office • 940+ significant clients[b] • $135.8 billion in deposits[c] • $27.9 billion in loans outstanding[d] • $281 billion in AUM

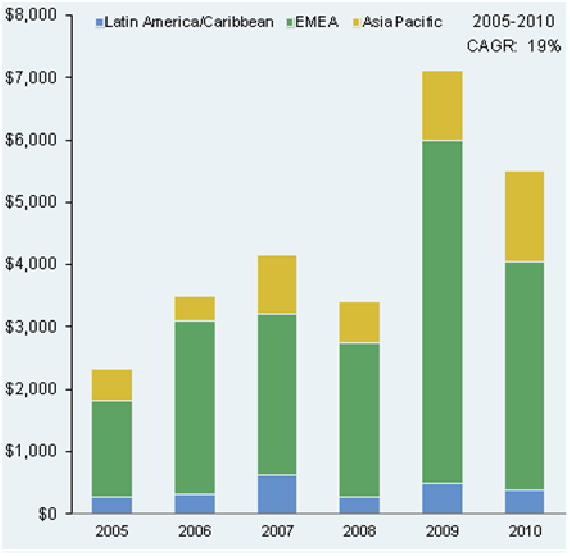
(a) Total headcount includes employees and, in certain cases, contractors whose functions are considered integral to the operations of the business. Employees in offshore service centers supporting line of business operations in each region are also included.
(b) Significant clients defined as a company with over $1 million in international revenue in the region (excludes private banking clients).
(c) Deposits reflect average balances and are based on booking location.
(d) Loans outstanding reflect period-end balances, are based on client domicile, and exclude loans held-for-sale and loans carried at fair value.

The following graphs provide the wholesale international revenue and net income for the periods indicated.

Revenue ($ millions) [a]



Net income ($ millions) [a]



(a) Based on wholesale international operations (RFS and CS are excluded from this analysis).

BALANCE SHEET ANALYSIS

Selected Consolidated Balance Sheets data

December 31, (in millions)	2010	2009
Assets		
Cash and due from banks	**$ 27,567**	$ 26,206
Deposits with banks	**21,673**	63,230
Federal funds sold and securities purchased under resale agreements	**222,554**	195,404
Securities borrowed	**123,587**	119,630
Trading assets:		
Debt and equity instruments	**409,411**	330,918
Derivative receivables	**80,481**	80,210
Securities	**316,336**	360,390
Loans	**692,927**	633,458
Allowance for loan losses	**(32,266)**	(31,602)
Loans, net of allowance for loan losses	**660,661**	601,856
Accrued interest and accounts receivable	**70,147**	67,427
Premises and equipment	**13,355**	11,118
Goodwill	**48,854**	48,357
Mortgage servicing rights	**13,649**	15,531
Other intangible assets	**4,039**	4,621
Other assets	**105,291**	107,091
Total assets	**$2,117,605**	$ 2,031,989
Liabilities		
Deposits	**$ 930,369**	$ 938,367
Federal funds purchased and securities loaned or sold under repurchase agreements	**276,644**	261,413
Commercial paper	**35,363**	41,794
Other borrowed funds	**57,309**	55,740
Trading liabilities:		
Debt and equity instruments	**76,947**	64,946
Derivative payables	**69,219**	60,125
Accounts payable and other liabilities	**170,330**	162,696
Beneficial interests issued by consolidated VIEs	**77,649**	15,225
Long-term debt	**247,669**	266,318
Total liabilities	**1,941,499**	1,866,624
Stockholders' equity	**176,106**	165,365
Total liabilities and stockholders' equity	**$2,117,605**	$ 2,031,989

Consolidated Balance Sheets overview

Total assets were $2.1 trillion, up by $85.6 billion from December 31, 2009. The increase was primarily a result of higher trading assets – debt and equity instruments, principally due to improved market activity; higher loans, largely due to the January 1, 2010, adoption of accounting guidance related to VIEs; and higher federal funds sold and securities purchased under resale agreements, predominantly due to higher financing volume in IB. These increases were partially offset by a reduction in deposits with banks, as market stress eased from the end of 2009.

Total liabilities were $1.9 trillion, up by $74.9 billion. The increase was predominantly a result of higher beneficial interests issued by consolidated VIEs, due to the adoption of the accounting guidance related to VIEs.

Stockholders' equity was $176.1 billion, up by $10.7 billion. The increase was driven predominantly by net income, partially offset by the cumulative effect of changes in accounting principles as a result of the adoption of the accounting guidance related to the consolidation of VIEs.

The following is a discussion of the significant changes in the specific line captions of the Consolidated Balance Sheets from December 31, 2009.

Deposits with banks; federal funds sold and securities purchased under resale agreements; and securities borrowed

The Firm uses these instruments as part of its liquidity management activities; to manage its cash positions and risk-based capital requirements; and to support its trading and risk management activities. In particular, securities purchased under resale agreements and securities borrowed are used to provide funding or liquidity to clients by purchasing and borrowing their securities for the short term. The decrease in deposits with banks was largely due to lower deposits with the Federal Reserve Banks and lower interbank lending, as market stress eased from the end of 2009. Securities purchased under resale agreements increased, predominantly due to higher financing volume in IB. For additional information on the Firm's Liquidity Risk Management, see pages 110–115 of this Annual Report.

Trading assets and liabilities – debt and equity instruments

Debt and equity trading instruments are used primarily for market-making activity. These instruments consist predominantly of fixed-income securities, including government and corporate debt; equity securities, including convertible securities; loans, including prime mortgage and other loans warehoused by RFS and IB for sale or securitization purposes and accounted for at fair value; and physical commodities inventories carried at the lower of cost or fair value. Trading assets – debt and equity instruments increased, principally due to improved market activity, primarily in equity securities, foreign debt and physical commodities. Trading liabilities – debt and equity instruments increased, largely due to higher levels of positions to facilitate customer trading. For additional information, refer to Note 3 on pages 170–187 of this Annual Report.

Trading assets and liabilities – derivative receivables and payables

The Firm uses derivative instruments predominantly for market-making activity. Derivatives enable customers and the Firm to manage their exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its credit exposure. Derivative receivables were flat compared with the prior year. Derivative payables increased, reflecting tighter credit spreads, appreciation of the U.S. dollar and higher commodity derivatives balances (driven by increasing commodity prices and the RBS Sempra acquisition). For additional information, refer to Derivative contracts on pages 125–128, and Note 3 and Note 6 on pages 170–187 and 191–199, respectively, of this Annual Report.

Securities
Substantially all of the securities portfolio is classified as available-for-sale ("AFS") and used primarily to manage the Firm's exposure to interest rate movements and to invest cash resulting from excess funding positions. Securities decreased, largely due to repositioning of the portfolio in Corporate, in response to changes in the interest rate environment and to rebalance exposures. The repositioning reduced U.S. government agency securities and increased non-U.S. mortgage-backed securities. The adoption of the new accounting guidance related to VIEs, which resulted in the elimination of retained AFS securities issued by Firm-sponsored credit card securitization trusts, also contributed to the decrease. For information related to securities, refer to the Corporate/Private Equity segment on pages 89–90, and Note 3 and Note 12 on pages 170–187 and 214–218, respectively, of this Annual Report.

Loans and allowance for loan losses
The Firm provides loans to a variety of customers, from large corporate and institutional clients to individual consumers. Loans and the allowance for loan losses increased as a result of the Firm's adoption of accounting guidance related to VIEs at January 1, 2010. Excluding the impact of the adoption of the new accounting guidance, loans decreased due to the continued runoff of the residential real estate loans and credit card balances. The decrease was partially offset by an increase in wholesale loans, mainly in TSS and AM.

The allowance for loan losses, excluding the impact of this adoption, decreased primarily due to a decline in the credit card and wholesale allowance. The decrease was offset partially by an increase in the consumer (excluding credit card) allowance.

For a more detailed discussion of the loan portfolio and the allowance for loan losses, refer to Credit Risk Management on pages 116–141, and Notes 3, 4, 14 and 15 on pages 170–187, 187–189, 220–238 and 239–243, respectively, of this Annual Report.

Accrued interest and accounts receivable
This line caption consists of accrued interest receivables from interest-earning assets; receivables from customers (primarily from activities related to IB's Prime Services business); receivables from brokers, dealers and clearing organizations; and receivables from failed securities sales. Accrued interest and accounts receivable increased, reflecting higher customer receivables in IB's Prime Services business due to increased client activity. The increase was offset partially by the elimination of retained securitization interests upon the adoption of the new accounting guidance that resulted in the consolidation of Firm-sponsored credit card securitization trusts. For a more detailed discussion of the adoption, see Note 1 and Note 16 on pages 164–165 and 244–259, respectively, of this Annual Report.

Premises and equipment
The Firm's premises and equipment consist of land, buildings, leasehold improvements, furniture and fixtures, hardware and software, and other equipment. The increase in premises and equipment was primarily due to the purchase of two buildings, one in New York and one in London; investments in hardware, software and other equipment also contributed to the increase. The increase was partially offset by the related depreciation and amortization of these assets.

Goodwill
Goodwill arises from business combinations and represents the excess of the purchase price of an acquired entity or business over the fair values assigned to assets acquired and liabilities assumed. The increase in goodwill was largely due to the acquisition of RBS Sempra Commodities' global oil, global metal, and European power and gas businesses by IB; and the purchase of a majority interest in Gávea Investimentos, a leading alternative asset management company in Brazil, by AM. For additional information on goodwill, see Note 17 on pages 260–263 of this Annual Report.

Mortgage servicing rights
MSRs represent the fair value of future cash flows for performing specified mortgage-servicing activities (predominantly related to residential mortgages) for others. MSRs are either purchased from third parties or retained upon the sale or securitization of mortgage loans. Servicing activities include collecting principal, interest and escrow payments from borrowers; making tax and insurance payments on behalf of borrowers; monitoring delinquencies and executing foreclosure proceedings; and accounting for and remitting principal and interest payments to the related investors of the mortgage-backed securities. MSRs decreased, predominantly due to a significant decline in market interest rates during 2010, as well as from servicing portfolio runoff and dispositions of MSRs. These decreases were partially offset by increases related to sales in RFS of originated loans for which servicing rights were retained. For additional information on MSRs, see Note 3 and Note 17 on pages 170–187 and 260–263, respectively, of this Annual Report

Other intangible assets
Other intangible assets consist of purchased credit card relationships, other credit card–related intangibles, core deposit intangibles and other intangibles. The decrease in other intangible assets was predominately due to amortization, partially offset by an increase resulting from the aforementioned Gávea Investimentos transaction. For additional information on other intangible assets, see Note 17 on pages 260–263 of this Annual Report.

Other assets
Other assets consist of private equity and other investments, cash collateral pledged, corporate and bank-owned life insurance policies, assets acquired in loan satisfactions (including real estate owned) and all other assets. At December 31, 2010, other assets were relatively flat compared with December 31, 2009.

Deposits
Deposits represent a liability to customers, both retail and wholesale, related to non-brokerage funds held on their behalf. Deposits are classified by location (U.S. and non-U.S.), whether they are interest- or noninterest-bearing, and by type (i.e., demand, money-market, savings, time or negotiable order of withdrawal accounts). Deposits provide a stable and consistent source of funding for the Firm. Deposits decreased, reflecting a decline in wholesale funding due to the Firm's lower funding needs, and lower deposit levels in TSS. These factors were offset partially by net inflows from existing customers and new business in CB, RFS and AM. For more information on deposits, refer to the RFS and AM segment discussions on pages 72–78 and 86–88, respectively; the Liquidity Risk Management discussion on pages 110–115; and Note 3 and Note 19 on pages 170–187 and 263–264, respectively, of this Annual Report. For more information on wholesale liability balances, which includes deposits, refer to the CB and TSS segment discussions on pages 82–83 and 84–85, respectively, of this Annual Report.

Federal funds purchased and securities loaned or sold under repurchase agreements
The Firm uses these instruments as part of its liquidity management activities and to support its trading and risk management activities. In particular, federal funds purchased and securities loaned or sold under repurchase agreements are used as short-term funding sources and to make securities available to clients for their short-term liquidity purposes. Securities sold under repurchase agreements increased, largely due to increased levels of activity in IB, partially offset by a decrease in CIO repositioning activities. For additional information on the Firm's Liquidity Risk Management, see pages 110–115 of this Annual Report.

Commercial paper and other borrowed funds
The Firm uses commercial paper and other borrowed funds in its liquidity management activities to meet short-term funding needs, and in connection with a TSS liquidity management product, whereby excess client funds are transferred into commercial paper overnight sweep accounts. Commercial paper and other borrowed funds, which includes advances from Federal Home Loan Banks ("FHLBs"), decreased due to lower funding requirements. For additional information on the Firm's Liquidity Risk Management and other borrowed funds, see pages 110–115, and Note 20 on page 264 of this Annual Report.

Accounts payable and other liabilities
Accounts payable and other liabilities consist of payables to customers (primarily from activities related to IB's Prime Services business); payables to brokers, dealers and clearing organizations; payables from failed securities purchases; accrued expense, including interest-bearing liabilities; and all other liabilities, including litigation reserves and obligations to return securities received as collateral. Accounts payable and other liabilities increased due to additional litigation reserves, largely for mortgage-related matters.

Beneficial interests issued by consolidated VIEs
Beneficial interests issued by consolidated VIEs represent interest-bearing beneficial-interest liabilities, which increased, predominantly due to the Firm's adoption of accounting guidance related to VIEs, partially offset by maturities of $24.9 billion related to Firm-sponsored credit card securitization trusts. For additional information on Firm-sponsored VIEs and loan securitization trusts, see Off–Balance Sheet Arrangements and Contractual Cash Obligations below, and Note 16 and Note 22 on pages 244–259 and 265–266, respectively, of this Annual Report.

Long-term debt
The Firm uses long-term debt (including trust-preferred capital debt securities) to provide cost-effective and diversified sources of funds and as critical components of the Firm's liquidity and capital management activities. Long-term debt decreased, due to lower funding requirements. Maturities and redemptions totaled $53.4 billion during 2010 and were partially offset by new issuances of $36.0 billion. For additional information on the Firm's long-term debt activities, see the Liquidity Risk Management discussion on pages 110–115, and Note 22 on pages 265–266 of this Annual Report.

Stockholders' equity
Total stockholders' equity increased, predominantly due to net income, and net issuances and commitments to issue under the Firm's employee stock-based compensation plans. The increase was partially offset by the impact of the adoption of the new accounting guidance related to VIEs, which resulted in a reduction of $4.5 billion, driven by the establishment of an allowance for loan losses of $7.5 billion (pretax) related to receivables predominantly held in credit card securitization trusts that were consolidated at the adoption date. Also partially offsetting the increase were stock repurchases; the purchase of the remaining interest in a consolidated subsidiary from noncontrolling shareholders; and the declaration of cash dividends on common and preferred stock. For a more detailed discussion of the adoption of new consolidated guidance related to VIEs, see Notes 1 and 16 on pages 164–165 and 244–259, respectively, of this Annual Report.

JPMorgan Chase is involved with several types of off–balance sheet arrangements, including through unconsolidated special-purpose entities ("SPEs"), which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

SPEs are the most common type of VIE, used in securitization transactions to isolate certain assets and distribute related cash flows to investors. The basic SPE structure involves a company selling assets to the SPE. The SPE funds the purchase of those assets by issuing securities to investors in the form of commercial paper, short-term asset-backed notes, medium-term notes and other forms of interest. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

As a result of new accounting guidance, certain VIEs were consolidated on the Firm's Consolidated Balance Sheets effective January 1, 2010. Nevertheless, SPEs continue to be an important part of the financial markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks. These arrangements are integral to the markets for mortgage-backed securities, commercial paper and other asset-backed securities.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits, investor intermediation activities, and loan securitizations. See Note 16 on pages 244–259 for further information on these types of SPEs.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, the Firm could be required to provide funding if the short-term credit rating of JPMorgan Chase Bank, N.A., were downgraded below specific levels, primarily "P-1", "A-1" and "F1" for Moody's, Standard & Poor's and Fitch, respectively. The aggregate amount of these liquidity commitments, to both consolidated and nonconsolidated SPEs, were $34.2 billion at both December 31, 2010 and 2009. Alternatively, if JPMorgan Chase Bank, N.A., were downgraded, the Firm could be replaced by another liquidity provider in lieu of providing funding under the liquidity commitment or, in certain circumstances, the Firm could facilitate the sale or refinancing of the assets in the SPE in order to provide liquidity.

Special-purpose entities revenue

The following table summarizes certain revenue information related to consolidated and nonconsolidated VIEs with which the Firm has significant involvement. The revenue reported in the table below primarily represents contractual servicing and credit fee income (i.e., fee income from acting as administrator, structurer or liquidity provider). It does not include gains and losses from changes in the fair value of trading positions (such as derivative transactions) entered into with VIEs. Those gains and losses are recorded in principal transactions revenue.

Revenue from VIEs and Securitization Entities[a]

Year ended December 31, (in millions)	**2010**	2009	2008
Multi-seller conduits	**$ 240**	$ 460	$ 314
Investor intermediation	**49**	34	22
Other securitization entities[b]	**2,005**	2,510	1,742
Total	**$ 2,294**	$ 3,004	$ 2,078

(a) Includes revenue associated with both consolidated VIEs and significant nonconsolidated VIEs.
(b) Excludes servicing revenue from loans sold to and securitized by third parties.

Loan modifications

The Firm modifies certain loans that it services, and that were sold to off-balance sheet SPEs, pursuant to the U.S. Treasury's Making Home Affordable ("MHA") programs and the Firm's other loss mitigation programs. See Consumer Credit Portfolio on pages 129–138 of this Annual Report for more details on these loan modifications.

Off–balance sheet lending-related financial instruments and other guarantees

JPMorgan Chase uses lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the Firm's maximum possible credit risk should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. For further discussion of lending-related commitments and guarantees and the Firm's accounting for them, see Lending-related commitments on page 128 and Note 30 on pages 275–280 of this Annual Report.

The accompanying table presents, as of December 31, 2010, the amounts by contractual maturity of off–balance sheet lending-related financial instruments and other guarantees. The amounts in the table for credit card and home equity lending-related commitments represent the total available credit for these products.

The Firm has not experienced, and does not anticipate, that all available lines of credit for these products would be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law. The Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property or when there has been a demonstrable decline in the creditworthiness of the borrower. The accompanying table excludes certain guarantees that do not have a contractual maturity date (e.g., loan sale and securitization-related indemnification obligations). For further discussion, see discussion of Loan sale and securitization-related indemnification obligations in Note 30 on pages 275–280 of this Annual Report.

Off–balance sheet lending-related financial instruments and other guarantees

By remaining maturity at December 31,	2010					2009
(in millions)	2011	2012-2013	2014-2015	After 2015	**Total**	**Total**
Lending-related						
Consumer, excluding credit card:						
Home equity — senior lien	**$ 617**	**$ 3,100**	**$ 5,936**	**$ 6,407**	**$ 16,060**	$ 19,246
Home equity — junior lien	**1,125**	**7,169**	**10,742**	**9,645**	**28,681**	37,231
Prime mortgage	**1,266**	**—**	**—**	**—**	**1,266**	1,654
Subprime mortgage	**—**	**—**	**—**	**—**	**—**	—
Auto	**5,095**	**144**	**6**	**1**	**5,246**	5,467
Business banking	**9,116**	**264**	**85**	**237**	**9,702**	9,040
Student and other	**76**	**6**	**—**	**497**	**579**	2,189
Total consumer, excluding credit card	**17,295**	**10,683**	**16,769**	**16,787**	**61,534**	74,827
Credit card	**547,227**	**—**	**—**	**—**	**547,227**	569,113
Total consumer	**564,522**	**10,683**	**16,769**	**16,787**	**608,761**	643,940
Wholesale:						
Other unfunded commitments to extend credit[a][b][c]	**62,786**	**99,698**	**32,177**	**5,198**	**199,859**	192,145
Asset purchase agreements[b]	**—**	**—**	**—**	**—**	**—**	22,685
Standby letters of credit and other financial guarantees[a][c][d][e]	**25,346**	**48,408**	**16,729**	**4,354**	**94,837**	91,485
Unused advised lines of credit	**34,354**	**9,154**	**373**	**839**	**44,720**	35,673
Other letters of credit[a][e]	**3,903**	**2,304**	**456**	**—**	**6,663**	5,167
Total wholesale	**126,389**	**159,564**	**49,735**	**10,391**	**346,079**	347,155
Total lending-related	**$ 690,911**	**$ 170,247**	**$ 66,504**	**$ 27,178**	**$ 954,840**	$ 991,095
Other guarantees						
Securities lending indemnifications[f]	**$ 181,717**	**$ —**	**$ —**	**$ —**	**$ 181,717**	$ 170,777
Derivatives qualifying as guarantees[g]	**3,140**	**585**	**48,308**	**35,735**	**87,768**	98,052[i]
Other guarantees and commitments[h]	**90**	**226**	**288**	**3,162**	**3,766**	3,671

(a) At December 31, 2010 and 2009, represents the contractual amount net of risk participations totaling $542 million and $643 million, respectively, for other unfunded commitments to extend credit; $22.4 billion and $24.6 billion, respectively, for standby letters of credit and other financial guarantees; and $1.1 billion and $690 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.

(b) Upon the adoption of the accounting guidance related to VIEs, $24.2 billion of lending-related commitments between the Firm and Firm-administered multi-seller conduits were eliminated upon consolidation. The decrease in lending-related commitments was partially offset by the addition of $6.5 billion of unfunded commitments directly between the multi-seller conduits and clients; these unfunded commitments of the consolidated conduits are now included as off–balance sheet lending-related commitments of the Firm.

(c) Includes credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other not-for-profit entities of $43.4 billion and $44.1 billion, at December 31, 2010 and 2009, respectively.

(d) At December 31, 2010 and 2009, includes unissued standby letters of credit commitments of $41.6 billion and $38.4 billion, respectively.

(e) At December 31, 2010 and 2009, JPMorgan Chase held collateral relating to $37.8 billion and $31.5 billion, respectively, of standby letters of credit; and $2.1 billion and $1.3 billion, respectively, of other letters of credit.

(f) At December 31, 2010 and 2009, collateral held by the Firm in support of securities lending indemnification agreements totaled $185.0 billion and $173.2 billion, respectively. Securities lending collateral comprises primarily cash, and securities issued by governments that are members of the Organisation for Economic Co-operation and Development ("OECD") and U.S. government agencies.

(g) Represents the notional amounts of derivative contracts qualifying as guarantees. For further discussion of guarantees, see Note 6 on pages 191–199 and Note 30 on pages 275–280 of this Annual Report.

(h) Amounts include letters of credit hedged by derivative transactions and managed on a market risk basis.

(i) The prior period has been revised to conform with current presentation.

Contractual cash obligations

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. On-balance sheet obligations include deposits; secured and unsecured borrowings (both short- and long-term); beneficial interests issued by consolidated VIEs; current income taxes payable; accrued interest payments and certain employee benefit-related obligations. In addition, JPMorgan Chase has certain off-balance-sheet contractual obligations that may require future cash payments; these include unsettled reverse repurchase and securities borrowing agreements, future interest payments, noncancelable operating leases, capital expenditures related to real estate (including building purchase commitments) and equipment; equity investment commitments; and contracts to purchase future services.

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's significant contractual cash obligations at December 31, 2010. The contractual cash obligations included in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. The carrying amount of on-balance sheet obligations on the Consolidated Balance Sheets may differ from the amounts of the obligations reported below. Excluded are contingent payments associated with certain acquisitions, and loan repurchase liabilities. For a discussion of loan repurchase liabilities, see Repurchase liability on pages 98–101 of this Annual Report. For further discussion of other obligations, see the Notes to Consolidated Financial Statements in this Annual Report.

Contractual cash obligations

	2010					2009
By remaining maturity at December 31, (in millions)	2011	2012-2013	2014-2015	After 2015	**Total**	**Total**
On-balance sheet obligations						
Deposits[a]	**$ 910,802**	**$ 12,084**	**$ 4,139**	**$ 657**	**$ 927,682**	$ 935,265
Federal funds purchased and securities loaned or sold under repurchase agreements	**272,602**	**2,167**	**1,059**	**816**	**276,644**	261,413
Commercial paper	**35,363**	**—**	**—**	**—**	**35,363**	41,794
Other borrowed funds[a]	**33,758**	**8,833**	**4,030**	**915**	**47,536**	50,398
Beneficial interests issued by consolidated VIEs	**38,989**	**24,310**	**4,708**	**9,642**	**77,649**	15,225
Long-term debt[a]	**41,290**	**64,544**	**38,272**	**82,403**	**226,509**	242,465
Current income taxes payable[b]	**—**	**—**	**—**	**—**	**—**	457
Other[c]	**2,450**	**1,141**	**961**	**2,777**	**7,329**	7,438
Total on-balance sheet obligations	**1,335,254**	**113,079**	**53,169**	**97,210**	**1,598,712**	1,554,455
Off-balance sheet obligations						
Unsettled reverse repurchase and securities borrowing agreements[d]	**39,927**	**—**	**—**	**—**	**39,927**	48,187
Contractual interest payments[e]	**12,887**	**13,089**	**9,297**	**43,181**	**78,454**	77,015
Operating leases[f]	**1,884**	**3,478**	**2,860**	**7,778**	**16,000**	15,952
Building purchase commitments[g]	**258**	**—**	**—**	**—**	**258**	670
Equity investment commitments[h]	**1,296**	**9**	**23**	**1,140**	**2,468**	2,374
Contractual purchases and capital expenditures	**1,384**	**701**	**335**	**402**	**2,822**	3,104
Obligations under affinity and co-brand programs	**990**	**2,002**	**1,475**	**1,334**	**5,801**	6,898
Other	**142**	**120**	**32**	**15**	**309**	15
Total off-balance sheet obligations	**58,768**	**19,399**	**14,022**	**53,850**	**146,039**	154,215
Total contractual cash obligations	**$ 1,394,022**	**$132,478**	**$ 67,191**	**$151,060**	**$1,744,751**	$ 1,708,670

(a) Excludes structured notes where the Firm is not obligated to return a stated amount of principal at the maturity of the notes, but is obligated to return an amount based on the performance of the structured notes.
(b) 2011 excludes the expected benefit of net prepayments of income taxes as of December 31, 2010.
(c) Primarily includes deferred annuity contracts, pension and postretirement obligations and insurance liabilities.
(d) For further information, refer to Unsettled reverse repurchase and securities borrowing agreements in Note 30 on page 278 of this Annual Report.
(e) Includes accrued interest and future contractual interest obligations. Excludes interest related to structured notes where the Firm's payment obligation is based on the performance of certain benchmarks.
(f) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of $1.8 billion at both December 31, 2010 and 2009.
(g) For further information, refer to Building purchase commitments in Note 30 on page 278 of this Annual Report.
(h) At December 31, 2010 and 2009, includes unfunded commitments of $1.0 billion and $1.5 billion, respectively, to third-party private equity funds that are generally fair valued at net asset value as discussed in Note 3 on pages 170–187 of this Annual Report; and $1.4 billion and $897 million, respectively, to other equity investments.

Repurchase liability

In connection with the Firm's loan sale and securitization activities with Fannie Mae and Freddie Mac (the "GSEs") and other loan sale and private-label securitization transactions, the Firm has made representations and warranties that the loans sold meet certain requirements. For transactions with the GSEs, these representations relate to type of collateral, underwriting standards, validity of certain borrower representations in connection with the loan, primary mortgage insurance being in force for any mortgage loan with a loan-to-value ratio ("LTV") greater than 80%, and the use of the GSEs' standard legal documentation. The Firm may be, and has been, required to repurchase loans and/or indemnify the GSEs and other investors for losses due to material breaches of these representations and warranties; however, predominantly all of the repurchase demands received by the Firm and the Firm's losses realized to date are related to loans sold to the GSEs.

To date, the repurchase demands the Firm has received from the GSEs primarily relate to loans originated from 2005 to 2008. Demands against the pre-2005 and post-2008 vintages have not been significant; the Firm attributes this to the comparatively favorable credit performance of these vintages and to the enhanced underwriting and loan qualification standards implemented progressively during 2007 and 2008. From 2005 to 2008, excluding Washington Mutual, loans sold to the GSEs subject to representations and warranties for which the Firm may be liable were approximately $380 billion; this amount represents the principal amount of loans sold throughout 2005 to 2008 and has not been adjusted for subsequent activity, such as borrower repayments of principal or repurchases completed to date. See the discussion below for information concerning the process the Firm uses to evaluate repurchase demands for breaches of representations and warranties, and the Firm's estimate of probable losses related to such exposure.

From 2005 to 2008, Washington Mutual sold approximately $150 billion of loans to the GSEs subject to certain representations and warranties. Subsequent to the Firm's acquisition of certain assets and liabilities of Washington Mutual from the FDIC in September 2008, the Firm resolved and/or limited certain current and future repurchase demands for loans sold to the GSEs by Washington Mutual, although it remains the Firm's position that such obligations remain with the FDIC receivership. Nevertheless, certain payments have been made with respect to certain of the then current and future repurchase demands, and the Firm will continue to evaluate and may pay certain future repurchase demands related to individual loans. In addition to the payments already made, the Firm estimates it has a remaining repurchase liability of approximately $190 million as of December 31, 2010, relating to unresolved and future demands on loans sold to the GSEs by Washington Mutual. After consideration of this repurchase liability, the Firm believes that the remaining GSE repurchase exposure related to Washington Mutual presents minimal future risk to the Firm's financial results.

The Firm also sells loans in securitization transactions with Ginnie Mae; these loans are typically insured by the Federal Housing Administration ("FHA") or the Rural Housing Administration ("RHA") and/or guaranteed by the U.S. Department of Veterans Affairs ("VA"). The Firm, in its role as servicer, may elect to repurchase delinquent loans securitized by Ginnie Mae in accordance with guidelines prescribed by Ginnie Mae, FHA, RHA and VA. Amounts due under the terms of these loans continue to be insured and the reimbursement of insured amounts is proceeding normally. Accordingly, the Firm has not recorded any repurchase liability related to these loans.

From 2005 to 2008, the Firm and certain acquired entities sold or deposited approximately $450 billion of residential mortgage loans to securitization trusts in private-label securitizations they sponsored. In connection therewith certain representations and warranties were made related to these loans. With respect to the $165 billion of private-label securitizations originated by Washington Mutual, it is the Firm's position that repurchase obligations remain with the FDIC receivership.

While the terms of the securitization transactions vary, they generally differ from loan sales to GSEs in that, among other things: (i) in order to direct the trustee to investigate loan files, the security holders must make a formal request for the trustee to do so, and typically, this requires agreement of the holders of a specified percentage of the outstanding securities; (ii) generally, the mortgage loans are not required to meet all GSE eligibility criteria; and (iii) in many cases, the party demanding repurchase is required to demonstrate that a loan-level breach of a representation or warranty has materially and adversely affected the value of the loan. Of the $450 billion originally sold or deposited (including $165 billion by Washington Mutual, as to which the Firm maintains the repurchase obligations remain with the FDIC receivership), approximately $180 billion of principal has been repaid. Approximately $80 billion of loans have been liquidated, with an average loss severity of 57%. The remaining outstanding principal balance of these loans as of December 31, 2010, was approximately $190 billion.

To date, loan-level repurchase demands in private-label securitizations have been limited. As a result, the Firm's repurchase reserve primarily relates to loan sales to the GSEs and is predominantly derived from repurchase activity with the GSEs. While it is possible that the volume of repurchase demands in private-label securitizations will increase in the future, the Firm cannot offer a reasonable estimate of those future demands based on historical experience to date. Thus far, claims related to private-label securitizations (including from insurers that have guaranteed certain obligations of the securitization trusts) have generally manifested themselves through securities-related litigation. The Firm separately evaluates its exposure to such litigation in establishing its litigation reserves. For additional information regarding litigation, see Note 32 on pages 282–289 of this Annual Report.

Repurchase Demand Process

The Firm first becomes aware that a GSE is evaluating a particular loan for repurchase when the Firm receives a request from the GSE to review the underlying loan file ("file request"). Upon completing its review, the GSE may submit a repurchase demand to the Firm; historically, most file requests have not resulted in repurchase demands.

The primary reasons for repurchase demands from the GSEs relate to alleged misrepresentations primarily arising from: (i) credit quality and/or undisclosed debt of the borrower; (ii) income level and/or employment status of the borrower; and (iii) appraised value of collateral. Ineligibility of the borrower for the particular product, mortgage insurance rescissions and missing documentation are other reasons for repurchase demands. Beginning in 2009, mortgage insurers more frequently rescinded mortgage insurance coverage. The successful rescission of mortgage insurance typically results in a violation of representations and warranties made to the GSEs and, therefore, has been a significant cause of repurchase demands from the GSEs. The Firm actively reviews all rescission notices from mortgage insurers and contests them when appropriate.

As soon as practicable after receiving a repurchase demand from a GSE, the Firm evaluates the request and takes appropriate actions based on the nature of the repurchase demand. Loan-level appeals with the GSEs are typical and the Firm seeks to provide a final response to a repurchase demand within three to four months of the date of receipt. In many cases, the Firm ultimately is not required to repurchase a loan because it is able to resolve the purported defect. Although repurchase demands may be made for as long as the loan is outstanding, most repurchase demands from the GSEs historically have related to loans that became delinquent in the first 24 months following origination.

When the Firm accepts a repurchase demand from one of the GSEs, the Firm may either a) repurchase the loan or the underlying collateral from the GSE at the unpaid principal balance of the loan plus accrued interest, or b) reimburse the GSE for its realized loss on a liquidated property (a "make-whole" payment).

Estimated Repurchase Liability

To estimate the Firm's repurchase liability arising from breaches of representations and warranties, the Firm considers:

(i) the level of current unresolved repurchase demands and mortgage insurance rescission notices,
(ii) estimated probable future repurchase demands considering historical experience,
(iii) the potential ability of the Firm to cure the defects identified in the repurchase demands ("cure rate"),
(iv) the estimated severity of loss upon repurchase of the loan or collateral, make-whole settlement, or indemnification,
(v) the Firm's potential ability to recover its losses from third-party originators, and
(vi) the terms of agreements with certain mortgage insurers and other parties.

Based on these factors, the Firm has recognized a repurchase liability of $3.3 billion and $1.7 billion, including the Washington Mutual liability described above, as of December 31, 2010, and 2009, respectively.

The following table provides information about outstanding repurchase demands and mortgage insurance rescission notices, excluding those related to Washington Mutual, at each of the five most recent quarter-end dates. Due to the rate at which developments have occurred in this area, management does not believe that it would be useful or meaningful to report quarterly information for periods prior to the quarter ended December 31, 2009; the most meaningful trends are those which are more recent.

Outstanding repurchase demands and mortgage insurance rescission notices by counterparty type

(in millions)	**December 31, 2010**	September 30, 2010	June 30, 2010	March 31, 2010	December 31, 2009
GSEs and other	**$ 1,071**	$ 1,063	$ 1,331	$ 1,358	$ 1,339
Mortgage insurers	**624**	556	998	1,090	865
Overlapping population[a]	**(63)**	(69)	(220)	(232)	(169)
Total	**$ 1,632**	$ 1,550	$ 2,109	$ 2,216	$ 2,035

(a) Because the GSEs may make repurchase demands based on mortgage insurance rescission notices that remain unresolved, certain loans may be subject to both an unresolved mortgage insurance rescission notice and an unresolved repurchase demand.

Probable future repurchase demands are generally estimated based on loans that are or ever have been 90 days past due. The Firm estimates probable future repurchase demands by considering the unpaid principal balance of these delinquent loans and expected repurchase demand rates based on historical experience and data, including the age of the loan when it first became delinquent. Through the first three quarters of 2010, the Firm experienced a sustained trend of increased file requests and repurchase demands from the GSEs across most vintages, including the 2005-2008 vintages, in spite of improved delinquency statistics and the aging of the 2005-2008 vintages. File requests from the GSEs, excluding those related to Washington Mutual, and private investors decreased by 29% between the second and third quarters of 2009 and remained relatively stable through the fourth quarter of 2009. After this period of decline and relative stability, file requests from the GSEs and private investors then experienced quarter over quarter increases of 5%, 18% and 15% in the first, second and third quarters of 2010, respectively. The number of file requests received from the GSEs and private investors decreased in the fourth quarter of 2010, but the level of file requests continues to be elevated and volatile.

The Firm expects that the change in GSE behavior that it began to observe earlier in 2010 will alter the historical relationship between

delinquencies and repurchase demands. In response to these changing trends, in the third quarter of 2010, the Firm refined its estimate of probable future repurchase demands by separately forecasting near-term repurchase demands (using outstanding file requests) and longer-term repurchase demands (considering delinquent loans for which no file request has been received). The Firm believes that this refined estimation process produces a better estimate of probable future repurchase demands since it directly incorporates the Firm's recent file request experience. The Firm also believes that the refined estimation process will better reflect emerging trends in file requests as well as the relationship between file requests and ultimate repurchase demands. This refinement in the Firm's estimation process resulted in a higher estimated amount of probable future demands from the GSEs, and this revised future repurchase demand assumption, along with an overall increase in repurchase demands from the GSEs during 2010, were the primary drivers of the $1.6 billion increase in the Firm's repurchase liability during 2010.

The following tables show the trend in repurchase demands and mortgage insurance rescission notices received by loan origination vintage, excluding those related to Washington Mutual, for the five most recent quarters. Due to the rate at which developments have occurred in this area, management does not believe that it would be useful or meaningful to report quarterly information for periods prior to the quarter ended December 31, 2009; the most meaningful trends are those which are more recent.

Quarterly repurchase demands received by loan origination vintage

(in millions)	**December 31, 2010**	September 30, 2010	June 30, 2010	March 31, 2010	December 31, 2009
Pre-2005	**$ 38**	$ 31	$ 35	$ 16	$ 12
2005	**72**	67	94	50	40
2006	**195**	185	234	189	166
2007	**537**	498	521	403	425
2008	**254**	191	186	98	157
Post-2008	**65**	46	53	20	26
Total repurchase demands received	**$1,161**	$ 1,018	$ 1,123	$ 776	$ 826

Quarterly mortgage insurance rescission notices received by loan origination vintage

(in millions)	**December 31, 2010**	September 30, 2010	June 30, 2010	March 31, 2010	December 31, 2009
Pre-2005	**$ 3**	$ 4	$ 4	$ 2	$ 3
2005	**7**	5	7	18	22
2006	**40**	39	39	57	50
2007	**113**	105	155	203	221
2008	**49**	44	52	60	69
Post-2008	**1**	—	—	—	—
Total mortgage insurance rescissions received[a]	**$ 213**	$ 197	$ 257	$ 340	$ 365

(a) Mortgage insurance rescissions may ultimately result in a repurchase demand from the GSEs on a lagged basis. This table includes mortgage insurance rescissions where the GSEs have also issued a repurchase demand.

Because the Firm has demonstrated an ability to cure certain types of defects more frequently than others (e.g., missing documents), trends in the types of defects identified as well as the Firm's historical data are considered in estimating the future cure rate. During 2010, the Firm's overall cure rate, excluding Washington Mutual loans, has been approximately 50%. While the actual cure rate may vary from quarter to quarter, the Firm expects that the overall cure rate will remain in the 40–50% range for the foreseeable future.

The Firm has not observed a direct relationship between the type of defect that causes the breach of representations and warranties and the severity of the realized loss. Therefore, the loss severity assumption is estimated using the Firm's historical experience and projections regarding home price appreciation. Actual loss severities on finalized repurchases and "make-whole" settlements, excluding any related to Washington Mutual loans, currently average approximately 50%, but may vary from quarter to quarter based on the characteristics of the underlying loans and changes in home prices.

When a loan was originated by a third-party correspondent, the Firm typically has the right to seek a recovery of related repurchase losses from the correspondent originator. Correspondent-originated loans comprise approximately 40 percent of loans underlying outstanding repurchase demands, excluding those related to Washington Mutual. The Firm experienced a decrease in third-party recoveries from late 2009 into 2010. However, the actual third-party recovery rate may vary from quarter to quarter based upon the underlying mix of correspondents (e.g., active, inactive, out-of-business) from which recoveries are being sought.

The Firm is engaged in discussions with various mortgage insurers on their rights and practices of rescinding mortgage insurance coverage. The Firm has entered into agreements with two mortgage insurers to resolve their claims on certain portfolios for which the Firm is a servicer. The impact of these agreements is reflected in the repurchase liability and the disclosed outstanding mortgage insurance rescission notices as of December 31, 2010.

Substantially all of the estimates and assumptions underlying the Firm's methodology for computing its recorded repurchase liability—including factors such as the amount of probable future demands from purchasers (which is in part based on historical experience), the ability of the Firm to cure identified defects, the severity of loss upon repurchase or foreclosure and recoveries from third parties—require application of a significant level of management judgment. Estimating the repurchase liability is further complicated by limited and rapidly changing historical data and uncertainty surrounding numerous external factors, including: (i) economic factors (e.g., further declines in home prices and changes in borrower behavior may lead to increases in the number of defaults, the severity of losses, or both), and (ii) the level of future demands, which is dependent, in part, on actions taken by third parties, such as the GSEs and mortgage insurers. While the Firm uses the best information available to it in estimating its repurchase liability, the estimation process is inherently uncertain, imprecise and potentially volatile as additional information is obtained and external factors continue to evolve.

The following table summarizes the change in the repurchase liability for each of the periods presented.

Summary of changes in repurchase liability

Year ended December 31, (in millions)	**2010**	2009	2008
Repurchase liability at beginning of period	**$ 1,705**	$ 1,093	$ 15
Realized losses[a]	**(1,423)**	(1,253)[c]	(155)
Provision for repurchase losses	**3,003**	1,865	1,233[d]
Repurchase liability at end of period	**$ 3,285**[b]	$ 1,705	$ 1,093

(a) Includes principal losses and accrued interest on repurchased loans, "make-whole" settlements, settlements with claimants, and certain related expense. For the years ended December 31, 2010, 2009 and 2008, make-whole settlements were $632 million, $277 million and $34 million, respectively.
(b) Includes $190 million at December 31, 2010, related to future demands on loans sold by Washington Mutual to the GSEs.
(c) Includes the Firm's resolution of certain current and future repurchase demands for certain loans sold by Washington Mutual. The unpaid principal balance of loans related to this resolution is not included in the table below, which summarizes the unpaid principal balance of repurchased loans.
(d) Includes a repurchase liability assumed for certain loans sold by Washington Mutual; this assumed liability was reported as a reduction of the extraordinary gain rather than as a charge to the provision for repurchase losses.

The following table summarizes the total unpaid principal balance of repurchases during the periods indicated.

Unpaid principal balance of loan repurchases[a]

Year ended December 31, (in millions)	**2010**	2009	2008
Ginnie Mae[b]	**$ 8,717**	$ 6,966	$ 4,452
GSEs and other[c][d]	**1,790**	1,019	587
Total	**$10,507**	$ 7,985	$ 5,039

(a) Excludes mortgage insurers. While the rescission of mortgage insurance may ultimately trigger a repurchase demand, the mortgage insurers themselves do not present repurchase demands to the Firm.
(b) In substantially all cases, these repurchases represent the Firm's voluntary repurchase of certain delinquent loans from loan pools or packages as permitted by Ginnie Mae guidelines (i.e., they do not result from repurchase demands due to breaches of representations and warranties). In certain cases, the Firm repurchases these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, the FHA, RHA and/or the VA.
(c) Predominantly all of the repurchases related to the GSEs.
(d) Nonaccrual loans held-for-investment included $354 million and $218 million at December 31, 2010 and 2009, respectively, of loans repurchased as a result of breaches of representations and warranties.

CAPITAL MANAGEMENT

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables it to build and invest in market-leading businesses, even in a highly stressed environment. Senior management considers the implications on the Firm's capital strength prior to making any decision on future business activities. Capital and earnings are inextricably linked, as earnings directly affect capital generation for the Firm. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital and makes decisions to vary sources or uses to preserve the Firm's capital strength.

The Firm's capital management objectives are to hold capital sufficient to:

- Cover all material risks underlying the Firm's business activities;
- Maintain "well-capitalized" status under regulatory requirements;
- Achieve debt rating targets;
- Remain flexible to take advantage of future opportunities; and
- Build and invest in businesses, even in a highly stressed environment.

To meet these objectives, the Firm maintains a robust and disciplined capital adequacy assessment process, which is performed quarterly, and which is intended to enable the Firm to remain well-capitalized and fund ongoing operations under adverse conditions. The process assesses the potential impact of alternative economic and business scenarios on earnings and capital for the Firm's businesses individually and in the aggregate over a rolling three-year period. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and operational risk events, which generate significant one-time losses. However, even when defining a broad range of scenarios, realized events can always be worse. Accordingly, management considers additional stresses outside these scenarios as necessary. The Firm utilized this capital adequacy process in completing the Federal Reserve Comprehensive Capital Plan. The assessment of capital adequacy is also evaluated together with the Firm's Liquidity Risk Management processes. For further information on the Firm's liquidity risk management, see pages 110–115 of this Annual Report.

The quality and composition of capital are key factors in senior management's evaluation of the Firm's capital adequacy. Accordingly, the Firm holds a significant amount of its capital in the form of common equity. The Firm uses three capital disciplines:

- *Regulatory capital* – The capital required according to standards stipulated by U.S. bank regulatory agencies.
- *Economic risk capital* – A bottom-up assessment of the underlying risks of the Firm's business activities, utilizing internal risk-assessment methodologies.
- *Line of business equity* – The amount of equity the Firm believes each business segment would require if it were operating independently, which incorporates sufficient capital to address economic risk measures, regulatory capital requirements and capital levels for similarly rated peers.

Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

In connection with the U.S. Government's Supervisory Capital Assessment Program in 2009, U.S. banking regulators developed a new measure of capital, Tier 1 common, which is defined as Tier 1 capital less elements of Tier 1 capital not in the form of common equity – such as perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred capital debt securities. Tier 1 common, a non-GAAP financial measure, is used by banking regulators, investors and analysts to assess and compare the quality and composition of the Firm's capital with the capital of other financial services companies. The Firm uses Tier 1 common along with the other capital measures to assess and monitor its capital position.

At December 31, 2010 and 2009, JPMorgan Chase maintained Tier 1 and Total capital ratios in excess of the well-capitalized standards established by the Federal Reserve, as indicated in the tables below. In addition, the Firm's Tier 1 common ratio was significantly above the 4% well-capitalized standard established at the time of the Supervisory Capital Assessment Program. For more information, see Note 29 on pages 273–274 of this Annual Report.

Risk-based capital ratios

December 31,	2010	2009
Tier 1 capital[a]	**12.1%**	11.1%
Total capital	**15.5**	14.8
Tier 1 leverage	**7.0**	6.9
Tier 1 common	**9.8**	8.8

(a) On January 1, 2010, the Firm adopted accounting standards which required the consolidation of the Firm's credit card securitization trusts, Firm-administered multi-seller conduits, and certain mortgage and other consumer securitization entities. Refer to Note 16 on pages 244–259 of this Annual Report for additional information about the impact to the Firm of the new guidance.

A reconciliation of Total stockholders' equity to Tier 1 common capital, Tier 1 capital and Total qualifying capital is presented in the table below.

Risk-based capital components and assets

December 31, (in millions)	2010	2009
Tier 1 capital		
Tier 1 common:		
Total stockholders' equity	**$ 176,106**	$ 165,365
Less: Preferred stock	**7,800**	8,152
Common stockholders' equity	**168,306**	157,213
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 common equity	**(748)**	75
Less: Goodwill[a]	**46,915**	46,630
Fair value DVA on derivative and structured note liabilities related to the Firm's credit quality	**1,261**	912
Investments in certain subsidiaries and other	**1,032**	802
Other intangible assets[a]	**3,587**	3,660
Tier 1 common	**114,763**	105,284
Preferred stock	**7,800**	8,152
Qualifying hybrid securities and noncontrolling interests[b]	**19,887**	19,535
Total Tier 1 capital	**142,450**	132,971
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	**25,018**	28,977
Qualifying allowance for credit losses	**14,959**	15,296
Adjustment for investments in certain subsidiaries and other	**(211)**	(171)
Total Tier 2 capital	**39,766**	44,102
Total qualifying capital	**$ 182,216**	$ 177,073
Risk-weighted assets[c][d]	**$ 1,174,978**	$1,198,006
Total adjusted average assets[e]	**$ 2,024,515**	$1,933,767

(a) Goodwill and other intangible assets are net of any associated deferred tax liabilities.

(b) Primarily includes trust preferred capital debt securities of certain business trusts.

(c) Risk-weighted assets consist of on– and off–balance sheet assets that are assigned to one of several broad risk categories and weighted by factors representing their risk and potential for default. On–balance sheet assets are risk-weighted based on the perceived credit risk associated with the obligor or counterparty, the nature of any collateral, and the guarantor, if any. Off–balance sheet assets – such as lending-related commitments, guarantees, derivatives and other applicable off–balance sheet positions – are risk-weighted by multiplying the contractual amount by the appropriate credit conversion factor to determine the on–balance sheet credit-equivalent amount, which is then risk-weighted based on the same factors used for on–balance sheet assets. Risk-weighted assets also incorporate a measure for the market risk related to applicable trading assets–debt and equity instruments, and foreign exchange and commodity derivatives. The resulting risk-weighted values for each of the risk categories are then aggregated to determine total risk-weighted assets.

(d) Includes off–balance sheet risk-weighted assets at December 31, 2010 and 2009, of $282.9 billion and $367.4 billion, respectively. Risk-weighted assets are calculated in accordance with U.S. federal regulatory capital standards.

(e) Adjusted average assets, for purposes of calculating the leverage ratio, include total average assets adjusted for unrealized gains/(losses) on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries, and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.

The Firm's Tier 1 common capital was $114.8 billion at December 31, 2010, compared with $105.3 billion at December 31, 2009, an increase of $9.5 billion. The increase was predominantly due to net income (adjusted for DVA) of $17.0 billion and net issuances and commitments to issue common stock under the Firm's employee stock-based compensation plans of $2.8 billion. The increase was partially offset by $4.4 billion of cumulative effect adjustments to retained earnings that predominantly resulted from the adoption of new accounting guidance related to VIEs; $3.0 billion of common stock repurchases; $1.5 billion of dividends on common and preferred stock; and a $1.3 billion reduction related to the purchase of the remaining interest in a consolidated subsidiary from noncontrolling shareholders. The Firm's Tier 1 capital was $142.5 billion at December 31, 2010, compared with $133.0 billion at December 31, 2009, an increase of $9.5 billion. The increase in Tier 1 capital reflected the increase in Tier 1 common and a net issuance of trust preferred capital debt securities, offset by the redemption of preferred stock.

For additional information regarding federal regulatory capital requirements and capital ratios of the Firm and the Firm's significant banking subsidiaries at December 31, 2010 and 2009, see Note 29 on pages 273–274 of this Annual Report.

Basel II

The minimum risk-based capital requirements adopted by the U.S. federal banking agencies follow the Capital Accord of the Basel Committee on Banking Supervision ("Basel I"). In 2004, the Basel Committee published a revision to the Accord ("Basel II"). The goal of the Basel II Framework is to provide more risk-sensitive regulatory capital calculations and promote enhanced risk management practices among large, internationally active banking organizations. U.S. banking regulators published a final Basel II rule in December 2007, which requires JPMorgan Chase to implement Basel II at the holding company level, as well as at certain of its key U.S. bank subsidiaries.

Prior to full implementation of the new Basel II Framework, JPMorgan Chase is required to complete a qualification period of four consecutive quarters during which it needs to demonstrate that it meets the requirements of the rule to the satisfaction of its primary U.S. banking regulators. The U.S. implementation timetable consists of the qualification period, starting no later than April 1, 2010, followed by a minimum transition period of three years. During the transition period, Basel II risk-based capital requirements cannot fall below certain floors based on current Basel I regulations. JPMorgan Chase is currently in the qualification period and expects to be in compliance with all relevant Basel II rules within the established timelines. In addition, the Firm has adopted, and will con-

tinue to adopt, based on various established timelines, Basel II rules in certain non-U.S. jurisdictions, as required.

Basel III

In addition to the Basel II Framework, on December 16, 2010, the Basel Committee issued the final version of the Capital Accord, called "Basel III", which included narrowing the definition of capital, increasing capital requirements for specific exposures, introducing short-term liquidity coverage and term funding standards, and establishing an international leverage ratio. The Basel Committee also announced higher capital ratio requirements under Basel III which provide that the common equity requirement will be increased to 7%, comprised of a minimum of 4.5% plus a 2.5% capital conservation buffer.

In addition, the U.S. federal banking agencies have published for public comment proposed risk-based capital floors pursuant to the requirements of the Dodd-Frank Act to establish a permanent Basel I floor under Basel II / Basel III capital calculations.

The Firm fully expects to be in compliance with the higher Basel III capital standards when they become effective on January 1, 2019, as well as additional Dodd-Frank Act capital requirements when they are implemented. The Firm estimates that its Tier 1 common ratio under Basel III rules (including the changes for calculating capital on trading assets and securitizations) would be 7% as of December 31, 2010. This estimate reflects the Firm's current understanding of the Basel III rules and their application to its businesses as currently conducted; accordingly, this estimate will evolve over time as the Firm's businesses change and as a result of further rule-making on Basel III implementation from U.S. federal banking agencies. The Firm also believes it may need to modify the current liquidity profile of its assets and liabilities in response to the short-term liquidity coverage and term funding standards contained in Basel III. The Basel III revisions governing liquidity and capital requirements are subject to prolonged observation and transition periods. The observation period for the liquidity coverage ratio and term funding standards begins in 2011, with implementation in 2015 and 2018, respectively. The transition period for banks to meet the revised common equity requirement will begin in 2013, with implementation on January 1, 2019. The Firm will continue to monitor the ongoing rule-making process to assess both the timing and the impact of Basel III on its businesses and financial condition.

Broker-dealer regulatory capital

JPMorgan Chase's principal U.S. broker-dealer subsidiaries are J.P. Morgan Securities LLC ("JPMorgan Securities"; formerly J.P. Morgan Securities Inc.), and J.P. Morgan Clearing Corp. ("JPMorgan Clearing"). JPMorgan Securities became a limited liability company on September 1, 2010. JPMorgan Clearing is a subsidiary of JPMorgan Securities and provides clearing and settlement services. JPMorgan Securities and JPMorgan Clearing are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities and JPMorgan Clearing are also registered as futures commission merchants and subject to Rule 1.17 of the Commodity Futures Trading Commission ("CFTC").

JPMorgan Securities and JPMorgan Clearing have elected to compute their minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule. At December 31, 2010, JPMorgan Securities' net capital, as defined by the Net Capital Rule, was $6.9 billion, exceeding the minimum requirement by $6.3 billion, and JPMorgan Clearing's net capital was $5.7 billion, exceeding the minimum requirement by $3.9 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of $1.0 billion and is also required to notify the Securities and Exchange Commission ("SEC") in the event that tentative net capital is less than $5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2010, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

Economic risk capital

JPMorgan Chase assesses its capital adequacy relative to the risks underlying its business activities, using internal risk-assessment methodologies. The Firm measures economic capital primarily based on four risk factors: credit, market, operational and private equity risk.

Economic risk capital	Yearly Average	
Year ended December 31, (in billions)	**2010**	2009
Credit risk	**$ 49.7**	$ 51.3
Market risk	**15.1**	15.4
Operational risk	**7.4**	8.5
Private equity risk	**6.2**	4.7
Economic risk capital	**78.4**	79.9
Goodwill	**48.6**	48.3
Other[a]	**34.5**	17.7
Total common stockholders' equity	**$ 161.5**	$ 145.9

(a) Reflects additional capital required, in the Firm's view, to meet its regulatory and debt rating objectives.

Credit risk capital

Credit risk capital is estimated separately for the wholesale businesses (IB, CB, TSS and AM) and consumer businesses (RFS and CS).

Credit risk capital for the overall wholesale credit portfolio is defined in terms of unexpected credit losses, both from defaults and from declines in the portfolio value due to credit deterioration measured over a one-year period at a confidence level consistent with an "AA" credit rating standard. Unexpected losses are losses in excess of those for which allowances for credit losses are maintained. The capital methodology is based on several principal drivers of credit risk: exposure at default (or loan-equivalent amount), default likelihood, credit spreads, loss severity and portfolio correlation.

Credit risk capital for the consumer portfolio is based on product and other relevant risk segmentation. Actual segment-level default and severity experience are used to estimate unexpected losses for a one-year horizon at a confidence level consistent with an "AA" credit rating standard. See Credit Risk Management on pages 116–118 of this Annual Report for more information about these credit risk measures.

Market risk capital

The Firm calculates market risk capital guided by the principle that capital should reflect the risk of loss in the value of portfolios and financial instruments caused by adverse movements in market variables, such as interest and foreign exchange rates, credit spreads, and securities and commodities prices, taking into account the liquidity of the financial instruments. Results from daily VaR, biweekly stress-tests, issuer credit spreads and default risk calculations, as well as other factors, are used to determine appropriate capital levels. Market risk capital is allocated to each business segment based on its risk assessment. See Market Risk Management on pages 142–146 of this Annual Report for more information about these market risk measures.

Operational risk capital

Capital is allocated to the lines of business for operational risk using a risk-based capital allocation methodology which estimates operational risk on a bottom-up basis. The operational risk capital model is based on actual losses and potential scenario-based stress losses, with adjustments to the capital calculation to reflect changes in the quality of the control environment or the use of risk-transfer products. The Firm believes its model is consistent with the Basel II Framework. See Operational Risk Management on pages 147–148 of this Annual Report for more information about operational risk.

Private equity risk capital

Capital is allocated to privately- and publicly-held securities, third-party fund investments, and commitments in the private equity portfolio to cover the potential loss associated with a decline in equity markets and related asset devaluations. In addition to negative market fluctuations, potential losses in private equity investment portfolios can be magnified by liquidity risk. Capital allocation for the private equity portfolio is based on measurement of the loss experience suffered by the Firm and other market participants over a prolonged period of adverse equity market conditions.

Line of business equity

The Firm's framework for allocating capital is based on the following objectives:

- Integrate firmwide capital management activities with capital management activities within each of the lines of business;
- Measure performance consistently across all lines of business; and
- Provide comparability with peer firms for each of the lines of business

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, incorporating sufficient capital to address economic risk measures, regulatory capital requirements and capital levels for similarly rated peers. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. Return on common equity is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Line of business equity December 31, (in billions)	**2010**	2009
Investment Bank	**$ 40.0**	$ 33.0
Retail Financial Services	**28.0**	25.0
Card Services	**15.0**	15.0
Commercial Banking	**8.0**	8.0
Treasury & Securities Services	**6.5**	5.0
Asset Management	**6.5**	7.0
Corporate/Private Equity	**64.3**	64.2
Total common stockholders' equity	**$ 168.3**	$ 157.2

Line of business equity	Yearly Average		
(in billions)	**2010**	200	2008
Investment Bank	**$ 40.0**	$ 33.0	$ 26.1
Retail Financial Services	**28.0**	25.0	19.0
Card Services	**15.0**	15.0	14.3
Commercial Banking	**8.0**	8.0	7.3
Treasury & Securities Services	**6.5**	5.0	3.8
Asset Management	**6.5**	7.0	5.6
Corporate/Private Equity	**57.5**	52.9	53.0
Total common stockholders' equity	**$ 161.5**	$ 145.9	$ 129.1

Effective January 1, 2010, the Firm enhanced its line of business equity framework to better align equity assigned to the lines of business with changes anticipated to occur in each line of business, and to reflect the competitive and regulatory landscape. The lines of business are now capitalized based on the Tier 1 common standard, rather than the Tier 1 capital standard. In 2011, the Firm will further evaluate its line-of-business equity framework as appropriate to reflect future Basel III Tier 1 common capital requirements.

Capital actions

Dividends

On February 23, 2009, the Board of Directors reduced the Firm's quarterly common stock dividend from $0.38 to $0.05 per share, effective with the dividend paid on April 30, 2009, to shareholders of record on April 6, 2009. The action enabled the Firm to retain approximately $5.5 billion in common equity in each of 2010 and 2009, and was taken to ensure the Firm had sufficient capital strength in the event the very weak economic conditions that existed at the beginning of 2009 deteriorated further. JPMorgan Chase declared quarterly cash dividends on its common stock in the amount of $0.05 per share for each quarter of 2010 and 2009.

For information regarding dividend restrictions, see Note 23 and Note 28 on pages 267–268 and 273, respectively, of this Annual Report.

The following table shows the common dividend payout ratio based on reported net income.

Year ended December 31,	**2010**	2009	2008
Common dividend payout ratio	**5%**	9%	114%

Issuance

On June 5, 2009, the Firm issued $5.8 billion, or 163 million shares, of common stock at $35.25 per share. On September 30, 2008, the Firm issued $11.5 billion, or 284 million shares, of common stock at $40.50 per share. The proceeds from these issuances were used for general corporate purposes. For additional information regarding common stock, see Note 24 on page 268 of this Annual Report.

Capital Purchase Program

Pursuant to the U.S. Treasury's Capital Purchase Program, on October 28, 2008, the Firm issued to the U.S. Treasury, for total proceeds of $25.0 billion, (i) 2.5 million shares of Series K Preferred Stock, and (ii) a Warrant to purchase up to 88,401,697 shares of the Firm's common stock, at an exercise price of $42.42 per share, subject to certain antidilution and other adjustments. On June 17, 2009, the Firm redeemed all of the outstanding shares of Series K Preferred Stock and repaid the full $25.0 billion principal amount together with accrued dividends. The U.S. Treasury exchanged the Warrant for 88,401,697 warrants, each of which is a warrant to purchase a share of the Firm's common stock at an exercise price of $42.42 per share, and, on December 11, 2009, sold the warrants in a secondary public offering for $950 million. The Firm did not purchase any of the warrants sold by the U.S. Treasury.

Stock repurchases

Under the stock repurchase program authorized by the Firm's Board of Directors, the Firm is authorized to repurchase up to $10.0 billion of the Firm's common stock plus the 88 million warrants sold by the U.S. Treasury in 2009. During 2009, the Firm did not repurchase any shares of its common stock or warrants. In the second quarter of 2010, the Firm resumed common stock repurchases, and during the year repurchased an aggregate of 78 million shares for $3.0 billion at an average price per share of $38.49. The Firm's share repurchase activities in 2010 were intended to offset sharecount increases resulting from employee stock-based incentive awards and were consistent with the Firm's goal of maintaining an appropriate sharecount. The Firm did not repurchase any of the warrants during 2010. As of December 31, 2010, $3.2 billion of authorized repurchase capacity remained with respect to the common stock, and all of the authorized repurchase capacity remained with respect to the warrants.

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate the repurchase of common stock and warrants in accordance with the repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common stock – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

The authorization to repurchase common stock and warrants will be utilized at management's discretion, and the timing of purchases and the exact number of shares and warrants purchased is subject to various factors, including market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative potential investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, including through the use of Rule 10b5-1 programs; and may be suspended at any time.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5, Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on pages 13–14 of JPMorgan Chase's 2010 Form 10-K.

RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase's business activities. The Firm's risk management framework and governance structure are intended to provide comprehensive controls and ongoing management of the major risks taken in its business activities. The Firm employs a holistic approach to risk management to ensure the broad spectrum of risk types are considered in managing its business activities. The Firm's risk management framework is intended to create a culture of risk awareness and personal responsibility throughout the Firm where collaboration, discussion, escalation and sharing of information is encouraged.

The Firm's overall risk appetite is established in the context of the Firm's capital, earnings power, and diversified business model. The Firm employs a formal risk appetite framework to clearly link risk appetite and return targets, controls and capital management. The Firm's CEO is responsible for setting the overall risk appetite of the Firm and the LOB CEOs are responsible for setting the risk appetite for their respective lines of business. The Risk Policy Committee of the Firm's Board of Directors approves the risk appetite policy on behalf of the entire Board of Directors.

Risk governance

The Firm's risk governance structure is based on the principle that each line of business is responsible for managing the risk inherent in its business, albeit with appropriate Corporate oversight. Each line of business risk committee is responsible for decisions regarding the business' risk strategy, policies and controls.

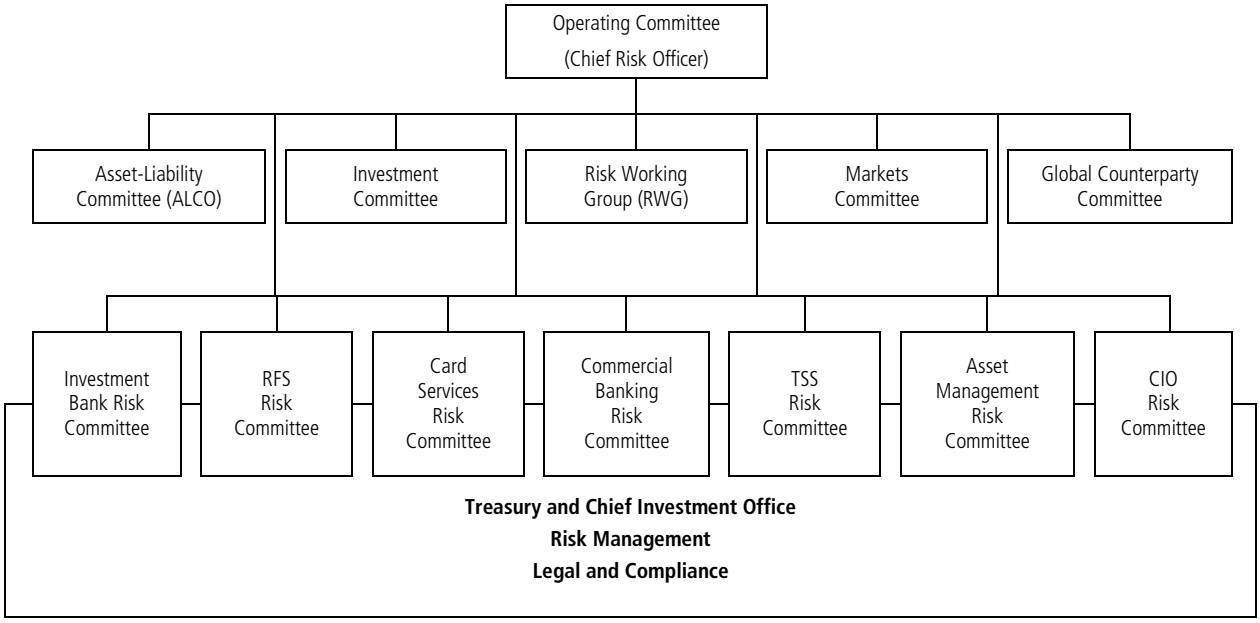
Overlaying line of business risk management are four corporate functions with risk management–related responsibilities: Risk Management, the Chief Investment Office, Corporate Treasury, and Legal and Compliance.

Risk Management operates independently to provide oversight of firmwide risk management and controls, and is viewed as a partner in achieving appropriate business objectives. Risk Management coordinates and communicates with each line of business through the line of business risk committees and chief risk officers to manage risk. The Risk Management function is headed by the Firm's Chief Risk Officer, who is a member of the Firm's Operating Committee and who reports to the Chief Executive Officer and the Board of Directors, primarily through the Board's Risk Policy Committee. The Chief Risk Officer is also a member of the line of business risk committees. Within the Firm's Risk Management function are units responsible for credit risk, market risk, operational risk and private equity risk, as well as risk reporting, risk policy and risk technology and operations. Risk technology and operations is responsible for building the information technology infrastructure used to monitor and manage risk.

The Chief Investment Office and Corporate Treasury are responsible for measuring, monitoring, reporting and managing the Firm's liquidity, interest rate and foreign exchange risk, and other structural risks.

Legal and Compliance has oversight for legal and fiduciary risk.

In addition to the risk committees of the lines of business and the above-referenced risk management functions, the Firm also has an Investment Committee, an Asset-Liability Committee and three other risk-related committees – the Risk Working Group, the Global Counterparty Committee and the Markets Committee. All of these committees are accountable to the Operating Committee. The membership of these committees are composed of senior management of the Firm, including representatives of lines of business, Risk Management, Finance and other senior executives. The committees meet frequently to discuss a broad range of topics including, for example, current market conditions and other external events, risk exposures, and risk concentrations to ensure that the impact of risk factors are considered broadly across the Firm's businesses.



The Asset-Liability Committee, chaired by the Corporate Treasurer, monitors the Firm's overall interest rate risk and liquidity risk. ALCO is responsible for reviewing and approving the Firm's liquidity policy and contingency funding plan. ALCO also reviews the Firm's funds transfer pricing policy (through which lines of business "transfer" interest rate and foreign exchange risk to Corporate Treasury in the Corporate/Private Equity segment), earnings at risk, overall interest rate position, funding requirements and strategy, and the Firm's securitization programs (and any required liquidity support by the Firm of such programs).

The Investment Committee, chaired by the Firm's Chief Financial Officer, oversees global merger and acquisition activities undertaken by JPMorgan Chase for its own account that fall outside the scope of the Firm's private equity and other principal finance activities.

The Risk Working Group, chaired by the Firm's Chief Risk Officer, meets monthly to review issues that cross lines of business such as risk policy, risk methodology, risk concentrations, regulatory capital and other regulatory issues, and such other topics referred to it by line of business risk committees.

The Markets Committee, chaired by the Firm's Chief Risk Officer, meets weekly to review, monitor and discuss significant risk matters, which may include credit, market and operational risk issues; market moving events; large transactions; hedging strategies; reputation risk; conflicts of interest; and other issues.

The Global Counterparty Committee, chaired by the Firm's Chief Risk Officer, reviews exposures to counterparties when such exposure levels are above portfolio-established thresholds. The Committee meets quarterly to review total exposures with these counterparties, with particular focus on counterparty trading exposures to ensure that such exposures are deemed appropriate to support the Firm's trading activities, and to direct changes in exposure levels as needed.

The Board of Directors exercises its oversight of risk management, principally through the Board's Risk Policy Committee and Audit Committee. The Risk Policy Committee oversees senior management risk-related responsibilities, including reviewing management policies and performance against these policies and related benchmarks. The Audit Committee is responsible for oversight of guidelines and policies that govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal controls that is relied upon to provide reasonable assurance of compliance with the Firm's operational risk management processes.

Risk monitoring and control

The Firm's ability to properly identify, measure, monitor and report risk is critical to both its soundness and profitability.

- Risk identification: The Firm's exposure to risk through its daily business dealings, including lending and capital markets activities, is identified and aggregated through the Firm's risk management infrastructure. In addition, individuals who manage risk positions, particularly those that are complex, are responsible for identifying and estimating potential losses that could arise from specific or unusual events that may not be captured in other models, and for communicating those risks to senior management.
- Risk measurement: The Firm measures risk using a variety of methodologies, including calculating probable loss, unexpected loss and value-at-risk, and by conducting stress tests and making comparisons to external benchmarks. Measurement models and related assumptions are routinely subject to internal model review, empirical validation and benchmarking with the goal of ensuring that the Firm's risk estimates are reasonable and reflective of the risk of the underlying positions.
- Risk monitoring/control: The Firm's risk management policies and procedures incorporate risk mitigation strategies and include approval limits by customer, product, industry, country and business. These limits are monitored on a daily, weekly and monthly basis, as appropriate.
- Risk reporting: The Firm reports risk exposures on both a line of business and a consolidated basis. This information is reported to management on a daily, weekly and monthly basis, as appropriate. There are eight major risk types identified in the business activities of the Firm: liquidity risk, credit risk, market risk, interest rate risk, private equity risk, operational risk, legal and fiduciary risk, and reputation risk.

LIQUIDITY RISK MANAGEMENT

The ability to maintain surplus levels of liquidity through economic cycles is crucial to financial services companies, particularly during periods of adverse conditions. The Firm's funding strategy is intended to ensure liquidity and diversity of funding sources to meet actual and contingent liabilities through both normal and stress periods.

JPMorgan Chase's primary sources of liquidity include a diversified deposit base, which was $930.4 billion at December 31, 2010, and access to the equity capital markets and long-term unsecured and secured funding sources, including asset securitizations and borrowings from FHLBs. Additionally, JPMorgan Chase maintains large pools of highly-liquid unencumbered assets. The Firm actively monitors the availability of funding in the wholesale markets across various geographic regions and in various currencies. The Firm's ability to generate funding from a broad range of sources in a variety of geographic locations and in a range of tenors is intended to enhance financial flexibility and limit funding concentration risk.

Management considers the Firm's liquidity position to be strong, based on its liquidity metrics as of December 31, 2010, and believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on– and off–balance sheet obligations. The Firm was able to access the funding markets as needed during 2010 and throughout the recent financial crisis.

Governance

The Firm's governance process is designed to ensure that its liquidity position remains strong. The Asset-Liability Committee reviews and approves the Firm's liquidity policy and contingency funding plan. Corporate Treasury formulates and is responsible for executing the Firm's liquidity policy and contingency funding plan as well as measuring, monitoring, reporting and managing the Firm's liquidity risk profile. JPMorgan Chase centralizes the management of global funding and liquidity risk within Corporate Treasury to maximize liquidity access, minimize funding costs and enhance global identification and coordination of liquidity risk. This centralized approach involves frequent communication with the business segments, disciplined management of liquidity at the parent holding company, comprehensive market-based pricing of all assets and liabilities, continuous balance sheet monitoring, frequent stress testing of liquidity sources, and frequent reporting to and communication with senior management and the Board of Directors regarding the Firm's liquidity position.

Liquidity monitoring

The Firm employs a variety of metrics to monitor and manage liquidity. One set of analyses used by the Firm relates to the timing of liquidity sources versus liquidity uses (e.g., funding gap analysis and parent holding company funding, which is discussed below). A second set of analyses focuses on ratios of funding and liquid collateral (e.g., measurements of the Firm's reliance on short-term unsecured funding as a percentage of total liabilities, as well as analyses of the relationship of short-term unsecured funding to highly-liquid assets, the deposits-to-loans ratio and other balance sheet measures).

The Firm performs regular liquidity stress tests as part of its liquidity monitoring. The purpose of the liquidity stress tests is intended to ensure sufficient liquidity for the Firm under both idiosyncratic and systemic market stress conditions. These scenarios evaluate the Firm's liquidity position across a full year horizon by analyzing the net funding gaps resulting from contractual and contingent cash and collateral outflows versus by the Firm's ability to generate additional liquidity by pledging or selling excess collateral and issuing unsecured debt. The scenarios are produced for the parent holding company and major bank subsidiaries as well as the Firm's major U.S. broker-dealer subsidiaries.

The idiosyncratic stress scenario employed by the Firm is a JPMorgan Chase-specific event that evaluates the Firm's net funding gap after a short-term ratings downgrade from the current level of A-1+/P-1 to A-2/P-2. The systemic market stress scenario evaluates the Firm's net funding gap during a period of severe market stress similar to market conditions in 2008 and assumes the Firm is not uniquely stressed versus its peers. The Firm's liquidity position is strong under the Firm-defined stress scenarios outlined above.

Parent holding company

Liquidity monitoring on the parent holding company takes into consideration regulatory restrictions that limit the extent to which bank subsidiaries may extend credit to the parent holding company and other nonbank subsidiaries. Excess cash generated by parent holding company issuance activity is placed with both bank and nonbank subsidiaries in the form of deposits and advances to satisfy a portion of subsidiary funding requirements. The remainder of the excess cash is used to purchase liquid collateral through reverse repurchase agreements. As discussed below, the Firm's liquidity management activities are also intended to ensure that its subsidiaries have the ability to generate replacement funding in the event the parent holding company requires repayment of the aforementioned deposits and advances.

The Firm closely monitors the ability of the parent holding company to meet all of its obligations with liquid sources of cash or cash equivalents for an extended period of time without access to the unsecured funding markets. The Firm targets pre-funding of parent holding company obligations for at least 12 months; however, due to conservative liquidity management actions taken by the Firm in the current environment, the current pre-funding of such obligations is significantly greater than target.

Global Liquidity Reserve

In addition to the parent holding company, the Firm maintains a significant amount of liquidity – primarily at its bank subsidiaries, but also at its nonbank subsidiaries. The Global Liquidity Reserve represents consolidated sources of available liquidity to the Firm, including cash on deposit at central banks, and cash proceeds reasonably expected to be received in secured financings of highly liquid, unencumbered securities – such as government-issued debt, government- and FDIC-guaranteed corporate debt, U.S. government agency debt and agency mortgage-backed securities ("MBS"). The liquidity amount anticipated to be realized from secured financings is based on management's current judgment and assessment of the Firm's ability to quickly raise secured financings. The Global Liquidity Reserve also includes the Firm's borrowing capacity at various FHLBs, the Federal Reserve Bank discount window and various other central banks from collateral pledged by the Firm to such banks. Although considered as a source of available liquidity, the Firm does not view borrowing capacity at the Federal Reserve Bank discount window and various other central banks as a primary source of funding. As of December 31, 2010, the Global Liquidity Reserve was approximately $262 billion.

In addition to the Global Liquidity Reserve, the Firm has significant amounts of other high-quality, marketable securities available to raise liquidity, such as corporate debt and equity securities.

Basel III

On December 16, 2010, the Basel Committee published the final Basel III rules pertaining to capital and liquidity requirements, including minimum standards for short-term liquidity coverage – the liquidity coverage ratio (the "LCR") – and term funding – the net stable funding ratio (the "NSFR"). These minimum standards will be phased in over time. The observation period for both the LCR and the NSFR commences in 2011, with implementation in 2015 and 2018, respectively. For more information, see the discussion on Basel III on page 104 of this Annual Report.

Funding

Sources of funds

A key strength of the Firm is its diversified deposit franchise, through the RFS, CB, TSS and AM lines of business, which provides a stable source of funding and decreases reliance on the wholesale markets. As of December 31, 2010, total deposits for the Firm were $930.4 billion, compared with $938.4 billion at December 31, 2009. Average total deposits for the Firm were $881.1 billion during 2010, compared with $882.0 billion during 2009. The Firm typically experiences higher deposit balances at period ends driven by higher seasonal customer deposit inflows. A significant portion of the Firm's deposits are retail deposits (40% and 38% at December 31, 2010 and 2009, respectively), which are considered particularly stable as they are less sensitive to interest rate changes or market volatility. A significant portion of the Firm's wholesale deposits are also considered stable sources of funding due to the nature of the relationships from which they are generated, particularly customers' operating service relationships with the Firm. As of December 31, 2010, the Firm's deposits-to-loans ratio was 134%, compared with 148% at December 31, 2009. The decline in the Firm's deposits-to-loans ratio was predominately due to an increase in loans resulting from the January 1, 2010, implementation of new accounting guidance related to VIEs. The impact of the new accounting guidance on the deposits-to-loans ratio was partially offset by continued attrition of the heritage Washington Mutual residential loan and credit card loan portfolios. For further discussions of deposit and liability balance trends, see the discussion of the results for the Firm's business segments and the Balance Sheet Analysis on pages 69–88 and 92–94, respectively, of this Annual Report. For a more detailed discussion of the adoption of the new accounting guidance, see Note 1 on pages 164–165 of this Annual Report.

Additional sources of funding include a variety of unsecured and secured short-term and long-term instruments. Short-term unsecured funding sources include federal funds and Eurodollars purchased, certificates of deposit, time deposits, commercial paper and bank notes. Long-term unsecured funding sources include long-term debt, trust preferred capital debt securities, preferred stock and common stock.

The Firm's short-term secured sources of funding consist of securities loaned or sold under agreements to repurchase and borrowings from the Chicago, Pittsburgh and San Francisco FHLBs. Secured long-term funding sources include asset-backed securitizations, and borrowings from the Chicago, Pittsburgh and San Francisco FHLBs.

Funding markets are evaluated on an ongoing basis to achieve an appropriate global balance of unsecured and secured funding at favorable rates.

Short-term funding

The Firm's reliance on short-term unsecured funding sources such as federal funds and Eurodollars purchased, certificates of deposit, time deposits, commercial paper and bank notes is limited.

Total commercial paper liabilities for the Firm were $35.4 billion as of December 31, 2010, compared with $41.8 billion as of December 31, 2009. However, of those totals, $29.2 billion and $28.7 billion as of December 31, 2010 and 2009, respectively, originated from deposits that customers chose to sweep into commercial paper liabilities as a cash management product offered by the Firm. Therefore, commercial paper liabilities sourced from wholesale funding markets were $6.2 billion as of December 31, 2010, compared with $13.1 billion as of December 31, 2009. There were no material differences between the average and year-end balances of commercial paper outstanding for the year ended and as of December 31, 2010.

Securities loaned or sold under agreements to repurchase are secured predominantly by high quality securities collateral, including government-issued debt, agency debt and agency MBS. The balances of securities loaned or sold under agreements to repurchase, which constitute a significant portion of the federal funds purchased and securities loaned or sold under repurchase agreements, was $273.3 billion as of December 31, 2010, compared with $253.5 billion as of December 31, 2009. There were no material differences between the average and year-end balances of securities loaned or sold under agreements to repurchase for the year ended and as of December 31, 2010. The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the Firm's matched book activity; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment and trading portfolios); and other market and portfolio factors. For additional information, see the Balance Sheet Analysis on pages 92–94, Note 13 on page 219 and Note 20 on page 264 of this Annual Report.

The short-term portion of total other borrowed funds for the Firm was $34.3 billion as of December 31, 2010, compared with $32.9 billion as of December 31, 2009. There were no material differences between the average and year-end balances of other borrowed funds for the year ended and as of December 31, 2010.

For additional information, see the table for Short-term and other borrowed funds on page 299 of this Annual Report.

Long-term funding and issuance

During 2010, the Firm issued $36.1 billion of long-term debt, including $17.1 billion of senior notes issued in the U.S. market, $2.9 billion of senior notes issued in the non-U.S. markets, $1.5 billion of trust preferred capital debt securities, and $14.6 billion of IB structured notes. In addition, in January 2011, the Firm issued $4.3 billion of long-term debt, including $3.5 billion of senior notes in the U.S. market and $800 million of senior notes issued in non-U.S. markets. During 2009, the Firm issued $19.7 billion of FDIC-guaranteed long-term debt under the Temporary Liquidity Guarantee Program. During 2009, the Firm also issued non-FDIC-guaranteed debt of $16.1 billion (including $11.0 billion of senior notes and $2.5 billion of trust preferred capital debt securities issued in the U.S. market, and $2.6 billion of senior notes issued in non-U.S. markets) and $15.5 billion of IB structured notes. During 2010, $53.4 billion of long-term debt matured or were redeemed, including $907 million of trust preferred capital debt securities redeemed on December 28, 2010, through a tender offer, and $22.8 billion of IB structured notes. During 2009, $55.7 billion of long-term debt (including trust preferred capital debt securities) matured or were redeemed, including $27.2 billion of IB structured notes.

In addition to the unsecured long-term funding and issuances discussed above, the Firm securitizes consumer credit card loans, residential mortgages, auto loans and student loans for funding purposes. Loans securitized by the Firm's wholesale businesses are related to client-driven transactions and are not considered to be a source of funding for the Firm. Effective January 1, 2010, certain Firm-sponsored credit card loan, student loan and auto loan securitization trusts were consolidated as a result of the accounting guidance related to VIEs. As a result of consolidating these securitization trusts, the maturities or redemptions of the beneficial interests issued by the securitization trusts are reported as a component of the Firm's cash flows from financing activities. During 2010, the Firm did not securitize any credit card loans, residential mortgage loans, auto loans or student loans through consolidated or nonconsolidated securitization trusts. During 2009, the Firm securitized $26.5 billion of credit card loans via nonconsolidated securitization trusts. During 2010, $25.8 billion of loan securitizations matured or were redeemed, including $24.9 billion of credit card loan securitizations, $210 million of auto loan securitizations, $294 million of residential mortgage loan securitizations and $326 million of student loan securitizations. For further discussion of loan securitizations, see Note 16 on pages 244–259 in this Annual Report.

During 2010, the Firm borrowed $18.7 billion of new long-term advances from the FHLBs, which were offset by $18.6 billion of maturities. During 2009, the Firm did not access the FHLBs for any new long-term advances and maturities were $9.5 billion during the period.

Termination of replacement capital covenants

In connection with the issuance of certain of its trust preferred capital debt securities and its noncumulative perpetual preferred stock, the Firm had entered into Replacement Capital Covenants ("RCCs"). These RCCs granted certain rights to the holders of "covered debt," as defined in the RCCs, that prohibited the repayment, redemption or purchase of such trust preferred capital debt securities and noncumulative perpetual preferred stock except, with limited exceptions, to the extent that JPMorgan Chase had received, in each such case, specified amounts of proceeds from the sale of certain qualifying securities. On December 10, 2010, the Firm received consents from the holders of a majority in liquidation amount of the covered debt to the termination of the RCCs, and the Firm terminated the RCCs pursuant to their terms.

Cash flows

For the years ended December 31, 2010, 2009 and 2008, cash and due from banks increased $1.4 billion, and decreased $689 million and $13.2 billion, respectively. The following discussion highlights the major activities and transactions that affected JPMorgan Chase's cash flows during 2010, 2009 and 2008.

Cash flows from operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's capital markets and lending activities, including the origination or purchase of loans initially designated as held-for-sale. Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven activities, market conditions and trading strategies. Management believes cash flows from operations, available cash balances and the Firm's ability to generate cash through short- and long-term borrowings are sufficient to fund the Firm's operating liquidity needs.

For the year ended December 31, 2010, net cash used by operating activities was $3.8 billion, mainly driven by an increase primarily in trading assets—debt and equity instruments; principally due to improved market activity primarily in equity securities, foreign debt and physical commodities, partially offset by an increase in trading liabilities due to higher levels of positions taken to facilitate customer driven trading. Net cash was provided by net income and from adjustments for non-cash items such as the provision for credit losses, depreciation and amortization and stock-based compensation. Additionally, proceeds from sales and paydowns of loans originated or purchased with an initial intent to sell were higher than cash used to acquire such loans.

For the years ended December 31, 2009 and 2008, net cash provided by operating activities was $122.8 billion and $23.9 billion, respectively. In 2009, the net decline in trading assets and liabilities was affected by the impact of the challenging capital markets environment that existed in 2008, and continued into the first half of 2009. In 2009 and 2008, net cash generated from operating activities was higher than net income, largely as a result of adjustments for non-cash items such as the provision for credit losses. In addition, for 2009 and 2008 proceeds from sales, securitizations and paydowns of loans originated or purchased with an initial intent to sell were higher than cash used to acquire such loans, but the cash flows from these loan activities remained at reduced levels as a result of the lower activity in these markets.

Cash flows from investing activities

The Firm's investing activities predominantly include loans originated to be held for investment, the AFS securities portfolio and other short-term interest-earning assets. For the year ended December 31, 2010, net cash of $54.0 billion was provided by investing activities. This resulted from a decrease in deposits with banks largely due to a decline in deposits placed with the Federal Reserve Bank and lower interbank lending as market stress eased since the end of 2009; net sales and maturities of AFS securities used in the Firm's interest rate risk management activities largely due to repositioning of the portfolio in Corporate, in response to changes in the interest rate environment and to rebalance exposures; and a net decrease in the loan portfolio, driven by the expected runoff of the Washington Mutual credit card portfolio, a decline in lower-yielding promotional credit card balances, continued runoff of the residential real estate portfolios, and repayments and loan sales in IB and CB; the decrease was partially offset by higher originations across the wholesale and consumer businesses. Partially offsetting these cash proceeds was an increase in securities purchased under resale agreements, predominantly due to higher financing volume in IB; and cash used for business acquisitions, primarily RBS Sempra.

For the year ended December 31, 2009, net cash of $29.4 billion was provided by investing activities, primarily from a decrease in deposits with banks reflecting lower demand for inter-bank lending and lower deposits with the Federal Reserve Bank relative to the elevated levels at the end of 2008; a net decrease in the loan portfolio across most businesses, driven by continued lower customer demand and loan sales in the wholesale businesses, lower charge volume on credit cards, slightly higher credit card securitizations, and paydowns; and the maturity of all asset-backed commercial paper issued by money market mutual funds in connection with the AML facility of the Federal Reserve Bank of Boston. Largely offsetting these cash proceeds were net purchases of AFS securities associated with the Firm's management of interest rate risk and investment of cash resulting from an excess funding position.

For the year ended December 31, 2008, net cash of $283.7 billion was used in investing activities, primarily for: increased deposits with banks as the result of the availability of excess cash for short-term investment opportunities through interbank lending, and reserve balances held by the Federal Reserve (which became an investing activity in 2008, reflecting a policy change of the Federal Reserve to pay interest to depository institutions on reserve balances); net purchases of investment securities in the AFS portfolio to manage the Firm's exposure to interest rate movements; net additions to the wholesale loan portfolio from organic growth in CB; additions to the consumer prime mortgage portfolio as a result of the decision to retain, rather than sell, new originations of nonconforming prime mortgage loans; an increase in securities purchased under resale agreements reflecting growth in demand from clients for liquidity; and net purchases of asset-backed commercial paper from money market mutual funds in connection with the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility ("AML facility") of the Federal Reserve Bank of Boston. Partially offsetting these uses of cash were proceeds from loan sales and securitization activities as well as net cash received from acquisitions and the sale of an investment. Additionally, in June 2008, in connection with the Bear Stearns merger, the Firm sold assets acquired from Bear Stearns to the FRBNY and received cash proceeds of $28.85 billion.

Cash flows from financing activities

The Firm's financing activities primarily reflect cash flows related to raising customer deposits, and issuing long-term debt (including trust preferred capital debt securities) as well as preferred and common stock. In 2010, net cash used in financing activities was $49.2 billion. This resulted from net payments of long-term borrowings and trust preferred capital debt securities as new issuances were more than offset by payments primarily reflecting a decline in beneficial interests issued by consolidated VIEs due to maturities related to Firm-sponsored credit card securitization trusts; a decline in deposits associated with wholesale funding activities due to the Firm's lower funding needs; lower deposit levels in TSS, offset partially by net inflows from existing customers and new business in AM, CB and RFS; a decline in commercial paper and other borrowed funds due to lower funding requirements; payments of cash dividends; and repurchases of common stock. Cash was generated as a result of an increase in securities sold under repurchase agreements largely as a result of an increase in activity levels in IB partially offset by a decrease in CIO reflecting repositioning activities.

In 2009, net cash used in financing activities was $153.1 billion; this reflected a decline in wholesale deposits, predominantly in TSS, driven by the continued normalization of wholesale deposit levels resulting from the mitigation of credit concerns, compared with the heightened market volatility and credit concerns in the latter part of 2008; a decline in other borrowings, due to the absence of borrowings from the Federal Reserve under the Term Auction Facility program; net repayments of short-term advances from FHLBs and the maturity of the nonrecourse advances under the Federal Reserve Bank of Boston AML Facility; the June 17, 2009, repayment in full of the $25.0 billion principal amount of Series K Preferred Stock issued to the U.S. Treasury; and the payment of cash dividends on common and preferred stock. Cash was also used for the net payment of long-term borrowings and trust preferred capital debt securities, as issuances of FDIC-guaranteed debt and non-FDIC guaranteed debt in both the U.S. and European markets were more than offset by repayments including long-term advances from FHLBs. Cash proceeds resulted from an increase in securities loaned or sold under repurchase agreements, partly attributable to favorable pricing and to financing the increased size of the Firm's AFS securities portfolio; and the issuance of $5.8 billion of common stock. There were no repurchases in the open market of common stock or the warrants during 2009.

In 2008, net cash provided by financing activities was $247.0 billion due to growth in wholesale deposits, in particular, interest- and noninterest-bearing deposits in TSS (driven by both new and existing clients, and due to the deposit inflows related to the heightened volatility and credit concerns affecting the global markets that began in the third quarter of 2008), as well as increases in AM and CB (due to organic growth); proceeds of $25.0 billion from the issuance of preferred stock and the Warrant to the U.S. Treasury under the Capital Purchase Program; additional issuances of common stock and preferred stock used for general corporate purposes; an increase in other borrowings due to nonrecourse secured advances under the Federal Reserve Bank of Boston AML Facility to fund the purchase of asset-backed commercial paper from money market mutual funds; increases in federal funds purchased and securities loaned or sold under repurchase agreements in connection with higher client demand for liquidity and to finance growth in the Firm's AFS securities portfolio; and a net increase in long-term borrowings due to a combination of non-FDIC guaranteed debt and trust preferred capital debt securities issued prior to December 4, 2008, and the issuance of $20.8 billion of FDIC-guaranteed long-term debt issued during the fourth quarter of 2008. The fourth-quarter FDIC-guaranteed debt issuance was offset partially by maturities of non-FDIC guaranteed long-term debt during the same period. The increase in long-term borrowings and trust preferred capital debt securities was used primarily to fund certain illiquid assets held by the parent holding company and to build liquidity. Cash was also used to pay dividends on common and preferred stock. The Firm did not repurchase any shares of its common stock during 2008.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on page 95 and Ratings profile of derivative receivables MTM on page 124, and Note 6 on pages 191–199, respectively, of this Annual Report.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures.

The credit ratings of the parent holding company and each of the Firm's significant banking subsidiaries as of December 31, 2010, were as follows.

	Short-term debt			Senior long-term debt		
	Moody's	S&P	Fitch	Moody's	S&P	Fitch
JPMorgan Chase & Co.	P-1	A-1	F1+	Aa3	A+	AA–
JPMorgan Chase Bank, N.A.	P-1	A-1+	F1+	Aa1	AA–	AA–
Chase Bank USA, N.A.	P-1	A-1+	F1+	Aa1	AA–	AA–

The senior unsecured ratings from Moody's, S&P and Fitch on JPMorgan Chase and its principal bank subsidiaries remained unchanged at December 31, 2010, from December 31, 2009. At December 31, 2010, Moody's and S&P's outlook remained negative, while Fitch's outlook remained stable.

Following the Firm's earnings release on January 14, 2011, S&P and Moody's announced that their ratings on the Firm remained unchanged.

If the Firm's senior long-term debt ratings were downgraded by one notch, the Firm believes the incremental cost of funds or loss of funding would be manageable, within the context of current market conditions and the Firm's liquidity resources. JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Several rating agencies have announced that they will be evaluating the effects of the financial regulatory reform legislation in order to determine the extent, if any, to which financial institutions, including the Firm, may be negatively impacted. There is no assurance the Firm's credit ratings will not be downgraded in the future as a result of any such reviews.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit (for example, through loans, lending-related commitments, guarantees and derivatives) to a variety of customers, from large corporate and institutional clients to the individual consumer. Loans originated or acquired by the Firm's wholesale businesses are generally retained on the balance sheet. Credit risk management actively monitors the wholesale portfolio to ensure that it is well diversified across industry, geography, risk rating, maturity and individual client categories. Portfolio management for wholesale loans includes, for the Firm's syndicated loan business, distributing originations into the market place, targeting exposure held in the retained wholesale portfolio at less than 10% of the customer facility. With regard to the consumer credit market, the Firm focuses on creating a portfolio that is diversified from a product, industry and geographic perspective. Loss mitigation strategies are being employed for all home lending portfolios. These strategies include rate reductions, forbearance and other actions intended to minimize economic loss and avoid foreclosure. In the mortgage business, originated loans are either retained in the mortgage portfolio or securitized and sold to U.S. government agencies and U.S. government-sponsored enterprises.

Credit risk organization

Credit risk management is overseen by the Chief Risk Officer and implemented within the lines of business. The Firm's credit risk management governance consists of the following functions:

- Establishing a comprehensive credit risk policy framework
- Monitoring and managing credit risk across all portfolio segments, including transaction and line approval
- Assigning and managing credit authorities in connection with the approval of all credit exposure
- Managing criticized exposures and delinquent loans
- Determining the allowance for credit losses and ensuring appropriate credit risk-based capital management

Risk identification

The Firm is exposed to credit risk through lending and capital markets activities. Credit Risk Management works in partnership with the business segments in identifying and aggregating exposures across all lines of business.

Risk measurement

To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the amount of exposure should the obligor or the counterparty default, the probability of default and the loss severity given a default event. Based on these factors and related market-based inputs, the Firm estimates both probable and unexpected losses for the wholesale and consumer portfolios as follows:

- Probable losses are based primarily upon statistical estimates of credit losses as a result of obligor or counterparty default. However, probable losses are not the sole indicators of risk.
- Unexpected losses, reflected in the allocation of credit risk capital, represent the potential volatility of actual losses relative to the probable level of losses.

Risk measurement for the wholesale portfolio is assessed primarily on a risk-rated basis; for the consumer portfolio, it is assessed primarily on a credit-scored basis.

Risk-rated exposure

Risk ratings are assigned to differentiate risk within the portfolio and are reviewed on an ongoing basis by Credit Risk Management and revised, if needed, to reflect the borrowers' current financial positions, risk profiles and the related collateral. For portfolios that are risk-rated, probable and unexpected loss calculations are based on estimates of probability of default and loss severity given a default. These risk-rated portfolios are generally held in IB, CB, TSS and AM; they also include approximately $18 billion of certain business banking and auto loans in RFS that are risk-rated because they have characteristics similar to commercial loans. Probability of default is the likelihood that a loan will not be repaid and will default. Probability of default is calculated for each client who has a risk-rated loan (wholesale and certain risk-rated consumer loans). Loss given default is an estimate of losses given a default event and takes into consideration collateral and structural support for each credit facility. Calculations and assumptions are based on management information systems and methodologies which are under continual review.

Credit-scored exposure

For credit-scored portfolios (generally held in RFS and CS), probable loss is based on a statistical analysis of inherent losses expected to emerge over discrete periods of time for each portfolio. The credit-scored portfolio includes mortgage, home equity, certain business banking and auto loans, student loans, as well as credit card loans. Probable losses inherent in the portfolio are estimated using sophisticated portfolio modeling, credit scoring and decision-support tools, which take into account factors such as delinquency, geography, LTV ratios and credit scores. These analyses are applied to the Firm's current portfolios in order to estimate the severity of losses, which determines the amount of probable losses. Other risk characteristics utilized to evaluate probable losses include recent loss experience in the portfolios, changes in origination sources, portfolio seasoning, potential borrower behavior and the macroeconomic environment. These factors and analyses are updated at least on a quarterly basis or more frequently as market conditions dictate.

Risk monitoring and control

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit and to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposure.

For consumer credit risk, delinquency and other trends, including any concentrations at the portfolio level, are monitored for potential problems, as certain of these trends can be ameliorated through changes in underwriting policies and portfolio guidelines. Consumer Credit Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. All of these historical and forecasted trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry and individual counterparty basis with established concentration limits that are reviewed and revised, as deemed appropriate by management, on an annual basis. Industry and counterparty limits, as measured in terms of exposure and economic credit risk capital, are subject to stress-based loss constraints for the aggregate portfolio.

Management of the Firm's wholesale exposure is accomplished through a number of means including:

- Loan syndication and participations
- Loan sales and securitizations
- Credit derivatives
- Use of master netting agreements
- Collateral and other risk-reduction techniques

In addition to Risk Management, the Firm's Audit department provides periodic reviews, as well as continuous monitoring, where appropriate, of the Firm's consumer and wholesale portfolios.

In the Firm's wholesale and certain risk-rated consumer credit portfolios, a credit review group within the Audit department is responsible for:

- Independently assessing and validating the changing risk grades assigned to exposures; and
- Evaluating the effectiveness of business units' risk rating, including the accuracy and consistency of risk grades, the timeliness of risk grade changes and the justification of risk grades in credit memoranda

In the Firm's consumer credit portfolio, the Audit department periodically tests the internal controls around the modeling process including the integrity of the data utilized. In addition, the risk inherent in the Firm's consumer based loans is evaluated using models whose construction, assumptions and on-going performance relative to expectations are reviewed by an independent risk management group that is separate from the lines of business. For further discussion on consumer loans, see Note 14 on pages 220–238 of this Annual Report.

Risk reporting

To enable monitoring of credit risk and decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior Credit Risk Management. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, senior management. For further discussion of risk monitoring and control, see page 109 of this Annual Report.

2010 Credit risk overview

During 2010, the credit environment improved compared with 2009, resulting in decreased downgrade, default and charge-off activity and improved delinquency trends. Despite challenging macroeconomic conditions, particularly in the first half of 2010, the Firm continued to actively manage its underperforming and nonaccrual loans and reduce such exposures through repayments, loan sales and workouts. These efforts resulted in an improvement in the credit quality of the portfolio compared with 2009 and contributed to the Firm's reduction in the allowance for credit losses, particularly in CS and IB. During the year and particularly in the second half of 2010, customer demand for credit improved, loan origination activity and market liquidity improved and credit spreads tightened from 2009.

In the wholesale portfolio, criticized assets, nonperforming assets and charge-offs decreased from peak loss levels experienced in 2009, reflecting general improvement in the portfolio, partially offset by continued weakness in commercial real estate ("CRE"). Toward the end of 2010, CRE exposure showed some positive signs of stabilization as property values improved somewhat from the declines witnessed over the prior two years. The wholesale portfolio continues to be actively managed, in part by conducting ongoing, in-depth reviews of credit quality and of industry, product and client concentrations. Underwriting guidelines across all areas of lending have remained in focus, consistent with evolving market conditions and the Firm's risk management activities. Reflecting the improvement in credit quality of the wholesale portfolio throughout the year, the wholesale allowance for loan loss coverage ratio was 2.14%, compared with 3.57% at the end of 2009. For further discussion of the wholesale credit environment and wholesale loans, see Wholesale Credit Portfolio on pages 120–129 and Note 14 on pages 220–238 of this Annual Report.

The consumer portfolio credit performance improved from 2009 with lower delinquent loans, nonperforming assets and charge-offs. However, credit performance continued to be negatively affected by the economic environment. High unemployment and weak overall economic conditions continued to have a negative impact in the number of loans charged off, while continued weak housing prices have resulted in an elevated severity of loss recognized on defaulted real estate loans. The Firm has taken proactive action to assist homeowners most in need of financial assistance throughout the economic downturn. The Firm is participating in the U.S. Treasury's MHA programs and continuing its other loss-mitigation efforts for financially distressed borrowers who do not qualify for the U.S. Treasury's programs. In addition, over the past several years, the Firm has taken actions to reduce risk exposure to consumer loans by tightening both underwriting and loan qualification standards, as well as eliminating certain products and loan origination channels. For further discussion of the consumer credit environment and consumer loans, see Consumer Credit Portfolio on pages 129–138 and Note 14 on pages 220–238 of this Annual Report.

CREDIT PORTFOLIO

The following table presents JPMorgan Chase's credit portfolio as of December 31, 2010 and 2009. Total credit exposure of $1.8 trillion at December 31, 2010, decreased by $46.9 billion from December 31, 2009, reflecting a decrease of $83.8 billion in the consumer portfolio, partly offset by an increase of $36.9 billion in the wholesale portfolio. During 2010, lending-related commitments decreased by $36.3 billion, loans decreased by $25.2 billion and receivables from customers increased by $16.8 billion. The overall decrease in total loans was primarily related to repayments, low customer demand and loan sales, partially offset by the adoption of the accounting guidance related to VIEs, predominantly in the wholesale portfolio.

While overall portfolio exposure declined, the Firm provided and raised nearly $1.4 trillion in new and renewed credit and capital for consumers, corporations, small businesses, municipalities and not-for-profit organizations during 2010.

In the table below, reported loans include loans retained; loans held-for-sale (which are carried at the lower of cost or fair value, with changes in value recorded in noninterest revenue); and loans accounted for at fair value. For additional information on the Firm's loans and derivative receivables, including the Firm's accounting policies, see Notes 14 and 6 on pages 220–238 and 191–199, respectively, of this Annual Report. Average retained loan balances are used for the net charge-off rate calculations.

Total credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonperforming[h][i]		Net charge-offs		Average annual net charge-off ratio[j][k]	
	2010	2009	**2010**	2009	**2010**	2009	**2010**	2009
Total credit portfolio								
Loans retained[a]	**$ 685,498**	$ 627,218	**$ 14,345**	$ 17,219	**$ 23,673**	$ 22,965	**3.39%**	3.42%
Loans held-for-sale	**5,453**	4,876	**341**	234	**—**	—	**—**	—
Loans at fair value	**1,976**	1,364	**155**	111	**—**	—	**—**	—
Loans – reported[a]	**692,927**	633,458	**14,841**	17,564	**23,673**	22,965	**3.39**	3.42
Loans – securitized[a][b]	**NA**	84,626	**NA**	—	**NA**	6,443	**NA**	7.55
Total loans[a]	**692,927**	718,084	**14,841**	17,564	**23,673**	29,408	**3.39**	3.88
Derivative receivables	**80,481**	80,210	**34**	529	**NA**	NA	**NA**	NA
Receivables from customers[c]	**32,541**	15,745	**—**	—	**—**	—	**—**	—
Interests in purchased receivables[a][d]	**391**	2,927	**—**	—	**—**	—	**—**	—
Total credit-related assets[a]	**806,340**	816,966	**14,875**	18,093	**23,673**	29,408	**3.39**	3.88
Lending-related commitments[a][e]	**954,840**	991,095	**1,005**	1,577	**—**	—	**—**	—
Assets acquired in loan satisfactions								
Real estate owned	**NA**	NA	**1,610**	1,548	**NA**	NA	**NA**	NA
Other	**NA**	NA	**72**	100	**NA**	NA	**NA**	NA
Total assets acquired in loan satisfactions	**NA**	NA	**1,682**	1,648	**NA**	NA	**NA**	NA
Total credit portfolio	**$ 1,761,180**	$1,808,061	**$ 17,562**	$ 21,318	**$ 23,673**	$ 29,408	**3.39%**	3.88%
Net credit derivative hedges notional[f]	**$ (23,108)**	$ (48,376)	**$ (55)**	$ (139)	**NA**	NA	**NA**	NA
Liquid securities and other cash collateral held against derivatives[g]	**(16,486)**	(15,519)	**NA**	NA	**NA**	NA	**NA**	NA

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon the adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, its Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related. As a result, related assets are now primarily recorded in loans or other assets on the Consolidated Balance Sheet. As a result of the consolidation of the credit card securitization trusts, reported and managed basis are equivalent for periods beginning after January 1, 2010. For further discussion, see Note 16 on pages 244–259 of this Annual Report.

(b) Loans securitized are defined as loans that were sold to nonconsolidated securitization trusts and were not included in reported loans. For further discussion of credit card securitizations, see Note 16 on pages 244–259 of this Annual Report.

(c) Represents primarily margin loans to prime and retail brokerage customers, which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.

(d) Represents an ownership interest in cash flows of a pool of receivables transferred by a third-party seller into a bankruptcy-remote entity, generally a trust.

(e) The amounts in nonperforming represent unfunded commitments that are risk rated as nonaccrual.

(f) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage both performing and nonperforming credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on pages 126–128 and Note 6 on pages 191–199 of this Annual Report.

(g) Represents other liquid securities collateral and other cash collateral held by the Firm.

(h) At December 31, 2010 and 2009, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $10.5 billion and $9.0 billion, respectively, that are 90 days past due and accruing at the guaranteed reimbursement rate; (2) real estate owned insured by U.S. government agencies of $1.9 billion and $579 million, respectively; and (3) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $625 million and $542 million, respectively. These amounts are excluded as reimbursement of insured amounts is proceeding normally. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council ("FFIEC"). Credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

(i) Excludes PCI loans acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

(j) For the year ended December 31, 2010, net charge-off ratios were calculated using average retained loans of $698.2 billion; and for the year ended December 31, 2009, average retained loans of $672.3 billion and average securitized loans of $85.4 billion.

(k) For the years ended December 31, 2010 and 2009, firmwide net charge-off ratios were calculated including average PCI loans of $77.0 billion and $85.4 billion, respectively. Excluding the impact of PCI loans, the total Firm's managed net charge-off rate would have been 3.81% and 4.37% respectively.

WHOLESALE CREDIT PORTFOLIO

As of December 31, 2010, wholesale exposure (IB, CB, TSS and AM) increased by $36.9 billion from December 31, 2009. The overall increase was primarily driven by increases of $23.5 billion in loans and $16.8 billion of receivables from customers, partially offset by decreases in interests in purchase receivables and lending-related commitments of $2.5 billion and $1.1 billion, respectively. The decrease in lending-related commitments and the increase in loans were primarily related to the January 1, 2010, adoption of the accounting guidance related to VIEs, which resulted in the elimination of a net $17.7 billion of lending-related commitments between the Firm and its administrated multi-seller conduits upon consolidation. Assets of the consolidated conduits included $15.1 billion of wholesale loans at January 1, 2010. Excluding the effect of the accounting guidance, lending-related commitments and loans would have increased by $16.6 billion and $8.4 billion, respectively, mainly related to increased client activity. The increase in loans also included the purchase of a $3.5 billion loan portfolio in CB during the third quarter of 2010. The increase of $16.8 billion in receivables from customers was due to increased client activity, predominantly in Prime Services.

Wholesale

December 31,	Credit exposure		Nonperforming[f]	
(in millions)	**2010**	2009	**2010**	2009
Loans retained	**$ 222,510**	$ 200,077	**$ 5,510**	$ 6,559
Loans held-for-sale	**3,147**	2,734	**341**	234
Loans at fair value	**1,976**	1,364	**155**	111
Loans – reported	**227,633**	204,175	**6,006**	6,904
Derivative receivables	**80,481**	80,210	**34**	529
Receivables from customers[a]	**32,541**	15,745	**—**	—
Interests in purchased receivables[b]	**391**	2,927	**—**	—
Total wholesale credit-related assets	**341,046**	303,057	**6,040**	7,433
Lending-related commitments[c]	**346,079**	347,155	**1,005**	1,577
Total wholesale credit exposure	**$ 687,125**	$ 650,212	**$ 7,045**	$ 9,010
Net credit derivative hedges notional[d]	**$ (23,108)**	$ (48,376)	**$ (55)**	$ (139)
Liquid securities and other cash collateral held against derivatives[e]	**(16,486)**	(15,519)	**NA**	NA

(a) Represents primarily margin loans to prime and retail brokerage customers, which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.
(b) Represents an ownership interest in cash flows of a pool of receivables transferred by a third-party seller into a bankruptcy-remote entity, generally a trust.
(c) The amounts in nonperforming represent unfunded commitments that are risk rated as nonaccrual.
(d) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage both performing and nonperforming credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on pages 126–128, and Note 6 on pages 191–199 of this Annual Report.
(e) Represents other liquid securities collateral and other cash collateral held by the Firm.
(f) Excludes assets acquired in loan satisfactions.

The following table presents summaries of the maturity and ratings profiles of the wholesale portfolio as of December 31, 2010 and 2009. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings as defined by S&P and Moody's. Also included in this table is the notional value of net credit derivative hedges; the counterparties to these hedges are predominantly investment grade banks and finance companies.

Wholesale credit exposure – maturity and ratings profile

December 31, 2010 (in millions, except ratios)	Maturity profile[e] Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	Ratings profile Investment-grade ("IG") AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	Total	Total % of IG
Loans	**$ 78,017**	**$ 85,987**	**$ 58,506**	**$ 222,510**	**$ 146,047**	**$ 76,463**	**$ 222,510**	**66%**
Derivative receivables[a]				**80,481**			**80,481**	
Less: Liquid securities and other cash collateral held against derivatives				**(16,486)**			**(16,486)**	
Total derivative receivables, net of all collateral	**11,499**	**24,415**	**28,081**	**63,995**	**47,557**	**16,438**	**63,995**	**74**
Lending-related commitments	**126,389**	**209,299**	**10,391**	**346,079**	**276,298**	**69,781**	**346,079**	**80**
Subtotal	**215,905**	**319,701**	**96,978**	**632,584**	**469,902**	**162,682**	**632,584**	**74**
Loans held-for-sale and loans at fair value[b][c]				**5,123**			**5,123**	
Receivables from customers[c]				**32,541**			**32,541**	
Interests in purchased receivables[c]				**391**			**391**	
Total exposure – excluding liquid securities and other cash collateral held against derivatives				**$ 670,639**			**$ 670,639**	
Net credit derivative hedges notional[d]	**$ (1,228)**	**$ (16,415)**	**$ (5,465)**	**$ (23,108)**	**$ (23,159)**	**$ 51**	**$ (23,108)**	**100%**

December 31, 2009 (in millions, except ratios)	Maturity profile[e] Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	Ratings profile Investment-grade ("IG") AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	Total	Total % of IG
Loans	$ 57,381	$ 79,636	$ 63,060	$ 200,077	$ 118,531	$ 81,546	$ 200,077	59%
Derivative receivables[a]				80,210			80,210	
Less: Liquid securities and other cash collateral held against derivatives				(15,519)			(15,519)	
Total derivative receivables, net of all collateral	7,535	27,123	30,033	64,691	47,305	17,386	64,691	73
Lending-related commitments	141,621	198,215	7,319	347,155	280,811	66,344	347,155	81
Subtotal	206,537	304,974	100,412	611,923	446,647	165,276	611,923	73
Loans held-for-sale and loans at fair value[b][c]				4,098			4,098	
Receivables from customers[c]				15,745			15,745	
Interests in purchased receivables[c]				2,927			2,927	
Total exposure – excluding liquid securities and other cash collateral held against derivatives				$ 634,693			$ 634,693	
Net credit derivative hedges notional[d]	$ (23,568)	$ (20,322)	$ (4,486)	$ (48,376)	$ (48,110)	$ (266)	$ (48,376)	99%

(a) Represents the fair value of derivative receivables as reported on the Consolidated Balance Sheets.
(b) Loans held-for-sale and loans at fair value relate primarily to syndicated loans and loans transferred from the retained portfolio.
(c) From a credit risk perspective maturity and ratings profiles are not meaningful.
(d) Represents the net notional amounts of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP.
(e) The maturity profile of loans and lending-related commitments is based on the remaining contractual maturity. The maturity profile of derivative receivables is based on the maturity profile of average exposure. For further discussion of average exposure, see Derivative receivables marked to market on pages 125–126 of this Annual Report.

Customer receivables representing primarily margin loans to prime and retail brokerage clients of $32.5 billion and $15.7 billion at December 31, 2010 and 2009, respectively, are included in the table. These margin loans are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's positions may be liquidated by the Firm to meet the minimum collateral requirements.

Wholesale credit exposure – selected industry exposures

The Firm focuses on the management and diversification of its industry exposures, with particular attention paid to industries with actual or potential credit concerns. Exposures deemed criticized generally represent a ratings profile similar to a rating of "CCC+"/"Caa1" and lower, as defined by S&P and Moody's. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, decreased to $22.4 billion at December 31, 2010, from $33.2 billion at year-end 2009. The decrease was primarily related to net repayments and loan sales.

Below are summaries of the top 25 industry exposures as of December 31, 2010 and 2009. For additional information on industry concentrations, see Note 5 on pages 189–190 of this Annual Report.

Wholesale credit exposure – selected industry exposures

As of or for the year ended			Noninvestment grade			30 days or more past due	Year-to-date	Credit	Liquid securities and other cash collateral held against
December 31, 2010 (in millions)	Credit exposure[c]	Investment grade	Noncriticized	Criticized performing	Criticized nonperforming	and accruing loans	net charge-offs/ (recoveries)	derivative hedges[d]	derivative receivables
Top 25 industries[a]									
Banks and finance companies	$ 65,867	$ 54,839	$ 10,428	$ 467	$ 133	$ 26	$ 69	$ (3,456)	$ (9,216)
Real estate	64,351	34,440	20,569	6,404	2,938	399	862	(76)	(57)
Healthcare	41,093	33,752	7,019	291	31	85	4	(768)	(161)
State and municipal governments	35,808	34,641	912	231	24	34	3	(186)	(233)
Asset managers	29,364	25,533	3,401	427	3	7	—	—	(2,948)
Consumer products	27,508	16,747	10,379	371	11	217	1	(752)	(2)
Oil and gas	26,459	18,465	7,850	143	1	24	—	(87)	(50)
Utilities	25,911	20,951	4,101	498	361	3	49	(355)	(230)
Retail and consumer services	20,882	12,021	8,316	338	207	8	23	(623)	(3)
Technology	14,348	9,355	4,534	399	60	47	50	(158)	—
Machinery and equipment manufacturing	13,311	7,690	5,372	244	5	8	2	(74)	(2)
Building materials/construction	12,808	6,557	5,065	1,129	57	9	6	(308)	—
Chemicals/plastics	12,312	8,375	3,656	274	7	—	2	(70)	—
Metals/mining	11,426	5,260	5,748	362	56	7	35	(296)	—
Business services	11,247	6,351	4,735	115	46	11	15	(5)	—
Central government	11,173	10,677	496	—	—	—	—	(6,897)	(42)
Media	10,967	5,808	3,945	672	542	2	92	(212)	(3)
Insurance	10,918	7,908	2,690	320	—	—	(1)	(805)	(567)
Telecom services	10,709	7,582	2,295	821	11	3	(8)	(820)	—
Holding companies	10,504	8,375	2,091	38	—	33	5	—	(362)
Transportation	9,652	6,630	2,739	245	38	—	(16)	(132)	—
Securities firms and exchanges	9,415	7,678	1,700	37	—	—	5	(38)	(2,358)
Automotive	9,011	3,915	4,822	269	5	—	52	(758)	—
Agriculture/paper manufacturing	7,368	4,510	2,614	242	2	8	7	(44)	(2)
Aerospace	5,732	4,903	732	97	—	—	—	(321)	—
All other[b]	140,926	122,594	14,924	2,402	1,006	921	470	(5,867)	(250)
Subtotal	649,070	485,557	141,133	16,836	5,544	1,852	1,727	(23,108)	(16,486)
Loans held-for-sale and loans at fair value	5,123								
Receivables from customers	32,541								
Interest in purchased receivables	391								
Total	$ 687,125	$ 485,557	$ 141,133	$ 16,836	$ 5,544	$ 1,852	$ 1,727	$ (23,108)	$ (16,486)

Presented below is a discussion of several industries to which the Firm has significant exposure, as well as industries the Firm continues to monitor because of actual or potential credit concerns. For additional information, refer to the tables above and on the preceding page.

- **Banks and finance companies:** Exposure to this industry increased by 22% or $11.8 billion, and criticized exposure decreased 71%, compared with 2009. This portfolio experienced improvement in credit quality as a result of growth in investment-grade lending, as well as upgrades in risk ratings to financial counterparties.
- **Real estate:** Real estate loans decreased by 6% or $3.6 billion from 2009, including a 19% decline in the criticized portion of the portfolio, mainly as a result of repayments and loans sales. While this sector continued to be challenged throughout 2010, the portfolio experienced stabilization toward the end of the year. The ratio of nonaccrual loans to total loans increased due to a downgrade of a loan to nonaccrual in the fourth quarter of 2010. Excluding this downgrade, the ratio would have improved in line with the broader real estate portfolio. For further discussion on commercial real estate loans, see Note 14 on pages 220–238 of this Annual Report.
- **State and municipal governments:** Exposure to this segment increased by $1.1 billion or 3% in 2010 to $35.8 billion. Lending-related commitments comprise approximately 70% of exposure to this sector, mainly bond liquidity and standby letter of credit commitments. Credit quality of the portfolio remains high as 97% of the portfolio was rated investment grade, up from 93% in 2009. Criticized exposure was less than 1% of this industry's exposure. The Firm continues to actively monitor and manage this exposure in light of the challenging environment faced by state and municipal governments. For further discussion of commitments for bond liquidity and standby letters of credit, see Note 30 on pages 275–280 of this Annual Report.

As of or for the year ended December 31, 2009 (in millions)	Credit exposure[c]	Investment grade	Noninvestment grade: Noncriticized	Noninvestment grade: Criticized performing	Noninvestment grade: Criticized nonperforming	30 days or more past due and accruing loans	Year-to-date net charge-offs/ (recoveries)	Credit derivative hedges[d]	Liquid securities and other cash collateral held against derivative receivables
Top 25 industries[a]									
Banks and finance companies	$ 54,053	$ 43,576	$ 8,424	$ 1,559	$ 494	$ 43	$ 719	$ (3,718)	$ (8,353)
Real estate	68,509	37,724	18,810	8,872	3,103	937	688	(1,168)	(35)
Healthcare	35,605	29,576	5,700	310	19	30	10	(2,545)	(125)
State and municipal governments	34,726	32,410	1,850	400	66	15	—	(204)	(193)
Asset managers	24,920	20,498	3,742	442	238	28	7	(40)	(2,105)
Consumer products	27,004	17,384	9,105	479	36	13	35	(3,638)	(4)
Oil and gas	23,322	17,082	5,854	378	8	28	16	(2,567)	(6)
Utilities	27,178	22,063	3,877	1,236	2	3	182	(3,486)	(360)
Retail and consumer services	20,673	12,024	7,867	687	95	10	35	(3,073)	—
Technology	14,169	8,877	4,004	1,125	163	5	28	(1,730)	(130)
Machinery and equipment manufacturing	12,759	7,287	5,122	329	21	13	12	(1,327)	(1)
Building materials/construction	10,448	4,512	4,537	1,309	90	19	98	(1,141)	—
Chemicals/plastics	9,870	6,633	2,626	600	11	5	22	(1,357)	—
Metals/mining	12,547	7,002	4,906	547	92	4	24	(1,963)	—
Business services	10,667	6,464	3,859	241	103	7	8	(107)	—
Central government	9,557	9,480	77	—	—	—	—	(4,814)	(30)
Media	12,379	6,789	3,898	1,056	636	57	464	(1,606)	—
Insurance	13,421	9,221	3,601	581	18	—	7	(2,735)	(793)
Telecom services	11,265	7,741	3,273	191	60	—	31	(3,455)	(62)
Holding companies	16,018	13,801	2,107	42	68	44	275	(421)	(320)
Transportation	9,749	6,416	2,745	553	35	41	61	(870)	(242)
Securities firms and exchanges	10,832	8,220	2,467	36	109	2	—	(289)	(2,139)
Automotive	9,357	3,865	4,252	1,195	45	2	52	(1,541)	—
Agriculture/paper manufacturing	5,801	2,169	3,132	331	169	36	10	(897)	—
Aerospace	5,254	4,442	743	69	—	13	—	(963)	—
All other[b]	137,359	115,446	16,979	3,527	1,407	671	348	(2,721)	(621)
Subtotal	627,442	460,702	133,557	26,095	7,088	2,026	3,132	(48,376)	(15,519)
Loans held-for-sale and loans at fair value	4,098								
Receivables from customers	15,745								
Interest in purchased receivables	2,927								
Total	$ 650,212	$ 460,702	$ 133,557	$ 26,095	$ 7,088	$ 2,026	$ 3,132	$ (48,376)	$ (15,519)

(a) All industry rankings are based on exposure at December 31, 2010. The industry rankings presented in the 2009 table are based on the industry rankings of the corresponding exposures at December 31, 2010, not actual rankings of such exposures at December 31, 2009.
(b) For more information on exposures to SPEs included in all other, see Note 16 on pages 244–259 of this Annual Report.
(c) Credit exposure is net of risk participations and excludes the benefit of credit derivative hedges and collateral held against derivative receivables or loans.
(d) Represents the net notional amounts of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP.

- **Media:** Exposure to this industry decreased by 11% in 2010 to $11.0 billion. Credit quality in this portfolio stabilized somewhat in 2010 as a result of repayments and loan sales. Criticized exposure also decreased by 28% from 2009 to $1.2 billion, but remains elevated relative to total industry exposure due to continued pressure on the traditional media business model from expanding digital and online technology.

- **All other:** All other at December 31, 2010 (excluding loans held-for-sale and loans at fair value), included $140.9 billion of credit exposure to eight industry segments. Exposures related to: (1) Individuals, Private Education & Civic Organizations were 47% and (2) SPEs were 39% of this category. SPEs provide secured financing (generally backed by receivables, loans or bonds with a diverse group of obligors). For further discussion of SPEs, see Note 1 on pages 164–165 of this Annual Report. The remaining all other exposure is well-diversified across industries and none comprise more than 6% of total exposure.

The following table presents the geographic distribution of wholesale credit, nonperforming assets and past due loans as of December 31, 2010 and 2009. The geographic distribution of the wholesale portfolio is determined based predominantly on the domicile of the borrower.

	Credit exposure				Nonperforming					
December 31, 2010 (in millions)	Loans	Lending-related commitments	Derivative receivables	Total credit exposure	Loans[a]	Derivatives	Lending-related commitments	Total nonperforming[b]	Assets acquired in loan satisfactions	30 days or more past due and accruing loans
Europe/Middle East and Africa	**$ 27,934**	**$ 58,418**	**$ 35,196**	**$ 121,548**	**$ 153**	**$ 1**	**$ 23**	**$ 177**	**$ —**	**$ 127**
Asia and Pacific	**20,552**	**15,002**	**10,991**	**46,545**	**579**	**21**	**—**	**600**	**—**	**74**
Latin America and the Caribbean	**16,480**	**12,170**	**5,634**	**34,284**	**649**	**—**	**13**	**662**	**1**	**131**
Other	**1,185**	**6,149**	**2,039**	**9,373**	**6**	**—**	**5**	**11**	**—**	**—**
Total non-U.S.	**66,151**	**91,739**	**53,860**	**211,750**	**1,387**	**22**	**41**	**1,450**	**1**	**332**
Total U.S.	**156,359**	**254,340**	**26,621**	**437,320**	**4,123**	**12**	**964**	**5,099**	**320**	**1,520**
Loans held-for-sale and loans at fair value	**5,123**	**—**	**—**	**5,123**	**496**	**NA**	**—**	**496**	**NA**	**—**
Receivables from customers	**—**	**—**	**—**	**32,541**	**NA**	**NA**	**NA**	**NA**	**NA**	**—**
Interests in purchased receivables	**—**	**—**	**—**	**391**	**NA**	**NA**	**NA**	**NA**	**NA**	**—**
Total	**$ 227,633**	**$ 346,079**	**$ 80,481**	**$ 687,125**	**$ 6,006**	**$ 34**	**$ 1,005**	**$ 7,045**	**$ 321**	**$ 1,852**

	Credit exposure				Nonperforming					
December 31, 2009 (in millions)	Loans	Lending-related commitments	Derivative receivables	Total credit exposure	Loans[a]	Derivatives	Lending-related commitments	Total nonperforming[b]	Assets acquired in loan satisfactions	30 days or more past due and accruing loans
Europe/Middle East and Africa	$ 26,688	$ 56,106	$ 37,411	$ 120,205	$ 269	$ —	$ 22	$ 291	$ —	$ 103
Asia and Pacific	11,612	13,450	8,784	33,846	357	2	1	360	—	—
Latin America and the Caribbean	13,350	10,249	6,948	30,547	272	3	6	281	52	134
Other	1,967	5,895	1,467	9,329	81	—	—	81	—	54
Total non-U.S.	53,617	85,700	54,610	193,927	979	5	29	1,013	52	291
Total U.S.	146,460	261,455	25,600	433,515	5,580	524	1,548	7,652	341	1,735
Loans held-for-sale and loans at fair value	4,098	—	—	4,098	345	NA	—	345	NA	—
Receivables from customers	—	—	—	15,745	NA	NA	NA	NA	NA	—
Interests in purchased receivables	—	—	—	2,927	NA	NA	NA	NA	NA	—
Total	$ 204,175	$ 347,155	$ 80,210	$ 650,212	$ 6,904	$ 529	$ 1,577	$ 9,010	$ 393	$ 2,026

(a) The Firm held allowance for loan losses of $1.6 billion and $2.0 billion related to nonaccrual retained loans resulting in allowance coverage ratios of 29% and 31% at December 31, 2010 and 2009, respectively. Wholesale nonaccrual loans represent 2.64% and 3.38% of total wholesale loans at December 31, 2010 and 2009, respectively.

(b) Total nonperforming include nonaccrual loans, nonperforming derivatives and nonperforming lending-related commitments.

Loans

In the normal course of business, the Firm provides loans to a variety of wholesale customers, from large corporate and institutional clients to high-net-worth individuals. For further discussion on loans, including information on credit quality indicators, see Note 14 on pages 220–238 of this Annual Report.

Retained wholesale loans were $222.5 billion at December 31, 2010, compared with $200.1 billion at December 31, 2009. The $22.4 billion increase was primarily related to the January 1, 2010, adoption of accounting guidance related to VIEs. Excluding the effect of the adoption of the accounting guidance, loans increased by $7.4 billion. Loans held-for-sale and loans at fair value relate primarily to syndicated loans and loans transferred from the retained portfolio.

The Firm actively manages wholesale credit exposure through sales of loans and lending-related commitments. During 2010 the Firm sold $7.7 billion of loans and commitments, recognizing revenue gains of $98.9 million. In 2009, the Firm sold $3.9 billion of loans and commitments, recognizing net losses of $38 million. These results included gains or losses on sales of nonaccrual loans, if any, as discussed below. These activities are not related to the Firm's securitization activities. For further discussion of securitization activity, see Liquidity Risk Management and Note 16 on pages 110–115 and 244–259 respectively, of this Annual Report.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2010 and 2009.

Wholesale nonaccrual loan activity[a]

Year ended December 31, (in millions)	2010	2009
Beginning balance	**$ 6,904**	$ 2,382
Additions	**9,249**	13,591
Reductions:		
Paydowns and other	**5,540**	4,964
Gross charge-offs	**1,854**	2,974
Returned to performing	**364**	341
Sales	**2,389**	790
Total reductions	**10,147**	9,069
Net additions/(reductions)	**(898)**	4,522
Ending balance	**$ 6,006**	$ 6,904

(a) This table includes total wholesale loans – reported.

Nonaccrual wholesale loans decreased by $898 million from December 31, 2009, reflecting primarily net repayments and loan sales.

The following table presents net charge-offs, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2010 and 2009. The amounts in the table below do not include revenue gains from sales of nonaccrual loans.

Wholesale net charge-offs

Year ended December 31, (in millions, except ratios)	2010	2009
Loans – reported		
Average loans retained	**$ 213,609**	$ 223,047
Net charge-offs	**1,727**	3,132
Average annual net charge-off ratio	**0.81%**	1.40%

Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activity. Derivatives enable customers and the Firm to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its credit exposure. For further discussion of derivative contracts, see Note 5 and Note 6 on pages 189–190 and 191–199, respectively, of this Annual Report.

The following tables summarize the net derivative receivables MTM for the periods presented.

Derivative receivables MTM

December 31, (in millions)	Derivative receivables MTM 2010	2009
Interest rate[a]	**$ 32,555**	$ 33,733
Credit derivatives[a]	**7,725**	11,859
Foreign exchange	**25,858**	21,984
Equity	**4,204**	6,635
Commodity	**10,139**	5,999
Total, net of cash collateral	**80,481**	80,210
Liquid securities and other cash collateral held against derivative receivables	**(16,486)**	(15,519)
Total, net of all collateral	**$ 63,995**	$ 64,691

(a) In 2010, the reporting of cash collateral netting was enhanced to reflect a refined allocation by product. Prior periods have been revised to conform to the current presentation. The refinement resulted in an increase to interest rate derivative receivables, and an offsetting decrease to credit derivative receivables, of $7.0 billion as of December 31, 2009.

Derivative receivables reported on the Consolidated Balance Sheets were $80.5 billion and $80.2 billion at December 31, 2010 and 2009, respectively. These represent the fair value (e.g. MTM) of the derivative contracts after giving effect to legally enforceable master netting agreements, cash collateral held by the Firm and the credit valuation adjustment ("CVA"). These amounts reported on the Consolidated Balance Sheets represent the cost to the Firm to replace the contracts at current market rates should the counterparty default. However, in management's view, the appropriate measure of current credit risk should also reflect additional liquid securities and other cash collateral held by the Firm of $16.5 billion and $15.5 billion at December 31, 2010 and 2009, respectively, resulting in total exposure, net of all collateral, of $64.0 billion and $64.7 billion at December 31, 2010 and 2009, respectively.

The Firm also holds additional collateral delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Though this collateral does not reduce the balances noted in the table above, it is available as security against potential exposure that could arise should the MTM of the client's derivative transactions move in the Firm's favor. As of December 31, 2010 and 2009, the Firm held $18.0 billion and $16.9 billion, respectively, of this additional collateral. The derivative receivables MTM, net of all collateral, also do not include other credit enhancements, such as letters of credit.

While useful as a current view of credit exposure, the net MTM value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

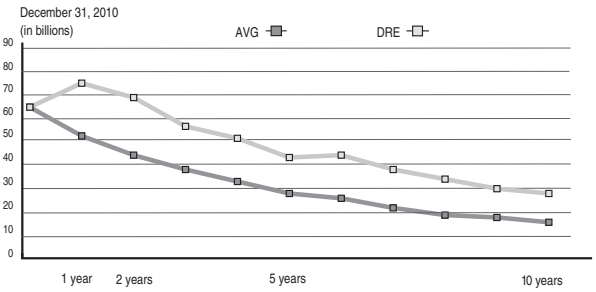
Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, AVG is a measure of the expected MTM value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the CVA, as further described below. AVG exposure was $45.3 billion and $49.0 billion at December 31, 2010 and 2009, respectively, compared with derivative receivables MTM, net of all collateral, of $64.0 billion and $64.7 billion at December 31, 2010 and 2009, respectively.

The MTM value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's credit approval process takes into consideration the potential for correlation between the Firm's AVG to a counterparty and the counterparty's credit quality. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to derivatives over the next 10 years as calculated by the DRE and AVG metrics. The two measures generally show declining exposure after the first year, if no new trades were added to the portfolio.

Exposure profile of derivatives measures



The following table summarizes the ratings profile of the Firm's derivative receivables MTM, net of other liquid securities collateral, for the dates indicated.

Ratings profile of derivative receivables MTM

Rating equivalent	**2010**		2009	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 23,342**	**36%**	$ 25,530	40%
A+/A1 to A-/A3	**15,812**	**25**	12,432	19
BBB+/Baa1 to BBB-/Baa3	**8,403**	**13**	9,343	14
BB+/Ba1 to B-/B3	**13,716**	**22**	14,571	23
CCC+/Caa1 and below	**2,722**	**4**	2,815	4
Total	**$ 63,995**	**100%**	$ 64,691	100%

As noted above, the Firm uses collateral agreements to mitigate counterparty credit risk in derivatives. The percentage of the Firm's derivatives transactions subject to collateral agreements – excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity – was 88% as of December 31, 2010, largely unchanged from 89% at December 31, 2009. The Firm posted $58.3 billion and $56.7 billion of collateral at December 31, 2010 and 2009, respectively.

Credit derivatives

For risk management purposes, the Firm is primarily a purchaser of credit protection. As a purchaser of credit protection, the Firm has risk that the counterparty providing the credit protection will default. As a seller of credit protection, the Firm has risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker in the dealer/client business to meet the needs of customers; and second, in order to mitigate the Firm's own credit risk associated with its overall derivative receivables and traditional commercial credit lending exposures (loans and unfunded commitments).

Of the Firm's $80.5 billion of total derivative receivables MTM at December 31, 2010, $7.7 billion, or 10%, was associated with credit derivatives, before the benefit of liquid securities collateral.

One type of credit derivatives the Firm enters into with counterparties are credit default swaps ("CDS"). The large majority of CDS are subject to collateral arrangements to protect the Firm from counterparty credit risk. The use of collateral to settle against defaulting counterparties generally performed as designed in significantly mitigating the Firm's exposure to these counterparties. In 2010, the frequency and size of defaults related to the underlying debt referenced in credit derivatives was lower than 2009. For further discussion of derivatives, see Note 6 on pages 191–199 of this Annual Report.

The following table presents the Firm's notional amounts of credit derivatives protection purchased and sold as of December 31, 2010 and 2009, distinguishing between dealer/client activity and credit portfolio activity.

	2010					2009				
	Dealer/client		Credit portfolio			Dealer/client		Credit portfolio		
December 31, (in millions)	Protection purchased[b]	Protection sold	Protection purchased[c]	Protection sold	Total	Protection purchased[b]	Protection sold	Protection purchased[c]	Protection sold	Total
Credit default swaps	**$ 2,661,657**	**$ 2,658,825**	**$ 23,523**	**$ 415**	**$ 5,344,420**	$ 2,957,277	$ 2,936,987	$ 48,831	$ 455	$ 5,943,550
Other credit derivatives[a]	**34,250**	**93,776**	**—**	**—**	**128,026**	39,763	10,575	—	—	50,338
Total	**$ 2,695,907**	**$ 2,752,601**	**$ 23,523**	**$ 415**	**$ 5,472,446**	$ 2,997,040	$ 2,947,562	$ 48,831	$ 455	$ 5,993,888

(a) Primarily consists of total return swaps and credit default swap options.
(b) Included $2,662 billion and $2,987 billion at December 31, 2010 and 2009, respectively, of notional exposure where the Firm has sold protection on the identical underlying reference instruments.
(c) Included zero and $19.7 billion at December 31, 2010 and 2009, respectively, that represented the notional amount for structured portfolio protection; the Firm retains the first risk of loss on this portfolio.

Dealer/client business

Within the dealer/client business, the Firm actively manages credit derivatives by buying and selling credit protection, predominantly on corporate debt obligations, according to client demand. For further information, see Note 6 on pages 191–199 of this Annual Report.

At December 31, 2010, the total notional amount of protection purchased and sold decreased by $496.1 billion from year-end 2009. The decrease was primarily due to the impact of industry efforts to reduce offsetting trade activity.

Credit portfolio activities

Management of the Firm's wholesale exposure is accomplished through a number of means including loan syndication and participations, loan sales, securitizations, credit derivatives, use of master netting agreements, and collateral and other risk-reduction techniques. The Firm also manages its wholesale credit exposure by purchasing protection through single-name and portfolio credit derivatives to manage the credit risk associated with loans, lending-related commitments and derivative receivables. Changes in credit risk on the credit derivatives are expected to offset changes in credit risk on the loans, lending-related commitments or derivative receivables. This activity does not reduce the reported level of assets on the balance sheet or the level of reported off–balance sheet commitments, although it does provide the Firm with credit risk protection. The Firm also diversifies its exposures by selling credit protection, which increases exposure to industries or clients where the Firm has little or no client-related exposure; however, this activity is not material to the Firm's overall credit exposure.

Use of single-name and portfolio credit derivatives

	Notional amount of protection purchased and sold	
December 31, (in millions)	**2010**	2009
Credit derivatives used to manage		
Loans and lending-related commitments	**$ 6,698**	$ 36,873
Derivative receivables	**16,825**	11,958
Total protection purchased[a]	**23,523**	48,831
Total protection sold	**415**	455
Credit derivatives hedges notional, net	**$23,108**	$ 48,376

(a) Included zero and $19.7 billion at December 31, 2010 and 2009, respectively, that represented the notional amount for structured portfolio protection; the Firm retains the first risk of loss on this portfolio.

The credit derivatives used by JPMorgan Chase for credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure. The MTM value related to the Firm's credit derivatives used for managing credit exposure, as well as the MTM value related to the CVA (which reflects the credit quality of derivatives counterparty exposure) are included in the gains and losses realized on credit derivatives disclosed in the table below. These results can vary from period to period due to market conditions that affect specific positions in the portfolio.

Year ended December 31, (in millions)	2010	2009	2008
Hedges of lending-related commitments[a]	**$ (279)**	$ (3,258)	$ 2,216
CVA and hedges of CVA[a]	**(403)**	1,920	(2,359)
Net gains/(losses)	**$ (682)**	$ (1,338)	$ (143)

(a) These hedges do not qualify for hedge accounting under U.S. GAAP.

Lending-related commitments

JPMorgan Chase uses lending-related financial instruments, such as commitments and guarantees, to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligation under these guarantees, and should the counterparties subsequently fail to perform according to the terms of these contracts.

Wholesale lending-related commitments were $346.1 billion at December 31, 2010, compared with $347.2 billion at December 31, 2009. The decrease reflected the January 1, 2010, adoption of accounting guidance related to VIEs. Excluding the effect of the accounting guidance, lending-related commitments would have increased by $16.6 billion.

In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's actual credit risk exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these commitments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn upon in an event of a default by an obligor. The loan-equivalent amounts of the Firm's lending-related commitments were $189.9 billion and $179.8 billion as of December 31, 2010 and 2009, respectively.

Country exposure

The Firm's wholesale portfolio includes country risk exposures to both developed and emerging markets. The Firm seeks to diversify its country exposures, including its credit-related lending, trading and investment activities, whether cross-border or locally funded.

Country exposure under the Firm's internal risk management approach is reported based on the country where the assets of the obligor, counterparty or guarantor are located. Exposure amounts, including resale agreements, are adjusted for collateral and for credit enhancements (e.g., guarantees and letters of credit) provided by third parties; outstandings supported by a guarantor located outside the country or backed by collateral held outside the country are assigned to the country of the enhancement provider. In addition, the effect of credit derivative hedges and other short credit or equity trading positions are taken into consideration. Total exposure measures include activity with both government and private-sector entities in a country.

The Firm also reports country exposure for regulatory purposes following FFIEC guidelines, which are different from the Firm's internal risk management approach for measuring country exposure. For additional information on the FFIEC exposures, see Cross-border outstandings on page 314 of this Annual Report.

Several European countries, including Greece, Portugal, Spain, Italy and Ireland, have been subject to credit deterioration due to weaknesses in their economic and fiscal situations. The Firm is closely monitoring its exposures to these five countries. Aggregate net exposures to these five countries as measured under the Firm's internal approach was less than $15.0 billion at December 31, 2010, with no country representing a majority of the exposure. Sovereign exposure in all five countries represented less than half the aggregate net exposure. The Firm currently believes its exposure to these five countries is modest relative to the Firm's overall risk exposures and is manageable given the size and types of exposures to each of the countries and the diversification of the aggregate exposure. The Firm continues to conduct business and support client activity in these countries and, therefore, the Firm's aggregate net exposures may vary over time. In addition, the net exposures may be impacted by changes in market conditions, and the effects of interest rates and credit spreads on market valuations.

As part of its ongoing country risk management process, the Firm monitors exposure to emerging market countries, and utilizes country stress tests to measure and manage the risk of extreme loss associated with a sovereign crisis. There is no common definition of emerging markets, but the Firm generally includes in its definition those countries whose sovereign debt ratings are equivalent to "A+" or lower. The table below presents the Firm's exposure to its top 10 emerging markets countries based on its internal measurement approach. The selection of countries is based solely on the Firm's largest total exposures by country and does not represent its view of any actual or potentially adverse credit conditions.

Top 10 emerging markets country exposure

At December 31, 2010	Cross-border					Total
(in billions)	Lending[a]	Trading[b]	Other[c]	Total	Local[d]	exposure
Brazil	**$ 3.0**	**$ 1.8**	**$ 1.1**	**$ 5.9**	**$ 3.9**	**$ 9.8**
South Korea	**3.0**	**1.4**	**1.5**	**5.9**	**3.1**	**9.0**
India	**4.2**	**2.1**	**1.4**	**7.7**	**1.1**	**8.8**
China	**3.6**	**1.1**	**1.0**	**5.7**	**1.2**	**6.9**
Hong Kong	**2.5**	**1.5**	**1.2**	**5.2**	**—**	**5.2**
Mexico	**2.1**	**2.3**	**0.5**	**4.9**	**—**	**4.9**
Malaysia	**0.6**	**2.0**	**0.3**	**2.9**	**0.4**	**3.3**
Taiwan	**0.3**	**0.6**	**0.4**	**1.3**	**1.9**	**3.2**
Thailand	**0.3**	**1.1**	**0.4**	**1.8**	**0.9**	**2.7**
Russia	**1.2**	**1.0**	**0.3**	**2.5**	**—**	**2.5**

At December 31, 2009	Cross-border					Total
(in billions)	Lending[a]	Trading[b]	Other[c]	Total	Local[d]	exposure
South Korea	$ 2.7	$ 1.7	$ 1.3	$ 5.7	$ 3.3	$ 9.0
India	1.5	2.7	1.1	5.3	0.3	5.6
Brazil	1.8	(0.5)	1.0	2.3	2.2	4.5
China	1.8	0.4	0.8	3.0	—	3.0
Taiwan	0.1	0.8	0.3	1.2	1.8	3.0
Hong Kong	1.1	0.2	1.3	2.6	—	2.6
Mexico	1.2	0.8	0.4	2.4	—	2.4
Chile	0.8	0.6	0.5	1.9	—	1.9
Malaysia	0.1	1.3	0.3	1.7	0.2	1.9
South Africa	0.4	0.8	0.5	1.7	—	1.7

(a) Lending includes loans and accrued interest receivable, interest-earning deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit.

(b) Trading includes: (1) issuer exposure on cross-border debt and equity instruments, held both in trading and investment accounts and adjusted for the impact of issuer hedges, including credit derivatives; and (2) counterparty exposure on derivative and foreign exchange contracts as well as securities financing trades (resale agreements and securities borrowed).

(c) Other represents mainly local exposure funded cross-border, including capital investments in local entities.

(d) Local exposure is defined as exposure to a country denominated in local currency and booked locally. Any exposure not meeting these criteria is defined as cross-border exposure.

CONSUMER CREDIT PORTFOLIO

JPMorgan Chase's consumer portfolio consists primarily of residential mortgages, home equity loans, credit cards, auto loans, student loans and business banking loans**.** The Firm's primary focus is on serving the prime consumer credit market. For further information on the consumer loans, see Note 14 on pages 220–238 of this Annual Report.

A substantial portion of the consumer loans acquired in the Washington Mutual transaction were identified as purchased credit-impaired based on an analysis of high-risk characteristics, including product type, LTV ratios, FICO scores and delinquency status. These PCI loans are accounted for on a pool basis, and the pools are considered to be performing. See pages 132–134 of this Annual Report for further information on the purchased credit-impaired loans.

The credit performance of the consumer portfolio across the entire product spectrum has stabilized but high unemployment and weak overall economic conditions continue to put pressure on the number of loans charged off, and weak housing prices continue to negatively affect the severity of loss recognized on real estate loans that default. Delinquencies and nonaccrual loans remain elevated but have improved. The delinquency trend exhibited improvement in the first half of 2010; early-stage delinquencies (30–89 days delinquent) then flattened across most RFS products early in the second half of the year, before once again showing improvement at the end of the year. Late-stage residential real estate delinquencies (150+ days delinquent) remain elevated. The elevated level of these credit quality metrics is due, in part, to loss-mitigation activities currently being undertaken and elongated foreclosure processing timelines. Losses related to these loans continued to be recognized in accordance with the Firm's standard charge-off practices, but some delinquent loans that would have otherwise been foreclosed upon remain in the mortgage and home equity loan portfolios.

Since mid-2007, the Firm has taken actions to reduce risk exposure to consumer loans by tightening both underwriting and loan qualification standards, as well as eliminating certain products and loan origination channels for residential real estate lending. The tightening of underwriting criteria for auto loans has resulted in the reduction of both extended-term and high LTV financing. In addition, new originations of private student loans are limited to school-certified loans, the majority of which include a qualified co-borrower.

As a further action to reduce risk associated with lending-related commitments, the Firm has reduced or canceled certain lines of credit as permitted by law. For example, the Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property or when there has been a demonstrable decline in the creditworthiness of the borrower. Also, the Firm typically closes credit card lines when the borrower is 60 days or more past due. Finally, certain inactive credit card lines have been closed, and a number of active credit card lines have been reduced.

The following table presents managed consumer credit–related information (including RFS, CS and residential real estate loans reported in the Corporate/Private Equity segment) for the dates indicated. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 14 on pages 220–238 of this Annual Report.

Consumer

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonaccrual loans[k][l]		Net charge-offs		Net charge-off rate[m][n]	
	2010	2009	**2010**	2009	**2010**	2009	**2010**	2009
Consumer, excluding credit card								
Loans, excluding PCI loans and loans held-for-sale								
Home equity – senior lien[a]	**$ 24,376**	$ 27,376	**$ 479**	$ 477	**$ 262**	$ 234	**1.00%**	0.80%
Home equity – junior lien[b]	**64,009**	74,049	**784**	1,188	**3,182**	4,448	**4.63**	5.62
Prime mortgage, including option ARMs[c]	**74,539**	75,428	**4,320**	4,667	**1,627**	1,957	**2.15**	2.51
Subprime mortgage[c]	**11,287**	12,526	**2,210**	3,248	**1,374**	1,648	**10.82**	11.86
Auto[c][d]	**48,367**	46,031	**141**	177	**298**	627	**0.63**	1.44
Business banking	**16,812**	16,974	**832**	826	**707**	842	**4.23**	4.73
Student and other[c]	**15,311**	14,726	**67**	74	**459**	443	**2.85**	2.90
Total loans, excluding PCI loans and loans held-for-sale	**254,701**	267,110	**8,833**	10,657	**7,909**	10,199	**3.00**	3.68
Loans – PCI[e]								
Home equity	**24,459**	26,520	**NA**	NA	**NA**	NA	**NA**	NA
Prime mortgage	**17,322**	19,693	**NA**	NA	**NA**	NA	**NA**	NA
Subprime mortgage	**5,398**	5,993	**NA**	NA	**NA**	NA	**NA**	NA
Option ARMs	**25,584**	29,039	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – PCI	**72,763**	81,245	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – retained	**327,464**	348,355	**8,833**	10,657	**7,909**	10,199	**2.32**	2.82
Loans held-for-sale[f]	**154**	2,142	—	—	—	—	—	—
Total loans – reported	**327,618**	350,497	**8,833**	10,657	**7,909**	10,199	**2.32**	2.82
Lending-related commitments								
Home equity – senior lien[a][g]	**16,060**	19,246						
Home equity – junior lien[b][g]	**28,681**	37,231						
Prime mortgage	**1,266**	1,654						
Subprime mortgage	—	—						
Auto	**5,246**	5,467						
Business banking	**9,702**	9,040						
Student and other	**579**	2,189						
Total lending-related commitments	**61,534**	74,827						
Total consumer exposure, excluding credit card	**389,152**	425,324						
Credit Card								
Loans retained[c][h][i]	**135,524**	78,786	**2**	3	**14,037**	9,634	**9.73**	11.07
Loans held-for-sale	**2,152**	—	—	—	—	—	—	—
Total loans – reported	**137,676**	78,786	**2**	3	**14,037**	9,634	**9.73**	11.07
Securitized[c][j]	**NA**	84,626	**NA**	—	**NA**	6,443	**NA**	7.55
Total loans – managed[c]	**137,676**	163,412	**2**	3	**14,037**	16,077	**9.73**	9.33
Lending-related commitments[g]	**547,227**	569,113						
Total credit card exposure	**684,903**	732,525						
Total consumer credit portfolio – reported	**1,074,055**	1,073,223	**8,835**	10,660	**21,946**	19,833	**4.53**	4.41
Total consumer credit portfolio – managed[c]	**$ 1,074,055**	$ 1,157,849	**$ 8,835**	$10,660	**$ 21,946**	$ 26,276	**4.53%**	4.91%

(a) Represents loans where JPMorgan Chase holds the first security interest on the property.
(b) Represents loans where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.
(c) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon the adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts and certain other consumer loan securitization entities, primarily mortgage-related. As a result, related receivables are now recorded as loans on the Consolidated Balance Sheet. As a result of the consolidation of the securitization trusts, reported and managed basis are equivalent for periods beginning after January 1, 2010. For further discussion, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 64–66 of this Form 10-K.
(d) Excluded operating lease–related assets of $3.7 billion and $2.9 billion at December 31, 2010 and 2009, respectively.
(e) Charge-offs are not recorded on PCI loans until actual losses exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. To date, no charge-offs have been recorded for these loans.
(f) At December 31, 2010 and 2009, loans held-for-sale included prime mortgages of $154 million and $450 million, respectively, and student loans of zero and $1.7 billion, respectively.
(g) The credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card commitments and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law.

(h) Included $1.0 billion of loans at December 31, 2009, held by the WMMT, which were consolidated onto the Firm's Consolidated Balance Sheets at fair value in 2009. Such loans had been fully repaid or charged off as of December 31, 2010. See Note 16 on pages 244–259 this Annual Report.
(i) Included billed finance charges and fees net of an allowance for uncollectible amounts.
(j) Loans securitized are defined as loans that were sold to nonconsolidated securitization trusts and not included in reported loans. For a further discussion of credit card securitizations, see CS on pages 79–81 of this Annual Report.
(k) At December 31, 2010 and 2009, nonaccrual loans excluded: (1) mortgage loans insured by U.S. government agencies of $10.5 billion and $9.0 billion, respectively, that are 90 days past due and accruing at the guaranteed reimbursement rate; and (2) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $625 million and $542 million, respectively. These amounts are excluded as reimbursement of insured amounts is proceeding normally. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance. Under guidance issued by the FFIEC, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.
(l) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.
(m) Average consumer loans held-for-sale and loans at fair value were $1.5 billion and $2.2 billion for the years ended December 31, 2010 and 2009, respectively. These amounts were excluded when calculating net charge-off rates.
(n) As further discussed below, net charge-off rates for 2010 reflect the impact of an aggregate $632 million adjustment related to the Firm's estimate of the net realizable value of the collateral underlying the loans at the charge-off date. Absent this adjustment, net charge-off rates would have been 0.92%, 4.57%, 1.73% and 8.87% for home equity – senior lien; home equity – junior lien; prime mortgage (including option ARMs); and subprime mortgage, respectively. Total consumer, excluding credit card and PCI loans, and total consumer, excluding credit card net charge-off rates would have been 2.76% and 2.14%, respectively, excluding this adjustment.

Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of this guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts and certain other consumer loan securitization entities. The following table summarizes the impact on consumer loans at adoption.

Reported loans
January 1, 2010 (in millions)

Consumer, excluding credit card	
Prime mortgage, including option ARMs	$ 1,858
Subprime mortgage	1,758
Auto	218
Student	1,008
Total consumer, excluding credit card	4,842
Credit card	84,663
Total increase in consumer loans	$ 89,505

Consumer, excluding credit card

Portfolio analysis

The following discussion relates to the specific loan and lending-related categories. Purchased credit-impaired loans are excluded from individual loan product discussions and are addressed separately below. For further information about the Firm's consumer portfolio, related delinquency information and other credit quality indicators, see Note 14 on pages 220–238 of this Annual Report.

It is the Firm's policy to charge down residential real estate loans to net realizable value at no later than 180 days past due. During the fourth quarter of 2010, the Firm recorded an aggregate adjustment of $632 million to increase net charge-offs related to the estimated net realizable value of the collateral underlying delinquent residential home loans. Because these losses were previously recognized in the provision and allowance for loan losses, this adjustment had no impact on the Firm's net income. The impact of this aggregate adjustment on reported net charge-off rates is provided in footnote (n) above.

Home equity: Home equity loans at December 31, 2010, were $88.4 billion, compared with $101.4 billion at December 31, 2009. The decrease in this portfolio primarily reflected loan paydowns and charge-offs. Junior lien net charge-offs declined from the prior year but remained high. Senior lien nonaccrual loans remained relatively flat, while junior lien nonaccrual loans decreased from prior year-end as a result of improvement in early-stage delinquencies. Improvements in delinquencies and charge-offs slowed during the second half of the year and stabilized at these elevated levels. In addition to delinquent accounts, the Firm monitors current junior lien loans where the borrower has a first mortgage loan which is either delinquent or has been modified, as such junior lien loans are considered to be at higher risk of delinquency. The portfolio contained an estimated $4 billion of such junior lien loans. The risk associated with these junior lien loans was considered in establishing the allowance for loan losses at December 31, 2010.

Mortgage: Mortgage loans at December 31, 2010, including prime and subprime mortgages and mortgage loans held-for-sale, were $86.0 billion, compared with $88.4 billion at December 31, 2009. The decrease was primarily due to portfolio runoff, partially offset by the addition of loans to the balance sheet as a result of the adoption of the accounting guidance related to VIEs. Net charge-offs decreased from the prior year but remained elevated.

Prime mortgages at December 31, 2010, including option ARMs, were $74.7 billion, compared with $75.9 billion at December 31, 2009. The decrease in loans was due to paydowns and charge-offs on delinquent loans, partially offset by the addition of loans as a result of the adoption of the accounting guidance related to VIEs. Early-stage delinquencies showed improvement during the year but remained at elevated levels. Late-stage delinquencies increased during the first half of the year, then trended lower for several months before flattening toward the end of 2010. Nonaccrual loans showed improvement, but also remained elevated as a result of ongoing modification activity and foreclosure processing delays. Charge-offs declined year over year but remained high.

Option ARM loans, which are included in the prime mortgage portfolio, were $8.1 billion at December 31, 2010, and represented 11% of the prime mortgage portfolio. These are primarily loans with low LTV ratios and high borrower FICOs. Accordingly, the Firm expects substantially lower losses on this portfolio when compared with the PCI option ARM pool. As of December 31, 2010, approximately 8% of the option ARM borrowers were delinquent, 4% were making interest-only or negatively amortizing payments, and 88% were making amortizing payments. Substantially all borrowers within the portfolio are subject to risk of payment shock due to future payment recast as a limited number of these loans have been modified. The cumulative amount of unpaid interest added to the

unpaid principal balance due to negative amortization of option ARMs was $24 million and $78 million at December 31, 2010 and 2009, respectively. The Firm estimates the following balances of option ARM loans will experience a recast that results in a payment increase: $72 million in 2011, $241 million in 2012 and $784 million in 2013. The Firm did not originate option ARMs and new originations of option ARMs were discontinued by Washington Mutual prior to the date of JPMorgan Chase's acquisition of its banking operations.

Subprime mortgages at December 31, 2010 were $11.3 billion, compared with $12.5 billion at December 31, 2009. The decrease was due to paydowns and charge-offs on delinquent loans, partially offset by the addition of loans as a result of the adoption of the accounting guidance related to VIEs. Late-stage delinquencies remained elevated but continued to improve, albeit at a slower rate during the second half of the year, while early-stage delinquencies stabilized at an elevated level during this period. Nonaccrual loans improved largely as a result of the improvement in late-stage delinquencies. Charge-offs reflected modest improvement.

Auto: Auto loans at December 31, 2010, were $48.4 billion, compared with $46.0 billion at December 31, 2009. Delinquent and nonaccrual loans have decreased. In addition, net charge-offs have declined 52% from the prior year. Provision expense decreased due to favorable loss severity as a result of a strong used-car market nationwide and reduced loss frequency due to the tightening of underwriting criteria in earlier periods. The auto loan portfolio reflected a high concentration of prime quality credits.

Business banking: Business banking loans at December 31, 2010, were $16.8 billion, compared with $17.0 billion at December 31, 2009. The decrease was primarily a result of run-off of the Washington Mutual portfolio and charge-offs on delinquent loans. These loans primarily include loans which are highly collateralized, often with personal loan guarantees. Nonaccrual loans continued to remain elevated. After having increased during the first half of 2010, nonaccrual loans as of December 31, 2010, declined to year-end 2009 levels.

Student and other: Student and other loans at December 31, 2010, including loans held-for-sale, were $15.3 billion, compared with $16.4 billion at December 31, 2009. Other loans primarily include other secured and unsecured consumer loans. Delinquencies reflected some stabilization in the second half of 2010, but remained elevated. Charge-offs during 2010 remained relatively flat with 2009 levels reflecting the impact of elevated unemployment levels.

Purchased credit-impaired loans: PCI loans at December 31, 2010, were $72.8 billion compared with $81.2 billion at December 31, 2009. This portfolio represents loans acquired in the Washington Mutual transaction that were recorded at fair value at the time of acquisition. That fair value included an estimate of credit losses expected to be realized over the remaining lives of the loans, and therefore no allowance for loan losses was recorded for these loans as of the acquisition date.

The Firm regularly updates the amount of principal and interest cash flows expected to be collected for these loans. Probable decreases in expected loan principal cash flows would trigger the recognition of impairment through the provision for loan losses. Probable and significant increases in expected cash flows (e.g., decreased principal credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses, with any remaining increase in the expected cash flows recognized prospectively in interest income over the remaining estimated lives of the underlying loans.

During 2010, management concluded as part of the Firm's regular assessment of the PCI pools that it was probable that higher expected principal credit losses would result in a decrease in expected cash flows. Accordingly, the Firm recognized an aggregate $3.4 billion impairment related to the home equity, prime mortgage, option ARM and subprime mortgage PCI portfolios. As a result of this impairment, the Firm's allowance for loan losses for the home equity, prime mortgage, option ARM and subprime mortgage PCI portfolios was $1.6 billion, $1.8 billion, $1.5 billion and $98 million, respectively, at December 31, 2010, compared with an allowance for loan losses of $1.1 billion and $491 million for the prime mortgage and option ARM PCI portfolios, respectively, at December 31, 2009.

Approximately 39% of the option ARM borrowers were delinquent, 5% were making interest-only or negatively amortizing payments, and 56% were making amortizing payments. Approximately 50% of current borrowers are subject to risk of payment shock due to future payment recast; substantially all of the remaining loans have been modified to a fixed rate fully amortizing loan. The cumulative amount of unpaid interest added to the unpaid principal balance of the option ARM PCI pool was $1.4 billion and $1.9 billion at December 31, 2010 and 2009, respectively. The Firm estimates the following balances of option ARM PCI loans will experience a recast that results in a payment increase: $1.2 billion in 2011, $2.7 billion in 2012 and $508 million in 2013.

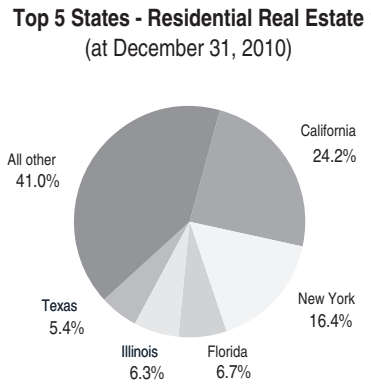
The following table provides a summary of lifetime loss estimates included in both the nonaccretable difference and the allowance for loan losses. Principal charge-offs will not be recorded on these pools until the nonaccretable difference has been fully depleted.

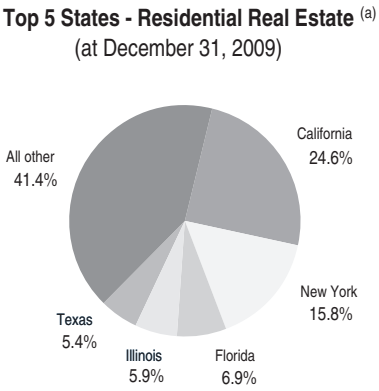
	Lifetime loss estimates[a]		LTD liquidation losses[b]	
December 31, (in millions)	**2010**	2009	**2010**	2009
Option ARMs	**$ 11,588**	$ 10,650	**$ 4,860**	$ 1,744
Home equity	**14,698**	13,138	**8,810**	6,060
Prime mortgage	**4,870**	4,240	**1,495**	794
Subprime mortgage	**3,732**	3,842	**1,250**	796
Total	**$ 34,888**	$ 31,870	**$ 16,415**	$ 9,394

(a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses only. The remaining nonaccretable difference for principal losses only was $14.1 billion and $21.1 billion at December 31, 2010 and 2009, respectively. All probable increases in principal losses and foregone interest subsequent to the purchase date are reflected in the allowance for loan losses.

(b) Life-to-date ("LTD") liquidation losses represent realization of loss upon loan resolution.

Geographic composition and current estimated LTVs of residential real estate loans





(a) Represents residential real estate loans retained, excluding purchased credit-impaired loans acquired in the Washington Mutual transaction and loans insured by U.S. government agencies.

The consumer credit portfolio is geographically diverse. The greatest concentration of residential real estate loans is in California. Excluding mortgage loans insured by U.S. government agencies and PCI loans, California-based loans retained represented 24% of total residential real estate loans retained at December 31, 2010, compared with 25% at December 31, 2009. Of the total residential real estate loan portfolio retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, $86.4 billion, or 54%, were concentrated in California, New York, Arizona, Florida and Michigan at December 31, 2010, compared with $95.9 billion, or 54%, at December 31, 2009.

The current estimated average LTV ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 83% at December 31, 2010, compared with 81% at December 31, 2009. Excluding mortgage loans insured by U.S. government agencies and PCI loans, 24% of the retained portfolio had a current estimated LTV ratio greater than 100%, and 10% of the retained portfolio had a current estimated LTV ratio greater than 125% at December 31, 2010, compared with 22% with a current estimated LTV ratio greater than 100%, and 9% with a current estimated LTV ratio greater than 125%, at December 31, 2009. The decline in home prices had a significant impact on the collateral value underlying the Firm's residential real estate loan portfolio. In general, the delinquency rate for loans with high LTV ratios is greater than the delinquency rate for loans in which the borrower has equity in the collateral. While a large portion of the loans with current estimated LTV ratios greater than 100% continue to pay and are current, the continued willingness and ability of these borrowers to pay remains uncertain.

The following table presents the current estimated LTV ratio, as well as the ratio of the carrying value of the underlying loans to the current estimated collateral value, for PCI loans. Because such loans were initially measured at fair value, the ratio of the carrying value to the current estimated collateral value will be lower than the current estimated LTV ratio, which is based on the unpaid principal balance. The estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting ratios are necessarily imprecise and should therefore be viewed as estimates.

LTV ratios and ratios of carrying values to current estimated collateral values – PCI loans

December 31, 2010 (in millions, except ratios)	Unpaid principal balance[a]	Current estimated LTV ratio[b]	Carrying value[d]	Ratio of carrying value to current estimated collateral value[e]
Home equity	**$ 28,312**	**117%[c]**	**$ 24,459**	**95%**
Prime mortgage	**18,928**	**109**	**17,322**	**90**
Subprime mortgage	**8,042**	**113**	**5,398**	**74**
Option ARMs	**30,791**	**111**	**25,584**	**87**

December 31, 2009 (in millions, except ratios)	Unpaid principal balance[a]	Current estimated LTV ratio[b]	Carrying value[d]	Ratio of carrying value to current estimated collateral value[e]
Home equity	$ 32,958	113%[c]	$ 26,520	91%
Prime mortgage	21,972	103	19,693	87
Subprime mortgage	9,021	107	5,993	71
Option ARMs	37,379	111	29,039	85

(a) Represents the contractual amount of principal owed at December 31, 2010 and 2009.

(b) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated based on home valuation models utilizing nationally recognized home price index valuation estimates. Prior period amounts have been revised to conform to the current period presentation.
(c) Represents current estimated combined LTV, which considers all available lien positions related to the property. All other products are presented without consideration of subordinate liens on the property.
(d) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.
(e) At December 31, 2010, and 2009, the ratios of carrying value to current estimated collateral value are net of the allowance for loan losses of $1.6 billion and zero for home equity, respectively, $1.8 billion and $1.1 billion for prime mortgage, respectively, $98 million and zero for subprime mortgage, respectively, and $1.5 billion and $491 million for option ARMs, respectively.

PCI loans in the states of California and Florida represented 53% and 10%, respectively, of total PCI loans at December 31, 2010, compared with 54% and 11%, respectively, at December 31, 2009. The current estimated average LTV ratios were 118% and 135% for California and Florida loans, respectively, at December 31, 2010, compared with 114% and 131%, respectively, at December 31, 2009. Continued pressure on housing prices in California and Florida have contributed negatively to both the current estimated average LTV ratio and the ratio of carrying value to current collateral value for loans in the PCI portfolio. For the PCI portfolio, 63% had a current estimated LTV ratio greater than 100%, and 31% of the PCI portfolio had a current estimated LTV ratio greater than 125% at December 31, 2010; this compared with 59% of the PCI portfolio with a current estimated LTV ratio greater than 100%, and 28% with a current estimated LTV ratio greater than 125%, at December 31, 2009.

The carrying value of PCI loans is below the current estimated collateral value of the loans and, accordingly, the ultimate performance of this portfolio is highly dependent on borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity, as well as on the cost of alternative housing. For further information on the geographic composition and current estimated LTVs of residential real estate – non PCI and PCI loans, see Note 14 on pages 220–238 of this Annual Report.

Loan modification activities

For additional information about consumer loan modification activities, including consumer loan modifications accounted for as troubled debt restructurings, see Note 14 on pages 220–238 of this Annual Report.

Residential real estate loans: For both the Firm's on-balance sheet loans and loans serviced for others, more than 1,038,000 mortgage modifications have been offered to borrowers and approximately 318,000 have been approved since the beginning of 2009. Of these, approximately 285,000 have achieved permanent modification as of December 31, 2010. Of the remaining 720,000 modifications, 34% are in a trial period or still being reviewed for a modification, while 66% have dropped out of the modification program or otherwise were not eligible for final modification.

The Firm is participating in the U.S. Treasury's MHA programs and is continuing to expand its other loss-mitigation efforts for financially distressed borrowers who do not qualify for the U.S. Treasury's programs. The MHA programs include the Home Affordable Modification Program ("HAMP") and the Second Lien Modification Program ("2MP"); these programs mandate standard modification terms across the industry and provide incentives to borrowers, servicers and investors who participate. The Firm completed its first permanent modifications under HAMP in September 2009. Under 2MP, which the Firm implemented in May 2010, homeowners are offered a way to modify their second mortgage to make it more affordable when their first mortgage has been modified under HAMP.

The Firm's other loss-mitigation programs for troubled borrowers who do not qualify for HAMP include the traditional modification programs offered by the GSE's and Ginnie Mae, as well as the Firm's proprietary modification programs, which include similar concessions to those offered under HAMP but with expanded eligibility criteria. In addition, the Firm has offered modification programs targeted specifically to borrowers with higher-risk mortgage products.

MHA, as well as the Firm's other loss-mitigation programs, generally provide various concessions to financially troubled borrowers, including, but not limited to, interest rate reductions, term or payment extensions, and deferral of principal payments that would have otherwise been required under the terms of the original agreement. For the 54,500 on–balance sheet loans modified under HAMP and the Firm's other loss-mitigation programs since July 1, 2009, 55% of permanent loan modifications have included interest rate reductions, 49% have included term or payment extensions, 9% have included principal deferment and 22% have included principal forgiveness. Principal forgiveness has been limited to a specific modification program for option ARMs. The sum of the percentages of the types of loan modifications exceeds 100% because, in some cases, the modification of an individual loan includes more than one type of concession.

Generally, borrowers must make at least three payments under the revised contractual terms during a trial modification and be successfully re-underwritten with income verification before a mortgage or home equity loan can be permanently modified. When the Firm modifies home equity lines of credit, future lending commitments related to the modified loans are canceled as part of the terms of the modification.

The ultimate success of these modification programs and their impact on reducing credit losses remains uncertain given the short period of time since modification. The primary indicator used by management to monitor the success of these programs is the rate at which the modified loans redefault. Modification redefault rates are affected by a number of factors, including the type of loan modified, the borrower's overall ability and willingness to repay the modified loan and other macroeconomic factors. Reduction in payment size for a borrower has shown to be the most significant driver in improving redefault rates. Modifications completed after July 1, 2009, whether under HAMP or under the Firm's other modification programs, differ from modifications completed under prior programs in that they are generally fully underwritten after a

successful trial payment period of at least three months. Approximately 87% of on–balance sheet modifications completed since July 1, 2009, were completed in 2010, with approximately 10% completed as recently as the fourth quarter of 2010. Performance metrics to date for modifications seasoned more than six months show weighted average redefault rates of 25% and 28% for HAMP and the Firm's other modification programs, respectively. While these rates compare favorably to equivalent metrics for modifications completed under prior programs, ultimate redefault rates will remain uncertain until modified loans have seasoned.

The following table presents information as of December 31, 2010 and 2009, relating to restructured on–balance sheet residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. Modifications of PCI loans continue to be accounted for and reported as PCI loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of estimated future cash flows. Modifications of consumer loans other than PCI loans are generally accounted for and reported as troubled debt restructurings ("TDRs").

Restructured residential real estate loans

	2010		2009	
December 31, (in millions)	On–balance sheet loans	Nonaccrual on–balance sheet loans[d]	On–balance sheet loans	Nonaccrual on–balance sheet loans[d]
Restructured residential real estate loans – excluding PCI loans[a][b]				
Home equity – senior lien	**$ 226**	**$ 38**	$ 168	$ 30
Home equity – junior lien	**283**	**63**	222	43
Prime mortgage, including option ARMs	**2,084**	**534**	642	249
Subprime mortgage	**2,751**	**632**	1,998	598
Total restructured residential real estate loans – excluding PCI loans	**$ 5,344**	**$ 1,267**	$ 3,030	$ 920
Restructured PCI loans[c]				
Home equity	**$ 492**	**NA**	$ 453	NA
Prime mortgage	**3,018**	**NA**	1,526	NA
Subprime mortgage	**3,329**	**NA**	1,954	NA
Option ARMs	**9,396**	**NA**	2,972	NA
Total restructured PCI loans	**$ 16,235**	**NA**	$ 6,905	NA

(a) Amounts represent the carrying value of restructured residential real estate loans.
(b) At December 31, 2010 and 2009, $3.0 billion and $296 million, respectively, of loans modified subsequent to repurchase from Ginnie Mae were excluded from loans accounted for as TDRs. When such loans perform subsequent to modification they are generally sold back into Ginnie Mae loan pools. Modified loans that do not reperform become subject to foreclosure. Substantially all amounts due under the terms of these loans continue to be insured and, where applicable, reimbursement of insured amounts is proceeding normally.
(c) Amounts represent the unpaid principal balance of restructured PCI loans.
(d) Nonaccrual loans modified in a TDR may be returned to accrual status when repayment is reasonably assured and the borrower has made a minimum of six payments under the new terms. As of December 31, 2010 and 2009, nonaccrual loans of $580 million and $256 million, respectively, are TDRs for which the borrowers have not yet made six payments under their modified terms.

Foreclosure prevention: Foreclosure is a last resort and the Firm makes significant efforts to help borrowers stay in their homes. Since the first quarter of 2009, the Firm has prevented two foreclosures (through loan modification, short sales, and other foreclosure prevention means) for every foreclosure completed.

The Firm has a well-defined foreclosure prevention process when a borrower fails to pay on his or her loan. Customer contacts are attempted multiple times in various ways to pursue options other than foreclosure (including through loan modification, short sales, and other foreclosure prevention means). In addition, if the Firm is unable to contact a customer, various reviews are completed of borrower's facts and circumstances before a foreclosure sale is completed. By the time of a foreclosure sale, borrowers have not made a payment on average for approximately 14 months.

Foreclosure process issues

The foreclosure process is governed by laws and regulations established on a state-by-state basis. In some states, the foreclosure process involves a judicial process requiring filing documents with a court. In other states, the process is mostly non-judicial, involving various processes, some of which require filing documents with governmental agencies. During the third quarter of 2010, the Firm became aware that certain documents executed by Firm personnel in connection with the foreclosure process may not have complied with all applicable procedural requirements. For example, in certain instances, the underlying loan file review and verification of information for inclusion in an affidavit was performed by Firm personnel other than the affiant, or the affidavit may not have been properly notarized. The Firm instructed its outside foreclosure counsel to temporarily suspend foreclosures, foreclosure sales and evictions in 43 states so that it could review its processes. These matters are the subject of investigation by federal and state officials. For further discussion, see "Mortgage Foreclosure Investigations and Litigation" in Note 32 on pages 282–289 of this Annual Report.

As a result of these foreclosure process issues, the Firm has undertaken remedial actions to ensure that it satisfies all procedural requirements relating to mortgage foreclosures. These actions include:

- A complete review of the foreclosure document execution policies and procedures;
- The creation of model affidavits that will comply with all local law requirements and be used in every case;
- Implementation of enhanced procedures designed to ensure that employees who execute affidavits personally verify their contents and that the affidavits are executed only in the physical presence of a licensed notary;
- Extensive training for all personnel who will have responsibility for document execution going forward and certification of those personnel by outside counsel;
- Implementation of a rigorous quality control double-check review of affidavits completed by the Firm's employees; and
- Review and verification of our revised procedures by outside experts.

As of January 2011, the Firm has resumed initiation of new foreclosure proceedings in nearly all states in which it had previously suspended such proceedings.

The following table presents information as of December 31, 2010 and 2009, about the Firm's nonperforming consumer assets, excluding credit card.

Nonperforming assets(a)

December 31, (in millions)	2010	2009
Nonaccrual loans(b)		
Home equity – senior lien	**$ 479**	$ 477
Home equity – junior lien	**784**	1,188
Prime mortgage, including option ARMs	**4,320**	4,667
Subprime mortgage	**2,210**	3,248
Auto	**141**	177
Business banking	**832**	826
Student and other	**67**	74
Total nonaccrual loans	**8,833**	10,657
Assets acquired in loan satisfactions		
Real estate owned	**1,294**	1,156
Other	**67**	99
Total assets acquired in loan satisfactions	**1,361**	1,255
Total nonperforming assets	**$10,194**	$ 11,912

(a) At December 31, 2010 and 2009, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $10.5 billion and $9.0 billion, respectively, that are 90 days past due and accruing at the guaranteed reimbursement rate; (2) real estate owned insured by U.S. government agencies of $1.9 billion and $579 million, respectively; and (3) student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $625 million and $542 million, respectively. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

(b) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

Nonaccrual loans: Total consumer nonaccrual loans, excluding credit card, were $8.8 billion, compared with $10.7 billion at December 31, 2009. Nonaccrual loans have stabilized, but remained at elevated levels. The increase in loan modification activities is expected to continue to result in elevated levels of nonaccrual loans in the residential real estate portfolios as a result of both redefault of modified loans as well as the Firm's policy that modified loans remain in nonaccrual status until repayment is reasonably assured and the borrower has made a minimum of six payments under the new terms. Nonaccrual loans in the residential real estate portfolio totaled $7.8 billion at December 31, 2010, of which 71% were greater than 150 days past due; this compared with nonaccrual residential real estate loans of $9.6 billion at December 31, 2009, of which 64% were greater than 150 days past due. Modified residential real estate loans of $1.3 billion and $920 million at December 31, 2010 and 2009, respectively, were classified as nonaccrual loans. Of these modified residential real estate loans, $580 million and $256 million had yet to make six payments under their modified terms at December 31, 2010 and 2009, respectively, with the remaining nonaccrual modified loans having redefaulted. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 46% and 36% to estimated collateral value at December 31, 2010 and 2009, respectively.

Real estate owned ("REO"): As part of the residential real estate foreclosure process, loans are written down to the fair value of the underlying real estate asset, less costs to sell, at acquisition. Typically, any further gains or losses on REO assets are recorded as part of other income. In those instances where the Firm gains ownership and possession of individual properties at the completion of the foreclosure process, these REO assets are managed for prompt sale and disposition at the best possible economic value. Operating expense, such as real estate taxes and maintenance, are charged to other expense. REO assets, excluding those insured by U.S. government agencies, increased by $138 million from December 31, 2009 to $1.3 billion, primarily related to foreclosures of non-PCI loans. It is anticipated that REO assets will continue to increase over the next several quarters, as loans moving through the foreclosure process are expected to increase.

Credit Card

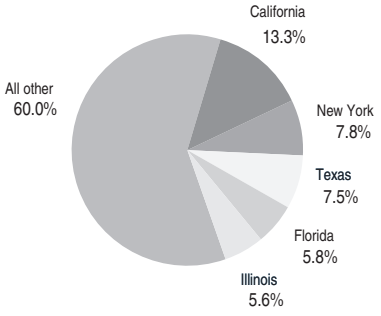
Credit card receivables (which include receivables in Firm-sponsored credit card securitization trusts that were not reported on the Consolidated Balance Sheets prior to January 1, 2010) were $137.7 billion at December 31, 2010, a decrease of $25.7 billion from December 31, 2009, due to the decline in lower-yielding promotional balances and runoff of the Washington Mutual portfolio.

The 30-day delinquency rate decreased to 4.07% at December 31, 2010, from 6.28% at December 31, 2009, while the net charge-off rate increased to 9.73% for 2010, from 9.33% in 2009 due primarily to the decline in outstanding loans. The delinquency trend is showing improvement, especially within early stage delinquencies. Charge-offs were elevated in 2010 but showed improvement in the second half of the year as a result of lower delinquent loans and higher repayment rates. The credit card portfolio continues to reflect a well-seasoned, largely rewards-based portfolio that has good U.S. geographic diversification. The greatest geographic concentration of credit card loans is in California which represented 13% of total loans at December 2010, compared with 14% at December 2009. Loan concentration for the top five states of California, New York, Texas, Florida and Illinois consisted of $55.1 billion in receivables, or 40% of the portfolio, at December 2010, compared with $65.9 billion, or 40%, at December 2009.

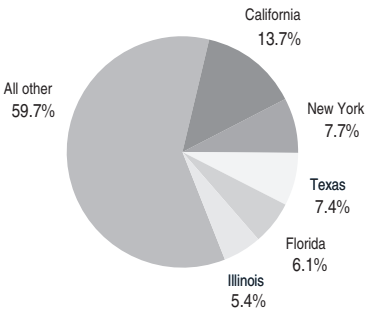
Credit card receivables, excluding the Washington Mutual portfolio, were $123.9 billion at December 31, 2010, compared with $143.8 billion at December 31, 2009. The 30-day delinquency rate, excluding the Washington Mutual portfolio, was 3.66% at December 31, 2010, down from 5.52% at December 31, 2009, while the net charge-off rate increased to 8.72% in 2010 from 8.45% in 2009 due largely to the decrease in outstanding loans.

Credit card receivables in the Washington Mutual portfolio were $13.7 billion at December 31, 2010, compared with $19.7 billion at December 31, 2009. The Washington Mutual portfolio's 30-day delinquency rate was 7.74% at December 31, 2010, down from 12.72% at December 31, 2009; the 2009 delinquency rate excludes the impact of the consolidation of the Washington Mutual Master Trust ("WMMT") in the second quarter of 2009. The net charge-off rate in 2010 was 18.73%, compared with 18.79% in 2009, excluding the impact of the purchase accounting adjustments related to the consolidation of the WMMT in the second quarter of 2009.

Top 5 States Credit Card - Managed
(at December 31, 2010)



Top 5 States Credit Card - Managed
(at December 31, 2009)



Modifications of credit card loans

For additional information about credit card loan modification activities, including credit card loan modifications accounted for as troubled debt restructurings, see Note 14 on pages 220–238 of this Annual Report.

JPMorgan Chase may offer one of a number of loan modification programs to borrowers who are experiencing financial difficulty. The Firm has short-term programs for borrowers who may be in need of temporary relief, and long-term programs for borrowers who are experiencing a more fundamental level of financial difficulties. Most of the Firm's modified credit card loans have been modified under the Firm's long-term programs. Modifications under the Firm's long-term programs involve placing the customer on a fixed payment plan not exceeding 60 months. Modifications under all of these programs typically include reducing the interest rate on the card. Also, in all cases, the Firm cancels the customer's available line of credit on the credit card. Substantially all of these modifications, both short-term and long-term, are considered to be TDRs. Based on the Firm's historical experience, the Firm expects that a significant portion of the borrowers will not ultimately comply with the modified payment terms.

If the cardholder does not comply with the modified payment terms, then the credit card loan agreement generally reverts back to its pre-modification payment rate terms. Assuming that those borrowers do not begin to perform in accordance with those payment terms, the loans continue to age and will ultimately be charged off in accordance with the Firm's standard charge-off policy. In addition, if a borrower successfully completes a short-term modification program, then the loan reverts back to its pre-modification payment terms. However, in most cases the Firm does not reinstate the borrower's line of credit.

At December 31, 2010 and 2009, the Firm had $10.0 billion and $6.2 billion, respectively, of on–balance sheet credit card loans outstanding that have been modified in troubled debt restructurings. These balances include both credit card loans with modified payment terms and credit card loans that have reverted back to their pre-modification payment terms. The increase in modified credit card loans outstanding from December 31, 2009, to December 31, 2010, is primarily attributable to previously-modified loans held in Firm-sponsored credit card securitization trusts being consolidated as a result of adopting the new accounting guidance regarding consolidation of VIEs.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status. However, the Firm separately establishes an allowance for the estimated uncollectible portion of billed and accrued interest and fee income on credit card loans.

COMMUNITY REINVESTMENT ACT EXPOSURE

The Community Reinvestment Act ("CRA") encourages banks to meet the credit needs of borrowers in all segments of their communities, including neighborhoods with low or moderate incomes. JPMorgan Chase is a national leader in community development by providing loans, investments and community development services in communities across the United States.

At December 31, 2010 and 2009, the Firm's CRA loan portfolio was approximately $16 billion and $18 billion, respectively. Of the CRA portfolio 65% were residential mortgage loans and 15% were business banking loans at both December 31, 2010 and 2009, respectively; 9% and 8%, respectively, were commercial real estate loans; and 11% and 12%, respectively, were other loans. The CRA nonaccrual loans were 6% of the Firm's nonaccrual loans at both December 31, 2010 and 2009. Net charge-offs in the CRA portfolio were 3% of the Firm's net charge-offs in both 2010 and 2009.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers the wholesale (risk-rated), and consumer (primarily scored) portfolios. The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also determines an allowance for wholesale and consumer (excluding credit card) lending-related commitments using a methodology similar to that used for the wholesale loans. During 2010, the Firm did not make any significant changes to the methodologies or policies used to establish its allowance for credit losses.

For a further discussion of the components of the allowance for credit losses, see Critical Accounting Estimates Used by the Firm on pages 149–154 and Note 15 on pages 239–243 of this Annual Report.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2010, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses inherent in the portfolio, including those not yet identifiable).

The allowance for credit losses was $33.0 billion at December 31, 2010, an increase of $442 million from $32.5 billion at December 31, 2009. The increase was primarily due to the Firm's adoption of accounting guidance related to VIEs. As a result of the consolidation of certain securitization entities, the Firm established an allowance for loan losses of $7.5 billion at January 1, 2010, primarily related to the receivables that had been held in credit card securitization trusts. Excluding the $7.5 billion transition adjustment at adoption, the allowance decreased by $6.8 billion in the consumer and wholesale portfolios, generally reflecting an improvement in credit quality.

The consumer (excluding credit card) allowance for loan losses increased $1.6 billion largely due to a $3.4 billion increase related to further estimated deterioration in the Washington Mutual PCI pools, partially offset by a $1.8 billion reduction predominantly in non-credit-impaired residential real estate reserves reflecting improved loss outlook as a result of the resumption of favorable delinquency trends at the end of 2010, as well as a $632 million adjustment related to the estimated net realizable value of the collateral underlying delinquent residential home loans. For additional information, refer to page 131 of this Annual Report.

The credit card allowance for loan losses increased $1.4 billion from December 31, 2009, largely due to the impact of the adoption of the accounting guidance related to VIEs. Excluding the effect of the transition adjustment at adoption, the credit card allowance decreased by $6.0 billion from December 31, 2009, reflecting lower estimated losses primarily related to improved delinquency trends as well as lower levels of outstandings.

The wholesale allowance for loan losses decreased by $2.4 billion from December 31, 2009, primarily due to repayments and loan sales, as well as continued improvement in the credit quality of the commercial and industrial loan portfolio.

The allowance for lending-related commitments for both wholesale and consumer (excluding credit card), which is reported in other liabilities, was $717 million and $939 million at December 31, 2010 and 2009, respectively. The decrease primarily reflected the continued improvement in the credit quality of the wholesale commercial and industrial loan portfolio.

The credit ratios in the table below are based on retained loan balances, which exclude loans held-for-sale and loans accounted for at fair value.

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2010 Wholesale	2010 Consumer, excluding credit card	2010 Credit Card	2010 Total	2009 Wholesale	2009 Consumer, excluding credit card	2009 Credit Card	2009 Total
Allowance for loan losses								
Beginning balance at January 1,	**$ 7,145**	**$ 14,785**	**$ 9,672**	**$ 31,602**	$ 6,545	$ 8,927	$ 7,692	$ 23,164
Cumulative effect of change in accounting principles[a]	**14**	**127**	**7,353**	**7,494**	—	—	—	—
Gross charge-offs[a]	**1,989**	**8,383**	**15,410**	**25,782**	3,226	10,421	10,371	24,018
Gross (recoveries)[a]	**(262)**	**(474)**	**(1,373)**	**(2,109)**	(94)	(222)	(737)	(1,053)
Net charge-offs[a]	**1,727**	**7,909**	**14,037**	**23,673**	3,132	10,199	9,634	22,965
Provision for loan losses[a]	**(673)**	**9,458**	**8,037**	**16,822**	3,684	16,032	12,019	31,735
Other[b]	**2**	**10**	**9**	**21**	48	25	(405)	(332)
Ending balance	**$ 4,761**	**$ 16,471**	**$ 11,034**	**$ 32,266**	$ 7,145	$ 14,785	$ 9,672	$ 31,602
Impairment methodology								
Asset-specific[c][d][e]	**$ 1,574**	**$ 1,075**	**$ 4,069**	**$ 6,718**	$ 2,046	$ 896	$ 3,117	$ 6,059
Formula-based[a][e]	**3,187**	**10,455**	**6,965**	**20,607**	5,099	12,308	6,555	23,962
PCI	**—**	**4,941**	**—**	**4,941**	—	1,581	—	1,581
Total allowance for loan losses	**$ 4,761**	**$ 16,471**	**$ 11,034**	**$ 32,266**	$ 7,145	$ 14,785	$ 9,672	$ 31,602
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 927**	**$ 12**	**$ —**	**$ 939**	$ 634	$ 25	$ —	$ 659
Cumulative effect of change in accounting principles[a]	**(18)**	**—**	**—**	**(18)**	—	—	—	—
Provision for lending-related commitments[a]	**(177)**	**(6)**	**—**	**(183)**	290	(10)	—	280
Other	**(21)**	**—**	**—**	**(21)**	3	(3)	—	—
Ending balance	**$ 711**	**$ 6**	**$ —**	**$ 717**	$ 927	$ 12	$ —	$ 939
Impairment methodology								
Asset-specific	**$ 180**	**$ —**	**$ —**	**$ 180**	$ 297	$ —	$ —	$ 297
Formula-based	**531**	**6**	**—**	**537**	630	12	—	642
Total allowance for lending-related commitments	**$ 711**	**$ 6**	**$ —**	**$ 717**	$ 927	$ 12	$ —	$ 939
Total allowance for credit losses	**$ 5,472**	**$ 16,477**	**$ 11,034**	**$ 32,983**	$ 8,072	$ 14,797	$ 9,672	$ 32,541
Memo:								
Retained loans, end of period	**$ 222,510**	**$ 327,464**	**$ 135,524**	**$ 685,498**	$ 200,077	$ 348,355	$ 78,786	$ 627,218
Retained loans, average	**213,609**	**340,334**	**144,219**	**698,162**	223,047	362,216	87,029	672,292
Credit ratios								
Allowance for loan losses to retained loans	**2.14%**	**5.03%**	**8.14%**	**4.71%**	3.57%	4.24%	12.28%	5.04%
Allowance for loan losses to retained nonaccrual loans[f]	**86**	**186**	**NM**	**225**	109	139	NM	184
Allowance for loan losses to retained nonaccrual loans excluding credit card	**86**	**186**	**NM**	**148**	109	139	NM	127
Net charge-off rates[g]	**0.81**	**2.32**	**9.73**	**3.39**	1.40	2.82	11.07	3.42
Credit ratios excluding home lending PCI loans and loans held by the WMMT								
Allowance for loan losses to retained loans[h]	**2.14**	**4.53**	**8.14**	**4.46**	3.57	4.94	12.43	5.51
Allowance for loan losses to retained nonaccrual loans[f][h]	**86**	**131**	**NM**	**190**	109	124	NM	174
Allowance for loan losses to retained nonaccrual loans excluding credit card[f][h]	**86**	**131**	**NM**	**114**	109	124	NM	118

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon the adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, its Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related. As a result $7.4 billion, $14 million and $127 million, respectively, of allowance for loan losses were recorded on-balance sheet associated with the consolidation of these entities. For further discussion, see Note 16 on pages 244–259 of this Annual Report.

(b) Other predominantly includes a reclassification in 2009 related to the issuance and retention of securities from the Chase Issuance Trust.

(c) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(d) The asset-specific consumer (excluding credit card) allowance for loan losses includes TDR reserves of $985 million and $754 million at December 31, 2010 and 2009, respectively. Prior-period amounts have been reclassified from formula-based to conform with the current period presentation.

(e) At December 31, 2010, the Firm's allowance for loan losses on credit card loans for which the Firm has modified the terms of the loans for borrowers who are experiencing financial difficulty was reclassified to the asset-specific allowance. Prior periods have been revised to reflect the current presentation.

(f) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance. Under the guidance issued by the FFIEC, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.
(g) Charge-offs are not recorded on PCI loans until actual losses exceed estimated losses recorded as purchase accounting adjustments at the time of acquisition.
(h) Excludes the impact of PCI loans acquired as part of the Washington Mutual transaction. The allowance for loan losses on PCI loans was $4.9 billion and $1.6 billion as of December 31, 2010 and 2009, respectively.

The following table presents a credit ratio excluding: home lending PCI loans acquired in the Washington Mutual transaction; and credit card loans held by the Washington Mutual Master Trust which were consolidated onto the Firm's balance sheet at fair value during the second quarter of 2009. The PCI loans were accounted for at fair value on the acquisition date, which incorporated management's estimate, as of that date, of credit losses over the remaining life of the portfolio. Accordingly, no allowance for loan losses was recorded for these loans as of the acquisition date. Subsequent evaluations of estimated credit deterioration in this portfolio resulted in the recording of an allowance for loan losses of $4.9 billion and $1.6 billion at December 31, 2010 and 2009, respectively. For more information on home lending PCI loans, see pages 132–134 of this Annual Report. For more information on the consolidation of assets from the Washington Mutual Master Trust, see Note 16 on pages 244–259 of this Annual Report.

The calculation of the allowance for loan losses to total retained loans, excluding PCI loans and loans held by the WMMT, is presented below.

December 31, (in millions, except ratios)	2010	2009
Allowance for loan losses	**$ 32,266**	$ 31,602
Less: Allowance for PCI loans	**4,941**	1,581
Adjusted allowance for loan losses	**$ 27,325**	$ 30,021
Total loans retained	**$ 685,498**	$ 627,218
Less: Firmwide PCI loans	**72,807**	81,380
Loans held by the WMMT	**—**	1,002
Adjusted loans	**$ 612,691**	$ 544,836
Allowance for loan losses to ending loans excluding PCI loans and loans held by the WMMT	**4.46%**	5.51%

Provision for credit losses

The provision for credit losses was $16.6 billion for the year ended December 31, 2010, down by $21.8 billion, or 57%, from the prior-year provision. The total consumer provision (excluding credit card) for credit losses was $9.5 billion, reflecting an addition to the allowance for loan losses of $1.6 billion (primarily related to the increase in allowance for the PCI portfolio of $3.4 billion), partially offset by a $1.8 billion reduction in allowance predominantly for non-credit-impaired residential real estate loans. The prior year provision was $16.0 billion reflecting additions of $5.8 billion predominantly for the home equity and mortgage portfolios, including $1.6 billion for the PCI portfolio. The total credit card provision for credit losses was $8.0 billion, primarily reflecting a reduction in the allowance for credit losses of $6.0 billion as a result of improved delinquency trends and reduced net charge-offs. The prior year managed provision was $18.5 billion reflecting additions to the allowance of $2.4 billion. The wholesale provision for credit losses was a benefit of $850 million, compared with expense of $4.0 billion, reflecting a reduction in the allowance for credit losses predominantly as a result of continued improvement in the credit quality of the commercial and industrial portfolio, reduced net charge-offs and repayments.

Year ended December 31,	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
(in millions)	2010	2009	2008	2010	2009	2008	2010	2009	2008
Wholesale	**$ (673)**	$ 3,684	$ 3,536	**$ (177)**	$ 290	$ (209)	**$ (850)**	$ 3,974	$ 3,327
Consumer, excluding credit card[a]	**9,458**	16,032	10,659	**(6)**	(10)	(49)	**452**	16,022	10,610
Credit card– reported[a][b]	**8,037**	12,019	7,042	**—**	—	—	**8,037**	12,019	7,042
Total provision for credit losses – reported	**16,822**	31,735	21,237	**(183)**	280	(258)	**16,639**	32,015	20,979
Credit card – securitized[b][c]	**NA**	6,443	3,612	**NA**	—	—	**NA**	6,443	3,612
Total provision for credit losses – managed	**$16,822**	$ 38,178	$ 24,849	**$ (183)**	$ 280	$ (258)	**$16,639**	$ 38,458	$ 24,591

(a) Includes adjustments to the provision for credit losses recognized in the Corporate/Private Equity segment related to the Washington Mutual transaction in 2008.
(b) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. As a result of the consolidation of the credit card securitization trusts, reported and managed basis relating to credit card securitizations are equivalent for periods beginning after January 1, 2010. For further discussion regarding the Firm's application and the impact of the new guidance, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 64–65 of this Annual Report.
(c) Loans securitized are defined as loans that were sold to unconsolidated securitization trusts and were not included in reported loans. For further discussion of credit card securitizations, see Note 16 on pages 244–259 of this Annual Report.

MARKET RISK MANAGEMENT

Market risk is the exposure to an adverse change in the market value of portfolios and financial instruments caused by a change in market prices or rates.

Market risk management

Market Risk is an independent risk management function that works in close partnership with the business segments to identify and monitor market risks throughout the Firm and to define market risk policies and procedures. The risk management function is headed by the Firm's Chief Risk Officer.

Market Risk seeks to facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- establishing a market risk policy framework
- independent measurement, monitoring and control of line-of-business market risk
- definition, approval and monitoring of limits
- performance of stress testing and qualitative risk assessments

Risk identification and classification

Each line of business is responsible for the comprehensive identification and verification of market risks within its units. The Firm's market risks arise primarily from the activities in IB, Mortgage Banking, and CIO in Corporate/Private Equity.

IB makes markets and trades its products across the fixed income, foreign exchange, equities and commodities markets. This trading activity may lead to a potential decline in net income due to adverse changes in market rates. In addition to these trading risks, there are risks in IB's credit portfolio from retained loans and commitments, derivative credit valuation adjustments, hedges of the credit valuation adjustments and mark-to-market hedges of the retained loan portfolio. Additional risk positions result from the debit valuation adjustments taken on certain structured liabilities and derivatives to reflect the credit quality of the Firm.

The Firm's Mortgage Banking business includes the Firm's mortgage pipeline and warehouse loans, MSRs and all related hedges. These activities give rise to complex interest rate risks, as well as option and basis risk. Option risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing. Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates.

CIO is primarily concerned with managing structural risks which arise out of the various business activities of the Firm. Market Risk measures and monitors the gross structural exposures as well as the net exposures related to these activities.

Risk measurement

Tools used to measure risk

Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- Value-at-risk ("VaR")
- Economic-value stress testing
- Nonstatistical risk measures
- Loss advisories
- Revenue drawdowns
- Risk identification for large exposures ("RIFLEs")
- Earnings-at-risk stress testing

Value-at-risk

JPMorgan Chase utilizes VaR, a statistical risk measure, to estimate the potential loss from adverse market moves. Each business day, as part of its risk management activities, the Firm undertakes a comprehensive VaR calculation that includes the majority of its material market risks. VaR provides a consistent cross-business measure of risk profiles and levels of diversification and is used for comparing risks across businesses and monitoring limits. These VaR results are reported to senior management and regulators, and they feed regulatory capital calculations.

The Firm calculates VaR to estimate possible economic outcomes for current positions using historical data from the previous twelve months. This approach assumes that historical changes in market values are representative of current risk; this assumption may not always be valid. VaR is calculated using a one-day time horizon and an expected tail-loss methodology, which approximates a 95% confidence level. This means the Firm would expect to incur losses greater than that predicted by VaR estimates five times in every 100 trading days, or about 12 to 13 times a year.

The table below shows the results of the Firm's VaR measure using a 95% confidence level.

95% Confidence-Level VaR
Total IB trading VaR by risk type, credit portfolio VaR and other VaR

As of or for the year ended December 31, (in millions)	2010 Average	2010 Minimum	2010 Maximum	2009 Average	2009 Minimum	2009 Maximum	At December 31, 2010	At December 31, 2009
IB VaR by risk type								
Fixed income	**$ 65**	**$ 33**	**$ 95**	$ 160	$ 80	$ 216	**$ 52**	$ 80
Foreign exchange	**11**	**6**	**20**	18	7	39	**16**	10
Equities	**22**	**10**	**52**	47	8	156	**30**	43
Commodities and other	**16**	**11**	**32**	20	11	35	**13**	14
Diversification benefit to IB trading VaR	**(43)**[a]	**NM**[b]	**NM**[b]	(91)[a]	NM[b]	NM[b]	**(34)**[a]	(54)[a]
IB trading VaR	**$ 71**	**$ 40**	**$ 107**	$ 154	$ 77	$ 236	**$ 77**	$ 93
Credit portfolio VaR	**26**	**15**	**40**	52	18	106	**27**	21
Diversification benefit to IB trading and credit portfolio VaR	**(10)**[a]	**NM**[b]	**NM**[b]	(42)[a]	NM[b]	NM[b]	**(5)**[a]	(9)[a]
Total IB trading and credit portfolio VaR	**$ 87**	**$ 50**	**$ 128**	$ 164	$ 93	$ 256	**$ 99**	$ 105
Mortgage Banking VaR	**$ 23**	**$ 8**	**$ 47**	$ 57	$ 19	$ 151	**$ 9**	$ 28
Chief Investment Office ("CIO") VaR	**61**	**44**	**80**	103	71	126	**56**	76
Diversification benefit to total other VaR	**(13)**[a]	**NM**[b]	**NM**[b]	(36)[a]	NM[b]	NM[b]	**(10)**[a]	(13)[a]
Total other VaR	**$ 71**	**$ 48**	**$ 100**	$ 124	$ 79	$ 202	**$ 55**	$ 91
Diversification benefit to total IB and other VaR	**(59)**[a]	**NM**[b]	**NM**[b]	(82)[a]	NM[b]	NM[b]	**(65)**[a]	(73)[a]
Total IB and other VaR	**$ 99**	**$ 66**	**$ 142**	$ 206	$ 111	$ 328	**$ 89**	$ 123

(a) Average VaR and period-end VaR were less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects the fact that the risks were not perfectly correlated. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves.
(b) Designated as not meaningful ("NM"), because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio-diversification effect.

VaR measurement

IB trading and credit portfolio VaR includes substantially all trading activities in IB, including the credit spread sensitivities of certain mortgage products and syndicated lending facilities that the Firm intends to distribute. The Firm uses proxies to estimate the VaR for these products since daily time series are largely not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. In addition, for certain products included in IB trading and credit portfolio VaR, particular risk parameters are not fully captured – for example, correlation risk.

Total other VaR includes certain positions employed as part of the Firm's risk management function within CIO and in the Mortgage Banking business. CIO VaR includes positions, primarily in debt securities and credit products, used to manage structural and other risks including interest rate, credit and mortgage risks arising from the Firm's ongoing business activities. The Mortgage Banking VaR includes the Firm's mortgage pipeline and warehouse loans, MSRs and all related hedges.

In the Firm's view, including IB trading and credit portfolio VaR within total other VaR produces a more complete and transparent perspective of the Firm's market risk profile.

IB and other VaR does not include the retained credit portfolio, which is not marked to market; however, it does include hedges of those positions. It also does not include debit valuation adjustments ("DVA") taken on derivative and structured liabilities to reflect the credit quality of the Firm, principal investments (mezzanine financing, tax-oriented investments, etc.), and certain securities and investments held by the Corporate/Private Equity line of business, including private equity investments, capital management positions and longer-term investments managed by CIO. These longer-term positions are managed through the Firm's earnings at risk and other cash flow monitoring processes, rather than by using a VaR measure. Principal investing activities and Private Equity positions are managed using stress and scenario analyses. See the DVA Sensitivity table on page 144 of this Annual Report for further details. For a discussion of Corporate/Private Equity, see pages 89–90 of this Annual Report.

2010 and 2009 VaR results

As presented in the table, average total IB and other VaR totaled $99 million for 2010, compared with $206 million for 2009. The decrease in average VaR in 2010 was driven by a decline in market volatility in early 2009, as well as a reduction in exposures, primarily in CIO and IB. Average total IB trading and credit portfolio VaR for 2010 was $87 million, compared with $164 million for 2009. The decrease in IB trading and credit portfolio VaR for 2010 was also driven by the decline in market volatility, as well as a reduction in exposure, primarily in the fixed income risk component. CIO VaR averaged $61 million for 2010, compared with $103 million for 2009. Mortgage Banking VaR averaged $23 million for 2010,

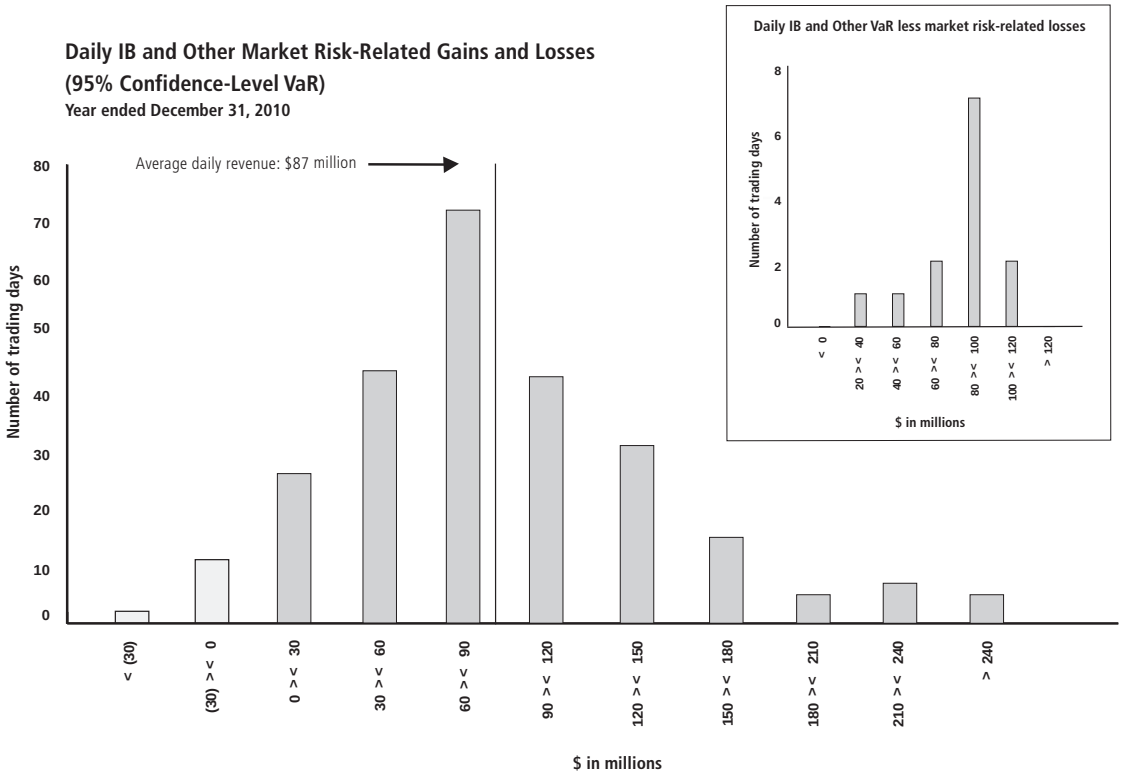
compared with $57 million for 2009. Decreases in CIO and Mortgage Banking VaR for 2010 were again driven by the decline in market volatility and position changes. The decline in Mortgage Banking VaR at December 31, 2010, reflects management's decision to reduce risk given market volatility at the time.

The Firm's average IB and other VaR diversification benefit was $59 million or 37% of the sum for 2010, compared with $82 million or 28% of the sum for 2009. The Firm experienced an increase in the diversification benefit in 2010 as positions changed and correlations decreased. In general, over the course of the year, VaR exposure can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

VaR back-testing

The Firm conducts daily back-testing of VaR against its market risk-related revenue, which is defined as the change in value of: principal transactions revenue for IB and CIO (less Private Equity gains/losses and revenue from longer-term CIO investments); trading-related net interest income for IB, CIO and Mortgage Banking; IB brokerage commissions, underwriting fees or other revenue; revenue from syndicated lending facilities that the Firm intends to distribute; and mortgage fees and related income for the Firm's mortgage pipeline and warehouse loans, MSRs, and all related hedges. Daily firmwide market risk–related revenue excludes gains and losses from DVA.

The following histogram illustrates the daily market risk–related gains and losses for IB, CIO and Mortgage Banking positions for 2010. The chart shows that the Firm posted market risk–related gains on 248 out of 261 days in this period, with 12 days exceeding $210 million. The inset graph looks at those days on which the Firm experienced losses and depicts the amount by which the 95% confidence-level VaR exceeded the actual loss on each of those days. During 2010, losses were sustained on 13 days, none of which exceeded the VaR measure.



The following table provides information about the gross sensitivity of DVA to a one-basis-point increase in JPMorgan Chase's credit spreads. This sensitivity represents the impact from a one-basis-point parallel shift in JPMorgan Chase's entire credit curve. As credit curves do not typically move in a parallel fashion, the sensitivity multiplied by the change in spreads at a single maturity point may not be representative of the actual revenue recognized.

Debit valuation adjustment sensitivity

December 31, (in millions)	1 Basis point increase in JPMorgan Chase's credit spread
2010	**$ 35**
2009	39

Economic value stress testing

While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing captures the Firm's exposure to unlikely but plausible events in abnormal markets using multiple scenarios that assume significant changes in credit spreads, equity prices, interest rates, currency rates or commodity prices. Scenarios are updated dynamically and may be redefined on an ongoing basis to reflect current market conditions. Along with VaR, stress testing is important in measuring and controlling risk; it enhances understanding of the Firm's risk profile and loss potential, as stress losses are monitored against limits. Stress testing is also employed in cross-business risk management. Stress-test results, trends and explanations based on current market risk positions are reported to the Firm's senior management and to the lines of business to allow them to better understand event risk–sensitive positions and manage risks with more transparency.

Nonstatistical risk measures

Nonstatistical risk measures as well as stress testing include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line-of-business and by risk type, and are used for tactical control and monitoring limits.

Loss advisories and revenue drawdowns

Loss advisories and net revenue drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Net revenue drawdown is defined as the decline in net revenue since the year-to-date peak revenue level.

Risk identification for large exposures

Individuals who manage risk positions in IB are responsible for identifying potential losses that could arise from specific, unusual events, such as a potential change in tax legislation, or a particular combination of unusual market moves. This information is aggregated centrally for IB. Trading businesses are responsible for RIFLEs, thereby permitting the Firm to monitor further earnings vulnerability not adequately covered by standard risk measures.

Earnings-at-risk stress testing

The VaR and stress-test measures described above illustrate the total economic sensitivity of the Firm's Consolidated Balance Sheets to changes in market variables. The effect of interest rate exposure on reported net income is also important. Interest rate risk exposure in the Firm's core nontrading business activities (i.e., asset/liability management positions, including accrual loans within IB and CIO) results from on– and off–balance sheet positions. ALCO establishes the Firm's interest rate risk policies, sets risk guidelines and limits and reviews the risk profile of the Firm. Treasury, working in partnership with the lines of business, calculates the Firm's interest rate risk profile weekly and reports to senior management.

Interest rate risk for nontrading activities can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off–balance sheet instruments. For example, if liabilities reprice more quickly than assets and funding interest rates are declining, earnings will increase initially.
- Differences in the amounts of assets, liabilities and off–balance sheet instruments that are repricing at the same time. For example, if more deposit liabilities are repricing than assets when general interest rates are declining, earnings will increase initially.
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve) because the Firm has the ability to lend at long-term fixed rates and borrow at variable or short-term fixed rates. Based on these scenarios, the Firm's earnings would be affected negatively by a sudden and unanticipated increase in short-term rates paid on its liabilities (e.g., deposits) without a corresponding increase in long-term rates received on its assets (e.g., loans). Conversely, higher long-term rates received on assets generally are beneficial to earnings, particularly when the increase is not accompanied by rising short-term rates paid on liabilities.
- The impact of changes in the maturity of various assets, liabilities or off–balance sheet instruments as interest rates change. For example, if more borrowers than forecasted pay down higher-rate loan balances when general interest rates are declining, earnings may decrease initially.

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, corporate-wide basis. Business units transfer their interest rate risk to Treasury through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm conducts simulations of changes in net interest income from its nontrading activities under a variety of interest rate scenarios. Earnings-at-risk tests measure the potential change in the Firm's net interest income, and the corresponding impact to the Firm's pretax earnings, over the following 12 months. These tests highlight exposures to various rate-sensitive factors, such as the rates themselves (e.g., the prime lending rate), pricing strategies on deposits, optionality and changes in product mix. The tests include forecasted balance sheet changes, such as asset sales and securitizations, as well as prepayment and reinvestment behavior. Mortgage prepayment assumptions are based on current interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience and forward market expectations. The balance and pricing assumptions of deposits that have no stated maturity are based on historical performance, the competitive environment, customer behavior, and product mix.

Immediate changes in interest rates present a limited view of risk, and so a number of alternative scenarios are also reviewed. These scenarios include the implied forward curve, nonparallel rate shifts and severe interest rate shocks on selected key rates. These scenarios are intended to provide a comprehensive view of JPMorgan Chase's earnings at risk over a wide range of outcomes.

JPMorgan Chase's 12-month pretax earnings sensitivity profiles as of December 31, 2010 and 2009, were as follows.

	Immediate change in rates			
December 31, (in millions)	+200bp	+100bp	-100bp	-200bp
2010	**$ 2,465**	**$ 1,483**	**NM**[a][b]	**NM**[a][b]
2009	(1,594)	(554)	NM[a]	NM[a]

(a) Downward 100- and 200-basis-point parallel shocks result in a Fed Funds target rate of zero, and negative three- and six-month Treasury rates. The earnings-at-risk results of such a low-probability scenario are not meaningful.
(b) Excludes economic value stress losses.

The change in earnings at risk from December 31, 2009, resulted from investment portfolio repositioning, assumed higher levels of deposit balances and reduced levels of fixed-rate loans. The Firm's risk to rising rates was largely the result of widening deposit margins, which are currently compressed due to very low short-term interest rates.

Additionally, another interest rate scenario conducted by the Firm – involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels – results in a 12-month pretax earnings benefit of $770 million. The increase in earnings under this scenario is due to reinvestment of maturing assets at the higher long-term rates, with funding costs remaining unchanged.

Risk monitoring and control

Limits

Market risk is controlled primarily through a series of limits. Limits reflect the Firm's risk appetite in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as senior management risk appetite, market volatility, product liquidity, accommodation of client business and management experience.

Market risk management regularly reviews and updates risk limits. Senior management, including the Firm's Chief Executive Officer and Chief Risk Officer, is responsible for reviewing and approving cetain risk limits on an ongoing basis.

The Firm maintains different levels of limits. Corporate-level limits include VaR and stress limits. Similarly, line-of-business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns. Businesses are responsible for adhering to established limits, against which exposures are monitored and reported. Limit breaches are reported in a timely manner to senior management, and the affected line-of-business is required to reduce trading positions or consult with senior management on the appropriate action.

Model review

Some of the Firm's financial instruments cannot be valued based on quoted market prices but are instead valued using pricing models. These pricing models and VaR models are used for management of risk positions, such as reporting against limits, as well as for valuation. The Model Risk Group, which is independent of the businesses and market risk management, reviews the models the Firm uses and assesses model appropriateness and consistency. The model reviews consider a number of factors about the model's suitability for valuation and risk management of a particular product. These factors include whether the model accurately reflects the characteristics of the transaction and its significant risks, the suitability and convergence properties of numerical algorithms, reliability of data sources, consistency of the treatment with models for similar products, and sensitivity to input parameters and assumptions that cannot be priced from the market.

Reviews are conducted of new or changed models, as well as previously accepted models, to assess whether there have been any changes in the product or market that may affect the model's validity and whether there are theoretical or competitive developments that may require reassessment of the model's adequacy. For a summary of valuations based on models, see Critical Accounting Estimates Used by the Firm on pages 149–154 of this Annual Report.

Risk reporting

Nonstatistical risk measures, VaR, loss advisories and limit excesses are reported daily to the lines of business and to senior management. Market risk exposure trends, VaR trends, profit-and-loss changes and portfolio concentrations are reported weekly. Stress-test results are also reported weekly to the lines of business and to senior management.

PRIVATE EQUITY RISK MANAGEMENT

The Firm makes principal investments in private equity. The illiquid nature and long-term holding periods associated with these investments differentiates private equity risk from the risk of positions held in the trading portfolios. The Firm's approach to managing private equity risk is consistent with the Firm's general risk governance structure. Controls are in place establishing expected levels for total and annual investment in order to control the overall size of the portfolios. Industry and geographic concentration limits are in place and intended to ensure diversification of the portfolios. All investments are approved by investment committees that include executives who are not part of the investing businesses. An independent valuation function is responsible for reviewing the appropriateness of the carrying values of private equity investments in accordance with relevant accounting policies. At December 31, 2010 and 2009, the carrying value of the Private Equity portfolio was $8.7 billion and $7.3 billion, respectively, of which $875 million and $762 million, respectively, represented publicly-traded positions. For further information on the Private Equity portfolio, see page 90 of this Annual Report.

OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, fraudulent acts, business interruptions, inappropriate behavior of employees, or vendors that do not perform in accordance with their arrangements. These events could result in financial losses and other damage to the Firm, including reputational harm.

To monitor and control operational risk, the Firm maintains a system of comprehensive policies and a control framework designed to provide a sound and well-controlled operational environment. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject. Notwithstanding these control measures, the Firm incurs operational losses.

The Firm's approach to operational risk management is intended to mitigate such losses by supplementing traditional control-based approaches to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

One of the ways operational risk is mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations, as well as to serve other needs of the Firm. Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

The Firm's operational risk framework is supported by Phoenix, an internally designed operational risk software tool. Phoenix integrates the individual components of the operational risk management framework into a unified, web-based tool. Phoenix enhances the capture, reporting and analysis of operational risk data by enabling risk identification, measurement, monitoring, reporting and analysis to be done in an integrated manner, thereby enabling efficiencies in the Firm's monitoring and management of its operational risk.

For purposes of identification, monitoring, reporting and analysis, the Firm categorizes operational risk events as follows:

- Client service and selection
- Business practices
- Fraud, theft and malice
- Execution, delivery and process management
- Employee disputes
- Disasters and public safety
- Technology and infrastructure failures

Risk identification

Risk identification is the recognition of the operational risk events that management believes may give rise to operational losses. All businesses utilize the Firm's standard self-assessment process and supporting architecture as a dynamic risk management tool. The goal of the self-assessment process is for each business to identify the key operational risks specific to its environment and assess the degree to which it maintains appropriate controls. Action plans are developed for control issues that are identified, and businesses are held accountable for tracking and resolving these issues on a timely basis.

Risk measurement

Operational risk is measured for each business on the basis of historical loss experience using a statistically based loss-distribution approach. The current business environment, potential stress scenarios and measures of the control environment are then factored into the statistical measure in determining firmwide operational risk capital. This methodology is designed to comply with the advanced measurement rules under the Basel II Framework.

Risk monitoring

The Firm has a process for monitoring operational risk-event data, permitting analysis of errors and losses as well as trends. Such analysis, performed both at a line-of-business level and by risk-event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns. The data reported enables the Firm to back-test against self-assessment results. The Firm is a founding member of the Operational Riskdata eXchange Association, a not-for-profit industry association formed for the purpose of collecting operational loss data, sharing data in an anonymous form and benchmarking results back to mem-

bers. Such information supplements the Firm's ongoing operational risk measurement and analysis.

Risk reporting and analysis
Operational risk management reports provide timely and accurate information, including information about actual operational loss levels and self-assessment results, to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and support areas.

Audit alignment
Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. This includes reviewing the operational risk framework, the effectiveness of the business self-assessment process, and the loss data-collection and reporting activities.

REPUTATION AND FIDUCIARY RISK MANAGEMENT

The Firm's success depends not only on its prudent management of the liquidity, credit, market and operational risks that are part of its business risk, but equally on the maintenance among its many constituents—customers and clients, investors, regulators, as well as the general public—of a reputation for business practices of the highest quality. Attention to reputation has always been a key aspect of the Firm's practices, and maintenance of the Firm's reputation is the responsibility of each individual employee at the Firm. JPMorgan Chase bolsters this individual responsibility in many ways, including through the Firm's Code of Conduct, which is based on the Firm's fundamental belief that no one should ever sacrifice integrity—or give the impression that he or she has—even if one thinks it would help the Firm's business. The Code requires prompt reporting of any known or suspected violation of the Code, any internal Firm policy, or any law or regulation applicable to the Firm's business. It also requires the reporting of any illegal conduct, or conduct that violates the underlying principles of the Code, by any of our customers, suppliers, contract workers, business partners or agents. Concerns may be reported anonymously and the Firm prohibits retaliation against employees for the good faith reporting of any actual or suspected violations of the Code.

In addition to training of employees with regard to the principles and requirements of the Code, and requiring annual affirmation by each employee of compliance with the Code, the Firm has established policies and procedures, and has in place various oversight functions, intended to promote the Firm's culture of "doing the right thing". These include a Conflicts Office which examines wholesale transactions with the potential to create conflicts of interest for the Firm. In addition, each line of business has a risk committee which includes in its mandate oversight of the reputational risks in its business that may produce significant losses or reputational damage. In IB, there is a separate Reputation Risk Office and several regional reputation risk committees, members of which are senior representatives of businesses and control functions, that focus on transactions that raise reputational issues. Such transactions may include, for example, complex derivatives and structured finance transactions. The Firm also established this year a Consumer Reputational Risk Committee, comprised of senior management from the Firm's Operating Committee, including the heads of its primary consumer facing businesses, RFS and CS, that helps to ensure that the Firm has a consistent, disciplined focus on the review of the impact on consumers of Chase products and practices, including any that could raise reputational issues.

Fiduciary Risk Management
The Fiduciary Risk Management function works with relevant line of business risk committees, with the goal of ensuring that businesses providing investment or risk management products or services that give rise to fiduciary duties to clients perform at the appropriate standard relative to their fiduciary relationship with a client. Of particular focus are the policies and practices that address a business' responsibilities to a client, including performance and service requirements and expectations; client suitability determinations; and disclosure obligations and communications. In this way, the relevant line of business risk committees, together with the Fiduciary Risk Management function, provide oversight of the Firm's efforts to monitor, measure and control the performance and risks that may arise in the delivery of products or services to clients that give rise to such fiduciary duties, as well as those stemming from any of the Firm's fiduciary responsibilities under the Firm's various employee benefit plans.

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the value of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained wholesale and consumer loan portfolios, as well as the Firm's wholesale and consumer lending-related commitments. The allowance for loan losses is intended to adjust the value of the Firm's loan assets to reflect probable credit losses inherent in the portfolio as of the balance sheet date. The allowance for lending-related commitments is established to cover probable losses in the lending-related commitments portfolio. For a further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Note 15 on pages 239–243 of this Annual Report.

Wholesale loans and lending-related commitments

The methodology for calculating the allowance for loan losses and the allowance for lending-related commitments involves significant judgment. First and foremost, it involves the early identification of credits that are deteriorating. Second, it involves judgment in establishing the inputs used to estimate the allowances. Third, it involves management judgment to evaluate certain macroeconomic factors, underwriting standards, and other relevant internal and external factors affecting the credit quality of the current portfolio, and to refine loss factors to better reflect these conditions.

The Firm uses a risk-rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm to that loan.

The Firm applies its judgment to establish loss factors used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances. Many factors can affect estimates of loss, including volatility of loss given default, probability of default and rating migrations. Consideration is given as to whether the loss estimates should be calculated as an average over the entire credit cycle or at a particular point in the credit cycle, as well as to which external data should be used and when they should be used. Choosing data that are not reflective of the Firm's specific loan portfolio characteristics could also affect loss estimates. The application of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the loss factors derived, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both loss given default and probability of default are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

As noted above, the Firm's wholesale allowance is sensitive to the risk rating assigned to a loan. As of December 31, 2010, assuming a one-notch downgrade in the Firm's internal risk ratings for its entire wholesale portfolio, the allowance for loan losses for the wholesale portfolio would increase by approximately $1.3 billion. This sensitivity analysis is hypothetical. In the Firm's view, the likelihood of a one-notch downgrade for all wholesale loans within a short timeframe is remote. The purpose of this analysis is to provide an indication of the impact of risk ratings on the estimate of the allowance for loan losses for wholesale loans. It is not intended to imply management's expectation of future deterioration in risk ratings. Given the process the Firm follows in determining the risk ratings of its loans, management believes the risk ratings currently assigned to wholesale loans are appropriate.

Consumer loans and lending-related commitments

The allowance for credit losses for the consumer portfolio, including credit card, is sensitive to changes in the economic environment, delinquency status, the realizable value of collateral, FICO scores, borrower behavior and other risk factors, and is intended to represent management's best estimate of probable losses inherent in the portfolio as of the balance sheet date. The credit performance of the consumer portfolio across the entire consumer credit product spectrum has stabilized but high unemployment and weak overall economic conditions continue to result in an elevated level of charge-offs, while weak housing prices continue to negatively affect the severity of losses realized on residential real estate loans that default. Significant judgment is required to estimate the duration and severity

of the current economic downturn, as well as its potential impact on housing prices and the labor market. While the allowance for credit losses is highly sensitive to both home prices and unemployment rates, in the current market it is difficult to estimate how potential changes in one or both of these factors might affect the allowance for credit losses. For example, while both factors are important determinants of overall allowance levels, changes in one factor or the other may not occur at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across all geographies or product types. Finally, it is difficult to predict the extent to which changes in both or either of these factors would ultimately affect the frequency of losses, the severity of losses or both; overall loss rates are a function of both the frequency and severity of individual loan losses.

The consumer allowance is calculated by applying statistical loss factors and other risk indicators to pools of loans with similar risk characteristics to arrive at an estimate of incurred losses in the portfolio. Management applies judgment to the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate probable losses inherent in the portfolio. Management uses additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate. The statistical calculation is then adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but are not yet reflected in the factors used to derive the statistical calculation; this adjustment is accomplished in part by analyzing the historical loss experience for each major product segment. In the current economic environment, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment in making this adjustment, taking into account uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, borrower behavior and other relevant internal and external factors affecting the credit quality of the portfolio. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. The application of different inputs into the statistical calculation, and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for loan losses for the consumer credit portfolio.

Fair value of financial instruments, MSRs and commodities inventories

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are carried at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including loans accounted for at the lower of cost or fair value that are only subject to fair value adjustments under certain circumstances.

Under U.S. GAAP there is a three-level valuation hierarchy for disclosure of fair value measurements. An instrument's categorization within the hierarchy is based on the lowest level of input that is significant to the fair value measurement. Therefore, for instruments classified in levels 1 and 2 of the hierarchy, where inputs are principally based on observable market data, there is less judgment applied in arriving at a fair value measurement. For instruments classified within level 3 of the hierarchy, judgments are more significant. The Firm reviews and updates the fair value hierarchy classifications on a quarterly basis. Changes from one quarter to the next related to the observability of inputs to a fair value measurement may result in a reclassification between hierarchy levels.

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy.

December 31,	**2010**		2009	
(in billions, except ratio data)	Total at fair value	Level 3 total	Total at fair value	Level 3 total
Trading debt and equity instruments[a]	**$ 409.4**	**$ 33.9**	$ 330.9	$ 35.2
Derivative receivables – gross	**1,529.4**	**35.3**	1,565.5	46.7
Netting adjustment	**(1,448.9)**	**—**	(1,485.3)	—
Derivative receivables – net	**80.5**	**35.3**[d]	80.2	46.7[d]
AFS securities	**316.3**	**14.3**	360.4	13.2
Loans	**2.0**	**1.5**	1.4	1.0
MSRs	**13.6**	**13.6**	15.5	15.5
Private equity investments	**8.7**	**7.9**	7.3	6.6
Other[b]	**43.8**	**4.1**	44.4	9.5
Total assets measured at fair value on a recurring basis	**874.3**	**110.6**	840.1	127.7
Total assets measured at fair value on a nonrecurring basis[c]	**10.1**	**4.2**	8.2	2.7
Total assets measured at fair value	**$ 884.4**	**$ 114.8**[e]	$ 848.3	$ 130.4[e]
Total Firm assets	**$ 2,117.6**		$ 2,032.0	
Level 3 assets as a percentage of total Firm assets		**5%**		6%
Level 3 assets as a percentage of total Firm assets at fair value		**13**		15

(a) Includes physical commodities generally carried at the lower of cost or fair value.

(b) Includes certain securities purchased under resale agreements, securities borrowed, accrued interest receivable and other investments.

(c) Predominantly includes mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral, and on credit card and leveraged lending loans carried on the Consolidated Balance Sheets at the lower of cost or fair value.

(d) Derivative receivable and derivative payable balances, and the related cash collateral received and paid, are presented net on the Consolidated Balance Sheets where there is a legally enforceable master netting agreement in place with counterparties. For purposes of the table above, the Firm does not reduce level 3 derivative receivable balances for netting adjustments, as such an adjustment is not relevant to a presentation that is based on the transparency of inputs to the valuation. Therefore, the derivative balances reported in the fair value hierarchy levels are gross of any counterparty netting adjustments. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivable and payable balances would be $12.7 billion and $16.0 billion at December 31, 2010 and 2009, respectively, exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.

(e) At December 31, 2010 and 2009, included $66.0 billion and $80.0 billion, respectively, of level 3 assets, consisting of recurring and nonrecurring assets carried by IB.

Valuation

The Firm has an established and well-documented process for determining fair value. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on internally developed models that primarily use as inputs market-based or independently sourced market parameters. The Firm's process is intended to ensure that all applicable inputs are appropriately calibrated to market data, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models also incorporate transaction details, such as maturity. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. These adjustments include amounts to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters that are applied consistently over time.

For instruments classified within level 3 of the hierarchy, judgments used to estimate fair value may be significant. In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs – including, but not limited to, yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models also incorporate transaction details, such as maturity. Finally, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters, where relevant. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. The Firm has numerous controls in place to ensure that its valuations are appropriate. An independent model review group reviews the Firm's valuation models and approves them for use for specific products. All valuation models of the Firm are subject to this review process. A price verification group, independent from the risk-taking functions, ensures observable market prices and market-based parameters are used for valuation whenever possible. For those products with material parameter risk for which observable market levels do not exist, an independent review of the assumptions made on pricing is performed. Additional review includes deconstruction of the model valuations for certain structured instruments into their components; benchmarking valuations, where possible, to similar products; validating valuation estimates through actual cash settlement; and detailed review and explanation of recorded gains and losses, which are analyzed daily and over time. Valuation adjustments, which are also determined by the independent price verification group, are based on established policies and applied consistently over time. Any changes to the valuation methodology are reviewed by management to confirm the changes are justified. As markets and products develop and the pricing for certain products becomes more transparent, the Firm continues to refine its valuation methodologies. During 2010, no changes were made to the Firm's valuation models that had, or are expected to have, a material impact on the Firm's Consolidated Balance Sheets or results of operations.

Imprecision in estimating unobservable market inputs can affect the amount of revenue or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date. For a detailed discussion of the determination of fair value for individual financial instruments, see Note 3 on pages 170–187 of this Annual Report.

Purchased credit-impaired loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain loans with evidence of deterioration of credit quality since origination and for which it was probable, at acquisition, that the Firm would be unable to collect all contractually required payments receivable. These loans are considered to be purchased credit-impaired ("PCI") loans and are accounted for as described in Note 14 on pages 220–238 of this Annual Report. The application of the accounting guidance for PCI loans requires a number of significant estimates and judgment, such as determining: (i) which loans are within the scope of PCI accounting guidance, (ii) the fair value of the PCI loans at acquisition, (iii) how loans are aggregated to apply the guidance on accounting for pools of loans, and (iv) estimates of cash flows to be collected over the term of the loans.

Determining which loans are in the scope of PCI accounting guidance is highly subjective and requires significant judgment. In the Washington Mutual transaction, consumer loans with certain attributes (e.g., higher loan-to-value ratios, borrowers with lower FICO scores, delinquencies) were determined to be credit-impaired, provided that those attributes arose subsequent to the loans' origination dates. A wholesale loan was determined to be credit-impaired if it was risk-rated such that it would otherwise have required an asset-specific allowance for loan losses.

At the acquisition date, the Firm recorded its PCI loans at fair value, which included an estimate of losses that were then expected to be incurred over the estimated remaining lives of the loans. The Firm estimated the fair value of its PCI loans at the acquisition date by discounting the cash flows expected to be collected at a market-observable discount rate, when available, adjusted for factors that a market participant would consider in determining fair value. The initial estimate of cash flows to be collected was derived from assumptions such as default rates, loss severities and the amount and timing of prepayments.

The PCI accounting guidance states that investors may aggregate loans into pools that have common risk characteristics and thereby use a composite interest rate and estimate of cash flows expected to be collected for the pools. The pools then become the unit of accounting and are considered one loan for purposes of accounting for these loans at and subsequent to acquisition. Once a pool is assembled, the integrity of the pool must be

maintained. The Firm has aggregated substantially all of the PCI loans identified in the Washington Mutual transaction (i.e., the residential real estate loans) into pools with common risk characteristics. Significant judgment is required to determine whether individual loans have common risk characteristics for purposes of establishing pools of loans.

The Firm's estimate of cash flows expected to be collected must be updated each reporting period based on updated assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are dependent on assumptions regarding the level of future home price declines, and the duration and severity of the current economic downturn, among other factors. These estimates and assumptions require significant management judgment and certain assumptions are highly subjective. These estimates of cash flows expected to be collected may have a significant impact on the recognition of impairment losses and/or interest income. As of December 31, 2010, a 1% decrease in expected future principal cash payments for the entire portfolio of purchased credit-impaired loans would result in the recognition of an allowance for loan losses for these loans of approximately $670 million.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 17 on pages 260–263 of this Annual Report.

Management applies significant judgment when estimating the fair value of its reporting units. Estimates of fair value are dependent upon estimates of (a) the future earnings potential of the Firm's reporting units, including the estimated effects of regulatory and legislative changes, such as the Dodd-Frank Act, the CARD Act, and limitations on non-sufficient funds and overdraft fees and (b) the relevant cost of equity and long-term growth rates. Imprecision in estimating these factors can affect the estimated fair value of the reporting units. The fair values of a significant majority of the Firm's reporting units exceeded their carrying values by substantial amounts (fair value as a percent of carrying value ranged from 120% to 380%) and did not indicate a significant risk of goodwill impairment based on current projections and valuations.

However, the fair value of the Firm's consumer lending businesses in RFS and CS each exceeded their carrying values by approximately 25% and 7%, respectively, and the associated goodwill remains at an elevated risk of impairment due to their exposure to U.S. consumer credit risk and the effects of regulatory and legislative changes. The assumptions used in the valuation of these businesses include (a) estimates of future cash flows (which are dependent on portfolio outstanding balances, net interest margin, operating expense, credit losses, and the amount of capital necessary given the risk of business activities to meet regulatory capital requirements), (b) the cost of equity used to discount those cash flows to a present value. Each of these factors requires significant judgment and the assumptions used are based on management's best and most current projections, including those derived from the Firm's business forecasting process reviewed with senior management. These projections are consistent with the short-term assumptions discussed in Business Outlook on pages 57–58 of this Form 10-K and, in the longer term, incorporate a set of macroeconomic assumptions (for example, allowing for relatively high but gradually declining unemployment rates for the next few years) and the Firm's best estimates of long-term growth and returns of its businesses. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates. The cost of equity used in the discounted cash flow model reflected the estimated risk and uncertainty in these businesses and was evaluated in comparison with relevant market peers.

The Firm did not recognize goodwill impairment as of December 31, 2010, or at anytime during 2010, based on management's best estimates. However, deterioration in economic market conditions, increased estimates of the effects of recent regulatory or legislative changes, or additional regulatory or legislative changes may result in declines in projected business performance beyond management's current expectations. For example, in CS such declines could result from deterioration in economic conditions, such as: increased unemployment claims or bankruptcy filings that result in increased credit losses, changes in customer behavior that cause decreased account activity or receivables balances, or unanticipated effects of regulatory or legislative changes. In RFS, such declines could result from deterioration in economic conditions that result in increased credit losses, including decreases in home prices beyond management's current expectations; or loan repurchase costs that significantly exceed management's current expectations. Such declines in business performance, or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations and tax planning strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. The Firm has also recognized deferred tax assets in connection with certain net operating losses. The Firm performs regular reviews to ascertain whether deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize net operating losses before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2010, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective tax rate in the period in which the reassessment occurs.

For additional information on income taxes, see Note 27 on pages 271-273 of this Annual Report.

Accounting for transfers of financial assets and consolidation of variable interest entities

Effective January 1, 2010, the Firm implemented new accounting guidance that amends the accounting for the transfers of financial assets and the consolidation of VIEs. Upon adoption of the new guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, Firm-administered multi-seller conduits, and certain mortgage and other consumer loan securitization entities. The Financial Accounting Standards Board ("FASB") deferred the requirements of the new accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds, until the FASB reconsiders the appropriate accounting guidance for these funds. For additional information about the impact of the adoption of the new accounting guidance on January 1, 2010, see Note 16 on pages 244–259 of this Annual Report.

Fair value measurements and disclosures

In January 2010, the FASB issued guidance that requires new disclosures, and clarifies existing disclosure requirements, about fair value measurements. The clarifications and the requirement to separately disclose transfers of instruments between level 1 and level 2 of the fair value hierarchy are effective for interim reporting periods beginning after December 15, 2009; the Firm adopted this guidance in the first quarter of 2010. For additional information about the impact of the adoption of the new fair value measurements guidance, see Note 3 on pages 170–187 of this Annual Report. In addition, a new requirement to provide purchases, sales, issuances and settlements in the level 3 rollforward on a gross basis is effective for fiscal years beginning after December 15, 2010.

Subsequent events

In May 2009, the FASB issued guidance that established general standards of accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued or are available to be issued. The guidance was effective for interim or annual financial periods ending after June 15, 2009. In February 2010, the FASB amended the guidance by eliminating the requirement for SEC filers to disclose the date through which it evaluated subsequent events. The Firm adopted the amended guidance in the first quarter of 2010. The application of the guidance had no effect on the Firm's Consolidated Balance Sheets or results of operations.

Accounting for certain embedded credit derivatives

In March 2010, the FASB issued guidance clarifying the circumstances in which a credit derivative embedded in beneficial interests in securitized financial assets is required to be separately accounted for as a derivative instrument. The guidance is effective for the first fiscal quarter beginning after June 15, 2010, with early adoption permitted. Upon adoption, the new guidance permits the election of the fair value option for beneficial interests in securitized financial assets. The Firm adopted the new guidance prospectively, effective July 1, 2010. The adoption of the guidance did not have a material impact on the Firm's Consolidated Balance Sheets or results of operations. For additional information about the impact of the adoption of the new guidance, see Note 6 on pages 191–199 of this Annual Report.

Accounting for troubled debt restructurings of purchased credit-impaired loans that are part of a pool

In April 2010, the FASB issued guidance that amends the accounting for troubled debt restructurings ("TDRs") of PCI loans accounted for within a pool. The guidance clarifies that modified PCI loans should not be removed from a pool even if the modification would otherwise be considered a TDR. Additionally, the guidance clarifies that the impact of modifications should be included in evaluating whether a pool of loans is impaired. The guidance was effective for the Firm beginning in the third quarter of 2010, and is to be applied prospectively. The guidance is consistent with the Firm's previously existing accounting practice and, therefore, had no impact on the Firm's Consolidated Balance Sheets or results of operations.

Disclosures about the credit quality of financing receivables and the allowance for credit losses

In July 2010, the FASB issued guidance that requires enhanced disclosures surrounding the credit characteristics of the Firm's loan portfolio. Under the new guidance, the Firm is required to disclose its accounting policies, the methods it uses to determine the components of the allowance for credit losses, and qualitative and quantitative information about the credit risk inherent in the loan portfolio, including additional information on certain types of loan modifications. For the Firm, the new disclosures became effective for the 2010 Annual Report. For additional information, see Notes 14 and 15 on pages 220–243 of this Annual Report. The adoption of this guidance only affects JPMorgan Chase's disclosures of financing receivables and not its Consolidated Balance Sheets or results of operations. In January 2011, the FASB issued guidance that deferred the effective date of certain disclosures in this guidance regarding TDRs, pending resolution on the FASB's project to amend the scope of TDR guidance.

NONEXCHANGE-TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based on internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2010.

For the year ended December 31, 2010 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2010	$ 5,027	$ 1,737
Effect of legally enforceable master netting agreements	25,282	26,490
Gross fair value of contracts outstanding at January 1, 2010	30,309	28,227
Contracts realized or otherwise settled	(18,309)	(17,232)
Fair value of new contracts	24,294	23,194
Changes in fair values attributable to changes in valuation techniques and assumptions	—	—
Other changes in fair value	13,156	14,914
Gross fair value of contracts outstanding at December 31, 2010	49,450	49,103
Effect of legally enforceable master netting agreements	(41,284)	(41,919)
Net fair value of contracts outstanding at December 31, 2010	$ 8,166	$ 7,184

The following table indicates the maturities of nonexchange-traded commodity derivative contracts at December 31, 2010.

December 31, 2010 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 22,713	$ 19,402
Maturity 1–3 years	16,689	16,074
Maturity 4–5 years	8,500	7,840
Maturity in excess of 5 years	1,548	5,787
Gross fair value of contracts outstanding at December 31, 2010	49,450	49,103
Effect of legally enforceable master netting agreements	(41,284)	(41,919)
Net fair value of contracts outstanding at December 31, 2010	$ 8,166	$ 7,184

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the Securities and Exchange Commission. In addition, the Firm's senior management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- local, regional and international business, economic and political conditions and geopolitical events;
- changes in laws and regulatory requirements, including as a result of the newly-enacted financial services legislation;
- changes in trade, monetary and fiscal policies and laws;
- securities and capital markets behavior, including changes in market liquidity and volatility;
- changes in investor sentiment or consumer spending or savings behavior;
- ability of the Firm to manage effectively its liquidity;
- changes in credit ratings assigned to the Firm or its subsidiaries;
- damage to the Firm's reputation;
- ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- technology changes instituted by the Firm, its counterparties or competitors;
- mergers and acquisitions, including the Firm's ability to integrate acquisitions;
- ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to increase market share;
- ability of the Firm to attract and retain employees;
- ability of the Firm to control expense;
- competitive pressures;
- changes in the credit quality of the Firm's customers and counterparties;
- adequacy of the Firm's risk management framework;
- adverse judicial or regulatory proceedings;
- changes in applicable accounting policies;
- ability of the Firm to determine accurate values of certain assets and liabilities;
- occurrence of natural or man-made disasters or calamities or conflicts, including any effect of any such disasters, calamities or conflicts on the Firm's power generation facilities and the Firm's other commodity-related activities;
- the other risks and uncertainties detailed in Part 1, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2010.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2010. In making the assessment, management used the framework in "Internal Control – Integrated Framework" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2010, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2010.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2010, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Douglas L. Braunstein
Executive Vice President and Chief Financial Officer

February 28, 2011

Report of independent registered public accounting firm

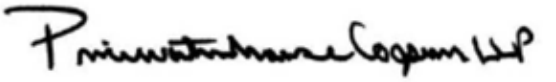


Report of Independent Registered Public Accounting Firm To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, changes in stockholders' equity and comprehensive income and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2010 and 2009, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2010, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2010, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting." Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



February 28, 2011

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2010	2009	2008
Revenue			
Investment banking fees	**$ 6,190**	$ 7,087	$ 5,526
Principal transactions	**10,894**	9,796	(10,699)
Lending- and deposit-related fees	**6,340**	7,045	5,088
Asset management, administration and commissions	**13,499**	12,540	13,943
Securities gains[a]	**2,965**	1,110	1,560
Mortgage fees and related income	**3,870**	3,678	3,467
Credit card income	**5,891**	7,110	7,419
Other income	**2,044**	916	2,169
Noninterest revenue	**51,693**	49,282	28,473
Interest income	**63,782**	66,350	73,018
Interest expense	**12,781**	15,198	34,239
Net interest income	**51,001**	51,152	38,779
Total net revenue	**102,694**	100,434	67,252
Provision for credit losses	**16,639**	32,015	20,979
Noninterest expense			
Compensation expense	**28,124**	26,928	22,746
Occupancy expense	**3,681**	3,666	3,038
Technology, communications and equipment expense	**4,684**	4,624	4,315
Professional and outside services	**6,767**	6,232	6,053
Marketing	**2,446**	1,777	1,913
Other expense	**14,558**	7,594	3,740
Amortization of intangibles	**936**	1,050	1,263
Merger costs	**—**	481	432
Total noninterest expense	**61,196**	52,352	43,500
Income before income tax expense/(benefit) and extraordinary gain	**24,859**	16,067	2,773
Income tax expense/(benefit)	**7,489**	4,415	(926)
Income before extraordinary gain	**17,370**	11,652	3,699
Extraordinary gain	**—**	76	1,906
Net income	**$ 17,370**	$ 11,728	$ 5,605
Net income applicable to common stockholders	**$ 15,764**	$ 8,774	$ 4,742
Per common share data			
Basic earnings per share			
Income before extraordinary gain	**$ 3.98**	$ 2.25	$ 0.81
Net income	**3.98**	2.27	1.35
Diluted earnings per share			
Income before extraordinary gain	**3.96**	2.24	0.81
Net income	**3.96**	2.26	1.35
Weighted-average basic shares	**3,956**	3,863	3,501
Weighted-average diluted shares	**3,977**	3,880	3,522
Cash dividends declared per common share	**$ 0.20**	$ 0.20	$ 1.52

(a) The following other-than-temporary impairment losses are included in securities gains for the periods presented.

Year ended December 31,(in millions)	2010	2009
Total other-than-temporary impairment losses	**$ (94)**	$ (946)
Losses recorded in/(reclassified from) other comprehensive income	**(6)**	368
Total credit losses recognized in income	**$ (100)**	$ (578)

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2010	2009
Assets		
Cash and due from banks	**$ 27,567**	$ 26,206
Deposits with banks	**21,673**	63,230
Federal funds sold and securities purchased under resale agreements (included **$20,299** and $20,536 at fair value)	**222,554**	195,404
Securities borrowed (included **$13,961** and $7,032 at fair value)	**123,587**	119,630
Trading assets (included assets pledged of **$73,056** and $38,315)	**489,892**	411,128
Securities (included **$316,318** and $360,365 at fair value and assets pledged of **$86,891** and $140,631)	**316,336**	360,390
Loans (included **$1,976** and $1,364 at fair value)	**692,927**	633,458
Allowance for loan losses	**(32,266)**	(31,602)
Loans, net of allowance for loan losses	**660,661**	601,856
Accrued interest and accounts receivable (included **zero** and $5,012 at fair value)	**70,147**	67,427
Premises and equipment	**13,355**	11,118
Goodwill	**48,854**	48,357
Mortgage servicing rights	**13,649**	15,531
Other intangible assets	**4,039**	4,621
Other assets (included **$18,201** and $19,165 at fair value and assets pledged of **$1,485** and $1,762)	**105,291**	107,091
Total assets[a]	**$ 2,117,605**	$ 2,031,989
Liabilities		
Deposits (included **$4,369** and $4,455 at fair value)	**$ 930,369**	$ 938,367
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$4,060** and $3,396 at fair value)	**276,644**	261,413
Commercial paper	**35,363**	41,794
Other borrowed funds (included **$9,931** and $5,637 at fair value)	**57,309**	55,740
Trading liabilities	**146,166**	125,071
Accounts payable and other liabilities (included the allowance for lending-related commitments of **$717** and $939 and **$236** and $357 at fair value)	**170,330**	162,696
Beneficial interests issued by consolidated variable interest entities (included **$1,495** and $1,410 at fair value)	**77,649**	15,225
Long-term debt (included **$38,839** and $48,972 at fair value)	**247,669**	266,318
Total liabilities[a]	**1,941,499**	1,866,624
Commitments and contingencies (see Note 31 on pages 280–281 of this Annual Report)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares; issued **780,000** and 2,538,107 shares)	**7,800**	8,152
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Capital surplus	**97,415**	97,982
Retained earnings	**73,998**	62,481
Accumulated other comprehensive income/(loss)	**1,001**	(91)
Shares held in RSU Trust, at cost (**1,192,712** shares and 1,526,944 shares)	**(53)**	(68)
Treasury stock, at cost (**194,639,785** shares and 162,974,783 shares)	**(8,160)**	(7,196)
Total stockholders' equity	**176,106**	165,365
Total liabilities and stockholders' equity	**$ 2,117,605**	$ 2,031,989

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2010 and 2009. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which were eliminated in consolidation.

December 31, (in millions)	2010	2009
Assets		
Trading assets	**$ 9,837**	$ 6,347
Loans	**95,587**	13,004
All other assets	**3,494**	5,043
Total assets	**$ 108,918**	$ 24,394
Liabilities		
Beneficial interests issued by consolidated variable interest entities	**$ 77,649**	$ 15,225
All other liabilities	**1,922**	2,197
Total liabilities	**$ 79,571**	$ 17,422

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. At December 31, 2010, the Firm provided limited program-wide credit enhancement of $2.0 billion related to its Firm-administered multi-seller conduits. For further discussion, see Note 16 on pages 244–259 of this Annual Report.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity and comprehensive income

Year ended December 31, (in millions, except per share data)	2010	2009	2008
Preferred stock			
Balance at January 1	**$ 8,152**	$ 31,939	$ —
Issuance of preferred stock	**—**	—	31,550
Issuance of preferred stock – conversion of the Bear Stearns preferred stock	**—**	—	352
Accretion of preferred stock discount on issuance to the U.S. Treasury	**—**	1,213	37
Redemption of preferred stock issued to the U.S. Treasury	**—**	(25,000)	—
Redemption of other preferred stock	**(352)**	—	—
Balance at December 31	**7,800**	8,152	31,939
Common stock			
Balance at January 1	**4,105**	3,942	3,658
Issuance of common stock	**—**	163	284
Balance at December 31	**4,105**	4,105	3,942
Capital surplus			
Balance at January 1	**97,982**	92,143	78,597
Issuance of common stock	**—**	5,593	11,201
Warrant issued to U.S. Treasury in connection with issuance of preferred stock	**—**	—	1,250
Preferred stock issue cost	**—**	—	(54)
Shares issued and commitments to issue common stock for employee stock-based compensation awards and related tax effects	**706**	474	859
Net change from the Bear Stearns merger:			
Reissuance of treasury stock and the Share Exchange agreement	**—**	—	48
Employee stock awards	**—**	—	242
Other	**(1,273)**	(228)	—
Balance at December 31	**97,415**	97,982	92,143
Retained earnings			
Balance at January 1	**62,481**	54,013	54,715
Cumulative effect of changes in accounting principles	**(4,376)**	—	—
Net income	**17,370**	11,728	5,605
Dividends declared:			
Preferred stock	**(642)**	(1,328)	(674)
Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	**—**	(1,112)	—
Common stock (**$0.20**, $0.20 and $1.52 per share for 2010, 2009 and 2008, respectively)	**(835)**	(820)	(5,633)
Balance at December 31	**73,998**	62,481	54,013
Accumulated other comprehensive income/(loss)			
Balance at January 1	**(91)**	(5,687)	(917)
Cumulative effect of changes in accounting principles	**(144)**	—	—
Other comprehensive income/(loss)	**1,236**	5,596	(4,770)
Balance at December 31	**1,001**	(91)	(5,687)
Shares held in RSU Trust			
Balance at January 1	**(68)**	(217)	—
Resulting from the Bear Stearns merger	**—**	—	(269)
Reissuance from RSU Trust	**15**	149	52
Balance at December 31	**(53)**	(68)	(217)
Treasury stock, at cost			
Balance at January 1	**(7,196)**	(9,249)	(12,832)
Purchase of treasury stock	**(2,999)**	—	—
Reissuance from treasury stock	**2,040**	2,079	2,454
Share repurchases related to employee stock-based compensation awards	**(5)**	(26)	(21)
Net change from the Bear Stearns merger as a result of the reissuance of treasury stock and the Share Exchange agreement	**—**	—	1,150
Balance at December 31	**(8,160)**	(7,196)	(9,249)
Total stockholders' equity	**$ 176,106**	$ 165,365	$ 166,884
Comprehensive income			
Net income	**$ 17,370**	$ 11,728	$ 5,605
Other comprehensive income/(loss)	**1,236**	5,596	(4,770)
Comprehensive income	**$ 18,606**	$ 17,324	$ 835

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2010	2009	2008
Operating activities			
Net income	**$ 17,370**	$ 11,728	$ 5,605
Adjustments to reconcile net income to net cash (used in)/provided by operating activities:			
Provision for credit losses	**16,639**	32,015	20,979
Depreciation and amortization	**4,029**	3,308	3,265
Amortization of intangibles	**936**	1,050	1,263
Deferred tax benefit	**(968)**	(3,622)	(2,637)
Investment securities gains	**(2,965)**	(1,110)	(1,560)
Proceeds on sale of investment	**—**	—	(1,540)
Stock-based compensation	**3,251**	3,355	2,637
Originations and purchases of loans held-for-sale	**(37,085)**	(22,417)	(34,902)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**40,155**	33,902	38,036
Net change in:			
Trading assets	**(72,082)**	133,488	(12,787)
Securities borrowed	**(3,926)**	4,452	15,408
Accrued interest and accounts receivable	**443**	(6,312)	10,221
Other assets	**(12,452)**	32,557	(32,919)
Trading liabilities	**19,344**	(79,314)	24,061
Accounts payable and other liabilities	**17,325**	(26,450)	1,012
Other operating adjustments	**6,234**	6,167	(12,212)
Net cash (used in)/provided by operating activities	**(3,752)**	122,797	23,930
Investing activities			
Net change in:			
Deposits with banks	**41,625**	74,829	(118,929)
Federal funds sold and securities purchased under resale agreements	**(26,957)**	7,082	(44,597)
Held-to-maturity securities:			
Proceeds	**7**	9	10
Available-for-sale securities:			
Proceeds from maturities	**92,740**	87,712	44,414
Proceeds from sales	**118,600**	114,041	96,806
Purchases	**(179,487)**	(346,372)	(248,599)
Proceeds from sales and securitizations of loans held-for-investment	**8,853**	30,434	27,531
Other changes in loans, net	**3,645**	51,251	(59,123)
Net cash (used)/received in business acquisitions or dispositions	**(4,910)**	(97)	2,128
Proceeds from assets sale to the FRBNY	**—**	—	28,850
Net maturities/(purchases) of asset-backed commercial paper guaranteed by the FRBB	**—**	11,228	(11,228)
All other investing activities, net	**(114)**	(762)	(934)
Net cash provided by/(used in) investing activities	**54,002**	29,355	(283,671)
Financing activities			
Net change in:			
Deposits	**(9,637)**	(107,700)	177,331
Federal funds purchased and securities loaned or sold under repurchase agreements	**15,202**	67,785	15,250
Commercial paper and other borrowed funds	**(6,869)**	(67,198)	9,219
Beneficial interests issued by consolidated variable interest entities	**2,426**	(4,076)	(55)
Proceeds from long-term borrowings and trust preferred capital debt securities	**55,181**	51,324	72,407
Payments of long-term borrowings and trust preferred capital debt securities	**(99,043)**	(68,441)	(65,344)
Excess tax benefits related to stock-based compensation	**26**	17	148
Proceeds from issuance of preferred stock and Warrant to the U.S. Treasury	**—**	—	25,000
Proceeds from issuance of other preferred stock	**—**	—	7,746
Redemption of preferred stock issued to the U.S. Treasury	**—**	(25,000)	—
Redemption of other preferred stock	**(352)**	—	—
Proceeds from issuance of common stock	**—**	5,756	11,500
Treasury stock purchased	**(2,999)**	—	—
Dividends paid	**(1,486)**	(3,422)	(5,911)
All other financing activities, net	**(1,666)**	(2,124)	(292)
Net cash (used in)/provided by financing activities	**(49,217)**	(153,079)	246,999
Effect of exchange rate changes on cash and due from banks	**328**	238	(507)
Net increase/(decrease) in cash and due from banks	**1,361**	(689)	(13,249)
Cash and due from banks at the beginning of the year	**26,206**	26,895	40,144
Cash and due from banks at the end of the year	**$ 27,567**	$ 26,206	$ 26,895
Cash interest paid	**$ 12,404**	$ 16,875	$ 37,267
Cash income taxes paid, net	**9,747**	5,434	2,280

Note: Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated noncash assets and liabilities of $87.7 billion and $92.2 billion, respectively.

In 2008, the fair values of noncash assets acquired and liabilities assumed in: (1) the merger with Bear Stearns were $288.2 billion and $287.7 billion, respectively (approximately 26 million shares of common stock valued at approximately $1.2 billion were issued in connection with the Bear Stearns merger); and (2) the Washington Mutual transaction were $260.3 billion and $260.1 billion, respectively.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers, small business and commercial banking, financial transaction processing, asset management and private equity. For a discussion of the Firm's business segment information, see Note 34 on pages 290–293 of this Annual Report.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the United States of America ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by bank regulatory authorities.

Certain amounts in prior periods have been reclassified to conform to the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated. The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity ("VIE").

Voting Interest Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Firm to recognize its proportionate share of the entity's net earnings), or (ii) at fair value if the fair value option was elected at the inception of the Firm's investment. These investments are generally included in other assets, with income or loss included in other income.

The Firm-sponsored asset management funds are generally structured as limited partnerships or limited liability companies, which are typically considered voting interest entities. For the significant majority of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these funds. In the limited cases where the non-affiliated partners or members do not have substantive kick-out or participating rights, the Firm consolidates the funds.

The Firm's investment companies make investments in both public and private entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated Balance Sheets at fair value, and are recorded in other assets.

Variable Interest Entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is a special purpose entity ("SPE"). SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important part of the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

On January 1, 2010, the Firm implemented new consolidation accounting guidance related to VIEs. The new guidance eliminates the concept of qualified special purpose entities ("QSPEs") that were previously exempt from consolidation, and introduces a new framework for consolidation of VIEs. The primary beneficiary of a VIE is required to consolidate the assets and liabilities of the VIE. Under the new guidance, the primary beneficiary is the party that has both (1) the power to direct the activities of an entity that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivative or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

For further details regarding the Firm's application of the accounting guidance effective January 1, 2010, see Note 16 on pages 244–259 of this Annual Report.

The Financial Accounting Standards Board ("FASB") issued an amendment which deferred the requirements of the accounting guidance for certain investment funds, including mutual funds, private equity funds and hedge funds. For the funds to which the deferral applies, the Firm continues to apply other existing authoritative guidance to determine whether such funds should be consolidated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included in the Consolidated Balance Sheets.

For reporting periods prior to January 1, 2010, there were two different accounting frameworks applicable to SPEs: The qualifying special purpose entity ("QSPE") framework and the VIE framework. The applicable framework depended on the nature of the entity and the Firm's relation to that entity. The QSPE framework was applicable when an entity sold financial assets to an SPE meeting certain defined criteria that were designed to ensure that the activities of the entity were essentially predetermined at the inception of the vehicle and that the transferor of the financial assets could not exercise control over the entity and the assets therein. QSPEs were not consolidated by the transferor or other counterparties as long as they did not have the unilateral ability to liquidate or to cause the entity to no longer meet the QSPE criteria. The Firm's securitizations of residential and commercial mortgages, credit card, automobile and student loans generally were evaluated using the QSPE framework. For further details, see Note 16 on pages 244–259 of this Annual Report.

Additionally, the other SPEs were evaluated using the VIE framework, which was based on a risk and reward approach, and required a variable interest holder (i.e., an investor or other counterparty to a VIE) to consolidate the VIE if that party absorbed a majority of the expected losses of the VIE, received the majority of the expected residual returns of the VIE, or both. In making the determination of whether the Firm should consolidate a VIE, the Firm evaluated the VIE's design, capital structure and relationships among the variable interest holders. If the Firm could not identify the party that consolidates a VIE through a qualitative analysis, the Firm performed a quantitative analysis, which computed and allocated expected losses or residual returns to variable interest holders. The allocation of expected cash flows in this analysis was based on the relative rights and preferences of each variable interest holder in the VIE's capital structure. The Firm reconsidered whether it was the primary beneficiary of a VIE only when certain defined events occurred.

Use of estimates in the preparation of consolidated financial statements

The preparation of Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in other comprehensive income/(loss) within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated Statements of Income.

Statements of cash flows

For JPMorgan Chase's Consolidated Statements of Cash Flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Business changes and developments	Note 2	Page 166
Fair value measurement	Note 3	Page 170
Fair value option	Note 4	Page 187
Derivative instruments	Note 6	Page 191
Noninterest revenue	Note 7	Page 199
Interest income and interest expense	Note 8	Page 200
Pension and other postretirement employee benefit plans	Note 9	Page 201
Employee stock-based incentives	Note 10	Page 210
Securities	Note 12	Page 214
Securities financing activities	Note 13	Page 219
Loans	Note 14	Page 220
Allowance for credit losses	Note 15	Page 239
Variable interest entities	Note 16	Page 244
Goodwill and other intangible assets	Note 17	Page 260
Premises and equipment	Note 18	Page 263
Long-term debt	Note 22	Page 265
Income taxes	Note 27	Page 271
Off–balance sheet lending-related financial instruments, guarantees and other commitments	Note 30	Page 275
Litigation	Note 32	Page 282

Note 2 – Business changes and developments

Decrease in common stock dividend

On February 23, 2009, the Board of Directors reduced the Firm's quarterly common stock dividend from $0.38 to $0.05 per share, effective with the dividend paid on April 30, 2009, to shareholders of record on April 6, 2009.

Acquisition of the banking operations of Washington Mutual Bank

On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC for $1.9 billion. The acquisition expanded JPMorgan Chase's consumer branch network into several states, including California, Florida Washington, Georgia, Idaho, Nevada and Oregon and created the third largest branch network in the U.S. The acquisition also extended the reach of the Firm's business banking, commercial banking, credit card, consumer lending and wealth management businesses.

The acquisition was accounted for under the purchase method of accounting, which requires that the assets and liabilities of Washington Mutual be initially reported at fair value.

In 2008, the $1.9 billion purchase price was preliminarily allocated to the Washington Mutual assets acquired and liabilities assumed, which resulted in negative goodwill. In accordance with U.S. GAAP for business combinations that was in effect at the time of the acquisition, noncurrent nonfinancial assets acquired in the Washington Mutual transaction that were not held-for-sale, such as the premises and equipment and other intangibles, were written down against the negative goodwill. The negative goodwill that remained after writing down the nonfinancial assets was recognized as an extraordinary gain of $1.9 billion at December 31, 2008. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion.

The final summary computation of the purchase price and the allocation of the final total purchase price of $1.9 billion to the net assets acquired of Washington Mutual – based on their respective fair values as of September 25, 2008, and the resulting final negative goodwill of $2.0 billion are presented below.

September 25, 2008 (in millions)		
Purchase price		
Purchase price		$ 1,938
Direct acquisition costs		3
Total purchase price		1,941
Net assets acquired:		
Washington Mutual's net assets before fair value adjustments	$ 39,186	
Washington Mutual's goodwill and other intangible assets	(7,566)	
Subtotal	31,620	
Adjustments to reflect assets acquired at fair value:		
Securities	(16)	
Trading assets	(591)	
Loans	(30,998)	
Allowance for loan losses	8,216	
Premises and equipment	680	
Accrued interest and accounts receivable	(243)	
Other assets	4,010	
Adjustments to reflect liabilities assumed at fair value:		
Deposits	(686)	
Other borrowed funds	68	
Accounts payable, accrued expense and other liabilities	(1,124)	
Long-term debt	1,063	
Fair value of net assets acquired		11,999
Negative goodwill before allocation to nonfinancial assets		(10,058)
Negative goodwill allocated to nonfinancial assets[a]		8,076
Negative goodwill resulting from the acquisition[b]		$ (1,982)

(a) The acquisition was accounted for as a purchase business combination, which requires the assets (including identifiable intangible assets) and liabilities (including executory contracts and other commitments) of an acquired business to be recorded at their respective fair values as of the effective date of the acquisition and consolidated with those of JPMorgan Chase. The fair value of the net assets of Washington Mutual's banking operations exceeded the $1.9 billion purchase price, resulting in negative goodwill. Noncurrent, nonfinancial assets not held-for-sale, such as premises and equipment and other intangibles, were written down against the negative goodwill. The negative goodwill that remained after writing down transaction-related core deposit intangibles of approximately $4.9 billion and premises and equipment of approximately $3.2 billion was recognized as an extraordinary gain of $2.0 billion.

(b) The extraordinary gain was recorded net of tax expense in Corporate/Private Equity.

Condensed statement of net assets acquired

The following condensed statement of net assets acquired reflects the final value assigned to the Washington Mutual net assets as of September 25, 2008.

(in millions)	September 25, 2008
Assets	
Cash and due from banks	$ 3,680
Deposits with banks	3,517
Federal funds sold and securities purchased under resale agreements	1,700
Trading assets	5,691
Securities	17,224
Loans (net of allowance for loan losses)	206,456
Accrued interest and accounts receivable	3,253
Mortgage servicing rights	5,874
All other assets	16,596
Total assets	$ 263,991
Liabilities	
Deposits	$ 159,872
Federal funds purchased and securities loaned or sold under repurchase agreements	4,549
Other borrowed funds	81,636
Trading liabilities	585
Accounts payable, accrued expense and other liabilities	6,708
Long-term debt	6,718
Total liabilities	260,068
Washington Mutual net assets acquired	$ 3,923

Merger with The Bear Stearns Companies Inc.

Effective May 30, 2008, BSC Merger Corporation, a wholly owned subsidiary of JPMorgan Chase, merged with The Bear Stearns Companies Inc. ("Bear Stearns") pursuant to the Agreement and Plan of Merger, dated as of March 16, 2008, as amended March 24, 2008, and Bear Stearns became a wholly owned subsidiary of JPMorgan Chase. The merger provided the Firm with a leading global prime brokerage platform; strengthened the Firm's equities and asset management businesses; enhanced capabilities in mortgage origination, securitization and servicing; and expanded the platform of the Firm's energy business. The merger was accounted for under the purchase method of accounting, which requires that the assets and liabilities of Bear Stearns be fair valued. The final total purchase price to complete the merger was $1.5 billion.

The merger with Bear Stearns was accomplished through a series of transactions that were reflected as step acquisitions. On April 8, 2008, pursuant to a share exchange agreement, JPMorgan Chase acquired 95 million newly issued shares of Bear Stearns common stock (or 39.5% of Bear Stearns common stock after giving effect to the issuance) for 20.7 million shares of JPMorgan Chase common stock. Further, between March 24, 2008, and May 12, 2008, JPMorgan Chase acquired approximately 24 million shares of Bear Stearns common stock in the open market at an average purchase price of $12.37 per share. The share exchange and cash purchase transactions resulted in JPMorgan Chase owning approximately 49.4% of Bear Stearns common stock immediately prior to consummation of the merger. Finally, on May 30, 2008, JPMorgan Chase completed the merger. As a result of the merger, each outstanding share of Bear Stearns common stock (other than shares then held by JPMorgan Chase) was converted into the right to receive 0.21753 shares of common stock of JPMorgan Chase. Also, on May 30, 2008, the shares of common stock that JPMorgan Chase and Bear Stearns acquired from each other in the share exchange transaction were cancelled. From April 8, 2008, through May 30, 2008, JPMorgan Chase accounted for the investment in Bear Stearns under the equity method of accounting. During this period, JPMorgan Chase recorded reductions to its investment in Bear Stearns representing its share of Bear Stearns net losses, which was recorded in other income and accumulated other comprehensive income. The difference between the net assets acquired and the fair value of the net assets acquired (including goodwill), presented in the tables below, represent JPMorgan Chase's net losses recorded under the equity method of accounting.

In conjunction with the Bear Stearns merger, in June 2008, the Federal Reserve Bank of New York (the "FRBNY") took control, through a limited liability company ("LLC") formed for this purpose, of a portfolio of $30 billion in assets acquired from Bear Stearns, based on the value of the portfolio as of March 14, 2008. The assets of the LLC were funded by a $28.85 billion term loan from the FRBNY, and a $1.15 billion subordinated loan from JPMorgan Chase. The JPMorgan Chase loan is subordinated to the FRBNY loan and will bear the first $1.15 billion of any losses of the portfolio. Any remaining assets in the portfolio after repayment of the FRBNY loan, the JPMorgan Chase note and the expense of the LLC will be for the account of the FRBNY.

As a result of step acquisition accounting, the final total purchase price of $1.5 billion was allocated to the Bear Stearns assets acquired and liabilities assumed using their fair values as of April 8, 2008, and May 30, 2008, respectively. The final summary computation of the purchase price and the allocation of the final total purchase price of $1.5 billion to the net assets acquired of Bear Stearns are presented below.

May 30, 2008 (in millions, except shares, per share amounts, ratios and where otherwise noted)		
Purchase price		
Shares exchanged in the Share Exchange transaction (April 8, 2008)	95,000	
Other Bear Stearns shares outstanding	145,759	
Total Bear Stearns stock outstanding	240,759	
Cancellation of shares issued in the Share Exchange transaction	(95,000)	
Cancellation of shares acquired by JPMorgan Chase for cash in the open market	(24,061)	
Bear Stearns common stock exchanged as of May 30, 2008	121,698	
Exchange ratio	0.21753	
JPMorgan Chase common stock issued	26,473	
Average purchase price per JPMorgan Chase common share[a]	$ 45.26	
Total fair value of JPMorgan Chase common stock issued		$ 1,198
Bear Stearns common stock acquired for cash in the open market (24 million shares at an average share price of $12.37 per share)		298
Fair value of employee stock awards (largely to be settled by shares held in the RSU Trust[b])		242
Direct acquisition costs		27
Less: Fair value of Bear Stearns common stock held in the RSU Trust and included in the exchange of common stock		(269)[b]
Total purchase price		1,496
Net assets acquired		
Bear Stearns common stockholders' equity	$ 6,052	
Adjustments to reflect assets acquired at fair value:		
Trading assets	(3,877)	
Premises and equipment	509	
Other assets	(288)	
Adjustments to reflect liabilities assumed at fair value:		
Long-term debt	504	
Other liabilities	(2,289)	
Fair value of net assets acquired excluding goodwill		611
Goodwill resulting from the merger[c]		$ 885

(a) The value of JPMorgan Chase common stock was determined by averaging the closing prices of JPMorgan Chase's common stock for the four trading days during the period March 19 through 25, 2008.

(b) Represents shares of Bear Stearns common stock held in an irrevocable grantor trust (the "RSU Trust"), to be used to settle stock awards granted to selected employees and certain key executives under certain heritage Bear Stearns employee stock plans. Shares in the RSU Trust were exchanged for 6 million shares of JPMorgan Chase common stock at the merger exchange ratio of 0.21753. For further discussion of the RSU Trust, see Note 10 on pages 210–212 of this Annual Report.

(c) The goodwill was recorded in Investment Bank and is not tax-deductible.

Condensed statement of net assets acquired

The following condensed statement of net assets acquired reflects the final values assigned to the Bear Stearns net assets as of May 30, 2008.

(in millions)	May 30, 2008
Assets	
Cash and due from banks	$ 534
Federal funds sold and securities purchased under resale agreements	21,204
Securities borrowed	55,195
Trading assets	136,489
Loans	4,407
Accrued interest and accounts receivable	34,677
Goodwill	885
All other assets	35,377
Total assets	$ 288,768
Liabilities	
Federal funds purchased and securities loaned or sold under repurchase agreements	$ 54,643
Other borrowings	16,166
Trading liabilities	24,267
Beneficial interests issued by consolidated VIEs	47,042
Long-term debt	67,015
Accounts payable and other liabilities	78,569
Total liabilities	287,702
Bear Stearns net assets[a]	$ 1,066

(a) Reflects the fair value assigned to 49.4% of the Bear Stearns net assets acquired on April 8, 2008 (net of related amortization), and the fair value assigned to the remaining 50.6% of the Bear Stearns net assets acquired on May 30, 2008. The difference between the net assets acquired, as presented above, and the fair value of the net assets acquired (including goodwill), presented in the previous table, represents JPMorgan Chase's net losses recorded under the equity method of accounting.

Unaudited pro forma condensed combined financial information reflecting the Bear Stearns merger and Washington Mutual transaction

The following unaudited pro forma condensed combined financial information presents the 2008 results of operations of the Firm as they may have appeared, if the Bear Stearns merger and the Washington Mutual transaction had been completed on January 1, 2008.

Year ended December 31, (in millions, except per share data)	2008
Total net revenue	$ 68,149
Loss before extraordinary gain	(14,090)
Net loss	(12,184)
Net loss per common share data:	
Basic earnings per share	
Loss before extraordinary gain	$ (4.26)
Net loss	(3.72)
Diluted earnings per share[a]	
Loss before extraordinary gain	(4.26)
Net loss	(3.72)
Average common shares issued and outstanding	
Basic	3,510.5
Diluted	3,510.5

(a) Common equivalent shares have been excluded from the pro forma computation of diluted loss per share for the year ended December 31, 2008, as the effect would be antidilutive.

The unaudited pro forma combined financial information is presented for illustrative purposes only and does not indicate the financial results of the combined company had the companies actually been combined as of January 1, 2008, nor is it indicative of the results of operations in future periods. Included in the unaudited pro forma combined financial information for the year ended December 31, 2008, were pro forma adjustments to reflect the results of operations of Bear Stearns and Washington Mutual's banking operations, considering the purchase accounting, valuation and accounting conformity adjustments. For the Washington Mutual transaction, the amortization of purchase accounting adjustments to report interest-earning assets acquired and interest-bearing liabilities assumed at current interest rates is reflected for the year ended December 31, 2008. Valuation adjustments and the adjustment to conform allowance methodologies in the Washington Mutual transaction, and valuation and accounting conformity adjustments related to the Bear Stearns merger are reflected in the results for the year ended December 31, 2008.

Internal reorganization related to the Bear Stearns merger

On June 30, 2008, JPMorgan Chase fully and unconditionally guaranteed each series of outstanding preferred stock of Bear Stearns, as well as all of Bear Stearns' outstanding U.S. Securities and Exchange Commission ("SEC") registered U.S. debt securities and obligations relating to trust preferred capital debt securities. Subsequently, on July 15, 2008, JPMorgan Chase completed an internal merger transaction, which resulted in each series of outstanding preferred stock of Bear Stearns being automatically exchanged into newly-issued shares of JPMorgan Chase preferred stock having substantially identical terms. In addition, pursuant to internal transactions in July 2008 and the first quarter of 2009, JPMorgan Chase assumed or guaranteed the remaining outstanding securities of Bear Stearns and its subsidiaries, in each case in accordance with the indentures and other agreements governing those securities. As discussed below, all of the above series of preferred stock, and the depositary shares representing such preferred stock, were redeemed on August 20, 2010.

Other business events

Redemption of Series E, F and G cumulative preferred stock

On August 20, 2010, JPMorgan Chase redeemed at stated redemption value, all outstanding shares of its Series E 6.15% Cumulative Preferred Stock; Series F 5.72% Cumulative Preferred Stock; and Series G 5.49% Cumulative Preferred Stock. For a further discussion of preferred stock, see Note 23 on pages 267–268 of this Annual Report.

RBS Sempra transaction

On July 1, 2010, JPMorgan Chase completed the acquisition of RBS Sempra Commodities' global oil, global metals and European power and gas businesses. The Firm acquired approximately $1.7 billion of net assets which included $3.3 billion of debt which was immediately repaid. This acquisition almost doubled the number of clients the Firm's commodities business can serve and will enable the Firm to offer clients more products in more regions of the world.

Purchase of remaining interest in J.P. Morgan Cazenove

On January 4, 2010, JPMorgan Chase purchased the remaining interest in J.P. Morgan Cazenove, an investment banking business partnership formed in 2005, which resulted in an adjustment to the Firm's capital surplus of approximately $1.3 billion.

Termination of Chase Paymentech Solutions joint venture

The dissolution of the Chase Paymentech Solutions joint venture, a global payments and merchant acquiring joint venture between JPMorgan Chase and First Data Corporation, was completed on November 1, 2008. JPMorgan Chase retained approximately 51% of the business, which it operates under the name Chase Paymentech Solutions. The dissolution of the Chase Paymentech Solutions joint venture was accounted for as a step acquisition in accordance with U.S. GAAP for business combinations, and the Firm recognized an after-tax gain of $627 million in the fourth quarter of 2008 as a result of the dissolution. The gain represents the amount by which the fair value of the net assets acquired (predominantly intangible assets and goodwill) exceeded JPMorgan Chase's carrying value in the net assets transferred to First Data Corporation. Upon dissolution, the Firm consolidated the retained Chase Paymentech Solutions business.

Proceeds from Visa Inc. shares

On March 19, 2008, Visa Inc. ("Visa") completed its initial public offering ("IPO"). Prior to the IPO, JPMorgan Chase held approximately a 13% equity interest in Visa. On March 28, 2008, Visa used a portion of the proceeds from the offering to redeem a portion of the Firm's equity interest, which resulted in the recognition of a pretax gain of $1.5 billion (recorded in other income). In conjunction with the IPO, Visa placed $3.0 billion in escrow to cover liabilities related to certain litigation matters. The escrow was increased by $1.1 billion in 2008, $700 million in 2009 and by $1.3 billion in 2010. Increases in Visa's escrow account results in a dilution of the value of the Firm's ownership of Visa Inc. JPMorgan Chase's interest in the escrow was recorded as a reduction of other expense and reported net to the extent of established litigation reserves.

Purchase of remaining interest in Highbridge Capital Management

In January 2008, JPMorgan Chase purchased an additional equity interest in Highbridge Capital Management, LLC ("Highbridge"), which resulted in the Firm owning 77.5% of Highbridge. In July 2009, JPMorgan Chase completed its purchase of the remaining interest in Highbridge, which resulted in a $228 million adjustment to capital surplus.

Note 3 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are carried at fair value on a recurring basis. Certain assets and liabilities are carried at fair value on a nonrecurring basis, including held-for-sale loans, which are accounted for at the lower of cost or fair value and that are only subject to fair value adjustments under certain circumstances.

The Firm has an established and well-documented process for determining fair values. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on internally developed models that primarily use, as inputs, market-based or independently sourced market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models also incorporate transaction details, such as maturity of the instrument. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. These adjustments include amounts to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters. Valuation adjustments are applied consistently over time.

- Credit valuation adjustments ("CVA") are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few classes of derivative contracts are listed on an exchange, the majority of derivative positions are valued using internally developed models that use as their basis observable market parameters. An adjustment is necessary to reflect the credit quality of each derivative counterparty to arrive at fair value. The adjustment also takes into account contractual factors designed to reduce the Firm's credit exposure to each counterparty, such as collateral and legal rights of offset.
- Debit valuation adjustments ("DVA") are necessary to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. The methodology to determine the adjustment is consistent with CVA and incorporates JPMorgan Chase's credit spread as observed through the credit default swap market.

- Liquidity valuation adjustments are necessary when the Firm may not be able to observe a recent market price for a financial instrument that trades in inactive (or less active) markets or to reflect the cost of exiting larger-than-normal market-size risk positions (liquidity adjustments are not taken for positions classified within level 1 of the fair value hierarchy; see below). The Firm estimates the amount of uncertainty in the initial valuation based on the degree of liquidity in the market in which the financial instrument trades and makes liquidity adjustments to the carrying value of the financial instrument. The Firm measures the liquidity adjustment based on the following factors: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quote; and (3) the volatility of the principal risk component of the financial instrument. Costs to exit larger-than-normal market-size risk positions are determined based on the size of the adverse market move that is likely to occur during the period required to bring a position down to a nonconcentrated level.
- Unobservable parameter valuation adjustments are necessary when positions are valued using internally developed models that use as their basis unobservable parameters – that is, parameters that must be estimated and are, therefore, subject to management judgment. Such positions are normally traded less actively. Examples include certain credit products where parameters such as correlation and recovery rates are unobservable. Unobservable parameter valuation adjustments are applied to mitigate the possibility of error and revision in the estimate of the market price provided by the model.

The Firm has numerous controls in place intended to ensure that its fair values are appropriate. An independent model review group reviews the Firm's valuation models and approves them for use for specific products. All valuation models within the Firm are subject to this review process. A price verification group, independent from the risk-taking function, ensures observable market prices and market-based parameters are used for valuation wherever possible. For those products with material parameter risk for which observable market levels do not exist, an independent review of the assumptions made on pricing is performed. Additional review includes deconstruction of the model valuations for certain structured instruments into their components and benchmarking valuations, where possible, to similar products; validating valuation estimates through actual cash settlement; and detailed review and explanation of recorded gains and losses, which are analyzed daily and over time. Valuation adjustments, which are also determined by the independent price verification group, are based on established policies and applied consistently over time. Any changes to the valuation methodology are reviewed by management to confirm that the changes are justified. As markets and products develop and the pricing for certain products becomes more or less transparent, the Firm continues to refine its valuation methodologies. During 2010, no changes were made to the Firm's valuation models that had, or are expected to have, a material impact on the Firm's Consolidated Balance Sheets or results of operations.

The methods described above to estimate fair value may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Valuation Hierarchy

A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

Following is a description of the valuation methodologies used by the Firm to measure instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Assets

Securities purchased under resale agreements ("resale agreements") and securities borrowed

To estimate the fair value of resale agreements and securities borrowed transactions, cash flows are first evaluated taking into consideration any derivative features of the resale agreement and are then discounted using the appropriate market rates for the applicable maturity. As the inputs into the valuation are primarily based on readily observable pricing information, such resale agreements are classified within level 2 of the valuation hierarchy.

Loans and unfunded lending-related commitments

The majority of the Firm's loans and lending-related commitments are not carried at fair value on a recurring basis on the Consolidated Balance Sheets, nor are they actively traded. The fair value of such loans and lending-related commitments is included in the additional disclosures of fair value of certain financial instruments required by U.S. GAAP on pages 185–186 of this Note. Loans

carried at fair value on a recurring and nonrecurring basis are included in the applicable tables that follow.

Wholesale

There is no liquid secondary market for most loans and lending-related commitments in the Firm's wholesale portfolio. In the limited circumstances where direct secondary market information – including pricing of actual market transactions, broker quotations or quoted market prices for similar instruments – is available (principally for loans in the Firm's secondary trading portfolio), such information is used in the determination of fair value. For the remainder of the portfolio, fair value is estimated using a discounted cash flow ("DCF") model. In addition to the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees), key inputs to the model include interest rates, prepayment rates and credit spreads. The credit spread input is derived from the cost of credit default swaps ("CDS") and, as a result, also incorporates the effects of secondary market liquidity. As many of the Firm's clients do not have bonds traded with sufficient liquidity in the public markets to have observable CDS spreads, the Firm principally develops benchmark credit curves by industry and credit rating to estimate fair value. Also incorporated into the valuation process are additional adjustments to account for the difference in loss severity rates between bonds, on which the cost of credit derivatives is based, and loans as well as loan equivalents (which represent the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become outstanding prior to an obligor default). Certain floating rate loans that are not carried on the balance sheet at fair value are carried at amounts that approximate fair value due to their short term nature and negligible credit risk (e.g. based on historical experience or collateralization).

The Firm's loans and unfunded lending-related commitments carried at fair value are classified within level 2 or 3 of the valuation hierarchy, depending on the level of liquidity and activity in the markets for a particular product.

Consumer

The only products in the Firm's consumer loan portfolio with a meaningful level of secondary market activity in the current economic environment are certain conforming residential mortgages. These loans are classified as trading assets and carried at fair value on the Consolidated Balance Sheets. They are predominantly classified within level 2 of the valuation hierarchy based on the level of market liquidity and activity.

The fair value of the Firm's other consumer loans (except for credit card receivables) is generally determined by discounting the loan principal and interest cash flows expected to be collected at a market observable discount rate, when available. Portfolio-specific factors that a market participant would consider in determining fair value (e.g., expected lifetime credit losses, estimated prepayments, servicing costs and market liquidity) are either modeled into the cash flow projections or incorporated as an adjustment to the discount rate. For products that continue to be offered in the market, discount rates are derived from market-observable primary origination rates. Where primary origination rates are not available (i.e., subprime mortgages, subprime home equity and option adjustable-rate mortgages ("option ARMs")) the valuation is based on the Firm's estimate of a market participant's required return on equity for similar products (i.e., a hypothetical origination spread). Estimated lifetime credit losses consider expected and current default rates for existing portfolios, collateral prices (where applicable) and expectations about changes in the economic environment (e.g., unemployment rates).

The fair value of credit card receivables is determined using a discounted expected cash flow methodology. Key estimates and assumptions include: projected interest income and late fee revenue, funding, servicing, credit costs, and loan payment rates. The projected loan payment rates are used to determine the estimated life of the credit card loan receivables, which are then discounted using a risk-appropriate discount rate. The discount rate is derived from the Firm's estimate of a market participant's expected return on credit card receivables. As the credit card portfolio has a short-term life, an amount equal to the allowance for loan losses is considered a reasonable proxy for the credit cost component.

Loans that are not carried on the Consolidated Balance Sheets at fair value are not classified within the fair value hierarchy.

Mortgage loans carried at fair value

For certain loans that are expected to be securitized, fair value is estimated using a combination of observed transaction prices, independent pricing services and relevant broker quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided from independent pricing services. When relevant market activity is not occurring or is limited, fair value is estimated by projecting the expected cash flows and discounting those cash flows at a rate reflective of current market liquidity. To estimate the projected cash flows of a residential mortgage loan (inclusive of assumptions of prepayment, default rates and loss severity), specific consideration is given to both borrower-specific and other market factors, including, but not limited to: the borrower's FICO score; the type of collateral supporting the loans; the level of documentation for the loan; and market-derived expectations for home price appreciation or depreciation in the respective geography of the borrower. For commercial mortgages, consideration is given to both borrower-specific and other market factors, including but not limited to: the borrower's debt-to-service coverage ratio; the type of commercial property (e.g., retail, office, lodging, multi-family, etc.); an estimate of the current loan-to-value ratio; and market-derived expectations for property price appreciation or depreciation in the respective geographic location. In addition, commercial mortgage loans typically have lock-out periods where the borrower is restricted from prepaying the loan due to prepayment penalties. These features reduce prepayment risk for commercial mortgages rela-

tive to that of residential mortgages. These loans are classified within level 2 or 3 of the valuation hierarchy, depending on the level of liquidity and activity in the markets for the particular product.

Securities

Where quoted prices for identical securities are available in an active market, securities are classified in level 1 of the valuation hierarchy. Level 1 securities include highly liquid government bonds; mortgage products for which there are quoted prices in active markets such as U.S. government agency or U.S. government-sponsored enterprise (collectively, "U.S. government agencies") markets; pass-through mortgage-backed securities ("MBS"); and exchange-traded equities (e.g., common and preferred stocks).

If quoted market prices are not available for the specific security, the Firm may estimate the value of such instruments using a combination of observed transaction prices, independent pricing services and relevant broker quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided from independent pricing services. The Firm may also use pricing models or discounted cash flows. The majority of such instruments are classified within level 2 of the valuation hierarchy; however, in cases where there is limited activity or less transparency around inputs to the valuation, securities are classified within level 3 of the valuation hierarchy.

For mortgage-backed securities, where market activity is not occurring or is limited, fair value is estimated considering the value of the collateral and the specific attributes of the securities held by the Firm. The value of the collateral pool supporting the securities is analyzed using the same techniques and factors described above for residential mortgage loans, albeit in a more aggregated manner across the pool. For example, for residential MBS, factors evaluated may include average FICO scores, average delinquency rates, average loss severities and prepayment rates, among other metrics. For commercial MBS, factors evaluated may include average delinquencies, loan or geographic concentrations, and average debt-service coverage ratios, among other metrics. In addition, as each securitization vehicle distributes cash in a manner or order that is predetermined at the inception of the vehicle, the priority in which each particular MBS is allocated cash flows, and the level of credit enhancement in place to support those cash flows, are key considerations in deriving the value of MBS. Finally, the risk premium that investors demand for securitized products in the current market is factored into the valuation. To benchmark its valuations, the Firm looks to transactions for similar instruments and uses independent pricing provided by third-party vendors, broker quotes and relevant market indices, such as the ABX index, as applicable. While none of those sources are solely indicative of fair value, they serve as directional indicators for the appropriateness of the Firm's estimates.

For certain collateralized mortgage and debt obligations, asset-backed securities ("ABS") and high-yield debt securities, the determination of fair value may require benchmarking to similar instruments or analyzing default and recovery rates. For cash collateralized debt obligations ("CDOs"), external price information is not available. Therefore, cash CDOs are valued using market-standard models, such as Intex, to model the specific collateral composition and cash flow structure of each deal; key inputs to the model are market spread data for each credit rating, collateral type and other relevant contractual features. Asset-backed securities are valued based on external prices or market spread data, using current market assumptions on prepayments and defaults. For ABS where the external price data is not observable or the limited available data is opaque, the collateral performance is monitored and considered in the valuation of the security. To benchmark its valuations, the Firm looks to transactions for similar instruments and uses independent prices provided by third-party vendors, broker quotes and relevant market indices, such as the ABX index, as applicable. While none of those sources are solely indicative of fair value, they serve as directional indicators for the appropriateness of the Firm's estimates. The majority of collateralized mortgage and debt obligations, high-yield debt securities and ABS are currently classified in level 3 of the valuation hierarchy.

Collateralized loan obligations ("CLOs") are securities backed by corporate loans, and they are predominantly held in the Firm's available-for-sale ("AFS") securities portfolio. For these securities, external pricing information is not readily available. They are therefore valued using market-standard models to model the specific collateral composition and cash flow structure of each deal; key inputs to the model are market spread data for each credit rating, collateral type and other relevant contractual features. For further discussion, see Note 12 on pages 214–218 of this Annual Report.

Commodities

Commodities inventory is generally carried at the lower of cost or fair value. The fair value of commodities inventory is determined primarily using pricing and data derived from the markets on which the commodities are traded. The majority of commodities inventory is classified within level 1 of the valuation hierarchy.

The Firm also has positions in commodities-based derivatives that can be traded on an exchange or over-the-counter ("OTC") and carried at fair value. The pricing inputs to these derivatives include forward curves of underlying commodities, basis curves, volatilities, correlations, and occasionally other model parameters. The valuation of these derivatives is based on calibrating to market transactions, as well as to independent pricing information from sources such as brokers and consensus pricing services. Where inputs are historical time series data, they are adjusted for uncertainty where appropriate. The majority of commodities-based derivatives are classified within level 2 of the valuation hierarchy.

Derivatives

Exchange-traded derivatives valued using quoted prices are classified within level 1 of the valuation hierarchy. However, few classes of derivative contracts are listed on an exchange; thus, the majority of the Firm's derivative positions are valued using internally developed models that use as their basis readily observable market parameters – that is, parameters that are actively quoted and can be validated to external sources, including industry pricing services. Depending on the types and contractual terms of derivatives, fair value can be modeled using a series of techniques, such as the Black-Scholes option pricing model, simulation models or a combination of various models, which are consistently applied. Where derivative products have been established for some time, the Firm uses models that are widely accepted in the financial services industry. These models reflect the contractual terms of the derivatives, including the period to maturity, and market-based parameters such as interest rates, volatility, and the credit quality of the counterparty. Further, many of these models do not contain a high level of subjectivity, as the methodologies used in the models do not require significant judgment, and inputs to the models are readily observable from actively quoted markets, as is the case for "plain vanilla" interest rate swaps, option contracts and CDS. Such instruments are generally classified within level 2 of the valuation hierarchy.

Derivatives that are valued based on models with significant unobservable market parameters and that are normally traded less actively, have trade activity that is one way, and/or are traded in less-developed markets are classified within level 3 of the valuation hierarchy. Level 3 derivatives include, for example, CDS referenced to certain MBS, certain types of CDO transactions, options on baskets of single-name stocks, and callable exotic interest rate options.

Other complex products, such as those sensitive to correlation between two or more underlying parameters, also fall within level 3 of the valuation hierarchy, and include structured credit derivatives which are illiquid and non-standard in nature (e.g., synthetic CDOs collateralized by a portfolio of credit default swaps "CDS"). For most CDO transactions, while inputs such as CDS spreads may be observable, the correlation between the underlying debt instruments is unobservable. Correlation levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices. For all structured credit derivatives, actual transactions, where available, are used regularly to recalibrate all unobservable parameters.

Correlation sensitivity is also material to the overall valuation of options on baskets of single-name stocks; the valuation of these baskets is typically not observable due to their non-standardized structuring. Correlation for products such as these is typically estimated based on an observable basket of stocks and then adjusted to reflect the differences between the underlying equities.

For callable exotic interest rate options, while most of the assumptions in the valuation can be observed in active markets (e.g., interest rates and volatility), the callable option transaction flow is essentially one-way, and as such, price observability is limited. As pricing information is limited, assumptions are based on the dynamics of the underlying markets (e.g., the interest rate markets) including the range and possible outcomes of the applicable inputs. In addition, the models used are calibrated, as relevant, to liquid benchmarks, and valuation is tested against monthly independent pricing services and actual transactions.

Mortgage servicing rights and certain retained interests in securitizations

Mortgage servicing rights ("MSRs") and certain retained interests from securitization activities do not trade in an active, open market with readily observable prices. Accordingly, the Firm estimates the fair value of MSRs and certain other retained interests in securitizations using DCF models.

- For MSRs, the Firm uses an option-adjusted spread ("OAS") valuation model in conjunction with the Firm's proprietary prepayment model to project MSR cash flows over multiple interest rate scenarios; these scenarios are then discounted at risk-adjusted rates to estimate the fair value of the MSRs. The OAS model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenue, costs to service and other economic factors. The Firm reassesses and periodically adjusts the underlying inputs and assumptions used in the OAS model to reflect market conditions and assumptions that a market participant would consider in valuing the MSR asset. Due to the nature of the valuation inputs, MSRs are classified within level 3 of the valuation hierarchy.
- For certain retained interests in securitizations, the Firm estimates the fair value for those retained interests by calculating the present value of future expected cash flows using modeling techniques. Such models incorporate management's best estimates of key variables, such as expected credit losses, prepayment speeds and the appropriate discount rates, considering the risk involved. Changes in the assumptions used may have a significant impact on the Firm's valuation of retained interests, and such interests are therefore typically classified within level 3 of the valuation hierarchy.

For both MSRs and certain other retained interests in securitizations, the Firm compares its fair value estimates and assumptions to observable market data where available and to recent market activity and actual portfolio experience. For further discussion of the most significant assumptions used to value retained interests and MSRs, as well as the applicable stress tests for those assumptions, see Note 16 on pages 244–259, and Note 17 on pages 260–263 of this Annual Report.

Private equity investments

The valuation of nonpublic private equity investments, which are held primarily by the Private Equity business within the Corporate/Private Equity line of business, requires significant management judgment due to the absence of quoted market prices, the inherent lack of liquidity and the long-term nature of such assets. As such, nonpublic private equity investments are valued initially based on cost. Each quarter, valuations are reviewed using available and relevant market data to determine if the carrying value of these investments should be adjusted. Such market data primarily include observations of the trading multiples of public companies considered comparable to the private companies being valued and the operating performance of the underlying portfolio company, including its historical and projected net income and its earnings before interest, taxes, depreciation and amortization ("EBITDA"). Valuations are adjusted to account for company-specific issues, the lack of liquidity inherent in a nonpublic investment, and the fact that comparable public companies are not identical to the companies being valued. In addition, a variety of additional factors are reviewed by management, including, but not limited to, financing and sales transactions with third parties, future expectations of the particular investment, changes in market outlook and the third-party financing environment. Nonpublic private equity investments are included in level 3 of the valuation hierarchy.

Private equity investments also include publicly held equity investments, generally obtained through the initial public offering of privately held equity investments. Investments in securities of publicly held companies that trade in liquid markets are marked to market at the quoted public value less adjustments for regulatory or contractual sales restrictions. Discounts for restrictions are quantified by analyzing the length of the restriction period and the volatility of the equity security. Publicly held investments are predominantly classified in level 2 of the valuation hierarchy.

Other fund investments

The Firm holds investments in mutual/collective investment funds, private equity funds, hedge funds and real estate funds. Where the funds produce a daily net asset value ("NAV") that is validated by a sufficient level of observable activity (purchases and sales at NAV), the NAV is used to value the fund investment and it is classified in level 1 of the valuation hierarchy. Where adjustments to the NAV are required, for example, with respect to interests in funds subject to restrictions on redemption (such as lock-up periods or withdrawal limitations) and/or observable activity for the fund investment is limited, investments are classified within level 2 or 3 of the valuation hierarchy.

Liabilities

Securities sold under repurchase agreements ("repurchase agreements")

To estimate the fair value of repurchase agreements, cash flows are first evaluated taking into consideration any derivative features of the repurchase agreements and are then discounted using the appropriate market rates for the applicable maturity. Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to, or in excess of, the principal amount loaned; as a result, there would be no adjustment, or an immaterial adjustment, to reflect the credit quality of the Firm (i.e., DVA) related to these agreements. As the inputs into the valuation are primarily based on observable pricing information, repurchase agreements are classified within level 2 of the valuation hierarchy.

Beneficial interests issued by consolidated VIEs

The fair value of beneficial interests issued by consolidated VIEs ("beneficial interests") is estimated based on the fair value of the underlying assets held by the VIEs. The valuation of beneficial interests does not include an adjustment to reflect the credit quality of the Firm, as the holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Where the inputs into the valuation are based on observable market pricing information, the beneficial interests are classified within level 2 of the valuation hierarchy. Where significant inputs into the valuation are unobservable, the beneficial interests are classified within level 3 of the valuation hierarchy.

Deposits, other borrowed funds and long-term debt

To estimate the fair value of long-term debt, cash flows are discounted using the appropriate market rates for the applicable maturities, with an adjustment to reflect the credit quality of the Firm (i.e., the DVA). Included within deposits, other borrowed funds and long-term debt are structured notes issued by the Firm that are financial instruments containing embedded derivatives. In addition to the above, the estimation of the fair value of structured notes takes into consideration any derivative features. Where the inputs into the valuation are primarily based on observable market prices, the structured notes are classified within level 2 of the valuation hierarchy. Where significant inputs are unobservable, the structured notes are classified within level 3 of the valuation hierarchy.

The following tables present assets and liabilities measured at fair value as of December 31, 2010 and 2009, by major product category and by the fair value hierarchy (as described above).

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2010 (in millions)	Level 1[i]	Level 2[i]	Level 3[i]	Netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ —	$ 20,299	$ —	$ —	$ 20,299
Securities borrowed	—	13,961	—	—	13,961
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	36,813	10,738	174	—	47,725
Residential – nonagency	—	2,807	687	—	3,494
Commercial – nonagency	—	1,093	2,069	—	3,162
Total mortgage-backed securities	36,813	14,638	2,930	—	54,381
U.S. Treasury and government agencies[a]	12,863	9,026	—	—	21,889
Obligations of U.S. states and municipalities	—	11,715	2,257	—	13,972
Certificates of deposit, bankers' acceptances and commercial paper	—	3,248	—	—	3,248
Non-U.S. government debt securities	31,127	38,482	697	—	70,306
Corporate debt securities	—	42,280	4,946	—	47,226
Loans[b]	—	21,736	13,144	—	34,880
Asset-backed securities	—	2,743	7,965	—	10,708
Total debt instruments	80,803	143,868	31,939	—	256,610
Equity securities	124,400	3,153	1,685	—	129,238
Physical commodities[c]	18,327	2,708	—	—	21,035
Other	—	2,275	253	—	2,528
Total debt and equity instruments[d]	223,530	152,004	33,877	—	409,411
Derivative receivables:					
Interest rate	2,278	1,120,282	5,422	(1,095,427)	32,555
Credit[e]	—	111,827	17,902	(122,004)	7,725
Foreign exchange	1,121	163,114	4,236	(142,613)	25,858
Equity	30	38,041	5,562	(39,429)	4,204
Commodity	1,324	56,076	2,197	(49,458)	10,139
Total derivative receivables[f]	4,753	1,489,340	35,319	(1,448,931)	80,481
Total trading assets	228,283	1,641,344	69,196	(1,448,931)	489,892
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	104,736	15,490	—	—	120,226
Residential – nonagency	—	48,969	5	—	48,974
Commercial – nonagency	—	5,403	251	—	5,654
Total mortgage-backed securities	104,736	69,862	256	—	174,854
U.S. Treasury and government agencies[a]	522	10,826	—	—	11,348
Obligations of U.S. states and municipalities	31	11,272	256	—	11,559
Certificates of deposit	6	3,641	—	—	3,647
Non-U.S. government debt securities	13,107	7,670	—	—	20,777
Corporate debt securities	1	61,793	—	—	61,794
Asset-backed securities:					
Credit card receivables	—	7,608	—	—	7,608
Collateralized loan obligations	—	128	13,470	—	13,598
Other	—	8,777	305	—	9,082
Equity securities	1,998	53	—	—	2,051
Total available-for-sale securities	120,401	181,630	14,287	—	316,318
Loans	—	510	1,466	—	1,976
Mortgage servicing rights	—	—	13,649	—	13,649
Other assets:					
Private equity investments[g]	49	826	7,862	—	8,737
All other	5,093	192	4,179	—	9,464
Total other assets	5,142	1,018	12,041	—	18,201
Total assets measured at fair value on a recurring basis[h]	$ 353,826	$1,858,762	$ 110,639	$(1,448,931)	$ 874,296

December 31, 2010 (in millions)	Fair value hierarchy			Netting adjustments	Total fair value
	Level 1[i]	Level 2[i]	Level 3[i]		
Deposits	$ —	$ 3,736	$ 633	$ —	$ 4,369
Federal funds purchased and securities loaned or sold under repurchase agreements	—	4,060	—	—	4,060
Other borrowed funds	—	8,959	972	—	9,931
Trading liabilities:					
Debt and equity instruments[d]	58,468	18,425	54	—	76,947
Derivative payables:					
Interest rate	2,625	1,085,233	2,586	(1,070,057)	20,387
Credit[e]	—	112,545	12,516	(119,923)	5,138
Foreign exchange	972	158,908	4,850	(139,715)	25,015
Equity	22	39,046	7,331	(35,949)	10,450
Commodity	862	54,611	3,002	(50,246)	8,229
Total derivative payables[f]	4,481	1,450,343	30,285	(1,415,890)	69,219
Total trading liabilities	62,949	1,468,768	30,339	(1,415,890)	146,166
Accounts payable and other liabilities	—	—	236	—	236
Beneficial interests issued by consolidated VIEs	—	622	873	—	1,495
Long-term debt	—	25,795	13,044	—	38,839
Total liabilities measured at fair value on a recurring basis	$ 62,949	$ 1,511,940	$ 46,097	$(1,415,890)	$ 205,096

December 31, 2009 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ —	$ 20,536	$ —	$ —	$ 20,536
Securities borrowed	—	7,032	—	—	7,032
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	33,092	8,373	260	—	41,725
Residential – nonagency	—	2,284	1,115	—	3,399
Commercial – nonagency	—	537	1,770	—	2,307
Total mortgage-backed securities	33,092	11,194	3,145	—	47,431
U.S. Treasury and government agencies[a]	13,701	9,559	—	—	23,260
Obligations of U.S. states and municipalities	—	5,681	1,971	—	7,652
Certificates of deposit, bankers' acceptances and commercial paper	—	5,419	—	—	5,419
Non-U.S. government debt securities	25,684	32,487	734	—	58,905
Corporate debt securities	—	48,754	5,241	—	53,995
Loans[b]	—	18,330	13,218	—	31,548
Asset-backed securities	—	1,428	7,975	—	9,403
Total debt instruments	72,477	132,852	32,284	—	237,613
Equity securities	75,053	3,450	1,956	—	80,459
Physical commodities[c]	9,450	586	—	—	10,036
Other	—	1,884	926	—	2,810
Total debt and equity instruments[d]	156,980	138,772	35,166	—	330,918
Derivative receivables[e][f]	2,344	1,516,490	46,684	(1,485,308)	80,210
Total trading assets	159,324	1,655,262	81,850	(1,485,308)	411,128
Available-for-sale securities :					
Mortgage-backed securities:					
U.S. government agencies[a]	158,957	8,941	—	—	167,898
Residential – nonagency	—	14,773	25	—	14,798
Commercial – nonagency	—	4,590	—	—	4,590
Total mortgage-backed securities	158,957	28,304	25	—	187,286
U.S. Treasury and government agencies[a]	405	29,592	—	—	29,997
Obligations of U.S. states and municipalities	—	6,188	349	—	6,537
Certificates of deposit	—	2,650	—	—	2,650
Non-U.S. government debt securities	5,506	18,997	—	—	24,503
Corporate debt securities	1	62,007	—	—	62,008
Asset-backed securities:					
Credit card receivables	—	25,742	—	—	25,742
Collateralized debt and loan obligations	—	5	12,144	—	12,149
Other	—	6,206	588	—	6,794
Equity securities	2,466	146	87	—	2,699
Total available-for-sale securities	167,335	179,837	13,193	—	360,365
Loans	—	374	990	—	1,364
Mortgage servicing rights	—	—	15,531	—	15,531
Other assets:					
Private equity investments[g]	165	597	6,563	—	7,325
All other[j]	7,241	90	9,521	—	16,852
Total other assets	7,406	687	16,084	—	24,177
Total assets measured at fair value on a recurring basis[h]	$ 334,065	$ 1,863,728	$ 127,648	$ (1,485,308)	$ 840,133

December 31, 2009 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Netting adjustments	Total fair value
Deposits	$ —	$ 3,979	$ 476	$ —	$ 4,455
Federal funds purchased and securities loaned or sold under repurchase agreements	—	3,396	—	—	3,396
Other borrowed funds	—	5,095	542	—	5,637
Trading liabilities:					
Debt and equity instruments[d]	50,577	14,359	10	—	64,946
Derivative payables[e][f]	2,038	1,481,813	35,332	(1,459,058)	60,125
Total trading liabilities	52,615	1,496,172	35,342	(1,459,058)	125,071
Accounts payable and other liabilities	—	2	355	—	357
Beneficial interests issued by consolidated VIEs	—	785	625	—	1,410
Long-term debt	—	30,685	18,287	—	48,972
Total liabilities measured at fair value on a recurring basis	$ 52,615	$ 1,540,114	$ 55,627	$ (1,459,058)	$ 189,298

(a) At December 31, 2010 and 2009, included total U.S. government-sponsored enterprise obligations of $137.3 billion and $195.8 billion respectively, which were predominantly mortgage-related.
(b) At December 31, 2010 and 2009, included within trading loans were $22.7 billion and $20.7 billion, respectively, of residential first-lien mortgages and $2.6 billion and $2.7 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $13.1 billion and $11.1 billion, respectively, and reverse mortgages of $4.0 billion and $4.5 billion, respectively.
(c) Physical commodities inventories are generally accounted for at the lower of cost or fair value.
(d) Balances reflect the reduction of securities owned (long positions) by the amount of securities sold but not yet purchased (short positions) when the long and short positions have identical Committee on Uniform Security Identification Procedures ("CUSIPs").
(e) The level 3 amounts for derivative receivables and derivative payables related to credit primarily include structured credit derivative instruments. For further information on the classification of instruments within the valuation hierarchy, see pages 171–175 of this Note.
(f) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. Therefore, the balances reported in the fair value hierarchy table above are gross of any counterparty netting adjustments. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivable and derivative payable balances would be $12.7 billion and $16.0 billion at December 31, 2010 and 2009, respectively, exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.
(g) Private equity instruments represent investments within the Corporate/Private Equity line of business. The cost basis of the private equity investment portfolio totaled $10.0 billion and $8.8 billion at December 31, 2010 and 2009, respectively.
(h) At December 31, 2010 and 2009, balances included investments valued at net asset value of $12.1 billion and $16.8 billion, respectively, of which $5.9 billion and $9.0 billion, respectively, were classified in level 1, $2.0 billion and $3.2 billion, respectively, in level 2 and $4.2 billion and $4.6 billion in level 3.
(i) For the year ended December 31, 2010, there were no significant transfers between levels 1 and 2. Transfers from level 3 into level 2 included $1.2 billion of trading loans due to increased price transparency. There were no significant transfers into level 3.
(j) Included assets within accrued interest receivable and other assets at December 31, 2009.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the balance sheet amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2010, 2009 and 2008. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2010 (in millions)	Fair value at January 1, 2010	Total realized/ unrealized gains/(losses)	Purchases, issuances settlements, net	Transfers into and/or out of level 3[e]	Fair value at December 31, 2010	Change in unrealized gains/(losses) related to financial instruments held at December 31, 2010
	Fair value measurements using significant unobservable inputs					
Assets:						
Trading assets:						
Debt instruments:						
Mortgage-backed securities:						
U.S. government agencies	$ 260	$ 24	$ (107)	$ (3)	$ 174	$ (31)
Residential – nonagency	1,115	178	(564)	(42)	687	110
Commercial – nonagency	1,770	230	(33)	102	2,069	130
Total mortgage-backed securities	3,145	432	(704)	57	2,930	209
Obligations of U.S. states and municipalities	1,971	2	142	142	2,257	(30)
Non-U.S. government debt securities	734	(132)	140	(45)	697	(105)
Corporate debt securities	5,241	(325)	115	(85)	4,946	28
Loans	13,218	(40)	1,296	(1,330)	13,144	(385)
Asset-backed securities	7,975	333	(354)	11	7,965	292
Total debt instruments	32,284	270	635	(1,250)	31,939	9
Equity securities	1,956	133	(351)	(53)	1,685	199
Other	926	10	(762)	79	253	98
Total debt and equity instruments	35,166	413[a]	(478)	(1,224)	33,877	306[a]
Net derivative receivables:						
Interest rate	2,040	3,057	(2,520)	259	2,836	487
Credit	10,350	(1,757)	(3,102)	(105)	5,386	(1,048)
Foreign exchange	1,082	(913)	(434)	(349)	(614)	(464)
Equity	(1,791)	7	(121)	136	(1,769)	(11)
Commodity	(329)	(700)	134	90	(805)	(76)
Total net derivative receivables	11,352	(306)[a]	(6,043)	31	5,034	(1,112)[a]
Available-for-sale securities:						
Asset-backed securities	12,732	(146)	1,189	—	13,775	(129)
Other	461	(49)	37	63	512	18
Total available-for-sale securities	13,193	(195)[b]	1,226	63	14,287	(111)[b]
Loans	990	145[a]	323	8	1,466	37[a]
Mortgage servicing rights	15,531	(2,268)[c]	386	—	13,649	(2,268)[c]
Other assets:						
Private equity investments	6,563	1,038[a]	715	(454)	7,862	688[a]
All other	9,521	(113)[d]	(5,132)	(97)	4,179	37[d]

Year ended December 31, 2010 (in millions)	Fair value at January 1, 2010	Total realized/ unrealized (gains)/losses	Purchases, issuances settlements, net	Transfers into and/or out of level 3[e]	Fair value at December 31, 2010	Change in unrealized (gains)/losses related to financial instruments held at December 31, 2010
	Fair value measurements using significant unobservable inputs					
Liabilities[f]:						
Deposits	$ 476	$ 54[a]	$ (226)	$ 329	$ 633	$ (77)[a]
Other borrowed funds	542	(123)[a]	795	(242)	972	445[a]
Trading liabilities:						
Debt and equity instruments	10	2[a]	19	23	54	—[a]
Accounts payable and other liabilities	355	(138)[d]	19	—	236	37[d]
Beneficial interests issued by consolidated VIEs	625	(7)[a]	87	168	873	(76)[a]
Long-term debt	18,287	(532)[a]	(4,796)	85	13,044	662[a]

Year ended December 31, 2009 (in millions)	Fair value, January 1, 2009	Total realized/ unrealized gains/(losses)	Purchases, issuances settlements, net	Transfers into and/or out of level 3[e]	Fair value, December 31, 2009	Change in unrealized gains/(losses) related to financial instruments held at December 31, 2009
	Fair value measurements using significant unobservable inputs					
Assets:						
Trading assets:						
Debt instruments:						
Mortgage-backed securities:						
U.S. government agencies	$ 163	$ (38)	$ 62	$ 73	$ 260	$ (38)
Residential – nonagency	3,339	(782)	(245)	(1,197)	1,115	(871)
Commercial – nonagency	2,487	(242)	(325)	(150)	1,770	(313)
Total mortgage-backed securities	5,989	(1,062)	(508)	(1,274)	3,145	(1,222)
Obligations of U.S. states and municipalities	2,641	(22)	(648)	—	1,971	(123)
Non-U.S. government debt securities	707	38	(75)	64	734	34
Corporate debt securities	5,280	38	(3,416)	3,339	5,241	(72)
Loans	17,091	(871)	(3,497)	495	13,218	(1,167)
Asset-backed securities	7,106	1,436	(378)	(189)	7,975	734
Total debt instruments	38,814	(443)	(8,522)	2,435	32,284	(1,816)
Equity securities	1,380	(149)	(512)	1,237	1,956	(51)
Other	1,226	(79)	(253)	32	926	(119)
Total debt and equity instruments	41,420	(671)[a]	(9,287)	3,704	35,166	(1,986)[a]
Total net derivative receivables	9,507	(11,406)[a]	(3,448)	16,699	11,352	(10,835)[a]
Available-for-sale securities:						
Asset-backed securities	11,447	(2)	1,112	175	12,732	(48)
Other	944	(269)	302	(516)	461	43
Total available-for-sale securities	12,391	(271)[b]	1,414	(341)	13,193	(5)[b]
Loans	2,667	(448)[a]	(1,906)	677	990	(488)[a]
Mortgage servicing rights	9,403	5,807[c]	321	—	15,531	5,807[c]
Other assets:						
Private equity investments	6,369	(407)[a]	582	19	6,563	(369)[a]
All other[g]	8,114	(676)[d]	2,439	(356)	9,521	(612)[d]

Year ended December 31, 2009 (in millions)	Fair value at January 1, 2009	Total realized/ unrealized (gains)/losses	Purchases, issuances settlements, net	Transfers into and/or out of level 3[e]	Fair value at December 31, 2009	Change in unrealized (gains)/losses related to financial instruments held at December 31, 2009
	Fair value measurements using significant unobservable inputs					
Liabilities[f]:						
Deposits	$ 1,235	$ 47[a]	$ (870)	$ 64	$ 476	$ (36)[a]
Other borrowed funds	101	(73)[a]	621	(107)	542	9[a]
Trading liabilities:						
Debt and equity instruments	288	64[a]	(339)	(3)	10	12[a]
Accounts payable and other liabilities	—	(55)[a]	410	—	355	(29)[a]
Beneficial interests issued by consolidated VIEs	—	344[a]	(598)	879	625	327[a]
Long-term debt	16,548	1,367[a]	(2,738)	3,110	18,287	1,728[a]

Year ended December 31, 2008 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at January 1, 2008	Total realized/ unrealized gains/(losses)	Purchases, issuances settlements, net	Transfers into and/or out of level 3[e]	Fair value at December 31, 2008	Change in unrealized gains/(losses) related to financial instruments held at December 31, 2008
Assets:						
Trading assets:						
Debt and equity instruments	$ 24,066	$(12,805)[a]	$ 6,201	$ 23,958	$ 41,420	$ (9,860)[a]
Total net derivative receivables	633	4,556[a]	2,290	2,028	9,507	1,814[a]
Available-for-sale securities	101	(1,232)[b]	3,772	9,750	12,391	(422)[b]
Loans	8,380	(1,547)[a]	12	(4,178)	2,667	(1,324)[a]
Mortgage servicing rights	8,632	(6,933)[c]	7,704	—	9,403	(6,933)[c]
Other assets:						
Private equity investments	6,763	(638)[a]	320	(76)	6,369	(1,089)[a]
All other[g]	5,978	(940)[d]	2,787	289	8,114	(753)[d]

Year ended December 31, 2008 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at January 1, 2008	Total realized/ unrealized (gains)/losses	Purchases, issuances settlements, net	Transfers into and/or out of level 3[e]	Fair value at December 31, 2008	Change in unrealized (gains)/losses related to financial instruments held at December 31, 2008
Liabilities[f]:						
Deposits	$ 1,161	$ (57)[a]	$ 79	$ 52	$ 1,235	$ (69)[a]
Other borrowed funds	105	(7)[a]	53	(50)	101	(24)[a]
Trading liabilities:						
Debt and equity instruments	480	(73)[a]	(33)	(86)	288	(125)[a]
Accounts payable and other liabilities	25	(25)[a]	—	—	—	—
Beneficial interests issued by consolidated VIEs	82	(24)[a]	(603)	545	—	—
Long-term debt	21,938	(4,502)[a]	(1,717)	829	16,548	(3,682)[a]

(a) Predominantly reported in principal transactions revenue, except for changes in fair value for Retail Financial Services mortgage loans originated with the intent to sell, which are reported in mortgage fees and related income.
(b) Realized gains and losses on available-for-sale securities, as well as other-than-temporary impairment losses that are recorded in earnings, are reported in securities gains. Unrealized gains and losses are reported in other comprehensive income.
(c) Changes in fair value for Retail Financial Services mortgage servicing rights are reported in mortgage fees and related income.
(d) Predominantly reported in other income.
(e) All transfers into and/or out of level 3 are assumed to occur at the beginning of the reporting period.
(f) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 22%, 29% and 25% at December 31, 2010, 2009 and 2008, respectively.
(g) Includes certain assets that are classified within accrued interest receivable and other assets on the Consolidated Balance Sheet at December 31, 2009 and 2008.

Assets and liabilities measured at fair value on a nonrecurring basis

Certain assets, liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but instead are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment). The following tables present the assets and liabilities carried on the Consolidated Balance Sheets by caption and level within the valuation hierarchy (as described above) as of December 31, 2010 and 2009, for which a nonrecurring change in fair value has been recorded during the reporting period.

December 31, 2010 (in millions)	Fair value hierarchy: Level 1[d]	Level 2[d]	Level 3[d]	Total fair value
Loans retained[a]	**$ —**	**$ 5,484**	**$ 690**	**$ 6,174**
Loans held-for-sale[b]	**—**	**312**	**3,200**	**3,512**
Total loans	**—**	**5,796**	**3,890**	**9,686**
Other real estate owned	**—**	**78**	**311**	**389**
Other assets	**—**	**—**	**2**	**2**
Total other assets	**—**	**78**	**313**	**391**
Total assets at fair value on a nonrecurring basis	**$ —**	**$ 5,874**	**$ 4,203**	**$ 10,077**
Accounts payable and other liabilities[c]	**$ —**	**$ 53**	**$ 18**	**$ 71**
Total liabilities at fair value on a nonrecurring basis	**$ —**	**$ 53**	**$ 18**	**$ 71**

December 31, 2009 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Total fair value
Loans retained[a]	$ —	$ 4,544	$ 1,137	$ 5,681
Loans held-for-sale[b]	—	601	1,029	1,630
Total loans	—	5,145	2,166	7,311
Other real estate owned	—	307	387	694
Other assets	—	—	184	184
Total other assets	—	307	571	878
Total assets at fair value on a nonrecurring basis	$ —	$ 5,452	$ 2,737	$ 8,189
Accounts payable and other liabilities[c]	$ —	$ 87	$ 39	$ 126
Total liabilities at fair value on a nonrecurring basis	$ —	$ 87	$ 39	$ 126

(a) Reflects mortgage, home equity and other loans where the carrying value is based on the fair value of the underlying collateral.
(b) Predominantly includes credit card loans at December 31, 2010. Predominantly includes leveraged lending loans at December 31, 2009. Loans held-for-sale are carried on the Consolidated Balance Sheets at the lower of cost or fair value.
(c) Represents, at December 31, 2010 and 2009, fair value adjustments associated with $517 million and $648 million, respectively, of unfunded held-for-sale lending-related commitments within the leveraged lending portfolio.
(d) In the year ended December 31, 2010, transfers between levels 1, 2 and 3 were not significant.

The method used to estimate the fair value of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), depends on the type of collateral (e.g., securities, real estate, nonfinancial assets) underlying the loan. Fair value of the collateral is estimated based on quoted market prices, broker quotes or independent appraisals, or by using a DCF model. For further information, see Note 15 on pages 239–243 of this Annual Report.

Nonrecurring fair value changes

The following table presents the total change in value of assets and liabilities for which a fair value adjustment has been included in the Consolidated Statements of Income for the years ended December 31, 2010, 2009 and 2008, related to financial instruments held at those dates.

Year ended December 31, (in millions)	**2010**	2009	2008
Loans retained	**$ (3,413)**	$ (3,550)	$ (1,159)
Loans held-for-sale	**29**	(389)	(2,728)
Total loans	**(3,384)**	(3,939)	(3,887)
Other assets	**25**	(104)	(685)
Accounts payable and other liabilities	**6**	31	(285)
Total nonrecurring fair value gains/(losses)	**$ (3,353)**	$ (4,012)	$ (4,857)

In the above table, loans predominantly include: (1) mortgage, home equity, and other loans where changes in the carrying value are based on the fair value of the underlying collateral; and (2) the change in fair value for leveraged lending loans carried on the Consolidated Balance Sheets at the lower of cost or fair value. Accounts payable and other liabilities predominantly include the change in fair value for unfunded lending-related commitments within the leveraged lending portfolio.

Level 3 analysis

Level 3 assets at December 31, 2010, predominantly include derivative receivables, mortgage servicing rights ("MSRs"), collateralized loan obligations ("CLOs") held within the available-for-sale securities portfolio, trading loans, asset-backed trading securities and private equity investments.

- Derivative receivables included $35.3 billion of interest rate, credit, foreign exchange, equity and commodity contracts classified within level 3 at December 31, 2010. Included within this balance was $11.6 billion of structured credit derivatives with corporate debt underlying. In assessing the Firm's risk exposure to structured credit derivatives, the Firm believes consideration should also be given to derivative liabilities with similar, and therefore offsetting, risk profiles. At December 31, 2010, $5.6 billion of level 3 derivative liabilities had risk characteristics similar to those of the derivative receivable assets classified in level 3.
- Mortgage servicing rights represent the fair value of future cash flows for performing specified mortgage servicing activities for others (predominantly with respect to residential mortgage loans). For a further description of the MSR asset, interest rate risk management and the valuation methodology used for MSRs, including valuation assumptions and sensitivities, see Note 17 on pages 260–263 of this Annual Report.
- CLOs totaling $13.5 billion were securities backed by corporate loans held in the Firm's AFS securities portfolio. Substantially all of these securities are rated "AAA," "AA" and "A" and had an average credit enhancement of 30%. Credit enhancement in CLOs is primarily in the form of subordination, which is a form of structural credit enhancement where realized losses associated with assets held by an issuing vehicle are allocated to issued tranches considering their relative seniority. For further discussion, see Note 12 on pages 214–218 of this Annual Report.
- Trading loans totaling $13.1 billion included $4.4 billion of nonagency residential mortgage whole loans and commercial mortgage loans held in IB for which there is limited price transparency; and $4.0 billion of reverse mortgages for which the principal risk sensitivities are mortality risk and home prices. The fair value of

the commercial and residential mortgage loans is estimated by projecting expected cash flows, considering relevant borrower-specific and market factors, and discounting those cash flows at a rate reflecting current market liquidity. Loans are partially hedged by level 2 instruments, including credit default swaps and interest rate derivatives, which are observable and liquid.

Consolidated Balance Sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 5% of total Firm assets at December 31, 2010.

The following describes significant changes to level 3 assets during the year.

For the year ended December 31, 2010

Level 3 assets decreased by $15.5 billion during 2010, due to the following:

- $11.4 billion decrease in derivative receivables, predominantly driven by changes in credit spreads;
- A net decrease of $3.5 billion due to the adoption of new accounting guidance related to VIEs. As a result of the adoption of the new guidance, there was a decrease of $5.0 billion in accrued interest and accounts receivable related to retained securitization interests in Firm-sponsored credit card securitization trusts that were eliminated upon consolidation, partially offset by an increase of $1.5 billion in trading debt and equity instruments;
- $2.8 billion decrease in trading assets – debt and equity instruments, driven by sales, securitizations and transfers of trading loans to level 2 due to increased price transparency;
- $1.9 billion decrease in MSRs. For a further discussion of the change, refer to Note 17 on pages 260–263 of this Annual Report;
- $2.2 billion increase in nonrecurring loans held-for-sale, largely driven by an increase in credit card loans;
- $1.3 billion increase in private equity investments, largely driven by additional follow-on investments and net gains in the portfolio; and
- $1.0 billion increase in asset-backed AFS securities, predominantly driven by purchases of CLOs.

Gains and Losses

Gains and losses included in the tables for 2010, 2009 and 2008 included:

2010

Included in the tables for the year ended December 31, 2010

- $2.3 billion of losses on MSRs; and
- $1.0 billion gain in private equity, largely driven by gains on investments in the portfolio.

2009

Included in the tables for the year ended December 31, 2009

- $11.4 billion of net losses on derivatives, primarily related to the tightening of credit spreads;
- Net losses on trading – debt and equity instruments of $671 million, consisting of $2.1 billion of losses, primarily related to residential and commercial loans and MBS, principally driven by markdowns and sales, partially offset by gains of $1.4 billion, reflecting increases in the fair value of other ABS;
- $5.8 billion of gains on MSRs; and
- $1.4 billion of losses related to structured note liabilities, predominantly due to volatility in the equity markets.

2008

Included in the tables for the year ended December 31, 2008

- Losses on trading-debt and equity instruments of approximately $12.8 billion, principally from mortgage-related transactions and auction-rate securities;
- Losses of $6.9 billion on MSRs;
- Losses of approximately $3.9 billion on leveraged loans;
- Net gains of $4.6 billion related to derivatives, principally due to changes in credit spreads and rate curves;
- Gains of $4.5 billion related to structured notes, principally due to significant volatility in the fixed income, commodities and equity markets; and
- Private equity losses of $638 million.

For further information on changes in the fair value of the MSRs, see Note 17 on pages 260–263 of this Annual Report.

Credit adjustments

When determining the fair value of an instrument, it may be necessary to record a valuation adjustment to arrive at an exit price under U.S. GAAP. Valuation adjustments include, but are not limited to, amounts to reflect counterparty credit quality and the Firm's own creditworthiness. The market's view of the Firm's credit quality is reflected in credit spreads observed in the credit default swap market. For a detailed discussion of the valuation adjustments the Firm considers, see the valuation discussion at the beginning of this Note.

The following table provides the credit adjustments, excluding the effect of any hedging activity, reflected within the Consolidated Balance Sheets as of the dates indicated.

December 31, (in millions)	**2010**	2009
Derivative receivables balance	**$ 80,481**	$ 80,210
Derivatives CVA[(a)]	**(4,362)**	(3,697)
Derivative payables balance	**69,219**	60,125
Derivatives DVA	**(882)**	(841)[(d)]
Structured notes balance[(b)(c)]	**53,139**	59,064
Structured notes DVA	**(1,153)**	(685)[(d)]

(a) Derivatives credit valuation adjustments ("CVA"), gross of hedges, includes results managed by credit portfolio and other lines of business within IB.
(b) Structured notes are recorded within long-term debt, other borrowed funds or deposits on the Consolidated Balance Sheets, based on the tenor and legal form of the note.
(c) Structured notes are measured at fair value based on the Firm's election under the fair value option. For further information on these elections, see Note 4 on pages 187–189 of this Annual Report.
(d) The prior period has been revised.

The following table provides the impact of credit adjustments on earnings in the respective periods, excluding the effect of any hedging activity.

Year ended December 31, (in millions)	**2010**	2009	2008
Credit adjustments:			
Derivative CVA[a]	**$ (665)**	$ 5,869	$ (7,561)
Derivative DVA	**41**	(548)[c]	789
Structured note DVA[b]	**468**	(1,748)[c]	1,211

(a) Derivatives CVA, gross of hedges, includes results managed by credit portfolio and other lines of business within IB.
(b) Structured notes are measured at fair value based on the Firm's election under the fair value option. For further information on these elections, see Note 4 on pages 187–189 of this Annual Report.
(c) The 2009 prior period has been revised.

Additional disclosures about the fair value of financial instruments (including financial instruments not carried at fair value)

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table. However, certain financial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements. Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of JPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated Balance Sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks; deposits with banks; federal funds sold; securities purchased under resale agreements and securities borrowed with short-dated maturities; short-term receivables and accrued interest receivable; commercial paper; federal funds purchased; securities loaned and sold under repurchase agreements with short-dated maturities; other borrowed funds (excluding advances from the Federal Home Loan Banks ("FHLBs")); accounts payable; and accrued liabilities. In addition, U.S. GAAP requires that the fair value for deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents the carrying value and estimated fair values of financial assets and liabilities.

	2010			2009		
December 31, (in billions)	Carrying value	Estimated fair value	Appreciation/ (depreciation)	Carrying value	Estimated fair value	Appreciation/ (depreciation)
Financial assets						
Assets for which fair value approximates carrying value	**$ 49.2**	**$ 49.2**	**$ —**	$ 89.4	$ 89.4	$ —
Accrued interest and accounts receivable (included **zero** and $5.0 at fair value)	**70.1**	**70.1**	**—**	67.4	67.4	—
Federal funds sold and securities purchased under resale agreements (included **$20.3** and $20.5 at fair value)	**222.6**	**222.6**	**—**	195.4	195.4	—
Securities borrowed (included **$14.0** and $7.0 at fair value)	**123.6**	**123.6**	**—**	119.6	119.6	—
Trading assets	**489.9**	**489.9**	**—**	411.1	411.1	—
Securities (included **$316.3** and $360.4 at fair value)	**316.3**	**316.3**	**—**	360.4	360.4	—
Loans (included **$2.0** and $1.4 at fair value)[a][b]	**660.7**	**663.5**	**2.8**	601.9	598.3	(3.6)
Mortgage servicing rights at fair value	**13.6**	**13.6**	**—**	15.5	15.5	—
Other (included **$18.2** and $19.2 at fair value)	**64.9**	**65.0**	**0.1**	73.4	73.2	(0.2)
Total financial assets	**$ 2,010.9**	**$ 2,013.8**	**$ 2.9**	$ 1,934.1	$ 1,930.3	$ (3.8)
Financial liabilities						
Deposits (included **$4.4** and $4.5 at fair value)	**$ 930.4**	**$ 931.5**	**$ (1.1)**	$ 938.4	$ 939.5	$ (1.1)
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$4.1** and $3.4 at fair value)	**276.6**	**276.6**	**—**	261.4	261.4	—
Commercial paper	**35.4**	**35.4**	**—**	41.8	41.8	—
Other borrowed funds (included **$9.9** and $5.6 at fair value)	**57.3**	**57.2**	**0.1**	55.7	55.9	(0.2)
Trading liabilities	**146.2**	**146.2**	**—**	125.1	125.1	—
Accounts payable and other liabilities (included **$0.2** and $0.4 at fair value)	**138.2**	**138.2**	**—**	136.8	136.8	—
Beneficial interests issued by consolidated VIEs (included **$1.5** and $1.4 at fair value)	**77.6**	**77.9**	**(0.3)**	15.2	15.2	—
Long-term debt and junior subordinated deferrable interest debentures (included **$38.8** and $49.0 at fair value)	**247.7**	**249.0**	**(1.3)**	266.3	268.4	(2.1)
Total financial liabilities	**$ 1,909.4**	**$ 1,912.0**	**$ (2.6)**	$ 1,840.7	$ 1,844.1	$ (3.4)
Net appreciation/(depreciation)			**$ 0.3**			$ (7.2)

(a) For originated or purchased loans held for investment, other than PCI loans, the carrying value is the principal amount outstanding, net of the allowance for loan losses, net charge-offs, interest applied to principal (for loans accounted for on the cost recovery method), unamortized discounts and premiums, and deferred loan fees or costs. For a further discussion of the Firm's loan accounting framework, see Note 14 on pages 220–238 of this Annual Report.

(b) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. The difference between the estimated fair value and carrying value is the result of the different methodologies used to determine fair value as compared to carrying value. For example, credit losses are estimated for the asset's remaining life in a fair value calculation but are estimated for a loss emergence period in a loan loss reserve calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in a loan loss reserve calculation. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see pages 171–173 of this Note.

The majority of the Firm's unfunded lending-related commitments are not carried at fair value on a recurring basis on the Consolidated Balance Sheets, nor are they actively traded. The carrying value and estimated fair value of the Firm's wholesale lending-related commitments were as follows for the periods indicated.

	2010		2009	
December 31, (in billions)	Carrying value[a]	Estimated fair value	Carrying value[a]	Estimated fair value
holesale lending-related commitments	**$ 0.7**	**$ 0.9**	$ 0.9	$ 1.3

(a) Represents the allowance for wholesale unfunded lending-related commitments. Excludes the current carrying values of the guarantee liability and the offsetting asset each recognized at fair value at the inception of guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower prior notice or, in some cases, without notice as permitted by law. For a further discussion of the valuation of lending-related commitments, see pages 171–173 of this Note.

Trading assets and liabilities

Trading assets include debt and equity instruments held for trading purposes that JPMorgan Chase owns ("long" positions), certain loans managed on a fair value basis and for which the Firm has elected the fair value option, and physical commodities inventories that are generally accounted for at the lower of cost or fair value. Trading liabilities include debt and equity instruments that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase instruments at a future date to cover the short positions. Included in trading assets and trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. Trading assets and liabilities are carried at fair value on the Consolidated Balance Sheets. Balances reflect the reduction of securities owned (long positions) by the amount of securities sold but not yet purchased (short positions) when the long and short positions have identical Committee on Uniform Security Identification Procedures ("CUSIPs").

Trading assets and liabilities–average balances

Average trading assets and liabilities were as follows for the periods indicated.

Year ended December 31, (in millions)	**2010**	2009	2008
Trading assets – debt and equity instruments[a]	**$ 354,441**	$ 318,063	$ 384,102
Trading assets – derivative receivables	**84,676**	110,457	121,417
Trading liabilities – debt and equity instruments[a] [b]	**78,159**	60,224	78,841
Trading liabilities – derivative payables	**65,714**	77,901	93,200

(a) Balances reflect the reduction of securities owned (long positions) by the amount of securities sold, but not yet purchased (short positions) when the long and short positions have identical CUSIPs.

(b) Primarily represent securities sold, not yet purchased.

Note 4 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments not previously carried at fair value.

Elections

Elections were made by the Firm to:

- Mitigate income statement volatility caused by the differences in the measurement basis of elected instruments (for example, certain instruments elected were previously accounted for on an accrual basis) while the associated risk management arrangements are accounted for on a fair value basis;
- Eliminate the complexities of applying certain accounting models (e.g., hedge accounting or bifurcation accounting for hybrid instruments); and
- Better reflect those instruments that are managed on a fair value basis.

Elections include the following:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis.
- Securities financing arrangements with an embedded derivative and/or a maturity of greater than one year.
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument.
- Certain tax credits and other equity investments acquired as part of the Washington Mutual transaction.
- Structured notes issued as part of IB's client-driven activities. (Structured notes are financial instruments that contain embedded derivatives.)
- Long-term beneficial interests issued by IB's consolidated securitization trusts where the underlying assets are carried at fair value.

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated Statements of Income for the years ended December 31, 2010, 2009 and 2008, for items for which the fair value election was made. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2010			2009			2008		
December 31, (in millions)	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	**$ 173**	**$ —**	**$ 173**	$ (553)	$ —	$ (553)	$ 1,139	$ —	$ 1,139
Securities borrowed	**31**	**—**	**31**	82	—	82	29	—	29
Trading assets:									
Debt and equity instruments, excluding loans	**556**	**(2)**[c]	**554**	619	25[c]	644	(870)	(58)[c]	(928)
Loans reported as trading assets:									
Changes in instrument-specific credit risk	**1,279**	**(6)**[c]	**1,273**	(300)	(177)[c]	(477)	(9,802)	(283)[c]	(10,085)
Other changes in fair value	**(312)**	**4,449**[c]	**4,137**	1,132	3,119[c]	4,251	696	1,178[c]	1,874
Loans:									
Changes in instrument-specific credit risk	**95**	**—**	**95**	(78)	—	(78)	(1,991)	—	(1,991)
Other changes in fair value	**90**	**—**	**90**	(343)	—	(343)	(42)	—	(42)
Other assets	**—**	**(263)**[d]	**(263)**	—	(731)[d]	(731)	—	(660)[d]	(660)
Deposits[a]	**(564)**	**—**	**(564)**	(770)	—	(770)	(132)	—	(132)
Federal funds purchased and securities loaned or sold under repurchase agreements	**(29)**	**—**	**(29)**	116	—	116	(127)	—	(127)
Other borrowed funds[a]	**123**	**—**	**123**	(1,287)	—	(1,287)	1,888	—	1,888
Trading liabilities	**(23)**	**—**	**(23)**	(3)	—	(3)	35	—	35
Beneficial interests issued by consolidated VIEs	**(12)**	**—**	**(12)**	(351)	—	(351)	355	—	355
Other liabilities	**(9)**	**8**[d]	**(1)**	64	—	64	—	—	—
Long-term debt:									
Changes in instrument-specific credit risk[a]	**400**	**—**	**400**	(1,704)	—	(1,704)	1,174	—	1,174
Other changes in fair value[b]	**1,297**	**—**	**1,297**	(2,393)	—	(2,393)	16,202	—	16,202

(a) Total changes in instrument-specific credit risk related to structured notes were $468 million, $(1.7) billion and $1.2 billion for the years ended December 31, 2010, 2009 and 2008, respectively. These totals include adjustments for structured notes classified within deposits and other borrowed funds, as well as long-term debt. The 2009 prior period has been revised.

(b) Structured notes are debt instruments with embedded derivatives that are tailored to meet a client's need for derivative risk in funded form. The embedded derivative is the primary driver of risk. The 2008 gain included in "Other changes in fair value" results from a significant decline in the value of certain structured notes where the embedded derivative is principally linked to either equity indices or commodity prices, both of which declined sharply during the third quarter of 2008. Although the risk associated with the structured notes is actively managed, the gains reported in this table do not include the income statement impact of such risk management instruments.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings during 2010, 2009 and 2008, which were attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2010 and 2009, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2010			2009		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding
Loans						
Performing loans 90 days or more past due						
Loans reported as trading assets	**$ —**	**$ —**	**$ —**	$ —	$ —	$ —
Loans	**—**	**—**	**—**	—	—	—
Nonaccrual loans						
Loans reported as trading assets	**5,246**	**1,239**	**(4,007)**	7,264	2,207	(5,057)
Loans	**927**	**132**	**(795)**	1,126	151	(975)
Subtotal	**6,173**	**1,371**	**(4,802)**	8,390	2,358	(6,032)
All other performing loans						
Loans reported as trading assets	**39,490**	**33,641**	**(5,849)**	35,095	29,341	(5,754)
Loans	**2,496**	**1,434**	**(1,062)**	2,147	1,000	(1,147)
Total loans	**$ 48,159**	**$ 36,446**	**$ (11,713)**	$ 45,632	$ 32,699	$ (12,933)
Long-term debt						
Principal-protected debt	**$ 20,761**[b]	**$ 21,315**	**$ 554**	$ 26,765[b]	$ 26,378	$ (387)
Nonprincipal-protected debt[a]	**NA**	**17,524**	**NA**	NA	22,594	NA
Total long-term debt	**NA**	**$ 38,839**	**NA**	NA	$ 48,972	NA
Long-term beneficial interests						
Principal-protected debt	**$ 49**	**$ 49**	**$ —**	$ 90	$ 90	$ —
Nonprincipal-protected debt[a]	**NA**	**1,446**	**NA**	NA	1,320	NA
Total long-term beneficial interests	**NA**	**$ 1,495**	**NA**	NA	$ 1,410	NA

(a) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note.

(b) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflected as the remaining contractual principal is the final principal payment at maturity.

At December 31, 2010 and 2009, the contractual amount of letters of credit for which the fair value option was elected was $3.8 billion and $3.7 billion, respectively, with a corresponding fair value of $6 million at both December 31, 2010 and 2009. For further information regarding off-balance sheet commitments, see Note 30 on pages 275–280 of this Annual Report.

Note 5 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolio to assess potential concentration risks and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect management's risk tolerance.

In the Firm's wholesale portfolio, risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis. Management of the Firm's wholesale exposure is accomplished through loan syndication and participation, loan sales, securitizations, credit derivatives, use of master netting agreements, and collateral and other risk-reduction techniques. In the consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines.

The Firm does not believe that its exposure to any particular loan product (e.g., option ARMs), industry segment (e.g., commercial real estate) or its exposure to residential real estate loans with high loan-to-value ratios results in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

For further information regarding on–balance sheet credit concentrations by major product and/or geography, see Notes 14 and 15 on pages 220–238 and 239–243, respectively, of this Annual Report. For information regarding concentrations of off–balance sheet lending-related financial instruments by major product, see Note 30 on pages 275–280 of this Annual Report.

Customer receivables representing primarily margin loans to prime and retail brokerage clients of $32.5 billion and $15.7 billion at December 31, 2010 and 2009, respectively, are included in the table below. These margin loans are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not

provided by the client, the client's positions may be liquidated by the Firm to meet the minimum collateral requirements. As a result of the Firm's credit risk mitigation practices, the Firm does not hold any reserves for credit impairment on these agreements as of December 31, 2010 and 2009.

The table below presents both on–balance sheet and off–balance sheet wholesale- and consumer-related credit exposure by the Firm's three portfolio segments as of December 31, 2010, and 2009.

	2010				2009			
	Credit	On-balance sheet		Off-balance	Credit	On-balance sheet		Off-balance
December 31, (in millions)	exposure	Loans	Derivatives	sheet(d)	exposure	Loans	Derivatives	sheet(d)
Wholesale(a)								
Banks and finance companies	**$ 65,867**	**$ 21,562**	**$ 20,935**	**$ 23,370**	$ 54,053	$ 14,396	$ 17,957	$ 21,700
Real estate	**64,351**	**53,635**	**868**	**9,848**	68,509	57,195	1,112	10,202
Healthcare	**41,093**	**6,047**	**2,121**	**32,925**	35,605	4,992	1,917	28,696
State and municipal governments	**35,808**	**6,095**	**5,148**	**24,565**	34,726	5,687	4,979	24,060
Asset managers	**29,364**	**7,070**	**7,124**	**15,170**	24,920	5,930	6,640	12,350
Consumer products	**27,508**	**7,921**	**1,039**	**18,548**	27,004	7,880	1,094	18,030
Oil and gas	**26,459**	**5,701**	**3,866**	**16,892**	23,322	5,895	2,309	15,118
Utilities	**25,911**	**4,220**	**3,104**	**18,587**	27,178	5,451	3,073	18,654
Retail and consumer services	**20,882**	**5,876**	**796**	**14,210**	20,673	5,611	769	14,293
Technology	**14,348**	**2,752**	**1,554**	**10,042**	14,169	3,802	1,409	8,958
Machinery and equipment manufacturing	**13,311**	**3,601**	**445**	**9,265**	12,759	3,189	456	9,114
Building materials/construction	**12,808**	**3,285**	**295**	**9,228**	10,448	3,252	281	6,915
Chemicals/plastics	**12,312**	**3,372**	**350**	**8,590**	9,870	2,719	392	6,759
Metals/mining	**11,426**	**3,301**	**1,018**	**7,107**	12,547	3,410	1,158	7,979
Business services	**11,247**	**3,850**	**370**	**7,027**	10,667	3,627	397	6,643
Central government	**11,173**	**1,146**	**6,052**	**3,975**	9,557	1,703	5,501	2,353
Media	**10,967**	**3,711**	**284**	**6,972**	12,379	4,173	329	7,877
Insurance	**10,918**	**1,103**	**1,660**	**8,155**	13,421	1,292	2,511	9,618
Telecom services	**10,709**	**1,524**	**1,362**	**7,823**	11,265	2,042	1,273	7,950
Holding companies	**10,504**	**3,885**	**894**	**5,725**	16,018	4,360	1,042	10,616
Transportation	**9,652**	**3,754**	**822**	**5,076**	9,749	3,141	1,238	5,370
Securities firms and exchanges	**9,415**	**1,722**	**5,038**	**2,655**	10,832	3,457	4,796	2,579
Automotive	**9,011**	**2,026**	**248**	**6,737**	9,357	2,510	357	6,490
Agriculture/paper manufacturing	**7,368**	**1,918**	**250**	**5,200**	5,801	1,928	251	3,622
Aerospace	**5,732**	**516**	**197**	**5,019**	5,254	597	79	4,578
All other(b)	**140,926**	**62,917**	**14,641**	**63,368**	137,359	41,838	18,890	76,631
Subtotal	**649,070**	**222,510**	**80,481**	**346,079**	627,442	200,077	80,210	347,155
Loans held-for-sale and loans at fair value	**5,123**	**5,123**	**—**	**—**	4,098	4,098	—	—
Receivables from customers	**32,541**	**—**	**—**	**—**	15,745	—	—	—
Interests in purchased receivables	**391**	**—**	**—**	**—**	2,927	—	—	—
Total wholesale	**687,125**	**227,633**	**80,481**	**346,079**	650,212	204,175	80,210	347,155
Consumer, excluding credit card								
Home equity – senior lien	**40,436**	**24,376**	**—**	**16,060**	46,622	27,376	—	19,246
Home equity – junior lien	**92,690**	**64,009**	**—**	**28,681**	111,280	74,049	—	37,231
Prime mortgage, including option ARMs(a)	**75,805**	**74,539**	**—**	**1,266**	77,082	75,428	—	1,654
Subprime mortgage(a)	**11,287**	**11,287**	**—**	**—**	12,526	12,526	—	—
Auto(a)	**53,613**	**48,367**	**—**	**5,246**	51,498	46,031	—	5,467
Business banking	**26,514**	**16,812**	**—**	**9,702**	26,014	16,974	—	9,040
Student and other(a)	**15,890**	**15,311**	**—**	**579**	16,915	14,726	—	2,189
PCI-Home equity	**24,459**	**24,459**	**—**	**—**	26,520	26,520	—	—
PCI-Prime mortgage	**17,322**	**17,322**	**—**	**—**	19,693	19,693	—	—
PCI-Subprime mortgage	**5,398**	**5,398**	**—**	**—**	5,993	5,993	—	—
PCI-option ARMs	**25,584**	**25,584**	**—**	**—**	29,039	29,039	—	—
Loans held-for-sale	**154**	**154**	**—**	**—**	2,142	2,142	—	—
Total consumer, excluding credit card	**389,152**	**327,618**	**—**	**61,534**	425,324	350,497	—	74,827
Credit Card								
Credit card – retained(a)(c)	**682,751**	**135,524**	**—**	**547,227**	647,899	78,786	—	569,113
Credit card – held-for-sale	**2,152**	**2,152**	**—**	**—**	—	—	—	—
Total credit card	**684,903**	**137,676**	**—**	**547,227**	647,899	78,786	—	569,113
Total exposure	**$ 1,761,180**	**$ 692,927**	**$ 80,481**	**$ 954,840**	$ 1,723,435	$ 633,458	$ 80,210	$ 991,095

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon the adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts and certain other consumer loan securitization entities, primarily mortgage-related. As a result, related receivables are now recorded as loans on the Consolidated Balance Sheet. For further information, see Note 16 on pages 244–259 of this Annual Report.

(b) For more information on exposures to SPEs included in all other, see Note 16 on pages 244–259 of this Annual Report.

(c) Excludes $84.6 billion of securitized credit card receivables at December 31, 2009.

(d) Represents lending-related financial instruments.

Note 6 – Derivative instruments

Derivative instruments enable end-users to modify or mitigate exposure to credit or market risks. Counterparties to a derivative contract seek to obtain risks and rewards similar to those that could be obtained from purchasing or selling a related cash instrument without having to exchange upfront the full purchase or sales price. JPMorgan Chase makes markets in derivatives for customers and also uses derivatives to hedge or manage its own market risk exposures. The majority of the Firm's derivatives are entered into for market-making purposes.

Trading derivatives

The Firm makes markets in a variety of derivatives in its trading portfolios to meet the needs of customers (both dealers and clients) and to generate revenue through this trading activity ("client derivatives"). Customers use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives. The Firm also seeks to earn a spread between the client derivatives and offsetting positions, and from the remaining open risk positions.

Risk management derivatives

The Firm manages its market risk exposures using various derivative instruments.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increase or decrease as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency–denominated (i.e., non-U.S.) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar–equivalent values of the foreign currency–denominated assets and liabilities or forecasted revenue or expense increase or decrease. Gains or losses on the derivative instruments related to these foreign currency–denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities based forward and futures contracts are used to manage the price risk of certain inventory, including gold and base metals, in the Firm's commodities portfolio. Gains or losses on the forwards and futures are expected to substantially offset the depreciation or appreciation of the related inventory. Also in the commodities portfolio, electricity and natural gas futures and forwards contracts are used to manage price risk associated with energy-related tolling and load-serving contracts and investments.

The Firm uses credit derivatives to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 197–199 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 196 of this Annual Report, and the hedge accounting gains and losses tables on pages 194–195 of this Note.

Accounting for derivatives

All free-standing derivatives are required to be recorded on the Consolidated Balance Sheets at fair value. As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral received and paid, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are marked to market through earnings. The tabular disclosures on pages 192–199 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 3 and 4 on pages 170–187 and 187–189, respectively, of this Annual Report.

Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and gold and base metal derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased credit default swaps used to manage the credit risk of loans and commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate and commodity derivatives used for risk management purposes.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as

well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the change in the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and gold and base metal inventory. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item, for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the fair value adjustment to the hedged item continues to be reported as part of the basis of the hedged item and for interest-bearing instruments is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges to hedge the exposure to variability in cash flows from floating-rate financial instruments and forecasted transactions, primarily the rollover of short-term assets and liabilities, and foreign currency–denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in other comprehensive income/(loss) ("OCI") and recognized in the Consolidated Statements of Income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in accumulated other comprehensive income/(loss) ("AOCI") is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses foreign currency hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For foreign currency qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2010 and 2009.

	Notional amounts[b]	
December 31, (in billions)	**2010**	2009
Interest rate contracts		
Swaps	**$ 46,299**	$ 47,663
Futures and forwards	**9,298**	6,986
Written options	**4,075**	4,553
Purchased options	**3,968**	4,584
Total interest rate contracts	**63,640**	63,786
Credit derivatives[a]	**5,472**	5,994
Foreign exchange contracts		
Cross-currency swaps	**2,568**	2,217
Spot, futures and forwards	**3,893**	3,578
Written options	**674**	685
Purchased options	**649**	699
Total foreign exchange contracts	**7,784**	7,179
Equity contracts		
Swaps	**116**	81
Futures and forwards	**49**	45
Written options	**430**	502
Purchased options	**377**	449
Total equity contracts	**972**	1,077
Commodity contracts		
Swaps	**349**	178
Spot, futures and forwards	**170**	113
Written options	**264**	201
Purchased options	**254**	205
Total commodity contracts	**1,037**	697
Total derivative notional amounts	**$ 78,905**	$ 78,733

(a) Primarily consists of credit default swaps. For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 197–199 of this Note.

(b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivative activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount does not change hands; it is used simply as a reference to calculate payments.

Impact of derivatives on the Consolidated Balance Sheets

The following tables summarize derivative fair values as of December 31, 2010 and 2009, by accounting designation (e.g., whether the derivatives were designated as hedges or not) and contract type.

Free-standing derivatives[a]

December 31, 2010 (in millions)	Derivative receivables: Not designated as hedges	Derivative receivables: Designated as hedges	Derivative receivables: Total derivative receivables	Derivative payables: Not designated as hedges	Derivative payables: Designated as hedges	Derivative payables: Total derivative payables
Trading assets and liabilities						
Interest rate	**$ 1,121,703**	**$ 6,279**	**$ 1,127,982**	**$ 1,089,604**	**$ 840**	**$ 1,090,444**
Credit	**129,729**	**—**	**129,729**	**125,061**	**—**	**125,061**
Foreign exchange[b]	**165,240**	**3,231**	**168,471**	**163,671**	**1,059**	**164,730**
Equity	**43,633**	**—**	**43,633**	**46,399**	**—**	**46,399**
Commodity	**59,573**	**24**	**59,597**	**56,397**	**2,078**[d]	**58,475**
Gross fair value of trading assets and liabilities	**$ 1,519,878**	**$ 9,534**	**$ 1,529,412**	**$ 1,481,132**	**$ 3,977**	**$ 1,485,109**
Netting adjustment[c]			**(1,448,931)**			**(1,415,890)**
Carrying value of derivative trading assets and trading liabilities on the Consolidated Balance Sheets			**$ 80,481**			**$ 69,219**

December 31, 2009 (in millions)	Derivative receivables: Not designated as hedges	Derivative receivables: Designated as hedges	Derivative receivables: Total derivative receivables	Derivative payables: Not designated as hedges	Derivative payables: Designated as hedges	Derivative payables: Total derivative payables
Trading assets and liabilities						
Interest rate	$ 1,148,901	$ 6,568	$ 1,155,469	$ 1,121,978	$ 427	$ 1,122,405
Credit	170,864	—	170,864	164,790	—	164,790
Foreign exchange[b]	141,790	2,497	144,287	137,865	353	138,218
Equity	57,871	—	57,871	58,494	—	58,494
Commodity	36,988	39	37,027	35,082	194[d]	35,276
Gross fair value of trading assets and liabilities	$ 1,556,414	$ 9,104	$ 1,565,518	$ 1,518,209	$ 974	$ 1,519,183
Netting adjustment[c]			(1,485,308)			(1,459,058)
Carrying value of derivative trading assets and trading liabilities on the Consolidated Balance Sheets			$ 80,210			$ 60,125

(a) Excludes structured notes for which the fair value option has been elected. See Note 4 on pages 187–189 of this Annual Report for further information.
(b) Excludes $21 million of foreign currency-denominated debt designated as a net investment hedge at December 31, 2010. The Firm did not use foreign currency-denominated debt as a hedging instrument in 2009, and therefore there was no impact as of December, 31, 2009.
(c) U.S. GAAP permits the netting of derivative receivables and payables, and the related cash collateral received and paid when a legally enforceable master netting agreement exists between the Firm and a derivative counterparty.
(d) Excludes $1.0 billion and $1.3 billion related to commodity derivatives that are embedded in a debt instrument and used as fair value hedging instruments that are recorded in the line item of the host contract (other borrowed funds) for December 31, 2010 and 2009, respectively.

Derivative receivables and payables mark-to-market

The following table summarizes the fair values of derivative receivables and payables, including those designated as hedges, by contract type after netting adjustments as of December 31, 2010 and 2009.

December 31, (in millions)	Trading assets – Derivative receivables: **2010**	Trading assets – Derivative receivables: 2009	Trading liabilities – Derivative payables: **2010**	Trading liabilities – Derivative payables: 2009
Contract type				
Interest rate[a]	**$ 32,555**	$ 33,733	**$ 20,387**	$ 19,688
Credit[a]	**7,725**	11,859	**5,138**	6,036
Foreign exchange	**25,858**	21,984	**25,015**	19,818
Equity	**4,204**	6,635	**10,450**	11,554
Commodity	**10,139**	5,999	**8,229**	3,029
Total	**$ 80,481**	$ 80,210	**$ 69,219**	$ 60,125

(a)In 2010, the reporting of cash collateral netting was enhanced to reflect a refined allocation by product. Prior periods have been revised to conform to the current presentation. The refinement resulted in an increase to interest rate derivative receivables, and an offsetting decrease to credit derivative receivables, of $7.0 billion, and an increase to interest rate derivative payables and a corresponding decrease to credit derivative payables of $4.5 billion as of December 31, 2009.

The tables that follow reflect the derivative-related income statement impact by accounting designation for the years ended December 31, 2010 and 2009, respectively.

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pretax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2010 and 2009. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated Statements of Income.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2010 (in millions)	Derivatives	Hedged items	Total income statement impact[d]	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	**$ 1,066**	**$ (454)**	**$ 612**	**$ 172**	**$ 440**
Foreign exchange[b]	**1,357**[g]	**(1,812)**	**(455)**	**—**	**(455)**
Commodity[c]	**(1,354)**	**1,882**	**528**	**—**	**528**
Total	**$ 1,069**	**$ (384)**	**$ 685**	**$ 172**	**$ 513**

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2009 (in millions)	Derivatives	Hedged items	Total income statement impact[d]	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	$ (3,830)	$ 4,638	$ 808	$ (466)	$ 1,274
Foreign exchange[b]	(1,421)[g]	1,445	24	—	24
Commodity[c]	(430)	399	(31)	—	(31)
Total	$ (5,681)	$ 6,482	$ 801	$ (466)	$ 1,267

(a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in spot foreign currency rates, were recorded in principal transactions revenue.

(c) Consists of overall fair value hedges of gold and base metal inventory. Gains and losses were recorded in principal transactions revenue.

(d) Total income statement impact for fair value hedges consists of hedge ineffectiveness and any components excluded from the assessment of hedge effectiveness. The related amount for the year ended December 31, 2008 was a net gain of $434 million.

(e) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.

(f) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on a futures or forward contract. Amounts related to excluded components are recorded in current-period income.

(g) For the years ended December 31, 2010 and 2009, includes $278 million and $(1.6) billion of revenue related to certain foreign exchange trading derivatives designated as fair value hedging instruments, respectively.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives, for the years ended December 31, 2010 and 2009, respectively. The Firm includes the gain/(loss) on the hedging derivative in the same line item as the offsetting change in cash flows on the hedged item in the Consolidated Statements of Income.

	Gains/(losses) recorded in income and other comprehensive income/(loss)				
Year ended December 31, 2010 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	**$ 288**[c]	**$ 20**	**$ 308**	**$ 388**	**$ 100**
Foreign exchange[b]	**(82)**	**(3)**	**(85)**	**(141)**	**(59)**
Total	**$ 206**	**$ 17**	**$ 223**	**$ 247**	**$ 41**

	Gains/(losses) recorded in income and other comprehensive income/(loss)				
Year ended December 31, 2009 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (158)[c]	$ (62)	$ (220)	$ 61	$ 219
Foreign exchange[b]	282	—	282	706	424
Total	$ 124	$ (62)	$ 62	$ 767	$ 643

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of non–U.S. dollar–denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily net interest income, compensation expense and other expense.

(c) In 2010, the Firm reclassified a $25 million loss from accumulated other comprehensive income ("AOCI") to earnings because the Firm determined that it is probable that forecasted interest payment cash flows related to certain wholesale deposits will not occur. The Firm did not experience forecasted transactions that failed to occur for the year ended December 31, 2009.

(d) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk. Hedge ineffectiveness recorded directly in income for cash flow hedges was a net gain of $18 million for the year ended December 31, 2008.

Over the next 12 months, the Firm expects that $282 million (after-tax) of net losses recorded in AOCI at December 31, 2010, related to cash flow hedges will be recognized in income. The maximum length of time over which forecasted transactions are hedged is 10 years, and such transactions primarily relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pretax gains/(losses) recorded on such instruments for the years ended December 31, 2010 and 2009.

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
	Hedging instruments – excluded components recorded directly in income[a]		Hedging instruments – effective portion recorded in OCI	
Year ended December 31, (in millions)	**2010**	2009	**2010**	2009
Contract type				
Foreign exchange derivatives	**$ (139)**	$ (112)	**$ (30)**	$ (259)
Foreign currency denominated debt	**—**	NA	**41**	NA
Total	**$ (139)**	$ (112)	**$ 11**	$ (259)

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on a futures or forward contract. Amounts related to excluded components are recorded in current-period income. There was no ineffectiveness for net investment hedge accounting relationships during 2010 and 2009.

Risk management derivatives gains and losses (not designated as hedging instruments)

The following table presents nontrading derivatives, by contract type, that were not designated in hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives for the years ended December 31, 2010 and 2009. These derivatives are risk management instruments used to mitigate or transform market risk exposures arising from banking activities other than trading activities, which are discussed separately below.

Year ended December 31,	Derivatives gains/(losses) recorded in income	
(in millions)	**2010**	2009
Contract type		
Interest rate[a]	**$ 4,997**	$ (3,113)
Credit[b]	**(237)**	(3,222)
Foreign exchange[c]	**(85)**	(197)
Equity[b]	**—**	(8)
Commodity[b]	**(24)**	(50)
Total	**$ 4,651**	$ (6,590)

(a) Gains and losses were recorded in principal transactions revenue, mortgage fees and related income, and net interest income.
(b) Gains and losses were recorded in principal transactions revenue.
(c) Gains and losses were recorded in principal transactions revenue and net interest income.

Trading derivative gains and losses

The Firm has elected to present derivative gains and losses related to its trading activities together with the cash instruments with which they are risk managed. All amounts are recorded in principal transactions revenue in the Consolidated Statements of Income for the years ended December 31, 2010 and 2009. The amounts below do not represent a comprehensive view of the Firm's trading activities because they do not include certain revenue associated with those activities, including net interest income earned on cash instruments used in trading activities and gains and losses on cash instruments that are risk managed without derivative instruments.

Year ended December 31,	Gains/(losses) recorded in principal transactions revenue	
(in millions)	**2010**	2009
Type of instrument		
Interest rate	**$ (683)**	$ 4,375
Credit	**4,636**	5,022
Foreign exchange[a]	**1,854**	2,583
Equity	**1,827**	1,475
Commodity	**256**	1,329
Total	**$ 7,890**	$ 14,784

(a) In 2010, the reporting of trading gains and losses was enhanced to include trading gains and losses related to certain trading derivatives designated as fair value hedging instruments. Prior period amounts have been revised to conform to the current presentation.

Credit risk, liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk – the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to enter into legally enforceable master netting agreements as well as to actively pursue the use of collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated Balance Sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. These amounts represent the cost to the Firm to replace the contracts at then-current market rates should the counterparty default.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the mark-to-market ("MTM") of the contracts moves in the counterparties' favor, or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The aggregate fair value of net derivative payables that contain contingent collateral or termination features triggered upon a downgrade was $19.8 billion and $22.6 billion at December 31, 2010 and 2009, respectively, for which the Firm has posted collateral of $14.6 billion and $22.3 billion, respectively, in the normal course of business. At December 31, 2010 and 2009, the impact of a single-notch and two-notch ratings downgrade to JPMorgan Chase & Co. and its subsidiaries, primarily JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), would have required $1.9 billion and $3.5 billion, respectively, and $1.2 billion and $2.2 billion, respectively, of additional collateral to be posted by the Firm. In addition, at December 31, 2010 and 2009, the impact of single-notch and two-notch ratings downgrades to JPMorgan Chase & Co. and its subsidiaries, primarily JPMorgan Chase Bank, N.A., related to contracts with termination triggers would have required the Firm to settle trades with a fair value of $430 million and $1.0 billion, respectively, and $260 million and $270 million, respectively.

The following table shows the current credit risk of derivative receivables after netting adjustments, and the current liquidity risk of derivative payables after netting adjustments, as of December 31, 2010 and 2009.

	Derivative receivables		Derivative payables	
December 31, (in millions)	**2010**	2009	**2010**	2009
Gross derivative fair value	**$ 1,529,412**	$ 1,565,518	**$ 1,485,109**	$ 1,519,183
Netting adjustment – offsetting receivables/payables	**(1,376,969)**	(1,419,840)	**(1,376,969)**	(1,419,840)
Netting adjustment – cash collateral received/paid	**(71,962)**	(65,468)	**(38,921)**	(39,218)
Carrying value on Consolidated Balance Sheets	**$ 80,481**	$ 80,210	**$ 69,219**	$ 60,125

In addition to the collateral amounts reflected in the table above, at December 31, 2010 and 2009, the Firm had received liquid securities and other cash collateral in the amount of $16.5 billion and $15.5 billion, respectively, and had posted $10.9 billion and $11.7 billion, respectively. The Firm also receives and delivers collateral at the initiation of derivative transactions, which is available as security against potential exposure that could arise should the fair value of the transactions move in the Firm's or client's favor, respectively. Furthermore, the Firm and its counterparties hold collateral related to contracts that have a non-daily call frequency for collateral to be posted, and collateral that the Firm or a counterparty has agreed to return but has not yet settled as of the reporting date. At December 31, 2010 and 2009, the Firm had received $18.0 billion and $16.9 billion, respectively, and delivered $8.4 billion and $5.8 billion, respectively, of such additional collateral. These amounts were not netted against the derivative receivables and payables in the table above, because, at an individual counterparty level, the collateral exceeded the fair value exposure at December 31, 2010 and 2009.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker in the dealer/client business, the Firm actively risk manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. As a seller of protection, the Firm's exposure to a given reference entity may be offset partially, or entirely, with a contract to purchase protection from another counterparty on the same or similar reference entity. Second, the Firm uses credit derivatives to mitigate credit risk associated with its overall derivative receivables and traditional commercial credit lending exposures (loans and unfunded commitments) as well as to manage its exposure to residential and commercial mortgages. See Note 3 on pages 170–187 of this Annual Report for further information on the Firm's mortgage-related exposures. In accomplishing the above, the Firm uses different types of credit derivatives. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Firm purchases and sells protection on both single- name and index-reference obligations. Single-name CDS and index CDS contracts are OTC derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index comprises a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at the time of settling the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-related notes

A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a referenced entity. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity experiences a specified credit event. If a credit event

occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity. For a further discussion of credit-related notes, see Note 16 on pages 244–259 of this Annual Report.

Effective July 1, 2010, the Firm adopted new accounting guidance prospectively related to credit derivatives embedded in beneficial interests in securitized financial assets, which resulted in the election of the fair value option for certain instruments in the AFS securities portfolio. The related cumulative effect adjustment increased retained earnings and decreased accumulated other comprehensive income by $15 million, respectively, as of July 1, 2010.

The following table presents a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2010 and 2009. Upon a credit event, the Firm as seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following table includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased through credit-related notes.

The Firm does not use notional amounts as the primary measure of risk management for credit derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges.

Total credit derivatives and credit-related notes

	Maximum payout/Notional amount			
December 31, 2010 (in millions)	Protection sold	Protection purchased with identical underlyings[c]	Net protection (sold)/purchased[d]	Other protection purchased[e]
Credit derivatives				
Credit default swaps	**$ (2,659,240)**	**$ 2,652,313**	**$ (6,927)**	**$ 32,867**
Other credit derivatives[a]	**(93,776)**	**10,016**	**(83,760)**	**24,234**
Total credit derivatives	**(2,753,016)**	**2,662,329**	**(90,687)**	**57,101**
Credit-related notes[b]	**(2,008)**	**—**	**(2,008)**	**3,327**
Total	**$ (2,755,024)**	**$ 2,662,329**	**$ (92,695)**	**$ 60,428**

	Maximum payout/Notional amount			
December 31, 2009 (in millions)	Protection sold	Protection purchased with identical underlyings[c]	Net protection (sold)/purchased[d]	Other protection purchased[e]
Credit derivatives				
Credit default swaps	$ (2,937,442)	$ 2,978,044	$ 40,602	$ 28,064
Other credit derivatives[a]	(10,575)	9,290	(1,285)	30,473
Total credit derivatives	(2,948,017)	2,987,334	39,317	58,537
Credit-related notes	(4,031)	—	(4,031)	1,728
Total	$ (2,952,048)	$ 2,987,334	$ 35,286	$ 60,265

(a) Primarily consists of total return swaps and credit default swap options.
(b) As a result of the adoption of new accounting guidance, effective July 1, 2010, includes beneficial interests in securitized financial assets that contain embedded credit derivatives.
(c) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(d) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(e) Represents protection purchased by the Firm through single-name and index credit default swap or credit-related notes.

The following tables summarize the notional and fair value amounts of credit derivatives and credit-related notes as of December 31, 2010 and 2009, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of protection purchased are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings[a]/maturity profile

December 31, 2010 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value[b]
Risk rating of reference entity					
Investment-grade	**$ (175,618)**	**$ (1,194,695)**	**$ (336,309)**	**$ (1,706,622)**	**$ (17,261)**
Noninvestment-grade	**(148,434)**	**(702,638)**	**(197,330)**	**(1,048,402)**	**(59,939)**
Total	**$ (324,052)**	**$ (1,897,333)**	**$ (533,639)**	**$ (2,755,024)**	**$ (77,200)**

December 31, 2009 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value[b]
Risk rating of reference entity					
Investment-grade	$ (215,580)	$ (1,140,133)	$ (367,015)	$ (1,722,728)	$ (16,607)
Noninvestment-grade	(150,122)	(806,139)	(273,059)	(1,229,320)	(90,410)
Total	$ (365,702)	$ (1,946,272)	$ (640,074)	$ (2,952,048)	$ (107,017)

(a) The ratings scale is based on the Firm's internal ratings, which generally correspond to ratings as defined by S&P and Moody's.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral held by the Firm.

Note 7 – Noninterest revenue

Investment banking fees

This revenue category includes advisory and equity and debt underwriting fees. Advisory fees are recognized as revenue when the related services have been performed and the fee has been earned. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee (e.g., the fee is not contingent upon the customer obtaining financing). Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria.

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	**2010**	2009	2008
Underwriting:			
Equity	**$ 1,589**	$2,487	$ 1,477
Debt	**3,172**	2,739	2,094
Total underwriting	**4,761**	5,226	3,571
Advisory[a]	**1,429**	1,861	1,955
Total investment banking fees	**$ 6,190**	$7,087	$ 5,526

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated its Firm-administered multi-seller conduits. The consolidation of the conduits did not significantly change the Firm's net income as a whole; however, it did affect the classification of items on the Firm's Consolidated Statements of Income. As a result, certain advisory fees were considered inter-company and eliminated, and the fees charged by the consolidated multi-seller conduits to its customers were classified as lending-and-deposit-related fees.

Principal transactions

Principal transactions revenue consists of realized and unrealized gains and losses from trading activities (including physical commodities inventories that are generally accounted for at the lower of cost or fair value), changes in fair value associated with financial instruments held by IB for which the fair value option was elected, and loans held-for-sale within the wholesale lines of business. Principal transactions revenue also includes private equity gains and losses.

The following table presents principal transactions revenue.

Year ended December 31, (in millions)	**2010**	2009	2008
Trading revenue	**$ 9,404**	$ 9,870	$ (9,791)
Private equity gains/(losses)[a]	**1,490**	(74)	(908)
Principal transactions	**$10,894**	$ 9,796	$(10,699)

(a) Includes revenue on private equity investments held in the Private Equity business within Corporate/Private Equity, as well as those held in other business segments.

Lending- and deposit-related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan-servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions, and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met.

The following table presents the components of asset management, administration and commissions.

Year ended December 31, (in millions)	**2010**	2009	2008
Asset management:			
Investment management fees	**$ 5,632**	$ 4,997	$ 5,562
All other asset management fees	**496**	356	432
Total asset management fees	**6,128**	5,353	5,994
Total administration fees[a]	**2,023**	1,927	2,452
Commission and other fees:			
Brokerage commissions	**2,804**	2,904	3,141
All other commissions and fees	**2,544**	2,356	2,356
Total commissions and fees	**5,348**	5,260	5,497
Total asset management, administration and commissions	**$13,499**	$12,540	$13,943

(a) Includes fees for custody, securities lending, funds services and securities clearance.

Mortgage fees and related income

This revenue category primarily reflects Retail Financial Services's ("RFS") mortgage banking revenue, including: fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously-sold loans; the impact of risk management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. Changes in the fair value of RFS mortgage servicing rights are reported in mortgage fees and related income. Net interest income from mortgage loans, and securities gains and losses on AFS securities used in mortgage-related risk management activities, are recorded in interest income and securities gains/(losses), respectively. For a further discussion of MSRs, see Note 17 on pages 260–263 of this Annual Report.

Credit card income

This revenue category includes interchange income from credit and debit cards. Prior to 2010, this revenue category included servicing fees earned in connection with securitization activities. Effective January 1, 2010, the Firm consolidated its Firm-sponsored credit card securitization trusts (see Note 16 on pages 244–259 of this Annual Report) and, as a result, the servicing fees were eliminated in consolidation. Volume-related payments to partners and expense for rewards programs are netted against interchange income; expense related to rewards programs are recorded when the rewards are earned by the customer. Other fee revenue is recognized as earned, except for annual fees, which are deferred and recognized on a straight-line basis over the 12-month period to which they pertain. Direct loan origination costs are also deferred and recognized over a 12-month period. In addition, due to the consolidation of Chase Paymentech Solutions in the fourth quarter of 2008, this category now includes net fees earned for processing card transactions for merchants.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous affinity organizations and co-brand partners, which grant the Firm exclusive rights to market to the members or customers of such organizations and partners. These organizations and partners endorse the credit card programs and provide their mailing lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to 10 years. The economic incentives the Firm pays to the endorsing organizations and partners typically include payments based on new account originations, charge volumes, and the cost of the endorsing organizations' or partners' marketing activities and awards.

The Firm recognizes the payments made to the affinity organizations and co-brand partners based on new account originations as direct loan origination costs. Payments based on charge volumes are considered by the Firm as revenue sharing with the affinity organizations and co-brand partners, which are deducted from interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the endorsing organization or partner are expensed by the Firm as incurred. These costs are recorded within noninterest expense.

Note 8 – Interest income and Interest expense

Interest income and interest expense is recorded in the Consolidated Statements of Income and classified based on the nature of the underlying asset or liability. Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP absent the fair value option election; for those instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable.

Details of interest income and interest expense were as follows.

Year ended December 31, (in millions)	**2010**	2009	2008
Interest income			
Loans	**$ 40,388**	$38,704	$ 38,347
Securities	**9,540**	12,377	6,344
Trading assets	**11,007**	12,098	17,236
Federal funds sold and securities purchased under resale agreements	**1,786**	1,750	5,983
Securities borrowed	**175**	4	2,297
Deposits with banks	**345**	938	1,916
Other assets[a]	**541**	479	895
Total interest income[b]	**63,782**	66,350	73,018
Interest expense			
Interest-bearing deposits	**3,424**	4,826	14,546
Short-term and other liabilities[c]	**2,708**	3,845	10,933
Long-term debt	**5,504**	6,309	8,355
Beneficial interests issued by consolidated VIEs	**1,145**	218	405
Total interest expense[b]	**12,781**	15,198	34,239
Net interest income	**$ 51,001**	$51,152	$ 38,779
Provision for credit losses	**$ 16,639**	$ 32,015	$ 19,445
Provision for credit losses – accounting conformity[d]	**—**	—	1,534
Total provision for credit losses	**$ 16,639**	$32,015	$ 20,979
Net interest income after provision for credit losses	**$ 34,362**	$19,137	$ 17,800

(a) Predominantly margin loans.

(b) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon the adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, its Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related. The consolidation of these VIEs did not significantly change the Firm's total net income. However, it did affect the classification of items on the Firm's Consolidated Statements of Income; as a result of the adoption of the guidance, certain noninterest revenue was eliminated in consolidation, offset by the recognition of interest income, interest expense, and provision for credit losses.

(c) Includes brokerage customer payables.

(d) 2008 includes an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual's banking operations.

Note 9 – Pension and other postretirement employee benefit plans

The Firm's defined benefit pension plans and its other postretirement employee benefit ("OPEB") plans (collectively the "Plans") are accounted for in accordance with U.S. GAAP for retirement benefits.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based on eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after three years of service. In November 2009, the Firm announced certain changes to the pay credit schedule and amount of eligible compensation recognized under the U.S. plan effective February 1, 2010. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws. On January 15, 2009, and August 28, 2009, the Firm made discretionary cash contributions to its U.S. defined benefit pension plan of $1.3 billion and $1.5 billion, respectively. The amount of potential 2011 contributions to the U.S. defined benefit pension plans, if any, is not determinable at this time. The expected amount of 2011 contributions to the non-U.S. defined benefit pension plans is $166 million of which $154 million is contractually required.

JPMorgan Chase also has a number of defined benefit pension plans not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees earn pay and interest credits on compensation amounts above the maximum stipulated by law under a qualified plan. The Firm announced that, effective May 1, 2009, pay credits would no longer be provided on compensation amounts above the maximum stipulated by law. The Excess Retirement Plan had an unfunded projected benefit obligation in the amount of $266 million and $267 million, at December 31, 2010 and 2009, respectively.

Defined contribution plans

JPMorgan Chase currently provides two qualified defined contribution plans in the U.S. and other similar arrangements in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is The JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. The 401(k) Savings Plan allows employees to make pretax and Roth 401(k) contributions to tax-deferred investment portfolios. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan.

The Firm matched eligible employee contributions up to 5% of benefits-eligible compensation (e.g., base pay) on a per pay period basis through April 30, 2009, and then amended the plan to provide that thereafter matching contributions would be made annually. Employees begin to receive matching contributions after completing a one-year-of-service requirement. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. Matching contributions are immediately vested for employees hired before May 1, 2009, and will vest after three years of service for employees hired on or after May 1, 2009. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

Effective August 10, 2009, JPMorgan Chase Bank, N.A. became the sponsor of the WaMu Savings Plan and that plan's assets were merged into the 401(k) Savings Plan effective March 31, 2010.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with length of service and date of hire and provide for limits on the Firm's share of covered medical benefits. The medical and life insurance benefits are both contributory. Postretirement medical benefits also are offered to qualifying U.K. employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations and plan assets and funded status amounts reported on the Consolidated Balance Sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

As of or for the year ended December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans[f]	
(in millions)	**2010**	2009	**2010**	2009	**2010**	2009
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (7,977)**	$ (7,796)	**$ (2,536)**	$ (2,007)	**$ (1,025)**	$ (1,095)
Benefits earned during the year	**(230)**	(313)	**(30)**	(30)	**(2)**	(3)
Interest cost on benefit obligations	**(468)**	(514)	**(128)**	(122)	**(55)**	(64)
Plan amendments	**—**	384	**10**	1	**—**	—
Business combinations	**—**	(4)[b]	**(12)**[b]	—	**—**	(40)[b]
Employee contributions	**NA**	NA	**(4)**	(3)	**(70)**	(64)
Net gain/(loss)	**(249)**	(408)	**(71)**	(287)	**13**	101
Benefits paid	**604**	674	**96**	95	**168**	160
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(10)**	(9)
Curtailments	**—**	—	**—**	1	**—**	(7)
Settlements	**—**	—	**5**	4	**—**	—
Special termination benefits	**—**	—	**(1)**	(1)	**—**	—
Foreign exchange impact and other	**—**	—	**71**	(187)	**1**	(4)
Benefit obligation, end of year	**$ (8,320)**	$ (7,977)	**$ (2,600)**	$ (2,536)	**$ (980)**	$ (1,025)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 10,218**	$ 6,948	**$ 2,432**	$ 2,008	**$ 1,269**	$ 1,126
Actual return on plan assets	**1,179**	1,145	**228**	218	**137**	172
Firm contributions	**35**	2,799	**157**	115	**3**	2
Employee contributions	**—**	—	**4**	3	**—**	—
Benefits paid	**(604)**	(674)	**(96)**	(95)	**(28)**	(31)
Settlements	**—**	—	**(5)**	(4)	**—**	—
Foreign exchange impact and other	**—**	—	**(73)**	187	**—**	—
Fair value of plan assets, end of year	**$ 10,828**[c][d]	$ 10,218[c][d]	**$ 2,647**[d]	$ 2,432[d]	**$ 1,381**	$ 1,269
Funded/(unfunded) status[a]	**$ 2,508**[e]	$ 2,241[e]	**$ 47**	$ (104)	**$ 401**	$ 244
Accumulated benefit obligation, end of year	**$ (8,271)**	$ (7,964)	**$ (2,576)**	$ (2,510)	**NA**	NA

(a) Represents overfunded plans with an aggregate balance of $3.5 billion and $3.0 billion at December 31, 2010 and 2009, respectively, and underfunded plans with an aggregate balance of $561 million and $623 million at December 31, 2010 and 2009, respectively.
(b) Represents change resulting from the RBS Sempra Commodities business in 2010 and from the Washington Mutual plan in 2009.
(c) At December 31, 2010 and 2009, approximately $385 million and $332 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.
(d) At December 31, 2010 and 2009, defined benefit pension plan amounts not measured at fair value include $52 million and $82 million, respectively, of accrued receivables, and $187 million and $189 million, respectively, of accrued liabilities, for U.S. plans; and $9 million and $8 million, respectively, of accrued receivables for non-U.S. plans.
(e) Does not include any amounts attributable to the Washington Mutual Qualified Pension plan. The disposition of this plan remained subject to litigation and was not determinable.
(f) Includes an unfunded accumulated postretirement benefit obligation of $36 million and $29 million at December 31, 2010 and 2009, respectively, for the U.K. plan.

Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the projected benefit obligation or the fair value of the plan assets. Any excess, as well as prior service costs, are amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently nine years. For OPEB plans, any excess net gains and losses also are amortized over the average future service period, which is currently five years; however, prior service costs are amortized over the average years of service remaining to full eligibility age, which is currently three years.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

December 31,	Defined benefit pension plans				OPEB plans	
	U.S.		Non-U.S.			
(in millions)	**2010**	2009	**2010**	2009	**2010**	2009
Net gain/(loss)	**$ (2,627)**	$ (3,039)	**$ (566)**	$ (666)	**$ (119)**	$ (171)
Prior service credit/(cost)	**321**	364	**13**	3	**9**	22
Accumulated other comprehensive income/ (loss), pretax, end of year	**$ (2,306)**	$ (2,675)	**$ (553)**	$ (663)	**$ (110)**	$ (149)

The following table presents the components of net periodic benefit costs reported in the Consolidated Statements of Income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension, defined contribution and OPEB plans.

	Pension plans						OPEB plans		
	U.S.			Non-U.S.					
Year ended December 31, (in millions)	**2010**	2009	2008	**2010**	2009	2008	**2010**	2009	2008
Components of net periodic benefit cost									
Benefits earned during the year	**$ 230**	$ 313	$ 278	**$ 31**	$ 28	$ 29	**$ 2**	$ 3	$ 5
Interest cost on benefit obligations	**468**	514	488	**128**	122	142	**55**	65	74
Expected return on plan assets	**(742)**	(585)	(719)	**(126)**	(115)	(152)	**(96)**	(97)	(98)
Amortization:									
Net loss	**225**	304	—	**56**	44	25	**(1)**	—	—
Prior service cost/(credit)	**(43)**	4	4	**(1)**	—	—	**(13)**	(14)	(16)
Curtailment (gain)/loss	**—**	1	1	**—**	—	—	**—**	5	4
Settlement (gain)/loss	**—**	—	—	**1**	1	—	**—**	—	—
Special termination benefits	**—**	—	—	**1**	1	3	**—**	—	—
Net periodic benefit cost	**138**	551	52	**90**	81	47	**(53)**	(38)	(31)
Other defined benefit pension plans[a]	**14**	15	11	**11**	12	14	**NA**	NA	NA
Total defined benefit plans	**152**	566	63	**101**	93	61	**(53)**	(38)	(31)
Total defined contribution plans	**332**	359	263	**251**	226	286	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 484**	$ 925	$ 326	**$ 352**	$ 319	$ 347	**$ (53)**	$ (38)	$ (31)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	**$ (187)**	$ (168)	$ 3,243	**$ (21)**	$ 183	$ 235	**$ (54)**	$ (176)	$ 248
Prior service credit arising during the year	**—**	(384)	—	**(10)**	(1)	—	**—**	—	—
Amortization of net loss	**(225)**	(304)	—	**(56)**	(44)	(27)	**1**	—	—
Amortization of prior service (cost)/credit	**43**	(6)	(5)	**1**	—	—	**13**	15	15
Curtailment (gain)/loss	**—**	—	—	**—**	—	—	**—**	2	3
Settlement loss/(gain)	**—**	—	—	**(1)**	(1)	—	**—**	—	—
Foreign exchange impact and other	**—**	18	—	**(23)**	36	(150)	**1**	(1)	3
Total recognized in other comprehensive income	**(369)**	(844)	3,238	**(110)**	173	58	**(39)**	(160)	269
Total recognized in net periodic benefit cost and other comprehensive income	**$ (231)**	$ (293)	$ 3,290	**$ (20)**	$ 254	$ 105	**$ (92)**	$ (198)	$ 238

(a) Includes various defined benefit pension plans, which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2011 are as follows.

	Defined benefit pension plans		OPEB plans	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss	$ 168	$ 44	$ —	$ —
Prior service cost/(credit)	(43)	(1)	(8)	—
Total	$ 125	$ 43	$ (8)	$ —

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
December 31,	**2010**	2009	2008	**2010**	2009	2008
Actual rate of return:						
Defined benefit pension plans	**12.23%**	13.78%	(25.17)%	**0.77-10.65%**	3.17-22.43%	(21.58)-5.06%
OPEB plans	**11.23**	15.93	(17.89)	**NA**	NA	NA

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking building-block approach and are not strictly based on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration is also given to current market conditions and the short-term portfolio mix of each plan; as a result, in 2010 the Firm generally maintained the same expected return on assets as in the prior year.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on defined benefit pension plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The return on "AA"-rated long-term corporate bonds has been taken as the average yield on such bonds.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension and OPEB plans represents a rate implied from the yield curve of the year-end iBoxx £ corporate "AA" 15-year-plus bond index.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S.	
December 31,	**2010**	2009	**2010**	2009
Discount rate:				
Defined benefit pension plans	**5.50%**	6.00%	**1.60-5.50%**	2.00-5.70%
OPEB plans	**5.50**	6.00	**5.50**	5.70
Rate of compensation increase	**4.00**	4.00	**3.00-4.50**	3.00-4.50
Health care cost trend rate:				
Assumed for next year	**7.00**	7.75	**6.50**	5.40
Ultimate	**5.00**	5.00	**6.00**	4.50
Year when rate will reach ultimate	**2017**	2014	**2015**	2014

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2010**	2009	2008	**2010**	2009	2008
Discount rate:						
Defined benefit pension plans	**6.00%**	6.65%	6.60%	**2.00-5.70%**	2.00-6.20%	2.25-5.80%
OPEB plans	**6.00**	6.70	6.60	**5.70**	6.20	5.80
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**7.50**	7.50	7.50	**2.40-6.20**	2.50-6.90	3.25-5.75
OPEB plans	**7.00**	7.00	7.00	**NA**	NA	NA
Rate of compensation increase	**4.00**	4.00	4.00	**3.00-4.50**	3.00-4.00	3.00-4.25
Health care cost trend rate:						
Assumed for next year	**7.75**	8.50	9.25	**5.40**	7.00	5.75
Ultimate	**5.00**	5.00	5.00	**4.50**	5.50	4.00
Year when rate will reach ultimate	**2014**	2014	2014	**2014**	2012	2010

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's total service and interest cost and accumulated postretirement benefit obligation.

Year ended December 31, 2010 (in millions)	1-Percentage-point increase	1-Percentage-point decrease
Effect on total service and interest cost	$ 2	$ (2)
Effect on accumulated postretirement benefit obligation	36	(31)

At December 31, 2010, the Firm decreased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will result in an increase in expense of approximately $21 million for 2011. The 2011 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 7.50% and 6.25%, respectively, as compared to 7.50% and 7.00% in 2010. The initial health care benefit obligation trend assumption declined from 7.75% in 2010 to 7.00% in 2011. The ultimate health care trend assumption will remain at 5.00% in 2011, but the year to ultimate was adjusted from 2014 to 2017. As of December 31, 2010, the interest crediting rate assumption and the assumed rate of compensation increase remained at 5.25% and 4.00%, respectively.

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an increase of approximately an aggregate $30 million in 2011 U.S. defined benefit pension and OPEB plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2011 U.S. defined benefit pension and OPEB plan expense of approximately an aggregate $11 million and an increase in the related benefit obligations of approximately an aggregate $169 million. A 25-basis point increase in the interest crediting rate for the U.S. defined benefit pension plan would result in an increase in 2011 U.S. defined benefit pension expense of approximately $19 million and an increase in the related projected benefit obligations of approximately $76 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2011 non-U.S. defined benefit pension plan expense of approximately $11 million.

Investment strategy and asset allocation

The Firm's U.S. defined benefit pension plan assets are held in trust and are invested in a well-diversified portfolio of equity and fixed income securities, real estate, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity funds, and real estate funds). Non-U.S. defined benefit pension plan assets are held in various trusts and are also invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to partially fund the U.S. OPEB plan, are held in separate accounts with an insurance company and are invested in equity and fixed income index funds.

The investment policy for the Firm's U.S. defined benefit pension plan assets is to optimize the risk-return relationship as appropriate to the needs and goals using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Periodically the Firm performs a comprehensive analysis on the U.S. defined benefit pension plan asset allocations, incorporating projected asset and liability data, which focuses on the short-and long-term impact of the asset allocation on cumulative pension expense, economic cost, present value of contributions and funded status. Currently, approved asset allocation ranges are: U.S. equity 15–35%, international equity 15–25%, debt securities 10–30%, hedge funds 10–30%, real estate 5–20%, and private equity 5–20%. Asset allocations are not managed to a specific target but seek to shift asset class allocations within these stated ranges. Assets are managed by a combination of internal and external investment managers. Asset allocation decisions also incorporate the economic outlook and anticipated implications of the macroeconomic environment on the various asset classes and managers. Maintaining an appropriate level of liquidity, which takes into consideration forecasted requirements for cash is a major consideration in the asset allocation process. The Firm regularly reviews the asset allocations and all factors that continuously impact the portfolio, which is rebalanced when deemed necessary.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, the assets are invested to maximize returns subject to an appropriate level of risk relative to the plans' liabilities. In order to reduce the volatility in returns relative to the plan's liability profiles, the U.K. defined benefit pension plans' largest asset allocations are to debt securities of appropriate durations. Other assets, mainly equity securities, are then invested for capital appreciation, to provide long-term investment growth. Similar to the U.S. defined benefit pension plan, asset allocations for the U.K. plans are reviewed and rebalanced on a regular basis.

Investments held by the Plans include financial instruments which are exposed to various risks such as interest rate, market and credit risks. Exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments. As of December 31, 2010, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except in connection with investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $1.7 billion and $1.6 billion for U.S. plans and $155 million and $474 million for non-U.S. plans, as of December 31, 2010 and 2009, respectively.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[c]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2010**	2009	Allocation	**2010**	2009	Allocation	**2010**	2009
Asset category									
Debt securities[a]	10-30%	**29%**	29%	72%	**71%**	75%	50%	**50%**	50%
Equity securities	25-60	**40**	40	26	**28**	23	50	**50**	50
Real estate	5-20	**4**	4	1	**—**	1	—	**—**	—
Alternatives[b]	15-50	**27**	27	1	**1**	1	—	**—**	—
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Debt securities primarily include corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.
(b) Alternatives primarily include limited partnerships.
(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

Fair value measurement of the plans' assets and liabilities

The following details the instruments measured at fair value, including the general classification of such instruments pursuant to the valuation hierarchy, as described in Note 3 on pages 170–187 of this Annual Report.

Cash and cash equivalents

Cash and cash equivalents includes currency on hand, demand deposits with banks or other financial institutions, and any short-term, highly liquid investments readily convertible into cash (i.e., investments with original maturities of three months or less). Due to the highly liquid nature of these assets, they are classified within level 1 of the valuation hierarchy.

Equity securities

Common and preferred stocks are valued at the closing price reported on the major market on which the individual securities are traded and are generally classified within level 1 of the valuation hierarchy. If quoted exchange prices are not available for the specific security, other independent pricing or broker quotes are consulted for valuation purposes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided from independent pricing services. Common and preferred stock that do not have quoted exchange prices are generally classified within level 2 of the valuation hierarchy.

Common/collective trust funds

These investments are public investment vehicles valued based on the calculated NAV of the fund. Where the funds produce a daily NAV that is validated by a sufficient level of observable activity (purchases and sales at NAV), the NAV is used to value the fund investment and it is classified in level 1 of the valuation hierarchy. Where adjustments to the NAV are required, for example, with respect to interests in funds subject to restrictions on redemption (such as withdrawal limitations) and/or observable activity for the fund investment is limited, investments are classified within level 2 of the valuation hierarchy.

Limited partnerships

Limited partnerships include investments in hedge funds, private equity funds and real estate funds. Hedge funds are valued based on quoted NAV and are classified within level 2 or 3 of the valuation hierarchy depending on the level of liquidity and activity in the markets for each investment. Certain of these hedge fund investments are subject to restrictions on redemption (such as initial lock-up periods, withdrawal limitations and illiquid assets) and are therefore classified within level 3 of the valuation hierarchy. The valuation of private equity investments and real estate funds require significant management judgment due to the absence of quoted market prices, the inherent lack of liquidity and the long-term nature of such assets and therefore, they are generally classified within level 3 of the valuation hierarchy. Unfunded commitments to purchase limited partnership investments for the Plans were $1.1 billion and $1.3 billion for 2010 and 2009, respectively.

Corporate debt securities and U.S. federal, state, local and non-government debt securities

The Firm estimates the value of debt instruments using a combination of observed transaction prices, independent pricing services and relevant broker quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided from independent pricing services. The Firm may also use pricing models or discounted cash flows. Such securities are generally classified within level 2 of the valuation hierarchy.

Mortgage-backed securities

MBS include both U.S. government agency and U.S. government-sponsored enterprise (collectively, "U.S. government agencies") securities, and nonagency pass-through securities. U.S. government agency securities are valued based on quoted prices in active markets and are therefore classified in level 1 of the valuation hierarchy. Nonagency securities are primarily "AAA" rated residential and commercial MBS valued using a combination of observed transaction prices, independent pricing services and relevant broker quotes. Consideration is given to the nature of the quotes and the relationships of recently evidenced market activity to the prices provided from independent pricing services. Such securities are generally classified within level 2 of the valuation hierarchy.

Derivative receivables and derivative payables

In the normal course of business, foreign exchange, credit, interest rate and equity derivative contracts are used to minimize fluctuations in the value of plan assets caused by exposure to credit or market risks. These instruments may also be used in lieu of investing in cash instruments. Exchange traded derivatives valued using quoted prices are classified within level 1 of the valuation hierarchy. However, a majority of the derivative instruments are valued using internally developed models that use as their basis readily observable market parameters and are therefore classified within level 2 of the valuation hierarchy.

Other

Other consists of exchange traded funds ("ETFs"), mutual fund investments, and participating and non-participating annuity contracts ("Annuity Contracts"). ETFs are valued at the closing price reported on the major market on which the individual securities are traded and are generally classified within level 1 of the valuation hierarchy. Mutual fund investments are valued using NAV. Those fund investments with a daily NAV that are validated by a sufficient level of observable activity (purchases and sales at NAV) are classified in level 1 of the valuation hierarchy. Where adjustments to the NAV are required, for example, for fund investments subject to restrictions on redemption (such as lock-up periods or withdrawal limitations), and/or observable activity for the fund investment is limited, the mutual fund investments are classified in level 2 or 3 of the valuation hierarchy. Annuity Contracts are valued at the amount by which the fair value of the assets held in the separate account exceeds the actuarially determined guaranteed benefit obligation covered under the Annuity Contracts. Annuity Contracts lack market mechanisms for transferring each individual policy and generally include restrictions on the timing of surrender; therefore, these investments are classified within level 3 of the valuation hierarchy.

Pension and OPEB plan assets and liabilities measured at fair value

	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans			
December 31, 2010 (in millions)	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Level 3	Total fair value
Cash and cash equivalents	$ —	$ —	$ —	$ —	$ 81	$ —	$ —	$ 81
Equity securities:								
Capital equipment	748	9	—	757	68	13	—	81
Consumer goods	712	—	—	712	75	21	—	96
Banks and finance companies	414	1	—	415	113	9	—	122
Business services	444	—	—	444	53	10	—	63
Energy	195	—	—	195	59	6	—	65
Materials	205	—	—	205	50	13	—	63
Real Estate	21	—	—	21	1	—	—	1
Other	857	6	—	863	194	16	—	210
Total equity securities	3,596	16	—	3,612	613	88	—	701
Common/collective trust funds[a]	1,195	756	—	1,951	46	180	—	226
Limited partnerships:								
Hedge funds	—	959	1,102	2,061	—	—	—	—
Private equity funds	—	—	1,232	1,232	—	—	—	—
Real estate	—	—	304	304	—	—	—	—
Total limited partnerships	—	959	2,638	3,597	—	—	—	—
Corporate debt securities[b]	—	424	1	425	—	718	—	718
U.S. federal, state, local and non-U.S. government debt securities	—	453	—	453	—	864	—	864
Mortgage-backed securities[c]	188	55	—	243	1	—	—	1
Derivative receivables[d]	2	194	—	196	—	3	—	3
Other	218	58	387	663	18	51	—	69
Total assets measured at fair value[e][f]	$ 5,199	$ 2,915	$ 3,026	$ 11,140	$ 759	$ 1,904	$ —	$ 2,663
Derivative payables	—	(177)	—	(177)	—	(25)	—	(25)
Total liabilities measured at fair value	$ —	$ (177)	$ —	$ (177)[g]	$ —	$ (25)	$ —	$ (25)

	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans			
December 31, 2009 (in millions)	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Level 3	Total fair value
Cash and cash equivalents	$ 71	$ —	$ —	$ 71	$ 27	$ —	$ —	$ 27
Equity securities:								
Capital equipment	608	13	—	621	49	16	—	65
Consumer goods	554	—	—	554	64	18	—	82
Banks and finance companies	324	—	—	324	90	12	—	102
Business services	322	—	—	322	39	13	—	52
Energy	188	—	—	188	45	13	—	58
Materials	186	—	—	186	35	3	—	38
Real estate	19	—	—	19	—	—	—	—
Other	571	1	—	572	171	—	—	171
Total equity securities	2,772	14	—	2,786	493	75	—	568
Common/collective trust funds[a]	1,868	610	—	2,478	23	185	—	208
Limited partnerships:								
Hedge funds	—	912	627	1,539	—	—	—	—
Private equity funds	—	—	874	874	—	—	—	—
Real estate	—	—	196	196	—	—	—	—
Total limited partnerships	—	912	1,697	2,609	—	—	—	—
Corporate debt securities[b]	—	941	—	941	—	685	—	685
U.S. federal, state, local and non-U.S. government debt securities	—	406	—	406	—	841	—	841
Mortgage-backed securities[c]	169	54	—	223	—	—	—	—
Derivative receivables[d]	—	90	—	90	—	5	—	5
Other	348	115	334	797	18	89	13	120
Total assets measured at fair value[e][f]	$ 5,228	$ 3,142	$ 2,031	$ 10,401	$ 561	$ 1,880	$ 13	$ 2,454
Derivative payables	—	(76)	—	(76)	—	(30)	—	(30)
Total liabilities measured at fair value	$ —	$ (76)	$ —	$ (76)[g]	$ —	$ (30)	$ —	$ (30)

(a) At December 31, 2010 and 2009, common/collective trust funds generally include commingled funds that primarily included 22% and 39%, respectively, of short-term investment funds; 21% and 24%, respectively, of equity (index) investments; and 16% and 15%, respectively, of international investments.

(b) Corporate debt securities include debt securities of U.S. and non-U.S. corporations.

(c) At December 31, 2010 and 2009, mortgage-backed securities were generally invested 77% and 72%, respectively, in debt securities issued by U.S. government agencies.

(d) At December 31, 2010 and 2009, derivative receivables primarily included 89% and 80%, respectively, of foreign exchange contracts; and 11% and 16%, respectively, of equity warrants.

(e) At December 31, 2010 and 2009, the fair value of investments valued at NAV were $4.1 billion and $4.2 billion, respectively, which were classified within the valuation hierarchy as follows: $1.3 billion and $2.0 billion in level 1, $1.7 billion and $1.6 billion in level 2 and $1.1 billion and $600 million in level 3.

(f) At December 31, 2010 and 2009, excluded U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $52 million and $82 million, respectively; and excluded non-U.S. defined benefit pension plan receivables for dividends and interest receivables of $9 million and $8 million, respectively.

(g) At December 31, 2010 and 2009, excluded $149 million and $177 million, respectively, of U.S. defined benefit pension plan payables for investments purchased; and $38 million and $12 million, respectively, of other liabilities.

At December 31, 2010 and 2009, the Firm's OPEB plan was partially funded with COLI policies of $1.4 billion and $1.3 billion, respectively, which were classified in level 3 of the valuation hierarchy.

Changes in level 3 fair value measurements using significant unobservable inputs

Year ended December 31, 2010 (in millions)	Fair value, January 1, 2010	Total realized/ unrealized gains/(losses)(a)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2010
U.S. defined benefit pension plans					
Limited partnerships:					
Hedge funds	**$ 627**	**$ 8**	**$ 388**	**$ 79**	**$ 1,102**
Private equity funds	**874**	**111**	**235**	**12**	**1,232**
Real estate	**196**	**19**	**89**	**—**	**304**
Total limited partnerships	**$ 1,697**	**$ 138**	**$ 712**	**$ 91**	**$ 2,638**
Corporate debt securities	**—**	**—**	**—**	**1**	**1**
Other	**334**	**53**	**—**	**—**	**387**
Total U.S. plans	**$ 2,031**	**$ 191**	**$ 712**	**$ 92**	**$ 3,026**
Non-U.S. defined benefit pension plans					
Other	**$ 13**	**$ (1)**	**$ (12)**	**$ —**	**$ —**
Total non-U.S. plans	**$ 13**	**$ (1)**	**$ (12)**	**$ —**	**$ —**
OPEB plans					
COLI	**$ 1,269**	**$ 137**	**$ (25)**	**$ —**	**$ 1,381**
Total OPEB plans	**$ 1,269**	**$ 137**	**$ (25)**	**$ —**	**$ 1,381**

Year ended December 31, 2009 (in millions)	Fair value, January 1, 2009	Total realized/ unrealized gains/(losses)(a)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2009
U.S. defined benefit pension plans					
Limited partnerships:					
Hedge funds	$ 524	$ 112	$ (9)	$ —	$ 627
Private equity funds	810	(1)	80	(15)	874
Real estate	203	(107)	100	—	196
Total limited partnerships	$ 1,537	$ 4	$ 171	$ (15)	$ 1,697
Corporate debt securities	—	—	—	—	—
Other	315	19	—	—	334
Total U.S. plans	$ 1,852	$ 23	$ 171	$ (15)	$ 2,031
Non-U.S. defined benefit pension plans					
Other	$ 14	$ (1)	$ —	$ —	$ 13
Total non-U.S. plans	$ 14	$ (1)	$ —	$ —	$ 13
OPEB plans					
COLI	$ 1,126	$ 172	$ (29)	$ —	$ 1,269
Total OPEB plans	$ 1,126	$ 172	$ (29)	$ —	$ 1,269

(a) For the years ended December 31, 2010, and 2009, respectively, total realized (unrealized) gains/(losses) are the changes in unrealized gains or losses relating to assets held at December 31, 2010 and 2009, respectively.

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2011	$ 1,001	$ 84	$ 99	$ 10
2012	1,011	92	97	11
2013	587	98	95	12
2014	593	102	94	13
2015	592	111	92	14
Years 2016–2020	3,013	640	418	78

Note 10 – Employee stock-based incentives

Employee stock-based awards

In 2010, 2009, and 2008, JPMorgan Chase granted long-term stock-based awards to certain key employees under the 2005 Long-Term Incentive Plan (the "2005 Plan"). The 2005 Plan became effective on May 17, 2005, and was amended in May 2008. Under the terms of the amended 2005 plan, as of December 31, 2010, 113 million shares of common stock are available for issuance through May 2013. The amended 2005 Plan is the only active plan under which the Firm is currently granting stock-based incentive awards. In the following discussion, the 2005 Plan, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans," and such plans constitute the Firm's stock-based incentive plans.

Restricted stock units ("RSUs") are awarded at no cost to the recipient upon their grant. RSUs are generally granted annually and generally vest at a rate of 50% after two years and 50% after three years and convert into shares of common stock at the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All of these awards are subject to forfeiture until vested. An RSU entitles the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSU is outstanding and, as such, are considered participating securities as discussed in Note 25 on page 269 of this Annual Report.

Under the LTI Plans, stock options and stock appreciation rights ("SARs") have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm typically awards SARs to certain key employees once per year, and it also periodically grants discretionary stock-based incentive awards to individual employees, primarily in the form of both employee stock options and SARs. The 2010, 2009 and 2008 grants of SARs to key employees vest ratably over five years (i.e., 20% per year). The 2010 grants of SARs contain full-career eligibility provisions; the 2009 and 2008 grants of SARs do not include any full-career eligibility provisions. SARs generally expire 10 years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2010, 2009 and 2008, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. The SARs, which have a 10-year term, will become exercisable no earlier than January 22, 2013, and have an exercise price of $39.83. The number of SARs that will become exercisable (ranging from none to the full 2 million) and their exercise date or dates may be determined by the Board of Directors based on an annual assessment of the performance of both the CEO and JPMorgan Chase. The Firm recognizes this award ratably over an assumed five-year service period, subject to a requirement to recognize changes in the fair value of the award through the grant date. The Firm recognized $4 million, $9 million and $1 million in compensation expense in 2010, 2009 and 2008, respectively, for this award.

In connection with the Bear Stearns merger, 46 million Bear Stearns employee stock awards, principally RSUs, capital appreciation plan units and stock options, were exchanged for equivalent JPMorgan Chase awards using the merger exchange ratio of 0.21753. The fair value of these employee stock awards was included in the Bear Stearns purchase price, since substantially all of the awards were fully vested immediately after the merger date under provisions that provided for accelerated vesting upon a change of control of Bear Stearns. However, Bear Stearns vested employee stock options had no impact on the purchase price; since the employee stock options were significantly out of the money at the merger date, the fair value of these awards was equal to zero upon their conversion into JPMorgan Chase options.

The Firm also exchanged 6 million shares of its common stock for 27 million shares of Bear Stearns common stock held in an irrevocable grantor trust (the "RSU Trust"), using the merger exchange ratio of 0.21753. The RSU Trust was established to hold common stock underlying awards granted to selected employees and key executives under certain Bear Stearns employee stock plans. The RSU Trust was consolidated on JPMorgan Chase's Consolidated Balance Sheets as of June 30, 2008, and the shares held in the RSU Trust were recorded in "Shares held in RSU Trust," which reduced stockholders' equity, similar to the treatment for treasury stock. The related obligation to issue stock under these employee stock plans is reported in capital surplus. The issuance of shares held in the RSU Trust to employees has no effect on the Firm's total stockholders' equity, net income or earnings per share. Shares held in the RSU Trust were distributed in 2008, 2009 and 2010, with a majority of the shares in the RSU Trust having been distributed through December 2010. There were 1 million shares in the RSU Trust as of December 31, 2010. These remaining shares are expected to be distributed over the next two years.

RSU activity

Compensation expense for RSUs is measured based on the number of shares granted multiplied by the stock price at the grant date and is recognized in income as previously described. The following table summarizes JPMorgan Chase's RSU activity for 2010.

Year ended December 31, 2010 (in thousands, except weighted average data)	Number of shares	Weighted-average grant date fair value
Outstanding, January 1	221,265	$ 29.32
Granted	80,142	42.92
Vested	(59,137)	43.05
Forfeited	(8,149)	31.15
Outstanding, December 31	234,121	$ 30.45

The total fair value of shares that vested during the years ended December 31, 2010, 2009 and 2008, was $2.3 billion, $1.3 billion and $1.6 billion, respectively.

Employee stock option and SARs activity

Compensation expense for employee stock options and SARs, which is measured at the grant date as the fair value of employee stock options and SARs, is recognized in net income as described above.

The following table summarizes JPMorgan Chase's employee stock option and SARs activity for the year ended December 31, 2010, including awards granted to key employees and awards granted in prior years under broad-based plans.

Year ended December 31, 2010 (in thousands, except weighted-average data, and where otherwise noted)	Number of options/SARs	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	266,568	$ 45.83		
Granted	20,949	42.96		
Exercised	(12,870)	30.69		
Forfeited	(3,076)	34.82		
Canceled	(37,044)	65.95		
Outstanding, December 31	234,527	$ 43.33	3.4	$ 1,191,151
Exercisable, December 31	181,183	45.52	2.1	788,217

The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2010, 2009 and 2008, was $12.27, $8.24 and $10.36, respectively. The total intrinsic value of options exercised during the years ended December 31, 2010, 2009 and 2008, was $154 million, $154 million and $391 million, respectively.

Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated Statements of Income.

Year ended December 31, (in millions)	**2010**	2009	2008
Cost of prior grants of RSUs and SARs that are amortized over their applicable vesting periods	**$ 2,479**	$ 2,510	$ 2,228
Accrual of estimated costs of RSUs and SARs to be granted in future periods including those to full-career eligible employees	**772**	845	409
Total noncash compensation expense related to employee stock-based incentive plans	**$ 3,251**	$ 3,355	$ 2,637

At December 31, 2010, approximately $1.5 billion (pretax) of compensation cost related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 0.9 years. The Firm does not capitalize any compensation cost related to share-based compensation awards to employees.

Cash flows and tax benefits

Income tax benefits related to stock-based incentive arrangements recognized in the Firm's Consolidated Statements of Income for the years ended December 31, 2010, 2009 and 2008, were $1.3 billion, $1.3 billion and $1.1 billion, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements, and the actual income tax benefit realized related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	**2010**	2009	2008
Cash received for options exercised	**$ 205**	$ 437	$1,026
Tax benefit realized	**14**	11	72

In June 2007, the FASB ratified guidance which requires that realized tax benefits from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings be recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards. Prior to the issuance of this guidance, the Firm did not include these tax benefits as part of this pool of excess tax benefits. The Firm adopted this guidance on January 1, 2008; its adoption did not have an impact on the Firm's Consolidated Balance Sheets or results of operations.

Valuation assumptions

The following table presents the assumptions used to value employee stock options and SARs granted during the years ended December 31, 2010, 2009 and 2008, under the Black-Scholes valuation model.

Year ended December 31,	**2010**	2009	2008
Weighted-average annualized valuation assumptions			
Risk-free interest rate	**3.89%**	2.33%	3.90%
Expected dividend yield[(a)]	**3.13**	3.40	3.57
Expected common stock price volatility	**37**	56	34
Expected life (in years)	**6.4**	6.6	6.8

(a) In 2010 and 2009, the expected dividend yield was determined using historical dividend yields.

The expected volatility assumption is derived from the implied volatility of JPMorgan Chase's publicly traded stock options. The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled, and the assumption is based on the Firm's historical experience.

Note 11 – Noninterest expense

The following table presents the components of noninterest expense.

Year ended December 31, (in millions)	**2010**	2009	2008
Compensation expense[a]	**$28,124**	$ 26,928	$ 22,746
Noncompensation expense:			
Occupancy expense	**3,681**	3,666	3,038
Technology, communications and equipment expense	**4,684**	4,624	4,315
Professional and outside services	**6,767**	6,232	6,053
Marketing	**2,446**	1,777	1,913
Other expense[b][c][d]	**14,558**	7,594	3,740
Amortization of intangibles	**936**	1,050	1,263
Total noncompensation expense	**33,072**	24,943	20,322
Merger costs	**—**	481	432
Total noninterest expense	**$61,196**	$ 52,352	$ 43,500

(a) 2010 includes a payroll tax expense related to the United Kingdom ("U.K.") Bank Payroll Tax on certain compensation awarded from December 9, 2009, to April 5, 2010, to relevant banking employees.
(b) In 2010, 2009 and 2008, included litigation expense of $7.4 billion, $161 million and a net benefit of $781 million, respectively.
(c) Includes foreclosed property expense of $1.0 billion, $1.4 billion and $213 million in 2010, 2009 and 2008, respectively.
(d) Expense for 2009 included a $675 million FDIC special assessment.

Merger costs

Costs associated with the Bear Stearns merger and the Washington Mutual transaction in 2008 are reflected in the merger costs caption of the Consolidated Statements of Income. For a further discussion of the Bear Stearns merger and the Washington Mutual transaction, see Note 2 on pages 166–170 of this Annual Report. A summary of merger-related costs is shown in the following table.

	2009			2008		
Year ended December 31, (in millions)	Bear Stearns	Washington Mutual	Total	Bear Stearns	Washington Mutual	Total
Expense category						
Compensation	$ (9)	$ 256	$ 247	$ 181	$ 113	$ 294
Occupancy	(3)	15	12	42	—	42
Technology and communications and other	38	184	222	85	11	96
Total[a][b]	$ 26	$ 455	$ 481	$ 308	$ 124	$ 432

(a) With the exception of occupancy- and technology-related write-offs, all of the costs in the table required the expenditure of cash.
(b) There were no merger costs for 2010.

The table below shows changes in the merger reserve balance related to costs associated with the above transactions.

	2010			2009			2008		
Year ended December 31, (in millions)	Bear Stearns	Washington Mutual	Total	Bear Stearns	Washington Mutual	Total	Bear Stearns	Washington Mutual	Total
Merger reserve balance, beginning of period	**$ 32**	**$ 57**	**$ 89**	$ 327	$ 441	$ 768	$ —	$ —	$ —
Recorded as merger costs[a]	**—**	**—**	**—**	26	455	481	308	124	432
Recorded as goodwill	**—**	**—**	**—**	(5)	—	(5)	1,112	435	1,547
Utilization of merger reserve	**(32)**	**(57)**	**(89)**	(316)	(839)	(1,155)	(1,093)	(118)	(1,211)
Merger reserve balance, end of period	**$ —**	**$ —**	**$ —**	$ 32	$ 57	$ 89	$ 327	$ 441	$ 768

(a) There were no merger costs for 2010.

Note 12 – Securities

Securities are classified as AFS, held-to-maturity ("HTM") or trading. Trading securities are discussed in Note 3 on pages 170–187 of this Annual Report. Securities are classified primarily as AFS when used to manage the Firm's exposure to interest rate movements or used for longer-term strategic purposes. AFS securities are carried at fair value on the Consolidated Balance Sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to accumulated other comprehensive income/(loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated Statements of Income. Securities that the Firm has the positive intent and ability to hold to maturity are classified as HTM and are carried at amortized cost on the Consolidated Balance Sheets. The Firm has not classified new purchases of securities as HTM for the past several years.

Other-than-temporary impairment

AFS debt and equity securities in unrealized loss positions are analyzed as part of the Firm's ongoing assessment of other-than-temporary impairment ("OTTI"). For debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. The Firm also considers an OTTI to have occurred when there is an adverse change in cash flows to beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment. For AFS equity securities, the Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its amortized cost basis.

For debt securities, OTTI losses must be recognized in earnings if an investor has the intent to sell the debt security, or if it is more likely than not that the investor will be required to sell the debt security before recovery of its amortized cost basis. However, even if an investor does not expect to sell a debt security, it must evaluate the expected cash flows to be received and determine if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI.

When the Firm intends to sell AFS debt or equity securities, it recognizes an impairment loss equal to the full difference between the amortized cost basis and the fair value of those securities.

When the Firm does not intend to sell AFS debt or equity securities in an unrealized loss position, potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and changes in fair value of the security after the balance sheet date. For debt securities, the Firm estimates cash flows over the remaining lives of the underlying collateral to assess whether credit losses exist and, where applicable for purchased or retained beneficial interests in securitized assets, to determine if any adverse changes in cash flows have occurred. The Firm's cash flow estimates take into account expectations of relevant market and economic data as of the end of the reporting period. For securities issued in a securitization, the Firm also takes into consideration underlying loan-level data, and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss on the AFS debt security exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios.

For equity securities, the Firm considers the above factors, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the carrying value.

Realized gains and losses

The following table presents realized gains and losses from AFS securities.

Year ended December 31, (in millions)	**2010**	2009	2008
Realized gains	**$ 3,382**	$ 2,268	$ 1,890
Realized losses	**(317)**	(580)	(330)[c]
Net realized gains[a]	**3,065**	1,688	1,560
Credit losses included in securities gains[b]	**(100)**	(578)	NA
Net securities gains	**$ 2,965**	$ 1,110	$ 1,560

(a) Proceeds from securities sold were within approximately 3% of amortized cost in 2010 and 2009 and within approximately 2% of amortized cost in 2008.
(b) Includes other-than-temporary impairment losses recognized in income on certain prime mortgage-backed securities and obligations of U.S. states and municipalities for the year ended December 31, 2010, and on certain subprime and prime mortgage-backed securities and obligations of U.S. states and municipalities for the year ended December 31, 2009.
(c) Includes $76 million of losses due to other-than temporary impairment of subprime mortgage-backed securities.

The amortized costs and estimated fair values of AFS and HTM securities were as follows at December 31, 2010 and 2009.

	2010				2009			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies[a]	**$ 117,364**	**$ 3,159**	**$ 297**	**$ 120,226**	$ 166,094	$ 2,412	$ 608	$ 167,898
Residential:								
Prime and Alt-A	**2,173**	**81**	**250**[d]	**2,004**	5,234	96	807[d]	4,523
Subprime	**—**	**—**	**—**	**—**	17	—	—	17
Non-U.S.	**47,089**	**290**	**409**	**46,970**	10,003	320	65	10,258
Commercial	**5,169**	**502**	**17**	**5,654**	4,521	132	63	4,590
Total mortgage-backed securities	**171,795**	**4,032**	**973**	**174,854**	185,869	2,960	1,543	187,286
U.S. Treasury and government agencies[a]	**11,258**	**118**	**28**	**11,348**	30,044	88	135	29,997
Obligations of U.S. states and municipalities	**11,732**	**165**	**338**	**11,559**	6,270	292	25	6,537
Certificates of deposit	**3,648**	**1**	**2**	**3,647**	2,649	1	—	2,650
Non-U.S. government debt securities	**20,614**	**191**	**28**	**20,777**	24,320	234	51	24,503
Corporate debt securities[b]	**61,718**	**495**	**419**	**61,794**	61,226	812	30	62,008
Asset-backed securities:								
Credit card receivables	**7,278**	**335**	**5**	**7,608**	25,266	502	26	25,742
Collateralized loan obligations	**13,336**	**472**	**210**	**13,598**	12,172	413	436	12,149
Other	**8,968**	**130**	**16**	**9,082**	6,719	129	54	6,794
Total available-for-sale debt securities	**310,347**	**5,939**	**2,019**[d]	**314,267**	354,535	5,431	2,300[d]	357,666
Available-for-sale equity securities	**1,894**	**163**	**6**	**2,051**	2,518	185	4	2,699
Total available-for-sale securities	**$ 312,241**	**$ 6,102**	**$ 2,025**[d]	**$ 316,318**	$ 357,053	$ 5,616	$ 2,304[d]	$ 360,365
Total held-to-maturity securities[c]	**$ 18**	**$ 2**	**$ —**	**$ 20**	$ 25	$ 2	$ —	$27

(a) Includes total U.S. government-sponsored enterprise obligations with fair values of $94.2 billion and $153.0 billion at December 31, 2010 and 2009, respectively, which were predominantly mortgage-related.

(b) Consists primarily of bank debt including sovereign government-guaranteed bank debt.

(c) Consists primarily of mortgage-backed securities issued by U.S. government-sponsored enterprises.

(d) Includes a total of $133 million and $368 million (before tax) of unrealized losses related to prime mortgage-backed securities for which credit losses have been recognized in income at December 31, 2010 and 2009, respectively. These unrealized losses are not credit-related and remain reported in AOCI.

Securities impairment

The following table presents the fair value and gross unrealized losses for AFS securities by aging category at December 31, 2010 and 2009.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2010 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	**$ 14,039**	**$ 297**	**$ —**	**$ —**	**$ 14,039**	**$ 297**
Residential:						
Prime and Alt-A	**—**	**—**	**1,193**	**250**	**1,193**	**250**
Subprime	**—**	**—**	**—**	**—**	**—**	**—**
Non-U.S.	**35,166**	**379**	**1,080**	**30**	**36,246**	**409**
Commercial	**548**	**14**	**11**	**3**	**559**	**17**
Total mortgage-backed securities	**49,753**	**690**	**2,284**	**283**	**52,037**	**973**
U.S. Treasury and government agencies	**921**	**28**	**—**	**—**	**921**	**28**
Obligations of U.S. states and municipalities	**6,890**	**330**	**20**	**8**	**6,910**	**338**
Certificates of deposit	**1,771**	**2**	**—**	**—**	**1,771**	**2**
Non-U.S. government debt securities	**6,960**	**28**	**—**	**—**	**6,960**	**28**
Corporate debt securities	**18,783**	**418**	**90**	**1**	**18,873**	**419**
Asset-backed securities:						
Credit card receivables	**—**	**—**	**345**	**5**	**345**	**5**
Collateralized loan obligations	**460**	**10**	**6,321**	**200**	**6,781**	**210**
Other	**2,615**	**9**	**32**	**7**	**2,647**	**16**
Total available-for-sale debt securities	**88,153**	**1,515**	**9,092**	**504**	**97,245**	**2,019**
Available-for-sale equity securities	**—**	**—**	**2**	**6**	**2**	**6**
Total securities with gross unrealized losses	**$ 88,153**	**$ 1,515**	**$ 9,094**	**$ 510**	**$ 97,247**	**$ 2,025**

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2009 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 43,235	$ 603	$ 644	$ 5	$ 43,879	$ 608
Residential:						
Prime and Alt-A	183	27	3,032	780	3,215	807
Subprime	—	—	—	—	—	—
Non-U.S.	391	1	1,773	64	2,164	65
Commercial	679	34	229	29	908	63
Total mortgage-backed securities	44,488	665	5,678	878	50,166	1,543
U.S. Treasury and government agencies	8,433	135	—	—	8,433	135
Obligations of U.S. states and municipalities	472	11	389	14	861	25
Certificates of deposit	—	—	—	—	—	—
Non-U.S. government debt securities	2,471	46	835	5	3,306	51
Corporate debt securities	1,831	12	4,634	18	6,465	30
Asset-backed securities:						
Credit card receivables	—	—	745	26	745	26
Collateralized loan obligations	42	1	7,883	435	7,925	436
Other	767	8	1,767	46	2,534	54
Total available-for-sale debt securities	58,504	878	21,931	1,422	80,435	2,300
Available-for-sale equity securities	1	1	3	3	4	4
Total securities with gross unrealized losses	$ 58,505	$ 879	$ 21,934	$ 1,425	$ 80,439	$ 2,304

Other-than-temporary impairment

The following table presents credit losses that are included in the securities gains and losses table above.

Year ended December 31, (in millions)	2010	2009
Debt securities the Firm does not intend to sell that have credit losses		
Total other-than-temporary impairment losses[a]	**$ (94)**	$ (946)
Losses recorded in/(reclassified from) other comprehensive income	**(6)**	368
Credit losses recognized in income[b][c]	**$ (100)**	$ (578)

(a) For initial OTTI, represents the excess of the amortized cost over the fair value of AFS debt securities. For subsequent OTTI of the same security, represents additional declines in fair value subsequent to the previously recorded OTTI, if applicable.

(b) Represents the credit loss component of certain prime mortgage-backed securities and obligations of U.S. states and municipalities for 2010, and certain prime and subprime mortgage-backed securities and obligations of U.S. states and municipalities for 2009 that the Firm does not intend to sell. Subsequent credit losses may be recorded on securities without a corresponding further decline in fair value if there has been a decline in expected cash flows.

(c) Excluded from this table are OTTI losses of $7 million that were recognized in income in 2009, related to subprime mortgage-backed debt securities the Firm intended to sell. These securities were sold in 2009, resulting in the recognition of a recovery of $1 million.

Changes in the credit loss component of credit-impaired debt securities

The following table presents a rollforward for the years ended December 31, 2010 and 2009, of the credit loss component of OTTI losses that were recognized in income related to debt securities that the Firm does not intend to sell.

Year ended December 31, (in millions)	2010	2009
Balance, beginning of period	**$ 578**	$ —
Additions:		
Newly credit-impaired securities	**—**	578
Increase in losses on previously credit-impaired securities	**94**	—
Losses reclassified from other comprehensive income on previously credit-impaired securities	**6**	—
Reductions:		
Sales of credit-impaired securities	**(31)**	—
Impact of new accounting guidance related to VIEs	**(15)**	—
Balance, end of period	**$ 632**	$ 578

Gross unrealized losses

Gross unrealized losses have generally decreased since December 31, 2009, due primarily to market spread improvement and increased liquidity, driving asset prices higher. However, gross unrealized losses on certain securities have increased, including on certain corporate debt securities, which are primarily government-guaranteed positions that experienced credit spread widening. As of December 31, 2010, the Firm does not intend to sell the securities with a loss position in AOCI, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities reported in the table above for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2010.

Following is a description of the Firm's principal security investments with the most significant unrealized losses as of December 31, 2010, and the key assumptions used in the Firm's estimate of the present value of the cash flows most likely to be collected from these investments.

Mortgage-backed securities – Prime and Alt-A nonagency

As of December 31, 2010, gross unrealized losses related to prime and Alt-A residential mortgage-backed securities issued by private issuers were $250 million, all of which have been in an unrealized loss position for 12 months or more. Approximately 70% of the total portfolio (by amortized cost) are currently rated below investment-grade; the Firm has recorded other-than-temporary impairment losses on 55% of the below investment-grade positions. In analyzing prime and Alt-A residential mortgage-backed securities for potential credit losses, the Firm utilizes a methodology that focuses on loan-level detail to estimate future cash flows, which are then allocated to the various tranches of the securities. The loan-level analysis primarily considers current home value, loan-to-value ("LTV") ratio, loan type and geographical location of the underlying property to forecast prepayment, home price, default rate and loss severity. The forecasted weighted average underlying default rate on the positions was 21% and the related weighted average loss severity was 50%. Based on this analysis, an OTTI loss of $6 million was recognized in 2010 related to securities that experienced increased delinquency rates associated with specific collateral types and origination dates. Overall losses have decreased since December 31, 2009, with the recovery in security prices resulting from increased demand for higher-yielding asset classes and a deceleration in the pace of home price declines due in part to the U.S. government programs to facilitate financing and to spur home purchases. The unrealized loss of $250 million is considered temporary, based on management's assessment that the estimated future cash flows together with the credit enhancement levels for those securities remain sufficient to support the Firm's investment. The credit enhancements associated with the below investment-grade and investment-grade positions are 9% and 24%, respectively.

Asset-backed securities – Collateralized loan obligations

As of December 31, 2010, gross unrealized losses related to CLOs were $210 million, of which $200 million related to securities that were in an unrealized loss position for 12 months or more. Overall losses have decreased since December 31, 2009, mainly as a result of lower default forecasts and spread tightening across various asset classes. Substantially all of these securities are rated "AAA," "AA" and "A" and have an average credit enhancement of 30%. Credit enhancement in CLOs is primarily in the form of subordination, which is a form of structural credit enhancement where realized losses associated with assets held by an issuing vehicle are allocated to issued tranches considering their relative seniority. The key assumptions considered in analyzing potential credit losses were underlying loan and debt security defaults and loss severity. Based on current default trends, the Firm assumed collateral default rates of 2.1% for 2010 and 5% thereafter. Further, loss severities were assumed to be 48% for loans and 78% for debt securities. Losses on collateral were estimated to occur approximately 18 months after default.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2010, of JPMorgan Chase's AFS and HTM securities by contractual maturity.

By remaining maturity December 31, 2010 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities:[a]					
Amortized cost	$ 15	$ 259	$ 2,781	$ 168,740	$ 171,795
Fair value	15	282	2,825	171,732	174,854
Average yield[b]	8.63%	6.25%	2.71%	3.85%	3.84 %
U.S. Treasury and government agencies:[a]					
Amortized cost	$ 1,843	$ 4,913	$ 4,251	$ 251	$ 11,258
Fair value	1,850	5,007	4,260	231	11,348
Average yield[b]	1.68%	2.62%	3.84%	3.86%	2.95 %
Obligations of U.S. states and municipalities:					
Amortized cost	$ 39	$ 160	$ 333	$ 11,200	$ 11,732
Fair value	39	167	351	11,002	11,559
Average yield[b]	3.21%	4.30%	5.25%	5.07%	5.06 %
Certificates of deposit:					
Amortized cost	$ 3,642	$ 6	$ —	$ —	$ 3,648
Fair value	3,641	6	—	—	3,647
Average yield[b]	5.16%	10.75%	—%	—%	5.17 %
Non-U.S. government debt securities:					
Amortized cost	$ 5,666	$ 13,557	$ 1,388	$ 3	$ 20,614
Fair value	5,673	13,712	1,389	3	20,777
Average yield[b]	1.81%	2.23%	3.56%	5.34%	2.21 %
Corporate debt securities:					
Amortized cost	$ 12,515	$ 44,137	$ 5,065	$ 1	$ 61,718
Fair value	12,597	44,100	5,096	1	61,794
Average yield[b]	2.25%	2.19%	4.81%	1.07%	2.42 %
Asset-backed securities:					
Amortized cost	$ 38	$ 3,371	$ 13,567	$ 12,606	$ 29,582
Fair value	38	3,454	14,041	12,755	30,288
Average yield[b]	8.94%	2.05%	2.48%	2.19%	2.32 %
Total available-for-sale debt securities					
Amortized cost	$ 23,758	$ 66,403	$ 27,385	$ 192,801	$ 310,347
Fair value	23,853	66,728	27,962	195,724	314,267
Average yield[b]	2.56%	2.24%	3.23%	3.81%	3.33 %
Available-for-sale equity securities					
Amortized cost	$ —	$ —	$ —	$ 1,894	$ 1,894
Fair value	—	—	—	2,051	2,051
Average yield[b]	—%	—%	—%	0.29%	0.29 %
Total available-for-sale securities					
Amortized cost	$ 23,758	$ 66,403	$ 27,385	$ 194,695	$ 312,241
Fair value	23,853	66,728	27,962	197,775	316,318
Average yield[b]	2.56%	2.24%	3.23%	3.78%	3.31 %
Total held-to-maturity securities					
Amortized cost	$ —	$ 6	$ 11	$ 1	$ 18
Fair value	—	6	12	2	20
Average yield[b]	—%	6.97%	6.83%	6.49%	6.85 %

(a) U.S. government agencies and U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2010.

(b) Average yield was based on amortized cost balances at the end of the period and did not give effect to changes in fair value reflected in accumulated other comprehensive income/(loss). Yields are derived by dividing interest/dividend income (including the effect of related derivatives on AFS securities and the amortization of premiums and accretion of discounts) by total amortized cost. Taxable-equivalent yields are used where applicable.

(c) Includes securities with no stated maturity. Substantially all of the Firm's residential mortgage-backed securities and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated duration, which reflects anticipated future prepayments based on a consensus of dealers in the market, is approximately five years for agency residential mortgage-backed securities, three years for agency residential collateralized mortgage obligations and six years for nonagency residential collateralized mortgage obligations.

Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated Balance Sheets. Resale and repurchase agreements are generally carried at the amounts at which the securities will be subsequently sold or repurchased, plus accrued interest. Securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. Fees received or paid in connection with securities financing agreements are recorded in interest income or interest expense.

The Firm has elected the fair value option for certain securities financing agreements. For a further discussion of the fair value option, see Note 4 on pages 187–189 of this Annual Report. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements; securities loaned or sold under repurchase agreements; and securities borrowed on the Consolidated Balance Sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

The following table details the Firm's securities financing agreements, all of which are accounted for as collateralized financings during the periods presented.

December 31, (in millions)	**2010**	2009
Securities purchased under resale agreements[(a)]	**$ 222,302**	$ 195,328
Securities borrowed[(b)]	**123,587**	119,630
Securities sold under repurchase agreements[(c)]	**$ 262,722**	$ 245,692
Securities loaned	**10,592**	7,835

(a) Includes resale agreements of $20.3 billion and $20.5 billion accounted for at fair value at December 31, 2010 and 2009, respectively.
(b) Includes securities borrowed of $14.0 billion and $7.0 billion accounted for at fair value at December 31, 2010 and 2009, respectively.
(c) Includes repurchase agreements of $4.1 billion and $3.4 billion accounted for at fair value at December 31, 2010 and 2009, respectively.

The amounts reported in the table above have been reduced by $112.7 billion and $121.2 billion at December 31, 2010 and 2009, respectively, as a result of agreements in effect that meet the specified conditions for net presentation under applicable accounting guidance.

JPMorgan Chase's policy is to take possession, where possible, of securities purchased under resale agreements and of securities borrowed. The Firm monitors the market value of the underlying securities that it has received from its counterparties and either requests additional collateral or returns a portion of the collateral when appropriate in light of the market value of the underlying securities. Margin levels are established initially based upon the counterparty and type of collateral and monitored on an ongoing basis to protect against declines in collateral value in the event of default. JPMorgan Chase typically enters into master netting agreements and other collateral arrangements with its resale agreement and securities borrowed counterparties, which provide for the right to liquidate the purchased or borrowed securities in the event of a customer default. As a result of the Firm's credit risk mitigation practices described above on resale and securities borrowed agreements, the Firm did not hold any reserves for credit impairment on these agreements as of December 31, 2010 and 2009.

For a further discussion of assets pledged and collateral received in securities financing agreements see Note 31 on pages 280–281 of this Annual Report.

Note 14 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (other than purchased credit-impaired ("PCI") loans);
- Loans held-for-sale;
- Fair value loans;
- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories:

Loans held-for-investment (other than PCI loans)

Originated or purchased loans held-for-investment, other than PCI loans, are measured at the principal amount outstanding, net of the following: allowance for loan losses; net charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and deferred loan fees or cost.

Interest income

Interest income on performing loans held-for-investment, other than PCI loans, is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is in doubt, which is generally determined when principal or interest is 90 days or more past due and collateral, if any, is insufficient to cover principal and interest. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. All interest accrued but not collected is reversed against interest income at the date a loan is placed on nonaccrual status. In addition, the amortization of deferred amounts is suspended. In certain cases, interest income on nonaccrual loans may be recognized to the extent cash is received (i.e., cash basis) when the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectability of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method).

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance for the estimated uncollectible portion of billed and accrued interest and fee income on credit card loans.

Allowance for loan losses

The allowance for loan losses represents the estimated probable losses on held-for-investment loans. Changes in the allowance for loan losses are recorded in the Provision for credit losses on the Firm's Consolidated Statements of Income. See Note 15 on pages 239–243 for further information on the Firm's accounting polices for the allowance for loan losses.

Charge-offs

Wholesale loans and risk-rated business banking and auto loans are charged off against the allowance for loan losses when it is highly certain that a loss has been realized. This determination includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity.

Consumer loans, other than risk-rated business banking and auto loans and PCI loans, are generally charged off to the allowance for loan losses upon reaching specified stages of delinquency, in accordance with the Federal Financial Institutions Examination Council ("FFIEC") policy. Residential mortgage loans and scored business banking loans are generally charged down to estimated net realizable value at no later than 180 days past due. Certain consumer loans, including auto loans and non-government guaranteed student loans, are generally charged down to estimated net realizable value at 120 days past due. The Firm regularly assesses the assumptions that it uses to estimate these net realizable values, and updates the underlying assumptions as necessary to further refine its estimates.

Credit card loans are charged off by the end of the month in which the account becomes 180 days past due, or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

Certain impaired loans are deemed collateral-dependent because repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources. Impaired collateral-dependent loans are charged-off to the fair value of the collateral, less costs to sell. See Note 15 on pages 239–243 for information on the Firm's charge-off and valuation policies for collateral-dependent loans.

Loans held-for-sale

Held-for-sale loans are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For wholesale loans, the valuation is performed on an individual loan basis. For consumer loans, the valuation is performed on a portfolio basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or losses recognized at the time of sale.

Held-for-sale loans are subject to the nonaccrual policies described above.

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

Fair value loans

Loans used in a trading strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue.

For these loans, the earned current contractual interest payment is recognized in interest income. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's nonaccrual, allowance for loan losses, and charge-off policies do not apply to these loans.

See Note 4 on pages 187–189 of this Annual Report for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 and Note 4 on pages 170–187 and 187–189 of this Annual Report for further information on loans carried at fair value and classified as trading assets.

PCI loans

PCI loans held-for-investment are initially measured at fair value. PCI loans have evidence of credit deterioration since the loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected. Because PCI loans are initially measured at fair value, which includes an estimate of future credit losses, no allowance for loan losses related to PCI loans is recorded at the acquisition date. See page 233 of this Note for information on accounting for PCI loans subsequent to their acquisition.

Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; losses due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In certain limited cases, loans in the held-for-sale portfolio that management decides to retain are transferred to the held-for-investment portfolio at the lower of cost or fair value on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 15 on pages 239–243 of this Annual Report.

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss, avoid foreclosure or repossession of the collateral and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, or the acceptance of equity or other assets in lieu of payments. In certain limited circumstances, loan modifications include principal forgiveness.

Such modifications are accounted for and reported as troubled debt restructurings ("TDRs"). A loan that has been modified in a TDR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless of whether the borrower performs under the modified terms. In certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring. In such circumstances, and assuming that the loan subsequently performs under its modified terms and the Firm expects to collect all contractual principal and interest cash flows, the loan is disclosed as impaired and as a TDR only during the year of the modification; in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in most cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (resuming the accrual of interest) if the following criteria are met: (a) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (b) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, LTV ratios, and other current market considerations.

Because TDRs are considered to be impaired, these loans are evaluated for an asset-specific allowance, which considers the expected re-default rates for the modified loans and is determined based on the same methodology used to estimate the Firm's asset-specific allowance component regardless of whether the loan is performing and has been returned to accrual status. For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 15 on pages 239–243 of this Annual Report.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, buildings, and fixtures) and commercial and personal property (e.g., aircraft, railcars, and ships).

At the time JPMorgan Chase takes physical possession, the property is recorded in other assets on the Consolidated Balance Sheets at fair value less estimated costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary. Subsequent changes to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan Portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Wholesale; Consumer, excluding credit card; and Credit Card. Within each portfolio segment, the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class:

Wholesale[a]	Consumer, excluding credit card[b]	Credit Card
• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other	Residential real estate – excluding PCI • Home equity – senior lien • Home equity – junior lien • Prime mortgage, including option ARMs • Subprime mortgage Other consumer loans • Auto[c] • Business banking[c] • Student and other Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Chase, excluding accounts originated by Washington Mutual • Accounts originated by Washington Mutual

(a) Includes loans reported in Investment Bank, Commercial Banking, Treasury & Securities Services, Asset Management and Corporate/Private Equity segments.
(b) Includes RFS and residential real estate loans reported in the Corporate/Private Equity segment.
(c) Includes risk-rated loans that apply the Firm's wholesale methodology for determining the allowance for loan losses; these loans are managed by RFS, and therefore for consistency in presentation, are included with the other consumer loan classes.

The following table summarizes the Firm's loan balances by portfolio segment:

December 31, 2010 (in millions)	Wholesale	Consumer, excluding credit card	Credit Card	**Total**
Retained[a]	**$ 222,510**	**$ 327,464**	**$ 135,524**	**$ 685,498**[b]
Held-for-sale	**3,147**	**154**	**2,152**	**5,453**
At fair value	**1,976**	**—**	**—**	**1,976**
Total	**$ 227,633**	**$ 327,618**	**$ 137,676**	**$ 692,927**

December 31, 2009 (in millions)	Wholesale	Consumer, excluding credit card	Credit Card	**Total**
Retained	$ 200,077	$ 348,355	$ 78,786	$ 627,218[b]
Held-for-sale	2,734	2,142	—	4,876
At fair value	1,364	—	—	1,364
Total	$ 204,175	$ 350,497	$ 78,786	$ 633,458

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated $84.7 billion of loans associated with Firm-sponsored credit card securitization trusts; $15.1 billion of wholesale loans; and $4.8 billion of loans associated with certain other consumer securitization entities, primarily mortgage-related. For further information, see Note 16 on pages 244–259 of this Annual Report.

(b) Loans (other than PCI loans and those for which the fair value option has been selected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs of $1.9 billion and $1.4 billion at December 31, 2010 and 2009, respectively.

On an on-going basis, the Firm manages its exposure to credit risk. Selling loans is one way that the Firm reduces its credit exposures. The following table provides information about the Firm's loan sales by portfolio segment.

Year ended December 31, (in millions)	**2010**	2009	2008
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]			
Wholesale	**$ 215**	$ 291	$ (2,647)
Consumer, excluding credit card	**265**	127	(11)
Credit Card	**(16)**	21	150
Total net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]	**$ 464**	$ 439	$ (2,508)

(a) Excludes sales related to loans accounted for at fair value.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of customers from large corporate and institutional clients to certain high-net worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the probability of default ("PD") and the loss given default ("LGD"). PD is the likelihood that a loan will not be repaid at default. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. Risk ratings generally represent ratings profiles similar to those defined by S&P and Moody's. Investment grade ratings range from "AAA/Aaa" to "BBB-/Baa3". Noninvestment grade ratings are further classified as noncriticized ("BB+/Ba1 and B-/B3") and criticized ("CCC+"/"Caa1 and lower"), and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note 5 on pages 189–190 in this Annual Report for further detail on industry concentrations.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

As of or for the year ended December 31, (in millions, except ratios)	Commercial and industrial 2010	Commercial and industrial 2009	Real estate 2010	Real estate 2009
Loans by risk ratings				
Investment grade	**$ 31,697**	$ 31,203	**$ 28,504**	$ 31,986
Noninvestment grade:				
Noncriticized	**30,874**	28,714	**16,425**	14,462
Criticized performing	**2,371**	6,079	**5,769**	7,859
Criticized-total nonaccrual	**1,634**	2,245	**2,937**	2,888
Total noninvestment grade	**34,879**	37,038	**25,131**	25,209
Total retained loans	**$ 66,576**	$ 68,241	**$ 53,635**	$ 57,195
% of total criticized to total retained loans	**6.02%**	12.20%	**16.23%**	18.79%
% of nonaccrual loans to total retained loans	**2.45**	3.29	**5.48**	5.05
Loans by geographic distribution(a)				
Total non-U.S.	**$ 17,731**	$ 19,138	**$ 1,963**	$ 2,227
Total U.S.	**48,845**	49,103	**51,672**	54,968
Total retained loans	**$ 66,576**	$ 68,241	**$ 53,635**	$ 57,195
Net charge-offs	**$ 403**	$ 1,243	**$ 862**	$ 688
% of net charge-offs to retained loans(b)	**0.61%**	1.82%	**1.61%**	1.20%
Loan deliquency(c)				
Current and less than 30 days past due and still accruing	**$ 64,501**	$ 65,692	**$ 50,299**	$ 53,370
30–89 days past due and still accruing	**434**	276	**290**	823
90 or more days past due and still accruing(d)	**7**	28	**109**	114
Nonaccrual	**1,634**	2,245	**2,937**	2,888
Total retained loans	**$ 66,576**	$ 68,241	**$ 53,635**	$ 57,195

(a) U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) Ratios were calculated using end-of-period retained loans.
(c) For wholesale loans, the past due status of a loan is generally not a significant indicator of credit quality due to the ongoing review and monitoring of an obligor's ability to meet contractual obligations. For a discussion of more significant factors, see page 223 of this Note.
(d) Represents loans that are 90 days or more past due as to principal and/or interest, but that are still accruing interest; these loans are considered well-collateralized.
(e) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated $15.1 billion of wholesale loans. For further information, see Note 16 on pages 244–259 of this Annual Report.
(f) Other primarily includes loans to special purpose entities and loans to private banking clients. See Note 1 on page 164–165 of this Annual Report for additional information on SPEs.

The following table presents additional information on the real estate class of loans within the wholesale portfolio segment for the periods ended December 31, 2010 and 2009. The real estate class primarily consists of secured commercial loans mainly to borrowers for multi-family and commercial lessor properties. Multi-family lending specifically finances apartment buildings. Commercial lessors receive financing specifically for real estate leased to retail, office and industrial tenants. The commercial construction and development loans represent financing for the construction of apartments, office and professional buildings and malls. Other real estate loans include lodging, real estate investment trusts ("REITs"), single-family, homebuilders and other real estate.

December 31, (in millions, except ratios)	Multi-family 2010	Multi-family 2009	Commercial lessors 2010	Commercial lessors 2009
Real estate retained loans	**$ 30,604**	$ 31,077	**$ 15,796**	$15,170
Criticized exposure	**3,798**	3,942	**3,593**	3,855
% of total real estate retained loans	**12.41%**	12.68%	**22.75%**	25.41%
Criticized nonaccrual	**$ 1,016**	$ 1,109	**$ 1,549**	$ 687
% of total real estate retained loans	**3.32%**	3.57%	**9.81%**	4.53%

(table continued from previous page)

Financial institutions		Government agencies		Other[e][f]		Total retained loans[e]	
2010	2009	**2010**	2009	**2010**	2009	**2010**	2009
$ 22,525	$ 14,878	**$ 6,871**	$ 6,684	**$ 56,450**	$ 33,780	**$ 146,047**	$ 118,531
8,480	8,319	**382**	624	**6,012**	6,704	**62,173**	58,823
317	1,201	**3**	28	**320**	997	**8,780**	16,164
136	729	**22**	5	**781**	692	**5,510**	6,559
8,933	10,249	**407**	657	**7,113**	8,393	**76,463**	81,546
$ 31,458	$ 25,127	**$ 7,278**	$ 7,341	**$ 63,563**	$ 42,173	**$ 222,510**	$ 200,077
1.44%	7.68%	**0.34%**	0.45%	**1.73%**	4.00%	**6.42%**	11.36%
0.43	2.90	**0.30**	0.07	**1.23**	1.64	**2.48**	3.28
$ 19,756	$ 11,755	**$ 870**	$ 1,707	**$ 25,831**	$ 18,790	**$ 66,151**	$ 53,617
11,702	13,372	**6,408**	5,634	**37,732**	23,383	**156,359**	146,460
$ 31,458	$ 25,127	**$ 7,278**	$ 7,341	**$ 63,563**	$ 42,173	**$ 222,510**	$ 200,077
$ 72	$ 734	**$ 2**	$ —	**$ 388**	$ 467	**$ 1,727**	$ 3,132
0.23%	2.92%	**0.03%**	—%	**0.61%**	1.11%	**0.78%**	1.57%
$ 31,289	$ 24,324	**$ 7,222**	$ 7,321	**$ 61,837**	$ 40,785	**$ 215,148**	$ 191,492
31	68	**34**	15	**704**	512	**1,493**	1,694
2	6	**—**	—	**241**	184	**359**	332
136	729	**22**	5	**781**	692	**5,510**	6,559
$ 31,458	$ 25,127	**$ 7,278**	$ 7,341	**$ 63,563**	$ 42,173	**$ 222,510**	$ 200,077

(table continued from previous page)

Commercial construction and development		Other		Total real estate loans	
2010	2009	**2010**	2009	**2010**	2009
$ 3,395	$ 4,599	**$ 3,840**	$ 6,349	**$ 53,635**	$ 57,195
619	1,359	**696**	1,591	**8,706**	10,747
18.23%	29.55%	**18.13%**	25.06%	**16.23%**	18.79%
$ 174	$ 313	**$ 198**	$ 779	**$ 2,937**	$ 2,888
5.13%	6.81%	**5.16%**	12.27%	**5.48%**	5.05%

Wholesale impaired loans and loan modifications

Wholesale impaired loans include loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 on pages 239–243 of this Annual Report.

The table below set forth information about the Firm's wholesale impaired loans.

December 31,	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
(in millions)	**2010**	2009	**2010**	2009	**2010**	2009	**2010**	2009	**2010**	2009	**2010**	2009
Impaired loans												
With an allowance	**$ 1,512**	$ 2,171	**$ 2,510**	$ 2,998	**$ 127**	$ 579	**$ 22**	$ 4	**$ 697**	$ 595	**$ 4,868**	$ 6,347
Without an allowance[a]	**157**	89	**445**	363	**8**	149	**—**	—	**8**	12	**618**	613
Total impaired loans	**$ 1,669**	$ 2,260	**$ 2,955**	$ 3,361	**$ 135**	$ 728	**$ 22**	$ 4	**$ 705**	$ 607	**$ 5,486**	$ 6,960
Allowance for loan losses related to impaired loans[b]	**$ 435**	$ 454	**$ 825**	$ 1,212	**$ 61**	$ 165	**$ 14**	$ 1	**$ 239**	$ 214	**$ 1,574**	$ 2,046
Unpaid principal balance of impaired loans[c]	**2,453**	3,042	**3,487**	3,649	**244**	918	**30**	4	**1,046**	760	**7,260**	8,373

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, then the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.
(b) The allowance for impaired loans is included in JPMorgan Chase's asset-specific allowance for loan losses.
(c) Represents the contractual amount of principal owed at December 31, 2010 and 2009. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and discount or premiums on purchased loans.

The following table presents the Firm's average impaired loans for the years ended 2010, 2009 and 2008.

For the year ended December 31,	Impaired loans (average)		
(in millions)	**2010**	2009	2008
Commercial and industrial	**$ 1,655**	$ 1,767	$ 337
Real estate	**3,101**	2,420	389
Financial institutions	**304**	685	49
Government agencies	**5**	4	1
Other	**884**	468	120
Total[a]	**$ 5,949**	$ 5,344	$ 896

(a) The related interest income on accruing impaired loans, largely in real estate, was $21 million, $15 million and zero for the years ended December 31, 2010, 2009 and 2008. The interest income recognized on a cash basis was not material for the years 2010, 2009 and 2008.

The following table provides information about the Firm's wholesale loans modified in troubled debt restructurings. These TDR loans are included as impaired loans in the above tables.

December 31,	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
(in millions)	**2010**	2009	**2010**	2009	**2010**	2009	**2010**	2009	**2010**	2009	**2010**	2009
Loans modified in troubled debt restructurings[a]	**$ 212**	$ 253	**$ 907**	$ 856	**$ 1**	$ —	**$ 22**	$ —	**$ 1**	$ —	**$ 1,143**	$1,109
TDRs on nonaccrual status	**163**	222	**831**	269	**1**	—	**22**	—	**1**	—	**1,018**	491
Additional commitments to lend to borrowers whose loans have been modified in TDRs	**1**	33	**—**	6	**—**	—	**—**	—	**—**	—	**1**	39

(a) These modifications generally provided interest rate concessions to the borrower or deferral of principal repayments.

Consumer loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans, auto loans, business banking loans, and student and other loans, with a primary focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens and mortgage loans with interest-only payment options to predominantly prime borrowers, as well as certain payment-option loans originated by Washington Mutual that may result in negative amortization.

The table below provides information about consumer retained loans by class, excluding the credit card loan portfolio segment.

December 31, (in millions)	**2010**	2009
Residential real estate – excluding PCI		
Home equity:		
Senior lien[a]	**$ 24,376**	$ 27,376
Junior lien[b]	**64,009**	74,049
Mortgages:		
Prime, including option ARMs[c]	**74,539**	75,428
Subprime[c]	**11,287**	12,526
Other consumer loans		
Auto[c]	**48,367**	46,031
Business banking	**16,812**	16,974
Student and other[c]	**15,311**	14,726
Residential real estate – PCI		
Home equity	**24,459**	26,520
Prime mortgage	**17,322**	19,693
Subprime mortgage	**5,398**	5,993
Option ARMs	**25,584**	29,039
Total retained loans	**$ 327,464**	$ 348,355

(a) Represents loans where JPMorgan Chase holds the first security interest on the property.
(b) Represents loans where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.
(c) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated $4.8 billion of certain consumer loan securitization entities, primarily mortgage-related. For further information, see Note 16 on pages 244–259 of this Annual Report.

Delinquency rates are a primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers that may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear that the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a short sale or foreclosure. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, including both non-PCI and PCI portfolios, the current estimated loan-to-value ("LTV") ratio, or the combined LTV ratio in the case of loans with a junior lien, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as hurricanes, earthquakes, etc. will affect credit quality. The borrowers' current or "refreshed" FICO score is a secondary credit-quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (660 or below) is considered to be of higher risk than a loan to a borrower with a high FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For auto, scored business banking and student loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.
- Risk-rated business banking and auto loans are similar to wholesale loans in that the primary credit quality indicators are the risk rating that is assigned to the loan and whether the loans are considered to be criticized and/or nonaccrual. Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting borrowers' ability to fulfill their obligations. Consistent with other classes of consumer loans, the geographic distribution of the portfolio provides insights into portfolio performance based on regional economic activity and events.

Residential real estate – excluding PCI loans

The tables below provide information by class for residential real estate (excluding PCI) retained loans in the consumer, excluding credit card portfolio segment.

	Home equity			
As of or for the year ended	Senior lien		Junior lien	
December 31, (in millions, except ratios)	**2010**	2009	**2010**	2009
Net charge-offs	**$ 262**	$ 234	**$ 3,182**	$ 4,448
% of net charge-offs to retained loans	**1.00%**	0.80%	**4.63%**	5.62%
Loan delinquency				
Current and less than 30 days past due	**$ 23,615**	$ 26,543	**$ 62,315**	$ 71,534
30–149 days past due	**414**	512	**1,508**	2,224
150 or more days past due	**347**	321	**186**	291
Total retained loans	**$ 24,376**	$ 27,376	**$ 64,009**	$ 74,049
% of 30+ days past due to total retained loans	**3.12%**	3.04%	**2.65%**	3.40%
90 or more days past due and still accruing	**$ —**	$ —	**$ —**	$ —
Nonaccrual loans[a]	**479**	477	**784**	1,188
Current estimated LTV ratios[b][c][d]				
Greater than 125% and refreshed FICO scores:				
Equal to or greater than 660	**$ 528**	$ 472	**$ 6,928**	$ 6,788
Less than 660	**238**	235	**2,495**	2,703
101% to 125% and refreshed FICO scores:				
Equal to or greater than 660	**974**	933	**9,403**	10,616
Less than 660	**325**	319	**2,873**	3,277
80% to 100% and refreshed FICO scores:				
Equal to or greater than 660	**2,860**	3,038	**13,333**	16,098
Less than 660	**738**	825	**3,155**	3,657
Less than 80% and refreshed FICO scores:				
Equal to or greater than 660	**15,994**	18,591	**22,527**	27,225
Less than 660	**2,719**	2,963	**3,295**	3,685
U.S. government-guaranteed	**—**	—	**—**	—
Total retained loans	**$ 24,376**	$ 27,376	**$ 64,009**	$ 74,049
Geographic region				
California	**$ 3,348**	$ 3,658	**$ 14,656**	$ 16,990
New York	**3,272**	3,438	**12,278**	13,456
Texas	**3,594**	4,306	**2,239**	2,711
Florida	**1,088**	1,198	**3,470**	4,123
Illinois	**1,635**	1,795	**4,248**	4,849
Ohio	**2,010**	2,338	**1,568**	1,865
New Jersey	**732**	777	**3,617**	4,090
Michigan	**1,176**	1,329	**1,618**	1,900
Arizona	**1,481**	1,648	**2,979**	3,582
Washington	**776**	868	**2,142**	2,481
All other[e]	**5,264**	6,021	**15,194**	18,002
Total retained loans	**$ 24,376**	$ 27,376	**$ 64,009**	$ 74,049

(a) At December 31, 2010 and 2009, nonaccrual loans excluded mortgage loans insured by U.S. government agencies of $10.5 billion and $9.0 billion, respectively, that are 90 days past due and accruing at the guaranteed reimbursement rate. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

(b) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models utilizing nationally recognized home price index valuation estimates and do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates.

(c) Junior lien represents combined LTV, which considers all available lien positions related to the property. All other products are presented without consideration of subordinate liens on the property.

(d) Refreshed FICO scores represent each borrower's most recent credit score obtained by the Firm; current FICO scores are obtained at least quarterly.

(e) At December 31, 2010 and 2009, includes prime mortgage loans insured by U.S. government agencies of $12.9 billion and $10.8 billion, respectively.

(f) At December 31, 2010 and 2009, includes 30+ day delinquent mortgage loans that are insured by U.S. government agencies of $11.4 billion and $9.7 billion, respectively. These amounts are considered current as reimbursement of insured amounts is proceeding normally.

(table continued from previous page)

Mortgages				Total residential real estate (excluding PCI)	
Prime, including option ARMs		Subprime			
2010	2009	**2010**	2009	**2010**	2009
$ 1,627	$ 1,957	**$ 1,374**	$ 1,648	**$ 6,445**	$ 8,287
2.15%	2.51%	**10.82%**	11.86%	**3.52%**	4.14%
$ 69,562[f]	$ 69,458[f]	**$ 8,477**	$ 8,294	**$ 163,969**	$ 175,829
1,576	2,629	**1,184**	1,883	**4,682**	7,248
3,401	3,341	**1,626**	2,349	**5,560**	6,302
$ 74,539	$ 75,428	**$ 11,287**	$ 12,526	**$ 174,211**	$ 189,379
6.68%	7.91%	**24.90%**	33.79%	**5.88%**	7.15%
$ —	$ —	**$ —**	$ —	**$ —**	$ —
4,320	4,667	**2,210**	3,248	**7,793**	9,580
$ 3,039	$ 2,435	**$ 338**	$ 335	**$ 10,833**	$ 10,030
1,595	1,339	**1,153**	1,169	**5,481**	5,446
4,733	4,763	**506**	593	**15,616**	16,905
1,775	1,913	**1,486**	1,902	**6,459**	7,411
10,720	12,889	**925**	1,094	**27,838**	33,119
2,786	3,152	**1,955**	2,663	**8,634**	10,297
32,385	33,368	**2,252**	2,063	**73,158**	81,247
4,557	4,803	**2,672**	2,707	**13,243**	14,158
12,949	10,766	**—**	—	**12,949**	10,766
$ 74,539	$ 75,428	**$ 11,287**	$ 12,526	**$ 174,211**	$ 189,379
$ 19,278	$ 21,538	**$ 1,730**	$ 1,720	**$ 39,012**	$ 43,906
9,587	9,784	**1,381**	1,535	**26,518**	28,213
2,569	2,185	**345**	407	**8,747**	9,609
4,840	5,293	**1,422**	1,625	**10,820**	12,239
3,765	3,250	**468**	584	**10,116**	10,478
462	461	**275**	299	**4,315**	4,963
2,026	2,207	**534**	617	**6,909**	7,691
963	1,009	**294**	324	**4,051**	4,562
1,320	1,414	**244**	301	**6,024**	6,945
2,056	2,174	**247**	274	**5,221**	5,797
27,673	26,113	**4,347**	4,840	**52,478**	54,976
$ 74,539	$ 75,428	**$ 11,287**	$ 12,526	**$ 174,211**	$ 189,379

Residential real estate impaired loans and loan modifications – excluding PCI loans

The Firm is participating in the U.S. Treasury's Making Home Affordable ("MHA") programs and is continuing to expand its other loss-mitigation efforts for financially distressed borrowers who do not qualify for the MHA programs.

MHA, as well as the Firm's other loss-mitigation programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal payments that would otherwise have been required under the terms of the original agreement. Principal forgiveness has been limited to a specific modification program for option ARMs.

Generally, borrowers must make at least three payments under the revised contractual terms during a trial modification and be successfully re-underwritten with income verification before a mortgage or home equity loan can be permanently modified. When the Firm modifies home equity lines of credit in troubled debt restructurings, future lending commitments related to the modified loans are canceled as part of the terms of the modification.

Modifications of residential real estate loans other than PCI loans are generally accounted for and reported as TDRs. For further discussion of the accounting for loan modifications and TDRs, see Loan modifications on pages 221–222 of this Note.

The tables below set forth information about the Firm's residential real estate impaired loans, excluding PCI. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 on pages 239–243 of this Annual Report.

	Home equity				Mortgages					
December 31,	Senior lien		Junior lien		Prime, including option ARMs		Subprime		Total residential real estate (excluding PCI)	
(in millions)	**2010**	2009	**2010**	2009	**2010**	2009	**2010**	2009	**2010**	2009
Impaired loans[a][b]										
With an allowance	**$ 211**	$ 167	**$ 258**	$ 221	**$ 1,525**	$ 552	**$ 2,563**	$ 1,952	**$ 4,557**	$ 2,892
Without an allowance[c]	**15**	1	**25**	1	**559**	90	**188**	46	**787**	138
Total impaired loans[d]	**$ 226**	$ 168	**$ 283**	$ 222	**$ 2,084**	$ 642	**$ 2,751**	$ 1,998	**$ 5,344**	$ 3,030
Allowance for loan losses related to impaired loans	**$ 77**	$ 73	**$ 82**	$ 100	**$ 97**	$ 70	**$ 555**	$ 494	**$ 811**	$ 737
Unpaid principal balance of impaired loans[e]	**265**	178	**402**	273	**2,751**	783	**3,777**	2,303	**7,195**	3,537
Impaired loans on nonaccrual status	**38**	30	**63**	43	**534**	249	**632**	598	**1,267**	920

(a) Represents loans modified in a TDR. These modifications generally provided interest rate concessions to the borrower or deferral of principal repayments.
(b) There are no additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2010 and 2009.
(c) When discounted cash flows or collateral value equals or exceeds the recorded investment in the loan, then the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.
(d) At December 31, 2010 and 2009, $3.0 billion and $296 million, respectively, of loans modified subsequent to repurchase from Ginnie Mae were excluded from loans accounted for as TDRs. When such loans perform subsequent to modification they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. Substantially all amounts due under the terms of these loans continue to be insured and, where applicable, reimbursement of insured amounts is proceeding normally.
(e) Represents the contractual amount of principal owed at December 31, 2010 and 2009. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the principal balance; net deferred loan fees or costs; and discounts or premiums on purchased loans.

The following table presents average impaired loans and the related interest income reported by the Firm.

For the year ended December 31,	Impaired loans (average)			Interest income on impaired loans[a]			Interest income on impaired loans on a cash basis[a]		
(in millions)	**2010**	2009	2008	**2010**	2009	2008	**2010**	2009	2008
Home equity									
Senior lien	**$ 207**	$ 142	$ 39	**$ 15**	$ 7	$ 2	**$ 1**	$ 1	$ —
Junior lien	**266**	187	39	**10**	9	3	**1**	1	—
Mortgages									
Prime, including option ARMs	**1,530**	496	41	**70**	34	2	**14**	8	—
Subprime	**2,539**	1,948	690	**121**	98	47	**19**	6	2
Total residential real estate (excluding PCI)	**$4,542**	$ 2,773	$ 809	**$ 216**	$ 148	$ 54	**$ 35**	$ 16	$ 2

(a) Generally, interest income on loans modified in a TDR is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms. As of December 31, 2010 and 2009, loans of $580 million and $256 million, respectively, are TDRs for which the borrowers have not yet made six payments under their modified terms.

Other consumer loans

The tables below provide information for other consumer retained loan classes, including auto, business banking and student loans.

As of or for the year ended December 31, (in millions, except ratios)	Auto[c]		Business banking		Student and other[c]		Total other consumer	
	2010	2009	**2010**	2009	**2010**	2009	**2010**	2009
Net charge-offs	**$ 298**	$ 627	**$ 707**	$ 842	**$ 459**	$ 443	**$ 1,464**	$ 1,912
% of net charge-offs to retained loans	**0.63%**	1.44%	**4.23%**	4.73%	**2.85%**	2.90%	**1.82%**	2.49%
Loan delinquency								
Current and less than 30 days past due	**$ 47,778**	$ 45,281	**$ 16,240**	$ 16,277	**$ 15,074**[d]	$ 14,479[d]	**$ 79,092**	$ 76,037
30–119 days past due	**579**	720	**351**	427	**232**	240	**1,162**	1,387
120 or more days past due	**10**	30	**221**	270	**5**	7	**236**	307
Total retained loans	**$ 48,367**	$ 46,031	**$ 16,812**	$ 16,974	**$ 15,311**	$ 14,726	**$ 80,490**	$ 77,731
% of 30+ days past due to total retained loans	**1.22%**	1.63%	**3.40%**	4.11%	**1.55%**	1.68%	**1.74%**	2.18%
90 or more days past due and still accruing	**$ —**	$ —	**$ —**	$ —	**$ 625**	$ 542	**$ 625**	$ 542
Nonaccrual loans[a]	**141**	177	**832**	826	**67**	74	**1,040**	1,077
Geographic region								
California	**$ 4,307**	$ 4,440	**$ 851**	$ 515	**$ 1,330**	$ 1,304	**$ 6,488**	$ 6,259
New York	**3,875**	3,756	**2,877**	3,040	**1,305**	1,243	**8,057**	8,039
Texas	**4,505**	4,330	**2,550**	2,487	**1,273**	1,197	**8,328**	8,014
Florida	**1,923**	1,750	**220**	166	**722**	715	**2,865**	2,631
Illinois	**2,608**	2,440	**1,320**	1,380	**940**	868	**4,868**	4,688
Ohio	**2,961**	3,153	**1,647**	1,783	**1,010**	957	**5,618**	5,893
New Jersey	**1,842**	1,776	**422**	426	**502**	475	**2,766**	2,677
Michigan	**2,434**	2,108	**1,401**	1,613	**729**	686	**4,564**	4,407
Arizona	**1,499**	1,479	**1,218**	1,210	**387**	366	**3,104**	3,055
Washington	**716**	627	**115**	84	**279**	266	**1,110**	977
All other	**21,697**	20,172	**4,191**	4,270	**6,834**	6,649	**32,722**	31,091
Total retained loans	**$ 48,367**	$ 46,031	**$ 16,812**	$ 16,974	**$ 15,311**	$ 14,726	**$ 80,490**	$ 77,731
Loans by risk ratings[b]								
Noncriticized	**$ 5,803**	$ 4,564	**$ 10,831**	$ 10,450	**NA**	NA	**$ 16,634**	$ 15,014
Criticized performing	**265**	448	**502**	517	**NA**	NA	**767**	965
Criticized nonaccrual	**12**	39	**574**	542	**NA**	NA	**586**	581

(a) At December 31, 2010 and 2009, excludes student loans that are 90 days past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $625 million and $542 million, respectively. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

(b) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk-rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.

(c) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon the adoption of the guidance, the Firm consolidated certain consumer loan securitization entities. For further information, see Note 16 on pages 244–259 of this Annual Report.

(d) Includes 30+ day delinquent loans that are 30 days or more past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $1.1 billion and $942 million at December 31, 2010 and 2009, respectively. These amounts are considered current as reimbursement of insured amounts is proceeding normally.

Other consumer impaired loans

The tables below set forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and any loan that has been modified in a troubled debt restructuring.

	Auto		Business banking		Total other consumer[c]	
December 31, (in millions)	**2010**	2009	**2010**	2009	**2010**	2009
Impaired loans						
With an allowance	**$ 102**	$ 118	**$ 774**	$ 500	**$ 876**	$ 618
Without an allowance[a]	**—**	—	**—**	—	**—**	—
Total impaired loans	**$ 102**	$ 118	**$ 774**	$ 500	**$ 876**	$ 618
Allowance for loan losses related to impaired loans	**$ 16**	$ 30	**$ 248**	$ 129	**$ 264**	$ 159
Unpaid principal balance of impaired loans[b]	**132**	137	**899**	577	**1,031**	714

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, then the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.
(b) Represents the contractual amount of principal owed at December 31, 2010 and 2009. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the principal balance; net deferred loan fees or costs; and discounts or premiums on purchased loans.
(c) There were no student and other loans modified in TDRs at December 31, 2010 and 2009.

The following table presents average impaired loans.

For the year ended December 31,	Impaired loans (average)[b]		
(in millions)	**2010**	2009	2008
Auto	**$ 120**	$ 100	$ 71
Business banking	**682**	396	200
Total other consumer[a]	**$ 802**	$ 496	$ 271

(a) There were no student and other loans modified in TDRs at December 31, 2010, 2009 and 2008.
(b) The related interest income on impaired loans, including those on cash basis, were not material for the years 2010, 2009 and 2008.

The following table provides information about the Firm's other consumer loans modified in troubled debt restructurings. These TDR loans are included as impaired loans in the tables above.

	Auto		Business banking		Total other consumer[c]	
December 31, (in millions)	**2010**	2009	**2010**	2009	**2010**	2009
Loans modified in troubled debt restructurings[a][b]	**$ 91**	$ 79	**$ 395**	$ 17	**$ 486**	$ 96
TDRs on nonaccrual status	**39**	30	**268**	16	**307**	46

(a) These modifications generally provided interest rate concessions to the borrower or deferral of principal repayments.
(b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2010 and 2009 are immaterial.
(c) There were no student and other loans modified in TDRs at December 31, 2010 and 2009.

Purchased credit-impaired ("PCI") loans

PCI loans were determined to be credit-impaired upon acquisition based on specific risk characteristics of the loan, including product type, loan-to-value ratios, FICO scores, and past-due status. Upon acquisition, credit-impaired loans acquired in the same fiscal quarter may be aggregated into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer loans were aggregated into pools of loans with common risk characteristics.

PCI loans are initially recorded at fair value upon acquisition. For each PCI loan, or pool of loans, the Firm is required to estimate the total cash flows (both principal and interest) expected to be collected over the remaining life of the loan or pool. These estimates incorporate assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that reflect then-current market conditions.

The excess of cash flows expected to be collected over the carrying value of the underlying loans is referred to as the accretable yield. This amount is not reported on the Firm's Consolidated Balance Sheets but is accreted into interest income at a level rate of return over the remaining estimated lives of the underlying pools of loans. For variable-rate loans, expected future cash flows were initially based on the rate in effect at acquisition; expected future cash flows are recalculated as rates change over the lives of the loans.

On a quarterly basis, the Firm updates the amount of loan principal and interest cash flows expected to be collected. Probable decreases in expected loan principal cash flows trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related foregone interest cash flows, discounted at the pool's effective interest rate. Impairments are recognized through the provision and allowance for loan losses. Probable and significant increases in expected cash flows (e.g., decreased principal credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans. The impacts of (i) prepayments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are recognized prospectively as adjustments to interest income. Disposals of loans – which may include sales of loans, receipt of payments in full by the borrower, or foreclosure – result in removal of the loan from the PCI portfolio.

If the timing and/or amounts of expected cash flows on PCI loans were determined not to be reasonably estimable, no interest would be accreted and the loans would be reported as nonaccrual loans; however, since the timing and amounts of expected cash flows for the Firm's PCI consumer loans are reasonably estimable, interest is being accreted and the loans are being reported as performing loans.

Charge-offs are not recorded on PCI loans until actual losses exceed the estimated losses that were recorded as purchase accounting adjustments at acquisition date. To date, no charge-offs have been recorded for these consumer loans.

The PCI portfolio affects the Firm's results of operations primarily through: (i) contribution to net interest margin; (ii) expense related to defaults and servicing resulting from the liquidation of the loans; and (iii) any provision for loan losses. The PCI loans acquired in the Washington Mutual transaction were funded based on the interest rate characteristics of the loans. For example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with fixed-rate liabilities with a similar maturity profile. A net spread will be earned on the declining balance of the portfolio, which is estimated as of December 31, 2010, to have a remaining weighted-average life of 7.0 years.

The Firm continues to modify certain PCI loans. The impact of these modifications is incorporated into the Firm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans. The impact of modifications on expected cash flows is estimated using the Firm's experience with previously modified loans and other relevant data. Additionally, the Firm monitors the performance of modifications and updates and/or refines assumptions as experience and changes in circumstances or data warrant.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer PCI loans.

December 31,	Home equity		Prime mortgage	
(in millions, except ratios)	**2010**	2009	**2010**	2009
Carrying value[a]	**$ 24,459**	$ 26,520	**$ 17,322**	$ 19,693
Related allowance for loan losses[b]	**1,583**	—	**1,766**	1,090
Loan delinquency (based on unpaid principal balance)				
Current and less than 30 days past due	**$ 25,783**	$ 29,697	**$ 13,035**	$ 15,404
30–149 days past due	**1,348**	2,117	**1,468**	2,026
150 or more days past due	**1,181**	1,144	**4,425**	4,542
Total loans	**$ 28,312**	$ 32,958	**$ 18,928**	$ 21,972
% of 30+ days past due to total loans	**8.93%**	9.89%	**31.13%**	29.89%
Current estimated LTV ratios (based on unpaid principal balance)[c][d]				
Greater than 125% and refreshed FICO scores:				
Equal to or greater than 660	**$ 6,324**	$ 6,139	**$ 2,400**	$ 1,935
Less than 660	**4,052**	4,401	**2,744**	2,244
101% to 125% and refreshed FICO scores:				
Equal to or greater than 660	**6,097**	6,875	**3,815**	4,566
Less than 660	**2,701**	3,141	**3,011**	3,213
80% to 100% and refreshed FICO scores:				
Equal to or greater than 660	**4,019**	5,713	**1,970**	3,364
Less than 660	**1,483**	1,930	**1,857**	2,594
Lower than 80% and refreshed FICO scores:				
Equal to or greater than 660	**2,539**	3,330	**1,443**	1,832
Less than 660	**1,097**	1,429	**1,688**	2,224
Total unpaid principal balance	**$ 28,312**	$ 32,958	**$ 18,928**	$ 21,972
Geographic region (based on unpaid principal balance)				
California	**$ 17,012**	$ 19,749	**$ 10,891**	$ 12,657
New York	**1,316**	1,495	**1,111**	1,239
Texas	**525**	616	**194**	231
Florida	**2,595**	3,045	**1,519**	1,801
Illinois	**627**	723	**562**	650
Ohio	**38**	47	**91**	106
New Jersey	**540**	625	**486**	540
Michigan	**95**	113	**279**	307
Arizona	**539**	653	**359**	438
Washington	**1,535**	1,766	**451**	533
All other	**3,490**	4,126	**2,985**	3,470
Total unpaid principal balance	**$ 28,312**	$ 32,958	**$ 18,928**	$ 21,972

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.

(b) Management concluded as part of the Firm's regular assessment of the PCI loan pools that it was probable that higher expected principal credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum quarterly, based on home valuation models utilizing nationally recognized home price index valuation estimates and do not represent actual appraised loan level collateral values; as such the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions related to the property.

(d) Refreshed FICO scores represent each borrower's most recent credit score obtained by the Firm; current FICO scores are obtained at least quarterly.

(table continued from previous page)

Subprime mortgage		Option ARMs		Total PCI	
2010	2009	**2010**	2009	**2010**	2009
$ 5,398	$ 5,993	**$ 25,584**	$ 29,039	**$ 72,763**	$ 81,245
98	—	**1,494**	491	**4,941**	1,581
$ 4,312	$ 4,531	**$ 18,672**	$ 23,709	**$ 61,802**	$ 73,341
1,020	1,383	**2,215**	4,010	**6,051**	9,536
2,710	3,107	**9,904**	9,660	**18,220**	18,453
$ 8,042	$ 9,021	**$ 30,791**	$ 37,379	**$ 86,073**	$ 101,330
46.38%	49.77%	**39.36%**	36.57%	**28.20%**	27.62%
$ 432	$ 409	**$ 2,681**	$ 4,081	**$ 11,837**	$ 12,564
2,129	2,084	**6,330**	6,761	**15,255**	15,490
424	481	**4,292**	5,518	**14,628**	17,440
1,663	1,877	**5,005**	6,291	**12,380**	14,522
374	497	**4,152**	4,925	**10,515**	14,499
1,477	1,917	**3,551**	4,213	**8,368**	10,654
186	179	**2,281**	2,549	**6,449**	7,890
1,357	1,577	**2,499**	3,041	**6,641**	8,271
$ 8,042	$ 9,021	**$ 30,791**	$ 37,379	**$ 86,073**	$ 101,330
$ 1,971	$ 2,244	**$ 16,130**	$ 19,637	**$ 46,004**	$ 54,287
736	774	**1,703**	1,848	**4,866**	5,356
435	476	**155**	191	**1,309**	1,514
906	1,049	**3,916**	5,106	**8,936**	11,001
438	480	**760**	896	**2,387**	2,749
122	135	**131**	156	**382**	444
316	350	**1,064**	1,166	**2,406**	2,681
214	245	**345**	448	**933**	1,113
165	194	**528**	708	**1,591**	1,993
178	200	**745**	877	**2,909**	3,376
2,561	2,874	**5,314**	6,346	**14,350**	16,816
$ 8,042	$ 9,021	**$ 30,791**	$ 37,379	**$ 86,073**	$ 101,330

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the years ended December 31, 2010, 2009 and 2008.

Year ended December 31,	Total PCI		
(in millions, except ratios)	**2010**	2009	2008
Balance, January 1	**$ 25,544**	$ 32,619	$ —
Washington Mutual acquisition	**—**	—	39,454
Accretion into interest income	**(3,232)**	(4,363)	(1,292)
Changes in interest rates on variable rate loans	**(819)**	(4,849)	(5,543)
Other changes in expected cash flows[a]	**(2,396)**	2,137	—
Balance, December 31	**$ 19,097**	$ 25,544	$ 32,619
Accretable yield percentage	**4.35%**	5.14%	5.81%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model and periodically updates model assumptions. For the years ended December 31, 2010 and 2009, other changes in expected cash flows were principally driven by changes in prepayment assumptions, as well as reclassification to the nonaccretable difference. Such changes are expected to have an insignificant impact on the accretable yield percentage.

The factors that most significantly affect estimates of gross cash flows expected to be collected, and accordingly the accretable yield balance, include: (i) changes in the benchmark interest rate indices for variable rate products such as option ARM and home equity loans; and (ii) changes in prepayment assumptions.

To date, the decrease in the accretable yield percentage has been primarily related to a decrease in interest rates on variable-rate loans and, to a lesser extent, extended loan liquidation periods. Certain events, such as extended loan liquidation periods, affect the timing of expected cash flows but not the amount of cash expected to be received (i.e., the accretable yield balance). Extended loan liquidation periods reduce the accretable yield percentage because the same accretable yield balance is recognized against a higher-than-expected loan balance over a longer-than-expected period of time.

Credit card loans

The credit card portfolio segment includes credit card loans originated and purchased by the Firm, including those acquired in the Washington Mutual transaction. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30-days past due), as well as information on those borrowers that have been delinquent for a longer period of time (90-days past due). In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

The borrower's credit score is another general indicator of credit quality. Because the borrower's credit score tends to be a lagging indicator of credit quality, the Firm does not use credit scores as a primary indicator of credit quality. However, the distribution of such scores provides a general indicator of credit quality trends within the portfolio. Refreshed FICO score information for a random sample of the credit card portfolio is indicated in the table below, as FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' refreshed FICO scores may change over time, depending on the performance of the cardholder and changes in credit score technology.

The table below sets forth information about the Firm's Credit Card loans.

As of or for the year ended December 31, (in millions, except ratios)	Chase, excluding Washington Mutual portfolio[e]		Washington Mutual portfolio[e]		Total credit card	
	2010	2009	**2010**	2009[f]	**2010**	2009[f]
Net charge-offs	**$ 11,191**	$ 6,466	**$ 2,846**	$ 3,168	**$ 14,037**	$ 9,634
% of net charge-offs to retained loans	**8.73%**	9.76%	**17.73%**	15.26%	**9.73%**	11.07%
Loan delinquency[a][b]						
Current and less than 30 days past due and still accruing	**$117,248**	$ 55,374	**$ 12,670**	$ 17,316	**$ 129,918**	$ 72,690
30 – 89 days past due and still accruing	**2,092**	1,638	**459**	974	**2,551**	2,612
90 or more days past due and still accruing	**2,449**	2,118	**604**	1,363	**3,053**	3,481
Nonaccrual loans	**2**	3	**—**	—	**2**	3
Total retained loans	**$121,791**	$ 59,133	**$ 13,733**	$ 19,653	**$ 135,524**	$ 78,786
Loan delinquency ratios						
% of 30 plus days past due to total retained loans	**3.73%**	6.35%	**7.74%**	11.89%	**4.14%**	7.73%
% of 90 plus days past due to total retained loans	**2.01**	3.58	**4.40**	6.94	**2.25**	4.42
Credit card loans by geographic region						
California	**$ 15,454**	$ 7,115	**$ 2,650**	$ 3,873	**$ 18,104**	$ 10,988
New York	**9,540**	4,527	**1,032**	1,458	**10,572**	5,985
Texas	**9,217**	4,154	**1,006**	1,421	**10,223**	5,575
Florida	**6,724**	3,439	**1,165**	1,735	**7,889**	5,174
Illinois	**7,077**	3,166	**542**	771	**7,619**	3,937
Ohio	**5,035**	2,506	**401**	562	**5,436**	3,068
New Jersey	**5,070**	2,337	**494**	707	**5,564**	3,044
Michigan	**3,956**	1,977	**273**	397	**4,229**	2,374
Virginia	**3,020**	1,386	**295**	417	**3,315**	1,803
Pennsylvania	**4,521**	2,243	**424**	598	**4,945**	2,841
Washington	**2,053**	911	**438**	596	**2,491**	1,507
Georgia	**2,834**	1,477	**398**	562	**3,232**	2,039
All other	**47,290**	23,895	**4,615**	6,556	**51,905**	30,451
Total retained loans[c]	**$ 121,791**	$ 59,133	**$ 13,733**	$ 19,653	**$ 135,524**	$ 78,786
Percentage of portfolio based on carrying value with estimated refreshed FICO scores[d]						
Equal to or greater than 660	**80.6%**	72.6%	**56.4%**	49.2%	**77.9%**	66.7%
Less than 660	**19.4**	27.4	**43.6**	50.8	**22.1**	33.3

(a) Results reflect the impact of purchase accounting adjustments related to the Washington Mutual transaction and the consolidation of the WMMT in the second quarter of 2009.

(b) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance. Under guidance issued by the FFIEC, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

(c) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts. For further information, see Note 16 on pages 244–259 of this Annual Report.

(d) Refreshed FICO scores are estimated based on a statistically significant random sample of credit card accounts in the credit card portfolio for the period shown. The Firm obtains refreshed FICO scores on a quarterly basis.

(e) Includes billed finance charges and fees net of an allowance for uncollectible amounts.

(f) Includes $1.0 billion of loans at December 31, 2009, held by the WMMT, which were consolidated onto the Firm's Consolidated Balance Sheets at fair value during the second quarter of 2009. Such loans had been fully repaid or charged off as of December 31, 2010. For further discussion, see Note 16 on pages 244–259 of this Annual Report.

Credit card impaired loans

JPMorgan Chase may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. The Firm has short-term programs for borrowers who may be in need of temporary relief, and long-term programs for borrowers who are experiencing a more fundamental level of financial difficulties. Most of the Firm's modified credit card loans have been modified under the long-term programs. Modifications under the Firm's long-term programs involve placing the customer on a fixed payment plan not exceeding 60 months. Modifications under all of these programs typically include reducing the interest rate on the card. Also in all cases, the Firm cancels the customer's available line of credit on the credit card. Substantially all of these modifications, both long-term and short-term are considered to be troubled debt restructurings.

If the cardholder does not comply with the modified payment terms, then the credit card loan agreement reverts back to its pre-modification payment terms. Assuming that the cardholder does not begin to perform in accordance with those payment terms, the loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In addition, if a borrower successfully completes a short-term modification program, then the loan reverts back to its pre-modification payment terms. However, in most cases, the Firm does not reinstate the borrower's line of credit.

The Firm measures the allowance for loan losses related to impaired credit card loans as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original contractual interest rate and, therefore, does not consider any incremental penalty rate in this measurement.

The tables below set forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in troubled debt restructurings.

	Chase, excluding Washington Mutual portfolio		Washington Mutual portfolio		Total credit card	
December 31, (in millions)	**2010**	2009	**2010**	2009	**2010**	2009
Impaired loans with an allowance[a][b]						
Credit card loans with modified payment terms[c]	**$ 6,685**	$ 3,513	**$ 1,570**	$ 1,617	**$ 8,255**	$ 5,130
Modified credit card loans that have reverted to pre-modification payment terms[d]	**1,439**	812	**311**	303	**1,750**	1,115
Total impaired loans[e]	**$ 8,124**	$ 4,325	**$ 1,881**	$ 1,920	**$10,005**	$ 6,245
Allowance for loan losses related to impaired loans	**$ 3,175**	$ 2,038	**$ 894**	$ 1,079	**$ 4,069**	$ 3,117

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
(b) There are no impaired loans without an allowance.
(c) Represents credit card loans outstanding to borrowers then enrolled in a credit card modification program.
(d) Represents credit card loans that were modified in troubled debt restructurings but that have subsequently reverted back to the loans' pre-modification payment terms. Of the $1.8 billion total loan amount at December 31, 2010, approximately $1.2 billion of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. A substantial portion of these loans is expected to be charged-off in accordance with the Firm's standard charge-off policy. The remaining $590 million of loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as troubled debt restructurings since the borrowers' credit lines remain closed. Prior-period amounts have been revised to conform to the current presentation.
(e) The increase in troubled debt restructurings from December 31, 2009 to December 31, 2010, is primarily attributable to previously-modified loans held in Firm-sponsored credit card securitization trusts being consolidated as a result of adopting the new accounting guidance related to VIEs.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

For the year ended December 31,	Impaired loans (average)			Interest income on impaired loans[a]		
(in millions)	**2010**	2009	2008	**2010**	2009	2008
Chase, excluding Washington Mutual portfolio	**$ 8,747**	$ 3,059	$ 2,386	**$ 479**	$ 181	$ 167
Washington Mutual portfolio	**1,983**	991	—	**126**	70	—
Total credit card	**$ 10,730**	$ 4,050	$ 2,386	**$ 605**	$ 251	$ 167

(a) As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance for the estimated uncollectible portion of billed and accrued interest and fee income on credit card loans.

Note 15 – Allowance for credit losses

JPMorgan Chase's allowance for loan losses covers the wholesale and consumer, including credit card loan portfolios, and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also computes an allowance for wholesale and consumer lending-related commitments using methodologies similar to those used to compute the allowance on the underlying loans. During 2010, the Firm did not make any significant changes to the methodologies or policies used to determine its allowance for credit losses, which policies are described in the following paragraphs.

The allowance for loan losses includes an asset-specific component, a formula-based component and a component related to PCI loans.

The asset-specific component relates to loans considered to be impaired, which includes loans that have been modified in a troubled debt restructuring as well as risk-rated loans that have been placed on nonaccrual status. An asset-specific allowance for impaired loans is established when the loan's discounted cash flows (or, in certain cases, the loan's observable market price) is lower than the recorded investment in the loan. To compute the asset-specific component of the allowance, larger loans are evaluated individually, while smaller loans are evaluated as pools using historical loss experience for the respective class of assets. Risk-rated loans (primarily wholesale loans) are pooled by risk rating, while scored loans (i.e., consumer loans) are pooled by product type.

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment due to the impact of discounting are reported as an adjustment to the provision for loan losses, not as an adjustment to interest income. An asset-specific allowance for an impaired loan that is determined using an observable market price is measured as the difference between the recorded investment in the loan and the loan's fair value.

Certain loans are deemed collateral-dependent because repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources. Impaired collateral-dependent loans are charged-off to the fair value of the collateral, less costs to sell, rather than being subject to an asset-specific reserve as for other impaired loans.

The determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"). As soon as practicable after taking physical possession of the property through foreclosure, the Firm obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared to the estimated values provided by exterior opinions and interior appraisals, considering state- and product-specific factors.

For commercial real estate loans, the collateral value is generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

See Note 3 on pages 170–187 of this Annual Report for further information on the fair value hierarchy for impaired collateral-dependent loans.

The formula-based component is based on a statistical calculation to provide for probable principal losses inherent in performing risk-rated loans and consumer loans, except for loans restructured in troubled debt restructurings and PCI loans. See Note 14 on pages 220–238 of this Annual Report for more information on PCI loans.

For risk-rated loans, the statistical calculation is the product of an estimated probability of default and an estimated loss given default. These factors are differentiated by risk rating and expected maturity. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm to that loan. PD estimates are based on observable external through-the-cycle data, using credit-rating agency default statistics. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle.

For scored loans, the statistical calculation is performed on pools of loans with similar risk characteristics (e.g., product type) and generally computed as the product of actual outstandings, an expected-loss factor and an estimated-loss coverage period. Expected-loss factors are statistically derived and consider historical factors such as loss frequency and severity. In developing loss frequency and severity assumptions, the Firm considers known and anticipated changes in the economic environment, including changes in housing prices, unemployment rates and other risk indicators.

A nationally recognized home price index measure is used to develop loss severity estimates on defaulted residential real estate loans at the metropolitan statistical areas ("MSA") level. These loss severity estimates are regularly validated by comparison to actual losses

recognized on defaulted loans, market-specific real estate appraisals and property sales activity. Real estate broker price opinions are obtained when the loan is being evaluated for charge-off and at least every six months thereafter. When foreclosure is determined to be probable, a third-party appraisal is obtained as soon as practicable. Forecasting methods are used to estimate expected-loss factors, including credit loss forecasting models and vintage-based loss forecasting.

The economic impact of potential modifications of residential real estate loans is not included in the formula-based allowance because of the uncertainty regarding the type and results of such modifications. As discussed in Note 14 on pages 220–238 of this Annual Report, modified residential real estate loans are generally accounted for as troubled debt restructurings upon contractual modification and are evaluated for an asset-specific allowance at and subsequent to modification. Assumptions regarding the loans' expected re-default rates are incorporated into the measurement of the asset-specific allowance.

Management applies judgment within an established framework to adjust the results of applying the statistical calculation described above. The determination of the appropriate adjustment is based on management's view of uncertainties that have occurred but are not yet reflected in the loss factors and that relate to current macroeconomic and political conditions, the quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the portfolio. In addition, for the risk-rated portfolios, any adjustments made to the statistical calculation also consider concentrated and deteriorating industries. For the scored loan portfolios, adjustments to the statistical calculation are accomplished in part by analyzing the historical loss experience for each major product segment. Factors related to unemployment, housing prices, borrower behavior and lien position are incorporated into the calculation, where relevant.

Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing wholesale and consumer lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

Allowance for credit losses and loans and lending-related commitments by impairment methodology

	2010			
Year ended December 31, (in millions)	Wholesale	Consumer, excluding credit card	Credit Card	Total
Allowance for loan losses				
Beginning balance at January 1,	**$ 7,145**	**$ 14,785**	**$ 9,672**	**$ 31,602**
Cumulative effect of change in accounting principles[a]	**14**	**127**	**7,353**	**7,494**
Gross charge-offs[a]	**1,989**	**8,383**	**15,410**	**25,782**
Gross (recoveries)[a]	**(262)**	**(474)**	**(1,373)**	**(2,109)**
Net charge-offs[a]	**1,727**	**7,909**	**14,037**	**23,673**
Provision for loan losses:				
Excluding accounting conformity[a]	**(673)**	**9,458**	**8,037**	**16,822**
Accounting conformity[b]	**—**	**—**	**—**	**—**
Total provision for loan losses	**(673)**	**9,458**	**8,037**	**16,822**
Acquired allowance resulting from Washington Mutual transaction	**—**	**—**	**—**	**—**
Other[c]	**2**	**10**	**9**	**21**
Ending balance at December 31	**$ 4,761**	**$ 16,471**	**$ 11,034**	**$ 32,266**
Allowance for loan losses by impairment methodology				
Asset-specific[d][e][f]	**$ 1,574**	**$ 1,075**	**$ 4,069**	**$ 6,718**
Formula-based[a][f]	**3,187**	**10,455**	**6,965**	**20,607**
PCI	**—**	**4,941**	**—**	**4,941**
Total allowance for loan losses	**$ 4,761**	**$ 16,471**	**$ 11,034**	**$ 32,266**
Loans by impairment methodology				
Asset-specific[c]	**$ 5,486**	**$ 6,220**	**$ 10,005**	**$ 21,711**
Formula-based	**216,980**	**248,481**	**125,519**	**590,980**
PCI	**44**	**72,763**	**—**	**72,807**
Total retained loans	**$ 222,510**	**$ 327,464**	**$ 135,524**	**$ 685,498**

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2010, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb losses that are inherent in the portfolio, including those not yet identifiable).

(table continued from previous page)

	2009				2008			
	Wholesale	Consumer, excluding credit card	Credit Card	Total	Wholesale	Consumer, excluding credit card	Credit Card	Total
	$ 6,545	$ 8,927	$ 7,692	$ 23,164	$ 3,154	$ 2,673	$ 3,407	$ 9,234
	—	—	—	—	—	—	—	—
	3,226	10,421	10,371	24,018	521	5,086	5,157	10,764
	(94)	(222)	(737)	(1,053)	(119)	(209)	(601)	(929)
	3,132	10,199	9,634	22,965	402	4,877	4,556	9,835
	3,684	16,032	12,019	31,735	2,895	10,309	6,456	19,660
	—	—	—	—	641	350	586	1,577
	3,684	16,032	12,019	31,735	3,536	10,659	7,042	21,237
	—	—	—	—	229	897	1,409	2,535
	48	25	(405)	(332)	28	(425)	390	(7)
	$ 7,145	$ 14,785	$ 9,672	$ 31,602	$ 6,545	$ 8,927	$ 7,692	$ 23,164
	$ 2,046	$ 896	$ 3,117	6,059	$ 712	$ 332	$ 1,450	$ 2,494
	5,099	12,308	6,555	23,962	5,833	8,595	6,242	20,670
	—	1,581	—	1,581	—	—	—	—
	$ 7,145	$ 14,785	$ 9,672	$ 31,602	$ 6,545	$ 8,927	$ 7,692	$ 23,164
	$ 6,960	$ 3,648	$ 6,245	$ 16,853	$ 2,088	$ 2,086	$ 3,048	$ 7,222
	192,982	263,462	72,541	528,985	245,777	285,181	101,647	632,605
	135	81,245	—	81,380	224	88,813	51	89,088
	$ 200,077	$ 348,355	$ 78,786	$ 627,218	$ 248,089	$ 376,080	$ 104,746	$ 728,915

Year ended December 31, (in millions)	2010 Wholesale	Consumer, excluding credit card	Credit Card	Total
Allowance for lending-related commitments				
Beginning balance at January 1,	**$ 927**	**$ 12**	**$ —**	**$ 939**
Cumulative effect of change in accounting principles[a]	**(18)**	**—**	**—**	**(18)**
Provision for lending-related commitments:				
Excluding accounting conformity[a]	**(177)**	**(6)**	**—**	**(183)**
Accounting conformity[b]	**—**	**—**	**—**	**—**
Total provision for lending-related commitments	**(177)**	**(6)**	**—**	**(183)**
Acquired allowance resulting from Washington Mutual transaction	**—**	**—**	**—**	**—**
Other[c]	**(21)**	**—**	**—**	**(21)**
Ending balance at December 31	**$ 711**	**$ 6**	**$ —**	**$ 717**
Allowance for lending-related commitments by impairment methodology				
Asset-specific	**$ 180**	**$ —**	**$ —**	**$ 180**
Formula-based	**531**	**6**	**—**	**537**
Total allowance for lending-related commitments	**$ 711**	**$ 6**	**$ —**	**$ 717**
Lending-related commitments by impairment methodology				
Asset-specific	**$ 1,005**	**$ —**	**$ —**	**$ 1,005**
Formula-based	**345,074**	**61,534**	**547,227**	**953,835**
Total lending-related commitments	**$ 346,079**	**$ 61,534**	**$ 547,227**	**$ 954,840**
Impaired collateral-dependent loans				
Net charge-offs	**$ 269**	**$ 304**	**$ —**	**$ 573**
Loans measured at fair value of collateral less cost to sell	**806**	**890**	**—**	**1,696**

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, its Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related. As a result, $7.4 billion, $14 million and $127 million, respectively, of allowance for loan losses were recorded on-balance sheet with the consolidation of these entities. For further discussion, see Note 16 on pages 244–259 of this Annual Report.

(b) Represents adjustments to the provision for credit losses recognized in Corporate/Private Equity related to the Washington Mutual transaction in 2008.

(c) The 2009 amount predominantly represents a reclassification related to the issuance and retention of securities from the Chase Issuance Trust. For further information, see Note 16 on pages 244–259 of this Annual Report. The 2008 amount predominantly represents a transfer of allowance between Corporate/Private Equity and Credit card.

(d) Relates to risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a troubled debt restructuring.

(e) At December 31, 2010, 2009 and 2008 the asset-specific consumer excluding card allowance for loan losses included troubled debt restructuring reserves of $985 million, $754 million and $258 million respectively. The asset-specific credit card allowance for loan losses is related to loans modified in troubled debt restructurings.

(f) At December 31, 2010, the Firm's allowance for loan losses on all impaired credit card loans was reclassified to the asset-specific allowance. This reclassification had no incremental impact on the Firm's allowance for loan losses. Prior periods have been revised to reflect the current presentation.

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(table continued from previous page)

2009				2008			
Wholesale	Consumer, excluding credit card	Credit card	Total	Wholesale	Consumer, excluding credit card	Credit card	Total
$ 634	$ 25	$ —	$ 659	$ 835	$ 15	$ —	$ 850
—	—	—	—	—	—	—	—
290	(10)	—	280	(214)	(1)	—	(215)
—	—	—	—	5	(48)	—	(43)
290	(10)	—	280	(209)	(49)	—	(258)
—	—	—	—	—	66	—	66
3	(3)	—	—	8	(7)	—	1
$ 927	$ 12	$ —	$ 939	$ 634	$ 25	$ —	$ 659
$ 297	$ —	$ —	$ 297	$ 29	$ —	$ —	$ 29
630	12	—	642	605	25	—	630
$ 927	$ 12	$ —	$ 939	$ 634	$ 25	$ —	$ 659
$ 1,577	$ —	$ —	$ 1,577	$ 233	$ —	$ —	$ 233
345,578	74,827	569,113	989,518	379,638	117,805	623,702	1,121,145
$ 347,155	$ 74,827	$ 569,113	$ 991,095	$ 379,871	$ 117,805	$ 623,702	$ 1,121,378
$ 500	$ 166	$ —	$ 666	$ 124	$ 22	$ —	$ 146
1,127	210	—	1,337	1,032	33	—	1,065

Note 16 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1 on pages 164–165 of this Annual Report.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the principal beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper ("ABCP") conduit.

Line-of-Business	Transaction Type	Activity	Annual Report page reference
Card Services	Credit card securitization trusts	Securitization of both originated and purchased credit card receivables	245–246
RFS	Mortgage and other securitization trusts	Securitization of originated and purchased residential mortgages, automobile and student loans	246–249
IB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, automobile and student loans	246–249
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	249–250
	Investor intermediation activities:		
	Municipal bond vehicles		250–251
	Credit-related note vehicles		252
	Asset swap vehicles		252–253

The Firm's other business segments are also involved with VIEs, but to a lesser extent, as follows:

- Asset Management ("AM"): Sponsors and manages a limited number of funds that are deemed VIEs. As asset manager of the funds, AM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For the limited number of fund entities that qualify as VIEs, AM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Treasury & Securities Services ("TSS"): Provides services to a number of VIEs that are similar to those provided to non-VIEs. TSS earns market-based fees for the services it provides. TSS's interests are generally not considered to be significant variable interests and/or do not control these VIEs; therefore, TSS does not consolidate these VIEs.
- Commercial Banking ("CB"): CB makes investments in and provides lending to community development entities that may meet the definition of a VIE. In addition, CB provides financing and lending related services to certain client sponsored VIEs. In general, CB does not control the activities of these entities and does not consolidate these entities.
- Corporate/Private Equity: Corporate uses VIEs to issue guaranteed capital debt securities. See Note 22 on pages 265–266 of this Annual Report for further information. The Private Equity business, within Corporate/Private Equity, may be involved with entities that are deemed VIEs. However, the Firm's private equity business is subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs.

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 253 of this Note.

New consolidation accounting guidance for VIEs

On January 1, 2010, the Firm implemented consolidation accounting guidance related to VIEs. The following table summarizes the incremental impact at adoption.

(in millions, except ratios)	U.S. GAAP assets	U.S. GAAP liabilities	Stockholders' equity	Tier 1 capital
As of December 31, 2009	$2,031,989	$1,866,624	$ 165,365	11.10%
Impact of new accounting guidance for consolidation of VIEs				
Credit card[a]	60,901	65,353	(4,452)	(0.30)%
Multi-seller conduits[b]	17,724	17,744	(20)	—
Mortgage & other[c][d]	9,059	9,107	(48)	(0.04)%
Total impact of new guidance	87,684	92,204	(4,520)	(0.34)%[e]
Beginning balance as of January 1, 2010	$2,119,673	$1,958,828	$ 160,845	10.76%

(a) The assets and liabilities of the Firm-sponsored credit card securitization trusts that were consolidated were initially measured at their carrying values, primarily amortized cost, as this method is consistent with the approach that Card Services utilizes to manage its other assets. These assets were primarily recorded in loans on the Firm's Consolidated Balance Sheet. In addition, Card Services established an allowance for loan losses of $7.4 billion (pretax), which was reported as a transition adjustment in stockholders' equity. The impact to stockholders' equity also includes a decrease to AOCI of $116 million, as a result of the reversal of the fair value adjustments taken on retained AFS securities that were eliminated in consolidation.
(b) The assets and liabilities of the Firm-administered multi-seller conduits which were consolidated were initially measured at their carrying values, primarily amortized cost, as this method is consistent with the business's intent to hold the assets for the longer-term. The assets are recorded primarily in loans and in other assets on the Firm's Consolidated Balance Sheets.
(c) RFS consolidated certain mortgage and other consumer securitizations, which resulted in a net increase in both assets and liabilities of $4.7 billion ($3.5 billion related to residential mortgage securitizations and $1.2 billion related to other consumer securitizations). These assets were initially measured at their unpaid principal balance and recorded primarily in loans on the Firm's Consolidated Balance Sheets. This method was elected as a practical expedient.
(d) IB consolidated certain mortgage and other consumer securitizations, which resulted in a net increase in both assets and liabilities of $4.3 billion ($3.7 billion related to residential mortgage securitizations and $0.6 billion related to other consumer securitizations). These assets were initially measured at their fair value, as this method is consistent with the approach that IB utilizes to manage similar assets. These assets were recorded primarily in trading assets on the Firm's Consolidated Balance Sheets.
(e) The U.S. GAAP consolidation of the credit card securitization trusts did not have a significant impact on risk-weighted assets on the adoption date because the Chase Issuance Trust (the Firm's primary credit card securitization trust) had been consolidated for regulatory capital purposes beginning in the second quarter of 2009, which added approximately $40.0 billion of risk-weighted assets for regulatory capital purposes. In addition, the Firm elected a two-quarter regulatory implementation deferral of the effect of this accounting guidance on risk-weighted assets and risk-based capital requirements, as permitted for its Firm-administered multi-seller conduits and certain mortgage-related and other securitization entities. The deferral period ended July 1, 2010, and the Firm consolidated, for regulatory capital purposes, the deferred amounts, which had a negligible impact on risk-weighted assets and risk-based capital ratios.

Significant Firm-sponsored variable interest entities

Credit card securitizations

The Card Services ("CS") business securitizes originated and purchased credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts. As servicer, the Firm receives contractual servicing fees based on the securitized loan balance plus excess servicing fees, which are recorded in credit card income as discussed in Note 7 on page 200 of this Annual Report.

Effective January 1, 2010, the Firm consolidated the assets and liabilities of Firm-sponsored credit card securitization trusts, including its primary card securitization trust, Chase Issuance Trust, as a result of the implementation of new accounting guidance. The consolidation determination was based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

Upon consolidation at January 1, 2010, the Firm recorded a net increase in GAAP assets of $60.9 billion on the Consolidated Balance Sheet, as follows: $84.7 billion of loans; $7.4 billion of allowance for loan losses; $4.4 billion of other assets, partially offset by $20.8 billion of previously recognized assets, consisting primarily of retained AFS securities that were eliminated upon consolidation. In addition, the Firm recognized $65.4 billion of liabilities representing the trusts' beneficial interests issued to third parties.

The following table summarizes the assets and liabilities of the Firm-sponsored credit card securitization trusts at December 31, 2010.

(in billions)	Loans	Other assets	Total assets held by Firm–sponsored credit card securitization trusts	Beneficial interests issued to third parties
December 31, 2010	$ 67.2	$ 1.3	$ 68.5	$ 44.3

The underlying securitized credit card receivables and other assets are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's other creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (which generally ranges from 4% to 12%). As of December 31, 2010, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $17.2 billion. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 19% for the year ended December 31, 2010. The Firm also retained $1.1 billion of senior securities and $3.2 billion of subordinated securities in certain of its credit card securitization trusts as of December 31, 2010. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

Accounting Treatment Prior to January 1, 2010

Prior to January 1, 2010, the Firm accounted for its credit card securitizations as QSPEs and therefore these entities were not consolidated. The Firm recorded only its retained interests in the entities on its Consolidated Balance Sheets.

As of December 31, 2009, the principal amount outstanding of total assets held by Firm-sponsored nonconsolidated credit card securitizations QSPEs was $109.6 billion in which the Firm had continuing involvement.

At December 31, 2009, the Firm retained undivided interests in its Firm-sponsored credit card securitization trusts of $16.7 billion,

which were classified within loans on its Consolidated Balance Sheets. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 16% for the year ended December 31, 2009. The Firm also retained $7.2 billion of senior securities and $6.6 billion of subordinated securities in certain of its credit card securitization trusts as of December 31, 2009, which were classified as AFS securities. Additionally, the Firm's interests included $1.0 billion of escrow accounts and $3.2 billion of retained subordinated interests in accrued interest and fees on securitized receivables, which were classified as "other assets."

During 2009, the Firm took certain actions permitted by the trust agreements with respect to two of the Firm's credit card securitization trusts.

- Chase Issuance Trust (the "Trust"): In 2009, the Firm consolidated, for regulatory capital purposes, the Chase Issuance Trust (the Firm's primary issuance trust) as a result of taking certain actions permitted by the Trust agreements, including increasing the required credit enhancement level of each tranche of outstanding notes issued by the Trust and increasing the excess spread for the Trust. These actions resulted in the addition of approximately $40 billion of risk-weighted assets for regulatory capital purposes, which decreased the Firm's Tier 1 capital ratio by approximately 40 basis points, at that time, but did not have a material impact on the Firm's Consolidated Balance Sheets or results of operations.
- Washington Mutual Master Trust ("WMMT"): The Firm acquired an interest in the WMMT as part of the acquisition of the Washington Mutual banking operations. In 2009, the Firm removed all remaining credit card receivables originated by Washington Mutual, resulting in the consolidation of the WMMT for accounting and regulatory capital purposes. As a result, the Firm recorded, during the second quarter of 2009, additional assets with an initial fair value of $6.0 billion, additional liabilities with an initial fair value of $6.1 billion and a pretax loss of approximately $64 million.

Firm-sponsored mortgage and other securitization trusts

The Firm securitizes originated and purchased residential mortgages, commercial mortgages and other consumer loans (including automobile and student loans) primarily in its RFS and IB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

Effective January 1, 2010, the Firm consolidated certain mortgage securitization trusts (both residential and commercial) and Firm-sponsored automobile and student loan trusts as a result of the implementation of the accounting guidance. The consolidation determination was based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and duties, including making decisions related to loan modifications and workouts. Additionally, the nature and extent of the Firm's continuing economic involvement with these trusts obligates the Firm to absorb losses and gives the Firm the right to receive benefits from the VIEs that could potentially be significant.

Prior to January 1, 2010, the Firm accounted for its residential and commercial mortgage, automobile, and certain student loan securitizations as QSPEs and therefore did not consolidate these entities; only the Firm's retained interests in these entities were recorded on its Consolidated Balance Sheets. In addition, the Firm previously consolidated certain other student loan securitizations in accordance with the accounting treatment under prior accounting guidance.

The following table presents the total unpaid principal amount of assets held in JPMorgan Chase–sponsored securitization entities in which the Firm has continuing involvement, including those that are consolidated by the Firm and those that are not consolidated by the Firm. Continuing involvement includes servicing the loans; holding senior interests or subordinated interests; recourse or guarantee arrangements; and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. In the table below, the amount of beneficial interests held by JPMorgan Chase does not equal the assets held in nonconsolidated VIEs because of the existence of beneficial interests held by third parties, which are reflected at their current outstanding par amounts; and because a portion of the Firm's retained interests (trading assets and AFS securities) are reflected at their fair values. See Securitization activity on pages 255–258 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs.

Firm-sponsored mortgage and other consumer securitization trusts

December 31, 2010[a] (in billions)	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[d][e][f][g][h]			
	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Other assets	Total interests held by JPMorgan Chase
Securitization-related							
Residential mortgage:							
Prime[b]	**$ 153.1**	**$ 2.2**	**$ 143.8**	**$ 0.7**	**$ —**	**$ —**	**$ 0.7**
Subprime	**44.0**	**1.6**	**40.7**	**—**	**—**	**—**	**—**
Option ARMs	**36.1**	**0.3**	**35.8**	**—**	**—**	**—**	**—**
Commercial and other[c]	**153.4**	**—**	**106.2**	**2.0**	**0.9**	**—**	**2.9**
Student	**4.5**	**4.5**	**—**	**—**	**—**	**—**	**—**
Auto	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Total	**$ 391.1**	**$ 8.6**	**$ 326.5**	**$ 2.7**	**$ 0.9**	**$ —**	**$ 3.6**

December 31, 2009[a] (in billions)	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[d][e][f][g][h]			
	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Other assets	Total interests held by JPMorgan Chase
Securitization-related							
Residential mortgage:							
Prime[b]	$ 183.3	$ —	$ 171.5	$ 0.9	$ 0.2	$ —	$ 1.1
Subprime	50.0	—	47.3	—	—	—	—
Option ARMs	42.0	—	42.0	—	0.1	—	0.1
Commercial and other[c]	155.3	—	24.8	1.6	0.8	—	2.4
Student	4.8	3.8	1.0	—	—	0.1	0.1
Auto	0.2	—	0.2	—	—	—	—
Total	$ 435.6	$ 3.8	$ 286.8	$ 2.5	$ 1.1	$ 0.1	$ 3.7

(a) Excludes loan sales to U.S. government agencies. See page 257 of this Note for information on the Firm's loan sales to U.S. government agencies.
(b) Includes Alt-A loans.
(c) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties. The Firm generally does not retain a residual interest in its sponsored commercial mortgage securitization transactions. Includes co-sponsored commercial securitizations and, therefore, includes non–JPMorgan Chase–originated commercial mortgage loans.
(d) Excludes retained servicing (for a discussion of MSRs, see Note 17 on pages 260–263 of this Annual Report) and securities retained from loan sales to U.S. government agencies.
(e) Excludes senior and subordinated securities of $182 million and $18 million, respectively, at December 31, 2010, and $729 million and $146 million, respectively, at December 31, 2009, which the Firm purchased in connection with IB's secondary market-making activities.
(f) Includes investments acquired in the secondary market that are predominantly for held-for-investment purposes, of $315 million and $139 million as of December 31, 2010 and 2009, respectively. This comprises $238 million and $91 million of AFS securities, related to commercial and other; and $77 million and $48 million of investments classified as trading assets–debt and equity instruments, including $39 million and $47 million of residential mortgages, and $38 million and $1 million of commercial and other, all respectively, at December 31, 2010 and 2009.
(g) Excludes interest rate and foreign exchange derivatives primarily used to manage the interest rate and foreign exchange risks of the securitization entities. See Note 6 on pages 191–199 of this Annual Report for further information on derivatives.
(h) Includes interests held in re-securitization transactions.

Residential mortgage

The Firm securitizes residential mortgage loans originated by RFS, as well as residential mortgage loans purchased from third parties by either RFS or IB. RFS generally retains servicing for all residential mortgage loans originated or purchased by RFS, and for certain mortgage loans purchased by IB.

For securitizations serviced by RFS, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. In a limited number of these securitizations, RFS also retains an interest in the VIE that could potentially be significant to the VIE. In these instances, the Firm is deemed to be the primary beneficiary. At December 31, 2010, approximately $2.9 billion of assets and $3.0 billion of liabilities of Firm-sponsored residential mortgage securitization trusts were consolidated on balance sheet. For Firm-sponsored securitizations serviced by unrelated third parties, the Firm does not consolidate the VIE as the power to direct the significant activities resides with the third party servicer. At December 31, 2009, RFS did not consolidate any VIEs in accordance with the accounting treatment under prior accounting rules. RFS held retained interests of approximately $205 million and $537 million as of December 31, 2010 and 2009, respectively, in nonconsolidated residential mortgage securitization entities. See pages 257–258 of this Note for further information on retained interests held in nonconsolidated VIEs; these retained interests are classified as trading assets or AFS securities.

The Firm's mortgage loan sales are primarily nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. However, for a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. See Note 30 on pages 275–280 of this Annual Report for additional information on loans sold with recourse, as well as information on indemnification liability for breaches of representations and warranties. See page 257 of this Note for further information on loans sold to U.S. government agencies.

IB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, IB at times retains senior and/or subordinated interests (including residual interests) in residential mortgage securitizations upon securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by IB, when considered together with the servicing arrangements entered into by RFS, the Firm is deemed to be the primary beneficiary of certain securitization trusts. At December 31, 2010, $1.2 billion of VIE assets and $702 million of liabilities were consolidated due to IB's involvement with such trusts. IB did not consolidate any residential securitization VIEs at December 31, 2009, in accordance with the accounting treatment under prior accounting rules. IB held approximately $461 million, and $479 million of senior and subordinated interests at December 31, 2010 and 2009, respectively, in nonconsolidated residential mortgage securitization entities. This includes approximately $1 million and $2 million of residual interests at December 31, 2010 and 2009, respectively. See pages 257–258 of this Note for further information on interests held in nonconsolidated securitizations. These retained interests are accounted for at fair value and classified as trading assets.

Commercial mortgages and other consumer securitizations

IB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. IB may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). At December 31, 2010, approximately $84 million of VIE assets and $82 million of VIE liabilities of commercial mortgage securitization trusts were consolidated due to the Firm holding certain subordinated interests that give the Firm the power to direct the activities of these entities as well as a significant interest. IB did not consolidate any commercial mortgage securitization VIEs at December 31, 2009, in accordance with the accounting treatment under prior accounting rules. At December 31, 2010 and 2009, the Firm held $2.0 billion and $1.6 billion, respectively, of retained interests in nonconsolidated commercial mortgage securitizations. This included approximately zero and $22 million of residual interests as of December 31, 2010 and 2009, respectively.

The Firm also securitizes automobile and student loans originated by RFS, and consumer loans (including automobile and student loans) purchased by IB. The Firm retains servicing responsibilities for all originated and certain purchased student and automobile loans and has the power to direct the activities of these VIEs through these servicing responsibilities. At December 31, 2010, $4.5 billion of assets and $3.2 billion of liabilities of student loan securitizations were consolidated due to the combination of retained interests held by the Firm and servicing responsibilities. Auto loans previously securitized were repurchased by the Firm during 2010 as these securitization entities were terminated. As of December 31, 2009, the Firm held $9 million and $49 million of retained interests in securitized automobile and student loan securitizations, respectively, which were not consolidated in accordance with the accounting treatment under prior accounting rules. These retained interests were reported in other assets. In addition, at December 31, 2009, the Firm held interests in other student loans which resulted in $3.8 billion of other student loans being consolidated on the balance sheet in accordance with the accounting treatment under prior accounting rules.

Re-securitizations

The Firm engages in re-securitization transactions in which securities are transferred to a VIE in exchange for new beneficial interests. Re-securitizations involve the repackaging of securities previously issued by both agency sponsored (Fannie Mae, Freddie Mac and Ginnie Mae) and nonagency (private-label) VIEs that are generally backed by either residential or commercial mortgages. A re-securitization entity receives principal and interest payments

from the securities held in the entity and passes them to the beneficial interest holders. These entities are not actively managed and are passive in nature. Re-securitization entities are often established to the specifications of the investors. In a re-securitization entity, the most significant power is in the design of the entity (i.e., the decision as to the specific security or securities to be repackaged and the terms of the beneficial interests issued). The power over a re-securitization entity is often considered to be shared between the sponsor and investor(s) that are significantly involved in the creation and design of the re-securitization entity. At December 31, 2010, the Firm did not consolidate any agency re-securitizations, as it did not have the unilateral power to direct the significant activities of the re-securitization entity. At December 31, 2010, the Firm consolidated $477 million of assets and $230 million of liabilities of private-label re-securitizations, as the Firm had both the unilateral power to direct the significant activities of, and retained a significant interest in, these re-securitization entities. As of December 31, 2009, the Firm did not consolidate any re-securitization entities (agency or private-label) in accordance with the accounting treatment under prior accounting rules.

During the years ended December 31, 2010, 2009, and 2008, the Firm transferred $33.9 billion, $19.1 billion and $16.8 billion, respectively, of securities to agency re-securitization entities and $1.3 billion, $4.0 billion and $2.7 billion to private-label re-securitization entities. At December 31, 2010 and 2009, the Firm held approximately $3.5 billion and $1.6 billion of both senior and subordinated interests in nonconsolidated agency re-securitization entities and $46 million and $220 million of both senior and subordinated interests, in nonconsolidated private-label re-securitization entities. See pages 257–258 of this Note for further information on interests held in nonconsolidated securitization VIEs.

Multi-seller conduits

The Firm is an active participant in the asset-backed securities business, and it helps customers meet their financing needs by providing access to the commercial paper markets through VIEs known as multi-seller conduits. Multi-seller conduit entities are separate bankruptcy remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper to third-party investors. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided by the customers (i.e., sellers) to the conduits or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller, but also may include any combination of the following: recourse to the seller or originator, cash collateral accounts, letters of credit, excess spread, retention of subordinated interests or third-party guarantees. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it. Deal-specific liquidity facilities are the primary source of liquidity support for the conduits and are typically in the form of asset purchase agreements. They are generally structured so the liquidity that will be provided by the Firm (as liquidity provider) will be effected by the Firm purchasing, or lending against, a pool of nondefaulted, performing assets. In limited circumstances, the Firm may provide unconditional liquidity.

The conduit's administrative agent can require the liquidity provider to perform under its asset purchase agreement with the conduit at any time. These agreements may cause the liquidity provider, which is generally the Firm, to purchase an asset from the conduit at an amount above the asset's then current fair value – in effect, providing a guarantee of the asset's initial value.

The Firm also provides the multi-seller conduit vehicles with program-wide liquidity facilities in the form of uncommitted short-term revolving facilities established to handle funding increments too small to be funded by commercial paper and that can be accessed by the conduits only in the event of short-term disruptions in the commercial paper market.

Because the majority of the deal-specific liquidity facilities will only fund nondefaulted assets, program-wide credit enhancement is required to absorb losses on defaulted receivables in excess of losses absorbed by any deal-specific credit enhancement. Program-wide credit enhancement may be provided by JPMorgan Chase in the form of standby letters of credit or by third-party surety bond providers. The amount of program-wide credit enhancement required varies by conduit and ranges between 5% and 10% of the applicable commercial paper that is outstanding. The Firm provided $2.0 billion and $2.4 billion of program-wide credit enhancement at December 31, 2010 and 2009, respectively.

JPMorgan Chase receives fees for structuring multi-seller conduit transactions and compensation from the multi-seller conduits for its role as administrative agent, liquidity provider, and provider of program-wide credit enhancement.

Effective January 1, 2010, the Firm consolidated its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. The Firm directs the economic performance of the conduits as administrative agent and in its role in structuring transactions for the conduits. In these roles, the Firm makes decisions regarding concentration of asset types and credit quality of transactions, and is responsible for managing the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent, liquidity provider and provider of program-wide credit enhancement, as well as the Firm's potential exposure as a result of the liquidity and credit enhancement facilities provided to the conduits.

December 31, 2010 (in billions)	Loans	Other assets	Total assets held by Firm-administered multi-seller conduits	Commercial paper issued to third parties
Consolidated[a]	$ 21.1	$ 0.6	$ 21.7	$ 21.6

(a) The Firm provided certain deal-specific liquidity facilities (primarily asset purchase agreements); program-wide liquidity facilities; and program-wide credit enhancements that were eliminated in consolidation.

Accounting Treatment Prior to January 1, 2010

Prior to January 1, 2010, the Firm had consolidated one of its multi-seller conduits; all other Firm-administered multi-seller conduits were not consolidated in accordance with prior accounting rules. Under prior accounting rules, the party that absorbed the majority of the entity's expected losses, received a majority of the entity's residual returns, or both, would consolidate. Each nonconsolidated multi-seller conduit administered by the Firm at December 31, 2009 had issued Expected Loss Notes ("ELNs"), the holders of which were committed to absorbing the majority of the expected loss of each respective conduit. The total amounts of ELNs outstanding for nonconsolidated conduits at December 31, 2009 was $96 million.

At December 31, 2009, total assets funded and commercial paper issued by Firm-sponsored multi-seller conduits were as follows.

December 31, 2009 (in billions)	Total assets funded	Commercial paper issued
Consolidated	$ 5.1	$ 5.1
Non-consolidated[a]	17.8	17.8

(a) The Firm provided certain deal-specific liquidity facilities (primarily asset purchase agreements) of $24.2 billion. Additionally, the Firm provided program-wide liquidity facilities of $13.0 billion and program-wide credit enhancements of $2.0 billion.

The Firm's maximum exposure to loss on nonconsolidated Firm-administered multi-seller conduits was $24.8 billion at December 31, 2009. The maximum exposure to loss, calculated separately for each multi-seller conduit, included the Firm's exposure to both deal-specific liquidity facilities and program wide credit enhancements. For purposes of calculating maximum exposure to loss, Firm-provided program-wide credit enhancement was limited to deal-specific liquidity facilities provided to third parties.

VIEs associated with investor intermediation activities

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions, typically using derivatives, with these VIEs to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in on behalf of clients are municipal bond vehicles, credit-related note vehicles and asset swap vehicles.

Municipal bond vehicles

The Firm has created a series of trusts that provide short-term investors with qualifying tax-exempt investments, and that allow investors in tax-exempt securities to finance their investments at short-term tax-exempt rates. In a typical transaction, the vehicle purchases fixed-rate longer-term highly rated municipal bonds and funds the purchase by issuing two types of securities: (1) putable floating-rate certificates and (2) inverse floating-rate residual interests ("residual interests"). The maturity of each of the putable floating-rate certificates and the residual interests is equal to the life of the vehicle, while the maturity of the underlying municipal bonds is longer. Holders of the putable floating-rate certificates may "put," or tender, the certificates if the remarketing agent cannot successfully remarket the floating-rate certificates to another investor. A liquidity facility conditionally obligates the liquidity provider to fund the purchase of the tendered floating-rate certificates. If funded, the liquidity facility would be repaid by the proceeds from the sale of the underlying municipal bonds upon termination of the vehicle. In certain transactions, if the proceeds from the sale of the underlying municipal bonds are not sufficient to repay the liquidity facility, the liquidity provider has recourse to the residual interest holders for reimbursement.

The holders of the residual interests in these vehicles could experience losses if the face amount of the putable floating-rate certificates exceeds the market value of the municipal bonds upon termination of the vehicle. Certain vehicles require a smaller initial investment by the residual interest holders and thus do not result in excess collateralization. For these vehicles there exists a reimbursement obligation which requires the residual interest holders to post, during the life of the vehicle, additional collateral to the Firm, as liquidity provider, on a daily basis should the market value of the municipal bonds decline.

JPMorgan Chase Bank, N.A. often serves as the sole liquidity provider, and J.P. Morgan Securities LLC as remarketing agent, of the putable floating-rate certificates. The liquidity provider's obligation to perform is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. A downgrade of JPMorgan Chase Bank, N.A.'s short-term rating does not affect the Firm's obligation under the liquidity facility. However, in the event of a downgrade in the Firm's credit ratings, holders of the putable floating-rate certificates supported by those liquidity facility commitments might choose to sell their instruments, which could increase the likelihood that the liquidity commitments could be drawn. In vehicles in which third-party investors own the residual interests, in addition to the termination events, the Firm's exposure as liquidity provider is further limited by

the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle or in certain transactions the reimbursement agreements with the residual interest holders.

As remarketing agent, the Firm may hold putable floating-rate certificates of the municipal bond vehicles. At December 31, 2010 and 2009, respectively, the Firm held $248 million and $72 million of these certificates on its Consolidated Balance Sheets. The largest amount held by the Firm at any time during 2010 was $796 million, or 6%, of the municipal bond vehicles' aggregate outstanding putable floating-rate certificates. The Firm did not have and continues not to have any intent to protect any residual interest holder from potential losses on any of the municipal bond holdings.

The long-term credit ratings of the putable floating-rate certificates are directly related to the credit ratings of the underlying municipal bonds, and to the credit rating of any insurer of the underlying municipal bond. A downgrade of a bond insurer would result in a downgrade of the insured municipal bonds, which would affect the rating of the putable floating-rate certificates. This could cause demand for these certificates by investors to decline or disappear, as putable floating-rate certificate holders typically require an "AA-" bond rating. At December 31, 2010 and 2009, 96% and 98%, respectively, of the municipal bonds held by vehicles for which the Firm served as liquidity provider were rated "AA-" or better, based on either the rating of the underlying municipal bond itself or the bond rating including any credit enhancement. At December 31, 2010 and 2009, $3.4 billion and $2.3 billion, respectively, of the bonds were insured by monoline bond insurers.

The Firm consolidates municipal bond vehicles if it owns the residual interest. The residual interest generally allows the owner to make decisions that significantly impact the economic performance of the municipal bond vehicle, primarily by directing the sale of the municipal bonds owned by the vehicle. In addition, the residual interest owners have the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle. The Firm does not consolidate municipal bond vehicles if it does not own the residual interests, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31, 2010 and 2009, including the ratings profile of the VIEs' assets, was as follows.

December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities[b]	Excess/(deficit)[c]	Maximum exposure
Nonconsolidated municipal bond vehicles[a]				
2010	**$ 13.7**	**$ 8.8**	**$ 4.9**	**$ 8.8**
2009	13.2	8.4	4.8	8.4

	Ratings profile of VIE assets[d]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions, except where otherwise noted)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
Nonconsolidated municipal bond vehicles[a]							
2010	**$ 1.9**	**$ 11.2**	**$ 0.6**	**$ —**	**$ —**	**$ 13.7**	**15.5**
2009	1.6	11.4	0.2	—	—	13.2	10.1

(a) Excluded $4.6 billion and $2.8 billion, as of December 31, 2010 and 2009, respectively, which were consolidated due to the Firm owning the residual interests.
(b) The Firm may serve as credit enhancement provider to municipal bond vehicles in which it serves as liquidity provider. The Firm provided insurance on underlying municipal bonds, in the form of letters of credit, of $10 million at both December 31, 2010 and 2009.
(c) Represents the excess/(deficit) of the fair values of municipal bond assets available to repay the liquidity facilities, if drawn.
(d) The ratings scale is based on the Firm's internal risk ratings and is presented on an S&P-equivalent basis.

Credit-related note vehicles

The Firm structures transactions with credit-related note vehicles in which the VIE purchases highly rated assets, such as asset-backed securities, and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit which the VIE otherwise does not hold. The VIE then issues credit-linked notes ("CLNs") with maturities predominantly ranging from one to 10 years in order to transfer the risk of the referenced credit to the VIE's investors. Clients and investors often prefer using a CLN vehicle since the CLNs issued by the VIE generally carry a higher credit rating than such notes would if issued directly by JPMorgan Chase. The Firm's exposure to the CLN vehicles is generally limited to its rights and obligations under the credit derivative contract with the VIE, as the Firm does not provide any additional contractual financial support to the VIE. In addition, the Firm has not historically provided any financial support to the CLN vehicles over and above its contractual obligations. Accordingly, the Firm typically does not consolidate the CLN vehicles. As a derivative counterparty in a credit-related note structure, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its balance sheet at fair value. The collateral purchased by such VIEs is largely investment-grade, with a significant amount being rated "AAA." The Firm divides its credit-related note structures broadly into two types: static and managed.

In a static credit-related note structure, the CLNs and associated credit derivative contract either reference a single credit (e.g., a multi-national corporation), or all or part of a fixed portfolio of credits. The Firm generally buys protection from the VIE under the credit derivative. In a managed credit-related note structure, the CLNs and associated credit derivative generally reference all or part of an actively managed portfolio of credits. An agreement exists between a portfolio manager and the VIE that gives the portfolio manager the ability to substitute each referenced credit in the portfolio for an alternative credit. By participating in a structure where a portfolio manager has the ability to substitute credits within pre-agreed terms, the investors who own the CLNs seek to reduce the risk that any single credit in the portfolio will default. The Firm does not act as portfolio manager; its involvement with the VIE is generally limited to being a derivative counterparty. As a net buyer of credit protection, in both static and managed credit-related note structures, the Firm pays a premium to the VIE in return for the receipt of a payment (up to the notional of the derivative) if one or more of the credits within the portfolio defaults, or if the losses resulting from the default of reference credits exceed specified levels. Since each CLN is established to the specifications of the investors, the investors have the power over the activities of that VIE that most significantly affect the performance of the CLN. Accordingly, the Firm does not generally consolidate these credit-related note entities. Furthermore, the Firm does not have a variable interest that could potentially be significant. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its balance sheet at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Exposure to nonconsolidated credit-related note VIEs at December 31, 2010 and 2009, was as follows.

December 31, 2010 (in billions)	Net derivative receivables	Trading assets[b]	Total exposure[c]	Par value of collateral held by VIEs[d]
Credit-related notes[a]				
Static structure	**$ 1.0**	**$ —**	**$ 1.0**	**$ 9.5**
Managed structure	**2.8**	**—**	**2.8**	**10.7**
Total	**$ 3.8**	**$ —**	**$ 3.8**	**$ 20.2**

December 31, 2009 (in billions)	Net derivative receivables	Trading assets[b]	Total exposure[c]	Par value of collateral held by VIEs[d]
Credit-related notes[a]				
Static structure	$ 1.9	$ 0.7	$ 2.6	$ 10.8
Managed structure	5.0	0.6	5.6	15.2
Total	$ 6.9	$ 1.3	$ 8.2	$ 26.0

(a) Excluded collateral with a fair value of $142 million and $855 million at December 31, 2010 and 2009, respectively, which was consolidated, as the Firm, in its role as secondary market-maker, held a majority of the issued credit-related notes of certain vehicles.
(b) Trading assets principally comprise notes issued by VIEs, which from time to time are held as part of the termination of a deal or to support limited market-making.
(c) On–balance sheet exposure that includes net derivative receivables and trading assets – debt and equity instruments.
(d) The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies on the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts.

Asset swap vehicles

The Firm structures and executes transactions with asset swap vehicles on behalf of investors. In such transactions, the VIE purchases a specific asset or assets and then enters into a derivative with the Firm in order to tailor the interest rate or foreign exchange currency risk, or both, according to investors' requirements. Generally, the assets are held by the VIE to maturity, and the tenor of the derivatives would match the maturity of the assets. Investors typically invest in the notes issued by such VIEs in order to obtain exposure to the credit risk of the specific assets, as well as exposure to foreign exchange and

interest rate risk that is tailored to their specific needs. The derivative transaction between the Firm and the VIE may include currency swaps to hedge assets held by the VIE denominated in foreign currency into the investors' local currency or interest rate swaps to hedge the interest rate risk of assets held by the VIE; to add additional interest rate exposure into the VIE in order to increase the return on the issued notes; or to convert an interest-bearing asset into a zero-coupon bond.

The Firm's exposure to asset swap vehicles is generally limited to its rights and obligations under the interest rate and/or foreign exchange derivative contracts. The Firm historically has not provided any financial support to the asset swap vehicles over and above its contractual obligations. The Firm does not generally consolidate these asset swap vehicles, since the Firm does not have the power to direct the significant activities of these entities and does not have a variable interest that could potentially be significant. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its balance sheet at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Exposure to nonconsolidated asset swap VIEs at December 31, 2010 and 2009, was as follows.

December 31, (in billions)	Net derivative receivables	Trading assets[b]	Total exposure[c]	Par value of collateral held by VIEs[d]
2010[a]	**$ 0.3**	**$ —**	**$ 0.3**	**$ 7.6**
2009[a]	0.1	—	0.1	10.2

(a) Excluded the fair value of collateral of zero and $623 million at December 31, 2010 and 2009, respectively, which was consolidated as the Firm, in its role as secondary market-maker, held a majority of the issued notes of certain vehicles.
(b) Trading assets principally comprise notes issued by VIEs, which from time to time are held as part of the termination of a deal or to support limited market-making.
(c) On–balance sheet exposure that includes net derivative receivables and trading assets – debt and equity instruments.
(d) The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies upon the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts.

VIEs sponsored by third parties

Investment in a third-party credit card securitization trust

The Firm holds two interests in a third-party-sponsored VIE, which is a credit card securitization trust that owns credit card receivables issued by a national retailer. The Firm is not the primary beneficiary of the trust, as the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance. The first note is structured so that the principal amount can float up to 47% of the principal amount of the receivables held by the trust, not to exceed $4.2 billion. The Firm accounts for its investment at fair value within AFS securities. At December 31, 2010 and 2009, the amortized cost of the note was $3.0 billion and $3.5 billion, respectively, and the fair value was $3.1 billion and $3.5 billion, respectively. The Firm accounts for its other interest with the trust, which is not subject to the limits noted above, as a loan at amortized cost. This senior loan had an amortized cost and fair value of approximately $1.0 billion at both December 31, 2010 and 2009. For more information on AFS securities and loans, see Notes 12 and 14 on pages 214–218 and 220–238, respectively, of this Annual Report.

VIE used in FRBNY transaction

In conjunction with the Bear Stearns merger, in June 2008, the Federal Reserve Bank of New York ("FRBNY") took control, through an LLC formed for this purpose, of a portfolio of $30.0 billion in assets, based on the value of the portfolio as of March 14, 2008. The assets of the LLC were funded by a $28.85 billion term loan from the FRBNY and a $1.15 billion subordinated loan from JPMorgan Chase. The JPMorgan Chase loan is subordinated to the FRBNY loan and will bear the first $1.15 billion of any losses of the portfolio. Any remaining assets in the portfolio after repayment of the FRBNY loan, repayment of the JPMorgan Chase loan and the expense of the LLC will be for the account of the FRBNY. The extent to which the FRBNY and JPMorgan Chase loans will be repaid will depend on the value of the assets in the portfolio and the liquidation strategy directed by the FRBNY. The Firm does not consolidate the LLC, as it does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance. Prior to January 1, 2010, the Firm did not consolidate the LLC in accordance with the accounting treatment under prior consolidation accounting guidance since it did not have the obligation to absorb the majority of the vehicle's expected losses, receive a majority of the vehicle's residual returns, or both.

Other VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, trustee or custodian. These transactions are conducted at arm's length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm records and reports these positions on its Consolidated Balance Sheets similarly to the way it would record and report positions in respect of any other third-party transaction.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm as of December 31, 2010 and 2009.

	Assets				Liabilities		
December 31, 2010 (in billions)	Trading assets – debt and equity instruments	Loans	Other[a]	Total assets[b]	Beneficial interests in VIE assets[c]	Other[d]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	**$ —**	**$ 67.2**	**$ 1.3**	**$ 68.5**	**$ 44.3**	**$ —**	**$ 44.3**
Firm-administered multi-seller conduits	**—**	**21.1**	**0.6**	**21.7**	**21.6**	**0.1**	**21.7**
Mortgage securitization entities	**1.8**	**2.9**	**—**	**4.7**	**2.4**	**1.6**	**4.0**
Other	**8.0**	**4.4**	**1.6**	**14.0**	**9.3**	**0.3**	**9.6**
Total	**$ 9.8**	**$ 95.6**	**$ 3.5**	**$ 108.9**	**$ 77.6**	**$ 2.0**	**$ 79.6**

	Assets				Liabilities		
December 31, 2009 (in billions)	Trading assets – debt and equity instruments	Loans	Other[a]	Total assets[b]	Beneficial interests in VIE assets[c]	Other[d]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts[e]	$ —	$ 6.1	$ 0.8	$ 6.9	$ 3.9	$ —	$ 3.9
Firm-administered multi-seller conduits	—	2.2	2.9	5.1	4.8	—	4.8
Mortgage securitization entities	—	—	—	—	—	—	—
Other	6.4	4.7	1.3	12.4	6.5	2.2	8.7
Total	$ 6.4	$ 13.0	$ 5.0	$ 24.4	$ 15.2	$ 2.2	$ 7.4

(a) Included assets classified as cash, resale agreements, derivative receivables, available-for-sale, and other assets within the Consolidated Balance Sheets.

(b) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.

(c) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated Balance Sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $52.6 billion and $10.4 billion at December 31, 2010 and 2009, respectively. The maturities of the long-term beneficial interests as of December 31, 2010, were as follows: $13.9 billion under one year, $29.0 billion between one and five years, and $9.7 billion over five years.

(d) Included liabilities predominately classified as other liabilities as of December 31, 2010, and predominately classified as other liabilities and other borrowed funds as of December 31, 2009.

(e) Includes the receivables and related liabilities of the WMMT. For further discussion, see page 246 of this Note.

Supplemental information on loan securitizations

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when the accounting criteria for a sale are met. Those criteria are: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue. The value of the proceeds received is determined under the Firm's valuation policies described in Note 3 on pages 170–187 of this Annual Report.

The accounting for retained interests is dependent upon several factors, including the form and economic characteristics of the retained interest. Interests retained by IB are classified as trading assets. Interests retained in other business segments, including RFS and Corporate Treasury, may be classified as AFS securities or trading assets. See Note 12 on pages 214–218 of this Annual Report for more information on AFS securities.

Securitization activity

The following tables provide information related to the Firm's securitization activities for the years ended December 31, 2010, 2009 and 2008, related to assets held in JPMorgan Chase–sponsored securitization entities that were not consolidated by the Firm for the periods presented. For the years ended December 31, 2009 and 2008, there were no residential mortgage loans that were securitized, and there were no cash flows from the Firm to the SPEs related to recourse or guarantee arrangements. Effective January 1, 2010, all of the Firm-sponsored credit card, student loan and auto securitization trusts were consolidated as a result of the accounting guidance related to VIEs and, accordingly, are not included in the securitization activity tables below for the year ended December 31, 2010.

Year ended December 31, 2010	Residential mortgage			Commercial
(in millions, except rates)	Prime[f][h]	Subprime	Option ARMs	and other
Principal securitized	**$ 35**	**$ —**	**$ —**	**$ 2,237**
Pretax gains	**—**	**—**	**—**	**—**[g]
All cash flows during the period[a]				
Proceeds from new securitizations[b]	**$ 36**	**$ —**	**$ —**	**$ 2,369**
Servicing fees collected	**311**	**209**	**448**	**4**
Other cash flows received	**—**	**—**	**—**	**—**
Proceeds from collections reinvested in revolving securitizations	**—**	**—**	**—**	**—**
Purchases of previously transferred financial assets (or the underlying collateral)[c]	**211**	**109**	**1**	**—**
Cash flows received on the interests that continue to be held by the Firm[d]	**288**	**26**	**5**	**143**
Key assumptions used to measure retained interests originated during the year (rates per annum)				
Prepayment rate[e]	**—**			**100% CPR**
Weighted-average life (in years)	**—**			**7.1**
Expected credit losses	**—**			**—%**
Discount rate	**—**			**7.7%**

Year ended December 31, 2009 (in millions, except rates)	Credit card	Residential mortgage Prime[f]	Subprime	Option ARMs	Commercial and other	Student	Auto
Principal securitized	$ 26,538	$ —	$ —	$ —	$ 500	$ —	$ —
Pretax gains	22	—	—	—	—[g]	—	—
All cash flows during the period[a]							
Proceeds from new securitizations[b]	$ 26,538	$ —	$ —	$ —	$ 542	$ —	$ —
Servicing fees collected	1,251	432	185	494	11	3	4
Other cash flows received	5,000	7	4	—	—	—	—
Proceeds from collections reinvested in revolving securitizations	161,428	—	—	—	—	—	—
Purchases of previously transferred financial assets (or the underlying collateral)[c]	—	136	—	29	—	—	249
Cash flows received on the interests that continue to be held by the Firm[d]	261	475	25	38	109	7	4
Key assumptions used to measure retained interests originated during the year (rates per annum)							
Prepayment rate[e]	16.7% PPR				100% CPY		
Weighted-average life (in years)	0.5				9.0		
Expected credit losses	8.9%				—%		
Discount rate	16.0%				10.7%		

Year ended December 31, 2008 (in millions, except rates)	Credit card	Residential mortgage Prime[f]	Subprime	Option ARMs	Commercial and other	Student	Auto
Principal securitized	$ 21,390	$ —	$ —	$ —	$ 1,023	$ —	$ —
Pretax gains	151	—	—	—	—[g]	—	—
All cash flows during the period[a]							
Proceeds from new securitizations[b]	$ 21,389	$ —	$ —	$ —	$ 989	$ —	$ —
Servicing fees collected	1,162	279	146	129	11	4	15
Other cash flows received	4,985	23	16	—	—	—	—
Proceeds from collections reinvested in revolving securitizations	152,399	—	—	—	—	—	—
Purchases of previously transferred financial assets (or the underlying collateral)[c]	—	217	13	6	—	—	359
Cash flows received on the interests that continue to be held by the Firm[d]	117	267	23	53	455	—	43
Key assumptions used to measure retained interests originated during the year (rates per annum)							
Prepayment rate[e]	19.1% PPR				1.5% CPR		
Weighted-average life (in years)	0.4				2.1		
Expected credit losses	4.6%				1.5%		
Discount rate	12.5%				25.0%		

(a) Excludes loan sales for which the Firm did not securitize (including loans sold to U.S. government agencies).
(b) Includes $36 million of proceeds from prime mortgage securitizations received as securities in 2010, $2.4 billion, $542 million, and $989 million from new securitizations of commercial and other in 2010, 2009 and 2008, respectively, and $12.8 billion and $5.5 billion from credit card in 2009 and 2008, respectively. These securities were primarily classified as level 2 of the fair value measurement hierarchy.
(c) Includes cash paid by the Firm to reacquire assets from the off–balance sheet, nonconsolidated entities – for example, servicer clean-up calls.
(d) Includes cash flows received on retained interests – including, for example, principal repayments and interest payments.
(e) PPR: principal payment rate; CPR: constant prepayment rate; CPY: constant prepayment yield.
(f) Includes Alt-A loans and re-securitization transactions.
(g) The Firm elected the fair value option for loans pending securitization. The carrying value of these loans accounted for at fair value approximated the proceeds received from securitization.
(h) There were no retained interests held in the residential mortgage securitization completed in 2010.

Loans sold to U.S. government agencies and other third-party sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans, predominantly to U.S. government agencies. These loans are sold primarily for the purpose of securitization by U.S. government agencies, which also provide credit enhancement of the loans through certain guarantee provisions. In connection with these loan sales, the Firm makes certain representations and warranties. For additional information about the Firm's loan sale- and securitization-related indemnifications, see Note 30 on pages 275–280 of this Annual Report.

The Firm generally retains the right to service the mortgage loans in accordance with the respective servicing guidelines and standards, and records a servicing asset at the time of sale.

The following table summarizes these loan sale activities.

Year ended December 31, (in millions)	**2010**	2009	2008
Carrying value of loans sold(a)(b)	**$156,615**	$ 154,571	$ 132,111
Proceeds received from loan sales as cash	**3,887**	1,702	7,112
Proceeds received from loan sales as securities(c)	**149,786**	149,343	121,947
Total proceeds received from loan sales	**$153,673**	$ 151,045	$ 129,059
Gains on loan sales	**212**	89	30

(a) Predominantly to U.S. government agencies.
(b) MSRs were excluded from the above table. See Note 17 on pages 260–263 of this Annual Report for further information on originated MSRs.
(c) Predominantly includes securities from U.S. government agencies that are generally sold shortly after receipt.

The Firm has the option to repurchase certain loans sold to U.S. government agencies (predominantly loans securitized in Ginnie Mae pools) if they reach certain delinquency triggers. Once the delinquency trigger has been met, regardless of whether the repurchase option has been exercised, the Firm recognizes the loan on the Consolidated Balance Sheet. The Firm also recognizes an offsetting liability in accounts payable and other liabilities for any loans subject to the repurchase option, but for which the option to repurchase has not been exercised. As of December 31, 2010 and 2009, loans repurchased or with the option to repurchase were $13.0 billion and $10.8 billion, respectively. Additionally, real estate owned resulting from repurchases of loans sold to U.S. government agencies was $1.9 billion and $579 million as of December 31, 2010 and 2009, respectively. Substantially all of these loans and real estate continue to be insured or guaranteed by U.S. government agencies and, where applicable, reimbursement is proceeding normally.

JPMorgan Chase's interests in Firm-sponsored securitized assets

The following table summarizes the Firm's interests in Firm-sponsored non-consolidated securitizations, which are carried at fair value on the Firm's Consolidated Balance Sheets at December 31, 2010 and 2009. The risk ratings are periodically reassessed as information becomes available. As of December 31, 2010 and 2009, 66% and 76%, respectively, of the Firm's retained securitization interests in Firm-sponsored securitizations were risk-rated "A" or better.

	Ratings profile of interests held(b)(c)(d)					
	2010			2009		
December 31, (in billions)	Investment-grade	Noninvestment-grade	Retained interests	Investment-grade	Noninvestment-grade	Retained interests(e)
Asset types						
Residential mortgage:						
Prime(a)	**$ 0.2**	**$ 0.5**	**$ 0.7**	$ 0.7	$ 0.4	$ 1.1
Subprime	**—**	**—**	**—**	—	—	—
Option ARMs	**—**	**—**	**—**	0.1	—	0.1
Commercial and other	**2.6**	**0.3**	**2.9**	2.2	0.2	2.4
Total	**$ 2.8**	**$ 0.8**	**$ 3.6**	$ 3.0	$ 0.6	$ 3.6

(a) Includes retained interests in Alt-A loans and re-securitization transactions.
(b) The ratings scale is presented on an S&P-equivalent basis.
(c) Includes $315 million and $139 million of investments acquired in the secondary market, but predominantly held for investment purposes, as of December 31, 2010 and 2009, respectively. Of this amount, $276 million and $108 million is classified as investment-grade as of December 31, 2010 and 2009, respectively.
(d) Excludes senior and subordinated securities of $200 million and $875 million at December 31, 2010 and 2009, respectively, which the Firm purchased in connection with IB's secondary market-making activities.
(e) Excludes $49 million of retained interests in student loans at December 31, 2009.

The table below outlines the key economic assumptions used to determine the fair value as of December 31, 2010 and 2009, of certain of the Firm's retained interests in nonconsolidated Firm-sponsored securitizations, other than MSRs, that are valued using modeling techniques. The table below also outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in assumptions used to determine fair value. For a discussion of MSRs, see Note 17 on pages 260–263 of this Annual Report.

		Residential mortgage			
December 31, 2010 (in millions, except rates and where otherwise noted)		Prime[b]	Subprime	Option ARMs	Commercial and other[g]
JPMorgan Chase interests in securitized assets[a][c]		**$ 708**	**$ 14**	**$ 29**	**$ 2,906**
Weighted-average life (in years)		**5.5**	**6.6**	**7.7**	**3.3**
Weighted-average constant prepayment rate[d]		**7.9% CPR**	**5.7% CPR**	**8.4% CPR**	**—% CPR**
Impact of 10% adverse change		**$ (15)**	**$ —**	**$ —**	**$ —**
Impact of 20% adverse change		**(27)**	**(1)**	**(1)**	**—**
Weighted-average loss assumption		**5.2%**	**16.2%**	**30.0%**	**2.1%**
Impact of 10% adverse change		**$ (12)**	**$ (1)**	**$ —**	**$ (76)**
Impact of 20% adverse change		**(21)**	**(2)**	**(1)**	**(151)**
Weighted-average discount rate		**11.6%**	**10.7%**	**6.3%**	**16.4%**
Impact of 10% adverse change		**$ (26)**	**$ —**	**$ (1)**	**$ (69)**
Impact of 20% adverse change		**(47)**	**(1)**	**(2)**	**(134)**

		Residential mortgage					
December 31, 2009 (in millions, except rates and where otherwise noted)	Credit card[e]	Prime[b]	Subprime	Option ARMs	Commercial and other[g]	Student	Auto
JPMorgan Chase interests in securitized assets[c]	$ 4,016	$ 1,143	$ 27	$ 113	$ 2,361	$ 51	$ 9
Weighted-average life (in years)	0.6	8.3	4.3	5.1	3.5	8.1	0.6
Weighted-average constant prepayment rate[d]	14.3% PPR	4.9% CPR	21.8% CPR	15.7% CPR	—% CPR	5.0% CPR	1.4% ABS
Impact of 10% adverse change	$ (1)	$ (15)	$ (2)	$ —	$ —	$ (1)	$ —
Impact of 20% adverse change	(2)	(31)	(3)	(1)	—	(2)	(1)
Weighted-average loss assumption	6.8%	3.2%	2.7%	0.7%	1.4%	—%[f]	0.8%
Impact of 10% adverse change	$ (1)	$ (15)	$ (4)	$ —	$ (41)	$ —	$ —
Impact of 20% adverse change	(3)	(29)	(7)	—	(100)	—	—
Weighted-average discount rate	12.0%	11.4%	23.2%	5.4%	12.5%	9.0%	2.8%
Impact of 10% adverse change	$ (10)	$ (41)	$ (2)	$ (1)	$ (72)	$ (2)	$ —
Impact of 20% adverse change	(20)	(82)	(4)	(3)	(139)	(4)	—

(a) Effective January 1, 2010, all of the Firm-sponsored credit card, student loan and auto securitization trusts were consolidated as a result of the accounting guidance related to VIEs and, accordingly, are not included in the table above for the year ended December 31, 2010.
(b) Includes retained interests in Alt-A and re-securitization transactions.
(c) Includes certain investments acquired in the secondary market but predominantly held for investment purposes.
(d) PPR: principal payment rate; ABS: absolute prepayment speed; CPR: constant prepayment rate.
(e) Excludes the Firm's retained senior and subordinated AFS securities in its credit card securitization trusts, which are discussed on pages 245–246 of this Note.
(f) Expected losses for student loans securitizations are minimal and are incorporated into other assumptions.
(g) The anticipated credit losses, including expected static pool losses, are immaterial for the Firm's retained interests on commercial and other securitizations that had occurred during 2010, 2009 and 2008.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based on a 10% or 20% variation in assumptions generally cannot be extrapolated easily, because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in the table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might counteract or magnify the sensitivities. The above sensitivities also do not reflect risk management practices the Firm may undertake to mitigate such risks.

Loan delinquencies and net charge-offs

The table below includes information about delinquencies, net charge-offs and components of off–balance sheet securitized financial assets as of December 31, 2010 and 2009.

As of or for the year ended December 31, (in millions)	Credit exposure		90 days past due and still accruing		Nonaccrual loans		Net loan charge-offs[d]	
	2010	2009	**2010**	2009	**2010**	2009	**2010**	2009
Securitized loans[a]								
Residential mortgage:								
Prime mortgage[b]	**$ 143,764**	$ 171,547	**$ —**	$ —	**$ 33,093**	$ 33,838	**$ 6,257**	$ 9,333
Subprime mortgage	**40,721**	47,261	**—**	—	**15,456**	19,505	**3,598**	7,123
Option ARMs	**35,786**	41,983	**—**	—	**10,788**	10,973	**2,305**	2,287
Commercial and other	**106,245**	24,799	**—**	—	**5,791**	1,244	**618**	15
Credit card	**NA**	84,626	**NA**	2,385	**NA**	—	**NA**	6,443
Student	**NA**	1,008	**NA**	64	**NA**	—	**NA**	1
Automobile	**NA**	218	**NA**	—	**NA**	1	**NA**	4
Total loans securitized[c]	**$ 326,516**	$ 371,442	**$ —**	$ 2,449	**$ 65,128**	$ 65,561	**$ 12,778**	$ 25,206

(a) Total assets held in securitization-related SPEs, including credit card securitization trusts, were $391.1 billion and $545.2 billion at December 31, 2010 and 2009, respectively. The $326.5 billion and $371.4 billion of loans securitized at December 31, 2010 and 2009, respectively, excludes: $56.0 billion and $145.0 billion of securitized loans in which the Firm has no continuing involvement, zero and $16.7 billion of seller's interests in credit card master trusts, zero and $8.3 billion of cash amounts on deposit and escrow accounts, and $8.6 billion and $3.8 billion of loan securitizations consolidated on the Firm's Consolidated Balance Sheets at December 31, 2010 and 2009, respectively.

(b) Includes Alt-A loans.

(c) Includes securitized loans that were previously recorded at fair value and classified as trading assets.

(d) Net charge-offs represent losses realized upon liquidation of the assets held by off–balance sheet securitization entities.

Note 17 – Goodwill and other intangible assets

Goodwill and other intangible assets consist of the following.

December 31, (in millions)	2010	2009	2008
Goodwill	**$ 48,854**	$ 48,357	$ 48,027
Mortgage servicing rights	**13,649**	15,531	9,403
Other intangible assets			
Purchased credit card relationships	**$ 897**	$ 1,246	$ 1,649
Other credit card–related intangibles	**593**	691	743
Core deposit intangibles	**879**	1,207	1,597
Other intangibles	**1,670**	1,477	1,592
Total other intangible assets	**$ 4,039**	$ 4,621	$ 5,581

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	2010	2009	2008
Investment Bank	**$ 5,278**	$ 4,959	$ 4,765
Retail Financial Services	**16,813**	16,831	16,840
Card Services	**14,205**	14,134	13,977
Commercial Banking	**2,866**	2,868	2,870
Treasury & Securities Services	**1,680**	1,667	1,633
Asset Management	**7,635**	7,521	7,565
Corporate/Private Equity	**377**	377	377
Total goodwill	**$ 48,854**	$ 48,357	$ 48,027

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	2010	2009	2008
Beginning balance at January 1,[a]:	**$ 48,357**	$ 48,027	$ 45,270
Changes from:			
Business combinations	**556**	271	2,481
Dispositions	**(19)**	—	(38)
Other[b]	**(40)**	59	314
Balance at December 31,[a]	**$ 48,854**	$ 48,357	$ 48,027

(a) Reflects gross goodwill balances as the Firm has not recognized any impairment losses to date.
(b) Includes foreign currency translation adjustments and other tax-related adjustments.

The increase in goodwill during 2010 was largely due to the acquisition of the RBS Sempra Commodities business in IB, and the purchase of a majority interest in Gávea Investimentos, a leading alternative asset management company in Brazil, by AM. The increase in goodwill during 2009 was primarily due to final purchase accounting adjustments related to the Bear Stearns merger and the acquisition of a commodities business (each primarily allocated to IB), and foreign currency translation adjustments related to the Firm's credit card business, partially offset by accounting adjustments associated with the Bear Stearns and Bank One mergers. The increase in goodwill during 2008 was primarily due to the dissolution of the Chase Paymentech Solutions joint venture (allocated to Card Services), the merger with Bear Stearns, the purchase of an additional equity interest in Highbridge and tax-related purchase accounting adjustments associated with the Bank One merger (which were primarily attributed to IB).

Impairment Testing

Goodwill was not impaired at December 31, 2010 or 2009, nor was any goodwill written off due to impairment during 2010, 2009 or 2008.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. The models project cash flows for the forecast period and use the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' earnings forecasts, which include the estimated effects of regulatory and legislative changes (including, but not limited to the Dodd-Frank Act, the CARD Act, and limitations on non-sufficient funds and overdraft fees). These forecasts are also reviewed with the Operating Committee of the Firm. The Firm's cost of equity is determined using the Capital Asset Pricing Model, which is consistent with methodologies and assumptions the Firm uses when advising clients in third party transactions. The discount rate used for each reporting unit represents an estimate of the cost of equity capital for that reporting unit and is determined based on the Firm's overall cost of equity, as adjusted for the risk characteristics specific to each reporting unit, (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firms' overall cost of equity to ensure reasonableness.

The valuations derived from the discounted cash flow models are then compared with market-based trading and transaction multiples for relevant competitors. Precise conclusions generally can not be drawn from these comparisons due to the differences that naturally exist between the Firm's businesses and competitor insti-

tutions. However, trading and transaction comparables are used as general indicators to assess the general reasonableness of the estimated fair values. Management also takes into consideration a comparison between the aggregate fair value of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (a) a control premium that would exist in a market transaction, (b) factors related to the level of execution risk that would exist at the firm-wide level that do not exist at the reporting unit level and (c) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

While no impairment of goodwill was recognized during 2010, the Firm's consumer lending businesses in RFS and CS remain at elevated risk of goodwill impairment due to their exposure to U.S. consumer credit risk and the effects of regulatory and legislative changes. The valuation of these businesses is particularly dependent upon economic conditions (including new unemployment claims and home prices), and regulatory and legislative changes that may affect consumer credit card use. The assumptions used in the discounted cash flow model were determined using management's best estimates. The cost of equity reflected the related risk and uncertainty, and was evaluated in comparison to relevant market peers. Deterioration in these assumptions could cause the estimated fair values of these reporting units and their associated goodwill to decline, which may result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights

Mortgage servicing rights represent the fair value of future cash flows for performing specified mortgage servicing activities (predominantly with respect to residential mortgage) for others. MSRs are either purchased from third parties or retained upon sale or securitization of mortgage loans. Servicing activities include collecting principal, interest, and escrow payments from borrowers; making tax and insurance payments on behalf of borrowers; monitoring delinquencies and executing foreclosure proceedings; and accounting for and remitting principal and interest payments to the investors of the mortgage-backed securities.

JPMorgan Chase made the determination to treat its MSRs as one class of servicing assets based on the availability of market inputs used to measure its MSR asset at fair value and its treatment of MSRs as one aggregate pool for risk management purposes. As permitted by U.S. GAAP, the Firm elected to account for this one class of servicing assets at fair value. The Firm estimates the fair value of MSRs using an option-adjusted spread model ("OAS"), which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenue and costs to service, and other economic factors. The Firm reassesses and periodically adjusts the underlying inputs and assumptions used in the OAS model to reflect market conditions and assumptions that a market participant would consider in valuing the MSR asset. During 2010 and 2009, the Firm continued to refine its proprietary prepayment model based on a number of market-related factors, including a downward trend in home prices, general tightening of credit underwriting standards and the associated impact on refinancing activity. The Firm compares fair value estimates and assumptions to observable market data where available, and to recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. JPMorgan Chase uses combinations of derivatives and securities to manage changes in the fair value of MSRs. The intent is to offset any changes in the fair value of MSRs with changes in the fair value of the related risk management instruments. MSRs decrease in value when interest rates decline. Conversely, securities (such as mortgage-backed securities), principal-only certificates and certain derivatives (when the Firm receives fixed-rate interest payments) increase in value when interest rates decline.

The following table summarizes MSR activity for the years ended December 31, 2010, 2009 and 2008.

Year ended December 31, (in millions, except where otherwise noted)	**2010**	2009	2008
Fair value at beginning of period	**$15,531**	$ 9,403	$ 8,632
MSR activity			
Originations of MSRs	**3,153**	3,615	3,061
Purchase of MSRs	**26**	2	6,755[f]
Disposition of MSRs	**(407)**	(10)	—
Total net additions	**2,772**	3,607	9,816
Change in valuation due to inputs and assumptions[a]	**(2,268)**	5,807	(6,933)
Other changes in fair value[b]	**(2,386)**	(3,286)	(2,112)
Total change in fair value of MSRs[c]	**(4,654)**	2,521	(9,045)
Fair value at December 31[d]	**$13,649**	$ 15,531	$ 9,403
Change in unrealized gains/ (losses) included in income related to MSRs held at December 31	**$ (2,268)**	$ 5,807	$ (6,933)
Contractual service fees, late fees and other ancillary fees included in income	**$ 4,484**	$ 4,818	$ 3,353
Third-party mortgage loans serviced at December 31 (in billions)	**$ 976**	$ 1,091	$ 1,185
Servicer advances, net at December 31 (in billions)[e]	**$ 9.9**	$ 7.7	$ 5.2

(a) Represents MSR asset fair value adjustments due to changes in inputs, such as interest rates and volatility, as well as updates to assumptions used in the valuation model. "Total realized/unrealized gains/(losses)" columns in the Changes in level 3 recurring fair value measurements tables in Note 3 on pages 170–187 of this Annual Report include these amounts.

(b) Includes changes in MSR value due to modeled servicing portfolio runoff (or time decay). "Purchases, issuances, settlements, net" columns in the Changes in level 3 recurring fair value measurements tables in Note 3 on pages 170–187 of this Annual Report include these amounts.

(c) Includes changes related to commercial real estate of $(1) million, $(4) million and $(4) million for the years ended December 31, 2010, 2009 and 2008, respectively.

(d) Includes $40 million, $41 million and $55 million related to commercial real estate at December 31, 2010, 2009 and 2008, respectively.

(e) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest to a trust, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these advances is minimal because reimbursement of the advances is senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment if the collateral is insufficient to cover the advance.

(f) Includes MSRs acquired as a result of the Washington Mutual transaction (of which $59 million related to commercial real estate) and the Bear Stearns merger. For further discussion, see Note 2 on pages 166–170 of this Annual Report.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2010, 2009 and 2008.

Year ended December 31, (in millions)	2010	2009	2008
RFS mortgage fees and related income			
Net production revenue:			
Production revenue	**$ 3,440**	$ 2,115	$1,150
Repurchase losses	**(2,912)**	(1,612)	(252)
Net production revenue	**528**	503	898
Net mortgage servicing revenue			
Operating revenue:			
Loan servicing revenue	**4,575**	4,942	3,258
Other changes in MSR asset fair value[a]	**(2,384)**	(3,279)	(2,052)
Total operating revenue	**2,191**	1,663	1,206
Risk management:			
Changes in MSR asset fair value due to inputs or assumptions in model[b]	**(2,268)**	5,804	(6,849)
Derivative valuation adjustments and other	**3,404**	(4,176)	8,366
Total risk management	**1,136**	1,628	1,517
Total RFS net mortgage servicing revenue	**3,327**	3,291	2,723
All other[c]	**15**	(116)	(154)
Mortgage fees and related income	**$ 3,870**	$ 3,678	$ 3,467

(a) Includes changes in the MSR value due to modeled servicing portfolio runoff (or time decay). "Purchases, issuances, settlements, net" columns in the Changes in level 3 recurring fair value measurements tables in Note 3 on pages 170–187 of this Annual Report include these amounts.

(b) Represents MSR asset fair value adjustments due to changes in inputs, such as interest rates and volatility, as well as updates to assumptions used in the valuation model. "Total realized/unrealized gains/(losses)" columns in the Changes in level 3 recurring fair value measurements tables in Note 3 on pages 170–187 of this Annual Report include these amounts.

(c) Primarily represents risk management activities performed by the Chief Investment Office ("CIO") in the Corporate sector.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2010 and 2009; and it outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

Year ended December 31, (in millions, except rates)	2010	2009
Weighted-average prepayment speed assumption (CPR)	**11.29%**	11.37%
Impact on fair value of 10% adverse change	**$ (809)**	$ (896)
Impact on fair value of 20% adverse change	**(1,568)**	(1,731)
Weighted-average option adjusted spread	**3.94%**	4.63%
Impact on fair value of 100 basis points adverse change	**$ (578)**	$ (641)
Impact on fair value of 200 basis points adverse change	**(1,109)**	(1,232)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might magnify or counteract the sensitivities.

Other intangible assets

Other intangible assets are recorded at their fair value upon completion of a business combination or certain other transactions, and generally represent the value of customer relationships or arrangements. Subsequently, the Firm's intangible assets with finite lives, including core deposit intangibles, purchased credit card relationships, and other intangible assets, are amortized over their useful lives in a manner that best reflects the economic benefits of the intangible asset. The decrease in other intangible assets during 2010 was predominantly due to amortization, partially offset by an increase resulting from the aforementioned Gávea Investimentos transaction.

The components of credit card relationships, core deposits and other intangible assets were as follows.

	2010			2009		
December 31, (in millions)	Gross amount	Accumulated amortization	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	**$ 5,789**	**$ 4,892**	**$ 897**	$ 5,783	$ 4,537	$ 1,246
Other credit card–related intangibles	**907**	**314**	**593**	894	203	691
Core deposit intangibles	**4,280**	**3,401**	**879**	4,280	3,073	1,207
Other intangibles	**2,515**	**845**	**1,670**	2,200	723	1,477

Amortization expense

Intangible assets of approximately $600 million, consisting primarily of asset management advisory contracts, were determined to have an indefinite life and are not amortized.

The following table presents amortization expense related to credit card relationships, core deposits and all other intangible assets.

Year ended December 31, (in millions)	**2010**	2009	2008
Purchased credit card relationships	**$ 355**	$ 421	$ 625
All other intangibles:			
Other credit card–related intangibles	**111**	94	33
Core deposit intangibles	**328**	390	469
Other intangibles	**142**	145	136
Total amortization expense	**$ 936**	$ 1,050	$ 1,263

Future amortization expense

The following table presents estimated future amortization expense related to credit card relationships, core deposits and all other intangible assets at December 31, 2010.

Year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	All other intangible assets	**Total**
2011	$ 294	$ 103	$ 284	$ 116	$ 797
2012	254	106	240	111	711
2013	213	103	195	108	619
2014	109	102	100	94	405
2015	23	95	25	76	219

Impairment testing

The Firm's intangible assets are tested for impairment if events or changes in circumstances indicate that the asset might be impaired, and, for intangible assets with indefinite lives, on an annual basis.

The impairment test for a finite-lived intangible asset compares the undiscounted cash flows associated with the use or disposition of the intangible asset to its carrying value. If the sum of the undiscounted cash flows exceeds its carrying value, then no impairment charge is recorded. If the sum of the undiscounted cash flows is less than its carrying value, then an impairment charge is recognized to the extent the carrying amount of the asset exceeds its fair value.

The impairment test for indefinite-lived intangible assets compares the fair value of the intangible asset to its carrying amount. If the carrying value exceeds the fair value, then an impairment charge is recognized for the difference.

Note 18 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset. JPMorgan Chase has recorded immaterial asset retirement obligations related to asbestos remediation in those cases where it has sufficient information to estimate the obligations' fair value.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 19 – Deposits

At December 31, 2010 and 2009, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	**2010**	2009
U.S. offices		
Noninterest-bearing	**$ 228,555**	$ 204,003
Interest-bearing:		
Demand[(a)]	**33,368**	15,964
Savings[(b)]	**334,632**	297,949
Time (included $2,733 and $1,463 at fair value at December 31, 2010 and 2009, respectively)[(c)]	**87,237**	125,191
Total interest-bearing deposits	**455,237**	439,104
Total deposits in U.S. offices	**683,792**	643,107
Non-U.S. offices		
Noninterest-bearing	**10,917**	8,082
Interest-bearing:		
Demand	**174,417**	186,885
Savings	**607**	661
Time (included $1,636 and $2,992 at fair value at December 31, 2010 and 2009, respectively)[(c)]	**60,636**	99,632
Total interest-bearing deposits	**235,660**	287,178
Total deposits in non-U.S. offices	**246,577**	295,260
Total deposits	**$ 930,369**	$ 938,367

(a) 2010 and 2009 includes Negotiable Order of Withdrawal ("NOW") accounts. 2010 includes certain trust accounts.
(b) Includes Money Market Deposit Accounts ("MMDAs").
(c) See Note 4 on pages 187–189 of this Annual Report for further information on structured notes classified as deposits for which the fair value option has been elected.

At December 31, 2010 and 2009, time deposits in denominations of $100,000 or more were as follows.

December 31, (in millions)	2010	2009
U.S.	**$ 59,653**	$ 90,552
Non-U.S.	**44,544**	77,887
Total	**$ 104,197**	$ 168,439

At December 31, 2010, the maturities of interest-bearing time deposits were as follows.

December 31, 2010 (in millions)	U.S.	Non-U.S.	**Total**
2011	$ 71,930	$ 60,043	$ 131,973
2012	7,382	287	7,669
2013	4,281	153	4,434
2014	1,432	22	1,454
2015	2,074	—	2,074
After 5 years	138	131	269
Total	$ 87,237	$ 60,636	$ 147,873

On November 21, 2008, the FDIC released final rules on the FDIC Temporary Liquidity Guarantee Program (the "TLG Program"). One component of this program, the Transaction Account Guarantee Program (the "TAG Program"), provided unlimited deposit insurance through December 31, 2009, on certain noninterest-bearing transaction accounts at FDIC-insured participating institutions. The Firm elected to participate in the TLG Program and, as a result, was required to pay additional insurance premiums to the FDIC in an amount equal to an annualized 10 basis points on balances in noninterest-bearing transaction accounts that exceeded the $250,000 FDIC deposit insurance limits. The expiration date of the program was extended to December 31, 2010, to provide continued support to those institutions most affected by the financial crisis and to enable the program to be phased-out in an orderly manner. Beginning January 1, 2010, the Firm no longer participated in the TAG Program. As a result, funds held in noninterest-bearing transaction accounts after December 31, 2009, were no longer guaranteed in full. Instead, they are insured up to $250,000 under the FDIC's general deposit rules.

Note 20 – Other borrowed funds

The following table details the components of other borrowed funds.

December 31, (in millions)	2010	2009
Advances from Federal Home Loan Banks[a]	**$ 25,234**	$ 27,847
Other	**32,075**	27,893
Total[b][c]	**$ 57,309**	$ 55,740

(a) Advances from the FHLBs of $11.4 billion, $1.5 billion, $7.3 billion, $1.0 billion and $3.0 billion matures in each of the 12-month periods ending December 31, 2011, 2012, 2013, 2014, and 2015, respectively, and $928 million matures after December 31, 2015.
(b) Includes other borrowed funds of $9.9 billion and $5.6 billion accounted for at fair value at December 31, 2010 and 2009, respectively. See Note 3 on pages 170–187 of this Annual Report for further information.
(c) Includes other borrowed funds of $37.8 billion and $30.4 billion secured by assets totaling $95.3 billion and $144.1 billion at December 31, 2010 and 2009, respectively.

As of December 31, 2010 and 2009, JPMorgan Chase had no significant lines of credit for general corporate purposes.

Note 21 – Accounts payable and other liabilities

The following table details the components of accounts payable and other liabilities.

December 31, (in millions)	2010	2009
Brokerage payables[a]	**$ 95,359**	$ 92,848
Accounts payable and other liabilities[b]	**74,971**	69,848
Total	**$ 170,330**	$ 162,696

(a) Includes payables to customers, brokers, dealers and clearing organizations, and securities fails.
(b) Includes $236 million and $357 million accounted for at fair value at December 31, 2010 and 2009, respectively.

Note 22 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. These hybrid securities are classified in the line item of the host contract on the Consolidated Balance Sheets. Changes in fair value are recorded in principal transactions revenue in the Consolidated Statements of Income. The following table is a summary of long-term debt carrying values (including unamortized original issue discount, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2010.

By remaining maturity at December 31, 2010 (in millions, except rates)		2010 Under 1 year	1–5 years	After 5 years	**Total**	2009 Total
Parent company						
Senior debt:	Fixed rate[a]	**$ 20,384**	**$ 47,031**	**$ 31,372**	**$ 98,787**	$ 93,729
	Variable rate[b]	**15,648**	**37,119**	**6,260**	**59,027**	73,335
	Interest rates[c]	**0.36–6.00%**	**0.31–7.00%**	**0.24–7.25%**	**0.24–7.25%**	0.22–7.50%
Subordinated debt:	Fixed rate	**$ 2,865**	**$ 9,649**	**$ 9,486**	**$ 22,000**	$ 24,851
	Variable rate	**—**	**1,987**	**9**	**1,996**	1,838
	Interest rates[c]	**5.90–6.75%**	**1.37–6.63%**	**2.16–8.53%**	**1.37–8.53%**	1.14–10.00%
	Subtotal	**$ 38,897**	**$ 95,786**	**$ 47,127**	**$ 181,810**	$ 193,753
Subsidiaries						
Senior debt:	Fixed rate	**$ 546**	**$ 1,782**	**$ 2,900**	**$ 5,228**	$ 3,310
	Variable rate	**6,435**	**17,199**	**6,911**	**30,545**	39,835
	Interest rates[c]	**0.26–2.00%**	**0.21–3.75%**	**0.32–14.21%**	**0.21–14.21%**	0.16–14.21%
Subordinated debt:	Fixed rate	**$ —**	**$ —**	**$ 8,605**	**$ 8,605**	$ 8,655
	Variable rate	**—**	**—**	**1,150**	**1,150**	1,150
	Interest rates[c]	**—%**	**—%**	**0.63–8.25%**	**0.63–8.25%**	0.58–8.25%
	Subtotal	**$ 6,981**	**$ 18,981**	**$ 19,566**	**$ 45,528**	$ 52,950
Junior subordinated debt:	Fixed rate	**$ —**	**$ —**	**$ 15,249**	**$ 15,249**	$ 16,349
	Variable rate	**—**	**—**	**5,082**	**5,082**	3,266
	Interest rates[c]	**—%**	**—%**	**0.79–8.75%**	**0.79–8.75%**	0.78–8.75%
	Subtotal	**$ —**	**$ —**	**$ 20,331**	**$ 20,331**	$ 19,615
Total long-term debt[d][e][f]		**$ 45,878**	**$ 114,767**	**$ 87,024**	**$ 247,669**[h][i]	$ 266,318
Long-term beneficial interests:						
	Fixed rate	**$ 3,095**	**$ 4,328**	**$ 2,372**	**$ 9,795**	$ 1,034
	Variable rate	**10,798**	**24,691**	**7,270**	**42,759**	9,404
	Interest rates	**0.28–7.00%**	**0.25–11.00%**	**0.05–7.47%**	**0.05–11.00%**	0.25–7.13%
Total long-term beneficial interests[g]		**$ 13,893**	**$ 29,019**	**$ 9,642**	**$ 52,554**	$ 10,438

(a) Included $18.5 billion and $21.6 billion as of December 31, 2010 and 2009, respectively, guaranteed by the FDIC under the TLG Program.
(b) Included $17.9 billion and $19.3 billion as of December 31, 2010 and 2009, respectively, guaranteed by the FDIC under the TLG Program.
(c) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2010, for total long-term debt was (0.12)% to 14.21%, versus the contractual range of 0.21% to 14.21% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.
(d) Included long-term debt of $8.3 billion and $8.1 billion secured by assets totaling $11.7 billion and $11.4 billion at December 31, 2010 and 2009, respectively. Excludes amounts related to hybrid instruments.
(e) Included $38.8 billion and $49.0 billion of outstanding structured notes accounted for at fair value at December 31, 2010 and 2009, respectively.
(f) Included $879 million and $3.4 billion of outstanding zero-coupon notes at December 31, 2010 and 2009, respectively. The aggregate principal amount of these notes at their respective maturities was $2.7 billion and $6.6 billion, respectively.
(g) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated VIEs. Also included $1.5 billion and $1.4 billion of outstanding structured notes accounted for at fair value at December 31, 2010 and 2009, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $25.1 billion and $4.8 billion at December 31, 2010 and 2009, respectively.
(h) At December 31, 2010, long-term debt aggregating $35.6 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective notes.
(i) The aggregate carrying values of debt that matures in each of the five years subsequent to 2010 is $45.9 billion in 2011, $51.9 billion in 2012, $20.4 billion in 2013, $23.5 billion in 2014 and $18.9 billion in 2015.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 3.78% and 3.52% as of December 31, 2010 and 2009, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 2.52% and 1.86% as of December 31, 2010 and 2009, respectively.

The Firm participated in the TLG Program commencing in December 2008. The TLG Program was available to, among others, all U.S. depository institutions insured by the FDIC and all U.S. bank holding companies, unless they opted out or the FDIC terminated their participation. Under the TLG Program, the FDIC guaranteed through the earlier of maturity or June 30, 2012, certain senior unsecured debt issued though October 31, 2009, in return for a fee to be paid based on the amount and maturity of the debt. Under the TLG Program, the FDIC would pay the unpaid principal and interest on an FDIC-guaranteed debt instrument upon the failure of the participating entity to make a timely payment of principal or interest in accordance with the terms of the instrument.

JPMorgan Chase & Co. (Parent Company) has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees rank on parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities totaled $3.7 billion and $4.5 billion at December 31, 2010 and 2009, respectively. For additional information, see Note 2 on pages 166–170 of this Annual Report.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities

At December 31, 2010, the Firm had established 26 wholly-owned Delaware statutory business trusts ("issuer trusts") that had issued guaranteed capital debt securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $20.3 billion and $19.6 billion at December 31, 2010 and 2009, respectively, were reflected in the Firm's Consolidated Balance Sheets in long-term debt, and in the table on the preceding page under the caption "Junior subordinated debt" (i.e., trust preferred capital debt securities). The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated Balance Sheets at December 31, 2010 and 2009. The debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, qualified as Tier 1 capital as of December 31, 2010.

The following is a summary of the outstanding trust preferred capital debt securities, including unamortized original issue discount, issued by each trust, and the junior subordinated deferrable interest debenture issued to each trust, as of December 31, 2010.

December 31, 2010 (in millions)	Amount of trust preferred capital debt securities issued by trust (a)	Principal amount of debenture issued to trust (b)	Issue date	Stated maturity of trust preferred capital securities and debentures	Earliest redemption date	Interest rate of trust preferred capital securities and debentures	Interest payment/ distribution dates
Bank One Capital III	$ 474	$ 674	2000	2030	Any time	8.75%	Semiannually
Bank One Capital VI	525	553	2001	2031	Any time	7.20%	Quarterly
Chase Capital II	482	497	1997	2027	Any time	LIBOR + 0.50%	Quarterly
Chase Capital III	295	305	1997	2027	Any time	LIBOR + 0.55%	Quarterly
Chase Capital VI	241	249	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	249	256	1997	2027	Any time	LIBOR + 0.55%	Quarterly
J.P. Morgan Chase Capital X	1,000	1,015	2002	2032	Any time	7.00%	Quarterly
J.P. Morgan Chase Capital XI	1,075	1,004	2003	2033	Any time	5.88%	Quarterly
J.P. Morgan Chase Capital XII	400	390	2003	2033	Any time	6.25%	Quarterly
JPMorgan Chase Capital XIII	465	480	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XIV	600	586	2004	2034	Any time	6.20%	Quarterly
JPMorgan Chase Capital XV	93	132	2005	2035	Any time	5.88%	Semiannually
JPMorgan Chase Capital XVI	500	492	2005	2035	Any time	6.35%	Quarterly
JPMorgan Chase Capital XVII	496	558	2005	2035	Any time	5.85%	Semiannually
JPMorgan Chase Capital XVIII	748	749	2006	2036	Any time	6.95%	Semiannually
JPMorgan Chase Capital XIX	563	564	2006	2036	2011	6.63%	Quarterly
JPMorgan Chase Capital XX	995	996	2006	2036	Any time	6.55%	Semiannually
JPMorgan Chase Capital XXI	836	837	2007	2037	2012	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXII	996	997	2007	2037	Any time	6.45%	Semiannually
JPMorgan Chase Capital XXIII	643	643	2007	2047	2012	LIBOR + 1.00%	Quarterly
JPMorgan Chase Capital XXIV	700	700	2007	2047	2012	6.88%	Quarterly
JPMorgan Chase Capital XXV	1,492	1,844	2007	2037	2037	6.80%	Semiannually
JPMorgan Chase Capital XXVI	1,815	1,815	2008	2048	2013	8.00%	Quarterly
JPMorgan Chase Capital XXVII	995	995	2009	2039	2039	7.00%	Semiannually
JPMorgan Chase Capital XXVIII	1,500	1,500	2009	2039	2014	7.20%	Quarterly
JPMorgan Chase Capital XXIX	1,500	1,500	2010	2040	2015	6.70%	Quarterly
Total	$ 19,678	$ 20,331					

(a) Represents the amount of trust preferred capital debt securities issued to the public by each trust, including unamortized original issue discount.

(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original-issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated Financial Statements.

Note 23 – Preferred stock

At December 31, 2010 and 2009, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock for the payment of dividends and the distribution of assets.

Generally, dividends on shares of each outstanding series of preferred stock are payable quarterly, except for the Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series I ("Series I"), which is payable semiannually as discussed below.

On April 23, 2008, the Firm issued 600,000 shares of Series I preferred stock, for total proceeds of $6.0 billion. Dividends on Series I shares are payable semiannually at a fixed annual dividend rate of 7.90% through April 2018, and then become payable quarterly at an annual dividend rate of three-month LIBOR plus 3.47%.

On July 15, 2008, each series of Bear Stearns preferred stock then issued and outstanding was exchanged into a series of JPMorgan Chase preferred stock with substantially identical terms (6.15% Cumulative Preferred Stock, Series E ("Series E"); 5.72% Cumulative Preferred Stock, Series F ("Series F"); and 5.49% Cumulative Preferred Stock, Series G ("Series G")). As a result of the exchange, these series ranked equally with other series of the Firm's preferred stock. On August 20, 2010, the Firm redeemed all of the outstanding shares of its Series E, Series F and Series G preferred stock at their stated redemption value.

On August 21, 2008, the Firm issued 180,000 shares of 8.625% Non-Cumulative Preferred Stock, Series J ("Series J"), for total proceeds of $1.8 billion.

On October 28, 2008, pursuant to the U.S. Treasury's Capital Purchase Program, the Firm issued to the U.S. Treasury, for total proceeds of $25.0 billion, (i) 2.5 million shares of the Firm's Fixed Rate Cumulative Perpetual Preferred Stock, Series K, par value $1 per share and liquidation preference $10,000 per share (the "Series K Preferred Stock"); and (ii) a warrant to purchase up to 88,401,697 shares of the Firm's common stock at an exercise price of $42.42 per share (the "Warrant"), subject to certain antidilution and other adjustments. The Series K Preferred Stock was nonvoting, qualified as Tier 1 capital and ranked equally with other series of the Firm's preferred stock in terms of dividend payments and upon liquidation of the Firm. On June 17, 2009, the Firm redeemed all outstanding shares of the Series K Preferred Stock and repaid the full $25.0 billion principal amount together with accrued but unpaid dividends. See Note 24 on page 268 for further discussion regarding the Warrant.

The following is a summary of JPMorgan Chase's preferred stock outstanding as of December 31, 2010 and 2009.

December 31,	Share value and redemption price per share[a]	Shares[b]		Carrying value (in millions)		Earliest redemption date	Contractual rate in effect at December 31,
		2010	2009	**2010**	2009		2010
Cumulative Preferred Stock, Series E	$ 200	**—**	818,113	**$ —**	$ 164	—	**NA**
Cumulative Preferred Stock, Series F	200	**—**	428,825	**—**	86	—	**NA**
Cumulative Preferred Stock, Series G	200	**—**	511,169	**—**	102	—	**NA**
Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series I	10,000	**600,000**	600,000	**6,000**	6,000	4/30/2018	**7.90%**
Non-Cumulative Perpetual Preferred Stock, Series J	10,000	**180,000**	180,000	**1,800**	1,800	9/1/2013	**8.63**
Total preferred stock		**780,000**	2,538,107	**$ 7,800**	$ 8,152		

(a) The redemption price includes the amount shown in the table plus any accrued but unpaid dividends.
(b) Represented by depositary shares.

Dividend and stock repurchase restrictions

Prior to the redemption of the Series K Preferred Stock on June 17, 2009, the Firm was subject to certain restrictions regarding the declaration of dividends and share repurchases. As a result of the redemption of the Series K Preferred Stock, JPMorgan Chase is no longer subject to any of these restrictions.

Note 24 – Common stock

At December 31, 2010 and 2009, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share. On June 5, 2009, the Firm issued $5.8 billion, or 163 million new shares, of its common stock at $35.25 per share. On September 30, 2008, the Firm issued $11.5 billion, or 284 million new shares, of its common stock at $40.50 per share.

On April 8, 2008, pursuant to the Share Exchange Agreement dated March 24, 2008, between JPMorgan Chase and Bear Stearns, 20.7 million newly issued shares of JPMorgan Chase common stock were issued to Bear Stearns in a transaction that was exempt from registration under the Securities Act of 1933, pursuant to Section 4(2) thereof, in exchange for 95.0 million newly issued shares of Bear Stearns common stock (or 39.5% of Bear Stearns common stock after giving effect to the issuance). Upon the consummation of the Bear Stearns merger, on May 30, 2008, the 20.7 million shares of JPMorgan Chase common stock and 95.0 million shares of Bear Stearns common stock were cancelled. For a further discussion of this transaction, see Note 2 on pages 166–170 of this Annual Report.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during the years ended December 31, 2010, 2009 and 2008 were as follows.

Year ended December 31, (in millions)	**2010**	2009	2008
Issued – balance at January 1	**4,104.9**	3,941.6	3,657.7
Newly issued:			
Common stock:			
Open market issuance	**—**	163.3	283.9
Bear Stearns Share Exchange Agreement	**—**	—	20.7
Total newly issued	**—**	163.3	304.6
Canceled shares	**—**	—	(20.7)
Total issued – balance at December 31	**4,104.9**	4,104.9	3,941.6
Treasury – balance at January 1	**(162.9)**	(208.8)	(290.3)
Purchase of treasury stock	**(77.9)**	—	—
Share repurchases related to employee stock-based awards(a)	**(0.1)**	(1.1)	(0.5)
Issued from treasury:			
Net change from the Bear Stearns merger as a result of the reissuance of Treasury stock and the Share Exchange Agreement	**—**	—	26.5
Employee benefits and compensation plans	**45.3**	45.7	54.4
Employee stock purchase plans	**1.0**	1.3	1.1
Total issued from treasury	**46.3**	47.0	82.0
Total treasury – balance at December 31	**(194.6)**	(162.9)	(208.8)
Outstanding	**3,910.3**	3,942.0	3,732.8

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes.

As noted in Note 23 on pages 267–268, pursuant to the U.S. Treasury's Capital Purchase Program, the Firm issued to the U.S. Treasury a Warrant to purchase up to 88,401,697 shares of the Firm's common stock, at an exercise price of $42.42 per share, subject to certain antidilution and other adjustments. The U.S. Treasury exchanged the Warrant for 88,401,697 warrants, each of which was a warrant to purchase a share of the Firm's common stock at an exercise price of $42.42 per share and, on December 11, 2009, sold the warrants in a secondary public offering for $950 million. The warrants are exercisable, in whole or in part, at any time and from time to time until October 28, 2018. The Firm did not purchase any of the warrants sold by the U.S. Treasury.

Under the stock repurchase program authorized by the Firm's Board of Directors, the Firm is authorized to repurchase up to $10.0 billion of the Firm's common stock plus 88 million warrants sold by the U.S. Treasury in 2009. During 2009, the Firm did not repurchase any shares of its common stock or warrants. In the second quarter of 2010, the Firm resumed common stock repurchases, and during the year repurchased an aggregate of 78 million shares for $3.0 billion at an average price per share of $38.49. The Firm's share repurchase activities in 2010 were intended to offset share-count increases resulting from employee stock-based incentive awards and were consistent with the Firm's goal of maintaining an appropriate sharecount. The Firm did not repurchase any of the warrants during 2010. As of December 31, 2010, $3.2 billion of authorized repurchase capacity remained with respect to the common stock, and all of the authorized repurchase capacity remained with respect to the warrants.

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate the repurchase of common stock and warrants in accordance with the repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common stock – for example during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

As of December 31, 2010, approximately 564 million unissued shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the warrants sold by the U.S. Treasury as discussed above.

Note 25 – Earnings per share

Effective January 1, 2009, the Firm implemented accounting guidance for participating securities, which clarifies that unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends") are participating securities and should be included in the earnings per share ("EPS") calculation using the two-class method. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities. EPS data for the prior periods were revised as required by the accounting guidance. Options issued under employee benefit plans that have an antidilutive effect are excluded from the computation of diluted EPS.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2010, 2009 and 2008.

Year ended December 31, (in millions, except per share amounts)	**2010**	2009	2008
Basic earnings per share			
Income before extraordinary gain	**$ 17,370**	$ 11,652	$ 3,699
Extraordinary gain	**—**	76	1,906
Net income	**17,370**	11,728	5,605
Less: Preferred stock dividends	**642**	1,327	674
Less: Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	**—**	1,112[c]	—
Net income applicable to common equity	**16,728**	9,289[c]	4,931
Less: Dividends and undistributed earnings allocated to participating securities	**964**	515	189
Net income applicable to common stockholders	**$ 15,764**	$ 8,774	$ 4,742
Total weighted-average basic shares outstanding	**3,956.3**	3,862.8	3,501.1
Per share			
Income before extraordinary gain	**$ 3.98**	$ 2.25[c]	$ 0.81
Extraordinary gain	**—**	0.02	0.54
Net income	**$ 3.98**	$ 2.27[c]	$ 1.35

Year ended December 31, (in millions, except per share amounts)	**2010**	2009	2008
Diluted earnings per share			
Net income applicable to common stockholders	**$ 15,764**	$ 8,774	$ 4,742
Total weighted-average basic shares outstanding	**3,956.3**	3,862.8	3,501.1
Add: Employee stock options, SARs and warrants[a]	**20.6**	16.9	20.7
Total weighted-average diluted shares outstanding[b]	**3,976.9**	3,879.7	3,521.8
Per share			
Income before extraordinary gain	**$ 3.96**	$ 2.24[c]	$ 0.81
Extraordinary gain	**—**	0.02	0.54
Net income per share	**$ 3.96**	$ 2.26[c]	$ 1.35

(a) Excluded from the computation of diluted EPS (due to their antidilutive effect) were options issued under employee benefit plans and the warrants originally issued in 2008 under the U.S. Treasury's Capital Purchase Program to purchase shares of the Firm's common stock aggregating 233 million, 266 million and 209 million for the full years ended December 31, 2010, 2009 and 2008, respectively.

(b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

(c) The calculation of basic and diluted EPS and net income applicable to common equity for full year 2009 includes a one-time, noncash reduction of $1.1 billion, or $0.27 per share, resulting from repayment of the U.S. Troubled Asset Relief Program ("TARP") preferred capital.

Note 26 – Accumulated other comprehensive income/(loss)

Accumulated other comprehensive income/(loss) includes the after-tax change in unrealized gains/(losses) on AFS securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities and net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

As of or for the year ended December 31, (in millions)	Unrealized gains/(losses) on AFS securities[b]	Translation adjustments, net of hedges	Cash flow hedges	Net loss and prior service costs/(credit) of defined benefit pension and OPEB plans	Accumulated other comprehensive income/(loss)
Balance at December 31, 2007	$ 380	$ 8	$ (802)	$ (503)	$ (917)
Net change	(2,481)[c]	(606)	600	(2,283)	(4,770)
Balance at December 31, 2008	(2,101)	(598)	(202)	(2,786)	(5,687)
Net change	4,133[d]	582	383	498	5,596
Balance at December 31, 2009	2,032[e]	(16)	181	(2,288)	(91)
Cumulative effect of changes in accounting principles[a]	**(144)**	**—**	**—**	**—**	**(144)**
Net change	**610**[f]	**269**	**25**	**332**	**1,236**
Balance at December 31, 2010	**$2,498**[e]	**$ 253**	**$ 206**	**$ (1,956)**	**$ 1,001**

(a) Reflects the effect of adoption of accounting guidance related to the consolidation of VIEs, and to embedded credit derivatives in beneficial interests in securitized financial assets. AOCI decreased by $129 million due to the adoption of the accounting guidance related to VIEs as a result of the reversal of the fair value adjustments taken on retained AFS securities that were eliminated in consolidation; for further discussion see Note 16 on pages 244–259 of this Annual Report. AOCI decreased by $15 million due to the adoption of the new guidance related to credit derivatives embedded in certain of the Firm's AFS securities; for further discussion, see Note 6 on pages 191–199 of this Annual Report.
(b) Represents the after-tax difference between the fair value and amortized cost of the AFS securities portfolio and retained interests in securitizations recorded in other assets.
(c) The net change during 2008 was due primarily to spread widening related to credit card asset-backed securities, nonagency MBS and collateralized loan obligations.
(d) The net change during 2009 was due primarily to overall market spread and market liquidity improvement as well as changes in the composition of investments.
(e) Includes after-tax unrealized losses of $(81) million and $(226) million not related to credit on debt securities for which credit losses have been recognized in income at December 31, 2010 and 2009, respectively.
(f) The net change during 2010 was due primarily to the narrowing of spreads on commercial and nonagency MBS as well as on collateralized loan obligations; also reflects increased market value on pass-through MBS due to narrowing of spreads and other market factors.

The following table presents the before- and after-tax changes in net unrealized gains/(losses); reclassification adjustments for realized (gains)/losses on AFS securities and cash flow hedges; changes resulting from foreign currency translation adjustments (including the impact of related derivatives); net gains/(losses) and prior service costs/(credits) from pension and OPEB plans; and amortization of pension and OPEB amounts into net income. Reclassification adjustments include amounts recognized in net income that had been recorded previously in other comprehensive income/(loss).

	2010			2009			2008		
Year ended December 31, (in millions)	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Unrealized gains/(losses) on AFS securities:									
Net unrealized gains/(losses) arising during the period	**$ 3,982**	**$ (1,540)**	**$ 2,442**	$ 7,870	$ (3,029)	$ 4,841	$ (3,071)	$ 1,171	$ (1,900)
Reclassification adjustment for realized (gains)/losses included in net income	**(2,982)**	**1,150**	**(1,832)**	(1,152)	444	(708)	(965)	384	(581)
Net change	**1,000**	**(390)**	**610**	6,718	(2,585)	4,133	(4,036)	1,555	(2,481)
Translation adjustments:									
Translation	**402**	**(139)**	**263**	1,139	(398)	741	(1,781)	682	(1,099)
Hedges	**11**	**(5)**	**6**	(259)	100	(159)	820	(327)	493
Net change	**413**	**(144)**	**269**	880	(298)	582	(961)	355	(606)
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**247**	**(96)**	**151**	767	(308)	459	584	(226)	358
Reclassification adjustment for realized (gains)/losses included in net income	**(206)**	**80**	**(126)**	(124)	48	(76)	402	(160)	242
Net change	**41**	**(16)**	**25**	643	(260)	383	986	(386)	600
Net loss and prior service cost/(credit) of defined benefit pension and OPEB plans:									
Net gains/(losses) and prior service credits arising during the period	**294**	**(96)**	**198**	494	(200)	294	(3,579)	1,289	(2,290)
Reclassification adjustment for net loss and prior service credits included in net income	**224**	**(90)**	**134**	337	(133)	204	14	(7)	7
Net change	**518**	**(186)**	**332**	831	(333)	498	(3,565)	1,282	(2,283)
Total other comprehensive income/(loss)	**$ 1,972**	**$ (736)**	**$ 1,236**	$ 9,072	$ (3,476)	$ 5,596	$ (7,576)	$ 2,806	$ (4,770)

Note 27 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

The components of income tax expense/(benefit) included in the Consolidated Statements of Income were as follows for each of the years ended December 31, 2010, 2009 and 2008.

Year ended December 31, (in millions)	**2010**	2009	2008
Current income tax expense			
U.S. federal	**$ 4,001**	$ 4,698	$ 395
Non-U.S.	**2,712**	2,368	1,009
U.S. state and local	**1,744**	971	307
Total current income tax expense	**8,457**	8,037	1,711
Deferred income tax expense/(benefit)			
U.S. federal	**(753)**	(2,867)	(3,015)
Non-U.S.	**169**	(454)	1
U.S. state and local	**(384)**	(301)	377
Total deferred income tax expense/(benefit)	**(968)**	(3,622)	(2,637)
Total income tax expense/ (benefit) before extraordinary gain	**$ 7,489**	$ 4,415	$ (926)

Total income tax expense includes $485 million, $280 million and $55 million of tax benefits recorded in 2010, 2009 and 2008, respectively, as a result of tax audit resolutions.

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity and certain tax benefits associated with the Firm's employee stock-based compensation plans. The tax effect of all items recorded directly to stockholders' equity resulted in an increase of $1.8 billion in 2010, a decrease of $3.7 billion in 2009, and an increase of $3.0 billion in 2008.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. During 2008, as part of JPMorgan Chase's periodic review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill these requirements and needs, the Firm determined that the undistributed earnings of certain of its subsidiaries, for which U.S. federal income taxes had been provided, would be indefinitely reinvested to fund the current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. This determination resulted in the release of deferred tax liabilities and the recognition of an income tax benefit of $1.1 billion associated with these undistributed earnings in 2008. For 2010, pretax earnings of approximately $3.5 billion were generated that will be indefinitely reinvested in these subsidiaries. At December 31, 2010, the cumulative amount of undistributed pretax earnings in these subsidiaries approximated $19.3 billion. If the Firm were to record a deferred tax liability associated with these undistributed earnings, the amount would be $4.3 billion at December 31, 2010.

Tax expense applicable to securities gains and losses for the years 2010, 2009 and 2008 was $1.1 billion, $427 million, and $608 million, respectively.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for each of the years ended December 31, 2010, 2009 and 2008, is presented in the following table.

Year ended December 31,	**2010**	2009	2008
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	**3.6**	2.7	16.0
Tax-exempt income	**(2.4)**	(3.9)	(14.8)
Non-U.S. subsidiary earnings[a]	**(2.2)**	(1.7)	(53.6)
Business tax credits	**(3.7)**	(5.5)	(24.5)
Bear Stearns equity losses	**—**	—	5.7
Other, net	**(0.2)**	0.9	2.8
Effective tax rate	**30.1%**	27.5%	(33.4)%

(a) Includes earnings deemed to be reinvested indefinitely in non-U.S. subsidiaries.

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting versus income-tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2010 and 2009.

December 31, (in millions)	2010	2009
Deferred tax assets		
Allowance for loan losses	**$ 12,287**	$ 12,376
Employee benefits	**4,279**	4,424
Allowance for other than loan losses	**6,029**	3,995
Non-U.S. operations	**956**	1,926
Tax attribute carryforwards	**1,370**	912
Fee income	**446**	—
Fair value adjustments[a]	**51**	—
Gross deferred tax assets	**$ 25,418**	$ 23,633
Deferred tax liabilities		
Depreciation and amortization	**$ 3,500**	$ 4,832
Leasing transactions	**2,160**	2,054
Non-U.S. operations	**1,136**	1,338
Fee income	**—**	670
Fair value adjustments[a]	**—**	328
Other, net	**519**	147
Gross deferred tax liabilities	**$ 7,315**	$ 9,369
Valuation allowance	**1,784**	1,677
Net deferred tax asset	**$ 16,319**	$ 12,587

(a) Includes fair value adjustments related to AFS securities, cash flows hedging activities and other portfolio investments.

JPMorgan Chase has recorded deferred tax assets of $1.4 billion at December 31, 2010, in connection with U.S. federal, state and local and non-U.S. subsidiary net operating loss carryforwards and foreign tax credit carryforwards. At December 31, 2010, the U.S. federal net operating loss carryforward was approximately $1.2 billion; the state and local net operating loss carryforward was approximately $1.0 billion; the non-U.S. subsidiary net operating loss carryforward was $515 million; and the U.S. foreign tax credit carryforward was approximately $750 million.

If not utilized, the U.S. federal net operating loss carryforward and the state and local net operating loss carryforward will expire in 2027; and the U.S. foreign tax credit carryforward will expire in 2020. The non-U.S. subsidiary net operating loss carryforward has an unlimited carryforward period.

A valuation allowance has been recorded for losses associated with non-U.S. subsidiaries and certain portfolio investments, and certain state and local tax benefits.

At December 31, 2010, 2009 and 2008, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $7.8 billion, $6.6 billion and $5.9 billion, respectively, of which $3.8 billion, $3.5 billion and $2.9 billion, respectively, if recognized, would reduce the annual effective tax rate. As JPMorgan Chase is presently under audit by a number of tax authorities, it is reasonably possible that significant changes in the gross balance of unrecognized tax benefits may occur within the next 12 months. JPMorgan Chase does not expect that any changes over the next twelve months in its gross balance of unrecognized tax benefits caused by such audits would result in a significant change in its annual effective tax rate.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2010, 2009 and 2008.

Unrecognized tax benefits

Year ended December 31, (in millions)	2010	2009	2008
Balance at January 1,	**$ 6,608**	$ 5,894	$ 4,811
Increases based on tax positions related to the current period	**813**	584	890
Decreases based on tax positions related to the current period	**(24)**	(6)	(109)
Increases associated with the Bear Stearns merger	**—**	—	1,387
Increases based on tax positions related to prior periods	**1,681**	703	501
Decreases based on tax positions related to prior periods	**(1,198)**	(322)	(1,386)
Decreases related to settlements with taxing authorities	**(74)**	(203)	(181)
Decreases related to a lapse of applicable statute of limitations	**(39)**	(42)	(19)
Balance at December 31,	**$ 7,767**	$ 6,608	$ 5,894

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $(54) million, $101 million and $346 million in 2010, 2009 and 2008, respectively.

Included in accounts payable and other liabilities at December 31, 2010 and 2009, in addition to the Firm's liability for unrecognized tax benefits, was $1.6 billion and $2.4 billion, respectively, for income tax-related interest and penalties.

JPMorgan Chase is subject to ongoing tax examinations by the tax authorities of the various jurisdictions in which it operates, including U.S. federal, state and local, and non-U.S. jurisdictions. The Firm's consolidated federal income tax returns are presently under examination by the Internal Revenue Service ("IRS") for the years 2003, 2004 and 2005. This examination is expected to conclude in 2011. The consolidated federal income tax returns of Bear Stearns for the years ended November 30, 2006, and November 30, 2007, and for the period December 1, 2007, through May 30, 2008, are presently under examination. This examination is expected to conclude in 2012.

The IRS audits of the consolidated federal income tax returns of JPMorgan Chase for the years 2006, 2007 and 2008 are expected to commence in 2011. Administrative appeals are pending with the IRS relating to prior periods that were examined for JPMorgan Chase and for certain of its predecessor entities. For 2002 and prior years, refund claims relating to income and credit adjustments, and to tax attribute carrybacks, for JPMorgan Chase have been filed. Refund claims have been filed for Bank One for the period January 1, 2004, through July 31, 2004, and for prior years primarily to reflect income adjustments. Amended returns to reflect refund claims primarily attributable to net operating losses and tax credit carrybacks are anticipated to be filed for the final Bear Stearns U.S. federal consolidated tax return for the period December 1, 2007, through May 30, 2008, and for prior years.

The following table presents the U.S. and non-U.S. components of income before income tax expense/(benefit) and extraordinary gain for the years ended December 31, 2010, 2009 and 2008.

Year ended December 31, (in millions)	2010	2009	2008
U.S.	**$ 16,568**	$ 6,263	$ (2,094)
Non-U.S.(a)	**8,291**	9,804	4,867
Income before income tax expense/(benefit) and extraordinary gain	**$ 24,859**	$ 16,067	$ 2,773

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

Note 28 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the Office of the Comptroller of the Currency ("OCC"). The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC.

The Board of Governors of the Federal Reserve System (the "Federal Reserve") requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $803 million and $821 million in 2010 and 2009, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company–only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2011, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, $2.0 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2011 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2010 and 2009, cash in the amount of $25.0 billion and $24.0 billion, respectively, and securities with a fair value of $9.7 billion and $10.2 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers.

Note 29 – Capital

The Federal Reserve establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A.

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital consists of common stockholders' equity, perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred capital debt securities, less goodwill and certain other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1, subordinated long-term debt and other instruments qualifying as Tier 2, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total capital is Tier 1 capital plus Tier 2 capital. Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Banking subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2010 and 2009, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

The following table presents the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant banking subsidiaries at December 31, 2010 and 2009. These amounts are determined in accordance with regulations issued by the Federal Reserve and/or OCC.

December 31, (in millions, except ratios)	JPMorgan Chase & Co.[e]		JPMorgan Chase Bank, N.A.[e]		Chase Bank USA, N.A.[e]		Well-capitalized ratios[g]	Minimum capital ratios[g]
	2010	2009	**2010**	2009	**2010**	2009		
Regulatory capital								
Tier 1[a]	**$ 142,450**	$ 132,971	**$ 91,764**	$ 96,372	**$ 12,966**	$ 15,534		
Total	**182,216**	177,073	**130,444**	136,646	**16,659**	19,198		
Assets								
Risk-weighted[b][c]	**1,174,978**[f]	1,198,006	**965,897**	1,011,995	**116,992**	114,693		
Adjusted average[d]	**2,024,515**[f]	1,933,767	**1,611,486**	1,609,081	**117,368**	74,087		
Capital ratios								
Tier 1[a]	**12.1%**[f]	11.1%	**9.5%**	9.5%	**11.1%**	13.5%	6.0%	4.0%
Total	**15.5**	14.8	**13.5**	13.5	**14.2**	16.7	10.0	8.0
Tier 1 leverage	**7.0**	6.9	**5.7**	6.0	**11.0**	21.0	5.0[h]	3.0[i]

(a) At December 31, 2010, for JPMorgan Chase and JPMorgan Chase Bank, N.A., trust preferred capital debt securities were $19.8 billion and $600 million, respectively. If these securities were excluded from the calculation at December 31, 2010, Tier 1 capital would be $122.7 billion and $91.2 billion, respectively, and the Tier 1 capital ratio would be 10.4% and 9.4%, respectively. At December 31, 2010, Chase Bank USA, N.A. had no trust preferred capital debt securities.

(b) Risk-weighted assets consist of on– and off–balance sheet assets that are assigned to one of several broad risk categories and weighted by factors representing their risk and potential for default. On–balance sheet assets are risk-weighted based on the perceived credit risk associated with the obligor or counterparty, the nature of any collateral, and the guarantor, if any. Off–balance sheet assets such as lending-related commitments, guarantees, derivatives and other applicable off–balance sheet positions are risk-weighted by multiplying the contractual amount by the appropriate credit conversion factor to determine the on–balance sheet credit-equivalent amount, which is then risk-weighted based on the same factors used for on–balance sheet assets. Risk-weighted assets also incorporate a measure for the market risk related to applicable trading assets—debt and equity instruments, and foreign exchange and commodity derivatives. The resulting risk-weighted values for each of the risk categories are then aggregated to determine total risk-weighted assets.

(c) Includes off–balance sheet risk-weighted assets at December 31, 2010, of $282.9 billion, $274.2 billion and $31 million, and at December 31, 2009, of $367.4 billion, $312.3 billion and $49.9 billion, for JPMorgan Chase, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., respectively.

(d) Adjusted average assets, for purposes of calculating the leverage ratio, include total quarterly average assets adjusted for unrealized gains/(losses) on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries, and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.

(e) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions; whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

(f) Effective January 1, 2010, the Firm adopted new guidance that amended the accounting for the consolidation of VIEs, which resulted in a decrease in the Tier 1 capital ratio of 34 basis points. See Note 16 on pages 244–259 of this Annual Report for further information.

(g) As defined by the regulations issued by the Federal Reserve, OCC and FDIC.

(h) Represents requirements for banking subsidiaries pursuant to regulations issued under the FDIC Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.

(i) The minimum Tier 1 leverage ratio for bank holding companies and banks is 3% or 4%, depending on factors specified in regulations issued by the Federal Reserve and OCC.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both nontaxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from nontaxable business combinations totaling $647 million and $812 million at December 31, 2010 and 2009, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of $1.9 billion and $1.7 billion at December 31, 2010 and 2009, respectively.

A reconciliation of the Firm's Total stockholders' equity to Tier 1 capital and Total qualifying capital is presented in the table below.

December 31, (in millions)	**2010**	2009
Tier 1 capital		
Total stockholders' equity	**$ 176,106**	$ 165,365
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 capital	**(748)**	75
Qualifying hybrid securities and noncontrolling interests[a]	**19,887**	19,535
Less: Goodwill[b]	**46,915**	46,630
Fair value DVA on derivative and structured note liabilities related to the Firm's credit quality	**1,261**	912
Investments in certain subsidiaries and other	**1,032**	802
Other intangible assets[b]	**3,587**	3,660
Total Tier 1 capital	**142,450**	132,971
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	**25,018**	28,977
Qualifying allowance for credit losses	**14,959**	15,296
Adjustment for investments in certain subsidiaries and other	**(211)**	(171)
Total Tier 2 capital	**39,766**	44,102
Total qualifying capital	**$ 182,216**	$ 177,073

(a) Primarily includes trust preferred capital debt securities of certain business trusts.

(b) Goodwill and other intangible assets are net of any associated deferred tax liabilities.

Note 30 – Off–balance sheet lending-related financial instruments, guarantees and other commitments

JPMorgan Chase utilizes lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the Firm's maximum possible credit risk should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements.

To provide for the risk of loss inherent in wholesale and consumer (excluding credit card) related contracts, an allowance for credit losses on lending-related commitments is maintained. See Note 15 on pages 239–243 of this Annual Report for further discussion regarding the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2010 and 2009. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower prior notice or, in some cases, without notice as permitted by law. The Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property or when there has been a demonstrable decline in the creditworthiness of the borrower.

Off–balance sheet lending-related financial instruments, guarantees and other commitments

	Contractual amount		Carrying value[l]	
December 31, (in millions)	**2010**	2009	**2010**	2009
Lending-related				
Consumer, excluding credit card:				
Home equity — senior lien	**$ 16,060**	$ 19,246	**$ —**	$ —
Home equity — junior lien	**28,681**	37,231	**—**	—
Prime mortgage	**1,266**	1,654	**—**	—
Subprime mortgage	**—**	—	**—**	—
Auto	**5,246**	5,467	**2**	7
Business banking	**9,702**	9,040	**4**	5
Student and other	**579**	2,189	**—**	—
Total consumer, excluding credit card	**61,534**	74,827	**6**	12
Credit card	**547,227**	569,113	**—**	—
Total consumer	**608,761**	643,940	**6**	12
Wholesale:				
Other unfunded commitments to extend credit[a][b][c]	**199,859**	192,145	**364**	356
Asset purchase agreements[b]	**—**	22,685	**—**	126
Standby letters of credit and other financial guarantees[a][c][d][e]	**94,837**	91,485	**705**	919
Unused advised lines of credit	**44,720**	35,673	**—**	—
Other letters of credit[a][e]	**6,663**	5,167	**2**	1
Total wholesale	**346,079**	347,155	**1,071**	1,402
Total lending-related	**$ 954,840**	$ 991,095	**$ 1,077**	$ 1,414
Other guarantees and commitments				
Securities lending indemnifications[f]	**$ 181,717**	$ 170,777	**$ NA**	$ NA
Derivatives qualifying as guarantees[g]	**87,768**	98,052[k]	**294**	896[k]
Unsettled reverse repurchase and securities borrowing agreements	**39,927**	48,187	**—**	—
Equity investment commitments[h]	**2,468**	2,374	**—**	—
Building purchase commitments	**258**	670	**—**	—
Other guarantees and commitments[i]	**3,766**	3,671	**6**	6
Loan sale and securitization-related indemnifications:				
Repurchase liability[j]	**NA**	NA	**3,285**	1,705
Loans sold with recourse	**10,982**	13,544	**153**	271

(a) At December 31, 2010 and 2009, represents the contractual amount net of risk participations totaling $542 million and $643 million, respectively, for other unfunded commitments to extend credit; $22.4 billion and $24.6 billion, respectively, for standby letters of credit and other financial guarantees; and $1.1 billion and $690 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve Board these commitments are shown gross of risk participations.

(b) Upon the adoption of the accounting guidance related to VIEs, $24.2 billion of lending-related commitments between the Firm and Firm-administered multi-seller conduits were eliminated upon consolidation. The decrease in lending-related commitments was partially offset by the addition of $6.5 billion of unfunded commitments directly between the multi-seller conduits and clients; these unfunded commitments of the consolidated conduits are now included as off–balance sheet lending-related commitments of the Firm. The carrying value of asset purchase agreements of $126 million at December 31, 2009 was comprised of $18 million for the allowance for lending-related commitments; and $108 million for the guarantee liability and corresponding asset.

(c) Includes credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other not-for-profit entities of $43.4 billion and $44.1 billion, at December 31, 2010 and 2009, respectively.
(d) At December 31, 2010 and 2009, includes unissued standby letters of credit commitments of $41.6 billion and $38.4 billion, respectively.
(e) At December 31, 2010 and 2009, JPMorgan Chase held collateral relating to $37.8 billion and $31.5 billion, respectively, of standby letters of credit; and $2.1 billion and $1.3 billion, respectively, of other letters of credit.
(f) At December 31, 2010 and 2009, collateral held by the Firm in support of securities lending indemnification agreements was $185.0 billion and $173.2 billion, respectively. Securities lending collateral comprises primarily cash, and securities issued by governments that are members of the Organisation for Economic Co-operation and Development ("OECD") and U.S. government agencies.
(g) Represents notional amounts of derivatives qualifying as guarantees. The carrying value at December 31, 2010 and 2009, reflects derivative payables of $390 million and $974 million, respectively, less derivative receivables of $96 million and $78 million, respectively.
(h) At December 31, 2010 and 2009, includes unfunded commitments of $1.0 billion and $1.5 billion, respectively, to third-party private equity funds that are generally fair valued at net asset value as discussed in Note 3 on pages 170–187 of this Annual Report; and $1.4 billion and $897 million, respectively, to other equity investments.
(i) Amounts include letters of credit hedged by derivative transactions and managed on a market risk basis.
(j) Represents estimated repurchase liability related to indemnifications for breaches of representations and warranties in loan sale and securitization agreements. For additional information, see Loan sale and securitization-related indemnifications on pages 278–279 of this Note.
(k) The prior period has been revised to conform to current presentation.
(l) For lending-related products the carrying value represents the allowance for lending-related commitments and the fair value of the guarantee liability, for derivative-related products the carrying value represents the fair value. For all other products the carrying value represents the valuation reserve.

Other unfunded commitments to extend credit

Other unfunded commitments to extend credit are generally comprised of commitments for working capital and general corporate purposes as well as extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors.

Also included in other unfunded commitments to extend credit are commitments to noninvestment-grade counterparties in connection with leveraged and acquisition finance activities which were $5.9 billion and $7.0 billion at December 31, 2010 and 2009, respectively. For further information, see Note 3 and Note 4 on pages 170–187 and 187–189 respectively, of this Annual Report.

Guarantees

U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off–balance sheet lending-related arrangements to be guarantees under U.S. GAAP: certain asset purchase agreements, standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the obligation assumed (e.g., the amount of consideration received, the net present value of the premium receivable). For certain types of guarantees, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending- and deposit-related fees over the life of the guarantee contract. For indemnifications provided in sales agreements, a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires). Any contingent liability that exists as a result of issuing the guarantee or indemnification is recognized when it become probable and reasonably estimable. The contingent portion of the liability is not recognized if the estimated amount is less than the carrying amount of the liability recognized at inception (adjusted for any amortization). The recorded amounts of the liabilities related to guarantees and indemnifications at December 31, 2010 and 2009, excluding the allowance for credit losses on lending-related commitments, are discussed in footnote (b) to the table above and below in this Note on pages 276–280.

Standby letters of credit

Standby letters of credit ("SBLC") and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were $707 million and $920 million at December 31, 2010 and 2009, respectively, which were classified in accounts payable and other liabilities on the Consolidated Balance Sheets; these carrying values include $347 million and $553 million, respectively, for the allowance for lending-related commitments, and $360 million and $367 million, respectively, for the guarantee liability and corresponding asset.

The following table presents standby letters of credit and other letters of credit arrangements by the ratings profiles of the Firm's customers as of December 31, 2010 and 2009.

Standby letters of credit and other financial guarantees and other letters of credit

	2010		2009	
December 31, (in millions)	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade[a]	**$ 70,236**	**$ 5,289**	$ 66,786	$ 3,861
Noninvestment-grade[a]	**24,601**	**1,374**	24,699	1,306
Total contractual amount[b]	**94,837**[c]	**6,663**	91,485[c]	5,167
Allowance for lending-related commitments	**345**	**2**	552	1
Commitments with collateral	**37,815**	**2,127**	31,454	1,315

(a) The ratings scale is based on the Firm's internal ratings which generally correspond to ratings as defined by S&P and Moody's.
(b) At December 31, 2010 and 2009, represents the contractual amount net of risk participations totaling $22.4 billion and $24.6 billion, respectively, for standby letters of credit and other financial guarantees; and $1.1 billion and $690 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(c) At December 31, 2010 and 2009, includes unissued standby letters of credit commitments of $41.6 billion and $38.4 billion, respectively.

Indemnification agreements – general

In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Securities lending indemnification

Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the third-party borrower to return the lent securities in the event the Firm did not obtain sufficient collateral. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof. Also, as part of this program, the Firm invests cash collateral received from the borrower in accordance with approved guidelines.

Derivatives qualifying as guarantees

In addition to the contracts described above, the Firm transacts certain derivative contracts that meet the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for trading purposes. The terms of written put options are typically five years or less. Derivative guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps", are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio and are typically longer-term or may have no stated maturity, but allow the Firm to terminate the contract under certain conditions.

Derivative guarantees are recorded on the Consolidated Balance Sheets at fair value in trading assets and trading liabilities. The total notional amount of the derivatives that the Firm deems to be guarantees was $87.8 billion and $98.1 billion at December 31, 2010 and 2009, respectively. The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees. However, exposure to certain stable value derivatives is contractually limited to a substantially lower percentage of the notional amount; the notional amount on these stable value contracts was $25.9 billion and $24.9 billion and the maximum exposure to loss was $2.7 billion and $2.5 billion, at December 31, 2010 and 2009, respectively. The fair values of the contracts reflects the probability of whether the Firm will be required to perform under the contract. The fair value related to derivative guarantees were derivative payables of $390 million and $974 million and derivative receivables of $96 million and $78 million at

December 31, 2010 and 2009, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 6 on pages 191–199 of this Annual Report.

Unsettled reverse repurchase and securities borrowing agreements

In the normal course of business, the Firm enters into reverse repurchase agreements and securities borrowing agreements that settle at a future date. At settlement, these commitments require that the Firm advance cash to and accept securities from the counterparty. These agreements generally do not meet the definition of a derivative, and therefore, are not recorded on the Consolidated Balance Sheets until settlement date. At December 31, 2010 and 2009, the amount of commitments related to forward starting reverse repurchase agreements and securities borrowing agreements were $14.4 billion and $23.4 billion, respectively. Commitments related to unsettled reverse repurchase agreements and securities borrowing agreements with regular way settlement periods were $25.5 billion and $24.8 billion at December 31, 2010 and 2009, respectively.

Building purchase commitments

In connection with the Bear Stearns merger, the Firm succeeded to an operating lease arrangement for the building located at 383 Madison Avenue in New York City (the "Synthetic Lease"). Under the terms of the Synthetic Lease, the Firm was obligated to a maximum residual value guarantee of approximately $670 million if the building were sold and the proceeds of the sale were insufficient to satisfy the lessor's debt obligation. Effective November 1, 2010, the lease expired and the Firm purchased the property recognizing the $670 million purchase price in premises and equipment.

On December 15, 2010, the Firm entered into an agreement to purchase the leasehold property at 60 Victoria Embankment in London, a building the Firm has leased since 1991, for approximately $253 million. The purchase of this building is expected to close in the second quarter of 2011.

Loan sale and securitization-related indemnifications

Indemnifications for breaches of representations and warranties

In connection with the Firm's loan sale and securitization activities with the GSEs and other loan sale and private-label securitization transactions, as described in Notes 14 and 16 on pages 220–238 and 244–259, respectively, of this Annual Report, the Firm has made representations and warranties that the loans sold meet certain requirements. For transactions with the GSEs, these representations include type of collateral, underwriting standards, validity of certain borrower representations in connection with the loan, that primary mortgage insurance is in force for any mortgage loan with an LTV ratio greater than 80%, and the use of the GSEs' standard legal documentation. The Firm may be, and has been, required to repurchase loans and/or indemnify the GSEs and other investors for losses due to material breaches of these representations and warranties; however, predominantly all of the repurchase demands received by the Firm and the Firm's losses realized to date are related to loans sold to the GSEs. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans that are deemed to have defects sold to purchasers (including securitization-related SPEs) plus, in certain circumstances, accrued and unpaid interest on such loans and certain expense.

Subsequent to the Firm's acquisition of certain assets and liabilities of Washington Mutual from the FDIC in September 2008, the Firm resolved and/or limited certain current and future repurchase demands for loans sold to the GSEs by Washington Mutual, although it remains the Firm's position that such obligations remain with the FDIC receivership. Nevertheless, certain payments have been made with respect to certain of the then current and future repurchase demands, and the Firm will continue to evaluate and may pay certain future repurchase demands related to individual loans. In addition to the payments already made, the Firm has a remaining repurchase liability of approximately $190 million as of December 31, 2010, relating to unresolved and future demands on the Washington Mutual portfolio.

The primary reasons for repurchase demands from the GSEs relate to alleged misrepresentations primarily driven by: (i) credit quality and/or undisclosed debt of the borrower; (ii) income level and/or employment status of the borrower; and (iii) appraised value of collateral. Ineligibility of the borrower for the particular product, mortgage insurance rescissions and missing documentation are other reasons for repurchase demands.

Beginning in 2009, mortgage insurers more frequently rescinded mortgage insurance coverage. The successful rescission of mortgage insurance typically results in a violation of representations and warranties made to the GSEs and, therefore, has been a significant cause of repurchase demands from the GSEs. The Firm actively reviews all rescission notices from mortgage insurers and contests them when appropriate. In addition, the Firm is engaged in discussions with various mortgage insurers on their rights and practices related to rescinding mortgage insurance coverage. The Firm has entered into agreements with two mortgage insurers to make processes more efficient and reduce exposure on claims on certain portfolios for which the Firm is a servicer. The impact of these agreements is reflected in the repurchase liability as of December 31, 2010.

When the Firm accepts a repurchase demand from one of the GSEs, the Firm may either (a) repurchase the loan or the underlying collateral from the GSE at the unpaid principal balance of the loan plus accrued interest, or (b) reimburse the GSE for its realized loss on a liquidated property (a "make-whole" payment).

To estimate the Firm's repurchase liability arising from breaches of representations and warranties, the Firm considers:

(i) the level of current unresolved repurchase demands and mortgage insurance rescission notices,
(ii) estimated probable future repurchase demands based upon loans that are or ever have been 90 days past due considering historical experience,
(iii) the potential ability of the Firm to cure the defects identified in the repurchase demands,
(iv) the estimated severity of loss upon repurchase of the loan or collateral, make-whole settlement, or indemnification,
(v) the Firm's potential ability to recover its losses from third-party originators, and
(vi) the terms of agreements with certain mortgage insurers and other parties.

Based on these factors, the Firm has recognized a repurchase liability of $3.3 billion and $1.7 billion, including the Washington Mutual liability described above, as of December 31, 2010 and 2009, respectively, which is reported in accounts payable and other liabilities net of probable recoveries from third parties.

Substantially all of the estimates and assumptions underlying the Firm's established methodology for computing its recorded repurchase liability – including factors such as the amount of probable future demands from purchasers, the ability of the Firm to cure identified defects, the severity of loss upon repurchase or foreclosure, and recoveries from third parties – require application of a significant level of management judgment. Estimating the repurchase liability is further complicated by limited and rapidly changing historical data and uncertainty surrounding numerous external factors, including: (i) macro-economic factors, and (ii) the level of future demands, which is dependent, in part, on actions taken by third parties such as the GSEs and mortgage insurers. While the Firm uses the best information available to it in estimating its repurchase liability, the estimation process is inherently uncertain and imprecise and, accordingly, losses in excess of the amounts accrued as of December 31, 2010 are reasonably possible.

The Firm believes the estimate of the range of reasonably possible losses, in excess of reserves established, for its repurchase liability is from $0 to approximately $2 billion at December 31, 2010. This estimated range of reasonably possible loss is based on an assumed peak to trough decline in home prices of 46%, which is an additional 12 percentage point decline in home prices beyond the Firm's current assumptions. Such a decline could increase the level of loan delinquencies, thereby potentially increasing the repurchase demand rate from the GSEs and increasing loss severity on repurchased loans, each of which could affect the Firm's repurchase liability. The Firm does not consider such a further decline in home prices to be likely to occur, and actual repurchase losses could vary significantly from the Firm's recorded repurchase liability or this estimate of reasonably possible additional losses, depending on the outcome of various factors, including those considered above.

The following table summarizes the change in the repurchase liability for each of the periods presented.

Summary of changes in repurchase liability

Year ended December 31, (in millions)	**2010**	2009	2008
Repurchase liability at beginning of period	**$ 1,705**	$ 1,093	$ 15
Realized losses[a]	**(1,423)**	(1,253)[c]	(155)
Provision for repurchase losses	**3,003**	1,865	1,233[d]
Repurchase liability at end of period	**$ 3,285**[b]	$ 1,705	$ 1,093

(a) Includes principal losses and accrued interest on repurchased loans, "make-whole" settlements, settlements with claimants, and certain related expense. For the years ended December 31, 2010, 2009 and 2008, make-whole settlements were $632 million, $277 million and $34 million, respectively.
(b) Includes $190 million at December 31, 2010, related to future demands on loans sold by Washington Mutual to the GSEs.
(c) Includes the Firm's resolution of certain current and future repurchase demands for certain loans sold by Washington Mutual.
(d) Includes a repurchase liability assumed for certain loans sold by Washington Mutual; this assumed liability was reported as a reduction of the extraordinary gain rather than as a charge to the provision for credit losses.

Loans sold with recourse

The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2010 and 2009, the unpaid principal balance of loans sold with recourse totaled $11.0 billion and $13.5 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it will have to perform under this guarantee, was $153 million and $271 million at December 31, 2010 and 2009, respectively.

Credit card charge-backs

Prior to November 1, 2008, the Firm was a partner with one of the leading companies in electronic payment services in a joint venture operating under the name of Chase Paymentech Solutions, LLC (the "joint venture"). The joint venture provided merchant processing services in the U.S. and Canada. The dissolution of the joint venture was completed on November 1, 2008, and JPMorgan Chase retained approximately 51% of the business under the Chase Paymentech name.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is liable primarily for the amount of each processed credit card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Chase Paymentech will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Chase Paymentech is unable to collect the amount from the merchant, Chase Paymentech will bear the loss for the amount credited or refunded to the cardmember. Chase Paymentech mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Chase Paymentech does not have sufficient collateral from the merchant to provide customer refunds; and (3) Chase Paymentech does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would be liable for the amount of the transaction. For the year ended December 31, 2010, Chase Paymentech incurred aggregate credit losses of $12 million on $469.3 billion of aggregate volume processed, and at December 31, 2010, it held $189 million of collateral. For the year ended December 31, 2009, Chase Paymentech incurred aggregate credit losses of $11 million on $409.7 billion of aggregate volume processed, and at December 31, 2009, it held $213 million of collateral. For the year ended December 31, 2008, Chase Paymentech incurred aggregate credit losses of $13 million on $713.9 billion of aggregate volume processed, and at December 31, 2008, it held $222 million of collateral. The Firm believes that, based on historical experience and the collateral held by Chase Paymentech, the fair value of the Firm's charge back-related obligations, which are representative of the payment or performance risk to the Firm, is immaterial.

Exchange and clearinghouse guarantees

The Firm is a member of several securities and futures exchanges and clearinghouses, both in the U.S. and other countries. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to a member's guarantee fund, or, in a few cases, the obligation may be unlimited. It is difficult to estimate the Firm's maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Note 31 – Commitments, pledged assets, collateral and contingencies

Lease commitments

At December 31, 2010, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2010.

Year ended December 31, (in millions)	
2011	$ 1,884
2012	1,804
2013	1,674
2014	1,497
2015	1,363
After 2015	7,778
Total minimum payments required[(a)]	16,000
Less: Sublease rentals under noncancelable subleases	(1,848)
Net minimum payment required	$ 14,152

(a) Lease restoration obligations are accrued in accordance with U.S. GAAP, and are not reported as a required minimum lease payment.

Total rental expense was as follows.

Year ended December 31, (in millions)	**2010**	2009	2008
Gross rental expense	**$ 2,212**	$ 1,884	$ 1,917
Sublease rental income	**(545)**	(172)	(415)
Net rental expense	**$ 1,667**	$ 1,712	$ 1,502

Pledged assets

At December 31, 2010, assets were pledged to collateralize repurchase agreements, other securities financing agreements, derivative transactions and for other purposes, including to secure borrowings and public deposits. Certain of these pledged assets may be sold or repledged by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated Balance Sheets. In addition, at December 31, 2010 and 2009, the Firm had pledged $288.7 billion and $344.6 billion, respectively, of financial instruments it owns that may not be sold or repledged by the secured parties. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	**2010**	2009
Securities	**$ 112.1**	$ 155.3
Loans	**214.8**	285.5
Trading assets and other	**123.2**	84.6
Total assets pledged[(a)]	**$ 450.1**	$ 525.4

(a) Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 16 on pages 244–259 of this Annual Report for additional information on assets and liabilities of consolidated VIEs.

Collateral

At December 31, 2010 and 2009, the Firm had accepted assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of approximately $655.0 billion and $635.6 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately $521.3 billion and $472.7 billion were sold or repledged, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales and to collateralize deposits and derivative agreements. The reporting of collateral sold or repledged was revised in 2010 to include certain securities used to cover short sales and to collateralize deposits and derivative agreements. Prior period amounts have been revised to conform to the current presentation. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.

Contingencies

In 2008, the Firm resolved with the IRS issues related to compliance with reporting and withholding requirements for certain accounts transferred to The Bank of New York Mellon Corporation ("BNYM") in connection with the Firm's sale to BNYM of its corporate trust business. The resolution of these issues did not have a material effect on the Firm.

Note 32 – Litigation

As of December 31, 2010, the Firm and its subsidiaries are defendants or putative defendants in more than 10,000 legal proceedings, in the form of regulatory/government investigations as well as private, civil litigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel claims or legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $4.5 billion at December 31, 2010. This estimated aggregate range of reasonably possible losses is based upon currently available information for those proceedings in which the Firm is involved, taking into account the Firm's best estimate of such losses for those cases for which such estimate can be made. For certain cases, the Firm does not believe that an estimate can currently be made. The Firm's estimate involves significant judgment, given the varying stages of the proceedings (including the fact that many of them are currently in preliminary stages), the existence of multiple defendants (including the Firm) in many of such proceedings whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims), and the attendant uncertainty of the various potential outcomes of such proceedings. Accordingly, the Firm's estimate will change from time to time, and actual losses may be more than the current estimate.

Set forth below are descriptions of the Firm's material legal proceedings.

Auction-Rate Securities Investigations and Litigation. Beginning in March 2008, several regulatory authorities initiated investigations of a number of industry participants, including the Firm, concerning possible state and federal securities law violations in connection with the sale of auction-rate securities. The market for many such securities had frozen and a significant number of auctions for those securities began to fail in February 2008.

The Firm, on behalf of itself and affiliates, agreed to a settlement in principle with the New York Attorney General's Office which provided, among other things, that the Firm would offer to purchase at par certain auction-rate securities purchased from J.P. Morgan Securities LLC ("JPMorgan Securities"; formerly J.P. Morgan Securities Inc.), Chase Investment Services Corp. and Bear, Stearns & Co. Inc. by individual investors, charities and small- to medium-sized businesses. The Firm also agreed to a substantively similar settlement in principle with the Office of Financial Regulation for the State of Florida and the North American Securities Administrator Association ("NASAA") Task Force, which agreed to recommend approval of the settlement to all remaining states, Puerto Rico and the U.S. Virgin Islands. The Firm has finalized the settlement agreements with the New York Attorney General's Office and the Office of Financial Regulation for the State of Florida. The settlement agreements provide for the payment of penalties totaling $25 million to all states. The Firm is currently in the process of finalizing consent agreements with NASAA's member states; over 40 of these consent agreements have been finalized to date.

The Firm also faces a number of civil actions relating to the Firm's sales of auction-rate securities, including a putative securities class action in the United States District Court for the Southern District of New York that seeks unspecified damages, and individual arbitrations and lawsuits in various forums brought by institutional and individual investors that, together, seek damages totaling more than $200 million relating to the Firm's sales of auction-rate securities. One action is brought by an issuer of auction-rate securities. The actions generally allege that the Firm and other firms manipulated the market for auction-rate securities by placing bids at auctions that affected these securities' clearing rates or otherwise supported the auctions without properly disclosing these activities. Some actions also allege that the Firm misrepresented that auction-rate securities were short-term instruments. The Firm has filed motions to dismiss each of the actions, which are being coordinated before the Southern District. These motions are currently pending.

Additionally, the Firm was named in two putative antitrust class actions in the United States District Court for the Southern District of New York. The actions allege that the Firm, along with numerous other financial institution defendants, colluded to maintain and stabilize the auction-rate securities market and then to withdraw their support for the auction-rate securities market. In January 2010, the District Court dismissed both actions. The Second Circuit Court of Appeals consolidated the two appeals. That appeal is currently pending.

Bear Stearns Hedge Fund Matters. Bear Stearns, certain current or former subsidiaries of Bear Stearns, including Bear Stearns Asset Management, Inc. ("BSAM") and Bear, Stearns & Co. Inc., and certain current or former Bear Stearns employees are named defendants (collectively the "Bear Stearns defendants") in multiple civil actions and arbitrations relating to alleged losses of more than $1 billion resulting from the failure of the Bear Stearns High Grade Structured Credit Strategies Master Fund, Ltd. (the "High Grade Fund") and the Bear Stearns High Grade Structured Credit Strategies Enhanced Leverage Master Fund, Ltd. (the "Enhanced Leverage Fund") (collectively, the "Funds"). BSAM served as investment manager for both of the Funds, which were organized such that there were U.S. and Cayman Islands "feeder funds" that invested substantially all their assets, directly or indirectly, in the Funds. The Funds are in liquidation.

There are currently four civil actions pending in the United States District Court for the Southern District of New York relating to the Funds. Two of these actions involve derivative lawsuits brought on behalf of purchasers of partnership interests in the two U.S. feeder

funds, alleging that the Bear Stearns defendants mismanaged the Funds and made material misrepresentations to and/or withheld information from investors in the feeder funds. These actions seek, among other things, unspecified compensatory damages based on alleged investor losses. The third action, brought by the Joint Voluntary Liquidators of the Cayman Islands feeder funds, makes allegations similar to those asserted in the derivative lawsuits related to the U.S. feeder funds, and seeks compensatory and punitive damages. Motions to dismiss in these three cases have been granted in part and denied in part. An agreement in principle has been reached, pursuant to which BSAM would pay a maximum of approximately $19 million to settle the one derivative action relating to the feeder fund to the High Grade Fund. BSAM has reserved the right not to proceed with this settlement if plaintiff is unable to secure the participation of investors whose net contributions meet a prescribed percentage of the aggregate net contributions to the High Grade Fund. The agreement in principle remains subject to documentation and approval by the Court. Discovery in the other two actions is ongoing.

The fourth action was brought by Bank of America and Banc of America Securities LLC (together "BofA") alleging breach of contract and fraud in connection with a May 2007 $4 billion securitization, known as a "CDO-squared," for which BSAM served as collateral manager. This securitization was composed of certain collateralized debt obligation ("CDO") holdings that were purchased by BofA from the Funds. Bank of America seeks in excess of $3 billion in damages. Defendants' motion to dismiss in this action was largely denied, an amended complaint was filed and discovery is ongoing.

Bear Stearns Shareholder Litigation and Related Matters. Various shareholders of Bear Stearns have commenced purported class actions against Bear Stearns and certain of its former officers and/or directors on behalf of all persons who purchased or otherwise acquired common stock of Bear Stearns between December 14, 2006 and March 14, 2008 (the "Class Period"). During the Class Period Bear Stearns had between 115 and 120 million common shares outstanding, and the price of those securities declined from a high of $172.61 to a low of $30 at the end of the period. The actions, originally commenced in several federal courts, allege that the defendants issued materially false and misleading statements regarding Bear Stearns' business and financial results and that, as a result of those false statements, Bear Stearns' common stock traded at artificially inflated prices during the Class Period. Separately, several individual shareholders of Bear Stearns have commenced or threatened to commence arbitration proceedings and lawsuits asserting claims similar to those in the putative class actions. In addition, Bear Stearns and certain of its former officers and/or directors have also been named as defendants in a number of purported class actions commenced in the United States District Court for the Southern District of New York seeking to represent the interests of participants in the Bear Stearns Employee Stock Ownership Plan ("ESOP") during the time period of December 2006 to March 2008. These actions, brought under the Employee Retirement Income Security Act ("ERISA"), allege that defendants breached their fiduciary duties to plaintiffs and to the other participants and beneficiaries of the ESOP by (a) failing to manage prudently the ESOP's investment in Bear Stearns securities; (b) failing to communicate fully and accurately about the risks of the ESOP's investment in Bear Stearns stock; (c) failing to avoid or address alleged conflicts of interest; and (d) failing to monitor those who managed and administered the ESOP.

Bear Stearns, former members of Bear Stearns' Board of Directors and certain of Bear Stearns' former executive officers have also been named as defendants in two purported shareholder derivative suits, subsequently consolidated into one action, pending in the United States District Court for the Southern District of New York. Plaintiffs are asserting claims for breach of fiduciary duty, violations of federal securities laws, waste of corporate assets and gross mismanagement, unjust enrichment, abuse of control and indemnification and contribution in connection with the losses sustained by Bear Stearns as a result of its purchases of subprime loans and certain repurchases of its own common stock. Certain individual defendants are also alleged to have sold their holdings of Bear Stearns common stock while in possession of material nonpublic information. Plaintiffs seek compensatory damages in an unspecified amount. Plaintiffs later filed a second amended complaint asserting, for the first time, purported class action claims, as well as new allegations concerning events that took place in March 2008.

All of the above-described actions filed in federal courts were ordered transferred and joined for pre-trial purposes before the United States District Court for the Southern District of New York. Defendants moved to dismiss the purported securities class action, the shareholders' derivative action and the ERISA action. In January 2011, the District Court granted the motions to dismiss the derivative and ERISA actions, and denied the motion as to the securities action. Plaintiffs in the derivative action have filed a motion for reconsideration of the dismissal. Discovery will now commence in the securities action.

City of Milan Litigation and Criminal Investigation. In January 2009, the City of Milan, Italy (the "City") issued civil proceedings against (among others) JPMorgan Chase Bank, N.A. and J.P. Morgan Securities Ltd. (together, "JPMorgan Chase") in the District Court of Milan. The proceedings relate to (a) a bond issue by the City in June 2005 (the "Bond") and (b) an associated swap transaction, which was subsequently restructured on a number of occasions between 2005 and 2007 (the "Swap"). The City seeks damages and/or other remedies against JPMorgan Chase (among others) on the grounds of alleged "fraudulent and deceitful acts" and alleged breach of advisory obligations by JPMorgan Chase (among others) in connection with the Swap and the Bond, together with related swap transactions with other counterparties. The civil proceedings continue and there will be an initial hearing on March 9, 2011. JPMorgan Chase Bank, N.A. will seek an adjournment on the grounds that it has filed a challenge to the Italian Supreme Court's jurisdiction over JPMorgan Chase Bank, N.A., which has yet to be decided. The judge directed four current and former JPMorgan Chase personnel and JPMorgan Chase Bank, N.A. (as well as other individuals and three other banks) to go forward to a full trial that

started in May 2010. Although the Firm is not charged with any crime and does not face criminal liability, if one or more of its employees were found guilty, the Firm could be subject to administrative sanctions, including restrictions on its ability to conduct business in Italy and monetary penalties. In the initial hearings, the City successfully applied to join some of the claims in the civil proceedings against the individuals and JPMorgan Chase Bank, N.A. to the criminal proceedings. In addition, a consumer association has also been given leave to join the criminal proceedings to seek damages from the defendant banks.

Enron Litigation. JPMorgan Chase and certain of its officers and directors are involved in several lawsuits that together seek substantial damages arising out of the Firm's banking relationships with Enron Corp. and its subsidiaries ("Enron"). A number of actions and other proceedings against the Firm previously were resolved, including a class action lawsuit captioned Newby v. Enron Corp. and adversary proceedings brought by Enron's bankruptcy estate. The remaining Enron-related actions include individual actions by Enron investors, an action by an Enron counterparty, and a purported class action filed on behalf of JPMorgan Chase employees who participated in the Firm's 401(k) plan asserting claims under the ERISA for alleged breaches of fiduciary duties by JPMorgan Chase, its directors and named officers. That action has been dismissed, and is on appeal to the United States Court of Appeals for the Second Circuit.

Interchange Litigation. A group of merchants has filed a series of putative class action complaints in several federal courts. The complaints allege that VISA and MasterCard, as well as certain other banks and their respective bank holding companies, conspired to set the price of credit and debit card interchange fees, enacted respective association rules in violation of anti-trust laws, and engaged in tying/bundling and exclusive dealing. The complaint seeks unspecified damages and injunctive relief based on the theory that interchange would be lower or eliminated but for the challenged conduct. Based on publicly available estimates, Visa and MasterCard branded payment cards generated approximately $40 billion of interchange fees industry-wide in 2009. All cases have been consolidated in the United States District Court for the Eastern District of New York for pretrial proceedings. The Court has dismissed all claims relating to periods prior to January 2004. The Court has not yet ruled on motions relating to the remainder of the case. Fact and expert discovery in the case have closed. The plaintiffs have filed a motion seeking class certification, and the defendants have opposed that motion. The Court has not yet ruled on the class certification motion.

In addition to the consolidated class action complaint, plaintiffs filed supplemental complaints challenging the initial public offerings ("IPOs") of MasterCard and Visa (the "IPO Complaints"). With respect to the MasterCard IPO, plaintiffs allege that the offering violated Section 7 of the Clayton Act and Section 1 of the Sherman Act and that the offering was a fraudulent conveyance. With respect to the Visa IPO, plaintiffs are challenging the Visa IPO on antitrust theories parallel to those articulated in the MasterCard IPO pleading. Defendants have filed motions to dismiss the IPO Complaints. The Court has not yet ruled on those motions.

Investment Management Litigation. Four cases have been filed claiming that investment portfolios managed by JPMorgan Investment Management Inc. ("JPMorgan Investment Management") were inappropriately invested in securities backed by subprime residential real estate collateral. Plaintiffs claim that JPMorgan Investment Management and related defendants are liable for losses of more than $1 billion in market value of these securities. The first case was filed by NM Homes One, Inc. in federal District Court in New York, and the Court granted JPMorgan Chase Bank, N.A.'s motion to dismiss nine of plaintiff's ten causes of action, leaving a breach of contract claim. The Court thereafter granted the plaintiff's motion for reconsideration and reinstated the common law non-fraud claims for breach of fiduciary duty, negligence, and gross negligence. The plaintiff withdrew its claim for negligent misrepresentation. The Firm has filed a renewed motion to dismiss the common law non-fraud claims and a motion for judgment on the pleadings as to the breach of contract claim. In the second case, which was filed by Assured Guaranty (U.K.) in New York state court, the New York State Appellate Division allowed plaintiff to proceed with its claims for breach of fiduciary duty and gross negligence, and for breach of contract based on alleged violations of the Delaware Insurance Code. The Firm sought and has obtained leave to appeal to the New York State Court of Appeals the decision by the Appellate Division to allow the breach of fiduciary duty and gross negligence claims to proceed. In the third case, filed by Ambac Assurance UK Limited in New York state court, the lower court granted JPMorgan Investment Management's motion to dismiss, and plaintiff has filed a notice of appeal. The fourth case was filed by CMMF LLP in New York state court; the lower court granted JPMorgan Investment Management's motion to dismiss the claims, other than claims for breach of contract and negligent misrepresentation. The Appellate Division affirmed the lower court's decision. Plaintiff has since filed an amended complaint seeking to assert claims under New York law for breach of fiduciary duty, gross negligence, breach of contract and negligent misrepresentation.

Lehman Brothers Bankruptcy Proceedings. In March 2010, the Examiner appointed by the Bankruptcy Court presiding over the Chapter 11 bankruptcy proceedings of Lehman Brothers Holdings Inc ("LBHI") and several of its subsidiaries (collectively, "Lehman") released a report as to his investigation into Lehman's failure and related matters. The Examiner concluded that one common law claim potentially could be asserted against the Firm for contributing to Lehman's failure, though he characterized the claim as "not strong." The Examiner also opined that certain cash and securities collateral provided by LBHI to the Firm in the weeks and days preceding LBHI's demise potentially could be challenged under the Bankruptcy Code's fraudulent conveyance or preference provisions, though the Firm is of the view that its right to such collateral is protected by the Bankruptcy Code's safe harbor provisions. In May 2010, LBHI and its Official Committee of Unsecured Creditors filed an adversary proceeding against JPMorgan Chase Bank, N.A. in the

United States Bankruptcy Court for the Southern District of New York. The complaint asserts both federal bankruptcy law and state common law claims, and seeks, among other relief, to recover $8.6 billion in collateral that was transferred to JPMorgan Chase Bank, N.A. in the week preceding LBHI's bankruptcy. The complaint also seeks unspecified damages on the grounds that JPMorgan Chase Bank, N.A.'s collateral requests hastened LBHI's demise. The Firm has moved to dismiss plaintiffs' amended complaint in its entirety. The Firm also filed counterclaims against LBHI alleging that LBHI fraudulently induced the Firm to make large clearing advances to Lehman against inappropriate collateral, which left the Firm with more than $25 billion in claims against the estate of Lehman's broker-dealer, which could be unpaid if the Firm is required to return any collateral to Lehman. The case is in the early stages, with a trial scheduled for 2012. In addition, the Firm may also face claims in the liquidation proceeding pending before the same Bankruptcy Court under the Securities Investor Protection Act ("SIPA") for LBHI's U.S. broker-dealer subsidiary, Lehman Brothers Inc. ("LBI"). The SIPA Trustee has advised the Firm that certain of the securities and cash pledged as collateral for the Firm's claims against LBI may be customer property free from any security interest in favor of the Firm. The Firm has also responded to various regulatory inquiries regarding the Lehman matter.

Madoff Litigation. JPMorgan Chase & Co., JPMorgan Chase Bank, N.A., JPMorgan Securities LLC, and JPMorgan Securities Ltd. have been named as defendants in a lawsuit brought by the trustee for the liquidation of Bernard L. Madoff Investment Securities LLC (the "Trustee"). The Trustee asserts 28 causes of action against JPMorgan Chase, 16 of which seek to avoid certain transfers (direct or indirect) made to JPMorgan Chase that are alleged to have been preferential or fraudulent under the federal Bankruptcy Code and the New York Debtor and Creditor Law. The remaining causes of action are for, among other things, aiding and abetting fraud, aiding and abetting breach of fiduciary duty, conversion and unjust enrichment. The complaint generally alleges that JPMorgan Chase, as Madoff's long-time bank, facilitated the maintenance of Madoff's Ponzi scheme and overlooked signs of wrongdoing in order to obtain profits and fees. The complaint purports to seek approximately $6 billion in damages from JPMorgan Chase, and to recover approximately $425 million in transfers that JPMorgan Chase allegedly received directly or indirectly from Bernard Madoff's brokerage firm. JPMorgan Chase has filed a motion to return the case from the Bankruptcy Court to the District Court, and intends to seek the dismissal of all or most of the Trustee's claims once that motion is decided.

Separately, J.P. Morgan Trust Company (Cayman) Limited, JPMorgan (Suisse) SA, and J.P. Morgan Securities Ltd. have been named as defendants in several suits in Bankruptcy Court and state and federal courts in New York arising out of the liquidation proceedings of Fairfield Sentry Limited and Fairfield Sigma Limited (together, "Fairfield"), so-called Madoff feeder funds. These actions advance theories of mistake and restitution and seek to recover payments previously made to defendants by the funds totaling approximately $140 million.

Mortgage-Backed Securities Litigation and Regulatory Investigations. JPMorgan Chase and affiliates, Bear Stearns and affiliates and Washington Mutual and affiliates have been named as defendants in a number of cases in their various roles as issuer and/or underwriter in mortgage-backed securities ("MBS") offerings. These cases include purported class action suits, actions by individual purchasers of securities and actions by insurance companies that guaranteed payments of principal and interest for particular tranches. Although the allegations vary by lawsuit, these cases generally allege that the offering documents for more than $100 billion of securities issued by dozens of securitization trusts contained material misrepresentations and omissions, including statements regarding the underwriting standards pursuant to which the underlying mortgage loans were issued.

In the actions against the Firm as an MBS issuer (and, in some cases, also as an underwriter of its own MBS offerings), three purported class actions are pending against JPMorgan Chase and Bear Stearns, and/or certain of their affiliates and current and former employees, in the United States District Courts for the Eastern and Southern Districts of New York. Defendants have moved to dismiss these actions. In addition, Washington Mutual affiliates, WaMu Asset Acceptance Corp. and WaMu Capital Corp., are defendants, along with certain former officers or directors of WaMu Asset Acceptance Corp., have been named as defendants in three now-consolidated purported class action cases pending in the Western District of Washington. Defendants' motion to dismiss was granted in part to dismiss all claims relating to MBS offerings in which a named plaintiff was not a purchaser. Discovery is ongoing.

In other actions brought against the Firm as an MBS issuer (and, in some cases, also as an underwriter) certain JPMorgan Chase entities, several Bear Stearns entities, and certain Washington Mutual affiliates are defendants in nine separate individual actions commenced by the Federal Home Loan Banks of Pittsburgh, Seattle, San Francisco, Chicago, Indianapolis and Atlanta in various state courts around the country; and certain JPMorgan Chase, Bear Stearns and Washington Mutual entities are also among the defendants named in separate individual actions commenced by Cambridge Place Investment Management Inc. in Massachusetts state court, by The Charles Schwab Corporation in state court in California and by Allstate in state court in New York.

EMC Mortgage Corporation ("EMC"), a subsidiary of JPMorgan Chase, is a defendant in four pending actions commenced by bond insurers that guaranteed payments of principal and interest on approximately $3.6 billion of certain classes of seven different MBS offerings sponsored by EMC. Three of those actions, commenced by Assured Guaranty Corp., Ambac Assurance Corporation and Syncora Guarantee, Inc., respectively, are pending in the United States District Court for the Southern District of New York. The fourth action, commenced by CIFG Assurance North America, Inc., is pending in state court in Texas. In each action, plaintiff claims that the underlying mortgage loans had origination defects that purportedly violate certain representations and warranties given by EMC to plaintiffs, and that EMC has breached the relevant agree-

ments between the parties by failing to repurchase allegedly defective mortgage loans. Each action seeks unspecified damages and an order compelling EMC to repurchase those loans.

In the actions against the Firm solely as an underwriter of other issuers' MBS offerings, the Firm has contractual rights to indemnification from the issuers, but those indemnity rights may prove effectively unenforceable where the issuers are now defunct, such as affiliates of IndyMac Bancorp ("IndyMac Trusts") and Thornburg Mortgage ("Thornburg"). With respect to the IndyMac Trusts, JPMorgan Securities, along with numerous other underwriters and individuals, is named as a defendant, both in its own capacity and as successor to Bear Stearns in a purported class action pending in the United States District Court for the Southern District of New York brought on behalf of purchasers of securities in various IndyMac Trust MBS offerings. The Court in that action has dismissed claims as to certain such securitizations, including all offerings in which no named plaintiff purchased securities, and allowed claims as to other offerings to proceed. Plaintiffs' motion to certify a class of investors in certain offerings is pending, and discovery is ongoing. In addition, JPMorgan Securities and JPMorgan Chase are named as defendants in an individual action filed by the Federal Home Loan Bank of Pittsburgh in connection with a single offering by an affiliate of IndyMac Bancorp. Discovery in that action is ongoing. Separately, JPMorgan Securities, as successor to Bear, Stearns & Co. Inc., along with other underwriters and certain individuals, are defendants in an action pending in state court in California brought by MBIA Insurance Corp. ("MBIA"). The action relates to certain securities issued by IndyMac trusts in offerings in which Bear Stearns was an underwriter, and as to which MBIA provided guaranty insurance policies. MBIA purports to be subrogated to the rights of the MBS holders, and seeks recovery of sums it has paid and will pay pursuant to those policies. Discovery is ongoing. With respect to Thornburg, a Bear Stearns subsidiary is a named defendant in a purported class action pending in the United States District Court for the District of New Mexico along with a number of other financial institutions that served as depositors and/or underwriters for three Thornburg MBS offerings.

In addition to the above-described litigation, the Firm has also received, and responded to, a number of subpoenas and informal requests for information from federal authorities concerning mortgage-related matters, including inquiries concerning a number of transactions involving the Firm's underwriting and issuance of MBS and its participation in offerings of certain collateralized debt obligations.

In addition to the above mortgage-related matters, the Firm is now a defendant in an action commenced by Deutsche Bank, described in more detail below with respect to the Washington Mutual Litigations.

Mortgage Foreclosure Investigations and Litigation. Multiple state and federal officials have announced investigations into the procedures followed by mortgage servicing companies and banks, including JPMorgan Chase & Co. and its affiliates, relating to foreclosure and loss mitigation processes. The Firm is cooperating with these investigations, and these investigations could result in material fines, penalties, equitable remedies (including requiring default servicing or other process changes), or other enforcement actions, as well as significant legal costs in responding to governmental investigations and additional litigation. Three purported class action lawsuits have also been filed against the Firm relating to its mortgage foreclosure procedures.

These investigations and actions follow the Firm's decision in late September 2010 to commence a temporary suspension of obtaining mortgage foreclosure judgments in the states and territories that require a judicial foreclosure process. Subsequently, the Firm extended this temporary suspension to foreclosure sales in those states and territories that require a judicial foreclosure process, and to foreclosures and foreclosure sales in the majority of remaining states where a judicial process is not required, but where affidavits signed by Firm personnel may have been used as part of the foreclosure process. In mid-October, the Firm also temporarily suspended evictions in the states and territories in which it had suspended foreclosures and foreclosure sales, as well as in certain additional states in which an affidavit signed by Firm personnel may have been used in connection with eviction proceedings.

The Firm's temporary suspension arose out of certain questions about affidavits of indebtedness prepared by local foreclosure counsel, signed by Firm employees and filed or used in mortgage foreclosure proceedings in certain states. Although the Firm believes, based on its work to date, that the statements in those affidavits of indebtedness regarding the fact of default and amount of indebtedness were materially accurate, in certain instances, the underlying review and verification of this information was performed by Firm personnel other than the affiants, or the affidavits may not have been properly notarized.

As of January 2011, the Firm has resumed initiation of new foreclosure proceedings in nearly all states in which it had previously suspended such proceedings, utilizing revised procedures in connection with the execution of affidavits and other documents used by Firm employees in the foreclosure process. The Firm is also in the process of reviewing pending foreclosure matters in these states to determine whether remediation of specific documentation is necessary, and intends to resume pending foreclosures as the review, and if necessary, remediation, of each pending matter is completed. The Firm intends to begin taking these same actions in all remaining states in the near future.

Municipal Derivatives Investigations and Litigation. The Department of Justice (in conjunction with the Internal Revenue Service), the Securities and Exchange Commission ("SEC"), a group of state attorneys general and the Office of the Comptroller of the Currency ("OCC") have been investigating JPMorgan Chase and Bear Stearns for possible antitrust, securities and tax-related violations in connection with the bidding or sale of guaranteed investment contracts and derivatives to municipal issuers. The Philadelphia Office of the SEC provided notice to JPMorgan Securities that it intends to recommend that the SEC bring civil charges in connection with its investigation. JPMorgan Securities has responded to that notice, as well as to a separate notice that that Philadelphia

Office of the SEC provided to Bear, Stearns & Co. Inc. The Firm has been cooperating with all of these investigations, and is seeking to resolve them on a negotiated basis.

Purported class action lawsuits and individual actions (the "Municipal Derivatives Actions") have been filed against JPMorgan Chase and Bear Stearns, as well as numerous other providers and brokers, alleging antitrust violations in the reportedly $100 billion to $300 billion annual market for financial instruments related to municipal bond offerings referred to collectively as "municipal derivatives." The Municipal Derivatives Actions have been consolidated in the United States District Court for the Southern District of New York. The Court denied in part and granted in part defendants' motions to dismiss the purported class and individual actions, permitting certain claims to proceed against the Firm and others under federal and California state antitrust laws and under the California false claims act. Subsequently, a number of additional individual actions asserting substantially similar claims, including claims under New York and West Virginia state antitrust statutes, were filed against JPMorgan Chase, Bear Stearns and numerous other defendants. Most of these cases have been coordinated for pretrial purposes in the United States District Court for the Southern District of New York. The Firm is seeking to have the balance of these cases coordinated before the same court. Discovery is ongoing.

Following JPMorgan Securities' settlement with the SEC in connection with certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions, the County filed a complaint against the Firm and several other defendants in the Circuit Court of Jefferson County, Alabama. The suit alleges that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3 billion in warrants issued by the County and chosen as the counterparty for certain swaps executed by the County. In its complaint, Jefferson County alleges that the Firm concealed these third-party payments and that, but for this concealment, the County would not have entered into the transactions. The County further alleges that the transactions increased the risks of its capital structure and that, following the downgrade of certain insurers that insured the warrants, the County's interest obligations increased and the principal due on a portion of its outstanding warrants was accelerated. The Court denied the Firm's motion to dismiss the complaint. The Firm filed a mandamus petition with the Alabama Supreme Court, seeking immediate appellate review of this decision. The petition is now fully briefed and all proceedings have been stayed pending adjudication of the petition.

A putative class action was filed on behalf of sewer ratepayers against JPMorgan Chase and Bear Stearns and numerous other defendants, based on substantially the same alleged conduct described above. The Firm's motion to dismiss the complaint for lack of standing was denied in January 2011.

Two insurance companies that guaranteed the payment of principal and interest on warrants issued by Jefferson County have filed separate actions against JPMorgan Chase (and one of the insurers has also named Jefferson County) in New York state court asserting that defendants fraudulently misled them into issuing the insurance coverage, based upon substantially the same alleged conduct described above and other alleged non-disclosures. One insurer claims that it insured an aggregate principal amount of nearly $1.2 billion in warrants, and seeks unspecified damages in excess of $400 million, as well as unspecified punitive damages. The other insurer claims that it insured an aggregate principal amount of more than $378 million and seeks recovery of $4 million that it alleges it paid under the policies to date as well as any payments it will make in the future and unspecified punitive damages. In December 2010, the court denied the Firm's motions to dismiss each of the complaints and the parties are currently engaged in discovery.

The Alabama Public Schools and College Authority ("APSCA") brought a declaratory judgment action in the United States District Court for the Northern District of Alabama claiming that certain interest rate swaption transactions entered into with JPMorgan Chase Bank, N.A. are void on the grounds that the APSCA purportedly did not have the authority to enter into the transactions or, alternatively, are voidable at the APSCA's option because of its alleged inability to issue refunding bonds in relation to the swaption. The action was settled in December 2010 for a payment by APSCA to the Firm and, pursuant to the settlement, the court dismissed the action by order dated December 27, 2010.

Overdraft Fee/Debit Posting Order Litigation. JPMorgan Chase Bank, N.A. has been named as a defendant in several purported class actions relating to its practices in posting debit card transactions to customers' deposit accounts. Plaintiffs allege that the Firm improperly re-ordered debit card transactions from the highest amount to lowest amount before processing these transactions in order to generate unwarranted overdraft fees. Plaintiffs contend that the Firm should have processed such transactions in the chronological order they were authorized. Plaintiffs seek the disgorgement of all overdraft fees paid to the Firm by plaintiffs, since approximately 2003, as a result of the re-ordering of debit card transactions. The claims against the Firm have been consolidated with numerous complaints against other national banks in Multi-District Litigation pending in the United States District Court for the Southern District of Florida. The Firm's motion to compel arbitration of certain plaintiffs' claims was denied by the District Court. That ruling is currently on appeal. Discovery is proceeding in the District Court. Plaintiffs' motion for class certification is due to be filed in April 2011.

Petters Bankruptcy and Related Matters. JPMorgan Chase and certain of its affiliates, including One Equity Partners, LLC ("OEP"), have been named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain entities affiliated with Petters (collectively, "Petters") and the Polaroid Corporation. The principal actions against JPMorgan Chase and its affiliates have been brought by the receiver and bankruptcy trustee for Petters and generally seek to avoid, on fraudulent transfer and preference grounds, certain purported transfers in connection with (i) the 2005 acquisition of Polaroid by Petters, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions entered into

with Polaroid; and (iii) a credit line and investment accounts held by Petters. The actions collectively seek recovery of approximately $450 million.

Securities Lending Litigation. JPMorgan Chase Bank, N.A. has been named as a defendant in four putative class actions asserting ERISA and other claims pending in the United States District Court for the Southern District of New York brought by participants in the Firm's securities lending business. A fifth lawsuit was filed in New York state court by an individual participant in the program. Three of the purported class actions, which have been consolidated, relate to investments of approximately $500 million in medium-term notes of Sigma Finance Inc. ("Sigma"). In August 2010, the Court certified a plaintiff class consisting of all securities lending participants that held Sigma medium-term notes on September 30, 2008, including those that held the notes by virtue of participation in the investment of cash collateral through a collective fund, as well as those that held the notes by virtue of the investment of cash collateral through individual accounts. All discovery has been completed. The Court has set a schedule for filing summary judgment briefs, pursuant to which the Firm's motion is to be fully briefed by April 2011.

The fourth putative class action concerns investments of approximately $500 million in Lehman Brothers medium-term notes. The Firm has moved to dismiss the amended complaint and is awaiting a decision. The Magistrate Judge ordered discovery to proceed while the motion is pending, but this ruling is on appeal to the District Judge and also is awaiting a decision. The New York state court action, which is not a class action, concerns the plaintiff's alleged loss of money in both Sigma and Lehman Brothers medium-term notes. The Firm has answered the complaint. The Court denied the Firm's motion to stay this action pending resolution of the proceedings in federal court**,** and discovery has commenced.

Service Members Civil Relief Act and Housing and Economic Recovery Act Investigations and Litigation. Multiple government officials have announced their intent to commence, or have commenced, inquiries into the Firm's procedures related to the Service Members Civil Relief Act ("SCRA") and the Housing and Economic Recovery Act of 2008 ("HERA"). These inquiries have been prompted by the Firm's public statements about its SCRA and HERA compliance and actions to remedy certain instances in which the Firm mistakenly charged active or recently-active military personnel mortgage interest and fees in excess of that permitted by SCRA and HERA, and in a number of instances, foreclosed on borrowers protected by SCRA and HERA. The Firm has implemented a number of procedural enhancements and controls to strengthen its SCRA and HERA compliance and is still reviewing the circumstances under which these issues arose. In addition, an individual borrower has filed a purported nationwide class action in United States District Court for South Carolina against the Firm alleging violations of the SCRA.

Washington Mutual Litigations. Subsequent to JPMorgan Chase's acquisition from the Federal Deposit Insurance Corporation ("FDIC") of substantially all of the assets and certain specified liabilities of Washington Mutual Bank, Henderson Nevada ("Washington Mutual Bank"), in September 2008, Washington Mutual Bank's parent holding company, Washington Mutual, Inc. ("WMI") and its wholly-owned subsidiary, WMI Investment Corp. (together, the "Debtors"), both commenced voluntary cases under Chapter 11 of Title 11 of the United States Code in the United States Bankruptcy Court for the District of Delaware (the "Bankruptcy Case"). In the Bankruptcy Case, the Debtors have asserted rights and interests in certain assets. The assets in dispute include principally the following: (a) approximately $4 billion in trust securities contributed by WMI to Washington Mutual Bank (the "Trust Securities"); (b) the right to tax refunds arising from overpayments attributable to operations of Washington Mutual Bank and its subsidiaries; (c) ownership of and other rights in approximately $4 billion that WMI contends are deposit accounts at Washington Mutual Bank and one of its subsidiaries; and (d) ownership of and rights in various other contracts and other assets (collectively, the "Disputed Assets").

WMI, JPMorgan Chase and the FDIC have since been involved in litigations over these and other claims pending in the Bankruptcy Court and the United States District Court for the District of Columbia.

In May 2010, WMI, JPMorgan Chase and the FDIC announced a global settlement agreement among themselves and significant creditor groups (the "Global Settlement Agreement"). The Global Settlement Agreement is incorporated into WMI's proposed Chapter 11 plan ("the Plan") that has been submitted to the Bankruptcy Court. If approved by the Bankruptcy Court, the Global Settlement would resolve numerous disputes among WMI, JPMorgan Chase, the FDIC in its capacity as receiver for Washington Mutual Bank and the FDIC in its corporate capacity, as well as those of significant creditor groups, including disputes relating to the Disputed Assets.

Other proceedings related to Washington Mutual's failure are also pending before the Bankruptcy Court. Among other actions, in July 2010, certain holders of the Trust Securities commenced an adversary proceeding in the Bankruptcy Court against JPMorgan Chase, WMI, and other entities seeking, among other relief, a declaratory judgment that WMI and JPMorgan Chase do not have any right, title or interest in the Trust Securities. In early January 2011, the Bankruptcy Court granted summary judgment to JPMorgan Chase and denied summary judgment to the plaintiffs in the Trust Securities adversary proceeding.

The Bankruptcy Court considered confirmation of the Plan, including the Global Settlement Agreement, in hearings in early December 2010. In early January 2011, the Bankruptcy Court issued an opinion in which it concluded that the Global Settlement Agreement is fair and reasonable, but that the Plan cannot be confirmed until the parties correct certain deficiencies, which include the scope of releases. None of these deficiencies relate to the Disputed Assets. The Equity Committee has filed a petition seeking a direct appeal to the United States Court of Appeals for the Third Circuit from so much of the Bankruptcy Court's ruling that found the settlement to be fair and reasonable. A revised Plan was filed with the Bankruptcy Court in February 2011, and the Bankruptcy Court has scheduled a hearing for May 2, 2011. If the Global Settlement is effected and the Plan is

confirmed, the Firm currently estimates it will not incur additional obligations beyond those already reflected in its liabilities for the numerous disputes covered by the Global Settlement.

Other proceedings related to Washington Mutual's failure are pending before the United States District Court for the District of Columbia include a lawsuit brought by Deutsche Bank National Trust Company, initially against the FDIC, asserting an estimated $6 billion to $10 billion in damages based upon alleged breach of various mortgage securitization agreements and alleged violation of certain representations and warranties given by certain WMI subsidiaries in connection with those securitization agreements. Deutsche Bank filed an amended complaint in August 2010, adding JPMorgan Chase Bank, N.A. as a party. The amended complaint includes assertions that JPMorgan Chase may have assumed liabilities relating to the mortgage securitization agreements. In November 2010, JPMorgan Chase and the FDIC moved to dismiss the complaint. JPMorgan Chase also moved for a partial summary judgment holding that the FDIC retained liability for Deutsche Bank's claims.

In addition, JPMorgan Chase was sued in an action originally filed in State District Court in Texas (the "Texas Action") by certain holders of WMI common stock and debt of WMI and Washington Mutual Bank who seek unspecified damages alleging that JPMorgan Chase acquired substantially all of the assets of Washington Mutual Bank from the FDIC at an allegedly too-low price. The Texas Action was transferred to the United States District Court for the District of Columbia, which ultimately granted JPMorgan Chase's and the FDIC's motions to dismiss the complaint. Plaintiffs have appealed this dismissal to the United States Court of Appeals for the District of Columbia Circuit. Oral argument is currently scheduled for April 5, 2011.

* * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously in all such matters. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. The Firm accrues for potential liability arising from such proceedings when it is probable that such liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downwards, as appropriate, based on management's best judgment after consultation with counsel. During the years ended December 31, 2010 and 2009, the Firm incurred $7.4 billion and $161 million, respectively, of litigation expense. During the year ended December 31, 2008, the Firm recorded a net benefit of $781 million to litigation expense. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what the eventual outcome of the currently pending matters will be, what the timing of the ultimate resolution of these pending matters will be or what the eventual loss, fines, penalties or impact related to each currently pending matter may be. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance the ultimate resolution of these matters will not significantly exceed the reserves currently accrued by the Firm; as a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

Note 33 – International operations

The following table presents income statement–related information for JPMorgan Chase by major international geographic area. The Firm defines international activities as business transactions that involve customers residing outside of the U.S., and the information presented below is based primarily upon the domicile of the customer, the location from which the customer relationship is managed or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 34 on pages 290–293 of this Annual Report.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the United States.

Year ended December 31, (in millions)	Revenue[a]	Expense[b]	Income (loss) before income tax expense/(benefit) and extraordinary gain	Net income	Average assets
2010					
Europe/Middle East and Africa	**$ 14,113**	**$ 8,712**	**$ 5,401**	**$ 3,655**	**$ 425,374**
Asia and Pacific	**5,791**	**3,577**	**2,214**	**1,470**	**134,787**
Latin America and the Caribbean	**1,810**	**1,152**	**658**	**395**	**30,021**
Other	**510**	**413**	**97**	**59**	**6,579**
Total international	**22,224**	**13,854**	**8,370**	**5,579**	**596,761**
Total U.S.	**80,470**	**63,981**	**16,489**	**11,791**	**1,456,490**
Total	**$ 102,694**	**$ 77,835**	**$ 24,859**	**$ 17,370**	**$ 2,053,251**
2009					
Europe/Middle East and Africa	$ 16,915	$ 8,610	$ 8,305	$ 5,485	$ 383,003
Asia and Pacific	5,088	3,438	1,650	1,119	100,932
Latin America and the Caribbean	1,982	1,112	870	513	23,227
Other	659	499	160	105	7,074
Total international	24,644	13,659	10,985	7,222	514,236
Total U.S.	75,790	70,708	5,082	4,506	1,509,965
Total	$ 100,434	$ 84,367	$ 16,067	$ 11,728	$ 2,024,201
2008					
Europe/Middle East and Africa	$ 11,449	$ 8,403	$ 3,046	$ 2,483	$ 352,558
Asia and Pacific	4,097	3,580	517	672	108,751
Latin America and the Caribbean	1,353	903	450	274	30,940
Other	499	410	89	21	6,553
Total international	17,398	13,296	4,102	3,450	498,802
Total U.S.	49,854	51,183	(1,329)	2,155	1,292,815
Total	$ 67,252	$ 64,479	$ 2,773	$ 5,605	$ 1,791,617

(a) Revenue is composed of net interest income and noninterest revenue.
(b) Expense is composed of noninterest expense and the provision for credit losses.

Note 34 – Business segments

The Firm is managed on a line-of-business basis. There are six major reportable business segments — Investment Bank, Retail Financial Services, Card Services, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate/Private Equity segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 64–65 of this Annual Report. For a further discussion concerning JPMorgan Chase's business segments, see Business segment results on pages 67–68 of this Annual Report.

The following is a description of each of the Firm's business segments:

Investment Bank

J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The clients of IB are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage, and research.

Retail Financial Services
RFS serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking, as well as through auto dealerships and school financial-aid offices. Customers can use more than 5,200 bank branches (third-largest nationally) and 16,100 ATMs (second-largest nationally), as well as online and mobile banking around the clock. More than 28,900 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. Consumers also can obtain loans through more than 16,200 auto dealerships and 2,200 schools and universities nationwide.

Card Services
CS is one of the nation's largest credit card issuers, with over $137 billion in loans and over 90 million open accounts. Customers used Chase cards to meet $313 billion of their spending needs in 2010. Through its merchant acquiring business, Chase Paymentech Solutions, CS is a global leader in payment processing and merchant acquiring.

Commercial Banking
CB delivers extensive industry knowledge, local expertise and dedicated service to nearly 24,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and nearly 35,000 real estate investors/owners. CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Treasury & Securities Services
TSS is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services ("TS") provides cash management, trade, wholesale card and liquidity products and services to small- and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with IB, CB, RFS and AM businesses to serve clients firmwide. Certain TS revenue is included in other segments' results. Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Asset Management
AM, with assets under supervision of $1.8 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity products, including money-market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

Corporate/Private Equity
The Corporate/Private Equity sector comprises Private Equity, Treasury, the Chief Investment Office, corporate staff units and expense that is centrally managed. Treasury and the Chief Investment Office manage capital, liquidity, and structural risks of the Firm. The corporate staff units include Central Technology and Operations, Internal Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Legal & Compliance, Corporate Real Estate and General Services, Risk Management, Corporate Responsibility and Strategy & Development. Other centrally managed expense includes the Firm's occupancy and pension-related expense, net of allocations to the business.

Effective January 1, 2010, the Firm enhanced its line-of-business equity framework to better align equity assigned to each line of business with changes anticipated to occur in the business and in the competitive and regulatory landscape. The lines of business are now capitalized based on the Tier 1 common standard, rather than the Tier 1 capital standard. Line-of-business equity increased during the second quarter of 2008 in IB and AM due to the Bear Stearns merger and for AM, the purchase of the additional equity interest in Highbridge. At the end of the third quarter of 2008, equity was increased for each line of business with a view toward the future implementation of the new Basel II capital rules. In addition, equity allocated to RFS, CS and CB was increased as a result of the Washington Mutual transaction.

Segment results

The following table provides a summary of the Firm's segment results for 2010, 2009 and 2008 on a managed basis. Prior to the January 1, 2010, adoption of the accounting guidance related to VIEs, the impact of credit card securitization adjustments had been included in reconciling items so that the total Firm results are on a reported basis. Finally, total net revenue (noninterest revenue and net interest income) for each of the segments is presented on a tax-equivalent basis. Accordingly, revenue from tax-exempt securities and investments that receive tax credits are presented in the managed results on a basis comparable to taxable securities and investments. This approach allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to these items is recorded within income tax expense/(benefit).

Segment results and reconciliation[a] (table continued on next page)

Year ended December 31,	Investment Bank			Retail Financial Services			Card Services[f]			Commercial Banking		
(in millions, except ratios)	**2010**	2009	2008	**2010**	2009	2008	**2010**	2009	2008	**2010**	2009	2008
Noninterest revenue	**$ 18,253**	$ 18,522	$ 2,051	**$ 12,228**	$ 12,200	$ 9,355	**$ 3,277**	$ 2,920	$ 2,719	**$ 2,200**	$ 1,817	$ 1,481
Net interest income	**7,964**	9,587	10,284	**19,528**	20,492	14,165	**13,886**	17,384	13,755	**3,840**	3,903	3,296
Total net revenue	**26,217**	28,109	12,335	**31,756**	32,692	23,520	**17,163**	20,304	16,474	**6,040**	5,720	4,777
Provision for credit losses	**(1,200)**	2,279	2,015	**9,452**	15,940	9,905	**8,037**	18,462	10,059	**297**	1,454	464
Credit reimbursement (to)/from TSS[b]	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Noninterest expense[c]	**17,265**	15,401	13,844	**17,864**	16,748	12,077	**5,797**	5,381	5,140	**2,199**	2,176	1,946
Income/(loss) before income tax expense/ (benefit) and extraordinary gain	**10,152**	10,429	(3,524)	**4,440**	4	1,538	**3,329**	(3,539)	1,275	**3,544**	2,090	2,367
Income tax expense/(benefit)	**3,513**	3,530	(2,349)	**1,914**	(93)	658	**1,255**	(1,314)	495	**1,460**	819	928
Income/(loss) before extraordinary gain	**6,639**	6,899	(1,175)	**2,526**	97	880	**2,074**	(2,225)	780	**2,084**	1,271	1,439
Extraordinary gain[d]	**—**	—	—	**—**	—	—	**—**	—	—	**—**	—	—
Net income/(loss)	**$ 6,639**	$ 6,899	$ (1,175)	**$ 2,526**	$ 97	$ 880	**$ 2,074**	$ (2,225)	$ 780	**$ 2,084**	$ 1,271	$ 1,439
Average common equity	**$ 40,000**	$ 33,000	$ 26,098	**$ 28,000**	$ 25,000	$ 19,011	**$ 15,000**	$ 15,000	$ 14,326	**$ 8,000**	$ 8,000	$ 7,251
Average assets	**731,801**	699,039	832,729	**381,337**	407,497	304,442	**145,750**	192,749	173,711	**133,654**	135,408	114,299
Return on average equity[e]	**17%**	21%	(5)%	**9%**	—%	5%	**14%**	(15)%	5%	**26%**	16%	20%
Overhead ratio	**66**	55	112	**56**	51	51	**34**	27	31	**36**	38	41

(a) In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's lines of business results on a "managed basis," which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications that do not have any impact on net income as reported by the lines of business or by the Firm as a whole.

(b) TSS was charged a credit reimbursement related to certain exposures managed within IB credit portfolio on behalf of clients shared with TSS. IB recognizes this credit reimbursement in its credit portfolio business in all other income.

(c) Includes merger costs, which are reported in the Corporate/Private Equity segment. There were no merger costs in 2010. Merger costs attributed to the business segments for 2009 and 2008 were as follows.

Year ended December 31, (in millions)	2009	2008
Investment Bank	$ 27	$ 183
Retail Financial Services	228	90
Card Services	40	20
Commercial Banking	6	4
Treasury & Securities Services	11	—
Asset Management	6	3
Corporate/Private Equity	163	132

(d) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual from the FDIC for $1.9 billion. The fair value of the net assets acquired exceeded the purchase price, which resulted in negative goodwill. In accordance with U.S. GAAP for business combinations, nonfinancial assets that are not held-for-sale, such as premises and equipment and other intangibles, acquired in the Washington Mutual transaction were written down against that negative goodwill. The negative goodwill that remained after writing down nonfinancial assets was recognized as an extraordinary gain.

(e) Ratio is based on income/(loss) before extraordinary gain for 2009 and 2008.

(f) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Prior to the adoption of the new guidance, managed results for credit card excluded the impact of credit card securitizations on total net revenue, provision for credit losses and average assets, as JPMorgan Chase treated the sold receivables as if they were still on the balance sheet in evaluating the credit performance of the entire managed credit card portfolio, as operations are funded, and decisions are made about allocating resources, such as employees and capital, based on managed information. These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results. The related securitization adjustments were as follows.

Year ended December 31, (in millions)	**2010**	2009	2008
Noninterest revenue	**NA**	$ (1,494)	$ (3,333)
Net interest income	**NA**	7,937	6,945
Provision for credit losses	**NA**	6,443	3,612
Average assets	**NA**	82,233	76,904

(g) Included a $1.5 billion charge to conform Washington Mutual's credit loss reserve to JPMorgan Chase's allowance methodology.

(table continued from previous page)

Treasury & Securities Services			Asset Management			Corporate/Private Equity			Reconciling items[f][i]			**Total**		
2010	2009	2008	**2010**	2009	2008	**2010**	2009	2008	**2010**	2009	2008	**2010**	2009	2008
$ 4,757	$ 4,747	$ 5,196	**$ 7,485**	$ 6,372	$ 6,066	**$ 5,359**	$ 2,771	$ (278)	**$ (1,866)**	$ (67)	$ 1,883	**$ 51,693**	$ 49,282	$ 28,473
2,624	2,597	2,938	**1,499**	1,593	1,518	**2,063**	3,863	347	**(403)**	(8,267)	(7,524)	**51,001**	51,152	38,779
7,381	7,344	8,134	**8,984**	7,965	7,584	**7,422**	6,634	69	**(2,269)**	(8,334)	(5,641)	**102,694**	100,434	67,252
(47)	55	82	**86**	188	85	**14**	80	1,981[g][h]	**—**	(6,443)	(3,612)	**16,639**	32,015	20,979
(121)	(121)	(121)	**—**	—	—	**—**	—	—	**121**	121	121	**—**	—	—
5,604	5,278	5,223	**6,112**	5,473	5,298	**6,355**	1,895	(28)	**—**	—	—	**61,196**	52,352	43,500
1,703	1,890	2,708	**2,786**	2,304	2,201	**1,053**	4,659	(1,884)	**(2,148)**	(1,770)	(1,908)	**24,859**	16,067	2,773
624	664	941	**1,076**	874	844	**(205)**	1,705	(535)	**(2,148)**	(1,770)	(1,908)	**7,489**	4,415	(926)
1,079	1,226	1,767	**1,710**	1,430	1,357	**1,258**	2,954	(1,349)	**—**	—	—	**17,370**	11,652	3,699
—	—	—	**—**	—	—	**—**	76	1,906	**—**	—	—	**—**	76	1,906
$ 1,079	$ 1,226	$ 1,767	**$ 1,710**	$ 1,430	$ 1,357	**$ 1,258**	$ 3,030	$ 557	**$ —**	$ —	$ —	**$ 17,370**	$ 11,728	$ 5,605
$ 6,500	$ 5,000	$ 3,751	**$ 6,500**	$ 7,000	$ 5,645	**$ 57,520**	$ 52,903	$ 53,034	**$ —**	$ —	$ —	**$ 161,520**	$ 145,903	$ 129,116
42,494	35,963	54,563	**65,056**	60,249	65,550	**553,159**	575,529	323,227	**NA**	(82,233)	(76,904)	**2,053,251**	2,024,201	1,791,617
17%	25%	47%	**26%**	20%	24%	**NM**	NM	NM	**NM**	NM	NM	**10%**	6%	4%
76	72	64	**68**	69	70	**NM**	NM	NM	**NM**	NM	NM	**60**	52	65

(h) In November 2008, the Firm transferred $5.8 billion of higher quality credit card loans from the legacy Chase portfolio to a securitization trust previously established by WMMT. As a result of converting higher credit quality Chase-originated on-book receivables to the Trust's seller's interest which has a higher overall loss rate reflective of the total assets within the Trust, approximately $400 million of incremental provision for credit losses was recorded during the fourth quarter of 2008. This incremental provision for credit losses was recorded in the Corporate/Private Equity segment as the action related to the acquisition of Washington Mutual's banking operations. For further discussion of credit card securitizations, see Note 16 on pages 244–259 of this Annual Report.

(i) Segment managed results reflect revenue on a tax-equivalent basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results. Tax-equivalent adjustments for the years ended December 31, 2010, 2009 and 2008 were as follows.

Year ended December 31, (in millions)	**2010**	2009	2008
Noninterest revenue	**$ 1,745**	$ 1,440	$ 1,329
Net interest income	**403**	330	579
Income tax expense	**2,148**	1,770	1,908

Note 35 – Parent company

Parent company – statements of income

Year ended December 31, (in millions)	2010	2009	2008
Income			
Dividends from subsidiaries:			
Bank and bank holding company	**$ 16,554**	$ 15,235	$ 3,085
Nonbank[a]	**932**	1,036	1,687
Interest income from subsidiaries	**985**	1,501	4,539
Other interest income	**294**	266	212
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**680**	233	244
Nonbank	**312**	742	95
Other income/(loss)	**157**	844	(1,038)
Total income	**19,914**	19,857	8,824
Expense			
Interest expense to subsidiaries[a]	**1,263**	1,118	1,302
Other interest expense	**3,782**	4,696	6,879
Compensation expense	**177**	574	43
Other noninterest expense	**363**	414	732
Total expense	**5,585**	6,802	8,956
Income/(loss) before income tax benefit and undistributed net income of subsidiaries	**14,329**	13,055	(132)
Income tax benefit	**511**	1,269	2,582
Equity in undistributed net income of subsidiaries	**2,530**	(2,596)	3,155
Net income	**$ 17,370**	$ 11,728	$ 5,605

Parent company – balance sheets

December 31, (in millions)	2010	2009
Assets		
Cash and due from banks	**$ 96**	$ 102
Deposits with banking subsidiaries	**80,201**	87,893
Trading assets	**16,038**	14,808
Available-for-sale securities	**3,176**	2,647
Loans	**1,849**	1,316
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**54,887**	54,152
Nonbank	**72,080**	81,365
Investments (at equity) in subsidiaries:		
Bank and bank holding company	**150,876**	157,412
Nonbank[a]	**38,000**	32,547
Goodwill and other intangibles	**1,050**	1,104
Other assets	**17,171**	14,793
Total assets	**$ 435,424**	$ 448,139
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries[a]	**$ 28,332**	$ 39,532
Other borrowed funds, primarily commercial paper	**41,874**	41,454
Other liabilities	**7,302**	8,035
Long-term debt[b]	**181,810**	193,753
Total liabilities	**259,318**	282,774
Total stockholders' equity	**176,106**	165,365
Total liabilities and stockholders' equity	**$ 435,424**	$ 448,139

Parent company – statements of cash flows

Year ended December 31, (in millions)	2010	2009	2008
Operating activities			
Net income	**$ 17,370**	$ 11,728	$ 5,605
Less: Net income of subsidiaries[a]	**20,016**	13,675	7,927
Parent company net loss	**(2,646)**	(1,947)	(2,322)
Cash dividends from subsidiaries[a]	**17,432**	16,054	4,648
Other, net	**1,685**	1,852	1,920
Net cash provided by operating activities	**16,471**	15,959	4,246
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**7,692**	(27,342)	(7,579)
Available-for-sale securities:			
Purchases	**(1,387)**	(1,454)	(1,475)
Proceeds from sales and maturities	**745**	522	—
Loans, net	**(90)**	209	(102)
Advances to subsidiaries, net	**8,051**	28,808	(82,725)
Investments (at equity) in subsidiaries, net[a]	**(871)**	(6,582)	(26,212)
Net cash provided by/(used in) investing activities	**14,140**	(5,839)	(118,093)
Financing activities			
Net change in borrowings from subsidiaries[a]	**(2,039)**	(4,935)	20,529
Net change in other borrowed funds	**(11,843)**	1,894	(12,880)
Proceeds from the issuance of long-term debt	**21,610**	32,304	50,013
Proceeds from the assumption of subsidiaries long-term debt[c]	**—**	15,264	39,778
Repayments of long-term debt	**(32,893)**	(31,964)	(22,972)
Proceeds from issuance of common stock	**—**	5,756	11,500
Excess tax benefits related to stock-based compensation	**26**	17	148
Proceeds from issuance of preferred stock and Warrant to the U.S. Treasury	**—**	—	25,000
Proceeds from issuance of other preferred stock[d]	**—**	—	8,098
Redemption of preferred stock issued to the U.S. Treasury	**—**	(25,000)	—
Redemption of other preferred stock	**(352)**	—	—
Treasury stock repurchased	**(2,999)**	—	—
Dividends paid	**(1,486)**	(3,422)	(5,911)
All other financing activities, net	**(641)**	33	469
Net cash (used in)/provided by financing activities	**(30,617)**	(10,053)	113,772
Net increase/(decrease) in cash and due from banks	**(6)**	67	(75)
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	**102**	35	110
Cash and due from banks at the end of the year, primarily with bank subsidiaries	**$ 96**	$ 102	$ 35
Cash interest paid	**$ 5,090**	$ 5,629	$ 7,485
Cash income taxes paid, net	**7,001**	3,124	156

(a) Subsidiaries include trusts that issued guaranteed capital debt securities ("issuer trusts"). The Parent received dividends of $13 million, $14 million and $15 million from the issuer trusts in 2010, 2009 and 2008, respectively. For further discussion on these issuer trusts, see Note 22 on pages 265–266 of this Annual Report.

(b) At December 31, 2010, long-term debt that contractually matures in 2011 through 2015 totaled $38.9 billion, $42.4 billion, $17.6 billion, $19.0 billion and $16.8 billion, respectively.

(c) Represents the assumption of Bear Stearns long-term debt by JPMorgan Chase & Co.

(d) 2008 included the conversion of Bear Stearns' preferred stock into JPMorgan Chase preferred stock.

Selected quarterly financial data (unaudited)

As of or for the period ended (in millions, except per share, ratio and headcount data)	2010				2009			
	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Noninterest revenue	**$ 13,996**	**$ 11,322**	**$ 12,414**	**$ 13,961**	$ 10,786	$ 13,885	$ 12,953	$ 11,658
Net interest income	**12,102**	**12,502**	**12,687**	**13,710**	12,378	12,737	12,670	13,367
Total net revenue	**26,098**	**23,824**	**25,101**	**27,671**	23,164	26,622	25,623	25,025
Total noninterest expense	**16,043**	**14,398**	**14,631**	**16,124**	12,004	13,455	13,520	13,373
Pre-provision profit(a)	**10,055**	**9,426**	**10,470**	**11,547**	11,160	13,167	12,103	11,652
Provision for credit losses	**3,043**	**3,223**	**3,363**	**7,010**	7,284	8,104	8,031	8,596
Income before income tax expense and extraordinary gain	**7,012**	**6,203**	**7,107**	**4,537**	3,876	5,063	4,072	3,056
Income tax expense	**2,181**	**1,785**	**2,312**	**1,211**	598	1,551	1,351	915
Income before extraordinary gain	**4,831**	**4,418**	**4,795**	**3,326**	3,278	3,512	2,721	2,141
Extraordinary gain(b)	**—**	**—**	**—**	**—**	—	76	—	—
Net income	**$ 4,831**	**$ 4,418**	**$ 4,795**	**$ 3,326**	$ 3,278	$ 3,588	$ 2,721	$ 2,141
Per common share data								
Basic earnings								
Income before extraordinary gain	**$ 1.13**	**$ 1.02**	**$ 1.10**	**$ 0.75**	$ 0.75	$ 0.80	$ 0.28	$ 0.40
Net income	**1.13**	**1.02**	**1.10**	**0.75**	0.75	0.82	0.28	0.40
Diluted earnings(c)								
Income before extraordinary gain	**$ 1.12**	**$ 1.01**	**$ 1.09**	**$ 0.74**	$ 0.74	$ 0.80	$ 0.28	$ 0.40
Net income	**1.12**	**1.01**	**1.09**	**0.74**	0.74	0.82	0.28	0.40
Cash dividends declared per share	**0.05**	**0.05**	**0.05**	**0.05**	0.05	0.05	0.05	0.05
Book value per share	**43.04**	**42.29**	**40.99**	**39.38**	39.88	39.12	37.36	36.78
Common shares outstanding								
Average: Basic	**3,917.0**	**3,954.3**	**3,983.5**	**3,970.5**	3,946.1	3,937.9	3,811.5	3,755.7
Diluted	**3,935.2**	**3,971.9**	**4,005.6**	**3,994.7**	3,974.1	3,962.0	3,824.1	3,758.7
Common shares at period-end	**3,910.3**	**3,925.8**	**3,975.8**	**3,975.4**	3,942.0	3,938.7	3,924.1	3,757.7
Share price(d)								
High	**$ 43.12**	**$ 41.70**	**$ 48.20**	**$ 46.05**	$ 47.47	$ 46.50	$ 38.94	$ 31.64
Low	**36.21**	**35.16**	**36.51**	**37.03**	40.04	31.59	25.29	14.96
Close	**42.42**	**38.06**	**36.61**	**44.75**	41.67	43.82	34.11	26.58
Market capitalization	**165,875**	**149,418**	**145,554**	**177,897**	164,261	172,596	133,852	99,881
Financial ratios								
Return on common equity(c)								
Income before extraordinary gain	**11%**	**10%**	**12%**	**8%**	8%	9%	3%	5%
Net income	**11**	**10**	**12**	**8**	8	9	3	5
Return on tangible common equity(c)								
Income before extraordinary gain	**16**	**15**	**17**	**12**	12	13	5	8
Net income	**16**	**15**	**17**	**12**	12	14	5	8
Return on assets								
Income before extraordinary gain	**0.92**	**0.86**	**0.94**	**0.66**	0.65	0.70	0.54	0.42
Net income	**0.92**	**0.86**	**0.94**	**0.66**	0.65	0.71	0.54	0.42
Overhead ratio	**61**	**60**	**58**	**58**	52	51	53	53
Deposits-to-loans ratio	**134**	**131**	**127**	**130**	148	133	127	128
Tier 1 capital ratio(e)	**12.1**	**11.9**	**12.1**	**11.5**	11.1	10.2	9.7	11.4
Total capital ratio	**15.5**	**15.4**	**15.8**	**15.1**	14.8	13.9	13.3	15.2
Tier 1 leverage ratio	**7.0**	**7.1**	**6.9**	**6.6**	6.9	6.5	6.2	7.1
Tier 1 common capital ratio(f)	**9.8**	**9.5**	**9.6**	**9.1**	8.8	8.2	7.7	7.3
Selected balance sheet data (period-end)(e)								
Trading assets	**$ 489,892**	**$ 475,515**	**$ 397,508**	**$ 426,128**	$ 411,128	$ 424,435	$ 395,626	$ 429,700
Securities	**316,336**	**340,168**	**312,013**	**344,376**	360,390	372,867	345,563	333,861
Loans	**692,927**	**690,531**	**699,483**	**713,799**	633,458	653,144	680,601	708,243
Total assets	**2,117,605**	**2,141,595**	**2,014,019**	**2,135,796**	2,031,989	2,041,009	2,026,642	2,079,188
Deposits	**930,369**	**903,138**	**887,805**	**925,303**	938,367	867,977	866,477	906,969
Long-term debt	**247,669**	**255,589**	**248,618**	**262,857**	266,318	272,124	271,939	261,845
Common stockholders' equity	**168,306**	**166,030**	**162,968**	**156,569**	157,213	154,101	146,614	138,201
Total stockholders' equity	**176,106**	**173,830**	**171,120**	**164,721**	165,365	162,253	154,766	170,194
Headcount	**239,831**	**236,810**	**232,939**	**226,623**	222,316	220,861	220,255	219,569

Supplementary information

As of or for the period ended (in millions, except ratio data)	2010 4th quarter	2010 3rd quarter	2010 2nd quarter	2010 1st quarter	2009 4th quarter	2009 3rd quarter	2009 2nd quarter	2009 1st quarter
Credit quality metrics								
Allowance for credit losses	**$ 32,983**	**$ 35,034**	**$ 36,748**	**$ 39,126**	$ 32,541	$ 31,454	$ 29,818	$ 28,019
Allowance for loan losses to total retained loans	**4.71%**	**4.97%**	**5.15%**	**5.40%**	5.04%	4.74%	4.33%	3.95%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[g]	**4.46**	**5.12**	**5.34**	**5.64**	5.51	5.28	5.01	4.53
Nonperforming assets	**$ 16,557**	**$ 17,656**	**$ 18,156**	**$ 19,019**	$ 19,741	$ 20,362	$ 17,517	$ 14,654
Net charge-offs	**5,104**	**4,945**	**5,714**	**7,910**	6,177	6,373	6,019	4,396
Net charge-off rate	**2.95%**	**2.84%**	**3.28%**	**4.46%**	3.85%	3.84%	3.52%	2.51%
Wholesale net charge-off rate	**0.49**	**0.49**	**0.44**	**1.84**	2.31	1.93	1.19	0.32
Consumer net charge-off rate[h]	**4.12**	**3.90**	**4.49**	**5.56**	4.60	4.79	4.69	3.61

(a) Pre-provision profit is total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

(b) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual. On May 30, 2008, a wholly-owned subsidiary of JPMorgan Chase merged with and into The Bear Stearns Companies, Inc. ("Bear Stearns"), and Bear Stearns became a wholly-owned subsidiary of JPMorgan Chase. The Washington Mutual acquisition resulted in negative goodwill, and accordingly, the Firm recorded an extraordinary gain. A preliminary gain of $1.9 billion was recognized at December 31, 2008. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion. For additional information of these transactions, see Note 2 on pages 166–170 of this Annual Report.

(c) The calculation of second-quarter 2009 earnings per share and net income applicable to common equity includes a one-time, noncash reduction of $1.1 billion, or $0.27 per share, resulting from repayment of U.S. Troubled Asset Relief Program ("TARP") preferred capital. Excluding this reduction, the adjusted return on common equity ("ROE") and Return on tangible common equity ("ROTCE") were 6% and 10%, respectively, for second-quarter 2009. The Firm views the adjusted ROE and ROTCE, both non-GAAP financial measures, as meaningful because they enable the comparability to prior periods. For further discussion, see "Explanation and reconciliation of the Firm's use of non-GAAP financial measures" on pages 64–66 of this Annual Report.

(d) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.

(e) Effective January 1, 2010, the Firm adopted new guidance that amended the accounting for the transfer of financial assets and the consolidation of VIEs. Upon adoption of the new guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related, adding $87.7 billion and $92.2 billion of assets and liabilities, respectively, and decreasing stockholders' equity and the Tier 1 capital ratio by $4.5 billion and 34 basis points, respectively. The reduction to stockholders' equity was driven by the establishment of an allowance for loan losses of $7.5 billion (pretax) primarily related to receivables held in credit card securitization trusts that were consolidated at the adoption date.

(f) The Firm uses Tier 1 common along with the other capital measures to assess and monitor its capital position. The Tier 1 common ratio is Tier 1 common divided by risk-weighted assets. For further discussion, see Regulatory capital on pages 102–104 of this Annual Report.

(g) Excludes the impact of home lending PCI loans and loans held by the Washington Mutual Master Trust. For further discussion, see Allowance for credit losses on pages 139–141 of this Annual Report.

(h) The fourth quarter of 2010 includes an aggregate adjustment of $632 million to increase net charge-offs related to the estimated net realizable value of the collateral underlying delinquent residential home loans. Because these losses were previously recognized in the provision and allowance for loan losses, this adjustment had no impact on the Firm's net income.

Selected annual financial data (unaudited)

As of or for the year ended December 31, (in millions, except per share, ratio and headcount data)	2010	2009	2008[d]	2007	2006
Selected income statement data					
Noninterest revenue	**$ 51,693**	$ 49,282	$ 28,473	$ 44,966	$ 40,757
Net interest income	**51,001**	51,152	38,779	26,406	21,242
Total net revenue	**102,694**	100,434	67,252	71,372	61,999
Total noninterest expense	**61,196**	52,352	43,500	41,703	38,843
Pre-provision profit[a]	**41,498**	48,082	23,752	29,669	23,156
Provision for credit losses	**16,639**	32,015	19,445	6,864	3,270
Provision for credit losses – accounting conformity[b]	**—**	—	1,534	—	—
Income from continuing operations before income tax expense/ (benefit) and extraordinary gain	**24,859**	16,067	2,773	22,805	19,886
Income tax expense/(benefit)	**7,489**	4,415	(926)	7,440	6,237
Income from continuing operations	**17,370**	11,652	3,699	15,365	13,649
Income from discontinued operations[c]	**—**	—	—	—	795
Income before extraordinary gain	**17,370**	11,652	3,699	15,365	14,444
Extraordinary gain [d]	**—**	76	1,906	—	—
Net income	**$ 17,370**	$ 11,728	$ 5,605	$ 15,365	$ 14,444
Per common share data					
Basic earnings					
Income from continuing operations	**$ 3.98**	$ 2.25	$ 0.81	$ 4.38	$ 3.83
Net income	**3.98**	2.27	1.35	4.38	4.05
Diluted earnings[e]					
Income from continuing operations	**$ 3.96**	$ 2.24	$ 0.81	$ 4.33	$ 3.78
Net income	**3.96**	2.26	1.35	4.33	4.00
Cash dividends declared per share	**0.20**	0.20	1.52	1.48	1.36
Book value per share	**43.04**	39.88	36.15	36.59	33.45
Common shares outstanding					
Average: Basic	**3,956.3**	3,862.8	3,501.1	3,403.6	3,470.1
Diluted	**3,976.9**	3,879.7	3,521.8	3,445.3	3,516.1
Common shares at period-end	**3,910.3**	3,942.0	3,732.8	3,367.4	3,461.7
Share price[f]					
High	**$ 48.20**	$ 47.47	$ 50.63	$ 53.25	$ 49.00
Low	**35.16**	14.96	19.69	40.15	37.88
Close	**42.42**	41.67	31.53	43.65	48.30
Market capitalization	**165,875**	164,261	117,695	146,986	167,199
Financial ratios					
Return on common equity[e]					
Income from continuing operations	**10%**	6%	2%	13%	12%
Net income	**10**	6	4	13	13
Return on tangible common equity[e]					
Income from continuing operations	**15**	10	4	22	24
Net income	**15**	10	6	22	24
Return on assets					
Income from continuing operations	**0.85**	0.58	0.21	1.06	1.04
Net income	**0.85**	0.58	0.31	1.06	1.10
Overhead ratio	**60**	52	65	58	63
Deposits-to-loans ratio	**134**	148	135	143	132
Tier 1 capital ratio[g]	**12.1**	11.1	10.9	8.4	8.7
Total capital ratio	**15.5**	14.8	14.8	12.6	12.3
Tier 1 leverage ratio	**7.0**	6.9	6.9	6.0	6.2
Tier 1 common capital ratio[h]	**9.8**	8.8	7.0	7.0	7.3
Selected balance sheet data (period-end)[g]					
Trading assets	**$ 489,892**	$ 411,128	$ 509,983	$ 491,409	$ 365,738
Securities	**316,336**	360,390	205,943	85,450	91,975
Loans	**692,927**	633,458	744,898	519,374	483,127
Total assets	**2,117,605**	2,031,989	2,175,052	1,562,147	1,351,520
Deposits	**930,369**	938,367	1,009,277	740,728	638,788
Long-term debt	**247,669**	266,318	270,683	199,010	145,630
Common stockholders' equity	**168,306**	157,213	134,945	123,221	115,790
Total stockholders' equity	**176,106**	165,365	166,884	123,221	115,790
Headcount	**239,831**	222,316	224,961	180,667	174,360

Supplementary information

As of or for the year ended December 31, (in millions, except ratio data)	2010	2009	2008(d)	2007	2006
Credit quality metrics					
Allowance for credit losses	**$ 32,983**	$ 32,541	$ 23,823	$ 10,084	$ 7,803
Allowance for loan losses to total retained loans	**4.71%**	5.04%	3.18%	1.88%	1.70%
Allowance for loan losses to retained loans, excluding PCI loans(i)	**4.46**	5.51	3.62	1.88	1.70
Nonperforming assets	**$ 16,557**	$ 19,741	$ 12,714	$ 3,933	$ 2,341
Net charge-offs	**23,673**	22,965	9,835	4,538	3,042
Net charge-off rate	**3.39%**	3.42%	1.73%	1.00%	0.73%
Wholesale net charge-off/(recovery) rate	**0.81**	1.40	0.18	0.04	(0.01)
Consumer net charge-off rate	**4.53**	4.41	2.71	1.61	1.17

(a) Pre-provision profit is total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

(b) Results for 2008 included an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual Bank's banking operations.

(c) On October 1, 2006, JPMorgan Chase & Co. completed the exchange of selected corporate trust businesses for the consumer, business-banking and middle-market banking businesses of The Bank of New York Company Inc. The results of operations of these corporate trust businesses were reported as discontinued operations.

(d) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual. On May 30, 2008, a wholly-owned subsidiary of JPMorgan Chase merged with and into Bear Stearns, and Bear Stearns became a wholly-owned subsidiary of JPMorgan Chase. The Washington Mutual acquisition resulted in negative goodwill, and accordingly, the Firm recorded an extraordinary gain. A preliminary gain of $1.9 billion was recognized at December 31, 2008. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion. For additional information on these transactions, see Note 2 on pages 166–170 of this Annual Report.

(e) The calculation of 2009 earnings per share and net income applicable to common equity includes a one-time, noncash reduction of $1.1 billion, or $0.27 per share, resulting from repayment of TARP preferred capital in the second quarter of 2009. Excluding this reduction, the adjusted return on equity ("ROE") and return on tangible common equity ("ROTCE") were 7% and 11%, respectively, for 2009. The Firm views the adjusted ROE and ROTCE, both non-GAAP financial measures, as meaningful because they enable the comparability to prior periods. For further discussion, see "Explanation and reconciliation of the Firm's use of non-GAAP financial measures" on pages 64–66 of this Annual Report.

(f) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.

(g) Effective January 1, 2010, the Firm adopted new guidance that amended the accounting for the transfer of financial assets and the consolidation of VIEs. Upon adoption of the new guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related, adding $87.7 billion and $92.2 billion of assets and liabilities, respectively, and decreasing stockholders' equity and the Tier 1 capital ratio by $4.5 billion and 34 basis points, respectively. The reduction to stockholders' equity was driven by the establishment of an allowance for loan losses of $7.5 billion (pretax) primarily related to receivables held in credit card securitization trusts that were consolidated at the adoption date.

(h) The Firm uses Tier 1 common along with the other capital measures to assess and monitor its capital position. The Tier 1 common ratio is Tier 1 common divided by risk-weighted assets. For further discussion, see Regulatory capital on pages 102–104 of this Annual Report.

(i) Excludes the impact of home lending PCI loans and loans held by the Washington Mutual Master Trust. For further discussion, see Allowance for credit losses on pages 139–141 of this Annual Report.

Short-term and other borrowed funds

The following table provides a summary of JPMorgan Chase's short-term and other borrowed funds for the years indicated.

As of or for the year ending December 31, (in millions, except rates)	2010	2009	2008
Federal funds purchased and securities loaned or sold under repurchase agreements:			
Balance at year-end	**$ 276,644**	$ 261,413	$ 192,546
Average daily balance during the year	**278,603**	275,862	196,739
Maximum month-end balance	**314,161**	310,802	224,075
Weighted-average rate at December 31	**0.18%**	0.04%	0.97%
Weighted-average rate during the year	**(0.07)**[c]	0.21	2.37
Commercial paper:			
Balance at year-end	**$ 35,363**	$ 41,794	$ 37,845
Average daily balance during the year	**36,000**	39,055	45,734
Maximum month-end balance	**50,554**	53,920	54,480
Weighted-average rate at December 31	**0.21%**	0.18%	0.82%
Weighted-average rate during the year	**0.20**	0.28	2.24
Other borrowed funds:[a]			
Balance at year-end	**$ 134,256**	$ 120,686	$ 177,674
Average daily balance during the year	**121,949**	130,767	118,714
Maximum month-end balance	**137,347**	188,004	244,040
Weighted-average rate at December 31	**4.48%**	3.37%	3.65%
Weighted-average rate during the year	**2.34**	2.92	4.29
Short-term beneficial interests:[b]			
Commercial paper and other borrowed funds:			
Balance at year-end	**$ 25,095**	$ 4,787	$ —
Average daily balance during the year	**21,853**	3,275	1,846
Maximum month-end balance	**25,095**	7,751	3,459
Weighted-average rate at December 31	**0.25%**	0.17%	NA
Weighted-average rate during the year	**0.27**	0.24	2.49%

(a) Includes securities sold but not yet purchased.
(b) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated variable interest entities.
(c) Reflects a benefit from the favorable market environments for U.S. dollar-roll financings.

Federal funds purchased represent overnight funds. Securities loaned or sold under repurchase agreements generally mature between one day and three months. Commercial paper generally is issued in amounts not less than $100,000, and with maturities of 270 days or less. Other borrowed funds consist of demand notes, term federal funds purchased, and various other borrowings that generally have maturities of one year or less.

Glossary of Terms

ACH: Automated Clearing House.

Advised lines of credit: An authorization which specifies the maximum amount of a credit facility the Firm has made available to an obligor on a revolving but non-binding basis. The borrower receives written or oral advice of this facility. The Firm may cancel this facility at any time.

Allowance for loan losses to total loans: Represents period-end Allowance for loan losses divided by retained loans.

Assets under management: Represent assets actively managed by AM on behalf of Private Banking, Institutional and Retail clients. Includes "Committed capital not Called," on which AM earns fees. Excludes assets managed by American Century Companies, Inc., in which the Firm has a 41% ownership interest as of December 31, 2010.

Assets under supervision: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Average managed assets: Refers to total assets on the Firm's Consolidated Balance Sheets plus credit card receivables that have been securitized and removed from the Firm's Consolidated Balance Sheets, for periods ended prior to the January 1, 2010, adoption of new accounting guidance requiring the consolidation of the Firm-sponsored credit card securitization trusts.

Bear Stearns merger: Effective May 30, 2008, JPMorgan Chase merged with The Bear Stearns Companies Inc. ("Bear Stearns"), and Bear Stearns became a wholly-owned subsidiary of JPMorgan Chase. The final total purchase price to complete the merger was $1.5 billion. For additional information, see Note 2 on pages 166–170 of this Annual Report.

Beneficial interest issued by consolidated VIEs: Represents the interest of third-party holders of debt/equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates. The underlying obligations of the VIEs consist of short-term borrowings, commercial paper and long-term debt. The related assets consist of trading assets, available-for-sale securities, loans and other assets.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

CAGR: Compound annual growth rate.

Corporate/Private Equity: Includes Private Equity, Treasury and Chief Investment Office, and Corporate Other, which includes other centrally managed expense and discontinued operations.

Credit card securitizations: For periods ended prior to the January 1, 2010, adoption of new guidance relating to the accounting for the transfer of financial assets and the consolidation of VIEs, CS' results were presented on a "managed" basis that assumed that credit card loans that had been securitized and sold in accordance with U.S. GAAP remained on the Consolidated Balance Sheets and that earnings on the securitized loans were classified in the same manner as the earnings on retained loans recorded on the Consolidated Balance Sheets. "Managed" results excluded the impact of credit card securitizations on total net revenue, the provision for credit losses, net charge-offs and loans. Securitization did not change reported net income; however, it did affect the classification of items on the Consolidated Statements of Income and Consolidated Balance Sheets.

Credit derivatives: Contractual agreements that provide protection against a credit event on one or more referenced credits. The nature of a credit event is established by the protection buyer and protection seller at the inception of a transaction, and such events include bankruptcy, insolvency or failure to meet payment obligations when due. The buyer of the credit derivative pays a periodic fee in return for a payment by the protection seller upon the occurrence, if any, of a credit event.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again. The duration of a credit cycle can vary from a couple of years to several years.

Deposit margin: Represents net interest income expressed as a percentage of average deposits.

Discontinued operations: A component of an entity that is classified as held-for-sale or that has been disposed of from ongoing operations in its entirety or piecemeal, and for which the entity will not have any significant, continuing involvement. A discontinued operation may be a separate major business segment, a component of a major business segment or a geographical area of operations of the entity that can be separately distinguished operationally and for financial reporting purposes.

FASB: Financial Accounting Standards Board.

FDIC: Federal Deposit Insurance Corporation.

FICO: Fair Isaac Corporation.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

FRBB: Federal Reserve Bank of Boston.

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

Interchange income: A fee that is paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Interests in purchased receivables: Represents an ownership interest in cash flows of an underlying pool of receivables transferred by a third-party seller into a bankruptcy-remote entity, generally a trust.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade"

generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

LLC: Limited Liability Company.

Loan-to-value ("LTV") ratio: For residential real estate loans, the relationship expressed as a percent, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio
The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio
An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the MSA level. These MSA-level home price indices comprise actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio
The LTV ratio considering all lien positions related to the property. Combined LTV ratios are used for junior lien home equity products.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis, and for periods ended prior to the January 1, 2010, adoption of accounting guidance relating to the accounting for the transfer of financial assets and the consolidation of VIEs related to credit card securitizations. Management uses this non-GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Managed credit card portfolio: Refers to credit card receivables on the Firm's Consolidated Balance Sheets plus credit card receivables that have been securitized and removed from the Firm's Consolidated Balance Sheets, for periods ended prior to the January 1, 2010, adoption of new guidance requiring the consolidation of the Firm-sponsored credit card securitization trusts.

Mark-to-market exposure: A measure, at a point in time, of the value of a derivative or foreign exchange contract in the open market. When the MTM value is positive, it indicates the counterparty owes JPMorgan Chase and, therefore, creates credit risk for the Firm. When the MTM value is negative, JPMorgan Chase owes the counterparty; in this situation, the Firm has liquidity risk.

Master netting agreement: An agreement between two counterparties who have multiple derivative contracts with each other that provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

Merger costs: Reflects costs associated with the Bear Stearns merger and the Washington Mutual transaction in 2008.

Mortgage product types:

Alt-A
Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) high combined-loan-to-value ("CLTV") ratio; (iii) loans secured by non-owner occupied properties; or (iv) debt-to-income ratio above normal limits. Perhaps the most important characteristic is limited documentation. A substantial proportion of traditional Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs
The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only, or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime
Prime mortgage loans generally have low default risk and are made to borrowers with good credit records and a monthly income that is at least three to four times greater than their monthly housing expense (mortgage payments plus taxes and other debt payments). These borrowers provide full documentation and generally have reliable payment histories.

Subprime
Subprime loans are designed for customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

MSR risk management revenue: Includes changes in MSR asset fair value due to market-based inputs, such as interest rates and volatility, as well as updates to assumptions used in the MSR

valuation model; and derivative valuation adjustments and other, which represents changes in the fair value of derivative instruments used to offset the impact of changes in the market-based inputs to the MSR valuation model.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class (e.g., long-term fixed income, equity, cash, real assets, private equity, or hedge funds).

NA: Data is not applicable or available for the period presented.

Net charge-off ratio: Represents net charge-offs (annualized) divided by average retained loans for the reporting period.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

Nonconforming mortgage loans: Mortgage loans that do not meet the requirements for sale to U.S. government agencies and U.S. government sponsored enterprises. These requirements include limits on loan-to-value ratios, loan terms, loan amounts, down payments, borrower creditworthiness and other requirements.

OPEB: Other postretirement employee benefits.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Participating securities: Represent unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively,"dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

Personal bankers: Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.

Portfolio activity: Describes changes to the risk profile of existing lending-related exposures and their impact on the allowance for credit losses from changes in customer profiles and inputs used to estimate the allowances.

Pre-provision profit: The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pretax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is, therefore, another basis that management uses to evaluate the performance of TSS and AM against the performance of their respective competitors.

Principal transactions: Realized and unrealized gains and losses from trading activities (including physical commodities inventories that are accounted for at the lower of cost or fair value) and changes in fair value associated with financial instruments held predominantly by IB for which the fair value option was elected. Principal transactions revenue also includes private equity gains and losses.

Purchased credit-impaired ("PCI") loans: Acquired loans deemed to be credit-impaired under the FASB guidance for PCI loans. The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., FICO score, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. Wholesale loans are determined to be credit-impaired if they meet the definition of an impaired loan under U.S. GAAP at the acquisition date. Consumer loans are determined to be credit-impaired based on specific risk characteristics of the loan, including product type, LTV ratios, FICO scores, and past due status.

Real estate investment trust ("REIT"): A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate related assets by pooling their capital to purchase and manage income property (i.e., equity REIT) and/or mortgage loans (i.e., mortgage REIT). REITs can be publicly- or privately-held and they also qualify for certain favorable tax considerations.

Receivables from customers: Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets for the wholesale lines of business.

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments. For periods ended prior to the January 1, 2010, adoption of new guidance requiring the consolidation of the Firm-sponsored credit card securitization trusts, the reported basis included the impact of credit card securitizations.

Retained loans: Loans that are held for investment excluding loans held-for-sale and loans at fair value.

Sales specialists: Retail branch office personnel who specialize in the marketing of a single product, including mortgages, investments and business banking, by partnering with the personal bankers.

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of

sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a commercially attractive track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Stress testing: A scenario that measures market risk under unlikely but plausible events in abnormal markets.

TARP: Troubled Asset Relief Program.

Taxable-equivalent basis: Total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from tax-exempt securities and investments that receive tax credits is presented in the managed results on a basis comparable to fully taxable securities and investments.

This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to these items is recorded within income tax expense.

Troubled debt restructuring ("TDR"): Occurs when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. government and federal agency obligations: Obligations of the U.S. government or an instrumentality of the U.S. government whose obligations are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury.

Value-at-risk ("VaR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC for $1.9 billion. The final allocation of the purchase price resulted in the recognition of negative goodwill and an extraordinary gain of $2.0 billion. For additional information, see Note 2 on pages 166–170 of this Annual Report.

J.P. Morgan International Council

As of December 31, 2010

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Rachelle Friedman
President and
Co-Chief Executive Officer
J&R Music and Computer World

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Chairman of the Board
The Golub Corporation

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President and
Chief Executive Officer
The Dress Barn, Inc.

Tod Johnson
Chairman and
Chief Executive Officer
The NPD Group, Inc.

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Executive Vice President,
Chief Financial Officer
The Estée Lauder Companies Inc.

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Chairman and
Chief Executive Officer
LeFrak Organization

Richard B. Leventhal
Chairman and
Chief Executive Officer
Fedway Associates, Inc.

John LiDestri
President and
Chief Executive Officer
LiDestri Foods, Inc.

Leo Liebowitz
Chief Executive Officer
Getty Realty Corp.

William L. Mack
Founder and Chairman
AREA Property Partners

Peter Markson
Chairman and
Chief Executive Officer
Paris Accessories, Inc.

James F. McCann
Chief Executive Officer
1-800-Flowers.com

John Morphy
Senior Vice President,
Chief Financial Officer
and Secretary
Paychex, Inc.

James L. Nederlander
President
Nederlander Producing Company
of America, Inc.

Samuel I. Newhouse III
General Manager
Advance Publications Inc.

William C. Rudin
Vice Chairman and
Chief Executive Officer
Rudin Management Company, Inc.

C. David Sammons
President and
Chief Executive Officer
Subaru Distributors Corp.

John Shalam
Founder and Chairman
Audiovox Corporation

Julie A. Shimer
President and
Chief Executive Officer
Welch Allyn, Inc.

Kenneth L. Wallach
Chairman and
Chief Executive Officer
Central National-Gottesman Inc.

Fred Wilpon
Chairman
Sterling Equities, Inc.

Frank Lourenso
Chairman
Regional Advisory Board

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(Window fashions)

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Executive Vice President
Comcast Corporation
(Television and entertainment)

David M. Cote [4, 5]
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Chief Executive Officer
Honeywell International Inc.
(Diversified technology and manufacturing)

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President
Henry Crown and Company
(Diversified investments)

James Dimon
Chairman and
Chief Executive Officer
JPMorgan Chase & Co.

Ellen V. Futter [4, 5]
President and Trustee
American Museum of Natural History
(Museum)

William H. Gray, III [1, 4]
Co-Chairman
GrayLoeffler, LLC
(Consulting and advisory)

Laban P. Jackson, Jr. [1]
Chairman and
Chief Executive Officer
Clear Creek Properties, Inc.
(Real estate development)

David C. Novak [2, 3]
Chairman and
Chief Executive Officer
Yum! Brands, Inc.
(Franchised restaurants)

Lee R. Raymond [2, 3]
Retired Chairman and
Chief Executive Officer
Exxon Mobil Corporation
(Oil and gas)

William C. Weldon [2, 3]
Chairman and
Chief Executive Officer
Johnson & Johnson
(Health care products)

Member of:
1 Audit Committee
2 Compensation & Management Development Committee
3 Corporate Governance & Nominating Committee
4 Public Responsibility Committee
5 Risk Policy Committee

Executive Committee (*denotes member of Operating Committee)

James Dimon*
Chairman and
Chief Executive Officer

Gaby A. Abdelnour
Asia Pacific

Nicolas Aguzin
Latin America

Peter K. Barker
California

Paul T. Bateman
Asset Management

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Chief Administrative Officer and Home Lending

Philip F. Bleser
Global Corporate Bank

Douglas L. Braunstein*
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Clive S. Brown
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Althea L. Duersten
Chief Investment Office

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Europe, Middle East and Africa

Gregory L. Guyett
Global Corporate Bank

Carlos M. Hernandez
Investment Bank

John J. Hogan
Investment Bank/ Risk Management

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Commercial Banking

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Asset Management

Conrad J. Kozak
Worldwide Securities Services

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Investment Bank

David B. Lowman
Home Lending

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Heidi Miller*
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Stephanie B. Mudick
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Asset Management

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Investment Bank

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Chase Operations

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Controller

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Emilio Saracho
Investment Bank

Charles W. Scharf*
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Peter L. Scher
Global Government Relations & Public Policy

Eileen M. Serra
Card Services

Marc Sheinbaum
Auto Finance and Student Loans

Gordon A. Smith*
Card Services

Barry Sommers
Chase Wealth Management

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Chief Risk Officer

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Joseph S. Bonocore
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Anthony J. Horan
Secretary

Lauren M. Tyler
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JPMorgan Chase & Co.

Corporate headquarters

270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000
jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities LLC

Annual Report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the U.S. Securities and Exchange Commission will be made available without charge upon request to:

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JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070

Stock listing

New York Stock Exchange
London Stock Exchange
Tokyo Stock Exchange

The New York Stock Exchange ticker symbol for the common stock of JPMorgan Chase & Co. is JPM.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations web site at jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000

Directors

To contact any of the Board members or committee chairs, the Presiding Director or the non-management directors as a group, please mail correspondence to:

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Office of the Secretary
270 Park Avenue
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The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct, the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting our web site at jpmorganchase.com and clicking on "Governance" under the "About us" tab.

Transfer agent and registrar

BNY Mellon
480 Washington Boulevard
Jersey City, NJ 07310-1900
Telephone: 800-758-4651
bnymellon.com/shareowner/equityaccess

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Contact BNY Mellon:

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From all other locations: 201-680-6889 (collect)

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Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, NY 10017-6204

As of the beginning of 2009, JPMorgan Chase & Co. has distributed shareholder information under the U.S. Securities and Exchange Commission "Notice and Access" rule. As a result, the firm prints 700,000 fewer Annual Reports and Proxy Statements, which saves on an annual basis approximately 6,400 trees and 800 metric tons of CO_2 emissions.

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JPMorgan Chase & Co.

jpmorganchase.com

FIRM OVERVIEW

Doug Braunstein, Chief Financial Officer

February 15, 2011

JPMorgan Chase & Co.

Agenda

I. JPMorgan Chase overview
   - Performance summary
   - LOB capital and performance targets

II. Selected key investor topics
   - Global opportunities
   - Competitive advantages of cross-sell
   - Corporate net income
   - Loan growth and capital raised
   - Firmwide capital topics
   - Outlook

III. Summary

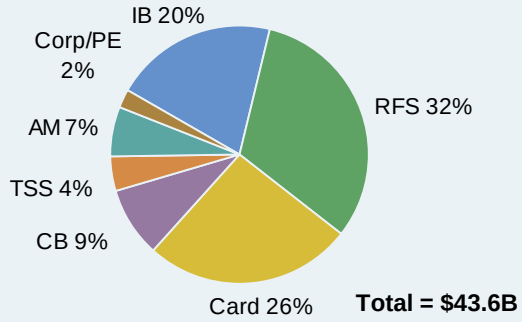
JPMorgan Chase overview

Performance summary

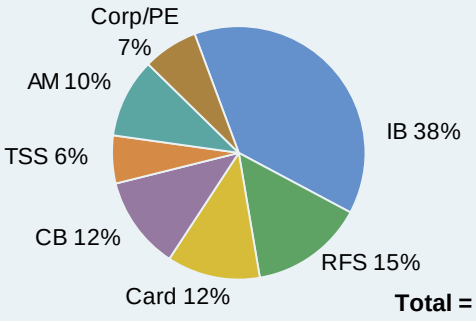
$ in millions, excluding EPS

	FY2009	FY2010	$O/(U) FY2009
Revenue (FTE)[1]	$108,647	$104,842	($3,805)
Credit Costs[1]	38,458	16,639	(21,819)
Expense	52,352	61,196	8,844
Reported Net Income	$11,728	$17,370	$5,642
Net Income Applicable to Common Stock	$8,774	$15,764	$6,990
Reported EPS	$2.26	$3.96	$1.70
ROE [2,3]	7%	10%	
ROTCE [2,3]	11%	15%	
Tier 1 Common	$105,284	$114,763	

Pretax pre-provision profit - 2010



Net income - 2010



[1] See note 1 on slide 38
[2] Net income used to calculate the ratios for FY2009 excludes the one-time, non-cash negative adjustment of $1.1B resulting from the repayment of TARP preferred capital
[3] See note 4 on slide 38

JPMorgan Chase overview

Breadth of the client franchise

Investment Bank

- ~5,000 issuer and ~16,000 investor clients, including:
  - Serving clients in 120+ countries
  - 89% of Fortune 100 companies
  - 76% of Fortune 500 companies
  - 120+ sovereign government clients
- Total front office personnel of ~8,500 including 800+ in Global Research
- ~2,000 bankers[1] globally

Commercial Banking

- Nearly 24,000 clients and nearly 35,000 real estate investors and owners
  - Nearly 21,000 Middle Market clients
    - Middle Market supports 3,200+ small business lending relationships with less than $20mm in sales
  - More than 1,600 Mid-Corporate clients
- 1,960 employees calling on clients, including 1,061 bankers

Treasury & Securities Services

- Serving ~25,000 corporations, financial institutions, governments and municipalities in over 140 countries and territories[2]
- ~10,600 TSS clients with >$50K revenue
  - WSS clients include 75% of the top 50 global asset managers
  - TS clients include 70% of the Global Fortune 500 companies
- ~1,090 sales and relationship managers

Asset Management

- AM's global footprint spans over 30 countries with employees in more than 200 locations
- 1,100 Investment professionals
- 130,000 Private Banking clients
- 3,400 sales people, including 2,600 client advisors and brokers

[1] Includes Public Finance and Global Corporate Bankers

[2] Represents TSS clients that meet certain revenue thresholds. Includes clients of IB, CB and AM

JPMorgan Chase overview

Breadth of the client franchise

Retail Financial Services

- 5,268 Chase branches in 23 states served nearly 31mm US consumers and small businesses in 4Q10
  - 23mm Retail Banking households served
  - 18mm active online Retail Banking customers
  - 2.2mm Business Banking customers
  - 8.5mm mortgage loans serviced
  - 3.3mm Auto accounts serviced
- Over 29,000 bankers

Card Services

- More than 139mm cards in circulation held by approximately 57mm customers
  - 2.3mm small business accounts
  - Affluent and High Net Worth – 11.3mm open accounts, 1.6mm new accounts added in 2010
  - 9.5mm Mass Affluent new accounts in 2010
  - Over 80 partner arrangements
- Over 600 sales people

JPMorgan Chase overview

Drivers of historical growth

	Select Key Stats ($ in billions, except where noted)	2005	2010	2005-2010 CAGR
IB	IB Fees ($mm)	$4,096	$6,186	8.6%
	Global IB Fees market share[1,2]	6.9%	7.8%	
	Fixed Income Markets ($mm)	7,570[1]	15,025	14.7%
	Equity Markets ($mm)	1,998	4,763	19.0%
RFS	Retail Banking Average Deposits	$175.1	$336.5	14.0%
	# of Branches	2,641	5,268	14.8%
	Deposit market share[3]	2.9%	5.7%	
	Mortgage origination market share[4]	5.6%	10.7%	
Card	Average Outstandings	$136.4	$144.4	1.1%
	Sales volume	224.7	313.0	6.9%
	GPCC Sales market share[5]	15.8%	18.4%	
	GPCC Credit Card OS market share[5]	20.9%	18.8%	
CB	Average Liability Balances[6]	$66.1	$138.9	16.0%
	Average Loans	48.1	97.0	15.1%
	IB Revenue, gross	0.6	1.3	19.3%
	Revenue/Banker ($mm)	2.8	5.7	15.3%
TSS	Average Liability Balances[6]	$154.7	$248.5	9.9%
	Assets under Custody ($T)	10.7	16.1	8.6%
	USD Clearing volume ($mm)	96	122	5.0%
	Depositary Receipts Program Balance (# of shares)	6,348	12,041	13.7%
AM	Assets under Management	$847	$1,298	8.9%
	Top quartile funds (3- year)[7]	111	195	11.9%
	Global Institutional Money Funds market share[8]	11.9%	17.1%	

[1] 2005 IB data represents heritage JPM only
[2] Source: Dealogic
[3] Source: SNL Corporation; all data is presented on a pro forma basis adjusted for acquisitions; excludes large branches (>$1B deposits) assumed to contain non-retail deposits
[4] Source: Inside Mortgage Finance, 4Q05 and 4Q10 for 2005 and 2010, respectively
[5] GPCC stands for General Purpose Credit Card. Excludes WaMu and industry data based on estimates and excludes Commercial Card
[6] Includes deposits and deposits swept to on-balance sheet liabilities
[7] Source: Lipper for the U.S. and Taiwan; Morningstar for the U.K., Luxembourg, France and Hong Kong; and Nomura for Japan
[8] iMoneyNet

JPMorgan Chase overview

Market share gains translate into significant earnings power

Pretax pre-provision profit ($ in billions)

	2005	2010	2005-2010 CAGR
Investment Bank[1]	$5,018	$8,952	12%
Retail Financial Services	6,245	13,892	17%
Card Services	10,367	11,366	2%
Commercial Banking	1,632	3,841	19%
Treasury & Securities Services	1,489	1,777	4%
Asset Management	1,804	2,872	10%
Corporate[1]	(6,617)	946	NM
Pretax Pre-Provision	$19,938	$43,646	17%
Net Income	$8,483	$17,370	15%

[1] IB revenue includes annual payment from TSS, which is offset in Corporate

JPMorgan Chase overview

LOB Capital

New vs. current LOB equity ($ in billions)	2010	2011	O/(U)
Investment Bank	$40.0	$40.0	$0.0
Retail Financial Services	28.0	28.0	0.0
Card Services	15.0	13.0	(2.0)
Commercial Banking	8.0	8.0	0.0
Treasury & Securities Svcs.	6.5	7.0	0.5
Asset Management	6.5	6.5	0.0
Total LOB Common Equity	$104.0	$102.5	($1.5)

- Standalone capital levels, specific to each LOB, incorporate Tier 1 Common Basel III expectations
- LOB equity process takes into account the following factors:
  - Known balance sheet actions
  - Economic capital
  - RWA stress
  - Peer capital levels
- IB capital increased in 2010, incorporating anticipated RWA changes
- Card Services capital reduction reflects portfolio run-off and improving risk profile

JPMorgan Chase overview

LOB performance targets

LOB performance targets

	Target Metrics	Target Metric Performance 2008	2009	2010	Performance Target
IB	ROE	(5%)	21%	17%	17% +/-
RFS[1]	ROE	5%	0%	9%	30% +/-
	ROE Exc. RE	35%	36%	27%	
Card	ROE	5%	(15%)	14%	20% +/-
CB	ROE	20%	16%	26%	20% +
TSS	ROE	47%	25%	17%	25% +/-
AM	ROE	24%	20%	26%	35% +/-

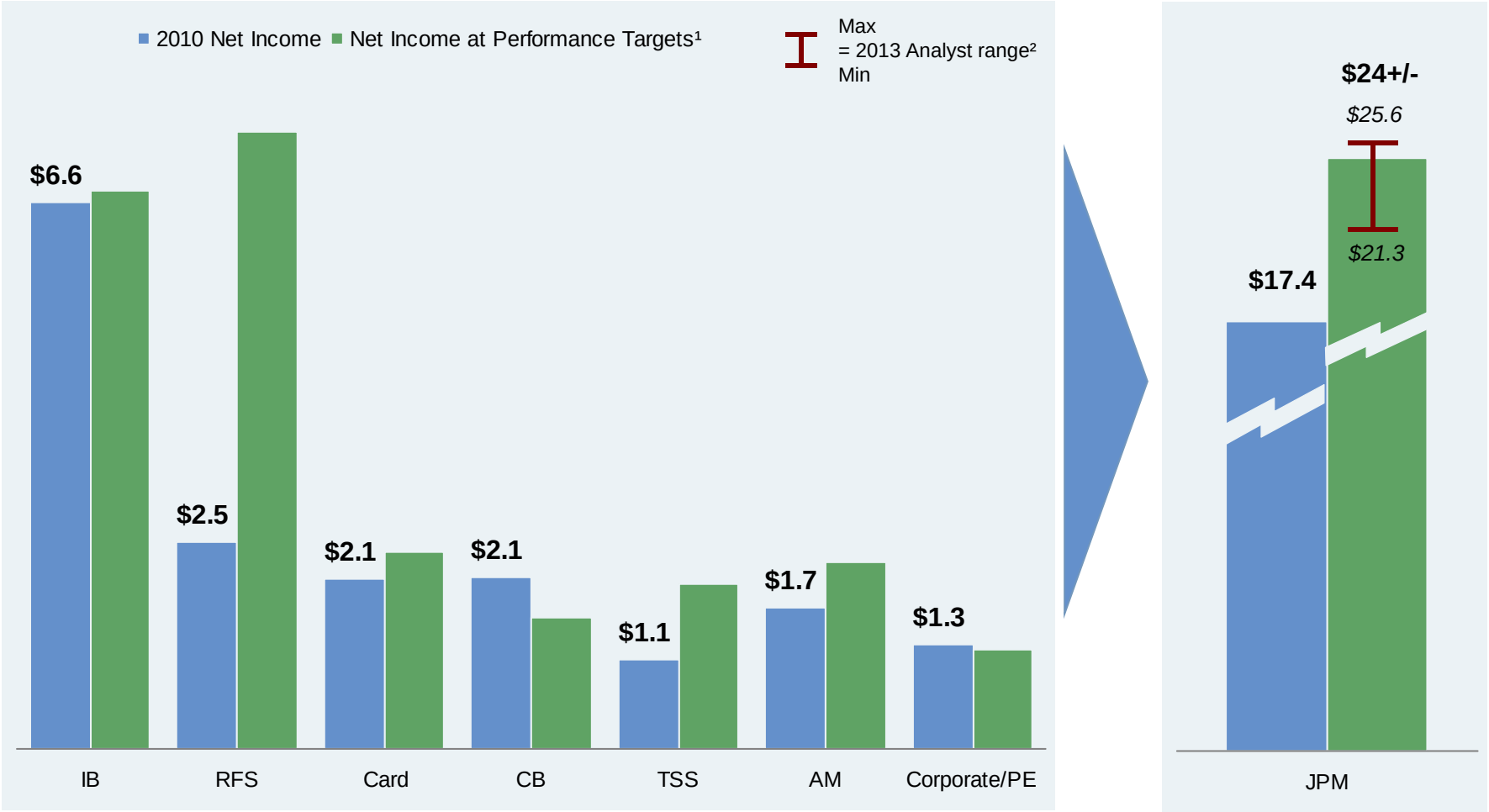
[1] Retail Banking ROE of 45%, 41% and 35% in 2008, 2009 and 2010, respectively; Mortgage Banking and Other Consumer Lending ROE of 23%, 28% and 17% in 2008, 2009 and 2010, respectively

Note: TSS and AM pretax margin targets remain unchanged at 35% +/- through the cycle

JPMorgan Chase overview

LOB performance at targets

Net income by LOB ($ in billions)



Significant earnings upside if the Firm reaches performance targets

[1] Net income projections based on performance target and steady state assumptions; TSS and AM ROE targets of 25% and 35%, respectively, are based on additional assumptions including steady state revenue and tax rate

[2] Analyst average for 2013 is composed of 5 analysts plus I/B/E/S LTG projections off of 2012 for 3 analysts; analyst average of $24.1 billion in 2013

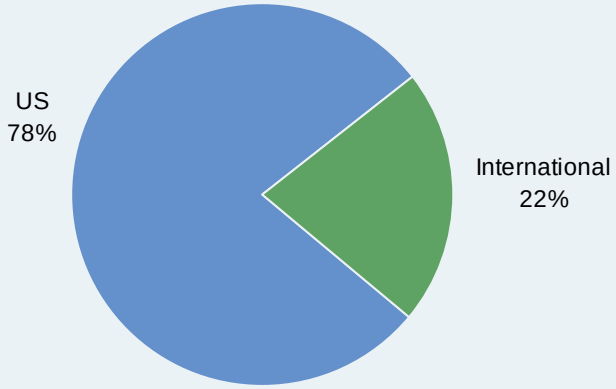
Agenda

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Selected key investor topics	**11**

Selected key investor topics

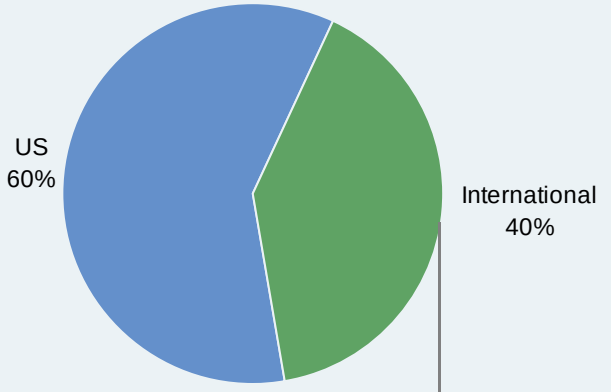
Our current global footprint

Firmwide revenue by region — 2010



Total = $102.7B

Wholesale revenue by region — 2010

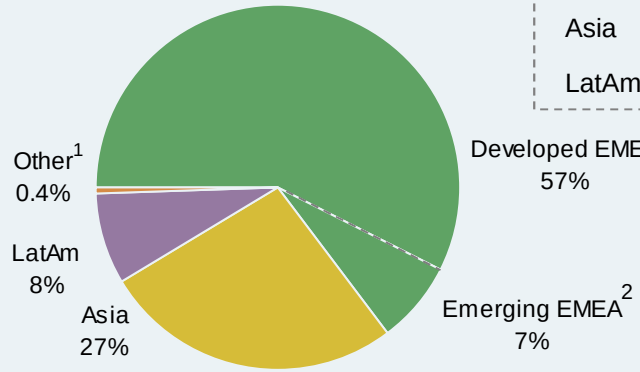


Total = $54.0B

International wholesale revenue — 2010

% International	
IB	46%
TSS	49%
AM	32%

'05-'10 CAGR	
EMEA	12%
Asia	15%
LatAm	13%

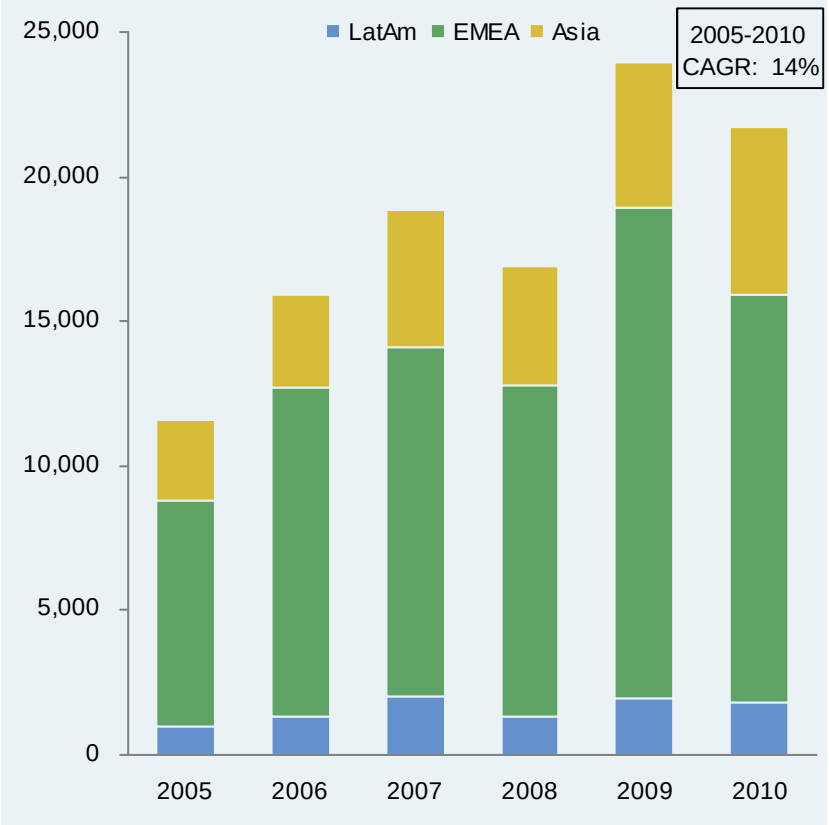


Total = $21.7B

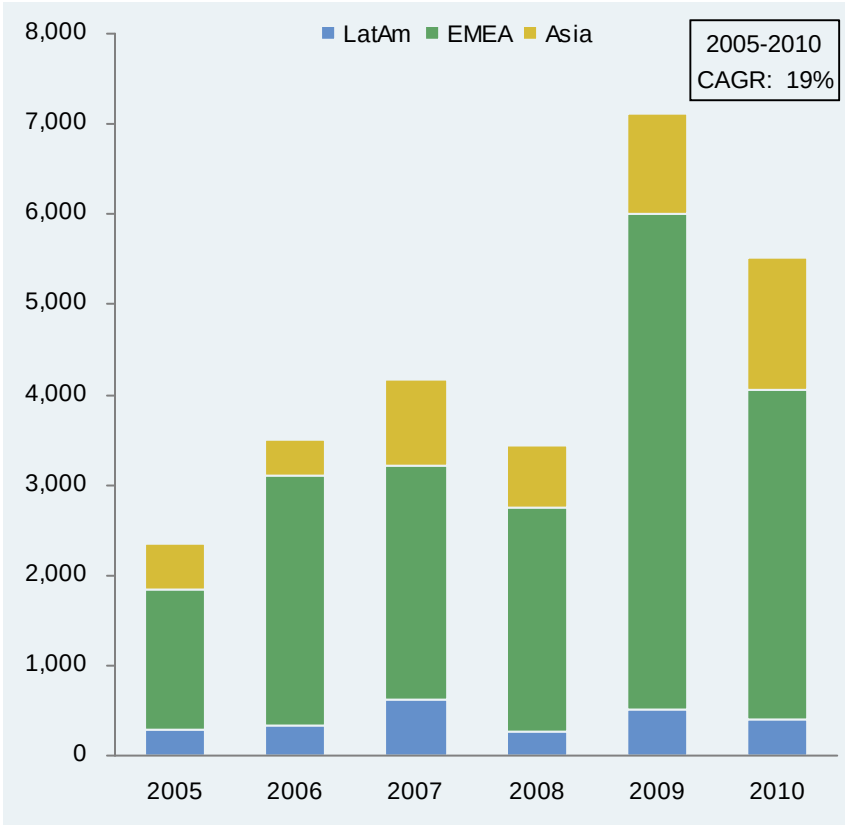
[1] Majority of the revenue in "Other" relates to activity in Canada
[2] EMEA includes CIO gains in 2010

2005 – 2010 International wholesale revenue and net income

Revenue – Non U.S. ($ in millions)



Net income – Non U.S. ($ in millions)



Note: RFS and Card excluded from this analysis. EMEA includes CIO gains in 2010

Key international wholesale metrics

Asia Pacific

- 2010 revenue of $5.8B
  - 2005 – 2010 CAGR: 15%
- Operate in 16 countries in the region
  - 6 new offices opened in 2010
- Headcount of 15,419[1]
  - 4,366 front office
- 450+ significant clients[2]
- $49.1B in deposits
- $20.6B in loans outstanding
- $118B in AUM

LatAm/Caribbean

- 2010 revenue of $1.8B
  - 2005 – 2010 CAGR: 13%
- Operate in 8 countries in the region
  - 2 new offices opened in 2010
- Headcount of 1,770[1]
  - 1,024 front office
- 160+ significant clients[2]
- $1.7B in deposits
- $16.5B in loans outstanding
- $32B in AUM

EMEA

- 2010 revenue of $14.1B
  - 2005 – 2010 CAGR: 13%
- Operate in 33 countries in the region
  - 5 new offices opened in 2010
- Headcount of 16,312[1]
  - 6,192 front office
- 940+ significant clients[2]
- $135.8B in deposits
- $27.9B in loans outstanding
- $281B in AUM

[1] Includes headcount in offshore service centers supporting line of business operations in each region.
Front office headcount defined as follows:
IB - Front office includes bankers and sales and trading employees excluding front office support
TSS - Front office includes sales, product and client service workforce
AM - Front office includes sales, sales support and all product/investors staff
[2] Significant clients defined as a company with over $1mm in international revenue in the region (excludes private banking clients)
Note: RFS and Card excluded from this analysis. EMEA includes CIO gains in 2010
Loans outstanding are based on client domicile and exclude loans held-for-sale

Major competitive advantage – cross-sell across wholesale

Investment Bank

- Significant revenue generated from the CB client base
  - 24% of gross domestic IB fee revenue generated from CB clients in 2010
  - $375mm firmwide revenue from FX/Derivatives for CB clients
  - $2B revenue opportunity within 5 years
- 40% firmwide FX revenue generated via TSS offerings

Treasury & Securities Services

- 40% TS Firmwide revenue from CB client base
- Global Corporate Bank effort
  - Additional ~$1B of annual pretax income impact expected in 5 years

Asset Management

- 21% of IM liquidity AUM from TSS
- 12% of firmwide PB client revenue generated from IB products

Retail branches are invaluable to the rest of our franchise

Commercial Banking

- Business unlikely to exist without retail presence
- ~17mm transactions done by CB clients in 2010 at branches
- $650-800mm of projected long-term CB pretax income opportunity from build-out in the WaMu footprint (West and Southeast)

Card Services

- 1.5 mm+/- cards sold through branches in 2010
  - 35% of Card Services cards sold through branch network[1]
- >40% of revenue from new merchants is being sourced through the retail branches



Asset Management

- ~25% of JPM IM US Retail AUM comes from the branches
  - $31B of JPM investment product AUM
- $1B+/- incremental pretax income opportunity from Chase Private Client Services
- ~50% of Private Banking clients use the branch network

Treasury & Securities Services

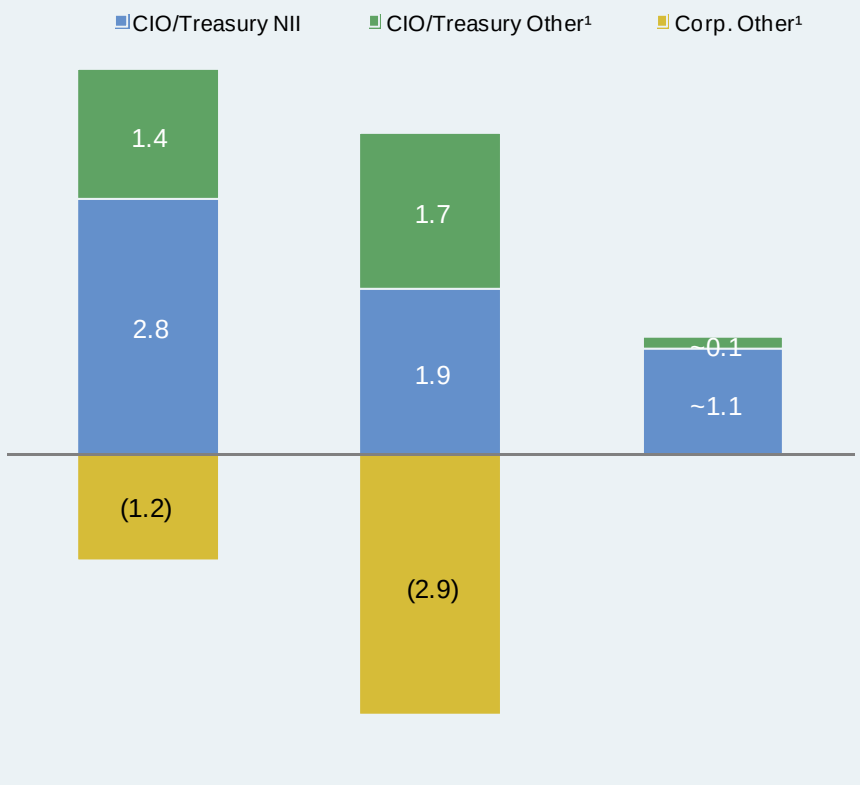
- Use of core banking services (e.g., deposits and change orders)
- Check Cashing Agreements: cashing of employee payroll checks without a fee across branch network
- Chase At Work: better payroll management, convenient banking & discounts to employees

[1] Excludes retail partner accounts

Selected key investor topics

Corporate net income guidance

Corporate Net income trend 2009 – 2011 ($ in billions)



	2009	2010	2011
Total Corp (ex. PE):	**$3.1**	**$0.7**	**~$1.2**

Commentary

- Reduction in NII reflects the cumulative effect of sales of high yielding securities that met price objectives
  - Overall part of deleveraging the balance sheet
  - Beginning to reposition for a rising rate environment
- Expect $300mm +/- corporate net income per quarter ($1.2B per annum, excl. PE and one-time items) largely driven by the characteristics of the investment portfolio

Firmwide net interest income

- Immediate 100bps rise in interest rates would increase firmwide revenue by $1.5B

¹ Corporate Other and CIO/Treasury Other includes one-time items for 2009 and 2010. Excludes Private Equity net income of ($78)mm loss in '09 and $587mm gain in '10. Corporate and Private Equity net income and Corporate Investment Securities portfolio previously disclosed. CIO/Treasury NII, CIO/Treasury Other, and Corp. Other not previously disclosed

Selected key investor topics

Loan growth - Growth in new and renewed credit provided to and capital raised for clients in 2010[1]

$ in billions



	Investment Bank	Commercial Banking	Asset Management	TSS	Card Services[5]	Business Banking	Other Consumer[6]	Total Firm
% Δ	1%	5%	26%	19%	58%	11%	50%	3%	6%
EOP ($B)		$56.9	$98.9	$44.1	$27.2	$123.9	$16.8	$314.8	$679.2
Δ in total EOP balances ($B)[7]		$7.8	$1.5	$6.3	$8.2	($19.8)	($0.2)	($23.2)	($19.2)
% Δ in EOP balances		16%	2%	17%	43%	(14)%	(1)%	(7)%	(3)%

[1] New and renewed lending consists of debt and equity underwriting, loan syndication and other capital raised for states, municipalities, hospitals, schools and non-profits in the Investment Bank; new and renewed lending commitments to commercial clients; new originations and refinancing to consumers including first mortgages, home equity lines, US credit cards and other consumer lending such as auto loans, leases, student loans and other; new originations, renewals and increases to existing lending for small businesses
[2] Consists of debt and equity underwriting, loan syndications distributed to third parties (as estimated) and other capital raised for states, municipalities, hospitals, schools and non-profits, excluding the portion retained in the credit portfolio (source: Dealogic and Thomson Reuters)
[3] Consists of new and renewed lending held in IB's credit portfolio, including the estimated retained portion of loan syndications
[4] Also includes estimated bilateral and other lending activity not previously reported
[5] Loan balances exclude the impact of the Washington Mutual transaction. New and renewed lending includes international originations starting January 1, 2010
[6] Consumer includes Home Lending, Home Equity, Auto loans and leases, Student and Other
[7] Total EOP loans are on a managed basis. Effective January 1, 2010, the Firm consolidated $15.1 billion of multi-seller conduit loans due to accounting guidance related to VIEs. CB loans for 2010 include the $3.5 billion Commercial Term Loan portfolio acquisition

Selected key investor topics

Capital stress process

Process overview

- Rigorous firmwide quarterly stress testing process in place
  - Bottom-up P&L and balance sheet developed for different economic scenarios
    - 3-year outlook
    - Economic scenarios defined by JPM economists
    - P&L and balance sheet models developed by lines of business
    - Stress scenarios incorporate potential expense reduction initiatives across LOBs
  - Capital actions evaluated
- Ongoing process adjusted to meet the Fed Comprehensive Capital Plan requirements

JPM Stress: Example metrics

Range of parameters used to model stress scenarios, including:

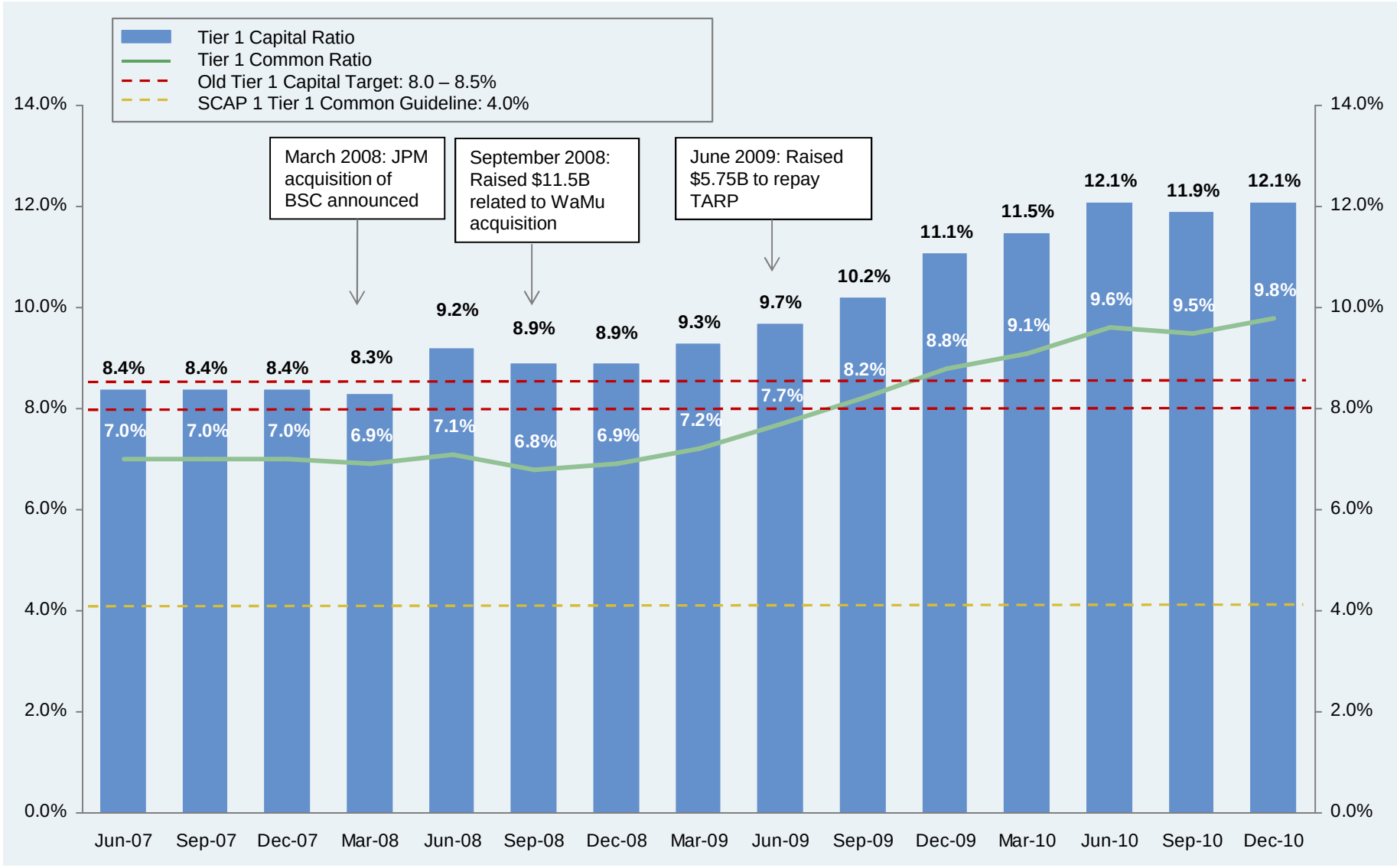
- GDP declines over 4% through 3Q11, then resumes slow growth through 4Q13
- Peak unemployment of 11.7% in 4Q13
- HPI peak-to-trough of 45% in 1Q12
- Equity markets bottom at 850[1] during 2H11 and do not recover to 2010 levels until 4Q13
- Fed funds stay at 20bps through 4Q13

[1] S&P 500

Selected key investor topics

JPM has maintained a fortress balance sheet throughout the crisis

Basel I Tier 1 Capital ratio excluding TARP[1]



[1] Includes BSC RWA relief in 2Q08 – 1Q09

Selected key investor topics

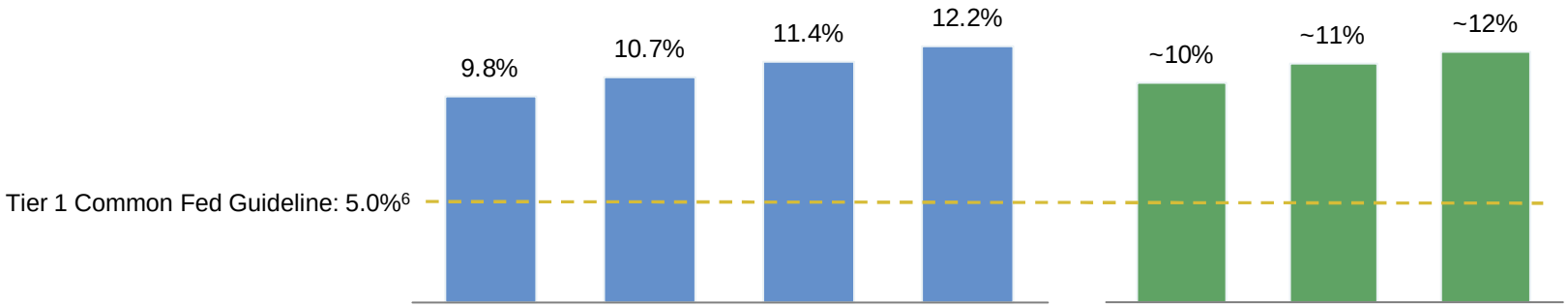
Capital generation — Illustrative "stress" case based on analyst projections

Analyst and "stressed" analyst projections ($ in billions)[1,2,3]

Assumptions

		Analyst Projections			"Stressed" Analyst Projections		
	2010	2011	2012	2013	2011	2012	2013
Net Income	$17.4	$19.6	$22.2	$24.1	~$12	~$13	~$14
Net Share Repurchases[4]		$4	$6	$7	$0	$0	$0
Total Common Dividends[5]		$2	$5	$6	$2	$5	$6
Capital Generation		$12	$10	$11	$9	$8	$8
Cumulative Cap. Gen.				$34			$25

Basel I Tier 1 Common Ratio



Basel III Tier 1 Common Ratio

Analyst Projections				"Stressed" Analyst Projections		
2010	2011	2012	2013	2011	2012	2013
7.0%	~8%	~10%	~11%	~8%	~9%	~10%

[1] Analyst average for 2013 is composed of 5 analysts plus I/B/E/S LTG projections off of 2012 for 3 analysts; regulatory changes are assumed to be incorporated in the analyst projections. JPM does not endorse these projections

[2] "Stressed" Analyst Projections incorporate JPM stressed scenario assumptions

[3] Analyst projection of capital deployment through common dividends of $13.7B and share repurchases of $17.3B from 2011-2013; "stressed" analyst projections include common dividend only

[4] Represents repurchases above and beyond employee issuance

[5] Analyst Projections and "Stressed" Analyst Projections assume dividends per share of $0.63, $1.28 and $1.56 in 2011, 2012 and 2013, respectively

[6] Guideline communicated in the Federal Comprehensive Capital Plan 11/10

Note: Numbers rounded for presentation purposes. Ratios and other calculations may not round perfectly

Selected key investor topics

Capital planning

Federal Reserve Comprehensive Capital Plan Review

- Extensive data collection and analysis; 100+ person firmwide team submitted plan on January 7, 2011
- Follow-up meetings with Fed currently under way
- Expect response by March 21, 2011

Capital Plan & Results

- Under both the JPM Stress and Fed Stress scenarios, JPM continues to maintain and grow its strong capital position
- Capital plan incorporates both dividend and share repurchase requests

Capital Hierarchy

- Increase dividend to 30%+ payout ratio of normalized earnings over time
- Hierarchy of capital after restoration of the dividend:
  - Organic growth
  - Opportunistic share repurchase – subject to price
  - Acquisitions

Outlook

Retail Financial Services

- Total quarterly net charge-offs running at $1.2B+/-
- Continued elevation in credit-related expense
- Residential real estate portfolios expected to decline by approximately 10-15% annually for the foreseeable future
  - 2011 portfolio net interest income expected to be reduced by $700mm+/- from 2010 level
- Mortgage production volumes and margins remain sensitive to interest rates. If current rates remain unchanged or rise further expect a significant impact on both

Card Services

- Chase and WaMu credit losses expected to continue to improve; Chase losses expected to be below 6.50% in 1Q11
- EOP outstandings for Chase (excluding WaMu) are projected to bottom out in 3Q11 and end the year in 2011 at $120B+/-, reflecting a better mix of customers
  - 1Q11 outstandings expected to decline as much as $10B due to runoff and seasonal activity
- Card Services 2011 net interest income expected to be reduced by $1.4B+/- from the 2010 level

Corporate/Private Equity

- Corporate
  - Quarterly net income expected to be $300mm+/-, subject to the size and duration of the investment securities portfolio, excluding private equity

JPM's fundamentals remain extremely strong

Excellent franchises

- Excellent client franchises and businesses
- Each standalone business has a top 1, 2 or 3 position
- Unparalleled client relationships in 120+ countries
- Culture of innovation; new products and programs launched during crisis

Significant earnings power

- Continued investment across LOBs driving organic growth
- Consistent record of operating efficiency and delivering merger saves
- Businesses stronger together than apart; additional revenue streams generated

Fortress balance sheet

- Further strengthened balance sheet: Tier 1 Common[1] at $115B or 9.8%; estimated Basel III Tier 1 Common[1] at $112B or 7.0%
- High quality capital and high level of reserves $32.3B, loan loss coverage ratio of 4.46%[2]
- Strong funding and liquidity profile: ~$930B deposits, 1.3x loan coverage
- Benefits from diversification – funding, capital, lower volatility

[1] See note 3 on slide 38
[2] See note 2 on slide 38

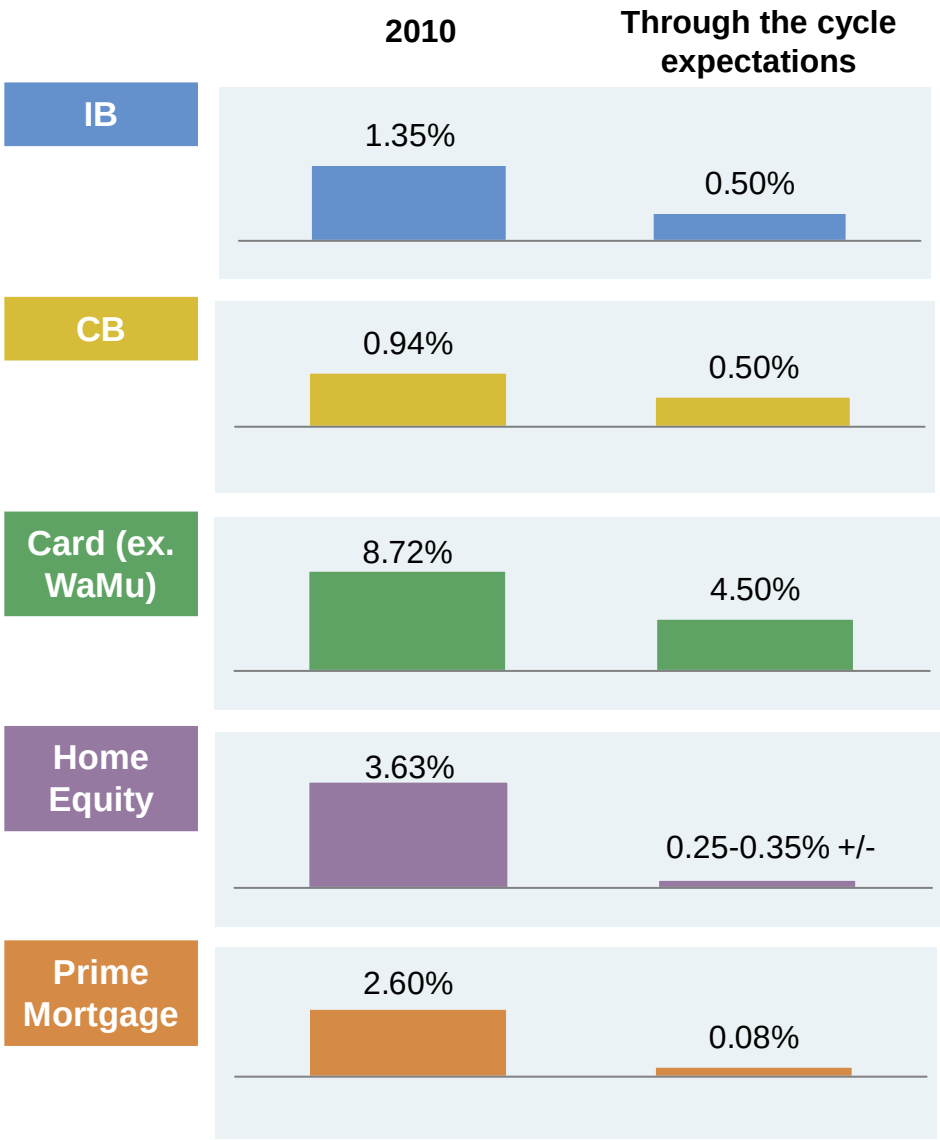
Agenda

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Appendix **24**

Credit performance improvement is a key driver to improved earnings outlook

Expectations for net charge-off rates through the cycle



Reserves

($ in billions)	12/31/10 Allowance for Loan Losses[1]	12/31/10 Loan Loss Coverage Ratio[1]
Wholesale	$4.8	2.1%
Consumer	22.6	5.8%
Firmwide	**$27.3**	**4.5%**

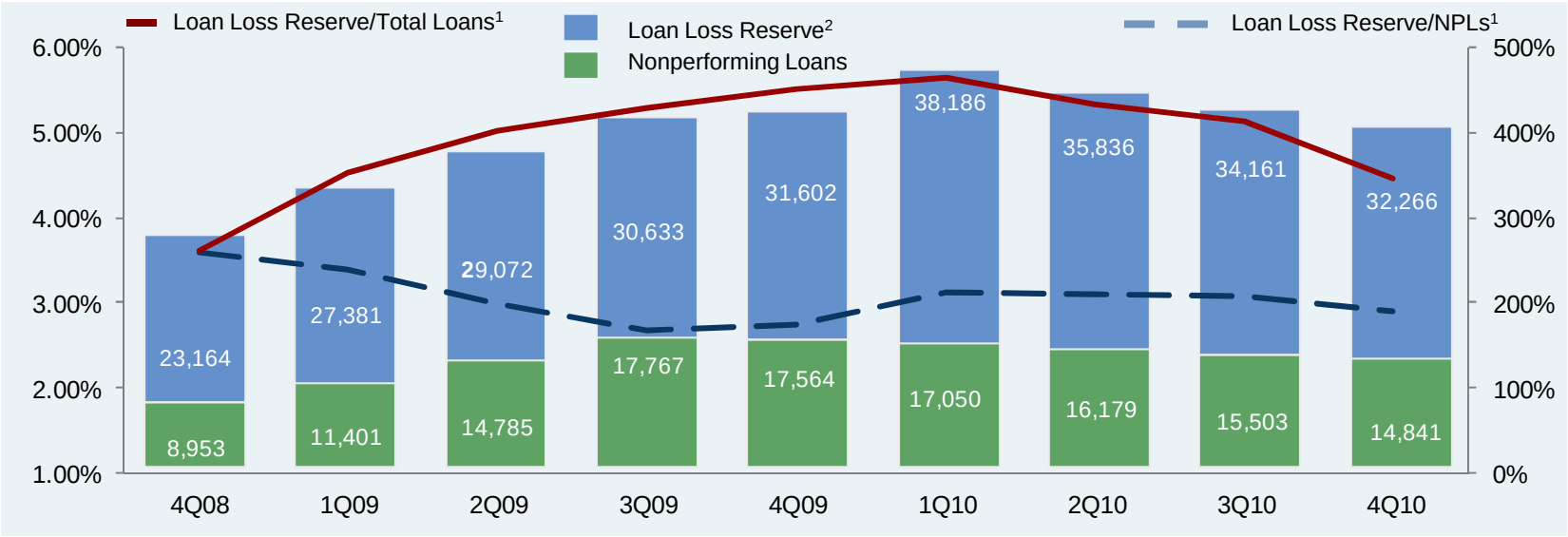
Reserve levels will adjust as underlying credit improves and certain portfolios run off

[1] See note 2 on slide 38

APPENDIX

Firmwide coverage ratios remain strong

$ in millions



Peer comparison

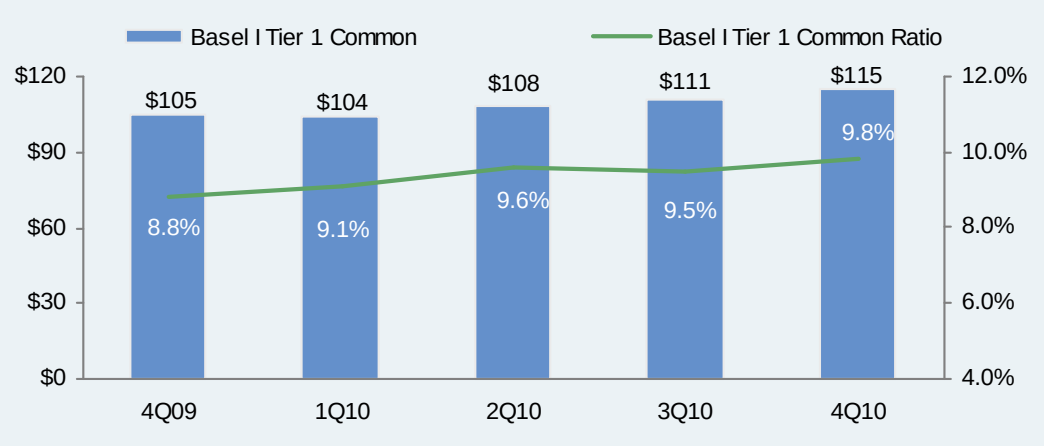
	4Q10	
	JPM[1]	Peer Avg.[3]
Consumer		
LLR/Total Loans	5.78%	5.86%
LLR/NPLs	255%	195%
Wholesale		
LLR/Total Loans	2.14%	2.32%
LLR/NPLs	86%	59%
Firmwide		
LLR/Total Loans	4.46%	4.56%
LLR/NPLs	190%	138%

- $32.3B of loan loss reserves in 4Q10[2], up ~$9.1B from $23.2B two years ago; loan loss coverage ratio of 4.46%[1]
  - $7.5B (pretax) addition in allowance for loan losses related to the consolidation of credit card receivables in 1Q10[1]

[1] See note 1 on slide 38
[2] Includes allowance for loan losses for purchased credit-impaired loans of $4.9B, $2.8B, $2.8B, $2.8B, $1.6B, and $1.1B at the end of 4Q10, 3Q10, 2Q10, 1Q10, 4Q09, and 3Q09, respectively
[3] Peer average reflects equivalent metrics for key competitors. Peers are defined as C, BAC and WFC

Fortress balance sheet

Tier 1 Common[1] ($ in billions)



- Firmwide total credit reserves of $33B; loan loss coverage ratio of 4.46%[1]
- Strong liquidity position
  - Global liquidity reserve of $262B[2,3]
  - Deposit to loan ratio of 134%
- Basel III Tier 1 Common of 6.8% and 7.0% in 3Q10 and 4Q10, respectively

[1] See note 2 on slide 38
[2] Estimated for 4Q10
[3] The Global Liquidity Reserve represents cash on deposit at central banks, and the cash proceeds expected to be received in connection with secured financing of highly liquid, unencumbered securities (such as sovereigns, FDIC and government guaranteed, agency and agency MBS). In addition, the Global Liquidity Reserve includes the firm's borrowing capacity at the Federal Reserve Bank discount window and various other central banks and from various Federal Home Loan Banks, which capacity is maintained by the firm having pledged collateral to all such banks. These amounts represent preliminary estimates which may be revised in the firm's 10-K for the period ending December 31, 2010
Note: Firmwide Level 3 assets are 5% of total firm assets at December 31, 2010

Managed financial results

Firmwide results ($ in millions)

	2005	2006	2007	2008	2009	2010
Revenue (FTE)[1]	$58,364	$65,113	$74,812	$72,772	$108,647	$104,842
Credit Costs[1]	3,483	3,270	6,864	20,979	32,015	16,639
Expense	38,281	38,843	41,703	43,500	52,352	61,196
Reported Net Income	**$8,843**	**$14,444**	**$15,365**	**$5,605**	**$11,728**	**$17,370**
Reported EPS	**$2.38**	**$4.04**	**$4.38**	**$1.35**	**$2.26**	**$3.96**
ROE[2]	8%	12%	13%	4%	7%	10%
ROTCE[2,3]	14%	22%	21%	6%	11%	15%

Net income by line of business ($ in millions)

	2005	2006	2007	2008	2009	2010
Investment Bank	$3,673	$3,674	$3,139	$(1,175)	$6,899	$6,639
Retail Financial Services	3,427	3,213	2,925	880	97	2,526
Card Services	1,907	3,206	2,919	780	(2,225)	2,074
Commercial Banking	951	1,010	1,134	1,439	1,271	2,084
Treasury & Securities Services	863	1,090	1,397	1,767	1,226	1,079
Asset Management	1,216	1,409	1,966	1,357	1,430	1,710
Corporate/Private Equity	(3,554)	842	1,885	557	3,030	1,258
Total Firm Net Income	**$8,843**	**$14,444**	**$15,365**	**$5,605**	**$11,728**	**17,370**

[1] See note 1 on slide 38
[2] Net income used to calculate the ratios for 2009 excludes the one-time, non-cash negative adjustment of $1.1B resulting from the repayment of TARP preferred capital
[3] See note 4 on slide 38

Investment Bank

$ in millions	2008[1]	2009	2010
Revenue[2]	$12,335	$28,109	$26,217
IB Fees	5,907	7,169	6,186
Fixed Income Markets	1,957	17,564	15,025
Equity Markets	3,611	4,393	4,763
Credit Portfolio	860	(1,017)	243
Expense	13,844	15,401	17,265
Credit Costs	2,015	2,279	(1,200)
Net Income	($1,175)	$6,899	$6,639
Key Statistics ($B)			
Overhead Ratio	112%	55%	66%
Comp/Revenue[3]	62%	33%	37%
EOP Loans	$85.0	$49.1	$56.9
Allow. for Loan Losses	$3.4	$3.8	$1.9
Net Charge-off Rate[4]	0.14%	3.04%	1.35%
ALL / EOP Loans[4]	4.83%	8.25%	3.51%
ROE[5]	(5%)	21%	17%
VAR ($mm)[6]	$176	$164	$87
EOP Equity	$33.0	$33.0	$40.0

[1] Results for 2008 include seven months of the combined Firm's (JPMorgan Chase & Co.'s and Bear Stearns') results and five months of heritage JPMorgan Chase results
[2] The 2009 results reflect modest net gains on legacy leveraged lending and mortgage-related positions, compared with net markdowns of $10.6 billion in 2008
[3] The compensation expense as a percentage of total net revenue ratio includes the impact of the U.K. Bank Payroll Tax on certain compensation awarded from December 9, 2009 to April 5, 2010 to relevant banking employees. For comparability to prior periods, IB excludes the impact of the U.K. Bank Payroll Tax expense, which results in a compensation expense as a percentage of total net revenue for 2010 of 35%, which is a non-GAAP financial measure
[4] Loans held-for-sale and loans at fair value were excluded when calculating the loan loss coverage ratio and net charge-off rate
[5] Calculated based on average equity
[6] First six months of 2008 represent VAR at 99% confidence level, second six months of 2008, 2009 and 2010 Average Trading and Credit Portfolio VAR at 95% confidence interval
[7] Dealogic based on revenue
[8] Source: Coalition Development Ltd

Leadership positions

- Global IB Fee market leader, #1 ranking for the past two years[7]
- Ranked #2 in disclosed Markets revenue in 2010 (Based on top 10 competitors that have released as of February 11th, 2011)
- Top 2 player in emerging markets over past 5 years[8]
- Ranked #1 2010 All-America Fixed Income and Equity Research team by Institutional Investor magazine

Retail Financial Services

$ in millions	2008	2009	2010
Retail Financial Services			
Net Interest Income	$14,165	$20,492	$19,528
Noninterest Revenue	9,355	12,200	12,228
Revenue	23,520	32,692	31,756
Expense	12,077	16,748	17,864
Pre-Provision Pretax	11,443	15,944	13,892
Credit Costs	9,905	15,940	9,452
Net Income	$880	$97	$2,526
EOP Equity ($B)	$25	$25	$28
ROE[1]	5%	- %	9%
Memo:			
RFS Net Income Excl. Real Estate Portfolios	$4,268	$5,546	$5,019
ROE Excl. Real Estate Portfolios[2]	35%	36%	27%
Retail Banking — Key Drivers[1] ($ in billions)			
Average Deposits	$244.6	$340.8	$336.5
Deposit Margin	2.89%	2.96%	3.03%
Checking Accts (mm)	24.5	25.7	27.3
# of Branches	5,474	5,154	5,268
Mortgage Banking & Other Consumer Lending — Key Drivers[1] ($ in billions)			
Mortgage Loan Originations	$169.0	$150.7	$155.6
3rd Party Mortgage Loans Svc'd (EOP)	1,173	1,082	968
Auto Originations	19.4	23.7	23.0
Avg Loans	61.9	68.7	77.2

[1] Calculated based on average equity; average equity for 2010, 2009 and 2008 was $28B, $25B and $19B, respectively
[2] Calculated based on average equity; average equity for 2010, 2009 and 2008 was $18.3B, $15.2B and $12.1B, respectively
[3] Source: Inside Mortgage Finance, 4Q10
[4] Source: Autocount as of YTD December 2010

Leadership positions

- Attractive footprint
  - Tri-West
  - Midwest
  - California
  - Northwest
  - Florida
  - Southwest
- Top deposit shares in
  - #1 New York
  - #1 Chicago
  - #1 Phoenix
  - #1 Dallas/Ft. Worth
  - #1 Houston
  - #2 Seattle
  - #3 Los Angeles
- #3 in Mortgage Originations with 10.7% market share[3]
- #3 in Mortgage Servicing with 11.9% market share[3]
- #2 non-captive in new/used vehicles sold at franchise dealers[4]

Retail Financial Services

Retail Banking and Mortgage Banking & Other Consumer Lending

$ in millions	2008	2009	2010
Retail Banking			
Net Interest Income	7,659	10,781	10,785
Noninterest Revenue	4,951	7,169	6,792
Revenue	$12,610	$17,950	17,577
Expense	7,232	10,357	10657
Pre-provision pretax	$5,378	$7,593	6,920
Credit Costs	449	1,142	607
Net Income	$2,982	$3,903	$3,614
Mortgage Banking & Other Consumer Lending			
Revenue (excl. MSR Risk Management)	$5,451	$6,594	$7,496
MSR Risk Management	1,517	1,628	1,136
Revenue	6,968	8,222	8,632
Memo: Repurchase Losses (Contra-Revenue)	($252)	($1,612)	($2,912)
Expense	3,956	4,544	5,580
Pre-Provision Pretax	3,012	3,678	3,052
Credit Costs	895	1,235	614
Net Income	$1,286	$1,643	$1,405

[1] Principally NII income ($5.4B in 2010 and $4.6B in 2011)

Retail Financial Services

Real Estate Portfolios

$ in millions			
	2008	2009	2010
Real Estate Portfolios			
Total Revenue	$3,942	$6,520	$5,547
Expense	889	1,847	1,627
Pre-Provision Pretax	3,053	4,673	3,920
Net charge-offs	3,894	8,343	6,450
Change in allowance	4,667	5,220	1,781
Credit Costs	8,561	13,563	8,231
Net Income	(3,388)	(5,449)	(2,493)
Memo: ALL/EOP Loans [1]	3.79%	6.55%	6.47%

Key Drivers ($ in billions)			
	2008	2009	2010
Total Avg loans	$181.3	$270.5	$238.8
Avg Home Equity Loans Owned[2]	107.0	135.9	120.3
Avg Mortgage Loans Owned[2]	73.4	133.8	117.5

[1] Excludes the impact of purchased credit-impaired loans acquired as part of the WaMu transaction. An allowance for loan losses of $4.9B and $1.6B was recorded for these loans at year end 2010 and 2009, respectively
[2] Includes purchased credit-impaired loans acquired as part of the WaMu transaction

APPENDIX

Card Services

$ in millions	2008	2009	2010
Revenue	$16,474	$20,304	$17,163
Expense	5,140	5,381	5,797
Credit Costs	10,059	18,462	8,037
Net Income	$780	($2,225)	$2,074
Key Statistics Incl WaMu ($B)			
ROO (Pretax)	0.78%	(2.05)%	2.31%
ROE[1]	5%	(15)%	14%
EOP Equity	$15.0	$15.0	$15.0
Key Statistics Excl WaMu ($B)			
Avg Outstandings	$155.9	$148.8	$128.3
EOP Outstandings	$162.1	$143.8	$123.9
New Accts Opened (mm)	14.4	10.2	11.3
Managed Margin	8.16%	8.97%	8.86%
Net Charge-Off Rate	4.92%	8.45%	8.72%
30+ Day Delinquency Rate	4.36%	5.52%	3.66%

[1] Calculated based on average equity

[2] Excludes WaMu and industry data based on estimates and excludes Commercial Card

[3] Based on internal JPM estimates

Leadership positions

- Chase is #1 Visa credit card issuer
- 18.8% market share of General Purpose Credit Card outstandings[2]
- 18.4% market share of General Purpose Credit Card sales volume[2]
- #1 co-brand card issuer in the U.S.[3]
- #1 merchant acquirer in e-commerce payment processing[3]

Commercial Banking

$ in millions	2008	2009	2010
Revenue	$4,777	$5,720	$6,040
Middle Market	2,939	3,055	3,060
Mid-Corp. Banking	921	1,102	1,154
Comm. Term Lending	243	875	1,023
Real Estate	413	461	460
Other	261	227	343
Expense	1,946	2,176	2,199
Credit Costs	464	1,454	297
Net Income	$1,439	$1,271	$2,084
Key Statistics ($B)			
Avg Loans	$82.3	$106.7	$97.0
EOP Loans	$115.4	$97.4	$98.9
Avg Liability Balances[1]	$103.1	$113.2	$138.9
Allow. for Loan Losses	$2.8	$3.0	$2.6
NPLs	$1.0	$2.8	$2.0
Net Charge-Off Rate[2]	0.35%	1.02%	0.94%
ALL/Loans[2]	2.45%	3.12%	2.61%
ROE[3]	20%	16%	26%
Overhead Ratio	41%	38%	36%
EOP Equity	$8.0	$8.0	$8.0

[1] Includes deposits and deposits swept to on-balance sheet liabilities
[2] Loans held-for-sale and loans at fair value were excluded when calculating the loan loss coverage ratio and net charge-off rate
[3] Calculated based on average equity
[4] Source: Greenwich Market Study FY2010
[5] FDIC 9/30/10
[6] Thomson Reuters FY10

Leadership positions

- Strong liquidity – only bank in peer group with a loan-to-deposit ratio under 100%
- Maintained top 3 leadership position nationally in market penetration and lead share[4]
- 68% of Chase clients use Chase for their TS needs[4]
- #1 multi-family lender in the U.S.[5]
- #2 large middle market lender in the U.S.[6]

Treasury & Securities Services

$ in millions	2008	2009	2010
Revenue	$8,134	$7,344	$7,381
Treasury Services	3,779	3,702	3,698
Worldwide Securities Svcs.	4,355	3,642	3,683
Expense	5,223	5,278	5,604
Credit Costs	82	55	(47)
Net Income	$1,767	$1,226	$1,079
Key Statistics			
Avg Liability Balances ($B)[1]	$279.8	$248.1	$248.5
Assets Under Custody ($T)	$13.2	$14.9	$16.1
Pretax Margin	33%	26%	23%
ROE[2]	47%	25%	17%
TSS Firmwide Revenue	$11,081	$10,231	$10,260
TS Firmwide Revenue	$6,726	$6,589	$6,577
TSS Firmwide Avg Liab Bal ($B)[1]	$382.9	$361.2	$387.3
EOP Equity ($B)	$4.5	$5.0	$6.5

[1] Includes deposits and deposits swept to on-balance sheet liabilities
[2] Calculated based on average equity
[3] Source: Ernst & Young and Federal Reserve
[4] Greenwich Associates, 2010
[5] Source: JPM and peer 4Q10 company filings
[6] Source: SEC 13-F filings by December 31, 2010
[7] Source: Nilson

Leadership positions

- #1 clearer of U.S. dollars in the world and #1 Automated Clearing House for originations[3]
- #1 (tied) in U.S. Corporate Cash management[4]
- #2 provider of custody services leveraging significant scale and global footprint with $16.1T in AUC[5]
- #2 in number of sponsored American Depository Receipt (ADR) shares[6]
- #1 Visa / MasterCard Commercial, Purchasing and Prepaid card issuer in the U.S.[7]

Asset Management

$ in millions	2008	2009	2010
Revenue	$7,584	$7,965	$8,984
Private Banking	4,189	4,320	$4,860
Institutional	1,775	2,065	2,180
Retail	1,620	1,580	1,944
Expense	5,298	5,473	6,122
Credit Costs	85	188	86
Net Income	$1,357	$1,430	$1,710
Key Statistics ($B)			
Assets Under Management	$1,133	$1,249	$1,298
Assets Under Supervision	$1,496	$1,701	$1,840
Average Loans	$38.1	$35.0	$38.9
EOP Loans	$36.2	$37.8	$44.1
Average Deposits	$70.2	$77.0	$86.1
Pretax Margin	29%	29%	31%
ROE[1]	24%	20%	26%
EOP Equity	$7.0	$7.0	$6.5

[1] Calculated based on average equity
[2] Source: iMoney, 2010
[3] Source: EuroMoney, 2010
[4] Source: The Asset Magazine, 2010
[5] Source: Institutional Investor, 2010
[6] Source: Incisive Media

Leadership positions

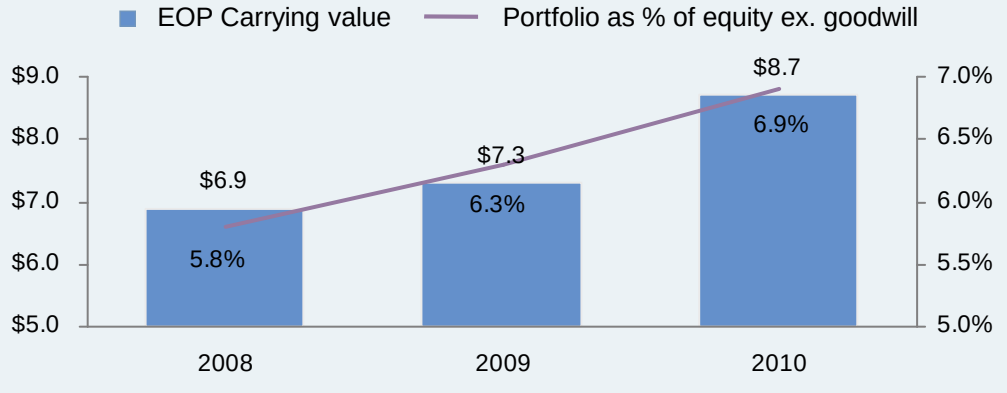
- #1 Institutional Money Market Fund Manager Worldwide[2]
- #1 Ultra-High-Net-Worth Private Bank Globally[3]
- 2010 Asset Manager of the Year for Asia and Hong Kong[4]
- Institutional Hedge Fund Manager of the Year[5]
- Gold Standard Fund Management, UK[6] (consecutively for eight years, 2003-2010)

Corporate/Private Equity

Net Income ($ in millions)

	2008	2009	2010
Private Equity	(690)	(78)	588
Corporate	1,458	3,743	670
Merger Related	(211)	(635)	-
Net Income	$557	$3,030	$1,258

Private Equity portfolio ($ in billions)



APPENDIX

Notes on non-GAAP financial measures

1. *In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a FTE basis. Accordingly, revenue from tax-exempt securities and investments that receive tax credits is presented in the managed results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to these items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.*

   Prior to January 1, 2010, the Firm's managed-basis presentation also included certain reclassification adjustments that assumed credit card loans securitized by CS remained on the balance sheet. Effective January 1, 2010, the Firm adopted accounting guidance that required the Firm to consolidate its Firm-sponsored credit card securitizations trusts. The income, expense and credit costs associated with these securitization activities are now recorded in the 2010 Consolidated Statements of Income in the same classifications that were previously used to report such items on a managed basis. As a result of the consolidation of the credit card securitization trusts, reported and managed basis relating to credit card securitizations are equivalent for periods beginning after January 1, 2010.

   The presentation of CS results prior to January 1, 2010 on a managed basis assumed that credit card loans that had been securitized and sold in accordance with U.S. GAAP remained on the Consolidated Balance Sheets, and that the earnings on the securitized loans were classified in the same manner as the earnings on retained loans recorded on the Consolidated Balance Sheets. JPMorgan Chase used the concept of managed basis to evaluate the credit performance and overall financial performance of the entire managed credit card portfolio. Operations were funded and decisions were made about allocating resources, such as employees and capital, based on managed financial information. In addition, the same underwriting standards and ongoing risk monitoring are used for both loans on the Consolidated Balance Sheets and securitized loans. Although securitizations result in the sale of credit card receivables to a trust, JPMorgan Chase retains the ongoing customer relationships, as the customers may continue to use their credit cards; accordingly, the customer's credit performance affects both the securitized loans and the loans retained on the Consolidated Balance Sheets. JPMorgan Chase believed that this managed-basis information was useful to investors, as it enabled them to understand both the credit risks associated with the loans reported on the Consolidated Balance Sheets and the Firm's retained interests in securitized loans.

2. *The ratio for the allowance for loan losses to end-of-period loans excludes the following: loans accounted for at fair value and loans held-for-sale; purchased credit-impaired loans; the allowance for loan losses related to purchased credit-impaired loans; and loans from the Washington Mutual Master Trust, which were consolidated on the Firm's balance sheet at fair value during the second quarter of 2009. Additionally, Real Estate Portfolios net charge-off rates exclude the impact of purchased credit-impaired loans. The allowance for loan losses related to the purchased credit-impaired portfolio totaled $4.9 billion, $2.8 billion, and $1.6 billion at December 31, 2010, September 30, 2010, and December 31, 2009, respectively.*

3. *Basel I Tier 1 common ratio is Tier 1 common divided by risk- weighted assets. Tier 1 common is defined as Tier 1 capital less elements of capital not in the form of common equity – such as perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred capital debt securities. Tier 1 common, a non-GAAP financial measure, is used by banking regulators, investors and analysts to assess and compare the quality and composition of the Firm's capital with the capital of other financial services companies. The Firm uses Tier 1 common along with the other capital measures to assess and monitor its capital position.*

4. *Tangible common equity ("TCE") represents common stockholders' equity (i.e., total stockholders' equity less preferred stock) less identifiable intangible assets (other than MSRs) and goodwill, net of related deferred tax liabilities. ROTCE, a non-GAAP financial ratio, measures the Firm's earnings as a percentage of TCE and is, in management's view, a meaningful measure to assess the Firm's use of equity.*

5. *Headcount-related expense includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.*

RETAIL FINANCIAL SERVICES

Charlie Scharf, Retail Financial Services Chief Executive Officer

February 15, 2011

JPMorgan Chase & Co.

Retail Financial Services – earnings summary

($ in millions)	2005	2006	2007	2008	2009	2010
Retail Banking	$1,645	$1,922	$2,245	$2,982	$3,903	$3,614
Mortgage Banking, Auto & Other Consumer Lending (excl. repurchase losses)	803	377	824	1,441	2,634	3,101
Subtotal	**$2,448**	**$2,299**	**$3,069**	**$4,423**	**$6,537**	**$6,715**
Repurchase Losses	(4)	(4)	(5)	(155)	(991)	(1,696)
Real Estate Portfolios	983	918	(139)	(3,388)	(5,449)	(2,493)
Retail Financial Services	**$3,427**	**$3,213**	**$2,925**	**$880**	**$97**	**$2,526**

- Consistently strong earnings power and potential of underlying businesses
- Repurchase losses will reduce over time and Real Estate Portfolios will make a positive contribution to earnings and capital over time as credit losses are reduced

Retail Financial Services – earnings summary

($ in millions)	4Q09	3Q10	4Q10	4Q10 ROE	Target ROE
Retail Banking	$1,027	$848	$954	37%	40%+/-
Mortgage Banking, Auto & Other Consumer Lending (excl. Repurchase losses)	679	1,060	780	38%	15%+/-
Subtotal	$1,706	$1,908	$1,734	38%	
Repurchase Losses	(413)	(853)	(203)	NM	
Real Estate Portfolios	(1,692)	(148)	(823)	-34%	15%+/-
Retail Financial Services	**($399)**	**$907**	**$708**	**10%**	**30%+/-**

- Strong underlying performance in Retail Banking, Mortgage Banking and Auto
- Repurchase losses and Real Estate Portfolios headwinds remain
- Underlying businesses positioned to deliver target ROEs
  - Retail Banking will be negatively affected by Durbin…but will earn back over time
  - Mortgage Banking will settle back to 15% returns post-refi boom
  - Auto back to 15%+ returns (excluding reserve actions)
  - Real Estate Portfolios – smaller overall dollars but 15% returns

4Q10 results included significant negatives

	After-tax ($mm)	EOP Reserves ($B)	Potential Excess Capital ($B)
Mortgage Banking			
Foreclosure Delay Costs	($218)		
Repurchase Expenses[1]	(203)	3.0	
Sub-total	**($421)**	**$3.0**	
Real Estate Portfolios			
Foreclosed Asset Expenses	($131)		
Total reserve actions[2]	(687)		
Non purchased credit-impaired LLR		9.7	
Sub-total	**($818)**	**$9.7**	
Total	**($1,239)**	**$12.7**	**$10 +/-**
Memo:			
Purchased credit-impaired LLR		*$4.9*	
Purchased credit-impaired fair value mark [3]		*$13.3*	

[1] RFS only. Excludes EMC
[2] Excludes the impact of a one-time $632mm adjustment in 4Q10 related to the timing of when the Firm recognized charge-offs on delinquent loans
[3] Remaining mark net of liquidation losses

- Credit and repurchase losses and other mortgage-related expenses will reduce over time improving earnings
- Portion of reserves released will become capital
- Capital will be freed up as Real Estate Portfolios run off

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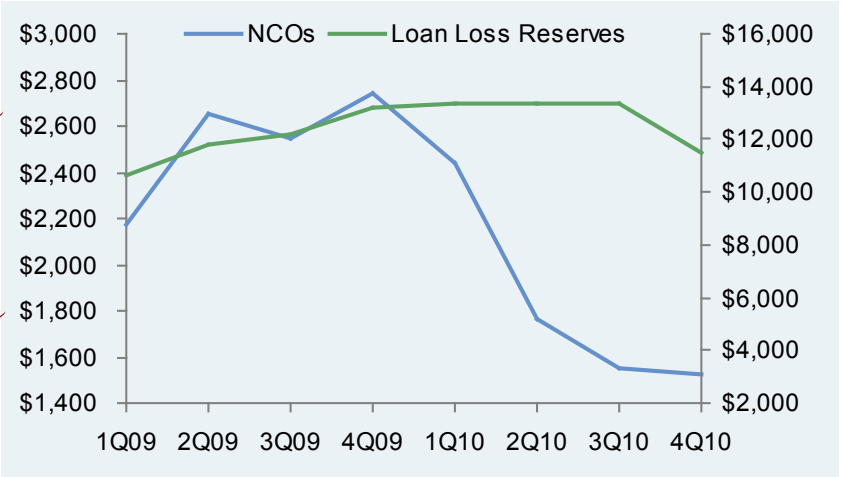
Reserve adequacy

Non credit-impaired ($ in millions)

	NCOs (annualized)[1]	EOP Loan Loss Reserves
Home Lending[2]	**$4,598**	**$9,653**
Auto	$282	$480
Student Loans[3]	386	419
Retail Banking	686	875
Other	24	85
All Other	**$1,378**	**$1,859**
Retail Financial Services	**$5,976**	**$11,512**

- Total Home Lending reserves of $9.7B (excluding WaMu purchased credit-impaired)
  - 4Q10 NCOs annualized (excluding one-time impact) of $4.6B
- Other consumer loan portfolios well reserved
- Loss guidance: Home Lending quarterly losses expected to be $1.2B+/-
  - January actual losses lower

Net charge-offs[1] vs. Loan loss reserve ($ in millions), excl PCI



- Delinquencies and net charge-offs peaked 4Q09, significantly reduced 1H10 and leveled off/modestly improved 2H10
  - Sustained reduction in net charge-offs supports reserve actions

[1] 4Q10 net charge-offs exclude the one-time impact of the $632mm adjustment related to the timing of when the Firm recognizes charge-offs on delinquent loans
[2] Net charge-offs exclude loans insured by U.S. government agencies
[3] Net charge-offs represent full year 2010 actuals

Reserve adequacy (continued…)

Purchased credit-impaired

- The current mark reflects ~$35B of lifetime losses
- Current mark has roll rates ~flat through 2011 and improving in 2012
  - If roll rates remain ~flat through 2012, this would result in an incremental $1B+/- impairment
- Further economic deterioration (45% HPA and worsening roll rate) could result in an incremental $3B+/- in additional losses

Repurchase reserves

- Agency repurchase exposure assessed and appropriately reserved
  - Repurchase losses life-to-date of $2.6B
  - End of period reserve balance of $3.0B; reserved for presented and probable future demands
    - 2011 realized losses estimated at $1.2B +/-
- Private label exposure – we have significant reserves

Consumer Lending portfolio

4Q10 Outstandings ($ in billions)	Total loans	Non purchased credit-impaired	Purchased credit-impaired
Home Equity	$116	$88	$28
Option ARM	39	8	31
Prime Mortgage	75	56	19
Subprime Mortgage	19	11	8
Total Home Lending portfolio[1]	**$249**	**$164**	**$86**
Fair value mark[2]	$13	NA	$13
Home Lending carrying value	236	$164	73
Auto	48	48	NA
Student and other	15	15	NA
Total Consumer Lending portfolio	**$299**	**$227**	**$73**
Loan loss reserve (LLR)	$16.5	$11.5	$4.9
LLR as % of loans / LLR + FVM as % of UPB PCI	NA	5.1%	20.8%

- 5.1% reserve ratio on non purchased credit-impaired portfolio
- Purchased credit-impaired remaining mark and reserves of 20.8% - life of loan losses
  - Purchased credit-impaired portfolio is appropriately reserved for best estimate of remaining lifetime losses

[1] Credit-impaired represents Unpaid Principal Balance (UPB) not book value
[2] Fair Value Mark (FVM) remaining is the original mark reduced by liquidation losses realized
Note: Table above excludes prime mortgage loans and student loans classified as held-for-sale

Home Lending portfolio losses

Net charge-offs ($ in millions), excluding purchased credit-impaired portfolio					
	1Q10	2Q10	3Q10	4Q10 Adjusted[2]	4Q10
Home Equity	$1,126	$796	$730	$725	$792
Prime Mortgage[1]	482	286	276	252	570
Subprime Mortgage	457	282	206	182	429
Total Home Lending	**$2,065**	**$1,364**	**$1,212**	**$1,159**	**$1,791**

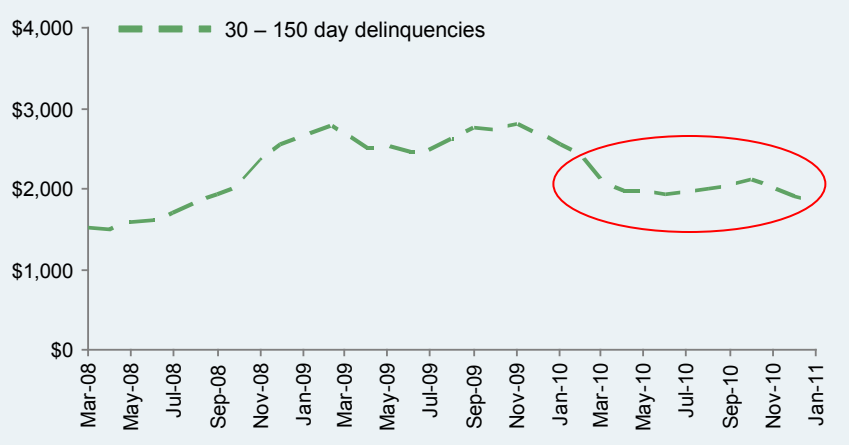
- Net charge-offs peaked 4Q09; significantly reduced in 1H10 in line with HPI and unemployment level stabilization; losses leveled off / modestly improved in 2H10
- Total quarterly net charge-offs running at $1.2B+/-
  - Losses expected to reduce over time following delinquencies

[1] Includes Option ARM
[2] 4Q10 net charge-offs exclude the one-time impact of the $632mm adjustment related to the timing of when the Firm recognizes charge-offs on delinquent loans

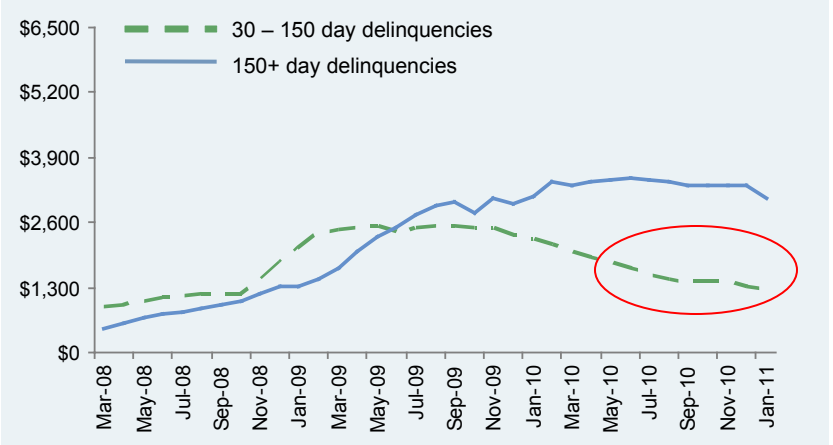
Consumer credit—delinquency trends

Excluding purchased credit-impaired loans

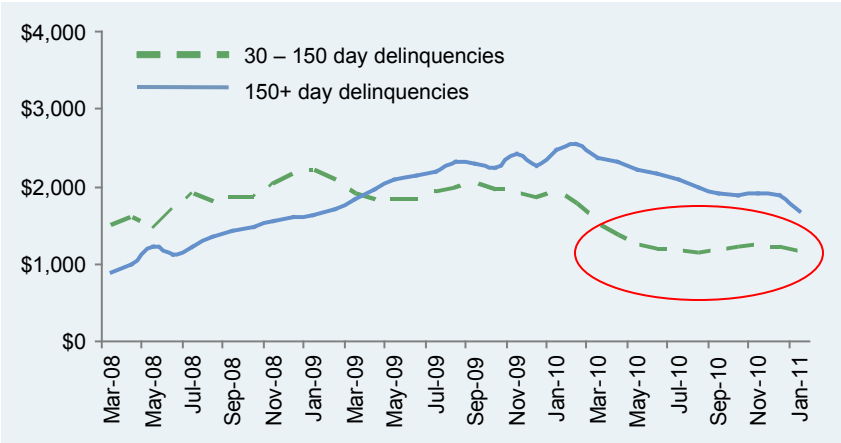
Home Equity delinquency trend ($ in millions)



Prime Mortgage delinquency trend ($ in millions)



Subprime Mortgage delinquency trend ($ in millions)



Commentary

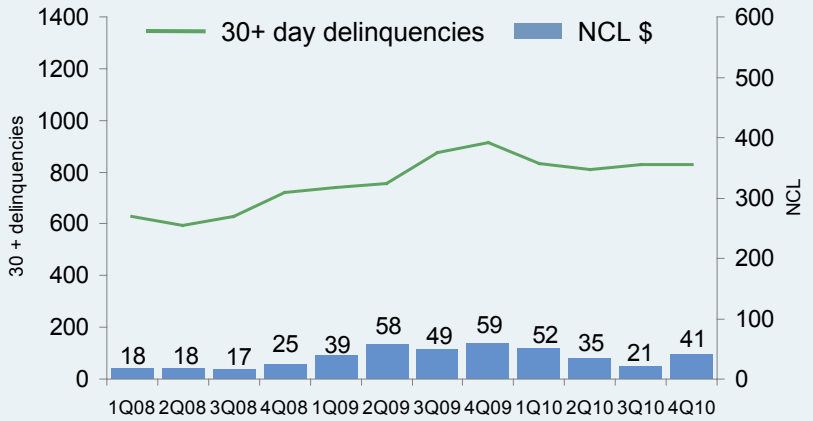
- 30-150 showing stability across portfolios with some recent improvements
- 150+ stabilized in mortgage portfolios

Note: Delinquencies prior to September 2008 are heritage Chase
Prime Mortgage excludes held-for-sale, Asset Management and Government Insured loans

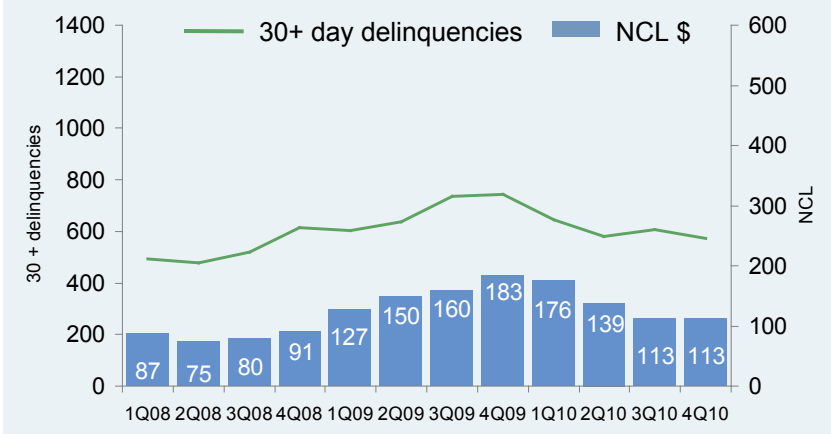
Delinquency and losses peaked and stabilizing across all ECLTV segments

Home Equity

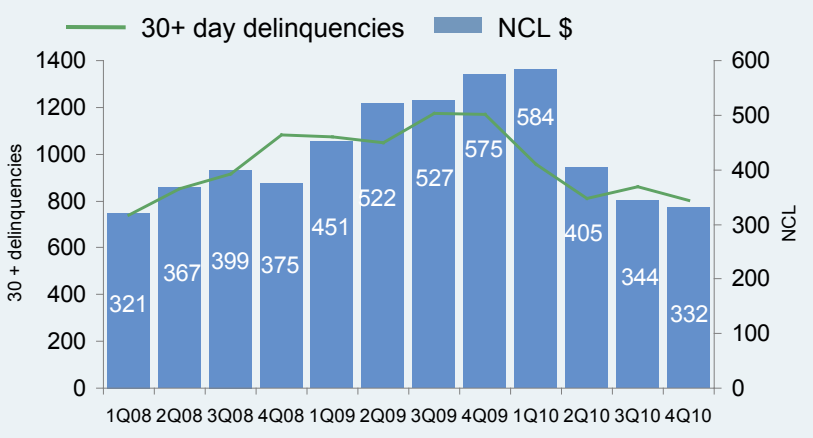
<80% current ECLTV



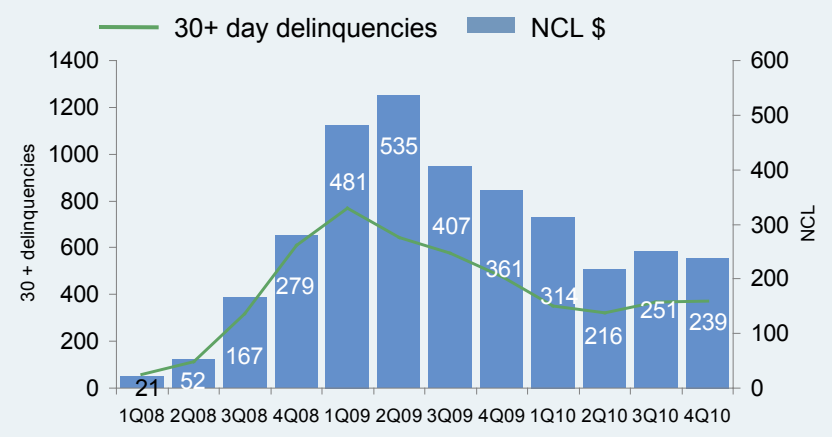
80 – 100% current ECLTV



100 – 150% current ECLTV



>150% current ECLTV



Note: Data prior to September 2008 is heritage Chase
ECLTV = estimated combined loan-to-value considering all available lien positions related to the property which we own or service
Current ECLTVs are calculated using original appraised value adjusted using the latest HPI published by Moody's Economy.com
Based on December 2010 curves

Home Equity balances migrating to >100% CLTV peaked in 2008

($ in billions, excluding purchased credit-impaired)



- New dollars moving into > 100% CLTV down from peaks in 2008
- Although some $ are still moving >100%, rate has slowed; expect loss rate to be lower

Note: Graph based on Moody's/Economy.com Case-Schiller. Baseline forecast as of December 2010

Home equity losses when exceed >100% CLTV

Net charge-offs ($ in millions), non credit-impaired portfolio

Losses from >100% CLTV	1H08	2H08	1H09	2H09	1H10	2H10	Annualized Loss Rates 1H09	Annualized Loss Rates 2H10	***Balances as of 12/10 ($B)***
Pre 2007	$115	$145	$173	$136	$96	$ 72	28.8%	17.4%	***$0.8***
1st Half 07	$261	$334	$415	$320	$227	$148	32.4%	17.6%	***$1.6***
2nd Half 07	$295	$443	$649	$585	$451	$330	20.7%	14.7%	***$4.3***
1st Half 08	$ 90	$209	$394	$ 407	$349	$260	11.8%	9.9%	***$5.0***
2nd Half 08	-	$89	$258	$298	$245	$198	7.3%	7.5%	***$5.1***
1st Half 09	-	-	$100	$87	$92	$87	7.1%	6.9%	***$2.5***
2nd Half 09	-	-	-	$36	$26	$23		5.5%	***$0.8***
Full Year 10[1]	-	-	-	-	$34	$ 48		10.1%	***$1.2***
Total >100%	**$761**	**$1,220**	**$1,989**	**$1,869**	**$1,520**	**$1,166**	**15.0%**	**10.7%**	***$21.4***
80-100%	$161	$171	$277	$343	$315	$226	2.3%	2.5%	***$20.3***
<80	$36	$42	$97	$107	$87	$63	0.3%	0.2%	***$46.7***
Total	**$958**	**$1,433**	**$2,363**	**$2,319**	**$1,922**	**$1,455**	**4.3%**	**3.2%**	***$88.4***

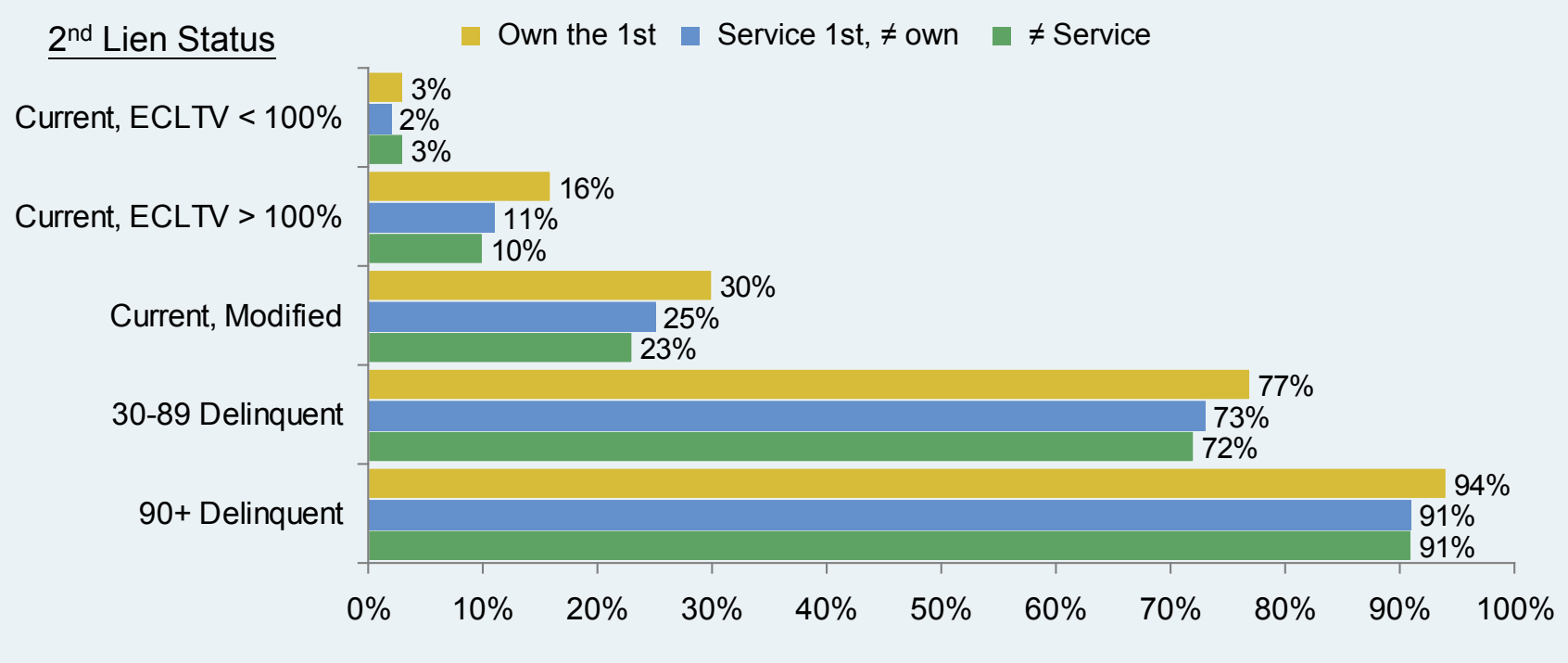
- 75 – 80% of losses generated by loans > 100% CLTV
- Losses substantially down from peaks in 2009 on both a dollar and rate basis

Note: Home Price Index, Moody's/Economy.com Case-Shiller Forecast as of December 2010

[1] 4Q10 net charge-offs exclude the one-time impact of the adjustment related to the timing of when the Firm recognizes charge-offs on delinquent loans

Performance of 2nd liens is consistent whether we own, service or do not service the 1st

2nd Lien total — 90+ or NCO in 16 months

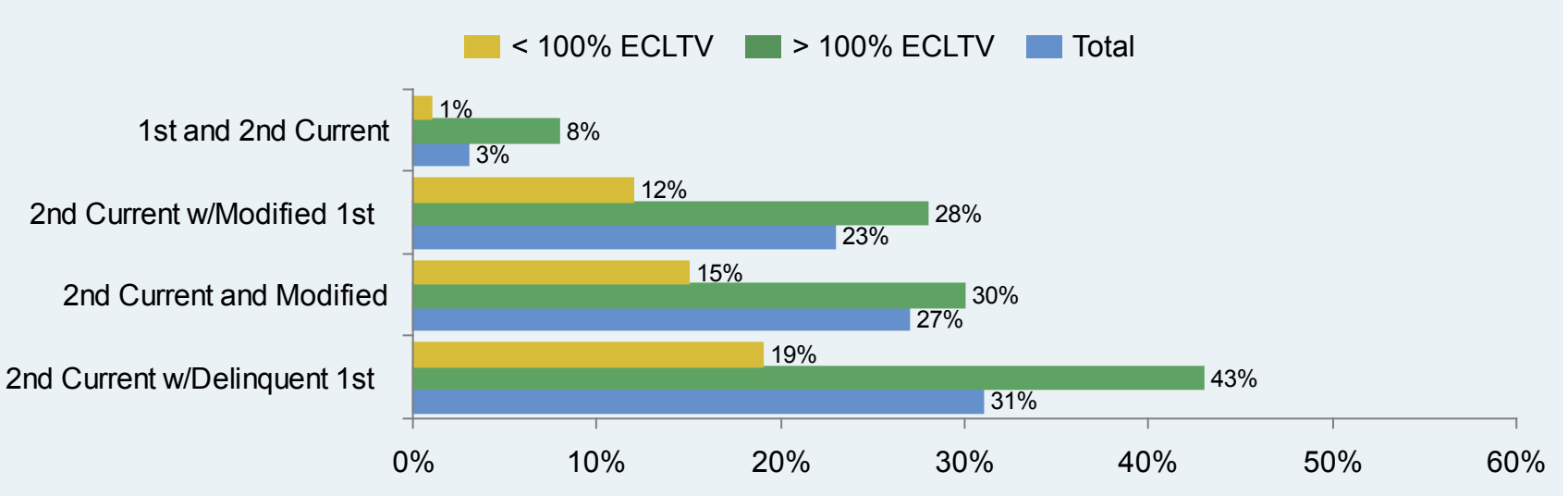


- No servicing conflict
  - 1st and 2nd lien mortgages are serviced independently of each other
  - Our servicing policies, processes and systems are applied consistently whether we own or service the 1st or 2nd mortgage
  - Modifications of 1st mortgages are done without regard to the status or ownership of a 2nd lien

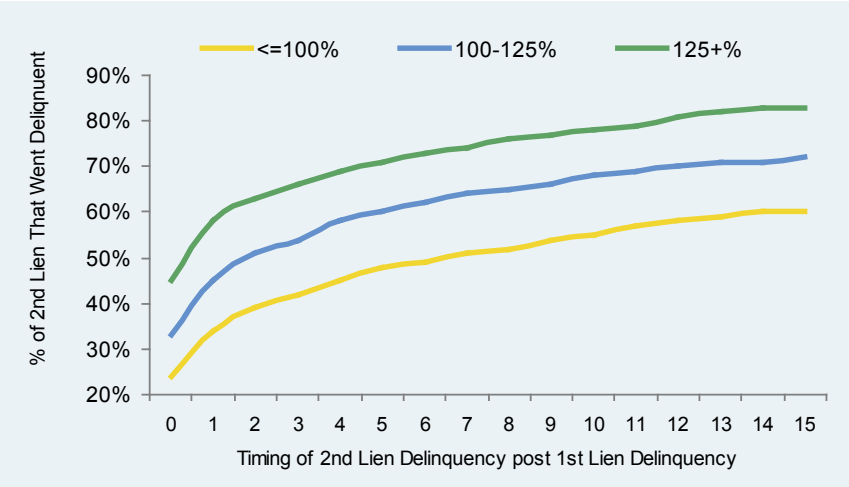
Note: Excludes purchased credit-impaired loans
Serviced Only excluded Owned, Owned Only means portfolio 1st lien
1st Lien is 27% of HE NCI UPB, 2nd Lien where we don't service the 1st is 47% of HE NCI UPB
Rates based on balances at observation

Equity is a driver of 2nd lien loss rates and delinquency timing

2nd Lien and we service the 1st (26% UPB) — 90+ or NCO in 16 months



Timing of 2nd Lien delinquency post 1st lien delinquency- ECLTV



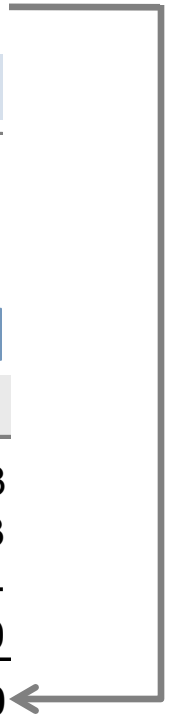
Note: Excludes purchased credit-impaired loans

- Performance of 2nd liens significantly differentiated by ECLTV
- There is some differentiation in performance of 2nds behind modified vs. delinquent 1sts
- ~65% of 2nd lien 125+% ECLTV loans go delinquent 3 months after the 1st lien vs. ~40% for <100%
- ~80% of 2nd lien 125+% ECLTV loans go delinquent by 15 months after the 1st lien vs. ~60% for <100%

Home Equity – performance of 2nd lien relative to 1st lien

UPB as of 12/31/10 ($ in billions), non purchased credit-impaired portfolio	
1st liens	$24.4
2nd liens	$64.0
Total	**$88.4**

2nd Lien status	
Current 1st / Current 2nd	$58.3
Current 1st / Delinquent 2nd	$0.3
Delinquent 1st and 2nd	$1.4
Current 2nd / Delinquent or Modified 1st	$4.0
Total	**$64.0**

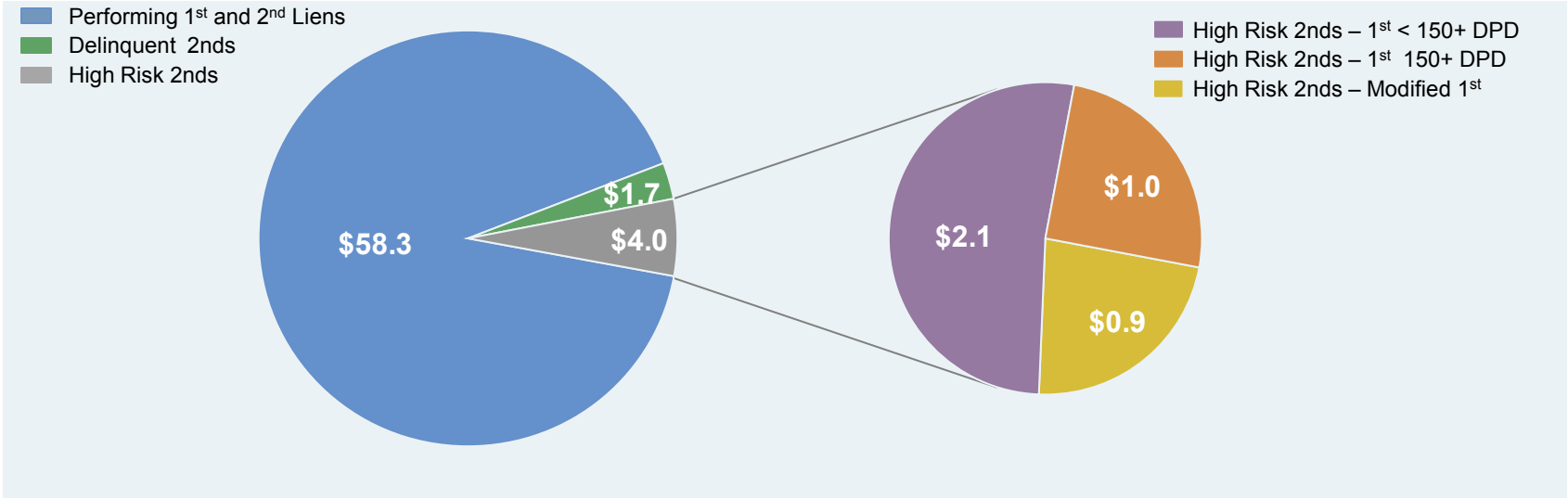


High risk 2nds – performing 2nds behind troubled borrowers

Excluding purchased credit-impaired loans

2nd Lien Home Equity UPB ($ in billions)

High Risk 2nd Liens ($ in billions)



Performing 1st and 2nd Liens

CLTV	UPB	Estimated Lifetime Loss Rates
<=80%	$25.4	~ 1%
80-100%	14.5	4-5%
100+%	18.4	12-15%
Total	**$58.3**	**5% +/-**

Note: Grossed up based on 35% match rate

High Risk 2nd Liens

1st Lien Status	UPB	Estimated Lifetime Loss Rates	>100+% CLTV
Modified	$0.9	~50%	70%
<150+ DPD	2.1	~60%	44%
150+ DPD	1.0	~95%	59%
Total	**$4.0**	**60% +/-**	**54%**

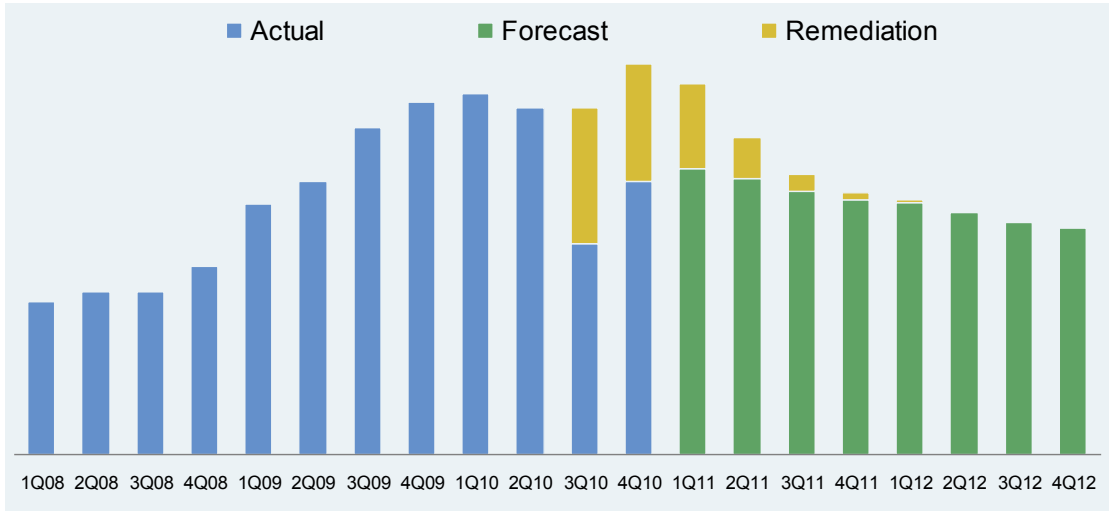
Note: Grossed up based on 35% match rate

We have considered the status of 1st lien and equity position of borrowers in our reserves

Total Home Equity reserves as of year end 2010 were $6.5B

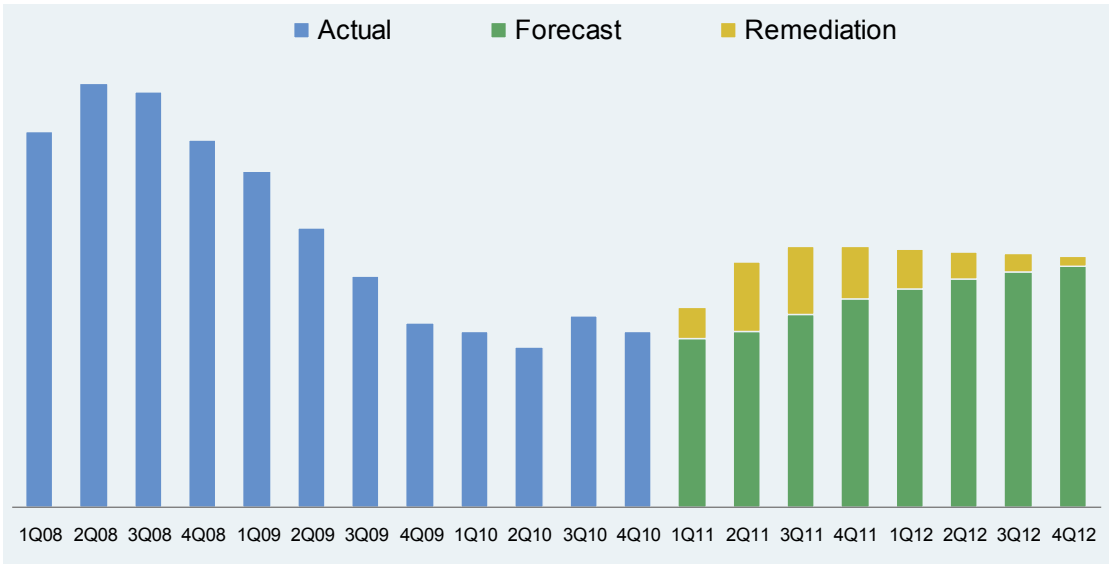
Foreclosure and REO trends – serviced

Units in process of foreclosure



- Foreclosure inventory will decline as inflows decrease on lower delinquencies and outflows increase as foreclosure remediation population is cleared

Units in REO



- REO inventory forecasted to increase in 1H11 with the resumption of foreclosures in all states

Estimated REO as a % of home sales – selected MSAs

REO as a % of home sales				
	1Q09	4Q09	4Q10	4Q12
Riverside	68%	46%	43%	**18 - 28%**
Sacramento	61%	37%	37%	**19 - 31%**
San Francisco	21%	10%	11%	**6 - 10%**
West Palm Beach	22%	11%	18%	**12 - 18%**
Washington DC	41%	21%	17%	**11 - 18%**
Miami	42%	23%	33%	**23 - 35%**
Ft Lauderdale	37%	29%	26%	**18 - 28%**
San Jose	45%	20%	17%	**14 - 22%**
Oakland	59%	31%	27%	**21 - 33%**
San Diego	50%	29%	27%	**23 - 35%**
New York	7%	7%	5%	**4 - 7%**
Phoenix	58%	35%	42%	**32 - 45%**
Long Island	10%	8%	4%	**4 - 6%**
Bridgeport	19%	10%	10%	**10 - 15%**
Los Angeles	49%	30%	27%	**27 - 44%**
Chicago	31%	23%	17%	**16 - 26%**
Houston	19%	16%	19%	**18 - 31%**
Dallas	25%	20%	25%	**23 - 39%**
Santa Ana	37%	18%	19%	**26 - 41%**
Seattle	13%	12%	15%	**24 - 38%**

Update on foreclosure process

We make every effort to avoid foreclosure

- Offered over 1mm modifications; 285,000 completed
- Prevented foreclosures at 2x the rate of those completed
- 51 Chase Home Ownership Centers (CHOCs) – plan to add 25 more in 2011
- 6,000 loss mitigation counselors to assist borrowers, across the country

Key facts about foreclosures

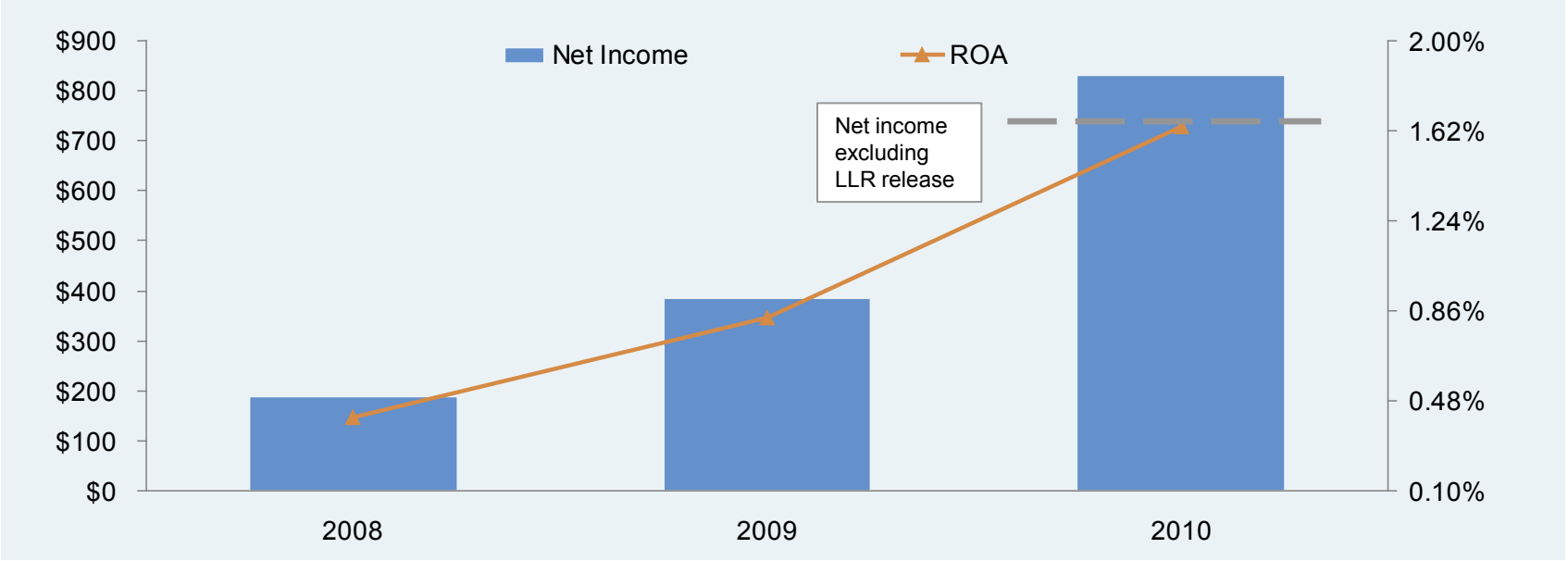
- Average delinquency at foreclosure is 14 months
- Recent foreclosure sales showed the following customer/loan characteristics:
  - 57% non-owner occupied, of which 52% were vacant at foreclosure
  - 43% owner-occupied, of which:
    - 25% were vacant at foreclosure
    - 53% did not qualify for modification (e.g., High DTI, unemployed, etc.)
    - 18% did not respond to modification outreach efforts or meet all permanent modification requirements

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Auto Finance

($ in millions)



- Record net income and returns in 2010
- Market share gained as competition weakened from 4.13% in 2008 to 5.45% in 2010; originations increased 19% despite new vehicle sales declining by 12% since 2008
- Portfolio loan spreads increased 50bps+/- reflecting change in mix and focus on higher return segments
- Strengthened relationships with strategic manufacturing partners

Mortgage Banking

($ in millions, except where noted)	2009	2010
Originations ($B)	**$150.7**	**$155.6**
Net Income		
Production excl. repurchase losses	$995	$1,570
Servicing	1,196	695
Total	$2,191	$2,265
Repurchase Losses	(991)	(1,696)
Total	**$1,200**	**$569**

- Market share gains from 9.2% to 10.7%[1]
- Refi volumes remained high on low rate environment
- Production revenue up on strong margins
- Servicing revenue remained steady; includes strong MSR risk management results
- Repurchase losses increased primarily due to $1.6B in reserve build
- Default costs increased on higher headcount and foreclosure costs

[1] Source: Inside Mortgage Finance, 4Q09 and 4Q10, respectively. Full year 2009 and 2010 market share were 8.6% and 10.4% respectively

Strong franchise with consistent business focus

Consistent business focus

Consumer Banking

- Acquire and deepen relationships
- Build distribution
- Customer service
- Customer engagement

Business Banking

- Leverage consumer growth

Home Lending

- Focus on retail customers
  - Bank branch
  - Strategic markets
  - Correspondent

Auto

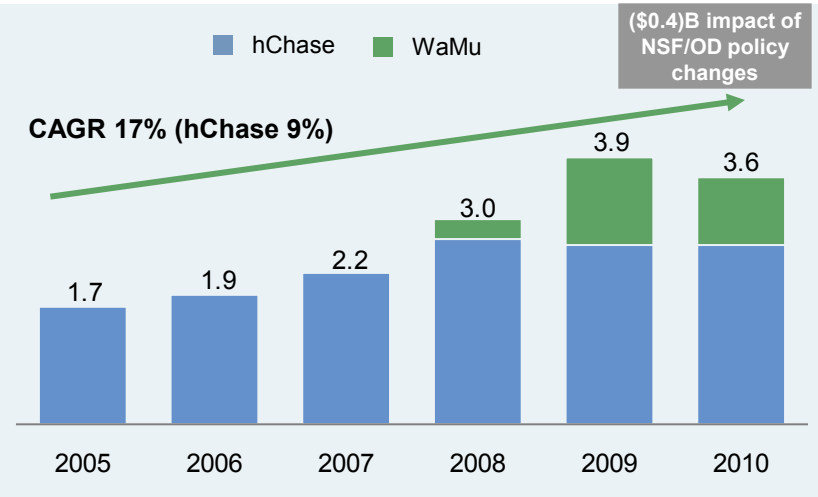
- Returns first, growth second

Strong positioning

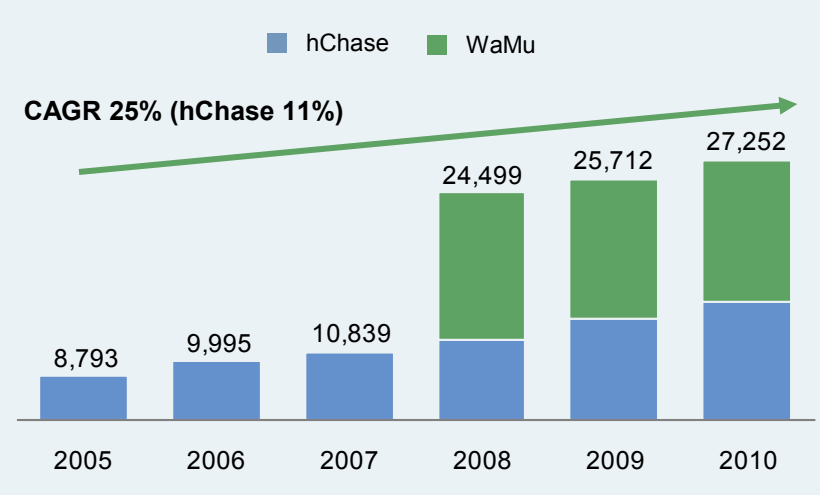
- Proven organic growth track record
- An institutional franchise
- Industry leading brand
- Industry leading footprint
- Great and diverse customer base
- Industry leading products and services

Retail Banking — consistent organic growth

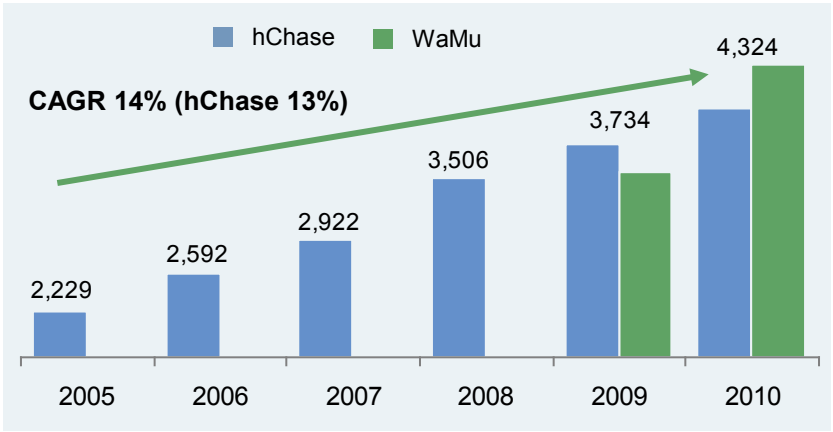
Net income ($ in billions)



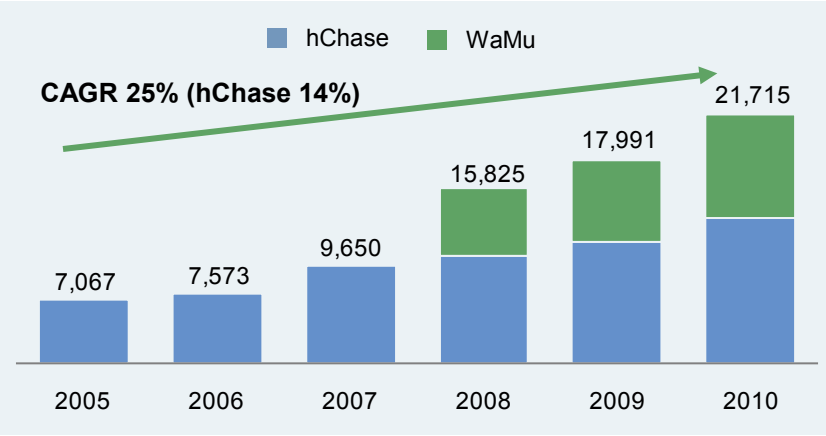
Checking accounts (# in 000s)



Sales production per branch (in units)



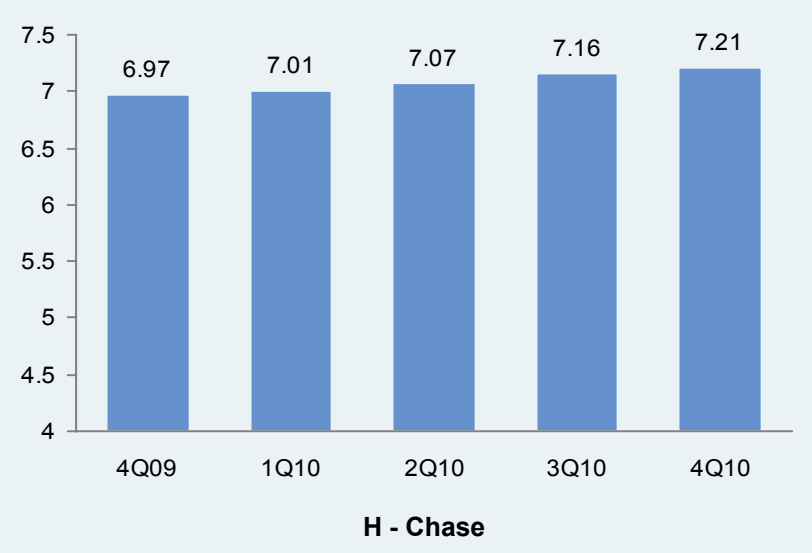
Personal bankers

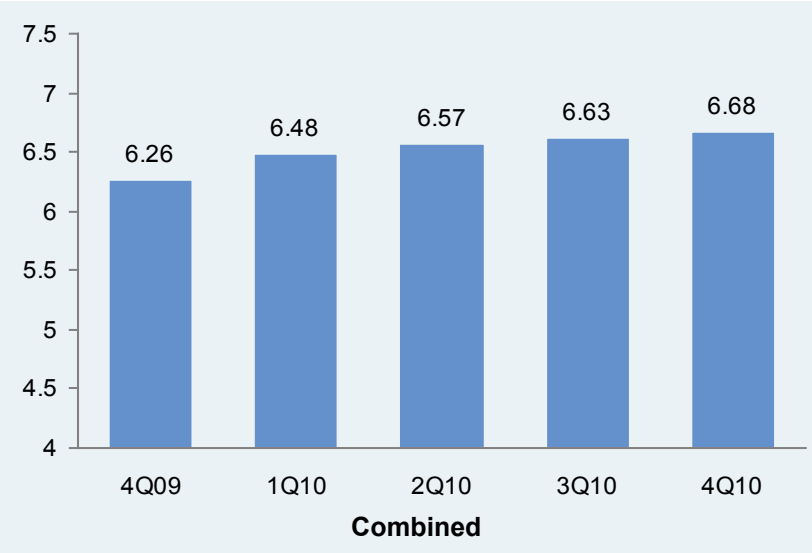


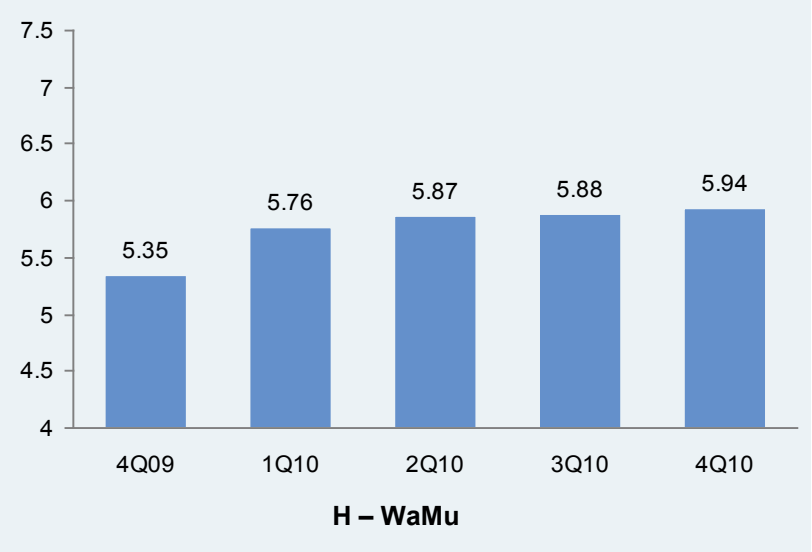
Strong growth through organic expansion and WaMu acquisition

Strong and growing cross sell

Cross Sell (# of Products and Services)

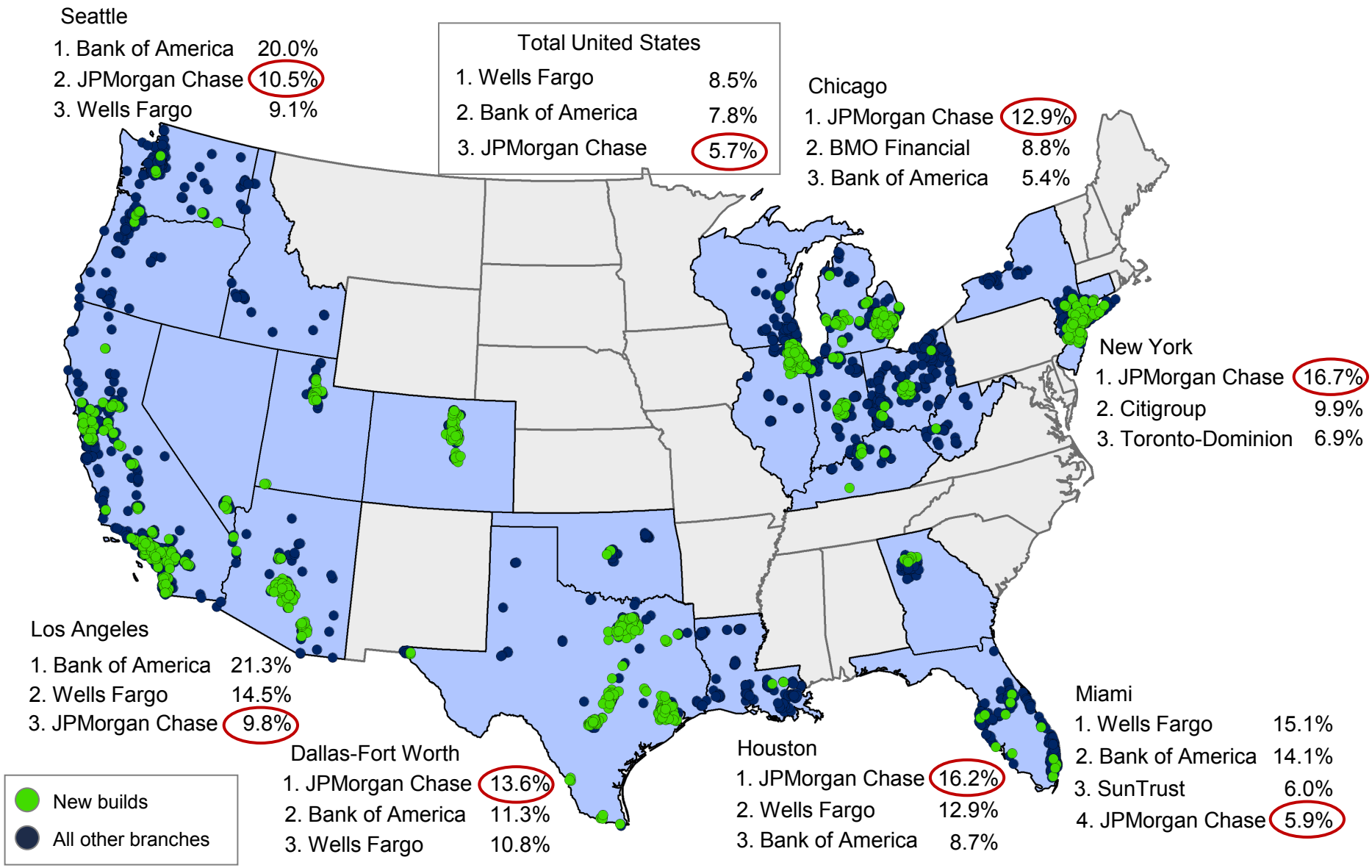






- Cross sell is a measure of penetration of products and services within Retail Financial Services households
  - The measure above counts each product and service individually (e.g. A household with 2 checking accounts is counted as 2)

Organic branch expansion



Note: Deposits adjusted to exclude large branches (+$1B) assumed to contain non-retail deposits
Note: Percentages represent deposit share by CBSA
Source: SNL Financial – FDIC deposit data as of 6/30/10

Retail Banking – Strong presence in key deposit markets

Chase ranking - Top 30 CBSAs in footprint

CBSA Ranking	CBSA	Chase Ranking in Market
1	New York, NY	1
2	Los Angeles, CA	3
3	Chicago, IL	1
4	Miami, FL	4
5	San Francisco, CA	4
9	Houston, TX	1
10	Dallas-Fort Worth, TX	1
11	Atlanta, GA	17
12	Detroit, MI	2
13	Seattle, WA	2
17	San Diego, CA	3
18	San Jose, CA	3
20	Denver, CO	5
21	Phoenix, AZ	1
22	Tampa, FL	18
23	Cleveland, OH	8
24	Riverside, CA	3
26	Cincinnati, OH	7
27	Portland, OR	4
29	Bridgeport, CT	2
30	Milwaukee, WI	4
Total Deposits ($B)	**$2,043.5**	

Not in footprint

CBSA Ranking	CBSA
6	Philadelphia, PA
7	Boston, MA
8	Washington, DC
14	Saint Louis, MO
15	Minneapolis, MN
16	Pittsburgh, PA
19	Baltimore, MD
25	Kansas City, MO
28	Providence, RI
Total Deposits ($B)	**$604.8**

- Significant presence in 21 of the top 30 markets
  - These 21 markets represent 77% of balances in top 30
  - Chase has 11% deposit share

Note: Deposits adjusted to exclude large branches (+$1B) assumed to contain non-retail deposits
Note: Percentages represent deposit share by CBSA
Source: SNL Financial – FDIC deposit data as of 6/30/10

Retail Banking — Continuous organic reinvestment (excl. WaMu)

	Investment (2006-2010)	% Growth in Investment 2010 vs. 2006	Key Stats (Cumulative 2006-2010)
New Builds[1]	$3.9B	65%	+ 649 Branches; > 1,000 branches since 2002
Advertising and Marketing	$1.4B	41%	Excludes credit card brand spend
Sales Headcount - Same Stores	$1.1B	234%	+ 6,200 Incremental sales headcount
Branch Signage / Interior upgrades	$0.9B	23%	+17,000 Branch projects completed
Debit Rewards	$0.7B	NA	~10.8mm Cards / ~5.9mm Rewards
ATM's	$0.4B	41%	+ 4,300 ATMs
Technology development	$0.2B	21%	+100 Incremental technology headcount
Total Investment	**$ 8.6B**	**120%**	

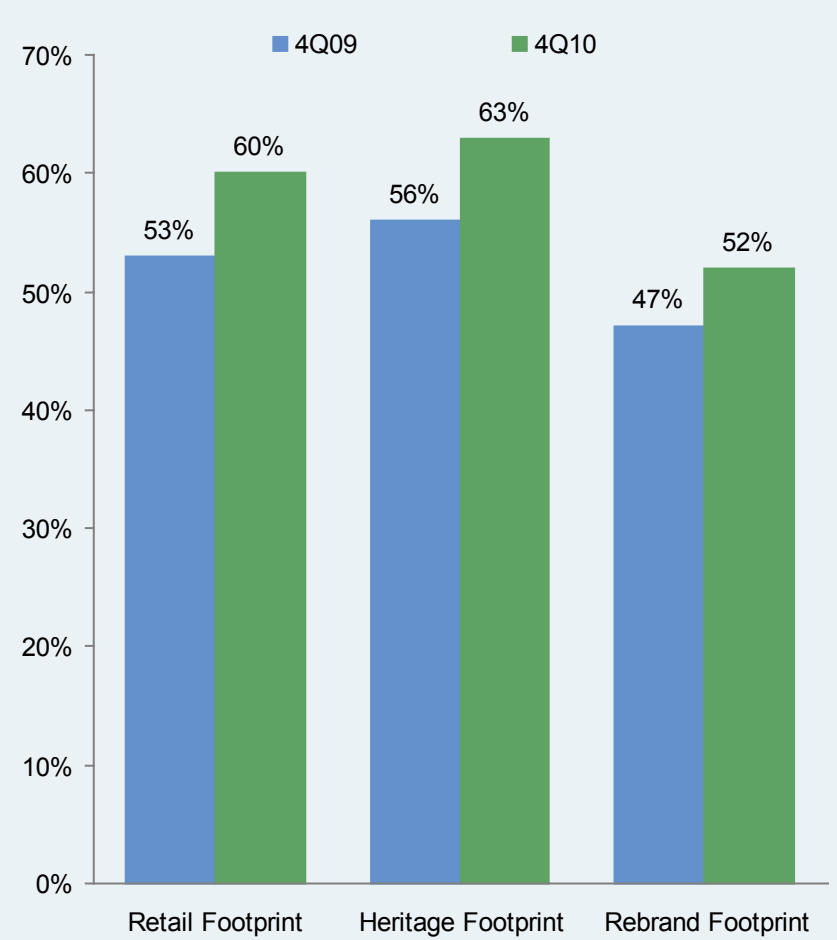
[1] Includes cumulative capital and operating expenses from 2006 to 2010

- Commitment to reinvest in our businesses drives continuous organic growth

Chase brand – strength and positive momentum

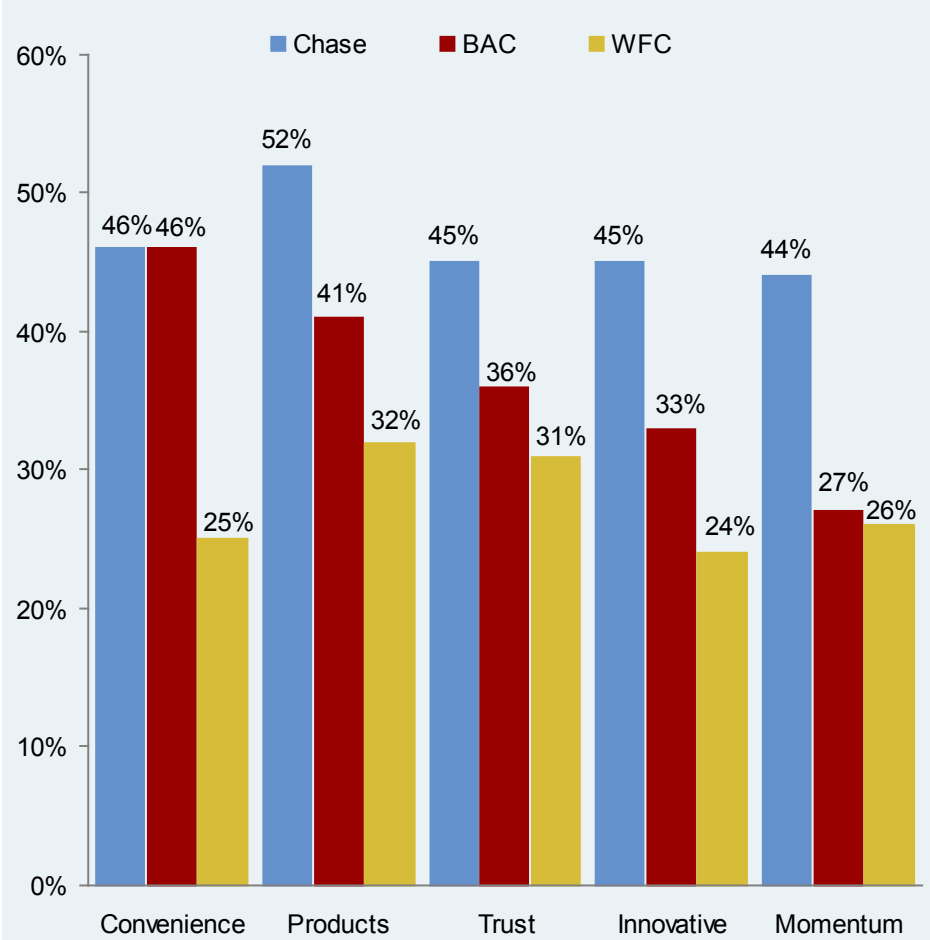
Heritage and rebrand footprint

YoY growth in Chase unaided brand awareness



Awareness of a bank that offers checking

Industry leader in key consumer attributes – 4Q10



- Convenience: Offer more convenient branch and ATM locations
- Products/Services: Offer products and services that meet my needs
- Momentum: Is growing more popular
- Trust: Is a bank I trust
- Innovative: Offers innovative products and services

Source: Q4 2010 Brand Tracker; Retail footprint

Substantial opportunity to build branches in our current footprint

Current footprint and growth opportunities

	Branch Share (2010)	Branch Count (2010)	Planned New Builds (2011)	Potential New Builds Over Next 5 Years
"Aggressive" Growth Areas				
California	11.0%	771		525 - 700
Florida	4.7%	248		375 - 500
Other locations	4.0%	183		400 - 550
Total "Aggressive" Growth Areas	7.1%	1,202	150+	1,300 – 1,750
All Other "Fill In" and In-Footprint Markets	10.9%	4,078	50+	200 – 250
Grand Total	**8.3%**	**5,280**	**200 - 225**	**1,500 - 2,000**

New build economics

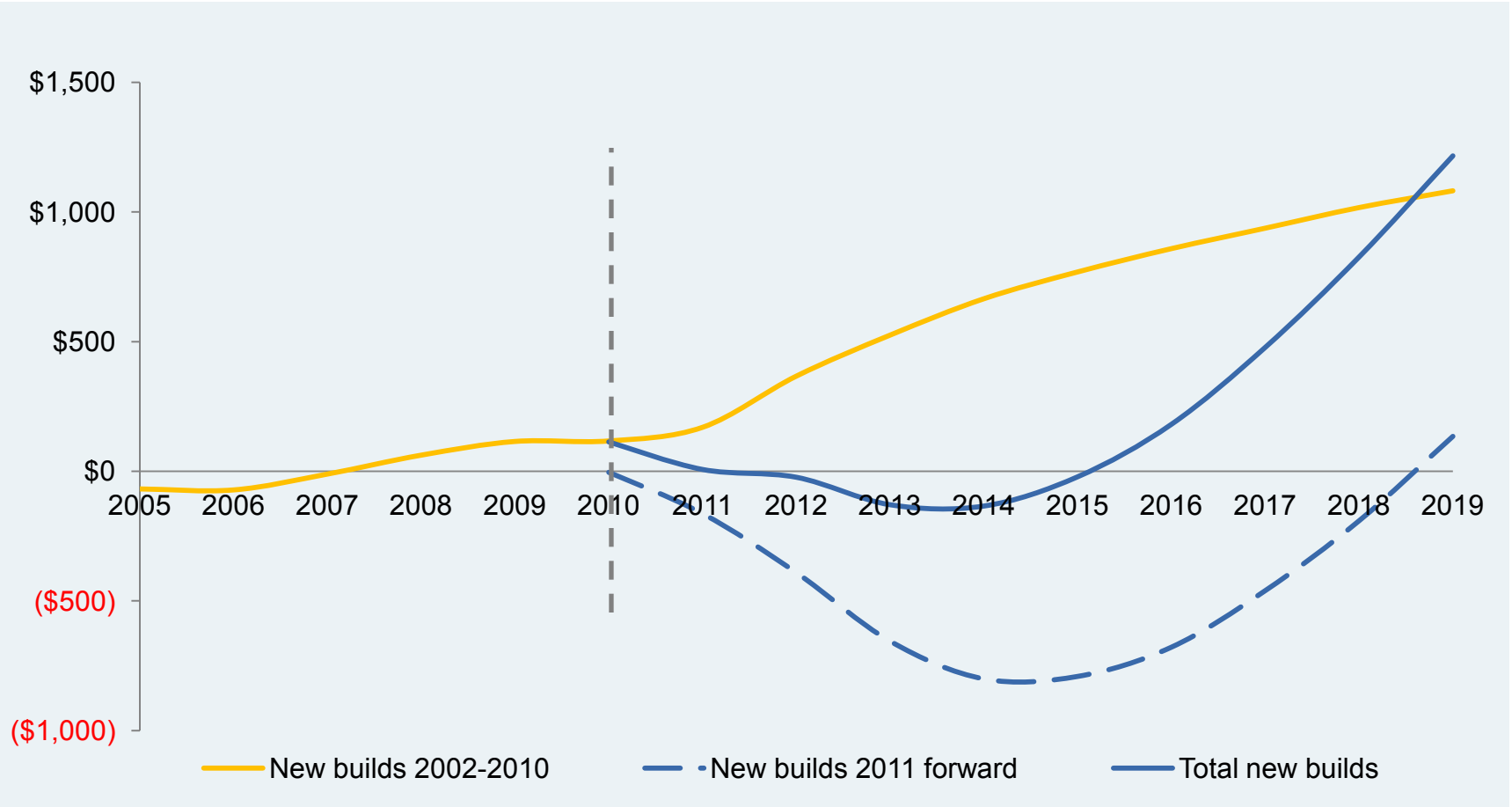
New build initiative ($ in millions)	2002	2003	2004	2005	2006	2007	2008	2009	2010
Branches Opened	35	59	124	146	125	127	126	117	154
Cumulative Branches Opened	35	94	218	364	489	616	742	859	1,013
$ contribution to 2010 pretax ($000s, per branch)[1]	$955	$877	$755	$532	$217	($10)	($304)	($600)	($165)
New Builds making a positive contribution to pretax (2002-2006)									$284
New Builds not yet broken even (2007-2010)									($135)
Total contribution of New Builds									**$148**

[1] 2010 includes partial year pretax impact of 2010 new builds vintage

- Almost 2mm checking accounts from new build portfolio
- On average, branches breakeven at 30 months +/-
  - 65 branches >36 months old have yet to break even
- On average, new builds pay back within 3-5 years
  - 54 branches >60 months old have yet to pay back
- Contribution of new builds once seasoned is >$1mm per branch per year
  - ~1,000 branches opened since 2002 will contribute $500mm +/- pretax by ~2013, and $1B+/- pretax by ~2018

New build economics

New builds pretax earnings ($ in millions)



- ~1,000 new builds to date contribute $1B+/- in ~2018
- Growing new builds to 200-225+/- in 2011, 300+/- in 2012 and 500+/- per year forward will create a drag on earnings but is a significant long term investment for growth

2011 products and services innovation



QuickDeposit

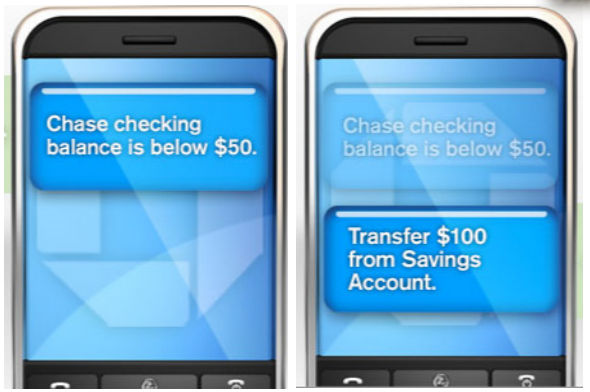


Instant Issue Debit

CHASE Paymentech



Square's card reader

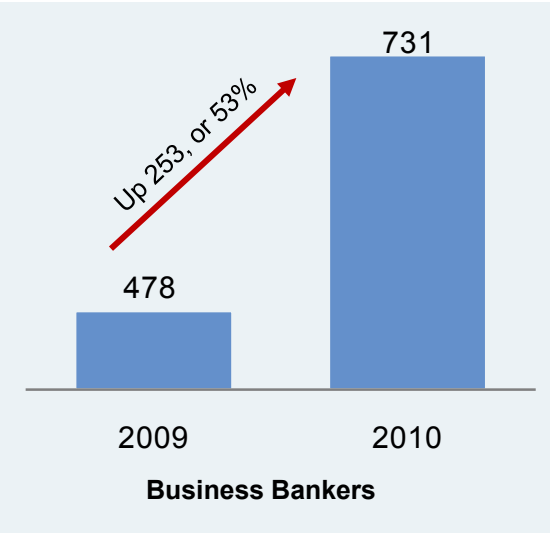


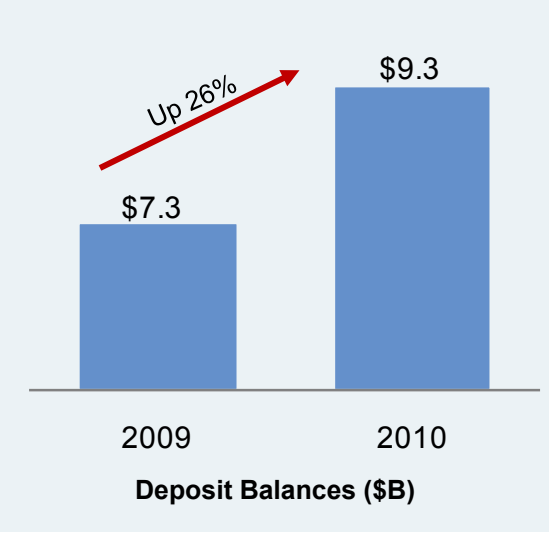
2 Way Instant Action Alerts

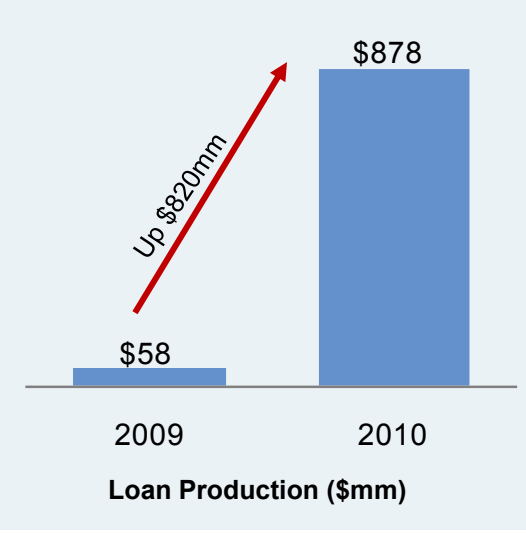
Capturing the Business Banking opportunity in heritage WaMu footprint

- WaMu branch productivity at Chase levels is a $1B+/- pretax opportunity
- Capturing the opportunity by leveraging the Chase Business Banking model
  - Dedicated bankers to help small businesses in branches
  - Full suite of small business products for deposits, cash management, credit and payments, etc.

Significant progress has been made to date in banker productivity….





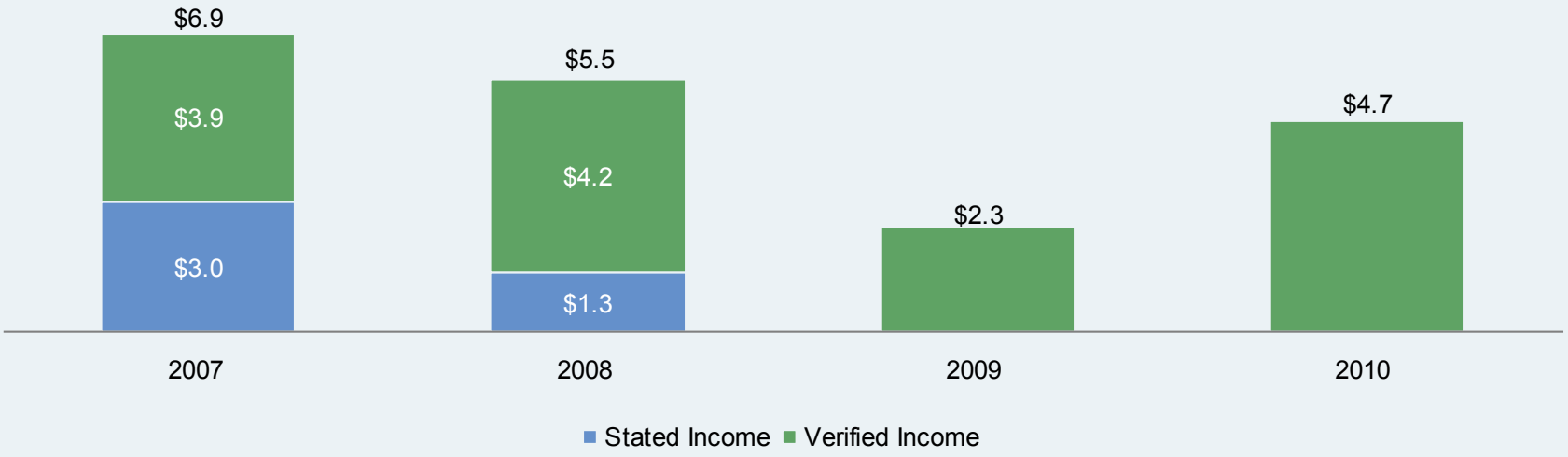


But reaching full profitability targets will take several years

- Average deposit balances per WaMu branch are still ~1/3 of Chase branches
- Average loan balances per WaMu branch are still ~1/6 of Chase branches

Stronger demand and changes in lending policy continue to drive significant small business lending growth

Business Banking loan originations ($ in billions)



Key drivers of growth

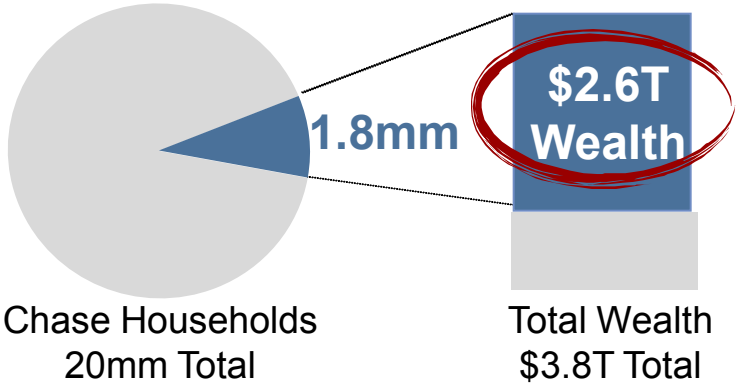
- Demand for small business loans grew in 2010
  - 4Q10 applications up 40%+ vs. 1Q10
  - Pipeline for larger ticket loans (>$250mm) set a new record at >$2B in 2010
- Refined credit policies and programs provided incremental credit to small businesses
  - Lowered debt service ratio requirements for established businesses
  - Increased focus on providing SBA financing to customers – Chase became the #1 SBA lender by loan units
  - Launched an automatic second review process
  - Launched promotions for waiving upfront fees on certain loans (e.g., Owner Occupied Real Estate)

Affluent banking opportunity is significant; we have a program to serve these clients

1.8mm Affluent clients in the Consumer Bank

- $500k - $5mm of wealth
- 70% of assets are in investments
- 67% visit the branch quarterly

The opportunity: 10% of clients with 70% of wealth



Significant opportunity to capture more wallet share

- We have only 5% share of wallet, including only 2% of the investment wallet

The Chase Private Client program



People	■ Dedicated teams of Personal Bankers, Investment Advisors and Service Specialists ■ Located in exclusive, private setting within the branch
Product	■ Banking products customized to meet the needs of the affluent ■ Full spectrum of J.P. Morgan investment capabilities
Technology	■ Unified client experience across all channels delivered through common technology platform
Positioning	■ Premier level of service ■ Distinct, premium brand that leverages Chase and J.P. Morgan for investments

Chase Private Client has made significant progress

The pilot has worked

- Pilot beginning in 2007 in the NY area and Chicago
- Clients with balances below $250k[1] grew balances 575%
- Clients with balances above $250k[1] grew balances 13%
  - Retention for high balance customers in CPC is 16% higher than non-CPC
- Over 40% of CPC households have investments, up from 17% prior to CPC

Recent progress and expansion

- Created Chase Wealth Management with a complete management team
  - Led by Barry Sommers, previously CEO of J.P. Morgan Securities
  - Deep experience in both brokerage and banking
  - Focused on enhancing program components and expanding presence
  - Well integrated with Consumer Bank and Asset Management
- Will add 50 locations in 2011. Will have more than 150 locations by 2013
  - Expanding presence in NY area and Chicago
  - Opening in Los Angeles, San Francisco and South Florida in 2011
  - Future priority markets include Texas, Washington, Arizona, other parts of California
- Recruiting over 100 Investment Advisors, 300 Bankers and 100 Service Specialists into the program by year-end
- Migrating investment technology to fully leverage JPMorgan Chase's investment platform

Becoming a significant provider to 10-20% current affluent clients would result in incremental pretax income of $500mm - $1B

[1] Balances prior to joining CPC

Retail Financial Services opportunities

- WaMu Business Banking
- Chase Wealth Management (Affluent)
- New Builds

Each is a $1B+/- incremental pretax opportunity

- Continue to execute in Chase same stores
- Build out WaMu consumer products and customer base
- Mortgage Banking – continue to focus on Retail customers (through loan officers and Correspondent)
- Auto – continue disciplined pricing and credit management

Significant growth opportunities remain across businesses

Agenda

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Strength of the franchise and growth opportunities	20
Strategic implications of legislation and regulation	**39**

Durbin Amendment

- Flawed policy
  - Merchants and consumers realize tremendous benefits from debit
  - Products and services should be priced based on value, not an artificial concept of cost
  - Definition of costs in Durbin is incomplete and extremely flawed
- Consumers will be harmed
  - Pay more for basic banking services
  - Restrictions on debit cards and banking services
  - 5%+ will exit mainstream banking
- All banks and credit unions will be affected
- Reduced payment innovation
- Potential for less safe and secure payment system

$14B annual wealth transfer from consumers to merchants, mostly large retail chains

Regulatory reform

- Will be a level playing field, and…
- We operate from a position of strength
  - Broad customer relationships (good distribution of customers across all wallet segments)
  - Superior and complete product set (i.e., credit cards, investments, deposits, loans, treasury services)
  - Nationwide footprint (over 5,000 branches and 16,000 ATMs in 23 states)
  - Willingness and ability to adapt and change

Operate from a position of strength

Product and customer positioning

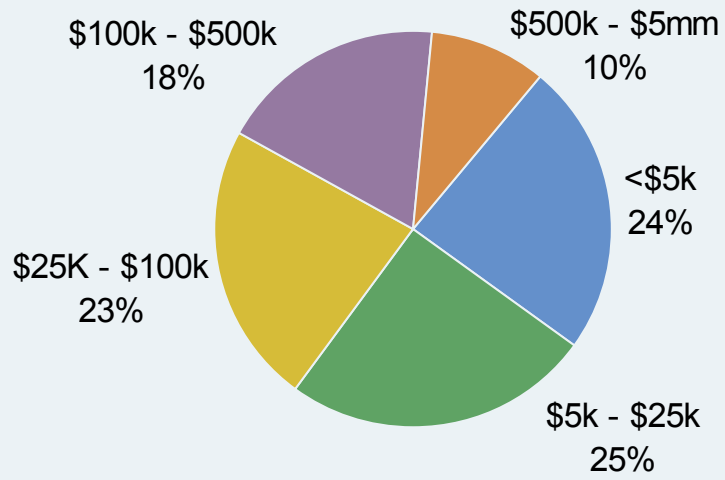
Products we offer

	Mass	Mass Affluent	Affluent
Deposits (checking, savings and CDs)	✓	✓	✓
Cards			
Debit	✓	✓	✓
Credit	✓	✓	✓
Gift	✓	✓	✓
Lending			
Mortgages	✓	✓	✓
Home Equity loans	✓	✓	✓
Business Banking lending (including SBA and CRE)	✓	✓	✓
Auto lending	✓	✓	✓
Student lending	✓	✓	✓
Investments			
Financial / retirement planning	✓	✓	✓
Mutual Funds	✓	✓	✓
Annuities and Life Insurance	✓	✓	✓
Brokerage and Managed account		✓	✓
Trusts		✓	✓
Securities Lending		✓	✓
Money Transfers	✓		
Prepaid Debit	✓		

We have a complete product set to meet our customers' needs

Diverse customer base: strong penetration, but lots of opportunity

% of Consumer Bank households based on deposit and investment wallet



Consumer Bank wallet share by segment

		Share of wallet	
Segment	Wallet range	Deposit share	Investment share
Mass	<$5k	43%	11%
	$5k - $25k	31%	6%
	$25K - $100k	29%	8%
Mass Affluent	$100k - $500k	25%	8%
Affluent	$500k - $5mm	12%	2%
Total		18%	4%

Lost contribution due to Durbin Amendment

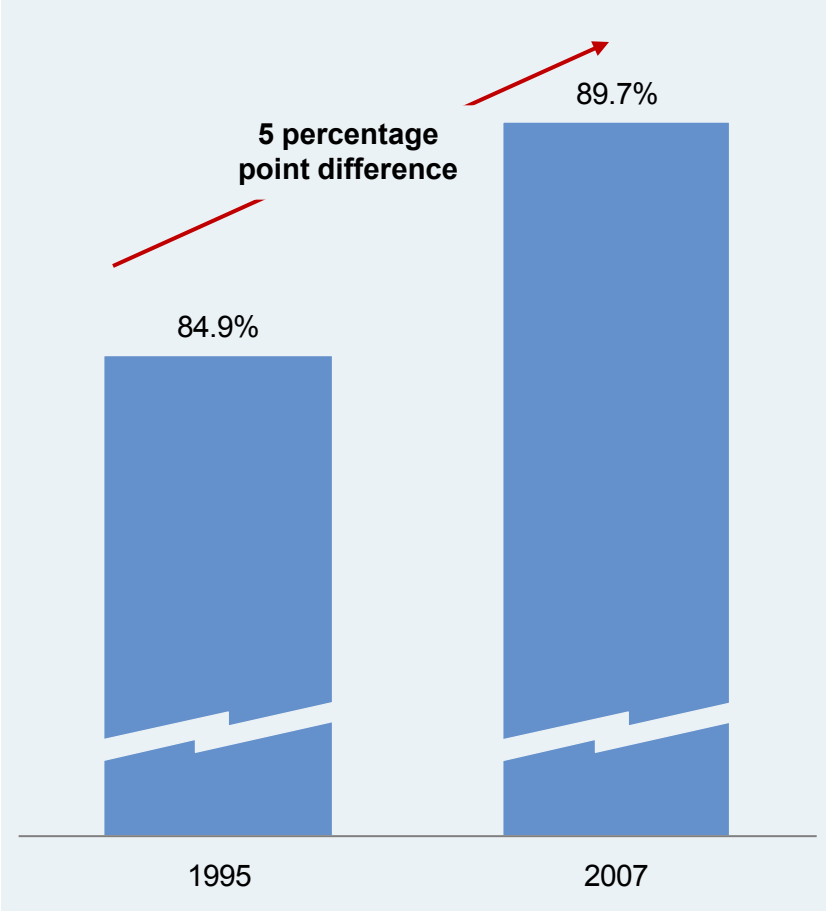
Total contribution to Consumer Bank fixed costs

Segment	Wallet range	Lost revenue ($B)	% of total lost revenue	# of households no longer profitable due to Durbin
Mass	< $100k	($1.0)	79%	1.3mm
Mass Affluent	$100k - $500k	($0.2)	16%	0.1mm
Affluent	$500k - $5mm	($0.1)	6%	< 0.1mm
Total		($1.3)+/-	100%	~1.3mm

Source: 2Q10 annualized Consumer Bank Profitability data

Projections of customers potentially moving out of the banking system

Percent of U.S. families with a checking account



Source: Federal Reserve Survey of Consumer Finance

Impact on customers

- Since “free checking” became widely available an additional 5% of US families have entered banking system
- If unable to qualify for free checking in the future these families may go unbanked
- Chase’s recent experience confirms that the impact will be meaningful:
  - ~15% of customers are in less affluent households who will no longer qualify for free checking
  - Based on current attrition rates, we expect 50% to 60% of these customers to leave Chase within the next year
  - If half of these customers leave the banking system = 5% +/- of customers becoming unbanked

Durbin customer impact – potential changes

Restrictions on debit cards

- Limit maximum transactions amounts due to fraud costs, e.g., $50 max
- Restrict use of debit cards at higher risk merchants and merchant categories
- Eliminate 100% fraud protection and guaranteed payment for merchants
- Eliminate debit rewards

More expensive banking services

- Monthly service fees (eliminate “free checking”)
- Debit card fees, e.g., monthly/annual fee, transaction fees (metering)
- Fees for other payment services, e.g., ACH
- Fees for account services, e.g., online banking, bill payment, mobile banking, paper statements
- Fees for banking services, e.g., teller, call center

Recent Chase actions

- Converted 8mm free checking customers to $10-12/month fee
- Stopped debit rewards
- Eliminated debit usage as a way to waive monthly service fee for all new customers
- Currently testing several other product and pricing concepts

- **Lower income and less affluent households most affected by Durbin**
- **Customers without significant balances will pay more for basic banking services**
- **5%+ customers will exit mainstream banking, e.g., pay day lenders, check cashers, pre-paid**

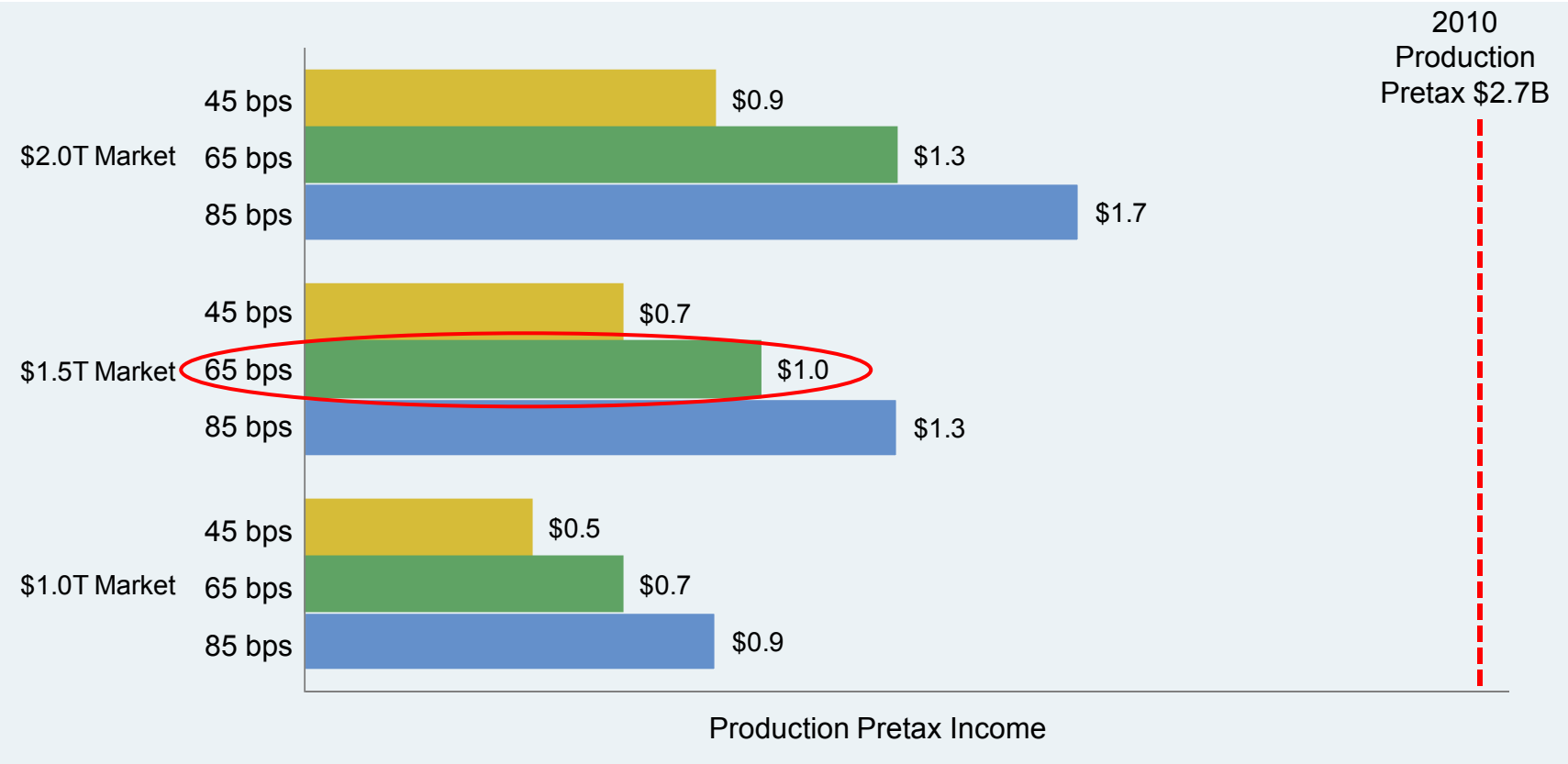
We plan to recoup revenue lost as a result of Durbin over time

Mortgage banking economics — scenario

Production	Servicing
■ Quality of underwriting ■ Pricing for risk ■ Cost / Efficiency of platform (sales, operational, overhead, etc.) ■ Market risk management – pipeline / warehouse ■ Focus on customer service	■ Size and average life of servicing book ■ Management of operational risk ■ Efficiency of platform ■ Market risk management – MSR hedging ■ Focus on customer service
■ Affected by high repurchase expense ■ Historically high refinance volumes and margins due to low interest rate environment ■ 2011 refinance volumes and margins and repurchase expenses expected to decline	■ Affected by high default driven costs ■ Default costs expected to remain high for next couple of years to handle modification and foreclosure volumes ■ Interest rate movements affect the business; require effective hedging strategies
Market Production $1.5T +/- Market Share 10% +/- Originations $150B +/- Pretax Margin 65bps +/- **Pretax $1.0B +/-**	Average UPB $1.0T +/- Servicing & Other Revenue 44bps +/- Amortization 25bps +/- Servicing & Default Costs 10bps +/- MSR Risk Management +/- 10bps **Pretax $1.0B +/-**

Mortgage Banking economics — sensitivity

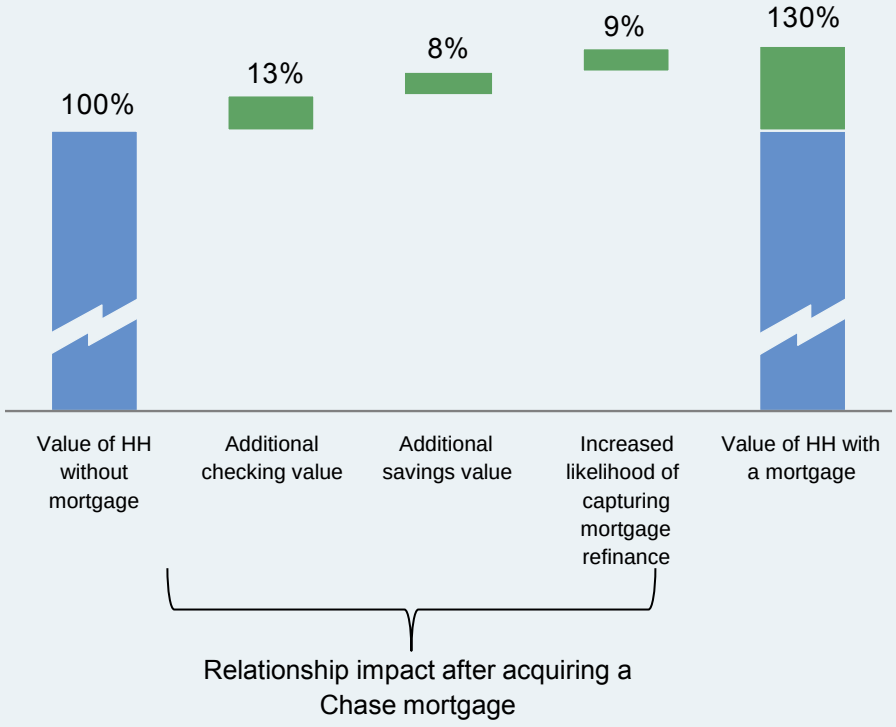
$ in billions



- Production volume and margins are impacted by market interest rates and capacity
- Some of the highest historic production margins were experienced in 2010
- Pretax servicing margin has been adversely affected by high default costs but generally can range from $500mm - $1.5B

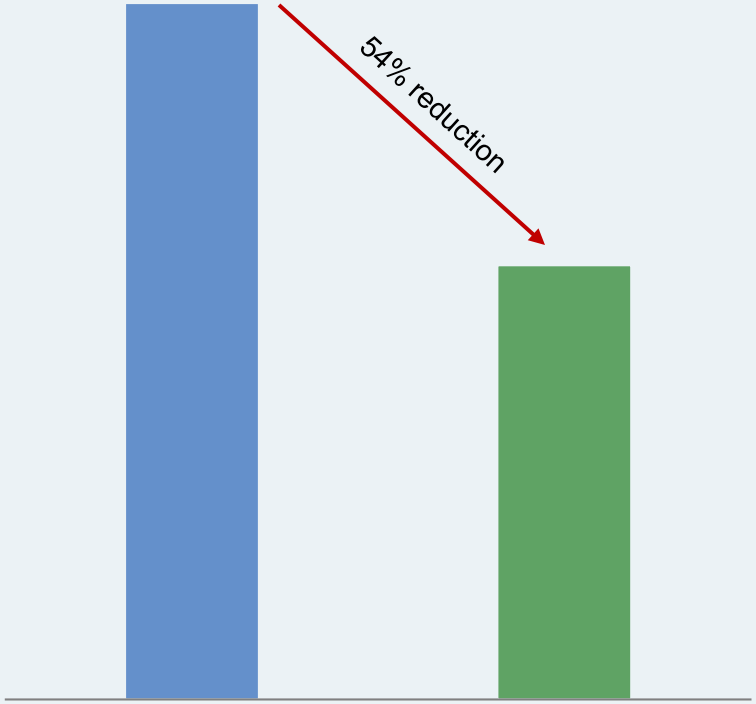
Mortgage increases the value of the overall customer relationship

Incremental value of adding mortgage to a banking relationship



- Excludes any additional value attributed to cross sell (e.g. credit card, investments)

Household checking annual attrition



Note: Impact of customer following refinance of a non-Chase mortgage at Chase

Servicer economics - modification vs. foreclosure

$ per loan	Foreclosed Loan	Modified Loan
Servicing Fees	1,500	3,400
Loss Mitigation Incentives	-	1,200
Total Fees	1,500	4,600
Servicing & Collection Cost	700	1,500
Loss Mitigation Cost	2,400	3,000
Foreclosure Processing Cost	1,500	600
Total Cost	4,600	5,100
Net Income/(Loss)	(3,100)	(500)

- Modification vs. foreclosure decision is made on behalf of the investor based on the best economic alternative
- From a servicer's perspective, a performing loan is the best alternative
- A foreclosure is the worst economic alternative, primarily due to the loss of servicing fee income

Housing market reform

- A healthy, functioning mortgage market is critical to consumers and the economy
- Mortgage business is extremely complex and industry practices need to be strengthened
- GSE reform is necessary
- Regardless of the outcome, we continue to like our competitive position
  - Existing customer relationships: over 67mm unique customer relationships
  - ~7mm new customers acquired each year
  - Processing scale
- Reasonable return on production and servicing - form may change
- A critical relationship product

Key messages

We will address legacy issues

- Earnings drag from significant negatives in 2010 will reduce over time
  - Credit, repurchases, elevated default and servicing expenses, foreclosure costs
- Well reserved entering 2011
- Capital will be freed up as reserves are released and Real Estate Portfolio runs-off

Quality of our franchise positions us to grow

- Doubled investment $ over the last 5 years
- Consistent, 10% to 15%, organic growth in key drivers
- Strong presence in key markets
- Significant opportunity to grow organically in our footprint; potential to build 1,500+/- new branches over the next 5 years
- WaMu Business Banking and Chase Private Client is a combined $2.0B+/- pretax opportunity

Our business model enables success even during significant change

- Strong and experienced management team
- Track record of execution and delivering growth
- Diverse customer base; strong penetration but lots of opportunity
- Complete product set; focus on innovation
- Regulatory reform will change our business; we are positioned to adapt and will price properly for the services and value we provide

Industry leading franchise with strong earnings power and potential

COMMERCIAL BANKING

Todd Maclin, Commercial Banking Chief Executive Officer

February 15, 2011

JPMorgan Chase & Co.

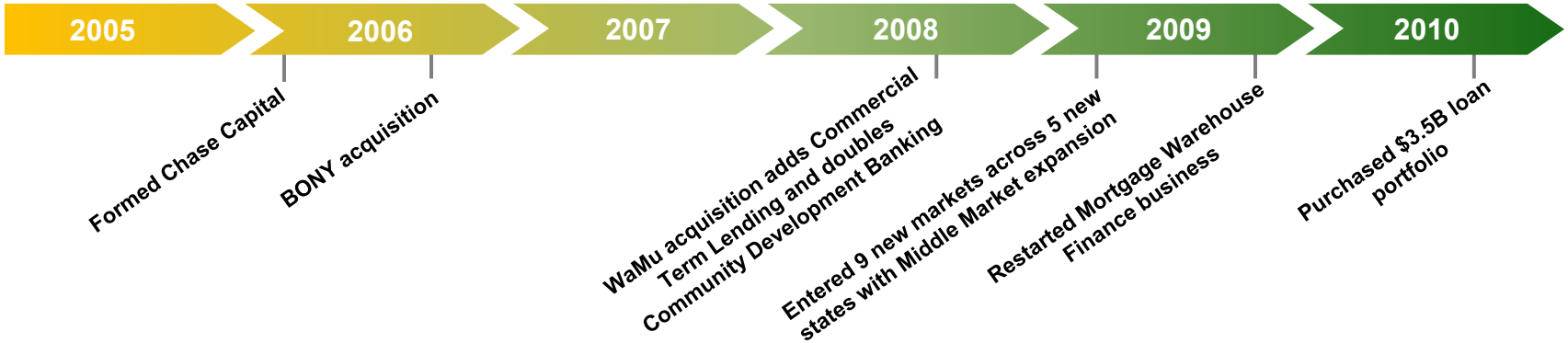
Agenda

Business performance	**1**
Current environment	8
Growth opportunities	12
2011 and 2012 outlook	18

Commercial Banking transformation

($ in billions, except where noted)		2005		2010	Growth
Step change in scale and reach	US Company Coverage[1]:	73%		86%	
	Loan Balances:	$48		$97	102%
	Liability Balances:	$66		$139	110%
	Gross IB Revenue:	$0.6		$1.3	142%
Doubled earnings	Revenue:	$3.5		$6.0	73%
	Operating Margin:	$1.6		$3.8	135%
	Net income:	$1.0		$2.1	119%
Improved returns	ROE[2]:	19%		26%	
	Revenue / Relationship[3] (000's):	$122		$211	72%
	Revenue / Banker ($mm):	$2.8		$5.7	103%

How we got here – A few new businesses and steady organic growth



[1] Represents number of companies with revenue between $10MM - $1B in Chase covered states vs. the total United States. Source – D&B as of 3Q10
[2] 2005 ROE of 19% based on $5.1 billion of equity to be consistent with Basel I methodology applicable beginning in 2006. Reported ROE was 28%
[3] 2005 Revenue/Relationship based on 2006 revenue and relationship count. Applicable 2005 relationship data not available. Excludes CTL clients and revenue

Our core business principals remain the same

Client selection

- Bank strong companies with proven management teams
- Maintain long-term client relationships; average Middle Market relationship tenure is over 14 years
- Minimize concentrations in any industry or geography; maintain granularity

Cross-sell entire firm

- Capitalize on JPMorgan Chase's extensive and differentiated product suite to meet client needs
- Actively refer our customers to other LOBs

Continuous investment in growth

- Invest in new markets and businesses to expand presence and market share
- Aggressively cover target markets

Expense management

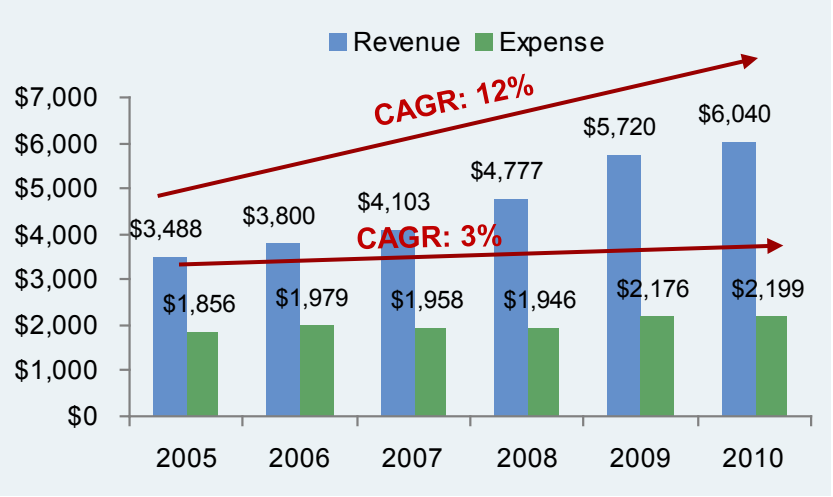
- Instill a culture of sensible spending
- Aggressively address variable expenses in downturns

Manage real estate and cyclical exposures through-the-cycle

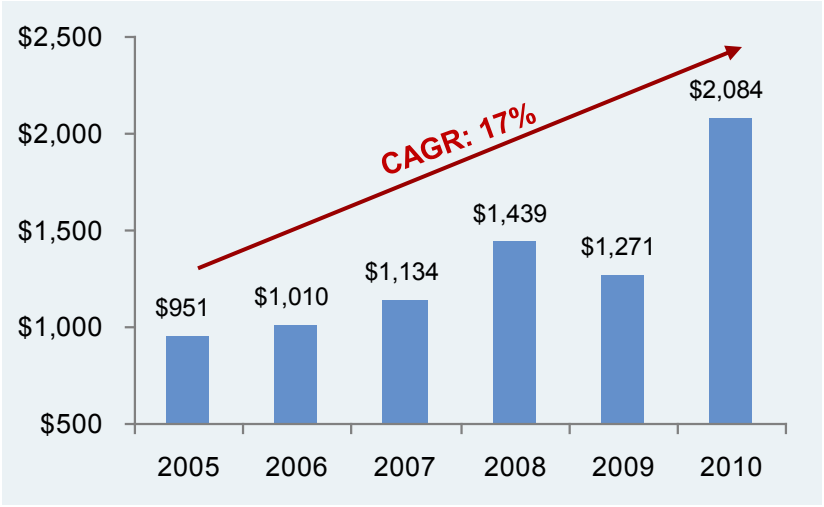
- Underwrite on only strong principals
- Stop when the market is irrational; return when market has rationalized
- Pre-determined circuit breakers in place

Steady profitable growth and high efficiency

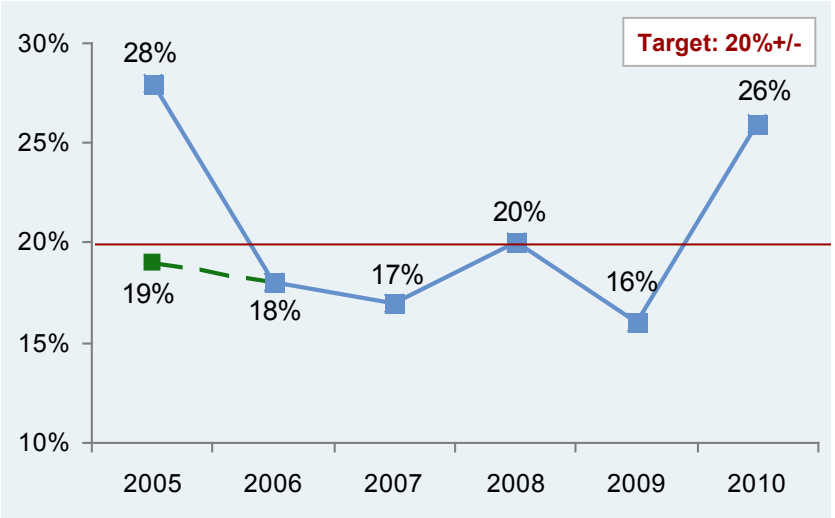
Revenue ($ in millions)



Net income ($ in millions)

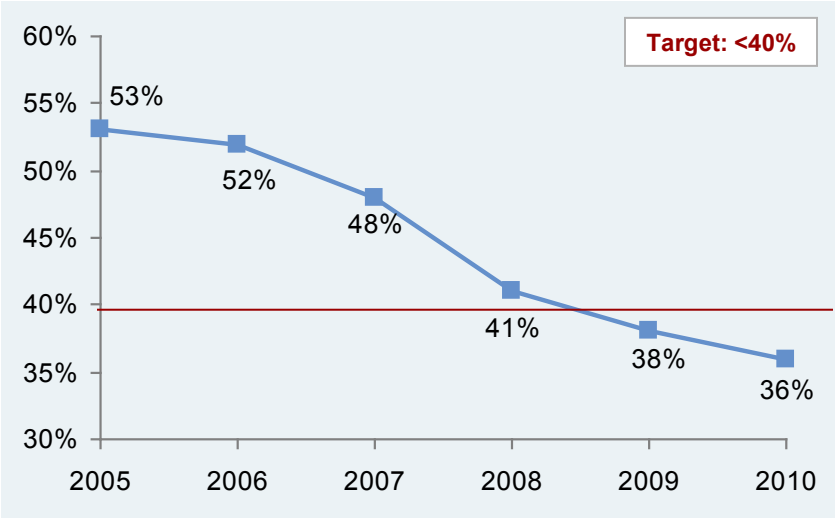


Return on equity



Note: 2005 ROE of 19% based on $5.1 billion of equity to be consistent with Basel I methodology applicable beginning in 2006

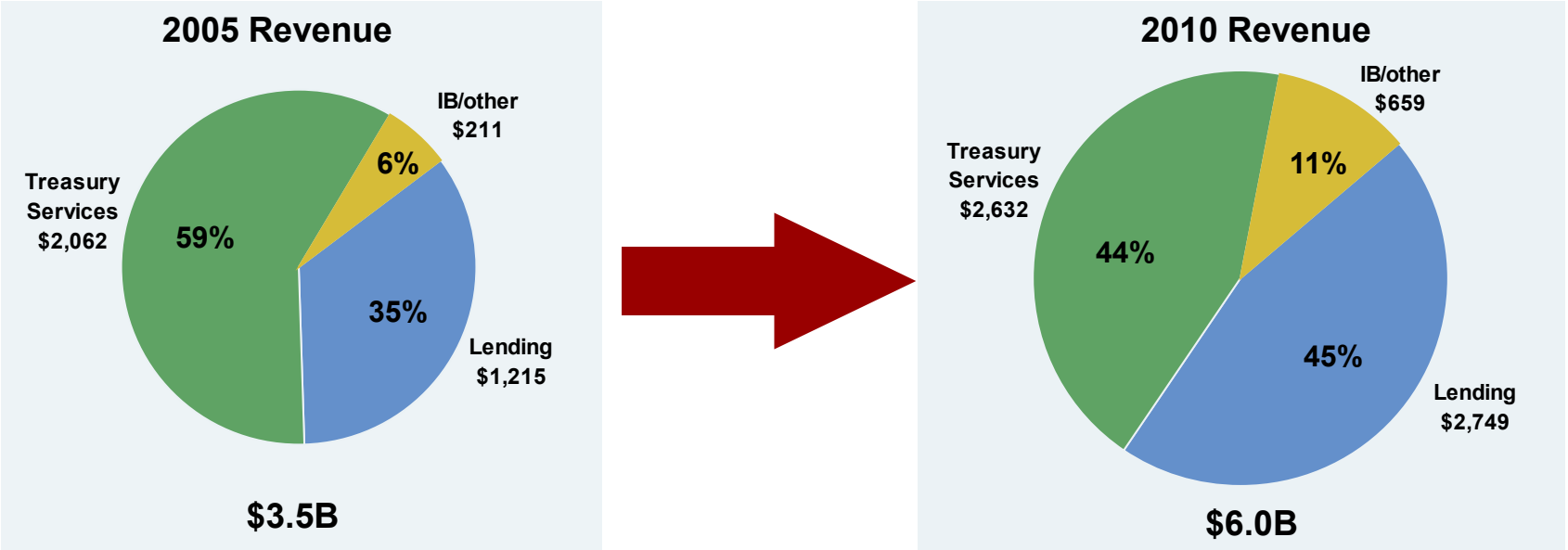
Overhead ratio



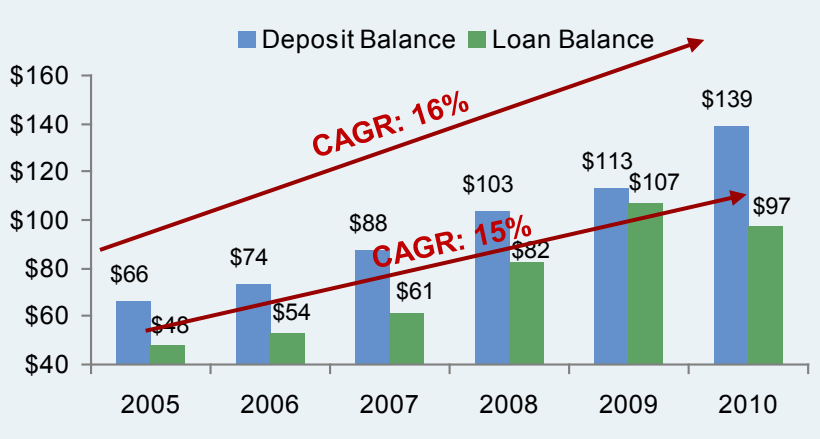
BUSINESS PERFORMANCE

Strong revenue growth despite low rate environment

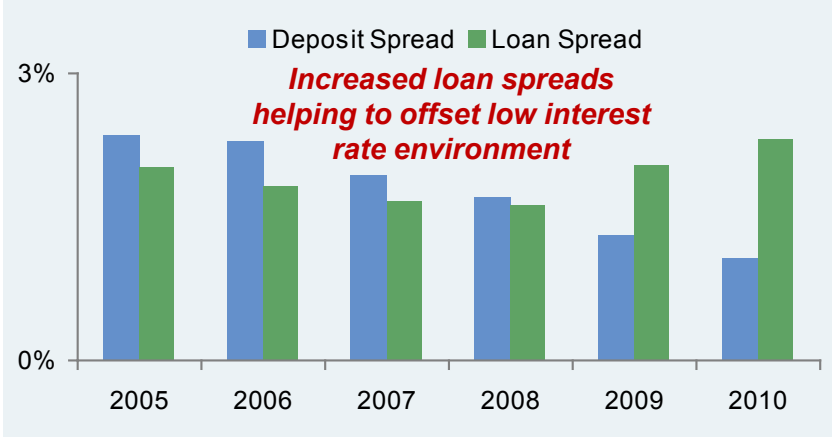
CB product revenue



Loan and deposit growth (Average, $ in billions)

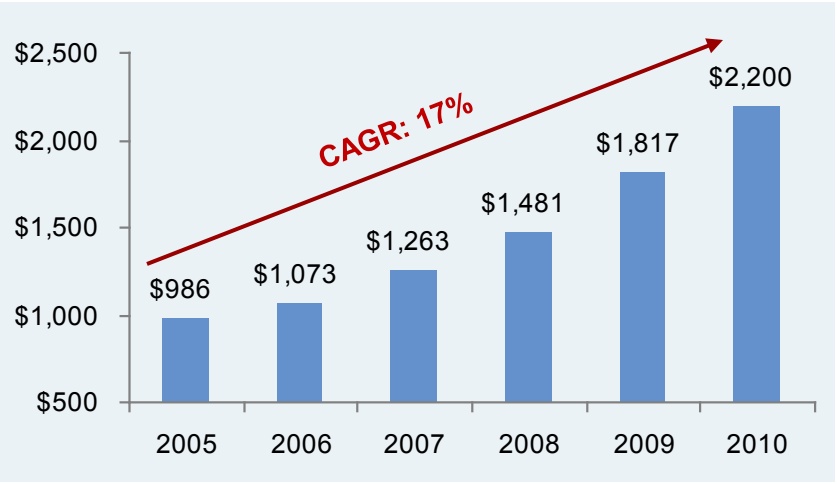


Loan and deposit spreads

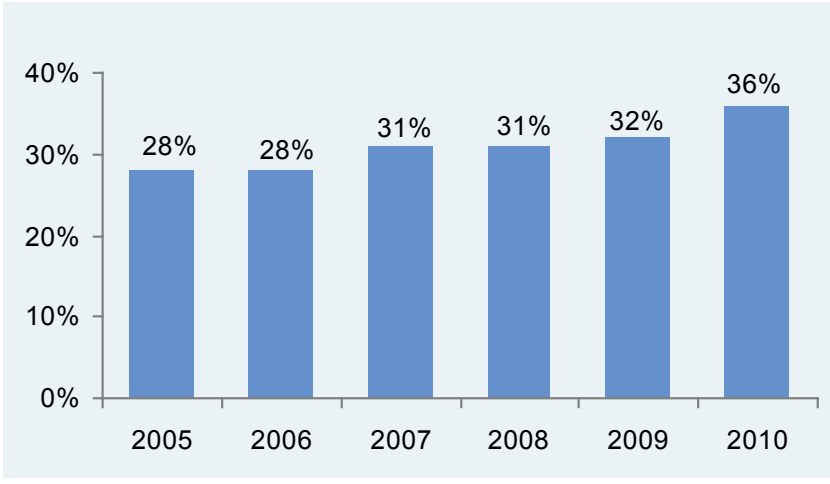


Strong cross-sell has significantly increased fee revenue

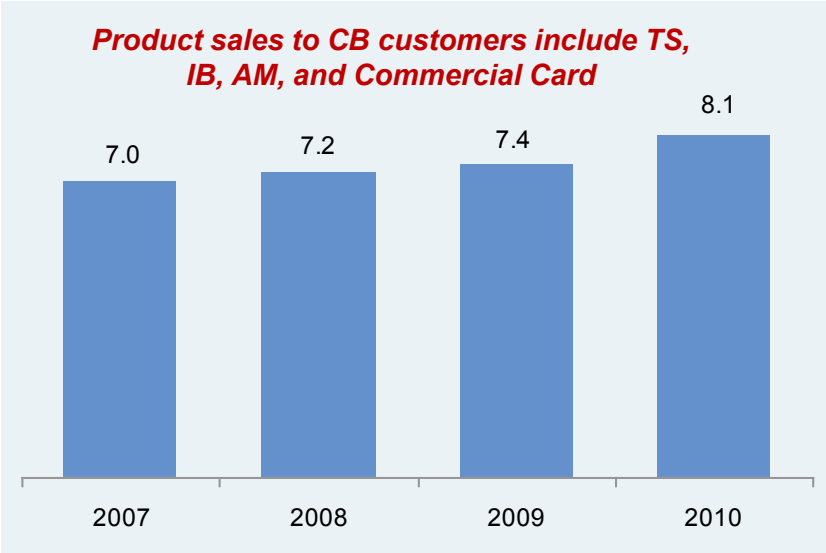
Non-interest revenue – CB reported ($ in millions)



Non-interest revenue / Total revenue trend

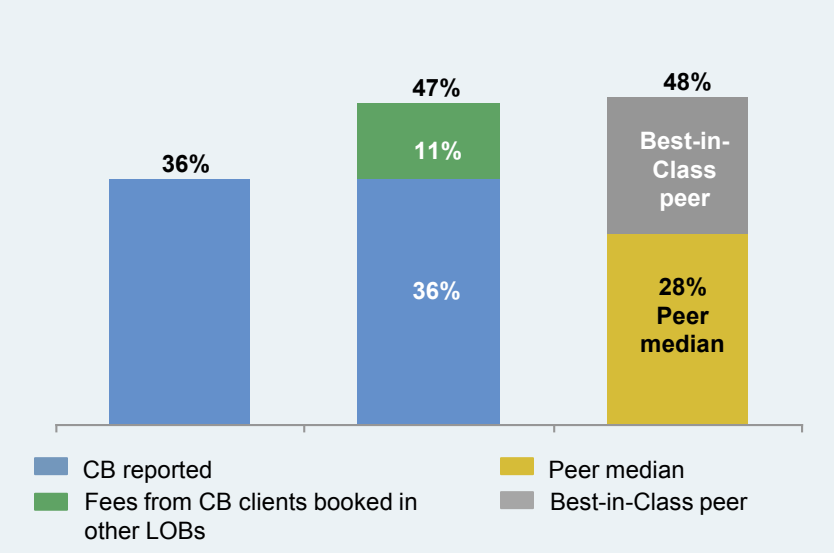


Average products per relationship



Note: Average product per relationship excludes CTL

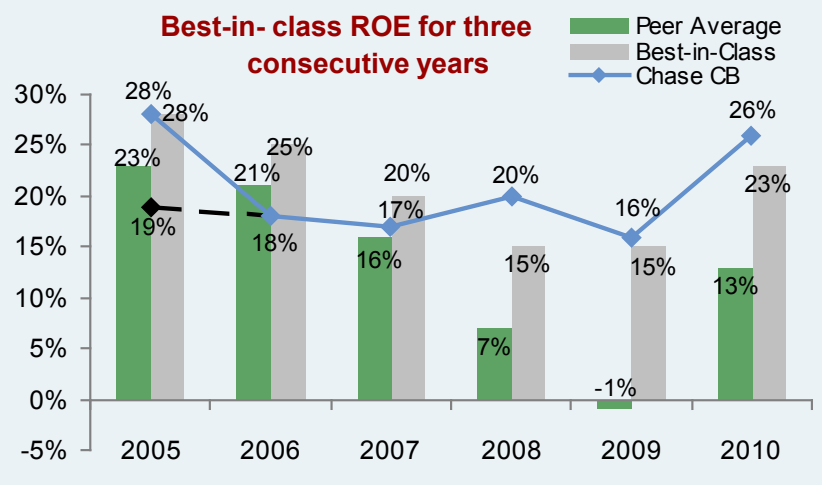
Total CB NIR / Revenue vs. peers



Note: Peer group comparison includes CB-equivalent segments at BAC, COF, CMA, FITB, PNC, STI, USB, WFC

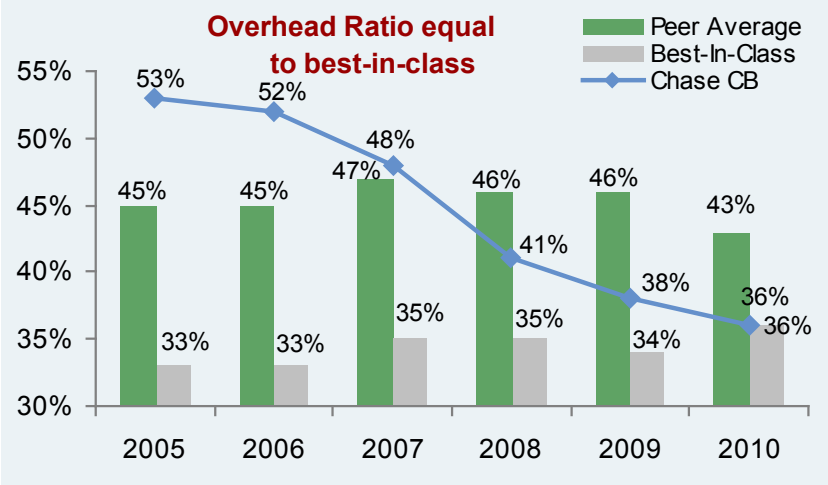
Best-in-class performance among peer group

Return on equity: Chase CB vs. peers



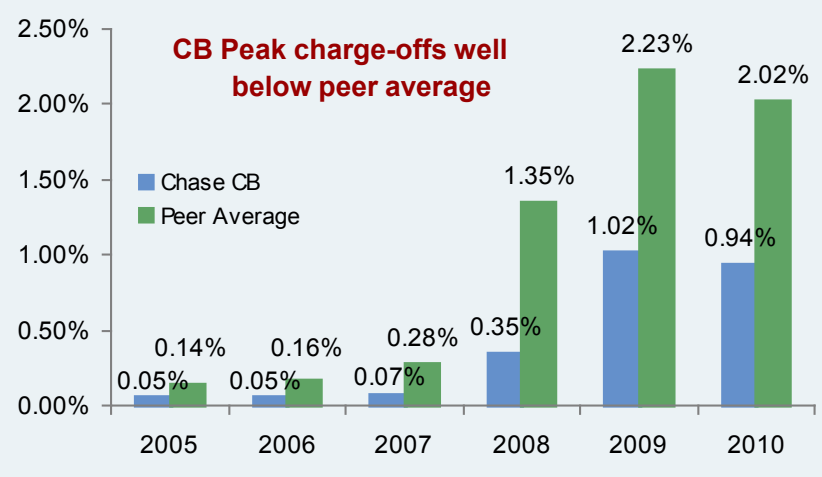
Note: ROE peer average reflects CB equivalent segments at BAC, CMA, KEY, PNC, USB
Best-in-class peer reflects peer bank with top metric for given year
2005 ROE of 19% based on $5.1 billion of equity to be consistent with Basel I methodology applicable beginning in 2006

Overhead ratio: Chase CB vs. peers



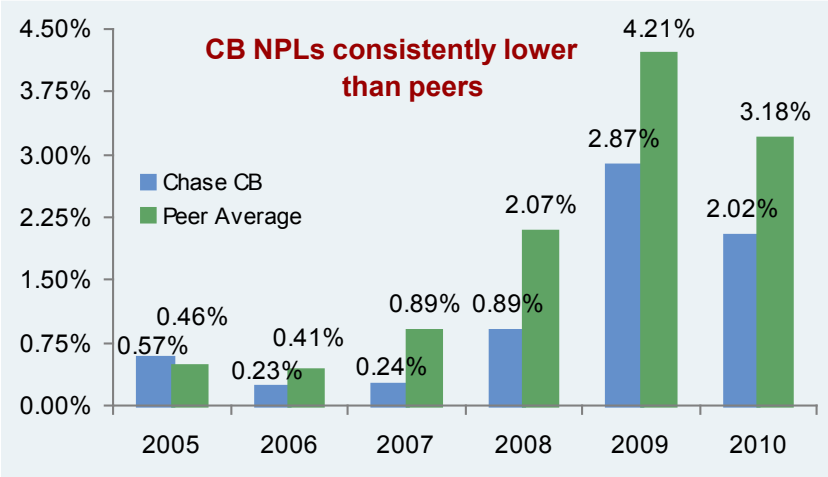
Note: Peer averages for overhead ratio include CB-equivalent segments at BAC, CMA, FITB, KEY, PNC, USB, WFC
Best-in-class peer reflects peer bank with top metric for given year

Net charge-off ratio: Chase CB vs. peers



Note: Peer averages NCO ratio includes CB-equivalent segment or wholesale portfolio at BAC, CMA, FITB, KEY, PNC, USB, WFC

Nonperforming loans ratio: Chase CB vs. peers



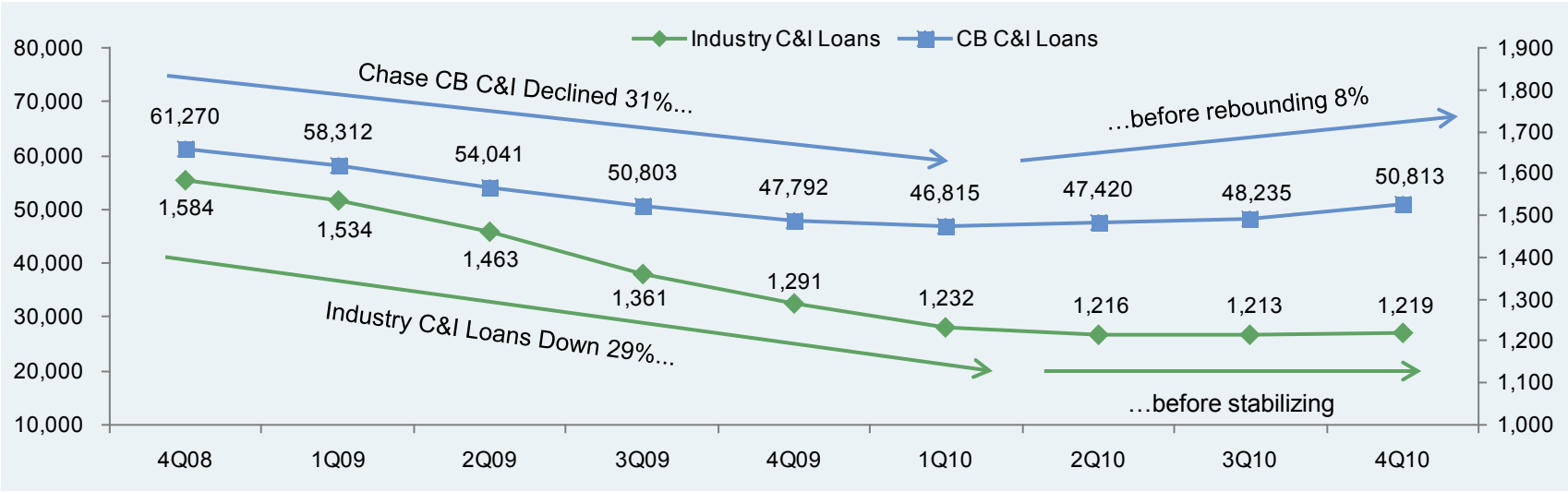
Note: Peer averages NPL ratio includes CB-equivalent segment or wholesale portfolio at BAC, CMA, FITB, KEY, PNC, USB, WFC
2005, 2006, & 2007 Chase CB NPL ratio based on average loans, all other periods based on ending loans

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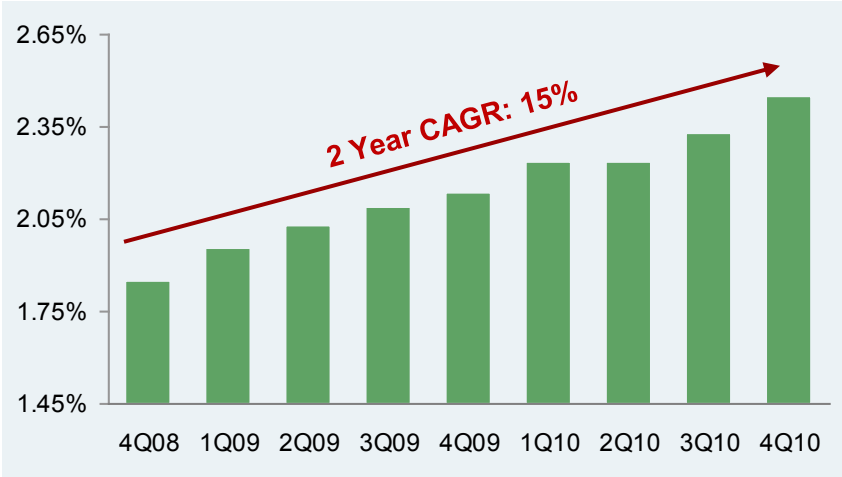
Market share appears to be driving our growth

Loan volume (Chase CB $ in millions, Industry C&I $ in billions)

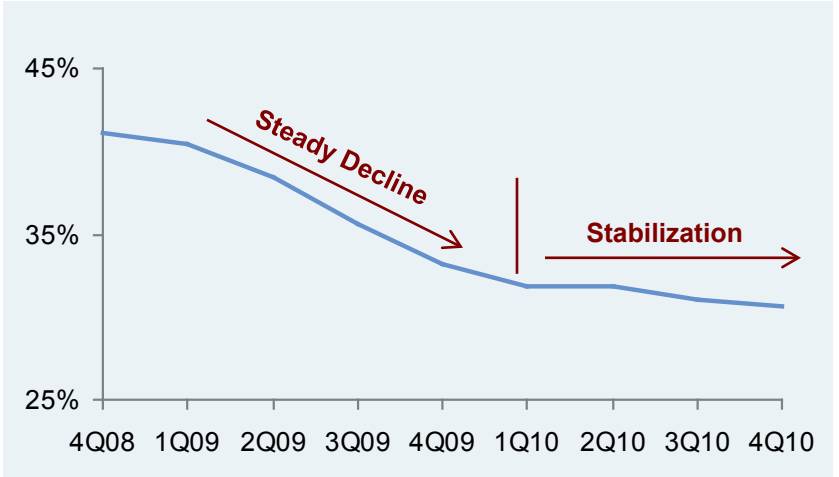


Source: C&I loans from the Federal Reserve; data released on a one week lag

Loan spread trend

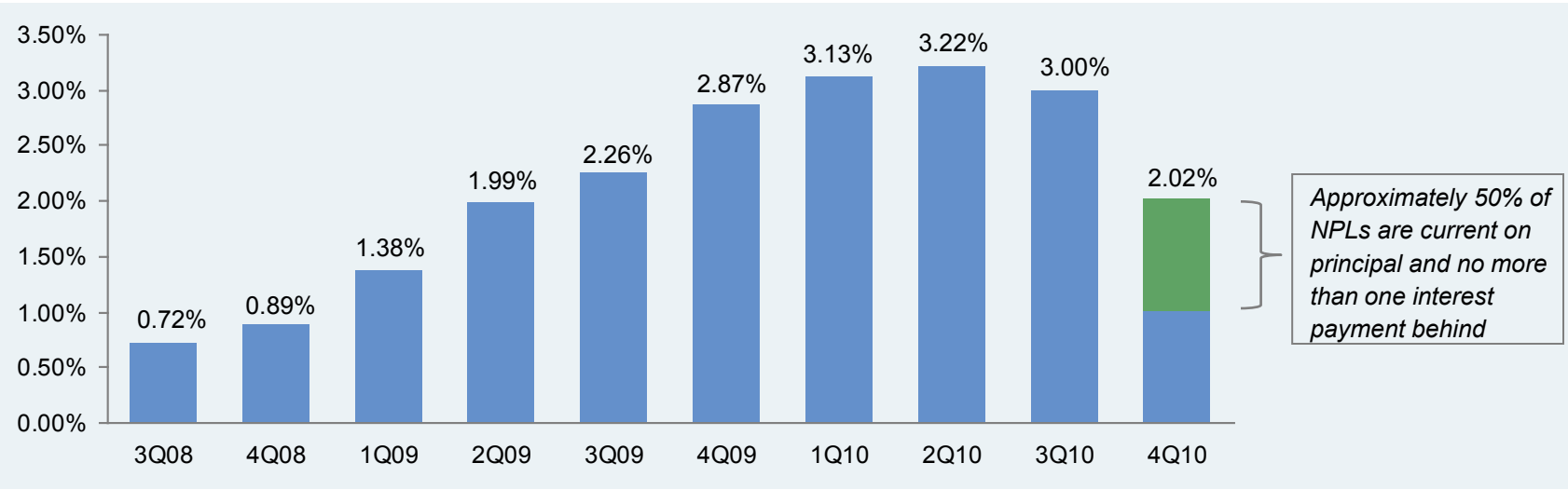


Utilization rates

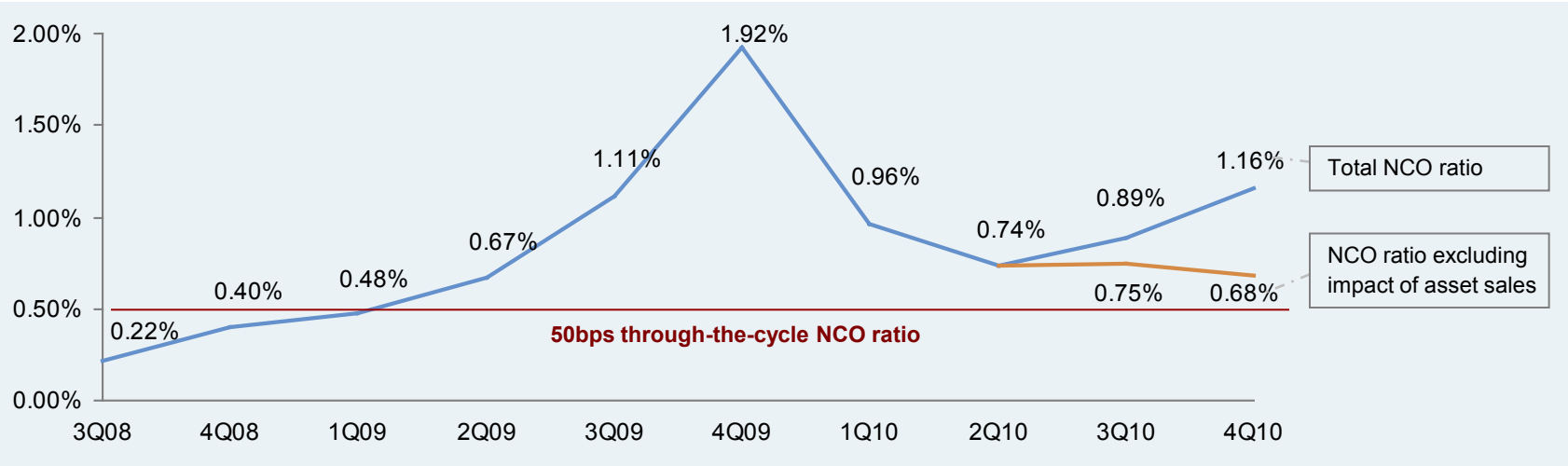


Credit performance continues to improve

Non-performing loan ratio by quarter

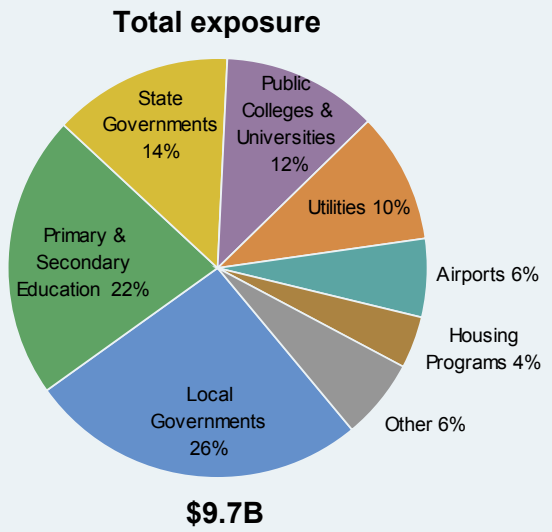


Net charge-off ratio by quarter

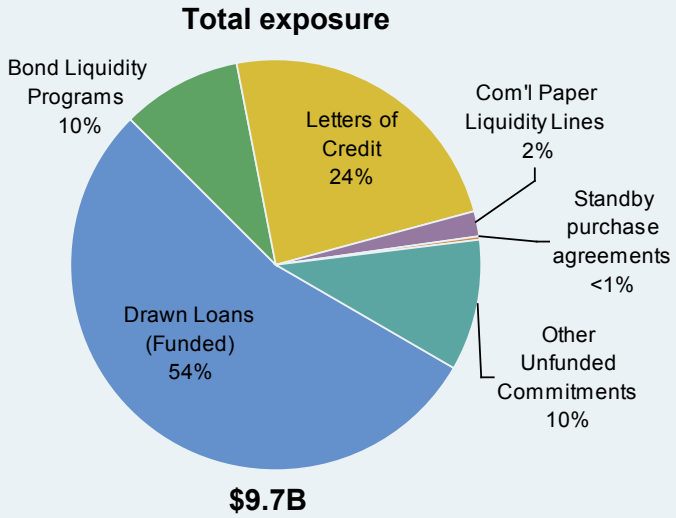


Monitoring exposure to States and Municipalities

Credit exposure by industry subsector[1]



Credit exposure by product[1]



[1] Exposure as of December 2010

Portfolio and risk profile

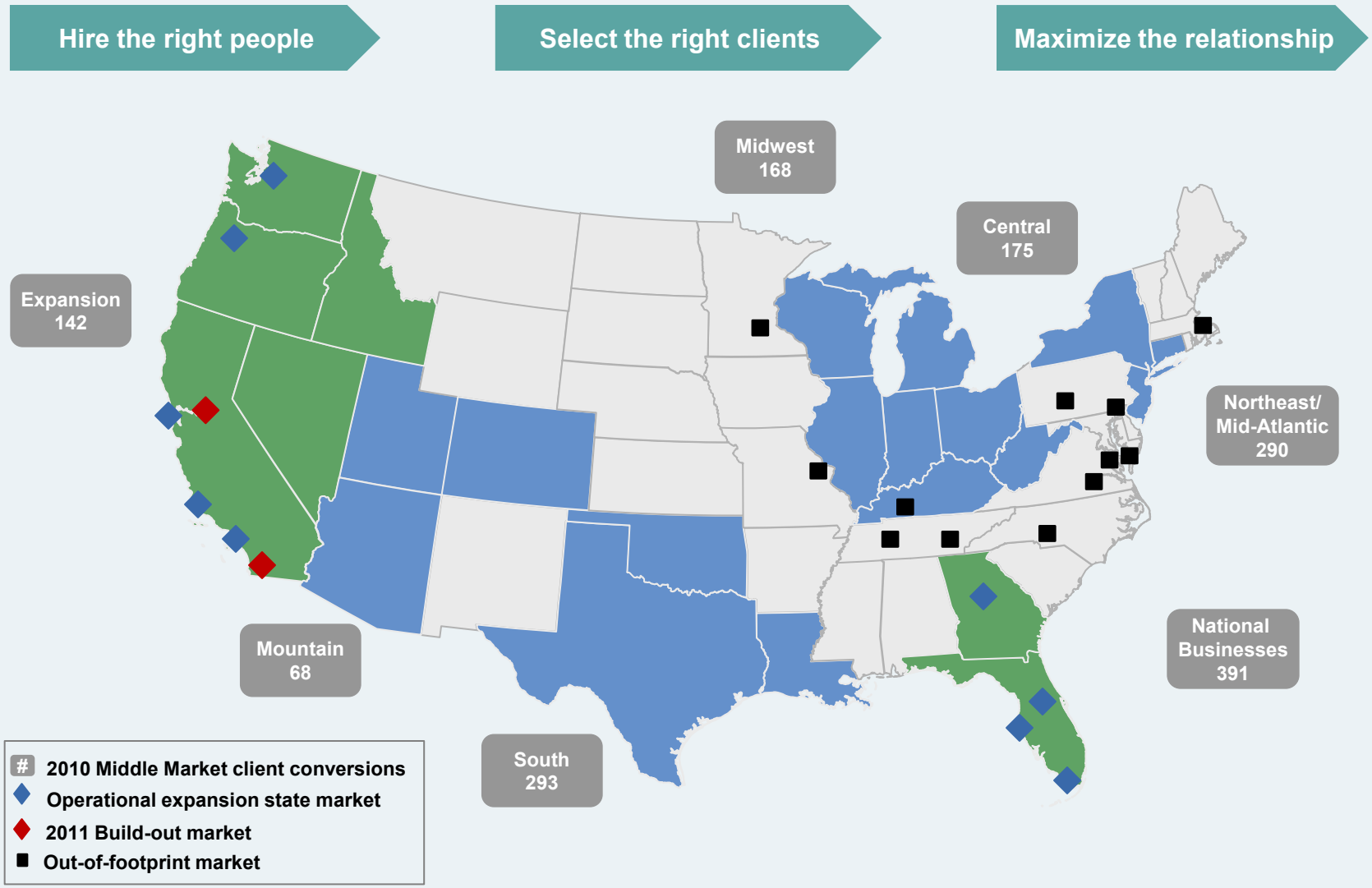
- Municipal portfolio overview
  - $9.7B represents 5% of total $187B CB exposure
  - Granular portfolio – ~2,000 clients
  - Primarily shorter-term debt allows for frequent re-evaluation
    - 74% under 5 year maturity
- Attractive risk characteristics
  - Typically state constitutions prioritize debt service coverage as the 1st or 2nd budget item
  - Portfolio primarily supports essential services with stable funding
    - Public Education
    - Municipal Utilities
    - Public Transportation
  - Legal balanced budget requirement in all states but one (Vermont)
  - General obligation debt to local governments viewed as secured given the municipality's ability to levy and collect taxes

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Expansion and out-of-footprint markets create a huge opportunity

Expansion and out-of-footprint presence

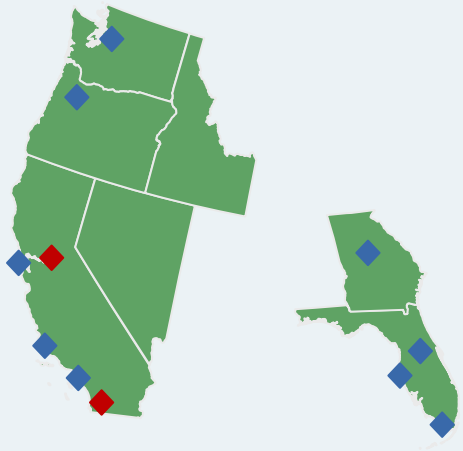


Only starting to tap market potential

Expansion markets[1]

Opportunity[1]

- Long-term CB pretax income opportunity of $650-800mm
- New markets roughly equivalent to adding[2]:
  - 1 Chicago
  - 3 Dallas
  - 3 Denver
  - 3 Salt Lake City
  - 1 Houston
  - 1 Columbus
- Over 4,700 prospects; finding new ones daily



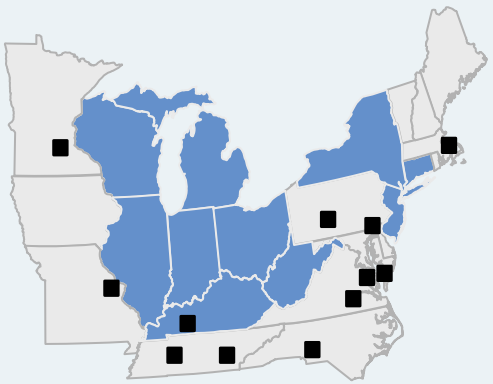
Progress[1]

- More than 200 fully dedicated CB resources
- Over $1B in loans; expect to double in 2011
- Over $1B in liabilities; expect to double in 2011
- Expected to be fully self-funded in 2011 (third year into effort)

Out-of-footprint markets

Opportunity

- Out-of-footprint markets roughly equivalent to covering:
  - 3 Houston
  - 3 Columbus
  - 1 Dallas
  - 1 Fort Worth
  - 1 New Orleans
  - 1 San Antonio
- Over 2,200 prospects



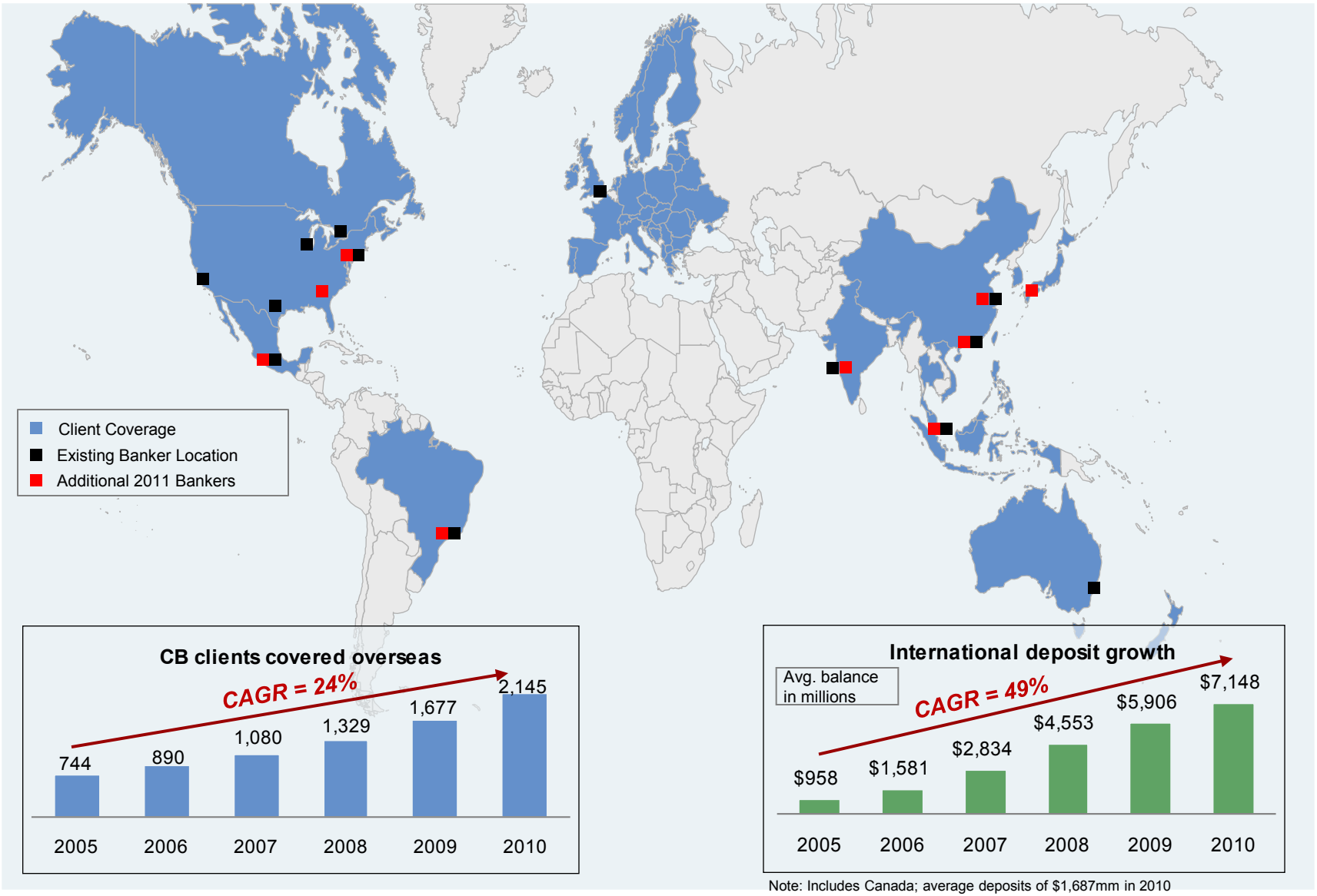
Progress

- Over 40 Commercial Bankers covering these markets
- Nearly 1,000 relationships across these markets

[1] Middle Market prospects only, does not include other CB LOB efforts in expansion states
[2] Market equivalents based on target companies with $10mm - $1B in revenue. Source: D&B as of 3Q10

International provides growth and differentiates from the competition

International client coverage

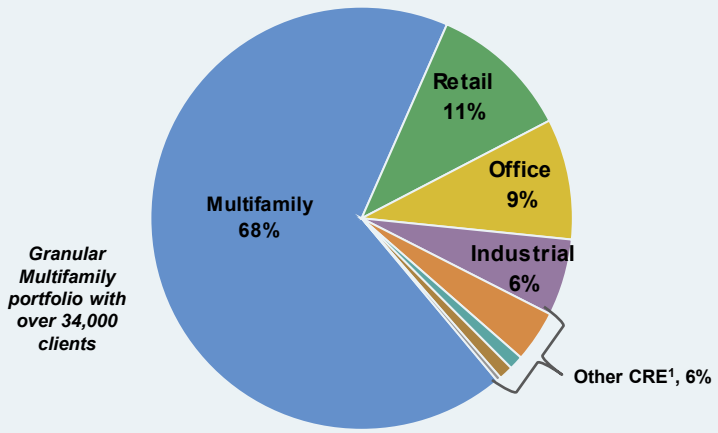


Note: Includes Canada; average deposits of $1,687mm in 2010

Well positioned to take advantage of the improving Commercial Real Estate cycle

CB CRE exposure - $52B

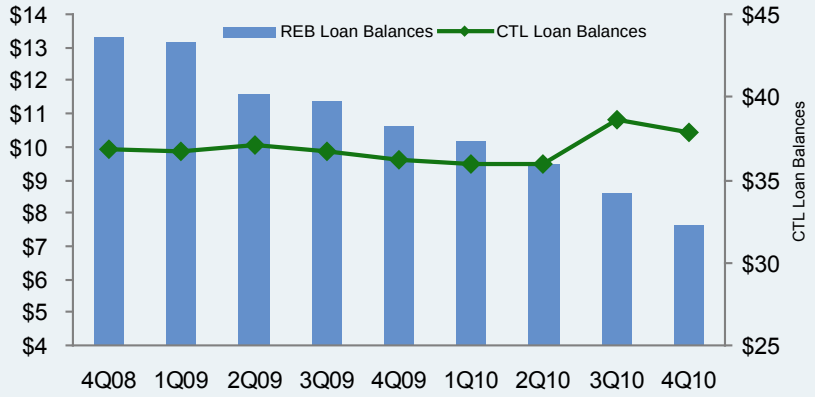
Majority of CRE exposure is multifamily



[1] Other CRE includes Hospitality, Subscription IP, Commercial Land, and misc. other

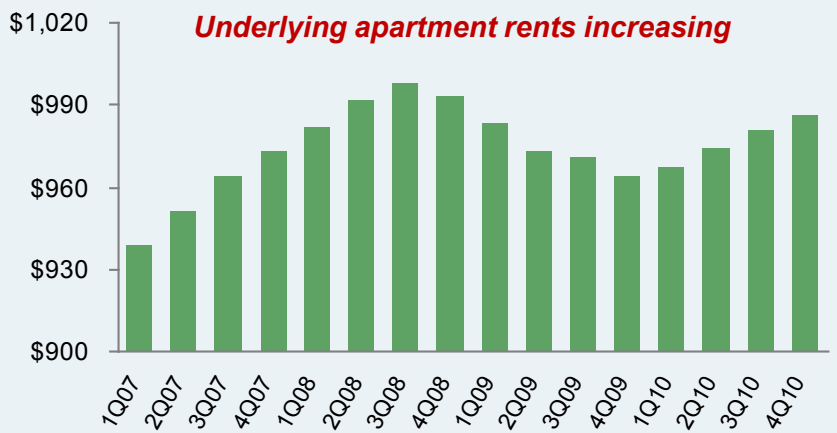
Real Estate Banking loan balances (EOP - $ in billions)

Commercial Term Lending balances flat while reduction in Real Estate Banking balances leaves capacity for opportunistic growth



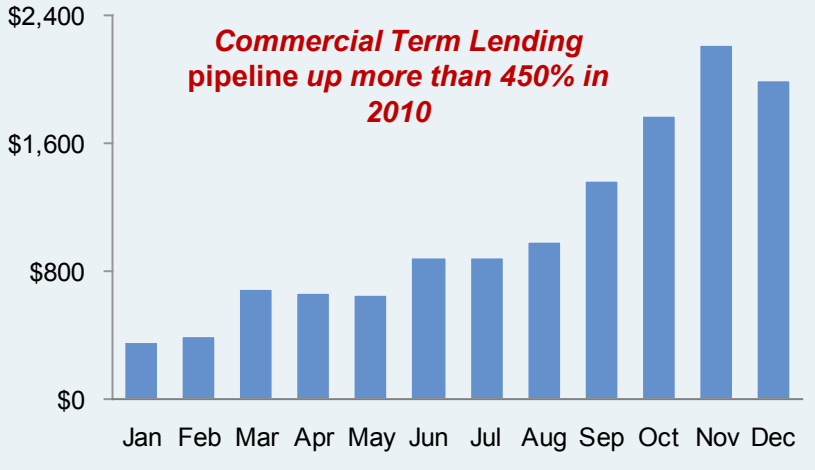
Industry-wide apartment rent rates[2]

Underlying apartment rents increasing



Commercial Term Lending loan pipeline ($ in millions)

Commercial Term Lending pipeline up more than 450% in 2010

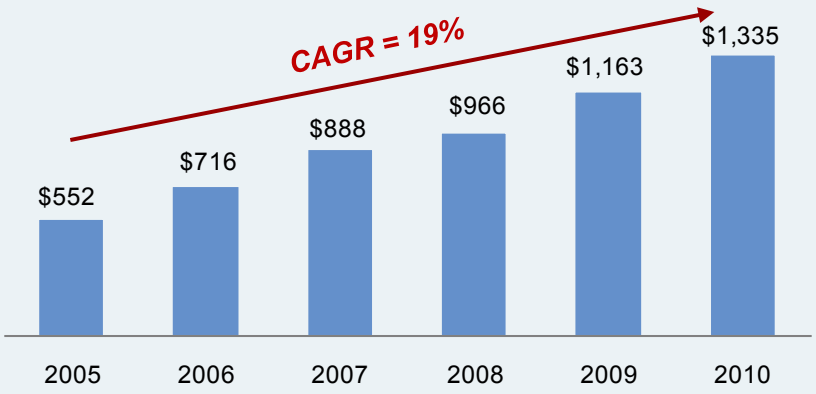


[1] Exposure as of December 2010
[2] National Effective Rent Rate, Source REIS

Investment Bank revenue remains a key cross-sell opportunity for Commercial Banking

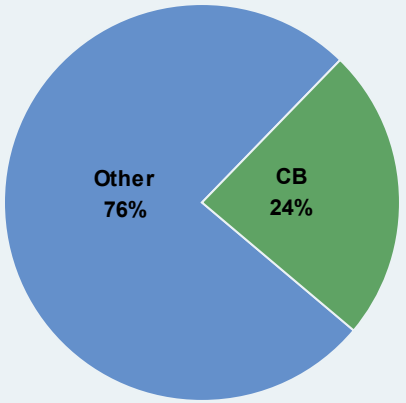
Gross IB revenue from CB clients ($ in millions)

IB revenue generated from CB clients has grown steadily…



Gross domestic Investment Bank fees – Total JPM

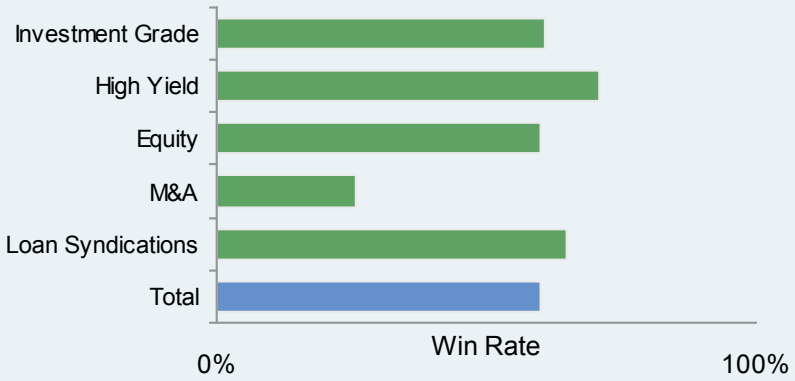
…and accounted for almost a quarter of the firm's gross domestic IB fees in 2010[1]



[1] 24% calculated based on Gross IB revenue for SLF, M&A, Equity Underwriting, and Bond Underwriting, which make up $904MM of the total $1,335MM Gross IB revenue

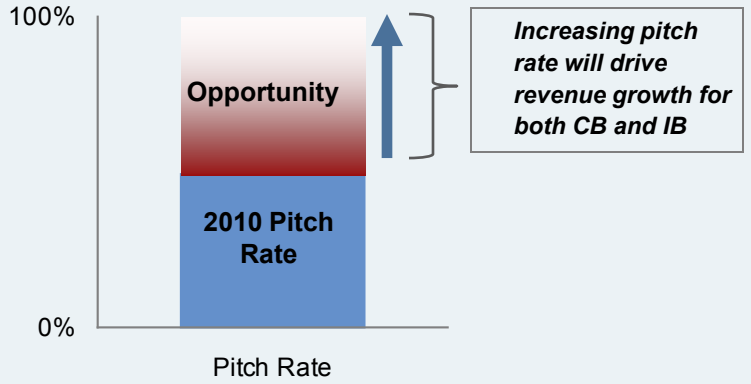
Win percent for IB deals pitched to CB clients

Historically high win rate when pitching deals to CB clients



Gross domestic Investment Bank fees – Total JPM

Efforts underway to increase pitch rate for further IB revenue growth



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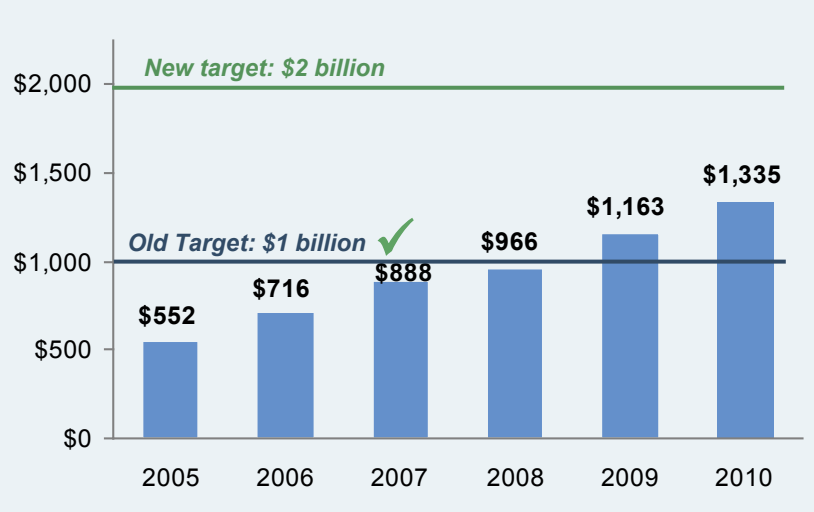
2011 and 2012 outlook

2011 and 2012 outlook

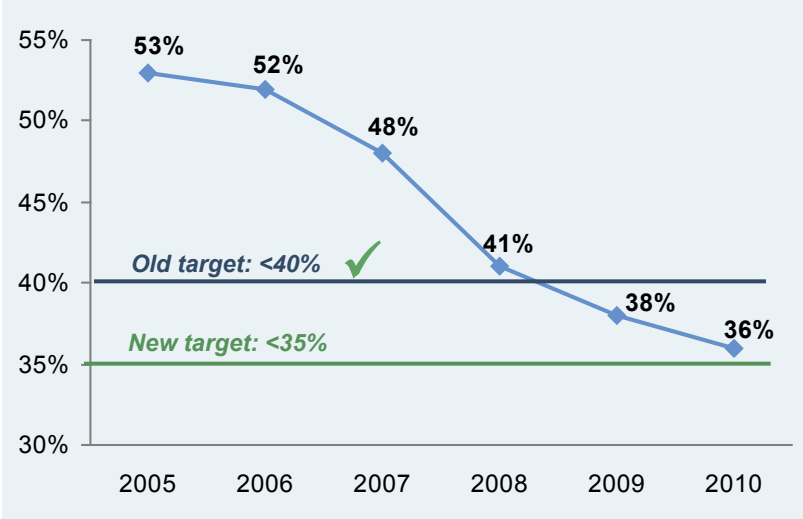
- Continued growth
  - Market expansion
  - New client conversion
  - International
  - Investment Bank cross-sell
  - Commercial real estate
  - More normalized environment = more normal spread earned on deposits
- Continued credit improvement
  - Net charge-offs leveling off; moving toward 50bps through the cycle
  - Current reserve levels adequate
- Improve efficiency
  - Growth in front line staff to drive revenue
  - Investing in technology and operations to improve efficiency and client experience

Commercial Banking performance targets

Gross IB revenue of $2B



Overhead ratio below 35%



Return on equity of 20%+



Note: 2005 ROE of 19% based on $5.1 billion of equity calculated using Basel I methodology applicable to 2006 equity

COMMERCIAL BANKING

Todd Maclin, Commercial Banking Chief Executive Officer

February 15, 2011

JPMorgan Chase & Co.

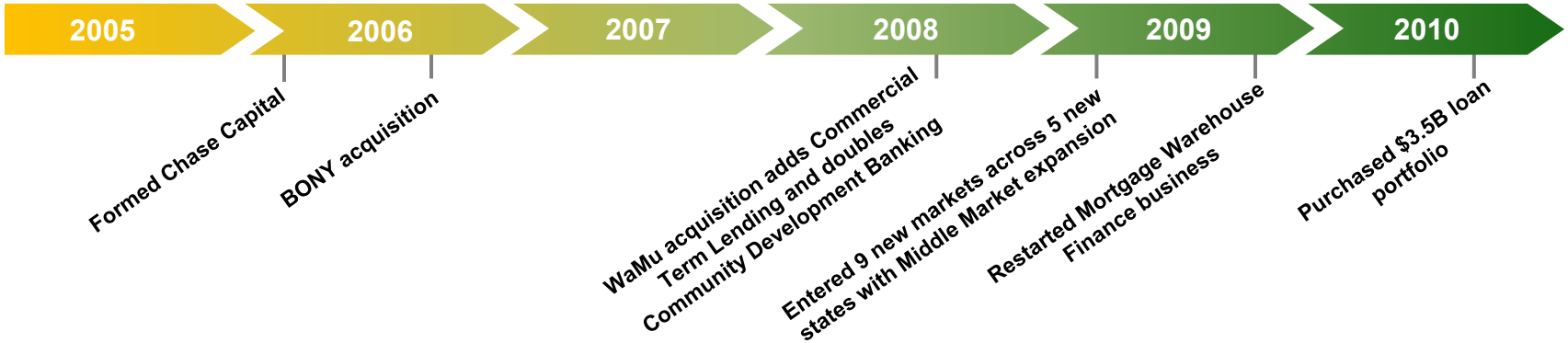
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- Aggressively cover target markets

Expense management

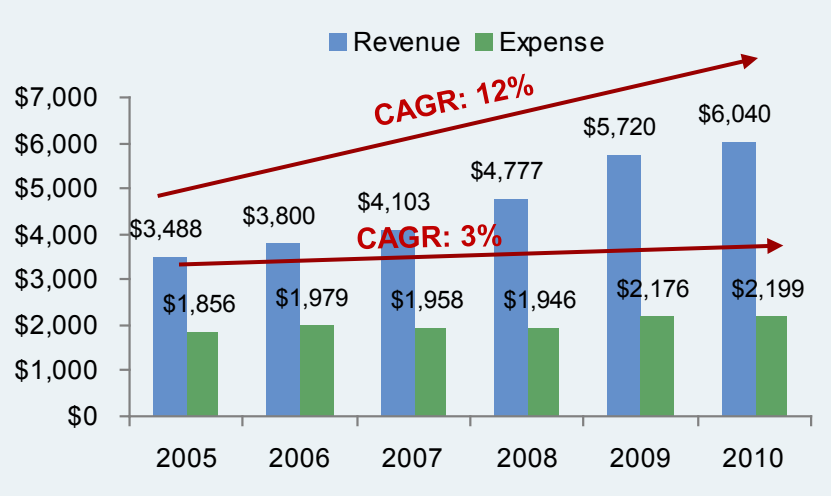
- Instill a culture of sensible spending
- Aggressively address variable expenses in downturns

Manage real estate and cyclical exposures through-the-cycle

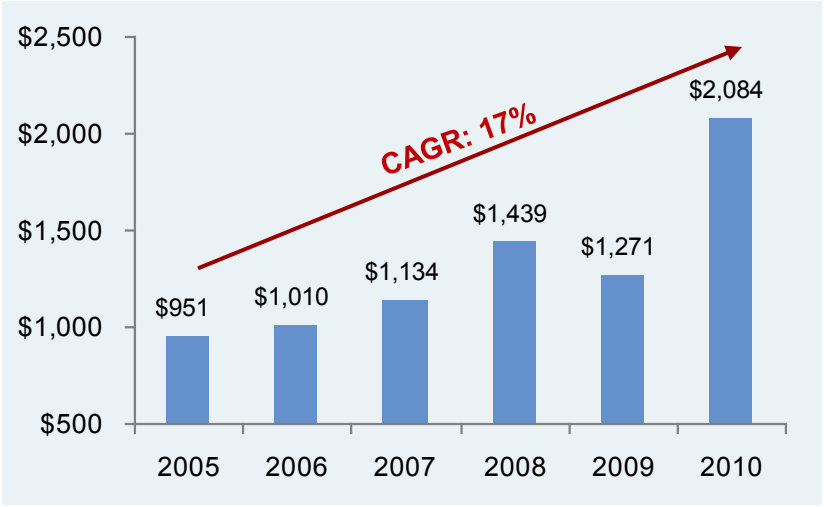
- Underwrite on only strong principals
- Stop when the market is irrational; return when market has rationalized
- Pre-determined circuit breakers in place

Steady profitable growth and high efficiency

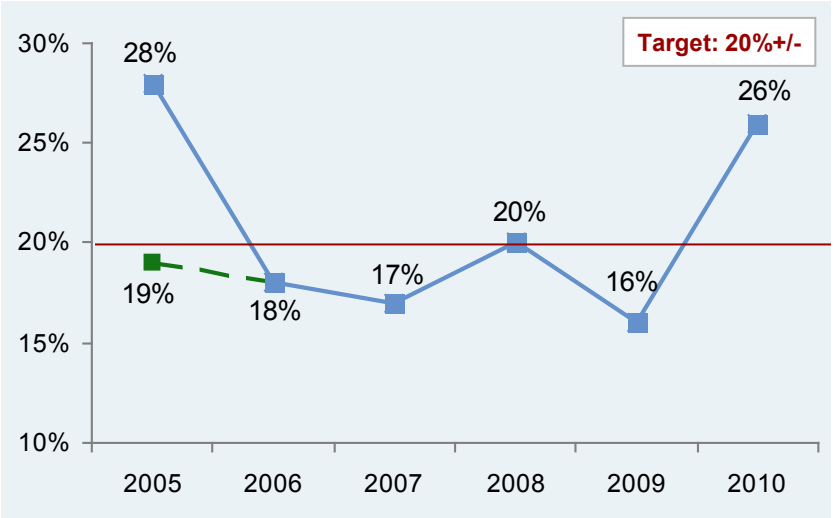
Revenue ($ in millions)



Net income ($ in millions)

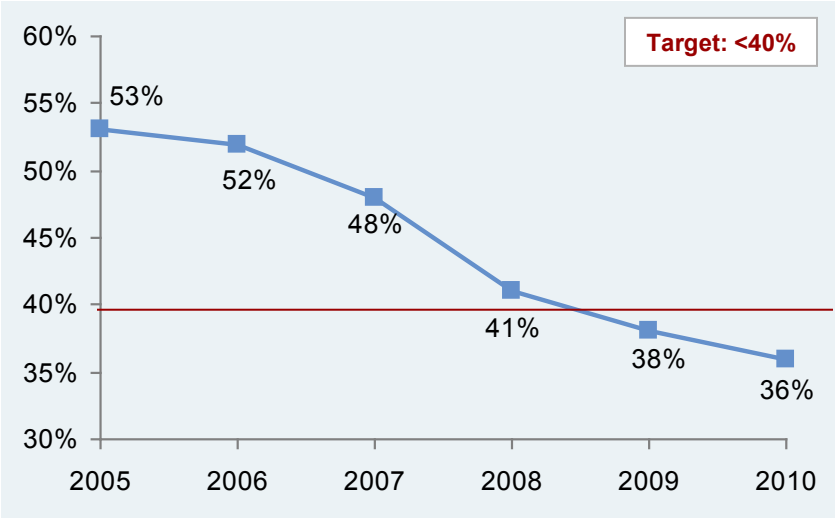


Return on equity



Note: 2005 ROE of 19% based on $5.1 billion of equity to be consistent with Basel I methodology applicable beginning in 2006

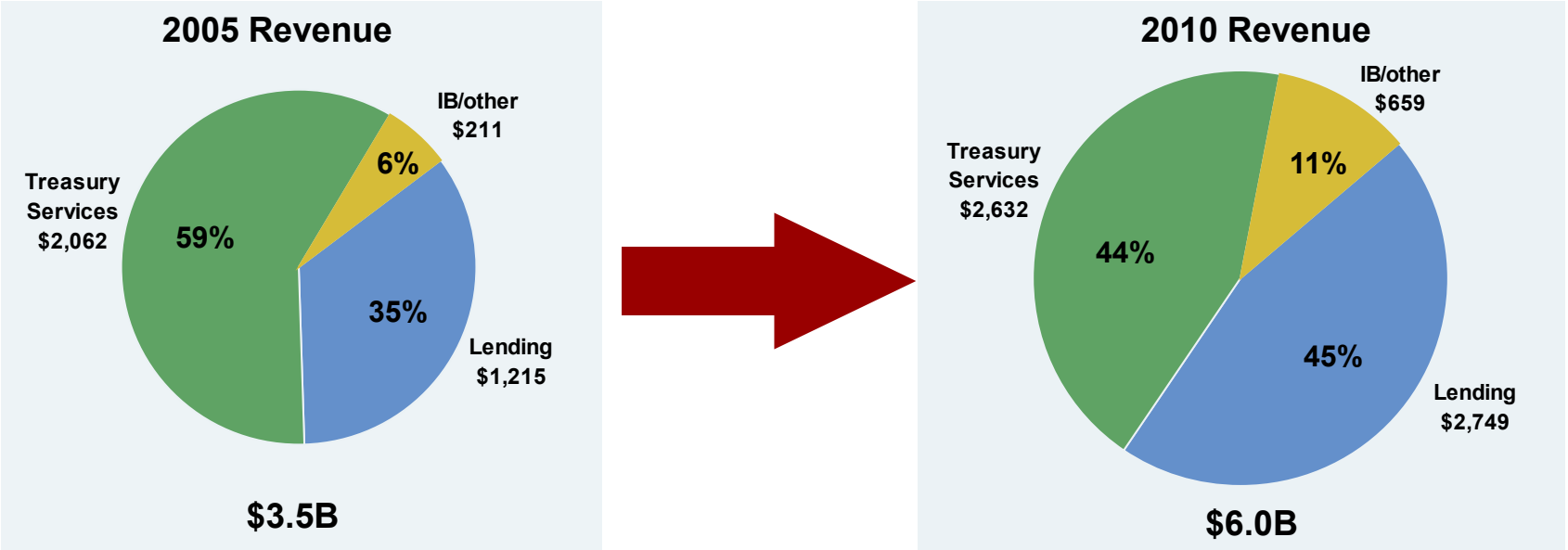
Overhead ratio



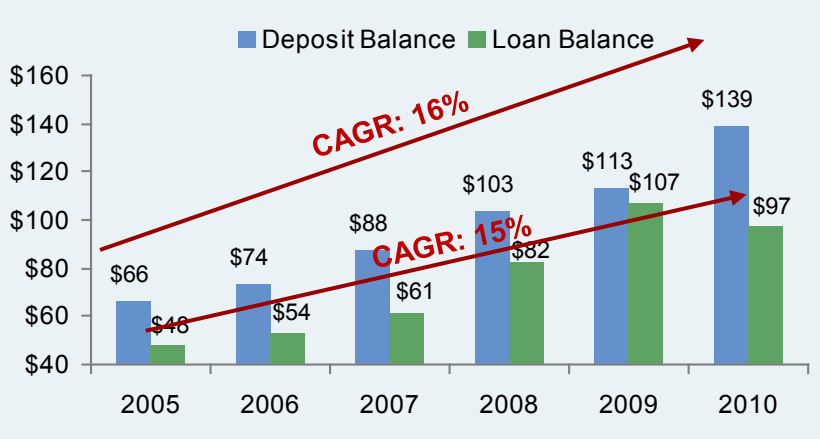
BUSINESS PERFORMANCE

Strong revenue growth despite low rate environment

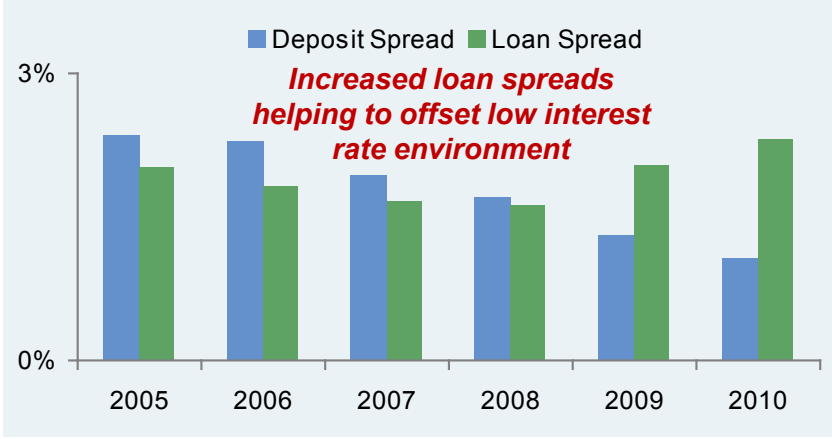
CB product revenue



Loan and deposit growth (Average, $ in billions)

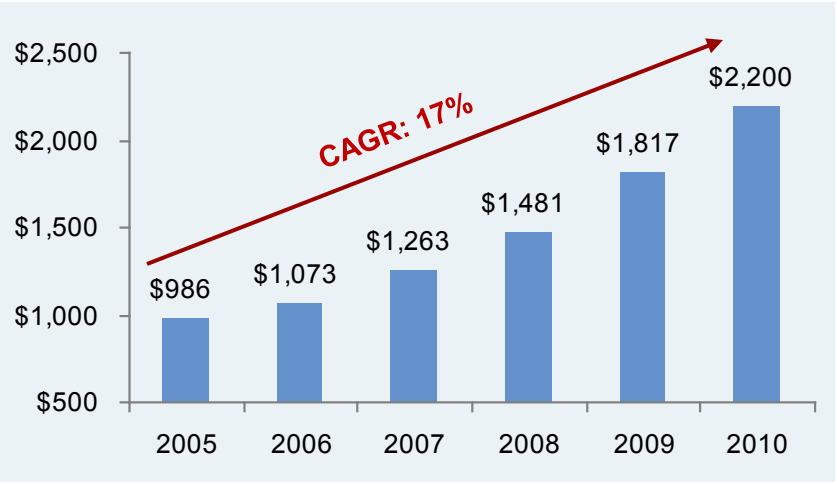


Loan and deposit spreads

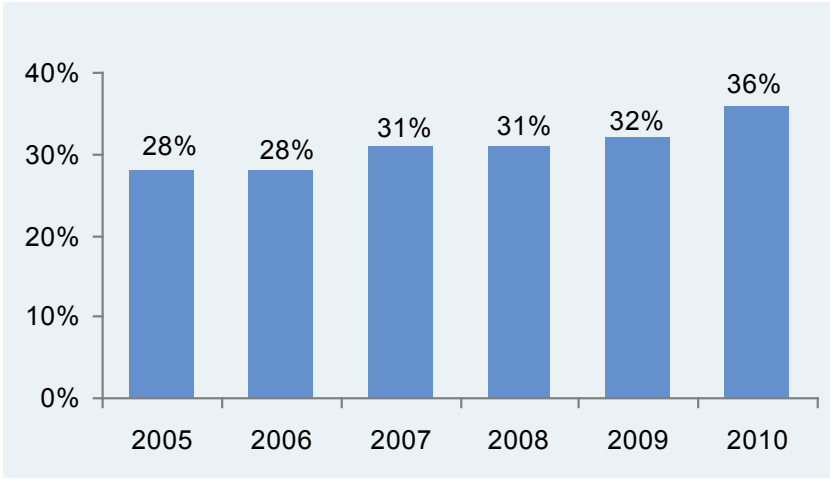


Strong cross-sell has significantly increased fee revenue

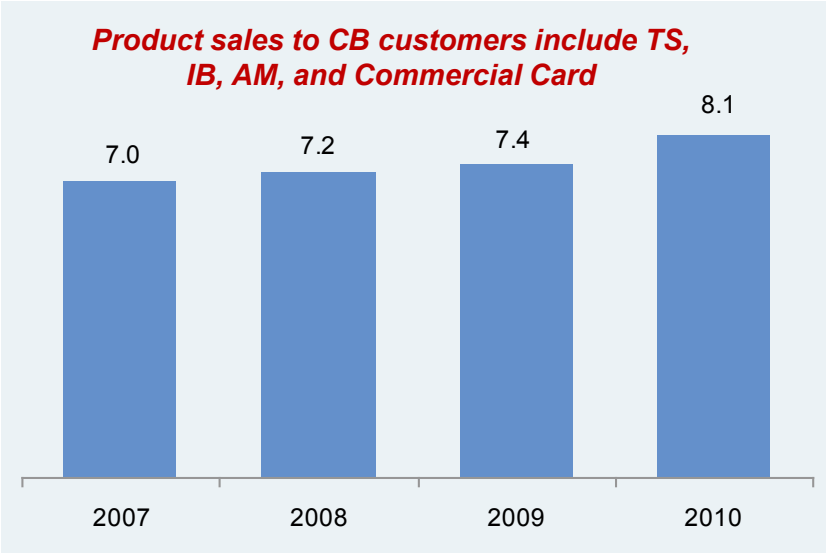
Non-interest revenue – CB reported ($ in millions)



Non-interest revenue / Total revenue trend

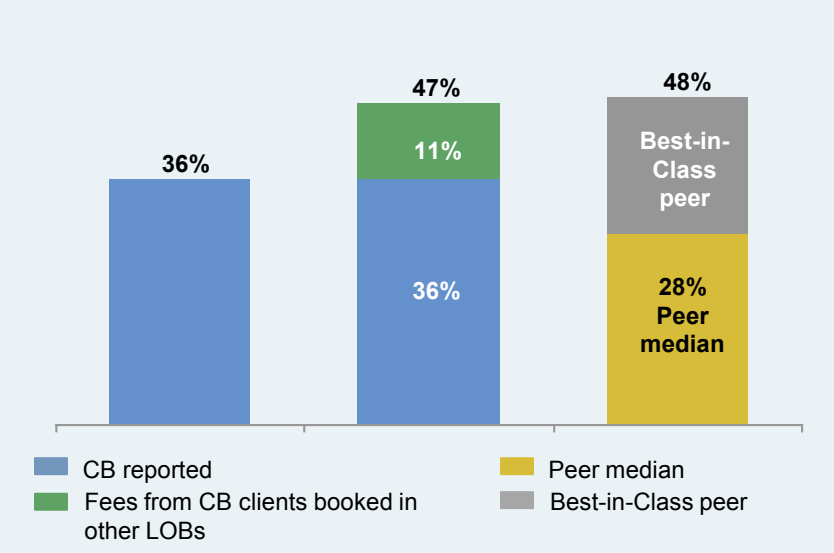


Average products per relationship



Note: Average product per relationship excludes CTL

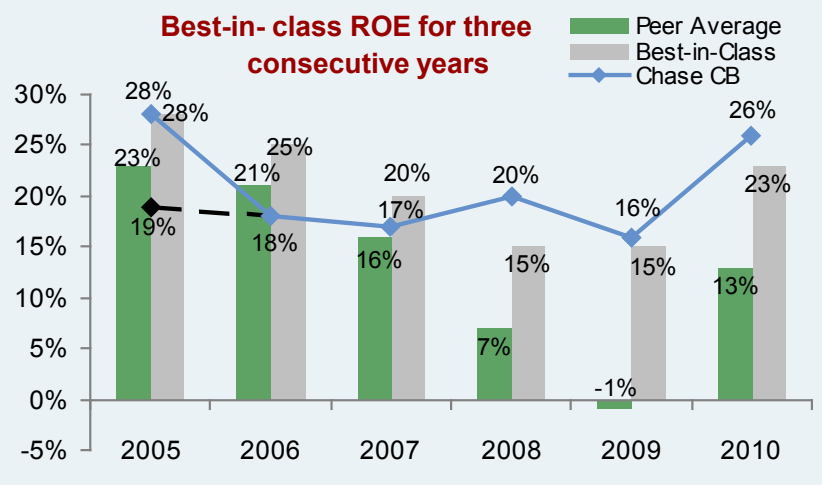
Total CB NIR / Revenue vs. peers



Note: Peer group comparison includes CB-equivalent segments at BAC, COF, CMA, FITB, PNC, STI, USB, WFC

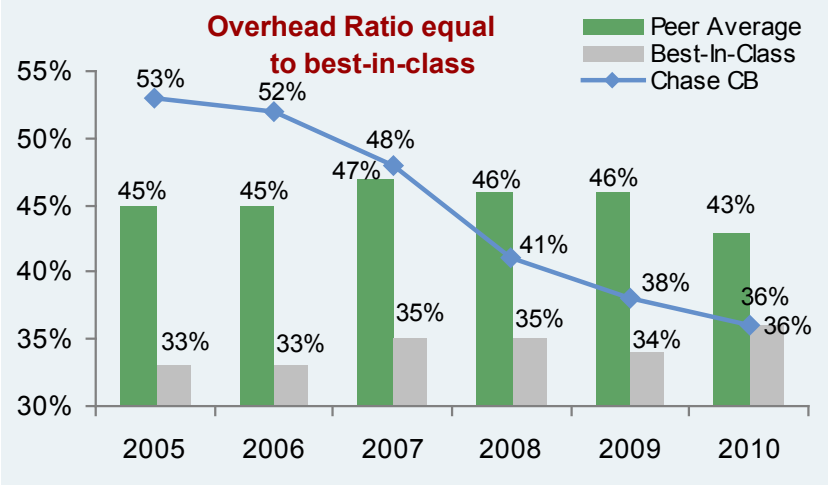
Best-in-class performance among peer group

Return on equity: Chase CB vs. peers



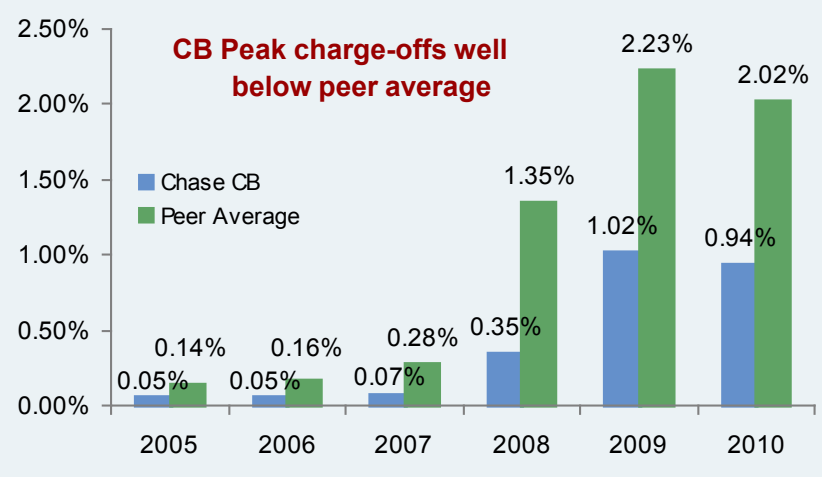
Note: ROE peer average reflects CB equivalent segments at BAC, CMA, KEY, PNC, USB
Best-in-class peer reflects peer bank with top metric for given year
2005 ROE of 19% based on $5.1 billion of equity to be consistent with Basel I methodology applicable beginning in 2006

Overhead ratio: Chase CB vs. peers



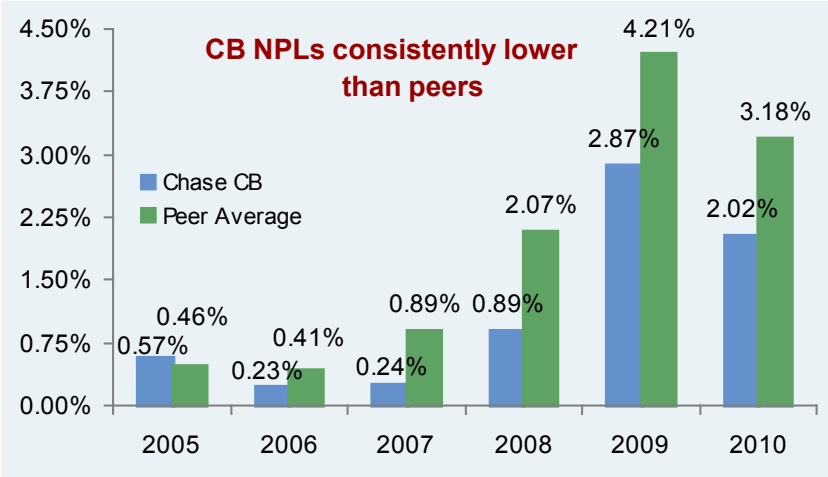
Note: Peer averages for overhead ratio include CB-equivalent segments at BAC, CMA, FITB, KEY, PNC, USB, WFC
Best-in-class peer reflects peer bank with top metric for given year

Net charge-off ratio: Chase CB vs. peers



Note: Peer averages NCO ratio includes CB-equivalent segment or wholesale portfolio at BAC, CMA, FITB, KEY, PNC, USB, WFC

Nonperforming loans ratio: Chase CB vs. peers



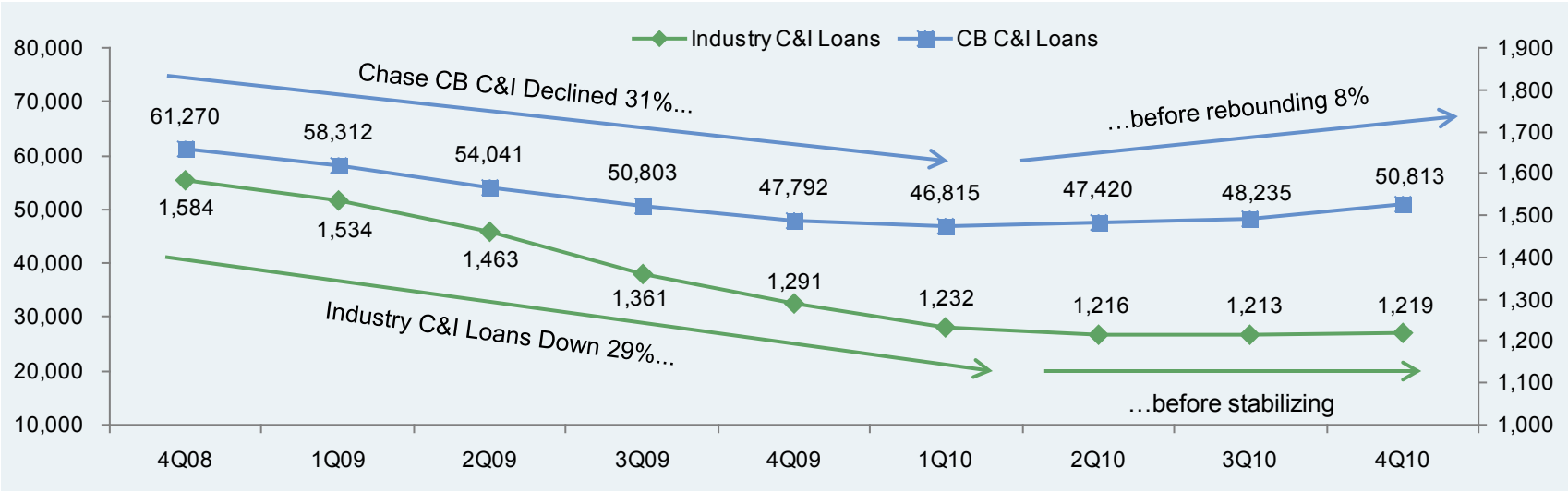
Note: Peer averages NPL ratio includes CB-equivalent segment or wholesale portfolio at BAC, CMA, FITB, KEY, PNC, USB, WFC
2005, 2006, & 2007 Chase CB NPL ratio based on average loans, all other periods based on ending loans

Agenda

Business performance	1
Current environment	**8**
Growth opportunities	12
2011 and 2012 outlook	18

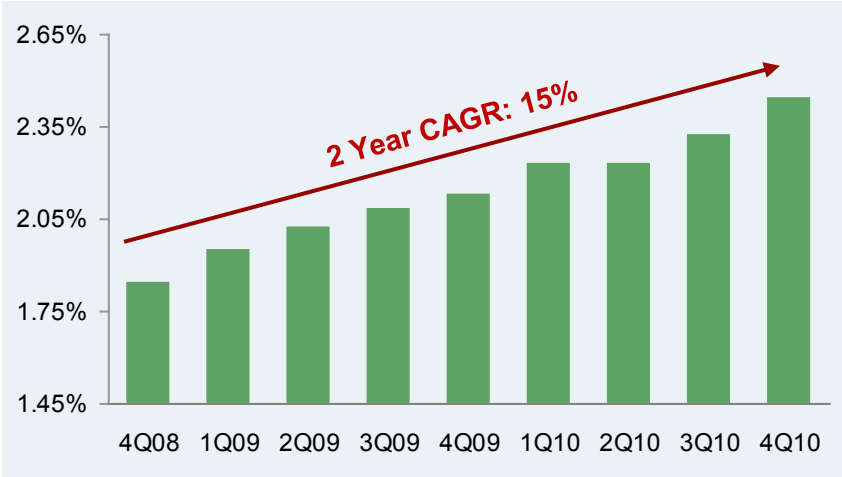
Market share appears to be driving our growth

Loan volume (Chase CB $ in millions, Industry C&I $ in billions)

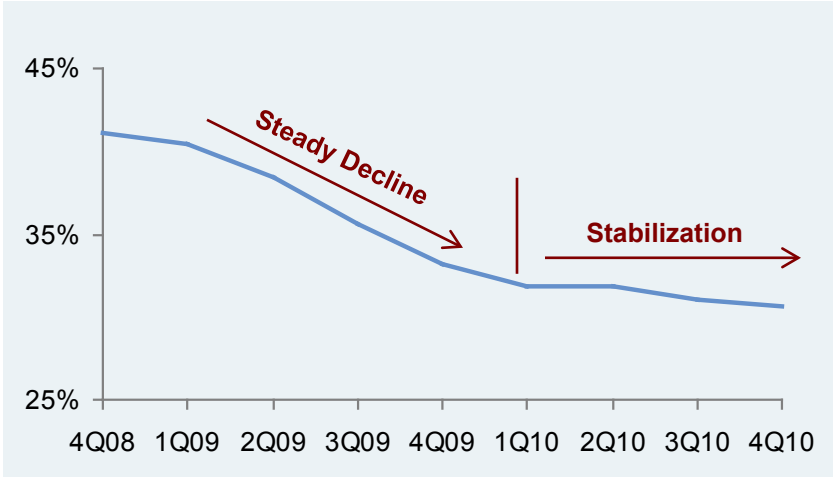


Source: C&I loans from the Federal Reserve; data released on a one week lag

Loan spread trend

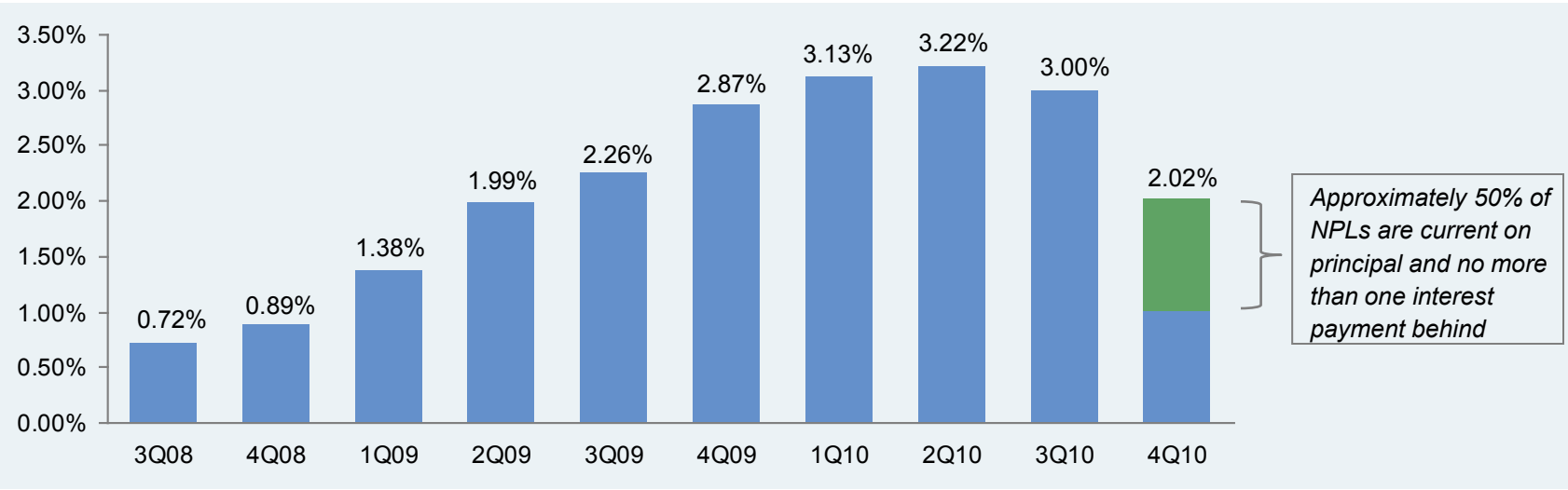


Utilization rates

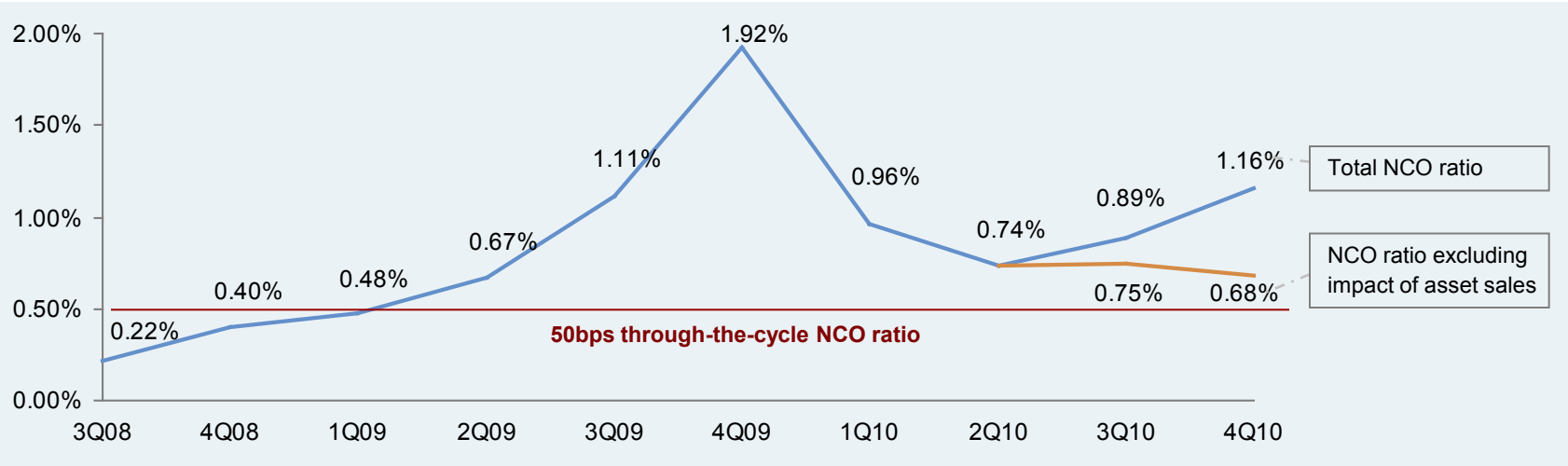


Credit performance continues to improve

Non-performing loan ratio by quarter

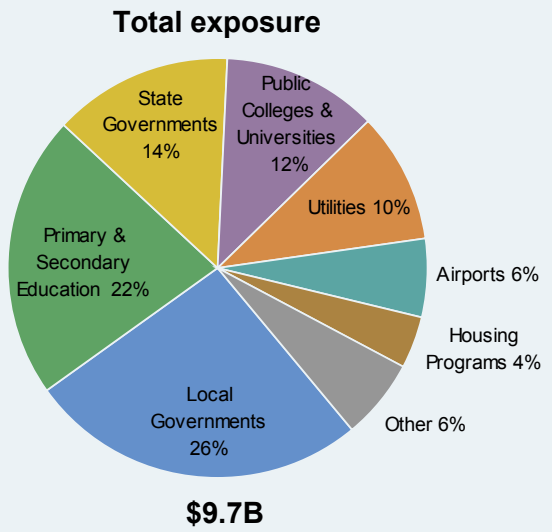


Net charge-off ratio by quarter

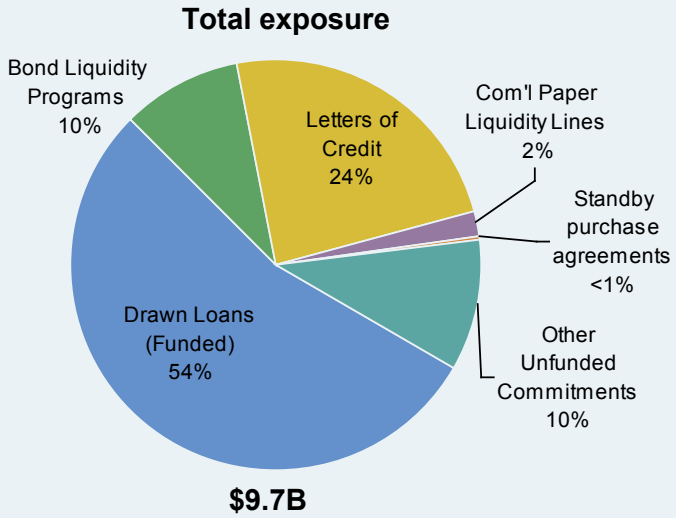


Monitoring exposure to States and Municipalities

Credit exposure by industry subsector[1]



Credit exposure by product[1]



[1] Exposure as of December 2010

Portfolio and risk profile

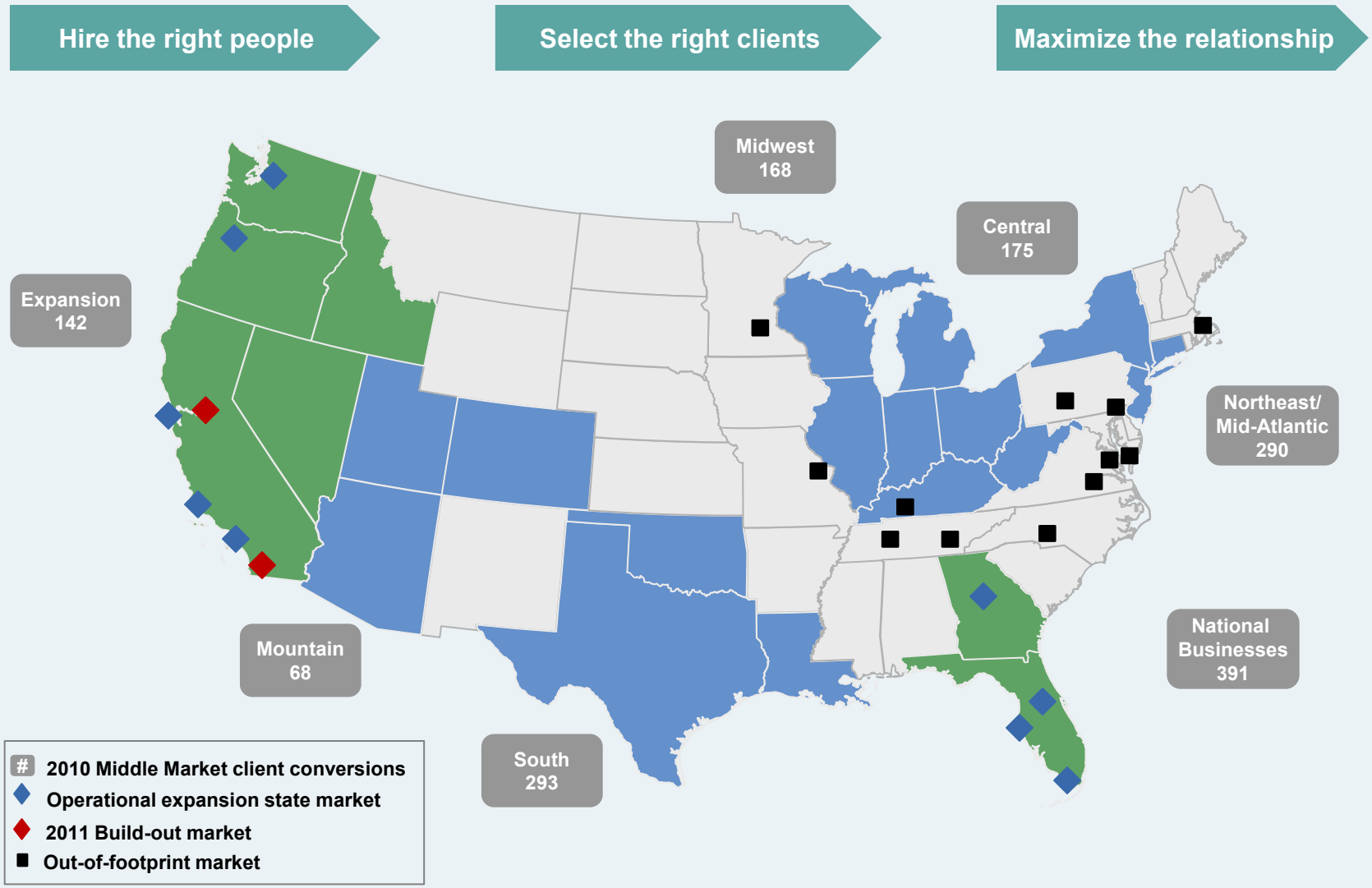
- Municipal portfolio overview
  - $9.7B represents 5% of total $187B CB exposure
  - Granular portfolio – ~2,000 clients
  - Primarily shorter-term debt allows for frequent re-evaluation
    - 74% under 5 year maturity
- Attractive risk characteristics
  - Typically state constitutions prioritize debt service coverage as the 1st or 2nd budget item
  - Portfolio primarily supports essential services with stable funding
    - Public Education
    - Municipal Utilities
    - Public Transportation
  - Legal balanced budget requirement in all states but one (Vermont)
  - General obligation debt to local governments viewed as secured given the municipality's ability to levy and collect taxes

Agenda

Business performance	1
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Expansion and out-of-footprint markets create a huge opportunity

Expansion and out-of-footprint presence

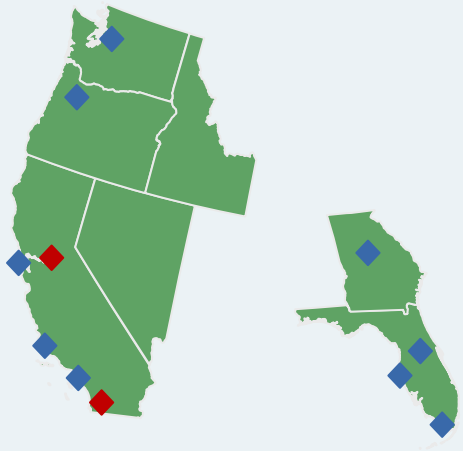


Only starting to tap market potential

Expansion markets[1]

Opportunity[1]

- Long-term CB pretax income opportunity of $650-800mm
- New markets roughly equivalent to adding[2]:
  - 1 Chicago
  - 3 Dallas
  - 3 Denver
  - 3 Salt Lake City
  - 1 Houston
  - 1 Columbus
- Over 4,700 prospects; finding new ones daily



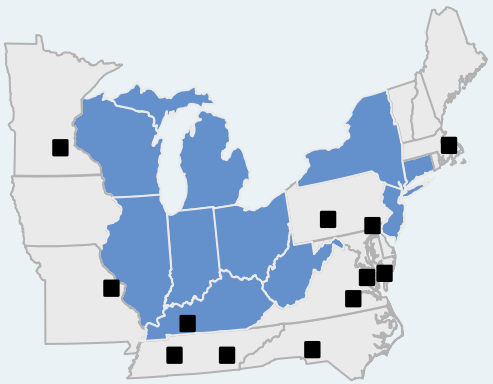
Progress[1]

- More than 200 fully dedicated CB resources
- Over $1B in loans; expect to double in 2011
- Over $1B in liabilities; expect to double in 2011
- Expected to be fully self-funded in 2011 (third year into effort)

Out-of-footprint markets

Opportunity

- Out-of-footprint markets roughly equivalent to covering:
  - 3 Houston
  - 3 Columbus
  - 1 Dallas
  - 1 Fort Worth
  - 1 New Orleans
  - 1 San Antonio
- Over 2,200 prospects



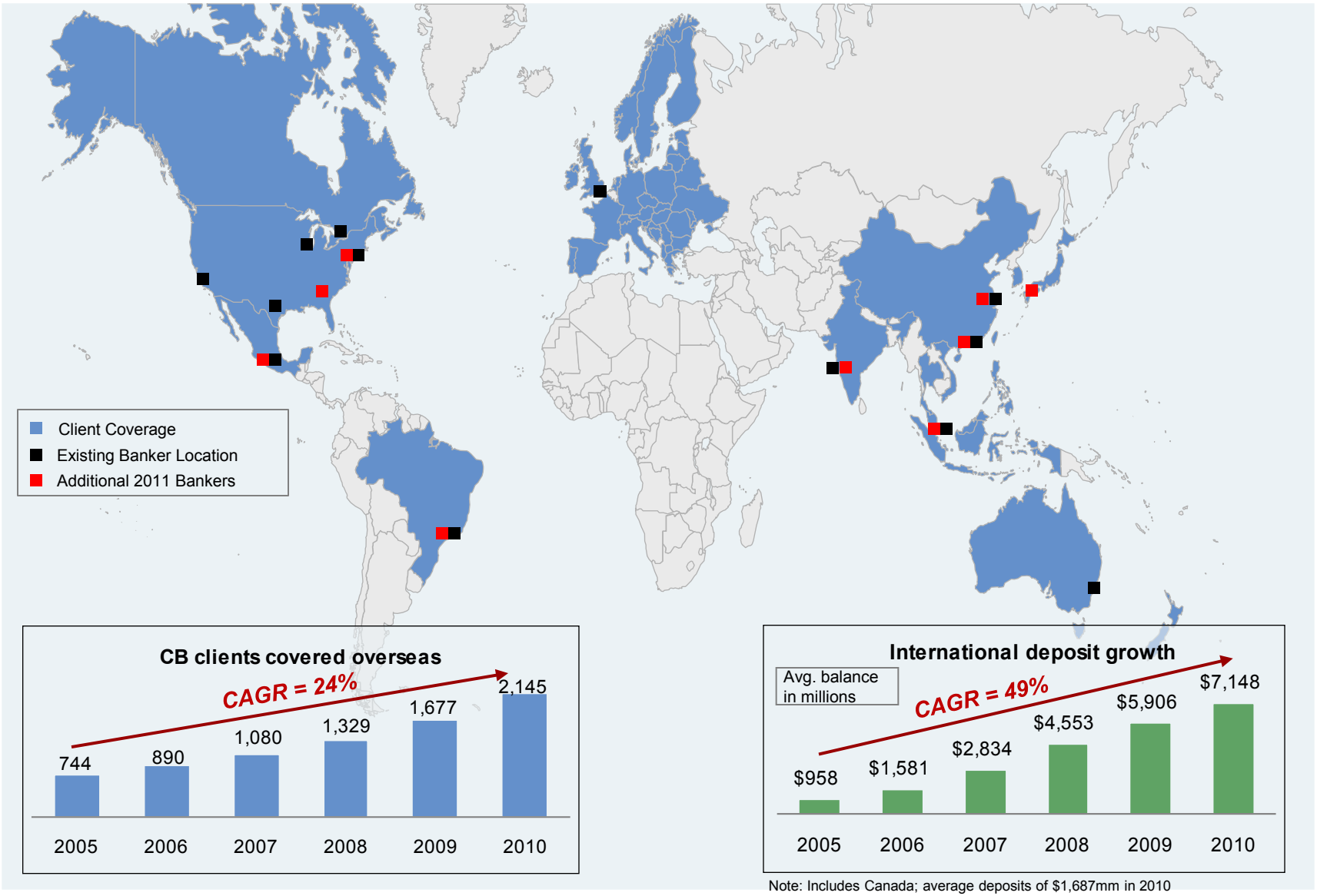
Progress

- Over 40 Commercial Bankers covering these markets
- Nearly 1,000 relationships across these markets

[1] Middle Market prospects only, does not include other CB LOB efforts in expansion states
[2] Market equivalents based on target companies with $10mm - $1B in revenue. Source: D&B as of 3Q10

International provides growth and differentiates from the competition

International client coverage

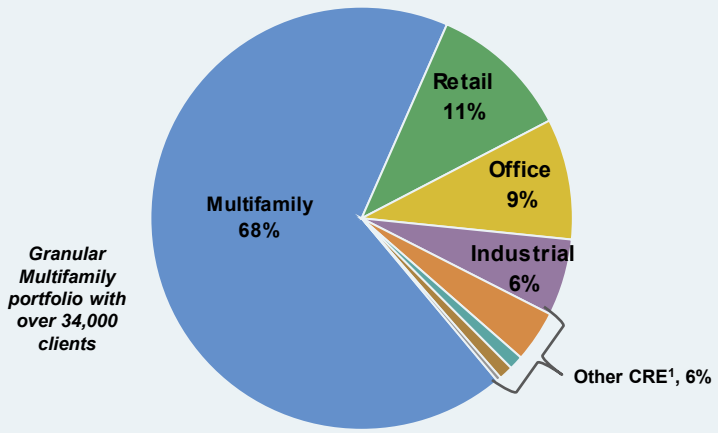


Note: Includes Canada; average deposits of $1,687mm in 2010

Well positioned to take advantage of the improving Commercial Real Estate cycle

CB CRE exposure - $52B

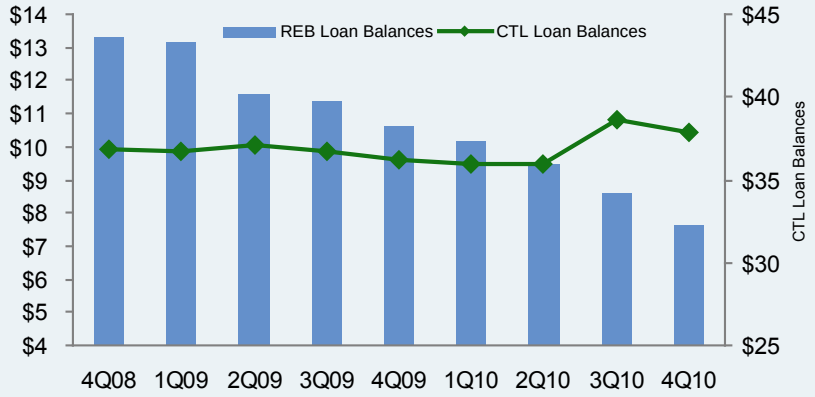
Majority of CRE exposure is multifamily



[1] Other CRE includes Hospitality, Subscription IP, Commercial Land, and misc. other

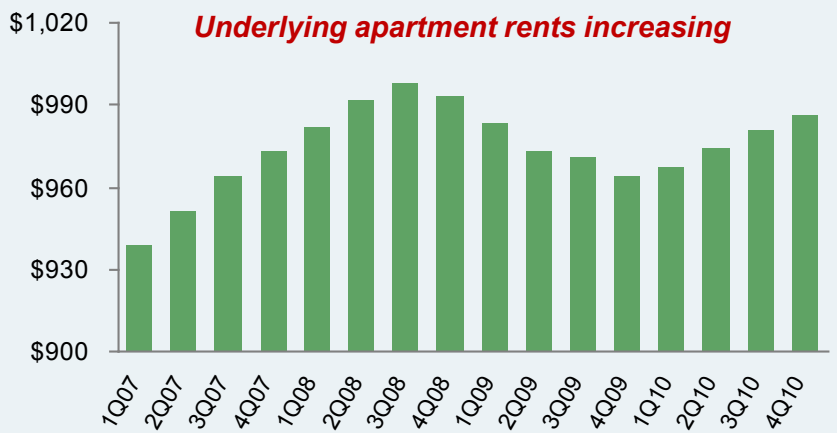
Real Estate Banking loan balances (EOP - $ in billions)

Commercial Term Lending balances flat while reduction in Real Estate Banking balances leaves capacity for opportunistic growth



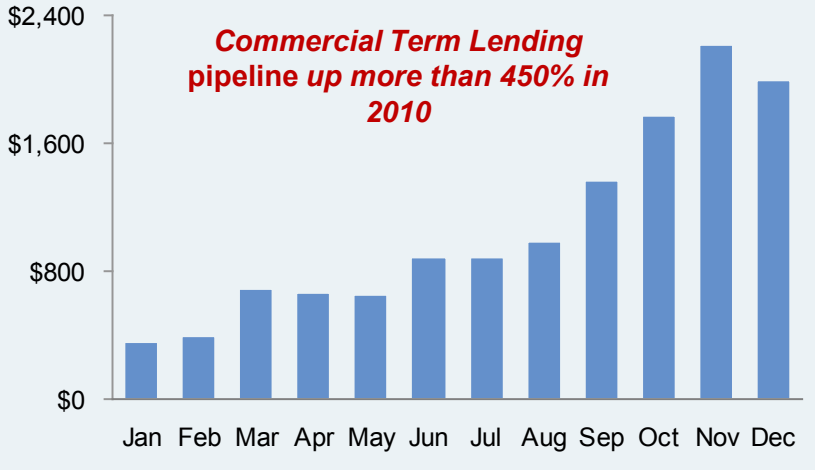
Industry-wide apartment rent rates[2]

Underlying apartment rents increasing



Commercial Term Lending loan pipeline ($ in millions)

Commercial Term Lending pipeline up more than 450% in 2010

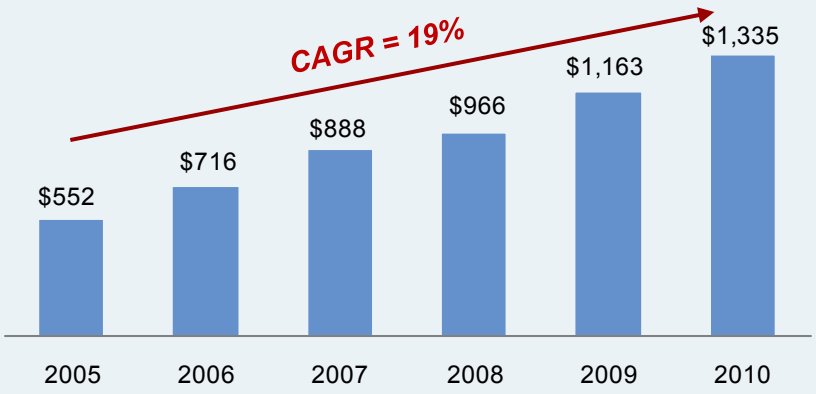


[1] Exposure as of December 2010
[2] National Effective Rent Rate, Source REIS

Investment Bank revenue remains a key cross-sell opportunity for Commercial Banking

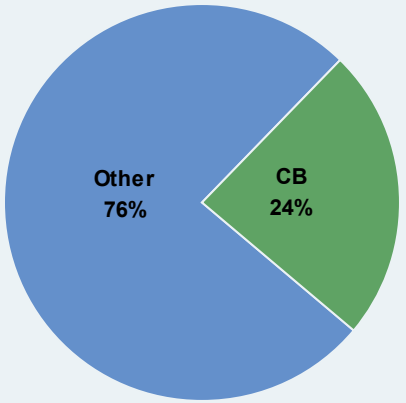
Gross IB revenue from CB clients ($ in millions)

IB revenue generated from CB clients has grown steadily…



Gross domestic Investment Bank fees – Total JPM

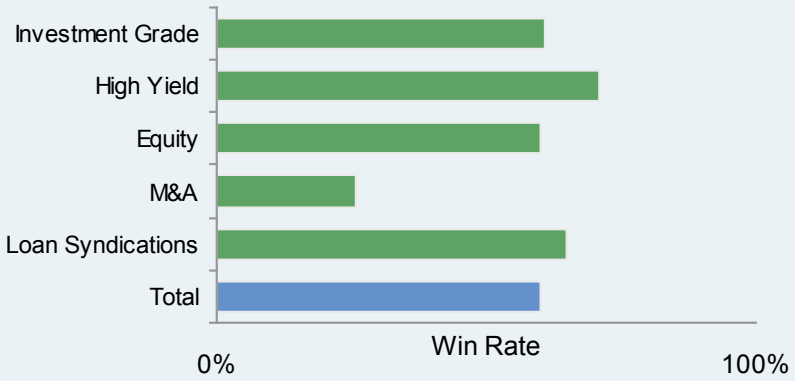
…and accounted for almost a quarter of the firm's gross domestic IB fees in 2010[1]



[1] 24% calculated based on Gross IB revenue for SLF, M&A, Equity Underwriting, and Bond Underwriting, which make up $904MM of the total $1,335MM Gross IB revenue

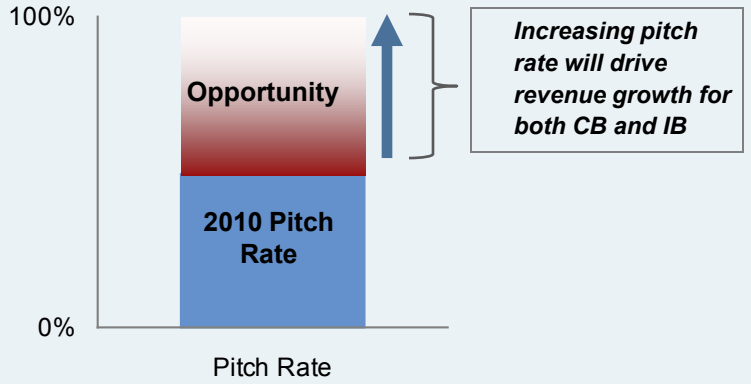
Win percent for IB deals pitched to CB clients

Historically high win rate when pitching deals to CB clients



Gross domestic Investment Bank fees – Total JPM

Efforts underway to increase pitch rate for further IB revenue growth



Agenda

Business performance	1
Current environment	8
Growth opportunities	12
2011 and 2012 outlook	**18**

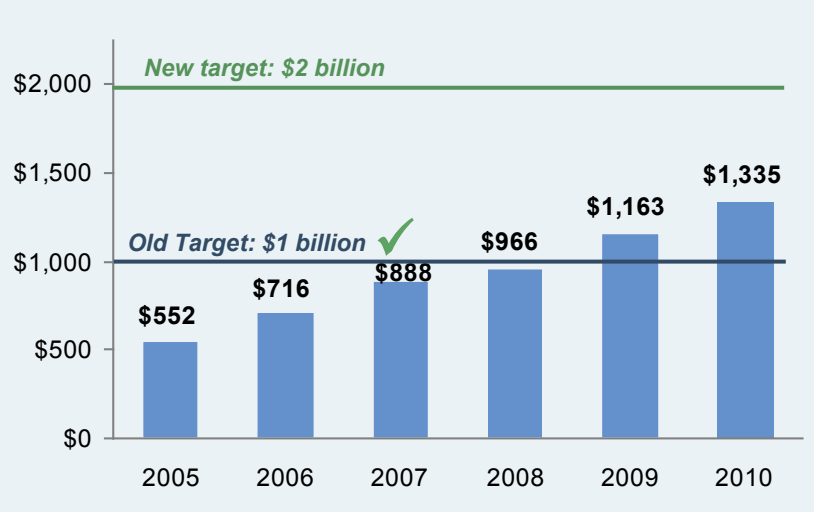
2011 and 2012 outlook

2011 and 2012 outlook

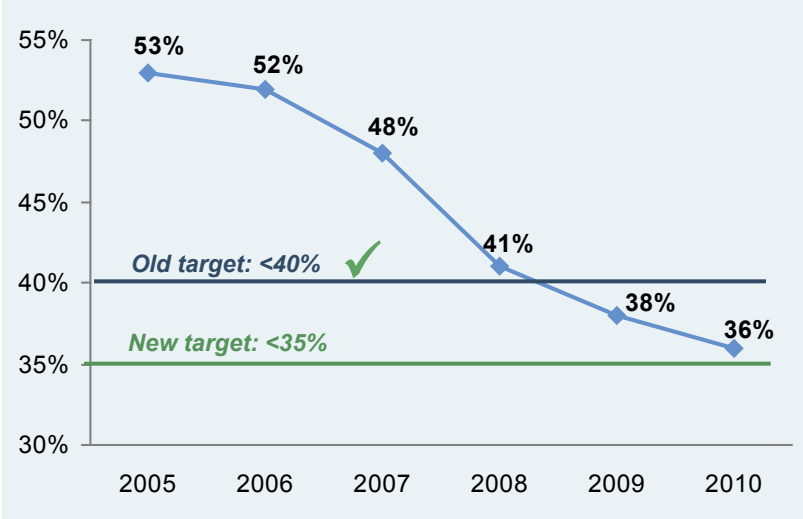
- Continued growth
  - Market expansion
  - New client conversion
  - International
  - Investment Bank cross-sell
  - Commercial real estate
  - More normalized environment = more normal spread earned on deposits
- Continued credit improvement
  - Net charge-offs leveling off; moving toward 50bps through the cycle
  - Current reserve levels adequate
- Improve efficiency
  - Growth in front line staff to drive revenue
  - Investing in technology and operations to improve efficiency and client experience

Commercial Banking performance targets

Gross IB revenue of $2B



Overhead ratio below 35%



Return on equity of 20%+



Note: 2005 ROE of 19% based on $5.1 billion of equity calculated using Basel I methodology applicable to 2006 equity

ASSET MANAGEMENT

Mary Erdoes, Asset Management Chief Executive Officer

February 15, 2011

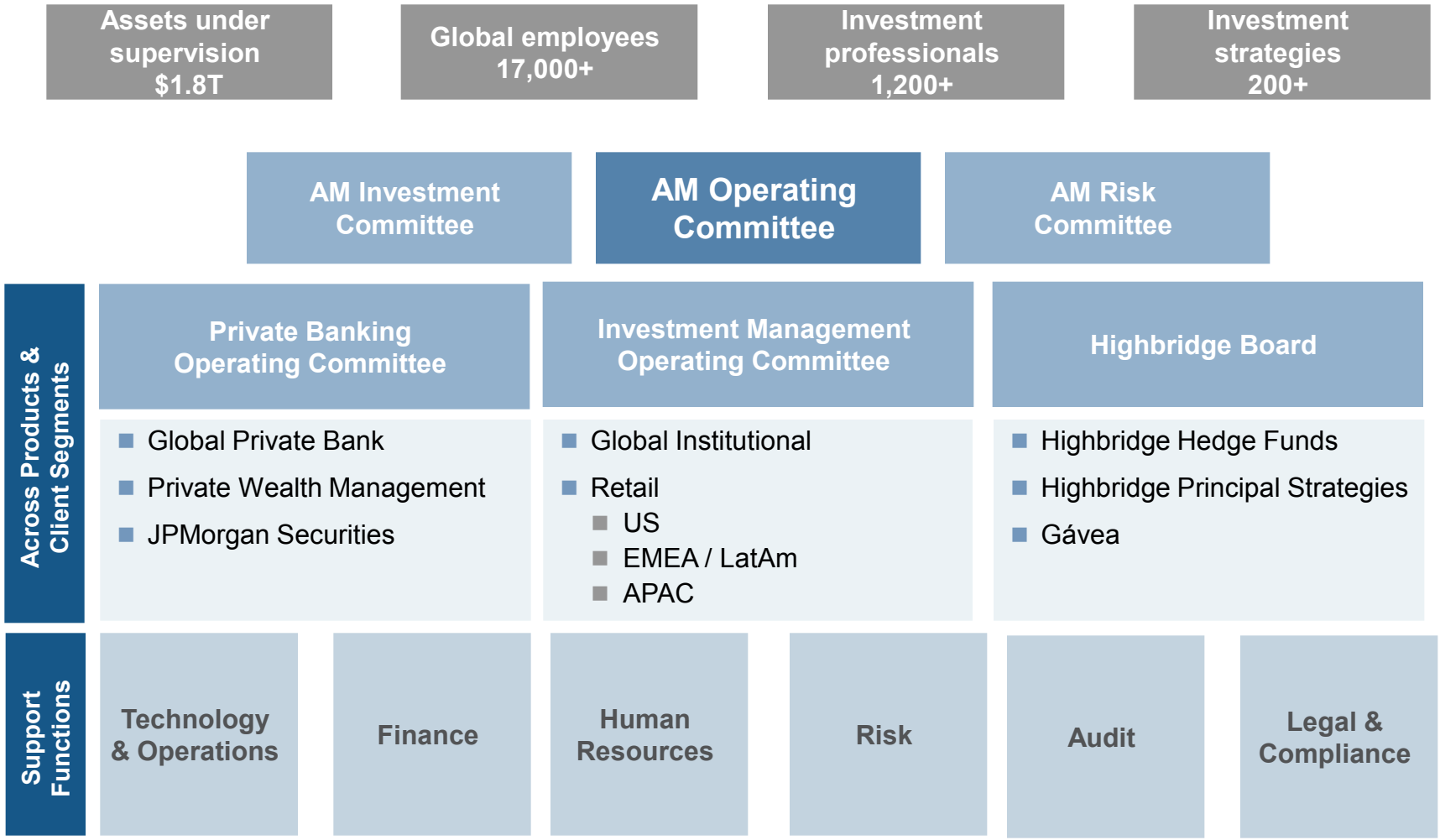
JPMorgan Chase & Co.

Agenda

	Page
Business Performance	**1**

ASSET MANAGEMENT

Asset Management framework designed for disciplined governance, risk management, and client focus in a complex and changing environment



"To be the most respected asset management firm by delivering exceptional risk adjusted investment performance, by offering a broad and innovative range of trust and investment products, and by providing the highest quality service through local management of client relationships."

In 2010, Asset Management showed strong growth, across all client segments

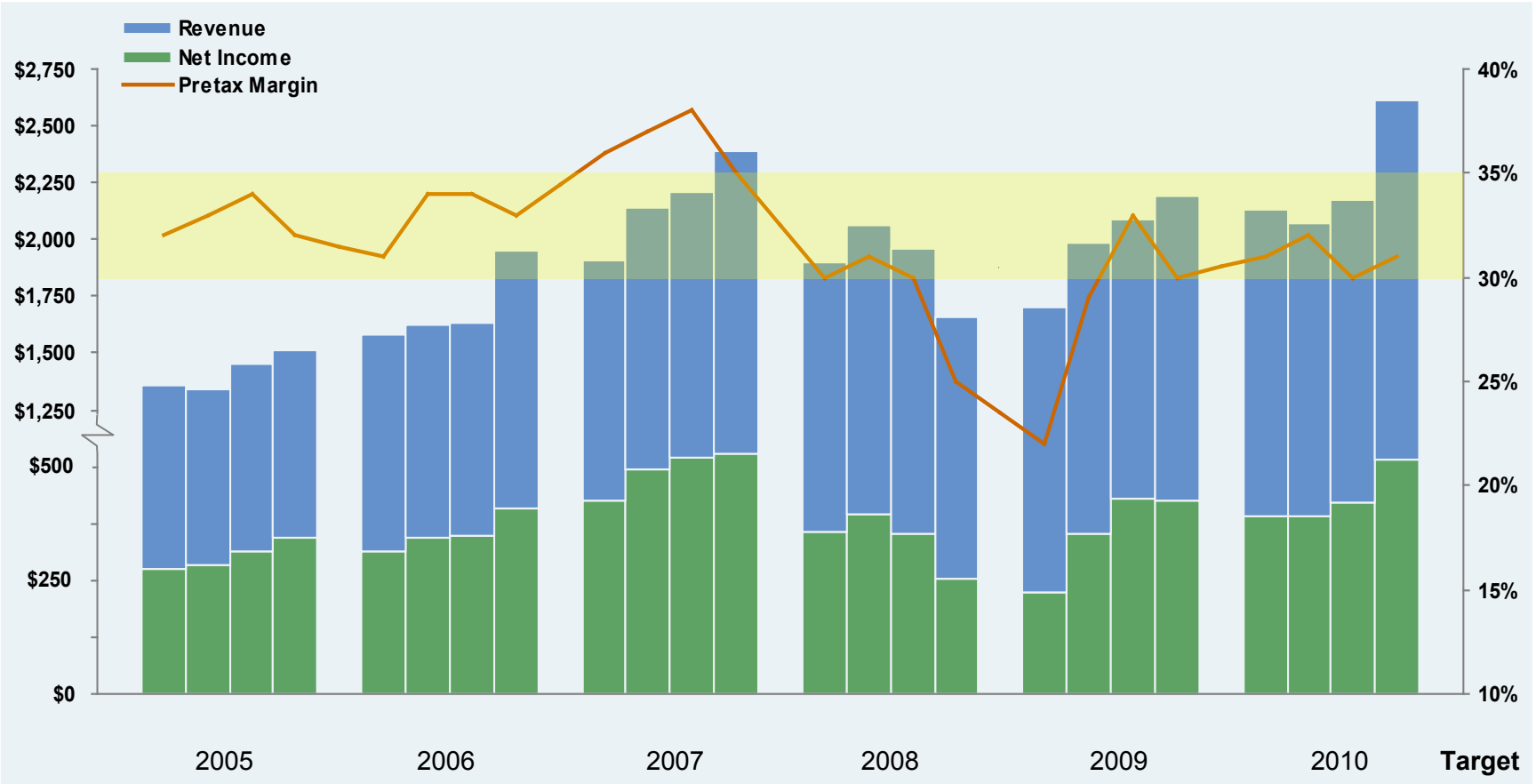
2010 results ($ in millions)	2010	% change vs. 2009	
Revenue:	$8,984	*13%*	Record
Private Banking	4,860	*13%*	Record
Institutional	2,180	*6%*	
Retail	1,944	*23%*	
Credit Costs	86	*(54%)*	
Expense	6,112	*12%*	
Pretax Margin	31%	*2%*[1]	
Net Income	$1,710	*20%*	

Key Statistics ($ in billions)	2010	% change vs. 2009	
Assets Under Management	$1,298	*4%*	Record
Assets Under Supervision	1,840	*8%*	Record
Loans	44	*17%*	Record
Deposits	89	*15%*	Record
Long-term flows	69	*35%*	Record
Sales hires	453	*15%*	Record
ROE	26%	*6%*[2]	
Equity	$6.5	*(7%)*	

[1] The “percentage” change in pretax margin is the actual difference between 2010 and 2009
[2] The “percentage” change in ROE is the actual difference between 2010 and 2009

Asset Management has shown consistent profitability during the financial crisis

Quarterly results – 2005 to 2010 ($ in millions)



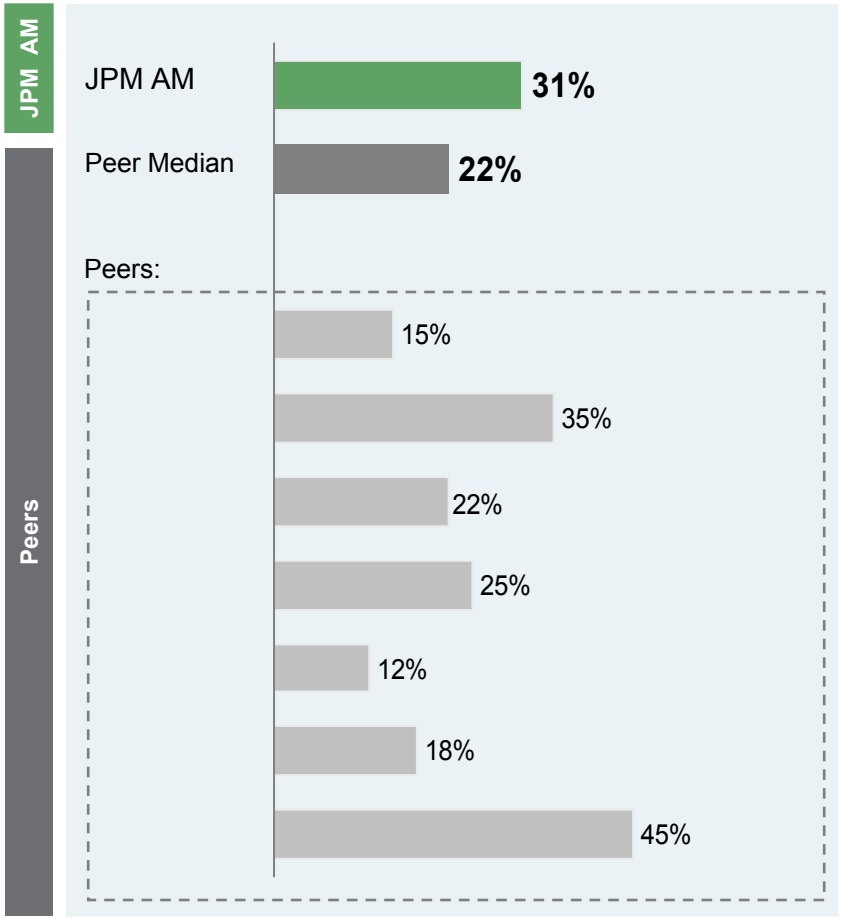
	2005	2006	2007	2008	2009	2010	Target
PT Margin:	33%	33%	36%	29%	29%	31%	**35%+/-**
ROE:	51%	40%	51%	24%	20%	26%	**35%+/-**
Avg Equity:	$2.4B	$3.5B	$3.9B	$5.6B	$7.0B	$6.5B	

Increased allocated capital

BUSINESS PERFORMANCE

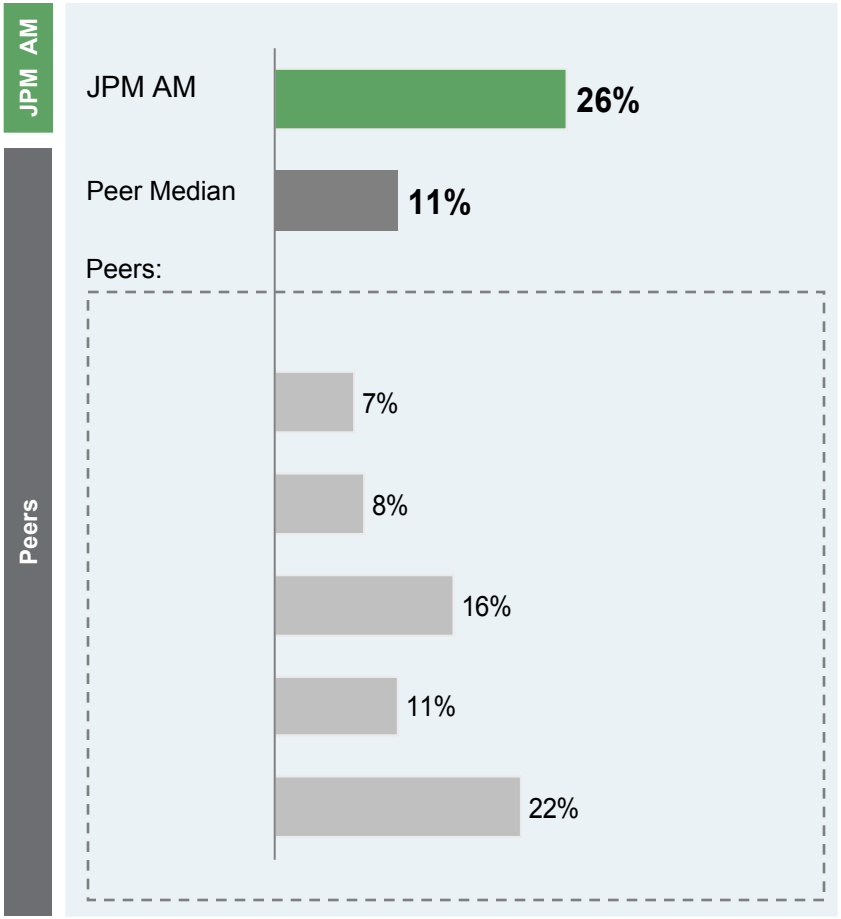
Pretax margin and ROE consistently remain above peer average

Pretax margin – 2010 (%)



Peers include: BAC, BLK, BNY, CS, MS, UBS, and TROW
Note: GAAP pretax margins presented

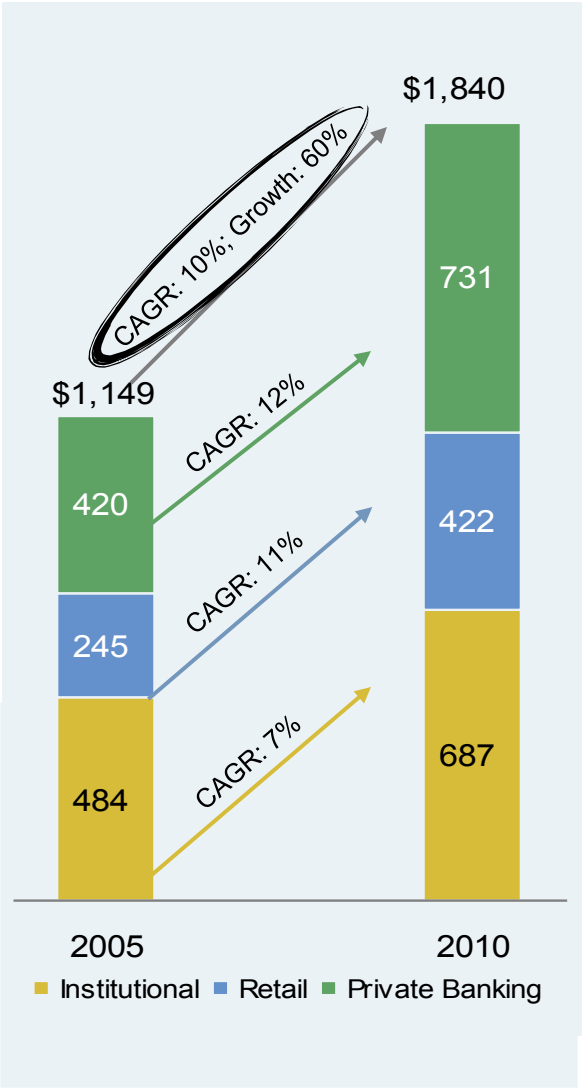
ROE – 2010 (%)



Peers include: BAC, BLK, MS, UBS, and TROW
Note: GAAP ROE presented

Asset Management has grown assets in each client segment over the last five years

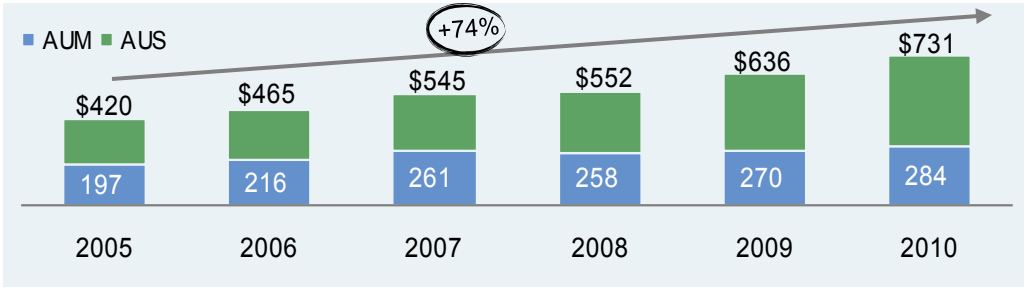
AUS – 2005 to 2010 ($ in billions)



Client segments ($ in billions)

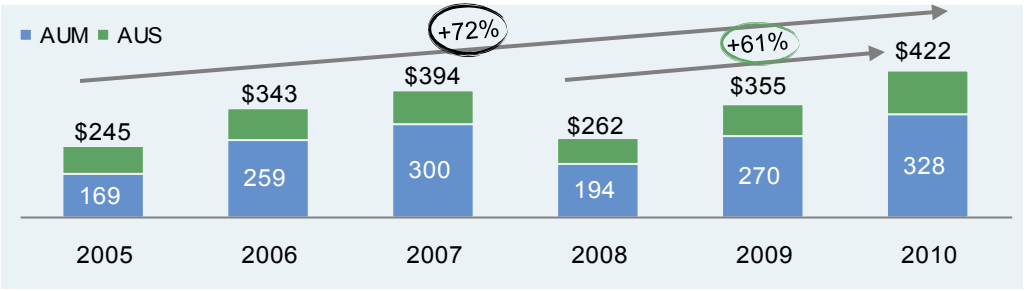
Private Banking

AUM and AUS



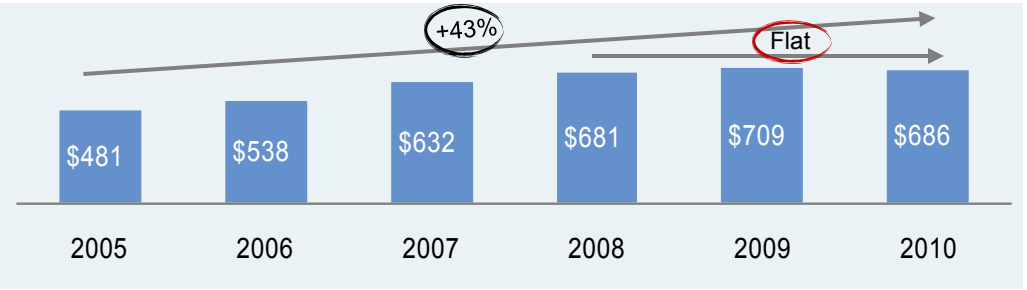
Retail

AUM and AUS

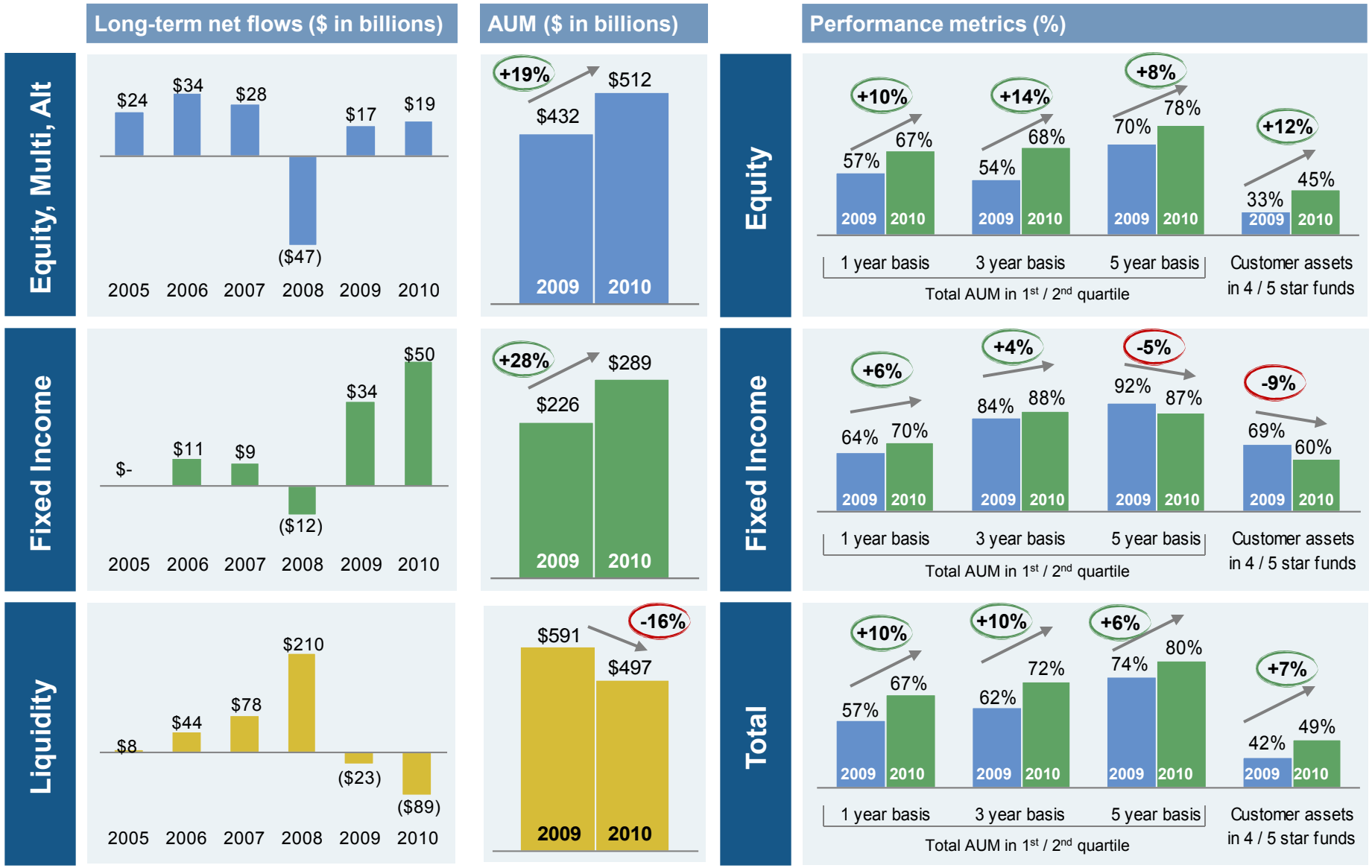


Institutional

AUM

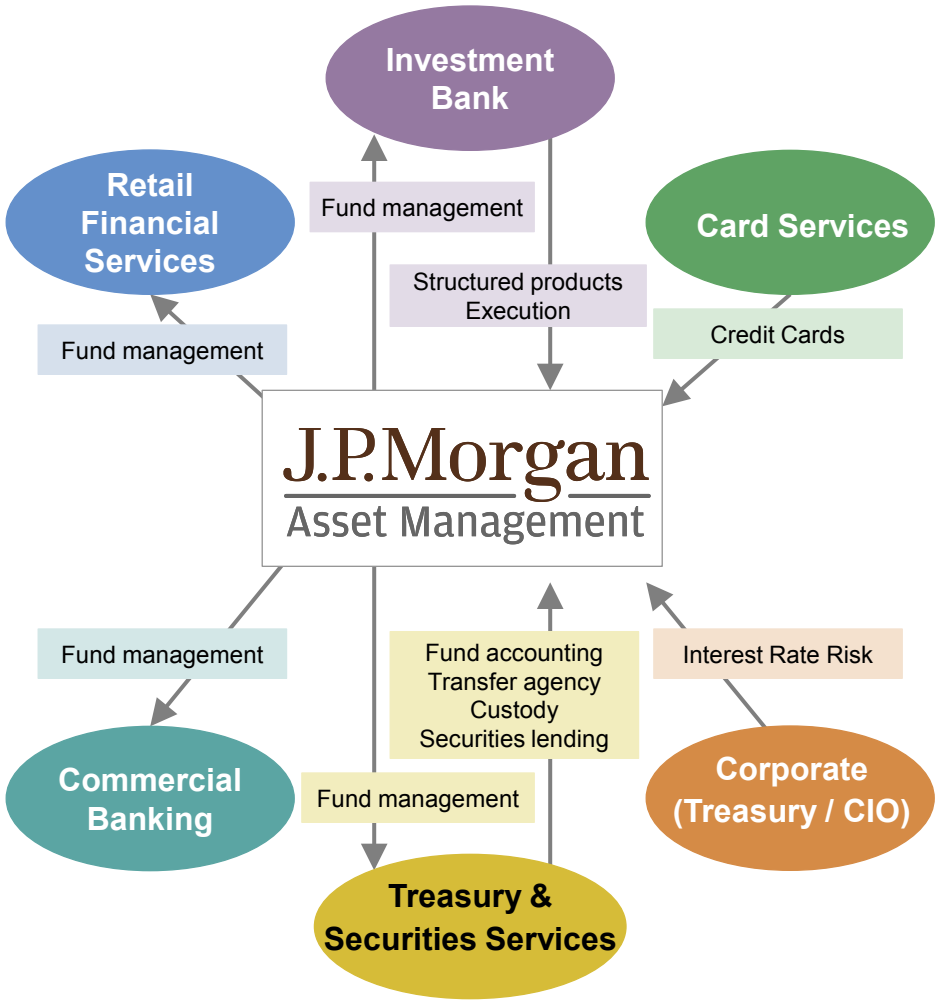


Fixed Income and equities recorded strong flows along with performance improvement



Asset Management greatly benefits from the power of the JPM network

Synergies of over $1B across LOBs



Highlights

- Synergies account for over 10% of JPM AM revenues
- **Investment Bank**
  - Securities offerings, structured products and trade execution offered to Private Banking clients
  - Referrals in both directions
- **Retail Financial Services**
  - Investment Management products offered to RFS clients through Chase branches
  - US branches available to Private Banking clients
- **Card Services** issued to Private Banking clients
- **Commercial Banking**
  - Investment Management products offered to Commercial Banking clients
  - Referrals in both directions
- **Treasury & Securities Services**
  - Liquidity products offered to TSS clients
  - Referrals in both directions
- **Corporate (Treasury/CIO)**
  - Manages Private Banking's mortgage interest rate risk

Business Performance 1

Growth Opportunities 9

1 International expansion

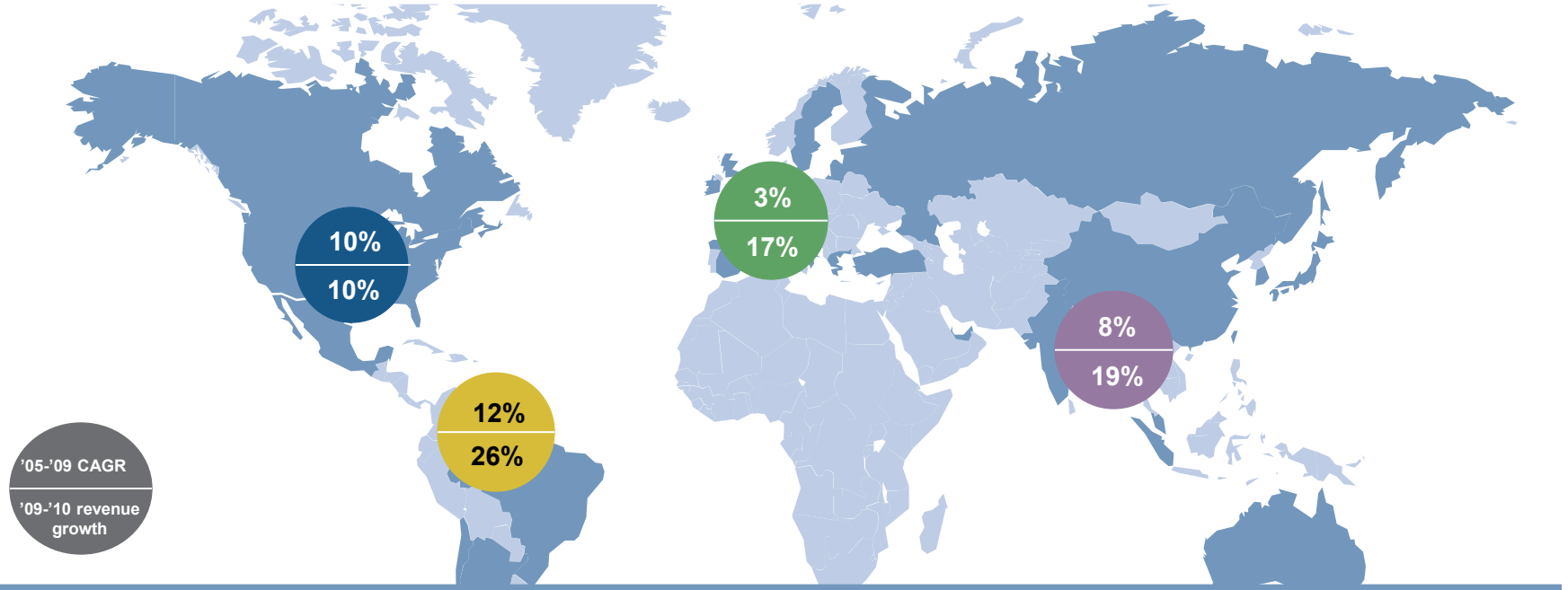
2 Front-facing client expansion

3 Market share gain: core products

4 Market share gain: innovative products and solutions

1 International expansion continues to be a priority

International growth



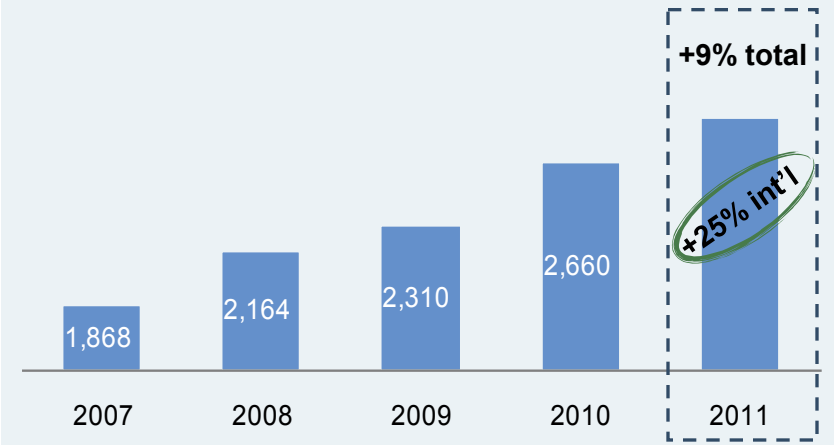
2011 priorities

	LatAm	EMEA	Asia Pacific
Private Banking	■ Ultra HNW continued growth ■ Brazil: local offices and talent	■ Ultra HNW continued growth ■ HNW development where scalable	■ Ultra HNW continued growth ■ HNW build out
Investment Management	■ Gávea ■ Brazil – local manufacturing	■ Sales force growth ■ Insurance, pensions	■ Sales force growth ■ Sovereigns, Central Banks

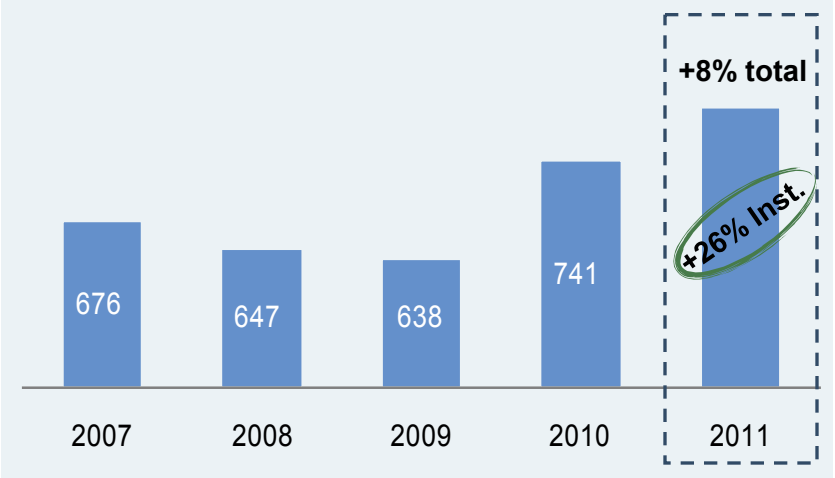
2 Front-facing client coverage

Talent

Private Banking – Client advisors (#)



Global Investment Management – Sales headcount (#)



2010 Highlights

- Private Banking:
  - Continued hiring throughout the crisis
  - 2010: 15% growth (32% internationally)
  - 2011: continue international expansion
  - Training is a critical part of hiring strategy
    - 13 training programs globally
    - Cultural integration is key
- Global Investment Management:
  - New senior sales leadership:
    - Global Institutional
    - Sovereigns
    - U.S. Retirement
    - Highbridge Institutional
- Metrics driven culture
- Cross-sell flows

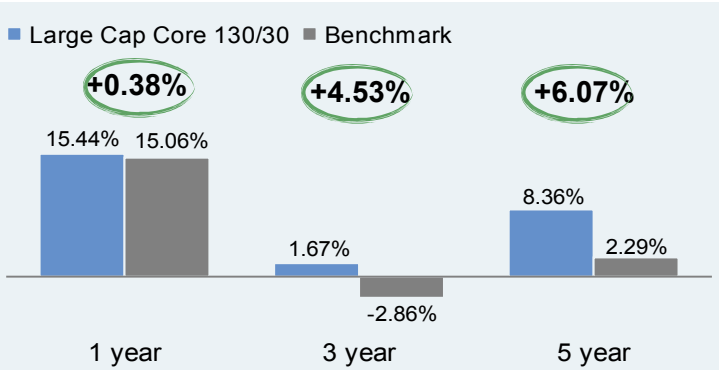
3 Market share gain: core "category killers"

Equities

130/30

- 130/30 started in 2004; utilizes research to invest long and short
- $130 million annual research budget; 200 career analysts
- 5% annualized excess returns since inception
- 50% market share

Performance vs. benchmark (S&P 500 Index)

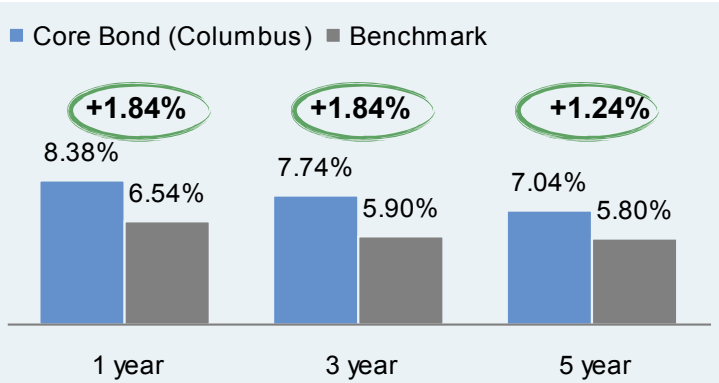


Fixed Income

Columbus Fixed Income

- Acquired through Bank One merger
- Long-term horizon based on analysis of individual securities, rather than macro themes
- Strongly rated by key consultants
- Strong flows across platform:
  - Core Bond
  - High Yield
  - Intermediate Tax Free

Performance vs. benchmark (Barclays Capital Agg.)



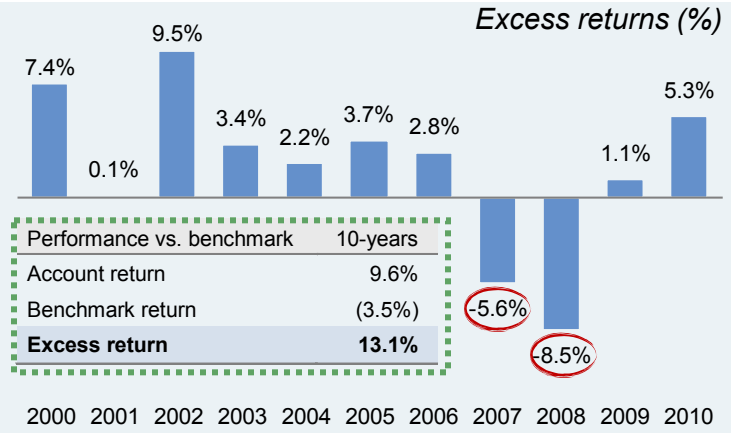
3 Market share gain: core "turnaround products"

Equities

Behavioral finance

- Viewed as a pioneer and a global leader in the field of behavioral based investing
- Stock ranking methodology based on anomalies to be exploited
- 60 investment professionals globally with local teams
- Current environment more stable for investment process

Europe Equity Fund vs. MSCI Europe Net Index

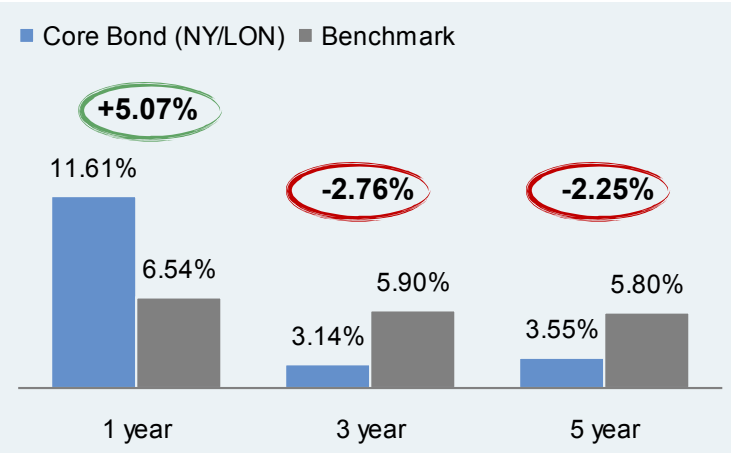


Fixed Income

New York / London Fixed Income

- Revamped entire team
- Integrates top-down macro themes with bottoms-up securities selection
- Target diversified sources of returns and minimize reliance on any single strategy
- Build-out complete after two years of investment
- Recently upgraded by a number of consultants

Performance vs. benchmark (Barclays Capital Agg.)



4 Market share gain: innovative products and solutions

Equity

- Global Merger Arbitrage Fund (2011)
- US Select Long Short Fund (2011)
- GEM Long Short Fund (2011)

Fixed Income

- Highbridge Credit Fund (2011)
- "Muni" Strategic Income Opportunity Fund (2011)
- Strategic Bond (2010)

Structures

- Gold / Oil Market Plus Note (2010)
- Copper Quarterly Review Note (2010)
- Emerging Markets FX Note (2010)
- S&P 500 Contingent Buffer Note (2010)

Multi-Asset

- Multi Asset Income Fund (2010)
- Thematic Advisory Program (TAP) (2010)
- Highbridge Dynamic Commodity (2010)
- Alternatives Portfolios Fund (2011)

Hedge Funds / Private Equity / Real Assets

- Gávea Macro Hedge Fund (2010)
- Global Maritime (2010)
- Distressed US Real Estate (2011)
- Brazil Private Equity, Gávea (2011)
- China Private Equity (2011)

Closing thoughts

J.P. Morgan Asset Management

- ✓ Consistent, strong financial performance
- ✓ Alpha generation is at the core of what we do
- ✓ Sophisticated and engaged client base
- ✓ Organic growth from increasing local coverage, launching innovative products, and increasing market share
- ✓ Rapidly growing opportunities in international markets and high-net-worth segment
- ✓ Strong management team
- ✓ Fine balance of hiring / growth with preserving culture / performance
- ✓ Goal is to be the most respected, not the biggest

J.P. Morgan is recognized as a global leader in Asset Management (2010 awards)

Global

- #1 Ultra-High-Net-Worth Private Bank Globally — Euromoney
- Institutional Hedge Fund Manager of the Year — Institutional Investor
- Cash & Money Management Manager of the Year — Institutional Investor
- #1 Institutional Money Market Fund Manager Worldwide — iMoneyNet

U.S.

- Largest U.S. based Hedge Fund Manager — Pensions&Investments
- #1 Most Respected U.S. Private Bank — FUNDfire
- U.S. Large Cap Core PM Tom Luddy named "Money Manager of the Year" — Institutional Investor
- #1 U.S. Real Estate Equity and Infrastructure Money Manager — Pensions&Investments
- #1 U.S. Manager of Currency Alpha Strategies — Pensions&Investments
- #1 U.S. Manager of Active Extension Equity Strategies — Pensions&Investments
- # 2 Mutual Fund Family — Strategic Insight

International

- Best Asset Management Company of the Year – Asia and Hong Kong — The Asset
- JF Asia Portfolio Manager Victor Lee named "Best Multi-Strategy Hedge Fund Manager" — The Asset
- Leading Pan-European Fund Management Firm — Thomson Reuters
- Fund Manager Peter Lawrence named "Leading Pan-European Fund Mgmt Individual" — Thomson Reuters
- Gold Standard Fund Management, UK — incisivemedia
- Investment Trust Group of the Year UK — incisivemedia
- German Fund Service Award — FONDS professionell

2011 ANNUAL REPORT



JPMORGAN CHASE & CO.

THE WAY FORWARD › › ›

Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio data and headcount)	2011	2010
Reported basis[a]		
Total net revenue	$ 97,234	$ 102,694
Total noninterest expense	62,911	61,196
Pre-provision profit	34,323	41,498
Provision for credit losses	7,574	16,639
Net income	$ 18,976	$ 17,370
Per common share data		
Net income per share:		
Basic	$ 4.50	$ 3.98
Diluted	4.48	3.96
Cash dividends declared	1.00	0.20
Book value	46.59	43.04
Selected ratios		
Return on common equity	11%	10%
Return on tangible common equity[b]	15	15
Tier 1 capital ratio	12.3	12.1
Total capital ratio	15.4	15.5
Tier 1 common capital ratio[b]	10.1	9.8
Selected balance sheet data (period-end)		
Total assets	$2,265,792	$ 2,117,605
Loans	723,720	692,927
Deposits	1,127,806	930,369
Total stockholders' equity	183,573	176,106
Headcount	260,157	239,831

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America, except where otherwise noted.
(b) Non-GAAP financial measure. For further discussion, see "Explanation and reconciliation of the firm's use of non-GAAP financial measures" and "Regulatory capital" in this Annual Report.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm and one of the largest banking institutions in the United States, with operations worldwide; the firm has $2.3 trillion in assets and $183.6 billion in stockholders' equity. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, asset management and private equity. A component of the Dow Jones Industrial Average, JPMorgan Chase & Co. serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands.

Information about J.P. Morgan capabilities can be found at jpmorgan.com and about Chase capabilities at chase.com. Information about the firm is available at jpmorganchase.com.

"The banker is a member of a profession practiced since the Middle Ages. There has grown up a code of professional ethics and customs, on the observance of which depend his reputation, his fortune and his usefulness to the community in which he works."

— J.P. Morgan, Jr., 1933

J.P. Morgan, Jr., spoke these words in 1933 during the heart of the Great Depression. It was those values that guided us through that tremendous challenge. Today, those values continue to guide us through challenges and help us maintain a standing of vitality and strength.

And, as always, our commitment to our clients remains first and foremost.

We raised $1.8 trillion for businesses and consumers. For small business, we approved more than $17 billion in credit and maintained our position as the nation's #1 Small Business Administration lender.

We also continued our support of communities. We raised $68 billion for not-for-profits and public services. And we hired more than 3,000 military veterans as a proud founding member of the 100,000 Jobs Mission.

We began to see some encouraging signs this past year, and our firm helped put more than 17,000 Americans back to work. We saw more businesses and individuals turning to us for loans. We saw credit quality strengthen and confidence return.

We are optimistic about the future. Throughout our 200-year history, our belief in responsible leadership, our dedication to our clients and our fortress balance sheet have carried us through the toughest challenges. These are the core values we maintain day after day and the values that will sustain us into the future.

Dear Fellow Shareholders,

Your company earned a record $19.0 billion in 2011, up 9% from the record earnings of $17.4 billion in 2010.

Our return on tangible equity for 2011 was 15% — the same as last year. Relative to our competitors and given the prevailing economic environment, this is a good result. On an absolute and static basis, we believe that our earnings should be $23 billion–$24 billion. The main reason for the difference between what we *are* earning and what we *should* be earning continues to be high costs and losses in mortgage and mortgage-related issues. While these losses are increasingly less severe, they will still persist at elevated levels for a while longer. Looking ahead, we believe our earnings power should grow over time, though we always expect volatility in our earnings — it is the nature of the various businesses we operate.

2011 was another year of challenges for JPMorgan Chase, the financial services industry and the economies of many countries around the world. In addition to the ongoing global economic uncertainty, other traumatic events — such as the earthquake and tsunami in Japan, the debt ceiling fiasco in the United States, revolutions in the Middle East and the European debt crisis — have impeded recovery. In the face of these tragic events and unfortunate setbacks, the frustration with — and hostility toward — our industry continues. We acknowledge it and respect people's right to express themselves. However, we all have an interest in getting the economy and job creation growing again.

In the face of many difficult challenges, JPMorgan Chase is trying to do its part. We have not retrenched. Just the opposite — we have stepped up.

Over the past year, our people demonstrated once again that the work we do matters. We positively impact the lives of millions of people and the communities in which they live. Our duty is to serve them by stepping into the arena each day and putting our resources and our voices to work on their behalf. For us, standing on the sidelines simply is not an option.

Jamie Dimon,
Chairman and
Chief Executive Officer

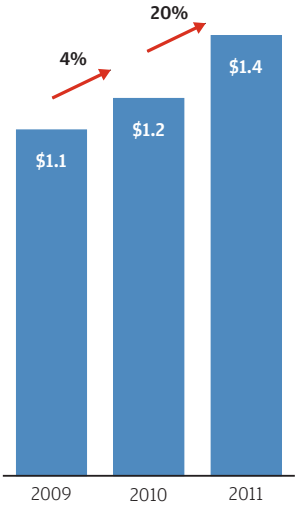


During 2011, the firm raised capital and provided credit of over $1.8 trillion for our commercial and consumer clients, up 18% from the prior year. We provided more than $17 billion of credit to U.S. small businesses, up 52% over last year. We raised capital or provided credit of $68 billion for more than 1,200 not-for-profit and government entities, including states, municipalities, hospitals and universities. We also issued new credit cards to 8.5 million people and originated more than 765,000 mortgages. To help struggling homeowners, we have offered over 1.2 million mortgage modifications since 2009 and completed more than 450,000.

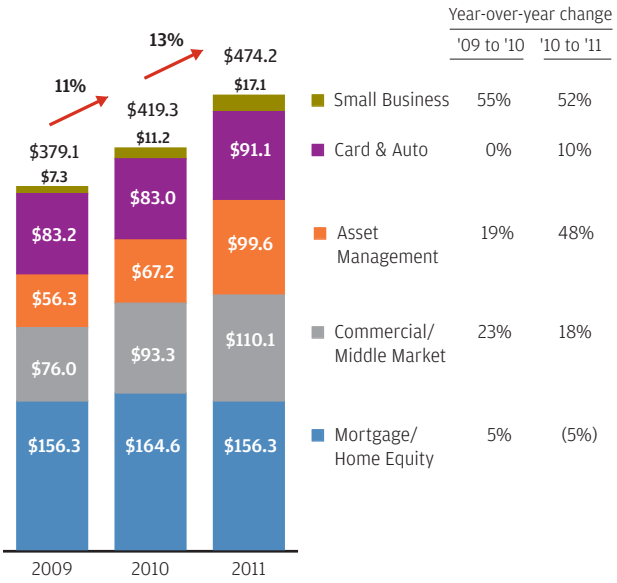
We also bought back $9 billion of stock and recently received permission to buy back an additional $15 billion of stock during the remainder of 2012 and the first quarter of 2013. We reinstated our annual dividend to $1.00 a share in April 2011 and recently announced that we are increasing it to $1.20 a share in April 2012. And we continued to build our business by heavily investing in infrastructure, systems, technology and new products and by adding bankers and branches around the world.

New and Renewed Capital and Credit for Our Clients

Corporate Clients ($ in trillions)



Consumer and Commercial Banking ($ in billions)



	Year-over-year change '09 to '10	'10 to '11
Small Business	55%	52%
Card & Auto	0%	10%
Asset Management	19%	48%
Commercial/ Middle Market	23%	18%
Mortgage/ Home Equity	5%	(5%)

The best way to build shareholder value is to build a great company, with exemplary products and services, excellent systems, quality accounting and reporting, effective controls and outstanding people. If you continually build a great company, the stock price will follow. Normally, we don't comment on the stock price. However, we make an exception in Section VIII of this letter because we are buying back a substantial amount of stock and because there are many concerns about investing in bank stocks.

We believe you own an exceptional company. Each of our businesses is among the best in the world, and record earnings were matched by increased market share in most of our businesses. Most importantly, we have outstanding people working at every level in every business across the economic spectrum and around the world. This is no accident - we work hard to bring people with character, integrity and intelligence into this company.

There is always room for improvement, but the strengths that are embedded in this company — our people, client relationships, product capabilities, technology, global presence and fortress balance sheet — provide us with a foundation that is rock solid and an ability to thrive regardless of what the future brings.

In this letter, I will focus my comments on the important issues affecting your company, including some of the regulatory and political issues facing us.

The main sections of the letter are as follows:

I. Our mission and how we operate to fulfill our role in society

II. A brief update on our major initiatives

III. The new One Chase – strengthening the customer experience

IV. An intense focus in 2012 on adapting our businesses successfully to the new regulatory framework

V. Comments on global financial reform

VI. The mortgage business – the good, the bad and the ugly

VII. Comments on the future of investment banking and the critical role of market making

VIII. Why would you want to own the stock?

IX. Closing

I. OUR MISSION AND HOW WE OPERATE TO FULFILL OUR ROLE IN SOCIETY

We are constantly asked the question of what comes first in your company – customers, employees, shareholder value or being a good corporate citizen – which implies a need to favor one over the other. We disagree with this view. We must serve them all well. If we fail at any one, the whole enterprise suffers.

Our customers, employees, shareholder value and communities *all* come first

Many people seem to think that shareholder value means profit and that a company earns more profit by giving customers or employees less. This has not been our experience. Our job is to build a healthy and vibrant company that satisfies clients, invests in its people – through training, opportunity and compensation – and rewards its shareholders. When this is done well, everyone benefits. At the same time, a company needs to be successful financially because if it isn't, it ultimately will fail. And when a company fails, everyone loses.

How we view our customers – we wouldn't be here without them

There would be no company but for our customers. Without our consumer or corporate clients – and satisfied ones at that – there would be no profits, no bankers, no staff and no CEO.

At JPMorgan Chase, we believe that customers should be treated like we would want to be treated ourselves. Customers usually don't mind paying a fair price for a product or service they need, particularly if it is delivered well and accompanied with a smile. We are constantly looking for better ways to provide, combine and deliver products that meet or exceed our customers' expectations. And we try to listen closely to our customers – even when they complain – because they are doing us a service by telling us how we could do better. It means a lot to a customer when we respond not only by listening but also by actually changing.

How we view our employees – they do it all

Doing a great job starts with great employees. We look for high-quality people with the capability to do a great job and grow with the firm. Then we train and empower them to do the right thing as best they can; to understand and anticipate their customers' needs; and, in effect, to be their advocate. To do this, each employee needs help from the rest of the company.

There are many employees who work behind the scenes that the customers do not see – such as programmers, assistants, network engineers, operations clerks and others. But these are the professionals we depend upon to help us seamlessly deliver integrated and complex products.

And all of our employees drive innovation. They have the knowledge and the deep understanding to find ways – large and small – to improve a system, streamline a process, and save time and money by making things work better for everybody.

How we view our communities – they are our hosts, our customers and our future

Doing the right thing for shareholders also means being a good corporate citizen.

If you owned a small business (e.g., the corner grocery store in a small town), more likely than not, you would be a good citizen by keeping the snow and ice off the sidewalk in front of your store or by contributing to a local Little League team, school or community center. You would participate in the community, and everyone would be better off because of your contributions. As a large company that operates in 2,000 communities around the world, we should act no differently. We participate at the local level by providing corporate support and by asking our associates to get involved in the towns where they live. We also participate in large-scale, country-wide and sometimes global projects, but the intent is the same – to improve the world in which we live.

In 2011, JPMorgan Chase contributed more than $200 million directly to community organizations and local not-for-profits. Our employees also provided nearly 375,000 hours of volunteer service through our Good Works program in local communities.

However, our efforts go well beyond philanthropic works. We finance and advise cities, states, municipalities, hospitals and universities – not just about financial affairs but also in related areas of governance, growth and sustainability. In 2011, we launched The Brookings JPMorgan Chase Global Cities Initiative with a $10 million commitment to help the 100 largest U.S. metropolitan areas become more competitive in the global economy.

Our business also provides dedicated expertise and financing for economically challenged areas of the world. For example, we partner with multiple global institutions, such as the U.S. Agency for International Development and the Bill & Melinda Gates Foundation, to help launch and support businesses that directly benefit small and rural farmers in Africa. Additionally, we are able to bring private capital to bear on scale solutions to global health problems such as tuberculosis and malaria. And we have just launched a philanthropic program focusing on entrepreneurship in South Africa.

I would like to mention one initiative of which we are particularly proud. After making some embarrassing mistakes with active military personnel, we redoubled our efforts to help military personnel and veterans – men and women to whom we owe a tremendous debt of gratitude for the sacrifices they have made – get jobs and transition out of active service to civilian life. Our efforts are working – over the past 12 months we have hired more than 3,000 veterans.

In short, we are part of our communities in every way possible – from the largest countries to the smallest towns.

It's a big responsibility to be a bank – and communities are better off if we do it well

If the financial crisis has taught us anything, it has taught us that being a strong bank in good times and, more important, in bad times is critical to the customers, communities and countries we serve around the world. Every day, our customers need us to deliver cash of $600 million and to reliably and quickly move $10 trillion around the world, where and when it is needed. Our customers trust us to safeguard $17 trillion of their assets under custody, manage $1.9 trillion of assets under supervision and protect $1.1 trillion of their deposits.

We provide our consumer and business customers with more than $700 billion outstanding of loans. We also are prepared to lend them an ***additional*** $975 billion, under committed lines, if they need it. Customers count on us to be there for them. And if we fail to do our job, they may fail as well. Money and credit are like oxygen for the economy. And like the oxygen you breathe, you really notice it when it is not there.

Unfortunately, sometimes we have to decline a customer request. Extending credit is important, but avoiding making bad loans – as we all learned again in this crisis – also is important. It is hard to turn down a customer's request and then try to explain why: We may think the loan represents too much risk, not only for us but also for the customer. We don't always make friends doing this – but it is the right thing to do.

Conversely, we cannot be a fair-weather friend. Clients, communities and countries want to know that we are going to be there ***particularly*** when times are tough. And when times are tough, we focus more on helping clients survive than on generating profits. That is in their – and our – long-term interest.

Europe is one ongoing example where we currently are applying this philosophy. When Greece, Ireland, Italy, Portugal and Spain got into trouble, we decided to stay the course. Our exposures, as reported last year, to those countries (primarily Italy and Spain) were maintained at approximately $15 billion. And we estimated that, in a bad outcome, we could lose $3 billion, after-tax. (Under really terrible circumstances; i.e., large countries exiting the euro – where the currency at settlement is uncertain for the assets, liabilities and contracts at issue – those losses could be even larger.) These exposures are primarily loans to businesses and sovereign nations,

as well as some market making. Even if the worst outcome occurs, we believe that we still made the right decision by being there for our clients. We hope to be doing business in these countries for decades to come.

We focus on *"quality"* profits – not quarterly profits

If we wanted to increase this quarter's or next quarter's profits, we could – and we could do it easily. How? By cutting marketing expenses by $500 million or eliminating another $500 million of investments in technology, training or systems upgrades. We also could add another $1 billion to our profits by increasing our interest rate exposure or credit risk. But this is not the way to build a healthy and vibrant company for the future or to produce what we would call "quality profits." In actuality, our profits reflect decisions made over many years. The breadth and depth of our client relationships today have been built over decades. Our people have been hired and trained over decades. Our branches – whether retail or wholesale – have been serving our clients for decades. Our investments in technology and product innovation typically are multi-year in nature. Our institutional knowledge and experience have been passed along generationally for more than 200 years. And the JPMorgan Chase reputation – that we, and our predecessors, have worked hard to earn – every day – has endured for more than two centuries.

All revenue isn't good; all expenses aren't bad

It always surprises me when people assume that all revenue is good and that all expenses are bad. Low-quality revenue is easy to produce, particularly in financial services. Poorly underwritten loans represent income today and losses tomorrow. And an efficiently run company is not the result of indiscriminate cost cutting. All expenses are not equal, which is why I always refer to waste cutting and not expense cutting. Many expenses actually are "good expenses." If you are reading this letter on an airplane, you easily can understand my meaning – a good expense would focus on properly maintaining that airplane. In the same way, you want to see your company continuing to invest in innovation and technology, marketing new products, hiring employees and opening branches. Our ability to distinguish between good and bad expenses should lead to higher profits in the future.

The reason we generally have been able to avoid major expense-cutting initiatives is because we continuously try to avoid wasteful spending. And much of our efficient cost structure comes from ongoing investment in technology and operations and from rigorous attention to detail. We strive to become an increasingly efficient company. Efficiency is a virtuous cycle – we can continuously invest more, save more, give our clients more – and still have healthy margins.

We build our operating company at a detailed level

While JPMorgan Chase has six lines of business that we report publicly, we essentially operate 60-70 businesses within and across the six lines of business. Each of these businesses is expected to attract great management, deliver best-in-class products and services, and earn a good margin – while making proper investments in its future.

We want each of these businesses to build quality assets (i.e., well-underwritten loans and books that are properly marked) and to account properly for all liabilities. We believe appropriately conservative accounting at a granular level leads to quality earnings and helps prepare each of our businesses to withstand tough challenges and to be there in tough times for our clients.

JPMorgan Chase builds its business on the credo "first-class business in a first-class way," and we stick to that credo even when it means forgoing fees or declining a deal that we do not think is in the best interest of our client. And rigorous client selection – ensuring a high-quality clientele – is the foundation of a strong bank.

If we keep doing what I have described above, you will not only be proud of this company, but, we hope, happy with your investment.

IT'S NOT SMALL BUSINESS VS. BIG BUSINESS — THEY ARE SYMBIOTIC AND THE ENGINE OF AMERICA'S GROWTH

In our vibrant, extremely powerful and complex economic ecosystem, there are 27 million U.S. businesses. Some facts:

- All but 17,000 of the 27 million are small businesses; i.e., they have under 500 employees.
- Twenty-one million have only one employee — they are sole proprietorships.
- Five million have fewer than 20 employees.
- Over half a million have between 20 and 500 employees.

These "small businesses" account for 56 million jobs, or 49% of U.S. payroll employment. The remaining 17,000 firms with more than 500 employees account for the other 51% of private sector jobs — and the largest 1,000 companies alone employ over 31 million people. (Outside the private sector, another 21 million work for the government, 85% for state and municipal governments — jobs that include our teachers, postal workers, police officers and firefighters.)

There are huge misunderstandings about job creation in the United States — and these misunderstandings frequently lead to misguided policy. We often talk about the net change in employment (clearly an important number); that is, the number of net new jobs created. But it masks the fact that the numbers change enormously underneath. On average, over 20 million jobs are "lost" every year as companies adjust payroll or people quit or move. Fortunately, more jobs than that are created most years. In our economy, businesses continuously morph and change; they outsource or insource jobs; some grow, some shrink and some merge. New companies — big and small — are created, and, unfortunately, some of those companies — big and small — fail.

Even Fortune 500 companies fail or are bought out or merged with another. Small companies sometimes morph into big ones — just think of Apple, Google and Facebook. This is part of a healthy, constantly changing economic dynamic. Failures are caused by recessions, lack of innovation and bad management, among other things. The alternative to this "creative destruction" would be a stultifying lack of change, inability to adopt new technologies, inflexibility and, ultimately, lower growth.

We often read that small business is the primary driver of new jobs — this is both incorrect and overly simplistic. Sometimes those net new jobs appear in small businesses, and sometimes they appear in large businesses. In fact, recent studies show that large companies generally are more stable over time and that their employment goes down less during recessions.

One thing we know for sure is that capital expenditures and R&D spending drive productivity and innovation, which, ultimately, drive job creation across the entire economy. In the United States, the 17,000 large firms account for 80% of the $280 billion business R&D spending — and the top 1,000 firms alone account for 50% of this amount. U.S. companies also spend more than $1.4 trillion annually on capital expenditures, and the top 1,000 firms account for 50% of that amount. Big businesses are capable of making huge investments. A typical semiconductor plant costs $1 billion, and a typical heavy manufacturing plant costs $1 billion. These types of investments create lots of jobs. Many studies have shown that for every 1,000 workers employed by a big business' new plant, 5,000 jobs are generated outside the plant — from high-tech to low-tech positions (all to support the plant and its employees); most of these jobs appear in small businesses.

It is worth noting that both large and small businesses often have benefited from strong collaboration with the government in making certain types of investments. The American people started and paid for the Hoover Dam, the interstate highway system and the landing on the moon. But the Hoover Dam was built by a consortium of six American businesses, the interstate highway system was built by American construction companies spanning the nation and the Apollo spacecraft was built by American aerospace companies — and all of these projects were supported by small business.

So when you read that small business and big business are pitted against each other or are not good for each other, don't believe it. They are huge customers of each other, they help drive each other's growth and they are completely symbiotic. Business, taken as a whole, is where almost all of the job creation will come from. And without the huge capital investments made by big business, job creation would be a lot less.

Small businesses of all types are essential, dynamic and innovative, and they are a uniquely entrepreneurial part of our U.S. economy. We wouldn't be the same without them.

But that does not diminish what big businesses do. Large companies are very stable, and they make huge investments for the future. On average, they pay their people more, and they provide health insurance and benefits for their employees and their families. Big businesses are an essential part of a country's success. Many American big businesses are the envy of the rest of the world. Show me a successful country, and I will show you its successful big businesses. Like small businesses, big businesses are philanthropic, patriotic and community minded. We are lucky to have them both.

II. A BRIEF UPDATE ON OUR MAJOR INITIATIVES

The opportunities for JPMorgan Chase over the next 20 years will equal – or maybe even surpass – those of the last 20 years.

In last year's letter, we discussed several specific initiatives we're undertaking in addition to the "normal" growth opportunities that we pursue every day. Each one of these initiatives involves a sustained, full-fledged effort of investment in people, branches and systems over a long period of time. And while we know that these efforts may not turn a profit in the first year, we expect each one to add $500 million or more in profits annually by the fifth to seventh year.

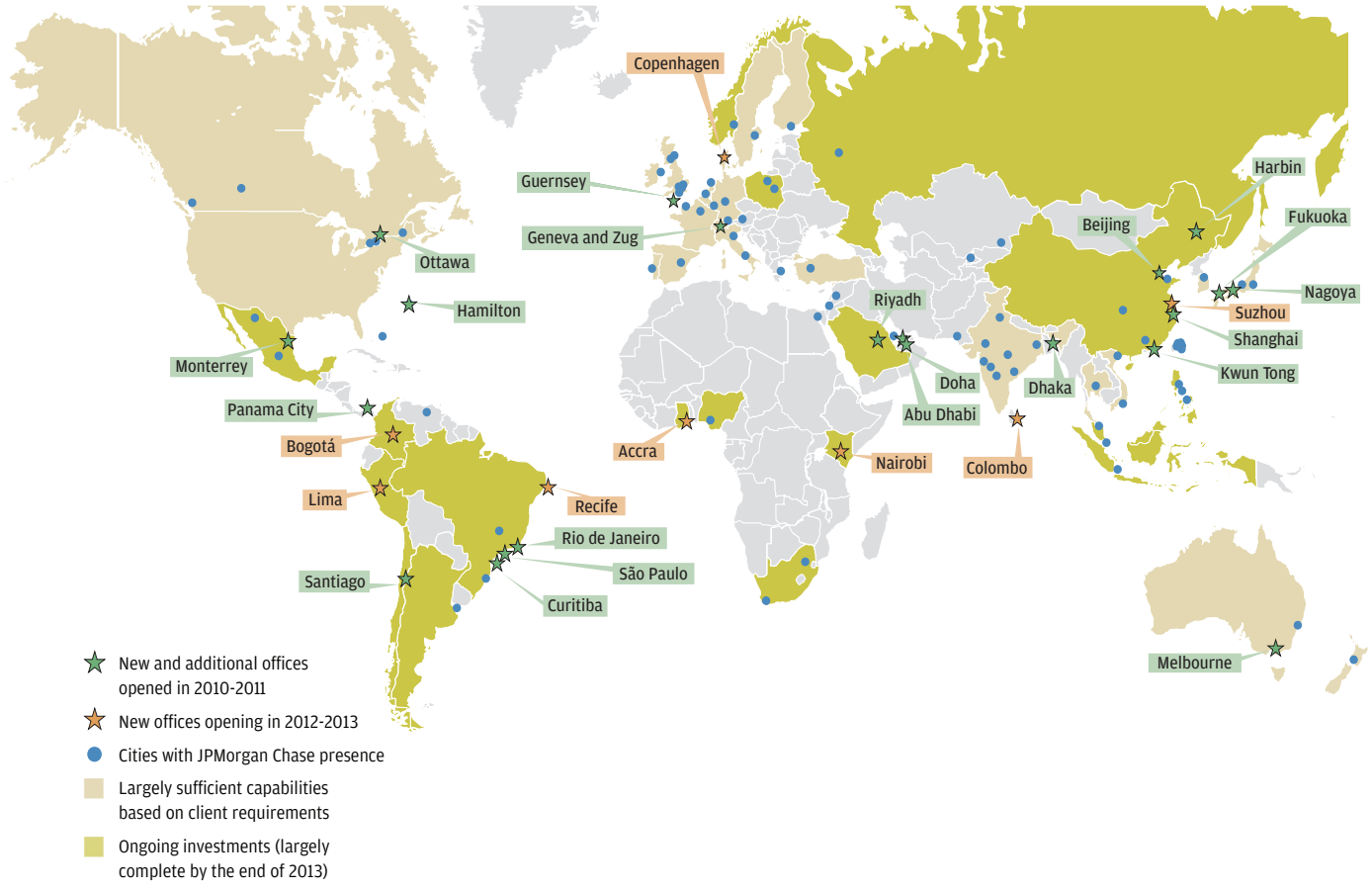
The following segments provide an update on how each of these initiatives is progressing.

The expansion of our international wholesale businesses, including progress in our Global Corporate Bank

Last year, we described our international expansion plan in detail. It involves building out our global presence across our wholesale businesses (Asset Management, the Investment Bank and Treasury & Securities Services) in the rapidly expanding markets of Asia, Latin America, Africa and the Middle East, as well as in emerging and even "frontier" markets.

As our clients – multinational corporations, sovereign wealth funds, public or quasi-public entities – expand globally, we intend to follow them around the world.

We Are Expanding Our Global Platform



We have made good progress:

- Five years ago, we served approximately 200 clients in Brazil, China and India combined. Today, that number has grown to approximately 800 clients. Five years from now, we expect to serve 2,000 clients – including locally headquartered companies (about 50%) and foreign subsidiaries of international companies (about 50%).
- In 2011, we opened offices in the following new locations: Harbin, China; Panama City, Panama; and Doha, Qatar. That's in addition to the offices we opened in 2010 in Bangladesh, Bermuda, Guernsey, Saudi Arabia and the United Arab Emirates. A quick glance at the map on the previous page shows the offices opened over the past two years in new and existing locations and the cities around the world where we plan to add locations in 2012-2013.
- When we started the Global Corporate Bank (GCB), we had 98 bankers. By the end of 2011, we had more than 250 bankers in 35 countries. We plan to have approximately 320 bankers in 40 countries by the end of 2013, who will provide approximately 3,500 multinational corporations with cash management, global custody, foreign exchange, trade finance and other services.
- This strategy has led to a 73% rise in our trade finance loans, a total of $37 billion in 2011. We also increased other business with these same multinational corporations, including rates, foreign exchange and commodities, by 30%.

Commodities

In 2011, we completed the integration of assets acquired from Sempra. We now are one of the top three firms in commodities – i.e., global sales and trading, as well as advisory services and market making in metals, oil, natural gas, power and others. Our global franchise includes approximately 600 employees and 10 main office locations around the world. Over the course of last year, we grew our client franchise by more than 10% to serve over 2,200 active clients. And we increased the selling of commodities products to already existing clients so that hundreds of clients now come to us for multiple products across different commodity asset classes.

Small business growth

In 2011, we provided more than $17 billion of new credit to U.S. small businesses in 2011, up 52% from 2010. We are the #1 Small Business Administration (SBA) lender nationwide – for the second year in a row. In 2011, we also became the #1 SBA lender to women-owned and minority-owned businesses.

Since 2009, we have added 1,200 new relationship managers and business bankers, and that includes adding 600 business bankers in the heritage Washington Mutual (WaMu) states of California and Florida. And we plan to continue aggressively hiring bankers who are meeting the needs of small businesses.

Commercial Banking expansion – particularly in WaMu states

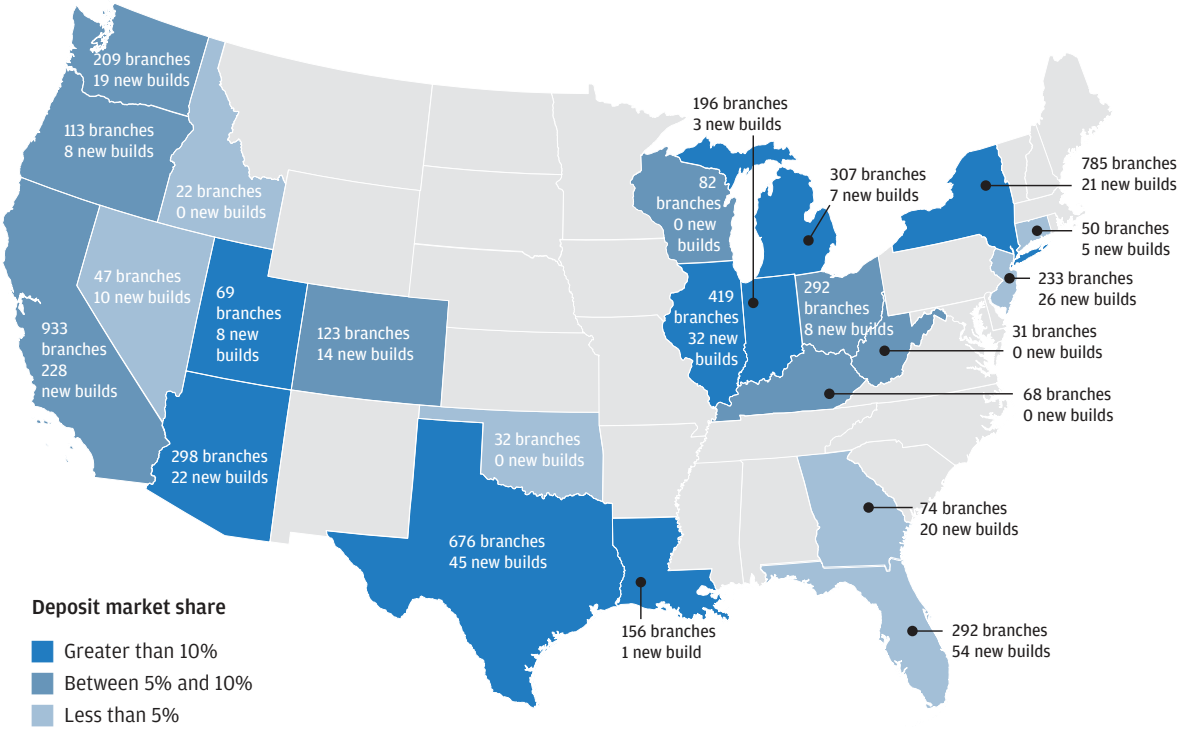
Our Commercial Banking business has performed well in the recession, earning returns of more than 20% during the past two years and over 15% in the most difficult years. We continue to invest in additional bankers and offices to support growth. In 2011, Commercial Banking added 60 new bankers, placing 21 of them in states where WaMu had a presence. Our expansion efforts have made great progress – in California and Florida alone, deposits increased to $1.8 billion and loans to $2.0 billion by the end of 2011. Since the WaMu acquisition, our Commercial Banking business has continued to add 200+ new clients a year in the WaMu states.

Commercial Banking's International Banking business unit also has experienced significant growth. In the six years since the unit was

Small Business Growth

	2009	2010	**2011**	Year-over-year change '09 to '10	Year-over-year change '10 to '11
New small business loans ($ in millions)	$7,251	$11,219	**$17,060**	55%	52%
Total small business bankers	1,953	2,420	**2,886**	24%	19%

Our Branch Network Provides Continued Opportunity to Grow



Branches as of December 31, 2011
New builds added from 2009 to 2011

launched, International Banking has increased the number of U.S. Commercial Banking clients using our international treasury and foreign exchange products – to 2,500 clients – at a rate of approximately 20% per year, and we expect this trend to continue.

As we strive to better and more fully meet the needs of our Commercial Banking clients, we are increasing their access to a broader range of products. Today, our average Commercial Banking client uses more than eight of our products and services, and this number continues to increase.

The growth of our branch network

For years, some have predicted the demise of the physical branch as more customers choose to transact banking business online and on their mobile devices. However, our experience shows that instead of choosing between a branch and a website, customers actively use both. More than 17 million of our customers are paying bills online. But when it's time to take out a mortgage, apply for a credit card or seek personal financial advice, customers often prefer to meet face to face with a banker. These activities will take place in physical branch locations for the foreseeable future. Our small business and middle market customers also are more comfortable discussing business needs such as cash management in person rather than online. In fact, our middle market business ***wouldn't*** exist without the branch network. Our branch presence also is a competitive advantage for many of our other businesses:

- For example, when we open a Chase branch, it provides our Card Services and Mortgage Banking businesses with the opportunity to offer more credit cards and retail mortgages. Today, about 45% of our Chase-branded credit cards and about 50% of our retail mortgages are sold through our branches.
- Today, our consumer banking household uses, on average, seven Chase products and services. Increasingly, our customers require and appreciate having the option to transact their business with us virtually and personally. Our network of branches gives consumers that choice.

The map on the preceding page shows our current branch footprint. Since 2009, we have built more than 525 new branches. In 2011, we opened 260 new branches and added more than 3,800 salespeople in the branches. We expect we will add approximately 150-200 branches a year for the next five years, which is fewer than we previously had planned. We are taking a more measured approach because regulatory changes have affected our ability to profitably operate some of our branches.

That said, and despite slight reductions in profit due to an abnormal interest rate environment, our average retail branch still earns approximately $1 million a year. And the right type of branch in the proper location is profitable not only on its own but is enormously beneficial to the rest of the company. We believe interest rates and spreads will return to normal levels, and we are building our branches accordingly. The map shows we are building branches where we already currently reside. It always has been more valuable to increase your market share in an existing market than it is to go to a new market.

Chase Private Client business continued growth

In 2011, we opened approximately 250 Chase Private Client (CPC) locations – branches dedicated to serving our affluent clients' investment needs – and we plan to open another 750 CPC locations in 2012. Chase Private Client is quickly making an impact in deepening our relationships with the 2 million affluent clients that already bank with Chase. Today, more than 500 Chase Private Client bankers and advisors serve private clients, and we plan to add more than 1,200 private client bankers and advisors in 2012. Since we launched the first phase of CPC expansion in July of 2011, the number of CPC households we serve has nearly quadrupled, and each of those households has grown deposit and investment balances by $80,000 on average.

WHEN YOU HIRE JPMORGAN CHASE, YOU GET ALL OF US – ONE GREAT EXAMPLE OF OUR BROAD, ORCHESTRATED EFFORTS WITH ONE GREAT CLIENT

At JPMorgan Chase, we are privileged to work with Caterpillar across our markets and services – from community banking in Caterpillar's hometown in central Illinois to strategic advice on Caterpillar's largest-ever acquisition. The relationship spans decades and multiple continents, with constant dialogue at many levels of our respective companies. We helped Caterpillar:

- Efficiently manage its cash through our Treasury Services team.
- Serve its current and future retirees by investing more than $2 billion of the company's 401(k) and defined benefit plan assets.
- Evaluate and execute strategic acquisitions by working closely with the company's strategic investments team.
- Provide interest rate, foreign currency and commodity risk management services through Caterpillar's work with our exposure management teams.
- Fund the manufacturing and finance company operations by underwriting some of their bonds and other forms of financing.
- Support the sale of Caterpillar's products into developed and emerging markets by providing critical trade finance around the world.
- Fund a portion of Caterpillar's global supply chain's working capital requirements in more than 10 countries.
- Finance several of Caterpillar's independently owned dealers who sell and service its products around the world.

More than 100 JPMorgan Chase banking professionals around the world touch Caterpillar directly at many levels. This is a great relationship for all parties involved.

III. THE NEW ONE CHASE – STRENGTHENING THE CUSTOMER EXPERIENCE

The Chase consumer businesses – Retail Banking, Credit Card, Auto Finance and Mortgage – historically ran as independent companies. Now we are coming together to run all of these companies as one consumer business and one brand – to focus, first and foremost, on serving our customers in the ways they want and with the products they choose. This includes developing common strategies, delivering a consistent customer experience, designing a seamlessly integrated product offering and continually innovating for our customers. We call this effort One Chase.

Doing a better job serving our consumer and small business customers

What does One Chase mean for our customers? It means being known and appreciated for all the business they do with us – across all product lines – and feeling as if they are dealing with one company. It means customers will be treated with consistently great service every time, any way and anywhere they connect with us. It means when customers call Chase, they will get an answer from the Chase representative answering the phone – whether the question is about their mortgage, credit card fees or banking account. It means customers can have more needs met at the Chase branch – including not only being able to get a credit card, mortgage or checking account but also being able to talk with branch professionals about any problems they may be having with any of our products.

Here are some of the things we're doing to serve our consumer and small business customers better:

Making our communications clear and simple

Our customers have told us that the "fine print" on our disclosures was confusing and wordy. Of course, that was not our intent. When we speak, email or send a letter to a customer, we aim to foster confidence, not confusion. So we have undertaken a number of initiatives designed to simplify the way we communicate with our customers.

At the end of last year, we unveiled a revised summary guide for Chase Total Checking that makes its terms and conditions easier to understand. We developed a simple disclosure form that uses everyday words in a consumer-friendly format. Instead of saying "transaction posting order," our new disclosure now says "how deposits and withdrawals work," using words that customers understand. Consumers now can more plainly see a description of fees and services and learn how to avoid certain fees, determine when deposits are available, and track when withdrawals and deposits are processed – on three pages (instead of 40).

In addition to streamlining and clarifying our written disclosures, we also are proactively reaching out to customers with an email or a phone call when we think they should know something about their account. For example, if there are suddenly several unusual transactions in a customer's account that could indicate fraud, we immediately send an email alert or make a phone call to let them know.

Focusing more on customer complaints

Every week, and sometimes every morning, the senior managers in our consumer businesses listen to or read customer complaints to get to the root of problems and to identify options to solve them. These issues are discussed, and the follow-up and feedback are shared with the broader customer support teams.

We know every company makes mistakes. But if you don't acknowledge mistakes, it's unlikely you can fix them. No one should be afraid to make a change because it might imply that something we did in the past was wrong. Instead, every employee at the firm –

including me – should take responsibility for mistakes and take the initiative to fix them and prevent them from occurring in the future. We must continually make changes that make us better.

Empowering our employees to own customer issues

When customers contact Chase, they expect – and deserve – to have us understand and assist them with their entire relationship, regardless of which line of business is involved. To ensure this happens, we increasingly have empowered our front-line employees to better handle customer requests and issues.

For example, we have authorized branch managers to use their judgment in waiving fees for customers they know personally in order to get them a quicker response or expedite a transaction. We are providing real-time information to our bankers and advisors, eliminating the need to transfer many customer calls. These initiatives have helped drive customer complaints down 25% over the last six months.

One Chase means one customer. So when making decisions, we consider the entire relationship our customers have with us. For example, when making a decision about a credit card application, we now more fully consider what type of customer the applicant has been and how long that person has been a customer.

Learning from our bus trips and other feedback

Following a terrific bus trip last summer along the West Coast, we hopped on a bus again in February 2012 and took a week-long, 550-mile journey through the Sunshine State. We visited branches and operations centers throughout Florida, many of which are in off-the-beaten-path locations, like our credit card operations center in Lake Mary. We met face to face with approximately 5,000 employees and hundreds of clients across all our lines of business – from consumer customers to Fortune 500 CEOs. We also met with elected officials and community leaders to talk about how much we're expanding, lending and adding jobs in Florida.

It was an incredible trip that gave us the opportunity to see firsthand how vibrant our business in Florida is: We have become the #1 SBA lender, and our branch count, which was 261 when we bought the WaMu business in 2008, is nearly 300 today – we expect it to grow to 500 in three to five years. Five years ago, we had 6,700 employees in Florida, and, including the 4,500 people we hired last year, we now have 17,550.

One of the most rewarding parts of the trip for us was riding the bus with some of our front-line employees – tellers, branch managers, personal bankers and others. Their perspective and advice on how ***we*** could do a better job were invaluable. And, boy, did we get a lot of advice – 160 specific recommendations, which we are in the process of implementing as we speak.

We want to make this drive toward continuous improvement a part of the fiber of every person at our firm.

A new internal tool called "What Do You Think?" is giving our employees throughout the firm a chance to evaluate the products we offer customers, as well as the services we provide internally, from accounts payable to our online benefit enrollment and internal travel services. Some of us predicted these internal services were going to receive the worst ratings – we weren't wrong. But we know that while we won't always like what we learn – in fact, sometimes it is embarrassing – it will help us become better. Providing best-in-class services internally is just as important as providing them to our customers because better services make our colleagues' lives easier so they can spend more time with customers in helping to solve ***their*** problems.

Continually innovating for our customers

A culture of speed and innovation is imperative. Sometimes people come up with great ideas on their own, but, more often, it happens through informal networking and brainstorming. Also, small improvements, over time, cumulatively may lead to major breakthroughs.

The financial services industry has been highly innovative over the past 20 years, from ATMs to online bill payment and a variety of mobile banking applications. Chase mobile customers increased 57% over the past year to more than 8 million active users at the end of 2011. These customers transact online by paying their bills, checking their balances and transferring money between accounts. Some of our new consumer innovations include:

- Chase QuickDeposit℠, part of the Chase Mobile® applications that allow customers to make deposits from their smartphones (by taking a picture of the check). Our customers have deposited 10 million checks in 2011. Over the past year, our total deposit volume increased to $2.6 billion – with $481 million deposited by QuickDeposit in January 2012 alone.
- We added "pay with points" functionality to our Amazon.com Rewards Visa® card, allowing customers to use their rewards instantly as cash.
- We pioneered Jot℠, a new mobile application for organizing and tracking expenses, which currently ranks in the top 5% of all financial applications (Apple App Store℠ ranking) and works exclusively for our Ink℠ from Chase small business cards.
- We continued to partner with some of the world's best brands, launching new cards with The Ritz-Carlton Hotel Company and United Airlines®.
- Chase QuickPay℠, our person-to-person payment service that allows our checking customers to use a phone or computer to send or receive money using an email address (money is either taken out or deposited into checking or savings accounts), increased by more than 200% to 2.6 million users in 2011.
- We introduced Chase Sapphire℠ for the affluent market in late 2009 and generated more than 1.8 million accounts in about two years. In 2011, we launched Chase Sapphire Preferred℠, an enhanced affluent-oriented product that rewards customers with two points for every dollar spent on dining and travel.

We continue to roll out new products. Soon after this letter goes to press, we will be launching an exciting new banking product that will have innovative features and broad appeal. I believe this could be a breakthrough product for consumers in terms of pricing transparency, convenience and simplicity – and we hope you agree when you see it. The management team doesn't want me to get too excited in case it doesn't work. I told them that even if it's a flop, I will be proud of their innovative spirit. You can't succeed if you don't try.

IV. AN INTENSE FOCUS IN 2012 ON ADAPTING OUR BUSINESSES SUCCESSFULLY TO THE NEW REGULATORY FRAMEWORK

The extensive requirements of regulatory reform – which we must meet – demand enormous resources. While we are going to continue the initiatives in all of our businesses in 2012, it is unlikely that we will undertake significant acquisitions due to these regulatory demands and other regulatory constraints. We need to meet these regulatory demands properly while ensuring that our clients are not adversely affected and that we are not creating excessive, stifling bureaucracy. We are totally focused on what is in front of us. It is a new world, and we are going to adjust to it very quickly – whether or not we like it or think it is all needed.

Meeting new regulatory requirements will be a large, costly and complex endeavor – and we must get it right. Therefore, we need to devote enormous attention and resources to it

It has been estimated that there are 14,000 new regulatory requirements that will be implemented over the next few years. Three hundred out of the 400 Dodd-Frank rules still need to be completed. We need to meet the new Basel II, Basel 2.5 and Basel III requirements. We need to meet the new liquidity requirements, the new global systemically important banks (G-SIB) rules, the new requirements due to Resolution Authority and living wills, and any new requirements from two new regulators, the Consumer Financial Protection Bureau and the Office of Financial Research. We need to meet the new derivatives, clearinghouse and Volcker trading rules. We also must complete periodic Comprehensive Capital Analysis and Review (CCAR) stress testing for the Federal Reserve. And, finally, we have major new rules and requirements from Brussels, London and other global jurisdictions.

These new rules will affect virtually every legal entity, system (we have 8,000 of these), banker and client around the world. It will take an enormous amount of resources across all of our disciplines – people, systems, technology and control functions (finance, risk, legal, audit and compliance) to get it done right. Over the next few years, we estimate that tens of thousands of our people will work on these changes, of whom 3,000 will be devoted full time to the effort, at a cost of close to $3 billion.

We must not let regulatory reform and requirements create excessive bureaucracy and unnecessary permanent costs

There are so many new rules that they inevitably create more opportunities to build unnecessary bureaucracy within the company. It is incumbent upon us to make sure that we do it right – for the regulators, our clients and our own efficient internal functioning. So we are trying to build streamlined systems to meet the needs of all the regulators in an efficient way. For example, different regulators have asked for different reports on some very complex issues such as global liquidity. We are going to try to build one report that meets all their needs and ours, too – as opposed to preparing three completely different liquidity reports every day or every month. Three reports lead to more mistakes, less understanding and more work.

We must do this in a way that minimizes cost and disruption to our clients

Most clients hope they will not see much change as a result of these new regulations. But for certain clients and certain products, the change will be significant. For example, the cost of credit, in general, will go up modestly, essentially due to the banks' higher capital and liquidity requirements. The cost of credit for some likely will go up substantially – for example, we expect larger increases in trade finance; consumer credit (particularly for consumers with FICO scores below 660); and backup lines of credit

that support commercial paper issuance. Because of the Durbin Amendment, the cost of banking services will go up modestly, but this will likely affect certain clients far more than others – e.g., customers with low account balances.

We also are trying to get ahead of the change and be proactive. We have canceled products and services and will continue to do so when we believe we no longer can adequately provide them, given the new regulatory requirements. We also are exiting products that we think create too much reputational risk for the firm. For example, we no longer bank certain types of clients, we no longer offer tax refund anticipation loans, we essentially have exited the subprime lending business and we no longer offer certain types of complex derivatives. We also have modified our overdraft procedures to be more consumer friendly and are trying to be very responsive to complaints about product disclosures, as we have mentioned previously. We will adjust to all of the new rules very quickly.

We have extensive processes in place to try to do business the right way

We have extensive processes to protect the company and conduct business the right way. We have strong audit, compliance and legal staffs (these groups total more than 3,600 employees). Some of these employees sit in specialized units that cut across the company focusing on the requirements of the Anti-Money Laundering, Bank Secrecy and Privacy acts, and other requirements (these units, which also include dedicated line of business employees, total approximately 1,400 employees). We know we won't always be perfect, but it won't be for lack of trying. Listed below are examples of how each business tries to properly conduct its affairs:

- Our Risk Committees provide general oversight into any and all risk in the business and set overall risk limits from credit extensions to any market-making activities. Risk limits are set by product, by counterparty and by type of specific risk (for example, liquidity risk, interest rate risk, credit risk, country risk, market risk, private equity risk, and legal and fiduciary risk, etc.).
- New Product Committees vet all new products to make sure that we can handle them operationally and, more important, that they meet our ethical standards for conducting business.
- The Capital and Credit Committees review all extensions of credit and uses of capital in the company to make sure we have the right limits, the right structures, the right clients and adequate returns.
- The Commitment Committees review underwritings of stocks, bonds, loans, etc., to ensure that each is properly structured, that we want to do business with the client, that we can meet our commitments and that due diligence is properly done, etc.
- The Operational Risk Committees review the potential errors in processing, legal agreements and others that can lead to any form of operational risk to the company from settlement to clearance, including litigation and processing errors.
- The Reputational Risk Committees review new types of business and out-of-the-ordinary transactions that entail risks relating to the environment, taxes, accounting, disclosures and know-your-customer rules to try to ensure that business is being done appropriately.

We operate in a complex business with high and increasing regulatory demands and risk. Whether or not we agree with all the new rules and business processes, we want you to know that we will strive to meet or exceed every regulatory requirement around the world. This simply is the way we run our business.

V. COMMENTS ON GLOBAL FINANCIAL REFORM

We have written extensively about the crisis and the need for financial reform in previous letters. Many of the issues we have discussed have not changed. It is very important, however, that we get this right so I will comment in this section on some of the more critical and recent developments.

We always have acknowledged the need for reform – and we agree with most, but not all, of it. And we all have a huge vested interest in having a strong financial system

Most banks and bankers have acknowledged the need for strong reform. JPMorgan Chase has consistently supported higher capital standards, more liquidity in the system, a Resolution Authority to better manage and unwind large financial firms, better regulation of the mortgage business, the clearing of standardized derivatives through well-structured clearinghouses and even stronger consumer protection (however, we thought this should have been a strengthened department inside the bank regulator). We also supported most of the principles of compensation reform – though you should know that our company, for the most part, had already practiced them.

In addition, we supported the ideas behind the creation of the Financial Stability Oversight Council (FSOC), recognizing that one of the flaws of our financial system was that we did not have strong oversight of the whole system or adequate coordination among many different regulators. We actually believe the FSOC should have even ***more*** authority than it has been given so that it can ***force*** coordination among the 11 regulatory authorities of the FSOC, adjudicate where necessary, and properly assign responsibility and authority.

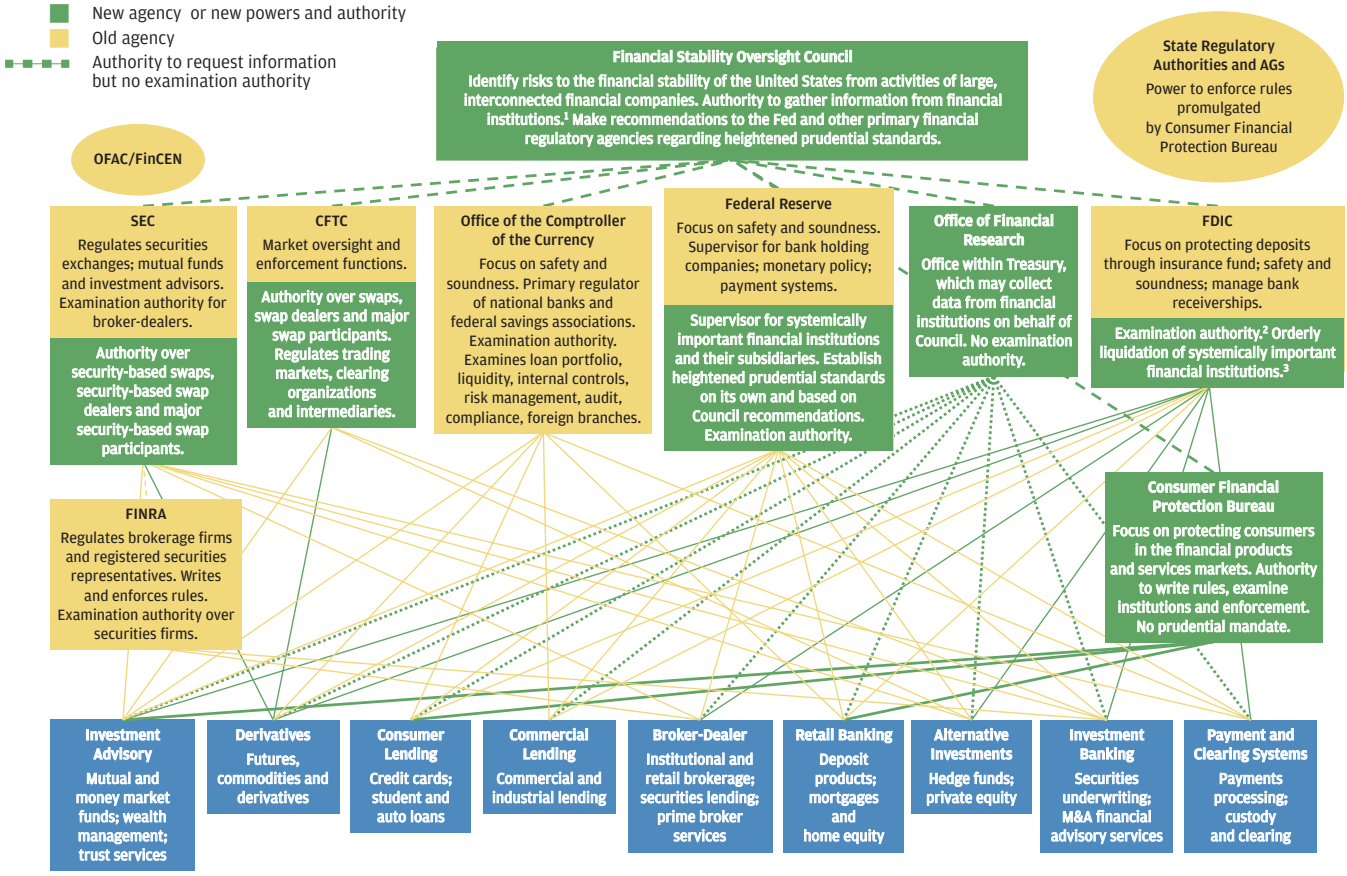
While we agree with much of the reform that has been put in place, we do not agree with all of it. Specifically, we disagree with the Durbin Amendment – which had nothing to do with the crisis and was the adjudication of a dispute between retailers and banks – when the banks were unable to effectively respond. (It essentially is price fixing by the government that will have the unfortunate consequence of leaving millions of Americans unbanked.) Three other specific rules with which we do not completely agree include the G-SIB restrictions and surcharge, the Volcker Rule and some of the derivatives rules. You may be surprised to know that we don't actually disagree with the stated ***intent*** of these rules. We, however, do disagree with some of the proposed specifics because we think they could have huge negative unintended consequences for American competitiveness and economic growth. As Albert Einstein said, "In theory, theory and practice are the same. In practice, they are not."

The United States has the best financial system on the planet. We have the deepest, widest, most transparent and most innovative capital markets. These markets have helped fuel the great American economic machine – from small businesses to large. And while we need reform, we must be very careful not to throw the baby out with the bathwater. Clear, fair and consistent rules need to be put in place as soon as possible so that our economy, once again, can grow and meet its potential.

But the result of financial reform has not been intelligent design – simplicity, clarity and speed would be better for the system ***and*** better for the economy

A robust financial system needs coordinated and consistent regulation that is strong, simple and transparent. The regulators should have clear authority and responsibility. Just one look at the chart on the next page shows that this is not what we now have. Complexity and confusion should have been alleviated, not compounded.

As a result of Dodd-Frank, we now have multiple regulatory agencies with overlapping rules and oversight responsibilities. Although the FSOC was created, it is proving to be too



Note: Green lines from SEC and CFTC represent enhanced authority over existing relationships

weak to effectively manage the overlap and complexity. We have hundreds of rules, many of which are uncoordinated and inconsistent with each other. While legislation obviously is political, we now have allowed regulation to become politicized, which we believe will likely lead to some bad outcomes.

And we have been very slow in finishing rules that are critical to the health of the system. The rules under which mortgages can be underwritten and securitized still have not been completed – three and a half years after the crisis began. This is unnecessarily keeping the cost of mortgages higher than they otherwise would be, slowing down the recovery. Basel III created additional "capital confusion" as banks did not know what the specific capital rules would be going forward – the banks still don't know exactly how much capital they will be required to hold, when the regulators would like the banks to get there and how they will be able to use their excess capital when they do get there. The Commodity Futures Trading Commission (CFTC) and the U.S. Securities and Exchange Commission (SEC), responsible for different parts of the swaps business, have not yet come up with common rules. And the several agencies claiming jurisdiction over the Volcker Rule have proposed regulations of mind-numbing complexity. Even senior regulators now recognize that the current proposed rules are unworkable and will be impossible to implement.

The rules also will create unintended consequences. Nearly 40% of all Americans have FICO scores below 660. Many of the new capital rules make it prohibitively more expensive to lend to this segment (if you are a bank). And the Federal Deposit Insurance Corporation (FDIC) now charges us approximately 10 basis points on all assets (not just the deposits it insures – we now are paying the FDIC approximately $1.5 billion a year), making all lending more expensive and, in particular, distorting the short-term money markets that lend large sums of money over short periods of time at low interest rates.

The chart above assumes these activities are conducted in a systemically important bank holding company (BHC)

1 The Council, through the Office of Financial Research, may request reports from systemically important BHCs

2 The FDIC may conduct exams of systemically important BHCs for purposes of implementing its authority for orderly liquidations but may not examine those in generally sound condition

3 The Dodd-Frank Act expanded the FDIC's authority when liquidating a financial institution to include the bank holding company, not just entities that house FDIC-insured deposits

No one has considered the cumulative effect of all these changes taking place all at once. And there is little question in my mind that credit contracted globally (particularly in Europe) as a response. Some analysts estimate that even after the European Central Bank's special three-year lending facility to banks, European banks will need to shed another $3 trillion in assets in the next few years, and that's assuming that banks don't try to meet their new Basel III guidelines ahead of time. This can't possibly help the recovery of an already weakened Europe. With all the new rules, it is unlikely that credit availability will be replaced by new lenders. Even small banks that are exempt from many of the new rules are complaining that these rules will have a substantially negative effect on their businesses – again, not the intended but the ***unintended*** consequence. And certainly the new regulatory burdens for large and small banks have become enormous, but it will be a disproportionate burden on smaller banks.

Recently, we have begun to achieve modest economic growth around the globe, somewhat held back by certain natural disasters such as the tsunami in Japan. But I have no doubt that our own actions – from the debt ceiling fiasco to bad and uncoordinated policy, including the somewhat dramatic restraining of bank leverage in the United States and Europe at precisely the wrong time – made the recovery worse than it otherwise would have been. You cannot prove this in real time, but when economists 20 years from now write the book on the recovery, it may well be entitled, *It Could Have Been Much Better.*

CIVIC ENGAGEMENT AND LOBBYING

You read constantly that banks are lobbying regulators and elected officials as if this is inappropriate. We don't look at it that way. We view it as our responsibility to stay actively engaged in policy debates that will affect our company, our communities and the global economy.

Not only is petitioning the government a ***constitutional right***, we have a responsibility as part of our firm's mission to be actively engaged in the political process in the communities and countries where we operate.

Governments are debating issues critical to the financial markets, our company, our shareholders and our customers. It is vital for officials and regulators to have input from people within our businesses who understand the intricacies of how financial markets operate and the consequences of certain policy decisions. Contrary to what you might hear, our input, as often as not, is at the request of government officials who want to draw upon the expertise of our executives who work in the markets every day.

Engagement with government officials and regulators is not only the responsibility of our Government Relations and Regulatory Policy teams, it also has become an important part of the fabric of our entire company. Employees across our company spend time meeting with and briefing government officials and regulators – from Washington to Brussels to Beijing to Sacramento to Albany – about what they are seeing in their local markets, as well as global markets, and how policymaking affects the financial and economic issues of the day.

Our engagement with public officials includes:

- Executives and employees from around the world who visit federal, state and local capitals to provide lawmakers with perspectives on economic conditions in their communities and countries.
- Market participants who respond to requests from policymakers to provide our views on how new regulations or legislation will affect businesses, markets and consumers.
- Small business lenders who offer perspectives on the lending needs of small businesses across the country.
- Analysts and economists who share information on specific industries and economic performance around the world.
- Our Military and Veterans team, which provides policymakers with real-world information on practices that work to employ more veterans and support their financial needs.

Finally, we should recognize that thousands of groups – including unions, veterans, teachers, municipal workers and others – are reasonably engaged in exercising their constitutional rights. We will continue to do so as well.

The United States needs more conversation, collaboration, coordination and confidence

More collaboration would be a good thing. Why should anyone be surprised that financial reform, which is so important to our country, is being rethought and refought (through the courts and otherwise) – since it was passed in a partisan way without sufficient collaboration and without adequate input from experts in the field?

Even with many of the rules and reforms that we support, the details (which are critical) are far from perfect. We're left with hundreds of rules and thousands of pages, that even the regulators are now struggling to make sense of. These are very complex systems that need to be carefully thought through and analyzed, particularly by people who know the subjects best – both academics and practitioners.

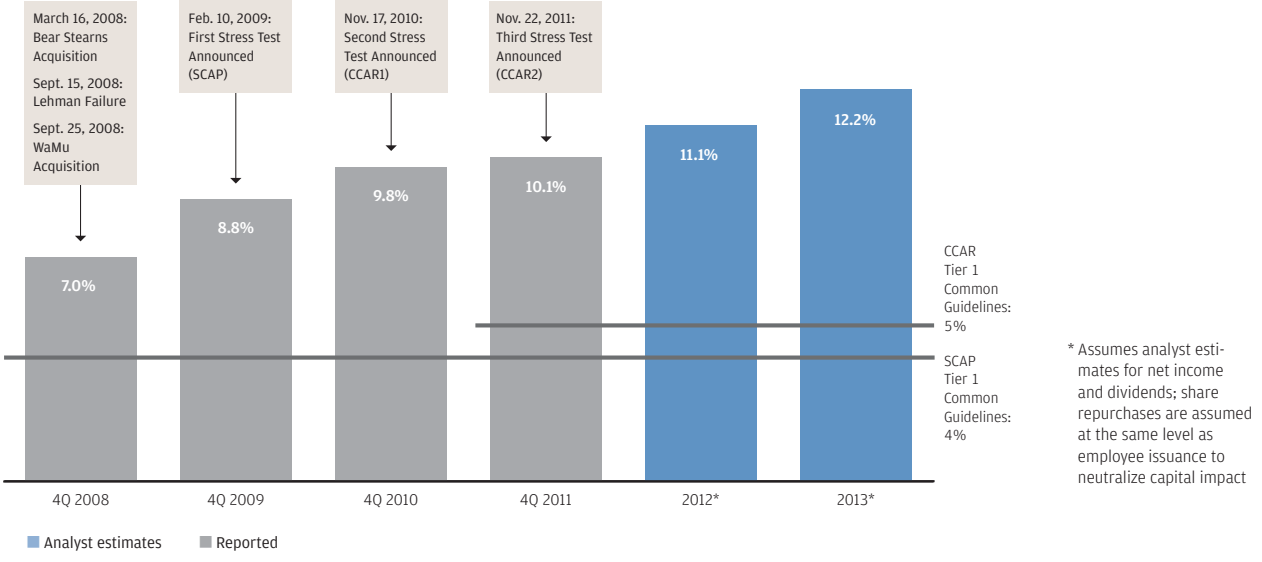
These issues are not Democratic or Republican, and the solution is not political. Many bankers would have loved to support proper reform. But it is hard to support something when you were not involved in the process in a meaningful way. In fact, at a bankers' meeting with 100 bank CEOs in the room, 70%-80% said they were afraid to speak up because of potential retribution from the regulators and examiners. This is not a healthy process for policymaking.

I am struck that so many of our leaders in the United States forget how strong our country can be. The United States of America has the world's best military, and it will have for decades. It has the world's best universities and the best rule of law. We are known for having some of the hardest working, most entrepreneurial and innovative workforces anywhere. The United States has the widest, deepest and most transparent capital markets in the world – and the best businesses on the planet – small to large. These businesses are an essential part of America's strength – they are the engine of the economy. They create the wealth that we have today to enable all of the things we do as a nation. If it weren't for the capital investment, innovation and productivity of American business, we all still would be living in tents and hunting buffalo.

The need for honest dialogue and collaboration goes way beyond the financial system. We need it in fiscal reform, health policy, energy policy, immigration, education and infrastructure. If we don't start working together, we won't get it right. It is critical that we get it right to ensure America has the best possible future.

As Benjamin Franklin said, "We must, indeed, all hang together, or assuredly we shall all hang separately."

JPMorgan Chase Capital Levels (Basel I Tier 1 Common Ratio)



* Assumes analyst estimates for net income and dividends; share repurchases are assumed at the same level as employee issuance to neutralize capital impact

We firmly believe in strong capital requirements, but the G-SIB surcharge goes too far — as proved by the recently completed Federal Reserve stress test

The Federal Reserve recently completed its CCAR stress test. The stress case makes some pretty severe assumptions for the next two years:

- Unemployment goes to 13%.
- Gross domestic product drops 8% (in the real recent recession it dropped only 5%).
- Home prices drop 20% from today's levels (they already are reduced 34% from peak 2006 levels).
- Trading, capital and credit markets perform even worse than they did in the last crisis.

The Federal Reserve requires all banks to show that throughout this high-stress environment, they can maintain Basel I capital of over 5% (at all times), while it also assumes banks should continue their capital, dividend and repurchase plans as if there were no crisis (there virtually is no way we would continue to buy back a substantial amount of stock if this stress scenario began to unfold).

The chart on the previous page shows what our capital ratios were over the last several years and what analysts are forecasting they will be over the next two years. Recent stress test results conclude that we can increase the dividend, buy back $12 billion of stock and still have capital in the worst quarter (the Fed's stress test assumes that a huge amount of losses all happen in the ***same*** quarter) of no less than 5%. We believe that even if the Fed's severe stress scenario actually happens, our capital ratios will drop only modestly since we will very actively manage our risk exposures, expenses and capital. Keep in mind that during the ***real*** stress test after the collapse of Lehman Brothers, our capital levels ***never went down***, even after buying $500 billion of assets through the acquisitions of Bear Stearns and WaMu.

We deeply believe in stress testing, and we even think that a severe stress test like this, properly calibrated, is appropriate. But we also know – as the real stress test after Lehman's collapse and the recent severe Fed stress test make eminently clear – we have plenty of capital.

There also should be recognition that the whole system is stronger. Accounting and disclosure are better, most off-balance sheet vehicles are gone, underwriting standards are higher, there is much less leverage in the system, many of the bad actors are gone and, last but not least, each remaining bank is individually stronger.

The G-SIB is contrived, artificial and duplicative and doesn't recognize that while some companies were "too big to fail" during the financial crisis, some also were ports in the storm

Once again, very complex regulations are being overlaid on already complex regulations. Under the new Basel III rules, all banks will be required to have 7% Basel III common equity (this translates to approximately 10% Basel I). The new G-SIB requirements mandate for a company our size approximately 2.5% more capital, totaling 9.5% Tier 1 common equity (this equates to approximately 13% Basel I). This is capital that we simply don't need. The G-SIB calculations focus only on the negatives of size and don't recognize the positives of size – diversification of earnings and capital strength – which kept several large companies safe during the storm. In fact, diversification of earnings and even high market shares, which often is a sign of a company's strength, are treated as negatives in these calculations.

The G-SIB rule has 12 metrics to determine how much extra capital a bank needs. I won't bore you with all 12, but I will describe a few to show how arbitrary and contrived the rule is:

- Many of the measures simply look at gross numbers – assets, gross derivatives exposure, cross-border lending, etc. – without any regard for the risk of the credit, whether the risk is collateralized or whatever the tenor of the loan.

- One category is substitutability – an assessment of how easily clients can replace the important services provided by the bank. One of these measures looks at market share in debt and equity underwriting. We believe this is a flawed measure since any given debt or equity transaction usually involves multiple underwriters – so replacement usually isn't even necessary. And if it were, it could be done easily.
- Another measure looks at "risky" wholesale funding. This clearly is a legitimate risk measure for banks, but the G-SIB calculation treats any funding other than retail deposits as equally risky. Your company, which effectively has no wholesale money market funding, is viewed to be just as risky as a company that mostly is wholesale funded in the notoriously fickle money markets. And no credit is given for deposits from companies (most of which are rather sticky), secure funding sources or long-term funding.
- Another factor in the G-SIB calculation is whether a bank holds assets under custody. This is a business where the assets are completely separated from the rest of the company; i.e., already fully safeguarded. We do not understand why the custody business is in the calculation at all.

We could go on and on – the rule penalizes diversification, it treats liquid securities as being worse than loans, it gives no credit to the newly established Resolution Authority to dismantle a big bank and it is inconsistent with parts of Basel III, particularly around the value of operational deposits.

We don't disagree with all of the intent of the G-SIB – it includes some logical approaches to reducing the complexity of the financial markets and the interconnectedness between financial companies. But the way some of these measures are calculated is contrived and artificial. They are duplicative and completely violate the principles of risk-weighting assets. We believe that while the G-SIB rule will cause bigger banks to hold more capital and give them some incentive to shrink, it will not end up working the way regulators envisioned.

We believe banks will be forced to increase their capital levels in order to "cluster around" their major competitors. Even if a bank could run at 7% capital, it probably will have to run at the higher number to be perceived as strong competitively. Additionally, the rule will create unintended, anti-competitive market-distorting arbitrage. Big banks that have a lot of capital will more easily win certain types of business, such as processing, from smaller competitors. Big banks that need to hold 9.5% capital against mortgages simply will syndicate them out to smaller banks that need to hold only 7% capital against the same specific assets.

Regardless of how we feel about the G-SIB surcharge, we, of course, will meet all the requirements – and currently believe we can do so and still earn adequate returns for our shareholders. We just don't think it is the right way to regulate banks – or operate a financial system.

Resolution Authority – essentially bankruptcy – needs to be made real. We must eliminate "too big to fail"

One of the most important provisions of the Dodd-Frank legislative reforms is the creation of a robust Resolution Authority, which empowers the FDIC to take over a failing systemically important financial institution, including us, and resolve its operations and businesses in an orderly manner, without causing systemic risks to the financial system or excessive risks to the economy as a whole. Shareholders and creditors would bear all the losses (in a predictable and consistent way), with no exposure to taxpayers or damage to innocent bystanders. The management responsible for the failure would be replaced, and prior compensation to directors and senior officers would be clawed back. Ideally, the name of the failed institution also would be buried, memorialized only in the hall of shame of failed institutions.

The FDIC would manage this process, including providing operational liquidity if necessary, so that resolution would occur without a lengthy period of government intervention. Properly executed, there would be minimum value destruction and contagion effects inherent in fire sales or disorderly liquidations (this also would preserve as much

value as possible for unsecured debt holders – just as in an ordinary bankruptcy proceeding). Those responsible for causing the problem would bear the losses. If losses exceeded the amount of shareholder equity and debt, the banking industry, as a whole, would pay for the losses. This essentially is the way the FDIC has operated since its creation in 1933. There would be no cost to taxpayers, and there would be no bailout by the government.

As a result, critical operations that are important to the economy and the functioning of the financial markets would continue uninterrupted. Credit card processing, ATM networks, checking accounts and debit cards would continue to function, but under the control of new owners and management. Similarly, custody services of client assets, payments processing, asset management, and securities and derivatives clearing would continue without economy-damaging interruption.

Although Dodd-Frank calls this process "orderly liquidation," it really is comparable with a bankruptcy. Implementing this process for financial institutions operating in many jurisdictions around the world brings added complexity. We are working closely with regulators to clearly identify how critical operations in local jurisdictions would continue under a resolution process. Close cooperation is required by multiple regulators. We believe this can best be achieved by actively working together well before any such event occurs and carefully (perhaps legislatively) agreeing on how such an orderly liquidation would be pursued across international borders.

We certainly hope that a large systemically important financial institution never has to go through this process. Certainly, higher capital and liquidity standards, better loan quality and more disciplined underwriting make such a failure significantly less likely. However, the availability of this controlled "bankruptcy" process is critically important for forcing managements and creditors of such institutions to understand that they are NOT too big to fail – and to understand that they are NOT so important that the taxpayers will bail them out and that they are NOT immune to the consequences of excessive risk taking. This type of "bankruptcy" for failed financial institutions is essential for management to maintain market discipline and for risk taking of financial firms.

We need to ensure that America's large global banks can effectively compete

Many of the new rules potentially affect U.S. global banks more significantly than they affect non-U.S. banks. This is not to say that other countries (for example, the United Kingdom and Switzerland) aren't doing things to make it harder for their banks to compete. But we need to ensure that the rules, which affect only American banks, don't hurt – in their ***cumulative effect*** – American banks' ability to compete. Following is a list of regulations that are unique to American banks. (Many of these rules did not emanate from Basel but from the U.S. legislative and regulatory process.)

- The Volcker Rule – and we don't know its final effect yet – will affect only U.S. companies, including, possibly, American banks' activities outside the United States.
- The derivatives rules – still not complete – may require American banks to follow U.S. regulations outside the United States and effectively could eliminate our ability to offer derivatives to our corporate clients.
- The Collins Amendment eliminates tax-efficient Tier 1 capital, effectively increasing the cost of capital.
- Concentration limits restrict the ability of U.S. banks to acquire institutions outside the United States with no similar limitations on our foreign competitors.
- High Mortgage Servicing Rights capital charges (a uniquely U.S. asset) increase our cost of doing business.
- Proposed accounting changes are more punitive for U.S. banks when they hold marketable debt securities. Foreign banks will be able to hold many of these securities at cost, but American banks will have to deduct any unrealized losses from capital.
- U.S.-specific liquid asset classes are given less credit or excluded. Amazingly, covered bonds in Europe count as 100% liquid assets, but U.S. government-guaranteed mortgage-backed securities count only as 85%.
- The G-SIB capital charge gives no credit for U.S. Resolution Authority in Dodd-Frank.

- U.S. companies that have earned high market shares over time in the investment banking and custody businesses (usually a sign of having a strong business) are specifically penalized with higher capital charges.

Ironically, while the U.S. banking system is far less consolidated than ***all*** other developed nations (currently only six of the 50 largest financial firms in the world, by market capitalization, are American – they were 44 of the 50 in 1989 – this should give U.S. policymakers pause), the G-SIB charges and some of the other rules penalize American banks more than non-U.S. banks.

Suffice it to say, the negatives are adding up and bear close watching. While we strongly prefer to have common global rules for everyone, it may not be turning out that way. It is incumbent upon American policymakers to make sure that the final outcome is fair to American banks and that they are ***fully free*** to compete in the face of increasingly tough global competition.

Basel III, procyclicality, group think and the role of judgment

Quantitative easing may be good policy to help the economy recover, but it does artificially increase the value of government and government-guaranteed securities. The new Liquidity Coverage Ratio gives government and government-guaranteed securities credit only for being liquid – no other assets, including gold, equities or corporate bonds have ***any*** liquidity value. This also creates higher demand and, therefore, a higher artificial value for government securities. The Volcker Rule, as it currently is written, also allows unimpeded trading and liquidity for government securities and a lot less liquidity for everything else. Pension accounting is forcing pensions to hedge their liabilities by buying fixed-rate securities at precisely the wrong time. Banks hold large available-for-sale securities portfolios to manage their assets and liability risk management. And if rates ever go up (and they will) and there are losses in these portfolios, the losses will have to be deducted in capital – even though the liabilities that they are hedging are not being marked-to-market. All the items we just mentioned could be looked at as one large "crowded trade." If things ever start to go wrong, everyone could head to the exit door at the same time. Your company has positioned itself to be protected against rapidly rising rates – in fact, the company would benefit if either short-term or long-term rates went up.

Markets already are naturally procyclical, and Basel III makes it worse. In a crisis, Basel III demands that even more capital be held against risky assets. We estimate that the swing in Tier 1 common capital from benign times to crisis times could be as much as a 20% difference in the capital ratio. We should try to make Basel III countercyclical – but certainly not more procyclical.

Finally, the ultimate goal, with which we mostly agree, is to have Basel III applied fairly and evenly around the world. But this leads to another potential set of issues. Everyone will start to have an increasingly more common view of the risk of a certain type of asset. This is what happened in the United States when everyone thought mortgages were completely safe. Models eventually will replace judgment – and this is a terrible idea. Models always are backward looking and don't capture true underlying shifts and changes that affect credit or markets; e.g., increasing or reducing liquidity, structural changes in industries that dramatically change the riskiness of an industry (think of what the Internet did to newspapers) or real quality underwriting vs. lax underwriting. And models have a hard time capturing concentration and correlation of risks (think of oil and real estate in oil regions). Many years ago in the United States, there were approximately eight large banks in Texas. Within five years after the oil crisis, only one survived as an independent bank. The others were either sold under duress or went bankrupt – not because of their oil exposure but because of their real estate exposure. Models cannot replace judgment, and judgment helps to balance and diversify the global financial system.

VI. THE MORTGAGE BUSINESS - THE GOOD, THE BAD AND THE UGLY

Many of the financial crises of the past hundred years around the world were related to real estate. Real estate was not the only culprit in the recent crisis, but it certainly was at the eye of the storm. I suspect that the mortgage crisis will be the worst financial catastrophe of our lifetime. What the world experienced was almost a collective brain freeze – traditional mortgage underwriting loosened over time (actively supported by the U.S. government) such that we got Alt-A mortgages, subprime mortgages and option-adjustable rate mortgages (option-ARM). These mortgages were packaged into securities (sometimes guaranteed by government entities and insurance companies), and home ownership was going up – it all seemed to be working. But as the process unfolded, unscrupulous mortgage officers were mis-selling mortgages, some borrowers were lying on mortgage documents and speculation was rampant. It was a disaster hidden by rising home prices and false expectations, and once that price bubble burst, we all were in trouble.

We need to write a letter to the next generation that says, "Never forget: 80% loan to value and verify appropriate income."

Clearly, it was not our finest hour

We were one of the better actors in this situation – but not good enough; we made too many mistakes. We generally were a better underwriter. We did not originate option-ARMs. Many of our problems were inherited from Bear Stearns and WaMu. Even our subprime mortgages outperformed most other subprime mortgages. Early in the crisis, we also stopped dealing with mortgage brokers, some of whom underwrote the worst of the mortgages and probably mis-sold mortgages more than most.

But we did participate in this disaster by originating mortgages that wouldn't have been given a decade earlier (and won't be given a decade later). And when delinquencies and foreclosures grew dramatically, we were ill-prepared operationally to deal with the extraordinary volume of troubled mortgages and upset borrowers. Our servicing operations left a lot to be desired: There were too many paperwork errors, including affidavits that were improperly signed because the signers did not have personal knowledge about what was in the affidavits but, instead, relied on the company's processes. However, the information in the affidavits was largely accurate – i.e., the borrower, in fact, was in default, we did have the mortgage and so on.

Gearing up to deal with this problem meant overcoming the multiple and poor systems we inherited from our acquisitions of Bear Stearns and WaMu. In addition, there were numerous government modification and refinancing programs and multiple changes to these programs to contend with, some of which involved extensive and hard-to-complete paperwork. We now have 23,000 people servicing delinquent loans or dealing with foreclosures – up from 6,800 people in 2008.

These problems, as one might expect, led to a myriad of lawsuits from various U.S. government agencies, attorneys general from the 50 states and private investors.

We have settled with the U.S. government and state attorneys general and implemented strong new policies – for the good of all. In February 2012, JPMorgan Chase and four other top mortgage servicers agreed to a global settlement with the U.S. Department of Justice, the U.S. Department of Housing and Urban Development, the Consumer Financial Protection Bureau and the state attorneys general. The settlement relates to the servicing and origination problems mentioned above.

For us, the settlement will consist of the following:

- Making cash payments of approximately $1.1 billion (a portion of which will be set aside for payments to borrowers) to 50 states.
- Offering approximately $500 million of refinancing relief to certain "underwater" borrowers whose loans are owned by the firm.
- Providing approximately $3.7 billion of additional relief for certain borrowers, including reductions of principal on first and second liens, payments to assist with short sales, deficiency balance waivers on past foreclosures and short sales, and forbearance assistance for unemployed homeowners.
- Agreeing, along with the other banks, to a new set of enhanced nationwide standards for mortgage servicing, including requirements around single point of contact, staffing levels and training, communication with borrowers and document execution in foreclosure cases. The standards also will require banks to offer modifications and other foreclosure alternatives for borrowers before pursuing foreclosure – a practice in which we have and will continue to be actively engaged. We support these new standards – they will help establish a higher level of transparency and clarity for servicer activities and, ultimately, will strengthen the stability of the industry as a whole. (I will talk later in more detail about all the things we are doing, in addition to the things mentioned above, to help homeowners.)

The global settlement releases JPMorgan Chase from further claims related to servicing activities, including foreclosures and loss mitigation activities, certain origination activities and certain bankruptcy activities. Not included in the settlement are claims from investors in private label securities who are making claims both on representations and warranties (i.e., that the underwriting wasn't done according to the standards in the securities contracts), as well as lawsuits claiming there were misstatements in the underwriting of the securities.

We have substantial reserves for mortgage litigation. One of the challenges our firm continues to face following the economic crisis is litigation relating to mortgage-backed securities issued by JPMorgan Chase, Bear Stearns and WaMu. Investors have brought securities litigation, trustees have demanded loan repurchases and regulators continue to scrutinize these transactions. As I always have said, we will honor our obligations. However, we also will defend against demands that are not reasonable. Securities claims brought by sophisticated investors who understood and accepted the risks associated with their investments – which, in some cases, are current and still paying – face substantial legal hurdles. Likewise, we are going to fight repurchase claims that pretend the steep decline in home prices and unprecedented market conditions had no impact on loan performance or that seek to impose liabilities on us that we believe reside with third-party originators (or, in the case of WaMu securitizations, with the FDIC). These plaintiffs face a long and difficult road, and, as a result, litigation over these issues could take many years. Nonetheless, we have set aside significant reserves to handle these exposures.

How we are trying to properly and fairly deal with delinquencies, modifications and foreclosures

First, some facts: Of 76 million owned homes in America, 24 million do not have a mortgage. Of the remaining 52 million homes with mortgages, approximately 4.7 million have a delinquent mortgage. And approximately half of those that are delinquent are on homes where the value of the home is worth less than the mortgage. Another 10+ million homeowners are current on their mortgages, but their houses are worth less than their mortgages. (We estimate that approximately 25% of these mortgages ultimately will go into default – homeowners for the rest will continue to pay and, it is hoped, will recover the value of their homes.)

Here is where we stand and how we are trying to deal with the situation:

- **If we treated a homeowner improperly, we should make it right.** Anyone who was mis-sold a loan or was foreclosed on improperly deserves redress. Mis-selling a loan is where the borrower was misled about significant loan terms or fees or interest rates that were higher than they should have been. An improper foreclosure is one in which the homeowner did not owe the money or was not in default. If it comes to our attention that we participated in any of these situations, we will fix them immediately. That said, however, many loans were taken out by unscrupulous borrowers, individuals who either lied about their income or lied about their intention to live in the home – they clearly were speculating that they could "flip" the real estate for a profit on rising home prices. These individuals should not receive help for any reason.

- **If a homeowner can afford to pay the mortgage – whether or not the home is underwater – the mortgage should be paid.** A mortgage is a loan collateralized by the house. It is not a loan that one should feel free to walk away from if the house goes down in value. Most of the people in this situation can, and do, pay their mortgages. Some attempt a "strategic" default – even if they can afford to pay, they just walk away. Even though they still owe the difference, it is hard for the lender to collect. It is hoped, as the housing market recovers, these "underwater" homeowners will get equity back in their homes.

- **If a homeowner cannot afford the mortgage but can afford a reduced payment, we try to modify the loan.** When a mortgage becomes delinquent, we make a very concerted effort to contact the person. We start reaching out as early as 15 days after a loan becomes delinquent and, for some homeowners, make a hundred or more attempts before foreclosure. We are sympathetic with these borrowers because most of them are unable to make their payments for legitimate reasons – someone lost a job, someone got sick or a person's income level dropped precipitously. In these cases, we try to modify the mortgage – both under a government initiative called Home Affordable Modification Program (HAMP), which has strict requirements, and through our Chase Home Affordable Modification Program (CHAMP), where we can be more flexible. We often can reduce the interest rate to as low as 2% and, in some cases, reduce the principal. Since 2009, we have offered over 1.2 million modifications and completed more than 450,000. We have reduced payments to borrowers by a current run rate of $1 billion annually. Ultimately, we expect to reduce payments over the years by more than $10 billion. For loans owned by JPMorgan Chase, we already have deferred principal of $1.5 billion, forgiven over $2.1 billion in principal and reduced interest payments by $1.2 billion. And by the end of the process, we expect to have forgiven principal of approximately $4.5 billion and reduced interest payments by a total of $3.5 billion.

  We treat loans to investors (i.e., loans in private label securities) the same way we treat loans that we own. It is important to note that all modifications are done according to specific contracts. These contracts stipulate that you can modify a mortgage only when it is better for the lender than foreclosing, all things considered (i.e., the net present value of a modified loan is worth more than going through a foreclosure process, with all its expense, and ultimately selling the home at a very distressed price).

- **If a homeowner cannot afford the home, even with the modification, we still try to avoid foreclosure.** If someone can't afford a mortgage at 2%, even using a reduced valuation on the house, foreclosure is the last option. Since 2009, we have prevented approximately 750,000 foreclosures through our various programs, including modifications – twice as many as have been foreclosed.

Programs designed to prevent foreclosures include short sales or deeds-in-lieu situations in which the homeowner agrees to sell the house or lets us sell the house. In some cases, we pay homeowners to sell their homes, and we waive deficient loan balances (waiving deficient loan balances represents debt forgiveness to these borrowers). These foreclosure programs have cost us $6 billion so far, including direct payments of $150 million and balance waivers of $5.8 billion. When these programs conclude, we expect to have paid a total of $650 million in direct payments and more than $12 billion in balance waivers.

- **Foreclosure.** While foreclosure is a terrible option, it sometimes is the only option. While it is awful for the homeowner, it does allow an individual to get a fresh start and more affordable housing – and relief from a crushing debt burden. Foreclosure is the worst option for the bank, too, because the house usually is left in poor condition and sold for substantially less than the outstanding balance on the loan, resulting in a loss. (We even, from time to time, make payments to people to help them leave the home in good condition and be able to afford to relocate.) By the time we actually foreclose on someone, we generally have not received a payment for 17+ months; and in 54% of the cases, the house was either vacant or occupied by someone other than the owner. The loss to the bank, in effect, becomes loan forgiveness to the individual – but this "forgiveness," it is hoped, is going only to people who really need it: people who truly are unable to pay and really need the debt relief. Since 2007, JPMorgan Chase has recognized losses on first mortgages of more than $21 billion due to foreclosures and charge-offs. Ultimately, we will have recognized more than $27 billion in foreclosures and charge-offs.

- **Home equity loans generally are modified if we modify the mortgage loan and almost always are written off if there is a short sale or foreclosure.** We treat home equity loans that we own exactly the same whether we own the first mortgage or service it for someone else. When the first mortgage is modified, the home equity loan generally is modified, and the modification terms typically are at least as generous to the borrower as the terms of the first mortgage. The home equity loan essentially will pay off only if the first mortgage ultimately pays off. Importantly, if the first mortgage is ever foreclosed on or written down due to a short sale, the second mortgage almost always is written off. Since 2007, we have recognized losses of more than $16 billion in home equity loans and expect as much as another $5 billion over the next few years.

This is a miserable situation all around, but we want our shareholders to know that we are trying to treat every borrower fairly and properly based on the individual's situation and circumstances.

But it also will be the best of JPMorgan Chase

We have brought enormous resources to bear on fixing our mortgage business. Many of our top executives volunteered to help – and we now have some of our best people from finance, risk, technology and operations devoted to this effort. As a result, we are responding rapidly and are improving across the board. For example:

- **In early 2009, Chase opened the first Chase Homeownership Center to help customers under financial stress stay in their homes.** We now have 82 brick-and-mortar centers located in 28 states and the District of Columbia, regions hardest hit by the housing crisis. Six of the 82 are near military bases, and the mortgage counselors at these centers receive special training to understand general military issues, special military programs and the Servicemembers Civil Relief Act. Over the past two years, our Borrower Assistance employees have met with more than 273,000 customers who are behind in their payments or are likely to be, and Chase has held 1,800 outreach events for homeowners who need assistance.

- **On October 4, 2011, our mortgage servicing platform, which, in fact, was three legacy technology systems from Chase, Bear Stearns and WaMu, was consolidated.** This was a huge 13-month effort that resulted in one Chase system, one way to serve customers, and a better and more consistent customer experience.

- **Our customer satisfaction scores in both external and internal surveys have improved considerably.** In the 2011 J.D. Power Mortgage Origination survey, Chase jumped to #5 from #12 in customer satisfaction among lenders nationwide – the largest improvement of any company. (We're still not satisfied with being #5.) At the same time, customer complaints have declined more than 60% from a high point in May 2011.

The mortgage business is important – that's why we are going to stay in it

Providing a mortgage – helping our customers own and stay in their homes – is one of the most important and emotional connections we have with our customers. It also is a product that has the potential to deepen our relationship with customers. Our Retail branch franchise and brand give us an enormous competitive advantage in the mortgage business. There are 5.7 million customers who have an existing Chase mortgage. But with a base of 50 million customers, we think we could double the number of mortgage customers.

Once we finish fixing it, the mortgage business will be a great one for JPMorgan Chase. The winners in the business will be those who have good customer relationships and are good at large-scale servicing and processing – right up our alley. Normalized earnings for this business should be about $2 billion, with a through-the-cycle return on equity (ROE) of about 15%. We continue to invest in this business by growing our sales force and introducing technology applications to improve the customer experience. Over the past year, we added 700 loan officers – bringing our total to 3,800 – and we are serving more customers as a result. Plus we plan to hire an additional 1,000 loan officers in 2012.

Housing is getting better – there, I said it

There has been a tremendous focus on the fact that housing prices remain depressed and, in fact, are still going down some. The large "shadow inventory" of homes in delinquency or foreclosure that has not yet hit the sale market adds to the fears that this will continue for a long time. New home construction still is very depressed – so, to most, the future looks bleak. However, if one looks at the leading indicators, all signs are flashing green – the turn is coming if it is not here already. We don't want to be blindly optimistic, but the facts are the facts:

- America has never stopped growing. The United States has added 3 million people a year since the crisis began four years ago. We will add 30 million people in the next 10 years.
- This population growth normally would create a need for 1.2 million additional housing units each year. Household formation has been half of that for the past four years. Our economists believe that there is huge pent-up demand and that household formation will return to 1.2 million a year as job conditions improve.
- Job conditions have been improving, albeit slowly. In the last 24 months, 3.45 million jobs have been created.
- On average, only 845,000 new U.S. housing units were built annually over the last four years – and the destruction of homes from demolition, disaster and dilapidation has averaged 250,000 a year. The growth of new households, even at a reduced rate, has been able to absorb all of this new supply, and more.
- The total inventory of single-family homes and condos for sale currently is 2.7 million units, down from a peak of 4.4 million units in May 2007. It now would take only six months to sell all of the houses for sale at existing sales rates, down from 12 months two years ago. (This low of an inventory number normally would be considered a positive sign for future housing prices.)
- While the shadow inventory mentioned above still is significant, it has shown a visible declining trend since peaking at the end of 2009, when the number of loans delinquent 90+ days or in foreclosure was 5.1 million homes. It now totals 3.9 million, and we estimate it could be 3 million in 12 months. The shadow inventory also may

move more quickly as mortgage servicers get better at packaged sales and short sales and as real money investors start to buy foreclosed homes and rent them out for a good profit. Home prices still are going down a little bit, and they will stay depressed for a while. Distressed sales (short sales, foreclosure sales, real estate-owned sales) still are 25% of all sales, and these sales typically are priced 30% lower than non-distressed sales. As the percentage of distressed sales comes down over the next 12-24 months, their negative effect on housing prices will start to diminish.

- Housing is at an all-time high level of affordability due to both low home prices and low mortgage rates.
- It now is cheaper to buy than to rent in half of the markets in America – this has not been true for more than 15 years. Relatively high rental prices can be a precursor to increasing home prices.
- At the same time, American consumers are finding more solid financial footing relative to their debt. The household debt service ratio, which is the ratio of mortgage plus consumer debt payments to disposable personal income, stands at its lowest level since 1994. This is a result of rapid consumer deleveraging – household mortgage debt now is down $1 trillion from its 2008 peak. (Reported U.S. mortgage data do not remove mortgage debt from an individual's debt obligations until there is an actual foreclosure. It is estimated that $600 billion of the $9 trillion in currently outstanding mortgage debt is not paying interest today and effectively could be removed now from these numbers.)
- Recent senior loan officer surveys by the Federal Reserve show that, while there are not yet clear signs of credit loosening for new mortgages, at least the rush to tighten mortgage lending standards has abated.
- Over the last two years, $2 trillion of mortgages have been refinanced, substantially aiding homeowner burdens. We expect another $2 trillion to refinance over the next two years, with approximately 10% coming from recently announced government programs, and, at that point, we estimate that only 15%-20% of Americans will be paying interest rates over 6%.

More jobs, more households, more Americans, good value – it's just a matter of time.

VII. COMMENTS ON THE FUTURE OF INVESTMENT BANKING AND THE CRITICAL ROLE OF MARKET MAKING

We believe that investment banks provide a critical role in facilitating the flow of capital to meet client needs and that those needs will grow dramatically in the next 10 years

It is important to look at any business from the point of view of the client. Our 5,000 issuer clients and 16,000 investor clients will have large and growing needs in the future.

Corporate clients' need for equity and debt issuance, M&A and other advice, and balance sheet management is projected to almost double over the next 10 years. Global infrastructure investment will more than double over a two-decade period – it is projected to reach $3.7 trillion by 2030.[(a)] Total global financial assets of consumers and businesses, which now total $198 trillion, are projected to nearly double to $371 trillion by 2020.[(b)] Clearly, these huge capital and investing needs of clients will drive real underlying growth of the investment banking business. And JPMorgan Chase is in the sweet spot because much of the growth will be with our clients – large, often multinational companies, government-related entities and large global investors. And our role as an issuer of securities and as a market maker places us right in the center of key money flows.

Of course, these business volumes, while they will grow over time, frequently have volatile swings within months, quarters and years. Not only can volumes easily move 50% by quarter or year, but spreads and fees also can move dramatically, affecting our revenue. The facts above convince us that the large slowdown we saw in the second half of last year was cyclical, not secular. And volatility does not make the business bad – it simply means you have to manage the business, knowing that it can happen at any time. In 2011, a tough time for many investment banks, your J.P. Morgan Investment Bank earned a 17% ROE.

Demystifying market making (trading) – why it is so important

While most people understand corporate finance fees are earned for stock or bond issuance or advice, market making is a mystery to most people – it remains a black box. We need to do a better job of describing the important role of market making and explaining how it can be done safely. Before I talk about our market-making business, it is important to recognize that market making is a normal function of any economy. While we make markets in general in financial instruments, others make markets in just about everything, everywhere – farmers markets, all types of food and commodities markets, lumber, paper, ink, advertising, steel, etc. Markets are simply where buyers and sellers meet to exchange products and services, and market makers facilitate the process.

Sixteen thousand investor clients use our market-making services. These clients include mutual funds, corporations, pension plans, states, municipalities, hospitals, universities, etc. The services we provide are research, advice and execution. Clients come to us when they want to buy or sell securities (in this section, when I refer to securities, I mean stocks, bonds and loans of companies, bonds of government entities, mortgage securities of all types, commodities of all types, currencies of all types and derivatives on all of the aforementioned securities, including swaps, options, etc.).

It takes substantial resources to provide these services properly. We have more than 800 professionals carrying out research on 4,300 companies, 1,000 government entities (states, municipalities, etc.) and 80 countries – at a cost of approximately $600 million a year. We analyze securities, markets and economies around the world. Our job is to educate our investors and issuers and help them accomplish their global financial objectives.

(a) According to McKinsey Global Institute Study, *Farewell to cheap capital? The implications of long-term shifts in global investment and saving*, December 2010

(b) According to McKinsey Global Institute Study, *The emerging equity gap: Growth and stability in the new investor landscape*, December 2011

To execute trades, J.P. Morgan has more than 110 trading desks around the world – 2,000 traders – making markets and executing trades in securities, broadly defined. And 2,500 salespeople call on our 16,000 investor clients, offering ideas and advice. Supporting our research, sales and trading are approximately 13,000 technology and operations specialists and 4,000 control, finance and risk management professionals across the Investment Bank. In addition, we hold an average of $400 billion in inventory (securities, broadly defined), which we turn over constantly, and we provide, on average, more than $250 billion of securities financing for clients. Our market-making operations also help our issuer clients sell or raise approximately $430 billion of capital a year.

We trade over a trillion dollars of securities, broadly defined, every day – for example, approximately 90,000 separate trades a day in our fixed income business alone. While we do business with 16,000 clients, the top 1,000 clients account for a large portion of the business. These investors are smart and sophisticated – we want their repeat business, but we have to earn it. Presumably, they keep coming back to us because they value the services we provide; but if we did not give them great value and great prices, we probably would not get their business – they have lots of other options – and there is a lot of competition for their business.

Our aim is simple – to provide our clients with sound investment ideas and value-added, world-class execution at increasingly lower cost.

The cost of these services to clients has been coming down dramatically over time – benefiting both investors and corporate issuers. Thirty years ago, it cost, on average, 15 cents to trade a share of stock, 1% (100 basis points) to buy or sell a corporate single-A bond and $100,000 to do a $100,000,000 interest rate swap. Today, it costs, on average, 1.5 cents to trade a share of stock, 10 basis points to buy a corporate single-A bond and $4,000 to do a $100,000,000 interest rate swap. Market making creates great liquidity in the market, giving investors confidence that they can buy and sell securities – often at a moment's notice. Market making also is being done at an increasingly lower cost of execution, which is a benefit to investors and issuers, buyers and sellers. Reducing spreads, or the cost to do a trade, means that the buyer gets to buy at a better price, ***and*** the seller gets to sell at a better price. This is no different from Wal-Mart Stores, Inc. offering you great products at lower prices. Innovation in products, systems and markets has driven down these costs, and the investor and issuer are the beneficiaries.

Profitability is driven by serving many clients well at a low cost to them – we take on risk, which we manage carefully, to serve our clients. A few examples will suffice. We have huge volumes of business, allowing us to offer good prices. For example, in North America Cash Equities, we buy and sell approximately 160 million shares a day at 1.5 cents per share. In foreign exchange trading, we do approximately 80,000 spot/forward trades a day, netting only $70 a trade (75% is done electronically). In credit trading, we do 4,000 trades a day (mostly bonds), making $1,500 per trade. We also trade, on average, approximately 500 interest rate swaps a day. Certain products have higher fees associated with them, but fees generally are consistent with the risk and cost we need to take to execute the trade. In all of these examples, revenue obviously is offset by the cost of operating the business, including the cost of hedging. And when volumes drop or spreads tighten, the business clearly becomes less profitable.

The revenue on 98% of our trades averages $50,000 or less – per trade. But on a handful of trades, we do make much larger fees because we serve our clients by taking on substantially more risk. Two examples will help explain. In one instance, we executed a multibillion dollar interest rate swap for a leading real estate company. In another trade, we executed a multiyear, half-billion dollar oil hedging program for a leading transportation firm. On some of these large trades, we can make revenue of millions of dollars, but to do so, we take on large risks, which we prudently try to hedge – an undertaking that frequently cannot be completed immediately. On occasion, after all is said and done, we may not make any revenue at all. However, our clients are happy – they have paid us to take on risks that they don't

want. And when we assume the risk, it is our job to manage it so that we are paid fairly, on average, for the risk we took.

In the market-making business, we actively try to hedge our positions to protect the firm from violent price swings. But all hedges are not perfect, and some things simply cannot be hedged. So we do take risk by holding inventory, but that is the cost of doing business – a cost not much different from the inventory a retailer or wholesaler holds in stores to serve their customers. (When they lose money on their inventory, it's called markdowns or sales.) Holding inventory at appropriate levels is a cost of doing business – it is not speculating.

Many clients have a large need for derivatives to manage their exposures. Even more misunderstood than market making in stocks and bonds is derivatives. Ninety percent of the global Fortune 500 companies actively use derivatives. They don't use them because we want them to do so. They use them to manage their own exposures. Ninety percent of what they do, and what we do, is pretty basic – they use interest rate or foreign exchange (FX) derivatives to manage interest rate or FX exposures. In addition, clients use derivatives to manage commodity exposures, credit exposures and other risk exposures. Many companies have huge exposures that they need to hedge so that they are not badly hurt or even bankrupted by violent moves in prices. Farmers have been doing hedging for a long time, and, in the modern world, it also applies to airlines, banks, investors and others who have exposures to oil, interest rates, foreign exchange rates, etc.

We tightly manage our risk in derivatives by limiting our risk to each counterparty, by limiting the type of risk we take within each counterparty and by taking substantial collateral against existing credit exposures. Today, our net credit exposure to all counterparties, net of collateral – in essence, what we are owed by our various counterparties – is approximately $70 billion. Most of our unsecured exposure is to government entities or corporate clients where we deliberately don't ask for collateral, which essentially is a way to extend credit to them. With all of our major global market counterparties – think of all the other major financial institutions – we don't leave any material unsecured derivatives exposure at all – we post collateral to each other every day.

One other great fear about derivatives is their "lack of transparency." If by "transparency" people mean transparent prices, derivatives actually are very transparent. Computer screens provide immediate pricing and very accurate spread information on the majority of derivatives, and many dealers can respond with actual bids, in size and with very tight spreads, to anyone who calls. If by "lack of transparency" people mean that the regulators cannot access the information they need to evaluate the risks, then that is incorrect – they can and do see everything we can see. Finally, if by "transparency" they mean that investors (our shareholders and debtholders) can't see or understand the risks – that's kind of true even though we make extensive disclosures. But you can look at any large company's public disclosures, and there will be some, not deliberate, lack of transparency. For example, it's not transparent what newspaper companies pay for print or paper or how various companies have their inventory marked or what insurance companies' true exposures are. We try to be as transparent as we can meaningfully be, without overwhelming our investors. We welcome any suggestions on how we can get even better at this.

A liquid secondary market is critical to the primary market – where corporate and government-related entities issue securities. Because America has such deep secondary markets, corporate and government-related entities can issue large quantities of securities quickly and at a low cost. When a corporate bond issuer comes to market with a multibillion dollar issue, the world already has been educated on the company, the bonds usually are traded actively and the issue usually can be placed fairly quickly at low cost to the issuer.

This would not be possible if we did not have a high level of efficiency, activity and liquidity in the secondary markets where existing issues constantly are bought and sold. If secondary markets were traded with less frequency, then spreads – or costs –

would increase, thereby making it far more expensive for entities – public and private – to raise capital by issuing new securities. America has the widest, deepest and most transparent capital markets in the world at the lowest prices for both issuer and investor. While we clearly had some issues with parts of these markets and believe reform is needed – let's not destroy the world's best capital markets.

We do not disagree with the *intent* of the Volcker Rule. If the intent of the Volcker Rule was to eliminate pure proprietary trading and to ensure that market making is done in a way that won't jeopardize a financial institution, we agree. And we believe there are many ways to accomplish this: by holding proper capital, by insisting on proper liquidity, by proper marking of positions, by proper reporting of risk, by constantly turning over the risk in inventory positions as appropriate for the type of security – trading in illiquid securities will have less turnover than trading in government securities – and by making sure that most trading is customer driven – much of the trading the Street does with itself is effectively to syndicate out unwanted risk, which is no different from loan syndication. But by its nature, market making requires that traders, in order to facilitate client business, take positions in inventory that they hope to sell later.

The reader should understand that loans, a traditional bank function, are proprietary, illiquid and risky by their nature – but that doesn't make them bad. And most banks that have gone bankrupt did so by making bad loans – not by trading. Loans and market making both serve a critical function: financing the American business machine.

The Volcker Rule and derivatives rules need to be formulated in such a way as not to severely inhibit American banks' ability to compete and serve clients. If the Volcker Rule or the derivatives rules are written in a way that constrains our ability to actively make markets or to competitively provide derivatives to our clients, our future will not be as bright as it could be. For both rules, one of the key questions is how they will apply to business conducted outside the United States. We cannot and should not be in a position where the rule affects U.S. banks outside the United States but not our foreign competition. Not only would we be unable to compete effectively in Europe, Asia and Latin America, but much of the business that we currently do in America (with investors or corporations) likely will move to foreign jurisdictions because our competitors will be able to offer a better deal. No matter how much our clients may like us, they will (and should) move their business if they get better pricing elsewhere.

In any case, we are well-positioned to be a winner in the investment banking business. While we do believe that there will be some large-scale changes affecting the business – driven by both regulation and innovation – J.P. Morgan has the breadth – we are one of the top players in almost all of the markets that we deal in – and necessary economies of scale to emerge as a winner.

VIII. WHY WOULD YOU WANT TO OWN THE STOCK?

With record earnings, top three positions in each of our major businesses and clear paths to growth, why hasn't the stock done better?

There are many issues that are causing investors concern, creating legitimate reasons for why bank values are depressed. Our stock closed the year at $33.25, lower than it was five years earlier. Over that time period, we underperformed the Standard & Poor's Index by 22% although we outperformed the Bank Index* by 41%. (As of March 15, 2012, at the time I am writing this letter, the stock has recovered to $45 a share, and these two numbers would be a 7% underperformance and a 60% outperformance, respectively).

In the beginning of this letter, I mentioned that we are buying back a substantial amount of stock despite all the issues facing our company. Given these issues, we feel we owe you an explanation about why we are doing this and how we view the stock.

There are significant issues affecting the stock valuation – but they will resolve over time

Banks do face a plethora of difficult and potentially damaging issues. Since the crisis, we have met with many bank investors who have said, "Bank stocks are uninvestible," and they cite the following reasons:

- High economic uncertainty, a weak recovery in the United States and large potential problems in Europe
- A low interest rate environment causing reduced margins
- The continued poor housing market in the United States
- Ongoing litigation around mortgage securities
- The large amount of regulation, including much higher capital and liquidity standards and the fear that given so much capital and regulatory constraints, we won't be able to earn an adequate return on our capital
- Ongoing anger at banks, which can lead to even more regulation and litigation
- Increasing global competition from large banks and from less regulated shadow banks

These issues are real and substantial. Regarding the first three issues, we have an abiding faith that the United States will recover, interest rates will normalize and housing will get better. We're already starting to see some hopeful signs. We also believe we are reserved substantially for mortgage litigation (as we've already described).

Much of the uncertainty around regulation will be resolved over the next 12-24 months. In my opinion, only two regulations materially can hurt our competitive ability (the Volcker Rule and the derivatives rules, which I spoke about in the last section). We believe they both will be properly resolved in a way that will allow us to compete fairly. We also believe there will be a lot of unintended consequences as a result of the complexity and interplay of all the regulations. And – while I have expressed my concerns on behalf of the consumer, the industry and the country – my sense is that JPMorgan Chase could benefit from as many unintended consequences as we will be hurt by them. This, however, may not be true for some of our competitors.

Finally, it is possible that we may be required to hold more capital than our main competitors, but we still believe we will find ways to manage both our capital and our businesses such that we earn adequate returns.

As all of these issues are resolved, we will be left with a stronger and more competitive company, our earnings will be higher, our industry will be growing and our future will be bright.

* Excluding JPMorgan Chase

Why we bought back the stock and how we look at stock value

Our tangible book value per share is a good, very conservative measure of shareholder value. If your assets and liabilities are properly valued, if your accounting is appropriately conservative, if you have real earnings without taking excessive risk and if you have strong franchises with defensible margins, tangible book value should be a very conservative measure of value.

And we have substantial, valuable intangibles. Our brand, our clients, our people, our systems and our capabilities are not replicable – even if I gave you hundreds of billions of dollars to do it. We have many businesses that earn extraordinary returns on equity because there is very little equity involved; e.g., much of our asset management business, our advisory business, parts of our payments businesses and others.

Many of our assets would sell at a substantial premium to what currently is on the books; e.g., credit card loans, consumer branches and others. To be honest, some also would sell at a discount vs. what they're on the books for – though many of these assets or loans will give us the cash flow return we expect and which normally are attached to a client where we earn a lot of non-loan-related, highly profitable revenue (i.e., cash management, etc.). The loan itself might sell at a discount, but the whole relationship would not. And, certainly, most of our businesses, if we sold them whole, would sell at a substantial premium to tangible book value.

Our best and highest use of capital (after the dividend) is always to build our business organically – particularly where we have significant competitive advantages and good returns. We already have described many of those opportunities in this letter, and I won't repeat them here. The second-highest use would be great acquisitions, but, as I also have indicated, it is unlikely that we will do one that requires substantial amounts of capital.

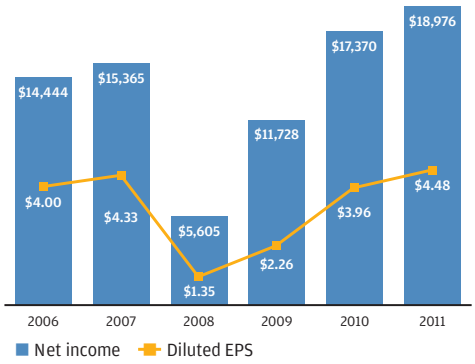
We have huge capital generation. When you look out many years into the future, JPMorgan Chase should generate huge amounts of capital, and much of it will be hard to deploy. Unfortunately, the CCAR test restricts our ability to buy back stock because it looks at just two years of capital generation. So while we have less capital than the 9.5% that we currently believe we will need under Basel III, once we get there, we will be generating extreme amounts of excess capital. And our organic growth and acquisitions unlikely will be able to use it all.

So buying back stock is a great option – you can do the math yourself. Haircut our earnings numbers that analysts project and forecast buying back, say, $10 billion a year for three years at tangible book value. With these assumptions, after four years, not only would earnings per share be 20% higher than they otherwise would have been, but tangible book value per share would be 15% higher than it otherwise would have been. If you like our businesses, buying back stock at tangible book value is a very good deal. So you can assume that we are a buyer in size around tangible book value. Unfortunately, we were restricted from buying back more stock when it was cheap – below tangible book value – and we did not get permission to buy back stock until it was selling at $45 a share.

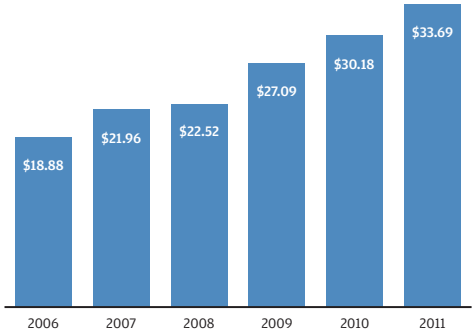
Our appetite for buying back stock is not as great (of course) at higher prices. If you run the same numbers as above, but at $45 per share, buybacks would be accretive to earnings and approximately break even to tangible book value – still attractive but far less so. Currently, above $45 a share, we plan to continue to buy back the amount of stock that we issue every year for employee compensation – we think this is just good discipline. As for the excess capital, we will either find good investments to make or simply use it to more quickly achieve our new Basel III targets. Rest assured, the Board will continuously reevaluate our capital plans and make changes as appropriate but will authorize a buyback of stock only when we think it is a great deal for you, our shareholders.

Earnings and Diluted Earnings per Share
2006-2011

($ in millions, except diluted EPS)



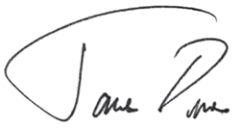
Tangible Book Value per Share
2006-2011



The tables above show our earnings per share and tangible book value per share over the last six years. I'd like to make one last comment about our stock and your company. I view it as a great sign of strength that, in the worst financial markets since the Great Depression, your company could earn money, grow tangible book value, buy Bear Stearns and WaMu and expand our franchise.

CLOSING

Let me close by thanking our 260,000 employees. Day in and day out, they are the people who serve our clients, communities and shareholders with distinction and dedication. They make me very proud, and I am honored to be their partner.



Jamie Dimon
Chairman and Chief Executive Officer

March 30, 2012

One Chase

Working together as One Chase to serve our 50 million customers



From left to right:

Gordon Smith,
CEO, Card Services & Auto

Todd Maclin,
CEO, Consumer & Business Banking

Frank Bisignano,
Chief Administrative Officer and CEO, Mortgage Banking

We will remember 2011 as a turning point. It's the year we united across the Chase businesses to work toward becoming an industry leader in customer service. Shifting the focus of an entire business, let alone three, isn't easy. But we must do this because we know good products alone aren't enough. We believe that outstanding service is the key to organic growth and long-term success for our franchise.

> "We know we're only at the beginning of a large-scale effort to improve customer service. It will be a challenge, but we think it's ours to win."

Why now? Chase has always offered a broad range of financial products and services. In fact, 50 million customers rely on us for their banking needs. There are more than 23 million households with consumer and business banking relationships, and we have 65 million credit card accounts and 8 million mortgage and home equity loans.

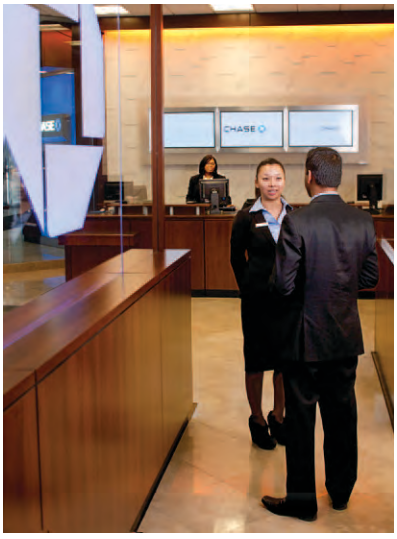
But historically, while consumers saw one sign out front – Chase – inside we sometimes operated like three separate businesses. We offer what we believe are the best products in the industry, but we weren't always getting the service part right. Our customer service scores were in the middle of the pack, and that's not nearly good enough.

So in 2011, we began the hard work of moving from a company organized around products to a company focused on our customers first. We are on a journey to create an outstanding customer experience in everything we do, and we are calling this effort One Chase. What that means is always running Chase as one business for our customers, providing consistently great customer service at every contact.

We are 100% certain that exceptional customer service is the key to growing revenue. We have a tremendous opportunity to earn more business from our current customers. Chase customers who live within our branch network have more than $10 trillion in deposits and investments with our competitors. And they spend more than $300 billion annually on non-Chase-issued credit cards.

Customers who say they are completely satisfied are 60% more likely to increase the number of Chase products they use, 26% less likely to switch banks and 61% more likely to recommend us to a friend. Affluent customers who are completely satisfied give us 52% more deposits and investments than those who aren't.

We're proud to say we've already made significant progress. Here's how we have gone about it.



Every day, our 160,000 Chase employees are working to provide exceptional service to make sure our customers have the products and advice they need.

First, we spent more time listening to customers' comments and complaints. Leaders, including our market, district and region managers, gathered for a two-day meeting in May during which they pored over complaint letters and listened to calls. We also launched "Begin Your Day with Our Customer," where the Executive Leadership team starts every day listening to customer calls.

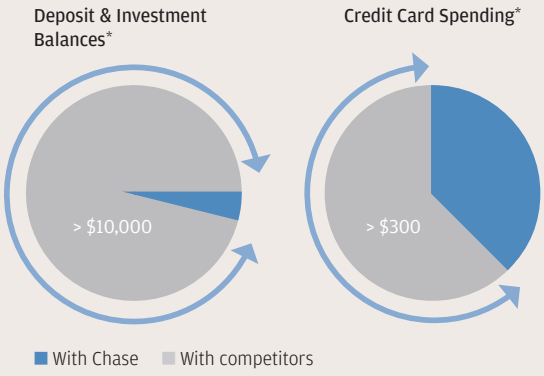
We learned a lot. We found that customers want to interact with people who genuinely care about helping them and are empowered to do so. When customers have issues that need to be resolved, they want to do so quickly and easily. Also, it builds lasting customer loyalty when an employee goes above and beyond what is needed.

We sought out other companies renowned for service and asked them how they do it. We visited some of the best service providers we know, like The Container Store, The Home Depot, Southwest Airlines, Zappos, and Enterprise Holdings, the parent company of Enterprise Rent-A-Car, many of which are great clients of the firm. Even though their industries and regulatory frameworks are different from ours, we saw a commonality in their approach to customer service that was eye opening.

Estimated Growth Opportunity

The business that customers are not doing with Chase represents a huge opportunity

($ in billions)

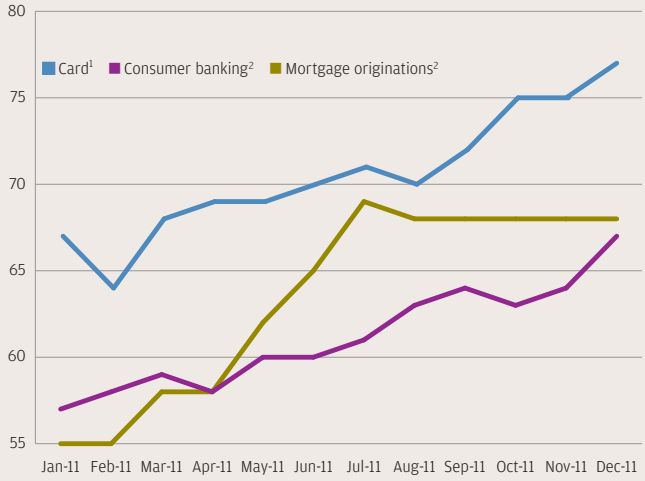


* Numbers are for 23 states with Chase branches

Source: Internal JPMorgan Chase data

Satisfaction Rating for Chase Businesses Increased across the Board

(score in percentage)



1 Satisfaction represents a top ranking of a 4 or 5 on a five-point scale
2 Satisfaction represents a top ranking of a 9 or 10 on a 10-point scale

Source: Based on internal survey process

We learned that great customer service starts with great employees. You have to hire people who have a heart for service and truly care about helping people. Then you have to give them the power to do what they know is right for the customer. We also learned that common policies and processes, while important, aren't the only things that create consistency in large organizations. Having a set of clear values and behaviors lets employees know where they stand and customers know what quality of service they will receive.

From that, we defined a consistent set of behaviors across our businesses that will help every employee interacting with customers, no matter the situation. We are calling these Chase's "Five Keys to a Great Customer Experience." The Five Keys include things like "exceed expectations" and "own customer issues from start to finish." For the first time, all 160,000 Chase employees understand what's expected of them and how they can provide the best possible experience for all our customers.

Next we hit the road to hear from employees in person. No one knows better what customers are thinking than the people who see and speak with them every day. So we went on bus tours and road shows, holding town halls, barbecues and even rallies to meet as many people as possible across all of Chase. Everywhere we went, we asked employees to tell us what we can do to make the place better. And they did.

We kept a log of everything we heard from employees – the good, the bad and the ugly. That kicked off the most important phase of our work, taking all the suggestions and using them to transform our customer service. We're tracking 160 suggestions that we've gotten from the road. That's in addition to the more than 400 changes we've made to improve the customer experience based on feedback from customers and employees.

While we were on the road, we were inspired by our employees' dedication and integrity and by their heartfelt desire to make their customers' lives better.

We're also working to make sure we continue to get the right people in the door by integrating customer service into our hiring process. In 2011, we created a net 18,000 jobs across Chase. Everyone understands the important role service plays in our business. We've also changed the way we reward people to better align our incentives around customer service.



Chase customers can use more than 5,500 bank branches and more than 17,200 ATMs in 23 states, as well as online and mobile banking services.

And it's not just the three of us who are engaged in this effort. All our senior managers are excited about the changes we're making and are pitching in to get the work done. We've created a combined Chase Executive Committee that meets regularly and two cross-Chase councils to solve problems quickly and put more senior focus on two critical areas: Customer Experience and Brand & Marketing. These two councils aim to take the best practices of each of our businesses and apply them to all.

For example, we're working to make sure experiences in our telephone Customer Service Centers are consistent. In 2011, we simplified our automatic voice menus and the process to reach an agent. We have implemented new training on cultural awareness and communication skills and are hiring people who genuinely want to help others.

We're also simplifying how we talk with customers. Building on work started in Card Services, we adopted an industry-leading standard to create simple, easy-to-understand product disclosures. It sounds simple, and we should have done it earlier. But we're doing it now, leading the industry and creating happy customers.

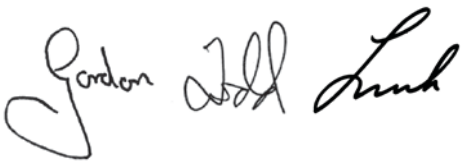
Customers are also benefiting from new technology. Our mobile applications are making it easier for our customers to do business with us across channels. Our ATMs now speak 14 languages and accept deposits of multiple checks and cash without an envelope or deposit slip. We've also set up a Twitter feed to help solve customer issues in real time.

We are even more enthusiastic about what's ahead with technology. We are piloting self-serve teller machines with bigger screens and greater functionality. They'll be able to dispense cash in multiple denominations for customers who simply want to get in and out of a branch quickly. We also plan to upgrade chase.com, incorporating feedback from customers on what they want to see.

We're only at the beginning of this journey, but we've already made remarkable progress. Overall, customer satisfaction scores are up, in some cases significantly, across Chase. Turnover is down, and the number of customer letters we receive commending our employees has increased dramatically.

The next great frontier in our industry is creating an outstanding customer experience, and no bank has really conquered it. We plan to do so. And we will. As a firm, when we set our minds to doing something, we do it. We're all consumers. We know what a great customer experience feels like and the loyalty it inspires in us. If we think like customers and focus on delivering the kind of experience we would like to have ourselves, we will build lifelong relationships. And stronger relationships will lead to more revenue and future earnings.

So stop by a branch, give us a call or log on to chase.com. We think you'll be excited by the changes you see and the outstanding service you'll receive.



Gordon Todd Frank

Consumer & Business Banking

It's an exciting time to be a part of Chase. I became CEO of Consumer & Business Banking (CBB) this past July after almost 10 years as CEO of Commercial Banking. There we worked closely with the consumer side of the business and relied on our outstanding branch network and terrific consumer bankers to serve our commercial clients. After more than eight months in this new role learning about the operations and products and meeting the dedicated people in this business, I more fully appreciate the power of our network. Our talented, caring and hard-working people, together with great products and channels, make Consumer & Business Banking a truly special part of the firm.

2011 Results: Solid Results in a Challenging Year

Even in a difficult year for the industry, Consumer & Business Banking produced a strong return on equity of 40% in 2011. We had net income of $3.8 billion, a 4% increase from 2010 on revenue of $18.0 billion, up 2% from 2010. Our total average deposits increased 6% to $360.7 billion.

Last year brought many changes to our business. One of the biggest was the implementation of the Durbin Amendment in the fourth quarter. This legislation, part of the broader Dodd-Frank financial reform bill, caps the amount of money banks can collect from merchants who accept debit cards. We expect these changes to lower net income by $600 million on an annualized basis. While that's a big hit to our bottom line, I am not worried. I know we have a strong plan to grow the business by focusing on serving our customers exceptionally well and providing great products that meet all of their financial needs. Over the long term, we'll gain a larger share of their business by serving them better than our competitors, becoming the most trusted advisor to many. We will capture an increased share of our customers' banking activities and continue to grow our business.

A key to our progress has been our continued investment in branches, people, products and technology. And we never stopped investing, even during the darkest days of the financial crisis. For this reason, we are well-positioned today. CBB's strong results in 2011 allow us to commit more resources to serve our customers. We hired more than 6,500 people in 2011, bringing our total number of employees to 88,540. We also promoted nearly 14,000 of our colleagues, giving them new skills and long-term career opportunities.

We added 260 Chase branches, mostly in California and Florida. These new locations allow us to increase our lending to small businesses, offer more mortgages and refinancings, and help more people manage their money through savings and investments. We also do our part to create economic growth by hiring local architects, contractors, builders and staff to assist us.

Our Business Banking expansion is another way we're supporting our communities with more loans and banking services. In 2011, the firm made $17 billion in new loans to small businesses, 52% more than the previous year. We were the #1 Small Business Administration lender for the second year in a row. Our average business deposits grew 12%, to $63 billion. Since the start of 2009, we have hired more than 1,200 Business Bankers to serve our more than 2.2 million small business customers.

2012 Priorities: Improve Service, Work to Become One Chase

We set ourselves apart from the competition with strong leadership, careful risk management and continuous investment in our businesses. Our plan in 2012 is to excel at customer service, putting us further ahead of our competitors. We intend to be the first national bank to be known for exceptional customer service. Our 160,000 Chase employees are fully committed to this goal and are already working hard to get us there.

In my experience, good service always leads to more customers and revenue growth. If you are happy with the service you receive, it stands to reason that you will do more business with that company. In fact, the most profitable hotels, airlines and retail stores are usually those that have a higher standard of service integrated into their culture, creating both satisfied employees and loyal customers who seek them out again and again.

In a short time, we've made dramatic progress on providing customers with a great experience. Across CBB, customer satisfaction is up, complaints are down and our customers are moving more money to Chase. This is all great news, but it is a journey, and we still have a long road to travel.

In addition to providing better service, we are developing more customized products that meet the different needs of our customers.

Some people are looking for a lower-cost product for basic banking, while others are looking for complex investment advice or help with their businesses. Delivering an experience that "wows," no matter what type of product or service, means getting to know each of our customers individually and learning what's important to them. For some people, it means making it easy to do transactions through technology and mobile devices. For others, it means offering experienced and proven investment advice to help grow savings.

We'll do this across a broad spectrum of products and channels. One example is our accelerated expansion of Chase Private Client (CPC), our banking and investment platform for affluent customers. Since we launched the first phase of CPC expansion in July of 2011, the number of CPC households we serve has nearly quadrupled, and those households have grown their deposit and investment balances by $80,000 on average.

In 2012, we will introduce a more affordable banking alternative designed for low- and middle-income customers. We see a great opportunity to provide a low-cost banking solution with tangible benefits, such as lower fees compared with the industry.

We remain committed to expanding our branch network thoughtfully and strategically. We will continue to open locations in our key expansion markets, mainly California and Florida. The average Chase household visits a branch more than 15 times a year. And branches are good investments. Most break even within three years and contribute $1 million in pretax earnings after 10 years. They also expand our distribution for nearly all of JPMorgan Chase's lines of business. For example:

- About 50% of retail mortgages are originated in branches
- 45% of Chase-branded credit cards are sold through branches
- In Treasury & Securities Services, about 30% of commercial dollars are deposited in branches
- Branches bring in about 20% of U.S. retail assets under management
- Commercial Banking clients account for 16 million branch transactions each year

While the banking industry faces many short-term challenges, at Chase we feel strongly that no other bank is as well positioned to have the successes we will have in the long term. We have a strong brand, more than 5,500 community branches, industry-leading online and mobile offerings, and exceptional people. This solid foundation will allow us to create a great experience, invest in our business, become more efficient and develop customized products.

Thank you for your investment in our company and for your confidence in us all.

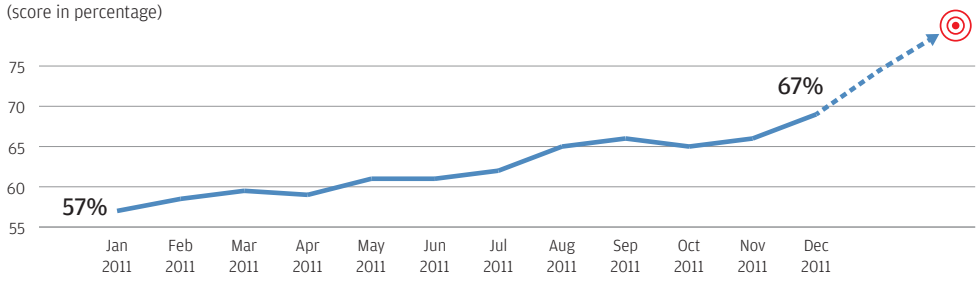


Todd Maclin
CEO, Consumer & Business Banking

2011 Highlights and Accomplishments

- More than 5,500 branches and more than 17,200 ATMs across 23 states serving 23 million households:
  - #2 ATM network
  - #3 in deposit market share
  - #3 in branches
- Chase Private Client:
  - Opened 246 Chase Private Client locations for a total of 262 nationwide
  - More than 500 CPC bankers and advisors now serve nearly 22,000 clients
- More than 17 million active online customers; active mobile users increased 57% from last year to more than 8 million
- Overall customer satisfaction improved to 67% from 57% during 2011
- Firmwide, we made $17 billion in new loans to small businesses in 2011, up 52% from the previous year. We were the #1 Small Business Administration lender for the second year in a row

Overall Satisfaction with Chase
Customers who rate Chase a 9 or 10 on a 10-point scale
(score in percentage)



Source: Chase Relationship Survey

Mortgage Banking

We view 2011 as a defining year for the mortgage business. There is no question that the past several years have been extremely challenging for the industry and Chase, but I couldn't be more proud of the progress we're making. In Mortgage Banking, we remind ourselves every day that every mortgage represents a customer and a home.

2011 Results: Improving Performance despite Continued Challenges

While market conditions remained challenging for the mortgage industry, we made progress in several areas of our businesses and continued to tackle regulatory issues.

Although credit losses and higher expenses continue to weigh on earnings, our new Production business made money for the year on strong refinancing activity and lower repurchase losses. We also increased market share, becoming the #2 originator at the end of 2011, up from #3. Core Servicing (excluding legacy portfolio) was firmly profitable. Real Estate Portfolio performance was better than the past two years as credit improved. This countered lower revenue from portfolio run-off.

Our first priority for 2011 was getting the best team we could on the field. We recruited top talent from across the firm and the industry to make sure we had the right controls, processes, systems and technology. To help manage our portfolios, we tapped experts in risk management and capital markets from the Investment Bank. We also hired finance industry veterans with deep mortgage experience to ensure we meet all new regulations to the full letter of the law.

With the right team in place, we made improving the customer experience a priority for all areas of Mortgage Banking. Customer complaints declined more than 60% from their May 2011 peak, and overall satisfaction improved to 67% from 58%. Chase was the top-ranked large bank in overall satisfaction in the J.D. Power and Associates 2011 U.S. Primary Mortgage Origination Satisfaction Study.

But 2011 wasn't without its challenges. In April, banking regulators issued Consent Orders to large mortgage servicers, including Chase, requiring changes to how residential mortgage loans and foreclosures are handled. These changes include dedicated borrower assistance when customers are facing foreclosure.

In February 2012, Chase and four other large mortgage servicers entered into a settlement with federal agencies and state regulators, including the Department of Justice and state attorneys general from the 50 states. The agreement provides money directly to states, as well as to borrowers struggling to stay in their homes, and addresses issues related to mortgage servicing and originations.

Because of the regulatory actions and continued stress in the housing market, we spent more on operations, people and legal expenses. Getting these issues behind us is good for the housing market recovery and good for Chase. We can now redirect the focus and resources consumed by the settlement toward growing our business and serving customers.

The changes we are making this year, which we believe go above and beyond any government requirements, will make us more customer oriented and a better place for employees to work.

2012 Priorities: Homeowner Assistance, Expense Controls and Shareholder Returns

The entire Mortgage Banking team is committed to improving our operations, processes, technology, management and controls. Three principles will continue to guide us in this business: helping people stay in their homes, delivering a sustainable profitability model, and managing our business responsibly.

We will continue our work to help people buy and afford homes. We've already made huge strides in our borrower assistance efforts and in preventing foreclosures, which we view as a last resort. We've reduced payments for struggling homeowners by about $1 billion annually. Since 2009, Chase has prevented about 750,000 foreclosures, which is twice the number of foreclosures that we've acted upon.

During the past two years, we opened 82 Chase Homeownership

Centers across the country, where we meet with customers one-on-one to discuss their options and foreclosure alternatives, including loan modifications. Six of those centers are near military bases, staffed by loan counselors trained in military issues.

Commitment to the Business

We are committed to the mortgage business and committed to returning the business to profitability over the long term for the firm and our shareholders. We believe normalized earnings should be about $2 billion, and we have the team and a plan to get us there.

We're continuing to hire loan officers and introduce technology that will allow us to more closely monitor the application process, making it easier for our customers to purchase and refinance homes. This year, we expect a modest recovery in the purchase market and continued strong refinancing activity, and I'm confident we'll be able to earn more business.

A mortgage is more than a loan; it's a lasting connection to a customer. Helping customers achieve and maintain homeownership is a responsibility and a great privilege. I am proud of the work we are doing to rebuild this business and I am honored to have this opportunity to help Americans affected by the crisis. While we are far from finished, our employees are on a mission to help customers purchase and remain in their homes. It's a mission I know we will accomplish.

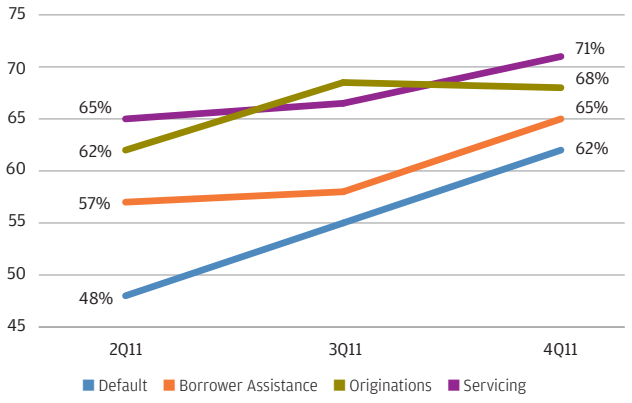


Frank Bisignano,
Mortgage Banking CEO,
Chief Administrative Officer,
JPMorgan Chase

2011 Highlights and Accomplishments

- Ranked #2 in originations at year-end, #4 in home equity originations and #3 in servicing:
  - Increased retail market share to 12.6%, up 28% from 2010 and the largest increase among the top 10 lenders
  - Ranked #5 in the J.D. Power and Associates 2011 U.S. Primary Mortgage Origination Study, the highest rating for a large bank and the biggest improvement of any lender
  - Increased loan officers by 23% in 2011
  - Funded approximately 670,000 mortgages for home purchases since 2009
  - Reduced customer complaints by more than 60% from their peak in May 2011
  - Serviced 8 million mortgages and $1.2 trillion in volume
- Prevented twice as many foreclosures as were acted upon:
  - Met with more than 273,000 struggling homeowners and held 1,800 borrower outreach events
  - Increased foreclosure alternatives 22% year-over-year
  - Completed 452,000 mortgage modifications since 2009
  - Completed more than 1 million mortgage refinancings since 2010
  - Increased modifications by 38% per month and short sales by 43% per month
- Consolidated three servicing platforms, providing one Chase system and one way to service customers
- Received approval from the Office of the Comptroller of the Currency on our plan to address Consent Order requirements

Overall Satisfaction with Mortgage Banking
Customers who rate Chase a 9 or 10 on a 10-point scale
(score in percentage)



Source: Based on internal survey process

CHASE

Card Services & Auto

After a difficult few years following the financial crisis, Card Services & Auto is now in an exciting time of growth. We made investments in new products, services and technologies that are paying off in higher market share and an improving customer experience.

The challenging economic environment makes what we do, helping customers manage their financial lives, more important than ever. Since 2009, we increased new accounts by 25%[(a)] across our co-brand and Chase-branded products by offering the right products and services to people at the right stage of their lives. Sales from these new accounts were up an impressive 98%[(a)] over the same two-year period.

We continued to see encouraging trends in increased consumer spending in 2011, a sign of what we hope is a more sustained economic recovery. Across all merchant categories, fourth quarter 2011 spending was up 14%[(b)] from the prior year, with higher-than-average increases in dining (20%)[(b)] and travel (15%).[(b)]

We also added new features to our products across segments:

- We improved our rewards products, including Chase Freedom[SM] and Chase Sapphire[SM], providing even more value. We launched Chase Sapphire Preferred[SM], giving customers two points for every dollar they spend on dining and travel, along with other new features and benefits.
- Our co-brand partnerships focused on some of the world's top brands, like Hyatt Hotels Corporation and The Ritz-Carlton Hotel Company. We also added "pay with points" functionality to our Amazon.com Rewards Visa® card so customers can use their rewards instantly. We extended our long-standing relationship with United Airlines® as the sole issuer of the United MileagePlus® co-brand card. Together, we introduced the United MileagePlus® Explorer card, which targets rewards-oriented consumers with new travel benefits such as priority boarding, airport lounge passes and a free checked bag.
- As the first U.S. bank to offer credit cards with embedded microchips, we made it easier for our customers who travel internationally to use our J.P. Morgan Select, J.P. Morgan Palladium, British Airways and Hyatt cards. Along with a magnetic stripe, the cards feature EMV chip-with-signature technology, making them extremely difficult to copy. The technology is widely used in Europe, Canada, and regions of Africa and Asia, among other locations.
- Chase Blueprint[SM], our program that allows cardholders to manage how they pay down balances, continues to attract customers who want more control over their personal finances. With more than 2 million Blueprint plans in place, customers are paying down their balances twice as fast as average consumers.
- We launched Jot[SM], a new mobile application created exclusively for Ink[SM] from Chase, to help cardholders organize and track business expenses.

2011 Results: Strong Earnings, Lower Risk

Card Services & Auto ended 2011 with improvements across all consumer segments. Total outstanding loan balances are lower than a year ago, but the portfolio has shifted toward customers with a lower risk profile. This is consistent with our strategy to focus on lifelong, quality relationships with engaged customers.

Across our business, net income was $4.5 billion, up 58% from $2.9 billion in 2010. Pretax income was $7.5 billion, also up 58% from $4.7 billion in 2010.[(c)] The improvement was driven by a lower provision for credit losses.

We opened 8.8 million[(d)] new credit cards for consumers and businesses in 2011. Card Services sales volume for the year was 13%[(e)] higher than 2010, and our market share continues to grow. General purpose credit card (GPCC) share increased 151 basis points[(f)] from 2009 to 2011. The higher sales are beginning to translate into higher Card Services loans outstanding: Loans grew 1% quarter-over-quarter in the third quarter of 2011 and 4% in the fourth quarter of 2011.

Chase Paymentech and Auto continued to perform well in 2011. At Paymentech, bank card volume continued to outperform the industry. The number of transactions increased 19% from 20.5 billion to 24.4 billion. Chase branches are acquiring new Paymentech merchants, with more than 34% of new signings coming through branch referrals. Auto, which joined our business in July, had its best year ever.

2012 Priorities: Innovation, Superior Service as Part of One Chase

For 2012, we are once again targeting 20% return on equity.

We will continue our focus on customers, rewards, brand and execution in 2012 with an emphasis on mobile and online innovation and the One Chase customer experience.

First, innovation continues to be a top priority for everyone, especially in mobile and online. I'm pleased to report that chase.com is the #1 most-visited banking website. Our customers spent more than $85 billion online during 2011, making Chase one of the largest e-commerce players in the United States. Online is already our most important channel by far.

Second, we are confident that we have the best products in the market. We need to ensure that we also provide the best service in the industry. Delivering a consistently outstanding experience for customers across Chase is the best way to sustain growth. We are making excellent progress, but we still have room to improve. In Card Services, our overall customer satisfaction increased by 10 percentage points in 2011.

I am extremely encouraged by the success we've had and am even more enthusiastic about the future of this business. As we continue to execute on our strategy, we can deliver strong performance and value for our shareholders over the long term by focusing on the needs of our customers.

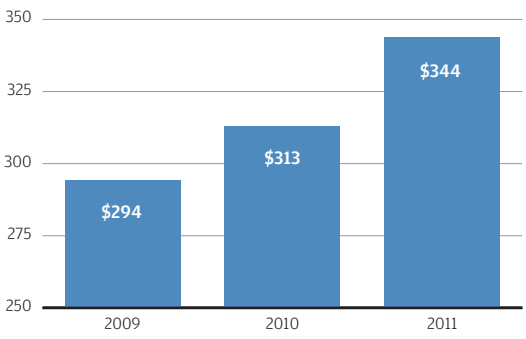


Gordon Smith
CEO, Card Services & Auto

2011 Highlights and Accomplishments

- Credit card loans climbed in the second half of 2011 and rose 4% in the fourth quarter from the previous quarter
- Card Services' sales growth of 13%[e] year-over-year in 2011 on top of a strong 2010 indicates sustained and robust growth
- Chase Paymentech is the third-largest merchant acquirer in the United States and processed 24.4 billion transactions with 18% year-over-year growth in sales volume
- Credit card net charge-off rate declined from 9.73% in 2010 to 5.44% in 2011. Similarly, delinquency rates also came down
- United MileagePlus® and Southwest Rapid Rewards® were added as Ultimate Rewards℠ point transfer partners. Chase Sapphire Preferred℠, Ink Plus℠ and Ink Bold℠ are the only cards in the marketplace that allow instant point transfers to MileagePlus and Southwest Rapid Rewards, as well as other frequent traveler programs
- Opened 8.8 million[d] new credit card accounts for consumers and businesses
- $21 billion in auto originations in 2011

Sales Volume
($ in billions)



(a) Excludes terminated partners

(b) Based on internal Chase data; excludes WaMu, International and private label portfolios

(c) Excluding the reduction in the allowance for loan losses, pretax income increased from a loss of $1.4 billion to income of $3.6 billion with an upward trajectory each quarter in 2011

(d) Excludes Commercial Card portfolio

(e) Excludes Kohl's and Commercial Card portfolios

(f) GPCC includes consumer, small business and charge card but excludes commercial and private label cards; Chase data excluding WaMu

CHASE

Commercial Banking



When I joined the Commercial Banking team a year and a half ago, I had the good fortune to join an organization with an outstanding track record; a tremendous culture; and a focused, long-term strategy – a legacy of Todd Maclin's nine years of leadership. Above and beyond Commercial Banking's best-in-class franchise, I am continually impressed by the depth of so many of our long-standing client relationships and the difference we make in our communities.

As a business, we are guided by our objectives to expand and deepen client relationships, invest consistently in our franchise, and maintain our risk and expense discipline. As bankers, we operate according to the fundamental principles of the firm, which include putting our clients first and adhering to the highest standards of integrity. This combination helped us add clients and expand geographically in 2011 while delivering very strong financial results despite persistent economic challenges and historically low interest rates.

2011 Results: Another Record Year

In 2011, we delivered record revenue of $6.4 billion and record net income of $2.4 billion, up 6% and 14%, respectively. Deposits grew by 26% over 2010, and loans were up 13% with all business units generating loan growth. Our credit performance continued to improve with non-performing loans and net charge-offs now trending to pre-crisis levels.

We are proud to have extended $111 billion in new and renewed financing to our clients in 2011, up from $92 billion in 2010. In 2011, Corporate Client Banking, which serves Commercial Banking's larger corporate clients, grew loans by 43%, and Middle Market Banking increased loans by 17%. These loans helped our clients, including more than 700 government, not-for-profit, healthcare and educational institutions, achieve their business goals such as purchasing equipment and owner-occupied real estate, refinancing existing debt and funding capital expenditures. Our Community Development Banking efforts brought over $900 million in capital to underserved communities through New Markets Tax Credit investments and helped create and retain more than 9,500 units of affordable housing in the United States.

We also made significant investments in our business to differentiate our capabilities, deliver exceptional service to our clients, and support our foundation for growth. We hired employees, opened offices both domestically and abroad, and invested in our technology and infrastructure, all while reducing our overhead ratio to 35% and increasing our return on equity to 30%. In short, 2011 was a terrific year.

2012 Priorities: Organic Growth

We enjoyed growth across Commercial Banking in 2011, but our four key growth areas remain an important focus for 2012.

U.S. Market Expansion – In May 2011, only two years after we began our Middle Market expansion in regions where WaMu had a presence, we achieved positive operating margin in those markets – and we have significantly more revenue potential. California and Florida remain our biggest opportunities, and we continue to gain share in those states. We also are expanding in areas outside our retail branch network with an aim to be a leading commercial bank in 40 of the top 50 metropolitan areas. I am proud of the way we are expanding – we are building strategically, with patience and discipline, while maintaining our culture and credit acumen.

Investment Banking – Our partnership with the Investment Bank remains a tremendous differentiator, generating a record $1.4 billion in revenue in 2011. With additional dedicated resources in place and a partnership that now is stronger than ever, we are finding new ways to scale the firm's capital markets, risk management and advisory solutions to more of our Commercial Banking clients. I am confident that we are on track to meet our goal of $2 billion in gross investment banking revenue within the next five years.

International Banking – We are observing a powerful trend in overseas activity among U.S.-based small and medium-sized enterprises. We now have more than 2,500 U.S. clients using our international treasury and foreign exchange solutions. This number has grown approximately 20% each year since we launched this business six years ago, and I believe it will continue to grow. With our firm's resources and capabilities, we are one of the few banks able to meet the needs of these companies as they expand overseas.

Commercial Real Estate – Our real estate businesses reported sharp increases in loan production in 2011 with Commercial Term Lending up to $8 billion from $2 billion in 2010 and Real Estate Banking up to $6 billion from $1 billion in 2010. Market fundamentals are favorable, and our portfolio is in excellent shape. While we expect our Commercial Real Estate businesses to continue performing well, we, as always, are monitoring market conditions carefully to manage the cyclical risks inherent in real estate lending.

We have strong momentum in each of these four areas, and we are confident of our ability to meet our growth targets. Nevertheless, growth should not come at the expense of discipline. We will continue to operate our business responsibly and transparently while relentlessly managing our controls and operational and reputational risks. These are central tenets of our operating philosophy.

As was the case in 2011, the market environment likely will remain challenging in 2012, and competition for the best clients again will be fierce. However, our strong national leadership team, skilled and professional employees, and the scale of the JPMorgan Chase platform paired with our local delivery capabilities give me confidence that Commercial Banking will sustain its outstanding track record. I am proud to be on this team and believe that our best days are ahead.



Douglas Petno
CEO, Commercial Banking

2011 Highlights and Accomplishments

- Produced record net income of $2.4 billion, grew deposits 26% year-over-year to a record balance of $175 billion and increased loans 13% year-over-year with six consecutive quarters of loan growth
- Extended more than $1.7 billion of new loan and lease commitments to clients through the Lending Our Strength program
- Increased Commercial Banking M&A fees by 57% over 2010
- Won more than 110 bookrunner roles on syndicated lending transactions
- Added more than 1,200 Middle Market clients
- Increased International Banking revenue by 41% over 2010
- Integrated the Citi portfolio acquisition into the Commercial Term Lending business unit
- Achieved the highest return on equity in our peer group[(a)] at 30%
- Achieved the lowest overhead ratio in our peer group[(b)] at 35% and continued to outperform peers in credit quality with the lowest net charge-off ratio and nonperforming loan ratio
- Maintained our ranking as the nation's #1 multifamily lender[(c)] and within the top three middle market syndicated lenders[(d)]
- Recognized for our leadership in Middle Market Banking by earning Greenwich Excellence Awards in financial stability, investment banking and international banking[(e)]

(a) Return on equity peer average reflects Commercial Banking equivalent segments at BAC, KEY, PNC, USB

(b) Peer averages include CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC

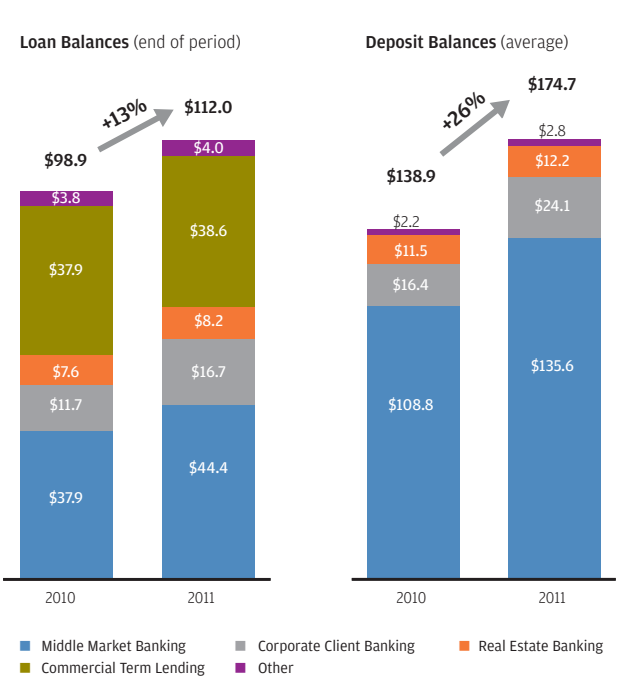
(c) Federal Deposit Insurance Corporation, 12/31/11

(d) Thomson Reuters, 2011

(e) Greenwich Associates, 2011

Steady Growth in Revenue and Profitability Driven by Increase in Loans and Deposits

($ in billions)



J.P. Morgan

Seamless Delivery



From left to right:
Jes Staley,
CEO, Investment Bank
Mary Callahan Erdoes,
CEO, Asset Management
Mike Cavanagh,
CEO, Treasury & Securities Services

J.P. Morgan is one of the financial industry's outstanding global wholesale franchises. As leaders in each of our businesses – the Investment Bank, Asset Management and Treasury & Securities Services – we serve many of the world's most successful corporations and individuals.

Large multinationals and emerging companies, institutional investors and individuals all turn to J.P. Morgan for capital, insights and solutions to address the opportunities and challenges that arise in today's rapidly evolving global economy.

Over the past decade, despite global crises, world commerce has evolved at a remarkable pace. Today, multinational corporations operate in many large, new markets that, in aggregate, dwarf the revenue potential of the mature economies in Western Europe and the United States; developing market financial assets account for 20% of the global total after years of double-digit increases.

Through sustained investment and strong execution, J.P. Morgan has developed unparalleled scale and capabilities to partner globally with clients to enable them to realize diverse financial and strategic goals.

Last year, while serving more than 25,000 institutional clients headquartered in 170 countries and over 5 million individuals, we cleared 20% of the world's dollar transactions, raised more debt and equity capital than any other firm ($430 billion), provided custody for nearly $17 trillion of assets and supervised nearly $2 trillion of investment assets.

J.P. Morgan's aggregate revenue totaled $43.5 billion,* roughly half from international sources, mirroring worldwide trends.

Although we already are well positioned for the future, we are adding new dimensions to our capabilities. For example, more Investment Banking clients are using the expertise we've developed in Treasury & Securities Services to streamline their own treasury activities to achieve greater efficiency in diverse operating and regulatory environments around the world.

We are taking bold steps to improve coordination of complementary activities across our lines of business that will grow revenue and strengthen customer relationships. The Global Corporate Bank, a partnership between Treasury & Securities Services and the Investment Bank that began in 2010, targets approximately 3,500 corporate, financial and public sector clients for intensive coverage by a dedicated team of banking and treasury professionals.

The Global Corporate Bank is on track to deliver more than $1 billion in annual pretax earnings by 2015. Similar ventures are under way involving Asset Management, Commercial Banking and other lines of business. In 2011, revenue synergies attributed to these activities were approximately $3 billion in the Investment Bank, $1 billion in Asset Management and $3 billion in Treasury & Securities Services, and, in our opinion, we've just scratched the surface of what's achievable.

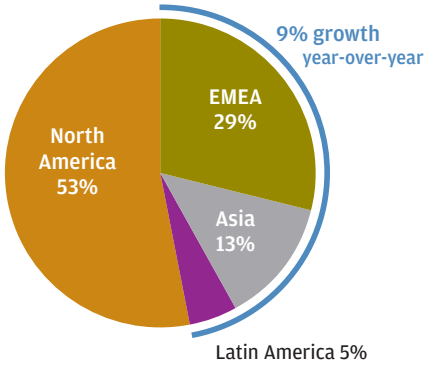
In addition, we launched another strategically important initiative across our businesses – "Value for Scale" – to eliminate unnecessary complexity, improve communication, and optimize shared and shareable resources. This promises substantial cost savings, further focuses attention and resources where they are most productive, and greatly enhances the quality of our work and client effectiveness.

Although we've really just begun, it's our belief that we're on a path to transform the way global wholesale banking business is conducted, delivering better results for our clients and ultimately more profits for our shareholders. This ambition wouldn't be possible without the efforts and shared vision of the 72,000 extraordinary employees throughout our organization whom we are privileged to lead.



Jes Mary Mike

J.P. Morgan Revenue*



2011 total: $43.5 billion

Revenue Synergy Examples

Investment Bank	Asset Management	Treasury & Securities Services
■ Jointly cover 1,800 clients with Commercial Banking (CB)	■ Manage $120 billion of assets for CB clients	■ 78% of top clients shared with Investment Bank
■ Robust client referral to and from Asset Management	■ Manage $90 billion of assets for Treasury & Securities Services clients	■ 75% of CB clients use Treasury Services products
$3 billion	**$1 billion**	**$3 billion**

* Includes Investment Bank, Asset Management and Treasury & Securities Services

Investment Bank

In 2011, J.P. Morgan enabled approximately 21,000 issuer and investor clients in over 130 countries to raise capital, invest and implement each client's unique financial and corporate strategies.

Successful execution, risk management and expense discipline produced near record net income for shareholders. We also maintained or improved our leadership position in most major markets and regions. We achieved these strong results even while market sentiment gradually deteriorated from cautious optimism in the first half of 2011 to pronounced anxiety by year-end, affecting transaction volumes and backlogs.

The U.S. debt ceiling impasse, sovereign downgrades, Eurozone instability, a developing markets slowdown and Mideast turmoil are a few examples from the growing list of major issues facing governments – and investors – that undermine confidence in the world recovery. Frenetic financial rulemaking by authorities in diverse venues around the globe also added a special dose of uncertainty to markets.

2011 Results: Strength in a Challenging Year

The Investment Bank (IB) once again made a significant contribution to firmwide results, delivering revenue of $26 billion with net income of $6.8 billion – our second best year ever. This 17% annual return on equity (15% excluding Debit Valuation Adjustment (DVA) – the effect of wider JPMorgan Chase credit spreads) is in line with multiyear targets that were set some time ago.

Our client flow business, relative to risk, has never been better. Equities, Fixed Income and Commodities contributed more than 75% of IB total revenue. At $20 billion, aggregate revenue in these businesses is nearly double pre-crisis levels. Equities, Commodities and Electronic Equities all achieved near or record revenues. In addition, our Fixed Income franchise retained its #1 revenue ranking for the second year in a row.

The acquired Sempra assets were fully integrated into our Commodities platform; we're now one of the top three firms in this profitable and highly competitive global industry.

In addition to strong financial results, we made progress on several strategic objectives. We eliminated regional silos and appointed a global head of Investment Banking to manage industry coverage, capital markets origination, and mergers and acquisitions worldwide. This move accelerates collaboration, streamlines reporting, and greatly improves resource allocation, client service and talent development.

Internationally, wholesale activities across lines of business – Asset Management, Treasury & Securities Services (TSS) and Investment Banking – now are supervised through an International Steering Committee chaired by Mary Erdoes, Mike Cavanagh and myself.

The Global Corporate Bank (GCB), less than two years old, at year-end achieved incremental international revenue exceeding $600 million. The GCB targets a subset of multinational clients for enhanced coordination and cross selling of TSS and IB products by a dedicated cadre of 250 bankers in offices around the world.

To better serve the needs of clients in Europe and the Middle East, we opened branches in Poland and Qatar, expanded banking capabilities in Saudi Arabia and launched an EMEA Prime Brokerage platform that created a solid pipeline of new clients.

In Asia, our joint venture with China Securities yielded impressive results in its first year. The joint venture launched its business operations, completed its first sole underwriting and was awarded Foreign Bank of the Year by *China Business News*.

The IB's technology Strategic Reengineering Program generated significant efficiencies and savings. Since 2008, we've decommissioned 28 overlapping systems, realizing direct run rate savings of roughly $175 million.

We've retained 98% of our top talent while managing through industry-wide adjustments in the structure and level of compensation. Our scale, sustained investments in career development and franchise strength are strong advantages in the war for talent. The Investment Bank's compensation to revenue ratio is one of the best in our industry.

2012 Priorities: Clients, Value for Scale, Regulatory Leadership

A vigilant focus on clients' long-term interests always has been our top priority. We are finding new ways to harness the resources at JPMorgan Chase for Investment Bank customers.

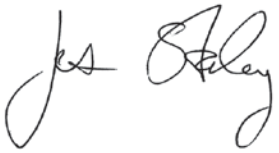
We recently launched a Value for Scale initiative that will centralize areas of expertise that support TSS and the Investment Bank. By merging teams and streamlining systems, we improve efficiency and enhance employee specialization. Most important, our clients' strategic objectives gain greater visibility across the firm, allowing professionals to share their knowledge and experience more effectively and to create additional value.

Our partnership with Asset Management's Private Bank improves coverage of private and closely held firms and their owners. This opportunity, similar in concept to the GCB, will lead to increased activity with thousands of clients worldwide. Close cooperation between the IB and the Private Bank also will strengthen the firm's presence in growth markets where family-owned firms predominate.

As rulemaking moves toward implementation in the United States and Europe, we will add more resources to expand our already considerable engagement with regulators to help them achieve the best outcome for clients and markets.

Our industry will adapt to new rules and capital costs. Markets will recalibrate the pricing of risk, and, together with clients, we will find the most efficient path toward recovery through the thicket of global challenges. We are fortunate to be able to serve during such an exciting and transformative era.

Few, if any, other global firms have commensurate financial strength, talent and tools. In this environment, our resources will be particularly useful to clients and being a part of J.P. Morgan will be especially satisfying for all who work here.

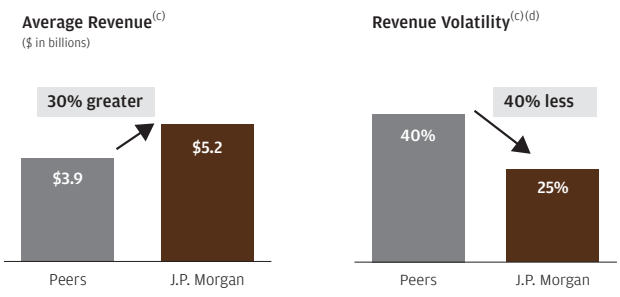


Jes Staley
CEO, Investment Bank

2011 Highlights and Accomplishments

- 2,500 sales professionals, 2,000 traders, 2,000 bankers and 800 research analysts serve clients around the world
- Executed 271 equity transactions,[a] including lead bookrunner on Mosaic's $7.5 billion equity offering – largest ever U.S. natural resources equity offering
- Advised clients on 332 announced mergers and acquisitions globally, including six of the year's 10 largest transactions, and achieved 18% market share[a]
- 110 trading desks around the world execute, in an average quarter[b]:
  - 5 million foreign exchange spot/forward transactions
  - 30,000 interest rate swaps
  - 10 billion North American equity shares
- Global Corporate Bank increasing revenue with multinational corporations[b]:
  - IB Markets: +29% year-over-year
  - Treasury Services: +22% year-over-year
- Market leadership in Banking, Equities and Fixed Income:
  - Top three firm in 13 of 16 major business segments[b]
  - Retained #1 global IB fee ranking, with 8% market share[a]
- Helped clients raise $430 billion of capital globally[a]:
  - More than $390 billion in debt
  - Around $43 billion in equity
- Led the market in arranging or lending approximately $440 billion in 1,204 transactions[a]
- Raised or provided $68 billion in capital for U.S. state and local governments, not-for-profits, healthcare organizations and educational institutions[b]
- For second consecutive year, won U.S. Equity and Fixed Income polls in *Institutional Investor*'s All-America Research survey

Over the last 12 quarters, J.P. Morgan's average markets revenue has been 30% greater than its peers, with 40% less volatility over the same period



(a) Dealogic
(b) Internal reporting
(c) Revenue excludes DVA; includes eight IB peers
(d) Volatility equals standard deviation as a percentage of the period average

Treasury & Securities Services

In 2011, Treasury & Securities Services (TSS) made solid progress toward a long-term performance target that is unchanged – a 25% return on equity (ROE), which equates to a 35% pretax margin. Although the operating environment continues to be a serious challenge for our profitability, I am proud of what we accomplished in 2011, and I could not be more confident about where the business is headed.

J.P. Morgan is a leading global provider of both treasury and securities services – and we have the capacity to continue investing to advance that market leadership as demand for these services grows.

From any angle, this is a great business to be in. We provide essential financial functions like trade finance and securities servicing that keep global commerce and financial markets running. The business generates steady earnings, good margins and high return on capital. These are businesses that are built over decades and require huge scale – making for high barriers to entry.

TSS delivers services that are integral to the development of strong, long-term client relationships across the firm's institutional businesses. In fact, nearly 80% of TSS' top clients are shared with the Investment Bank – underscoring this unique attribute of the J.P. Morgan franchise. Our expanding partnership with the Investment Bank already is yielding good results, and there's a great deal more potential to be realized. From a firmwide perspective, TSS is a significant source of liquidity, providing an average of roughly $320 billion in deposit[(a)] balances in 2011.

2011 Results: Revenue and Net Income Up, with Meaningful Increase in International Revenue

In 2011, TSS reported net income of $1.2 billion, up 12% from 2010, and a return on equity of 17%. Net revenue was nearly evenly divided between each business: $3.9 billion in Worldwide Securities Services (WSS) and $3.8 billion in Treasury Services (TS).

Our investment in global expansion yielded positive results: International revenue rose 17% and comprised 55% of total revenue, up from 49% in 2010. In WSS, 62% of revenue was generated outside North America, and 47% of TS revenue came from outside North America.

These increases resulted from expanded capabilities in more than 20 countries and the efforts of our 250-strong (and growing) team of Global Corporate Bankers who drive coordinated client planning with the Investment Bank and Asset Management.

I feel good about this performance, especially given our continued investment in capabilities and the low interest rates that compress the spreads we earn on client balances. But these results are still below our potential to earn, given the inherent strengths of the business. I'm confident that we can and will do better as we pursue our growth and efficiency priorities.

2012 Priorities: Continued Investment and Collaboration to Propel Global Growth

Our franchises are strong and well-positioned to capture the opportunities presented by macroeconomic trends. In TS, continued growth in cross-border commerce and trade is driving demand for global cash management and trade finance capabilities. In WSS, continued development of international capital markets and growth in cross-border investment will increase investor client needs for global custody and other securities services.

Our collaboration with the firm's other wholesale businesses distinctively positions J.P. Morgan to support our clients' global objectives. For example, our partnership with the Investment Bank enables us to provide custody for its prime brokerage clients and trade finance

(a) Deposit balances for TSS are shown on an average basis and include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased, time deposits and securities loaned or sold under repurchase agreements) as part of customer cash management programs

for its commodities clients. And while capital and other regulatory requirements are forcing some competitors to rethink their business strategies, our balance sheet and capital strength allow us to focus on our clients, providing credit where needed while we invest in our own business to better serve theirs.

Our continued investment in international expansion – which is aligned with the aggressive global growth agendas of our clients – presents an opportunity for significant growth over the long term. TSS has relationships with 84% of global Fortune 500 companies, yet we have plenty of room to deepen our partnerships with them.

Our disciplined efforts begun in 2011 – to eliminate non-core, non-strategic businesses, manage expenses better and be more deliberate about client selection – will allow us to continue to invest in our business and to improve clients' experiences with us.

We believe the combination of these factors plus interest rate normalization will enable us to reach our stated pretax margin target of 35% and 25% ROE. As markets and regulatory environments continue to change radically and rapidly, TSS remains committed to providing the strength, stability and resources of our firm to enable our clients to succeed.



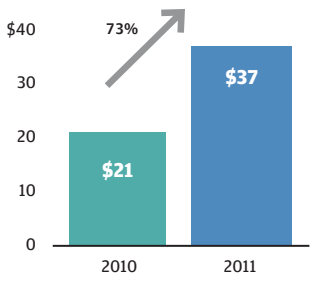
Mike Cavanagh
CEO, Treasury & Securities Services

2011 Highlights and Accomplishments

Exceptional Client Franchise

- Treasury Services does business with 84% of Fortune 500 companies
- Worldwide Securities Services does business with 86% of top 50 global asset managers

Trade Loans Up $16 Billion
($ in billions)



Treasury Services Highlights

- #1 global clearer of U.S. dollars
- Best Trade Bank in the World, *Trade & Forfaiting Review*, 2011
- Best Transaction Banking Business in Asia Pacific, *The Asian Banker*, 2011
- Global Bank of the Year for Risk Management, *Treasury Management International*, 2011

Worldwide Securities Services Highlights

- Record $16.9 trillion assets under custody
- Ranked #1 of the five largest providers, *Global Custodian*
- Best Global Custodian, *Asian Investor*, 2011
- Worldwide Securities Services ranks #1 in Luxembourg and #3 in Dublin offshore fund centers

Global Presence

- Treasury & Securities Services has roughly 28,000 employees in more than 50 countries
- 55% of TSS revenue was generated outside North America in 2011, up from 49% in 2010
- Treasury Services conducts business in 66 countries; in 2011, international revenue grew 22%
- Worldwide Securities Services conducts business in 100 markets; in 2011, 62% of revenue was generated outside North America

International Growth

- TSS expanded its capabilities in more than 20 countries in 2011, including Japan, Russia, Saudi Arabia, the Nordic countries, South Africa, Mexico and Brazil
- TSS opened three new offices in 2011: Panama, Qatar and our sixth branch in China (Harbin) and received permission for another one in Suzhou
- Built trade finance capabilities in nine countries, including Brazil, Mexico and Japan
- Launched Direct Custody and Clearing in Brazil
- Trade finance loans rose 73% in 2011; 96% of trade assets are international

Asset Management

For more than 175 years, J.P. Morgan Asset Management has been managing assets for institutions and individuals around the world. While 2011 presented many new challenges for investors, our approach remained the same: Rely on research, incorporate our collective years of experience in developed and emerging markets, and rigorously manage risks.

As global markets and economies continue to become interconnected and clients increasingly require global solutions combined with local expertise, J.P. Morgan is uniquely positioned to be the first call. Our teams in more than 30 countries bring together global macro and region-specific insights to help our clients for the near and long term.

Our Investment Management and Private Banking franchises are built on a fiduciary-minded foundation that puts a relentless focus on highly disciplined investing and generation of long-term investment outperformance. Our time-tested portfolio management skills, combined with our company's capital markets expertise, fortress balance sheet and risk management culture, led clients to invest more with us this year than ever before, resulting in a record 2011.

2011 Results: Continued Momentum in a Challenging Environment

On the whole, 2011 was a very strong year, but our results were even more gratifying in the context of a challenging geopolitical backdrop and volatile market environment. Some of the highlights include:

Strong and Steady Financial Performance – Asset Management produced record revenue of $9.5 billion, up 6%. While revenue growth came from almost every region and major asset class, it was particularly strong in our international and alternatives businesses, which were up 12% and 17%, respectively. Net income of $1.6 billion was down due in large part to continued investments in front office talent and new technology initiatives.

Clients continued to put their confidence in J.P. Morgan Asset Management, entrusting us with $53 billion in net new long-term assets for the year. We marked our 11th consecutive quarter of positive inflows. We also experienced record loan growth, up 31% to $58 billion; deposit balances, up 38% to $127 billion; and mortgage production, up 40% to $15 billion. We ended the year with record assets under supervision of $1.9 trillion.

Robust Investment Performance – The foundation of any asset management business is its ability to consistently outperform the benchmark and the competition. I'm proud to report that 78% of our mutual funds are in the first or second performance quartiles over the past five years. This track record has translated into positive flows into virtually every asset class and resulted in industry-leading growth rates in long-term assets under management flows.

Leading Provider of Alternative Solutions – J.P. Morgan has long been a pioneer in providing alternative solutions to clients who want to invest in private equity, real assets and hedge funds. In 2011, our Alternatives revenue grew by 17% as the business achieved several successes, including being ranked as the second-largest hedge fund manager by *Absolute Return* magazine. Together with our partners at Gávea Investimentos, we completed the largest-ever private equity fundraising in Brazil with the Gávea Investment Fund IV, making us the largest private equity manager in that country. We also launched the J.P. Morgan Digital Growth Fund; continued building out our Global Real Assets, Private Equity and Highbridge franchises; and maintained our leadership in advising clients on accessing other alternative asset managers.

Invested in Our Future – Our laser-focus on managing expenses and uncovering operating efficiencies enables us to reinvest in our business, create new investment capabilities (we increased our investment professionals by 4%), enter new markets (we opened five new offices) and exploit untapped distribution channels (we increased our client-facing professionals by 8%). Over the past year, we have invested more than $400 million in new people, systems, technologies and platforms to grow our market-leading positions for years to come.

Improved Market Share – Through the growth of our distribution network, we gained market share in a number of areas, including becoming the first bank-owned asset manager to be among the top 10 (#7 to be exact) in U.S. mutual fund assets under management and ranking #2 in U.S. mutual fund flows. We also generated a compound annual growth rate of 16% for international revenue across our division over the past two years.

Strategic Priorities for 2012: Innovate, Invest and Protect

We remain committed to providing superior investment returns for our clients through active asset management, as we have for decades.

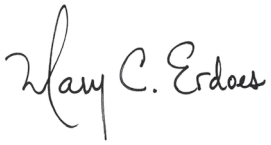
We recently celebrated the 25th anniversary of one of our leading equity products, our Research Enhanced Index portfolio (REI 250). This unique accomplishment is the result of a long-standing dedication to fundamental company research. REI 250 has outperformed the S&P 500 over the 3-, 5-, 10-, 15-, 20- and 25-year periods. Our dedication to local research combined with continuous innovation enables us to constantly adapt our approach and navigate portfolios through time.

We will continue to invest in providing global and local solutions to our clients around the globe. We have the world's leading Private Banking franchise, and we are committed to gaining market share by adding front-line bankers and client advisors in the locations where clients need us most and by developing solutions that give clients around the world the exposure they seek.

As we have expanded our business internationally, so have our partners in the Investment Bank and Treasury & Securities Services. Working together, we have a tremendous opportunity to provide clients across J.P. Morgan with a complete array of solutions that spans both their corporate and personal balance sheets.

All the energy we direct at searching for opportunities to invest results in an equal amount of energy being focused on managing risks and protecting clients' interests. Although new regulations will result in many changes in the industry, we anticipate managing through the issues presented while maintaining our client-first approach.

I know I speak for all of my partners in Asset Management when I say we are excited about the opportunities ahead for our business, and we look forward to delivering the returns JPMorgan Chase shareholders expect from us while always doing first-class business in a first-class way.

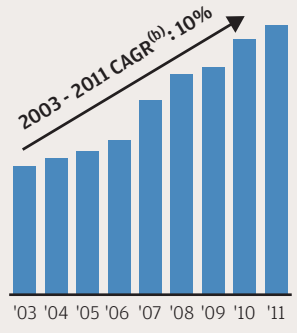


Mary Callahan Erdoes
CEO, Asset Management

2011 Highlights and Accomplishments

- #1 Ultra-High-Net-Worth Global Private Bank, *Euromoney*
- Second-largest recipient of U.S. total net mutual fund flows, *Strategic Insight*
- Leading Pan-European Fund Management Firm, Thomson Reuters
- #1 U.S. Real Estate Equity and Infrastructure Money Manager, *Pensions & Investments*
- Best Global Brand in Private Banking, *Financial Times*
- Asset Management Company of the Year in Asia and Hong Kong, *The Asset*
- Gold Standard Award for Funds Management in the United Kingdom for nine years in a row, Incisive Media

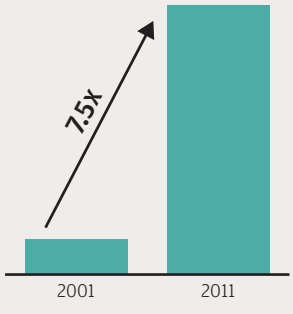
Global Wealth Management Revenue[a]



(a) 2003-2004 pro forma for Bank One acquisition

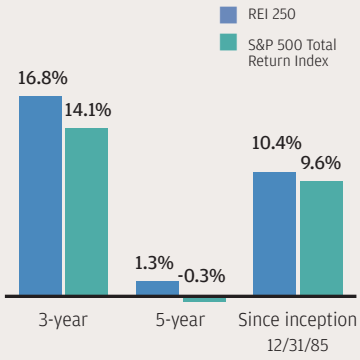
(b) Compound annual growth rate (CAGR)

Alternatives Assets under Management[c]



(c) Differs from public definition. Excludes currency and includes 130/30 funds

U.S. REI 250



Annualized performance results are as of December 31, 2011, and gross of fees

Corporate Responsibility



From left to right:

Kimberly Davis,
President, JPMorgan Chase Foundation

Mel Martinez,
Chairman, JPMorgan Chase Foundation

Peter Scher,
Head of Corporate Responsibility

2011 Highlights and Accomplishments

Growing Our Economy

- Earned the position as #1 Small Business Administration lender by volume in the country. We lent more than $17 billion to small businesses in 2011, up more than 52% from 2010 and 135% from 2009. We made nearly 400,000 new small business loans in 2011, up 45% from 2010.
- Demonstrated our commitment to investing in the future of the communities where we operate. In the United States, we hired more than 17,000 people in 2011.
- Launched The Brookings JPMorgan Chase Global Cities Initiative with a $10 million commitment to The Brookings Institution to help the 100 largest U.S. metropolitan areas become more competitive in the global economy.

Giving Consumers New Tools

- Became the first large bank to adopt The Pew Charitable Trusts' model disclosure form that uses everyday words in a consumer-friendly format.

Strengthening Communities

- Invested $1.4 billion in loans and nearly $1 billion in equity to build or preserve more than 19,500 units of affordable housing for low- and moderate-income families in over 80 U.S. cities. We also provided more than $350 million in loans and $46 million in donations to top-tier Community Development Financial Institutions and other intermediaries to support affordable housing, schools, healthcare clinics and small businesses.
- Donated more than $200 million in philanthropic support to not-for-profits in our communities, and our employees provided nearly 375,000 hours of volunteer service through our Good Works program in local communities.
- Contributed our time and expertise to digitize the most significant papers of Martin Luther King, Jr., through our Technology for Social Good program. The new website and archive make some of Dr. King's most famous speeches and correspondence available to Internet users for the first time.
- Led the financing of the California FreshWorks Fund, an innovative, $200 million public-private partnership loan fund created to increase access to healthy, affordable food in underserved communities, spur economic development and inspire innovation in healthy food retailing.
- Created a partnership between our Global Commodities business and the World Bank Group to offer a new product that will provide up to an initial $4 billion in protection from volatile food prices for farmers, food producers and consumers in developing countries.
- Invested $8 million through our Social Finance business in a $25 million initiative with the U.S. Agency for International Development and the Bill & Melinda Gates Foundation to provide private capital to small and medium-sized enterprises in Africa's agriculture sector.
- Donated more than $10 million to 200 charities in 2011 through the Chase Community Giving crowdsourcing program on Facebook, for a total of over $20 million to 500 charities since 2009. The program has more than 3.3 million fans worldwide.

Honoring Military and Veterans

- Expanded our commitment to help transitioning servicemembers and other veterans lead successful lives after their military service. Implemented a firmwide, comprehensive strategy focused on jobs, homeownership and education.
- Launched the 100,000 Jobs Mission along with other major employers with a goal to collectively hire 100,000 veterans by 2020. In 2011, coalition members hired over 6,600 transitioning military servicemembers and veterans. JPMorgan Chase alone hired more than 3,000.
- Awarded 85 mortgage-free homes to deserving veterans and their families and will award 915 more over the next four years.

Promoting Environmental Sustainability

- Renovated our 1.3 million-square-foot global headquarters building in New York City to earn LEED® Platinum certification from the U.S. Green Building Council, making it the world's largest renovation project to achieve Platinum certification.

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FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

(unaudited)
(in millions, except per share, headcount and ratio data)

As of or for the year ended December 31,	2011	2010	2009	2008[c]	2007
Selected income statement data					
Noninterest revenue	**$ 49,545**	$ 51,693	$ 49,282	$ 28,473	$ 44,966
Net interest income	**47,689**	51,001	51,152	38,779	26,406
Total net revenue	**97,234**	102,694	100,434	67,252	71,372
Total noninterest expense	**62,911**	61,196	52,352	43,500	41,703
Pre-provision profit[a]	**34,323**	41,498	48,082	23,752	29,669
Provision for credit losses	**7,574**	16,639	32,015	19,445	6,864
Provision for credit losses - accounting conformity[b]	**–**	–	–	1,534	–
Income before income tax expense/(benefit) and extraordinary gain	**26,749**	24,859	16,067	2,773	22,805
Income tax expense/(benefit)	**7,773**	7,489	4,415	(926)	7,440
Income before extraordinary gain	**18,976**	17,370	11,652	3,699	15,365
Extraordinary gain[c]	**–**	–	76	1,906	–
Net income	**$ 18,976**	$ 17,370	$ 11,728	$ 5,605	$ 15,365
Per common share data					
Basic earnings					
Income before extraordinary gain	**$ 4.50**	$ 3.98	$ 2.25	$ 0.81	$ 4.38
Net income	**4.50**	3.98	2.27	1.35	4.38
Diluted earnings[d]					
Income before extraordinary gain	**$ 4.48**	$ 3.96	$ 2.24	$ 0.81	$ 4.33
Net income	**4.48**	3.96	2.26	1.35	4.33
Cash dividends declared per share	**1.00**	0.20	0.20	1.52	1.48
Book value per share	**46.59**	43.04	39.88	36.15	36.59
Common shares outstanding					
Average: Basic	**3,900.4**	3,956.3	3,862.8	3,501.1	3,403.6
Diluted	**3,920.3**	3,976.9	3,879.7	3,521.8	3,445.3
Common shares at period-end	**3,772.7**	3,910.3	3,942.0	3,732.8	3,367.4
Share price[e]					
High	**$ 48.36**	$ 48.20	$ 47.47	$ 50.63	$ 53.25
Low	**27.85**	35.16	14.96	19.69	40.15
Close	**33.25**	42.42	41.67	31.53	43.65
Market capitalization	**125,442**	165,875	164,261	117,695	146,986
Selected ratios					
Return on common equity ("ROE")[d]					
Income before extraordinary gain	**11%**	10%	6%	2%	13%
Net income	**11**	10	6	4	13
Return on tangible common equity ("ROTCE")[d]					
Income before extraordinary gain	**15**	15	10	4	22
Net income	**15**	15	10	6	22
Return on assets ("ROA")					
Income before extraordinary gain	**0.86**	0.85	0.58	0.21	1.06
Net income	**0.86**	0.85	0.58	0.31	1.06
Overhead ratio	**65**	60	52	65	58
Deposits-to-loans ratio	**156**	134	148	135	143
Tier 1 capital ratio[f]	**12.3**	12.1	11.1	10.9	8.4
Total capital ratio	**15.4**	15.5	14.8	14.8	12.6
Tier 1 leverage ratio	**6.8**	7.0	6.9	6.9	6.0
Tier 1 common capital ratio[g]	**10.1**	9.8	8.8	7.0	7.0
Selected balance sheet data (period-end)[f]					
Trading assets	**$ 443,963**	$ 489,892	$ 411,128	$ 509,983	$ 491,409
Securities	**364,793**	316,336	360,390	205,943	85,450
Loans	**723,720**	692,927	633,458	744,898	519,374
Total assets	**2,265,792**	2,117,605	2,031,989	2,175,052	1,562,147
Deposits	**1,127,806**	930,369	938,367	1,009,277	740,728
Long-term debt[h]	**256,775**	270,653	289,165	302,959	199,010
Common stockholders' equity	**175,773**	168,306	157,213	134,945	123,221
Total stockholders' equity	**183,573**	176,106	165,365	166,884	123,221
Headcount	**260,157**	239,831	222,316	224,961	180,667
Credit quality metrics					
Allowance for credit losses	**$ 28,282**	$ 32,983	$ 32,541	$ 23,823	$ 10,084
Allowance for loan losses to total retained loans	**3.84%**	4.71%	5.04%	3.18%	1.88%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[i]	**3.35**	4.46	5.51	3.62	1.88
Nonperforming assets	**$ 11,036**	$ 16,557	$ 19,741	$ 12,714	$ 3,933
Net charge-offs	**12,237**	23,673	22,965	9,835	4,538
Net charge-off rate	**1.78%**	3.39%	3.42%	1.73%	1.00%

(a) Pre-provision profit is total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

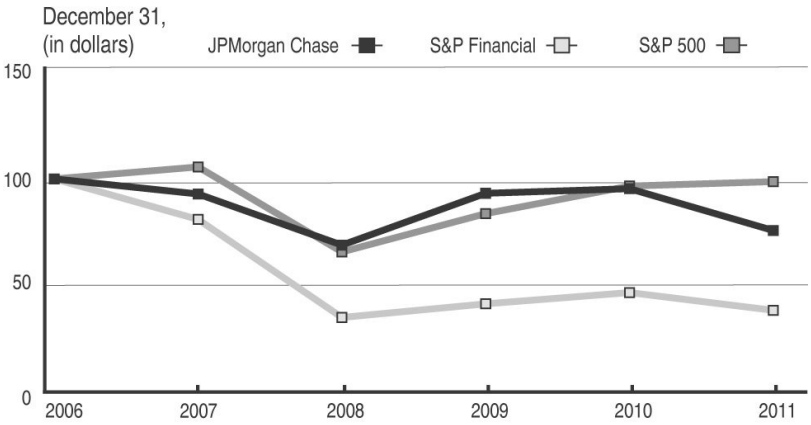
(b) Results for 2008 included an accounting conformity loan loss reserve provision related to the acquisition of Washington Mutual Bank's ("Washington Mutual") banking operations.
(c) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual. The acquisition resulted in negative goodwill, and accordingly, the Firm recorded an extraordinary gain. A preliminary gain of $1.9 billion was recognized at December 31, 2008. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion.
(d) The calculation of 2009 earnings per share ("EPS") and net income applicable to common equity includes a one-time, noncash reduction of $1.1 billion, or $0.27 per share, resulting from repayment of U.S. Troubled Asset Relief Program ("TARP") preferred capital in the second quarter of 2009. Excluding this reduction, the adjusted ROE and ROTCE were 7% and 11%, respectively, for 2009. The Firm views the adjusted ROE and ROTCE, both non-GAAP financial measures, as meaningful because they enable the comparability to prior periods.
(e) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.
(f) Effective January 1, 2010, the Firm adopted accounting guidance that amended the accounting for the transfer of financial assets and the consolidation of variable interest entities ("VIEs"). Upon adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related, adding $87.7 billion and $92.2 billion of assets and liabilities, respectively, and decreasing stockholders' equity and the Tier 1 capital ratio by $4.5 billion and 34 basis points, respectively. The reduction to stockholders' equity was driven by the establishment of an allowance for loan losses of $7.5 billion (pretax) primarily related to receivables held in credit card securitization trusts that were consolidated at the adoption date.
(g) Tier 1 common capital ratio ("Tier 1 common ratio") is Tier 1 common capital ("Tier 1 common") divided by risk-weighted assets. The Firm uses Tier 1 common capital along with the other capital measures to assess and monitor its capital position. For further discussion of Tier 1 common capital ratio, see Regulatory capital on pages 119–122 of this Annual Report.
(h) Effective January 1, 2011, the long-term portion of advances from Federal Home Loan Banks ("FHLBs") was reclassified from other borrowed funds to long-term debt. Prior periods have been revised to conform with the current presentation.
(i) Excludes the impact of residential real estate purchased credit-impaired ("PCI") loans. For further discussion, see Allowance for credit losses on pages 155–157 of this Annual Report.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced U.S. equity benchmark consisting of leading companies from different economic sectors. The S&P Financial Index is an index of 81 financial companies, all of which are components of the S&P 500. The Firm is a component of both industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2006, in JPMorgan Chase common stock and in each of the above S&P indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2006	2007	2008	2009	2010	**2011**
JPMorgan Chase	$ 100.00	$ 93.07	$ 69.58	$ 93.39	$ 95.50	**$ 76.29**
S&P Financial Index	100.00	81.37	36.36	42.62	47.79	**39.64**
S&P 500 Index	100.00	105.49	66.46	84.05	96.71	**98.75**



This section of JPMorgan Chase's Annual Report for the year ended December 31, 2011 ("Annual Report"), provides management's discussion and analysis ("MD&A") of the financial condition and results of operations of JPMorgan Chase. See the Glossary of Terms on pages 308–311 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 175 of this Annual Report) and in JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2011 ("2011 Form 10-K"), in Part I, Item 1A: Risk factors; reference is hereby made to both.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide; the Firm has $2.3 trillion in assets and $183.6 billion in stockholders' equity as of December 31, 2011. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, asset management and private equity. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national bank with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national bank that is the Firm's credit card–issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), the Firm's U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm's principal operating subsidiaries in the United Kingdom ("U.K.") is J.P. Morgan Securities Ltd., a subsidiary of JPMorgan Chase Bank, N.A.

JPMorgan Chase's activities are organized, for management reporting purposes, into six business segments, as well as Corporate/Private Equity. The Firm's wholesale businesses comprise the Investment Bank, Commercial Banking, Treasury & Securities Services and Asset Management segments. The Firm's consumer businesses comprise the Retail Financial Services and Card Services & Auto segments. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows.

Investment Bank
J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The clients of the Investment Bank ("IB") are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage, and research.

Retail Financial Services
Retail Financial Services ("RFS") serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking. RFS is organized into Consumer & Business Banking and Mortgage Banking (including Mortgage Production and Servicing, and Real Estate Portfolios). Consumer & Business Banking includes branch banking and business banking activities. Mortgage Production and Servicing includes mortgage origination and servicing activities. Real Estate Portfolios comprises residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Customers can use more than 5,500 bank branches (third largest nationally) and more than 17,200 ATMs (second largest nationally), as well as online and mobile banking around the clock. More than 33,500 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. As one of the largest mortgage originators in the U.S., Chase helps customers buy or refinance homes resulting in approximately $150 billion of mortgage originations annually. Chase also services more than 8 million mortgages and home equity loans.

Card Services & Auto
Card Services & Auto ("Card") is one of the nation's largest credit card issuers, with over $132 billion in credit card loans. Customers have over 65 million open credit card accounts (excluding the commercial card portfolio), and used Chase credit cards to meet over $343 billion of their spending needs in 2011. Through its Merchant Services business, Chase Paymentech Solutions, Card is a global leader in payment processing and merchant acquiring. Consumers also can obtain loans through more than 17,200 auto dealerships and 2,000 schools and universities nationwide.

Commercial Banking
Commercial Banking ("CB") delivers extensive industry knowledge, local expertise and dedicated service to more than 24,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and nearly 35,000 real estate investors/owners. CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management, to meet its clients' domestic and international financial needs.

Treasury & Securities Services
Treasury & Securities Services ("TSS") is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services ("TS") provides cash management, trade, wholesale card and liquidity products and services to small- and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with IB, CB, RFS and Asset Management businesses to serve clients firmwide. Certain TS revenue is included in other segments' results. Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Asset Management
Asset Management ("AM"), with assets under supervision of $1.9 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity products, including money-market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

EXECUTIVE OVERVIEW

This executive overview of the MD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of events, trends and uncertainties, as well as the capital, liquidity, credit and market risks, and the critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Economic environment

The global economy lost some momentum during 2011 in the face of several new threats, some transitory and some more deeply entrenched. In the first half of the year, the earthquake and tsunami in Japan represented a significant setback to that country's important economy and probably disrupted activity elsewhere in the world as well, particularly in the global motor vehicle sector. Later in the year, severe floods in Thailand also disrupted motor vehicle supply chains. Furthermore, a sharp rise in oil prices in the spring in the wake of political unrest in the Middle East slowed consumer demand.

Although many of these shocks eased later in the year, Europe's financial crisis posed a new threat. Concerns about sovereign debt in Greece and other Eurozone countries, which raised doubts in the investor community about the viability of the European monetary union, as well as the sovereign debt exposures of the European banking system, were a source of stress in the global financial markets during the second half of 2011. In December 2011, the European Central Bank ("ECB") announced measures to support bank lending and money market activity, offering 36-month, 1 percent loans through two longer-term refinancing operations, known as LTROs. These programs replaced a 12-month lending facility established by the ECB in October 2011 and also allowed banks to use a wider variety of assets as collateral for the loans. The ECB's actions were expected to ease near-term concerns about European bank funding and liquidity.

Despite these headwinds, there were a number of promising developments in the U.S. during 2011. The credit environment improved as consumer and wholesale delinquencies decreased and lending for a broad range of purposes accelerated. Housing prices continued to be largely unchanged and rose in the non-distressed sector, while home builders continued to make good progress working off the excess housing inventory that was built in the last decade. Despite the turmoil in the summer months associated with the debt ceiling crisis and a worsening of the crisis in Europe, the U.S. job market continued to improve, with layoffs easing, employment expanding steadily, and unemployment falling. At the same time the financial health of the business sector, which was already strong, continued to improve. Reflecting these favorable trends, the equity market recovered from the late summer drop.

The Board of Governors of the Federal Reserve System (the "Federal Reserve") took several actions during 2011 to support a stronger economic recovery and to help support conditions in mortgage markets. These actions included extending the average maturity of its holdings of securities, reinvesting principal payments from its holdings of agency debt and U.S. government agency mortgage-backed securities into other agency mortgage-backed securities and maintaining its existing policy of rolling over maturing U.S. Department of the Treasury ("U.S. Treasury") securities at auction. The Federal Reserve maintained the target range for the federal funds rate at zero to one-quarter percent and, in January 2012, provided specific guidance regarding its prediction about policy rates, stating that economic conditions were likely to warrant exceptionally low levels for the federal funds rate at least through late 2014. Also, the Federal Reserve reactivated currency swap lines with the ECB in response to pressures in interbank term funding markets.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	2011	2010	Change
Selected income statement data			
Total net revenue	**$ 97,234**	$ 102,694	(5)%
Total noninterest expense	**62,911**	61,196	3
Pre-provision profit	**34,323**	41,498	(17)
Provision for credit losses	**7,574**	16,639	(54)
Net income	**18,976**	17,370	9
Diluted earnings per share	**4.48**	3.96	13
Return on common equity	**11%**	10%	
Capital ratios			
Tier 1 capital	**12.3**	12.1	
Tier 1 common	**10.1**	9.8	

Business overview

JPMorgan Chase reported full-year 2011 record net income of $19.0 billion, or $4.48 per share, on net revenue of $97.2 billion. Net income increased by $1.6 billion, or 9%, compared with net income of $17.4 billion, or $3.96 per share, in 2010. ROE for the year was 11%, compared with 10% for the prior year.

The increase in net income in 2011 was driven by a lower provision for credit losses, predominantly offset by lower net revenue and higher noninterest expense. The reduction in the provision for credit losses reflected continued improvement in the consumer portfolios. The decline in net revenue from 2010 was driven by lower net interest income, securities gains, mortgage fees and related income, and principal transactions revenue, partially offset by higher asset management, administration and commissions revenue and higher other income. The increase in noninterest expense was driven largely by higher compensation expense, reflecting increased headcount.

During 2011, the credit quality of the Firm's wholesale credit portfolio improved. The delinquency trends in the consumer business modestly improved, though the rate of improvement seen earlier in 2011 slowed somewhat in the latter half of the year. Mortgage net charge-offs and delinquencies modestly improved, but both remained at elevated levels. These positive consumer credit trends resulted in reductions in the allowance for loan losses in Card Services & Auto and in Retail Financial Services (excluding purchased credit-impaired loans). The allowance for loan losses associated with the Washington Mutual purchased credit-impaired loan portfolio in Retail Financial Services increased, reflecting higher than expected loss frequency relative to modeled lifetime loss estimates. Firmwide, net charge-offs were $12.2 billion for the year, down $11.4 billion, or 48%, from 2010, and nonperforming assets at year-end were $11.0 billion, down $5.5 billion, or 33%. Total firmwide credit reserves were $28.3 billion, resulting in a loan loss coverage ratio of 3.35% of total loans, excluding the purchased credit-impaired portfolio.

Net income performance varied among JPMorgan Chase's lines of business, but underlying metrics in each business showed positive trends. The second half of 2011 reflected a challenging investment banking and capital markets environment which contributed to lower revenue for the year in the Investment Bank (excluding debit valuation adjustment ("DVA") gains). However, the Investment Bank maintained its #1 ranking in Global Investment Banking Fees for the year. Consumer & Business Banking within Retail Financial Services opened 260 new branches and increased deposits by 8% in 2011. In the Card business, credit card sales volume (excluding Commercial Card) was up 10% for the year. Treasury & Securities Services reported record average liability balances, up 28% for 2011, and a 73% increase in trade loans. Commercial Banking also reported record average liability balances, up 26% for the year, and record revenue and net income for the year. The fourth quarter of 2011 also marked CB's sixth consecutive quarter of loan growth, including a 17% increase in middle-market loans over the prior year end. Asset Management reported record revenue for the year and achieved eleven consecutive quarters of positive long-term flows into assets under management.

JPMorgan Chase ended the year with a Basel I Tier 1 common ratio of 10.1%, compared with 9.8% at year-end 2010. This strong capital position enabled the Firm to repurchase $8.95 billion of common stock and warrants during 2011. The Firm estimated that its Basel III Tier 1 common ratio was approximately 7.9% at December 31, 2011. Total deposits increased to $1.1 trillion, up 21% from the prior year. Total stockholders' equity at December 31, 2011, was $183.6 billion. The Basel I and III Tier 1 common ratios are non-GAAP financial measures, which the Firm uses along with the other capital measures, to assess and monitor its capital position. For further discussion of the Tier 1 common capital ratios, see Regulatory capital on pages 119–123 of this Annual Report.

During 2011, the Firm worked to help its individual customers, corporate clients and the communities in which it does business. The Firm provided credit to and raised capital of more than $1.8 trillion for its clients during 2011, up 18% from 2010; this included $17 billion lent to small businesses, up 52%, and $68 billion to more than 1,200 not-for-profit and government entities, including states, municipalities, hospitals and universities. The Firm also originated more than 765,000 mortgages, and provided credit cards to approximately 8.5 million people. The Firm remains committed to helping homeowners and preventing foreclosures. Since the beginning of 2009, the Firm has offered more than 1.2 million mortgage modifications, of which approximately 452,000 have achieved permanent modification as of December 31, 2011.

The discussion that follows highlights the performance of each business segment compared with the prior year and presents results on a managed basis. Managed basis starts with the reported results under the accounting principles generally accepted in the United States of America ("U.S. GAAP") and, for each line of business and the Firm as a whole, includes certain reclassifications to present total net revenue on a tax-equivalent basis. Prior to January 1, 2010, the Firm's managed-basis presentation also included certain reclassification adjustments that assumed credit card loans securitized by Card remained on the Consolidated Balance Sheets. For more information about managed basis, as well as other non-GAAP financial measures used by management to evaluate the performance of each line of business, see pages 76–78 of this Annual Report.

Investment Bank net income increased modestly from the prior year as lower noninterest expense was predominantly offset by a lower benefit from the provision for credit losses. Net revenue for the year was approximately flat compared with 2010 and included a $1.4 billion gain from DVA on certain structured and derivative liabilities, compared with a DVA gain of $509 million in 2010. In 2011, this was partially offset by a $769 million loss, net of hedges, from credit valuation adjustments ("CVA") on derivative assets within Credit Portfolio, due to the widening of credit spreads for the Firm's counterparties. In 2010, net revenue was partially offset by a $403 million loss, net of hedges, from CVA. Fixed Income and Equity Markets revenue increased compared with the prior year partially due to the DVA gain. In addition, results in Fixed Income and Equity Markets reflected solid client revenue across most products. Investment banking fees decreased for the year as the impact of lower volumes in the second half of 2011 more than offset the strong level of fees reported in the first half of the year. The decrease in noninterest expense from the prior-year level was largely driven by lower compensation expense and the absence of

the U.K. Bank Payroll Tax. Return on equity for the year was 17% on $40.0 billion of average allocated capital.

Retail Financial Services net income decreased modestly compared with the prior year driven by higher noninterest expense and lower net revenue, predominantly offset by a lower provision for credit losses. The decline in net revenue was driven by lower mortgage fees and related income and lower net interest income, which reflected the impact of lower loan balances due to portfolio runoff, and narrower loan spreads. Higher investment sales revenue and deposit-related fees partially offset the decline in revenue. A modest improvement in delinquency trends and a decline in net charge-offs compared with 2010 resulted in the lower provision for credit losses; however, the provision continued to reflect elevated losses in the mortgage and home equity portfolios. Additionally, the provision for credit losses in 2011 reflected a lower addition to the allowance for loan losses for the purchased credit-impaired portfolio compared with the prior year. The increase in noninterest expense from the prior year was driven by investment in sales force and new branch builds as well as elevated foreclosure- and default-related costs, including $1.7 billion of expense for fees and assessments, as well as other costs of foreclosure-related matters. Return on equity for the year was 7% on $25.0 billion of average allocated capital.

Card Services & Auto net income increased in 2011 compared with the prior year driven by a lower provision for credit losses partially offset by lower net revenue and higher noninterest expense. The decrease in net revenue was driven by a decline in net interest income, reflecting lower average loan balances, the impact of legislative changes and a decreased level of fees. These decreases were largely offset by lower revenue reversals associated with lower net charge-offs. Credit card sales volume, excluding the Commercial Card portfolio, was up 10% from 2010. The lower provision for credit losses reflected lower net charge-offs partially offset by a lower reduction in the allowance for loan losses. The increase in noninterest expense was due to higher marketing expense and the inclusion of the Commercial Card business. Return on equity for the year was 28% on $16.0 billion of average allocated capital.

Commercial Banking reported record net revenue and net income for the second consecutive year. The increase in revenue was driven by higher net interest income resulting from growth in liability and loan balances, partially offset by spread compression on liability products. Average liability balances reached a record level in 2011, up 26% from 2010. End-of-period loan balances increased in each quarter of 2011 and were up 13% from year-end 2010. The provision for credit losses declined compared with the prior year. Noninterest expense increased from the level in 2010, primarily reflecting higher headcount-related expense. Return on equity for the year was 30% on $8.0 billion of average allocated capital.

Treasury & Securities Services net income increased from the prior year, driven by higher net revenue reflecting record deposit balances and a benefit from the Global Corporate Bank ("GCB") credit allocation, predominantly offset by higher noninterest expense. Worldwide Securities Services net revenue increased compared to 2010, driven by higher net interest income due to higher deposit balances and net inflows of assets under custody. Assets under custody of $16.9 trillion were up 5% from 2010. Treasury Services net revenue increased, driven by higher deposit balances and higher trade loan volumes, partially offset by the transfer of the Commercial Card business to Card in the first quarter of 2011. Higher noninterest expense was mainly driven by continued expansion into new markets and expenses related to exiting unprofitable business, partially offset by the transfer of the Commercial Card business to Card. Return on equity for the year was 17% on $7.0 billion of average allocated capital.

Asset Management net income decreased, reflecting higher noninterest expense, largely offset by record net revenue. The growth in net revenue was due to net inflows to products with higher margins, higher deposit and loan balances, and the effect of higher average market levels. This growth was partially offset by lower performance fees, narrower deposit spreads and lower loan-related revenue. Assets under supervision of $1.9 trillion increased 4% from the prior year, and assets under management of $1.3 trillion were up 3%. Both increases were due to net inflows to long-term and liquidity products, partially offset by the effect of lower market levels. In addition, deposit and custody inflows contributed to the increase in assets under supervision. The increase in noninterest expense was due to higher headcount-related expense and non-client-related litigation, partially offset by lower performance-based compensation. Return on equity for the year was 25% on $6.5 billion of average allocated capital.

Corporate/Private Equity net income decreased in 2011 as income in both Private Equity and Corporate declined. Lower private equity gains were primarily the result of net write-downs on privately-held investments and the absence of prior-year gains from sales in the Private Equity portfolio. In Corporate, lower net interest income was primarily driven by repositioning of the investment securities portfolio and lower funding benefits from financing portfolio positions. Lower securities gains also drove the decline in net income. In 2011, noninterest expense included $3.2 billion of litigation expense, predominantly for mortgage-related matters, compared with $5.7 billion of litigation expense in 2010.

2012 Business outlook

The following forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking

Statements on page 175 and Risk Factors section of the 2011 Form 10-K.

JPMorgan Chase's outlook for the full-year 2012 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these linked factors will affect the performance of the Firm and its lines of business.

In the Consumer & Business Banking business within RFS, the Firm estimates that, given the current low interest rate environment, spread compression will likely negatively affect 2012 net income by approximately $400 million. In addition, the effect of the Durbin Amendment will likely reduce annualized net income by approximately $600 million.

In the Mortgage Production and Servicing business within RFS, revenue in 2012 could be negatively affected by continued elevated levels of repurchases of mortgages previously sold, predominantly to U.S. government-sponsored entities ("GSEs"). Management estimates that realized mortgage repurchase losses could be approximately $350 million per quarter in 2012. Also for Mortgage Production and Servicing, management expects the business to continue to incur elevated default management and foreclosure-related costs including additional costs associated with the Firm's mortgage servicing processes, particularly its loan modification and foreclosure procedures. (See Enhancements to Mortgage Servicing on pages 152-153 and Note 17 on pages 267–271 of this Annual Report.)

For the Real Estate Portfolios within RFS, management believes that quarterly net charge-offs could be approximately $900 million. Given management's current estimate of portfolio runoff levels, the existing residential real estate portfolio is expected to decline by approximately 10% to 15% in 2012 from year-end 2011 levels. This reduction in the residential real estate portfolio is expected to reduce net interest income by approximately $500 million in 2012. However, over time, the reduction in net interest income is expected to be more than offset by an improvement in credit costs and lower expenses. In addition, as the portfolio continues to run off, management anticipates that approximately $1 billion of capital may become available for redeployment each year, subject to the capital requirements associated with the remaining portfolio.

In Card, the net charge-off rate for the combined Chase and Washington Mutual credit card portfolios (excluding Commercial Card) could increase in the first quarter of 2012 to approximately 4.50% from the 4.33% reported in the fourth quarter, reflecting normal seasonality.

The currently anticipated results of RFS and Card described above could be adversely affected by further declines in U.S. housing prices or increases in the unemployment rate. Given ongoing weak economic conditions, combined with a high level of uncertainty concerning the residential real estate markets, management continues to closely monitor the portfolios in these businesses.

In IB, TSS, CB and AM, revenue will be affected by market levels, volumes and volatility, which will influence client flows and assets under management, supervision and custody. CB and TSS will continue to experience low net interest margins as long as market interest rates remain low. In addition, the wholesale credit environment will influence levels of charge-offs, repayments and provision for credit losses for IB, CB, TSS and AM.

In Private Equity, within the Corporate/Private Equity segment, earnings will likely continue to be volatile and be influenced by capital markets activity, market levels, the performance of the broader economy and investment-specific issues. Corporate's net interest income levels will generally trend with the size and duration of the investment securities portfolio. Corporate quarterly net income (excluding Private Equity results, significant nonrecurring items and litigation expense) could be approximately $200 million, though these results will depend on the decisions that the Firm makes over the course of the year with respect to repositioning of the investment securities portfolio.

The Firm faces a variety of litigation, including in its various roles as issuer and/or underwriter in mortgage-backed securities ("MBS") offerings, primarily related to offerings involving third parties other than the GSEs. It is possible that these matters will take a number of years to resolve; their ultimate resolution is inherently uncertain and reserves for such litigation matters may need to be increased in the future.

Management and the Firm's Board of Directors continually evaluate ways to deploy the Firm's strong capital base in order to enhance shareholder value. Such alternatives could include the repurchase of common stock and warrants, increasing the common stock dividend and pursuing alternative investment opportunities. Certain of such capital actions, such as increasing dividends, implementing common equity repurchase programs, or redeeming or repurchasing capital instruments, are subject to the Federal Reserve's Comprehensive Capital Analysis and Review ("CCAR") process. The Federal Reserve requires the Firm to submit a capital plan on an annual basis. The Firm submitted its 2012 capital plan on January 9, 2012. The Federal Reserve has indicated that it expects to provide notification of either its objection or non-objection to the Firm's capital plan by March 15, 2012.

Regulatory developments

JPMorgan Chase is subject to regulation under state and federal laws in the U.S., as well as the applicable laws of each of the various other jurisdictions outside the U.S. in which the Firm does business. The Firm is currently

experiencing a period of unprecedented change in regulation and such changes could have a significant impact on how the Firm conducts business. The Firm continues to work diligently in assessing and understanding the implications of the regulatory changes it is facing, and is devoting substantial resources to implementing all the new rules and regulations while meeting the needs and expectations of its clients. While the Firm has made a preliminary assessment of the likely impact of certain of the anticipated changes, the Firm cannot, given the current status of the regulatory developments, quantify the possible effects on its business and operations of all of the significant changes that are currently underway. For further discussion of regulatory developments, see Supervision and regulation on pages 1-7 and Risk factors on pages 7-17 of the 2011 Form 10-K.

Subsequent events

Global settlement on servicing and origination of mortgages

On February 9, 2012, the Firm announced that it agreed to a settlement in principle (the "global settlement") with a number of federal and state government agencies, relating to the servicing and origination of mortgages. The global settlement, which is subject to the execution of a definitive agreement and court approval, calls for the Firm to, among other things: (i) make cash payments of approximately $1.1 billion; (ii) provide approximately $500 million of refinancing relief to certain "underwater" borrowers whose loans are owned by the Firm; and (iii) provide approximately $3.7 billion of additional relief for certain borrowers, including reductions of principal, payments to assist with short sales, deficiency balance waivers on past foreclosures and short sales, and forbearance assistance for unemployed homeowners. While the Firm expects to incur additional operating costs to comply with portions of the global settlement, the Firm's prior period results of operations have reflected the estimated costs of the global settlement. Accordingly, the Firm expects that the financial impact of the global settlement on the Firm's financial condition and results of operations for the first quarter of 2012 and future periods will not be material. For further information on this settlement, see "Subsequent events" in Note 2, and "Mortgage Foreclosure Investigations and Litigation" in Note 31 on pages 183–184 and 295–296, respectively, of this Annual Report.

Washington Mutual, Inc. bankruptcy plan confirmation

On February 17, 2012, a bankruptcy court confirmed the joint plan containing the global settlement agreement resolving numerous disputes among Washington Mutual, Inc. ("WMI"), JPMorgan Chase and the Federal Deposit Insurance Corporation ("FDIC") as well as significant creditor groups (the "WaMu Global Settlement"). Pursuant to this agreement, the Firm expects to recognize additional assets, including certain pension-related assets, as well as tax refunds, in future periods as the settlement is executed and various state and federal tax matters are resolved. For additional information related to the WaMu Global Settlement, see "Subsequent events" in Note 2, and "Washington Mutual Litigations" in Note 31 on page 183-184 and 298, respectively, of this Annual Report.

The following section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2011. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 168–172 of this Annual Report.

Revenue

Year ended December 31, (in millions)	2011	2010	2009
Investment banking fees	**$ 5,911**	$ 6,190	$ 7,087
Principal transactions	**10,005**	10,894	9,796
Lending- and deposit-related fees	**6,458**	6,340	7,045
Asset management, administration and commissions	**14,094**	13,499	12,540
Securities gains	**1,593**	2,965	1,110
Mortgage fees and related income	**2,721**	3,870	3,678
Credit card income	**6,158**	5,891	7,110
Other income	**2,605**	2,044	916
Noninterest revenue	**49,545**	51,693	49,282
Net interest income	**47,689**	51,001	51,152
Total net revenue	**$ 97,234**	$ 102,694	$ 100,434

2011 compared with 2010

Total net revenue for 2011 was $97.2 billion, a decrease of $5.5 billion, or 5%, from 2010. Results for 2011 were driven by lower net interest income in several businesses, lower securities gains in Corporate/Private Equity, lower mortgage fees and related income in RFS, and lower principal transactions revenue in Corporate/Private Equity. These declines were partially offset by higher asset management fees, largely in AM.

Investment banking fees decreased from 2010, predominantly due to declines in equity and debt underwriting fees. The impact from lower industry-wide volumes in the second half of 2011 more than offset the Firm's record level of debt underwriting fees in the first six months of the year. Advisory fees increased for the year, reflecting higher industry-wide completed M&A volumes relative to the 2010 level. For additional information on investment banking fees, which are primarily recorded in IB, see IB segment results on pages 81–84, and Note 7 on pages 211–212 of this Annual Report.

Principal transactions revenue, which consists of revenue from the Firm's market-making and private equity investing activities, decreased compared with 2010. This was driven by lower trading revenue and lower private equity gains. Trading revenue included a $1.4 billion gain from DVA on certain structured notes and derivative liabilities, resulting from the widening of the Firm's credit spreads, partially offset by a $769 million loss, net of hedges, from CVA on derivative assets within Credit Portfolio in IB, due to the widening of credit spreads of the Firm's counterparties. The prior year included a $509 million gain from DVA, partially offset by a $403 million loss, net of hedges, from CVA. Excluding DVA and CVA, lower trading revenue reflected the impact of the second half of 2011's challenging market conditions on Corporate and IB. Lower private equity gains were primarily due to net write-downs on privately-held investments and the absence of prior-year gains from sales in the Private Equity portfolio. For additional information on principal transactions revenue, see IB and Corporate/Private Equity segment results on pages 81–84 and 107–108, respectively, and Note 7 on pages 211–212 of this Annual Report.

Lending- and deposit-related fees increased modestly in 2011 compared with the prior year. The increase was primarily driven by the introduction in the first quarter of 2011 of a new checking account product offering in RFS, and the subsequent conversion of certain existing accounts into the new product. The increase was offset partly by the impact of regulatory and policy changes affecting nonsufficient fund/overdraft fees in RFS. For additional information on lending- and deposit-related fees, which are mostly recorded in RFS, CB, TSS and IB, see RFS on pages 85–93, CB on pages 98–100, TSS on pages 101–103 and IB on pages 81–84 of this Annual Report.

Asset management, administration and commissions revenue increased from 2010, reflecting higher asset management fees in AM and RFS, driven by net inflows to products with higher margins and the effect of higher market levels; and higher administration fees in TSS, reflecting net inflows of assets under custody. For additional information on these fees and commissions, see the segment discussions for AM on pages 104–106, RFS on pages 85–93 and TSS on pages 101–103, and Note 7 on pages 211–212 of this Annual Report.

Securities gains decreased compared with the 2010 level, primarily due to the repositioning of the investment securities portfolio in response to changes in the current market environment and to rebalancing exposures. For additional information on securities gains, which are mostly recorded in the Firm's Corporate/Private Equity segment, see the Corporate/Private Equity segment discussion on pages 107–108, and Note 12 on pages 225–230 of this Annual Report.

Mortgage fees and related income decreased in 2011 compared with 2010, reflecting a MSR risk management loss of $1.6 billion for 2011, compared with income of $1.1 billion for 2010, largely offset by lower repurchase losses in 2011. The $1.6 billion loss was driven by a $7.1 billion loss due to a decrease in the fair value of the mortgage servicing rights ("MSRs") asset, which was predominantly offset by a $5.6 billion gain on the derivatives used to hedge the MSR asset. For additional information on

mortgage fees and related income, which is recorded primarily in RFS, see RFS's Mortgage Production and Servicing discussion on pages 89–91, and Note 17 on pages 267–271 of this Annual Report. For additional information on repurchase losses, see the Mortgage repurchase liability discussion on pages 115–118 and Note 29 on pages 283–289 of this Annual Report.

Credit card income increased during 2011, largely reflecting higher net interchange income associated with higher customer transaction volume on credit and debit cards, as well as lower partner revenue-sharing due to the impact of the Kohl's portfolio sale. These increases were partially offset by lower revenue from fee-based products, as well as the impact of the Durbin Amendment. For additional information on credit card income, see the Card and RFS segment results on pages 94–97, and pages 85–93, respectively, of this Annual Report.

Other income increased in 2011, driven by valuation adjustments on certain assets and incremental revenue from recent acquisitions in IB, and higher auto operating lease income in Card, resulting from growth in lease volume. Also contributing to the increase was a gain on the sale of an investment in AM.

Net interest income decreased in 2011 compared with the prior year, driven by lower average loan balances and yields in Card and RFS, reflecting the expected runoff of credit card balances and residential real estate loans; lower fees on credit card receivables, reflecting the impact of legislative changes; higher average interest-bearing deposit balances and related yields; and lower yields on securities, reflecting portfolio repositioning in anticipation of an increasing interest rate environment. The decrease was offset partially by lower revenue reversals associated with lower credit card charge-offs, and higher trading asset balances. The Firm's average interest-earning assets were $1.8 trillion for the 2011 full year, and the net yield on those assets, on a fully taxable-equivalent ("FTE") basis, was 2.74%, a decrease of 32 basis points from 2010. For further information on the impact of the legislative changes on the Consolidated Statements of Income, see Card discussion on credit card legislation on page 94 of this Annual Report.

2010 compared with 2009

Total net revenue for 2010 was $102.7 billion, up by $2.3 billion, or 2%, from 2009. Results for 2010 were driven by a higher level of securities gains and private equity gains in Corporate/Private Equity, higher asset management fees in AM and administration fees in TSS, and higher other income in several businesses, partially offset by lower credit card income.

Investment banking fees decreased from 2009 due to lower equity underwriting and advisory fees, partially offset by higher debt underwriting fees. Competitive markets combined with flat industry-wide equity underwriting and completed M&A volumes, resulted in lower equity underwriting and advisory fees; while strong industry-wide loan syndication and high-yield bond volumes drove record debt underwriting fees in IB. For additional information on investment banking fees, which are primarily recorded in IB, see IB segment results on pages 81–84, and Note 7 on pages 211–212 of this Annual Report.

Principal transactions revenue increased compared with 2009. This was driven by the Private Equity business, which had significant private equity gains in 2010, compared with a small loss in 2009, reflecting improvements in market conditions. Trading revenue decreased, reflecting lower results in Corporate, offset by higher revenue in IB primarily reflecting DVA gains. For additional information on principal transactions revenue, see IB and Corporate/Private Equity segment results on pages 81–84 and 107–108, respectively, and Note 7 on pages 211–212 of this Annual Report.

Lending- and deposit-related fees decreased in 2010 from 2009 levels, reflecting lower deposit-related fees in RFS associated, in part, with newly-enacted legislation related to non-sufficient funds and overdraft fees; this was partially offset by higher lending-related service fees in IB, primarily from growth in business volume, and in CB, primarily from higher commitment and letter-of-credit fees. For additional information on lending- and deposit-related fees, which are mostly recorded in IB, RFS, CB and TSS, see segment results for IB on pages 81–84, RFS on pages 85–93, CB on pages 98–100 and TSS on pages 101–103 of this Annual Report.

Asset management, administration and commissions revenue increased from 2009. The increase largely reflected higher asset management fees in AM, driven by the effect of higher market levels, net inflows to products with higher margins and higher performance fees; and higher administration fees in TSS, reflecting the effects of higher market levels and net inflows of assets under custody. This increase was partially offset by lower brokerage commissions in IB, as a result of lower market volumes. For additional information on these fees and commissions, see the segment discussions for AM on pages 104–106 and TSS on pages 101–103, and Note 7 on pages 211–212 of this Annual Report.

Securities gains were significantly higher in 2010 compared with 2009, resulting primarily from the repositioning of the portfolio in response to changes in the interest rate environment and to rebalance exposure. For additional information on securities gains, which are mostly recorded in the Firm's Corporate segment, see the Corporate/Private Equity segment discussion on pages 107–108, and Note 12 on pages 225–230 of this Annual Report.

Mortgage fees and related income increased in 2010 compared with 2009, driven by higher mortgage production revenue, reflecting increased mortgage origination volumes in RFS and AM, and wider margins, particularly in RFS. This increase was largely offset by higher repurchase losses in RFS (recorded as contra-revenue), which were attributable to higher estimated losses related to repurchase demands, predominantly from

GSEs. For additional information on mortgage fees and related income, which is recorded primarily in RFS, see RFS's Mortgage Production and Servicing discussion on pages 89–91, and Note 17 on pages 267–271 of this Annual Report. For additional information on repurchase losses, see the mortgage repurchase liability discussion on pages 115–118 and Note 30 on page 289 of this Annual Report.

Credit card income decreased during 2010, predominantly due to the impact of the accounting guidance related to VIEs, effective January 1, 2010, that required the Firm to consolidate the assets and liabilities of its Firm-sponsored credit card securitization trusts. Adoption of this guidance resulted in the elimination of all servicing fees received from Firm-sponsored credit card securitization trusts, which was offset by related increases in net interest income and provision for credit losses. Lower income from other fee-based products also contributed to the decrease in credit card income. Excluding the impact of the adoption of the accounting guidance, credit card income increased in 2010, reflecting higher customer charge volume on credit and debit cards. For a more detailed discussion of the impact of the adoption of the accounting guidance on the Consolidated Statements of Income, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 76–78 of this Annual Report. For additional information on credit card income, see the Card and RFS segment results on pages 94–97, and pages 85–93, respectively, of this Annual Report.

Other income increased in 2010, largely due to the write-down of securitization interests during 2009 and higher auto operating lease income in Card.

Net interest income was relatively flat in 2010 compared with 2009. The effect of lower loan balances was predominantly offset by the effect of the adoption of the new accounting guidance related to VIEs (which increased net interest income by approximately $5.8 billion in 2010). Excluding the impact of the adoption of the new accounting guidance, net interest income decreased, driven by lower average loan balances, primarily in Card, RFS and IB, reflecting the continued runoff of the credit card balances and residential real estate loans, and net repayments and loan sales; lower yields and fees on credit card receivables, reflecting the impact of legislative changes; and lower yields on securities in Corporate resulting from investment portfolio repositioning. The Firm's average interest-earning assets were $1.7 trillion in 2010, and the net yield on those assets, on a FTE basis, was 3.06%, a decrease of 6 basis points from 2009. For a more detailed discussion of the impact of the adoption of the new accounting guidance related to VIEs on the Consolidated Statements of Income, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 76–78 of this Annual Report. For further information on the impact of the legislative changes on the Consolidated Statements of Income, see Card discussion on credit card legislation on page 94 of this Annual Report.

Provision for credit losses

Year ended December 31,

(in millions)	2011	2010	2009
Wholesale	**$ (23)**	$ (850)	$ 3,974
Consumer, excluding credit card	**4,672**	9,452	16,022
Credit card	**2,925**	8,037	12,019
Total consumer	**7,597**	17,489	28,041
Total provision for credit losses	**$ 7,574**	$ 16,639	$ 32,015

2011 compared with 2010

The provision for credit losses declined by $9.1 billion compared with 2010. The consumer, excluding credit card, provision was down, reflecting improved delinquency and charge-off trends across most portfolios, partially offset by an increase of $770 million, reflecting additional impairment of the Washington Mutual PCI loans portfolio. The credit card provision was down, driven primarily by improved delinquency trends and net credit losses. The benefit from the wholesale provision was lower in 2011 than in 2010, primarily reflecting loan growth and other portfolio activity. For a more detailed discussion of the loan portfolio and the allowance for credit losses, see the segment discussions for RFS on pages 85–93, Card on pages 94–97, IB on pages 81–84 and CB on pages 98–100, and the Allowance for credit losses section on pages 155–157 of this Annual Report.

2010 compared with 2009

The provision for credit losses declined by $15.4 billion compared with 2009, due to decreases in both the consumer and wholesale provisions. The decreases in the consumer provisions reflected reductions in the allowance for credit losses for mortgages and credit cards as a result of improved delinquency trends and lower estimated losses. This was partially offset by an increase in the allowance for credit losses associated with the Washington Mutual PCI loans portfolio, resulting from increased estimated future credit losses. The decrease in the wholesale provision in 2010 reflected a reduction in the allowance for credit losses, predominantly as a result of continued improvement in the credit quality of the commercial and industrial loan portfolio, reduced net charge-offs, and net repayments and loan sales. For a more detailed discussion of the loan portfolio and the allowance for credit losses, see the segment discussions for RFS on pages 85–93, Card on pages 94–97, IB on pages 81–84 and CB on pages 98–100, and the Allowance for Credit Losses section on pages 155–157 of this Annual Report.

Noninterest expense

Year ended December 31, (in millions)	2011	2010	2009
Compensation expense	**$ 29,037**	$ 28,124	$ 26,928
Noncompensation expense:			
Occupancy	**3,895**	3,681	3,666
Technology, communications and equipment	**4,947**	4,684	4,624
Professional and outside services	**7,482**	6,767	6,232
Marketing	**3,143**	2,446	1,777
Other[(a)(b)]	**13,559**	14,558	7,594
Amortization of intangibles	**848**	936	1,050
Total noncompensation expense	**33,874**	33,072	24,943
Merger costs	**–**	–	481
Total noninterest expense	**$ 62,911**	$ 61,196	$ 52,352

(a) Included litigation expense of $4.9 billion, $7.4 billion and $161 million for the years ended December 31, 2011, 2010 and 2009, respectively.

(b) Included foreclosed property expense of $718 million, $1.0 billion and $1.4 billion for the years ended December 31, 2011, 2010 and 2009, respectively.

2011 compared with 2010

Total noninterest expense for 2011 was $62.9 billion, up by $1.7 billion, or 3%, from 2010. The increase was driven by higher compensation expense and noncompensation expense.

Compensation expense increased from the prior year, due to investments in branch and mortgage production sales and support staff in RFS and increased headcount in AM, largely offset by lower performance-based compensation expense and the absence of the 2010 U.K. Bank Payroll Tax in IB.

The increase in noncompensation expense in 2011 was due to elevated foreclosure- and default-related costs in RFS, including $1.7 billion of expense for fees and assessments, as well as other costs of foreclosure-related matters, higher marketing expense in Card, higher FDIC assessments across businesses, non-client-related litigation expense in AM, and the impact of continued investments in the businesses, including new branches in RFS. These were offset partially by lower litigation expense in 2011 in Corporate and IB. Effective April 1, 2011, the FDIC changed its methodology for calculating the deposit insurance assessment rate for large banks. The new rule changed the assessment base from insured deposits to average consolidated total assets less average tangible equity, and changed the assessment rate calculation. For a further discussion of litigation expense, see Note 31 on pages 290–299 of this Annual Report. For a discussion of amortization of intangibles, refer to the Balance Sheet Analysis on pages 110–112, and Note 17 on pages 267–271 of this Annual Report.

2010 compared with 2009

Total noninterest expense for 2010 was $61.2 billion, up by $8.8 billion, or 17%, from 2009. The increase was driven by higher noncompensation expense, largely due to higher litigation expense, and the effect of investments in the businesses.

Compensation expense increased from the prior year, predominantly due to higher salary expense related to investments in the businesses, including additional sales staff in RFS and client advisors in AM, and the impact of the U.K. Bank Payroll Tax.

In addition to the aforementioned higher litigation expense, which was largely for mortgage-related matters in Corporate and IB, the increase in noncompensation expense was driven by higher marketing expense in Card; higher professional services expense, due to continued investments in new product platforms in the businesses, including those related to international expansion; higher default-related expense, including costs associated with foreclosure affidavit-related suspensions (recorded in other expense), for the serviced portfolio in RFS; and higher brokerage, clearing and exchange transaction processing expense in IB. Partially offsetting these increases was the absence of a $675 million FDIC special assessment recognized in 2009. For a further discussion of litigation expense, see Note 31 pages 290–299 of this Annual Report. For a discussion of amortization of intangibles, refer to Note 17 on pages 267–271 of this Annual Report.

There were no merger costs recorded in 2010, compared with merger costs of $481 million in 2009. For additional information on merger costs, refer to Note 11 on page 224 of this Annual Report.

Income tax expense

Year ended December 31, (in millions, except rate)	2011	2010	2009
Income before income tax expense and extraordinary gain	**$ 26,749**	$ 24,859	$ 16,067
Income tax expense	**7,773**	7,489	4,415
Effective tax rate	**29.1%**	30.1%	27.5%

2011 compared with 2010

The decrease in the effective tax rate compared with the prior year was predominantly the result of tax benefits associated with state and local income taxes. This was partially offset by higher reported pretax income and changes in the proportion of income subject to U.S. federal tax. In addition, the current year included tax benefits associated with the disposition of certain investments; the prior year included tax benefits associated with the resolution of tax audits. For additional information on income taxes, see Critical Accounting Estimates Used by the Firm on pages 168–172 and Note 26 on pages 279–281 of this Annual Report.

2010 compared with 2009

The increase in the effective tax rate compared with the prior year was predominantly the result of higher reported pretax book income, as well as changes in the proportion of income subject to U.S. federal and state and local taxes. These increases were partially offset by increased benefits associated with the undistributed earnings of certain non-U.S. subsidiaries that were deemed to be reinvested indefinitely, as well as tax benefits recognized upon the resolution of tax audits in 2010. For additional information on income taxes, see Critical Accounting Estimates Used by the Firm on pages 168–172 and Note 26 on pages 279–281 of this Annual Report.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its consolidated financial statements using U.S. GAAP; these financial statements appear on pages 178–181 of this Annual Report. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Prior to January 1, 2010, the Firm's managed-basis presentation also included certain reclassification adjustments that assumed credit card loans securitized by Card remained on the Consolidated Balance Sheets. Effective January 1, 2010, the Firm adopted accounting guidance that required the Firm to consolidate its Firm-sponsored credit card securitization trusts. As a result of the consolidation of the credit card securitization trusts, reported and managed basis relating to credit card securitizations are equivalent for periods beginning after January 1, 2010. The income, expense and credit costs associated with these securitization activities were recorded in the 2011 and 2010 Consolidated Statements of Income in the same classifications that were previously used to report such items on a managed basis. For additional information on the accounting guidance, see Note 16 on pages 256–267 of this Annual Report.

The presentation in 2009 of Card's results on a managed basis assumed that credit card loans that had been securitized and sold in accordance with U.S. GAAP remained on the Consolidated Balance Sheets, and that the earnings on the securitized loans were classified in the same manner as earnings on retained loans recorded on the Consolidated Balance Sheets. JPMorgan Chase had used this managed-basis information to evaluate the credit performance and overall financial performance of the entire managed credit card portfolio. JPMorgan Chase believed that this managed-basis information was useful to investors, as it enabled them to understand both the credit risks associated with the loans reported on the Consolidated Balance Sheets and the Firm's retained interests in securitized loans. For a reconciliation of 2009 reported to managed basis results for Card, see Card's segment results on pages 94–97 of this Annual Report. For information regarding the securitization process, and loans and residual interests sold and securitized, see Note 16 on pages 256–267 of this Annual Report.

Tangible common equity ("TCE"), a non-GAAP financial measure, represents common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE, a non-GAAP financial ratio, measures the Firm's earnings as a percentage of TCE. Tier 1 common under Basel I and III rules, a non-GAAP financial measure, is used by management to assess the Firm's capital position in conjunction with its capital ratios under Basel I and III requirements. For additional information on Tier 1 common under Basel I and III, see Regulatory capital on pages 119–124 of this Annual Report. In management's view, these measures are meaningful to the Firm, as well as analysts and investors, in assessing the Firm's use of equity and in facilitating comparisons with competitors.

Management also uses certain non-GAAP financial measures at the business-segment level, because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and, therefore, facilitate a comparison of the business segment with the performance of its competitors. Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

Year ended December 31, (in millions, except per share and ratios)	2011 Reported Results	2011 Fully tax-equivalent adjustments	2011 Managed basis	2010 Reported Results	2010 Fully tax-equivalent adjustments	2010 Managed basis	2009 Reported Results	2009 Credit card[b]	2009 Fully tax-equivalent adjustments	2009 Managed basis
Revenue										
Investment banking fees	**$ 5,911**	**$ –**	**$ 5,911**	$ 6,190	$ –	$ 6,190	$ 7,087	$ –	$ –	$ 7,087
Principal transactions	**10,005**	**–**	**10,005**	10,894	–	10,894	9,796	–	–	9,796
Lending- and deposit-related fees	**6,458**	**–**	**6,458**	6,340	–	6,340	7,045	–	–	7,045
Asset management, administration and commissions	**14,094**	**–**	**14,094**	13,499	–	13,499	12,540	–	–	12,540
Securities gains	**1,593**	**–**	**1,593**	2,965	–	2,965	1,110	–	–	1,110
Mortgage fees and related income	**2,721**	**–**	**2,721**	3,870	–	3,870	3,678	–	–	3,678
Credit card income	**6,158**	**–**	**6,158**	5,891	–	5,891	7,110	(1,494)	–	5,616
Other income	**2,605**	**2,003**	**4,608**	2,044	1,745	3,789	916	–	1,440	2,356
Noninterest revenue	**49,545**	**2,003**	**51,548**	51,693	1,745	53,438	49,282	(1,494)	1,440	49,228
Net interest income	**47,689**	**530**	**48,219**	51,001	403	51,404	51,152	7,937	330	59,419
Total net revenue	**97,234**	**2,533**	**99,767**	102,694	2,148	104,842	100,434	6,443	1,770	108,647
Noninterest expense	**62,911**	**–**	**62,911**	61,196	–	61,196	52,352	–	–	52,352
Pre-provision profit	**34,323**	**2,533**	**36,856**	41,498	2,148	43,646	48,082	6,443	1,770	56,295
Provision for credit losses	**7,574**	**–**	**7,574**	16,639	–	16,639	32,015	6,443	–	38,458
Income before income tax expense and extraordinary gain	**26,749**	**2,533**	**29,282**	24,859	2,148	27,007	16,067	–	1,770	17,837
Income tax expense	**7,773**	**2,533**	**10,306**	7,489	2,148	9,637	4,415	–	1,770	6,185
Income before extraordinary gain	**18,976**	**–**	**18,976**	17,370	–	17,370	11,652	–	–	11,652
Extraordinary gain	**–**	**–**	**–**	–	–	–	76	–	–	76
Net income	**$ 18,976**	**$ –**	**$ 18,976**	$ 17,370	$ –	$ 17,370	$ 11,728	$ –	$ –	$ 11,728
Diluted earnings per share[a]	**$ 4.48**	**$ –**	**$ 4.48**	$ 3.96	$ –	$ 3.96	$ 2.24	$ –	$ –	$ 2.24
Return on assets[a]	**0.86%**	**NM**	**0.86%**	0.85%	NM	0.85%	0.58%	NM	NM	0.55%
Overhead ratio	**65**	**NM**	**63**	60	NM	58	52	NM	NM	48
Loans – period-end	**$ 723,720**	**$ –**	**$ 723,720**	$ 692,927	$ –	$ 692,927	$ 633,458	$ 84,626	$ –	$ 718,084
Total assets – average	**2,198,198**	**–**	**2,198,198**	2,053,251	–	2,053,251	2,024,201	82,233	–	2,106,434

(a) Based on income before extraordinary gain.
(b) See pages 94–97 of this Annual Report for a discussion of the effect of credit card securitizations on Card's results.

Calculation of certain U.S. GAAP and non-GAAP metrics

The table below reflects the formulas used to calculate both the following U.S. GAAP and non-GAAP measures.

Return on common equity
Net income* / Average common stockholders' equity

Return on tangible common equity[c]
Net income* / Average tangible common equity

Return on assets
Reported net income / Total average assets
Managed net income / Total average managed assets[d]

Overhead ratio
Total noninterest expense / Total net revenue

* Represents net income applicable to common equity

(c) The Firm uses ROTCE, a non-GAAP financial measure, to evaluate its use of equity and to facilitate comparisons with competitors. Refer to the following table for the calculation of average tangible common equity.

(d) The Firm uses return on managed assets, a non-GAAP financial measure, to evaluate the overall performance of the managed credit card portfolio, including securitized credit card loans.

Average tangible common equity

Year ended December 31, (in millions)	2011	2010	2009
Common stockholders' equity	**$ 173,266**	$ 161,520	$ 145,903
Less: Goodwill	**48,632**	48,618	48,254
Less: Certain identifiable intangible assets	**3,632**	4,178	5,095
Add: Deferred tax liabilities[a]	**2,635**	2,587	2,547
Tangible common equity	**$ 123,637**	$ 111,311	$ 95,101

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Core net interest income

In addition to reviewing JPMorgan Chase's net interest income on a managed basis, management also reviews core net interest income to assess the performance of its core lending, investing (including asset/liability management) and deposit-raising activities, excluding the impact of IB's market-based activities. The table below presents an analysis of core net interest income, core average interest-earning assets, and the core net interest yield on core average interest-earning assets, on a managed basis. Each of these amounts is a non-GAAP financial measure due to the exclusion of IB's market-based net interest income and the related assets. Management believes the exclusion of IB's market-based activities provides investors and analysts a more meaningful measure to analyze non-market related business trends of the Firm and can be used as a comparable measure to other financial institutions primarily focused on core lending, investing and deposit-raising activities.

Core net interest income data[a]

Year ended December 31, (in millions, except rates)	2011	2010	2009
Net interest income - managed basis	$ 48,219	$ 51,404	$ 59,419
Impact of market-based net interest income	7,329	7,112	8,238
Core net interest income	$ 40,890	$ 44,292	$ 51,181
Average interest-earning assets - managed basis	$ 1,761,355	$ 1,677,521	$ 1,735,866
Impact of market-based earning assets	519,655	470,927	428,471
Core average interest-earning assets	$ 1,241,700	$ 1,206,594	$ 1,307,395
Net interest yield on interest-earning assets - managed basis	2.74%	3.06%	3.42%
Net interest yield on market-based activity	1.41	1.51	1.92
Core net interest yield on interest-earning assets	3.29%	3.67%	3.91%

(a) Includes core lending activities, investing and deposit-raising activities on a managed basis, across RFS, Card, CB, TSS, AM and Corporate/ Private Equity, as well as IB credit portfolio loans.

2011 compared with 2010

Core net interest income decreased by $3.4 billion to $40.9 billion for 2011. The decrease was primarily driven by lower loan levels and yields in RFS and Card compared with 2010 levels. Core average interest-earning assets increased by $35.1 billion in 2011 to $1,241.7 billion. The increase was driven by higher levels of deposits with banks and securities borrowed due to wholesale and retail client deposit growth. The core net interest yield decreased by 38 basis points in 2011 driven by lower loan yields and higher deposit balances, and lower yields on investment securities due to portfolio mix and lower long-term interest rates.

2010 compared with 2009

Core net interest income decreased by $6.9 billion to $44.3 billion in 2010. The decrease was primarily driven by lower loan levels and yields in RFS, Card and IB compared with 2009 levels. Core average interest-earning assets decreased by $100.8 billion in 2010 to $1,206.6 billion. The decrease was primarily driven by lower loan balances and deposits with banks due to a decline in wholesale and retail deposits. The core net interest yield decreased by 24 basis points in 2010 driven by lower yields on loans and investment securities.

Impact of redemption of TARP preferred stock issued to the U.S. Treasury

The calculation of 2009 net income applicable to common equity included a one-time, noncash reduction of $1.1 billion resulting from the redemption of TARP preferred capital. Excluding this reduction, ROE would have been 7% for 2009. The Firm views adjusted ROE, a non-GAAP financial measure, as meaningful because it enables the comparability to the other periods reported.

Year ended December 31, 2009 (in millions, except ratios)	As reported	Excluding the TARP redemption
Return on equity		
Net income	$ 11,728	$ 11,728
Less: Preferred stock dividends	1,327	1,327
Less: Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	1,112	–
Net income applicable to common equity	$ 9,289	$ 10,401
Average common stockholders' equity	$ 145,903	$ 145,903
ROE	6%	7%

In addition, the calculation of diluted earnings per share ("EPS") for the year ended December 31, 2009, was also affected by the TARP repayment, as presented below.

Year ended December 31, 2009 (in millions, except per share)	As reported	Effect of TARP redemption
Diluted earnings per share		
Net income	$ 11,728	$ –
Less: Preferred stock dividends	1,327	–
Less: Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	1,112	1,112
Net income applicable to common equity	9,289	(1,112)
Less: Dividends and undistributed earnings allocated to participating securities	515	(62)
Net income applicable to common stockholders	8,774	(1,050)
Total weighted average diluted shares outstanding	3,879.7	3,879.7
Net income per share	$ 2.26	$ (0.27)

Other financial measures

The Firm also discloses the allowance for loan losses to total retained loans, excluding residential real estate purchased credit-impaired loans. For a further discussion of this credit metric, see Allowance for Credit Losses on pages 155–157 of this Annual Report.

The Firm is managed on a line-of-business basis. The business segment financial results presented reflect the current organization of JPMorgan Chase. There are six major reportable business segments: the Investment Bank, Retail Financial Services, Card Services & Auto, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate/Private Equity segment.

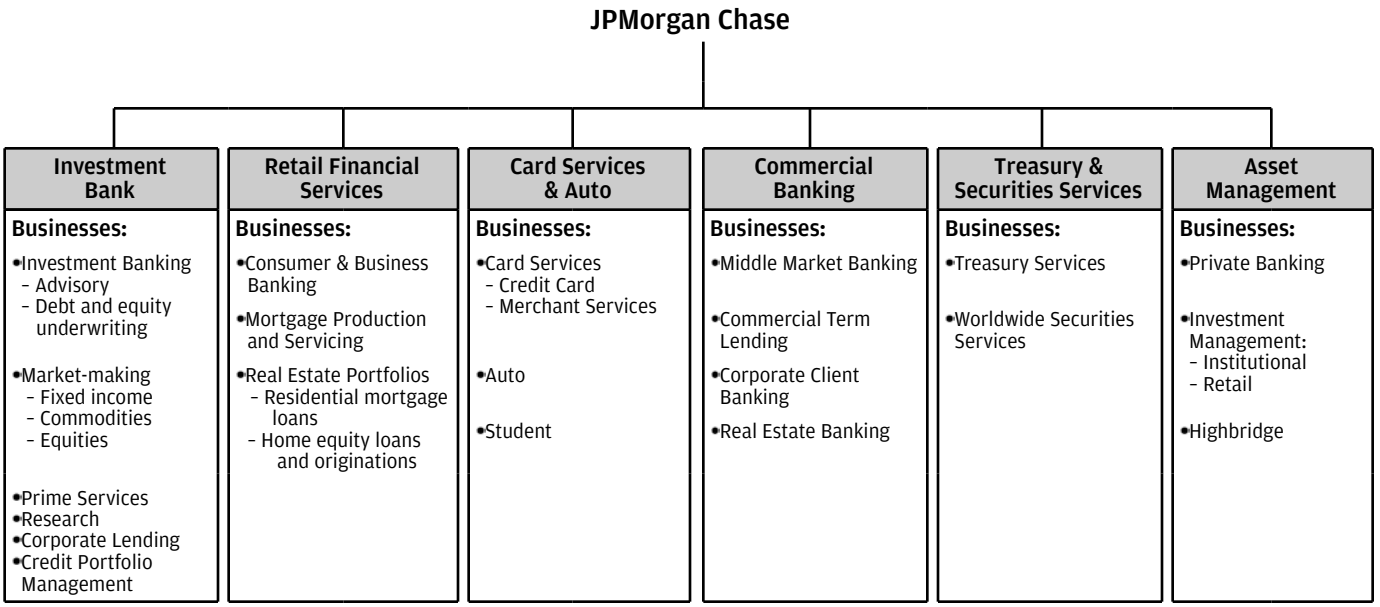
The business segments are determined based on the products and services provided, or the type of customer served, and reflect the manner in which financial information is currently evaluated by management. Results of the lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 76–78 of this Annual Report.

Business segment changes

Commencing July 1, 2011, the Firm's business segments were reorganized as follows:

Auto and Student Lending transferred from the RFS segment and are reported with Card in a single segment. Retail Financial Services continues as a segment, organized in two components: Consumer & Business Banking (formerly Retail Banking) and Mortgage Banking (which includes Mortgage Production and Servicing, and Real Estate Portfolios).

The business segment information associated with RFS and Card have been revised to reflect the business reorganization retroactive to January 1, 2009.



Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies. The Firm continues to assess the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing

Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Treasury group within the Corporate/Private Equity business segment. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment as if it were operating independently, and as compared with its stand-alone peers. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO"). Business segments may be permitted to retain certain interest rate exposures subject to management approval.

Capital allocation

Each line of business is allocated an amount of capital the Firm believes the business would require if it were operating independently, incorporating sufficient capital to

address regulatory capital requirements (including Basel III Tier 1 common capital requirements), economic risk measures and capital levels for similarly rated peers. For a further discussion on capital allocation, see Capital Management – Line of business equity on page 123 of this Annual Report.

Expense allocation

Where business segments use services provided by support units within the Firm, the costs of those support units are allocated to the business segments. The expense is allocated based on their actual cost or the lower of actual cost or market, as well as upon usage of the services provided. In contrast, certain other expense related to certain corporate functions, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Retained expense includes: parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other one-time items not aligned with a particular business segment.

Segment Results – Managed Basis

The following table summarizes the business segment results for the periods indicated.

Year ended December 31,	Total net revenue			Noninterest expense			Pre-provision profit[b]		
(in millions)	**2011**	2010	2009	**2011**	2010	2009	**2011**	2010	2009
Investment Bank[a]	**$ 26,274**	$ 26,217	$ 28,109	**$ 16,116**	$ 17,265	$ 15,401	**$ 10,158**	$ 8,952	$ 12,708
Retail Financial Services	**26,538**	28,447	29,797	**19,458**	16,483	15,512	**7,080**	11,964	14,285
Card Services & Auto	**19,141**	20,472	23,199	**8,045**	7,178	6,617	**11,096**	13,294	16,582
Commercial Banking	**6,418**	6,040	5,720	**2,278**	2,199	2,176	**4,140**	3,841	3,544
Treasury & Securities Services	**7,702**	7,381	7,344	**5,863**	5,604	5,278	**1,839**	1,777	2,066
Asset Management	**9,543**	8,984	7,965	**7,002**	6,112	5,473	**2,541**	2,872	2,492
Corporate/Private Equity[a]	**4,151**	7,301	6,513	**4,149**	6,355	1,895	**2**	946	4,618
Total	**$ 99,767**	$ 104,842	$ 108,647	**$ 62,911**	$ 61,196	$ 52,352	**$ 36,856**	$ 43,646	$ 56,295

Year ended December 31,	Provision for credit losses			Net income/(loss)			Return on equity		
(in millions, except ratios)	**2011**	2010	2009	**2011**	2010	2009	**2011**	2010	2009
Investment Bank[a]	**$ (286)**	$ (1,200)	$ 2,279	**$ 6,789**	$ 6,639	$ 6,899	**17%**	17%	21%
Retail Financial Services	**3,999**	8,919	14,754	**1,678**	1,728	(335)	**7**	7	(1)
Card Services & Auto	**3,621**	8,570	19,648	**4,544**	2,872	(1,793)	**28**	16	(10)
Commercial Banking	**208**	297	1,454	**2,367**	2,084	1,271	**30**	26	16
Treasury & Securities Services	**1**	(47)	55	**1,204**	1,079	1,226	**17**	17	25
Asset Management	**67**	86	188	**1,592**	1,710	1,430	**25**	26	20
Corporate/Private Equity[a]	**(36)**	14	80	**802**	1,258	3,030	**NM**	NM	NM
Total	**$ 7,574**	$ 16,639	$ 38,458	**$ 18,976**	$ 17,370	$ 11,728	**11%**	10%	6%

(a) Corporate/Private Equity includes an adjustment to offset IB's inclusion of a credit allocation income/(expense) to TSS in total net revenue; TSS reports the credit allocation as a separate line item on its income statement (not within total net revenue).

(b) Pre-provision profit is total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The clients of IB are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage, and research.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2011	2010	2009
Revenue			
Investment banking fees	**$ 5,859**	$ 6,186	$ 7,169
Principal transactions[a]	**8,324**	8,454	8,154
Lending- and deposit-related fees	**858**	819	664
Asset management, administration and commissions	**2,207**	2,413	2,650
All other income[b]	**723**	381	(115)
Noninterest revenue	**17,971**	18,253	18,522
Net interest income	**8,303**	7,964	9,587
Total net revenue[c]	**26,274**	26,217	28,109
Provision for credit losses	**(286)**	(1,200)	2,279
Noninterest expense			
Compensation expense	**8,880**	9,727	9,334
Noncompensation expense	**7,236**	7,538	6,067
Total noninterest expense	**16,116**	17,265	15,401
Income before income tax expense	**10,444**	10,152	10,429
Income tax expense	**3,655**	3,513	3,530
Net income	**$ 6,789**	$ 6,639	$ 6,899
Financial ratios			
Return on common equity	**17%**	17%	21%
Return on assets	**0.84**	0.91	0.99
Overhead ratio	**61**	66	55
Compensation expense as a percentage of total net revenue[d]	**34**	37	33

(a) Principal transactions included DVA related to derivatives and structured liabilities measured at fair value. DVA gains/(losses) were $1.4 billion, $509 million, and ($2.3) billion for the years ended December 31, 2011, 2010, and 2009, respectively.
(b) IB manages traditional credit exposures related to GCB on behalf of IB and TSS. Effective January 1, 2011, IB and TSS share the economics related to the Firm's GCB clients. IB recognizes this sharing agreement within all other income. The prior-year periods reflected the reimbursement from TSS for a portion of the total costs of managing the credit portfolio on behalf of TSS.
(c) Total net revenue included tax-equivalent adjustments, predominantly due to income tax credits related to affordable housing and alternative energy investments as well as tax-exempt income from municipal bond investments of $1.9 billion, $1.7 billion and $1.4 billion for the years ended December 31, 2011, 2010 and 2009, respectively.
(d) The compensation expense as a percentage of total net revenue ratio for the year ended December 31, 2010, excluding the payroll tax expense related to the U.K. Bank Payroll Tax on certain compensation awarded from December 9, 2009, to April 5, 2010, to relevant banking employees, which is a non-GAAP financial measure, was 35%. IB excluded this tax from the ratio because it enables comparability between periods.

The following table provides IB's total net revenue by business.

Year ended December 31, (in millions)	2011	2010	2009
Revenue by business			
Investment banking fees:			
Advisory	**$ 1,792**	$ 1,469	$ 1,867
Equity underwriting	**1,181**	1,589	2,641
Debt underwriting	**2,886**	3,128	2,661
Total investment banking fees	**5,859**	6,186	7,169
Fixed income markets[a]	**15,337**	15,025	17,564
Equity markets[b]	**4,832**	4,763	4,393
Credit portfolio[c][d]	**246**	243	(1,017)
Total net revenue	**$ 26,274**	$ 26,217	$ 28,109

(a) Fixed income markets primarily include revenue related to market-making across global fixed income markets, including foreign exchange, interest rate, credit and commodities markets.
(b) Equity markets primarily include revenue related to market-making across global equity products, including cash instruments, derivatives, convertibles and Prime Services.
(c) Credit portfolio revenue includes net interest income, fees and loan sale activity, as well as gains or losses on securities received as part of a loan restructuring, for IB's credit portfolio. Credit portfolio revenue also includes the results of risk management related to the Firm's lending and derivative activities. See pages 143–144 of the Credit Risk Management section of this Annual Report for further discussion.
(d) IB manages traditional credit exposures related to GCB on behalf of IB and TSS. Effective January 1, 2011, IB and TSS share the economics related to the Firm's GCB clients. IB recognizes this sharing agreement within all other income. The prior-year periods reflected the reimbursement from TSS for a portion of the total costs of managing the credit portfolio on behalf of TSS.

2011 compared with 2010

Net income was $6.8 billion, up 2% compared with the prior year. These results primarily reflected similar net revenue compared with 2010, while lower noninterest expense was largely offset by a reduced benefit from the provision for credit losses. Net revenue included a $1.4 billion gain from DVA on certain structured and derivative liabilities resulting from the widening of the Firm's credit spreads. Excluding the impact of DVA, net revenue was $24.8 billion and net income was $5.9 billion.

Net revenue was $26.3 billion, compared with $26.2 billion in the prior year. Investment banking fees were $5.9 billion, down 5% from the prior year; these consisted of debt underwriting fees of $2.9 billion (down 8%), advisory fees of $1.8 billion (up 22%) and equity underwriting fees of $1.2 billion (down 26%). Fixed Income Markets revenue was $15.3 billion, compared with $15.0 billion in the prior year, with continued solid client revenue. The increase also reflects DVA gains of $553 million, compared with DVA gains of $287 million in the prior year. Equity Markets revenue was $4.8 billion, approximately flat compared with the prior year, as slightly lower performance was more than offset by DVA gains of $356 million, compared with DVA

gains of $181 million in the prior year. Credit Portfolio revenue was $246 million as net interest income and fees on retained loans, as well as DVA gains of $528 million were predominantly offset by a $769 million loss, net of hedges, from CVA on derivative assets. Results were approximately flat to the prior year, which included net CVA losses of $403 million.

The provision for credit losses was a benefit of $286 million, compared with a benefit of $1.2 billion in the prior year. The current-year provision reflected a net reduction in the allowance for loan losses largely driven by portfolio activity, partially offset by new loan growth. Net charge-offs were $161 million, compared with $735 million in the prior year.

Noninterest expense was $16.1 billion, down 7% driven primarily by lower compensation expense compared with the prior period which included the impact of the U.K. Bank Payroll Tax. Noncompensation expense was also lower compared with the prior year, which included higher litigation reserves. This decrease was partially offset by additional operating expense related to growth in business activities in 2011.

Return on Equity was 17% on $40.0 billion of average allocated capital.

2010 compared with 2009

Net income was $6.6 billion, down 4% compared with the prior year. These results primarily reflected lower net revenue as well as higher noninterest expense, largely offset by a benefit from the provision for credit losses, compared with an expense in the prior year.

Net revenue was $26.2 billion, compared with $28.1 billion in the prior year. Investment banking fees were $6.2 billion, down 14% from the prior year; these consisted of record debt underwriting fees of $3.1 billion (up 18%), equity underwriting fees of $1.6 billion (down 40%), and advisory fees of $1.5 billion (down 21%). Fixed Income Markets revenue was $15.0 billion, compared with $17.6 billion in the prior year. The decrease from the prior year largely reflected lower results in rates and credit markets, partially offset by DVA gains of $287 million from the widening of the Firm's credit spread on certain structured liabilities, compared with DVA losses of $1.1 billion in the prior year. Equity Markets revenue was $4.8 billion, compared with $4.4 billion in the prior year, reflecting solid client revenue, as well as DVA gains of $181 million, compared with DVA losses of $596 million in the prior year. Credit Portfolio revenue was $243 million, primarily reflecting net interest income and fees on loans, partially offset by net CVA losses on derivative assets and mark-to-market losses on hedges of retained loans.

The provision for credit losses was a benefit of $1.2 billion, compared with an expense of $2.3 billion in the prior year. The current-year provision reflected a reduction in the allowance for loan losses, largely related to net repayments and loan sales. Net charge-offs were $735 million, compared with $1.9 billion in the prior year.

Noninterest expense was $17.3 billion, up $1.9 billion from the prior year, driven by higher noncompensation expense, which included increased litigation reserves, and higher compensation expense which included the impact of the U.K. Bank Payroll Tax.

Return on Equity was 17% on $40.0 billion of average allocated capital.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2011	2010	2009
Selected balance sheet data (period-end)			
Total assets	**$ 776,430**	$ 825,150	$ 706,944
Loans:			
Loans retained[a]	**68,208**	53,145	45,544
Loans held-for-sale and loans at fair value	**2,915**	3,746	3,567
Total loans	**71,123**	56,891	49,111
Equity	**40,000**	40,000	33,000
Selected balance sheet data (average)			
Total assets	**$ 812,779**	$ 731,801	$ 699,039
Trading assets-debt and equity instruments	**346,461**	307,061	273,624
Trading assets-derivative receivables	**73,201**	70,289	96,042
Loans:			
Loans retained[a]	**57,007**	54,402	62,722
Loans held-for-sale and loans at fair value	**3,119**	3,215	7,589
Total loans	**60,126**	57,617	70,311
Adjusted assets[b]	**600,160**	540,449	538,724
Equity	**40,000**	40,000	33,000
Headcount	**25,999**	26,314	24,654

(a) Loans retained included credit portfolio loans, leveraged leases and other held-for-investment loans, and excluded loans held-for-sale and loans at fair value.

(b) Adjusted assets, a non-GAAP financial measure, equals total assets minus: (1) securities purchased under resale agreements and securities borrowed less securities sold, not yet purchased; (2) assets of consolidated VIEs; (3) cash and securities segregated and on deposit for regulatory and other purposes; (4) goodwill and intangibles; and (5) securities received as collateral. The amount of adjusted assets is presented to assist the reader in comparing IB's asset and capital levels to other investment banks in the securities industry. Asset-to-equity leverage ratios are commonly used as one measure to assess a company's capital adequacy. IB believes an adjusted asset amount that excludes the assets discussed above, which were considered to have a low risk profile, provides a more meaningful measure of balance sheet leverage in the securities industry.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2011	2010	2009
Credit data and quality statistics			
Net charge-offs	**$ 161**	$ 735	$ 1,904
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[a][b]	**1,035**	3,159	3,196
Nonaccrual loans held-for-sale and loans at fair value	**166**	460	308
Total nonaccrual loans	**1,201**	3,619	3,504
Derivative receivables	**14**	34	529
Assets acquired in loan satisfactions	**79**	117	203
Total nonperforming assets	**1,294**	3,770	4,236
Allowance for credit losses:			
Allowance for loan losses	**1,436**	1,863	3,756
Allowance for lending-related commitments	**418**	447	485
Total allowance for credit losses	**1,854**	2,310	4,241
Net charge-off rate[a][c]	**0.28%**	1.35%	3.04%
Allowance for loan losses to period-end loans retained[a][c]	**2.11**	3.51	8.25
Allowance for loan losses to nonaccrual loans retained[a][b][c]	**139**	59	118
Nonaccrual loans to period-end loans	**1.69**	6.36	7.13
Market risk-average trading and credit portfolio VaR – 95% confidence level			
Trading activities:			
Fixed income	**$ 50**	$ 65	$ 160
Foreign exchange	**11**	11	18
Equities	**23**	22	47
Commodities and other	**16**	16	20
Diversification[d]	**(42)**	(43)	(91)
Total trading VaR[e]	**58**	71	154
Credit portfolio VaR[f]	**33**	26	52
Diversification[d]	**(15)**	(10)	(42)
Total trading and credit portfolio VaR	**$ 76**	$ 87	$ 164

(a) Loans retained included credit portfolio loans, leveraged leases and other held-for-investment loans, and excluded loans held-for-sale and loans at fair value.

(b) Allowance for loan losses of $263 million, $1.1 billion and $1.3 billion were held against these nonaccrual loans at December 31, 2011, 2010 and 2009, respectively.

(c) Loans held-for-sale and loans at fair value were excluded when calculating the allowance coverage ratio and net charge-off rate.

(d) Average value-at-risk ("VaR") was less than the sum of the VaR of the components described above, due to portfolio diversification. The diversification effect reflects the fact that the risks were not perfectly correlated. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves.

(e) Trading VaR includes substantially all market-making and client-driven activities as well as certain risk management activities in IB, including the credit spread sensitivities of certain mortgage products and syndicated lending facilities that the Firm intends to distribute; however, particular risk parameters of certain products are not fully captured, for example, correlation risk. Trading VaR does not include the DVA on derivative and structured liabilities to reflect the credit quality of the Firm. See VaR discussion on pages 158–160 and the DVA sensitivity table on page 161 of this Annual Report for further details.

(f) Credit portfolio VaR includes the derivative CVA, hedges of the CVA and mark-to-market ("MTM") hedges of the retained loan portfolio, which are all reported in principal transactions revenue. This VaR does not include the retained loan portfolio, which is not MTM.

Market shares and rankings[a]

Year ended December 31,	2011 Market Share	2011 Rankings	2010 Market Share	2010 Rankings	2009 Market Share	2009 Rankings
Global investment banking fees[b]	**8.1%**	**#1**	7.6%	#1	9.0%	#1
Debt, equity and equity-related						
Global	**6.8**	**1**	7.2	1	8.8	1
U.S.	**11.1**	**1**	11.1	1	14.8	1
Syndicated loans						
Global	**11.0**	**1**	8.5	2	8.1	1
U.S.	**21.4**	**1**	19.1	2	21.8	1
Long-term debt[c]						
Global	**6.7**	**1**	7.2	2	8.4	1
U.S.	**11.2**	**1**	10.9	2	14.2	1
Equity and equity-related						
Global[d]	**6.8**	**3**	7.3	3	11.6	1
U.S.	**12.5**	**1**	13.1	2	15.5	2
Announced M&A[e]						
Global	**18.6**	**2**	15.9	4	23.7	3
U.S.	**27.5**	**2**	21.9	3	35.6	2

(a) Source: Dealogic. Global Investment Banking fees reflects ranking of fees and market share. Remainder of rankings reflects transaction volume rank and market share. Global announced M&A is based on transaction value at announcement; because of joint M&A assignments, M&A market share of all participants will add up to more than 100%. All other transaction volume-based rankings are based on proceeds, with full credit to each book manager/equal if joint.

(b) Global Investment Banking fees rankings exclude money market, short-term debt and shelf deals.

(c) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and mortgage-backed securities; and exclude money market, short-term debt, and U.S. municipal securities.

(d) Global Equity and equity-related ranking includes rights offerings and Chinese A-Shares.

(e) Announced M&A reflects the removal of any withdrawn transactions. U.S. announced M&A represents any U.S. involvement ranking.

According to Dealogic, the Firm was ranked #1 in Global Investment Banking Fees generated during 2011, based on revenue; #1 in Global Debt, Equity and Equity-related; #1 in Global Syndicated Loans; #1 in Global Long-Term Debt; #3 in Global Equity and Equity-related; and #2 in Global Announced M&A, based on volume.

International metrics

Year ended December 31,

(in millions)	2011	2010	2009
Total net revenue[a]			
Europe/Middle East/Africa	**$ 8,418**	$ 7,380	$ 9,164
Asia/Pacific	**3,334**	3,809	3,470
Latin America/Caribbean	**1,079**	897	1,157
North America	**13,443**	14,131	14,318
Total net revenue	**$ 26,274**	$ 26,217	$ 28,109
Loans retained (period-end)[b]			
Europe/Middle East/Africa	**$ 15,905**	$ 13,961	$ 13,079
Asia/Pacific	**7,889**	5,924	4,542
Latin America/Caribbean	**3,148**	2,200	2,523
North America	**41,266**	31,060	25,400
Total loans	**$ 68,208**	$ 53,145	$ 45,544

(a) Regional revenue is based primarily on the domicile of the client and/or location of the trading desk.

(b) Includes retained loans based on the domicile of the customer. Excludes loans held-for-sale and loans at fair value.

Retail Financial Services serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking. RFS is organized into Consumer & Business Banking and Mortgage Banking (including Mortgage Production and Servicing, and Real Estate Portfolios). Consumer & Business Banking includes branch banking and business banking activities. Mortgage Production and Servicing includes mortgage origination and servicing activities. Real Estate Portfolios comprises residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Customers can use more than 5,500 bank branches (third largest nationally) and more than 17,200 ATMs (second largest nationally), as well as online and mobile banking around the clock. More than 33,500 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. As one of the largest mortgage originators in the U.S., Chase helps customers buy or refinance homes resulting in approximately $150 billion of mortgage originations annually. Chase also services more than 8 million mortgages and home equity loans.

Effective July 1, 2011, RFS was organized into two components: (1) Consumer & Business Banking (formerly Retail Banking) and (2) Mortgage Banking (including Mortgage Production and Servicing, and Real Estate Portfolios). For a further discussion of the business segment reorganization, see Business segment changes on page 79, and Note 33 on pages 300–303 of this Annual Report.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2011	2010	2009
Revenue			
Lending- and deposit-related fees	$ 3,190	$ 3,061	$ 3,897
Asset management, administration and commissions	1,991	1,776	1,665
Mortgage fees and related income	2,714	3,855	3,794
Credit card income	2,025	1,955	1,634
Other income	485	580	424
Noninterest revenue	10,405	11,227	11,414
Net interest income	16,133	17,220	18,383
Total net revenue[(a)]	26,538	28,447	29,797
Provision for credit losses	3,999	8,919	14,754
Noninterest expense			
Compensation expense	8,044	7,072	6,349
Noncompensation expense	11,176	9,135	8,834
Amortization of intangibles	238	276	329
Total noninterest expense	19,458	16,483	15,512
Income/(loss) before income tax expense/(benefit)	3,081	3,045	(469)
Income tax expense/(benefit)	1,403	1,317	(134)
Net income/(loss)	$ 1,678	$ 1,728	$ (335)
Financial ratios			
Return on common equity	7%	7%	(1)%
Overhead ratio	73	58	52
Overhead ratio excluding core deposit intangibles[(b)]	72	57	51

(a) Total net revenue included tax-equivalent adjustments associated with tax-exempt loans to municipalities and other qualified entities of $7 million, $8 million and $9 million for the years ended December 31, 2011, 2010 and 2009, respectively.

(b) RFS uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation would result in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would therefore result in an improving overhead ratio over time, all things remaining equal. This non-GAAP ratio excluded Consumer & Business Banking's CDI amortization expense related to prior business combination transactions of $238 million, $276 million and $328 million for the years ended December 31, 2011, 2010 and 2009, respectively.

2011 compared with 2010

Retail Financial Services reported net income of $1.7 billion, down 3% when compared with the prior year.

Net revenue was $26.5 billion, a decrease of $1.9 billion, or 7%, compared with the prior year. Net interest income was $16.1 billion, down by $1.1 billion, or 6%, reflecting the impact of lower loan balances, due to portfolio runoff, and narrower loan spreads. Noninterest revenue was $10.4 billion, down by $822 million, or 7%, driven by lower mortgage fees and related income partially offset by higher investment sales revenue and higher deposit-related fees.

The provision for credit losses was $4.0 billion, a decrease of $4.9 billion from the prior year. While delinquency trends and net charge-offs improved compared with the prior year, the current-year provision continued to reflect elevated losses in the mortgage and home equity portfolios. The current year provision also included a $230 million net reduction in the allowance for loan losses which reflects a reduction of $1.0 billion in the allowance related to the non-credit-impaired portfolio, as estimated losses in the portfolio have declined, predominantly offset by an increase of $770 million reflecting additional impairment of the Washington Mutual PCI portfolio due to higher-than-expected default frequency relative to modeled lifetime loss estimates. The prior-year provision reflected a higher impairment on the PCI portfolio and higher net charge-offs. See Consumer Credit Portfolio on pages 145–154 of this Annual Report for the net charge-off amounts and rates.

Noninterest expense was $19.5 billion, an increase of $3.0 billion, or 18%, from the prior year driven by elevated foreclosure- and default-related costs, including $1.7 billion for fees and assessments, as well as other costs of foreclosure-related matters during 2011, compared with $350 million in 2010.

2010 compared with 2009

Net income was $1.7 billion, compared with a net loss of $335 million in the prior year.

Net revenue was $28.4 billion, a decrease of $1.4 billion, or 5%, compared with the prior year. Net interest income was $17.2 billion, down by $1.2 billion, or 6%, reflecting the impact of lower loan and deposit balances and narrower

loan spreads, partially offset by a shift to wider-spread deposit products. Noninterest revenue was $11.2 billion, a decrease of $187 million, or 2%, compared with the prior year, as lower deposit-related fees were partially offset by higher debit card income.

The provision for credit losses was $8.9 billion, compared with $14.8 billion in the prior year. The current-year provision reflected an addition to the allowance for loan losses of $3.4 billion for the PCI portfolio and a reduction in the allowance for loan losses of $1.7 billion, predominantly for the mortgage loan portfolios. In comparison, the prior-year provision reflected an addition to the allowance for loan losses of $5.5 billion, predominantly for the home equity and mortgage portfolios, and also included an addition of $1.6 billion for the PCI portfolio. While delinquency trends and net charge-offs improved compared with the prior year, the provision continued to reflect elevated losses for the mortgage and home equity portfolios. See Consumer Credit Portfolio on page 145–154 of this Annual Report for the net charge-off amounts and rates.

Noninterest expense was $16.5 billion, an increase of $971 million, or 6%, from the prior year, reflecting higher default-related expense.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount and ratios)	2011	2010	2009
Selected balance sheet data (period-end)			
Total assets	**$ 274,795**	$ 299,950	$ 322,185
Loans:			
Loans retained	**232,555**	253,904	280,246
Loans held-for-sale and loans at fair value[a]	**12,694**	14,863	12,920
Total loans	**245,249**	268,767	293,166
Deposits	**395,797**	369,925	356,614
Equity	**25,000**	24,600	22,457
Selected balance sheet data (average)			
Total assets	**$ 286,716**	$ 314,046	$ 344,727
Loans:			
Loans retained	**241,621**	268,902	296,959
Loans held-for-sale and loans at fair value[a]	**16,354**	15,395	16,236
Total loans	**257,975**	284,297	313,195
Deposits	**380,663**	361,525	366,996
Equity	**25,000**	24,600	22,457
Headcount	**133,075**	116,882	103,733

As of or for the year ended December 31, (in millions, except ratios)	2011	2010	2009
Credit data and quality statistics			
Net charge-offs	**$ 4,304**	$ 7,221	$ 9,233
Nonaccrual loans:			
Nonaccrual loans retained	**7,170**	8,568	10,373
Nonaccrual loans held-for-sale and loans at fair value	**103**	145	234
Total nonaccrual loans[b][c][d]	**7,273**	8,713	10,607
Nonperforming assets[b][c][d]	**8,064**	9,999	11,761
Allowance for loan losses	**15,247**	15,554	13,734
Net charge-off rate[e]	**1.78%**	2.69%	3.11%
Net charge-off rate excluding PCI loans[e][f]	**2.49**	3.76	4.36
Allowance for loan losses to ending loans retained	**6.56**	6.13	4.90
Allowance for loan losses to ending loans retained excluding PCI loans[f]	**5.71**	5.86	6.11
Allowance for loan losses to nonaccrual loans retained[b][f]	**133**	124	117
Nonaccrual loans to total loans	**2.97**	3.24	3.62
Nonaccrual loans to total loans excluding PCI loans[b]	**4.05**	4.45	5.01

(a) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets.

(b) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of the individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

(c) Certain of these loans are classified as trading assets on the Consolidated Balance Sheets.

(d) At December 31, 2011, 2010 and 2009, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $11.5 billion, $9.4 billion and $9.0 billion, respectively, that are 90 or more days past due; and (2) real estate owned insured by U.S. government agencies of $954 million, $1.9 billion and $579 million, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally. For further discussion, see Note 14 on pages 231–252 of this Annual Report which summarizes loan delinquency information.

(e) Loans held-for-sale and loans accounted for at fair value were excluded when calculating the net charge-off rate.

(f) Excludes the impact of PCI loans that were acquired as part of the Washington Mutual transaction. These loans were accounted for at fair value on the acquisition date, which incorporated management's estimate, as of that date, of credit losses over the remaining life of the portfolio. An allowance for loan losses of $5.7 billion, $4.9 billion and $1.6 billion was recorded for these loans at December 31, 2011, 2010 and 2009, respectively; these amounts were also excluded from the applicable ratios. To date, no charge-offs have been recorded for these loans.

Consumer & Business Banking

Selected income statement data

Year ended December 31,

(in millions, except ratios)	2011	2010	2009
Noninterest revenue	**$ 7,201**	$ 6,844	$ 7,204
Net interest income	**10,809**	10,884	10,864
Total net revenue	**18,010**	17,728	18,068
Provision for credit losses	**419**	630	1,176
Noninterest expense	**11,202**	10,717	10,421
Income before income tax expense	**6,389**	6,381	6,471
Net income	**$ 3,816**	$ 3,652	$ 3,915
Overhead ratio	**62%**	60%	58%
Overhead ratio excluding core deposit intangibles[(a)]	**61**	59	56

(a) Consumer & Business Banking uses the overhead ratio (excluding the amortization of CDI), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation would result in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would therefore result in an improving overhead ratio over time, all things remaining equal. This non-GAAP ratio excluded Consumer & Business Banking's CDI amortization expense related to prior business combination transactions of $238 million and $276 million and $328 million for the years ended December 31, 2011, 2010 and 2009, respectively.

2011 compared with 2010

Consumer & Business Banking reported net income of $3.8 billion, an increase of $164 million, or 4%, compared with the prior year.

Net revenue was $18.0 billion, up 2%, from the prior year. Net interest income was $10.8 billion, relatively flat compared with the prior year, as the impact from higher deposit balances was offset predominantly by the effect of lower deposit spreads. Noninterest revenue was $7.2 billion, an increase of 5%, driven by higher investment sales revenue and higher deposit-related fees.

The provision for credit losses was $419 million, compared with $630 million in the prior year. Net charge-offs were $494 million, compared with $730 million in the prior year.

Noninterest expense was $11.2 billion, up 5%, from the prior year resulting from investment in sales force and new branch builds.

2010 compared with 2009

Consumer & Business Banking reported net income of $3.7 billion, a decrease of $263 million, or 7%, compared with the prior year.

Total net revenue was $17.7 billion, down 2% compared with the prior year. The decrease was driven by lower deposit-related fees, largely offset by higher debit card income and a shift to wider-spread deposit products.

The provision for credit losses was $630 million, down $546 million compared with the prior year. The current-year provision reflected lower net charge-offs and a reduction of $100 million to the allowance for loan losses due to lower estimated losses, compared with a $300 million addition to the allowance for loan losses in the prior year. Net charge-offs were $730 million, compared with $876 million in the prior year.

Noninterest expense was $10.7 billion, up 3% compared with the prior year, resulting from sales force increases in Business Banking and bank branches.

Selected metrics

As of or for the year ended December 31,

(in millions, except ratios)	2011	2010	2009
Business metrics			
Business banking origination volume	**$ 5,827**	$ 4,688	$ 2,299
End-of-period loans	**17,652**	16,812	16,974
End-of-period deposits:			
Checking	**147,779**	131,702	123,220
Savings	**191,891**	170,604	156,140
Time and other	**36,743**	45,967	58,185
Total end-of-period deposits	**376,413**	348,273	337,545
Average loans	**17,121**	16,863	17,991
Average deposits:			
Checking	**136,579**	123,490	116,568
Savings	**182,587**	166,112	151,909
Time and other	**41,574**	51,149	76,550
Total average deposits	**360,740**	340,751	345,027
Deposit margin	**2.82%**	3.00%	2.92%
Average assets	**$ 29,729**	$ 29,307	$ 29,791

Selected metrics

As of or for the year ended December 31,

(in millions, except ratios and where otherwise noted)	2011	2010	2009
Credit data and quality statistics			
Net charge-offs	**$ 494**	$ 730	$ 876
Net charge-off rate	**2.89%**	4.32%	4.87%
Allowance for loan losses	**$ 798**	$ 875	$ 977
Nonperforming assets	**710**	846	839
Retail branch business metrics			
Investment sales volume	**$ 22,716**	$ 23,579	$ 21,784
Client investment assets	**137,853**	133,114	120,507
% managed accounts	**24%**	20%	13%
Number of:			
Branches	**5,508**	5,268	5,154
Chase Private Client branch locations	**262**	16	16
ATMs	**17,235**	16,145	15,406
Personal bankers[(a)]	**24,308**	21,735	18,009
Sales specialists[(a)]	**6,017**	4,876	3,915
Client advisors	**3,201**	3,066	2,731
Active online customers (in thousands)[(a)]	**17,334**	16,855	14,627
Active mobile customers (in thousands)[(a)]	**8,391**	5,337	1,249
Chase Private Clients	**21,723**	4,242	2,933
Checking accounts (in thousands)	**26,626**	27,252	25,712

(a) In 2011, the classification of personal bankers, sales specialists, and active online and mobile customers was refined; as such, prior periods have been revised to conform with the current presentation.

Mortgage Production and Servicing

Selected income statement data

Year ended December 31, (in millions, except ratios)	2011	2010	2009
Mortgage fees and related income	$ 2,714	$ 3,855	$ 3,794
Other noninterest revenue	452	413	442
Net interest income	770	904	973
Total net revenue	3,936	5,172	5,209
Provision for credit losses	5	58	15
Noninterest expense	6,735	4,139	3,244
Income/(loss) before income tax expense/(benefit)	(2,804)	975	1,950
Net income/(loss)	$ (1,832)	$ 569	$ 1,199
Overhead ratio	171%	80%	62%
Functional results			
Production			
Production revenue	$ 3,395	$ 3,440	$ 2,115
Production-related net interest & other income	840	869	1,079
Production-related revenue, excluding repurchase losses	4,235	4,309	3,194
Production expense	1,895	1,613	1,575
Income, excluding repurchase losses	2,340	2,696	1,619
Repurchase losses	(1,347)	(2,912)	(1,612)
Income/(loss) before income tax expense/ (benefit)	993	(216)	7
Servicing			
Loan servicing revenue	4,134	4,575	4,942
Servicing-related net interest & other income	390	433	240
Servicing-related revenue	4,524	5,008	5,182
MSR asset modeled amortization	(1,904)	(2,384)	(3,279)
Default servicing expense[a]	3,814	1,747	1,002
Core servicing expense	1,031	837	682
Income/(loss), excluding MSR risk management	(2,225)	40	219
MSR risk management, including related net interest income/(expense)[b]	(1,572)	1,151	1,724
Income/(loss) before income tax expense/ (benefit)	(3,797)	1,191	1,943
Net income/(loss)	$ (1,832)	$ 569	$ 1,199

Selected income statement data

Year ended December 31, (in millions)	2011	2010	2009
Supplemental mortgage fees and related income details			
Net production revenue:			
Production revenue	$ 3,395	$ 3,440	$ 2,115
Repurchase losses	(1,347)	(2,912)	(1,612)
Net production revenue	2,048	528	503
Net mortgage servicing revenue:			
Operating revenue:			
Loan servicing revenue	4,134	4,575	4,942
Changes in MSR asset fair value due to modeled amortization	(1,904)	(2,384)	(3,279)
Total operating revenue	2,230	2,191	1,663
Risk management:			
Changes in MSR asset fair value due to inputs or assumptions in model	(7,117)	(2,268)	5,804
Derivative valuation adjustments and other	5,553	3,404	(4,176)
Total risk management[b]	(1,564)	1,136	1,628
Total net mortgage servicing revenue	666	3,327	3,291
Mortgage fees and related income	$ 2,714	$ 3,855	$ 3,794

(a) Includes $1.7 billion of fees and assessments, as well as other costs of foreclosure-related matters for the year ended December 31, 2011, and $350 million for foreclosure-related matters for the year ended December 31, 2010.

(b) Predominantly includes: (1) changes in the MSR asset fair value due to changes in market interest rates and other modeled inputs and assumptions, and (2) changes in the value of the derivatives used to hedge the MSR asset. See Note 17 on pages 267–271 of this Annual Report for further information regarding changes in value of the MSR asset and related hedges.

2011 compared with 2010

Mortgage Production and Servicing reported a net loss of $1.8 billion, compared with net income of $569 million in the prior year.

Mortgage production pretax income was $993 million, compared with a pretax loss of $216 million in the prior year. Production-related revenue, excluding repurchase losses, was $4.2 billion, a decrease of 2% from the prior year reflecting lower volumes and narrower margins when compared with the prior year. Production expense was $1.9 billion, an increase of $282 million, or 17%, reflecting a strategic shift to higher-cost retail originations both through the branch network and direct to the consumer. Repurchase losses were $1.3 billion, compared with prior-year repurchase losses of $2.9 billion, which included a $1.6 billion increase in the repurchase reserve.

Mortgage servicing, including MSR risk management, resulted in a pretax loss of $3.8 billion, compared with pretax income of $1.2 billion in the prior year. Servicing-related revenue was $4.5 billion, a decline of 10% from the prior year, as a result of the decline in third-party loans serviced. MSR asset amortization was $1.9 billion, compared with $2.4 billion in the prior year; this reflected reduced amortization as a result of a lower MSR asset value. Servicing expense was $4.8 billion, an increase of $2.3 billion, driven by $1.7 billion recorded for fees and assessments, and other costs of foreclosures-related matters, as well as higher core and default servicing costs. MSR risk management was a loss of $1.6 billion, compared with income of $1.2 billion in the prior year, driven by refinements to the valuation model and related inputs. See Note 17 on pages 267-271 of this Annual Report for further information regarding changes in value of the MSR asset and related hedges.

2010 compared with 2009

Mortgage Production and Servicing reported net income of $569 million, a decrease of $630 million, or 53%, from the prior year.

Mortgage production pretax loss was $216 million, compared with pretax income of $7 million in the prior year. Production-related revenue, excluding repurchase losses, was $4.3 billion, an increase of 35% from the prior year reflecting wider mortgage margins and higher origination volumes when compared with the prior year. Production expense was $1.6 billion, an increase of $38 million, due to increased volumes. Repurchase losses were $2.9 billion, compared with prior-year repurchase losses of $1.6 billion. The current year losses included a $1.6 billion increase in the repurchase reserve, reflecting higher estimated future repurchase demands.

Mortgage servicing, including MSR risk management, resulted in pretax income of $1.2 billion, compared with pretax income of $1.9 billion in the prior year. Servicing-related revenue was $5.0 billion, a decline of 3% from the prior year, as a result of the decline in third-party loans serviced. MSR asset amortization was $2.4 billion compared with $3.3 billion in the prior year, reflecting reduced amortization as a result of a lower MSR asset value. Servicing expense was $2.6 billion, an increase of $900 million, driven by higher core and default servicing costs, including $350 million for foreclosure-related matters. MSR risk management income was $1.2 billion, compared with income of $1.7 billion in the prior year.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2011	2010	2009
Selected balance sheet data			
End-of-period loans:			
Prime mortgage, including option ARMs[a]	**$16,891**	$14,186	$11,964
Loans held-for-sale and loans at fair value[b]	**12,694**	14,863	12,920
Average loans:			
Prime mortgage, including option ARMs[a]	**14,580**	13,422	8,894
Loans held-for-sale and loans at fair value[b]	**16,354**	15,395	16,236
Average assets	**59,891**	57,778	51,317
Repurchase reserve (ending)	**3,213**	3,000	1,448
Credit data and quality statistics			
Net charge-offs:			
Prime mortgage, including option ARMs	**5**	41	14
Net charge-off rate:			
Prime mortgage, including option ARMs	**0.03%**	0.31%	0.17%
30+ day delinquency rate[c]	**3.15**	3.44	2.89
Nonperforming assets[d]	**$ 716**	$ 729	$ 575
Business metrics (in billions)			
Origination volume by channel			
Retail	**$ 87.2**	$ 68.8	$ 53.9
Wholesale[e]	**0.5**	1.3	3.6
Correspondent[e]	**52.1**	75.3	81.0
CNT (negotiated transactions)	**5.8**	10.2	12.2
Total origination volume	**$ 145.6**	$ 155.6	$ 150.7
Application volume by channel			
Retail	**$ 137.2**	$ 115.1	$ 90.9
Wholesale[e]	**1.0**	2.4	4.9
Correspondent[e]	**66.5**	97.3	110.8
Total application volume	**$ 204.7**	$ 214.8	$ 206.6
Third-party mortgage loans serviced (ending)	**$ 902.2**	$ 967.5	$1,082.1
Third-party mortgage loans serviced (average)	**937.6**	1,037.6	1,119.1
MSR net carrying value (ending)	**7.2**	13.6	15.5
Ratio of MSR net carrying value (ending) to third-party mortgage loans serviced (ending)	**0.80%**	1.41%	1.43%
Ratio of loan servicing revenue to third-party mortgage loans serviced (average)	**0.44**	0.44	0.44
MSR revenue multiple[f]	**1.82x**	3.20x	3.25x

(a) Predominantly represents prime loans repurchased from Government National Mortgage Association ("Ginnie Mae") pools, which are insured by U.S. government agencies. See further discussion of loans repurchased from Ginnie Mae pools in Mortgage repurchase liability on pages 115-118 of this Annual Report.

(b) Loans at fair value consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets. These loans

totaled $12.7 billion, $14.7 billion and $12.5 billion at December 31, 2011, 2010 and 2009, respectively. Average balances of these loans totaled $16.3 billion, $15.2 billion and $15.8 billion for the years ended December 31, 2011, 2010 and 2009, respectively.

(c) At December 31, 2011, 2010 and 2009, excluded mortgage loans insured by U.S. government agencies of $12.6 billion, $10.3 billion and $9.7 billion, respectively, that are 30 or more days past due. These amounts were excluded as reimbursement of insured amounts is proceeding normally. For further discussion, see Note 14 on pages 231–252 of this Annual Report which summarizes loan delinquency information.

(d) At December 31, 2011, 2010 and 2009, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $11.5 billion, $9.4 billion and $9.0 billion, respectively, that are 90 or more days past due; and (2) real estate owned insured by U.S. government agencies of $954 million, $1.9 billion and $579 million, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally. For further discussion, see Note 14 on pages 231–252 of this Annual Report which summarizes loan delinquency information.

(e) Includes rural housing loans sourced through brokers and correspondents, which are underwritten and closed in conjunction with the U.S. Department of Agriculture Rural Development, who acts as the guarantor in the transaction.

(f) Represents the ratio of MSR net carrying value (ending) to third-party mortgage loans serviced (ending) divided by the ratio of loan servicing revenue to third-party mortgage loans serviced (average).

Mortgage Production and Servicing revenue comprises the following:

Net production revenue – Includes net gains or losses on originations and sales of prime and subprime mortgage loans, other production-related fees and losses related to the repurchase of previously-sold loans.

Net mortgage servicing revenue includes the following components:

(a) Operating revenue comprises:

- all gross income earned from servicing third-party mortgage loans including stated service fees, excess service fees, late fees and other ancillary fees; and
- modeled MSR asset amortization (or time decay).

(b) Risk management comprises:

- changes in MSR asset fair value due to market-based inputs such as interest rates, as well as updates to assumptions used in the MSR valuation model; and
- derivative valuation adjustments and other, which represents changes in the fair value of derivative instruments used to offset the impact of changes in interest rates to the MSR valuation model.

Mortgage origination channels comprise the following:

Retail – Borrowers buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Wholesale – Third-party mortgage brokers refer loan application packages to the Firm. The Firm then underwrites and funds the loan. Brokers are independent loan originators that specialize in counseling applicants on available home financing options, but do not provide funding for loans. Chase materially eliminated broker-originated loans in 2008, with the exception of a small number of loans guaranteed by the U.S. Department of Agriculture under its Section 502 Guaranteed Loan program that serves low-and-moderate income families in small rural communities.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions sell closed loans to the Firm.

Correspondent negotiated transactions ("CNTs") – Mid-to-large-sized mortgage lenders, banks and bank-owned mortgage companies sell servicing to the Firm on an as-originated basis (excluding sales of bulk servicing). These transactions supplement traditional production channels and provide growth opportunities in the servicing portfolio in periods of stable and rising interest rates.

Real Estate Portfolios

Selected income statement data

Year ended December 31, (in millions, except ratios)	2011	2010	2009
Noninterest revenue	$ 38	$ 115	$ (26)
Net interest income	4,554	5,432	6,546
Total net revenue	4,592	5,547	6,520
Provision for credit losses	3,575	8,231	13,563
Noninterest expense	1,521	1,627	1,847
Income/(loss) before income tax expense/(benefit)	(504)	(4,311)	(8,890)
Net income/(loss)	$ (306)	$ (2,493)	$ (5,449)
Overhead ratio	33%	29%	28%

2011 compared with 2010

Real Estate Portfolios reported a net loss of $306 million, compared with a net loss of $2.5 billion in the prior year. The improvement was driven by a lower provision for credit losses, partially offset by lower net revenue.

Net revenue was $4.6 billion, down by $955 million, or 17%, from the prior year. The decrease was driven by a decline in net interest income as a result of lower loan balances due to portfolio runoff and narrower loan spreads.

The provision for credit losses was $3.6 billion, compared with $8.2 billion in the prior year, reflecting an improvement in charge-off trends and a net reduction of the allowance for loan losses of $230 million. The net change in the allowance reflected a $1.0 billion reduction related to the non-credit-impaired portfolios as estimated losses declined, predominately offset by an increase of $770 million reflecting additional impairment of the Washington Mutual PCI portfolio due to higher-than-expected default frequency relative to modeled lifetime loss estimates. The prior-year provision reflected a higher impairment of the PCI portfolio and higher net charge-offs. See Consumer Credit Portfolio on pages 145–154 of this Annual Report for the net charge-off amounts and rates.

Noninterest expense was $1.5 billion, down by $106 million, or 7%, from the prior year, reflecting a decrease in foreclosed asset expense due to temporary delays in foreclosure activity.

2010 compared with 2009

Real Estate Portfolios reported a net loss of $2.5 billion, compared with a net loss of $5.4 billion in the prior year. The improvement was driven by a lower provision for credit losses, partially offset by lower net interest income.

Net revenue was $5.5 billion, down by $973 million, or 15%, from the prior year. The decrease was driven by a decline in net interest income as a result of lower loan balances, reflecting net portfolio runoff.

The provision for credit losses was $8.2 billion, compared with $13.6 billion in the prior year. The current-year provision reflected a $1.9 billion reduction in net charge-offs and a $1.6 billion reduction in the allowance for the mortgage loan portfolios. This reduction in the allowance for loan losses included the effect of $632 million of charge-offs related to an adjustment of the estimated net realizable value of the collateral underlying delinquent residential home loans. The remaining reduction of the allowance of approximately $950 million was a result of an improvement in delinquencies and lower estimated losses, compared with prior year additions of $3.6 billion for the home equity and mortgage portfolios. Additionally, the current-year provision reflected an addition to the allowance for loan losses of $3.4 billion for the PCI portfolio, compared with a prior year addition of $1.6 billion for this portfolio. See Consumer Credit Portfolio on pages 145–154 of this Annual Report for the net charge-off amounts and rates.

Noninterest expense was $1.6 billion, down by $220 million, or 12%, from the prior year, reflecting lower default-related expense.

PCI Loans

Included within Real Estate Portfolios are PCI loans that the Firm acquired in the Washington Mutual transaction. For PCI loans, the excess of the undiscounted gross cash flows expected to be collected over the carrying value of the loans (the “accretable yield”) is accreted into interest income at a level rate of return over the expected life of the loans.

The net spread between the PCI loans and the related liabilities are expected to be relatively constant over time, except for any basis risk or other residual interest rate risk that remains and for certain changes in the accretable yield percentage (e.g., from extended loan liquidation periods and from prepayments). As of December 31, 2011, the remaining weighted-average life of the PCI loan portfolio is expected to be 7.5 years. The loan balances are expected to decline more rapidly in the earlier years as the most troubled loans are liquidated, and more slowly thereafter as the remaining troubled borrowers have limited refinancing opportunities. Similarly, default and servicing expense are expected to be higher in the earlier years and decline over time as liquidations slow down.

To date the impact of the PCI loans on Real Estate Portfolios’ net income has been negative. This is due to the current net spread of the portfolio, the provision for loan losses recognized subsequent to its acquisition, and the higher level of default and servicing expense associated with the portfolio. Over time, the Firm expects that this portfolio will contribute positively to net income.

For further information, see Note 14, PCI loans, on pages 248–249 of this Annual Report.

Selected metrics

As of or for the year ended December 31, (in millions)	2011	2010	2009
Loans excluding PCI[a]			
End-of-period loans owned:			
Home equity	**$ 77,800**	$ 88,385	$ 101,425
Prime mortgage, including option ARMs	**44,284**	49,768	55,891
Subprime mortgage	**9,664**	11,287	12,526
Other	**718**	857	671
Total end-of-period loans owned	**$ 132,466**	$ 150,297	$ 170,513
Average loans owned:			
Home equity	**$ 82,886**	$ 94,835	$ 108,333
Prime mortgage, including option ARMs	**46,971**	53,431	62,155
Subprime mortgage	**10,471**	12,729	13,901
Other	**773**	954	841
Total average loans owned	**$ 141,101**	$ 161,949	$ 185,230
PCI loans[a]			
End-of-period loans owned:			
Home equity	**$ 22,697**	$ 24,459	$ 26,520
Prime mortgage	**15,180**	17,322	19,693
Subprime mortgage	**4,976**	5,398	5,993
Option ARMs	**22,693**	25,584	29,039
Total end-of-period loans owned	**$ 65,546**	$ 72,763	$ 81,245
Average loans owned:			
Home equity	**$ 23,514**	$ 25,455	$ 27,627
Prime mortgage	**16,181**	18,526	20,791
Subprime mortgage	**5,170**	5,671	6,350
Option ARMs	**24,045**	27,220	30,464
Total average loans owned	**$ 68,910**	$ 76,872	$ 85,232
Total Real Estate Portfolios			
End-of-period loans owned:			
Home equity	**$ 100,497**	$ 112,844	$ 127,945
Prime mortgage, including option ARMs	**82,157**	92,674	104,623
Subprime mortgage	**14,640**	16,685	18,519
Other	**718**	857	671
Total end-of-period loans owned	**$ 198,012**	$ 223,060	$ 251,758
Average loans owned:			
Home equity	**$ 106,400**	$ 120,290	$ 135,960
Prime mortgage, including option ARMs	**87,197**	99,177	113,410
Subprime mortgage	**15,641**	18,400	20,251
Other	**773**	954	841
Total average loans owned	**$ 210,011**	$ 238,821	$ 270,462
Average assets	**$ 197,096**	$ 226,961	$ 263,619
Home equity origination volume	**1,127**	1,203	2,479

(a) PCI loans represent loans acquired in the Washington Mutual transaction for which a deterioration in credit quality occurred between the origination date and JPMorgan Chase's acquisition date. These loans were initially recorded at fair value and accrete interest income over the estimated lives of the loans as long as cash flows are reasonably estimable, even if the underlying loans are contractually past due.

Credit data and quality statistics

As of or for the year ended December 31, (in millions, except ratios)	2011	2010	2009
Net charge-offs excluding PCI loans:[a]			
Home equity	**$ 2,472**	$ 3,444	$ 4,682
Prime mortgage, including option ARMs	**682**	1,573	1,935
Subprime mortgage	**626**	1,374	1,648
Other	**25**	59	78
Total net charge-offs	**$ 3,805**	$ 6,450	$ 8,343
Net charge-off rate excluding PCI loans:[a]			
Home equity	**2.98%**	3.63%	4.32%
Prime mortgage, including option ARMs	**1.45**	2.95	3.11
Subprime mortgage	**5.98**	10.82	11.86
Other	**3.23**	5.90	9.75
Total net charge-off rate excluding PCI loans	**2.70**	3.98	4.50
Net charge-off rate – reported:			
Home equity	**2.32%**	2.86%	3.45%
Prime mortgage, including option ARMs	**0.78**	1.59	1.70
Subprime mortgage	**4.00**	7.47	8.16
Other	**3.23**	5.90	9.75
Total net charge-off rate – reported	**1.81**	2.70	3.08
30+ day delinquency rate excluding PCI loans[b]	**5.69%**	6.45%	7.73%
Allowance for loan losses	**$ 14,429**	$ 14,659	$ 12,752
Nonperforming assets[c]	**6,638**	8,424	10,347
Allowance for loan losses to ending loans retained	**7.29%**	6.57%	5.06%
Allowance for loan losses to ending loans retained excluding PCI loans[a]	**6.58**	6.47	6.55

(a) Excludes the impact of PCI loans that were acquired as part of the Washington Mutual transaction. These loans were accounted for at fair value on the acquisition date, which incorporated management's estimate, as of that date, of credit losses over the remaining life of the portfolio. An allowance for loan losses of $5.7 billion, $4.9 billion and $1.6 billion was recorded for these loans at December 31, 2011, 2010 and 2009, respectively; these amounts were also excluded from the applicable ratios. To date, no charge-offs have been recorded for these loans.

(b) The delinquency rate for PCI loans was 23.30%, 28.20% and 27.62% at December 31, 2011, 2010 and 2009, respectively.

(c) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of the individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

CARD SERVICES & AUTO

Card Services & Auto is one of the nation's largest credit card issuers, with over $132 billion in credit card loans. Customers have over 65 million open credit card accounts (excluding the commercial card portfolio), and used Chase credit cards to meet over $343 billion of their spending needs in 2011. Through its Merchant Services business, Chase Paymentech Solutions, Card is a global leader in payment processing and merchant acquiring. Consumers also can obtain loans through more than 17,200 auto dealerships and 2,000 schools and universities nationwide.

Effective July 1, 2011, Card includes Auto and Student Lending. For a further discussion of the business segment reorganization, see Business segment changes on page 79, and Note 33 on pages 300–303 of this Annual Report.

Selected income statement data – managed basis[a][b]

Year ended December 31, (in millions, except ratios)	2011	2010	2009
Revenue			
Credit card income	**$ 4,127**	$ 3,514	$ 3,613
All other income	**765**	764	93
Noninterest revenue[c]	**4,892**	4,278	3,706
Net interest income	**14,249**	16,194	19,493
Total net revenue[d]	**19,141**	20,472	23,199
Provision for credit losses	**3,621**	8,570	19,648
Noninterest expense			
Compensation expense	**1,826**	1,651	1,739
Noncompensation expense	**5,818**	5,060	4,362
Amortization of intangibles	**401**	467	516
Total noninterest expense[e]	**8,045**	7,178	6,617
Income/(loss) before income tax expense/ (benefit)	**7,475**	4,724	(3,066)
Income tax expense/ (benefit)	**2,931**	1,852	(1,273)
Net income/(loss)	**$ 4,544**	$ 2,872	$ (1,793)
Memo: Net securitization income/(loss)	**NA**	NA	(474)
Financial ratios[a]			
Return on common equity	**28%**	16%	(10)%
Overhead ratio	**42**	35	29

(a) Effective January 1, 2011, the commercial card business that was previously in TSS was transferred to Card. There is no material impact on the financial data; prior-year periods were not revised.

(b) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. As a result of the consolidation of the securitization trusts, reported and managed basis are equivalent for periods beginning after January 1, 2010. See Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 76–78 of this Annual Report for additional information. Also, for further details regarding the Firm's application and impact of the VIE guidance, see Note 16 on pages 256–267 of this Annual Report.

(c) Included Commercial Card noninterest revenue of $290 million for the year ended December 31, 2011.

(d) Total net revenue included tax-equivalent adjustments associated with tax-exempt loans to certain qualified entities of $2 million, $7 million and $13 million for the years ended December 31, 2011, 2010 and 2009, respectively.

(e) Included Commercial Card noninterest expense of $298 million for the year ended December 31, 2011.

NA: Not applicable

2011 compared with 2010

Net income was $4.5 billion, compared with $2.9 billion in the prior year. The increase was driven primarily by lower net charge-offs, partially offset by a lower reduction in the allowance for loan losses compared with the prior year.

Net revenue was $19.1 billion, a decrease of $1.3 billion, or 7%, from the prior year. Net interest income was $14.2 billion, down by $1.9 billion, or 12%. The decrease was driven by lower average loan balances, the impact of legislative changes, and a decreased level of fees. These decreases were largely offset by lower revenue reversals associated with lower charge-offs. Noninterest revenue was $4.9 billion, an increase of $614 million, or 14%, from the prior year. The increase was driven by the transfer of the Commercial Card business to Card from Treasury & Securities Services in the first quarter of 2011, higher net interchange income, and lower partner revenue-sharing due to the impact of the Kohl's portfolio sale. These increases were partially offset by lower revenue from fee-based products. Excluding the impact of the Commercial Card business, noninterest revenue increased 8%.

The provision for credit losses was $3.6 billion, compared with $8.6 billion in the prior year. The current-year provision reflected lower net charge-offs and an improvement in delinquency rates, as well as a reduction of $3.9 billion to the allowance for loan losses due to lower estimated losses. The prior-year provision included a reduction of $6.2 billion to the allowance for loan losses. The net charge-off rate was 3.99%, down from 7.12% in the prior year; the 30+ day delinquency rate was 2.32%, down from 3.23% in the prior year. Excluding the Washington Mutual and Commercial Card portfolios, the Credit Card net charge-off rate[1] was 4.93%, down from 8.72% in the prior year; and the 30+ day delinquency rate[1] was 2.54%, down from 3.66% in the prior year. The Auto net charge-off rate was 0.32%, down from 0.63% in the prior year. The Student net charge-off rate was 3.10%, up from 2.61% in the prior year.

Noninterest expense was $8.0 billion, an increase of $867 million, or 12%, from the prior year, due to higher marketing expense and the inclusion of the Commercial Card business. Excluding the impact of the Commercial Card business, noninterest expense increased 8%.

In May 2009, the CARD Act was enacted. The changes required by the CARD Act were fully implemented by the end of the fourth quarter of 2010. The total estimated reduction in net income resulting from the CARD Act was approximately $750 million and $300 million in 2011 and 2010, respectively.

2010 compared with 2009

Net income was $2.9 billion, compared with a net loss of $1.8 billion in the prior year. The improved results were driven by a lower provision for credit losses, partially offset by lower net revenue.

End-of-period loans were $200.5 billion, a decrease of $24.7 billion, or 11%, from the prior year. Average loans were $207.9 billion, a decrease of $24.2 billion, or 10%, from the prior year. The declines in both end-of-period and average loans were predominantly due to a decline in Credit Card in lower-yielding promotional balances and the Washington Mutual portfolio runoff.

Net revenue was $20.5 billion, a decrease of $2.7 billion, or 12%, from the prior year. Net interest income was $16.2 billion, down by $3.3 billion, or 17%. The decrease in net interest income was driven by lower average loan balances, the impact of legislative changes, and a decreased level of fees. These decreases were offset partially by lower revenue reversals associated with lower charge-offs. Noninterest revenue was $4.3 billion, an increase of $572 million, or 15%, driven by the prior-year write-down of securitization interests and higher auto operating lease income, offset partially by lower revenue from fee-based products.

The provision for credit losses was $8.6 billion, compared with $19.6 billion in the prior year. The current-year provision reflected lower net charge-offs and a reduction of $6.2 billion to the allowance for loan losses due to lower estimated losses. The prior-year provision included an addition of $2.7 billion to the allowance for loan losses. The net charge-off rate was 7.12%, down from 7.37% in the prior year; and the 30+ day delinquency rate was 3.23%, down from 5.02% in the prior year. Card Services, excluding the Washington Mutual portfolio, net charge-off rate[1] was 8.72%, up from 8.45% in the prior year; and the 30+ day delinquency rate[1] was 3.66%, down from 5.52% in the prior year. The auto loan net charge-off rate was 0.63%, down from 1.44% in the prior year. The student loan net charge-off rate was 2.61%, up from 1.77% in the prior year.

Noninterest expense was $7.2 billion, an increase of $561 million, or 8%, due to higher marketing expense and higher auto operating lease depreciation expense.

[1] For Credit Card, includes loans held-for-sale, which are non-GAAP financial measures, to provide more meaningful measures that enable comparability with prior periods.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount and ratios)	**2011**	2010	2009
Selected balance sheet data (period-end)[a]			
Managed assets	**$ 208,467**	$ 208,793	$ 255,029
Loans:			
Credit Card	**132,277**	137,676	78,786
Auto	**47,426**	48,367	46,031
Student	**13,425**	14,454	15,747
Total loans on balance sheets	**193,128**	200,497	140,564
Securitized credit card loans[b]	**NA**	NA	84,626
Total loans[c]	**$ 193,128**	$ 200,497	$ 225,190
Equity	**16,000**	18,400	17,543
Selected balance sheet data (average)[a]			
Managed assets	**$ 201,162**	$ 213,041	$ 255,519
Loans:			
Credit Card	**128,167**	144,367	87,029
Auto	**47,034**	47,603	43,558
Student	**13,986**	15,945	16,108
Total average loans on balance sheets	**189,187**	207,915	146,695
Securitized credit card loans[b]	**NA**	NA	85,378
Total average loans[d]	**$ 189,187**	$ 207,915	$ 232,073
Equity	**$ 16,000**	$ 18,400	$ 17,543
Headcount[a]	**27,585**	25,733	27,914
Credit data and quality statistics[a][b]			
Net charge-offs:			
Credit Card	**$ 6,925**	$ 14,037	$ 16,077
Auto	**152**	298	627
Student	**434**	387	253
Total net charge-offs	**$ 7,511**	$ 14,722	$ 16,957
Net charge-off rate:			
Credit Card[e]	**5.44%**	9.73%	9.33%
Auto	**0.32**	0.63	1.44
Student[f]	**3.10**	2.61	1.77
Total net charge-off rate	**3.99**	7.12	7.37

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2011	2010	2009
Delinquency rates			
30+ day delinquency rate:			
Credit Card[g]	**2.81%**	4.14%	6.28%
Auto	**1.13**	1.22	1.63
Student[h][i]	**1.78**	1.53	1.50
Total 30+ day delinquency rate	**2.32**	3.23	5.02
90+ day delinquency rate - Credit Card[g]	**1.44**	2.25	3.59
Nonperforming assets[j]	**$ 228**	$ 269	$ 340
Allowance for loan losses:			
Credit Card[k]	**$ 6,999**	$ 11,034	$ 9,672
Auto and Student	**1,010**	899	1,042
Total allowance for loan losses	**$ 8,009**	$ 11,933	$ 10,714
Allowance for loan losses to period-end loans:			
Credit Card[g][k]	**5.30%**	8.14%	12.28%
Auto and Student[h]	**1.66**	1.43	1.73
Total allowance for loan losses to period-end loans	**4.15**	6.02	7.72
Business metrics			
Credit Card, excluding Commercial Card[a]			
Sales volume (in billions)	**$ 343.7**	$ 313.0	$ 294.1
New accounts opened	**8.8**	11.3	10.2
Open accounts[l]	**65.2**	90.7	93.3
Merchant Services			
Bank card volume (in billions)	**$ 553.7**	$ 469.3	$ 409.7
Total transactions (in billions)	**24.4**	20.5	18.0
Auto and Student			
Origination volume (in billions)			
Auto	**$ 21.0**	$ 23.0	$ 23.7
Student	**0.3**	1.9	4.2

The following are brief descriptions of selected business metrics within Card Services & Auto.

Sales volume - Dollar amount of cardmember purchases, net of returns.

Open accounts - Cardmember accounts with charging privileges.

Merchant Services business - A business that processes bank card transactions for merchants.

Bank card volume - Dollar amount of transactions processed for merchants.

Total transactions - Number of transactions and authorizations processed for merchants.

Auto origination volume - Dollar amount of loans and leases originated.

Commercial Card provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services and business-to-business payment solutions.

As of or for the year ended December 31, (in millions, except ratios)	2011	2010	2009
Supplemental information[a][m]			
Card Services, excluding Washington Mutual portfolio			
Loans (period-end)	**$121,224**	$123,943	$143,759
Average loans	**116,186**	128,312	148,765
Net interest income[n]	**8.70%**	8.86%	8.97%
Net revenue[n]	**11.74**	11.22	10.63
Risk adjusted margin[n][o]	**9.39**	5.81	1.39
Net charge-offs	**$ 5,668**	$ 11,191	$ 12,574
Net charge-off rate[e]	**4.88%**	8.72%	8.45%
30+ day delinquency rate[g]	**2.53**	3.66	5.52
90+ day delinquency rate[g]	**1.29**	1.98	3.13
Card Services, excluding Washington Mutual and Commercial Card portfolios			
Loans (period-end)	**$119,966**	$123,943	$143,759
Average loans	**114,828**	128,312	148,765
Net interest income[n]	**8.87%**	8.86%	8.97%
Net revenue[n]	**11.69**	11.22	10.63
Risk adjusted margin[n][o]	**9.32**	5.81	1.39
Net charge-offs	**$ 5,666**	$ 11,191	$ 12,574
Net charge-off rate[e]	**4.93%**	8.72%	8.45%
30+ day delinquency rate[g][p]	**2.54**	3.66	5.52
90+ day delinquency rate[g][q]	**1.30**	1.98	3.13

(a) Effective January 1, 2011, the Commercial Card business that was previously in TSS was transferred to Card. There is no material impact on the financial data; prior-year periods were not revised. The commercial card portfolio is excluded from business metrics and supplemental information where noted. Headcount included 1,274 employees related to the transfer of this business.

(b) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. As a result of the consolidation of the credit card securitization trusts, reported and managed basis relating to credit card securitizations are equivalent for periods beginning after January 1, 2010. For further details regarding the Firm's application and impact of the guidance, see Note 16 on pages 256–267 of this Annual Report.

(c) Total period-end loans included loans held-for-sale of $102 million, $2.2 billion and $1.7 billion at December 31, 2011, 2010 and 2009, respectively.

(d) Total average loans included loans held-for-sale of $833 million, $1.3 billion and $1.8 billion for the years ended December 31, 2011, 2010 and 2009, respectively.

(e) Average credit card loans included loans held-for-sale of $833 million and $148 million for the years ended December 31, 2011 and 2010, respectively. These amounts are excluded when calculating the net charge-off rate. For Card Services, excluding the Washington Mutual portfolio, and Card Services, excluding the Washington Mutual and Commercial Card portfolios, these amounts are included when calculating the net charge-off rate.

(f) Average student loans included loans held-for-sale of $1.1 billion and $1.8 billion for the years ended December 31, 2010 and 2009, respectively. These amounts are excluded when calculating the net charge-off rate.

(g) Period-end credit card loans included loans held-for-sale of $102 million and $2.2 billion at December 31, 2011 and 2010, respectively. No allowance for loan losses was recorded for these loans. These amounts are excluded when calculating the allowance for loan losses to period-end loans and delinquency rates. For Card Services, excluding the Washington Mutual portfolio, and Card Services, excluding the Washington Mutual and Commercial Card portfolios, these amounts are included when calculating the delinquency rates.

(h) Period-end student loans included loans held-for-sale of $1.7 billion at December 31, 2009. This amount is excluded when calculating the allowance for loan losses to period-end loans and the 30+ day delinquency rate.
(i) Excluded student loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") of $989 million, $1.1 billion and $942 million at December 31, 2011, 2010 and 2009, respectively, that are 30 or more days past due. These amounts are excluded as reimbursement of insured amounts is proceeding normally.
(j) Nonperforming assets excluded student loans insured by U.S. government agencies under the FFELP of $551 million, $625 million and $542 million at December 31, 2011, 2010 and 2009, respectively, that are 90 or more days past due. These amounts are excluded as reimbursement of insured amounts is proceeding normally.
(k) Based on loans on the Consolidated Balance Sheets.
(l) Reflected the impact of portfolio sales in the second quarter of 2011.
(m) Supplemental information is provided for Card Services, excluding Washington Mutual and Commercial Card portfolios and including loans held-for-sale, which are non-GAAP financial measures, to provide more meaningful measures that enable comparability with prior periods.
(n) As a percentage of average managed loans.
(o) Represents total net revenue less provision for credit losses.
(p) At December 31, 2011, 2010 and 2009, the 30+ day delinquent loans for Card Services, excluding Washington Mutual and Commercial Card portfolios, were $3,047 million, $4,541 million and $7,930 million, respectively.
(q) At December 31, 2011, 2010 and 2009, the 90+ day delinquent loans for Card Services, excluding Washington Mutual and Commercial Card portfolios, were $1,557 million, $2,449 million and $4,503 million, respectively.

NA: Not applicable

Reconciliation from reported basis to managed basis

The financial information presented in the following table reconciles reported basis and managed basis to disclose the effect of securitizations reported by Card Services & Auto in 2009. Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. As a result of the consolidation of the credit card securitization trusts, reported and managed basis relating to credit card securitizations are equivalent for periods beginning after January 1, 2010. For further details regarding the Firm's application and impact of the guidance, see Note 16 on pages 256–267 of this Annual Report.

Year ended December 31, (in millions, except ratios)	2011	2010	2009
Income statement data			
Credit card income			
Reported	**$ 4,127**	$ 3,514	$ 5,107
Securitization adjustments	**NA**	NA	(1,494)
Managed credit card income	**$ 4,127**	$ 3,514	$ 3,613
Net interest income			
Reported	**$ 14,247**	$ 16,187	$ 11,543
Securitization adjustments	**NA**	NA	7,937
Fully tax-equivalent adjustments	**2**	7	13
Managed net interest income	**$ 14,249**	$ 16,194	$ 19,493
Total net revenue			
Reported	**$ 19,139**	$ 20,465	$ 16,743
Securitization adjustments	**NA**	NA	6,443
Fully tax-equivalent adjustments	**2**	7	13
Managed total net revenue	**$ 19,141**	$ 20,472	$ 23,199
Provision for credit losses			
Reported	**$ 3,621**	$ 8,570	$ 13,205
Securitization adjustments	**NA**	NA	6,443
Managed provision for credit losses	**$ 3,621**	$ 8,570	$ 19,648
Income tax expense/ (benefit)			
Reported	**$ 2,929**	$ 1,845	$ (1,286)
Fully tax-equivalent adjustments	**2**	7	13
Managed income tax expense/(benefit)	**$ 2,931**	$ 1,852	$ (1,273)
Balance sheet – average balances			
Total average assets			
Reported	**$ 201,162**	$ 213,041	$ 173,286
Securitization adjustments	**NA**	NA	82,233
Managed average assets	**$ 201,162**	$ 213,041	$ 255,519
Credit data and quality statistics			
Net charge-offs			
Reported	**$ 7,511**	$ 14,722	$ 10,514
Securitization adjustments	**NA**	NA	6,443
Managed net charge-offs	**$ 7,511**	$ 14,722	$ 16,957
Net charge-off rates			
Reported	**3.99%**	7.12%	7.26%
Securitized	**NA**	NA	7.55
Managed net charge-off rate	**3.99**	7.12	7.37

NA: Not applicable

COMMERCIAL BANKING

Commercial Banking delivers extensive industry knowledge, local expertise and dedicated service to more than 24,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and nearly 35,000 real estate investors/owners. CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Commercial Banking is divided into four primary client segments: Middle Market Banking, Commercial Term Lending, Corporate Client Banking, and Real Estate Banking. Middle Market Banking covers corporate, municipal, financial institution and not-for-profit clients, with annual revenue generally ranging between $10 million and $500 million. Commercial Term Lending primarily provides term financing to real estate investors/owners for multifamily properties as well as financing office, retail and industrial properties. Corporate Client Banking, known as Mid-Corporate Banking prior to 2011, covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs. Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate properties. Lending and investment activity within the Community Development Banking and Chase Capital segments are included in other.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2011	2010	2009
Revenue			
Lending- and deposit-related fees	**$ 1,081**	$ 1,099	$ 1,081
Asset management, administration and commissions	**136**	144	140
All other income[a]	**978**	957	596
Noninterest revenue	**2,195**	2,200	1,817
Net interest income	**4,223**	3,840	3,903
Total net revenue[b]	**6,418**	6,040	5,720
Provision for credit losses	**208**	297	1,454
Noninterest expense			
Compensation expense	**886**	820	776
Noncompensation expense	**1,361**	1,344	1,359
Amortization of intangibles	**31**	35	41
Total noninterest expense	**2,278**	2,199	2,176
Income before income tax expense	**3,932**	3,544	2,090
Income tax expense	**1,565**	1,460	819
Net income	**$ 2,367**	$ 2,084	$ 1,271
Revenue by product			
Lending[c]	**$ 3,455**	$ 2,749	$ 2,663
Treasury services[c]	**2,270**	2,632	2,642
Investment banking	**498**	466	394
Other	**195**	193	21
Total Commercial Banking revenue	**$ 6,418**	$ 6,040	$ 5,720
IB revenue, gross[d]	**$ 1,421**	$ 1,335	$ 1,163
Revenue by client segment			
Middle Market Banking	**$ 3,145**	$ 3,060	$ 3,055
Commercial Term Lending	**1,168**	1,023	875
Corporate Client Banking[e]	**1,261**	1,154	1,102
Real Estate Banking	**416**	460	461
Other	**428**	343	227
Total Commercial Banking revenue	**$ 6,418**	$ 6,040	$ 5,720
Financial ratios			
Return on common equity	**30%**	26%	16%
Overhead ratio	**35**	36	38

(a) CB client revenue from investment banking products and commercial card transactions is included in all other income.

(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities, as well as tax-exempt income from municipal bond activity, totaling $345 million, $238 million, and $170 million for the years ended December 31, 2011, 2010 and 2009, respectively.

(c) Effective January 1, 2011, product revenue from commercial card and standby letters of credit transactions was included in lending. For the year ended December 31, 2011, the impact of the change was $438 million. In prior-year periods, it was reported in treasury services.

(d) Represents the total revenue related to investment banking products sold to CB clients.

(e) Corporate Client Banking was known as Mid-Corporate Banking prior to January 1, 2011.

2011 compared with 2010

Record net income was $2.4 billion, an increase of $283 million, or 14%, from the prior year. The improvement was driven by higher net revenue and a reduction in the provision for credit losses, partially offset by an increase in noninterest expense.

Net revenue was a record $6.4 billion, up by $378 million, or 6%, compared with the prior year. Net interest income was $4.2 billion, up by $383 million, or 10%, driven by growth in liability and loan balances partially offset by spread compression on liability products. Noninterest revenue was $2.2 billion, flat compared with the prior year.

On a client segment basis, revenue from Middle Market Banking was $3.1 billion, an increase of $85 million, or 3%, from the prior year due to higher liability and loan balances offset by spread compression on liability products and lower lending- and deposit-related fees. Revenue from Commercial Term Lending was $1.2 billion, an increase of $145 million, or 14%, and includes the full year impact of the purchase of a $3.5 billion loan portfolio during the third quarter of 2010. Revenue from Corporate Client Banking was $1.3 billion, an increase of $107 million, or 9% due to growth in liability and loan balances and higher lending- and deposit-related fees, partially offset by spread compression on liability products. Revenue from Real Estate Banking was $416 million, a decrease of $44 million, or 10%, driven by a reduction in loan balances and lower gains on sales of loans and other real estate owned, partially offset by wider loan spreads.

The provision for credit losses was $208 million, compared with $297 million in the prior year. Net charge-offs were $187 million (0.18% net charge-off rate) compared with $909 million (0.94% net charge-off rate) in the prior year. The reduction was largely related to commercial real estate. The allowance for loan losses to period-end loans retained was 2.34%, down from 2.61% in the prior year. Nonaccrual loans were $1.1 billion, down by $947 million, or 47% from the prior year, largely as a result of commercial real estate repayments and loans sales.

Noninterest expense was $2.3 billion, an increase of $79 million, or 4% from the prior year, reflecting higher headcount-related expense.

2010 compared with 2009

Record net income was $2.1 billion, an increase of $813 million, or 64%, from the prior year. The increase was driven by a reduction in the provision for credit losses and higher net revenue.

Net revenue was a record $6.0 billion, up by $320 million, or 6%, compared with the prior year. Net interest income was $3.8 billion, down by $63 million, or 2%, driven by spread compression on liability products and lower loan balances, predominantly offset by growth in liability balances and wider loan spreads. Noninterest revenue was $2.2 billion, an increase of $383 million, or 21%, from the prior year, reflecting higher net gains from asset sales, higher lending- and deposit-related fees, an improvement in the market conditions impacting the value of investments held at fair value, higher investment banking fees and increased community development investment-related revenue.

On a client segment basis, revenue from Middle Market Banking was $3.1 billion, flat compared with the prior year. Revenue from Commercial Term Lending was $1.0 billion, an increase of $148 million, or 17%, and included the impact of the purchase of a $3.5 billion loan portfolio during the third quarter of 2010 and higher net gains from asset sales. Corporate Client Banking revenue was $1.2 billion, an increase of $52 million, or 5%, compared with the prior year due to wider loan spreads, higher lending- and deposit-related fees and higher investment banking fees offset partially by reduced loan balances. Real Estate Banking revenue was $460 million, flat compared with the prior year.

The provision for credit losses was $297 million, compared with $1.5 billion in the prior year. The decline was mainly due to stabilization in the credit quality of the loan portfolio and refinements to credit loss estimates. Net charge-offs were $909 million (0.94% net charge-off rate), compared with $1.1 billion (1.02% net charge-off rate) in the prior year. The allowance for loan losses to period-end loans retained was 2.61%, down from 3.12% in the prior year. Nonaccrual loans were $2.0 billion, a decrease of $801 million, or 29%, from the prior year.

Noninterest expense was $2.2 billion, an increase of $23 million, or 1%, compared with the prior year reflecting higher headcount-related expense partially offset by lower volume-related expense.

Selected metrics

Year ended December 31, (in millions, except headcount and ratios)	2011	2010	2009
Selected balance sheet data (period-end)			
Total assets	**$ 158,040**	$ 142,646	$ 130,280
Loans:			
Loans retained	**111,162**	97,900	97,108
Loans held-for-sale and loans at fair value	**840**	1,018	324
Total loans	**$ 112,002**	$ 98,918	$ 97,432
Equity	**8,000**	8,000	8,000
Period-end loans by client segment			
Middle Market Banking	**$ 44,437**	$ 37,942	$ 34,170
Commercial Term Lending	**38,583**	37,928	36,201
Corporate Client Banking[a]	**16,747**	11,678	12,500
Real Estate Banking	**8,211**	7,591	10,619
Other	**4,024**	3,779	3,942
Total Commercial Banking loans	**$ 112,002**	$ 98,918	$ 97,432
Selected balance sheet data (average)			
Total assets	**$ 146,230**	$ 133,654	$ 135,408
Loans:			
Loans retained	**103,462**	96,584	106,421
Loans held-for-sale and loans at fair value	**745**	422	317
Total loans	**$ 104,207**	$ 97,006	$ 106,738
Liability balances[b]	**174,729**	138,862	113,152
Equity	**8,000**	8,000	8,000
Average loans by client segment			
Middle Market Banking	**$ 40,759**	$ 35,059	$ 37,459
Commercial Term Lending	**38,107**	36,978	36,806
Corporate Client Banking[a]	**13,993**	11,926	15,951
Real Estate Banking	**7,619**	9,344	12,066
Other	**3,729**	3,699	4,456
Total Commercial Banking loans	**$ 104,207**	$ 97,006	$ 106,738
Headcount	**5,520**	4,881	4,151

Year ended December 31, (in millions, except headcount and ratios)	2011	2010	2009
Credit data and quality statistics			
Net charge-offs	**$ 187**	$ 909	$ 1,089
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained[c]	**1,036**	1,964	2,764
Nonaccrual loans held-for-sale and loans held at fair value	**17**	36	37
Total nonaccrual loans	**1,053**	2,000	2,801
Assets acquired in loan satisfactions	**85**	197	188
Total nonperforming assets	**1,138**	2,197	2,989
Allowance for credit losses:			
Allowance for loan losses	**2,603**	2,552	3,025
Allowance for lending-related commitments	**189**	209	349
Total allowance for credit losses	**2,792**	2,761	3,374
Net charge-off rate[d]	**0.18%**	0.94%	1.02%
Allowance for loan losses to period-end loans retained	**2.34**	2.61	3.12
Allowance for loan losses to nonaccrual loans retained[c]	**251**	130	109
Nonaccrual loans to total period-end loans	**0.94**	2.02	2.87

(a) Corporate Client Banking was known as Mid-Corporate Banking prior to January 1, 2011.

(b) Liability balances include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased, time deposits and securities loaned or sold under repurchase agreements) as part of customer cash management programs.

(c) Allowance for loan losses of $176 million, $340 million and $581 million was held against nonaccrual loans retained at December 31, 2011, 2010 and 2009, respectively.

(d) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off rate.

Treasury & Securities Services is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services provides cash management, trade, wholesale card and liquidity products and services to small- and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with IB, CB, RFS and AM businesses to serve clients firmwide. Certain TS revenue is included in other segments' results. Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Selected income statement data

Year ended December 31, (in millions, except ratio data)	2011	2010	2009
Revenue			
Lending- and deposit-related fees	**$ 1,240**	$ 1,256	$ 1,285
Asset management, administration and commissions	**2,748**	2,697	2,631
All other income	**556**	804	831
Noninterest revenue	**4,544**	4,757	4,747
Net interest income	**3,158**	2,624	2,597
Total net revenue	**7,702**	7,381	7,344
Provision for credit losses	**1**	(47)	55
Credit allocation income/ (expense)[a]	**8**	(121)	(121)
Noninterest expense			
Compensation expense	**2,824**	2,734	2,544
Noncompensation expense	**2,971**	2,790	2,658
Amortization of intangibles	**68**	80	76
Total noninterest expense	**5,863**	5,604	5,278
Income before income tax expense	**1,846**	1,703	1,890
Income tax expense	**642**	624	664
Net income	**$ 1,204**	$ 1,079	$ 1,226
Financial ratios			
Return on common equity	**17%**	17%	25%
Pretax margin ratio	**24**	23	26
Overhead ratio	**76**	76	72
Pre-provision profit ratio[b]	**24**	24	28

(a) IB manages traditional credit exposures related to GCB on behalf of IB and TSS. Effective January 1, 2011, IB and TSS share the economics related to the Firm's GCB clients. Included within this allocation are net revenue, provision for credit losses and expenses. The prior years reflected a reimbursement to IB for a portion of the total costs of managing the credit portfolio. IB recognizes this credit allocation as a component of all other income.

(b) Pre-provision profit ratio represents total net revenue less total noninterest expense divided by total net revenue. This reflects the operating performance before the impact of credit, and is another measure of performance for TSS against the performance of competitors.

Year ended December 31, (in millions)	2011	2010	2009
Revenue by business			
Worldwide Securities Services ("WSS")			
Investor Services	**$ 3,019**	$ 2,869	$ 2,836
Clearance, Collateral Management and Depositary Receipts	**842**	814	806
Total WSS revenue	**$ 3,861**	$ 3,683	$ 3,642
Treasury Services ("TS")			
Transaction Services	**$ 3,240**	$ 3,233	$ 3,312
Trade Finance	**601**	465	390
Total TS revenue	**$ 3,841**	$ 3,698	$ 3,702

2011 compared with 2010

Net income was $1.2 billion, an increase of $125 million, or 12%, from the prior year.

Net revenue was $7.7 billion, an increase of $321 million, or 4%, from the prior year. Excluding the impact of the Commercial Card business, net revenue was up 7%. Worldwide Securities Services net revenue was $3.9 billion, an increase of $178 million, or 5%. The increase was driven mainly by higher net interest income due to higher deposit balances and net inflows of assets under custody. Treasury Services net revenue was $3.8 billion, an increase of $143 million, or 4%. The increase was driven by higher deposit balances as well as higher trade loan volumes, partially offset by the transfer of the Commercial Card business to Card in the first quarter of 2011. Excluding the impact of the Commercial Card business, TS net revenue increased 10%.

TSS generated firmwide net revenue of $10.2 billion, including $6.4 billion by Treasury Services; of that amount, $3.8 billion was recorded in Treasury Services, $2.3 billion in Commercial Banking and $265 million in other lines of business. The remaining $3.9 billion of firmwide net revenue was recorded in Worldwide Securities Services.

The provision for credit losses was an expense of $1 million, compared with a benefit of $47 million in the prior year.

Noninterest expense was $5.9 billion, an increase of $259 million, or 5%, from the prior year. The increase was mainly driven by continued expansion into new markets and expenses related to exiting unprofitable business, partially offset by the transfer of the Commercial Card business to Card. Excluding the impact of the Commercial Card business, TSS noninterest expense increased 10%.

Results for 2011 included an $8 million pretax benefit related to the traditional credit portfolio for GCB clients that are managed jointly by IB and TSS.

2010 compared with 2009

Net income was $1.1 billion, a decrease of $147 million, or 12%, from the prior year. These results reflected higher noninterest expense partially offset by the benefit from the provision for credit losses and higher net revenue.

Net revenue was $7.4 billion, an increase of $37 million, or 1%, from the prior year. Treasury Services net revenue was $3.7 billion, relatively flat compared with the prior year as lower spreads on liability products were offset by higher trade loan and card product volumes. Worldwide Securities Services net revenue was $3.7 billion, relatively flat compared with the prior year as higher market levels and net inflows of assets under custody were offset by lower spreads in securities lending, lower volatility on foreign exchange, and lower balances on liability products.

TSS generated firmwide net revenue of $10.3 billion, including $6.6 billion by Treasury Services; of that amount, $3.7 billion was recorded in Treasury Services, $2.6 billion in Commercial Banking and $247 million in other lines of business. The remaining $3.7 billion of firmwide net revenue was recorded in Worldwide Securities Services.

The provision for credit losses was a benefit of $47 million, compared with an expense of $55 million in the prior year. The decrease in the provision expense was primarily due to an improvement in credit quality.

Noninterest expense was $5.6 billion, up $326 million, or 6%, from the prior year. The increase was driven by continued investment in new product platforms, primarily related to international expansion and higher performance-based compensation.

Selected metrics

Year ended December 31, (in millions, except headcount data)	**2011**	2010	2009
Selected balance sheet data (period-end)			
Total assets	**$ 68,665**	$ 45,481	$ 38,054
Loans[a]	**42,992**	27,168	18,972
Equity	**7,000**	6,500	5,000
Selected balance sheet data (average)			
Total assets	**$ 56,151**	$ 42,494	$ 35,963
Loans[a]	**34,268**	23,271	18,397
Liability balances	**318,802**	248,451	248,095
Equity	**7,000**	6,500	5,000
Headcount	**27,825**	29,073	26,609

Year ended December 31, (in millions, except ratio data, and where otherwise noted)	**2011**	2010	2009
Credit data and quality statistics			
Net charge-offs	**$ —**	$ 1	$ 19
Nonaccrual loans	**4**	12	14
Allowance for credit losses:			
Allowance for loan losses	**65**	65	88
Allowance for lending-related commitments	**49**	51	84
Total allowance for credit losses	**114**	116	172
Net charge-off rate	**—%**	—%	0.10%
Allowance for loan losses to period-end loans	**0.15**	0.24	0.46
Allowance for loan losses to nonaccrual loans	**NM**	NM	NM
Nonaccrual loans to period-end loans	**0.01**	0.04	0.07
WSS business metrics			
Assets under custody ("AUC") by assets class (period-end) (in billions)			
Fixed income	**$ 10,926**	$ 10,364	$ 10,073
Equity	**4,878**	4,850	4,090
Other[b]	**1,066**	906	722
Total AUC	**$ 16,870**	$ 16,120	$ 14,885
Liability balances (average)	**100,660**	79,457	86,936
TS business metrics			
TS liability balances (average)	**218,142**	168,994	161,159
Trade finance loans (period-end)	**36,696**	21,156	10,227

(a) Loan balances include trade finance loans, wholesale overdrafts and commercial card. Effective January 1, 2011, the commercial card loan business (of approximately $1.2 billion) that was previously in TSS was transferred to Card. There is no material impact on the financial data; the prior years were not revised.

(b) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and nonsecurities contracts.

Selected metrics

Year ended December 31, (in millions, except where otherwise noted)	2011	2010	2009
International metrics			
Net revenue by geographic region[a]			
Asia/Pacific	**$ 1,235**	$ 978	$ 845
Latin America/Caribbean	**329**	257	221
Europe/Middle East/Africa	**2,658**	2,389	2,462
North America	**3,480**	3,757	3,816
Total net revenue	**$ 7,702**	$ 7,381	$ 7,344
Average liability balances[a]			
Asia/Pacific	**$ 43,524**	$ 32,862	$ 28,501
Latin America/Caribbean	**12,625**	11,558	8,231
Europe/Middle East/Africa	**123,920**	102,014	101,683
North America	**138,733**	102,017	109,680
Total average liability balances	**$ 318,802**	$ 248,451	$ 248,095
Trade finance loans (period-end)[a]			
Asia/Pacific	**$ 19,280**	$ 11,834	$ 4,519
Latin America/Caribbean	**6,254**	3,628	2,458
Europe/Middle East/Africa	**9,726**	4,874	2,171
North America	**1,436**	820	1,079
Total trade finance loans	**$ 36,696**	$ 21,156	$ 10,227
AUC (period-end)(in billions)[a]			
North America	**$ 9,735**	$ 9,836	$ 9,391
All other regions	**7,135**	6,284	5,494
Total AUC	**$ 16,870**	$ 16,120	$ 14,885
TSS firmwide disclosures[b]			
TS revenue – reported	**$ 3,841**	$ 3,698	$ 3,702
TS revenue reported in CB[c]	**2,270**	2,632	2,642
TS revenue reported in other lines of business	**265**	247	245
TS firmwide revenue[d]	**6,376**	6,577	6,589
WSS revenue	**3,861**	3,683	3,642
TSS firmwide revenue[d]	**$ 10,237**	$ 10,260	$ 10,231
TSS total foreign exchange ("FX") revenue[d]	**658**	636	661
TS firmwide liability balances (average)[e]	**393,022**	308,028	274,472
TSS firmwide liability balances (average)[e]	**493,531**	387,313	361,247
Number of:			
U.S.$ ACH transactions originated	**3,906**	3,892	3,896
Total U.S.$ clearing volume (in thousands)	**129,417**	122,123	113,476
International electronic funds transfer volume (in thousands)[f]	**250,537**	232,453	193,348
Wholesale check volume	**2,333**	2,060	2,184
Wholesale cards issued (in thousands)[g]	**25,187**	29,785	27,138

(a) Total net revenue, average liability balances, trade finance loans and AUC are based on the domicile of the client.

(b) TSS firmwide metrics include revenue recorded in CB, Consumer & Business Banking and AM lines of business and net TSS FX revenue (it excludes TSS FX revenue recorded in IB). In order to capture the firmwide impact of TS and TSS products and revenue, management reviews firmwide metrics in assessing financial performance of TSS. Firmwide metrics are necessary in order to understand the aggregate TSS business.

(c) Effective January 1, 2011, certain CB revenues were excluded in the TS firmwide metrics; they are instead directly captured within CB's lending revenue by product. The impact of this change was $438 million for the year ended December 31, 2011. In previous years, these revenues were included in CB's treasury services revenue by product.

(d) IB executes FX transactions on behalf of TSS customers under revenue sharing agreements. FX revenue generated by TSS customers is recorded in TSS and IB. TSS Total FX revenue reported above is the gross (pre-split) FX revenue generated by TSS customers. However, TSS firmwide revenue includes only the FX revenue booked in TSS, i.e., it does not include the portion of TSS FX revenue recorded in IB.

(e) Firmwide liability balances include liability balances recorded in CB.

(f) International electronic funds transfer includes non-U.S. dollar Automated Clearing House ("ACH") and clearing volume.

(g) Wholesale cards issued and outstanding include commercial, stored value, prepaid and government electronic benefit card products. Effective January 1, 2011, the commercial card portfolio was transferred from TSS to Card.

Description of a business metric within TSS:

Liability balances include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased, time deposits and securities loaned or sold under repurchase agreements) as part of customer cash management programs.

Description of selected products and services within TSS:

Investor Services includes primarily custody, fund accounting and administration, and securities lending products sold principally to asset managers, insurance companies and public and private investment funds.

Clearance, Collateral Management & Depositary Receipts primarily includes broker-dealer clearing and custody services, including tri-party repo transactions, collateral management products, and depositary bank services for American and global depositary receipt programs.

Transaction Services includes a broad range of products that enable clients to manage payments and receipts, as well as invest and manage funds. Products include U.S. dollar and multi-currency clearing, ACH, lockbox, disbursement and reconciliation services, check deposits, and currency related services.

Trade Finance enables the management of cross-border trade for bank and corporate clients. Products include loans directly tied to goods crossing borders, export/import loans, commercial letters of credit, standby letters of credit, and supply chain finance.

ASSET MANAGEMENT

Asset Management, with assets under supervision of $1.9 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity products, including money market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2011	2010	2009
Revenue			
Asset management, administration and commissions	**$ 6,748**	$ 6,374	$ 5,621
All other income	**1,147**	1,111	751
Noninterest revenue	**7,895**	7,485	6,372
Net interest income	**1,648**	1,499	1,593
Total net revenue	**9,543**	8,984	7,965
Provision for credit losses	**67**	86	188
Noninterest expense			
Compensation expense	**4,152**	3,763	3,375
Noncompensation expense	**2,752**	2,277	2,021
Amortization of intangibles	**98**	72	77
Total noninterest expense	**7,002**	6,112	5,473
Income before income tax expense	**2,474**	2,786	2,304
Income tax expense	**882**	1,076	874
Net income	**$ 1,592**	$ 1,710	$ 1,430
Revenue by client segment			
Private Banking	**$ 5,116**	$ 4,860	$ 4,320
Institutional	**2,273**	2,180	2,065
Retail	**2,154**	1,944	1,580
Total net revenue	**$ 9,543**	$ 8,984	$ 7,965
Financial ratios			
Return on common equity	**25%**	26%	20%
Overhead ratio	**73**	68	69
Pretax margin ratio	**26**	31	29

2011 compared with 2010

Net income was $1.6 billion, a decrease of $118 million, or 7%, from the prior year. These results reflected higher noninterest expense, largely offset by higher net revenue and a lower provision for credit losses.

Net revenue was $9.5 billion, an increase of $559 million, or 6%, from the prior year. Noninterest revenue was $7.9 billion, up by $410 million, or 5%, due to net inflows to products with higher margins and the effect of higher market levels, partially offset by lower performance fees and lower loan-related revenue. Net interest income was $1.6 billion, up by $149 million, or 10%, due to higher deposit and loan balances, partially offset by narrower deposit spreads.

Revenue from Private Banking was $5.1 billion, up 5% from the prior year due to higher deposit and loan balances and higher brokerage revenue, partially offset by narrower deposit spreads and lower loan-related revenue. Revenue from Institutional was $2.3 billion, up 4% due to net inflows to products with higher margins and the effect of higher market levels. Revenue from Retail was $2.2 billion, up 11% due to net inflows to products with higher margins and the effect of higher market levels.

The provision for credit losses was $67 million, compared with $86 million in the prior year.

Noninterest expense was $7.0 billion, an increase of $890 million, or 15%, from the prior year, due to higher headcount-related expense and non-client-related litigation, partially offset by lower performance-based compensation.

2010 compared with 2009

Net income was $1.7 billion, an increase of $280 million, or 20%, from the prior year, due to higher net revenue and a lower provision for credit losses, largely offset by higher noninterest expense.

Net revenue was a record $9.0 billion, an increase of $1.0 billion, or 13%, from the prior year. Noninterest revenue was $7.5 billion, an increase of $1.1 billion, or 17%, due to the effect of higher market levels, net inflows to products with higher margins, higher loan originations, and higher performance fees. Net interest income was $1.5 billion, down by $94 million, or 6%, from the prior year, due to narrower deposit spreads, largely offset by higher deposit and loan balances.

Revenue from Private Banking was $4.9 billion, up 13% from the prior year due to higher loan originations, higher deposit and loan balances, the effect of higher market levels and net inflows to products with higher margins, partially offset by narrower deposit spreads. Revenue from Institutional was $2.2 billion, up 6% due to the effect of higher market levels, partially offset by liquidity outflows. Revenue from Retail was $1.9 billion, up 23% due to the effect of higher market levels and net inflows to products with higher margins, partially offset by lower valuations of seed capital investments.

The provision for credit losses was $86 million, compared with $188 million in the prior year, reflecting an improving credit environment.

Noninterest expense was $6.1 billion, an increase of $639 million, or 12%, from the prior year, resulting from increased headcount and higher performance-based compensation.

Selected metrics

Business metrics

As of or for the year ended December 31, (in millions, except headcount, ranking data and where otherwise noted)	2011	2010	2009
Number of:			
Client advisors[a]	**2,444**	2,281	1,936
Retirement planning services participants (in thousands)	**1,798**	1,580	1,628
JPMorgan Securities brokers	**439**	415	376
% of customer assets in 4 & 5 Star Funds[b]	**43%**	49%	42%
% of AUM in 1st and 2nd quartiles:[c]			
1 year	**48**	67	57
3 years	**72**	72	62
5 years	**78**	80	74
Selected balance sheet data (period-end)			
Total assets	**$ 86,242**	$68,997	$64,502
Loans	**57,573**	44,084	37,755
Equity	**6,500**	6,500	7,000
Selected balance sheet data (average)			
Total assets	**$ 76,141**	$65,056	$60,249
Loans	**50,315**	38,948	34,963
Deposits	**106,421**	86,096	77,005
Equity	**6,500**	6,500	7,000
Headcount	**18,036**	16,918	15,136
Credit data and quality statistics			
Net charge-offs	**$ 92**	$ 76	$ 117
Nonaccrual loans	**317**	375	580
Allowance for credit losses:			
Allowance for loan losses	**209**	267	269
Allowance for lending-related commitments	**10**	4	9
Total allowance for credit losses	**219**	271	278
Net charge-off rate	**0.18%**	0.20%	0.33%
Allowance for loan losses to period-end loans	**0.36**	0.61	0.71
Allowance for loan losses to nonaccrual loans	**66**	71	46
Nonaccrual loans to period-end loans	**0.55**	0.85	1.54

(a) Effective January 1, 2011, the methodology used to determine client advisors was revised. Prior periods have been revised.
(b) Derived from Morningstar for the U.S., the U.K., Luxembourg, France, Hong Kong and Taiwan; and Nomura for Japan.
(c) Quartile ranking sourced from: Lipper for the U.S. and Taiwan; Morningstar for the U.K., Luxembourg, France and Hong Kong; and Nomura for Japan.

AM's client segments comprise the following:

Private Banking offers investment advice and wealth management services to high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty-wealth advisory services.

Institutional brings comprehensive global investment services – including asset management, pension analytics, asset-liability management and active risk-budgeting strategies – to corporate and public institutions, endowments, foundations, not-for-profit organizations and governments worldwide.

Retail provides worldwide investment management services and retirement planning and administration, through third-party and direct distribution of a full range of investment vehicles.

J.P. Morgan Asset Management has two high-level measures of its overall fund performance.

- Percentage of assets under management in funds rated 4- and 5-stars (three years). Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best and represents the top 10% of industry wide ranked funds. A 4-star rating represents the next 22% of industry wide ranked funds. The worst rating is a 1-star rating.
- Percentage of assets under management in first- or second- quartile funds (one, three and five years). Mutual fund rating services rank funds according to a peer-based performance system, which measures returns according to specific time and fund classification (small-, mid-, multi- and large-cap).

Assets under supervision

2011 compared with 2010

Assets under supervision were $1.9 trillion at December 31, 2011, an increase of $81 billion, or 4%, from the prior year. Assets under management were $1.3 trillion, an increase of $38 billion, or 3%. Both increases were due to net inflows to long-term and liquidity products, partially offset by the impact of lower market levels. Custody, brokerage, administration and deposit balances were $585 billion, up by $43 billion, or 8%, due to deposit and custody inflows.

2010 compared with 2009

Assets under supervision were $1.8 trillion at December 31, 2010, an increase of $139 billion, or 8%, from the prior year. Assets under management were $1.3 trillion, an increase of $49 billion, or 4%, due to the effect of higher market levels and net inflows in long-term products, largely offset by net outflows in liquidity products. Custody, brokerage, administration and deposit balances were $542 billion, up by $90 billion, or 20%, due to custody and brokerage inflows and the effect of higher market levels.

Assets under supervision[a]

As of or the year ended December 31, (in billions)	2011	2010	2009
Assets by asset class			
Liquidity	**$ 515**	$ 497	$ 591
Fixed income	**336**	289	226
Equity and multi-asset	**372**	404	339
Alternatives	**113**	108	93
Total assets under management	**1,336**	1,298	1,249
Custody/brokerage/ administration/deposits	**585**	542	452
Total assets under supervision	**$ 1,921**	$ 1,840	$ 1,701
Assets by client segment			
Private Banking	**$ 291**	$ 284	$ 270
Institutional[b]	**722**	703	731
Retail[b]	**323**	311	248
Total assets under management	**$ 1,336**	$ 1,298	$ 1,249
Private Banking	**$ 781**	$ 731	$ 636
Institutional[b]	**723**	703	731
Retail[b]	**417**	406	334
Total assets under supervision	**$ 1,921**	$ 1,840	$ 1,701
Mutual fund assets by asset class			
Liquidity	**$ 458**	$ 446	$ 539
Fixed income	**107**	92	67
Equity and multi-asset	**147**	169	143
Alternatives	**8**	7	9
Total mutual fund assets	**$ 720**	$ 714	$ 758

(a) Excludes assets under management of American Century Companies, Inc., in which the Firm sold its ownership interest on August 31, 2011. The Firm previously had an ownership interest of 41% and 42% in American Century Companies, Inc., whose AUM is not included in the table above, at December 31, 2010 and 2009, respectively.

(b) In 2011, the client hierarchy used to determine asset classification was revised, and the prior-year periods have been revised.

Year ended December 31, (in billions)	2011	2010	2009
Assets under management rollforward			
Beginning balance	**$ 1,298**	$ 1,249	$ 1,133
Net asset flows:			
Liquidity	**18**	(89)	(23)
Fixed income	**40**	50	34
Equity, multi-asset and alternatives	**13**	19	17
Market/performance/other impacts	**(33)**	69	88
Ending balance, December 31	**$ 1,336**	$ 1,298	$ 1,249
Assets under supervision rollforward			
Beginning balance	**$ 1,840**	$ 1,701	$ 1,496
Net asset flows	**123**	28	50
Market/performance/other impacts	**(42)**	111	155
Ending balance, December 31	**$ 1,921**	$ 1,840	$ 1,701

International metrics

Year ended December 31, (in billions, except where otherwise noted)	2011	2010	2009
Total net revenue (in millions)[a]			
Europe/Middle East/Africa	**$ 1,704**	$ 1,642	$ 1,380
Asia/Pacific	**971**	925	752
Latin America/Caribbean	**808**	541	426
North America	**6,060**	5,876	5,407
Total net revenue	**$ 9,543**	$ 8,984	$ 7,965
Assets under management			
Europe/Middle East/Africa	**$ 278**	$ 282	$ 293
Asia/Pacific	**105**	111	99
Latin America/Caribbean	**34**	35	19
North America	**919**	870	838
Total assets under management	**$ 1,336**	$ 1,298	$ 1,249
Assets under supervision			
Europe/Middle East/Africa	**$ 329**	$ 331	$ 338
Asia/Pacific	**139**	147	125
Latin America/Caribbean	**89**	84	55
North America	**1,364**	1,278	1,183
Total assets under supervision	**$ 1,921**	$ 1,840	$ 1,701

(a) Regional revenue is based on the domicile of the client.

The Corporate/Private Equity sector comprises Private Equity, Treasury, the Chief Investment Office ("CIO"), corporate staff units and expense that is centrally managed. Treasury and CIO manage capital, liquidity and structural risks of the Firm. The corporate staff units include Central Technology and Operations, Internal Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Legal & Compliance, Corporate Real Estate and General Services, Risk Management, Corporate Responsibility and Strategy & Development. Other centrally managed expense includes the Firm's occupancy and pension-related expense, net of allocations to the business.

Selected income statement data

Year ended December 31, (in millions, except headcount)	2011	2010	2009
Revenue			
Principal transactions	**$ 1,434**	$ 2,208	$ 1,574
Securities gains	**1,600**	2,898	1,139
All other income	**604**	253	58
Noninterest revenue	**3,638**	5,359	2,771
Net interest income	**505**	2,063	3,863
Total net revenue[a]	**4,143**	7,422	6,634
Provision for credit losses	**(36)**	14	80
Noninterest expense			
Compensation expense	**2,425**	2,357	2,811
Noncompensation expense[b]	**6,884**	8,788	3,597
Merger costs	**–**	–	481
Subtotal	**9,309**	11,145	6,889
Net expense allocated to other businesses	**(5,160)**	(4,790)	(4,994)
Total noninterest expense	**4,149**	6,355	1,895
Income before income tax expense/(benefit) and extraordinary gain	**30**	1,053	4,659
Income tax expense/(benefit) [c]	**(772)**	(205)	1,705
Income before extraordinary gain	**802**	1,258	2,954
Extraordinary gain[d]	**–**	–	76
Net income	**$ 802**	$ 1,258	$ 3,030
Total net revenue			
Private equity	**$ 836**	$ 1,239	$ 18
Corporate	**3,307**	6,183	6,616
Total net revenue	**$ 4,143**	$ 7,422	$ 6,634
Net income			
Private equity	**$ 391**	$ 588	$ (78)
Corporate[e]	**411**	670	3,108
Total net income	**$ 802**	$ 1,258	$ 3,030
Total assets (period-end)	**$693,153**	$ 526,588	$ 595,877
Headcount	**22,117**	20,030	20,119

(a) Total net revenue included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $298 million, $226 million and $151 million for the years ended December 31, 2011, 2010 and 2009, respectively.

(b) Included litigation expense of $3.2 billion and $5.7 billion for the years ended December 31, 2011 and 2010, respectively, compared with net benefits of $0.3 billion for the year ended December 31, 2009.

(c) Includes tax benefits recognized upon the resolution of tax audits.

(d) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual from the FDIC for $1.9 billion. The acquisition resulted in negative goodwill, and accordingly, the Firm recorded an extraordinary gain. A preliminary gain of $1.9 billion was recognized at December 31, 2008. As a result of the final refinement of the purchase price allocation in 2009, the Firm recognized a $76 million increase in the extraordinary gain. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion.

(e) 2009 included merger costs and the extraordinary gain related to the Washington Mutual transaction, as well as items related to the Bear Stearns merger, including merger costs, asset management liquidation costs and JPMorgan Securities broker retention expense.

2011 compared with 2010

Net income was $802 million, compared with $1.3 billion in the prior year.

Private Equity net income was $391 million, compared with $588 million in the prior year. Net revenue was $836 million, a decrease of $403 million, primarily related to net write-downs on privately-held investments and the absence of prior-year gains from sales. Noninterest expense was $238 million, a decrease of $85 million from the prior year.

Corporate reported net income of $411 million, compared with net income of $670 million in the prior year. Net revenue was $3.3 billion, including $1.6 billion of securities gains. Net interest income in 2011 was lower compared with 2010, primarily driven by repositioning of the investment securities portfolio and lower funding benefits from financing the portfolio.

Noninterest expense was $4.1 billion which included $3.2 billion of litigation expense, predominantly for mortgage-related matters. Noninterest expense in the prior year was $6.4 billion, which included $5.7 billion of litigation expense.

2010 compared with 2009

Net income was $1.3 billion compared with $3.0 billion in the prior year. The decrease was driven by higher litigation expense, partially offset by higher net revenue.

Net income for Private Equity was $588 million, compared with a net loss of $78 million in the prior year, reflecting the impact of improved market conditions on certain investments in the portfolio. Net revenue was $1.2 billion compared with $18 million in the prior year, reflecting private equity gains of $1.3 billion compared with losses of $54 million in 2009. Noninterest expense was $323 million, an increase of $182 million, driven by higher compensation expense.

Net income for Corporate was $670 million, compared with $3.1 billion in the prior year. Results for 2010 reflect after-tax litigation expense of $3.5 billion, lower net interest

income and trading gains, partially offset by a higher level of securities gains, primarily driven by repositioning of the investment securities portfolio in response to changes in the interest rate environment and to rebalance exposure. The prior year included merger-related net loss of $635 million and a $419 million FDIC assessment.

Treasury and CIO

Selected income statement and balance sheet data

Year ended December 31, (in millions)	2011	2010	2009
Securities gains[a]	**$ 1,385**	$ 2,897	$ 1,147
Investment securities portfolio (average)	**330,885**	323,673	324,037
Investment securities portfolio (ending)	**355,605**	310,801	340,163
Mortgage loans (average)	**13,006**	9,004	7,427
Mortgage loans (ending)	**13,375**	10,739	8,023

(a) Reflects repositioning of the Corporate investment securities portfolio.

For further information on the investment securities portfolio, see Note 3 and Note 12 on pages 184–198 and 225–230, respectively, of this Annual Report. For further information on CIO VaR and the Firm's nontrading interest rate-sensitive revenue at risk, see the Market Risk Management section on pages 158–163 of this Annual Report.

Private Equity Portfolio

Selected income statement and balance sheet data

Year ended December 31, (in millions)	2011	2010	2009
Private equity gains/(losses)			
Realized gains	**$ 1,842**	$ 1,409	$ 109
Unrealized gains/(losses)[a]	**(1,305)**	(302)	(81)
Total direct investments	**537**	1,107	28
Third-party fund investments	**417**	241	(82)
Total private equity gains/ (losses)[b]	**$ 954**	$ 1,348	$ (54)

Private equity portfolio information[c]

Direct investments

December 31, (in millions)	2011	2010	2009
Publicly held securities			
Carrying value	**$ 805**	$ 875	$ 762
Cost	**573**	732	743
Quoted public value	**896**	935	791
Privately held direct securities			
Carrying value	**4,597**	5,882	5,104
Cost	**6,793**	6,887	5,959
Third-party fund investments[d]			
Carrying value	**2,283**	1,980	1,459
Cost	**2,452**	2,404	2,079
Total private equity portfolio			
Carrying value	**$ 7,685**	$ 8,737	$ 7,325
Cost	**$ 9,818**	$ 10,023	$ 8,781

(a) Unrealized gains/(losses) contain reversals of unrealized gains and losses that were recognized in prior periods and have now been realized.
(b) Included in principal transactions revenue in the Consolidated Statements of Income.
(c) For more information on the Firm's policies regarding the valuation of the private equity portfolio, see Note 3 on pages 184–198 of this Annual Report.
(d) Unfunded commitments to third-party private equity funds were $789 million, $1.0 billion and $1.5 billion at December 31, 2011, 2010 and 2009, respectively.

2011 compared with 2010

The carrying value of the private equity portfolio at December 31, 2011, was $7.7 billion, down from $8.7 billion at December 31, 2010. The decrease in the portfolio is predominantly driven by sales of investments, partially offset by new investments. The portfolio represented 5.7% of the Firm's stockholders' equity less goodwill at December 31, 2011, down from 6.9% at December 31, 2010.

2010 compared with 2009

The carrying value of the private equity portfolio at December 31, 2010, was $8.7 billion, up from $7.3 billion at December 31, 2009. The portfolio increase was primarily due to incremental follow-on investments. The portfolio represented 6.9% of the Firm's stockholders' equity less goodwill at December 31, 2010, up from 6.3% at December 31, 2009.

During the years ended December 31, 2011 and 2010, the Firm recorded approximately $24.5 billion and $22.0 billion, respectively, of managed revenue derived from clients, customers and counterparties domiciled outside of North America. Of those amounts, approximately 66% and 64%, respectively, were derived from Europe/Middle East/Africa ("EMEA"); approximately 25% and 28%, respectively, from Asia/Pacific; and approximately 9% and 8%, respectively, from Latin America/Caribbean. For additional information regarding international operations, see Note 32 on pages 299-300 of this Annual Report.

International Wholesale Activities

The Firm is committed to further expanding its wholesale business activities outside of the United States, and it continues to add additional client-serving bankers, as well as product and sales support personnel, to address the needs of the Firm's clients located in these regions. With a comprehensive and coordinated international business strategy and growth plan, efforts and investments for growth outside of the United States will continue to be accelerated and prioritized.

Set forth below are certain key metrics related to the Firm's wholesale international operations, including, for each of EMEA, Asia/Pacific and Latin America/Caribbean, the number of countries in each such region in which they operate, front-office headcount, number of clients, revenue and selected balance-sheet data.

As of or for the year ended December 31,	EMEA		Asia/Pacific		Latin America/ Caribbean	
(in millions, except headcount and where otherwise noted)	**2011**	2010	**2011**	2010	**2011**	2010
Revenue[a]	**$ 16,141**	$ 14,149	**$ 5,971**	$ 6,082	**$ 2,232**	$ 1,697
Countries of operation	**33**	33	**16**	16	**9**	8
New offices	**3**	6	**2**	7	**4**	2
Total headcount[b]	**16,178**	16,122	**20,172**	19,153	**1,378**	1,201
Front-office headcount	**5,993**	5,872	**4,253**	4,168	**569**	486
Significant clients[c]	**920**	881	**480**	448	**154**	139
Deposits (average)[d]	**$168,882**	$142,859	**$ 57,684**	$ 53,268	**$ 5,318**	$ 6,263
Loans (period-end)[e]	**36,637**	27,934	**31,119**	20,552	**25,141**	16,480
Assets under management (in billions)	**278**	282	**105**	111	**34**	35
Assets under supervision (in billions)	**329**	331	**139**	147	**89**	84
Assets under custody (in billions)	**5,430**	4,810	**1,426**	1,321	**279**	153

Note: Wholesale international operations is comprised of IB, AM, TSS, CB and CIO/Treasury, and prior period amounts have been revised to conform with current allocation methodologies.

(a) Revenue is based predominantly on the domicile of the client, the location from which the client relationship is managed or the location of the trading desk.
(b) Total headcount includes all employees, including those in service centers, located in the region.
(c) Significant clients are defined as companies with over $1 million in revenue over a trailing 12-month period in the region (excludes private banking clients).
(d) Deposits are based on the location from which the client relationship is managed.
(e) Loans outstanding are based predominantly on the domicile of the borrower and exclude loans held-for-sale and loans carried at fair value.

BALANCE SHEET ANALYSIS

Selected Consolidated Balance Sheets data

December 31, (in millions)	2011	2010
Assets		
Cash and due from banks	**$ 59,602**	$ 27,567
Deposits with banks	**85,279**	21,673
Federal funds sold and securities purchased under resale agreements	**235,314**	222,554
Securities borrowed	**142,462**	123,587
Trading assets:		
Debt and equity instruments	**351,486**	409,411
Derivative receivables	**92,477**	80,481
Securities	**364,793**	316,336
Loans	**723,720**	692,927
Allowance for loan losses	**(27,609)**	(32,266)
Loans, net of allowance for loan losses	**696,111**	660,661
Accrued interest and accounts receivable	**61,478**	70,147
Premises and equipment	**14,041**	13,355
Goodwill	**48,188**	48,854
Mortgage servicing rights	**7,223**	13,649
Other intangible assets	**3,207**	4,039
Other assets	**104,131**	105,291
Total assets	**$2,265,792**	$2,117,605
Liabilities		
Deposits	**$1,127,806**	$ 930,369
Federal funds purchased and securities loaned or sold under repurchase agreements	**213,532**	276,644
Commercial paper	**51,631**	35,363
Other borrowed funds[(a)]	**21,908**	34,325
Trading liabilities:		
Debt and equity instruments	**66,718**	76,947
Derivative payables	**74,977**	69,219
Accounts payable and other liabilities	**202,895**	170,330
Beneficial interests issued by consolidated VIEs	**65,977**	77,649
Long-term debt[(a)]	**256,775**	270,653
Total liabilities	**2,082,219**	1,941,499
Stockholders' equity	**183,573**	176,106
Total liabilities and stockholders' equity	**$2,265,792**	$2,117,605

(a) Effective January 1, 2011, $23.0 billion of long-term advances from FHLBs were reclassified from other borrowed funds to long-term debt. The prior-year period has been revised to conform with the current presentation. For additional information, see Notes 3 and 21 on pages 184–198 and 273–275, respectively, of this Annual Report.

Consolidated Balance Sheets overview

JPMorgan Chase's assets and liabilities increased from December 31, 2010, largely due to a significant level of deposit inflows from wholesale clients and, to a lesser extent, consumer clients. The higher level of inflows since the beginning of the year, which accelerated after the first quarter, contributed to increases in both cash and due from banks, and deposits with banks, particularly balances due from Federal Reserve Banks and other banks. In addition, the increase in total assets was driven by a higher level of securities and loans. These increases were offset partially by lower trading assets, specifically debt and equity instruments. The increase in total liabilities was driven by the significant increase in deposits and, to a lesser extent, higher accounts payable, partially offset by a lower level of securities sold under repurchase agreements. The increase in stockholders' equity primarily reflected 2011 net income, net of repurchases of common equity.

The following paragraphs provide a description of each of the specific line captions on the Consolidated Balance Sheets. For the line captions that had significant changes from December 31, 2010, a discussion of the changes is also included.

Cash and due from banks and deposits with banks

The Firm uses these instruments as part of its liquidity management activities. Cash and due from banks and deposits with banks increased significantly, reflecting the placement of funds with various central banks, including Federal Reserve Banks; the increase in these funds predominantly resulted from the overall growth in wholesale client deposits. For additional information, see the deposits discussion below.

Federal funds sold and securities purchased under resale agreements; and securities borrowed

The Firm uses these instruments to support its client-driven market-making and risk management activities and to manage its cash positions. In particular, securities purchased under resale agreements and securities borrowed are used to provide funding or liquidity to clients through short-term purchases and borrowings of their securities by the Firm. Securities purchased under resale agreements and securities borrowed increased, predominantly in Corporate due to higher excess cash positions at year end.

Trading assets and liabilities – debt and equity instruments

Debt and equity trading instruments are used primarily for client-driven market-making activities. These instruments consist predominantly of fixed-income securities, including government and corporate debt; equity securities, including convertible securities; loans, including prime mortgages and other loans warehoused by RFS and IB for sale or securitization purposes and accounted for at fair value; and

physical commodities inventories generally carried at the lower of cost or fair value. Trading assets - debt and equity instruments decreased, driven by client market-making activity in IB; this resulted in lower levels of equity securities, U.S. government and agency mortgage-backed securities, and non-U.S. government securities. For additional information, refer to Note 3 on pages 184-198 of this Annual Report.

Trading assets and liabilities - derivative receivables and payables
The Firm uses derivative instruments predominantly for market-making activities. Derivatives enable customers and the Firm to manage their exposure to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its market and credit exposure. Derivative receivables and payables increased, predominantly due to increases in interest rate derivative balances driven by declining interest rates, and higher commodity derivative balances driven by price movements in base metals and energy. For additional information, refer to Derivative contracts on pages 141-144, and Note 3 and Note 6 on pages 184-198 and 202-210, respectively, of this Annual Report.

Securities
Substantially all of the securities portfolio is classified as available-for-sale ("AFS") and used primarily to manage the Firm's exposure to interest rate movements and to invest cash resulting from excess liquidity. Securities increased, largely due to repositioning of the portfolio in Corporate in response to changes in the market environment. This repositioning increased the levels of non-U.S. government debt and residential mortgage-backed securities, as well as collateralized loan obligations and commercial mortgage-backed securities, and reduced the levels of U.S. government agency securities. For additional information related to securities, refer to the discussion in the Corporate/Private Equity segment on pages 107-108, and Note 3 and Note 12 on pages 184-198 and 225-230, respectively, of this Annual Report.

Loans and allowance for loan losses
The Firm provides loans to a variety of customers, from large corporate and institutional clients to individual consumers and small businesses. Loans increased, reflecting continued growth in client activity across all of the Firm's wholesale businesses and regions. This increase was offset by a decline in consumer, excluding credit card loan balances, due to paydowns, portfolio run-off and charge-offs, and in credit card loans, due to higher repayment rates, run-off of the Washington Mutual portfolio and the Firm's sale of the Kohl's portfolio.

The allowance for loan losses decreased predominantly due to lower estimated losses in the credit card loan portfolio, reflecting improved delinquency trends and lower levels of credit card outstandings, and the impact of loan sales in the wholesale portfolio. For a more detailed discussion of the loan portfolio and the allowance for loan losses, refer to Credit Risk Management on pages 132-157, and Notes 3, 4, 14 and 15 on pages 184-198, 198-200, 231-252 and 252-255, respectively, of this Annual Report.

Accrued interest and accounts receivable
This caption consists of accrued interest receivables from interest-earning assets; receivables from customers; receivables from brokers, dealers and clearing organizations; and receivables from failed securities sales. Accrued interest and accounts receivable decreased, primarily in IB, driven by a large reduction in customer margin receivables due to changes in client activity.

Premises and Equipment
The Firm's premises and equipment consist of land, buildings, leasehold improvements, furniture and fixtures, hardware and software, and other equipment. The increase in premises and equipment was predominantly due to renovation of JPMorgan Chase's headquarters in New York City; the purchase of a building in London; retail branch expansion in the U.S.; and investments in technology hardware and software, as well as other equipment. The increase was partially offset by depreciation and amortization.

Goodwill
Goodwill arises from business combinations and represents the excess of the purchase price of an acquired entity or business over the fair values assigned to the assets acquired and liabilities assumed. The decrease in goodwill was predominantly due to AM's sale of its investment in an asset manager. For additional information on goodwill, see Note 17 on pages 267-271 of this Annual Report.

Mortgage servicing rights
MSRs represent the fair value of net cash flows expected to be received for performing specified mortgage-servicing activities for others. MSRs decreased, predominantly as a result of a decline in market interest rates, amortization and other changes in valuation inputs and assumptions, including increased cost to service assumptions, partially offset by new MSR originations. For additional information on MSRs, see Note 17 on pages 267-271 of this Annual Report.

Other intangible assets
Other intangible assets consist of purchased credit card relationships, other credit card-related intangibles, core deposit intangibles and other intangibles. The decrease in other intangible assets was due to amortization. For additional information on other intangible assets, see Note 17 on pages 267-271 of this Annual Report.

Other assets
Other assets consist of private equity and other instruments, cash collateral pledged, corporate- and bank-owned life insurance policies, assets acquired in loan satisfactions (including real estate owned), and all other assets. Other assets remained relatively flat in 2011.

Deposits

Deposits represent a liability to customers, both retail and wholesale, related to non-brokerage funds held on their behalf. Deposits provide a stable and consistent source of funding for the Firm. Deposits increased significantly, predominantly due to an overall growth in wholesale client balances and, to a lesser extent, growth in consumer deposit balances. The increase in wholesale client balances, particularly in TSS and CB, was primarily driven by lower returns on other available alternative investments and low interest rates during 2011, and in AM, driven by growth in the number of clients and level of deposits. For more information on deposits, refer to the RFS and AM segment discussions on pages 85–93 and 104–106, respectively; the Liquidity Risk Management discussion on pages 127–132; and Notes 3 and 19 on pages 184–198 and 272, respectively, of this Annual Report. For more information on wholesale liability balances, which includes deposits, refer to the CB and TSS segment discussions on pages 98–100 and 101–103, respectively, of this Annual Report.

Federal funds purchased and securities loaned or sold under repurchase agreements

The Firm uses these instruments as part of its liquidity management activities and to support its client-driven market-making activities. In particular, federal funds purchased and securities loaned or sold under repurchase agreements are used by the Firm as short-term funding sources and to provide securities to clients for their short-term liquidity purposes. Securities sold under repurchase agreements decreased, predominantly in IB, reflecting the lower funding requirements of the Firm based on lower trading inventory levels, and change in the mix of funding sources. For additional information on the Firm's Liquidity Risk Management, see pages 127–132 of this Annual Report.

Commercial paper and other borrowed funds

The Firm uses commercial paper and other borrowed funds in its liquidity management activities to meet short-term funding needs, and in connection with a TSS liquidity management product, whereby excess client funds are transferred into commercial paper overnight sweep accounts. Commercial paper increased due to growth in the volume of liability balances in sweep accounts related to TSS's cash management product. Other borrowed funds, which includes short-term advances from FHLBs decreased, predominantly driven by maturities of short-term secured borrowings, unsecured bank notes and short-term FHLB advances. For additional information on the Firm's Liquidity Risk Management and other borrowed funds, see pages 127–132 of this Annual Report.

Accounts payable and other liabilities

Accounts payable and other liabilities consist of payables to customers; payables to brokers, dealers and clearing organizations; payables from failed securities purchases; accrued expense, including interest-bearing liabilities; and all other liabilities, including litigation reserves and obligations to return securities received as collateral. Accounts payable and other liabilities increased predominantly due to higher IB customer balances. For additional information on the Firm's accounts payable and other liabilities, see Note 20 on page 272 of this Annual Report.

Beneficial interests issued by consolidated VIEs

Beneficial interests issued by consolidated VIEs represent interest-bearing beneficial-interest liabilities, which decreased, predominantly due to maturities of Firm-sponsored credit card securitization transactions. For additional information on Firm-sponsored VIEs and loan securitization trusts, see Off-Balance Sheet Arrangements, and Note 16 on pages 256–267 of this Annual Report.

Long-term debt

The Firm uses long-term debt (including trust-preferred capital debt securities and long-term FHLB advances) to provide cost-effective and diversified sources of funds and as critical components of the Firm's liquidity and capital management activities. Long-term debt decreased, predominantly due to net redemptions and maturities of long-term borrowings. For additional information on the Firm's long-term debt activities, see the Liquidity Risk Management discussion on pages 127–132 of this Annual Report.

Stockholders' equity

Total stockholders' equity increased, predominantly due to net income, as well as net issuances and commitments to issue under the Firm's employee stock-based compensation plans. The increase was partially offset by repurchases of common equity; and the declaration of cash dividends on common and preferred stock.

JPMorgan Chase is involved with several types of off-balance sheet arrangements, including through unconsolidated special-purpose entities ("SPEs"), which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

The most common type of VIE is a special purpose entity ("SPE"). SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important part of the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits, investor intermediation activities, and loan securitizations. As a result of changes in the accounting guidance, certain VIEs were consolidated on the Firm's Consolidated Balance Sheets effective January 1, 2010. For further information on the types of SPEs and the impact of the change in the accounting guidance, see Note 16 on pages 256–267 for further information on these types of SPEs.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, JPMorgan Chase Bank, N.A., could be required to provide funding if its short-term credit rating were downgraded below specific levels, primarily "P-1," "A-1" and "F1" for Moody's, Standard & Poor's and Fitch, respectively. These liquidity commitments support the issuance of asset-backed commercial paper by both Firm-administered consolidated and third party sponsored nonconsolidated SPEs. In the event of a short-term credit rating downgrade, JPMorgan Chase Bank, N.A., absent other solutions, would be required to provide funding to the SPE, if the commercial paper could not be reissued as it matured. The aggregate amounts of commercial paper outstanding, issued by both Firm-administered and third-party-sponsored SPEs, that are held by third parties as of December 31, 2011 and 2010, was $19.7 billion and $23.1 billion, respectively. In addition, the aggregate amounts of commercial paper outstanding could increase in future periods should clients of the Firm-administered consolidated or third party sponsored nonconsolidated SPEs draw down on certain unfunded lending-related commitments. JPMorgan Chase Bank, N.A. had unfunded lending-related commitments to clients to fund an incremental $11.0 billion and $10.5 billion at December 31, 2011 and 2010, respectively. The Firm could facilitate the refinancing of some of the clients' assets in order to reduce the funding obligation. For further information, see the discussion of Firm-administered multi-seller conduits in Note 16 on page 260 of this Annual Report.

The Firm also acts as liquidity provider for certain municipal bond vehicles. The liquidity provider's obligation to perform is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. See Note 16 on pages 260–261 of this Annual Report for additional information.

Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. For further discussion of lending-related commitments and guarantees and the Firm's accounting for them, see Lending-related commitments on page 144, and Note 29 (including a table that presents, as of December 31, 2011, the amounts, by contractual maturity, of off-balance sheet lending-related financial instruments, guarantees and other commitments) on pages 283–289, of this Annual Report. For a discussion of loan repurchase liabilities, see Mortgage repurchase liability on pages 115–118 and Note 29 on pages 283–289, respectively, of this Annual Report.

Contractual cash obligations

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are off-balance sheet under U.S. GAAP. The accompanying table summarizes, by remaining maturity, JPMorgan Chase's significant contractual cash obligations at December 31, 2011. The contractual cash obligations included in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. The carrying amount of on-balance sheet obligations on the Consolidated Balance Sheets may differ from the minimum contractual amount of the obligations reported below. For a discussion of mortgage loan repurchase liabilities, see Mortgage repurchase liability on pages 115–118 of this Annual Report. For further discussion of other obligations, see the Notes to Consolidated Financial Statements in this Annual Report.

Contractual cash obligations

	2011					2010
By remaining maturity at December 31, (in millions)	2012	2013-2014	2015-2016	After 2016	**Total**	**Total**
On-balance sheet obligations						
Deposits[a]	**$ 1,108,154**	**$ 9,681**	**$ 5,570**	**$ 2,065**	**$ 1,125,470**	$ 927,682
Federal funds purchased and securities loaned or sold under repurchase agreements	**200,049**	**11,271**	**875**	**1,337**	**213,532**	276,644
Commercial paper	**51,631**	**–**	**–**	**–**	**51,631**	35,363
Other borrowed funds[a]	**12,450**	**–**	**–**	**–**	**12,450**	24,611
Beneficial interests issued by consolidated VIEs	**39,729**	**14,317**	**3,464**	**8,467**	**65,977**	77,649
Long-term debt[a]	**50,077**	**59,749**	**43,464**	**83,615**	**236,905**	249,434
Other[b]	**1,355**	**1,136**	**924**	**2,617**	**6,032**	7,329
Total on-balance sheet obligations	**1,463,445**	**96,154**	**54,297**	**98,101**	**1,711,997**	1,598,712
Off-balance sheet obligations						
Unsettled reverse repurchase and securities borrowing agreements[c]	**39,939**	**–**	**–**	**–**	**39,939**	39,927
Contractual interest payments[d]	**9,551**	**13,006**	**9,669**	**44,192**	**76,418**	78,454
Operating leases[e]	**1,753**	**3,335**	**2,738**	**7,188**	**15,014**	16,000
Equity investment commitments[f]	**933**	**4**	**7**	**1,346**	**2,290**	2,468
Contractual purchases and capital expenditures	**1,244**	**713**	**288**	**415**	**2,660**	2,822
Obligations under affinity and co-brand programs	**1,197**	**1,996**	**1,875**	**325**	**5,393**	5,801
Other	**115**	**108**	**48**	**13**	**284**	567
Total off-balance sheet obligations	**54,732**	**19,162**	**14,625**	**53,479**	**141,998**	146,039
Total contractual cash obligations	**$ 1,518,177**	**$ 115,316**	**$ 68,922**	**$ 151,580**	**$ 1,853,995**	$ 1,744,751

(a) Excludes structured notes where the Firm is not obligated to return a stated amount of principal at the maturity of the notes, but is obligated to return an amount based on the performance of the structured notes.
(b) Primarily includes deferred annuity contracts, pension and postretirement obligations and insurance liabilities.
(c) For further information, refer to unsettled reverse repurchase and securities borrowing agreements in Note 29 on page 286 of this Annual Report.
(d) Includes accrued interest and future contractual interest obligations. Excludes interest related to structured notes where the Firm's payment obligation is based on the performance of certain benchmarks.
(e) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of $1.5 billion and $1.8 billion at December 31, 2011 and 2010, respectively.
(f) At December 31, 2011 and 2010, included unfunded commitments of $789 million and $1.0 billion, respectively, to third-party private equity funds that are generally valued as discussed in Note 3 on pages 184–198 of this Annual Report; and $1.5 billion and $1.4 billion of unfunded commitments, respectively, to other equity investments.

Mortgage repurchase liability

In connection with the Firm's mortgage loan sale and securitization activities with Fannie Mae and Freddie Mac (the "GSEs") and other mortgage loan sale and private-label securitization transactions, the Firm has made representations and warranties that the loans sold meet certain requirements. For transactions with the GSEs, these representations relate to type of collateral, underwriting standards, validity of certain borrower representations made in connection with the loan, primary mortgage insurance being in force for any mortgage loan with a loan-to-value ("LTV") ratio greater than 80% at the loan's origination date, and the use of the GSEs' standard legal documentation. The Firm may be, and has been, required to repurchase loans and/or indemnify the GSEs and other investors for losses due to material breaches of these representations and warranties. To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the related third party.

To date, the repurchase demands the Firm has received from the GSEs primarily relate to loans originated from 2005 to 2008. Demands against pre-2005 and post-2008 vintages have not been significant; the Firm attributes this to the comparatively favorable credit performance of these vintages and to the enhanced underwriting and loan qualification standards implemented progressively during 2007 and 2008. From 2005 to 2008, excluding Washington Mutual, the principal amount of loans sold to the GSEs subject to certain representations and warranties for which the Firm may be liable was approximately $380 billion; this amount has not been adjusted for subsequent activity, such as borrower repayments of principal or repurchases completed to date. See the discussion below for information concerning the process the Firm uses to evaluate repurchase demands for breaches of representations and warranties, and the Firm's estimate of probable losses related to such exposure.

From 2005 to 2008, Washington Mutual sold approximately $150 billion principal amount of loans to the GSEs subject to certain representations and warranties. Subsequent to the Firm's acquisition of certain assets and liabilities of Washington Mutual from the FDIC in September 2008, the Firm resolved and/or limited certain current and future repurchase demands for loans sold to the GSEs by Washington Mutual, although it remains the Firm's position that such obligations remain with the FDIC receivership. The Firm will continue to evaluate and may pay (subject to reserving its rights for indemnification by the FDIC) certain future repurchase demands related to individual loans, subject to certain limitations, and has considered such potential repurchase demands in its repurchase liability. The Firm believes that the remaining GSE repurchase exposure related to Washington Mutual presents minimal future risk to the Firm's financial results.

The Firm also sells loans in securitization transactions with Ginnie Mae; these loans are typically insured or guaranteed by another government agency. The Firm, in its role as servicer, may elect, but is not required, to repurchase delinquent loans securitized by Ginnie Mae, including those that have been sold back to Ginnie Mae subsequent to modification. Principal amounts due under the terms of these repurchased loans continue to be insured and the reimbursement of insured amounts is proceeding normally. Accordingly, the Firm has not recorded any mortgage repurchase liability related to these loans.

From 2005 to 2008, the Firm and certain acquired entities made certain loan level representations and warranties in connection with approximately $450 billion of residential mortgage loans that were sold or deposited into private-label securitizations. While the terms of the securitization transactions vary, they generally differ from loan sales to the GSEs in that, among other things: (i) in order to direct the trustee to investigate potential claims, the security holders must make a formal request for the trustee to do so, and typically, this requires agreement of the holders of a specified percentage of the outstanding securities; (ii) generally, the mortgage loans are not required to meet all GSE eligibility criteria; and (iii) in many cases, the party demanding repurchase is required to demonstrate that a loan-level breach of a representation or warranty has materially and adversely affected the value of the loan. Of the $450 billion originally sold or deposited (including $165 billion by Washington Mutual, as to which the Firm maintains that certain of the repurchase obligations remain with the FDIC receivership), approximately $191 billion of principal has been repaid (including $71 billion related to Washington Mutual). In addition, approximately $97 billion of the principal amount of loans has been liquidated (including $35 billion related to Washington Mutual), with an average loss severity of 58%. Accordingly, the remaining outstanding principal balance of these loans (including Washington Mutual) was, as of December 31, 2011, approximately $162 billion, of which $55 billion was 60 days or more past due. The remaining outstanding principal balance of loans related to Washington Mutual was approximately $59 billion, of which $20 billion were 60 days or more past due.

Although there have been generalized allegations, as well as specific demands, that the Firm should repurchase loans sold or deposited into private-label securitizations, these claims for repurchases of loans sold or deposited into private-label securitizations (including claims from insurers that have guaranteed certain obligations of the securitization trusts) have, thus far, generally manifested themselves through threatened or pending litigation. Accordingly, the Firm does not consider these claims in estimating its mortgage repurchase liability; rather, the Firm separately evaluates such exposures in establishing its litigation reserves. For additional information regarding litigation, see Note 31 on pages 290–299 of this Annual Report.

With respect to repurchase claims from private-label securitizations other than those considered in the Firm's litigation reserves, the Firm experienced an increase in the number of requests for loan files ("file requests") in the latter part of 2011; however, loan-level repurchase demands and repurchases from private-label securitizations have been limited to date. While it is possible that the volume of repurchases may increase in the future, the Firm cannot at the current time offer a reasonable estimate of probable future repurchases from such private-label securitizations. As a result, the Firm's mortgage repurchase liability primarily relates to loan sales to the GSEs and is calculated predominantly based on the Firm's repurchase activity experience with the GSEs.

Repurchase demand process

The Firm first becomes aware that a GSE is evaluating a particular loan for repurchase when the Firm receives a file request from the GSE. Upon completing its review, the GSE may submit a repurchase demand to the Firm; historically, most file requests have not resulted in repurchase demands.

The primary reasons for repurchase demands from the GSEs relate to alleged misrepresentations primarily arising from: (i) credit quality and/or undisclosed debt of the borrower; (ii) income level and/or employment status of the borrower; and (iii) appraised value of collateral. Ineligibility of the borrower for the particular product, mortgage insurance rescissions and missing documentation are other reasons for repurchase demands. The successful rescission of mortgage insurance typically results in a violation of representations and warranties made to the GSEs and, therefore, has been a significant cause of repurchase demands from the GSEs. The Firm actively reviews all rescission notices from mortgage insurers and contests them when appropriate.

As soon as practicable after receiving a repurchase demand from a GSE, the Firm evaluates the request and takes appropriate actions based on the nature of the repurchase demand. Loan-level appeals with the GSEs are typical and the Firm seeks to resolve the repurchase demand (i.e., either repurchase the loan or have the repurchase demand rescinded) within three to four months of the date of receipt. In many cases, the Firm ultimately is not required to repurchase a loan because it is able to resolve the purported defect. Although repurchase demands may be made until the loan is paid in full, most repurchase demands from the GSEs historically have related to loans that became delinquent in the first 24 months following origination.

When the Firm accepts a repurchase demand from one of the GSEs, the Firm may either (i) repurchase the loan or the underlying collateral from the GSE at the unpaid principal balance of the loan plus accrued interest, or (ii) reimburse the GSE for its realized loss on a liquidated property (a "make-whole" payment).

Estimated mortgage repurchase liability

To estimate the Firm's mortgage repurchase liability arising from breaches of representations and warranties, the Firm considers the following factors, which are predominantly based on the Firm's historical repurchase activity with the GSEs:

(i) the level of outstanding unresolved repurchase demands,
(ii) estimated probable future repurchase demands, considering information about file requests, delinquent and liquidated loans, resolved and unresolved mortgage insurance rescission notices and the Firm's historical experience,
(iii) the potential ability of the Firm to cure the defects identified in the repurchase demands ("cure rate"),
(iv) the estimated severity of loss upon repurchase of the loan or collateral, make-whole settlement, or indemnification,
(v) the Firm's potential ability to recover its losses from third-party originators, and
(vi) the terms of agreements with certain mortgage insurers and other parties.

Based on these factors, the Firm has recognized a mortgage repurchase liability of $3.6 billion and $3.3 billion as of December 31, 2011 and 2010, respectively.

The following table provides information about outstanding repurchase demands and unresolved mortgage insurance rescission notices, excluding those related to Washington Mutual, at each of the past five quarter-end dates.

Outstanding repurchase demands and unresolved mortgage insurance rescission notices by counterparty type[a]

(in millions)	December 31, 2011	September 30, 2011	June 30, 2011	March 31, 2011	December 31, 2010
GSEs and other[b]	**$ 2,345**	$ 2,133	$ 1,826	$ 1,321	$ 1,251
Mortgage insurers	**1,034**	1,112	1,093	1,240	1,121
Overlapping population[c]	**(113)**	(155)	(145)	(127)	(104)
Total	**$ 3,266**	$ 3,090	$ 2,774	$ 2,434	$ 2,268

(a) Mortgage repurchase demands associated with pending or threatened litigation are not reported in this table because the Firm separately evaluates its exposure to such repurchase demands in establishing its litigation reserves.
(b) The Firm's outstanding repurchase demands are predominantly from the GSEs. Other represents repurchase demands received from parties other than the GSEs that have been presented in accordance with the terms of the underlying sale or securitization agreement.
(c) Because the GSEs may make repurchase demands based on mortgage insurance rescission notices that remain unresolved, certain loans may be subject to both an unresolved mortgage insurance rescission notice and an outstanding repurchase demand.

The following tables show the trend in repurchase demands and mortgage insurance rescission notices received by loan origination vintage, excluding those related to Washington Mutual, for the past five quarters. The Firm expects repurchase demands to remain at elevated levels or to increase if there is a significant increase in private label repurchase demands outside of litigation.

Quarterly mortgage repurchase demands received by loan origination vintage[a]

(in millions)	December 31, 2011	September 30, 2011	June 30, 2011	March 31, 2011	December 31, 2010
Pre-2005	**$ 39**	$ 34	$ 32	$ 15	$ 39
2005	**55**	200	57	45	73
2006	**315**	232	363	158	198
2007	**804**	602	510	381	539
2008	**291**	323	301	249	254
Post-2008	**81**	153	89	94	65
Total repurchase demands received	**$ 1,585**	$ 1,544	$ 1,352	$ 942	$ 1,168

(a) Mortgage repurchase demands associated with pending or threatened litigation are not reported in this table because the Firm separately evaluates its exposure to such repurchase demands in establishing its litigation reserves.

Quarterly mortgage insurance rescission notices received by loan origination vintage[a]

(in millions)	December 31, 2011	September 30, 2011	June 30, 2011	March 31, 2011	December 31, 2010
Pre-2005	**$ 4**	$ 3	$ 3	$ 5	$ 3
2005	**12**	15	24	32	9
2006	**19**	31	39	65	53
2007	**48**	63	72	144	142
2008	**26**	30	31	49	50
Post-2008	**2**	1	1	1	1
Total mortgage insurance rescissions received[a]	**$ 111**	$ 143	$ 170	$ 296	$ 258

(a) Mortgage insurance rescissions typically result in a repurchase demand from the GSEs. This table includes mortgage insurance rescission notices for which the GSEs also have issued a repurchase demand.

Since the beginning of 2010, the Firm's overall cure rate, excluding Washington Mutual, has been approximately 50%. Repurchases that have resulted from mortgage insurance rescissions are reflected in the Firm's overall cure rate. While the actual cure rate may vary from quarter to quarter, the Firm expects that the overall cure rate will remain in the 40-50% range for the foreseeable future.

The Firm has not observed a direct relationship between the type of defect that causes the breach of representations and warranties and the severity of the realized loss. Therefore, the loss severity assumption is estimated using the Firm's historical experience and projections regarding changes in home prices. Actual principal loss severities on finalized repurchases and "make-whole" settlements to date, excluding Washington Mutual, currently average approximately 50%, but may vary from quarter to quarter based on the characteristics of the underlying loans and changes in home prices.

When a loan was originated by a third-party originator, the Firm typically has the right to seek a recovery of related repurchase losses from the third-party originator. Estimated and actual third-party recovery rates may vary from quarter to quarter based upon the underlying mix of correspondents (e.g., active, inactive, out-of-business originators) from which recoveries are being sought.

The Firm has entered into agreements with two mortgage insurers to resolve their claims on certain portfolios for which the Firm is a servicer. These two agreements cover and have resolved approximately one-third of the Firm's total mortgage insurance rescission risk exposure, both in terms of the unpaid principal balance of serviced loans covered by mortgage insurance and the amount of mortgage insurance coverage. The impact of these agreements is reflected in the mortgage repurchase liability and the outstanding mortgage insurance rescission notices as of December 31, 2011 disclosed above. The Firm has considered its remaining unresolved mortgage insurance rescission risk exposure in estimating the mortgage repurchase liability as of December 31, 2011.

Substantially all of the estimates and assumptions underlying the Firm's established methodology for computing its recorded mortgage repurchase liability — including the amount of probable future demands from purchasers, trustees or investors (which is in part based on historical experience), the ability of the Firm to cure identified defects, the severity of loss upon repurchase or foreclosure and recoveries from third parties — require application of a significant level of management judgment. Estimating the mortgage repurchase liability is further complicated by historical data that is not necessarily indicative of future expectations and uncertainty

surrounding numerous external factors, including: (i) economic factors (for example, further declines in home prices and changes in borrower behavior may lead to increases in the number of defaults, the severity of losses, or both), and (ii) the level of future demands, which is dependent, in part, on actions taken by third parties, such as the GSEs, mortgage insurers, trustees and investors. While the Firm uses the best information available to it in estimating its mortgage repurchase liability, the estimation process is inherently uncertain, imprecise and potentially volatile as additional information is obtained and external factors continue to evolve.

The following table summarizes the change in the mortgage repurchase liability for each of the periods presented.

Summary of changes in mortgage repurchase liability[a]

Year ended December 31, (in millions)	2011	2010	2009
Repurchase liability at beginning of period	**$ 3,285**	$ 1,705	$ 1,093
Realized losses[b]	**(1,263)**	(1,423)	(1,253) [d]
Provision for repurchase losses	**1,535**	3,003	1,865
Repurchase liability at end of period	**$ 3,557** [c]	$ 3,285	1,705

(a) Mortgage repurchase liabilities associated with pending or threatened litigation are not reported in this table because the Firm separately evaluates its exposure to such repurchases in establishing its litigation reserves.
(b) Includes principal losses and accrued interest on repurchased loans, "make-whole" settlements, settlements with claimants, and certain related expense. For the years ended 2011, 2010 and 2009, make-whole settlements were $640 million, $632 million and $277 million, respectively.
(c) Includes $173 million at December 31, 2011, related to future demands on loans sold by Washington Mutual to the GSEs.
(d) Includes the Firm's resolution with the GSEs of certain current and future repurchase demands for certain loans sold by Washington Mutual. The unpaid principal balance of loans related to this resolution is not included in the table below, which summarizes the unpaid principal balance of repurchased loans.

The following table summarizes the total unpaid principal balance of repurchases during the periods indicated.

Unpaid principal balance of mortgage loan repurchases[a]

Year ended December 31, (in millions)	2011	2010	2009
Ginnie Mae[b]	**$ 5,981**	$ 8,717	$ 6,966
GSEs and other[c][d]	**1,334**	1,773	1,019
Total	**$ 7,315**	$ 10,490	$ 7,985

(a) This table includes (i) repurchases of mortgage loans due to breaches of representations and warranties, and (ii) loans repurchased from Ginnie Mae loan pools as described in (b) below. This table does not include mortgage insurance rescissions; while the rescission of mortgage insurance typically results in a repurchase demand from the GSEs, the mortgage insurers themselves do not present repurchase demands to the Firm. This table also excludes mortgage loan repurchases associated with pending or threatened litigation because the Firm separately evaluates its exposure to such repurchases in establishing its litigation reserves.
(b) In substantially all cases, these repurchases represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Ginnie Mae guidelines (i.e., they do not result from repurchase demands due to breaches of representations and warranties). The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, the Federal Housing Administration ("FHA"), Rural Housing Services ("RHS") and/or the U.S. Department of Veterans Affairs ("VA").
(c) Predominantly all of the repurchases related to demands by GSEs.
(d) Nonaccrual loans held-for-investment included $477 million, $354 million and $218 million at December 31, 2011, 2010 and 2009, respectively, of loans repurchased as a result of breaches of representations and warranties.

For additional information regarding the mortgage repurchase liability, see Note 29 on pages 283-289 of this Annual Report.

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables the Firm to build and invest in market-leading businesses, even in a highly stressed environment. Senior management considers the implications on the Firm's capital strength prior to making any decision on future business activities. Capital and earnings are inextricably linked, as earnings directly affect capital generation for the Firm. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital and makes decisions to vary sources or uses to preserve the Firm's capital strength.

The Firm's capital management objectives are to hold capital sufficient to:

- Cover all material risks underlying the Firm's business activities;
- Maintain "well-capitalized" status under regulatory requirements;
- Maintain debt ratings, which will enable the Firm to optimize its funding mix and liquidity sources while minimizing costs;
- Retain flexibility to take advantage of future investment opportunities; and
- Build and invest in businesses, even in a highly stressed environment.

To meet these objectives, the Firm maintains a robust and disciplined capital adequacy assessment process, which is performed regularly, and is intended to enable the Firm to remain well-capitalized and fund ongoing operations under adverse conditions. The process assesses the potential impact of alternative economic and business scenarios on earnings and capital for the Firm's businesses individually and in the aggregate over a rolling three-year period. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and operational risk events, which generate significant losses. However, when defining a broad range of scenarios, realized events can always be worse. Accordingly, management considers additional stresses outside these scenarios as necessary.

The Firm utilized this capital adequacy process in completing the Federal Reserve Comprehensive Capital Analysis and Review ("CCAR"). The Federal Reserve requires the Firm to submit a capital plan on an annual basis. The Firm submitted its 2012 capital plan on January 9, 2012. The Federal Reserve has indicated that it expects to provide notification of either its objection or non-objection to the Firm's capital plan by March 15, 2012.

Capital adequacy is also evaluated with the Firm's liquidity risk management processes. For further information on the Firm's Liquidity Risk Management, see pages 127–132 of this Annual Report.

The quality and composition of capital are key factors in senior management's evaluation of the Firm's capital adequacy. Accordingly, the Firm holds a significant amount of its capital in the form of common equity. The Firm uses three capital measurements in assessing its levels of capital:

- *Regulatory capital* – The capital required according to standards stipulated by U.S. bank regulatory agencies.
- *Economic risk capital* – The capital required as a result of a bottom-up assessment of the underlying risks of the Firm's business activities, utilizing internal risk-assessment methodologies.
- *Line of business equity* – The amount of equity the Firm believes each business segment would require if it were operating independently, which incorporates sufficient capital to address economic risk measures, regulatory capital requirements and capital levels for similarly rated peers.

Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. As of December 31, 2011 and 2010, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and each met all capital requirements to which it was subject.

In connection with the U.S. Government's Supervisory Capital Assessment Program in 2009, U.S. banking regulators developed a new measure of capital, Tier 1 common, which is defined as Tier 1 capital less elements of Tier 1 capital not in the form of common equity – such as perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred capital debt securities. Tier 1 common, a non-GAAP financial measure, is used by banking regulators, investors and analysts to assess and compare the quality and composition of the Firm's capital with the capital of other financial services companies. The Firm uses Tier 1 common along with the other capital measures to assess and monitor its capital position.

At December 31, 2011 and 2010, JPMorgan Chase maintained Tier 1 and Total capital ratios in excess of the well-capitalized standards established by the Federal Reserve, as indicated in the tables below. In addition, the Firm's Tier 1 common ratio was significantly above the 4% well-capitalized standard established at the time of the Supervisory Capital Assessment Program. For more information, see Note 28 on pages 281–283 of this Annual Report.

The following table presents the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase at December 31, 2011 and 2010. These amounts are determined in accordance with regulations issued by the Federal Reserve and OCC.

Risk-based capital ratios

December 31,	2011	2010
Capital ratios		
Tier 1 capital	**12.3%**	12.1%
Total capital	**15.4**	15.5
Tier 1 leverage	**6.8**	7.0
Tier 1 common[(a)]	**10.1**	9.8

(a) The Tier 1 common ratio is Tier 1 common capital divided by RWA.

A reconciliation of total stockholders' equity to Tier 1 common, Tier 1 capital and Total qualifying capital is presented in the table below.

Risk-based capital components and assets

December 31, (in millions)	2011	2010
Total stockholders' equity	**$ 183,573**	$ 176,106
Less: Preferred stock	**7,800**	7,800
Common stockholders' equity	**175,773**	168,306
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 common	**(970)**	(748)
Less: Goodwill[(a)]	**45,873**	46,915
Fair value DVA on derivative and structured note liabilities related to the Firm's credit quality	**2,150**	1,261
Investments in certain subsidiaries and other	**993**	1,032
Other intangible assets[(a)]	**2,871**	3,587
Tier 1 common	**122,916**	114,763
Preferred stock	**7,800**	7,800
Qualifying hybrid securities and noncontrolling interests[(b)]	**19,668**	19,887
Total Tier 1 capital	**150,384**	142,450
Long-term debt and other instruments qualifying as Tier 2	**22,275**	25,018
Qualifying allowance for credit losses	**15,504**	14,959
Adjustment for investments in certain subsidiaries and other	**(75)**	(211)
Total Tier 2 capital	**37,704**	39,766
Total qualifying capital	**$ 188,088**	$ 182,216
Risk-weighted assets	**$ 1,221,198**	$ 1,174,978
Total adjusted average assets	**$ 2,202,087**	$ 2,024,515

(a) Goodwill and other intangible assets are net of any associated deferred tax liabilities.
(b) Primarily includes trust preferred capital debt securities of certain business trusts.

The Firm's Tier 1 common was $122.9 billion at December 31, 2011, an increase of $8.2 billion from December 31, 2010. The increase was predominantly due to net income (adjusted for DVA) of $18.1 billion, lower deductions related to goodwill and other intangibles of $1.8 billion, and net issuances and commitments to issue common stock under the Firm's employee stock-based compensation plans of $2.1 billion. The increase was partially offset by $8.95 billion (on a trade-date basis) of repurchases of common stock and warrants and $4.7 billion of dividends on common and preferred stock. The Firm's Tier 1 capital was $150.4 billion at December 31, 2011, an increase of $7.9 billion from December 31, 2010. The increase in Tier 1 capital reflected the increase in Tier 1 common.

Additional information regarding the Firm's capital ratios and the federal regulatory capital standards to which it is subject is presented in Supervision and regulation and Part I, Item 1A, Risk Factors, on pages 1–7 and 7–17, respectively, of the 2011 Form 10-K, and Note 28 on pages 281–283 of this Annual Report.

Basel II

The minimum risk-based capital requirements adopted by the U.S. federal banking agencies follow the Capital Accord of the Basel Committee on Banking Supervision ("Basel I"). In 2004, the Basel Committee published a revision to the Accord ("Basel II"). The goal of the Basel II Framework is to provide more risk-sensitive regulatory capital calculations and promote enhanced risk management practices among large, internationally active banking organizations. U.S. banking regulators published a final Basel II rule in December 2007, which requires JPMorgan Chase to implement Basel II at the holding company level, as well as at certain of its key U.S. bank subsidiaries.

Prior to full implementation of the new Basel II Framework, JPMorgan Chase is required to complete a qualification period of four consecutive quarters during which it needs to demonstrate that it meets the requirements of the rule to the satisfaction of its U.S. banking regulators. JPMorgan Chase is currently in the qualification period and expects to be in compliance with all relevant Basel II rules within the established timelines. In addition, the Firm has adopted, and will continue to adopt, based on various established timelines, Basel II rules in certain non-U.S. jurisdictions, as required.

"Basel 2.5"

During 2011, the U.S. federal banking agencies issued proposals for industry comment to revise the market risk capital rules of Basel II that would result in additional capital requirements for trading positions and securitizations. The Firm anticipates these rules will be finalized and implemented in 2012. It is currently estimated that implementation of these rules could result in approximately a 100 basis point decrease in the Firm's Basel I Tier 1 common ratio, but the actual impact upon implementation on the Firm's capital ratios could differ depending on the outcome of the final U.S. rules and regulatory approval of the Firm's internal models.

Basel III

In addition to the Basel II Framework, on December 16, 2010, the Basel Committee issued the final version of the Capital Accord, commonly referred to as "Basel III," which revised Basel II by, among other things, narrowing the definition of capital, increasing capital requirements for specific exposures, introducing minimum standards for short-term liquidity coverage – the liquidity coverage ratio (the "LCR") – and term funding – the net stable funding ratio (the "NSFR"), and establishing an international leverage ratio. The LCR is a short-term liquidity measure which identifies a firm's unencumbered, high-quality liquid assets that can be converted into cash to meet net cash outflows during a 30-day severe stress scenario. The NSFR measures the amount of longer-term, stable sources of funding available to support the portion of all assets (on- and off-balance sheet) that cannot be monetized over a one-year period of extended stress. The Basel Committee also announced higher capital ratio requirements under Basel III, which provide that the common equity requirement will be increased to 7%, comprised of a minimum ratio of 4.5% plus a 2.5% capital conservation buffer.

On June 25, 2011, the Basel Committee announced an agreement to require global systemically important banks ("GSIBs") to maintain Tier 1 common requirements above the 7% minimum in amounts ranging from an additional 1% to an additional 2.5%. The Basel Committee also stated it intended to require certain GSIBs to maintain a further Tier 1 common requirement of an additional 1% under certain circumstances, to act as a disincentive for the GSIB from taking actions that would further increase its systemic importance. On July 19, 2011, the Basel Committee published a proposal on the GSIB assessment methodology, which reflects an approach based on five broad categories: size; interconnectedness; lack of substitutability; cross-jurisdictional activity; and complexity. In late September, the Basel Committee finalized the GSIB assessment methodology and Tier 1 common requirements.

In addition, the U.S. federal banking agencies have published proposed risk-based capital floors pursuant to the requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") to establish a permanent Basel I floor under Basel II and Basel III capital calculations.

Estimated Tier 1 common under Basel III rules

The following table presents a comparison of the Firm's Tier 1 common under Basel I rules to its estimated Tier 1 common under Basel III rules, along with the Firm's estimated risk-weighted assets and the Tier 1 common ratio under Basel III rules, all of which are non-GAAP financial measures. Tier 1 common under Basel III includes additional adjustments and deductions not included in Basel I Tier 1 common, such as the inclusion of accumulated other comprehensive income ("AOCI") related to AFS securities and defined benefit pension and other postretirement employee benefit plans, and the deduction of the Firm's defined benefit pension fund assets.

The Firm estimates that its Tier 1 common ratio under Basel III rules would be 7.9% as of December 31, 2011. Management considers this estimate as a key measure to assess the Firm's capital position in conjunction with its capital ratios under Basel I requirements, in order to enable management, investors and analysts to compare the Firm's capital under the Basel III capital standards with similar estimates provided by other financial services companies.

December 31, 2011 (in millions, except ratios)		
Tier 1 common under Basel I rules	$	122,916
Adjustments related to AOCI for AFS securities and defined benefit pension and other postretirement employee benefit plans		919
Deduction for net defined benefit pension asset		(1,430)
All other adjustments		(534)
Estimated Tier 1 common under Basel III rules	$	121,871
Estimated risk-weighted assets under Basel III rules[a]	$	1,545,801
Estimated Tier 1 common ratio under Basel III rules[b]		7.9%

(a) Key differences in the calculation of risk-weighted assets between Basel I and Basel III include: (a) Basel III credit risk risk-weighted assets ("RWA") is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas Basel I RWA is based on fixed supervisory risk weightings which vary only by counterparty type and asset class; (b) Basel III market risk RWA reflects the new capital requirements related to trading assets and securitizations, which include incremental capital requirements for stress VaR, correlation trading, and re-securitization positions; and (c) Basel III includes RWA for operational risk, whereas Basel I does not.

(b) The Tier 1 common ratio is Tier 1 common divided by RWA.

The Firm's estimate of its Tier 1 common ratio under Basel III reflects its current understanding of the Basel III rules and the application of such rules to its businesses as currently conducted, and therefore excludes the impact of any changes the Firm may make in the future to its businesses as a result of implementing the Basel III rules. The Firm's understanding of the Basel III rules is based on information currently published by the Basel Committee and U.S. federal banking agencies.

The Firm intends to maintain its strong liquidity position in the future as the short-term liquidity coverage (LCR) and term funding (NSFR) standards of the Basel III rules are implemented, in 2015 and 2018, respectively. In order to do so the Firm believes it may need to modify the liquidity profile of certain of its assets and liabilities. Implementation of the Basel III rules may also cause the Firm to increase prices on, or alter the types of, products it offers to its customers and clients.

The Basel III revisions governing liquidity and capital requirements are subject to prolonged observation and transition periods. The observation periods for both the LCR and NSFR began in 2011, with implementation in 2015 and 2018, respectively. The transition period for banks to meet the revised Tier 1 common requirement will begin in 2013, with implementation on January 1, 2019. The Firm fully expects to be in compliance with the higher Basel III capital

standards, as well as any additional Dodd-Frank Act capital requirements, as they become effective. The additional capital requirements for GSIBs will be phased-in starting January 1, 2016, with full implementation on January 1, 2019.

The Firm will continue to monitor the ongoing rule-making process to assess both the timing and the impact of Basel III on its businesses and financial condition.

Broker-dealer regulatory capital

JPMorgan Chase's principal U.S. broker-dealer subsidiaries are J.P. Morgan Securities LLC ("JPMorgan Securities") and J.P. Morgan Clearing Corp. ("JPMorgan Clearing"). JPMorgan Clearing is a subsidiary of JPMorgan Securities and provides clearing and settlement services. JPMorgan Securities and JPMorgan Clearing are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities and JPMorgan Clearing are also each registered as futures commission merchants and subject to Rule 1.17 of the Commodity Futures Trading Commission ("CFTC"). Effective June 1, 2011, J.P. Morgan Futures Inc., a registered Futures Commission Merchant and a wholly owned subsidiary of JPMorgan Chase, merged with and into JPMorgan Securities. The merger created a combined Broker-Dealer/Futures Commission Merchant entity that provides capital and operational efficiencies.

JPMorgan Securities and JPMorgan Clearing have elected to compute their minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule. At December 31, 2011, JPMorgan Securities' net capital, as defined by the Net Capital Rule, was $11.1 billion, exceeding the minimum requirement by $9.5 billion, and JPMorgan Clearing's net capital was $7.4 billion, exceeding the minimum requirement by $5.5 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of $1.0 billion and is also required to notify the SEC in the event that tentative net capital is less than $5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2011, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

Economic risk capital

JPMorgan Chase assesses its capital adequacy relative to the risks underlying its business activities using internal risk-assessment methodologies. The Firm measures economic capital primarily based on four risk factors: credit, market, operational and private equity risk.

	Yearly Average		
Year ended December 31, (in billions)	**2011**	2010	2009
Credit risk	**$ 48.2**	$ 49.7	$ 51.3
Market risk	**14.5**	15.1	15.4
Operational risk	**8.5**	7.4	8.5
Private equity risk	**6.9**	6.2	4.7
Economic risk capital	**78.1**	78.4	79.9
Goodwill	**48.6**	48.6	48.3
Other[a]	**46.6**	34.5	17.7
Total common stockholders' equity	**$ 173.3**	$ 161.5	$ 145.9

(a) Reflects additional capital required, in the Firm's view, to meet its regulatory and debt rating objectives.

Credit risk capital

Credit risk capital is estimated separately for the wholesale businesses (IB, CB, TSS and AM) and consumer businesses (RFS and Card).

Credit risk capital for the overall wholesale credit portfolio is defined in terms of unexpected credit losses, both from defaults and from declines in the portfolio value due to credit deterioration, measured over a one-year period at a confidence level consistent with an "AA" credit rating standard. Unexpected losses are losses in excess of those for which allowances for credit losses are maintained. The capital methodology is based on several principal drivers of credit risk: exposure at default (or loan-equivalent amount), default likelihood, credit spreads, loss severity and portfolio correlation.

Credit risk capital for the consumer portfolio is based on product and other relevant risk segmentation. Actual segment-level default and severity experience are used to estimate unexpected losses for a one-year horizon at a confidence level consistent with an "AA" credit rating standard. See Credit Risk Management on pages 132–157 of this Annual Report for more information about these credit risk measures.

Market risk capital

The Firm calculates market risk capital guided by the principle that capital should reflect the risk of loss in the value of portfolios and financial instruments caused by adverse movements in market variables, such as interest and foreign exchange rates, credit spreads, and securities and commodities prices, taking into account the liquidity of the financial instruments. Results from daily VaR, biweekly stress-tests, issuer credit spreads and default risk calculations, as well as other factors, are used to determine appropriate capital levels. Market risk capital is allocated to each business segment based on its risk assessment. See Market Risk Management on pages 158–163 of this Annual Report for more information about these market risk measures.

Operational risk capital

Capital is allocated to the lines of business for operational risk using a risk-based capital allocation methodology which estimates operational risk on a bottom-up basis. The operational risk capital model is based on actual losses and potential scenario-based stress losses, with adjustments to the capital calculation to reflect changes in the quality of the control environment or the use of risk-transfer products. The Firm believes its model is consistent with the Basel II Framework. See Operational Risk Management on pages 166–167 of this Annual Report for more information about operational risk.

Private equity risk capital

Capital is allocated to privately- and publicly-held securities, third-party fund investments, and commitments in the private equity portfolio to cover the potential loss associated with a decline in equity markets and related asset devaluations. In addition to negative market fluctuations, potential losses in private equity investment portfolios can be magnified by liquidity risk. Capital allocation for the private equity portfolio is based on measurement of the loss experience suffered by the Firm and other market participants over a prolonged period of adverse equity market conditions.

Line of business equity

The Firm's framework for allocating capital is based on the following objectives:

- Integrate firmwide and line of business capital management activities;
- Measure performance consistently across all lines of business; and
- Provide comparability with peer firms for each of the lines of business

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III Tier 1 common capital requirements), economic risk measures and capital levels for similarly rated peers. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Line of business equity

December 31, (in billions)	2011	2010
Investment Bank	**$ 40.0**	$ 40.0
Retail Financial Services	**25.0**	24.6
Card Services & Auto	**16.0**	18.4
Commercial Banking	**8.0**	8.0
Treasury & Securities Services	**7.0**	6.5
Asset Management	**6.5**	6.5
Corporate/Private Equity	**73.3**	64.3
Total common stockholders' equity	**$ 175.8**	$ 168.3

Line of business equity

Year ended December 31, (in billions)	Yearly Average 2011	2010	2009
Investment Bank	**$ 40.0**	$ 40.0	$ 33.0
Retail Financial Services	**25.0**	24.6	22.5
Card Services & Auto	**16.0**	18.4	17.5
Commercial Banking	**8.0**	8.0	8.0
Treasury & Securities Services	**7.0**	6.5	5.0
Asset Management	**6.5**	6.5	7.0
Corporate/Private Equity	**70.8**	57.5	52.9
Total common stockholders' equity	**$ 173.3**	$ 161.5	$ 145.9

Effective January 1, 2010, the Firm enhanced its line of business equity framework to better align equity assigned to the lines of business with changes anticipated to occur in each line of business, and to reflect the competitive and regulatory landscape. The lines of business are now capitalized based on the Tier 1 common standard, rather than the Tier 1 capital standard. Effective January 1, 2011, capital allocated to Card was reduced by $2.4 billion to $16.0 billion, largely reflecting portfolio runoff and the improving risk profile of the business; capital allocated to TSS was increased by $500 million, to $7.0 billion, reflecting growth in the underlying business.

Effective January 1, 2012, the Firm further revised the capital allocated to certain businesses, reflecting additional refinement of each segment's Basel III Tier 1 common capital requirements. The Firm continues to assess the level of capital required for each line of business, as well as the assumptions and methodologies used to allocate capital to the business segments, and further refinements may be implemented in future periods.

Capital actions

Dividends

On February 23, 2009, the Board of Directors reduced the Firm's quarterly common stock dividend from $0.38 to $0.05 per share, effective with the dividend paid on April 30, 2009, to shareholders of record on April 6, 2009. The action enabled the Firm to retain approximately $5.5 billion in common equity in each of 2010 and 2009, and was taken to ensure the Firm had sufficient capital strength in the event the very weak economic conditions that existed at the beginning of 2009 deteriorated further. JPMorgan Chase declared quarterly cash dividends on its common stock in the amount of $0.05 per share for each quarter of 2010 and 2009.

On March 18, 2011, the Board of Directors increased the Firm's quarterly common stock dividend from $0.05 to $0.25 per share, effective with the dividend paid on April 30, 2011, to shareholders of record on April 6, 2011. The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook; desired dividend payout ratio; capital objectives; and alternative investment opportunities. The Firm's current expectation is to return to a payout ratio of approximately 30% of normalized earnings over time.

For information regarding dividend restrictions, see Note 22 and Note 27 on page 276 and 281, respectively, of this Annual Report.

The following table shows the common dividend payout ratio based on reported net income.

Year ended December 31,	**2011**	2010	2009
Common dividend payout ratio	**22%**	5%	9%

Common equity repurchases

On March 18, 2011, the Board of Directors approved a $15.0 billion common equity (i.e., common stock and warrants) repurchase program, of which $8.95 billion was authorized for repurchase in 2011. The $15.0 billion repurchase program superseded a $10.0 billion repurchase program approved in 2007. During 2011 and 2010, the Firm repurchased (on a trade-date basis) an aggregate of 240 million and 78 million shares of common stock and warrants, for $8.95 billion and $3.0 billion, at an average price per unit of $37.35 and $38.49, respectively. The Firm did not repurchase any of the warrants during 2010, and did not repurchase any shares of its common stock or warrants during 2009.

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on pages 18–20 of JPMorgan Chase's 2011 Form 10-K.

Issuance

Common stock

On June 5, 2009, the Firm issued $5.8 billion, or 163 million shares, of common stock at $35.25 per share. The proceeds from these issuances were used for general corporate purposes. For additional information regarding common stock, see Note 23 on pages 276-277 of this Annual Report.

Capital Purchase Program

Pursuant to the U.S. Treasury's Capital Purchase Program, on October 28, 2008, the Firm issued to the U.S. Treasury a Warrant to purchase up to 88,401,697 shares of the Firm's common stock, at an exercise price of $42.42 per share, subject to certain antidilution and other adjustments. The U.S. Treasury exchanged the Warrant for 88,401,697 warrants, each of which was a warrant to purchase a share of the Firm's common stock at an exercise price of $42.42 per share and, on December 11, 2009, the U.S. Treasury sold the warrants to the public in a secondary public offering for $950 million. In 2011, the Firm repurchased 10,167,698 of these warrants as part of the common equity repurchase program discussed above. The warrants are exercisable, in whole or in part, at any time and from time to time until October 28, 2018.

Risk is an inherent part of JPMorgan Chase's business activities. The Firm's risk management framework and governance structure are intended to provide comprehensive controls and ongoing management of the major risks inherent in its business activities. The Firm employs a holistic approach to risk management to ensure the broad spectrum of risk types are considered in managing its business activities. The Firm's risk management framework is intended to create a culture of risk awareness and personal responsibility throughout the Firm where collaboration, discussion, escalation and sharing of information is encouraged.

The Firm's overall risk appetite is established in the context of the Firm's capital, earnings power, and diversified business model. The Firm employs a formalized risk appetite framework to clearly link risk appetite and return targets, controls and capital management. The Firm's CEO is responsible for setting the overall risk appetite of the Firm and the LOB CEOs are responsible for setting the risk appetite for their respective lines of business. The Risk Policy Committee of the Firm's Board of Directors approves the risk appetite policy on behalf of the entire Board of Directors.

Risk governance

The Firm's risk governance structure is based on the principle that each line of business is responsible for managing the risk inherent in its business, albeit with appropriate Corporate oversight. Each line of business risk committee is responsible for decisions regarding the business' risk strategy, policies and controls. There are nine major risk types identified in the business activities of the Firm: liquidity risk, credit risk, market risk, interest rate risk, country risk, private equity risk, operational risk, legal and fiduciary risk, and reputation risk.

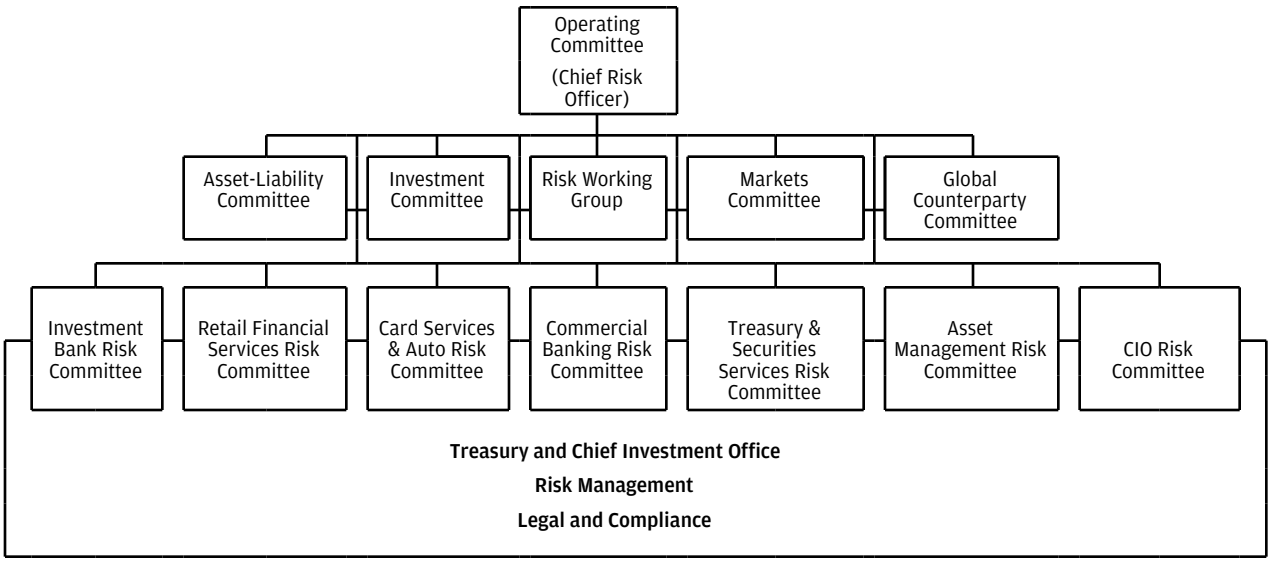
Overlaying line of business risk management are four corporate functions with risk management-related responsibilities: Risk Management, the Chief Investment Office, Corporate Treasury, and Legal and Compliance.

Risk Management operates independently of the lines of businesses to provide oversight of firmwide risk management and controls, and is viewed as a partner in achieving appropriate business objectives. Risk Management coordinates and communicates with each line of business through the line of business risk committees and chief risk officers to manage risk. The Risk Management function is headed by the Firm's Chief Risk Officer, who is a member of the Firm's Operating Committee and who reports to the Chief Executive Officer and is accountable to the Board of Directors, primarily through the Board's Risk Policy Committee. The Chief Risk Officer is also a member of the line of business risk committees. Within the Firm's Risk Management function are units responsible for credit risk, market risk, country risk, private equity risk and operational risk, as well as risk reporting, risk policy and risk technology and operations. Risk technology and operations is responsible for building the information technology infrastructure used to monitor and manage risk.

The Chief Investment Office and Corporate Treasury are responsible for measuring, monitoring, reporting and managing the Firm's liquidity, interest rate and foreign exchange risk, and other structural risks.

Legal and Compliance has oversight for legal risk.

In addition to the risk committees of the lines of business and the above-referenced risk management functions, the Firm also has an Investment Committee, an Asset-Liability Committee and three other risk-related committees – the Risk Working Group, the Global Counterparty Committee and the Markets Committee. All of these committees are accountable to the Operating Committee. The membership of these committees are composed of senior management of the Firm, including representatives of the lines of business, Risk Management, Finance and other senior executives. The committees meet frequently to discuss a broad range of topics including, for example, current market conditions and other external events, risk exposures, and risk concentrations to ensure that the impact of risk factors are considered broadly across the Firm's businesses.



The Asset-Liability Committee ("ALCO"), chaired by the Corporate Treasurer, monitors the Firm's overall interest rate risk and liquidity risk. ALCO is responsible for reviewing and approving the Firm's liquidity policy and contingency funding plan. ALCO also reviews the Firm's funds transfer pricing policy (through which lines of business "transfer" interest rate and foreign exchange risk to Corporate Treasury in the Corporate/Private Equity segment), nontrading interest rate-sensitive revenue-at-risk, overall interest rate position, funding requirements and strategy, and the Firm's securitization programs (and any required liquidity support by the Firm of such programs).

The Investment Committee, chaired by the Firm's Chief Financial Officer, oversees global merger and acquisition activities undertaken by JPMorgan Chase for its own account that fall outside the scope of the Firm's private equity and other principal finance activities.

The Risk Working Group, chaired by the Firm's Chief Risk Officer, meets monthly to review issues that cross lines of business such as risk policy, risk methodology, risk concentrations, regulatory capital and other regulatory issues, and such other topics referred to it by line of business risk committees.

The Markets Committee, chaired by the Firm's Chief Risk Officer, meets weekly to review, monitor and discuss significant risk matters, which may include credit, market and operational risk issues; market moving events; large transactions; hedging strategies; transactions that may give rise to reputation risk or conflicts of interest; and other issues.

The Global Counterparty Committee, chaired by the Firm's Chief Risk Officer, reviews exposures to counterparties when such exposure levels are above portfolio-established thresholds. The Committee meets quarterly to review total exposures with these counterparties, with particular focus on counterparty trading exposures to ensure that such exposures are deemed appropriate and to direct changes in exposure levels as needed.

The Board of Directors exercises its oversight of risk management, principally through the Board's Risk Policy Committee and Audit Committee. The Risk Policy Committee oversees senior management risk-related responsibilities, including reviewing management policies and performance against these policies and related benchmarks. The Audit Committee is responsible for oversight of guidelines and policies that govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal controls that is relied upon to provide reasonable assurance of compliance with the Firm's operational risk management processes.

Risk monitoring and control

The Firm's ability to properly identify, measure, monitor and report risk is critical to both its soundness and profitability.

- Risk identification: The Firm's exposure to risk through its daily business dealings, including lending and capital markets activities, is identified and aggregated through the Firm's risk management infrastructure. In addition, individuals who manage risk positions, particularly those that are complex, are responsible for identifying and estimating potential losses that could arise from specific or unusual events that may not be captured in other models, and for communicating those risks to senior management.
- Risk measurement: The Firm measures risk using a variety of methodologies, including calculating probable loss, unexpected loss and value-at-risk, and by conducting stress tests and making comparisons to external benchmarks. Measurement models and related assumptions are routinely subject to internal model

review, empirical validation and benchmarking with the goal of ensuring that the Firm's risk estimates are reasonable and reflective of the risk of the underlying positions.

- Risk monitoring/control: The Firm's risk management policies and procedures incorporate risk mitigation strategies and include approval limits by customer, product, industry, country and business. These limits are monitored on a daily, weekly and monthly basis, as appropriate.
- Risk reporting: The Firm reports risk exposures on both a line of business and a consolidated basis. This information is reported to management on a daily, weekly and monthly basis, as appropriate. There are nine major risk types identified in the business activities of the Firm: liquidity risk, credit risk, market risk, interest rate risk, country risk, private equity risk, operational risk, legal and fiduciary risk, and reputation risk.

LIQUIDITY RISK MANAGEMENT

Liquidity is essential to the ability to operate financial services businesses and, therefore, the ability to maintain surplus levels of liquidity through economic cycles is crucial to financial services companies, particularly during periods of adverse conditions. The Firm relies on external sources to finance a significant portion of its operations, and the Firm's funding strategy is intended to ensure that it will have sufficient liquidity and a diversity of funding sources necessary to enable it to meet actual and contingent liabilities during both normal and stress periods.

JPMorgan Chase's primary sources of liquidity include a diversified deposit base, which was $1,127.8 billion at December 31, 2011, and access to the equity capital markets and to long-term unsecured and secured funding sources, including through asset securitizations and borrowings from FHLBs. Additionally, JPMorgan Chase maintains significant amounts of highly-liquid unencumbered assets. The Firm actively monitors the availability of funding in the wholesale markets across various geographic regions and in various currencies. The Firm's ability to generate funding from a broad range of sources in a variety of geographic locations and in a range of tenors is intended to enhance financial flexibility and limit funding concentration risk.

Management considers the Firm's liquidity position to be strong, based on its liquidity metrics as of December 31, 2011, and believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations. The Firm was able to access the funding markets as needed during the year ended December 31, 2011, despite increased market volatility.

Governance

The Firm's liquidity risk governance process is designed to ensure that its liquidity position remains strong. The Asset-Liability Committee reviews and approves the Firm's liquidity policy and contingency funding plan. Corporate Treasury is responsible for executing the Firm's liquidity policy and contingency funding plan as well as measuring, monitoring, reporting and managing the Firm's liquidity risk profile. JPMorgan Chase centralizes the management of global funding and liquidity risk within Corporate Treasury. This centralized approach maximizes liquidity access, minimizes funding costs and enhances global identification and coordination of liquidity risk and involves frequent communication with the business segments, disciplined management of liquidity at the parent holding company, comprehensive market-based pricing of all financial assets and liabilities, continuous balance sheet monitoring, frequent stress testing of liquidity sources, and frequent reporting and communication provided to senior management and the Board of Directors regarding the Firm's liquidity position.

Liquidity monitoring

The Firm employs a variety of metrics to monitor and manage liquidity. One set of analyses used by the Firm relates to the timing of liquidity sources versus liquidity uses (e.g., funding gap analysis and parent holding company funding, as discussed below). A second set of analyses focuses on measurements of the Firm's reliance on short-term unsecured funding as a percentage of total liabilities, as well as the relationship of short-term unsecured funding to highly-liquid assets, the deposits-to-loans ratio and other balance sheet measures.

The Firm performs regular liquidity stress tests as part of its liquidity monitoring activities. The purpose of the liquidity stress tests is intended to ensure sufficient liquidity for the Firm under both idiosyncratic and systemic market stress conditions. These scenarios measure the Firm's liquidity position across a full-year horizon by analyzing the net funding gaps resulting from contractual and contingent cash and collateral outflows versus the Firm's ability to generate additional liquidity by pledging or selling excess collateral and issuing unsecured debt. The scenarios are produced for the parent holding company and major bank subsidiaries as well as the Firm's principal U.S. broker-dealer subsidiary.

The Firm currently has liquidity in excess of its projected full-year liquidity needs under both its idiosyncratic stress scenario (which evaluates the Firm's net funding gap after a short-term ratings downgrade to A-2/P-2), as well as under its systemic market stress scenario (which evaluates the Firm's net funding gap during a period of severe market stress similar to market conditions in 2008 and assumes that the Firm is not uniquely stressed versus its peers).

Parent holding company

Liquidity monitoring of the parent holding company takes

into consideration regulatory restrictions that limit the extent to which bank subsidiaries may extend credit to the parent holding company and other nonbank subsidiaries. Excess cash generated by parent holding company issuance activity is used to purchase liquid collateral through reverse repurchase agreements or is placed with both bank and nonbank subsidiaries in the form of deposits and advances to satisfy a portion of subsidiary funding requirements. The Firm's liquidity management takes into consideration its subsidiaries' ability to generate replacement funding in the event the parent holding company requires repayment of the aforementioned deposits and advances.

The Firm closely monitors the ability of the parent holding company to meet all of its obligations with liquid sources of cash or cash equivalents for an extended period of time without access to the unsecured funding markets. The Firm targets pre-funding of parent holding company obligations for at least 12 months; however, due to conservative liquidity management actions taken by the Firm in the current environment, the current pre-funding of such obligations is significantly greater than target.

Global Liquidity Reserve

In addition to the parent holding company, the Firm maintains a significant amount of liquidity – primarily at its bank subsidiaries, but also at its nonbank subsidiaries. The Global Liquidity Reserve represents consolidated sources of available liquidity to the Firm, including cash on deposit at central banks, and cash proceeds reasonably expected to be received in secured financings of highly liquid, unencumbered securities, such as government-issued debt, government- and FDIC-guaranteed corporate debt, U.S. government agency debt, and agency MBS. The liquidity amount estimated to be realized from secured financings is based on management's current judgment and assessment of the Firm's ability to quickly raise funds from secured financings. The Global Liquidity Reserve also includes the Firm's borrowing capacity at various FHLBs, the Federal Reserve Bank discount window and various other central banks as a result of collateral pledged by the Firm to such banks. Although considered as a source of available liquidity, the Firm does not view borrowing capacity at the Federal Reserve Bank discount window and various other central banks as a primary source of funding.

As of December 31, 2011, the Global Liquidity Reserve was estimated to be approximately $379 billion, compared with approximately $262 billion at December 31, 2010. The increase in the Global Liquidity Reserve reflected the placement of funds with various central banks, including Federal Reserve Banks, which was driven by an increase in deposits during the second half of 2011. For further discussion see Sources of funds below.

In addition to the Global Liquidity Reserve, the Firm has significant amounts of other high-quality, marketable securities available to raise liquidity, such as corporate debt and equity securities.

Basel III

On December 16, 2010, the Basel Committee published the final Basel III rules pertaining to capital and liquidity requirements, including minimum standards for short-term liquidity coverage – the liquidity coverage ratio (the "LCR") – and term funding – the net stable funding ratio (the "NSFR"). For more information, see the discussion on Basel III on pages 121–122 of this Annual Report.

Funding

Sources of funds

A key strength of the Firm is its diversified deposit franchise, through the RFS, CB, TSS and AM lines of business, which provides a stable source of funding and decreases reliance on the wholesale markets. As of December 31, 2011, total deposits for the Firm were $1,127.8 billion, compared with $930.4 billion at December 31, 2010. The significant increase in deposits was predominantly due to an overall growth in wholesale client balances and, to a lesser extent, consumer deposit balances. The increase in wholesale client balances, particularly in TSS and CB, was primarily driven by lower returns on other available alternative investments and low interest rates during 2011. Also contributing to the increase in deposits was growth in the number of clients and level of deposits in AM and RFS (the RFS deposits were net of attrition related to the conversion of Washington Mutual Free Checking accounts). Average total deposits for the Firm were $1,012.0 billion and $881.1 billion for the years ended December 31, 2011 and 2010, respectively.

The Firm typically experiences higher customer deposit inflows at period-ends. A significant portion of the Firm's deposits are retail deposits (35% and 40% at December 31, 2011 and 2010, respectively), which are considered particularly stable as they are less sensitive to interest rate changes or market volatility. A significant portion of the Firm's wholesale deposits are also considered to be stable sources of funding due to the nature of the relationships from which they are generated, particularly customers' operating service relationships with the Firm. As of December 31, 2011, the Firm's deposits-to-loans ratio was 156%, compared with 134% at December 31, 2010. For further discussions of deposit and liability balance trends, see the discussion of the results for the Firm's business segments and the Balance Sheet Analysis on pages 79–80 and 110–112, respectively, of this Annual Report.

Additional sources of funding include a variety of unsecured and secured short-term and long-term instruments. Short-term unsecured funding sources include federal funds and Eurodollars purchased, certificates of deposit, time deposits, commercial paper and other borrowed funds. Long-term unsecured funding sources include long-term debt, preferred stock and common stock.

The Firm's short-term secured sources of funding consist of securities loaned or sold under agreements to repurchase and other short-term secured other borrowed funds. Secured long-term funding sources include asset-backed

securitizations, and borrowings from the Chicago, Pittsburgh and San Francisco FHLBs.

Funding markets are evaluated on an ongoing basis to achieve an appropriate global balance of unsecured and secured funding at favorable rates.

Short-term funding

The Firm's reliance on short-term unsecured funding sources is limited. Short-term unsecured funding sources include federal funds and Eurodollars purchased, which represent overnight funds; certificates of deposit; time deposits; commercial paper, which is generally issued in amounts not less than $100,000 and with maturities of 270 days or less; and other borrowed funds, which consist of demand notes, term federal funds purchased, and various other borrowings that generally have maturities of one year or less.

Total commercial paper liabilities were $51.6 billion as of December 31, 2011, compared with $35.4 billion as of December 31, 2010. However, of those totals, $47.4 billion and $29.2 billion as of December 31, 2011 and 2010, respectively, originated from deposits that customers chose to sweep into commercial paper liabilities as a cash management product offered by the Firm. Therefore, commercial paper liabilities sourced from wholesale funding markets were $4.2 billion as of December 31, 2011, compared with $6.2 billion as of December 31, 2010; the average balance of commercial paper liabilities sourced from wholesale funding markets were $6.1 billion and $9.5 billion for the years ended December 31, 2011 and 2010, respectively.

Securities loaned or sold under agreements to repurchase, which generally mature between one day and three months, are secured predominantly by high-quality securities collateral, including government-issued debt, agency debt and agency MBS. The balances of securities loaned or sold under agreements to repurchase, which constitute a significant portion of the federal funds purchased and securities loaned or sold under repurchase agreements, was $212.0 billion as of December 31, 2011, compared with $273.3 billion as of December 31, 2010; the average balance was $252.6 billion and $271.5 billion for the years ended December 31, 2011 and 2010, respectively. At December 31, 2011, the decline in the balance, compared with the balance at December 31, 2010, and the average balance for the year ended December 31, 2011, was driven largely by lower financing of the Firm's trading assets and change in the mix of funding sources. The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the Firm's matched book activity; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment and market-making portfolios); and other market and portfolio factors.

Total other borrowed funds was $21.9 billion as of December 31, 2011, compared with $34.3 billion as of December 31, 2010; the average balance of other borrowed funds was $30.9 billion and $33.0 billion for the years ended December 31, 2011 and 2010, respectively. At December 31, 2011, the decline in the balance, compared with the balance at December 31, 2010, and the average balances for the year ended December 31, 2011, was predominantly driven by maturities of short-term unsecured bank notes, short-term FHLB advances, and other secured short-term borrowings.

For additional information, see the Balance Sheet Analysis on pages 110–112, Note 13 on page 231 and the table of Short-term and other borrowed funds on page 307 of this Annual Report.

Long-term funding and issuance

During the year ended December 31, 2011, the Firm issued $49.0 billion of long-term debt, including $29.0 billion of senior notes issued in the U.S. market, $5.2 billion of senior notes issued in non-U.S. markets, and $14.8 billion of IB structured notes. In addition, in January 2012, the Firm issued $3.3 billion of senior notes in the U.S. market and $2.1 billion of senior notes in non-U.S. markets. During the year ended December 31, 2010, the Firm issued $36.1 billion of long-term debt, including $17.1 billion of senior notes issued in U.S. markets, $2.9 billion of senior notes issued in non-U.S. markets, $1.5 billion of trust preferred capital debt securities and $14.6 billion of IB structured notes. During the year ended December 31, 2011, $58.5 billion of long-term debt matured or was redeemed, including $18.7 billion of IB structured notes. During the year ended December 31, 2010, $53.4 billion of long-term debt matured or was redeemed, including $907 million of trust preferred capital debt securities and $22.8 billion of IB structured notes.

In addition to the unsecured long-term funding and issuances discussed above, the Firm securitizes consumer credit card loans, residential mortgages, auto loans and student loans for funding purposes. During the year ended December 31, 2011, the Firm securitized $1.8 billion of credit card loans; $14.0 billion of loan securitizations matured or were redeemed, including $13.6 billion of credit card loan securitizations, $156 million of residential mortgage loan securitizations and $322 million of student loan securitizations. During the year ended December 31, 2010, the Firm did not securitize any loans for funding purposes; $25.8 billion of loan securitizations matured or were redeemed, including $24.9 billion of credit card loan securitizations, $294 million of residential mortgage loan securitizations, $326 million of student loan securitizations, and $210 million of auto loan securitizations.

In addition, the Firm's wholesale businesses securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm.

During the year ended December 31, 2011, the Firm borrowed $4.0 billion in long-term advances from the FHLBs and there were $9.2 billion of maturities. For the year ended December 31, 2010, the Firm borrowed $18.7 billion in long-term advances from the FHLBs, which was offset by $18.6 billion of maturities.

Cash flows

For the years ended December 31, 2011, 2010 and 2009, cash and due from banks increased $32.0 billion and $1.4 billion, and decreased $689 million, respectively. The following discussion highlights the major activities and transactions that affected JPMorgan Chase's cash flows during 2011, 2010 and 2009, respectively.

Cash flows from operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's capital markets and lending activities, including the origination or purchase of loans initially designated as held-for-sale. Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities, and market conditions. Management believes cash flows from operations, available cash balances and the Firm's ability to generate cash through short- and long-term borrowings are sufficient to fund the Firm's operating liquidity needs.

For the year ended December 31, 2011, net cash provided by operating activities was $95.9 billion. This resulted from a net decrease in trading assets and liabilities–debt and equity instruments, driven by client market-making activity in IB; an increase in accounts payable and other liabilities predominantly due to higher IB customer balances; and a decrease in accrued interest and accounts receivables, primarily in IB, driven by a large reduction in customer margin receivables due to changes in client activity. Partially offsetting these cash proceeds was an increase in securities borrowed, predominantly in Corporate due to higher excess cash positions at year-end. Net cash generated from operating activities was higher than net income largely as a result of adjustments for noncash items such as the provision for credit losses, depreciation and amortization, and stock-based compensation. Additionally, cash provided by proceeds from sales and paydowns of loans originated or purchased with an initial intent to sell was higher than cash used to acquire such loans, and also reflected a higher level of activity over the prior-year period.

For the year ended December 31, 2010, net cash used by operating activities was $3.8 billion, mainly driven by an increase primarily in trading assets–debt and equity instruments; principally due to improved market activity primarily in equity securities, foreign debt and physical commodities, partially offset by an increase in trading liabilities due to higher levels of positions taken to facilitate customer-driven activity. Net cash was provided by net income and from adjustments for non-cash items such as the provision for credit losses, depreciation and amortization and stock-based compensation. Additionally, proceeds from sales and paydowns of loans originated or purchased with an initial intent to sell were higher than cash used to acquire such loans.

For the year ended December 31, 2009, net cash provided by operating activities was $122.8 billion, reflecting the net decline in trading assets and liabilities affected by the impact of the challenging capital markets environment that existed in 2008, and continued into the first half of 2009. Net cash generated from operating activities was higher than net income, largely as a result of adjustments for non-cash items such as the provision for credit losses. In addition, proceeds from sales, securitizations and paydowns of loans originated or purchased with an initial intent to sell were higher than cash used to acquire such loans, but the cash flows from these loan activities remained at reduced levels as a result of the lower activity in these markets.

Cash flows from investing activities

The Firm's investing activities predominantly include loans originated to be held for investment, the AFS securities portfolio and other short-term interest-earning assets. For the year ended December 31, 2011, net cash of $170.8 billion was used in investing activities. This resulted from a significant increase in deposits with banks reflecting the placement of funds with various central banks, including Federal Reserve Banks, predominantly resulting from the overall growth in wholesale client deposits; an increase in loans reflecting continued growth in client activity across all of the Firm's wholesale businesses and regions; net purchases of AFS securities, largely due to repositioning of the portfolio in Corporate in response to changes in the market environment; and an increase in securities purchased under resale agreements, predominantly in Corporate due to higher excess cash positions at year-end. Partially offsetting these cash outflows were a decline in consumer, excluding credit card, loan balances due to paydowns and portfolio run-off, and in credit card loans, due to higher repayment rates, run-off of the Washington Mutual portfolio and the Firm's sale of the Kohl's portfolio.

For the year ended December 31, 2010, net cash of $54.0 billion was provided by investing activities. This resulted from a decrease in deposits with banks largely due to a decline in deposits placed with the Federal Reserve Bank and lower interbank lending as market stress eased since the end of 2009; net proceeds from sales and maturities of AFS securities used in the Firm's interest rate risk management activities in Corporate; and a net decrease in the credit card loan portfolio, driven by the expected runoff of the Washington Mutual portfolio, a decline in lower-yielding promotional credit card balances, continued runoff of loan balances in the consumer, excluding credit card portfolio, primarily related to residential real estate, and repayments and loan sales in the wholesale portfolio, primarily in IB and CB; the decrease was partially offset by higher originations across the wholesale and consumer businesses. Partially offsetting these cash proceeds was an increase in securities purchased under resale agreements,

predominantly due to higher financing volume in IB; and cash used for business acquisitions, primarily RBS Sempra.

For the year ended December 31, 2009, net cash of $29.4 billion was provided by investing activities, primarily from a decrease in deposits with banks reflecting lower demand for inter-bank lending and lower deposits with the Federal Reserve Bank relative to the elevated levels at the end of 2008; a net decrease in the loan portfolio across most businesses, driven by continued lower customer demand and loan sales in the wholesale portfolio, lower charge volume on credit cards, slightly higher credit card securitizations, and paydowns; and the maturity of all asset-backed commercial paper issued by money market mutual funds in connection with the Federal Reserve Bank of Boston's Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility ("AML facility"). Largely offsetting these cash proceeds were net purchases of AFS securities associated with the Firm's management of interest rate risk and investment of cash resulting from an excess funding position.

Cash flows from financing activities

The Firm's financing activities primarily reflect cash flows related to taking customer deposits, and issuing long-term debt as well as preferred and common stock. For the year ended December 31, 2011, net cash provided by financing activities was $107.7 billion. This was largely driven by a significant increase in deposits, predominantly due to an overall growth in wholesale client balances and, to a lesser extent, consumer deposit balances. The increase in wholesale client balances, particularly in TSS and CB, was primarily driven by lower returns on other available alternative investments and low interest rates during 2011, and in AM, driven by growth in the number of clients and level of deposits. In addition, there was an increase in commercial paper due to growth in the volume of liability balances in sweep accounts related to TSS's cash management product. Cash was used to reduce securities sold under repurchase agreements, predominantly in IB, reflecting the lower funding requirements of the Firm based on lower trading inventory levels, and change in the mix of funding sources; for net repayments of long-term borrowings, including a decrease in long-term debt, predominantly due to net redemptions and maturities, as well as a decline in long-term beneficial interests issued by consolidated VIEs due to maturities of Firm-sponsored credit card securitization transactions; to reduce other borrowed funds, predominantly driven by maturities of short-term secured borrowings, unsecured bank notes and short-term FHLB advances; and for repurchases of common stock and warrants, and payments of cash dividends on common and preferred stock.

In 2010, net cash used in financing activities was $49.2 billion. This resulted from net repayments of long-term borrowings as new issuances were more than offset by payments primarily reflecting a decline in beneficial interests issued by consolidated VIEs due to maturities related to Firm-sponsored credit card securitization trusts; a decline in deposits associated with wholesale funding activities due to the Firm's lower funding needs; lower deposit levels in TSS, offset partially by net inflows from existing customers and new business in AM, CB and RFS; a decline in commercial paper and other borrowed funds due to lower funding requirements; payments of cash dividends; and repurchases of common stock. Cash was generated as a result of an increase in securities sold under repurchase agreements largely as a result of an increase in activity levels in IB partially offset by a decrease in CIO reflecting repositioning activities.

In 2009, net cash used in financing activities was $153.1 billion; this reflected a decline in wholesale deposits, predominantly in TSS, driven by the continued normalization of wholesale deposit levels resulting from the mitigation of credit concerns, compared with the heightened market volatility and credit concerns in the latter part of 2008; a decline in other borrowings, due to the absence of borrowings from the Federal Reserve under the Term Auction Facility program; net repayments of short-term advances from FHLBs and the maturity of the nonrecourse advances under the Federal Reserve Bank of Boston AML Facility; the June 17, 2009, repayment in full of the $25.0 billion principal amount of Series K Preferred Stock issued to the U.S. Treasury; and the payment of cash dividends on common and preferred stock. Cash was also used for the net repayment of long-term borrowings as issuances of FDIC-guaranteed debt and non-FDIC guaranteed debt in both the U.S. and European markets were more than offset by repayments including long-term advances from FHLBs. Cash proceeds resulted from an increase in securities loaned or sold under repurchase agreements, partly attributable to favorable pricing and to financing the increased size of the Firm's AFS securities portfolio; and the issuance of $5.8 billion of common stock. There were no repurchases of common stock or the warrants during 2009.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on page 113, and Note 6 on pages 202–210, respectively, of this Annual Report.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures.

The credit ratings of the parent holding company and each of the Firm's significant banking subsidiaries as of December 31, 2011, were as follows.

	Short-term debt			Senior long-term debt		
	Moody's	S&P	Fitch	Moody's	S&P	Fitch
JPMorgan Chase & Co.	P-1	A-1	F1+	Aa3	A	AA-
JPMorgan Chase Bank, N.A.	P-1	A-1	F1+	Aa1	A+	AA-
Chase Bank USA, N.A.	P-1	A-1	F1+	Aa1	A+	AA-

On July 18, 2011, Moody's placed the long-term debt ratings of the Firm and its subsidiaries under review for possible downgrade. The Firm's current long-term debt ratings by Moody's reflect "support uplift" above the Firm's stand-alone financial strength due to Moody's assessment of the likelihood of U.S. government support. Moody's action was directly related to Moody's placing the U.S. government's Aaa rating on review for possible downgrade on July 13, 2011. Moody's indicated that the action did not reflect a change to Moody's opinion of the Firm's stand-alone financial strength. The short-term debt ratings of the Firm and its subsidiaries were affirmed and were not affected by the action. Subsequently, on August 3, 2011, Moody's confirmed the long-term debt ratings of the Firm and its subsidiaries at their current levels and assigned a negative outlook on the ratings. The rating confirmation was directly related to Moody's confirmation on August 2, 2011, of the Aaa rating assigned to the U.S. government.

On November 29, 2011, S&P lowered the long-term debt rating of the parent holding company from A+ to A, and the long-term and short-term debt ratings of the Firm's significant banking subsidiaries from AA- to A+ and from A-1+ to A-1, respectively. The action resulted from a review of the Firm along with all other banks rated by S&P under S&P's revised bank rating criteria. The downgrade had no adverse impact on the Firm's ability to fund itself.

The senior unsecured ratings from Moody's and Fitch on JPMorgan Chase and its principal bank subsidiaries remained unchanged at December 31, 2011, from December 31, 2010. At December 31, 2011, Moody's outlook was negative, while S&P's and Fitch's outlooks were stable.

On February 15, 2012, Moody's announced that it had placed 17 banks and securities firms with global capital markets operations on review for possible downgrade, including JPMorgan Chase. As part of this announcement, the long-term ratings of the Firm and its major operating entities were placed on review for possible downgrade, while all of the Firm's short-term ratings were affirmed.

If the Firm's senior long-term debt ratings were downgraded by one notch or two notches, the Firm believes its cost of funds would increase; however, the Firm's ability to fund itself would not be materially adversely impacted. JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Rating agencies continue to evaluate various ratings factors, such as regulatory reforms, economic uncertainty and sovereign creditworthiness, and their potential impact on ratings of financial institutions. Although the Firm closely monitors and endeavors to manage factors influencing its credit ratings, there is no assurance that its credit ratings will not be changed in the future.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit (for example, through loans, lending-related commitments, guarantees and derivatives) to a variety of customers, from large corporate and institutional clients to the individual consumers and small businesses. Loans originated or acquired by the Firm's wholesale businesses are generally retained on the balance sheet. Credit risk management actively monitors the wholesale portfolio to ensure that it is well diversified across industry, geography, risk rating, maturity and individual client categories. Portfolio management for wholesale loans includes, for the Firm's syndicated loan business, distributing originations into the market place and targeting exposure held in the retained wholesale portfolio at less than 10% of the customer facility. With regard to the consumer credit market, the Firm focuses on creating a portfolio that is diversified from a product, industry and geographic perspective. Loss mitigation strategies are being employed for all residential real estate portfolios. These strategies include interest rate reductions, term or payment extensions, principal and interest deferral and other actions intended to minimize economic loss and avoid foreclosure. In the mortgage business, originated loans are either retained in the mortgage portfolio or securitized and sold to U.S. government agencies and U.S. government-sponsored enterprises.

Credit risk organization

Credit risk management is overseen by the Chief Risk Officer and implemented within the lines of business. The Firm's credit risk management governance consists of the following functions:

- Establishing a comprehensive credit risk policy framework
- Monitoring and managing credit risk across all portfolio segments, including transaction and line approval
- Assigning and managing credit authorities in connection with the approval of all credit exposure
- Managing criticized exposures and delinquent loans
- Determining the allowance for credit losses and ensuring appropriate credit risk-based capital management

Risk identification and measurement

The Firm is exposed to credit risk through lending and capital markets activities. Credit Risk Management works in partnership with the business segments in identifying and aggregating exposures across all lines of business. To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the amount of exposure should the obligor or the counterparty default, the probability of default and the loss severity given a default event. Based on these factors and related market-based inputs, the Firm estimates both probable losses and unexpected losses for the wholesale and consumer portfolios as follows:

- Probable credit losses are based primarily upon statistical estimates of credit losses as a result of obligor or counterparty default. However, probable losses are not the sole indicators of risk.
- Unexpected losses, reflected in the allocation of credit risk capital, represent the potential volatility of actual losses relative to the probable level of incurred losses.

Risk measurement for the wholesale portfolio is assessed primarily on a risk-rated basis; for the consumer portfolio, it is assessed primarily on a credit-scored basis.

Risk-rated exposure

Risk ratings are assigned to differentiate risk within the portfolio and are reviewed on an ongoing basis by Credit Risk Management and revised, if needed, to reflect the borrowers' current financial positions, risk profiles and the related collateral. For portfolios that are risk-rated, probable and unexpected loss calculations are based on estimates of probability of default and loss severity given a default. These risk-rated portfolios are generally held in IB, CB, TSS and AM; they also include approximately $20.0 billion of certain business banking loans in RFS and certain auto loans in Card that are risk-rated because they have characteristics similar to commercial loans. Probability of default is the likelihood that a loan will default and will not be repaid. Probability of default is calculated for each client who has a risk-rated loan. Loss given default is an estimate of losses given a default event and takes into consideration collateral and structural support for each credit facility. Calculations and assumptions are based on management information systems and methodologies which are under continual review.

Credit-scored exposure

For credit-scored portfolios (generally held in RFS and Card), probable loss is based on a statistical analysis of inherent losses expected to emerge over discrete periods of time for each portfolio. The credit-scored portfolio includes residential real estate loans, credit card loans, certain auto and business banking loans, and student loans. Probable credit losses inherent in the portfolio are estimated using sophisticated portfolio modeling, credit scoring and decision-support tools, which take into account factors such as delinquency, LTV ratios, credit scores and geography. These analyses are applied to the Firm's current portfolios in order to estimate the severity of losses, which determines the amount of probable losses. Other risk characteristics utilized to evaluate probable losses include recent loss experience in the portfolios, changes in origination sources, portfolio seasoning, potential borrower behavior and the macroeconomic environment. These factors and analyses are updated on a quarterly basis or more frequently as market conditions dictate.

Risk monitoring and control

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit and to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

For consumer credit risk, delinquency and other trends, including any concentrations at the portfolio level, are monitored for potential problems, as certain of these trends can be ameliorated through changes in underwriting policies and portfolio guidelines. Consumer Credit Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Historical and forecasted trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio. In the Firm's consumer credit portfolio, the Internal Audit

department periodically tests the internal controls around the modeling process including the integrity of the data utilized. For further discussion of consumer loans, see Note 14 on pages 231–252 of this Annual Report.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry and individual counterparty basis with established concentration limits that are reviewed and revised, as deemed appropriate by management, typically on an annual basis. Industry and counterparty limits, as measured in terms of exposure and economic credit risk capital, are subject to stress-based loss constraints.

Management of the Firm's wholesale exposure is accomplished through a number of means including:

- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Use of master netting agreements
- Collateral and other risk-reduction techniques

In addition to Risk Management, the Firm's Internal Audit department performs periodic exams, as well as continuous review, where appropriate, of the Firm's consumer and wholesale portfolios.

For risk-rated portfolios, a credit review group within the Internal Audit department is responsible for:

- Independently assessing and validating the changing risk grades assigned to exposures; and
- Evaluating the effectiveness of business units' risk ratings, including the accuracy and consistency of risk grades, the timeliness of risk grade changes and the justification of risk grades in credit memoranda

Risk reporting

To enable monitoring of credit risk and decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior Credit Risk Management. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, senior management. For further discussion of Risk monitoring and control, see pages 126–127 of this Annual Report.

CREDIT PORTFOLIO

2011 Credit Risk Overview

In the first half of 2011, the credit environment showed signs of improvement compared with 2010. During the second half of the year, macroeconomic conditions became more challenging, with increased market volatility and heightened concerns around the European financial crisis. Over the course of the year, the Firm continued to actively manage its underperforming and nonaccrual loans and reduce such exposures through repayments, loan sales and workouts. The Firm also saw decreased downgrade, default and charge-off activity and improved consumer delinquency trends. At the same time, the Firm increased its overall lending activity driven by the wholesale businesses. The combination of these factors resulted in an improvement in the credit quality of the portfolio compared with 2010 and contributed to the Firm's reduction in the allowance for credit losses, particularly in Card.

The credit quality of the Firm's wholesale portfolio improved in 2011. The rise in commercial client activity resulted in an increase in credit exposure across all businesses, regions and products. Underwriting guidelines across all areas of lending continue to remain in focus, consistent with evolving market conditions and the Firm's risk management activities. The wholesale portfolio continues to be actively managed, in part by conducting ongoing, in-depth reviews of credit quality and of industry, product and client concentrations. During the year, criticized assets, nonperforming assets and charge-offs decreased from higher levels experienced in 2010, including a reduction in nonaccrual loans by over one half. As a result, the ratio of nonaccrual loans to total loans, the net charge-off rate and the allowance for loan loss coverage ratio all declined. For further discussion of wholesale loans, see Note 14 on pages 231–252 of this Annual Report.

The credit performance of the consumer portfolio across the entire product spectrum has improved, particularly in credit card, with lower levels of delinquent loans and charge-offs. Weak overall economic conditions continued to have a negative impact on the number of real estate loans charged off, while continued weak housing prices have resulted in an elevated severity of loss recognized on these defaulted loans. The Firm has taken proactive steps to assist homeowners most in need of financial assistance throughout the economic downturn. In addition, the Firm has taken actions since the onset of the economic downturn in 2007 to tighten underwriting and loan qualification standards and to eliminate certain products and loan origination channels, which have resulted in the reduction of credit risk and improved credit performance for recent loan vintages. For further discussion of the consumer credit environment and consumer loans, see Consumer Credit Portfolio on pages 145–154 and Note 14 on pages 231–252 of this Annual Report.

The following table presents JPMorgan Chase's credit portfolio as of December 31, 2011 and 2010. Total credit exposure was $1.8 trillion at December 31, 2011, an

increase of $44.4 billion from December 31, 2010, reflecting increases in loans of $30.8 billion, lending related commitments of $17.0 billion and derivative receivables of $12.0 billion. These increases were partially offset by a decrease in receivables from customers and interests in purchased receivables of $15.4 billion. The $44.4 billion net increase during 2011 in total credit exposure reflected an increase in the wholesale portfolio of $88.6 billion partially offset by a decrease in the consumer portfolio of $44.2 billion.

The Firm provided credit to and raised capital of more than $1.8 trillion for its clients during 2011, up 18% from 2010; this included $17 billion lent to small businesses, up 52%, and $68 billion to more than 1,200 not-for-profit and government entities, including states, municipalities, hospitals and universities. The Firm also originated more than 765,000 mortgages, and provided credit cards to approximately 8.5 million consumers. The Firm remains committed to helping homeowners and preventing foreclosures. Since the beginning of 2009, the Firm has offered more than 1.2 million mortgage modifications of which approximately 452,000 have achieved permanent modification as of December 31, 2011.

In the table below, reported loans include loans retained (i.e., held-for-investment); loans held-for-sale (which are carried at the lower of cost or fair value, with changes in value recorded in noninterest revenue); and loans accounted for at fair value. For additional information on the Firm's loans and derivative receivables, including the Firm's accounting policies, see Note 14 and Note 6 on pages 231–252 and 202–210, respectively, of this Annual Report. Average retained loan balances are used for net charge-off rate calculations.

Total credit portfolio

As of or for the year ended December 31,	Credit exposure		Nonperforming[c][d][e]		Net charge-offs		Average annual net charge-off rate[f]	
(in millions, except ratios)	**2011**	2010	**2011**	2010	**2011**	2010	**2011**	2010
Loans retained	**$ 718,997**	$ 685,498	**$ 9,810**	$ 14,345	**$ 12,237**	$ 23,673	**1.78%**	3.39%
Loans held-for-sale	**2,626**	5,453	**110**	341	**–**	–	**–**	–
Loans at fair value	**2,097**	1,976	**73**	155	**–**	–	**–**	–
Total loans – reported	**723,720**	692,927	**9,993**	14,841	**12,237**	23,673	**1.78**	3.39
Derivative receivables	**92,477**	80,481	**18**	34	**NA**	NA	**NA**	NA
Receivables from customers and interests in purchased receivables	**17,561**	32,932	**–**	–	**–**	–	**–**	–
Total credit-related assets	**833,758**	806,340	**10,011**	14,875	**12,237**	23,673	**1.78**	3.39
Lending-related commitments[a]	**975,662**	958,709	**865**	1,005	**NA**	NA	**NA**	NA
Assets acquired in loan satisfactions								
Real estate owned	**NA**	NA	**975**	1,610	**NA**	NA	**NA**	NA
Other	**NA**	NA	**50**	72	**NA**	NA	**NA**	NA
Total assets acquired in loan satisfactions	**NA**	NA	**1,025**	1,682	**NA**	NA	**NA**	NA
Total credit portfolio	**$ 1,809,420**	$ 1,765,049	**$ 11,901**	$ 17,562	**$ 12,237**	$ 23,673	**1.78%**	3.39%
Net credit derivative hedges notional[b]	**$ (26,240)**	$ (23,108)	**$ (38)**	$ (55)	**NA**	NA	**NA**	NA
Liquid securities and other cash collateral held against derivatives	**(21,807)**	(16,486)	**NA**	NA	**NA**	NA	**NA**	NA

(a) The amounts in nonperforming represent commitments that are risk rated as nonaccrual.

(b) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage both performing and nonperforming credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on pages 143–144 and Note 6 on pages 202–210 of this Annual Report.

(c) At December 31, 2011 and 2010, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $11.5 billion and $9.4 billion, respectively, that are 90 or more days past due; (2) real estate owned insured by U.S. government agencies of $954 million and $1.9 billion, respectively; and (3) student loans insured by U.S. government agencies under the FFELP of $551 million and $625 million, respectively, that are 90 or more days past due. These amounts were excluded as reimbursement of insured amounts is proceeding normally. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council ("FFIEC"). Credit card loans are charged-off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

(d) Excludes PCI loans acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

(e) At December 31, 2011 and 2010, total nonaccrual loans represented 1.38% and 2.14% of total loans .

(f) For the years ended December 31, 2011 and 2010, net charge-off rates were calculated using average retained loans of $688.2 billion and $698.2 billion, respectively. These average retained loans include average PCI loans of $69.0 billion and $77.0 billion, respectively. Excluding these PCI loans, the Firm's total charge-off rates would have been 1.98% and 3.81%, respectively.

WHOLESALE CREDIT PORTFOLIO

As of December 31, 2011, wholesale exposure (IB, CB, TSS and AM) increased by $88.6 billion from December 31, 2010. The overall increase was primarily driven by increases of $55.4 billion in loans, $36.7 billion in lending-related commitments and $12.0 billion in derivative receivables. These increases were partially offset by a decrease in receivables from customers and interests in purchased receivables of $15.5 billion. The growth in wholesale loans and lending related commitments represented increased client activity across all businesses and all regions. The increase in derivative receivables was predominantly due to increases in interest rate derivatives driven by declining interest rates, and higher commodity derivatives driven by price movements in base metals and energy. The decrease in receivables from customers and interests in purchased receivables was due to changes in client activity, primarily in IB. Effective January 1, 2011, the commercial card credit portfolio (composed of approximately $5.3 billion of lending-related commitments and $1.2 billion of loans) that was previously in TSS was transferred to Card.

Wholesale credit portfolio

December 31,	Credit exposure		Nonperforming[d]	
(in millions)	**2011**	2010	**2011**	2010
Loans retained	**$ 278,395**	$ 222,510	**$ 2,398**	$ 5,510
Loans held-for-sale	**2,524**	3,147	**110**	341
Loans at fair value	**2,097**	1,976	**73**	155
Loans – reported	**283,016**	227,633	**2,581**	6,006
Derivative receivables	**92,477**	80,481	**18**	34
Receivables from customers and interests in purchased receivables[a]	**17,461**	32,932	**–**	–
Total wholesale credit-related assets	**392,954**	341,046	**2,599**	6,040
Lending-related commitments[b]	**382,739**	346,079	**865**	1,005
Total wholesale credit exposure	**$ 775,693**	$ 687,125	**$ 3,464**	$ 7,045
Net credit derivative hedges notional[c]	**$ (26,240)**	$ (23,108)	**$ (38)**	$ (55)
Liquid securities and other cash collateral held against derivatives	**(21,807)**	(16,486)	**NA**	NA

(a) Receivables from customers primarily represent margin loans to prime and retail brokerage customers, which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets. Interests in purchased receivables represents ownership interests in cash flows of a pool of receivables transferred by third-party sellers into bankruptcy-remote entities, generally trusts, which are included in other assets on the Consolidated Balance Sheets.

(b) The amounts in nonperforming represent commitments that are risk-rated as nonaccrual.

(c) Represents the net notional amount of protection purchased and sold of single-name and portfolio credit derivatives used to manage both performing and nonperforming credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on pages 143–144, and Note 6 on pages 202–210 of this Annual Report.

(d) Excludes assets acquired in loan satisfactions.

The following table presents summaries of the maturity and ratings profiles of the wholesale portfolio as of December 31, 2011 and 2010. The increase in loans retained was predominately in loans to investment-grade ("IG") counterparties and was largely loans having a shorter maturity profile. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings as defined by S&P and Moody's. Also included in this table is the notional value of net credit derivative hedges; the counterparties to these hedges are predominantly investment-grade banks and finance companies.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[c]				Ratings profile			
December 31, 2011	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	Investment-grade	Noninvestment-grade	**Total**	Total % of IG
(in millions, except ratios)					AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below		
Loans retained	**$ 113,222**	**$ 101,959**	**$ 63,214**	**$ 278,395**	**$ 197,070**	**$ 81,325**	**$ 278,395**	**71%**
Derivative receivables				**92,477**			**92,477**	
Less: Liquid securities and other cash collateral held against derivatives				**(21,807)**			**(21,807)**	
Total derivative receivables, net of all collateral	**8,243**	**29,910**	**32,517**	**70,670**	**57,637**	**13,033**	**70,670**	**82**
Lending-related commitments	**139,978**	**233,396**	**9,365**	**382,739**	**310,107**	**72,632**	**382,739**	**81**
Subtotal	**261,443**	**365,265**	**105,096**	**731,804**	**564,814**	**166,990**	**731,804**	**77**
Loans held-for-sale and loans at fair value[a]				**4,621**			**4,621**	
Receivables from customers and interests in purchased receivables				**17,461**			**17,461**	
Total exposure – net of liquid securities and other cash collateral held against derivatives				**$ 753,886**			**$ 753,886**	
Net credit derivative hedges notional[b]	**$ (2,034)**	**$ (16,450)**	**$ (7,756)**	**$ (26,240)**	**$ (26,300)**	**$ 60**	**$ (26,240)**	**100%**

	Maturity profile[c]				Ratings profile			
December 31, 2010	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	Investment-grade	Noninvestment-grade	**Total**	Total % of IG
(in millions, except ratios)					AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below		
Loans retained	$ 78,017	$ 85,987	$ 58,506	$ 222,510	$ 146,047	$ 76,463	$ 222,510	66%
Derivative receivables				80,481			80,481	
Less: Liquid securities and other cash collateral held against derivatives				(16,486)			(16,486)	
Total derivative receivables, net of all collateral	11,499	24,415	28,081	63,995	47,557	16,438	63,995	74
Lending-related commitments	126,389	209,299	10,391	346,079	276,298	69,781	346,079	80
Subtotal	215,905	319,701	96,978	632,584	469,902	162,682	632,584	74
Loans held-for-sale and loans at fair value[a]				5,123			5,123	
Receivables from customers and interests in purchased receivables				32,932			32,932	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 670,639			$ 670,639	
Net credit derivative hedges notional[b]	$ (1,228)	$ (16,415)	$ (5,465)	$ (23,108)	$ (23,159)	$ 51	$ (23,108)	100%

(a) Represents loans held-for-sale primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
(b) Represents the net notional amounts of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP.
(c) The maturity profiles of retained loans and lending-related commitments are based on the remaining contractual maturity. The maturity profiles of derivative receivables are based on the maturity profile of average exposure. For further discussion of average exposure, see Derivative receivables on pages 141–144 of this Annual Report.

Receivables from customers primarily represent margin loans to prime and retail brokerage clients and are collateralized through a pledge of assets maintained in clients' brokerage accounts that are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's position may be liquidated by the Firm to meet the minimum collateral requirements.

Wholesale credit exposure – selected industry exposures

The Firm focuses on the management and diversification of its industry exposures, with particular attention paid to industries with actual or potential credit concerns. Exposures deemed criticized generally represent a ratings profile similar to a rating of "CCC+"/"Caa1" and lower, as defined by S&P and Moody's, respectively. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, decreased 29% to $15.9 billion at December 31, 2011, from $22.4 billion at December 31, 2010. The decrease was primarily related to net repayments and loan sales.

Below are summaries of the top 25 industry exposures as of December 31, 2011 and 2010. For additional information on industry concentrations, see Note 5 on page 201 of this Annual Report.

As of or for the year ended December 31, 2011 (in millions)	Credit exposure[d]	Investment-grade	Noninvestment-grade			30 days or more past due and accruing loans	Full year net charge-offs/ (recoveries)	Credit derivative hedges[e]	Liquid securities and other cash collateral held against derivative receivables
			Noncriticized	Criticized performing	Criticized nonperforming				
Top 25 industries[a]									
Banks and finance companies	$ 71,440	$ 59,115	$ 11,742	$ 560	$ 23	$ 20	$ (211)	$ (3,053)	$ (9,585)
Real estate	67,594	40,921	21,541	4,246	886	411	256	(97)	(359)
Healthcare	42,247	35,147	6,817	247	36	166	–	(304)	(320)
State and municipal governments[b]	41,930	40,565	1,124	225	16	23	–	(185)	(147)
Oil and gas	35,437	25,004	10,337	96	–	3	–	(119)	(88)
Asset managers	33,465	28,835	4,530	99	1	24	–	–	(4,807)
Consumer products	29,637	19,728	9,439	447	23	3	13	(272)	(50)
Utilities	28,650	23,557	4,423	614	56	–	76	(105)	(359)
Retail and consumer services	22,891	14,568	7,796	464	63	15	1	(96)	(1)
Technology	17,898	12,494	5,085	319	–	–	4	(191)	–
Central government	17,138	16,524	488	126	–	–	–	(9,796)	(813)
Machinery and equipment manufacturing	16,498	9,014	7,375	103	6	1	(1)	(19)	–
Transportation	16,305	12,061	4,070	149	25	6	17	(178)	–
Metals/mining	15,254	8,716	6,388	150	–	6	(19)	(423)	–
Insurance	13,092	9,425	3,064	591	12	–	–	(552)	(454)
Business services	12,408	7,093	5,168	113	34	17	22	(20)	(2)
Securities firms and exchanges	12,394	10,799	1,564	30	1	10	73	(395)	(3,738)
Media	11,909	6,853	3,921	720	415	1	18	(188)	–
Building materials/construction	11,770	5,175	5,674	917	4	6	(4)	(213)	–
Chemicals/plastics	11,728	7,867	3,720	140	1	–	–	(95)	(20)
Telecom services	11,552	8,502	2,235	814	1	2	5	(390)	–
Automotive	9,910	5,699	4,188	23	–	9	(11)	(819)	–
Aerospace	8,560	7,646	848	66	–	7	–	(208)	–
Agriculture/paper manufacturing	7,594	4,888	2,586	120	–	9	–	-	–
Leisure	5,650	3,051	1,752	629	218	1	1	(81)	(26)
All other[c]	180,660	161,568	17,011	1,486	595	1,099	200	(8,441)	(1,038)
Subtotal	$ 753,611	$ 584,815	$ 152,886	$ 13,494	$ 2,416	$ 1,839	$ 440	$ (26,240)	$ (21,807)
Loans held-for-sale and loans at fair value	4,621								
Receivables from customers and interests in purchased receivables	17,461								
Total	$ 775,693								

Presented below is a discussion of several industries to which the Firm has significant exposure, as well as industries the Firm continues to monitor because of actual or potential credit concerns. For additional information, refer to the tables above and on the next page.

- **Banks and finance companies:** Exposure to this industry increased by $5.6 billion or 8%, and criticized exposure decreased 3%, compared with 2010. The portfolio increased from 2010 and the investment grade portion remained high in proportion to the overall industry increase. At December 31, 2011, 83% of the portfolio continued to be rated investment-grade, unchanged from 2010.
- **Real estate:** Exposure to this sector increased by $3.2 billion or 5%, in 2011 to $67.6 billion. The increase was primarily driven by CB, partially offset by decreases in credit exposure in IB. The credit quality of this industry improved as the investment-grade portion of this industry increased by 19% from 2010, while the criticized portion declined by 45% from 2010, primarily as a result of repayments and loans sales. The ratio of nonaccrual loans to total loans decreased to 2% from 5% in line with the decrease in real estate criticized exposure. For further information on commercial real estate loans, see Note 14 on pages 231–252 of this Annual Report.

As of or for the year ended December 31, 2010 (in millions)	Credit exposure[d]	Investment-grade	Noninvestment-grade			30 days or more past due and accruing loans	Full year net charge-offs/ (recoveries)	Credit derivative hedges[e]	Liquid securities and other cash collateral held against derivative receivables
			Noncriticized	Criticized performing	Criticized nonperforming				
Top 25 industries[a]									
Banks and finance companies	$ 65,867	$ 54,839	$ 10,428	$ 467	$ 133	$ 26	$ 69	$ (3,456)	$ (9,216)
Real estate	64,351	34,440	20,569	6,404	2,938	399	862	(76)	(57)
Healthcare	41,093	33,752	7,019	291	31	85	4	(768)	(161)
State and municipal governments[b]	35,808	34,641	912	231	24	34	3	(186)	(233)
Oil and gas	26,459	18,465	7,850	143	1	24	–	(87)	(50)
Asset managers	29,364	25,533	3,401	427	3	7	–	–	(2,948)
Consumer products	27,508	16,747	10,379	371	11	217	1	(752)	(2)
Utilities	25,911	20,951	4,101	498	361	3	49	(355)	(230)
Retail and consumer services	20,882	12,021	8,316	338	207	8	23	(623)	(3)
Technology	14,348	9,355	4,534	399	60	47	50	(158)	–
Central government	11,173	10,677	496	–	–	–	–	(6,897)	(42)
Machinery and equipment manufacturing	13,311	7,690	5,372	244	5	8	2	(74)	(2)
Transportation	9,652	6,630	2,739	245	38	–	(16)	(132)	–
Metals/mining	11,426	5,260	5,748	362	56	7	35	(296)	–
Insurance	10,918	7,908	2,690	320	–	–	(1)	(805)	(567)
Business services	11,247	6,351	4,735	115	46	11	15	(5)	–
Securities firms and exchanges	9,415	7,678	1,700	37	–	–	5	(38)	(2,358)
Media	10,967	5,808	3,945	672	542	2	92	(212)	(3)
Building materials/construction	12,808	6,557	5,065	1,129	57	9	6	(308)	–
Chemicals/plastics	12,312	8,375	3,656	274	7	–	2	(70)	–
Telecom services	10,709	7,582	2,295	821	11	3	(8)	(820)	–
Automotive	9,011	3,915	4,822	269	5	–	52	(758)	–
Aerospace	5,732	4,903	732	97	–	–	–	(321)	–
Agriculture/paper manufacturing	7,368	4,510	2,614	242	2	8	7	(44)	(2)
Leisure	5,405	2,895	1,367	941	202	–	90	(253)	(21)
All other[c]	146,025	128,074	15,648	1,499	804	954	385	(5,614)	(591)
Subtotal	$ 649,070	$ 485,557	$ 141,133	$ 16,836	$ 5,544	$ 1,852	$ 1,727	$ (23,108)	$ (16,486)
Loans held-for-sale and loans at fair value	5,123								
Receivables from customers and interests in purchased receivables	32,932								
Total	$ 687,125								

(a) All industry rankings are based on exposure at December 31, 2011. The industry rankings presented in the table as of December 31, 2010, are based on the industry rankings of the corresponding exposures at December 31, 2011, not actual rankings of such exposures at December 31, 2010.

(b) In addition to the credit risk exposure to states and municipal governments at December 31, 2011 and 2010, noted above, the Firm held $16.7 billion and $14.0 billion, respectively, of trading securities and $16.5 billion and $11.6 billion, respectively, of AFS securities issued by U.S. state and municipal governments. For further information, see Note 3 and Note 12 on pages 184–198 and 225–230, respectively, of this Annual Report.

(c) For further information on the All other category refer to the discussion in the following section on page 140 of this Annual Report. All other for credit derivative hedges includes credit default swap ("CDS") index hedges of CVA.

(d) Credit exposure is net of risk participations and excludes the benefit of credit derivative hedges and collateral held against derivative receivables or loans.

(e) Represents the net notional amounts of protection purchased and sold of single-name and portfolio credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP.

- **State and municipal governments:** Exposure to this segment increased by $6.1 billion or 17% in 2011 to $41.9 billion. Lending-related commitments comprise approximately 67% of exposure to this sector, generally in the form of bond and commercial paper liquidity and standby letter of credit commitments. Credit quality of the portfolio remains high as 97% of the portfolio was rated investment-grade, unchanged from 2010. Criticized exposure was less than 1% of this industry's exposure. The non-U.S. portion of this industry was less than 5% of the total. The Firm continues to actively monitor and manage this exposure in light of the challenging environment faced by state and municipal governments. For further discussion of commitments for bond liquidity and standby letters of credit, see Note 29 on pages 283–289 of this Annual Report.
- **Media:** Exposure to this industry increased by 9% to $11.9 billion in 2011. Criticized exposure of $1.1 billion decreased by 7% in 2011 from $1.2 billion, but remains elevated relative to total industry exposure due to continued pressure on the traditional media business model from expanding digital and online technology.
- **All other:** All other at December 31, 2011 (excluding loans held-for-sale and loans at fair value), included $180.7 billion of credit exposure. Concentrations of exposures include: (1) Individuals, Private Education & Civic Organizations, which were 54% of this category and (2) SPEs which were 35% of this category. Each of these categories has high credit quality, and over 90% of each of these categories were rated investment-grade. SPEs provide secured financing (generally backed by receivables, loans or bonds with a diverse group of obligors); the lending in this category was all secured and well-structured. For further discussion of SPEs, see Note 1 on pages 182–183 and Note 16 on pages 256–267 of this Annual Report. The remaining exposure within this category is well-diversified, with no category being more than 6% of its total.

The following table presents the geographic distribution of wholesale credit exposure including nonperforming assets and past due loans as of December 31, 2011 and 2010. The geographic distribution of the wholesale portfolio is determined based predominantly on the domicile of the borrower.

	Credit exposure				Nonperforming					
December 31, 2011 (in millions)	Loans	Lending-related commitments	Derivative receivables	Total credit exposure	Nonaccrual loans[a]	Derivatives	Lending-related commitments	Total non-performing credit exposure	Assets acquired in loan satisfactions	30 days or more past due and accruing loans
Europe/Middle East/Africa	**$ 36,637**	**$ 60,681**	**$ 43,204**	**$ 140,522**	**$ 44**	**$ –**	**$ 25**	**$ 69**	**$ –**	**$ 68**
Asia/Pacific	**31,119**	**17,194**	**10,943**	**59,256**	**1**	**13**	**–**	**14**	**–**	**6**
Latin America/Caribbean	**25,141**	**20,859**	**5,316**	**51,316**	**386**	**–**	**15**	**401**	**3**	**222**
Other North America	**2,267**	**6,680**	**1,488**	**10,435**	**3**	**–**	**1**	**4**	**–**	**–**
Total non-U.S.	**95,164**	**105,414**	**60,951**	**261,529**	**434**	**13**	**41**	**488**	**3**	**296**
Total U.S.	**183,231**	**277,325**	**31,526**	**492,082**	**1,964**	**5**	**824**	**2,793**	**176**	**1,543**
Loans held-for-sale and loans at fair value	**4,621**	**–**	**–**	**4,621**	**183**	**NA**	**–**	**183**	**NA**	**–**
Receivables from customers and interests in purchased receivables	**–**	**–**	**–**	**17,461**	**–**	**NA**	**NA**	**–**	**NA**	**–**
Total	**$ 283,016**	**$ 382,739**	**$ 92,477**	**$ 775,693**	**$ 2,581**	**$ 18**	**$ 865**	**$ 3,464**	**$ 179**	**$ 1,839**

	Credit exposure				Nonperforming					
December 31, 2010 (in millions)	Loans	Lending-related commitments	Derivative receivables	Total credit exposure	Nonaccrual loans[a]	Derivatives	Lending-related commitments	Total non-performing credit exposure	Assets acquired in loan satisfactions	30 days or more past due and Accruing loans
Europe/Middle East/Africa	$ 27,934	$ 58,418	$ 35,196	$ 121,548	$ 153	$ 1	$ 23	$ 177	$ –	$ 127
Asia/Pacific	20,552	15,002	10,991	46,545	579	21	–	600	–	74
Latin America/Caribbean	16,480	12,170	5,634	34,284	649	–	13	662	1	131
Other North America	1,185	6,149	2,039	9,373	6	–	5	11	–	–
Total non-U.S.	66,151	91,739	53,860	211,750	1,387	22	41	1,450	1	332
Total U.S.	156,359	254,340	26,621	437,320	4,123	12	964	5,099	320	1,520
Loans held-for-sale and loans at fair value	5,123	–	–	5,123	496	NA	–	496	NA	–
Receivables from customers and interests in purchased receivables	–	–	–	32,932	–	NA	NA	–	NA	–
Total	$ 227,633	$ 346,079	$ 80,481	$ 687,125	$ 6,006	$ 34	$ 1,005	$ 7,045	$ 321	$ 1,852

(a) At December 31, 2011 and 2010, the Firm held an allowance for loan losses of $496 million and $1.6 billion, respectively, related to nonaccrual retained loans resulting in allowance coverage ratios of 21% and 29%, respectively. Wholesale nonaccrual loans represented 0.91% and 2.64% of total wholesale loans at December 31, 2011 and 2010, respectively.

Loans

In the normal course of business, the Firm provides loans to a variety of wholesale customers, from large corporate and institutional clients to high-net-worth individuals. For further discussion on loans, including information on credit quality indicators, see Note 14 on pages 231–252 of this Annual Report.

The Firm actively manages wholesale credit exposure. One way of managing credit risk is through sales of loans and lending-related commitments. During 2011, the Firm sold $5.2 billion of loans and commitments, recognizing net gains of $22 million. During 2010, the Firm sold $8.3 billion of loans and commitments, recognizing net gains of $99 million. These results included gains or losses on sales of nonaccrual loans, if any, as discussed below. These sale activities are not related to the Firm's securitization activities. For further discussion of securitization activity, see Liquidity Risk Management and Note 16 on pages 127–132 and 256–267 respectively, of this Annual Report.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2011 and 2010. Nonaccrual wholesale loans decreased by $3.4 billion from December 31, 2010, primarily reflecting net repayments and loan sales.

Wholesale nonaccrual loan activity

Year ended December 31, (in millions)	2011	2010
Beginning balance	**$ 6,006**	$ 6,904
Additions	**2,519**	9,249
Reductions:		
Paydowns and other	**2,841**	5,540
Gross charge-offs	**907**	1,854
Returned to performing status	**807**	364
Sales	**1,389**	2,389
Total reductions	**5,944**	10,147
Net additions/(reductions)	**(3,425)**	(898)
Ending balance	**$ 2,581**	$ 6,006

The following table presents net charge-offs, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2011 and 2010. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

Wholesale net charge-offs

Year ended December 31, (in millions, except ratios)	2011	2010
Loans – reported		
Average loans retained	**$ 245,111**	$ 213,609
Net charge-offs/(recoveries)	**440**	1,727
Net charge-off/(recovery) rate	**0.18%**	0.81%

Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activity. Derivatives enable customers and the Firm to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its credit exposure. For further discussion of derivative contracts, see Note 5 and Note 6 on page 201 and 202–210, respectively, of this Annual Report.

The following tables summarize the net derivative receivables for the periods presented

Derivative receivables

	Derivative receivables	
December 31, (in millions)	2011	2010
Interest rate	**$ 46,369**	$ 32,555
Credit derivatives	**6,684**	7,725
Foreign exchange	**17,890**	25,858
Equity	**6,793**	4,204
Commodity	**14,741**	10,139
Total, net of cash collateral	**92,477**	80,481
Liquid securities and other cash collateral held against derivative receivables	**(21,807)**	(16,486)
Total, net of all collateral	**$ 70,670**	$ 63,995

Derivative receivables reported on the Consolidated Balance Sheets were $92.5 billion and $80.5 billion at December 31, 2011 and 2010, respectively. These represent the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements, cash collateral held by the Firm and the CVA. However, in management's view, the appropriate measure of current credit risk should take into consideration additional liquid securities (primarily U.S. government and agency securities and other G7 government bonds) and other cash collateral held by the Firm of $21.8 billion and $16.5 billion at December 31, 2011 and 2010, respectively that may be used as security when the fair value of the client's exposure is in the Firm's favor, as shown in the table above.

In addition to the collateral described in the preceding paragraph the Firm also holds additional collateral (including cash, U.S. government and agency securities, and other G7 government bonds) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Though this collateral does not reduce the balances and is not included in the table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative transactions move in the Firm's favor. As of December 31, 2011 and 2010, the Firm held $17.6 billion and $18.0 billion, respectively, of this additional collateral. The derivative receivables fair value, net of all collateral, also do not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of

collateral agreements, see Note 6 on pages 202–210 of this Annual Report.

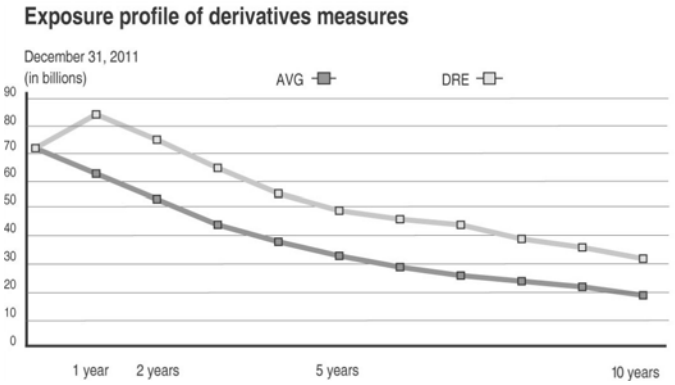
While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, AVG is a measure of the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the CVA, as further described below. AVG exposure was $53.6 billion and $45.3 billion at December 31, 2011 and 2010, respectively, compared with derivative receivables, net of all collateral, of $70.7 billion and $64.0 billion at December 31, 2011 and 2010, respectively.

The fair value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk management process takes into consideration the potential impact of wrong-way risk, which is broadly defined as the potential for increased correlation between the Firm's exposure to a counterparty (AVG) and the counterparty's credit quality. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with that counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to derivatives over the next 10 years as calculated by the DRE and AVG metrics. The two measures generally show declining exposure after the first year, if no new trades were added to the portfolio.



The following table summarizes the ratings profile of the Firm's derivative receivables, net of other liquid securities collateral, for the dates indicated.

Ratings profile of derivative receivables

Rating equivalent	**2011**		2010	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 25,100**	**35%**	$ 23,342	36%
A+/A1 to A-/A3	**22,942**	**32**	15,812	25
BBB+/Baa1 to BBB-/Baa3	**9,595**	**14**	8,403	13
BB+/Ba1 to B-/B3	**10,545**	**15**	13,716	22
CCC+/Caa1 and below	**2,488**	**4**	2,722	4
Total	**$ 70,670**	**100%**	$ 63,995	100%

As noted above, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's derivatives transactions subject to collateral agreements – excluding foreign exchange spot trades, which

are not typically covered by collateral agreements due to their short maturity – was 88% as of December 31, 2011, unchanged compared with December 31, 2010. The Firm posted $82.1 billion and $58.3 billion of collateral at December 31, 2011 and 2010, respectively.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller) when the reference entity suffers a credit event. If no credit event has occurred, the protection seller makes no payments to the protection purchaser.

As a purchaser of credit protection, the Firm has risk that the counterparty providing the credit protection will default. As a seller of credit protection, the Firm has risk that the underlying entity referenced in the contract will be subject to a credit event. Upon the occurrence of a credit event, which may include, among other events, the bankruptcy or failure to pay by, or certain restructurings of the debt of, the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the credit derivative contract and the fair value of the reference obligation at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is made by the relevant ISDA Determination Committee, comprised of 10 sell-side and five buy-side ISDA member firms.

One type of credit derivatives the Firm enters into with counterparties are CDS. The large majority of CDS are subject to collateral arrangements to protect the Firm from counterparty credit risk. The use of collateral to settle against defaulting counterparties has generally performed as designed and has significantly mitigated the Firm's exposure to these counterparties. In 2011 the frequency and size of defaults related to the underlying debt referenced in credit derivatives was lower than 2010. For a more detailed description of credit derivatives, including other types of credit derivatives, see Credit derivatives in Note 6 on pages 202–210 of this Annual Report.

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker in the dealer/client business to meet the needs of customers; and second, in order to mitigate the Firm's own credit risk associated with its overall derivative receivables and traditional commercial credit lending exposures (loans and unfunded commitments). For further information on the Firm's dealer/client business, see Credit derivatives in Note 6, on pages 202–210 of this Annual Report.

The following table presents the Firm's notional amounts of credit derivatives protection purchased and sold as of December 31, 2011 and 2010, distinguishing between dealer/client activity and credit portfolio activity.

Credit derivative notional amounts

	2011					2010				
	Dealer/client		Credit portfolio			Dealer/client		Credit portfolio		
December 31, (in millions)	Protection purchased[b]	Protection sold	Protection purchased	Protection sold	Total	Protection purchased[b]	Protection sold	Protection purchased	Protection sold	Total
Credit default swaps	**$ 2,800,975**	**$ 2,839,361**	**$ 26,371**	**$ 131**	**$ 5,666,838**	$ 2,661,657	$ 2,658,825	$ 23,523	$ 415	$ 5,344,420
Other credit derivatives[a]	**27,246**	**79,711**	**–**	**–**	**106,957**	34,250	93,776	–	–	128,026
Total	**$ 2,828,221**	**$ 2,919,072**	**$ 26,371**	**$ 131**	**$ 5,773,795**	$ 2,695,907	$ 2,752,601	$ 23,523	$ 415	$ 5,472,446

(a) Primarily consists of total return swaps and credit default swap options.
(b) At December 31, 2011 and 2010, included $2,803 billion and $2,662 billion, respectively, of notional exposure where the Firm has sold protection on the identical underlying reference instruments.

Dealer/client business

Within the dealer/client business, the Firm actively manages credit derivatives by buying and selling credit protection, predominantly on corporate debt obligations, according to client demand. For further information, see Note 6 on pages 202–210 of this Annual Report. At December 31, 2011, the total notional amount of protection purchased and sold increased by $298.8 billion from year-end 2010, primarily due to increased activity, particularly in the EMEA region.

Credit portfolio activities

Management of the Firm's wholesale exposure is accomplished through a number of means including loan syndication and participations, loan sales, securitizations, credit derivatives, use of master netting agreements, and collateral and other risk-reduction techniques. The Firm also manages its wholesale credit exposure by purchasing protection through single-name and portfolio credit derivatives to manage the credit risk associated with loans, lending-related commitments and derivative receivables. Changes in credit risk on the credit derivatives are expected to offset changes in credit risk on the loans, lending-related commitments or derivative receivables. This activity does not reduce the reported level of assets on the Consolidated Balance Sheets or the level of reported off-balance sheet commitments, although it does provide the Firm with credit risk protection.

Use of single-name and portfolio credit derivatives

	Notional amount of protection purchased and sold	
December 31, (in millions)	**2011**	2010
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 3,488**	$ 6,698
Derivative receivables	**22,883**	16,825
Total protection purchased	**26,371**	23,523
Total protection sold	**131**	415
Credit derivatives hedges notional, net	**$ 26,240**	$ 23,108

The credit derivatives used by JPMorgan Chase for credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure. In addition, the effectiveness of the Firm's CDS protection as a hedge of the Firm's exposures may vary depending upon a number of factors, including the contractual terms of the CDS. The fair value related to the Firm's credit derivatives used for managing credit exposure, as well as the fair value related to the CVA (which reflects the credit quality of derivatives counterparty exposure), are included in the gains and losses realized on credit derivatives disclosed in the table below. These results can vary from period to period due to market conditions that affect specific positions in the portfolio. For further information on credit derivative protection purchased in the context of country risk, see Country Risk Management on pages 163–165 of this Annual Report.

Net gains and losses on credit portfolio hedges

Year ended December 31, (in millions)	**2011**	2010	2009
Hedges of loans and lending-related commitments	**$ (32)**	$ (279)	$ (3,258)
CVA and hedges of CVA	**(769)**	(403)	1,920
Net gains/(losses)	**$ (801)**	$ (682)	$ (1,338)

Lending-related commitments

JPMorgan Chase uses lending-related financial instruments, such as commitments and guarantees, to meet the financing needs of its customers. The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligations under these guarantees, and the counterparties subsequently fails to perform according to the terms of these contracts.

In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's actual credit risk exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these commitments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn upon in an event of a default by an obligor. The loan-equivalent amount of the Firm's lending-related commitments was $206.5 billion and $178.9 billion as of December 31, 2011 and 2010, respectively.

CONSUMER CREDIT PORTFOLIO

JPMorgan Chase's consumer portfolio consists primarily of residential real estate loans, credit cards, auto loans, business banking loans, and student loans. The Firm's primary focus is on serving the prime segment of the consumer credit market. For further information on consumer loans, see Note 14 on pages 231–252 of this Annual Report.

A substantial portion of the consumer loans acquired in the Washington Mutual transaction were identified as PCI based on an analysis of high-risk characteristics, including product type, LTV ratios, FICO scores and delinquency status. These PCI loans are accounted for on a pool basis, and the pools are considered to be performing. For further information on PCI loans see Note 14 on pages 231–252 of this Annual Report.

The credit performance of the consumer portfolio across the entire product spectrum has improved, particularly in credit card, but high unemployment and weak overall economic conditions continued to result in an elevated number of residential real estate loans that were charged-off, and weak housing prices continued to negatively affect the severity of loss recognized on residential real estate loans that defaulted. Early-stage residential real estate delinquencies (30–89 days delinquent) declined during the first half of the year, but flattened during the second half of the year, while late-stage delinquencies (150+ days delinquent), excluding government guaranteed loans, have steadily declined in 2011. In spite of the declines, residential real estate loan delinquencies remained elevated. The elevated level of the late-stage delinquent loans is due, in part, to loss-mitigation activities currently being undertaken and to elongated foreclosure processing timelines. Losses related to these loans continued to be recognized in accordance with the Firm's standard charge-off practices, but some delinquent loans that would otherwise have been foreclosed upon remain in the mortgage and home equity loan portfolios. In addition to these elevated levels of delinquencies, ongoing weak economic conditions and housing prices, the estimated effects of the mortgage foreclosure-related settlement with federal and state officials, uncertainties regarding the ultimate success of loan modifications, and the risk attributes of certain loans within the portfolio (e.g., loans with high LTV ratios, junior lien loans behind a delinquent or modified senior lien) have resulted in a high level of uncertainty regarding credit risk in the residential real estate portfolio and have been considered in estimating the allowance for loan losses.

Since the global economic crisis began in mid-2007, the Firm has taken actions to reduce risk exposure to consumer loans by tightening both underwriting and loan qualification standards, as well as eliminating certain products and loan origination channels for residential real estate lending. To manage the risk associated with lending-related commitments, the Firm has reduced or canceled certain lines of credit as permitted by law. For example, the Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property or when there has been a demonstrable decline in the creditworthiness of the borrower. Also, the Firm typically closes credit card lines when the borrower is 60 days or more past due. The tightening of underwriting criteria for auto loans has resulted in the reduction of both extended-term and high LTV financing. In addition, new originations of private student loans are limited to school-certified loans, the majority of which include a qualified co-borrower.

The following table presents managed consumer credit-related information (including RFS, Card Services & Auto, and residential real estate loans reported in Asset Management and the Corporate/Private Equity segment) for the dates indicated. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 14 on pages 231–252 of this Annual Report.

Consumer credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonaccrual loans[g][h]		Net charge-offs		Average annual net charge-off rate[i][j]	
	2011	2010	**2011**	2010	**2011**	2010	**2011**	2010
Consumer, excluding credit card								
Loans, excluding PCI loans and loans held-for-sale								
Home equity – senior lien	**$ 21,765**	$ 24,376	**$ 495**	$ 479	**$ 284**	$ 262	**1.20%**	1.00%
Home equity – junior lien	**56,035**	64,009	**792**	784	**2,188**	3,182	**3.69**	4.63
Prime mortgage, including option ARMs	**76,196**	74,539	**3,462**	4,320	**708**	1,627	**0.95**	2.15
Subprime mortgage	**9,664**	11,287	**1,781**	2,210	**626**	1,374	**5.98**	10.82
Auto[a]	**47,426**	48,367	**118**	141	**152**	298	**0.32**	0.63
Business banking	**17,652**	16,812	**694**	832	**494**	707	**2.89**	4.23
Student and other	**14,143**	15,311	**69**	67	**420**	459	**2.85**	2.85
Total loans, excluding PCI loans and loans held-for-sale	**242,881**	254,701	**7,411**	8,833	**4,872**	7,909	**1.97**	3.00
Loans – PCI[b]								
Home equity	**22,697**	24,459	**NA**	NA	**NA**	NA	**NA**	NA
Prime mortgage	**15,180**	17,322	**NA**	NA	**NA**	NA	**NA**	NA
Subprime mortgage	**4,976**	5,398	**NA**	NA	**NA**	NA	**NA**	NA
Option ARMs	**22,693**	25,584	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – PCI	**65,546**	72,763	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – retained	**308,427**	327,464	**7,411**	8,833	**4,872**	7,909	**1.54**	2.32
Loans held-for-sale[c]	**–**	154	**–**	–	**–**	–	**–**	–
Total consumer, excluding credit card loans	**308,427**	327,618	**7,411**	8,833	**4,872**	7,909	**1.54**	2.32
Lending-related commitments								
Home equity – senior lien[d]	**16,542**	17,662						
Home equity – junior lien[d]	**26,408**	30,948						
Prime mortgage	**1,500**	1,266						
Subprime mortgage	–	–						
Auto	**6,694**	5,246						
Business banking	**10,299**	9,702						
Student and other	**864**	579						
Total lending-related commitments	**62,307**	65,403						
Receivables from customers[e]	**100**	–						
Total consumer exposure, excluding credit card	**370,834**	393,021						
Credit Card								
Loans retained[f]	**132,175**	135,524	**1**	2	**6,925**	14,037	**5.44**	9.73
Loans held-for-sale	**102**	2,152	**–**	–	**–**	–	**–**	–
Total credit card loans	**132,277**	137,676	**1**	2	**6,925**	14,037	**5.44**	9.73
Lending-related commitments[d]	**530,616**	547,227						
Total credit card exposure	**662,893**	684,903						
Total consumer credit portfolio	**$ 1,033,727**	$ 1,077,924	**$ 7,412**	$ 8,835	**$ 11,797**	$ 21,946	**2.66%**	4.53%
Memo: Total consumer credit portfolio, excluding PCI	**$ 968,181**	$ 1,005,161	**$ 7,412**	$ 8,835	**$ 11,797**	$ 21,946	**3.15%**	5.38%

(a) At December 31, 2011 and 2010, excluded operating lease-related assets of $4.4 billion and $3.7 billion, respectively.
(b) Charge-offs are not recorded on PCI loans until actual losses exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. To date, no charge-offs have been recorded for these loans.
(c) Represents prime mortgage loans held-for-sale.
(d) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases, without notice as permitted by law.
(e) Receivables from customers primarily represent margin loans to retail brokerage customers, which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.
(f) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(g) At December 31, 2011 and 2010, nonaccrual loans excluded: (1) mortgage loans insured by U.S. government agencies of $11.5 billion and $9.4 billion,

respectively, that are 90 or more days past due; and (2) student loans insured by U.S. government agencies under the FFELP of $551 million and $625 million, respectively, that are 90 or more days past due. These amounts were excluded as reimbursement of insured amounts is proceeding normally. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance. Under guidance issued by the FFIEC, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

(h) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

(i) Average consumer loans held-for-sale were $924 million and $1.5 billion, respectively, for the years ended December 31, 2011 and 2010. These amounts were excluded when calculating net charge-off rates.

(j) Net charge-off rates for 2010 reflect the impact of an aggregate $632 million adjustment related to the Firm's estimate of the net realizable value of the collateral underlying the loans at the charge-off date. Absent this adjustment, net charge-off rates would have been 0.92%, 4.57%, 1.73% and 8.87% for home equity – senior lien; home equity – junior lien; prime mortgage, including option ARMs; and subprime mortgage, respectively. Total consumer, excluding credit card and PCI loans, and total consumer, excluding credit card, net charge-off rates would have been 2.76% and 2.14%, respectively, excluding this adjustment.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances declined during the year ended December 31, 2011, due to paydowns, portfolio run-off and charge-offs. Credit performance has improved across most portfolios but remains under stress. The following discussion relates to the specific loan and lending-related categories. PCI loans are generally excluded from individual loan product discussions and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, see Note 14 on pages 231–252 of this Annual Report.

Home equity: Home equity loans at December 31, 2011, were $77.8 billion, compared with $88.4 billion at December 31, 2010. The decrease in this portfolio primarily reflected loan paydowns and charge-offs. Both senior lien and junior lien nonaccrual loans increased slightly from 2010. Senior lien early-stage delinquencies were relatively flat to 2010 and charge-offs increased slightly, but junior lien early-stage delinquencies and charge-offs showed improvement.

Approximately 20% of the Firm's home equity portfolio consists of home equity loans ("HELOANs") and the remainder consists of home equity lines of credit ("HELOCs"). HELOANs are generally fixed-rate, closed-end, amortizing loans, with terms ranging from 3–30 years. Approximately half of the HELOANs are senior liens and the remainder are junior liens. In general, HELOCs are open-ended, revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period. At the time of origination, the borrower typically selects one of two minimum payment options that will generally remain in effect during the revolving period: a monthly payment of 1% of the outstanding balance, or interest-only payments based on a variable index (typically Prime).

The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty or when the collateral does not support the loan amount. Because the majority of the HELOCs were funded in 2005 or later, a fully-amortizing payment is not required until 2015 or later for the most significant portion of the HELOC portfolio. The Firm regularly evaluates both the near-term and longer-term repricing risks inherent in its HELOC portfolio to ensure that the allowance for credit losses and its account management practices are appropriate given the portfolio risk profile.

At December 31, 2011, the Firm estimates that its home equity portfolio contained approximately $3.7 billion of junior lien loans where the borrower has a first mortgage loan that is either delinquent or has been modified ("high-risk seconds"). Such loans are considered to pose a higher risk of default than that of junior lien loans for which the senior lien is neither delinquent nor modified. Of this estimated $3.7 billion balance, the Firm owns approximately 5% and services approximately 30% of the related senior lien loans to these same borrowers. The Firm estimates the balance of its total exposure to high-risk seconds on a quarterly basis using summary-level output from a database of information about senior and junior lien mortgage and home equity loans maintained by one of the bank regulatory agencies. This database comprises loan-level data provided by a number of servicers across the industry (including JPMorgan Chase). The performance of the Firm's junior lien loans is generally consistent regardless of whether the Firm owns, services or does not own or service the senior lien. The increased probability of default associated with these higher-risk junior lien loans was considered in estimating the allowance for loan losses.

Mortgage: Mortgage loans at December 31, 2011, including prime, subprime and loans held-for-sale, were $85.9 billion, compared with $86.0 billion at December 31, 2010. Balances remained relatively flat as declines resulting from paydowns, portfolio run-off and the charge-off or liquidation of delinquent loans were offset by new prime mortgage originations and Ginnie Mae loans that the Firm elected to repurchase. Net charge-offs decreased from 2010 as a result of improvement in delinquencies, but remained elevated.

Prime mortgages, including option adjustable-rate mortgages ("ARMs") and loans held-for-sale, were $76.2 billion at December 31, 2011, compared with $74.7 billion at December 31, 2010. The increase was due primarily to

prime mortgage originations and Ginnie Mae loans that the Firm elected to repurchase, partially offset by the charge-off or liquidation of delinquent loans, paydowns, and portfolio run-off of option ARM loans. Excluding loans insured by U.S. government agencies, both early-stage and late-stage delinquencies showed modest improvement during the year but remained elevated. Nonaccrual loans showed improvement, but also remained elevated as a result of ongoing foreclosure processing delays. Net charge-offs declined year-over-year but remained high.

Option ARM loans, which are included in the prime mortgage portfolio, were $7.4 billion and $8.1 billion and represented 10% and 11% of the prime mortgage portfolio at December 31, 2011 and 2010, respectively. The decrease in option ARM loans resulted from portfolio run-off partially offset by the purchase of loans previously securitized as the securitization entities were terminated. The Firm's option ARM loans, other than those held in the PCI portfolio, are primarily loans with lower LTV ratios and higher borrower FICO scores. Accordingly, the Firm expects substantially lower losses on this portfolio when compared with the PCI option ARM pool. As of December 31, 2011, approximately 6% of option ARM borrowers were delinquent, 3% were making interest-only or negatively amortizing payments, and 91% were making amortizing payments (such payments are not necessarily fully amortizing). Approximately 85% of borrowers within the portfolio are subject to risk of payment shock due to future payment recast, as only a limited number of these loans have been modified. The cumulative amount of unpaid interest added to the unpaid principal balance due to negative amortization of option ARMs was not material at either December 31, 2011 or 2010. The Firm estimates the following balances of option ARM loans will experience a recast that results in a payment increase: $160 million in 2012, $528 million in 2013 and $636 million in 2014. The Firm did not originate option ARMs and new originations of option ARMs were discontinued by Washington Mutual prior to the date of JPMorgan Chase's acquisition of its banking operations.

Subprime mortgages at December 31, 2011, were $9.7 billion, compared with $11.3 billion at December 31, 2010. The decrease was due to portfolio run-off and the charge-off or liquidation of delinquent loans. Both early-stage and late-stage delinquencies improved from December 31, 2010. However, delinquencies and nonaccrual loans remained at elevated levels. Net charge-offs improved from the prior year.

Auto: Auto loans at December 31, 2011, were $47.4 billion, compared with $48.4 billion at December 31, 2010. Loan balances declined due to paydowns and payoffs, which were only partially offset by new originations reflecting the impact of increased competition. Delinquent and nonaccrual loans have decreased from December 31, 2010. Net charge-offs declined from the prior year as a result of a decline in loss severity due to a strong used-car market nationwide. The auto loan portfolio reflected a high concentration of prime-quality credits.

Business banking: Business banking loans at December 31, 2011, were $17.7 billion, compared with $16.8 billion at December 31, 2010. The increase was due to growth in new loan origination volumes. These loans primarily include loans that are collateralized, often with personal loan guarantees, and may also include Small Business Administration guarantees. Delinquent loans and nonaccrual loans showed some improvement from December 31, 2010, but remain elevated. Net charge-offs declined from the prior year.

Student and other: Student and other loans at December 31, 2011, were $14.1 billion, compared with $15.3 billion at December 31, 2010. The decrease was primarily due to paydowns and charge-offs of student loans. Other loans primarily include other secured and unsecured consumer loans. Delinquencies and nonaccrual loans remained elevated, but charge-offs decreased from 2010.

Purchased credit-impaired loans: PCI loans at December 31, 2011, were $65.5 billion, compared with $72.8 billion at December 31, 2010. This portfolio represents loans acquired in the Washington Mutual transaction, which were recorded at fair value at the time of acquisition.

During 2011, in connection with the Firm's quarterly review of the PCI portfolios' expected cash flows, management concluded that it was probable that higher expected credit losses would result in a decrease to the expected cash flows in certain portfolios. As a result, the Firm recognized an additional $770 million of impairment related to the home equity, prime mortgage and subprime mortgage PCI portfolios. As a result of this impairment, the Firm increased the allowance for loan losses for this portfolio. At December 31, 2011, the allowance for loan losses for the home equity, prime mortgage, option ARM and subprime mortgage PCI portfolios was $1.9 billion, $1.9 billion, $1.5 billion and $380 million, respectively, compared with an allowance for loan losses at December 31, 2010, of $1.6 billion, $1.8 billion, $1.5 billion and $98 million.

As of December 31, 2011, approximately 31% of the option ARM PCI loans were delinquent and 42% have been modified into fixed-rate, fully amortizing loans. Substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing; in addition, substantially all of these loans are subject to the risk of payment shock due to future payment recast. The cumulative amount of unpaid interest added to the unpaid principal balance of the option ARM PCI pool was $1.1 billion and $1.4 billion at December 31, 2011 and 2010, respectively. The Firm estimates the following balances of option ARM PCI loans will experience a recast that results in a payment increase: $2.1 billion in 2012 and $361 million in 2013 and $410 million in 2014.

The following table provides a summary of lifetime principal loss estimates included in both the nonaccretable difference and the allowance for loan losses. Lifetime principal loss estimates, which exclude the effect of foregone interest as a result of loan modifications, were relatively unchanged from December 31, 2010 to December 31, 2011. Although the credit quality of the non-modified PCI loans generally deteriorated during 2011, this was offset by a decrease in estimated principal losses on the modified portion of the PCI portfolio. The impairment recognized in the fourth quarter of 2011 was driven by an increase in estimated principal losses on non-modified PCI loans, as the improvement in estimated principal losses on modified PCI loans was predominately offset by contractual interest cash flows foregone as a result of the modification. Principal charge-offs will not be recorded on these pools until the nonaccretable difference has been fully depleted.

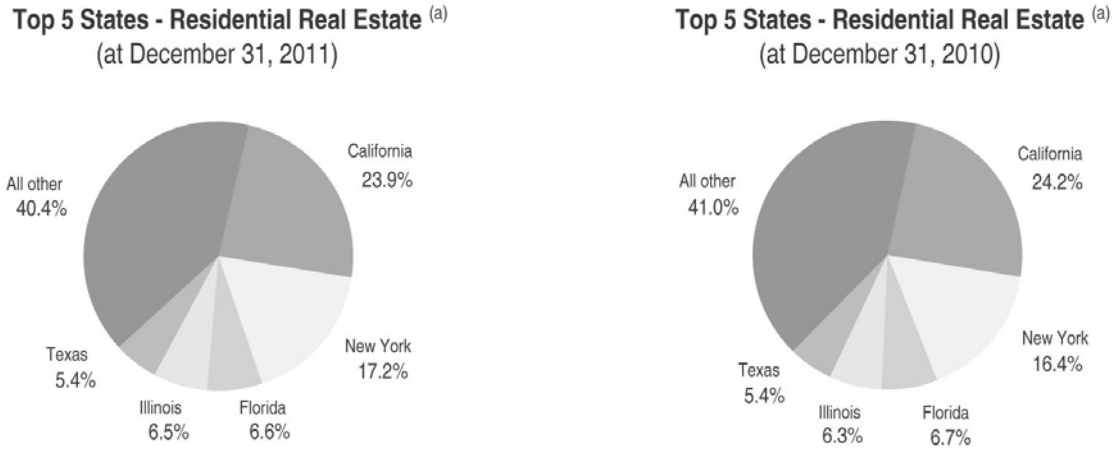
Summary of lifetime principal loss estimates

	Lifetime loss estimates[a]		LTD liquidation losses[b]	
December 31, (in billions)	**2011**	2010	**2011**	2010
Home equity	**$ 14.9**	$ 14.7	**$ 10.4**	$ 8.8
Prime mortgage	**4.6**	4.9	**2.3**	1.5
Subprime mortgage	**3.8**	3.7	**1.7**	1.2
Option ARMs	**11.5**	11.6	**6.6**	4.9
Total	**$ 34.8**	$ 34.9	**$ 21.0**	$ 16.4

(a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses only plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses only was $9.4 billion and $14.1 billion at December 31, 2011 and 2010, respectively.

(b) Life-to-date ("LTD") liquidation losses represent realization of loss upon loan resolution.

Geographic composition and current estimated LTVs of residential real estate loans



(a) Represents residential real estate loans retained, excluding purchased credit-impaired loans acquired in the Washington Mutual transaction and loans insured by U.S. government agencies.

The consumer, excluding credit card, loan portfolio is geographically diverse.

At both December 31, 2011 and 2010, California had the greatest concentration of residential real estate loans with 24% of the total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans. Of the total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans, $79.5 billion, or 54%, were concentrated in California, New York, Arizona, Florida and Michigan at December 31, 2011, compared with $86.4 billion, or 54%, at December 31, 2010. The unpaid principal balance of PCI loans concentrated in these five states represented 72% of total PCI loans at both December 31, 2011 and 2010.

The current estimated average LTV ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 83% at both December 31, 2011 and 2010. Excluding mortgage loans insured by U.S. government agencies and PCI loans, 24% of the retained portfolio had a current estimated LTV ratio greater than 100%, and 10% of the retained portfolio had a current estimated LTV ratio greater than 125% at both December 31, 2011 and 2010. The decline in home prices since 2007 has had a significant impact on the collateral values underlying the Firm's residential real estate loan portfolio. In general, the delinquency rate for loans with high LTV ratios is greater than the delinquency rate for loans in which the borrower has equity in the collateral. While a large portion of the loans with current estimated LTV ratios greater than 100% continue to pay and are current, the continued willingness and ability of these borrowers to pay remains uncertain.

The following table for PCI loans presents the current estimated LTV ratio, as well as the ratio of the carrying value of the underlying loans to the current estimated collateral value. Because such loans were initially measured at fair value, the ratio of the carrying value to the current estimated collateral value will be lower than the current estimated LTV ratio, which is based on the unpaid principal balance. The estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting ratios are necessarily imprecise and should therefore be viewed as estimates.

LTV ratios and ratios of carrying values to current estimated collateral values – PCI loans

	2011				2010			
December 31, (in millions, except ratios)	Unpaid principal balance	Current estimated LTV ratio[a]	Net carrying value[c]	Ratio of net carrying value to current estimated collateral value[c]	Unpaid principal balance	Current estimated LTV ratio[c]	Net carrying value[c]	Ratio of net carrying value to current estimated collateral value[c]
Home equity	**$ 25,064**	**117%** [b]	**$ 20,789**	**97%**	$ 28,312	117% [b]	$ 22,876	95%
Prime mortgage	**16,060**	**110**	**13,251**	**91**	18,928	109	15,556	90
Subprime mortgage	**7,229**	**115**	**4,596**	**73**	8,042	113	5,300	74
Option ARMs	**26,139**	**109**	**21,199**	**89**	30,791	111	24,090	87

(a) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated at least quarterly based on home valuation models that utilize nationally recognized home price index valuation estimates; such models incorporate actual data to the extent available and forecasted data where actual data is not available.

(b) Represents current estimated combined LTV for junior home equity liens, which considers all available lien positions related to the property. All other products are presented without consideration of subordinate liens on the property.

(c) Net carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition and is also net of the allowance for loan losses at December 31, 2011 and 2010, of $1.9 billion and $1.6 billion for home equity, respectively, $1.9 billion and $1.8 billion for prime mortgage, respectively, $1.5 billion and $1.5 billion for option ARMs, respectively, and $380 million and $98 million for subprime mortgage, respectively. Prior-period amounts have been revised to conform to the current-period presentation.

The current estimated average LTV ratios were 117% and 140% for California and Florida PCI loans, respectively, at December 31, 2011, compared with 118% and 135%, respectively, at December 31, 2010. Continued pressure on housing prices in California and Florida have contributed negatively to both the current estimated average LTV ratio and the ratio of net carrying value to current estimated collateral value for loans in the PCI portfolio. Of the PCI portfolio, 62% had a current estimated LTV ratio greater than 100%, and 31% had a current estimated LTV ratio greater than 125% at December 31, 2011, compared with 63% and 31%, respectively, at December 31, 2010.

While the current estimated collateral value is greater than the net carrying value of PCI loans, the ultimate performance of this portfolio is highly dependent on borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity, as well as on the cost of alternative housing. For further information on the geographic composition and current estimated LTVs of residential real estate – non-PCI and PCI loans, see Note 14 on pages 231–252 of this Annual Report.

Loan modification activities - residential real estate loans

For both the Firm's on-balance sheet loans and loans serviced for others, more than 1.2 million mortgage modifications have been offered to borrowers and approximately 461,000 have been approved since the beginning of 2009. Of these, approximately 452,000 have achieved permanent modification as of December 31, 2011. Of the remaining modifications offered, 23% are in a trial period or still being reviewed for a modification, while 77% have dropped out of the modification program or otherwise were not eligible for final modification.

The Firm is participating in the U.S. Treasury's Making Home Affordable ("MHA") programs and is continuing to expand its other loss-mitigation efforts for financially distressed borrowers who do not qualify for the U.S. Treasury's programs. The MHA programs include the Home Affordable Modification Program ("HAMP") and the Second Lien Modification Program ("2MP"). The Firm's other loss-mitigation programs for troubled borrowers who do not qualify for HAMP include the traditional modification programs offered by the GSEs and Ginnie Mae, as well as the Firm's proprietary modification programs, which include concessions similar to those offered under HAMP and 2MP but with expanded eligibility criteria. In addition, the Firm has offered specific targeted modification programs to higher risk borrowers, many of whom were current on their mortgages prior to modification.

Loan modifications under HAMP and under one of the Firm's proprietary modification programs, which is largely modeled after HAMP, require at least three payments to be made under the new terms during a trial modification period, and must be successfully re-underwritten with income verification before the loan can be permanently modified. In the case of specific targeted modification programs, re-underwriting the loan or a trial modification period is generally not required. When the Firm modifies

home equity lines of credit, future lending commitments related to the modified loans are canceled as part of the terms of the modification.

The primary indicator used by management to monitor the success of the modification programs is the rate at which the modified loans redefault. Modification redefault rates are affected by a number of factors, including the type of loan modified, the borrower's overall ability and willingness to repay the modified loan and macroeconomic factors. Reduction in payment size for a borrower has shown to be the most significant driver in improving redefault rates.

The performance of modified loans generally differs by product type and also based on whether the underlying loan is in the PCI portfolio, due both to differences in credit quality and in the types of modifications provided. Performance metrics for modifications to the residential real estate portfolio, excluding PCI loans, that have been seasoned more than six months show weighted average redefault rates of 21% for senior lien home equity, 14% for junior lien home equity, 13% for prime mortgages including option ARMs, and 28% for subprime mortgages. The cumulative performance metrics for modifications to the PCI residential real estate portfolio seasoned more than six months show weighted average redefault rates of 19% for home equity, 22% for prime mortgages, 9% for option ARMs and 31% for subprime mortgages. The favorable performance of the option ARM modifications is the result of a targeted proactive program which fixed the borrower's payment at the current level. The cumulative redefault rates reflect the performance of modifications completed under both HAMP and the Firm's proprietary modification programs from October 1, 2009, through December 31, 2011. However, given the limited experience, ultimate performance of the modifications remain uncertain.

The following table presents information as of December 31, 2011 and 2010, relating to modified on-balance sheet residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. Modifications of PCI loans continue to be accounted for and reported as PCI loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of estimated future cash flows. Modifications of consumer loans other than PCI loans are generally accounted for and reported as troubled debt restructurings ("TDRs"). For further information on TDRs for the year ended December 31, 2011, see Note 14 on pages 231–252 on this Annual Report.

Modified residential real estate loans

December 31, (in millions)	2011 On-balance sheet loans	2011 Nonaccrual on-balance sheet loans[d]	2010 On-balance sheet loans	2010 Nonaccrual on-balance sheet loans[d]
Modified residential real estate loans – excluding PCI loans[a][b]				
Home equity – senior lien	**$ 335**	**$ 77**	$ 226	$ 38
Home equity – junior lien	**657**	**159**	283	63
Prime mortgage, including option ARMs	**4,877**	**922**	2,084	534
Subprime mortgage	**3,219**	**832**	2,751	632
Total modified residential real estate loans – excluding PCI loans	**$ 9,088**	**$ 1,990**	$ 5,344	$ 1,267
Modified PCI loans[c]				
Home equity	**$ 1,044**	**NA**	$ 492	NA
Prime mortgage	**5,418**	**NA**	3,018	NA
Subprime mortgage	**3,982**	**NA**	3,329	NA
Option ARMs	**13,568**	**NA**	9,396	NA
Total modified PCI loans	**$ 24,012**	**NA**	$ 16,235	NA

(a) Amounts represent the carrying value of modified residential real estate loans.

(b) At December 31, 2011 and 2010, $4.3 billion and $3.0 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) were excluded from loans accounted for as TDRs. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. For additional information about sales of loans in securitization transactions with Ginnie Mae, see Note 16 on pages 256–267 of this Annual Report.

(c) Amounts represent the unpaid principal balance of modified PCI loans.

(d) Loans modified in a TDR that are on nonaccrual status may be returned to accrual status when repayment is reasonably assured and the borrower has made a minimum of six payments under the new terms. As of December 31, 2011 and 2010, nonaccrual loans included $886 million and $580 million, respectively, of TDRs for which the borrowers had not yet made six payments under the modified terms.

Foreclosure prevention: Foreclosure is a last resort, and the Firm makes significant efforts to help borrowers stay in their homes. Since the third quarter of 2009, the Firm has prevented two foreclosures (through loan modification, short sales, and other foreclosure prevention means) for every foreclosure completed.

The Firm has a well-defined foreclosure prevention process when a borrower fails to pay on his or her loan. Customer contacts are attempted multiple times in various ways to pursue options other than foreclosure. In addition, if the Firm is unable to contact a customer, various reviews are completed of a borrower's facts and circumstances before a foreclosure sale is completed. By the time of a foreclosure sale, borrowers have not made a payment on average for more than 17 months.

Nonperforming assets

The following table presents information as of December 31, 2011 and 2010, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[a]		
December 31, (in millions)	**2011**	2010
Nonaccrual loans[b][c]		
Home equity – senior lien	**$ 495**	$ 479
Home equity – junior lien	**792**	784
Prime mortgage, including option ARMs	**3,462**	4,320
Subprime mortgage	**1,781**	2,210
Auto	**118**	141
Business banking	**694**	832
Student and other	**69**	67
Total nonaccrual loans	**7,411**	8,833
Assets acquired in loan satisfactions		
Real estate owned	**802**	1,294
Other	**44**	67
Total assets acquired in loan satisfactions	**846**	1,361
Total nonperforming assets	**$ 8,257**	$ 10,194

(a) At December 31, 2011 and 2010, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $11.5 billion and $9.4 billion, respectively, that are 90 or more days past due; (2) real estate owned insured by U.S. government agencies of $954 million and $1.9 billion, respectively; and (3) student loans insured by U.S. government agencies under the FFELP of $551 million and $625 million, respectively, that are 90 or more days past due. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

(b) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

(c) At December 31, 2011 and 2010, consumer, excluding credit card nonaccrual loans represented 2.40% and 2.70%, respectively, of total consumer, excluding credit card loans.

Nonaccrual loans: Total consumer, excluding credit card, nonaccrual loans were $7.4 billion at December 31, 2011, compared with $8.8 billion at December 31, 2010. Nonaccrual loans have declined, but remain at elevated levels. The elongated foreclosure processing timelines is expected to continue to result in elevated levels of nonaccrual loans in the residential real estate portfolios. In addition, modified loans have also contributed to the elevated level of nonaccrual loans, since the Firm's policy requires modified loans that are on nonaccrual to remain on nonaccrual status until payment is reasonably assured and the borrower has made a minimum of six payments under the modified terms. Nonaccrual loans in the residential real estate portfolio totaled $6.5 billion at December 31, 2011, of which 69% were greater than 150 days past due; this compared with nonaccrual residential real estate loans of $7.8 billion at December 31, 2010, of which 71% were greater than 150 days past due. At December 31, 2011 and 2010, modified residential real estate loans of $2.0 billion and $1.3 billion, respectively, were classified as nonaccrual loans, of which $886 million and $580 million, respectively, had yet to make six payments under their modified terms; the remaining nonaccrual modified loans have redefaulted. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 50% and 46% to estimated collateral value at December 31, 2011 and 2010, respectively.

Real estate owned ("REO"): REO assets are managed for prompt sale and disposition at the best possible economic value. REO assets are those individual properties where the Firm gains ownership and possession at the completion of the foreclosure process. REO assets, excluding those insured by U.S. government agencies, decreased by $492 million from $1.3 billion at December 31, 2010, to $802 million at December 31, 2011.

Enhancements to mortgage servicing

During the second quarter of 2011, the Firm entered into Consent Orders with banking regulators relating to its residential mortgage servicing, foreclosure and loss-mitigation activities. In their Orders, the regulators have mandated significant changes to the Firm's servicing and default business and outlined requirements to implement these changes. In accordance with the requirements of the Consent Orders, the Firm submitted comprehensive action plans, the plans have been approved, and the Firm has commenced implementation. The plans sets forth the steps necessary to ensure the Firm's residential mortgage servicing, foreclosure and loss-mitigation activities are conducted in accordance with the requirements of the Orders.

To date, the Firm has implemented a number of corrective actions including the following:

- Established an independent Compliance Committee which meets regularly and monitors progress against the Consent Orders.
- Launched a new Customer Assistance Specialist organization for borrowers to facilitate the single point of contact initiative and ensure effective coordination and communication related to foreclosure, loss-mitigation and loan modification.
- Enhanced its approach to oversight over third-party vendors for foreclosure or other related functions.
- Standardized the processes for maintaining appropriate controls and oversight of the Firm's activities with respect to the Mortgage Electronic Registration system ("MERS") and compliance with MERSCORP's membership rules, terms and conditions.
- Strengthened its compliance program so as to ensure mortgage-servicing and foreclosure operations, including loss-mitigation and loan modification, comply with all applicable legal requirements.
- Enhanced management information systems for loan modification, loss-mitigation and foreclosure activities.
- Developed a comprehensive assessment of risks in servicing operations including, but not limited to, operational, transaction, legal and reputational risks.
- Made technological enhancements to automate and streamline processes for the Firm's document management, training, skills assessment and payment processing initiatives.
- Deployed an internal validation process to monitor progress under the comprehensive action plans.

In addition, pursuant to the Consent Orders, the Firm is required to enhance oversight of its mortgage servicing activities, including oversight by compliance, management and audit personnel and, accordingly, has made and continues to make changes in its organization structure, control oversight and customer service practices.

Pursuant to the Consent Orders, the Firm has retained an independent consultant to conduct a review of its residential foreclosure actions during the period from January 1, 2009, through December 31, 2010 (including foreclosure actions brought in respect of loans being serviced), and to remediate any errors or deficiencies identified by the independent consultant, including, if required, by reimbursing borrowers for any identified financial injury they may have incurred. The borrower outreach process was launched in the fourth quarter of 2011, and the independent consultant has begun its review. For additional information, see "Mortgage Foreclosure Investigations and Litigation" in Note 31 on pages 290–299 of this Annual Report.

In connection with the Firm's February 2012 settlement with the U.S. Department of Justice, other federal agencies, and the State Attorneys General relating to the Firm's residential mortgage servicing, foreclosure, loss mitigation and origination activities, the Firm will make significant further changes to its servicing and default business pursuant to servicing standards agreed upon in the settlement. The servicing standards include, among other items, the following enhancements to the Firm's servicing of loans: a pre-foreclosure notice to all borrowers, which will include account information, holder status, and loss mitigation steps taken; enhancements to payment application and collections processes; strengthening procedures for filings in bankruptcy proceedings; deploying specific restrictions on "dual track" of foreclosure and loss mitigation; standardizing the process for appeal of loss mitigation denials; and implementing certain restrictions on fees, including the waiver of certain fees while a borrower's loss mitigation application is being evaluated.

Credit Card

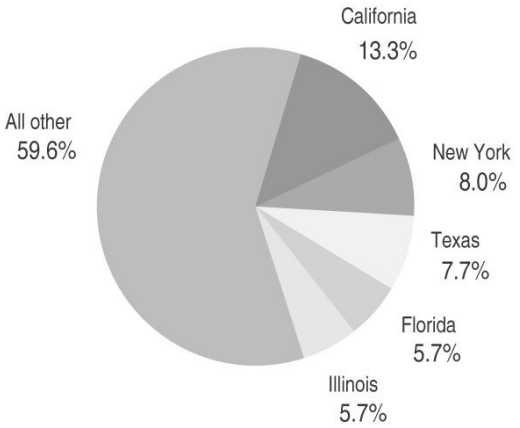
Total credit card loans were $132.3 billion at December 31, 2011, a decrease of $5.4 billion from December 31, 2010, due to higher repayment rates, runoff of the Washington Mutual portfolio and the Firm's sale of the $3.7 billion Kohl's portfolio on April 1, 2011.

For the retained credit card portfolio, the 30+ day delinquency rate decreased to 2.81% at December 31, 2011, from 4.14% at December 31, 2010. For the years ended December 31, 2011 and 2010, the net charge-off rates were 5.44% and 9.73% respectively. The delinquency trend showed improvement in the first half of the year, but delinquencies flattened during the second half of the year. Charge-offs have improved as a result of lower delinquent loans. The credit card portfolio continues to reflect a well-seasoned, largely rewards-based portfolio that has good U.S. geographic diversification. The greatest geographic concentration of credit card retained loans is in California, which represented 13% of total retained loans at both December 31, 2011 and 2010. Loan concentration for the top five states of California, New York, Texas, Florida and Illinois consisted of $53.6 billion in receivables, or 40% of the retained loan portfolio, at December 31, 2011, compared with $54.4 billion, or 40%, at December 31, 2010.

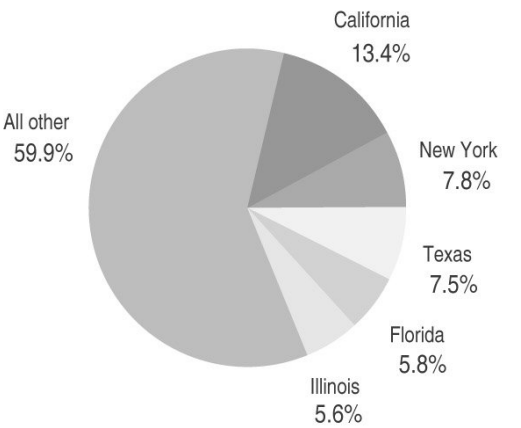
Total retained credit card loans, excluding the Washington Mutual portfolio, were $121.1 billion at December 31, 2011, compared with $121.8 billion at December 31, 2010. The 30+ day delinquency rate was 2.53% at December 31, 2011, down from 3.73% at December 31, 2010. For the years ended December 31, 2011 and 2010, the net charge-off rates were 4.91% and 8.73% respectively.

Retained credit card loans in the Washington Mutual portfolio were $11.1 billion at December 31, 2011, compared with $13.7 billion at December 31, 2010. The Washington Mutual portfolio's 30+ day delinquency rate was 5.82% at December 31, 2011, down from 7.74% at December 31, 2010. For the years ended December 31, 2011 and 2010, the net charge-off rates were 10.49% and 17.73% respectively.

Top 5 States Credit Card - Retained
(at December 31, 2011)



Top 5 States Credit Card - Retained
(at December 31, 2010)



Modifications of credit card loans

At December 31, 2011 and 2010, the Firm had $7.2 billion and $10.0 billion, respectively, of on-balance sheet credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms. The decrease in modified credit card loans outstanding from December 31, 2010, was attributable to a reduction in new modifications as well as ongoing payments and charge-offs on previously modified credit card loans.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status. However, the Firm establishes an allowance, which is reflected as a charge to interest income, for the estimated uncollectible portion of billed and accrued interest and fee income on credit card loans.

For additional information about loan modification programs to borrowers, see Note 14 on pages 231–252 of this Annual Report.

COMMUNITY REINVESTMENT ACT EXPOSURE

The Community Reinvestment Act ("CRA") encourages banks to meet the credit needs of borrowers in all segments of their communities, including neighborhoods with low or moderate incomes. JPMorgan Chase is a national leader in community development by providing loans, investments and community development services in communities across the United States.

At December 31, 2011 and 2010, the Firm's CRA loan portfolio was approximately $15 billion and $16 billion, respectively. At December 31, 2011 and 2010, 63% and 65%, respectively, of the CRA portfolio were residential mortgage loans; 17% and 15%, respectively, were business banking loans; 14%, for both periods, were commercial real estate loans; and 6%, for both periods, were other loans. CRA nonaccrual loans were 6% of the Firm's total nonaccrual loans at both December 31, 2011 and 2010, respectively. For the years ended December 31, 2011 and 2010, net charge-offs in the CRA portfolio were 3% for both periods, of the Firm's net charge-offs.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers the wholesale (risk-rated), and consumer, excluding credit card and credit card portfolios (primarily scored). The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also determines an allowance for wholesale and certain consumer, excluding credit card, lending-related commitments.

For a further discussion of the components of the allowance for credit losses, see Critical Accounting Estimates Used by the Firm on pages 168–169 and Note 15 on pages 252–255 of this Annual Report.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2011, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses inherent in the portfolio).

The allowance for credit losses was $28.3 billion at December 31, 2011, a decrease of $4.7 billion from $33.0 billion at December 31, 2010. The credit card allowance for loan losses decreased by $4.0 billion from December 31, 2010, primarily as a result of lower estimated losses primarily related to improved delinquency trends as well as lower levels of outstandings. The wholesale allowance for loan losses decreased by $445 million from December 31, 2010, primarily related to the impact of loan sales. The consumer, excluding credit card, allowance for loan losses decreased $177 million largely due to a reduction of $1.0 billion in the allowance related to the non-credit-impaired residential real estate portfolio, as estimated losses in that portfolio declined, predominantly offset by a $770 million increase related to an increase in estimated lifetime losses in the PCI portfolio.

The allowance for lending-related commitments for both the wholesale and consumer, excluding credit card portfolios, which is reported in other liabilities, totaled $673 million and $717 million at December 31, 2011 and 2010, respectively.

The credit ratios in the table below are based on retained loan balances, which exclude loans held-for-sale and loans accounted for at fair value.

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2011 Wholesale	2011 Consumer, excluding credit card	2011 Credit card	2011 Total	2010 Wholesale	2010 Consumer, excluding credit card	2010 Credit card	2010 Total
Allowance for loan losses								
Beginning balance at January 1,	**$ 4,761**	**$ 16,471**	**$ 11,034**	**$ 32,266**	$ 7,145	$ 14,785	$ 9,672	$ 31,602
Cumulative effect of change in accounting principles[a]	**–**	**–**	**–**	**–**	14	127	7,353	7,494
Gross charge-offs	**916**	**5,419**	**8,168**	**14,503**	1,989	8,383	15,410	25,782
Gross recoveries	**(476)**	**(547)**	**(1,243)**	**(2,266)**	(262)	(474)	(1,373)	(2,109)
Net charge-offs	**440**	**4,872**	**6,925**	**12,237**	1,727	7,909	14,037	23,673
Provision for loan losses	**17**	**4,670**	**2,925**	**7,612**	(673)	9,458	8,037	16,822
Other	**(22)**	**25**	**(35)**	**(32)**	2	10	9	21
Ending balance at December 31,	**$ 4,316**	**$ 16,294**	**$ 6,999**	**$ 27,609**	$ 4,761	$ 16,471	$ 11,034	$ 32,266
Impairment methodology								
Asset-specific[b]	**$ 516**	**$ 828**	**$ 2,727**	**$ 4,071**	$ 1,574	$ 1,075	$ 4,069	$ 6,718
Formula-based	**3,800**	**9,755**	**4,272**	**17,827**	3,187	10,455	6,965	20,607
PCI	**–**	**5,711**	**–**	**5,711**	–	4,941	–	4,941
Total allowance for loan losses	**$ 4,316**	**$ 16,294**	**$ 6,999**	**$ 27,609**	$ 4,761	$ 16,471	$ 11,034	$ 32,266
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 711**	**$ 6**	**$ –**	**$ 717**	$ 927	$ 12	$ –	$ 939
Cumulative effect of change in accounting principles[a]	**–**	**–**	**–**	**–**	(18)	–	–	(18)
Provision for lending-related commitments	**(40)**	**2**	**–**	**(38)**	(177)	(6)	–	(183)
Other	**(5)**	**(1)**	**–**	**(6)**	(21)	–	–	(21)
Ending balance at December 31,	**$ 666**	**$ 7**	**$ –**	**$ 673**	$ 711	$ 6	$ –	$ 717
Impairment methodology								
Asset-specific	**$ 150**	**$ –**	**$ –**	**$ 150**	$ 180	$ –	$ –	$ 180
Formula-based	**516**	**7**	**–**	**523**	531	6	–	537
Total allowance for lending-related commitments	**$ 666**	**$ 7**	**$ –**	**$ 673**	$ 711	$ 6	$ –	$ 717
Total allowance for credit losses	**$ 4,982**	**$ 16,301**	**$ 6,999**	**$ 28,282**	$ 5,472	$ 16,477	$ 11,034	$ 32,983
Memo:								
Retained loans, end of period	**$ 278,395**	**$ 308,427**	**$ 132,175**	**$ 718,997**	$ 222,510	$ 327,464	$ 135,524	$ 685,498
Retained loans, average	**245,111**	**315,736**	**127,334**	**688,181**	213,609	340,334	144,219	698,162
PCI loans, end of period	**21**	**65,546**	**–**	**65,567**	44	72,763	–	72,807
Credit ratios								
Allowance for loan losses to retained loans	**1.55%**	**5.28%**	**5.30%**	**3.84%**	2.14%	5.03%	8.14%	4.71%
Allowance for loan losses to retained nonaccrual loans[c]	**180**	**220**	**NM**	**281**	86	186	NM	225
Allowance for loan losses to retained nonaccrual loans excluding credit card	**180**	**220**	**NM**	**210**	86	186	NM	148
Net charge-off rates[d]	**0.18**	**1.54**	**5.44**	**1.78**	0.81	2.32	9.73	3.39
Credit ratios, excluding residential real estate PCI loans								
Allowance for loan losses to retained loans [e]	**1.55**	**4.36**	**5.30**	**3.35**	2.14	4.53	8.14	4.46
Allowance for loan losses to retained nonaccrual loans[c][e]	**180**	**143**	**NM**	**223**	86	131	NM	190
Allowance for loan losses to retained nonaccrual loans excluding credit card[c][e]	**180**	**143**	**NM**	**152**	86	131	NM	114
Net charge-off rates[d]	**0.18%**	**1.97%**	**5.44%**	**1.98%**	0.81%	3.00%	9.73%	3.81%

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, its Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related. As a result, $7.4 billion,

$14 million and $127 million, respectively, of allowance for loan losses were recorded on-balance sheet with the consolidation of these entities. For further discussion, see Note 16 on pages 256–267 of this Annual Report.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance. Under the guidance issued by the FFIEC, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

(d) Charge-offs are not recorded on PCI loans until actual losses exceed estimated losses recorded as purchase accounting adjustments at the time of acquisition.

(e) Excludes the impact of PCI loans acquired as part of the Washington Mutual transaction.

Provision for credit losses

For the year ended December 31, 2011, the provision for credit losses was $7.6 billion down 54% from 2010. For the year ended December 31, 2011, the consumer, excluding credit card, provision for credit losses was $4.7 billion, down 51% from 2010, reflecting improved delinquency and net charge-off trends in 2011 across most portfolios, partially offset by an increase of $770 million reflecting additional impairment of the Washington Mutual PCI loans portfolio. The credit card provision for credit losses was $2.9 billion, down 64% from the prior year period, driven primarily by improved delinquency and net charge-offs which led to a reduction in the allowance for loan losses for both the prior and current year periods. For the year ended December 31, 2011, the wholesale provision for credit losses was a benefit of $23 million, compared with a benefit of $850 million in the prior-year period. The change in the wholesale provision when compared with the prior year period primarily reflects loan growth and other portfolio activity including the effect of lower net-charge offs on the provision.

Year ended December 31,	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
(in millions)	**2011**	2010	2009	**2011**	2010	2009	**2011**	2010	2009
Wholesale	**$ 17**	$ (673)	$ 3,684	**$ (40)**	$ (177)	$ 290	**$ (23)**	$ (850)	$ 3,974
Consumer, excluding credit card	**4,670**	9,458	16,032	**2**	(6)	(10)	**4,672**	9,452	16,022
Credit card – reported[a]	**2,925**	8,037	12,019	**–**	–	–	**2,925**	8,037	12,019
Total provision for credit losses – reported	**7,612**	16,822	31,735	**(38)**	(183)	280	**7,574**	16,639	32,015
Credit card – securitized[a][b]	**NA**	NA	6,443	**NA**	NA	–	**NA**	NA	6,443
Total provision for credit losses – managed	**$ 7,612**	$ 16,822	$ 38,178	**$ (38)**	$ (183)	$ 280	**$ 7,574**	$ 16,639	$ 38,458

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. As a result of the consolidation of the credit card securitization trusts, reported and managed basis relating to credit card securitizations are equivalent for periods beginning after January 1, 2010. For further discussion regarding the Firm's application and the impact of the new guidance, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 76–78 of this Annual Report.

(b) Loans securitized are defined as loans that were sold to unconsolidated securitization trusts and were not included in reported loans. For further discussion of credit card securitizations, see Note 16 on pages 256–267 of this Annual Report.

MARKET RISK MANAGEMENT

Market risk is the exposure to an adverse change in the market value of portfolios and financial instruments caused by a change in market prices or rates.

Market risk management
Market Risk is an independent risk management function that works in close partnership with the business segments to identify and monitor market risks throughout the Firm and to define market risk policies and procedures. The risk management function is headed by the Firm's Chief Risk Officer.

Market Risk seeks to facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- Establishing a market risk policy framework
- Independent measurement, monitoring and control of line-of-business market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk identification and classification
Each line of business is responsible for the comprehensive identification and verification of market risks within its units. The Firm's market risks arise primarily from the activities in IB, Mortgage Production and Servicing, and CIO in Corporate/Private Equity.

IB makes markets in products across the fixed income, foreign exchange, equities and commodities markets. This trading activity may lead to a potential decline in net income due to adverse changes in market rates. In addition to these risks, there are risks in IB's credit portfolio from retained loans and commitments, derivative credit valuation adjustments, hedges of the credit valuation adjustments and the fair value of hedges of the retained loan portfolio. Additional risk positions result from the debit valuation adjustments taken on certain structured liabilities and derivatives to reflect the credit quality of the Firm.

The Firm's Mortgage Production and Servicing business includes the Firm's mortgage pipeline and warehouse loans, MSRs and all related hedges. These activities give rise to complex interest rate risks, as well as option and basis risk. Option risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing. Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates.

CIO is primarily concerned with managing structural risks which arise out of the various business activities of the Firm. Market Risk measures and monitors the gross structural exposures as well as the net exposures related to these activities.

Risk measurement

Tools used to measure risk
Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- Value-at-risk
- Economic-value stress testing
- Nonstatistical risk measures
- Loss advisories
- Revenue drawdowns
- Risk identification for large exposures ("RIFLEs")
- Nontrading interest rate-sensitive revenue-at-risk stress testing

Value-at-risk
JPMorgan Chase utilizes VaR, a statistical risk measure, to estimate the potential loss from adverse market moves. Each business day, as part of its risk management activities, the Firm undertakes a comprehensive VaR calculation that includes the majority of its material market risks. VaR provides a consistent cross-business measure of risk profiles and levels of diversification and is used for comparing risks across businesses and monitoring limits. These VaR results are reported to senior management and regulators, and they are utilized in regulatory capital calculations.

The Firm calculates VaR to estimate possible economic outcomes for its current positions using historical simulation, which measures risk across instruments and portfolios in a consistent, comparable way. The simulation is based on data for the previous 12 months. This approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. VaR is calculated using a one day time horizon and an expected tail-loss methodology, and approximates a 95% confidence level. This means that, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur losses greater than that predicted by VaR estimates five times in every 100 trading days, or about 12 to 13 times a year. However, differences between current and historical market price volatility may result in fewer or greater VaR exceptions than the number indicated by the historical simulation. The Firm's VaR calculation is highly granular and incorporates numerous risk factors, which are selected based on the risk profile of each portfolio.

The table below shows the results of the Firm's VaR measure using a 95% confidence level.

Total IB trading VaR by risk type, Credit portfolio VaR and other VaR

As of or for the year ended December 31,	2011			2010			At December 31,	
(in millions)	Avg.	Min	Max	Avg.	Min	Max	2011	2010
IB VaR by risk type								
Fixed income	**$ 50**	**$ 31**	**$ 68**	$ 65	$ 33	$ 95	**$ 49**	$ 52
Foreign exchange	**11**	**6**	**19**	11	6	20	**19**	16
Equities	**23**	**15**	**42**	22	10	52	**19**	30
Commodities and other	**16**	**8**	**24**	16	11	32	**22**	13
Diversification benefit to IB trading VaR	**(42)** [a]	**NM** [b]	**NM** [b]	(43) [a]	NM [b]	NM [b]	**(55)** [a]	(34) [a]
IB trading VaR	**58**	**34**	**80**	71	40	107	**54**	77
Credit portfolio VaR	**33**	**19**	**55**	26	15	40	**42**	27
Diversification benefit to IB trading and credit portfolio VaR	**(15)** [a]	**NM** [b]	**NM** [b]	(10) [a]	NM [b]	NM [b]	**(20)** [a]	(5) [a]
Total IB trading and credit portfolio VaR	**76**	**42**	**102**	87	50	128	**76**	99
Other VaR								
Mortgage Production and Servicing VaR	**30**	**6**	**98**	23	8	47	**16**	9
Chief Investment Office ("CIO") VaR	**57**	**30**	**80**	61	44	80	**77**	56
Diversification benefit to total other VaR	**(17)** [a]	**NM** [b]	**NM** [b]	(13) [a]	NM [b]	NM [b]	**(10)** [a]	(10) [a]
Total other VaR	**70**	**46**	**110**	71	48	100	**83**	55
Diversification benefit to total IB and other VaR	**(45)** [a]	**NM** [b]	**NM** [b]	(59) [a]	NM [b]	NM [b]	**(46)** [a]	(65) [a]
Total IB and other VaR	**$ 101**	**$ 67**	**$ 147**	$ 99	$ 66	$ 142	**$ 113**	$ 89

(a) Average VaR and period-end VaR were less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects the fact that the risks were not perfectly correlated. The risk of a portfolio of positions is therefore usually less than the sum of the risks of the positions themselves.

(b) Designated as not meaningful ("NM"), because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio-diversification effect.

VaR Measurement

IB trading VaR includes substantially all market-making and client-driven activities as well as certain risk management activities in IB. This includes the credit spread sensitivities of certain mortgage products and syndicated lending facilities that the Firm intends to distribute. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. In addition, for certain products included in IB trading and credit portfolio VaR, certain risk parameters that do not have daily observable values are not captured, such as correlation risk.

Credit portfolio VaR includes the derivative CVA, hedges of the CVA and the fair value of hedges of the retained loan portfolio, which are reported in principal transactions revenue. However, Credit portfolio VaR does not include the retained portfolio, which is not reported at fair value.

Other VaR includes certain positions employed as part of the Firm's risk management function within the Chief Investment Office ("CIO") and in the Mortgage Production and Servicing business. CIO VaR includes positions, primarily in debt securities and credit products, used to manage structural and other risks including interest rate, credit and mortgage risks arising from the Firm's ongoing business activities. Mortgage Production and Servicing VaR includes the Firm's mortgage pipeline and warehouse loans, MSRs and all related hedges.

As noted above, IB, Credit portfolio and other VaR does not include the retained Credit portfolio, which is not marked to market; however, it does include hedges of those positions. It also does not include DVA on derivative and structured liabilities to reflect the credit quality of the Firm; principal investments (mezzanine financing, tax-oriented investments, etc.); and certain securities and investments held by the Corporate/Private Equity line of business, including private equity investments, capital management positions and longer-term investments managed by CIO. These longer-term positions are managed through the Firm's nontrading interest rate-sensitive revenue-at-risk and other cash flow-monitoring processes, rather than by using a VaR measure. Principal investing activities and Private Equity positions are managed using stress and scenario analyses. See the DVA sensitivity table on page 161 of this Annual Report for further details. For a discussion of Corporate/Private Equity, see pages 107–108 of this Annual Report.

2011 and 2010 VaR results

As presented in the table above, average total IB and other VaR was $101 million for 2011, compared with $99 million for 2010. The increase in average VaR was driven by a decrease in diversification benefit across the Firm.

Average total IB trading and credit portfolio VaR for 2011 was $76 million compared with $87 million for 2010. The decrease in IB trading VaR was driven by a decline in market volatility in the first half of 2011, a reduction in average credit spreads, and a reduction in exposure mainly

in the fixed income risk component.

CIO VaR averaged $57 million in 2011, compared with $61 million for 2010. The decrease was also driven by a decline in market volatility in the first half of 2011, as well as position changes.

Mortgage Production and Servicing VaR averaged $30 million for 2011, compared with $23 million for 2010. The increase was driven by position changes in the MSR Portfolio.

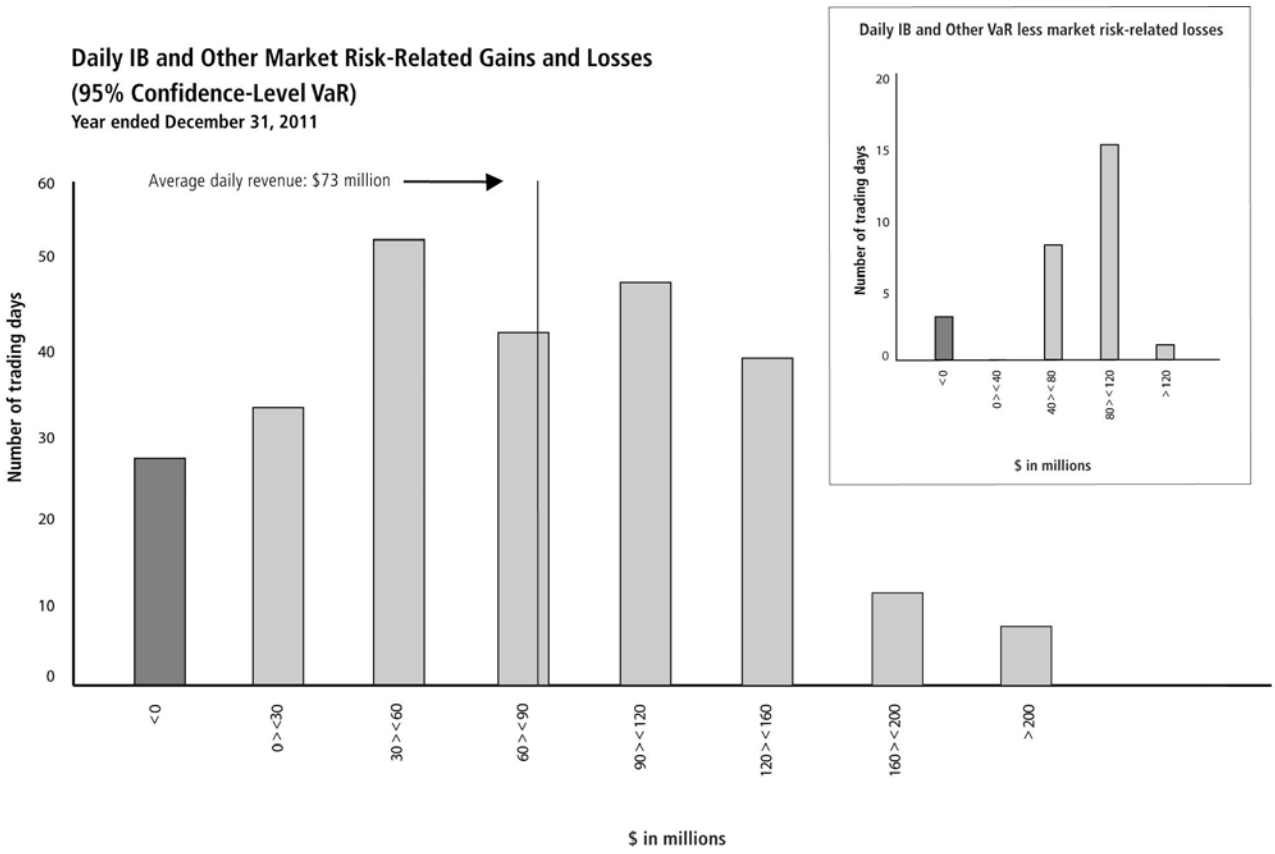
The Firm's average IB and other VaR diversification benefit was $45 million or 31% of the sum for 2011, compared with $59 million or 37% of the sum for 2010. In general, over the course of the year, VaR exposure can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

VaR back-testing

The Firm conducts daily back-testing of VaR against its market risk related revenue. In the year ended December 31, 2011, losses were sustained on 27 days, of which three days exceeded the VaR measure.

The following histogram illustrates the daily market risk related gains and losses for IB, CIO and Mortgage Production and Servicing positions for 2011. This market risk related revenue is defined as the change in value of: principal transactions revenue for IB and CIO (less Private Equity gains/losses and revenue from longer-term CIO investments); trading-related net interest income for IB, CIO and Mortgage Production and Servicing; IB brokerage commissions, underwriting fees or other revenue; revenue from syndicated lending facilities that the Firm intends to distribute; and mortgage fees and related income for the Firm's mortgage pipeline and warehouse loans, MSRs, and all related hedges. Daily firmwide market risk related revenue excludes gains and losses from DVA.

The chart shows that the Firm posted market risk related gains on 233 of the 260 days in this period, with seven days exceeding $200 million. The inset graph looks at those days on which the Firm experienced losses and depicts the amount by which the VaR exceeded the actual loss on each of those days.



The following table provides information about the gross sensitivity of DVA to a one-basis-point increase in JPMorgan Chase's credit spreads. This sensitivity represents the impact from a one-basis-point parallel shift in JPMorgan Chase's entire credit curve. As credit curves do not typically move in a parallel fashion, the sensitivity multiplied by the change in spreads at a single maturity point may not be representative of the actual revenue recognized.

Debit valuation adjustment sensitivity

December 31, (in millions)	One basis-point increase in JPMorgan Chase's credit spread
2011	**$ 35**
2010	35

Economic-value stress testing

While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing captures the Firm's exposure to unlikely but plausible events in abnormal markets using multiple scenarios that assume significant changes in credit spreads, equity prices, interest rates, currency rates or commodity prices. Scenarios are updated dynamically and may be redefined on an ongoing basis to reflect current market conditions. Along with VaR, stress testing is important in measuring and controlling risk; it enhances understanding of the Firm's risk profile and loss potential, as stress losses are monitored against limits. Stress testing is also employed in cross-business risk management. Stress-test results, trends and explanations based on current market risk positions are reported to the Firm's senior management and to the lines of business to allow them to better understand event risk-sensitive positions and manage risks with more transparency.

Nonstatistical risk measures

Nonstatistical risk measures as well as stress testing include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line-of-business and by risk type, and are used for tactical control and monitoring limits.

Loss advisories and revenue drawdowns

Loss advisories and net revenue drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Net revenue drawdown is defined as the decline in net revenue since the year-to-date peak revenue level.

Risk identification for large exposures

Individuals who manage risk positions in IB are responsible for identifying potential losses that could arise from specific, unusual events, such as a potential change in tax legislation, or a particular combination of unusual market moves. This information allows the Firm to monitor further earnings vulnerability not adequately covered by standard risk measures.

Nontrading interest rate-sensitive revenue-at-risk (i.e., "earnings-at-risk")

The VaR and stress-test measures described above illustrate the total economic sensitivity of the Firm's Consolidated Balance Sheets to changes in market variables. The effect of interest rate exposure on reported net income is also important. Interest rate risk represents one of the Firm's significant market risk exposures. This risk arises not only from trading activities but also from the Firm's traditional banking activities which include extension of loans and credit facilities, taking deposits and issuing debt (i.e., asset/liability management positions including accrual loans within IB and CIO, and off–balance sheet positions). ALCO establishes the Firm's interest rate risk policies, sets risk guidelines and limits and reviews the risk profile of the Firm. Treasury, working in partnership with the lines of business, calculates the Firm's interest rate risk profile weekly and reviews it with senior management.

Interest rate risk for nontrading activities can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off–balance sheet instruments. For example, if liabilities reprice more quickly than assets and funding interest rates are declining, earnings will increase initially.
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time. For example, if more deposit liabilities are repricing than assets when general interest rates are declining, earnings will increase initially.
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve) because the Firm has the ability to lend at long-term fixed rates and borrow at variable or short-term fixed rates. Based on these scenarios, the Firm's earnings would be affected negatively by a sudden and unanticipated increase in short-term rates paid on its liabilities (e.g., deposits) without a corresponding increase in long-term rates received on its assets (e.g., loans). Conversely, higher long-term rates received on assets generally are beneficial to earnings, particularly when the increase is not accompanied by rising short-term rates paid on liabilities.
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change. For example, if more borrowers than forecasted pay down higher-rate loan balances when general interest rates are declining, earnings may decrease initially.

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, corporate-wide basis. Business units transfer their interest rate risk to Treasury through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements

include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm manages this interest rate risk generally through its investment securities portfolio and related derivatives. The Firm evaluates its nontrading interest rate risk exposure through the stress testing of earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's Core net interest income (see page 78 of this Annual Report for further discussion on Core net interest income) and interest rate-sensitive fees ("nontrading interest rate-sensitive revenue"). Earnings-at-risk excludes the impact of trading activities and MSRs as these sensitivities are captured under VaR.

The Firm conducts simulations of changes in nontrading interest rate-sensitive revenue under a variety of interest rate scenarios. Earnings-at-risk tests measure the potential change in this revenue, and the corresponding impact to the Firm's pretax earnings, over the following 12 months. These tests highlight exposures to various interest rate-sensitive factors, such as the rates themselves (e.g., the prime lending rate), pricing strategies on deposits, optionality and changes in product mix. The tests include forecasted balance sheet changes, such as asset sales and securitizations, as well as prepayment and reinvestment behavior. Mortgage prepayment assumptions are based on current interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience and forward market expectations. The amount and pricing assumptions of deposits that have no stated maturity are based on historical performance, the competitive environment, customer behavior, and product mix.

Immediate changes in interest rates present a limited view of risk, and so a number of alternative scenarios are also reviewed. These scenarios include the implied forward curve, nonparallel rate shifts and severe interest rate shocks on selected key rates. These scenarios are intended to provide a comprehensive view of JPMorgan Chase's earnings-at-risk over a wide range of outcomes.

JPMorgan Chase's 12-month pretax earnings sensitivity profiles. (Excludes the impact of trading activities and MSRs)

	Immediate change in rates			
December 31, (in millions)	+200bp	+100bp	-100bp	-200bp
2011	**$ 4,046**	**$ 2,326**	**NM** [(a)]	**NM** [(a)]
2010	2,465	1,483	NM [(a)]	NM [(a)]

(a) Downward 100- and 200-basis-point parallel shocks result in a Federal Funds target rate of zero and negative three- and six-month treasury rates. The earnings-at-risk results of such a low-probability scenario are not meaningful.

The change in earnings at risk from December 31, 2010, resulted from investment portfolio repositioning and an assumed higher level of deposit balances. The Firm's risk to rising rates was largely the result of widening deposit margins, which are currently compressed due to very low short-term interest rates.

Additionally, another interest rate scenario used by the Firm – involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels – results in a 12-month pretax earnings benefit of $669 million. The increase in earnings under this scenario is due to reinvestment of maturing assets at the higher long-term rates, with funding costs remaining unchanged.

Risk monitoring and control

Limits

Market risk is controlled primarily through a series of limits. Limits reflect the Firm's risk appetite in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as senior management risk appetite, market volatility, product liquidity, accommodation of client business and management experience.

Market risk management regularly reviews and updates risk limits. Senior management, including the Firm's Chief Executive Officer and Chief Risk Officer, is responsible for reviewing and approving certain risk limits on an ongoing basis.

The Firm maintains different levels of limits. Corporate-level limits include VaR and stress limits. Similarly, line-of-business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns. Businesses are responsible for adhering to established limits, against which exposures are monitored and reported. Limit breaches are reported in a timely manner to senior management, and the affected line-of-business is required to reduce trading positions or consult with senior management on the appropriate action.

Model review

Some of the Firm's financial instruments cannot be valued based on quoted market prices but are instead valued using pricing models. These pricing models and VaR models are used for management of risk positions, such as reporting against limits, as well as for valuation. The Model Risk Group, which is independent of the businesses and market risk management, reviews the models the Firm uses and assesses model appropriateness and consistency. The model reviews consider a number of factors about the model's suitability for valuation and risk management of a particular product. These factors include whether the model accurately reflects the characteristics of the transaction and its significant risks, the suitability and convergence properties of numerical algorithms, reliability of data sources, consistency of the treatment with models for similar products, and sensitivity to input parameters and assumptions that cannot be priced from the market. Reviews are conducted of new or changed models, as well

as previously accepted models, to assess whether there have been any changes in the product or market that may affect the model's validity and whether there are theoretical or competitive developments that may require reassessment of the model's adequacy. For a summary of valuations based on models, see Critical Accounting Estimates Used by the Firm on pages 168–172 and Note 3 on pages 184–198 of this Annual Report.

Risk reporting

Nonstatistical risk measures, VaR, loss advisories and limit excesses are reported daily to the lines of business and to senior management. Market risk exposure trends, VaR trends, profit-and-loss changes and portfolio concentrations are reported weekly. Stress-test results are also reported weekly to the lines of business and to senior management.

COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of counterparties and issuers related to a country. The Firm has a comprehensive country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring direct country exposures in the Firm's wholesale lines of business, including CIO. The Country Risk Management group is responsible for developing guidelines and policy for managing country risk in both emerging and developed countries. The Country Risk Management group actively monitors the wholesale portfolio to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

Country risk organization

The Country Risk Management group is an independent risk management function which works in close partnership with other risk functions and across wholesale lines of business, including CIO. The Country Risk Management governance consists of the following functions:

- Developing guidelines and policies consistent with a comprehensive country risk framework
- Assigning sovereign ratings and assessing country risks
- Measuring and monitoring country risk exposure across the Firm
- Managing country limits and reporting utilization to senior management
- Developing surveillance tools for early identification of potential country risk concerns
- Providing country risk scenario analysis

Country risk identification and measurement

The Firm is exposed to country risk through its wholesale lending, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country. Under the Firm's internal risk management approach, country exposure is reported based on the country where the majority of the assets of the obligor, counterparty, issuer or guarantor are located or where the majority of its revenue is derived, which may be different than the domicile (legal residence) of the obligor, counterparty, issuer or guarantor. Exposures are generally measured by considering the Firm's risk to an immediate default of the counterparty or obligor, with zero recovery. For example:

- Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and cash and marketable securities collateral received
- AFS securities are measured at par value
- Securities financing exposures are measured at their receivable balance, net of collateral received
- Debt and equity securities in market-making and investing activities are measured at the fair value of all positions, both long and short positions
- Counterparty exposure on derivative receivables, including credit derivative receivables, is measured at the derivative's fair value, net of the fair value of the related collateral
- Credit derivatives protection purchased and sold are reported based on the underlying reference entity and is measured at the notional amount of protection purchased or sold, net of the fair value of the recognized derivative receivable or payable. Credit derivatives protection purchased and sold in the Firm's market-making activities are presented on a net basis, as such activities often result in selling and purchasing protection related to the same underlying reference entity, and which reflects the manner in which the Firm manages these exposures

In addition, the Firm also has indirect exposures to country risk (for example, related to the collateral received on securities financing receivables or related to client clearing activities). These indirect exposures are managed in the normal course of business through the Firm's credit, market, and operational risk governance, rather than through the country risk governance.

The Firm's internal risk management approach differs from the reporting provided under FFIEC bank regulatory requirements. There are significant reporting differences in reporting methodology, including with respect to the treatment of collateral received and the benefit of credit derivative protection. For further information on the FFIEC's reporting methodology, see Cross-border outstandings on page 322 of the 2011 Form 10-K.

Country risk monitoring and control

The Country Risk Policy Group establishes guidelines for sovereign ratings reviews and limit management. In addition, the Country Risk Management group uses surveillance tools for early identification of potential country risk concerns, such as signaling models and ratings indicators. The limit framework includes a risk-tier approach and stress testing procedures for assessing the potential risk of loss associated with a significant sovereign crisis. Country ratings and limits activity are actively monitored and reported on a regular basis. Country limit requirements are reviewed and approved by senior management as often as necessary, but at least annually. For further information on market-risk stress testing the Firm performs in the normal course of business, see Market Risk Management on pages 161–162 of this Annual Report. For further information on credit loss estimates, see Critical Accounting Estimates – Allowance for credit losses on pages 168–169 of this Annual Report.

Country risk reporting

The following table presents the Firm's top 20 country exposures (excluding U.S.) based on its internal measurements of exposure. The selection of countries is based solely on the Firm's largest total exposures by country and does not represent its view of any actual or potentially adverse credit conditions.

Top 20 country exposures

December 31, 2011 (in billions)	Lending[a]	Trading and investing[b]	Other[c]	Total exposure
United Kingdom	$ 23.6	$ 58.4	$ 12.1	$ 94.1
Switzerland	41.4	1.1	0.5	43.0
Netherlands	4.7	34.5	2.9	42.1
France	16.8	13.9	–	30.7
Germany	13.6	16.0	–	29.6
Australia	7.6	20.4	–	28.0
Brazil	5.3	14.1	–	19.4
Canada	9.1	5.9	0.2	15.2
India	7.8	7.1	–	14.9
Korea	7.7	5.7	–	13.4
China	7.0	4.4	0.2	11.6
Japan	3.5	5.4	–	8.9
Hong Kong	3.5	4.2	–	7.7
Mexico	3.2	4.5	–	7.7
Belgium	2.1	5.2	0.1	7.4
Spain	3.3	3.8	0.1	7.2
Italy	3.1	3.4	0.1	6.6
Singapore	3.0	2.2	1.0	6.2
Sweden	1.6	3.6	0.5	5.7
Taiwan	2.8	2.5	–	5.3

(a) Lending includes loans and accrued interest receivable, net of the allowance for loan losses, deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit.
(b) Includes market-making inventory, securities held in AFS accounts and hedging.
(c) Includes capital invested in local entities and physical commodity storage.

Selected European exposure

Several European countries, including Spain, Italy, Ireland, Portugal and Greece, have been subject to credit deterioration due to weaknesses in their economic and fiscal situations. The Firm believes its exposure to these five countries is modest relative to the Firm's overall risk exposures and is manageable given the size and types of exposures to each of the countries and the diversification of the aggregate exposure. The Firm continues to conduct business and support client activity in these countries and, therefore, the Firm's aggregate net exposures and sector distribution may vary over time. In addition, the net exposures may be affected by changes in market conditions, including the effects of interest rates and credit spreads on market valuations. The Firm is closely monitoring its exposures in these countries. The following table presents the Firm's direct exposure to these five countries at December 31, 2011, as measured under the Firm's internal risk management approach.

December 31, 2011 (in billions)	Lending[a]	AFS securities[b]	Trading[c]	Derivative collateral[d]	Portfolio hedging[e]	Total exposure
Spain						
Sovereign	$ –	$ 2.0	$ –	$ –	$ (0.1)	$ 1.9
Non-sovereign	3.3	0.2	4.4	(2.3)	(0.3)	5.3
Total Spain exposure	$ 3.3	$ 2.2	$ 4.4	$ (2.3)	$ (0.4)	$ 7.2
Italy						
Sovereign	$ –	$ –	$ 6.4	$ (1.1)	$ (2.8)	$ 2.5
Non-sovereign	3.1	0.1	2.9	(1.5)	(0.5)	4.1
Total Italy exposure	$ 3.1	$ 0.1	$ 9.3	$ (2.6)	$ (3.3)	$ 6.6
Other (Ireland, Portugal and Greece)						
Sovereign	$ –	$ 1.0	$ 0.1	$ –	$ (0.9)	$ 0.2
Non-sovereign	1.4	–	2.1	(1.4)	(0.1)	2.0
Total other exposure	$ 1.4	$ 1.0	$ 2.2	$ (1.4)	$ (1.0)	$ 2.2
Total exposure	$ 7.8	$ 3.3	$ 15.9	$ (6.3)	$ (4.7)	$ 16.0

(a) Lending includes loans and accrued interest receivable, net of the allowance for loan losses, deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit. Includes $2.2 billion of unfunded lending exposure at December 31, 2011. These exposures consist typically of committed, but unused corporate credit agreements, with market-based lending terms and covenants.

(b) The fair value of AFS securities was $3.1 billion at December 31, 2011.

(c) Includes: (1) $1.2 billion of issuer exposure on debt and equity securities held in trading, as well as market-making CDS exposure and (2) $14.5 billion of derivative and securities financing counterparty exposure. As of December 31, 2011, there were approximately $18.4 billion of securities financing receivables, which were collateralized with approximately $21.5 billion of marketable securities.

(d) Includes cash and marketable securities pledged to the Firm, of which approximately 98% of the collateral was cash as of December 31, 2011,

(e) Reflects net CDS protection purchased through the Firm's credit portfolio management activities, which are managed separately from its market-making activities.

Corporate clients represent approximately 77% of the Firm's non-sovereign net exposure in these five countries, and substantially all of the remaining 23% of the non-sovereign exposure is to the banking sector.

The table above includes single-name CDS protection sold and purchased, as well as portfolio and tranche CDS for which one or more of the underlying reference entities is in one of the named European countries. As of December 31, 2011, the notional amount of single-name CDS protection sold and purchased related to these countries was $142.4 billion and $147.3 billion, respectively, on a gross basis, before consideration of counterparty master netting agreements or collateral arrangements. In each of the five countries, the aggregate gross notional amount of single-name protection sold was more than 97% offset by the aggregate gross notional amount of single-name protection purchased on the same reference entities on which the Firm sold protection. The notional amount of single-name CDS protection sold and purchased related to these countries, after consideration of counterparty master netting agreements (which is a measure used by certain market peers and therefore presented for comparative purposes), was $13.7 billion and $18.5 billion, respectively.

The fair value of the single-name CDS protection sold and purchased in the five named European countries as of December 31, 2011 was $22.9 billion and $24.1 billion, respectively, prior to consideration of collateral and master netting agreements, and was $2.7 billion and $3.9 billion, respectively, after consideration of counterparty master netting agreements for single-name credit derivatives within the selected European countries.

The Firm's credit derivative activity is presented on a net basis, as market-making activities often result in selling and purchasing protection related to the same underlying reference entity. This presentation reflects the manner in which this exposure is managed, and reflects, in the Firm's view, the substantial mitigation of counterparty credit and market risk in its credit derivative activities. The Firm believes that the counterparty credit risk on credit derivative purchased protection has been substantially mitigated based on the following characteristics, by notional amount, as of December 31, 2011:

- 99% is purchased under contracts that require posting of cash collateral;
- 83% is purchased from investment-grade counterparties domiciled outside of the select European countries;
- 75% of the protection purchased offsets protection sold on the identical reference entity, with the identical counterparty subject to master netting agreements.

The Firm generally seeks to purchase credit protection with the same or similar maturity date on its exposures for which the protection was purchased. However, there are instances where the purchased protection has a shorter maturity date than the maturity date on the exposure for which the protection was purchased. These exposures are actively monitored and managed by the Firm.

The effectiveness of the Firm's CDS protection as a hedge of the Firm's exposures may vary depending upon a number of factors, including the contractual terms of the CDS. For further information about credit derivatives see Credit derivatives on pages 143–144 of this Annual report.

PRIVATE EQUITY RISK MANAGEMENT

The Firm makes principal investments in private equity. The illiquid nature and long-term holding periods associated with these investments differentiates private equity risk from the risk of positions held in the trading portfolios. The Firm's approach to managing private equity risk is consistent with the Firm's general risk governance structure. Targeted levels for total and annual investments are established in order to manage the overall size of the portfolios. Industry and geographic concentration limits are in place and intended to ensure diversification of the portfolios. All investments are approved by investment committees that include executives who are not part of the investing businesses. An independent valuation function is responsible for reviewing the appropriateness of the carrying values of private equity investments in accordance with relevant accounting policies. At December 31, 2011 and 2010, the carrying value of the Private Equity portfolio was $7.7 billion and $8.7 billion, respectively, of which $805 million and $875 million, respectively, represented securities with publicly available market quotations. For further information on the Private Equity portfolio, see page 108 of this Annual Report.

OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, fraudulent acts, business interruptions, inappropriate behavior of employees, or vendors that do not perform in accordance with their arrangements. These events could result in financial losses and other damage to the Firm, including reputational harm.

To monitor and control operational risk, the Firm maintains a system of comprehensive policies and a control framework designed to provide a sound and well-controlled operational environment. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject. Notwithstanding these control measures, the Firm incurs operational losses.

The Firm's approach to operational risk management is intended to mitigate such losses by supplementing traditional control-based approaches to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

One of the ways operational loss is mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations, as well as to serve other needs of the Firm. Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

The Firm's operational risk framework is supported by Phoenix, an internally designed operational risk software tool. Phoenix integrates the individual components of the operational risk management framework into a unified, web-based tool. Phoenix enhances the capture, reporting and analysis of operational risk data by enabling risk identification, measurement, monitoring, reporting and analysis to be done in an integrated manner, thereby enabling efficiencies in the Firm's monitoring and management of its operational risk.

For purposes of identification, monitoring, reporting and analysis, the Firm categorizes operational risk events as follows:

- Client service and selection
- Business practices
- Fraud, theft and malice
- Execution, delivery and process management
- Employee disputes
- Disasters and public safety
- Technology and infrastructure failures, including cybersecurity breaches

Control assessment

In order to evaluate the effectiveness of the control environment in mitigating operational risk, the businesses utilize the Firm's standard self-assessment process and supporting architecture. The goal of the self-assessment process is for each business to identify the key operational risks specific to its environment and assess the degree to which it maintains appropriate controls. Action plans are developed for control issues that are identified, and businesses are held accountable for tracking and resolving these issues on a timely basis.

Risk measurement

Operational risk is measured for each business on the basis of historical loss experience using a statistically based loss-distribution approach. The current business environment, potential scenarios and measures of the control environment are then factored into determining firmwide operational risk capital. This methodology is designed to comply with the advanced measurement rules under the Basel II Framework.

Risk monitoring

The Firm has a process for monitoring operational risk-event data, permitting analysis of errors and losses as well

as trends. Such analysis, performed both at a line-of-business level and by risk-event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns.

Risk reporting and analysis
Operational risk management reports provide information, including actual operational loss levels, self-assessment results and the status of issue resolution to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and support areas.

Audit alignment
Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. This includes reviewing the operational risk framework, the effectiveness of the business self-assessment process, and the loss data-collection and reporting activities.

REPUTATION AND FIDUCIARY RISK MANAGEMENT

The Firm's success depends not only on its prudent management of the liquidity, credit, market and operational risks that are part of its business risk, but equally on the maintenance among its many constituents-customers and clients, investors, regulators, as well as the general public-of a reputation for business practices of the highest quality. Attention to reputation has always been a key aspect of the Firm's practices, and maintenance of the Firm's reputation is the responsibility of each individual employee at the Firm. JPMorgan Chase bolsters this individual responsibility in many ways, including through the Firm's Code of Conduct (the "Code"), which is based on the Firm's fundamental belief that no one should ever sacrifice integrity – or give the impression that he or she has – even if one thinks it would help the Firm's business. The Code requires prompt reporting of any known or suspected violation of the Code, any internal Firm policy, or any law or regulation applicable to the Firm's business. It also requires the reporting of any illegal conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's customers, suppliers, contract workers, business partners or agents. Concerns may be reported anonymously and the Firm prohibits retaliation against employees for the good faith reporting of any actual or suspected violations of the Code.

In addition to training of employees with regard to the principles and requirements of the Code, and requiring annual affirmation by each employee of compliance with the Code, the Firm has established policies and procedures, and has in place various oversight functions, intended to promote the Firm's culture of "doing the right thing." These include a Conflicts Office which examines wholesale transactions with the potential to create conflicts of interest for the Firm. In addition, each line of business has a risk committee which includes in its mandate oversight of the reputational risks in its business that may produce significant losses or reputational damage; some lines of business, including the IB, have separate risk committees comprised of senior representatives of business and control functions. In addition, in IB, there are several regional reputation risk committees. The Firm has also established a Consumer Reputational Risk Committee, comprised of senior management from the Firm's Operating Committee, including the heads of its primary consumer facing businesses, RFS and Card, that helps to ensure that the Firm has a consistent, disciplined focus on the review of the impact on consumers of Chase products and practices, including any that could raise reputational issues.

Fiduciary Risk Management
Fiduciary Risk Management is part of the relevant line of business risk committees. Senior business, legal and compliance management, who have particular responsibility for fiduciary issues, work with the relevant businesses' risk committees with the goal of ensuring that the businesses providing investment or risk management products or services that give rise to fiduciary duties to clients perform at the appropriate standard relative to their fiduciary relationship with a client. Of particular focus are the policies and practices that address a business' responsibilities to a client, including performance and service requirements and expectations; client suitability determinations; and disclosure obligations and communications. In this way, the relevant line of business risk committees provide oversight of the Firm's efforts to monitor, measure and control the performance and risks that may arise in the delivery of products or services to clients that give rise to such fiduciary duties, as well as those stemming from any of the Firm's fiduciary responsibilities under the Firm's various employee benefit plans.

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the value of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained wholesale and consumer loan portfolios, as well as the Firm's wholesale and consumer lending-related commitments. The allowance for loan losses is intended to adjust the value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date. For further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Allowance for Credit Losses on pages 155–157 and Note 15 on pages 252–255 of this Annual Report.

The determination of the allowance for credit losses involves significant judgment on a number of matters, as discussed below.

Wholesale loans and lending-related commitments

The Firm's methodology for determining the allowance for loan losses and the allowance for lending-related commitments requires the early identification of credits that are deteriorating. The Firm uses a risk-rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm to that loan.

The Firm applies its judgment to establish loss factors used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances. Many factors can affect estimates of loss, including volatility of loss given default, probability of default and rating migrations. Consideration is given as to whether the loss estimates should be calculated as an average over the entire credit cycle or at a particular point in the credit cycle, as well as to which external data should be used and when they should be used. Choosing data that are not reflective of the Firm's specific loan portfolio characteristics could also affect loss estimates. The application of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the loss factors derived, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both loss given default and probability of default are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

Consumer loans and lending-related commitments, excluding PCI loans

The allowance for credit losses for the consumer portfolio, including credit card, is calculated by applying statistical expected loss factors to outstanding principal balances over an estimated loss emergence period to arrive at an estimate of losses in the portfolio. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends. In addition, management applies judgment to the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate probable credit losses inherent in the portfolio. Management uses additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate.

The statistical calculation is then adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation; these adjustments are accomplished in part by analyzing the historical loss experience for each major product segment. In the current economic environment, it is difficult to predict whether historical loss experience is

indicative of future loss levels. Management applies judgment in making this adjustment, taking into account uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, borrower behavior, the estimated effects of the mortgage foreclosure-related settlement with federal and state officials, uncertainties regarding the ultimate success of loan modifications, and other relevant internal and external factors affecting the credit quality of the portfolio. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. The application of different inputs into the statistical calculation, and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for loan losses for the consumer credit portfolio.

The allowance for credit losses for the consumer portfolio, including credit card, is sensitive to changes in the economic environment, delinquency status, the realizable value of collateral, FICO scores, borrower behavior and other risk factors. Significant judgment is required to estimate the duration of current weak overall economic conditions, as well as the impact on housing prices and the labor market. The allowance for credit losses is highly sensitive to both home prices and unemployment rates, and in the current market it is difficult to estimate how potential changes in one or both of these factors might affect the allowance for credit losses. For example, while both factors are important determinants of overall allowance levels, changes in one factor or the other may not occur at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across all geographies or product types. Finally, it is difficult to predict the extent to which changes in both or either of these factors would ultimately affect the frequency of losses, the severity of losses or both.

PCI loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain PCI loans, which are accounted for as described in Note 14 on pages 231–252 of this Annual Report. The allowance for loan losses for the PCI portfolio is based on quarterly estimates of the amount of principal and interest cash flows expected to be collected over the estimated remaining lives of the loans.

These cash flow projections are based on estimates regarding default rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are dependent on assumptions regarding the level of future home price declines, and the duration of current weak overall economic conditions, among other factors. These estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Allowance for credit losses sensitivity

As noted above, the Firm's allowance for credit losses is sensitive to numerous factors, depending on the portfolio. Changes in economic conditions or in the Firm's assumptions could affect the Firm's estimate of probable credit losses inherent in the portfolio at the balance sheet date. For example, deterioration in the following inputs would have the following effects on the Firm's modeled loss estimates as of December 31, 2011, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- A one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately $1.9 billion.
- An adverse national home price scenario (reflecting an additional 8% decline in housing prices when geographically weighted for the PCI portfolio), could result in an increase in credit loss estimates for PCI loans of approximately $1.5 billion.
- The same adverse scenario, weighted for the residential real estate portfolio, excluding PCI loans, could result in an increase to modeled annual loss estimates of approximately $600 million.
- A 50 basis point deterioration in forecasted credit card loss rates could imply an increase to modeled annualized credit card loan loss estimates of approximately $800 million.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on credit loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors.

It is difficult to estimate how potential changes in specific factors might affect the allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm follows in evaluating the risk factors related to its loans, including risk ratings, home price assumptions, and credit card loss estimates, management believes that its current estimate of the allowance for credit loss is appropriate.

Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including loans accounted for at the lower of cost or fair value that are only subject to fair value adjustments under certain circumstances.

Under U.S. GAAP there is a three-level valuation hierarchy for disclosure of fair value measurements. An instrument's categorization within the hierarchy is based on the lowest level of input that is significant to the fair value measurement. Therefore, for instruments classified in levels 1 and 2 of the hierarchy, where inputs are principally based on observable market data, there is less judgment applied in arriving at a fair value measurement. For instruments classified within level 3 of the hierarchy, judgments are more significant. The Firm reviews and updates the fair value hierarchy classifications on a quarterly basis. Changes from one quarter to the next related to the observability of inputs to a fair value measurement may result in a reclassification between hierarchy levels.

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy. For further information, see Note 3 on pages 184–198 of this Annual Report.

	2011	
December 31, (in billions, except ratio data)	Total assets at fair value	Total level 3 assets
Trading debt and equity instruments	$ 351.5	$ 33.0
Derivative receivables – gross	1,884.5	35.0
Netting adjustment	(1,792.0)	—
Derivative receivables – net	92.5	35.0
AFS securities	364.8	25.5
Loans	2.1	1.6
MSRs	7.2	7.2
Private equity investments	7.6	6.8
Other	49.1	4.4
Total assets measured at fair value on a recurring basis	874.8	113.5
Total assets measured at fair value on a nonrecurring basis	5.3	4.9
Total assets measured at fair value	$ 880.1	$ 118.4 [(a)]
Total Firm assets	$ 2,265.8	
Level 3 assets as a percentage of total Firm assets		5.2%
Level 3 assets as a percentage of total Firm assets at fair value		13.5%

(a) At December 31, 2011, included $63.0 billion of level 3 assets, consisting of recurring and nonrecurring assets carried by IB.

Valuation

The Firm has an established and well-documented process for determining fair value. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on internally developed models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced market parameters. For further information on the Firm's valuation process, see Note 3 on pages 184–198 of this Annual Report.

For instruments classified within level 3 of the hierarchy, judgments used to estimate fair value may be significant. In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs – including, but not limited to, transaction details, yield curves, interest rates, volatilities, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. Finally, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters, where relevant. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole.

The Firm has numerous controls in place to ensure that its valuations are appropriate. An independent model review group reviews the Firm's valuation models and approves them for use for specific products. All valuation models of the Firm are subject to this review process. A price verification group, independent from the risk-taking functions, ensures observable market prices and market-based parameters are used for valuation whenever possible. For those products with material parameter risk for which observable market levels do not exist, an independent review of the assumptions made on pricing is performed. Additional review includes deconstruction of the model valuations for certain structured instruments into their components; benchmarking valuations, where possible, to similar products; validating valuation estimates through actual cash settlement; and detailed review and explanation of recorded gains and losses, which are analyzed daily and over time. Valuation adjustments, which are also determined by the independent price verification group, are based on established policies and applied consistently over time. Any changes to the valuation methodology are reviewed by management to confirm the changes are justified. As markets and products develop and the pricing for certain products becomes more transparent, the Firm continues to refine its valuation methodologies.

Imprecision in estimating unobservable market inputs can affect the amount of revenue or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date. For a detailed discussion of the determination of fair value for individual financial instruments, see Note 3 on pages 184–198 of this Annual Report.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 17 on pages 267–271 of this Annual Report.

Management applies significant judgment when estimating the fair value of its reporting units. Estimates of fair value are dependent upon estimates of (a) the future earnings potential of the Firm's reporting units, including the estimated effects of regulatory and legislative changes, such as the Dodd-Frank Act, the CARD Act, and limitations on non-sufficient funds and overdraft fees and (b) the relevant cost of equity and long-term growth rates. Imprecision in estimating these factors can affect the estimated fair value of the reporting units.

Based upon the updated valuations for all of its reporting units, the Firm concluded that goodwill allocated to its reporting units was not impaired at December 31, 2011 nor was any goodwill written off during 2011. The fair values of a significant majority of the Firm's reporting units exceeded their carrying values by substantial amounts (excess fair value as a percent of carrying value ranged from approximately 20% to 200%) and did not indicate a significant risk of goodwill impairment based on current projections and valuations.

However, the fair value of the Firm's consumer lending businesses in RFS and Card each exceeded their carrying values by less than 15% and the associated goodwill remains at an elevated risk for goodwill impairment due to their exposure to U.S. consumer credit risk and the effects of regulatory and legislative changes. The assumptions used in the valuation of these businesses include (a) estimates of future cash flows for the business (which are dependent on portfolio outstanding balances, net interest margin, operating expense, credit losses and the amount of capital necessary given the risk of business activities), and (b) the cost of equity used to discount those cash flows to a present value. Each of these factors requires significant judgment and the assumptions used are based on management's best estimate and most current projections, derived from the Firm's business forecasting process reviewed with senior management. These projections are consistent with the short-term assumptions discussed in the Business Outlook on pages 68–69 of this Annual Report, and, in the longer term, incorporate a set of macroeconomic assumptions and the Firm's best estimates of long-term growth and returns of its businesses. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.

Deterioration in economic market conditions, increased estimates of the effects of recent regulatory or legislative changes, or additional regulatory or legislative changes may result in declines in projected business performance beyond management's current expectations. For example, in RFS, such declines could result from increases in costs to resolve foreclosure-related matters or from deterioration in economic conditions that result in increased credit losses, including decreases in home prices beyond management's current expectations. In Card, declines in business performance could result from deterioration in economic conditions such as increased unemployment claims or bankruptcy filings that result in increased credit losses or changes in customer behavior that cause decreased account activity or receivable balances. In addition, the earnings or estimated cost of equity of the Firm's capital markets businesses could also be affected by regulatory or legislative changes. Declines in business performance, increases in equity capital requirements, or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

For additional information on goodwill, see Note 17 on pages 267–271 of this Annual Report.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations and tax planning strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely

than not. The Firm has also recognized deferred tax assets in connection with certain net operating losses. The Firm performs regular reviews to ascertain whether deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize net operating losses before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2011, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

JPMorgan Chase does not provide U.S. federal income taxes on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Changes to the income tax rates applicable to these non-U.S. subsidiaries may have a material impact on the effective tax rate in a future period if such changes were to occur.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective tax rate in the period in which the reassessment occurs.

For additional information on income taxes, see Note 26 on pages 279–281 of this Annual Report.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 31 on pages 290–299 of this Annual Report.

Fair value measurement and disclosures
In January 2010, the FASB issued guidance that requires new disclosures, and clarifies existing disclosure requirements, about fair value measurements. The clarifications and the requirement to separately disclose transfers of instruments between level 1 and level 2 of the fair value hierarchy was effective for interim reporting periods beginning after December 15, 2009; the Firm adopted this guidance in the first quarter of 2010. In addition, a new requirement to provide purchases, sales, issuances and settlements in the level 3 rollforward on a gross basis was effective for fiscal years beginning after December 15, 2010. The Firm adopted the new guidance, effective January 1, 2011. For information about fair value measurements, see Note 3 on pages 184–198 of this Annual Report.

In May 2011, the FASB issued guidance that amends the requirements for fair value measurement and disclosure. The guidance changes and clarifies certain existing requirements related to portfolios of financial instruments and valuation adjustments, requires additional disclosures for fair value measurements categorized in level 3 of the fair value hierarchy (including disclosure of the range of inputs used in certain valuations), and requires additional disclosures for certain financial instruments that are not carried at fair value. The guidance is effective in the first quarter of 2012. The application of this guidance is not expected to have a material effect on the Firm's Consolidated Balance Sheets or results of operations.

Determining whether a restructuring is a troubled debt restructuring
In April 2011, the FASB issued guidance to clarify existing standards for determining whether a modification represents a TDR from the perspective of the creditor. In addition, the guidance established an effective date for enhanced disclosures related to TDRs. The guidance and new disclosures became effective in the third quarter of 2011 and were applied retrospectively to January 1, 2011. For information regarding the Firm's TDRs, see Note 14 on pages 231–252 of this Annual Report. The application of this guidance did not have a material effect on the Firm's Consolidated Balance Sheets or results of operations.

Accounting for repurchase and similar agreements
In April 2011, the FASB issued guidance that amends the criteria used to assess whether repurchase and similar agreements should be accounted for as financings or sales (purchases) with forward agreements to repurchase (resell). Specifically, the guidance eliminates circumstances in which the lack of adequate collateral maintenance requirements could result in a repurchase agreement being accounted for as a sale. The guidance is effective for new transactions or existing transactions that are modified beginning January 1, 2012. The Firm has accounted for its repurchase and similar agreements as secured financings, and therefore, the Firm does not expect the application of this guidance will have an impact on the Firm's Consolidated Balance Sheets or results of operations.

Presentation of other comprehensive income
In June 2011, the FASB issued guidance that modifies the presentation of other comprehensive income in the Consolidated Financial Statements. The guidance requires that items of net income, items of other comprehensive income, and total comprehensive income be presented in one continuous statement or in two separate but consecutive statements. For public companies the guidance is effective for interim and annual reporting periods beginning after December 15, 2011. However, in December 2011, the FASB issued guidance that deferred the presentation requirements relating to reclassifications of items out of accumulated other comprehensive income and into the income statement. The application of this guidance will only affect the presentation of the Consolidated Financial Statements and will have no impact on the Firm's Consolidated Balance Sheets or results of operations.

Balance sheet netting
In December 2011, the FASB issued guidance that requires enhanced disclosures about derivatives and securities financing agreements that are subject to legally enforceable master netting or similar agreements, or that have otherwise been offset on the balance sheet under certain specific conditions that permit net presentation. The guidance is effective in the first quarter of 2013. The application of this guidance will only affect the disclosure of these instruments and will have no impact on the Firm's Consolidated Balance Sheets or results of operations.

NONEXCHANGE TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based on internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2011.

Year ended December 31, 2011 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2011	$ 8,166	$ 7,184
Effect of legally enforceable master netting agreements	41,284	41,919
Gross fair value of contracts outstanding at January 1, 2011	49,450	49,103
Contracts realized or otherwise settled	(22,855)	(20,826)
Fair value of new contracts	21,517	23,195
Changes in fair values attributable to changes in valuation techniques and assumptions	–	–
Other changes in fair value	(1,495)	(2,260)
Gross fair value of contracts outstanding at December 31, 2011	46,617	49,212
Effect of legally enforceable master netting agreements	(33,495)	(35,695)
Net fair value of contracts outstanding at December 31, 2011	$ 13,122	$ 13,517

The following table indicates the maturities of nonexchange-traded commodity derivative contracts at December 31, 2011.

December 31, 2011 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 20,876	$ 18,993
Maturity 1–3 years	16,564	16,949
Maturity 4–5 years	7,745	7,593
Maturity in excess of 5 years	1,432	5,677
Gross fair value of contracts outstanding at December 31, 2011	46,617	49,212
Effect of legally enforceable master netting agreements	(33,495)	(35,695)
Net fair value of contracts outstanding at December 31, 2011	$ 13,122	$ 13,517

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the Securities and Exchange Commission. In addition, the Firm's senior management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and international business, economic and political conditions and geopolitical events;
- Changes in laws and regulatory requirements, including as a result of recent financial services legislation;
- Changes in trade, monetary and fiscal policies and laws;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its liquidity;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- Technology changes instituted by the Firm, its counterparties or competitors;
- Mergers and acquisitions, including the Firm's ability to integrate acquisitions;
- Ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Ability of the Firm to address enhanced regulatory requirements affecting its mortgage business;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to increase market share;
- Ability of the Firm to attract and retain employees;
- Ability of the Firm to control expense;
- Competitive pressures;
- Changes in the credit quality of the Firm's customers and counterparties;
- Adequacy of the Firm's risk management framework;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities or conflicts, including any effect of any such disasters, calamities or conflicts on the Firm's power generation facilities and the Firm's other commodity-related activities;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operating systems and facilities;
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2011.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2011. In making the assessment, management used the framework in "Internal Control – Integrated Framework" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2011, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2011.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2011, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Douglas L. Braunstein
Executive Vice President and Chief Financial Officer

February 29, 2012



To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, changes in stockholders' equity and comprehensive income and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2011 and 2010, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2011, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting." Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



February 29, 2012

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2011	2010	2009
Revenue			
Investment banking fees	**$ 5,911**	$ 6,190	$ 7,087
Principal transactions	**10,005**	10,894	9,796
Lending- and deposit-related fees	**6,458**	6,340	7,045
Asset management, administration and commissions	**14,094**	13,499	12,540
Securities gains[(a)]	**1,593**	2,965	1,110
Mortgage fees and related income	**2,721**	3,870	3,678
Credit card income	**6,158**	5,891	7,110
Other income	**2,605**	2,044	916
Noninterest revenue	**49,545**	51,693	49,282
Interest income	**61,293**	63,782	66,350
Interest expense	**13,604**	12,781	15,198
Net interest income	**47,689**	51,001	51,152
Total net revenue	**97,234**	102,694	100,434
Provision for credit losses	**7,574**	16,639	32,015
Noninterest expense			
Compensation expense	**29,037**	28,124	26,928
Occupancy expense	**3,895**	3,681	3,666
Technology, communications and equipment expense	**4,947**	4,684	4,624
Professional and outside services	**7,482**	6,767	6,232
Marketing	**3,143**	2,446	1,777
Other expense	**13,559**	14,558	7,594
Amortization of intangibles	**848**	936	1,050
Merger costs	**–**	–	481
Total noninterest expense	**62,911**	61,196	52,352
Income before income tax expense and extraordinary gain	**26,749**	24,859	16,067
Income tax expense	**7,773**	7,489	4,415
Income before extraordinary gain	**18,976**	17,370	11,652
Extraordinary gain	**–**	–	76
Net income	**$ 18,976**	$ 17,370	$ 11,728
Net income applicable to common stockholders	**$ 17,568**	$ 15,764	$ 8,774
Per common share data			
Basic earnings per share			
Income before extraordinary gain	**$ 4.50**	$ 3.98	$ 2.25
Net income	**4.50**	3.98	2.27
Diluted earnings per share			
Income before extraordinary gain	**4.48**	3.96	2.24
Net income	**4.48**	3.96	2.26
Weighted-average basic shares	**3,900.4**	3,956.3	3,862.8
Weighted-average diluted shares	**3,920.3**	3,976.9	3,879.7
Cash dividends declared per common share	**$ 1.00**	$ 0.20	$ 0.20

(a) The following other-than-temporary impairment losses are included in securities gains for the periods presented.

Year ended December 31, (in millions)	2011	2010	2009
Total other-than-temporary impairment losses	**$ (27)**	$ (94)	$ (946)
Losses recorded in/(reclassified from) other comprehensive income	**(49)**	(6)	368
Total credit losses recognized in income	**$ (76)**	$ (100)	$ (578)

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2011	2010
Assets		
Cash and due from banks	**$ 59,602**	$ 27,567
Deposits with banks	**85,279**	21,673
Federal funds sold and securities purchased under resale agreements (included **$24,891** and $20,299 at fair value)	**235,314**	222,554
Securities borrowed (included **$15,308** and $13,961 at fair value)	**142,462**	123,587
Trading assets (included assets pledged of **$89,856** and $73,056)	**443,963**	489,892
Securities (included **$364,781** and $316,318 at fair value and assets pledged of **$94,691** and $86,891)	**364,793**	316,336
Loans (included **$2,097** and $1,976 at fair value)	**723,720**	692,927
Allowance for loan losses	**(27,609)**	(32,266)
Loans, net of allowance for loan losses	**696,111**	660,661
Accrued interest and accounts receivable	**61,478**	70,147
Premises and equipment	**14,041**	13,355
Goodwill	**48,188**	48,854
Mortgage servicing rights	**7,223**	13,649
Other intangible assets	**3,207**	4,039
Other assets (included **$16,499** and $18,201 at fair value and assets pledged of **$1,316** and $1,485)	**104,131**	105,291
Total assets[a]	**$ 2,265,792**	$ 2,117,605
Liabilities		
Deposits (included **$4,933** and $4,369 at fair value)	**$ 1,127,806**	$ 930,369
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$9,517** and $4,060 at fair value)	**213,532**	276,644
Commercial paper	**51,631**	35,363
Other borrowed funds (included **$9,576** and $9,931 at fair value)	**21,908**	34,325
Trading liabilities	**141,695**	146,166
Accounts payable and other liabilities (included **$51** and $236 at fair value)	**202,895**	170,330
Beneficial interests issued by consolidated variable interest entities (included **$1,250** and $1,495 at fair value)	**65,977**	77,649
Long-term debt (included **$34,720** and $38,839 at fair value)	**256,775**	270,653
Total liabilities[a]	**2,082,219**	1,941,499
Commitments and contingencies (see Notes 29, 30 and 31 of this Annual Report)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares: issued **780,000** shares)	**7,800**	7,800
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Capital surplus	**95,602**	97,415
Retained earnings	**88,315**	73,998
Accumulated other comprehensive income/(loss)	**944**	1,001
Shares held in RSU Trust, at cost (**852,906** and 1,192,712 shares)	**(38)**	(53)
Treasury stock, at cost (**332,243,180** and 194,639,785 shares)	**(13,155)**	(8,160)
Total stockholders' equity	**183,573**	176,106
Total liabilities and stockholders' equity	**$ 2,265,792**	$ 2,117,605

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2011 and 2010. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which were eliminated in consolidation.

December 31, (in millions)	2011	2010
Assets		
Trading assets	**$ 12,079**	$ 9,837
Loans	**86,754**	95,587
All other assets	**2,638**	3,494
Total assets	**$ 101,471**	$ 108,918
Liabilities		
Beneficial interests issued by consolidated variable interest entities	**$ 65,977**	$ 77,649
All other liabilities	**1,487**	1,922
Total liabilities	**$ 67,464**	$ 79,571

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. At December 31, 2011 and 2010, the Firm provided limited program-wide credit enhancement of $3.1 billion and $2.0 billion, respectively, related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 16 on pages 256–267 of this Annual Report.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity and comprehensive income

Year ended December 31, (in millions, except per share data)	2011	2010	2009
Preferred stock			
Balance at January 1	**$ 7,800**	$ 8,152	$ 31,939
Accretion of preferred stock discount on issuance to the U.S. Treasury	**–**	–	1,213
Redemption of preferred stock issued to the U.S. Treasury	**–**	–	(25,000)
Redemption of other preferred stock	**–**	(352)	–
Balance at December 31	**7,800**	7,800	8,152
Common stock			
Balance at January 1	**4,105**	4,105	3,942
Issuance of common stock	**–**	–	163
Balance at December 31	**4,105**	4,105	4,105
Capital surplus			
Balance at January 1	**97,415**	97,982	92,143
Issuance of common stock	**–**	–	5,593
Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects	**(1,688)**	706	474
Other	**(125)**	(1,273)	(228)
Balance at December 31	**95,602**	97,415	97,982
Retained earnings			
Balance at January 1	**73,998**	62,481	54,013
Cumulative effect of changes in accounting principles	**–**	(4,376)	–
Net income	**18,976**	17,370	11,728
Dividends declared:			
Preferred stock	**(629)**	(642)	(1,328)
Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	**–**	–	(1,112)
Common stock (**$1.00**, $0.20 and $0.20 per share for 2011, 2010 and 2009, respectively)	**(4,030)**	(835)	(820)
Balance at December 31	**88,315**	73,998	62,481
Accumulated other comprehensive income/(loss)			
Balance at January 1	**1,001**	(91)	(5,687)
Cumulative effect of changes in accounting principles	**–**	(144)	–
Other comprehensive (loss)/income	**(57)**	1,236	5,596
Balance at December 31	**944**	1,001	(91)
Shares held in RSU Trust, at cost			
Balance at January 1	**(53)**	(68)	(217)
Reissuance from RSU Trust	**15**	15	149
Balance at December 31	**(38)**	(53)	(68)
Treasury stock, at cost			
Balance at January 1	**(8,160)**	(7,196)	(9,249)
Purchase of treasury stock	**(8,741)**	(2,999)	–
Reissuance from treasury stock	**3,750**	2,040	2,079
Share repurchases related to employee stock-based compensation awards	**(4)**	(5)	(26)
Balance at December 31	**(13,155)**	(8,160)	(7,196)
Total stockholders' equity	**$ 183,573**	$ 176,106	$ 165,365
Comprehensive income			
Net income	**$ 18,976**	$ 17,370	$ 11,728
Other comprehensive (loss)/income	**(57)**	1,236	5,596
Comprehensive income	**$ 18,919**	$ 18,606	$ 17,324

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2011	2010	2009
Operating activities			
Net income	**$ 18,976**	$ 17,370	$ 11,728
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Provision for credit losses	**7,574**	16,639	32,015
Depreciation and amortization	**4,257**	4,029	3,308
Amortization of intangibles	**848**	936	1,050
Deferred tax expense/(benefit)	**1,693**	(968)	(3,622)
Investment securities gains	**(1,593)**	(2,965)	(1,110)
Stock-based compensation	**2,675**	3,251	3,355
Originations and purchases of loans held-for-sale	**(52,561)**	(37,085)	(22,417)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**54,092**	40,155	33,902
Net change in:			
Trading assets	**36,443**	(72,082)	133,488
Securities borrowed	**(18,936)**	(3,926)	4,452
Accrued interest and accounts receivable	**8,655**	443	(6,312)
Other assets	**(15,456)**	(12,452)	32,557
Trading liabilities	**7,905**	19,344	(79,314)
Accounts payable and other liabilities	**35,203**	17,325	(26,450)
Other operating adjustments	**6,157**	6,234	6,167
Net cash provided by/(used in) operating activities	**95,932**	(3,752)	122,797
Investing activities			
Net change in:			
Deposits with banks	**(63,592)**	41,625	74,829
Federal funds sold and securities purchased under resale agreements	**(12,490)**	(26,957)	7,082
Held-to-maturity securities:			
Proceeds	**6**	7	9
Available-for-sale securities:			
Proceeds from maturities	**86,850**	92,740	87,712
Proceeds from sales	**68,631**	118,600	114,041
Purchases	**(202,309)**	(179,487)	(346,372)
Proceeds from sales and securitizations of loans held-for-investment	**10,478**	9,476	31,034
Other changes in loans, net	**(58,365)**	3,022	50,651
Net cash received from/(used in) business acquisitions or dispositions	**102**	(4,910)	(97)
Net maturities of asset-backed commercial paper guaranteed by the FRBB	**–**	–	11,228
All other investing activities, net	**(63)**	(114)	(762)
Net cash (used in)/provided by investing activities	**(170,752)**	54,002	29,355
Financing activities			
Net change in:			
Deposits	**203,420**	(9,637)	(107,700)
Federal funds purchased and securities loaned or sold under repurchase agreements	**(63,116)**	15,202	67,785
Commercial paper and other borrowed funds	**7,230**	(6,869)	(67,198)
Beneficial interests issued by consolidated variable interest entities	**1,165**	2,426	(4,076)
Proceeds from long-term borrowings and trust preferred capital debt securities	**54,844**	55,181	51,324
Payments of long-term borrowings and trust preferred capital debt securities	**(82,078)**	(99,043)	(68,441)
Excess tax benefits related to stock-based compensation	**867**	26	17
Redemption of preferred stock issued to the U.S. Treasury	**–**	–	(25,000)
Redemption of other preferred stock	**–**	(352)	–
Proceeds from issuance of common stock	**–**	–	5,756
Treasury stock and warrants repurchased	**(8,863)**	(2,999)	–
Dividends paid	**(3,895)**	(1,486)	(3,422)
All other financing activities, net	**(1,868)**	(1,666)	(2,124)
Net cash provided by/(used in) financing activities	**107,706**	(49,217)	(153,079)
Effect of exchange rate changes on cash and due from banks	**(851)**	328	238
Net increase/(decrease) in cash and due from banks	**32,035**	1,361	(689)
Cash and due from banks at the beginning of the period	**27,567**	26,206	26,895
Cash and due from banks at the end of the period	**$ 59,602**	$ 27,567	$ 26,206
Cash interest paid	**$ 13,725**	$ 12,404	$ 16,875
Cash income taxes paid, net	**8,153**	9,747	5,434

Note: Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated noncash assets and liabilities of $87.7 billion and $92.2 billion, respectively.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small business, commercial banking, financial transaction processing, asset management and private equity. For a discussion of the Firm's business segments, see Note 33 on pages 300–303 of this Annual Report.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the U.S. ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Certain amounts reported in prior periods have been reclassified to conform to the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated. The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity ("VIE").

Voting Interest Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Firm to recognize its proportionate share of the entity's net earnings), or (ii) at fair value if the fair value option was elected at the inception of the Firm's investment. These investments are generally included in other assets, with income or loss included in other income.

Certain Firm-sponsored asset management funds are structured as limited partnerships or limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these funds. In the limited cases where the non-affiliated partners or members do not have substantive kick-out or participating rights, the Firm consolidates the funds.

The Firm's investment companies make investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated Balance Sheets at fair value, and are recorded in other assets.

Variable Interest Entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is a special purpose entity ("SPE"). SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of an entity that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivative or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

In January 2010, the Financial Accounting Standards Board ("FASB") issued an amendment which deferred the requirements of the accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds. For the funds to which the deferral applies, the Firm continues to apply other existing authoritative accounting guidance to determine whether such funds should be consolidated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included in the Consolidated Balance Sheets.

Use of estimates in the preparation of consolidated financial statements

The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in other comprehensive income/(loss) ("OCI") within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated Statements of Income.

Statements of cash flows

For JPMorgan Chase's Consolidated Statements of Cash Flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Business changes and developments	Note 2	Page 183
Fair value measurement	Note 3	Page 184
Fair value option	Note 4	Page 198
Derivative instruments	Note 6	Page 202
Noninterest revenue	Note 7	Page 211
Interest income and interest expense	Note 8	Page 212
Pension and other postretirement employee benefit plans	Note 9	Page 213
Employee stock-based incentives	Note 10	Page 222
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Off-balance sheet lending-related financial instruments, guarantees and other commitments	Note 29	Page 283
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Note 2 – Business changes and developments

Changes in common stock dividend

On February 23, 2009, the Board of Directors reduced the Firm's quarterly common stock dividend from $0.38 to $0.05 per share, effective with the dividend paid on April 30, 2009, to shareholders of record on April 6, 2009. On March 18, 2011, the Board of Directors raised the Firm's quarterly common stock dividend from $0.05 to $0.25 per share, effective with the dividend paid on April 30, 2011, to shareholders of record on April 6, 2011.

Other business events

RBS Sempra transaction

On July 1, 2010, JPMorgan Chase completed the acquisition of RBS Sempra Commodities' global oil, global metals and European power and gas businesses. The Firm acquired approximately $1.7 billion of net assets which included $3.3 billion of debt which was immediately repaid. This acquisition almost doubled the number of clients the Firm's commodities business can serve and has enabled the Firm to offer clients more products in more regions of the world.

Purchase of remaining interest in J.P. Morgan Cazenove

On January 4, 2010, JPMorgan Chase purchased the remaining interest in J.P. Morgan Cazenove, an investment banking business partnership formed in 2005, which resulted in an adjustment to the Firm's capital surplus of approximately $1.3 billion.

Purchase of remaining interest in Highbridge Capital Management

In July 2009, JPMorgan Chase completed its purchase of the remaining interest in Highbridge, which resulted in a $228 million adjustment to capital surplus.

Subsequent events

Global settlement on servicing and origination of mortgages

On February 9, 2012, the Firm announced that it agreed to a settlement in principle (the "global settlement") with a number of federal and state government agencies, including the U.S. Department of Justice, the U.S. Department of Housing and Urban Development, the Consumer Financial Protection Bureau and the State Attorneys General, relating to the servicing and origination of mortgages. The global settlement, which is subject to the execution of a definitive agreement and court approval, calls for the Firm to, among other things: (i) make cash payments of approximately $1.1 billion (a portion of which will be set aside for payments to borrowers); (ii) provide approximately $500 million of refinancing relief to certain "underwater" borrowers whose loans are owned by the Firm; and (iii) provide approximately $3.7 billion of additional relief for certain borrowers, including reductions of principal on first and second liens, payments to assist with short sales, deficiency balance waivers on past foreclosures and short sales, and forbearance assistance for unemployed homeowners. (If the Firm does not meet certain targets for provision of the refinancing or other borrower relief within certain prescribed time periods, the Firm will instead make cash payments.) In addition, under the global settlement the Firm will be required to adhere to certain enhanced mortgage servicing standards.

The global settlement releases the Firm from further claims related to servicing activities, including foreclosures and loss mitigation activities; certain origination activities; and certain bankruptcy-related activities. Not included in the global settlement are any claims arising out of securitization activities, including representations made to investors respecting mortgage-backed securities; criminal claims; and repurchase demands from the GSEs, among other items.

Also on February 9, 2012, the Firm entered into agreements in principle with the Federal Reserve and the Office of the Comptroller of the Currency for the payment of civil money penalties related to conduct that was the subject of consent orders entered into with the banking regulators in April 2011. The Firm's payment obligations under those agreements will be deemed satisfied by the Firm's payments and provisions of relief under the global settlement.

While the Firm expects to incur additional operating costs to comply with portions of the global settlement, including the enhanced servicing standards, the Firm's prior period results of operations have reflected the estimated costs of the global settlement. Accordingly, the Firm expects that the financial impact of the global settlement on the Firm's financial condition and results of operations for the first quarter of 2012 and future periods will not be material. For further information on this settlement, see "Mortgage Foreclosure Investigations and Litigation" in Note 31 on pages 290–299 of this Annual Report.

Washington Mutual, Inc. bankruptcy plan confirmation

On February 17, 2012, a bankruptcy court confirmed the joint plan containing the global settlement agreement resolving numerous disputes among Washington Mutual, Inc. ("WMI"), JPMorgan Chase and the Federal Deposit Insurance Corporation ("FDIC") as well as significant creditor groups (the "WaMu Global Settlement"). Pursuant to this agreement, the Firm expects to recognize additional assets, including certain pension-related assets, as well as tax refunds, in future periods as the settlement is executed and various state and federal tax matters are resolved. For additional information related to the WaMu Global Settlement, see "Washington Mutual Litigations" in Note 31 on pages 290–299 of this Annual Report.

Note 3 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis. Certain assets and liabilities are carried at fair value on a nonrecurring basis, including mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

The Firm has an established and well-documented process for determining fair values. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on internally developed models that consider relevant transaction data such as maturity and use as inputs, market-based or independently sourced market parameters, including but

not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. These adjustments include amounts to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters. Valuation adjustments are applied consistently over time.

- Credit valuation adjustments ("CVA") are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few classes of derivative contracts are listed on an exchange, derivative positions are predominantly valued using internally developed models that use as their basis observable market parameters. An adjustment is necessary to reflect the credit quality of each derivative counterparty to arrive at fair value. The adjustment also takes into account contractual factors designed to reduce the Firm's credit exposure to each counterparty, such as collateral and legal rights of offset.
- Debit valuation adjustments ("DVA") are taken to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. The methodology to determine the adjustment is consistent with CVA and incorporates JPMorgan Chase's credit spread as observed through the credit default swap market.
- Liquidity valuation adjustments are necessary when the Firm may not be able to observe a recent market price for a financial instrument that trades in inactive (or less active) markets or to reflect the cost of exiting larger-than-normal market-size risk positions (liquidity adjustments are not taken for positions classified within level 1 of the fair value hierarchy; see below). The Firm estimates the amount of uncertainty in the initial valuation based on the degree of liquidity in the market in which the financial instrument trades and makes liquidity adjustments to the carrying value of the financial instrument. The Firm measures the liquidity adjustment based on the following factors: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quote; and (3) the volatility of the principal risk component of the financial instrument. Costs to exit larger-than-normal market-size risk positions are determined based on the size of the adverse market move that is likely to occur during the period required to bring a position down to a nonconcentrated level.
- Unobservable parameter valuation adjustments are necessary when positions are valued using internally developed models that use as their basis unobservable parameters – that is, parameters that must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to mitigate the possibility of error and revision in the estimate of the market price provided by the model.

The Firm has numerous controls in place intended to ensure that its fair values are appropriate. An independent model review group reviews the Firm's valuation models and approves them for use for specific products. All valuation models within the Firm are subject to this review process. A price verification group, independent from the risk-taking function, ensures observable market prices and market-based parameters are used for valuation wherever possible. For those products with material parameter risk for which observable market levels do not exist, an independent review of the assumptions made on pricing is performed. Additional review includes deconstruction of the model valuations for certain structured instruments into their components and benchmarking valuations, where possible, to similar products; validating valuation estimates through actual cash settlement; and detailed review and explanation of recorded gains and losses, which are analyzed daily and over time. Valuation adjustments, which are also determined by the independent price verification group, are based on established policies and applied consistently over time. Any changes to the valuation methodology are reviewed by management to confirm that the changes are justified. As markets and products develop and the pricing for certain products becomes more or less transparent, the Firm continues to refine its valuation methodologies.

The methods described above to estimate fair value may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Valuation Hierarchy

A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following table is a description of the valuation methodologies used by the Firm to measure it's more significant products/ instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features • Market rates for respective maturity • Collateral	Instruments carried at fair value are generally classified in level 2
Loans and lending-related commitments - wholesale		
Trading portfolio	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are limited) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Discount rate • Expected credit losses • Loss severity rates • Prepayment rates • Servicing costs	Level 2 or 3
Loans held for investment and associated lending related commitments	Valuations are based on discounted cash flows, which consider: • Credit spreads, derived from the cost of credit default swaps ("CDS"); or benchmark credit curves developed by the Firm by industry and credit rating, and which take into account the difference in loss severity rates between bonds and loans • Prepayment rates Lending related commitments are valued similar to loans and reflect the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become funded prior to an obligor default For information regarding the valuation of loans measured at collateral value, see pages 231-252 of Note 14 of this Annual Report.	Loans held for investment and associated lending-related commitments that are not carried at fair value are not classified within the fair value hierarchy
Loans - consumer		
Held for investment consumer loans, excluding credit card	Valuations are based on discounted cash flows, which consider: • Discount rates (derived from primary origination rates and market activity) • Expected lifetime credit losses (considering expected and current default rates for existing portfolios, collateral prices, and economic environment expectations (i.e., unemployment rates)) • Estimated prepayments • Servicing costs • Market liquidity For information regarding the valuation of loans measured at collateral value, see pages 231-252 of Note 14 of this Annual Report.	Consumer loans in this category are not carried at fair value and are not classified within the fair value hierarchy
Credit card receivables	Valuations are based on discounted cash flows, which consider: • Projected interest income and late fee revenue, funding, servicing and credit costs, and loan repayment rates • Estimated life of receivables (based on projected loan payment rates) • Discount rate - based on expected return on receivables • Credit costs - allowance for loan losses is considered a reasonable proxy for the credit cost based on the short- term nature of credit card receivables	Credit card loans are not carried at fair value and are not classified within the fair value hierarchy
Conforming residential mortgage loans expected to be sold	Fair value is based upon observable pricing of mortgage-backed securities with similar collateral and incorporates adjustments to these prices to account for differences between the security and the value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity.	Predominantly classified within level 2

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Securities	Quoted market prices are used where available.	Level 1
	In the absence of quoted market prices, securities are valued based on: • Observed market prices for similar securities • Relevant broker quotes • Discounted cash flows (see specific product discussion below) *Mortgage- and asset-backed securities specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to discount rate, prepayments, defaults and recoveries *Collateralized debt obligations ("CDOs"), including collateralized loan obligations ("CLOs"), specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Expected prepayment, default, recovery, default correlation and liquidity spread assumptions • Credit spreads • Credit rating data	Level 2 or 3
Physical commodities	Valued using observable market prices or data	Level 1 or 2
Derivatives	Exchange-traded derivatives are valued using market observable prices.	Level 1
	Derivatives that are not exchange-traded, which include plain vanilla options and interest rate and credit default swaps, are valued using internally developed models and/or a series of techniques such as the Black-Scholes option pricing model, simulation models, or a combination of models, which are consistently applied. Inputs include: • Contractual terms including period to maturity • Readily observable parameters including interest rates and volatility • Credit quality of the counterparty and of the Firm • Correlation levels *Derivatives that are valued based on models with significant unobservable inputs include:* *Structured credit derivatives specific inputs:* • CDS spreads and recovery rates • Correlation between the underlying debt instruments (levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices) • Actual transactions, where available, are used to regularly recalibrate unobservable parameters *Certain long-dated equity option specific inputs:* • Long-dated equity volatilities *Callable interest rate FX exotic options specific inputs:* • Correlation between interest rates and FX rates • Parameters describing the evolution of underlying interest rates	Level 2 or 3
Mortgage servicing rights ("MSRs")	See Mortgage servicing rights on pages 268–270 of Note 17 of this Annual Report.	Level 3

Product/instrument	Valuation methodology, inputs and assumptions	Classification in the valuation hierarchy
Private equity investments	*Private equity investments held in the Private Equity portfolio* Fair value is estimated using all available information and considering the range of potential inputs, including: • Transaction prices • Trading multiples of comparable public companies • Operating performance of the underlying portfolio company • Additional available inputs relevant to the investment • Adjustments are required since comparable public companies are not identical to the company being valued, and for company-specific issues and lack of liquidity	Level 3
	Public investments held in the Private Equity portfolio • Valued using observable market prices less adjustments for relevant restrictions, where applicable	Level 1 or 2
Fund investments (i.e., mutual/collective investment funds, private equity funds, hedge funds, and real estate funds)	Net Asset Value ("NAV") • NAV is validated by sufficient level of observable activity (i.e., purchases and sales)	Level 1
	• Adjustments to the NAV are required for restrictions on redemption (e.g., lock up periods or withdrawal limitations) or where observable activity is limited	Level 2 or 3
Beneficial interests issued by consolidated VIE	Valued using observable market information, where available In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE	Level 2 or 3
Long-term debt, not carried at fair value	Valuations are based on discounted cash flows, which consider: • Market rates for respective maturity • Credit quality of the Firm (DVA)	Long-term debt, excluding structured notes, is not carried at fair value and is not classified within the fair value hierarchy
Structured notes (included in Deposits, Other borrowed funds and Long-term debt)	Valuations are based on discounted cash flows, which consider: • Credit quality of the Firm (DVA) • Consideration of derivative features	Level 2 or 3

The following table presents the asset and liabilities measured at fair value as of December 31, 2011 and 2010 by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2011 (in millions)	Level 1[h]	Level 2[h]	Level 3[h]	Netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 24,891	$ –	$ –	$ 24,891
Securities borrowed	–	15,308	–	–	15,308
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	27,082	7,801	86	–	34,969
Residential – nonagency	–	2,956	796	–	3,752
Commercial – nonagency	–	870	1,758	–	2,628
Total mortgage-backed securities	27,082	11,627	2,640	–	41,349
U.S. Treasury and government agencies[a]	11,508	8,391	–	–	19,899
Obligations of U.S. states and municipalities	–	15,117	1,619	–	16,736
Certificates of deposit, bankers' acceptances and commercial paper	–	2,615	–	–	2,615
Non-U.S. government debt securities	18,618	40,080	104	–	58,802
Corporate debt securities	–	33,938	6,373	–	40,311
Loans[b]	–	21,589	12,209	–	33,798
Asset-backed securities	–	2,406	7,965	–	10,371
Total debt instruments	57,208	135,763	30,910	–	223,881
Equity securities	93,799	3,502	1,177	–	98,478
Physical commodities[c]	21,066	4,898	–	–	25,964
Other	–	2,283	880	–	3,163
Total debt and equity instruments[d]	172,073	146,446	32,967	–	351,486
Derivative receivables:					
Interest rate	1,324	1,433,469	6,728	(1,395,152)	46,369
Credit	–	152,569	17,081	(162,966)	6,684
Foreign exchange	833	162,689	4,641	(150,273)	17,890
Equity	–	43,604	4,132	(40,943)	6,793
Commodity	4,561	50,409	2,459	(42,688)	14,741
Total derivative receivables[e]	6,718	1,842,740	35,041	(1,792,022)	92,477
Total trading assets	178,791	1,989,186	68,008	(1,792,022)	443,963
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	92,426	14,681	–	–	107,107
Residential – nonagency	–	67,554	3	–	67,557
Commercial – nonagency	–	10,962	267	–	11,229
Total mortgage-backed securities	92,426	93,197	270	–	185,893
U.S. Treasury and government agencies[a]	3,837	4,514	–	–	8,351
Obligations of U.S. states and municipalities	36	16,246	258	–	16,540
Certificates of deposit	–	3,017	–	–	3,017
Non-U.S. government debt securities	25,381	19,884	–	–	45,265
Corporate debt securities	–	62,176	–	–	62,176
Asset-backed securities:					
Credit card receivables	–	4,655	–	–	4,655
Collateralized loan obligations	–	116	24,745	–	24,861
Other	–	11,105	213	–	11,318
Equity securities	2,667	38	–	–	2,705
Total available-for-sale securities	124,347	214,948	25,486	–	364,781
Loans	–	450	1,647	–	2,097
Mortgage servicing rights	–	–	7,223	–	7,223
Other assets:					
Private equity investments[f]	99	706	6,751	–	7,556
All other	4,336	233	4,374	–	8,943
Total other assets	4,435	939	11,125	–	16,499
Total assets measured at fair value on a recurring basis[g]	$ 307,573	$ 2,245,722	$ 113,489	$ (1,792,022)	$ 874,762
Deposits	$ –	$ 3,515	$ 1,418	$ –	$ 4,933
Federal funds purchased and securities loaned or sold under repurchase agreements	–	9,517	–	–	9,517
Other borrowed funds	–	8,069	1,507	–	9,576
Trading liabilities:					
Debt and equity instruments[d]	50,830	15,677	211	–	66,718
Derivative payables:					
Interest rate	1,537	1,395,113	3,167	(1,371,807)	28,010
Credit	–	155,772	9,349	(159,511)	5,610
Foreign exchange	846	159,258	5,904	(148,573)	17,435
Equity	–	39,129	7,237	(36,711)	9,655
Commodity	3,114	53,684	3,146	(45,677)	14,267
Total derivative payables[e]	5,497	1,802,956	28,803	(1,762,279)	74,977
Total trading liabilities	56,327	1,818,633	29,014	(1,762,279)	141,695
Accounts payable and other liabilities	–	–	51	–	51
Beneficial interests issued by consolidated VIEs	–	459	791	–	1,250
Long-term debt	–	24,410	10,310	–	34,720
Total liabilities measured at fair value on a recurring basis	$ 56,327	$ 1,864,603	$ 43,091	$ (1,762,279)	$ 201,742

December 31, 2010 (in millions)	Fair value hierarchy Level 1[h]	Level 2[h]	Level 3[h]	Netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 20,299	$ –	$ –	$ 20,299
Securities borrowed	–	13,961	–	–	13,961
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	36,813	10,738	174	–	47,725
Residential – nonagency	–	2,807	687	–	3,494
Commercial – nonagency	–	1,093	2,069	–	3,162
Total mortgage-backed securities	36,813	14,638	2,930	–	54,381
U.S. Treasury and government agencies[a]	12,863	9,026	–	–	21,889
Obligations of U.S. states and municipalities	–	11,715	2,257	–	13,972
Certificates of deposit, bankers' acceptances and commercial paper	–	3,248	–	–	3,248
Non-U.S. government debt securities	31,127	38,482	202	–	69,811
Corporate debt securities	–	42,280	4,946	–	47,226
Loans[b]	–	21,736	13,144	–	34,880
Asset-backed securities	–	2,743	8,460	–	11,203
Total debt instruments	80,803	143,868	31,939	–	256,610
Equity securities	124,400	3,153	1,685	–	129,238
Physical commodities[c]	18,327	2,708	–	–	21,035
Other	–	1,598	930	–	2,528
Total debt and equity instruments[d]	223,530	151,327	34,554	–	409,411
Derivative receivables:					
Interest rate	2,278	1,120,282	5,422	(1,095,427)	32,555
Credit	–	111,827	17,902	(122,004)	7,725
Foreign exchange	1,121	163,114	4,236	(142,613)	25,858
Equity	30	38,718	4,885	(39,429)	4,204
Commodity	1,324	56,076	2,197	(49,458)	10,139
Total derivative receivables[e]	4,753	1,490,017	34,642	(1,448,931)	80,481
Total trading assets	228,283	1,641,344	69,196	(1,448,931)	489,892
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	104,736	15,490	–	–	120,226
Residential – nonagency	1	48,969	5	–	48,975
Commercial – nonagency	–	5,403	251	–	5,654
Total mortgage-backed securities	104,737	69,862	256	–	174,855
U.S. Treasury and government agencies[a]	522	10,826	–	–	11,348
Obligations of U.S. states and municipalities	31	11,272	256	–	11,559
Certificates of deposit	6	3,641	–	–	3,647
Non-U.S. government debt securities	13,107	7,670	–	–	20,777
Corporate debt securities	–	61,793	–	–	61,793
Asset-backed securities:					
Credit card receivables	–	7,608	–	–	7,608
Collateralized loan obligations	–	128	13,470	–	13,598
Other	–	8,777	305	–	9,082
Equity securities	1,998	53	–	–	2,051
Total available-for-sale securities	120,401	181,630	14,287	–	316,318
Loans	–	510	1,466	–	1,976
Mortgage servicing rights	–	–	13,649	–	13,649
Other assets:					
Private equity investments[f]	49	826	7,862	–	8,737
All other	5,093	192	4,179	–	9,464
Total other assets	5,142	1,018	12,041	–	18,201
Total assets measured at fair value on a recurring basis[g]	$ 353,826	$ 1,858,762	$ 110,639	$ (1,448,931)	$ 874,296
Deposits	$ –	$ 3,596	$ 773	$ –	$ 4,369
Federal funds purchased and securities loaned or sold under repurchase agreements	–	4,060	–	–	4,060
Other borrowed funds	–	8,547	1,384	–	9,931
Trading liabilities:					
Debt and equity instruments[d]	58,468	18,425	54	–	76,947
Derivative payables:					
Interest rate	2,625	1,085,233	2,586	(1,070,057)	20,387
Credit	–	112,545	12,516	(119,923)	5,138
Foreign exchange	972	158,908	4,850	(139,715)	25,015
Equity	22	39,046	7,331	(35,949)	10,450
Commodity	862	54,611	3,002	(50,246)	8,229
Total derivative payables[e]	4,481	1,450,343	30,285	(1,415,890)	69,219
Total trading liabilities	62,949	1,468,768	30,339	(1,415,890)	146,166
Accounts payable and other liabilities	–	–	236	–	236
Beneficial interests issued by consolidated VIEs	–	622	873	–	1,495
Long-term debt	–	25,795	13,044	–	38,839
Total liabilities measured at fair value on a recurring basis	$ 62,949	$ 1,511,388	$ 46,649	$ (1,415,890)	$ 205,096

(a) At December 31, 2011 and 2010, included total U.S. government-sponsored enterprise obligations of $122.4 billion and $137.3 billion respectively, which were predominantly mortgage-related.

(b) At December 31, 2011 and 2010, included within trading loans were $20.1 billion and $22.7 billion, respectively, of residential first-lien mortgages, and $2.0 billion and $2.6 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $11.0 billion and $13.1 billion, respectively, and reverse mortgages of $4.0 billion and $4.0 billion, respectively.

(c) Physical commodities inventories are generally accounted for at the lower of cost or fair value.

(d) Balances reflect the reduction of securities owned (long positions) by the amount of securities sold but not yet purchased (short positions) when the long and short positions have identical Committee on Uniform Security Identification Procedures numbers ("CUSIPs").
(e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. Therefore, the balances reported in the fair value hierarchy table are gross of any counterparty netting adjustments. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivable and payable balances would be $11.7 billion and $12.7 billion at December 31, 2011 and 2010, respectively; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.
(f) Private equity instruments represent investments within the Corporate/Private Equity line of business. The cost basis of the private equity investment portfolio totaled $9.5 billion and $10.0 billion at December 31, 2011 and 2010, respectively.
(g) At December 31, 2011 and 2010, balances included investments valued at net asset values of $10.8 billion and $12.1 billion, respectively, of which $5.3 billion and $5.9 billion, respectively, were classified in level 1, $1.2 billion and $2.0 billion, respectively, in level 2, and $4.3 billion and $4.2 billion, respectively, in level 3.
(h) For the years ended December 31, 2011 and 2010, there were no significant transfers between levels 1 and 2. For the year ended December 31, 2011, transfers from level 3 into level 2 included $2.6 billion of long-term debt due to a decrease in valuation uncertainty of certain structured notes. For the year ended December 31, 2010, transfers from level 3 into level 2 included $1.2 billion of trading loans due to increased price transparency. There were no significant transfers into level 3 for the years ended December 31, 2011 and 2010. All transfers are assumed to occur at the beginning of the reporting period.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated Balance Sheet amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2011, 2010 and 2009. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2011 (in millions)	Fair value at January 1, 2011	Total realized/ unrealized gains/(losses)	Purchases[f]	Sales	Issuances	Settlements	Transfers into and/ or out of level 3[g]	Fair value at Dec. 31, 2011	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2011
	Fair value measurements using significant unobservable inputs								
Assets:									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. government agencies	$ 174	$ 24	$ 28	$ (39)	$ –	$ (43)	$ (58)	$ 86	$ (51)
Residential – nonagency	687	109	708	(432)	–	(221)	(55)	796	(9)
Commercial – nonagency	2,069	37	796	(973)	–	(171)	–	1,758	33
Total mortgage-backed securities	2,930	170	1,532	(1,444)	–	(435)	(113)	2,640	(27)
Obligations of U.S. states and municipalities	2,257	9	807	(1,465)	–	(1)	12	1,619	(11)
Non-U.S. government debt securities	202	35	552	(531)	–	(80)	(74)	104	38
Corporate debt securities	4,946	32	8,080	(5,939)	–	(1,005)	259	6,373	26
Loans	13,144	329	5,532	(3,873)	–	(2,691)	(232)	12,209	142
Asset-backed securities	8,460	90	4,185	(4,368)	–	(424)	22	7,965	(217)
Total debt instruments	31,939	665	20,688	(17,620)	–	(4,636)	(126)	30,910	(49)
Equity securities	1,685	267	180	(541)	–	(352)	(62)	1,177	278
Other	930	48	36	(39)	–	(95)	–	880	79
Total trading assets – debt and equity instruments	34,554	980 [b]	20,904	(18,200)	–	(5,083)	(188)	32,967	308 [b]
Net derivative receivables:									
Interest rate	2,836	5,205	511	(219)	–	(4,534)	(238)	3,561	1,497
Credit	5,386	2,240	22	(13)	–	116	(19)	7,732	2,744
Foreign exchange	(614)	(1,913)	191	(20)	–	886	207	(1,263)	(1,878)
Equity	(2,446)	(60)	715	(1,449)	–	37	98	(3,105)	(132)
Commodity	(805)	596	328	(350)	–	(294)	(162)	(687)	208
Total net derivative receivables	4,357	6,068 [b]	1,767	(2,051)	–	(3,789)	(114)	6,238	2,439 [b]
Available-for-sale securities:									
Asset-backed securities	13,775	(95)	15,268	(1,461)	–	(2,529)	–	24,958	(106)
Other	512	–	57	(15)	–	(26)	–	528	8
Total available-for-sale securities	14,287	(95) [c]	15,325	(1,476)	–	(2,555)	–	25,486	(98) [c]
Loans	1,466	504 [b]	326	(9)	–	(639)	(1)	1,647	484 [b]
Mortgage servicing rights	13,649	(7,119) [d]	2,603	–	–	(1,910)	–	7,223	(7,119) [d]
Other assets:									
Private equity investments	7,862	943 [b]	1,452	(2,746)	–	(594)	(166)	6,751	(242) [b]
All other	4,179	(54) [e]	938	(139)	–	(521)	(29)	4,374	(83) [e]

Year ended December 31, 2011 (in millions)	Fair value at January 1, 2011	Total realized/ unrealized (gains)/losses	Purchases[f]	Sales	Issuances	Settlements	Transfers into and/ or out of level 3[g]	Fair value at Dec. 31, 2011	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2011
	Fair value measurements using significant unobservable inputs								
Liabilities:[a]									
Deposits	$ 773	$ 15 [b]	$ –	$ –	$ 433	$ (386)	$ 583	$ 1,418	$ 4 [b]
Other borrowed funds	1,384	(244) [b]	–	–	1,597	(834)	(396)	1,507	(85) [b]
Trading liabilities – debt and equity instruments	54	17 [b]	(533)	778	–	(109)	4	211	(7) [b]
Accounts payable and other liabilities	236	(61) [e]	–	–	–	(124)	–	51	5 [e]
Beneficial interests issued by consolidated VIEs	873	17 [b]	–	–	580	(679)	–	791	(15) [b]
Long-term debt	13,044	60 [b]	–	–	2,564	(3,218)	(2,140)	10,310	288 [b]

Year ended December 31, 2010 (in millions)	Fair value at January 1, 2010	Total realized/ unrealized gains/ (losses)	Purchases, issuances, settlements, net	Transfers into and/or out of level 3[g]	Fair value at Dec. 31, 2010	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2010
	Fair value measurements using significant unobservable inputs					
Assets:						
Trading assets:						
Debt instruments:						
Mortgage-backed securities:						
U.S. government agencies	$ 260	$ 24	$ (107)	$ (3)	$ 174	$ (31)
Residential – nonagency	1,115	178	(564)	(42)	687	110
Commercial – nonagency	1,770	230	(33)	102	2,069	130
Total mortgage-backed securities	3,145	432	(704)	57	2,930	209
Obligations of U.S. states and municipalities	1,971	2	142	142	2,257	(30)
Non-U.S. government debt securities	89	(36)	194	(45)	202	(8)
Corporate debt securities	5,241	(325)	115	(85)	4,946	28
Loans	13,218	(40)	1,296	(1,330)	13,144	(385)
Asset-backed securities	8,620	237	(408)	11	8,460	195
Total debt instruments	32,284	270	635	(1,250)	31,939	9
Equity securities	1,956	133	(351)	(53)	1,685	199
Other	1,441	211	(801)	79	930	299
Total trading assets – debt and equity instruments	35,681	614 [b]	(517)	(1,224)	34,554	507 [b]
Net derivative receivables:						
Interest rate	2,040	3,057	(2,520)	259	2,836	487
Credit	10,350	(1,757)	(3,102)	(105)	5,386	(1,048)
Foreign exchange	1,082	(913)	(434)	(349)	(614)	(464)
Equity	(2,306)	(194)	(82)	136	(2,446)	(212)
Commodity	(329)	(700)	134	90	(805)	(76)
Total net derivative receivables	10,837	(507) [b]	(6,004)	31	4,357	(1,313) [b]
Available-for-sale securities:						
Asset-backed securities	12,732	(146)	1,189	–	13,775	(129)
Other	461	(49)	37	63	512	18
Total available-for-sale securities	13,193	(195) [c]	1,226	63	14,287	(111) [c]
Loans	990	145 [b]	323	8	1,466	37 [b]
Mortgage servicing rights	15,531	(2,268) [d]	386	–	13,649	(2,268) [d]
Other assets:						
Private equity investments	6,563	1,038 [b]	715	(454)	7,862	688 [b]
All other	9,521	(113) [e]	(5,132)	(97)	4,179	37 [e]

Year ended December 31, 2010 (in millions)	Fair value at January 1, 2010	Total realized/ unrealized (gains)/losses	Purchases, issuances, settlements, net	Transfers into and/or out of level 3[g]	Fair value at Dec. 31, 2010	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2010
	Fair value measurements using significant unobservable inputs					
Liabilities:[a]						
Deposits	$ 476	$ 54 [b]	$ (86)	$ 329	$ 773	$ (77) [b]
Other borrowed funds	542	(242) [b]	1,326	(242)	1,384	445 [b]
Trading liabilities – debt and equity instruments	10	2 [b]	19	23	54	–
Accounts payable and other liabilities	355	(138) [e]	19	–	236	37 [e]
Beneficial interests issued by consolidated VIEs	625	(7) [b]	87	168	873	(76) [b]
Long-term debt	18,287	(532) [b]	(4,796)	85	13,044	662 [b]

Year ended December 31, 2009 (in millions)	Fair Value at January 1, 2009	Total realized/ unrealized gains/ (losses)	Purchases, issuances settlements, net	Transfers into and/or out of level 3[g]	Fair value at Dec. 31,2009	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2009
	Fair value measurements using significant unobservable inputs					
Assets:						
Trading assets:						
Debt instruments:						
Mortgage-backed securities:						
U.S. government agencies	$ 163	$ (38)	$ 62	$ 73	$ 260	$ (38)
Residential – nonagency	3,339	(782)	(245)	(1,197)	1,115	(871)
Commercial – nonagency	2,487	(242)	(325)	(150)	1,770	(313)
Total mortgage-backed securities	5,989	(1,062)	(508)	(1,274)	3,145	(1,222)
Obligations of U.S. states and municipalities	2,641	(22)	(648)	–	1,971	(123)
Non-U.S. government debt securities	11	36	(22)	64	89	32
Corporate debt securities	5,280	38	(3,416)	3,339	5,241	(72)
Loans	17,091	(871)	(3,497)	495	13,218	(1,167)
Asset-backed securities	7,802	1,438	(431)	(189)	8,620	736
Total debt instruments	38,814	(443)	(8,522)	2,435	32,284	(1,816)
Equity securities	1,380	(149)	(512)	1,237	1,956	(51)
Other	1,694	(12)	(273)	32	1,441	(52)
Total trading assets – debt and equity instruments	41,888	(604) [b]	(9,307)	3,704	35,681	(1,919) [b]
Total net derivative receivables	9,039	(11,473) [b]	(3,428)	16,699	10,837	(10,902) [b]
Available-for-sale securities:						
Asset-backed securities	11,447	(2)	1,112	175	12,732	(48)
Other	944	(269)	302	(516)	461	43
Total available-for-sale securities	12,391	(271) [c]	1,414	(341)	13,193	(5) [c]
Loans	2,667	(448) [b]	(1,906)	677	990	(488) [b]
Mortgage servicing rights	9,403	5,807 [d]	321	–	15,531	5,807 [d]
Other assets:						
Private equity investments	6,369	(407) [b]	582	19	6,563	(369) [b]
All other	8,114	(676) [e]	2,439	(356)	9,521	(612) [e]

Year ended December 31, 2009 (in millions)	Fair value at January 1, 2009	Total realized/ unrealized (gains)/losses	Purchases, issuances settlements, net	Transfers into and/or out of level 3[e]	Fair value at Dec.31, 2009	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2009
	Fair value measurements using significant unobservable inputs					
Liabilities:[a]						
Deposits	$ 1,235	$ 47 [b]	$ (870)	$ 64	$ 476	$ (36) [b]
Other borrowed funds	101	(73) [b]	621	(107)	542	9 [b]
Trading liabilities:						
Debt and equity instruments	288	64 [b]	(339)	(3)	10	12 [b]
Accounts payable and other liabilities	–	(55) [b]	410	–	355	(29) [b]
Beneficial interests issued by consolidated VIEs	–	344 [b]	(598)	879	625	327 [b]
Long-term debt	16,548	1,367 [b]	(2,738)	3,110	18,287	1,728 [b]

(a) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 21%, 23% and 29% at December 31, 2011, 2010 and 2009, respectively.
(b) Predominantly reported in principal transactions revenue, except for changes in fair value for Retail Financial Services ("RFS") mortgage loans and lending-related commitments originated with the intent to sell, which are reported in mortgage fees and related income.
(c) Realized gains/(losses) on available-for-sale ("AFS") securities, as well as other-than-temporary impairment losses that are recorded in earnings, are reported in securities gains. Unrealized gains/(losses) are reported in OCI. Realized gains/(losses) and foreign exchange remeasurement adjustments recorded in income on AFS securities were $(240) million, $(66) million, and $(345) million for the years ended December 31, 2011, 2010 and 2009, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were $145 million, $(129) million and $74 million for the years ended December 31, 2011, 2010 and 2009, respectively.
(d) Changes in fair value for RFS mortgage servicing rights are reported in mortgage fees and related income.
(e) Largely reported in other income.
(f) Loan originations are included in purchases.
(g) All transfers into and/or out of level 3 are assumed to occur at the beginning of the reporting period.

Assets and liabilities measured at fair value on a nonrecurring basis

Certain assets, liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment). At December 31, 2011 and 2010, assets measured at fair value on a nonrecurring basis were $5.3 billion and $9.9 billion, respectively, comprised predominantly of loans. At December 31, 2011, $369 million and $4.9 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. At December 31, 2010, $312 million and $9.6 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. Liabilities measured at fair value on a nonrecurring basis were not significant at December 31, 2011 and 2010. For the years ended December 31, 2011 and 2010, there were no significant transfers between levels 1, 2, and 3. The total change in the value of assets and liabilities for which a fair value adjustment has been included in the Consolidated Statements of Income for the years ended December 31, 2011, 2010 and 2009, related to financial instruments held at those dates were losses of $2.2 billion, $3.6 billion and $4.7 billion, respectively; these losses were predominantly associated with loans.

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), see Note 14 on pages 231–252 of this Annual Report.

Level 3 analysis

Level 3 assets at December 31, 2011, predominantly included derivative receivables, MSRs, CLOs held within the available-for-sale and trading portfolios, loans within the trading portfolio and private equity investments.

- Derivative receivables included $35.0 billion related to interest rate, credit, foreign exchange, equity and commodity contracts. Credit derivative receivables of $17.1 billion included $12.1 billion of structured credit derivatives with corporate debt underlying and $3.4 billion of CDS largely on commercial mortgages where the risks are partially mitigated by similar and offsetting derivative payables. Interest rate derivative receivables of $6.7 billion include long-dated structured interest rate derivatives which are dependent on the correlation between different interest rate curves. Foreign exchange derivative receivables of $4.6 billion included long-dated foreign exchange derivatives which are dependent on the correlation between foreign exchange and interest rates. Equity derivative receivables of $4.1 billion principally included long-dated contracts where the volatility levels are unobservable. Commodity derivative receivables of $2.5 billion largely included long-dated oil contracts.
- CLOs totaling $30.9 billion are securities backed by corporate loans. At December 31, 2011, $24.7 billion of CLOs were held in the AFS securities portfolio and $6.2 billion were included in asset-backed securities held in the trading portfolio. Substantially all of the securities are rated "AAA," "AA" and "A" and had an average credit enhancement of 30%. Credit enhancement in CLOs is primarily in the form of subordination, which is a form of structural credit enhancement where realized losses associated with assets held by the issuing vehicle are allocated to the various tranches of securities issued by the vehicle considering their relative seniority. For a further discussion of CLOs held in the AFS securities portfolio, see Note 12 on pages 225–230 of this Annual Report.
- Trading loans totaling $12.2 billion included $6.0 billion of residential mortgage whole loans and commercial mortgage loans for which there is limited price transparency; and $4.0 billion of reverse mortgages for which the principal risk sensitivities are mortality risk and home prices. The fair value of the commercial and residential mortgage loans is estimated by projecting expected cash flows, considering relevant borrower-specific and market factors, and discounting those cash flows at a rate reflecting current market liquidity. Loans are partially hedged by level 2 instruments, including credit default swaps and interest rate derivatives, for which valuation inputs are observable and liquid.
- MSRs represent the fair value of future cash flows for performing specified mortgage servicing activities for others (predominantly with respect to residential mortgage loans). For a further discussion of the MSR asset, the interest rate risk management and valuation methodology used for MSRs, including valuation assumptions and sensitivities, and a summary of the changes in the MSR asset, see Note 17 on pages 267–271 of this Annual Report.

Consolidated Balance Sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 5.2% of total Firm assets at December 31, 2011. The following describes significant changes to level 3 assets since December 31, 2010.

For the year ended December 31, 2011

Level 3 assets decreased by $1.8 billion during 2011, due to the following:

- $11.2 billion increase in asset-backed AFS securities, predominantly driven by purchases of CLOs;
- $6.4 billion decrease in MSRs. For further discussion of the change, refer to Note 17 on pages 267–271 of this Annual Report;
- $2.3 billion decrease in nonrecurring loans held-for-sale, predominantly driven by sales in the loan portfolios;
- $2.2 billion decrease in nonrecurring retained loans predominantly due to portfolio runoff;
- $1.6 billion decrease in trading assets – debt and equity instruments, largely driven by sales and settlements of certain securities, partially offset by purchases of corporate debt; and

- $1.1 billion decrease in private equity investments, predominantly driven by sales of investments, partially offset by new investments.

Gains and Losses
Gains and losses included in the tables for 2011, 2010 and 2009 included:

2011

Included in the tables for the year ended December 31, 2011
- $7.1 billion of losses on MSRs. For further discussion of the change, refer to Note 17 on pages 267–271 of this Annual Report; and
- $6.1 billion of net gains on derivatives, related to declining interest rates and tightening of credit spreads, partially offset by losses due to fluctuation in foreign exchange rates.

2010

Included in the tables for the year ended December 31, 2010
- $2.3 billion of losses on MSRs; and
- $1.0 billion gain in private equity largely driven by gains on investments in the portfolio.

2009

Included in the tables for the year ended December 31, 2009
- $11.5 billion of net losses on derivatives, primarily related to the tightening of credit spreads;
- Net losses on trading – debt and equity instruments of $604 million, consisting of $2.1 billion of losses, primarily related to residential and commercial loans and mortgage-backed securities ("MBS"), principally driven by markdowns and sales, partially offset by gains of $1.4 billion, reflecting increases in the fair value of other asset-backed securities ("ABS");
- $5.8 billion of gains on MSRs; and
- $1.4 billion of losses related to structured note liabilities, predominantly due to volatility in the equity markets.

Credit adjustments

When determining the fair value of an instrument, it may be necessary to record a valuation adjustment to arrive at an exit price under U.S. GAAP. Valuation adjustments include, but are not limited to, amounts to reflect counterparty credit quality and the Firm's own creditworthiness. The market's view of the Firm's credit quality is reflected in credit spreads observed in the credit default swap market. For a detailed discussion of the valuation adjustments the Firm considers, see the valuation discussion at the beginning of this Note.

The following table provides the credit adjustments, excluding the effect of any hedging activity, reflected within the Consolidated Balance Sheets as of the dates indicated.

December 31, (in millions)	2011	2010
Derivative receivables balance (net of derivatives CVA)	**$ 92,477**	$ 80,481
Derivatives CVA[a]	**(6,936)**	(4,362)
Derivative payables balance (net of derivatives DVA)	**74,977**	69,219
Derivatives DVA	**(1,420)**	(882)
Structured notes balance (net of structured notes DVA)[b][c]	**49,229**	53,139
Structured notes DVA	**(2,052)**	(1,153)

(a) Derivatives CVA, gross of hedges, includes results managed by the Credit Portfolio and other lines of business within the Investment Bank ("IB").
(b) Structured notes are recorded within long-term debt, other borrowed funds or deposits on the Consolidated Balance Sheets, depending upon the tenor and legal form of the note.
(c) Structured notes are measured at fair value based on the Firm's election under the fair value option. For further information on these elections, see Note 4 on pages 198–200 of this Annual Report.

The following table provides the impact of credit adjustments on earnings in the respective periods, excluding the effect of any hedging activity.

Year ended December 31, (in millions)	2011	2010	2009
Credit adjustments:			
Derivative CVA[a]	**$ (2,574)**	$ (665)	$ 5,869
Derivative DVA	**538**	41	(548)
Structured note DVA[b]	**899**	468	(1,748)

(a) Derivatives CVA, gross of hedges, includes results managed by the Credit Portfolio and other lines of business within IB.
(b) Structured notes are measured at fair value based on the Firm's election under the fair value option. For further information on these elections, see Note 4 on pages 198–200 of this Annual Report.

Additional disclosures about the fair value of financial instruments (including financial instruments not carried at fair value)

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table. However, certain financial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements. Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of JPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated Balance Sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks; deposits with banks; federal funds sold; securities purchased under resale agreements and securities borrowed with short-dated maturities; short-term receivables and accrued interest receivable; commercial paper; federal funds purchased; securities loaned and sold under repurchase agreements with short-dated maturities; other borrowed funds (excluding advances from the Federal Home Loan Banks ("FHLBs")); accounts payable; and accrued liabilities. In addition, U.S. GAAP requires that the fair value for deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents the carrying values and estimated fair values of financial assets and liabilities.

	2011		2010	
December 31, (in billions)	Carrying value	Estimated fair value	Carrying value	Estimated fair value
Financial assets				
Assets for which fair value approximates carrying value	**$ 144.9**	**$ 144.9**	$ 49.2	$ 49.2
Accrued interest and accounts receivable	**61.5**	**61.5**	70.1	70.1
Federal funds sold and securities purchased under resale agreements (included **$24.9** and $20.3 at fair value)	**235.3**	**235.3**	222.6	222.6
Securities borrowed (included **$15.3** and $14.0 at fair value)	**142.5**	**142.5**	123.6	123.6
Trading assets	**444.0**	**444.0**	489.9	489.9
Securities (included **$364.8** and $316.3 at fair value)	**364.8**	**364.8**	316.3	316.3
Loans (included **$2.1** and $2.0 at fair value)[(a)]	**696.1**	**695.8**	660.7	663.5
Mortgage servicing rights at fair value	**7.2**	**7.2**	13.6	13.6
Other (included **$16.5** and $18.2 at fair value)	**66.3**	**66.8**	64.9	65.0
Financial liabilities				
Deposits (included **$4.9** and $4.4 at fair value)	**$ 1,127.8**	**$ 1,128.3**	$ 930.4	$ 931.5
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$9.5** and $4.1 at fair value)	**213.5**	**213.5**	276.6	276.6
Commercial paper	**51.6**	**51.6**	35.4	35.4
Other borrowed funds (included **$9.6** and $9.9 at fair value)[(b)]	**21.9**	**21.9**	34.3	34.3
Trading liabilities	**141.7**	**141.7**	146.2	146.2
Accounts payable and other liabilities (included **$0.1** and $0.2 at fair value)	**167.0**	**166.9**	138.2	138.2
Beneficial interests issued by consolidated VIEs (included **$1.3** and $1.5 at fair value)	**66.0**	**66.2**	77.6	77.9
Long-term debt and junior subordinated deferrable interest debentures (included **$34.7** and $38.8 at fair value)[(b)]	**256.8**	**254.2**	270.7	271.9

(a) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in a loan loss reserve calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in a loan loss reserve calculation. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see pages 186–188 of this Note.

(b) Effective January 1, 2011, $23.0 billion of long-term advances from FHLBs were reclassified from other borrowed funds to long-term debt. The prior-year period has been revised to conform with the current presentation.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated Balance Sheets, nor are they actively traded. The carrying value and estimated fair value of the Firm's wholesale lending-related commitments were as follows for the periods indicated.

	2011		2010	
December 31, (in billions)	Carrying value[a]	Estimated fair value	Carrying value[a]	Estimated fair value
Wholesale lending-related commitments	**$ 0.7**	**$ 3.4**	$ 0.7	$ 0.9

(a) Represents the allowance for wholesale lending-related commitments. Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which are recognized at fair value at the inception of guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases, without notice as permitted by law. For a further discussion of lending-related commitments, see Note 29 on pages 283–289 of this Annual Report; for further information on the valuation of lending-related commitments, see pages 186–188 of this Note.

Trading assets and liabilities

Trading assets include debt and equity instruments owned by JPMorgan Chase ("long" positions) that are held for client market-making and client-driven activities, as well as for certain risk management activities, certain loans managed on a fair value basis and for which the Firm has elected the fair value option, and physical commodities inventories that are generally accounted for at the lower of cost or fair value. Trading liabilities include debt and equity instruments that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase instruments at a future date to cover the short positions. Included in trading assets and trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. Trading assets and liabilities are carried at fair value on the Consolidated Balance Sheets. Balances reflect the reduction of securities owned (long positions) by the amount of securities sold but not yet purchased (short positions) when the long and short positions have identical Committee on Uniform Security Identification Procedures numbers ("CUSIPs").

Trading assets and liabilities – average balances

Average trading assets and liabilities were as follows for the periods indicated.

Year ended December 31, (in millions)	2011	2010	2009
Trading assets – debt and equity instruments[a]	**$ 393,890**	$ 354,441	$ 318,063
Trading assets – derivative receivables	**90,003**	84,676	110,457
Trading liabilities – debt and equity instruments[a][b]	**81,916**	78,159	60,224
Trading liabilities – derivative payables	**71,539**	65,714	77,901

(a) Balances reflect the reduction of securities owned (long positions) by the amount of securities sold, but not yet purchased (short positions) when the long and short positions have identical CUSIP numbers.
(b) Primarily represent securities sold, not yet purchased.

Note 4 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments not previously carried at fair value.

Elections

Elections were made by the Firm to:

- Mitigate income statement volatility caused by the differences in the measurement basis of elected instruments (for example, certain instruments elected were previously accounted for on an accrual basis) while the associated risk management arrangements are accounted for on a fair value basis;
- Eliminate the complexities of applying certain accounting models (e.g., hedge accounting or bifurcation accounting for hybrid instruments); and/or
- Better reflect those instruments that are managed on a fair value basis.

Elections include the following:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis.
- Securities financing arrangements with an embedded derivative and/or a maturity of greater than one year.
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument.
- Certain investments that receive tax credits and other equity investments acquired as part of the Washington Mutual transaction.
- Structured notes issued as part of IB's client-driven activities. (Structured notes are financial instruments that contain embedded derivatives.)
- Long-term beneficial interests issued by IB's consolidated securitization trusts where the underlying assets are carried at fair value.

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated Statements of Income for the years ended December 31, 2011, 2010 and 2009, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2011			2010			2009		
December 31, (in millions)	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	**$ 270**	**$ –**	**$ 270**	$ 173	$ –	$ 173	$ (553)	$ –	$ (553)
Securities borrowed	**(61)**	**–**	**(61)**	31	–	31	82	–	82
Trading assets:									
Debt and equity instruments, excluding loans	**53**	**(6)** [c]	**47**	556	(2) [c]	554	619	25 [c]	644
Loans reported as trading assets:									
Changes in instrument-specific credit risk	**934**	**(174)** [c]	**760**	1,279	(6) [c]	1,273	(300)	(177) [c]	(477)
Other changes in fair value	**127**	**5,263** [c]	**5,390**	(312)	4,449 [c]	4,137	1,132	3,119 [c]	4,251
Loans:									
Changes in instrument-specific credit risk	**2**	**–**	**2**	95	–	95	(78)	–	(78)
Other changes in fair value	**535**	**–**	**535**	90	–	90	(343)	–	(343)
Other assets	**(49)**	**(19)** [d]	**(68)**	–	(263) [d]	(263)	–	(731) [d]	(731)
Deposits[a]	**(237)**	**–**	**(237)**	(564)	–	(564)	(770)	–	(770)
Federal funds purchased and securities loaned or sold under repurchase agreements	**(4)**	**–**	**(4)**	(29)	–	(29)	116	–	116
Other borrowed funds[a]	**2,986**	**–**	**2,986**	123	–	123	(1,287)	–	(1,287)
Trading liabilities	**(57)**	**–**	**(57)**	(23)	–	(23)	(3)	–	(3)
Beneficial interests issued by consolidated VIEs	**(83)**	**–**	**(83)**	(12)	–	(12)	(351)	–	(351)
Other liabilities	**(3)**	**(5)** [d]	**(8)**	(9)	8 [d]	(1)	64	–	64
Long-term debt:									
Changes in instrument-specific credit risk[a]	**927**	**–**	**927**	400	–	400	(1,704)	–	(1,704)
Other changes in fair value[b]	**322**	**–**	**322**	1,297	–	1,297	(2,393)	–	(2,393)

(a) Total changes in instrument-specific credit risk related to structured notes were $899 million, $468 million, and $(1.7) billion for the years ended December 31, 2011, 2010 and 2009, respectively. These totals include adjustments for structured notes classified within deposits and other borrowed funds, as well as long-term debt.

(b) Structured notes are debt instruments with embedded derivatives that are tailored to meet a client's need. The embedded derivative is the primary driver of risk. Although the risk associated with the structured notes is actively managed, the gains reported in this table do not include the income statement impact of such risk management instruments.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings during 2011, 2010 and 2009, which were attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2011 and 2010, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2011			2010		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding
Loans[a]						
Nonaccrual loans						
Loans reported as trading assets	**$ 4,875**	**$ 1,141**	**$ (3,734)**	$ 5,246	$ 1,239	$ (4,007)
Loans	**820**	**56**	**(764)**	927	132	(795)
Subtotal	**5,695**	**1,197**	**(4,498)**	6,173	1,371	(4,802)
All other performing loans						
Loans reported as trading assets	**37,481**	**32,657**	**(4,824)**	39,490	33,641	(5,849)
Loans	**2,136**	**1,601**	**(535)**	2,496	1,434	(1,062)
Total loans	**$ 45,312**	**$ 35,455**	**$ (9,857)**	$ 48,159	$ 36,446	$ (11,713)
Long-term debt						
Principal-protected debt	**$ 19,417** [c]	**$ 19,890**	**$ 473**	$ 20,761 [c]	$ 21,315	$ 554
Nonprincipal-protected debt[b]	**NA**	**14,830**	**NA**	NA	17,524	NA
Total long-term debt	**NA**	**$ 34,720**	**NA**	NA	$ 38,839	NA
Long-term beneficial interests						
Principal-protected debt	**$ –**	**$ –**	**$ –**	$ 49	$ 49	$ –
Nonprincipal-protected debt[b]	**NA**	**1,250**	**NA**	NA	1,446	NA
Total long-term beneficial interests	**NA**	**$ 1,250**	**NA**	NA	$ 1,495	NA

(a) There were no performing loans which were ninety days or more past due as of December 31, 2011 and 2010, respectively.

(b) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note.

(c) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflected as the remaining contractual principal is the final principal payment at maturity.

At December 31, 2011 and 2010, the contractual amount of letters of credit for which the fair value option was elected was $3.9 billion and $3.8 billion, respectively, with a corresponding fair value of $(5) million and $(6) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29 on pages 283–289 of this Annual Report.

Note 5 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolio to assess potential concentration risks and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's wholesale portfolio, risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis. Management of the Firm's wholesale exposure is accomplished through loan syndication and participation, loan sales, securitizations, credit derivatives, use of master netting agreements, and collateral and other risk-reduction techniques. In the consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines.

The Firm does not believe that its exposure to any particular loan product (e.g., option adjustable rate mortgages ("ARMs")), industry segment (e.g., commercial real estate) or its exposure to residential real estate loans with high loan-to-value ratios results in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

For further information regarding on-balance sheet credit concentrations by major product and/or geography, see Notes 6, 14 and 15 on pages 202–210, 231–252 and 252–255, respectively, of this Annual Report. For information regarding concentrations of off-balance sheet lending-related financial instruments by major product, see Note 29 on pages 283–289 of this Annual Report.

Customer receivables representing primarily margin loans to prime and retail brokerage clients of $17.6 billion and $32.5 billion at December 31, 2011 and 2010, respectively, are included in the table below. These margin loans are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's positions may be liquidated by the Firm to meet the minimum collateral requirements. As a result of the Firm's credit risk mitigation practices, the Firm does not hold any reserves for credit impairment on these agreements as of December 31, 2011 and 2010.

The table below presents both on–balance sheet and off–balance sheet wholesale- and consumer-related credit exposure by the Firm's three credit portfolio segments as of December 31, 2011 and 2010.

	2011				2010			
	Credit	On-balance sheet		Off-balance	Credit	On-balance sheet		Off-balance
December 31, (in millions)	exposure	Loans	Derivatives	sheet[c]	exposure	Loans	Derivatives	sheet[c]
Wholesale								
Banks and finance companies	**$ 71,440**	**$ 29,392**	**$ 20,372**	**$ 21,676**	$ 65,867	$ 21,562	$ 20,935	$ 23,370
Real estate	**67,594**	**54,684**	**1,155**	**11,755**	64,351	53,635	868	9,848
Healthcare	**42,247**	**8,908**	**3,021**	**30,318**	41,093	6,047	2,121	32,925
State and municipal governments	**41,930**	**7,144**	**6,575**	**28,211**	35,808	6,095	5,148	24,565
Oil and gas	**35,437**	**10,780**	**3,521**	**21,136**	26,459	5,701	3,866	16,892
Asset managers	**33,465**	**6,182**	**9,458**	**17,825**	29,364	7,070	7,124	15,170
Consumer products	**29,637**	**9,187**	**1,079**	**19,371**	27,508	7,921	1,039	18,548
Utilities	**28,650**	**5,191**	**3,602**	**19,857**	25,911	4,220	3,104	18,587
Retail and consumer services	**22,891**	**6,353**	**565**	**15,973**	20,882	5,876	796	14,210
Technology	**17,898**	**4,394**	**1,310**	**12,194**	14,348	2,752	1,554	10,042
Central government	**17,138**	**623**	**10,813**	**5,702**	11,173	1,146	6,052	3,975
Machinery and equipment manufacturing	**16,498**	**5,111**	**417**	**10,970**	13,311	3,601	445	9,265
Transportation	**16,305**	**10,000**	**947**	**5,358**	9,652	3,754	822	5,076
Metals/mining	**15,254**	**6,073**	**690**	**8,491**	11,426	3,301	1,018	7,107
Insurance	**13,092**	**1,109**	**2,061**	**9,922**	10,918	1,103	1,660	8,155
All other[a]	**284,135**	**113,264**	**26,891**	**143,980**	240,999	88,726	23,929	128,344
Subtotal	**753,611**	**278,395**	**92,477**	**382,739**	649,070	222,510	80,481	346,079
Loans held-for-sale and loans at fair value	**4,621**	**4,621**	**–**	**–**	5,123	5,123	–	–
Receivables from customers and interests in purchased receivables	**17,461**	**–**	**–**	**–**	32,932	–	–	–
Total wholesale	**775,693**	**283,016**	**92,477**	**382,739**	687,125	227,633	80,481	346,079
Total consumer, excluding credit card[b]	**370,834**	**308,427**	**–**	**62,307**	393,021	327,618	–	65,403
Total credit card	**662,893**	**132,277**	**–**	**530,616**	684,903	137,676	–	547,227
Total exposure	**$1,809,420**	**$ 723,720**	**$ 92,477**	**$ 975,662**	$1,765,049	$ 692,927	$ 80,481	$ 958,709

(a) For more information on exposures to SPEs included within All other see Note 16 on pages 256–267 of this Annual Report.
(b) As of December 31, 2011, credit exposure for total consumer, excluding credit card, includes receivables from customers of $100 million.
(c) Represents lending-related financial instruments.

Note 6 – Derivative instruments

Derivative instruments enable end-users to modify or mitigate exposure to credit or market risks. Counterparties to a derivative contract seek to obtain risks and rewards similar to those that could be obtained from purchasing or selling a related cash instrument without having to exchange upfront the full purchase or sales price. JPMorgan Chase makes markets in derivatives for customers and also uses derivatives to hedge or manage its own market risk exposures. The majority of the Firm's derivatives are entered into for market-making purposes.

Trading derivatives
The Firm makes markets in a variety of derivatives to meet the needs of customers (both dealers and clients) and to generate revenue through this trading activity ("client derivatives"). Customers use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives. The Firm also seeks to earn a spread between the client derivatives and offsetting positions, and from the remaining open risk positions.

Risk management derivatives
The Firm manages its market risk exposures using various derivative instruments.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increase or decrease as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar-equivalent values of the foreign currency-denominated assets and liabilities or forecasted revenue or expense increase or decrease. Gains or losses on the derivative instruments related to these foreign currency-denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities contracts are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset the depreciation or appreciation of the related inventory. Also in the commodities portfolio, electricity and natural gas futures and forwards contracts are used to manage price risk associated with energy-related tolling and load-serving contracts and investments.

The Firm uses credit derivatives to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of credit default swaps. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 209–210 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 207 of this Note, and the hedge accounting gains and losses tables on pages 205–207 of this Note.

Accounting for derivatives
All free-standing derivatives are required to be recorded on the Consolidated Balance Sheets at fair value. As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral received and paid, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are marked to market through earnings. The tabular disclosures on pages 203–210 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 3 and 4 on pages 184–198 and 198–200, respectively, of this Annual Report.

Derivatives designated as hedges
The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and commodity derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased credit default swaps used to manage the credit risk of loans and commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate and commodity derivatives used for risk management purposes.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed

prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the change in the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item, for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the fair value adjustment to the hedged item continues to be reported as part of the basis of the hedged item and for interest-bearing instruments is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges to hedge the exposure to variability in cash flows from floating-rate financial instruments and forecasted transactions, primarily the rollover of short-term assets and liabilities, and foreign currency–denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in OCI and recognized in the Consolidated Statements of Income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in accumulated other comprehensive income/(loss) ("AOCI") is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses foreign currency hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For foreign currency qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2011 and 2010.

	Notional amounts[a]	
December 31, (in billions)	**2011**	2010
Interest rate contracts		
Swaps	**$ 38,704**	$ 46,299
Futures and forwards	**7,888**	9,298
Written options	**3,842**	4,075
Purchased options	**4,026**	3,968
Total interest rate contracts	**54,460**	63,640
Credit derivatives	**5,774**	5,472
Foreign exchange contracts		
Cross-currency swaps	**2,931**	2,568
Spot, futures and forwards	**4,512**	3,893
Written options	**674**	674
Purchased options	**670**	649
Total foreign exchange contracts	**8,787**	7,784
Equity contracts		
Swaps	**119**	116
Futures and forwards	**38**	49
Written options	**460**	430
Purchased options	**405**	377
Total equity contracts	**1,022**	972
Commodity contracts		
Swaps	**341**	349
Spot, futures and forwards	**188**	170
Written options	**310**	264
Purchased options	**274**	254
Total commodity contracts	**1,113**	1,037
Total derivative notional amounts	**$ 71,156**	$ 78,905

(a) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.

Impact of derivatives on the Consolidated Balance Sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated Balance Sheets as of December 31, 2011 and 2010, by accounting designation (e.g., whether the derivatives were designated as hedges or not) and contract type.

Free-standing derivative receivables and payables[a]

	Gross derivative receivables				Gross derivative payables			
December 31, 2011 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables
Trading assets and liabilities								
Interest rate	**$ 1,433,900**	**$ 7,621**	**$ 1,441,521**	**$ 46,369**	**$ 1,397,625**	**$ 2,192**	**$ 1,399,817**	**$ 28,010**
Credit	**169,650**	**–**	**169,650**	**6,684**	**165,121**	**–**	**165,121**	**5,610**
Foreign exchange[b]	**163,497**	**4,666**	**168,163**	**17,890**	**165,353**	**655**	**166,008**	**17,435**
Equity	**47,736**	**–**	**47,736**	**6,793**	**46,366**	**–**	**46,366**	**9,655**
Commodity	**53,894**	**3,535**	**57,429**	**14,741**	**58,836**	**1,108**	**59,944**	**14,267**
Total fair value of trading assets and liabilities	**$ 1,868,677**	**$ 15,822**	**$ 1,884,499**	**$ 92,477**	**$ 1,833,301**	**$ 3,955**	**$ 1,837,256**	**$ 74,977**

	Gross derivative receivables				Gross derivative payables			
December 31, 2010 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables
Trading assets and liabilities								
Interest rate	$ 1,121,703	$ 6,279	$ 1,127,982	$ 32,555	$ 1,089,604	$ 840	$ 1,090,444	$ 20,387
Credit	129,729	–	129,729	7,725	125,061	–	125,061	5,138
Foreign exchange[b]	165,240	3,231	168,471	25,858	163,671	1,059	164,730	25,015
Equity	43,633	–	43,633	4,204	46,399	–	46,399	10,450
Commodity	59,573	24	59,597	10,139	56,397	2,078 [c]	58,475	8,229
Total fair value of trading assets and liabilities	$ 1,519,878	$ 9,534	$ 1,529,412	$ 80,481	$ 1,481,132	$ 3,977	$ 1,485,109	$ 69,219

(a) Excludes structured notes for which the fair value option has been elected. See Note 4 on pages 198–200 of this Annual Report for further information.
(b) Excludes $11 million and $21 million of foreign currency-denominated debt designated as a net investment hedge at December 31, 2011 and 2010, respectively.
(c) Excludes $1.0 billion related to commodity derivatives that were embedded in a debt instrument and used as fair value hedging instruments that were recorded in the line item of the host contract (other borrowed funds) at December 31, 2010.

Impact of derivatives on the Consolidated Statements of Income

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pretax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2011, 2010 and 2009, respectively. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated Statements of Income.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2011 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	**$ 558**	**$ 6**	**$ 564**	**$ 104**	**$ 460**
Foreign exchange[b]	**5,684** [d]	**(3,761)**	**1,923**	**–**	**1,923**
Commodity[c]	**1,784**	**(2,880)**	**(1,096)**	**(10)**	**(1,086)**
Total	**$ 8,026**	**$ (6,635)**	**$ 1,391**	**$ 94**	**$ 1,297**

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2010 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	$ 1,066	$ (454)	$ 612	$ 172	$ 440
Foreign exchange[b]	1,357 [d]	(1,812)	(455)	–	(455)
Commodity[c]	(1,354)	1,882	528	–	528
Total	$ 1,069	$ (384)	$ 685	$ 172	$ 513

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2009 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	$ (3,830)	$ 4,638	$ 808	$ (466)	$ 1,274
Foreign exchange[b]	(1,421) [d]	1,445	24	–	24
Commodity[c]	(430)	399	(31)	–	(31)
Total	$ (5,681)	$ 6,482	$ 801	$ (466)	$ 1,267

(a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in spot foreign currency rates, were recorded in principal transactions revenue.

(c) Consists of overall fair value hedges of certain commodities inventories. Gains and losses were recorded in principal transactions revenue.

(d) Included $4.9 billion, $278 million and $(1.6) billion for the years ended December 31, 2011, 2010 and 2009, respectively, of revenue related to certain foreign exchange trading derivatives designated as fair value hedging instruments.

(e) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.

(f) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in current-period income.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives, for the years ended December 31, 2011, 2010 and 2009, respectively. The Firm includes the gain/(loss) on the hedging derivative in the same line item as the offsetting change in cash flows on the hedged item in the Consolidated Statements of Income.

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2011 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	**$ 310**	**$ 19**	**$ 329**	**$ 107**	**$ (203)**
Foreign exchange[b]	**(9)**	**—**	**(9)**	**(57)**	**(48)**
Total	**$ 301**	**$ 19**	**$ 320**	**$ 50**	**$ (251)**

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2010 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ 288	$ 20	$ 308	$ 388	$ 100
Foreign exchange[b]	(82)	(3)	(85)	(141)	(59)
Total	$ 206	$ 17	$ 223	$ 247	$ 41

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2009 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (158)	$ (62)	$ (220)	$ 61	$ 219
Foreign exchange[b]	282	—	282	706	424
Total	$ 124	$ (62)	$ 62	$ 767	$ 643

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily net interest income, noninterest revenue and compensation expense.

(c) The Firm did not experience any forecasted transactions that failed to occur for the years ended December 31, 2011 and 2009. In 2010, the Firm reclassified a $25 million loss from AOCI to earnings because the Firm determined that it was probable that forecasted interest payment cash flows related to certain wholesale deposits would not occur.

(d) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

Over the next 12 months, the Firm expects that $26 million (after-tax) of net gains recorded in AOCI at December 31, 2011, related to cash flow hedges will be recognized in income. The maximum length of time over which forecasted transactions are hedged is 10 years, and such transactions primarily relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following tables present hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pretax gains/(losses) recorded on such instruments for the years ended December 31, 2011, 2010 and 2009.

	Gains/(losses) recorded in income and other comprehensive income/(loss)					
	2011		2010		2009	
Year ended December 31, (in millions)	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI
Contract type						
Foreign exchange derivatives	**$ (251)**	**$ 225**	$ (139)	$ (30)	$ (112)	$ (259)
Foreign currency denominated debt	**–**	**1**	–	41	NA	NA
Total	**$ (251)**	**$ 226**	$ (139)	$ 11	$ (112)	$ (259)

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in current-period income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates, and therefore there was no ineffectiveness for net investment hedge accounting relationships during 2011, 2010 and 2009.

Risk management derivatives gains and losses (not designated as hedging instruments)

The following table presents nontrading derivatives, by contract type, that were not designated in hedge relationships, and the pretax gains/(losses) recorded on such derivatives for the years ended December 31, 2011, 2010 and 2009. These derivatives are risk management instruments used to mitigate or transform market risk exposures arising from banking activities other than trading activities, which are discussed separately below.

	Derivatives gains/(losses) recorded in income		
Year ended December 31, (in millions)	**2011**	2010	2009
Contract type			
Interest rate[a]	**$ 8,084**	$ 4,987	$ (3,113)
Credit[b]	**(52)**	(237)	(3,222)
Foreign exchange[c]	**(157)**	(64)	(197)
Equity[b]	**–**	–	(8)
Commodity[b]	**41**	(48)	(50)
Total	**$ 7,916**	$ 4,638	$ (6,590)

(a) Gains and losses were recorded in principal transactions revenue, mortgage fees and related income, and net interest income.
(b) Gains and losses were recorded in principal transactions revenue.
(c) Gains and losses were recorded in principal transactions revenue and net interest income.

Trading derivative gains and losses

The Firm has elected to present derivative gains and losses related to its trading activities together with the nonderivative instruments with which they are risk managed. All amounts are recorded in principal transactions revenue in the Consolidated Statements of Income for the years ended December 31, 2011, 2010 and 2009. The amounts below do not represent a comprehensive view of the Firm's trading activities because they do not include certain revenue associated with those activities, including net interest income earned on cash instruments used in trading activities and gains and losses on cash instruments that are risk managed without derivative instruments.

	Gains/(losses) recorded in principal transactions revenue		
Year ended December 31, (in millions)	**2011**	2010	2009
Type of instrument			
Interest rate	**$ (1,531)**	$ (683)	$ 4,375
Credit	**3,346**	4,636	5,022
Foreign exchange	**1,216**	1,854	2,583
Equity	**1,956**	1,827	1,475
Commodity	**3,697**	243	1,329
Total	**$ 8,684**	$ 7,877	$ 14,784

Credit risk, liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk – the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to actively pursue the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated Balance Sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. These amounts represent the cost to the Firm to replace the contracts at then-current market rates should the counterparty default.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the mark-to-market ("MTM") of the contracts moves in the counterparties' favor, or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables that contain contingent collateral or termination features that may be triggered upon a downgrade and the associated collateral the Firm has posted in the normal course of business at December 31, 2011 and 2010.

Derivative payables containing downgrade triggers

December 31, (in millions)	**2011**	2010
Aggregate fair value of net derivative payables	**$ 16,937**	$ 19,777
Collateral posted	**11,429**	14,629

The following table shows the impact of a single-notch and two-notch ratings downgrade to JPMorgan Chase & Co. and its subsidiaries, primarily JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") at December 31, 2011 and 2010, related to derivative contracts with contingent collateral or termination features that may be triggered upon a downgrade.

Liquidity impact of derivative downgrade triggers

	2011		2010	
December 31, (in millions)	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted	**$ 1,460**	**$ 2,054**	$ 1,904	$ 3,462
Amount required to settle contracts with termination triggers	**1,054**	**1,923**	430	994

The following tables show the carrying value of derivative receivables and payables after netting adjustments and adjustments for collateral held and transferred as of December 31, 2011 and 2010.

Impact of netting adjustments on derivative receivables and payables

	Derivative receivables		Derivative payables	
December 31, (in millions)	**2011**	2010	**2011**	2010
Gross derivative fair value	**$ 1,884,499**	$ 1,529,412	**$ 1,837,256**	$ 1,485,109
Netting adjustment – offsetting receivables/payables[a]	**(1,710,525)**	(1,376,969)	**(1,710,523)**	(1,376,969)
Netting adjustment – cash collateral received/paid[a]	**(81,497)**	(71,962)	**(51,756)**	(38,921)
Carrying value on Consolidated Balance Sheets	**$ 92,477**	$ 80,481	**$ 74,977**	$ 69,219

Total derivative collateral

	Collateral held		Collateral transferred	
December 31, (in millions)	**2011**	2010	**2011**	2010
Netting adjustment for cash collateral[a]	**$ 81,497**	$ 71,962	**$ 51,756**	$ 38,921
Liquid securities and other cash collateral[b]	**21,807**	16,486	**19,439**	10,899
Additional liquid securities and cash collateral[c]	**17,615**	18,048	**10,824**	8,435
Total collateral for derivative transactions	**$ 120,919**	$ 106,496	**$ 82,019**	$ 58,255

(a) As permitted under U.S. GAAP, the Firm has elected to net cash collateral received and paid together with the related derivative receivables and derivative payables when a legally enforceable master netting agreement exists.

(b) Represents cash collateral received and paid that is not subject to a legally enforceable master netting agreement, and liquid securities collateral held and transferred.

(c) Represents liquid securities and cash collateral held and transferred at the initiation of derivative transactions, which is available as security against potential exposure that could arise should the fair value of the transactions move, as well as collateral held and transferred related to contracts that have non-daily call frequency for collateral to be posted, and collateral that the Firm or a counterparty has agreed to return but has not yet settled as of the reporting date. These amounts were not netted against the derivative receivables and payables in the tables above, because, at an individual counterparty level, the collateral exceeded the fair value exposure at both December 31, 2011 and 2010.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker in the dealer/client business, the Firm actively risk manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. As a seller of protection, the Firm's exposure to a given reference entity may be offset partially, or entirely, with a contract to purchase protection from another counterparty on the same or similar reference entity. Second, the Firm uses credit derivatives to mitigate credit risk associated with its overall derivative receivables and traditional commercial credit lending exposures (loans and unfunded commitments) as well as to manage its exposure to residential and commercial mortgages. In accomplishing the above, the Firm uses different types of credit derivatives. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name CDS and index CDS contracts are OTC derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index comprises a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at the time of settling the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-related notes

A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a referenced entity. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity experiences a specified credit event. If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity. For a further discussion of credit-related notes, see Note 16 on pages 256–267 of this Annual Report.

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2011 and 2010. Upon a credit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased through credit-related notes.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

	Maximum payout/Notional amount			
December 31, 2011 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	**$ (2,839,492)**	**$ 2,798,207**	**$ (41,285)**	**$ 29,139**
Other credit derivatives[a]	**(79,711)**	**4,954**	**(74,757)**	**22,292**
Total credit derivatives	**(2,919,203)**	**2,803,161**	**(116,042)**	**51,431**
Credit-related notes	**(742)**	**–**	**(742)**	**3,944**
Total	**$ (2,919,945)**	**$ 2,803,161**	**$ (116,784)**	**$ 55,375**

	Maximum payout/Notional amount			
December 31, 2010 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (2,659,240)	$ 2,652,313	$ (6,927)	$ 32,867
Other credit derivatives[a]	(93,776)	10,016	(83,760)	24,234
Total credit derivatives	(2,753,016)	2,662,329	(90,687)	57,101
Credit-related notes	(2,008)	–	(2,008)	3,327
Total	$ (2,755,024)	$ 2,662,329	$ (92,695)	$ 60,428

(a) Primarily consists of total return swaps and credit default swap options.
(b) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(d) Represents protection purchased by the Firm through single-name and index credit default swaps or credit-related notes.

The following tables summarize the notional and fair value amounts of credit derivatives and credit-related notes as of December 31, 2011 and 2010, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings[a]/maturity profile

December 31, 2011 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value[b]
Risk rating of reference entity					
Investment-grade	**$ (352,215)**	**$ (1,262,143)**	**$ (345,996)**	**$ (1,960,354)**	**$ (57,697)**
Noninvestment-grade	**(241,823)**	**(589,954)**	**(127,814)**	**(959,591)**	**(85,304)**
Total	**$ (594,038)**	**$ (1,852,097)**	**$ (473,810)**	**$ (2,919,945)**	**$ (143,001)**

December 31, 2010 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value[b]
Risk rating of reference entity					
Investment-grade	$ (175,618)	$ (1,194,695)	$ (336,309)	$ (1,706,622)	$ (17,261)
Noninvestment-grade	(148,434)	(702,638)	(197,330)	(1,048,402)	(59,939)
Total	$ (324,052)	$ (1,897,333)	$ (533,639)	$ (2,755,024)	$ (77,200)

(a) The ratings scale is based on the Firm's internal ratings, which generally correspond to ratings as defined by S&P and Moody's.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

Note 7 – Noninterest revenue

Investment banking fees

This revenue category includes advisory and equity and debt underwriting fees. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee. Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria. Advisory fees are recognized as revenue when the related services have been performed and the fee has been earned.

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	2011	2010	2009
Underwriting			
Equity	**$ 1,181**	$ 1,589	$ 2,487
Debt	**2,934**	3,172	2,739
Total underwriting	**4,115**	4,761	5,226
Advisory[a]	**1,796**	1,429	1,861
Total investment banking fees	**$ 5,911**	$ 6,190	$ 7,087

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated its Firm-administered multi-seller conduits. The consolidation of the conduits did not significantly change the Firm's net income as a whole; however, certain advisory fees considered inter-company were eliminated while net interest income and lending-and-deposit-related fees increased.

Principal transactions

Principal transactions revenue consists of trading revenue as well as realized and unrealized gains and losses on private equity investments. Trading revenue is driven by the Firm's client market-making and client driven activities as well as certain risk management activities.

The spread between the price at which the Firm buys and sells financial instruments and physical commodities inventories to and from its clients and other market-makers is recognized as trading revenue. Trading revenue also includes unrealized gains and losses on financial instruments (including those for which the fair value option was elected) and unrealized losses on physical commodities inventories (generally carried at the lower of cost or fair value) that the Firm holds in inventory as a market-maker to meet client needs, or for risk management purposes.

The following table presents principal transactions revenue by major underlying type of risk exposures. This table does not include other types of revenue, such as net interest income on trading assets, which are an integral part of the overall performance of the Firm's client-driven trading activities.

Year ended December 31, (in millions)	2011	2010	2009
Trading revenue by risk exposure			
Interest rate	**$ (873)**	$ (199)	$ 3,681
Credit	**3,393**	4,543	546
Foreign exchange	**1,154**	1,896	2,317
Equity	**2,401**	2,275	2,056
Commodity[a]	**2,823**	889	1,270
Total trading revenue	**8,898**	9,404	9,870
Private equity gains/(losses)[b]	**1,107**	1,490	(74)
Principal transactions[c]	**$ 10,005**	$ 10,894	$ 9,796

(a) Includes realized gains and losses and unrealized losses on physical commodities inventories that are generally carried at the lower of cost or fair value, and gains and losses on commodity derivatives and other financial instruments that are carried at fair value through income. Commodity derivatives are frequently used to manage the Firm's risk exposure to its physical commodities inventories.

(b) Includes revenue on private equity investments held in the Private Equity business within Corporate/Private Equity, as well as those held in other business segments.

(c) Principal transactions included DVA related to derivatives and structured liabilities measured at fair value in IB. DVA gains/(losses) were $1.4 billion, $509 million, and $(2.3) billion for the years ended December 31, 2011, 2010 and 2009, respectively.

Lending- and deposit-related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan-servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions, and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met.

The following table presents components of asset management, administration and commissions.

Year ended December 31, (in millions)	2011	2010	2009
Asset management			
Investment management fees	**$ 6,085**	$ 5,632	$ 4,997
All other asset management fees	**605**	496	356
Total asset management fees	**6,690**	6,128	5,353
Total administration fees[a]	**2,171**	2,023	1,927
Commission and other fees			
Brokerage commissions	**2,753**	2,804	2,904
All other commissions and fees	**2,480**	2,544	2,356
Total commissions and fees	**5,233**	5,348	5,260
Total asset management, administration and commissions	**$ 14,094**	$ 13,499	$ 12,540

(a) Includes fees for custody, securities lending, funds services and securities clearance.

Mortgage fees and related income
This revenue category primarily reflects RFS's mortgage production and servicing revenue, including: fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously-sold loans; the impact of risk management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. Changes in the fair value of RFS mortgage servicing rights are reported in mortgage fees and related income. Net interest income from mortgage loans, and securities gains and losses on AFS securities used in mortgage-related risk management activities, are recorded in interest income and securities gains/(losses), respectively. For a further discussion of MSRs, see Note 17 on pages 267–271 of this Annual Report.

Credit card income
This revenue category includes interchange income from credit and debit cards and net fees earned from processing credit card transactions for merchants. Prior to 2010, this revenue category included servicing fees earned in connection with securitization activities; such fees have been eliminated in consolidation since January 1, 2010, when the Firm consolidated its Firm-sponsored credit card securitization trusts (see Note 16 on pages 256–267 of this Annual Report). Credit card income is recognized as earned. Annual fees and direct loan origination costs are deferred and recognized on a straight-line basis over a 12-month period. Expense related to rewards programs is recorded when the rewards are earned by the customer and netted against interchange income.

Credit card revenue sharing agreements
The Firm has contractual agreements with numerous affinity organizations and co-brand partners (collectively, "partners"), which grant the Firm exclusive rights to market to the members or customers of such partners. These partners endorse the credit card programs and provide their mailing lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to 10 years.

The Firm typically makes incentive payments to the partners based on: new account originations; charge volumes; and, the cost of the partners' marketing activities and awards. Payments based on new account originations are accounted for as direct loan origination costs. Payments to partners based on charge volumes are deducted from interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as noninterest expense.

Note 8 – Interest income and Interest expense

Interest income and interest expense is recorded in the Consolidated Statements of Income and classified based on the nature of the underlying asset or liability. Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP absent the fair value option election; for those instruments, all changes in fair value including any interest elements, are reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable.

Details of interest income and interest expense were as follows.

Year ended December 31, (in millions)	2011	2010	2009
Interest income			
Loans	**$ 37,098**	$ 40,388	$ 38,704
Securities	**9,215**	9,540	12,377
Trading assets	**11,142**	11,007	12,098
Federal funds sold and securities purchased under resale agreements	**2,523**	1,786	1,750
Securities borrowed	**110**	175	4
Deposits with banks	**599**	345	938
Other assets[a]	**606**	541	479
Total interest income[b]	**61,293**	63,782	66,350
Interest expense			
Interest-bearing deposits	**3,855**	3,424	4,826
Short-term and other liabilities[c][d]	**2,873**	2,364	2,786
Long-term debt[d]	**6,109**	5,848	7,368
Beneficial interests issued by consolidated VIEs	**767**	1,145	218
Total interest expense[b]	**13,604**	12,781	15,198
Net interest income	**47,689**	51,001	51,152
Provision for credit losses	**7,574**	16,639	32,015
Net interest income after provision for credit losses	**$ 40,115**	$ 34,362	$ 19,137

(a) Predominantly margin loans.
(b) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon the adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, its Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related. The consolidation of these VIEs did not significantly change the Firm's total net income. However, it did affect the classification of items on the Firm's Consolidated Statements of Income; as a result of the adoption of the guidance, certain noninterest revenue was eliminated in consolidation, offset by the recognition of interest income, interest expense, and provision for credit losses.
(c) Includes brokerage customer payables.
(d) Effective January 1, 2011, the long-term portion of advances from FHLBs was reclassified from other borrowed funds to long-term debt. The related interest expense for the prior-year period has also been reclassified to conform with the current presentation.

Note 9 – Pension and other postretirement employee benefit plans

The Firm's defined benefit pension plans and its other postretirement employee benefit ("OPEB") plans (collectively the "Plans") are accounted for in accordance with U.S. GAAP for retirement benefits.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based on eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after three years of service. In November 2009, the Firm announced certain changes to the pay credit schedule and amount of eligible compensation recognized under the U.S. plan effective February 1, 2010. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws. On January 15, 2009, and August 28, 2009, the Firm made discretionary cash contributions to its U.S. defined benefit pension plan of $1.3 billion and $1.5 billion, respectively. The Firm does not anticipate any contribution to the U.S. defined benefit pension plan in 2012 at this time. The 2012 contributions to the non-U.S. defined benefit pension plans are expected to be $49 million of which $37 million are contractually required.

JPMorgan Chase also has a number of defined benefit pension plans not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees earn pay and interest credits on compensation amounts above the maximum stipulated by law under a qualified plan. The Firm announced that, effective May 1, 2009, pay credits would no longer be provided on compensation amounts above the maximum stipulated by law. The Excess Retirement Plan had an unfunded projected benefit obligation in the amount of $272 million and $266 million, at December 31, 2011 and 2010, respectively.

Defined contribution plans

JPMorgan Chase currently provides two qualified defined contribution plans in the U.S. and other similar arrangements in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is The JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. The 401(k) Savings Plan allows employees to make pretax and Roth 401(k) contributions to tax-deferred investment portfolios. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan.

The Firm matched eligible employee contributions up to 5% of benefits-eligible compensation (e.g., base pay) on a per pay period basis through April 30, 2009; commencing May 1, 2009 matching contributions are made annually. Employees begin to receive matching contributions after completing a one-year-of-service requirement. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. Matching contributions are immediately vested for employees hired before May 1, 2009, and will vest after three years of service for employees hired on or after May 1, 2009. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

Effective August 10, 2009, JPMorgan Chase Bank, N.A. became the sponsor of the WaMu Savings Plan and that plan's assets were merged into the 401(k) Savings Plan effective March 31, 2010.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with length of service and date of hire and provide for limits on the Firm's share of covered medical benefits. The medical and life insurance benefits are both contributory. Postretirement medical benefits also are offered to qualifying U.K. employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations, plan assets and funded status amounts reported on the Consolidated Balance Sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

As of or for the year ended December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans[f]	
(in millions)	**2011**	2010	**2011**	2010	**2011**	2010
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (8,320)**	$ (7,977)	**$ (2,600)**	$ (2,536)	**$ (980)**	$ (1,025)
Benefits earned during the year	**(249)**	(230)	**(36)**	(30)	**(1)**	(2)
Interest cost on benefit obligations	**(451)**	(468)	**(133)**	(128)	**(51)**	(55)
Plan amendments	**–**	–	**–**	10	**–**	–
Business combinations	**–**	–	**–**	(12) [b]	**–**	–
Employee contributions	**NA**	NA	**(5)**	(4)	**(84)**	(70)
Net gain/(loss)	**(563)**	(249)	**(160)**	(71)	**(39)**	13
Benefits paid	**540**	604	**93**	96	**166**	168
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(10)**	(10)
Curtailments	**–**	–	**–**	–	**–**	–
Settlements	**–**	–	**–**	5	**–**	–
Special termination benefits	**–**	–	**–**	(1)	**–**	–
Foreign exchange impact and other	**–**	–	**12**	71	**–**	1
Benefit obligation, end of year	**$ (9,043)**	$ (8,320)	**$ (2,829)**	$ (2,600)	**$ (999)**	$ (980)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 10,828**	$ 10,218	**$ 2,647**	$ 2,432	**$ 1,381**	$ 1,269
Actual return on plan assets	**147**	1,179	**277**	228	**78**	137
Firm contributions	**37**	35	**169**	157	**2**	3
Employee contributions	**–**	–	**5**	4	**–**	–
Benefits paid	**(540)**	(604)	**(93)**	(96)	**(26)**	(28)
Settlements	**–**	–	**–**	(5)	**–**	–
Foreign exchange impact and other	**–**	–	**(16)**	(73)	**–**	–
Fair value of plan assets, end of year	**$ 10,472** [c][d]	$ 10,828 [c][d]	**$ 2,989** [d]	$ 2,647 [d]	**$ 1,435**	$ 1,381
Funded/(unfunded) status[a]	**$ 1,429** [e]	$ 2,508 [e]	**$ 160**	$ 47	**$ 436**	$ 401
Accumulated benefit obligation, end of year	**$ (9,008)**	$ (8,271)	**$ (2,800)**	$ (2,576)	**NA**	NA

(a) Represents overfunded plans with an aggregate balance of $2.6 billion and $3.5 billion at December 31, 2011 and 2010, respectively, and underfunded plans with an aggregate balance of $621 million and $561 million at December 31, 2011 and 2010, respectively.
(b) Represents change resulting from acquisition of RBS Sempra Commodities business in 2010.
(c) At December 31, 2011 and 2010, approximately $426 million and $385 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.
(d) At December 31, 2011 and 2010, defined benefit pension plan amounts not measured at fair value included $50 million and $52 million, respectively, of accrued receivables, and $245 million and $187 million, respectively, of accrued liabilities, for U.S. plans; and $56 million and $9 million, respectively, of accrued receivables , and at December 31, 2011, $69 million of accrued liabilities, for non-U.S. plans.
(e) Does not include any amounts attributable to the Washington Mutual Qualified Pension plan. The disposition of this plan remained subject to litigation and was not determinable at December 31, 2011 and 2010.
(f) Includes an unfunded accumulated postretirement benefit obligation of $33 million and $36 million at December 31, 2011 and 2010, respectively, for the U.K. plan.

Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the projected benefit obligation or the fair value of the plan assets. Any excess is amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently nine years.

For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. This value is referred to as the market related value of assets. Amortization of net gains and losses, adjusted for gains and losses not yet recognized, is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market related value of assets. Any excess is amortized over the average

future service period, which is currently five years; however, prior service costs are amortized over the average years of service remaining to full eligibility age, which is currently three years.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

December 31,	Defined benefit pension plans				OPEB plans	
	U.S.		Non-U.S.			
(in millions)	**2011**	2010	**2011**	2010	**2011**	2010
Net gain/(loss)	**$ (3,669)**	$ (2,627)	**$ (544)**	$ (566)	**$ (176)**	$ (119)
Prior service credit/(cost)	**278**	321	**12**	13	**1**	9
Accumulated other comprehensive income/(loss), pretax, end of year	**$ (3,391)**	$ (2,306)	**$ (532)**	$ (553)	**$ (175)**	$ (110)

The following table presents the components of net periodic benefit costs reported in the Consolidated Statements of Income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension, defined contribution and OPEB plans.

	Pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2011**	2010	2009	**2011**	2010	2009	**2011**	2010	2009
Components of net periodic benefit cost									
Benefits earned during the year	**$ 249**	$ 230	$ 313	**$ 36**	$ 31	$ 28	**$ 1**	$ 2	$ 3
Interest cost on benefit obligations	**451**	468	514	**133**	128	122	**51**	55	65
Expected return on plan assets	**(791)**	(742)	(585)	**(141)**	(126)	(115)	**(88)**	(96)	(97)
Amortization:									
Net (gain)/loss	**165**	225	304	**48**	56	44	**1**	(1)	–
Prior service cost/(credit)	**(43)**	(43)	4	**(1)**	(1)	–	**(8)**	(13)	(14)
Curtailment (gain)/loss	**–**	–	1	**–**	–	–	**–**	–	5
Settlement (gain)/loss	**–**	–	–	**–**	1	1	**–**	–	–
Special termination benefits	**–**	–	–	**–**	1	1	**–**	–	–
Net periodic defined benefit cost	**31**	138	551	**75**	90	81	**(43)**	(53)	(38)
Other defined benefit pension plans[a]	**19**	14	15	**12**	11	12	**NA**	NA	NA
Total defined benefit plans	**50**	152	566	**87**	101	93	**(43)**	(53)	(38)
Total defined contribution plans	**370**	332	359	**285**	251	226	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 420**	$ 484	$ 925	**$ 372**	$ 352	$ 319	**$ (43)**	$ (53)	$ (38)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	**1,207**	(187)	(168)	**25**	(21)	183	**58**	(54)	(176)
Prior service credit arising during the year	**–**	–	(384)	**–**	(10)	(1)	**–**	–	–
Amortization of net loss	**(165)**	(225)	(304)	**(48)**	(56)	(44)	**(1)**	1	–
Amortization of prior service (cost)/credit	**43**	43	(6)	**1**	1	–	**8**	13	15
Curtailment (gain)/loss	**–**	–	–	**–**	–	–	**–**	–	2
Settlement loss/(gain)	**–**	–	–	**–**	(1)	(1)	**–**	–	–
Foreign exchange impact and other	**–**	–	18	**1**	(23)	36	**–**	1	(1)
Total recognized in other comprehensive income	**1,085**	(369)	(844)	**(21)**	(110)	173	**65**	(39)	(160)
Total recognized in net periodic benefit cost and other comprehensive income	**$ 1,116**	$ (231)	$ (293)	**$ 54**	$ (20)	$ 254	**$ 22**	$ (92)	$ (198)

(a) Includes various defined benefit pension plans which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2012 are as follows.

	Defined benefit pension plans		OPEB plans	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss	$ 287	$ 36	$ 7	$ –
Prior service cost/(credit)	(41)	(1)	(1)	–
Total	$ 246	$ 35	$ 6	$ –

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
Year ended December 31,	**2011**	2010	2009	**2011**	2010	2009
Actual rate of return:						
Defined benefit pension plans	**0.72%**	12.23%	13.78%	**(4.29)-13.12%**	0.77-10.65%	3.17-22.43%
OPEB plans	**5.22%**	11.23%	15.93%	**NA**	NA	NA

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration is also given to current market conditions and the short-term portfolio mix of each plan; as a result, in 2011 the Firm generally maintained the same expected return on assets as in the prior year.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The expected return on "AA" rated long-term corporate bonds is based on an implied yield for similar bonds.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension and OPEB plans represents a rate implied from the yield curve of the year-end iBoxx £ corporate "AA" 15-year-plus bond index.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's significant U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S.	
December 31,	**2011**	2010	**2011**	2010
Discount rate:				
Defined benefit pension plans	**4.60%**	5.50%	**1.50-4.80%**	1.60-5.50%
OPEB plans	**4.70**	5.50	**–**	–
Rate of compensation increase	**4.00**	4.00	**2.75-4.20**	3.00-4.50
Health care cost trend rate:				
Assumed for next year	**7.00**	7.00	**–**	–
Ultimate	**5.00**	5.00	**–**	–
Year when rate will reach ultimate	**2017**	2017	**–**	–

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2011**	2010	2009	**2011**	2010	2009
Discount rate:						
Defined benefit pension plans	**5.50%**	6.00%	6.65%	**1.60-5.50%**	2.00-5.70%	2.00-6.20%
OPEB plans	**5.50**	6.00	6.70	**–**	–	–
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**7.50**	7.50	7.50	**2.40-5.40**	2.40-6.20	2.50-6.90
OPEB plans	**6.25**	7.00	7.00	**NA**	NA	NA
Rate of compensation increase	**4.00**	4.00	4.00	**3.00-4.50**	3.00-4.50	3.00-4.00
Health care cost trend rate:						
Assumed for next year	**7.00**	7.75	8.50	**–**	–	–
Ultimate	**5.00**	5.00	5.00	**–**	–	–
Year when rate will reach ultimate	**2017**	2014	2014	**–**	–	–

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's total service and interest cost and accumulated postretirement benefit obligation.

Year ended December 31, 2011(in millions)	1-Percentage point increase	1-Percentage point decrease
Effect on total service and interest cost	$ 1	$ (1)
Effect on accumulated postretirement benefit obligation	27	(24)

At December 31, 2011, the Firm decreased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will result in an increase in expense of approximately $47 million for 2012. The 2012 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 7.50% and 6.25%, respectively, unchanged from 2011. For 2012, the initial health care benefit obligation trend assumption will be set at 7.00%, and the ultimate health care trend assumption and year to reach ultimate rate will remain at 5.00% and 2017, respectively, unchanged from 2011. As of December 31, 2011, the assumed rate of compensation increase remained at 4.00%. The 2012 interest crediting rate assumption will be set at 5.00%, as compared to 5.25% in 2011.

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an increase of approximately an aggregate $29 million in 2012 U.S. defined benefit pension and OPEB plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2012 U.S. defined benefit pension and OPEB plan expense of approximately an aggregate $17 million and an increase in the related benefit obligations of approximately an aggregate $192 million. A 25-basis point increase in the interest crediting rate for the U.S. defined benefit pension plan would result in an increase in 2012 U.S. defined benefit pension expense of approximately $19 million and an increase in the related projected benefit obligations of approximately $82 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2012 non-U.S. defined benefit pension plan expense of approximately $11 million.

Investment strategy and asset allocation

The Firm's U.S. defined benefit pension plan assets are held in trust and are invested in a well-diversified portfolio of equity and fixed income securities, real estate, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity, real estate and real assets). Non-U.S. defined benefit pension plan assets are held in various trusts and are also invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to partially fund the U.S. OPEB plan, are held in separate accounts with an insurance company and are invested in equity and fixed income index funds.

The investment policy for the Firm's U.S. defined benefit pension plan assets is to optimize the risk-return relationship as appropriate to the needs and goals using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Assets are managed by a combination of internal and external investment managers. Periodically the Firm performs a comprehensive analysis on the U.S. defined benefit pension plan asset allocations, incorporating projected asset and liability data, which focuses on the short-and long-term impact of the asset allocation on cumulative pension expense, economic cost, present value of contributions and funded status. Currently, approved asset allocation ranges are: U.S. equity 15% to 35%, international equity 15% to 25%, debt securities 10% to 30%, hedge funds 10% to 30%, and real estate, real assets and private equity 5% to 20%. Asset allocations are not managed to a specific target but seek to shift asset class allocations within these stated ranges. Investment strategies incorporate the economic outlook, anticipated implications of the macroeconomic environment on the various asset classes/managers, and maintaining an appropriate level of liquidity for the plan.

The Firm regularly reviews the asset allocations and all factors that continuously impact the portfolio, which is rebalanced when deemed necessary.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, the assets are invested to maximize returns subject to an appropriate level of risk relative to the plans' liabilities. In order to reduce the volatility in returns relative to the plan's liability profiles, the U.K. defined benefit pension plans' largest asset allocations are to debt securities of appropriate durations. Other assets, mainly equity securities, are then invested for capital appreciation, to provide long-term investment growth. Similar to the U.S. defined benefit pension plan, asset allocations for the U.K. plans are reviewed and rebalanced on a regular basis.

Investments held by the Plans include financial instruments which are exposed to various risks such as interest rate, market and credit risks. Exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments. As of December 31, 2011, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except in connection with investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $1.6 billion and $1.7 billion for U.S. plans and $194 million and $155 million for non-U.S. plans, as of December 31, 2011 and 2010, respectively.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[c]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2011**	2010	Allocation	**2011**	2010	Allocation	**2011**	2010
Asset category									
Debt securities[a]	10–30%	**20%**	29%	72%	**74%**	71%	50%	**50%**	50%
Equity securities	25–60	**39**	40	27	**25**	28	50	**50**	50
Real estate	5–20	**5**	4	–	**–**	–	–	**–**	–
Alternatives[b]	15–50	**36**	27	1	**1**	1	–	**–**	–
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Debt securities primarily include corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.
(b) Alternatives primarily include limited partnerships.
(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

Fair value measurement of the plans' assets and liabilities

For information on fair value measurements, including descriptions of level 1, 2, and 3 of the fair value hierarchy and the valuation methods employed by the Firm, see Note 3 on pages 184–198 of this Annual Report.

Pension and OPEB plan assets and liabilities measured at fair value

	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans			
December 31, 2011 (in millions)	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Level 3	Total fair value
Cash and cash equivalents	$ 117	$ –	$ –	$ 117	$ 72	$ –	$ –	$ 72
Equity securities:								
Capital equipment	607	7	–	614	69	12	–	81
Consumer goods	657	–	–	657	64	30	–	94
Banks and finance companies	301	2	–	303	83	13	–	96
Business services	332	–	–	332	48	10	–	58
Energy	173	–	–	173	52	10	–	62
Materials	161	–	1	162	35	6	–	41
Real Estate	11	–	–	11	1	–	–	1
Other	766	274	–	1,040	160	5	–	165
Total equity securities	3,008	283	1	3,292	512	86	–	598
Common/collective trust funds[a]	401	1,125	202	1,728	138	170	–	308
Limited partnerships:[c]								
Hedge funds	–	933	1,039	1,972	–	–	–	–
Private equity	–	–	1,367	1,367	–	–	–	–
Real estate	–	–	306	306	–	–	–	–
Real assets[d]	–	–	264	264	–	–	–	–
Total limited partnerships	–	933	2,976	3,909	–	–	–	–
Corporate debt securities[e]	–	544	2	546	–	958	–	958
U.S. federal, state, local and non-U.S. government debt securities	–	328	–	328	–	904	–	904
Mortgage-backed securities	122	36	–	158	17	–	–	17
Derivative receivables	1	2	–	3	–	7	–	7
Other[f]	102	60	427	589	74	65	–	139
Total assets measured at fair value[g][h]	$ 3,751	$ 3,311	$ 3,608	$ 10,670	$ 813	$ 2,190	$ –	$ 3,003
Derivative payables	–	(3)	–	(3)	–	(1)	–	(1)
Total liabilities measured at fair value	$ –	$ (3)	$ –	$ (3) [i]	$ –	$ (1)	$ –	$ (1)

December 31, 2010 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans			
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Level 3	Total fair value
Cash and cash equivalents	$ –	$ –	$ –	$ –	$ 81	$ –	$ –	$ 81
Equity securities:								
Capital equipment	748	9	–	757	68	13	–	81
Consumer goods	712	–	–	712	75	21	–	96
Banks and finance companies	414	1	–	415	113	9	–	122
Business services	444	–	–	444	53	10	–	63
Energy	195	–	–	195	59	6	–	65
Materials	205	–	–	205	50	13	–	63
Real estate	21	–	–	21	1	–	–	1
Other	857	6	–	863	194	16	–	210
Total equity securities	3,596	16	–	3,612	613	88	–	701
Common/collective trust funds[a][b]	436	1,263	194	1,893	46	180	–	226
Limited partnerships:[c]								
Hedge funds	–	959	1,160	2,119	–	–	–	–
Private equity	–	–	1,232	1,232	–	–	–	–
Real estate	–	–	304	304	–	–	–	–
Real assets[d]	–	–	–	–	–	–	–	–
Total limited partnerships	–	959	2,696	3,655	–	–	–	–
Corporate debt securities[e]	–	424	1	425	–	718	–	718
U.S. federal, state, local and non-U.S. government debt securities	–	453	–	453	–	864	–	864
Mortgage-backed securities	188	55	–	243	1	–	–	1
Derivative receivables	2	194	–	196	–	3	–	3
Other[f]	218	58	387	663	18	51	–	69
Total assets measured at fair value[g][h]	$ 4,440	$ 3,422	$ 3,278	$ 11,140	$ 759	$ 1,904	$ –	$ 2,663
Derivative payables	–	(177)	–	(177)	–	(25)	–	(25)
Total liabilities measured at fair value	$ –	$ (177)	$ –	$ (177) [i]	$ –	$ (25)	$ –	$ (25)

(a) At December 31, 2011 and 2010, common/collective trust funds generally include commingled funds that primarily included 23% and 22%, respectively, of short-term investment funds; 19% and 21%, respectively, of equity (index) investments; and 19% and 16%, respectively, of international investments.

(b) The prior period has been revised to consider redemption notification periods, in determining the classification of investments within the fair value hierarchy.

(c) Unfunded commitments to purchase limited partnership investments for the Plans were $1.2 billion and $1.1 billion for 2011 and 2010, respectively.

(d) Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.

(e) Corporate debt securities include debt securities of U.S. and non-U.S. corporations.

(f) Other consists of exchange traded funds and participating and non-participating annuity contracts. Exchange traded funds are primarily classified within level 1 of the fair value hierarchy given they are valued using market observable prices. Participating and non-participating annuity contracts are classified within level 3 of the fair value hierarchy due to lack of market mechanisms for transferring each policy and surrender restrictions.

(g) At December 31, 2011 and 2010, the fair value of investments valued at NAV were $3.9 billion and $4.1 billion, respectively, which were classified within the valuation hierarchy as follows: $0.4 billion and $0.5 billion in level 1, $2.1 billion and $2.2 billion in level 2 and $1.4 billion and $1.4 billion in level 3.

(h) At December 31, 2011 and 2010, excluded U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $50 million and $52 million, respectively; and excluded non-U.S. defined benefit pension plan receivables for dividends and interest receivables of $56 million and $9 million, respectively.

(i) At December 31, 2011 and 2010, excluded $241 million and $149 million, respectively, of U.S. defined benefit pension plan payables for investments purchased; and $4 million and $38 million, respectively, of other liabilities; and excluded non-U.S. defined benefit pension plan payables for investments purchased of $69 million at December 31, 2011.

The Firm's OPEB plan was partially funded with COLI policies of $1.4 billion, at December 31, 2011 and 2010, respectively, which were classified in level 3 of the valuation hierarchy.

Changes in level 3 fair value measurements using significant unobservable inputs

Year ended December 31, 2011 (in millions)	Fair value, January 1, 2011	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2011
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	**$ –**	**$ –**	**$ –**	**$ –**	**$ 1**	**$ 1**
Common/collective trust funds	**194**	**35**	**1**	**(28)**	**–**	**202**
Limited partnerships:						
Hedge funds	**1,160**	**(16)**	**27**	**(76)**	**(56)**	**1,039**
Private equity	**1,232**	**56**	**2**	**77**	**–**	**1,367**
Real estate	**304**	**8**	**40**	**14**	**(60)**	**306**
Real assets	**–**	**5**	**(7)**	**150**	**116**	**264**
Total limited partnerships	**2,696**	**53**	**62**	**165**	**–**	**2,976**
Corporate debt securities	**1**	**–**	**–**	**1**	**–**	**2**
Other	**387**	**–**	**41**	**(1)**	**–**	**427**
Total U.S. plans	**$ 3,278**	**$ 88**	**$ 104**	**$ 137**	**$ 1**	**$ 3,608**
Non-U.S. defined benefit pension plans						
Other	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**
Total non-U.S. plans	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**
OPEB plans						
COLI	**$ 1,381**	**$ –**	**$ 70**	**$ (24)**	**$ –**	**$ 1,427**
Total OPEB plans	**$ 1,381**	**$ –**	**$ 70**	**$ (24)**	**$ –**	**$ 1,427**

Year ended December 31, 2010 (in millions)	Fair value, January 1, 2010	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2010
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	$ –	$ –	$ –	$ –	$ –	$ –
Common/collective trust funds[(a)]	284	–	(90)	–	–	194
Limited partnerships:						
Hedge funds	680	(1)	14	388	79	1,160
Private equity	874	3	108	235	12	1,232
Real estate	196	3	16	89	–	304
Real assets	–	–	–	–	–	–
Total limited partnerships	1,750	5	138	712	91	2,696
Corporate debt securities	–	–	–	–	1	1
Other	334	–	53	–	–	387
Total U.S. plans	$ 2,368	$ 5	$ 101	$ 712	$ 92	$ 3,278
Non-U.S. defined benefit pension plans						
Other	$ 13	$ –	$ (1)	$ (12)	$ –	$ –
Total non-U.S. plans	$ 13	$ –	$ (1)	$ (12)	$ –	$ –
OPEB plans						
COLI	$ 1,269	$ –	$ 137	$ (25)	$ –	$ 1,381
Total OPEB plans	$ 1,269	$ –	$ 137	$ (25)	$ –	$ 1,381

Year ended December 31, 2009 (in millions)	Fair value, January 1, 2009	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2009
U.S. defined benefit pension plans						
Equities	$ –	$ –	$ –	$ –	$ –	$ –
Common/collective trust funds[a]	340	–	(56)	–	–	284
Limited partnerships:						
Hedge funds	553	–	136	(9)	–	680
Private equity	810	–	(1)	80	(15)	874
Real estate	203	–	(107)	100	–	196
Real assets	–	–	–	–	–	–
Total limited partnerships	1,566	–	28	171	(15)	1,750
Corporate debt securities	–	–	–	–	–	–
Other	315	–	19	–	–	334
Total U.S. plans	$ 2,221	$ –	$ (9)	$ 171	$ (15)	$ 2,368
Non-U.S. defined benefit pension plans						
Other	$ 14	$ –	$ (1)	$ –	$ –	$ 13
Total non-U.S. plans	$ 14	$ –	$ (1)	$ –	$ –	$ 13
OPEB plans						
COLI	$ 1,126	$ –	$ 172	$ (29)	$ –	$ 1,269
Total OPEB plans	$ 1,126	$ –	$ 172	$ (29)	$ –	$ 1,269

(a) The prior period has been revised to consider redemption notification periods in determining the classification of investments within the fair value hierarchy.

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2012	$ 1,038	$ 95	$ 96	$ 11
2013	1,035	99	95	12
2014	610	101	94	13
2015	610	110	92	14
2016	613	116	90	14
Years 2017–2021	3,084	658	404	80

Note 10 – Employee stock-based incentives

Employee stock-based awards

In 2011, 2010 and 2009, JPMorgan Chase granted long-term stock-based awards to certain key employees under the 2005 Long-Term Incentive Plan (the "2005 Plan"). The 2005 Plan became effective on May 17, 2005, and was last amended in May 2011. Under the terms of the amended 2005 plan, as of December 31, 2011, 318 million shares of common stock are available for issuance through May 2015. The amended 2005 Plan is the only active plan under which the Firm is currently granting stock-based incentive awards. In the following discussion, the 2005 Plan, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans," and such plans constitute the Firm's stock-based incentive plans.

Restricted stock units ("RSUs") are awarded at no cost to the recipient upon their grant. RSUs are generally granted annually and generally vest at a rate of 50% after two years and 50% after three years and convert into shares of common stock at the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All of these awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation prior to vesting under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding and, as such, are considered participating securities as discussed in Note 24 on page 277 of this Annual Report.

Under the LTI Plans, stock options and stock appreciation rights ("SARs") have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm typically awards SARs to certain key employees once per year; the Firm also

periodically grants employee stock options and SARs to individual employees. The 2011, 2010 and 2009 grants of SARs to key employees vest ratably over five years (i.e., 20% per year) and contain clawback provisions similar to RSUs. The 2011 and 2010 grants of SARs contain full-career eligibility provisions; the 2009 grants of SARs do not include any full-career eligibility provisions. SARs generally expire 10 years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2011, 2010 and 2009, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. The SARs, which have a 10-year term, will become exercisable no earlier than January 22, 2013, and have an exercise price of $39.83. The number of SARs that will become exercisable (ranging from none to the full 2 million) and their exercise date or dates may be determined by the Board of Directors based on an annual assessment of the performance of both the CEO and JPMorgan Chase. The Firm recognizes this award ratably over an assumed five-year service period, subject to a requirement to recognize changes in the fair value of the award through the grant date. The Firm recognized $(4) million, $4 million and $9 million in compensation expense in 2011, 2010 and 2009, respectively, for this award.

RSUs, employee stock options and SARs activity

Compensation expense for RSUs is measured based on the number of shares granted multiplied by the stock price at the grant date, and for employee stock options and SARs, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorgan Chase's RSUs, employee stock options and SARs activity for 2011.

	RSUs		Options/SARs			
Year ended December 31, 2011 (in thousands, except weighted-average data, and where otherwise stated)	Number of shares	Weighted-average grant date fair value	Number of awards	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	234,121	$ 30.45	234,527	$ 43.33		
Granted	59,697	44.05	15,300	44.27		
Exercised or vested	(121,699)	26.95	(15,409)	32.27		
Forfeited	(5,488)	37.05	(4,168)	39.56		
Canceled	NA	NA	(74,489)	51.77		
Outstanding, December 31	166,631	$ 37.65	155,761	$ 40.58	4.6	$ 419,887
Exercisable, December 31	NA	NA	106,335	41.89	3.1	260,309

The total fair value of RSUs that vested during the years ended December 31, 2011, 2010 and 2009, was $5.4 billion, $2.3 billion and $1.3 billion, respectively. The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2011, 2010 and 2009, was $13.04, $12.27 and $8.24, respectively. The total intrinsic value of options exercised during the years ended December 31, 2011, 2010 and 2009, was $191 million, $154 million and $154 million, respectively.

Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated Statements of Income.

Year ended December 31, (in millions)	2011	2010	2009
Cost of prior grants of RSUs and SARs that are amortized over their applicable vesting periods	**$ 1,986**	$ 2,479	$ 2,510
Accrual of estimated costs of RSUs and SARs to be granted in future periods including those to full-career eligible employees	**689**	772	845
Total noncash compensation expense related to employee stock-based incentive plans	**$ 2,675**	$ 3,251	$ 3,355

At December 31, 2011, approximately $1.3 billion (pretax) of compensation cost related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.0 year. The Firm does not capitalize any compensation cost related to share-based compensation awards to employees.

Cash flows and tax benefits

Income tax benefits related to stock-based incentive arrangements recognized in the Firm's Consolidated Statements of Income for the years ended December 31, 2011, 2010 and 2009, were $1.0 billion, $1.3 billion and $1.3 billion, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements, and the actual income tax benefit realized related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	2011	2010	2009
Cash received for options exercised	**$ 354**	$ 205	$ 437
Tax benefit realized[a]	**31**	14	11

(a) The tax benefit realized from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings are recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards.

Valuation assumptions

The following table presents the assumptions used to value employee stock options and SARs granted during the years ended December 31, 2011, 2010 and 2009, under the Black-Scholes valuation model.

Year ended December 31,	2011	2010	2009
Weighted-average annualized valuation assumptions			
Risk-free interest rate	**2.58%**	3.89%	2.33%
Expected dividend yield[a]	**2.20**	3.13	3.40
Expected common stock price volatility	**34**	37	56
Expected life (in years)	**6.5**	6.4	6.6

(a) In 2011, the expected dividend yield was determined using forward-looking assumptions. In 2010 and 2009 the expected dividend yield was determined using historical dividend yields.

The expected volatility assumption is derived from the implied volatility of JPMorgan Chase's stock options. The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled, and the assumption is based on the Firm's historical experience.

Note 11 – Noninterest expense

The following table presents the components of noninterest expense.

Year ended December 31, (in millions)	2011	2010	2009	
Compensation expense[a]	**$ 29,037**	$ 28,124	$ 26,928	
Noncompensation expense:				
Occupancy expense	**3,895**	3,681	3,666	
Technology, communications and equipment expense	**4,947**	4,684	4,624	
Professional and outside services	**7,482**	6,767	6,232	
Marketing	**3,143**	2,446	1,777	
Other expense[b][c]	**13,559**	14,558	7,594	
Amortization of intangibles	**848**	936	1,050	
Total noncompensation expense	**33,874**	33,072	24,943	
Merger costs	**–**	–	481	[d]
Total noninterest expense	**$ 62,911**	$ 61,196	$ 52,352	

(a) Expense for 2010 includes a payroll tax expense related to the United Kingdom ("U.K.") Bank Payroll Tax on certain compensation awarded from December 9, 2009, to April 5, 2010, to relevant banking employees.

(b) Included litigation expense of $4.9 billion, $7.4 billion and $161 million for the years ended December 31, 2011, 2010 and 2009, respectively.

(c) Included foreclosed property expense of $718 million, $1.0 billion and $1.4 billion for the years ended December 31, 2011, 2010 and 2009, respectively.

(d) Total merger-related costs for the year ended December 31, 2009, were comprised of $247 million in compensation costs, $12 million in occupancy costs, and $222 million in technology and communications and other costs.

Note 12 – Securities

Securities are primarily classified as AFS or trading. Trading securities are discussed in Note 3 on pages 184–198 of this Annual Report. Securities are classified primarily as AFS when used to manage the Firm's exposure to interest rate movements or used for longer-term strategic purposes. AFS securities are carried at fair value on the Consolidated Balance Sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to accumulated other comprehensive income/(loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated Statements of Income.

Other-than-temporary impairment

AFS debt and equity securities in unrealized loss positions are analyzed as part of the Firm's ongoing assessment of other-than-temporary impairment ("OTTI"). For most types of debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm considers an OTTI to have occurred when there is an adverse change in expected cash flows. For AFS equity securities, the Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its amortized cost basis.

Potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and the Firm's intent and ability to hold the security until recovery.

For debt securities, the Firm recognizes OTTI losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost basis. In these circumstances the impairment loss is equal to the full difference between the amortized cost basis and the fair value of the securities. When the Firm has the intent and ability to hold AFS debt securities in an unrealized loss position, it evaluates the expected cash flows to be received and determines if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI.

The Firm's cash flow evaluations take into account the factors noted above and expectations of relevant market and economic data as of the end of the reporting period. For securities issued in a securitization, the Firm estimates cash flows considering underlying loan-level data and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios.

For equity securities, OTTI losses are recognized in earnings if the Firm intends to sell the security. In other cases the Firm considers the relevant factors noted above, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the carrying value. Any impairment loss on an equity security is equal to the full difference between the amortized cost basis and the fair value of the security.

Realized gains and losses

The following table presents realized gains and losses and credit losses that were recognized in income from AFS securities.

Year ended December 31, (in millions)	2011	2010	2009
Realized gains	**$ 1,811**	$ 3,382	$ 2,268
Realized losses	**(142)**	(317)	(580)
Net realized gains[(a)]	**1,669**	3,065	1,688
Credit losses included in securities gains[(b)]	**(76)**	(100)	(578)
Net securities gains	**$ 1,593**	$ 2,965	$ 1,110

(a) Proceeds from securities sold were within approximately 4% of amortized cost in 2011, and within approximately 3% of amortized cost in 2010 and 2009.

(b) Includes other-than-temporary impairment losses recognized in income on certain prime mortgage-backed securities for the year ended December 31, 2011; certain prime mortgage-backed securities and obligations of U.S. states and municipalities for the year ended December 31, 2010; and certain prime and subprime mortgage-backed securities and obligations of U.S. states and municipalities for the year ended December 31, 2009.

The amortized costs and estimated fair values of AFS and held-to-maturity ("HTM") securities were as follows for the dates indicated.

	2011				2010			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies[a]	**$ 101,968**	**$ 5,141**	**$ 2**	**$ 107,107**	$ 117,364	$ 3,159	$ 297	$ 120,226
Residential:								
Prime and Alt-A	**2,170**	**54**	**218** [c]	**2,006**	2,173	81	250 [c]	2,004
Subprime	**1**	**–**	**–**	**1**	1	–	–	1
Non-U.S.	**66,067**	**170**	**687**	**65,550**	47,089	290	409	46,970
Commercial	**10,632**	**650**	**53**	**11,229**	5,169	502	17	5,654
Total mortgage-backed securities	**180,838**	**6,015**	**960**	**185,893**	171,796	4,032	973	174,855
U.S. Treasury and government agencies[a]	**8,184**	**169**	**2**	**8,351**	11,258	118	28	11,348
Obligations of U.S. states and municipalities	**15,404**	**1,184**	**48**	**16,540**	11,732	165	338	11,559
Certificates of deposit	**3,017**	**–**	**–**	**3,017**	3,648	1	2	3,647
Non-U.S. government debt securities	**44,944**	**402**	**81**	**45,265**	20,614	191	28	20,777
Corporate debt securities[b]	**63,607**	**216**	**1,647**	**62,176**	61,717	495	419	61,793
Asset-backed securities:								
Credit card receivables	**4,506**	**149**	**–**	**4,655**	7,278	335	5	7,608
Collateralized loan obligations	**24,474**	**553**	**166**	**24,861**	13,336	472	210	13,598
Other	**11,273**	**102**	**57**	**11,318**	8,968	130	16	9,082
Total available-for-sale debt securities	**356,247**	**8,790**	**2,961** [c]	**362,076**	310,347	5,939	2,019 [c]	314,267
Available-for-sale equity securities	**2,693**	**14**	**2**	**2,705**	1,894	163	6	2,051
Total available-for-sale securities	**$ 358,940**	**$ 8,804**	**$ 2,963** [c]	**$ 364,781**	$ 312,241	$ 6,102	$ 2,025 [c]	$ 316,318
Total held-to-maturity securities	**$ 12**	**$ 1**	**$ –**	**$ 13**	$ 18	$ 2	$ –	$ 20

(a) Includes total U.S. government-sponsored enterprise obligations with fair values of $89.3 billion and $94.2 billion at December 31, 2011 and 2010, respectively, which were predominantly mortgage-related.
(b) Consists primarily of bank debt including sovereign government-guaranteed bank debt.
(c) Includes a total of $91 million and $133 million (pretax) of unrealized losses related to prime mortgage-backed securities for which credit losses have been recognized in income at December 31, 2011 and 2010, respectively. These unrealized losses are not credit-related and remain reported in AOCI.

Securities impairment

The following tables present the fair value and gross unrealized losses for AFS securities by aging category at December 31, 2011 and 2010.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2011 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	**$ 2,724**	**$ 2**	**$ –**	**$ –**	**$ 2,724**	**$ 2**
Residential:						
Prime and Alt-A	**649**	**12**	**970**	**206**	**1,619**	**218**
Subprime	**–**	**–**	**–**	**–**	**–**	**–**
Non-U.S.	**30,500**	**266**	**25,176**	**421**	**55,676**	**687**
Commercial	**837**	**53**	**–**	**–**	**837**	**53**
Total mortgage-backed securities	**34,710**	**333**	**26,146**	**627**	**60,856**	**960**
U.S. Treasury and government agencies	**3,369**	**2**	**–**	**–**	**3,369**	**2**
Obligations of U.S. states and municipalities	**147**	**42**	**40**	**6**	**187**	**48**
Certificates of deposit	**–**	**–**	**–**	**–**	**–**	**–**
Non-U.S. government debt securities	**11,901**	**66**	**1,286**	**15**	**13,187**	**81**
Corporate debt securities	**22,230**	**901**	**9,585**	**746**	**31,815**	**1,647**
Asset-backed securities:						
Credit card receivables	**–**	**–**	**–**	**–**	**–**	**–**
Collateralized loan obligations	**5,610**	**49**	**3,913**	**117**	**9,523**	**166**
Other	**4,735**	**40**	**1,185**	**17**	**5,920**	**57**
Total available-for-sale debt securities	**82,702**	**1,433**	**42,155**	**1,528**	**124,857**	**2,961**
Available-for-sale equity securities	**338**	**2**	**–**	**–**	**338**	**2**
Total securities with gross unrealized losses	**$ 83,040**	**$ 1,435**	**$ 42,155**	**$ 1,528**	**$ 125,195**	**$ 2,963**

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2010 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 14,039	$ 297	$ –	$ –	$ 14,039	$ 297
Residential:						
Prime and Alt-A	–	–	1,193	250	1,193	250
Subprime	–	–	–	–	–	–
Non-U.S.	35,166	379	1,080	30	36,246	409
Commercial	548	14	11	3	559	17
Total mortgage-backed securities	49,753	690	2,284	283	52,037	973
U.S. Treasury and government agencies	921	28	–	–	921	28
Obligations of U.S. states and municipalities	6,890	330	20	8	6,910	338
Certificates of deposit	1,771	2	–	–	1,771	2
Non-U.S. government debt securities	6,960	28	–	–	6,960	28
Corporate debt securities	18,783	418	90	1	18,873	419
Asset-backed securities:						
Credit card receivables	–	–	345	5	345	5
Collateralized loan obligations	460	10	6,321	200	6,781	210
Other	2,615	9	32	7	2,647	16
Total available-for-sale debt securities	88,153	1,515	9,092	504	97,245	2,019
Available-for-sale equity securities	–	–	2	6	2	6
Total securities with gross unrealized losses	$ 88,153	$ 1,515	$ 9,094	$ 510	$ 97,247	$ 2,025

Other-than-temporary impairment

The following table presents credit losses that are included in the securities gains and losses table above.

Year ended December 31, (in millions)	2011	2010	2009
Debt securities the Firm does not intend to sell that have credit losses			
Total other-than-temporary impairment losses[a]	**$ (27)**	$ (94)	$ (946)
Losses recorded in/(reclassified from) other comprehensive income	**(49)**	(6)	368
Total credit losses recognized in income[b][c]	**$ (76)**	$ (100)	$ (578)

(a) For initial OTTI, represents the excess of the amortized cost over the fair value of AFS debt securities. For subsequent impairments of the same security, represents additional declines in fair value subsequent to previously recorded OTTI, if applicable.

(b) Represents the credit loss component on certain prime mortgage-backed securities for 2011; certain prime mortgage-backed securities and obligations of U.S. states and municipalities for 2010; and certain prime and subprime mortgage-backed securities and obligations of U.S. states and municipalities for 2009 that the Firm does not intend to sell. Subsequent credit losses may be recorded on securities without a corresponding further decline in fair value if there has been a decline in expected cash flows.

(c) Excluded from this table are OTTI losses of $7 million that were recognized in income in 2009, related to subprime mortgage-backed debt securities the Firm intended to sell. These securities were sold in 2009, resulting in the recognition of a recovery of $1 million.

Changes in the credit loss component of credit-impaired debt securities

The following table presents a rollforward for the years ended December 31, 2011, 2010 and 2009, of the credit loss component of OTTI losses that have been recognized in income, related to debt securities that the Firm does not intend to sell.

Year ended December 31, (in millions)	2011	2010	2009
Balance, beginning of period	**$ 632**	$ 578	$ –
Additions:			
Newly credit-impaired securities	**4**	–	578
Increase in losses on previously credit-impaired securities	**–**	94	–
Losses reclassified from other comprehensive income on previously credit-impaired securities	**72**	6	–
Reductions:			
Sales of credit-impaired securities	**–**	(31)	–
Impact of new accounting guidance related to VIEs	**–**	(15)	–
Balance, end of period	**$ 708**	$ 632	$ 578

Gross unrealized losses

Gross unrealized losses have generally increased since December 31, 2010, including those that have been in an unrealized loss position for 12 months or more. As of December 31, 2011, the Firm does not intend to sell the securities with a loss position in AOCI, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities reported in the table above for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2011.

Following is a description of the Firm's principal investment securities with the most significant unrealized losses that have existed for 12 months or more as of December 31, 2011, and the key assumptions used in the Firm's estimate of the present value of the cash flows most likely to be collected from these investments.

Mortgage-backed securities – Prime and Alt-A nonagency

As of December 31, 2011, gross unrealized losses related to prime and Alt-A residential mortgage-backed securities issued by private issuers were $218 million, of which $206 million related to securities that have been in an unrealized loss position for 12 months or more. The Firm has previously recognized OTTI on securities that are backed primarily by mortgages with higher credit risk characteristics based on collateral type, vintage and geographic concentration. The remaining securities that have not experienced OTTI generally either do not possess all of these characteristics or have sufficient credit enhancements, primarily in the form of subordination, to protect the investment. The average credit enhancements associated with the below investment-grade positions that have experienced OTTI losses and those that have not are 1% and 18%, respectively.

The Firm's cash flow estimates are based on a loan-level analysis that considers housing prices, loan-to-value ("LTV") ratio, loan type, geographical location of the underlying property and unemployment rates, among other factors. The weighted-average underlying default rate on the positions was forecasted to be 25%; the related weighted-average loss severity forecast was 52%; and estimated voluntary prepayment rates ranged from 4% to 19%. Based on the results of this analysis, an OTTI loss of $76 million was recognized in 2011 on certain securities due to their higher loss assumptions, and the unrealized loss of $218 million is considered temporary as management believes that the credit enhancement levels for those securities remain sufficient to support the Firm's investment.

Mortgage-backed securities – Non-U.S.

As of December 31, 2011, gross unrealized losses related to non-U.S. residential mortgage-backed securities were $687 million, of which $421 million related to securities that have been in an unrealized loss position for 12 months or more. Substantially all of these securities are rated "AAA," "AA" or "A" and primarily represent mortgage exposures in the United Kingdom and the Netherlands. The key assumptions used in analyzing non-U.S. residential mortgage-backed securities for potential credit losses include credit enhancements, recovery rates, default rates, and constant prepayment rates. Credit enhancement is primarily in the form of subordination, which is a form of structural credit enhancement where realized losses associated with assets held in an issuing vehicle are allocated to the various tranches of securities issued by the vehicle considering their relative seniority. Credit

enhancement in the form of subordination was approximately 10% of the outstanding principal balance of securitized mortgage loans, compared with expected lifetime losses of 1% of the outstanding principal. In assessing potential credit losses, assumptions included recovery rates of 60%, default rates of 0.25% to 0.5% and constant prepayment rates of 15% to 20%. The unrealized loss is considered temporary, based on management's assessment that the estimated future cash flows together with the credit enhancement levels for those securities remain sufficient to support the Firm's investment.

Corporate debt securities

As of December 31, 2011, gross unrealized losses related to corporate debt securities were $1.6 billion, of which $746 million related to securities that have been in an unrealized loss position for 12 months or more. Substantially all of the corporate debt securities are rated investment-grade, including those in an unrealized loss position. Various factors were considered in assessing whether the Firm expects to recover the amortized cost of corporate debt securities including, but not limited to, the strength of issuer credit ratings, the financial condition of guarantors and the length of time and the extent to which a security's fair value has been less than its amortized cost. The fair values of securities in an unrealized loss position were on average within approximately 4% of amortized cost. Based on management's assessment, the Firm expects to recover the entire amortized cost basis of all corporate debt securities that were in an unrealized loss position as of December 31, 2011.

Asset-backed securities – Collateralized loan obligations

As of December 31, 2011, gross unrealized losses related to CLOs were $166 million, of which $117 million related to securities that were in an unrealized loss position for 12 months or more. Overall, losses have decreased since December 31, 2010, mainly as a result of lower default forecasts and spread tightening across various asset classes. Substantially all of these securities are rated "AAA," "AA" or "A" and have an average credit enhancement of 30%. The key assumptions considered in analyzing potential credit losses were underlying loan and debt security defaults and loss severity. Based on current default trends for the collateral underlying the securities, the Firm assumed initial collateral default rates of 2% and 4% beginning in 2012 and thereafter. Further, loss severities were assumed to be 48% for loans and 82% for debt securities. Losses on collateral were estimated to occur approximately 18 months after default. The unrealized loss is considered temporary, based on management's assessment that the estimated future cash flows together with the credit enhancement levels for those securities remain sufficient to support the Firm's investment.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2011, of JPMorgan Chase's AFS and HTM securities by contractual maturity.

By remaining maturity December 31, 2011 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities[a]					
Amortized cost	$ 15	$ 3,666	$ 3,932	$ 173,225	$ 180,838
Fair value	15	3,653	4,073	178,152	185,893
Average yield[b]	5.04%	3.20%	3.08%	3.64%	3.62%
U.S. Treasury and government agencies[a]					
Amortized cost	$ 4,949	$ 2,984	$ –	$ 251	$ 8,184
Fair value	4,952	3,099	–	300	8,351
Average yield[b]	0.58%	2.20%	–%	3.89%	1.27%
Obligations of U.S. states and municipalities					
Amortized cost	$ 61	$ 306	$ 1,132	$ 13,905	$ 15,404
Fair value	62	326	1,206	14,946	16,540
Average yield[b]	3.10%	3.66%	3.59%	4.84%	4.72%
Certificates of deposit					
Amortized cost	$ 3,017	$ –	$ –	$ –	$ 3,017
Fair value	3,017	–	–	–	3,017
Average yield[b]	4.33%	–%	–%	–%	4.33%
Non-U.S. government debt securities					
Amortized cost	$ 20,863	$ 15,967	$ 7,524	$ 590	$ 44,944
Fair value	20,861	16,106	7,700	598	45,265
Average yield[b]	1.27%	2.06%	2.86%	4.94%	1.87%
Corporate debt securities					
Amortized cost	$ 22,019	$ 30,171	$ 11,398	$ 19	$ 63,607
Fair value	22,091	29,291	10,776	18	62,176
Average yield[b]	2.05%	3.09%	4.45%	5.42%	2.97%
Asset-backed securities					
Amortized cost	$ 2	$ 5,965	$ 17,951	$ 16,335	$ 40,253
Fair value	2	6,102	18,287	16,443	40,834
Average yield[b]	2.28%	2.88%	2.02%	2.51%	2.35%
Total available-for-sale debt securities					
Amortized cost	$ 50,926	$ 59,059	$ 41,937	$ 204,325	$ 356,247
Fair value	51,000	58,577	42,042	210,457	362,076
Average yield[b]	1.73%	2.75%	2.97%	3.64%	3.14%
Available-for-sale equity securities					
Amortized cost	$ –	$ –	$ –	$ 2,693	$ 2,693
Fair value	–	–	–	2,705	2,705
Average yield[b]	–%	–%	–%	0.38%	0.38%
Total available-for-sale securities					
Amortized cost	$ 50,926	$ 59,059	$ 41,937	$ 207,018	$ 358,940
Fair value	51,000	58,577	42,042	213,162	364,781
Average yield[b]	1.73%	2.75%	2.97%	3.60%	3.12%
Total held-to-maturity securities					
Amortized cost	$ –	$ 8	$ 3	$ 1	$ 12
Fair value	–	9	3	1	13
Average yield[b]	–%	6.90%	6.76%	6.48%	6.84%

(a) U.S. government agencies and U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2011.

(b) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.

(c) Includes securities with no stated maturity. Substantially all of the Firm's residential mortgage-backed securities and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated duration, which reflects anticipated future prepayments based on a consensus of dealers in the market, is approximately three years for agency residential mortgage-backed securities, two years for agency residential collateralized mortgage obligations and four years for nonagency residential collateralized mortgage obligations.

Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated Balance Sheets. Resale and repurchase agreements are generally carried at the amounts at which the securities will be subsequently sold or repurchased, plus accrued interest. Securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. Fees received and paid in connection with securities financing agreements are recorded in interest income and interest expense, respectively.

The Firm has elected the fair value option for certain securities financing agreements. For further information regarding the fair value option, see Note 4 on pages 198–200 of this Annual Report. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements; securities loaned or sold under repurchase agreements; and securities borrowed on the Consolidated Balance Sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

The following table details the Firm's securities financing agreements, all of which are accounted for as collateralized financings during the periods presented.

December 31, (in millions)	**2011**	2010
Securities purchased under resale agreements[(a)]	**$ 235,000**	$ 222,302
Securities borrowed[(b)]	**142,462**	123,587
Securities sold under repurchase agreements[(c)]	**$ 197,789**	$ 262,722
Securities loaned	**14,214**	10,592

(a) At December 31, 2011 and 2010, included resale agreements of $24.9 billion and $20.3 billion, respectively, accounted for at fair value.
(b) At December 31, 2011 and 2010, included securities borrowed of $15.3 billion and $14.0 billion, respectively, accounted for at fair value.
(c) At December 31, 2011 and 2010, included repurchase agreements of $9.5 billion and $4.1 billion, respectively, accounted for at fair value.

The amounts reported in the table above were reduced by $115.7 billion and $112.7 billion at December 31, 2011 and 2010, respectively, as a result of agreements in effect that meet the specified conditions for net presentation under applicable accounting guidance.

JPMorgan Chase's policy is to take possession, where possible, of securities purchased under resale agreements and of securities borrowed. The Firm monitors the value of the underlying securities (primarily G7 government securities, U.S. agency securities and agency MBS, and equities) that it has received from its counterparties and either requests additional collateral or returns a portion of the collateral when appropriate in light of the market value of the underlying securities. Margin levels are established initially based upon the counterparty and type of collateral and monitored on an ongoing basis to protect against declines in collateral value in the event of default. JPMorgan Chase typically enters into master netting agreements and other collateral arrangements with its resale agreement and securities borrowed counterparties, which provide for the right to liquidate the purchased or borrowed securities in the event of a customer default. As a result of the Firm's credit risk mitigation practices described above on resale and securities borrowed agreements, the Firm did not hold any reserves for credit impairment on these agreements as of December 31, 2011 and 2010.

For further information regarding assets pledged and collateral received in securities financing agreements, see Note 30 on page 289 of this Annual Report.

Note 14 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained"), other than purchased credit-impaired ("PCI") loans
- Loans held-for-sale
- Loans at fair value
- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories:

Loans held-for-investment (other than PCI loans)

Originated or purchased loans held-for-investment, other than PCI loans, are measured at the principal amount outstanding, net of the following: allowance for loan losses; net charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and net deferred loan fees or costs.

Interest income

Interest income on performing loans held-for-investment, other than PCI loans, is accrued and recognized as interest

income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is in doubt, which for consumer loans, excluding credit card, is generally determined when principal or interest is 90 days or more past due and collateral, if any, is insufficient to cover principal and interest. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. All interest accrued but not collected is reversed against interest income at the date a loan is placed on nonaccrual status. In addition, the amortization of deferred amounts is suspended. In certain cases, interest income on nonaccrual loans may be recognized to the extent cash is received (i.e., cash basis) when the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method).

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance for the estimated uncollectible portion of billed and accrued interest and fee income on credit card loans.

Allowance for loan losses

The allowance for loan losses represents the estimated probable losses on held-for-investment loans. Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated Statements of Income. See Note 15 on pages 252–255 for further information on the Firm's accounting polices for the allowance for loan losses.

Charge-offs

Wholesale loans and risk-rated business banking and auto loans are charged off against the allowance for loan losses when it is highly certain that a loss has been realized. This determination includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity.

Credit card loans are charged off by the end of the month in which the account becomes 180 days past due, or within 60 days from receiving notification about a specified event (e.g., bankruptcy of the borrower), whichever is earlier.

Consumer loans, other than risk-rated business banking and auto loans and PCI loans, are generally charged off to the allowance for loan losses upon reaching specified stages of delinquency, in accordance with the Federal Financial Institutions Examination Council ("FFIEC") policy. Residential mortgage loans and scored business banking loans are generally charged down to estimated net realizable value (the fair value of collateral less costs to sell) at no later than 180 days past due.

Collateral-dependent loans are charged down to estimated net realizable value when deemed impaired (for example, upon modification in a troubled debt restructuring). A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.

When a loan is charged down to the estimated net realizable value, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every six months thereafter. As soon as practicable after taking physical possession of the property through foreclosure, the Firm obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared to the estimated values provided by exterior opinions and interior appraisals, considering state- and product-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

Loans held-for-sale

Held-for-sale loans are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For wholesale loans, the valuation is performed on an individual loan basis. For consumer loans, the valuation is performed on a portfolio basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or losses recognized at the time of sale.

Held-for-sale loans are subject to the nonaccrual policies described above.

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

Loans at fair value

Loans used in a trading strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue.

For these loans, the earned current contractual interest payment is recognized in interest income. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's nonaccrual, allowance for loan losses, and charge-off policies do not apply to these loans.

See Note 4 on pages 198–200 of this Annual Report for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 and Note 4 on pages 184–198 and 198–200 of this Annual Report for further information on loans carried at fair value and classified as trading assets.

PCI loans

PCI loans held-for-investment are initially measured at fair value. PCI loans have evidence of credit deterioration since the loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected. Because PCI loans are initially measured at fair value, which includes an estimate of future credit losses, no allowance for loan losses related to PCI loans is recorded at the acquisition date. See page 247 of this Note for information on accounting for PCI loans subsequent to their acquisition.

Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; losses due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at the lower of cost or fair value on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 15 on pages 252–255 of this Annual Report.

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss, avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, or the acceptance of equity or other assets in lieu of payments. In certain limited circumstances, loan modifications include principal forgiveness.

Such modifications are accounted for and reported as troubled debt restructurings ("TDRs"). A loan that has been modified in a TDR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless of whether the borrower performs under the modified terms. In certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring. In such circumstances, and assuming that the loan subsequently performs under its modified terms and the Firm expects to collect all contractual principal and interest cash flows, the loan is disclosed as impaired and as a TDR only during the year of the modification; in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (resuming the accrual of interest) if the following criteria are met: (a) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (b) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, LTV ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

Because loans modified in TDRs are considered to be impaired, these loans are evaluated for an asset-specific allowance, which considers the expected re-default rates for the modified loans and is determined based on the same methodology used to estimate the Firm's asset-specific allowance component. A loan modified in a TDR remains subject to the asset-specific allowance methodology

throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status. For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 15 on pages 252–255 of this Annual Report.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, buildings, and fixtures) and commercial and personal property (e.g., aircraft, railcars, and ships).

At the time JPMorgan Chase takes physical possession, the property is recorded in other assets on the Consolidated Balance Sheets at fair value less estimated costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary. Subsequent changes to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Wholesale; Consumer, excluding credit card; and Credit card. Within each portfolio segment, the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class:

Wholesale[a]	Consumer, excluding credit card[b]	Credit card
• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other	Residential real estate – excluding PCI • Home equity – senior lien • Home equity – junior lien • Prime mortgage, including option ARMs • Subprime mortgage Other consumer loans • Auto[c] • Business banking[c] • Student and other Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Chase, excluding accounts originated by Washington Mutual • Accounts originated by Washington Mutual

(a) Includes loans reported in IB, Commercial Banking ("CB"), Treasury & Securities Services ("TSS"), Asset Management ("AM"), and Corporate/Private Equity segments.

(b) Includes loans reported in RFS, auto and student loans reported in Card Services & Auto ("Card"), and residential real estate loans reported in the Corporate/Private Equity and AM segment.

(c) Includes auto and business banking risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by Card and RFS, respectively, and therefore, for consistency in presentation, are included with the other consumer loan classes.

The following table summarizes the Firm's loan balances by portfolio segment.

December 31, 2011 (in millions)	Wholesale	Consumer, excluding credit card	Credit card	Total	
Retained	**$ 278,395**	**$ 308,427**	**$ 132,175**	**$ 718,997**	[a]
Held-for-sale	**2,524**	**–**	**102**	**2,626**	
At fair value	**2,097**	**–**	**–**	**2,097**	
Total	**$ 283,016**	**$ 308,427**	**$ 132,277**	**$ 723,720**	

December 31, 2010 (in millions)	Wholesale	Consumer, excluding credit card	Credit card	Total	
Retained	$ 222,510	$ 327,464	$ 135,524	$ 685,498	[a]
Held-for-sale	3,147	154	2,152	5,453	
At fair value	1,976	–	–	1,976	
Total	$ 227,633	$ 327,618	$ 137,676	$ 692,927	

(a) Loans (other than PCI loans and those for which the fair value option has been selected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs of $2.7 billion and $1.9 billion at December 31, 2011 and 2010, respectively.

The following table provides information about the carrying value of retained loans purchased, retained loans sold and retained loans reclassified to held-for-sale during the periods indicated. These tables exclude loans recorded at fair value. On an ongoing basis, the Firm manages its exposure to credit risk. Selling loans is one way that the Firm reduces its credit exposures.

Year ended December 31, 2011 (in millions)	Wholesale	Consumer, excluding credit card	Credit card	Total
Purchases	$ 906	$ 7,525	$ –	$ 8,431
Sales	3,289	1,384	–	4,673
Retained loans reclassified to held-for-sale	538	–	2,006	2,544

The following table provides information about gains/(losses) on loan sales by portfolio segment.

Year ended December 31, (in millions)	2011	2010	2009
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]			
Wholesale	**$ 121**	$ 215	$ 291
Consumer, excluding credit card	**131**	265	127
Credit card	**(24)**	(16)	21
Total net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]	**$ 228**	$ 464	$ 439

(a) Excludes sales related to loans accounted for at fair value.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of customers from large corporate and institutional clients to certain high-net worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the probability of default ("PD") and the loss given default ("LGD"). PD is the likelihood that a loan will not be repaid at default. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. Risk ratings generally represent ratings profiles similar to those defined by S&P and Moody's. Investment grade ratings range from "AAA/Aaa" to "BBB-/Baa3." Noninvestment grade ratings are classified as noncriticized ("BB+/Ba1 and B-/B3") and criticized ("CCC+"/"Caa1 and below"), and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note 5 on page 201 in this Annual Report for further detail on industry concentrations.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

As of or for the year ended December 31, (in millions, except ratios)	Commercial and industrial		Real estate	
	2011	2010	**2011**	2010
Loans by risk ratings				
Investment grade	**$ 52,428**	$ 31,697	**$ 33,920**	$ 28,504
Noninvestment grade:				
Noncriticized	**38,644**	30,874	**15,972**	16,425
Criticized performing	**2,254**	2,371	**3,906**	5,769
Criticized nonaccrual	**889**	1,634	**886**	2,937
Total noninvestment grade	**41,787**	34,879	**20,764**	25,131
Total retained loans	**$ 94,215**	$ 66,576	**$ 54,684**	$ 53,635
% of total criticized to total retained loans	**3.34%**	6.02%	**8.76%**	16.23%
% of nonaccrual loans to total retained loans	**0.94**	2.45	**1.62**	5.48
Loans by geographic distribution[a]				
Total non-U.S.	**$ 30,813**	$ 17,731	**$ 1,497**	$ 1,963
Total U.S.	**63,402**	48,845	**53,187**	51,672
Total retained loans	**$ 94,215**	$ 66,576	**$ 54,684**	$ 53,635
Net charge-offs	**$ 124**	$ 403	**$ 256**	$ 862
% of net charge-offs to end-of-period retained loans	**0.13%**	0.61%	**0.47%**	1.61%
Loan delinquency[b]				
Current and less than 30 days past due and still accruing	**$ 93,060**	$ 64,501	**$ 53,387**	$ 50,299
30–89 days past due and still accruing	**266**	434	**327**	290
90 or more days past due and still accruing[c]	**—**	7	**84**	109
Criticized nonaccrual	**889**	1,634	**886**	2,937
Total retained loans	**$ 94,215**	$ 66,576	**$ 54,684**	$ 53,635

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality. For a discussion of more significant risk factors, see page 235 of this Note.
(c) Represents loans that are considered well-collateralized and therefore still accruing interest.
(d) Other primarily includes loans to SPEs and loans to private banking clients. See Note 1 on pages 182–183 of this Annual Report for additional information on SPEs.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio segment for the periods indicated. The real estate class primarily consists of secured commercial loans mainly to borrowers for multi-family and commercial lessor properties. Multifamily lending specifically finances apartment buildings. Commercial lessors receive financing specifically for real estate leased to retail, office and industrial tenants. Commercial construction and development loans represent financing for the construction of apartments, office and professional buildings and malls. Other real estate loans include lodging, real estate investment trusts ("REITs"), single-family, homebuilders and other real estate.

December 31, (in millions, except ratios)	Multifamily		Commercial lessors	
	2011	2010	**2011**	2010
Real estate retained loans	**$ 32,524**	$ 30,604	**$ 14,444**	$ 15,796
Criticized exposure	**2,451**	3,798	**1,662**	3,593
% of criticized exposure to total real estate retained loans	**7.54%**	12.41%	**11.51%**	22.75%
Criticized nonaccrual	**$ 412**	$ 1,016	**$ 284**	$ 1,549
% of criticized nonaccrual to total real estate retained loans	**1.27%**	3.32%	**1.97%**	9.81%

(table continued from previous page)

Financial institutions		Government agencies		Other[(d)]		Total retained loans	
2011	2010	**2011**	2010	**2011**	2010	**2011**	2010
$ 28,804	$ 22,525	**$ 7,421**	$ 6,871	**$ 74,497**	$ 56,450	**$ 197,070**	$ 146,047
9,132	8,480	**378**	382	**7,583**	6,012	**71,709**	62,173
246	317	**4**	3	**808**	320	**7,218**	8,780
37	136	**16**	22	**570**	781	**2,398**	5,510
9,415	8,933	**398**	407	**8,961**	7,113	**81,325**	76,463
$ 38,219	$ 31,458	**$ 7,819**	$ 7,278	**$ 83,458**	$ 63,563	**$ 278,395**	$ 222,510
0.74 %	1.44%	**0.26%**	0.34%	**1.65%**	1.73%	**3.45%**	6.42%
0.10	0.43	**0.20**	0.30	**0.68**	1.23	**0.86**	2.48
$ 29,996	$ 19,756	**$ 583**	$ 870	**$ 32,275**	$ 25,831	**$ 95,164**	$ 66,151
8,223	11,702	**7,236**	6,408	**51,183**	37,732	**183,231**	156,359
$ 38,219	$ 31,458	**$ 7,819**	$ 7,278	**$ 83,458**	$ 63,563	**$ 278,395**	$ 222,510
$ (137)	$ 72	**$ –**	$ 2	**$ 197**	$ 388	**$ 440**	$ 1,727
(0.36)%	0.23%	**–%**	0.03%	**0.24%**	0.61%	**0.16%**	0.78%
$ 38,129	$ 31,289	**$ 7,780**	$ 7,222	**$ 81,802**	$ 61,837	**$ 274,158**	$ 215,148
51	31	**23**	34	**1,072**	704	**1,739**	1,493
2	2	**–**	–	**14**	241	**100**	359
37	136	**16**	22	**570**	781	**2,398**	5,510
$ 38,219	$ 31,458	**$ 7,819**	$ 7,278	**$ 83,458**	$ 63,563	**$ 278,395**	$ 222,510

(table continued from previous page)

Commercial construction and development		Other		Total real estate loans	
2011	2010	**2011**	2010	**2011**	2010
$ 3,148	$ 3,395	**$ 4,568**	$ 3,840	**$ 54,684**	$ 53,635
297	619	**382**	696	**4,792**	8,706
9.43%	18.23%	**8.36%**	18.13%	**8.76%**	16.23%
$ 69	$ 174	**$ 121**	$ 198	**$ 886**	$ 2,937
2.19%	5.13%	**2.65%**	5.16%	**1.62%**	5.48%

Wholesale impaired loans and loan modifications

Wholesale impaired loans include loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described on pages 233–234 of this Note.

The table below set forth information about the Firm's wholesale impaired loans.

December 31, (in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	2011	2010	**2011**	2010	**2011**	2010	**2011**	2010	**2011**	2010	**2011**	2010
Impaired loans												
With an allowance	**$ 828**	$ 1,512	**$ 621**	$ 2,510	**$ 21**	$ 127	**$ 16**	$ 22	**$ 473**	$ 697	**$ 1,959**	$ 4,868
Without an allowance[a]	**177**	157	**292**	445	**18**	8	**–**	–	**103**	8	**590**	618
Total impaired loans	**$ 1,005**	$ 1,669	**$ 913**	$ 2,955	**$ 39**	$ 135	**$ 16**	$ 22	**$ 576**	$ 705	**$ 2,549**	$ 5,486
Allowance for loan losses related to impaired loans	**$ 276**	$ 435	**$ 148**	$ 825	**$ 5**	$ 61	**$ 10**	$ 14	**$ 77**	$ 239	**$ 516**	$ 1,574
Unpaid principal balance of impaired loans[b]	**1,705**	2,453	**1,124**	3,487	**63**	244	**17**	30	**1,008**	1,046	**3,917**	7,260

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, then the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.

(b) Represents the contractual amount of principal owed at December 31, 2011 and 2010. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.

The following table presents the Firm's average impaired loans for the years ended 2011, 2010 and 2009.

Year ended December 31, (in millions)	**2011**	2010	2009
Commercial and industrial	**$ 1,309**	$ 1,655	$ 1,767
Real estate	**1,813**	3,101	2,420
Financial institutions	**84**	304	685
Government agencies	**20**	5	4
Other	**634**	884	468
Total[a]	**$ 3,860**	$ 5,949	$ 5,344

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the years ended December 31, 2011, 2010 and 2009.

Loan modifications

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above. The following table provides information about the Firm's wholesale loans that have been modified in TDRs as of the dates presented.

December 31, (in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	2011	2010	**2011**	2010	**2011**	2010	**2011**	2010	**2011**	2010	**2011**	2010
Loans modified in troubled debt restructurings	**$ 531**	$ 212	**$ 176**	$ 907	**$ 2**	$ 1	**$ 16**	$ 22	**$ 25**	$ 1	**$ 750**	$ 1,143
TDRs on nonaccrual status	**415**	163	**128**	831	**–**	1	**16**	22	**19**	1	**578**	1,018
Additional commitments to lend to borrowers whose loans have been modified in TDRs	**147**	1	**–**	–	**–**	–	**–**	–	**–**	–	**147**	1

TDR activity rollforward

The following table reconciles the beginning and ending balances of wholesale loans modified in TDRs for the period presented and provides information regarding the nature and extent of modifications during the period.

Year ended December 31, 2011 (in millions)	Commercial and industrial	Real estate	Other[b]	Total
Beginning balance of TDRs	$ 212	$ 907	$ 24	$ 1,143
New TDRs	665	113	32	810
Increases to existing TDRs	96	16	–	112
Charge-offs post-modification	(30)	(146)	–	(176)
Sales and other[a]	(412)	(714)	(13)	(1,139)
Ending balance of TDRs	$ 531	$ 176	$ 43	$ 750

(a) Sales and other are predominantly sales and paydowns, but may include performing loans restructured at market rates that are no longer reported as TDRs.

(b) Includes loans to Financial institutions, Government agencies and Other.

Financial effects of modifications and redefaults
Loans modified as TDRs during the year ended December 31, 2011, are predominantly term or payment extensions and, to a lesser extent, deferrals of principal and/or interest on commercial and industrial and real estate loans. The average term extension granted on loans with term or payment extensions was 3.3 years for the year ended December 31, 2011. The weighted-average remaining term for all loans modified during the year ended December 31, 2011 was 4.5 years. Wholesale TDR loans that redefaulted within one year of the modification were $96 million during the year ended December 31, 2011. A payment default is deemed to occur when the borrower has not made a loan payment by its scheduled due date after giving effect to any contractual grace period.

Consumer, excluding credit card loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, business banking loans, and student and other loans, with a primary focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens and mortgage loans with interest-only payment options to predominantly prime borrowers, as well as certain payment-option loans originated by Washington Mutual that may result in negative amortization.

The table below provides information about consumer retained loans by class, excluding the Credit card loan portfolio segment.

December 31, (in millions)	2011	2010
Residential real estate – excluding PCI		
Home equity:		
Senior lien	**$ 21,765**	$ 24,376
Junior lien	**56,035**	64,009
Mortgages:		
Prime, including option ARMs	**76,196**	74,539
Subprime	**9,664**	11,287
Other consumer loans		
Auto	**47,426**	48,367
Business banking	**17,652**	16,812
Student and other	**14,143**	15,311
Residential real estate – PCI		
Home equity	**22,697**	24,459
Prime mortgage	**15,180**	17,322
Subprime mortgage	**4,976**	5,398
Option ARMs	**22,693**	25,584
Total retained loans	**$ 308,427**	$ 327,464

Delinquency rates are a primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers that may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear that the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a short sale or foreclosure. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, including both non-PCI and PCI portfolios, the current estimated LTV ratio, or the combined LTV ratio in the case of loans with a junior lien, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as hurricanes, earthquakes, etc., will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit-quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (660 or below) is considered to be of higher risk than a loan to a borrower with a high FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For auto, scored business banking and student loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.
- Risk-rated business banking and auto loans are similar to wholesale loans in that the primary credit quality indicators are the risk rating that is assigned to the loan and whether the loans are considered to be criticized and/or nonaccrual. Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting borrowers' ability to fulfill their obligations. Consistent with other classes of consumer loans, the geographic distribution of the portfolio provides insights into portfolio performance based on regional economic activity and events.

Residential real estate – excluding PCI loans
The following tables provide information by class for residential real estate – excluding PCI retained loans in the Consumer, excluding credit card, portfolio segment.

The following factors should be considered in analyzing certain credit statistics applicable to the Firm's residential real estate – excluding PCI loans portfolio: (i) junior lien home equity loans may be fully charged off when the loan becomes 180 days past due, the borrower is either unable

or unwilling to repay the loan, and the value of the collateral does not support the repayment of the loan, resulting in relatively high charge-off rates for this product class; and (ii) the lengthening of loss-mitigation timelines may result in higher delinquency rates for loans carried at estimated collateral value that remain on the Firm's Consolidated Balance Sheets.

Residential real estate – excluding PCI loans

December 31, (in millions, except ratios)	Home equity			
	Senior lien		Junior lien	
	2011	2010	**2011**	2010
Loan delinquency[a]				
Current and less than 30 days past due	**$ 20,992**	$ 23,615	**$ 54,533**	$ 62,315
30–149 days past due	**405**	414	**1,272**	1,508
150 or more days past due	**368**	347	**230**	186
Total retained loans	**$ 21,765**	$ 24,376	**$ 56,035**	$ 64,009
% of 30+ days past due to total retained loans	**3.55%**	3.12%	**2.68%**	2.65%
90 or more days past due and still accruing	**$ –**	$ –	**$ –**	$ –
90 or more days past due and government guaranteed[b]	**–**	–	**–**	–
Nonaccrual loans	**495**	479	**792**	784
Current estimated LTV ratios[c][d][e][f]				
Greater than 125% and refreshed FICO scores:				
Equal to or greater than 660	**$ 341**	$ 363	**$ 6,463**	$ 6,928
Less than 660	**160**	196	**2,037**	2,495
101% to 125% and refreshed FICO scores:				
Equal to or greater than 660	**663**	619	**8,775**	9,403
Less than 660	**241**	249	**2,510**	2,873
80% to 100% and refreshed FICO scores:				
Equal to or greater than 660	**1,850**	1,900	**11,433**	13,333
Less than 660	**601**	657	**2,616**	3,155
Less than 80% and refreshed FICO scores:				
Equal to or greater than 660	**15,350**	17,474	**19,326**	22,527
Less than 660	**2,559**	2,918	**2,875**	3,295
U.S. government-guaranteed	**–**	–	**–**	–
Total retained loans	**$ 21,765**	$ 24,376	**$ 56,035**	$ 64,009
Geographic region				
California	**$ 3,066**	$ 3,348	**$ 12,851**	$ 14,656
New York	**3,023**	3,272	**10,979**	12,278
Florida	**992**	1,088	**3,006**	3,470
Illinois	**1,495**	1,635	**3,785**	4,248
Texas	**3,027**	3,594	**1,859**	2,239
New Jersey	**687**	732	**3,238**	3,617
Arizona	**1,339**	1,481	**2,552**	2,979
Washington	**714**	776	**1,895**	2,142
Ohio	**1,747**	2,010	**1,328**	1,568
Michigan	**1,044**	1,176	**1,400**	1,618
All other[g]	**4,631**	5,264	**13,142**	15,194
Total retained loans	**$ 21,765**	$ 24,376	**$ 56,035**	$ 64,009

(a) Individual delinquency classifications included mortgage loans insured by U.S. government agencies as follows: current and less than 30 days past due includes $3.0 billion and $2.5 billion; 30–149 days past due includes $2.3 billion and $2.5 billion; and 150 or more days past due includes $10.3 billion and $7.9 billion at December 31, 2011 and 2010, respectively.

(b) These balances, which are 90 days or more past due but insured by U.S. government agencies, are excluded from nonaccrual loans. In predominately all cases, 100% of the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting agreed servicing guidelines. These amounts are excluded from nonaccrual loans because reimbursement of insured and guaranteed amounts is proceeding normally. At December 31, 2011 and 2010, these balances included $7.0 billion and $2.8 billion, respectively, of loans that are no longer accruing interest because interest has been curtailed by the U.S. government agencies although, in predominantly all cases, 100% of the principal is still insured. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates.

(d) Junior lien represents combined LTV, which considers all available lien positions related to the property. All other products are presented without consideration of subordinate liens on the property.

(e) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm at least on a quarterly basis.

(f) For senior lien home equity loans, prior-period amounts have been revised to conform with the current-period presentation.

(g) At December 31, 2011 and 2010, included mortgage loans insured by U.S. government agencies of $15.6 billion and $12.9 billion, respectively.

(h) At December 31, 2011 and 2010, excluded mortgage loans insured by U.S. government agencies of $12.6 billion and $10.3 billion, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

(table continued from previous page)

Mortgages					
Prime, including option ARMs		Subprime		Total residential real estate – excluding PCI	
2011	2010	**2011**	2010	**2011**	2010
$ 59,855	$ 59,223	**$ 7,585**	$ 8,477	**$ 142,965**	$ 153,630
3,475	4,052	**820**	1,184	**5,972**	7,158
12,866	11,264	**1,259**	1,626	**14,723**	13,423
$ 76,196	$ 74,539	**$ 9,664**	$ 11,287	**$ 163,660**	$ 174,211
4.96% [h]	6.68% [h]	**21.51%**	24.90%	**4.97%** [h]	5.88% [h]
$ –	$ –	**$ –**	$ –	**$ –**	$ –
11,516	9,417	**–**	–	**11,516**	9,417
3,462	4,320	**1,781**	2,210	**6,530**	7,793
$ 3,168	$ 3,039	**$ 367**	$ 338	**$ 10,339**	$ 10,668
1,416	1,595	**1,061**	1,153	**4,674**	5,439
4,626	4,733	**506**	506	**14,570**	15,261
1,636	1,775	**1,284**	1,486	**5,671**	6,383
9,343	10,720	**817**	925	**23,443**	26,878
2,349	2,786	**1,556**	1,955	**7,122**	8,553
33,849	32,385	**1,906**	2,252	**70,431**	74,638
4,225	4,557	**2,167**	2,672	**11,826**	13,442
15,584	12,949	**–**	–	**15,584**	12,949
$ 76,196	$ 74,539	**$ 9,664**	$ 11,287	**$ 163,660**	$ 174,211
$ 18,029	$ 19,278	**$ 1,463**	$ 1,730	**$ 35,409**	$ 39,012
10,200	9,587	**1,217**	1,381	**25,419**	26,518
4,565	4,840	**1,206**	1,422	**9,769**	10,820
3,922	3,765	**391**	468	**9,593**	10,116
2,851	2,569	**300**	345	**8,037**	8,747
2,042	2,026	**461**	534	**6,428**	6,909
1,194	1,320	**199**	244	**5,284**	6,024
1,878	2,056	**209**	247	**4,696**	5,221
441	462	**234**	275	**3,750**	4,315
909	963	**246**	294	**3,599**	4,051
30,165	27,673	**3,738**	4,347	**51,676**	52,478
$ 76,196	$ 74,539	**$ 9,664**	$ 11,287	**$ 163,660**	$ 174,211

The following table represents the Firm's delinquency statistics for junior lien home equity loans as of December 31, 2011 and 2010.

December 31, 2011 (in millions, except ratios)	Delinquencies 30–89 days past due	90–149 days past due	150+ days past due	Total loans	Total 30+ day delinquency rate
HELOCs:[a]					
Within the revolving period[b]	**$ 606**	**$ 314**	**$ 173**	**$ 47,760**	**2.29%**
Within the required amortization period	**45**	**19**	**15**	**1,636**	**4.83**
HELOANs	**188**	**100**	**42**	**6,639**	**4.97**
Total	**$ 839**	**$ 433**	**$ 230**	**$ 56,035**	**2.68%**

December 31, 2010 (in millions, except ratios)	Delinquencies 30–89 days past due	90–149 days past due	150+ days past due	Total loans	Total 30+ day delinquency rate
HELOCs:[a]					
Within the revolving period[b]	$ 665	$ 384	$ 145	$ 54,434	2.19%
Within the required amortization period	41	19	10	1,177	5.95
HELOANs	250	149	31	8,398	5.12
Total	$ 956	$ 552	$ 186	$ 64,009	2.65%

(a) In general, HELOCs are open-ended, revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period.

(b) The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty or when the collateral does not support the loan amount.

Home equity lines of credit ("HELOCs") within the required amortization period and home equity loans ("HELOANs") have higher delinquency rates than do HELOCs within the revolving period. That is primarily because the fully-amortizing payment required for those products is higher than the minimum payment options available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the loss estimates produced by the Firm's delinquency roll-rate methodology, which estimates defaults based on the current delinquency status of a portfolio.

Impaired loans

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 on pages 252–255 of this Annual Report.

December 31, (in millions)	Home equity: Senior lien		Home equity: Junior lien		Mortgages: Prime, including option ARMs		Mortgages: Subprime		Total residential real estate – excluding PCI	
	2011	2010	**2011**	2010	**2011**	2010	**2011**	2010	**2011**	2010
Impaired loans										
With an allowance	**$ 319**	$ 211	**$ 622**	$ 258	**$ 4,332**	$ 1,525	**$ 3,047**	$ 2,563	**$ 8,320**	$ 4,557
Without an allowance[a]	**16**	15	**35**	25	**545**	559	**172**	188	**768**	787
Total impaired loans[b]	**$ 335**	$ 226	**$ 657**	$ 283	**$ 4,877**	$ 2,084	**$ 3,219**	$ 2,751	**$ 9,088**	$ 5,344
Allowance for loan losses related to impaired loans	**$ 80**	$ 77	**$ 141**	$ 82	**$ 4**	$ 97	**$ 366**	$ 555	**$ 591**	$ 811
Unpaid principal balance of impaired loans[c]	**433**	265	**994**	402	**6,190**	2,751	**4,827**	3,777	**12,444**	7,195
Impaired loans on nonaccrual status	**77**	38	**159**	63	**922**	534	**832**	632	**1,990**	1,267

(a) When discounted cash flows or collateral value equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when an impaired loan has been partially charged off.

(b) At December 31, 2011 and 2010, $4.3 billion and $3.0 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., Federal Housing Administration ("FHA"), U.S. Department of Veterans Affairs ("VA"), Rural Housing Services ("RHS")) were excluded from loans accounted for as TDRs. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure.

(c) Represents the contractual amount of principal owed at December 31, 2011 and 2010. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.

The following table presents average impaired loans and the related interest income reported by the Firm.

Year ended December 31,	Average impaired loans			Interest income on impaired loans[a]			Interest income on impaired loans on a cash basis[a]		
(in millions)	**2011**	2010	2009	**2011**	2010	2009	**2011**	2010	2009
Home equity									
Senior lien	**$ 287**	$ 207	$ 142	**$ 10**	$ 15	$ 7	**$ 1**	$ 1	$ 1
Junior lien	**521**	266	187	**18**	10	9	**2**	1	1
Mortgages									
Prime, including option ARMs	**3,859**	1,530	496	**147**	70	34	**14**	14	8
Subprime	**3,083**	2,539	1,948	**148**	121	98	**16**	19	6
Total residential real estate – excluding PCI	**$ 7,750**	$ 4,542	$ 2,773	**$ 323**	$ 216	$ 148	**$ 33**	$ 35	$ 16

(a) Generally, interest income on loans modified in a TDR is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms. As of December 31, 2011 and 2010, $886 million and $580 million, respectively, of loans were TDRs for which the borrowers had not yet made six payments under their modified terms.

Loan modifications

The Firm is participating in the U.S. Treasury's Making Home Affordable ("MHA") programs and is continuing to expand its other loss-mitigation efforts for financially distressed borrowers who do not qualify for the U.S. Treasury's programs. The MHA programs include the Home Affordable Modification Program ("HAMP") and the Second Lien Modification Program ("2MP"). The Firm's other loss-mitigation programs for troubled borrowers who do not qualify for HAMP include the traditional modification programs offered by the GSEs and Ginnie Mae, as well as the Firm's proprietary modification programs, which include concessions similar to those offered under HAMP and 2MP but with expanded eligibility criteria. In addition, the Firm has offered specific targeted modification programs to higher risk borrowers, many of whom were current on their mortgages prior to modification.

In order to be offered a permanent modification under HAMP, a borrower must successfully make three payments under the new terms during a trial modification period. The Firm also offers one proprietary modification program that is similar to HAMP and that includes a comparable trial modification period. Borrowers who do not successfully complete the trial modification period do not qualify to have their loans permanently modified under that particular program; however, in certain cases, the Firm considers whether the borrower might qualify for a different loan modification program.

Permanent modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. In addition, in the fourth quarter of 2011, the Firm began to characterize as TDRs loans to borrowers who have been approved for a trial modification either under HAMP or under the proprietary program noted above, even though such loans have not yet been permanently modified. Regardless of whether the borrower successfully completes the trial modification, such loans will continue to be reported as TDRs until charged-off, repaid or otherwise liquidated. The Firm previously considered the risk characteristics of loans in a trial modification in determining its formula-based allowance for loan losses. As a result, the recharacterization of trial modifications as TDRs during the fourth quarter of 2011 did not have a significant impact on the Firm's allowance for loan losses.

There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

TDR activity rollforward

The following tables reconcile the beginning and ending balances of residential real estate loans, excluding PCI loans, modified in TDRs for the periods presented.

Year ended December 31, 2011 (in millions)	Home equity		Mortgages		Total residential real estate – (excluding PCI)
	Senior lien	Junior lien	Prime, including option ARMs	Subprime	
Beginning balance of TDRs	$ 226	$ 283	$ 2,084	$ 2,751	$ 5,344
New TDRs[a]	138	518	3,268	883	4,807
Charge-offs post-modification[b]	(15)	(78)	(119)	(234)	(446)
Foreclosures and other liquidations (e.g., short sales)	–	(11)	(108)	(82)	(201)
Principal payments and other	(14)	(55)	(248)	(99)	(416)
Ending balance of TDRs	$ 335	$ 657	$ 4,877	$ 3,219	$ 9,088
Permanent modifications	$ 285	$ 634	$ 4,601	$ 3,029	$ 8,549
Trial modifications	$ 50	$ 23	$ 276	$ 190	$ 539

(a) Includes all loans to borrowers who were approved for trial modification on or after January 1, 2011, as well as all loans permanently modified during the year ended December 31, 2011. In the event that a trial modification is reported as a new TDR, any subsequent permanent modification of that same loan is not reported as a new TDR.

(b) Includes charge-offs on unsuccessful trial modifications.

Nature and extent of modifications

MHA, as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement. The following table provides information about how residential real estate loans, excluding PCI loans, were permanently modified during the period presented.

	Home equity		Mortgages		
Year ended December 31, 2011	Senior lien	Junior lien	Prime, including option ARMs	Subprime	Total residential real estate – (excluding PCI)
Number of loans approved for a trial modification, but not permanently modified	654	778	898	1,730	4,060
Number of loans permanently modified	1,006	9,142	9,579	4,972	24,699
Permanent concession granted:[(a)(b)]					
Interest rate reduction	80%	95%	53%	80%	75%
Term or payment extension	88	81	71	72	75
Principal and/or interest deferred	10	21	17	19	19
Principal forgiveness	7	20	2	13	11
Other[(c)]	29	7	68	26	35

(a) As a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the permanent modifications include more than one type of concession.
(b) Except for the "Other" category, the percentages representing the various types of concessions granted are estimated to be materially consistent with those related to loans approved for trial modification.
(c) Represents variable interest rate to fixed interest rate modifications. To date, these concessions have solely related to permanent modifications.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in permanent modifications of residential real estate loans, excluding PCI, and also about redefaults of certain loans modified in TDRs for the period presented.

	Home equity		Mortgages		
Year ended December 31, 2011 (in millions, except weighted-average data and number of loans)	Senior lien	Junior lien	Prime, including option ARMs	Subprime	Total residential real estate – (excluding PCI)
Weighted-average interest rate of loans with interest rate reductions – before TDR[(a)]	7.25%	5.46%	5.98%	8.25%	6.44%
Weighted-average interest rate of loans with interest rate reductions – after TDR[(a)]	3.51	1.49	3.34	3.46	3.09
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR[(a)]	18	21	25	23	24
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR[(a)]	30	34	35	34	35
Charge-offs recognized upon permanent modification	$ 1	$ 117	$ 61	$ 19	$ 198
Principal deferred[(b)]	4	35	167	61	267
Principal forgiven[(b)]	1	62	20	46	129
Number of loans that redefaulted within one year of permanent modification[(c)]	222	1,310	1,142	1,989	4,663
Balance of loans that redefaulted within one year of permanent modification[(c)]	$ 18	$ 52	$ 340	$ 281	$ 691
Cumulative permanent modification redefault rates[(d)]	21%	14%	13%	28%	18%

(a) Represents information about loans that have been permanently modified. The financial effects of such concessions related to loans approved for trial modification are estimated to be materially consistent with the financial effects presented above.
(b) Represents information about loans that have been permanently modified. Principal deferred and principal forgiven related to loans approved for trial modification totaled $125 million for the year ended December 31, 2011.
(c) Represents loans permanently modified in TDRs that experienced a payment default in the period presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which they defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.
(d) Based upon permanent modifications completed after October 1, 2009, that are seasoned more than six months.

Approximately 85% of the trial modifications approved on or after July 1, 2010 (the approximate date on which substantial revisions were made to the HAMP program), that are seasoned more than six months have been successfully converted to permanent modifications.

At December 31, 2011, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 7.0 years, 6.9 years, 9.0 years and 6.7 years for senior lien home equity, junior lien home equity, prime mortgage, including option ARMs, and subprime mortgage, respectively. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

Other consumer loans

The tables below provide information for other consumer retained loan classes, including auto, business banking and student loans.

December 31, (in millions, except ratios)	Auto		Business banking		Student and other		Total other consumer	
	2011	2010	**2011**	2010	**2011**	2010	**2011**	2010
Loan delinquency[a]								
Current and less than 30 days past due	**$46,891**	$47,778	**$17,173**	$ 16,240	**$12,905**	$ 13,998	**$ 76,969**	$ 78,016
30–119 days past due	**528**	579	**326**	351	**777**	795	**1,631**	1,725
120 or more days past due	**7**	10	**153**	221	**461**	518	**621**	749
Total retained loans	**$47,426**	$48,367	**$17,652**	$ 16,812	**$14,143**	$ 15,311	**$ 79,221**	$ 80,490
% of 30+ days past due to total retained loans	**1.13%**	1.22%	**2.71%**	3.40%	**1.76%** [d]	1.61% [d]	**1.59%** [d]	1.75% [d]
90 or more days past due and still accruing [b]	**$ —**	$ —	**$ —**	$ —	**$ 551**	$ 625	**$ 551**	$ 625
Nonaccrual loans	**118**	141	**694**	832	**69**	67	**881**	1,040
Geographic region								
California	**$ 4,413**	$ 4,307	**$ 1,342**	$ 851	**$ 1,261**	$ 1,330	**$ 7,016**	$ 6,488
New York	**3,616**	3,875	**2,792**	2,877	**1,401**	1,305	**7,809**	8,057
Florida	**1,881**	1,923	**313**	220	**658**	722	**2,852**	2,865
Illinois	**2,496**	2,608	**1,364**	1,320	**851**	940	**4,711**	4,868
Texas	**4,467**	4,505	**2,680**	2,550	**1,053**	1,273	**8,200**	8,328
New Jersey	**1,829**	1,842	**376**	422	**460**	502	**2,665**	2,766
Arizona	**1,495**	1,499	**1,165**	1,218	**316**	387	**2,976**	3,104
Washington	**735**	716	**160**	115	**249**	279	**1,144**	1,110
Ohio	**2,633**	2,961	**1,541**	1,647	**880**	1,010	**5,054**	5,618
Michigan	**2,282**	2,434	**1,389**	1,401	**637**	729	**4,308**	4,564
All other	**21,579**	21,697	**4,530**	4,191	**6,377**	6,834	**32,486**	32,722
Total retained loans	**$47,426**	$48,367	**$17,652**	$ 16,812	**$14,143**	$ 15,311	**$ 79,221**	$ 80,490
Loans by risk ratings[c]								
Noncriticized	**$ 6,775**	$ 5,803	**$11,749**	$ 10,351	**NA**	NA	**$ 18,524**	$ 16,154
Criticized performing	**166**	265	**817**	982	**NA**	NA	**983**	1,247
Criticized nonaccrual	**3**	12	**524**	574	**NA**	NA	**527**	586

(a) Loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") are included in the delinquency classifications presented based on their payment status. Prior-period amounts have been revised to conform with the current-period presentation.

(b) These amounts represent student loans, which are insured by U.S. government agencies under the FFELP. These amounts were accruing as reimbursement of insured amounts is proceeding normally.

(c) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.

(d) December 31, 2011 and 2010, excluded loans 30 days or more past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $989 million and $1.1 billion, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

Other consumer impaired loans and loan modifications

The tables below set forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

December 31, (in millions)	Auto		Business banking		Total other consumer[c]	
	2011	2010	**2011**	2010	**2011**	2010
Impaired loans						
With an allowance	**$ 88**	$ 102	**$ 713**	$ 774	**$ 801**	$ 876
Without an allowance[a]	**3**	–	**–**	–	**3**	–
Total impaired loans	**$ 91**	$ 102	**$ 713**	$ 774	**$ 804**	$ 876
Allowance for loan losses related to impaired loans	**$ 12**	$ 16	**$ 225**	$ 248	**$ 237**	$ 264
Unpaid principal balance of impaired loans[b]	**126**	132	**822**	899	**948**	1,031
Impaired loans on nonaccrual status	**41**	50	**551**	647	**592**	697

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, then the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) Represents the contractual amount of principal owed at December 31, 2011 and 2010. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the principal balance; net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.
(c) There were no impaired student and other loans at December 31, 2011 and 2010.

The following table presents average impaired loans for the periods presented.

Year ended December 31, (in millions)	Average impaired loans[b]		
	2011	2010	2009
Auto	**$ 92**	$ 120	$ 100
Business banking	**760**	682	396
Total other consumer[a]	**$ 852**	$ 802	$ 496

(a) There were no impaired student and other loans for the years ended 2011, 2010 and 2009.
(b) The related interest income on impaired loans, including those on a cash basis, was not material for the years ended 2011, 2010 and 2009.

Loan modifications

The following table provides information about the Firm's other consumer loans modified in TDRs. All of these TDRs are reported as impaired loans in the tables above.

December 31, (in millions)	Auto		Business banking		Total other consumer[c]	
	2011	2010	**2011**	2010	**2011**	2010
Loans modified in troubled debt restructurings[a][b]	**$ 88**	$ 91	**$ 415**	$ 395	**$ 503**	$ 486
TDRs on nonaccrual status	**38**	39	**253**	268	**291**	307

(a) These modifications generally provided interest rate concessions to the borrower or deferral of principal repayments.
(b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2011 and 2010, were immaterial.
(c) There were no student and other loans modified in TDRs at December 31, 2011 and 2010.

TDR activity rollforward

The following table reconciles the beginning and ending balances of other consumer loans modified in TDRs for the period presented.

Year ended December 31, 2011 (in millions)	Auto	Business banking	Total other consumer
Beginning balance of TDRs	$ 91	$ 395	$ 486
New TDRs	54	195	249
Charge-offs	(5)	(11)	(16)
Foreclosures and other liquidations	–	(3)	(3)
Principal payments and other	(52)	(161)	(213)
Ending balance of TDRs	$ 88	$ 415	$ 503

Financial effects of modifications and redefaults

For auto loans, TDRs typically occur in connection with the bankruptcy of the borrower. In these cases, the loan is modified with a revised repayment plan that typically incorporates interest rate reductions and, to a lesser extent, principal forgiveness.

For business banking loans, concessions are dependent on individual borrower circumstances and can be of a short-term nature for borrowers who need temporary relief or longer term for borrowers experiencing more fundamental financial difficulties. Concessions are predominantly term or payment extensions, but also may include interest rate reductions.

For the year ended December 31, 2011, the interest rates on auto loans modified in TDRs were reduced on average from 12.45% to 5.70%, and the interest rates on business banking loans modified in TDRs were reduced on average from 7.55% to 5.52%. For business banking loans, the weighted-average remaining term of all loans modified in TDRs during the year ended December 31, 2011, increased from 1.4 years to 2.6 years. For all periods presented, principal forgiveness related to auto loans was immaterial.

The balance of business banking loans modified in TDRs that experienced a payment default during the year ended December 31, 2011, and for which the payment default occurred within one year of the modification, was $80 million; the corresponding balance of redefaulted auto loans modified in TDRs was insignificant. A payment default is deemed to occur as follows: (1) for scored auto and business banking loans, when the loan is two payments past due; and (2) for risk-rated business banking loans and auto loans, when the borrower has not made a loan payment by its scheduled due date after giving effect to the contractual grace period, if any.

Purchased credit-impaired loans

PCI loans are initially recorded at fair value at acquisition; PCI loans acquired in the same fiscal quarter may be aggregated into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer loans were aggregated into pools of loans with common risk characteristics.

On a quarterly basis, the Firm estimates the total cash flows (both principal and interest) expected to be collected over the remaining life of each pool. These estimates incorporate assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that reflect then-current market conditions. Probable decreases in expected cash flows (i.e., increased credit losses) trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related foregone interest cash flows, discounted at the pool's effective interest rate. Impairments are recognized through the provision for credit losses and an increase in the allowance for loan losses. Probable and significant increases in expected cash flows (e.g., decreased credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans. The impacts of (i) pre-payments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are recognized prospectively as adjustments to interest income. Disposals of loans — which may include sales of loans, receipt of payments in full by the borrower, or foreclosure — result in removal of the loans from the PCI portfolio.

The Firm continues to modify certain PCI loans. The impact of these modifications is incorporated into the Firm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans. In evaluating the effect of modifications on expected cash flows, the Firm incorporates the effect of any foregone interest and also considers the potential for redefault. The Firm develops product-specific probability of default estimates, which are used to compute expected credit losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment based upon industry-wide data. The Firm also considers its own historical loss experience to date based on actual redefaulted PCI modified loans.

The excess of cash flows expected to be collected over the carrying value of the underlying loans is referred to as the accretable yield. This amount is not reported on the Firm's Consolidated Balance Sheets but is accreted into interest income at a level rate of return over the remaining estimated lives of the underlying pools of loans.

If the timing and/or amounts of expected cash flows on PCI loans were determined not to be reasonably estimable, no interest would be accreted and the loans would be reported as nonaccrual loans; however, since the timing and amounts of expected cash flows for the Firm's PCI consumer loans are reasonably estimable, interest is being accreted and the loans are being reported as performing loans.

Charge-offs are not recorded on PCI loans until actual losses exceed the estimated losses that were recorded as purchase accounting adjustments at acquisition date. To date, no charge-offs have been recorded for these consumer loans.

The PCI portfolio affects the Firm's results of operations primarily through: (i) contribution to net interest margin; (ii) expense related to defaults and servicing resulting from the liquidation of the loans; and (iii) any provision for loan losses. The PCI loans acquired in the Washington Mutual transaction were funded based on the interest rate characteristics of the loans. For example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with fixed-rate liabilities with a similar maturity profile. A net spread will be earned on the declining balance of the portfolio, which is estimated as of December 31, 2011, to have a remaining weighted-average life of 7.5 years.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

December 31, (in millions, except ratios)	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
	2011	2010	**2011**	2010	**2011**	2010	**2011**	2010	**2011**	2010
Carrying value[a]	**$22,697**	$24,459	**$15,180**	$17,322	**$ 4,976**	$ 5,398	**$22,693**	$25,584	**$65,546**	$72,763
Related allowance for loan losses[b]	**1,908**	1,583	**1,929**	1,766	**380**	98	**1,494**	1,494	**5,711**	4,941
Loan delinquency (based on unpaid principal balance)										
Current and less than 30 days past due	**$22,682**	$25,783	**$12,148**	$13,035	**$ 4,388**	$ 4,312	**$17,919**	$18,672	**$57,137**	$61,802
30–149 days past due	**1,130**	1,348	**912**	1,468	**782**	1,020	**1,467**	2,215	**4,291**	6,051
150 or more days past due	**1,252**	1,181	**3,000**	4,425	**2,059**	2,710	**6,753**	9,904	**13,064**	18,220
Total loans	**$25,064**	$28,312	**$16,060**	$18,928	**$ 7,229**	$ 8,042	**$26,139**	$30,791	**$74,492**	$86,073
% of 30+ days past due to total loans	**9.50%**	8.93%	**24.36%**	31.13%	**39.30%**	46.38%	**31.45%**	39.36%	**23.30%**	28.20%
Current estimated LTV ratios (based on unpaid principal balance)[c][d][e]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 5,915**	$ 6,289	**$ 2,313**	$ 2,400	**$ 473**	$ 432	**$ 2,509**	$ 2,681	**$11,210**	$11,802
Less than 660	**3,299**	4,043	**2,319**	2,744	**1,939**	2,129	**4,608**	6,330	**12,165**	15,246
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**5,393**	6,053	**3,328**	3,815	**434**	424	**3,959**	4,292	**13,114**	14,584
Less than 660	**2,304**	2,696	**2,314**	3,011	**1,510**	1,663	**3,884**	5,005	**10,012**	12,375
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**3,482**	3,995	**1,629**	1,970	**372**	374	**3,740**	4,152	**9,223**	10,491
Less than 660	**1,264**	1,482	**1,457**	1,857	**1,197**	1,477	**3,035**	3,551	**6,953**	8,367
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	**2,409**	2,641	**1,276**	1,443	**198**	186	**2,189**	2,281	**6,072**	6,551
Less than 660	**998**	1,113	**1,424**	1,688	**1,106**	1,357	**2,215**	2,499	**5,743**	6,657
Total unpaid principal balance	**$25,064**	$28,312	**$16,060**	$18,928	**$ 7,229**	$ 8,042	**$26,139**	$30,791	**$74,492**	$86,073
Geographic region (based on unpaid principal balance)										
California	**$15,091**	$17,012	**$ 9,121**	$10,891	**$ 1,661**	$ 1,971	**$13,565**	$16,130	**$39,438**	$46,004
New York	**1,179**	1,316	**1,018**	1,111	**709**	736	**1,548**	1,703	**4,454**	4,866
Florida	**2,307**	2,595	**1,265**	1,519	**812**	906	**3,201**	3,916	**7,585**	8,936
Illinois	**558**	627	**511**	562	**411**	438	**702**	760	**2,182**	2,387
Texas	**455**	525	**168**	194	**405**	435	**140**	155	**1,168**	1,309
New Jersey	**471**	540	**445**	486	**297**	316	**969**	1,064	**2,182**	2,406
Arizona	**468**	539	**254**	359	**126**	165	**362**	528	**1,210**	1,591
Washington	**1,368**	1,535	**388**	451	**160**	178	**649**	745	**2,565**	2,909
Ohio	**32**	38	**79**	91	**114**	122	**111**	131	**336**	382
Michigan	**81**	95	**239**	279	**187**	214	**268**	345	**775**	933
All other	**3,054**	3,490	**2,572**	2,985	**2,347**	2,561	**4,624**	5,314	**12,597**	14,350
Total unpaid principal balance	**$25,064**	$28,312	**$16,060**	$18,928	**$ 7,229**	$ 8,042	**$26,139**	$30,791	**$74,492**	$86,073

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.

(b) Management concluded as part of the Firm's regular assessment of the PCI loan pools that it was probable that higher expected credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions related to the property.

(d) Refreshed FICO scores represent each borrower's most recent credit score obtained by the Firm. The Firm obtains refreshed FICO scores at least quarterly.

(e) For home equity loans, prior-period amounts have been revised to conform with the current-period presentation.

Approximately 20% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following table represents delinquency statistics for PCI junior lien home equity loans based on unpaid principal balance as of December 31, 2011 and 2010.

	Delinquencies				
December 31, 2011 (in millions, except ratios)	30–89 days past due	90–149 days past due	150+ days past due	Total loans	Total 30+ day delinquency rate
HELOCs:[a]					
Within the revolving period[b]	**$ 500**	**$ 296**	**$ 543**	**$ 18,246**	**7.34%**
Within the required amortization period[c]	**16**	**11**	**5**	**400**	**8.00**
HELOANs	**53**	**29**	**44**	**1,327**	**9.50**
Total	**$ 569**	**$ 336**	**$ 592**	**$ 19,973**	**7.50%**

	Delinquencies				
December 31, 2010 (in millions, except ratios)	30–89 days past due	90–149 days past due	150+ days past due	Total loans	Total 30+ day delinquency rate
HELOCs:[a]					
Within the revolving period[b]	$ 601	$ 404	$ 428	$ 21,172	6.77%
Within the required amortization period[c]	1	–	1	37	5.41
HELOANs	79	49	46	1,573	11.06
Total	$ 681	$ 453	$ 475	$ 22,782	7.06%

(a) In general, HELOCs are open-ended, revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period.
(b) Substantially all undrawn HELOCs within the revolving period have been closed.
(c) Predominantly all of these loans have been modified to provide a more affordable payment to the borrower.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the years ended December 31, 2011, 2010 and 2009, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. This table excludes the cost to fund the PCI portfolios, and therefore does not represent net interest income expected to be earned on these portfolios.

	Total PCI		
Year ended December 31, (in millions, except ratios)	**2011**	2010	2009
Beginning balance	**$ 19,097**	$ 25,544	$ 32,619
Accretion into interest income	**(2,767)**	(3,232)	(4,363)
Changes in interest rates on variable-rate loans	**(573)**	(819)	(4,849)
Other changes in expected cash flows[a]	**3,315**	(2,396)	2,137
Balance at December 31	**$ 19,072**	$ 19,097	$ 25,544
Accretable yield percentage	**4.33%**	4.35%	5.14%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model and periodically updates model assumptions. For the year ended December 31, 2011, other changes in expected cash flows were largely driven by the impact of modifications, but also related to changes in prepayment assumptions. For the years ended December 31, 2010 and 2009, other changes in expected cash flows were principally driven by changes in prepayment assumptions, as well as reclassification to the nonaccretable difference. Changes to prepayment assumptions change the expected remaining life of the portfolio, which drives changes in expected future interest cash collections. Such changes do not have a significant impact on the accretable yield percentage.

The factors that most significantly affect estimates of gross cash flows expected to be collected, and accordingly the accretable yield balance, include: (i) changes in the benchmark interest rate indices for variable-rate products such as option ARM and home equity loans; and (ii) changes in prepayment assumptions.

Since the date of acquisition, the decrease in the accretable yield percentage has been primarily related to a decrease in interest rates on variable-rate loans and, to a lesser extent, extended loan liquidation periods. Certain events, such as extended loan liquidation periods, affect the timing of expected cash flows but not the amount of cash expected to be received (i.e., the accretable yield balance). Extended loan liquidation periods reduce the accretable yield percentage because the same accretable yield balance is recognized against a higher-than-expected loan balance over a longer-than-expected period of time.

Credit card loan portfolio

The Credit card portfolio segment includes credit card loans originated and purchased by the Firm, including those acquired in the Washington Mutual transaction.

Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30-days past due), as well as information on those borrowers that have been delinquent for a longer period of time (90-days past due). In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

The borrower's credit score is another general indicator of credit quality. Because the borrower's credit score tends to be a lagging indicator of credit quality, the Firm does not use credit scores as a primary indicator of credit quality. However, the distribution of such scores provides a general indicator of credit quality trends within the portfolio. Refreshed FICO score information for a statistically significant random sample of the credit card portfolio is indicated in the table below, as FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' refreshed FICO scores may change over time, depending on the performance of the cardholder and changes in credit score technology.

The table below sets forth information about the Firm's credit card loans.

As of or for the year ended December 31, (in millions, except ratios)	Chase, excluding Washington Mutual portfolio[b]		Washington Mutual portfolio[b]		Total credit card[b]	
	2011	2010	**2011**	2010	**2011**	2010
Net charge-offs	**$ 5,668**	$ 11,191	**$ 1,257**	$ 2,846	**$ 6,925**	$ 14,037
% of net charge-offs to retained loans	**4.91%**	8.73%	**10.49%**	17.73%	**5.44%**	9.73%
Loan delinquency						
Current and less than 30 days past due and still accruing	**$ 118,054**	$ 117,248	**$ 10,410**	$ 12,670	**$ 128,464**	$ 129,918
30–89 days past due and still accruing	**1,509**	2,092	**299**	459	**1,808**	2,551
90 or more days past due and still accruing	**1,558**	2,449	**344**	604	**1,902**	3,053
Nonaccrual loans	**1**	2	**—**	—	**1**	2
Total retained loans	**$ 121,122**	$ 121,791	**$ 11,053**	$ 13,733	**$ 132,175**	$ 135,524
Loan delinquency ratios						
% of 30+ days past due to total retained loans	**2.53%**	3.73%	**5.82%**	7.74%	**2.81%**	4.14%
% of 90+ days past due to total retained loans	**1.29**	2.01	**3.11**	4.40	**1.44**	2.25
Credit card loans by geographic region						
California	**$ 15,479**	$ 15,454	**$ 2,119**	$ 2,650	**$ 17,598**	$ 18,104
New York	**9,755**	9,540	**839**	1,032	**10,594**	10,572
Texas	**9,418**	9,217	**821**	1,006	**10,239**	10,223
Florida	**6,658**	6,724	**925**	1,165	**7,583**	7,889
Illinois	**7,108**	7,077	**440**	542	**7,548**	7,619
New Jersey	**5,208**	5,070	**396**	494	**5,604**	5,564
Ohio	**4,882**	5,035	**320**	401	**5,202**	5,436
Pennsylvania	**4,434**	4,521	**345**	424	**4,779**	4,945
Michigan	**3,777**	3,956	**217**	273	**3,994**	4,229
Virginia	**3,061**	3,020	**237**	295	**3,298**	3,315
Georgia	**2,737**	2,834	**315**	398	**3,052**	3,232
Washington	**2,081**	2,053	**359**	438	**2,440**	2,491
All other	**46,524**	47,290	**3,720**	4,615	**50,244**	51,905
Total retained loans	**$ 121,122**	$ 121,791	**$ 11,053**	$ 13,733	**$ 132,175**	$ 135,524
Percentage of portfolio based on carrying value with estimated refreshed FICO scores[a]						
Equal to or greater than 660	**83.3%**	80.6%	**62.6%**	56.4%	**81.4%**	77.9%
Less than 660	**16.7**	19.4	**37.4**	43.6	**18.6**	22.1

(a) Refreshed FICO scores are estimated based on a statistically significant random sample of credit card accounts in the credit card portfolio for the period shown. The Firm obtains refreshed FICO scores at least quarterly.

(b) Includes billed finance charges and fees net of an allowance for uncollectible amounts.

Credit card impaired loans and loan modifications

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

	Chase, excluding Washington Mutual portfolio		Washington Mutual portfolio		Total credit card	
December 31, (in millions)	**2011**	2010	**2011**	2010	**2011**	2010
Impaired loans with an allowance[a][b]						
Credit card loans with modified payment terms[c]	**$ 4,959**	$ 6,685	**$ 1,116**	$ 1,570	**$ 6,075**	$ 8,255
Modified credit card loans that have reverted to pre-modification payment terms[d]	**930**	1,439	**209**	311	**1,139**	1,750
Total impaired loans	**$ 5,889**	$ 8,124	**$ 1,325**	$ 1,881	**$ 7,214**	$ 10,005
Allowance for loan losses related to impaired loans	**$ 2,195**	$ 3,175	**$ 532**	$ 894	**$ 2,727**	$ 4,069

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
(b) There were no impaired loans without an allowance.
(c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.
(d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At December 31, 2011 and 2010, $762 million and $1.2 billion, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. Based on the Firm's historical experience a substantial portion of these loans is expected to be charged-off in accordance with the Firm's standard charge-off policy. The remaining $377 million and $590 million at December 31, 2011 and 2010, respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

Year ended December 31,	Average impaired loans			Interest income on impaired loans		
(in millions)	**2011**	2010	2009	**2011**	2010	2009
Chase, excluding Washington Mutual portfolio	**$ 6,914**	$ 8,747	$ 3,059	**$ 360**	$ 479	$ 181
Washington Mutual portfolio	**1,585**	1,983	991	**103**	126	70
Total credit card	**$ 8,499**	$ 10,730	$ 4,050	**$ 463**	$ 605	$ 251

Loan modifications

JPMorgan Chase may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. The Firm has short-term programs for borrowers who may be in need of temporary relief, and long-term programs for borrowers who are experiencing a more fundamental level of financial difficulties. Most of the credit card loans have been modified under long-term programs. Modifications under long-term programs involve placing the customer on a fixed payment plan, generally for 60 months. Modifications under all short- and long-term programs typically include reducing the interest rate on the credit card. Certain borrowers enrolled in a short-term modification program may be given the option to re-enroll in a long-term program. Substantially all modifications are considered to be TDRs.

If the cardholder does not comply with the modified payment terms, then the credit card loan agreement reverts back to its pre-modification payment terms. Assuming that the cardholder does not begin to perform in accordance with those payment terms, the loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In addition, if a borrower successfully completes a short-term modification program, then the loan reverts back to its pre-modification payment terms. However, in most cases, the Firm does not reinstate the borrower's line of credit.

The following tables provide information regarding the nature and extent of modifications of credit card loans for the period presented.

Year ended December 31, 2011 (in millions)	Chase, excluding Washington Mutual portfolio		Washington Mutual portfolio		Total credit card	
	Short-term programs	Long-term programs	Short-term programs	Long-term programs	Short-term programs	Long-term programs
New enrollments	$ 141	$ 2,075	$ 26	$ 448	$ 167	$ 2,523

Financial effects of modifications and redefaults

The following tables provide information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the period presented.

Year ended December 31, 2011 (in millions, except weighted-average data)	Chase, excluding Washington Mutual portfolio	Washington Mutual portfolio	Total credit card
Weighted-average interest rate of loans – before TDR	14.91%	21.38%	16.05%
Weighted-average interest rate of loans – after TDR	5.04	6.39	5.28
Loans that redefaulted within one year of modification[(a)]	$ 559	$ 128	$ 687

(a) Represents loans modified in TDRs that experienced a payment default in the period presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default is deemed to have occurred when the loans become two payments past due. At the time of default, a loan is removed from the modification program and reverts back to its pre-modification terms. Based on historical experience, a substantial portion of these loans are expected to be charged-off in accordance with the Firm's standard charge-off policy. Also based on historical experience, the estimated weighted-average ultimate default rate for modified credit card loans was 35.47% at December 31, 2011, and 36.45% at December 31, 2010.

Note 15 – Allowance for credit losses

JPMorgan Chase's allowance for loan losses covers the wholesale and consumer, including credit card, loan portfolios, and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. The allowance for loan losses includes an asset-specific component, a formula-based component and a component related to PCI loans, as described below. Management also estimates an allowance for wholesale and consumer lending-related commitments using methodologies similar to those used to estimate the allowance on the underlying loans. During 2011, the Firm did not make any significant changes to the methodologies or policies used to determine its allowance for credit losses; such policies are described in the following paragraphs.

The asset-specific component of the allowance relates to loans considered to be impaired, which includes loans that have been modified in TDRs as well as risk-rated loans that have been placed on nonaccrual status. To determine the asset-specific component of the allowance, larger loans are evaluated individually, while smaller loans are evaluated as pools using historical loss experience for the respective class of assets. Risk-rated loans (primarily wholesale loans) are segmented by risk rating, while scored loans (i.e., consumer loans) are pooled by product type.

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are reported as an adjustment to the provision for loan losses. In certain cases, the asset-specific allowance is determined using an observable market price, and the allowance is measured as the difference between the recorded investment in the loan and the loan's fair value. Impaired collateral-dependent loans are charged down to the fair value of collateral less costs to sell and therefore may not be subject to an asset-specific reserve as for other impaired loans. See Note 14 on pages 231–252 of this Annual Report for more information about charge-offs and collateral-dependent loans.

The asset-specific component of the allowance for impaired loans that have been modified in TDRs incorporates the effects of foregone interest, if any, in the present value calculation and also incorporates the effect of the modification on the loan's expected cash flows, which considers the potential for redefault. For wholesale loans modified in TDRs, expected losses incorporate redefaults based on management's expectation of the borrower's ability to repay under the modified terms. For residential real estate loans modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to date based on actual redefaulted modified loans. For credit card loans modified in TDRs, expected losses incorporate projected redefaults based on the Firm's

historical experience by type of modification program.

The formula-based component is based on a statistical calculation to provide for probable principal losses inherent in performing risk-rated loans and all consumer loans, except for any loans restructured in TDRs and PCI loans. See Note 14 on pages 231–252 of this Annual Report for more information on PCI loans.

For risk-rated loans, the statistical calculation is the product of an estimated probability of default ("PD") and an estimated loss given default ("LGD"). These factors are differentiated by risk rating and expected maturity. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm to that loan. PD estimates are based on observable external through-the-cycle data, using credit-rating agency default statistics. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle.

For scored loans, the statistical calculation is performed on pools of loans with similar risk characteristics (e.g., product type) and generally computed by applying expected loss factors to outstanding principal balances over an estimated loss emergence period. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends.

Loss factors are statistically derived and sensitive to changes in delinquency status, credit scores, collateral values and other risk factors. The Firm uses a number of different forecasting models to estimate both the PD and the loss severity, including delinquency roll rate models and credit loss severity models. In developing PD and loss severity assumptions, the Firm also considers known and anticipated changes in the economic environment, including changes in home prices, unemployment rates and other risk indicators.

A nationally recognized home price index measure is used to estimate both the PD and the loss severity on residential real estate loans at the metropolitan statistical areas ("MSA") level. Loss severity estimates are regularly validated by comparison to actual losses recognized on defaulted loans, market-specific real estate appraisals and property sales activity. The economic impact of potential modifications of residential real estate loans is not included in the statistical calculation because of the uncertainty regarding the type and results of such modifications.

Management applies judgment within an established framework to adjust the results of applying the statistical calculation described above. The determination of the appropriate adjustment is based on management's view of uncertainties that have occurred but that are not yet reflected in the loss factors and that relate to current macroeconomic and political conditions, the quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the portfolio. In addition, for the risk-rated portfolios, any adjustments made to the statistical calculation also consider concentrated and deteriorating industries. For the scored loan portfolios, adjustments to the statistical calculation are accomplished in part by analyzing the historical loss experience for each major product segment. Factors related to unemployment, home prices, borrower behavior and lien position, the estimated effects of the mortgage foreclosure-related settlement with federal and state officials and uncertainties regarding the ultimate success of loan modifications are incorporated into the calculation, as appropriate. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment.

Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing wholesale and consumer lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2011, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses that are inherent in the portfolio).

Allowance for credit losses and loans and lending-related commitments by impairment methodology

The table below summarizes information about the allowance for loan losses, loans by impairment methodology, the allowance for lending-related commitments and lending-related commitments by impairment methodology.

	2011			
Year ended December 31, (in millions)	Wholesale	Consumer, excluding credit card	Credit card	Total
Allowance for loan losses				
Beginning balance at January 1,	$ 4,761	$ 16,471	$ 11,034	$ 32,266
Cumulative effect of change in accounting principles[a]	–	–	–	–
Gross charge-offs	916	5,419	8,168	14,503
Gross recoveries	(476)	(547)	(1,243)	(2,266)
Net charge-offs	440	4,872	6,925	12,237
Provision for loan losses	17	4,670	2,925	7,612
Other	(22)	25	(35)	(32)
Ending balance at December 31,	$ 4,316	$ 16,294	$ 6,999	$ 27,609
Allowance for loan losses by impairment methodology				
Asset-specific[b]	$ 516	$ 828	$ 2,727	$ 4,071
Formula-based	3,800	9,755	4,272	17,827
PCI	–	5,711	–	5,711
Total allowance for loan losses	$ 4,316	$ 16,294	$ 6,999	$ 27,609
Loans by impairment methodology				
Asset-specific	$ 2,549	$ 9,892	$ 7,214	$ 19,655
Formula-based	275,825	232,989	124,961	633,775
PCI	21	65,546	–	65,567
Total retained loans	$ 278,395	$ 308,427	$ 132,175	$ 718,997
Impaired collateral-dependent loans				
Net charge-offs[c]	$ 128	$ 110	$ –	$ 238
Loans measured at fair value of collateral less cost to sell[c]	833	830 [d]	–	1,663
Allowance for lending-related commitments				
Beginning balance at January 1,	$ 711	$ 6	$ –	$ 717
Cumulative effect of change in accounting principles[a]	–	–	–	–
Provision for lending-related commitments	(40)	2	–	(38)
Other	(5)	(1)	–	(6)
Ending balance at December 31,	$ 666	$ 7	$ –	$ 673
Allowance for lending-related commitments by impairment methodology				
Asset-specific	$ 150	$ –	$ –	$ 150
Formula-based	516	7	–	523
Total allowance for lending-related commitments	$ 666	$ 7	$ –	$ 673
Lending-related commitments by impairment methodology				
Asset-specific	$ 865	$ –	$ –	$ 865
Formula-based	381,874	62,307	530,616	974,797
Total lending-related commitments	$ 382,739	$ 62,307	$ 530,616	$ 975,662

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, its Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related. As a result, $7.4 billion, $14 million and $127 million, respectively, of allowance for loan losses were recorded on-balance sheet with the consolidation of these entities. For further discussion, see Note 16 on pages 256–267 of this Annual Report.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) Prior periods have been revised to conform with the current presentation.

(d) Includes collateral-dependent residential mortgage loans that are charged off to the fair value of the underlying collateral less cost to sell. These loans are considered collateral-dependent under regulatory guidance because they involve modifications where an interest-only period is provided or a significant portion of principal is deferred.

(table continued from previous page)

2010				2009			
Wholesale	Consumer, excluding credit card	Credit card	Total	Wholesale	Consumer, excluding credit card	Credit card	Total
$ 7,145	$ 14,785	$ 9,672	$ 31,602	$ 6,545	$ 8,927	$ 7,692	$ 23,164
14	127	7,353	7,494	–	–	–	–
1,989	8,383	15,410	25,782	3,226	10,421	10,371	24,018
(262)	(474)	(1,373)	(2,109)	(94)	(222)	(737)	(1,053)
1,727	7,909	14,037	23,673	3,132	10,199	9,634	22,965
(673)	9,458	8,037	16,822	3,684	16,032	12,019	31,735
2	10	9	21	48	25	(405)	(332)
$ 4,761	$ 16,471	$ 11,034	$ 32,266	$ 7,145	$ 14,785	$ 9,672	$ 31,602
$ 1,574	$ 1,075	$ 4,069	$ 6,718	$ 2,046	$ 896	$ 3,117	$ 6,059
3,187	10,455	6,965	20,607	5,099	12,308	6,555	23,962
–	4,941	–	4,941	–	1,581	–	1,581
$ 4,761	$ 16,471	$ 11,034	$ 32,266	$ 7,145	$ 14,785	$ 9,672	$ 31,602
$ 5,486	$ 6,220	$ 10,005	$ 21,711	$ 6,960	$ 3,648	$ 6,245	$ 16,853
216,980	248,481	125,519	590,980	192,982	263,462	72,541	528,985
44	72,763	–	72,807	135	81,245	–	81,380
$ 222,510	$ 327,464	$ 135,524	$ 685,498	$ 200,077	$ 348,355	$ 78,786	$ 627,218
$ 636	$ 304	$ –	$ 940	$ 1,394	$ 166	$ –	$ 1,560
1,269	890 [(d)]	–	2,159	1,744	210 [(d)]	–	1,954
$ 927	$ 12	$ –	$ 939	$ 634	$ 25	$ –	$ 659
(18)	–	–	(18)	–	–	–	–
(177)	(6)	–	(183)	290	(10)	–	280
(21)	–	–	(21)	3	(3)	–	–
$ 711	$ 6	$ –	$ 717	$ 927	$ 12	$ –	$ 939
$ 180	$ –	$ –	$ 180	$ 297	$ –	$ –	$ 297
531	6	–	537	630	12	–	642
$ 711	$ 6	$ –	$ 717	$ 927	$ 12	$ –	$ 939
$ 1,005	$ –	$ –	$ 1,005	$ 1,577	$ –	$ –	$ 1,577
345,074	65,403	547,227	957,704	345,578	74,827	569,113	989,518
$ 346,079	$ 65,403	$ 547,227	$ 958,709	$ 347,155	$ 74,827	$ 569,113	$ 991,095

Note 16 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1 on pages 182–183 of this Annual Report.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the principal beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper conduit.

Line-of-Business	*Transaction Type*	*Activity*	*Annual Report page reference*
Card	Credit card securitization trusts	Securitization of both originated and purchased credit card receivables	257
	Other securitization trusts	Securitization of originated automobile and student loans	257–260
RFS	Mortgage securitization trusts	Securitization of originated and purchased residential mortgages	257–260
IB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, automobile and student loans	257–260
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	260
	Investor intermediation activities:		
	Municipal bond vehicles		260–261
	Credit-related note and asset swap vehicles		261–263

The Firm's other business segments are also involved with VIEs, but to a lesser extent, as follows:

- Asset Management: Sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For fund entities that qualify as VIEs, AM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Treasury & Securities Services: Provides services to a number of VIEs that are similar to those provided to non-VIEs. TSS earns market-based fees for the services it provides. TSS's interests are generally not considered to be potentially significant variable interests and/or TSS does not control these VIEs; therefore, TSS does not consolidate these VIEs.
- Commercial Banking: CB makes investments in and provides lending to community development entities that may meet the definition of a VIE. In addition, CB provides financing and lending related services to certain client-sponsored VIEs. In general, CB does not control the activities of these entities and does not consolidate these entities.
- Corporate/Private Equity: Corporate uses VIEs to issue guaranteed capital debt securities. See Note 21 on pages 273–275 of this Annual Report for further information. The Private Equity business, within Corporate/Private Equity, may be involved with entities that are deemed VIEs. However, the Firm's private equity business is subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs.

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 263 of this Note.

Significant Firm-sponsored variable interest entities

Credit card securitizations

The Card business securitizes originated and purchased credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.

The Firm is considered to be the primary beneficiary of these Firm-sponsored credit card securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

Effective January 1, 2010, the Firm consolidated the assets and liabilities of the Firm-sponsored credit card securitization trusts as a result of the implementation of VIE consolidation accounting guidance. See the table on page 264 of this Note for more information on the consolidation of credit card securitizations.

The underlying securitized credit card receivables and other assets are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's other creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (which generally ranges from 4% to 12%). As of December 31, 2011 and 2010, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $13.7 billion and $17.2 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 22% and 19% for the years ended December 31, 2011 and 2010, respectively. The Firm also retained $541 million and $1.1 billion of senior securities and $3.0 billion and $3.2 billion of subordinated securities in certain of its credit card securitization trusts as of December 31, 2011 and 2010, respectively. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

Firm-sponsored mortgage and other securitization trusts

The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans (including automobile and student loans) primarily in its IB and RFS businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

The following table presents the total unpaid principal amount of assets held in Firm-sponsored securitization entities in which the Firm has continuing involvement, including those that are consolidated or not consolidated by the Firm. Continuing involvement includes servicing the loans; holding senior interests or subordinated interests; recourse or guarantee arrangements; and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. See Securitization activity on pages 264–265 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[d][e][f]		
December 31, 2011[a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime[b]	**$ 129.5**	**$ 2.4**	**$ 101.0**	**$ 0.6**	**$ –**	**$ 0.6**
Subprime	**38.3**	**0.2**	**35.8**	**–**	**–**	**–**
Option ARMs	**31.1**	**–**	**31.1**	**–**	**–**	**–**
Commercial and other[c]	**139.3**	**–**	**93.3**	**1.7**	**2.0**	**3.7**
Student	**4.1**	**4.1**	**–**	**–**	**–**	**–**
Total	**$ 342.3**	**$ 6.7**	**$ 261.2**	**$ 2.3**	**$ 2.0**	**$ 4.3**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[d][e][f]		
December 31, 2010[a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime[b]	$ 153.1	$ 2.2	$ 143.8	$ 0.7	$ –	$ 0.7
Subprime	44.0	1.6	40.7	–	–	–
Option ARMs	36.1	0.3	35.8	–	–	–
Commercial and other[c]	153.4	–	106.2	2.0	0.9	2.9
Student	4.5	4.5	–	–	–	–
Total	$ 391.1	$ 8.6	$ 326.5	$ 2.7	$ 0.9	$ 3.6

(a) Excludes U.S. government agency securitizations. See page 265 of this Note for information on the Firm's loan sales to U.S. government agencies.
(b) Includes Alt-A loans.
(c) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties. The Firm generally does not retain a residual interest in its sponsored commercial mortgage securitization transactions.
(d) The table above excludes the following: retained servicing (see Note 17 on pages 267–271 of this Annual Report for a discussion of MSRs); securities retained from loans sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (See Note 6 on pages 202–210 of this Annual Report for further information on derivatives); senior and subordinated securities of $110 million and $8 million, respectively, at December 31, 2011, and $182 million and $18 million, respectively, at December 31, 2010, which the Firm purchased in connection with IB's secondary market-making activities.
(e) Includes interests held in re-securitization transactions.
(f) As of December 31, 2011 and 2010, 68% and 66%, respectively, of the Firm's retained securitization interests, which are carried at fair value, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of $136 million and $157 million of investment-grade and $427 million and $552 million of noninvestment-grade retained interests at December 31, 2011 and 2010, respectively. The retained interests in commercial and other securitizations trusts consisted of $3.4 billion and $2.6 billion of investment-grade and $283 million and $250 million of noninvestment-grade retained interests at December 31, 2011 and 2010, respectively.

Residential mortgage
The Firm securitizes residential mortgage loans originated by RFS, as well as residential mortgage loans purchased from third parties by either RFS or IB. RFS generally retains servicing for all residential mortgage loans originated or purchased by RFS, and for certain mortgage loans purchased by IB. For securitizations serviced by RFS, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. RFS may retain an interest upon securitization.

In addition, IB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, IB at times retains senior and/or subordinated interests (including residual interests) in residential mortgage securitizations upon securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by IB or held by RFS, when considered together with the servicing arrangements entered into by RFS, the Firm is deemed to be the primary beneficiary of certain securitization trusts. See the table on page 264 of this Note for more information on the consolidated residential mortgage securitizations.

The Firm does not consolidate a mortgage securitization (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust. At December 31, 2011 and 2010, the Firm did not consolidate the assets of certain Firm-sponsored residential mortgage securitization VIEs, in which the Firm had continuing involvement, primarily due to the fact that the Firm did not hold an interest in these trusts that could potentially be significant to the trusts. See the table on page 258 of this Note for further information on interests held in nonconsolidated securitizations.

Commercial mortgages and other consumer securitizations
IB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. IB may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). See the table on page 264 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on page 258 of this Note for further information on interests held in nonconsolidated securitizations.

The Firm also securitizes automobile and student loans. The Firm retains servicing responsibilities for all originated and certain purchased student and automobile loans and has the power to direct the activities of these VIEs through these servicing responsibilities. See the table on page 264 of this Note for more information on the consolidated student loan securitizations, and the table on page 258 of this Note for further information on interests held in nonconsolidated securitizations.

Re-securitizations
The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both agency (Fannie Mae, Freddie Mac and Ginnie Mae) and nonagency (private-label) sponsored VIEs, which may be backed by either residential or commercial mortgages. The Firm's consolidation analysis is largely dependent on the Firm's role and interest in the re-securitization trusts. During the years ended December 31, 2011, 2010 and 2009, the Firm transferred $24.9 billion, $33.9 billion and $19.1 billion, respectively, of securities to agency VIEs, and $381 million, $1.3 billion and $4.0 billion, respectively, of securities to private-label VIEs.

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients are seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its client(s), considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.

In more limited circumstances, the Firm creates a re-securitization trust independently and not in conjunction with specific clients. In these circumstances, the Firm is deemed to have the unilateral ability to direct the most significant activities of the re-securitization trust because of the decisions made during the establishment and design of the trust; therefore, the Firm consolidates the re-securitization VIE if the Firm holds an interest that could potentially be significant.

Additionally, the Firm may invest in beneficial interests of third-party securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it wasn't involved in the initial design of the trust, or the Firm is involved with an independent third party sponsor and demonstrates shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

As of December 31, 2011 and 2010, the Firm did not consolidate any agency re-securitizations. As of December 31, 2011 and 2010, the Firm consolidated $348 million and $477 million, respectively, of assets, and $139 million and $230 million, respectively, of liabilities of private-label re-securitizations. See the table on page 264 of this Note for more information on the consolidated re-securitization transactions.

As of December 31, 2011 and 2010, total assets of nonconsolidated Firm-sponsored private-label re-securitization entities were $3.3 billion and $3.6 billion, respectively. At December 31, 2011 and 2010, the Firm held approximately $3.6 billion and $3.5 billion, respectively, of interests in nonconsolidated agency re-securitization entities, and $14 million and $46 million, respectively, of senior and subordinated interests in nonconsolidated private-label re-securitization entities. See the table on page 258 of this Note for further information on interests held in nonconsolidated securitizations.

Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A., also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required varies by conduit and ranges between 5% and 10% of the commercial paper that is outstanding.

The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure to the liquidity and credit enhancement facilities provided to the conduits. See page 264 of this Note for further information on consolidated VIE assets and liabilities.

In the normal course of business, JPMorgan Chase trades and invests in commercial paper, including commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $11.3 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2011, which was eliminated in consolidation. The Firm did not hold commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2010. The Firm's investments were not driven by market illiquidity and the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm provides lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded portion of these commitments was $10.8 billion and $10.0 billion at December 31, 2011 and 2010 respectively, which are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 29 on pages 283-289 of this Annual Report.

VIEs associated with investor intermediation activities

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions with these VIEs, typically using derivatives, to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in on behalf of clients are municipal bond vehicles, credit-related note vehicles and asset swap vehicles.

Municipal bond vehicles

The Firm has created a series of trusts that provide short-term investors with qualifying tax-exempt investments, and that allow investors in tax-exempt securities to finance their investments at short-term tax-exempt rates. In a typical transaction, the vehicle purchases fixed-rate longer-term highly rated municipal bonds and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates and (2) inverse floating-rate residual interests ("residual interests"). The maturity of each of the puttable floating-rate certificates and the residual interests is equal to the life of the vehicle, while the maturity of the underlying municipal bonds is typically longer. Holders of the puttable floating-rate certificates may "put," or tender, the certificates if the remarketing agent cannot successfully remarket the floating-rate certificates to another investor. A liquidity facility conditionally obligates the liquidity provider to fund the purchase of the tendered floating-rate certificates. Upon termination of the vehicle, proceeds from the sale of the underlying municipal bonds would first repay any funded liquidity facility or outstanding floating-rate certificates and the remaining amount, if any, would be paid to the residual interests. If the proceeds from the sale of the underlying municipal bonds are not sufficient to repay the liquidity facility, in certain transactions the liquidity provider has recourse to the residual interest holders for reimbursement. Certain residual interest holders may be required to post collateral with the Firm, as liquidity

provider, to support such reimbursement obligations should the market value of the municipal bonds decline.

JPMorgan Chase Bank, N.A. often serves as the sole liquidity provider, and J.P. Morgan Securities LLC as remarketing agent, of the puttable floating-rate certificates. The liquidity provider's obligation to perform is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the Firm's exposure as liquidity provider is further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle or in certain transactions the reimbursement agreements with the residual interest holders. However, a downgrade of JPMorgan Chase Bank, N.A.'s short-term rating does not affect the Firm's obligation under the liquidity facility.

The long-term credit ratings of the puttable floating rate certificates are directly related to the credit ratings of the underlying municipal bonds, to the credit rating of any insurer of the underlying municipal bond, and the Firm's short-term credit rating as liquidity provider. A downgrade in any of these ratings would affect the rating of the puttable floating-rate certificates and could cause demand for these certificates by investors to decline or disappear.

As remarketing agent, the Firm may hold puttable floating-rate certificates of the municipal bond vehicles. At December 31, 2011 and 2010, respectively, the Firm held $637 million and $248 million of these certificates on its Consolidated Balance Sheets. The largest amount held by the Firm at any time during 2011 was $1.1 billion, or 7.6%, of the municipal bond vehicles' aggregate outstanding puttable floating-rate certificates. The Firm did not have and continues not to have any intent to protect any residual interest holder from potential losses on any of the municipal bond holdings.

The Firm consolidates municipal bond vehicles if it owns the residual interest. The residual interest generally allows the owner to make decisions that significantly impact the economic performance of the municipal bond vehicle, primarily by directing the sale of the municipal bonds owned by the vehicle. In addition, the residual interest owners have the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle. The Firm does not consolidate municipal bond vehicles if it does not own the residual interests, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31, 2011 and 2010, including the ratings profile of the VIEs' assets, was as follows.

December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities[a]	Excess/(deficit)[b]	Maximum exposure
Nonconsolidated municipal bond vehicles				
2011	**$ 13.5**	**$ 7.9**	**$ 5.6**	**$ 7.9**
2010	13.7	8.8	4.9	8.8

	Ratings profile of VIE assets[c]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions, except where otherwise noted)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB+ to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
2011	**$ 1.5**	**$ 11.2**	**$ 0.7**	**$ –**	**$ 0.1**	**$ 13.5**	**6.6**
2010	1.9	11.2	0.6	–	–	13.7	15.5

(a) The Firm may serve as credit enhancement provider to municipal bond vehicles in which it serves as liquidity provider. The Firm provided insurance on underlying municipal bonds, in the form of letters of credit, of $10 million at December 31, 2010. The Firm did not provide insurance on underlying municipal bonds at December 31, 2011.

(b) Represents the excess/(deficit) of the fair values of municipal bond assets available to repay the liquidity facilities, if drawn.

(c) The ratings scale is based on the Firm's internal risk ratings and is presented on an S&P-equivalent basis.

Credit-related note and asset swap vehicles

Credit-related note vehicles

The Firm structures transactions with credit-related note vehicles in which the VIE purchases highly rated assets, such as asset-backed securities, and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit which the VIE otherwise does not hold. The VIE then issues credit-linked notes ("CLNs") with maturities predominantly ranging from one to 10 years in order to transfer the risk of the referenced credit to the VIE's investors. Clients and investors often prefer using a CLN vehicle since the CLNs issued by the VIE generally carry a higher credit rating than such notes would if issued directly by JPMorgan Chase. As a derivative counterparty in a credit-related note structure, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. The collateral purchased by such VIEs is largely investment-grade, with a significant amount being rated "AAA." The Firm divides its credit-related note structures broadly into two types: static and managed.

In a static credit-related note structure, the CLNs and associated credit derivative contract either reference a single credit (e.g., a multi-national corporation), or all or part of a fixed portfolio of credits. In a managed credit-related note structure, the CLNs and associated credit derivative generally reference all or part of an actively managed portfolio of credits. An agreement exists between a portfolio manager and the VIE that gives the portfolio manager the ability to substitute each referenced credit in the portfolio for an alternative credit. The Firm does not act as portfolio manager; its involvement with the VIE is generally limited to being a derivative counterparty. As a net buyer of credit protection, in both static and managed credit-related note structures, the Firm pays a premium to the VIE in return for the receipt of a payment (up to the notional of the derivative) if one or more of the credits within the portfolio defaults, or if the losses resulting from the default of reference credits exceed specified levels. The Firm does not provide any additional contractual financial support to the VIE. In addition, the Firm has not historically provided any financial support to the CLN vehicles over and above its contractual obligations. Since each CLN is established to the specifications of the investors, the investors have the power over the activities of that VIE that most significantly affect the performance of the CLN. Accordingly, the Firm does not generally consolidate these credit-related note entities. Furthermore, the Firm does not have a variable interest that could potentially be significant. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Asset swap vehicles

The Firm structures and executes transactions with asset swap vehicles on behalf of investors. In such transactions, the VIE purchases a specific asset or assets and then enters into a derivative with the Firm in order to tailor the interest rate or foreign exchange currency risk, or both, according to investors' requirements. Generally, the assets are held by the VIE to maturity, and the tenor of the derivatives would match the maturity of the assets. Investors typically invest in the notes issued by such VIEs in order to obtain exposure to the credit risk of the specific assets, as well as exposure to foreign exchange and interest rate risk that is tailored to their specific needs. The derivative transaction between the Firm and the VIE may include currency swaps to hedge assets held by the VIE denominated in foreign currency into the investors' local currency or interest rate swaps to hedge the interest rate risk of assets held by the VIE; to add additional interest rate exposure into the VIE in order to increase the return on the issued notes; or to convert an interest-bearing asset into a zero-coupon bond.

The Firm's exposure to asset swap vehicles is generally limited to its rights and obligations under the interest rate and/or foreign exchange derivative contracts. The Firm historically has not provided any financial support to the asset swap vehicles over and above its contractual obligations. The Firm does not generally consolidate these asset swap vehicles, since the Firm does not have the power to direct the significant activities of these entities and does not have a variable interest that could potentially be significant. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Exposure to nonconsolidated credit-related note and asset swap VIEs at December 31, 2011 and 2010, was as follows.

December 31, 2011 (in billions)	Net derivative receivables	Total exposure[a]	Par value of collateral held by VIEs[b]
Credit-related notes			
Static structure	**$ 1.0**	**$ 1.0**	**$ 9.1**
Managed structure	**2.7**	**2.7**	**7.7**
Total credit-related notes	**3.7**	**3.7**	**16.8**
Asset swaps	**0.6**	**0.6**	**8.6**
Total	**$ 4.3**	**$ 4.3**	**$ 25.4**

December 31, 2010 (in billions)	Net derivative receivables	Total exposure[a]	Par value of collateral held by VIEs[b]
Credit-related notes			
Static structure	$ 1.0	$ 1.0	$ 9.5
Managed structure	2.8	2.8	10.7
Total credit-related notes	3.8	3.8	20.2
Asset swaps	0.3	0.3	7.6
Total	$ 4.1	$ 4.1	$ 27.8

(a) On-balance sheet exposure that includes net derivative receivables and trading assets - debt and equity instruments. At both December 31, 2011 and 2010, the amount of trading assets issued by nonconsolidated credit-related note and asset swap vehicles that were held by the Firm were immaterial.

(b) The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies on the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts.

The Firm consolidated credit-related note vehicles with collateral fair values of $231 million and $394 million, at December 31, 2011 and 2010, respectively. The Firm consolidated these vehicles, because in its role as secondary market-maker, it held positions in these entities that provided the Firm with control of certain vehicles. The Firm did not consolidate any asset swap vehicles at December 31, 2011 and 2010.

VIEs sponsored by third parties

Investment in a third-party credit card securitization trust

The Firm holds two interests in a third-party-sponsored VIE, which is a credit card securitization trust that owns credit card receivables issued by a national retailer. The Firm is not the primary beneficiary of the trust as the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance. The Firm's interests in the VIE include investments classified as AFS securities that had fair values of $2.9 billion and $3.1 billion at December 31, 2011 and 2010, respectively, and other interests which are classified as loans and have a fair value of approximately $1.0 billion and $1.0 billion at December 31, 2011 and 2010, respectively. For more information on AFS securities and loans, see Notes 12 and 14 on pages 225–230 and 231–252, respectively, of this Annual Report.

VIE used in FRBNY transaction

In conjunction with the Bear Stearns merger, in June 2008, the Federal Reserve Bank of New York ("FRBNY") took control, through an LLC formed for this purpose, of a portfolio of $30.0 billion in assets, based on the value of the portfolio as of March 14, 2008. The assets of the LLC were funded by a $28.85 billion term loan from the FRBNY and a $1.15 billion subordinated loan from JPMorgan Chase. The JPMorgan Chase loan is subordinated to the FRBNY loan and will bear the first $1.15 billion of any losses of the portfolio. Any remaining assets in the portfolio after repayment of the FRBNY loan, repayment of the JPMorgan Chase loan and the expense of the LLC will be for the account of the FRBNY. The extent to which the FRBNY and JPMorgan Chase loans will be repaid will depend on the value of the assets in the portfolio and the liquidation strategy directed by the FRBNY. The Firm does not consolidate the LLC, as it does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance.

Other VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, trustee or custodian. These transactions are conducted at arm's-length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm records and reports these positions on its Consolidated Balance Sheets similarly to the way it would record and report positions in respect of any other third-party transaction.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2011 and 2010.

	Assets				Liabilities		
December 31, 2011 (in billions)	Trading assets – debt and equity instruments	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	**$ –**	**$ 50.7**	**$ 0.8**	**$ 51.5**	**$ 32.5**	**$ –**	**$ 32.5**
Firm-administered multi-seller conduits	**–**	**29.7**	**0.2**	**29.9**	**18.7**	**–**	**18.7**
Mortgage securitization entities[a]	**1.4**	**2.3**	**–**	**3.7**	**2.3**	**1.3**	**3.6**
Other[b]	**10.7**	**4.1**	**1.6**	**16.4**	**12.5**	**0.2**	**12.7**
Total	**$ 12.1**	**$ 86.8**	**$ 2.6**	**$ 101.5**	**$ 66.0**	**$ 1.5**	**$ 67.5**

	Assets				Liabilities		
December 31, 2010 (in billions)	Trading assets – debt and equity instruments	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	$ –	$ 67.2	$ 1.3	$ 68.5	$ 44.3	$ –	$ 44.3
Firm-administered multi-seller conduits	–	21.1	0.6	21.7	21.6	0.1	21.7
Mortgage securitization entities[a]	1.8	2.9	–	4.7	2.4	1.6	4.0
Other[b]	8.0	4.4	1.6	14.0	9.3	0.3	9.6
Total	$ 9.8	$ 95.6	$ 3.5	$ 108.9	$ 77.6	$ 2.0	$ 79.6

(a) Includes residential and commercial mortgage securitizations as well as re-securitizations.
(b) Primarily comprises student loan securitization entities and municipal bond entities. The Firm consolidated $4.1 billion and $4.5 billion of student loan securitization entities as of December 31, 2011 and 2010, respectively, and $9.3 billion and $4.6 billion of municipal bond vehicles as of December 31, 2011 and 2010, respectively.
(c) Includes assets classified as cash, derivative receivables, AFS securities, and other assets within the Consolidated Balance Sheets.
(d) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.
(e) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated Balance Sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $39.7 billion and $52.6 billion at December 31, 2011 and 2010, respectively. The maturities of the long-term beneficial interests as of December 31, 2011, were as follows: $13.5 billion under one year, $17.8 billion between one and five years, and $8.4 billion over five years, all respectively.
(f) Includes liabilities classified as accounts payable and other liabilities in the Consolidated Balance Sheets.

Supplemental information on loan securitizations

The Firm securitizes and sells a variety of loans, including residential mortgage, credit card, automobile, student and commercial (primarily related to real estate) loans, as well as debt securities. The primary purposes of these securitization transactions are to satisfy investor demand and to generate liquidity for the Firm.

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when the accounting criteria for a sale are met. Those criteria are: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

Securitization activity

The following tables provide information related to the Firm's securitization activities for the years ended December 31, 2011, 2010 and 2009, related to assets held in JPMorgan Chase-sponsored securitization entities that were not consolidated by the Firm, and sale accounting was achieved based on the accounting rules in effect at the time of the securitization.

For the year ended December 31, 2009, there were no mortgage loans that were securitized, except for commercial and other, and there were no cash flows from the Firm to the SPEs related to recourse arrangements.

Effective January 1, 2010, all of the Firm-sponsored credit card securitization trusts and predominantly all of the Firm-sponsored student loan and auto securitization trusts were consolidated as a result of the accounting guidance related to VIEs and, accordingly, are not included in the securitization activity tables below for the years ended December 31, 2011 and 2010.

Prior to January 1, 2010, the Firm did not consolidate its credit card, residential and commercial mortgage, automobile, and certain student loan securitizations based on the accounting guidance in effect at that time. The Firm recorded only its retained interests in the entities on its Consolidated Balance Sheets.

	2011		2010		2009		
Year ended December 31, (in millions, except rates)	Residential mortgage[d][e]	Commercial and other[f]	Residential mortgage[d][e]	Commercial and other[f]	Residential mortgage[d][e]	Commercial and other[f]	Credit card
Principal securitized	**$ —**	**$ 5,961**	$ 35	$ 2,237	$ —	$ 500	$ 26,538
Pretax gains	**—**	**—** [g]	—	— [g]	—	—	[g] 22
All cash flows during the period:							
Proceeds from new securitizations[a]	**$ —**	**$ 6,142**	$ 36	$ 2,369	$ —	$ 542	$ 26,538
Servicing fees collected	**755**	**4**	968	4	1,111	18	1,251
Other cash flows received	**—**	**—**	—	—	11	—	5,000
Proceeds from collections reinvested in revolving securitizations	**—**	**—**	—	—	—	—	161,428
Purchases of previously transferred financial assets (or the underlying collateral)[b]	**772**	**—**	321	—	165	249	—
Cash flows received on the interests that continue to be held by the Firm	**235**	**178**	319	143	538	120	261
Key assumptions used to measure retained interests originated during the year (rates per annum)							
Prepayment rate[c]		**—%**		100%		100%	16.7%
		CPY		CPY		CPY	PPR
Weighted-average life (in years)		**1.7**		7.1		9.0	0.5
Expected credit losses		**—%**		—%		—%	8.9%
Discount rate		**3.5**		7.7		10.7	16.0

(a) Proceeds from residential and commercial mortgage securitizations are received in the form of securities. During 2011, $4.0 billion and $2.1 billion of commercial mortgage securitizations were classified in levels 2 and 3 of the fair value hierarchy, respectively. During 2010, $2.2 billion and $172 million of residential and commercial mortgage securitizations were classified in levels 2 and 3 of the fair value hierarchy, respectively. During 2009, $380 million and $162 million of residential and commercial mortgage securitizations were classified in levels 2 and 3 of the fair value hierarchy, respectively; and $12.8 billion of proceeds from credit card securitizations were received as securities and were classified in level 2 of the fair value hierarchy.

(b) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities - for example, loan repurchases due to representation and warranties and servicer clean-up calls.

(c) CPY: constant prepayment yield; PPR: principal payment rate.

(d) Includes prime, Alt-A, subprime, option ARMS, and re-securitizations. Excludes sales for which the Firm did not securitize the loan (including loans sold to Ginnie Mae, Fannie Mae and Freddie Mac).

(e) There were no retained interests held in the residential mortgage securitization completed in 2010. There were no residential mortgage securitizations in 2011 and 2009.

(f) Includes commercial, student loan and automobile loan securitizations.

(g) The Firm elected the fair value option for loans pending securitization. The carrying value of these loans accounted for at fair value approximated the proceeds received from securitization.

Loans sold to agencies and other third-party-sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans on a nonrecourse basis, predominantly to Ginnie Mae, Fannie Mae and Freddie Mac (the "Agencies"). These loans are sold primarily for the purpose of securitization by the Agencies, which also provide credit enhancement of the loans through certain guarantee provisions. The Firm does not consolidate these securitization vehicles as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. See Note 29 on pages 283–289 of this Annual Report for additional information about the Firm's loans sales- and securitization-related indemnifications.

The following table summarizes the activities related to loans sold to U.S. government-sponsored agencies and third-party-sponsored securitization entities.

Year ended December 31, (in millions)	2011	2010	2009
Carrying value of loans sold[a][b]	**$ 150,632**	$ 156,615	$ 154,571
Proceeds received from loan sales as cash	**2,864**	3,887	1,702
Proceeds from loans sales as securities[c]	**145,340**	149,786	149,343
Total proceeds received from loan sales	**$ 148,204**	$ 153,673	$ 151,045
Gains on loan sales	**133**	212	89

(a) Predominantly to U.S. government agencies.

(b) MSRs were excluded from the above table. See Note 17 on pages 267–271 of this Annual Report for further information on originated MSRs.
(c) Predominantly includes securities from U.S. government agencies that are generally sold shortly after receipt.

Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 29 on pages 283–289 of this Annual Report, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae, as well as for other U.S. government agencies in certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated Balance Sheets as a loan with a corresponding liability. As of December 31, 2011 and 2010, the Firm had recorded on its Consolidated Balance Sheets $15.7 billion and $13.0 billion, respectively, of loans that either had been repurchased or for which the Firm had an option to repurchase. Predominately all of the amounts presented above relate to loans that have been repurchased from Ginnie Mae. Additionally, real estate owned resulting from voluntary repurchases of loans was $1.0 billion and $1.9 billion as of December 31, 2011 and 2010, respectively. Substantially all of these loans and real estate owned are insured or guaranteed by U.S. government agencies, and where applicable, reimbursement is proceeding normally. For additional information, refer to Note 14 on pages 231–252 of this Annual Report.

JPMorgan Chase's interest in securitized assets held at fair value

The following table outlines the key economic assumptions used to determine the fair value, as of December 31, 2011 and 2010, of certain of the Firm's retained interests in nonconsolidated VIEs (other than MSRs), that are valued using modeling techniques. The table also outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in assumptions used to determine fair value. For a discussion of MSRs, see Note 17 on pages 267–271 of this Annual Report.

	Commercial and other	
December 31, (in millions, except rates and where otherwise noted)	**2011**	2010
JPMorgan Chase interests in securitized assets[a][b]	**$ 3,663**	$ 2,906
Weighted-average life (in years)	**3.0**	3.3
Weighted-average constant prepayment rate[c]	**—%**	—%
	CPR	CPR
Impact of 10% adverse change	**$ —**	$ —
Impact of 20% adverse change	**—**	—
Weighted-average loss assumption	**0.2%**	2.1%
Impact of 10% adverse change	**$ (61)**	$ (76)
Impact of 20% adverse change	**(119)**	(151)
Weighted-average discount rate	**28.2%**	16.4%
Impact of 10% adverse change	**$ (75)**	$ (69)
Impact of 20% adverse change	**(136)**	(134)

(a) The Firm's interests in prime mortgage securitizations were $555 million and $708 million, as of December 31, 2011 and 2010, respectively. These include retained interests in Alt-A loans and re-securitization transactions. The Firm's interests in subprime mortgage securitizations were $31 million and $14 million, as of December 31, 2011 and 2010, respectively. Additionally, the Firm had interests in option ARM mortgage securitizations of $23 million and $29 million at December 31, 2011 and 2010, respectively.
(b) Includes certain investments acquired in the secondary market but predominantly held for investment purposes.
(c) CPR: constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based on a 10% or 20% variation in assumptions generally cannot be extrapolated easily, because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in the table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might counteract or magnify the sensitivities. The above sensitivities also do not reflect risk management practices the Firm may undertake to mitigate such risks.

Loan delinquencies and liquidation losses

The table below includes information about delinquencies, liquidation losses and components of nonconsolidated securitized financial assets in which the Firm has continuing involvement as of December 31, 2011 and 2010.

	Securitized assets		90 days past due		Liquidation losses	
As of or for the year ended December 31, (in millions)	**2011**	2010	**2011**	2010	**2011**	2010
Securitized loans[a]						
Residential mortgage:						
Prime mortgage[b]	**$ 101,004**	$ 143,764	**$ 24,285**	$ 33,093	**$ 5,650**	$ 6,257
Subprime mortgage	**35,755**	40,721	**14,293**	15,456	**3,086**	3,598
Option ARMs	**31,075**	35,786	**9,999**	10,788	**1,907**	2,305
Commercial and other	**93,336**	106,245	**4,836**	5,791	**1,101**	618
Total loans securitized[c]	**$ 261,170**	$ 326,516	**$ 53,413**	$ 65,128	**$ 11,744**	$ 12,778

(a) Total assets held in securitization-related SPEs were $342.3 billion and $391.1 billion, respectively, at December 31, 2011 and 2010. The $261.2 billion and $326.5 billion, respectively, of loans securitized at December 31, 2011 and 2010, excludes: $74.4 billion and $56.0 billion, respectively, of securitized loans in which the Firm has no continuing involvement, and $6.7 billion and $8.6 billion, respectively, of loan securitizations consolidated on the Firm's Consolidated Balance Sheets at December 31, 2011 and 2010.

(b) Includes Alt-A loans.

(c) Includes securitized loans that were previously recorded at fair value and classified as trading assets.

Implementation of change in consolidation accounting guidance for VIEs

On January 1, 2010, the Firm implemented consolidation accounting guidance related to VIEs. The following table summarizes the incremental impact at adoption of the new guidance.

(in millions, except ratios)	U.S. GAAP assets	U.S. GAAP liabilities	Stockholders' equity	Tier 1 capital
As of December 31, 2009	$ 2,031,989	$ 1,866,624	$ 165,365	11.10%
Impact of new accounting guidance for consolidation of VIEs				
Credit card	60,901	65,353	(4,452)	(0.30)
Multi-seller conduits	17,724	17,744	(20)	–
Mortgage & other	9,059	9,107	(48)	(0.04)
Total impact of new guidance	87,684	92,204	(4,520)	(0.34)
Beginning balance as of January 1, 2010	$ 2,119,673	$ 1,958,828	$ 160,845	10.76%

Note 17 – Goodwill and other intangible assets

Goodwill and other intangible assets consist of the following.

December 31, (in millions)	**2011**	2010	2009
Goodwill	**$48,188**	$48,854	$48,357
Mortgage servicing rights	**7,223**	13,649	15,531
Other intangible assets:			
Purchased credit card relationships	**$ 602**	$ 897	$ 1,246
Other credit card-related intangibles	**488**	593	691
Core deposit intangibles	**594**	879	1,207
Other intangibles	**1,523**	1,670	1,477
Total other intangible assets	**$ 3,207**	$ 4,039	$ 4,621

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	**2011**	2010	2009
Investment Bank	**$ 5,276**	$ 5,278	$ 4,959
Retail Financial Services	**16,489**	16,496	16,514
Card Services & Auto	**14,507**	14,522	14,451
Commercial Banking	**2,864**	2,866	2,868
Treasury & Securities Services	**1,668**	1,680	1,667
Asset Management	**7,007**	7,635	7,521
Corporate/Private Equity	**377**	377	377
Total goodwill	**$ 48,188**	$ 48,854	$ 48,357

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	**2011**	2010	2009
Balance at beginning of period[a]	**$ 48,854**	$ 48,357	$ 48,027
Changes during the period from:			
Business combinations	**97**	556	271
Dispositions	**(685)**	(19)	–
Other[b]	**(78)**	(40)	59
Balance at December 31,[a]	**$ 48,188**	$ 48,854	$ 48,357

(a) Reflects gross goodwill balances as the Firm has not recognized any impairment losses to date.
(b) Includes foreign currency translation adjustments and other tax-related adjustments.

The net reduction in goodwill was predominantly due to AM's sale of its investment in an asset manager.

Impairment testing
Goodwill was not impaired at December 31, 2011 or 2010, nor was any goodwill written off due to impairment during 2011, 2010 or 2009.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. The models project cash flows for the forecast period and use the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' earnings forecasts, which include the estimated effects of regulatory and legislative changes (including, but not limited to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), the CARD Act, and limitations on non-sufficient funds and overdraft fees), and which are reviewed with the Operating Committee of the Firm. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firms' overall estimated cost of equity to ensure reasonableness.

The valuations derived from the discounted cash flow models are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to assess the general reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that naturally exist between the Firm's businesses and competitor institutions. Management also takes into consideration a comparison between the aggregate fair value of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (a) a control premium that would exist in a market transaction, (b) factors related to the level of execution risk that would exist at the firmwide level that do not exist at the reporting unit level and (c) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

While no impairment of goodwill was recognized, the Firm's consumer lending businesses in RFS and Card remain at an elevated risk of goodwill impairment due to their exposure to U.S. consumer credit risk and the effects of economic, regulatory and legislative changes. The valuation of these businesses is particularly dependent upon economic conditions (including new unemployment claims and home prices), regulatory and legislative changes (for example, those related to residential mortgage servicing, foreclosure and loss mitigation activities, and those that may affect consumer credit card use), and the amount of equity capital required. In addition, the earnings or estimated cost of equity of the Firm's capital markets businesses could also be affected by regulatory or legislative changes. The assumptions used in the discounted cash flow valuation models were determined using management's best estimates. The cost of equity reflected the related risks and uncertainties, and was evaluated in comparison to relevant market peers. Deterioration in these assumptions could cause the estimated fair values of these reporting units and their associated goodwill to decline, which may result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights
Mortgage servicing rights represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk

management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, late charges, other ancillary revenue and costs to service, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that comprise the MSR asset. Conversely, securities (e.g., mortgage-backed securities), principal-only certificates and certain derivatives (i.e., those for which the Firm receives fixed-rate interest payments) increase in value when interest rates decline. JPMorgan Chase uses combinations of derivatives and securities to manage changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2011, 2010 and 2009.

Year ended December 31, (in millions, except where otherwise noted)	**2011**	2010	2009
Fair value at beginning of period	**$ 13,649**	$ 15,531	$ 9,403
MSR activity			
Originations of MSRs	**2,570**	3,153	3,615
Purchase of MSRs	**33**	26	2
Disposition of MSRs	**—**	(407)	(10)
Changes due to modeled amortization	**(1,910)**	(2,386)	(3,286)
Net additions and amortization	**693**	386	321
Changes due to market interest rates	**(5,392)**	(2,224)	5,844
Other changes in valuation due to inputs and assumptions[a]	**(1,727)**	(44)	(37)
Total change in fair value of MSRs[b]	**(7,119)**	(2,268)	5,807
Fair value at December 31[c]	**$ 7,223**	$ 13,649	$ 15,531
Change in unrealized gains/(losses) included in income related to MSRs held at December 31	**$ (7,119)**	$ (2,268)	$ 5,807
Contractual service fees, late fees and other ancillary fees included in income	**$ 3,977**	$ 4,484	$ 4,818
Third-party mortgage loans serviced at December 31 (in billions)	**$ 910**	$ 976	$ 1,091
Servicer advances at December 31 (in billions)[d]	**$ 11.1**	$ 9.9	$ 7.7

(a) Represents the aggregate impact of changes in model inputs and assumptions such as costs to service, home prices, mortgage spreads, ancillary income, and assumptions used to derive prepayment speeds, as well as changes to the valuation models themselves.

(b) Includes changes related to commercial real estate of $(9) million, $(1) million and $(4) million for the years ended December 31, 2011, 2010 and 2009, respectively.

(c) Includes $31 million, $40 million and $41 million related to commercial real estate at December 31, 2011, 2010 and 2009, respectively.

(d) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest to a trust, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these advances is minimal because reimbursement of the advances is senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment if the collateral is insufficient to cover the advance.

During the year ended December 31, 2011, the fair value of the MSR decreased by $6.4 billion. This decrease was predominately due to a decline in market interest rates, which resulted in a loss of $5.4 billion. These losses were offset by gains of $5.6 billion on derivatives used to hedge the MSR asset; these derivatives are recognized on the Consolidated Balance Sheets separately from the MSR asset. Also contributing to the decline in fair value of the MSR asset was a $1.7 billion decrease related to revised cost to service and ancillary income assumptions incorporated in the MSR valuation. The increased cost to service assumptions reflect the estimated impact of higher servicing costs to enhance servicing processes, particularly loan modification and foreclosure procedures, including costs to comply with Consent Orders entered into with banking regulators. The increase in the cost to service assumption contemplates significant and prolonged increases in staffing levels in the core and default servicing functions. The decreased ancillary income assumption is similarly related to a reassessment of business practices in consideration of the Consent Orders and the existing industry-wide regulatory environment, which is broadly affecting market participants.

Also in the fourth quarter of 2011, the Firm revised its OAS assumption and updated its proprietary prepayment model; these changes had generally offsetting effects. The Firm's OAS assumption is based upon capital and return requirements that the Firm believes a market participant would consider, taking into account factors such as the pending Basel III capital rules. Consequently, the OAS assumption for the Firm's portfolio increased by approximately 400 basis points and decreased the fair value of the MSR asset by approximately $1.2 billion.

Since 2009, the Firm has continued to refine its proprietary prepayment model based on a number of market-related factors, including a downward trend in home prices, a general tightening of credit underwriting standards and the associated impact on refinancing activity. In the fourth quarter of 2011, the Firm further enhanced its proprietary prepayment model to incorporate: (i) the impact of the Home Affordable Refinance Program ("HARP") 2.0), and (ii) assumptions that will limit modeled refinancings due to the combined influences of relatively strict underwriting standards and reduced levels of expected home price appreciation. In the aggregate, these refinements increased the fair value of the MSR asset by approximately $1.2 billion.

The decrease in the fair value of the MSR results in a lower asset value that will amortize in future periods against contractual and ancillary fee income received in future periods. While there is expected to be higher levels of noninterest expense associated with higher servicing costs in those future periods, there will also be less MSR amortization, which will have the effect of increasing mortgage fees and related income. The amortization of the MSR is reflected in the tables above under "Changes due to modeled amortization."

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2011, 2010 and 2009.

Year ended December 31, (in millions)	2011	2010	2009
RFS mortgage fees and related income			
Net production revenue:			
Production revenue	**$3,395**	$ 3,440	$2,115
Repurchase losses	**(1,347)**	(2,912)	(1,612)
Net production revenue	**2,048**	528	503
Net mortgage servicing revenue			
Operating revenue:			
Loan servicing revenue	**4,134**	4,575	4,942
Changes in MSR asset fair value due to modeled amortization	**(1,904)**	(2,384)	(3,279)
Total operating revenue	**2,230**	2,191	1,663
Risk management:			
Changes in MSR asset fair value due to market interest rates	**(5,390)**	(2,224)	5,804
Other changes in MSR asset fair value due to inputs or assumptions in model[(a)]	**(1,727)**	(44)	–
Derivative valuation adjustments and other	**5,553**	3,404	(4,176)
Total risk management	**(1,564)**	1,136	1,628
Total RFS net mortgage servicing revenue	**666**	3,327	3,291
All other	**7**	15	(116)
Mortgage fees and related income	**$2,721**	$ 3,870	$3,678

(a) Represents the aggregate impact of changes in model inputs and assumptions such as costs to service, home prices, mortgage spreads, ancillary income, and assumptions used to derive prepayment speeds, as well as changes to the valuation models themselves.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2011 and 2010; and it outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

Year ended December 31, (in millions, except rates)	2011	2010
Weighted-average prepayment speed assumption ("CPR")	**18.07%**	11.29%
Impact on fair value of 10% adverse change	**$ (585)**	$ (809)
Impact on fair value of 20% adverse change	**(1,118)**	(1,568)
Weighted-average option adjusted spread	**7.83%**	3.94%
Impact on fair value of 100 basis points adverse change	**$ (269)**	$ (578)
Impact on fair value of 200 basis points adverse change	**(518)**	(1,109)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly inter-related and may not be linear. In this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

Other intangible assets

Other intangible assets are recorded at their fair value upon completion of a business combination or certain other transactions, and generally represent the value of customer relationships or arrangements. Subsequently, the Firm's intangible assets with finite lives, including core deposit intangibles, purchased credit card relationships, and other intangible assets, are amortized over their useful lives in a manner that best reflects the economic benefits of the intangible asset. The $832 million decrease in other intangible assets during 2011, was due to $848 million in amortization.

The components of credit card relationships, core deposits and other intangible assets were as follows.

	December 31, 2011			December 31, 2010		
December 31, (in millions)	Gross amount[a]	Accumulated amortization[a]	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	**$ 3,826**	**$ 3,224**	**$ 602**	$ 5,789	$ 4,892	$ 897
Other credit card-related intangibles	**844**	**356**	**488**	907	314	593
Core deposit intangibles	**4,133**	**3,539**	**594**	4,280	3,401	879
Other intangibles	**2,467**	**944**	**1,523**	2,515	845	1,670

(a) The decrease in the gross amount and accumulated amortization from December 31, 2010, was due to the removal of fully amortized assets.

In addition to the finite lived intangible assets in the previous table, the Firm has intangible assets of approximately $600 million consisting primarily of asset management advisory contracts, which were determined to have an indefinite life and are not amortized.

Amortization expense

The following table presents amortization expense related to credit card relationships, core deposits and other intangible assets.

December 31, (in millions)	**2011**	2010	2009
Purchased credit card relationships	**$ 295**	$ 355	$ 421
Other credit card-related intangibles	**106**	111	94
Core deposit intangibles	**285**	328	390
Other intangibles	**162**	142	145
Total amortization expense	**$ 848**	$ 936	$ 1,050

Future amortization expense

The following table presents estimated future amortization expense related to credit card relationships, core deposits and other intangible assets at December 31, 2011.

For the year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	Other intangibles	**Total**
2012	$ 253	$ 106	$ 240	$ 147	$ 746
2013	212	103	195	140	650
2014	109	102	103	122	436
2015	23	94	26	105	248
2016	4	34	14	98	150

Impairment testing

The Firm's intangible assets are tested for impairment annually or more often if events or changes in circumstances indicate that the asset might be impaired.

The impairment test for a finite-lived intangible asset compares the undiscounted cash flows associated with the use or disposition of the intangible asset to its carrying value. If the sum of the undiscounted cash flows exceeds its carrying value, then no impairment charge is recorded. If the sum of the undiscounted cash flows is less than its carrying value, then an impairment charge is recognized to the extent the carrying amount of the asset exceeds its fair value.

The impairment test for indefinite-lived intangible assets compares the fair value of the intangible asset to its carrying amount. If the carrying value exceeds the fair value, then an impairment charge is recognized for the difference.

Note 18 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset. JPMorgan Chase has recorded immaterial asset retirement obligations related to asbestos remediation in those cases where it has sufficient information to estimate the obligations' fair value.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 19 – Deposits

At December 31, 2011 and 2010, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	2011	2010
U.S. offices		
Noninterest-bearing	**$ 346,670**	$ 228,555
Interest-bearing		
Demand[a]	**47,075**	33,368
Savings[b]	**375,051**	334,632
Time (included **$3,861** and $2,733 at fair value)[c]	**82,738**	87,237
Total interest-bearing deposits	**504,864**	455,237
Total deposits in U.S. offices	**851,534**	683,792
Non-U.S. offices		
Noninterest-bearing	**18,790**	10,917
Interest-bearing		
Demand	**188,202**	174,417
Savings	**687**	607
Time (included **$1,072** and $1,636 at fair value)[c]	**68,593**	60,636
Total interest-bearing deposits	**257,482**	235,660
Total deposits in non-U.S. offices	**276,272**	246,577
Total deposits	**$ 1,127,806**	$ 930,369

(a) Includes Negotiable Order of Withdrawal ("NOW") accounts, and certain trust accounts.
(b) Includes Money Market Deposit Accounts ("MMDAs").
(c) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 4 on pages 198–200 of this Annual Report.

At December 31, 2011 and 2010, time deposits in denominations of $100,000 or more were as follows.

December 31, (in millions)	2011	2010
U.S. offices	**$ 57,802**	$ 59,653
Non-U.S. offices	**50,614**	44,544
Total	**$108,416**	$104,197

At December 31, 2011, the maturities of interest-bearing time deposits were as follows.

December 31, 2011 (in millions)	U.S.	Non-U.S.	Total
2012	$68,345	$67,107	$ 135,452
2013	7,222	1,086	8,308
2014	1,947	219	2,166
2015	2,051	22	2,073
2016	2,532	102	2,634
After 5 years	641	57	698
Total	$82,738	$68,593	$ 151,331

Note 20 – Accounts payable and other liabilities

The following table details the components of accounts payable and other liabilities.

December 31, (in millions)	2011	2010
Brokerage payables[a]	**$ 121,353**	$ 95,359
Accounts payable and other liabilities[b]	**81,542**	74,971
Total	**$ 202,895**	$ 170,330

(a) Includes payables to customers, brokers, dealers and clearing organizations, and securities fails.
(b) Includes $51 million and $236 million accounted for at fair value at December 31, 2011 and 2010, respectively.

Note 21 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated Statements of Income. The following table is a summary of long-term debt carrying values (including unamortized original issue discount, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2011.

By remaining maturity at December 31, (in millions, except rates)		2011 Under 1 year	1-5 years	After 5 years	Total	2010 Total
Parent company						
Senior debt:	Fixed rate[a]	**$ 17,142**	**$ 40,060**	**$ 39,276**	**$ 96,478**	$ 98,787
	Variable rate[b]	**24,186**	**25,684**	**5,909**	**55,779**	59,027
	Interest rates[c]	**0.32-7.00%**	**0.60-7.00%**	**0.41-7.25%**	**0.32-7.25%**	0.24-7.25%
Subordinated debt:	Fixed rate	**$ 1,005**	**$ 8,919**	**$ 9,243**	**$ 19,167**	$ 22,000
	Variable rate	**118**	**1,827**	**9**	**1,954**	1,996
	Interest rates[c]	**6.63-6.63%**	**1.09-5.75%**	**2.16-8.53%**	**1.09-8.53%**	1.37-8.53%
	Subtotal	**$ 42,451**	**$ 76,490**	**$ 54,437**	**$ 173,378**	$ 181,810
Subsidiaries						
FHLB advances:[d]	Fixed rate	**$ 18**	**$ 4,548**	**$ 172**	**$ 4,738**	$ 7,324
	Variable rate	**5,500**	**6,822**	**763**	**13,085**	15,660
	Interest rates[c]	**0.32-0.44%**	**0.32-2.04%**	**0.41-0.44%**	**0.32-2.04%**	0.21-4.05%
Senior debt:	Fixed rate	**$ 699**	**$ 2,963**	**$ 2,884**	**$ 6,546**	$ 5,228
	Variable rate	**6,465**	**17,327**	**4,465**	**28,257**	30,545
	Interest rates[c]	**0.33-0.57%**	**0.13-4.28%**	**4.00-14.21%**	**0.13-14.21%**	0.21-14.21%
Subordinated debt:	Fixed rate	**$ –**	**$ 1,672**	**$ 7,083**	**$ 8,755**	$ 8,605
	Variable rate	**–**	**1,150**	**–**	**1,150**	1,150
	Interest rates[c]	**–%**	**0.87-5.88%**	**4.38-8.25%**	**0.87-8.25%**	0.63-8.25%
	Subtotal	**$ 12,682**	**$ 34,482**	**$ 15,367**	**$ 62,531**	$ 68,512
Junior subordinated debt:	Fixed rate	**$ –**	**$ –**	**$ 15,784**	**$ 15,784**	$ 15,249
	Variable rate	**–**	**–**	**5,082**	**5,082**	5,082
	Interest rates[c]	**–%**	**–%**	**0.93-8.75%**	**0.93-8.75%**	0.79-8.75%
	Subtotal	**$ –**	**$ –**	**$ 20,866**	**$ 20,866**	$ 20,331
Total long-term debt[e][f][g]		**$ 55,133**	**$ 110,972**	**$ 90,670**	**$ 256,775** [i][j]	$ 270,653
Long-term beneficial interests:						
	Fixed rate	**$ 2,012**	**$ 2,474**	**$ 1,775**	**$ 6,261**	$ 9,795
	Variable rate	**11,474**	**15,306**	**6,693**	**33,473**	42,759
	Interest rates	**0.06-11.00%**	**0.06-5.63%**	**0.02-9.19%**	**0.02-11.00%**	0.05-11.00%
Total long-term beneficial interests[h]		**$ 13,486**	**$ 17,780**	**$ 8,468**	**$ 39,734**	$ 52,554

(a) Included $8.4 billion and $18.5 billion as of December 31, 2011 and 2010, respectively, guaranteed by the FDIC under the Temporary Liquidity Guarantee ("TLG") Program.

(b) Included $11.9 billion and $17.9 billion as of December 31, 2011 and 2010, respectively, guaranteed by the FDIC under the TLG Program.

(c) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2011, for total long-term debt was (0.37)% to 14.21%, versus the contractual range of 0.13% to 14.21% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.

(d) Effective January 1, 2011, $23.0 billion of long-term advances from FHLBs were reclassified from other borrowed funds to long-term debt. The prior-year period has been revised to conform with the current presentation.

(e) Included long-term debt of $23.8 billion and $31.3 billion secured by assets totaling $89.4 billion and $92.0 billion at December 31, 2011 and 2010, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.

(f) Included $34.7 billion and $38.8 billion of outstanding structured notes accounted for at fair value at December 31, 2011 and 2010, respectively.

(g) Included $2.1 billion and $879 million of outstanding zero-coupon notes at December 31, 2011 and 2010, respectively. The aggregate principal amount of these notes at their respective maturities was $5.0 billion and $2.7 billion, respectively.

(h) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated VIEs. Also included $1.3 billion and $1.5 billion of outstanding structured notes accounted for at fair value at December 31, 2011 and 2010, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $26.2 billion and $25.1 billion at December 31, 2011 and 2010, respectively.

(i) At December 31, 2011, long-term debt in the aggregate of $28.6 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective notes.
(j) The aggregate carrying values of debt that matures in each of the five years subsequent to 2011 is $55.1 billion in 2012, $34.9 billion in 2013, $30.4 billion in 2014, $21.6 billion in 2015 and $24.1 billion in 2016.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 3.57% and 3.50% as of December 31, 2011 and 2010, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 2.67% and 2.36% as of December 31, 2011 and 2010, respectively.

The Firm commenced its participation in the TLG Program in December 2008. The TLG Program was available to, among others, all U.S. depository institutions insured by the FDIC and all U.S. bank holding companies, unless they opted out or the FDIC terminated their participation. Under the TLG Program, the FDIC guaranteed through the earlier of maturity or December 31, 2012, certain senior unsecured debt issued though October 31, 2009, in return for a fee to be paid based on the amount and maturity of the debt. Under the TLG Program, the FDIC would pay the unpaid principal and interest on an FDIC-guaranteed debt instrument upon the failure of the participating entity to make a timely payment of principal or interest in accordance with the terms of the instrument.

The Parent Company has guaranteed certain long-term debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees rank on parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities were $3.0 billion and $3.7 billion at December 31, 2011 and 2010, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities
At December 31, 2011, the Firm had established 26 wholly-owned Delaware statutory business trusts ("issuer trusts") that had issued guaranteed capital debt securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $20.9 billion and $20.3 billion at December 31, 2011 and 2010, respectively, were reflected in the Firm's Consolidated Balance Sheets in long-term debt, and in the table on the preceding page under the caption "Junior subordinated debt" (i.e., trust preferred capital debt securities). The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated Balance Sheets at December 31, 2011 and 2010. The debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, qualified as Tier 1 capital as of December 31, 2011.

The following is a summary of the outstanding trust preferred capital debt securities, including unamortized original issue discount, issued by each trust, and the junior subordinated deferrable interest debenture issued to each trust, as of December 31, 2011.

December 31, 2011 (in millions)	Amount of trust preferred capital debt securities issued by trust[a]	Principal amount of debenture issued to trust[b]	Issue date	Stated maturity of trust preferred capital securities and debentures	Earliest redemption date	Interest rate of trust preferred capital securities and debentures	Interest payment/ distribution dates
Bank One Capital III	$474	$765	2000	2030	Any time	8.75%	Semiannually
Bank One Capital VI	525	552	2001	2031	Any time	7.20%	Quarterly
Chase Capital II	482	497	1997	2027	Any time	LIBOR + 0.50%	Quarterly
Chase Capital III	295	305	1997	2027	Any time	LIBOR + 0.55%	Quarterly
Chase Capital VI	241	249	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	249	256	1997	2027	Any time	LIBOR + 0.55%	Quarterly
J.P. Morgan Chase Capital X	1,000	1,016	2002	2032	Any time	7.00%	Quarterly
J.P. Morgan Chase Capital XI	1,075	1,009	2003	2033	Any time	5.88%	Quarterly
J.P. Morgan Chase Capital XII	400	391	2003	2033	Any time	6.25%	Quarterly
JPMorgan Chase Capital XIII	465	480	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XIV	600	587	2004	2034	Any time	6.20%	Quarterly
JPMorgan Chase Capital XV	93	132	2005	2035	Any time	5.88%	Semiannually
JPMorgan Chase Capital XVI	500	493	2005	2035	Any time	6.35%	Quarterly
JPMorgan Chase Capital XVII	496	720	2005	2035	Any time	5.85%	Semiannually
JPMorgan Chase Capital XVIII	748	749	2006	2036	Any time	6.95%	Semiannually
JPMorgan Chase Capital XIX	563	564	2006	2036	Any time	6.63%	Quarterly
JPMorgan Chase Capital XX	905	907	2006	2036	Any time	6.55%	Semiannually
JPMorgan Chase Capital XXI	836	837	2007	2037	2012	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXII	911	912	2007	2037	Any time	6.45%	Semiannually
JPMorgan Chase Capital XXIII	643	643	2007	2047	2012	LIBOR + 1.00%	Quarterly
JPMorgan Chase Capital XXIV	700	700	2007	2047	2012	6.88%	Quarterly
JPMorgan Chase Capital XXV	1,493	2,292	2007	2037	2037	6.80%	Semiannually
JPMorgan Chase Capital XXVI	1,815	1,815	2008	2048	2013	8.00%	Quarterly
JPMorgan Chase Capital XXVII	995	995	2009	2039	2039	7.00%	Semiannually
JPMorgan Chase Capital XXVIII	1,500	1,500	2009	2039	2014	7.20%	Quarterly
JPMorgan Chase Capital XXIX	1,500	1,500	2010	2040	2015	6.70%	Quarterly
Total	$19,504	$20,866					

(a) Represents the amount of trust preferred capital debt securities issued to the public by each trust, including unamortized original issue discount.

(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original-issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated Financial Statements.

Note 22 – Preferred stock

At December 31, 2011 and 2010, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock for the payment of dividends and the distribution of assets.

Dividends on the Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series I shares are payable semiannually at a fixed annual dividend rate of 7.90% through April 2018, and then become payable quarterly at an annual dividend rate of three-month LIBOR plus 3.47%. Dividends on the 8.625% Non-Cumulative Preferred Stock, Series J are payable quarterly.

On August 20, 2010, the Firm redeemed all of the outstanding shares of its 6.15% Cumulative Preferred Stock, Series E; 5.72% Cumulative Preferred Stock, Series F; and 5.49% Cumulative Preferred Stock, Series G at their stated redemption value. On June 17, 2009, the Firm redeemed all outstanding shares of the Fixed Rate Cumulative Perpetual Preferred Stock, Series K ("Series K Preferred Stock") and repaid the full $25.0 billion principal amount together with accrued but unpaid dividends.
The following is a summary of JPMorgan Chase's preferred stock outstanding as of December 31, 2011 and 2010.

December 31,		Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series I	8.625% Non-Cumulative Perpetual Preferred Stock, Series J	**Total preferred stock**
Contractual rate in effect at December 31, 2011		7.900%	8.625%	
Shares[a]	**2011**	**600,000**	**180,000**	**780,000**
	2010	600,000	180,000	780,000
Carrying value (in millions)	**2011**	**$ 6,000**	**$ 1,800**	**$ 7,800**
	2010	6,000	1,800	7,800
Earliest redemption date		4/30/2018	9/1/2013	
Share value and redemption price per share[b]		$ 10,000	$ 10,000	

(a) Represented by depositary shares.
(b) The redemption price includes the amount shown in the table plus any accrued but unpaid dividends.

Dividend and stock repurchase restrictions
Prior to the redemption of the Series K Preferred Stock on June 17, 2009, the Firm was subject to certain restrictions regarding the declaration of dividends and share repurchases. As a result of the redemption of the Series K Preferred Stock, JPMorgan Chase is no longer subject to any of these restrictions.

Note 23 – Common stock

At December 31, 2011 and 2010, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share. On June 5, 2009, the Firm issued $5.8 billion, or 163 million new shares, of its common stock at $35.25 per share.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during the years ended December 31, 2011, 2010 and 2009 were as follows.

Year ended December 31, (in millions)	**2011**	2010	2009
Issued – balance at January 1	**4,104.9**	4,104.9	3,941.6
New open market issuances	**–**	–	163.3
Total issued – balance at December 31	**4,104.9**	4,104.9	4,104.9
Treasury – balance at January 1	**(194.6)**	(162.9)	(208.8)
Purchase of treasury stock	**(226.9)**	(77.9)	–
Share repurchases related to employee stock-based awards[a]	**(0.1)**	(0.1)	(1.1)
Issued from treasury:			
Employee benefits and compensation plans	**88.3**	45.3	45.7
Employee stock purchase plans	**1.1**	1.0	1.3
Total issued from treasury	**89.4**	46.3	47.0
Total treasury – balance at December 31	**(332.2)**	(194.6)	(162.9)
Outstanding	**3,772.7**	3,910.3	3,942.0

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes.

Pursuant to the U.S. Treasury's Capital Purchase Program, the Firm issued to the U.S. Treasury a Warrant to purchase up to 88,401,697 shares of the Firm's common stock, at an exercise price of $42.42 per share, subject to certain antidilution and other adjustments. The U.S. Treasury exchanged the Warrant for 88,401,697 warrants, each of which was a warrant to purchase a share of the Firm's common stock at an exercise price of $42.42 per share and, on December 11, 2009, sold the warrants in a secondary public offering for $950 million. The warrants are exercisable, in whole or in part, at any time and from time to time until October 28, 2018. As part of its common equity repurchase program discussed below, the Firm repurchased 10,167,698 warrants during 2011, with 78,233,999 warrants remaining outstanding at December 31, 2011. The repurchase of the warrants resulted in a $122 million adjustment to capital surplus.

On March 18, 2011, the Board of Directors approved a $15.0 billion common equity (i.e., common stock and warrants) repurchase program, of which $8.95 billion was authorized for repurchase in 2011. The $15.0 billion repurchase program superseded a $10.0 billion repurchase program approved in 2007. During 2011 and 2010, the Firm repurchased (on a trade-date basis) an aggregate of 240 million and 78 million shares of common stock and warrants, for $8.95 billion and $3.0 billion, at an average price per unit of $37.35 and $38.49, respectively. The Firm

did not repurchase any of the warrants during 2010, and did not repurchase any shares of its common stock or warrants during 2009. For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on pages 18–20 of JPMorgan Chase's 2011 Form 10-K.

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

As of December 31, 2011, approximately 408 million unissued shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the warrants sold by the U.S. Treasury as discussed above.

Note 24 – Earnings per share

Earnings per share ("EPS") is calculated under the two-class method under which all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities based on their respective rights to receive dividends. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities. Options issued under employee benefit plans that have an antidilutive effect are excluded from the computation of diluted EPS.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2011, 2010 and 2009.

Year ended December 31, (in millions, except per share amounts)	**2011**	2010	2009	
Basic earnings per share				
Income before extraordinary gain	**$18,976**	$17,370	$11,652	
Extraordinary gain	**–**	–	76	
Net income	**$18,976**	$17,370	$11,728	
Less: Preferred stock dividends	**629**	642	1,327	
Less: Accelerated amortization from redemption of preferred stock issued to the U.S. Treasury	**–**	–	1,112	(c)
Net income applicable to common equity	**18,347**	16,728	9,289	(c)
Less: Dividends and undistributed earnings allocated to participating securities	**779**	964	515	
Net income applicable to common stockholders	**$17,568**	$15,764	$ 8,774	
Total weighted-average basic shares outstanding	**3,900.4**	3,956.3	3,862.8	
Per share				
Income before extraordinary gain	**$ 4.50**	$ 3.98	$ 2.25	(c)
Extraordinary gain	**–**	–	0.02	
Net income	**$ 4.50**	$ 3.98	$ 2.27	(c)

Year ended December 31, (in millions, except per share amounts)	**2011**	2010	2009	
Diluted earnings per share				
Net income applicable to common stockholders	**$17,568**	$15,764	$ 8,774	
Total weighted-average basic shares outstanding	**3,900.4**	3,956.3	3,862.8	
Add: Employee stock options, SARs and warrants[a]	**19.9**	20.6	16.9	
Total weighted-average diluted shares outstanding[b]	**3,920.3**	3,976.9	3,879.7	
Per share				
Income before extraordinary gain	**$ 4.48**	$ 3.96	$ 2.24	(c)
Extraordinary gain	**–**	–	0.02	
Net income per share	**$ 4.48**	$ 3.96	$ 2.26	(c)

(a) Excluded from the computation of diluted EPS (due to the antidilutive effect) were options issued under employee benefit plans and the warrants originally issued in 2008 under the U.S. Treasury's Capital Purchase Program to purchase shares of the Firm's common stock. The aggregate number of shares issuable upon the exercise of such options and warrants was 133 million, 233 million and 266 million for the full years ended December 31, 2011, 2010 and 2009 respectively.

(b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

(c) The calculation of basic and diluted EPS and net income applicable to common equity for full year 2009 includes a one-time, noncash reduction of $1.1 billion, or $0.27 per share, resulting from repayment of the U.S. Troubled Asset Relief Program ("TARP") preferred capital.

Note 25 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on AFS securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities, and net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

As of or for the year ended December 31, (in millions)	Unrealized gains/ (losses) on AFS securities[b]	Translation adjustments, net of hedges	Cash flow hedges	Net loss and prior service costs/(credit) of defined benefit pension and OPEB plans	Accumulated other comprehensive income/(loss)
Balance at December 31, 2008	$ (2,101)	$ (598)	$ (202)	$ (2,786)	$ (5,687)
Net change	4,133 [c]	582	383	498	5,596
Balance at December 31, 2009	$ 2,032 [d]	$ (16)	$ 181	$ (2,288)	$ (91)
Cumulative effect of changes in accounting principles[a]	(144)	–	–	–	(144)
Net change	610 [e]	269	25	332	1,236
Balance at December 31, 2010	$ 2,498 [d]	$ 253	$ 206	$ (1,956)	$ 1,001
Net change	**1,067** [f]	**(279)**	**(155)**	**(690)**	**(57)**
Balance at December 31, 2011	**$ 3,565** [d]	**$ (26)**	**$ 51**	**$ (2,646)**	**$ 944**

(a) Reflects the effect of the adoption of accounting guidance related to the consolidation of VIEs, and to embedded credit derivatives in beneficial interests in securitized financial assets. AOCI decreased by $129 million due to the adoption of the accounting guidance related to VIEs, as a result of the reversal of the fair value adjustments taken on retained AFS securities that were eliminated in consolidation; for further discussion see Note 16 on pages 256–267 of this Annual Report. AOCI decreased by $15 million due to the adoption of the new guidance related to credit derivatives embedded in certain of the Firm's AFS securities; for further discussion see Note 6 on pages 202–210 of this Annual Report.

(b) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS.

(c) The net change during 2009 was due primarily to overall market spread and market liquidity improvement as well as changes in the composition of investments.

(d) Included after-tax unrealized losses not related to credit on debt securities for which credit losses have been recognized in income of $(56) million, $(81) million and $(226) million at December 31, 2011, 2010 and 2009, respectively.

(e) The net change during 2010 was due primarily to the narrowing of spreads on commercial and non-agency MBS as well as on collateralized loan obligations; also reflects increased market value on pass-through MBS due to narrowing of spreads and other market factors.

(f) The net change for 2011 was due primarily to increased market value on agency MBS and municipal securities, partially offset by the widening of spreads on non-U.S. corporate debt and the realization of gains due to portfolio repositioning.

The following table presents the before- and after-tax changes in the components of other comprehensive income/(loss).

	2011			2010			2009		
Year ended December 31, (in millions)	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Unrealized gains/(losses) on AFS securities:									
Net unrealized gains/(losses) arising during the period	**$ 3,361**	**$(1,322)**	**$ 2,039**	$ 3,982	$(1,540)	$ 2,442	$ 7,870	$(3,029)	$ 4,841
Reclassification adjustment for realized (gains)/ losses included in net income	**(1,593)**	**621**	**(972)**	(2,982)	1,150	(1,832)	(1,152)	444	(708)
Net change	**1,768**	**(701)**	**1,067**	1,000	(390)	610	6,718	(2,585)	4,133
Translation adjustments:									
Translation	**(672)**	**255**	**(417)**	402	(139)	263	1,139	(398)	741
Hedges	**226**	**(88)**	**138**	11	(5)	6	(259)	100	(159)
Net change	**(446)**	**167**	**(279)**	413	(144)	269	880	(298)	582
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**50**	**(19)**	**31**	247	(96)	151	767	(308)	459
Reclassification adjustment for realized (gains)/ losses included in net income	**(301)**	**115**	**(186)**	(206)	80	(126)	(124)	48	(76)
Net change	**(251)**	**96**	**(155)**	41	(16)	25	643	(260)	383
Net loss and prior service cost/(credit) of defined benefit pension and OPEB plans:									
Net gains/(losses) and prior service credits arising during the period	**(1,291)**	**502**	**(789)**	294	(96)	198	494	(200)	294
Reclassification adjustment for net loss and prior service credits included in net income	**162**	**(63)**	**99**	224	(90)	134	337	(133)	204
Net change	**(1,129)**	**439**	**(690)**	518	(186)	332	831	(333)	498
Total other comprehensive income/(loss)	**$ (58)**	**$ 1**	**$ (57)**	$ 1,972	$ (736)	$ 1,236	$ 9,072	$(3,476)	$ 5,596

Note 26 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

The components of income tax expense/(benefit) included in the Consolidated Statements of Income were as follows for each of the years ended December 31, 2011, 2010, and 2009.

Year ended December 31, (in millions)	**2011**	2010	2009
Current income tax expense			
U.S. federal	**$ 3,719**	$ 4,001	$ 4,698
Non-U.S.	**1,183**	2,712	2,368
U.S. state and local	**1,178**	1,744	971
Total current income tax expense	**6,080**	8,457	8,037
Deferred income tax expense/ (benefit)			
U.S. federal	**2,109**	(753)	(2,867)
Non-U.S.	**102**	169	(454)
U.S. state and local	**(518)**	(384)	(301)
Total deferred income tax expense/(benefit)	**1,693**	(968)	(3,622)
Total income tax expense	**$ 7,773**	$ 7,489	$ 4,415

Total income tax expense includes $76 million, $485 million and $280 million of tax benefits recorded in 2011, 2010, and 2009, respectively, as a result of tax audit resolutions.

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity and certain tax benefits associated with the Firm's employee stock-based compensation plans. The tax effect of all items recorded directly to stockholders' equity resulted in an increase of $927 million in 2011, an increase of $1.8 billion in 2010, and a decrease of $3.7 billion in 2009.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Based on JPMorgan Chase's ongoing review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill these requirements and needs, the Firm has determined that the undistributed earnings of certain of its subsidiaries would be indefinitely reinvested to fund current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. For 2011, pretax earnings of approximately $2.6 billion were generated and will be indefinitely reinvested in these subsidiaries. At December 31, 2011, the cumulative amount of undistributed pretax earnings in these subsidiaries approximated $21.8 billion. If the Firm were to record a deferred tax liability associated with these undistributed earnings, the amount would be approximately $4.9 billion at December 31, 2011.

Tax expense applicable to securities gains and losses for the years 2011, 2010 and 2009 was $617 million, $1.1 billion, and $427 million, respectively.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for each of the years ended December 31, 2011, 2010 and 2009, is presented in the following table.

Year ended December 31,	**2011**	2010	2009
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	**1.6**	3.6	2.7
Tax-exempt income	**(2.1)**	(2.4)	(3.9)
Non-U.S. subsidiary earnings[(a)]	**(2.3)**	(2.2)	(1.7)
Business tax credits	**(4.0)**	(3.7)	(5.5)
Other, net	**0.9**	(0.2)	0.9
Effective tax rate	**29.1%**	30.1%	27.5%

(a) Includes earnings deemed to be reinvested indefinitely in non-U.S. subsidiaries.

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2011 and 2010.

December 31, (in millions)	2011	2010
Deferred tax assets		
Allowance for loan losses	**$ 10,689**	$ 12,287
Employee benefits	**4,570**	4,279
Accrued expenses and other[(a)]	**9,186**	7,850
Non-U.S. operations	**2,943**	956
Tax attribute carryforwards[(a)]	**1,547**	2,348
Gross deferred tax assets	**$ 28,935**	$ 27,720
Valuation allowance	**(1,303)**	(1,784)
Deferred tax assets, net of valuation allowance	**$ 27,632**	$ 25,936
Deferred tax liabilities		
Depreciation and amortization[(a)]	**$ 6,358**	$ 4,823
Leasing transactions	**2,569**	2,160
Non-U.S. operations	**2,790**	1,136
Other, net[(a)]	**1,139**	1,497
Gross deferred tax liabilities	**$ 12,856**	$ 9,616
Net deferred tax assets	**$ 14,776**	$ 16,320

(a) The prior-year period has been revised to conform with the current presentation.

JPMorgan Chase has recorded deferred tax assets of $1.5 billion at December 31, 2011, in connection with U.S. federal, state and local, and non-U.S. subsidiary net operating loss carryforwards. At December 31, 2011, the U.S. federal net operating loss carryforwards were approximately $4.1 billion; the state and local net operating loss carryforward was approximately $642 million; and the non-U.S. subsidiary net operating loss carryforward was $116 million. If not utilized, the U.S. federal net operating loss carryforwards and the state and local net operating loss carryforward will expire between 2027 and 2030. The non-U.S. subsidiary net operating loss carryforward has an unlimited carryforward period. A valuation allowance has been recorded for losses associated with non-U.S. subsidiaries and certain portfolio investments, and certain state and local tax benefits. During 2011, the valuation allowance decreased by $481 million predominantly related to the realization of state and local tax benefits.

At December 31, 2011, 2010 and 2009, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $7.2 billion, $7.8 billion and $6.6 billion, respectively, of which $4.0 billion, $3.8 billion and $3.5 billion, respectively, if recognized, would reduce the annual effective tax rate. As JPMorgan Chase is presently under audit by a number of taxing authorities, it is reasonably possible that significant changes in the gross balance of unrecognized tax benefits may occur within the next 12 months. JPMorgan Chase does not expect that any changes over the next twelve months in its gross balance of unrecognized tax benefits caused by such audits would result in a significant change in its annual effective tax rate. The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2011, 2010 and 2009.

Unrecognized tax benefits

Year ended December 31, (in millions)	2011	2010	2009
Balance at January 1,	**$ 7,767**	$ 6,608	$ 5,894
Increases based on tax positions related to the current period	**516**	813	584
Decreases based on tax positions related to the current period	**(110)**	(24)	(6)
Increases based on tax positions related to prior periods	**496**	1,681	703
Decreases based on tax positions related to prior periods	**(1,433)**	(1,198)	(322)
Decreases related to settlements with taxing authorities	**(16)**	(74)	(203)
Decreases related to a lapse of applicable statute of limitations	**(31)**	(39)	(42)
Balance at December 31,	**$ 7,189**	$ 7,767	$ 6,608

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $184 million, $(54) million and $101 million in 2011, 2010 and 2009, respectively.

At December 31, 2011 and 2010, in addition to the liability for unrecognized tax benefits, the Firm had accrued $1.7 billion and $1.6 billion, respectively, for income tax-related interest and penalties.

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many states throughout the U.S. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2011.

December 31, 2011	Periods under examination	Status
JPMorgan Chase – U.S.	1993 – 2002	Refund claims under review
JPMorgan Chase – U.S.	2003 – 2005[a]	Field examination completed, JPMorgan Chase intends to file refund claims
Bank One – U.S.	2000 – 2004	Refund claims under review
Bear Stearns – U.S.	2003 – 2005	In appeals process
Bear Stearns – U.S.	2006 – 2008	Field examination
JPMorgan Chase – United Kingdom	2006 – 2010	Field examination
JPMorgan Chase – New York State and City	2005 – 2007	Field examination
JPMorgan Chase – California	2006 – 2008	Field examination

(a) JPMorgan Chase anticipates that the IRS will commence in 2012 an examination of the years 2006 through 2008.

The following table presents the U.S. and non-U.S. components of income before income tax expense and extraordinary gain for the years ended December 31, 2011, 2010 and 2009.

Year ended December 31, (in millions)	2011	2010	2009
U.S.	**$ 16,336**	$ 16,568	$ 6,263
Non-U.S.[a]	**10,413**	8,291	9,804
Income before income tax and extraordinary gain	**$ 26,749**	$ 24,859	$ 16,067

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

Note 27 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the Office of the Comptroller of the Currency ("OCC"). The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC.

The Board of Governors of the Federal Reserve System (the "Federal Reserve") requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $4.4 billion and $803 million in 2011 and 2010, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company-only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2012, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, $7.4 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2012 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2011 and 2010, cash in the amount of $25.4 billion and $25.0 billion, respectively, and securities with a fair value of $23.4 billion and $9.7 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers. In addition, as of December 31, 2011 and 2010, the Firm had other restricted cash of $4.2 billion and $2.7 billion, respectively, primarily representing cash reserves held at non-U.S. central banks and held for other general purposes.

Note 28 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A.

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital consists of common stockholders' equity, perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred capital debt securities, less goodwill and certain other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1 capital, subordinated long-term debt and other instruments qualifying as Tier 2 capital, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total capital is Tier 1 capital plus Tier 2 capital. Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Banking subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2011 and 2010, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

The following table presents the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant banking subsidiaries at December 31, 2011 and 2010. These amounts are determined in accordance with regulations issued by the Federal Reserve and/or OCC.

December 31,	JPMorgan Chase & Co.[e]		JPMorgan Chase Bank, N.A.[e]		Chase Bank USA, N.A.[e]		Well-capitalized ratios[f]	Minimum capital ratios[f]
(in millions, except ratios)	**2011**	2010	**2011**	2010	**2011**	2010		
Regulatory capital								
Tier 1[a]	**$ 150,384**	$ 142,450	**$ 98,426**	$ 91,764	**$ 11,903**	$ 12,966		
Total	**188,088**	182,216	**136,017**	130,444	**15,448**	16,659		
Assets								
Risk-weighted[b][c]	**$1,221,198**	$1,174,978	**$1,042,898**	$ 965,897	**$107,421**	$116,992		
Adjusted average[d]	**2,202,087**	2,024,515	**1,789,194**	1,611,486	**106,312**	117,368		
Capital ratios								
Tier 1[a]	**12.3%**	12.1%	**9.4%**	9.5%	**11.1%**	11.1%	6.0%	4.0%
Total	**15.4**	15.5	**13.0**	13.5	**14.4**	14.2	10.0	8.0
Tier 1 leverage	**6.8**	7.0	**5.5**	5.7	**11.2**	11.0	5.0 [g]	3.0 [h]

(a) At December 31, 2011, for JPMorgan Chase and JPMorgan Chase Bank, N.A., trust preferred capital debt securities were $19.6 billion and $600 million, respectively. If these securities were excluded from the calculation at December 31, 2011, Tier 1 capital would be $130.8 billion and $97.8 billion, respectively, and the Tier 1 capital ratio would be 10.7% and 9.4%, respectively. At December 31, 2011, Chase Bank USA, N.A. had no trust preferred capital debt securities.

(b) Risk-weighted assets consist of on- and off-balance sheet assets that are assigned to one of several broad risk categories and weighted by factors representing their risk and potential for default. On-balance sheet assets are risk-weighted based on the perceived credit risk associated with the obligor or counterparty, the nature of any collateral, and the guarantor, if any. Off-balance sheet assets such as lending-related commitments, guarantees, derivatives and other applicable off-balance sheet positions are risk-weighted by multiplying the contractual amount by the appropriate credit conversion factor to determine the on-balance sheet credit-equivalent amount, which is then risk-weighted based on the same factors used for on-balance sheet assets. Risk-weighted assets also incorporate a measure for the market risk related to applicable trading assets-debt and equity instruments, and foreign exchange and commodity derivatives. The resulting risk-weighted values for each of the risk categories are then aggregated to determine total risk-weighted assets.

(c) Includes off-balance sheet risk-weighted assets at December 31, 2011, of $301.1 billion, $291.0 billion and $38 million, and at December 31, 2010, of $282.9 billion, $274.2 billion and $31 million, for JPMorgan Chase, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., respectively.

(d) Adjusted average assets, for purposes of calculating the leverage ratio, include total quarterly average assets adjusted for unrealized gains/(losses) on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries, and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.

(e) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions; whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

(f) As defined by the regulations issued by the Federal Reserve, OCC and FDIC.

(g) Represents requirements for banking subsidiaries pursuant to regulations issued under the FDIC Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.

(h) The minimum Tier 1 leverage ratio for bank holding companies and banks is 3% or 4%, depending on factors specified in regulations issued by the Federal Reserve and OCC.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both nontaxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from nontaxable business combinations totaling $414 million and $647 million at December 31, 2011 and 2010, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of $2.3 billion and $1.9 billion at December 31, 2011 and 2010, respectively.

A reconciliation of the Firm's Total stockholders' equity to Tier 1 capital and Total qualifying capital is presented in the table below.

December 31, (in millions)	2011	2010
Tier 1 capital		
Total stockholders' equity	**$ 183,573**	$ 176,106
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 capital	**(970)**	(748)
Qualifying hybrid securities and noncontrolling interests[a]	**19,668**	19,887
Less: Goodwill[b]	**45,873**	46,915
Fair value DVA on derivative and structured note liabilities related to the Firm's credit quality	**2,150**	1,261
Investments in certain subsidiaries and other	**993**	1,032
Other intangible assets[b]	**2,871**	3,587
Total Tier 1 capital	**150,384**	142,450
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	**22,275**	25,018
Qualifying allowance for credit losses	**15,504**	14,959
Adjustment for investments in certain subsidiaries and other	**(75)**	(211)
Total Tier 2 capital	**37,704**	39,766
Total qualifying capital	**$ 188,088**	$ 182,216

(a) Primarily includes trust preferred capital debt securities of certain business trusts.
(b) Goodwill and other intangible assets are net of any associated deferred tax liabilities.

Note 29 – Off–balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements.

To provide for the risk of loss inherent in wholesale and consumer (excluding credit card) contracts, an allowance for credit losses on lending-related commitments is maintained. See Note 15 on pages 252–255 of this Annual Report for further discussion regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2011 and 2010. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases, without notice as permitted by law. The Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower. Also, the Firm typically closes credit card lines when the borrower is 60 days or more past due.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity at December 31, (in millions)	Contractual amount 2011 Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	2010 Total	Carrying value[i] 2011	2010
Lending-related								
Consumer, excluding credit card:								
Home equity – senior lien	**$ 933**	**$ 4,780**	**$ 4,870**	**$ 5,959**	**$ 16,542**	$ 17,662	**$ –**	$ –
Home equity – junior lien	**2,096**	**8,964**	**8,075**	**7,273**	**26,408**	30,948	**–**	–
Prime mortgage	**1,500**	**–**	**–**	**–**	**1,500**	1,266	**–**	–
Subprime mortgage	**–**	**–**	**–**	**–**	**–**	–	**–**	–
Auto	**6,431**	**97**	**149**	**17**	**6,694**	5,246	**1**	2
Business banking	**9,480**	**430**	**63**	**326**	**10,299**	9,702	**6**	4
Student and other	**82**	**169**	**127**	**486**	**864**	579	**–**	–
Total consumer, excluding credit card	**20,522**	**14,440**	**13,284**	**14,061**	**62,307**	65,403	**7**	6
Credit card	**530,616**	**–**	**–**	**–**	**530,616**	547,227	**–**	–
Total consumer	**551,138**	**14,440**	**13,284**	**14,061**	**592,923**	612,630	**7**	6
Wholesale:								
Other unfunded commitments to extend credit[a][b]	**61,083**	**61,628**	**87,830**	**4,710**	**215,251**	199,859	**347**	364
Standby letters of credit and other financial guarantees[a][b][c][d]	**27,982**	**34,671**	**36,448**	**2,798**	**101,899**	94,837	**696**	705
Unused advised lines of credit	**46,695**	**11,324**	**327**	**1,857**	**60,203**	44,720	**–**	–
Other letters of credit[a][d]	**4,218**	**1,020**	**148**	**–**	**5,386**	6,663	**2**	2
Total wholesale	**139,978**	**108,643**	**124,753**	**9,365**	**382,739**	346,079	**1,045**	1,071
Total lending-related	**$ 691,116**	**$ 123,083**	**$ 138,037**	**$ 23,426**	**$ 975,662**	$ 958,709	**$ 1,052**	$ 1,077
Other guarantees and commitments								
Securities lending indemnifications[e]	**$ 186,077**	**$ –**	**$ –**	**$ –**	**$ 186,077**	$ 181,717	**NA**	NA
Derivatives qualifying as guarantees[f]	**2,998**	**5,117**	**31,097**	**36,381**	**75,593**	87,768	**$ 457**	$ 294
Unsettled reverse repurchase and securities borrowing agreements	**39,939**	**–**	**–**	**–**	**39,939**	39,927	**–**	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability[g]	**NA**	**NA**	**NA**	**NA**	**NA**	NA	**3,557**	3,285
Loans sold with recourse	**NA**	**NA**	**NA**	**NA**	**10,397**	10,982	**148**	153
Other guarantees and commitments[h]	**1,030**	**279**	**299**	**4,713**	**6,321**	6,492	**(5)**	(6)

(a) At December 31, 2011 and 2010, reflects the contractual amount net of risk participations totaling $1.1 billion and $542 million, respectively, for other unfunded commitments to extend credit; $19.8 billion and $22.4 billion, respectively, for standby letters of credit and other financial guarantees; and $974 million and $1.1 billion, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.

(b) At December 31, 2011 and 2010, included credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other not-for-profit entities of $48.6 billion and $43.4 billion, respectively. These commitments also include liquidity facilities to nonconsolidated municipal bond VIEs; for further information, see Note 16 on pages 256–267 of this Annual Report.

(c) At December 31, 2011 and 2010, included unissued standby letters of credit commitments of $44.1 billion and $41.6 billion, respectively.

(d) At December 31, 2011 and 2010, JPMorgan Chase held collateral relating to $41.5 billion and $37.8 billion, respectively, of standby letters of credit; and $1.3 billion and $2.1 billion, respectively, of other letters of credit.

(e) At December 31, 2011 and 2010, collateral held by the Firm in support of securities lending indemnification agreements was $186.3 billion and $185.0 billion, respectively. Securities lending collateral comprises primarily cash and securities issued by governments that are members of the Organisation for Economic Co-operation and Development ("OECD") and U.S. government agencies.

(f) Represents notional amounts of derivatives qualifying as guarantees.

(g) Represents the estimated mortgage repurchase liability related to indemnifications for breaches of representations and warranties in loan sale and securitization agreements. For additional information, see Loan sale and securitization-related indemnifications on pages 286–287 of this Note.

(h) At December 31, 2011 and 2010, included unfunded commitments of $789 million and $1.0 billion, respectively, to third-party private equity funds; and $1.5 billion and $1.4 billion, respectively, to other equity investments. These commitments included $820 million and $1.0 billion, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 3 on pages 184–198 of this Annual Report. In addition, at December 31, 2011 and 2010, included letters of credit hedged by derivative transactions and managed on a market risk basis of $3.9 billion and $3.8 billion, respectively.

(i) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value. For all other products the carrying value represents the valuation reserve.

Other unfunded commitments to extend credit
Other unfunded commitments to extend credit generally comprise commitments for working capital and general corporate purposes, as well as extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors.

Also included in other unfunded commitments to extend credit are commitments to noninvestment-grade counterparties in connection with leveraged and acquisition finance activities, which were $6.1 billion and $5.9 billion at December 31, 2011 and 2010, respectively. For further information, see Note 3 and Note 4 on pages 184–198 and 198–200 respectively, of this Annual Report.

Guarantees
U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off–balance sheet lending-related arrangements to be guarantees under U.S. GAAP: standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For certain types of guarantees, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. For indemnifications provided in sales agreements, a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires). Any contingent liability that exists as a result of issuing the guarantee or indemnification is recognized when it becomes probable and reasonably estimable. The contingent portion of the liability is not recognized if the estimated amount is less than the carrying amount of the liability recognized at inception (adjusted for any amortization). The recorded amounts of the liabilities related to guarantees and indemnifications at December 31, 2011 and 2010, excluding the allowance for credit losses on lending-related commitments, are discussed below.

Standby letters of credit and other financial guarantees
Standby letters of credit ("SBLC") and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were $698 million and $707 million at December 31, 2011 and 2010, respectively, which were classified in accounts payable and other liabilities on the Consolidated Balance Sheets; these carrying values included $319 million and $347 million, respectively, for the allowance for lending-related commitments, and $379 million and $360 million, respectively, for the guarantee liability and corresponding asset.

The following table summarizes the types of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's customers, as of December 31, 2011 and 2010.

Standby letters of credit, other financial guarantees and other letters of credit

	2011		2010	
December 31, (in millions)	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade[a]	**$ 78,884**	**$ 4,105**	$ 70,236	$ 5,289
Noninvestment-grade[a]	**23,015**	**1,281**	24,601	1,374
Total contractual amount[b]	**$ 101,899** [c]	**$ 5,386**	$ 94,837 [c]	$ 6,663
Allowance for lending-related commitments	**$ 317**	**$ 2**	$ 345	$ 2
Commitments with collateral	**41,529**	**1,264**	37,815	2,127

(a) The ratings scale is based on the Firm's internal ratings which generally correspond to ratings as defined by S&P and Moody's.
(b) At December 31, 2011 and 2010, reflects the contractual amount net of risk participations totaling $19.8 billion and $22.4 billion, respectively, for standby letters of credit and other financial guarantees; and $974 million and $1.1 billion, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(c) At December 31, 2011 and 2010, included unissued standby letters of credit commitments of $44.1 billion and $41.6 billion, respectively.

Advised lines of credit
An advised line of credit is a revolving credit line which specifies the maximum amount the Firm may make available to an obligor, on a nonbinding basis. The borrower receives written or oral advice of this facility. The Firm may cancel this facility at any time by providing the borrower notice or, in some cases, without notice as permitted by law.

Securities lending indemnifications
Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the third-party borrower to return the lent securities in the event the Firm did not obtain sufficient collateral. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

Derivatives qualifying as guarantees
In addition to the contracts described above, the Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less. Derivative guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps", are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio and are typically longer-term or may have no stated maturity, but allow the Firm to terminate the contract under certain conditions.

Derivative guarantees are recorded on the Consolidated Balance Sheets at fair value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was $75.6 billion and $87.8 billion at December 31, 2011 and 2010, respectively. The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees. However, exposure to certain stable value contracts is contractually limited to a substantially lower percentage of the notional amount; the notional amount on these stable value contracts was $26.1 billion and $25.9 billion and the maximum exposure to loss was $2.8 billion and $2.7 billion, at December 31, 2011 and 2010, respectively. The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract. The fair value related to derivatives that the Firm deems to be guarantees were derivative payables of $555 million and $390 million and derivative receivables of $98 million and $96 million at December 31, 2011 and 2010, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees. In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 6 on pages 202–210 of this Annual Report.

Unsettled reverse repurchase and securities borrowing agreements
In the normal course of business, the Firm enters into reverse repurchase agreements and securities borrowing agreements that settle at a future date. At settlement, these commitments require that the Firm advance cash to and accept securities from the counterparty. These agreements generally do not meet the definition of a derivative, and therefore, are not recorded on the Consolidated Balance Sheets until settlement date. At December 31, 2011 and 2010, the amount of commitments related to forward starting reverse repurchase agreements and securities borrowing agreements were $14.4 billion and $14.4 billion, respectively. Commitments related to unsettled reverse repurchase agreements and securities borrowing agreements with regular way settlement periods were $25.5 billion and $25.5 billion at December 31, 2011 and 2010, respectively.

Loan sales- and securitization-related indemnifications
Mortgage repurchase liability
In connection with the Firm's loan sale and securitization activities with the GSEs and other loan sale and private-label securitization transactions, as described in Note 16 on pages 256–267 of this Annual Report, the Firm has made representations and warranties that the loans sold meet certain requirements. The Firm may be, and has been, required to repurchase loans and/or indemnify the GSEs and other investors for losses due to material breaches of these representations and warranties. Although there have been both generalized allegations, as well as specific demands that the Firm should repurchase loans sold or deposited into private-label securitizations, and the Firm experienced an increase in the number of requests for loan files ("file requests") in the latter part of 2011, loan-level repurchase demands and repurchases from private-label securitizations have been limited to date. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans that are deemed to have defects that were

sold to purchasers (including securitization-related SPEs) plus, in certain circumstances, accrued and unpaid interest on such loans and certain expense.

Subsequent to the Firm's acquisition of certain assets and liabilities of Washington Mutual from the FDIC in September 2008, the Firm resolved and/or limited certain current and future repurchase demands for loans sold to the GSEs by Washington Mutual, although it remains the Firm's position that such obligations remain with the FDIC receivership. The Firm will continue to evaluate and may pay (subject to reserving its rights for indemnification by the FDIC) certain future repurchase demands related to individual loans, subject to certain limitations, and has considered such potential repurchase demands in its repurchase liability.

To estimate the Firm's mortgage repurchase liability arising from breaches of representations and warranties, the Firm considers:

(i) the level of outstanding unresolved repurchase demands,

(ii) estimated probable future repurchase demands considering information about file requests, delinquent and liquidated loans, resolved and unresolved mortgage insurance rescission notices and the Firm's historical experience,

(iii) the potential ability of the Firm to cure the defects identified in the repurchase demands ("cure rate"),

(iv) the estimated severity of loss upon repurchase of the loan or collateral, make-whole settlement, or indemnification,

(v) the Firm's potential ability to recover its losses from third-party originators, and

(vi) the terms of agreements with certain mortgage insurers and other parties.

Based on these factors, the Firm has recognized a mortgage repurchase liability of $3.6 billion and $3.3 billion, as of December 31, 2011 and 2010, respectively, which is reported in accounts payable and other liabilities net of probable recoveries from third-party correspondents of $577 million and $517 million at December 31, 2011 and 2010, respectively.

Substantially all of the estimates and assumptions underlying the Firm's established methodology for computing its recorded mortgage repurchase liability — including factors such as the amount of probable future demands from purchasers, trustees or investors, the ability of the Firm to cure identified defects, the severity of loss upon repurchase or foreclosure, and recoveries from third parties — require application of a significant level of management judgment. Estimating the mortgage repurchase liability is further complicated by historical data and uncertainty surrounding numerous external factors, including: (i) macro-economic factors and (ii) the level of future demands, which is dependent, in part, on actions taken by third parties such as the GSEs, mortgage insurers, trustees and investors.

While the Firm uses the best information available to it in estimating its mortgage repurchase liability, the estimation process is inherently uncertain and imprecise and, accordingly, losses in excess of the amounts accrued as of December 31, 2011, are reasonably possible. The Firm believes the estimate of the range of reasonably possible losses, in excess of its established repurchase liability, is from $0 to approximately $2 billion at December 31, 2011. This estimated range of reasonably possible loss considers the Firm's GSE-related exposure based on an assumed peak to trough decline in home prices of 44%, which is an additional 9 percentage point decline in home prices beyond the Firm's current assumptions which were derived from a nationally recognized home price index. Although the Firm does not consider a further decline in home prices of this magnitude likely to occur, such a decline could increase the level of loan delinquencies, thereby potentially increasing the repurchase demand rate from the GSEs and increasing loss severity on repurchased loans, each of which could affect the Firm's mortgage repurchase liability. Claims related to private-label securitizations have, thus far, generally manifested themselves through threatened or pending litigation, which the Firm has considered with other litigation matters as discussed in Note 31 on pages 290–299 of this Annual Report. Actual repurchase losses could vary significantly from the Firm's recorded mortgage repurchase liability or this estimate of reasonably possible additional losses, depending on the outcome of various factors, including those considered above.

The following table summarizes the change in the mortgage repurchase liability for each of the periods presented.

Summary of changes in mortgage repurchase liability[a]

Year ended December 31, (in millions)	2011	2010	2009
Repurchase liability at beginning of period	**$ 3,285**	$ 1,705	$ 1,093
Realized losses[b]	**(1,263)**	(1,423)	(1,253) [d]
Provision for repurchase losses	**1,535**	3,003	1,865
Repurchase liability at end of period	**$ 3,557** [c]	$ 3,285	$ 1,705

(a) Mortgage repurchase liabilities associated with pending or threatened litigation are not reported in this table because the Firm separately evaluates its exposure to such repurchases in establishing its litigation reserves.

(b) Includes principal losses and accrued interest on repurchased loans, "make-whole" settlements, settlements with claimants, and certain related expense. For the years ended December 31, 2011, 2010 and 2009, make-whole settlements were and $640 million, $632 million and $277 million, respectively.

(c) Includes $173 million at December 31, 2011, related to future demands on loans sold by Washington Mutual to the GSEs.

(d) Includes the Firm's resolution of certain current and future repurchase demands for certain loans sold by Washington Mutual.

Loans sold with recourse

The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing

advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2011 and 2010, the unpaid principal balance of loans sold with recourse totaled $10.4 billion and $11.0 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it will have to perform under its recourse obligations, was $148 million and $153 million at December 31, 2011 and 2010, respectively.

Other off-balance sheet arrangements

Indemnification agreements – general

In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Credit card charge-backs

Chase Paymentech Solutions, Card's merchant services business and a subsidiary of JPMorgan Chase Bank, N.A., is a global leader in payment processing and merchant acquiring.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is liable primarily for the amount of each processed credit card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Chase Paymentech will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Chase Paymentech is unable to collect the amount from the merchant, Chase Paymentech will bear the loss for the amount credited or refunded to the cardmember. Chase Paymentech mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Chase Paymentech does not have sufficient collateral from the merchant to provide customer refunds; and (3) Chase Paymentech does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would be liable for the amount of the transaction. For the year ended December 31, 2011, Chase Paymentech incurred aggregate credit losses of $13 million on $553.7 billion of aggregate volume processed, and at December 31, 2011, it held $204 million of collateral. For the year ended December 31, 2010, Chase Paymentech incurred aggregate credit losses of $12 million on $469.3 billion of aggregate volume processed, and at December 31, 2010, it held $189 million of collateral. For the year ended December 31, 2009, Chase Paymentech incurred aggregate credit losses of $11 million on $409.7 billion of aggregate volume processed, and at December 31, 2009, it held $213 million of collateral. The Firm believes that, based on historical experience and the collateral held by Chase Paymentech, the fair value of the Firm's charge back-related obligations, which are representative of the payment or performance risk to the Firm, is immaterial.

Exchange and clearinghouse guarantees

The Firm is a member of several securities and futures exchanges and clearinghouses, both in the U.S. and other countries. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to a member's guarantee fund, or, in a few cases, the obligation may be unlimited. It is difficult to estimate the Firm's maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

The Firm clears transactions on behalf of its clients through various clearinghouses, and the Firm stands behind the performance of its clients on such trades. The Firm mitigates its exposure to loss in the event of a client default by requiring that clients provide appropriate amounts of margin at the inception and throughout the life of the transaction, and can cease the provision of clearing services if clients do not adhere to their obligations under the clearing agreement. It is difficult to estimate the Firm's maximum exposure under such transactions, as this would

require an assessment of transactions that clients may execute in the future. However, based upon historical experience, management believes it is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

Guarantees of subsidiaries

In the normal course of business, JPMorgan Chase & Co. ("Parent Company") may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated Balance Sheets, or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees are not included in the table on page 284 of this Note. For additional information, see Note 21 on pages 273–275 of this Annual Report.

Note 30 – Commitments, pledged assets and collateral

Lease commitments

At December 31, 2011, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2011.

Year ended December 31, (in millions)	
2012	$ 1,753
2013	1,758
2014	1,577
2015	1,438
2016	1,300
After 2016	7,188
Total minimum payments required[a]	15,014
Less: Sublease rentals under noncancelable subleases	(1,542)
Net minimum payment required	$ 13,472

(a) Lease restoration obligations are accrued in accordance with U.S. GAAP, and are not reported as a required minimum lease payment.

Total rental expense was as follows.

Year ended December 31, (in millions)	**2011**	2010	2009
Gross rental expense	**$ 2,228**	$ 2,212	$ 1,884
Sublease rental income	**(403)**	(545)	(172)
Net rental expense	**$ 1,825**	$ 1,667	$ 1,712

Pledged assets

At December 31, 2011, assets were pledged to collateralize repurchase agreements, other securities financing agreements, derivative transactions and for other purposes, including to secure borrowings and public deposits. Certain of these pledged assets may be sold or repledged by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated Balance Sheets. In addition, at December 31, 2011 and 2010, the Firm had pledged $270.3 billion and $288.7 billion, respectively, of financial instruments it owns that may not be sold or repledged by the secured parties. Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	**2011**	2010
Securities	**$ 134.8**	$ 112.1
Loans	**198.6**	214.8
Trading assets and other	**122.8**	123.2
Total assets pledged[a]	**$ 456.2**	$ 450.1

(a) Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 16 on pages 256–267 of this Annual Report for additional information on assets and liabilities of consolidated VIEs.

Collateral

At December 31, 2011 and 2010, the Firm had accepted assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of approximately $742.1 billion and $655.0 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately $515.8 billion and $521.3 billion, respectively, were sold or repledged, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales and to collateralize deposits and derivative agreements.

Note 31 – Litigation

Contingencies

As of December 31, 2011, the Firm and its subsidiaries are defendants or putative defendants in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $5.1 billion at December 31, 2011. This estimated aggregate range of reasonably possible losses is based upon currently available information for those proceedings in which the Firm is involved, taking into account the Firm's best estimate of such losses for those cases for which such estimate can be made. For certain cases, the Firm does not believe that an estimate can currently be made. The Firm's estimate involves significant judgment, given the varying stages of the proceedings (including the fact that many are currently in preliminary stages), the existence in many such proceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings. Accordingly, the Firm's estimate will change from time to time, and actual losses may be more than the current estimate.

Set forth below are descriptions of the Firm's material legal proceedings.

Auction-Rate Securities Investigations and Litigation. Beginning in March 2008, several regulatory authorities initiated investigations of a number of industry participants, including the Firm, concerning possible state and federal securities law violations in connection with the sale of auction-rate securities. The market for many such securities had frozen and a significant number of auctions for those securities began to fail in February 2008.

The Firm, on behalf of itself and affiliates, agreed to a settlement in principle with the New York Attorney General's Office which provided, among other things, that the Firm would offer to purchase at par certain auction-rate securities purchased from J.P. Morgan Securities LLC, Chase Investment Services Corp. and Bear, Stearns & Co. Inc. by individual investors, charities and small- to medium-sized businesses. The Firm also agreed to a substantively similar settlement in principle with the Office of Financial Regulation for the State of Florida and the North American Securities Administrators Association ("NASAA") Task Force, which agreed to recommend approval of the settlement to all remaining states, Puerto Rico and the U.S. Virgin Islands. The Firm has finalized the settlement agreements with the New York Attorney General's Office and the Office of Financial Regulation for the State of Florida. The settlement agreements provide for the payment of penalties totaling $25 million to all states. The Firm is currently in the process of finalizing consent agreements with NASAA's member states; more than 45 of these consent agreements have been finalized to date.

The Firm also faces a number of civil actions relating to the Firm's sales of auction-rate securities, including a putative securities class action in the United States District Court for the Southern District of New York that seeks unspecified damages, and individual arbitrations and lawsuits in various forums brought by institutional and individual investors that, together, seek damages totaling approximately $50 million. The actions generally allege that the Firm and other firms manipulated the market for auction-rate securities by placing bids at auctions that affected these securities' clearing rates or otherwise supported the auctions without properly disclosing these activities. Some actions also allege that the Firm misrepresented that auction-rate securities were short-term instruments. The lawsuits are being coordinated before the federal District Court in New York.

Additionally, the Firm was named in two putative antitrust class actions. The actions allege that the Firm, along with numerous other financial institution defendants, colluded to maintain and stabilize the auction-rate securities market and then to withdraw their support for the auction-rate securities market. In January 2010, the District Court dismissed both actions. An appeal is pending in the United States Court of Appeals for the Second Circuit.

Bear Stearns Hedge Fund Matters. The Bear Stearns Companies LLC (formerly The Bear Stearns Companies Inc.) ("Bear Stearns"), certain current or former subsidiaries of Bear Stearns, including Bear Stearns Asset Management, Inc. ("BSAM") and Bear, Stearns & Co. Inc., and certain individuals formerly employed by Bear Stearns are named defendants (collectively the "Bear Stearns defendants") in multiple civil actions and arbitrations relating to alleged losses resulting from the failure of the Bear Stearns High Grade Structured Credit Strategies Master Fund, Ltd. (the "High Grade Fund") and the Bear Stearns High Grade Structured Credit Strategies Enhanced Leverage Master Fund, Ltd. (the "Enhanced Leverage Fund") (collectively, the "Funds"). BSAM served as investment manager for both of the Funds, which were organized such that there were U.S. and Cayman Islands "feeder funds" that invested substantially all their assets, directly or indirectly, in the Funds. The Funds are in liquidation.

There are currently three civil actions pending in the United States District Court for the Southern District of New York

relating to the Funds. One of these actions involves a derivative lawsuit brought on behalf of purchasers of partnership interests in the U.S. feeder fund to the Enhanced Leverage Fund, alleging that the Bear Stearns defendants mismanaged the Funds. This action seeks, among other things, unspecified compensatory damages based on alleged investor losses. The parties have reached an agreement to settle this derivative action, pursuant to which BSAM would pay a maximum of approximately $18 million. BSAM has reserved the right not to proceed with this settlement if plaintiff is unable to secure the participation of investors whose net contributions meet a prescribed percentage of the aggregate net contributions to this feeder fund. The court has preliminarily approved the settlement, which remains subject to final court approval. (A separate derivative action, also alleging that the Bear Stearns defendants mismanaged the Funds, was brought on behalf of purchasers of partnership interests in the U.S. feeder fund to the High Grade Fund, and was dismissed following a Court-approved settlement with similar terms, pursuant to which BSAM paid approximately $19 million). The second pending action, brought by the Joint Voluntary Liquidators of the Cayman Islands feeder funds, makes allegations similar to those asserted in the derivative lawsuits related to the U.S. feeder funds, alleges net losses of approximately $700 million and seeks compensatory and punitive damages. The parties presently are engaged in discovery.

The third action was brought by Bank of America and Banc of America Securities LLC (together "BofA") alleging breach of contract and fraud in connection with a $4 billion securitization in May 2007 known as a "CDO-squared," for which BSAM served as collateral manager. This securitization was composed of certain collateralized debt obligation holdings that were purchased by BofA from the Funds. BofA alleges that it incurred losses in excess of $3 billion and seeks damages in an amount to be determined, although the amount of damages that BofA seeks may be substantially less than its alleged losses. Discovery is ongoing.

Bear Stearns Shareholder Litigation and Related Matters. Various shareholders of Bear Stearns have commenced purported class actions against Bear Stearns and certain of its former officers and/or directors on behalf of all persons who purchased or otherwise acquired common stock of Bear Stearns between December 14, 2006, and March 14, 2008 (the "Class Period"). During the Class Period, Bear Stearns had between 115 million and 120 million common shares outstanding, and the price per share of those securities declined from a high of $172.61 to a low of $30 at the end of the period. The actions, originally commenced in several federal courts, allege that the defendants issued materially false and misleading statements regarding Bear Stearns' business and financial results and that, as a result of those false statements, Bear Stearns' common stock traded at artificially inflated prices during the Class Period. In addition, several individual shareholders of Bear Stearns have also commenced or threatened to commence their own arbitration proceedings and lawsuits asserting claims similar to those in the putative class actions. Certain of these matters have been dismissed or settled.

Separately, an agreement in principle has been reached to resolve a class action brought under the Employee Retirement Income Security Act ("ERISA") against Bear Stearns and certain of its former officers and/or directors on behalf of participants in the Bear Stearns Employee Stock Ownership Plan for alleged breaches of fiduciary duties in connection with the management of that Plan. Under the settlement, which remains subject to final documentation and court approval, the class will receive $10 million.

Bear Stearns, former members of Bear Stearns' Board of Directors and certain of Bear Stearns' former executive officers have also been named as defendants in a shareholder derivative and class action suit which is pending in the United States District Court for the Southern District of New York. Plaintiffs assert claims for breach of fiduciary duty, violations of federal securities laws, waste of corporate assets and gross mismanagement, unjust enrichment, abuse of control and indemnification and contribution in connection with the losses sustained by Bear Stearns as a result of its purchases of subprime loans and certain repurchases of its own common stock. Certain individual defendants are also alleged to have sold their holdings of Bear Stearns common stock while in possession of material nonpublic information. Plaintiffs seek compensatory damages in an unspecified amount. The District Court dismissed the action, and plaintiffs have appealed.

City of Milan Litigation and Criminal Investigation. In January 2009, the City of Milan, Italy (the "City") issued civil proceedings against (among others) JPMorgan Chase Bank, N.A. and J.P. Morgan Securities Ltd. (together, "JPMorgan Chase") in the District Court of Milan. The proceedings relate to (a) a bond issue by the City in June 2005 (the "Bond"), and (b) an associated swap transaction, which was subsequently restructured on a number of occasions between 2005 and 2007 (the "Swap"). The City seeks damages and/or other remedies against JPMorgan Chase (among others) on the grounds of alleged "fraudulent and deceitful acts" and alleged breach of advisory obligations in connection with the Swap and the Bond, together with related swap transactions with other counterparties. The civil proceedings have been stayed pending the determination of an application by JPMorgan Chase to the Supreme Court in Rome challenging jurisdiction, which was heard in November 2011.

In March 2010, a criminal judge directed four current and former JPMorgan Chase personnel and JPMorgan Chase Bank, N.A. (as well as other individuals and three other banks) to go forward to a full trial that started in May 2010. Although the Firm is not charged with any crime and does not face criminal liability, if one or more of its employees were found guilty, the Firm could be subject to administrative sanctions, including restrictions on its ability

to conduct business in Italy and monetary penalties. Hearings have continued on a weekly basis since May 2010.

Enron Litigation. JPMorgan Chase and certain of its officers and directors are involved in several lawsuits seeking damages arising out of the Firm's banking relationships with Enron Corp. and its subsidiaries ("Enron"). A number of actions and other proceedings against the Firm previously were resolved, including a class action lawsuit captioned Newby v. Enron Corp. and adversary proceedings brought by Enron's bankruptcy estate. The remaining Enron-related actions include an individual action by an Enron investor, an action by an Enron counterparty and a purported class action filed on behalf of JPMorgan Chase employees who participated in the Firm's 401(k) plan asserting claims under ERISA for alleged breaches of fiduciary duties by JPMorgan Chase, its directors and named officers. The class action has been dismissed, and is on appeal to the United States Court of Appeals for the Second Circuit. Motions to dismiss are pending in the other two actions.

Interchange Litigation. A group of merchants has filed a series of putative class action complaints in several federal courts. The complaints allege that Visa and MasterCard, as well as certain other banks and their respective bank holding companies, conspired to set the price of credit and debit card interchange fees, enacted respective association rules in violation of antitrust laws, and engaged in tying/bundling and exclusive dealing. The complaint seeks unspecified damages and injunctive relief based on the theory that interchange fees would be lower or eliminated but for the challenged conduct. Based on publicly available estimates, Visa and MasterCard branded payment cards generated approximately $40 billion of interchange fees industry-wide in 2010. All cases have been consolidated in the United States District Court for the Eastern District of New York for pretrial proceedings. The Court has dismissed all claims relating to periods prior to January 2004. The Court has not yet ruled on motions relating to the remainder of the case or plaintiffs' class certification motion. Fact and expert discovery have closed.

In addition to the consolidated class action complaint, plaintiffs filed supplemental complaints challenging the initial public offerings ("IPOs") of MasterCard and Visa (the "IPO Complaints"). With respect to the MasterCard IPO, plaintiffs allege that the offering violated Section 7 of the Clayton Act and Section 1 of the Sherman Act and that the offering was a fraudulent conveyance. With respect to the Visa IPO, plaintiffs are challenging the Visa IPO on antitrust theories parallel to those articulated in the MasterCard IPO pleading. Defendants have filed motions to dismiss the IPO Complaints. The Court has not yet ruled on those motions.

The parties also have filed motions seeking summary judgment as to various claims in the complaints. Oral argument on these summary judgment motions was heard in November 2011.

Investment Management Litigation. Four cases have been filed claiming that investment portfolios managed by J.P. Morgan Investment Management Inc. ("JPMorgan Investment Management") were inappropriately invested in securities backed by subprime residential real estate collateral. Plaintiffs claim that JPMorgan Investment Management and related defendants are liable for losses of more than $1 billion in market value of these securities. The first case was filed by NM Homes One, Inc. in federal District Court in New York. Following rulings on motions addressed to the pleadings, plaintiff's claims for breach of contract, breach of fiduciary duty, negligence and gross negligence survive, and discovery is proceeding. In the second case, filed by Assured Guaranty (U.K.) in New York state court, discovery is proceeding on plaintiff's claims for breach of contract, breach of fiduciary duty and gross negligence. In the third case, filed by Ambac Assurance UK Limited in New York state court, the lower court granted JPMorgan Investment Management's motion to dismiss. The New York State Appellate Division reversed the lower court's decision and discovery is proceeding. The fourth case, filed by CMMF LLP in New York state court, asserts claims under New York law for breach of fiduciary duty, gross negligence, breach of contract and negligent misrepresentation. The lower court denied in part defendants' motion to dismiss and discovery is proceeding.

Lehman Brothers Bankruptcy Proceedings. In May 2010, Lehman Brothers Holdings Inc. ("LBHI") and its Official Committee of Unsecured Creditors (the "Committee") filed a complaint (and later an amended complaint) against JPMorgan Chase Bank, N.A. in the United States Bankruptcy Court for the Southern District of New York that asserts both federal bankruptcy law and state common law claims, and seeks, among other relief, to recover $8.6 billion in collateral that was transferred to JPMorgan Chase Bank, N.A. in the weeks preceding LBHI's bankruptcy. The amended complaint also seeks unspecified damages on the grounds that JPMorgan Chase Bank, N.A.'s collateral requests hastened LBHI's demise. The Firm has moved to dismiss plaintiffs' amended complaint in its entirety, and has also moved to transfer the litigation from the Bankruptcy Court to the United States District Court for the Southern District of New York. Neither motion has yet been decided, but following argument on the motion to transfer the litigation, the District Court directed the Bankruptcy Court to decide the motion to dismiss while the District Court is considering the transfer motion. The Firm also filed counterclaims against LBHI alleging that LBHI fraudulently induced the Firm to make large clearing advances to Lehman against inappropriate collateral, which left the Firm with more than $25 billion in claims (the "Clearing Claims") against the estate of Lehman Brothers Inc. ("LBI"), LBHI's broker-dealer subsidiary. These claims have been paid in full, subject to the outcome of the litigation. Discovery is underway with a trial scheduled for 2012. In August 2011, LBHI and the Committee filed an objection to the deficiency claims asserted by JPMorgan Chase Bank, N.A. against LBHI with respect to the Clearing Claims, principally on the grounds that the Firm had not conducted the sale of the securities collateral held for such claims in a commercially reasonable manner. The Firm has received and is in various

stages of responding to regulatory investigations regarding Lehman.

LIBOR Investigations and Litigation. JPMorgan Chase has received various subpoenas and requests for documents and, in some cases, interviews, from the United States Department of Justice, United States Commodity Futures Trading Commission, United States Securities and Exchange Commission, European Commission, United Kingdom Financial Services Authority, Canadian Competition Bureau and Swiss Competition Commission. The documents and information sought all relate to the process by which rates were submitted to the British Bankers Association ("BBA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR"), principally in 2007 and 2008. The inquiries from some of the regulators also relate to similar processes by which EURIBOR rates are submitted to the European Banking Federation and TIBOR rates are submitted to the Japanese Bankers' Association during similar time periods. The Firm is cooperating with these inquiries.

In addition, the Firm has been named as a defendant along with other banks in a series of individual and class actions filed in various U.S. federal courts alleging that since 2006 the defendants either individually suppressed the LIBOR rate artificially or colluded in submitting rates for LIBOR that were artificially low. Plaintiffs allege that they transacted in U.S. dollar LIBOR-based derivatives or other financial instruments whose values are impacted by changes in U.S. dollar LIBOR, and assert a variety of claims including antitrust claims seeking treble damages. All cases have been consolidated for pre-trial purposes in the United States District Court for the Southern District of New York. In November 2011, the District Court entered an Order appointing interim lead counsel for the two proposed classes: (i) plaintiffs who allegedly purchased U.S. dollar LIBOR-based financial instruments directly from the defendants in the over-the-counter market, and (ii) plaintiffs who allegedly purchased U.S. dollar LIBOR-based financial instruments on an exchange.

Madoff Litigation. JPMorgan Chase & Co., JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC, and J.P. Morgan Securities Ltd. have been named as defendants in a lawsuit brought by the trustee (the "Trustee") for the liquidation of Bernard L. Madoff Investment Securities LLC ("Madoff"). The Trustee has served an amended complaint in which he has asserted 28 causes of action against JPMorgan Chase, 20 of which seek to avoid certain transfers (direct or indirect) made to JPMorgan Chase that are alleged to have been preferential or fraudulent under the federal Bankruptcy Code and the New York Debtor and Creditor Law. The remaining causes of action involve claims for, among other things, aiding and abetting fraud, aiding and abetting breach of fiduciary duty, conversion, contribution and unjust enrichment. The complaint generally alleges that JPMorgan Chase, as Madoff's long-time bank, facilitated the maintenance of Madoff's Ponzi scheme and overlooked signs of wrongdoing in order to obtain profits and fees. The complaint asserts common law claims that purport to seek approximately $19 billion in damages, together with bankruptcy law claims to recover approximately $425 million in transfers that JPMorgan Chase allegedly received directly or indirectly from Bernard Madoff's brokerage firm. By order dated October 31, 2011, the United States District Court for the Southern District of New York granted JPMorgan Chase's motion to dismiss the common law claims asserted by the Trustee, and returned the remaining claims to the Bankruptcy Court for further proceedings. The Trustee has appealed this decision.

Separately, J.P. Morgan Trust Company (Cayman) Limited, JPMorgan (Suisse) SA, J.P. Morgan Securities Ltd., Bear Stearns Alternative Assets International Ltd. and J.P. Morgan Clearing Corp. have been named as defendants in lawsuits presently pending in Bankruptcy Court in New York arising out of the liquidation proceedings of Fairfield Sentry Limited and Fairfield Sigma Limited (together, "Fairfield"), so-called Madoff feeder funds. These actions are based on theories of mistake and restitution and seek to recover payments made to defendants by the funds totaling approximately $150 million. Pursuant to an agreement with the Trustee, the liquidators of Fairfield have voluntarily dismissed their action against J.P. Morgan Securities Ltd. without prejudice to refiling. The other actions remain outstanding. The Bankruptcy Court has stayed these actions. In addition, a purported class action was brought against JPMorgan Chase in the United States District Court for the Southern District of New York, as is a motion by separate potential class plaintiffs to add claims against JPMorgan Chase, JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC and J.P. Morgan Securities Ltd. to an already-pending purported class action in the same court. The allegations in these complaints largely track those raised by the Trustee. The Court dismissed these complaints and plaintiffs have appealed.

Finally, JPMorgan Chase is a defendant in five actions pending in New York state court and two purported class actions in federal court in New York. The allegations in all of these actions are essentially identical, and involve claims against the Firm for aiding and abetting fraud, aiding and abetting breach of fiduciary duty, conversion and unjust enrichment. In the state court actions, the Firm's motion to dismiss is pending. The Firm has moved to dismiss the state court actions and intends to move to dismiss the federal actions.

The Firm is also responding to various governmental inquiries concerning the Madoff matter.

MF Global. JPMorgan Chase & Co. has been named as one of several defendants in six putative class action lawsuits brought by customers of MF Global in federal district courts in Montana and New York. The actions allege, among other things, that the Firm aided and abetted MF Global's alleged misuse of customer money and breaches of fiduciary duty and was unjustly enriched by the transfer of $200 million in customer segregated funds by MF Global.

In addition, J.P. Morgan Securities LLC has been named as one of several defendants in a putative class action filed in

federal district court in New York on behalf of purchasers of MF Global's publicly traded securities including the securities issued pursuant to MF Global's February 2011 and August 2011 convertible note offerings. The complaint, which asserts violations of the Securities Act of 1933 against the underwriter defendants, alleges that the offering documents contained materially false and misleading statements and omissions regarding MF Global's financial position, including its exposure to European sovereign debt. The Firm is also responding to various governmental inquiries concerning MF Global.

Mortgage-Backed Securities and Repurchase Litigation and Regulatory Investigations. JPMorgan Chase and affiliates, Bear Stearns and affiliates and Washington Mutual affiliates have been named as defendants in a number of cases in their various roles as issuer or underwriter in MBS offerings. These cases include purported class action suits, actions by individual purchasers of securities or by trustees for the benefit of purchasers of securities, and actions by monoline insurance companies that guaranteed payments of principal and interest for particular tranches of securities offerings. Although the allegations vary by lawsuit, these cases generally allege that the offering documents for securities issued by dozens of securitization trusts contained material misrepresentations and omissions, including with regard to the underwriting standards pursuant to which the underlying mortgage loans were issued, or assert that various representations or warranties relating to the loans were breached at the time of origination. There are currently pending and tolled investor and monoline claims involving approximately $120 billion of such securities, a number that decreased significantly in the fourth quarter of 2011 largely due to favorable rulings on standing in the class actions discussed below.

In the actions against the Firm as an MBS issuer (and, in some cases, also as an underwriter of its own MBS offerings), three purported class actions are pending against JPMorgan Chase and Bear Stearns, and/or certain of their affiliates and current and former employees, in the United States District Courts for the Eastern and Southern Districts of New York. Defendants moved to dismiss these actions. In the first of these three actions, the court dismissed claims relating to all but one of the offerings. In the second action, the court dismissed claims as to certain offerings and tranches for lack of standing, but allowed claims to proceed relating to some offerings and certificates including ones raised by newly intervening plaintiffs; both parties have sought leave to appeal these rulings. In the third action, the Firm's motion to dismiss remains pending. In a fourth purported class action pending in the United States District Court for the Western District of Washington, Washington Mutual affiliates, WaMu Asset Acceptance Corp. and WaMu Capital Corp., along with certain former officers or directors of WaMu Asset Acceptance Corp., have been named as defendants. The court there denied plaintiffs' motion for leave to amend their complaint to add JPMorgan Chase Bank, N.A., as a defendant on the theory that it is a successor to Washington Mutual Bank. In October 2011, the court certified a class of plaintiff investors to pursue the claims asserted, but limited those claims to the 13 tranches of MBS in which a named plaintiff purchased. Discovery is proceeding.

In addition to class actions, the Firm is also a defendant in individual actions brought against certain affiliates of JPMorgan Chase, Bear Stearns and Washington Mutual as issuers (and, in some cases, as underwriters). These actions involve claims by governmental agencies, including the Federal Housing Finance Administration, the National Credit Union Administration and the Federal Home Loan Banks of Pittsburgh, Seattle, San Francisco, Chicago, Indianapolis, Atlanta and Boston, as well as by or to benefit various institutional investors, including Cambridge Place Investment Management, various affiliates of the Allstate Corporation, the Charles Schwab Corporation, Massachusetts Mutual Life Insurance Company, Western & Southern Life Insurance Company, HSH Nordbank, IKB International, S.A., Sealink Funding, Ltd., Landesbank Baden-Wurttemberg, Stichting Pensioenfonds ABP, Bayerische Landesbank, Union Central Life Insurance Company, Capital Ventures International, John Hancock Life Insurance Company and certain affiliates, Dexia SA/NV and certain affiliates, Deutsche Zentral-Genossenschaftsbank and Asset Management Fund and certain affiliates. These actions are pending in federal and state courts across the country and are at various stages of litigation.

EMC Mortgage LLC (formerly EMC Mortgage Corporation) ("EMC"), an indirect subsidiary of JPMorgan Chase & Co., and certain other JPMorgan Chase entities currently are defendants in four pending actions commenced by bond insurers that guaranteed payments of principal and interest on approximately $3.5 billion of certain classes of six different MBS offerings sponsored by EMC. One of those actions, commenced by Syncora Guarantee, Inc., is pending in the United States District Court for the Southern District of New York against EMC only. Syncora has also filed two actions in New York state court: the first, against J.P. Morgan Securities LLC, asserts tort claims arising out of the same transaction as its federal complaint; the second asserts various tort and contract claims relating to a separate transaction against J.P. Morgan Securities LLC, JPMorgan Chase Bank, N.A. and Bear Stearns Asset-Backed Securities I LLC. Ambac has filed a similar complaint in New York state court relating to four MBS offerings, which alleges various contract and tort claims against EMC, J.P. Morgan Securities LLC and JPMorgan Chase Bank, N.A. These Ambac and Syncora actions seek unspecified damages and specific performance. In December 2011, Assured Guaranty Corp. dismissed its case filed against EMC with respect to one MBS offering that was pending in the United States District Court for the Southern District of New York.

In actions against the Firm solely as an underwriter of other issuers' MBS offerings, the Firm has contractual rights to indemnification from the issuers, but those indemnity rights may prove effectively unenforceable where the issuers are now defunct, such as affiliates of IndyMac Bancorp

("IndyMac Trusts") and Thornburg Mortgage ("Thornburg"). The Firm may also be contractually obligated to indemnify underwriters in certain deals it issued. With respect to the IndyMac Trusts, J.P. Morgan Securities LLC, along with numerous other underwriters and individuals, is named as a defendant, both in its own capacity and as successor to Bear Stearns, in a purported class action pending in the United States District Court for the Southern District of New York brought on behalf of purchasers of securities in various IndyMac Trust MBS offerings. The court in that action has dismissed claims as to certain such securitizations, including all offerings in which no named plaintiff purchased securities, and allowed claims as to other offerings to proceed. Plaintiffs' motion to certify a class of investors in certain offerings is pending, and discovery is ongoing. In addition, J.P. Morgan Securities LLC and JPMorgan Chase are named as defendants in an individual action filed by the Federal Home Loan Bank of Pittsburgh in connection with a single offering by an affiliate of IndyMac Bancorp. Discovery in that action is ongoing and defendants moved for partial summary judgment in November 2011. Separately, J.P. Morgan Securities LLC, as successor to Bear, Stearns & Co. Inc., along with other underwriters and certain individuals, are defendants in an action pending in state court in California brought by MBIA Insurance Corp. ("MBIA"). The action relates to certain securities issued by IndyMac trusts in offerings in which Bear Stearns was an underwriter, and as to which MBIA provided guaranty insurance policies. MBIA purports to be subrogated to the rights of the MBS holders, and seeks recovery of sums it has paid and will pay pursuant to those policies. Discovery is ongoing. With respect to Thornburg, a Bear Stearns subsidiary is also a named defendant in a purported class action pending in the United States District Court for the District of New Mexico along with a number of other financial institutions that served as depositors and/or underwriters for three Thornburg MBS offerings. The Court granted in part defendants' motion to dismiss but indicated that plaintiffs could replead. Plaintiffs filed another amended complaint in December 2011, while defendants have asked the court to reconsider its ruling denying in part the defendants' motion to dismiss.

The Firm or its affiliates are defendants in three actions brought by trustees of MBS on behalf of the purchasers of securities. In the first, Wells Fargo, as trustee for a single MBS trust, has filed an action against EMC Mortgage in Delaware state court alleging that EMC breached various representations and warranties and seeking the repurchase of more than 800 mortgage loans by EMC and indemnification for the trustee attorneys' fees and costs. In the second, a trustee for a single MBS trust filed a summons with notice in New York state court against EMC, Bear Stearns & Co. Inc. and JPMorgan Chase & Co., seeking damages for breach of contract. The Firm has not yet been served with the complaint. In the third, the Firm is a defendant in an action commenced by Deutsche Bank National Trust Co., acting as trustee for various MBS trusts. That case is described in more detail below with respect to the Washington Mutual Litigations.

There is no assurance that the Firm will not be named as a defendant in additional MBS-related litigation, and the Firm has entered into agreements with a number of entities that purchased such securities which toll the statutes of limitations and repose with respect to their claims. In addition, the Firm has received several demands by securitization trustees that threaten litigation, as well as demands by investors directing or threatening to direct trustees to investigate claims or bring litigation, based on purported obligations to repurchase loans out of securitization trusts and alleged servicing deficiencies. These include but are not limited to a demand from a law firm, as counsel to a group of certificateholders who purport to have 25% or more of the voting rights in as many as 191 different trusts sponsored by the Firm with an original principal balance of more than $174 billion (excluding 52 trusts sponsored by Washington Mutual, with an original principal balance of more than $58 billion), made to various trustees to investigate potential repurchase and servicing claims.

A shareholder complaint has been filed in New York state court against the Firm and two affiliates, members of the boards of directors thereof and certain employees, asserting claims based on alleged wrongful actions and inactions relating to residential mortgage originations and securitizations. The action seeks an accounting and damages. The defendants have moved to dismiss the action.

In addition to the above-described litigation, the Firm has also received, and responded to, a number of subpoenas and informal requests for information from federal and state authorities concerning mortgage-related matters, including inquiries concerning a number of transactions involving the Firm's origination and purchase of whole loans, underwriting and issuance of MBS, treatment of early payment defaults and potential breaches of securitization representations and warranties, and due diligence in connection with securitizations. In January 2012, the Firm was advised by SEC staff that they are considering recommending to the Commission that civil or administrative actions be pursued arising out of two separate investigations they have been conducting. The first involves potential claims against J.P. Morgan Securities LLC relating to due diligence conducted for two mortgage-backed securitizations and corresponding disclosures. The second involves potential claims against Bear Stearns entities, JPMorgan Chase & Co. and J.P. Morgan Securities LLC relating to settlements of claims against originators involving loans included in a number of Bear Stearns securitizations. In both investigations, the SEC staff has invited the Firm to submit responses to the proposed actions.

Mortgage Foreclosure Investigations and Litigation. JPMorgan Chase and four other firms have agreed to a settlement in principle (the "global settlement") with a number of federal and state government agencies, including the U.S. Department of Justice, the U.S.

Department of Housing and Urban Development, the Consumer Financial Protection Bureau and the State Attorneys General, relating to the servicing and origination of mortgages. The global settlement, which is subject to the execution of a definitive agreement and court approval, calls for the Firm to, among other things: (i) make cash payments of approximately $1.1 billion (a portion of which will be set aside for payments to borrowers); (ii) provide approximately $500 million of refinancing relief to certain "underwater" borrowers whose loans are owned by the Firm; and (iii) provide approximately $3.7 billion of additional relief for certain borrowers, including reductions of principal on first and second liens, payments to assist with short sales, deficiency balance waivers on past foreclosures and short sales, and forbearance assistance for unemployed homeowners. (If the Firm does not meet certain targets for provision of the refinancing or other borrower relief within certain prescribed time periods, the Firm will instead make cash payments.) In addition, under the global settlement the Firm will be required to adhere to certain enhanced mortgage servicing standards.

The global settlement releases the Firm from further claims related to servicing activities, including foreclosures and loss mitigation activities; certain origination activities; and certain bankruptcy-related activities. Not included in the global settlement are any claims arising out of securitization activities, including representations made to investors respecting mortgage-backed securities; criminal claims; and repurchase demands from the GSEs, among other items.

The Firm also entered into agreements in principle with the Federal Reserve and the OCC for the payment of civil money penalties related to conduct that was the subject of consent orders entered into with the banking regulators in April 2011. The Firm's payment obligations under those agreements will be deemed satisfied by the Firm's payments and provisions of relief under the global settlement.

The Attorneys General of Massachusetts and New York have separately filed lawsuits against the Firm, other servicers and a mortgage recording company asserting claims for various alleged wrongdoings relating to mortgage assignments and use of the industry's electronic mortgage registry. The Firm has moved to dismiss the Massachusetts action, and has yet to respond to the New York action.

Five purported class action lawsuits were filed against the Firm relating to its mortgage foreclosure procedures. Two of those suits were dismissed with prejudice. A third suit has been resolved, and its dismissal will be obtained shortly. Additionally, the Firm is defending a purported class action brought against Bank of America involving an EMC loan.

A shareholder derivative action has been filed in New York state court against the Firm's board of directors alleging that the board failed to exercise adequate oversight as to wrongful conduct by the Firm regarding mortgage servicing. The action seeks a declaratory judgment and damages.

Municipal Derivatives Investigations and Litigation. Purported class action lawsuits and individual actions (the "Municipal Derivatives Actions") have been filed against JPMorgan Chase and Bear Stearns, as well as numerous other providers and brokers, alleging antitrust violations in the reportedly $100 billion to $300 billion annual market for financial instruments related to municipal bond offerings referred to collectively as "municipal derivatives." In July 2011, the Firm settled with federal and state governmental agencies to resolve their investigations into similar alleged conduct. The Municipal Derivatives Actions have been consolidated and/or coordinated in the United States District Court for the Southern District of New York. The court denied in part and granted in part defendants' motions to dismiss the purported class and individual actions, permitting certain claims to proceed against the Firm and others under federal and California state antitrust laws and under the California false claims act. Subsequently, a number of additional individual actions asserting substantially similar claims, including claims under New York and West Virginia state antitrust statutes, were filed against JPMorgan Chase, Bear Stearns and numerous other defendants. These cases are also being coordinated for pretrial purposes in the United States District Court for the Southern District of New York. Discovery is ongoing.

In addition, civil actions have been commenced against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions. In November 2009, J.P. Morgan Securities LLC settled with the SEC to resolve its investigation into those transactions. Following that settlement, the County and a putative class of sewer rate payers filed complaints against the Firm and several other defendants in Alabama state court. The suits allege that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The complaints also allege that the Firm concealed these third-party payments and that, but for this concealment, the County would not have entered into the transactions. The Court denied the Firm's motions to dismiss the complaints in both proceedings. The Firm filed mandamus petitions with the Alabama Supreme Court, seeking immediate appellate review of these decisions. The mandamus petition in the County's lawsuit was denied in April 2011. In November and December, 2011, the County filed notices of bankruptcy with the trial court in each of the cases and with the Alabama Supreme Court stating that it was a Chapter 9 Debtor in the U.S. Bankruptcy Court for the Northern District of Alabama and providing notice of the automatic stay. Subsequently, the portion of the sewer rate payer action involving claims against the Firm was removed by certain defendants to the United States District Court for the Northern District of Alabama. In its order finding that removal of this action was proper, the District Court referred the action to the District's Bankruptcy Court, where the action remains pending.

Two insurance companies that guaranteed the payment of principal and interest on warrants issued by the County have filed separate actions against the Firm in New York state court. Their complaints assert that the Firm fraudulently misled them into issuing insurance based upon substantially the same alleged conduct described above and other alleged non-disclosures. One insurer claims that it insured an aggregate principal amount of nearly $1.2 billion and seeks unspecified damages in excess of $400 million as well as unspecified punitive damages. The other insurer claims that it insured an aggregate principal amount of more than $378 million and seeks recovery of $4 million allegedly paid under the policies to date as well as any future payments and unspecified punitive damages. In December 2010, the court denied the Firm's motions to dismiss each of the complaints. The Firm has filed a cross-claim and a third party claim against the County for indemnity and contribution. The County moved to dismiss, which the court denied in August 2011. In consequence of its November 2011 bankruptcy filing, the County has asserted that these actions are stayed.

Overdraft Fee/Debit Posting Order Litigation. JPMorgan Chase Bank, N.A. has been named as a defendant in several purported class actions relating to its practices in posting debit card transactions to customers' deposit accounts. Plaintiffs allege that the Firm improperly re-ordered debit card transactions from the highest amount to the lowest amount before processing these transactions in order to generate unwarranted overdraft fees. Plaintiffs contend that the Firm should have processed such transactions in the chronological order they were authorized. Plaintiffs seek the disgorgement of all overdraft fees paid to the Firm by plaintiffs since approximately 2003 as a result of the re-ordering of debit card transactions. The claims against the Firm have been consolidated with numerous complaints against other national banks in multi-District litigation pending in the United States District Court for the Southern District of Florida. The Firm's motion to compel arbitration of certain plaintiffs' claims was initially denied by the District Court. On appeal, the United States Court of Appeals for the Eleventh Circuit vacated the District Court's order and remanded the case for reconsideration in light of a recent ruling by the United States Supreme Court in an unrelated case addressing the enforcement of an arbitration provision in a consumer product agreement. The Firm has reached an agreement in principle to settle this matter in exchange for the Firm paying $110 million and agreeing to change certain overdraft fee practices. The settlement is subject to documentation and court approval.

Petters Bankruptcy and Related Matters. JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), have been named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain affiliated entities (collectively, "Petters") and the Polaroid Corporation. The principal actions against JPMorgan Chase and its affiliates have been brought by a court-appointed receiver for Petters and the trustees in bankruptcy proceedings for three Petters entities. These actions generally seek to avoid, on fraudulent transfer and preference grounds, certain purported transfers in connection with (i) the 2005 acquisition by Petters of Polaroid, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions entered into with Polaroid; and (iii) a credit line and investment accounts held by Petters. The actions collectively seek recovery of approximately $450 million. Defendants have moved to dismiss the complaints in the actions filed by the Petters bankruptcy trustees.

Securities Lending Litigation. JPMorgan Chase Bank, N.A. has been named as a defendant in four putative class actions asserting ERISA and other claims pending in the United States District Court for the Southern District of New York brought by participants in the Firm's securities lending business. A fifth lawsuit was filed in New York state court by an individual participant in the program. Three of the purported class actions, which have been consolidated, relate to investments of approximately $500 million in medium-term notes of Sigma Finance Inc. ("Sigma"). In August 2010, the Court certified a plaintiff class consisting of all securities lending participants that held Sigma medium-term notes on September 30, 2008, including those that held the notes by virtue of participation in the investment of cash collateral through a collective fund, as well as those that held the notes by virtue of the investment of cash collateral through individual accounts. The Court granted JPMorgan Chase's motion for partial summary judgment as to plaintiffs' duty of loyalty claim, finding that the Firm did not have a conflict of interest when it provided repurchase financing to Sigma while also holding Sigma medium-term notes in securities lending accounts. Trial on the remaining duty of prudence claim is scheduled to begin in February 2012. In December 2011, JPMorgan Chase filed third-party claims for indemnification and contribution against the investment fiduciaries for three unnamed class members that maintained individual securities lending accounts. The parties have reached an agreement in principle to settle this action. The settlement is subject to documentation and court approval.

The fourth putative class action concerns investments of approximately $500 million in Lehman Brothers medium-term notes. The Firm has moved to dismiss the amended complaint and is awaiting a decision. Discovery is proceeding while the motion is pending. The New York state court action, which is not a class action, concerns the plaintiff's alleged loss of money in both Sigma and Lehman Brothers medium-term notes. The Firm has answered the complaint. Discovery is proceeding.

Service Members Civil Relief Act and Housing and Economic Recovery Act Investigations and Litigation. Multiple government officials have conducted inquiries into the Firm's procedures related to the Service Members Civil Relief Act ("SCRA") and the Housing and Economic Recovery Act of 2008 ("HERA"). These inquiries were prompted by the Firm's public statements about its SCRA and HERA

compliance and actions to remedy certain instances in which the Firm mistakenly charged active or recently-active military personnel mortgage interest and fees in excess of that permitted by SCRA and HERA, and in a number of instances, foreclosed on borrowers protected by SCRA and HERA. The Firm has implemented a number of procedural enhancements and controls to strengthen its SCRA and HERA compliance. In addition, an individual borrower filed a nationwide class action in United States District Court for South Carolina against the Firm alleging violations of the SCRA related to home loans. The Firm agreed to pay $27 million plus attorneys' fees, in addition to reimbursements previously paid by the Firm, to settle the class action. Additional borrowers were subsequently added to the class, and the Firm agreed to pay an additional $8 million into the settlement fund. The court entered a final order approving the settlement in January 2012.

Washington Mutual Litigations. Subsequent to JPMorgan Chase's acquisition from the FDIC of substantially all of the assets and certain specified liabilities of Washington Mutual Bank ("Washington Mutual Bank") in September 2008, Washington Mutual Bank's parent holding company, Washington Mutual, Inc. ("WMI") and its wholly-owned subsidiary, WMI Investment Corp. (together, the "Debtors"), both commenced voluntary cases under Chapter 11 of Title 11 of the United States Code in the United States Bankruptcy Court for the District of Delaware (the "Bankruptcy Case"). In the Bankruptcy Case, the Debtors have asserted rights and interests in certain assets. The assets in dispute include principally the following: (a) approximately $4 billion in trust securities contributed by WMI to Washington Mutual Bank (the "Trust Securities"); (b) the right to tax refunds arising from overpayments attributable to operations of Washington Mutual Bank and its subsidiaries; (c) ownership of and other rights in approximately $4 billion that WMI contends are deposit accounts at Washington Mutual Bank and one of its subsidiaries; and (d) ownership of and rights in various other contracts and other assets (collectively, the "Disputed Assets").

WMI, JPMorgan Chase and the FDIC have since been involved in litigations over these and other claims pending in the Bankruptcy Court for the District of Delaware (the "Bankruptcy Court") and the United States District Court for the District of Columbia.

In May 2010, WMI, JPMorgan Chase and the FDIC announced a global settlement agreement among themselves and significant creditor groups (the "WaMu Global Settlement"). The WaMu Global Settlement is incorporated into WMI's Chapter 11 plan ("the Plan") submitted to the Bankruptcy Court. The WaMu Global Settlement resolves numerous disputes among WMI, JPMorgan Chase, the FDIC in its capacity as receiver for Washington Mutual Bank and the FDIC in its corporate capacity, as well as those of significant creditor groups, including disputes relating to the Disputed Assets. After several amendments to the Plan to address deficiencies identified by the Bankruptcy Court that were unrelated to the WaMu Global Settlement, in February 2012 the Bankruptcy Court confirmed the Plan, including the WaMu Global Settlement.

Other proceedings related to Washington Mutual's failure are also pending before the Bankruptcy Court. Among other actions, in July 2010, certain holders of the Trust Securities commenced an adversary proceeding in the Bankruptcy Court against JPMorgan Chase, WMI, and other entities seeking, among other relief, a declaratory judgment that WMI and JPMorgan Chase do not have any right, title or interest in the Trust Securities. In early January 2011, the Bankruptcy Court granted summary judgment to JPMorgan Chase and denied summary judgment to the plaintiffs in the Trust Securities adversary proceeding. The plaintiffs have appealed that decision to the United States District Court for the District of Delaware. In connection with the current Plan, these plaintiffs filed a motion seeking a stay of further confirmation proceedings pending their appeal from the Bankruptcy Court's determination that they have no interest in the Trust Securities and are instead owners of WMI preferred equity. In January 2012, the Bankruptcy Court denied their motion, and the District Court denied their motions for a stay pending appeal and mandamus relief.

Other proceedings related to Washington Mutual's failure are pending before the United States District Court for the District of Columbia and include a lawsuit brought by Deutsche Bank National Trust Company, initially against the FDIC, asserting an estimated $6 billion to $10 billion in damages based upon alleged breach of various mortgage securitization agreements and alleged violation of certain representations and warranties given by certain WMI subsidiaries in connection with those securitization agreements. The case includes assertions that JPMorgan Chase may have assumed liabilities for the alleged breaches of representations and warranties in the mortgage securitization agreements. The District Court denied as premature motions by the Firm and the FDIC that sought a ruling on whether the FDIC retained liability for Deutsche Bank's claims. Discovery is underway.

In addition, JPMorgan Chase was sued in an action originally filed in state court in Texas (the "Texas Action") by certain holders of WMI common stock and debt of WMI and Washington Mutual Bank who seek unspecified damages alleging that JPMorgan Chase acquired substantially all of the assets of Washington Mutual Bank from the FDIC at a price that was allegedly too low. The Texas Action was transferred to the United States District Court for the District of Columbia, which ultimately granted JPMorgan Chase's and the FDIC's motions to dismiss the complaint, but the United States Court of Appeals for the District of Columbia Circuit reversed the trial court's dismissal and remanded the case for further proceedings. Plaintiffs, which now include only holders of Washington Mutual Bank debt following their voluntary dismissal of claims brought as holders of WMI common stock and debt, have filed an amended complaint alleging that JPMorgan Chase caused

the closure of Washington Mutual Bank and damaged them by causing their bonds issued by Washington Mutual Bank to lose substantially all of their value. JPMorgan Chase and the FDIC have again moved to dismiss this action.

* * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously in all such matters. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. The Firm accrues for potential liability arising from such proceedings when it is probable that such liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downwards, as appropriate, based on management's best judgment after consultation with counsel. During the years ended December 31, 2011, 2010 and 2009, the Firm incurred $4.9 billion, $7.4 billion and $161 million, respectively, of litigation expense. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or impact related to those matters. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued; as a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

Note 32 – International operations

The following table presents income statement-related and balance sheet-related information for JPMorgan Chase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 33 on pages 300–303 of this Annual Report.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the United States.

As of or for the year ended December 31, (in millions)	Revenue[c]	Expense[d]	Income before income tax expense and extraordinary gain	Net income	Total assets
2011					
Europe/Middle East and Africa	**$ 16,212**	**$ 9,157**	**$ 7,055**	**$ 4,844**	**$ 566,866**
Asia and Pacific	**5,992**	**3,802**	**2,190**	**1,380**	**156,411**
Latin America and the Caribbean	**2,273**	**1,711**	**562**	**340**	**51,481**
Total international	**24,477**	**14,670**	**9,807**	**6,564**	**774,758**
North America[a]	**72,757**	**55,815**	**16,942**	**12,412**	**1,491,034**
Total	**$ 97,234**	**$ 70,485**	**$ 26,749**	**$ 18,976**	**$ 2,265,792**
2010[b]					
Europe/Middle East and Africa	$ 14,135	$ 8,777	$ 5,358	$ 3,635	$ 446,547
Asia and Pacific	6,073	3,677	2,396	1,614	151,379
Latin America and the Caribbean	1,750	1,181	569	362	33,192
Total international	21,958	13,635	8,323	5,611	631,118
North America[a]	80,736	64,200	16,536	11,759	1,486,487
Total	$ 102,694	$ 77,835	$ 24,859	$ 17,370	$ 2,117,605
2009[b]					
Europe/Middle East and Africa	$ 16,294	$ 8,620	$ 7,674	$ 5,212	$ 375,406
Asia and Pacific	5,429	3,528	1,901	1,286	112,798
Latin America and the Caribbean	1,867	1,083	784	463	23,692
Total international	23,590	13,231	10,359	6,961	511,896
North America[a]	76,844	71,136	5,708	4,767	1,520,093
Total	$ 100,434	$ 84,367	$ 16,067	$ 11,728	$ 2,031,989

(a) Substantially reflects the U.S.
(b) The regional allocation of revenue, expense and net income for 2010 and 2009 has been modified to conform with current allocation methodologies.
(c) Revenue is composed of net interest income and noninterest revenue.
(d) Expense is composed of noninterest expense and the provision for credit losses.

Note 33 – Business segments

The Firm is managed on a line of business basis. There are six major reportable business segments – Investment Bank, Retail Financial Services, Card Services & Auto, Commercial Banking, Treasury & Securities Services and Asset Management, as well as a Corporate/Private Equity segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 76–78 of this Annual Report. For a further discussion concerning JPMorgan Chase's business segments, see Business Segment Results on pages 79–80 of this Annual Report.

The following is a description of each of the Firm's business segments:

Investment Bank

J.P. Morgan is one of the world's leading investment banks, with deep client relationships and broad product capabilities. The clients of IB are corporations, financial institutions, governments and institutional investors. The Firm offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, sophisticated risk management, market-making in cash securities and derivative instruments, prime brokerage, and research.

Retail Financial Services

RFS serves consumers and businesses through personal service at bank branches and through ATMs, online banking and telephone banking. RFS is organized into Consumer & Business Banking and Mortgage Banking (including Mortgage Production and Servicing, and Real Estate Portfolios). Consumer & Business Banking includes branch banking and business banking activities. Mortgage Production and Servicing includes mortgage origination and servicing activities. Real Estate Portfolios comprises residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Customers can use more than 5,500 bank branches (third largest nationally) and more than 17,200 ATMs (second largest nationally), as well as online and mobile banking around the clock. More than 33,500 branch salespeople assist customers with checking and savings accounts, mortgages, home equity and business loans, and investments across the 23-state footprint from New York and Florida to California. As one of the largest mortgage originators in the U.S., Chase helps customers buy or refinance homes resulting in approximately $150 billion of

mortgage originations annually. Chase also services more than 8 million mortgages and home equity loans.

Card Services & Auto
Card Services & Auto is one of the nation's largest credit card issuers, with over $132 billion in credit card loans. Customers have over 65 million open credit card accounts (excluding the commercial card portfolio), and used Chase credit cards to meet over $343 billion of their spending needs in 2011. Through its Merchant Services business, Chase Paymentech Solutions, Card is a global leader in payment processing and merchant acquiring. Consumers also can obtain loans through more than 17,200 auto dealerships and 2,000 schools and universities nationwide.

Commercial Banking
CB delivers extensive industry knowledge, local expertise and dedicated service to more than 24,000 clients nationally, including corporations, municipalities, financial institutions and not-for-profit entities with annual revenue generally ranging from $10 million to $2 billion, and nearly 35,000 real estate investors/owners. CB partners with the Firm's other businesses to provide comprehensive solutions, including lending, treasury services, investment banking and asset management, to meet its clients' domestic and international financial needs.

Treasury & Securities Services
TSS is a global leader in transaction, investment and information services. TSS is one of the world's largest cash management providers and a leading global custodian. Treasury Services ("TS") provides cash management, trade, wholesale card and liquidity products and services to small- and mid-sized companies, multinational corporations, financial institutions and government entities. TS partners with IB, CB, RFS and Asset Management businesses to serve clients firmwide. Certain TS revenue is included in other segments' results. Worldwide Securities Services holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Asset Management
AM, with assets under supervision of $1.9 trillion, is a global leader in investment and wealth management. AM clients include institutions, retail investors and high-net-worth individuals in every major market throughout the world. AM offers global investment management in equities, fixed income, real estate, hedge funds, private equity and liquidity products, including money-market instruments and bank deposits. AM also provides trust and estate, banking and brokerage services to high-net-worth clients, and retirement services for corporations and individuals. The majority of AM's client assets are in actively managed portfolios.

Corporate/Private Equity
The Corporate/Private Equity sector comprises Private Equity, Treasury, the Chief Investment Office, corporate staff units and expense that is centrally managed. Treasury and the Chief Investment Office manage capital, liquidity, and structural risks of the Firm. The corporate staff units include Central Technology and Operations, Internal Audit, Executive Office, Finance, Human Resources, Marketing & Communications, Legal & Compliance, Corporate Real Estate and General Services, Risk Management, Corporate Responsibility and Strategy & Development. Other centrally managed expense includes the Firm's occupancy and pension-related expense, net of allocations to the business.

Business segment changes
Commencing July 1, 2011, the Firm's business segments have been reorganized as follows:

Auto and Student Lending transferred from the RFS segment and are reported with Card in a single segment. Retail Financial Services continues as a segment, organized in two components: Consumer & Business Banking (formerly Retail Banking) and Mortgage Banking (including Mortgage Production and Servicing, and Real Estate Portfolios).

The business segment information associated with RFS and Card have been revised to reflect the business reorganization retroactive to January 1, 2009.

Effective January 1, 2010, the Firm enhanced its line of business equity framework to better align equity assigned to the lines of business with changes anticipated to occur in each line of business, and to reflect the competitive and regulatory landscape. The lines of business are now capitalized based on the Tier 1 common standard, rather than the Tier 1 capital standard. In addition, effective January 1, 2011, capital allocated to Card was reduced, largely reflecting portfolio runoff and the improving risk profile of the business; and capital allocated to TSS was increased, reflecting growth in the underlying business.

Segment results
The following tables provide a summary of the Firm's segment results for 2011, 2010 and 2009 on a managed basis. Prior to the January 1, 2010, adoption of the accounting guidance related to VIEs, the impact of credit card securitization adjustments had been included in reconciling items; as a result, the total Firm results are on a reported basis. Finally, total net revenue (noninterest revenue and net interest income) for each of the segments is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit).

Segment results and reconciliation[a]

As of or the year ended December 31, (in millions, except ratios)	Investment Bank			Retail Financial Services			Card Services & Auto[f]			Commercial Banking		
	2011	2010	2009	**2011**	2010	2009	**2011**	2010	2009	**2011**	2010	2009
Noninterest revenue	**$ 17,971**	$ 18,253	$ 18,522	**$ 10,405**	$ 11,227	$ 11,414	**$ 4,892**	$ 4,278	$ 3,706	**$ 2,195**	$ 2,200	$ 1,817
Net interest income	**8,303**	7,964	9,587	**16,133**	17,220	18,383	**14,249**	16,194	19,493	**4,223**	3,840	3,903
Total net revenue	**26,274**	26,217	28,109	**26,538**	28,447	29,797	**19,141**	20,472	23,199	**6,418**	6,040	5,720
Provision for credit losses	**(286)**	(1,200)	2,279	**3,999**	8,919	14,754	**3,621**	8,570	19,648	**208**	297	1,454
Credit allocation income/ (expense)[b]	**–**	–	–	**–**	–	–	**–**	–	–	**–**	–	–
Noninterest expense[c]	**16,116**	17,265	15,401	**19,458**	16,483	15,512	**8,045**	7,178	6,617	**2,278**	2,199	2,176
Income/(loss) before income tax expense/ (benefit) and extraordinary gain	**10,444**	10,152	10,429	**3,081**	3,045	(469)	**7,475**	4,724	(3,066)	**3,932**	3,544	2,090
Income tax expense/ (benefit)	**3,655**	3,513	3,530	**1,403**	1,317	(134)	**2,931**	1,852	(1,273)	**1,565**	1,460	819
Income/(loss) before extraordinary gain	**6,789**	6,639	6,899	**1,678**	1,728	(335)	**4,544**	2,872	(1,793)	**2,367**	2,084	1,271
Extraordinary gain[d]	**–**	–	–	**–**	–	–	**–**	–	–	**–**	–	–
Net income/(loss)	**$ 6,789**	$ 6,639	$ 6,899	**$ 1,678**	$ 1,728	$ (335)	**$ 4,544**	$ 2,872	$ (1,793)	**$ 2,367**	$ 2,084	$ 1,271
Average common equity	**$ 40,000**	$ 40,000	$ 33,000	**$ 25,000**	$ 24,600	$ 22,457	**$ 16,000**	$ 18,400	$ 17,543	**$ 8,000**	$ 8,000	$ 8,000
Total assets	**776,430**	825,150	706,944	**274,795**	299,950	322,185	**208,467**	208,793	255,029	**158,040**	142,646	130,280
Return on average common equity[e]	**17%**	17%	21%	**7%**	7%	(1)%	**28%**	16%	(10)%	**30%**	26%	16%
Overhead ratio	**61**	66	55	**73**	58	52	**42**	35	29	**35**	36	38

(a) In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's lines of business results on a "managed basis," which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications as discussed below that do not have any impact on net income as reported by the lines of business or by the Firm as a whole.

(b) IB manages traditional credit exposures related to the Global Corporate Bank ("GCB") on behalf of IB and TSS. Effective January 1, 2011, IB and TSS share the economics related to the Firm's GCB clients. Included within this allocation are net revenue, provision for credit losses and expenses. Prior years reflected a reimbursement to IB for a portion of the total costs of managing the credit portfolio. IB recognizes this credit allocation as a component of all other income.

(c) Includes merger costs, which are reported in the Corporate/Private Equity segment. There were no merger costs in 2011 and 2010. Merger costs attributed to the business segments for 2009 was as follows.

Year ended December 31, (in millions)	2009
Investment Bank	$ 27
Retail Financial Services	228
Card Services & Auto	40
Commercial Banking	6
Treasury & Securities Services	11
Asset Management	6
Corporate/Private Equity	163

(d) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual from the FDIC for $1.9 billion. The fair value of the net assets acquired exceeded the purchase price, which resulted in negative goodwill. In accordance with U.S. GAAP for business combinations, nonfinancial assets that are not held-for-sale, such as premises and equipment and other intangibles, acquired in the Washington Mutual transaction were written down against that negative goodwill. The negative goodwill that remained after writing down nonfinancial assets was recognized as an extraordinary gain. A preliminary gain of $1.9 billion was recognized at December 31, 2008. As a result of the final refinement of the purchase price allocation in 2009, the Firm recognized a $76 million increase in the extraordinary gain. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion.

(e) Ratio is based on income/(loss) before extraordinary gain for 2009.

(f) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Prior to the adoption of the new guidance, managed results for credit Card excluded the impact of credit card securitizations on total net revenue, provision for credit losses and average assets, as JPMorgan Chase treated the sold receivables as if they were still on the balance sheet in evaluating the credit performance of the entire managed credit card portfolio, as operations are funded, and decisions are made about allocating resources, such as employees and capital, based on managed information. These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results. The related securitization adjustments were as follows.

Year ended December 31, (in millions)	2009
Noninterest revenue	$ (1,494)
Net interest income	7,937
Provision for credit losses	6,443
Total assets	80,882

(table continued from previous page)

Treasury & Securities Services			Asset Management			Corporate/Private Equity			Reconciling Items[f][g]			Total		
2011	2010	2009	**2011**	2010	2009	**2011**	2010	2009	**2011**	2010	2009	**2011**	2010	2009
$ 4,544	$ 4,757	$ 4,747	**$ 7,895**	$ 7,485	$ 6,372	**$ 3,638**	$ 5,359	$ 2,771	**$ (1,995)**	$ (1,866)	$ (67)	**$ 49,545**	$ 51,693	$ 49,282
3,158	2,624	2,597	**1,648**	1,499	1,593	**505**	2,063	3,863	**(530)**	(403)	(8,267)	**47,689**	51,001	51,152
7,702	7,381	7,344	**9,543**	8,984	7,965	**4,143**	7,422	6,634	**(2,525)**	(2,269)	(8,334)	**97,234**	102,694	100,434
1	(47)	55	**67**	86	188	**(36)**	14	80	**–**	–	(6,443)	**7,574**	16,639	32,015
8	(121)	(121)	**–**	–	–	**–**	–	–	**(8)**	121	121	**–**	–	–
5,863	5,604	5,278	**7,002**	6,112	5,473	**4,149**	6,355	1,895	**–**	–	–	**62,911**	61,196	52,352
1,846	1,703	1,890	**2,474**	2,786	2,304	**30**	1,053	4,659	**(2,533)**	(2,148)	(1,770)	**26,749**	24,859	16,067
642	624	664	**882**	1,076	874	**(772)**	(205)	1,705	**(2,533)**	(2,148)	(1,770)	**7,773**	7,489	4,415
1,204	1,079	1,226	**1,592**	1,710	1,430	**802**	1,258	2,954	**–**	–	–	**18,976**	17,370	11,652
–	–	–	**–**	–	–	**–**	–	76	**–**	–	–	**–**	–	76
$ 1,204	$ 1,079	$ 1,226	**$ 1,592**	$ 1,710	$ 1,430	**$ 802**	$ 1,258	$ 3,030	**$ –**	$ –	$ –	**$ 18,976**	$ 17,370	$ 11,728
$ 7,000	$ 6,500	$ 5,000	**$ 6,500**	$ 6,500	$ 7,000	**$ 70,766**	$ 57,520	$ 52,903	**$ –**	$ –	$ –	**$ 173,266**	$ 161,520	$ 145,903
68,665	45,481	38,054	**86,242**	68,997	64,502	**693,153**	526,588	595,877	**NA**	NA	(80,882)	**2,265,792**	2,117,605	2,031,989
17%	17%	25%	**25%**	26%	20%	**NM**	NM	NM	**NM**	NM	NM	**11%**	10%	6%
76	76	72	**73**	68	69	**NM**	NM	NM	**NM**	NM	NM	**65**	60	52

(g) Segment managed results reflect revenue on a tax-equivalent basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results. Tax-equivalent adjustments for the years ended December 31, 2011, 2010 and 2009 were as follows.

Year ended December 31, (in millions)	**2011**	2010	2009
Noninterest revenue	**$ 2,003**	$ 1,745	$ 1,440
Net interest income	**530**	403	330
Income tax expense	**2,533**	2,148	1,770

Note 34 – Parent company

Parent company – Statements of income

Year ended December 31, (in millions)	2011	2010	2009
Income			
Dividends from subsidiaries:			
Bank and bank holding company	**$ 10,852**	$ 16,554	$ 15,235
Nonbank[a]	**2,651**	932	1,036
Interest income from subsidiaries	**1,099**	985	1,501
Other interest income	**384**	294	266
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**809**	680	233
Nonbank	**92**	312	742
Other income/(loss)	**(85)**	157	844
Total income	**15,802**	19,914	19,857
Expense			
Interest expense to subsidiaries[a]	**1,121**	1,263	1,118
Other interest expense	**4,447**	3,782	4,696
Other noninterest expense	**649**	540	988
Total expense	**6,217**	5,585	6,802
Income before income tax benefit and undistributed net income of subsidiaries	**9,585**	14,329	13,055
Income tax benefit	**1,089**	511	1,269
Equity in undistributed net income of subsidiaries	**8,302**	2,530	(2,596)
Net income	**$ 18,976**	$ 17,370	$ 11,728

Parent company – Balance sheets

December 31, (in millions)	2011	2010
Assets		
Cash and due from banks	**$ 132**	$ 96
Deposits with banking subsidiaries	**91,622**	80,201
Trading assets	**18,485**	16,038
Available-for-sale securities	**3,657**	3,176
Loans	**1,880**	1,849
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**39,888**	54,887
Nonbank	**83,138**	72,080
Investments (at equity) in subsidiaries:		
Bank and bank holding company	**157,160**	150,876
Nonbank[a]	**42,231**	38,000
Goodwill and other intangibles	**1,027**	1,050
Other assets	**15,506**	17,171
Total assets	**$ 454,726**	$ 435,424
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries[a]	**$ 30,231**	$ 28,332
Other borrowed funds, primarily commercial paper	**59,891**	41,874
Other liabilities	**7,653**	7,302
Long-term debt[b][c]	**173,378**	181,810
Total liabilities[c]	**271,153**	259,318
Total stockholders' equity	**183,573**	176,106
Total liabilities and stockholders' equity	**$ 454,726**	$ 435,424

Parent company – Statements of cash flows

Year ended December 31, (in millions)	2011	2010	2009
Operating activities			
Net income	**$ 18,976**	$ 17,370	$ 11,728
Less: Net income of subsidiaries[a]	**21,805**	20,016	13,675
Parent company net loss	**(2,829)**	(2,646)	(1,947)
Cash dividends from subsidiaries[a]	**13,414**	17,432	16,054
Other, net	**889**	1,685	1,852
Net cash provided by operating activities	**11,474**	16,471	15,959
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**20,866**	7,692	(27,342)
Available-for-sale securities:			
Purchases	**(1,109)**	(1,387)	(1,454)
Proceeds from sales and maturities	**886**	745	522
Loans, net	**153**	(90)	209
Advances to subsidiaries, net	**(28,105)**	8,051	28,808
Investments (at equity) in subsidiaries, net[a]	**(1,530)**	(871)	(6,582)
Net cash (used in)/provided by investing activities	**(8,839)**	14,140	(5,839)
Financing activities			
Net change in borrowings from subsidiaries[a]	**2,827**	(2,039)	(4,935)
Net change in other borrowed funds	**16,268**	(11,843)	1,894
Proceeds from the issuance of long-term debt	**33,566**	21,610	32,304
Proceeds from the assumption of subsidiaries long-term debt[d]	**–**	–	15,264
Repayments of long-term debt	**(41,747)**	(32,893)	(31,964)
Excess tax benefits related to stock-based compensation	**867**	26	17
Redemption of preferred stock issued to the U.S. Treasury	**–**	–	(25,000)
Redemption of other preferred stock	**–**	(352)	–
Proceeds from issuance of common stock	**–**	–	5,756
Treasury stock and warrants repurchased	**(8,863)**	(2,999)	–
Dividends paid	**(3,895)**	(1,486)	(3,422)
All other financing activities, net	**(1,622)**	(641)	33
Net cash used in financing activities	**(2,599)**	(30,617)	(10,053)
Net increase/(decrease) in cash and due from banks	**36**	(6)	67
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	**96**	102	35
Cash and due from banks at the end of the year, primarily with bank subsidiaries	**$ 132**	$ 96	$ 102
Cash interest paid	**$ 5,800**	$ 5,090	$ 5,629
Cash income taxes paid, net	**5,885**	7,001	3,124

(a) Subsidiaries include trusts that issued guaranteed capital debt securities ("issuer trusts"). The Parent received dividends of $13 million, $13 million and $14 million from the issuer trusts in 2011, 2010 and 2009, respectively. For further discussion on these issuer trusts, see Note 21 on pages 273–275 of this Annual Report.

(b) At December 31, 2011, long-term debt that contractually matures in 2012 through 2016 totaled $42.5 billion, $17.4 billion, $24.9 billion, $16.7 billion and $17.5 billion, respectively.

(c) For information regarding the Firm's guarantees of its subsidiaries' obligations, see Note 21 and Note 29 on pages 273–275 and 283–289, respectively, of this Annual Report.

(d) Represents the assumption of Bear Stearns long-term debt by JPMorgan Chase & Co.

Selected quarterly financial data (unaudited)

(Table continued on next page)

As of or for the period ended	2011				2010			
(in millions, except per share, ratio and headcount data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Noninterest revenue	**$ 9,340**	**$ 11,946**	**$ 14,943**	**$ 13,316**	$ 13,996	$ 11,322	$ 12,414	$ 13,961
Net interest income	**12,131**	**11,817**	**11,836**	**11,905**	12,102	12,502	12,687	13,710
Total net revenue	**21,471**	**23,763**	**26,779**	**25,221**	26,098	23,824	25,101	27,671
Total noninterest expense	**14,540**	**15,534**	**16,842**	**15,995**	16,043	14,398	14,631	16,124
Pre-provision profit[a]	**6,931**	**8,229**	**9,937**	**9,226**	10,055	9,426	10,470	11,547
Provision for credit losses	**2,184**	**2,411**	**1,810**	**1,169**	3,043	3,223	3,363	7,010
Income before income tax expense	**4,747**	**5,818**	**8,127**	**8,057**	7,012	6,203	7,107	4,537
Income tax expense	**1,019**	**1,556**	**2,696**	**2,502**	2,181	1,785	2,312	1,211
Net income	**$ 3,728**	**$ 4,262**	**$ 5,431**	**$ 5,555**	$ 4,831	$ 4,418	$ 4,795	$ 3,326
Per common share data								
Average: Basic	**$ 0.90**	**$ 1.02**	**$ 1.28**	**$ 1.29**	$ 1.13	$ 1.02	$ 1.10	$ 0.75
Diluted	**0.90**	**1.02**	**1.27**	**1.28**	1.12	1.01	1.09	0.74
Cash dividends declared per share[b]	**0.25**	**0.25**	**0.25**	**0.25**	0.05	0.05	0.05	0.05
Book value per share	**46.59**	**45.93**	**44.77**	**43.34**	43.04	42.29	40.99	39.38
Common shares outstanding								
Average: Basic	**3,801.9**	**3,859.6**	**3,958.4**	**3,981.6**	3,917.0	3,954.3	3,983.5	3,970.5
Diluted	**3,811.7**	**3,872.2**	**3,983.2**	**4,014.1**	3,935.2	3,971.9	4,005.6	3,994.7
Common shares at period-end	**3,772.7**	**3,798.9**	**3,910.2**	**3,986.6**	3,910.3	3,925.8	3,975.8	3,975.4
Share price[c]								
High	**$ 37.54**	**$ 42.55**	**$ 47.80**	**$ 48.36**	$ 43.12	$ 41.70	$ 48.20	$ 46.05
Low	**27.85**	**28.53**	**39.24**	**42.65**	36.21	35.16	36.51	37.03
Close	**33.25**	**30.12**	**40.94**	**46.10**	42.42	38.06	36.61	44.75
Market capitalization	**125,442**	**114,422**	**160,083**	**183,783**	165,875	149,418	145,554	177,897
Financial ratios								
Return on common equity	**8%**	**9%**	**12%**	**13%**	11%	10%	12%	8%
Return on tangible common equity	**11**	**13**	**17**	**18**	16	15	17	12
Return on assets	**0.65**	**0.76**	**0.99**	**1.07**	0.92	0.86	0.94	0.66
Overhead ratio	**68**	**65**	**63**	**63**	61	60	58	58
Deposits-to-loans ratio	**156**	**157**	**152**	**145**	134	131	127	130
Tier 1 capital ratio	**12.3**	**12.1**	**12.4**	**12.3**	12.1	11.9	12.1	11.5
Total capital ratio	**15.4**	**15.3**	**15.7**	**15.6**	15.5	15.4	15.8	15.1
Tier 1 leverage ratio	**6.8**	**6.8**	**7.0**	**7.2**	7.0	7.1	6.9	6.6
Tier 1 common capital ratio[d]	**10.1**	**9.9**	**10.1**	**10.0**	9.8	9.5	9.6	9.1
Selected balance sheet data (period-end)								
Trading assets	**$ 443,963**	**$ 461,531**	**$ 458,722**	**$ 501,148**	$ 489,892	$ 475,515	$ 397,508	$ 426,128
Securities	**364,793**	**339,349**	**324,741**	**334,800**	316,336	340,168	312,013	344,376
Loans	**723,720**	**696,853**	**689,736**	**685,996**	692,927	690,531	699,483	713,799
Total assets	**2,265,792**	**2,289,240**	**2,246,764**	**2,198,161**	2,117,605	2,141,595	2,014,019	2,135,796
Deposits	**1,127,806**	**1,092,708**	**1,048,685**	**995,829**	930,369	903,138	887,805	925,303
Long-term debt[f]	**256,775**	**273,688**	**279,228**	**269,616**	270,653	271,495	260,442	278,685
Common stockholders' equity	**175,773**	**174,487**	**175,079**	**172,798**	168,306	166,030	162,968	156,569
Total stockholders' equity	**183,573**	**182,287**	**182,879**	**180,598**	176,106	173,830	171,120	164,721
Headcount	**260,157**	**256,663**	**250,095**	**242,929**	239,831	236,810	232,939	226,623

(Table continued from previous page)

As of or for the period ended	2011				2010			
(in millions, except ratio data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Credit quality metrics								
Allowance for credit losses	**$ 28,282**	**$ 29,036**	**$ 29,146**	**$ 30,438**	$ 32,983	$ 35,034	$ 36,748	$ 39,126
Allowance for loan losses to total retained loans	**3.84%**	**4.09%**	**4.16%**	**4.40%**	4.71%	4.97%	5.15%	5.40%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[g]	**3.35**	**3.74**	**3.83**	**4.10**	4.46	5.12	5.34	5.64
Nonperforming assets	**$ 11,036**	**$ 12,194**	**$ 13,240**	**$ 14,986**	$ 16,557	$ 17,656	$ 18,156	$ 19,019
Net charge-offs[h]	**2,907**	**2,507**	**3,103**	**3,720**	5,104	4,945	5,714	7,910
Net charge-off rate[h]	**1.64%**	**1.44%**	**1.83%**	**2.22%**	2.95%	2.84%	3.28%	4.46%

(a) Pre-provision profit is total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

(b) On March 18, 2011, the Board of Directors increased the Firm's quarterly stock dividend from $0.05 to $0.25 per share.

(c) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.

(d) Tier 1 common capital ratio ("Tier 1 common ratio") is Tier 1 common capital ("Tier 1 common") divided by risk-weighted assets. The Firm uses Tier 1 common capital along with the other capital measures to assess and monitor its capital position. For further discussion of Tier 1 common ratio, see Regulatory capital on pages 119–122 of this Annual Report.

(f) Effective January 1, 2011, the long-term portion of advances from FHLBs was reclassified from other borrowed funds to long-term debt. Prior periods have been revised to conform with the current presentation.

(g) Excludes the impact of residential real estate PCI loans. For further discussion, see Allowance for credit losses on pages 155–157 of this Annual Report.

(h) Net charge-offs and net charge-off rates for the fourth quarter of 2010 include the effect of $632 million of charge-offs related to the estimated net realizable value of the collateral underlying delinquent residential home loans. Because these losses were previously recognized in the provision and allowance for loan losses, this adjustment had no impact on the Firm's net income.

Short-term and other borrowed funds

The following table provides a summary of JPMorgan Chase's short-term and other borrowed funds for the years indicated.

As of or for the year ended December 31, (in millions, except rates)	2011	2010	2009
Federal funds purchased and securities loaned or sold under repurchase agreements:			
Balance at year-end	**$ 213,532**	$ 276,644	$ 261,413
Average daily balance during the year	**256,283**	278,603	275,862
Maximum month-end balance	**289,835**	314,161	310,802
Weighted-average rate at December 31	**0.16%**	0.18%	0.04%
Weighted-average rate during the year	**0.21**	(0.07) [d]	0.21
Commercial paper:			
Balance at year-end	**$ 51,631**	$ 35,363	$ 41,794
Average daily balance during the year	**42,653**	36,000	39,055
Maximum month-end balance	**51,631**	50,554	53,920
Weighted-average rate at December 31	**0.12%**	0.21%	0.18%
Weighted-average rate during the year	**0.17**	0.20	0.28
Other borrowed funds:[a][b]			
Balance at year-end	**$ 88,626**	$ 111,272	$ 97,838
Average daily balance during the year	**107,543**	104,951	99,785
Maximum month-end balance	**127,517**	120,437	155,693
Weighted-average rate at December 31	**1.60%**	5.71%	3.92%
Weighted-average rate during the year	**2.50**	2.89	2.83
Short-term beneficial interests:[c]			
Commercial paper and other borrowed funds:			
Balance at year-end	**$ 26,243**	$ 25,095	$ 4,787
Average daily balance during the year	**25,125**	21,853	3,275
Maximum month-end balance	**26,780**	25,095	7,751
Weighted-average rate at December 31	**0.18%**	0.25%	0.17%
Weighted-average rate during the year	**0.23**	0.27	0.24

(a) Includes securities sold but not yet purchased.
(b) Effective January 1, 2011, $23.0 billion of long-term advances from FHLBs were reclassified from other borrowed funds to long-term debt. The prior periods have been revised to conform with the current presentation.
(c) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated variable interest entities.
(d) Reflects a benefit from the favorable market environments for U.S. dollar-roll financings.

Federal funds purchased represent overnight funds. Securities loaned or sold under repurchase agreements generally mature between one day and three months. Commercial paper generally is issued in amounts not less than $100,000, and with maturities of 270 days or less. Other borrowed funds consist of demand notes, term federal funds purchased, and various other borrowings that generally have maturities of one year or less.

ACH: Automated Clearing House.

Active mobile customers - Retail banking users of all mobile platforms, which include: SMS text, Mobile Browser, iPhone, iPad and Android, who have been active in the past 90 days.

Allowance for loan losses to total loans: Represents period-end allowance for loan losses divided by retained loans.

Assets under management: Represent assets actively managed by AM on behalf of Private Banking, Institutional and Retail clients. Includes "Committed capital not Called," on which AM earns fees. Excludes assets managed by American Century Companies, Inc., in which the Firm sold its ownership interest on August 31, 2011.

Assets under supervision: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Average managed assets: Refers to total assets on the Firm's Consolidated Balance Sheets plus credit card receivables that have been securitized and removed from the Firm's Consolidated Balance Sheets, for periods ended prior to the January 1, 2010, adoption of new accounting guidance requiring the consolidation of the Firm-sponsored credit card securitization trusts.

Beneficial interests issued by consolidated VIEs: Represents the third-party interests issued by VIEs that JPMorgan Chase consolidates where the third-party interest holders do not have recourse to the general credit of JPMorgan Chase. The underlying obligations of the VIEs consist of short-term borrowings, commercial paper and long-term debt.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Client advisors: Investment product specialists, including Private Client Advisors, Financial Advisors, Financial Advisor Associates, Senior Financial Advisors, Independent Financial Advisors and Financial Advisor Associate trainees, who advise clients on investment options, including annuities, mutual funds, stock trading services, etc., sold by the Firm or by third party vendors through retail branches, Chase Private Client branches and other channels.

Client investment managed accounts - Assets actively managed by Chase Wealth Management on behalf of clients. The percentage of managed accounts is calculated by dividing managed account assets by total client investment assets.

Contractual credit card charge-off: In accordance with the Federal Financial Institutions Examination Council policy, credit card loans are charged off by the end of the month in which the account becomes 180 days past due or within 60 days from receiving notification about a specific event (e.g., bankruptcy of the borrower), whichever is earlier.

Corporate/Private Equity: Includes Private Equity, Treasury and Chief Investment Office, and Corporate Other, which includes other centrally managed expense and discontinued operations.

Credit card securitizations: For periods ended prior to the January 1, 2010, adoption of new guidance relating to the accounting for the transfer of financial assets and the consolidation of VIEs, Card's results were presented on a "managed" basis that assumed that credit card loans that had been securitized and sold in accordance with U.S. GAAP remained on the Consolidated Balance Sheets and that earnings on the securitized loans were classified in the same manner as the earnings on retained loans recorded on the Consolidated Balance Sheets. "Managed" results excluded the impact of credit card securitizations on total net revenue, the provision for credit losses, net charge-offs and loans. Securitization did not change reported net income; however, it did affect the classification of items on the Consolidated Statements of Income and Consolidated Balance Sheets.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event, which may include, among other events, the bankruptcy or failure to pay by, or certain restructurings of the debt of, the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the credit default swap contract and the fair value of the reference obligation at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is made by the relevant ISDA Determination Committee, comprised of 10 sell-side and five buy-side ISDA member firms.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again. The duration of a credit cycle can vary from a couple of years to several years.

CUSIP number: A CUSIP (i.e., Committee on Uniform Securities Identification Procedures) number identifies most securities, including: stocks of all registered U.S. and Canadian companies, and U.S. government and municipal bonds. The CUSIP system – owned by the American Bankers Association and operated by Standard & Poor's – facilitates the clearing and settlement process of securities. The number consists of nine characters (including letters and numbers) that uniquely identify a company or issuer and the type of security. A similar system is used to identify non-U.S. securities (CUSIP International Numbering System).

Deposit margin: Represents net interest income expressed as a percentage of average deposits.

FASB: Financial Accounting Standards Board.

FDIC: Federal Deposit Insurance Corporation.

FICO score: A measure of consumer credit risk provided by

credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

G7 government bonds: Bonds issued by the government of one of countries in the "Group of Seven" ("G7") nations. Countries in the G7 are Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

Global Corporate Bank: TSS and IB formed a joint venture to create the Firm's Global Corporate Bank. With a team of bankers, the Global Corporate Bank serves multinational clients by providing them access to TSS products and services and certain IB products, including derivatives, foreign exchange and debt. The cost of this effort and the credit that the Firm extends to these clients is shared between TSS and IB.

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

Home equity - senior lien: Represents loans where JP Morgan Chase holds the first security interest on the property.

Home equity - junior lien: Represents loans where JP Morgan Chase holds a security interest that is subordinate in rank to other liens.

Interchange income: A fee paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Interests in purchased receivables: Represents an ownership interest in cash flows of an underlying pool of receivables transferred by a third-party seller into a bankruptcy-remote entity, generally a trust.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

ISDA: International Swaps and Derivatives Association.

LLC: Limited Liability Company.

Loan-to-value ("LTV") ratio: For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio
The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio
An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices comprise actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all lien positions related to the property. Combined LTV ratios are used for junior lien home equity products.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. For periods ended prior to the January 1, 2010, adoption of accounting guidance requiring the consolidation of the Firm-sponsored credit card securitization trusts, the Firm's managed-basis presentation also included certain reclassification adjustments that assumed credit card loans that were securitized remained on the Consolidated Balance Sheets. Management uses this non-GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Managed credit card portfolio: Refers to credit card receivables on the Firm's Consolidated Balance Sheets plus credit card receivables that have been securitized and removed from the Firm's Consolidated Balance Sheets, for periods ended prior to the January 1, 2010, adoption of accounting guidance requiring the consolidation of the Firm-sponsored credit card securitization trusts.

Mark-to-market exposure: A measure, at a point in time, of the value of a derivative or foreign exchange contract in the open market. When the fair value is positive, it indicates the counterparty owes JPMorgan Chase and, therefore, creates credit risk for the Firm. When the fair value is negative, JPMorgan Chase owes the counterparty; in this situation, the Firm has liquidity risk.

Master netting agreement: An agreement between two counterparties who have multiple derivative contracts with each other that provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

Mortgage product types:

Alt-A
Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high combined-loan-to-value ("CLTV") ratio; (iii) loans secured by non-

owner occupied properties; or (iv) a debt-to-income ratio above normal limits. Perhaps the most important characteristic is limited documentation. A substantial proportion of traditional Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs
The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime
Prime mortgage loans generally have low default risk and are made to borrowers with good credit records and a monthly income at least three to four times greater than their monthly housing expense (mortgage payments plus taxes and other debt payments). These borrowers provide full documentation and generally have reliable payment histories.

Subprime
Subprime loans are designed for customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

MSR risk management revenue: Includes changes in the fair value of the MSR asset due to market-based inputs, such as interest rates and volatility, as well as updates to assumptions used in the MSR valuation model; and derivative valuation adjustments and other, which represents changes in the fair value of derivative instruments used to offset the impact of changes in the market-based inputs to the MSR valuation model.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class (e.g., long-term fixed income, equity, cash, real assets, private equity or hedge funds).

NA: Data is not applicable or available for the period presented.

Net charge-off rate: Represents net charge-offs (annualized) divided by average retained loans for the reporting period.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

OPEB: Other postretirement employee benefits.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Participating securities: Represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings-per-share calculation using the two-class method.

Personal bankers: Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.

Portfolio activity: Describes changes to the risk profile of existing lending-related exposures and their impact on the allowance for credit losses from changes in customer profiles and inputs used to estimate the allowances.

Pre-provision profit: Total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pretax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is, therefore, another basis that management uses to evaluate the performance of TSS and AM against the performance of their respective competitors.

Purchased credit-impaired ("PCI") loans: Acquired loans deemed to be credit-impaired under the FASB guidance for PCI loans. The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., FICO score, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. Wholesale loans are determined to be credit-impaired if they meet the definition of an impaired loan under U.S. GAAP at the acquisition date. Consumer loans are determined to be credit-impaired based on specific risk characteristics of the loan, including product type, LTV ratios, FICO scores, and past due status.

Real estate investment trust ("REIT"): A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate related assets by pooling their capital to purchase and manage income property (i.e., equity REIT) and/or

mortgage loans (i.e., mortgage REIT). REITs can be publicly- or privately-held and they also qualify for certain favorable tax considerations.

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment excluding loans held-for-sale and loans at fair value.

Risk-weighted assets ("RWA"): Risk-weighted assets consist of on- and off-balance sheet assets that are assigned to one of several broad risk categories and weighted by factors representing their risk and potential for default. On-balance sheet assets are risk-weighted based on the perceived credit risk associated with the obligor or counterparty, the nature of any collateral, and the guarantor, if any. Off-balance sheet assets such as lending-related commitments, guarantees, derivatives and other applicable off-balance sheet positions are risk-weighted by multiplying the contractual amount by the appropriate credit conversion factor to determine the on-balance sheet credit equivalent amount, which is then risk-weighted based on the same factors used for on-balance sheet assets. RWA also incorporate a measure for the market risk related to applicable trading assets-debt and equity instruments, and foreign exchange and commodity derivatives. The resulting risk-weighted values for each of the risk categories are then aggregated to determine total RWA.

Sales specialists: Retail branch office and field personnel, including Business Bankers, Relationship Managers and Loan Officers, who specialize in marketing and sales of various business banking products (i.e., business loans, letters of credit, deposit accounts, Chase Paymentech, etc.) and mortgage products to existing and new clients.

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a commercially attractive track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Stress testing: A scenario that measures market risk under unlikely but plausible events in abnormal markets.

TARP: Troubled Asset Relief Program.

Taxable-equivalent basis: For managed results, total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

Troubled debt restructuring ("TDR"): Occurs when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury.

Value-at-risk ("VaR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC. The Washington Mutual acquisition resulted in negative goodwill, and accordingly, the Firm recorded an extraordinary gain. A preliminary gain of $1.9 billion was recognized at December 31, 2008. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion.

J.P. Morgan International Council

As of December 31, 2011

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Ayala Corporation
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Chief Operating Officer
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Union Square Hospitality Group

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Chief Executive Officer
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Chief Executive Officer and
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The Golub Corporation

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Chief Executive Officer
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Chief Executive Officer
The NPD Group, Inc.

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President and
Chief Executive Officer
SI Group, Inc.

Richard S. LeFrak
Chairman and
Chief Executive Officer
LeFrak Organization

Richard B. Leventhal
Chairman and
Chief Executive Officer
Fedway Associates, Inc.

John LiDestri
President and
Chief Executive Officer
LiDestri Foods, Inc.

Leo Liebowitz
Chairman
Getty Realty Corp.

William L. Mack
Founder and Chairman
AREA Property Partners

Peter Markson
Chairman and
Chief Executive Officer
Paris Accessories, Inc.

James F. McCann
Chief Executive Officer
1-800-Flowers.com

John Morphy
Former Senior Vice President,
Chief Financial Officer
and Secretary
Paychex, Inc.

Samuel I. Newhouse III
General Manager
Advance Publications Inc.

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Vice Chairman and
Chief Executive Officer
Rudin Management Company, Inc.

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President and
Chief Executive Officer
Montefiore Medical Center

C. David Sammons
President and
Chief Executive Officer
Subaru Distributors Corporation

John Shalam
Chairman
Audiovox Corporation

Kenneth L. Wallach
Chairman and
Chief Executive Officer
Central National-Gottesman Inc.

Fred Wilpon
Chairman
Sterling Equities, Inc.

Frank Lourenso
Chairman
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Retired Executive Vice President
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(Aerospace)

Crandall C. Bowles [1, 4]
Chairman
Springs Industries, Inc.
(Window fashions)

Stephen B. Burke [2, 3]
Chief Executive Officer
NBCUniversal, LLC
Executive Vice President
Comcast Corporation
(Television and entertainment)

David M. Cote [4, 5]
Chairman and
Chief Executive Officer
Honeywell International Inc.
(Diversified technology and manufacturing)

James S. Crown [5]
President
Henry Crown and Company
(Diversified investments)

Jamie Dimon
Chairman and
Chief Executive Officer
JPMorgan Chase & Co.

Ellen V. Futter [4, 5]
President and Trustee
American Museum of Natural History
(Museum)

William H. Gray, III [1, 4]
Chairman
Gray Global Strategies, Inc.
(Consulting and advisory)

Laban P. Jackson, Jr. [1]
Chairman and
Chief Executive Officer
Clear Creek Properties, Inc.
(Real estate development)

David C. Novak [2, 3]
Chairman and
Chief Executive Officer
Yum! Brands, Inc.
(Franchised restaurants)

Lee R. Raymond [2, 3]
Retired Chairman and
Chief Executive Officer
Exxon Mobil Corporation
(Oil and gas)

William C. Weldon [2, 3]
Chairman and
Chief Executive Officer
Johnson & Johnson
(Health care products)

Member of:

1 Audit Committee
2 Compensation & Management Development Committee
3 Corporate Governance & Nominating Committee
4 Public Responsibility Committee
5 Risk Policy Committee

Operating Committee

Jamie Dimon
Chairman and
Chief Executive Officer

Frank J. Bisignano
Chief Administrative Officer and
Mortgage Banking CEO

Douglas L. Braunstein
Chief Financial Officer

Michael J. Cavanagh
Treasury & Securities Services CEO

Stephen M. Cutler
General Counsel

John L. Donnelly
Head of Human Resources

Ina R. Drew
Chief Investment Officer

Mary Callahan Erdoes
Asset Management CEO

John J. Hogan
Chief Risk Officer

Todd Maclin
Consumer & Business Banking CEO

Douglas B. Petno
Commercial Banking CEO

Gordon A. Smith
Card, Merchant Services & Auto Finance CEO

Jes Staley
Investment Bank CEO

Barry L. Zubrow
Head of Corporate & Regulatory Affairs

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Nicolas Aguzin
Latin America

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California

Paul T. Bateman
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Philip F. Bleser
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Investment Bank

Phil Di Iorio
Asset Management

Joseph M. Evangelisti
Corporate Communications

Dr. Jacob A. Frenkel
JPMorgan Chase International

Martha J. Gallo
Chief Compliance Officer

George C. Gatch
Asset Management

Scott Geller
Business Banking

Walter A. Gubert
Europe, Middle East and Africa

Gregory L. Guyett
Global Corporate Bank

Carlos M. Hernandez
Investment Bank

Thomas J. Higgins
Chief Administrative Office

Robert C. Holmes
Commercial Banking

Dinkar Jetley
Worldwide Securities Services

Catherine M. Keating
Asset Management

James B. Lee, Jr.
Investment Bank

Achilles O. Macris
Chief Investment Office

Mel R. Martinez
Florida, Mexico, Central America and Caribbean; JPMorgan Chase Foundation

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Investment Bank

Donald H. McCree, III
Treasury Services

Ryan McInerney
Consumer Banking

Michael O'Brien
Asset Management

Sandra E. O'Connor
Finance

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Investment Bank and EMEA

Louis Rauchenberger
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Marc Sheinbaum
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Irene Tse
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Sarah M. Youngwood
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Chile
Vicente Monge

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Eduardo F. Cepeda

North America

Canada
David E. Rawlings

JPMorgan Chase & Co.

Corporate headquarters

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New York, NY 10017-2070
Telephone: 212-270-6000
jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities LLC
J.P. Morgan Securities Ltd.

Annual Report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the U.S. Securities and Exchange Commission will be made available without charge upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070

Stock listing

New York Stock Exchange
London Stock Exchange
Tokyo Stock Exchange

The New York Stock Exchange ticker symbol for the common stock of JPMorgan Chase & Co. is JPM.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations website at jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000

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To contact any of the Board members or committee chairs, the Presiding Director or the non-management directors as a group, please mail correspondence to:

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Office of the Secretary
270 Park Avenue
New York, NY 10017-2070

The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct, the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting our website at jpmorganchase.com and clicking on "Governance" under the "About us" tab.

Transfer agent and registrar

Computershare Shareowner Services LLC
480 Washington Boulevard
Jersey City, NJ 07310-2053
Telephone: 800-758-4651
computershare.com

Investor Services Program

JPMorgan Chase & Co.'s Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorgan Chase & Co. common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, Computershare Shareowner Services LLC, by calling 800-758-4651, by writing to the address indicated above or by visiting its website at bnymellon.com/shareowner/equityaccess.

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480 Washington Boulevard
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Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, NY 10017-6204

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As of the beginning of 2009, JPMorgan Chase & Co. has distributed shareholder information under the U.S. Securities and Exchange Commission "Notice and Access" rule. As a result, the firm prints 700,000 fewer Annual Reports and Proxy Statements, which saves on an annual basis approximately 6,400 trees and 800 metric tons of CO_2 emissions.

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JPMorgan Chase & Co.

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2012 Investor Day agenda

Presentation	Speaker	Start time
Firm Overview	Doug Braunstein	8:30AM
Mortgage Banking	Frank Bisignano	9:05AM
Consumer & Business Banking	Todd Maclin	9:50AM
Break		10:35AM
Card Services & Auto	Gordon Smith	10:50AM
Commercial Banking	Doug Petno	11:30AM
Break		12:00PM
Lunch		12:15PM
Treasury & Securities Services	Mike Cavanagh	1:15PM
Asset Management	Mary Erdoes	1:45PM
Investment Bank	Jes Staley	2:15PM
Closing remarks and Q&A	Jamie Dimon	3:15PM

FIRM OVERVIEW

Doug Braunstein, Chief Financial Officer

February 28, 2012

JPMorgan Chase & Co.

Agenda

I. JPMorgan Chase overview
- Performance summary
- Customer focus
- Leveraging the franchise
- Global presence
- Loan growth and run-off portfolios
- Credit quality
- Deposit growth
- Net interest margin
- Expense and investments

II. Specific risk questions from investors
- European exposure
- Mortgage settlement
- Private label litigation

III. Firmwide capital
- LOB capital allocation
- Target returns
- Capital planning

IV. Key firmwide themes

V. Appendix

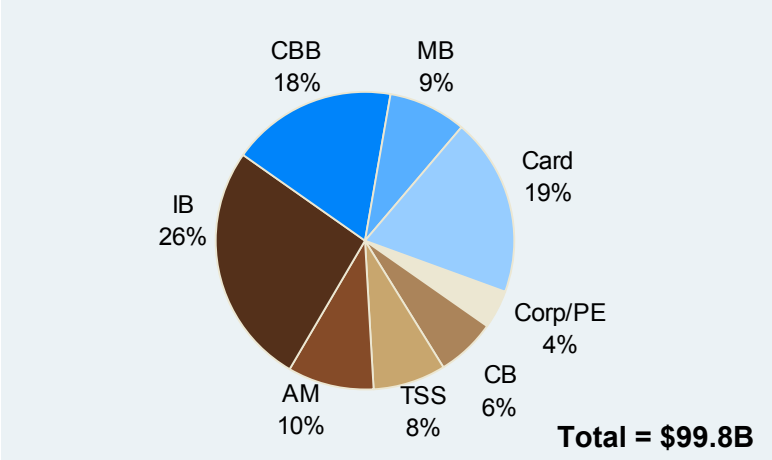
Performance summary

JPMorgan Chase overview

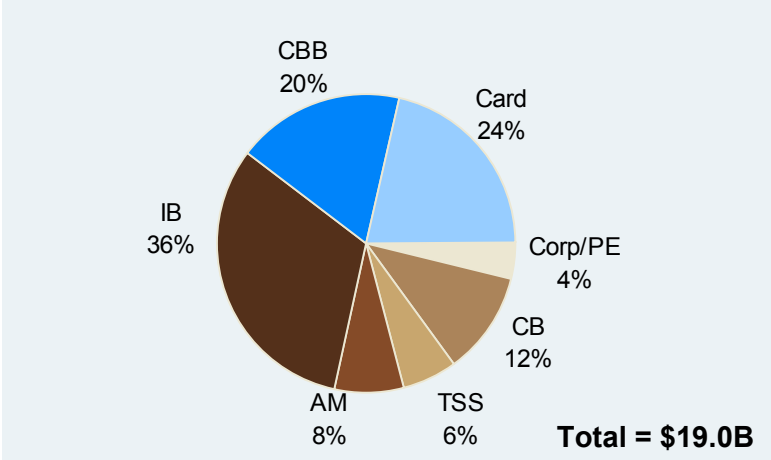
$mm, excluding EPS

	2010	2011	$O/(U) 2010
Revenue (FTE)[1]	$104,842	$99,767	($5,075)
Credit costs	16,639	7,574	(9,065)
Expense	61,196	62,911	1,715
Reported net income	$17,370	$18,976	$1,606
Net income applicable to common stock	$15,764	$17,568	$1,804
Reported EPS	$3.96	$4.48	$0.52
ROE	10%	11%	
ROTCE[2]	15	15	
Basel I Tier 1 common	$114,763	$122,916	$8,153
Basel I Tier 1 common ratio	9.8%	10.1%	
Basel III Tier 1 common ratio[3]	7.0	7.9	

Firmwide revenue – 2011



Net income – 2011[4]



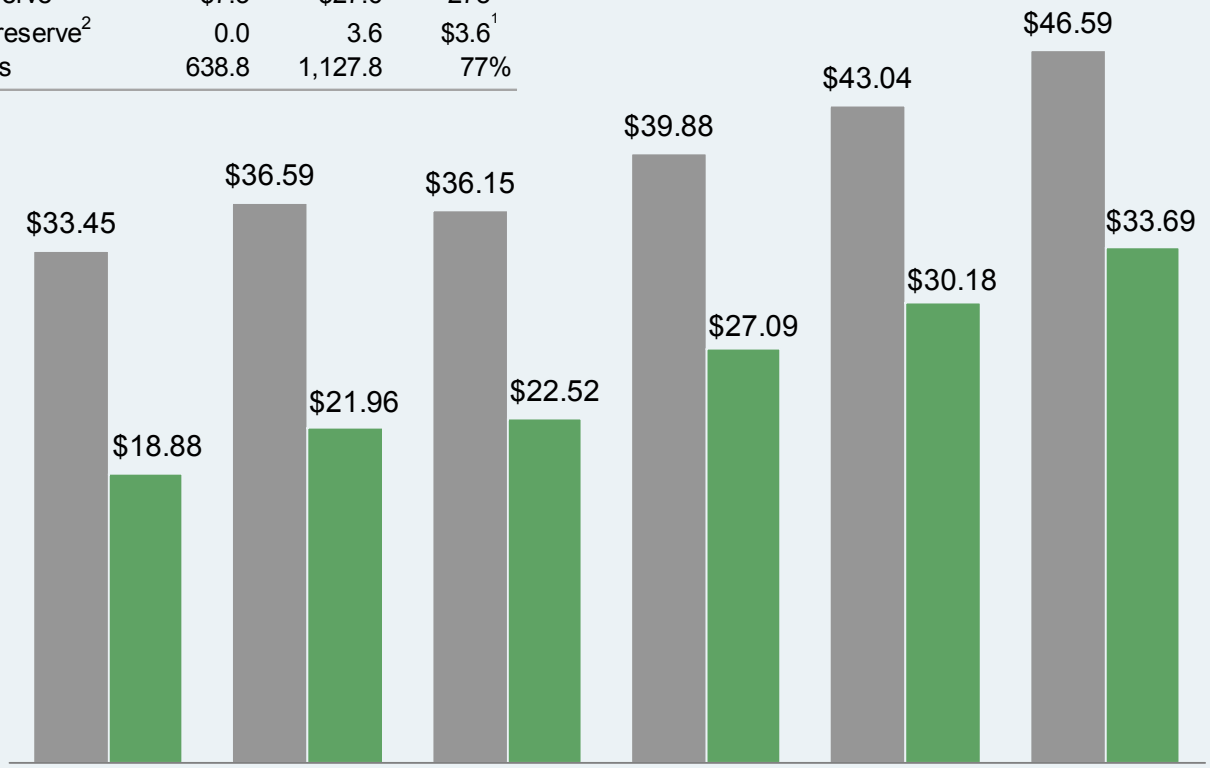
[1] See note 1 on slide 43
[2] See note 4 on slide 43
[3] Estimated
[4] Excludes MB FY11 net loss of ($2.1B) or (11)%

Book value per share: growing our fortress balance sheet

JPMorgan Chase overview

Key metrics since 2006

($B)	2006	2011	%Δ
Tangible common equity	$65.4	$127.1	94%
Basel I Tier 1 common	7%	10%	3[1]
Loan loss reserve	$7.3	$27.6	278
Repurchase reserve[2]	0.0	3.6	$3.6[1]
EOP Deposits	638.8	1,127.8	77%



Growth	YoY	5Y[3]	10Y[3]
BVPS	8%	7%	9%
TBVPS	12	12	8
EPS	13	3	19

2011 share repurchases: $9B

Shares outstanding (EOP)	2006	2007	2008	2009	2010	2011
	3.5B	3.4B	3.7B	3.9B	3.9B	3.8B

[1] Actual change
[2] Excludes litigation reserve
[3] CAGR

Business returns

JPMorgan Chase overview

Return analysis

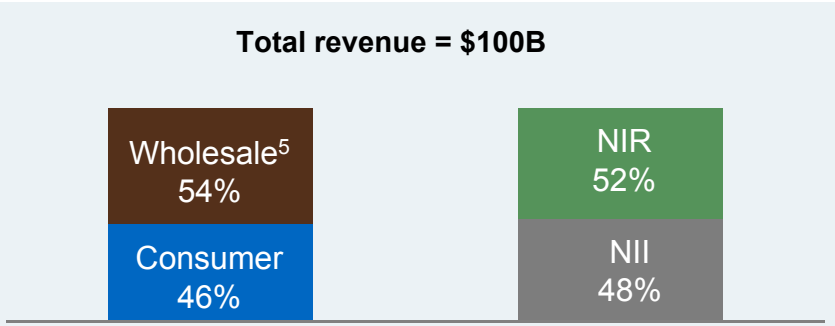
	2009	2010	2011
Return on assets[1]			
JPM	0.6%	0.9%	0.9%
Peer avg.	0.6	0.6	0.6
Best-in-class	1.5	1.0	1.2
Return on RWA[1,2]			
JPM	1.0%	1.5%	1.6%
Peer avg.	1.0	1.2	1.1
Best-in-class	3.2	1.9	1.6
Risk-adjusted return[1,3]			
JPM	6.5%	6.8%	7.3%
Peer avg.	5.2	5.8	6.1
Best-in-class	6.7	6.8	7.3

[1] Peer group includes BAC, C, WFC, GS and MS
[2] Based on Basel I RWA
[3] (NII+NIR-NCOs)/Basel I RWA; excludes GS and MS
[4] Presented on a managed basis. See note 1 on slide 43
[5] Wholesale includes Corporate
Note: Totals may not sum due to rounding

Comments

- ROA does not capture the difference in business mix between JPM and its peers
  - For instance, the IB includes large asset classes which have low yield but low risk, including the repo book
- We consider return on RWA and risk-adjusted return to be more relevant for JPM and comparisons to peers

2011 revenue mix[4]



Building market leading franchises

JPMorgan Chase overview

	Select key stats ($B, except where noted)	2006	2011	2006-2011 CAGR
IB	IB fees ($mm)[1]	$5,537	$5,859	1.1%
	Fixed income markets ($mm)[1]	8,736	15,337	11.9
	Equity markets ($mm)[1]	3,458	4,832	6.9
CB	Average liability balances[2]	$73.6	$174.7	18.9%
	Average loans	53.6	104.2	14.2
	IB revenue, gross	0.7	1.4	14.7
	Overhead ratio	52%	35%	
TSS	Average liability balances[2]	$189.5	$318.8	11.0%
	Assets under custody ($T)	13.9	16.9	3.9
	Average trade loan balances	1.5	27.8	79.6
	Non-U.S. revenue (%)	40.8%	55.0%	
AM	Assets under management	$1,013.1	$1,336.2	5.7%
	Long-term flows	45.0	53.0	3.3
	Number of Private Banking client advisors	1,506	2,883	13.9
Retail Financial Services				
CBB	Average total deposits	$190.1	$360.7	13.7%
	Client investment assets, excluding deposits	80.6	137.9	11.3
	End-of-period Business Banking loans	14,205	17,652	4.4
	Number of branches	3,079	5,508	12.3
MB	Mortgage loans originated	$119.2	$145.6	4.1%
	Retail branch and direct to consumer originations	40.5	87.2	16.6
	Number of branch salespeople	1,196	3,125	21.2
	Mortgage loan origination market share[3]	5.8%	11.5%	
Card	Card Services sales volume[4]	$256.8	$343.7	6.0%
	Card Services net revenue rate (% avg. loans)[4]	10.4%	12.3%	
	GPCC sales volume market share[5]	15.7	19.3	
	Auto originations market share[6]	3.1	4.3	

[1] 2006 IB financial data represents heritage JPM only. JPM's Dealogic IB fees rank was #1 in 2011 and # 1 in 2006 for heritage JPM only
[2] Includes deposits and deposits swept to on-balance sheet liabilities
[3] Source: Inside Mortgage Finance, 4Q06 and 4Q11 for 2006 and 2011, respectively
[4] Excludes Commercial Card
[5] GPCC stands for General Purpose Credit Card; excludes WaMu and Commercial Card
[6] 2011 is through November

Customer focus

JPMorgan Chase overview

Customer satisfaction metrics	
IB	■ Selected as a Quality and Share Leader for 48 distinctions across 15 programs[1], including Global Fixed Income, U.S. Large Corporate Finance and U.S. Equities
CB	■ 88% of the customers surveyed are satisfied with their relationship with Chase[2] ■ Highest client loyalty score – Ahead of WFC, USB, PNC and BAC[3]
TSS	■ Overall TS Service Delivery rated at near "best-in-class" levels with 89% of U.S. and 87% of EMEA clients rating service Excellent/Very Good[4] ■ 82% of WSS clients in 2011 indicated that they were satisfied with their current level of service[4] ■ WSS moved to #3 in 2011 from #7 in 2010 in Global Custodian Magazine's 2011 Global Custody Survey
AM	■ Ranked #1 in client-oriented thinking by the 2012 Fund Brand 30 report[5] ■ Significant increase in loyalty score – Ranked #7 in 2011, up from #21 in 2010[6] ■ Ranked #1 for satisfaction with website, investment tools and resources for advisors[7]
Retail Financial Services – CBB	■ Overall satisfaction with Chase (top 2-box scores) increased from 57% to 67% in 2011[8] ■ For customers with top 2-box scores: ■ 69% of households surveyed strongly agree that they are likely to use Chase to fulfill new financial need[9] ■ 81% of households surveyed strongly agree that they are likely to recommend Chase to others[9]
Retail Financial Services – MB	■ Ranked #5 in the JD Power mortgage origination survey, up from #12 in 2010; topping the industry average and ahead of WFC, C and BAC ■ Customer satisfaction for origination and servicing (top 2-box scores) of ~70% by the end of 2011 ■ Customer complaint inventory declined by more than 60% since May 2011
Card	■ According to the JD Power overall satisfaction index rankings, Chase moved up to the 4th position, topping the industry average, ahead of WFC, USB, COF, C and BAC[10] ■ Continuing focus on issue identification, elimination and prevention has yielded positive results with significant reduction in OCC/CFPB complaints

[1] Greenwich Associates, 2011
[2] 2010 Chase Relationship Survey
[3] Greenwich Associates, 2011 Twenty Two State Footprint Market Share Study
[4] Client surveys conducted by the TS and WSS client service team
[5] Survey of retail investors in the 10 largest European countries
[6] Cogent Research Investor Brandscape, 2012
[7] Cogent Advisor Touchpoints 2011: Trends and Best Practices for Creating a Connection with FAs
[8] Chase Relationship Survey
[9] Monthly Consumer Bank relationship survey (data from December 2011). Strongly agree equals a 9 or 10 on a 10-point scale
[10] JD Power and Associates 2011 Credit Card Satisfaction Trends

Major competitive advantage: leveraging the franchise

JPMorgan Chase overview

JPMorgan Chase & Co.

Leveraging the franchise

Investment Bank

- Significant revenue generated from the CB client base
  - Joint coverage of ~1,800 clients
  - 25% of North American IB revenue in 2011[1]
  - $1.4B of gross total IB revenue from CB clients in 2011
- Robust client referral to and from AM
  - 41 new PB clients through IB referrals

Treasury & Securities Services

- 75% of CB clients use Treasury Services products
  - $2.3B of revenue in 2011
- CBB clients use TS services ($215mm in 2011, up 10% YoY)
- Provide custodial and transfer agency services to AM

Commercial Bank

- Referral source for Private Bank, Private Wealth Management and Chase Private Client
- CB clients accounting for 66% of total Global Commercial Card clients, driving nearly $15B in Card spend in 2011

Asset Management

- Manage $90B of AUM for TSS clients
  - $140mm in 2011 firmwide revenue
- IM products offered to CB clients
  - $370mm in 2011 firmwide revenue
- Products offered to retail clients through the branch network
  - $510mm in firmwide revenue

Consumer & Business Banking

- ~45% of Chase branded cards sold through branches
- ~40% of Card Services revenue from new merchants is sourced through the branches
- ~20% of JPM IM U.S. Retail AUM comes from the branches
- >16mm branch transactions annually by CB clients

Mortgage Banking

- 6.1mm existing eligible Chase banking relationships with no mortgage relationship
- ~50% of retail mortgages originated through branches

Card Services & Auto

- Increased signings of new Paymentech accounts through branch referrals by 34%
- Sourced most new Middle Market Commercial Card customers through CB
- Generated >40% of Commercial Card revenue from wholesale clients

Global Corporate Bank

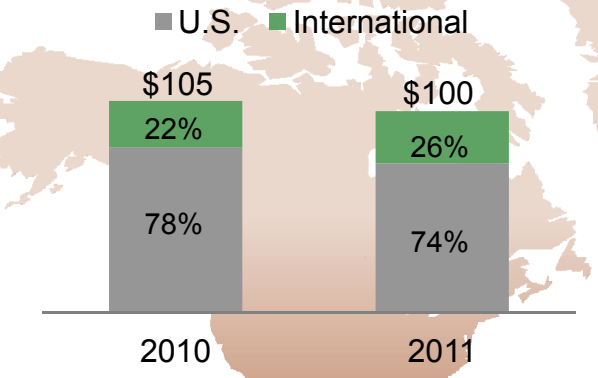
- Joint coverage of foreign multinational clients
- Presence in 40+ countries
- $200B+ of global exposure to GCB clients

[1] Calculated based on gross domestic IB revenue for SLF, M&A, Equity Underwriting, Bond Underwriting

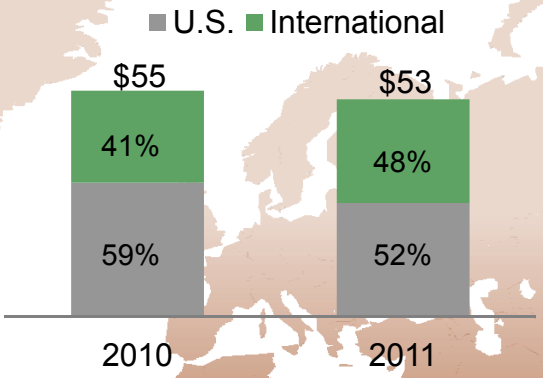
Global footprint and scorecard

JPMorgan Chase overview

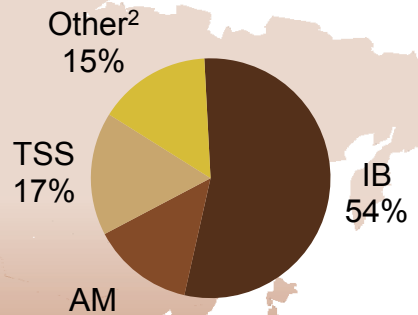
Firmwide revenue[1] – ($B)



Wholesale revenue[1] – ($B)



Int'l Wholesale revenue by LOB[1]



Total = $25B

LatAm/Caribbean (9%)[3]

- 2011 revenue of $2.2B
  - 2006 – 2011 CAGR: 11%; up 32% YoY
- Operate in 9 countries in the region
  - 4 new offices opened in 2011
- $5B in deposits[4], down 15% YoY
- $25B in loans[5], up 53% YoY
- $34B in AUM

EMEA (64%)[3]

- 2011 revenue of $16.1B
  - 2006 – 2011 CAGR: 7%; up 14% YoY
- Operate in 33 countries in the region
  - 3 new offices opened in 2011
- $169B in deposits[4], up 18% YoY
- $37B in loans[5], up 31% YoY
- $278B in AUM

Asia Pacific (24%)[3]

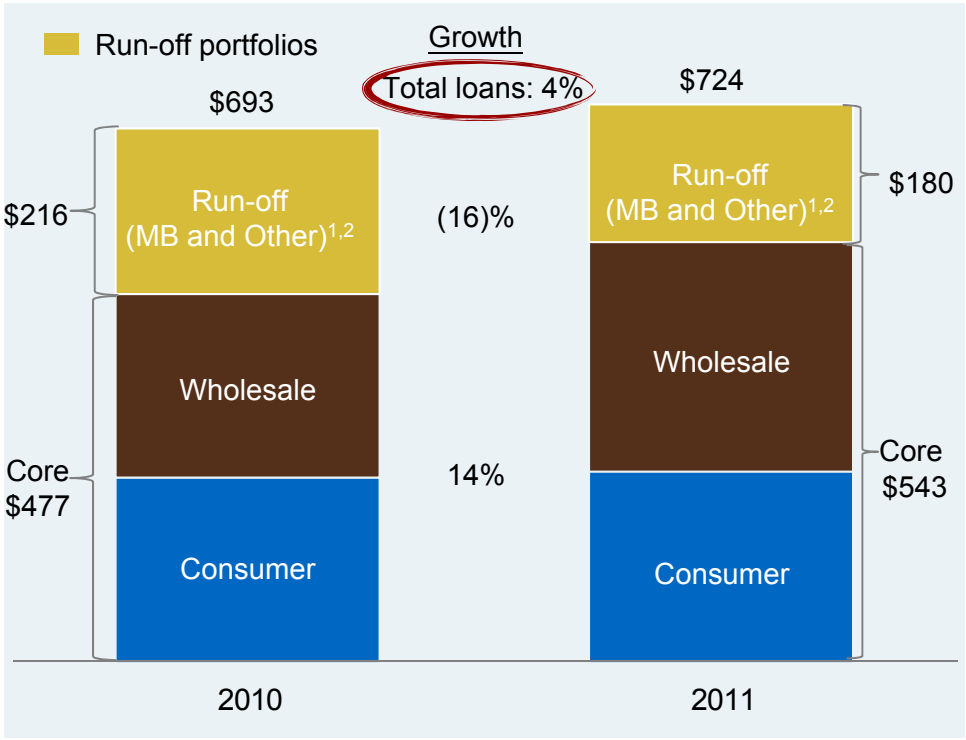
- 2011 revenue of $6.0B
  - 2006 – 2011 CAGR: 13%; down 2% YoY
- Operate in 16 countries in the region
  - 2 new offices opened in 2011
- $58B in deposits[4], up 8% YoY
- $31B in loans[5], up 51% YoY
- $105B in AUM

[1] On a managed basis
[2] Primarily composed of CIO net gains
[3] % of Wholesale revenue
[4] Average deposits are based on the location from which the customer relationship is managed
[5] End-of-period loans outstanding are based predominantly on the domicile of the borrower and exclude loans held-for-sale and loans carried at fair value
Note: Wholesale international operations comprised of IB, AM, TSS, CB and CIO/Treasury. Totals may not sum due to rounding

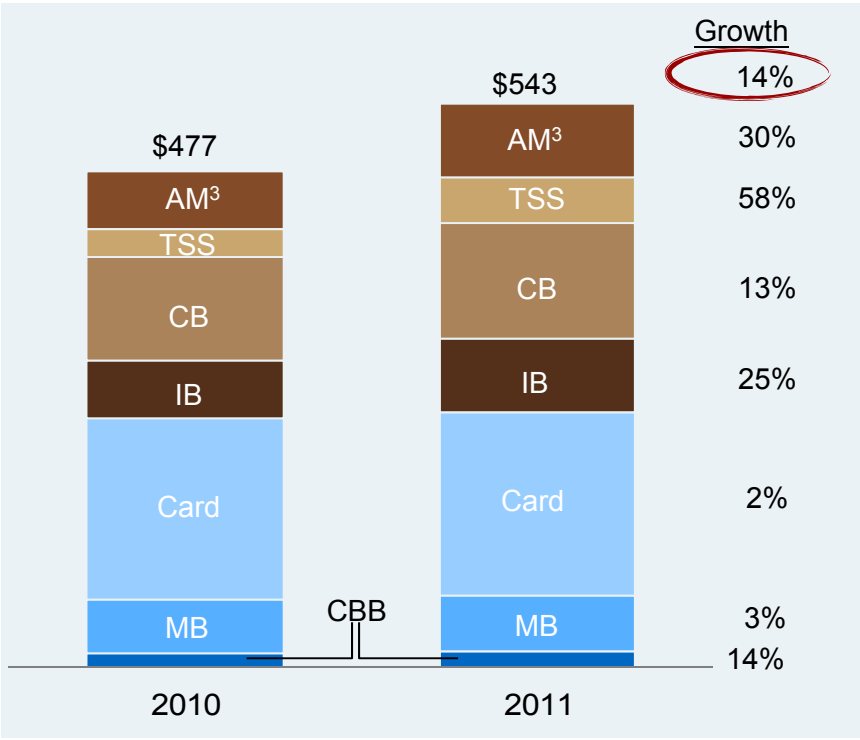
Loan growth

JPMorgan Chase overview

Total end-of-period loans ($B)



Core loans by line of business ($B)



- Total loans increased 4% YoY driven by core loan growth of 14% across all businesses, including Wholesale loan growth of 25%
  - CB achieved six consecutive quarters of loan growth through the end of 2011; Middle Market loans up 17% YoY
  - TSS trade loans up 73%
  - Business Banking loans up 5%; 24% increase in new origination volume in 2011
- Run-off portfolios decreased 16% YoY driven by runoff of Mortgage Banking loans

Note: Wholesale includes IB, CB, TSS, AM and Corporate; Consumer includes CBB, MB and Card

[1] Other includes Card run-off portfolio, including certain legacy WaMu loans, legacy balance transfer programs and terminated partner portfolios (e.g. Kohl's), and CBB run-off portfolio, including discontinued products

[2] MB run-off portfolio includes WaMu purchased credit-impaired loans, discontinued products, and certain prime loans with estimated current LTVs greater than 80% as of January 2010

[3] AM includes loans originated by AM that are held in Corporate and other loans held in Corporate

Note: Totals may not sum due to rounding

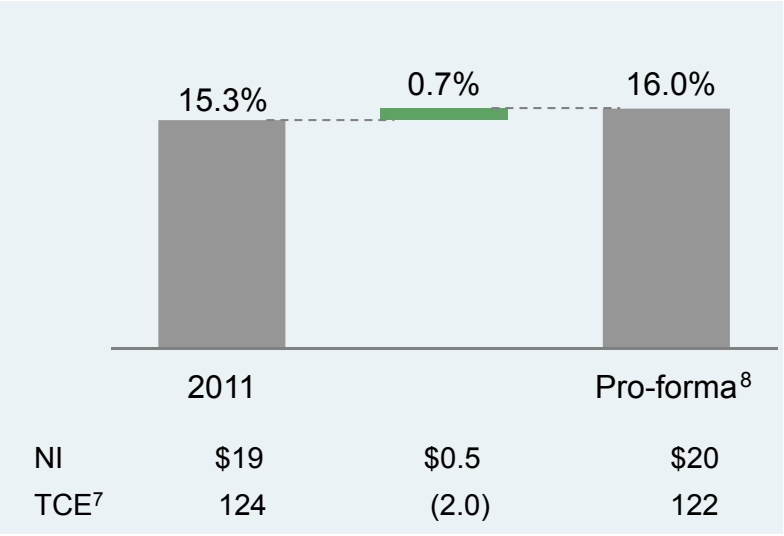
Impact of our run-off portfolios: a simulation

JPMorgan Chase overview

Run-off portfolios simulation ($B)

	2011	2012[5]	2013[5]	2014[5]
MB[1]	$173	$152	$128	$110
Other[2]	22	16	12	10
Total average loans	**$196**	**$167**	**$140**	**$120**
Total run-off portfolios				
Net interest income	$6.3	$5.1	$4.1	$3.2
Noninterest expense	2.0	1.6	1.3	1.1
NCOs[3]	5.8	4.2	2.8	1.6
Net income[4]	**($0.9)**	**($0.4)**	**($0.1)**	**$0.3**
Capital	$12	$10	$8	$7
Net interest margin	3.2%	3.1%	2.9%	2.7%

Pro-forma impact on ROTCE[6] ($B)



	2011		Pro-forma[8]
NI	$19	$0.5	$20
TCE[7]	124	(2.0)	122

Comments

- Simulation assumes provision for credit losses equals net charge-offs; other reserve actions not simulated
- NII will decline as portfolios run off; reduction of higher yield loans puts pressure on firmwide NIM
  - NII for run-off portfolios expected to decline by $1B +/- in 2012, including $500mm +/- related to MB
- However, runoff will benefit firmwide ROTCE as expense and credit losses also decline, and approximately $2B of capital per year could be liberated and redeployed, including $1B +/- related to MB

[1] MB run-off portfolio includes WaMu purchased credit-impaired loans, discontinued products, and certain prime loans with estimated current LTVs greater than 80% as of January 2010
[2] Other includes Card run-off portfolio, including certain legacy WaMu loans, legacy balance transfer programs and terminated partner portfolios, and CBB run-off portfolio, including discontinued products
[3] Assumes provision for credit losses equals net charge-offs associated with NCI portfolio. Assumes no reserve actions associated with run-off PCI portfolio. All amounts presented in the simulated periods are estimates within a range of possible outcomes. Actual results could differ significantly from these estimates
[4] Assumes 38% tax rate
[5] Simulated results based on current run-off portfolios trends
[6] Run-off portfolios impact represents the incremental ROTCE impact of changes to net income and allocated capital in the first year of the simulation
[7] Average tangible common equity
[8] Adjusted for difference between 2011 actual and 2012 simulated amounts
Note: Totals may not sum due to rounding

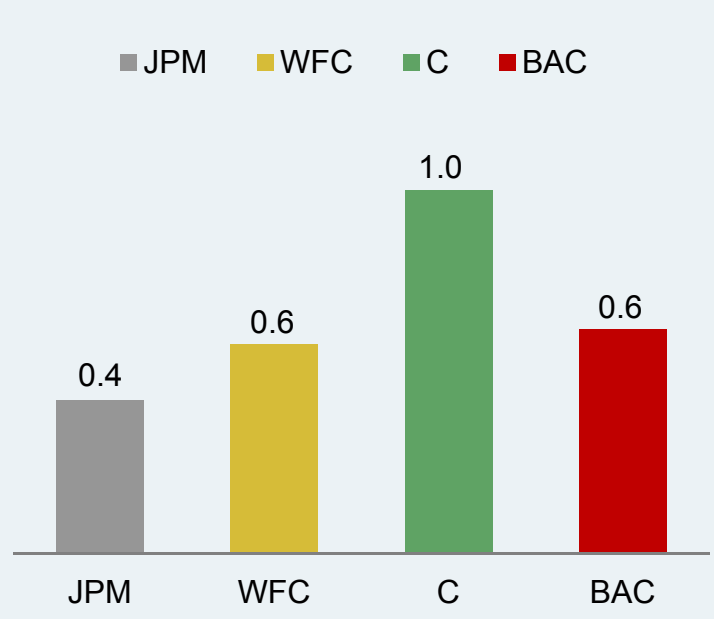
Credit quality: strengthened coverage and reserve position

JPMorgan Chase overview

Peer group credit statistics – 2011 ($B)

	JPM	WFC	C	BAC
EOP loans	$723.7	$769.6	$647.2	$940.0
NCOs	12.2	11.3	20.0	20.8
NPLs	10.0	21.3	11.2	25.1
LLR	27.6[1]	19.4	30.1	33.8
LLRs/NCOs[2]	237%	183%	183%	208%

YoY change in LLRs to change in NCOs



- The Firm's net charge-offs and nonperforming loans are down 48% and 44% from peak levels, while loan loss reserves decreased 28% from peak and 13% since 2009
- LLRs/NPLs ratio is 281%, up from 184% in 2009[1]
- LLRs/NCOs[2] coverage is 237%, up from 128% in 2009[3]

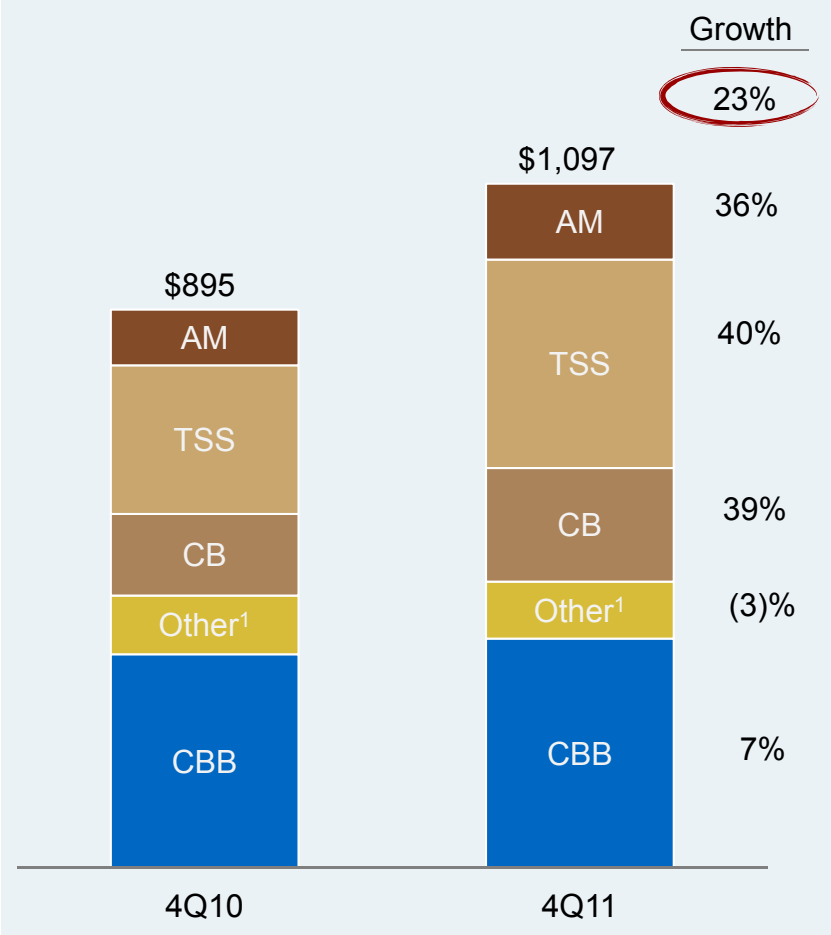
Expect reserve levels to adjust to normalized levels of ~$15B as underlying credit improves and we recognize the impact of certain portfolio runoff

[1] Loan loss reserve includes $5.7B and $1.6B of PCI reserves in 2011 and 2009, respectively
[2] Reflects 4Q11 NCOs annualized
[3] Reflects 4Q09 NCOs annualized; excludes NCOs for securitized credit card receivables for which there was no associated LLR

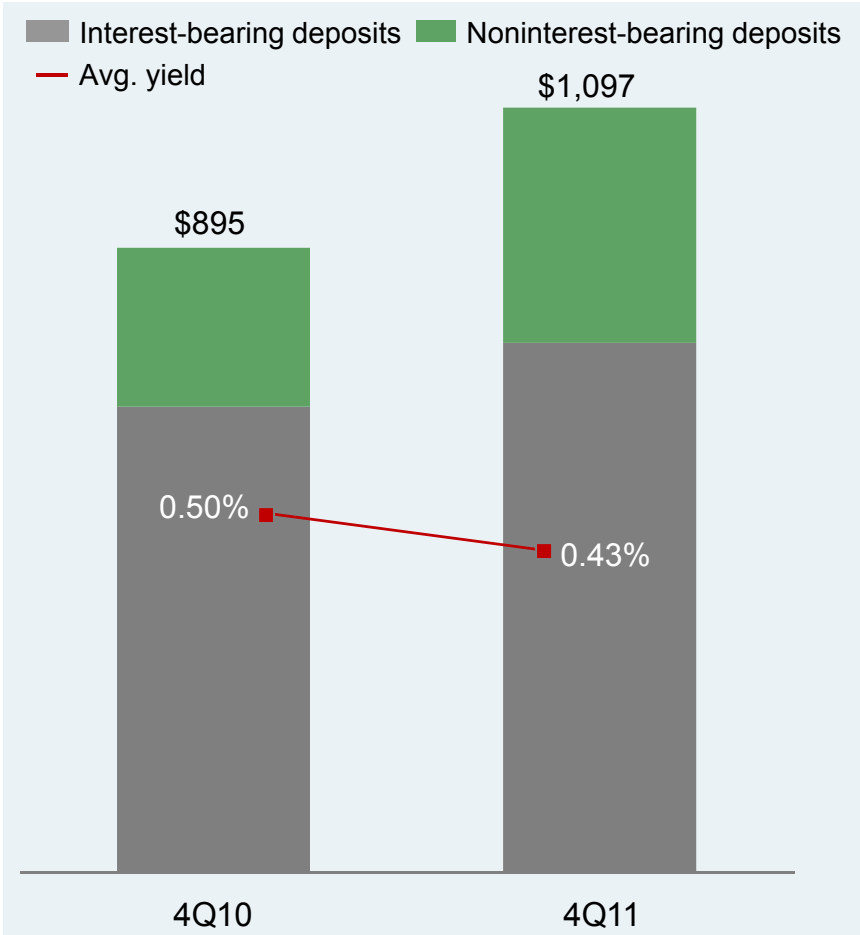
Deposit growth

JPMorgan Chase overview

Avg. deposits by line of business ($B)



Avg. interest-bearing vs. noninterest-bearing deposits ($B)



[1] Other includes IB, MB, Card and Corporate
Note: Totals may not sum due to rounding

Net interest margin and net interest income rate sensitivity

JPMorgan Chase overview

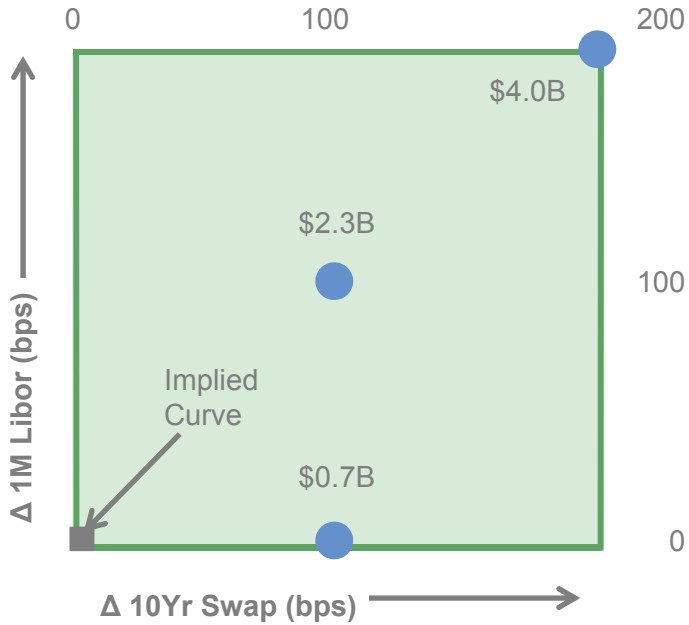
YoY net interest margin ($B)

	2010	2011
Net interest income	$51.4	$48.2
Interest-earning assets	3.83%	3.51%
Interest-bearing liabilities	0.84	0.86
Net interest margin (NIM %)	3.06%	2.74%

Comments

- Net interest income has been impacted by the runoff of higher yield loan portfolios and portfolio mix
- Net interest margin decreased by 32bps in 2011 due to
  - Runoff
  - Changes in portfolio mix
  - Impact of lower rates
- Continued pressure on NIM in 2012 as market and mix conditions continue
  - Spread compression will negatively impact CBB net income by $400mm+/-
- Portfolio runoff will negatively impact NII in REP by $500mm+/-

Potential net interest income increases[1]



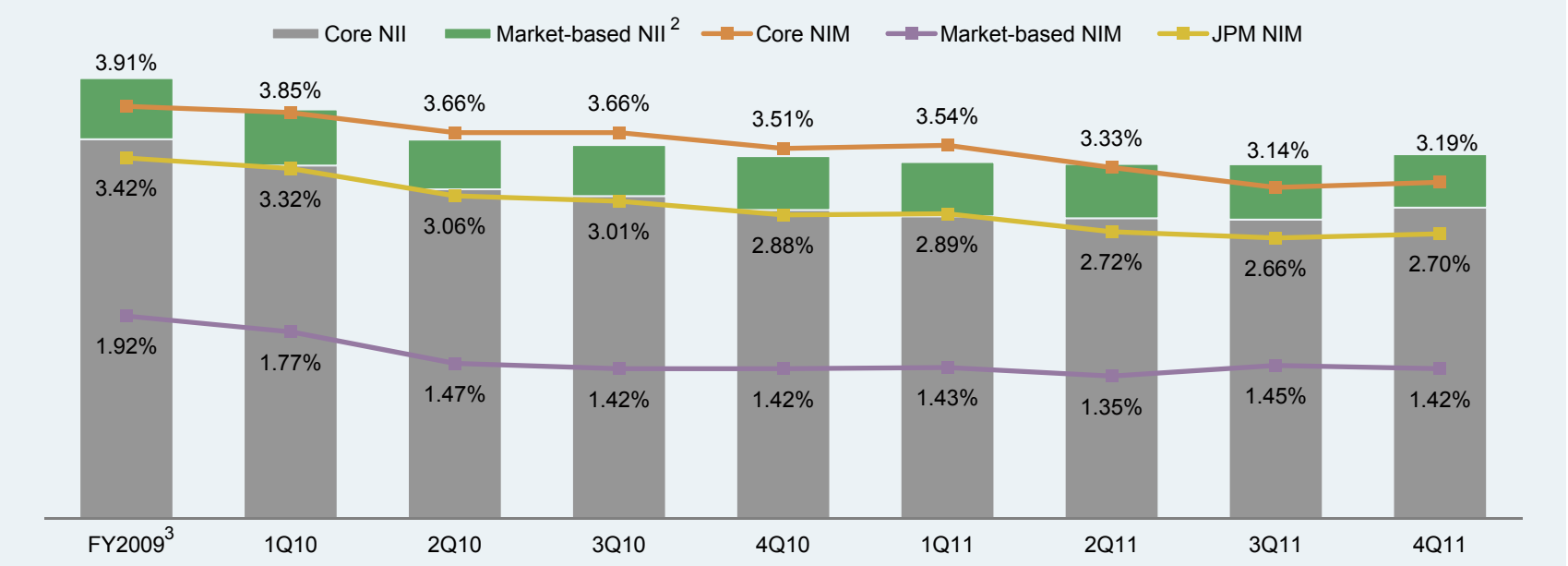
Potential increases in NII relative to the implied curve

[1] As of 12/31/2011. Reflects risk exposure to pretax NII of the Firm's non-market-based business activities (see 3Q11 form 10-Q disclosure for further discussion on interest rate exposure). Implied curve represents the market expectation of rates over the next 12 months

Core net interest margin[1]

JPMorgan Chase overview

Net interest income trend



Core net interest income

- Core NIM is a measure that is more comparable to the NIM of financial institutions focused primarily on loan and deposit-related activities
- Given mark-to-market and P&L geography of hedging in the IB, NIM is not a good indicator of IB profitability

Core net interest income walk – 4Q11 ($B)

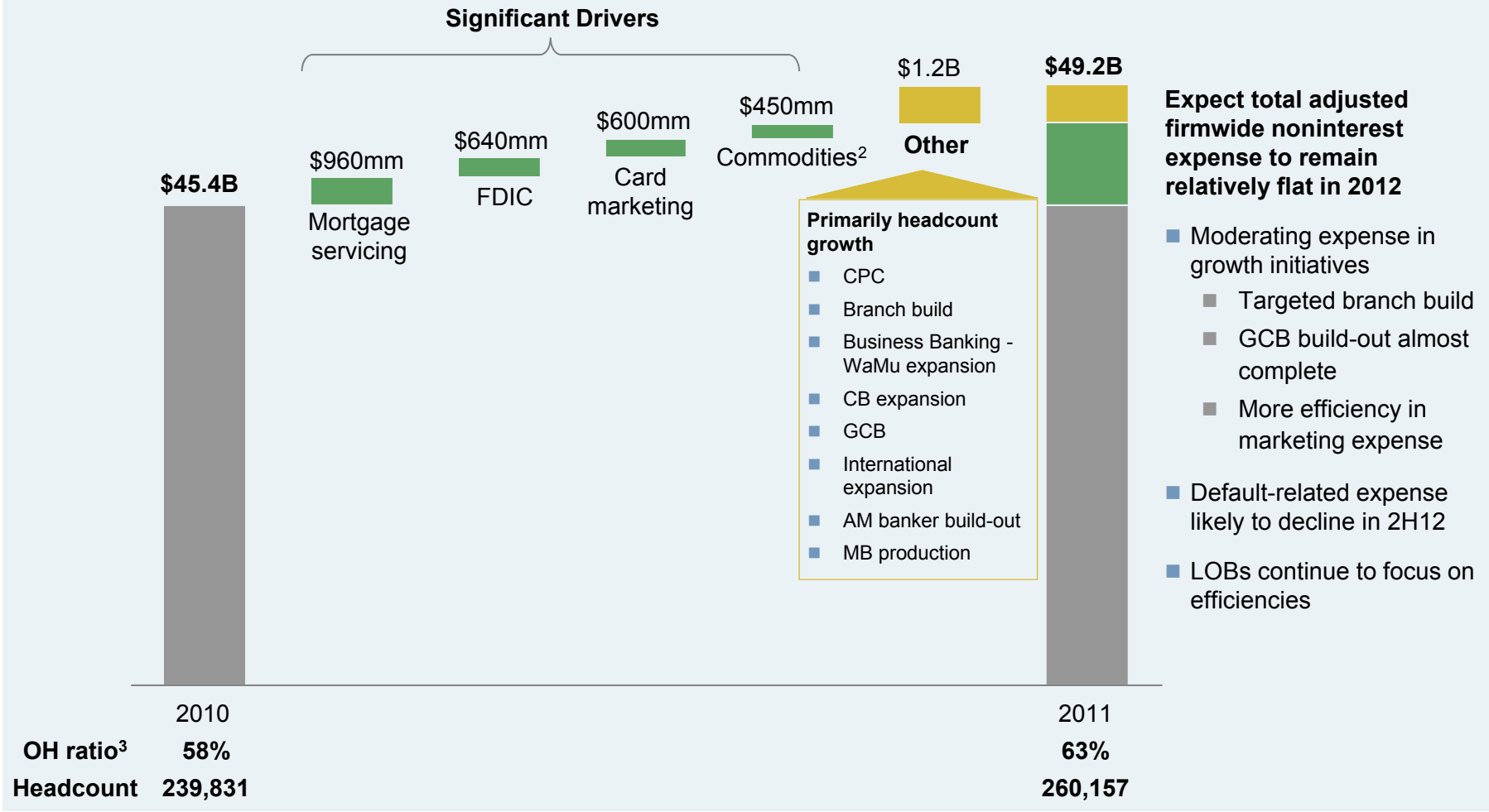
	Avg. earning assets	NII	Yield
Firm reported	$1,808	$12	2.7%
IB reported	567	2	1.5
Less IB loans	65	0.3	1.8
IB market-based activities	$502	$2	1.4%
Core	**$1,306**	**$11**	**3.2%**

[1] See note 6 on slide 43
[2] IB's market-based activities are defined as total IB net interest income less net interest income earned on IB loans
[3] Net interest income presented as an average 2009 quarter (i.e. total year divided by 4); all others are yearly rates

Firmwide expense has been trending higher

JPMorgan Chase overview

Adjusted firmwide noninterest expense[1]



Expect total adjusted firmwide noninterest expense to remain relatively flat in 2012

- Moderating expense in growth initiatives
  - Targeted branch build
  - GCB build-out almost complete
  - More efficiency in marketing expense
- Default-related expense likely to decline in 2H12
- LOBs continue to focus on efficiencies

[1] Excludes Investment Bank compensation expense, Corporate litigation expense, and foreclosure-related matters. Investment Bank compensation expense totaled $9.7B in FY2010 and $8.9B in FY2011. Corporate litigation expense totaled $5.7B in FY2010 and $3.2B in FY2011. Foreclosure-related matters totaled $350mm in FY2010 and $1.7B in FY2011

[2] Specific transaction related noninterest expense, which is directly related to generating the associated revenue (e.g., storage and transportation costs)

[3] Presented on a managed basis. See note 1 on page 43

Note: Totals may not sum due to rounding

Overview of select investments

JPMorgan Chase overview

2011 expense and NI impact of cumulative spend from select investments ($mm, except where noted)

	LOB/Investment	2011 Expense	Comments	NI impact of cumulative spend
	IB International Prime Brokerage	~$60	■ Build out int'l platform to facilitate clients' regional strategies ■ Successful launch of int'l platform in 2011; steady state 2014/15	$175 +/-
	CB Middle Market expansion	~70	■ Expand CB coverage into new markets ■ Broke even in 2011; continue to add 200+ clients a year	450 +/-
	IB/TSS International expansion/ Global Corporate Bank	~200	■ Build out branches and product capabilities ■ Uplift primarily from Markets, Credit and TS products	600 +/-
	AM PB banker/ IM expansion	~300	■ 317 PB bankers hired since 2010; 729 IM sales, investors & support hires since 2009 (expense incl tech & other support) ■ Expect to reach target net income by 2015	400 +/-
Retail Financial Services	**CBB** Branch builds *2011 expense associated with 2009-2011 branch builds*	~400	■ ~525 new branches built since 2009 ■ Avg. branch achieves payback & 30% ROE by year 8+/-	600 +/-[1]
	CBB Business Banking *2011 expense associated with 2009-2011 new hires*	~150	■ 1,200 new RMs & business bankers hired since 2009 ■ Significant growth opportunities in h-WaMu markets	600 +/-
	CBB Chase Private Client	~50	■ 262 CPC locations as of 2011; plan to add 750 in 2012 ■ 22K clients as of 2011; plan to reach 75K clients by 2012	600 +/-
	MB Mortgage capacity & productivity[2]	~175	■ Added 700 loan officers in 2011; plan to add 1,000 in 2012 to grow retail capacity ■ Improve productivity through origination & servicing investments	450 +/-
	Card Incremental customer acquisition marketing	~500[3]	■ Total spend in 2011 expected to generate 9mm+/- accounts and $45B+/- in sales volume in 2012 ■ Run-rate NI by year 3	350 +/-
		~$1,900		

[1] Reflects NI contribution from 2002-2011 branch builds
[2] Excl. expense related to existing portfolios and litigation
[3] Excl. the impact of deferred loan origination cost (FAS 91)

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European exposure

Specific risk questions from investors

As of February 16, 2012 ($B)

	Exposure[1]					
		Securities & Trading				
	Lending	AFS	Trading	Derivative collateral	Portfolio hedging	Net exposure
Spain	$3.4	$0.8	$5.3	($3.3)	($0.5)	$5.7
Sovereign	-	0.5	(0.3)	-	(0.1)	0.1
Non-sovereign	3.4	0.3	5.6	(3.3)	(0.4)	5.6
Italy	3.4	0.1	10.3	(2.2)	(4.3)	7.3
Sovereign	-	-	7.7	(1.1)	(3.6)	3.0
Non-sovereign	3.4	0.1	2.6	(1.1)	(0.7)	4.3
Other (Ireland, Portugal & Greece)	1.4	0.6	2.3	(1.3)	(1.0)	2.0
Sovereign	-	0.6	0.1	-	(0.8)	(0.1)
Non-sovereign	1.4	-	2.2	(1.3)	(0.2)	2.1
Total firmwide exposure	**$8.2**	**$1.5**	**$17.9**	**($6.8)**	**($5.8)**	**$15.0**

- Lending exposure includes both funded loans and undrawn commitments
  - Lending exposure ~72% to corporates
- AFS securities exposure – 73% government guaranteed
- Trading exposure ~ 42% to sovereigns
  - Includes $2.4B of debt and equity securities
  - Predominantly client-driven net derivative receivables of $15.3B, offset by collateral of $6.8B (98%+ held in cash)
  - Credit derivatives counterparties primarily outside Euro 5 and are investment-grade or well-supported by collateral arrangements
- Mark-to-market of large counterparty gross long and short positions largely offset and are all collateralized daily
- ~ 79% of portfolio hedges are against sovereign exposure
  - Substantially all hedges are with investment grade counterparties outside the Euro 5 and are collateralized
- Non-sovereign net exposure – 82% to corporate clients and remaining 18% to the banking sector

[1] Exposure is a risk management view. Lending is net of liquid collateral. Trading includes net inventory, derivative netting under legally enforceable trading agreements, net CDS underlying exposure from market-making flows, unsecured net derivative receivables and under collateralized securities financing counterparty exposure

Department of Justice and Attorneys General mortgage settlement summary

Specific risk questions from investors

- $25B global settlement announced between the five major servicers and the Federal Government including the Department of Justice, Department of Housing and Urban Development, and the State Attorneys General
- For Chase the settlement amount will be ~$5.3B and will consist of
  - ~$1.1B in cash payments
  - ~$0.5B toward a refinance program
    - Will offer interest rate reductions for certain homeowners with Chase-owned mortgages
  - Up to ~$3.7B of additional relief for homeowners
    - Menu of options from which the bank can choose to assist homeowners, including modifications with first and second lien principal reductions
  - New servicing standards, which establish a new level of transparency and clarity for servicer activities
- Limits the Firm's liability related to MERS-related conduct, such as recording of assignments and standing in foreclosures
  - Only New York, Delaware and Massachusetts may maintain suits for MERS-related conduct. The settlement limits monetary remedies those states can seek against Chase, and precludes them from seeking to vacate past foreclosures for MERS-related conduct
- Given our current reserve position, the settlement is not expected to have a material impact on earnings

Private label securitization

Specific risk questions from investors

- Original balances in litigation for Chase (excl. WaMu)[1] of ~$50B[2]
  - A group of investors claiming to have a quorum in trusts with an original principal balance (excl. WaMu) of ~$175B asked various trustees to, among other things, investigate servicing and repurchase claims
- Both securities and repurchase claims are likely to be litigated
- Substantial impediments to repurchase and servicing claims
  - Trustees generally do not act unless instructed by a quorum and indemnified
  - Many loans were originated or are serviced by others
  - WaMu repurchase liabilities reside with the FDIC[1]
  - We intend to honor our obligations, but claims are fact intensive, generally requiring loan-by-loan analysis
    - There is no repurchase absent proof that a breach "materially and adversely" affected value of loan
- Securities litigation claimants also face significant hurdles
- There is significant overlap between repurchase and securities exposure: we do not intend to pay twice for the same exposure
  - Median analyst estimate of exposure across the entire private label securitization portfolio, including balances not in litigation, is $6.5B[3]
- Litigation could take years, but we have built significant litigation reserves

[1] The Firm believes that WaMu bank-related repurchase liabilities are the responsibility of the FDIC (the FDIC disagrees) and any securities liabilities reside with the WaMu subsidiaries
[2] Excludes class action deals with standing defects, deals where the Firm was sued solely as an underwriter (and was not an issuer), monoline claims and trustee claims
[3] Certain analysts include estimates for private label litigation in their private label repurchase exposure estimates. Certain analysts exclude WaMu related liabilities from JPM repurchase estimates

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Common equity and performance targets

Firmwide capital

Common equity and target ROEs ($B)

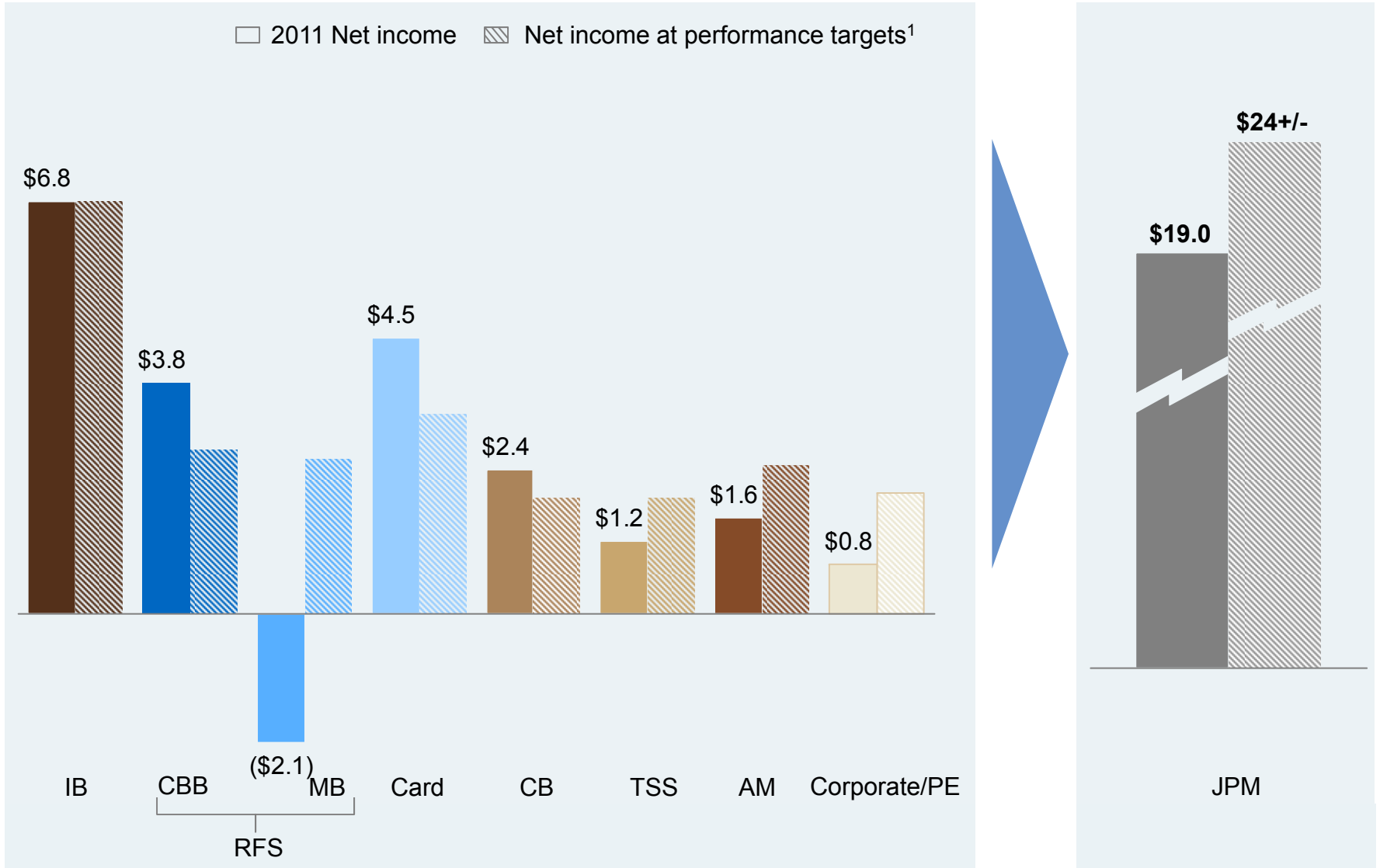
		Common equity			Targets	
		2011	1/1/2012	2011 ROE	Through-the-cycle ROE	Basel III Tier 1 common
	Investment Bank	$40.0	$40.0	17%	17% +/-	9.5% +/-
RFS	Consumer & Business Banking	9.5	9.0	40	30 +/-	8.5 +/-
RFS	Mortgage Banking	15.5	17.5	(14)	15 +/-	8.5 +/-
	Card Services & Auto	16.0	16.5	28	20 +/-	8.5 +/-
	Commercial Banking	8.0	9.5	30	20 +	8.5 +/-
	Treasury & Securities Svcs.[1]	7.0	7.5	17	25 +/-	9.0 +/-
	Asset Management[1]	6.5	7.0	25	35 +/-	8.5 +/-
	Private Equity	3.6	4.8	11	20 +/-[2]	9.5 +/-
	Corporate (CIO/Treasury/Corp)	13.1	18.3	3	$0.5-$1B +/- of net income	
	Subtotal	**$119.2**	**$130.1**			
	Unallocated Capital[3]	$14.5	$3.6			
	Corporate Goodwill[4]	42.1	42.1			
	Total Firm ROE			**11%**		
	Total Firm ROTCE			**15%**	**16% +/-**	**9.5% +/-**

[1] TSS and AM pretax margin targets remain unchanged at 35% +/- through the cycle
[2] IRR of 20% +/-
[3] 1/1/12 for illustrative purposes only
[4] Reflects capital held against Corporate goodwill

LOB performance at targets

Firmwide capital

Net income by LOB ($B)

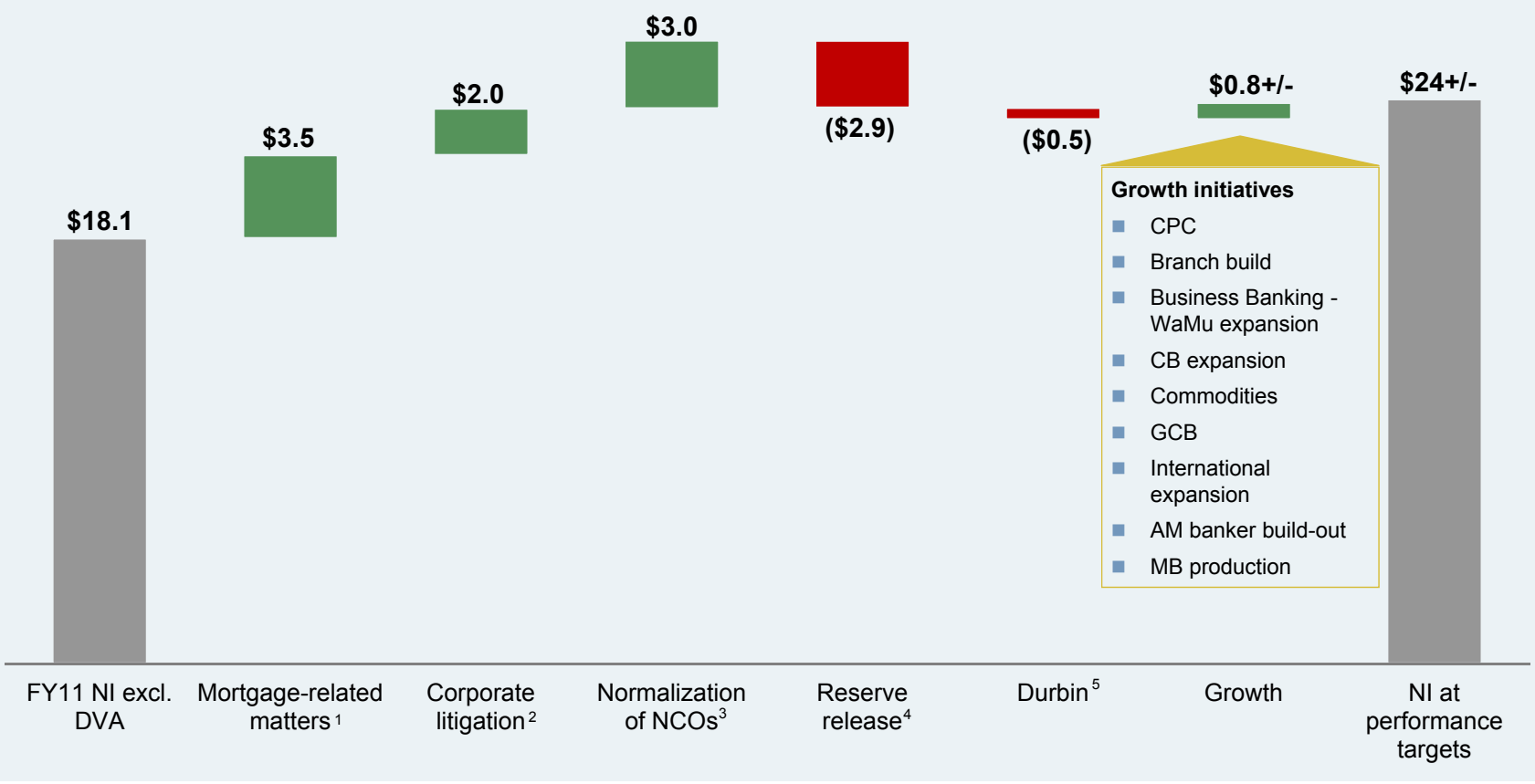


[1] Net income projections based on performance target and steady state assumptions

Earnings walk

Firmwide capital

Net income build ($B)



[1] Includes servicing and default related costs, foreclosed asset expense, repurchase losses, MSR valuation adjustments offset by normalized production revenue, and normalized repurchases; excludes elevated credit costs

[2] Corporate litigation expense for 2011 (after-tax)

[3] Based on disclosed through-the-cycle net charge-off rates for IB, Card (excl. WaMu and Commercial Card), CB, Home Equity and Prime excl. Option ARM; applied to 2011 average retained loan balances. Card through-the-cycle charge-off rate applied to Card average balances, excl. WaMu and Commercial Card . Also excludes MB WaMu PCI portfolio and discontinued products

[4] Loan loss reserve release for FY 2011

[5] Durbin Amendment annualized 2012 net income impact of $600mm+/- less the impact of Durbin included in FY11 results. Excludes the potential incremental impact from Dodd Frank on the IB

Note: Assumes tax rate of 38%

Capital planning

Firmwide capital

Dividends

- Increase dividend to 30% payout ratio of normalized earnings over time

Capital hierarchy

- Hierarchy of capital deployment, after dividends
  - Organic growth
  - Acquisitions
  - Share repurchases

CCAR

- Submitted Capital Plan on January 9, 2012
- Follow-up meetings with Fed currently under way
- Expect response by March 15, 2012
- Severe Fed stress scenario, evaluated under Basel I
  - GDP decline of 8%
  - Peak unemployment of 13%
  - HPI decline of 20% from current level
  - Equity markets decline of 52% from 3Q11
  - Severe global market shock, including specific European stresses
- Baseline evaluated under Basel III
  - Capital Plan expected to show steady progress toward the fully phased in requirement of Basel III Tier 1 common ratio of 9.5% by 2019

Indicative stress analysis – Based on analyst estimates

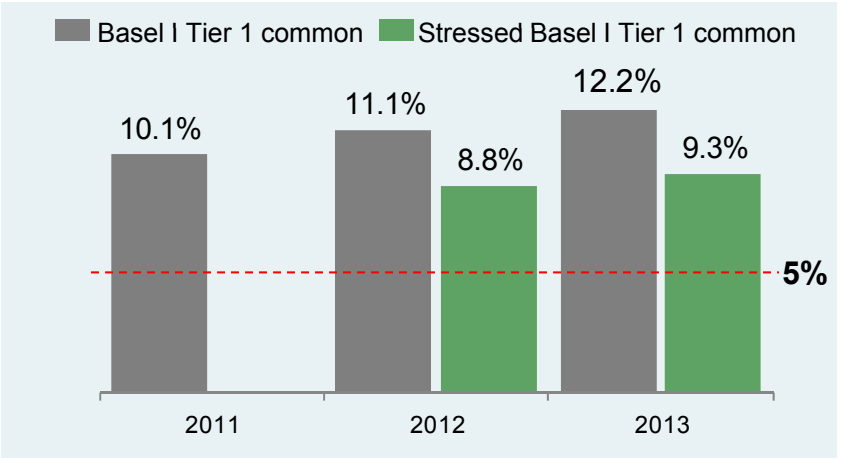
Firmwide capital

Key assumptions[1]

($B)	2011	2012	2013
Base net income	$19.0	$18.2	$20.3
Stressed net income		1.5	12.8
Actual Basel I RWA ($T)	$1.22		

- Key assumptions
  - Analyst estimates for net income and dividends
  - Actual year end 2011 Basel I RWA held constant
  - Repurchases to neutralize employee issuance

Indicative stressed capital[2]



Comments on stress results

- Fed CCAR requires share repurchases to be consistent with baseline distributions
- Assuming analyst estimated dividends, and share repurchases generally consistent with 2011, Basel I Tier 1 common remains at ~8% in 2012 and 2013
  - Results in over $35B of excess capital above the 5% minimum

Stressed Basel I Tier 1 common remains well above 5% threshold

[1] 2012-2013 net income reflects the average of 8 analyst estimates. Stressed net income reflects analyst Baseline NI multiplied by (JPM Fed Stress NI/JPM Baseline NI). 2012 and 2013 RWA levels held constant from year end 2011

[2] Analyses assume analyst average dividend/share of $1.22 in 2012 and $1.51 in 2013

Note: Fed stress case assumes backward looking market stress, which changes pro-forma Tier 1 common at the end of 2011. 2011 stressed Tier 1 common is used as a starting point for the stressed case in this analysis

See note 3 on slide 43 for discussion of Basel estimates

Basel III RWA and Tier 1 common

Firmwide capital

Basel I to Basel III incremental RWA ($T)	2011
RWA Basel I	**$1.22**
Market risk impact [1]	*80*
Risk weight 50/50 deductions at 1250% [2]	*80*
CVA [3]	*65*
250% risk weight [4]	*35*
Other [5]	*65*
Basel I to Basel III incremental RWA ($B)	**$325**
Estimated RWA Basel III	**$1.55**

Potential Basel III RWA reductions ($T)	2012	2013
Estimated beginning balance	**$1.55**	**$1.48**
Data / Model enhancements	*(30)*	*(30)*
Portfolio runoff	*(45)*	*(35)*
BAU portfolio changes	*10*	*20*
Reduction in RWA ($B)	**(65)**	**(45)**
Estimated ending balance	**$1.48**	**$1.44**

Basel I to Basel III capital reconciliation ($B)	2011
Basel I Tier 1 common	**$123**
AOCI for AFS securities; pension and other postretirement plans	*0.9*
Deduction for net defined benefit pension asset	*(1.4)*
Other	*(0.5)*
Basel I to Basel III incremental Tier 1 common	**(1.0)**
Estimated Basel III Tier 1 common	**$122**

[1] Basel III market risk RWA reflects the new capital requirements related to trading assets and securitizations, which include incremental capital requirements for stress VaR, correlation trading, and re-securitization positions
[2] Primarily reflects securitization-related exposures required to be risk weighted at 1250% based on Basel III rules
[3] Capital charge for potential mark-to-market losses associated with a deterioration in the credit worthiness of a counterparty
[4] Applied to MSR, DTA, and investments in unconsolidated financial institutions
[5] Other includes Basel I to II transition, reclassification of trading book positions, and counterparty credit
Note: Analysis reflects current interpretation of Basel III guidelines and balance sheet assumptions
See note 3 on slide 43 for discussion of Basel estimates

Baseline scenarios – Alternative Basel III trajectories

Firmwide capital

Capital adequacy – Based on analyst estimates ($B)	2011	2012E	2013E
Net income[1]	$19.0	$18.2	$20.3
Potential RWA ($T)	$1.55	$1.48	$1.44
Tier 1 common - pre-capital distribution[2]	$122[3]	$141	$163
Tier 1 common ratio - pre-capital distribution[2]	7.9%[3]	9.5%	11.3%

Straight line[4]	2012E	2013E
Tier 1 common ratio target[2]	8.1%	8.3%
Annual capital distribution capacity[2]	**$21**	**$22**

Accelerated[5]	2012E	2013E
Tier 1 common ratio target[2]	8.7%	9.5%
Annual capital distribution capacity[2]	**$13**	**$14**

[1] 2012-2013 net income reflects the average of 8 analyst estimates
[2] Net of preferred dividends of $629mm, and includes estimated impact of employee issuance. The Firm expects to utilize its repurchase capacity to, at a minimum, essentially repurchase the same amount of shares that it issues for employee stock-based incentive awards
[3] Reported estimates
[4] Achieve a Tier 1 common ratio of 9.5% by the end of 2018
[5] Achieve a Tier 1 common ratio of 9.5% by the end of 2013
Note: See note 3 on slide 43 for discussion of Basel estimates

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Key firmwide themes

- Consistent focus on customer experience and innovation
- Continued focus on cross-LOB opportunities
  - GCB at the core of IB/TSS/CB collaboration
  - Organizing Consumer businesses
- Positioning LOBs for continued growth in market share
  - Significant opportunity for net income growth
- Enhancing our ongoing focus on expense discipline
- Adapting to the new regulatory environment and capital rules
- Fortress balance sheet affords us the opportunity to
  - Serve as a source of strength for our clients
  - Continue to invest in organic growth
  - Return excess capital to our shareholders

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Managed financial results

Firmwide results ($mm)	2009	2010	2011
Revenue (FTE)[1]	$108,647	$104,842	$99,767
Credit Costs[1]	38,458	16,639	7,574
Expense	52,352	61,196	62,911
Reported net income	**$11,728**	**$17,370**	**$18,976**
Reported EPS	**$2.26**	**$3.96**	**$4.48**
ROE[2]	7%	10%	11%
ROTCE[2,3]	11	15	15

Net income by lines of business ($mm)	2009	2010	2011
Investment Bank	$6,899	$6,639	$6,789
Retail Financial Services	(335)	1,728	1,678
Card Services	(1,793)	2,872	4,544
Commercial Banking	1,271	2,084	2,367
Treasury & Securities Services	1,226	1,079	1,204
Asset Management	1,430	1,710	1,592
Corporate/Private Equity	3,030	1,258	802
Total firm net income	**$11,728**	**$17,370**	**$18,976**

[1] See note 1 on slide 43
[2] Net income used to calculate the ratios for 2009 excludes the one-time, non-cash negative adjustment of $1.1B resulting from the repayment of TARP preferred capital, which is a non-GAAP financial measure. Including this, ROE was 6%
[3] See note 4 on slide 43

Investment Bank

$mm	2009	2010	2011
Revenue	$28,109	$26,217	$26,274
IB Fees	7,169	6,186	5,859
Fixed Income Markets	17,564	15,025	15,337
Equity Markets	4,393	4,763	4,832
Credit Portfolio	(1,017)	243	246
Expense	15,401	17,265	16,116
Credit Costs	2,279	(1,200)	(286)
Net Income	$6,899	$6,639	$6,789
Key Statistics ($B)			
Overhead Ratio	55%	66%	61%
Comp/Revenue[1]	33	37	34
EOP Loans	$49.1	$56.9	$71.1
Allow. for Loan Losses	3.8	1.9	1.4
Net Charge-off Rate	3.04%	1.35%	0.28%
ALL / EOP Loans[2]	8.25	3.51	2.11
ROE[3]	21	17	17
VAR ($mm)[4]	$164	$87	$76
EOP Equity	33.0	40.0	40.0

[1] The compensation expense as a percentage of total net revenue ratio includes the impact of the U.K. Bank Payroll Tax on certain compensation awarded from December 9, 2009 to April 5, 2010 to relevant banking employees. For comparability to prior periods, IB excludes the impact of the U.K. Bank Payroll Tax expense, which results in a compensation expense as a percentage of total net revenue for 2010 of 35%, which is a non-GAAP financial measure

[2] Loans held-for-sale and loans at fair value were excluded when calculating the loan loss coverage ratio and net charge-off rate

[3] Calculated based on average equity

[4] Average Trading and Credit portfolio VAR at 95% confidence level

[5] Dealogic based on revenue

Leadership positions

- Global IB Fee market leader, #1 ranking for the past three years[5]
- Ranked #1 in disclosed 2011 Markets revenue among the top 10 competitors, both including and excluding DVA, up from #2 in 2010
- Selected by Greenwich Associates as a Quality and Share Leader for 48 distinctions across 15 programs, including Global Fixed Income, U.S. Large Corporate Finance and U.S. Equities, 2011
- Named U.S. Municipal Bond House of the Year by *IFR*, 2011
- Ranked #1 2011 Overall, *Risk*'s Institutional Investor rankings

Retail Financial Services

$mm	2009	2010	2011
Net Interest Income	$18,383	$17,220	$16,133
Noninterest Income	11,414	11,227	10,405
Revenue	29,797	28,447	26,538
Expense	15,512	16,483	19,458
Pre-Provision Pretax	$14,285	$11,964	$7,080
Credit Costs	14,754	8,919	3,999
Net Income	($335)	$1,728	$1,678
EOP Equity ($B)	$22	$25	$25
ROE[1]	(1)%	7%	7%
Memo:			
RFS Net income excl. Real Estate Portfolios	*$5,114*	*$4,221*	*$1,984*
ROE excl. Real Estate Portfolios	*40%*	*28%*	*14%*

[1] Calculated based on average equity; average equity for 2011, 2010 and 2009 was $25.0B $24.6B, and $22.5B, respectively
[2] Calculated based on average equity; average equity for 2011, 2010 and 2009 was $14.5B, $14.9B, and $12.7B, respectively

Retail Financial Services

Consumer & Business Banking

$mm	2009	2010	2011
Net Interest Income	$10,864	$10,884	$10,809
Noninterest Income	7,204	6,844	7,201
Revenue	$18,068	$17,728	$18,010
Expense	10,421	10,717	11,202
Pre-Provision Pretax	$7,647	$7,011	$6,808
Credit Costs	1,176	630	419
Net Income	$3,915	$3,652	$3,816
Key Drivers ($B)			
Average Total Deposits	$345.0	$340.8	$360.7
Deposit Margin	2.92%	3.00%	2.82%
Checking Accounts (mm)	25.7	27.3	26.6
# of Branches	5,154	5,268	5,508
Business Banking Originations	$2.3	$4.7	$5.8
Client Investment Assets	$120.5	$133.1	$137.9
# of Active Mobile Customers (mm)	1.2	5.3	8.4

Leadership positions

- Attractive footprint
  - Tri-state
  - Midwest
  - California
  - Northwest
  - Florida
  - Southwest
- Top deposit shares in
  - #1 New York
  - #1 Chicago
  - #1 Phoenix
  - #1 Dallas/Ft. Worth
  - #1 Houston
  - # 1 Columbus, OH
  - #2 Seattle
  - #3 Los Angeles
  - #3 San Francisco
  - #3 Miami

Retail Financial Services

Mortgage Production and Servicing

$mm	2009	2010	2011
Production			
Production-related Revenue excl. Repurchase Losses	$3,194	$4,309	$4,235
Production Expense	1,575	1,613	1,895
Income excl. repurchase losses	$1,619	$2,696	$2,340
Repurchase Losses	(1,612)	(2,912)	(1,347)
Income/(loss) before income tax expense/(benefit)	$7	($216)	$993
Servicing			
Servicing-related Revenue	$5,182	$5,008	$4,524
MSR Asset Amoritization	(3,279)	(2,384)	(1,904)
Servicing Expense	1,684	2,584	4,845
Income/(loss), excl. MSR risk management	219	40	(2,225)
MSR Risk Management	1,724	1,151	(1,572)
Income/(loss) before income tax expense/(benefit)	$1,943	$1,191	($3,797)
Net income/(loss)	$1,199	$569	($1,832)
Key Drivers ($B)			
Mortgage Loan Originations	$150.7	$155.6	$145.6
Retail Channel Originations	53.9	68.8	87.2
Mortgage Application Volume	206.6	214.8	204.7
3rd Party Mtg Loans Svc'd (EOP)	1,082.1	967.5	902.2
Headcount[1]	32,393	39,440	49,189

[1] Headcount for total Mortgage Banking
[2] Source: Inside Mortgage Finance, 4Q11

Leadership positions

- #3 in Mortgage Originations with 11.5% market share[2]
- #3 in Mortgage Servicing with 11.4% market share[2]

APPENDIX

Retail Financial Services

Real Estate Portfolios

$mm	2009	2010	2011
Revenue	$6,520	$5,547	$4,592
Expense	1,847	1,627	1,521
Pre-Provision Pretax	4,673	3,920	3,071
Net Charge-Offs	8,343	6,450	3,805
Change in Allowance	5,220	1,781	(230)
Credit Costs	13,563	8,231	3,575
Net Income	($5,449)	($2,493)	($306)
Memo: ALL/ EOP Loans[1]	*6.55%*	*6.47%*	*6.58%*
Key Drivers[1] **($B)**			
Average Home Equity Loans Owned[2]	$136.0	$120.3	$106.4
Average Mortgage Loans Owned[2]	133.7	117.6	102.8

[1] Excludes the impact of purchased credit-impaired loans acquired as part of the WaMu transaction. An allowance for loan losses of $5.7B, $4.9B and $1.6B was recorded for these loans at year end 2011, 2010 and 2009, respectively
[2] Includes purchased credit-impaired loans acquired as part of the WaMu transaction

Card Services & Auto

$mm	2009[1]	2010	2011
Card Services & Auto			
Revenue	$23,199	$20,472	$19,141
Credit Costs	19,648	8,570	3,621
Expense	6,617	7,178	8,045
Net Income	($1,793)	$2,872	$4,544
ROE[2]	(10)%	16%	28%
EOP Equity ($B)	$17.5	$18.4	$16.0
Card Services — Key Drivers excl. Commercial Card[3] ($B)			
Avg Outstandings	$172.4	$144.4	$126.8
Sales volume	$294.1	$313.0	$343.7
New Accts Opened (mm)	10.2	11.3	8.8
Net Revenue Rate	11.78%	11.89%	12.31%
Net Charge-off Rate	9.33	9.72	5.46
30+ Day Delinquency Rate	6.28	4.07	2.82
Merchant Services — Key Drivers (B)			
Bank card volume	$409.7	$469.3	$553.7
# of total transactions	18.0	20.5	24.4
Auto — Key Drivers ($B)			
Avg Outstandings - Auto	$43.6	$47.6	$47.0
Avg Outstandings - Student	16.1	15.9	$14.0
Auto Originations	23.7	23.0	$21.0

[1] 2009 on a managed basis. See note 1 on slide 43
[2] Calculated based on average equity; 2011, 2010 and 2009 average equity was $16.0B, $18.4B and $17.5B, respectively
[3] Statistics include loans held for sale
[4] Excludes WaMu and Commercial Card
[5] Based on internal JPM estimates

Leadership positions

- Chase is #1 Visa credit card issuer
- 20.8% market share of General Purpose Credit Card outstandings[4]
- 19.3% market share of General Purpose Credit Card sales volume[4]
- #1 co-brand card issuer in the U.S.[5]
- #1 merchant acquirer in e-commerce payment processing[5]

Commercial Banking

$mm	2009	2010	2011
Revenue	$5,720	$6,040	$6,418
Middle Market	3,055	3,060	3,145
Corp. Client Banking	1,102	1,154	1,261
Comm. Term Lending	875	1,023	1,168
Real Estate	461	460	416
Other	227	343	428
Expense	2,176	2,199	2,278
Credit Costs	1,454	297	208
Net Income	$1,271	$2,084	$2,367
Key Statistics ($B)			
Avg Loans	$106.7	$97.0	$104.2
EOP Loans	97.4	98.9	112.0
Avg Liability Balances[1]	113.2	138.9	174.7
Gross IB Fees ($mm)	1,163	1,335	1,421
Allow. for Loan Losses	3.0	2.6	2.6
NPLs	2.8	2.0	1.1
Net Charge-Off Rate[2]	1.02%	0.94%	0.18%
ALL/Loans[2]	3.12	2.61	2.34
ROE[3]	16	26	30
Overhead Ratio	38	36	35
EOP Equity	$8.0	$8.0	$8.0

[1] Includes deposits and deposits swept to on-balance sheet liabilities
[2] Loans held-for-sale and loans at fair value were excluded when calculating the loan loss coverage ratio and net charge-off rate
[3] Calculated based on average equity
[4] Reflect CB-equivalent segments at BAC, KEY, PNC and USB
[5] Based on CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB and WFC
[6] Thomson Reuters FY11
[7] FDIC 9/30/11

Leadership positions

- Highest ROE in peer group[4]
- Lowest overhead ratio in peer group[5]
- Continued to outperform peers in credit quality with the lowest net charge-off ratio and nonperforming loan ratio in peer group[5]
- Top 3 Middle Market syndicated lender in the U.S.[6]
- #1 multi-family lender in the U.S.[7]

Treasury & Securities Services

$mm	2009	2010	2011
Revenue	$7,344	$7,381	$7,702
Treasury Services	3,702	3,698	3,841
Worldwide Securities Svcs.	3,642	3,683	3,861
Expense	5,278	5,604	5,863
Credit Costs	55	(47)	1
Net Income	$1,226	$1,079	$1,204
Key Statistics			
Avg Liability Balances ($B)[1]	$248.1	$248.5	$318.8
Assets Under Custody ($T)	14.9	16.1	16.9
Pretax Margin	26%	23%	24%
ROE[2]	25	17	17
TSS Firmwide Revenue	$10,231	$10,260	$10,237
TS Firmwide Revenue	6,589	6,577	6,376
TSS Firmwide Avg Liab Bal ($B)[1]	361.2	387.3	493.5
EOP Equity ($B)	5.0	6.5	7.0

[1] Includes deposits and deposits swept to on-balance sheet liabilities
[2] Calculated based on average equity
[3] Source: Federal Reserve, Clearing House for Interbank Payments (CHIPS), and Ernst & Young
[4] Source: Greenwich Associates, 2011
[5] Source: JPM and peer 4Q11 company filings
[6] Source: Various global exchanges, as of November 2011
[7] Source: Nilson

Leadership positions

- #1 global clearer of U.S. dollars and #1 Automated Clearing House for originations[3]
- #1 (tied) share leader in U.S. Large Corporate Treasury Management Market Penetration providers[4]
- #2 provider of custody services leveraging significant scale and global footprint with $16.9T in AUC[5]
- #2 in number of sponsored American Depository Receipt (ADR) shares[6]
- #1 Visa / MasterCard Commercial, Purchasing and Prepaid card issuer in the U.S.[7]

Asset Management

$mm	2009	2010	2011
Revenue	$7,965	$8,984	$9,543
Private Banking	4,320	4,860	$5,116
Institutional	2,065	2,180	2,273
Retail	1,580	1,944	2,154
Expense	5,473	6,112	7,002
Credit Costs	188	86	67
Net Income	$1,430	$1,710	$1,592
Key Statistics ($B)			
Assets Under Management	$1,249	$1,298	$1,336
Assets Under Supervision	1,701	1,840	1,921
Average Loans	35.0	38.9	50.3
EOP Loans	37.8	44.1	57.6
Average Deposits	77.0	86.1	106.4
Pretax Margin	29%	31%	26%
ROE[1]	20	26	25
EOP Equity	$7.0	$6.5	$6.5

[1] Calculated based on average equity
[2] Source: iMoney, 2011
[3] Source: EuroMoney, 2012
[4] Source: Strategic Insight, 2011
[5] Source: The Asset Magazine, 2011
[6] Source: Thomson Reuters, 2011
[7] Source: Financial Times, 2011

Leadership positions

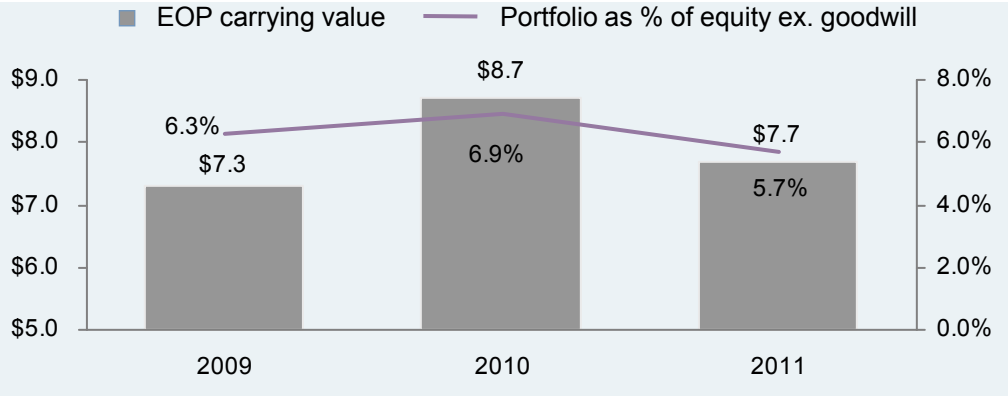
- #1 Institutional Money Market Fund Manager Worldwide[2]
- #1 Ultra-High-Net-Worth Private Bank Globally[3]
- #2 in U.S. Total Net Mutual Fund flows[4]
- 2011 Asset Manager of the Year for Asia and Hong Kong[5]
- Leading Pan-European Fund Management Firm[6]
- Best brand in Private Banking[7]
- Best Private Bank for Customer Service[7]

Corporate/Private Equity

Net income ($mm)

	2009	2010	2011
Private Equity	($78)	$588	$391
Corporate[1]	3,108	670	411
Net Income	$3,030	$1,258	$802

Private Equity portfolio ($B)



[1] Includes merger-related items

Notes on non-GAAP & other financial measures

Notes on non-GAAP financial measures

1. *In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a FTE basis. Accordingly, revenue from tax-exempt securities and investments that receive tax credits is presented in the managed results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.*

   Prior to January 1, 2010, the Firm's managed basis presentation also included certain reclassification adjustments that assumed credit card loans securitized by Card Services & Auto remained on the balance sheet. Effective January 1, 2010 the Firm adopted accounting guidance that required the Firm to consolidate its Firm-sponsored credit card securitization trusts. The income, expense and credit costs associated with these securitization activities are recorded in the 2011 Consolidated Statements of Income in the same classifications that were previously used to report such items on a managed basis. As a result of the consolidation of the credit card securitization trusts, reported and managed basis relating to credit card securitizations are equivalent for periods beginning January 1, 2010.

   The presentation of Card Services & Auto's results prior to January 1, 2010 on a managed basis assumed that credit card loans that had been securitized and sold in accordance with U.S. GAAP remained on the Consolidated Balance Sheets, and that the earnings on the securitized loans were classified in the same manner as the earnings on retained loans recorded on the Consolidated Balance Sheets. JPMorgan Chase used the concept of managed basis to evaluate the credit performance and overall financial performance of the entire managed credit card portfolio. Operations were funded and decisions were made about allocating resources, such as employees and capital, based on managed financial information. In addition, the same underwriting standards and ongoing risk monitoring are used for both loans on the Consolidated Balance Sheets and securitized loans. Although securitizations result in the sale of credit card receivables to a trust, JPMorgan Chase retains the ongoing customer relationships, as the customers may continue to use their credit cards; accordingly, the customer's credit performance affects both the securitized loans and the loans retained on the Consolidated Balance Sheets. JPMorgan Chase believed that this managed-basis information was useful to investors, as it enabled them to understand both the credit risks associated with the loans reported on the Consolidated Balance Sheets and the Firm's retained interests in securitized loans.

2. *The ratio of the allowance for loan losses to end-of-period loans excludes the following: loans accounted for at fair value and loans held-for-sale; purchased credit-impaired ("PCI") loans; and the allowance for loan losses related to PCI loans. Additionally, Real Estate Portfolios net charge-offs exclude the impact of PCI loans. The allowance for loan losses related to the purchased credit-impaired portfolio totaled $5.7 billion, $4.9 billion and $1.6 billion at December 31, 2011, 2010 and 2009, respectively*

3. *The Basel I Tier 1 common ratio is Tier 1 common divided by risk-weighted assets. Tier 1 common is defined as Tier 1 capital less elements of Tier 1 capital not in the form of common equity, such as perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred capital debt securities. Tier 1 common, a non-GAAP financial measure, is used by banking regulators, investors and analysts to assess and compare the quality and composition of the Firm's capital with the capital of other financial services companies. The Firm uses Tier 1 common along with other capital measures to assess and monitor its capital position. On December 16, 2010, the Basel Committee issued the final version of the Basel Capital Accord, commonly referred to as "Basel III." The Firm's estimate of its Tier 1 common ratio under Basel III is a non-GAAP financial measure and reflects the Firm's current understanding of the Basel III rules and the application of such rules to its businesses as currently conducted, and therefore excludes the impact of any changes the Firm may make in the future to its businesses as a result of implementing the Basel III rules. The Firm's understanding of the Basel III rules is based on information currently published by the Basel Committee and U.S. federal banking agencies. Management considers this estimate as a key measure to assess the Firm's capital position in conjunction with its capital ratios under Basel I requirements, in order to enable management, investors and analysts to compare the Firm's capital under the Basel III capital standards with similar estimates provided by other financial services companies.*

4. *Tangible common equity ("TCE"), a non-GAAP financial measure, represents common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE, a non-GAAP financial ratio, measures the Firm's earnings as a percentage of TCE. In management's view, these measures are meaningful to the Firm, as well as analysts and investors in assessing the Firm's use of equity, and in facilitating comparisons with competitors.*

5. *In Card Services, supplemental information is provided for Chase, excluding Washington Mutual and Commercial Card portfolios, to provide more meaningful measures that enable comparability with prior periods. The net charge-off rate and 30+ delinquency rate presented include loans held-for-sale.*

6 *In addition to reviewing JPMorgan Chase's net interest yield on a managed basis, management also reviews core net interest income to assess the performance of its core lending, investing (including asset /liability management), and deposit-raising activities, excluding the impact of IB's market-based activities. IB's market-based activities is defined as total IB net interest income less net interest income earned on IB loans. The chart presents an analysis of managed core net interest income and core net interest margin. These are non-GAAP financial measures due to the exclusion of IB's market-based net interest income and the related assets. Management believes the exclusion of IB's market-based activities, provides investors and analysts a more meaningful measure to analyze non-market related business trends of the Firm and can be used as a comparable measure to other financial institutions primarily focused on core lending, investing and deposit-raising activities.*

Additional notes on financial measures

7. *Pretax margin represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is, therefore, another basis that management uses to evaluate the performance of TSS and AM against the performance of their respective competitors.*

MORTGAGE BANKING

Frank Bisignano, Mortgage Banking CEO and Chief Administrative Officer

February 28, 2012

JPMorgan Chase & Co.

Agenda

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2011 – A year of repositioning

Credit

- Recent underwriting practices have demonstrated strong performance
  - Early delinquency rates[1] peaked in 2005-2008 vintages at 1.5% for Prime/Home Equity loans; over 4% for government insured
  - 2009+ vintages averaging less than 0.5% across product types

Borrower Relief

- Modification and refinance programs continue to be expanded
- Significant proprietary modification and short sale programs exist with each servicer
- Servicing practices largely remediated

DOJ/AG

- $25B settlement covers 5 servicers
  - ~$5B – Cash
  - ~$3B – Refi Program for “underwater” homeowners
  - ~$17B – Additional consumer relief
- Required to adhere to certain enhanced mortgage servicing standards

Consent Orders

- The OCC and the Fed issued Consent Orders in April 2011 to large mortgage servicers
  - Servicer plans were approved by the OCC and the Fed
  - Communication with borrowers began in October

- **Uncertainty continues**
  - Private label litigation; GSE/FHA/VA/PLS repurchases and other
  - Volume of unsold homes; shadow inventory
  - Role of private capital in mortgage market liquidity

[1] Ever 30 days delinquent measured 6 months from origination for the JPMC serviced portfolio; excludes HARP

2011 – Positioning for success at Chase

Brought full power of the firm to fix our mortgage business

- Reconstituted management team and organizational structure
- Recruited key leadership by leveraging talent inside the firm and from strategic external hires
- Formed Borrower Assistance
- Increased loan officers 23% in 2011
- Leveraged firmwide expertise and best practices across LOBs – Investment Bank, CIO, and other Consumer businesses

Delivered on technology and process improvements

- Consolidated three servicing platforms into one
- Re-engineered servicing processes to improve efficiency
- Increased number of modifications per month by 38% and short sales by 43%

Improved volumes, market share, and customer satisfaction

- Chase now #2 in originations – 3Q/4Q11
- Increased the number of loans originated from the branches by over 40%
- Enhanced customer experience
- JD Power Customer Satisfaction rank up to 5th, from 12th
- Community relationships improved

Improved risk and control environment

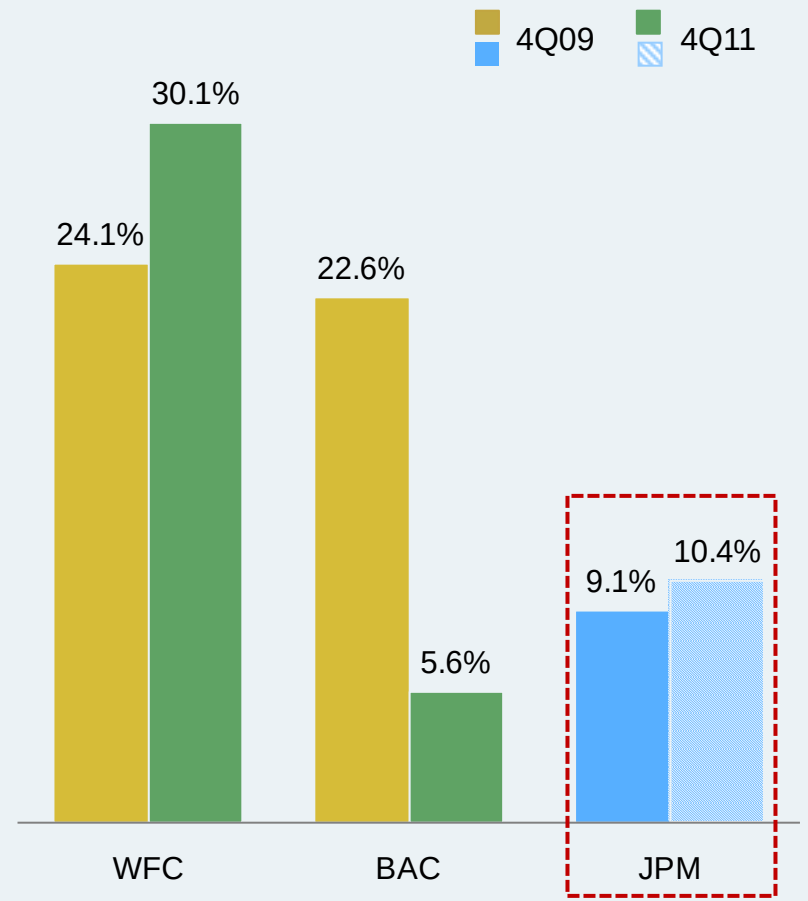
- Control governance structure revamped; risk management oversight enhanced
- Consent Orders servicing improvements

Improving financial performance

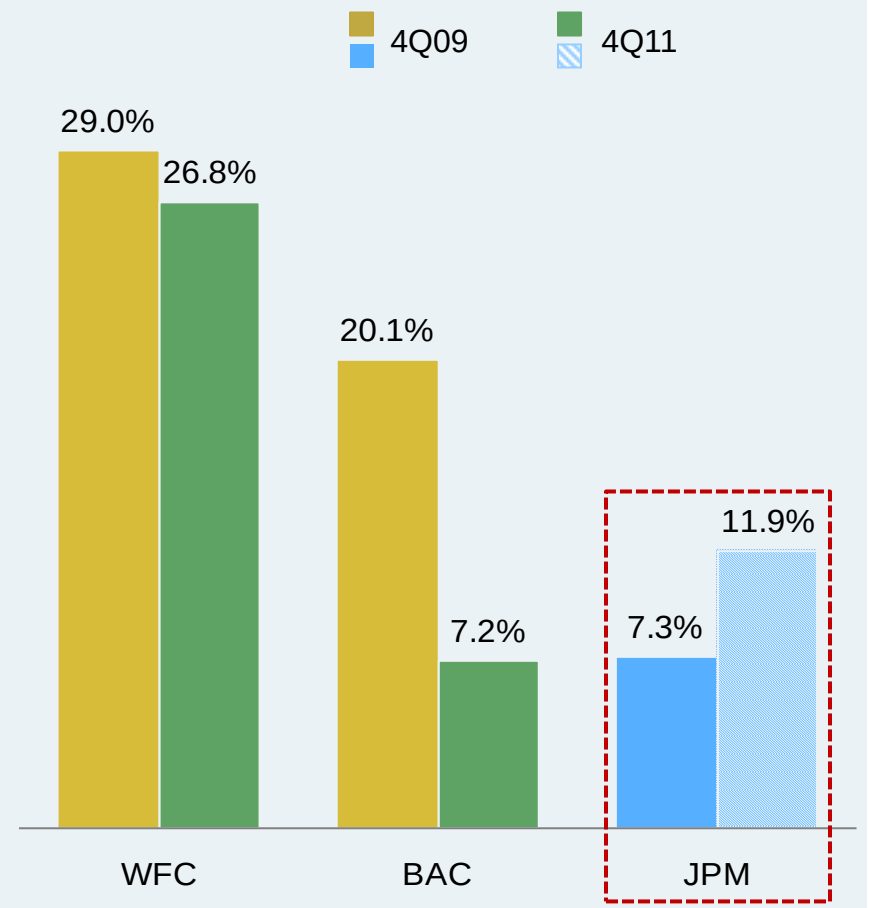
- Charge-offs decreased
- Repurchase losses lower
- Strong retail channel volumes and margins

2011 – Focused on more profitable Retail channel

Market share trends – Total originations



Market share trends – Retail originations

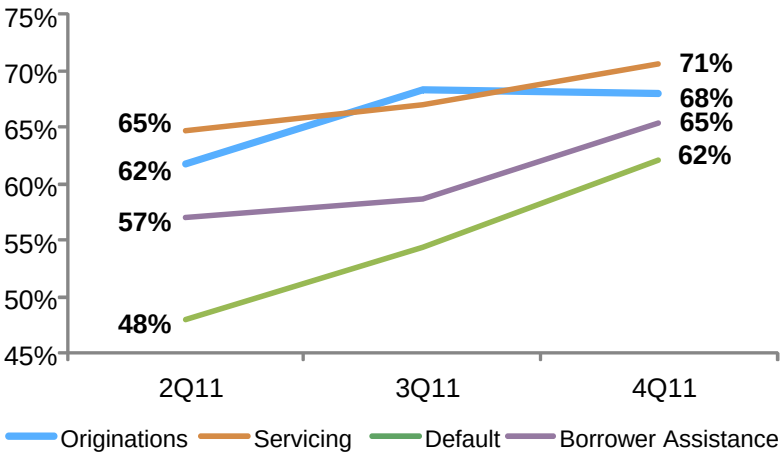


- Overall market share increase driven by Retail originations – Now represent ~2/3 of our volume
- While growth has been driven by the Retail channel, we continue to believe the Correspondent channel is attractive with the appropriate risk/return profile

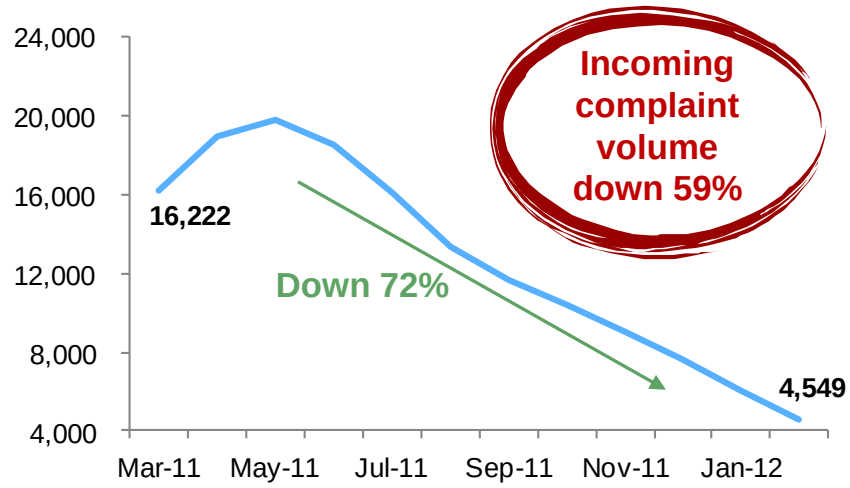
Note: Retail channel includes branch and direct to consumer originations
Source: Inside Mortgage Finance – Originations are firmwide

2011 – Positioning for success at Chase

Customer satisfaction trends



Customer complaint inventory



JD Power Mortgage Origination Survey – 2011 overall satisfaction index

2010 Rank	2011 Rank		Difference from 2010
1	1	Quicken Loans 818	(8)
5	2	SunTrust Mortgage 791	21
--	3	ING Bank 789	(37)
6	4	BB&T 781	14
12	5	Chase **760**	61
		Industry Average 747	(15)
8	10	Wells Fargo 741	(61)
13	14	CitiMortgage/Citibank 725	65
14	16	Bank of America 710	13

650 700 750 800 850

PERFORMANCE AND OUTLOOK

2011 Results

P&L ($mm)	2009	2010	2011
Production pre-tax	$7	($216)	$993
Servicing pre-tax	1,943	1,191	(3,797)
Real Estate Portfolio pre-tax	(8,890)	(4,311)	(504)
Total net income	($4,250)	($1,924)	($2,138)

Key drivers ($B, unless otherwise noted)			
Total origination market size	$1,840.0	$1,630.0	$1,350.0
Chase mortgage loan originations	150.7	155.6	145.6
Chase Retail channel originations	$53.9	$68.8	$87.2
Chase Correspondent channel originations	93.2	85.5	57.9
3rd Party mtg loans svc'd (EOP)	1,082.1	967.5	902.2
MSR net carrying value (EOP)	15.5	13.6	7.2
MSR revenue multiple	3.3x	3.2x	1.8x
Headcount	32,393	39,440	49,189

2011 Ongoing vs. legacy view – Ongoing business profitable

Mortgage Banking ($mm)

	2011			
	Ongoing	Legacy	Total	Normalized
Production				
Pre-tax income	$2,270	($1,277)	$993	$1,500 +/-
Servicing				
Servicing operating pre-tax	203	(2,428)	(2,225)	
MSR risk management	154	(1,726)	(1,572)	
Total pre-tax income	$357	($4,154)	($3,797)	$1,000 +/-
Real Estate Portfolios[1]				
Pre-tax pre-provision	549	2,522	3,071	
Credit costs	109	3,466	3,575	
Total pre-tax income	$440	($944)	($504)	$500-1,000
Total Mortgage Banking pre-tax income	$3,067	($6,375)	($3,308)	$3,000-3,500
Mortgage Banking net income	$1,982	($4,120)	($2,138)	$1,800-2,100
Normalized ROE				15%

Key drivers

- Production: legacy repurchase losses will normalize over time
- Servicing: MSR yield will improve in 2012 based on refinement of MSR valuation model in 4Q11
  - Weighted average option adjusted spread of 7.8% at year end 2011 vs. 3.9% at year end 2010
- Real Estate Portfolios: legacy portfolio will improve with credit and ultimately turn positive

Normalized earnings should produce 15% ROE through the cycle

[1] Legacy Real Estate Portfolio is defined as WaMu purchased credit-impaired, discontinued products, broker originated loans, limited documentation loans, and certain loans with ECLTVs greater than 80%. Ongoing portfolio end-of-period loan balance is $36B and legacy portfolio end-of-period loan balance is $162B

2011 included significant negatives

($mm)			
Significant items - pretax	**2010**	**2011**	**Normalized**
Production			
Repurchase losses[1]	(2,912)	(1,347)	(150)
Servicing			
Servicing and default expense[2]	($2,234)	($3,195)	($1,250)
Core servicing expense	*(837)*	*(1,031)*	
Default servicing expense	*(1,397)*	*(2,164)*	
Non-recurring	($350)	($3,377)	
Foreclosure related matters	*(350)*	*(1,650)*	
MSR valuation updates [3]	*NM*	*(1,727)*	
Real Estate Portfolios			
Foreclosed asset expense	(896)	(649)	(200)
Subtotal	***($6,392)***	***($8,568)***	***($1,600)***

[1] RFS only. Excludes EMC
[2] Excludes non-recurring foreclosure-related matters
[3] Includes refinements to the valuation model and related inputs comprising updates to the prepayment model, revised fee and cost to service assumptions and an increase in the option adjusted spread ("OAS") to reflect higher return and capital requirements

- 2011 servicing and default expense of $3.2B will normalize to $1.25B over time
- 2011 results include $3.4B of non-recurring costs

2012: business growth and winning

Customers

- Capitalize on ‘One Chase’ brand
- Continue to improve customer experience
- Continue root cause analysis to eliminate customer complaints

Performance

- Expand and strengthen the production franchise
- Accelerate growth, particularly in retail channel and purchase lending
- Re-engineer origination and servicing processes and enhance operating efficiency
- Price for appropriate returns given increasing capital requirements

Controls

- Strengthen controls, minimize breakages and defects
- Enhance compliance, risk and control infrastructure
- Deliver against Consent Orders and DOJ/AG requirements

People

- Attract and retain talent to focus on most critical areas
- Develop and motivate high performers
- Improve loan officer retention
- Build a culture of quality and control

Leverage technology to enhance customer experience and improve operating efficiencies and controls

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Best-in-class customer experience – Mortgage Manager video

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Strengthen the production franchise

Why we like the business

- Retail origination model leverages Chase brand and customer delivery platform
  - Branches, online, and mobile
- Core product for branch cross-sell opportunities
- Fee based counter-cyclical earnings stream complements traditional spread businesses
- Attractive returns over the cycle

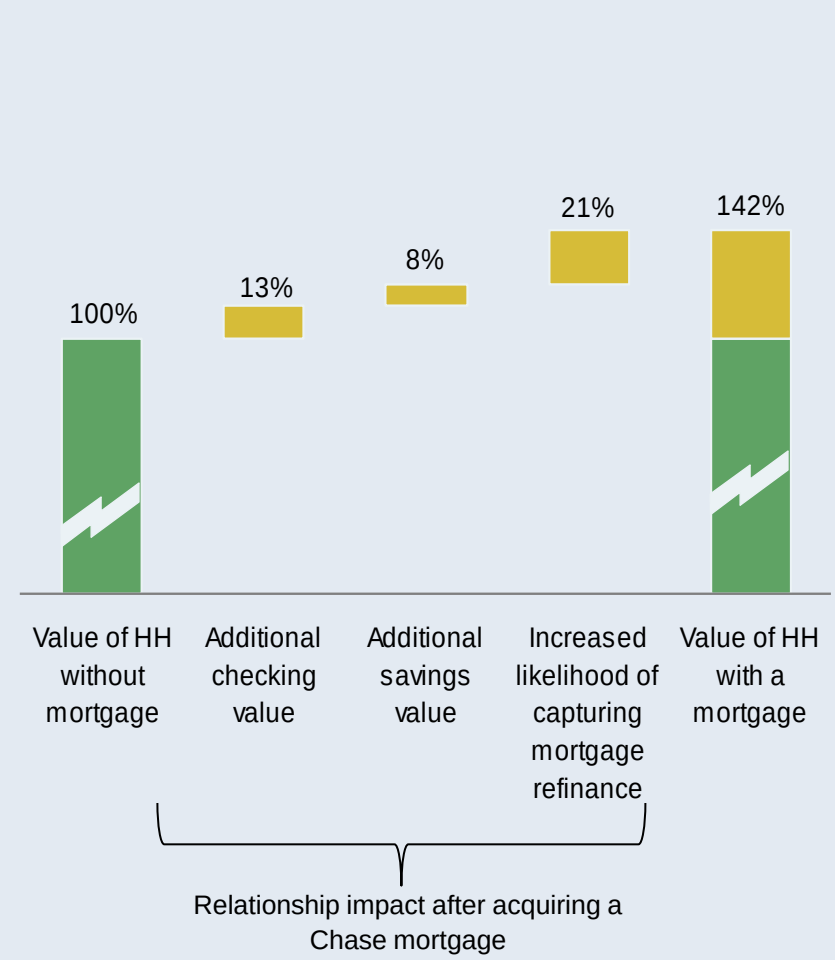
Areas of focus

- Improve purchase market share to 10%-12%
  - An increase of ~50% from 2011
- Retail sales force growth ~25% in 2012
- Best-in-class customer experience
  - Roll out Mortgage Manager
- New retail origination platform
  - Improve productivity
  - Enhance underwriting and process quality

Core product for branch cross-sell opportunities

Mortgage increases the value of the overall customer relationship

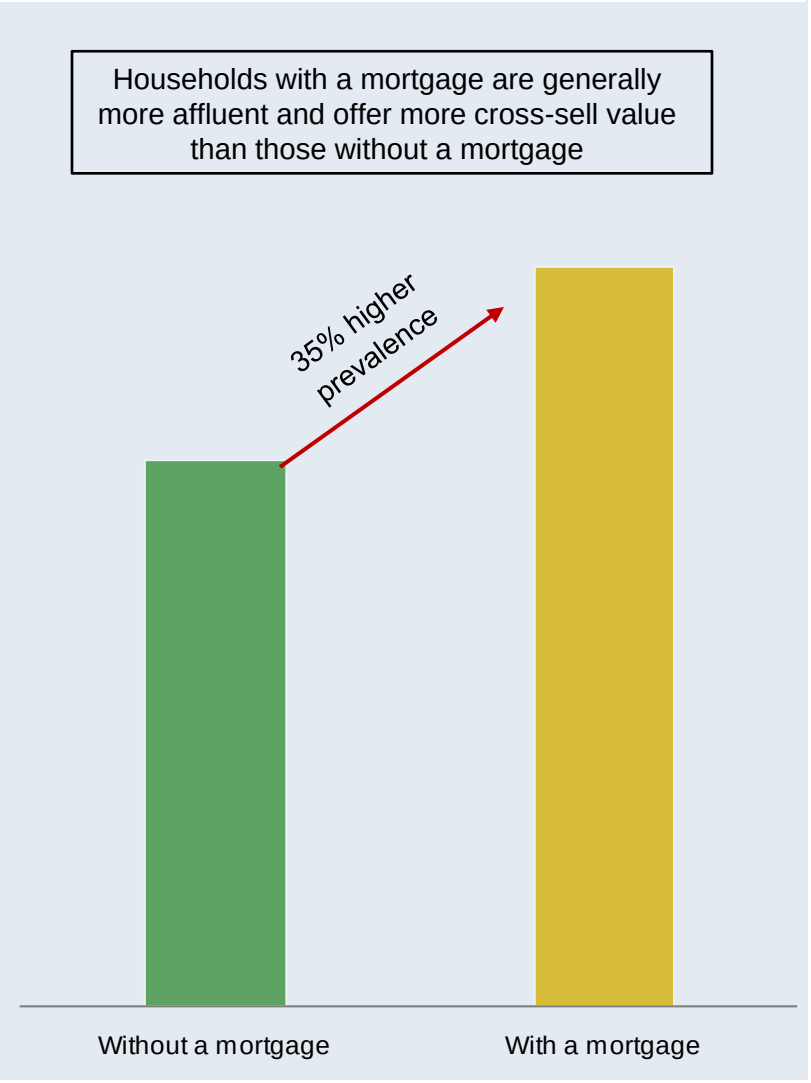
Incremental value[1] of adding mortgage to a banking relationship



- Excludes any additional value attributed to cross-sell (e.g. credit card, investments)

[1] Higher share of wallet and lower attrition of balances

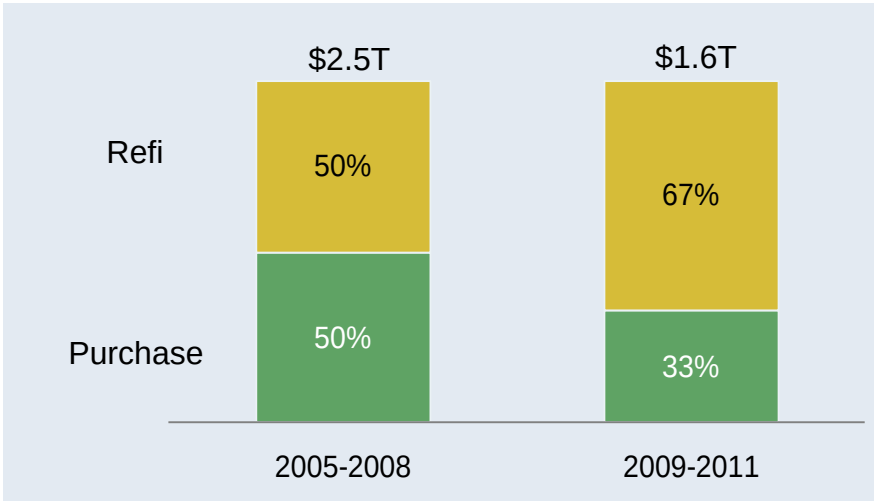
% of HH that are high net worth, mass affluent or affluent[2]



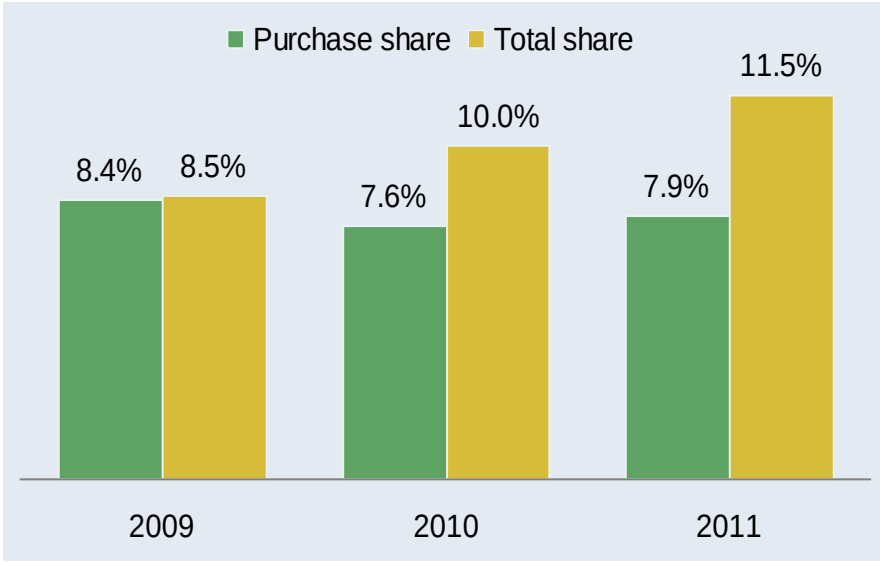
[2] Mass Affluent has a deposit and investment wallet of $100k-$500k, affluent has $500k-$5mm, and high net worth has greater than $5mm

Mortgage production – Purchase market share opportunity

Average mortgage market size and purchase/refinance mix



Chase mortgage originations market share



Source: Inside Mortgage Finance

Comments

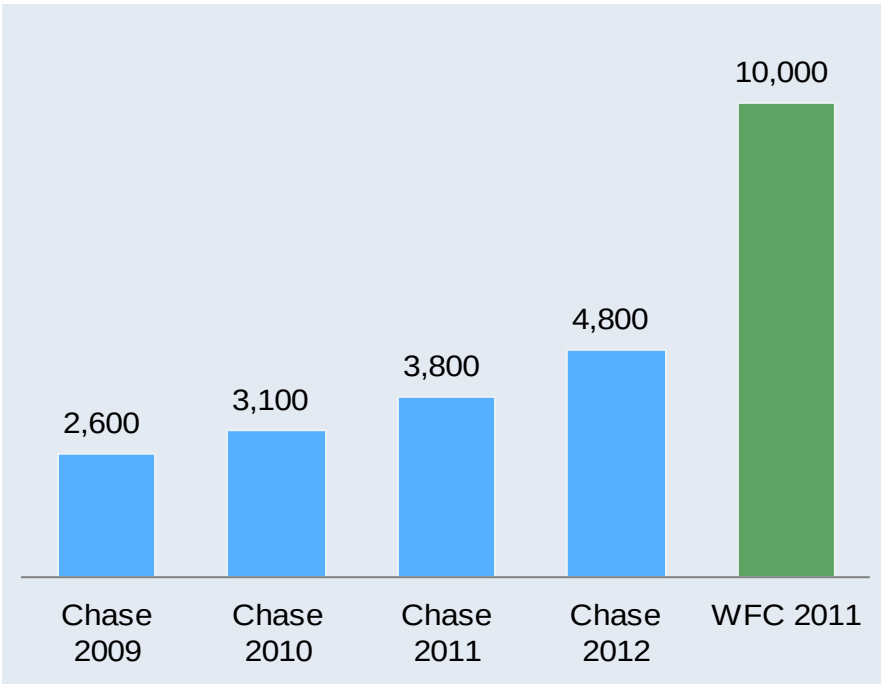
- Lowest rates in history and HARP led to recent robust refinance market
- We expect market mix to be weighted to purchase in a more normal rate environment
- Focus on growing share in purchase to capitalize on market growth
- Well positioned to take share in purchase market
  - 5.7mm existing Chase mortgage households
  - 6.1mm existing eligible Chase banking relationships with no mortgage relationship
  - 75k real estate agent relationships in business banking
  - Strong recruiting of purchase-focused loan officers
  - Increasing lead in customer satisfaction versus top competitors

Mortgage production – Retail model differentiation

2011 Retail fundings / loan officer / month



Number of loan officers (EOP)



Sources: Company filings and investor presentations

Commentary

- Chase loan officer productivity exceeds major competitors
- Loan officers substantially located at branches
- Marketing investment drives leads to branches and call center

Commentary

- Opportunity to increase sales force to match competitors
- Added +/- 700 loan officers in 2011
- Additional +/- 1,000 loan officers in 2012 is additional run rate annual pretax earnings of $100mm+

Mortgage origination economics

Business drivers

- Sales force size/productivity
- Marketing effectiveness
- Customer experience
- Operational efficiency and capacity flexibility
- Underwriting and process quality

Risks

- Repurchase expense
- Market risk exposure to MBS rates
- Competitor capacity/margin positioning
- Purchase market does not recover
- Regulatory and GSE changes

- Execution of business drivers creates attractive returns over the cycle
- High returns in peak refinance years
- Lower returns in “normal” years

Normalized target income

Market volume	$1.5T +/-
Market share	15% +/-
Chase volume	$225B +/-
Chase pretax margin / $ volume	65bps +/-
Chase pretax income	**$1.5B +/-**

Repurchase update

Realized losses and reserve

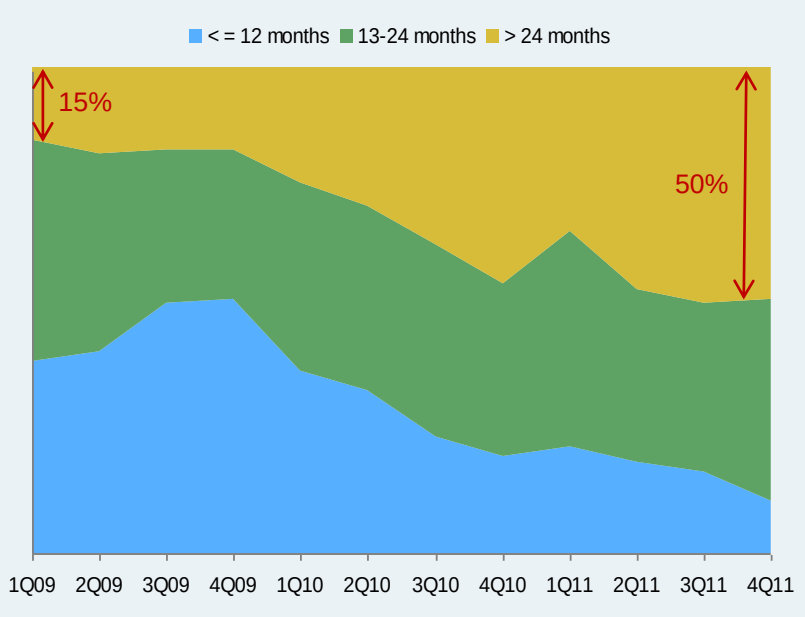
	4Q10	1Q11	2Q11	3Q11	4Q11	FY10	FY11
Realized losses ($mm)	$349	$215	$215	$314	$390	$1,360	$1,134
Reserve ($B, EOP)	$3.0	$3.2	$3.2	$3.2	$3.2	$3.0	$3.2

Commentary

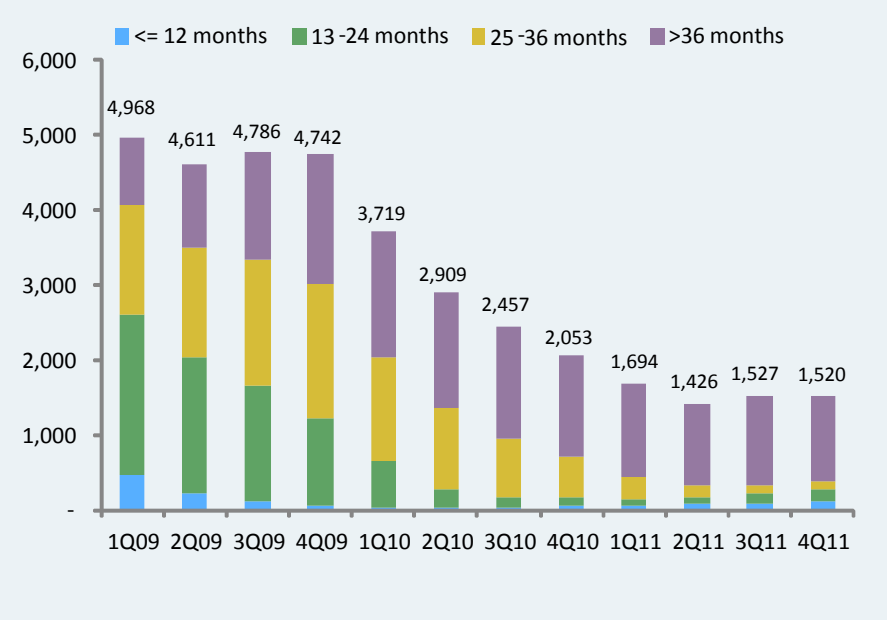
- FY11 realized losses of $1.1B with reserves of $3.2B
- Realized losses trended higher in 2H11 as GSE demands accelerated
  - GSEs have improved cycle times (reduced time between file request and demand)
  - ~90% of demands continue to come from 2005-2008 vintages
- While 2012 realized losses are expected to remain elevated, reserves will come down at some point
  - Newly delinquent loans have longer payment history, reducing likelihood of origination defect
- Outlook of +/- $350mm realized losses per quarter

Repurchase update

GSE new demands by pay history
(2005-2008 Vintages, hChase UPB, $mm)



GSE new loans to 90 days past due by burnout
(2005-2011 vintages, hChase, UPB $mm)



Commentary

- Loans going delinquent after 24 months of payment history are typically at a lower risk of repurchase due to rep and warrant defect
- ~50% of demands received in 2H11 have made more than 24 months of payments – Up from ~15% in 2009
- Cure rates (ability to remedy purported defect) have been 10-15 points higher on loans with greater than 24 months pay history
- New delinquencies have decreased significantly from 2009 peak; majority of newly delinquent loans in 2011 had more than 36 months of pay history

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Improving servicing profitability

Why we like the business

- Mortgage increases the value of the overall customer relationship
- Chase, as the 3rd largest servicer has the advantage of scale
- Macroeconomic fundamentals are improving, resulting in reduced default rates, and improving cost structure
- With appropriate operations and risk management, the MSR asset will deliver consistent attractive returns (15% ROE)

Areas of focus

- Achieve short term run-rate savings
  - Delinquent accounts decrease
  - Modification inventory reduced through borrower assistance initiatives
- Normalize servicing expense over time
- Regulatory environment, including Consent Orders and DOJ/AG related items
- Improve customer satisfaction
  - Deployment of NICE analytics for early escalation of customer issues

Foreclosure process update

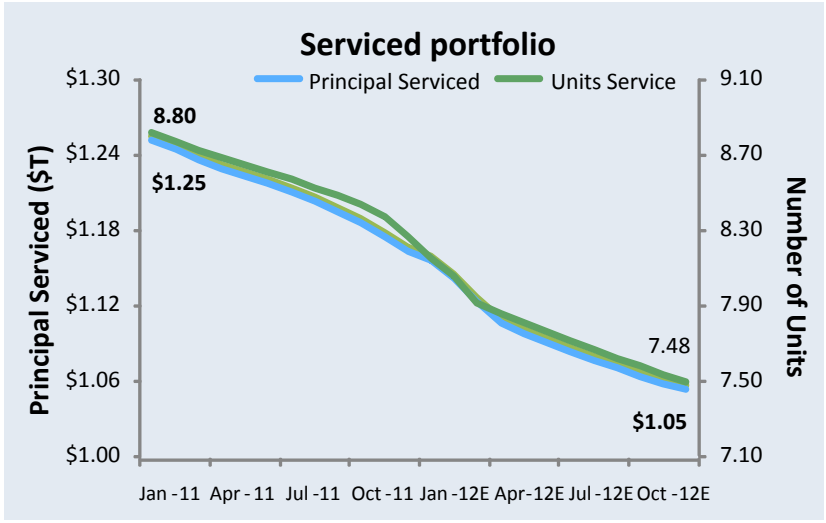
Doing more to prevent foreclosures

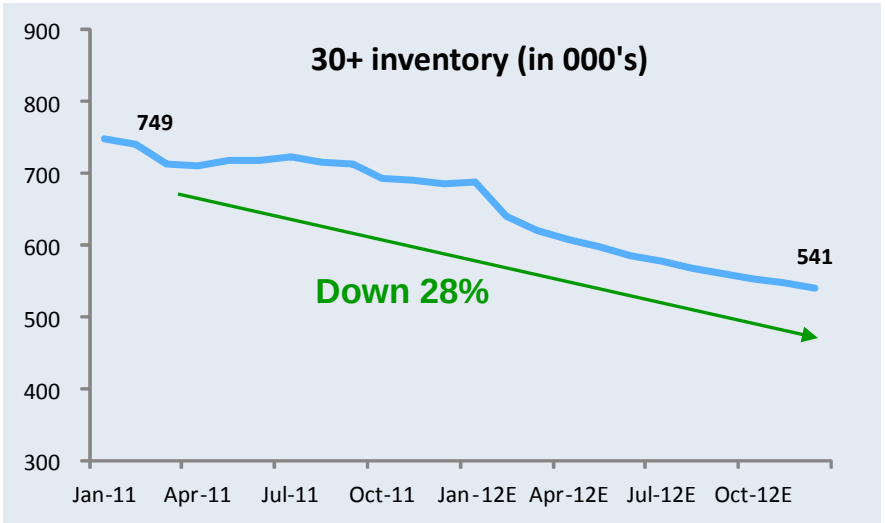
- Prevented twice as many foreclosures as have been acted upon
  - Offered over 1.2 million modifications and completed 452,000 since 2009
  - Foreclosure alternatives (short sales, Deed in Lieu) increased 22% over the prior year
- 82 Chase Home Ownership Centers (CHOCs)
- 15,000 borrower assistance and default servicing support staff
- Refinanced more than 1 million mortgages since 2010
- Met with over 273,000 struggling customers

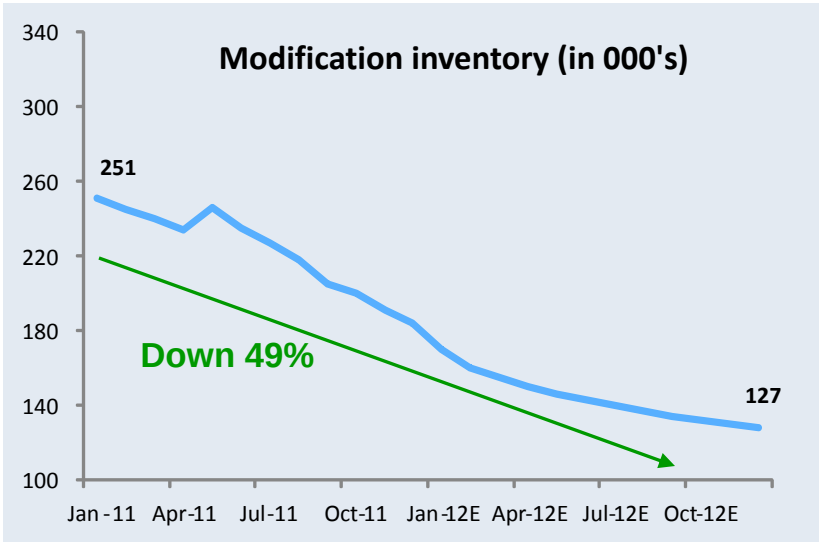
Key facts about foreclosures

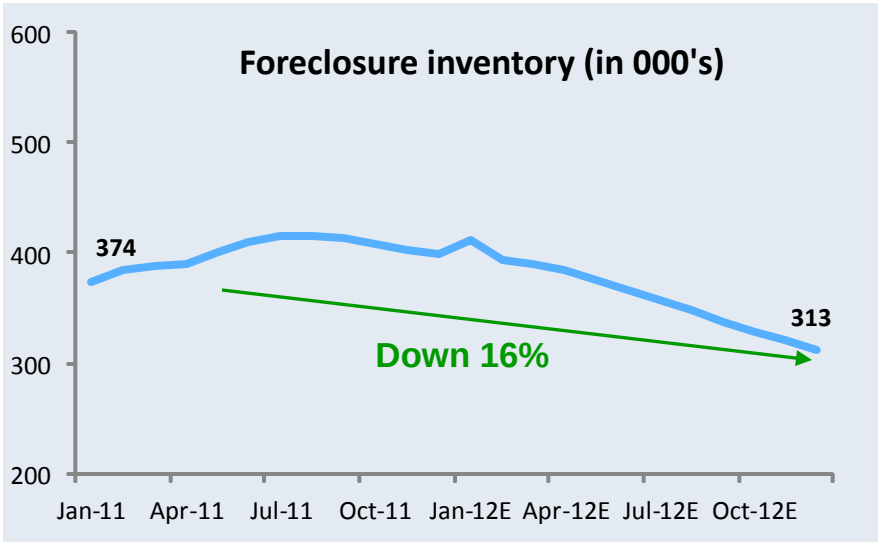
- Average delinquency at foreclosure is over 17 months
- Recent foreclosure sales showed the following customer/loan characteristics:
  - 54% non-owner occupied or vacant
    - Of which 80% were vacant at time of sale
  - 46% were owner-occupied

Short term run-rate savings in 2012 – Driven by both volume declines and efficiency





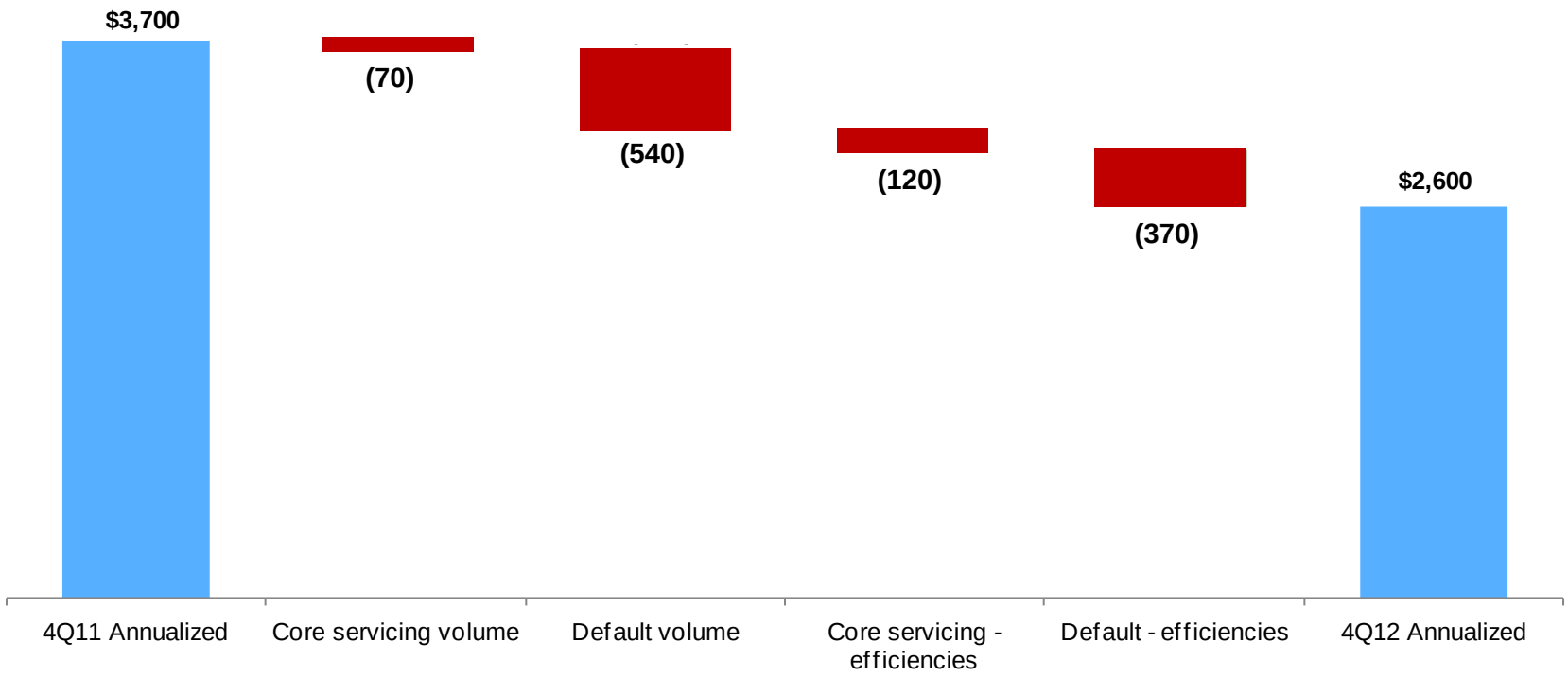




MORTGAGE SERVICING

Achieve short term run-rate savings – More than $1B by 4Q12

Servicing and default expense ($mm)



Volume

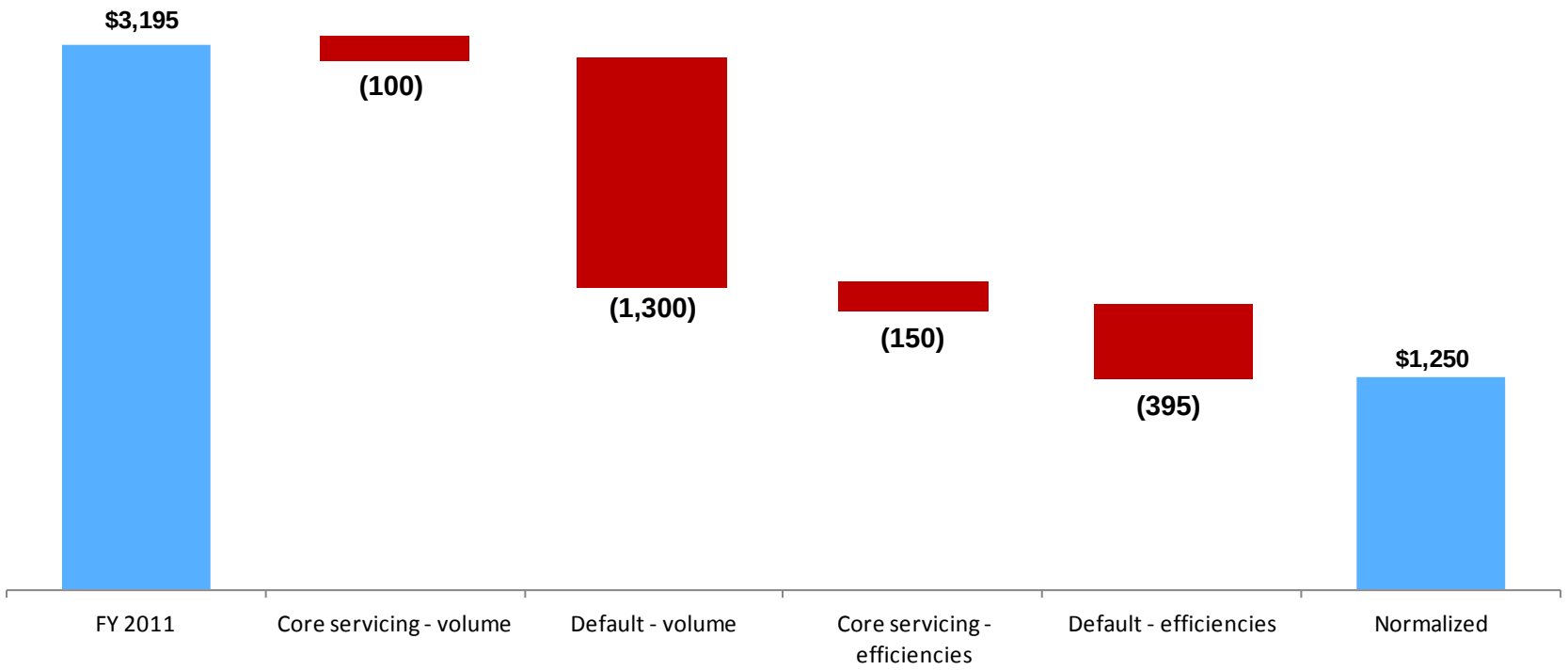
- Loan portfolio declines by 5-10%
- 30+ delinquencies decline approximately 25%
- Modification pipeline reduced

Efficiencies

- Consolidated site strategy
- Improved productivity through employee retention
- Non-compensation expense improvement primarily due to non-recurring costs and lower operational losses

Normalizing servicing expenses over time

Servicing and default expense ($mm)



Volume

- Core servicing
  - Loan portfolio declines by 10-15% to steady state of ~7.5mm units
- Default
  - 30+ delinquencies decline by 70-75% to steady state of ~200k units
  - Modification pipeline materially reduced

Efficiencies

- Process improvements and technology enhancements in core servicing and default
- Consolidated site strategy
- Improved productivity through employee retention
- Lower legal costs and operational losses

DOJ and State AG settlement

Impact to Chase

- ~$5.3B: ~$1.1B cash payment, ~$0.5B refinance program and up to ~$3.7B of additional consumer relief (primarily through modification programs)
- Limits the firm's liability related to
  - Servicing activities, including past foreclosure, loss mitigation and bankruptcy practices
  - Origination activities, including federal False Claims Act violations and federal consumer statute claims
  - MERS-related conduct, such as recording of assignments and standing in foreclosures
- Only New York, Delaware, and Massachusetts may maintain suits for MERS-related conduct. The settlement limits monetary remedies those states can seek against Chase, and precludes them from seeking to vacate past foreclosures for MERS-related conduct
- Does not release the firm from liability related to securitizations and whole loan sales, GSE/FHA/VA/PLS repurchase demands, pension fund claims, fair lending claims, and criminal actions. It also does not preclude suits against MERS as an entity or suits against Chase by county recorders for lost fees

Financial impact overview

- Estimated impact was covered in prior periods
- Modification programs
  - Modest impact on charge-off timing as a result of principal forgiveness – No change to loss guidance
- Refinance program
  - Impact of reducing borrower rates is expected to drive an immaterial decrease in net interest margin – Offset in reserves

Mortgage servicing economics

Business drivers

- Macroeconomics (unemployment, HPI, interest rates)
- Size and average life of servicing book
- Management of operational risk and efficiency of platforms
- Market risk management – MSR hedging

Risks

- Default costs expected to remain high for the medium term to handle modification and foreclosure volumes
- Market risk management
- Regulatory and GSE changes

Normalized target income

Average UPB	$1.0T +/-
Servicing & Other Revenue	45bps +/-
Amortization	22bps +/-
Servicing & Default Costs	13bps +/-
Pretax	**$1.0B +/-**

With appropriate operations and risk management and market recovery, the size and mix of our serviced portfolio will deliver solid profitability

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Real Estate Portfolios simulation

Real Estate Portfolios — simulated ending loan balance run-off and net income ($mm)

	2009	2010	2011	2012	2013	2014
Ending Balances ($B)	$252	$223	$198	$178	$158	$144
Ongoing ($B)		*37*	*36*	*37*	*$39*	*42*
Legacy ($B)		*186*	*162*	*141*	*$119*	*102*
Revenue	$6,520	$5,547	$4,592	$4,100	$3,400	$2,900
Net charge-offs	8,343	6,450	3,805	3,000-4,000	2,000-3,500	1,000-1,500
Change in reserves	5,220	1,781	(230)			
Expense	1,847	1,627	1,521	1,300	1,200	1,000
Pre-tax net income / (loss)	**($8,890)**	**($4,311)**	**($504)**	**($1,200)-($200)**	**($1,300)-$200**	**$400-$900**

Commentary

- Future reserve actions not simulated
- Although NII will decline as portfolio runs down, expense and credit losses will also decline
  - As a result, the net losses today will become a modest positive contribution to earnings over time
- As portfolio runs off, ~$1B of capital per year could be freed up and re-deployed – Timing is impacted by pro-cyclicality of capital rules

Real Estate Portfolios

Real Estate Portfolios EOP loans as of 12/31/11 ($B)

	Non credit-impaired	Purchased credit-impaired	Total loans
Home Equity	$78	$25	$103
Prime Mortgage	$37	16	53
Option ARM	$7	26	33
Subprime Mortgage	$10	7	17
Total REP Loans[1]	**$132**	**$74**	**$206**
Fair Value Mark[2]	NA	9	9
Total Mortgage Banking Portfolio	**$132**	**$65**	**$197**
Loan loss reserve (LLR)	$8.7	$5.7	$14.4
LLR as % of loans / LLR + FVM as % of UPB PCI	6.6%	19.7%	NA

[1] Credit-impaired represents Unpaid Principal Balance (UPB), not book value
[2] Fair Value Mark (FVM) remaining is the original mark reduced by liquidation losses realized
Note: Table above excludes prime mortgage loans and student loans classified as held-for-sale

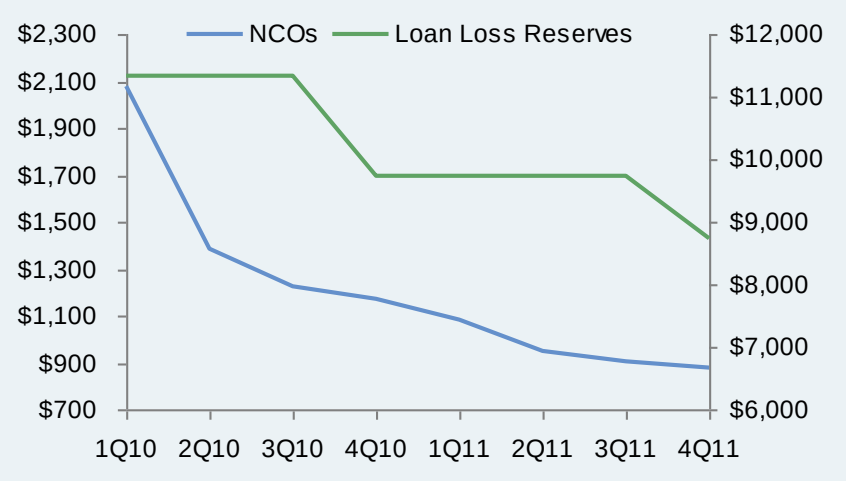
Commentary

- 6.6% reserve ratio on non credit-impaired portfolio
- Purchased credit-impaired portfolio is appropriately reserved for best estimate of remaining lifetime losses

Credit

Non-credit-impaired

Net charge-offs[1] vs. Loan loss reserve ($mm), excl PCI



[1] 4Q10 net charge-offs exclude the one-time impact of the $632mm adjustment related to the timing of when the Firm recognizes charge-offs on delinquent loans

- Total Mortgage Banking reserves of $8.7B (excluding WaMu purchased credit-impaired)
  - 4Q11 net charge-offs annualized of $3.5B
- Loss guidance: Mortgage Banking quarterly net charge-offs expected to be $900mm+/-

Purchase credit-impaired

- Current reserve and mark reflect ~$35B of lifetime losses, of which $21B has been realized to-date
- Further 8% HPI decline from current levels would result in a $1.5B impairment

Key themes addressed throughout the day

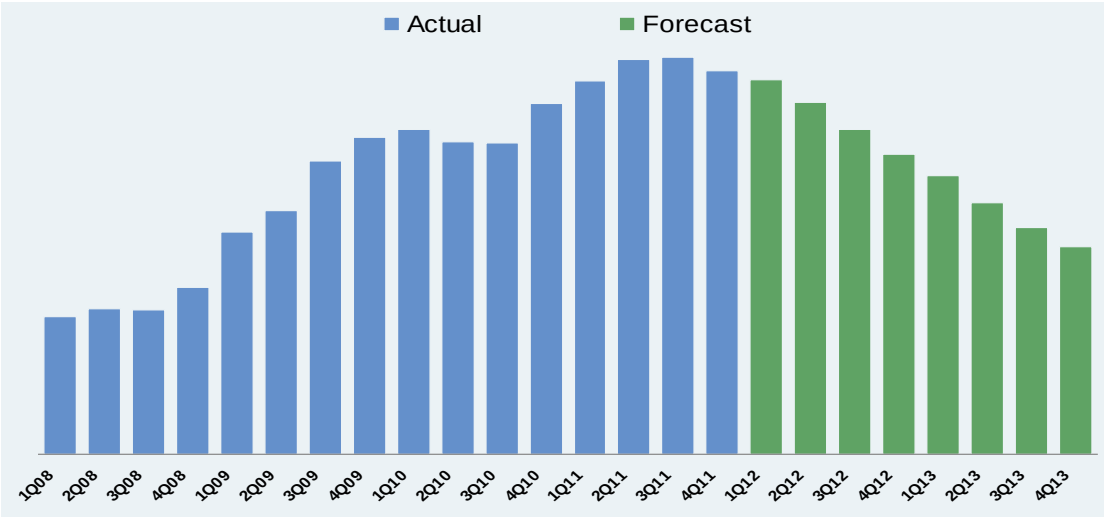
- Production business positioned for success
- Continuing to improve the customer experience
- Servicing – Building efficiencies for the future
- Real Estate Portfolios – Returning to profitability and returning capital
- Significant legacy issues behind us: Consent Orders and DOJ/AG Settlement
- Attractive earnings potential with 15% ROE through the cycle
- Our goal is to be the most efficient, profitable, and customer-centric mortgage business

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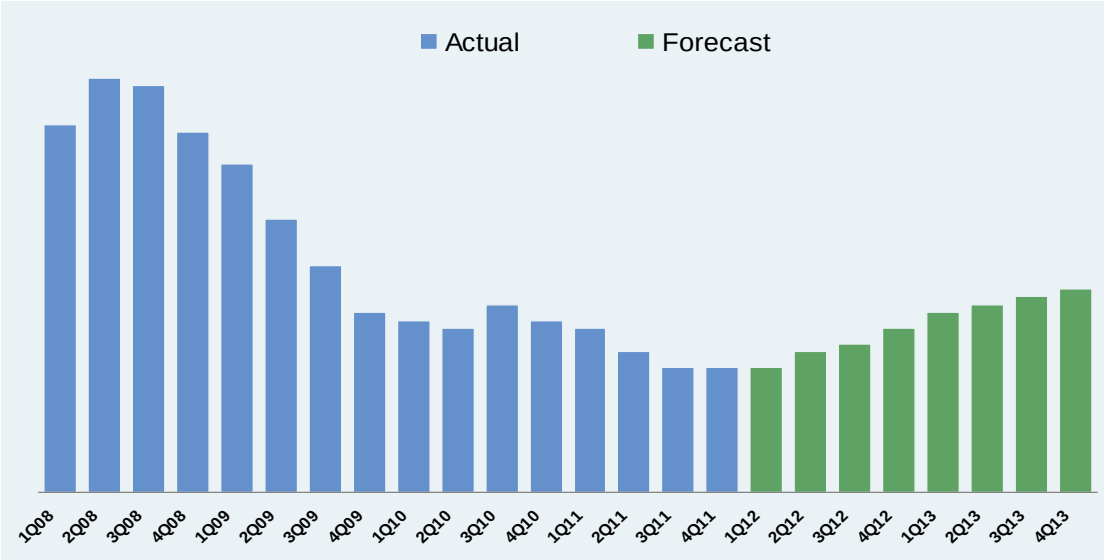
Foreclosure and REO trends – Total serviced

Units in process of foreclosure



- Foreclosure inventory will continue to decline as inflows of new delinquencies decline and outflows of foreclosure and short sales increase

Units in REO



- REO inventory forecast to increase as volume of foreclosure sales increase

Home Equity – Performance of 2nd lien relative to 1st lien

UPB as of 12/31/11 ($B), non-credit-impaired portfolio	
1st liens	$21.8
2nd liens	56.0
Total	**$77.8**

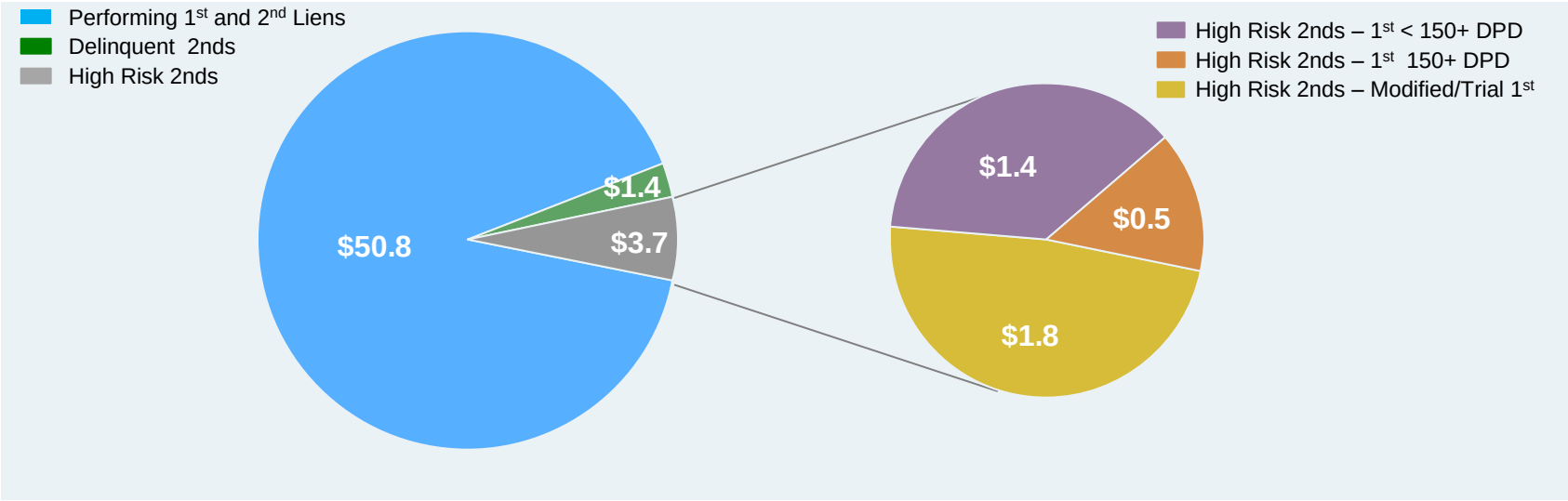
2nd Lien status	
Current 1st / current 2nd	$50.8
Current 1st / delinquent 2nd	0.3
Delinquent 1st and 2nd	1.1
Current 2nd / delinquent or modified 1st	3.7
Total	**$56.0**

Note: Current Mortgage defined as Current (excludes 1-29), while Current Home Equity is Current or 1-29 bucket to align with OCC definition

High risk 2nds – Performing 2nds behind troubled borrowers

Excluding purchased credit-impaired loans

2nd Lien Home Equity UPB ($B) - Dec11



High Risk 2nd Liens ($B) - Dec11

Performing 1st and 2nd liens

CLTV	UPB	Estimated lifetime loss rates
<=80%	$24.5	~ 1%
80-100%	12.2	4-5
100+%	14.1	12-15
Total	**$50.8**	**6% +/-**

Note: grossed up based on 35% match rate

High Risk 2nd liens

1st Lien status	UPB	Estimated lifetime loss rates	>100+% CLTV
Modified	$1.8	~40%	65%
<150+ DPD	1.4	~50	40
150+ DPD	0.5	~95	53
Total	**$3.7**	**55% +/-**	**53%**

Note: grossed up based on 35% match rate

We have considered the status of 1st lien and equity position of borrowers in our reserves

Note: ECLTV for Home Equity 2nd Liens and ELTV for 1st Lien Home Equity (Change made in 3Q11). ECLTV = estimated combined loan to value considering all available lien positions related to the property which we own or service
Current ECLTVs are calculated using original appraised value adjusted using the latest HPI published by Moody's Economy.com
Missing ECLTV & Missing FICO allocated based on Non Missing
Current Mortgage defined as Current (excludes 1-29), while current Home Equity is Current or 1-29 bucket to align with OCC definition

CONSUMER & BUSINESS BANKING

Todd Maclin, Chief Executive Officer Consumer & Business Banking

February 28, 2012

JPMorgan Chase & Co.

Consumer & Business Banking is a strong franchise today

- Strong profitability, despite the environment – 2011 net income of $3.8B and ROE of 40%
  - Low volatility in earnings
  - Significant opportunities to lower cost to serve and increase revenues – 3-5 year horizon
- Brand strength, driven by excellent products, services and convenient channels
  - #3 in U.S[1]: over 5,500 branches and over 17,200 ATMs across 23 states serving 23mm households
  - Over 17mm active online customers
  - Over 8mm active online mobile customers, over 50% YoY growth
  - Significant presence and leadership in key deposit markets
  - Competitive position of strength: our customers, our people and our financial capacity
- Investment consistency: we are growing and deepening relationships
  - Over 27,000 personal and business bankers and 3,200 financial advisors
  - Branch and ATM build-out to capture growth at low risk ROIs
  - Significant mobile and internet investment
  - Technology to lower cost-to-serve and delight customers
  - Across "One Chase," ~51mm households and ~63mm customers to target more aggressively
    - Chase.com #1 most visited banking portal in the US[2]

Great business with a focus on growth

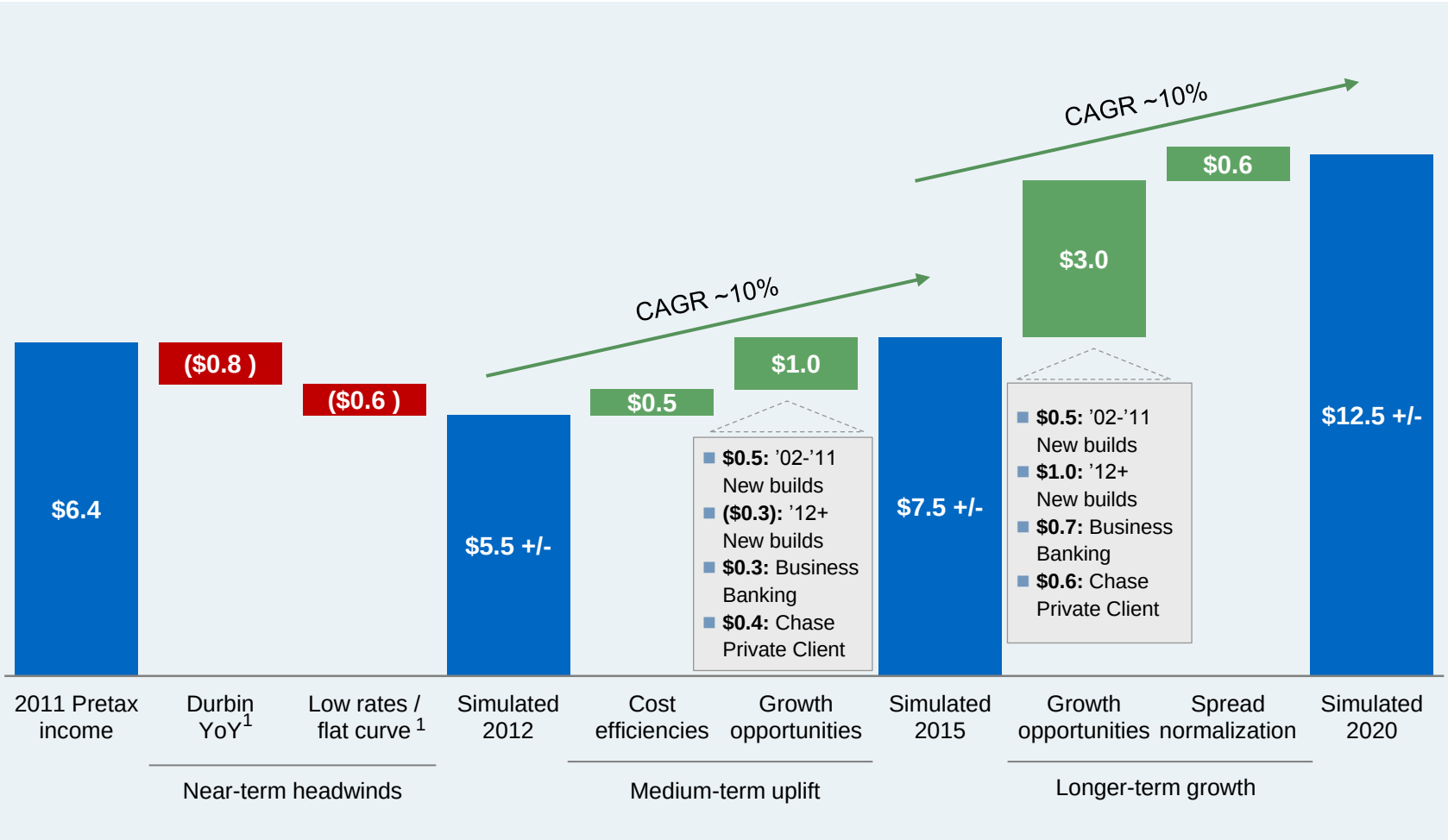
Note: all data as of December 31, 2011

[1] Based on FDIC data for retail deposits as of June 2011; deposits adjusted to exclude large branches (+$1B) assumed to contain non-retail deposits

[2] January 2012 compete.com rankings

Near-term headwinds will slow – Our focus on strong underlying growth will pay off

Simulated pretax income ($B)



- 4% underlying annual growth (net of investment) assumed

[1] Consistent with 2012 outlook provided in 4Q11 earnings materials

Regulatory reform has permanently altered the economics in CBB

Historical growth

	h-Chase '05-'09 CAGR	Chase incl. WaMu '09-'11 CAGR	Revenue △ YoY '11-12
Net interest income	**8%**	**0%**	→
Noninterest revenue	**11**	**0**	↓
Debit	23	11	↓
NSF-OD	15	(20)	→
Investment revenue	5	9	↑
Service fees and other	3	14	→
Total revenue	**9%**	**0%**	↓
# of checking accounts	**12%**	**2%**	↑
# of debit transactions	**20%**	**17%**	↑

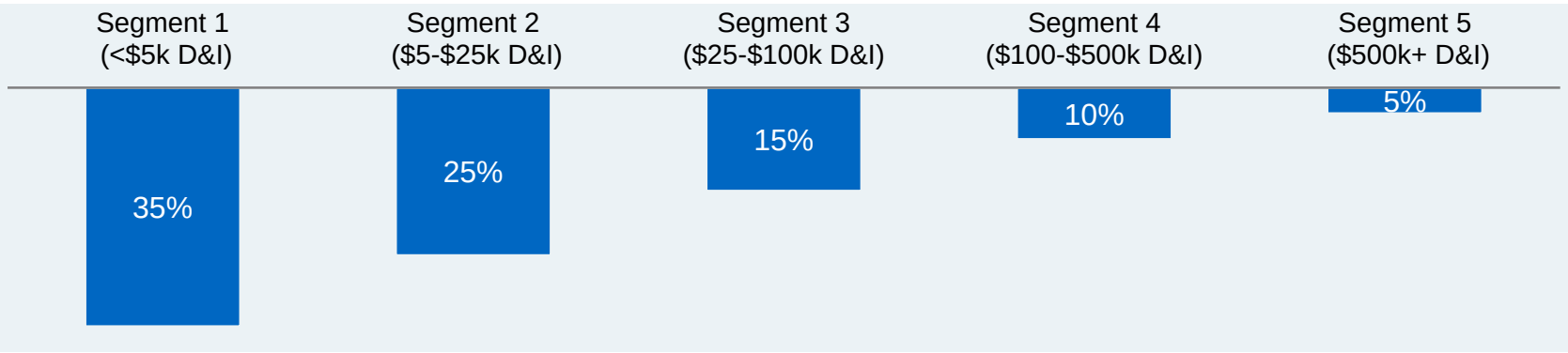
- Regulatory reform cost the industry ~$20B[1]
  - In addition, low rates cost the industry ~$4B[2]
- These revenues will not be replaced in the short term

Regulatory reform forces industry to significantly change business models

[1] Source: Boston Consulting Group
[2] Source: Bernstein and Morgan Stanley research

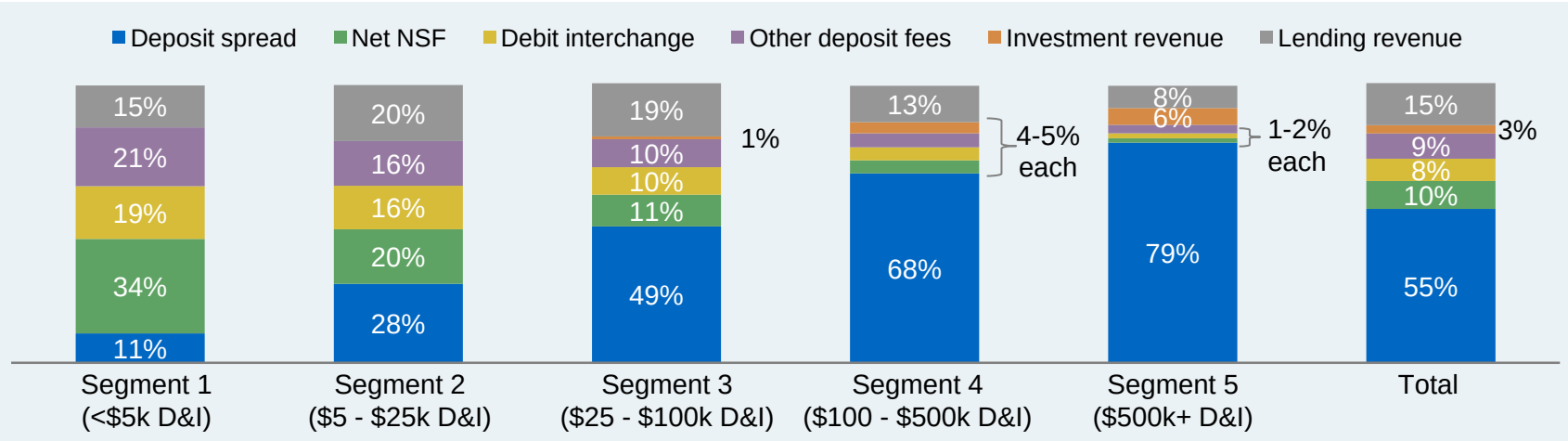
Regulatory reform has disproportionately impacted "transaction-only" banking

Percent reduction in per household variable contribution by segment



- Post-regulation, ~70% of the customers in segments 1-3 are unprofitable on a fully loaded basis and ~10-15% are unprofitable on a variable basis
  - There is limited opportunity to deepen relationships with these customers
- Further regulation will have additional impact

Revenue composition by wealth segment post-regulation [1]



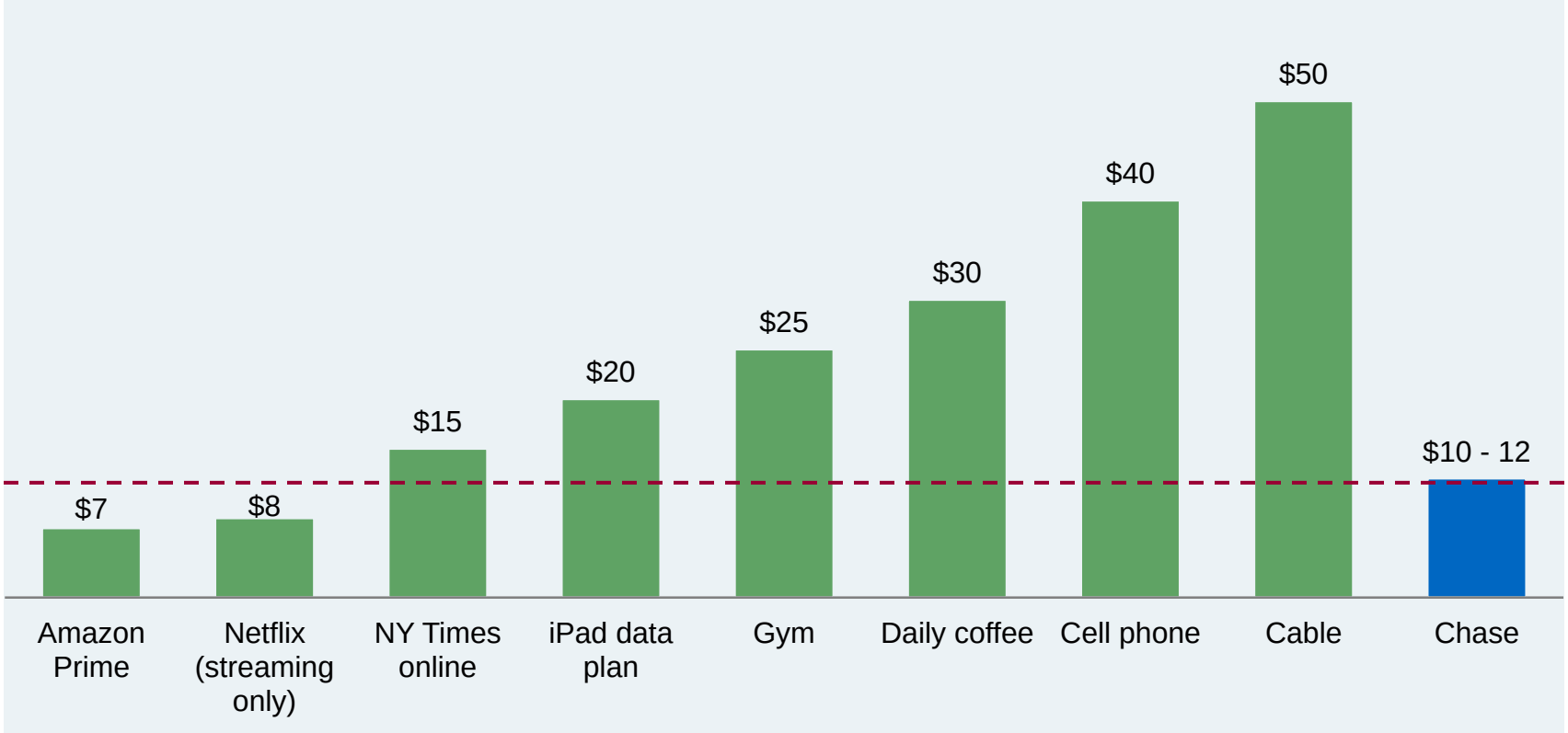
Note: JPM Chase internal data
D&I = Deposits & investments

[1] Post-implementation of Durbin Amendment and Regulation E

Monthly service charges for banks are lower than most consumer service charges

But in this environment, do not expect them to bridge the revenue gap

Average monthly expense for common services



- Customer predisposition and the current competitive landscape does not allow banks to be compensated via monthly fee-based accounts
- Chase has multiple paths to a checking account with no monthly service fee – Over 85% of customers qualify

Note: non-banking fees captured represent the low-end product/service per category (e.g., NY Times online subscription, etc.)

Chase delivers significant value to customers at minimal or no cost

Services not explicitly charged for

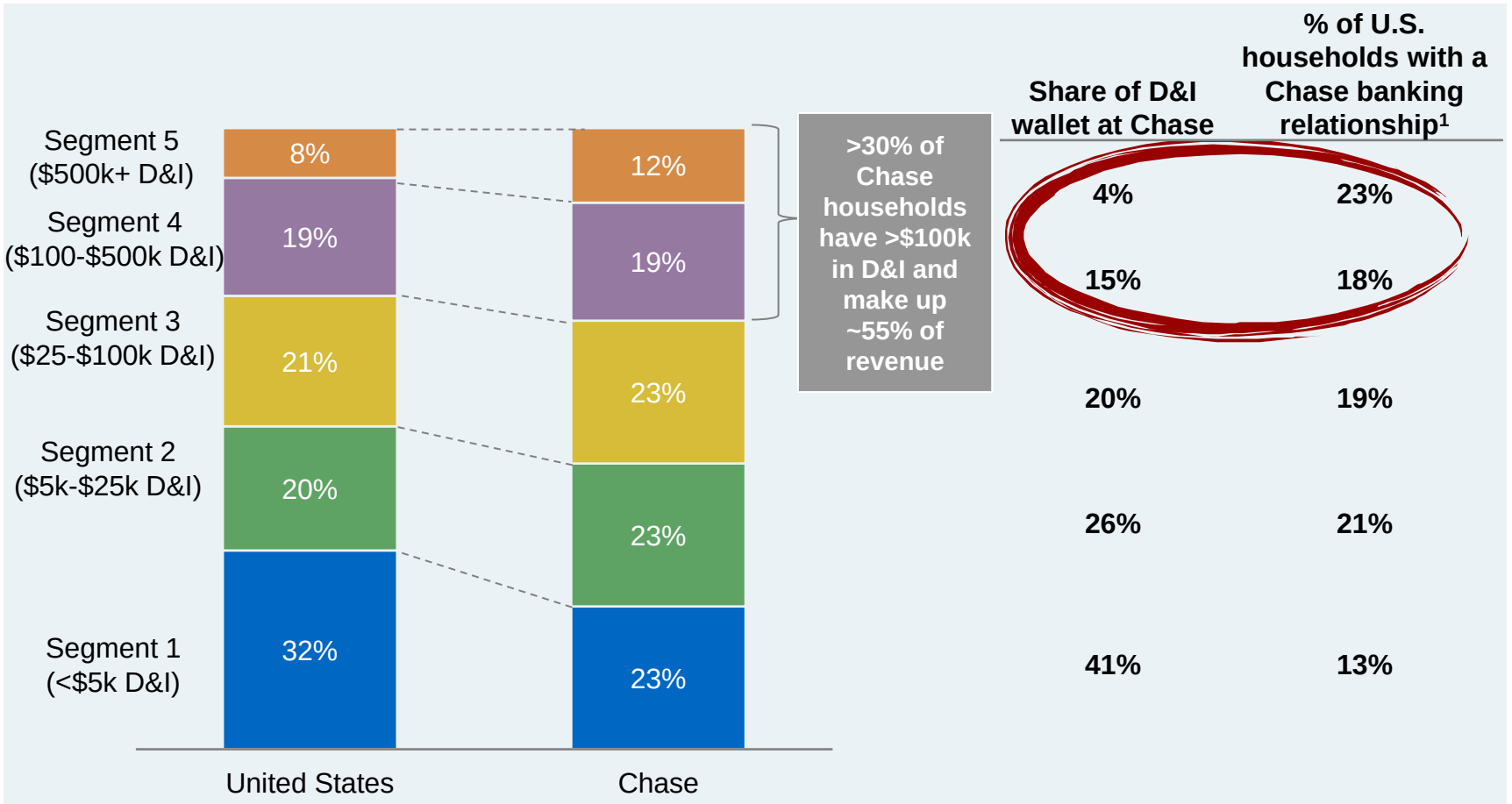
- Over 5,500 branches, many with extended and Saturday hours, staffed by over 57,000 employees
- 24/7 phone support staffed with almost 6,000 telephone banking employees willing to help with any query
- Access to over 17,200 ATMs across the United States
- Innovative transaction options
  - QuickPay℠ and QuickDeposit℠
  - Online bill payment
  - E-mail and text alerts
  - Over 10,700 deposit-friendly ATMs
- Fraud protection
- FDIC protection on deposits

Note: all data as of December 31, 2011

Greatest opportunity is to grow with our highest value customers

And we have a larger share of them

Distribution of households by wealth segment

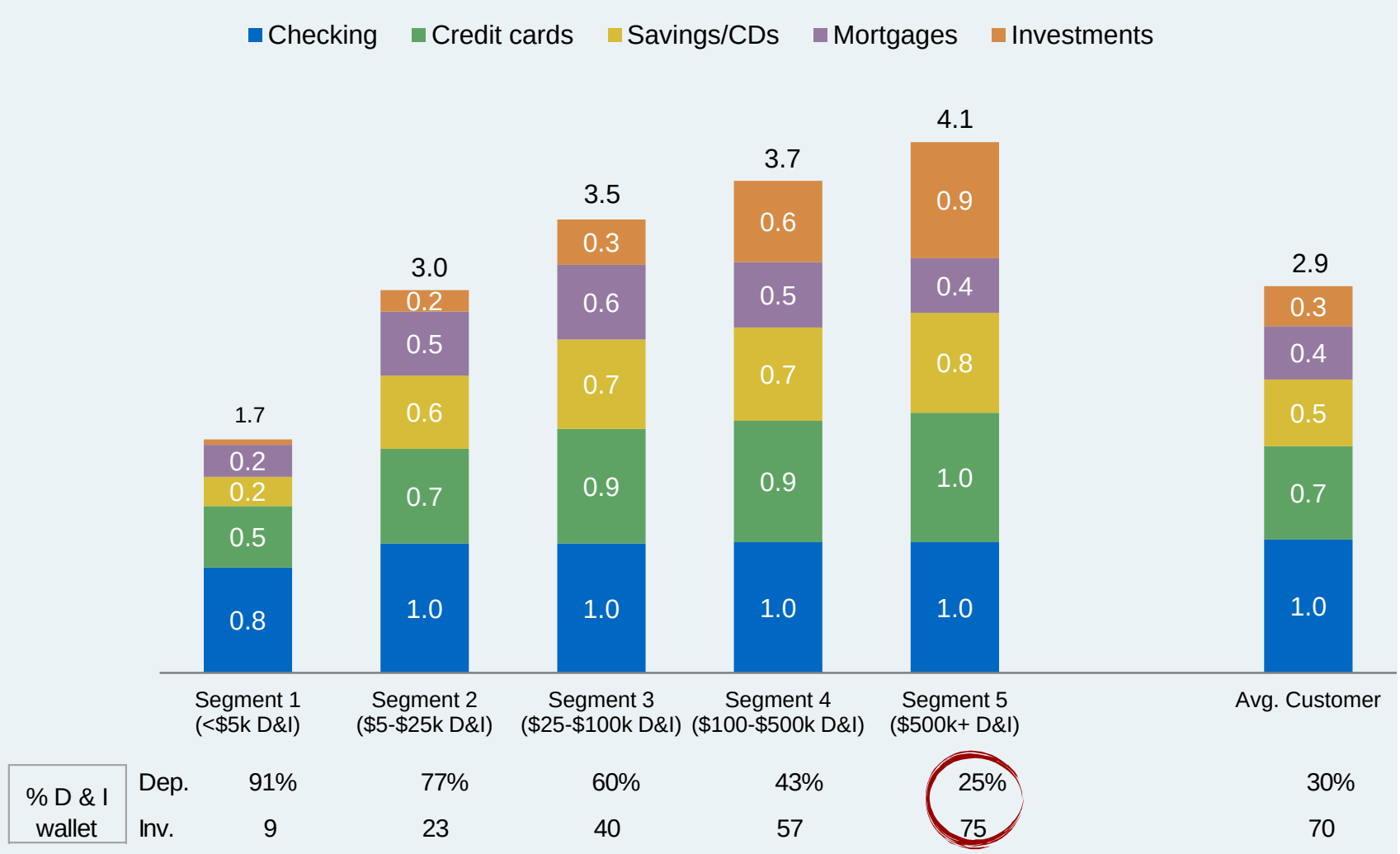


Source: MacroMonitor 2010 Survey of U.S. Households, U.S. Census Bureau
Chase data post-implementation of Durbin Amendment and Regulation E

[1] Primary business households and primary business card-only households excluded

More affluent customers have a broader set of financial services needs

Products per household by wealth segment (industry)



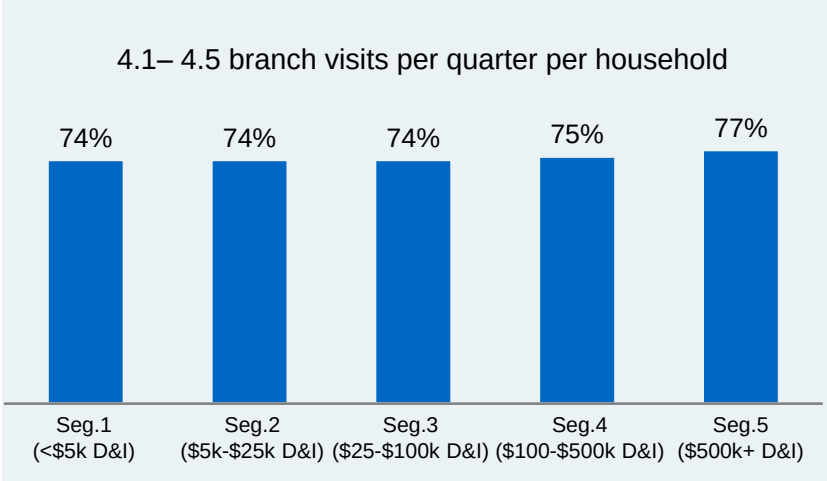
% D & I wallet							
	Dep.	91%	77%	60%	43%	25%	30%
	Inv.	9	23	40	57	75	70

Customer segments require a needs-based approach

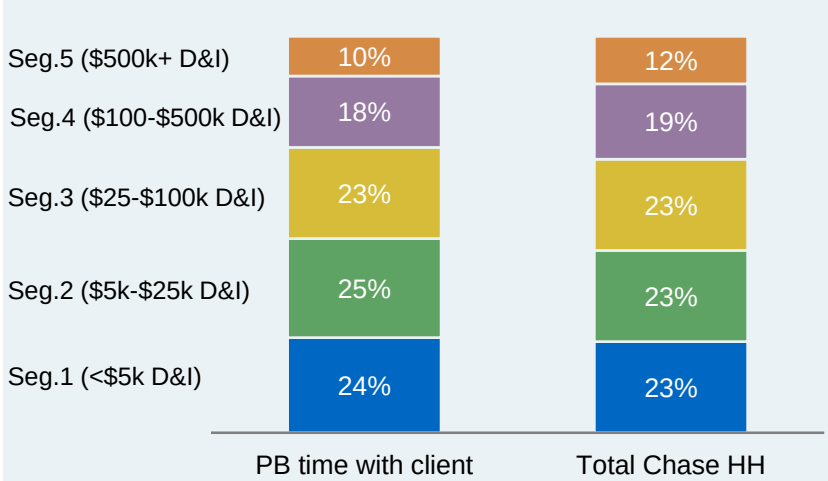
Source: MacroMonitor 2010 Survey of U.S. Households

Historically, we have spent the same amount of time with all our customers

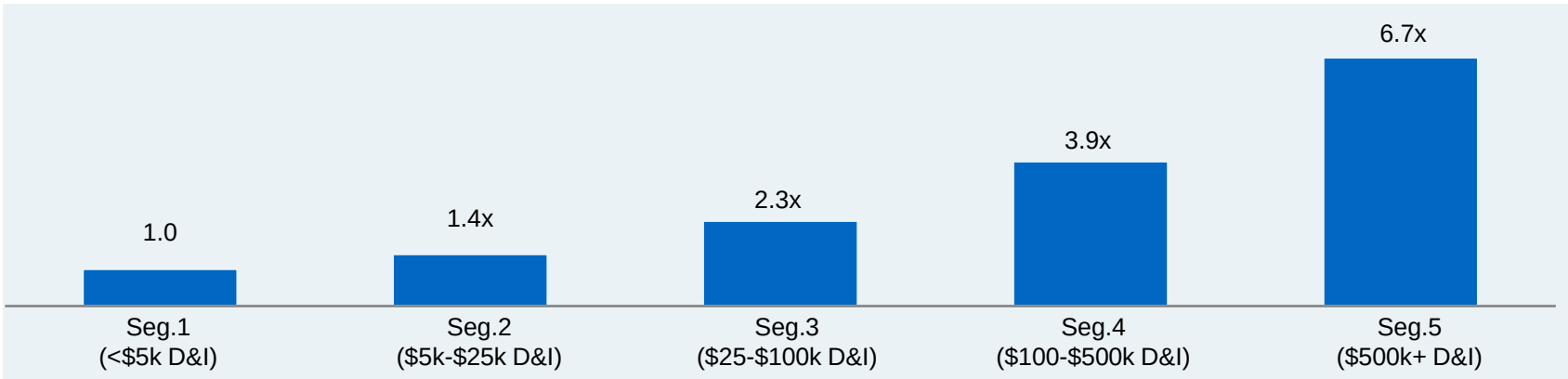
Households visiting branch quarterly by wealth[1]



% of personal banker time by customer wealth segment[1]



Variable contribution[2] by wealth segment (indexed to segment 1)



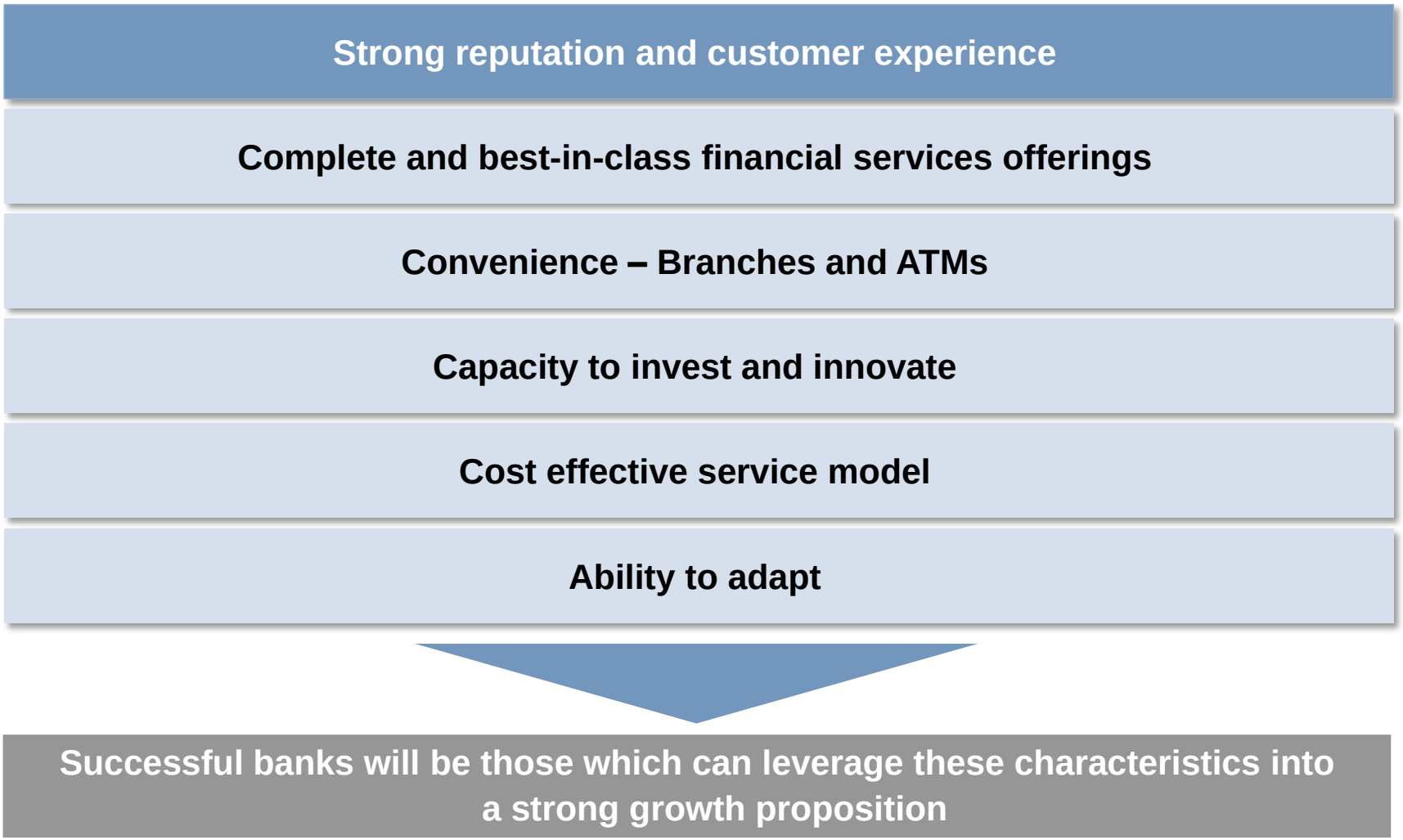
There is an opportunity to align our service models toward highest potential customers

Source: JPM Chase internal data

[1] Based on data observed during 2011

[2] Post-implementation of Durbin Amendment and Regulation E

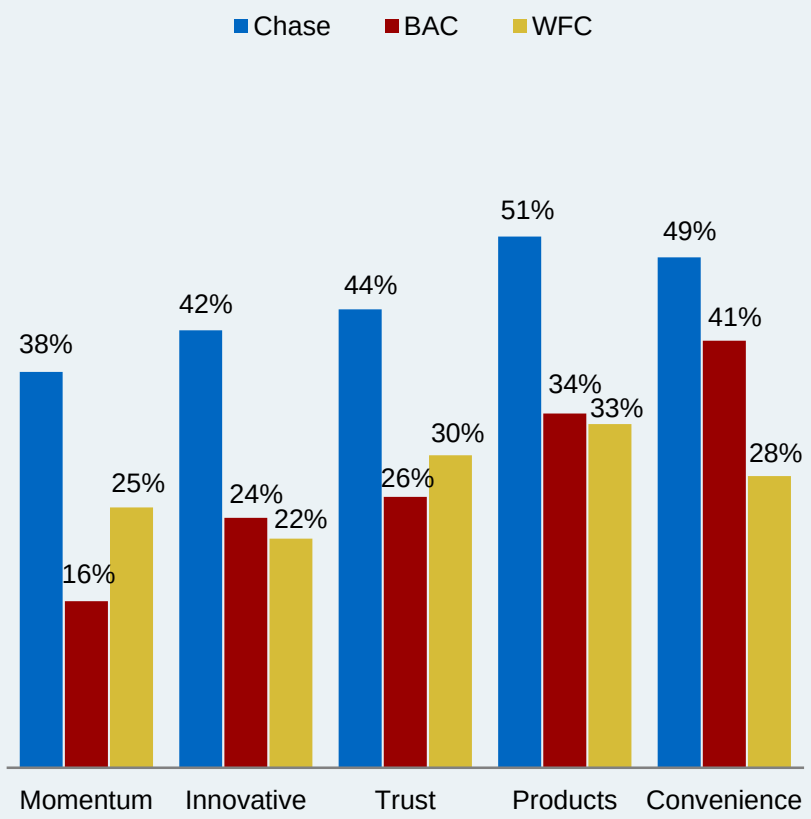
Requirements for succeeding in the new environment



A strong reputation and customer experience are keys to growth

Chase scores well relative to competitors

Industry leader in key consumer attributes – 4Q11

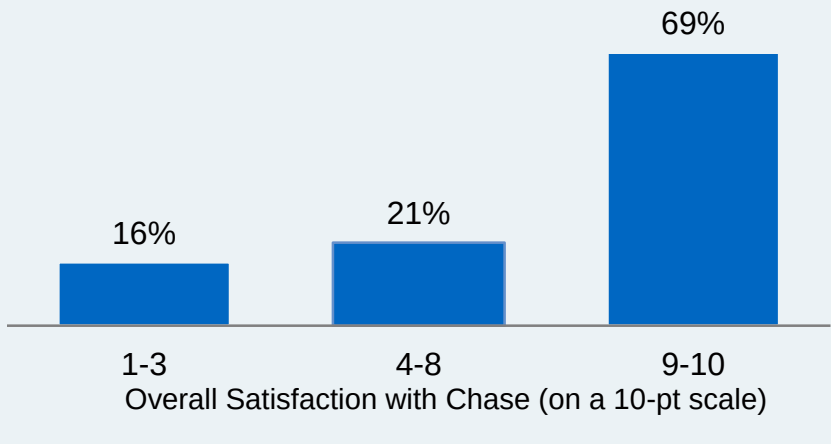


Attribute definitions:

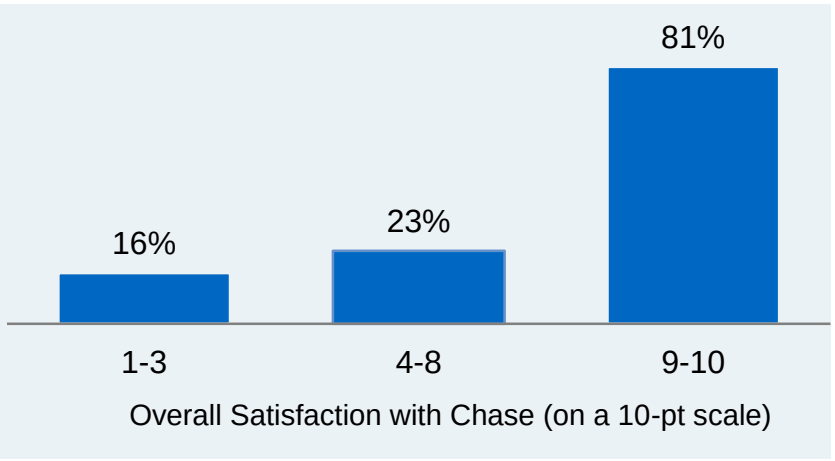
- **Momentum:** Is becoming more popular
- **Innovative:** Offers innovative products and services
- **Trust:** Is a bank I trust
- **Products/Services:** Offers products and services that meet my needs
- **Convenience:** Offers more convenient branch and ATM locations

Source: 4Q11 Brand Tracker in the retail footprint

Likely to use Chase to fulfill new financial need (% of households who strongly agree[1])



Likely to recommend Chase to family, friends, co-workers (% of households who strongly agree[1])

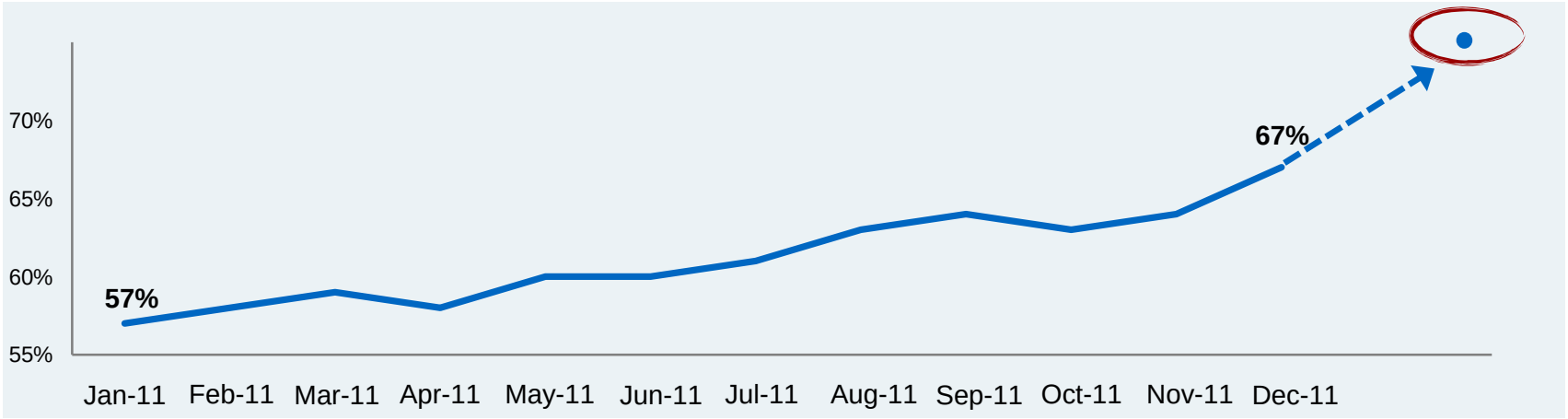


Source: Monthly Consumer Bank Relationship Survey (data from December 2011)

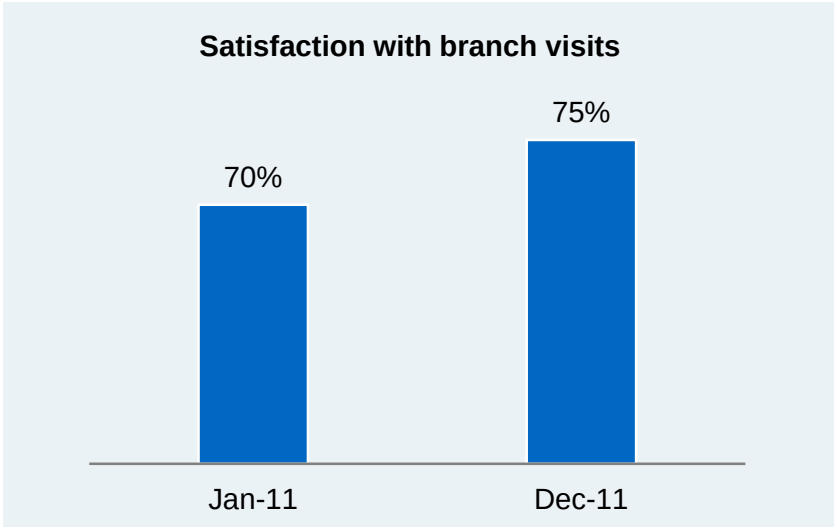
[1] Strongly agree equals a 9 or 10 on a 10-point scale

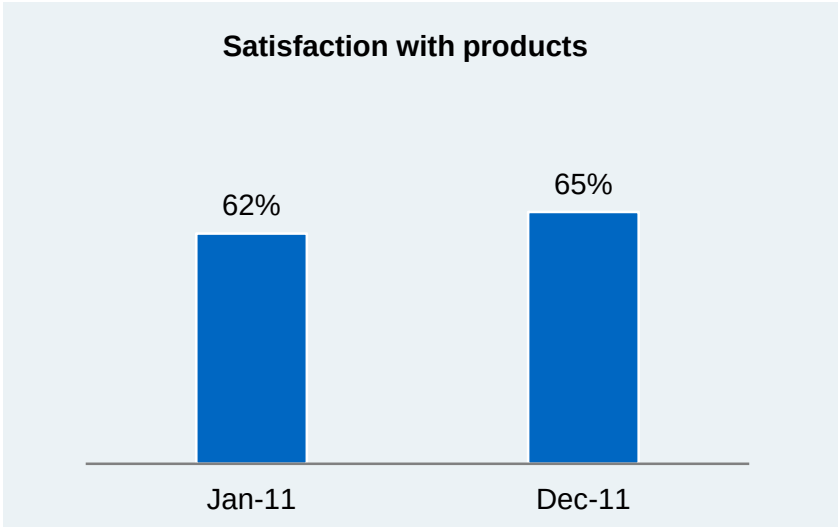
We have made measurable customer experience improvements in the last year and continue to have momentum

Overall satisfaction with Chase (top 2-box scores[1])



Key areas of overall satisfaction (top 2-box scores[1])



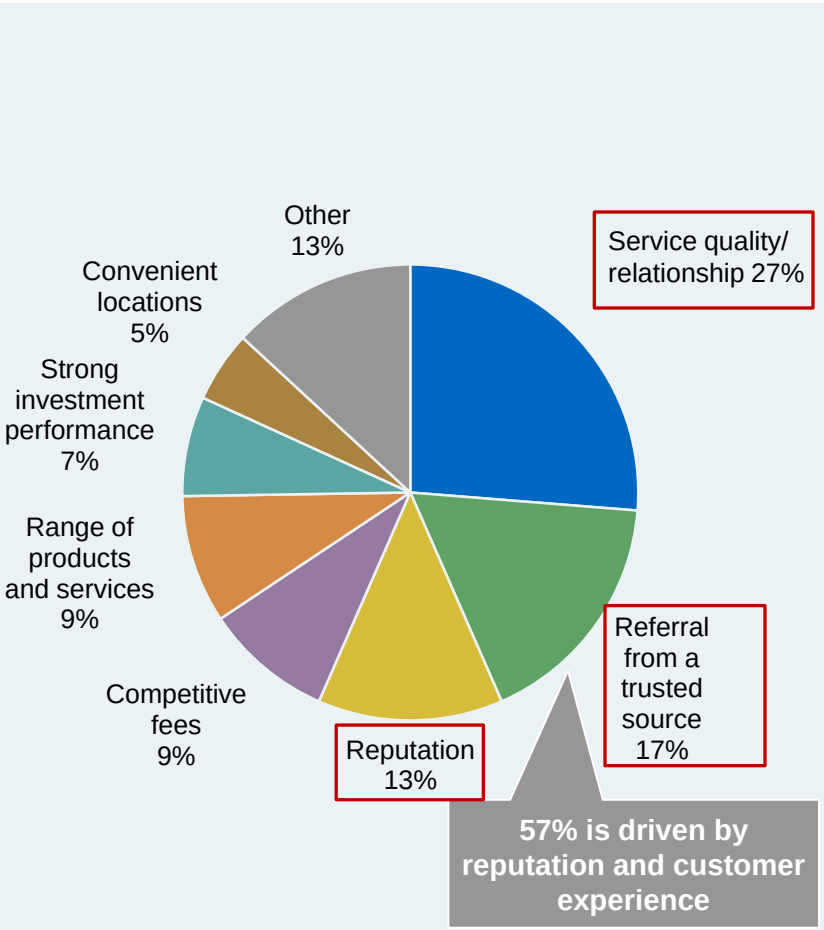


Source: Chase Relationship Survey

[1] From a scale of 1-10, customers who select a rating of 9 or 10

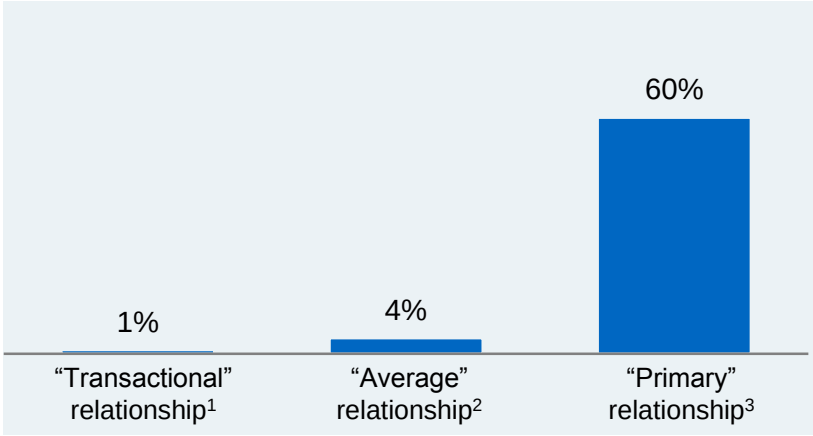
Customer experience is critical to our affluent customers

Reasons why affluent households want to consolidate

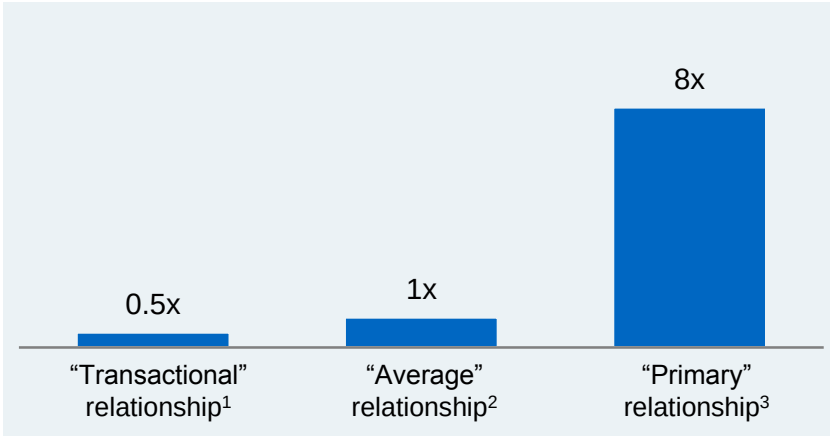


Source: 2008-2009 Phoenix Survey
Note: question asked – What is the primary reason you chose to begin your relationship with your primary investment provider?

Affluent share of D&I wallet

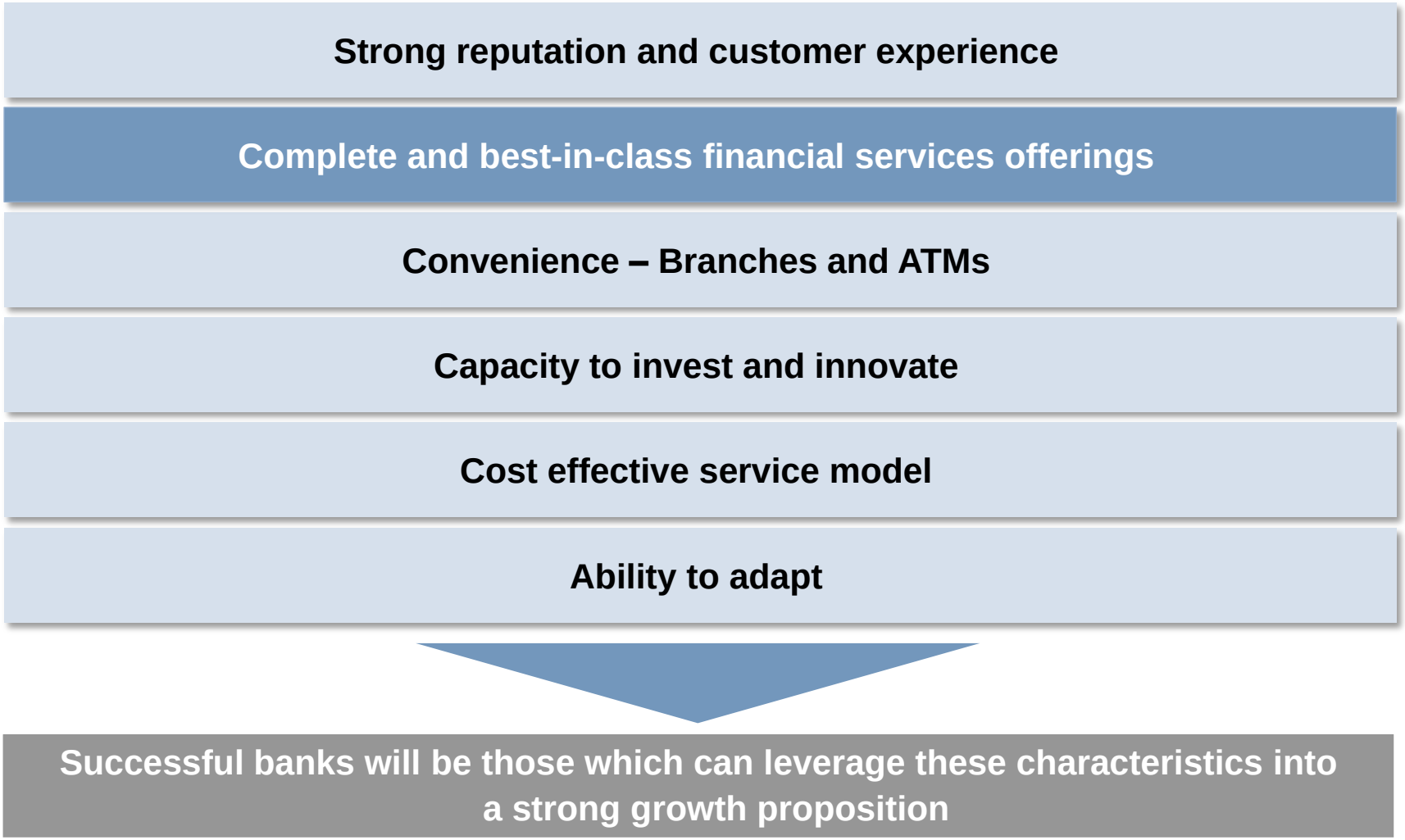


Variable contribution of affluent households



Source: internal customer profitability analysis, September 2010 – August 2011 (as of August)
[1] Checking only
[2] HH with Chase's current penetration and size of deposit and lending relationship
[3] 60% of D&I; an average credit card relationship (~$15k annual spend) with every HH. and with a mortgage in one out of two HH

Requirements for succeeding in the new environment



Chase has best-in-class financial services and proven ability in AM and CB

Chase Wealth Management

- Leading investment sales force
  - Over 3,200 financial advisors
  - ~$140B client investment assets
- World class investment products brought to Chase
  - Industry leading managed account platform
  - Full suite of brokerage and insurance products
  - Access to J.P. Morgan Private Bank products for Chase Private Clients
- Fully integrated banking product offering
  - Online and mobile banking
  - Award winning Chase Sapphire card[1]
  - Chase mortgage platform
- Branches are invaluable to affluent customers
  - Affluent households average ~4.5 branch visits per quarter

Incremental D&I balances of $100B (3% wallet) at 1% = $1B+/- pretax opportunity

Business Banking

- Chase lent $17B to small businesses up 52% YoY
- #1 SBA lender second year in a row
  - Over 5,300 SBA loans
  - #1 SBA lender to women and minority owned businesses in 2011
- Hired over 1,200 business bankers since start of 2009 to serve small business clients
- Business Banking average deposits of $65B up 11% YoY
- Ink from Chase – Best Business Rewards Credit Card[2]
  - 183k cards issued, up 58% YoY
- 52k mobile online users of Jot – Product unveiled in 2Q11
- Paymentech named #1 payment systems provider of the Top 500 internet retailers for 6th consecutive year by *Internet Retailer*
  - New sign-ups from branches increased ~34% YoY

WaMu branch productivity at Chase levels is a $1B+/- pretax opportunity

Note: all data as of 2011

[1] "Best General Travel Credit Card" by Nerd Wallet (Winter 2012), "Best Airline Miles Credit Card" by Credit.com (December 2011)

[2] Nerd Wallet (Winter 2012)

Chase Private Client continues to expand at a rapid pace

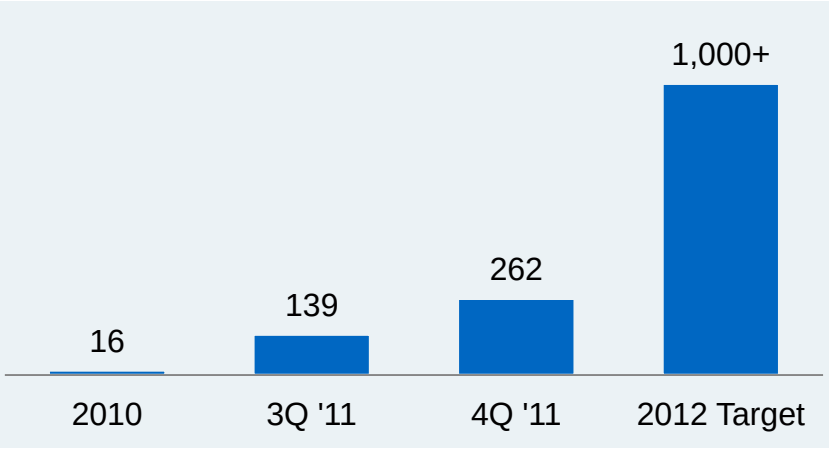
2011 Expansion

- Added locations and bankers
  - Opened 246 CPC locations in 2011; total of 262
  - New York, Chicago, South Florida, Los Angeles and San Francisco
  - 500+ CPC Bankers and Advisors
- Growing relationships
  - ~22,000 clients with $70k+ avg. in incremental D&I balance per CPC client
  - $16B in D&I with $1.6B new money (most of the growth where CPC has been open <6 months)
  - Advice/managed money platform

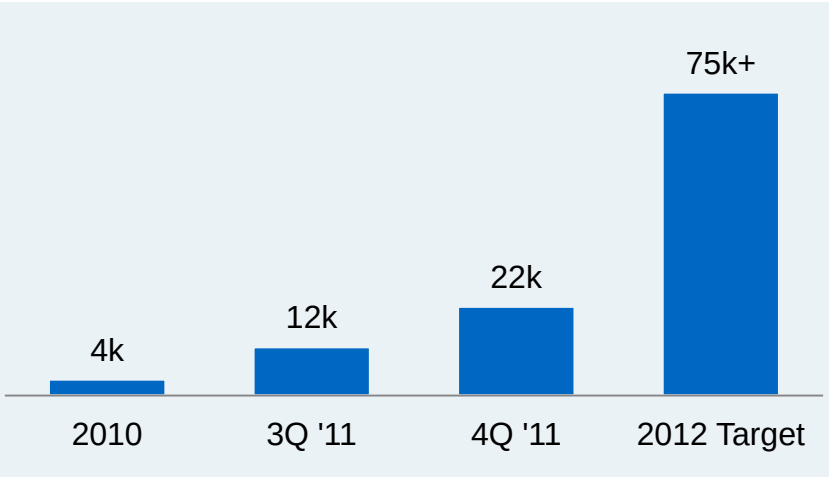
2012 Plans

- 750 additional CPC locations
  - California, Texas, Florida, Arizona and Washington
  - Extending in Tri-state, Midwest, Los Angeles and San Francisco
- Adding 900 Private Client Bankers and 350 Private Client Advisors

of CPC locations



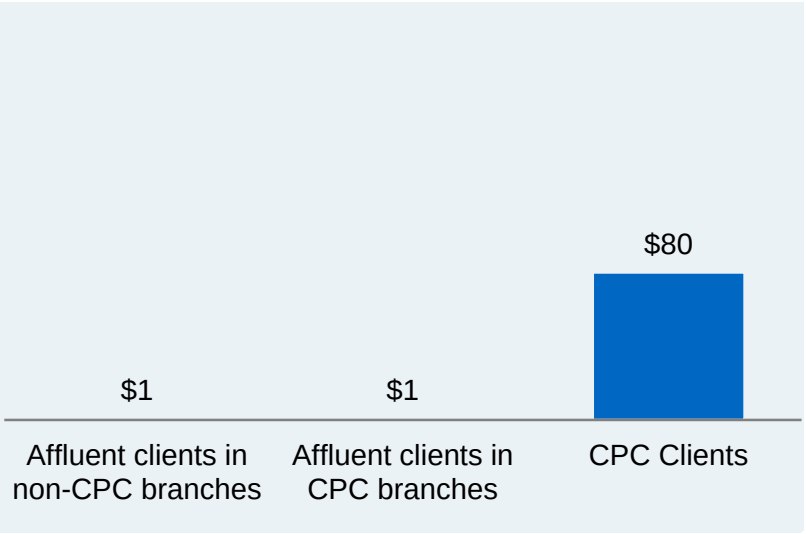
of Chase Private Clients



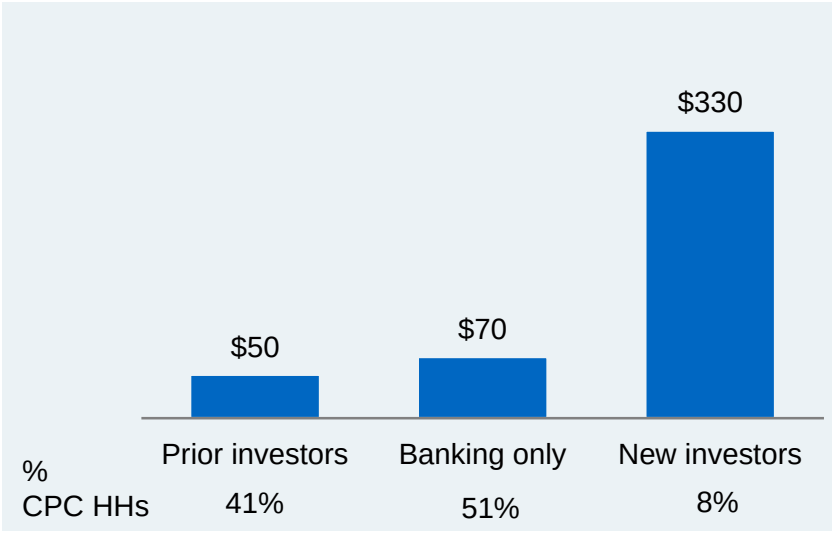
By the end of 2012, CPC will have a presence in markets that cover ~55% of the 2.2mm affluent Chase banking households

CPC – Household balance growth showing early signs of success

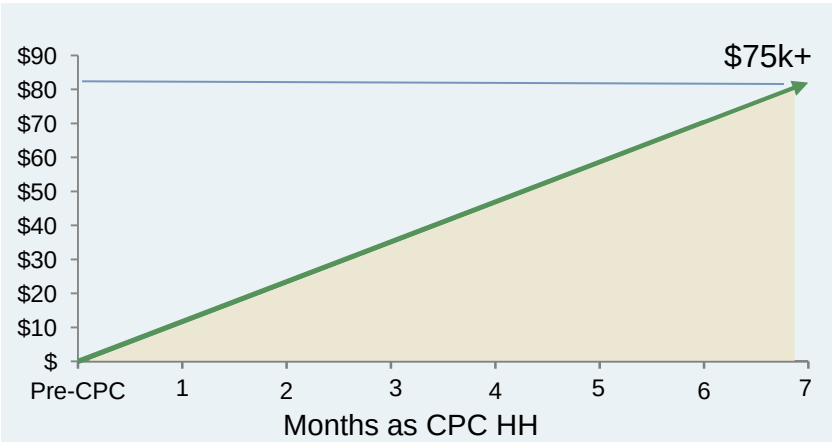
D&I growth/Affluent HH ($k change July '11 – Jan '12)



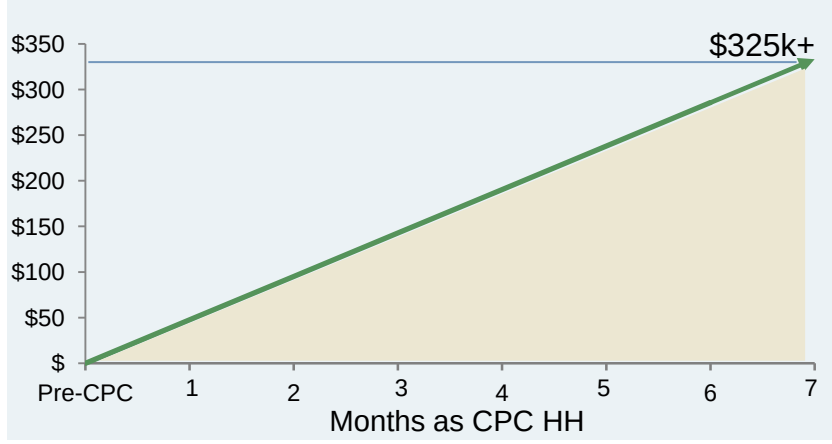
D&I growth/CPC HH ($k change July '11 – Jan '12)



D&I growth/CPC household ($k change)



D&I growth/CPC new investor households ($k change)



Source: JPM Chase internal data

Business Banking – Growing with larger business customers

Comparison by sales revenue tier

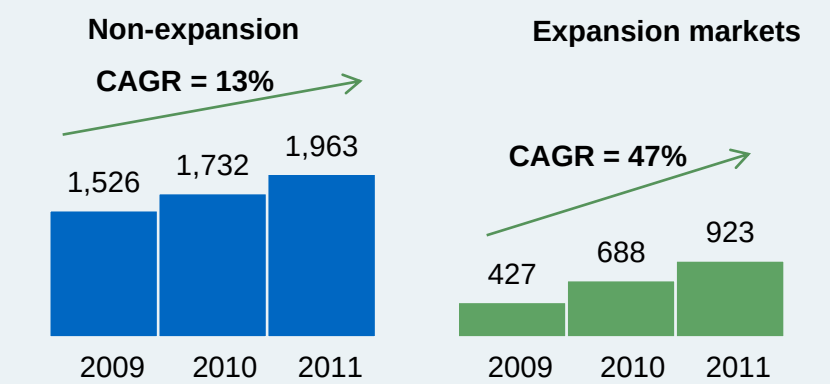
	Average of all relationships		Average of top decile[1] (based on deposit balances)	
Sales revenue	$250k-$3mm	$3mm+	$250k-$3mm	$3mm+
Deposit ADB per relationship ($k)	$65	$200	$500	$1,500
Commercial checking ownership[2]	9%	19%	26%	65%
Payroll Services ownership	4	4	8	12
Treasury Services ownership[3]	3	10	13	50
Merchant Services ownership	6	6	8	17
Revenue per relationship[4]	**1x**	**3x**	**5x**	**15x**

- Our objective is to provide the primary operating account relationship for Business Banking customers
- Commercial Banking and Treasury & Securities Services platforms allow us to deliver best-in-class products, services and technology to small businesses

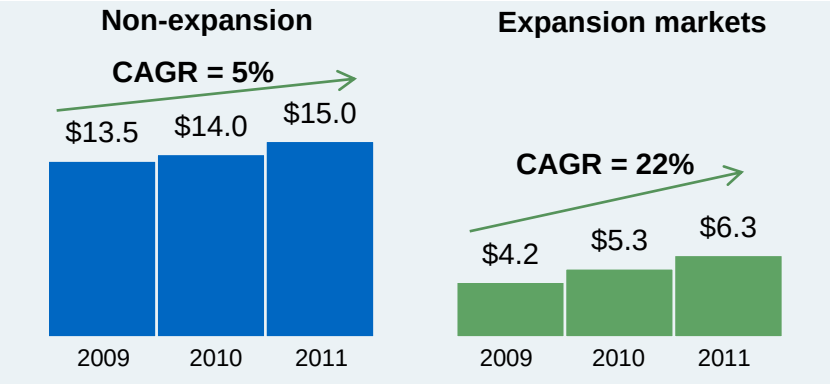
Source: JPM Chase internal data
[1] Average deposit balance, product ownership, and revenue of top 10% of relationships by deposit balance
[2] Commercial checking products include all analyzed checking accounts
[3] Treasury Services includes lockbox, account transfer service, ACH initiation and block, cash vault, check payable services, payroll cards, etc.
[4] Revenue is post-Durbin (at 22 cents per transaction) and Reg. Q

Business Banking is dramatically improving productivity in expansion markets

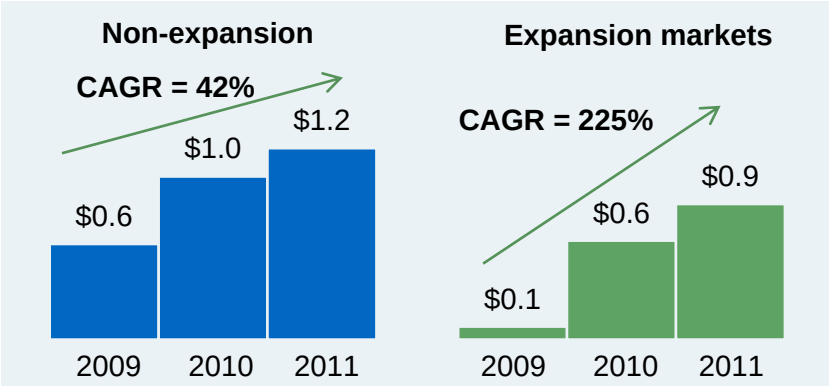
Number of Business Bankers



Average deposit ADB per branch ($mm)



Loan originations per branch ($mm)



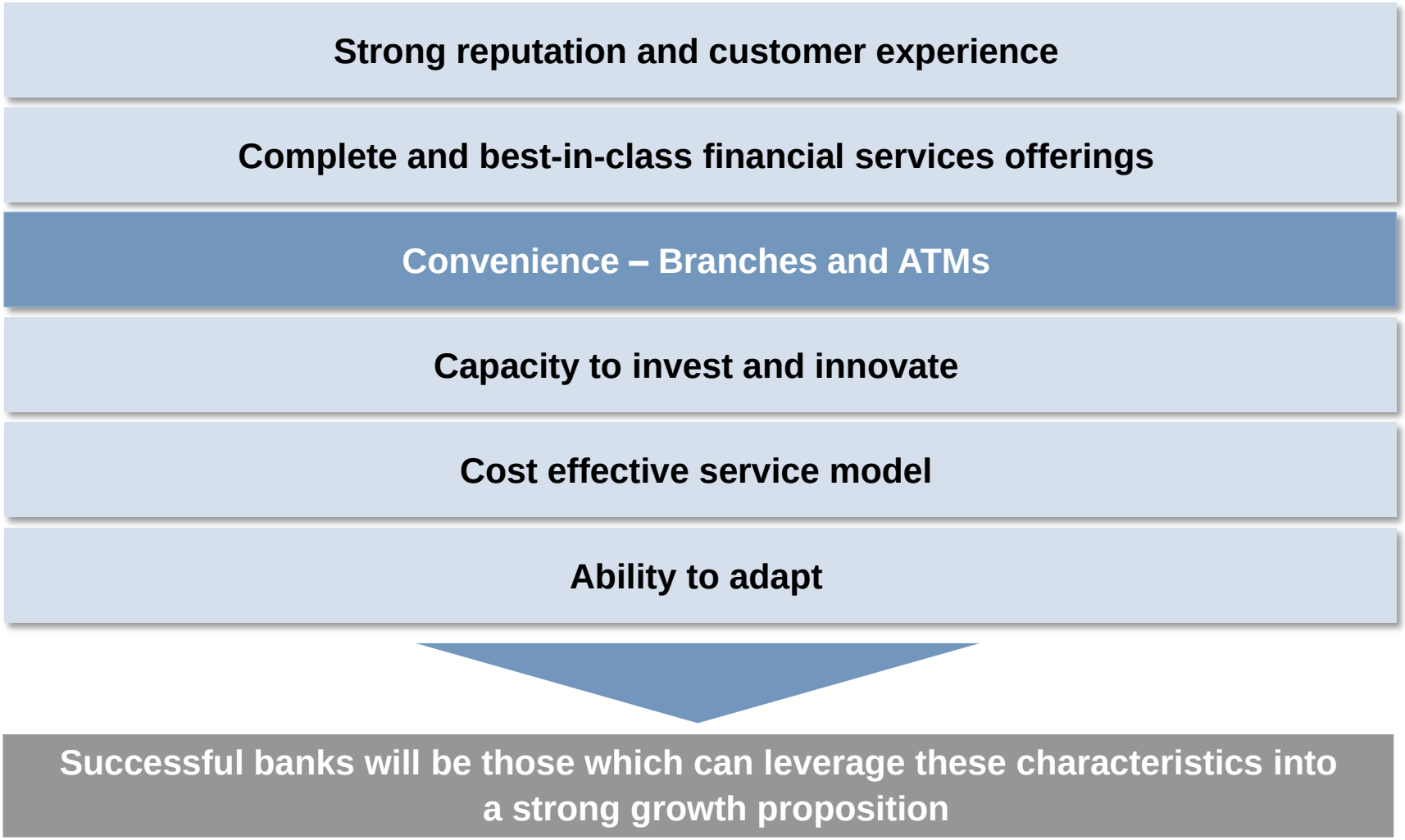
Comments

- Managed to increase risk-adjusted spreads while gaining market share
  - Industry loan balances contracted 5%, while Chase Business Banking grew 4%[1]

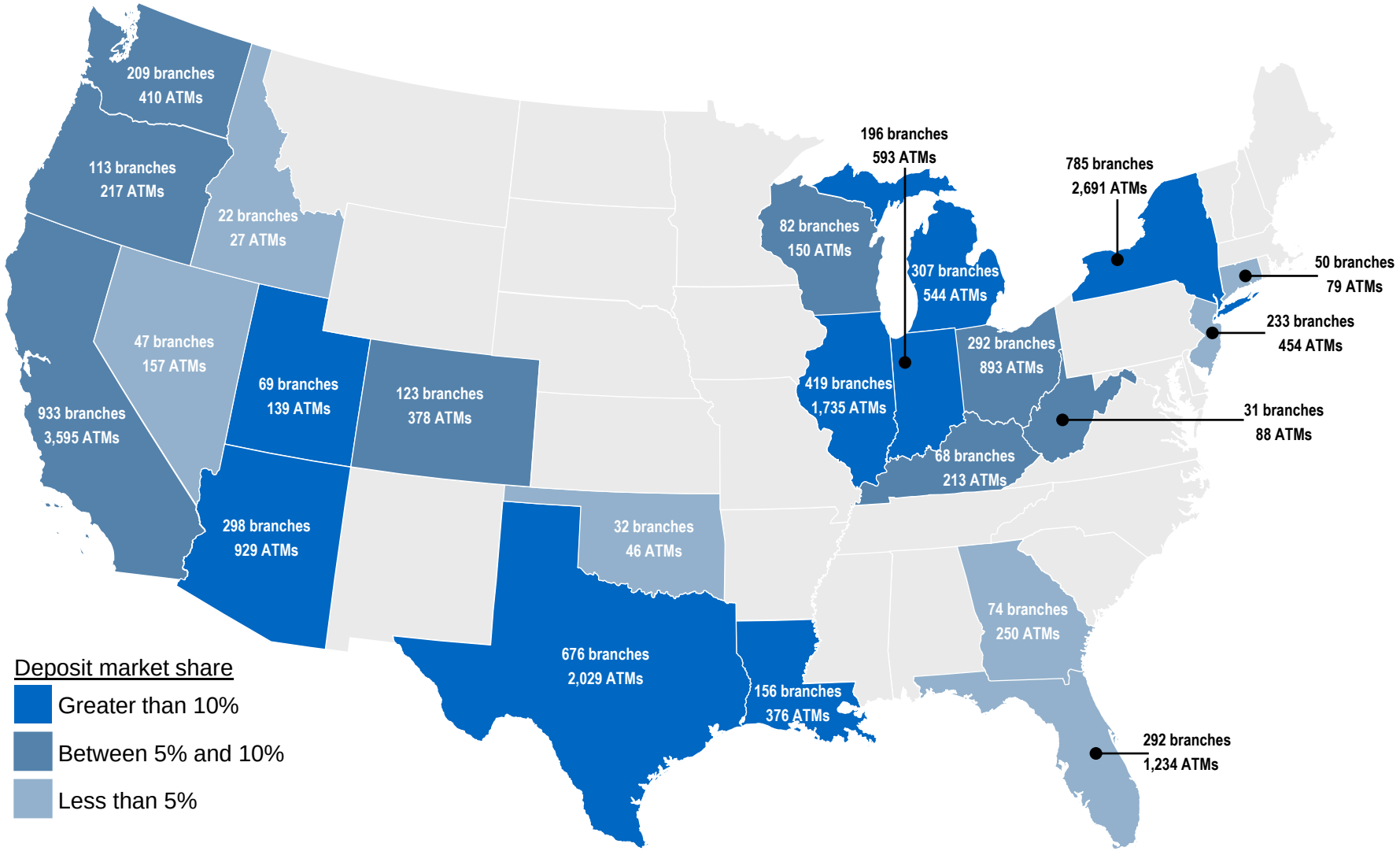
Source: JPM Chase internal data

[1] 3Q11 vs. 3Q10

Requirements for succeeding in the new environment



Our branch and ATM network provides opportunity to grow



[1] Branches and ATMs as of December 31, 2011

Filling out branch footprint in attractive growth markets

Expansion markets



Simulated branch expansion	Current branches[1]	Potential 2012+ new builds	Total potential future branches
California	933	300	1,250
Florida	292	200	500
Atlanta, GA	74	50	120
Total	1,299	550 +/-	1,850 +/-
All Other "Fill In" and In-Footprint	4,209	350	4,550
Grand Total	**5,508**	**900 +/-**	**6,400 +/-**

- Plenty of opportunity to build profitable branches
- We decision branches one at a time
- We continue to build the majority of our branches in CA and FL
- Once optimal network is reached, we will stop building branches
- We will continue to consolidate branches where it makes sense to do so

Once build-out is complete, footprint will be hard to replicate

[1] Branches as of December 31, 2011

New build economics still support growth strategy

Individual branch example using through-the-cycle rates

	% medium and high opportunity	Cost to build	Seasoned pre-tax opportunity	Number of years until… …break-even[1]	…payback
2012 new build pipeline	~90%	$2.5mm+/-	$1.5mm	3 +/-	6 +/-
Average branch built in 2002-2011	~60	2.0+/-	1.0	4 +/-	8 +/-

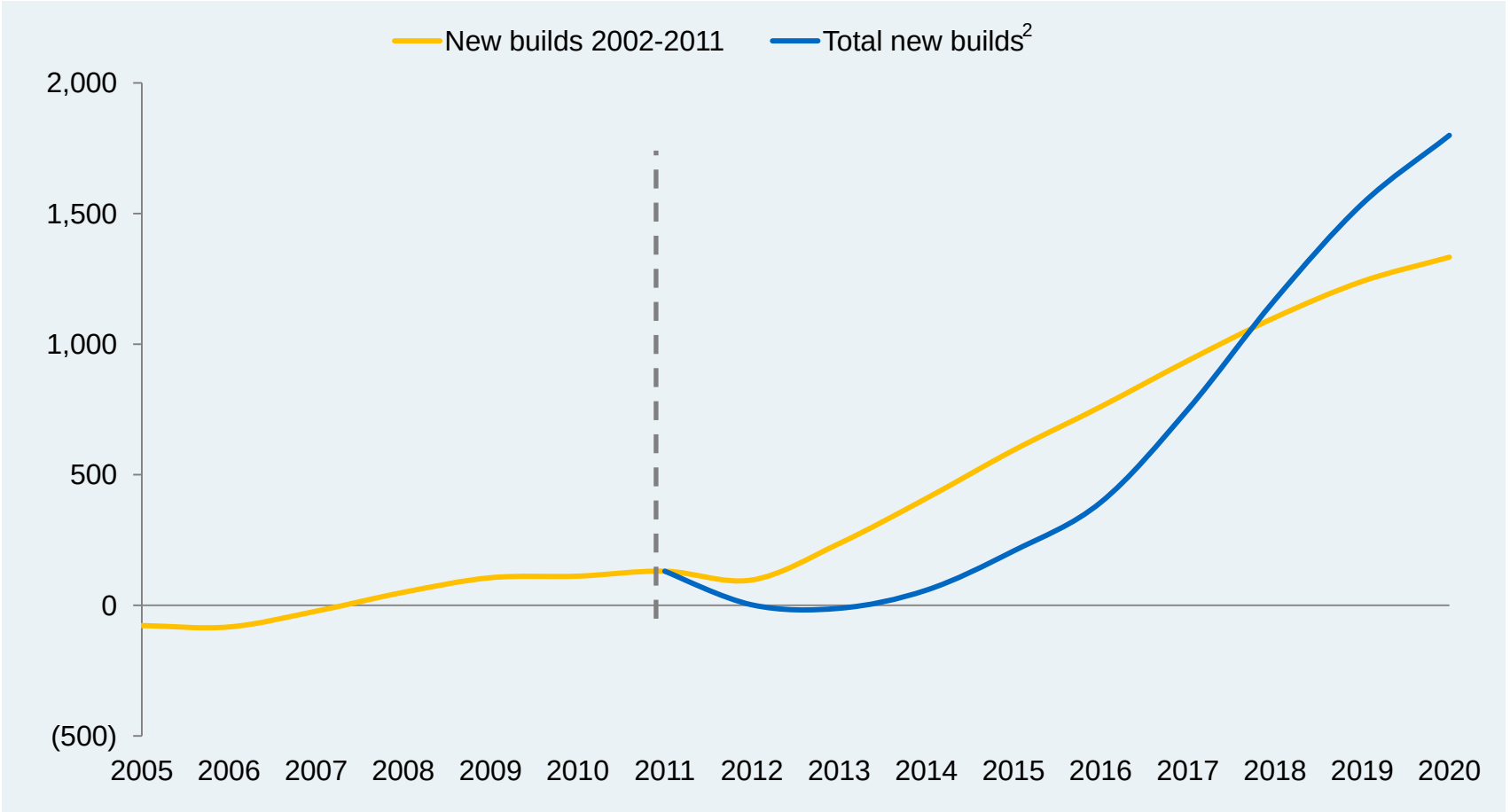
- We have shifted new build strategy toward higher opportunity branches
- We will also continue to build branches to meet our responsibilities under the Community Reinvestment Act ("CRA")

New builds reach $1mm in pre-tax opportunity by year 10+/-

[1] Contribution basis which includes all of the direct branch costs (costs within the walls – e.g., occupancy, salaries and benefits, technology/equip), as well as variable product costs

New builds remain a $1B+ pre-tax opportunity

Cumulative new build pretax earnings ($mm)[1]



- ~1,250 new builds between 2002 and 2011 contribute $1B+/- in 2018
- Future new builds provide a significant long-term opportunity

[1] Assumes low rates through 2014, normalizing thereafter
[2] Including 900 potential new builds

Retail branches are critical to fully integrated client solutions

Consumer & Business Banking

#1 SBA lender	#2 ATM network	#3 in deposit market share[1]	#3 in branches

Leveraging the retail branch platform

Mortgage Banking

- ~50% of retail mortgages originated through branches

Card Services & Auto

- ~45% of Chase branded cards sold through branches
- ~40% of Card Services revenue from new merchants sourced through the branches

Commercial Banking

- Business unlikely to exist without retail presence (>16mm branch transactions annually by CB clients)
- $0.4-$0.5B of projected long-term CB target net income opportunity from Middle Market expansion in the WaMu footprint

Treasury & Securities Services

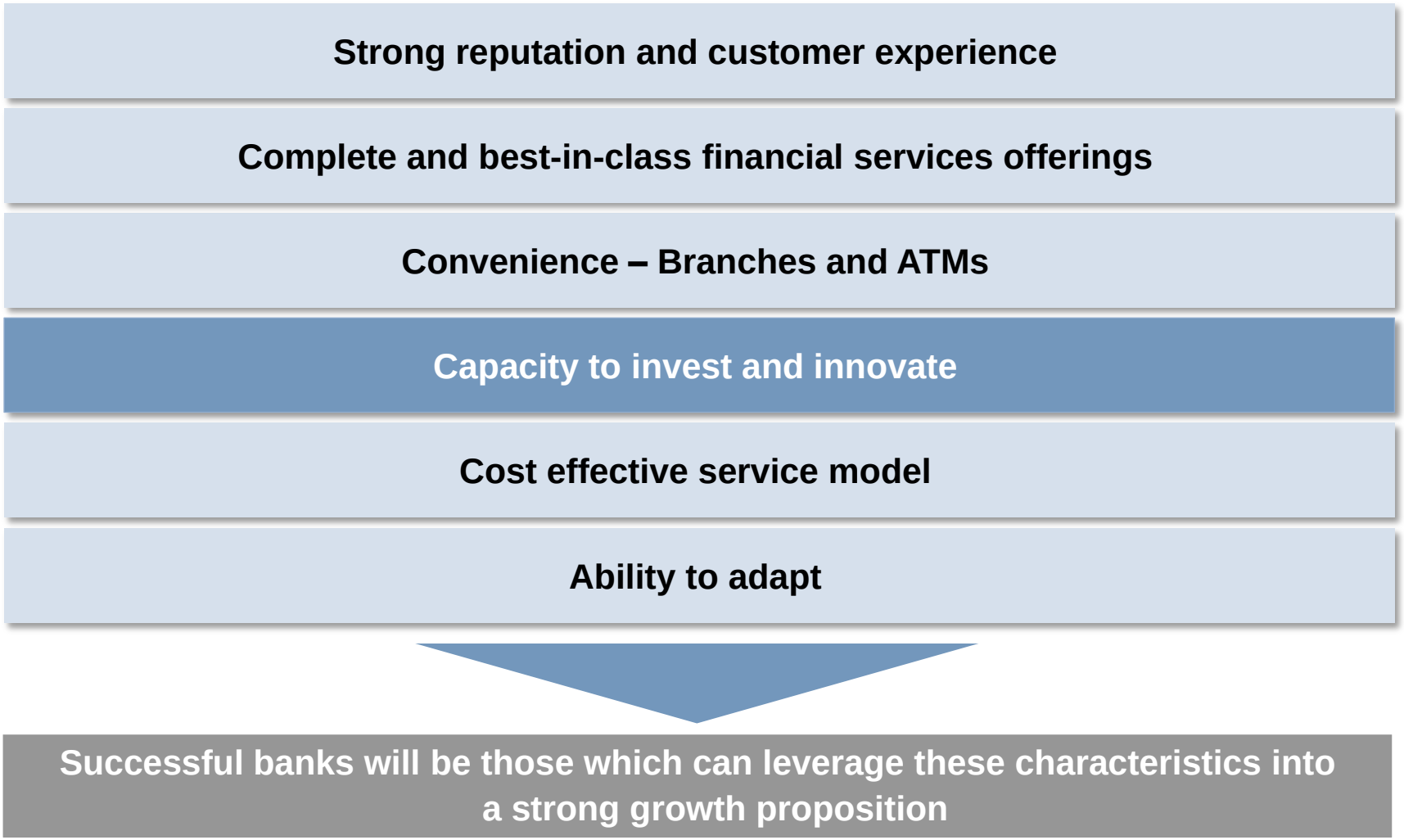
- ~30% commercial dollars deposited through the branch channel

Asset Management

- ~20% of JPM IM US Retail AUM comes from the branches

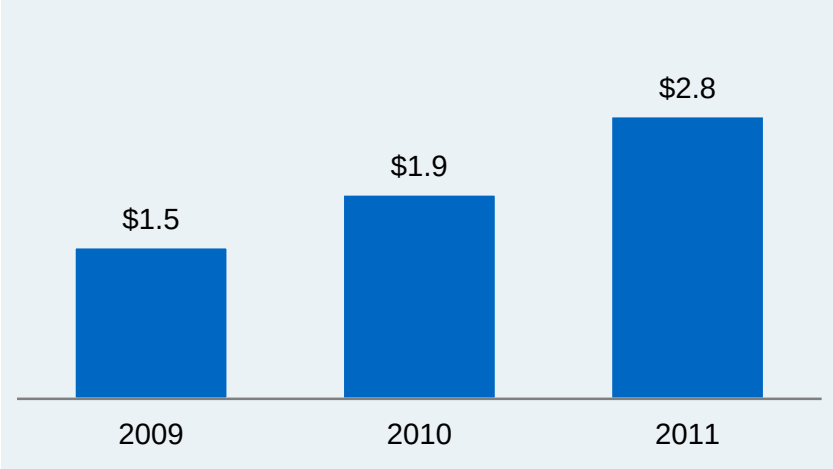
[1] FDIC data as of June 2011

Requirements for succeeding in the new environment

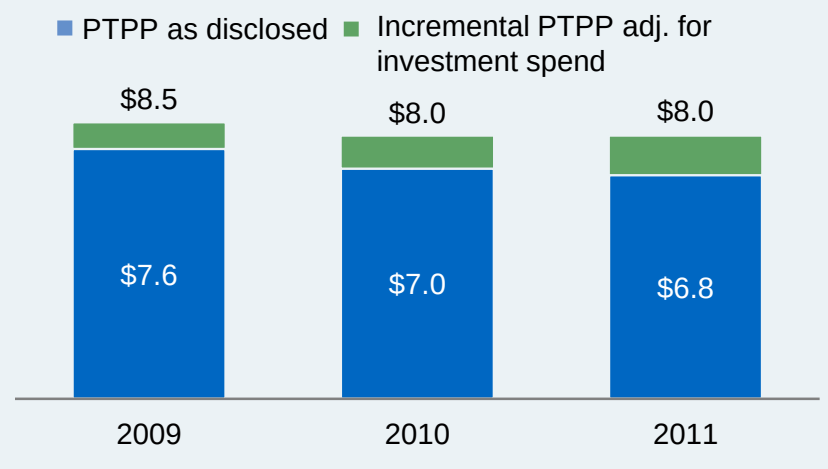


Capacity to invest – Building the foundation for future earnings

Investment cash spend ($B)



Pre-tax pre-provision ($B)



Performance metrics

	2009	2010	2011
Overhead reported/adjusted[1]	58% / 53%	60% / 53%	62% / 53%
ROE reported/adjusted[1]	42% / 47%	36% / 41%	40% / 47%

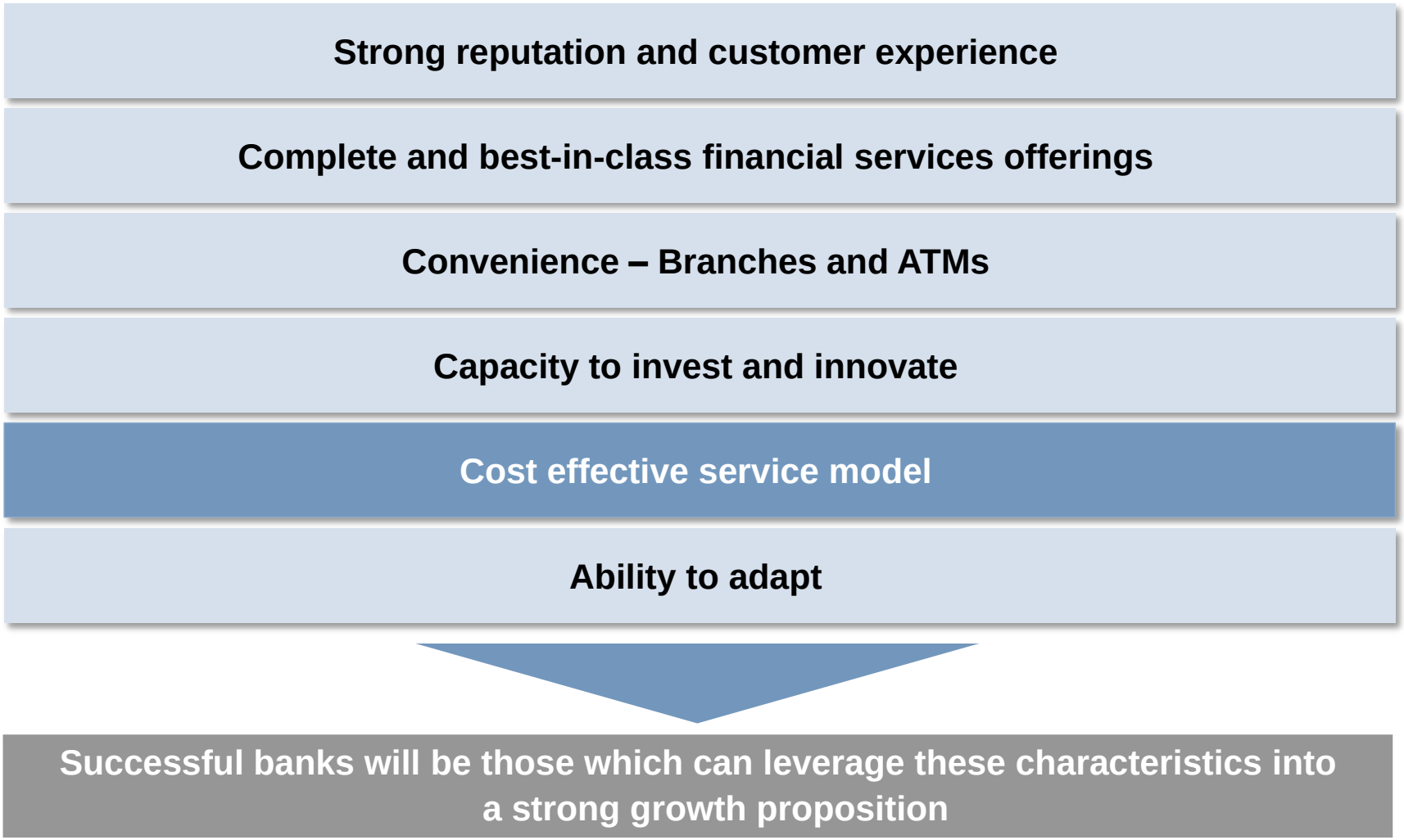
Comments

- Continue to invest even in difficult times
- Even with investment spending, we have strong quality of earnings
- Peers who have limited capacity or chose not to invest will pay for it in future earnings

Note: investment spend includes new builds, business banking expansion, new CPC locations, advertising and marketing, sales force adds, technology, branch signage / interior upgrades, and ATMs

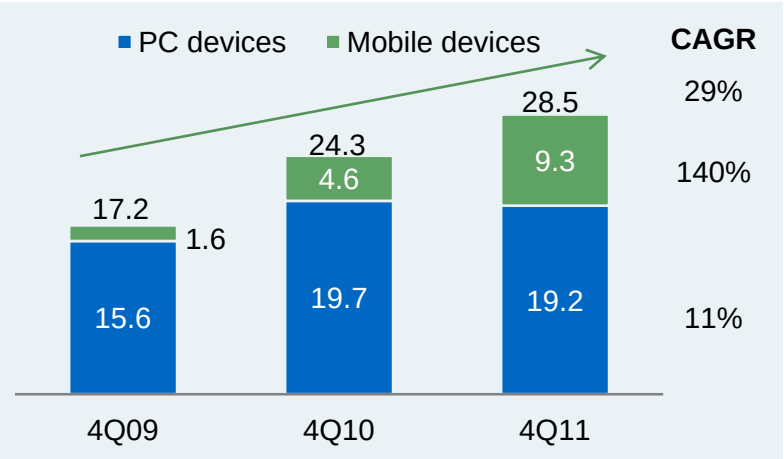
[1] Excludes investment spend

Requirements for succeeding in the new environment

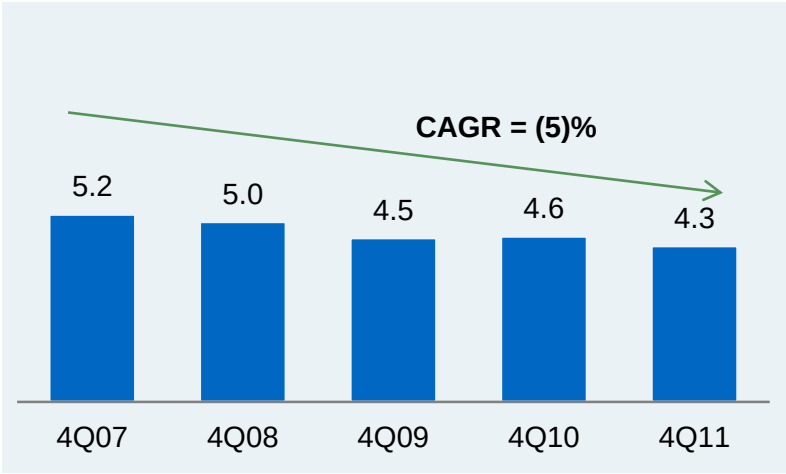


Investments in automation have led to an increase in customer self-service…

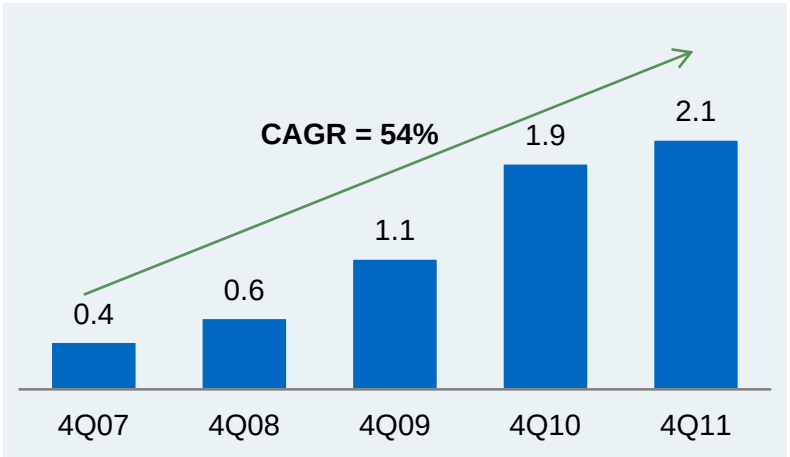
Digital – Avg. quarterly logins per Consumer household[1]



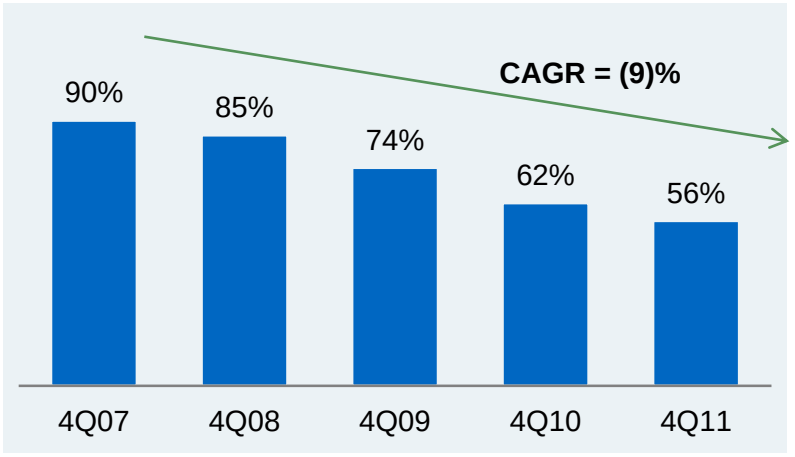
Branch – Avg. quarterly visits per Consumer household[1]



ATM – Avg. quarterly deposits per Consumer household[1]



Teller share of deposit volume[2]



Approximately 90% of transactions are now self-service

Source: JPM Chase Internal Data

[1] All interaction (i.e., logins, visits, deposits) per household figures include total Consumer households for the quarter (both channel active and inactive households)

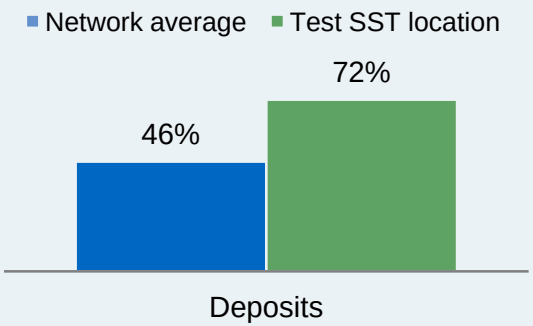
[2] Analysis includes only ATM and Teller deposits (excludes Mobile Quick Deposits)

…and we are positioned to continue innovating and reducing the cost to serve

Testing new Self-Serve Teller (SST) technology in branches

- Pilots in multiple branches
- Positive customer reaction (similar to airline industry)

% of Deposit transactions automated



Note: data reflects 4Q11

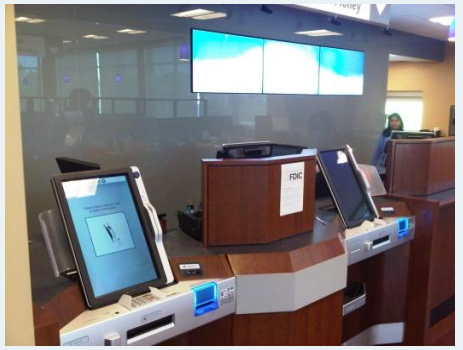


"The large screen is very engaging and easy to use"

"The denomination choice for customer withdrawals is a great feature"

Chase customer reactions

- Self-Serve Teller machine at the teller line
- Will be able to support check cashing, multi-denomination deposits and withdrawals



Instant issue debit and credit



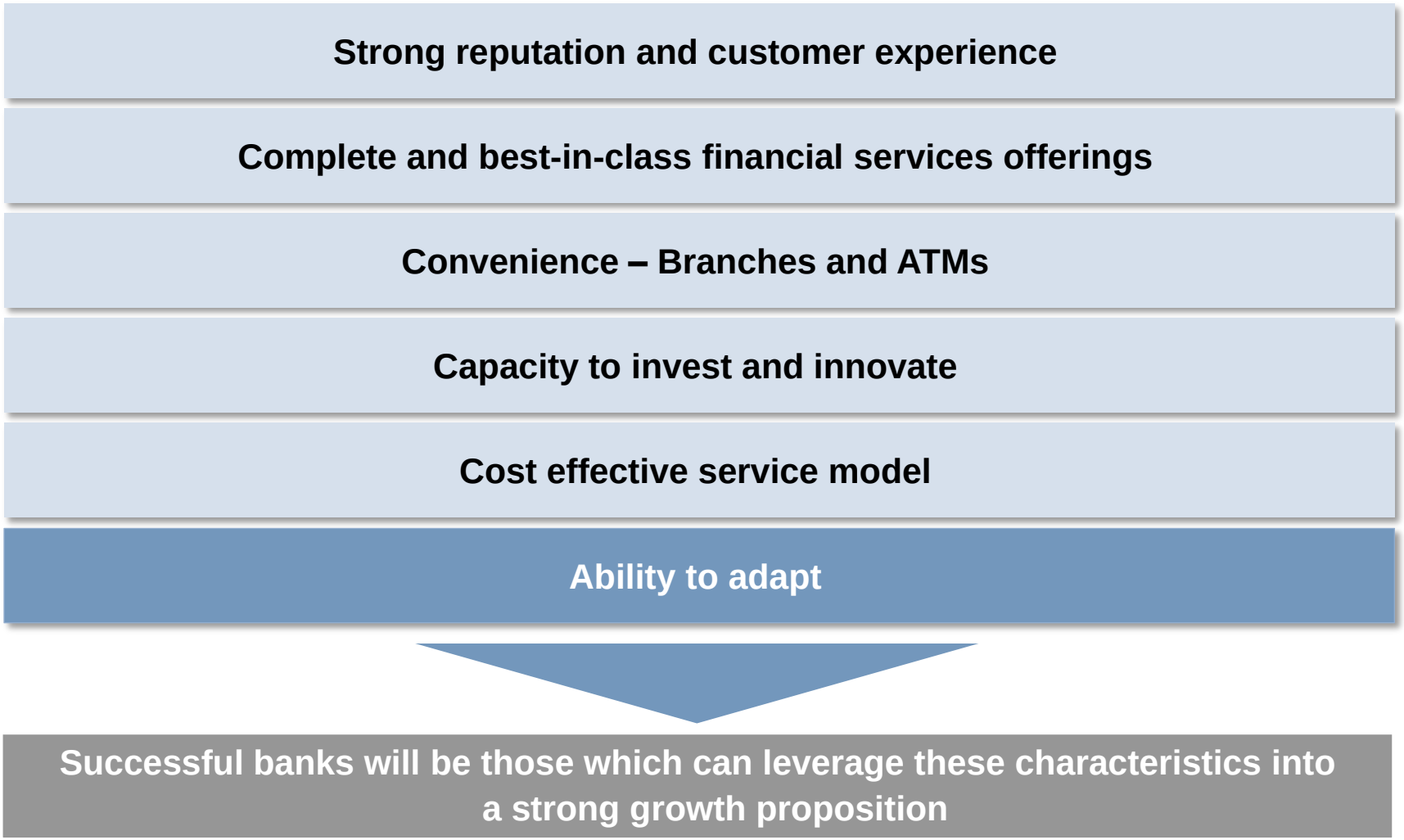
Sales tablet interface



Telepresence



Requirements for succeeding in the new environment



Winners will need to adapt to regulatory change

Regulatory compliance is extremely expensive. It becomes a very good decision to say, "I'm not sure I want to be in this business."
– Robert Peck, Gateway Bank CEO

Customer outrage prompts Bank of America to ditch its monthly debit-charge plans

Pressure Growing on Small Banks:
With the economy still struggling and regulations increasing, more community banks are exploring mergers

"The increased cost of regulation stemming from the passage of the Dodd-Frank Act in 2010 is forcing many small community banks to find merger partners and most industry experts expect this trend to accelerate over the next few years." - American Banker

"This is one of the hidden costs of Dodd-Frank: maybe half the community banks in the nation will disappear through mergers due to the costs of regulations and the inability to generate fee income." -- Steve Wyatt, Chair of Finance, Miami University

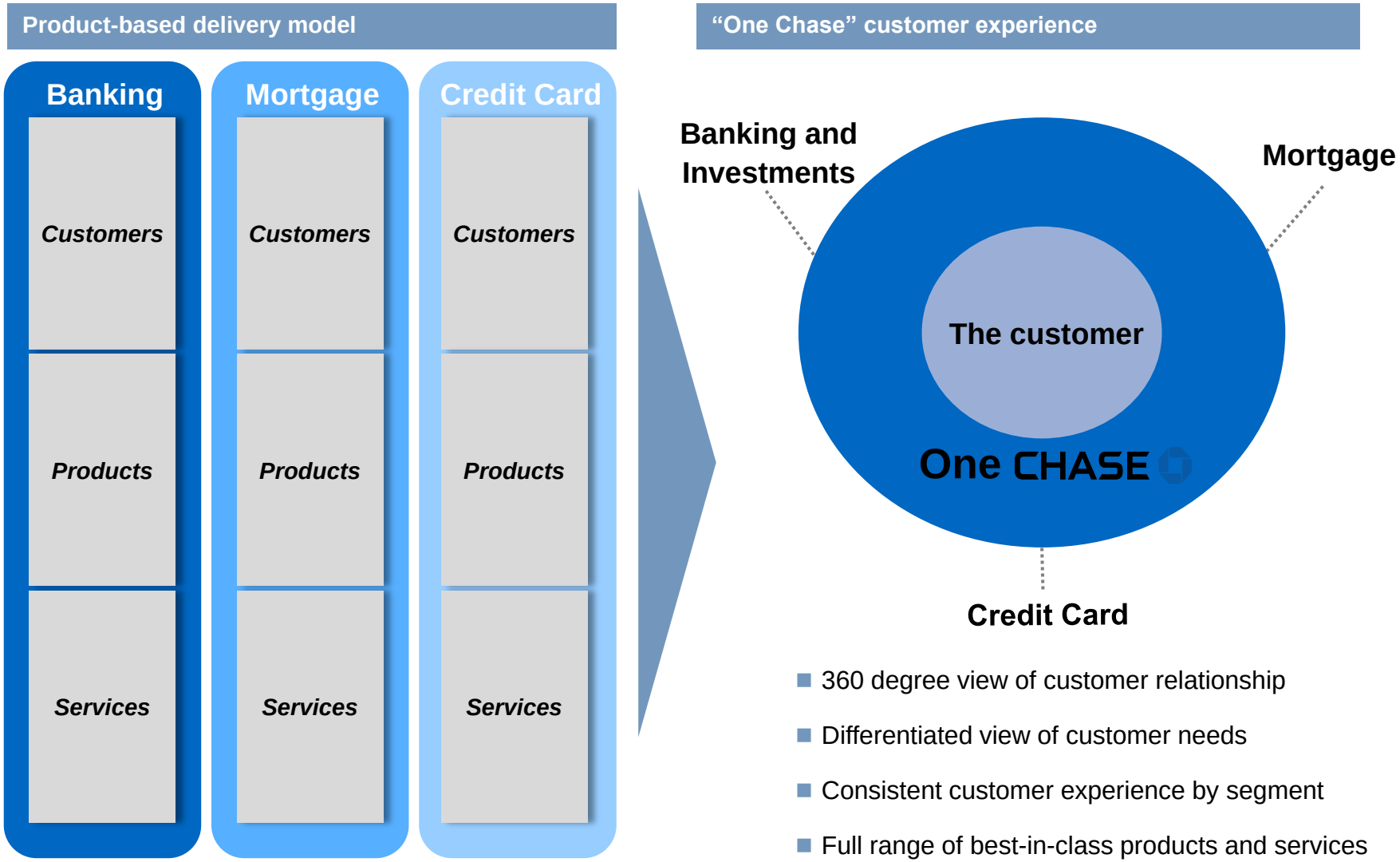
Small banks should brace for Dodd-Frank fallout

"The increasing cost of regulation is causing another small bank to give up its independence.

SunTrust, Regions gain after Marshall & Isley accepts takeover

Thrivent Financial Bank converting to a credit union

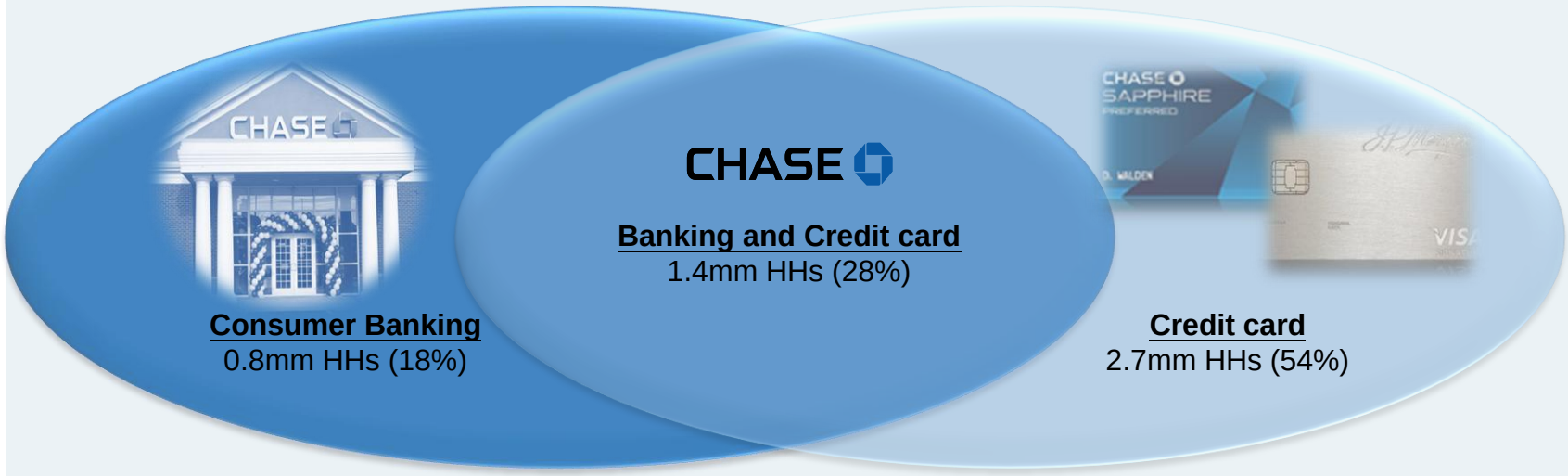
We have made a commitment to “One Chase” and customer experience – Not all banks have capacity to invest in people, systems and processes needed



Customers see us as “One Chase” – We should too

There is significant opportunity to deepen affluent relationships across LOBs

Significant opportunity to deepen affluent relationships (in-footprint segment 5 households)



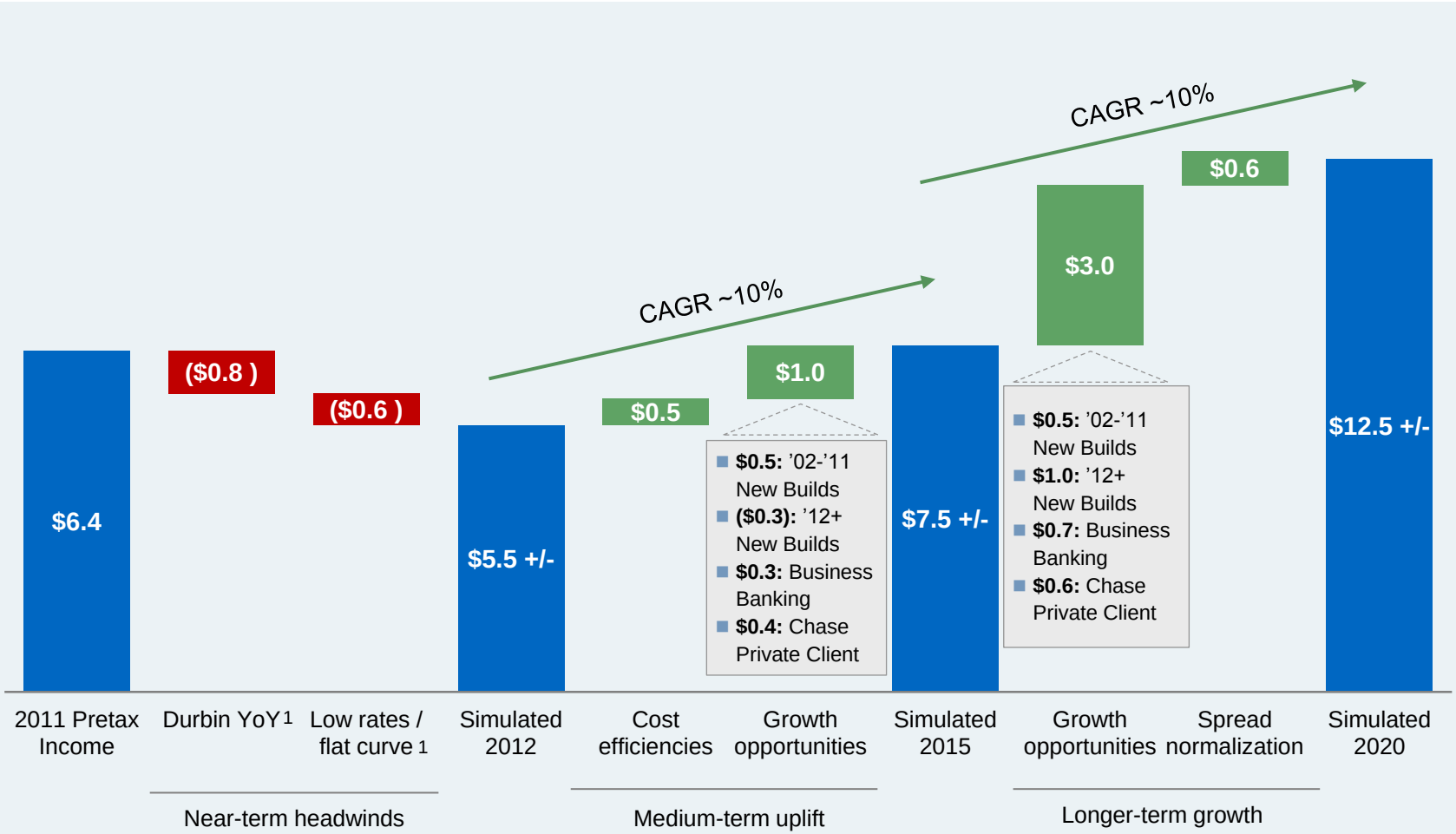
Unmet opportunity ($B)			
D&I at competitors	$1,100	$1,650	$4,100
Credit card spend at competitors	40	35	65

Note: data as of May 2011

4% of Chase in-footprint households have a Banking, Credit card, and Mortgage relationship

Near-term headwinds will slow – Our focus on strong underlying growth will pay off

Simulated pretax income ($B)



- 4% underlying annual growth (net of investment) assumed

[1] Consistent with 2012 outlook provided in 4Q11 earnings materials

BRANCH INNOVATIONS

Ryan McInerney, Consumer Banking Chief Executive Officer

February 28, 2012

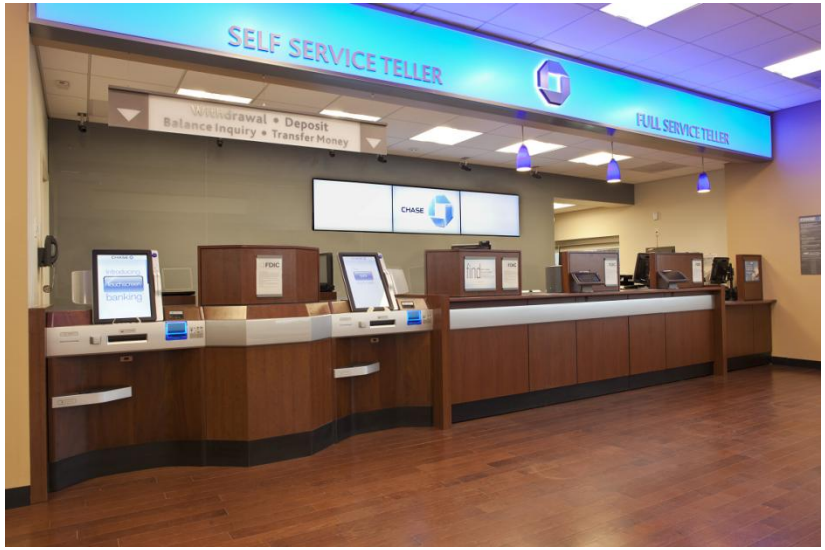
JPMorgan Chase & Co.

Branch innovations – Overview

- Consumers are increasingly adopting new technologies at a rapid pace – evident by ATM deposits and mobile banking adoption rates
- We are testing a number of new technology innovations in our branches to improve the customer experience and reduce costs
  - Redesigning the **teller line experience** via Self-Serve Teller and Paperless Teller
  - Improving **card convenience and activation** rates via Instant Issue Card
  - Offering **specialized service and face-to-face sales** through ExpertLink (Telepresence)
  - Testing several other innovations to improve sales and transaction capabilities in branches and ATMs
- While it is still early, we believe these innovations could meaningfully change how we serve our customers and staff our branches
  - **More self-serve options** to improve convenience and hours of operation while lowering costs per transaction
  - **Paperless branches –** Leveraging technology to reduce costs, eliminate errors, and improve sales and service
  - **More capabilities in more places** – Greater access to service and sales specialists across all branches via Telepresence, combined with ATMs that offer increased functionality

To integrate self-service, we are redesigning our overall teller line

Teller line redesign





- Experimenting with best mix of Self-Service Teller machines and full-service teller stations
- Designing flexible architecture to increase Self-Service Teller lines over time
- Testing whether customers prefer assistance from behind the line, side by side, or both
- Designing new Self-Service technologies for drive-up lanes
- Beginning to integrate Teller and ATM user interface and systems

Self-Service Teller

Self-Service Teller





Check cashing at traditional teller line dropped 40% after Self-Serve Teller capability was introduced

Purpose

- Automated platform allows customers to perform 90%+ of current teller transactions via self-service
- Can support extended hours access (24-hour access in many locations)
- Make it easier for customers to get in and out quickly
- Allows more efficient staffing, lowering average costs per transaction

Functions

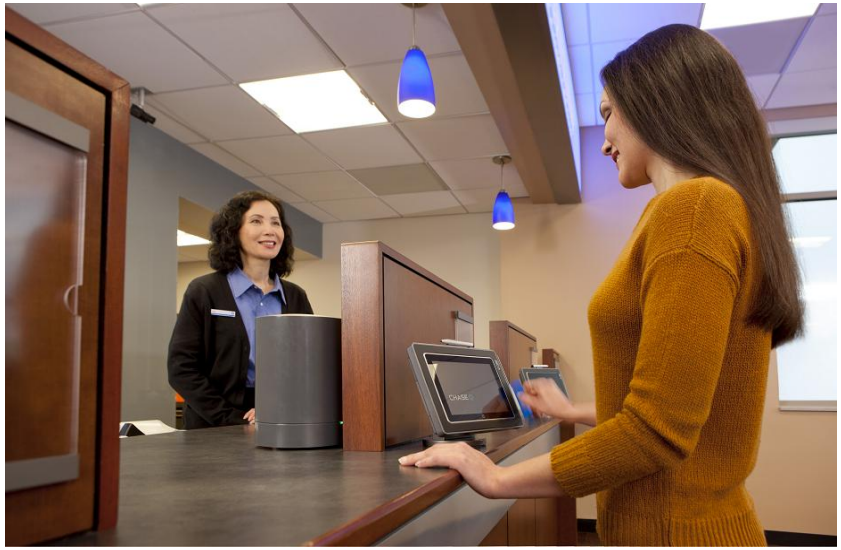
- Performs all typical ATM functions, plus additional functions such as check cashing
- Customer can choose multiple denominations (not just $20 bills)

Piloting in 6 locations

- Some lessons learned
  - Customers find the large touch screens very attractive and user friendly
  - Supporting tellers easily handle two lines at once, even during peak periods
  - Enables employees to focus on higher impact interactions

Paperless Teller

Paperless Teller



Positive customer reactions in branch tests

"I liked how simple it was."

"Makes my transactions easier."

"I'm satisfied, especially with the savings on trees."

Purpose

- Significantly reduce teller transaction slips and receipts (currently almost one billion per year)
- Increase accuracy and reduce disputes

Functions

- Brings customer into session more quickly
- Customer does not have to complete a paper slip
- Provides enhanced authentication; customer uses card swipe and PIN to authenticate

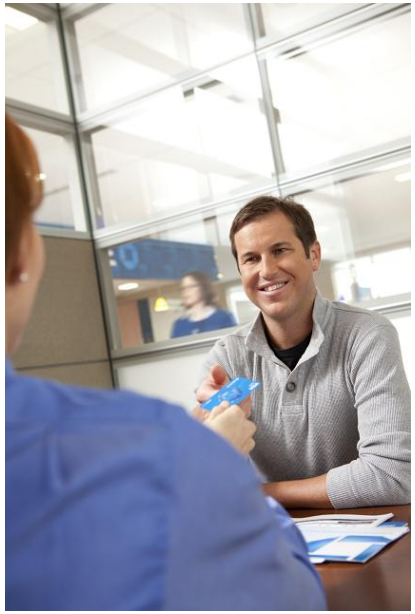
Piloting in 5 locations

- Some lessons learned
  - Some learning curve for customers to use electronic teller versus paper slips
  - Ensure angle and screen protection provide maximum privacy

Instant Issue Cards

Instant Issue Cards





Nearly 85,000 cards issued during pilots since 2008

Purpose

- 20mm+ Chase credit and debit cards are issued annually for new customers and replacements
- Improves experience and reduces costs via same day pickup at a branch instead of mailing a card
- More convenient account opening process and higher activation rates
- Opportunity to improve credit card cross-sell at the branch in the future

Functions

- New and existing customers can have debit card issued instantly at the branch
- Debit card immediately active for PIN and signature based transactions
- Future functionality will include credit cards

Piloting in 58 locations

- Some lessons learned
  - Customers love “on the spot” solution instead of waiting for the mail
  - Instant issue increases sales and customer engagement
  - Servicing model is being refined, as we scale

ExpertLink (Telepresence)

ExpertLink (Telepresence)



Purpose

- Increase sales in branches by connecting customers with sales and service specialists
- Improve customer experience by offering multi-lingual support and specialized services

Functions

- ExpertLink provides a face to face interaction with specialists via telepresence
- Functions tested in different locations
  - Sales: Mortgage, Investments, and Business Banking
  - Service: Spanish language banking, debit claims, fraud, and banker support

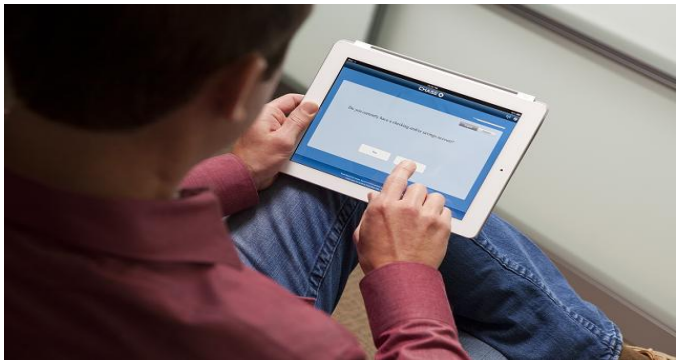
Piloting in 13 locations

- Some lessons learned
  - Experience is superior to phone
  - Customers very willing to open accounts via ExpertLink

Other innovations we are developing and testing

Self-Profiler on an iPad

- Customers fill out their own profile information prior to banker meeting. Customers prefer to share more information via this experience



Next Gen ATM

- Increase functionality and customer experience



Paperless sales

- Touchscreen sales process with paperless account opening and eSignature. Documents are sent to email or online document vault



Mobile Demonstration Zone

- Help customers set up their mobile banking in the branch immediately after account opening



CARD SERVICES & AUTO

Gordon Smith, Chief Executive Officer Card Services & Auto

February 28, 2012

JPMORGAN CHASE & CO.

Executive Summary

- **Consumer and Small Business Card performance is consistent with last year's guidance**
  - Outstandings stabilized reaching the target of $120B at year end[1]
  - Net charge-off rate in 4Q11 of 4.33% in line with 4.50% +/- target
  - Revenue margin at 12.3% for FY2011 in line with 12.0%−12.5% target
- **Our focused investments are yielding attractive returns and driving continued market share growth**
  - 4Q11 sales growth of 13.6% remains robust[2]
  - Engagement levels continue to increase – 501 bps lift in sales active rate and 38% lift in sales per sales active since 2009
  - Market share of general purpose credit card sales has now grown by 322 bps since 2007
  - Paymentech sales volume is up 18% fueled by 34% growth in new merchant accounts through retail branches
- **We are seeing rapid adoption of our digital capabilities**
  - Chase.com is the #1 most visited banking portal[3] and our customers spent over $85B online during 2011
  - We have 15 million registered mobile users and our customers moved $33B in 2011 using mobile channels
  - We have made significant investments in mobile (QuickPay, QuickDeposit, Jot)

Note: Consumer and Small Business Card represents Card Services excluding Commercial Card
[1] Excludes WaMu
[2] Excludes Kohl's
[3] Based on Jan'12 compete.com rankings

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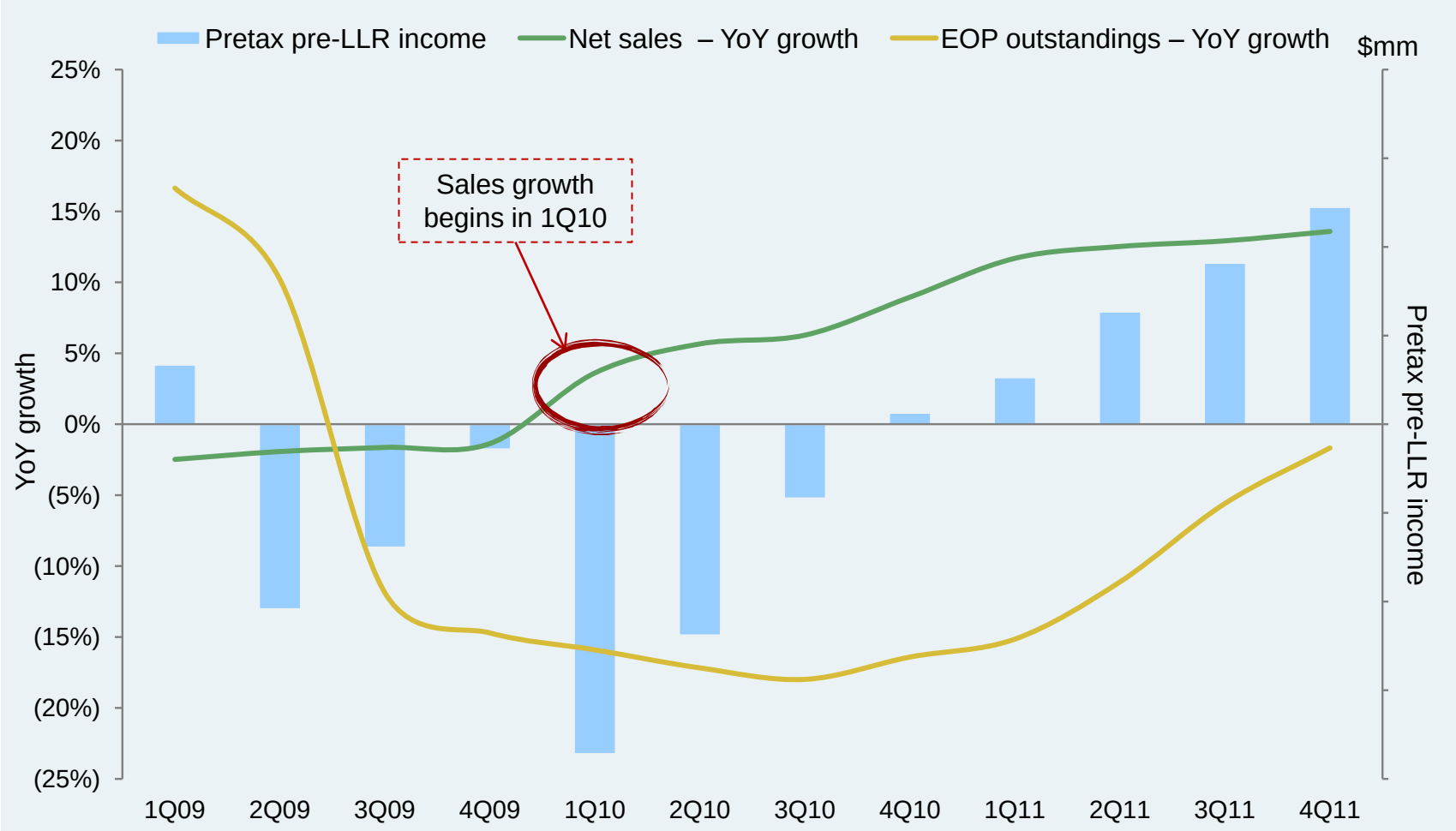
We have shown consistent progress against our targets

($B)	2011 EOP outstandings	2011 Sales volume		2009	2010	2011	Through-the-cycle targets
Affluent and High Net Worth	$40	$169	Revenue margin	10.8%	10.6%	11.1%	11% - 13%
			ROE	23	4	16	> 20
Mass Affluent[1]	79	144	Revenue margin	11.4%	11.3%	11.7%	10% - 12%
			ROE	(2)	(18)	12	15 - 18
Small Business	6	27	Revenue margin	11.8%	12.6%	14.2%	13% - 15%
			ROE	(32)	(25)	12	> 20
Chase Paymentech[2]	N/A	N/A	ROE	36%	41%	47%	> 20%
Auto	47	N/A	ROE	21%	32%	34%	18% +/-
Corporate[3]	20	4					
Card Services[4]			Revenue margin	11.8%	11.9%	12.3%	12.0% - 12.5%
Card Services[4] & Auto	$192	$344	ROE	(10%)	16%	29%	20% +/-

Source: internal Chase data
Note: Component numbers may not equal total Card Services & Auto due to rounding
[1] Mass Affluent includes WaMu (except for sub-prime portion)
[2] Paymentech ROE represents return on tangible equity
[3] Includes Student and sub-prime portion of WaMu
[4] Excludes Commercial Card

Pretax pre-LLR profit has been steadily increasing since 1Q10

Consumer and Small Business Card[1] trends in sales, outstandings, and pretax pre-LLR income

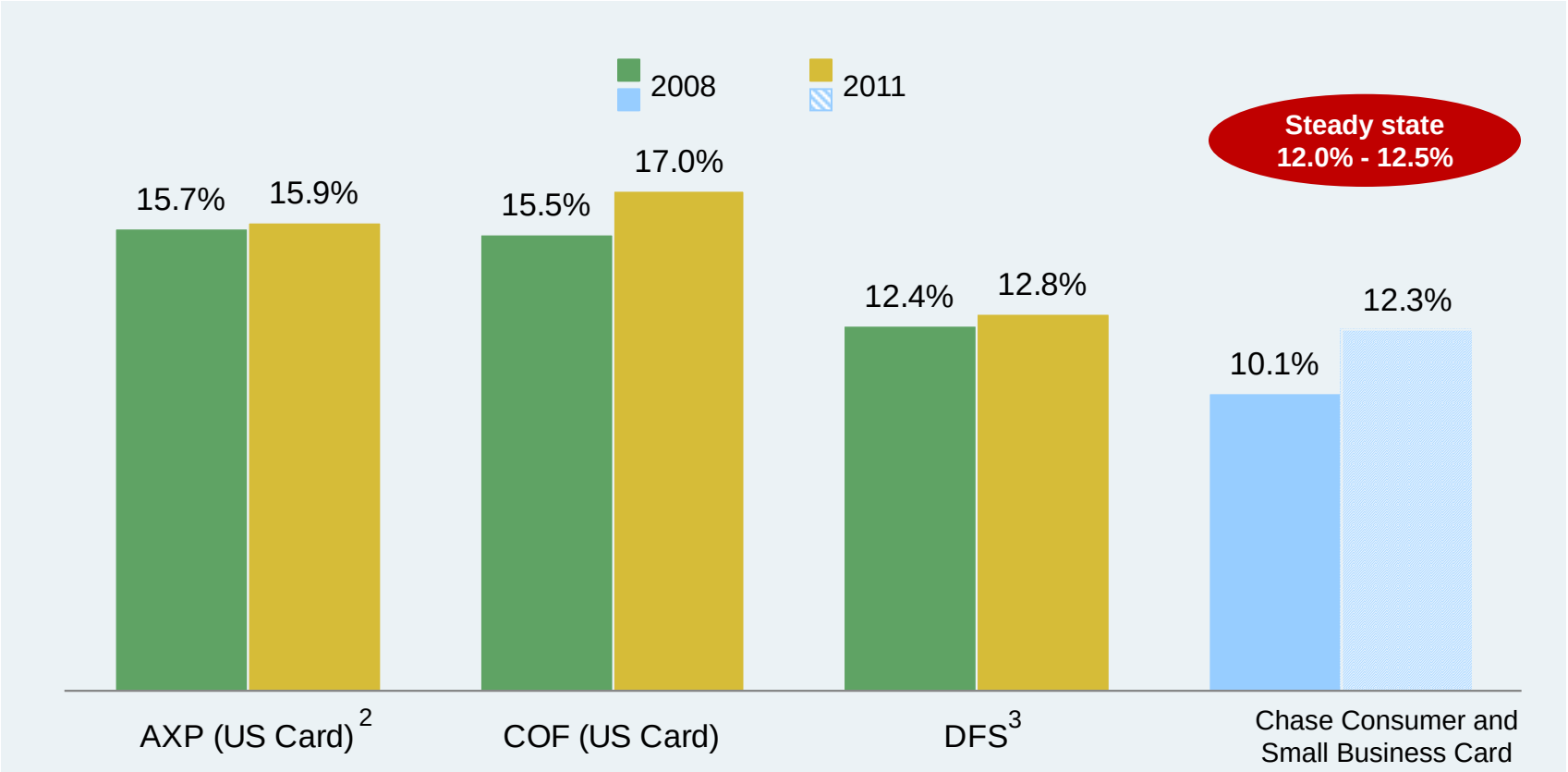


Source: internal Chase data

[1] Excludes Kohl's

Revenue margin continues positive trend

Revenue margin[1]

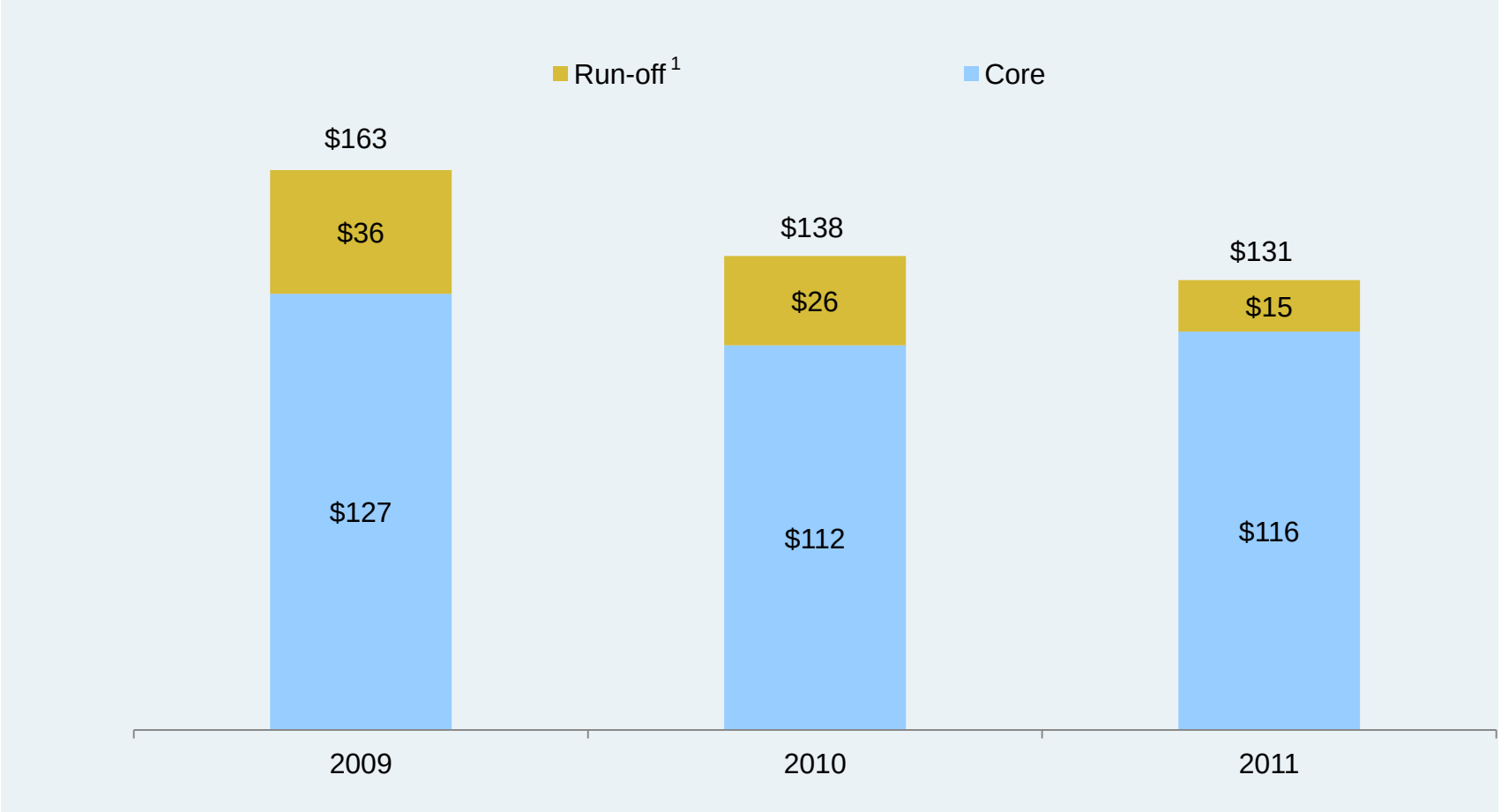


2008 – 2011				
Growth (in bps)	16	155	38	220
CAGR	0.4%	3.1%	1.1%	6.8%

[1] Revenue margin defined as revenue over average outstandings
[2] AXP revenue have been adjusted to exclude estimated rewards costs
[3] DFS revenue represents Direct Banking segment fiscal year ending November; 2008 data has been adjusted to exclude $863mm in VISA/MasterCard litigation payments in 4Q08

Outstandings have stabilized

Consumer and Small Business Card end-of-period outstandings ($B)

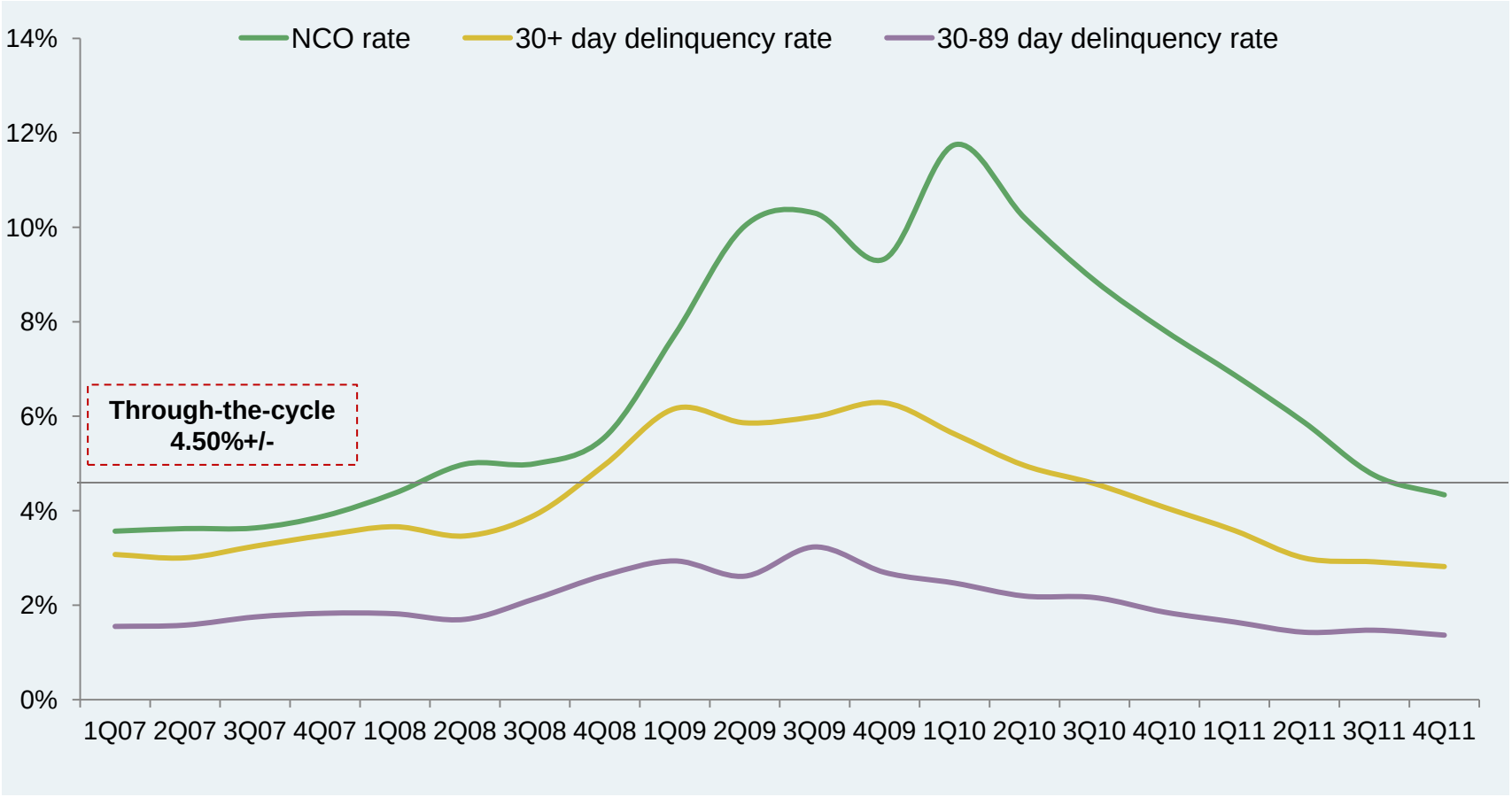


Source: internal Chase data

[1] Run-off balances include certain legacy WaMu loans, legacy balance transfer programs and terminated partner portfolios (e.g. Kohl's)

Loan losses show continued improvement

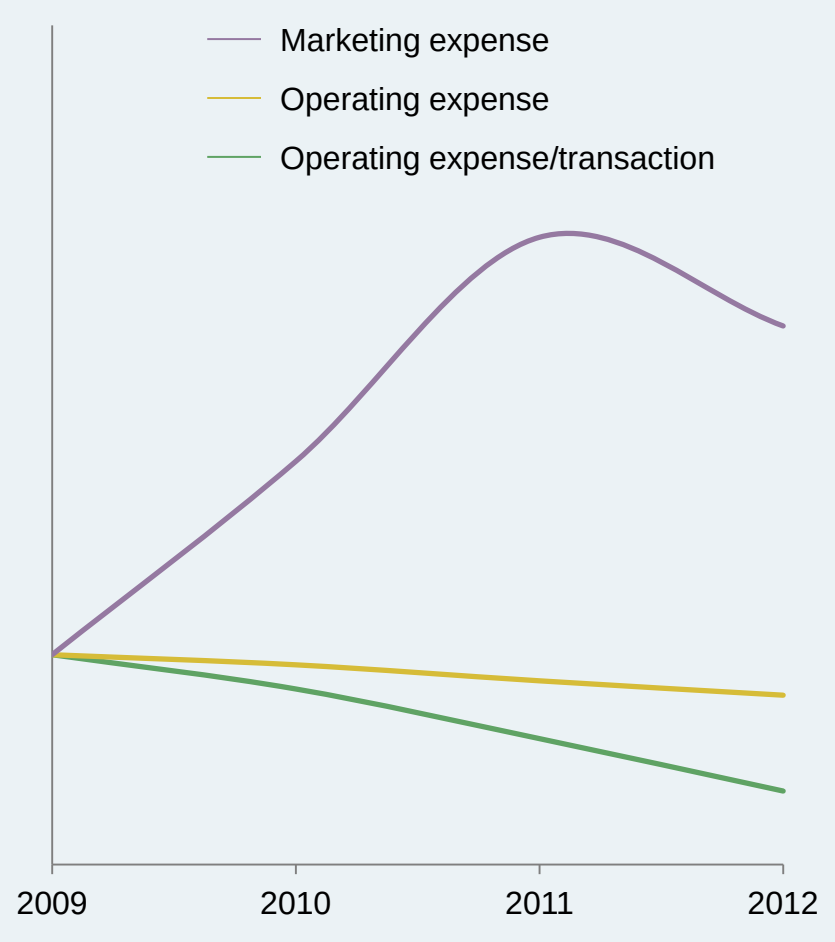
Consumer and Small Business Card net charge-off and delinquency rate trends



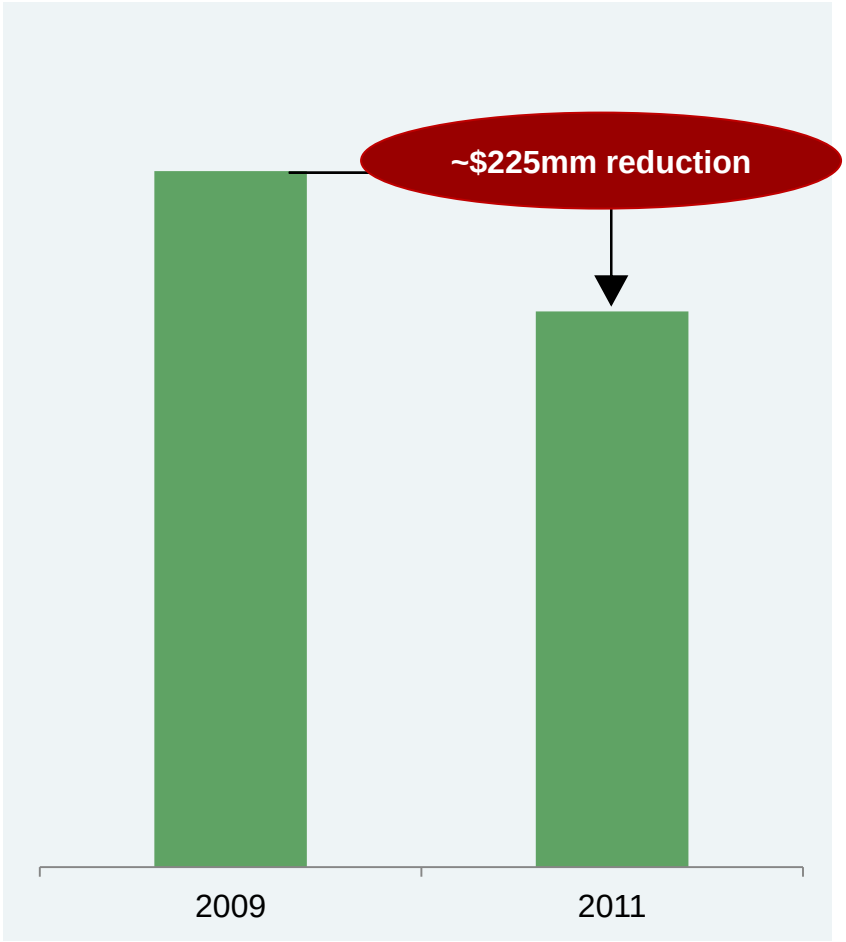
Source: internal Chase data

Core operating expense is tightly controlled as we invest in new capabilities and growth

Trends in Consumer and Small Business Card expense (indexed to 2009)



Consumer and Small Business Card core operating expense[1] ($B, indexed to 2009)



Source: internal Chase data

[1] Excludes new business initiatives and investments

Return on new account investment will sustain portfolio steady state ROE of 20%+/-

Process of selecting marketing investments

- Evaluate over 2,000 acquisition marketing investments per quarter
- Very granular level
  - Forecast P&L with all metrics
  - Projections based on past experience
  - Adjusted for expected changes
- Determine how much to invest based on the attractiveness of choices
- Select investments to maximize the overall return on our marketing spend
- Ensure each investment meets NPV, undiscounted payback and ROE hurdles

Vintage	Lifetime ROE[1,2]	Average payback period (years)[2]
3Q09	> 30%	< 3
3Q10	> 35%	< 5
3Q11	> 40%	< 5

[1] Based on actuals through 4Q11 and forecasts
[2] Excludes fixed operating expense and advertising media expense on existing accounts

Through-the-cycle targets for Consumer and Small Business Card

Consumer and Small Business Card key metrics		
	Through-the-cycle targets	4Q11
Revenue margin	12.0% - 12.5%	12.2%
Expense	4.5%+/-	4.8%
Net charge-off rate	4.5%+/-	4.3%
Equity	$13B	$13B
ROE[1]	20%+/-	18%

[1] Excludes impact of loan loss reserve actions and assumes 39% tax rate

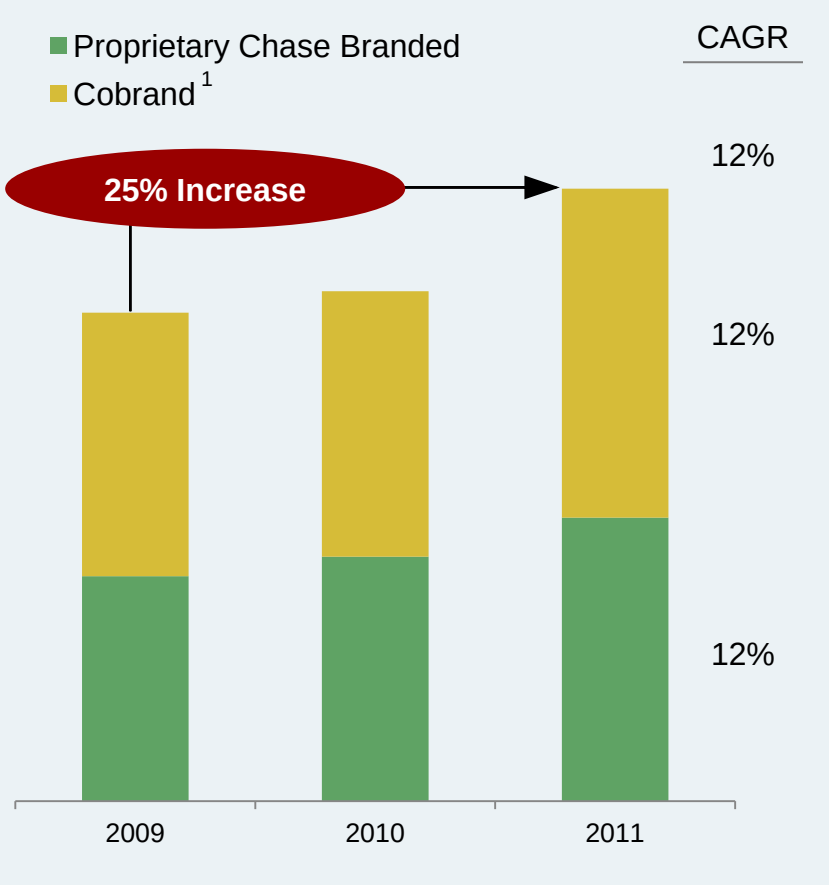
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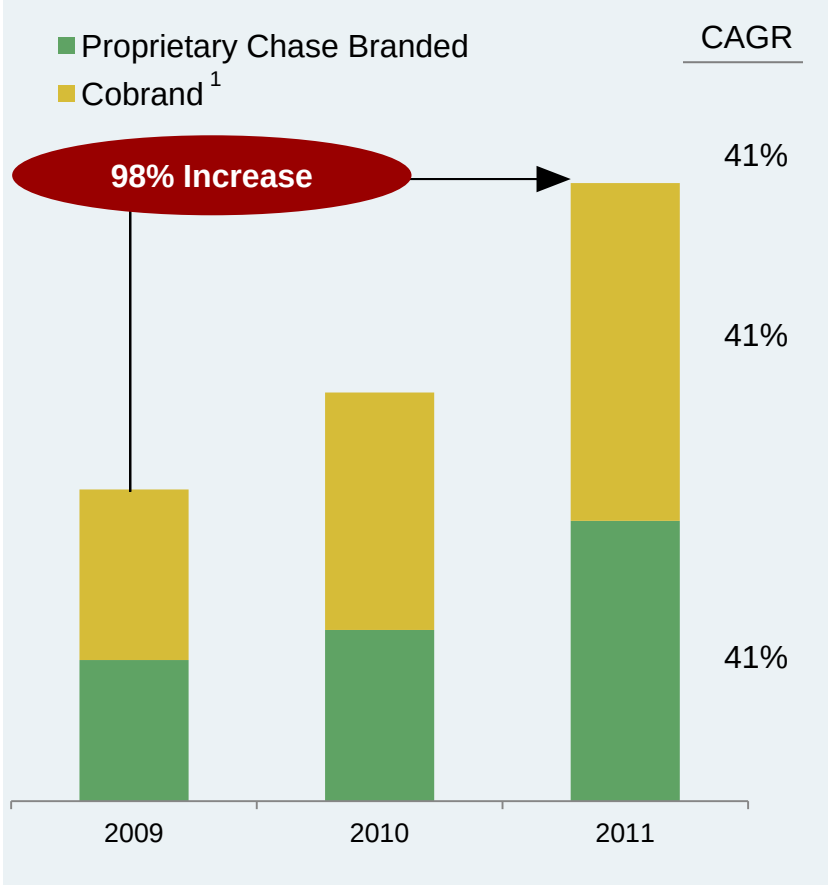
We are acquiring high quality engaged customers

Trend in Consumer and Small Business Card customer acquisitions metrics

New accounts ('000s)



Sales volume from new accounts ($mm)

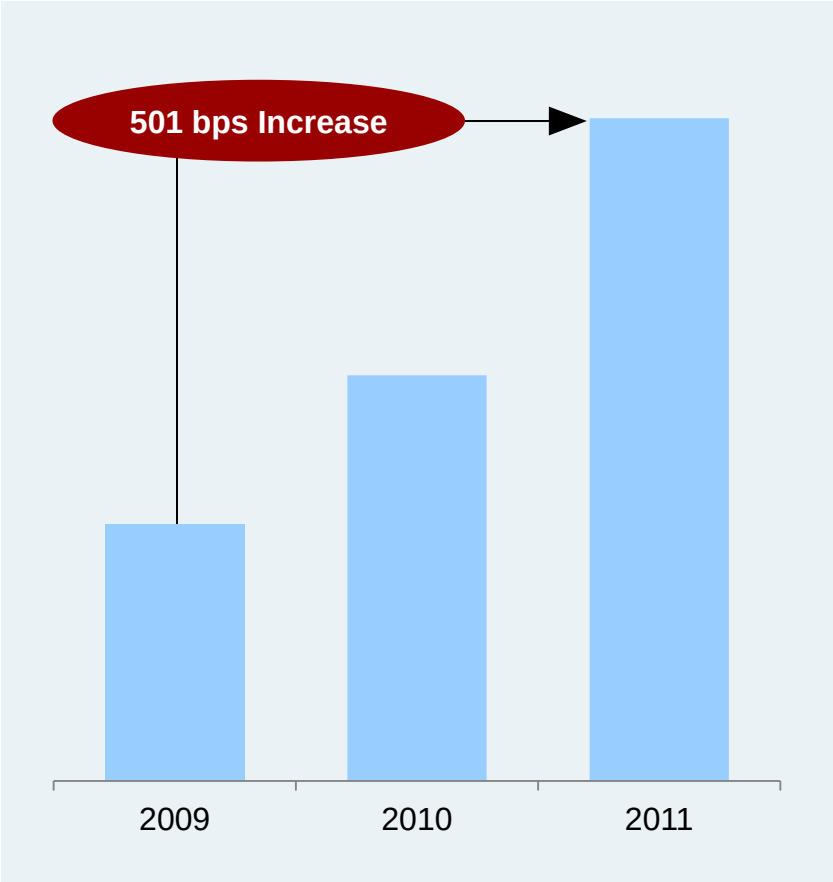


Source: internal Chase data
[1] Excludes terminated partners

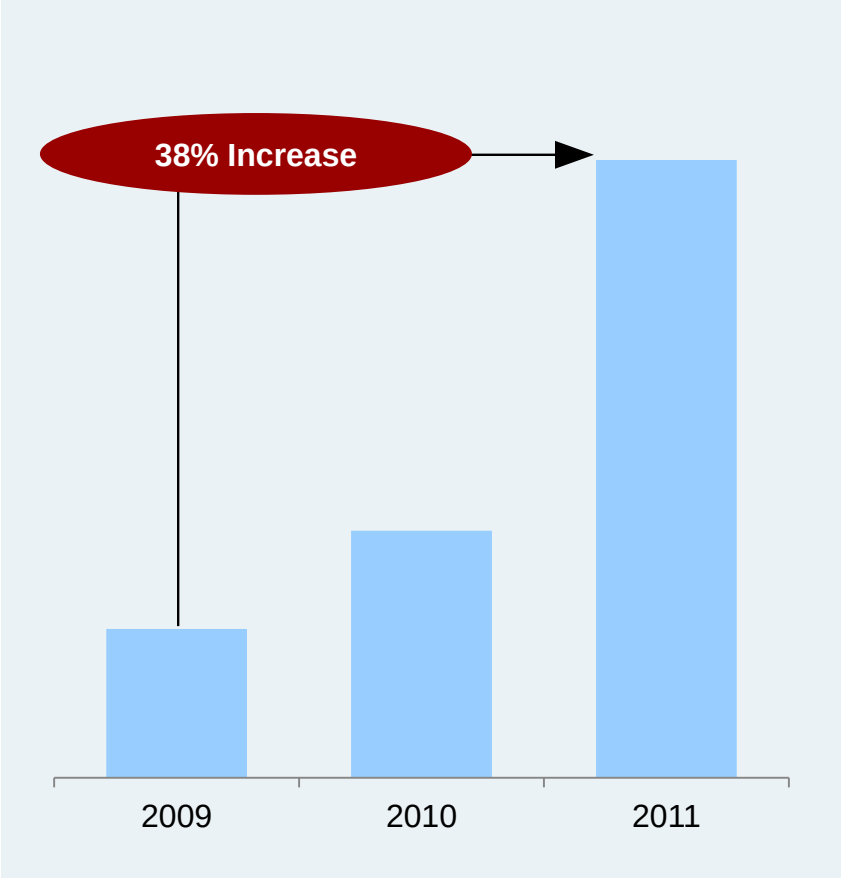
We continue to see improvements in sales activation rates and sales per sales active

Trend in Consumer and Small Business Card portfolio metrics

Sales activation rate



Sales per sales active

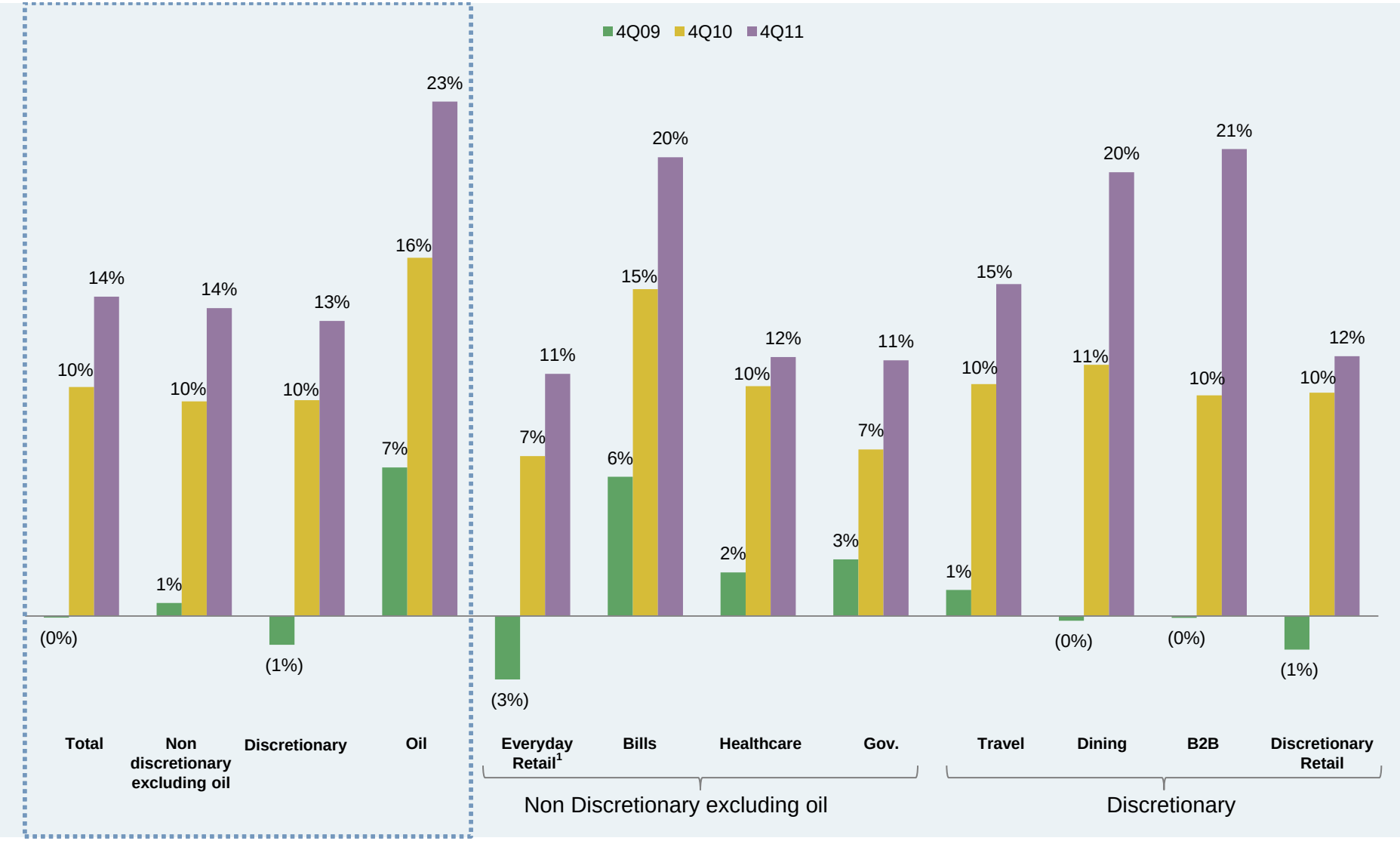


Source: internal Chase data
Note: sales active population excludes accounts with only balance transfers or cash advance activity

We are continuing to experience growth within all merchant categories

OUR INVESTMENTS ARE YIELDING ATTRACTIVE RETURNS

Trends in YoY sales growth by merchant category

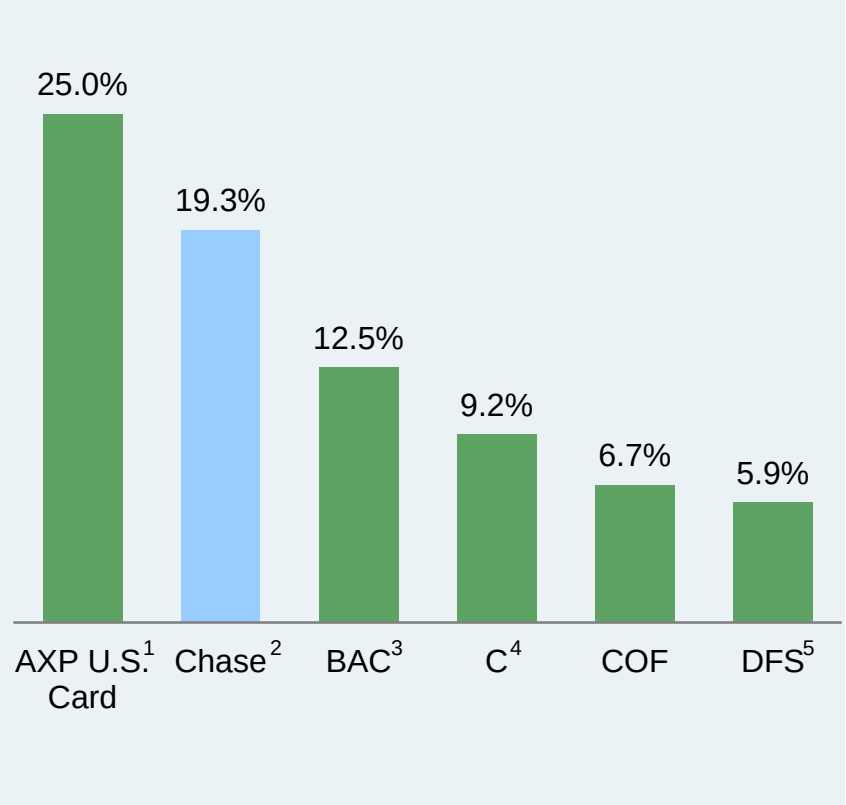


Source: internal Chase data; excludes WaMu, International, and Private Label

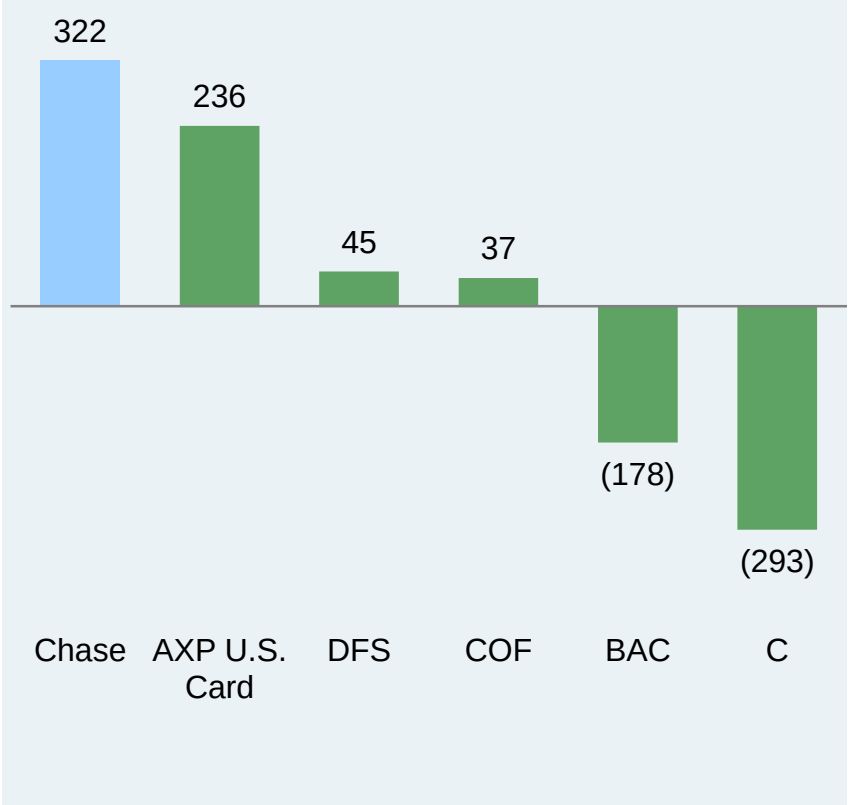
[1] Everyday retail includes supermarket/grocery stores, department stores, discount stores, and wholesale clubs

Chase has gained sales market share vs. competitors over the past 4 years

2011 General Purpose Credit Card (GPCC) sales volume market share



Change in GPCC sales volume market share (bps) — 2007 vs. 2011



Source: earnings releases; internal Chase data; internal Chase estimates
Note: GPCC includes consumer, small business, charge card but excludes commercial
[1] AXP includes cash advances, excludes Global Network Services (GNS) volumes
[2] Chase sales data excludes WaMu, cash advances, balance transfers and Private Label
[3] BAC includes U.S. consumer and small business; 2007 is estimated to exclude international
[4] C includes C branded and excludes non-core retail partner portfolios
[5] DFS sales data excludes cash advances

We continue to leverage the JPMC franchise

Card Services & Auto

$193B in outstandings
~$132B OS in Consumer, Small Business, and Commercial Card
~$61B loan balances in Auto & Student Lending

~65mm credit card open accounts

~$400B in sales
~$379B net sales in Card Services
~$21B loan originations (sales) in Auto

Card Services is #1 among key issuers in General Purpose Credit Card receivables

Leveraging the JPMorgan Chase franchise

Investment Bank | **Global Corporate Bank** | **Treasury & Securities Services**

- Leveraged existing wholesale relationships and customers
  - Sourced new Paymentech accounts represents a considerable part of Paymentech's revenue from new customers
  - Sourced most new commercial card customers through referrals
  - These customers generate >50% of commercial card revenue
- Sourced Subaru, Mazda, Jaguar, Land Rover and Chrysler Auto financing deals though IB relationship
- M&A advisory on Card portfolio acquisitions and divestitures

Commercial Banking

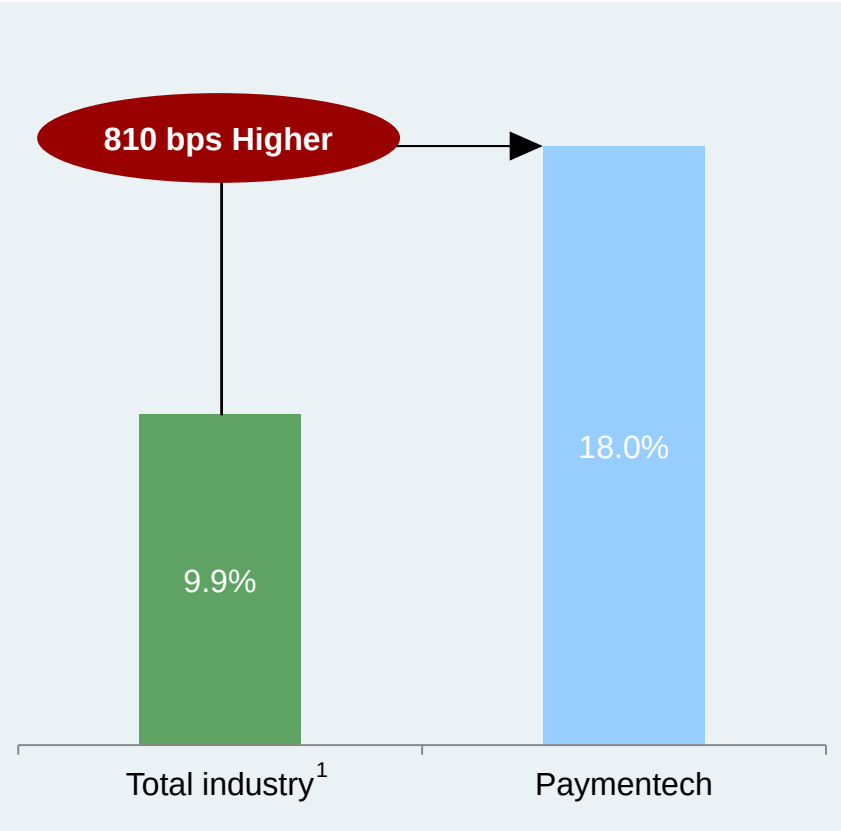
- Sourced most new middle market commercial card customers through Commercial bank
- Generated >40% of commercial card revenue from JPMC wholesale customers

Retail Financial Services

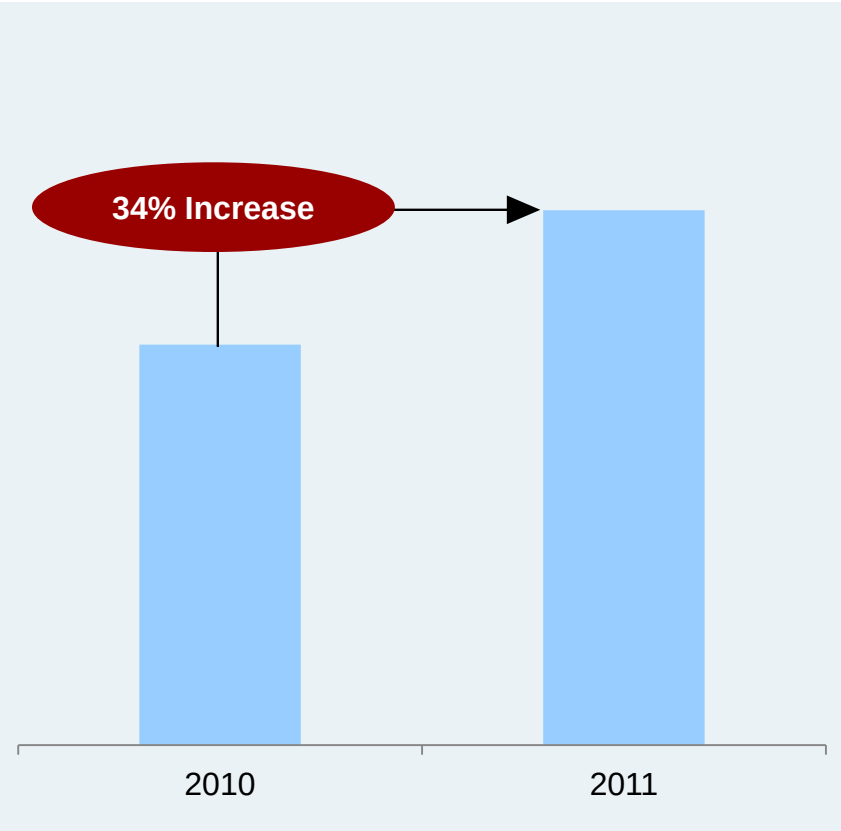
- Issued 1.3mm new consumer and small business card accounts through branches
- Increased signings of new Paymentech accounts through branch referrals by 34%
- Provided in person servicing

Paymentech continues its strong growth driven by new accounts from retail branches

Debit and credit volume 2011 YoY growth



New accounts from retail branches ('000s)



Source: internal Chase data

[1] Based on Visa and Mastercard publicly reported credit and debit sales volumes

Agenda

	Page
Financial performance	2
Our investments are yielding attractive returns	11
Digital and mobile growth	**18**

Digital strategy

Customers

Consumers



Small Businesses



Channels

Chase.com and partner websites

Branches

Mobile applications

Email

Telephone

Text messaging

Social media sites

ATM

Direct mail

One Chase

- Consumer & Business Banking
- Card Services & Auto
- Mortgage Banking

DIGITAL AND MOBILE GROWTH

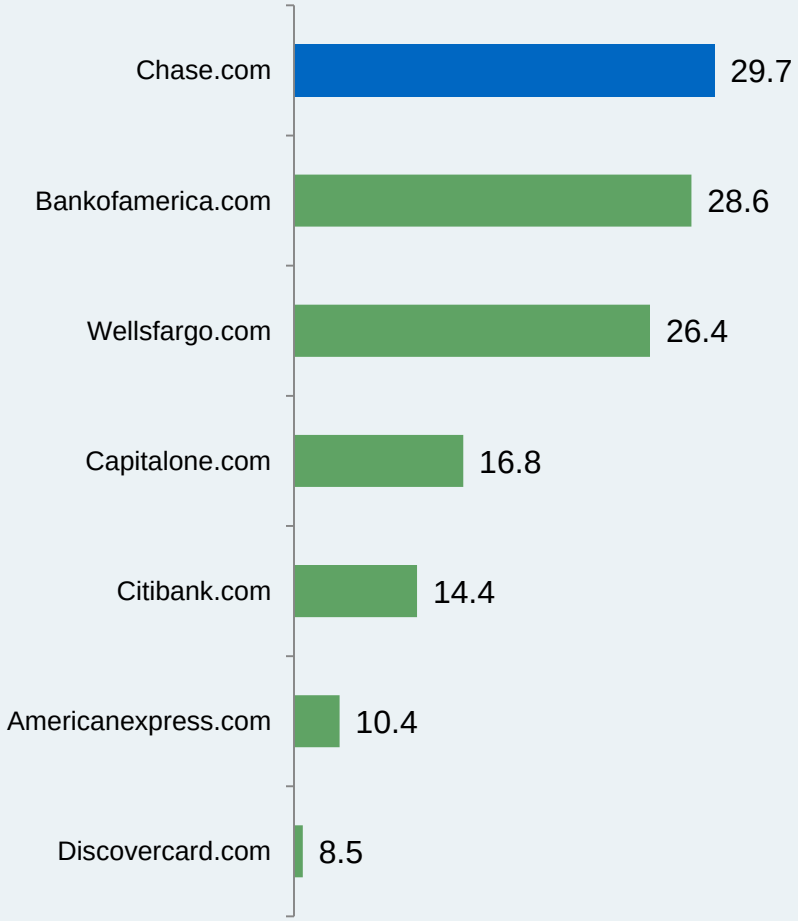
Digital and mobile growth

- **Digital is key to our business**
  - Chase.com #1 most visited banking portal in the U.S.[1]
  - With $85B + in e-commerce sales volume, we are among the largest players in the U.S.
  - Online channel is used 6x as frequently as the phone and 5x the branch
  - Digital channels drive increased engagement and efficiency
- **Mobile payments investments are gaining traction**
  - 15mm registered mobile users growing by 600k per month
  - $33B payments and transfers last year, momentum suggests this will be double in 2012[2]
  - Chase Mobile generates more payments volume than eBay/PayPal, Amazon, and Apple combined
  - Chase Paymentech is among the largest merchant processor of mobile payments[3]

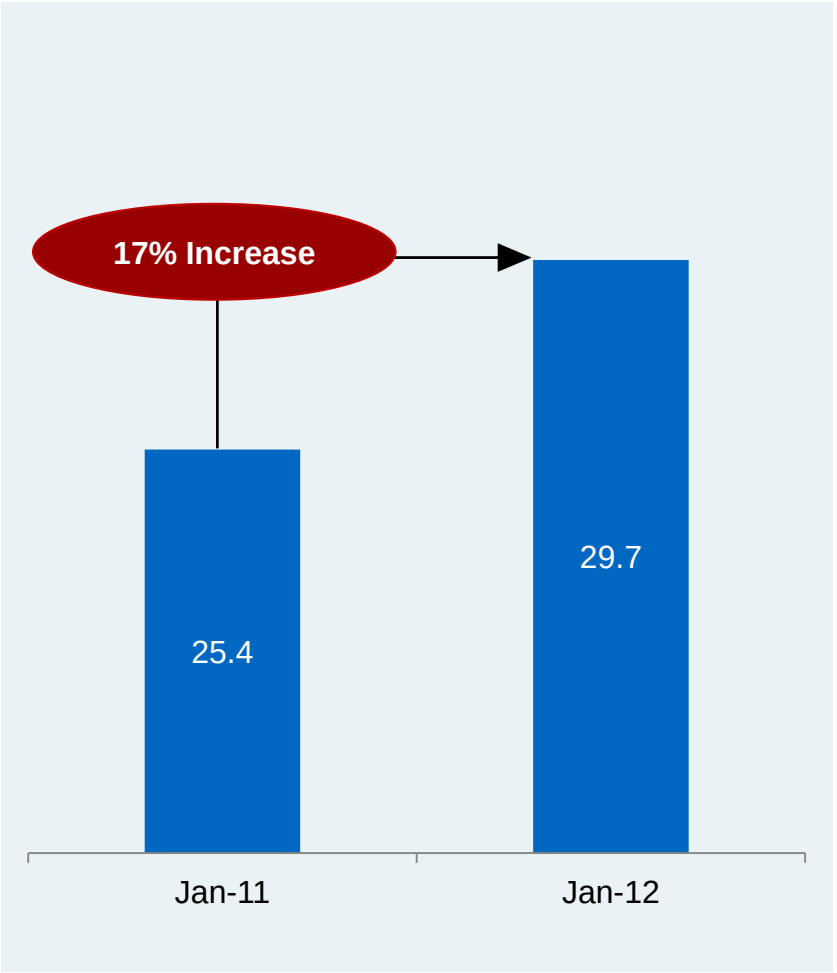
[1] January 2012 compete.com rankings
[2] Includes same customer funds transfers, QuickDeposit, QuickPay, credit card bill pay (Epay), bill pay, and wire
[3] Based on analysis of Mobile Commerce Top 300 report

Chase.com is the most visited banking portal in the United States

Unique visitors[1] to online banking portal (mm)



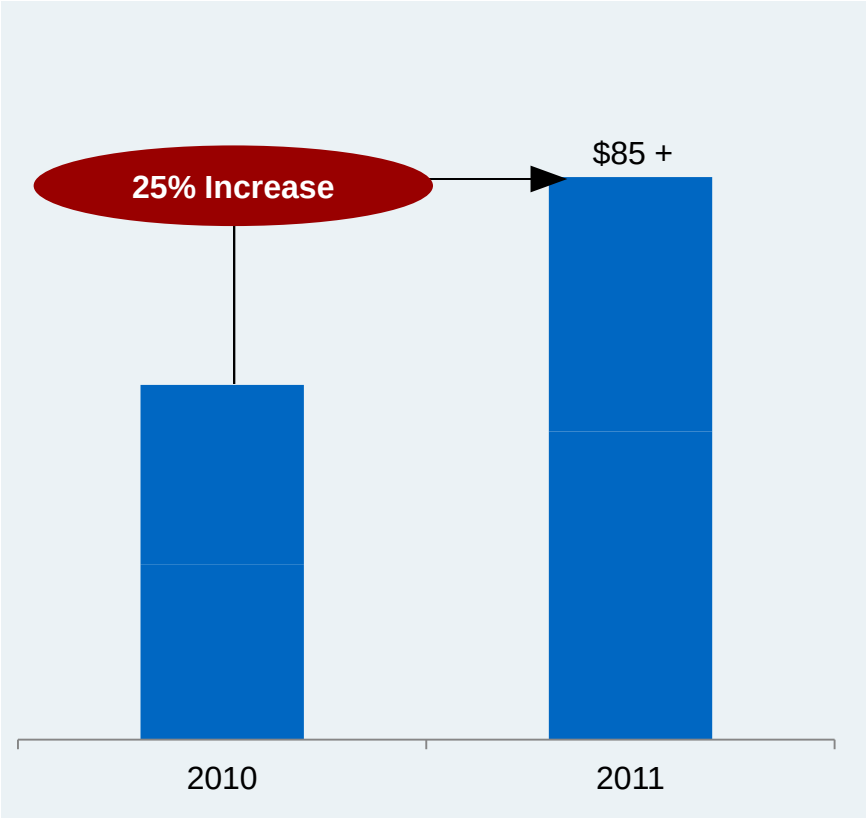
Unique visitors[1] to chase.com (mm)



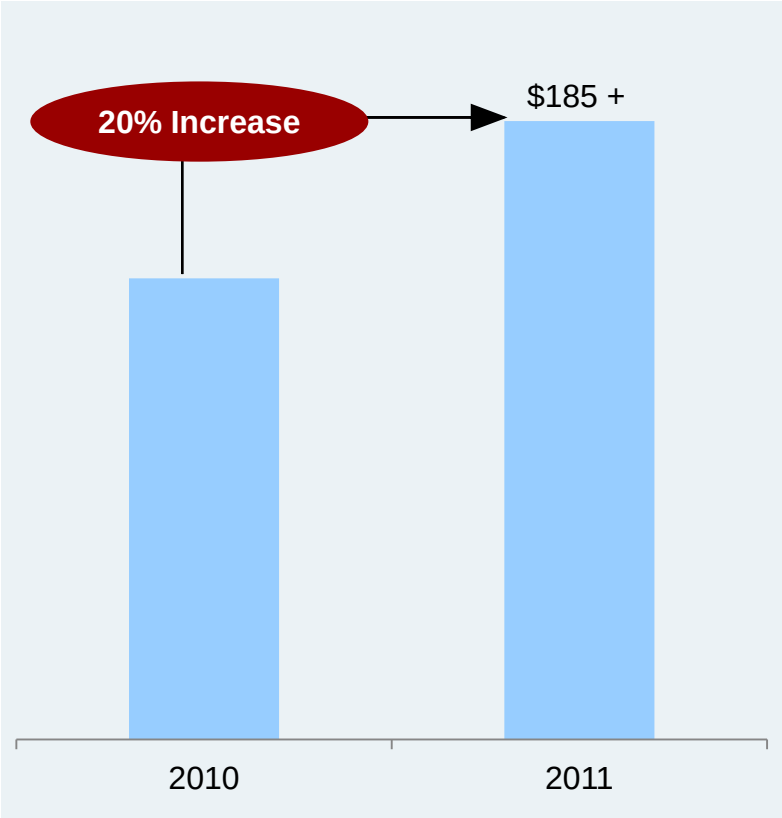
Source: January 2012 compete.com rankings
[1] Based on actual distinct internet users

We are already among the largest e-commerce players in the U.S.

Chase e-commerce[1] total debit and credit sales volume ($B)



Paymentech e-commerce[1] gross dollar volume ($B)

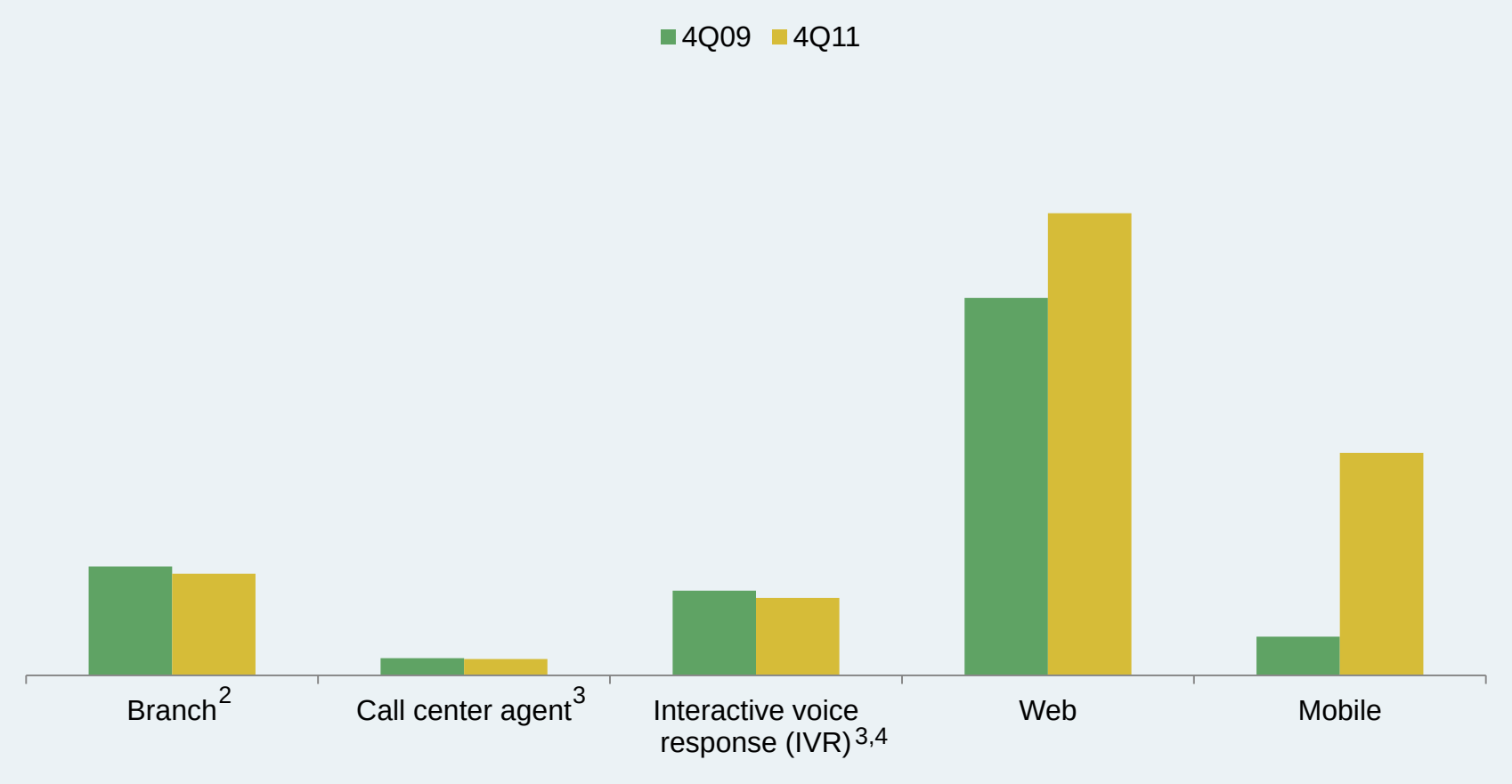


Source: internal Chase data

[1] Based on network reported transaction code

Digital channels are the most frequently utilized method of interaction for our customers

Average quarterly service interactions per core Retail consumer household by channel type[1]



Source: internal Chase data

[1] Quarterly figures based on all core Retail consumer households (both channel active and channel inactive); "interactions" include branch visits, agent and IVR calls, and online and mobile logins

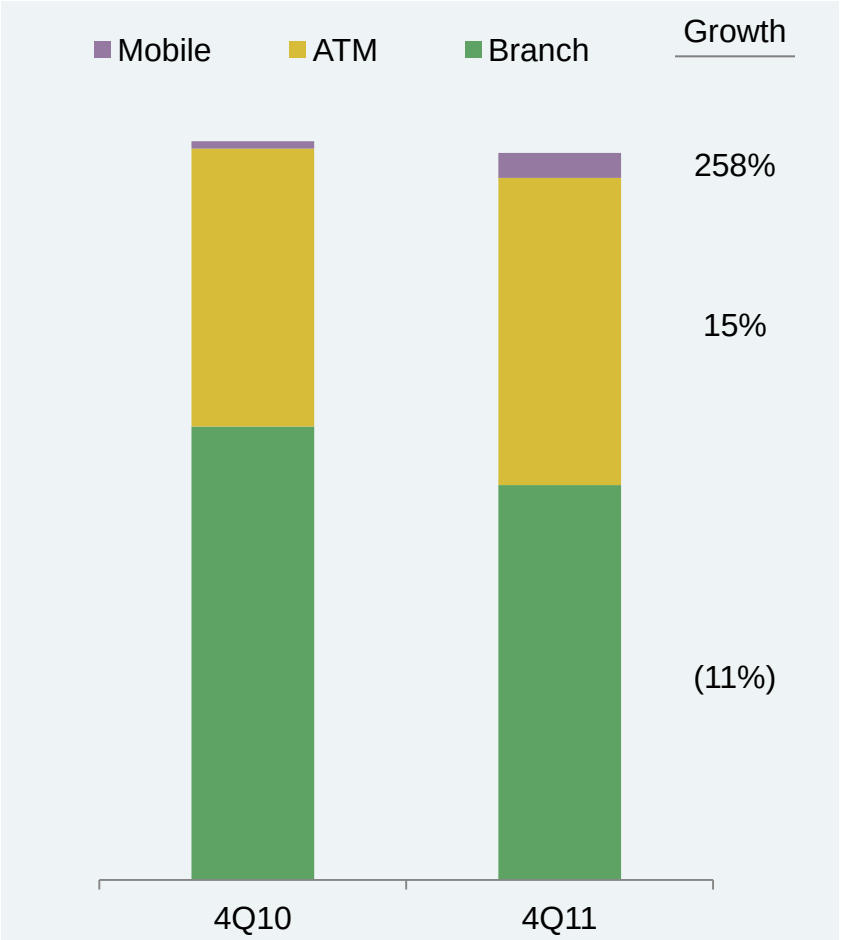
[2] Does not account for multiple branch visits in one day

[3] Excludes dropped calls

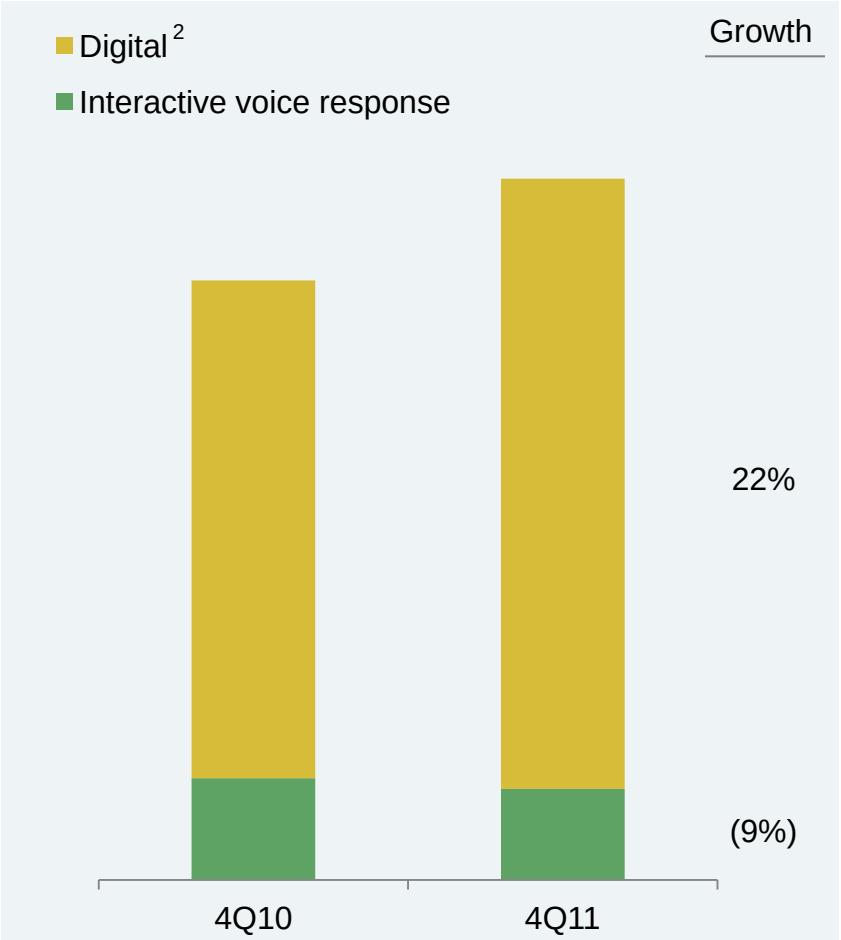
[4] Excludes opt-out calls transferred to a banker

Everyday banking through digital channels has improved efficiency in the retail bank

Avg. quarterly # of deposits per consumer household[1]



Avg. quarterly inquiries per consumer household[1]



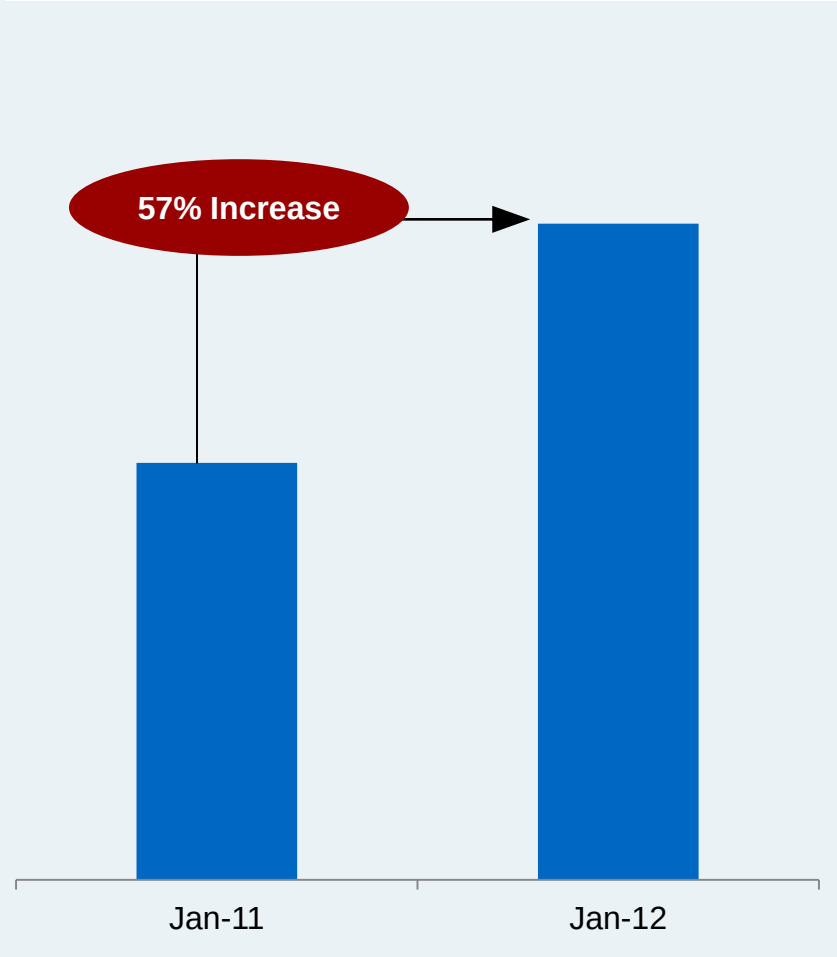
Source: internal Chase data

[1] Based on total Consumer households (both channel active and channel inactive)

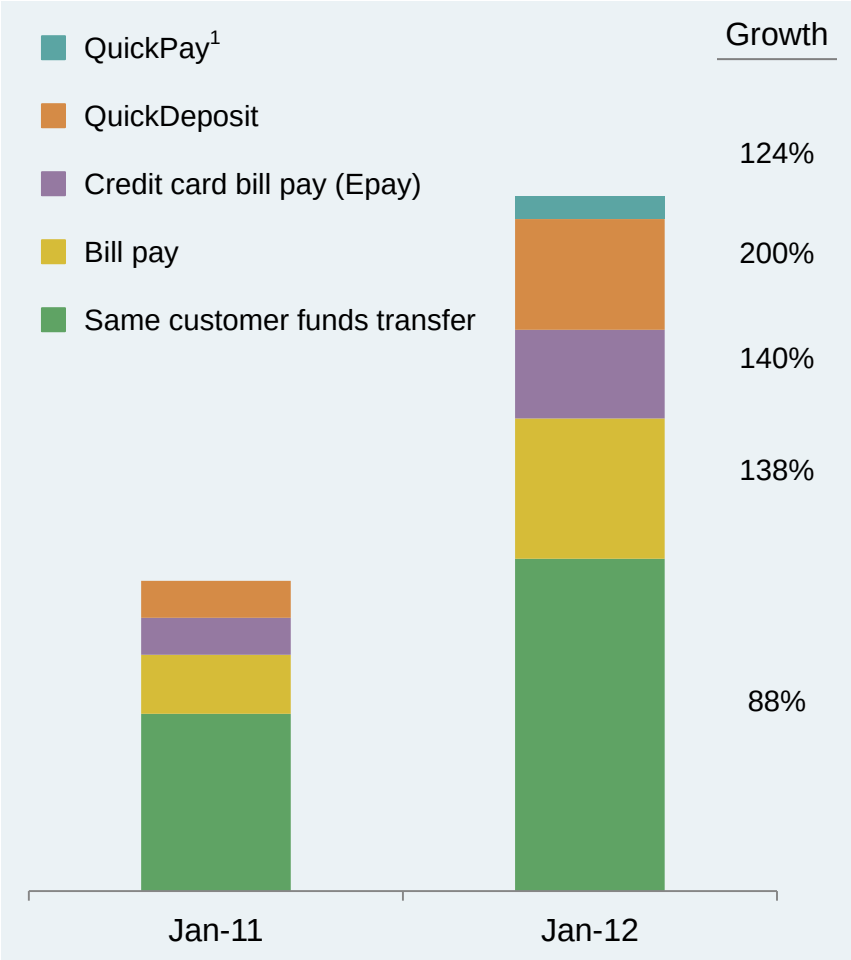
[2] Based on online/mobile visits where customer *only* logged in and did not do other transactions (e.g., same customer funds transfer, QuickDeposit, etc.)

Chase mobile adoption is growing quickly

Active Chase mobile users (mm)



Mobile payment transactions (mm)

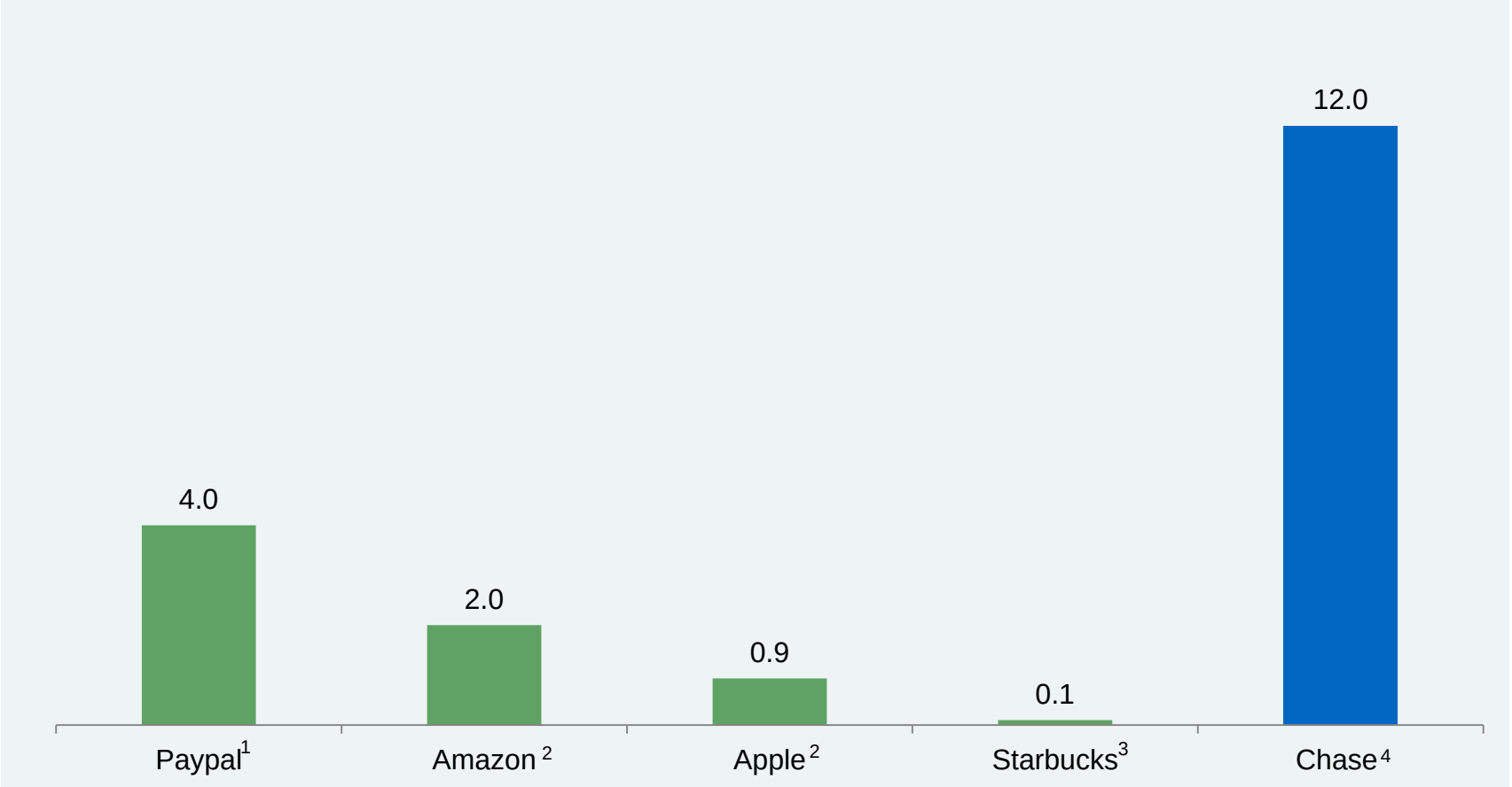


Source: internal Chase data

[1] QuickPay for mobile devices launched in early 2011

Our 2011 mobile payment volume totaled more than 4 top players combined

2011 mobile payment volume ($B)



[1] Based on 2011 eBay SEC 10-K filing; includes U.S. and International
[2] Based on Internet Retailer 2012 m-commerce report
[3] Based on December 2011 Starbucks press release
[4] Includes QuickPay, QuickDeposit, credit card bill pay (Epay), bill pay, and wire from mobile and excludes same customer funds transfers

We are investing in three major opportunity areas in mobile

Mobile opportunity areas

	How it works for customers	What it involves	Current partnerships
Mobile wallets	■ Use mobile device to shop ■ Use existing payments instruments and prepaid ■ Isis wallet available on new phones	■ We support open wallets, multiple technologies ■ For Isis, mobile network operators will distribute Isis wallet through retail outlets ■ Access to secure Near Field Communication element on the phone	ISIS Mobile Network Operator backed open wallet GOPAGO Mobile ordering startup
Mobile merchant solutions	■ Use mobile device to accept debit and credit card payments anytime anywhere in the U.S.	■ Provide a solution for merchants in every size category ■ Offer unique features ■ Market to new and existing clients	Square CHASE Paymentech
Mobile Person to Person and check	■ Use email or mobile device to send payments to others	■ Expand to enable payments between Chase and other banks ■ Further simplify and streamline user experience ■ Explore new technologies	clearXchange Chase QuickPay℠ Chase QuickDeposit℠

We are pursuing investments to address both near and medium term digital opportunities

Chase Digital Strategy: achievements to-date and 2012 roadmap

QuickDeposit
$2.6B in 2011



Chase QuickPay℠
QuickPay mobile
$340mm in less than a year

Near Field Communication wallet partnership

Mobile POS app and smart phone card acceptance



Ultimate Rewards "Pay with Points"

Chase QuickPay℠
Person to Person payments with other banks

To-date achievements

2012 - 2013

Chase Community Giving
3.4mm Facebook fans

Top 5% of all mobile financial applications

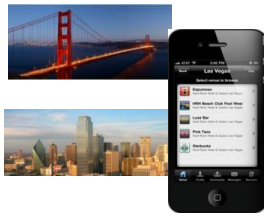
Amazon cobrand "Pay with Points" tripled redemptions

m-commerce platform partnership

Chase terminal with Near Field Communication capabilities



Storefront and wallet pilot



Chase "My Offers"

Pilot launch in 2 cities



Key themes

- Performance was consistent with metrics we described this time last year
- We expect expense to be flat in 2012, as we self-fund innovation
- Our tried and true investments are yielding attractive returns and driving growth in the business
- We are deeply engaged in digital channels and we are seeing rapid adoption of our capabilities
- Digital channels are an important accelerant of our business model – Engagement, efficiency, and customer acquisition
- Market share gains continue to accelerate
- Loans outstanding have stabilized
- Credit losses continue to perform well

COMMERCIAL BANKING

Doug Petno, Chief Executive Officer Commercial Banking

February 28, 2012

JPMorgan Chase & Co.

Opening thoughts

- **Introduction**
- **Results are strong, but we are seeking continuous improvement and investing in business**
  - Record 2011 performance – Revenue, net income, deposits, and investment banking
  - Continued to invest in franchise – Hired bankers, grew loans, and added clients
- **Market environment, while challenging, favors the Chase franchise**
- **Not all commercial banks are created equal; we have a very strong hand**
  - Clients – Carefully selected
  - Platform – Local knowledge and delivery, global reach
  - Products – Best in class, competitive advantage
  - Scale – Flight-to-quality by both clients and talent
  - People – Seasoned and focused
  - Opportunity – Tremendous opportunity in high potential markets

Our business model is proven and we remain focused on execution excellence

Agenda

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Business performance	**2**
Growth opportunities	14
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2011: a record year – We continue to focus on executing our strategy

Business performance

Record ✓ Target met

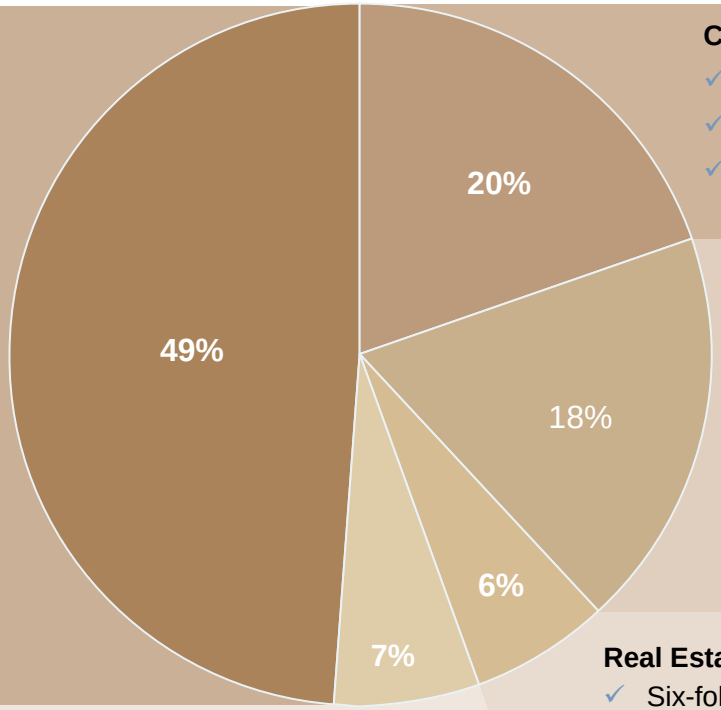
$B (except ratios, products and headcount)		2010	2011	YoY
Expand and deepen client relationships	Total loan balances[1]	$98.9	$112.0	13%
	Total liability balances[2]	138.9	174.7	26
	Gross IB revenues	1.3	1.4	6
	Average number of products per client	8.1	8.4	NM
	Number of international clients (US parent)	2,145	2,505	17
Invest in the franchise	Top-50 MSAs covered	37	40	NM
	Bankers[3]	955	1,015	6%
	Total headcount	4,881	5,520	13
	WaMu expansion loan balances[1]	$1.1	$2.9	155
	WaMu expansion liability balances[2]	0.4	1.7	280
Maintain risk and expense discipline	NCO ratio	0.94%	0.18%	(76) bps
	NPL ratio	2.02	0.94	(108)
	LLRs/NPLs	130	251	NM
	Overhead ratio	36	35 ✓	(92) bps
	Total non-interest expense	$2.2	$2.3	4%
Deliver profitable growth	Revenue	$6.0	$6.4	6%
	Pre-provision pretax income	3.8	4.1	8
	Net income	2.1	2.4	14
	ROE	**26.0%**	**29.6%** ✓	**354 bps**

[1] Loan balances are end-of-period
[2] Liability balances are average
[3] Reflects total number of revenue producing employees

Diversified business model – Strength across all business segments in 2011

Business performance

2011 revenue contribution by client segment – Total revenue of $6.4B



Middle Market Banking

- ✓ Seven consecutive quarters of loan growth
- ✓ 1,200+ new clients added
- ✓ Geographic expansion on track and profitable in key markets
- ✓ Enhanced industry specialized coverage

Corporate Client Banking

- ✓ 9% operating margin growth
- ✓ 43% increase in loans
- ✓ Over 110 uptiers and new bookrunner roles on syndicated lending transactions

Commercial Term Lending

- ✓ #1 multifamily lender[1]
- ✓ Four-fold increase in originations
- ✓ Continued improvement in overall credit quality
- ✓ Citi portfolio successfully integrated and exceeding expectations

Real Estate Banking

- ✓ Six-fold increase in originations
- ✓ Strong pipeline for 2012
- ✓ 56% improvement in NPLs

Other

- ✓ Community Development Banking
- ✓ Chase Capital Corporation
- ✓ Chase Business Credit[2]
- ✓ Chase Equipment Finance[2]

Select highlights

- ✓ Record ABL originations; zero net charge-offs
- ✓ 26% growth in equipment finance portfolio
- ✓ 41% increase in international revenue
- ✓ Record gross IB revenue of $1.4B
  - ✓ 57% YoY growth in M&A fees
  - ✓ Rates, FX and Commodities revenue increased by 16% YoY

[1] Source: FDIC industry data as of 9/30/11

[2] Full business results of Chase Business Credit and Chase Equipment Finance are included in client segment results

Our local delivery model fully leverages the firm's global platform and financial solutions

Business performance

CHASE Commercial Banking

~23,000 clients	~36,000 prospects	~36,000 real estate clients, owners & investors
Middle Market Banking: ~21,000 Corporate Client Banking: ~1,700		Clients: ~1,400 Owners & investors: ~35,000

Bankers, underwriters and service teams in 125 locations across 28 states, D.C. and 13 major international cities[1]

Investment Bank

- Joint coverage of nearly 1,800 CB clients
- $1.4B gross revenue in 2011, including $415mm in Rates, FX and Commodities
- CB clients accounted for 25% of North America IB fees in 2011[2]

Global Corporate Bank

- Joint coverage of foreign multinational clients
- Presence in 40+ countries
- CB leveraging GCB footprint and resources

Treasury & Securities Services

- 75% of CB clients use Treasury Services products
- Leveraging cash management and trade finance platform in CB international expansion
- $2.3B in revenue in 2011

Asset Management

- Referral source for Private Bank and Private Wealth Management
- CB clients leveraging Investment Management services
- Opportunity to bring in AUM from CB client M&A/IPO transactions

Consumer & Business Banking

- Over 16mm branch transactions annually by CB clients
- WaMu branch footprint is foundation for Middle Market expansion
- Referral source for Chase Private Client
- Referrals from Business Banking to CB

Card Services & Auto

- Nearly $170mm in Global Commercial Card revenue in 2011
- CB clients accounting for 66% of total GCC clients, driving nearly $15B in Card spend in 2011
- Opportunity to further leverage Card as wedge product in growth regions

Corporate/ Private Equity

- 200+ affordable housing and community facilities transactions led by Community Development Banking
- Key referral source for private equity investments by One Equity Partners

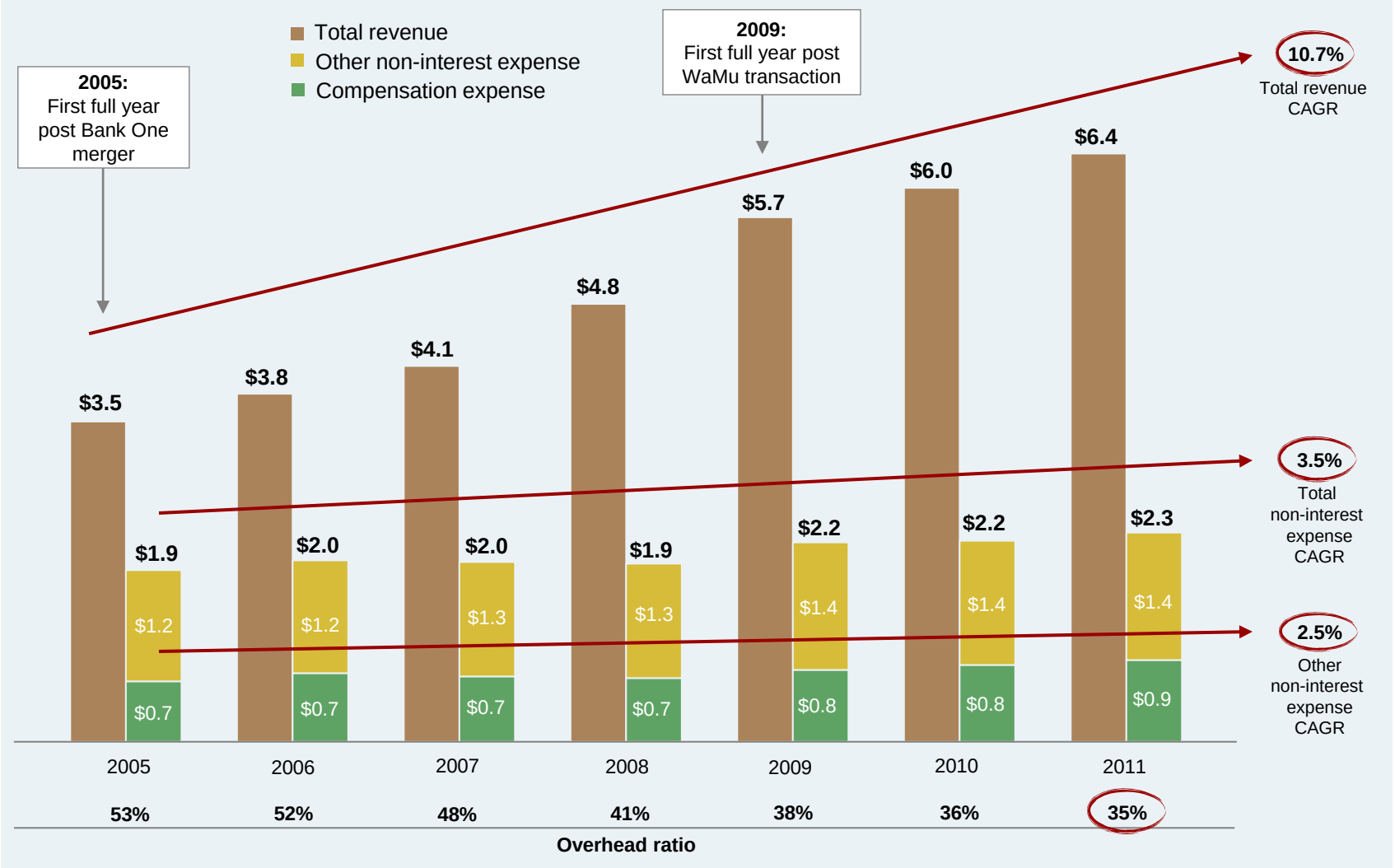
[1] Includes offices in Canada dedicated to Chase Business Credit and Corporate Client Banking only

[2] Calculated based on gross domestic IB revenue for SLF, M&A, Equity Underwriting, Bond Underwriting

Maintaining expense discipline while steadily investing in business

Business performance

Total revenue and non-interest expense ($B)

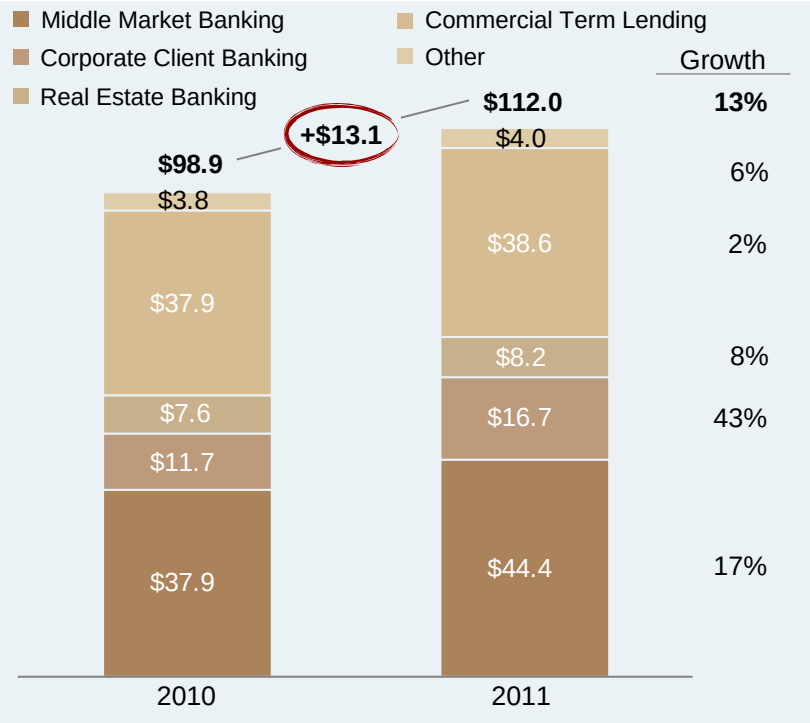


Note: Numbers may not sum due to rounding

Steady growth in revenue and profitability driven by increase in loans and deposits

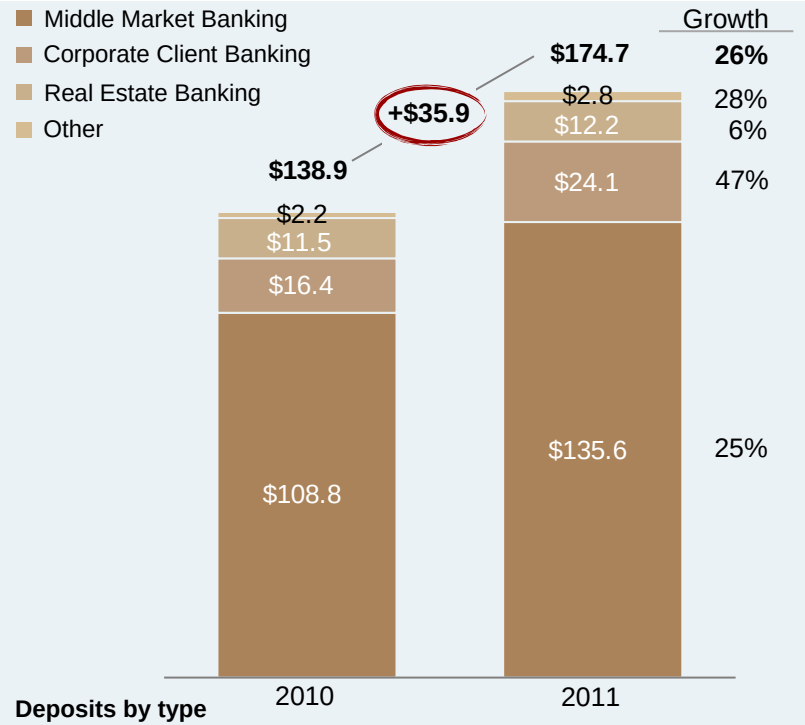
Business performance

Loan balances (EOP, $B)



Utilization	30.3%	31.4%

Liability balances (average, $B)



Deposits by type	2010	2011
DDA	39%	43%
Savings	34%	32%
Sweeps/other	27%	25%
Total	**100%**	**100%**

- Six consecutive quarters of loan growth
- Maintaining underwriting standards
- Spread on new loans consistent with spread on overall loan portfolio

- Clients continue to generate cash with few alternative investment options and maintain more cash liquidity
- Spreads under continued pressure from low rate environment

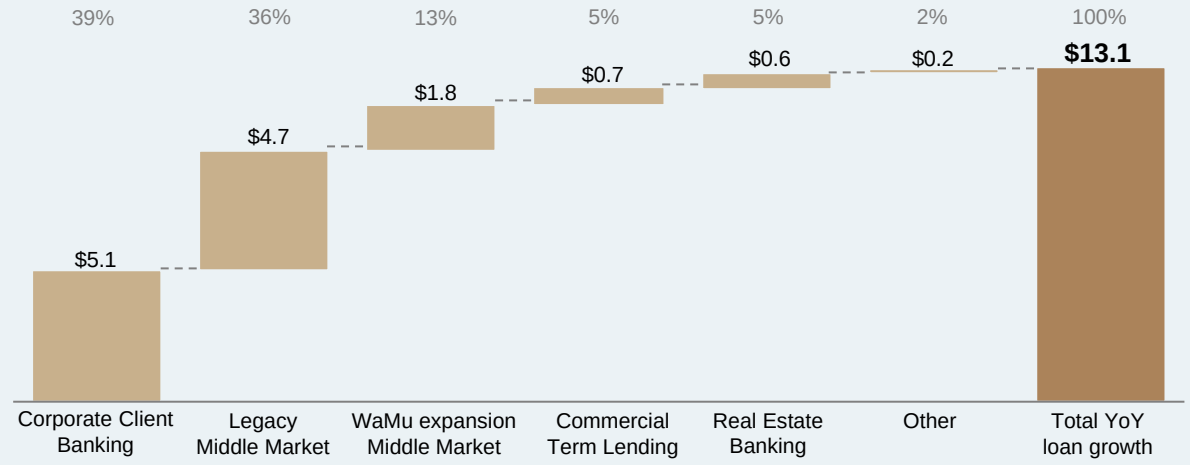
Note: Numbers may not sum due to rounding

De-mystifying loan growth – Increase driven by multiple sources

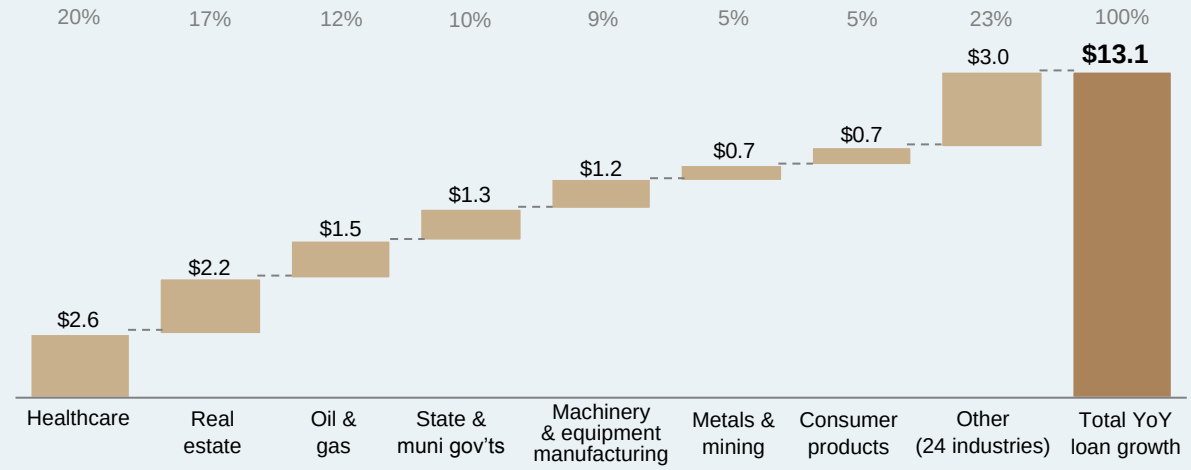
Business performance

2011 Commercial Banking YoY loan growth ($B)

By client segment



By industry



Note: Numbers may not sum due to rounding

Highlights

- Loan growth drivers
  - Taking share among larger corporate clients
  - New client acquisition across WaMu footprint
  - Increased activity across select industries (energy, utilities, machinery and equipment manufacturing)
  - Shift by select clients to direct bank loans in place of issuing bonds
  - Differentiating capabilities (i.e. multicurrency revolvers)
  - Minimal increase in utilization
  - Lease portfolio grew by more than $1B
- Loan demand drivers
  - Capex (equipment, infrastructure)
  - M&A transactions, fund distributions (dividend recap)
  - Opportunistically acquire real estate/office space

C&I – Business optimism is up but caution remains; strong competition for good clients

Business performance

State of client base

- With certain regional and industry exceptions, clients are in good shape
  - Profitable, liquid, and less leveraged
  - Accessed long-term markets
  - Well-positioned to withstand potential slide in recovery
- Client confidence and optimism expected to improve gradually as macro-risks subside

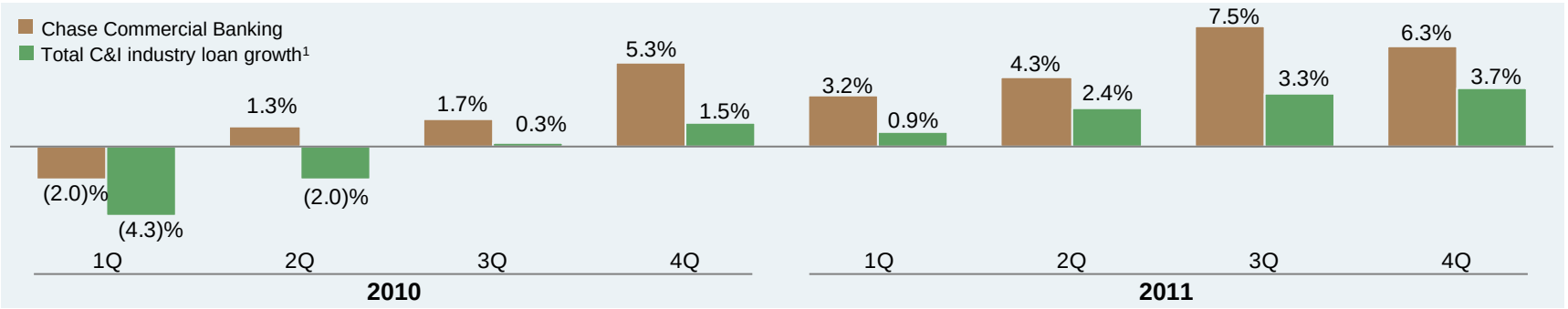
Outlook

- Loan demand drivers in 2012 will be similar to 2011
- Expect utilization to stay flat absent material economic uptick

Competitive landscape

- Weakened or distracted competitors in many markets
- Certain European banks retrenching
- Intense competition for high-quality clients; larger competitors aggressively defending key clients
- Customers seeking stability and one-stop shopping
- Likely to see more large portfolios come to market as banks recapitalize

QoQ C&I loan growth



[1] Source: FRB H.8 Assets and Liabilities of Commercial Banks in the United States for February 10, 2012 (not seasonally adjusted)

CRE – Multifamily in robust recovery while other asset classes have stabilized

Business performance

State of client base

- Real estate fundamentals continue to improve and net operating income is rising across many markets and property types
- Vacancy rates declining but broader economic uncertainty weighed on Office, Retail and Industrial properties in 2011
- Core markets such as New York, Washington D.C. and San Francisco are showing stronger signs of recovery
- Secondary and tertiary markets will likely not recover until we see material improvement in unemployment

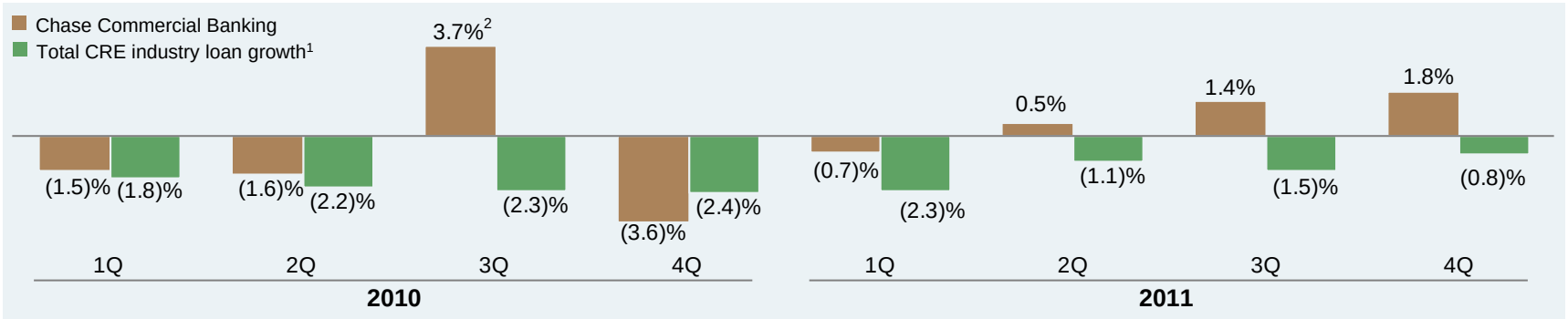
Outlook

- Increasing rents and declining vacancies expected to continue driven by
  - Increasing demand
  - Lack of supply
  - Continued weakness in the single-family housing market
- Lack of momentum in CMBS market reinforces need for alternative capital sources

Competitive landscape

- Spreads holding steady as number of active CRE lenders remain limited
- Underwriting standards holding steady
  - Select lenders willing to take large hold positions

QoQ CRE loan growth



[1] Source: FRB H.8 Assets and Liabilities of Commercial Banks in the United States for February 10, 2012 (not seasonally adjusted)
[2] First fiscal quarter end after acquisition of Citi's $3.5B Commercial Term Lending portfolio

Our granular, diversified portfolio reflects our focus on client selection and risk discipline

Business performance

Commercial & Industrial

~23,000 clients

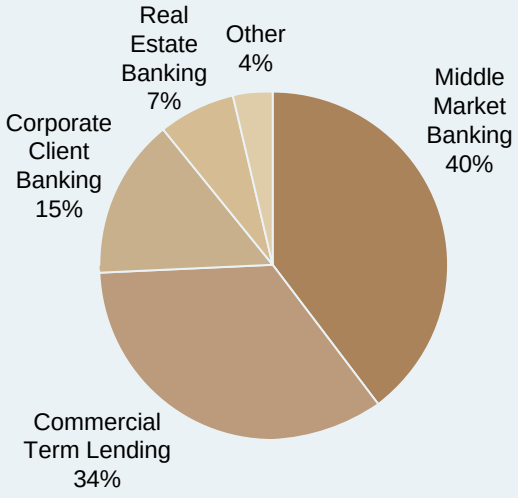
- Average C&I loan size of $2.3mm
- Average Middle Market relationship tenor of 15+ years
- 72% of C&I portfolio is secured
- No industry accounts for more than 6% of total loan portfolio
- Granular, high-quality state and municipal loan portfolio
  - 94% of outstanding loans to clients rated equivalent of investment grade

Commercial Real Estate

~36,000 real estate clients, owners & investors

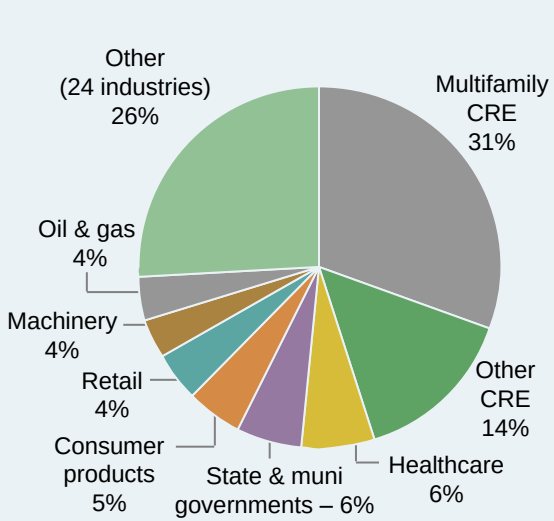
- 51% of Real Estate Banking portfolio was originated in 2009 or later
  - Limited construction risk
  - Focused on top-tier real estate companies
- Commercial Term Lending portfolio has stabilized properties and no construction risk
  - Average loan size of $1.1mm
- Multifamily accounts for 66% of total CRE portfolio

Loan portfolio by business



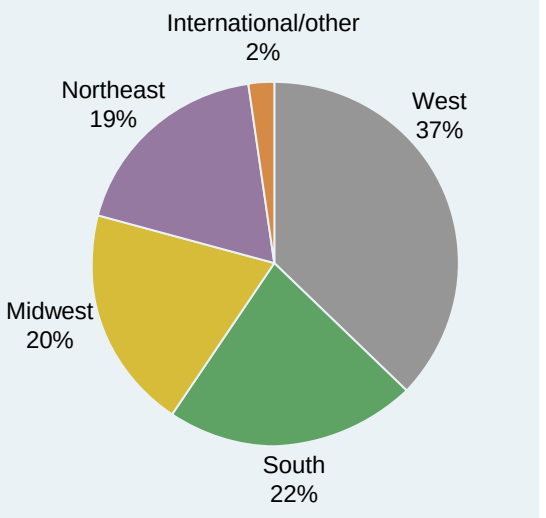
Total loans: $112B

Loan portfolio by industry



Total loans: $112B

Loan portfolio by geography[1]



Total loans: $112B

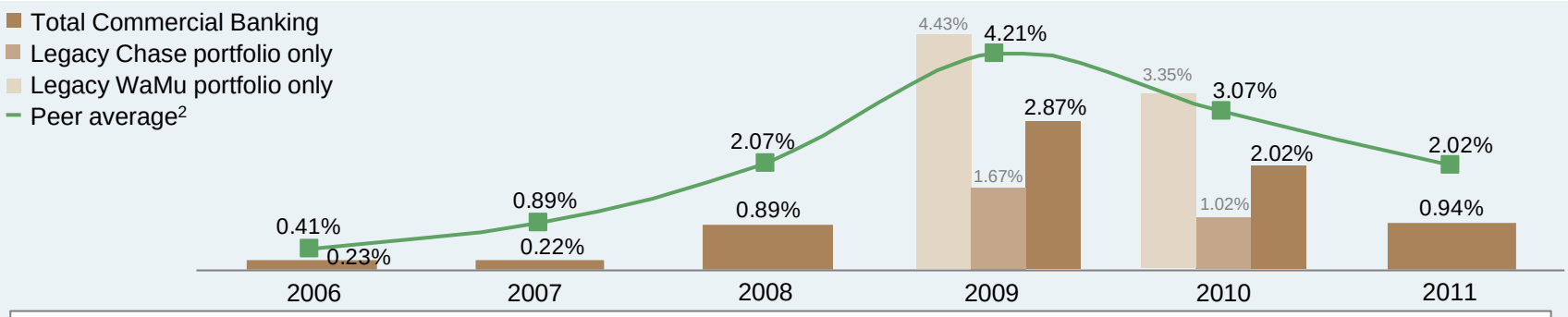
Note: Numbers may not sum due to rounding

[1] Based on client domicile

Continued strong credit performance

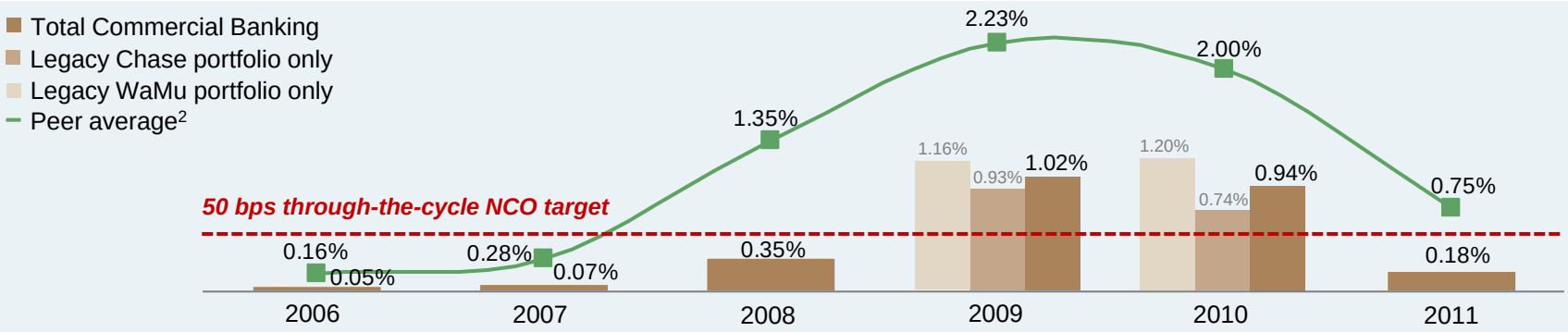
Business performance

Non-performing loans[1]



	2006	2007	2008	2009	2010	2011
Total CB NPLs ($B)	$0.1	$0.1	$1.0	$2.8	$2.0	$1.1
Total CB LLR/NPLs (%)	1,255%	1,161%	275%	109%	130%	251%
C&I NPLs (%)	0.26	0.16	0.6	1.01	0.75	0.36
CRE NPLs (%)[3]	0.03	0.70	2.75	4.67	3.37	1.67

Net charge-offs



	2006	2007	2008	2009	2010	2011
Total CB NCOs ($B)	$0.0	$0.0	$0.3	$1.1	$0.9	$0.2
C&I NCOs (%)	0.05%	0.05%	0.17%	0.71%	0.61%	0.09%
CRE NCOs (%)[3]	0.06	0.23	1.62	1.36	1.26	0.28

[1] 2006 Commercial Banking NPL ratios are based on average loans; 2007-2011 Commercial Banking NPL ratios are based on end-of-period loans
[2] Peer averages include CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC
[3] 2006-2007 CRE NPLs and NCOs reflect Real Estate Banking only; 2008-2011 CRE NPLs and NCOs also include Community Development Banking; 2009-2011 NPLs and NCOs also include Commercial Term Lending

We are well-positioned relative to peers against major market drivers and key trends

Business performance

Regulatory environment	**Increased capital requirements**	■ Current business model generates high returns (20+% ROE target; ~30% in 2011) ■ Multiple revenue sources to supplement lending returns ■ Loan pricing decisions, and businesses presently modeling and adapting to higher capital requirements ■ Risk appetite will not change
Macro uncertainty	**Eurozone concerns**	■ Fortress balance sheet gives us capacity to bid for select asset opportunities from deleveraging by certain competitors ■ Strong acquisition track record; successfully integrated $3.5B Citi multifamily lending portfolio into CTL
	Threat of double-dip	■ Client selection – Client base is much better prepared ■ Loan portfolio in excellent shape across all businesses ■ Substantial loan loss reserves ■ Strong base annuity business creates earnings resiliency
	Sustained low rates	■ Record results in 2011 despite low rates ■ Flight to quality ■ Multiple NIR opportunities through broad product capability
	Loan demand	■ Overall CRE is growing; key peers face more significant run-off ■ Sizable greenfield C&I loan growth opportunity in expansion markets ■ Focus on expanding share among larger corporate names
Market-driven upside	**Eventual economic recovery**	■ Record deposits; potential earnings benefit from normalized yield curve is substantial ■ Utilization levels will eventually improve ■ Recovery will present IB opportunities across broad and expanded client footprint ■ Investments and focus through the downturn will pay off

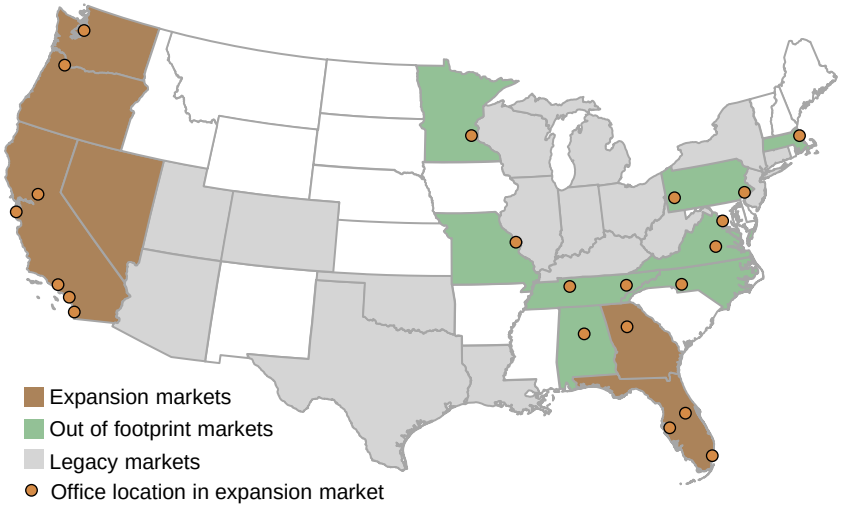
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Middle Market expansion

Growth opportunities

Expanding into new markets



Incremental prospects: ~15,000
or equivalent to ~70% of total existing Middle Market clients

WaMu expansion markets

MSA	Rank by size
Los Angeles	2nd
Miami	8th
Atlanta	9th
San Francisco	13th
Seattle	15th
San Diego	17th
Tampa	19th
Portland	23th
Orlando	26th

Out of footprint markets

MSA	Rank by size
Philadelphia	5th
Washington D.C.	7th
Boston	10th
Minneapolis	16th
St. Louis	18th
Pittsburgh	22nd
Charlotte	33rd
Nashville	38th
Richmond	43rd
Birmingham	49th

[1] Based on average per month for 4Q11

Opportunity

- Expand into new high-potential markets
- Create scale in 19 new top-50 MSAs, including 6 of top-10 MSAs
- Continue to add over 200 new clients a year
- Long-term net income opportunity of $400-500mm

Strategy

- Export our culture and risk discipline
- Hire the right people with local expertise
- Prudent client selection
- Aggressive patience
- Track individual market performance

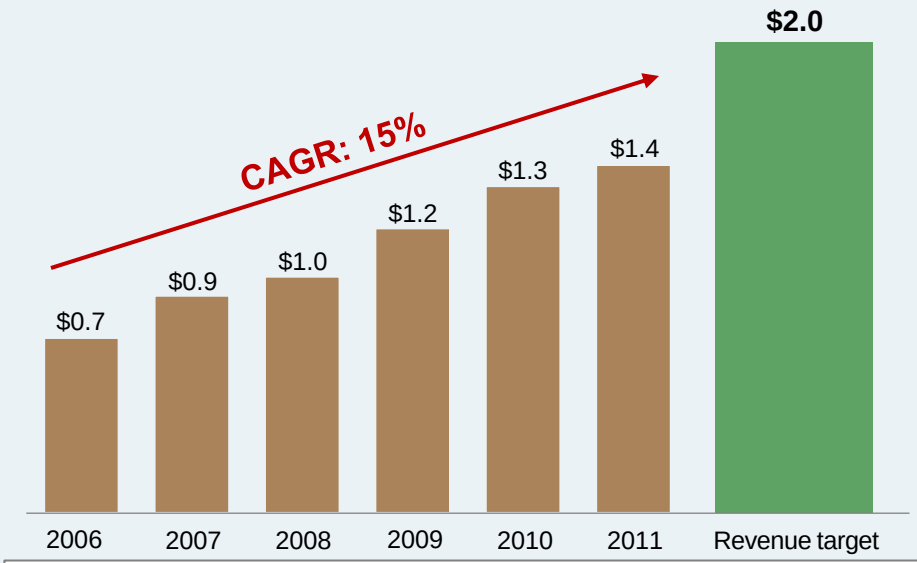
Progress

- WaMu expansion markets
  - 300+ dedicated resources firm-wide
  - 850+ prospect calls per month[1]
  - 200+ new clients in 2011
  - As of year-end 2011
    - $2.9B in loan balances (up 155% YoY)
    - $1.7B in liability balances (up 280% YoY)
  - Breakeven in 2Q11; expecting full pay-back of start-up investment in 2012
- Out-of-footprint markets
  - 40+ new bankers; actively building out coverage teams

Improve delivery of the full investment banking product capability to CB clients

Growth opportunities

CB gross IB revenue grew 6% YoY in 2011 despite market headwinds ($B)



Syndicated and Leveraged Finance
Selectively expand Lead roles in upcoming maturities and new financings

M&A and Corporate Finance Advisory
Dedicate resources to leverage full M&A and Corporate Finance Coverage platforms

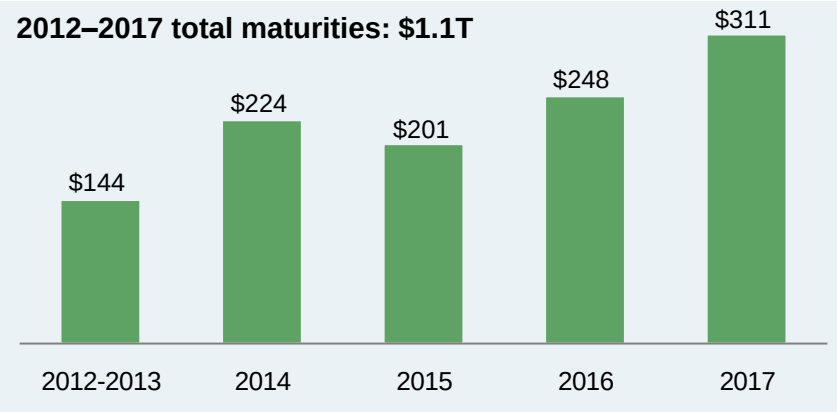
Rates & FX
Increased Lead roles in credit facilities and international expansion will drive additional revenue opportunities

Commodities
Deliver commodities risk management solutions to the broader CB client base

2006	2007	2008	2009	2010	2011	
16%	17%	16%	20%	25%	25%	**CB IB fees as percentage of North America IB fees[1]**

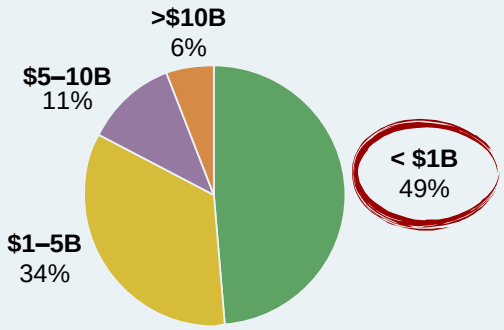
[1] Calculated based on gross domestic IB revenue for SLF, M&A, Equity Underwriting, Bond Underwriting

Continued focus on upcoming debt maturities will drive SLF revenue (US leveraged debt maturities – $B)



Source: J.P. Morgan; S&P LCD

50% of NA M&A deal fees are from transactions of <$1B in size



Total 2011 North America M&A fees: $10.8B

Source: Dealogic

Delivering international banking solutions locally and differentiating from the competition

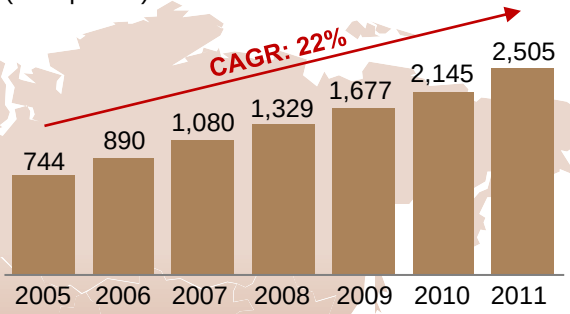
Growth opportunities

International

- ✓ Global capabilities delivered locally – Wedge product with Middle Market
- ✓ Well-positioned with global platform and infrastructure
- ✓ Leveraging GCB's scale and global expansion
- ✓ 41% growth in international revenue in 2011
- ✓ 5-year overseas revenue target of $400-500mm

International clients

(U.S. parent)



Americas[1]

- Regional office locations:
  - US (New York, Chicago, Dallas, Irvine, Atlanta, Grand Rapids)
  - Toronto
  - Mexico City
  - Sao Paulo

EMEA

- Regional office locations:
  - London
  - Frankfurt

Asia Pacific

- Regional office locations:
  - Mumbai
  - Hong Kong
  - Shanghai
  - Tokyo
  - Singapore
  - Sydney

[1] Excludes offices in Canada dedicated to Chase Business Credit and Corporate Client Banking only

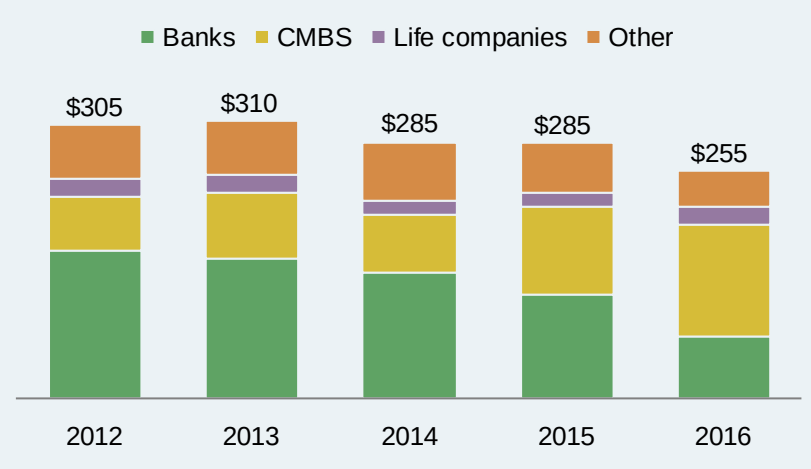
Real Estate Banking is well positioned to take advantage of the CRE recovery

Growth opportunities

Real Estate Banking

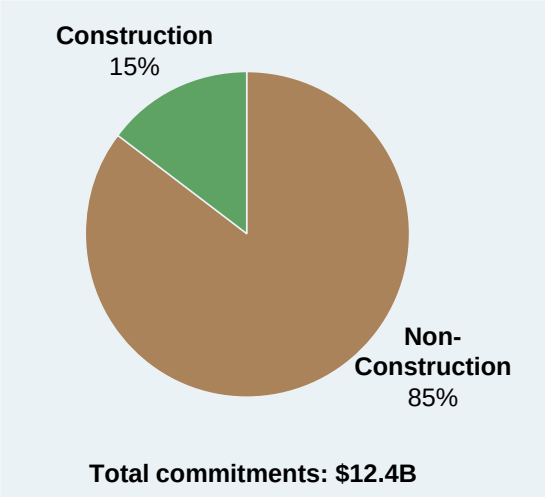
- Grow portfolio opportunistically
- Portfolio in excellent shape; appetite for high-quality opportunities
- Favorable competitive landscape
- Undistracted team
- Continued focus on risk discipline
- Focus on top-tier real estate companies with broad product needs

Upcoming CRE debt maturities ($B)

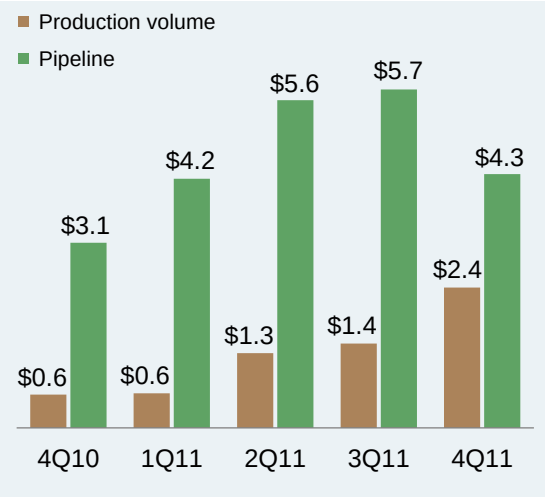


Source: Foresight Analytics, July 2010

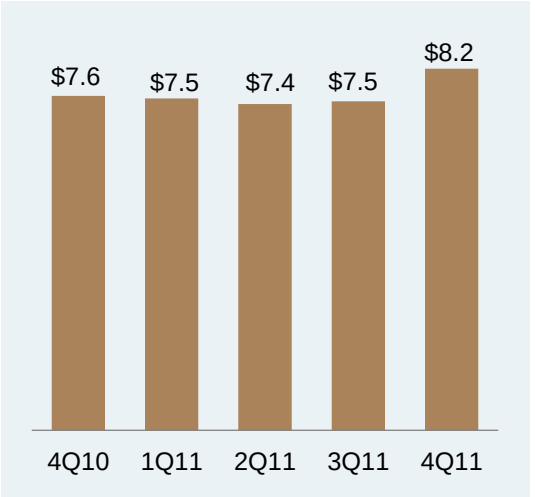
REB portfolio breakout[1]



REB production and pipeline ($B)



REB loan balances ($B)



[1] Based on commitments as of 12/31/11

Commercial Term Lending is capitalizing on strong multifamily market fundamentals

Growth opportunities

Commercial Term Lending

- Favorable market environment
  - Historical market participants no longer active
  - Attractive market pricing and terms
  - Strong market fundamentals
- Opportunistically grow multifamily portfolio
  - Fully underwritten, "cash flow" lending
  - Differentiate through best-in-class efficiency, local presence, competitive pricing and certainty of execution
- Aggressively manage risk and credit costs

Multi-family market drivers

Increasing demand

- "Echo Boomers" entering prime age for renting
- Decrease in homeownership increasing rental demand

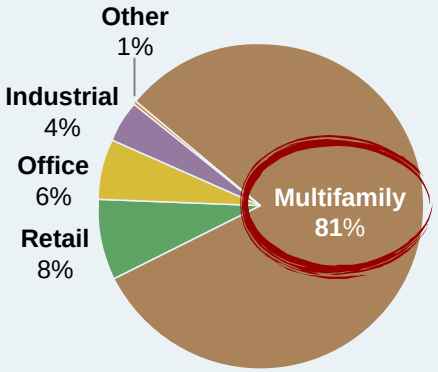
Lack of supply

- Limited new construction in the last several years
- Decreasing vacancy in existing stock

Strong investor demand

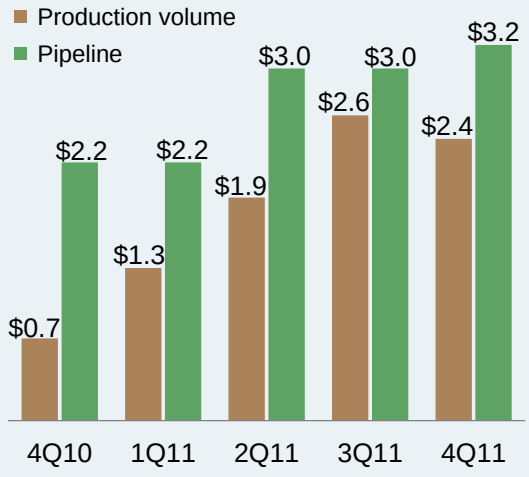
- Strong investor demand for emerging multifamily market
- Premium for newer quality properties versus older assets in non-core locations

CTL portfolio breakout

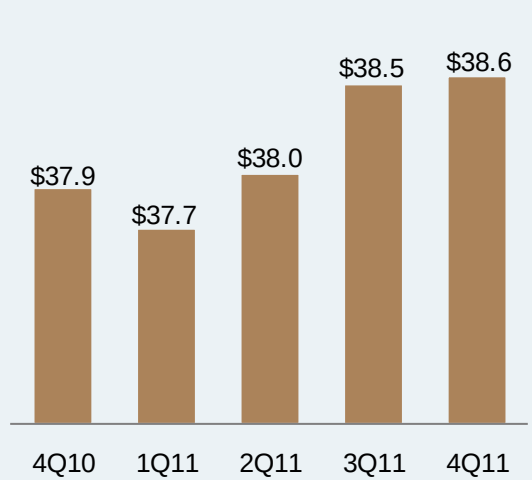


Stabilized properties
No construction risk
Average loan size of $1.1mm

CTL production and pipeline ($B)



CTL loan balances ($B)



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Our financial targets remain the same

Outlook

Growth

✓ Making progress towards long-term goals

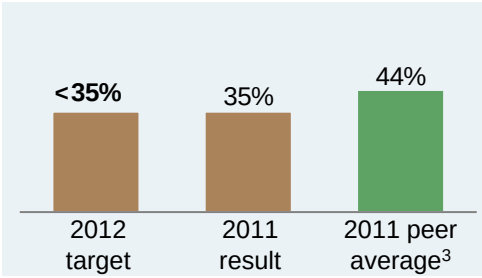
Growth targets ($B)



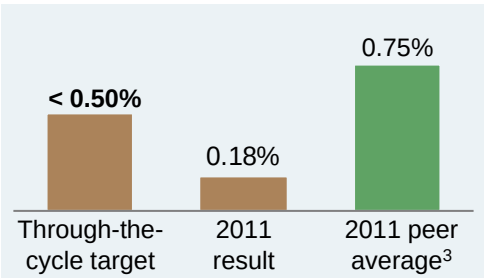
Overhead & credit costs

✓ Maintain risk and expense discipline

Overhead ratio (%)



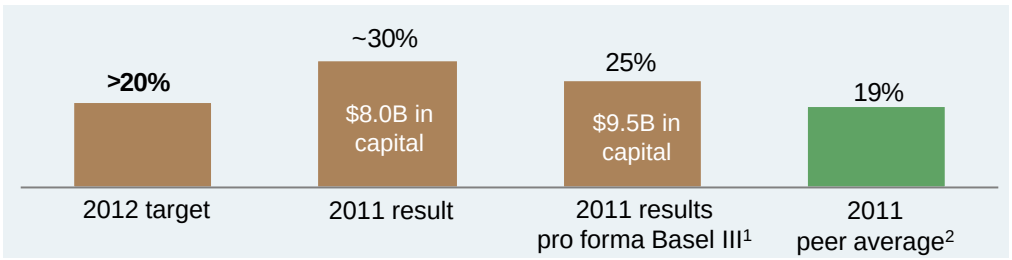
Net charge-offs (%)



Returns

✓ Stand by ROE of >20%, even with more capital

ROE (%)



[1] Illustrative 2011 ROE calculated based on $9.5B of common equity; CB common equity increased from $8.0B to $9.5B on 1/1/2012 to reach 8.5% Basel III Tier 1 common equity target ratio

[2] ROE peer average reflects CB equivalent segments at BAC, KEY, PNC, USB

[3] Peer averages for overhead ratio and NCO ratio include CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC

Our core business principles remain the same

Outlook

Client selection	■ Select strong companies in attractive industries with proven management teams ■ Maintain long-term client relationships; average Middle Market relationship tenor is over 15 years ■ Minimize concentrations in any industry or geography; maintain granularity
Deliver the entire firm	■ Capitalize on JPMorgan Chase's extensive and differentiated product suite to meet client needs ■ Actively refer our customers to other LOBs
Continuous investment in growth	■ Invest in new markets and businesses to expand presence and market share ■ Aggressively cover target markets
Expense management	■ Maintain expense discipline ■ Manage variable expenses in downturns
Manage real estate and cyclical exposures through-the-cycle	■ Only underwrite strong principals ■ Stop when the market is irrational; return when market has rationalized ■ Pre-determined market indicators in place

Industry leading franchise with strong earnings and growth potential

Takeaways

- **Consistent strong financial performance**
  - Strength across all business segments
  - High quality assets
  - Rigorous risk management
  - Expense discipline while steadily investing in the business with long term view
- **Quality of our franchise positions us to grow**
  - Organic growth – Expanding footprint and deepening client relationships by differentiating products, solutions and services
  - Synergies from the platform – Strong internal partnerships, product capabilities
  - Quality and stability of people – Continue to deliver locally with confidence and conviction
- **Well-positioned relative to peers against major market drivers and key trends**
- **Proven business model**

TREASURY & SECURITIES SERVICES

Mike Cavanagh, Chief Executive Officer Treasury & Securities Services

February 28, 2012

JPMorgan Chase & Co.

Treasury & Securities Services is a great business

State of the business

	Treasury Services (TS)	Worldwide Securities Services (WSS)
Deep and stable client relationships	■ ~2,600 significant clients ■ 84% of Fortune 500 companies ■ 650 clients with >$1mm in revenue ■ Top 500 clients are ~80% of revenue	■ ~1,500 significant clients ■ 86% of top 50 global asset managers[3] ■ 400 clients with >$1mm in revenue ■ Administer over 20,000 funds
Strong competitive position	■ #1 global clearer of U.S. dollars[1] ■ #1 (tied) share leader in U.S. Large Corporate Treasury Management Market Penetration providers[2]	■ #2 global custodian by AUC[4] with $16.9T ■ Ranked #1 of the 5 largest providers[5] ■ #2 in number of sponsored ADR shares[6]
Global presence	■ International revenue grew 22% in 2011 ■ Conduct business in 66 countries; expanded capabilities in more than 20 countries ■ Leveraging GCB expansion (75 bankers hired in 32 countries) ■ Corporate clients with >$1mm in international revenue up 19%	■ 62% of 2011 revenue outside North America ■ Conduct business in 100 markets ■ #1 in Luxembourg and #3 in Dublin offshore fund centers[7] ■ Non-North America AUC up 14% in 2011

Capital friendly businesses, with scale benefits and high barriers to entry; steady revenue and earnings; strong long-term secular trends

[1] Federal Reserve, Clearing House for Interbank Payments (CHIPS), and Ernst & Young
[2] Greenwich Associates, 2011
[3] As ranked by Global AUM by *Institutional Investor*
[4] JPM and competitor 4Q11 financial reports
[5] *Global Custodian,* 2011
[6] Various global exchanges, as of November 2011
[7] Lipper's 17th Annual Luxembourg & Ireland Fund Encyclopedias

Performance summary – Stable earnings with upside

State of the business

Key financials

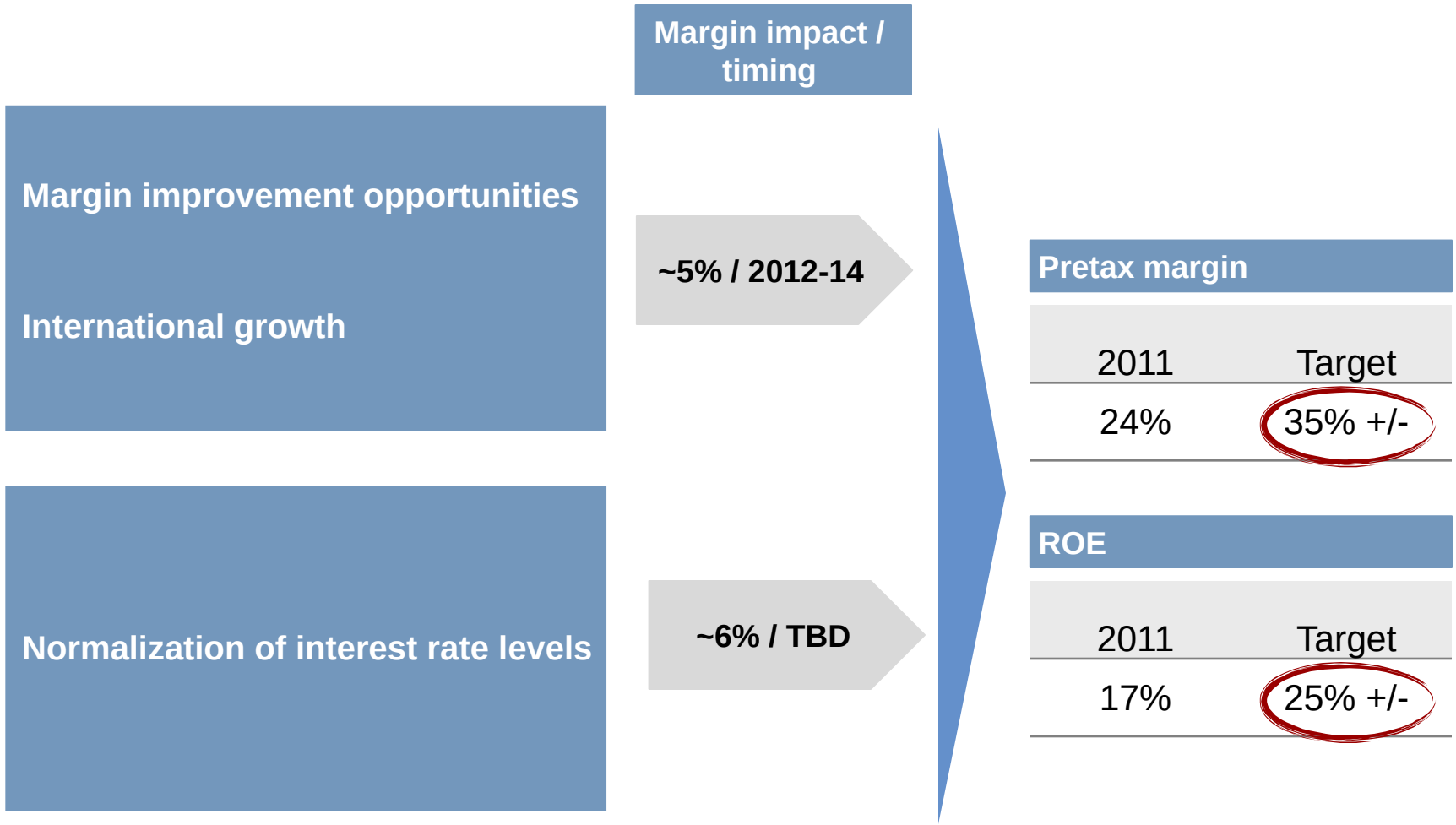
($mm)	2010	2011	2011 YoY Growth
Worldwide Securities Services	$3,683	$3,861	5%
Treasury Services	3,698	3,841	4
Revenue	$7,381	$7,702	4
Expense	5,604	5,863	5
Pre-Provision Pretax	$1,777	$1,839	4%
Credit Costs	(47)	1	NM
Net Income	$1,079	$1,204	12%
Key Statistics			
Pretax Margin	23%	24%	
ROE	17	17	
Avg. Liability Balances ($B)	$248.5	$318.8	28%
Assets under Custody ($T)	$16.1	$16.9	5
International			
Revenue	$3,624	$4,222	17%
Avg. Liability Balances ($B)	$146.4	$180.1	23
AUC ($T)	$6.3	$7.1	14
EOP Trade Finance Loans ($B)	$21.2	$36.7	73

Comments

- Key business drivers trending higher
  - TSS average liability balances up 28%
  - Non-North America AUC up 14%; total AUC at record level
  - Number of funds serviced up 13%
  - Global payment volumes up 4%
  - International clearing volumes up 8%
  - Trade loans (mostly international) up 73%
- Revenue up 7% YoY, adjusted for Card transfer
  - TS revenue up 10% YoY, adjusted for Card transfer
  - International revenue up 17%
    - APAC up ~$260mm, 26% YoY
    - EMEA up ~$270mm, 11% YoY
- Pre-provision pretax up modestly, including
  - Continued investment, including the international build-out
  - Exit costs taken to reshape business

Effective January 1, 2011, the commercial card loan business of approximately $1.2 billion that was previously in TSS was transferred to Card. The prior-year periods were not revised

Reaffirming performance targets for the business



Leveraging firmwide capabilities will help deliver high top-line growth and higher margins

Margin improvement initiatives can add 3-5% to TSS' pretax margin

Treasury & Securities Services

~3,500 GCB significant clients

55% of revenue generated outside North America

~28,000 employees (~55% outside of U.S.)

Clients located in over 170 countries and territories around the world

Investment Bank / Global Corporate Bank

- Strong firmwide relationships: 78% of top clients shared across the IB and TSS
  - Enhanced firmwide strategic planning for largest clients
  - $200B+ of global exposure to GCB clients
  - Over 80% of 2011 TS firmwide revenue growth from GCB covered clients[1]
- Delivering differentiated solutions to clients
  - Prime Custody; Collateral Management; Supply Chain Finance; Commodities Finance
  - Largest USD clearer worldwide
- Value for Scale: leveraging platforms across IB/TSS (collectively $1.6B in expense across common areas)
- $1B+ multi-year investment plan to support expansion outside the U.S.

Commercial Bank

- 75% of CB clients use Treasury Services products
- Leveraging cash management and trade finance platform in CB international expansion
- $2.3B in revenue in 2011

Asset Management

- TSS largest distribution channel for AM money market funds: ~ $90B as of 2011
- Client referrals to WSS

Retail Financial Services

- Leverage common DDA platform
- Consumer Business Banking clients use TS services ($215mm in 2011, up 10% YoY)

[1] Adjusted for Card transfer

Efficiency efforts will allow us to improve our margins while continuing to invest

Margin improvement initiatives can add 3-5% to TSS' pretax margin

	Activities	Key metrics
Redeveloping key platforms	■ Automation and platform renovation ■ Legacy consolidation/decommission ■ Distributed operating model ■ Virtualization/capacity on demand	■ Increased business volumes with modest application production support growth of 5% (CAGR '07 to '11) ■ Custody volume (+8%) ■ NAVs produced (+14%) ■ OTC derivatives (+30%)
Increase technology efficiency	■ Optimize location strategy ■ Less reliance on vendors ■ Agile development methodology	■ Staff located in low cost sites (26% to 40%) ■ 11% improvement in cost per head ■ Improvement in quality of application functionality and time to market
Process re-engineering	■ Streamline fund accounting processes ■ Receivables workflow automation ■ Global payments process/self-servicing	■ 9% improvement in cost per NAV ■ 100% improvement in checks processed per head
Invest in new development	■ International expansion of core capabilities ■ Improved collateral management capability ■ Global asset servicing platform ■ Global trade platform implementation ■ Next generation cash management platform	■ Development as a % of total spend increased from 60% to 73% ■ Total development spend increased 20% (CAGR '07 to '11)

Disciplined management of client profitability and non-core activities

Margin improvement initiatives can add 3-5% to TSS' pretax margin

Managing client profitability

- New client management structure with P&L accountability (regional)
  - Historically product-led structure only
- Greatly enhanced client-level planning for largest TSS clients – Coordinated across the firm
- Redirecting resources, focusing on clients with good returns and growth potential
- Directing investment dollars aligned with client strategy and largest revenue opportunities

Focused on our core business

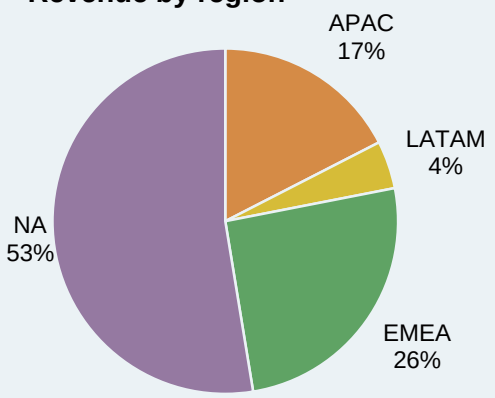
- Exiting sub-scale businesses with no linkage to strategy and/or little growth opportunity
  - Majority of financial impact already recognized
- Reevaluating select markets and client segments to exit those with unattractive risk/return profiles

We already have very successful global franchises in both TS and WSS

International opportunities will help generate revenue growth and attractive margins

47% of TS revenue come outside North America

Revenue by region

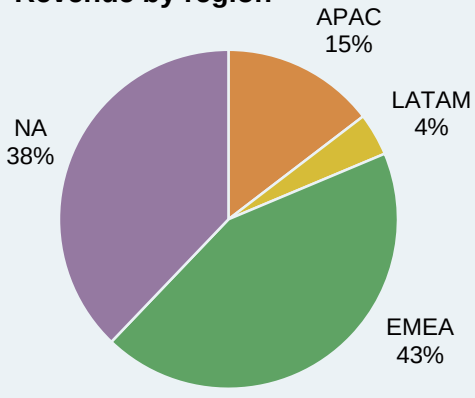


Total = $3.8B

- Over 13,000 employees, with nearly 6,000 people in 90 locations outside the US
- 57% of liability balances outside NA; virtually all (96%) of trade assets are international

WSS is our most global business

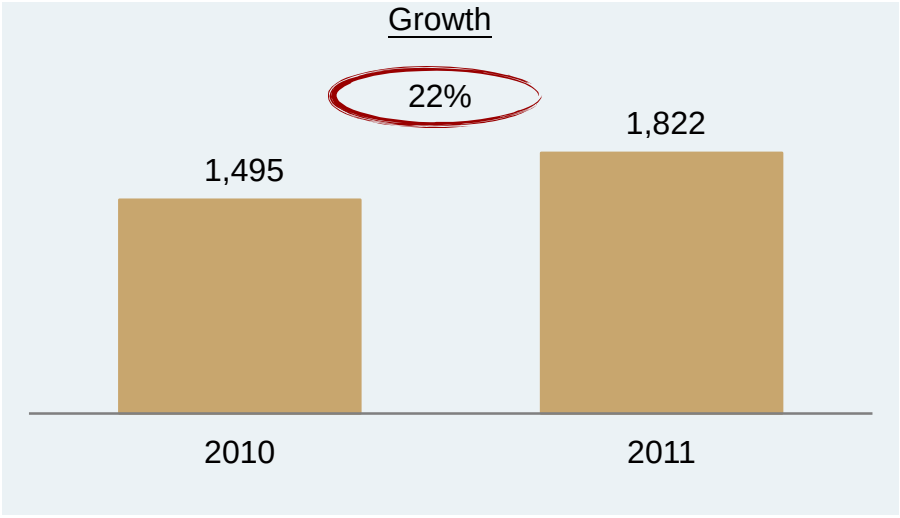
Revenue by region



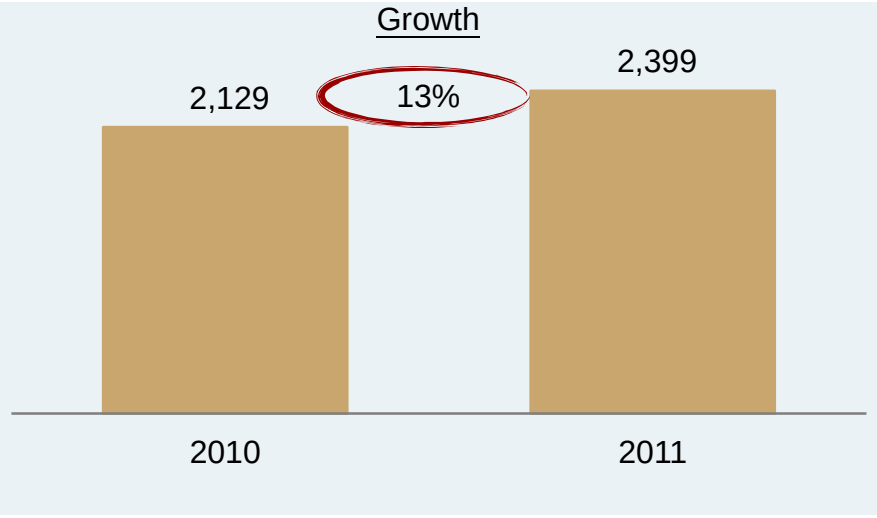
Total = $3.9B

- Over 13,000 employees, with over 9,000 people in 72 locations outside the US
- 42% of AUC from clients domiciled outside NA; 28% of AUC serviced outside NA

TS international revenue 2010-2011 ($mm)



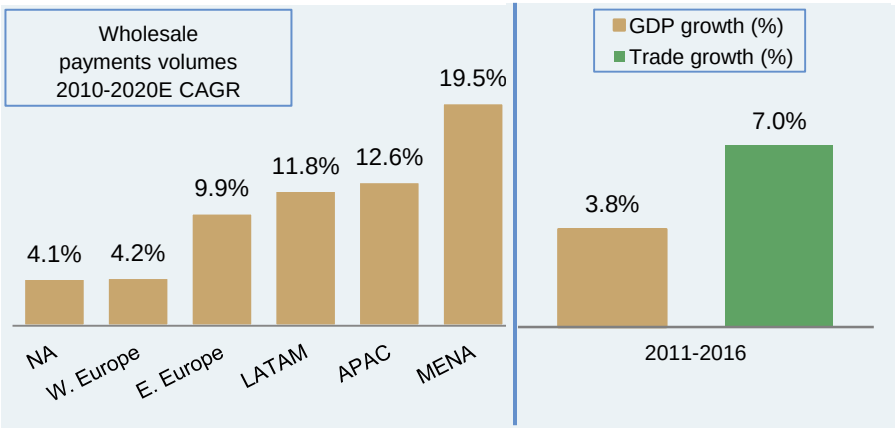
WSS international revenue 2010-2011 ($mm)



Secular trends will help further accelerate international growth

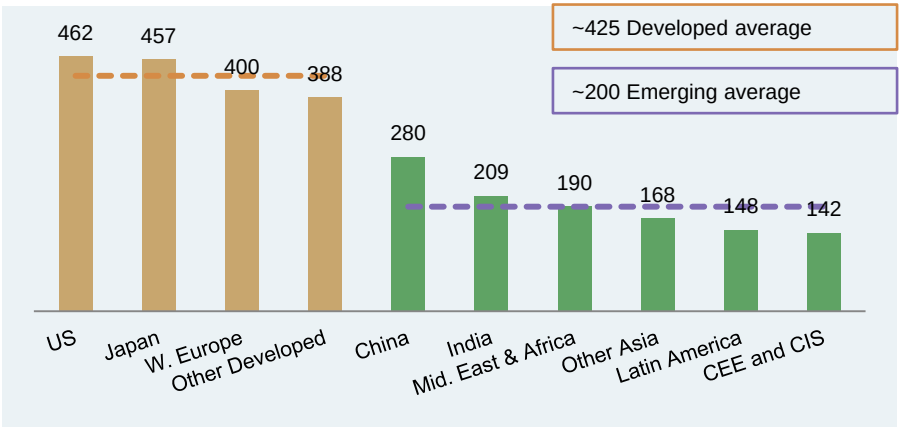
International opportunities will help generate revenue growth and attractive margins

Transaction Services and Trade Finance – positive long-term outlook



Source: Boston Consulting Group, IMF estimates. MENA is Middle East North Africa

Financial market depth as % of GDP[4] – Emerging markets are a big long-term opportunity



Source: McKinsey Global Institute

Key drivers of TS growth

- Global payments are expected to grow 9% between 2010-2020E[1]
  - Cross-border payments to grow 11%[1]
- Global trade growing at ~2x rate of GDP growth[2]
- Emerging markets account for 50+% of GDP growth and are the fastest growing markets for Payments and Trade[3]

Key drivers of WSS growth

- Global investment flows are growing
- Need for retirement savings is increasing (e.g., aging population)
- Complexity is driving clients' need for partner (asset servicing, margin pressures and regulatory changes)

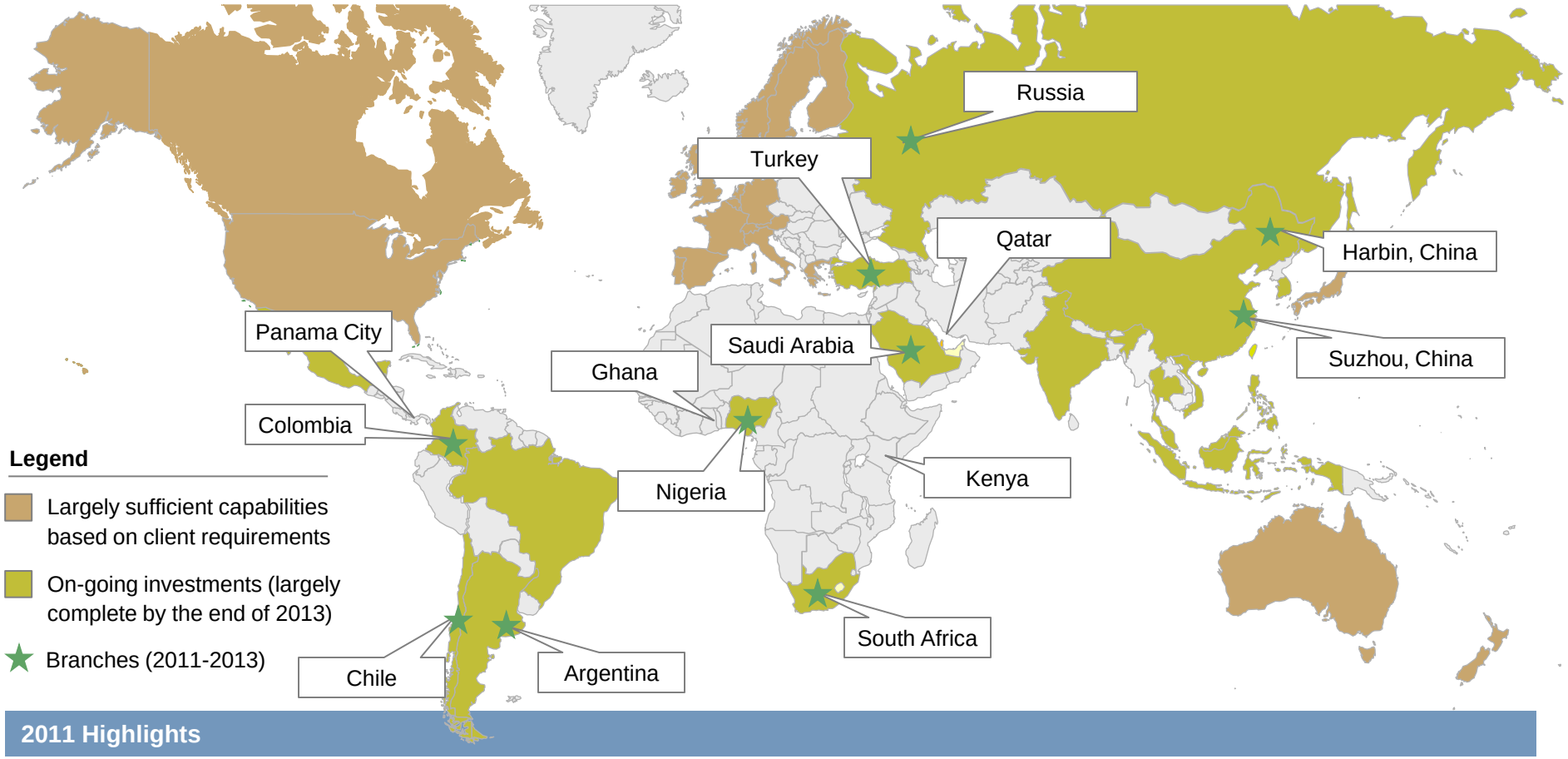
TS will benefit from increasing cross-border economic activity

WSS will benefit from deepening Capital Markets and changes in client behavior and needs

[1] Boston Consulting Group
[2] World Trade Organization
[3] International Monetary Fund
[4] Based on 2010 data. Depth of a country's financial markets is a function of the aggregate value of outstanding bonds, loans, and equity relative to the country's GDP. CEE is Central and Eastern Europe. CIS is Commonwealth of Independent States

Local capabilities to support GCB strategy will be largely established by 2013

Global Corporate Bank helping drive international growth across IB and TSS



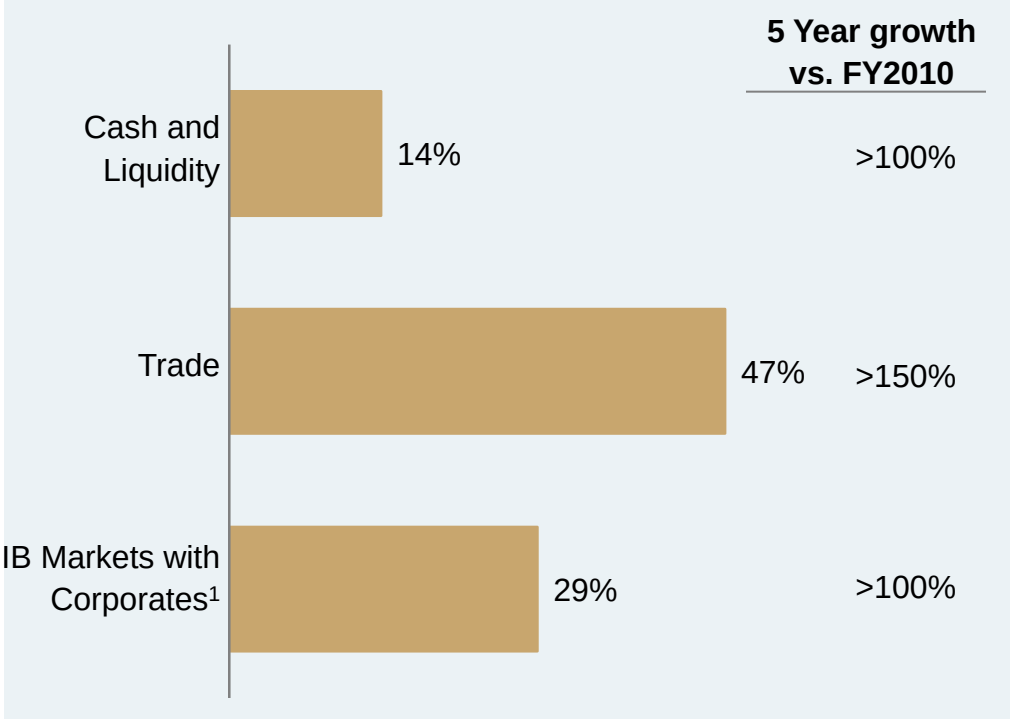
2011 Highlights

- Opened our 6th branch in China (Harbin) and received permission for another one in Suzhou
- Opened expanded branches in Saudi Arabia and South Africa and rep offices in Qatar and Panama City
- Hired 75 Corporate Bankers in 32 countries
- Built Trade Finance capabilities in 9 countries
- Invested $200mm to expand local lending and payment/deposit capabilities in 20+ countries
- Holistic effort looking at target client needs against firmwide product capabilities and infrastructure
- Long-term plan for building Sub-Saharan Africa – Starting from South Africa and Nigeria

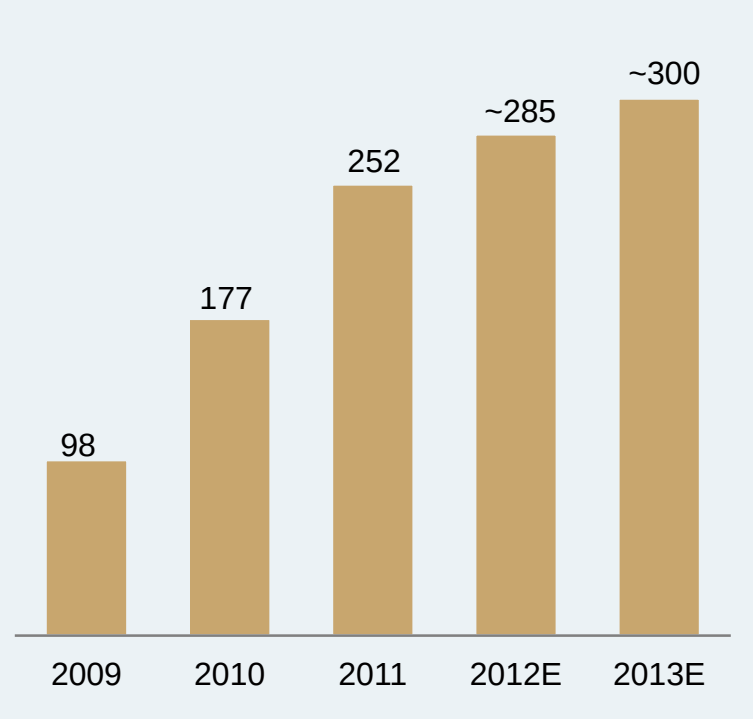
International revenue growing significantly and banker hiring close to completion

Global Corporate Bank helping drive international growth across IB and TSS

International revenue growth – FY11 vs. FY10



Bankers



[1] Markets include Commodities, FX, and Rates for Corporate clients only

- **Vast majority of revenue growth coming from deeper penetration of existing clients. More than half from cross-selling new products and/or new geographies**
- **On track to deliver $1B+ in incremental annual pretax across IB and TS by 2015**
- **Investment spend largely complete by the end of 2013; positive contributor to profit growth and margin (over time) for TSS**

Significant international wins in 2011 generate good momentum

Global Corporate Bank helping drive international growth across IB and TSS

Client Need
- Achieve bank account rationalization across 15 countries in Asia Pacific

JPM Solution
- Employed consultative and solutions based approach to propose optimized account structure
- Provided dedicated regional and in-country technical and implementation resources to manage deployment of the proposed solution over a 7-year period, while minimizing impact to existing operations

Client Need
- Transition of $12.5bn of custodied assets to a captive asset management entity

JPM Solution
- One of the largest and most complex transitions of its kind -- had to meet legal, regulatory and tax issues across 30 emerging markets
- Engaged the IB's trading desk for execution
- JPMorgan was also retained as global custodian for the assets

Client Need
- Unlock value from its supply chain, manage counterparty risk and improve working capital management

JPM Solution
- Implemented a $350 million structured receivables purchase solution across Europe, North America, Asia Pacific and the Middle East
- Reduced the client's Days Sales Outstanding (DSO) from 30 days to between five and seven days
- Purchased more than $1.3 billion worth of receivables to date

Client Need
- $3 billion financing, global liquidity and cash management

JPM Solution
- Acted as Joint Bookrunner on Vale´s 5-year, $3 billion Revolving Credit Facility. The transaction set a record as the tightest priced Brazilian corporate deal since 2008 and was the first jumbo transaction in the 2011 Latin American syndicated loan market
- J.P. Morgan was also selected as Vale's global bank for USD liquidity and cash management

Low rates: limited additional downside (and a lot of upside), partly mitigated by balance growth

Significant increase in deposit inflow since last year's Investor Day

Overall balance growth of ~$100B

- **$60B flight to safety**
- **$40B franchise**

- Flight to safety balances
  - Accommodating clients
- Franchise balance growth
  - Largely international

Annual NII impact of higher rates

1-month rate rise of 100 bps	**+/- $350mm**
10-year rate rise of 100 bps	**< $50mm**

- Spread compression fully recaptured with ~200bp rise
- NII if rates stay flat over the next 12 months is negative ~$50mm

Rate normalization alone would bring pretax margin to ~30%

Regulation: driving incremental cost, largely in current run-rate

Changes will require work

- 130+ regulatory changes impacting the business
- In addition, heightened expectations relative to existing regulation
- It will increase the cost and affect the service that clients receive from banks
  - Opportunity to distinguish ourselves

Impact is largely in run-rate

- Expense up significantly since 2008
  - Regulatory and compliance costs up ~$100mm
  - FDIC expense up ~$170mm
- Managing at Basel III capital rules now
  - Capitalized at 9%, with $7.5B in allocated capital
  - New business evaluated using new hurdles and returns remain strong
- Basel III liquidity rules not final
  - TSS is a positive contributor to liquidity for the firm
  - Product and pricing enhancements likely (particularly for financial institutions)

TSS is well positioned to adapt to higher regulatory burden and help clients as they face increasing complexity

Closing thoughts: confident about the future

- Great businesses with good momentum coming out of 2011
- Realizing margin improvement
  - Leverage firmwide relationships, capabilities and coordination (client planning; Value for Scale)
  - Focus on business profitability, core activities, and target clients
  - Ongoing cost efficiencies within TSS
- Capturing significant international growth opportunities
  - Strong global client relationships, but under-penetrated wallet
  - Secular growth of underlying TS and WSS markets
- Navigating headwinds – Largely in current results, with upside
  - Low interest rates
  - Regulatory expense
- Reaffirming performance targets for the business

ASSET MANAGEMENT

Mary Erdoes, Chief Executive Officer Asset Management

February 28, 2012

STRICTLY PRIVATE AND CONFIDENTIAL

Asset Management: a very strong business even through the crisis

Record

($B, unless otherwise noted)		2006	2011	2006 – 2011 CAGR
Solid financials through crisis	Revenue	$6.8	$9.5	7.1%
	Pretax margin	33%	26%	
	Net income	$1.4	$1.6	2.5%
	ROE	40%	25%	
Strong investment performance	Investment strategies (#)	254	369	7.8%
	4/5 star funds (#)	136	207	8.8
	AUM in 1st/2nd quartiles, 5 years (%)	79%	78%	
Gaining market share	Loans	$30	$58	14.2%
	Deposits	52	127	19.8
	Mortgages	5	15	23.6
	AUM	1,013	1,336	5.7
	AUS	1,347	1,921	7.4
	U.S. active mutual fund rank (by AUM)	19th	7th	
	U.S. active mutual fund flows rank	18th	2nd	
	Luxembourg/Dublin fund AUM share	6%	7%	
Investing for future	Private bankers (#)	1,506	2,444	10.2%
	International private bankers (#)	337	711	16.1
	JPMS brokers (#)	326[1]	439	6.1
	IM sales (#)	659	822	4.5
	International IM sales (#)	324	385	3.5

[1] Post Bear Stearns merger

Asset Management framework: designed for disciplined management and client focus in a complex and changing environment



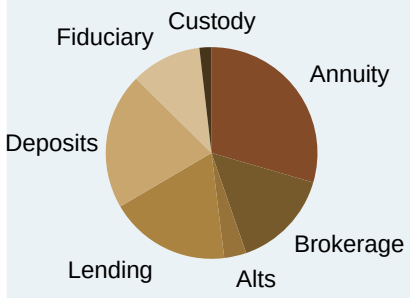
J.P. Morgan Asset Management overview

Global Wealth Management

GWM: revenue up 5%

Channels	Revenue
PB U.S.	↑
PWM	→
PB International	↑
JPMS	↑

Breakdown by product



Observations

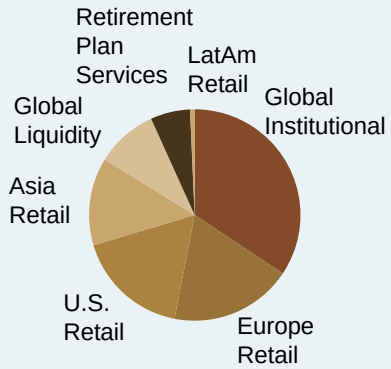
- 9 consecutive years of Private Banking revenue growth
- 8% front office growth (21% internally)
- International revenue growth in Private Bank (11%) stronger than the U.S. (3%)
- *Euromoney* – #1 Global Private Bank UHNW, #1 U.S. HNW Private Bank
- *Financial Times* – Best Global Brand in Private Banking
- Growth agenda focused on international expansion and high net worth markets globally

Global Investment Management

GIM: revenue up 4%

Products	Revenue
Equity	↑
Fixed Income	↑
Global Cash	↓
Global Real Assets	↑
PE / HF	↑
HB/Gávea	↑

Breakdown by channel



Observations

- 15% U.S. active, long-term fund AUM growth
- Eleven consecutive quarters of positive long-term flows
- Positive flows into every asset class
- Alternatives revenue up 21%
- Largest Brazil focused private equity fund
- *European Pensions* – Institutional Hedge Fund Manager of the Year
- *The Asset* – Asia and Hong Kong – Best Asset Management Company of the Year
- Growth agenda focused on channel expansion across global retail, retirement, and insurance

Note: Growth rates are year-over-year

Power of the platform: our model fully leverages the firm's global platform and financial solutions

J.P. Morgan Asset Management

Synergies of over $1B across LOBs

Synergies account for over 10% of JPM AM revenue

Leveraging the JPMorgan Chase franchise

Treasury & Securities Services

- AM manages $90B of AUM for TSS clients
  - $140mm in 2011 firm revenue
- TSS provides custodial and transfer agency services to AM
- Referrals in both directions
  - $15mm in 2011 firm revenue

Investment Bank

- Securities offerings, structured products and trade execution offered to Private Banking clients
- $590mm in 2011 firm revenue
- IB referrals to AM: $80mm in 2011 revenue

Commercial Bank

- Investment Management products offered to Commercial Banking clients
  - AM manages $120B of AUA for CB clients
  - $370mm in 2011 firm revenue
- CB referrals to AM: $70mm in 2011 revenue

Retail Financial Services

- AM products offered to RFS clients through Chase branches
  - $40B in AUM
  - $510mm in 2011 firm revenue
- JPM is one of the fastest growing providers of unified managed accounts
- Banking to CB

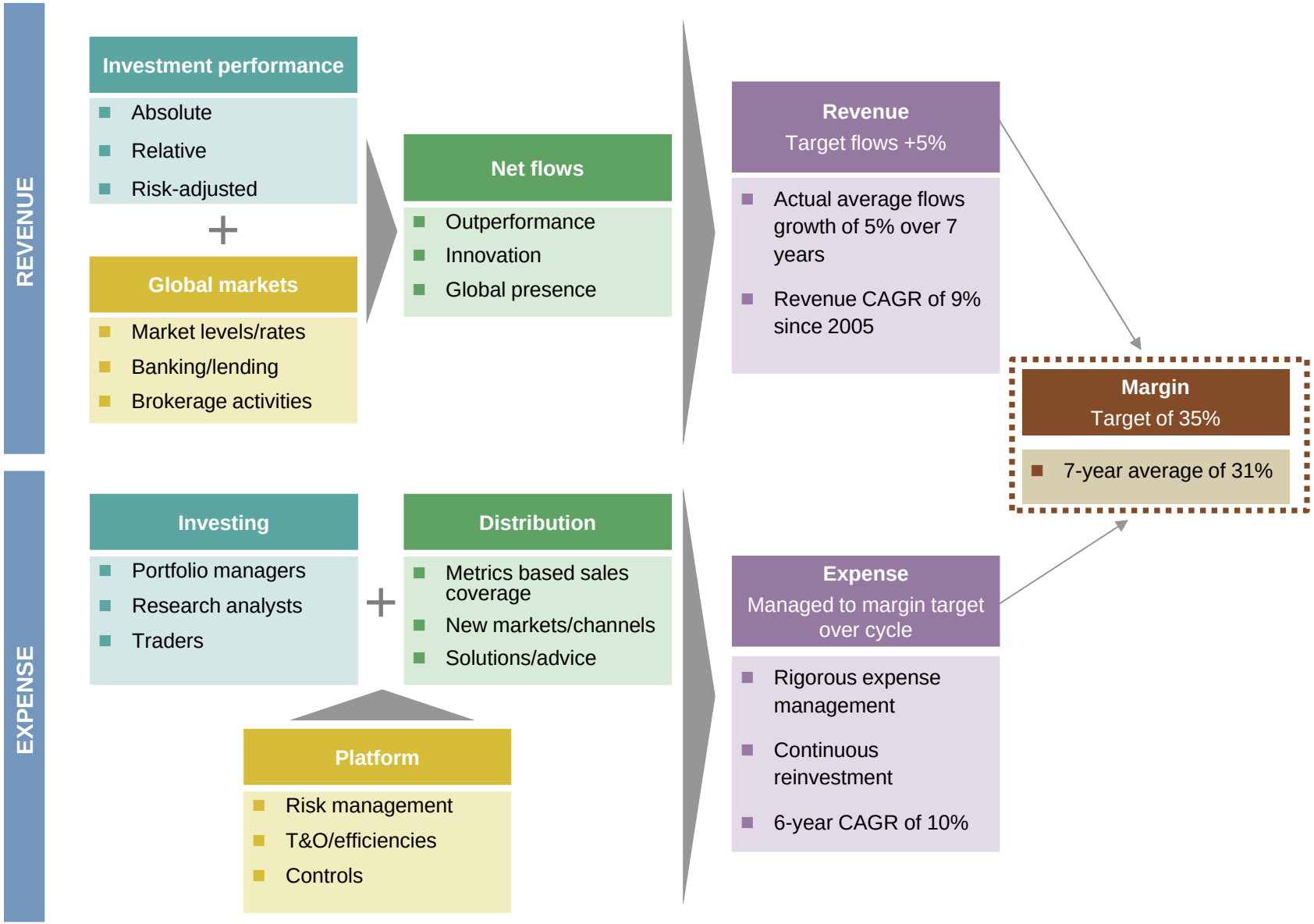
Card Services & Auto

- Credit cards issued to Private Banking clients

Corporate/ Private Equity

- Corporate provides asset and liability management to AM

Drivers of our business: investment performance is first, everything else second

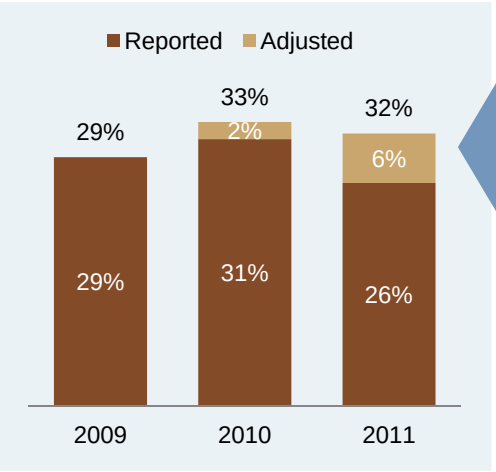


Overall AM: adjusting margin exceeds target in most years; margin is at high end of peers

JPM AM pretax margin

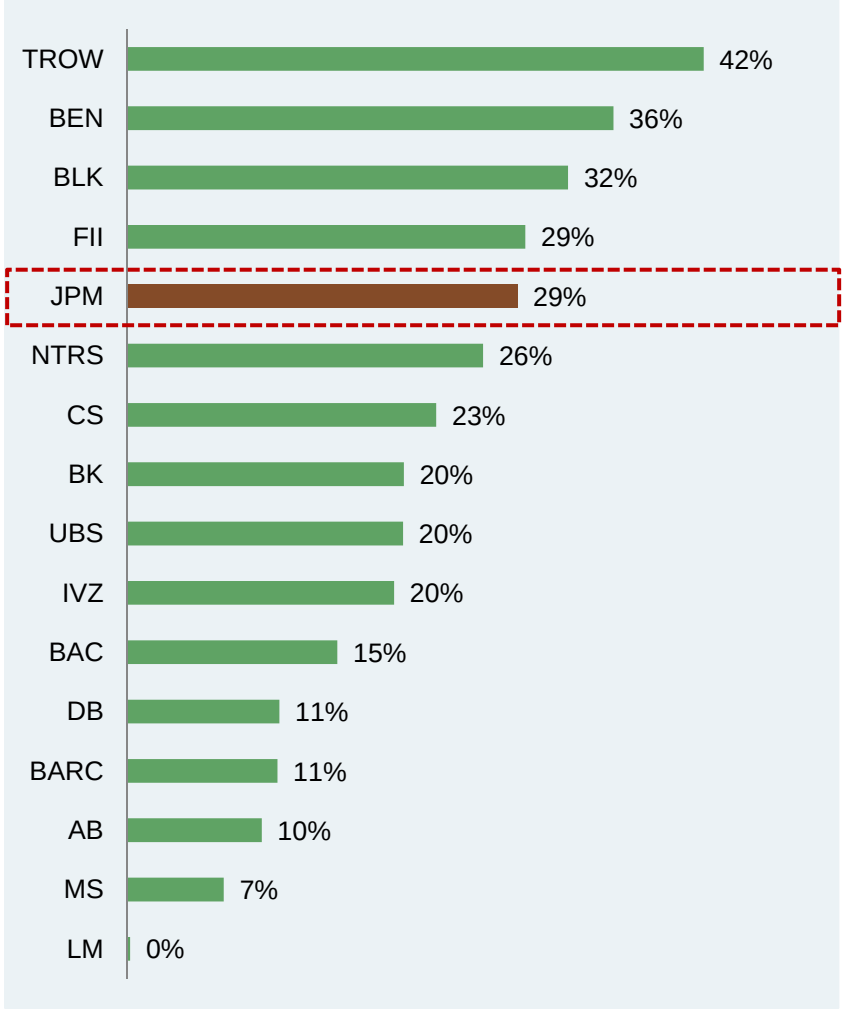


Pretax margin: investments in people and technology



- Net new front office talent
- Net new technology initiatives
- Non-client litigation

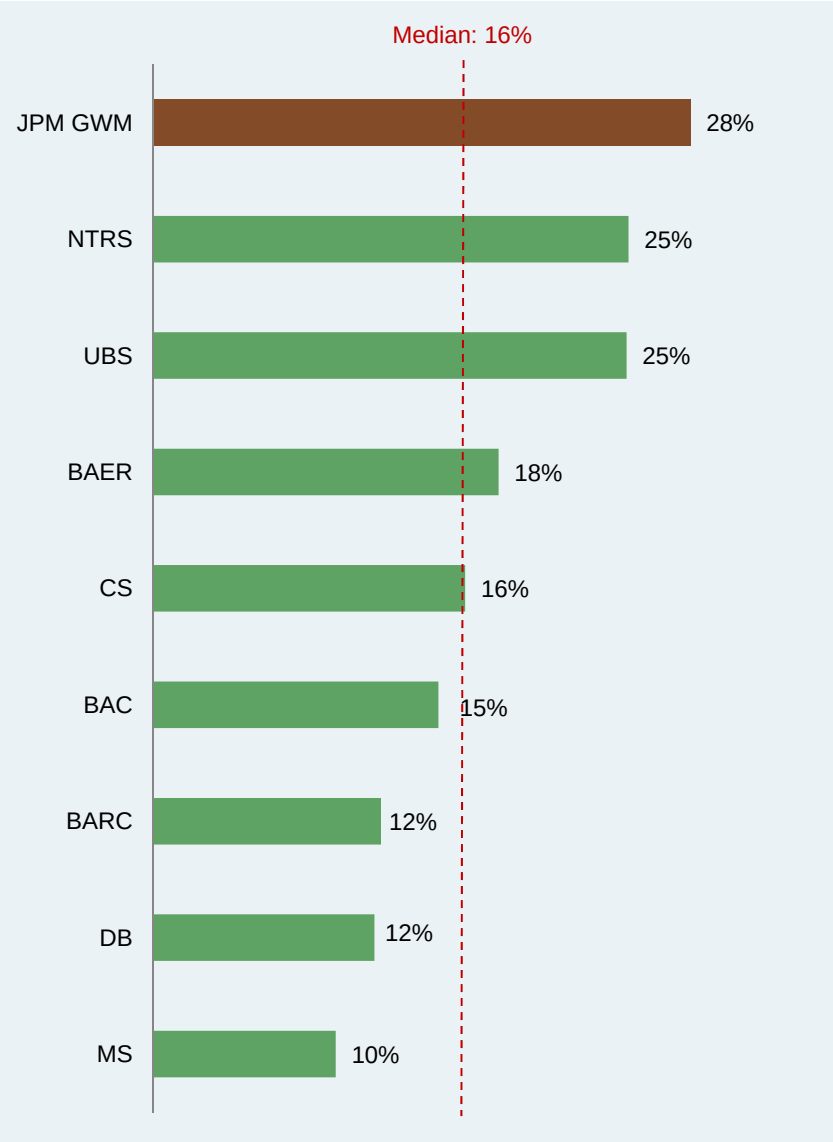
3-year average margins



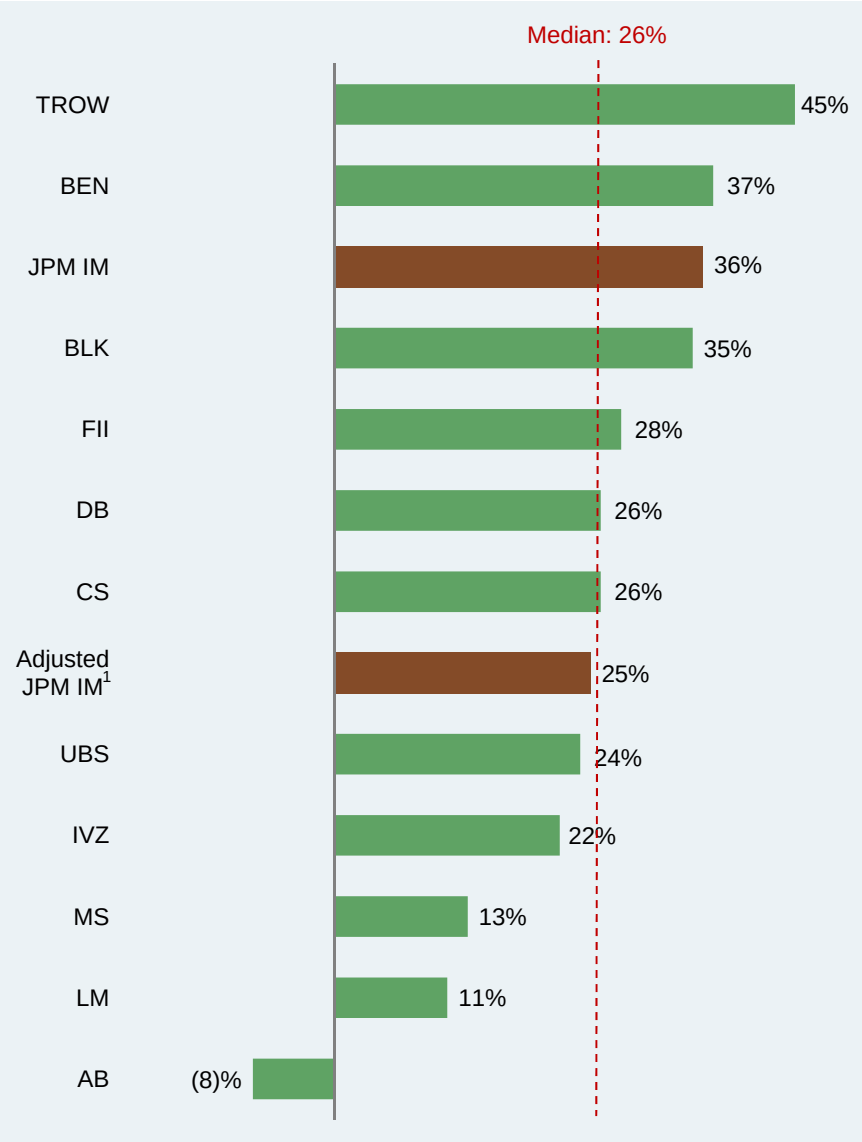
Based on J.P. Morgan estimates

Overall AM: solid margin business

Global Wealth Management – FY 2011 pretax margin



Global Investment Management – FY 2011 pretax margin

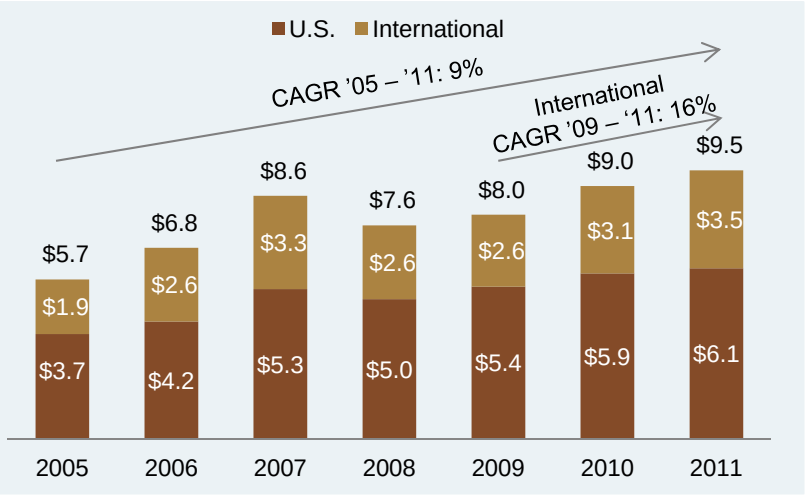


Based on J.P. Morgan estimates

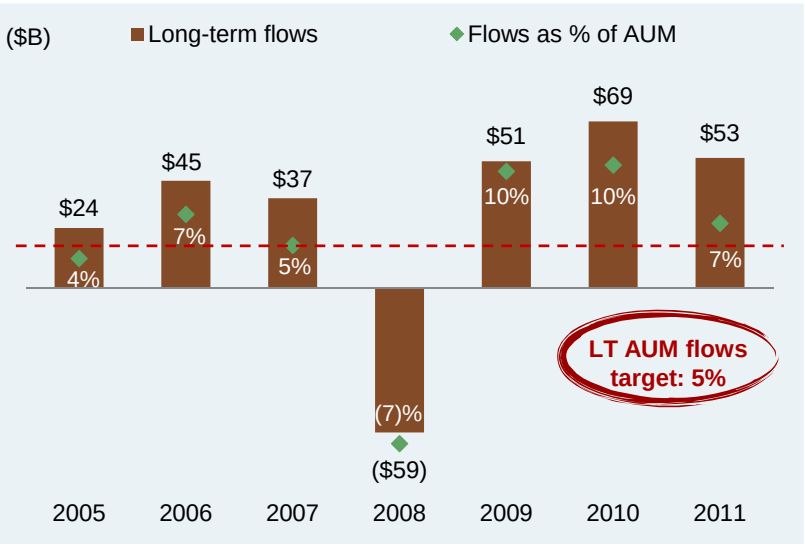
[1] Adjusted JPM IM margin includes Highbridge, Gávea and one-time items

Overall AM: flows very strong, revenue growth in top half of competitors

Revenue trend ($B)

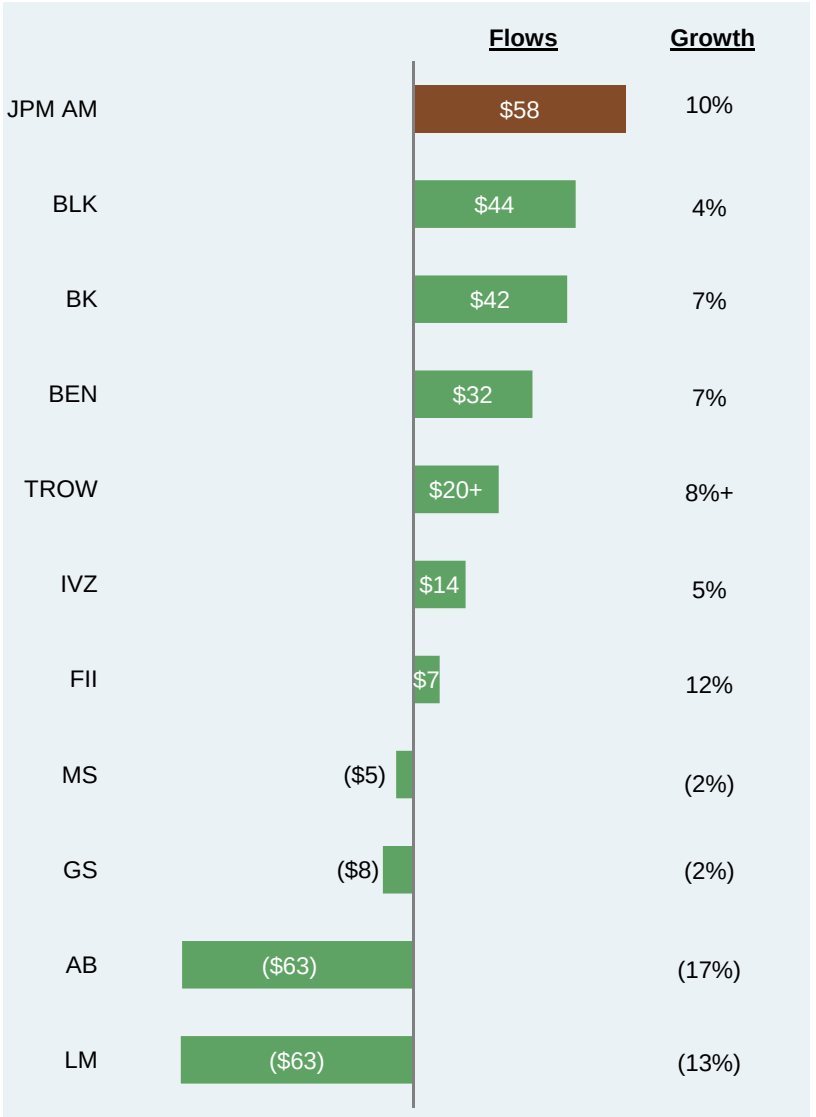


Long-term flows & flows as % AUM



Based on J.P. Morgan estimates

Long-term flows: 3-yr average flows ($B) & growth rate

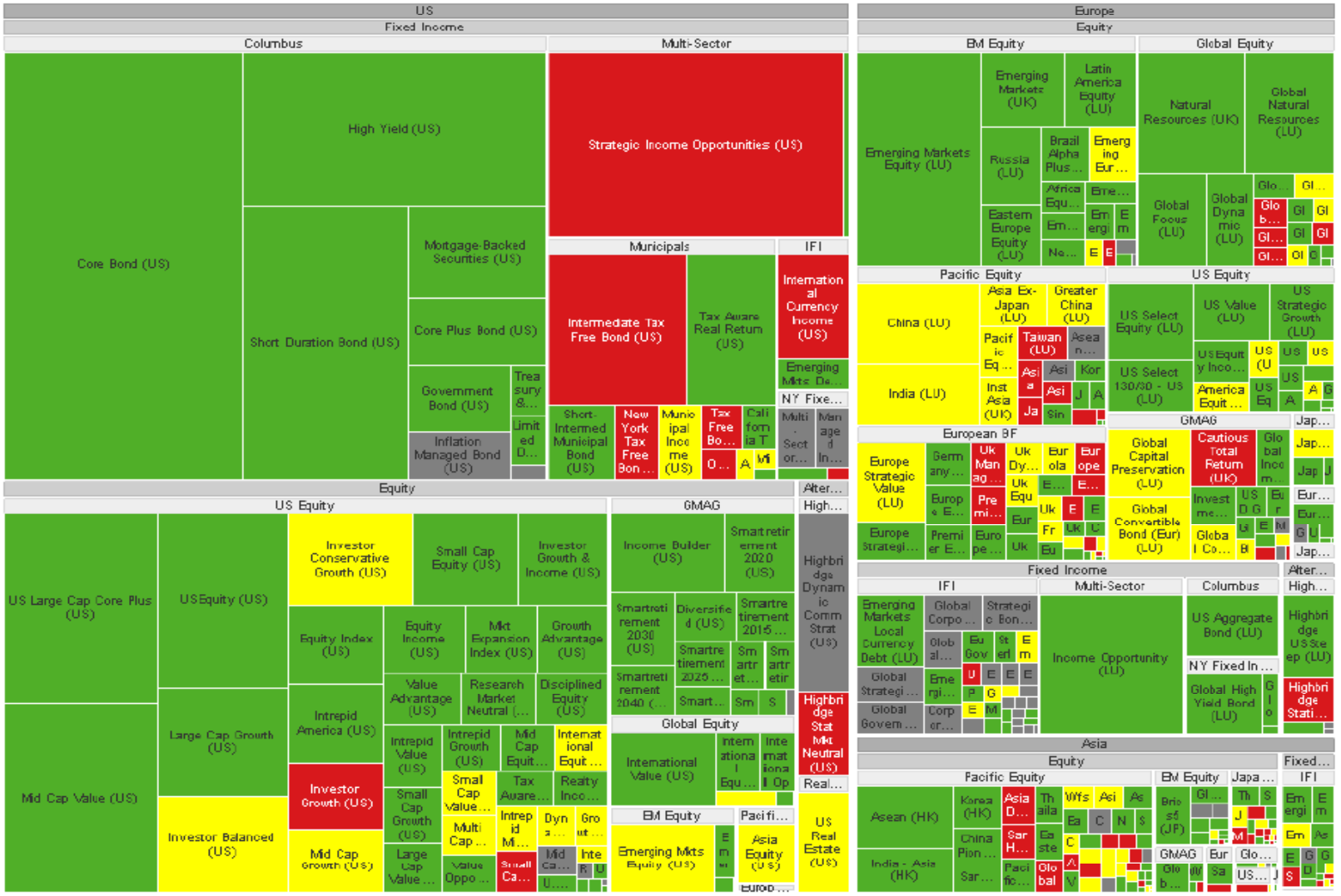


ASSET MANAGEMENT

Diverse sources of alpha leads to consistent flows, globally (mutual funds only)

Top 2 quartiles | 3rd quartile | 4th quartile | No track record

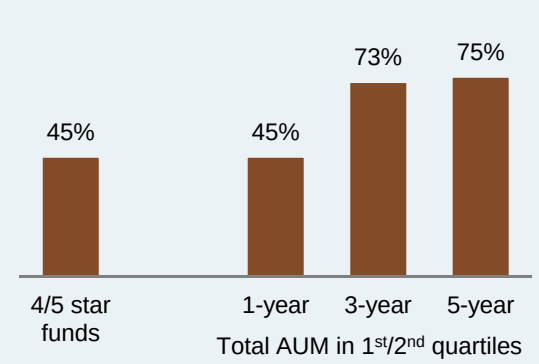
Performance: 3-year



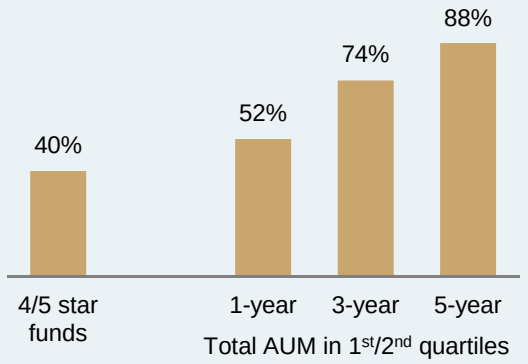
Over 70% of long-term AUM exceeds median, driving robust flows

Performance metrics

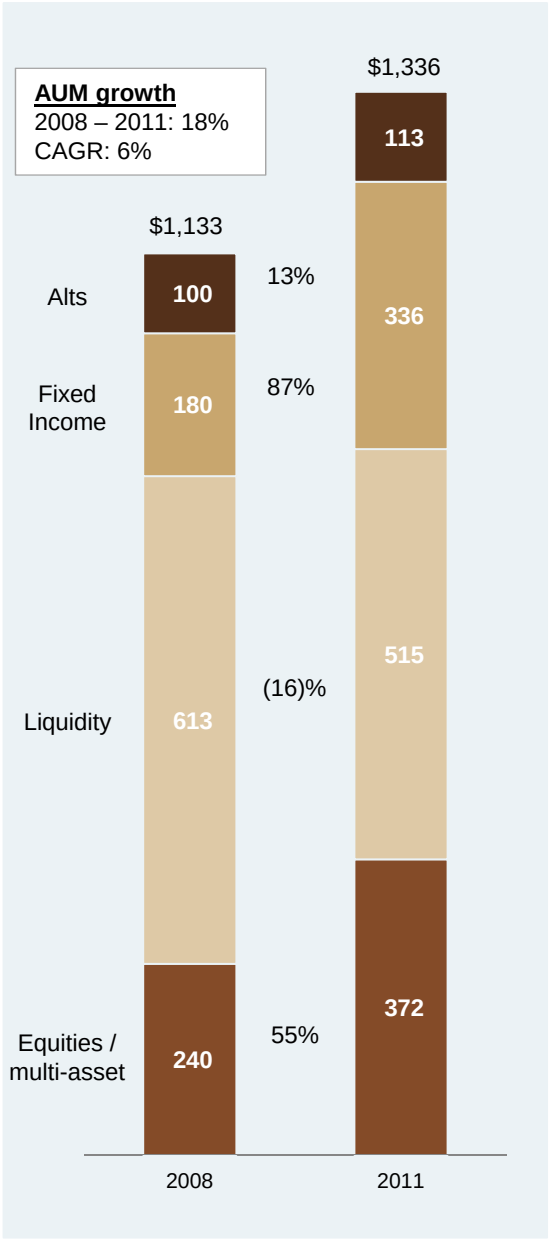
Equities and multi-asset



Fixed Income

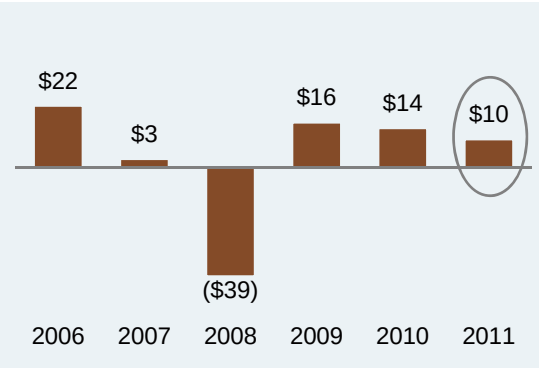


AUM growth and mix ($B)

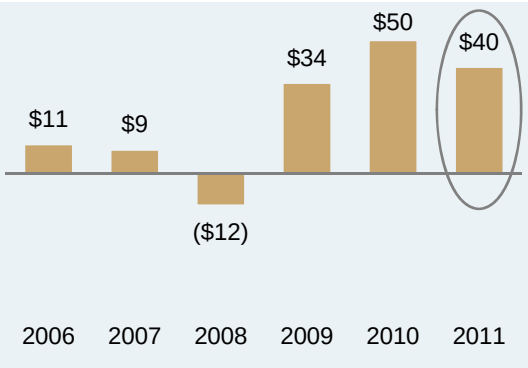


Net flows by asset class ($B)

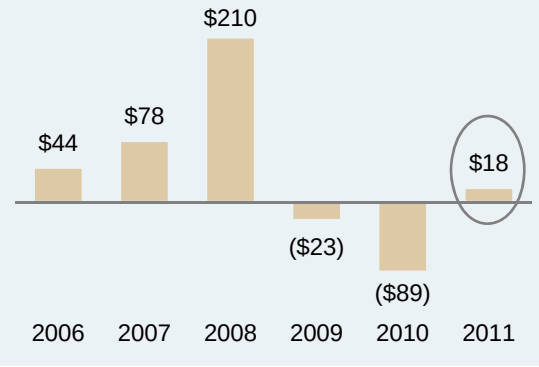
Equities and multi-asset



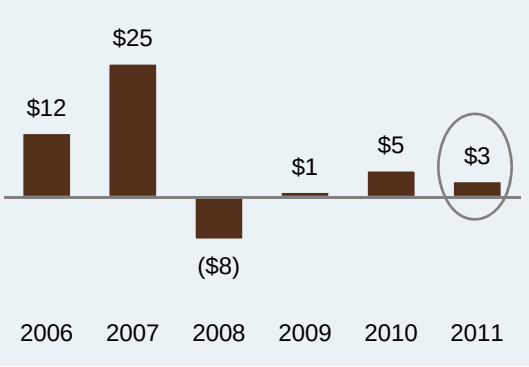
Fixed Income



Liquidity



Alternatives



ASSET MANAGEMENT

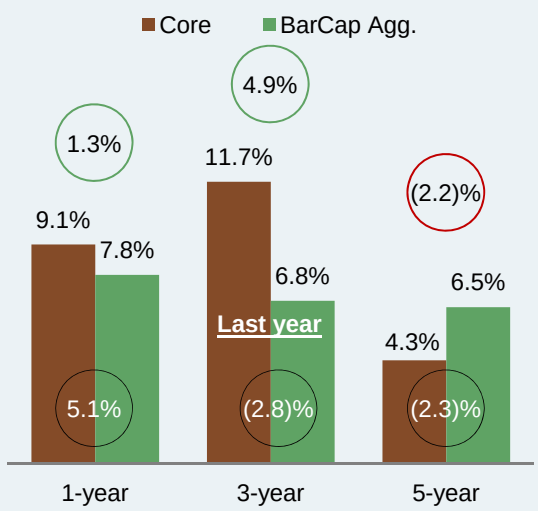
Fixed Income & Liquidity: multiple engine platform

Institutional money fund market share

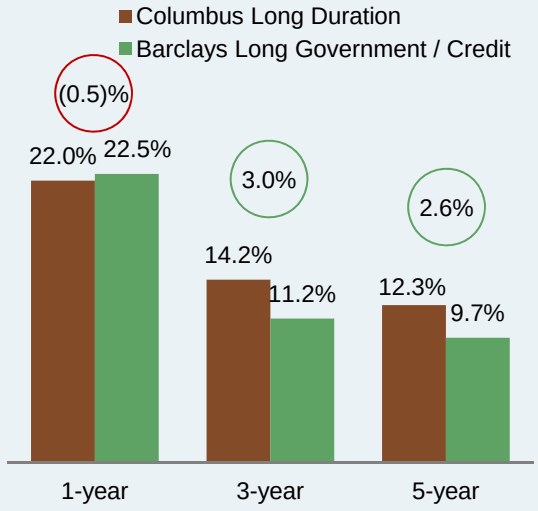


Source: iMoneyNet

New York, London, Asia Fixed Income – Core (NY)



Columbus Fixed Income – Long Duration



Observations

- Meaningful SEC changes since 2008 have reformed the industry
- Continued debate on regulatory changes unresolved
- Floating NAV possible, and already part of J.P. Morgan's suite of products
- Risk aversion ebbing but heightened focus on credit risk remains
- Continued demand globally for J.P. Morgan cash products

Observations

- Top quartile eVestment rankings for 1, 2 and 3 years, through risk-on and risk-off environments
- Growing recognition from global consultant community; critical to securing institutional sales

Observations

- $8.4B in Long Duration AUM ($10.5B counting unfunded commitments), up from $4.9B in 2010, and $1.9B in 2008
- Expanding advisory capabilities to position liability driven investing (LDI) in broader asset allocation discussions

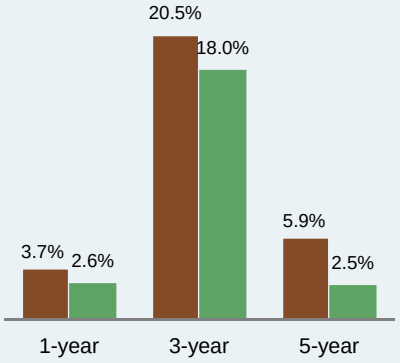
Performance figures from eVestment
Note: Annualized performance results are as of December 31, 2011 and gross of fees

Globally diverse active equity platform

J.P. Morgan Fund Benchmark

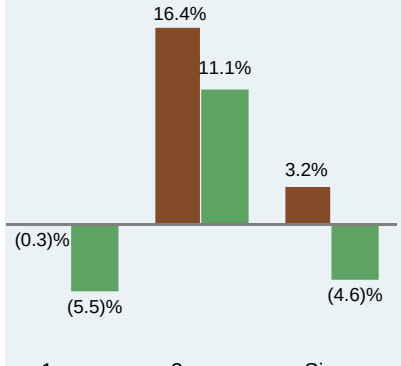
U.S. Large Cap Growth
(vs. Russell 1000 Growth)

Only 9% of LCG peers beat bench in 2011



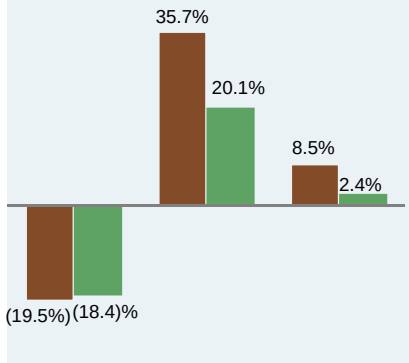
Income Builder (GMAG)[1]
(vs. MSCI World)

5 star Morningstar fund



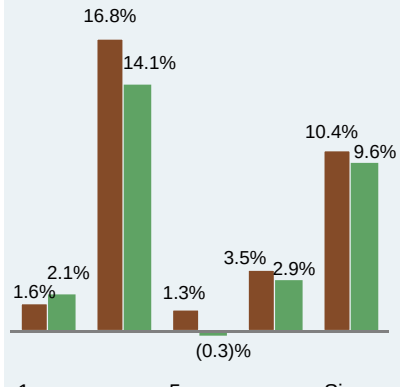
GEM Discovery
(vs. MSCI EM Std)

Top decile performer for 3 and 5 years



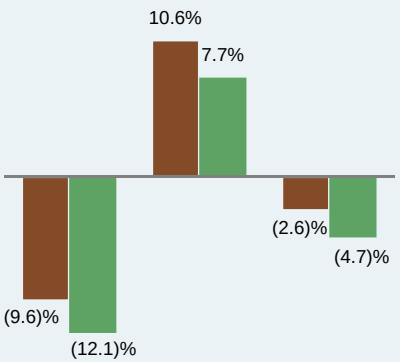
U.S. REI 250
(vs. S&P 500 Total Return)

DDM process celebrated 25th anniversary



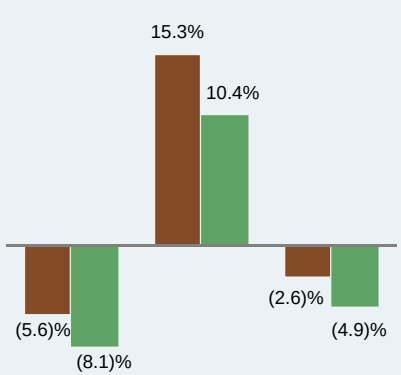
EAFE Plus
(vs. MSCI EAFE NDR)

Market leading information ratio



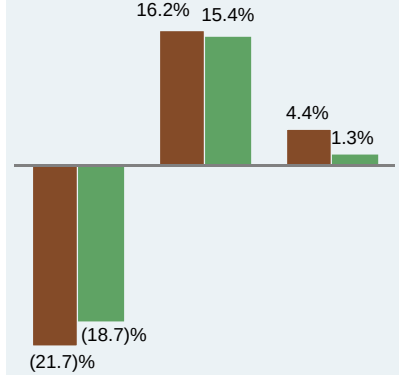
Europe Strategic Dividend
(vs. MSCI Europe)

Top quartile perf. over all time periods



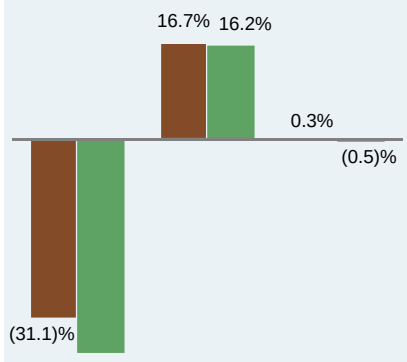
JF Greater China
(vs. MSCI Golden Dragon)

Leading position in Greater China



Indian Equity
(vs. MSCI India 10/40 Net)

Pioneer in Indian Equity space



Note: Annualized performance results are as of December 31, 2011 and gross of fees

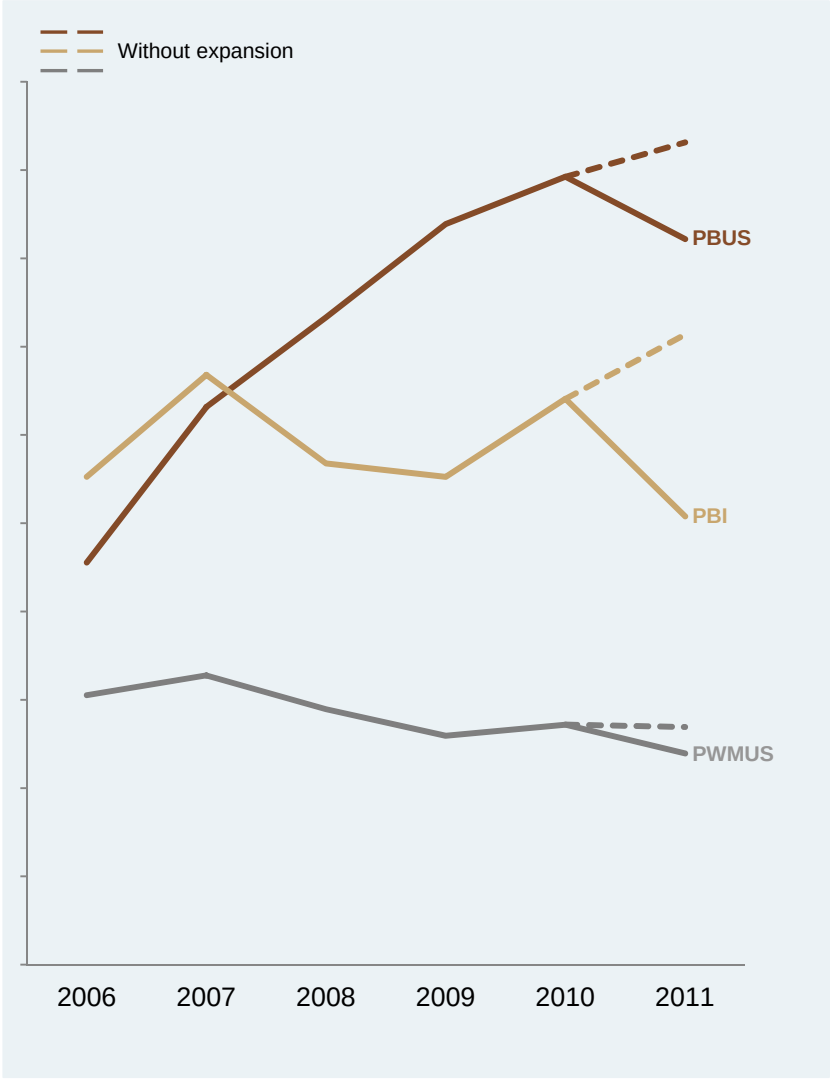
[1] Performance net of fees Select Share Class

Solution and product innovation

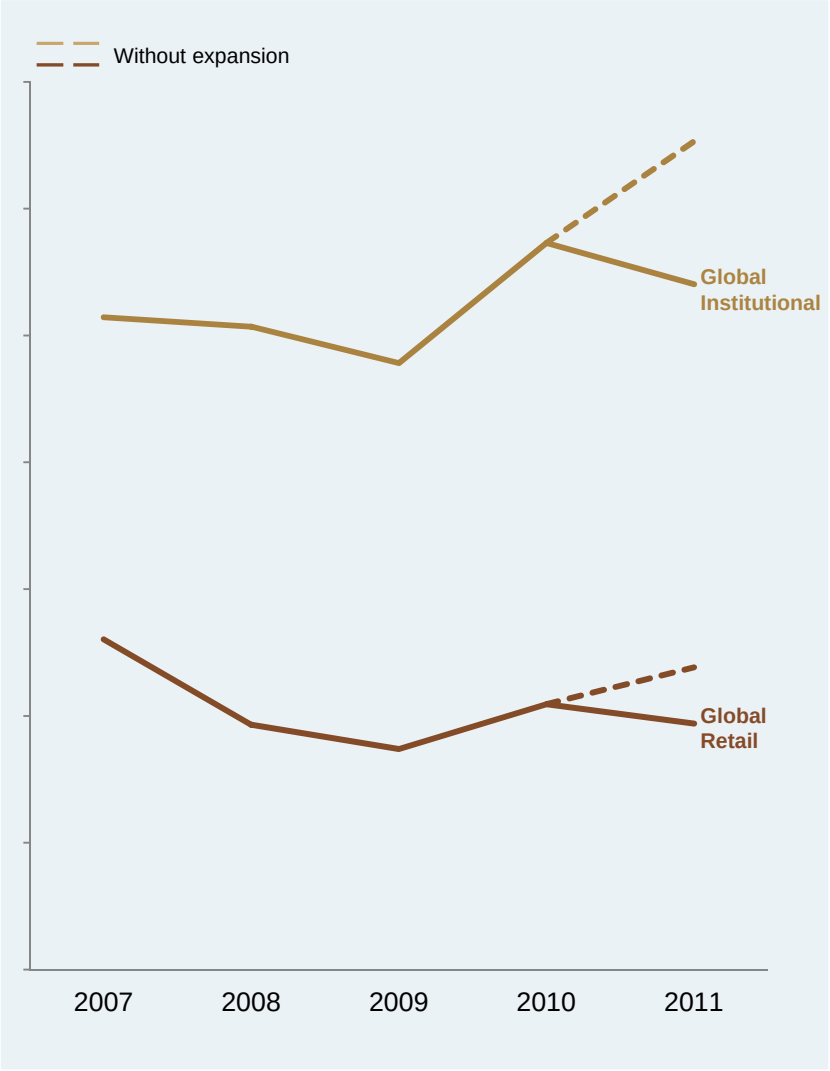
	Pre 1970's	1970's	1980's	1990's	2000's	2010's
Alternatives	■ Sale-leasebacks	■ Direct real estate	■ Private equity ■ Commodities	■ Highbridge Capital Management ■ Hedge fund of funds ■ Security Capital/REITs	■ Highbridge Principal Strategies ■ Hedge fund customization and advisory ■ Asian/European real estate ■ OECD/Asian infrastructure	■ Gávea Investimentos ■ Digital growth ■ China JV ■ Opportunistic U.S. real estate ■ Maritime ■ Infrastructure debt
Equities: from core to alternatives	■ Core equity ■ International equity ■ Japan equities	■ Emerging markets equities ■ Jardine Fleming/Asian equities	■ Dividend discount model ■ Enhanced index ■ Market neutral ■ Long/short equity	■ Behavioral finance ■ European style	■ Thematic portfolios ■ Equity China JV ■ Structured notes	■ Managed volatility ■ Unconstrained equity
Fixed Income: from core to alternatives	■ Money market ■ Core fixed income	■ International fixed income ■ Private mortgages	■ Distressed debt ■ High yield ■ Long duration ■ Stable value ■ Currency ■ Muni private placements	■ Insurance ■ Emerging markets	■ LDI ■ Inflation strategies ■ Absolute return ■ Multi-sector ■ Bank loans	■ Unconstrained fixed income ■ Alternative benchmark strategies ■ Asian credit ■ Hedge funds
Multi-asset solutions	■ Balanced portfolios		■ Tactical asset allocation	■ Global multi-asset capabilities	■ Target date ■ Glide path advisory ■ Global absolute/total return ■ Global Access Portfolios	■ Opportunistic/ Thematic Advisory Solutions ■ Risk managed portfolio ■ Merger arbitrage
Local Investors	■ New York ■ London	■ Hong Kong ■ Tokyo	■ Moscow ■ Melbourne ■ Singapore ■ Seoul ■ Taipei ■ Paris ■ Frankfurt	■ Columbus ■ Los Angeles ■ Houston ■ Luxembourg ■ Rio de Janeiro ■ Sao Paolo ■ Mumbai	■ Boston ■ Cincinnati ■ Indianapolis ■ San Francisco ■ Chicago ■ Shanghai ■ Beijing	

Examples of expense measurement and discipline

GWM revenue per client advisor

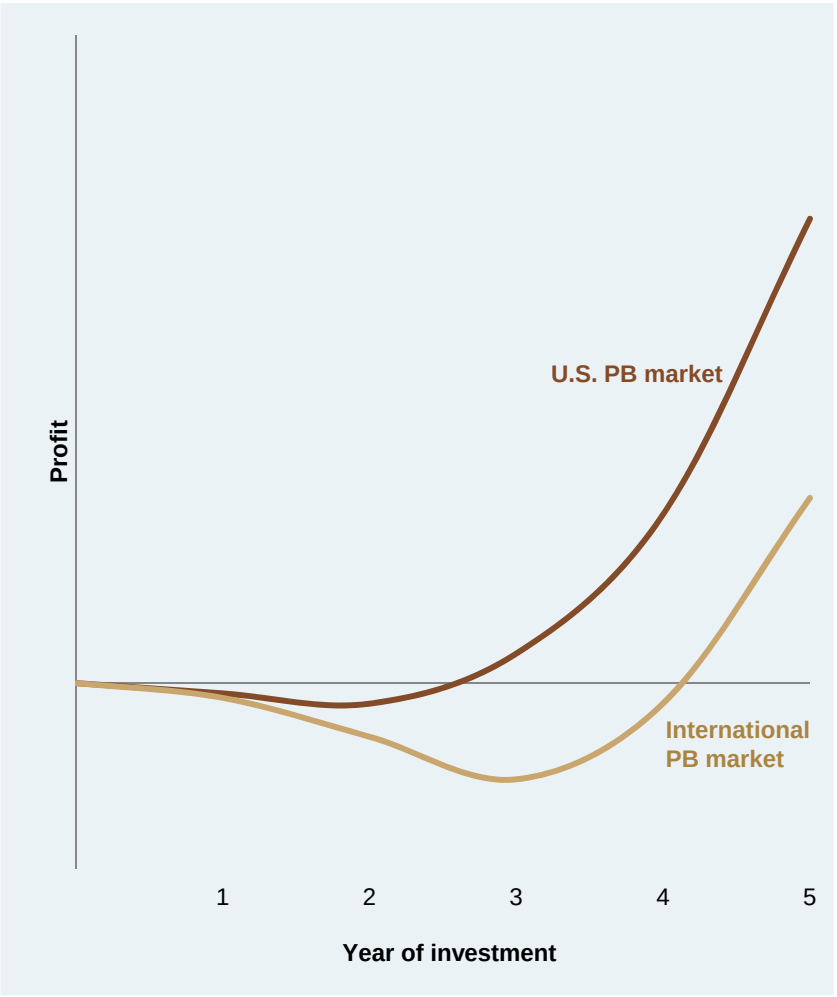


GIM revenue per client advisor

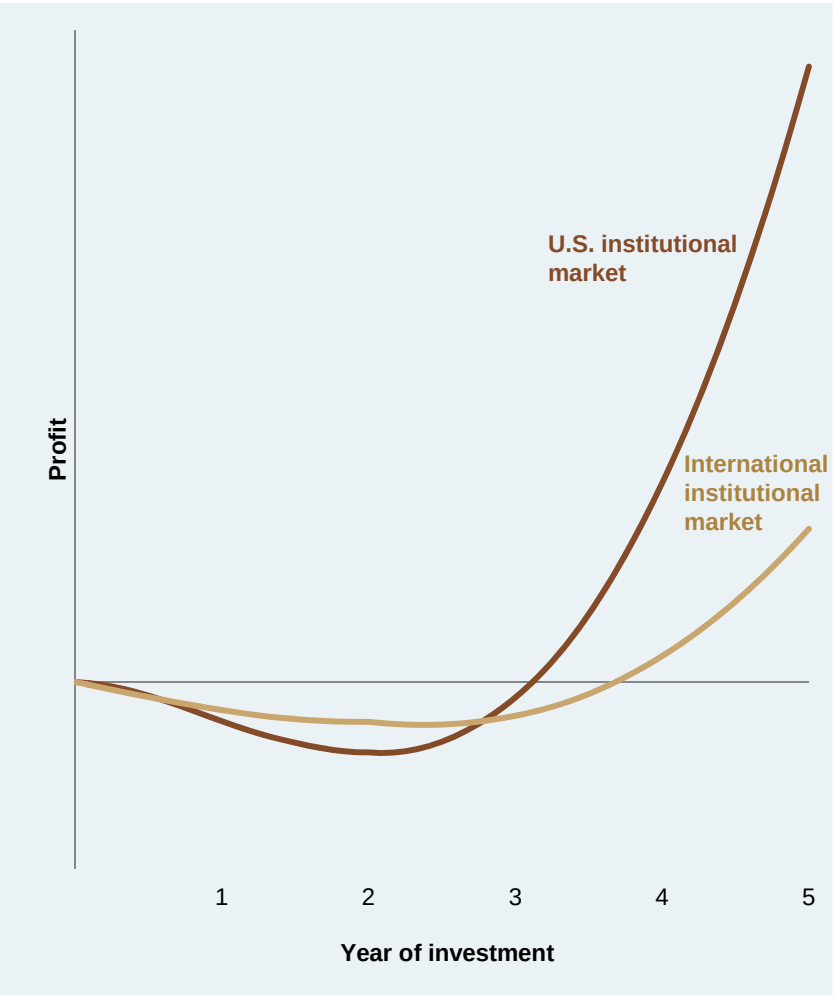


Investment return periods differ by market and channel

GWM cumulative expansion payback periods

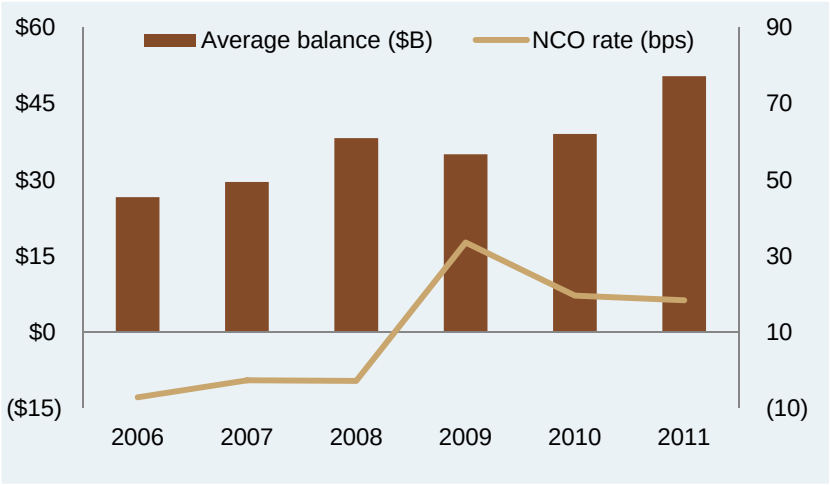


GIM cumulative expansion payback periods

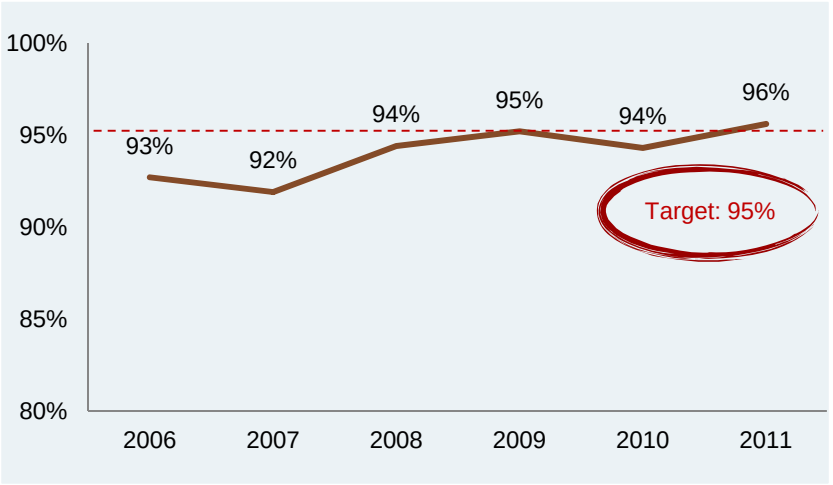


Constant monitoring of risk, retention and regulations

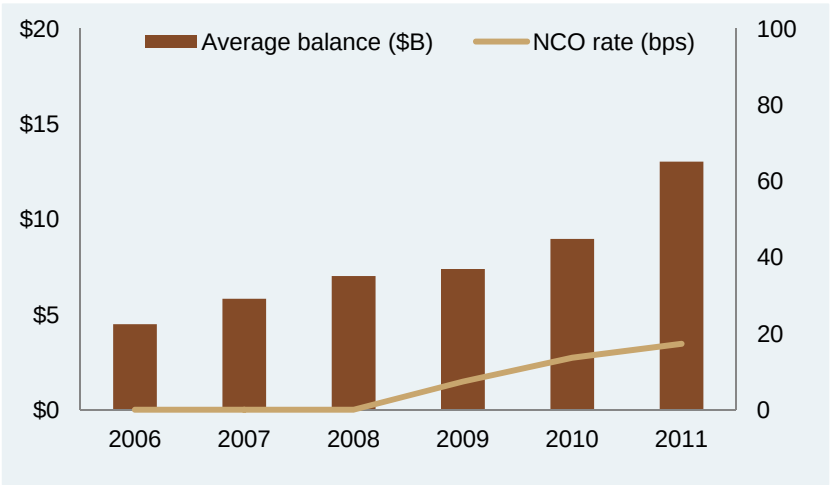
Risk management of loan book



Top talent retention rate



Risk management of the jumbo mortgage book



Regulations

- Dodd Frank
  - Volcker Rule
  - Derivatives
- Money market funds
  - Floating NAV
  - Capital requirements
- Form PF
  - Proposed reporting requirements for private funds

Closing thoughts

J.P. Morgan Asset Management

- Strong investment performance
- Constant innovation
- Continued investment in the business
- Disciplined expense management
- Continued revenue growth
- High ROE/margin business

"…at all times the idea of doing only first-class business, and that in a first-class way"

– John Pierpont Morgan, Jr.,1933

ASSET MANAGEMENT

INVESTMENT BANK

Jes Staley, Chief Executive Officer Investment Bank

February 28, 2012

JPMorgan Chase & Co.

Agenda

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Business highlights	13

INVESTMENT BANK

2011: strength amidst volatility

Performance

Financial results

- Near record performance
  - Revenue: $26.3B
  - Earnings: $6.8B (second highest)
- ROE of 17% on capital of $40B
- Further strengthened fortress balance sheet (Tier 1 common ratios)
  - Basel II: 13.7%
  - Basel III: 8.4%

Business summary

- Sustained Investment Banking leadership
  - #1 in Global IB Fees (third consecutive year): 8% market share[1]
  - Record loan syndication revenue, advisory fees up 22%
- Fixed Income: historic high revenue market share, 17%[2]
- Equities: record results
- Commodities: complete franchise

[1] Dealogic
[2] Estimated using public disclosure of top 10 competitors, excluding DVA

Strategic initiatives: 2011 progress and 2012 momentum

Performance

		2011	2012
Clients		■ Disciplined, sustained focus	
Initiatives	**International**	■ Formed International Steering Committee ■ Expanded Markets footprint in 20 countries ■ Launched EMEA Prime Brokerage	■ TS/IB Markets growth with corporates ■ Add local market capabilities ■ Build Asia Prime Brokerage
	Commodities	■ Achieved targets, increased client activity ■ Completed Sempra integration	■ Maintain leadership ■ Grow developing markets franchise
	Technology	■ Strategic Reengineering Program: over 50% complete, on target ■ Doubled electronic equity internalization ■ Further reduced errors and cost per trade	■ Execute Strategic Reengineering Program ■ Rationalize IB/TSS costs and execution (Value for Scale) ■ Deliver cross-asset platforms for innovation
Capital/risk management		■ Prudent capital management ■ Continued focus on regulation	■ Efficient capital usage ■ Control during volatility ■ Repositioning ahead of new regulations

Agenda

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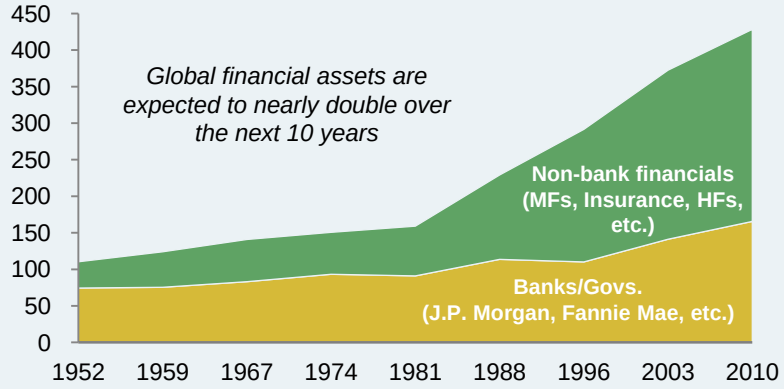
INVESTMENT BANK

Credit, rates and currencies drive the global financial markets

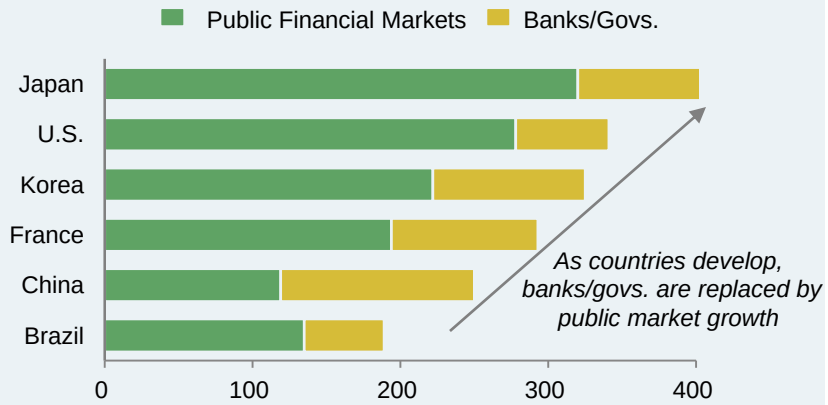
Markets

Non-bank financial assets outpacing growth of traditional sources of capital…

Financial assets (% of GDP)

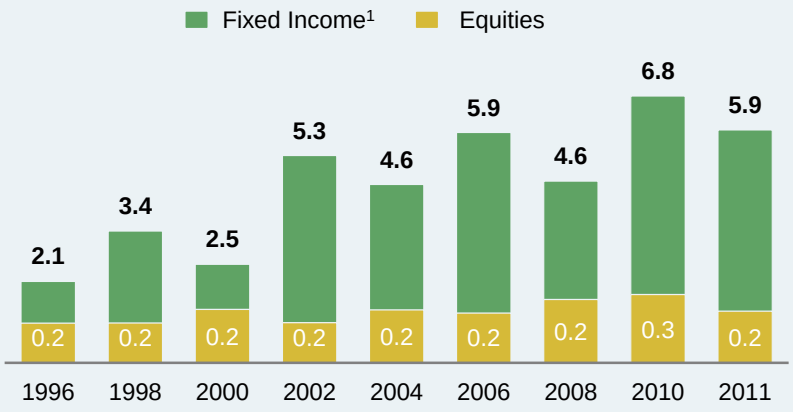


Capital by source (% of GDP)

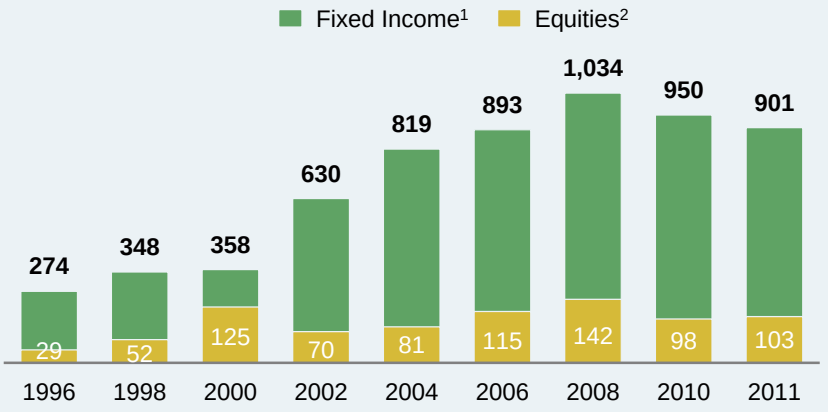


…and Fixed Income markets continue to dominate Equities

Gross U.S. equity and long-term debt issuance ($T)



Daily average U.S. trading volume ($B)



Source: Federal Flow of Funds, Bloomberg, IMF, Bank for International Settlements, CBRC, CSRC, Thomson Reuters, SIFMA, McKinsey Global Institute
Note: "Gross U.S. equity and long-term debt issuance" and "Daily average U.S. trading volume" graphs not shown to scale
[1] Municipal, Treasury, MBS, Corporate Debt, and Federal Agency securities
[2] Daily average value traded by the NASDAQ and NYSE

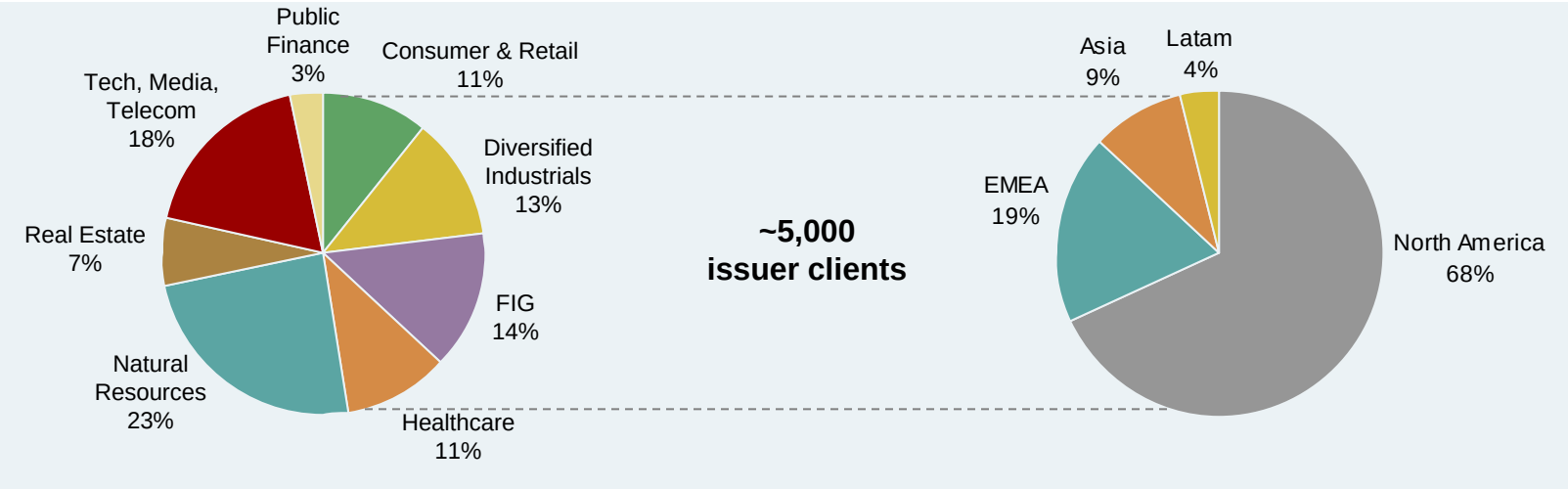
Our client franchise is large, diversified and global

Markets

2011 Markets revenue mix



2011 IB fees mix



[1] Other Financials includes public sector, pension funds, private equity, and SPVs

We have unmatched scale, diversification and leadership

Markets

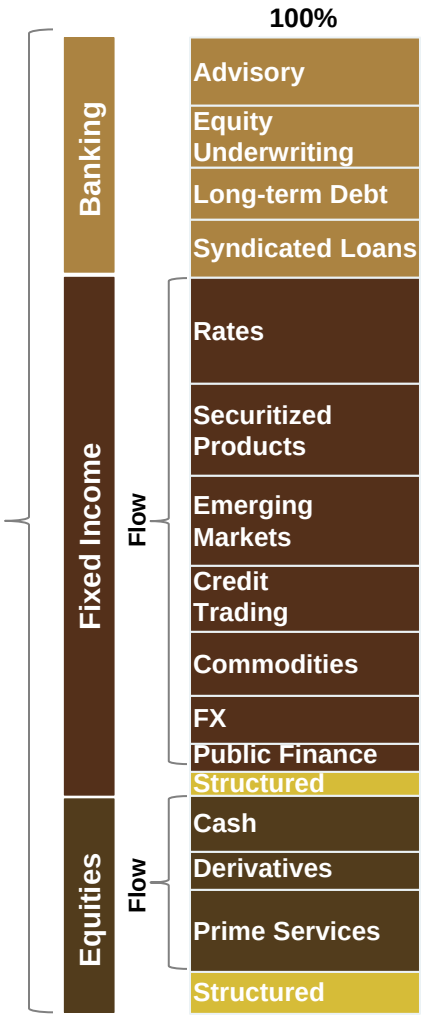
Scale

How we operate

- 2,500 salespeople
- 2,000 traders
- 2,000 bankers
- 800 research analysts
- 4,000 control and risk professionals
- 13,000 tech. & ops. professionals
- 40 countries
- 110+ trading desks
- 20 trading centers

Diversity

IB revenue (typical quarter)



Leadership

Industry rankings

	2009	2010	2011[1]
Advisory	#3	#4	#2
Equity Underwriting	1	3	3
Long-term Debt	1	2	1
Syndicated Loans	1	2	1
Rates	2	1	1
Securitized Products	2	1	1
Emerging Markets	2	3	2
Credit Trading	1	1	1
Commodities	5	5	3
FX	2	2	2
Public Finance	3	3	3
Structured	3	8	8
Cash	N/A	4	4
	N/A	9	9
Derivatives	3	3	1
Prime Services	2	2	2
Structured	N/A	N/A	N/A

Descriptions

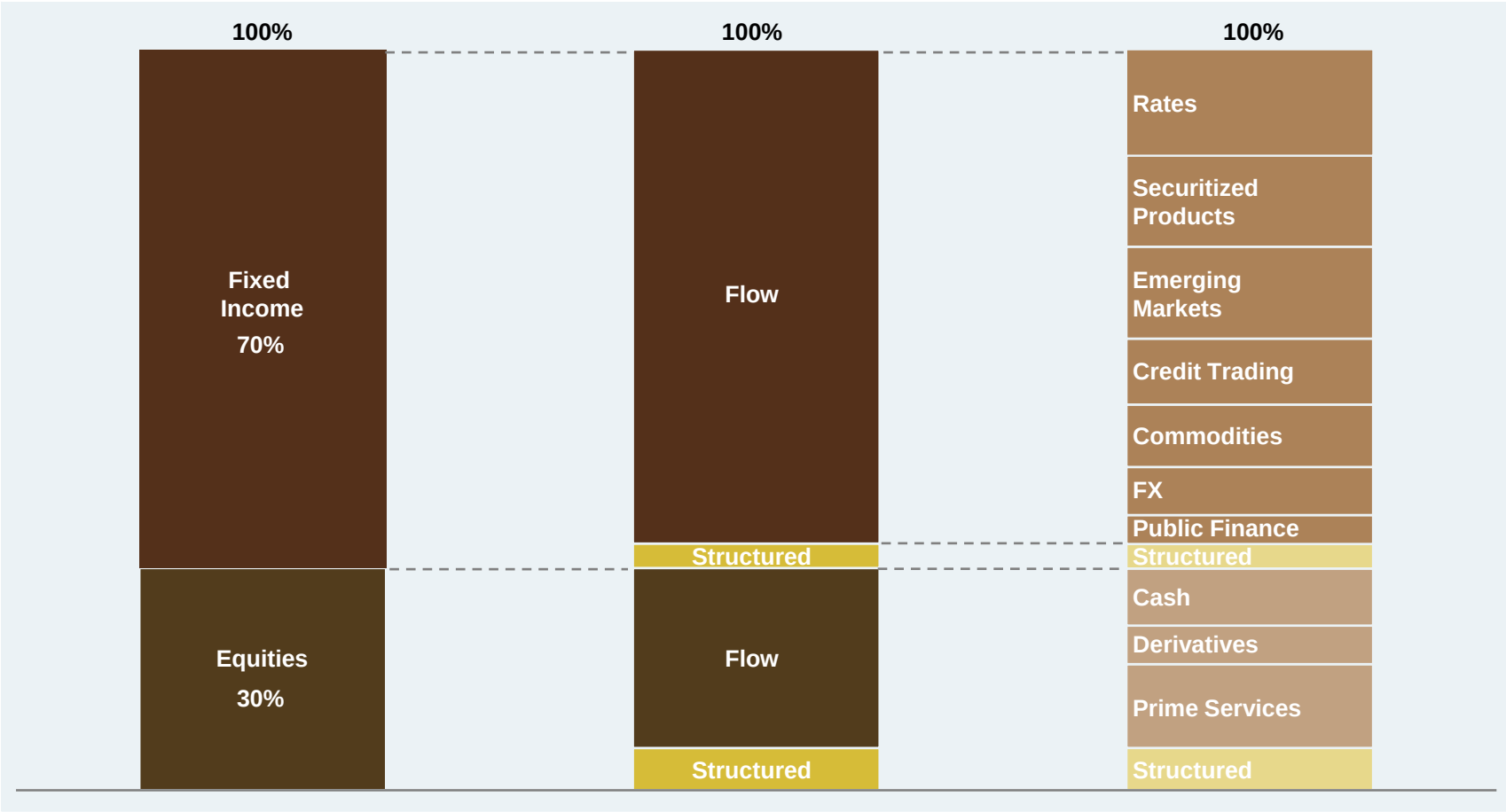
- M&A, Corporate Finance advisory
- Primary and secondary issuance
- Bond underwriting
- Loan syndication
- Treasuries, agencies, swaps, futures, options
- Mortgage and asset backed securities
- Non G-10 rates, credit, FX
- Corporate bonds, loans, credit swaps, index products
- Swaps, futures, options, physical transactions
- Spot foreign exchange swaps, futures, options
- Municipal debt trading and issuance
- Rates and credit
- High touch execution
- Low touch execution (electronic)
- Swaps, options, convertibles
- Financing, execution, clearing
- Margin financing, structured notes

Source: Dealogic, Coalition
Note: Coalition competitor set: BAC, BARC, C, CS, DB, GS, MS, and UBS
[1] Fixed Income and Equities ranking as of 3Q YTD 2011 (Coalition – Revenue); Banking rankings are FY 2011 (Dealogic – Volume)

Flow driven Markets business

Markets

IB Markets revenue: typical quarter (%)



High volume Markets business model with standardized products

Markets

	Examples of major trading products	Quantity per quarter (# of trades)	x	Average revenue ($ per trade)	=	Revenue per quarter ($mm)
Fixed Income	FX Spot/Forwards	5,000,000		70		350
	Credit Trading	250,000		1,500		375
	FX Options	150,000		600		100
	Metals Trading	140,000		600		75
	Financing	100,000		1,500		150
	Governments	75,000		2,500		200
	Energy Trading	50,000		5,000		250
	Interest Rate Swaps	30,000		12,000		350
	Asset Backed Securities	30,000		10,000		300
	Agencies	11,000		7,000		75
	Loan Trading	10,000		10,000		100
Equities	Cash Equities (N.A.)	10B shares		1.5 cents per share		150
	Cash Equities (EMEA/Asia)	$200B notional		8bps		175
	Equity Swaps and Options	6,000		30,000		200
	F&O and OTC clearing	350mm lots		40 cents per lot		150

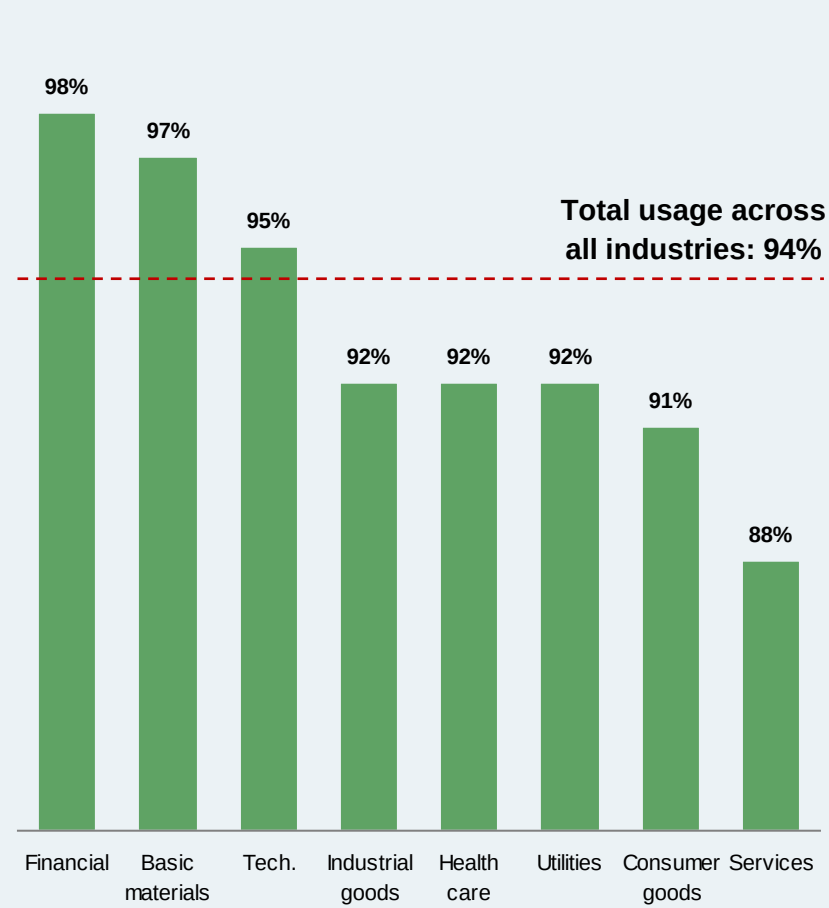
Note: Quantity, average revenue and total revenue are estimates based on typical quarter; revenue per quarter rounded

Over 90% of the Global Fortune 500 use swaps, futures, and options

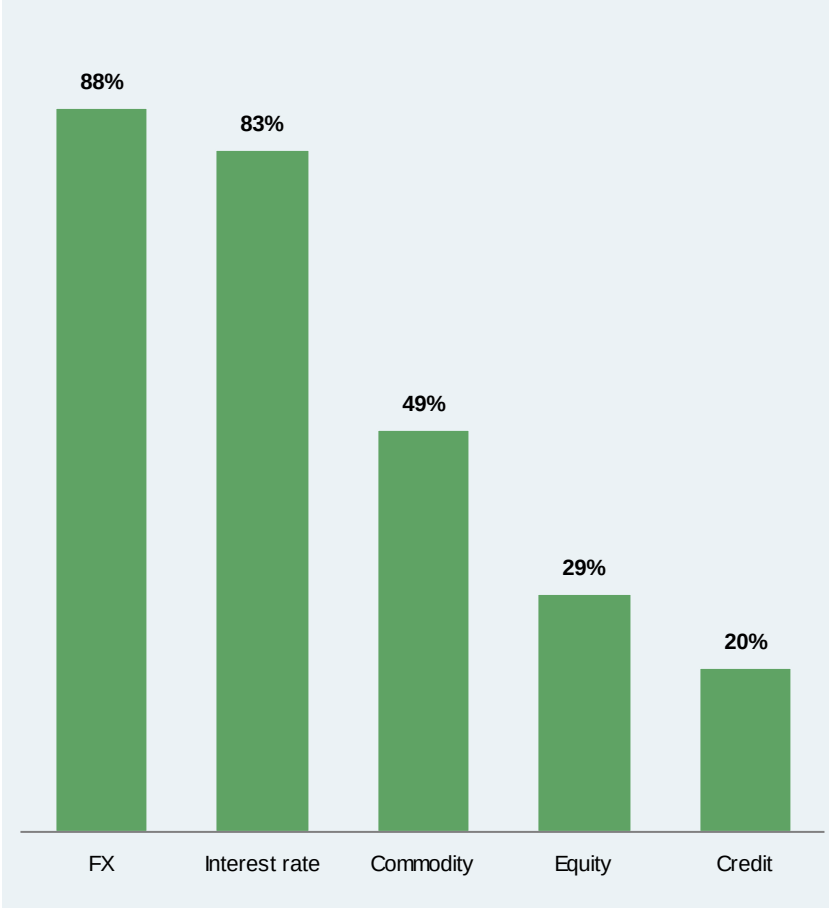
Markets

Global Fortune 500

Usage by industry



Usage by product

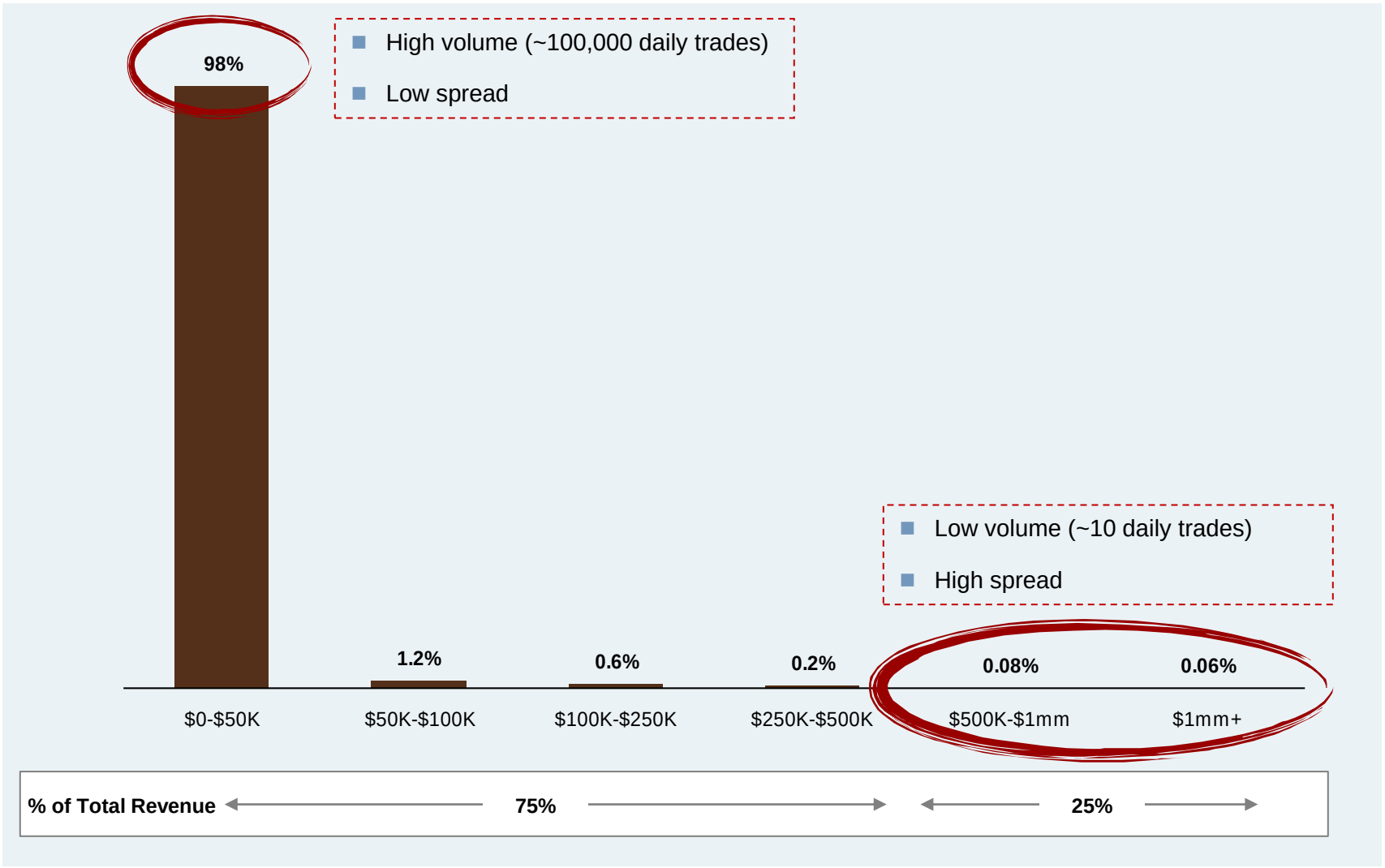


Source: ISDA 2009 Survey

Scale driven Markets business model

Markets

Estimated % of total client trades by average revenue per trade (FY 2011)

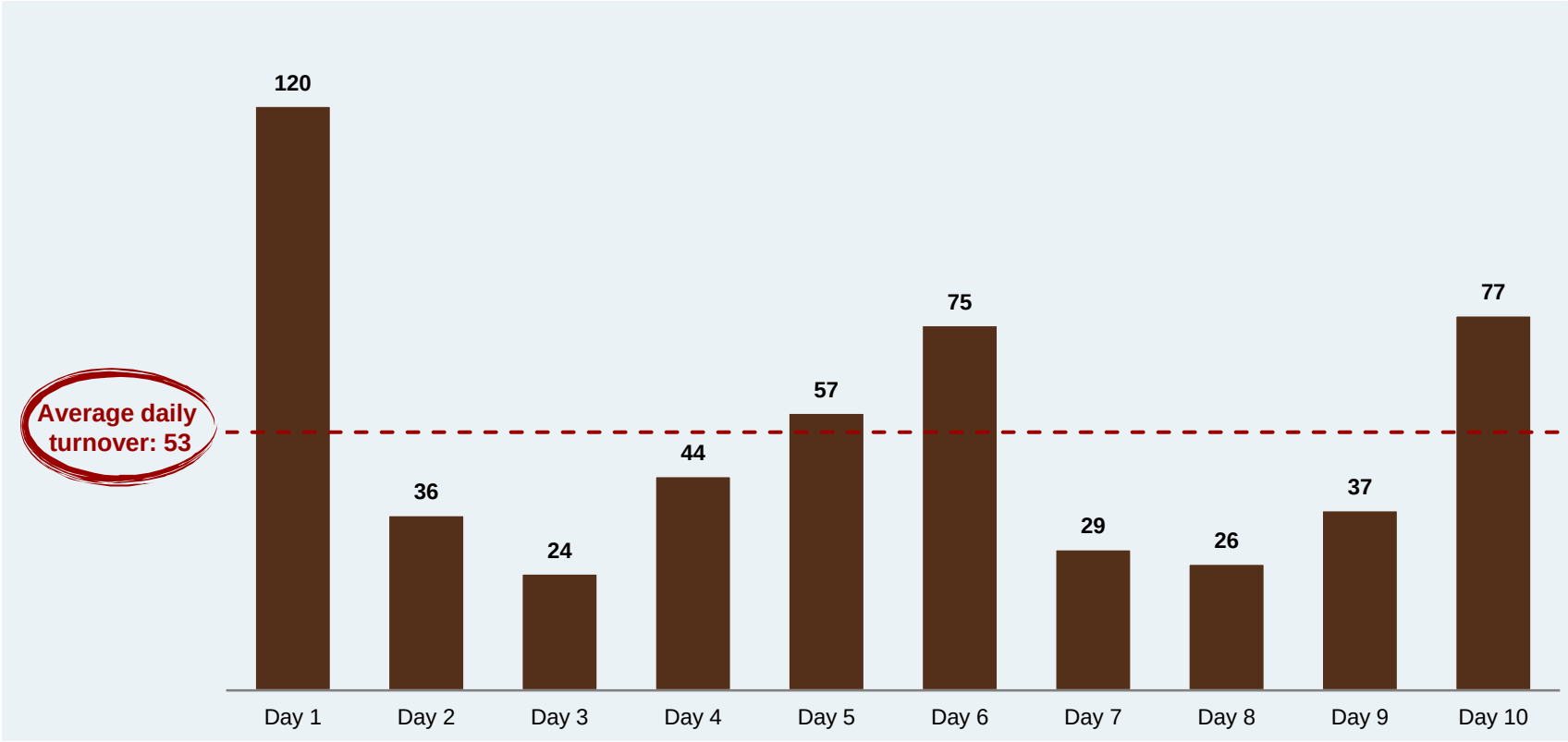


Note: Represents Fixed Income business

High turnover Markets business model

Markets

Case study – North America interest rate swaps daily turnover metrics



Client businesses carry little risk inventory and turn their positions multiple times a day

Note: Turnover defined as daily DV01 risk traded divided by starting DV01. DV01 is the risk position for a desk (amount of money desk makes or loses on a one basis point move in the yield curve); actual two-week period in 2011

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INVESTMENT BANK

Well positioned to adapt to regulation

Business highlights

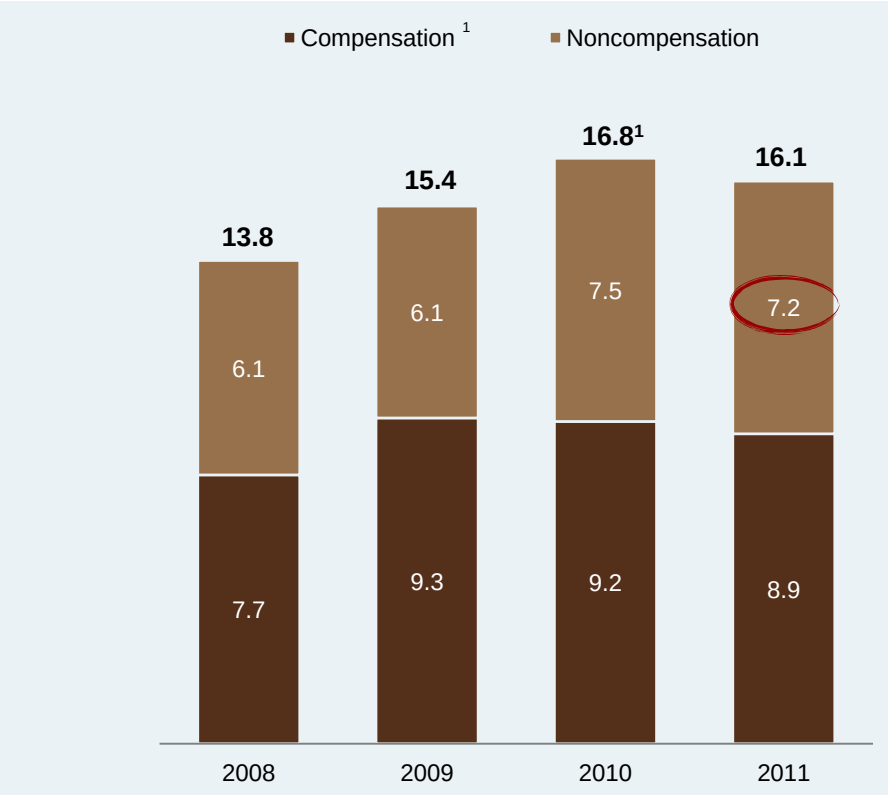
	Impact	Concerns	Strengths
Clearing and Swap Execution Facilities (SEFs)	■ Mandated clearing ■ Meaningful volumes ■ Lesser revenue impact	■ Unresolved: end-user margin/extraterritoriality ■ Concentration of exposure to central counterparties	■ Competitive advantage by being a scale player with existing connectivity and access to SEFs
Volcker	■ Ban on Bright Line proprietary trading ■ Immaterial revenue impact ■ Not a large business ■ Limits market making/hedging ability	■ Could limit liquidity ■ Clients ■ Markets ■ Compliance emphasis may impact costs	■ Long-track record of client-focused business model ■ Competitors may need to re-orient their businesses
Non-Bank Subsidiary (NBS) swap "push out"	■ Pushing-out portions of below investment grade CDS, equity and commodities derivatives ■ No significant revenue or capital changes expected	■ Complicates risk management ■ Extraterritoriality: potential impact to scope	■ Operational excellence: depth of experience managing complex migrations

Strong governance programs in place to address regulatory change: 500 people; 65+ projects

Expense discipline enables investment capacity

Business highlights

J.P. Morgan IB expense ($B)



Overhead ratio[2]	**NM**	**51%**	**65%**	**65%**
Comp/revenue[1,2]	**75%**	**31%**	**36%**	**36%**

Highlights

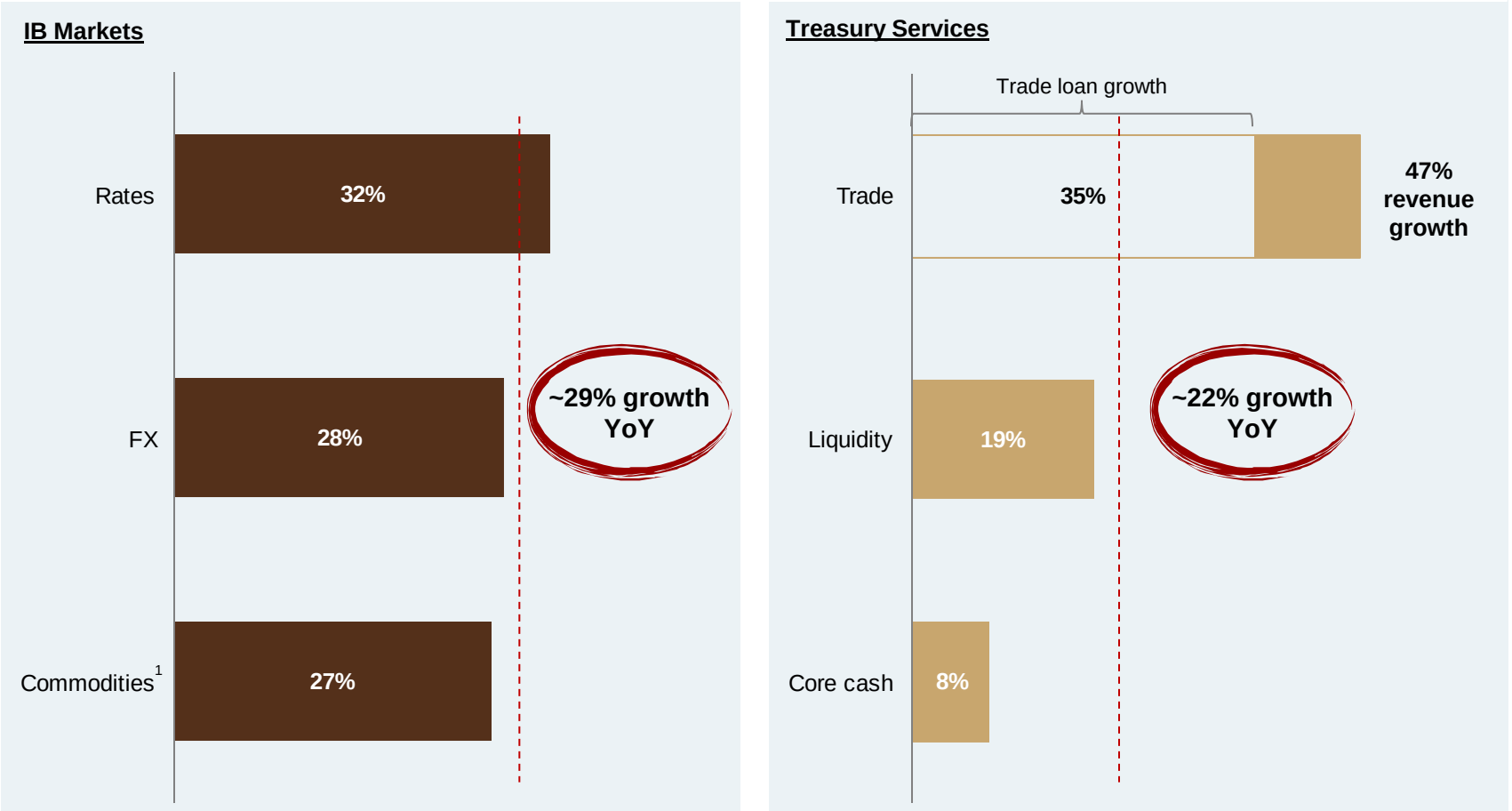
- Disciplined expense management
  - Total expense down 4%
  - Focus on operating efficiency
  - Best-in-class overhead ratio
  - Lowest comp/revenue ratio
- Continued investment capacity
  - Strategic Reengineering Project (SRP)
  - International expansion
  - Commodities execution
  - International Prime Brokerage
- Value for Scale
  - Synergies across wholesale businesses

[1] 2010 compensation expense excludes $0.5B of U.K. payroll tax
[2] Overhead and comp/revenue ratios exclude DVA impact

Global Corporate Bank: contributing to IB Markets and Treasury Services

Business highlights

2011 international revenue with corporates



[1] Excludes non-recurring items

Leveraging the J.P. Morgan platform

Business highlights

J.P. Morgan

Investment Bank

Leveraging the wholesale platform

Commercial Banking

- IB recognized fees for 147 debt and 77 equity deals for CB clients in 2011
- $1.4B gross revenue in 2011

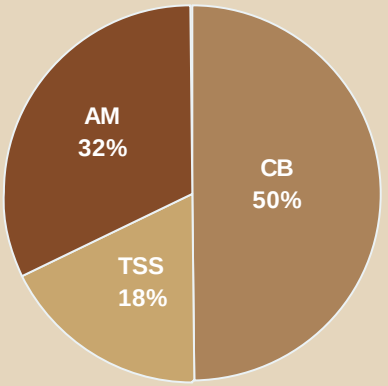
Treasury & Securities Services

- Expanded client coverage/footprint with Global Corporate Bank
- Increased credit extension and product penetration

Asset Management

- 41 new Private Bank clients from IB referrals
- 71 Private Bank referrals to the IB
- Expanding international referrals and syndication access

IB cross-LOB gross revenue share ($B)

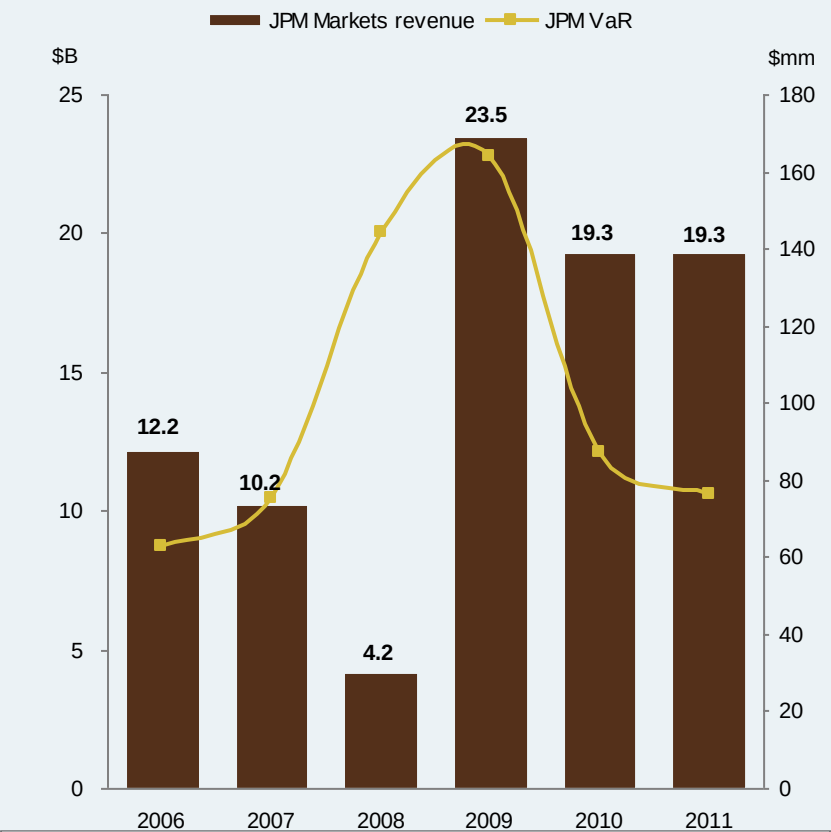


2011 total: $2.7B

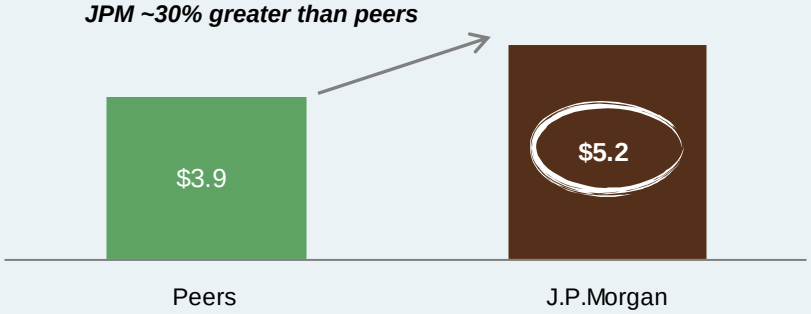
Proven risk management capability

Business highlights

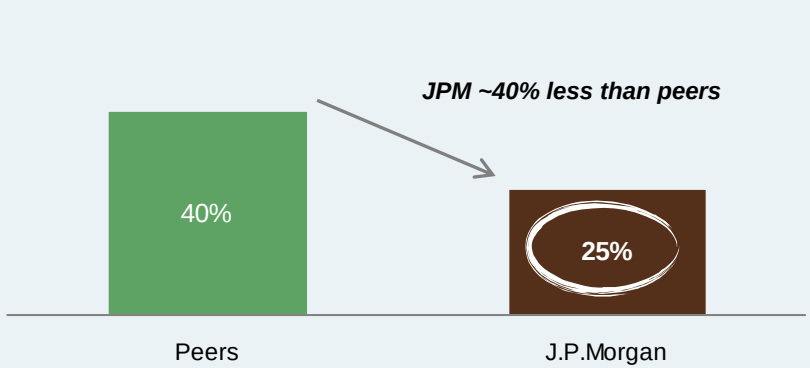
J.P. Morgan Markets revenue and VaR



Average revenue over past 12 quarters



Markets revenue volatility[2] of past 12 quarters



Note: Revenue excludes DVA; peers: BAC, BARC, C, CS, DB, GS, MS and UBS

[1] Estimated using public disclosure of top 10 competitors, including DVA

[2] Volatility equals standard deviation as a percentage of the period average

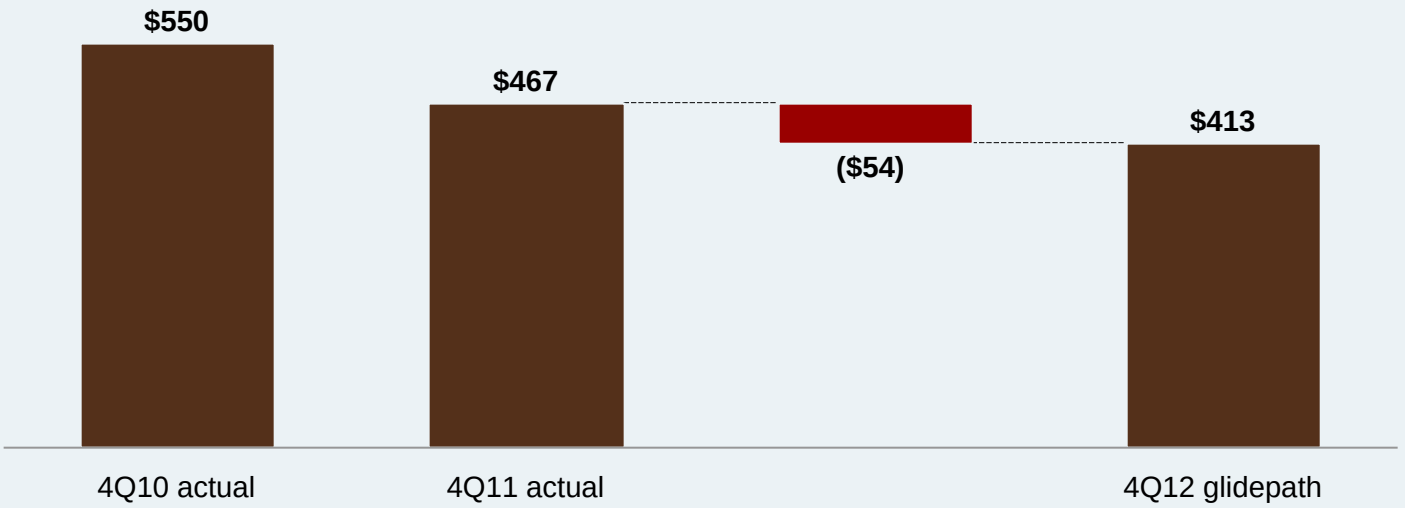
~30% higher revenue than peers with ~40% less volatility

Fortress balance sheet and prudent capital management

Business highlights

2012 walk forward ($B)

Risk Weighted Assets (based on Basel III)



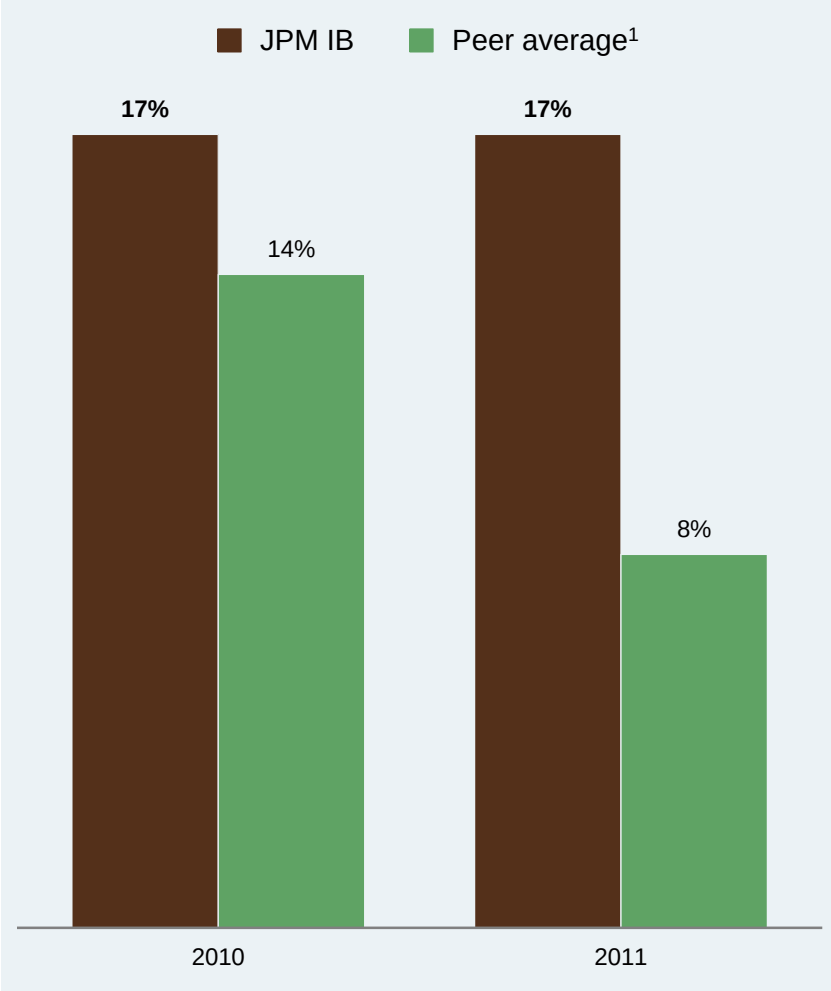
Allocated equity ($B)	**40**	**40**	**40**
Basel III Tier 1 common ratio	**7.2%**	**8.4%**	**9.5%**

Note: 2012 RWA reduction is a combination of legacy asset roll-off, risk adjustments, and continued RWA management discipline

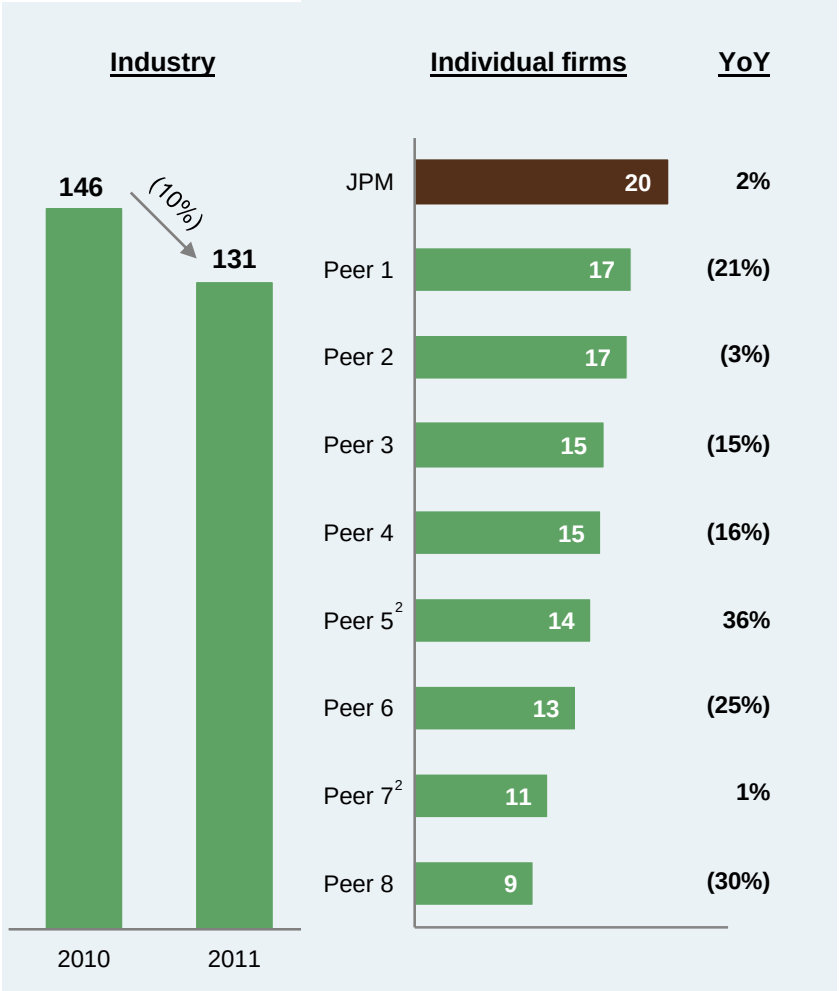
Consistency of results

Business highlights

JPM Investment Bank ROE vs. peers



Markets revenue (Equities and FICC, $B)



Source: Company filings

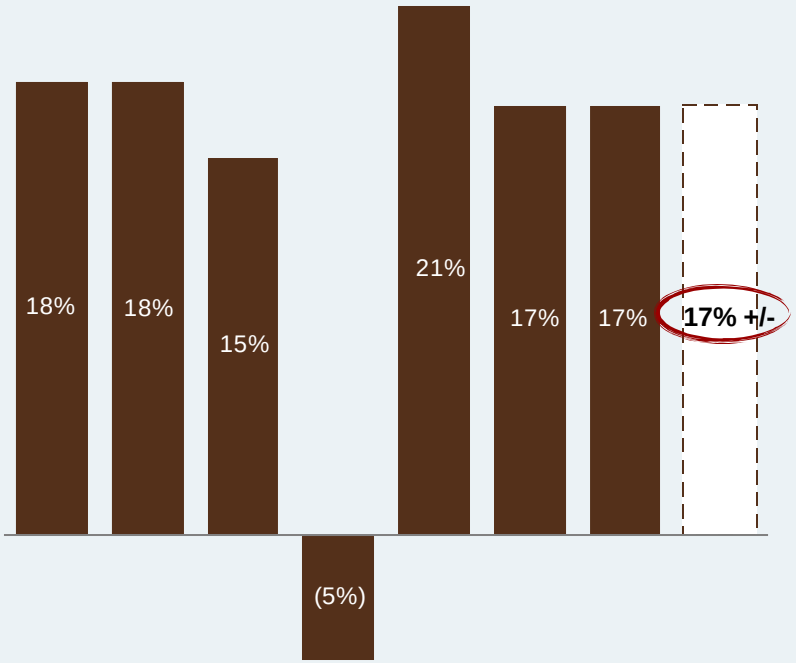
[1] Peer average ROE excludes firms without sufficient IB segment-level disclosure

[2] Adjusted for non-recurring items

Performance and outlook

Business highlights

J.P. Morgan IB ROE



Allocated capital ($B)	20	21	21	26	33	40	40	40

Outlook

- We are holding 17% target going forward
- Headwinds to consider
  - Regulatory burden
  - Global market uncertainty
  - Tougher RWA calculations
  - Sustained low interest rate environment
- Key drivers
  - Scale and diversity of franchise
  - Market leadership
  - Growth initiatives
  - Disciplined expense management
  - Strong capital position

JPMorgan Chase & Co.

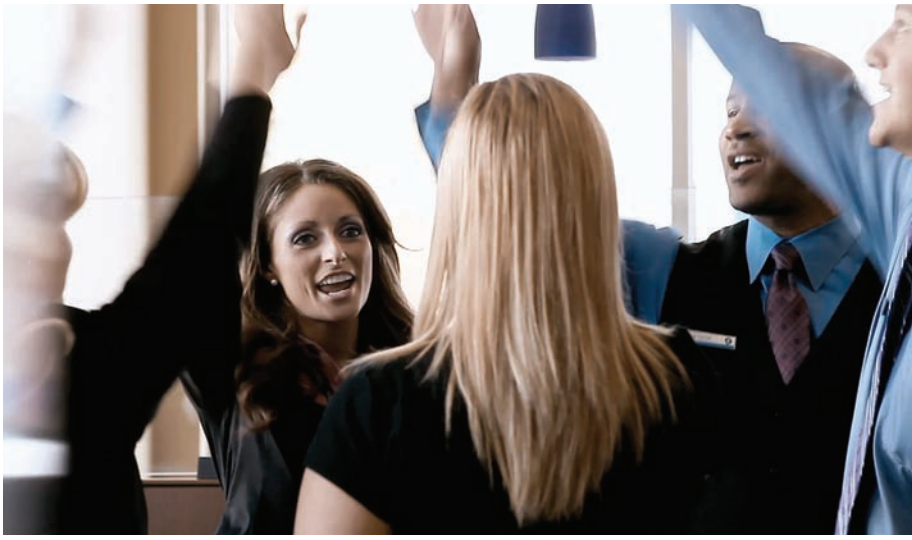
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REPORT
2012

WE ARE JPMORGAN CHASE
















Financial Highlights

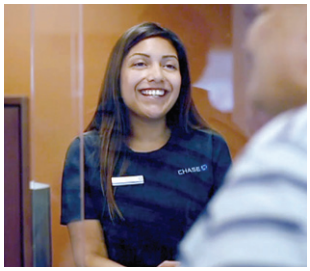
As of or for the year ended December 31, (in millions, except per share, ratio data and headcount)	2012	2011
Reported basis [a]		
Total net revenue	$ 97,031	$ 97,234
Total noninterest expense	64,729	62,911
Pre-provision profit	32,302	34,323
Provision for credit losses	3,385	7,574
Net income	$ 21,284	$ 18,976
Per common share data		
Net income per share:		
Basic	$ 5.22	$ 4.50
Diluted	5.20	4.48
Cash dividends declared	1.20	1.00
Book value	51.27	46.59
Tangible book value [b]	38.75	33.69
Selected ratios		
Return on common equity	11%	11%
Return on tangible common equity [b]	15	15
Tier 1 capital ratio	12.6	12.3
Total capital ratio	15.3	15.4
Tier 1 common capital ratio [b]	11.0	10.1
Selected balance sheet data (period-end)		
Total assets	$2,359,141	$2,265,792
Loans	733,796	723,720
Deposits	1,193,593	1,127,806
Total stockholders' equity	204,069	183,573
Headcount	258,965	260,157

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America, except where otherwise noted.

(b) Non-GAAP financial measure. For further discussion, see "Explanation and reconciliation of the firm's use of non-GAAP financial measures" and "Regulatory capital" in this Annual Report.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm and one of the largest banking institutions in the United States, with operations worldwide; the firm has $2.4 trillion in assets and $204.1 billion in stockholders' equity. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, asset management and private equity. A component of the Dow Jones Industrial Average, JPMorgan Chase & Co. serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands.

Information about J.P. Morgan capabilities can be found at jpmorgan.com and about Chase capabilities at chase.com. Information about the firm is available at jpmorganchase.com.






This past year, we took on a big task. We set out to produce a video that would capture the spirit of JPMorgan Chase. We are a bank. But we also are 260,000 people serving 50 million customers every single day. Those customers are companies, small businesses, families, countries and municipalities. And we serve the communities in which we live – in the United States, where we're based, and around the world.

We invite you, the owners of our company, to view this video on jpmorganchase.com/we-are-jpmorganchase. We call it "We Are JPMorgan Chase."

We think the video represents the company of which we are so proud to be a part. It tells the story of what we do through the eyes of the people we serve. Because we believe, it's not just about what we do but who we are and our clients, employees and the people we help.

We hope it makes you proud to own this company.

Dear Fellow Shareholders,



Jamie Dimon with employees in Ohio

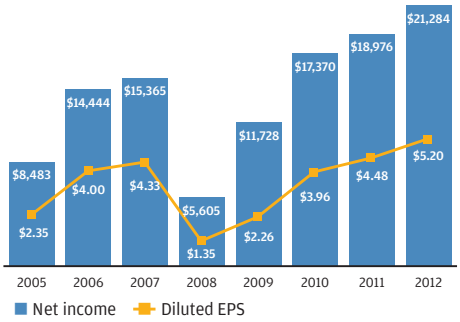
Your company earned a record $21.3 billion in net income on revenue of $97.0 billion in 2012. It was our third consecutive year of both record net income and a return on tangible common equity of at least 15%.

Our financial results reflected strong underlying performance across virtually all our businesses, fueled by strong lending and deposit growth. We also maintained our leadership positions and continued to gain market share in key areas of our franchise.

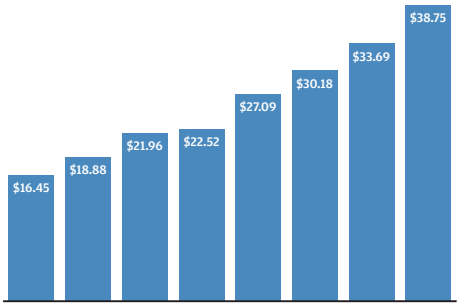
This financial performance has resulted in good stock performance. For Bank One shareholders since March 27, 2000, the stock has performed better than most financial companies and the Standard & Poor's 500 Index (S&P 500). And since the JPMorgan Chase & Co. merger with Bank One on July 1, 2004, we have had good performance vs. other financial companies and slightly worse performance than the S&P 500. The details are shown in the charts on the opposite page. One of the charts also shows the growth in tangible book value per share, which we believe is a conservative measure of value. You can see that it has grown far more than the S&P 500 in both time periods.

Earnings and Diluted Earnings per Share 2005 – 2012

($ in millions, except diluted EPS)



Tangible Book Value per Share 2005 – 2012



Stock and Book Value Performance

Stock Total Return Analysis

	Bank One	S&P 500	S&P Financials Index
Performance since becoming CEO of Bank One (3/26/2000 – 12/31/2012):[a]			
Compounded Annual Gain (Loss)	8.6%	1.4%	(1.0)%
Overall Gain (Loss)	185.1%	18.8%	(11.5)%

	JPMorgan Chase & Co.	S&P 500	S&P Financials Index
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004 – 12/31/2012):			
Compounded Annual Gain (Loss)	4.2%	4.8%	(4.0)%
Overall Gain (Loss)	42.0%	49.2%	(29.5)%

These charts show actual returns of the stock, with dividends included, for heritage shareholders of Bank One and JPMorgan Chase & Co. vs. the Standard & Poor's 500 Index (S&P 500) and the Standard & Poor's Financials Index (S&P Financials Index).

[a] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One.

Bank One/JPMorgan Chase & Co. Tangible Book Value per Share Performance vs. S&P 500

	Bank One (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since becoming CEO of Bank One (12/31/2000 – 12/31/2012):[a]			
Compounded Annual Gain	13.4%	2.6%	10.8%
Overall Gain	354.1%	36.3%	317.8%

	JPMorgan Chase & Co. (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004 – 12/31/2012):			
Compounded Annual Gain	15.4%	4.8%	10.6%
Overall Gain	237.2%	49.2%	188.0%

Tangible book value over time captures the company's use of capital, balance sheet and profitability. In this chart, we are looking at heritage Bank One shareholders and JPMorgan Chase & Co. shareholders. The chart shows the increase in tangible book value per share; it is an after-tax number assuming all dividends were retained vs. the S&P 500 (a pre-tax number with dividends reinvested).

[a] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One.

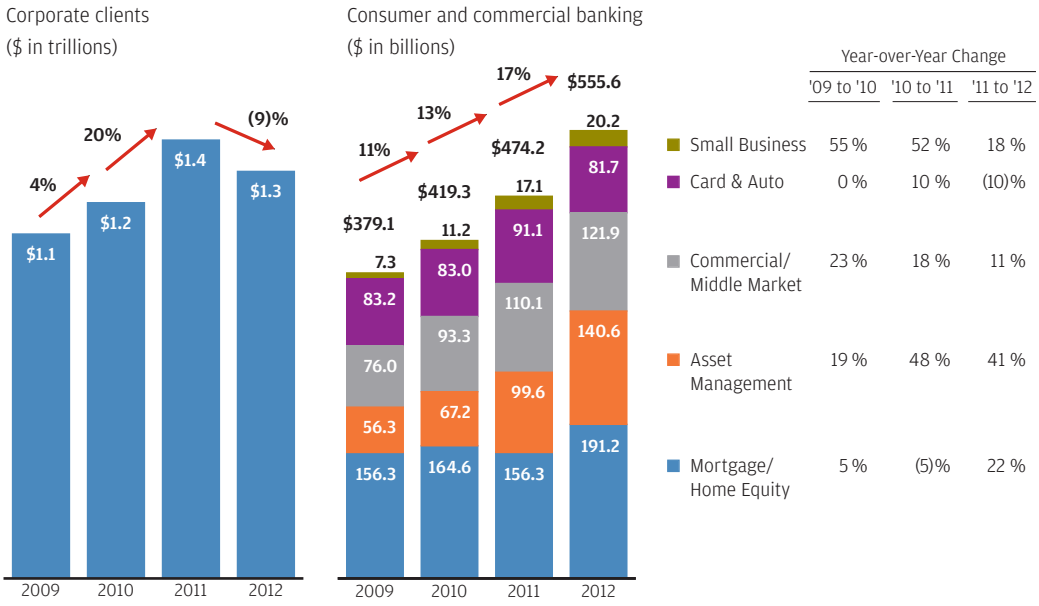
For the better part of this decade, during a time of tremendous challenges, our company has been doing great things. During this period of economic volatility, social and political change around the world, growing social needs and constrained government resources, our work matters more than ever.

Today's global economy is exciting and dynamic, but it also can be tough and confusing. To survive and succeed, companies small and large need to innovate and learn to do business in markets around the world; big cities are becoming even bigger, as are the challenges they face, with millions of residents needing basic services; workers must continually update their skills and adapt to changing technologies and global competition; and average families require tools and support to navigate a complicated financial landscape and successfully secure a good mortgage, manage a household budget, and invest in their retirement and future.

These issues are critically important. How we all deal with them will define the U.S. and global economies for decades to come. And as much as any other company, JPMorgan Chase is positioned to help individuals, businesses of all sizes, governments, nonprofits and other partners seize the opportunities and respond to the challenges of our times. We can do it because of the strong company we have built — global in reach, with outstanding people, expertise, capabilities, relationships and capital at the scale required to do big things.

During the course of 2012, JPMorgan Chase provided credit and raised capital of over $1.8 trillion for our clients. This included $20 billion for small businesses, up 18%. We also originated more than 920,000 mortgages; provided credit cards to 6.7 million people; and raised capital and provided credit of approximately $85 billion for nearly 1,500 nonprofit and government entities, including states, municipalities, hospitals and universities. And we continued to stand by our European clients — both corporations and governments — as they were facing economic stress and challenges. As part of the 100,000 Jobs Mission we helped launch in early 2011, we have hired nearly 5,000 U.S. military veterans and members of the National Guard and Reserve; and, through our nonprofit partners, we have provided mortgage-free homes for 386 deserving veterans and their families.

New and Renewed Credit and Capital for Our Clients



Through the turbulence of recent years, we have consistently earned a fair profit for our shareholders, and we have never stopped serving clients and investing in the future of our franchise — opening new offices and branches, adding bankers in key markets, innovating and gaining market share. Our capital strength and earnings power are as strong as they have ever been. Challenges still exist, and there's always room for improvement, but as we head into 2013, we remain proud of these accomplishments and are optimistic about the future.

There are a few things, however, that occurred this past year that we are not proud of. The "London Whale" episode not only cost us money — it was extremely embarrassing, opened us up to severe criticism, damaged our reputation and resulted in litigation and investigations that are still ongoing. I will discuss this incident in more detail in the first section of this letter. Additionally, we received regulatory orders requiring improved performance in multiple areas, including mortgage foreclosures, anti-money laundering procedures and others. Unfortunately, we expect we will have more of these in the coming months. We need to and will do all the work necessary to complete the needed improvements identified by our regulators.

In this letter, I will discuss the issues highlighted below. I am not going to cover the updates on our business units as the Chief Executive Officers (CEO) of those businesses have provided individual updates, and I encourage you to read their letters as well.

Your company takes its responsibilities quite seriously. We are doing big things at a time that calls for just that. We will continue to do so. And we will not let the challenges we face today undermine our intention to deliver to the next generation of shareholders, customers, employees and communities a better, stronger JPMorgan Chase capable of doing more good than ever before.

As usual, this letter will describe some of our successes and opportunities, as well as our challenges and issues. The main sections of the letter are as follows:

I. Our control and regulatory agenda is our top priority (and some lessons learned from the "London Whale")

II. A frank assessment of where our country and the world are today — the opportunities and challenges

III. JPMorgan Chase faces the future with a strong hand

IV. We are using our unique capabilities to do even more for our clients and communities

V. Our people are our future — how we are developing and retaining our leaders

I. OUR CONTROL AND REGULATORY AGENDA IS OUR TOP PRIORITY (AND SOME LESSONS LEARNED FROM THE "LONDON WHALE")

I would like to deal with some of our problems right up front. Our biggest problem of the year – the "London Whale" Chief Investment Office (CIO) issue – has been widely chronicled. Unfortunately, we also fell short on multiple control issues highlighted by the regulatory consent orders that we received. (Consent orders may be given to a bank when a regulator determines that the bank fails to meet proper standards – and they demand improved procedures.) Our consent orders came not only from the CIO issue but also around mortgage foreclosures and anti-money laundering practices.

Let me be perfectly clear: These problems were our fault, and it is our job to fix them. In fact, I feel terrible that we let our regulators down. We are devoted to ensuring that our systems, practices, controls, technology and, above all, culture meet the highest standards. We want to be considered one of the best banks – across all measures – by our shareholders, our customers ***and*** our regulators.

We also must prepare to comply with all the new regulatory requirements. These include not just the several hundred rules coming out of Dodd-Frank but the capital and liquidity rules coming out of Basel and the new rules coming out of Brussels, the United Kingdom's Financial Services Authority and other regulatory bodies around the world. Additionally, we must meet many new reporting and stress testing requirements. And we must meet all of these requirements in short order.

We absolutely believe that our bank and our regulators share a common goal: to ensure a strong, stable banking system that can help our economy grow.

Satisfying all the regulatory requirements will take diligent, sustained effort and will touch every part of the company

Our shareholders should understand that the mandate to meet all the new regulatory requirements requires extensive changes in our business practices. These new rules will touch almost every system, every legal entity, every product and every service that we have across the company. To give you one example, we are enhancing systems to manage risk-weighted asset and liquidity requirements all the way down to the specific asset and the specific client.

It also is possible that we will need to make changes to our legal entity structure and our capital structure to comply with the new rules relative to subsidiaries, orderly resolution and living wills.

We are committed to making the necessary investments in our risk, credit, finance, legal, compliance, audit, technology and operations staff to change systems, reporting and practices to meet all the regulatory changes.

Our control agenda is now priority #1 – we are organizing and staffing up to meet our regulatory obligations

We are making our control agenda priority #1. To do so, we are re-prioritizing our major projects and initiatives, deploying massive new resources, and dedicating critical managerial time and focus to this effort. We also will be making changes in our organizational structure to ensure we get this done properly and quickly.

For this reason, we have established a new Firmwide Oversight & Control Group that is separately staffed, reporting directly to our Co-Chief Operating Officers (co-COO). The group has the authority to make decisions top down, in command and control fashion, similar to the way we operate when we undertake a major acquisition.

We have asked every line of business in the company to appoint a business control officer to report jointly to the line of business CEO and the Firmwide Oversight & Control Group. In addition, every major enterprise-wide control initiative (we have more than 20 of them) will be staffed with program managers and oversight group managers, including our COOs. Each initiative also will have an Operating Committee member responsible for its success. This structure will enable the control groups to have immediate access to the right people, make decisions quickly and have the resources to get any issues fixed.

Our Operating Committee members also will be meeting regularly with our regulators to share information and hear from them directly about any criticisms they may have. We are approaching this entire effort with the same level of rigor and discipline we bring to everything we do, from major mergers to large-scale re-engineering programs. The goal of this effort – to have a strong, effective control environment across the company – is what makes this huge investment of time and resources worthwhile.

We must and will do a better job at compliance

We are dramatically strengthening how we carry out our compliance mission, including significantly increasing our compliance staff over the last three years. The letter on the opposite page → was sent out in early March to all our employees and shows you how seriously we are taking the effort.

We and our regulators have a common interest to build and sustain a strong and safe financial system

Significant progress has been made in building a safer financial system since the financial crisis. There is far more capital and liquidity in the global banking system. The new stress tests will be instrumental in ensuring that the financial system is sound and that each and every bank has an extremely low chance of failure. This is a good outcome. We all saw how bad a financial crisis can be – and none of us want to see it again. In addition, many of the root causes of the crisis have been addressed. For example, most off-balance sheet vehicles are gone, standards are in place to improve mortgage underwriting, leverage everywhere in the system is lower, and very few risky and exotic derivatives are being used. Additionally, both Board-level and regulatory oversight is more exacting for all financial firms.

We also share a common interest in eliminating "too big to fail," and we believe the new authorities under Dodd-Frank for orderly liquidation and living wills create the conditions to eliminate too big to fail. Clearly, more work needs to be done, but we are collaborating closely with the regulators to accomplish this goal. Because when it is done, the market, regulators and politicians should have confidence that big banks can be bankrupted in a way that does not damage the economy and is not paid for by taxpayers.

JPMorgan Chase & Co.

Message from the Operating Committee

March 5, 2013

Dear colleagues –

When it comes to complying with the rules and regulations that govern our industry and our company, there is no room for compromise. We must always and will always follow not only the letter but the spirit of the law. As many of you have heard Jamie say (on multiple occasions): There is no piece of business, no deal, no revenue stream that is more important than our obligation to act responsibly, ethically and within the rules.

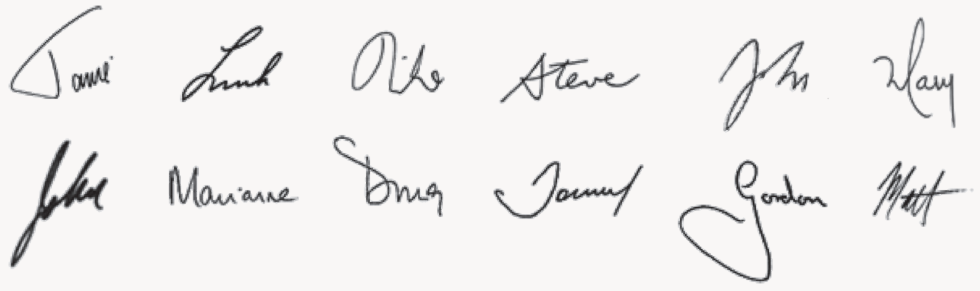
While every company makes mistakes, the hallmark of a great company is to learn from them and to continually grow and improve. And that is precisely what we have committed ourselves to do. We will meet that commitment, and every other commitment we have made to our regulators. We are devoting substantial resources to that effort – in the form of improved systems, new project plans, and good old-fashioned sweat and hard work.

Compliance isn't just the province of our Compliance Department or other control functions; it is everyone's responsibility. ALL of us, from our technologists to our traders, from our loan officers to our tellers, from our security guards to our securities salespeople, from our call center personnel to our portfolio managers, are guardians of the company's reputation and accountable when it comes to following the rules.

There are 260,000 employees of this company working to serve more than 50 million customers – individuals, companies, governments and nonprofits – every day. All of you do remarkable work to help our customers achieve their goals. Remember that in everything we do, all of us must live by the following values:

1. Most important, treat our clients like you would a member of your own family. If you see a product feature you wouldn't feel comfortable selling to a relative, then we shouldn't be selling it to our clients, either.
2. Know the rules that apply to you, your business and your activities. If you don't know or you're unsure what those are, ask.
3. Follow those rules to the letter. But following them to the letter isn't enough. Understand the "why" behind them and live within their spirit as well as their letter.
4. If you have any doubt about something you or someone else is doing, say something – to a colleague, to your manager, to Compliance, to Audit. And you can always call our Employee Hotline – which is staffed 24/7 and is available to our employees everywhere we do business around the globe.
5. Good compliance requires constant vigilance. Sometimes products change, and sometimes standards evolve.
6. Don't assume someone else is taking care of fixing the problem across the company. Follow up, follow up, follow up to ensure your partners in other businesses can benefit from what you've learned.

We are so proud of what we do, day in and day out, for the clients and communities we serve. Thank you for all of your efforts every day to work on this. Together, we can make this company even stronger in the future.



We learned — or were painfully reminded of — hard lessons from the London Whale problem

It's impossible to look back on the past year and not talk about the London Whale. Let me be direct: The London Whale was the stupidest and most embarrassing situation I have ever been a part of. But it is critical that we learn from the experience – otherwise, it truly was nothing but a loss. I also want our shareholders to know that I take personal responsibility for what happened. I deeply apologize to you, our shareholders, and to others, including our regulators, who were affected by this mistake. Here are some of the lifelong lessons we either learned (or were painfully reminded of) from the CIO problem.

Fight complacency

Complacency sets in when you start assuming that tomorrow will look more or less like today – and when you stop looking at yourself and your colleagues with a tough, honest, critical eye. Avoiding complacency means inviting others to question your logic and decisions in a disciplined way. Even when – and especially when – things have been going well for a long time, rigorous reviews must always take place.

Originally, the synthetic credit CIO portfolio (begun in 2007) was meant to help protect the firm's overall credit exposure by offsetting losses in the event there was a credit crisis. It worked and essentially accomplished its intended objectives for many years. In late 2011, we asked the CIO team to reduce the portfolio for a variety of reasons. It was at this point that a new strategy was devised, which actually added to the risk. This new strategy was flawed, complex, poorly reviewed, poorly executed and poorly monitored. Given the portfolio's success over time, we had become complacent, and we weren't as rigorous and skeptical as we should have been.

Overcome conflict avoidance

Sometimes people don't ask hard questions because they want to avoid conflict. That cannot be the way we operate. Confronting people when necessary or asking hard questions is not an insult. It doesn't mean you lack collegiality or don't trust the individual. In fact, asking hard questions is what we owe one another to protect ourselves from mistakes and self-inflicted wounds.

Risk Management 101: Controls must match risk

Controls, risk limits and authorities should be appropriate to the kind of activity being conducted. We should have had more and very specific rules and requirements around the synthetic credit portfolio – but we didn't. Tighter and more appropriately specific limits could have caught the problem earlier and reduced its impact.

I know we will always make mistakes – that is unavoidable. What we continually strive for is to keep those mistakes small and infrequent. I certainly hope the London Whale is the largest mistake I am ever a part of.

We had a gap in our fortress wall. For a company that prides itself on risk management, this was a real kick in the teeth. You can rest assured we are focused on learning the right lessons, putting the right people and controls in place, and doing everything we can to prevent something like this from happening again.

Trust *and* verify

That's why we have a risk committee framework within the firm with extremely detailed reporting and many other checks and balances (like reputation committees, underwriting committees and others) to make sure we have a disciplined process in place to question our own thinking so we can spot mistakes before they do real damage. Our employees on risk and other committees are expected to ask questions, raise concerns and ensure that corrective action is taken – that is their job. Verifying does not mean you don't have trust – it's an acknowledgment that we operate in a tough and complex world.

Problems don't age well

To paraphrase some good advice, if you see anything that doesn't look right, raise your hand and say something. We tell our people to escalate problems early so we can bring more resources to bear on solving them. And we don't blame the messenger here. Those who highlight problems are doing this firm a great service.

Continue to share what you know when you know it

On April 13, 2012, when we were announcing our earnings, we made some unfortunate statements, including my "tempest in a teapot" comment. At the time, everyone involved thought we had a small problem – nothing more. Several weeks later, when it became clear that we were dead wrong, we made an unusual and embarrassing public statement disclosing our mounting losses and communicating how wrong we had been just a few weeks earlier. We were right to share that information at that time.

We also said we would give shareholders and investors much more information on July 13, 2012, when we would be announcing 2Q12 earnings. We did just that, and, after reviewing tens of thousands of emails, reports and phone call tapes, we also restated our 1Q12 earnings. In the meantime, the company continued its extensive review, guided by the Board of Directors, and the Board independently conducted its own review as well. Both these reviews were made public in January of this year. All the recommendations from both reports have been or are in the process of being fully implemented.

After finding out about the extent of the CIO problem, we started to actively reduce the risk in the synthetic credit portfolio. We told our shareholders that we hoped it would be a non-issue by the end of 2012, and it basically was. Today, the risk is a fraction of what it was. We have transferred the remaining positions to the Investment Bank, which is well-suited to manage these exposures. We no longer maintain a synthetic credit portfolio in CIO.

Mistakes have consequences

You also should know that we took strong action with those who were directly and indirectly involved. We replaced the management team responsible for the losses, we invoked comprehensive clawbacks of previously granted awards and/or repayment of previously vested awards for those with primary responsibility (more than $100 million was recaptured), we reduced or eliminated compensation for a group of employees, and your Chief Executive Officer and Chief Financial Officer saw their compensation reduced by the Board as a result of this embarrassing episode.

Never lose sight of the main mission: serving clients

When I realized the severity of the problem, I was completely aware that in addition to the financial loss, the regulatory, media and political pressures would be extreme – on me personally, on the senior management team and on the entire company. Much of this was deserved (and, believe me, we were our own toughest critic). I knew we would solve the CIO problem, but I worried that it would have an impact on our employees throughout the firm, their morale and their ability to stay focused on serving our clients. It would have been a terrible shame if the CIO problem was allowed to damage the rest of the company and detract from all the good things we do. Fortunately, that didn't happen. Our people, to their great credit, continued to do their jobs, serving our clients and keeping the company on track – while those charged with fixing the CIO problem mitigated the impact and managed the exposure down.

When the going got tough, we learned what the people of JPMorgan Chase are made of — and they made us proud

In this time of need, hundreds of our senior employees volunteered to step in and help. They worked around the clock, seven days a week, for many months to try to fix this problem and limit the damage. We can't thank them enough. A company built on individuals like that is built to last.

We will be a port of safety in the next storm

We are fully committed to strengthening our company by working with our regulators and being in full compliance with the spirit and letter of the law. Eventually, when this effort is done, it will make us an even stronger company. We want the public, our regulators and our shareholders to have confidence that we are ***the safest and soundest bank on the planet***.

When the people of JPMorgan Chase put their collective minds and muscle behind something, what we're capable of accomplishing is extraordinary. This is the company that was able to buy Bear Stearns and Washington Mutual and assimilate them – an enormously complex job of managing risk, systems and people – in less than a year.

JPMorgan Chase was a port of safety in the last storm – a source of strength, not weakness, for the global economy. We tried to do things to help – and sometimes took bold actions to do it. In prior Annual Reports, we told you we cannot promise you results but that we do promise you, among other things, consistent effort and integrity. In that spirit – I make this promise: ***We will be a port of safety in the next storm***.

II. A FRANK ASSESSMENT OF WHERE OUR COUNTRY AND THE WORLD ARE TODAY – THE OPPORTUNITIES AND CHALLENGES

The five years since the financial crisis began have been a time of turmoil and rapid change for countries, companies, individuals and your company. Your company survived, and even thrived, as we served our clients. But global economies still are not strong, large regulatory changes are looming and banks have been subjected to extreme criticism. Here is an honest assessment of where we are, both good and bad, and how your company is working to be successful in the future.

The needs of the global economy are large and still growing

All the issues since the financial crisis will not stem the growing needs of countries, companies and individuals over time. That growth will be in global multinationals, in large infrastructure projects and in global cross-border capital flows – all increasingly in the emerging markets. Consider the following:

- World gross domestic product (GDP) is projected to grow an average of 5% per year through 2017, from $71 trillion in 2012 to $93 trillion in 2017.
- Keeping pace with global GDP growth will require an estimated $57 trillion in infrastructure investment between now and 2030 – this is 60% more than the $36 trillion spent over the past 18 years.
- Emerging economies are likely to account for 40% to 50% of this infrastructure spending.
- The growth in the value of the world's exports – an average rate of 11% per year between 2001 and 2011, from $7.7 trillion to $22.4 trillion – will continue, if not accelerate.
- Global cross-border capital flows have grown by over four times in the last two decades, from $1 trillion in 1992 to $5 trillion in 2012. While these flows have slowed down recently, they, more likely than not, will continue to increase in the future.
- Foreign direct investment grew as a share of total global capital flows over the last five years, from 22% in 2007 to 38% in 2012. This trend is likely to continue as well.
- In 1990, only 19 of the world's top 500 multinationals were from developing countries, and by 2012, that number had increased to more than 125. Also, by 2012, 32% of global capital flows – vs. 5% in 2000 – went to emerging economies. Among emerging economies, China and India will account for the greatest number of new multinationals over the next 15 years.
- A majority of the world's population now lives in urban areas for the first time in history, and by 2050, that number is expected to grow to 70%. This mass urbanization will create cities on a scale beyond what most of the world has seen. Providing the infrastructure and clean water, schooling, healthcare and social safety nets (to name just a few) to anticipate, accommodate and sustain this growth will be hugely challenging.
- Total global financial assets of consumers and businesses were $219 trillion in 2011 and are projected to grow at a compound annual growth rate of 6% through 2020 to roughly $370 trillion.

Banks – large global banks with broad capabilities designed to serve the needs of global clients in particular – will be essential to meeting these large, growing and complex needs.

We must be vigilant – we operate in a challenging and complex part of the global economy

Today, our firm serves clients in more than 100 markets around the world. To support those clients, we move up to $10 trillion a day and lend or raise capital of nearly $500 billion a quarter. The markets we operate in cover 5.6 billion people who speak over 100 languages and use close to 50 currencies. Our firm provides support to these clients 24 hours a day, 365 days a year – across all time zones.

The speed of markets and the constant application of new technology are increasing exponentially. While this has provided some positive outcomes, including lower costs and greater ease of use, it also creates additional risks and problems – from cybersecurity to "flash crashes."

History reminds us that there always have been, and always will be, so-called "black swans." Some are out in the open – like the turmoil in the Middle East, the Eurozone crisis and the potential for nuclear proliferation in unstable parts of the world. Others – ranging from natural disasters to man-made events – will surprise us, and we must be prepared for those as well. These black swans occur throughout history, from the recent unexpected change in government in Egypt and other spots in the Middle East back to 1914, when the world slipped into World War I due to the domino effect of multiple defense treaties.

Keeping in mind the changing geopolitical and economic events that can render any static analysis irrelevant, I do want to share some thoughts about the situations in Europe and the United States.

Europe is making progress, but it remains a serious issue

Europe has made progress in solving its issues. Italy and Spain have moved forward with their austerity programs, the European Central Bank has made powerful commitments to maintain sovereign debt and bank liquidity, and the Eurozone has taken meaningful steps to advance its banking union. The key European leaders appear devoted to doing whatever they need to do in order to save the Eurozone and the euro.

However, it still is going to be a very complex and prolonged challenge. There will be many months when things seem safe and sound, but we should not be lulled into a false sense of safety. At a minimum, this serenity will be disturbed by elections, disputes, policy shifts and unforecasted events as these 17 nations try to resolve some very complicated issues over several years. It will be a long and winding road.

We all are rooting for them to succeed and are actively trying to help. But we also need to be prepared for potential bad outcomes while continuing to support our clients and the governments and people of Europe.

The U.S. economic situation is getting better

The current economy in the U.S. is fairly healthy. Companies, both large and small, are in increasingly better shape – margins are high, and leverage is low. The banking system has largely recovered, and the capital markets, for the most part, are wide open. Nearly 5 million more people are employed today than four years ago, and the population is still growing by 3 million people a year. Consumers' debt service ratio; i.e., the amount of income needed to service their debt, which peaked at 14.09% in 2007, now is down to 10.30% – back to its ***lowest*** level since 1980, when the ratio first was calculated. Housing has turned the corner, and we have been blessed with new discoveries in oil and gas.

Good public policy could create even stronger growth – uncertainty has become the norm. Political gridlock and the inability to craft and pass even a "baby bargain" (although we all would have preferred a "grand bargain") have left the future fiscal situation untenable and future tax policies unclear. Then you add in a debt ceiling crisis and fiscal cliff scenario – you get my point. Confidence, which usually is the secret sauce for the economy, for both individuals and companies, gets eroded. All this is impeding our ability to grow as fast as we could and should.

The solutions actually are well-known. What we need is good old-fashioned collaboration and compromise. Growth will lead to more jobs and, we hope, more prosperity for all.

The United States still is in an extraordinarily good position

If you look past the immediate economic situation and the recent financial crisis and take stock of the overall picture, the United States is in a great position. Let's look at our outstanding strengths:

- The United States has the world's strongest military, and this will be the case for decades. We also are fortunate to be at peace with our neighbors and to have the protection of two great oceans.
- The U.S. has among the world's best universities and hospitals.
- The U.S. has a reliable rule of law and low corruption.
- The people of the United States have a great work ethic and "can do" attitude.
- Americans are among the most entrepreneurial and innovative people in the world – from those who work on the factory floors to the geniuses like Steve Jobs. Improving "things" and increasing productivity is an American pastime. And America still fosters an entrepreneurial culture where risk taking is allowed – accepting that it can result in success or failure.
- The United States is home to many of the best businesses on the planet – from small and middle sized to large global multinationals.
- The United States also has the widest, deepest, most transparent and best financial markets in the world. And I'm not talking about just Wall Street and banks – I include the whole mosaic: venture capital, private equity, asset managers, individual and corporate investors, and the public and private capital markets. Our financial markets have been an essential part of the great American business machine.

All Americans today benefit from what our forefathers struggled to build – from democracy itself to what is still the best economy in the world. We benefit from the hundreds of trillions of dollars that have been invested over the centuries in research and development, in public infrastructure and in our companies. When my grandfather was born in 1897, there was nothing that resembled the healthcare and technology of today – there were no cars, planes, phones, TVs or computers. Technology and exponentially growing human knowledge are like the energy of "dark matter" – it is everywhere – and it will drive productivity and growth for decades. I have little doubt that a hundred years from now, there will be new technologies that, today, we never could have imagined.

While the wounds of the financial crisis still are healing and too many Americans still are struggling, the country actually may be in ***a better position today than it has ever been in***. In fact, Americans born today hold a far better hand than Americans who were born 50 or 100 years ago – we all clearly stand on the shoulders of all those who came before us.

America, however, does not have a divine right to success

Great potential and past glory do not guarantee future success. This is true for companies, and it is true for countries. America does not have a divine right to success – we have some serious issues to address. Our immigration policy is flawed. We have yet to find a way for law-abiding but undocumented immigrants to stay in this country. And it is alarming that approximately 40% of those who receive advanced degrees in science, technology, engineering and math at American universities are foreign nationals with no legal way of staying here even when many of them would choose to do so.

We need five- to 20-year intelligent infrastructure plans (electrical grids, roads, tunnels, bridges, airports, etc.) for our cities, states and federal government. We also need better opportunities for all our citizens, and that can't happen when 50% of our high school students in the inner cities fail to graduate. And without rational, long-term fiscal policy, including cost-effective reform

of our entitlement programs – it will not be possible to establish a proper safety net and to create the incentive for consumers to responsibly take care of their health. It also is time to reform both the individual and corporate tax codes, which are confusing, inefficient and costly. Our corporate tax policies are, at the margin, driving capital overseas, just as, at the margin, our immigration policies are driving brainpower back overseas. The good news is that all these problems are known, and they are solvable. Fixing these issues would greatly increase American prosperity for decades. I also suspect it would improve income equality, a cherished American ideal.

While the U.S. political system appears to be in deep gridlock today, it always has been able to find its way forward. America has exhibited extraordinary resiliency through its darkest moments – and I wouldn't bet against her today. The future is extremely bright, but we are still going to have to ***earn it***.

Expansionary global fiscal and monetary policies may create additional potential risky outcomes

Governments around the world, partially but not entirely due to the crisis, generally have been spending more money than they take in. And central banks, mostly as a reaction to the global financial crisis, essentially have been

CYBERSECURITY BECOMES AN ISSUE OF GLOBAL IMPORTANCE AND IS CRITICAL TO OUR COMPANY

Cybersecurity is a critical priority for the entire company, from the CEO on down. Cybersecurity is increasingly becoming more complex and more dangerous. Originally, fairly simplistic computer hackers, often taking over other people's personal computers, would do things like "phish" for personal information, hoping to steal some money or simply try to wreak havoc by slowing down the ability of consumers to get into our sites (these generally are called denial of service attacks).

The new efforts often are state sanctioned and coordinated, using hundreds of programmers and frequently taking over servers and other powerful computers to orchestrate their attacks. The new attacks are more complex, more sophisticated and faster, operating at speeds and volumes thousands of times greater than a few years ago. These attacks are meant to disrupt service to hurt the American economy, steal money or rob intellectual property.

Serving our clients and keeping their information safe is our key priority – we will stand behind our clients, and they will not be responsible for any losses from this malicious activity. We are actively engaged and will devote any and all resources to protect ourselves, our clients and our country – but we must confess that this issue worries us. Each year, JPMorgan Chase spends approximately $200 million to protect ourselves from cyberwarfare and to make sure our data are safe and secure. This number will grow dramatically over the next three years. More than 600 employees across the firm are dedicated to the task. And this number likely will grow as well.

In addition to protecting our perimeter (people trying to get into our systems from the outside), we are beefing up our processes to monitor and detect internal threats. We increasingly limit access to high-risk systems and monitor activities that could indicate problems. We also are increasingly monitoring related third-party systems (e.g., exchanges, etc.) to make sure their protections are adequate.

Managing cybersecurity threats requires collective action. Hackers always will seek the weakest links in the network chain. So in addition to making sure there are no weak links within the JPMorgan Chase systems, you can rest assured that we are working closely with the appropriate government agencies and with other businesses to continue to enhance our defenses and improve our resiliency to the cybersecurity threats facing many industries. I recently met with President Obama and a small group of CEOs from various companies to discuss the issue of cybersecurity. The government is in the best position to see all the attacks on businesses – not just the ones we see – and to continue to help businesses adjust defenses and enhance their cybersecurity.

creating money (called Quantitative Easing) to keep rates low and foster a stronger recovery. For the most part, these policies have helped the world economy recover – particularly in the United States. But this medicine is untested, and it may have severe aftereffects. This especially is true if fiscal policy makes it increasingly harder for central banks to slowly remove some of the monetary stimulus. Good fiscal policy and any policies that create growth will make the central banks' job easier. Higher interest rates and a little bit of inflation won't matter much if we have strong job growth, good profitability and general prosperity.

We don't know the outcome of all these efforts. While it is entirely possible that we will manage through the process without too much suffering, there also are some fairly coherent arguments that suggest there could be significant negative consequences. We cannot ignore this possibility and must safeguard against unintended and adverse outcomes. One such scenario would be rapidly raising rates without strong growth. In the recent past, in 1994 and 2004, interest rates, both short term and long term, rose about 300 basis points within approximately a one-year period. In 1994, such action was unexpected, and it caused real damage for many who were unprepared (i.e., the failure of Orange County and significant financial losses at several financial and non-financial institutions). In 2004, the increase in rates was more expected – institutions probably had additional tools at their disposal to manage it, and the damage was far more limited.

Although we are not predicting it, we need to be prepared for rapidly rising rates, potentially even worse than we have seen in recent history. One of the ways we do this is to position our company – if all things are equal – so we can benefit from rapidly rising interest rates. As we currently are positioned, if rates went up 300 basis points, our pre-tax profits would increase by approximately $5 billion over a one-year period. Remember, however, that all things are not equal, and that $5 billion of improved income should be looked at as an additional cushion to protect us from other bad outcomes. You should know that it costs us a significant amount of current income to be positioned this way. But we believe it is better to be safe than sorry.

The needs of our clients are substantial and growing

In the years to come, the needs of our clients and customers will not only grow but will become more global and complex. This includes companies' needs for financing – loans, equity, debt and trade – and strategic advice; investors' needs for execution, research and best prices; and individuals' needs for asset management, mortgages, credit and financial advice. Lots of things ***will*** change – products, pricing, new technologies – but the needs of our clients for our services and advice will be as strong as ever. Our bank is uniquely positioned to help clients benefit from those opportunities and overcome those challenges. The following examples highlight just how large those needs will be:

- Our issuer and investor clients will have large and growing capital and investing needs in the future. McKinsey estimates that corporate equity and debt issuer demand could grow 25%-30% over the next five years, while global investor client demand could grow 20%-25% by 2017. These needs will drive real underlying growth of the corporate and investment banking business. JPMorgan Chase is in the ***sweet spot*** because much of the growth will be with our clients – large, often multinational companies, government-related entities and large global investors. Our role as an underwriter of securities, as a provider of payment services and as a market maker places us right in the center of key money flows.
- Opportunities for businesses to grow globally never have been greater. More and more companies of all sizes are conducting business cross border. Even in our U.S. Middle Market business, international expertise is becoming an essential service. All these companies need the right partner – and one with global capabilities and perspective – as they enter unfamiliar territory.

- At the same time, Chinese companies are looking for opportunities in the United States; Brazilian companies are looking at India; Indian companies are looking at Europe; European companies are looking at Africa; and so on. Our global network serves all their needs – inbound, outbound and locally.
- Outstanding loan balances for small and mid-sized enterprises are projected to grow at 6% a year through 2020, from $2.2 trillion in 2012 to $3.5 trillion in 2020. At JPMorgan Chase, loans to middle market companies have grown from $34.2 billion in 2009 to $50.7 billion in 2012 – a compound annual growth rate of 14%.
- Investable assets for high-net-worth individuals globally rose from $33 trillion in 2008 to $42 trillion in 2011 – up nearly 9% on a compound annual growth rate. These assets are projected to grow at an average annual growth rate of about 6% through 2020. We serve this market and, over the past few years, have increased our market share by 13%.
- U.S. consumer financial assets have grown an average of 6% per year over the last decade, from $27 trillion in 2002 to $50 trillion in 2012. McKinsey estimates U.S. consumer financial assets will continue to grow at a similar rate through 2020.
- The ways in which U.S. companies and individual consumers use financial services – beyond traditional products – also are increasing. Examples include depositing a check by taking its picture, moving funds around the world with the push of a button, banking via the smartphone and utilizing person-to-person payment tools.

While the global environment is challenging and complicated, we are fairly confident that the number of clients who need our services, and the services they need, will continue to grow over time.

III. JPMORGAN CHASE FACES THE FUTURE WITH A STRONG HAND

While we do operate in a tough world with huge, growing competitors and rapidly changing regulations and technologies, we enter the arena with a strong hand, built up over hundreds of years. One could not easily replicate the extraordinary reach and capabilities of JPMorgan Chase.

We have extraordinary relationships developed over decades

JPMorgan Chase does business with 5,000 issuer and 16,000 investor client accounts around the world. More than 50 million consumer households rely on Chase for their banking needs as do 2.2 million middle market and small businesses in the United States. They trust us, they are happy to see us, and they value our ideas and assistance. That's why they do a lot of business with us. The average corporate client uses four of our products and services, the average consumer uses eight of our products and services, and the average middle market company uses nine. These numbers have been growing over time, and we expect the trend to continue as our product set expands, our network extends, and the ease and cost of doing business with us improves over time.

Each of our businesses is among the best in its field — *and* each gains strength from being part of the whole

Every single one of our businesses is growing, is strongly profitable and is a formidable competitor. Each is a leader in its respective field. Our individual businesses also get competitive advantages from being a part of the whole – each business is able to offer more products, at a lower cost, to more clients. The evidence is in the cross selling that takes place across the company – we estimate that approximately $14 billion of revenue comes from cross selling and synergies across the businesses. Presumably, customers buy additional products from us because they choose to do so, finding it easier and less costly. We are able to deliver that value at lower costs due to our purchasing power and the highly efficient use of global data networks, data centers and other operating systems. We estimate that this represents a $3 billion cost efficiency benefit. All our businesses also benefit from our wonderful brand.

There are reasons that our businesses are grouped together, and the proof is in the results. We believe one of the reasons we have strong financial performance is that we can use these cross-selling and efficiency benefits to give the customer more while also earning a reasonable return for our shareholders. If those reasons ever cease to exist – as evidenced by our customers choosing alternative products and services – we obviously would make appropriate adjustments to our business strategies.

At our recent Investor Day on February 26, 2013, we made extensive presentations about each of our businesses and discussed where we think our competitive advantages lie. These presentations are found on our website and at the following link: investor.shareholder.com/jpmorganchase/presentations.cfm.

We have maintained a fortress balance sheet — and we generate plenty of capital to invest

JPMorgan Chase ended the year with a Basel I Tier 1 common ratio of 11.0% compared with 10.1% at year-end 2011. The company estimated that its Basel III Tier 1 common ratio was approximately 8.7% at year-end 2012.

A fortress balance sheet to us is strong capital, liquidity and margins. We also believe in conservative accounting, rapid recognition of problems and strong risk management, including quality clients and good underwriting, among other criteria. Policies and principles like these protect the company in all types of weather.

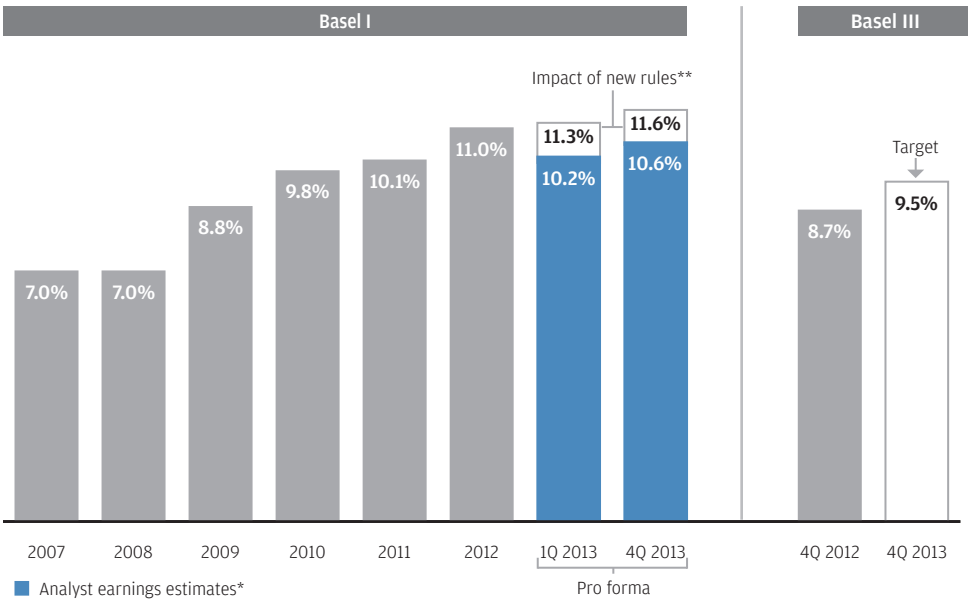
Our fortress balance sheet, including our strong return on capital, provides us with excess capital to invest, and we always are thinking way ahead about the best ways to deploy it. As we have said in the past, after steadily increasing dividends, our favorite deployment is in growing our businesses. After investing in the growth of our businesses, we look at other ways to use the remaining excess capital. One use we consider is buying back stock – but only at a price we think is good for shareholders.

In March, we passed the Federal Reserve Board's Comprehensive Capital Analysis and Review (CCAR) stress test, which allows the firm to increase the dividend (the Board of Directors intends to increase the dividend to $0.38 per share effective in the second quarter of 2013 – where it was before the crisis) and to repurchase an additional $6 billion of common equity. The equity buyback plan is less than half of what it was last year because we would like to get to our target Basel III Tier 1 common ratio of 9.5% by the end of 2013.

We are strong believers in proper stress testing – we do hundreds of stress tests each week, primarily on our market-sensitive positions and on multiple different scenarios as well. And while we passed the Federal Reserve Board's CCAR stress test (the Federal Reserve Board did not object to our proposed capital distribution plan), we were asked to submit an additional capital plan by the end of the third quarter addressing the weaknesses identified in our capital planning process. Following its review, the Federal Reserve Board may require us to modify our capital distributions. We are dramatically increasing the resources deployed and hope to successfully address all the weaknesses identified. As in everything else, we will strive to be best in class in the CCAR stress test.

In recent years, the company has been able to grow its business, increase its dividend, buy back stock ***and*** materially increase its capital ratios (which, as you can see in the chart below, are much stronger – particularly if they are applied on a consistent basis).

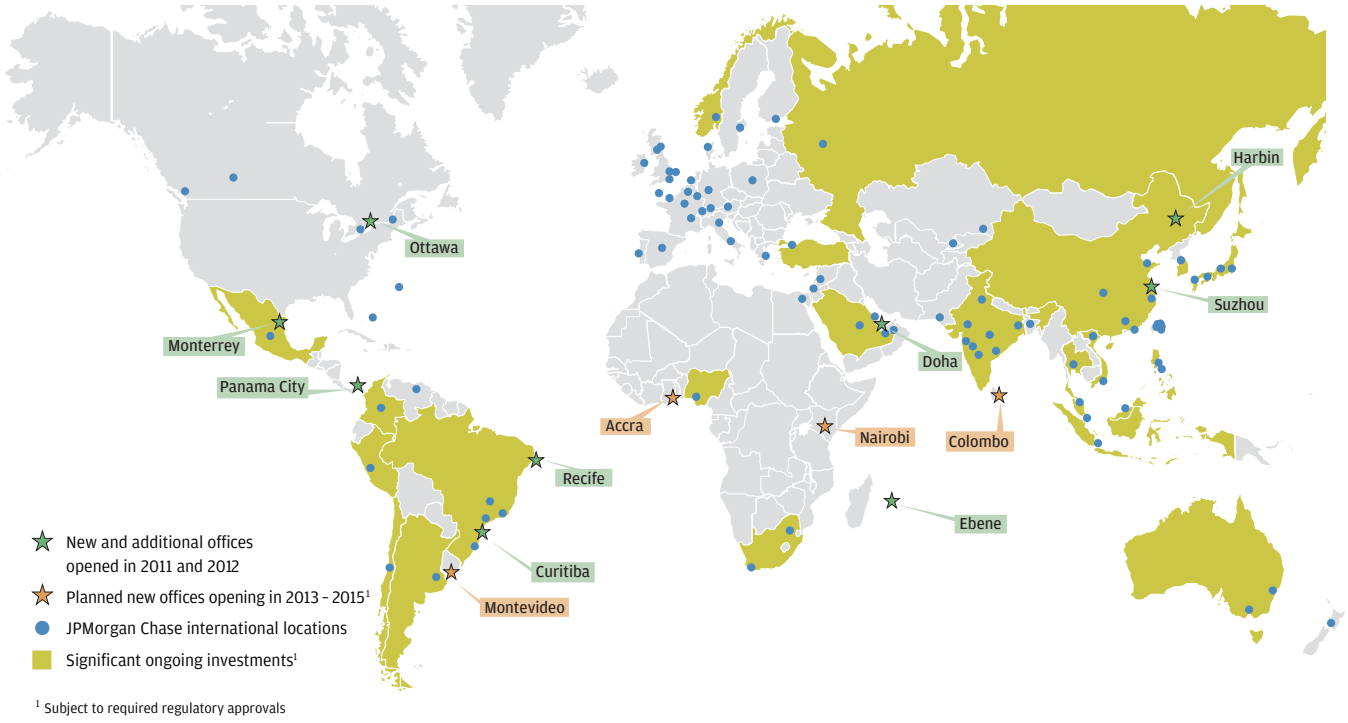
JPMorgan Chase Capital Levels



* Assumes analyst estimates for net income, dividends and share repurchases

** New market risk rules (Basel 2.5) came into effect 1/1/13

We Are Expanding Our Global Platform



[1] Subject to required regulatory approvals

The investments we've made in the past few years have and will continue to drive results

The most important thing we can do with our capital is to invest in ways to grow our company, building great, long-term profitable businesses. We work hard to use our capital wisely. We generate enough capital to be able to invest at scale and on a continual basis.

For example, in the last five years, we have built more than 800 new Chase branches, and since 2011, we added 1,200 Chase Private Client locations. We also have added about 770 small business bankers and hired approximately 500 Private Bank client advisors and approximately 300 Investment Management salespeople and investors since the beginning of 2010. And we have hired approximately 400 people in the Global Corporate Bank, which includes about 185 bankers, since the end of 2009.

We continue to grow internationally. In 2012, we opened a new wholesale branch in Russia and our seventh branch in China – bringing our total to 102 wholesale branch and office locations worldwide (non-U.S.) (see map).

We continually roll out new products. For example, this past year, in Consumer & Community Banking, we launched Chase Liquid℠, a great new prepaid product with no hidden fees; one low, flat cost; and unmatched flexibility in giving consumers cost-free access to Chase ATMs and branches, direct deposit and other services traditionally associated with regular bank accounts. We also continue to increase the customers using our new credit card products, including Chase Sapphire℠ and Chase Freedom℠ for consumers and Ink℠ for small businesses. In Asset Management, we consistently introduce investment products. And in our Corporate & Investment Bank, we finished building Access, a sophisticated new global cash management product for sophisticated corporations.

These investments enable us to extend the benefits of the products and services we provide and to attract new clients and revenue at a fraction of the fixed and overhead costs. And they create a "network effect," which enables us to serve clients in multiple locations. These investments should drive results for years.

We are efficient and already have a good return on tangible equity

Even after our investments in the future, we delivered a healthy 15% return on tangible common equity. We already have a fairly efficient cost structure – each business is competitive in its field. And we try to maintain good expense discipline; i.e., eliminating bad expenses (that are not productive) but keeping good expenses (e.g., training, new systems, etc.). Just because we don't announce new major expense reduction initiatives with fancy names does not mean we are not watching expenses like a hawk. We are continuously driving costs down.

We have extraordinary capabilities – technological, risk and credit, and deep knowledge, among others

We have 20,000 programmers, application developers and information technology employees who tirelessly keep our 31 data centers, 56,000 servers, 22,000 databases, 325,000 physical desktops, virtual desktops and laptops, and global networks up and running. We spend over $8 billion on systems and technology every year.

Additionally, we have nearly 6,500 professionals on approximately 120 trading desks in 25 trading centers around the world; these professionals include more than 800 research analysts who educate investors on over 4,000 companies and provide insight on 40 developed and emerging markets. These professionals provide our investor clients with research expertise, advice and execution capabilities to help them buy and sell securities and other financial instruments. We also rely on approximately 4,000 risk and credit officers to manage our various exposures, including the $3.4 billion of new lending we extend on average every day and the $1 trillion we trade and settle every day.

We have deep knowledge about global markets, countries, economies and policies. We know a tremendous amount about our clients and their needs, and you'll be hearing more in future years as we increasingly use Big Data to manage risk, offer our clients more targeted products and services, and give them additional information to make thoughtful decisions.

We have strong and capable global management

The individuals who manage our global businesses are exceptional. Our senior leadership team – more than 300 strong – is experienced, knowledgeable and capable. These individuals have significant tenure at the company, are based around the world and are globally savvy. And (we are working to increase these statistics) 25% are women, and about 20% are ethnically diverse. These managers are thoughtful and mature, and they focus on getting things done and done right. They work together and share the decision-making process, tapping the group's collective wisdom to deal with issues. It's wonderful to watch. It is as good a team of senior leaders as I've ever had the privilege to work with.

I truly believe you are an owner of one exceptional company.

IV. WE ARE USING OUR UNIQUE CAPABILITIES TO DO EVEN MORE FOR OUR CLIENTS AND COMMUNITIES

Our global presence and scale enable us to understand what is happening in the world and to use that knowledge and our capabilities to support our clients and communities.

We never will lose focus on the reason we are here: to serve our clients

We at JPMorgan Chase – from your CEO to each and every individual around the world – never will forget that we are here only because we have clients to serve. All our resources, both directly and indirectly, are brought to bear to help our clients achieve their objectives. We want our clients to get the full benefit of our capabilities. When we do that, the outcome benefits our clients, as well as our company. And that contributes to the broad-based, global economic growth that is needed to address the biggest challenges the world faces. This is how JPMorgan Chase does our part – person by person and community by community.

Periodically, all businesses need to reorganize to set themselves up for continued success. As the global environment rapidly changes, we also must evolve and position ourselves to best serve our clients and benefit from emerging trends and opportunities for growth. We always want to see the world from the point of view of the client – that is generally the best way to look at any business.

We reorganized our global wholesale business around our clients to better serve them

Our Investment Bank and Treasury & Securities Services and Global Corporate Bank businesses serve many of the same corporate and investor clients, and we believe our decision to combine these units creates the strongest and most complete institutional client franchise in the industry. The scope includes more than 50,000 employees serving approximately 7,600 clients in over 100 markets globally. Approximately 80% of Fortune 500 companies are our clients.

Our new global coverage teams are more coordinated and comprehensive in how they serve the client. A shared balance sheet can deliver credit to clients where, when and how they want it. The combination also enables our business to manage risk, capital, credit and liquidity on a client-by-client basis, which is a ***necessity*** in the new regulatory environment.

The scale with which we operate – arranging $450 billion of syndicated loans for clients, processing up to $10 trillion a day in transactions around the world, etc. – cannot be met by most banks. Even many of our U.S.-based middle market companies use our services internationally to grow their businesses. In fact, 58% of our middle market clients are active in global markets today, and 26% have operations in foreign countries. These numbers are substantially higher than a decade ago. Governments and government entities deposit huge sums of money with us – again, this cannot be handled by small banks. And our size enables us to invest in new products and services, as well as in infrastructure and technology. It also gives us the resources to accommodate all the new regulatory demands, including new clearinghouses and new reporting requirements.

Ultimately, we expect this new organization to make it easier for clients to do business with us, to increase the revenue and cross selling that we do with each client while reducing the cost of serving each client.

J.P. Morgan brings its breadth to help major clients

Time and again, J.P. Morgan has shown the ability to deliver its scale and broad cross-market capabilities to support clients in carrying out their strategic growth plans. In February 2013, J.P. Morgan advised 3G Capital and Berkshire Hathaway on their acquisition of the iconic H.J. Heinz Company

for $28 billion. J.P. Morgan was the first call 3G and Berkshire made to secure the necessary financing, knowing we had the wherewithal to quickly commit to a $12 billion debt transaction. A few months earlier, J.P. Morgan stepped up for Freeport-McMoRan Copper & Gold Inc. As the sole underwriter of a $9.5 billion financing, Freeport-McMoRan was able to launch its proposed acquisition of Plains Exploration & Production Company and of McMoRan Exploration Co., two complementary transactions totaling $20 billion. The acquisitions add oil and gas businesses to Freeport-McMoRan's global mining portfolio.

We enable major companies to accomplish their strategic objectives. Not many banks can undertake these types of large and complex transactions.

We invest for the long run, and we manage risk accordingly

JPMorgan Chase plays the long game, and we are not a fair weather friend. Clients, communities and countries want to know that we are going to be there ***particularly*** when times are tough. It is easy for critics to blame a bank for taking certain risks ***after*** the results are known. It is much harder to make those decisions before the outcomes are revealed.

In the height of the financial crisis in 2008, we completed several major syndicated leveraged finance loans, and, in one critical instance, we bought the entire $1.4 billion bond issue from the state of Illinois when no one else would bid for it, giving Illinois the financing for payroll and other important needs. We also committed $4 billion to California and $2 billion to New Jersey when others were not able to do so.

Europe is another example of where we apply this philosophy. When Greece, Ireland, Italy, Portugal and Spain got into trouble, we made the decision to stay the course. We have described to our shareholders that under terrible scenarios, we could lose $5 billion or more. But we have been doing business with those clients and in those countries, in some cases, for more than a hundred years. We need to help them in their time of trouble – and we can. We hope to be doing business in those countries for decades to come.

JPMORGAN CHASE IS THE LARGEST BANK TO SMALL AND REGIONAL BANKS IN AMERICA

In the ongoing national dialogue about banks, some have tried to pit large global banks such as JPMorgan Chase against community and regional banks – as if the success of one comes at the expense of the other. That simply is false. There is both room for and need for large global banks, as well as smaller banks. Just as we have some unique capabilities – so do they. They are deeply embedded in their communities and are knowledgeable about their local consumers and small businesses.

We are proud to be the largest banker in America to community and regional banks. We help them raise equity in the capital markets, advise on merger and acquisition deals, and provide credit and cash management services to more than 800 bank clients. Since the start of the financial crisis in September 2008 through the end of 2012, we have raised $22.8 billion in equity, $43.6 billion in debt and advised on $37.2 billion in merger and acquisition deals for community and regional banks. And when smaller banks couldn't get funding during the financial crisis so they could lend to their clients, we were there for them – perhaps more than any other bank.

We combined all our consumer businesses into one unit to better serve our consumers

In 2012, we continued the work of unifying the Chase businesses into one franchise by creating Consumer & Community Banking. We did this so we could be organized around the customer. Historically, much of our company was built around products: the mortgage company did mortgages, the credit card company did credit cards, and the bank branches did checking and savings accounts. Instead, we re-imagined our consumer bank from the ground up and reorganized it – not by product but around the customer so we could better select for every person the best of what Chase provides to meet customer needs.

Creating the single unit ultimately will mean that when dealing with Chase, customers will get a consistent and seamless experience, whether they are taking out a credit card, applying for a mortgage or managing a checking account. This will allow us to do a better job of serving our customers at a lower cost. In the end, customers will get more for less – and save themselves some time in the process.

It also allows us to deliver industry-leading innovations. For example, we were among the first to roll out a full range of mobile solutions across different products. This past year, the number of customers using mobile banking jumped 51% to exceed 12 million users – and we're growing at a rate of nearly 350,000 new users each month. We transacted over $18 billion in mobile payments. Chase.com is the most visited bank portal in America, and more than 17 million customers paid their bills with us online.

Our bank branch model is evolving beyond just a place where customers conduct routine business to a place where customers get advice, new products and direct service. Currently, about 50% of our Chase-branded credit cards and 50% of our retail mortgages are sold in Chase branches. And today, our consumer banking households use, on average, eight Chase products and services.

The results of these efforts have made Chase one of the leading consumer banks in the country. Our customer satisfaction scores never have been higher. We serve over 50 million households, and we are there for them at every stage of life – from their first checking account and first credit card to their long-term investment and retirement needs.

We are making similar efforts serving our small business customers. Consumer & Community Banking is the nation's #1 Small Business Administration lender (based on number of loans) for the third year in a row. And we are one of the largest banks to small businesses in America – we have 2 million small business customers.

One exciting new service – called Chase Merchant Services – will enable us, working with Visa, to tailor customized deals with merchants to help them grow their businesses. This will allow merchants to get more from our products and services, including targeted marketing to our customers. If we do this type of partnership properly, we believe both merchants and our customers will be happier.

Our economies of scale, level of convenience and breadth of activities allow us to be there for our communities in meaningful ways

The same attributes that drive the success of our business also allow our bank to help tackle some of the world's toughest issues.

During Superstorm Sandy, the spirit of our people, combined with the depth of our balance sheet, made a real difference to the affected communities

Perhaps the most dramatic example of your bank in action is our response to disaster. In the face of Superstorm Sandy, our firm responded magnificently. Even though our own employees were in the storm's path, they rallied and did amazing things. We dispensed more than $1 billion in cash through branches and ATMs to the affected areas at a time when power was down and many people couldn't get access to their money. We even sent mobile branches to the Rockaways and deeply damaged parts of Brooklyn, Staten Island and New Jersey. We drove portable ATMs to storm-ravaged

areas, and we also reconfigured the ATMs so customers could donate to relief efforts. We made $5 billion in incremental capital available to impacted small and medium-sized businesses. We allowed mortgage holders and credit card holders to delay payments without penalty.

In partnership with the 12.12.12 Concert for Sandy Relief, we helped raise millions, and we directly donated $10 million to charities and individuals in need. And we guaranteed "certainty of execution" pricing on a $2.6 billion bond issue for the state of New Jersey to ensure that it had access to desperately needed funds.

JPMorgan Chase provides huge capital and knowledge to global cities

The future of humanity is a tale of cities. That is where the majority of the world's population now lives and the source from which almost all economic growth will come.

That is why JPMorgan Chase continues to focus on ways to help metropolitan communities operate and grow. We offer cities and states our best advice and considerable financial support. Last year, the firm provided more than $85 billion in capital or credit to nearly 1,500 government entities, including states, municipalities, hospitals, universities and nonprofits.

This past year, we also partnered with The Brookings Institution to launch the Global Cities Initiative. We made a $10 million financial commitment and leveraged it by tapping our network of relationships around the world to convene an extraordinary series of events in cities from Los Angeles to São Paulo. These sessions bring together policymakers, business leaders and non-governmental organizations to share best practices and develop strategies for improved competitiveness. As a result of these meetings, participants are developing locally driven, actionable strategies to strengthen their respective region's trade and investment practices. More such events are planned for 2013 – both in the U.S. and around the world.

JPMorgan Chase also is using its capabilities in conjunction with philanthropy to help alleviate poverty

JPMorgan Chase contributes approximately $200 million a year – much of it to help the poor and disadvantaged – and our people dedicated over 465,000 hours of volunteer service in local communities around the globe. In addition, we use our knowledge and financing capabilities to develop new and innovative ways to attack problems. For example, JPMorgan Chase continued to invest millions of dollars through our social finance business to address the needs of vulnerable populations worldwide. As of the end of 2012, our impact investments have ***improved the livelihoods of 14 million people***, including, for example, affordable housing for 10,000 poor living in Mexico. In another example, through our investment in AllLife, the only dedicated insurance company in the world to provide coverage for people living with HIV, tens of thousands of lives in South Africa have been made more stable and financially secure.

V. OUR PEOPLE ARE OUR FUTURE – HOW WE ARE DEVELOPING AND RETAINING OUR LEADERS

To be a great company, we need to institutionalize and perpetuate a great culture and excellent leaders. To do this, we must do many things well, including the training, the retention of talent and the creation of a company that is continually learning. One also must have a culture of character and integrity. This comes from fostering an open environment, where people speak their minds freely, to treating people with respect – at all levels, from the CEO to clerks in the mailroom – to setting the highest standards combined with recognizing and admitting mistakes.

We continually train our next-generation management

At JPMorgan Chase, we hire thousands of employees each year across all our global businesses, and we train them to understand our products, services and customers and to know how to do their jobs well. For example, last year, our Corporate & Investment Bank programs alone hired and trained more than 1,000 full-time analysts and associates and nearly 1,700 summer analysts and associates. This training program has long been considered one of the best in the world, and we continue to receive industry awards and top honors for formal training and as the best investment bank for which to work. Similar training programs hire and develop more than 400 analysts, associates and summer interns in Asset Management and over 1,000 full-time analysts in our Corporate Development Program within Technology, Operations, Finance and Human Resources. We recently developed an enterprise-wide general management program with global rotations across our wholesale, consumer and corporate functions.

Most employees receive ongoing training and development to ensure they are fully prepared to manage complex jobs, systems and client relationships. Some others are prepared to take on management roles and leadership responsibilities. Four years ago, we relaunched an executive leadership program, called Leaders Morgan Chase (which was started by my predecessor Bill Harrison), for our senior leaders who have been identified to take on even bigger management roles in the future. We have held 10 sessions to date for about 250 participants – and roughly 50% already have moved on to new challenging roles.

We work hard to reassign our employees when changes require cutbacks

Businesses must continuously adjust to changing conditions – sometimes volume related and sometimes related to technology and productivity enhancements. Unfortunately, that may mean job reductions. At JPMorgan Chase, we developed a new firmwide program, called Talent Reassignment, where we work earnestly and extensively to find employees new job opportunities inside our company and minimize the number of employee layoffs. In 2012, we placed more than 4,000 employees in new roles at the firm through this program. It has successfully retained strong talent and saved $80 million in severance costs. It is the right thing to do, it shows a huge commitment to our employees, and it's great for morale throughout the firm because it shows we treat our people with respect and humanity.

We love hiring veterans – and we've gotten good at it

There is no group that we hold in higher regard than the service members and veterans in our country – we can't thank them enough for their service. The 100,000 Jobs Mission, which our firm helped launch in early 2011, includes 91 companies that collectively hired 51,835 returning service members by the end of 2012. That means we are more than halfway to the goal in just over one year – and we have no intention of stopping even after we hit the 100,000 job target.

At JPMorgan Chase, we have hired close to 5,000 former members of the armed services in all areas of the firm since the beginning of 2011. We work hard to leverage the valuable skills veterans bring to our company and to provide them with training and the unique support that might be required as they transition from the military to the corporate world.

These veterans whom we have hired are great employees and team members (they were taught by the U.S. military to be great team players, to stay focused on the mission and to win), and they have lifted up our entire company. Everyone at JPMorgan Chase is proud of our efforts to hire veterans – at many of our company-wide events, you see a lot of tears in the room when our employees see the efforts we are making to help those who were willing to put their lives on the line for our country.

We had too much turnover in the senior management team this year, but today's team is exceptional and highly experienced

While it is normal to expect some turnover of the senior management team (as people age, want to change jobs or retire), this year we had more than our normal share. Three new members were added to the senior management team, replacing five former members (the Operating Committee now totals 12 members). Some turnover was due to the reorganization of our businesses that I mentioned in the previous section, some was due to succession planning, some was due to a desire to do something different and, of course, some was due to our CIO problem.

However, the change was not as pronounced as it may have looked. All the new members of our Operating Committee were promoted from within the firm and already were responsible for a large part of the job they were promoted to do. They are experienced and deeply respected by the people within the company. Their average tenure is 13 years at the firm and approximately 25 years in the industry. They are mature and tested, and they confront tough issues with a smile.

We could have delayed the reorganization within the company. Many times in my career, people have suggested we should not do something because it might add additional negative press coverage when the company really doesn't need more. But companies have to change and move forward. Not doing the right thing for the wrong reasons usually is a bad idea.

We have and must continue to successfully attract high-quality people

Our company eventually would fail if we no longer were able to attract high-quality people at all levels. Fortunately, we continue to attract great people, in part because of the culture of our firm. Our employees like the fact that we care about our clients, encourage our people to speak their minds and share their ideas and like the fact that we are successful and want to win. They also like to know their managers are smart, decent and honest and can admit their mistakes – both large and small (you can't fix problems if you don't admit them).

We also believe that our compensation programs have been consistent and fair. Our principles of compensation are: We need to be competitive; we look at multi-year performance; we have no formulas; senior management receives much of its compensation in common stock; we have no multi-year guarantees; and we do not have change-of-control agreements, special retirement plans, golden parachutes or special severance packages. Performance to us has never been just about financial outcomes – it includes broader contributions such as developing leadership skills, maintaining integrity and a strong character, recruiting and coaching a diverse workforce, building quality systems, strengthening our controls and fostering innovation, to name a few key qualities.

We also work hard to both empower our front lines while maintaining tight controls. We do not unfairly scapegoat people for making an honest mistake. It is hard to build strong morale or continuity when people feel they may be the next casualty if senior management is looking for someone unfairly to blame.

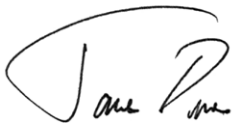
Finally, we try to make sure work is fulfilling. While we always try to focus on what we could do better, we do take time to celebrate our successes and do fun things, like take bus trips around the country where we can both learn from our employees and clients and show our deep appreciation to them.

One of my favorite things to do each year is travel to our annual event where we recognize and thank our top branch tellers and personal bankers for the great job they are doing of serving our customers. We give out awards on stage for hours to the winners – and we all find it inspiring. It always motivates me to do a better job for all of them.

CLOSING

I want to say again how proud I am of this company and its people. These past five years have been a period of turmoil, crisis and stress. What your company accomplished during these difficult circumstances has been extraordinary.

We've created a video titled "We Are JPMorgan Chase." It is 11 minutes long, and it is worthwhile to watch (you can view it on jpmorganchase.com/we-are-jpmorganchase). This video is not the typical thing a bank would do, but it explains on a human level what we do as a bank and what we are all about. It reflects the diversity of our people, the common bond they share, and the many wonderful ways – large and small – in which they make life better for each other, our clients and our communities. It will show you why I am so proud to work at JPMorgan Chase.



Jamie Dimon
Chairman and Chief Executive Officer

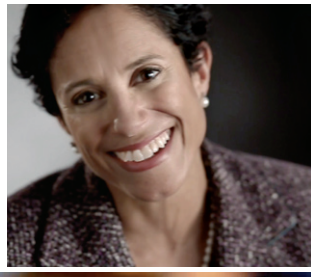
April 10, 2013




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CHASE
ROAD TRIP
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CHASE

Consumer & Community Banking



Gordon Smith

Two years ago, we began a journey to provide an exceptional and consistent experience for Chase's more than 50 million households. In 2012, we took a big step forward by combining Chase's three retail businesses – Consumer & Business Banking, Mortgage Banking, and Card, Merchant Services & Auto Finance – into a unified franchise, Consumer & Community Banking (CCB). As one team working together, we will drive the same high-quality customer experience across our great businesses.

Combined, we have the broadest banking platform in the industry, one that would be nearly impossible to replicate. We have a relationship with about half the households in America – more than any other financial services provider. We have the largest ATM network in the nation and the #2 branch network. We're the #1 issuer of credit cards in the U.S. based on outstandings, the #2 mortgage originator and, based on the number of loans we make, the #1 Small Business Administration lender.

We have an outstanding set of products. Now, we will distinguish ourselves through an outstanding customer experience. And if 2012 is any indicator, we have made real progress against these objectives.

First, let me talk about our 2012 financial performance. Roughly half of JPMorgan Chase's diversified earnings comes from serving our U.S. consumers. In 2012, net income was $10.6 billion, a **71% increase** from 2011, on revenue of $49.9 billion, up 9% from 2011. Return on equity was 25% for the year.

The favorable credit environment helped performance in many of our businesses, notably Card, Auto Finance and Business Banking. Another important driver of our 2012 results was the change in momentum of our mortgage business. Mortgage Banking reported net income of $3.3 billion in 2012, compared with a net loss of $2.1 billion in 2011. The return to profitability was driven by an improving residential real estate portfolio and strong mortgage loan originations, mainly from refinancings. We still have a great deal of work ahead to build a truly outstanding mortgage business but have made important strides.

Performance was strong in all of CCB's businesses, and we gained market share across the board. Chase was the top-performing bank in the Federal Deposit Insurance Corporation's (FDIC) 2012 Summary of Deposits survey, growing deposits at approximately three times the industry rate, while gaining market share in all our top 25 markets. Chase Wealth Management had solid results, with investment sales and client investment assets both up 15% year-over-year. We remain the leading credit card franchise, outpacing all our key competitors in year-over-year sales growth. Sales for Chase Sapphire℠ increased 22.5%, Chase Freedom℠ grew 20.7% and Ink℠ grew 21.3%.

Another driver of our profitability has been our focus on improving our customers' experience. Our mission is to create lifelong relationships with our customers by being the most trusted provider of financial services that helps people achieve their goals. That is how we have become the institution that nearly 50% of U.S. households turn to across the different stages of people's lives – opening a first savings account, taking out a credit card, buying a first home or turning a dream into a business.

Our ability to build upon those relationships is founded on three key focus areas: **customer experience; clear, simple products;** and **self-service channels**. Some detail on each follows.

Customer experience

Providing a great customer experience rooted in service is what differentiates Chase. This is essential

to our long-term growth and profitability. For example, consumer banking customers who tell us they are fully satisfied with Chase are three times more likely to recommend us to a friend and buy more of our products and services. These customers also say they're nearly twice as likely to continue doing business with us. As I noted in last year's letter, we had work to do to improve our service. And over the past year, we have continued to make progress.

Last year, we developed and rolled out a common set of principles, called The Five Keys to a Great Customer Experience, which all of our 160,000 people embraced and adopted. The results have been striking. Overall customer satisfaction with Chase retail banking improved eight points year-over-year, and the number of customers who would recommend Chase cards improved 10 points. Gains this sizable within one year exceeded our expectations.

We also have been recognized in several respected external surveys that track customer satisfaction. Chase was named the #1 large retail bank in the 2012 American Customer Satisfaction Index survey. We were ranked the #1 major bank in customer satisfaction by Harris Interactive. And in J.D. Power and Associates, perhaps the best-known customer research firm, Chase climbed in every single 2012 banking survey the firm conducted. We improved – in some cases dramatically – across the 2012 J.D. Power Satisfaction Surveys in mortgage origination, mortgage servicing, retail banking, small business banking and credit card.

In our highly competitive industry, service can set Chase apart. The work of this past year has begun to do just that, and we plan to continue our positive momentum.

Clear, simple products

With more than 50 million households, our customers have very different needs. In 2012, we expanded the products and services we offer to meet those varied needs. And we worked to simplify our products to make them easy to use and understand.

In May, we launched our first prepaid card, called Chase Liquid℠. Historically, prepaid cards have suffered from limited functionality and hidden fees. Chase Liquid℠ is different. It offers customers a product that gives them better control over their finances and allows them full access to Chase branches, ATMs and online banking. It also introduces new customers to Chase. More than 65% of Chase Liquid℠ customers are new to the company, and we hope they will expand their relationship with us throughout their lives. And Chase Liquid℠ adapts a consumer-friendly disclosure developed by The Pew Charitable Trust, which we call Clear and Simple.

We expanded our offering for customers who have more complex needs with Chase Private Client (CPC). Affluent customers were banking at Chase but investing somewhere else, and they told us they wanted to consolidate with one partner.

In 2012, we added approximately 950 CPC branch locations for a total of 1,218 locations as of year-end. Investment sales in the branches were up 15% year-over-year. In fact, CPC has brought $5.0 billion in new deposits and $7.3 billion of new investments to the firm since its inception and has been a key driver of our balance growth. Customers who have less than $100,000 in total balances per household increase their balances by more than $300,000 on average once they join Chase Private Client.

We think we've only begun to tap into the opportunity here. We will add approximately 800 CPC branch locations in 2013, and our footprint remains a significant competitive advantage. One in five Chase households is affluent, and roughly 50% of all U.S. affluent households are located within two miles of a Chase branch.

Self-service channels

Consumer behavior is shifting toward mobile and digital channels. We've seen this shift in other industries – airlines, retail, travel – and we're seeing similarly rapid adoption in banking. When ATMs that could take deposits were first introduced, 90% of customers still took their checks to a teller. Today, approximately 50% of Chase deposits are made with a teller; the rest are made at ATMs, online and on mobile devices. Customers tell us repeatedly that they prefer the convenience and ease of being able to make basic transactions themselves.

Mobile channel use is skyrocketing. Chase was an early leader in mobile banking, and we are realizing the benefits of this investment. At the end of 2011, Chase had 8.2 million 90-day active mobile users. At year-end 2012, we had 12.4 million active mobile users, a 51% increase in only 12 months. Today, we're growing mobile users by roughly 350,000 a month. The story for

online banking is similar. Today, CCB has over 31 million customers that actively use Chase Online℠ and Chase Mobile℠, and we have the most visited banking portal in the U.S. – Chase.com (per compete.com). And these customers transact more than $25 billion in payments every month.

In Mortgage Banking, we built the My New Home℠ app. This is the only app in the market that enables customers to search for and compare homes, calculate payments and connect with a local Chase mortgage banker from a mobile device. This is a particularly important touchpoint given that more than 90% of home buyers use the Internet when they begin to search for a home.

In Card, more than 50% of new accounts are acquired through digital channels. This often is a simpler experience for customers and is more efficient than traditional marketing channels, such as mail.

Roughly 20% of our active customers access Chase through digital channels and call centers exclusively. Mobile channels provide our customers with convenience and a great experience, and these customers have a 33% lower attrition rate than non-mobile customers. A fully digital account is 70% less expensive to maintain than a traditional banking account and 30% less expensive than a traditional credit card account.

We continue investing in innovations that offer our customers added convenience. We introduced Self-Service Banking Kiosks this year that can complete 90% of the transactions made at a teller window and are available 24 hours a day, seven days a week. These machines can distribute money in any denomination, provide coins, and are simple and easy to use.

While these innovations are unlocking tremendous value for the firm and our customers, the branch remains a critical distribution channel. More than 70% of Chase households visit a branch quarterly, and that's generally true across all segments. What we see, however, is that customers are using branches differently.

Our branches are evolving from transaction centers to advice centers. They are a place for customers to meet with bankers who know and can guide them across our platform of experts. Branches are a place for us to build our relationships with customers – so we can get to know what's important to them and help them achieve their goals.

Our branches also can be an important resource for the community. During Superstorm Sandy, for example, many of our branches had generators and were open in towns that were without power. We welcomed neighbors, customers and non-customers alike to use our electricity, get a cup of coffee, stay warm or call their families. And following Hurricane Isaac in New Orleans, we opened up food stations for people in the area to come and get a warm meal. Our hope is that the branch is seen not just as a bank but also as a center of the community.

Conclusion

For us, 2012 was a strong year. We delivered outstanding financial performance to JPMorgan Chase shareholders. We took a major step forward in improving the experience our customers have when they bank with us. And we empowered our employees to use their good judgment in doing what they believe is right to serve customers.

In 2013, we will continue our focus on creating a great work environment for our people, exceeding our customers' expectations and delivering profitability for the firm. We also plan to redouble our focus on building a strong control and compliance environment across Chase.

I just want to close with what is my favorite part of this job. Without question, the best part of this role is reading the hundreds of customer letters I receive each week about our employees. Some of these letters cause me to sit up in my chair and stop to appreciate the great company of which I'm a part. It includes letters about small businesses growing during tough times. It includes letters from grown children thanking us for helping their older parents with banking and letters from parents thanking us for helping their adult children start out. I see letters about amazing feats, including one about Shelby Slaughter, a teller who thought fast and saved a customer's life by performing CPR. But most of them are about the simple kindnesses and thoughtful service performed by one of our 160,000 employees.

Thank you to all of them. I know our team will continue to serve all our customers with distinction in 2013.

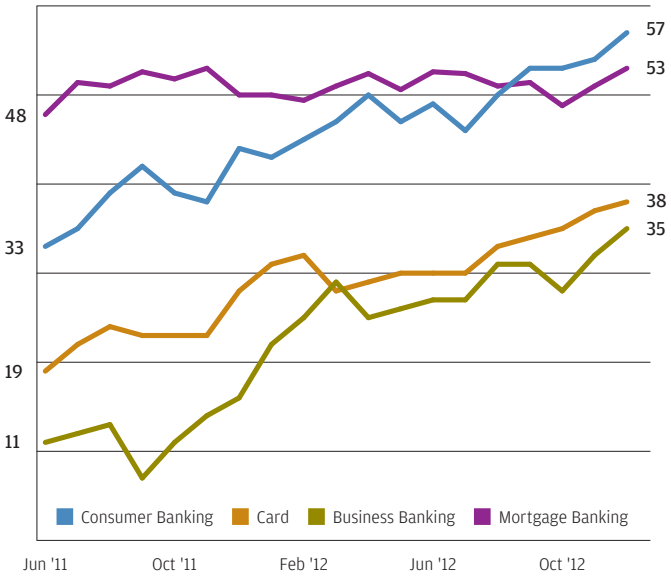


Gordon Smith
CEO, Consumer & Community Banking

2012 HIGHLIGHTS AND ACCOMPLISHMENTS

- #1 in retail banking among large banks in 2012 American Customer Satisfaction Index survey and the #1 major bank in customer satisfaction by Harris Interactive
- Improved in every 2012 J.D. Power and Associates banking survey, including mortgage origination, mortgage servicing, retail banking, small business banking and credit card
- Top-performing bank in the FDIC's 2012 Summary of Deposits survey, growing deposits at approximately three times the industry rate
- Added 106 net branches, increasing Chase's network to 5,614; added approximately 950 Chase Private Client branch locations for a total of 1,218 locations as of year-end
  - Consumer household relationships up 4%
  - Investment sales and client investment assets both up 15%
- #1 credit card issuer in the U.S. based on outstandings; #1 global Visa issuer based on consumer and business credit card sales volume; and #1 U.S. co-brand credit card issuer based on outstandings
- Business Banking loans increased to a record $18.9 billion, up 7%, and loan originations increased 12%
  - #1 Small Business Administration lender (based on number of loans) in the U.S. for the third year in a row
- Mortgage application volume up 30%; loan originations up 24%; and retail channel mortgage originations up 16%
  - #2 mortgage originator
  - #2 retail mortgage originator
  - #3 mortgage servicer
- Funded $192 billion of mortgage and home equity originations firmwide in 2012 and helped more than 280,000 homeowners avoid foreclosure, half of whom received modifications
- 12.4 million active mobile customers, up 51%; 31.1 million active online customers, up 5%
  - $18 billion in mobile payments
  - Chase QuickPay℠ volume up 103% between January and December 2012
  - #1 most visited banking portal in the U.S. – Chase.com (per compete.com)
- #2 wholly owned merchant acquirer in the U.S., processing 29.5 billion transactions in 2012, up 21% year-over-year

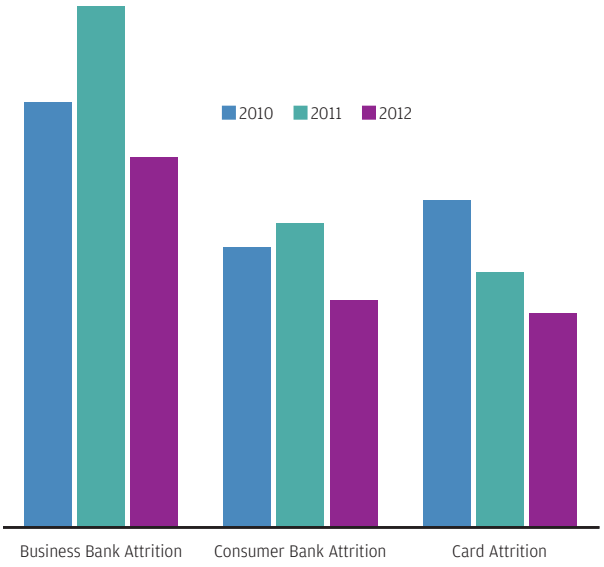
Net Promoter Score[1]



Source: Internal data

[1] Net Promoter Score (NPS) represents the percentage of customers who say they would definitely recommend Chase to a friend or colleague (promoter who gave Chase a rating of 9 or 10 on a 10-point scale) vs. those who would not (detractors who gave Chase a rating of 0 to 6); a higher NPS signifies greater customer loyalty

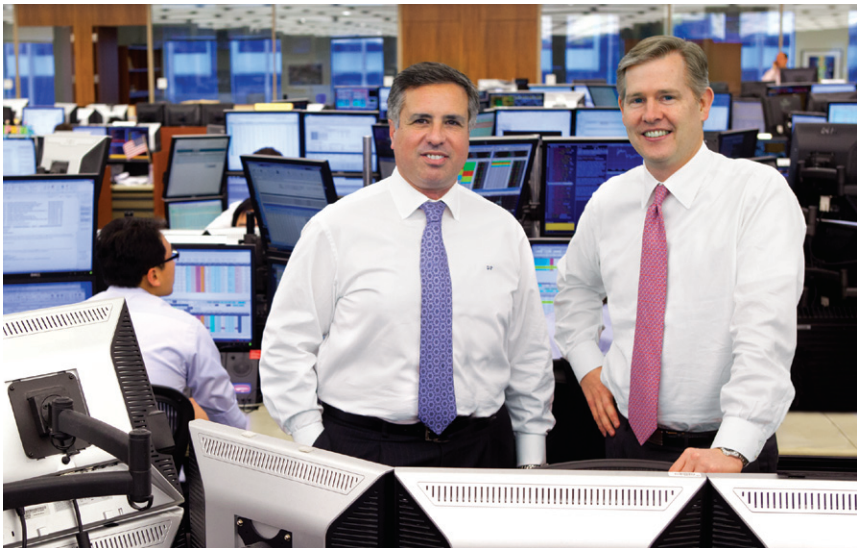
Household Attrition[2] by Business Line



Source: Internal data

[2] Households that close all Chase relationships

Corporate & Investment Bank



From l. to r.: Daniel Pinto, Mike Cavanagh

Introduction

As the financial markets have experienced rapid change and new challenges in recent years, J.P. Morgan has secured its place as a global leader, ranking #1 in many key industry-wide benchmarks.

And while we're proud of our top-tier rankings, we take greater satisfaction in the success of our clients and the reputation we have earned for standing by them, not just when market conditions are strong, but, more importantly, when they are challenged.

As a global financial institution, we believe J.P. Morgan has a responsibility to facilitate a healthy and productive global economy, to ensure the availability of credit and to provide liquidity in the markets. And we take this responsibility extremely seriously. When we lend to a manufacturer so it can gear up to meet orders, that loan helps create jobs. When we provide cash management services for a corporation with receivables in multiple currencies, it helps bolster the client's profitability.

When we lead an initial public offering, the company receives a capital infusion so it can continue to innovate. And when we lead a bond issue so that a university can add a new facility, we are supporting construction employment in the near term and are extending educational opportunities in the long term.

That expertise, cross-market strength and client dedication drove last year's decision to combine J.P. Morgan's Investment Bank (IB) and Treasury & Securities Services (TSS) divisions. As the two heritage businesses already served many of the same clients, further integrating our product offerings leads to wider-ranging solutions for clients and deepens each client relationship. Now branded as the Corporate & Investment Bank (CIB), the combined set of businesses possesses all the best-in-class and global elements required to effectively serve our clients into the future.

The unified CIB is recognized as a market leader across a wide spectrum of financial markets businesses. We have organized the CIB in three major segments – Banking, Markets and Investor Services – each of which is made better by being part of a combined whole. For example, our leadership in credit and advisory solutions is further differentiated by a best-in-class Markets franchise, coupled with leading cross-border capital-raising and execution capabilities. As validation of our combined business model, clients who today use all three of the CIB's business segments represent more than half of CIB revenue.

While the CIB has a broad array of products, our guiding principle is to provide our corporate and institutional clients with solutions based on what they need, rather than on what we happen to offer. We measure our impact by tracking how our clients use us, and are pleased to see steady growth in the number of clients using seven or more of our product sets. This results in a deep client franchise that drives our profitability.

Building on strength

Our ability to extend capital and provide innovative solutions while investing for future growth is supported by solid, consistent financial performance. For three years running, both heritage businesses produced returns on equity in excess of 17%.

In 2012, the CIB achieved net income of $8.4 billion on $34.3 billion of revenue. Excluding the impact of debit valuation adjustments (DVA) of close to $1 billion, the CIB produced net income of $9.0 billion, up 26% from full year 2011, and achieved a 19% return on equity.[1] Even as we incurred substantial new costs to meet increased regulatory requirements, the CIB's core expenses[2] have declined by 2% on

average each year since 2010, while revenue has increased 3% on average, excluding the impact of DVA.

Looking beyond the financial data, the firm's client mix illustrates its increasingly geographic diversity. Sixty-one percent of our clients are international. Forty-eight percent of our revenue, excluding DVA, is now generated from our international business. Over the past three years, the number of significant CIB international clients with revenue in excess of $1 million rose 45%, from 1,100 to 1,600. Even so, we believe substantial international growth opportunities are ahead, and this is reflected in our investment strategy.

To support its growing roster of international clients, J.P. Morgan has been bolstering its global network and enhancing its capabilities in Latin America, Africa, the Middle East and Asia Pacific. With nearly 200 corporate bankers added in the last few years, we are able to serve clients comprehensively in 35 countries. Few banks can commit to this level of investment, and we believe this will give us a significant competitive advantage in the future.

Another core dimension to our strength is our stability of earnings. In particular, we have a client flow-driven business in Markets that consistently has delivered strong revenue, with declining volatility year-over-year. In combination with the several fee-based businesses in Investor Services that are linked to long-term operational contracts with clients, this has led to a uniquely stable earnings profile for the CIB.

Being there for clients

At J.P. Morgan, we lead numerous transactions aimed at helping our clients succeed against a challenging economic backdrop. The support we provide clients ripples through the economy, creating jobs and providing financing for growth and investment domestically and across the globe.

For example, in the aftermath of Superstorm Sandy, J.P. Morgan provided the State of New Jersey with "certainty of execution" for a $2.6 billion note sale despite the devastation that destroyed thousands of homes and shuttered businesses across the state.

And despite the economic issues affecting southern Europe, J.P. Morgan, along with a few other institutions, successfully led a €9 billion syndicated financing, along with a subsequent €6 billion bond offering, that enabled Snam, an Italian gas infrastructure company, to refinance its capital structure, a step toward complying with a government requirement to split off from its parent.

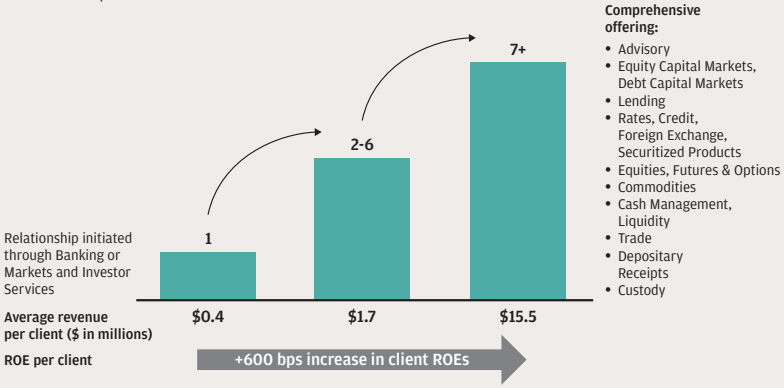
With our breadth of capabilities in Markets and Investor Services, we are able to provide best-in-class services to the largest institutional investors, pension funds, governments, banks and insurers. Our scale, global presence and balance sheet

[1] FY2012 CIB return on equity (ROE) on a pro forma basis assuming the 2013 allocated capital level of $56.5 billion would have been 15%, and 16% excluding the impact of DVA

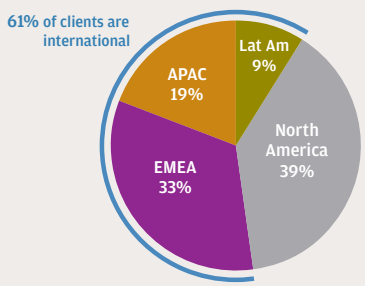
[2] Core expense equals total noninterest expense less regulatory assessments, which include FDIC, UK Bank levy and other regulatory fees

Evolution of Product Set Usage among Clients

Number of product sets



Clients with >$50,000 in Revenue (2012)



2012 CIB clients: ~7,600

strength allow us to make markets when others are unable to do so, provide liquidity in tough market conditions and maintain safe custody of client assets through volatile markets.

To illustrate, J.P. Morgan's Global Commodities Group, backed by an array of disciplines within the firm, devised an innovative commodity solution and structured an asset-backed loan for Philadelphia Energy Solutions, a joint venture of The Carlyle Group and Sunoco. This kept oil flowing at the largest refinery system in the U.S. Northeast and 850 employees working at this Pennsylvania energy complex that had been slated to close.

Finally, in an example of J.P. Morgan's ability to collaborate across its lines of business, the firm joined with the Export-Import Bank of the United States and Commercial Banking client, Weldy-Lamont Associates, an Illinois engineering firm that is designing the system and sourcing equipment to make electricity available to more than 2,000 villages and over 1 million people in Ghana. Along with extending reliable power to the villages, Weldy-Lamont contracted with U.S. manufacturers for the electrical equipment, creating jobs at suppliers throughout the Midwest and in California, Florida and Georgia. J.P. Morgan provided Treasury Services solutions in support of these efforts.

If we are successful in being viewed as partners by our clients, a significant measure of that credit goes to our 52,000 employees. Every day, they work with integrity, put their clients' interests first and pay attention to their needs in order to create the right solutions based on the right products.

We are focused on maintaining the highest controls standards, ensuring regulatory compliance and investing to make sure our technology and operations platforms perform to the highest standards possible. Throughout our businesses, we continually strive to instill a strong culture of partnership, integrity and a desire to deliver for clients, which is evident in very high talent retention rates.

2013 trends and priorities

In 2013 and beyond, we see several global macroeconomic trends that will affect the wholesale banking industry. Some of these will present challenges, but many others should abet global bulge bracket players like J.P. Morgan. We are confident that we are well-positioned to deal with these challenges and, in many cases, capitalize on these macro trends.

Dodd-Frank implementation, Basel capital rule changes and Volcker-Vickers are just a few examples of the regulatory changes in the works that together represent a real challenge. J.P. Morgan is well on the way to meeting these requirements. In particular, to deal with the impact of Basel III regulations, we have increased the allocated capital to the CIB to $56.5 billion as of January 1, 2013.

On the client front, continued globalization, accelerating cross-border trade flows and the deepening of capital markets present attractive growth opportunities. While client needs for capital are growing, some competitors have been retrenching. For example, many European banks have been deleveraging due to the stresses brought about by persistent slow economic growth, tightening regulatory requirements and sovereign debt concerns. As a result, companies increasingly will turn to the capital markets to finance their operations and growth, creating opportunities for global leaders in capital markets underwriting such as J.P. Morgan.

We will continue to strengthen our ability to provide Global Corporate Bank and Treasury Services solutions around the world, ensuring that the full integration of foreign exchange and payments products is available in an age when trade is increasingly global. We plan to continue to expand our international Prime Brokerage offering for clients who more and more demand global execution. And we plan to expand our over-the-counter (OTC) clearing platform and launch collateral management solutions for our clients as OTC clearing mandates roll out globally.

Last, as clients continue to shift away from structured products toward flow products, we already are well-positioned with a flow-driven business model, and we continue to make investments to enhance our position. We are very focused on closing the gaps in our electronic trading offerings in equities and are investing to position ourselves for changes in fixed income market structure. As part of our technology priorities, we will complete the four-year Strategic Re-engineering Program during 2013 and execute on Value for Scale, which will capitalize on technology and operations synergies across the combined IB and TSS platforms. These initiatives are expected to yield hundreds of millions of dollars in savings.

In addition, we are continually reviewing and fine-tuning our various businesses to optimize the allocation of resources and capital.

In combination, these initiatives offer tremendous growth opportunities and will work to offset any potential loss we may have in revenue in certain businesses due to regulatory changes. Based on these growth opportunities and the depth and breadth of our client franchise, we are confident we can achieve our target return on equity of 16%, plus or minus, through the cycle on our now higher capital level.

Summary

Not every firm is able to make these commitments to invest for the future, and we feel privileged to be able to do so on behalf of our clients. Serving our clients remains our most important priority this year and every year.

Our plan for 2012 was ambitious and our priorities for 2013 and beyond are no less so. We will continue our focus on strong risk management and controls, talent management and investment discipline, which are key underpinnings of our industry leadership. Although we certainly are proud of what our employees and the CIB heritage businesses already have accomplished, we are even more optimistic about our firm's market-leading capabilities to assist our clients into the future.



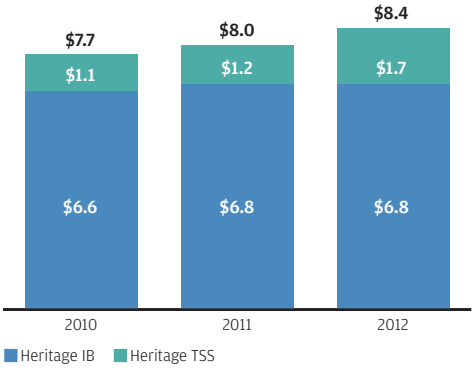
Mike Cavanagh Daniel Pinto
Co-CEOs, Corporate & Investment Bank

2012 HIGHLIGHTS AND ACCOMPLISHMENTS

- 61% of the CIB's clients and 48% of revenue (excluding DVA) of $35.3 billion are international (outside North America)
- 52,000+ employees in close to 60 countries serving approximately 7,600 clients
- 13% compound annual growth rate in the number of "significant" international clients generating more than $1 million annually in revenue since 2009
- Raised or provided $70 billion of capital for nonprofit and governmental clients, including states, municipalities, hospitals and universities (Source: Thomson Financial, internal sources)
- Traded more than 125 million equity shares and 60,000 fixed income securities daily on average
- Ranked #1 in U.S. dollar wire clearing with a 20% share of Fed and CHIPS (Source: Federal Reserve and Clearing House Interbank Payments System, CHIPS)
- Record assets under custody of $18.8 trillion, up 12% from 2011
- Ranked #1 in Global IB Fees; based on volumes, ranked #1 in Global Debt, Equity & Equity Related, #1 in Global Syndicated Loans, and #2 in Global M&A Announced (Source: Dealogic)

Combined Earnings Power

Net income
($ in billions)



Return on equity

H-IB	17%	17%	17%
H-TSS	17%	17%	22%
CIB	17%	17%	18%[1]

H = Heritage

[1] FY2012 CIB ROE on a pro forma basis assuming the 2013 allocated capital level of $56.5 billion would have been 15%, and 16% excluding the impact of DVA

Commercial Banking



Douglas Petno

In Commercial Banking, we always have taken a long-term view and measured the success of our business by the value we bring to our clients. We look for the best management teams in the best industries and nonprofit sectors and then patiently build long-lasting relationships. Our bankers work to understand each client's business model, operating environment, and, importantly, ambitions and challenges so we can respond with the ideas, solutions and capital to help every client succeed.

Our Commercial Banking team of more than 6,000 professionals now is in 125 locations across 29 states; Washington, D.C.; and 13 major international cities, and we are entrenched in the communities we serve. By being where our clients are, Commercial Banking is in a unique position to deliver comprehensive, world-class financial solutions from across our firm while never compromising on service, customer experience or our local presence.

2012 results

This approach has produced consistently positive results for the last several years, and 2012 was no exception. In 2012, we delivered record revenue of $6.8 billion and record net income of $2.6 billion, up 6% and 12%, respectively, over the previous year. Loans have increased for 10 consecutive quarters, and in 2012, end-of-period loans increased 14% over the previous year. These results led to exceptional returns, with return on equity of 28%, exceeding our 20% through-the-cycle target. Each of our business units has a strategy to better serve our clients, and each is executing admirably.

Essential to achieving consistent earnings growth, we have maintained a relentless focus on our risk profile and expense base. We delivered strong credit performance, with nonperforming loans and net charge-offs continuing to trend toward pre-crisis levels even as we increased lending. We also maintained our expense discipline and met our overhead ratio target of 35% in 2012 while continuing to make substantial investments in our overall business. We opened new offices in Jacksonville, Florida and Sacramento, California; hired new employees; continued to improve our customer experience; and invested in the latest technologies to enhance and specialize our products.

A real highlight for me in 2012 was the degree to which our partnerships across the firm grew even stronger. There is significant value in our ability to provide comprehensive solutions and service to our nearly 23,000 corporate, state, municipal, financial institution and nonprofit clients and almost 36,000 commercial real estate clients. Through closer partnerships across the firm, we've enhanced our focus on clients this year and now are in an even better position to tailor our wide array of solutions to fit their needs.

Doing business the right way

We are proud of the unwavering support and capital we provided to our clients in turbulent market conditions. In 2012, we extended $126 billion in new and renewed financing, up 13% from 2011, including $15 billion extended to governments, hospitals, educational institutions and other nonprofit organizations. This financing provided vital capital to our clients, helping them expand and invest in their businesses and thus contribute

meaningfully to their local economies. We do this every day, across the country, with companies like Jack Link's Beef Jerky, a Chase Middle Market client that completed major expansions of its production facilities in Alpena, South Dakota and Minong, Wisconsin last year, adding 115 full-time jobs in those communities.

Having long-lasting relationships with our clients means we are there for them when they need us most. Our response in the aftermath of Superstorm Sandy best exemplifies our dedication to our clients and our communities. In the wake of the storm, Commercial Banking team members from across the country immediately went to work, finding ways – both big and small – to offer resources and support for those affected. Beyond increasing credit lines to give our clients peace of mind as they worked to resume operations, we also located clients that could provide temporary space to help other clients, donated payroll processing equipment to an evacuated healthcare client and proactively processed wire payments for clients without electricity.

Being good partners is about more than doing our job well. It's about finding ways to contribute outside the office, too. I'm incredibly proud of our team members' commitment to being good neighbors in everything they do.

2013 perspective

As we look forward, 2013 will continue to test us as our competition intensifies and the economy remains fragile. We expect market conditions to improve, though, and actually hope to see some reduction in deposit balances as that money moves back into the economy.

We will uphold our risk discipline and continue doing business the right way in 2013. We have a responsibility to ourselves, our clients and our shareholders to deliver strong financial performance while building and maintaining effective controls to protect our business. This includes complying with the letter and spirit of all rules and regulations that govern our industry and our firm.

Expanding our client base and building deeper client relationships remain top priorities for Commercial Banking. Our Middle Market expansion strategy is a significant growth opportunity – one we believe will reach $1 billion in annual revenue over time. We added over 900 new Middle Market clients last year, with more than a quarter of those in our expansion markets. We are deepening existing relationships by continually improving our coverage and customer service, as well as by sharpening our industry expertise. Deepening relationships takes patience, but we're not going anywhere.

There are real growth opportunities in our commercial real estate businesses as well. Our strategy for the coming year is to further differentiate our service and capabilities as multifamily housing market fundamentals continue to improve. We're monitoring risk in these businesses as carefully as always.

In 2013, we will continue to recruit and hire great people across our markets while also focusing on development initiatives to build and retain the best team in the industry. All our employees are challenged to continually learn and grow, and I'm committed to making sure they have access to the best resources possible to help them make a difference for our business and in the communities where they live and work.

Our business plan has been tested and proven. We have a fantastic team with an incredible culture based on teamwork, integrity, hard work and a deep sense of community. I am so proud of what our people do every day for our clients. I'm confident we will continue to build upon our tremendous franchise, remain focused on our long-term objectives, and deliver enduring value to our clients and shareholders in 2013.



Douglas Petno
CEO, Commercial Banking

2012 HIGHLIGHTS AND ACCOMPLISHMENTS

Performance highlights

- Third consecutive year of record earnings, revenue and gross investment banking revenue
- Grew end-of-period loans 14% and average deposits 12%
- Generated return on equity of 28%, exceeding target of 20%
- Continued to outperform peers in credit quality with the lowest net charge-off ratio and nonperforming loan ratio[1]

Progress in key growth areas

- U.S. market expansion – Added more than 250 clients in expansion markets, contributing 49% of revenue growth for Middle Market Banking
- Investment Banking – Earned gross revenue of $1.6 billion
- International Banking – Achieved double-digit growth in revenue, deposits and loans[2]

Business segment highlights

- Middle Market Banking – Double-digit growth in both loans and deposits; 11 consecutive quarters of loan increases; and more than 900 new clients added
- Corporate Client Banking – 15% increase in revenue; record loans and investment banking fees
- Commercial Term Lending – Record originations: 73% increase in 2012; improvement in credit quality
- Real Estate Banking – Record originations: 19% increase in 2012; double-digit deposit growth
- Community Development Banking – Provided nearly $900 million in new loans that supported ~9,500 affordable housing units in the U.S.
- Asset-Based Lending and Chase Equipment Finance – 25% and 18% increase in loans, respectively

Firmwide contribution

- In 2012, Commercial Banking clients accounted for:[3] 31% of North America (NA) total investment banking fees, 32% of NA M&A fees, and 34% of NA equity underwriting fees
- $2.4 billion in Treasury Services revenue in 2012
- Over $110 billion in assets under management from Commercial Banking clients, generating $415 million in Investment Management revenue
- More than $180 million in Global Commercial Card revenue in 2012

Leadership positions

- #1 large middle market syndicated lender[4]
- #1 U.S. multifamily lender since 2008[5]
- 89% customer satisfaction[6]
- Recognized with 2012 Greenwich Associates' Excellence Awards in Treasury Services product capabilities and customer service, international service and online services

[1] Peer averages for ratios reflect Commercial Banking equivalent segments or wholesale portfolios at Bank of America, Comerica, Fifth Third, KeyCorp, PNC, U.S. Bancorp and Wells Fargo

[2] Denotes U.S. multinational clients with overseas revenue

[3] Calculated based on gross domestic IB revenue for syndicated and leveraged finance, M&A, equity underwriting and bond underwriting

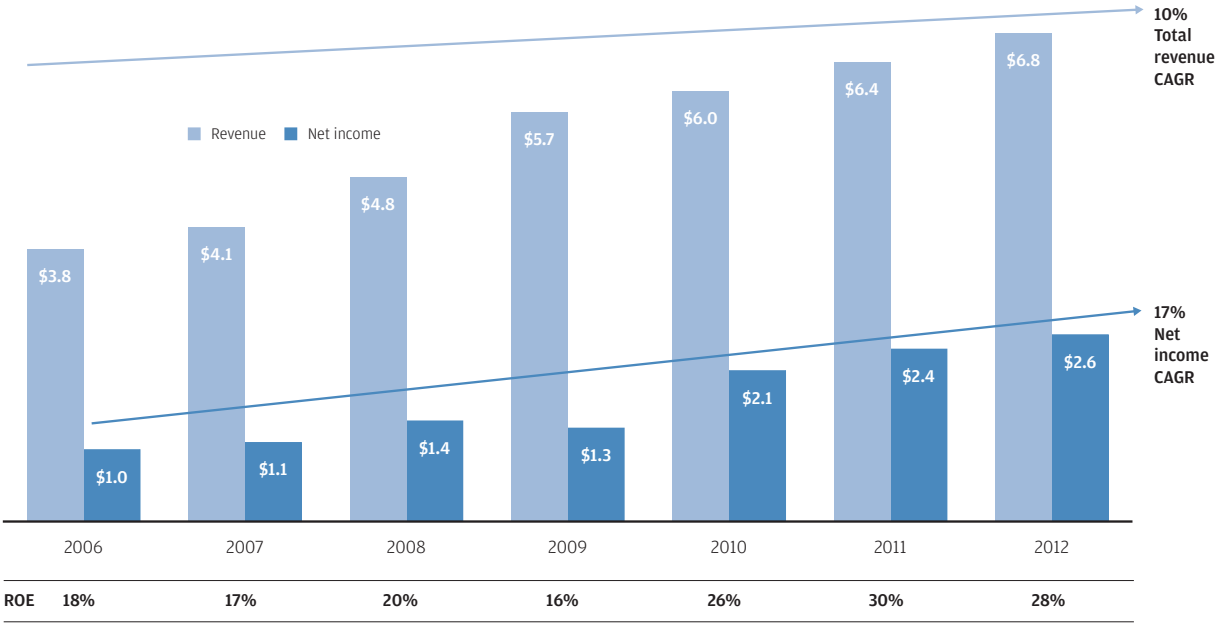
[4] Thomson Reuters FY2012

[5] Federal Deposit Insurance Corporation 2008 – YTD 3Q12

[6] 2012 Chase Relationship Survey

Proven Business Model

Strong financial results and consistent growth ($ in billions)



CAGR = Compound annual growth rate

Asset Management



Mary Callahan Erdoes

Delivering for our clients

In Asset Management, our commitment is to generate strong risk-adjusted investment performance over the long term for our individual and institutional clients around the world. By virtually any measure, we delivered on that promise in 2012, achieving industry-leading performance in the 1-, 3-, 5- and 10-year categories.

With more than 215 of our public mutual funds ranked 4 or 5 stars by Morningstar and 76% of all our assets in the first or second performance quartile over the past five years, our success spans all the global markets in which we operate. We are proud that J.P. Morgan is the only firm to be recognized by *Barron's* as being in the top five of its 1-, 5- and 10-year U.S. performance rankings.

Our award-winning investment performance is even more powerful when it's combined with our broad range of banking, lending and fiduciary capabilities. Our integrated offering led to more clients entrusting us with their assets. We had more than $100 billion in new, long-term inflows (excluding liquidity), bringing us to a record $2.1 trillion in total client assets. Equally impressive, we marked our 15th consecutive quarter of positive long-term assets under management flows and our 10th consecutive year of inflows across our private client complex.

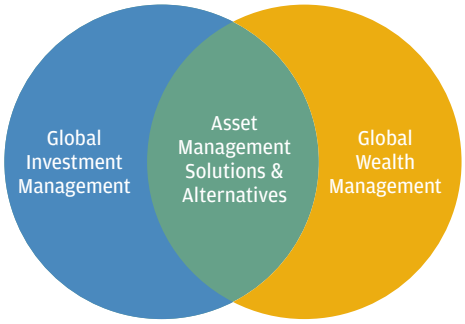
In addition to investing with J.P. Morgan, more clients utilized our lending and deposit capabilities than ever before. We had a record $69 billion of wholesale loan balances, an additional $18 billion in total underwritten mortgages, and a record $145 billion in private client deposits at year-end.

A unique business model serving the world's most influential clients

Asset Management's Global Investment Management (GIM) and Global Wealth Management (GWM) franchises count among their clients many of the world's largest billionaires; more than half of the top pension funds, sovereign wealth funds and central banks; and over 3,000 global financial intermediary firms – each with multiple advisors who invest in our funds on behalf of their clients.

Our client relationships are built on trust and have endured for decades. Last year, we celebrated the 110th anniversary with one of our private client families. The relationship, which started in New York with a prominent business owner, has spanned 14 family branches and five generations, and includes multi-jurisdictional estate planning and investment management for family members living around the world, from New Zealand to New York.

An Integrated Business Model



Insurance
Sovereigns
Pension Funds
Intermediaries
Endowments & Foundations
Family Offices
Ultra-High-Net-Worth
High-Net-Worth
Affluent

For us, earning our clients' trust is about taking a comprehensive view of their financial needs. For example, when a Middle Eastern institutional client whose assets we invest has needs on the liability side of its balance sheet or a Latin American business owner to whom we provide personal balance sheet advice needs help with corporate banking and lending, we are able to connect them with our colleagues across the firm to develop the best solutions.

2012 financial results

Our relentless focus on our clients' needs helped Asset Management produce record annual revenue for the third consecutive year – $9.9 billion. Net income was up a healthy 7% to $1.7 billion, and our pre-tax margin remained strong at 28%, which is particularly meaningful as we continue to invest heavily in the future growth of our business.

Most of our additional investments focused on two themes: enhancing our products and services, and strengthening our core operations.

We added 80 client advisors and investment professionals, and had a record of more than 375 investment strategies, ensuring that we can offer our clients the best advice and solutions. We also invested more than $600 million in state-of-the-art technology designed to help us serve clients better.

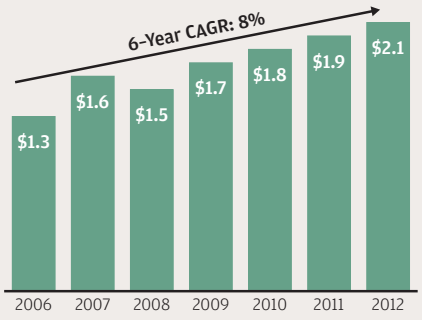
2013 strategic priorities

In addition to our continued investments in our business and relentless focus on investment performance and business discipline, partnership remains a critical driver of our future growth. The more we work together – within Asset Management and across JPMorgan Chase – the better we can serve our clients.

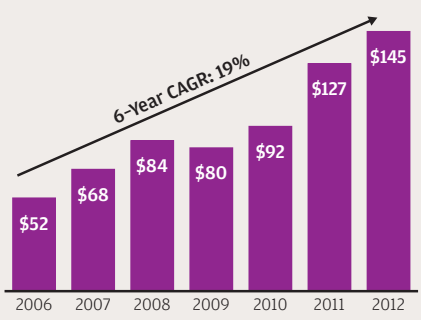
U.S. wealth management continuum – We are committed to serving the entire U.S. wealth management continuum – affluent, high-net-worth and ultra-high-net-worth. Our J.P. Morgan and Chase franchises have nearly 6,000 client advisors focused on these segments. A significant growth opportunity is Asset Management's partnership with Chase Private Client (CPC), which serves the affluent segment. With CPC leveraging Asset Management's best-in-class infrastructure and solutions, the number of households being served by the group climbed nearly fivefold last year and its assets more than quadrupled.

Solutions and alternatives – Last year, we created the Asset Management Solutions group to bring together insights and ideas from across GIM and GWM. The group has approximately $100 billion in assets under management and is well-positioned for growth as more clients focus on outcome-oriented solutions. Our Alternatives teams, which include Highbridge, Gávea, Global Real Assets, and our fund-of-funds and advisory businesses, also are working together more closely and leveraging our best thinking across segments. With $163 billion of client assets in diversified alternatives and absolute return solutions, we are one of the world's largest alternatives managers.

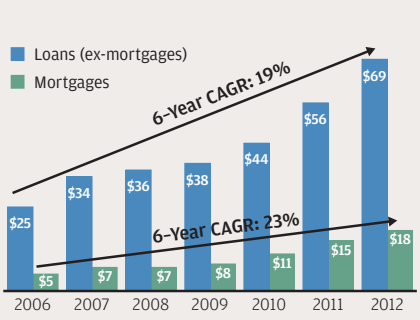
Asset Management Total Client Assets
($ in trillions)



Global Wealth Management Deposits
($ in billions)



Global Wealth Management – 94% with Secured Collateral
($ in billions)



CAGR = compound annual growth rate

International – We plan to build upon our momentum of attracting the best and brightest in the financial industry. Since 2006, in the International Private Bank alone, we have grown our client advisors by 130%. Additionally, last year we aligned each of our Mutual Funds and Institutional businesses globally to create greater opportunities for sharing product innovations and sales strategies, and for leveraging best practices. We also continue to consider the best ways to prudently balance our onshore and offshore capabilities in countries around the world.

Proud of our heritage

With more than 180 years of experience as fiduciaries and a proven track record of delivering high growth and diversified earnings from a broad set of products, channels and regions, we have a business and heritage that are difficult to replicate.

We are proud of our success and excited about the opportunities ahead of us. But most important, we are privileged to have earned our clients' trust and remain committed to delivering best-in-class investment performance, providing innovative solutions, and always doing first-class business and that in a first-class way.



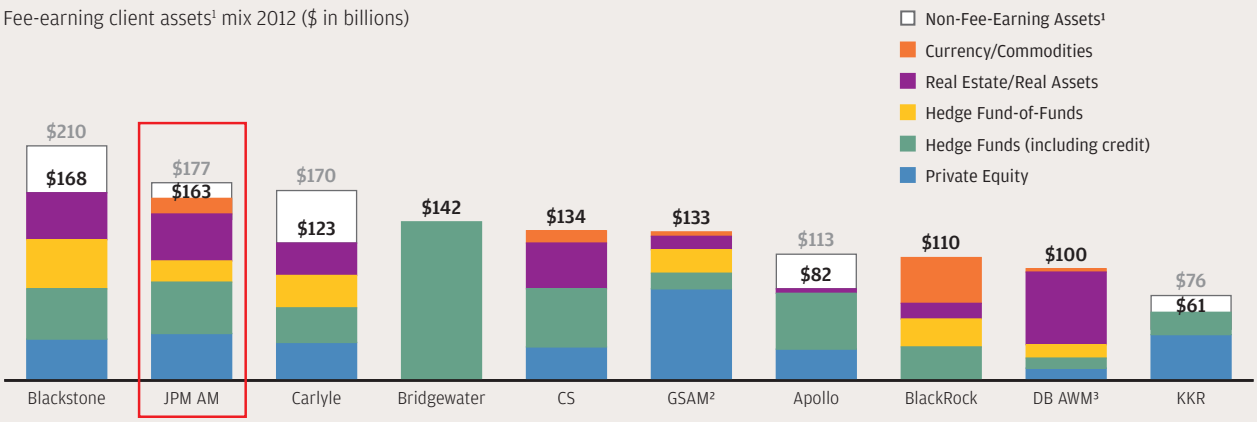
Mary Callahan Erdoes
CEO, Asset Management

2012 HIGHLIGHTS AND ACCOMPLISHMENTS

- #1 Ultra-High-Net-Worth Global Private Bank, *Euromoney*
- #1 U.S. Large Cap Growth Manager of the Year, *Institutional Investor*
- #1 U.S. Infrastructure Manager of the Year, *Institutional Investor*
- #1 Institutional Money Market Fund Manager Worldwide, *iMoneyNet*
- #1 U.S. Alternatives Money Manager, *Pensions & Investments*
- #1 U.S. Private Equity Money Manager, *Pensions & Investments*
- Top European Buyside Firm, *Thomson Reuters Extel*
- Best Asset Management Company for Asia, Hong Kong, and Japan, *The Asset*
- Best Overall Wealth Solutions Provider, *Private Asset Managers*
- Advisory Solutions Investment Manager of the Year, Money Management Institute
- Second-largest recipient of U.S. total net mutual fund flows, *Strategic Insight*
- Second-largest hedge fund manager, *Absolute Return*

Diversified Alternatives/Absolute Return Platform

Fee-earning client assets[1] mix 2012 ($ in billions)



Source: Company filings, J.P. Morgan estimates

[1] Fee-earning client assets exclude assets that do not earn fees such as firm capital invested in its own funds, uncalled capital commitments and asset appreciation based on changes in the fair value of underlying investments; non-fee-earning assets include these items

[2] GSAM breakdown based on Towers Watson FT Global Alternatives Survey 2012 (July 2012)

[3] Deutsche Bank AWM figures based on J.P. Morgan estimates

Corporate Responsibility



Peter Scher

About Corporate Responsibility

Five years after the global financial crisis began, 2012 saw the economic tide begin to turn. Housing markets started to stabilize, economies around the world slowly found their footing and unemployment rates inched down. At JPMorgan Chase, we remain optimistic that better days are ahead, but there still are far too many people looking for jobs, governments facing severe fiscal constraints and vital social service providers stretched thin trying to serve millions struggling to make ends meet.

As the financial crisis in the United States and the ongoing challenges in Europe have demonstrated, the world is more complex and our economies more interconnected than at any time in history. Global competition is more formidable than ever. Populations are growing rapidly and are migrating to urban areas, creating the need for new jobs and putting pressure on local infrastructure, education, housing, energy, clean water and other critical resources. And political instability, fueled in part by lack of economic opportunity, is sending ripples around the globe.

At the core of our values, JPMorgan Chase believes that using our strength and global reach, our expertise and relationships, and, of course, our access to capital to support our clients and communities, invest in them and help them navigate a complex global economy is our unique and fundamental corporate responsibility. This is central to how we do business. Because when we are successful, we create the foundation for widely shared growth and long-term prosperity.

2012 results

There was a lot for us to be proud of during the last year.

At a time when job creation is top of mind for communities all around the world, we increased our lending to small businesses by 18% over 2011; provided $6 billion to low-to-moderate income individuals or communities through our community development work; and worked to improve the lives of underserved people around the globe by growing the amount of capital we committed to impact investments to nearly $50 million.

In 2012, we worked with municipal governments to finance investments in infrastructure, education, workforce training and economic development that make cities globally competitive – and we leveraged our global footprint to connect economic leaders around the world through our Global Cities Initiative with The Brookings Institution. We also advanced environmental stewardship and innovation across our lines of business in close partnership with clients and through careful management of our direct operations, including energy use and greenhouse gas emissions.

In the United States, our community development financing efforts expanded affordable housing in cities and towns across the country. We introduced products tailored to meet the needs of underserved communities, many of which lack traditional, secure banking relationships. Our company and people donated very significant amounts of time and money to help local charities everywhere we operate. And we continued to uphold our duty to support – through hiring, housing and education – the military men and women who bravely serve the United States.

Taken together, these efforts reflect our responsibility to invest in our communities across the globe – and we are committed to doing more in the years ahead. We know that to make progress, we need to operate with integrity, acknowledge and fix our mistakes, and continually strive to gain the confidence of all our stakeholders. This is what motivates us every day.



Peter Scher
Head of Corporate Responsibility

2012 HIGHLIGHTS AND ACCOMPLISHMENTS

Growing the economy

- Provided $20 billion in new credit to American small businesses. Over the last three years, we added more than 1,000 small business bankers, and for the third year in a row, we were the #1 Small Business Administration (SBA) lender by units, approving 40% more SBA loans than our nearest competitor in the SBA's fiscal year 2012.
- Continued to provide billions of dollars in credit and financing to European clients – corporate and sovereign – even as those economies came under increasing strain. J.P. Morgan has been in Europe for more than 150 years and is committed to being a reliable partner in good times and bad to serve countries, clients, nonprofits and communities across the region.
- Provided $3 million in grants through our Mission Small Business program to small businesses around the United States that are making a positive impact in their communities. Nearly 70,000 small businesses applied, and 3.1 million consumers showed their support by voting for their favorite small businesses.
- Launched a five-year, $10 million effort to bolster economic growth by strengthening trade and investment ties between U.S. and global cities. In 2012, The Brookings-JPMorgan Chase Global Cities Initiative brought together leaders in Los Angeles, San Diego, Columbus, Miami, Singapore and São Paulo to highlight best policy and practice innovations from around the world and to foster a global network of leaders whose metropolitan regions trade, invest and grow together.

GLOBAL CITIES INITIATIVE
A Joint Project of Brookings and JPMorgan Chase

- Invested $15 million in workforce development partnerships, including Skills for Chicagoland's Future, which connects workforce development training programs with partners who can train people with the skills employers are seeking and then match graduates with employers' posted positions. In total, we awarded nearly $60 million in grants to workforce development programs over the last five years.

Strengthening communities

- Provided in excess of $990 million in loans and just over $1 billion in equity to build or preserve more than 31,000 units of affordable housing for low- and moderate-income families in over 200 U.S. cities.
- Lent $189 million to community development financial institutions that leveraged our capital to secure financing for more affordable housing, schools, healthcare clinics and small businesses.
- Structured $219 million in New Markets Tax Credits to build manufacturing and industrial capacity in the U.S. and $79 million for the construction of eight healthcare centers that cumulatively will be able to provide more than a quarter million annual patient visits.
- Committed $10 million to New York City's Clean Heat program, a public-private partnership to allow low-income, multifamily buildings to convert their heating systems from heavy fuel oil to cleaner-burning natural gas.
- Exceeded our 2004 10-year, $800 billion Public Commitment to make loans and investments for housing, small businesses and community development in the U.S. By the end of 2012 – one year ahead of schedule – we had lent or invested $844 billion in mortgages, small business and nonprofit loans, and affordable housing, primarily for minority or lower-income borrowers and communities.
- Strengthened communities outside the U.S. by investing $1 million in clean water programs in rural villages across India, Vietnam, Indonesia and the Philippines. Over the last two years, JPMorgan Chase has provided $1.9 million to deploy 192 AquaTowers that each supports the daily drinking water requirements of 1,000 people.





Coming to the aid of our neighbors and communities

In the wake of Superstorm Sandy, JPMorgan Chase announced up to $5 billion of support for small and mid-sized businesses and donated $10 million in aid to disaster relief organizations and individuals. We dispatched food trucks and mobile ATMs to hard-hit areas, waived fees for customers, reopened our branches quickly, found ways for more than 1,000 JPMorgan Chase employees to volunteer, and accepted donations to the American Red Cross through our ATMs and Rewards program. In partnership with the Robin Hood Foundation, we supported the 12.12.12 Concert for Sandy Relief, which raised more than $50 million for storm victims. After it became clear that Superstorm Sandy might disrupt the normal operations of the municipal debt markets, J.P. Morgan immediately offered its services to help the state of New Jersey raise $2.6 billion in debt financing, waiving our fees on the underwriting and guaranteeing that the state's borrowing costs would not exceed a predetermined rate.

Banking the underserved

- Introduced Chase Liquid℠, a general purpose reloadable card that is a low-cost alternative to traditional checking accounts and is designed to bring underserved customers into the traditional banking system.
- Supported a multimillion-dollar impact investment in Barared, a correspondent banking network that provides Mexico's low-income population with access to financial services and improves the income of small businesses in the network.

Honoring military and veterans

- Worked with partner firms to grow the 100,000 Jobs Mission to 91 companies that have hired more than 51,000 American veterans in just under two years — well ahead of the goal to hire 100,000 veterans by 2020. JPMorgan Chase alone hired nearly 5,000 veterans by the end of 2012, and we work every day to provide them with the tools to have a meaningful career.
- Provided almost 400 homes to deserving veterans and their families through our nonprofit partners, including Building Homes for Heroes, Homes for Our Troops, Military Warriors Support Foundation and Operation Homefront. We're on track to meet our commitment to donate 1,000 homes by 2016.

Giving and volunteering

- Made more than $190 million in philanthropic donations to nonprofits in 37 countries around the world to support community development, education, and arts and culture.
- More than 43,000 of our people provided 468,000 hours of volunteer service in local communities around the globe.



- Donated computer servers worth more than $500,000 to the KIPP public charter school network in New York. This hardware, configured by our Technology for Social Good team, will increase KIPP's data storage capacity and will improve its ability to expand curricula. In 2011, we invested over $38 million to help KIPP construct new schools in low-income communities in the Bronx, New York; Lynn, Massachusetts; and Washington, D.C.



- Donated more than $10 million to over 200 charities through the Chase Community Giving crowdsourced philanthropy program. Through Chase Community Giving, we've donated in excess of $28 million to over 700 charities across the U.S. since 2009 — and the program has more than 3.8 million Facebook fans.
- Extended our inaugural support of Bankers Without Borders®, a global volunteer initiative that connects institutions serving the poor with skilled volunteers. In 2012, our employees volunteered over 2,500 hours on projects in Indonesia, Peru and Kenya, among others.

Promoting sustainability

- Helped deploy over $5 billion of capital for alternative energy and clean technology companies and projects, including more than $1.6 billion in tax equity for renewable energy.
- Built a risk assessment framework to understand the practices of our clients that engage in hydraulic fracturing, working with clients, communities and environmental organizations such as the Environmental Defense Fund and The Nature Conservancy. The framework will allow us to promote best practices with our clients and across the financial services industry.

Accelerating small business growth

In South Africa, small businesses are key to expanding employment and economic growth, but many lack access to the expertise and services they need in order to grow. In 2012, we committed more than $1 million to launch the SME Catalyst for Growth Program, an initiative that provides small and medium-sized enterprises (SME) with access to hard-to-obtain quality business development services such as technical skills training, mentoring and help in accessing markets and finance. This program will create a framework for assessing the quality and impact of these services, helping both financiers and enterprises invest wisely in the sector, and contributing to South Africa's economic growth.



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FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

(unaudited)
As of or for the year ended December 31,

(in millions, except per share, ratio and headcount data)	2012	2011	2010	2009	2008[b]
Selected income statement data					
Total net revenue	$ 97,031	$ 97,234	$ 102,694	$ 100,434	$ 67,252
Total noninterest expense	64,729	62,911	61,196	52,352	43,500
Pre-provision profit	32,302	34,323	41,498	48,082	23,752
Provision for credit losses	3,385	7,574	16,639	32,015	19,445
Provision for credit losses - accounting conformity[a]	–	–	–	–	1,534
Income before income tax expense/(benefit) and extraordinary gain	28,917	26,749	24,859	16,067	2,773
Income tax expense/(benefit)	7,633	7,773	7,489	4,415	(926)
Income before extraordinary gain	21,284	18,976	17,370	11,652	3,699
Extraordinary gain[b]	–	–	–	76	1,906
Net income	$ 21,284	$ 18,976	$ 17,370	$ 11,728	$ 5,605
Per common share data					
Basic earnings					
Income before extraordinary gain	$ 5.22	$ 4.50	$ 3.98	$ 2.25	$ 0.81
Net income	5.22	4.50	3.98	2.27	1.35
Diluted earnings[c]					
Income before extraordinary gain	$ 5.20	$ 4.48	$ 3.96	$ 2.24	$ 0.81
Net income	5.20	4.48	3.96	2.26	1.35
Cash dividends declared per share	1.20	1.00	0.20	0.20	1.52
Book value per share	51.27	46.59	43.04	39.88	36.15
Tangible book value per share[d]	38.75	33.69	30.18	27.09	22.52
Common shares outstanding					
Average: Basic	3,809.4	3,900.4	3,956.3	3,862.8	3,501.1
Diluted	3,822.2	3,920.3	3,976.9	3,879.7	3,521.8
Common shares at period-end	3,804.0	3,772.7	3,910.3	3,942.0	3,732.8
Share price[e]					
High	$ 46.49	$ 48.36	$ 48.20	$ 47.47	$ 50.63
Low	30.83	27.85	35.16	14.96	19.69
Close	43.97	33.25	42.42	41.67	31.53
Market capitalization	167,260	125,442	165,875	164,261	117,695
Selected ratios					
Return on common equity ("ROE")[c]					
Income before extraordinary gain	11%	11%	10%	6%	2%
Net income	11	11	10	6	4
Return on tangible common equity ("ROTCE")[c][d]					
Income before extraordinary gain	15	15	15	10	4
Net income	15	15	15	10	6
Return on assets ("ROA")					
Income before extraordinary gain	0.94	0.86	0.85	0.58	0.21
Net income	0.94	0.86	0.85	0.58	0.31
Return on risk-weighted assets[f]					
Income before extraordinary gain	1.65	1.58	1.50	0.95	0.32
Net income	1.65	1.58	1.50	0.95	0.49
Overhead ratio	67	65	60	52	65
Deposits-to-loans ratio	163	156	134	148	135
Tier 1 capital ratio[g]	12.6	12.3	12.1	11.1	10.9
Total capital ratio	15.3	15.4	15.5	14.8	14.8
Tier 1 leverage ratio	7.1	6.8	7.0	6.9	6.9
Tier 1 common capital ratio[h]	11.0	10.1	9.8	8.8	7.0
Selected balance sheet data (period-end)[g]					
Trading assets	$ 450,028	$ 443,963	$ 489,892	$ 411,128	$ 509,983
Securities	371,152	364,793	316,336	360,390	205,943
Loans	733,796	723,720	692,927	633,458	744,898
Total assets	2,359,141	2,265,792	2,117,605	2,031,989	2,175,052
Deposits	1,193,593	1,127,806	930,369	938,367	1,009,277
Long-term debt	249,024	256,775	270,653	289,165	302,959
Common stockholders' equity	195,011	175,773	168,306	157,213	134,945
Total stockholders' equity	204,069	183,573	176,106	165,365	166,884
Headcount	258,965	260,157	239,831	222,316	224,961
Credit quality metrics					
Allowance for credit losses	$ 22,604	$ 28,282	$ 32,983	$ 32,541	$ 23,823
Allowance for loan losses to total retained loans	3.02%	3.84%	4.71%	5.04%	3.18%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[i]	2.43	3.35	4.46	5.51	3.62
Nonperforming assets	$ 11,734	$ 11,315	$ 16,682	$ 19,948	$ 12,780
Net charge-offs	9,063	12,237	23,673	22,965	9,835
Net charge-off rate	1.26%	1.78%	3.39%	3.42%	1.73%

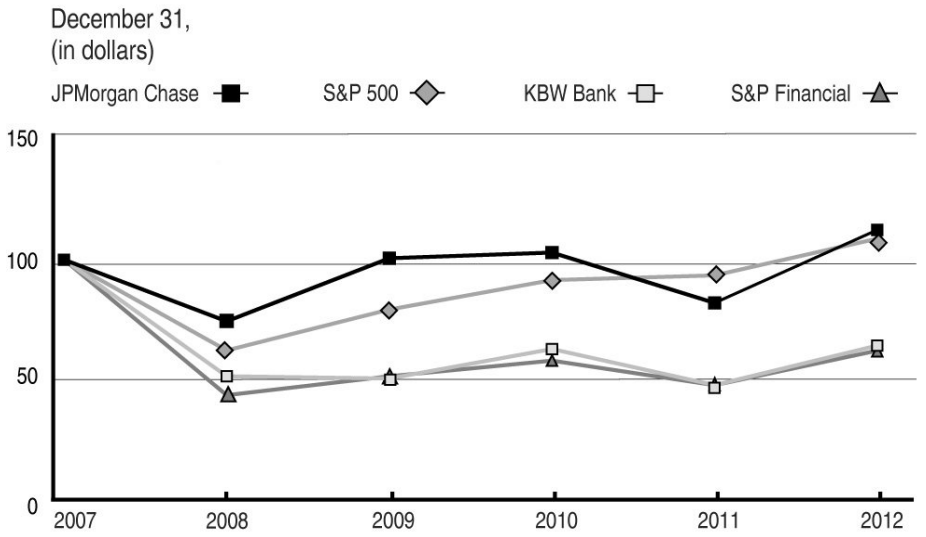
(a) Results for 2008 included a conforming loan loss provision related to the acquisition of Washington Mutual Bank's ("Washington Mutual") banking operations.
(b) On September 25, 2008, JPMorgan Chase acquired the banking operations of Washington Mutual. The acquisition resulted in negative goodwill, and accordingly, the Firm recorded an extraordinary gain. A preliminary gain of $1.9 billion was recognized at December 31, 2008. The final total extraordinary gain that resulted from the Washington Mutual transaction was $2.0 billion.
(c) The calculation of 2009 earnings per share ("EPS") and net income applicable to common equity includes a one-time, noncash reduction of $1.1 billion, or $0.27 per share, resulting from repayment of U.S. Troubled Asset Relief Program ("TARP") preferred capital in the second quarter of 2009. Excluding this reduction, the adjusted ROE and ROTCE were 7% and 11%, respectively, for 2009. The Firm views the adjusted ROE and ROTCE, both non-GAAP financial measures, as meaningful because they enable the comparability to prior periods.
(d) Tangible book value per share and ROTCE are non-GAAP financial measures. Tangible book value per share represents the Firm's tangible common equity divided by period-end common shares. ROTCE measures the Firm's annualized earnings as a percentage of tangible common equity. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 76–77 of this Annual Report.
(e) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.
(f) Return on Basel I risk-weighted assets is the annualized earnings of the Firm divided by its average risk-weighted assets.
(g) Effective January 1, 2010, the Firm adopted accounting guidance that amended the accounting for the transfer of financial assets and the consolidation of variable interest entities ("VIEs"). Upon adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related, adding $87.7 billion and $92.2 billion of assets and liabilities, respectively, and decreasing stockholders' equity and the Tier 1 capital ratio by $4.5 billion and 34 basis points, respectively. The reduction to stockholders' equity was driven by the establishment of an allowance for loan losses of $7.5 billion (pretax) primarily related to receivables held in credit card securitization trusts that were consolidated at the adoption date.
(h) Basel I Tier 1 common capital ratio ("Tier 1 common ratio") is Tier 1 common capital ("Tier 1 common") divided by risk-weighted assets. The Firm uses Tier 1 common capital along with the other capital measures to assess and monitor its capital position. For further discussion of the Tier 1 common capital ratio, see Regulatory capital on pages 117–120 of this Annual Report.
(i) Excludes the impact of residential real estate purchased credit-impaired ("PCI") loans. For further discussion, see Allowance for credit losses on pages 159–162 of this Annual Report.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Index, the KBW Bank Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced U.S. equity benchmark consisting of leading companies from different economic sectors. The KBW Bank Index seeks to reflect the performance of banks and thrifts that are publicly-traded in the U.S. and is composed of 24 leading national money center and regional banks and thrifts. The S&P Financial Index is an index of 80 financial companies, all of which are components of the S&P 500. The Firm is a component of all three industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2007, in JPMorgan Chase common stock and in each of the above indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2007	2008	2009	2010	2011	2012
JPMorgan Chase	$ 100.00	$ 74.87	$ 100.59	$ 102.91	$ 82.36	$ 112.15
KBW Bank Index	100.00	52.45	51.53	63.56	48.83	64.97
S&P Financial Index	100.00	44.73	52.44	58.82	48.81	62.92
S&P 500 Index	100.00	63.00	79.68	91.68	93.61	108.59



This section of JPMorgan Chase's Annual Report for the year ended December 31, 2012 ("Annual Report"), provides Management's discussion and analysis ("MD&A") of the financial condition and results of operations of JPMorgan Chase. See the Glossary of Terms on pages 333–335 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 185 of this Annual Report) and in JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2012 ("2012 Form 10-K"), in Part I, Item 1A: Risk factors; reference is hereby made to both.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide; the Firm has $2.4 trillion in assets and $204.1 billion in stockholders' equity as of December 31, 2012. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, asset management and private equity. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national bank with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national bank that is the Firm's credit card–issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), the Firm's U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm's principal operating subsidiaries in the United Kingdom ("U.K.") is J.P. Morgan Securities plc (formerly J.P. Morgan Securities Ltd.), a wholly-owned subsidiary of JPMorgan Chase Bank, N.A.

JPMorgan Chase's activities are organized, for management reporting purposes, into four major reportable business segments, as well as a Corporate/Private Equity segment. The Firm's consumer business is the Consumer & Community Banking segment. The Corporate & Investment Bank, Commercial Banking, and Asset Management segments comprise the Firm's wholesale businesses. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows.

Consumer & Community Banking
Consumer & Community Banking ("CCB") serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Merchant Services & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the purchased credit impaired ("PCI") portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.

Corporate & Investment Bank
The Corporate & Investment Bank ("CIB") offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Commercial Banking
Commercial Banking ("CB") delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and non-profit entities with annual revenue generally ranging from $20 million to $2 billion. CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Asset Management
Asset Management ("AM"), with client assets of $2.1 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions to a broad range of clients' investment needs. For individual investors, AM also provides retirement products and services, brokerage and banking services including trust and estate, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

EXECUTIVE OVERVIEW

This executive overview of the MD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of events, trends and uncertainties, as well as the capital, liquidity, credit, market, and country risks, and the critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Economic environment

The Eurozone crisis was center stage the beginning of the year, with social stresses and fears of breakup of the Euro. However, strong stands by Eurozone states and the European Central Bank ("ECB") helped stabilize the Eurozone later in the year. The ECB's Outright Monetary Transactions ("OMT") program showed its commitment to provide a safety net for European nations. Eurozone member states also took crucial steps toward further fiscal integration by handing over power to the ECB to regulate the largest banks in the Euro area and by passing more budgetary authority to the European Union. Despite the easing of the crisis, the economies of many of the European Union member countries stalled in 2012.

Asia's developing economies continued to expand in 2012, although growth was significantly slower than the previous year, reducing global inflationary pressures.

In the U.S., the economy grew at a modest pace and the unemployment rate declined to a four year low of 7.8% by the end of 2012 as U.S. labor market conditions continued to improve. The U.S. housing market turned the corner during 2012 as the sector continued to show signs of improvement: excess inventories were reduced, prices began to rise and home affordability improved in most areas of the country as household incomes stabilized and mortgage rates declined to historic lows. Homebuilder confidence improved to the highest level in six years and housing starts increased to the highest level in four years during 2012. At the same time, inflation remained below the Board of Governors of the Federal Reserve System's (the "Federal Reserve") 2% long-run goal.

The Federal Reserve maintained the target range for the federal funds rate at zero to one quarter percent and tied the interest rate forecasts to the evolution of the economy, in particular inflation and unemployment rates. Additionally, the Federal Reserve announced a new asset purchase program that would be open-ended and is intended to speed up the pace of the U.S. economic recovery and produce sustained improvement in the labor market.

Financial markets reacted favorably when the U.S. Congress reached an agreement to resolve the so-called "fiscal cliff" by passing the American Taxpayer Relief Act of 2012. This Act made permanent most of the tax cuts initiated in 2001 and 2003 and allowed the tax rate on the top income bracket, which was increased to $450,000 annually for joint tax filers, to revert to 39.6% from 35.0%. Spending and debt ceiling issues were postponed into 2013.

Going into 2013, the U.S. economy is likely to be affected by the continuing uncertainty about Europe's financial crisis, the Federal Reserve's monetary policy, and the ongoing fiscal debate over the U.S. debt limit, government spending and taxes.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	2012	2011	Change
Selected income statement data			
Total net revenue	$ 97,031	$ 97,234	– %
Total noninterest expense	64,729	62,911	3
Pre-provision profit	32,302	34,323	(6)
Provision for credit losses	3,385	7,574	(55)
Net income	21,284	18,976	12
Diluted earnings per share	5.20	4.48	16
Return on common equity	11%	11%	
Capital ratios			
Tier 1 capital	12.6	12.3	
Tier 1 common	11.0	10.1	

Business overview

JPMorgan Chase reported full-year 2012 record net income of $21.3 billion, or $5.20 per share, on net revenue of $97.0 billion. Net income increased by $2.3 billion, or 12%, compared with net income of $19.0 billion, or $4.48 per share, in 2011. ROE for both 2012 and 2011 was 11%.

The increase in net income in 2012 was driven by a lower provision for credit losses, partially offset by higher noninterest expense. Net revenue was flat compared with 2011 as lower principal transactions revenue and lower net interest income were offset by higher mortgage fees and related income, higher other income, and higher securities gains. Principal transactions revenue for 2012 included losses from the synthetic credit portfolio. The increase in noninterest expense was driven by higher compensation expense.

The decline in the provision for credit losses reflected a lower consumer provision as net charge-offs decreased and the related allowance for credit losses was reduced by $5.5 billion in 2012. The decline in the consumer allowance reflected improved delinquency trends and reduced estimated losses in the real estate and credit card loan portfolios. The wholesale credit environment remained favorable throughout 2012. Firmwide, net charge-offs were $9.1 billion for the year, down $3.2 billion, or 26%, from 2011, and nonperforming assets at year-end were $11.7 billion, up $419 million, or 4%. The current year included the effect of regulatory guidance implemented during 2012, which resulted in the Firm reporting an additional $3.0 billion of nonperforming loans at December 31, 2012 (see Consumer, excluding credit card on pages 140–148 of this Annual Report for further information). Before the

impact of these reporting changes, nonperforming assets would have been $8.7 billion at December 31, 2012. The total firmwide allowance for credit losses was $22.6 billion, resulting in a loan loss coverage ratio of 2.43% of total loans, excluding the purchased credit-impaired portfolio.

The Firm's 2012 results reflected strong underlying performance across virtually all its businesses, with strong lending and deposit growth. Consumer & Business Banking within Consumer & Community Banking added 106 branches and increased deposits by 11% in 2012. Business Banking loans increased to a record $18.9 billion, up 7% compared with 2011. Mortgage Banking reported strong production revenue driven by strong originations growth. In Card, Merchant Services & Auto, credit card sales volume (excluding Commercial Card) was up 11% for the year. The Corporate & Investment Bank maintained its #1 ranking in Global Investment Banking Fees and reported record assets under custody of $18.8 trillion at December 31, 2012. Commercial Banking reported record net revenue of $6.8 billion and record net income of $2.6 billion in 2012. Commercial Banking loans increased to a record $128.2 billion, a 14% increase compared with the prior year. Asset Management reported record revenue in 2012 and achieved its fifteenth consecutive quarter of positive net long-term client flows into assets under management. Asset Management also increased loan balances to a record $80.2 billion at December 31, 2012.

JPMorgan Chase ended the year with a Basel I Tier 1 common ratio of 11.0%, compared with 10.1% at year-end 2011. The Firm estimated that its Basel III Tier 1 common ratio was approximately 8.7% at December 31, 2012, taking into account the impact of final Basel 2.5 rules and the proposals set forth in the Federal Reserve's Notice of Proposed Rulemaking ("NPR"). Total deposits increased to $1.2 trillion, up 6% from the prior year. Total stockholders' equity at December 31, 2012, was $204.1 billion. (The Basel I and III Tier 1 common ratios are non-GAAP financial measures, which the Firm uses along with the other capital measures, to assess and monitor its capital position. For further discussion of the Tier 1 common capital ratios, see Regulatory capital on pages 117–120 of this Annual Report.)

During 2012, the Firm worked to help its customers, corporate clients and the communities in which it does business. The Firm provided credit and raised capital of more than $1.8 trillion for its clients during 2012; this included $20 billion lent to small businesses and $85 billion for nearly 1,500 non-profit and government entities, including states, municipalities, hospitals and universities. The Firm also originated more than 920,000 mortgages, and provided credit cards to approximately 6.7 million people. Since the beginning of 2009, the Firm has offered nearly 1.4 million mortgage modifications and of these approximately 610,000 have achieved permanent modifications.

In addition, despite the damage and disruption at many of its branches and facilities caused by Superstorm Sandy at the end of October 2012, the Firm continued to assist customers, clients and borrowers in the affected areas. The Firm continued to dispense cash through ATMs, loan money, provide liquidity to customers, and settle trades, and it waived a number of checking account and loan fees, including late payment fees, for the benefit of its customers.

Consumer & Community Banking net income increased compared to the prior year, reflecting higher net revenue and lower provision for credit losses, partially offset by higher noninterest expense. Net revenue increased, driven by higher noninterest revenue. Net interest income decreased, driven by lower deposit margins and lower loan balances due to net portfolio runoff, largely offset by the impact of higher deposit balances. Noninterest revenue increased, driven by higher mortgage fees and related income, partially offset by lower debit card revenue, reflecting the impact of the Durbin Amendment. The provision for credit losses in 2012 was $3.8 billion compared with $7.6 billion in the prior year. The current-year provision reflected a $5.5 billion reduction in the allowance for loan losses due to improved delinquency trends and lower estimated losses in the mortgage loan and credit card portfolios. The prior-year provision reflected a $4.2 billion reduction in the allowance for loan losses. Noninterest expense increased in 2012 compared with the prior year, driven by higher production expense reflecting higher volumes, investments in sales force and partially offset by lower marketing expense in Card. Return on equity for the year was 25% on $43.0 billion of average allocated capital.

Corporate & Investment Bank net income increased in 2012 compared with the prior year, reflecting slightly higher net revenue, lower noninterest expense and a larger benefit from the provision for credit losses. Net revenue for 2012 included a $930 million loss from debit valuation adjustments ("DVA") on structured notes and derivative liabilities resulting from the tightening of the Firm's credit spreads. The prior year net revenue included a $1.4 billion gain from DVA. The provision for credit losses was a larger benefit in 2012 compared with the prior year. The current-year benefit reflected recoveries and a net reduction in the allowance for credit losses both related to the restructuring of certain nonperforming loans, current credit trends and other portfolio activity. Noninterest expense was down slightly driven by lower compensation expense. Return on equity for the year was 18%, or 19% excluding DVA (a non-GAAP financial measure), on $47.5 billion of average allocated capital.

Commercial Banking reported record net income for 2012, reflecting an increase in net revenue and a decrease in the provision for credit losses, partially offset by higher noninterest expense. Net revenue was a record, driven by higher net interest income and higher noninterest revenue. Net interest income increased, driven by growth in loan and liability balances, partially offset by spread compression on loan and liability products. Noninterest revenue increased

compared with the prior year, largely driven by increased investment banking revenue. Noninterest expense increased, primarily reflecting higher headcount-related expense. Return on equity for the year was 28% on $9.5 billion of average allocated capital.

Asset Management net income increased in 2012, driven by higher net revenue. Net revenue increased, driven by net inflows to products with higher margins and higher net interest income resulting from higher loan and deposit balances. Noninterest expense was flat compared with the prior year. Return on equity for the year was 24% on $7.0 billion of average allocated capital.

Corporate/Private Equity reported a net loss in 2012, compared with net income in the prior year driven by losses in Treasury and Chief Investment Office ("CIO"). Treasury and CIO net revenue included $5.8 billion of principal transactions losses from the synthetic credit portfolio in CIO during the first six months of 2012 and $449 million of losses during the third quarter of 2012 on the retained index credit derivative positions. During the third quarter, CIO effectively closed out the index credit derivative positions that were retained following the transfer of the remainder of the synthetic credit portfolio to CIB on July 2, 2012. Treasury and CIO net revenue also included securities gains of $2.0 billion for the year. The current-year net revenue also included $888 million of extinguishment gains related to the redemption of trust preferred securities. Net interest income was negative in 2012, and significantly lower than the prior year, primarily reflecting the impact of lower portfolio yields and higher deposit balances across the Firm.

Other Corporate reported a net loss in 2012. Noninterest revenue included a benefit of $1.1 billion as a result of the Washington Mutual bankruptcy settlement and a $665 million gain for the recovery on a Bear Stearns-related subordinated loan. Noninterest expense included an expense of $3.7 billion for additional litigation reserves, predominantly for mortgage-related matters. The prior year included expense of $3.2 billion for additional litigation reserves.

Note: The Firm uses a single U.S.-based, blended marginal tax rate of 38% ("the marginal rate") to report the estimated after-tax effects of each significant item affecting net income. This rate represents the weighted-average marginal tax rate for the U.S. consolidated tax group. The Firm uses this single marginal rate to reflect the tax effects of all significant items because (a) it simplifies the presentation and analysis for management and investors; (b) it has proved to be a reasonable estimate of the marginal tax effects; and (c) often there is uncertainty at the time a significant item is disclosed regarding its ultimate tax outcome.

2013 Business outlook

The following forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking Statements on page 185 of this Annual Report and the Risk Factors section on pages 8–21 of the 2012 Form 10-K.

JPMorgan Chase's outlook for the full year 2013 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these linked factors will affect the performance of the Firm and its lines of business.

In the Consumer & Business Banking business within CCB, the Firm estimates that, given the current low interest rate environment, continued deposit spread compression could negatively impact annual net income by approximately $400 million in 2013. This decline may be offset by the impact of deposit balance growth, although the exact extent of any such deposit growth cannot be determined at this time.

In the Mortgage Banking business within CCB, management expects to continue to incur elevated default- and foreclosure-related costs, including additional costs associated with the Firm's mortgage servicing processes, particularly its loan modification and foreclosure procedures. In addition, management believes that the high production margins experienced in recent quarters likely peaked in 2012 and will decline over time. Management also expects there will be continued elevated levels of repurchases of mortgages previously sold, predominantly to U.S. government-sponsored entities ("GSEs"). However, based on current trends and estimates, management believes that the existing mortgage repurchase liability is sufficient to cover such losses.

For Real Estate Portfolios within Mortgage Banking, management believes that total quarterly net charge-offs may be approximately $550 million, subject to economic conditions. If the positive credit trends in the residential real estate portfolio continue or accelerate and economic uncertainty declines, the related allowance for loan losses may be reduced over time. Given management's current estimate of portfolio runoff levels, the residential real estate portfolio is expected to decline by approximately 10% to 15% in 2013 from year-end 2012 levels. The run-off in the residential real estate portfolio can be expected to reduce annual net interest income by approximately $600 million in 2013. Over time, the reduction in net interest income should be offset by an improvement in credit costs and lower expenses.

In Card Services within CCB, the Firm expects that, if current positive credit trends continue, the card- related allowance for loan losses could be reduced by up to $1 billion over the course of 2013.

The currently anticipated results for CCB described above could be adversely affected if economic conditions, including U.S. housing prices or the unemployment rate, do not continue to improve. Management continues to closely monitor the portfolios in these businesses.

In Private Equity, within the Corporate/Private Equity segment, earnings will likely continue to be volatile and

influenced by capital markets activity, market levels, the performance of the broader economy and investment-specific issues.

For Treasury and CIO, within the Corporate/Private Equity segment, management expects a quarterly net loss of approximately $300 million with that amount likely to vary driven by the implied yield curve and management decisions related to the positioning of the investment securities portfolio.

For Other Corporate, within the Corporate/Private Equity segment, management expects quarterly net income, excluding material litigation expense and significant items, if any, to be approximately $100 million, but this amount is also likely to vary each quarter.

Management expects the Firm's net interest income to be generally flat during 2013, as modest pressure on the net yield on interest-earning assets is expected to be generally offset by anticipated growth in interest-earning assets.

The Firm continues to focus on expense discipline and is targeting expense for 2013 to be approximately $1 billion lower than in 2012 (not taking into account, for such purposes, any expenses in each year related to corporate litigation and foreclosure-related matters).

CIO synthetic credit portfolio

On August 9, 2012, the Firm restated its previously-filed interim financial statements for the quarterly period ended March 31, 2012. The restatement related to valuations of certain positions in the synthetic credit portfolio of the Firm's CIO. The restatement had the effect of reducing the Firm's reported net income for the three months ended March 31, 2012, by $459 million. The restatement had no impact on any of the Firm's Consolidated Financial Statements as of June 30, 2012, and December 31, 2011, or for the three and six months ended June 30, 2012 and 2011. For more information about the restatement and the related valuation matter, see the Firm's Form 10-Q for the quarter ended June 30, 2012, filed on August 9, 2012.

Management also determined that a material weakness existed in the Firm's internal control over financial reporting at March 31, 2012. Management has taken steps to remediate the material weakness, including enhancing management supervision of valuation matters. These remedial steps were substantially implemented by June 30, 2012; however, in accordance with the Firm's internal control compliance program, the material weakness designation could not be closed until the remedial processes were operational for a period of time and successfully tested. The testing was successfully completed during the third quarter of 2012 and the control deficiency was closed at September 30, 2012. For additional information concerning the remedial changes in, and related testing of, the Firm's internal control over financial reporting, see Part I, Item 4: Controls and Procedures in the Firm's Form 10-Q for the quarter ended September 30, 2012, filed on November 8, 2012.

On July 2, 2012, the majority of the synthetic credit portfolio was transferred from the CIO to the Firm's CIB, which has the expertise, trading platforms and market franchise to manage these positions to maximize their economic value. An aggregate position of approximately $12 billion notional was retained in CIO. By the end of the third quarter of 2012, CIO effectively closed out the index credit derivative positions that had been retained by it following the transfer. CIO incurred losses of $5.8 billion from the synthetic credit portfolio for the six months ended June 30, 2012, and losses of $449 million from the retained index credit derivative positions for the three months ended September 30, 2012, which were recorded in the principal transactions revenue line item of the income statement. CIB continues to actively manage and reduce the risks in the remaining synthetic credit portfolio that had been transferred to it on July 2, 2012. This portion of the portfolio experienced modest losses in each of the two quarters of 2012 following the transfer; these losses were included in Fixed Income Markets Revenue for CIB (and also recorded in the principal transactions revenue).

On January 16, 2013, the Firm announced that the Firm's Management Task Force and the independent Review Committee of the Firm's Board of Directors (the "Board Review Committee") had each concluded their reviews relating to the 2012 losses by the CIO and had released their respective reports. The Board Review Committee's Report sets forth recommendations relating to the Board's oversight of the Firm's risk management processes, all of which have been approved by the full Board of Directors and have been, or are in the process of being, implemented.

The Management Task Force Report, in addition to summarizing the key events and setting forth its observations regarding the losses incurred in CIO's synthetic credit portfolio, describes the broad range of remedial measures taken by the Firm to respond to the lessons it has learned from the CIO events, including:

- revamping the governance, mandate and reporting and control processes of CIO;
- implementing numerous risk management changes, including improvements in model governance and market risk; and
- effecting a series of changes to the Risk function's governance, organizational structure and interaction with the Board.

The Board of Directors formed the Board Review Committee in May 2012 to oversee the scope and work of the Management Task Force review, assess the Firm's risk management processes related to the issues raised in the Management Task Force review, and to report to the Board of Directors on the Review Committee's findings and recommendations. In performing these tasks, the Board Review Committee, with the assistance of its own counsel and expert advisor, conducted an independent review, including analyzing the voluminous documentary record and conducting interviews of Board members and

numerous current and former employees of the Firm. Based on its review, the Board Review Committee concurred in the substance of the Management Task Force Report. The Management Task Force Report and the Board Review Committee Report set out facts that in their view were the most relevant for their respective purposes. Others (including regulators conducting their own investigations) may have a different view of the facts, or may focus on other facts, and may also draw different conclusions regarding the facts and issues.

The Board Review Committee Report recommends a number of enhancements to the Board's own practices to strengthen its oversight of the Firm's risk management processes. The Board Review Committee noted that some of its recommendations were already being followed by the Board or the Risk Policy Committee or have recently been put into effect.

The Board Review Committee's recommendations include:

- better focused and clearer reporting of presentations to the Board's Risk Policy Committee, with particular emphasis on the key risks for each line of business, identification of significant future changes to the business and its risk profile, and adequacy of staffing, technology and other resources;
- clarifying to management the Board's expectations regarding the capabilities, stature, and independence of the Firm's risk management personnel;
- more systematic reporting to the Risk Policy Committee on significant model risk, model approval and model governance, on setting of significant risk limits and responses to significant limit excessions, and with respect to regulatory matters requiring attention;
- further clarification of the Risk Policy Committee's role and responsibilities, and more coordination of matters presented to the Risk Policy Committee and the Audit Committee;
- concurrence by the Risk Policy Committee in the hiring or firing of the Chief Risk Officer and that it be consulted with respect to the setting of such Chief Risk Officer's compensation; and
- staff with appropriate risk expertise be added to the Firm's Internal Audit function and that Internal Audit more systematically include the risk management function in its audits.

The Board of Directors will continue to oversee the Firm's remediation efforts to ensure they are fully implemented.

Also, on January 14, 2013, the Firm and JPMorgan Chase Bank, N.A., entered into Consent Orders with, respectively, the Board of Governors of the Federal Reserve System and the Office of the Comptroller of the Currency ("the OCC") that relate to risk management, model governance and other control functions related to CIO and certain other trading activities at the Firm. Many of the actions required by the Consent Orders are consistent with those recommended by the Management Task Force and the Board Review Committee and, as such, a number of them have been, or are in the process of being, implemented. The Firm is committed to the full remediation of all issues identified in the Consent Orders.

The CIO synthetic credit portfolio losses have resulted in litigation against the Firm, as well as heightened regulatory scrutiny and may lead to additional regulatory or legal proceedings, in addition to the consent orders noted above. Such regulatory and legal proceedings may expose the Firm to fines, penalties, judgments or losses, harm the Firm's reputation or otherwise cause a decline in investor confidence. For a description of the regulatory and legal developments relating to the CIO matters described above, see Note 31 on pages 316–325 of this Annual Report.

Regulatory developments

JPMorgan Chase is subject to regulation under state and federal laws in the U.S., as well as the applicable laws of each of the various other jurisdictions outside the U.S. in which the Firm does business. The Firm is currently experiencing an unprecedented increase in regulation and supervision, and such changes could have a significant impact on how the Firm conducts business. For example, under the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), U.S. federal banking and other regulatory agencies are instructed to conduct approximately 285 rulemakings and 130 studies and reports. These agencies include the Federal Reserve, the Office of the Comptroller of the Currency (the "OCC"), the Federal Deposit Insurance Corporation (the "FDIC"), the Commodity Futures Trading Commission, the U.S. Securities and Exchange Commission (the "SEC") and the Bureau of Consumer Financial Protection (the "CFPB"). The Firm continues to work diligently in assessing and understanding the implications of the regulatory changes it is facing, and is devoting substantial resources to implementing all the new regulations while, at the same time, best meeting the needs and expectations of its clients.

During 2012, for example, the Firm submitted to the Federal Reserve and the FDIC its "resolution plan" in the event of a material distress or failure, registered several of its subsidiaries with the CFTC as swap dealers, and continued its planning and implementation efforts with respect to new regulations affecting its derivatives, trading and money market mutual funds businesses. The Firm also faces regulatory initiatives relating to its structure, including push-out of certain derivatives activities from its subsidiary banks under Section 716 of the Dodd-Frank Act, a proposed requirement from the U.K. Financial Services Authority (the "FSA") requiring the Firm to either obtain equal treatment for the U.K. depositors of its U.S. bank who makes deposits in the U.K., or "subsidiarize" in the U.K., and various other proposed U.K. and EU initiatives that could affect its ability to allocate capital and liquidity efficiently among its global operations. Additional efforts are underway to comply with the higher capital requirements of the new Basel Accords (both the "Basel 2.5" requirements effective January 1, 2013 as well as the additional capital requirements of "Basel III"). The Firm is also preparing to comply with Basel III's new liquidity measures -- the "liquidity coverage ratio" ("LCR") and the "net stable

funding ratio" ("NSFR") - which require the Firm to hold specified types of "high quality" liquid assets to meet assumed levels of cash outflows following a stress event. Management's current objective is for the Firm to reach, by the end of 2013, an estimated Basel III Tier I common ratio of 9.5% (including the impact of the Basel 2.5 rules and the estimated impact of the other applicable requirements set forth in the Federal Reserve's Advanced NPR issued in June 2012). The Firm is currently targeting reaching a 100% LCR, based on its current understanding of these requirements, by the end of 2013.

Furthermore, the Firm is experiencing heightened scrutiny by its regulators of its compliance with new and existing regulations, including those issued under the Bank Secrecy Act, the Unfair and Deceptive Acts or Practices laws, the Real Estate Settlement Procedures Act ("RESPA"), the Truth in Lending Act, laws governing the Firm's consumer collections practices and the laws administered by the Office of Foreign Control, among others. The Firm is also under scrutiny by its supervisors with respect to its controls and operational processes, such as those relating to model development, review, governance and approvals. On January 14, 2013, the Firm and three of its subsidiary banks, including JPMorgan Chase Bank, N.A. entered into Consent Orders with the Federal Reserve and the OCC relating principally to the Firm's and such banks' BSA/AML policies and procedures. Also on January 14, 2013, the Firm and JPMorgan Chase Bank, N.A. entered into Consent Orders arising out of their reviews of the Firm's Chief Investment Office. These latter Consent Orders relate to risk management, model governance and other control functions related to CIO and certain other trading activities at the Firm. The Firm expects that its banking supervisors will in the future continue to take more formal enforcement actions against the Firm rather than issuing informal supervisory actions or criticisms.

While the effect of the changes in law and the heightened scrutiny of its regulators is likely to result in additional costs, the Firm cannot, given the current status of regulatory and supervisory developments, quantify the possible effects on its business and operations of all the significant changes that are currently underway. For further discussion of regulatory developments, see Supervision and regulation on pages 1–8 and Risk factors on pages 8–21.

On January 7, 2013, the Firm submitted its capital plan to the Federal Reserve under the Federal Reserve's 2013 Comprehensive Capital Analysis and Review ("CCAR") process. The Firm's plan relates to the last three quarters of 2013 and the first quarter of 2014 (that is, the 2013 CCAR capital plan relates to dividends to be declared commencing in June 2013 and payable in July 2013, and to common equity repurchases and other capital actions commencing April 1, 2013). The Firm expects to receive the Federal Reserve's final response to its plan no later than March 14, 2013. With respect to the Firm's 2012 CCAR capital plan, the Firm expects that its Board of Directors will declare the regular quarterly common stock dividend of $0.30 per share for the 2013 first quarter at its Board meeting to be held on March 19, 2013. In addition, pursuant to a non-objection received from the Federal Reserve on November 5, 2012 with respect to the 2012 capital plan it resubmitted in August 2012, the Firm is authorized to repurchase up to $3.0 billion of common equity in the first quarter of 2013. The timing and exact amount of any common equity to be repurchased under the program will depend on various factors, including market conditions; the Firm's capital position; organic and other investment opportunities, and legal and regulatory considerations, among other factors. For more information, see Capital management on pages 116–122.

Business events

Superstorm Sandy

On October 29, 2012, the mid-Atlantic and Northeast regions of the U.S. were affected by Superstorm Sandy, which caused major flooding and wind damage and resulted in major disruptions to individuals and businesses and significant damage to homes and communities in the affected regions. Despite the damage and disruption to many of its branches and facilities, the Firm has been assisting its customers, clients and borrowers in the affected areas. The Firm has continued to dispense cash via ATMs and branches, loan money, provide liquidity to customers, and settle trades, and it waived a number of checking account and loan fees, including late payment fees. Superstorm Sandy did not have a material impact on the 2012 financial results of the Firm and the Firm does not anticipate total losses due to the storm will be material.

Subsequent events

Mortgage foreclosure settlement agreement with the Office of the Comptroller of the Currency and the Board of Governors of the Federal Reserve System

On January 7, 2013, the Firm announced that it and a number of other financial institutions entered into a settlement agreement with the Office of the Comptroller of the Currency and the Board of Governors of the Federal Reserve System providing for the termination of the independent foreclosure review programs (the "Independent Foreclosure Review"). Under this settlement, the Firm will make a cash payment of $753 million into a settlement fund for distribution to qualified borrowers. The Firm has also committed an additional $1.2 billion to foreclosure prevention actions, which will be fulfilled through credits given to the Firm for modifications, short sales and other specified types of borrower relief. Foreclosure prevention actions that earn credit under the Independent Foreclosure Review settlement are in addition to actions taken by the Firm to earn credit under the global settlement entered into by the Firm with state and federal agencies. The estimated impact of the foreclosure prevention actions required under the Independent Foreclosure Review settlement have been considered in the Firm's allowance for loan losses. The Firm recognized a pretax charge of approximately $700 million in the fourth quarter of 2012 related to the Independent Foreclosure Review settlement.

CONSOLIDATED RESULTS OF OPERATIONS

The following section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2012. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 178–182 of this Annual Report.

Revenue

Year ended December 31, (in millions)	2012	2011	2010
Investment banking fees	$ 5,808	$ 5,911	$ 6,190
Principal transactions	5,536	10,005	10,894
Lending- and deposit-related fees	6,196	6,458	6,340
Asset management, administration and commissions	13,868	14,094	13,499
Securities gains	2,110	1,593	2,965
Mortgage fees and related income	8,687	2,721	3,870
Card income	5,658	6,158	5,891
Other income[a]	4,258	2,605	2,044
Noninterest revenue	52,121	49,545	51,693
Net interest income	44,910	47,689	51,001
Total net revenue	$ 97,031	$ 97,234	$ 102,694

(a) Included operating lease income of $1.3 billion, $1.2 billion and $971 million for the years ended December 31, 2012, 2011 and 2010, respectively.

2012 compared with 2011

Total net revenue for 2012 was $97.0 billion, down slightly from 2011. Results for 2012 were driven by lower principal transactions revenue from losses incurred by CIO, and lower net interest income. These items were predominantly offset by higher mortgage fees and related income in CCB and higher other income in Corporate/Private Equity.

Investment banking fees decreased slightly from 2011, reflecting lower advisory fees on lower industry-wide volumes, and to a lesser extent, slightly lower equity underwriting fees on industry-wide volumes that were flat from the prior year. These declines were predominantly offset by record debt underwriting fees, driven by favorable market conditions and the impact of continued low interest rates. For additional information on investment banking fees, which are primarily recorded in CIB, see CIB segment results pages 92–95 and Note 7 on pages 228–229 of this Annual Report.

Principal transactions revenue, which consists of revenue primarily from the Firm's market-making and private equity investing activities, decreased compared with 2011, predominantly due to $5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and $449 million of losses incurred by CIO from the retained index credit derivative positions for the three months ended September 30, 2012; and additional modest losses incurred by CIB from the synthetic credit portfolio in each of the third and fourth quarters of 2012.

Principal transaction revenue also included a $930 million loss in 2012, compared with a $1.4 billion gain in 2011, from DVA on structured notes and derivative liabilities, resulting from the tightening of the Firm's credit spreads. These declines were partially offset by higher market-making revenue in CIB, driven by strong client revenue and higher revenue in rates-related products, as well as a $665 million gain recognized in Other Corporate associated with the recovery on a Bear Stearns-related subordinated loan. Private equity gains decreased in 2012, predominantly due to lower unrealized and realized gains on private investments, partially offset by higher unrealized gains on public securities. For additional information on principal transactions revenue, see CIB and Corporate/Private Equity segment results on pages 92–95 and 102–104, respectively, and Note 7 on pages 228–229 of this Annual Report.

Lending- and deposit-related fees decreased in 2012 compared with the prior year. The decrease predominantly reflected lower lending-related fees in CIB and lower deposit-related fees in CCB. For additional information on lending- and deposit-related fees, which are mostly recorded in CCB, CIB and CB, see the segment results for CCB on pages 80–91, CIB on pages 92–95 and CB on pages 96–98 of this Annual Report.

Asset management, administration and commissions revenue decreased from 2011. The decrease was largely driven by lower brokerage commissions in CIB. This decrease was largely offset by higher asset management fees in AM driven by net client inflows, the effect of higher market levels, and higher performance fees; and higher investment service fees in CCB, as a result of growth in branch sales of investment products. For additional information on these fees and commissions, see the segment discussions for CIB on pages 92–95, CCB on pages 80–91, AM on pages 99–101, and Note 7 on pages 228–229 of this Annual Report.

Securities gains increased, compared with the 2011 level, reflecting the results of repositioning the CIO available-for-sale ("AFS") securities portfolio. For additional information on securities gains, which are mostly recorded in the Firm's Corporate/Private Equity segment, see the Corporate/Private Equity segment discussion on pages 102–104, and Note 12 on pages 244–248 of this Annual Report.

Mortgage fees and related income increased significantly in 2012 compared with 2011. The increase resulted from higher production revenue, reflecting wider margins driven by favorable market conditions; and higher volumes due to historically low interest rates and the Home Affordable Refinance Programs ("HARP"). The increase also resulted from a favorable swing in risk management results related

to mortgage servicing rights ("MSR"), which was a gain of $619 million in 2012, compared with a loss of $1.6 billion in 2011. For additional information on mortgage fees and related income, which is recorded predominantly in CCB, see CCB's Mortgage Production and Mortgage Servicing discussion on pages 85–87, and Note 17 on pages 291–295 of this Annual Report.

Card income decreased during 2012, driven by lower debit card revenue, reflecting the impact of the Durbin Amendment; and to a lesser extent, higher amortization of loan origination costs. The decrease in credit card income was offset partially by higher net interchange income associated with growth in credit card sales volume, and higher merchant servicing revenue. For additional information on credit card income, see the CCB segment results on pages 80–91 of this Annual Report.

Other income increased in 2012 compared with the prior year, largely due to a $1.1 billion benefit from the Washington Mutual bankruptcy settlement, and $888 million of extinguishment gains in Corporate/Private Equity related to the redemption of trust preferred securities ("TruPS"). The extinguishment gains were related to adjustments applied to the cost basis of the TruPS during the period they were in a qualified hedge accounting relationship. These items were offset partially by the absence of a prior-year gain on the sale of an investment in AM.

Net interest income decreased in 2012 compared with the prior year, predominantly reflecting the impact of lower average trading asset balances, the runoff of higher-yielding loans, faster prepayment of mortgage-backed securities, limited reinvestment opportunities, as well as the impact of lower interest rates across the Firm's interest-earning assets. The decrease in net interest income was partially offset by lower deposit and other borrowing costs. The Firm's average interest-earning assets were $1.8 trillion for 2012, and the net yield on those assets, on a fully taxable-equivalent ("FTE") basis, was 2.48%, a decrease of 26 basis points from 2011.

2011 compared with 2010

Total net revenue for 2011 was $97.2 billion, a decrease of $5.5 billion, or 5%, from 2010. Results for 2011 were driven by lower net interest income in several businesses, lower securities gains in Corporate/Private Equity, lower mortgage fees and related income in CCB, and lower principal transactions revenue in Corporate/Private Equity. These declines were partially offset by higher asset management fees, largely in AM.

Investment banking fees decreased from 2010, predominantly due to declines in equity and debt underwriting fees. The impact from lower industry-wide volumes in the second half of 2011 more than offset the Firm's record level of debt underwriting fees in the first six months of the year. Advisory fees increased for the year, reflecting higher industry-wide completed M&A volumes relative to the 2010 level.

Principal transactions revenue decreased compared with 2010. This was driven by lower trading revenue and lower private equity gains. Trading revenue included a $1.4 billion gain from DVA on structured notes and derivative liabilities, resulting from the widening of the Firm's credit spreads; this was partially offset by a $769 million loss, net of hedges, from CVA on derivative assets in CIB's credit portfolio, due to the widening of credit spreads related to the Firm's counterparties. The prior year included a $509 million gain from DVA, partially offset by a $403 million loss, net of hedges, from CVA. Excluding DVA and CVA, lower trading revenue reflected the impact of challenging market conditions on Corporate and CIB during the second half of 2011. Lower private equity gains were primarily due to net write-downs on privately-held investments and the absence of prior-year gains from sales in the Private Equity portfolio.

Lending- and deposit-related fees increased modestly in 2011 compared with the prior year. The increase was primarily driven by the introduction of a new checking account product offering by CCB in the first quarter of 2011, and the subsequent conversion of certain existing accounts into the new product. The increase was offset partly by the impact of regulatory and policy changes affecting nonsufficient fund/overdraft fees in CCB.

Asset management, administration and commissions revenue increased from 2010, reflecting higher asset management fees in AM and CCB, driven by net inflows to products with higher margins and the effect of higher market levels; and higher administration fees in CIB, reflecting net inflows of assets under custody.

Securities gains decreased, compared with the 2010 level, primarily due to the repositioning of the AFS portfolio in response to changes in the current market environment and to rebalancing exposures.

Mortgage fees and related income decreased in 2011 compared with 2010, reflecting a MSR risk management loss of $1.6 billion for 2011, compared with income of $1.1 billion for 2010, largely offset by lower repurchase losses in 2011. The $1.6 billion loss was driven by a $7.1 billion loss due to a decrease in the fair value of the mortgage servicing rights ("MSR") asset, which was predominantly offset by a $5.6 billion gain on the derivatives used to hedge the MSR asset. For additional information on repurchase losses, see the Mortgage repurchase liability discussion on pages 111–115 and Note 29 on pages 308–315 of this Annual Report.

Card income increased during 2011, largely reflecting higher net interchange income associated with higher customer transaction volume on credit and debit cards, as well as lower partner revenue-sharing due to the impact of the Kohl's portfolio sale. These increases were partially offset by lower revenue from fee-based products, as well as the impact of the Durbin Amendment.

Other income increased in 2011, driven by valuation adjustments on certain assets and incremental revenue from recent acquisitions in CIB, and higher auto operating lease income in CCB, resulting from growth in lease volume.

Also contributing to the increase was a gain on the sale of an investment in AM.

Net interest income decreased in 2011 compared with the prior year, driven by lower average loan balances and yields in CCB, reflecting the expected runoff of credit card balances and residential real estate loans; lower fees on credit card receivables, reflecting the impact of legislative changes; higher average interest-bearing deposit balances and related yields; and lower yields on securities, reflecting portfolio repositioning in anticipation of an increasing interest rate environment. The decrease was offset partially by lower revenue reversals associated with lower credit card charge-offs, and higher trading asset balances. The Firm's average interest-earning assets were $1.8 trillion for the 2011 full year, and the net yield on those assets, on a FTE basis, was 2.74%, a decrease of 32 basis points from 2010. For further information on the impact of the legislative changes on the Consolidated Statements of Income, see CCB discussion on credit card legislation on page 89 of this Annual Report.

Provision for credit losses

Year ended December 31,

(in millions)	2012	2011	2010
Consumer, excluding credit card	$ 302	$ 4,672	$ 9,452
Credit card	3,444	2,925	8,037
Total consumer	3,746	7,597	17,489
Wholesale	(361)	(23)	(850)
Total provision for credit losses	$ 3,385	$ 7,574	$ 16,639

2012 compared with 2011

The provision for credit losses decreased by $4.2 billion from 2011. The decrease was driven by a lower provision for consumer, excluding credit card loans, which reflected a reduction in the allowance for loan losses, due primarily to lower estimated losses in the non-PCI residential real estate portfolio as delinquency trends improved, partially offset by the impact of charge-offs of Chapter 7 loans. A higher level of recoveries and lower charge-offs in the wholesale provision also contributed to the decrease. These items were partially offset by a higher provision for credit card loans, largely due to a smaller reduction in the allowance for loan losses in 2012 compared with the prior year. For a more detailed discussion of the loan portfolio and the allowance for credit losses, see the segment discussions for CCB on pages 80–91, CIB on pages 92–95 and CB on pages 96–98, and Allowance For Credit Losses on pages 159–162 of this Annual Report.

2011 compared with 2010

The provision for credit losses declined by $9.1 billion from 2010. The consumer, excluding credit card, provision was down, reflecting improved delinquency and charge-off trends across most portfolios, partially offset by an increase of $770 million, reflecting additional impairment of the Washington Mutual PCI loans portfolio. The credit card provision was down, driven primarily by improved delinquency trends and net credit losses. The benefit from the wholesale provision was lower in 2011 than in 2010, primarily reflecting loan growth and other portfolio activity.

Noninterest expense

Year ended December 31,

(in millions)	2012	2011	2010
Compensation expense	$30,585	$29,037	$28,124
Noncompensation expense:			
Occupancy	3,925	3,895	3,681
Technology, communications and equipment	5,224	4,947	4,684
Professional and outside services	7,429	7,482	6,767
Marketing	2,577	3,143	2,446
Other[(a)(b)]	14,032	13,559	14,558
Amortization of intangibles	957	848	936
Total noncompensation expense	34,144	33,874	33,072
Total noninterest expense	$64,729	$62,911	$61,196

(a) Included litigation expense of $5.0 billion, $4.9 billion and $7.4 billion for the years ended December 31, 2012, 2011 and 2010, respectively.

(b) Included FDIC-related expense of $1.7 billion, $1.5 billion and $899 million for the years ended December 31, 2012, 2011 and 2010, respectively.

2012 compared with 2011

Total noninterest expense for 2012 was $64.7 billion, up by $1.8 billion, or 3%, from 2011. Compensation expense drove the increase from the prior year.

Compensation expense increased from the prior year, predominantly due to investments in the businesses, including the sales force in CCB and bankers in the other businesses, partially offset by lower compensation expense in CIB.

Noncompensation expense for 2012 increased from the prior year, reflecting continued investments in the businesses, including branch builds in CCB; higher expense related to growth in business volume in CIB and CCB; higher regulatory deposit insurance assessments; expenses related to exiting a non-core product and writing-off intangible assets in CCB; and higher litigation expense in Corporate/Private Equity. These increases were partially offset by lower litigation expense in AM and CCB (including the Independent Foreclosure Review settlement) and lower marketing expense in CCB. For a further discussion of litigation expense, see Note 31 on pages 316–325 of this Annual Report. For a discussion of amortization of intangibles, refer to Note 17 on pages 291–295 of this Annual Report.

2011 compared with 2010

Total noninterest expense for 2011 was $62.9 billion, up by $1.7 billion, or 3%, from 2010. Both compensation and noncompensation expense contributed to the increase.

Compensation expense increased from the prior year, due to investments in branch and mortgage production sales and support staff in CCB and increased headcount in AM, largely offset by lower performance-based compensation expense and the absence of the 2010 U.K. Bank Payroll Tax in CIB.

The increase in noncompensation expense in 2011 was due to elevated foreclosure- and default-related costs in CCB, including $1.7 billion of expense for fees and assessments, as well as other costs of foreclosure-related matters, higher marketing expense in CCB, higher FDIC assessments across businesses, non-client-related litigation expense in AM, and the impact of continued investments in the businesses, including new branches in CCB. These were offset partially by lower litigation expense in 2011 in Corporate and CIB. Effective April 1, 2011, the FDIC changed its methodology for calculating the deposit insurance assessment rate for large banks. The new rule changed the assessment base from insured deposits to average consolidated total assets less average tangible equity, and changed the assessment rate calculation.

Income tax expense

Year ended December 31, (in millions, except rate)	2012	2011	2010
Income before income tax expense	**$28,917**	$26,749	$24,859
Income tax expense	**7,633**	7,773	7,489
Effective tax rate	**26.4%**	29.1%	30.1%

2012 compared with 2011

The decrease in the effective tax rate compared with the prior year was largely the result of changes in the proportion of income subject to U.S. federal and state and local taxes, as well as higher tax benefits associated with tax audits and tax-advantaged investments. This was partially offset by higher reported pretax income and lower benefits associated with the disposition of certain investments. The current and prior periods include deferred tax benefits associated with state and local income taxes. For additional information on income taxes, see Critical Accounting Estimates Used by the Firm on pages 178–182 and Note 26 on pages 303–305 of this Annual Report.

2011 compared with 2010

The decrease in the effective tax rate compared with the prior year was predominantly the result of tax benefits associated with U.S. state and local income taxes. This was partially offset by higher reported pretax income and changes in the proportion of income subject to U.S. federal tax. In addition, the current year included tax benefits associated with the disposition of certain investments; the prior year included tax benefits associated with the resolution of tax audits.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its consolidated financial statements using accounting principles generally accepted in the U.S. ("U.S. GAAP"); these financial statements appear on pages 188–192 of this Annual Report. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Management also uses certain non-GAAP financial measures at the business-segment level, because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and, therefore, facilitate a comparison of the business segment with the performance of its competitors. Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

	2012			2011			2010		
Year ended December 31, (in millions, except ratios)	Reported Results	Fully tax-equivalent adjustments[a]	Managed basis	Reported Results	Fully tax-equivalent adjustments[a]	Managed basis	Reported Results	Fully tax-equivalent adjustments[a]	Managed basis
Other income	$ 4,258	$ 2,116	$ 6,374	$ 2,605	$ 2,003	$ 4,608	$ 2,044	$ 1,745	$ 3,789
Total noninterest revenue	52,121	2,116	54,237	49,545	2,003	51,548	51,693	1,745	53,438
Net interest income	44,910	743	45,653	47,689	530	48,219	51,001	403	51,404
Total net revenue	97,031	2,859	99,890	97,234	2,533	99,767	102,694	2,148	104,842
Pre-provision profit	32,302	2,859	35,161	34,323	2,533	36,856	41,498	2,148	43,646
Income before income tax expense	28,917	2,859	31,776	26,749	2,533	29,282	24,859	2,148	27,007
Income tax expense	7,633	2,859	10,492	7,773	2,533	10,306	7,489	2,148	9,637
Overhead ratio	67%	NM	65%	65%	NM	63%	60%	NM	58%

(a) Predominantly recognized in CIB and CB business segments and Corporate/Private Equity.

Tangible common equity ("TCE"), ROTCE, tangible book value per share ("TBVS"), and Tier 1 common under Basel I and III rules are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's earnings as a percentage of TCE. TBVS represents the Firm's tangible common equity divided by period-end common shares. Tier 1 common under Basel I and III rules are used by management, along with other capital measures, to assess and monitor the Firm's capital position. TCE, ROTCE, and TBVS are meaningful to the Firm, as well as analysts and investors, in assessing the Firm's use of equity. For additional information on Tier 1 common under Basel I and III, see Regulatory capital on pages 117–120 of this Annual Report. All of the aforementioned measures are useful to the Firm, as well as analysts and investors, in facilitating comparison of the Firm with competitors.

Calculation of certain U.S. GAAP and non-GAAP metrics

The table below reflects the formulas used to calculate both the following U.S. GAAP and non-GAAP measures.

Return on common equity
Net income* / Average common stockholders' equity

Return on tangible common equity[a]
Net income* / Average tangible common equity

Return on assets
Reported net income / Total average assets

Return on risk-weighted assets
Annualized earnings / Average risk-weighted assets

Overhead ratio
Total noninterest expense / Total net revenue

* Represents net income applicable to common equity

(a) The Firm uses ROTCE, a non-GAAP financial measure, to evaluate its use of equity and to facilitate comparisons with competitors. Refer to the following table for the calculation of average tangible common equity.

Average tangible common equity

Year ended December 31, (in millions)	2012	2011	2010
Common stockholders' equity	**$ 184,352**	$ 173,266	$ 161,520
Less: Goodwill	**48,176**	48,632	48,618
Less: Certain identifiable intangible assets	**2,833**	3,632	4,178
Add: Deferred tax liabilities[a]	**2,754**	2,635	2,587
Tangible common equity	**$ 136,097**	$ 123,637	$ 111,311

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Core net interest income

In addition to reviewing JPMorgan Chase's net interest income on a managed basis, management also reviews core net interest income to assess the performance of its core lending, investing (including asset-liability management) and deposit-raising activities (which excludes the impact of CIB's market-based activities). The table below presents an analysis of core net interest income, core average interest-earning assets, and the core net interest yield on core average interest-earning assets, on a managed basis. Each of these amounts is a non-GAAP financial measure due to the exclusion of CIB's market-based net interest income and the related assets. Management believes the exclusion of CIB's market-based activities provides investors and analysts a more meaningful measure by which to analyze the non-market-related business trends of the Firm and provides a comparable measure to other financial institutions that are primarily focused on core lending, investing and deposit-raising activities.

Core net interest income data[a]

Year ended December 31, (in millions, except rates)	2012	2011	2010
Net interest income - managed basis[b][c]	**$ 45,653**	$ 48,219	$ 51,404
Less: Market-based net interest income	**5,787**	7,329	7,112
Core net interest income[b]	**$ 39,866**	$ 40,890	$ 44,292
Average interest-earning assets	**$ 1,842,417**	$ 1,761,355	$ 1,677,521
Less: Average market-based earning assets	**499,339**	519,655	470,927
Core average interest-earning assets	**$ 1,343,078**	$ 1,241,700	$ 1,206,594
Net interest yield on interest-earning assets - managed basis	**2.48%**	2.74%	3.06%
Net interest yield on market-based activity	**1.16**	1.41	1.51
Core net interest yield on core average interest-earning assets	**2.97%**	3.29%	3.67%

(a) Includes core lending, investing and deposit-raising activities on a managed basis across CCB, CIB, CB, AM, Corporate/Private Equity; excludes the market-based activities within the CIB.
(b) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(c) For a reconciliation of net interest income on a reported and managed basis, see reconciliation from the Firm's reported U.S. GAAP results to managed basis on page 76.

2012 compared with 2011

Core net interest income decreased by $1.0 billion to $39.9 billion for 2012 and core average interest-earning assets increased by $101.4 billion in 2012 to $1,343.1 billion. The decline in net interest income in 2012 reflected the impact of the runoff of higher-yielding loans, faster prepayment of mortgage-backed securities, limited reinvestment opportunities, as well as the impact of lower interest rates across the Firm's interest-earning assets. The decrease in net interest income was partially offset by lower deposit and other borrowing costs. The increase in average interest-earning assets was driven by higher deposits with banks and other short-term investments, increased levels of loans, and an increase in investment securities. The core net interest yield decreased by 32 basis points to 2.97% in 2012, primarily driven by the runoff of higher-yielding loans as well as lower customer loan rates, higher financing costs associated with mortgage-backed securities, limited reinvestment opportunities, and was slightly offset by lower customer deposit rates.

2011 compared with 2010

Core net interest income decreased by $3.4 billion to $40.9 billion for 2011. The decrease was primarily driven by lower loan levels and yields in CCB compared with 2010 levels. Core average interest-earning assets increased by $35.1 billion in 2011 to $1,241.7 billion. The increase was driven by higher levels of deposits with banks and securities borrowed due to wholesale and retail client deposit growth. The core net interest yield decreased by 38 basis points in 2011 driven by lower loan yields and higher deposit balances, and lower yields on investment securities due to portfolio mix and lower long-term interest rates.

Other financial measures

The Firm also discloses the allowance for loan losses to total retained loans, excluding residential real estate purchased credit-impaired loans. For a further discussion of this credit metric, see Allowance for Credit Losses on pages 159–162 of this Annual Report.

BUSINESS SEGMENT RESULTS

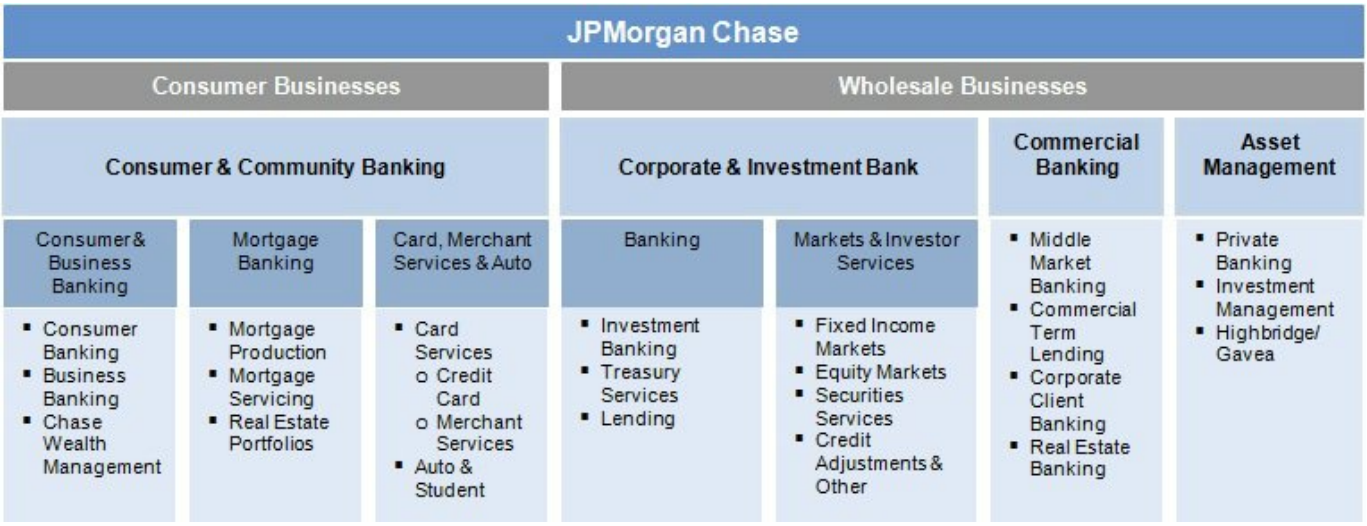
The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate/Private Equity segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 76–77 of this Annual Report.

Business segment changes
Commencing with the fourth quarter of 2012, the Firm's business segments have been reorganized as follows:

Retail Financial Services and Card Services & Auto ("Card") business segments were combined to form one business segment called Consumer & Community Banking ("CCB"), and Investment Bank and Treasury & Securities Services business segments were combined to form one business segment called Corporate & Investment Bank ("CIB"). Commercial Banking ("CB") and Asset Management ("AM") were not affected by the aforementioned changes. A technology function supporting online and mobile banking was transferred from Corporate/Private Equity to the CCB business segment. This transfer did not materially affect the results of either the CCB business segment or Corporate/Private Equity.

The business segment information that follows has been revised to reflect the business reorganization retroactive to January 1, 2010.



Description of business segment reporting methodology
Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies. The Firm continues to assess the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing
When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing
Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Treasury group within Corporate/Private Equity. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment as if it were operating independently, and as compared with its stand-alone peers. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO"). Business segments may be permitted to retain certain interest rate exposures subject to management approval.

Capital allocation

Each business segment is allocated capital, taking into consideration the capital the business segment would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III Tier 1 common capital requirements), economic risk measures and capital levels for similarly rated peers. The amount of capital assigned to each business is referred to as equity. Effective January 1, 2012, the Firm revised the capital allocated to certain businesses, reflecting additional refinement of each segment's estimated Basel III Tier 1 common capital requirements and balance sheet trends. For a further discussion of capital allocation, including refinements to the capital allocations that became effective on January 1, 2013, see Capital Management – Line of business equity on page 121 of this Annual Report.

Expense allocation

Where business segments use services provided by support units within the Firm, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally allocated based on actual cost and upon usage of the services provided. In contrast, certain other expense related to certain corporate functions, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Retained expense includes: parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other one-time items not aligned with a particular business segment.

Segment Results – Managed Basis

The following table summarizes the business segment results for the periods indicated.

Year ended December 31,	Total net revenue			Noninterest expense			Pre-provision profit		
(in millions)	**2012**	2011	2010	**2012**	2011	2010	**2012**	2011	2010
Consumer & Community Banking	**$ 49,945**	$ 45,687	$ 48,927	**$ 28,790**	$ 27,544	$ 23,706	**$ 21,155**	$ 18,143	$ 25,221
Corporate & Investment Bank	**34,326**	33,984	33,477	**21,850**	21,979	22,869	**12,476**	12,005	10,608
Commercial Banking	**6,825**	6,418	6,040	**2,389**	2,278	2,199	**4,436**	4,140	3,841
Asset Management	**9,946**	9,543	8,984	**7,104**	7,002	6,112	**2,842**	2,541	2,872
Corporate/Private Equity	**(1,152)**	4,135	7,414	**4,596**	4,108	6,310	**(5,748)**	27	1,104
Total	**$ 99,890**	$ 99,767	$ 104,842	**$ 64,729**	$ 62,911	$ 61,196	**$ 35,161**	$ 36,856	$ 43,646

Year ended December 31,	Provision for credit losses			Net income/(loss)			Return on equity		
(in millions, except ratios)	**2012**	2011	2010	**2012**	2011	2010	**2012**	2011	2010
Consumer & Community Banking	**$ 3,774**	$ 7,620	$ 17,489	**$ 10,611**	$ 6,202	$ 4,578	**25%**	15%	11%
Corporate & Investment Bank	**(479)**	(285)	(1,247)	**8,406**	7,993	7,718	**18**	17	17
Commercial Banking	**41**	208	297	**2,646**	2,367	2,084	**28**	30	26
Asset Management	**86**	67	86	**1,703**	1,592	1,710	**24**	25	26
Corporate/Private Equity	**(37)**	(36)	14	**(2,082)**	822	1,280	NM	NM	NM
Total	**$ 3,385**	$ 7,574	$ 16,639	**$ 21,284**	$ 18,976	$ 17,370	**11%**	11%	10%

CONSUMER & COMMUNITY BANKING

Consumer & Community Banking ("CCB") serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Merchant Services & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.

Selected income statement data Year ended December 31, (in millions, except ratios)	2012	2011	2010
Revenue			
Lending- and deposit-related fees	$ 3,121	$ 3,219	$ 3,117
Asset management, administration and commissions	2,092	2,044	1,831
Mortgage fees and related income	8,680	2,714	3,855
Card income	5,446	6,152	5,469
All other income	1,456	1,177	1,241
Noninterest revenue	20,795	15,306	15,513
Net interest income	29,150	30,381	33,414
Total net revenue	49,945	45,687	48,927
Provision for credit losses	3,774	7,620	17,489
Noninterest expense			
Compensation expense	11,231	9,971	8,804
Noncompensation expense	16,784	16,934	14,159
Amortization of intangibles	775	639	743
Total noninterest expense	28,790	27,544	23,706
Income before income tax expense	17,381	10,523	7,732
Income tax expense	6,770	4,321	3,154
Net income	$ 10,611	$ 6,202	$ 4,578
Financial ratios			
Return on common equity	25%	15%	11%
Overhead ratio	58	60	48

2012 compared with 2011

Consumer & Community Banking net income was $10.6 billion, up 71% when compared with the prior year. The increase was driven by higher net revenue and lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was $49.9 billion, up $4.3 billion, or 9%, compared with the prior year. Net interest income was $29.2 billion, down $1.2 billion, or 4%, driven by lower deposit margins and lower loan balances due to portfolio runoff, largely offset by higher deposit balances. Noninterest revenue was $20.8 billion, up $5.5 billion, or 36%, driven by higher mortgage fees and related income, partially offset by lower debit card revenue, reflecting the impact of the Durbin Amendment.

The provision for credit losses was $3.8 billion compared with $7.6 billion in the prior year. The current-year provision reflected a $5.5 billion reduction in the allowance for loan losses due to improved delinquency trends and reduced estimated losses in the real estate and credit card loan portfolios. Current-year total net charge-offs were $9.3 billion, including $800 million of charge-offs related to regulatory guidance. Excluding these charge-offs, net charge-offs during the year would have been $8.5 billion compared with $11.8 billion in the prior year. For more information, including net charge-off amounts and rates, see Consumer Credit Portfolio on pages 138–149 of this Annual Report.

Noninterest expense was $28.8 billion, an increase of $1.2 billion, or 5%, compared with the prior year, driven by higher production expense reflecting higher volumes, and investments in sales force, partially offset by lower costs related to mortgage-related matters and lower marketing expense in Card.

2011 compared with 2010

Consumer & Community Banking net income was $6.2 billion, up 35% when compared with the prior year. The increase was driven by lower provision for credit losses, largely offset by higher noninterest expense and lower net revenue.

Net revenue was $45.7 billion, down $3.2 billion, or 7%, compared with the prior year. Net interest income was $30.4 billion, down $3.0 billion, or 9%, reflecting the impact of lower loan balances, the impact of legislative changes in Card and a decreased level of fees in Card, largely offset by lower revenue reversals associated with lower net charge-offs in Card. Noninterest revenue was $15.3 billion, down $207 million, or 1%, driven by lower mortgage fees and related income, largely offset by the transfer of the Commercial Card business to Card from CIB in the first quarter of 2011 and higher net interchange income in Card.

The provision for credit losses was $7.6 billion, a decrease of $9.9 billion from the prior year. The current year provision included a $4.2 billion net reduction in the allowance for loan losses due to improved delinquency trends and lower estimated losses primarily in Card. The prior year provision reflected a reduction in the allowance for loan losses of $4.3 billion due to lower estimated losses primarily in Card.

Noninterest expense was $27.5 billion, up $3.8 billion, or 16%, from the prior year driven by elevated foreclosure- and default-related costs, including $1.7 billion for fees and assessments, as well as other costs of foreclosure-related matters during 2011, compared with $350 million in 2010 in Mortgage Banking, as well as higher marketing expense in Card.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount and ratios)	2012	2011	2010
Selected balance sheet data (period-end)			
Total assets	$ 463,608	$ 483,307	$ 508,775
Loans:			
Loans retained	402,963	425,581	452,249
Loans held-for-sale and loans at fair value[a]	18,801	12,796	17,015
Total loans	421,764	438,377	469,264
Deposits	438,484	397,825	371,861
Equity	43,000	41,000	43,000
Selected balance sheet data (average)			
Total assets	$ 464,197	$ 487,923	$ 527,101
Loans:			
Loans retained	408,559	429,975	475,549
Loans held-for-sale and loans at fair value[a]	18,006	17,187	16,663
Total loans	426,565	447,162	492,212
Deposits	413,911	382,678	363,645
Equity	43,000	41,000	43,000
Headcount	159,467	161,443	143,226

Selected metrics

As of or for the year ended December 31, (in millions, except headcount and ratios)	2012	2011	2010
Credit data and quality statistics			
Net charge-offs[b]	$ 9,280	$ 11,815	$ 21,943
Nonaccrual loans:			
Nonaccrual loans retained	9,114	7,354	8,770
Nonaccrual loans held-for-sale and loans at fair value	39	103	145
Total nonaccrual loans[c][d][e][f]	9,153	7,457	8,915
Nonperforming assets[c][d][e][f]	9,830	8,292	10,268
Allowance for loan losses	17,752	23,256	27,487
Net charge-off rate[b][g]	2.27%	2.75%	4.61%
Net charge-off rate, excluding PCI loans[b][g]	2.68	3.27	5.50
Allowance for loan losses to period-end loans retained	4.41	5.46	6.08
Allowance for loan losses to period-end loans retained, excluding PCI loans[h]	3.51	4.87	5.94
Allowance for loan losses to nonaccrual loans retained, excluding credit card[c][f][h]	72	143	131
Nonaccrual loans to total period-end loans, excluding credit card[f]	3.12	2.44	2.69
Nonaccrual loans to total period-end loans, excluding credit card and PCI loans[c][f]	3.91	3.10	3.44
Business metrics			
Number of:			
Branches	5,614	5,508	5,268
ATMs	18,699	17,235	16,145
Active online customers (in thousands)	31,114	29,749	28,708
Active mobile customers (in thousands)	12,359	8,203	4,873

(a) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets.

(b) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $800 million of charge-offs, recorded in accordance with regulatory guidance. Excluding these charges-offs, net charge-offs for the year ended December 31, 2012, would have been $8.5 billion and excluding these charge-offs and PCI loans, the net charge-off rate for the year ended December 31, 2012, would have been 2.45%. For further information, see Consumer Credit Portfolio on pages 138–149 of this Annual Report.

(c) Excludes PCI loans. Because the Firm is recognizing interest income on each pool of PCI loans, they are all considered to be performing.

(d) Certain mortgages originated with the intent to sell are classified as trading assets on the Consolidated Balance Sheets.

(e) At December 31, 2012, 2011 and 2010, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $10.6 billion, $11.5 billion, and $9.4 billion, respectively, that are 90 or more days past due; (2) real estate owned insured by U.S. government agencies of $1.6 billion, $954 million, and $1.9 billion, respectively; and (3) student loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") of $525 million, $551 million, and $625 million, respectively, that are 90 or more days past due. These amounts were excluded from nonaccrual loans as reimbursement of insured amounts is proceeding normally.

(f) Nonaccrual loans included $3.0 billion of loans at December 31, 2012, based upon regulatory guidance. For further information, see Consumer Credit Portfolio on pages 138–149 of this Annual Report.

(g) Loans held-for-sale and loans accounted for at fair value were excluded when calculating the net charge-off rate.

(h) An allowance for loan losses of $5.7 billion at December 31, 2012 and 2011, and $4.9 billion at December 31, 2010 was recorded for PCI loans; these amounts were also excluded from the applicable ratios.

Consumer & Business Banking

Selected income statement data

Year ended December 31, (in millions, except ratios)	2012	2011	2010
Revenue			
Lending- and deposit-related fees	$ 3,068	$ 3,160	$ 3,025
Asset management, administration and commissions	1,637	1,559	1,390
Card income	1,353	2,024	1,953
All other income	481	467	484
Noninterest revenue	6,539	7,210	6,852
Net interest income	10,673	10,808	10,884
Total net revenue	17,212	18,018	17,736
Provision for credit losses	311	419	630
Noninterest expense	11,453	11,243	10,762
Income before income tax expense	5,448	6,356	6,344
Net income	$ 3,263	$ 3,796	$ 3,630
Overhead ratio	67%	62%	61%
Overhead ratio, excluding core deposit intangibles[(a)]	65	61	59

(a) Consumer & Business Banking ("CBB") uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation would result in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would therefore result in an improving overhead ratio over time, all things remaining equal. This non-GAAP ratio excluded CBB's CDI amortization expense related to prior business combination transactions of $200 million, $238 million, and $276 million for the years ended December 31, 2012, 2011 and 2010, respectively.

2012 compared with 2011

Consumer & Business Banking net income was $3.3 billion, a decrease of $533 million, or 14%, compared with the prior year. The decrease was driven by lower net revenue and higher noninterest expense, partially offset by lower provision for credit losses.

Net revenue was $17.2 billion, down 4% from the prior year. Net interest income was $10.7 billion, down 1% from the prior year, driven by the impact of lower deposit margins, predominantly offset by higher deposit balances. Noninterest revenue was $6.5 billion, down 9% from the prior year, driven by lower debit card revenue, reflecting the impact of the Durbin Amendment.

The provision for credit losses was $311 million, compared with $419 million in the prior year. The current-year provision reflected a $100 million reduction in the allowance for loan losses. Net charge-offs were $411 million compared with $494 million in the prior year.

Noninterest expense was $11.5 billion, up 2% from the prior year, resulting from investment in the sales force and new branch builds.

2011 compared with 2010

Consumer & Business Banking net income was $3.8 billion, an increase of $166 million, or 5%, compared with the prior year. The increase was driven by higher net revenue and lower provision for credit losses, offset by higher noninterest expense.

Net revenue was $18.0 billion, up 2% from the prior year. Net interest income was $10.8 billion, relatively flat compared with the prior year, as the impact from higher deposit balances was predominantly offset by the effect of lower deposit margins. Noninterest revenue was $7.2 billion, up 5% from the prior year, driven by higher investment sales revenue and higher deposit-related fees.

The provision for credit losses was $419 million, compared with $630 million in the prior year. Net charge-offs were $494 million, compared with $730 million in the prior year.

Noninterest expense was $11.2 billion, up 4% from the prior year, resulting from investment in sales force and new branch builds.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2012	2011	2010
Business metrics			
Business banking origination volume	$ 6,542	$ 5,827	$ 4,688
Period-end loans	18,883	17,652	16,812
Period-end deposits:			
Checking	170,322	147,779	131,702
Savings	216,422	191,891	170,604
Time and other	31,752	36,745	45,967
Total period-end deposits	418,496	376,415	348,273
Average loans	18,104	17,121	16,863
Average deposits:			
Checking	153,385	136,579	123,490
Savings	204,449	182,587	166,112
Time and other	34,224	41,576	51,152
Total average deposits	392,058	360,742	340,754
Deposit margin	2.57%	2.82%	3.00%
Average assets	$ 30,987	$ 29,774	$ 29,321

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2012	2011	2010
Credit data and quality statistics			
Net charge-offs	$ 411	$ 494	$ 730
Net charge-off rate	2.27%	2.89%	4.32%
Allowance for loan losses	$ 698	$ 798	$ 875
Nonperforming assets	488	710	846
Retail branch business metrics			
Investment sales volume	$ 26,036	$ 22,716	$ 23,579
Client investment assets	158,502	137,853	133,114
% managed accounts	29%	24%	20%
Number of:			
Chase Private Client branch locations	1,218	262	16
Personal bankers	23,674	24,308	21,735
Sales specialists	6,076	6,017	4,876
Client advisors	2,963	3,201	3,066
Chase Private Clients	105,700	21,723	4,242
Accounts (in thousands)[(a)]	28,073	26,626	27,252

(a) Includes checking accounts and Chase Liquid℠ cards (launched in the second quarter of 2012).

Mortgage Banking

Selected income statement data

Year ended December 31, (in millions, except ratios)	2012	2011	2010
Revenue			
Mortgage fees and related income	$ 8,680	$ 2,714	$ 3,855
All other income	475	490	528
Noninterest revenue	9,155	3,204	4,383
Net interest income	4,808	5,324	6,336
Total net revenue	13,963	8,528	10,719
Provision for credit losses	(490)	3,580	8,289
Noninterest expense	9,121	8,256	5,766
Income/(loss) before income tax expense/(benefit)	5,332	(3,308)	(3,336)
Net income/(loss)	$ 3,341	$ (2,138)	$ (1,924)
Overhead ratio	65%	97%	54%

2012 compared with 2011

Mortgage Banking net income was $3.3 billion, compared with a net loss of $2.1 billion in the prior year. The increase was driven by higher net revenue and lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was $14.0 billion, up $5.4 billion, or 64%, compared with the prior year. Net interest income was $4.8 billion, down $516 million, or 10%, resulting from lower loan balances due to portfolio runoff. Noninterest revenue was $9.2 billion, up $6.0 billion compared with the prior year, driven by higher mortgage fees and related income.

The provision for credit losses was a benefit of $490 million, compared with a provision expense of $3.6 billion in the prior year. The current year reflected a $3.85 billion reduction in the allowance for loan losses due to improved delinquency trends and lower estimated losses.

Noninterest expense was $9.1 billion, an increase of $865 million, or 10%, compared with the prior year, driven by higher production expense reflecting higher volumes, partially offset by lower costs related to mortgage-related matters.

2011 compared with 2010

Mortgage Banking reported a net loss of $2.1 billion, compared with a net loss of $1.9 billion in the prior year. The increase in net loss was driven by higher noninterest expense and lower net revenue, offset by lower provision for credit losses.

Net revenue was $8.5 billion, down $2.2 billion, or 20%, compared with the prior year. Net interest income was $5.3 billion, down $1.0 billion, or 16%, from the prior year, resulting from lower loan balances due to portfolio runoff. Noninterest revenue was $3.2 billion, down $1.2 billion, or 27%, from the prior year, driven by lower mortgage fees and related income.

The provision for credit losses was $3.6 billion, down $4.7 billion, or 57% compared with the prior year due to lower estimated losses as delinquency trends and charge-offs continued to improve. The current year provision also included a $230 million net reduction in the allowance for loan losses which reflects a reduction of $1.0 billion in the allowance related to the non-credit-impaired portfolio, as estimated losses in the portfolio have declined, predominantly offset by an increase of $770 million reflecting additional impairment of the Washington Mutual PCI portfolio due to higher-than-expected default frequency relative to modeled lifetime loss estimates. The prior-year provision reflected a higher impairment of the PCI portfolio and higher net charge-offs.

Noninterest expense was $8.3 billion, an increase of $2.5 billion, or 43%, compared with the prior year, driven by elevated foreclosure- and default-related costs in Mortgage Servicing.

Functional results

Year ended December 31, (in millions, except ratios)	2012	2011	2010
Mortgage Production			
Production revenue	$ 5,783	$ 3,395	$ 3,440
Production-related net interest & other income	787	840	869
Production-related revenue, excluding repurchase losses	6,570	4,235	4,309
Production expense[a]	2,747	1,895	1,613
Income, excluding repurchase losses	3,823	2,340	2,696
Repurchase losses	(272)	(1,347)	(2,912)
Income/(loss) before income tax expense/(benefit)	3,551	993	(216)
Mortgage Servicing			
Loan servicing revenue	3,772	4,134	4,575
Servicing-related net interest & other income	407	390	433
Servicing-related revenue	4,179	4,524	5,008
MSR asset modeled amortization	(1,222)	(1,904)	(2,384)
Default servicing expense	3,707	3,814	1,747
Core servicing expense	1,033	1,031	837
Income/(loss), excluding MSR risk management	(1,783)	(2,225)	40
MSR risk management, including related net interest income/(expense)	616	(1,572)	1,151
Income/(loss) before income tax expense/(benefit)	(1,167)	(3,797)	1,191
Real Estate Portfolios			
Noninterest revenue	43	38	115
Net interest income	4,049	4,554	5,432
Total net revenue	4,092	4,592	5,547
Provision for credit losses	(509)	3,575	8,231
Noninterest expense	1,653	1,521	1,627
Income/(loss) before income tax expense/(benefit)	2,948	(504)	(4,311)
Mortgage Banking income/(loss) before income tax expense/(benefit)	$ 5,332	$ (3,308)	$ (3,336)
Mortgage Banking net income/(loss)	$ 3,341	$ (2,138)	$ (1,924)
Overhead ratios			
Mortgage Production	43%	65%	111%
Mortgage Servicing	133	462	68
Real Estate Portfolios	40	33	29

(a) Includes credit costs associated with Production.

Selected income statement data

Year ended December 31, (in millions)	2012	2011	2010
Supplemental mortgage fees and related income details			
Net production revenue:			
Production revenue	$ 5,783	$ 3,395	$ 3,440
Repurchase losses	(272)	(1,347)	(2,912)
Net production revenue	5,511	2,048	528
Net mortgage servicing revenue:			
Operating revenue:			
Loan servicing revenue	3,772	4,134	4,575
Changes in MSR asset fair value due to modeled amortization	(1,222)	(1,904)	(2,384)
Total operating revenue	2,550	2,230	2,191
Risk management:			
Changes in MSR asset fair value due to market interest rates	(587)	(5,390)	(2,224)
Other changes in MSR asset fair value due to inputs or assumptions in model[a]	(46)	(1,727)	(44)
Changes in derivative fair value and other	1,252	5,553	3,404
Total risk management	619	(1,564)	1,136
Total net mortgage servicing revenue	3,169	666	3,327
Mortgage fees and related income	$ 8,680	$ 2,714	$ 3,855

(a) Represents the aggregate impact of changes in model inputs and assumptions such as costs to service, home prices, mortgage spreads, ancillary income, and assumptions used to derive prepayment speeds, as well as changes to the valuation models themselves.

Net production revenue includes net gains or losses on originations and sales of prime and subprime mortgage loans, other production-related fees and losses related to the repurchase of previously-sold loans.

Net mortgage servicing revenue includes the following components:

(a) Operating revenue comprises:

- gross income earned from servicing third-party mortgage loans including stated service fees, excess service fees and other ancillary fees; and
- modeled MSR asset amortization (or time decay).

(b) Risk management comprises:

- changes in MSR asset fair value due to market-based inputs such as interest rates, as well as updates to assumptions used in the MSR valuation model; and
- changes in derivative fair value and other, which represents changes in the fair value of derivative instruments used to offset the impact of changes in interest rates to the MSR valuation model.

Mortgage origination channels comprise the following:

Retail – Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Wholesale – Third-party mortgage brokers refer loan application packages to the Firm. The Firm then underwrites and funds the loan. Brokers are independent loan originators that specialize in counseling applicants on available home financing options, but do not provide funding for loans. Chase materially eliminated broker-originated loans in 2008, with the exception of a small number of loans guaranteed by the U.S. Department of Agriculture under its Section 502 Guaranteed Loan program that serves low-and-moderate income families in small rural communities.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Correspondent negotiated transactions ("CNTs") – Mid-to-large-sized mortgage lenders, banks and bank-owned mortgage companies sell servicing to the Firm on an as-originated basis (excluding sales of bulk servicing transactions). These transactions supplement traditional production channels and provide growth opportunities in the servicing portfolio in periods of stable and rising interest rates.

2012 compared with 2011

Mortgage Production pretax income was $3.6 billion, an increase of $2.6 billion compared with the prior year. Mortgage production-related revenue, excluding repurchase losses, was $6.6 billion, an increase of $2.3 billion, or 55%, from the prior year. These results reflected wider margins, driven by favorable market conditions, and higher volumes due to historically low interest rates and the Home Affordable Refinance Programs ("HARP"). Production expense, including credit costs, was $2.7 billion, an increase of $852 million, or 45%, reflecting higher volumes and additional litigation costs. Repurchase losses were $272 million, compared with $1.3 billion in the prior year. The current-year reflected a reduction in the repurchase liability of $683 million compared with a build of $213 million in the prior year, primarily driven by improved cure rates on Agency repurchase demands and lower outstanding repurchase demand pipeline. For further information, see Mortgage repurchase liability on pages 111–115 of this Annual Report.

Mortgage Servicing reported a pretax loss of $1.2 billion, compared with a pretax loss of $3.8 billion in the prior year. Mortgage servicing revenue, including amortization, was $3.0 billion, an increase of $337 million, or 13%, from the prior year, driven by lower mortgage servicing rights ("MSR") asset amortization expense as a result of lower MSR asset value, partially offset by lower loan servicing revenue due to the decline in the third-party loans serviced. MSR risk management income was $616 million, compared with a loss of $1.6 billion in the prior year. The prior year MSR risk management loss was driven by refinements to the valuation model and related inputs. See Note 17 on pages 291–295 of this Annual Report for further information regarding changes in value of the MSR asset and related hedges. Servicing expense was $4.7 billion, down 2% from the prior year, but elevated in both the current and prior year primarily due to higher default servicing costs.

Real Estate Portfolios pretax income was $2.9 billion, compared with a pretax loss of $504 million in the prior year. The improvement was driven by a benefit from the provision for credit losses, reflecting the continued improvement in credit trends, partially offset by lower net revenue. Net revenue was $4.1 billion, down $500 million, or 11%, from the prior year. The decrease was driven by a decline in net interest income as a result of lower loan balances due to portfolio runoff. The provision for credit losses reflected a benefit of $509 million, compared with a provision expense of $3.6 billion in the prior year. The current-year provision reflected a $3.9 billion reduction in the allowance for loan losses due to improved delinquency trends and lower estimated losses. Current-year net charge-offs totaled $3.3 billion, including $744 million of charge-offs, related to regulatory guidance, compared with $3.8 billion in the prior year. See Consumer Credit Portfolio on pages 138–149 of this Annual Report for the net charge-off amounts and rates. Nonaccrual loans were $7.9 billion, compared with $5.9 billion in the prior year. Excluding the impact of certain regulatory guidance, nonaccrual loans would have been $4.9 billion at December 31, 2012. For more information on the reporting of Chapter 7 loans and performing junior liens that are subordinate to senior liens that are 90 days or more past due as nonaccrual, see Consumer Credit Portfolio on pages 138–149 of this Annual Report. Noninterest expense was $1.7 billion, up $132 million, or 9%, compared with the prior year due to an increase in servicing costs.

2011 compared with 2010

Mortgage Production pretax income was $993 million, compared with a pretax loss of $216 million in the prior year. Production-related revenue, excluding repurchase losses, was $4.2 billion, a decrease of 2% from the prior year, reflecting lower volumes and narrower margins compared with the prior year. Production expense was $1.9 billion, an increase of $282 million, or 17%, reflecting a strategic shift to higher-cost retail originations both through the branch network and direct to the consumer. Repurchase losses were $1.3 billion, compared with prior-year repurchase losses of $2.9 billion, which included a $1.6 billion increase in the repurchase reserve.

Mortgage Servicing reported a pretax loss of $3.8 billion, compared with pretax income of $1.2 billion in the prior year. Mortgage servicing revenue, including amortization was $2.6 billion, or flat compared with the prior year. MSR risk management was a loss of $1.6 billion, compared with income of $1.2 billion in the prior year, driven by refinements to the valuation model and related inputs. Servicing expense was $4.8 billion, an increase of $2.3 billion, driven by $1.7 billion recorded for fees and assessments, and other costs of foreclosure-related matters, as well as higher core and default servicing costs. See Note 17 on pages 291–295 of this Annual Report for further information regarding changes in value of the MSR asset and related hedges.

Real Estate Portfolios reported a pretax loss of $504 million, compared with a pretax loss of $4.3 billion in the prior year. The improvement was driven by lower provision for credit losses, partially offset by lower net revenue. Net revenue was $4.6 billion, down by $955 million, or 17%, from the prior year. The decrease was driven by a decline in net interest income as a result of lower loan balances due to portfolio runoff and narrower loan spreads. The provision for credit losses was $3.6 billion, compared with $8.2 billion in the prior year, reflecting an improvement in charge-off trends and a net reduction of the allowance for loan losses of $230 million. The net change in the allowance reflected a $1.0 billion reduction related to the non-credit-impaired portfolios as estimated losses declined, predominately offset by an increase of $770 million reflecting additional impairment of the Washington Mutual PCI portfolio due to higher-than-expected default frequency relative to modeled lifetime loss estimates. The prior-year provision reflected a higher impairment of the PCI portfolio and higher net charge-offs. See Consumer Credit Portfolio on pages 138–149 of this Annual Report for the net charge-off amounts and rates. Noninterest expense was $1.5 billion, down by $106 million, or 7%, from the prior year, reflecting a decrease in foreclosed asset expense due to temporary delays in foreclosure activity.

PCI Loans

Included within Real Estate Portfolios are PCI loans that the Firm acquired in the Washington Mutual transaction. For PCI loans, the excess of the undiscounted gross cash flows expected to be collected over the carrying value of the loans (the "accretable yield") is accreted into interest income at a level rate of return over the expected life of the loans.

The net spread between the PCI loans and the related liabilities are expected to be relatively constant over time, except for any basis risk or other residual interest rate risk that remains and for certain changes in the accretable yield percentage (e.g., from extended loan liquidation periods and from prepayments). As of December 31, 2012, the remaining weighted-average life of the PCI loan portfolio is expected to be 8 years. The loan balances are expected to decline more rapidly over the next three to four years as the most troubled loans are liquidated, and more slowly thereafter as the remaining troubled borrowers have limited refinancing opportunities. Similarly, default and servicing expense are expected to be higher in the earlier years and decline over time as liquidations slow down.

To date the impact of the PCI loans on Real Estate Portfolios' net income has been negative. This is largely due to the provision for loan losses recognized subsequent to its acquisition, and the higher level of default and servicing expense associated with the portfolio. Over time, the Firm expects that this portfolio will contribute positively to net income.

For further information, see Note 14, PCI loans, on pages 266–268 of this Annual Report.

Mortgage Production and Servicing

Selected metrics

As of or for the year ended December 31,

(in millions, except ratios)	2012	2011	2010
Selected balance sheet data			
Period-end loans:			
Prime mortgage, including option ARMs[a]	$17,290	$16,891	$14,186
Loans held-for-sale and loans at fair value[b]	18,801	12,694	14,863
Average loans:			
Prime mortgage, including option ARMs[a]	17,335	14,580	13,422
Loans held-for-sale and loans at fair value[b]	17,573	16,354	15,395
Average assets	59,837	59,891	57,778
Repurchase liability (period-end)	2,530	3,213	3,000
Credit data and quality statistics			
Net charge-offs:			
Prime mortgage, including option ARMs	19	5	41
Net charge-off rate:			
Prime mortgage, including option ARMs	0.11%	0.03%	0.31%
30+ day delinquency rate[c]	3.05	3.15	3.44
Nonperforming assets[d]	$ 638	$ 716	$ 729

(a) Predominantly represents prime loans repurchased from Government National Mortgage Association ("Ginnie Mae") pools, which are insured by U.S. government agencies. See further discussion of loans repurchased from Ginnie Mae pools in Mortgage repurchase liability on pages 111–115 of this Annual Report.

(b) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets.

(c) At December 31, 2012, 2011 and 2010, excluded mortgage loans insured by U.S. government agencies of $11.8 billion, $12.6 billion, and $10.3 billion, respectively, that are 30 or more days past due. These amounts were excluded as reimbursement of insured amounts is proceeding normally. For further discussion, see Note 14 on pages 250–275 of this Annual Report which summarizes loan delinquency information.

(d) At December 31, 2012, 2011 and 2010, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $10.6 billion, $11.5 billion, and $9.4 billion, respectively, that are 90 or more days past due; and (2) real estate owned insured by U.S. government agencies of $1.6 billion, $954 million, and $1.9 billion, respectively. These amounts were excluded from nonaccrual loans as reimbursement of insured amounts is proceeding normally. For further discussion, see Note 14 on pages 250–275 of this Annual Report which summarizes loan delinquency information.

Selected metrics

As of or for the year ended December 31,

(in millions, except ratios and where otherwise noted)	2012	2011	2010
Business metrics (in billions)			
Origination volume by channel			
Retail	$ 101.4	$ 87.2	$ 68.8
Wholesale[a]	0.3	0.5	1.3
Correspondent[a]	73.1	52.1	75.3
CNT (negotiated transactions)	6.0	5.8	10.2
Total origination volume	$ 180.8	$ 145.6	$ 155.6
Application volume by channel			
Retail	$ 164.5	$ 137.2	$ 115.1
Wholesale[a]	0.7	1.0	2.4
Correspondent[a]	100.5	66.5	97.3
Total application volume	$ 265.7	$ 204.7	$ 214.8
Third-party mortgage loans serviced (period-end)	$ 859.4	$ 902.2	$ 967.5
Third-party mortgage loans serviced (average)	847.0	937.6	1,037.6
MSR net carrying value (period-end)	7.6	7.2	13.6
Ratio of MSR net carrying value (period-end) to third-party mortgage loans serviced (period-end)	0.88%	0.80%	1.41%
Ratio of loan servicing-related revenue to third-party mortgage loans serviced (average)	0.46	0.44	0.44
MSR revenue multiple[b]	1.91x	1.82x	3.20x

(a) Includes rural housing loans sourced through brokers and correspondents, which are underwritten and closed with pre-funding loan approval from the U.S. Department of Agriculture Rural Development, which acts as the guarantor in the transaction.

(b) Represents the ratio of MSR net carrying value (period-end) to third-party mortgage loans serviced (period-end) divided by the ratio of loan servicing-related revenue to third-party mortgage loans serviced (average).

Real Estate Portfolios

Selected metrics

As of or for the year ended December 31, (in millions)	2012	2011	2010
Loans, excluding PCI			
Period-end loans owned:			
Home equity	$ 67,385	$ 77,800	$ 88,385
Prime mortgage, including option ARMs	41,316	44,284	49,768
Subprime mortgage	8,255	9,664	11,287
Other	633	718	857
Total period-end loans owned	$117,589	$132,466	$150,297
Average loans owned:			
Home equity	$ 72,674	$ 82,886	$ 94,835
Prime mortgage, including option ARMs	42,311	46,971	53,431
Subprime mortgage	8,947	10,471	12,729
Other	675	773	954
Total average loans owned	$124,607	$141,101	$161,949
PCI loans			
Period-end loans owned:			
Home equity	$ 20,971	$ 22,697	$ 24,459
Prime mortgage	13,674	15,180	17,322
Subprime mortgage	4,626	4,976	5,398
Option ARMs	20,466	22,693	25,584
Total period-end loans owned	$ 59,737	$ 65,546	$ 72,763
Average loans owned:			
Home equity	$ 21,840	$ 23,514	$ 25,455
Prime mortgage	14,400	16,181	18,526
Subprime mortgage	4,777	5,170	5,671
Option ARMs	21,545	24,045	27,220
Total average loans owned	$ 62,562	$ 68,910	$ 76,872
Total Real Estate Portfolios			
Period-end loans owned:			
Home equity	$ 88,356	$100,497	$112,844
Prime mortgage, including option ARMs	75,456	82,157	92,674
Subprime mortgage	12,881	14,640	16,685
Other	633	718	857
Total period-end loans owned	$177,326	$198,012	$223,060
Average loans owned:			
Home equity	$ 94,514	$106,400	$120,290
Prime mortgage, including option ARMs	78,256	87,197	99,177
Subprime mortgage	13,724	15,641	18,400
Other	675	773	954
Total average loans owned	$187,169	$210,011	$238,821
Average assets	$175,712	$197,096	$226,961
Home equity origination volume	1,420	1,127	1,203

Credit data and quality statistics

As of or for the year ended December 31, (in millions, except ratios)	2012	2011	2010
Net charge-offs, excluding PCI loans[a]			
Home equity	$ 2,385	$ 2,472	$ 3,444
Prime mortgage, including option ARMs	454	682	1,573
Subprime mortgage	486	626	1,374
Other	16	25	59
Total net charge-offs	$ 3,341	$ 3,805	$ 6,450
Net charge-off rate, excluding PCI loans:[a]			
Home equity	3.28%	2.98%	3.63%
Prime mortgage, including option ARMs	1.07	1.45	2.95
Subprime mortgage	5.43	5.98	10.82
Other	2.37	3.23	5.90
Total net charge-off rate, excluding PCI loans	2.68	2.70	3.98
Net charge-off rate – reported:[a]			
Home equity	2.52%	2.32%	2.86%
Prime mortgage, including option ARMs	0.58	0.78	1.59
Subprime mortgage	3.54	4.00	7.47
Other	2.37	3.23	5.90
Total net charge-off rate – reported	1.79	1.81	2.70
30+ day delinquency rate, excluding PCI loans[b]	5.03%	5.69%	6.45%
Allowance for loan losses, excluding PCI loans	$ 4,868	$ 8,718	$ 9,718
Allowance for PCI loans	5,711	5,711	4,941
Allowance for loan losses	$ 10,579	$ 14,429	$ 14,659
Nonperforming assets[c][d]	8,439	6,638	8,424
Allowance for loan losses to period-end loans retained	5.97%	7.29%	6.57%
Allowance for loan losses to period-end loans retained, excluding PCI loans	4.14	6.58	6.47

(a) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $744 million of charge-offs related to regulatory guidance. Excluding these charges-offs, net charge-offs for the year ended December 31, 2012, would have been $1.8 billion, $410 million and $416 million for the home equity, prime mortgage, including option ARMs, and subprime mortgage portfolios, respectively. Net charge-off rates for the same period, excluding these charge-offs and PCI loans, would have been 2.41%, 0.97% and 4.65% for the home equity, prime mortgage, including option ARMs, and subprime mortgage portfolios, respectively. For further information, see Consumer Credit Portfolio on pages 138–149 of this Annual Report.

(b) The delinquency rate for PCI loans was 20.14%, 23.30%, and 28.20% at December 31, 2012, 2011 and 2010, respectively.

(c) Excludes PCI loans. Because the Firm is recognizing interest income on each pool of PCI loans, they are all considered to be performing.

(d) Nonperforming assets at December 31, 2012, included loans based upon regulatory guidance. For further information, see Consumer Credit Portfolio on pages 138–149 of this Annual Report.

Card, Merchant Services & Auto

Selected income statement data

Year ended December 31, (in millions, except ratios)	2012	2011	2010
Revenue			
Card income	$ 4,092	$ 4,127	$ 3,514
All other income	1,009	765	764
Noninterest revenue	5,101	4,892	4,278
Net interest income	13,669	14,249	16,194
Total net revenue	18,770	19,141	20,472
Provision for credit losses	3,953	3,621	8,570
Noninterest expense	8,216	8,045	7,178
Income before income tax expense	6,601	7,475	4,724
Net income	$ 4,007	$ 4,544	$ 2,872
Overhead ratio	44%	42%	35%

2012 compared with 2011

Card, Merchant Services & Auto net income was $4.0 billion, a decrease of $537 million, or 12%, compared with the prior year. The decrease was driven by lower net revenue and higher provision for credit losses.

Net revenue was $18.8 billion, a decrease of $371 million, or 2%, from the prior year. Net interest income was $13.7 billion, down $580 million, or 4%, from the prior year. The decrease was driven by narrower loan spreads and lower average loan balances, partially offset by lower revenue reversals associated with lower net charge-offs. Noninterest revenue was $5.1 billion, an increase of $209 million, or 4%, from the prior year. The increase was driven by higher net interchange income, including lower partner revenue-sharing due to the impact of the Kohl's portfolio sale on April 1, 2011, and higher merchant servicing revenue, partially offset by higher amortization of loan origination costs.

The provision for credit losses was $4.0 billion, compared with $3.6 billion in the prior year. The current-year provision reflected lower net charge-offs and a $1.6 billion reduction in the allowance for loan losses due to lower estimated losses. The prior-year provision included a $3.9 billion reduction in the allowance for loan losses. The Credit Card net charge-off rate[1] was 3.94%, down from 5.40% in the prior year; and the 30+ day delinquency rate[1] was 2.10%, down from 2.81% in the prior year. The net charge-off rate would have been 3.87% absent a policy change on restructured loans that do not comply with their modified payment terms. The Auto net charge-off rate was 0.39%, up from 0.32% in the prior year, including $53 million of charge-offs related to regulatory guidance. Excluding these charge-offs, the net charge-off rate would have been 0.28%.

Noninterest expense was $8.2 billion, an increase of $171 million, or 2%, from the prior year, driven by expenses related to a non-core product that is being exited and the write-off of intangible assets associated with a non-strategic relationship, partially offset by lower marketing expense.

2011 compared with 2010

Card, Merchant Services & Auto net income was $4.5 billion, compared with $2.9 billion in the prior year. The increase was driven primarily by lower net charge-offs, partially offset by a lower reduction in the allowance for loan losses compared with the prior year.

Net revenue was $19.1 billion, a decrease of $1.3 billion, or 7%, from the prior year. Net interest income was $14.2 billion, down by $1.9 billion, or 12%. The decrease was driven by lower average loan balances, the impact of legislative changes, and a decreased level of fees. These decreases were largely offset by lower revenue reversals associated with lower charge-offs. Noninterest revenue was $4.9 billion, an increase of $614 million, or 14%, from the prior year. The increase was driven by the transfer of the Commercial Card business to Card from CIB in the first quarter of 2011, higher net interchange income, and lower partner revenue-sharing due to the impact of the Kohl's portfolio sale. These increases were partially offset by lower revenue from fee-based products. Excluding the impact of the Commercial Card business, noninterest revenue increased 8%.

The provision for credit losses was $3.6 billion, compared with $8.6 billion in the prior year. The current-year provision reflected lower net charge-offs and an improvement in delinquency rates, as well as a reduction of $3.9 billion to the allowance for loan losses due to lower estimated losses. The prior-year provision included a reduction of $6.2 billion to the allowance for loan losses. The Credit Card net charge-off rate[1] was 5.40%, down from 9.72% in the prior year; and the 30+ day delinquency rate[1] was 2.81%, down from 4.07% in the prior year. The Auto net charge-off rate was 0.32%, down from 0.63% in the prior year.

Noninterest expense was $8.0 billion, an increase of $867 million, or 12%, from the prior year, due to higher marketing expense and the inclusion of the Commercial Card business. Excluding the impact of the Commercial Card business, noninterest expense increased 8%.

In May 2009, the CARD Act was enacted. The changes required by the CARD Act were fully implemented by the end of the fourth quarter of 2010. The total estimated reduction in net income resulting from the CARD Act was approximately $750 million and $300 million in 2011 and 2010, respectively.

[1] *The net charge-off and 30+ day delinquency rates presented for credit card loans, which include loans held-for-sale, are non-GAAP financial measures. Management uses this as an additional measure to assess the performance of the portfolio.*

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2012	2011	2010
Selected balance sheet data (period-end)			
Loans:			
Credit Card	**$127,993**	$132,277	$137,676
Auto	**49,913**	47,426	48,367
Student	**11,558**	13,425	14,454
Total loans	**$189,464**	$193,128	$200,497
Selected balance sheet data (average)			
Total assets	**$197,661**	$201,162	$213,041
Loans:			
Credit Card	**125,464**	128,167	144,367
Auto	**48,413**	47,034	47,603
Student	**12,507**	13,986	15,945
Total loans	**$186,384**	$189,187	$207,915
Business metrics			
Credit Card, excluding Commercial Card			
Sales volume (in billions)	**$ 381.1**	$ 343.7	$ 313.0
New accounts opened	**6.7**	8.8	11.3
Open accounts	**64.5**	65.2	90.7
Accounts with sales activity	**30.6**	30.7	39.9
% of accounts acquired online	**51%**	32%	15%
Merchant Services			
Merchant processing volume (in billions)	**$ 655.2**	$ 553.7	$ 469.3
Total transactions (in billions)	**29.5**	24.4	20.5
Auto & Student			
Origination volume (in billions)			
Auto	**$ 23.4**	$ 21.0	$ 23.0
Student	**0.2**	0.3	1.9

The following are brief descriptions of selected business metrics within Card, Merchant Services & Auto.

Card Services includes the Credit Card and Merchant Services businesses.

Merchant Services is a business that processes transactions for merchants.

Total transactions – Number of transactions and authorizations processed for merchants.

Commercial Card provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services and business-to-business payment solutions.

Sales volume - Dollar amount of cardmember purchases, net of returns.

Open accounts – Cardmember accounts with charging privileges.

Auto origination volume - Dollar amount of auto loans and leases originated.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2012	2011	2010
Credit data and quality statistics			
Net charge-offs:			
Credit Card	$ 4,944	$ 6,925	$ 14,037
Auto[a]	188	152	298
Student	377	434	387
Total net charge-offs	$ 5,509	$ 7,511	$ 14,722
Net charge-off rate:			
Credit Card[b]	3.95%	5.44%	9.73%
Auto[a]	0.39	0.32	0.63
Student[c]	3.01	3.10	2.61
Total net charge-off rate	2.96	3.99	7.12
Delinquency rates			
30+ day delinquency rate:			
Credit Card[d]	2.10	2.81	4.14
Auto	1.25	1.13	1.22
Student[e]	2.13	1.78	1.53
Total 30+ day delinquency rate	1.87	2.32	3.23
90+ day delinquency rate – Credit Card[d]	1.02	1.44	2.25
Nonperforming assets[a][f]	$ 265	$ 228	$ 269
Allowance for loan losses:			
Credit Card	$ 5,501	$ 6,999	$ 11,034
Auto & Student	954	1,010	899
Total allowance for loan losses	$ 6,455	$ 8,009	$ 11,933
Allowance for loan losses to period-end loans:			
Credit Card[d]	4.30%	5.30%	8.14%
Auto & Student	1.55	1.66	1.43
Total allowance for loan losses to period-end loans	3.41	4.15	6.02

(a) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $53 million of charge-offs related to regulatory guidance. Excluding these charge-offs, net charge-offs for the year ended December 31, 2012, would have been $135 million, and the net charge-off rate would have been 0.28%. Nonperforming assets at December 31, 2012, included $51 million of loans based upon regulatory guidance.

(b) Average credit card loans included loans held-for-sale of $433 million, $833 million and $148 million for the years ended December 31, 2012, 2011 and 2010, respectively. These amounts are excluded when calculating the net charge-off rate.

(c) Average student loans included loans held-for-sale of $1.1 billion for the year ended December 31, 2010. There were no loans held-for-sale for all other periods. This amount is excluded when calculating the net charge-off rate.

(d) Period-end credit card loans included loans held-for-sale of $102 million and $2.2 billion at December 31, 2011 and 2010, respectively. These amounts are excluded when calculating delinquency rates and the allowance for loan losses to period-end loans. There were no loans held-for-sale at December 31, 2012. No allowance for loan losses was recorded for these loans.

(e) Excluded student loans insured by U.S. government agencies under the FFELP of $894 million, $989 million and $1.1 billion at December 31, 2012, 2011 and 2010, respectively, that are 30 or more days past due. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

(f) Nonperforming assets excluded student loans insured by U.S. government agencies under the FFELP of $525 million, $551 million and $625 million at December 31, 2012, 2011 and 2010, respectively, that are 90 or more days past due. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

Card Services supplemental information

Year ended December 31, (in millions, except ratios)	2012	2011	2010
Revenue			
Noninterest revenue	$ 3,887	$ 3,740	$ 3,277
Net interest income	11,611	12,084	13,886
Total net revenue	15,498	15,824	17,163
Provision for credit losses	3,444	2,925	8,037
Noninterest expense	6,566	6,544	5,797
Income before income tax expense	5,488	6,355	3,329
Net income	$ 3,344	$ 3,876	$ 2,074
Percentage of average loans:			
Noninterest revenue	3.10%	2.92%	2.27%
Net interest income	9.25	9.43	9.62
Total net revenue	12.35	12.35	11.89

CORPORATE & INVESTMENT BANK

The Corporate & Investment Bank ("CIB") offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Selected income statement data

Year ended December 31,

(in millions)	2012	2011	2010
Revenue			
Investment banking fees	$ 5,769	$ 5,859	$ 6,186
Principal transactions[a]	9,510	8,347	8,474
Lending- and deposit-related fees	1,948	2,098	2,075
Asset management, administration and commissions	4,693	4,955	5,110
All other income	1,184	1,264	1,044
Noninterest revenue	23,104	22,523	22,889
Net interest income	11,222	11,461	10,588
Total net revenue[b]	34,326	33,984	33,477
Provision for credit losses	(479)	(285)	(1,247)
Noninterest expense			
Compensation expense	11,313	11,654	12,418
Noncompensation expense	10,537	10,325	10,451
Total noninterest expense	21,850	21,979	22,869
Income before income tax expense	12,955	12,290	11,855
Income tax expense	4,549	4,297	4,137
Net income	$ 8,406	$ 7,993	$ 7,718

(a) Included DVA on structured notes and derivative liabilities measured at fair value. DVA gains/(losses) were $(930) million, $1.4 billion and $509 million for the years ended December 31, 2012, 2011 and 2010, respectively.
(b) Included tax-equivalent adjustments, predominantly due to income tax credits related to affordable housing and alternative energy investments, as well as tax-exempt income from municipal bond investments of $2.0 billion, $1.9 billion and $1.7 billion for the years ended December 31, 2012, 2011 and 2010, respectively.

Selected income statement data

Year ended December 31,

(in millions, except ratios)	2012	2011	2010
Financial ratios			
Return on common equity[a]	18%	17%	17%
Overhead ratio	64	65	68
Compensation expense as a percentage of total net revenue[b]	33	34	37
Revenue by business			
Advisory	$ 1,491	$ 1,792	$ 1,469
Equity underwriting	1,026	1,181	1,589
Debt underwriting	3,252	2,886	3,128
Total investment banking fees	5,769	5,859	6,186
Treasury Services	4,249	3,841	3,698
Lending	1,331	1,054	811
Total Banking	11,349	10,754	10,695
Fixed Income Markets[c]	15,412	14,784	14,738
Equity Markets	4,406	4,476	4,582
Securities Services	4,000	3,861	3,683
Credit Adjustments & Other[d][e]	(841)	109	(221)
Total Markets & Investor Services	22,977	23,230	22,782
Total net revenue	$ 34,326	$ 33,984	$ 33,477

(a) Return on equity excluding DVA, a non-GAAP financial measure, was 19%, 15% and 16% for the years ended December 31, 2012, 2011 and 2010, respectively.
(b) Compensation expense as a percentage of total net revenue excluding DVA, a non-GAAP financial measure, was 32%, 36% and 38% for the years ended December 31, 2012, 2011 and 2010, respectively. In addition, compensation expense as a percent of total net revenue for the year ended December 31, 2010, excluding both DVA and the payroll tax expense related to the U.K. Bank Payroll Tax on certain compensation awarded from December 9, 2009, to April 5, 2010, to relevant banking employees, which is a non-GAAP financial measure, was 36%.
(c) Includes results of the synthetic credit portfolio that was transferred from the CIO effective July 2, 2012.
(d) Primarily includes credit portfolio credit valuation adjustments ("CVA") net of associated hedging activities; DVA on structured notes and derivative liabilities; and nonperforming derivative receivable results effective in the first quarter of 2012 and thereafter.
(e) Included DVA on structured notes and derivative liabilities measured at fair value. DVA gains/(losses) were $(930) million, $1.4 billion and $509 million for the years ended December 31, 2012, 2011 and 2010, respectively.

CIB provides several non-GAAP financial measures which exclude the impact of DVA on: net revenue, net income, compensation ratio, and return on equity. The ratio for the allowance for loan losses to end-of-period loans is calculated excluding the impact of consolidated Firm-administered multi-seller conduits and trade finance, to provide a more meaningful assessment of CIB's allowance coverage ratio. These measures are used by management to assess the underlying performance of the business and for comparability with peers.

2012 compared with 2011

Net income was $8.4 billion, up 5% compared with the prior year. These results primarily reflected slightly higher net revenue compared with 2011, lower noninterest expense and a larger benefit from the provision for credit losses. Net revenue included a $930 million loss from DVA on structured notes and derivative liabilities resulting from the tightening of the Firm's credit spreads. Excluding the impact of DVA, net revenue was $35.3 billion and net income was $9.0 billion, compared with $32.5 billion and $7.1 billion in the prior year, respectively.

Net revenue was $34.3 billion, compared with $34.0 billion in the prior year. Banking revenues were $11.3 billion, compared with $10.8 billion in the prior year. Investment banking fees were $5.8 billion, down 2% from the prior year; these consisted of record debt underwriting fees of $3.3 billion (up 13%), advisory fees of $1.5 billion (down 17%) and equity underwriting fees of $1.0 billion (down 13%). Industry-wide debt capital markets volumes were at their second highest annual level since 2006, as the low rate environment continued to fuel issuance and refinancing activity. In contrast there was lower industry-wide announced mergers and acquisitions activity, while industry-wide equity underwriting volumes remained steady. Treasury Services revenue was a record $4.2 billion compared with $3.8 billion in the prior year driven by continued deposit balance growth and higher average trade loans outstanding during the year. Lending revenue was $1.3 billion, compared with $1.1 billion in the prior year due to higher net interest income on increased average retained loans as well as higher fees on lending-related commitments. This was partially offset by higher fair value losses on credit risk-related hedges of the retained loan portfolio.

Markets and Investor Services revenue was $23.0 billion compared to $23.2 billion in the prior year. Combined Fixed Income and Equity Markets revenue was $19.8 billion, up from $19.3 billion the prior year as client revenue remained strong across most products, with particular strength in rates-related products, which improved from the prior year. 2012 generally saw credit spread tightening and lower volatility in both the credit and equity markets compared with the prior year, during which macroeconomic concerns, including those in the Eurozone, caused credit spread widening and generally more volatile market conditions, particularly in the second half of the year. Securities Services revenue was $4.0 billion compared with $3.9 billion the prior year primarily driven by higher deposit balances. Assets under custody grew to a record $18.8 trillion by the end of 2012, driven by both market appreciation as well as net inflows. Credit Adjustments & Other was a loss of $841 million, driven predominantly by DVA, which was a loss of $930 million due to the tightening of the Firm's credit spreads.

The provision for credit losses was a benefit of $479 million, compared with a benefit of $285 million in the prior year, as credit trends remained stable. The current-year benefit reflected recoveries and a net reduction in the allowance for credit losses, both related to the restructuring of certain nonperforming loans, current credit trends and other portfolio activities. Net recoveries were $284 million, compared with net charge-offs of $161 million in the prior year. Nonperforming loans were down 49% from the prior year.

Noninterest expense was $21.9 billion, down 1%, driven primarily by lower compensation expense.

Return on equity was 18% on $47.5 billion of average allocated capital.

2011 compared with 2010

Net income was $8.0 billion, up 4% compared with the prior year. These results primarily reflected higher net revenue compared with 2010, and lower noninterest expense, largely offset by a reduced benefit from the provision for credit losses. Net revenue included a $1.4 billion gain from DVA on structured notes and derivative liabilities resulting from the widening of the Firm's credit spreads. Excluding the impact of DVA, net revenue was $32.5 billion and net income was $7.1 billion, compared with $33.0 billion and $7.4 billion in the prior year, respectively.

Net revenue was $34.0 billion, compared with $33.5 billion in the prior year. Banking revenues were $10.8 billion, compared with $10.7 billion in the prior year. Investment banking fees were $5.9 billion, down 5% from the prior year; these consisted of debt underwriting fees of $2.9 billion (down 8%), advisory fees of $1.8 billion (up 22%) and equity underwriting fees of $1.2 billion (down 26%). Treasury Services revenue was $3.8 billion compared with $3.7 billion in the prior year driven by higher deposit balances as well as higher trade loan volumes, partially offset by the transfer of the Commercial Card business to Card in the first quarter of 2011. Lending revenue was $1.1 billion, compared with $811 million in the prior year, driven by lower fair value losses on hedges of the retained loan portfolio.

Markets and Investor Services revenue was $23.2 billion compared with $22.8 billion the year prior. Fixed Income Markets revenue was $14.8 billion, compared with $14.7 billion in the prior year, with continued solid client revenue. Equity Markets revenue was $4.5 billion compared with $4.6 billion the prior year on slightly lower performance. Securities Services revenue was $3.9 billion compared with $3.7 billion the prior year driven by higher

net interest income due to higher deposit balances and net inflows of assets under custody. Credit Adjustments & Other was a gain of $109 million compared with a loss of $221 million in the prior year.

The provision for credit losses was a benefit of $285 million, compared with a benefit of $1.2 billion in the prior year. The benefit in 2011 reflected a net reduction in the allowance for loan losses largely driven by portfolio activity, partially offset by new loan growth. Net charge-offs were $161 million, compared with $736 million in the prior year.

Noninterest expense was $22.0 billion, down 4% driven primarily by lower compensation expense compared with the prior period which included the impact of the U.K. Bank Payroll Tax. Noncompensation expense was also lower compared with the prior year, which included higher litigation reserves. This decrease was partially offset by additional operating expense related to business growth as well as expenses related to exiting unprofitable business.

Return on equity was 17% on $47.0 billion of average allocated capital.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2012	2011	2010
Selected balance sheet data (period-end)			
Assets	$ 876,107	$ 845,095	$ 870,631
Loans:			
Loans retained[a]	109,501	111,099	80,208
Loans held-for-sale and loans at fair value	5,749	3,016	3,851
Total loans	115,250	114,115	84,059
Equity	47,500	47,000	46,500
Selected balance sheet data (average)			
Assets	$ 854,670	$ 868,930	$ 774,295
Trading assets-debt and equity instruments	312,944	348,234	309,383
Trading assets-derivative receivables	74,874	73,200	70,286
Loans:			
Loans retained[a]	110,100	91,173	77,620
Loans held-for-sale and loans at fair value	3,502	3,221	3,268
Total loans	113,602	94,394	80,888
Equity	47,500	47,000	46,500
Headcount	52,151	53,557	55,142

(a) Loans retained includes credit portfolio loans, trade finance loans, other held-for-investment loans and overdrafts.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2012	2011	2010
Credit data and quality statistics			
Net charge-offs/(recoveries)	$ (284)	$ 161	$ 736
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[a][b]	535	1,039	3,171
Nonaccrual loans held-for-sale and loans at fair value	82	166	460
Total nonaccrual loans	617	1,205	3,631
Derivative receivables[c]	239	293	159
Assets acquired in loan satisfactions	64	79	117
Total nonperforming assets	920	1,577	3,907
Allowance for credit losses:			
Allowance for loan losses	1,300	1,501	1,928
Allowance for lending-related commitments	473	467	498
Total allowance for credit losses	1,773	1,968	2,426
Net charge-off/(recovery) rate[a]	(0.26)%	0.18%	0.95%
Allowance for loan losses to period-end loans retained[a]	1.19	1.35	2.40
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits[d]	2.52	3.06	4.90
Allowance for loan losses to nonaccrual loans retained[a][b]	243	144	61
Nonaccrual loans to total period-end loans	0.54	1.06	4.32
Business metrics			
Assets under custody ("AUC") by asset class (period-end) in billions:			
Fixed Income	$ 11,745	$ 10,926	$ 10,364
Equity	5,637	4,878	4,850
Other[e]	1,453	1,066	906
Total AUC	$ 18,835	$ 16,870	$ 16,120
Client deposits and other third party liabilities (average)[f]	$355,766	$318,802	$248,451
Trade finance loans (period-end)	35,783	36,696	21,156

(a) Loans retained includes credit portfolio loans, trade finance loans, other held-for-investment loans and overdrafts.

(b) Allowance for loan losses of $153 million, $263 million and $1.1 billion were held against these nonaccrual loans at December 31, 2012, 2011 and 2010, respectively.

(c) Prior to 2012, reported amounts had only included defaulted derivatives; effective in the first quarter of 2012, reported amounts included both defaulted derivatives as well as derivatives that have been risk rated as nonperforming.

(d) Management uses allowance for loan losses to period-end loans retained, excluding trade finance and conduits, a non-GAAP financial measure, as a more relevant metric to reflect the allowance coverage of the retained lending portfolio.

(e) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and nonsecurities contracts.

(f) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses, and include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of their client cash management program.

Market shares and rankings[a]

Year ended December 31,	2012 Market Share	2012 Rankings	2011 Market Share	2011 Rankings	2010 Market Share	2010 Rankings
Global investment banking fees[b]	**7.6%**	**#1**	8.1%	#1	7.6%	#1
Debt, equity and equity-related						
Global	**7.2**	**1**	6.7	1	7.2	1
U.S.	**11.5**	**1**	11.1	1	11.1	1
Syndicated loans						
Global	**9.6**	**1**	10.8	1	8.5	2
U.S.	**17.6**	**1**	21.2	1	19.1	2
Long-term debt[c]						
Global	**7.1**	**1**	6.7	1	7.2	2
U.S.	**11.6**	**1**	11.2	1	10.9	2
Equity and equity-related						
Global[d]	**7.8**	**4**	6.8	3	7.3	3
U.S.	**10.4**	**5**	12.5	1	13.1	2
Announced M&A[e]						
Global	**18.5**	**2**	18.3	2	15.9	4
U.S.	**21.5**	**2**	26.7	2	21.9	3

(a) Source: Dealogic. Global Investment Banking fees reflects the ranking of fees and market share. The remaining rankings reflects transaction volume and market share. Global announced M&A is based on transaction value at announcement; because of joint M&A assignments, M&A market share of all participants will add up to more than 100%. All other transaction volume-based rankings are based on proceeds, with full credit to each book manager/equal if joint.

(b) Global investment banking fees rankings exclude money market, short-term debt and shelf deals.

(c) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and mortgage-backed securities; and exclude money market, short-term debt, and U.S. municipal securities.

(d) Global equity and equity-related ranking includes rights offerings and Chinese A-Shares.

(e) Announced M&A reflects the removal of any withdrawn transactions. U.S. announced M&A represents any U.S. involvement ranking.

According to Dealogic, the Firm was ranked #1 in Global Investment Banking Fees generated during 2012, based on revenue; #1 in Global Debt, Equity and Equity-related; #1 in Global Syndicated Loans; #1 in Global Long-Term Debt; #4 in Global Equity and Equity-related; and #2 in Global Announced M&A, based on volume.

International metrics

Year ended December 31,

(in millions)	2012	2011	2010
Total net revenue[a]			
Europe/Middle East/Africa	**$ 10,639**	$ 11,102	$ 9,740
Asia/Pacific	**4,100**	4,589	4,775
Latin America/Caribbean	**1,524**	1,409	1,154
Total international net revenue	**16,263**	17,100	15,669
North America	**18,063**	16,884	17,808
Total net revenue	**$ 34,326**	$ 33,984	$ 33,477
Loans (period-end)[a]			
Europe/Middle East/Africa	**$ 30,266**	$ 29,484	$ 21,072
Asia/Pacific	**27,193**	27,803	18,251
Latin America/Caribbean	**10,220**	9,692	5,928
Total international loans	**67,679**	66,979	45,251
North America	**41,822**	44,120	34,957
Total loans	**$ 109,501**	$ 111,099	$ 80,208
Client deposits and other third-party liabilities (average)[a][b]			
Europe/Middle East/Africa	**$ 127,326**	$ 123,920	$ 102,014
Asia/Pacific	**51,180**	43,524	32,862
Latin America/Caribbean	**11,052**	12,625	11,558
Total international	**$ 189,558**	$ 180,069	$ 146,434
North America	**166,208**	138,733	102,017
Total client deposits and other third-party liabilities	**$ 355,766**	$ 318,802	$ 248,451
AUC (period-end) (in billions)[a]			
North America	**$ 10,504**	$ 9,735	$ 9,836
All other regions	**8,331**	7,135	6,284
Total AUC	**$ 18,835**	$ 16,870	$ 16,120

(a) Total net revenue is based primarily on the domicile of the client or location of the trading desk, as applicable. Loans outstanding (excluding loans-held-for-sale and loans carried at fair value), client deposits and AUC are based predominantly on the domicile of the client.

(b) Client deposits and other third-party liabilities pertain to the Treasury Services and Securities Services businesses, and include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of their client cash management program.

COMMERCIAL BANKING

Commercial Banking delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and non-profit entities with annual revenue generally ranging from $20 million to $2 billion. CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2012	2011	2010
Revenue			
Lending- and deposit-related fees	$ 1,072	$ 1,081	$ 1,099
Asset management, administration and commissions	130	136	144
All other income[a]	1,081	978	957
Noninterest revenue	2,283	2,195	2,200
Net interest income	4,542	4,223	3,840
Total net revenue[b]	6,825	6,418	6,040
Provision for credit losses	41	208	297
Noninterest expense			
Compensation expense[c]	1,014	936	863
Noncompensation expense[c]	1,348	1,311	1,301
Amortization of intangibles	27	31	35
Total noninterest expense	2,389	2,278	2,199
Income before income tax expense	4,395	3,932	3,544
Income tax expense	1,749	1,565	1,460
Net income	$ 2,646	$ 2,367	$ 2,084
Revenue by product			
Lending[d]	$ 3,675	$ 3,455	$ 2,749
Treasury services[d]	2,428	2,270	2,632
Investment banking	545	498	466
Other	177	195	193
Total Commercial Banking revenue	$ 6,825	$ 6,418	$ 6,040
Investment banking revenue, gross	$ 1,597	$ 1,421	$ 1,335
Revenue by client segment			
Middle Market Banking	$ 3,334	$ 3,145	$ 3,060
Commercial Term Lending	1,194	1,168	1,023
Corporate Client Banking	1,456	1,261	1,154
Real Estate Banking	438	416	460
Other	403	428	343
Total Commercial Banking revenue	$ 6,825	$ 6,418	$ 6,040
Financial ratios			
Return on common equity	28%	30%	26%
Overhead ratio	35	35	36

(a) CB client revenue from investment banking products and commercial card transactions is included in all other income.

(b) Included tax-equivalent adjustments, predominantly due to income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities, as well as tax-exempt income from municipal bond activity, of $381 million, $345 million, and $238 million for the years ended December 31, 2012, 2011 and 2010, respectively.

(c) Effective July 1, 2012, certain Treasury Services product sales staff supporting CB were transferred from CIB to CB. As a result, compensation expense for these sales staff is now reflected in CB's compensation expense rather than as an allocation from CIB in noncompensation expense. CB's and CIB's previously reported headcount, compensation expense and noncompensation expense have been revised to reflect this transfer.

(d) Effective January 1, 2011, product revenue from commercial card and standby letters of credit transactions was included in lending. For the years ended December 31, 2012 and 2011, the impact of the change was $434 million and $438 million, respectively. For the year ended December 31, 2010, it was reported in treasury services.

CB revenue comprises the following:

Lending includes a variety of financing alternatives, which are predominantly provided on a basis secured by receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, commercial card products and standby letters of credit.

Treasury services includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

Investment banking includes revenue from a range of products providing CB clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from Fixed income and Equity market products available to CB clients is also included. Investment banking revenue, gross, represents total revenue related to investment banking products sold to CB clients.

Other product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activity and certain income derived from principal transactions.

Commercial Banking is divided into four primary client segments for management reporting purposes: Middle Market Banking, Commercial Term Lending, Corporate Client Banking, and Real Estate Banking.

Middle Market Banking covers corporate, municipal, financial institution and non-profit clients, with annual revenue generally ranging between $20 million and $500 million.

Commercial Term Lending primarily provides term financing to real estate investors/owners for multifamily properties as well as financing office, retail and industrial properties.

Corporate Client Banking covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs.

Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate properties.

Other primarily includes lending and investment activity within the Community Development Banking and Chase Capital businesses.

2012 compared with 2011

Record net income was $2.6 billion, an increase of $279 million, or 12%, from the prior year. The improvement was driven by an increase in net revenue and a decrease in the provision for credit losses, partially offset by higher noninterest expense.

Net revenue was a record $6.8 billion, an increase of $407 million, or 6%, from the prior year. Net interest income was $4.5 billion, up by $319 million, or 8%, driven by growth in loans and client deposits, partially offset by spread compression. Loan growth was strong across all client segments and industries. Noninterest revenue was $2.3 billion, up by $88 million, or 4%, compared with the prior year, largely driven by increased investment banking revenue.

Revenue from Middle Market Banking was $3.3 billion, an increase of $189 million, or 6%, from the prior year driven by higher loans and client deposits, partially offset by lower spreads from lending and deposit products. Revenue from Commercial Term Lending was $1.2 billion, an increase of $26 million, or 2%. Revenue from Corporate Client Banking was $1.5 billion, an increase of $195 million, or 15%, driven by growth in loans and client deposits and higher revenue from investment banking products, partially offset by lower lending spreads. Revenue from Real Estate Banking was $438 million, an increase of $22 million, or 5%, partially driven by higher loan balances.

The provision for credit losses was $41 million, compared with $208 million in the prior year. Net charge-offs were $35 million (0.03% net charge-off rate) compared with net charge-offs of $187 million (0.18% net charge-off rate) in 2011. The decrease in the provision and net charge-offs was largely driven by improving trends in the credit quality of the portfolio. Nonaccrual loans were $673 million, down by $380 million or 36%, due to repayments and loan sales. The allowance for loan losses to period-end retained loans was 2.06%, down from 2.34%.

Noninterest expense was $2.4 billion, an increase of $111 million, or 5% from the prior year, reflecting higher compensation expense driven by expansion, portfolio growth and increased regulatory requirements.

2011 compared with 2010

Record net income was $2.4 billion, an increase of $283 million, or 14%, from the prior year. The improvement was driven by higher net revenue and a reduction in the provision for credit losses, partially offset by an increase in noninterest expense.

Net revenue was a record $6.4 billion, up by $378 million, or 6%, compared with the prior year. Net interest income was $4.2 billion, up by $383 million, or 10%, driven by growth in client deposits and loan balances partially offset by spread compression on client deposits. Noninterest revenue was $2.2 billion, flat compared with the prior year.

On a client segment basis, revenue from Middle Market Banking was $3.1 billion, an increase of $85 million, or 3%, from the prior year due to higher client deposits and loan balances, partially offset by spread compression on client deposits and lower lending- and deposit-related fees. Revenue from Commercial Term Lending was $1.2 billion, an increase of $145 million, or 14%, and includes the full year impact of the purchase of a $3.5 billion loan portfolio during the third quarter of 2010. Revenue from Corporate Client Banking was $1.3 billion, an increase of $107 million, or 9% due to growth in client deposits and loan balances and higher lending- and deposit-related fees, partially offset by spread compression on client deposits. Revenue from Real Estate Banking was $416 million, a decrease of $44 million, or 10%, driven by a reduction in loan balances and lower gains on sales of loans and other real estate owned, partially offset by wider loan spreads.

The provision for credit losses was $208 million, compared with $297 million in the prior year. Net charge-offs were $187 million (0.18% net charge-off rate) compared with $909 million (0.94% net charge-off rate) in the prior year. The reduction was largely related to commercial real estate. The allowance for loan losses to period-end loans retained was 2.34%, down from 2.61% in the prior year. Nonaccrual loans were $1.1 billion, down by $947 million, or 47% from the prior year, largely as a result of commercial real estate repayments and loans sales.

Noninterest expense was $2.3 billion, an increase of $79 million, or 4% from the prior year, reflecting higher headcount-related expense.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount and ratios)	2012	2011	2010
Selected balance sheet data (period-end)			
Total assets	$ 181,502	$ 158,040	$ 142,646
Loans:			
Loans retained	126,996	111,162	97,900
Loans held-for-sale and loans at fair value	1,212	840	1,018
Total loans	$ 128,208	$ 112,002	$ 98,918
Equity	9,500	8,000	8,000
Period-end loans by client segment			
Middle Market Banking	$ 50,701	$ 44,437	$ 37,942
Commercial Term Lending	43,512	38,583	37,928
Corporate Client Banking	21,558	16,747	11,678
Real Estate Banking	8,552	8,211	7,591
Other	3,885	4,024	3,779
Total Commercial Banking loans	$ 128,208	$ 112,002	$ 98,918
Selected balance sheet data (average)			
Total assets	$ 165,111	$ 146,230	$ 133,654
Loans:			
Loans retained	119,218	103,462	96,584
Loans held-for-sale and loans at fair value	882	745	422
Total loans	$ 120,100	$ 104,207	$ 97,006
Client deposits and other third-party liabilities[a]	195,912	174,729	138,862
Equity	9,500	8,000	8,000
Average loans by client segment			
Middle Market Banking	$ 47,198	$ 40,759	$ 35,059
Commercial Term Lending	40,872	38,107	36,978
Corporate Client Banking	19,383	13,993	11,926
Real Estate Banking	8,562	7,619	9,344
Other	4,085	3,729	3,699
Total Commercial Banking loans	$ 120,100	$ 104,207	$ 97,006
Headcount[b]	6,120	5,787	5,126

As of or for the year ended December 31, (in millions, except headcount and ratios)	2012	2011	2010
Credit data and quality statistics			
Net charge-offs	$ 35	$ 187	$ 909
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained[c]	644	1,036	1,964
Nonaccrual loans held-for-sale and loans held at fair value	29	17	36
Total nonaccrual loans	673	1,053	2,000
Assets acquired in loan satisfactions	14	85	197
Total nonperforming assets	687	1,138	2,197
Allowance for credit losses:			
Allowance for loan losses	2,610	2,603	2,552
Allowance for lending-related commitments	183	189	209
Total allowance for credit losses	2,793	2,792	2,761
Net charge-off rate[d]	0.03%	0.18%	0.94%
Allowance for loan losses to period-end loans retained	2.06	2.34	2.61
Allowance for loan losses to nonaccrual loans retained[c]	405	251	130
Nonaccrual loans to total period-end loans	0.52	0.94	2.02

(a) Client deposits and other third-party liabilities include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased, and securities loaned or sold under repurchase agreements) as part of client cash management programs.

(b) Effective July 1, 2012, certain Treasury Services product sales staff supporting CB were transferred from CIB to CB. For further discussion of this transfer, see footnote (c) on page 96 of this Annual Report.

(c) Allowance for loan losses of $107 million, $176 million and $340 million was held against nonaccrual loans retained at December 31, 2012, 2011 and 2010, respectively.

(d) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off rate.

Asset Management, with client assets of $2.1 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions to a broad range of clients' investment needs. For individual investors, AM also provides retirement products and services, brokerage and banking services including trust and estate, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2012	2011	2010
Revenue			
Asset management, administration and commissions	$ 7,041	$ 6,748	$ 6,374
All other income	806	1,147	1,111
Noninterest revenue	7,847	7,895	7,485
Net interest income	2,099	1,648	1,499
Total net revenue	9,946	9,543	8,984
Provision for credit losses	86	67	86
Noninterest expense			
Compensation expense	4,405	4,152	3,763
Noncompensation expense	2,608	2,752	2,277
Amortization of intangibles	91	98	72
Total noninterest expense	7,104	7,002	6,112
Income before income tax expense	2,756	2,474	2,786
Income tax expense	1,053	882	1,076
Net income	$ 1,703	$ 1,592	$ 1,710
Revenue by client segment			
Private Banking	$ 5,426	$ 5,116	$ 4,860
Institutional	2,386	2,273	2,180
Retail	2,134	2,154	1,944
Total net revenue	$ 9,946	$ 9,543	$ 8,984
Financial ratios			
Return on common equity	24%	25%	26%
Overhead ratio	71	73	68
Pretax margin ratio	28	26	31

2012 compared with 2011

Net income was $1.7 billion, an increase of $111 million, or 7%, from the prior year. These results reflected higher net revenue, partially offset by higher noninterest expense and a higher provision for credit losses.

Net revenue was $9.9 billion, an increase of $403 million, or 4%, from the prior year. Noninterest revenue was $7.8 billion, down $48 million, or 1%, due to lower loan-related revenue and the absence of a prior-year gain on the sale of an investment. These decreases were predominantly offset by net client inflows, higher valuations of seed capital investments, the effect of higher market levels, higher brokerage revenue and higher performance fees. Net interest income was $2.1 billion, up $451 million, or 27%, due to higher loan and deposit balances.

Revenue from Private Banking was $5.4 billion, up 6% from the prior year due to higher net interest income from loan and deposit balances and higher brokerage revenue, partially offset by lower loan-related fee revenue. Revenue from Institutional was $2.4 billion, up 5% due to net client inflows and the effect of higher market levels. Revenue from Retail was $2.1 billion, down 1% due to the absence of a prior-year gain on the sale of an investment, predominantly offset by higher valuations of seed capital investments and higher performance fees.

The provision for credit losses was $86 million, compared with $67 million in the prior year.

Noninterest expense was $7.1 billion, an increase of $102 million, or 1%, from the prior year, due to higher performance-based compensation and higher headcount-related expense, partially offset by the absence of non-client-related litigation expense.

2011 compared with 2010

Net income was $1.6 billion, a decrease of $118 million, or 7%, from the prior year. These results reflected higher noninterest expense, largely offset by higher net revenue and a lower provision for credit losses.

Net revenue was $9.5 billion, an increase of $559 million, or 6%, from the prior year. Noninterest revenue was $7.9 billion, up $410 million, or 5%, due to net inflows to products with higher margins and the effect of higher market levels, partially offset by lower performance fees and lower loan-related revenue. Net interest income was $1.6 billion, up $149 million, or 10%, due to higher deposit and loan balances, partially offset by narrower deposit spreads.

Revenue from Private Banking was $5.1 billion, up 5% from the prior year due to higher deposit and loan balances and higher brokerage revenue, partially offset by narrower deposit spreads and lower loan-related revenue. Revenue from Institutional was $2.3 billion, up 4% due to net inflows to products with higher margins and the effect of higher market levels. Revenue from Retail was $2.2 billion, up 11% due to net inflows to products with higher margins and the effect of higher market levels.

The provision for credit losses was $67 million, compared with $86 million in the prior year.

Noninterest expense was $7.0 billion, an increase of $890 million, or 15%, from the prior year, due to higher headcount-related expense and non-client-related litigation, partially offset by lower performance-based compensation.

Selected metrics

Business metrics

As of or for the year ended December 31, (in millions, except headcount, ranking data, ratios and where otherwise noted)	2012	2011	2010
Number of:			
Client advisors[a]	2,821	2,883	2,696
Retirement planning services participants (in thousands)	1,961	1,798	1,580
% of customer assets in 4 & 5 Star Funds[b]	47%	43%	49%
% of AUM in 1st and 2nd quartiles:[c]			
1 year	67	48	67
3 years	74	72	72
5 years	76	78	80
Selected balance sheet data (period-end)			
Total assets	$ 108,999	$ 86,242	$ 68,997
Loans[d]	80,216	57,573	44,084
Equity	7,000	6,500	6,500
Selected balance sheet data (average)			
Total assets	$ 97,447	$ 76,141	$ 65,056
Loans	68,719	50,315	38,948
Deposits	129,208	106,421	86,096
Equity	7,000	6,500	6,500
Headcount	18,480	18,036	16,918
Credit data and quality statistics			
Net charge-offs	$ 64	$ 92	$ 76
Nonaccrual loans	250	317	375
Allowance for credit losses:			
Allowance for loan losses	248	209	267
Allowance for lending-related commitments	5	10	4
Total allowance for credit losses	253	219	271
Net charge-off rate	0.09%	0.18%	0.20%
Allowance for loan losses to period-end loans	0.31	0.36	0.61
Allowance for loan losses to nonaccrual loans	99	66	71
Nonaccrual loans to period-end loans	0.31	0.55	0.85

(a) Effective January 1, 2012, the previously disclosed separate metric for client advisors and JPMorgan Securities brokers were combined into one metric that reflects the number of Private Banking client-facing representatives.
(b) Derived from Morningstar for the U.S., the U.K., Luxembourg, France, Hong Kong and Taiwan; and Nomura for Japan.
(c) Quartile ranking sourced from: Lipper for the U.S. and Taiwan; Morningstar for the U.K., Luxembourg, France and Hong Kong; and Nomura for Japan.
(d) Included $10.9 billion of prime mortgage loans reported in the Consumer, excluding credit card, loan portfolio at December 31, 2012.

AM's client segments comprise the following:

Private Banking offers investment advice and wealth management services to high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty-wealth advisory services.

Institutional brings comprehensive global investment services – including asset management, pension analytics, asset-liability management and active risk-budgeting strategies – to corporate and public institutions, endowments, foundations, non-profit organizations and governments worldwide.

Retail provides worldwide investment management services and retirement planning and administration, through financial intermediaries and direct distribution of a full range of investment products.

J.P. Morgan Asset Management has two high-level measures of its overall fund performance.

- Percentage of assets under management in funds rated 4- and 5-stars (three years). Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22% of industry wide ranked funds. The worst rating is a 1-star rating.
- Percentage of assets under management in first- or second- quartile funds (one, three and five years). Mutual fund rating services rank funds according to a peer-based performance system, which measures returns according to specific time and fund classification (small-, mid-, multi- and large-cap).

Assets under supervision

2012 compared with 2011

Assets under supervision were $2.1 trillion at December 31, 2012, an increase of $174 billion, or 9%, from the prior year. Assets under management were $1.4 trillion, an increase of $90 billion, or 7%, due to the effect of higher market levels and net inflows to long-term products, partially offset by net outflows from liquidity products. Custody, brokerage, administration and deposit balances were $669 billion, up $84 billion, or 14%, due to the effect of higher market levels and custody and brokerage inflows.

2011 compared with 2010

Assets under supervision were $1.9 trillion at December 31, 2011, an increase of $81 billion, or 4%, from the prior year. Assets under management were $1.3 trillion, an increase of $38 billion, or 3%. Both increases were due to net inflows to long-term and liquidity products, partially offset by the impact of lower market levels. Custody, brokerage, administration and deposit balances were $585 billion, up by $43 billion, or 8%, due to deposit and custody inflows.

Assets under supervision

December 31, (in billions)	2012	2011	2010
Assets by asset class			
Liquidity	$ 475	$ 515	$ 497
Fixed income	386	336	289
Equity and multi-asset	447	372	404
Alternatives	118	113	108
Total assets under management	1,426	1,336	1,298
Custody/brokerage/ administration/deposits	669	585	542
Total assets under supervision	$ 2,095	$ 1,921	$ 1,840
Assets by client segment			
Private Banking	$ 318	$ 291	$ 284
Institutional	741	722	703
Retail	367	323	311
Total assets under management	$ 1,426	$ 1,336	$ 1,298
Private Banking	$ 877	$ 781	$ 731
Institutional	741	723	703
Retail	477	417	406
Total assets under supervision	$ 2,095	$ 1,921	$ 1,840
Mutual fund assets by asset class			
Liquidity	$ 410	$ 458	$ 446
Fixed income	136	107	92
Equity and multi-asset	180	147	169
Alternatives	5	8	7
Total mutual fund assets	$ 731	$ 720	$ 714

Year ended December 31, (in billions)	2012	2011	2010
Assets under management rollforward			
Beginning balance	$ 1,336	$ 1,298	$ 1,249
Net asset flows:			
Liquidity	(43)	18	(89)
Fixed income	30	40	50
Equity, multi-asset and alternatives	30	13	19
Market/performance/other impacts	73	(33)	69
Ending balance, December 31	$ 1,426	$ 1,336	$ 1,298
Assets under supervision rollforward			
Beginning balance	$ 1,921	$ 1,840	$ 1,701
Net asset flows	60	123	28
Market/performance/other impacts	114	(42)	111
Ending balance, December 31	$ 2,095	$ 1,921	$ 1,840

International metrics

Year ended December 31, (in billions, except where otherwise noted)	2012	2011	2010
Total net revenue (in millions)[a]			
Europe/Middle East/Africa	$ 1,641	$ 1,704	$ 1,642
Asia/Pacific	967	971	925
Latin America/Caribbean	772	808	541
North America	6,566	6,060	5,876
Total net revenue	$ 9,946	$ 9,543	$ 8,984
Assets under management			
Europe/Middle East/Africa	$ 258	$ 278	$ 282
Asia/Pacific	114	105	111
Latin America/Caribbean	45	34	35
North America	1,009	919	870
Total assets under management	$ 1,426	$ 1,336	$ 1,298
Assets under supervision			
Europe/Middle East/Africa	$ 317	$ 329	$ 331
Asia/Pacific	160	139	147
Latin America/Caribbean	110	89	84
North America	1,508	1,364	1,278
Total assets under supervision	$ 2,095	$ 1,921	$ 1,840

(a) Regional revenue is based on the domicile of the client.

CORPORATE/PRIVATE EQUITY

The Corporate/Private Equity segment comprises Private Equity, Treasury, Chief Investment Office ("CIO"), and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital and structural interest rate and foreign exchange risks. The corporate staff units include Central Technology and Operations, Internal Audit, Executive, Finance, Human Resources, Legal & Compliance, Global Real Estate, General Services, Operational Control, Risk Management, and Corporate Responsibility & Public Policy. Other centrally managed expense includes the Firm's occupancy and pension-related expense that are subject to allocation to the businesses.

Selected income statement data

Year ended December 31, (in millions, except headcount)	2012	2011	2010
Revenue			
Principal transactions	$ (4,268)	$ 1,434	$ 2,208
Securities gains	2,024	1,600	2,898
All other income	2,452	595	245
Noninterest revenue	208	3,629	5,351
Net interest income	(1,360)	506	2,063
Total net revenue[(a)]	(1,152)	4,135	7,414
Provision for credit losses	(37)	(36)	14
Noninterest expense			
Compensation expense	2,622	2,324	2,276
Noncompensation expense[(b)]	7,353	6,693	8,641
Subtotal	9,975	9,017	10,917
Net expense allocated to other businesses	(5,379)	(4,909)	(4,607)
Total noninterest expense	4,596	4,108	6,310
Income before income tax expense/(benefit)	(5,711)	63	1,090
Income tax expense/(benefit)[(c)]	(3,629)	(759)	(190)
Net income	$ (2,082)	$ 822	$ 1,280
Total net revenue			
Private equity	$ 601	$ 836	$ 1,239
Treasury and CIO	(3,064)	3,196	6,642
Other Corporate	1,311	103	(467)
Total net revenue	$ (1,152)	$ 4,135	$ 7,414
Net income			
Private equity	$ 292	$ 391	$ 588
Treasury and CIO	(2,093)	1,349	3,576
Other Corporate	(281)	(918)	(2,884)
Total net income	$ (2,082)	$ 822	$ 1,280
Total assets (period-end)	$728,925	$ 693,108	$ 526,556
Headcount	22,747	21,334	19,419

(a) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $443 million, $298 million and $226 million for the years ended December 31, 2012, 2011 and 2010, respectively.

(b) Included litigation expense of $3.7 billion, $3.2 billion and $5.7 billion for the years ended December 31, 2012, 2011 and 2010, respectively.

(c) Includes tax benefits recognized upon the resolution of tax audits.

2012 compared with 2011

Net loss was $2.1 billion, compared with a net income of $822 million in the prior year.

Private Equity reported net income of $292 million, compared with net income of $391 million in the prior year. Net revenue was $601 million, compared with $836 million in the prior year, due to lower unrealized and realized gains on private investments, partially offset by higher unrealized gains on public securities. Noninterest expense was $145 million, down from $238 million in the prior year.

Treasury and CIO reported a net loss of $2.1 billion, compared with net income of $1.3 billion in the prior year. Net revenue was a loss of $3.1 billion, compared with net revenue of $3.2 billion in the prior year. The current year loss reflected $5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and $449 million of losses from the retained index credit derivative positions for the three months ended September 30, 2012. These losses were partially offset by securities gains of $2.0 billion. The current year revenue reflected $888 million of extinguishment gains related to the redemption of trust preferred securities, which are included in all other income in the above table. The extinguishment gains were related to adjustments applied to the cost basis of the trust preferred securities during the period they were in a qualified hedge accounting relationship. Net interest income was negative $683 million, compared with $1.4 billion in the prior year, primarily reflecting the impact of lower portfolio yields and higher deposit balances across the Firm.

Other Corporate reported a net loss of $281 million, compared with a net loss of $918 million in the prior year. Noninterest revenue of $1.8 billion was driven by a $1.1 billion benefit for the Washington Mutual bankruptcy settlement, which is included in all other income in the above table, and a $665 million gain from the recovery on a Bear Stearns-related subordinated loan. Noninterest expense of $3.9 billion was up $943 million compared with the prior year. The current year included expense of $3.7 billion for additional litigation reserves, largely for mortgage-related matters. The prior year included expense of $3.2 billion for additional litigation reserves.

2011 compared with 2010
Net income was $822 million, compared with $1.3 billion in the prior year.

Private Equity reported net income of $391 million, compared with $588 million in the prior year. Net revenue was $836 million, a decrease of $403 million, primarily related to net write-downs on private investments and the absence of prior year gains on sales. Noninterest expense was $238 million, a decrease of $85 million from the prior year.

Treasury and CIO reported net income of $1.3 billion, compared with net income of $3.6 billion in the prior year. Net revenue was $3.2 billion, including $1.4 billion of security gains. Net interest income in 2011 was lower compared with 2010, primarily driven by repositioning of the investment securities portfolio and lower funding benefits from financing the portfolio.

Other Corporate reported a net loss of $918 million, compared with a net loss of $2.9 billion in the prior year. Net revenue was $103 million, compared with a net loss of $467 million in the prior year. Noninterest expense was $2.9 billion which included $3.2 billion of additional litigation reserves, predominantly for mortgage-related matters. Noninterest expense in the prior year was $5.5 billion which included $5.7 billion of additional litigation reserves.

Treasury and CIO overview

Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital and structural interest rate and foreign exchange risks. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's four major reportable business segments to serve their respective client bases, which generate both on- and off-balance sheet assets and liabilities.

Treasury is responsible for, among other functions, funds transfer pricing. Funds transfer pricing is used to transfer structural interest rate risk and foreign exchange risk of the Firm to Treasury and CIO and allocate interest income and expense to each business based on market rates. CIO, through its management of the investment portfolio, generates net interest income to pay the lines of business market rates. Any variance (whether positive or negative) between amounts generated by CIO through its investment portfolio activities and amounts paid to or received by the lines of business are retained by CIO, and are not reflected in line of business segment results. Treasury and CIO activities operate in support of the overall Firm.

CIO achieves the Firm's asset-liability management objectives generally by investing in high-quality securities that are managed for the longer-term as part of the Firm's AFS investment portfolio. Unrealized gains and losses on securities held in the AFS portfolio are recorded in other comprehensive income. For further information about securities in the AFS portfolio, see Note 3 and Note 12 on pages 196–214 and 244–248, respectively, of this Annual Report. CIO also uses securities that are not classified within the AFS portfolio, as well as derivatives, to meet the Firm's asset-liability management objectives. Securities not classified within the AFS portfolio are recorded in trading assets and liabilities; realized and unrealized gains and losses on such securities are recorded in the principal transactions revenue line in the Consolidated Statements of Income. For further information about securities included in trading assets and liabilities, see Note 3 on pages 196–214 of this Annual Report. Derivatives used by CIO are also classified as trading assets and liabilities. For further information on derivatives, including the classification of realized and unrealized gains and losses, see Note 6 on pages 218–227 of this Annual Report.

CIO's AFS portfolio consists of U.S. and non-U.S. government securities, agency and non-agency mortgage-backed securities, other asset-backed securities and corporate and municipal debt securities. Treasury's AFS portfolio consists of U.S. and non-U.S. government securities and corporate debt securities. At December 31, 2012, the total Treasury and CIO AFS portfolios were $344.1 billion and $21.3 billion, respectively; the average credit rating of the securities comprising the Treasury and CIO AFS portfolios was AA+ (based upon external ratings where available and where not available, based primarily upon internal ratings that correspond to ratings as defined by S&P and Moody's). See Note 12 on pages 244–248 of this Annual Report for further information on the details of the Firm's AFS portfolio.

For further information on liquidity and funding risk, see Liquidity Risk Management on pages 127–133 of this Annual Report. For information on interest rate, foreign exchange and other risks, and CIO VaR and the Firm's nontrading interest rate-sensitive revenue at risk, see Market Risk Management on pages 163–169 of this Annual Report.

Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	2012	2011	2010
Securities gains[(a)]	$ 2,028	$ 1,385	$ 2,897
Investment securities portfolio (average)	358,029	330,885	323,673
Investment securities portfolio (period-end)	365,421	355,605	310,801
Mortgage loans (average)	10,241	13,006	9,004
Mortgage loans (period-end)	7,037	13,375	10,739

(a) Reflects repositioning of the investment securities portfolio.

Private Equity portfolio

Selected income statement and balance sheet data

Year ended December 31, (in millions)	2012	2011	2010
Private equity gains/(losses)			
Realized gains	**$ 17**	$ 1,842	$ 1,409
Unrealized gains/(losses)[a]	**639**	(1,305)	(302)
Total direct investments	**656**	537	1,107
Third-party fund investments	**134**	417	241
Total private equity gains/ (losses)[b]	**$ 790**	$ 954	$ 1,348

(a) Unrealized gains/(losses) contain reversals of unrealized gains and losses that were recognized in prior periods and have now been realized.

(b) Included in principal transactions revenue in the Consolidated Statements of Income.

Private equity portfolio information[a]

Direct investments

December 31, (in millions)	2012	2011	2010
Publicly held securities			
Carrying value	**$ 578**	$ 805	$ 875
Cost	**350**	573	732
Quoted public value	**578**	896	935
Privately held direct securities			
Carrying value	**5,379**	4,597	5,882
Cost	**6,584**	6,793	6,887
Third-party fund investments[b]			
Carrying value	**2,117**	2,283	1,980
Cost	**1,963**	2,452	2,404
Total private equity portfolio			
Carrying value	**$ 8,074**	$ 7,685	$ 8,737
Cost	**$ 8,897**	$ 9,818	$ 10,023

(a) For more information on the Firm's policies regarding the valuation of the private equity portfolio, see Note 3 on pages 196–214 of this Annual Report.

(b) Unfunded commitments to third-party private equity funds were $370 million, $789 million and $1.0 billion at December 31, 2012, 2011 and 2010, respectively.

2012 compared with 2011

The carrying value of the private equity portfolio at December 31, 2012, was $8.1 billion, up from $7.7 billion at December 31, 2011. The increase in the portfolio was predominantly driven by new investments and unrealized gains, partially offset by sales of investments. The portfolio represented 5.2% of the Firm's stockholders' equity less goodwill at December 31, 2012, down from 5.7% at December 31, 2011.

2011 compared with 2010

The carrying value of the private equity portfolio at December 31, 2011, was $7.7 billion, down from $8.7 billion at December 31, 2010. The decrease in the portfolio was predominantly driven by sales of investments, partially offset by new investments. The portfolio represented 5.7% of the Firm's stockholders' equity less goodwill at December 31, 2011, down from 6.9% at December 31, 2010.

INTERNATIONAL OPERATIONS

During the years ended December 31, 2012, 2011 and 2010, the Firm recorded approximately $18.5 billion, $24.5 billion and $22.0 billion, respectively, of managed revenue derived from clients, customers and counterparties domiciled outside of North America. Of those amounts, approximately 57%, 66% and 64%, respectively, were derived from Europe/Middle East/Africa ("EMEA"); approximately 30%, 25% and 28%, respectively, from Asia/Pacific; and approximately 13%, 9% and 8%, respectively, from Latin America/Caribbean. For additional information regarding international operations, see Note 32 on page 326 of this Annual Report.

International wholesale activities

The Firm is committed to further expanding its wholesale business activities outside of the United States, and it continues to add additional client-serving bankers, as well as product and sales support personnel, to address the needs of the Firm's clients located in these regions. With a comprehensive and coordinated international business strategy and growth plan, efforts and investments for growth outside of the United States will continue to be accelerated and prioritized.

Set forth below are certain key metrics related to the Firm's wholesale international operations, including, for each of EMEA, Asia/Pacific and Latin America/Caribbean, the number of countries in each such region in which they operate, front-office headcount, number of clients, revenue and selected balance-sheet data.

As of or for the year ended December 31,	EMEA			Asia/Pacific			Latin America/Caribbean		
(in millions, except headcount and where otherwise noted)	**2012**	2011	2010	**2012**	2011	2010	**2012**	2011	2010
Revenue[a]	**$ 10,398**	$ 16,141	$ 14,149	**$ 5,590**	$ 5,971	$ 6,082	**$ 2,327**	$ 2,232	$ 1,697
Countries of operation	**33**	33	33	**17**	16	16	**9**	9	8
New offices	**–**	1	6	**2**	2	7	**–**	4	2
Total headcount[b]	**15,533**	16,178	16,122	**20,548**	20,172	19,153	**1,436**	1,378	1,201
Front-office headcount	**5,917**	5,993	5,872	**4,195**	4,253	4,168	**644**	569	486
Significant clients[c]	**992**	938	900	**492**	479	451	**164**	140	126
Deposits (average)[d]	**$ 169,693**	$ 168,882	$ 142,859	**$ 57,329**	$ 57,684	$ 53,268	**$ 4,823**	$ 5,318	$ 6,263
Loans (period-end)[e]	**40,760**	36,637	27,934	**30,287**	31,119	20,552	**30,322**	25,141	16,480
Assets under management (in billions)	**258**	278	282	**114**	105	111	**45**	34	35
Assets under supervision (in billions)	**317**	329	331	**160**	139	147	**110**	89	84
Assets under custody (in billions)	**6,502**	5,430	4,810	**1,577**	1,426	1,321	**252**	279	153

Note: International wholesale operations is comprised of CIB, AM, CB and Treasury and CIO, and prior-period amounts have been revised to conform with current allocation methodologies.

(a) Revenue is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk.
(b) Total headcount includes all employees, including those in service centers, located in the region.
(c) Significant clients are defined as companies with over $1 million in revenue over a trailing 12-month period in the region (excludes private banking clients).
(d) Deposits are based on the location from which the client relationship is managed.
(e) Loans outstanding are based predominantly on the domicile of the borrower and exclude loans held-for-sale and loans carried at fair value.

BALANCE SHEET ANALYSIS

Selected Consolidated Balance Sheets data

December 31, (in millions)	2012	2011
Assets		
Cash and due from banks	$ 53,723	$ 59,602
Deposits with banks	121,814	85,279
Federal funds sold and securities purchased under resale agreements	296,296	235,314
Securities borrowed	119,017	142,462
Trading assets:		
Debt and equity instruments	375,045	351,486
Derivative receivables	74,983	92,477
Securities	371,152	364,793
Loans	733,796	723,720
Allowance for loan losses	(21,936)	(27,609)
Loans, net of allowance for loan losses	711,860	696,111
Accrued interest and accounts receivable	60,933	61,478
Premises and equipment	14,519	14,041
Goodwill	48,175	48,188
Mortgage servicing rights	7,614	7,223
Other intangible assets	2,235	3,207
Other assets	101,775	104,131
Total assets	$2,359,141	$2,265,792
Liabilities		
Deposits	$1,193,593	$1,127,806
Federal funds purchased and securities loaned or sold under repurchase agreements	240,103	213,532
Commercial paper	55,367	51,631
Other borrowed funds	26,636	21,908
Trading liabilities:		
Debt and equity instruments	61,262	66,718
Derivative payables	70,656	74,977
Accounts payable and other liabilities	195,240	202,895
Beneficial interests issued by consolidated VIEs	63,191	65,977
Long-term debt	249,024	256,775
Total liabilities	2,155,072	2,082,219
Stockholders' equity	204,069	183,573
Total liabilities and stockholders' equity	$2,359,141	$2,265,792

Consolidated Balance Sheets overview

JPMorgan Chase's total assets increased 4% and total liabilities increased 3% from December 31, 2011. The increase in total assets was predominantly due to higher securities purchased under resale agreements and deposits with banks, reflecting the deployment of the Firm's excess cash. The increase in total liabilities was predominantly due to higher deposits, reflecting a higher level of consumer and wholesale balances; and higher securities sold under repurchase agreements associated with financing the Firm's assets. The increase in stockholders' equity was predominantly due to net income.

The following paragraphs provide a description of specific line captions on the Consolidated Balance Sheets. For the line captions that had significant changes from December 31, 2011, a discussion of the changes is also included.

Cash and due from banks and deposits with banks

The Firm uses these instruments as part of its cash and liquidity management activities. The net increase reflected the placement of the Firm's excess funds with various central banks, primarily Federal Reserve Banks. For additional information, refer to the Liquidity Risk Management discussion on pages 127–133 of this Annual Report.

Federal funds sold and securities purchased under resale agreements; and securities borrowed

The Firm uses these instruments to support its client-driven market-making and risk management activities and to manage its cash positions. In particular, securities purchased under resale agreements and securities borrowed are used to provide funding or liquidity to clients through short-term purchases and borrowings of their securities by the Firm. The increase in securities purchased under resale agreements was due primarily to deployment of the Firm's excess cash by Treasury; the decrease in securities borrowed reflects a shift in deployment of excess cash to resale agreements as well as lower client activity in CIB.

Trading assets and liabilities – debt and equity instruments

Debt and equity trading instruments are used primarily for client-driven market-making activities. These instruments consist predominantly of fixed income securities, including government and corporate debt; equity securities, including convertible securities; loans, including prime mortgages and other loans warehoused by CCB and CIB for sale or securitization purposes and accounted for at fair value; and physical commodities inventories generally carried at the lower of cost or market (market approximates fair value). The increase in trading assets in 2012 was driven by client-driven market-making activity in CIB, which resulted in higher levels of non-U.S. government debt securities, partially offset by a decrease in physical commodities inventories. For additional information, refer to Note 3 on pages 196–214 of this Annual Report.

Trading assets and liabilities – derivative receivables and payables

The Firm uses derivative instruments predominantly for market-making activities. Derivatives enable customers and the Firm to manage their exposure to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its credit exposure.

Derivative receivables decreased primarily related to the decline in the U.S. dollar, and tightening of credit spreads;

these changes resulted in reductions to interest rate, credit derivative, and foreign exchange balances.

Derivative payables decreased primarily related to the decline in the U.S. dollar, and tightening of credit spreads; these changes resulted in reductions to interest rate, and credit derivative balances. For additional information, refer to Derivative contracts on pages 156–159, and Note 3 and Note 6 on pages 196–214 and 218–227, respectively, of this Annual Report.

Securities
Substantially all of the securities portfolio is classified as AFS and used primarily to manage the Firm's exposure to interest rate movements and to invest cash resulting from excess liquidity. Securities increased largely due to reinvestment and repositioning of the CIO AFS portfolio, which increased the levels of non-U.S. government debt and residential mortgage-backed securities ("MBS") as well as obligations of U.S. states and municipalities; the increase was mainly offset by decreases in corporate debt securities and U.S. government agency-issued MBS. For additional information related to securities, refer to the discussion in the Corporate/Private Equity segment on pages 102–104, and Note 3 and Note 12 on pages 196–214 and 244–248, respectively, of this Annual Report.

Loans and allowance for loan losses
The Firm provides loans to a variety of customers, ranging from large corporate and institutional clients, to individual customers and small businesses. Loan balances increased throughout 2012 due to higher levels of wholesale loans, primarily in CB and AM, partially offset by lower balances of consumer loans. The increase in wholesale loans was driven by higher wholesale activity across most of the Firm's regions and businesses. The decline in consumer, excluding credit card, loans was predominantly due to mortgage-related paydowns, portfolio run-off, and net charge-offs. The decline in credit card loans was due to higher repayment rates.

The allowance for loan losses decreased across all portfolio segments, but the most significant portion of the reduction occurred in the consumer allowances, predominantly related to the continuing trend of improved delinquencies across most portfolios, notably non-PCI residential real estate and credit card. The wholesale allowance also decreased, driven by recoveries, the restructuring of certain nonperforming loans, current credit trends and other portfolio activity.

For a more detailed discussion of the loan portfolio and the allowance for loan losses, refer to Credit Risk Management on pages 134–162, and Notes 3, 4, 14 and 15 on pages 196–214, 214–216, 250–275 and 276–279, respectively, of this Annual Report.

Premises and Equipment
The Firm's premises and equipment consist of land, buildings, leasehold improvements, furniture and fixtures, hardware and software, and other equipment. The increase in premises and equipment was largely due to retail branch expansion in the U.S. and other investments in facilities globally.

Mortgage servicing rights
MSRs represent the fair value of net cash flows expected to be received for performing specified mortgage-servicing activities for third parties. The increase in the MSR asset was predominantly due to originations and purchases, partially offset by dispositions and amortization. These net additions were partially offset by changes due to market interest rates and, to a lesser extent, other changes in valuation due to inputs and assumptions. For additional information on MSRs, see Note 17 on pages 291–295 of this Annual Report.

Other assets
Other assets consist of private equity and other instruments, cash collateral pledged, corporate- and bank-owned life insurance policies, assets acquired in loan satisfactions (including real estate owned), and all other assets. Other assets remained relatively flat compared to the prior year.

Deposits
Deposits represent a liability to both retail and wholesale customers related to non-brokerage accounts held on their behalf. Deposits provide a stable and consistent source of funding for the Firm. The increase in deposits was due to growth in both consumer and wholesale deposits. Consumer deposit balances increased throughout the year, largely driven by a focus on sales activity, lower attrition due to initiatives to improve customer experience and the impact of network expansion. The increase in wholesale client balances was due to higher client operating balances in CIB; a higher level of seasonal inflows at year-end in both CIB and AM; and in AM, clients realizing capital gains in anticipation of changes in U.S. tax rates; these increases were partially offset by lower balances related to changes in FDIC insurance coverage. For more information on deposits, refer to the CCB and AM segment discussions on pages 80–91 and 99–101, respectively; the Liquidity Risk Management discussion on pages 127–133; and Notes 3 and 19 on pages 196–214 and 296, respectively, of this Annual Report. For more information on wholesale client deposits, refer to the CB and CIB segment discussions on pages 96–98 and 92–95, respectively, of this Annual Report.

Federal funds purchased and securities loaned or sold under repurchase agreements
The Firm uses these instruments as part of its liquidity management activities and to support its client-driven market-making activities. In particular, federal funds purchased and securities loaned or sold under repurchase agreements are used by the Firm as short-term funding sources and to provide securities to clients for their short-term liquidity purposes. The increase was due to higher secured financing of the Firm's assets. For additional

information on the Firm's Liquidity Risk Management, see pages 127–133 of this Annual Report.

Commercial paper and other borrowed funds
The Firm uses commercial paper and other borrowed funds in its liquidity management activities to meet short-term funding needs, and in connection with a CIB liquidity management product, whereby clients choose to sweep their deposits into commercial paper. Commercial paper increased due to higher commercial paper issuance from wholesale funding markets to meet short-term funding needs, partially offset by a decline in the volume of liability balances related to CIB's liquidity management product. Other borrowed funds increased due to higher secured short-term borrowings and unsecured short-term borrowings to meet short-term funding needs. For additional information on the Firm's Liquidity Risk Management and other borrowed funds, see pages 127–133 of this Annual Report.

Accounts payable and other liabilities
Accounts payable and other liabilities consist of payables to customers; payables to brokers, dealers and clearing organizations; payables from failed securities purchases; income taxes payable; accrued expense, including interest-bearing liabilities; and all other liabilities, including litigation reserves and obligations to return securities received as collateral. Accounts payable and other liabilities decreased predominantly due to lower CIB client balances, partially offset by increases in income taxes payables and litigation reserves related to mortgage foreclosure-related matters. For additional information on the Firm's accounts payable and other liabilities, see Note 20 on page 296 of this Annual Report.

Beneficial interests issued by consolidated VIEs
Beneficial interests issued by consolidated VIEs represent interest-bearing beneficial-interest liabilities, which decreased primarily due to credit card maturities and a reduction in outstanding conduit commercial paper held by third parties, partially offset by new credit card issuances and new consolidated municipal bond vehicles. For additional information on Firm-sponsored VIEs and loan securitization trusts, see Off-Balance Sheet Arrangements, and Note 16 on pages 280–291 of this Annual Report.

Long-term debt
The Firm uses long-term debt (including TruPS and long-term FHLB advances) to provide cost-effective and diversified sources of funds and as critical components of the Firm's liquidity and capital management activities. Long-term debt decreased, primarily due to the redemption of TruPS. For additional information on the Firm's long-term debt activities, see the Liquidity Risk Management discussion on pages 127–133 of this Annual Report.

Stockholders' equity
Total stockholders' equity increased, predominantly due to net income; a net increase in AOCI driven by net unrealized market value increases on AFS securities, predominantly non-U.S. residential MBS and corporate debt securities, and obligations of U.S. states and municipalities, partially offset by realized gains; issuances and commitments to issue under the Firm's employee stock-based compensation plans; and the issuance of preferred stock. The increase was partially offset by the repurchases of common equity, and the declaration of cash dividends on common and preferred stock.

JPMorgan Chase is involved with several types of off-balance sheet arrangements, including through nonconsolidated special-purpose entities ("SPEs"), which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important part of the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits, investor intermediation activities, and loan securitizations. See Note 16 on pages 280–291 for further information on these types of SPEs.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, JPMorgan Chase Bank, N.A., could be required to provide funding if its short-term credit rating were downgraded below specific levels, primarily "P-1", "A-1" and "F1" for Moody's, Standard & Poor's and Fitch, respectively. These liquidity commitments support the issuance of asset-backed commercial paper by both Firm-administered consolidated and third-party sponsored nonconsolidated SPEs. In the event of such a short-term credit rating downgrade, JPMorgan Chase Bank, N.A., absent other solutions, would be required to provide funding to the SPE, if the commercial paper could not be reissued as it matured. The aggregate amounts of commercial paper outstanding, issued by both Firm-administered and third-party sponsored SPEs, that are held by third parties as of December 31, 2012 and 2011, was $18.1 billion and $19.7 billion, respectively. The aggregate amounts of commercial paper outstanding could increase in future periods should clients of the Firm-administered consolidated or third-party sponsored nonconsolidated SPEs draw down on certain unfunded lending-related commitments. These unfunded lending-related commitments were $10.9 billion and $11.0 billion at December 31, 2012 and 2011, respectively. The Firm could facilitate the refinancing of some of the clients' assets in order to reduce the funding obligation. For further information, see the discussion of Firm-administered multi-seller conduits in Note 16 on pages 284–285 of this Annual Report.

The Firm also acts as liquidity provider for certain municipal bond vehicles. The Firm's obligation to perform as liquidity provider is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. See Note 16 on pages 280–291 of this Annual Report for additional information.

Off–balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. For further discussion of lending-related commitments and guarantees and the Firm's accounting for them, see Lending-related commitments on page 156, and Note 29 (including a table that presents, as of December 31, 2012, the amounts, by contractual maturity, of off–balance sheet lending-related financial instruments, guarantees and other commitments) on pages 308–315, of this Annual Report. For a discussion of loan repurchase liabilities, see Mortgage repurchase liability on pages 111–115 and Note 29 on pages 308–315, respectively, of this Annual Report.

Contractual cash obligations

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are off-balance sheet under U.S. GAAP. The accompanying table summarizes, by remaining maturity, JPMorgan Chase's significant contractual cash obligations at December 31, 2012. The contractual cash obligations included in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. The carrying amount of on-balance sheet obligations on the Consolidated Balance Sheets may differ from the minimum contractual amount of the obligations reported below. For a discussion of mortgage loan repurchase liabilities, see Mortgage repurchase liability on pages 111–115 of this Annual Report. For further discussion of other obligations, see the Notes to Consolidated Financial Statements in this Annual Report.

Contractual cash obligations

By remaining maturity at December 31, (in millions)	2012					2011
	2013	2014-2015	2016-2017	After 2017	**Total**	Total
On-balance sheet obligations						
Deposits[a]	**$ 1,175,886**	**$ 7,440**	**$ 5,434**	**$ 3,016**	**$ 1,191,776**	$ 1,125,470
Federal funds purchased and securities loaned or sold under repurchase agreements	**236,875**	**1,464**	**500**	**1,264**	**240,103**	213,532
Commercial paper	**55,367**	**–**	**–**	**–**	**55,367**	51,631
Other borrowed funds[a]	**15,357**		**–**	**–**	**15,357**	12,450
Beneficial interests issued by consolidated VIEs[a]	**40,071**	**11,310**	**4,710**	**5,930**	**62,021**	65,977
Long-term debt[a]	**26,256**	**63,515**	**57,998**	**83,454**	**231,223**	236,905
Other[b]	**1,120**	**1,025**	**915**	**2,647**	**5,707**	6,032
Total on-balance sheet obligations	**1,550,932**	**84,754**	**69,557**	**96,311**	**1,801,554**	1,711,997
Off-balance sheet obligations						
Unsettled reverse repurchase and securities borrowing agreements[c]	**34,871**	**–**	**–**	**–**	**34,871**	39,939
Contractual interest payments[d]	**7,703**	**11,137**	**8,195**	**29,245**	**56,280**	76,418
Operating leases[e]	**1,788**	**3,282**	**2,749**	**6,536**	**14,355**	15,014
Equity investment commitments[f]	**449**	**6**	**2**	**1,452**	**1,909**	2,290
Contractual purchases and capital expenditures	**1,232**	**634**	**382**	**497**	**2,745**	2,660
Obligations under affinity and co-brand programs	**980**	**1,924**	**1,336**	**66**	**4,306**	5,393
Other	**32**	**2**	**–**	**–**	**34**	284
Total off-balance sheet obligations	**47,055**	**16,985**	**12,664**	**37,796**	**114,500**	141,998
Total contractual cash obligations	**$ 1,597,987**	**$ 101,739**	**$ 82,221**	**$ 134,107**	**$ 1,916,054**	$ 1,853,995

(a) Excludes structured notes where the Firm is not obligated to return a stated amount of principal at the maturity of the notes, but is obligated to return an amount based on the performance of the structured notes.
(b) Primarily includes deferred annuity contracts, pension and postretirement obligations and insurance liabilities.
(c) For further information, refer to unsettled reverse repurchase and securities borrowing agreements in Note 29 on page 312 of this Annual Report.
(d) Includes accrued interest and future contractual interest obligations. Excludes interest related to structured notes where the Firm's payment obligation is based on the performance of certain benchmarks.
(e) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of $1.7 billion and $1.5 billion at December 31, 2012 and 2011, respectively.
(f) At December 31, 2012 and 2011, included unfunded commitments of $370 million and $789 million, respectively, to third-party private equity funds that are generally valued as discussed in Note 3 on pages 196–214 of this Annual Report; and $1.5 billion and $1.5 billion of unfunded commitments, respectively, to other equity investments.

Mortgage repurchase liability

In connection with the Firm's mortgage loan sale and securitization activities with Fannie Mae and Freddie Mac (the "GSEs") and other mortgage loan sale and private-label securitization transactions, the Firm has made representations and warranties that the loans sold meet certain requirements. For transactions with the GSEs, these representations relate to type of collateral, underwriting standards, validity of certain borrower representations made in connection with the loan, primary mortgage insurance being in force for any mortgage loan with a loan-to-value ("LTV") ratio greater than 80% at the loan's origination date, and the use of the GSEs' standard legal documentation. The Firm may be, and has been, required to repurchase loans and/or indemnify the GSEs and other investors for losses due to material breaches of these representations and warranties. To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the related third party.

To date, the repurchase demands the Firm has received from the GSEs primarily relate to loans originated from 2005 to 2008. Repurchases resulting from demands against pre-2005 and post-2008 vintages have not been significant; the Firm attributes this to the comparatively favorable credit performance of these vintages and to the enhanced underwriting and loan qualification standards implemented progressively during 2007 and 2008. From 2005 to 2008, excluding Washington Mutual, the principal amount of loans sold to the GSEs subject to certain representations and warranties for which the Firm may be liable was approximately $380 billion (this amount has not been adjusted for subsequent activity, such as borrower repayments of principal or repurchases completed to date). See the discussion below for information concerning the process the Firm uses to evaluate repurchase demands for breaches of representations and warranties, and the Firm's estimate of probable losses related to such exposure.

From 2005 to 2008, Washington Mutual sold approximately $150 billion principal amount of loans to the GSEs subject to certain representations and warranties. Subsequent to the Firm's acquisition of certain assets and liabilities of Washington Mutual from the FDIC in September 2008, the Firm resolved and/or limited certain current and future repurchase demands for loans sold to the GSEs by Washington Mutual, although it remains the Firm's position that such obligations remain with the FDIC receivership. As of December 31, 2012, the Firm believes that it has no remaining exposure related to loans sold by Washington Mutual to the GSEs.

The Firm also sells loans in securitization transactions with Ginnie Mae; these loans are typically insured or guaranteed by another government agency. The Firm, in its role as servicer, may elect, but is typically not required, to repurchase delinquent loans securitized by Ginnie Mae, including those that have been sold back to Ginnie Mae subsequent to modification. Because principal amounts due under the terms of these repurchased loans continue to be insured and the reimbursement of insured amounts continues to proceed normally, the Firm has not recorded any mortgage repurchase liability related to these loans. However, the Civil Division of the United States Attorney's Office for the Southern District of New York is conducting an investigation concerning the Firm's compliance with the requirements of the Federal Housing Administration's Direct Endorsement Program. The Firm is cooperating in that investigation.

From 2005 to 2008, the Firm and certain acquired entities made certain loan level representations and warranties in connection with approximately $450 billion of residential mortgage loans that were sold or deposited into private-label securitizations. While the terms of the securitization transactions vary, they generally differ from loan sales to the GSEs in that, among other things: (i) in order to direct the trustee to investigate potential claims, the security holders must make a formal request for the trustee to do so, and typically, this requires agreement of the holders of a specified percentage of the outstanding securities; (ii) generally, the mortgage loans are not required to meet all GSE eligibility criteria; and (iii) in many cases, the party demanding repurchase is required to demonstrate that a loan-level breach of a representation or warranty has materially and adversely affected the value of the loan. Of the $450 billion originally sold or deposited (including $165 billion by Washington Mutual, as to which the Firm maintains that certain of the repurchase obligations remain with the FDIC receivership), approximately $197 billion of principal has been repaid (including $72 billion related to Washington Mutual). In addition, approximately $118 billion of the principal amount of such loans has been liquidated (including $43 billion related to Washington Mutual), with an average loss severity of 60%. Accordingly, the remaining outstanding principal balance of these loans (including Washington Mutual) was, as of December 31, 2012, approximately $135 billion, of which $39 billion was 60 days or more past due. The remaining outstanding principal balance of loans related to Washington Mutual was approximately $50 billion, of which $14 billion were 60 days or more past due.

There have been generalized allegations, as well as specific demands, that the Firm repurchase loans sold or deposited into private-label securitizations (including claims from insurers that have guaranteed certain obligations of the securitization trusts). Although the Firm encourages parties to use the contractual repurchase process established in the governing agreements, these private-label repurchase claims have generally manifested themselves through threatened or pending litigation. Accordingly, the liability related to repurchase demands associated with all of the private-label securitizations described above is separately evaluated by the Firm in establishing its litigation reserves. For additional information regarding litigation, see Note 31 on pages 316–325 of this Annual Report.

Repurchase demand process - GSEs

The Firm first becomes aware that a GSE is evaluating a particular loan for repurchase when the Firm receives a file request from the GSE. Upon completing its review, the GSE may submit a repurchase demand to the Firm; historically, most file requests have not resulted in repurchase demands.

The primary reasons for repurchase demands from the GSEs relate to alleged misrepresentations primarily arising from: (i) credit quality and/or undisclosed debt of the borrower; (ii) income level and/or employment status of the borrower; and (iii) appraised value of collateral. Ineligibility of the borrower for the particular product, mortgage insurance rescissions and missing documentation are other reasons for repurchase demands. The successful rescission of mortgage insurance typically results in a violation of representations and warranties made to the GSEs and, therefore, has been a significant cause of repurchase demands from the GSEs. The Firm actively reviews all rescission notices from mortgage insurers and contests them when appropriate.

As soon as practicable after receiving a repurchase demand from a GSE, the Firm evaluates the request and takes appropriate actions based on the nature of the repurchase demand. Loan-level appeals with the GSEs are typical and the Firm seeks to resolve the repurchase demand (i.e., either repurchase the loan or have the repurchase demand rescinded) within three to four months of the date of receipt. In many cases, the Firm ultimately is not required to repurchase a loan because it is able to resolve the purported defect. Although repurchase demands may be made until the loan is paid in full, the majority of repurchase demands from the GSEs have historically related to loans that became delinquent in the first 24 months following origination. More recently, the Firm has observed an increase in repurchase demands from the GSEs with respect to loans to borrowers who have made more than 24 months of payments before defaulting.

When the Firm accepts a repurchase demand from one of the GSEs, the Firm may either (i) repurchase the loan or the underlying collateral from the GSE at the unpaid principal balance of the loan plus accrued interest, or (ii) reimburse the GSE for its realized loss on a liquidated property (a "make-whole" payment).

Estimated mortgage repurchase liability

To estimate the Firm's mortgage repurchase liability arising from breaches of representations and warranties, the Firm considers the following factors, which are predominantly based on the Firm's historical repurchase experience with the GSEs:

(i) the level of outstanding unresolved repurchase demands,
(ii) estimated probable future repurchase demands, considering information about file requests, delinquent and liquidated loans, resolved and unresolved mortgage insurance rescission notices and the Firm's historical experience,
(iii) the potential ability of the Firm to cure the defects identified in the repurchase demands ("cure rate"),
(iv) the estimated severity of loss upon repurchase of the loan or collateral, make-whole settlement, or indemnification,
(v) the Firm's potential ability to recover its losses from third-party originators, and
(vi) the terms of agreements with certain mortgage insurers and other parties.

Based on these factors, the Firm has recognized a mortgage repurchase liability of $2.8 billion and $3.6 billion as of December 31, 2012 and 2011, respectively. The Firm's mortgage repurchase liability is intended to cover repurchase losses associated with all loans previously sold in connection with loan sale and securitization transactions with the GSEs, regardless of when those losses occur or how they are ultimately resolved (e.g., repurchase, make-whole payment). While uncertainties continue to exist with respect to both GSE behavior and the economic environment, the Firm believes that the model inputs and assumptions that it uses to estimate its mortgage repurchase liability are becoming increasingly seasoned and stable. Based on these model inputs, which take into account all available information, and also considering projections regarding future uncertainty, including the GSEs' current behavior, the Firm has become increasingly confident in its ability to estimate reliably its mortgage repurchase liability. For these reasons, the Firm believes that its mortgage repurchase liability at December 31, 2012, is sufficient to cover probable future repurchase losses arising from loan sale and securitization transactions with the GSEs.

The following table provides information about outstanding repurchase demands and unresolved mortgage insurance rescission notices, excluding those related to Washington Mutual, by counterparty type, at each of the past five quarter-end dates. The table includes repurchase demands received from the GSEs as well as repurchase demands that have been presented to the Firm by trustees who assert authority to present such claims under the terms of the underlying sale or securitization agreement (but excludes repurchase demands asserted in or in connection with pending repurchase litigation). However, all mortgage repurchase demands associated with private-label securitizations (however asserted) are evaluated by the Firm in establishing its litigation reserves and are not considered in the Firm's mortgage repurchase liability.

Outstanding repurchase demands and unresolved mortgage insurance rescission notices by counterparty type

(in millions)	Dec 31, 2012	Sep 30, 2012	Jun 30, 2012	Mar 31, 2012	Dec 31, 2011
GSEs	$ 1,166	$ 1,533	$ 1,646	$ 1,868	$ 1,682
Mortgage insurers	1,014	1,036	1,004	1,000	1,034
Other[a]	887	1,697	981	756	663
Overlapping population[b]	(86)	(150)	(125)	(116)	(113)
Total	$ 2,981	$ 4,116	$ 3,506	$ 3,508	$ 3,266

(a) The decrease from September 30, 2012 predominantly relates to repurchase demands from private-label securitizations that had been presented in this table as of September 30, 2012 but that subsequently became subject to repurchase litigation in the fourth quarter of 2012; such repurchase demands are excluded from this table.

(b) Because the GSEs and others may make repurchase demands based on mortgage insurance rescission notices that remain unresolved, certain loans may be subject to both an unresolved mortgage insurance rescission notice and an outstanding repurchase demand.

The following tables provide information about repurchase demands and mortgage insurance rescission notices received by loan origination vintage, excluding those related to Washington Mutual, for the past five quarters. The Firm expects repurchase demands to remain at elevated levels or to increase if there is a significant increase in private-label repurchase demands outside of pending repurchase litigation. Additionally, repurchase demands from the GSEs may continue to fluctuate from period to period. The Firm considers future repurchase demands, including this potential volatility, in estimating its mortgage repurchase liability.

Quarterly mortgage repurchase demands received by loan origination vintage[a]

(in millions)	Dec 31, 2012	Sep 30, 2012	Jun 30, 2012	Mar 31, 2012	Dec 31, 2011
Pre-2005	$ 42	$ 33	$ 28	$ 41	$ 39
2005	42	103	65	95	55
2006	292	963	506	375	315
2007	241	371	420	645	804
2008	114	196	311	361	291
Post-2008	87	124	191	124	81
Total repurchase demands received	$ 818	$ 1,790	$ 1,521	$ 1,641	$ 1,585

(a) All mortgage repurchase demands associated with private-label securitizations are separately evaluated by the Firm in establishing its litigation reserves. This table excludes repurchase demands asserted in or in connection with pending repurchase litigation.

Quarterly mortgage insurance rescission notices received by loan origination vintage[a]

(in millions)	Dec 31, 2012	Sep 30, 2012	Jun 30, 2012	Mar 31, 2012	Dec 31, 2011
Pre-2005	$ 6	$ 6	$ 9	$ 13	$ 4
2005	18	14	13	19	12
2006	35	46	26	36	19
2007	83	139	121	78	48
2008	26	37	51	32	26
Post-2008	7	8	6	4	2
Total mortgage insurance rescissions received[a]	$ 175	$ 250	$ 226	$ 182	$ 111

(a) Mortgage insurance rescissions typically result in a repurchase demand from the GSEs. This table includes mortgage insurance rescission notices for which the GSEs also have issued a repurchase demand.

Since the beginning of 2011, the Firm's cumulative cure rate (excluding loans originated by Washington Mutual) has been approximately 60%. A significant portion of repurchase demands now relate to loans with a longer pay history, which historically have had higher cure rates. Repurchases that have resulted from mortgage insurance rescissions are reflected in the Firm's overall cure rate. While the actual cure rate may vary from quarter to quarter, the Firm expects that the cumulative cure rate will remain in the 55-65% range for the foreseeable future.

The Firm has not observed a direct relationship between the type of defect that allegedly causes the breach of representations and warranties and the severity of the realized loss. Therefore, the loss severity assumption is estimated using the Firm's historical experience and projections regarding changes in home prices. Actual principal loss severities on finalized repurchases and "make-whole" settlements to date (excluding loans originated by Washington Mutual) currently average approximately 50%, but may vary from quarter to quarter based on the characteristics of the underlying loans and changes in home prices.

When a loan was originated by a third-party originator, the Firm typically has the right to seek a recovery of related repurchase losses from the third-party originator. Estimated and actual third-party recovery rates may vary from quarter to quarter based upon the underlying mix of third-party originators (e.g., active, inactive, out-of-business originators) from which recoveries are being sought.

The Firm has entered into agreements with two mortgage insurers to resolve their claims on certain portfolios for which the Firm is a servicer. These two agreements cover and have resolved approximately one-third of the Firm's total mortgage insurance rescission risk exposure, both in terms of the unpaid principal balance of serviced loans covered by mortgage insurance and the amount of mortgage insurance coverage. The impact of these agreements is reflected in the mortgage repurchase liability and the outstanding mortgage insurance rescission notices as of December 31, 2012, disclosed on the prior page. The Firm has considered its remaining unresolved mortgage insurance rescission risk exposure in estimating the mortgage repurchase liability as of December 31, 2012.

Substantially all of the estimates and assumptions underlying the Firm's established methodology for computing its recorded mortgage repurchase liability — including the amount of probable future demands from the GSEs (based on both historical experience and the Firm's expectations about the GSEs' future behavior), the ability of the Firm to cure identified defects, the severity of loss upon repurchase or foreclosure and recoveries from third parties — require application of a significant level of management judgment. While the Firm uses the best information available to it in estimating its mortgage repurchase liability, this estimate is inherently uncertain and imprecise.

The following table summarizes the change in the mortgage repurchase liability for each of the periods presented.

Summary of changes in mortgage repurchase liability[a]

Year ended December 31, (in millions)	2012	2011	2010
Repurchase liability at beginning of period	$ 3,557	$ 3,285	$ 1,705
Realized losses[b]	(1,158)	(1,263)	(1,423)
Provision for repurchase losses[c]	412	1,535	3,003
Repurchase liability at end of period	$ 2,811	$ 3,557	3,285

(a) All mortgage repurchase demands associated with private-label securitizations are separately evaluated by the Firm in establishing its litigation reserves.
(b) Includes principal losses and accrued interest on repurchased loans, "make-whole" settlements, settlements with claimants, and certain related expense. Make-whole settlements were $524 million, $640 million and $632 million, for the years ended December 31, 2012, 2011 and 2010, respectively.
(c) Includes $112 million, $52 million and $47 million of provision related to new loan sales for the years ended December 31, 2012, 2011 and 2010, respectively.

The following table summarizes the unpaid principal balance of certain repurchases during the periods indicated.

Unpaid principal balance of mortgage loan repurchases[a]

Year ended December 31, (in millions)	2012	2011	2010
Ginnie Mae[b]	$ 5,539	$ 5,981	$ 8,717
GSEs[c]	1,204	1,208	1,498
Other[c][d]	209	126	275
Total	$ 6,952	$ 7,315	$ 10,490

(a) This table includes: (i) repurchases of mortgage loans due to breaches of representations and warranties, and (ii) loans repurchased from Ginnie Mae loan pools as described in (b) below. This table does not include mortgage insurance rescissions; while the rescission of mortgage insurance typically results in a repurchase demand from the GSEs, the mortgage insurers themselves do not present repurchase demands to the Firm. This table also excludes mortgage loan repurchases associated with repurchase demands asserted in or in connection with pending litigation.
(b) In substantially all cases, these repurchases represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Ginnie Mae guidelines (i.e., they do not result from repurchase demands due to breaches of representations and warranties). The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, the Federal Housing Administration ("FHA"), Rural Housing Services ("RHS") and/or the U.S. Department of Veterans Affairs ("VA").
(c) Nonaccrual loans held-for-investment included $465 million, $477 million and $354 million at December 31, 2012, 2011 and 2010, respectively, of loans repurchased as a result of breaches of representations and warranties.
(d) Represents loans repurchased from parties other than the GSEs, excluding those repurchased in connection with pending repurchase litigation.

For additional information regarding the mortgage repurchase liability, see Note 29 on pages 308–315 of this Annual Report.

The Firm also faces a variety of exposures resulting from repurchase demands and litigation arising out of its various roles as issuer and/or sponsor of mortgage-backed securities ("MBS") offerings in private-label securitizations. For further information, see Note 31 on pages 316–325 of this Annual Report.

CAPITAL MANAGEMENT

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables the Firm to build and invest in market-leading businesses, even in a highly stressed environment. Prior to making any decisions on future business activities, senior management considers the implications on the Firm's capital strength. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to preserving the Firm's capital strength. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative by the Firm's Board of Directors, CEO and Operating Committee. The Firm's balance sheet philosophy focuses on risk-adjusted returns, strong capital and reserves, and robust liquidity.

The Firm's capital management objectives are to hold capital sufficient to:

- Cover all material risks underlying the Firm's business activities;
- Maintain "well-capitalized" status under regulatory requirements;
- Maintain debt ratings that enable the Firm to optimize its funding mix and liquidity sources while minimizing costs;
- Retain flexibility to take advantage of future investment opportunities; and
- Build and invest in businesses, even in a highly stressed environment.

These objectives are achieved through ongoing monitoring of the Firm's capital position, regular stress testing, and a capital governance framework. Capital management is intended to be flexible in order to react to a range of potential events. JPMorgan Chase has frequent firmwide and LOB processes for ongoing monitoring and active management of its capital position.

Capital governance

The Firm's senior management recognizes the importance of a capital management function that supports strategic decision-making. The Firm has established the Regulatory Capital Management Office ("RCMO") which is responsible for measuring, monitoring and reporting the Firm's capital and related risks. The RCMO is an integral component of the Firm's overall capital governance framework and is responsible for reviewing, approving and monitoring the implementation of the Firm's capital policies and strategies, as well as its capital adequacy assessment process. The Board's Risk Policy Committee assesses the capital adequacy assessment process and its components. This review encompasses evaluating the effectiveness of the capital adequacy process, the appropriateness of the risk tolerance levels, and the strength of the control infrastructure. For additional discussion on the Board's Risk Policy Committee, see Risk Management on pages 123–126 of this Annual Report.

Internal Capital Adequacy Assessment Process

Semiannually, the Firm completes the Internal Capital Adequacy Assessment Process ("ICAAP"), which provides management with a view of the impact of severe and unexpected events on earnings, balance sheet positions, reserves and capital. The Firm's ICAAP integrates stress testing protocols with capital planning.

The process assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. However, when defining a broad range of scenarios, realized events can always be worse. Accordingly, management considers additional stresses outside these scenarios, as necessary. ICAAP results are reviewed by management and the Board of Directors.

Comprehensive Capital Analysis and Review ("CCAR")

The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. The Federal Reserve uses the CCAR and Dodd-Frank Act Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") stress test processes to ensure that large bank holding companies have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each bank holding company's unique risks to enable them to have the ability to absorb losses under certain stress scenarios. Through the CCAR, the Federal Reserve evaluates each bank holding company's capital adequacy and internal capital adequacy assessment processes, as well as its plans to make capital distributions, such as dividend payments or stock repurchases.

The Firm's CCAR process is integrated into and employs the same methodologies utilized in the Firm's ICAAP process described above. The Firm submitted its 2012 capital plan on January 9, 2012, and received notice of the Federal Reserve's non-objection on March 13, 2012. The Firm increased the quarterly dividend on its common equity to $0.30 per share commencing in the first quarter of 2012, and during 2012 repurchased (on a trade-date basis) 31 million shares of common stock and 18 million warrants for $1.3 billion and $238 million, respectively. Following the voluntary cessation of its common equity repurchase program in May 2012, the Firm resubmitted its capital plan to the Federal Reserve under the 2012 CCAR process in August 2012. Pursuant to a non-objection received from the Federal Reserve on November 5, 2012, with respect to the resubmitted capital plan, the Firm is authorized to

repurchase up to $3.0 billion of common equity in the first quarter of 2013. The timing and exact amount of any common equity to be repurchased under the program will depend on various factors, including market conditions; the Firm's capital position; organic and other investment opportunities; and legal and regulatory considerations, among other factors.

On January 7, 2013, the Firm submitted its capital plan to the Federal Reserve under the Federal Reserve's 2013 CCAR process. The Firm's plan relates to the last three quarters of 2013 and the first quarter of 2014 (that is, the 2013 CCAR capital plan relates to dividends to be declared commencing in June 2013, and to common equity repurchases and other capital actions commencing April 1, 2013). The Firm expects to receive the Federal Reserve's response to its plan no later than March 14, 2013. The Firm expects that its Board of Directors will declare the regular quarterly common stock dividend of $0.30 per share for the 2013 first quarter at its Board meeting to be held on March 19, 2013. For additional information on the Firm's capital actions, see Capital actions on page 122, and Notes 22 and 23 on pages 300 and 300–301, respectively, of this Annual Report.

Capital Disciplines

The Firm assesses capital based on:

- *Regulatory capital requirements*
- *Economic risk capital assessment*
- *Line of business equity attribution*

Regulatory capital is the capital required to be held by the Firm pursuant to the standards stipulated by U.S. bank regulatory agencies. Regulatory capital is the primary measure used to assess capital adequacy at JPMorgan Chase, as regulatory capital measures are the basis upon which the Federal Reserve objects or does not object to the Firm's planned capital actions as set forth in the Firm's CCAR submission.

Economic risk capital is assessed by evaluating the underlying risks of JPMorgan Chase's business activities using internal risk evaluation methods. These methods result in capital allocations for both individual and aggregated LOB transactions and can be grouped into four main categories:

- Credit risk
- Market risk
- Operational risk
- Private equity risk

These internal calculations result in the capital needed to cover JPMorgan Chase's business activities in the event of unexpected losses.

In determining line of business equity the Firm evaluates the amount of capital the line of business would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III Tier 1 common capital requirements as discussed below), economic risk measures and capital levels for similarly rated peers.

Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

Basel

The minimum risk-based capital requirements adopted by the U.S. federal banking agencies follow the Capital Accord ("Basel I") of the Basel Committee on Banking Supervision ("Basel Committee"). In 2004, the Basel Committee published a revision to the Capital Accord ("Basel II"). The goal of the Basel II framework is to provide more risk-sensitive regulatory capital calculations and promote enhanced risk management practices among large, internationally active banking organizations. U.S. banking regulators published a final Basel II rule in December 2007, which requires JPMorgan Chase to implement Basel II at the holding company level, as well as at certain of its key U.S. bank subsidiaries.

Prior to full implementation of the Basel II framework, JPMorgan Chase is required to complete a qualification period of at least four consecutive quarters during which it needs to demonstrate that it meets the requirements of the rule to the satisfaction of its U.S. banking regulators. JPMorgan Chase is currently in the qualification period and expects to be in compliance with all relevant Basel II rules within the established timelines. In addition, the firm has adopted, and will continue to adopt, based on various established timelines, Basel II rules in certain non-U.S. jurisdictions, as required.

In connection with the U.S. Government's Supervisory Capital Assessment Program in 2009 ("SCAP"), U.S. banking regulators developed an additional measure of capital, Tier 1 common, which is defined as Tier 1 capital less elements of Tier 1 capital not in the form of common equity, such as perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred securities. The Federal Reserve employs a minimum 5% Tier 1 common ratio standard for CCAR purposes, in addition to the other minimum capital requirements under Basel I.

The following table presents the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase at December 31, 2012 and 2011, under Basel I. As of December 31, 2012 and 2011, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and each met all capital requirements to which it was subject.

Risk-based capital ratios

December 31,	2012	2011
Capital ratios		
Tier 1 capital	**12.6%**	12.3%
Total capital	**15.3**	15.4
Tier 1 leverage	**7.1**	6.8
Tier 1 common[a]	**11.0**	10.1

(a) The Tier 1 common ratio is Tier 1 common capital divided by RWA.

At December 31, 2012 and 2011, JPMorgan Chase maintained Tier 1 and Total capital ratios in excess of the well-capitalized standards established by the Federal Reserve, as indicated in the above tables. In addition, at December 31, 2012 and 2011, the Firm's Tier 1 common ratio was significantly above the 5% CCAR standard. For more information, see Note 28 on pages 306–308 of this Annual Report.

A reconciliation of total stockholders' equity to Tier 1 common, Tier 1 capital and Total qualifying capital is presented in the table below.

Risk-based capital components and assets

December 31, (in millions)	2012	2011
Total stockholders' equity	**$ 204,069**	$ 183,573
Less: Preferred stock	**9,058**	7,800
Common stockholders' equity	**195,011**	175,773
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 common	**(4,198)**	(970)
Less: Goodwill[a]	**45,663**	45,873
Fair value DVA on structured notes and derivative liabilities related to the Firm's credit quality	**1,577**	2,150
Investments in certain subsidiaries and other	**920**	993
Other intangible assets[a]	**2,311**	2,871
Tier 1 common	**140,342**	122,916
Preferred stock	**9,058**	7,800
Qualifying hybrid securities and noncontrolling interests[b]	**10,608**	19,668
Adjustment for investments in certain subsidiaries and other	**(6)**	–
Total Tier 1 capital	**160,002**	150,384
Long-term debt and other instruments qualifying as Tier 2	**18,061**	22,275
Qualifying allowance for credit losses	**15,995**	15,504
Adjustment for investments in certain subsidiaries and other	**(22)**	(75)
Total Tier 2 capital	**34,034**	37,704
Total qualifying capital	**$ 194,036**	$ 188,088
Risk-weighted assets	**$ 1,270,378**	$ 1,221,198
Total adjusted average assets	**$ 2,243,242**	$ 2,202,087

(a) Goodwill and other intangible assets are net of any associated deferred tax liabilities.
(b) Primarily includes trust preferred securities of certain business trusts.

The following table presents the changes in Tier 1 common, Tier 1 capital and Tier 2 capital for the year ended December 31, 2012.

Capital rollforward

Year ended December 31, (in millions)	2012
Tier 1 common at December 31, 2011	$ 122,916
Net income	21,284
Dividends declared	(5,376)
Net issuance of treasury stock	1,153
Changes in capital surplus	(998)
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 common	(69)
Qualifying non-controlling minority interests in consolidated subsidiaries	309
DVA on structured notes and derivative liabilities	573
Goodwill and other nonqualifying intangibles (net of deferred tax liabilities)	770
Other	(220)
Increase in Tier 1 common	17,426
Tier 1 common at December 31, 2012	$ 140,342
Tier 1 capital at December 31, 2011	$ 150,384
Change in Tier 1 common	17,426
Issuance of noncumulative perpetual preferred stock	1,258
Net redemption of qualifying trust preferred securities	(9,369)
Other	303
Increase in Tier 1 capital	9,618
Tier 1 capital at December 31, 2012	$ 160,002
Tier 2 capital at December 31, 2011	$ 37,704
Change in long-term debt and other instruments qualifying as Tier 2	(4,214)
Change in allowance for credit losses	491
Other	53
Decrease in Tier 2 capital	(3,670)
Tier 2 capital at December 31, 2012	$ 34,034
Total capital at December 31, 2012	$ 194,036

Risk-weighted assets were $1,270 billion at December 31, 2012, an increase of $49 billion from December 31, 2011. In addition to the growth in the Firm's assets, the increase in risk-weighted assets also reflected an adjustment to reflect regulatory guidance regarding a limited number of market risk models used for certain positions held by the Firm during the first half of 2012, including the synthetic credit portfolio. In the fourth quarter of 2012, the adjustment to RWA decreased substantially as a result of regulatory approval of certain market risk models and a reduction in related positions.

In June 2012, U.S. federal banking agencies published final rules that went into effect on January 1, 2013, that provide for additional capital requirements for trading positions and securitizations ("Basel 2.5"). It is currently estimated that implementation of these rules could result in approximately a 100 basis point decrease from the Firm's Basel I Tier 1 common ratio at December 31, 2012 (all other factors being constant).

In June 2012, U.S. federal banking agencies also published a Notice for Proposed Rulemaking ("NPR") for

implementing further revisions to the Capital Accord in the U.S. (such further revisions are commonly referred to as "Basel III"). Basel III revised Basel II by, among other things, narrowing the definition of capital, and increasing capital requirements for specific exposures. Basel III also includes higher capital ratio requirements and provides that the Tier 1 common capital requirement will be increased to 7%, comprised of a minimum ratio of 4.5% plus a 2.5% capital conservation buffer. Implementation of the 7% Tier 1 common capital requirement is required by January 1, 2019.

In addition, global systemically important banks ("GSIBs") will be required to maintain Tier 1 common requirements above the 7% minimum in amounts ranging from an additional 1% to an additional 2.5%. In November 2012, the Financial Stability Board ("FSB") indicated that it would require the Firm, as well as three other banks, to hold the additional 2.5% of Tier 1 common; the requirement will be phased in beginning in 2016. The Basel Committee also stated it intended to require certain GSIBs to hold an additional 1% of Tier 1 common under certain circumstances, to act as a disincentive for the GSIB from taking actions that would further increase its systemic importance. Currently, no GSIB (including the Firm) is required to hold this additional 1% of Tier 1 common.

In addition, pursuant to the requirements of the Dodd-Frank Act, U.S. federal banking agencies have proposed certain permanent Basel I floors under Basel II and Basel III capital calculations.

The following table presents a comparison of the Firm's Tier 1 common under Basel I rules to its estimated Tier 1 common under Basel III rules, along with the Firm's estimated risk-weighted assets. Tier 1 common under Basel III includes additional adjustments and deductions not included in Basel I Tier 1 common, such as the inclusion of AOCI related to AFS securities and defined benefit pension and other postretirement employee benefit ("OPEB") plans.

The Firm estimates that its Tier 1 common ratio under Basel III rules would be 8.7% as of December 31, 2012. The Tier 1 common ratio under both Basel I and Basel III are non-GAAP financial measures. However, such measures are used by bank regulators, investors and analysts as a key measure to assess the Firm's capital position and to compare the Firm's capital to that of other financial services companies.

December 31, 2012 (in millions, except ratios)		
Tier 1 common under Basel I rules	$	140,342
Adjustments related to AOCI for AFS securities and defined benefit pension and OPEB plans		4,077
All other adjustments		(453)
Estimated Tier 1 common under Basel III rules	$	143,966
Estimated risk-weighted assets under Basel III rules[a]	$	1,647,903
Estimated Tier 1 common ratio under Basel III rules[b]		8.7%

(a) Key differences in the calculation of risk-weighted assets between Basel I and Basel III include: (1) Basel III credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas Basel I RWA is based on fixed supervisory risk weightings which vary only by counterparty type and asset class; (2) Basel III market risk RWA reflects the new capital requirements related to trading assets and securitizations, which include incremental capital requirements for stress VaR, correlation trading, and re-securitization positions; and (3) Basel III includes RWA for operational risk, whereas Basel I does not. The actual impact on the Firm's capital ratios upon implementation could differ depending on final implementation guidance from the regulators, as well as regulatory approval of certain of the Firm's internal risk models.

(b) The Tier 1 common ratio is Tier 1 common divided by RWA.

The Firm's estimate of its Tier 1 common ratio under Basel III reflects its current understanding of the Basel III rules based on information currently published by the Basel Committee and U.S. federal banking agencies and on the application of such rules to its businesses as currently conducted; it excludes the impact of any changes the Firm may make in the future to its businesses as a result of implementing the Basel III rules, possible enhancements to certain market risk models, and any further implementation guidance from the regulators.

The Basel III capital requirements are subject to prolonged transition periods. The transition period for banks to meet the Tier 1 common requirement under Basel III was originally scheduled to begin in 2013, with full implementation on January 1, 2019. In November 2012, the U.S. federal banking agencies announced a delay in the implementation dates for the Basel III capital requirements. The additional capital requirements for GSIBs will be phased in starting January 1, 2016, with full implementation on January 1, 2019. Management's current objective is for the Firm to reach, by the end of 2013, an estimated Basel III Tier I common ratio of 9.5%.

Additional information regarding the Firm's capital ratios and the federal regulatory capital standards to which it is subject is presented in Supervision and regulation on pages 1–8 of the 2012 Form 10-K, and Note 28 on pages 306–308 of this Annual Report.

Broker-dealer regulatory capital

JPMorgan Chase's principal U.S. broker-dealer subsidiaries are J.P. Morgan Securities LLC ("JPMorgan Securities") and J.P. Morgan Clearing Corp. ("JPMorgan Clearing"). JPMorgan Clearing is a subsidiary of JPMorgan Securities and provides clearing and settlement services. JPMorgan Securities and JPMorgan Clearing are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities and JPMorgan Clearing are also each registered as futures commission merchants and subject to Rule 1.17 of the Commodity Futures Trading Commission ("CFTC").

JPMorgan Securities and JPMorgan Clearing have elected to compute their minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule. At December 31, 2012, JPMorgan Securities' net capital, as defined by the Net Capital Rule, was $13.5 billion, exceeding the minimum requirement by

$12.0 billion, and JPMorgan Clearing's net capital was $6.6 billion, exceeding the minimum requirement by $5.0 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of $1.0 billion and is also required to notify the SEC in the event that tentative net capital is less than $5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2012, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

J.P. Morgan Securities plc (formerly J.P. Morgan Securities Ltd.) is a wholly-owned subsidiary of JPMorgan Chase Bank, N.A. and is the Firm's principal operating subsidiary in the U.K. It has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities plc is regulated by the U.K. Financial Services Authority ("FSA"). At December 31, 2012, it had total capital of $20.8 billion, or a Total capital ratio of 15.5% which exceeded the 8% well-capitalized standard applicable to it under Basel 2.5.

Economic risk capital

JPMorgan Chase assesses its capital adequacy relative to the risks underlying its business activities using internal risk-assessment methodologies. The Firm measures economic capital primarily based on four risk factors: credit, market, operational and private equity risk.

Year ended December 31, (in billions)	Yearly Average 2012	2011	2010
Credit risk	**$ 46.6**	$ 48.2	$ 49.7
Market risk	**17.5**	14.5	15.1
Operational risk	**15.9**	8.5	7.4
Private equity risk	**6.0**	6.9	6.2
Economic risk capital	**86.0**	78.1	78.4
Goodwill	**48.2**	48.6	48.6
Other[a]	**50.2**	46.6	34.5
Total common stockholders' equity	**$ 184.4**	$ 173.3	$ 161.5

(a) Reflects additional capital required, in the Firm's view, to meet its regulatory and debt rating objectives.

Credit risk capital

Credit risk capital is estimated separately for the wholesale businesses (CIB, CB and AM) and consumer business (CCB).

Credit risk capital for the wholesale credit portfolio is defined in terms of unexpected credit losses, both from defaults and from declines in the value of the portfolio due to credit deterioration, measured over a one-year period at a confidence level consistent with an "AA" credit rating standard. Unexpected losses are losses in excess of those for which the allowance for credit losses is maintained. The capital methodology is based on several principal drivers of credit risk: exposure at default (or loan-equivalent amount), default likelihood, credit spreads, loss severity and portfolio correlation.

Credit risk capital for the consumer portfolio is based on product and other relevant risk segmentation. Actual segment-level default and severity experience are used to estimate unexpected losses for a one-year horizon at a confidence level consistent with an "AA" credit rating standard. The decrease in credit risk capital in 2012 was driven by consumer portfolio runoff and continued model enhancements to better estimate future stress credit losses in the consumer portfolio. See Credit Risk Management on pages 134–135 of this Annual Report for more information about these credit risk measures.

Market risk capital

The Firm calculates market risk capital guided by the principle that capital should reflect the risk of loss in the value of the portfolios and financial instruments caused by adverse movements in market variables, such as interest and foreign exchange rates, credit spreads, and securities and commodities prices, taking into account the liquidity of the financial instruments. Results from daily VaR, weekly stress tests, issuer credit spreads and default risk calculations, as well as other factors, are used to determine appropriate capital levels. Market risk capital is allocated to each business segment based on its risk assessment. The increase in market risk capital in 2012 was driven by increased risk in the synthetic credit portfolio. See Market Risk Management on pages 163–169 of this Annual Report for more information about these market risk measures.

Operational risk capital

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events. The operational risk capital model is based on actual losses and potential scenario-based losses, with adjustments to the capital calculation to reflect changes in the quality of the control environment. The increase in operational risk capital in 2012 was primarily due to continued model enhancements to better capture large historical loss events, including mortgage-related litigation costs. The increases that occurred during 2012 will be fully reflected in average operational risk capital in 2013. See Operational Risk Management on pages 175–176 of this Annual Report for more information about operational risk.

Private equity risk capital

Capital is allocated to privately- and publicly-held securities, third-party fund investments, and commitments in the private equity portfolio, within the Corporate/Private Equity segment, to cover the potential loss associated with a decline in equity markets and related asset devaluations. In addition to negative market fluctuations, potential losses in private equity investment portfolios can be magnified by liquidity risk.

Line of business equity

The Firm's framework for allocating capital to its business segments is based on the following objectives:

- Integrate firmwide and line of business capital management activities;
- Measure performance consistently across all lines of business; and
- Provide comparability with peer firms for each of the lines of business

In determining line of business equity the Firm evaluates the amount of capital the line of business would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III Tier 1 common capital requirements as discussed below), economic risk measures and capital levels for similarly rated peers. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Line of business equity	Yearly Average		
Year ended December 31, (in billions)	**2012**	2011	2010
Consumer & Community Banking	**$ 43.0**	$ 41.0	$ 43.0
Corporate & Investment Bank	**47.5**	47.0	46.5
Commercial Banking	**9.5**	8.0	8.0
Asset Management	**7.0**	6.5	6.5
Corporate/Private Equity	**77.4**	70.8	57.5
Total common stockholders' equity	**$ 184.4**	$ 173.3	$ 161.5

Effective January 1, 2012, the Firm revised the capital allocated to each of its businesses, reflecting additional refinement of each segment's Basel III Tier 1 common capital requirements.

In addition, effective January 1, 2013, the Firm further refined the capital allocation framework to align it with the revised line of business structure that became effective in the fourth quarter of 2012. The increase in equity levels for the lines of businesses is largely driven by the most current regulatory guidance on Basel 2.5 and Basel III requirements (including the NPR), principally for CIB and CIO, and by anticipated business growth.

Line of business equity	January 1,	December 31,	
(in billions)	**2013[a]**	2012	2011
Consumer & Community Banking	**$ 46.0**	$ 43.0	$ 41.0
Corporate & Investment Bank	**56.5**	47.5	47.0
Commercial Banking	**13.5**	9.5	8.0
Asset Management	**9.0**	7.0	6.5
Corporate/Private Equity	**70.0**	88.0	73.3
Total common stockholders' equity	**$ 195.0**	$ 195.0	$ 175.8

(a) Reflects refined capital allocations effective January 1, 2013 as discussed above.

The Firm will continue to assess the level of capital required for each line of business, as well as the assumptions and methodologies used to allocate capital to the business segments, and further refinements may be implemented in future periods.

Capital actions

Issuance of preferred stock

On August 27, 2012, the Firm issued $1.3 billion of fixed-rate noncumulative perpetual preferred stock. For additional information on the Firm's preferred stock, see Note 22 on page 300 of this Annual Report.

Dividends

JPMorgan Chase declared quarterly cash dividends on its common stock in the amount of $0.05 per share for each quarter of 2010.

On March 18, 2011, the Board of Directors increased the Firm's quarterly common stock dividend from $0.05 to $0.25 per share, effective with the dividend paid on April 30, 2011, to shareholders of record on April 6, 2011. On March 13, 2012, the Board of Directors increased the Firm's quarterly common stock dividend from $0.25 to $0.30 per share, effective with the dividend paid on April 30, 2012, to shareholders of record on April 5, 2012. The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratio, capital objectives, and alternative investment opportunities. The Firm's current expectation is to return to a payout ratio of approximately 30% of normalized earnings over time.

For information regarding dividend restrictions, see Note 22 and Note 27 on pages 300 and 306, respectively, of this Annual Report.

The following table shows the common dividend payout ratio based on reported net income.

Year ended December 31,	2012	2011	2010
Common dividend payout ratio	23%	22%	5%

Common equity repurchases

On March 18, 2011, the Board of Directors approved a $15.0 billion common equity (i.e., common stock and warrants) repurchase program, of which $8.95 billion was authorized for repurchase in 2011. On March 13, 2012, the Board of Directors authorized a new $15.0 billion common equity repurchase program, of which up to $12.0 billion was approved for repurchase in 2012 and up to an additional $3.0 billion was approved through the end of the first quarter of 2013. Following the voluntary cessation of its common equity repurchase program in May 2012, the Firm resubmitted its capital plan to the Federal Reserve under the 2012 CCAR process in August 2012. Pursuant to a non-objection received from the Federal Reserve on November 5, 2012, with respect to the resubmitted capital plan, the Firm is authorized to repurchase up to $3.0 billion of common equity in the first quarter of 2013. The timing and exact amount of any common equity to be repurchased under the program will depend on various factors, including market conditions; the Firm's capital position; organic and other investment opportunities; and legal and regulatory considerations, among other factors.

During 2012, 2011 and 2010, the Firm repurchased (on a trade-date basis) 31 million, 229 million, and 78 million shares of common stock, for $1.3 billion, $8.8 billion and $3.0 billion, respectively. During 2012 and 2011, the Firm repurchased 18 million and 10 million warrants (originally issued to the U.S. Treasury in 2008 pursuant to its Capital Purchase Program), for $238 million and $122 million, respectively. The Firm did not repurchase any of the warrants during 2010.

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on pages 22–23 of JPMorgan Chase's 2012 Form 10-K and 2013 Business Outlook, on pages 68–69 of this Annual Report.

Risk is an inherent part of JPMorgan Chase's business activities. The Firm's risk management framework and governance structure are intended to provide comprehensive controls and ongoing management of the major risks inherent in its business activities. The Firm employs a holistic approach to risk management intended to ensure the broad spectrum of risk types are considered in managing its business activities. The Firm's risk management framework is intended to create a culture of risk awareness and personal responsibility throughout the Firm where collaboration, discussion, escalation and sharing of information are encouraged.

The Firm's overall risk appetite is established in the context of the Firm's capital, earnings power, and diversified business model. The Firm employs a formalized risk appetite framework to integrate the Firm's objectives with return targets, risk controls and capital management. The Firm's Chief Executive Officer ("CEO") is responsible for setting the overall firmwide risk appetite. The lines of business CEOs, Chief Risk Officers ("CROs") and Corporate/Private Equity senior management are responsible for setting the risk appetite for their respective lines of business or risk limits, within the Firm's limits, and these risk limits are subject to approval by the CEO and firmwide Chief Risk Officer ("CRO") or the Deputy CRO. The Risk Policy Committee of the Firm's Board of Directors approves the risk appetite policy on behalf of the entire Board of Directors.

Risk governance

The Firm's risk governance structure is based on the principle that each line of business is responsible for managing the risks inherent in its business, albeit with appropriate corporate oversight. Each line of business risk committee is responsible for decisions regarding the business' risk strategy, policies as appropriate and controls. There are nine major risk types identified arising out of the business activities of the Firm: liquidity risk, credit risk, market risk, interest rate risk, country risk, principal risk, operational risk, legal risk, fiduciary risk and reputation risk.

Overlaying line of business risk management are corporate functions with risk management-related responsibilities: Risk Management, Treasury and CIO, the Regulatory Capital Management Office ("RCMO") the Firmwide Oversight and Control Group, Legal and Compliance and the Firmwide Valuation Governance Forum.

Risk Management reports independently of the lines of business to provide oversight of firmwide risk management and controls, and is viewed as a partner in achieving appropriate business risk and reward objectives. Risk Management coordinates and communicates with each line of business through the line of business risk committees and CROs to manage risk. The Risk Management function is headed by the Firm's Chief Risk Officer, who is a member of the Firm's Operating Committee and who reports to the Chief Executive Officer and is accountable to the Board of Directors, primarily through the Board's Risk Policy Committee. The Chief Risk Officer is also a member of the line of business risk committees. Within the Firm's Risk Management function are units responsible for credit risk, market risk, country risk, principal risk, model risk and development, reputational risk and operational risk framework, as well as risk reporting and risk policy. Risk Management is supported by risk technology and operations functions that are responsible for building the information technology infrastructure used to monitor and manage risk.

The Risk Management organization maintains a Risk Operating Committee and the Risk Management Business Control Committees. The Risk Operating Committee focuses on risk management, including setting risk management priorities, escalation of risk issues, talent and resourcing, and other issues brought to its attention by line of business CEOs, CROs and cross-line of business risk officers (e.g., Country Risk, Market Risk and Model Risk). This committee meets bi-weekly and is led by the CRO or deputy-CRO. There are three business control committees within the Risk Management function (Wholesale Risk Business Control Committee, Consumer Risk Business Control Committee and the Corporate Risk Business Control Committee) which meet at least quarterly and focus on the control environment, including outstanding action plans, audit status, operational risk statistics (such as losses, risk indicators, etc.), compliance with critical control programs, and risk technology.

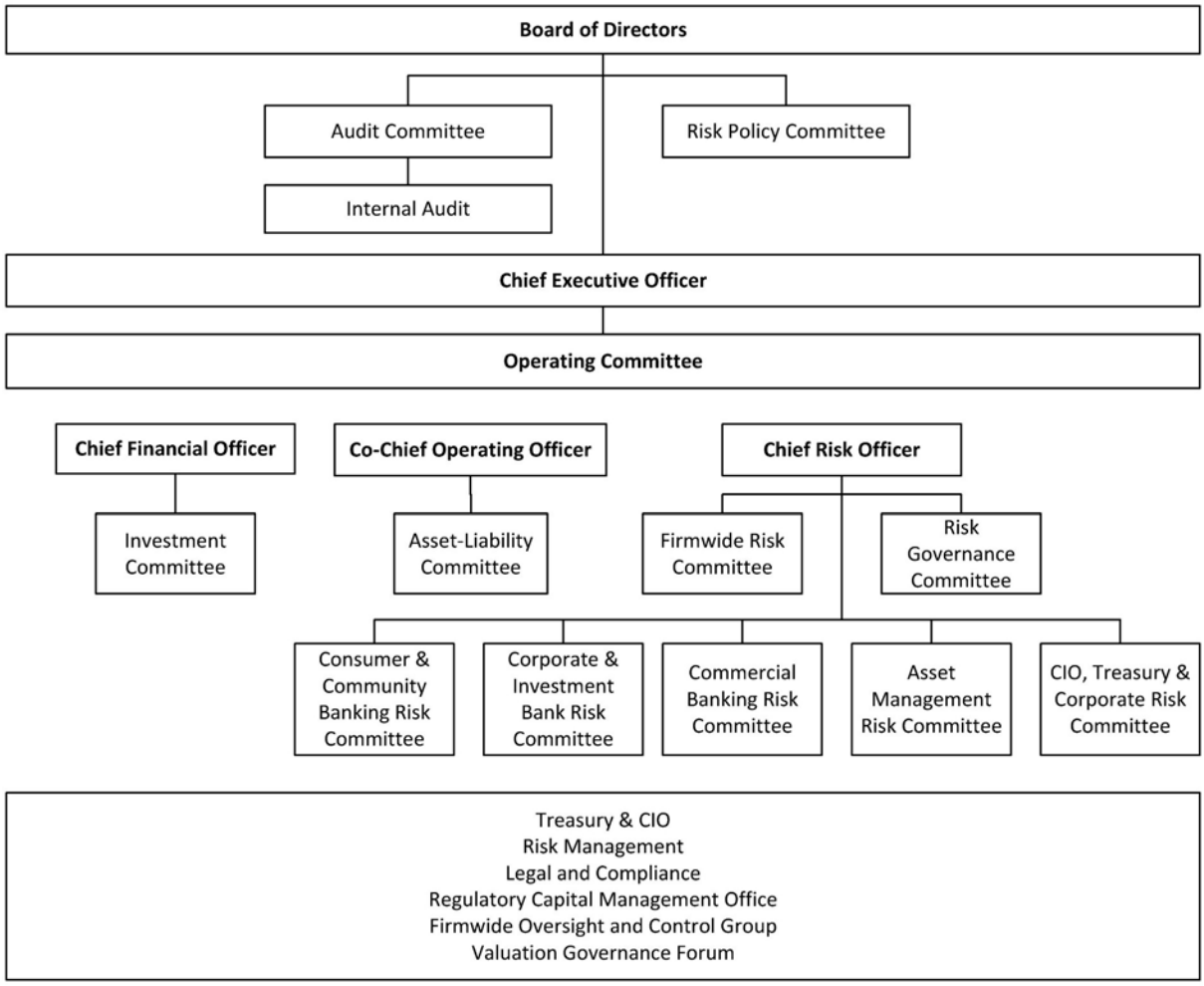
The Model Risk and Development unit, within the Risk Management function, provides oversight of the firmwide Model Risk policy, guidance with respect to a model's appropriate usage and conducts independent reviews of models.

Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital and structural interest rate and foreign exchange risks. RCMO is responsible for measuring, monitoring, and reporting the Firm's capital and related risks.

Legal and Compliance has oversight for legal risk. In January 2013, the Compliance function was moved to report to the Firm's co-COOs in order to better align the function, which is a critical component of how the Firm manages its risk, with the Firm's Oversight and Control function. Compliance will continue to work closely with Legal, given their complementary missions. The Firm's Oversight and Control group is dedicated to enhancing the Firm's control framework, and to looking within and across the lines of business and the Corporate functions (including CIO) to identify and remediate control issues.

In addition, the Firm has a firm-wide Valuation Governance Forum ("VGF") comprising senior finance and risk executives to oversee the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the firm-wide head of the valuation control function, and also includes sub-forums for the CIB, MB, and certain corporate functions including Treasury and CIO.

In addition to the risk committees of the lines of business and the above-referenced risk management functions, the Firm also has numerous management level committees focused on measuring, monitoring and managing risk. All of these committees are accountable to the CEO and Operating Committee. The membership of these committees is composed of senior management of the Firm; membership varies across the committees and is based on the objectives of the individual committee. Typically membership includes representatives of the lines of business, CIO, Treasury, Risk Management, Finance, Legal and Compliance and other senior executives. The committees meet regularly to discuss a broad range of topics including, for example, current market conditions and other external events, risk exposures, and risk concentrations to ensure that the effects of risk issues are considered broadly across the Firm's businesses.



The Board of Directors exercises its oversight of the Firm's risk management principally through the Board's Risk Policy Committee and Audit Committee.

The Board's Risk Policy Committee oversees senior management risk-related responsibilities, including reviewing management policies and performance against these policies and related benchmarks. The Board's Risk Policy Committee also reviews firm level market risk limits at least annually. The CROs for each line of business and the heads of Country Risk, Market Risk, Model Risk and the Wholesale Chief Credit Officer meet with the Board's Risk Policy Committee on a regular basis. In addition, in conjunction with the Firm's capital assessment process, the CEO or Chief Risk Officer is responsible for notifying the Risk Policy Committee of any results which are projected to exceed line of business or firmwide risk appetite tolerances. The CEO or CRO is required to notify the Chairman of the Board's Risk Policy Committee if certain firmwide limits are modified or exceeded.

The Audit Committee is responsible for oversight of guidelines and policies that govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal controls that is relied upon to provide

reasonable assurance of compliance with the Firm's operational risk management processes. In addition, Internal Audit, an independent function within the Firm that provides independent and objective assessments of the control environment, reports directly to the Audit Committee of the Board of Directors and administratively to the CEO. Internal Audit conducts regular independent reviews to evaluate the Firm's internal control structure and compliance with applicable regulatory requirements and is responsible for providing the Audit Committee, senior management and regulators with an independent assessment of the Firm's ability to manage and control risk.

Among the Firm's management level committees that are primarily responsible for certain risk-related functions are:

The Asset-Liability Committee, chaired by the Corporate Treasurer, monitors the Firm's overall interest rate risk and liquidity risk. ALCO is responsible for reviewing and approving the Firm's liquidity policy and contingency funding plan. ALCO also reviews the Firm's funds transfer pricing policy (through which lines of business "transfer" interest rate and foreign exchange risk to Treasury), nontrading interest rate-sensitive revenue-at-risk, overall interest rate position, funding requirements and strategy, and the Firm's securitization programs (and any required liquidity support by the Firm of such programs).

The Firmwide Risk Committee is co-chaired by the Firm's CEO and CRO or Deputy CRO. *The Risk Governance Committee* is chaired by the Firm's CRO and Deputy CRO. These committees meet monthly to review cross-line of business issues such as risk appetite, certain business activity and aggregate risk measures, risk policy, risk methodology regulatory capital and other regulatory issues, as referred by line of business risk committees. The Risk Governance Committee is also responsible for ensuring that line of business and firmwide risk reporting and compliance with risk appetite levels are monitored, in conjunction with the Firm's capital assessment process. Each line of business risk committee meets at least on a monthly basis and is co-chaired by the line of business CRO and CEO or equivalent. Each line of business risk committee is also attended by individuals from outside the line of business. It is the responsibility of committee members of the line of business risk committees to escalate line of business risk topics to the Firmwide Risk Committee as appropriate.

In addition to the above, there is the Investment Committee, chaired by the Firm's Chief Financial Officer that meets on an as needed basis and oversees global merger and acquisition activities undertaken by JPMorgan Chase for its own account that fall outside the scope of the Firm's private equity and other principal finance activities.

Risk monitoring and control

The Firm's ability to properly identify, measure, monitor and report risk is critical to both its soundness and profitability.

- Risk identification: The Firm's exposure to risk through its daily business dealings, including lending and capital markets activities and operational services, is identified and aggregated through the Firm's risk management infrastructure. There are nine major risk types identified in the business activities of the Firm: liquidity risk, credit risk, market risk, interest rate risk, country risk, private equity risk, operational risk, legal and fiduciary risk, and reputation risk.
- Risk measurement: The Firm measures risk using a variety of methodologies, including calculating probable loss, unexpected loss and value-at-risk, and by conducting stress tests and making comparisons to external benchmarks. Measurement models and related assumptions are subject to internal model review, empirical validation and benchmarking with the goal of ensuring that the Firm's risk estimates are reasonable and reflective of the risk of the underlying positions.
- Risk monitoring/control: The Firm's risk management policies and procedures incorporate risk mitigation strategies and include approval limits by customer, product, industry, country and business. These limits are monitored on a daily, weekly and monthly basis, as appropriate.
- Risk reporting: The Firm reports risk exposures on both a line of business and a consolidated basis. This information is reported to management on a daily, weekly and monthly basis, as appropriate.

Model risk

The Firm uses risk management models, including Value-at-Risk ("VaR") and stress models, for the measurement, monitoring and management of risk positions. Valuation models are employed by the Firm to value certain financial instruments which cannot otherwise be valued using quoted prices. These valuation models may also be employed as inputs to risk management models, for example in VaR and economic stress models. The Firm also makes use of models for a number of other purposes, including the calculation of regulatory capital requirements and estimating the allowance for credit losses.

Models are owned by various functions within the Firm based on the specific purposes of such models. For example, VaR models and certain regulatory capital models are owned by the line-of-business aligned risk management functions. Owners of the models are responsible for the development, implementation and testing of models, as well as referral of models to the Model Risk function (within the Model Risk and Development unit) for review and approval. Once models have been approved, the model owners maintain a robust operating environment and monitor and evaluate the performance of models on an ongoing basis. Model owners enhance models in response to changes in

the portfolios and for changes in product and market developments, as well as improvements in available modeling techniques and systems capabilities, and submit such enhancements to the Model Risk function for review.

The Model Risk function comprises the Model Review Group and the Model Governance Group and reports to the Model Risk and Development unit, which in turn reports to the Chief Risk Officer. The Model Risk function is independent of the model owners and reviews and approves a wide range of models, including risk management, valuation and certain regulatory capital models used by the Firm.

Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on the model. This tiering is subject to the approval of the Model Risk function. The model reviews conducted by the Model Risk function consider a number of factors about the model's suitability for valuation or risk management of a particular product, or other purposes. The factors considered include the assigned model tier, whether the model accurately reflects the characteristics of the instruments and its significant risks, the selection and reliability of model inputs, consistency with models for similar products, the appropriateness of any model-related adjustments, and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes. Model reviews are approved by the appropriate level of management within the Model Risk function based on the relevant tier of the model.

Under the Firm's model risk policy, new significant models, as well as material changes to existing models, are reviewed and approved by the Model Risk function prior to implementation into the operating environment. The Model Risk function performs an annual Firmwide model risk assessment where developments in the product or market are considered in determining whether models need to be reviewed and approved again.

In the event that the Model Risk function does not approve a significant model, escalation to senior management is required and the model owner is required to remediate the model within a time period as agreed upon with the Model Risk function. The model owner is also required to resubmit the model for review to the Model Risk function and to take appropriate actions to mitigate the model risk in the interim. The actions taken will depend on the model that is disapproved and may include, for example, limitation of trading activity. The Firm may also implement other appropriate risk measurement tools in place to augment the model that is subject to remediation.

Exceptions to the Firm's model risk policy may be granted by the Model Risk function to allow a significant model to be used prior to review or approval. Such exceptions have been applied in limited circumstances, and where this is the case, compensating controls similar to those described above have been put in place.

For a summary of valuations based on models, see Critical Accounting Estimates Used by the Firm on pages 180–181 and Note 3 on pages 196–214 of this Annual Report.

Liquidity risk management is intended to ensure that the Firm has the appropriate amount, composition and tenor of funding and liquidity in support of its assets. The primary objectives of effective liquidity management are to ensure that the Firm's core businesses are able to operate in support of client needs and meet contractual and contingent obligations through normal economic cycles as well as during market stress and maintain debt ratings that enable the Firm to optimize its funding mix and liquidity sources while minimizing costs.

The Firm manages liquidity and funding using a centralized, global approach in order to actively manage liquidity for the Firm as a whole, monitor exposures and identify constraints on the transfer of liquidity within the Firm, and maintain the appropriate amount of surplus liquidity as part of the Firm's overall balance sheet management strategy.

In the context of the Firm's liquidity management, Treasury is responsible for:

- Measuring, managing, monitoring and reporting the Firm's current and projected liquidity sources and uses;
- Understanding the liquidity characteristics of the Firm's assets and liabilities;
- Defining and monitoring Firmwide and legal entity liquidity strategies, policies, guidelines, and contingency funding plans;
- Liquidity stress testing under a variety of adverse scenarios
- Managing funding mix and deployment of excess short-term cash;
- Defining and implementing funds transfer pricing ("FTP") across all lines of business and regions; and
- Defining and addressing the impact of regulatory changes on funding and liquidity.

The Firm has a liquidity risk governance framework to review, approve and monitor the implementation of liquidity risk policies and funding and capital strategies at the Firmwide, regional and line of business levels.

Specific risk committees responsible for liquidity risk governance include ALCO as well as lines of business and regional asset and liability management committees. For further discussion of the risk committees, see Risk Management on pages 123–126 of this Annual Report.

Management considers the Firm's liquidity position to be strong as of December 31, 2012, and believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations.

LCR and NSFR

In December 2010, the Basel Committee introduced two new measures of liquidity risk: the liquidity coverage ratio ("LCR") which is intended to measure the amount of "high-quality liquid assets" held by the Firm during an acute stress, in relation to the estimated net cash outflows within the 30-day period; and the net stable funding ratio ("NSFR") which is intended to measure the "available" amount of stable funding relative to the "required" amount of stable funding over a 1-year horizon. The standards require that the LCR be no lower than 100% and the NSFR be greater than 100%.

In January 2013, the Basel Committee introduced certain amendments to the formulation of the LCR, and a revised timetable to phase-in the standard. The LCR will continue to become effective on January 1, 2015, but the minimum requirement will begin at 60%, increasing in equal annual stages to reach 100% on January 1, 2019. The Firm is currently targeting to attain a 100% LCR, based on its current understanding of the requirements, by the end of 2013. The NSFR is scheduled to become effective in 2018.

Funding

The Firm funds its global balance sheet through diverse sources of funding, including a stable deposit franchise as well as secured and unsecured funding in the capital markets. Access to funding markets is executed regionally through hubs in New York, London, Hong Kong and other locations which enables the Firm to observe and respond effectively to local market dynamics and client needs. The Firm manages and monitors its use of wholesale funding markets to maximize market access, optimize funding cost and ensure diversification of its funding profile across geographic regions, tenors, currencies, product types and counterparties, using key metrics including short-term unsecured funding as a percentage of total liabilities, and in relation to high-quality assets, and counterparty concentration.

Sources of funds

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. As of December 31, 2012, the Firm's deposits-to-loans ratio was 163%, compared with 156% at December 31, 2011.

As of December 31, 2012, total deposits for the Firm were $1,193.6 billion, compared with $1,127.8 billion at December 31, 2011 (55% and 54% of total liabilities at December 31, 2012 and 2011, respectively). The increase in deposits was predominantly due to growth in retail and wholesale deposits. For further information, see Balance Sheet Analysis on pages 106–108 of this Annual Report.

The Firm typically experiences higher customer deposit inflows at period-ends. Therefore, average deposit balances are more representative of deposit trends. The table below summarizes, by line of business, average deposits for the year ended December 31, 2012 and 2011, respectively.

Deposits	December 31,		Year ended December 31, Average	
(in millions)	2012	2011	2012	2011
Consumer & Community Banking	$ 438,484	$ 397,825	$ 413,911	$ 382,678
Corporate & Investment Bank	385,560	362,384	353,048	317,213
Commercial Banking	198,383	196,366	181,805	157,899
Asset Management	144,579	127,464	129,208	106,421
Corporate/ Private Equity	26,587	43,767	27,911	47,779
Total Firm	$1,193,593	$1,127,806	$1,105,883	$1,011,990

A significant portion of the Firm's deposits are retail deposits (37% and 35% at December 31, 2012 and 2011, respectively), which are considered particularly stable as they are less sensitive to interest rate changes or market volatility. Additionally, the majority of the Firm's institutional deposits are also considered to be stable sources of funding since they are generated from customers that maintain operating service relationships with the Firm. For further discussions of deposit balance trends, see the discussion of the results for the Firm's business segments and the Balance Sheet Analysis on pages 80–104 and 106–108, respectively, of this Annual Report.

Short-term funding

Short-term unsecured funding sources include federal funds and Eurodollars purchased; certificates of deposit; time deposits; commercial paper; and other borrowed funds that generally have maturities of one year or less.

The Firm's reliance on short-term unsecured funding sources is limited. A significant portion of the total commercial paper liabilities, approximately 72% as of December 31, 2012, as shown in the table below, were originated from deposits that customers choose to sweep into commercial paper liabilities as a cash management program offered by CIB and are not sourced from wholesale funding markets.

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. Securities loaned or sold under agreements to repurchase generally mature between one day and three months, are secured predominantly by high-quality securities collateral, including government-issued debt, agency debt and agency MBS, and constitute a significant portion of the federal funds purchased and securities loaned or sold under purchase agreements. The increase in the balance at December 31, 2012, compared with the balance at December 31, 2011 was predominantly because of higher secured financing of the Firm's assets. The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment and market-making portfolios); and other market and portfolio factors.

At December 31, 2012, the balance of total unsecured and secured other borrowed funds increased, compared with the balance at December 31, 2011. The increase was primarily driven by an increase in term federal funds purchased and in CIB structured notes. The average balance for the year ended December 31, 2012, decreased from the prior year, predominantly driven by maturities of short-term unsecured bank notes and other unsecured borrowings, and other secured short-term borrowings.

For additional information, see the Balance Sheet Analysis on pages 106–108 and Note 13 on page 249 of this Annual Report. The following table summarizes by source select short-term unsecured and secured funding as of December 31, 2012 and 2011, and average balances for the year ended December 31, 2012 and 2011, respectively.

Select Short-term funding	December 31,		Year ended December 31, Average	
(in millions)	2012	December 31, 2011	2012	2011
Commercial paper:				
Wholesale funding	$ 15,589	$ 4,245	$ 14,302	$ 6,119
Client cash management	39,778	47,386	36,478	36,534
Total commercial paper	$ 55,367	$ 51,631	$ 50,780	$ 42,653
Other borrowed funds	$ 26,636	$ 21,908	$ 24,174	$ 30,943
Securities loaned or sold under agreements to repurchase:				
Securities sold under agreements to repurchase	$ 212,278	$ 191,649	$ 219,625	$ 228,514
Securities loaned	23,125	14,214	20,763	19,438
Total securities loaned or sold under agreements to repurchase[a][b][c]	$ 235,403	$ 205,863	$ 240,388	$ 247,952

(a) Excludes federal funds purchased.
(b) Excludes long-term structured repurchase agreements of $3.3 billion and $6.1 billion as of December 31, 2012 and 2011, respectively, and average balance of $7.0 billion and $4.6 billion for the years ended December 31, 2012 and 2011, respectively.
(c) Excludes long-term securities loaned of $457 million as of December 31, 2012, and average balance of $113 million for the year ended December 31, 2012. There were no long-term securities loaned as of December 31, 2011.

Long-term funding and issuance

Long-term funding provides additional sources of stable funding and liquidity for the Firm. The majority of the Firm's long-term unsecured funding is issued by the parent holding company to provide maximum flexibility in support of both bank and nonbank subsidiary funding.

The following table summarizes long-term unsecured issuance and maturities or redemption for the years ended December 31, 2012 and 2011, respectively. For additional information, see Note 21 on pages 297–299 of this Annual Report.

Long-term unsecured funding

Year ended December 31, (in millions)	2012	2011
Issuance		
Senior notes issued in the U.S. market	$ 15,695	$ 29,043
Senior notes issued in non-U.S. markets	8,341	5,173
Total senior notes	24,036	34,216
Trust preferred securities	–	–
Subordinated debt	–	–
Structured notes	15,525	14,761
Total long-term unsecured funding – issuance	$ 39,561	$ 48,977
Maturities/redemptions		
Total senior notes	$ 40,484	$ 36,773
Trust preferred securities	9,482	101
Subordinated debt	1,045	2,912
Structured notes	20,183	18,692
Total long-term unsecured funding – maturities/redemptions	$ 71,194	$ 58,478

Following the Federal Reserve's announcement on June 7, 2012, of proposed rules which will implement the phase-out of Tier 1 capital treatment for trust preferred securities, the Firm announced on June 11, 2012, that it would redeem approximately $9.0 billion of trust preferred securities pursuant to redemption provisions relating to the occurrence of a "Capital Treatment Event" (as defined in the documents governing those securities). The redemption was completed on July 12, 2012.

The Firm raises secured long-term funding through securitization of consumer credit card loans, residential mortgages, auto loans and student loans, as well as through advances from the FHLBs, all of which increase funding and investor diversity.

The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemption for the years ended December 31, 2012 and 2011.

Long-term secured funding

Year ended December 31,	Issuance		Maturities/Redemptions	
(in millions)	2012	2011	2012	2011
Credit card securitization	$ 10,800	$ 1,775	$ 13,187	$ 13,556
Other securitizations[a]	–	–	487	478
FHLB advances	35,350	4,000	11,124	9,155
Total long-term secured funding	$ 46,150	$ 5,775	$ 24,798	$ 23,189

(a) Other securitizations includes securitizations of residential mortgages, auto loans and student loans.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. For further description of the client-driven loan securitizations, see Note 16 on pages 280–291 of this Annual Report.

Parent holding company and subsidiary funding

The parent holding company acts as an important source of funding to its subsidiaries. The Firm's liquidity management is therefore intended to ensure that liquidity at the parent holding company is maintained at levels sufficient to fund the operations of the parent holding company and its subsidiaries and affiliates for an extended period of time in a stress environment where access to normal funding sources is disrupted.

To effectively monitor the adequacy of liquidity and funding at the parent holding company, the Firm uses three primary measures:

- Number of months of pre-funding: The Firm targets pre-funding of the parent holding company to ensure that both contractual and non-contractual obligations can be met for at least 18 months assuming no access to wholesale funding markets. However, due to conservative liquidity management actions taken by the Firm, the current pre-funding of such obligations is greater than target.
- Excess cash: Excess cash is managed to ensure that daily cash requirements can be met in both normal and stressed environments. Excess cash generated by parent holding company issuance activity is placed on deposit with or as advances to both bank and nonbank subsidiaries or held as liquid collateral purchased through reverse repurchase agreements.
- Stress testing: The Firm conducts regular stress testing for the parent holding company and major bank subsidiaries as well as the Firm's principal U.S. and U.K. broker-dealer subsidiaries to ensure sufficient liquidity for the Firm in a stressed environment. The Firm's

liquidity management takes into consideration its subsidiaries' ability to generate replacement funding in the event the parent holding company requires repayment of the aforementioned deposits and advances. For further information, see the Stress testing discussion below.

Global Liquidity Reserve

The Global Liquidity Reserve includes cash on deposit at central banks, and cash proceeds reasonably expected to be received in secured financings of unencumbered high-quality securities (such as sovereign debt, government-guaranteed corporate debt, U.S. government agency debt, and agency MBS) that are available to the Firm on a consolidated basis. The liquidity amount estimated to be realized from secured financings is based on management's current judgment and assessment of the Firm's ability to quickly raise funds from secured financings.

The Global Liquidity Reserve also includes the Firm's borrowing capacity at various FHLBs, the Federal Reserve Bank discount window and various other central banks as a result of collateral pledged by the Firm to such banks. Although considered as a source of available liquidity, the Firm does not view borrowing capacity at the Federal Reserve Bank discount window and various other central banks as a primary source of funding.

As of December 31, 2012, the Global Liquidity Reserve was estimated to be approximately $491 billion, compared with approximately $379 billion at December 31, 2011. The Global Liquidity Reserve fluctuates due to changes in deposits, the Firm's purchase and investment activities and general market conditions.

In addition to the Global Liquidity Reserve, the Firm has significant amounts of marketable securities such as corporate debt and equity securities available to raise liquidity, if required.

Stress testing

Liquidity stress tests are intended to ensure sufficient liquidity for the Firm under a variety of adverse scenarios. Results of stress tests are therefore considered in the formulation of the Firm's funding plan and assessment of its liquidity position. Liquidity outflow assumptions are modeled across a range of time horizons and varying degrees of market and idiosyncratic stress. Standard stress tests are performed on a regular basis and ad hoc stress tests are performed as required. Stress scenarios are produced for the parent holding company and the Firm's major bank subsidiaries as well as the Firm's principal U.S. and U.K. broker-dealer subsidiaries. In addition, separate regional liquidity stress testing is performed.

Liquidity stress tests assume all of the Firm's contractual obligations are met and also take into consideration varying levels of access to unsecured and secured funding markets. Additionally, assumptions with respect to potential non-contractual and contingent outflows include, but are not limited to, the following:

- Deposits
  - For bank deposits that have no contractual maturity, the range of potential outflows reflect the type and size of deposit account, and the nature and extent of the Firm's relationship with the depositor.
- Secured funding
  - Range of haircuts on collateral based on security type and counterparty.
- Derivatives
  - Margin calls by exchanges or clearing houses;
  - Collateral calls associated with ratings downgrade triggers and variation margin;
  - Outflows of excess client collateral;
  - Novation of derivative trades.
- Unfunded commitments
  - Potential facility drawdowns reflecting the type of commitment and counterparty.

Contingency funding plan

The Firm's contingency funding plan ("CFP"), which is reviewed and approved by ALCO, provides a documented framework for managing both temporary and longer-term unexpected adverse liquidity situations. It sets out a list of indicators and metrics that are reviewed on a daily basis to identify the emergence of increased risks or vulnerabilities in the Firm's liquidity position. The CFP identifies alternative contingent liquidity resources that can be accessed under adverse liquidity circumstances.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on page 109, and Credit risk, liquidity risk and credit-related contingent features in Note 5 on pages 224–225, of this Annual Report.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures.

The credit ratings of the parent holding company and certain of the Firm's significant operating subsidiaries as of December 31, 2012, were as follows.

	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A. Chase Bank USA, N.A.			J.P. Morgan Securities LLC		
December 31, 2012	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investor Services	A2	P-1	Negative	Aa3	P-1	Stable	A1	P-1	Stable
Standard & Poor's	A	A-1	Negative	A+	A-1	Negative	A+	A-1	Negative
Fitch Ratings	A+	F1	Stable	A+	F1	Stable	A+	F1	Stable

On June 21, 2012, Moody's downgraded the long-term ratings of the Firm and affirmed all its short-term ratings. The outlook for the parent holding company was left on negative reflecting Moody's view that government support for U.S. bank holding company creditors is becoming less certain and less predictable. Such ratings actions concluded Moody's review of 17 banks and securities firms with global capital markets operations, including the Firm, as a result of which all of these institutions were downgraded by various degrees.

Following the disclosure by the Firm, on May 10, 2012, of losses from the synthetic credit portfolio held by CIO, Fitch downgraded the Firm and placed all parent and subsidiary long-term ratings on Ratings Watch Negative. At that time, S&P also revised its outlook on the ratings of the Firm from Stable to Negative. Subsequently, on October 10, 2012, Fitch revised the outlook to Stable and affirmed the Firm's ratings.

The above-mentioned rating actions did not have a material adverse impact on the Firm's cost of funds and its ability to fund itself. Further downgrades of the Firm's long-term ratings by one notch or two notches could result in a downgrade of the Firm's short-term ratings. If this were to occur, the Firm believes its cost of funds could increase and access to certain funding markets could be reduced. The nature and magnitude of the impact of further ratings downgrades depends on numerous contractual and behavioral factors (which the Firm believes are incorporated in the Firm's liquidity risk and stress testing metrics). The Firm believes it maintains sufficient liquidity to withstand any potential decrease in funding capacity due to further ratings downgrades.

JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Rating agencies continue to evaluate various ratings factors, such as regulatory reforms, rating uplift assumptions surrounding government support, and economic uncertainty and sovereign creditworthiness, and their potential impact on ratings of financial institutions. Although the Firm closely monitors and endeavors to manage factors influencing its credit ratings, there is no assurance that its credit ratings will not be changed in the future.

Cash flows

For the years ended December 31, 2012, 2011 and 2010, cash and due from banks decreased $5.9 billion, and increased by $32.0 billion and $1.4 billion, respectively. The following discussion highlights the major activities and transactions that affected JPMorgan Chase's cash flows during 2012, 2011 and 2010, respectively.

Cash flows from operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's capital markets and lending activities, including the origination or purchase of loans initially designated as held-for-sale. Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities, and market conditions. Management believes cash flows from operations, available cash balances and the Firm's ability to generate cash through short- and long-term borrowings are sufficient to fund the Firm's operating liquidity needs.

For the year ended December 31, 2012, net cash provided by operating activities was $25.1 billion. This resulted from a decrease in securities borrowed reflecting a shift in the deployment of excess cash to resale agreements, as well as lower client activity in CIB, and lower trading assets - derivative receivables, primarily related to the decline in the U.S. dollar and tightening of credit spreads. Partially offsetting these cash inflows was a decrease in accounts payable and other liabilities predominantly due to lower CIB client balances, and an increase in trading assets - debt and equity instruments driven by client-driven market-making activity in CIB. Net cash generated from operating activities was higher than net income largely as a result of adjustments for noncash items such as depreciation and amortization, provision for credit losses, and stock-based compensation. Cash used to acquire loans was higher than cash proceeds received from sales and paydowns of such loans originated and purchased with an initial intent to sell, and also reflected a lower level of activity over the prior-year period.

For the year ended December 31, 2011, net cash provided by operating activities was $95.9 billion. This resulted from a net decrease in trading assets and liabilities – debt and equity instruments, driven by client-driven market-making activity in CIB; an increase in accounts payable and other liabilities predominantly due to higher CIB client balances, and a decrease in accrued interest and accounts receivables, primarily in CIB, driven by a large reduction in customer margin receivables due to changes in client activity. Partially offsetting these cash proceeds was an increase in securities borrowed, predominantly in Corporate due to higher excess cash positions at year-end. Net cash generated from operating activities was higher than net income largely as a result of adjustments for noncash items such as the provision for credit losses, depreciation and amortization, and stock-based compensation. Additionally, cash provided by proceeds from sales and paydowns of loans originated or purchased with an initial intent to sell was higher than cash used to acquire such loans, and also reflected a higher level of activity over the prior-year period.

For the year ended December 31, 2010, net cash used by operating activities was $3.8 billion, mainly driven by an increase primarily in trading assets – debt and equity instruments; principally due to improved market activity primarily in equity securities, foreign debt and physical commodities, partially offset by an increase in trading liabilities due to higher levels of positions taken to facilitate customer-driven activity. Net cash was provided by net income and from adjustments for non-cash items such as the provision for credit losses, depreciation and amortization and stock-based compensation. Additionally, proceeds from sales and paydowns of loans originated or purchased with an initial intent to sell were higher than cash used to acquire such loans.

Cash flows from investing activities

The Firm's investing activities predominantly include loans originated to be held for investment, the AFS securities portfolio and other short-term interest-earning assets. For the year ended December 31, 2012, net cash of $119.8 billion was used in investing activities. This resulted from an increase in securities purchased under resale agreements due to deployment of the Firm's excess cash by Treasury; higher deposits with banks reflecting placements of the Firm's excess cash with various central banks, primarily Federal Reserve Banks; and higher levels of wholesale loans, primarily in CB and AM, driven by higher wholesale activity across most of the Firm's regions and businesses. Partially offsetting these cash outflows were a decline in consumer, excluding credit card, loans predominantly due to mortgage-related paydowns and portfolio run-off, and a decline in credit card loans due to higher repayment rates; and proceeds from maturities and sales of AFS securities, which were higher than the cash used to acquire new AFS securities.

For the year ended December 31, 2011, net cash of $170.8 billion was used in investing activities. This resulted from a significant increase in deposits with banks reflecting the placement of funds with various central banks, including Federal Reserve Banks, predominantly resulting from the overall growth in wholesale client deposits; an increase in loans reflecting continued growth in client activity across all of the Firm's wholesale businesses and regions; net purchases of AFS securities, largely due to repositioning of the portfolio in Corporate in response to changes in the market environment; and an increase in securities purchased under resale agreements, predominantly in Corporate due to higher excess cash positions at year-end. Partially offsetting these cash outflows were a decline in consumer, excluding credit card, loan balances due to paydowns and portfolio run-off, and in credit card loans, due to higher repayment rates, run-off of the Washington Mutual portfolio and the Firm's sale of the Kohl's portfolio.

For the year ended December 31, 2010, net cash of $54.0 billion was provided by investing activities. This resulted from a decrease in deposits with banks largely due to a decline in deposits placed with the Federal Reserve Bank and lower interbank lending as market stress eased since the end of 2009; net proceeds from sales and maturities of AFS securities used in the Firm's interest rate risk management activities in Corporate; and a net decrease in the credit card loan portfolio, driven by the expected runoff of the Washington Mutual portfolio, a decline in lower-yielding promotional credit card balances, continued runoff of loan balances in the consumer, excluding credit card portfolio, primarily related to residential real estate, and repayments and loan sales in the wholesale portfolio, primarily in CIB and CB; the decrease was partially offset by higher originations across the wholesale and consumer businesses. Partially offsetting these cash proceeds was an increase in securities purchased under resale agreements, predominantly due to higher financing volume in CIB; and cash used for business acquisitions, primarily RBS Sempra.

Cash flows from financing activities

The Firm's financing activities predominantly include taking customer deposits, and issuing long-term debt as well as preferred and common stock. For the year ended December 31, 2012, net cash provided by financing activities was $87.7 billion. This was driven by proceeds from long-term borrowings and a higher level of securitized credit cards; an increase in deposits due to growth in both consumer and wholesale deposits (for additional information, see Balance Sheet Analysis on pages 106–108 of this Annual Report); an increase in federal funds purchased and securities loaned or sold under repurchase agreements due to higher secured financings of the Firm's assets; an increase in commercial paper issuance in the wholesale funding markets to meet short-term funding needs, partially offset by a decline in the volume of client deposits and other third-party liability balances related to CIB's liquidity management product; an increase in other borrowed funds due to higher secured and unsecured short-term borrowings to meet short-term funding needs; and proceeds from the issuance of preferred stock. Partially offsetting these cash inflows were redemptions and maturities of long-term borrowings, including TruPS, and securitized credit cards; and payments of cash dividends on common and preferred stock and repurchases of common stock and warrants.

For the year ended December 31, 2011, net cash provided by financing activities was $107.7 billion. This was largely driven by a significant increase in deposits, predominantly due to an overall growth in wholesale client balances and, to a lesser extent, consumer deposit balances. The increase in wholesale client balances, particularly in CIB and CB, was primarily driven by lower returns on other available alternative investments and low interest rates during 2011, and in AM, driven by growth in the number of clients and level of deposits. In addition, there was an increase in commercial paper due to growth in the volume of liability balances in sweep accounts related to CIB's cash management program. Cash was used to reduce securities sold under repurchase agreements, predominantly in CIB, reflecting the lower funding requirements of the Firm based on lower trading inventory levels, and change in the mix of funding sources; for net repayments of long-term borrowings, including a decrease in long-term debt, predominantly due to net redemptions and maturities, as well as a decline in long-term beneficial interests issued by consolidated VIEs due to maturities of Firm-sponsored credit card securitization transactions; to reduce other borrowed funds, predominantly driven by maturities of short-term secured borrowings, unsecured bank notes and short-term FHLB advances; and for repurchases of common stock and warrants, and payments of cash dividends on common and preferred stock.

In 2010, net cash used in financing activities was $49.2 billion. This resulted from net repayments of long-term borrowings as new issuances were more than offset by payments primarily reflecting a decline in beneficial interests issued by consolidated VIEs due to maturities related to Firm-sponsored credit card securitization trusts; a decline in deposits associated with wholesale funding activities due to the Firm's lower funding needs; lower deposit levels in CIB, offset partially by net inflows from existing customers and new business in AM, CB and CCB; a decline in commercial paper and other borrowed funds due to lower funding requirements; payments of cash dividends; and repurchases of common stock. Cash was generated as a result of an increase in securities sold under repurchase agreements largely as a result of an increase in activity levels in CIB partially offset by a decrease in Corporate reflecting repositioning activities.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk through its real estate, credit card, auto, business banking and student lending businesses, with a primary focus of serving the prime segment of the consumer market. Originated mortgage loans are retained in the mortgage portfolio, or securitized or sold to U.S. government agencies and U.S. government-sponsored enterprises; other types of consumer loans are typically retained on balance sheet. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending and derivatives activities with and for clients and counterparties, as well as through its operating services activities, such as cash management and clearing activities. Loans originated or acquired by the Firm's wholesale businesses are generally retained on the balance sheet. The Firm's syndicated loan business, distributes a significant percentage of originations into the market and is an important component of portfolio management.

Credit risk organization

Credit risk management is overseen by the Chief Risk Officer and implemented within the lines of business. The Firm's credit risk management governance consists of the following functions:

- Establishing a comprehensive credit risk policy framework
- Monitoring and managing credit risk across all portfolio segments, including transaction and line approval
- Assigning and managing credit authorities in connection with the approval of all credit exposure
- Managing criticized exposures and delinquent loans
- Determining the allowance for credit losses and ensuring appropriate credit risk-based capital management

Risk identification and measurement

The Firm is exposed to credit risk through its lending, capital markets activities and operating services businesses. Credit Risk Management works in partnership with the business segments in identifying and aggregating exposures across all lines of business. To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the amount of exposure should the obligor or the counterparty default, the probability of default and the loss severity given a default event.

Based on these factors and related market-based inputs, the Firm estimates probable and unexpected credit losses for the consumer and wholesale portfolios. Probable credit losses inherent in the Firm's loan portfolio and related commitments are reflected in the allowance for credit losses. These losses are estimated using statistical analyses and other factors as described in Note 15 on pages 276–279 of this Annual Report. However, probable losses are not the sole indicators of risk. Unexpected losses are reflected in the allocation of credit risk capital and represent the potential volatility of actual losses relative to the amount of probable losses inherent in the portfolio. The methodologies used to measure probable and unexpected credit losses depends on the characteristics of the credit exposure, as described below.

Scored exposure

The scored portfolio is generally held in CCB and includes residential real estate loans, credit card loans, certain auto and business banking loans, and student loans. For the scored portfolio, probable and unexpected credit losses are based on statistical analysis of credit losses over discrete periods of time. Probable credit losses inherent in the portfolio are estimated using portfolio modeling, credit scoring, and decision-support tools, which consider loan-level factors such as delinquency status, credit scores, collateral values, and other risk factors. Estimated probable and unexpected credit losses also consider uncertainties and other factors, including those related to current macroeconomic and political conditions, the quality of underwriting standards, and other internal and external factors. The factors and analysis are updated on a quarterly basis or more frequently as market conditions dictate.

Risk-rated exposure

Risk-rated portfolios are generally held in CIB, CB and AM, but also include certain business banking and auto dealer loans held in CCB that are risk-rated because they have characteristics similar to commercial loans. For the risk-rated portfolio, probable and unexpected credit losses are based on estimates of the probability of default and loss severity given a default. The estimation process begins with risk-ratings that are assigned to each loan facility to differentiate risk within the portfolio. These risk-ratings are reviewed on an ongoing basis by Credit Risk management and revised as needed to reflect the borrower's current financial position, risk profile and related collateral. The probability of default is the likelihood that a loan will default and not be fully repaid by the borrower. The probability of default is estimated for each borrower, and a loss given default is estimated considering the collateral and structural support for each credit facility. The calculations and assumptions are based on management

information systems and methodologies that are under continual review.

Stress testing

Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied consistently across the businesses. These scenarios are articulated in terms of macroeconomic factors, which may lead to credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, as necessary.

Risk monitoring and management

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit and to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

For consumer credit risk, delinquency and other trends, including any concentrations at the portfolio level, are monitored for potential problems, as certain of these trends can be improved through changes in underwriting policies and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Loss mitigation strategies are being employed for all residential real estate portfolios. These strategies include interest rate reductions, term or payment extensions, principal and interest deferral and other actions intended to minimize economic loss and avoid foreclosure. Historical and forecasted trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio. Under the Firm's model risk policy, new significant risk management models, as well as major changes to such models, are required to be reviewed and approved by the Model Review Group prior to implementation into the operating environment. Internal Audit also periodically tests the internal controls around the modeling process including the integrity of the data utilized. For further discussion of consumer loans, see Note 14 on pages 250–275 of this Annual Report.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry and individual counterparty basis with established concentration limits that are reviewed and revised, as deemed appropriate by management, typically on an annual basis. Industry and counterparty limits, as measured in terms of exposure and economic credit risk capital, are subject to stress-based loss constraints.

Management of the Firm's wholesale credit risk exposure is accomplished through a number of means including:

- Loan underwriting and credit approval process
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Use of master netting agreements
- Collateral and other risk-reduction techniques

In addition to Risk Management, Internal Audit performs periodic exams, as well as continuous review, where appropriate, of the Firm's consumer and wholesale portfolios. For risk-rated portfolios, a credit review group within Internal Audit is responsible for:

- Independently assessing and validating the changing risk grades assigned to exposures; and
- Evaluating the effectiveness of business units' risk-ratings, including the accuracy and consistency of risk grades, the timeliness of risk grade changes and the justification of risk grades in credit memoranda

Risk reporting

To enable monitoring of credit risk and effective decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior Credit Risk Management. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, senior management and the Board of Directors. For further discussion of Risk monitoring and control, see page 125 of this Annual Report.

CREDIT PORTFOLIO

2012 Credit Risk Overview

The credit environment in 2012 continued to improve, but concerns persisted around the European financial crisis and the U.S. fiscal situation. Over the course of the year, the Firm continued to actively manage its underperforming and nonaccrual loans and reduce such exposures through repayments, loan sales and workouts. The Firm saw decreased downgrade, default and charge-off activity and improved consumer delinquency trends. The Firm did see a minimal increase in delinquencies in the fourth quarter as a result of Superstorm Sandy but currently does not anticipate losses to be material. At the same time, the Firm increased its overall lending activity driven by the wholesale businesses. The combination of these factors resulted in an improvement in the credit quality of the portfolio compared with 2011 and contributed to the Firm's reduction in the allowance for credit losses. The current year included the effect of regulatory guidance implemented during 2012 which resulted in the Firm reporting an additional $3.0 billion of nonaccrual loans at December 31, 2012 (see page 146 in this Annual Report for further information). Excluding the impact of the reporting changes noted above, nonperforming loans would have decreased from 2011.

The credit performance of the consumer portfolio across the entire product spectrum has improved, with lower levels of delinquent loans and charge-offs. Weak overall economic conditions continued to have a negative impact on the number of real estate loans charged off, while continued weak housing prices have resulted in an elevated severity of loss recognized on these defaulted loans. The Firm has taken proactive steps to assist homeowners most in need of financial assistance throughout the economic downturn. For further discussion of the consumer credit environment and consumer loans, see Consumer Credit Portfolio on pages 138–149 and Note 14 on pages 250–275 of this Annual Report.

The wholesale credit environment remained favorable throughout 2012. The rise in commercial client activity resulted in an increase in credit exposure across most businesses, regions and products. Underwriting guidelines across all areas of lending continue to remain a key point of focus, consistent with evolving market conditions and the Firm's risk management activities. The wholesale portfolio continues to be actively managed, in part by conducting ongoing, in-depth reviews of credit quality and of industry, product and client concentrations. During the year, wholesale criticized assets, nonperforming assets and charge-offs decreased from the higher levels experienced in 2011, including a reduction in nonaccrual loans by 40%. As a result, the ratio of nonaccrual loans to total loans, the net charge-off rate and the allowance for loan loss coverage ratio all declined. For further discussion of wholesale loans, see Note 14 on pages 250–275 of this Annual Report.

The following table presents JPMorgan Chase's credit portfolio as of December 31, 2012 and 2011. Total credit exposure was $1.9 trillion at December 31, 2012, an increase of $51.1 billion from December 31, 2011, primarily reflecting an increase in the wholesale portfolio of $70.9 billion, partially offset by a decrease in the consumer portfolio of $19.8 billion. For further information on the changes in the credit portfolio, see Consumer Credit Portfolio on pages 138–149, and Wholesale Credit Portfolio on pages 150–159, of this Annual Report.

In the following table, reported loans include loans retained (i.e., held-for-investment); loans held-for-sale (which are carried at the lower of cost or fair value, with valuation changes recorded in noninterest revenue); and certain loans accounted for at fair value. The Firm also records certain loans accounted for at fair value in trading assets. For further information regarding these loans see Note 3 on pages 196–214 of this Annual Report. For additional information on the Firm's loans and derivative receivables, including the Firm's accounting policies, see Note 14 and Note 6 on pages 250–275 and 218–227, respectively, of this Annual Report.

Total credit portfolio

December 31, 2012	Credit exposure		Nonperforming[b][c][d][e][f]	
(in millions)	**2012**	2011	**2012**	2011
Loans retained	**$ 726,835**	$ 718,997	**$ 10,609**	$ 9,810
Loans held-for-sale	**4,406**	2,626	**18**	110
Loans at fair value	**2,555**	2,097	**93**	73
Total loans – reported	**733,796**	723,720	**10,720**	9,993
Derivative receivables	**74,983**	92,477	**239**	297
Receivables from customers and other	**23,761**	17,561	**–**	–
Total credit-related assets	**832,540**	833,758	**10,959**	10,290
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**738**	975
Other	**NA**	NA	**37**	50
Total assets acquired in loan satisfactions	**NA**	NA	**775**	1,025
Total assets	**832,540**	833,758	**11,734**	11,315
Lending-related commitments	**1,027,988**	975,662	**355**	865
Total credit portfolio	**$1,860,528**	$1,809,420	**$ 12,089**	$ 12,180
Credit Portfolio Management derivatives notional, net[a]	**$ (27,447)**	$ (26,240)	**$ (25)**	$ (38)
Liquid securities and other cash collateral held against derivatives	**(13,658)**	(21,807)	**NA**	NA

Year ended December 31, (in millions, except ratios)	**2012**	2011
Net charge-offs[g]	**$ 9,063**	$ 12,237
Average retained loans		
Loans – reported	**717,035**	688,181
Loans – reported, excluding residential real estate PCI loans	**654,454**	619,227
Net charge-off rates[g]		
Loans – reported	**1.26%**	1.78%
Loans – reported, excluding PCI	**1.38**	1.98

(a) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. Excludes the synthetic credit portfolio. For additional information, see Credit derivatives on pages 158–159 and Note 6 on pages 218–227 of this Annual Report.

(b) Nonperforming includes nonaccrual loans, nonperforming derivatives, commitments that are risk rated as nonaccrual, real estate owned and other commercial and personal property.

(c) At December 31, 2012 and 2011, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $10.6 billion and $11.5 billion, respectively, that are 90 or more days past due; (2) real estate owned insured by U.S. government agencies of $1.6 billion and $954 million, respectively; and (3) student loans insured by U.S. government agencies under the FFELP of $525 million and $551 million, respectively, that are 90 or more days past due. These amounts were excluded from nonaccrual loans as reimbursement of insured amounts is proceeding normally. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council ("FFIEC").

(d) Excludes PCI loans. Because the Firm is recognizing interest income on each pool of PCI loans, they are all considered to be performing.

(e) At December 31, 2012 and 2011, total nonaccrual loans represented 1.46% and 1.38%, respectively, of total loans. At December 31, 2012, included $1.8 billion of Chapter 7 loans and $1.2 billion of performing junior liens that are subordinate to senior liens that are 90 days or more past due. For more information, see Consumer Credit Portfolio on pages 138–149 of this Annual Report.

(f) Prior to the first quarter of 2012, reported amounts had only included defaulted derivatives; effective in the first quarter of 2012, reported amounts in all periods include both defaulted derivatives as well as derivatives that have been risk rated as nonperforming.

(g) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $800 million of charge-offs of Chapter 7 loans. See Consumer Credit Portfolio on pages 138–149 of this Annual Report for further details.

CONSUMER CREDIT PORTFOLIO

JPMorgan Chase's consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, business banking loans, and student loans. The Firm's primary focus is on serving the prime segment of the consumer credit market. For further information on consumer loans, see Note 14 on pages 250–275 of this Annual Report.

A substantial portion of the consumer loans acquired in the Washington Mutual transaction were identified as PCI based on an analysis of high-risk characteristics, including product type, loan-to-value ("LTV") ratios, FICO risk scores and delinquency status. These PCI loans are accounted for on a pool basis, and the pools are considered to be performing. For further information on PCI loans see Note 14 on pages 250–275 of this Annual Report.

The credit performance of the consumer portfolio improved as the economy continued to slowly expand during 2012, resulting in a reduction in estimated credit losses, particularly in the residential real estate and credit card portfolios. However, high unemployment relative to the historical norm and weak housing prices continue to negatively impact the number of residential real estate loans being charged off and the severity of loss recognized on these loans. Early-stage residential real estate delinquencies (30–89 days delinquent), excluding government guaranteed loans, declined during the first half of the year, but increased during the second half of the year primarily due to seasonal impacts and the effect of Superstorm Sandy. Late-stage delinquencies (150+ days delinquent) continued to decline, but remain elevated. The elevated level of the late-stage delinquent loans is due, in part, to loss mitigation activities currently being undertaken and to elongated foreclosure processing timelines. Losses related to these loans continue to be recognized in accordance with the Firm's standard charge-off practices, but some delinquent loans that would otherwise have been foreclosed upon remain in the mortgage and home equity loan portfolios. In addition to these elevated levels of delinquencies, high unemployment and weak housing prices, uncertainties regarding the ultimate success of loan modifications, and the risk attributes of certain loans within the portfolio (e.g., loans with high LTV ratios, junior lien loans that are subordinate to a delinquent or modified senior lien) continue to contribute to uncertainty regarding overall residential real estate portfolio performance and have been considered in estimating the allowance for loan losses.

The following table presents consumer credit-related information held by CCB as well as residential real estate loans reported in the Asset Management and the Corporate/Private Equity segments for the dates indicated. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 14 on pages 250–275 of this Annual Report.

Consumer credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonaccrual loans[f][g][h]		Net charge-offs[i]		Average annual net charge-off rate[i][j]	
	2012	2011	2012	2011	2012	2011	2012	2011
Consumer, excluding credit card								
Loans, excluding PCI loans and loans held-for-sale								
Home equity – senior lien	$ 19,385	$ 21,765	$ 931	$ 495	$ 279	$ 284	1.33%	1.20%
Home equity – junior lien	48,000	56,035	2,277	792	2,106	2,188	4.07	3.69
Prime mortgage, including option ARMs	76,256	76,196	3,445	3,462	487	708	0.64	0.95
Subprime mortgage	8,255	9,664	1,807	1,781	486	626	5.43	5.98
Auto[a]	49,913	47,426	163	118	188	152	0.39	0.32
Business banking	18,883	17,652	481	694	411	494	2.27	2.89
Student and other	12,191	14,143	70	69	340	420	2.58	2.85
Total loans, excluding PCI loans and loans held-for-sale	232,883	242,881	9,174	7,411	4,297	4,872	1.81	1.97
Loans – PCI[b]								
Home equity	20,971	22,697	NA	NA	NA	NA	NA	NA
Prime mortgage	13,674	15,180	NA	NA	NA	NA	NA	NA
Subprime mortgage	4,626	4,976	NA	NA	NA	NA	NA	NA
Option ARMs	20,466	22,693	NA	NA	NA	NA	NA	NA
Total loans – PCI	59,737	65,546	NA	NA	NA	NA	NA	NA
Total loans – retained	292,620	308,427	9,174	7,411	4,297	4,872	1.43	1.54
Loans held-for-sale	–	–	–	–	–	–	–	–
Total consumer, excluding credit card loans	292,620	308,427	9,174	7,411	4,297	4,872	1.43	1.54
Lending-related commitments								
Home equity – senior lien[c]	15,180	16,542						
Home equity – junior lien[c]	21,796	26,408						
Prime mortgage	4,107	1,500						
Subprime mortgage	–	–						
Auto	7,185	6,694						
Business banking	11,092	10,299						
Student and other	796	864						
Total lending-related commitments	60,156	62,307						
Receivables from customers[d]	113	100						
Total consumer exposure, excluding credit card	352,889	370,834						
Credit Card								
Loans retained[e]	127,993	132,175	1	1	4,944	6,925	3.95	5.44
Loans held-for-sale	–	102	–	–	–	–	–	–
Total credit card loans	127,993	132,277	1	1	4,944	6,925	3.95	5.44
Lending-related commitments[c]	533,018	530,616						
Total credit card exposure	661,011	662,893						
Total consumer credit portfolio	$ 1,013,900	$ 1,033,727	$ 9,175	$ 7,412	$ 9,241	$ 11,797	2.17%	2.66%
Memo: Total consumer credit portfolio, excluding PCI	$ 954,163	$ 968,181	$ 9,175	$ 7,412	$ 9,241	$ 11,797	2.55%	3.15%

(a) At December 31, 2012 and 2011, excluded operating lease-related assets of $4.7 billion and $4.4 billion, respectively.

(b) Charge-offs are not recorded on PCI loans until actual losses exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. To date, no charge-offs have been recorded for these loans.

(c) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases, without notice as permitted by law.

(d) Receivables from customers primarily represent margin loans to retail brokerage customers, which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.

(e) Includes accrued interest and fees net of an allowance for the uncollectible portion of accrued interest and fee income.

(f) At December 31, 2012 and 2011, nonaccrual loans excluded: (1) mortgage loans insured by U.S. government agencies of $10.6 billion and $11.5 billion, respectively, that are 90 or more days past due; and (2) student loans insured by U.S. government agencies under the FFELP of $525 million and $551 million, respectively, that are 90 or more days past due. These amounts were excluded from nonaccrual loans as reimbursement of insured amounts is proceeding normally. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

(g) Excludes PCI loans. Because the Firm is recognizing interest income on each pool of PCI loans, they are all considered to be performing.
(h) At December 31, 2012, included $1.8 billion of Chapter 7 loans as well as $1.2 billion of performing junior liens that are subordinate to senior liens that are 90 days or more past due. See Consumer Credit Portfolio on pages 138–149 of this Annual Report for further details.
(i) Charge-offs and net charge-off rates for the year ended December 31, 2012, included net charge-offs of Chapter 7 loans of $91 million for senior lien home equity, $539 million for junior lien home equity, $47 million for prime mortgage, including option ARMs, $70 million for subprime mortgage and $53 million for auto loans. Net charge-off rates for the for the year ended December 31, 2012, excluding these net charge-offs would have been 0.90%, 3.03%, 0.58%, 4.65% and 0.28% for the senior lien home equity, junior lien home equity, prime mortgage, including option ARMs, subprime mortgages and auto loans, respectively. See Consumer Credit Portfolio on pages 138–149 of this Annual Report for further details.
(j) Average consumer loans held-for-sale were $433 million and $924 million, respectively, for the years ended December 31, 2012 and 2011. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

At December 31, 2012, the Firm reported, in accordance with regulatory guidance, $1.7 billion of residential real estate and auto loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual troubled debt restructurings ("TDRs"), regardless of their delinquency status. Pursuant to that guidance, these Chapter 7 loans were charged off to the net realizable value of the collateral, resulting in $800 million of charge-offs for the year ended December 31, 2012. The Firm expects to recover a significant amount of these losses over time as principal payments are received. Prior to September 30, 2012, the Firm's policy was to charge down to net realizable value loans to borrowers who had filed for bankruptcy when such loans became 60 days past due, and report such loans as nonaccrual at that time. However, the Firm did not previously report loans discharged under Chapter 7 bankruptcy as TDRs unless otherwise modified under one of the Firm's loss mitigation programs. Prior periods have not been restated for this policy change.

Based upon regulatory guidance, the Firm also began reporting performing junior liens that are subordinate to senior liens that are 90 days or more past due as nonaccrual loans in the first quarter of 2012. The prior year was also not restated for this policy change. The classification of certain of these higher-risk junior lien loans as nonaccrual did not have an impact on the allowance for loan losses as the Firm had previously considered the risk characteristics of this portfolio in estimating its allowance for loan losses. This regulatory policy change had a minimal impact on the Firm's net interest income during the year ended December 31, 2012, because predominantly all of the reclassified junior lien loans are currently making payments, and it is the Firm's policy to recognize these cash interest payments received as interest income.

For more information regarding the impact of these changes to nonaccrual loans and net charge-offs, see the Nonaccrual loans section on page 146 of this Annual Report and the Consumer Credit Portfolio table on page 139 of this Annual Report.

Portfolio analysis

Consumer loan balances declined during the year ended December 31, 2012, due to paydowns and charge-offs. Credit performance has improved across most portfolios but residential real estate charge-offs and delinquent loans remain above normal levels.

The following discussion relates to the specific loan and lending-related categories. PCI loans are generally excluded from individual loan product discussions and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, see Note 14 on pages 250–275 of this Annual Report.

Home equity: Home equity loans at December 31, 2012, were $67.4 billion, compared with $77.8 billion at December 31, 2011. The decrease in this portfolio primarily reflected loan paydowns and charge-offs. Early-stage delinquencies showed improvement from December 31, 2011, for both senior and junior lien home equity loans, while net charge-offs for the year ended December 31, 2012, which include Chapter 7 loan charge-offs, decreased from the prior year. Senior lien and junior lien nonaccrual loans increased $890 million in 2012 due to the inclusion of Chapter 7 loans. Junior lien nonaccrual loans also increased from December 31, 2011, due to the addition of $1.2 billion of performing junior liens that are subordinate to senior liens that are 90 days or more past due based upon regulatory guidance issued during the first quarter of 2012.

Approximately 20% of the Firm's home equity portfolio consists of home equity loans ("HELOANs") and the remainder consists of home equity lines of credit ("HELOCs"). HELOANs are generally fixed-rate, closed-end, amortizing loans, with terms ranging from 3–30 years. Approximately half of the HELOANs are senior liens and the remainder are junior liens. In general, HELOCs originated by the Firm are revolving loans for a 10-year period, after which time the HELOC recasts into a loan with a 20-year amortization period. At the time of origination, the borrower typically selects one of two minimum payment options that will generally remain in effect during the revolving period: a monthly payment of 1% of the outstanding balance, or interest-only payments based on a variable index (typically Prime). HELOCs originated by Washington Mutual were generally revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term. Predominantly all HELOCs in the PCI portfolio beyond the revolving period have been modified into fixed-rate amortizing loans.

The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial

difficulty or when the collateral does not support the loan amount. The majority of the HELOCs contain terms that do not require a fully-amortizing payment until 2015 or later. Certain factors, such as future developments in both unemployment and home prices, could have a significant impact on the performance of these loans. The Firm will continue to evaluate both the near-term and longer-term repricing and recast risks inherent in its HELOC portfolio to ensure that changes in the Firm's estimate of incurred losses are appropriately considered in the allowance for credit losses and the Firm's account management practices are appropriate given the portfolio's risk profile.

At December 31, 2012, the Firm estimated that its home equity portfolio contained approximately $3.1 billion of current junior lien loans where the borrower has a first mortgage loan that is either delinquent or has been modified ("high-risk seconds"), compared with $3.7 billion at December 31, 2011. Such loans are considered to pose a higher risk of default than that of junior lien loans for which the senior lien is neither delinquent nor modified. The Firm estimates the balance of its total exposure to high-risk seconds on a quarterly basis using internal data, loan level credit bureau data, which typically provides the delinquency status of the senior lien, as well as information from a database maintained by one of the bank regulatory agencies. The estimated balance of these high-risk seconds may vary from quarter to quarter for reasons such as the movement of related senior liens into and out of the 30+ day delinquency bucket.

Current high risk junior liens

(in billions)	December 31, 2012	
Junior liens subordinate to:		
Modified current senior lien	$ 1.1	
Senior lien 30 – 89 days delinquent	0.9	
Senior lien 90 days or more delinquent	1.1	(a)
Total current high risk junior liens	$ 3.1	

(a) Junior liens subordinate to senior liens that are 90 days or more past due are classified as nonaccrual loans. Excludes approximately $100 million of junior liens that are performing but not current, which were placed on nonaccrual in accordance with the regulatory guidance.

Of the estimated $3.1 billion of high-risk junior liens at December 31, 2012, the Firm owns approximately 5% and services approximately 30% of the related senior lien loans to the same borrowers. The performance of the Firm's junior lien loans is generally consistent regardless of whether the Firm owns, services or does not own or service the senior lien. The increased probability of default associated with these higher-risk junior lien loans was considered in estimating the allowance for loan losses.

Mortgage: Mortgage loans at December 31, 2012, including prime, subprime and loans held-for-sale, were $84.5 billion, compared with $85.9 billion at December 31, 2011. Balances declined due to paydowns and the charge-off or liquidation of delinquent loans, partially offset by new prime mortgage originations. Net charge-offs decreased from the prior year as a result of improvement in delinquencies, but remained elevated.

Prime mortgages, including option adjustable-rate mortgages ("ARMs"), were $76.3 billion at December 31, 2012, compared with $76.2 billion at December 31, 2011. These loans were largely unchanged as increases related to prime mortgage originations and government insured loans that the Firm repurchased were largely offset by charge-off or liquidation of delinquent loans and paydowns of option ARM loans. Excluding loans insured by U.S. government agencies, both early-stage and late-stage delinquencies showed improvement during the year ended December 31, 2012, but early-stage delinquent loans increased during the second half of the year due primarily to seasonal factors and the impact of Superstorm Sandy. Nonaccrual loans decreased from the prior year (notwithstanding the inclusion of Chapter 7 loans), but remained elevated as a result of ongoing foreclosure processing delays. Net charge-offs declined year-over-year but remained elevated.

Option ARM loans, which are included in the prime mortgage portfolio, were $6.5 billion and $7.4 billion and represented 9% and 10% of the prime mortgage portfolio at December 31, 2012 and 2011, respectively. The decrease in option ARM loans resulted from portfolio run-off. As of December 31, 2012, approximately 6% of option ARM borrowers were delinquent, 2% were making interest-only or negatively amortizing payments, and 92% were making amortizing payments (such payments are not necessarily fully amortizing). Approximately 84% of borrowers within the portfolio are subject to risk of payment shock due to future payment recast, as only a limited number of these loans have been modified. The cumulative amount of unpaid interest added to the unpaid principal balance due to negative amortization of option ARMs was not material at either December 31, 2012, or 2011. The Firm estimates the following balances of option ARM loans will undergo a payment recast that results in a payment increase: $523 million in 2013, $709 million in 2014 and $724 million in 2015. Default rates generally increase when payment recast results in a payment increase. However, as the Firm's option ARM loans, other than those held in the PCI portfolio, are primarily loans with lower LTV ratios and higher borrower FICO scores, it is possible that many of these borrowers will be able to refinance into a lower rate product, which would reduce this payment recast risk. Accordingly, the Firm expects substantially lower losses on this portfolio when compared with the PCI option ARM portfolio. To date, losses realized on option ARM loans that have undergone payment recast have been immaterial and consistent with the Firm's expectations. The option ARM portfolio was acquired by the Firm as part of the Washington Mutual transaction.

Subprime mortgages at December 31, 2012, were $8.3 billion, compared with $9.7 billion at December 31, 2011. The decrease was due to portfolio run-off and the charge-off or liquidation of delinquent loans. Both early-stage and late-stage delinquencies have improved from December 31,

2011, but remain at elevated levels. Early-stage delinquencies increased during the second half of the year due primarily to seasonal factors and the impact of Superstorm Sandy. Nonaccrual loans increased due to the inclusion of Chapter 7 loans, while net charge-offs declined.

Auto: Auto loans at December 31, 2012, were $49.9 billion, compared with $47.4 billion at December 31, 2011. Loan balances increased due to new originations, partially offset by paydowns and payoffs. Delinquent loans increased compared with December 31, 2011; nonaccrual loans increased due to the inclusion of Chapter 7 loans. Net charge-offs also increased for the year ended December 31, 2012, compared with the prior year as a result of charge-offs of the Chapter 7 loans. Excluding the net charge-offs of the Chapter 7 loans, net charge-offs remained low as a result of favorable trends in both loss frequency and loss severity, mainly due to enhanced underwriting standards and a strong used car market. The auto loan portfolio reflected a high concentration of prime-quality credits.

Business banking: Business banking loans at December 31, 2012, were $18.9 billion, compared with $17.7 billion at December 31, 2011. The increase was due to growth in new loan origination volumes. These loans primarily include loans that are collateralized, often with personal loan guarantees, and may also include Small Business Administration guarantees. Delinquent loans and nonaccrual loans showed improvement from December 31, 2011. Net charge-offs declined for the year ended December 31, 2012, compared with the same period in the prior year.

Student and other: Student and other loans at December 31, 2012, were $12.2 billion, compared with $14.1 billion at December 31, 2011. The decrease was primarily due to paydowns and charge-offs of student loans. Other loans primarily include other secured and unsecured consumer loans. Nonaccrual loans were flat compared with December 31, 2011 while charge-offs decreased for the year ended December 31, 2012, compared with the prior year.

Purchased credit-impaired loans: PCI loans at December 31, 2012, were $59.7 billion, compared with $65.5 billion at December 31, 2011. This portfolio represents loans acquired in the Washington Mutual transaction, which were recorded at fair value at the time of acquisition.

During the year ended December 31, 2012, no additional impairment or reserve release was recognized in connection with the Firm's review of the PCI portfolios' expected cash flows. At both December 31, 2012 and 2011, the allowance for loan losses for the home equity, prime mortgage, option ARM and subprime mortgage PCI portfolios was $1.9 billion, $1.9 billion, $1.5 billion and $380 million, respectively.

As of December 31, 2012, approximately 27% of the option ARM PCI loans were delinquent and 48% had been modified into fixed-rate, fully amortizing loans. Substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing; in addition, substantially all of these loans are subject to the risk of payment shock due to future payment recast. Default rates generally increase on option ARM loans when payment recast results in a payment increase. The expected increase in default rates is considered in the Firm's quarterly estimates of expected cash flows for the PCI portfolio. The cumulative amount of unpaid interest added to the unpaid principal balance of the option ARM PCI pool was $879 million and $1.1 billion at December 31, 2012, and December 31, 2011, respectively. The Firm estimates the following balances of option ARM PCI loans will undergo a payment recast that results in a payment increase: $283 million in 2013, $449 million in 2014 and $778 million in 2015.

The following table provides a summary of lifetime principal loss estimates included in both the nonaccretable difference and the allowance for loan losses. Lifetime principal loss estimates were relatively unchanged from December 31, 2011, to December 31, 2012. Principal charge-offs will not be recorded on these pools until the nonaccretable difference has been fully depleted.

Summary of lifetime principal loss estimates

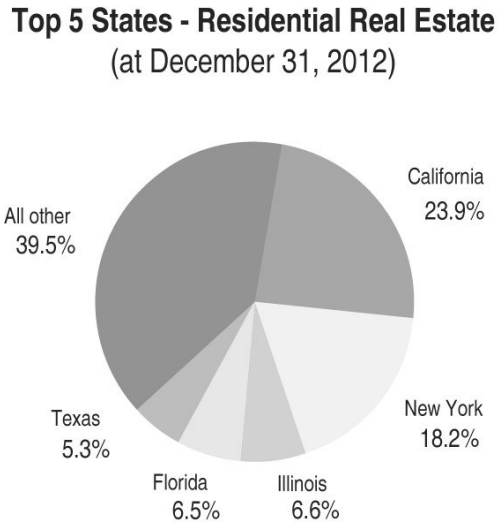
December 31, (in billions)	Lifetime loss estimates[a]		LTD liquidation losses[b]	
	2012	2011	2012	2011
Home equity	$ 14.9	$ 14.9	$ 11.5	$ 10.4
Prime mortgage	4.2	4.6	2.9	2.3
Subprime mortgage	3.6	3.8	2.2	1.7
Option ARMs	11.3	11.5	8.0	6.6
Total	$ 34.0	$ 34.8	$ 24.6	$ 21.0

(a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses only plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses only was $5.8 billion and $9.4 billion at December 31, 2012 and 2011, respectively.

(b) Life-to-date ("LTD") liquidation losses represent realization of loss upon loan resolution.

Geographic composition of residential real estate loans

At both December 31, 2012 and 2011, California had the greatest concentration of residential real estate loans with 24% of the total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans. Of the total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans, $74.1 billion, or 54%, were concentrated in California, New York, Arizona, Florida and Michigan at December 31, 2012, compared with $79.5 billion, or 54%, at December 31, 2011. The unpaid principal balance of PCI loans concentrated in these five states represented 72% of total PCI loans at both December 31, 2012 and 2011.





Current estimated LTVs of residential real estate loans

The current estimated average LTV ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 81% at December 31, 2012, compared with 83% at December 31, 2011. Excluding mortgage loans insured by U.S. government agencies and PCI loans, 20% of the retained portfolio had a current estimated LTV ratio greater than 100%, and 8% of the retained portfolio had a current estimated LTV ratio greater than 125% at December 31, 2012, compared with 24% and 10%, respectively, at December 31, 2011. The decline in home prices since 2007 has had a significant impact on the collateral values underlying the Firm's residential real estate loan portfolio. In general, the delinquency rate for loans with high LTV ratios is greater than the delinquency rate for loans in which the borrower has equity in the collateral. While a large portion of the loans with current estimated LTV ratios greater than 100% continue to pay and are current, the continued willingness and ability of these borrowers to pay remains a risk.

The following table for PCI loans presents the current estimated LTV ratios, as well as the ratios of the carrying value of the underlying loans to the current estimated collateral value. Because such loans were initially measured at fair value, the ratios of the carrying value to the current estimated collateral value will be lower than the current estimated LTV ratios, which are based on the unpaid principal balances. The estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting ratios are necessarily imprecise and should therefore be viewed as estimates.

LTV ratios and ratios of carrying values to current estimated collateral values – PCI loans

	2012				2011			
December 31, (in millions, except ratios)	Unpaid principal balance	Current estimated LTV ratio[a]	Net carrying value[c]	Ratio of net carrying value to current estimated collateral value[c]	Unpaid principal balance	Current estimated LTV ratio[a]	Net carrying value[c]	Ratio of net carrying value to current estimated collateral value[c]
Home equity	$ 22,343	111% [b]	$ 19,063	95%	$ 25,064	117% [b]	$ 20,789	97%
Prime mortgage	13,884	104	11,745	88	16,060	110	13,251	91
Subprime mortgage	6,326	107	4,246	72	7,229	115	4,596	73
Option ARMs	22,591	101	18,972	85	26,139	109	21,199	89

(a) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated at least quarterly based on home valuation models that utilize nationally recognized home price index valuation estimates; such models incorporate actual data to the extent available and forecasted data where actual data is not available.

(b) Represents current estimated combined LTV for junior home equity liens, which considers all available lien positions related to the property. All other products are presented without consideration of subordinate liens on the property.

(c) Net carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition and is also net of the allowance for loan losses of $1.9 billion for home equity, $1.9 billion for prime mortgage, $1.5 billion for option ARMs, and $380 million for subprime mortgage at both December 31, 2012 and 2011.

The current estimated average LTV ratios were 110% and 125% for California and Florida PCI loans, respectively, at December 31, 2012, compared with 117% and 140%, respectively, at December 31, 2011. Pressure on housing prices in California and Florida have contributed negatively to both the current estimated average LTV ratio and the ratio of net carrying value to current estimated collateral value for loans in the PCI portfolio. Of the PCI portfolio, 55% had a current estimated LTV ratio greater than 100%, and 24% had a current LTV ratio of greater than 125% at December 31, 2012, compared with 62% and 31%, respectively, at December 31, 2011.

While the current estimated collateral value is greater than the net carrying value of PCI loans, the ultimate performance of this portfolio is highly dependent on borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity, as well as on the cost of alternative housing. For further information on the geographic composition and current estimated LTVs of residential real estate – non-PCI and PCI loans, see Note 14 on pages 250–275 of this Annual Report.

Loan modification activities – residential real estate loans

For both the Firm's on-balance sheet loans and loans serviced for others, more than 1.4 million mortgage modifications have been offered to borrowers and approximately 622,000 have been approved since the beginning of 2009. Of these, approximately 610,000 have achieved permanent modification as of December 31, 2012. Of the remaining modifications offered, 16% are in a trial period or still being reviewed for a modification, while 84% have dropped out of the modification program or otherwise were deemed not eligible for final modification.

The Firm is participating in the U.S. Treasury's Making Home Affordable ("MHA") programs and is continuing to offer its other loss-mitigation programs to financially distressed borrowers who do not qualify for the U.S. Treasury's programs. The MHA programs include the Home Affordable Modification Program ("HAMP") and the Second Lien Modification Program ("2MP"). The Firm's other loss-mitigation programs for troubled borrowers who do not qualify for HAMP include the traditional modification programs offered by the GSEs and other governmental agencies, as well as the Firm's proprietary modification programs, which include concessions similar to those offered under HAMP and 2MP but with expanded eligibility criteria. In addition, the Firm has offered specific targeted modification programs to higher risk borrowers, many of whom were current on their mortgages prior to modification. For further information about how loans are modified, see Note 14, Loan modifications, on pages 260–262 of this Annual Report.

Loan modifications under HAMP and under one of the Firm's proprietary modification programs, which are largely modeled after HAMP, require at least three payments to be made under the new terms during a trial modification period, and must be successfully re-underwritten with income verification before the loan can be permanently modified. In the case of specific targeted modification programs, re-underwriting the loan or a trial modification period is generally not required, unless the targeted loan is delinquent at the time of modification. When the Firm modifies home equity lines of credit, future lending commitments related to the modified loans are canceled as part of the terms of the modification.

The primary indicator used by management to monitor the success of the modification programs is the rate at which the modified loans redefault. Modification redefault rates are affected by a number of factors, including the type of loan modified, the borrower's overall ability and willingness to repay the modified loan and macroeconomic factors. Reduction in payment size for a borrower has shown to be the most significant driver in improving redefault rates.

The performance of modified loans generally differs by product type and also on whether the underlying loan is in the PCI portfolio, due both to differences in credit quality and in the types of modifications provided. Performance metrics for modifications to the residential real estate portfolio, excluding PCI loans, that have been seasoned more than six months show weighted average redefault rates of 25% for senior lien home equity, 20% for junior lien home equity, 14% for prime mortgages including option ARMs, and 24% for subprime mortgages. The cumulative performance metrics for modifications to the PCI residential real estate portfolio seasoned more than six months show weighted average redefault rates of 22% for home equity, 16% for prime mortgages, 13% for option ARMs and 28% for subprime mortgages. The favorable performance of the option ARM modifications is the result of a targeted proactive program which fixes the borrower's payment at the current level. The cumulative redefault rates reflect the performance of modifications completed under both HAMP and the Firm's proprietary modification programs from October 1, 2009, through December 31, 2012.

The following table presents information as of December 31, 2012 and 2011, relating to modified on-balance sheet residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. Modifications of PCI loans continue to be accounted for and reported as PCI loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of estimated future cash flows. Modifications of consumer loans other than PCI loans are generally accounted for and reported as TDRs. For further information on TDRs for the years ended December 31, 2012 and 2011, see Note 14 on pages 250–275 of this Annual Report.

Modified residential real estate loans

	2012		2011	
December 31, (in millions)	On-balance sheet loans	Nonaccrual on-balance sheet loans[e]	On-balance sheet loans	Nonaccrual on-balance sheet loans[e]
Modified residential real estate loans, excluding PCI loans[a][b][c]				
Home equity – senior lien	**$ 1,092**	**$ 607**	$ 335	$ 77
Home equity – junior lien	**1,223**	**599**	657	159
Prime mortgage, including option ARMs	**7,118**	**1,888**	4,877	922
Subprime mortgage	**3,812**	**1,308**	3,219	832
Total modified residential real estate loans, excluding PCI loans	**$ 13,245**	**$ 4,402**	$ 9,088	$ 1,990
Modified PCI loans[d]				
Home equity	**$ 2,302**	**NA**	$ 1,044	NA
Prime mortgage	**7,228**	**NA**	5,418	NA
Subprime mortgage	**4,430**	**NA**	3,982	NA
Option ARMs	**14,031**	**NA**	13,568	NA
Total modified PCI loans	**$ 27,991**	**NA**	$ 24,012	NA

(a) Amounts represent the carrying value of modified residential real estate loans.

(b) At December 31, 2012 and 2011, $7.5 billion and $4.3 billion, respectively, of loans permanently modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. For additional information about sales of loans in securitization transactions with Ginnie Mae, see Note 16 on pages 280–291 of this Annual Report.

(c) At December 31, 2012, included $1.6 billion of Chapter 7 loans, consisting of $450 million of senior lien home equity loans, $448 million of junior lien home equity loans, $465 million of prime, including option ARMs, and $245 million of subprime mortgages. Certain of these loans were previously reported as nonaccrual loans (e.g. based upon the delinquency status of the loan). See Consumer Credit Portfolio on pages 138–149 of this Annual Report for further details.

(d) Amounts represent the unpaid principal balance of modified PCI loans.

(e) As of December 31, 2012 and 2011, nonaccrual loans included $2.9 billion and $886 million, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status, see Note 14 on pages 250–275 of this Annual Report.

Nonperforming assets

The following table presents information as of December 31, 2012 and 2011, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[a]		
December 31, (in millions)	2012	2011
Nonaccrual loans[b]		
Home equity – senior lien	$ 931	$ 495
Home equity – junior lien	2,277	792
Prime mortgage, including option ARMs	3,445	3,462
Subprime mortgage	1,807	1,781
Auto	163	118
Business banking	481	694
Student and other	70	69
Total nonaccrual loans	9,174	7,411
Assets acquired in loan satisfactions		
Real estate owned	647	802
Other	37	44
Total assets acquired in loan satisfactions	684	846
Total nonperforming assets	$ 9,858	$ 8,257

(a) At December 31, 2012 and 2011, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $10.6 billion and $11.5 billion, respectively, that are 90 or more days past due; (2) real estate owned insured by U.S. government agencies of $1.6 billion and $954 million, respectively; and (3) student loans insured by U.S. government agencies under the FFELP of $525 million and $551 million, respectively, that are 90 or more days past due. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

(b) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

Nonaccrual loans: Total consumer, excluding credit card, nonaccrual loans were $9.2 billion at December 31, 2012, compared with $7.4 billion at December 31, 2011.

Excluding the combined impacts of the Chapter 7 loans and the performing junior lien home equity loans discussed below, total consumer, excluding credit card, nonaccrual loans would have been $6.2 billion at December 31, 2012, compared with $7.4 billion at December 31, 2011. In addition to the combined impacts of the Chapter 7 loans and the performing junior lien home equity loans, elongated foreclosure processing timelines continue to result in elevated levels of nonaccrual loans in the residential real estate portfolios.

Nonaccrual loans in the residential real estate portfolio totaled $8.5 billion at December 31, 2012, of which 42% were greater than 150 days past due, compared with nonaccrual residential real estate loans of $6.5 billion at December 31, 2011, of which 69% were greater than 150 days past due. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 52% and 50% to estimated net realizable value of the collateral at December 31, 2012 and 2011, respectively.

At December 31, 2012, consumer, excluding credit card, nonaccrual loans included $1.8 billion of Chapter 7 loans, consisting of $450 million of senior lien home equity, $440 million of junior lien home equity, $500 million of prime mortgage, including option ARMs, $357 million of subprime mortgages and $51 million of auto loans. Because the Chapter 7 loans are accounted for as collateral-dependent loans and reported at the net realizable value of the collateral, these loans did not require an additional allowance for loan losses. Certain of these individual loans had previously been reported as performing TDRs (e.g., those loans that had been previously modified under one of the Firm's loss mitigation programs and that subsequently made at least six payments under the modified payment terms).

At December 31, 2012, nonaccrual loans in the residential real estate portfolio also included $1.2 billion of performing junior lien home equity loans that are subordinate to senior liens that are 90 days or more past due. For more information on the change in reporting of these junior liens, see the home equity portfolio analysis discussion on pages 140–141 of this Annual Report.

Modified loans have contributed to an elevated level of nonaccrual loans, since the Firm's policy requires modified loans that are on nonaccrual status to remain on nonaccrual status until payment is reasonably assured and the borrower has made a minimum of six payments under the modified terms. At December 31, 2012 and 2011, modified residential real estate loans of $4.4 billion and $2.0 billion, respectively, were classified as nonaccrual loans.

Real estate owned ("REO"): REO assets are managed for prompt sale and disposition at the best possible economic value. REO assets are those individual properties where the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession). The Firm generally recognizes REO assets at the completion of the foreclosure process or upon execution of a deed in lieu of foreclosure transaction with the borrower. REO assets, excluding those insured by U.S. government agencies, decreased by $155 million from $802 million at December 31, 2011, to $647 million at December 31, 2012.

Mortgage servicing-related matters

The financial crisis resulted in unprecedented levels of delinquencies and defaults of 1-4 family residential real estate loans. Such loans required varying degrees of loss mitigation activities. It is the Firm's goal that foreclosure in these situations be a last resort, and accordingly, the Firm has made, and continues to make, significant efforts to help borrowers stay in their homes. Since the third quarter of 2010, the Firm has prevented two foreclosures for every foreclosure completed; foreclosure-prevention methods include loan modification, short sales and other means.

The Firm has a well-defined foreclosure prevention process when a borrower fails to pay on his or her loan. The Firm attempts to contact the borrower multiple times and in various ways in an effort to pursue home retention or other

options other than foreclosure. In addition, if the Firm is unable to contact a borrower, the Firm completes various reviews of the borrower's facts and circumstances before a foreclosure sale is completed. The delinquency period for the average borrower at the time of foreclosure over the last year has been approximately 25 months.

The high volume of delinquent and defaulted mortgages experienced by the Firm has placed a significant amount of stress on the Firm's servicing operations. The Firm has entered into a global settlement with certain federal and state agencies and Consent Orders with its banking regulators with respect to various mortgage servicing, loss mitigation and foreclosure process-related matters as further discussed below. The GSEs also impose compensatory fees on its mortgage servicers, including the Firm, if such servicers are unable to comply with the foreclosure timetables mandated by the GSEs. The Firm has incurred, and is continuing to incur, compensatory fees, which are reported in default servicing expense. To address its underlying mortgage servicing, loss mitigation and foreclosure process issues, the Firm has made, and is continuing to make, significant changes to its mortgage operations, which will enable it to comply with the Consent Orders and the global settlement and enhance its ability to comply with the foreclosure timetables mandated by the GSEs.

Global settlement with federal and state agencies: On February 9, 2012, the Firm announced that it had agreed to a settlement in principle (the "global settlement") with a number of federal and state government agencies, including the U.S. Department of Justice, the U.S. Department of Housing and Urban Development, the Consumer Financial Protection Bureau and the State Attorneys General, relating to the servicing and origination of mortgages. The global settlement, which became effective on April 5, 2012, required the Firm to, among other things: (i) make cash payments of approximately $1.1 billion, a portion of which will be set aside for payments to borrowers ("Cash Settlement Payment"); (ii) provide approximately $500 million of refinancing relief to certain "underwater" borrowers whose loans are owned and serviced by the Firm ("Refi Program"); and (iii) provide approximately $3.7 billion of additional relief for certain borrowers, including reductions of principal on first and second liens, payments to assist with short sales, deficiency balance waivers on past foreclosures and short sales, and forbearance assistance for unemployed homeowners ("Consumer Relief Program"). The Cash Settlement Payment was made on April 13, 2012.

The purpose of the Refi Program was to allow eligible borrowers who were current on their Firm-owned mortgage loans to refinance those loans and take advantage of the current low interest rate environment. Borrowers who were eligible for the Refi Program were those who were unable to refinance their mortgage loans under standard refinancing programs because they had no equity or, in many cases, negative equity in their homes. Initial interest rates on loans refinanced under the Refi Program were lower than the borrowers' interest rates prior to the refinancings and were capped at the greater of 100 basis points over Freddie Mac's then-current Primary Mortgage Market Survey Rate or 5.25%. Under the Refi Program, the interest rate on each refinanced loan could have been reduced either for the remaining life of the loan or for five years. The Firm reduced the interest rates on loans that it refinanced under the Refi Program for the remaining lives of those loans. In substance, these refinancings were more similar to loan modifications than traditional refinancings. All refinancings required under the Refi Program were completed as of December 31, 2012.

The first and second lien loan modifications provided for in the Consumer Relief Program will typically involve principal reductions for borrowers who have negative equity in their homes and who are experiencing financial difficulty. These loan modifications are primarily expected to be executed under the terms of either MHA (e.g., HAMP, 2MP) or one of the Firm's proprietary modification programs. The Firm began to provide relief to borrowers under the Consumer Relief Program in the first quarter of 2012.

If the Firm does not meet certain targets set forth in the global settlement agreement for providing either refinancings under the Refi Program or other borrower relief under the Consumer Relief Program within certain prescribed time periods, the Firm must instead make additional cash payments. In general, 75% of the targets must be met within two years of the date of the global settlement and 100% must be achieved within three years of that date. The Firm filed its first quarterly report concerning its compliance with the global settlement with the Office of Mortgage Settlement Oversight in November 2012. The report included information regarding the refinancings completed under the Refi Program and relief provided to borrowers under the Consumer Relief Program, as well as credits earned by the Firm under the global settlement as a result of such actions. The Firm expects to substantially complete its obligations under the Consumer Relief Program in the first half of 2013.

The global settlement also requires the Firm to adhere to certain enhanced mortgage servicing standards. The servicing standards include, among other items, the following enhancements to the Firm's servicing of loans: a pre-foreclosure notice to all borrowers, which will include account information, holder status, and loss mitigation steps taken; enhancements to payment application and collections processes; strengthening procedures for filings in bankruptcy proceedings; deploying specific restrictions on the "dual track" of foreclosure and loss mitigation; standardizing the process for appeal of loss mitigation denials; and implementing certain restrictions on fees, including the waiver of certain fees while a borrower's loss mitigation application is being evaluated. The Firm has made significant progress in implementing the prescribed servicing standards.

The global settlement releases the Firm from certain further claims by the participating government entities related to servicing activities, including foreclosures and loss mitigation activities; certain origination activities; and certain bankruptcy-related activities. Not included in the global settlement are any claims arising out of securitization activities, including representations made to investors with respect to mortgage-backed securities; criminal claims; and repurchase demands from the GSEs, among other items.

The Firm has accounted for all refinancings performed under the Refi Program and expects to account for all first and second lien loans modified under the Consumer Relief Program as TDRs. The expected impact of the Consumer Relief Program has been considered in the Firm's allowance for loan losses. For additional information, see Allowance for Credit Losses on pages 159–162 of this Annual Report.

On February 9, 2012, the Firm also entered into agreements with the Federal Reserve and the OCC for the payment of civil money penalties related to conduct that was the subject of consent orders entered into with the banking regulators in April 2011, as discussed further below. The Firm's payment obligations under those agreements will be deemed satisfied by the Firm's payments and provisions of relief under the global settlement.

For further information on the global settlement, see Critical Accounting Estimates Used by the Firm on pages 178–182, Note 2 on pages 195–196 and Note 14 on pages 250–275 of this Annual Report.

Consent Orders: During the second quarter of 2011, the Firm entered into Consent Orders ("Orders") with banking regulators relating to its residential mortgage servicing, foreclosure and loss-mitigation activities. In the Orders, the regulators have mandated significant changes to the Firm's servicing and default business and outlined requirements to implement these changes. The Firm submitted comprehensive action plans to the regulators, which set forth the steps necessary to ensure the Firm's residential mortgage servicing, foreclosure and loss-mitigation activities are conducted in accordance with the requirements of the Orders. The plans were approved and the Firm has implemented a number of corrective actions and made significant progress with respect to the following:

- Established an independent Compliance Committee which meets regularly and monitors progress against the Orders.
- Launched a new Customer Assistance Specialist organization for borrowers to facilitate the single point of contact initiative and ensure effective coordination and communication related to foreclosure, loss-mitigation and loan modification.
- Enhanced its approach to oversight over third-party vendors for foreclosure or other related functions.
- Standardized the processes for maintaining appropriate controls and oversight of the Firm's activities with respect to the Mortgage Electronic Registration system ("MERS") and compliance with MERSCORP's membership rules, terms and conditions.
- Strengthened its compliance program so as to ensure mortgage-servicing and foreclosure operations, including loss-mitigation and loan modification, comply with all applicable legal requirements.
- Enhanced management information systems for loan modification, loss-mitigation and foreclosure activities.
- Developed a comprehensive assessment of risks in servicing operations including, but not limited to, operational, transaction, legal and reputational risks.
- Made technological enhancements to automate and streamline processes for the Firm's document management, training, skills assessment and payment processing initiatives.
- Deployed an internal validation process to monitor progress under the comprehensive action plans.

In addition, pursuant to the Orders, the Firm is required to enhance oversight of its mortgage servicing activities, including oversight by compliance, management and audit personnel and, accordingly, has made and continues to make changes in its organization structure, control oversight and customer service practices.

Pursuant to the Orders, the Firm had retained an independent consultant to conduct a review of its residential foreclosure actions during the period from January 1, 2009, through December 31, 2010 (including foreclosure actions brought in respect of loans being serviced), and to remediate any errors or deficiencies identified by the independent consultant.

On January 7, 2013, the Firm announced that it and a number of other financial institutions entered into a settlement agreement with the OCC and the Federal Reserve providing for the termination of such Independent Foreclosure Review programs. As a result of this settlement, the independent consultant will no longer be conducting a look-back review of residential foreclosure actions. The Firm will make a cash payment of $753 million into a settlement fund for distribution to qualified borrowers. The Firm has also committed an additional $1.2 billion to foreclosure prevention actions, which will be fulfilled through credits given to the Firm for modifications, short sales and other specified types of borrower relief. Foreclosure prevention actions that earn credit under the Independent Foreclosure Review settlement are in addition to actions taken by the Firm to earn credit under the Consumer Relief Program of the global settlement. The estimated impact of the foreclosure prevention actions required under the Independent Foreclosure Review settlement have been considered in the Firm's allowance for loan losses. The Firm recognized a pretax charge of approximately $700 million in the fourth quarter of 2012 related to the Independent Foreclosure Review settlement.

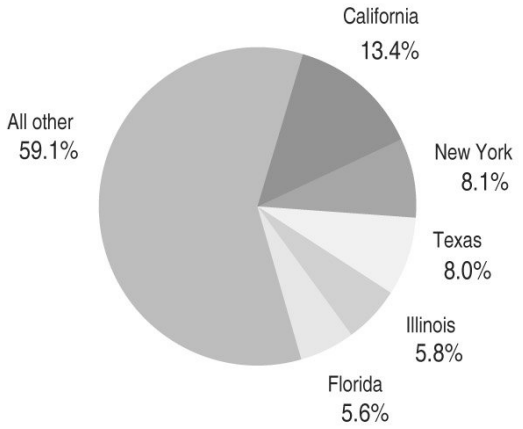
Credit Card

Total credit card loans were $128.0 billion at December 31, 2012, a decrease of $4.3 billion from December 31, 2011. The decrease in outstanding loans was primarily due to higher repayment rates.

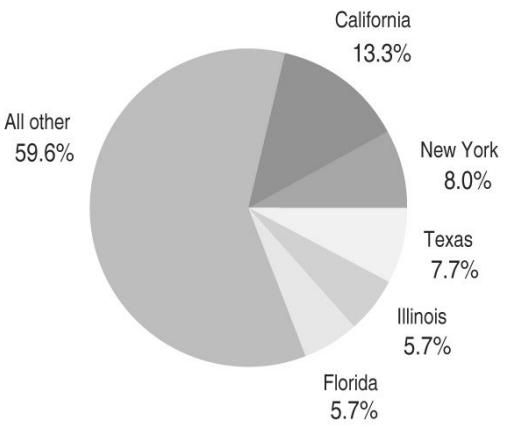
For the retained credit card portfolio, the 30+ day delinquency rate decreased to 2.10% at December 31, 2012, from 2.81% at December 31, 2011. For the years ended December 31, 2012 and 2011, the net charge-off rates were 3.95% and 5.44% respectively. Charge-offs have improved as a result of lower delinquent loans. The credit card portfolio continues to reflect a well-seasoned, largely rewards-based portfolio that has good U.S. geographic diversification. The greatest geographic concentration of credit card retained loans is in California, which represented 13% of total retained loans at both December 31, 2012 and 2011. Loan concentration for the top five states of California, New York, Texas, Florida and Illinois consisted of $52.3 billion in receivables, or 41% of the retained loan portfolio, at December 31, 2012, compared with $53.6 billion, or 40%, at December 31, 2011.

Geographic composition of Credit Card loans

Top 5 States Credit Card - Retained
(at December 31, 2012)



Top 5 States Credit Card - Retained
(at December 31, 2011)



Modifications of credit card loans

At December 31, 2012 and 2011, the Firm had $4.8 billion and $7.2 billion, respectively, of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms. The decrease in modified credit card loans outstanding from December 31, 2011, was attributable to a reduction in new modifications as well as ongoing payments and charge-offs on previously modified credit card loans. In the second quarter of 2012, the Firm revised its policy for recognizing charge-offs on restructured loans that do not comply with their modified payment terms. Commencing June 30, 2012 these loans are now charged-off when they are 120 days past due rather than 180 days past due.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged-off. However, the Firm establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued interest and fee income.

For additional information about loan modification programs to borrowers, see Note 14 on pages 250–275 of this Annual Report.

WHOLESALE CREDIT PORTFOLIO

As of December 31, 2012, wholesale exposure (CIB, CB and AM) increased by $70.9 billion from December 31, 2011, primarily driven by increases of $52.1 billion in lending-related commitments and $30.2 billion in loans due to increased client activity across most regions and most businesses. The increase in loans was due to growth in CB and AM. These increases were partially offset by a $17.5 billion decrease in derivative receivables, primarily related to the decline in the U.S. dollar, and tightening of credit spreads; these changes resulted in reductions to interest rate, credit derivative, and foreign exchange balances.

Wholesale credit portfolio

December 31,	Credit exposure		Nonperforming[c][d]	
(in millions)	**2012**	2011	**2012**	2011
Loans retained	**$306,222**	$278,395	**$ 1,434**	$ 2,398
Loans held-for-sale	**4,406**	2,524	**18**	110
Loans at fair value	**2,555**	2,097	**93**	73
Loans – reported	**313,183**	283,016	**1,545**	2,581
Derivative receivables	**74,983**	92,477	**239**	297
Receivables from customers and other[a]	**23,648**	17,461	**–**	–
Total wholesale credit-related assets	**411,814**	392,954	**1,784**	2,878
Lending-related commitments	**434,814**	382,739	**355**	865
Total wholesale credit exposure	**$846,628**	$775,693	**$ 2,139**	$ 3,743
Credit Portfolio Management derivatives notional, net[b]	**$ (27,447)**	$ (26,240)	**$ (25)**	$ (38)
Liquid securities and other cash collateral held against derivatives	**(13,658)**	(21,807)	**NA**	NA

(a) Receivables from customers and other primarily includes margin loans to prime and retail brokerage customers; these are classified in accrued interest and accounts receivable on the Consolidated Balance Sheets.
(b) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. Excludes the synthetic credit portfolio. For additional information, see Credit derivatives on pages 158–159, and Note 6 on pages 218–227 of this Annual Report.
(c) Excludes assets acquired in loan satisfactions.
(d) Prior to the first quarter of 2012, reported amounts had only included defaulted derivatives; effective in the first quarter of 2012, reported amounts in all periods include both defaulted derivatives as well as derivatives that have been risk rated as nonperforming.

The following table presents summaries of the maturity and ratings profiles of the wholesale credit portfolio as of December 31, 2012 and 2011. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings as defined by S&P and Moody's.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[e]				Ratings profile			
December 31, 2012 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	Investment-grade AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	Total	Total % of IG
Loans retained	$ 115,227	$ 117,673	$ 73,322	$ 306,222	$ 214,446	$ 91,776	$ 306,222	70%
Derivative receivables				74,983			74,983	
Less: Liquid securities and other cash collateral held against derivatives				(13,658)			(13,658)	
Total derivative receivables, net of all collateral	13,336	25,055	22,934	61,325	50,406	10,919	61,325	82
Lending-related commitments	164,327	261,261	9,226	434,814	347,316	87,498	434,814	80
Subtotal	292,890	403,989	105,482	802,361	612,168	190,193	802,361	76
Loans held-for-sale and loans at fair value[a]				6,961			6,961	
Receivables from customers and other				23,648			23,648	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 832,970			$ 832,970	
Credit Portfolio Management derivatives net notional by counterparty ratings profile[b][c]	$ (1,579)	$ (16,475)	$ (9,393)	$ (27,447)	$ (27,507)	$ 60	$ (27,447)	100%
Credit Portfolio Management derivatives net notional by reference entity ratings profile[b][d]					$ (24,622)	$ (2,825)	$ (27,447)	90%

	Maturity profile[e]				Ratings profile			
December 31, 2011 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	Investment-grade AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	Total	Total % of IG
Loans retained	$ 113,222	$ 101,959	$ 63,214	$ 278,395	$ 196,998	$ 81,397	$ 278,395	71%
Derivative receivables				92,477			92,477	
Less: Liquid securities and other cash collateral held against derivatives				(21,807)			(21,807)	
Total derivative receivables, net of all collateral	8,243	29,910	32,517	70,670	57,637	13,033	70,670	82
Lending-related commitments	139,978	233,396	9,365	382,739	310,107	72,632	382,739	81
Subtotal	261,443	365,265	105,096	731,804	564,742	167,062	731,804	77
Loans held-for-sale and loans at fair value[a]				4,621			4,621	
Receivables from customers and other				17,461			17,461	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 753,886			$ 753,886	
Credit Portfolio Management derivatives net notional by counterparty ratings profile[b][c]	$ (2,034)	$ (16,450)	$ (7,756)	$ (26,240)	$ (26,300)	$ 60	$ (26,240)	100%
Credit Portfolio Management derivatives net notional by reference entity ratings profile[b][d]					$ (22,159)	$ (4,081)	$ (26,240)	84%

(a) Represents loans held-for-sale primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
(b) These derivatives do not quality for hedge accounting under U.S. GAAP. Excludes the synthetic credit portfolio.
(c) The notional amounts are presented on a net basis by each derivative counterparty and the ratings profile shown is based on the ratings of those counterparties. The counterparties to these positions are predominately investment-grade banks and finance companies.
(d) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased.
(e) The maturity profiles of retained loans and lending-related commitments are based on the remaining contractual maturity. The maturity profiles of derivative receivables are based on the maturity profile of average exposure. For further discussion of average exposure, see Derivative receivables on pages 156–159 of this Annual Report.

Wholesale credit exposure – selected industry exposures

The Firm focuses on the management and diversification of its industry exposures, with particular attention paid to industries with actual or potential credit concerns. As of September 30, 2012, the Firm revised its definition of the criticized component of the wholesale portfolio to align with the banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. Prior periods have been reclassified to conform with the current presentation. The reclassification resulted in an increase in the level of reported criticized exposure by $4.5 billion as of December 31, 2011, which did not result in material changes to the Firm's underlying risk ratings or the amount of nonaccrual loans. Accordingly, this reclassification did not result in material changes to the Firm's allowance for credit losses or additional provision for credit losses. Furthermore, this change had no effect on reported net interest income with respect to the affected loans. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, decreased by 23% to $15.6 billion at December 31, 2012, from $20.3 billion at December 31, 2011, primarily due to repayments.

Below are summaries of the top 25 industry exposures as of December 31, 2012 and 2011. For additional information on industry concentrations, see Note 5 on page 217 of this Annual Report.

As of or for the year ended December 31, 2012 (in millions)	Credit exposure[c]	Investment-grade	Noninvestment-grade[d][f]			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[e]	Liquid securities and other cash collateral held against derivative receivables
Top 25 industries[a]									
Real Estate	$ 76,198	$ 50,103	$ 21,503	$ 4,067	$ 525	$ 391	$ 54	$ (41)	$ (507)
Banks & Finance Cos	73,318	55,805	16,928	578	7	20	(34)	(3,524)	(5,983)
Healthcare	48,487	41,146	6,761	569	11	38	9	(238)	(450)
Oil & Gas	42,563	31,258	11,012	270	23	9	–	(155)	(101)
State & Municipal Govt[b]	41,821	40,562	1,093	52	114	28	2	(186)	(218)
Consumer Products	32,778	21,428	10,473	868	9	2	(16)	(275)	(12)
Asset Managers	31,474	26,283	4,987	204	–	46	–	–	(2,667)
Utilities	29,533	24,917	4,257	175	184	2	15	(315)	(368)
Retail & Consumer Services	25,597	16,100	8,763	700	34	20	(11)	(37)	(1)
Central Govt	21,223	20,678	484	61	–	–	–	(11,620)	(1,154)
Metals/Mining	20,958	12,912	7,608	406	32	8	(1)	(409)	(124)
Transportation	19,827	15,128	4,353	283	63	5	2	(82)	(1)
Machinery & Equipment Mfg	18,504	10,228	7,827	444	5	–	2	(23)	–
Technology	18,488	12,089	5,683	696	20	–	1	(226)	–
Media	16,007	7,473	7,754	517	263	2	(218)	(93)	–
Insurance	14,446	12,156	2,119	171	–	2	(2)	(143)	(1,654)
Business Services	13,577	7,172	6,132	232	41	9	23	(10)	–
Building Materials/Construction	12,377	5,690	5,892	791	4	8	1	(114)	–
Telecom Services	12,239	7,792	3,244	1,200	3	5	1	(229)	–
Chemicals/Plastics	11,591	7,234	4,172	169	16	18	2	(55)	(74)
Automotive	11,511	6,447	4,963	101	–	–	–	(530)	–
Leisure	7,748	3,160	3,724	551	313	–	(13)	(63)	(24)
Agriculture/Paper Mfg	7,729	5,029	2,657	42	1	5	–	–	–
Aerospace/Defense	6,702	5,518	1,150	33	1	–	–	(141)	–
Securities Firms & Exchanges	5,756	4,096	1,612	46	2	–	–	(171)	(179)
All other	195,567	174,264	20,562	384	357	1,478	5	(8,767)	(141)
Subtotal	$ 816,019	$ 624,668	$ 175,713	$ 13,610	$ 2,028	$ 2,096	$ (178)	$ (27,447)	$ (13,658)
Loans held-for-sale and loans at fair value	6,961								
Receivables from customers and other	23,648								
Total	$ 846,628								

As of or for the year ended December 31, 2011 (in millions)	Credit exposure[c]	Investment-grade	Noninvestment-grade[d][f]			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[e]	Liquid securities and other cash collateral held against derivative receivables
Top 25 industries[a]									
Real Estate	$ 67,594	$ 40,921	$ 19,947	$ 5,732	$ 994	$ 411	$ 256	$ (97)	$ (359)
Banks & Finance Cos	71,440	59,115	11,744	555	26	20	(211)	(3,053)	(9,585)
Healthcare	42,247	35,146	6,816	228	57	166	–	(304)	(320)
Oil & Gas	35,437	24,957	10,178	274	28	3	–	(119)	(88)
State & Municipal Govt[b]	41,930	40,565	1,122	113	130	23	–	(185)	(147)
Consumer Products	29,637	19,728	9,040	832	37	3	13	(272)	(50)
Asset Managers	33,465	28,834	4,201	429	1	24	–	–	(4,807)
Utilities	28,650	23,557	4,412	174	507	–	76	(105)	(359)
Retail & Consumer Services	22,891	14,567	7,446	778	100	15	1	(96)	(1)
Central Govt	17,138	16,524	488	126	–	–	–	(9,796)	(813)
Metals/Mining	15,254	8,716	6,339	198	1	6	(19)	(423)	–
Transportation	16,305	12,061	3,930	256	58	6	17	(178)	–
Machinery & Equipment Mfg	16,498	9,014	7,236	238	10	1	(1)	(19)	–
Technology	17,898	12,494	4,985	417	2	–	4	(191)	–
Media	11,909	6,853	3,729	866	461	1	18	(188)	–
Insurance	13,092	9,425	2,852	802	13	–	–	(552)	(454)
Business Services	12,408	7,093	5,012	264	39	17	22	(20)	(2)
Building Materials/Construction	11,770	5,175	5,335	1,256	4	6	(4)	(213)	–
Telecom Services	11,552	8,502	2,493	546	11	2	5	(390)	–
Chemicals/Plastics	11,728	7,867	3,700	146	15	–	–	(95)	(20)
Automotive	9,910	5,699	4,123	88	–	9	(11)	(819)	–
Leisure	5,650	3,051	1,680	530	389	1	1	(81)	(26)
Agriculture/Paper Mfg	7,594	4,888	2,540	166	–	9	–	–	–
Aerospace/Defense	8,560	7,646	845	69	–	7	–	(208)	–
Securities Firms & Exchanges	12,394	10,799	1,571	23	1	10	73	(395)	(3,738)
All other	180,660	161,546	16,785	1,653	676	1,099	200	(8,441)	(1,038)
Subtotal	$ 753,611	$ 584,743	$ 148,549	$ 16,759	$ 3,560	$ 1,839	$ 440	$ (26,240)	$ (21,807)
Loans held-for-sale and loans at fair value	4,621								
Receivables from customers and other	17,461								
Total	$ 775,693								

(a) The industry rankings presented in the table as of December 31, 2011, are based on the industry rankings of the corresponding exposures at December 31, 2012, not actual rankings of such exposures at December 31, 2011.

(b) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2012 and 2011, noted above, the Firm held $18.2 billion and $16.7 billion, respectively, of trading securities and $21.7 billion and $16.5 billion, respectively, of AFS securities issued by U.S. state and municipal governments. For further information, see Note 3 and Note 12 on pages 196–214 and 244–248, respectively, of this Annual Report.

(c) Credit exposure is net of risk participations and excludes the benefit of "Credit Portfolio Management derivatives net notional" held against derivative receivables or loans and "Liquid securities and other cash collateral held against derivative receivables".

(d) As of December 31, 2012, exposures deemed criticized correspond to special mention, substandard and doubtful categories as defined by bank regulatory agencies. Prior periods have been reclassified to conform with the current presentation.

(e) Represents the net notional amounts of protection purchased and sold through credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The all other category includes purchased credit protection on certain credit indices. Credit Portfolio Management derivatives excludes the synthetic credit portfolio.

(f) Prior to the first quarter of 2012, reported amounts had only included defaulted derivatives; effective in the first quarter of 2012, reported amounts in all periods include both defaulted derivatives as well as derivatives that have been risk rated as nonperforming.

Presented below is a discussion of several industries to which the Firm has significant exposure, as well as industries the Firm continues to monitor because of actual or potential credit concerns. For additional information, refer to the tables on the previous pages.

- **Real estate:** Exposure to this industry increased by $8.6 billion or 13%, in 2012 to $76.2 billion. The increase was primarily driven by CB. The credit quality of this industry improved as the investment-grade portion of the exposures to this industry increased by 22% from 2011, while the criticized portion declined by 32% from 2011, primarily as a result of repayments and loan sales. The ratio of nonaccrual retained loans to total retained loans decreased to 0.86% at December 31, 2012 from 1.62% at December 31, 2011 in line with the decrease in real estate criticized exposure. For further information on commercial real estate loans, see Note 14 on pages 250–275 of this Annual Report.
- **Banks and finance companies:** Exposure to this industry increased by $1.9 billion or 3%, and criticized exposure decreased by 0.7%, compared with 2011. At December 31, 2012, 76% of the portfolio is rated investment-grade.
- **State and municipal governments:** Exposure to this industry decreased by $109 million in 2012 to $41.8 billion. Lending-related commitments comprise approximately 69% of the exposure to this sector, generally in the form of bond and commercial paper liquidity and standby letter of credit commitments. The credit quality of the portfolio remains high as 97% of the portfolio was rated investment-grade, which was unchanged from 2011. Criticized exposure was less than 0.40% of this industry's exposure. The non-U.S. portion of this industry was less than 4% of the total. The Firm continues to actively monitor and manage this exposure in light of the challenging environment faced by state and municipal governments. For further discussion of commitments for bond liquidity and standby letters of credit, see Note 29 on pages 308–315 of this Annual Report.
- **All other:** All other at December 31, 2012 (excluding loans held-for-sale and loans at fair value), included $195.6 billion of credit exposure. Concentrations of exposures include: (1) Individuals, Private Education & Civic Organizations, which were 57% of this category and (2) SPEs which were 28% of this category. Each of these categories has high credit quality, and approximately 90% of each of these categories were rated investment-grade. SPEs provide secured financing (generally backed by receivables, loans or bonds with a diverse group of obligors); the lending in this category was all secured and well-structured. For further discussion of SPEs, see Note 1 on pages 193–194 and Note 16 on pages 280–291 of this Annual Report. The remaining exposure within this category is well-diversified, with no category being more than 7% of its total.

The following tables present the geographic distribution of wholesale credit exposure including nonperforming assets and past due loans as of December 31, 2012 and 2011. The geographic distribution of the wholesale portfolio is determined based predominantly on the domicile (legal residence) of the borrower. For further information on Country Risk Management, see pages 170–173 of this Annual Report.

	Credit exposure				Nonperforming					
December 31, 2012 (in millions)	Loans	Lending-related commitments	Derivative receivables	Total credit exposure	Nonaccrual loans[a]	Derivatives	Lending-related commitments	Total non-performing credit exposure	Assets acquired in loan satisfactions	30 days or more past due and accruing loans
Europe/Middle East/Africa	$ 40,760	$ 75,706	$ 35,561	$ 152,027	$ 13	$ 8	$ 15	$ 36	$ 9	$ 131
Asia/Pacific	30,287	22,919	10,557	63,763	13	–	–	13	–	18
Latin America/Caribbean	30,322	26,438	4,889	61,649	67	–	4	71	–	640
Other North America	2,987	7,653	1,418	12,058	–	–	–	–	–	14
Total non-U.S.	104,356	132,716	52,425	289,497	93	8	19	120	9	803
Total U.S.	201,866	302,098	22,558	526,522	1,341	231	336	1,908	82	1,293
Loans held-for-sale and loans at fair value	6,961	–	–	6,961	111	NA	–	111	NA	–
Receivables from customers and other	–	–	–	23,648	–	NA	NA	–	NA	–
Total	$ 313,183	$ 434,814	$ 74,983	$ 846,628	$ 1,545	$ 239	$ 355	$ 2,139	$ 91	$ 2,096

	Credit exposure				Nonperforming					
December 31, 2011 (in millions)	Loans	Lending-related commitments	Derivative receivables	Total credit exposure	Nonaccrual loans[a]	Derivatives[b]	Lending-related commitments	Total non-performing credit exposure	Assets acquired in loan satisfactions	30 days or more past due and Accruing loans
Europe/Middle East/Africa	$ 36,637	$ 60,681	$ 43,204	$ 140,522	$ 44	$ 14	$ 25	$ 83	$ –	$ 68
Asia/Pacific	31,119	17,194	10,943	59,256	1	42	–	43	–	6
Latin America/Caribbean	25,141	20,859	5,316	51,316	386	–	15	401	3	222
Other North America	2,267	6,680	1,488	10,435	3	–	1	4	–	–
Total non-U.S.	95,164	105,414	60,951	261,529	434	56	41	531	3	296
Total U.S.	183,231	277,325	31,526	492,082	1,964	241	824	3,029	176	1,543
Loans held-for-sale and loans at fair value	4,621	–	–	4,621	183	NA	–	183	NA	–
Receivables from customers and other	–	–	–	17,461	–	NA	NA	–	NA	–
Total	$ 283,016	$ 382,739	$ 92,477	$ 775,693	$ 2,581	$ 297	$ 865	$ 3,743	$ 179	$ 1,839

(a) At December 31, 2012 and 2011, the Firm held an allowance for loan losses of $310 million and $496 million, respectively, related to nonaccrual retained loans resulting in allowance coverage ratios of 22% and 21%, respectively. Wholesale nonaccrual loans represented 0.49% and 0.91% of total wholesale loans at December 31, 2012 and 2011, respectively.

(b) Prior to the first quarter of 2012, reported amounts had only included defaulted derivatives; effective in the first quarter of 2012, reported amounts in all periods include both defaulted derivatives as well as derivatives that have been risk rated as nonperforming.

Loans

In the normal course of its wholesale business, the Firm provides loans to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals. For further discussion on loans, including information on credit quality indicators, see Note 14 on pages 250–275 of this Annual Report.

The Firm actively manages wholesale credit exposure. One way of managing credit risk is through sales of loans and lending-related commitments. During 2012 and 2011, the Firm sold $8.4 billion and $5.2 billion, respectively, of loans and commitments. These sale activities are not related to the Firm's securitization activities. For further discussion of securitization activity, see Liquidity Risk Management and Note 16 on pages 127–133 and 280–291 respectively, of this Annual Report.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2012 and 2011. Nonaccrual wholesale loans decreased by $1.0 billion from December 31, 2011, primarily reflecting paydowns.

Wholesale nonaccrual loan activity

Year ended December 31, (in millions)	2012	2011
Beginning balance	$ 2,581	$ 6,006
Additions	1,748	2,519
Reductions:		
Paydowns and other	1,784	2,841
Gross charge-offs	335	907
Returned to performing status	240	807
Sales	425	1,389
Total reductions	2,784	5,944
Net additions/(reductions)	(1,036)	(3,425)
Ending balance	$ 1,545	$ 2,581

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2012 and 2011. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

Wholesale net charge-offs/recoveries

Year ended December 31, (in millions, except ratios)	2012	2011
Loans – reported		
Average loans retained	$ 291,980	$ 245,111
Gross charge-Offs	346	916
Gross recoveries	(524)	(476)
Net charge-offs/(recoveries)	(178)	440
Net charge-off/(recovery) rate	(0.06)%	0.18%

Receivables from customers

Receivables from customers primarily represent margin loans to prime and retail brokerage clients that are collateralized through a pledge of assets maintained in clients' brokerage accounts that are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's position may be liquidated by the Firm to meet the minimum collateral requirements.

Lending-related commitments

JPMorgan Chase uses lending-related financial instruments, such as commitments and guarantees, to meet the financing needs of its customers. The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligations under these guarantees, and the counterparties subsequently fails to perform according to the terms of these contracts.

In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's actual credit risk exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these commitments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn upon in an event of a default by an obligor. The loan-equivalent amount of the Firm's lending-related commitments was $223.7 billion and $206.5 billion as of December 31, 2012 and 2011, respectively.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activities. Derivatives enable customers to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its own credit exposure. For further discussion of derivative contracts, see Note 5 and Note 6 on page 217 and pages 218–227, respectively, of this Annual Report.

The following table summarizes the net derivative receivables for the periods presented.

Derivative receivables

	Derivative receivables	
December 31, (in millions)	2012	2011
Interest rate	$ 39,205	$ 46,369
Credit derivatives	1,735	6,684
Foreign exchange	14,142	17,890
Equity	9,266	6,793
Commodity	10,635	14,741
Total, net of cash collateral	74,983	92,477
Liquid securities and other cash collateral held against derivative receivables	(13,658)	(21,807)
Total, net of all collateral	$ 61,325	$ 70,670

Derivative receivables reported on the Consolidated Balance Sheets were $75.0 billion and $92.5 billion at December 31, 2012 and 2011, respectively. These amounts represent the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements, cash collateral held by the Firm and the CVA. However, in management's view, the appropriate measure of current credit risk should also take into consideration additional liquid securities (primarily U.S. government and agency securities and other G7 government bonds) and other cash collateral held by the Firm of $13.7 billion and $21.8 billion at December 31, 2012 and 2011, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor, as shown in the table above.

In addition to the collateral described in the preceding paragraph, the Firm also holds additional collateral (including cash, U.S. government and agency securities, and other G7 government bonds) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Though this collateral does not reduce the balances and is not included in the table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative transactions move in the Firm's favor. As of December 31, 2012 and 2011, the Firm held $22.6 billion and $17.6 billion, respectively, of this additional collateral. The derivative receivables, net of all collateral, also does not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of collateral agreements, see Note 6 on pages 218–227 of this Annual Report.

While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

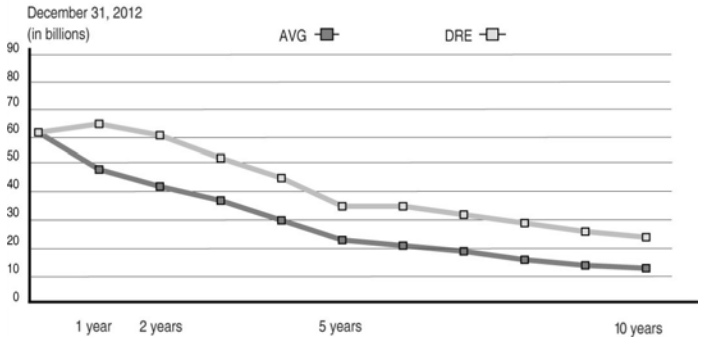
Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, AVG is a measure of the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the CVA, as further described below. The three year AVG exposure was $42.3 billion and $53.6 billion at December 31, 2012 and 2011, respectively, compared with derivative receivables, net of all collateral, of $61.3 billion and $70.7 billion at December 31, 2012 and 2011, respectively.

The fair value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk management process takes into consideration the potential impact of wrong-way risk, which is broadly defined as the potential for increased correlation between the Firm's exposure to a counterparty (AVG) and the counterparty's credit quality. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with that counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to derivatives over the next 10 years as calculated by the DRE and AVG metrics. The two measures generally show that exposure will decline after the first year, if no new trades are added to the portfolio.

Exposure profile of derivatives measures



The following table summarizes the ratings profile by derivative counterparty of the Firm's derivative receivables, including credit derivatives, net of other liquid securities collateral, for the dates indicated.

Ratings profile of derivative receivables

Rating equivalent	2012		2011	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 20,040**	**33%**	$ 25,100	35%
A+/A1 to A-/A3	**12,169**	**20**	22,942	32
BBB+/Baa1 to BBB-/Baa3	**18,197**	**29**	9,595	14
BB+/Ba1 to B-/B3	**9,636**	**16**	10,545	15
CCC+/Caa1 and below	**1,283**	**2**	2,488	4
Total	**$ 61,325**	**100%**	$ 70,670	100%

As noted above, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's derivatives transactions subject to collateral agreements – excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity – was 88% as of December 31, 2012, unchanged compared with December 31, 2011.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller) when the reference entity suffers a credit event. If no credit event has occurred, the protection seller makes no payments to the protection purchaser.

For a more detailed description of credit derivatives, see Credit derivatives in Note 6 on pages 218–227 of this Annual Report.

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker; and second, as an end-user, to manage the Firm's own credit risk associated with various exposures.

Included in end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses ("Credit Portfolio Management" activities). Information on Credit Portfolio Management activities is provided in the table below.

In addition, the Firm uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain AFS securities and from certain securities held in the Firm's market making businesses. These credit derivatives, as well as the synthetic credit portfolio, are not included in Credit Portfolio Management activities; for further information on these credit derivatives as well as credit derivatives used in the Firm's capacity as a market maker in credit derivatives, see Credit derivatives in Note 6 on pages 226–227 of this Annual Report.

Credit Portfolio Management activities

Credit Portfolio Management derivatives

December 31, (in millions)	Notional amount of protection purchased and sold [a] 2012	2011
Credit derivatives used to manage:		
Loans and lending-related commitments	$ 2,166	$ 3,488
Derivative receivables	25,347	22,883
Total net protection purchased	27,513	26,371
Total net protection sold	66	131
Credit Portfolio Management derivatives net notional	$ 27,447	$ 26,240

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

The credit derivatives used in Credit Portfolio Management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure. In addition, the effectiveness of the Firm's credit default swap ("CDS") protection as a hedge of the Firm's exposures may vary depending on a number of factors, including the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures), the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS), and the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm).

The fair value related to the Firm's credit derivatives used for managing credit exposure, as well as the fair value related to the CVA (which reflects the credit quality of derivatives counterparty exposure), are included in the gains and losses realized on credit derivatives disclosed in the table below. These results can vary from period to period due to market conditions that affect specific positions in the portfolio.

Net gains and losses on credit portfolio hedges

Year ended December 31, (in millions)	2012	2011	2010
Hedges of loans and lending-related commitments	$ (163)	$ (32)	$ (279)
CVA and hedges of CVA	127	(769)	(403)
Net gains/(losses)	$ (36)	$ (801)	$ (682)

COMMUNITY REINVESTMENT ACT EXPOSURE

The Community Reinvestment Act ("CRA") encourages banks to meet the credit needs of borrowers in all segments of their communities, including neighborhoods with low or moderate incomes. The Firm is a national leader in community development by providing loans, investments and community development services in communities across the United States.

At December 31, 2012 and 2011, the Firm's CRA loan portfolio was approximately $16 billion and $15 billion, respectively. At December 31, 2012 and 2011, 62% and 63%, respectively, of the CRA portfolio were residential mortgage loans; 18% and 17%, respectively, were business banking loans; 13% and 14%, respectively, were commercial real estate loans; and 7% and 6%, respectively, were other loans. CRA nonaccrual loans were 4% and 6%, respectively, of the Firm's total nonaccrual loans. For the years ended December 31, 2012 and 2011, net charge-offs in the CRA portfolio were 3% of the Firm's net charge-offs in both years.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers the consumer, including credit card, portfolio segments (primarily scored); and wholesale (risk-rated) portfolio. The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also determines an allowance for wholesale and certain consumer, excluding credit card, lending-related commitments.

The allowance for loan losses includes an asset-specific component, a formula-based component, and a component related to PCI loans. The asset-specific component and the PCI loan component are generally based on an estimate of cash flows expected to be collected from specifically identified impaired or PCI loans. The formula-based component is based on a statistical calculation to provide for probable principal losses inherent in the remaining loan portfolios. Within the formula-based component, management applies judgment within an established framework to adjust the results of applying its statistical loss calculation. The determination of the appropriate adjustment is based on management's view of uncertainties that have occurred but are not yet reflected in the statistical calculation and that relate to current macroeconomic and political conditions, the quality of underwriting standards, and other relevant internal and external factors affecting

the credit quality of the portfolio. For a further discussion of the components of the allowance for credit losses, see Critical Accounting Estimates Used by the Firm on pages 178–182 and Note 15 on pages 276–279 of this Annual Report.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2012, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses inherent in the portfolio).

The allowance for credit losses was $22.6 billion at December 31, 2012, a decrease of $5.7 billion from $28.3 billion at December 31, 2011.

The consumer, excluding credit card, allowance for loan losses decreased $4.0 billion from December 31, 2011, predominantly due to a reduction in the allowance for the non-PCI residential real estate portfolio, reflecting the continuing trend of improving delinquencies and nonaccrual loans (excluding the impact of Chapter 7 loans and junior liens that are subordinate to senior liens that are 90 days or more past due, which have been included in nonaccrual loans beginning in 2012), which resulted in a lower level of estimated losses based on the Firm's base statistical loss calculation. The allowance also included a $488 million reduction attributable to a refinement of the loss estimates associated with the Firm's compliance with its obligations under the global settlement, which reflected changes in implementation strategies adopted in the second quarter of 2012. The adjustment to the base statistical loss calculation that underlies the formula-based component of the allowance for credit losses for the consumer, excluding credit card, portfolio segment has declined over the past two years, predominantly because specific risks covered by this adjustment were subsequently incorporated into either the base statistical loss calculation or asset-specific reserves during that same time period.

The credit card allowance for loan losses decreased by $1.5 billion since December 31, 2011, due to reductions in both the asset-specific allowance and the formula-based allowance. The reduction in the asset-specific allowance, which relates to loans restructured in TDRs, largely reflects the changing profile of the TDR portfolio. The volume of new TDRs, which have higher loss rates due to expected redefaults, continues to decrease, and the loss rate on existing TDRs is also decreasing over time as previously restructured loans season and continue to perform. In addition, effective June 30, 2012, the Firm changed its policy for recognizing charge-offs on restructured loans that do not comply with their modified payment terms based upon guidance received from the banking regulators; this policy change resulted in an acceleration of charge-offs against the asset-specific allowance. For the year ended December 31, 2012, the reduction in the formula-based allowance was primarily driven by the continuing trend of improving delinquencies and bankruptcies (which resulted in a lower level of estimated losses based on the Firm's statistical loss calculation) and by lower levels of credit card outstandings. The adjustment to the base statistical loss calculation that underlies the formula-based component of the allowance for credit losses for the credit card portfolio segment has increased somewhat over the past two years, primarily to consider current macroeconomic conditions (including relatively high unemployment rates).

The wholesale allowance for loan losses decreased by $173 million since December 31, 2011. The decrease was driven by recoveries, the restructuring of certain nonperforming loans and other portfolio activity, as well as continued improvements in the wholesale credit environment as evidenced by lower charge-offs, non-accrual assets and downgrade activity. The resulting decrease has been partially offset by an increase in the adjustment to the base statistical loss calculation in order to reflect inherent credit losses that have not been captured by current credit metrics and greater levels of uncertainty, due to the low level of criticized assets and limited downgrade activity in the portfolio.

For additional information about the credit quality of the Firm's loan portfolios, see Consumer Credit Portfolio on pages 138–149, Wholesale Credit Portfolio on pages 150–159, and Note 14 on pages 250–275 of this Annual Report.

The allowance for lending-related commitments for both the consumer, excluding credit card, and wholesale portfolios, which is reported in other liabilities, was $668 million and $673 million at December 31, 2012 and 2011, respectively.

The credit ratios in the following table are based on retained loan balances, which exclude loans held-for-sale and loans accounted for at fair value.

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2012 Consumer, excluding credit card	2012 Credit card	2012 Wholesale	2012 Total	2011 Consumer, excluding credit card	2011 Credit card	2011 Wholesale	2011 Total
Allowance for loan losses								
Beginning balance at January 1,	$ 16,294	$ 6,999	$ 4,316	$ 27,609	$ 16,471	$ 11,034	$ 4,761	$ 32,266
Gross charge-offs	4,805 [(d)]	5,755	346	10,906	5,419	8,168	916	14,503
Gross recoveries	(508)	(811)	(524)	(1,843)	(547)	(1,243)	(476)	(2,266)
Net charge-offs/(recoveries)	4,297 [(d)]	4,944	(178)	9,063	4,872	6,925	440	12,237
Provision for loan losses	302	3,444	(359)	3,387	4,670	2,925	17	7,612
Other	(7)	2	8	3	25	(35)	(22)	(32)
Ending balance at December 31,	$ 12,292	$ 5,501	$ 4,143	$ 21,936	$ 16,294	$ 6,999	$ 4,316	$ 27,609
Impairment methodology								
Asset-specific[(a)]	$ 729	$ 1,681	$ 319	$ 2,729	$ 828	$ 2,727	$ 516	$ 4,071
Formula-based	5,852	3,820	3,824	13,496	9,755	4,272	3,800	17,827
PCI	5,711	–	–	5,711	5,711	–	–	5,711
Total allowance for loan losses	$ 12,292	$ 5,501	$ 4,143	$ 21,936	$ 16,294	$ 6,999	$ 4,316	$ 27,609
Allowance for lending-related commitments								
Beginning balance at January 1,	$ 7	$ –	$ 666	$ 673	$ 6	$ –	$ 711	$ 717
Provision for lending-related commitments	–	–	(2)	(2)	2	–	(40)	(38)
Other	–	–	(3)	(3)	(1)	–	(5)	(6)
Ending balance at December 31,	$ 7	$ –	$ 661	$ 668	$ 7	$ –	$ 666	$ 673
Impairment methodology								
Asset-specific	$ –	$ –	$ 97	$ 97	$ –	$ –	$ 150	$ 150
Formula-based	7	–	564	571	7	–	516	523
Total allowance for lending-related commitments	$ 7	$ –	$ 661	$ 668	$ 7	$ –	$ 666	$ 673
Total allowance for credit losses	$ 12,299	$ 5,501	$ 4,804	$ 22,604	$ 16,301	$ 6,999	$ 4,982	$ 28,282
Memo:								
Retained loans, end of period	$ 292,620	$ 127,993	$ 306,222	$ 726,835	$ 308,427	$ 132,175	$ 278,395	$ 718,997
Retained loans, average	300,024	125,031	291,980	717,035	315,736	127,334	245,111	688,181
PCI loans, end of period	59,737	–	19	59,756	65,546	–	21	65,567
Credit ratios								
Allowance for loan losses to retained loans	4.20%	4.30%	1.35 %	3.02%	5.28%	5.30%	1.55%	3.84%
Allowance for loan losses to retained nonaccrual loans[(b)]	134	NM	289	207	220	NM	180	281
Allowance for loan losses to retained nonaccrual loans excluding credit card	134	NM	289	155	220	NM	180	210
Net charge-off/(recovery) rates[(c)]	1.43 [(d)]	3.95	(0.06)	1.26	1.54	5.44	0.18	1.78
Credit ratios, excluding residential real estate PCI loans								
Allowance for loan losses to retained loans	2.83	4.30	1.35	2.43	4.36	5.30	1.55	3.35
Allowance for loan losses to retained nonaccrual loans[(b)]	72	NM	289	153	143	NM	180	223
Allowance for loan losses to retained nonaccrual loans excluding credit card[(b)]	72	NM	289	101	143	NM	180	152
Net charge-off/(recovery) rates[(c)]	1.81% [(d)]	3.95%	(0.06)%	1.38%	1.97%	5.44%	0.18%	1.98%

(a) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.
(b) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.
(c) Charge-offs are not recorded on PCI loans until actual losses exceed estimated losses recorded as purchase accounting adjustments at the time of acquisition.
(d) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $800 million of charge-offs of Chapter 7 loans. See Consumer Credit Portfolio on pages 138–149 of this Annual Report for further details.

Provision for credit losses

For the year ended December 31, 2012, the provision for credit losses was $3.4 billion, down by 55% from 2011.

The consumer, excluding credit card, provision for credit losses was $302 million in 2012, compared with $4.7 billion in 2011, reflecting reductions in the allowance for loan losses due primarily to lower estimated losses in the non-PCI residential real estate portfolio as delinquency trends improved. These reductions were partially offset by the impact of charge-offs of Chapter 7 loans.

The credit card provision for credit losses was $3.4 billion in 2012, compared with $2.9 billion in 2011, reflecting a smaller current year reduction in the allowance for loan losses compared with the prior year, partially offset by lower net charge-offs in 2012.

In 2012 the wholesale provision for credit losses was a benefit of $361 million, compared with a benefit of $23 million in 2011. The current year period provision reflected recoveries, the restructuring of certain nonperforming loans, current credit trends and other portfolio activity. For further information on the provision for credit losses, see the Consolidated Results of Operations on pages 72–75 of this Annual Report.

Year ended December 31,	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
(in millions)	**2012**	2011	2010	**2012**	2011	2010	**2012**	2011	2010
Consumer, excluding credit card	**$ 302**	$ 4,670	$ 9,458	**$ –**	$ 2	$ (6)	**$ 302**	$ 4,672	$ 9,452
Credit card	**3,444**	2,925	8,037	**–**	–	–	**3,444**	2,925	8,037
Wholesale	**(359)**	17	(673)	**(2)**	(40)	(177)	**(361)**	(23)	(850)
Total provision for credit losses	**$ 3,387**	$ 7,612	$ 16,822	**$ (2)**	$ (38)	$ (183)	**$ 3,385**	$ 7,574	$ 16,639

Market risk is the exposure to an adverse change in the market value of portfolios and financial instruments caused by a change in their market prices.

Market risk management
Market Risk is an independent risk management function that works in close partnership with the lines of business, including Corporate/Private Equity, to identify and monitor market risks throughout the Firm and to define market risk policies and procedures. The market risk function reports to the Firm's Chief Risk Officer.

Market Risk seeks to control risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk identification and classification
Each line of business is responsible for the management of the market risks within its units. The independent risk management group responsible for overseeing each line of business ensures that all material market risks are appropriately identified, measured, monitored and managed in accordance with the risk policy framework set out by Market Risk. The Firm's market risks arise primarily from the activities in CIB, Mortgage Production and Mortgage Servicing in CCB, and CIO in Corporate/Private Equity.

CIB makes markets in products across fixed income, foreign exchange, equities and commodities markets. This activity gives rise to market risk and may lead to a potential decline in net income as a result of changes in market prices and rates. In addition, CIB's credit portfolio exposes the Firm to market risks related to credit valuation adjustments ("CVA"), hedges of CVA and the fair value of hedges of the retained loan portfolio. Additional market risk positions result from debit valuation adjustments ("DVA") taken on structured notes and derivative liabilities to reflect the credit quality of the Firm; DVA is not included in VaR.

The Firm's Mortgage Production and Mortgage Servicing businesses includes the Firm's mortgage pipeline and warehouse loans, MSRs and all related hedges. These activities give rise to complex, non-linear interest rate risks, as well as basis risk. Non-linear risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing. Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates.

Corporate/Private Equity comprises Private Equity, Treasury and CIO. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital and structural interest rate and foreign exchange risks. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's four major reportable business segments to serve their respective client bases, which generate both on- and off-balance sheet assets and liabilities.

Risk measurement

Tools used to measure risk
Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- Value-at-risk ("VaR")
- Economic-value stress testing
- Nonstatistical risk measures
- Loss advisories
- Profit and loss drawdowns
- Risk identification for large exposures ("RIFLEs")
- Nontrading interest rate-sensitive revenue-at-risk stress testing

Value-at-risk
JPMorgan Chase utilizes VaR, a statistical risk measure, to estimate the potential loss from adverse market moves in a normal market environment.

The Firm has one overarching VaR model framework used for risk management purposes across the Firm, which utilizes historical simulation based on data for the previous 12 months. The framework's approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. VaR is calculated assuming a one-day holding period and an expected tail-loss methodology, which approximates a 95% confidence level. This means that, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur losses greater than that predicted by VaR estimates five times in every 100 trading days.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual products and/or risk factors. To capture material market risks as part of the Firm's risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes

in market values over the historical period; inputs are selected based on the risk profile of each portfolio as sensitivities and historical time series used to generate daily market values may be different for different products or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

Data sources used in VaR models may be the same as those used for financial statement valuations. However in cases where market prices are not observable, or where proxies are used in VaR historical time series, the sources may differ. In addition, the daily market data used in VaR models may be different than the independent third party data collected for VCG price testing in their monthly valuation process (see pages 196–200 of this Annual Report for further information on the Firm's valuation process.) VaR model calculations require a more timely (i.e., daily) data and consistent source for valuation and therefore it is not practical to use the monthly valuation process.

VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks across businesses and monitoring limits. These VaR results are reported to senior management, the Board of Directors and regulators.

The Firm uses VaR as a statistical risk management tool for assessing risk under normal market conditions consistent with the day-to-day risk decisions made by the lines of business. VaR is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. The Firm uses economic-value stress testing and other techniques to capture and manage market risk arising under stressed scenarios, as described further below.

Because VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses. For example, differences between current and historical market price volatility may result in fewer or greater VaR exceptions than the number indicated by the historical simulation. The VaR measurement also does not provide an estimate of the extent to which losses may exceed VaR results. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions. As VaR cannot be used to determine future losses in the Firm's market risk positions, the Firm considers other metrics in addition to VaR to monitor and manage its market risk positions.

Separately, the Firm calculates a daily aggregated VaR in accordance with regulatory rules, which is used to derive the Firm's regulatory VaR based capital requirements. This regulatory VaR model framework currently assumes a ten business day holding period and an expected tail loss methodology, which approximates a 99% confidence level. Regulatory VaR is applied to positions as defined by the banking regulators' Basel I "Market Risk Rule", which are different than positions included in the Firm's internal risk management VaR. Certain positions are not included in the Firm's internal risk management VaR, while the Firm's internal risk management VaR includes some positions, such as CVA and its related credit hedges that are not included in Regulatory VaR. For further information, see Capital Management on pages 116–122 of this Annual Report. Effective in the first quarter of 2013, the Firm will implement regulatory VaR for positions as defined by the U.S. banking regulators' Basel 2.5 "Market Risk Rule".

The table below shows the results of the Firm's VaR measure using a 95% confidence level.

Total VaR

As of or for the year ended December 31,	2012			2011			At December 31,	
(in millions)	Avg.	Min	Max	Avg.	Min	Max	2012	2011
CIB trading VaR by risk type								
Fixed income	$ 83 [a]	$ 47	$ 131	$ 50	$ 31	$ 68	$ 69	$ 49
Foreign exchange	10	6	22	11	6	19	8	19
Equities	21	12	35	23	15	42	22	19
Commodities and other	15	11	27	16	8	24	15	22
Diversification benefit to CIB trading VaR	(45) [b]	NM [c]	NM [c]	(42) [b]	NM [c]	NM [c]	(39) [b]	(55) [b]
CIB trading VaR	84	50	128	58	34	80	75	54
Credit portfolio VaR	25	16	42	33	19	55	18	42
Diversification benefit to CIB trading and credit portfolio VaR	(13) [b]	NM [c]	NM [c]	(15) [b]	NM [c]	NM [c]	(9) [b]	(20) [b]
Total CIB trading and credit portfolio VaR	96 [a][e]	58	142	76	42	102	84 [a][e]	76
Other VaR								
Mortgage Production and Mortgage Servicing VaR	17	8	43	30	6	98	24	16
Chief Investment Office ("CIO") VaR	92 [a][d]	5	196	57	30	80	6	77
Diversification benefit to total other VaR	(8) [b]	NM [c]	NM [c]	(17) [b]	NM [c]	NM [c]	(5) [b]	(10) [b]
Total other VaR	101	18	204	70	46	110	25	83
Diversification benefit to total CIB and other VaR	(45) [b]	NM [c]	NM [c]	(45) [b]	NM [c]	NM [c]	(11) [b]	(46) [b]
Total VaR	$ 152	$ 93	$ 254	$ 101	$ 67	$ 147	$ 98	$ 113

(a) On July 2, 2012, CIO transferred its synthetic credit portfolio, other than a portion aggregating approximately $12 billion notional, to CIB; CIO's retained portfolio was effectively closed out during the three months ended September 30, 2012. During the third quarter of 2012, the Firm applied a new VaR model to calculate VaR for both the portion of the synthetic credit portfolio held by CIB, as well as the portion that was retained by CIO, and which was effectively closed out at September 30, 2012. For the three months ended December 31, 2012, this new VaR model resulted in a reduction to average fixed income VaR of $11 million, average CIB trading and credit portfolio VaR of $8 million, and average total VaR of $7 million.

(b) Average portfolio VaR and period-end portfolio VaR were less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects the fact that the risks were not perfectly correlated.

(c) Designated as not meaningful ("NM"), because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio-diversification effect.

(d) Reference is made to CIO synthetic credit portfolio on pages 69–70 of this Annual Report regarding the Firm's restatement of its 2012 first quarter financial statements. The CIO VaR amount has not been recalculated for the first quarter to reflect the restatement. The 2012 full-year VaR does not include recalculated amounts for the first quarter of 2012.

(e) Effective in the fourth quarter of 2012, CIB's VaR includes the VaR of former reportable business segments, Investment Bank and Treasury & Securities Services ("TSS"), which were combined to form the CIB business segment as a result of the reorganization of the Firm's business segments. TSS VaR was not material and was previously classified within Other VaR. Prior period VaR disclosures were not revised as a result of the business segment reorganization.

VaR measurement

CIB trading VaR includes substantially all market-making and client-driven activities as well as certain risk management activities in CIB. This includes the credit spread sensitivities to CVA and syndicated lending facilities that the Firm intends to distribute. For certain products, specific risk parameters are not captured in VaR. Reasons include the lack of inherent illiquidity and availability of appropriate historical data or suitable proxies. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. While the overall impact to VaR is not material, the Firm uses alternative methods to capture and measure these risk parameters not otherwise captured in VaR, including economic-value stress testing, nonstatistical measures and risk identification for large exposures as described further below.

Credit portfolio VaR includes the derivative CVA, hedges of the CVA and hedges of the retained portfolio, which are reported in principal transactions revenue. Credit portfolio VaR does not include the retained loan portfolio, which is not reported at fair value.

Other VaR includes certain positions employed as part of the Firm's risk management function within the CIO and in the Mortgage Production and Mortgage Servicing businesses. CIO VaR includes positions, primarily in debt securities and derivatives, which are measured at fair value through earnings. Mortgage Production and Mortgage Servicing VaR includes the Firm's mortgage pipeline and warehouse loans, MSRs and all related hedges.

As noted above, CIB, Credit portfolio and other VaR does not include the retained loan portfolio, which is not reported at fair value; however, it does include hedges of those positions, which are reported at fair value. It also does not include DVA on structured notes and derivative liabilities to reflect the credit quality of the Firm; principal investments; certain foreign exchange positions used for net investment hedging of foreign currency operations; and longer-term securities investments managed by CIO that are primarily classified as available for sale. These positions are managed through the Firm's nontrading interest rate-sensitive revenue-at-risk and other cash flow-monitoring processes, rather than by using a VaR measure. Principal investing activities (including mezzanine financing, tax oriented investments, etc.) and private equity positions are managed using stress and scenario analyses and are not included in VaR. See the DVA sensitivity table on page 167 of this

Annual Report for further details. For a discussion of Corporate/Private Equity, see pages 102–104 of this Annual Report.

The Firm's VaR model calculations are continuously evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and other factors. Such changes will also affect historical comparisons of VaR results. Model changes go through a review and approval process by the Model Review Group prior to implementation into the operating environment. For further information, see Model risk on pages 125–126 of this Annual Report.

During the third quarter of 2012, the Firm applied a new VaR model to calculate VaR for the synthetic credit portfolio. (This model change went through the Firm's review and approval process by the Model Review Group prior to implementation of this model into the operating environment. For further information, see the Model risk on pages 125–126 of this Annual Report.)

For the six months ended December 31, 2012, this new VaR model resulted in a reduction to average fixed income VaR of $19 million, average total CIB trading and credit portfolio VaR of $18 million, average CIO VaR of $9 million, and average total VaR of $22 million. Prior period VaR results have not been recalculated using the new model. The new model uses data that references actual underlying indices, rather than being constructed through single name and index basis, which the Firm believes is a more direct representation of the risks that were in the portfolio. As a result, the Firm believes the new model, which was applied to both the portion of the synthetic credit portfolio held by CIB, as well as the portion that was retained by CIO, during the last six months of 2012 more appropriately captured the risks of the portfolio.

2012 and 2011 VaR results

As presented in the table above, average Total VaR was $152 million for 2012, compared with $101 million for 2011. The increase was primarily driven by the synthetic credit portfolio, partially offset by a decrease in market volatility in the fourth quarter of 2012.

Average total CIB trading and Credit portfolio VaR for the 2012 was $96 million compared with $76 million for 2011. The increase was driven primarily by the addition of the synthetic credit portfolio in CIB on July 2, 2012.

Average CIO VaR for 2012 was $92 million compared with $57 million in 2011, predominantly reflecting the increased risk in the synthetic credit portfolio, during the first quarter of 2012. On July 2, 2012, CIO transferred its synthetic credit portfolio, other than a portion aggregating approximately $12 billion notional, to CIB; CIO's retained portfolio was effectively closed out during the three months ended September 30, 2012.

Average Mortgage Production and Mortgage Servicing VaR was $17 million for 2012 compared with $30 million for 2011. These decreases were primarily driven by changes in the risk profile of the MSR Portfolio.

The Firm's average CIB and other VaR diversification benefit was $45 million or 23% of the sum for 2012, compared with $45 million or 31% of the sum for 2011. In general, over the course of the year, VaR exposure can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

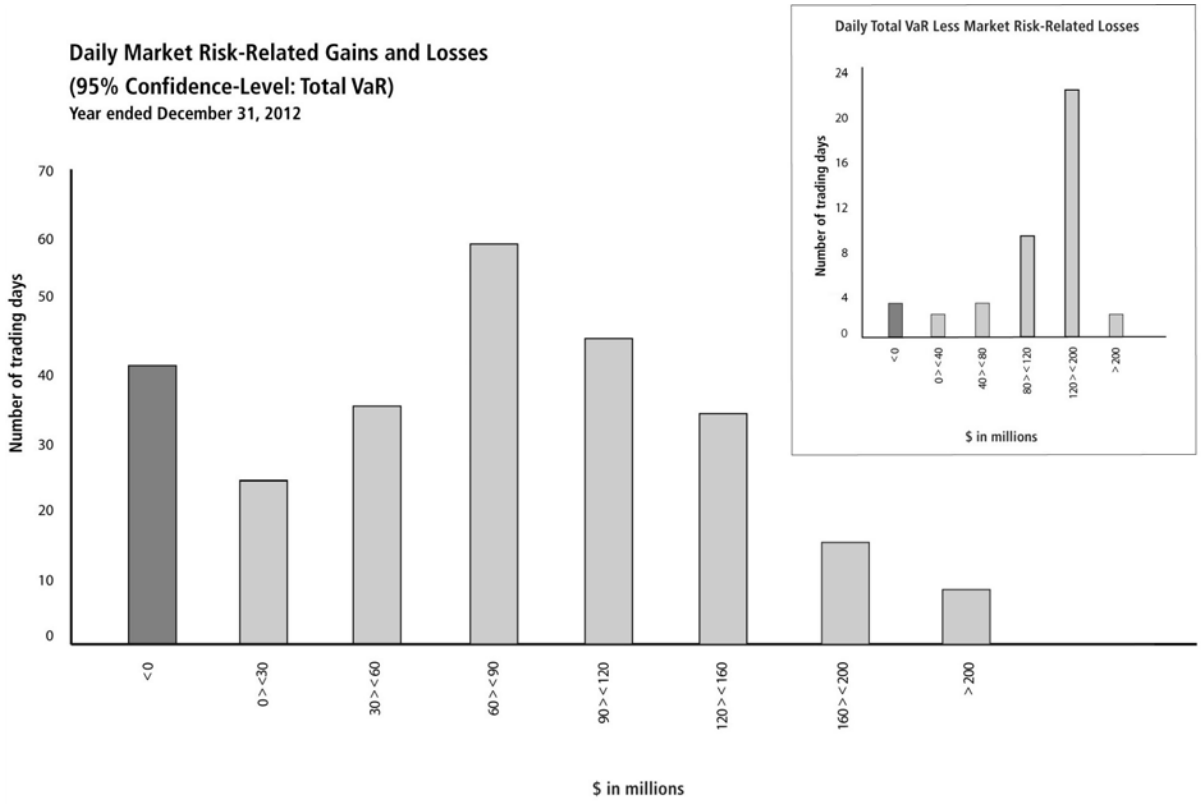
VaR back-testing

The Firm conducts daily back-testing of VaR against its market risk-related revenue.

The following histogram illustrates the daily market risk-related gains and losses for CIB, CIO and Mortgage Production and Mortgage Servicing positions in CCB for the year ended December 31, 2012. This market risk-related revenue is defined as the change in value of: principal transactions revenue for CIB and CIO (excludes Private Equity gains/(losses) and unrealized and realized gains/(losses) from AFS securities and other investments held for the longer term); trading related net interest income for CIB, CIO and Mortgage Production and Mortgage Servicing in CCB; CIB brokerage commissions, underwriting fees or other revenue; revenue from syndicated lending facilities that the Firm intends to distribute; and mortgage fees and related income for the Firm's mortgage pipeline and warehouse loans, MSRs, and all related hedges. Daily firmwide market risk-related revenue excludes gains and losses from DVA.

The chart shows that for year ended December 31, 2012, the Firm posted market risk related gains on 220 of the 261 days in this period, with gains on eight days exceeding $200 million. The chart includes year to date losses incurred in the synthetic credit portfolio. CIB and Credit Portfolio posted market risk-related gains on 254 days in the period.

The inset graph looks at those days on which the Firm experienced losses and depicts the amount by which VaR exceeded the actual loss on each of those days. Of the losses that were sustained on the 41 days of the 261 days in the trading period, the Firm sustained losses that exceeded the VaR measure on three of those days. These losses in excess of the VaR all occurred in the second quarter of 2012 and were due to the adverse effect of market movements on risk positions in the synthetic credit portfolio held by CIO. During the year ended December 31, 2012, CIB and Credit Portfolio experienced seven loss days; none of the losses on those days exceeded their respective VaR measures.



Other risk measures

Debit valuation adjustment sensitivity

The following table provides information about the gross sensitivity of DVA to a one-basis-point increase in JPMorgan Chase's credit spreads. This sensitivity represents the impact from a one-basis-point parallel shift in JPMorgan Chase's entire credit curve. However, the sensitivity at a single point in time multiplied by the change in credit spread at a single maturity point may not be representative of the actual DVA gain or loss realized within a period. The actual results reflect the movement in credit spreads across various maturities, which typically do not move in a parallel fashion, and is the product of a constantly changing exposure profile, among other factors.

Debit valuation adjustment sensitivity

(in millions)	One basis-point increase in JPMorgan Chase's credit spread
December 31, 2012	**$ 34**
December 31, 2011	35

Economic-value stress testing

Along with VaR, stress testing is important in measuring and controlling risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing captures the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates or commodity prices. The framework uses a grid-based approach, which calculates multiple magnitudes of stress for both market rallies and market sell-offs for

each risk factor. Stress-test results, trends and explanations based on current market risk positions are reported to the Firm's senior management and to the lines of business to allow them to better understand the sensitivity of positions to certain defined events and manage their risks with more transparency.

Stress scenarios are defined and reviewed by Market Risk, and significant changes are reviewed by the relevant Risk Committees, (For further details see Risk Governance, on pages 123–125 of this Annual Report). While most of these scenarios estimate losses based on significant market moves, such as an equity market collapse or credit crisis, the Firm also develops scenarios to quantify risk coming from specific portfolios or concentrations of risks, which attempt to capture certain idiosyncratic market movements. Scenarios may be redefined on an ongoing basis to reflect current market conditions. Ad hoc scenarios are run in response to specific market events or concerns. Furthermore, the Firm's stress testing framework is utilized in calculating results under scenarios mandated by the Federal Reserve's Comprehensive Capital Analysis and Review ("CCAR") and ICAAP ("Internal Capital Adequacy Assessment Process") processes.

Nonstatistical risk measures
Nonstatistical risk measures include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line-of-business and by risk type, and are used for tactical control and monitoring limits.

Loss advisories and profit and loss drawdowns
Loss advisories and profit and loss drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Profit and loss drawdowns are defined as the decline in net profit and loss since the year-to-date peak revenue level.

Risk identification for large exposures
Individuals who manage risk positions are responsible for identifying potential losses that could arise from specific, unusual events, such as a potential change in tax legislation, or a particular combination of unusual market moves. This information allows the Firm to monitor further earnings vulnerability not adequately covered by standard risk measures.

Nontrading interest rate-sensitive revenue-at-risk (i.e., "earnings-at-risk")
The VaR and stress-test measures described above illustrate the total economic sensitivity of the Firm's Consolidated Balance Sheets to changes in market variables. The effect of interest rate exposure on reported net income is also important. Interest rate risk represents one of the Firm's significant market risk exposures. This risk arises not only from trading activities but also from the Firm's traditional banking activities which include extension of loans and credit facilities, taking deposits and issuing debt (i.e., asset/liability management positions, accrual loans within CIB and CIO, and off-balance sheet positions). ALCO establishes the Firm's interest rate risk policies and sets risk guidelines. Treasury, working in partnership with the lines of business, calculates the Firm's interest rate risk profile weekly and reviews it with senior management.

Interest rate risk for nontrading activities can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments. For example, if liabilities reprice more quickly than assets and funding interest rates are declining, net interest income will increase initially.
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time. For example, if more deposit liabilities are repricing than assets when general interest rates are declining, net interest income will increase initially.
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve) because the Firm has the ability to lend at long-term fixed rates and borrow at variable or short-term fixed rates. Based on these scenarios, the Firm's net interest income would be affected negatively by a sudden and unanticipated increase in short-term rates paid on its liabilities (e.g., deposits) without a corresponding increase in long-term rates received on its assets (e.g., loans). Conversely, higher long-term rates received on assets generally are beneficial to net interest income, particularly when the increase is not accompanied by rising short-term rates paid on liabilities.
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change. For example, if more borrowers than forecasted pay down higher-rate loan balances when general interest rates are declining, net interest income may decrease initially.

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, corporate-wide basis. Business units transfer their interest rate risk to Treasury through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm manages this interest rate risk generally through its investment securities portfolio and related derivatives. The Firm evaluates its nontrading interest rate risk

exposure through the stress testing of earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's core net interest income (see page 77 of this Annual Report for further discussion of core net interest income) and interest rate-sensitive fees ("nontrading interest rate-sensitive revenue"). Earnings-at-risk excludes the impact of trading activities and MSRs, as these sensitivities are captured under VaR.

The Firm conducts simulations of changes in nontrading interest rate-sensitive revenue under a variety of interest rate scenarios. Earnings-at-risk tests measure the potential change in this revenue, and the corresponding impact to the Firm's pretax net interest income, over the following 12 months. These tests highlight exposures to various interest rate-sensitive factors, such as the rates themselves (e.g., the prime lending rate), pricing strategies on deposits, optionality and changes in product mix. The tests include forecasted balance sheet changes, such as asset sales and securitizations, as well as prepayment and reinvestment behavior. Mortgage prepayment assumptions are based on current interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience and forward market expectations. The amount and pricing assumptions of deposits that have no stated maturity are based on historical performance, the competitive environment, customer behavior, and product mix.

Immediate changes in interest rates present a limited view of risk, and so a number of alternative scenarios are also reviewed. These scenarios include the implied forward curve, nonparallel rate shifts and severe interest rate shocks on selected key rates. These scenarios are intended to provide a comprehensive view of JPMorgan Chase's earnings-at-risk over a wide range of outcomes.

JPMorgan Chase's 12-month pretax net interest income sensitivity profiles.

	Immediate change in rates			
December 31, (in millions)	+200bp	+100bp	-100bp	-200bp
2012	**$ 3,886**	**$ 2,145**	**NM** [(a)]	**NM** [(a)]
2011	4,046	2,326	NM [(a)]	NM [(a)]

(a) Downward 100- and 200-basis-point parallel shocks result in a federal funds target rate of zero and negative three- and six-month treasury rates. The earnings-at-risk results of such a low-probability scenario are not meaningful.

The change in earnings-at-risk from December 31, 2011, resulted from investment portfolio repositioning, partially offset by higher expected deposit balances. The Firm's risk to rising rates was largely the result of widening deposit margins, which are currently compressed due to very low short-term interest rates, and ALM investment portfolio positioning.

Additionally, another interest rate scenario used by the Firm — involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels — results in a 12-month pretax net interest income benefit of $778 million. The increase in net interest income under this scenario is due to reinvestment of maturing assets at the higher long-term rates, with funding costs remaining unchanged.

Risk monitoring and control

Limits

Market risk is controlled primarily through a series of limits set in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity and accommodation of client business and management experience. The Firm maintains different levels of limits. Corporate level limits include VaR and stress limits. Similarly, line of business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns. Limits may also be allocated within the lines of business, as well at the portfolio level.

Limits are established by Market Risk in agreement with the lines of business. Limits are reviewed regularly by Market Risk and updated as appropriate, with any changes approved by lines of business management and Market Risk. Senior management, including the Firm's Chief Executive Officer and Chief Risk Officer, are responsible for reviewing and approving certain of these risk limits on an ongoing basis. All limits that have not been reviewed within specified time periods by Market Risk are escalated to senior management. The lines of business are responsible for adhering to established limits against which exposures are monitored and reported.

Limit breaches are required to be reported in a timely manner by Risk Management to limit approvers, Market Risk and senior management. Market Risk consults with Firm senior management and lines of business senior management to determine the appropriate course of action required to return to compliance, which may include a reduction in risk in order to remedy the excess. Any Firm or line of business-level limits that are in excess for three business days or longer, or that are over limit by more than 30%, are escalated to senior management and the Firmwide Risk Committee.

COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers related to a country. The Firm has a comprehensive country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring direct country exposures in the Firm's wholesale lines of business, including CIO. The Country Risk Management group is responsible for developing guidelines and policy for managing country risk in both emerging and developed countries. The Country Risk Management group actively monitors the wholesale portfolio, including CIO, to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

Country risk organization

The Country Risk Management group is an independent risk management function which works in close partnership with other risk functions and across the wholesale lines of business, including CIO. The Country Risk Management governance consists of the following functions:

- Developing guidelines and policies consistent with a comprehensive country risk framework
- Assigning sovereign ratings and assessing country risks
- Measuring and monitoring country risk exposure across the Firm
- Managing country limits and reporting utilization to senior management
- Developing surveillance tools for early identification of potential country risk concerns
- Providing country risk scenario analysis

Country risk identification and measurement

The Firm is exposed to country risk through its wholesale lending, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country. Under the Firm's internal country risk management approach, country exposure is reported based on the country where the majority of the assets of the obligor, counterparty, issuer or guarantor are located or where the majority of its revenue is derived, which may be different than the domicile (legal residence) of the obligor, counterparty, issuer or guarantor. Country exposures are generally measured by considering the Firm's risk to an immediate default of the counterparty or obligor, with zero recovery.

- Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and cash and marketable securities collateral received
- AFS securities are measured at par value
- Securities financing exposures are measured at their receivable balance, net of collateral received
- Debt and equity securities in market-making and investing activities are measured at the fair value of all positions, including both long and short positions
- Counterparty exposure on derivative receivables, including credit derivative receivables, is measured at the derivative's fair value, net of the fair value of the related collateral
- Credit derivatives protection purchased and sold are reported based on the underlying reference entity and is measured at the notional amount of protection purchased or sold, net of the fair value of the recognized derivative receivable or payable. Credit derivatives protection purchased and sold in the Firm's market-making activities are presented on a net basis, as such activities often result in selling and purchasing protection related to the same underlying reference entity, and which reflects the manner in which the Firm manages these exposures

In addition, the Firm also has indirect exposures to country risk (for example, related to the collateral received on securities financing receivables or related to client clearing activities). These indirect exposures are managed in the normal course of business through the Firm's credit, market, and operational risk governance, rather than through the country risk governance.

The Firm's internal country risk reporting differs from the reporting provided under FFIEC bank regulatory requirements. There are significant reporting differences in reporting methodology, including with respect to the treatment of collateral received and the benefit of credit derivative protection. For further information on the FFIEC's reporting methodology, see Cross-border outstandings on page 347 of the 2012 Form 10-K.

Country risk monitoring and control

The Country Risk Management Group establishes guidelines for sovereign ratings reviews and limit management. In addition, the Country Risk Management group uses surveillance tools for early identification of potential country risk concerns, such as signaling models and ratings indicators. The limit framework includes a risk-tier approach and stress testing procedures for assessing the potential risk of loss associated with a significant sovereign crisis. Country ratings and limits activity are actively monitored and reported on a regular basis. Country limit requirements are reviewed and approved by senior management as often as necessary, but at least annually. For further information on market-risk stress testing the Firm performs in the normal course of business, see Market Risk Management on pages 163–169 of this Annual Report. For further information on credit loss estimates, see Critical Accounting Estimates – Allowance for credit losses on pages 178–180 of this Annual Report.

Country risk reporting

The following table presents the Firm's top 20 exposures by country (excluding the U.S.). The selection of countries is based solely on the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent its view of any actual or potentially adverse credit conditions.

Top 20 country exposures

December 31, 2012 (in billions)	Lending[a]	Trading and investing[b][c]	Other[d]	Total exposure
United Kingdom	$ 23.3	$ 52.6	$ 2.6	$ 78.5
Germany	24.4	36.3	–	60.7
France	14.7	30.3	–	45.0
Netherlands	5.0	29.8	3.0	37.8
Switzerland	24.4	1.5	2.1	28.0
Australia	7.1	16.2	–	23.3
Canada	12.8	5.8	0.6	19.2
Brazil	5.9	13.0	–	18.9
India	7.3	7.9	0.7	15.9
Korea	6.5	7.8	0.6	14.9
China	8.0	3.9	1.3	13.2
Japan	3.7	7.7	–	11.4
Mexico	2.8	6.8	–	9.6
Italy	2.8	4.7	–	7.5
Singapore	3.8	1.8	1.2	6.8
Russia	4.6	1.9	–	6.5
Hong Kong	3.4	2.8	–	6.2
Sweden	3.5	1.9	0.5	5.9
Malaysia	1.5	3.6	0.7	5.8
Spain	3.1	1.6	–	4.7

(a) Lending includes loans and accrued interest receivable, net of the allowance for loan losses, deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities.
(b) Includes market-making inventory, securities held in AFS accounts and hedging.
(c) Includes single-name and index and tranched credit derivatives for which one or more of the underlying reference entities is in a country listed in the above table.
(d) Includes capital invested in local entities and physical commodity inventory.

Selected European exposure

Several European countries, including Spain, Italy, Ireland, Portugal and Greece, have been subject to continued credit deterioration due to weaknesses in their economic and fiscal situations. The Firm is closely monitoring its exposures in these countries and believes its exposure to these five countries is modest relative to the Firm's aggregate exposures. The Firm continues to conduct business and support client activity in these countries and, therefore, the Firm's aggregate net exposures and sector distribution may vary over time. In addition, the net exposures may be affected by changes in market conditions, including the effects of interest rates and credit spreads on market valuations.

The following table presents the Firm's direct exposure to the five countries listed below at December 31, 2012, as measured under the Firm's internal country risk management approach. For individual exposures, corporate clients represent approximately 78% of the Firm's non-sovereign exposure in these five countries, and substantially all of the remaining 22% of the non-sovereign exposure is to the banking sector.

December 31, 2012 (in billions)	Lending net of Allowance[a]	AFS securities[b]	Trading[c]	Derivative collateral[d]	Portfolio hedging[e]	Total exposure
Spain						
Sovereign	$ –	$ 0.5	$ (0.4)	$ –	$ (0.1)	$ –
Non-sovereign	3.1	–	5.2	(3.3)	(0.3)	4.7
Total Spain exposure	$ 3.1	$ 0.5	$ 4.8	$ (3.3)	$ (0.4)	$ 4.7
Italy						
Sovereign	$ –	$ –	$ 11.6	$ (1.4)	$ (4.9)	$ 5.3
Non-sovereign	2.8	–	1.0	(1.2)	(0.4)	2.2
Total Italy exposure	$ 2.8	$ –	$ 12.6	$ (2.6)	$ (5.3)	$ 7.5
Ireland						
Sovereign	$ –	$ 0.3	$ –	$ –	$ (0.3)	$ –
Non-sovereign	0.5	–	1.7	(0.3)	–	1.9
Total Ireland exposure	$ 0.5	$ 0.3	$ 1.7	$ (0.3)	$ (0.3)	$ 1.9
Portugal						
Sovereign	$ –	$ –	$ 0.4	$ –	$ (0.3)	$ 0.1
Non-sovereign	0.5	–	(0.4)	(0.4)	(0.1)	(0.4)
Total Portugal exposure	$ 0.5	$ –	$ –	$ (0.4)	$ (0.4)	$ (0.3)
Greece						
Sovereign	$ –	$ –	$ 0.1	$ –	$ –	$ 0.1
Non-sovereign	0.1	–	0.7	(0.9)	–	(0.1)
Total Greece exposure	$ 0.1	$ –	$ 0.8	$ (0.9)	$ –	$ –
Total exposure	$ 7.0	$ 0.8	$ 19.9	$ (7.5)	$ (6.4)	$ 13.8

(a) Lending includes loans and accrued interest receivable, deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities. Amounts are presented net of the allowance for credit losses of $116 million (Spain), $79 million (Italy), $9 million (Ireland), $15 million (Portugal), and $12 million (Greece) specifically attributable to these countries. Includes $2.4 billion of unfunded lending exposure at December 31, 2012. These exposures consist typically of committed, but unused corporate credit agreements, with market-based lending terms and covenants.

(b) The fair value of AFS securities was approximately $0.7 billion at December 31, 2012. The table above reflects AFS securities measured at par value.

(c) Primarily includes: $19.9 billion of counterparty exposure on derivative and securities financings, $3.7 billion of issuer exposure on debt and equity securities held in trading, $(3.6) billion of net protection from credit derivatives, including $(4.1) billion related to the synthetic credit portfolio managed by CIB. Securities financings of approximately $17.9 billion were collateralized with approximately $20.2 billion of cash and marketable securities as of December 31, 2012.

(d) Includes cash and marketable securities pledged to the Firm, of which approximately 97% of the collateral was cash at December 31, 2012.

(e) Reflects net protection purchased through the Firm's credit portfolio management activities, which are managed separately from its market-making activities. Predominantly includes single-name CDS and also includes index credit derivatives and short bond positions. It does not include the synthetic credit portfolio.

Effect of credit derivatives on selected European exposures

Country exposures in the Selected European exposure table above have been reduced by purchasing protection through single name, index, and tranched credit derivatives. The following table presents the effect of purchased and sold credit derivatives on the trading and portfolio hedging activities in the Selected European exposure table.

December 31, 2012	Trading			Portfolio hedging		
(in billions)	Purchased	Sold	Net	Purchased	Sold	Net
Spain	$ (121.2)	$ 120.2	$ (1.0)	$ (1.2)	$ 0.9	$ (0.3)
Italy	(157.9)	156.5	(1.4)	(11.0)	5.9	(5.1)
Ireland	(7.1)	7.2	0.1	(1.0)	0.7	(0.3)
Portugal	(43.2)	42.2	(1.0)	(0.5)	0.1	(0.4)
Greece	(11.7)	11.4	(0.3)	–	–	–
Total	$ (341.1)	$ 337.5	$ (3.6)	$ (13.7)	$ 7.6	$ (6.1)

Under the Firm's internal country risk management approach, generally credit derivatives are reported based on the country where the majority of the assets of the reference entity are located. Exposures are measured assuming that all of the reference entities in a particular country default simultaneously with zero recovery. For example, single-name and index credit derivatives are measured at the notional amount, net of the fair value of the derivative receivable or payable. Exposures for index credit derivatives, which may include several underlying reference entities, are determined by evaluating the relevant country for each of the reference entities underlying the named index, and allocating the applicable amount of the notional and fair value of the index credit derivative to each of the relevant countries. Tranched credit derivatives are measured at the modeled change in value of the derivative assuming the simultaneous default of all underlying reference entities in a specific country; this approach considers the tranched nature of the derivative (i.e., that some tranches are subordinate to others) and the Firm's own position in the structure.

The total line in the table above represents the simple sum of the individual countries. Changes in the Firm's methodology or assumptions would produce different results.

The credit derivatives reflected in the "Trading" column include those from the Firm's market-making activities as well as $(4.1) billion of net purchased protection in the synthetic credit portfolio managed by CIB beginning in July 2012. Based on scheduled maturities and risk reduction actions being taken in the synthetic credit portfolio, the amount of protection provided by the synthetic credit portfolio relative to the five named countries is likely to be substantially reduced over time.

The credit derivatives reflected in the "Portfolio hedging" column are used in the Firm's Credit Portfolio Management activities, which are intended to mitigate the credit risk associated with traditional lending activities and derivative counterparty exposure. These credit derivatives include both purchased and sold protection, where the sold protection is generally used to close out purchased protection when appropriate under the Firm's risk mitigation strategies. In its Credit Portfolio Management activities, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposures for which the protection was purchased. However, there are instances where the purchased protection has a shorter maturity date than the maturity date of the exposure for which the protection was purchased. These exposures are actively monitored and managed by the Firm. The effectiveness of the Firm's CDS protection as a hedge of the Firm's exposures may vary depending upon a number of factors, including the contractual terms of the CDS. For further information about credit derivatives see Credit derivatives on pages 158–159, and Note 6 on pages 218–227 of this Annual Report.

The Firm's net presentation of purchased and sold credit derivatives reflects the manner in which this exposure is managed, and reflects, in the Firm's view, the substantial mitigation of market and counterparty credit risk in its credit derivative activities. Market risk is substantially mitigated because market-making activities, and to a lesser extent, hedging activities, often result in selling and purchasing protection related to the same underlying reference entity. For example, in each of the five countries as of December 31, 2012, the protection sold by the Firm was more than 92% offset by protection purchased on the identical reference entity.

In addition, counterparty credit risk has been substantially mitigated by the master netting and collateral agreements in place for these credit derivatives. As of December 31, 2012, 99% of the purchased protection presented in the table above is purchased under contracts that require posting of cash collateral; 92% is purchased from investment-grade counterparties domiciled outside of the selected European countries; and 69% of the protection purchased offsets protection sold on the identical reference entity, with the identical counterparty subject to a master netting agreement.

PRINCIPAL RISK MANAGEMENT

Principal investments are predominantly privately-held assets and instruments typically representing an ownership or junior capital position, that have unique risks due to their illiquidity and junior capital status, as well as lack of observable valuation data. Such investing activities, including mezzanine financing, tax-oriented investments and private equity positions, are typically intended to be held over extended investment periods and, accordingly, the Firm has no expectation for short-term gain with respect to these investments. All investments are approved by investment committees that include executives who are not part of the investing businesses. An independent valuation function is responsible for reviewing the appropriateness of the carrying values of principal investments, including private equity, in accordance with relevant accounting, valuation and risk policies.

The Firm's approach to managing principal risk is consistent with the Firm's general risk governance structure. Targeted levels for total and annual investments are established in order to manage the overall size of the portfolios. Industry and geographic concentration limits are in place and intended to ensure diversification of the portfolios. The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves.

The Firm's merchant banking business is managed in Corporate/Private Equity (for detailed information, see Private Equity portfolio on page 104 of this Annual Report); other lines of business may also conduct some principal investing activities, including private equity positions, which are captured within their respective financial results.

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, fraudulent acts, business interruptions, inappropriate behavior of employees, or vendors that do not perform in accordance with their arrangements. These events could result in financial losses, including litigation and regulatory fines, as well as other damage to the Firm, including reputational harm. To monitor and control operational risk, the Firm maintains an overall framework that includes strong oversight and governance, comprehensive policies, consistent practices across the lines of business, and enterprise risk management tools intended to provide a sound and well-controlled operational environment.

The framework clarifies:

- Ownership of the risk by the businesses and functional areas
- Monitoring and validation by business control officers
- Oversight by independent risk management
- Governance through business risk & control committees
- Independent review by Internal Audit

The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject.

In order to strengthen focus on the Firm's control environment and drive consistent practices across businesses and functional areas, the Firm established a new Firmwide Oversight and Control Group during 2012. This group is dedicated to enhancing the Firm's control framework, and to looking within and across the lines of business and the Corporate functions (including CIO) to identify and remediate control issues. The Firmwide Oversight and Control Group will work closely with all control disciplines - partnering with compliance, risk, audit and other functions - in order to provide a cohesive and centralized view of control functions and control issues. Among other things, Oversight and Control will enable the Firm to detect problems and escalate issues quickly, get the right people involved to understand the common themes and interdependencies among various business and control issues, and effectively remediate these issues across all affected areas of the Firm. As a result, the group will facilitate an effective control framework and operational risk management across the Firm.

The Operational risk management framework

The Firm's approach to operational risk management is intended to identify potential issues and mitigate losses by supplementing traditional control-based approaches to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

In addition to the standard Basel risk event categories, the Firm has developed the operational risk categorization taxonomy below for purposes of identification, monitoring, reporting and analysis:

- Fraud risk
- Improper market practices
- Improper client management
- Processing error
- Financial reporting error
- Information risk
- Technology risk (including cybersecurity risk)
- Third-party risk
- Disruption & safety risk
- Employee risk
- Risk management error (including model risk)

Key components of the Operational Risk Management Framework include:

Control assessment

In order to evaluate the effectiveness of the control environment in mitigating operational risk, the businesses utilize the Firm's standard self-assessment process and supporting architecture. The goal of the self-assessment process is for each business to identify the key operational risks specific to its environment and assess the degree to which it maintains appropriate controls. Action plans are developed for control issues that are identified, and businesses are held accountable for tracking and resolving issues on a timely basis.

Risk monitoring

The Firm has a process for monitoring operational risk event data, which permits analysis of errors and losses as well as trends. Such analysis, performed both at a line of business level and by risk-event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns.

Risk reporting and analysis

Operational risk management reports provide information, including actual operational loss levels, self-assessment results and the status of issue resolution to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and support areas.

Risk measurement

Operational risk is measured using a statistical model based on the loss distribution approach. The operational risk

capital model uses actual losses, a comprehensive inventory of forward looking potential loss scenarios with adjustments to reflect changes in the quality of the control environment in determining Firmwide operational risk capital. This methodology is designed to comply with the advanced measurement rules under the Basel II Framework.

Operational risk management system

The Firm's operational risk framework is supported by Phoenix, an internally designed operational risk system, which integrates the individual components of the operational risk management framework into a unified, web-based tool. Phoenix enhances the capture, reporting and analysis of operational risk data by enabling risk identification, measurement, monitoring, reporting and analysis to be done in an integrated manner across the Firm.

Audit alignment

Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. This includes reviewing the operational risk framework, the effectiveness of the business self-assessment process, and the loss data-collection and reporting activities.

Insurance

One of the ways operational loss is mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations, as well as to serve other needs. Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

Cybersecurity

The Firm devotes significant resources to maintain and regularly update its systems and processes that are designed to protect the security of the Firm's computer systems, software, networks and other technology assets against attempts by third parties to obtain unauthorized access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage. The Firm and several other U.S. financial institutions continue to experience significant distributed denial-of-service attacks from technically sophisticated and well-resourced third parties which are intended to disrupt consumer online banking services. The Firm has also experienced other attempts to breach the security of the Firm's systems and data. These cyberattacks have not, to date, resulted in any material disruption of the Firm's operations, material harm to the Firm's customers, and have not had a material adverse effect on the Firm's results of operations.

Business resiliency

JPMorgan Chase's global resiliency and crisis management program is intended to ensure that the Firm has the ability to recover its critical business functions and supporting assets (i.e., staff, technology and facilities) in the event of a business interruption, and to remain in compliance with global laws and regulations as they relate to resiliency risk. The program includes corporate governance, awareness and training, as well as strategic and tactical initiatives to ensure that risks are properly identified, assessed, and managed.

The Firm's Global Resiliency team has established comprehensive and qualitative tracking and reporting of resiliency plans in order to proactively anticipate and manage various potential disruptive circumstances such as severe weather, technology and communications outages, flooding, mass transit shutdowns and terrorist threats, among others. The resiliency measures utilized by the Firm include backup infrastructure for data centers, a geographically distributed workforce, dedicated recovery facilities, ensuring technological capabilities to support remote work capacity for displaced staff and accommodation of employees at alternate locations. JPMorgan Chase continues to coordinate its global resiliency program across the Firm and mitigate business continuity risks by reviewing and testing recovery procedures. The strength and proficiency of the Firm's global resiliency program has played an integral role in maintaining the Firm's business operations during and quickly after various events that have resulted in business interruptions, such as Superstorm Sandy and Hurricane Isaac in the U.S., monsoon rains in the Philippines, tsunamis in Asia, and earthquakes in Latin America.

The Firm's success depends not only on its prudent management of the liquidity, credit, market, principal, and operational risks that are part of its business risk, but equally on the maintenance among its many constituents – customers and clients, investors, regulators, as well as the general public – of a reputation for business practices of the highest quality. Attention to reputation has always been a key aspect of the Firm's practices, and maintenance of the Firm's reputation is the responsibility of each individual employee at the Firm. JPMorgan Chase bolsters this individual responsibility in many ways, including through the Firm's Code of Conduct (the "Code"), which is based on the Firm's fundamental belief that no one should ever sacrifice integrity – or give the impression that he or she has – even if one thinks it would help the Firm's business. The Code requires prompt reporting of any known or suspected violation of the Code, any internal Firm policy, or any law or regulation applicable to the Firm's business. It also requires the reporting of any illegal conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's customers, suppliers, contract workers, business partners or agents. Concerns may be reported anonymously and the Firm prohibits retaliation against employees for the good faith reporting of any actual or suspected violations of the Code.

In addition to training of employees with regard to the principles and requirements of the Code, and requiring annual affirmation by each employee of compliance with the Code, the Firm has established policies and procedures, and has in place various oversight functions, intended to promote the Firm's culture of "doing the right thing." These include a Conflicts Office which examines wholesale transactions with the potential to create conflicts of interest for the Firm and a Reputation Risk Office that reviews transactions or activities that may give rise to reputation risk for the Firm. Each line of business also has a risk committee which includes in its mandate the oversight of reputational risks in its business that may produce significant losses or reputational damage to the Firm.

Fiduciary Risk Management

Fiduciary Risk Management is part of the relevant line-of-business risk committees. Senior business, legal and compliance management, who have particular responsibility for fiduciary issues, work with the relevant businesses' risk committees with the goal of ensuring that the businesses providing investment or risk management products or services that give rise to fiduciary duties to clients perform at the appropriate standard relative to their fiduciary relationship with a client. Of particular focus are the policies and practices that address a business' responsibilities to a client, including performance and service requirements and expectations; client suitability determinations; and disclosure obligations and communications. In this way, the relevant line-of-business risk committees provide oversight of the Firm's efforts to monitor, measure and control the performance and risks that may arise in the delivery of products or services to clients that give rise to such fiduciary duties, as well as those stemming from any of the Firm's fiduciary responsibilities under the Firm's various employee benefit plans.

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the value of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's consumer and wholesale lending-related commitments. The allowance for loan losses is intended to adjust the value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date.

The allowance for loan losses includes an asset-specific component, a formula-based component and a component related to PCI loans. The asset-specific allowance for loan losses for each of the Firm's portfolio segments is generally measured as the difference between the recorded investment in the impaired loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections further rely upon estimates such as redefault rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are, in turn, dependent on factors such as the level of future home prices, the duration of current weak overall economic conditions, and other macroeconomic and portfolio-specific factors. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

For further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Allowance for Credit Losses on pages 159–162 and Note 15 on pages 276–279 of this Annual Report.

The determination of the formula-based allowance for credit losses also involves significant judgment on a number of matters, as discussed below.

Consumer loans and lending-related commitments, excluding PCI loans

The formula-based allowance for credit losses for the consumer portfolio, including credit card, is calculated by applying statistical expected loss factors to outstanding principal balances over an estimated loss emergence period to arrive at an estimate of losses in the portfolio. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends. In addition, management applies judgment to the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate probable credit losses inherent in the portfolio. Management uses additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate.

The statistical calculation is then adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation; these adjustments are accomplished in part by analyzing the historical loss experience for each major product segment. In the current economic environment, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment in making this adjustment, taking into account uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, borrower behavior, the estimated effects of the mortgage foreclosure-related settlement with federal and state officials, uncertainties regarding the ultimate success of loan modifications, the potential impact of payment recasts within the HELOC portfolio, and other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties. For example, the performance of a HELOC that experiences a payment recast may be affected by both the quality of underwriting standards applied in originating the loan and the general economic conditions in effect at the time of the payment recast. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. The application of different inputs into the statistical calculation, and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or considering other

inputs or assumptions, could affect the estimate of the allowance for loan losses for the consumer credit portfolio.

Overall, the allowance for credit losses for the consumer portfolio, including credit card, is sensitive to changes in the economic environment, delinquency status, the realizable value of collateral, FICO scores, borrower behavior and other risk factors. Significant judgment is required to estimate the duration of current weak overall economic conditions, as well as the impact on housing prices and the labor market. The allowance for credit losses is highly sensitive to both home prices and unemployment rates, and in the current market it is difficult to estimate how potential changes in one or both of these factors might affect the allowance for credit losses. For example, while both factors are important determinants of overall allowance levels, changes in one factor or the other may not occur at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across all geographies or product types. Finally, it is difficult to predict the extent to which changes in both or either of these factors would ultimately affect the frequency of losses, the severity of losses or both.

PCI loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain PCI loans, which are accounted for as described in Note 14 on pages 250–275 of this Annual Report. The allowance for loan losses for the PCI portfolio is based on quarterly estimates of the amount of principal and interest cash flows expected to be collected over the estimated remaining lives of the loans.

These cash flow projections are based on estimates regarding default rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are dependent on assumptions regarding the level of future home price declines, and the duration of current weak overall economic conditions, among other factors. These estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Wholesale loans and lending-related commitments

The Firm's methodology for determining the allowance for loan losses and the allowance for lending-related commitments requires the early identification of credits that are deteriorating. The Firm uses a risk-rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm to that loan.

The Firm applies its judgment to establish loss factors used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances. Many factors can affect estimates of loss, including volatility of loss given default, probability of default and rating migrations. Consideration is given as to the particular source of external data used as well as the time period to which loss data relates (for example, point-in-time loss estimates and estimates that reflect longer views of the credit cycle). Finally, differences in loan characteristics between the Firm's specific loan portfolio and those reflected in the external data could also affect loss estimates. The application of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the loss factors derived, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both loss given default and probability of default are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

Allowance for credit losses sensitivity

As noted above, the Firm's allowance for credit losses is sensitive to numerous factors, depending on the portfolio. Changes in economic conditions or in the Firm's assumptions could affect the Firm's estimate of probable credit losses inherent in the portfolio at the balance sheet date. For example, deterioration in the following inputs would have the following effects on the Firm's modeled loss estimates as of December 31, 2012, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- A 5% decline in housing prices from current levels, accompanied by an assumed corresponding change in the unemployment rate, for the residential real estate portfolio, excluding PCI loans, could result in an increase to modeled annual loss estimates of approximately $200 million.
- A 5% decline in housing prices from current levels, accompanied by an assumed corresponding change in the unemployment rate, could result in an increase in credit loss estimates for PCI loans of approximately $600 million.

- A 50 basis point deterioration in forecasted credit card loss rates could imply an increase to modeled annualized credit card loan loss estimates of approximately $800 million.
- A one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately $2.1 billion.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors.

These analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm follows in evaluating the risk factors related to its loans, including risk ratings, home price assumptions, and credit card loss estimates, management believes that its current estimate of the allowance for credit loss is appropriate.

Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy. For further information, see Note 3 on pages 196–214 of this Annual Report.

December 31, 2012 (in billions, except ratio data)	Total assets at fair value	Total level 3 assets
Trading debt and equity instruments	$ 375.0	$ 25.6
Derivative receivables	75.0	23.3
Trading assets	450.0	48.9
AFS securities	371.1	28.9
Loans	2.6	2.3
MSRs	7.6	7.6
Private equity investments	7.8	7.2
Other	43.1	4.2
Total assets measured at fair value on a recurring basis	882.2	99.1
Total assets measured at fair value on a nonrecurring basis	5.1	4.4
Total assets measured at fair value	$ 887.3	$ 103.5 [(a)]
Total Firm assets	$ 2,359.1	
Level 3 assets as a percentage of total Firm assets		4.4%
Level 3 assets as a percentage of total Firm assets at fair value		11.7%

Valuation

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Firm has an established and well-documented process for determining fair value, for further details see Note 3 on pages 196–214 of this Annual Report. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available for an instrument or a similar instrument, fair value is generally based on models that consider relevant transaction characteristics (such as maturity) and use as inputs market-based or independently sourced parameters.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the valuation hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs — including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit

curves. Finally, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's credit-worthiness, liquidity considerations, unobservable parameters, and for certain portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 3 on pages 196–214 of this Annual Report.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions to those used by the Firm could result in a different estimate of fair value at the reporting date. For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, see Note 3 on pages 196–214 of this Annual Report.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 17 on pages 291–295 of this Annual Report.

Management applies significant judgment when estimating the fair value of its reporting units. Estimates of fair value are dependent upon estimates of (a) the future earnings potential of the Firm's reporting units, including the estimated effects of regulatory and legislative changes, such as the Dodd-Frank Act, the CARD Act, and limitations on non-sufficient funds and overdraft fees and (b) the relevant cost of equity and long-term growth rates. Imprecision in estimating these factors can affect the estimated fair value of the reporting units.

Based upon the updated valuations for all of its reporting units, the Firm concluded that goodwill allocated to its reporting units was not impaired at December 31, 2012, nor was any goodwill written off during 2012. The fair values of almost all of the Firm's reporting units exceeded their carrying values by substantial amounts (excess fair value as a percent of carrying value ranged from approximately 30% to 180%) and did not indicate a significant risk of goodwill impairment based on current projections and valuations.

However, the fair value of the Firm's mortgage lending business exceeded its carrying value by less than 10% and the associated goodwill remains at an elevated risk for goodwill impairment due to its exposure to U.S. consumer credit risk and the effects of regulatory and legislative changes. The assumptions used in the valuation of this business include (a) estimates of future cash flows for the business (which are dependent on portfolio outstanding balances, net interest margin, operating expense, credit losses and the amount of capital necessary given the risk of business activities), and (b) the cost of equity used to discount those cash flows to a present value. Each of these factors requires significant judgment and the assumptions used are based on management's best estimate and most current projections, derived from the Firm's business forecasting process reviewed with senior management.

The projections for all of the Firm's reporting units are consistent with the short-term assumptions discussed in the Business Outlook on pages 68–69 of this Annual Report, and, in the longer term, incorporate a set of macroeconomic assumptions and the Firm's best estimates of long-term growth and returns of its businesses. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.

Deterioration in economic market conditions, increased estimates of the effects of recent regulatory or legislative changes, or additional regulatory or legislative changes may result in declines in projected business performance beyond management's current expectations. For example, in the Firm's mortgage lending business, such declines could result from increases in costs to resolve foreclosure-related matters or from deterioration in economic conditions that result in increased credit losses, including decreases in home prices beyond management's current expectations. In addition, the earnings or estimated cost of equity of the Firm's capital markets businesses could also be affected by regulatory or legislative changes. Declines in business performance, increases in equity capital requirements, or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

For additional information on goodwill, see Note 17 on pages 291–295 of this Annual Report.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations and tax planning strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. The Firm has also recognized deferred tax assets in connection with certain net operating losses. The Firm performs regular reviews to ascertain whether deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize net operating losses before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2012, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

JPMorgan Chase does not provide U.S. federal income taxes on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Changes to the income tax rates applicable to these non-U.S. subsidiaries may have a material impact on the effective tax rate in a future period if such changes were to occur.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective tax rate in the period in which the reassessment occurs.

For additional information on income taxes, see Note 26 on pages 303–305 of this Annual Report.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 31 on pages 316–325 of this Annual Report.

Fair value measurement and disclosures
In May 2011, the Financial Accounting Standards Board ("FASB") issued guidance that amends the requirements for fair value measurement and disclosure. The guidance changes and clarifies certain existing requirements related to portfolios of financial instruments and valuation adjustments, requires additional disclosures for fair value measurements categorized in level 3 of the fair value hierarchy (including disclosure of the range of inputs used in certain valuations), and requires additional disclosures for certain financial instruments that are not carried at fair value. The guidance was effective in the first quarter of 2012, and the Firm adopted the new guidance, effective January 1, 2012. The application of this guidance did not have a material effect on the Firm's Consolidated Balance Sheets or results of operations.

Accounting for repurchase and similar agreements
In April 2011, the FASB issued guidance that amends the criteria used to assess whether repurchase and similar agreements should be accounted for as financings or sales (purchases) with forward agreements to repurchase (resell). Specifically, the guidance eliminates circumstances in which the lack of adequate collateral maintenance requirements could result in a repurchase agreement being accounted for as a sale. The guidance was effective for new transactions or existing transactions that were modified beginning January 1, 2012. The Firm has accounted for its repurchase and similar agreements as secured financings, and therefore, the application of this guidance did not have an impact on the Firm's Consolidated Balance Sheets or results of operations.

Presentation of other comprehensive income
In June 2011, the FASB issued guidance that modifies the presentation of other comprehensive income in the Consolidated Financial Statements. The guidance requires that items of net income, items of other comprehensive income, and total comprehensive income be presented in one continuous statement or in two separate but consecutive statements. The guidance was effective in the first quarter of 2012, and the Firm adopted the new guidance by electing the two-statement approach, effective January 1, 2012. The application of this guidance only affected the presentation of the Consolidated Financial Statements and had no impact on the Firm's Consolidated Balance Sheets or results of operations.

In February 2013, the FASB issued guidance that requires enhanced disclosures of any reclassifications out of accumulated other comprehensive income. The guidance is effective in the first quarter of 2013. The application of this guidance will impact disclosures and will have no impact on the Firm's Consolidated Balance Sheets or results of operations.

Balance sheet netting
In December 2011, the FASB issued guidance that requires enhanced disclosures about certain financial assets and liabilities that are subject to enforceable master netting agreements or similar agreements, or that have otherwise been offset on the balance sheet under certain specific conditions that permit net presentation. In January 2013, the FASB clarified that the scope of this guidance is limited to derivatives, repurchase and reverse repurchase agreements, and securities borrowing and lending transactions. The guidance will become effective in the first quarter of 2013. The application of this guidance will only affect the disclosure of these instruments and will have no impact on the Firm's Consolidated Balance Sheets or results of operations.

NONEXCHANGE TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based on internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2012.

Year ended December 31, 2012 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2012	$ 13,122	$ 13,517
Effect of legally enforceable master netting agreements	33,495	35,695
Gross fair value of contracts outstanding at January 1, 2012	46,617	49,212
Contracts realized or otherwise settled	(23,889)	(26,321)
Fair value of new contracts	19,357	21,502
Changes in fair values attributable to changes in valuation techniques and assumptions	–	–
Other changes in fair value	(4,934)	(3,072)
Gross fair value of contracts outstanding at December 31, 2012	37,151	41,321
Effect of legally enforceable master netting agreements	(28,856)	(30,505)
Net fair value of contracts outstanding at December 31, 2012	$ 8,295	$ 10,816

The following table indicates the maturities of nonexchange-traded commodity derivative contracts at December 31, 2012.

December 31, 2012 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 21,878	$ 23,129
Maturity 1–3 years	12,029	12,424
Maturity 4–5 years	1,947	2,155
Maturity in excess of 5 years	1,297	3,613
Gross fair value of contracts outstanding at December 31, 2012	37,151	41,321
Effect of legally enforceable master netting agreements	(28,856)	(30,505)
Net fair value of contracts outstanding at December 31, 2012	$ 8,295	$ 10,816

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the Securities and Exchange Commission. In addition, the Firm's senior management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and international business, economic and political conditions and geopolitical events;
- Changes in laws and regulatory requirements, including as a result of recent financial services legislation;
- Changes in trade, monetary and fiscal policies and laws;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity, including approval of its capital plans by banking regulators;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- Technology changes instituted by the Firm, its counterparties or competitors;
- Mergers and acquisitions, including the Firm's ability to integrate acquisitions;
- Ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Ability of the Firm to address enhanced bank regulatory and other governmental agency requirements affecting its mortgage business;
- Ability of the Firm to implement successfully the actions required under the various Consent Orders entered into with its banking regulators;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to increase market share;
- Ability of the Firm to attract and retain employees;
- Ability of the Firm to control expense;
- Competitive pressures;
- Changes in the credit quality of the Firm's customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting, and the effectiveness of such controls and procedures in preventing control lapses or deficiencies;
- Efficacy of the models used by the Firm in valuing, measuring, monitoring and managing positions and risk;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities or conflicts, including any effect of any such disasters, calamities or conflicts on the Firm's power generation facilities and the Firm's other commodity-related activities;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operating systems and facilities;
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2012.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

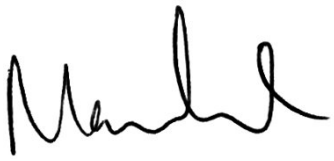
Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2012. In making the assessment, management used the framework in "Internal Control - Integrated Framework" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2012, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2012.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2012, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Marianne Lake
Executive Vice President and Chief Financial Officer

February 28, 2013



To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2012 and 2011, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2012 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting". Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PricewaterhouseCoopers LLP

February 28, 2013

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2012	2011	2010
Revenue			
Investment banking fees	$ 5,808	$ 5,911	$ 6,190
Principal transactions	5,536	10,005	10,894
Lending- and deposit-related fees	6,196	6,458	6,340
Asset management, administration and commissions	13,868	14,094	13,499
Securities gains[a]	2,110	1,593	2,965
Mortgage fees and related income	8,687	2,721	3,870
Card income	5,658	6,158	5,891
Other income	4,258	2,605	2,044
Noninterest revenue	52,121	49,545	51,693
Interest income	56,063	61,293	63,782
Interest expense	11,153	13,604	12,781
Net interest income	44,910	47,689	51,001
Total net revenue	97,031	97,234	102,694
Provision for credit losses	3,385	7,574	16,639
Noninterest expense			
Compensation expense	30,585	29,037	28,124
Occupancy expense	3,925	3,895	3,681
Technology, communications and equipment expense	5,224	4,947	4,684
Professional and outside services	7,429	7,482	6,767
Marketing	2,577	3,143	2,446
Other expense	14,032	13,559	14,558
Amortization of intangibles	957	848	936
Total noninterest expense	64,729	62,911	61,196
Income before income tax expense	28,917	26,749	24,859
Income tax expense	7,633	7,773	7,489
Net income	$ 21,284	$ 18,976	$ 17,370
Net income applicable to common stockholders	$ 19,877	$ 17,568	$ 15,764
Net income per common share data			
Basic earnings per share	$ 5.22	$ 4.50	$ 3.98
Diluted earnings per share	5.20	4.48	3.96
Weighted-average basic shares	3,809.4	3,900.4	3,956.3
Weighted-average diluted shares	3,822.2	3,920.3	3,976.9
Cash dividends declared per common share	$ 1.20	$ 1.00	$ 0.20

(a) The following other-than-temporary impairment losses are included in securities gains for the periods presented.

Year ended December 31, (in millions)	2012	2011	2010
Debt securities the Firm does not intend to sell that have credit losses			
Total other-than-temporary impairment losses	$ (113)	$ (27)	$ (94)
Losses recorded in/(reclassified from) other comprehensive income	85	(49)	(6)
Total credit losses recognized in income	(28)	(76)	(100)
Securities the Firm intends to sell	(15)	–	–
Total other-than-temporary impairment losses recognized in income	$ (43)	$ (76)	$ (100)

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of comprehensive income

Year ended December 31, (in millions)	2012	2011	2010
Net income	**$ 21,284**	$ 18,976	$ 17,370
Other comprehensive income, after-tax			
Unrealized gains on AFS securities	**3,303**	1,067	610
Translation adjustments, net of hedges	**(69)**	(279)	269
Cash flow hedges	**69**	(155)	25
Defined benefit pension and OPEB plans	**(145)**	(690)	332
Total other comprehensive income, after-tax	**3,158**	(57)	1,236
Comprehensive income	**$ 24,442**	$ 18,919	$ 18,606

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2012	2011
Assets		
Cash and due from banks	$ 53,723	$ 59,602
Deposits with banks	121,814	85,279
Federal funds sold and securities purchased under resale agreements (included $24,258 and $22,191 at fair value)	296,296	235,314
Securities borrowed (included $10,177 and $15,308 at fair value)	119,017	142,462
Trading assets (included assets pledged of $108,784 and $89,856)	450,028	443,963
Securities (included $371,145 and $364,781 at fair value and assets pledged of $71,167 and $94,691)	371,152	364,793
Loans (included $2,555 and $2,097 at fair value)	733,796	723,720
Allowance for loan losses	(21,936)	(27,609)
Loans, net of allowance for loan losses	711,860	696,111
Accrued interest and accounts receivable	60,933	61,478
Premises and equipment	14,519	14,041
Goodwill	48,175	48,188
Mortgage servicing rights	7,614	7,223
Other intangible assets	2,235	3,207
Other assets (included $16,458 and $16,499 at fair value and assets pledged of $1,127 and $1,316)	101,775	104,131
Total assets[a]	$ 2,359,141	$ 2,265,792
Liabilities		
Deposits (included $5,733 and $4,933 at fair value)	$ 1,193,593	$ 1,127,806
Federal funds purchased and securities loaned or sold under repurchase agreements (included $4,388 and $6,817 at fair value)	240,103	213,532
Commercial paper	55,367	51,631
Other borrowed funds (included $11,591 and $9,576 at fair value)	26,636	21,908
Trading liabilities	131,918	141,695
Accounts payable and other liabilities (included $36 and $51 at fair value)	195,240	202,895
Beneficial interests issued by consolidated variable interest entities (included $1,170 and $1,250 at fair value)	63,191	65,977
Long-term debt (included $30,788 and $34,720 at fair value)	249,024	256,775
Total liabilities[a]	2,155,072	2,082,219
Commitments and contingencies (see Notes 29, 30 and 31 of this Annual Report)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares: issued 905,750 and 780,000 shares)	9,058	7,800
Common stock ($1 par value; authorized 9,000,000,000 shares; issued 4,104,933,895 shares)	4,105	4,105
Capital surplus	94,604	95,602
Retained earnings	104,223	88,315
Accumulated other comprehensive income/(loss)	4,102	944
Shares held in RSU Trust, at cost (479,126 and 852,906 shares)	(21)	(38)
Treasury stock, at cost (300,981,690 and 332,243,180 shares)	(12,002)	(13,155)
Total stockholders' equity	204,069	183,573
Total liabilities and stockholders' equity	$ 2,359,141	$ 2,265,792

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2012 and 2011. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which were eliminated in consolidation.

December 31, (in millions)	2012	2011
Assets		
Trading assets	$ 11,966	$ 12,079
Loans	82,723	86,754
All other assets	2,090	2,638
Total assets	$ 96,779	$ 101,471
Liabilities		
Beneficial interests issued by consolidated variable interest entities	$ 63,191	$ 65,977
All other liabilities	1,244	1,487
Total liabilities	$ 64,435	$ 67,464

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. At both December 31, 2012 and 2011, the Firm provided limited program-wide credit enhancement of $3.1 billion related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 16 on pages 280–291 of this Annual Report.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity

Year ended December 31, (in millions, except per share data)	2012	2011	2010
Preferred stock			
Balance at January 1	**$ 7,800**	$ 7,800	$ 8,152
Issuance of preferred stock	**1,258**	–	–
Redemption of preferred stock	**–**	–	(352)
Balance at December 31	**9,058**	7,800	7,800
Common stock			
Balance at January 1 and December 31	**4,105**	4,105	4,105
Capital surplus			
Balance at January 1	**95,602**	97,415	97,982
Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects	**(736)**	(1,688)	706
Other	**(262)**	(125)	(1,273)
Balance at December 31	**94,604**	95,602	97,415
Retained earnings			
Balance at January 1	**88,315**	73,998	62,481
Cumulative effect of changes in accounting principles	**–**	–	(4,376)
Net income	**21,284**	18,976	17,370
Dividends declared:			
Preferred stock	**(647)**	(629)	(642)
Common stock (**$1.20**, $1.00 and $0.20 per share for 2012, 2011 and 2010, respectively)	**(4,729)**	(4,030)	(835)
Balance at December 31	**104,223**	88,315	73,998
Accumulated other comprehensive income/(loss)			
Balance at January 1	**944**	1,001	(91)
Cumulative effect of changes in accounting principles	**–**	–	(144)
Other comprehensive (loss)/income	**3,158**	(57)	1,236
Balance at December 31	**4,102**	944	1,001
Shares held in RSU Trust, at cost			
Balance at January 1	**(38)**	(53)	(68)
Reissuance from RSU Trust	**17**	15	15
Balance at December 31	**(21)**	(38)	(53)
Treasury stock, at cost			
Balance at January 1	**(13,155)**	(8,160)	(7,196)
Purchase of treasury stock	**(1,415)**	(8,741)	(2,999)
Reissuance from treasury stock	**2,574**	3,750	2,040
Share repurchases related to employee stock-based compensation awards	**(6)**	(4)	(5)
Balance at December 31	**(12,002)**	(13,155)	(8,160)
Total stockholders' equity	**$ 204,069**	$ 183,573	$ 176,106

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2012	2011	2010
Operating activities			
Net income	$ 21,284	$ 18,976	$ 17,370
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Provision for credit losses	3,385	7,574	16,639
Depreciation and amortization	4,190	4,257	4,029
Amortization of intangibles	957	848	936
Deferred tax expense/(benefit)	1,130	1,693	(968)
Investment securities gains	(2,110)	(1,593)	(2,965)
Stock-based compensation	2,545	2,675	3,251
Originations and purchases of loans held-for-sale	(34,026)	(52,561)	(37,085)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	33,202	54,092	40,155
Net change in:			
Trading assets	(5,379)	36,443	(72,082)
Securities borrowed	23,455	(18,936)	(3,926)
Accrued interest and accounts receivable	1,732	8,655	443
Other assets	(4,683)	(15,456)	(12,452)
Trading liabilities	(3,921)	7,905	19,344
Accounts payable and other liabilities	(13,069)	35,203	17,325
Other operating adjustments	(3,613)	6,157	6,234
Net cash provided by/(used in) operating activities	25,079	95,932	(3,752)
Investing activities			
Net change in:			
Deposits with banks	(36,595)	(63,592)	41,625
Federal funds sold and securities purchased under resale agreements	(60,821)	(12,490)	(26,957)
Held-to-maturity securities:			
Proceeds	4	6	7
Available-for-sale securities:			
Proceeds from maturities	112,633	86,850	92,740
Proceeds from sales	81,957	68,631	118,600
Purchases	(189,630)	(202,309)	(179,487)
Proceeds from sales and securitizations of loans held-for-investment	6,430	10,478	9,476
Other changes in loans, net	(30,491)	(58,365)	3,022
Net cash received from/(used in) business acquisitions or dispositions	88	102	(4,910)
All other investing activities, net	(3,400)	(63)	(114)
Net cash (used in)/provided by investing activities	(119,825)	(170,752)	54,002
Financing activities			
Net change in:			
Deposits	67,250	203,420	(9,637)
Federal funds purchased and securities loaned or sold under repurchase agreements	26,546	(63,116)	15,202
Commercial paper and other borrowed funds	9,315	7,230	(6,869)
Beneficial interests issued by consolidated variable interest entities	345	1,165	2,426
Proceeds from long-term borrowings and trust preferred capital debt securities	86,271	54,844	55,181
Payments of long-term borrowings and trust preferred capital debt securities	(96,473)	(82,078)	(99,043)
Excess tax benefits related to stock-based compensation	255	867	26
Redemption of preferred stock	–	–	(352)
Proceeds from issuance of preferred stock	1,234	–	–
Treasury stock and warrants repurchased	(1,653)	(8,863)	(2,999)
Dividends paid	(5,194)	(3,895)	(1,486)
All other financing activities, net	(189)	(1,868)	(1,666)
Net cash provided by/(used in) financing activities	87,707	107,706	(49,217)
Effect of exchange rate changes on cash and due from banks	1,160	(851)	328
Net (decrease)/increase in cash and due from banks	(5,879)	32,035	1,361
Cash and due from banks at the beginning of the period	59,602	27,567	26,206
Cash and due from banks at the end of the period	$ 53,723	$ 59,602	$ 27,567
Cash interest paid	$ 11,161	$ 13,725	$ 12,404
Cash income taxes paid, net	2,050	8,153	9,747

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small business, commercial banking, financial transaction processing, asset management and private equity. For a discussion of the Firm's business segments, see Note 33 on pages 326–329 of this Annual Report.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the U.S. ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Certain amounts reported in prior periods have been reclassified to conform with the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated. The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity ("VIE").

Voting Interest Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Firm to recognize its proportionate share of the entity's net earnings), or (ii) at fair value if the fair value option was elected at the inception of the Firm's investment. These investments are generally included in other assets, with income or loss included in other income.

Certain Firm-sponsored asset management funds are structured as limited partnerships or limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these funds. In the limited cases where the nonaffiliated partners or members do not have substantive kick-out or participating rights, the Firm consolidates the funds.

The Firm's investment companies make investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated Balance Sheets at fair value, and are recorded in other assets.

Variable Interest Entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is a special purpose entity ("SPE"). SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivative or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

In January 2010, the Financial Accounting Standards Board ("FASB") issued an amendment which deferred the requirements of the accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds. For the funds to which the deferral applies, the Firm continues to apply other existing authoritative accounting guidance to determine whether such funds should be consolidated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated Balance Sheets.

Use of estimates in the preparation of consolidated financial statements

The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in other comprehensive income/(loss) ("OCI") within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated Statements of Income.

Statements of cash flows

For JPMorgan Chase's Consolidated Statements of Cash Flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Business changes and developments	Note 2	Page 195
Fair value measurement	Note 3	Page 196
Fair value option	Note 4	Page 214
Derivative instruments	Note 6	Page 218
Noninterest revenue	Note 7	Page 228
Interest income and interest expense	Note 8	Page 230
Pension and other postretirement employee benefit plans	Note 9	Page 231
Employee stock-based incentives	Note 10	Page 241
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Goodwill and other intangible assets	Note 17	Page 291
Premises and equipment	Note 18	Page 296
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Income taxes	Note 26	Page 303
Off-balance sheet lending-related financial instruments, guarantees and other commitments	Note 29	Page 308
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Note 2 – Business changes and developments

Changes in common stock dividend

On March 18, 2011, the Board of Directors raised the Firm's quarterly common stock dividend from $0.05 to $0.25 per share, effective with the dividend paid on April 30, 2011, to shareholders of record on April 6, 2011. On March 13, 2012, the Board of Directors increased the Firm's quarterly common stock dividend from $0.25 to $0.30 per share, effective with the dividend paid on April 30, 2012, to shareholders of record on April 5, 2012.

Other business events

RBS Sempra transaction

On July 1, 2010, JPMorgan Chase completed the acquisition of RBS Sempra Commodities' global oil, global metals and European power and gas businesses. The Firm acquired approximately $1.7 billion of net assets which included $3.3 billion of debt which was immediately repaid. This acquisition almost doubled the number of clients the Firm's commodities business can serve and has enabled the Firm to offer clients more products in more regions of the world.

Purchase of remaining interest in J.P. Morgan Cazenove

On January 4, 2010, JPMorgan Chase purchased the remaining interest in J.P. Morgan Cazenove, an investment banking business partnership formed in 2005, which resulted in an adjustment to the Firm's capital surplus of approximately $1.3 billion.

Global settlement on servicing and origination of mortgages

On February 9, 2012, the Firm announced that it had agreed to a settlement in principle (the "global settlement") with a number of federal and state government agencies, including the U.S. Department of Justice ("DOJ"), the U.S. Department of Housing and Urban Development, the Consumer Financial Protection Bureau and the State Attorneys General, relating to the servicing and origination of mortgages. The global settlement, which became effective on April 5, 2012, required the Firm to, among other things: (i) make cash payments of approximately $1.1 billion, a portion of which will be set aside for payments to borrowers ("Cash Settlement Payment"); (ii) provide approximately $500 million of refinancing relief to certain "underwater" borrowers whose loans are owned and serviced by the Firm ("Refi Program"); and (iii) provide approximately $3.7 billion of additional relief for certain borrowers, including reductions of principal on first and second liens, payments to assist with short sales, deficiency balance waivers on past foreclosures and short sales, and forbearance assistance for unemployed homeowners ("Consumer Relief Program"). The Cash Settlement Payment was made on April 13, 2012.

As the Firm provides relief to borrowers under the Refi and Consumer Relief Programs, the Firm receives credits that reduce its remaining obligation under these programs. If the Firm does not meet certain targets set forth in the global settlement agreement for providing either refinancings under the Refi Program or other borrower relief under the Consumer Relief Program within certain prescribed time periods, the Firm must instead make additional cash payments. In general, 75% of the targets must be met within two years of the date of the global settlement and 100% must be achieved within three years of that date. The Firm filed its first quarterly report concerning its compliance with the global settlement with the Office of Mortgage Settlement Oversight in November 2012. The report included information regarding refinancings completed under the Refi Program and relief provided to borrowers under the Consumer Relief Program, as well as credits earned by the Firm under the global settlement as a result of such actions.

The global settlement releases the Firm from certain further claims by the participating government entities related to servicing activities, including foreclosures and loss mitigation activities; certain origination activities; and certain bankruptcy-related activities. Not included in the global settlement are any claims arising out of securitization activities, including representations made to investors with respect to mortgage-backed securities; criminal claims; and repurchase demands from U.S. government-sponsored entities ("GSEs"), among other items.

Also on February 9, 2012, the Firm entered into agreements with the Board of Governors of the Federal Reserve System ("Federal Reserve") and the Office of the Comptroller of the Currency ("OCC") for the payment of civil money penalties related to conduct that was the subject of consent orders entered into with the banking regulators in April 2011. The Firm's payment obligations under those agreements will be deemed satisfied by the Firm's payments and provisions of relief under the global settlement.

For further information on this global settlement, see Loans in Note 14 on pages 250–275 of this Annual Report.

Washington Mutual, Inc. bankruptcy plan confirmation

On February 17, 2012, a bankruptcy court confirmed the joint plan containing the global settlement agreement resolving numerous disputes among Washington Mutual, Inc. ("WMI"), JPMorgan Chase and the Federal Deposit Insurance Corporation ("FDIC") as well as significant creditor groups (the "WaMu Global Settlement"). The WaMu Global Settlement was finalized on March 19, 2012, pursuant to the execution of a definitive agreement and court approval, and the Firm recognized additional assets, including certain pension-related assets, as well as tax refunds, resulting in a pretax gain of $1.1 billion for the three months ended March 31, 2012. For additional information related to the WaMu Global Settlement see Washington Mutual Litigations in Note 31 on page 324 of this Annual Report.

Superstorm Sandy
On October 29, 2012, the mid-Atlantic and Northeast regions of the U.S. were affected by Superstorm Sandy, which caused major flooding and wind damage and resulted in major disruptions to individuals and businesses and significant damage to homes and communities in the affected regions. Superstorm Sandy did not have a material impact on the 2012 financial results of the Firm.

Subsequent events

Mortgage foreclosure settlement agreement with the Office of the Comptroller of the Currency and the Board of Governors of the Federal Reserve System
On January 7, 2013, the Firm announced that it and a number of other financial institutions entered into a settlement agreement with the Office of the Comptroller of the Currency and the Board of Governors of the Federal Reserve System providing for the termination of the independent foreclosure review programs (the "Independent Foreclosure Review"). Under this settlement, the Firm will make a cash payment of $753 million into a settlement fund for distribution to qualified borrowers. The Firm has also committed an additional $1.2 billion to foreclosure prevention actions, which will be fulfilled through credits given to the Firm for modifications, short sales and other specified types of borrower relief. Foreclosure prevention actions that earn credit under the Independent Foreclosure Review settlement are in addition to actions taken by the Firm to earn credit under the global settlement entered into by the Firm with state and federal agencies. The estimated impact of the foreclosure prevention actions required under the Independent Foreclosure Review settlement have been considered in the Firm's allowance for loan losses. The Firm recognized a pretax charge of approximately $700 million in the fourth quarter of 2012 related to the Independent Foreclosure Review settlement.

Note 3 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Firm's Consolidated Balance Sheets). Certain assets (e.g. certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral), liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment).

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on models that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions to those used by the Firm could result in a different estimate of fair value at the reporting date.

Valuation process
Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated Balance Sheets at fair value. The Firm's valuation control function, which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value. In addition, the Firm has a firm-wide Valuation Governance Forum ("VGF") comprising senior finance and risk executives to oversee the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the firm-wide head of the valuation control function, and also includes sub-forums for the CIB, MB, and certain corporate functions including Treasury and CIO.

The valuation control function verifies fair value estimates leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, additional review is performed by the valuation control function to ensure the reasonableness of estimates that cannot be verified to external independent data, and may include: evaluating the limited market activity including client unwinds; benchmarking of valuation inputs to those for similar instruments; decomposing the valuation of structured instruments into individual components; comparing expected to actual cash flows; reviewing profit and loss trends; and reviewing trends in collateral valuation. In addition there are additional levels of management review for more significant or complex positions.

The valuation control function determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments are applied to the quoted market price for instruments classified within

level 1 of the fair value hierarchy (see below for further information on the fair value hierarchy). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

- Liquidity valuation adjustments are considered when the Firm may not be able to observe a recent market price for a financial instrument that trades in an inactive (or less active) market. The Firm estimates the amount of uncertainty in the initial fair value estimate based on the degree of liquidity in the market. Factors considered in determining the liquidity adjustment include: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quote or alternatively pricing points for similar instruments in active markets; and (3) the volatility of the principal risk component of the financial instrument. For certain portfolios of financial instruments that the Firm manages on the basis of net open risk exposure, valuation adjustments are necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.
- Unobservable parameter valuation adjustments may be made when positions are valued using internally developed models that incorporate unobservable parameters – that is, parameters that must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the valuation estimate provided by the model.

Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality and the Firm's own creditworthiness, applying a consistent framework across the Firm. For more information on such adjustments see Credit adjustments on page 212 of this Note

Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs to those models.

The Firm's Model Risk function within the Firm's Model Risk and Development Group, which in turn reports to the Chief Risk Officer, reviews and approves valuation models used by the Firm. Model reviews consider a number of factors about the model's suitability for valuation of a particular product including whether it accurately reflects the characteristics and significant risks of a particular instrument; the selection and reliability of model inputs; consistency with models for similar products; the appropriateness of any model-related adjustments; and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes.

New significant valuation models, as well as material changes to existing models, are reviewed and approved prior to implementation except where specified conditions are met. The Model Risk function performs an annual Firmwide model risk assessment where developments in the product or market are considered in determining whether valuation models which have already been reviewed need to be reviewed and approved again.

Valuation Hierarchy

A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following table describes the valuation methodologies used by the Firm to measure its more significant products/ instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features. For further information refer to discussion on derivatives below. • Market rates for the respective maturity • Collateral	Level 2
Loans and lending-related commitments - wholesale		
Trading portfolio	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are limited) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Yield • Lifetime credit losses • Loss severity • Prepayment speed • Servicing costs	Level 2 or 3
Loans held for investment and associated lending related commitments	Valuations are based on discounted cash flows, which consider: • Credit spreads, derived from the cost of CDS; or benchmark credit curves developed by the Firm, by industry and credit rating, and which take into account the difference in loss severity rates between bonds and loans • Prepayment speed Lending related commitments are valued similar to loans and reflect the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become funded prior to an obligor default For information regarding the valuation of loans measured at collateral value, see Note 14 on pages 250-275 of this Annual Report.	Predominantly level 3
Loans - consumer		
Held for investment consumer loans, excluding credit card	Valuations are based on discounted cash flows, which consider: • Discount rates (derived from primary origination rates and market activity) • Expected lifetime credit losses (considering expected and current default rates for existing portfolios, collateral prices, and economic environment expectations (i.e., unemployment rates)) • Estimated prepayments • Servicing costs • Market liquidity For information regarding the valuation of loans measured at collateral value, see Note 14 on pages 250-275 of this Annual Report.	Predominantly level 3
Credit card receivables	Valuations are based on discounted cash flows, which consider: • Projected interest income and late fee revenue, funding, servicing and credit costs, and loan repayment rates • Estimated life of receivables (based on projected loan payment rates) • Discount rate - based on expected return on receivables • Credit costs - allowance for loan losses is considered a reasonable proxy for the credit cost based on the short- term nature of credit card receivables	Level 3
Conforming residential mortgage loans expected to be sold	Fair value is based upon observable prices for mortgage-backed securities with similar collateral and incorporates adjustments to these prices to account for differences between the securities and the value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity.	Predominantly level 2

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Securities	Quoted market prices are used where available.	Level 1
	In the absence of quoted market prices, securities are valued based on:	Level 2 or 3
	• Observable market prices for similar securities	
	• Relevant broker quotes	
	• Discounted cash flows	
	In addition, the following inputs to discounted cash flows are used for the following products:	
	Mortgage- and asset-backed securities specific inputs:	
	• Collateral characteristics	
	• Deal-specific payment and loss allocations	
	• Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity	
	Collateralized loan obligations ("CLOs"), specific inputs:	
	• Collateral characteristics	
	• Deal-specific payment and loss allocations	
	• Expected prepayment speed, conditional default rates, loss severity	
	• Credit spreads	
	• Credit rating data	
Physical commodities	Valued using observable market prices or data	Level 1 or 2
Derivatives	Exchange-traded derivatives that are actively traded and valued using the exchange price, and over-the-counter contracts where quoted prices are available in an active market.	Level 1
	Derivatives valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models, that use observable or unobservable valuation inputs (e.g. plain vanilla options and interest rate and credit default swaps). Inputs include:	Level 2 or 3
	• Contractual terms including the period to maturity	
	• Readily observable parameters including interest rates and volatility	
	• Credit quality of the counterparty and of the Firm	
	• Correlation levels	
	In addition, the following specific inputs are used for the following derivatives that are valued based on models with significant unobservable inputs:	
	Structured credit derivatives specific inputs include:	
	• CDS spreads and recovery rates	
	• Credit correlation between the underlying debt instruments (levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices)	
	• Actual transactions, where available, are used to regularly recalibrate unobservable parameters	
	Certain long-dated equity option specific inputs include:	
	• Long-dated equity volatilities	
	Certain interest rate and FX exotic options specific inputs include:	
	• Interest rate correlation	
	• Interest rate spread volatility	
	• Foreign exchange correlation	
	• Correlation between interest rates and foreign exchange rates	
	• Parameters describing the evolution of underlying interest rates	
	Certain commodity derivatives specific inputs include:	
	• Commodity volatility	
	Adjustments to reflect counterparty credit quality (credit valuation adjustments or "CVA"), and the Firms own creditworthiness (debit valuation adjustments or "DVA"), see page 212 of this Note.	

Product/instrument	Valuation methodology, inputs and assumptions	Classification in the valuation hierarchy
Mortgage servicing rights ("MSRs")	See Mortgage servicing rights in Note 17 on pages 292-294 of this Annual Report.	Level 3
Private equity direct investments	*Private equity direct investments* Fair value is estimated using all available information and considering the range of potential inputs, including: • Transaction prices • Trading multiples of comparable public companies • Operating performance of the underlying portfolio company • Additional available inputs relevant to the investment • Adjustments as required, since comparable public companies are not identical to the company being valued, and for company-specific issues and lack of liquidity	Level 3
	Public investments held in the Private Equity portfolio • Valued using observable market prices less adjustments for relevant restrictions, where applicable	Level 1 or 2
Fund investments (i.e., mutual/collective investment funds, private equity funds, hedge funds, and real estate funds)	Net asset value ("NAV") • NAV is validated by sufficient level of observable activity (i.e., purchases and sales) • Adjustments to the NAV as required, for restrictions on redemption (e.g., lock up periods or withdrawal limitations) or where observable activity is limited	Level 1 Level 2 or 3
Beneficial interests issued by consolidated VIE	Valued using observable market information, where available In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE	Level 2 or 3
Long-term debt, not carried at fair value	Valuations are based on discounted cash flows, which consider: • Market rates for respective maturity • The Firm's own creditworthiness (DVA), see page 212 of this Note	Predominantly level 2
Structured notes (included in deposits, other borrowed funds and long-term debt)	Valuations are based on discounted cash flows, which consider: • The Firm's own creditworthiness (DVA), see page 212 of this Note • Consideration of derivative features. For further information refer to discussion on derivatives above	Level 2 or 3

The following table presents the asset and liabilities measured at fair value as of December 31, 2012 and 2011 by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2012 (in millions)	Level 1	Level 2	Level 3	Netting	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 24,258	$ –	$ –	$ 24,258
Securities borrowed	–	10,177	–	–	10,177
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	36,240	498	–	36,738
Residential – nonagency	–	1,509	663	–	2,172
Commercial – nonagency	–	1,565	1,207	–	2,772
Total mortgage-backed securities	–	39,314	2,368	–	41,682
U.S. Treasury and government agencies[a]	12,240	10,185	–	–	22,425
Obligations of U.S. states and municipalities	–	16,726	1,436	–	18,162
Certificates of deposit, bankers' acceptances and commercial paper	–	4,759	–	–	4,759
Non-U.S. government debt securities	23,500	45,121	67	–	68,688
Corporate debt securities	–	33,384	5,308	–	38,692
Loans[b]	–	30,754	10,787	–	41,541
Asset-backed securities	–	4,182	3,696	–	7,878
Total debt instruments	35,740	184,425	23,662	–	243,827
Equity securities	106,898	2,687	1,114	–	110,699
Physical commodities[c]	10,107	6,066	–	–	16,173
Other	–	3,483	863	–	4,346
Total debt and equity instruments[d]	152,745	196,661	25,639	–	375,045
Derivative receivables:					
Interest rate	476	1,322,155	6,617	(1,290,043)	39,205
Credit	–	93,821	6,489	(98,575)	1,735
Foreign exchange	450	144,758	3,051	(134,117)	14,142
Equity	–	36,017	4,921	(31,672)	9,266
Commodity	316	41,129	2,180	(32,990)	10,635
Total derivative receivables[e]	1,242	1,637,880	23,258	(1,587,397)	74,983
Total trading assets	153,987	1,834,541	48,897	(1,587,397)	450,028
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	98,388	–	–	98,388
Residential – nonagency	–	74,189	450	–	74,639
Commercial – nonagency	–	12,948	255	–	13,203
Total mortgage-backed securities	–	185,525	705	–	186,230
U.S. Treasury and government agencies[a]	8,907	3,223	–	–	12,130
Obligations of U.S. states and municipalities	35	21,489	187	–	21,711
Certificates of deposit	–	2,783	–	–	2,783
Non-U.S. government debt securities	41,218	24,826	–	–	66,044
Corporate debt securities	–	38,609	–	–	38,609
Asset-backed securities:					
Collateralized loan obligations	–	–	27,896	–	27,896
Other	–	12,843	128	–	12,971
Equity securities	2,733	38	–	–	2,771
Total available-for-sale securities	52,893	289,336	28,916	–	371,145
Loans	–	273	2,282	–	2,555
Mortgage servicing rights	–	–	7,614	–	7,614
Other assets:					
Private equity investments[f]	578	–	7,181	–	7,759
All other	4,188	253	4,258	–	8,699
Total other assets	4,766	253	11,439	–	16,458
Total assets measured at fair value on a recurring basis	$ 211,646	$ 2,158,838[g]	$ 99,148[g]	$ (1,587,397)	$ 882,235
Deposits	$ –	$ 3,750	$ 1,983	$ –	$ 5,733
Federal funds purchased and securities loaned or sold under repurchase agreements	–	4,388	–	–	4,388
Other borrowed funds	–	9,972	1,619	–	11,591
Trading liabilities:					
Debt and equity instruments[d]	46,580	14,477	205	–	61,262
Derivative payables:					
Interest rate	490	1,283,829	3,295	(1,262,708)	24,906
Credit	–	95,411	4,616	(97,523)	2,504
Foreign exchange	428	156,413	4,801	(143,041)	18,601
Equity	–	36,083	6,727	(30,991)	11,819
Commodity	176	45,363	1,926	(34,639)	12,826
Total derivative payables[e]	1,094	1,617,099	21,365	(1,568,902)	70,656
Total trading liabilities	47,674	1,631,576	21,570	(1,568,902)	131,918
Accounts payable and other liabilities	–	–	36	–	36
Beneficial interests issued by consolidated VIEs	–	245	925	–	1,170
Long-term debt	–	22,312	8,476	–	30,788
Total liabilities measured at fair value on a recurring basis	$ 47,674	$ 1,672,243	$ 34,609	$ (1,568,902)	$ 185,624

	Fair value hierarchy				
December 31, 2011 (in millions)	Level 1	Level 2	Level 3	Netting	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 22,191	$ –	$ –	$ 22,191
Securities borrowed	–	15,308	–	–	15,308
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	27,082	7,801	86	–	34,969
Residential – nonagency	–	2,956	796	–	3,752
Commercial – nonagency	–	870	1,758	–	2,628
Total mortgage-backed securities	27,082	11,627	2,640	–	41,349
U.S. Treasury and government agencies[a]	11,508	8,391	–	–	19,899
Obligations of U.S. states and municipalities	–	15,117	1,619	–	16,736
Certificates of deposit, bankers' acceptances and commercial paper	–	2,615	–	–	2,615
Non-U.S. government debt securities	18,618	40,080	104	–	58,802
Corporate debt securities	–	33,938	6,373	–	40,311
Loans[b]	–	21,589	12,209	–	33,798
Asset-backed securities	–	2,406	7,965	–	10,371
Total debt instruments	57,208	135,763	30,910	–	223,881
Equity securities	93,799	3,502	1,177	–	98,478
Physical commodities[c]	21,066	4,898	–	–	25,964
Other	–	2,283	880	–	3,163
Total debt and equity instruments[d]	172,073	146,446	32,967	–	351,486
Derivative receivables:					
Interest rate	1,324	1,433,469	6,728	(1,395,152)	46,369
Credit	–	152,569	17,081	(162,966)	6,684
Foreign exchange	833	162,689	4,641	(150,273)	17,890
Equity	–	43,604	4,132	(40,943)	6,793
Commodity	4,561	50,409	2,459	(42,688)	14,741
Total derivative receivables[e]	6,718	1,842,740	35,041	(1,792,022)	92,477
Total trading assets	178,791	1,989,186	68,008	(1,792,022)	443,963
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	92,426	14,681	–	–	107,107
Residential – nonagency	–	67,554	3	–	67,557
Commercial – nonagency	–	10,962	267	–	11,229
Total mortgage-backed securities	92,426	93,197	270	–	185,893
U.S. Treasury and government agencies[a]	3,837	4,514	–	–	8,351
Obligations of U.S. states and municipalities	36	16,246	258	–	16,540
Certificates of deposit	–	3,017	–	–	3,017
Non-U.S. government debt securities	25,381	19,884	–	–	45,265
Corporate debt securities	–	62,176	–	–	62,176
Asset-backed securities:					
Collateralized loan obligations	–	116	24,745	–	24,861
Other	–	15,760	213	–	15,973
Equity securities	2,667	38	–	–	2,705
Total available-for-sale securities	124,347	214,948	25,486	–	364,781
Loans	–	450	1,647	–	2,097
Mortgage servicing rights	–	–	7,223	–	7,223
Other assets:					
Private equity investments[f]	99	706	6,751	–	7,556
All other	4,336	233	4,374	–	8,943
Total other assets	4,435	939	11,125	–	16,499
Total assets measured at fair value on a recurring basis	$ 307,573	$ 2,243,022[g]	$ 113,489[g]	$ (1,792,022)	$ 872,062
Deposits	$ –	$ 3,515	$ 1,418	$ –	$ 4,933
Federal funds purchased and securities loaned or sold under repurchase agreements	–	6,817	–	–	6,817
Other borrowed funds	–	8,069	1,507	–	9,576
Trading liabilities:					
Debt and equity instruments[d]	50,830	15,677	211	–	66,718
Derivative payables:					
Interest rate	1,537	1,395,113	3,167	(1,371,807)	28,010
Credit	–	155,772	9,349	(159,511)	5,610
Foreign exchange	846	159,258	5,904	(148,573)	17,435
Equity	–	39,129	7,237	(36,711)	9,655
Commodity	3,114	53,684	3,146	(45,677)	14,267
Total derivative payables[e]	5,497	1,802,956	28,803	(1,762,279)	74,977
Total trading liabilities	56,327	1,818,633	29,014	(1,762,279)	141,695
Accounts payable and other liabilities	–	–	51	–	51
Beneficial interests issued by consolidated VIEs	–	459	791	–	1,250
Long-term debt	–	24,410	10,310	–	34,720
Total liabilities measured at fair value on a recurring basis	$ 56,327	$ 1,861,903	$ 43,091	$ (1,762,279)	$ 199,042

(a) At December 31, 2012 and 2011, included total U.S. government-sponsored enterprise obligations of $119.4 billion and $122.4 billion respectively, which were predominantly mortgage-related.

(b) At December 31, 2012 and 2011, included within trading loans were $26.4 billion and $20.1 billion, respectively, of residential first-lien mortgages, and $2.2 billion and $2.0 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $17.4 billion and $11.0 billion, respectively, and reverse mortgages of $4.0 billion and $4.0 billion, respectively.

(c) Physical commodities inventories are generally accounted for at the lower of cost or market. "Market" is a term defined in U.S. GAAP as an amount not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory.

Therefore, market approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when market is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. For a further discussion of the Firm's hedge accounting relationships, see Note 6 on pages 218–227 of this Annual Report. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.

(d) Balances reflect the reduction of securities owned (long positions) by the amount of securities sold but not yet purchased (short positions) when the long and short positions have identical Committee on Uniform Security Identification Procedures numbers ("CUSIPs").

(e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. Therefore, the balances reported in the fair value hierarchy table are gross of any counterparty netting adjustments. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivable and payable balances would be $8.4 billion and $11.7 billion at December 31, 2012 and 2011, respectively; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.

(f) Private equity instruments represent investments within the Corporate/Private Equity segment. The cost basis of the private equity investment portfolio totaled $8.4 billion and $9.5 billion at December 31, 2012 and 2011, respectively.

(g) Includes investments in hedge funds, private equity funds, real estate and other funds that do not have readily determinable fair values. The Firm uses net asset value per share when measuring the fair value of these investments. At December 31, 2012 and 2011, the fair value of these investments were $4.9 billion and $5.5 billion, respectively, of which $1.1 billion and $1.2 billion, respectively, in level 2, and $3.8 billion and $4.3 billion, respectively, in level 3.

Transfers between levels for instruments carried at fair value on a recurring basis

For the year ended December 31, 2012, $113.9 billion of settled U.S. government agency mortgage-backed securities were transferred from level 1 to level 2. While the U.S. government agency mortgage-backed securities market remains highly liquid and transparent, the transfer reflects greater market price differentiation between settled securities based on certain underlying loan specific factors. There were no significant transfers from level 2 to level 1 for the year ended December 31, 2012, and no significant transfers between level 1 and level 2 for the year ended December 31, 2011.

For the years ended December 31, 2012 and 2011, there were no significant transfers from level 2 into level 3. For the year ended December 31, 2012, transfers from level 3 into level 2 included $1.2 billion of derivative payables based on increased observability of certain structured equity derivatives; and $1.8 billion of long-term debt due to a decrease in valuation uncertainty of certain equity structured notes. For the year ended December 31, 2011, transfers from level 3 into level 2 included $2.6 billion of long-term debt due to a decrease in valuation uncertainty of certain structured notes.

All transfers are assumed to occur at the beginning of the reporting period.

During 2012 the liquidity for certain collateralized loan obligations increased and price transparency improved. Accordingly, the Firm incorporated a revised valuation model into its valuation process for CLOs to better calibrate to market data where available. The Firm began to verify fair value estimates from this model to independent sources during the fourth quarter of 2012. Although market liquidity and price transparency have improved, CLO market prices were not yet considered materially observable and therefore CLOs remained in level 3 as of December 31, 2012. The change in the valuation process did not have a significant impact on the fair value of the Firm's CLO positions.

Level 3 valuations

The Firm has established well-documented processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3). For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, see pages 196–200 of this Note.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs — including, but not limited to, transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. Finally, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, constraints on liquidity and unobservable parameters, where relevant. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. The input range does not reflect the level of input uncertainty, instead it is driven by the different underlying characteristics of the various instruments within the classification. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors , or strike prices.

Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value. In the Firm's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. The input range and weighted average values will therefore vary from period to period and parameter to parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

Level 3 inputs[a]

December 31, 2012 (in millions, except for ratios and basis points)

Product/Instrument	Fair value	Principal valuation technique	Unobservable inputs	Range of input values	Weighted average
Residential mortgage-backed securities and loans	$ 9,836	Discounted cash flows	Yield	4 % - 20%	7%
			Prepayment speed	0 % - 40%	6%
			Conditional default rate	0 % - 100%	10%
			Loss severity	0 % - 95%	15%
Commercial mortgage-backed securities and loans[b]	1,724	Discounted cash flows	Yield	2 % - 32%	6%
			Conditional default rate	0 % - 8%	0%
			Loss severity	0 % - 40%	35%
Corporate debt securities, obligations of U.S. states and municipalities, and other[c]	19,563	Discounted cash flows	Credit spread	130 bps - 250 bps	153 bps
			Yield	0 % - 30%	9%
		Market comparables	Price	25 - 125	87
Net interest rate derivatives	3,322	Option pricing	Interest rate correlation	(75)% - 100%	
			Interest rate spread volatility	0 % - 60%	
Net credit derivatives[b]	1,873	Discounted cash flows	Credit correlation	27 % - 90%	
Net foreign exchange derivatives	(1,750)	Option pricing	Foreign exchange correlation	(75)% - 45%	
Net equity derivatives	(1,806)	Option pricing	Equity volatility	5 % - 45%	
Net commodity derivatives	254	Option pricing	Commodity volatility	24 % - 47%	
Collateralized loan obligations[d]	29,972	Discounted cash flows	Credit spread	130 bps - 600 bps	163 bps
			Prepayment speed	15 % - 20%	19%
			Conditional default rate	2%	2%
			Loss severity	40%	40%
Mortgage servicing rights ("MSRs")	7,614	Discounted cash flows	Refer to Note 17 on pages 291–295 of this Annual Report.		
Private equity direct investments	5,231	Market comparables	EBITDA multiple	2.7x - 14.6x	8.3x
			Liquidity adjustment	0 % - 30%	10%
Private equity fund investments	1,950	Net asset value	Net asset value[f]		
Long-term debt, other borrowed funds, and deposits[e]	12,078	Option pricing	Interest rate correlation	(75)% - 100%	
			Foreign exchange correlation	(75)% - 45%	
			Equity correlation	(40)% - 85%	
		Discounted cash flows	Credit correlation	27 % - 84%	

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated Balance Sheet.
(b) The unobservable inputs and associated input ranges for approximately $1.3 billion of credit derivative receivables and $1.2 billion of credit derivative payables with underlying mortgage risk have been included in the inputs and ranges provided for commercial mortgage-backed securities and loans.
(c) Approximately 16% of instruments in this category include price as an unobservable input. This balance includes certain securities and illiquid trading loans, which are generally valued using comparable prices and/or yields for similar instruments.
(d) CLOs are securities backed by corporate loans. At December 31, 2012, $27.9 billion of CLOs were held in the available-for-sale ("AFS") securities portfolio and $2.1 billion were included in asset-backed securities held in the trading portfolio. Substantially all of the securities are rated "AAA", "AA" and "A". The reported range of credit spreads increased from the third quarter to the fourth quarter of 2012, while the reported ranges of other unobservable parameters decreased. This was primarily due to the Firm incorporating a revised valuation model for CLOs, which uses a different combination of valuation parameters as compared with the old model. The change did not have a significant impact on the fair value of the Firm's CLO positions.
(e) Long-term debt, other borrowed funds, and deposits include structured notes issued by the Firm that are financial instruments containing embedded derivatives. The estimation of the fair value of structured notes is predominantly based on the derivative features embedded within the instruments. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.
(f) The range has not been disclosed due to the wide range of possible values given the diverse nature of the underlying investments.

Changes in and ranges of unobservable inputs

The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent as a change in one unobservable input may give rise to a change in another unobservable input, and where relationships exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline). Such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

In addition, the following discussion provides a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.

Discount rates and spreads

Yield – The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

Credit spread – The credit spread is the amount of additional annualized return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

The yield and the credit spread of a particular mortgage-backed security or CLO primarily reflect the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield and credit spreads reflects the range of risk inherent in various instruments owned by the Firm. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, loan to value ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages. For CLOs, credit spread reflects the market's implied risk premium based on several factors including the subordination of the investment, the credit quality of underlying borrowers, the specific terms of the loans within the CLO structure, as well as the supply and demand of the instrument. For corporate debt securities, obligations of U.S. states and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.

Performance rates of underlying collateral in collateralized obligations (e.g., MBS, CLOs, etc.)

Prepayment speed – The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool-to-collateral pool, and are driven by the type and location of the underlying borrower, the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

Conditional default rate – The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral have high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement. Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Firm's market-making portfolios, conditional default rates are most typically at the lower end of the range presented.

Loss severity – The loss severity (the inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

The loss severity applied in valuing a mortgage-backed security or a CLO investment depends on a host of factors relating to the underlying obligations (i.e., mortgages or loans). For mortgages, this includes the loan-to-value ratio, the nature of the lender's charge over the property and various other instrument-specific factors. For CLO investments, loss severity is driven by the characteristics of the underlying loans including the seniority of the loans and the type and amount of any security provided by the obligor.

Correlation – Correlation is a measure of the relationship between the movements of two variables (e.g., how the change in one variable influences the change in the other). Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity and foreign exchange) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement. Correlation inputs between risks within the same asset class are generally narrower than those between underlying risks across asset classes. In addition the ranges of credit correlation inputs tend to be narrower than those affecting other asset classes.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input as the relationship between the underlying risks may be different over different time periods. Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

For the Firm's derivatives and structured notes positions classified within level 3, the equity, foreign exchange and interest rate correlation inputs used in estimating fair value were concentrated at the upper end of the range presented, while the credit correlation inputs were distributed across the range presented.

Volatility – Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options, commodity options, and interest rate options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option (e.g., the volatility of a particular equity security may be significantly different from that of a particular commodity index), the tenor of the derivative as well as the strike price of the option.

For the Firm's derivatives and structured notes positions classified within level 3, the equity and interest rate volatility inputs used in estimating fair value were concentrated at the upper end of the range presented, while commodities volatilities were concentrated at the lower end of the range.

EBITDA multiple – EBITDA multiples refer to the input (often derived from the value of a comparable company) that is multiplied by the historic and/or expected earnings before interest, taxes, depreciation and amortization ("EBITDA") of a company in order to estimate the company's value. An increase in the EBITDA multiple, in isolation, net of adjustments, would result in an increase in a fair value measurement.

Net asset value – Net asset value is the total value of a fund's assets less liabilities. An increase in net asset value would result in an increase in a fair value measurement.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated Balance Sheet amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2012, 2011 and 2010. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2012 (in millions)	Fair value at January 1, 2012	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2012	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2012
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 86	$ (44)	$ 575	$ (103)	$ (16)	$ –	$ 498	$ (21)
Residential – nonagency	796	151	417	(533)	(145)	(23)	663	74
Commercial – nonagency	1,758	(159)	287	(475)	(104)	(100)	1,207	(145)
Total mortgage-backed securities	2,640	(52)	1,279	(1,111)	(265)	(123)	2,368	(92)
Obligations of U.S. states and municipalities	1,619	37	336	(552)	(4)	–	1,436	(15)
Non-U.S. government debt securities	104	(6)	661	(668)	(24)	–	67	(5)
Corporate debt securities	6,373	187	8,391	(6,186)	(3,045)	(412)	5,308	689
Loans	12,209	836	5,342	(3,269)	(3,801)	(530)	10,787	411
Asset-backed securities	7,965	272	2,550	(6,468)	(614)	(9)	3,696	184
Total debt instruments	30,910	1,274	18,559	(18,254)	(7,753)	(1,074)	23,662	1,172
Equity securities	1,177	(209)	460	(379)	(12)	77	1,114	(112)
Other	880	186	68	(108)	(163)	–	863	180
Total trading assets – debt and equity instruments	32,967	1,251 [c]	19,087	(18,741)	(7,928)	(997)	25,639	1,240 [c]
Net derivative receivables:[a]								
Interest rate	3,561	6,930	406	(194)	(7,071)	(310)	3,322	905
Credit	7,732	(4,487)	124	(84)	(1,416)	4	1,873	(3,271)
Foreign exchange	(1,263)	(800)	112	(184)	436	(51)	(1,750)	(957)
Equity	(3,105)	168	1,676	(2,579)	899	1,135	(1,806)	580
Commodity	(687)	(673)	74	64	1,278	198	254	(160)
Total net derivative receivables	6,238	1,138 [c]	2,392	(2,977)	(5,874)	976	1,893	(2,903) [c]
Available-for-sale securities:								
Asset-backed securities	24,958	135	9,280	(3,361)	(3,104)	116	28,024	118
Other	528	55	667	(113)	(245)	–	892	59
Total available-for-sale securities	25,486	190 [d]	9,947	(3,474)	(3,349)	116	28,916	177 [d]
Loans	1,647	695 [c]	1,536	(22)	(1,718)	144	2,282	12 [c]
Mortgage servicing rights	7,223	(635) [e]	2,833	(579)	(1,228)	–	7,614	(635) [e]
Other assets:								
Private equity investments	6,751	420 [c]	1,545	(512)	(977)	(46)	7,181	333 [c]
All other	4,374	(195) [f]	818	(238)	(501)	–	4,258	(200) [f]

Year ended December 31, 2012 (in millions)	Fair value at January 1, 2012	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2012	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2012
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 1,418	$ 212 [c]	$ –	$ –	$ 1,236	$ (380)	$ (503)	$ 1,983	$ 185 [c]
Other borrowed funds	1,507	148 [c]	–	–	1,646	(1,774)	92	1,619	72 [c]
Trading liabilities – debt and equity instruments	211	(16) [c]	(2,875)	2,940	–	(50)	(5)	205	(12) [c]
Accounts payable and other liabilities	51	1 [f]	–	–	–	(16)	–	36	1 [f]
Beneficial interests issued by consolidated VIEs	791	181 [c]	–	–	221	(268)	–	925	143 [c]
Long-term debt	10,310	328 [c]	–	–	3,662	(4,511)	(1,313)	8,476	(101) [c]

Year ended December 31, 2011 (in millions)	Fair value at January 1, 2011	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2011	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2011
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 174	$ 24	$ 28	$ (39)	$ (43)	$ (58)	$ 86	$ (51)
Residential – nonagency	687	109	708	(432)	(221)	(55)	796	(9)
Commercial – nonagency	2,069	37	796	(973)	(171)	–	1,758	33
Total mortgage-backed securities	2,930	170	1,532	(1,444)	(435)	(113)	2,640	(27)
Obligations of U.S. states and municipalities	2,257	9	807	(1,465)	(1)	12	1,619	(11)
Non-U.S. government debt securities	202	35	552	(531)	(80)	(74)	104	38
Corporate debt securities	4,946	32	8,080	(5,939)	(1,005)	259	6,373	26
Loans	13,144	329	5,532	(3,873)	(2,691)	(232)	12,209	142
Asset-backed securities	8,460	90	4,185	(4,368)	(424)	22	7,965	(217)
Total debt instruments	31,939	665	20,688	(17,620)	(4,636)	(126)	30,910	(49)
Equity securities	1,685	267	180	(541)	(352)	(62)	1,177	278
Other	930	48	36	(39)	(95)	–	880	79
Total trading assets – debt and equity instruments	34,554	980 [c]	20,904	(18,200)	(5,083)	(188)	32,967	308 [c]
Net derivative receivables:[a]								
Interest rate	2,836	5,205	511	(219)	(4,534)	(238)	3,561	1,497
Credit	5,386	2,240	22	(13)	116	(19)	7,732	2,744
Foreign exchange	(614)	(1,913)	191	(20)	886	207	(1,263)	(1,878)
Equity	(2,446)	(60)	715	(1,449)	37	98	(3,105)	(132)
Commodity	(805)	596	328	(350)	(294)	(162)	(687)	208
Total net derivative receivables	4,357	6,068 [c]	1,767	(2,051)	(3,789)	(114)	6,238	2,439 [c]
Available-for-sale securities:								
Asset-backed securities	13,775	(95)	15,268	(1,461)	(2,529)	–	24,958	(106)
Other	512	–	57	(15)	(26)	–	528	8
Total available-for-sale securities	14,287	(95) [d]	15,325	(1,476)	(2,555)	–	25,486	(98) [d]
Loans	1,466	504 [c]	326	(9)	(639)	(1)	1,647	484 [c]
Mortgage servicing rights	13,649	(7,119) [e]	2,603	–	(1,910)	–	7,223	(7,119) [e]
Other assets:								
Private equity investments	7,862	943 [c]	1,452	(2,746)	(594)	(166)	6,751	(242) [c]
All other	4,179	(54) [f]	938	(139)	(521)	(29)	4,374	(83) [f]

Year ended December 31, 2011 (in millions)	Fair value at January 1, 2011	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2011	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2011
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 773	$ 15 [c]	$ –	$ –	$ 433	$ (386)	$ 583	$ 1,418	$ 4 [c]
Other borrowed funds	1,384	(244) [c]	–	–	1,597	(834)	(396)	1,507	(85) [c]
Trading liabilities – debt and equity instruments	54	17 [c]	(533)	778	–	(109)	4	211	(7) [c]
Accounts payable and other liabilities	236	(61) [f]	–	–	–	(124)	–	51	5 [f]
Beneficial interests issued by consolidated VIEs	873	17 [c]	–	–	580	(679)	–	791	(15) [c]
Long-term debt	13,044	60 [c]	–	–	2,564	(3,218)	(2,140)	10,310	288 [c]

Year ended December 31, 2010 (in millions)	Fair value at January 1, 2010	Total realized/ unrealized gains/ (losses)	Purchases, issuances, settlements, net	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2010	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2010
	Fair value measurements using significant unobservable inputs					
Assets:						
Trading assets:						
Debt instruments:						
Mortgage-backed securities:						
U.S. government agencies	$ 260	$ 24	$ (107)	$ (3)	$ 174	$ (31)
Residential – nonagency	1,115	178	(564)	(42)	687	110
Commercial – nonagency	1,770	230	(33)	102	2,069	130
Total mortgage-backed securities	3,145	432	(704)	57	2,930	209
Obligations of U.S. states and municipalities	1,971	2	142	142	2,257	(30)
Non-U.S. government debt securities	89	(36)	194	(45)	202	(8)
Corporate debt securities	5,241	(325)	115	(85)	4,946	28
Loans	13,218	(40)	1,296	(1,330)	13,144	(385)
Asset-backed securities	8,620	237	(408)	11	8,460	195
Total debt instruments	32,284	270	635	(1,250)	31,939	9
Equity securities	1,956	133	(351)	(53)	1,685	199
Other	1,441	211	(801)	79	930	299
Total trading assets – debt and equity instruments	35,681	614 [c]	(517)	(1,224)	34,554	507 [c]
Net derivative receivables:[a]						
Interest rate	2,040	3,057	(2,520)	259	2,836	487
Credit	10,350	(1,757)	(3,102)	(105)	5,386	(1,048)
Foreign exchange	1,082	(913)	(434)	(349)	(614)	(464)
Equity	(2,306)	(194)	(82)	136	(2,446)	(212)
Commodity	(329)	(700)	134	90	(805)	(76)
Total net derivative receivables	10,837	(507) [c]	(6,004)	31	4,357	(1,313) [c]
Available-for-sale securities:						
Asset-backed securities	12,732	(146)	1,189	–	13,775	(129)
Other	461	(49)	37	63	512	18
Total available-for-sale securities	13,193	(195) [d]	1,226	63	14,287	(111) [d]
Loans	990	145 [c]	323	8	1,466	37 [c]
Mortgage servicing rights	15,531	(2,268) [e]	386	–	13,649	(2,268) [e]
Other assets:						
Private equity investments	6,563	1,038 [c]	715	(454)	7,862	688 [c]
All other	9,521	(113) [f]	(5,132)	(97)	4,179	37 [f]

Year ended December 31, 2010 (in millions)	Fair value at January 1, 2010	Total realized/ unrealized (gains)/losses	Purchases, issuances, settlements, net	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2010	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2010
	Fair value measurements using significant unobservable inputs					
Liabilities:[b]						
Deposits	$ 476	$ 54 [c]	$ (86)	$ 329	$ 773	$ (77) [c]
Other borrowed funds	542	(242) [c]	1,326	(242)	1,384	445 [c]
Trading liabilities – debt and equity instruments	10	2 [c]	19	23	54	–
Accounts payable and other liabilities	355	(138) [f]	19	–	236	37 [f]
Beneficial interests issued by consolidated VIEs	625	(7) [c]	87	168	873	(76) [c]
Long-term debt	18,287	(532) [c]	(4,796)	85	13,044	662 [c]

(a) All level 3 derivatives are presented on a net basis, irrespective of underlying counterparty.
(b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 19%, 22% and 23% at December 31, 2012, 2011 and 2010, respectively.
(c) Predominantly reported in principal transactions revenue, except for changes in fair value for Consumer & Community Banking ("CCB") mortgage loans and lending-related commitments originated with the intent to sell, which are reported in mortgage fees and related income.
(d) Realized gains/(losses) on AFS securities, as well as other-than-temporary impairment losses that are recorded in earnings, are reported in securities gains. Unrealized gains/(losses) are reported in OCI. Realized gains/(losses) and foreign exchange remeasurement adjustments recorded in income on AFS securities were $145 million, $(240) million, and $(66) million for the years ended December 31, 2012, 2011 and 2010, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were $45 million, $145 million and $(129) million for the years ended December 31, 2012, 2011 and 2010, respectively.
(e) Changes in fair value for CCB mortgage servicing rights are reported in mortgage fees and related income.
(f) Largely reported in other income.
(g) Loan originations are included in purchases.
(h) All transfers into and/or out of level 3 are assumed to occur at the beginning of the reporting period.

Level 3 analysis

Consolidated Balance Sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 4.4% of total Firm assets at December 31, 2012. The following describes significant changes to level 3 assets since December 31, 2011, for those items measured at fair value on a recurring basis. For further information on changes impacting items measured at fair value on a nonrecurring basis, see Assets and liabilities measured at fair value on a nonrecurring basis on page 212 of this Annual Report.

For the year ended December 31, 2012

Level 3 assets were $99.1 billion at December 31, 2012, reflecting a decrease of $14.3 billion from December 31, 2011, due to the following:

- $11.8 billion decrease in gross derivative receivables, predominantly driven by a $10.6 billion decrease from the impact of tightening reference entity credit spreads and risk reductions of credit derivatives and $1.6 billion decrease due to fluctuation in foreign exchange rates;
- $7.3 billion decrease in trading assets – debt and equity instruments, predominantly driven by sales and settlements of ABS, trading loans, and corporate debt securities.

The decreases above are partially offset by:

- $3.1 billion increase in asset-backed AFS securities, predominantly driven by purchases of CLOs.

Gains and Losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the years ended 2012, 2011 and 2010. For further information on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 207–210 of this Annual Report.

2012

- $1.3 billion of net gains on trading assets - debt and equity instruments, largely driven by tightening of credit spreads and fluctuation in foreign exchange rates; and
- $1.1 billion of net gains on derivatives, driven by $6.9 billion of net gains predominantly on interest rate lock commitments due to increased volumes and lower interest rates, partially offset by $4.5 billion of net losses on credit derivatives largely as a result of tightening of reference entity credit spreads.

2011

- $7.1 billion of losses on MSRs. For further discussion of the change, refer to Note 17 on pages 291–295 of this Annual Report; and
- $6.1 billion of net gains on derivatives, related to declining interest rates and widening of reference entity credit spreads, partially offset by losses due to fluctuation in foreign exchange rates.

2010

- $2.3 billion of losses on MSRs; For further discussion of the change, refer to Note 17 on pages 291–295 of this Annual Report; and
- $1.0 billion gain in private equity largely driven by gains on investments in the portfolio.

Credit adjustments

When determining the fair value of an instrument, it may be necessary to record adjustments to the Firm's estimates of fair value in order to reflect the counterparty credit quality and Firm's own creditworthiness:

- Credit valuation adjustments ("CVA") are taken to reflect the credit quality of a counterparty in the valuation of derivatives. CVA adjustments are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few classes of derivative contracts are listed on an exchange, derivative positions are predominantly valued using models that use as their basis observable market parameters. An adjustment is necessary to reflect the credit quality of each derivative counterparty to arrive at fair value. The adjustment also takes into account contractual factors designed to reduce the Firm's credit exposure to each counterparty, such as collateral and legal rights of offset.
- Debit valuation adjustments ("DVA") are taken to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. The methodology to determine the adjustment is generally consistent with CVA and incorporates JPMorgan Chase's credit spread as observed through the credit default swap ("CDS") market.

The following table provides the credit adjustments, excluding the effect of any hedging activity, reflected within the Consolidated Balance Sheets as of the dates indicated.

December 31, (in millions)	2012	2011
Derivative receivables balance (net of derivatives CVA)	$ 74,983	$ 92,477
Derivatives CVA[(a)]	(4,238)	(6,936)
Derivative payables balance (net of derivatives DVA)	70,656	74,977
Derivatives DVA	(830)	(1,420)
Structured notes balance (net of structured notes DVA)[(b)(c)]	48,112	49,229
Structured notes DVA	(1,712)	(2,052)

(a) Derivatives CVA, gross of hedges, includes results managed by the credit portfolio and other lines of business within the Corporate & Investment Bank ("CIB").
(b) Structured notes are recorded within long-term debt, other borrowed funds or deposits on the Consolidated Balance Sheets, depending upon the tenor and legal form of the note.
(c) Structured notes are measured at fair value based on the Firm's election under the fair value option. For further information on these elections, see Note 4 on pages 214–216 of this Annual Report.

The following table provides the impact of credit adjustments on earnings in the respective periods, excluding the effect of any hedging activity.

Year ended December 31, (in millions)	2012	2011	2010
Credit adjustments:			
Derivative CVA[(a)]	$ 2,698	$ (2,574)	$ (665)
Derivative DVA	(590)	538	41
Structured notes DVA[(b)]	(340)	899	468

(a) Derivatives CVA, gross of hedges, includes results managed by the credit portfolio and other lines of business within the CIB.
(b) Structured notes are measured at fair value based on the Firm's election under the fair value option. For further information on these elections, see Note 4 on pages 214–216 of this Annual Report.

Assets and liabilities measured at fair value on a nonrecurring basis

At December 31, 2012 and 2011, assets measured at fair value on a nonrecurring basis were $5.1 billion and $5.3 billion, respectively, comprised predominantly of loans. At December 31, 2012, $667 million and $4.4 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. At December 31, 2011, $369 million and $4.9 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. Liabilities measured at fair value on a nonrecurring basis were not significant at December 31, 2012 and 2011. For the years ended December 31, 2012 and 2011, there were no significant transfers between levels 1, 2, and 3.

Of the $5.1 billion of assets measured at fair value on a nonrecurring basis, $4.0 billion related to residential real estate loans at the net realizable value of the underlying collateral (i.e., collateral dependent loans). These amounts are classified as level 3, as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values. These discounts to the broker price opinions ranged from 22% to 66%, with a weighted average of 29%.

The total change in the value of assets and liabilities for which a fair value adjustment has been included in the Consolidated Statements of Income for the years ended December 31, 2012, 2011 and 2010, related to financial instruments held at those dates were losses of $1.6 billion, $2.2 billion and $3.6 billion, respectively; these losses were predominantly associated with loans. The changes reported for the year ended December 31, 2012, included the impact of charge-offs recognized on residential real estate loans discharged under Chapter 7 bankruptcy, as described in Note 14 on page 259 of this Annual Report.

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), see Note 14 on pages 250–275 of this Annual Report.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated Balance Sheets at fair value

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table. However, certain financial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements. Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of JPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated Balance Sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks; deposits with banks; federal funds sold; securities purchased under resale agreements and securities borrowed with short-dated maturities; short-term receivables and accrued interest receivable; commercial paper; federal funds purchased; securities loaned and sold under repurchase agreements with short-dated maturities; other borrowed funds; accounts payable; and accrued liabilities. In addition, U.S. GAAP requires that the fair value for deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents the carrying values and estimated fair values at December 31, 2012 and 2011, of financial assets and liabilities that are not carried on the Firm's Consolidated Balance Sheets at fair value (i.e. excluding financial instruments which are carried at fair value on a recurring basis. At December 31, 2012, information is provided on their classification within the fair value hierarchy. For additional information regarding the financial instruments within the scope of this disclosure, and the methods and significant assumptions used to estimate their fair value, see pages 196–200 of this Note.

	2012					2011	
		Estimated fair value hierarchy					
December 31, (in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Estimated fair value
Financial assets							
Cash and due from banks	$ 53.7	$ 53.7	$ —	$ —	$ 53.7	$ 59.6	$ 59.6
Deposits with banks	121.8	114.1	7.7	—	121.8	85.3	85.3
Accrued interest and accounts receivable	60.9	—	60.3	0.6	60.9	61.5	61.5
Federal funds sold and securities purchased under resale agreements	272.0	—	272.0	—	272.0	213.1	213.1
Securities borrowed	108.8	—	108.8	—	108.8	127.2	127.2
Loans, net of allowance for loan losses[(a)]	709.3	—	26.4	685.4	711.8	694.0	693.7
Other	49.7	—	42.7	7.4	50.1	49.8	50.3
Financial liabilities							
Deposits	$ 1,187.9	$ —	$ 1,187.2	$ 1.2	$ 1,188.4	$ 1,122.9	$ 1,123.4
Federal funds purchased and securities loaned or sold under repurchase agreements	235.7	—	235.7	—	235.7	206.7	206.7
Commercial paper	55.4	—	55.4	—	55.4	51.6	51.6
Other borrowed funds	15.0	—	15.0	—	15.0	12.3	12.3
Accounts payable and other liabilities	156.5	—	153.8	2.5	156.3	166.9	166.8
Beneficial interests issued by consolidated VIEs	62.0	—	57.7	4.4	62.1	64.7	64.9
Long-term debt and junior subordinated deferrable interest debentures	218.2	—	220.0	5.4	225.4	222.1	219.5

(a) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in the allowance for loan loss calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in the allowance for loan losses. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see page 198 of this Note.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated Balance Sheets, nor are they actively traded. The carrying value and estimated fair value of the Firm's wholesale lending-related commitments were as follows for the periods indicated.

	2012					2011	
		Estimated fair value hierarchy					
December 31, (in billions)	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[a]	Estimated fair value
Wholesale lending-related commitments	$ 0.7	$ –	$ –	$ 1.9	$ 1.9	$ 0.7	$ 3.4

(a) Represents the allowance for wholesale lending-related commitments. Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which are recognized at fair value at the inception of guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases, without notice as permitted by law. For a further discussion of the valuation of lending-related commitments, see page 198 of this Note.

Trading assets and liabilities

Trading assets include debt and equity instruments owned by JPMorgan Chase ("long" positions) that are held for client market-making and client-driven activities, as well as for certain risk management activities, certain loans managed on a fair value basis and for which the Firm has elected the fair value option, and physical commodities inventories that are generally accounted for at the lower of cost or market (market approximates fair value). Trading liabilities include debt and equity instruments that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase instruments at a future date to cover the short positions. Included in trading assets and trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. Trading assets and liabilities are carried at fair value on the Consolidated Balance Sheets. Balances reflect the reduction of securities owned (long positions) by the amount of securities sold but not yet purchased (short positions) when the long and short positions have identical Committee on Uniform Security Identification Procedures numbers ("CUSIPs").

Trading assets and liabilities – average balances

Average trading assets and liabilities were as follows for the periods indicated.

Year ended December 31, (in millions)	2012	2011	2010
Trading assets – debt and equity instruments[a]	$ 349,337	$ 393,890	$ 354,441
Trading assets – derivative receivables	85,744	90,003	84,676
Trading liabilities – debt and equity instruments[a][b]	69,001	81,916	78,159
Trading liabilities – derivative payables	76,162	71,539	65,714

(a) Balances reflect the reduction of securities owned (long positions) by the amount of securities sold, but not yet purchased (short positions) when the long and short positions have identical CUSIP numbers.
(b) Primarily represent securities sold, not yet purchased.

Note 4 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments not previously carried at fair value.

Elections

Elections were made by the Firm to:

- Mitigate income statement volatility caused by the differences in the measurement basis of elected instruments (for example, certain instruments elected were previously accounted for on an accrual basis) while the associated risk management arrangements are accounted for on a fair value basis;
- Eliminate the complexities of applying certain accounting models (e.g., hedge accounting or bifurcation accounting for hybrid instruments); and/or
- Better reflect those instruments that are managed on a fair value basis.

Elections include the following:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis.
- Securities financing arrangements with an embedded derivative and/or a maturity of greater than one year.

- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument.
- Certain investments that receive tax credits and other equity investments acquired as part of the Washington Mutual transaction.
- Structured notes issued as part of CIB's client-driven activities. (Structured notes are financial instruments that contain embedded derivatives.)
- Long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value.

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated Statements of Income for the years ended December 31, 2012, 2011 and 2010, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2012			2011			2010		
December 31, (in millions)	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	$ 161	$ –	$ 161	$ 270	$ –	$ 270	$ 173	$ –	$ 173
Securities borrowed	10	–	10	(61)	–	(61)	31	–	31
Trading assets:									
Debt and equity instruments, excluding loans	513	7 (c)	520	53	(6) (c)	47	556	(2) (c)	554
Loans reported as trading assets:									
Changes in instrument-specific credit risk	1,489	81 (c)	1,570	934	(174) (c)	760	1,279	(6) (c)	1,273
Other changes in fair value	(183)	7,670 (c)	7,487	127	5,263 (c)	5,390	(312)	4,449 (c)	4,137
Loans:									
Changes in instrument-specific credit risk	(14)	–	(14)	2	–	2	95	–	95
Other changes in fair value	676	–	676	535	–	535	90	–	90
Other assets	–	(339) (d)	(339)	(49)	(19) (d)	(68)	–	(263) (d)	(263)
Deposits[a]	(188)	–	(188)	(237)	–	(237)	(564)	–	(564)
Federal funds purchased and securities loaned or sold under repurchase agreements	(25)	–	(25)	(4)	–	(4)	(29)	–	(29)
Other borrowed funds[a]	494	–	494	2,986	–	2,986	123	–	123
Trading liabilities	(41)	–	(41)	(57)	–	(57)	(23)	–	(23)
Beneficial interests issued by consolidated VIEs	(166)	–	(166)	(83)	–	(83)	(12)	–	(12)
Other liabilities	–	–	–	(3)	(5) (d)	(8)	(9)	8 (d)	(1)
Long-term debt:									
Changes in instrument-specific credit risk[a]	(835)	–	(835)	927	–	927	400	–	400
Other changes in fair value[b]	(1,025)	–	(1,025)	322	–	322	1,297	–	1,297

(a) Total changes in instrument-specific credit risk related to structured notes were $(340) million, $899 million, and $468 million for the years ended December 31, 2012, 2011 and 2010, respectively. These totals include adjustments for structured notes classified within deposits and other borrowed funds, as well as long-term debt.

(b) Structured notes are debt instruments with embedded derivatives that are tailored to meet a client's need. The embedded derivative is the primary driver of risk. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of such risk management instruments.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings during 2012, 2011 and 2010, which were attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2012 and 2011, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2012			2011		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding
Loans[a]						
Nonaccrual loans						
Loans reported as trading assets	**$ 4,217**	**$ 960**	**$ (3,257)**	$ 4,875	$ 1,141	$ (3,734)
Loans	**116**	**64**	**(52)**	820	56	(764)
Subtotal	**4,333**	**1,024**	**(3,309)**	5,695	1,197	(4,498)
All other performing loans						
Loans reported as trading assets	**44,084**	**40,581**	**(3,503)**	37,481	32,657	(4,824)
Loans	**2,211**	**2,099**	**(112)**	2,136	1,601	(535)
Total loans	**$ 50,628**	**$ 43,704**	**$ (6,924)**	$ 45,312	$ 35,455	$ (9,857)
Long-term debt						
Principal-protected debt	**$ 16,541** [c]	**$ 16,391**	**$ (150)**	$ 19,417 [c]	$ 19,890	$ 473
Nonprincipal-protected debt[b]	**NA**	**14,397**	**NA**	NA	14,830	NA
Total long-term debt	**NA**	**$ 30,788**	**NA**	NA	$ 34,720	NA
Long-term beneficial interests						
Nonprincipal-protected debt[b]	**NA**	**$ 1,170**	**NA**	NA	$ 1,250	NA
Total long-term beneficial interests	**NA**	**$ 1,170**	**NA**	NA	$ 1,250	NA

(a) There were no performing loans which were ninety days or more past due as of December 31, 2012 and 2011, respectively.
(b) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note.
(c) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflected as the remaining contractual principal is the final principal payment at maturity.

At December 31, 2012 and 2011, the contractual amount of letters of credit for which the fair value option was elected was $4.5 billion and $3.9 billion, respectively, with a corresponding fair value of $(75) million and $(5) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29 on pages 308–315 of this Annual Report.

Note 5 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolio to assess potential concentration risks and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. In the wholesale portfolio, risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis. Management of the Firm's wholesale exposure is accomplished through loan syndications and participations, loan sales, securitizations, credit derivatives, use of master netting agreements, and collateral and other risk-reduction techniques.

The Firm does not believe that its exposure to any particular loan product (e.g., option adjustable rate mortgages ("ARMs")), industry segment (e.g., commercial real estate) or its exposure to residential real estate loans with high loan-to-value ratios results in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

Customer receivables representing primarily margin loans to prime and retail brokerage clients of $23.8 billion and $17.6 billion at December 31, 2012 and 2011, respectively, are included in the table below. These margin loans are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's positions may be liquidated by the Firm to meet the minimum collateral requirements. As a result of the Firm's credit risk mitigation practices, the Firm does not hold any reserves for credit impairment on these receivables as of December 31, 2012 and 2011.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale-related credit exposure by the Firm's three credit portfolio segments as of December 31, 2012 and 2011.

	2012				2011			
	Credit exposure	On-balance sheet		Off-balance sheet[c]	Credit exposure	On-balance sheet		Off-balance sheet[c]
December 31, (in millions)		Loans	Derivatives			Loans	Derivatives	
Total consumer, excluding credit card[a]	$ 352,889	$ 292,620	$ –	$ 60,156	$ 370,834	$ 308,427	$ –	$ 62,307
Total credit card	661,011	127,993	–	533,018	662,893	132,277	–	530,616
Total consumer	1,013,900	420,613	–	593,174	1,033,727	440,704	–	592,923
Wholesale-related								
Real estate	76,198	60,740	1,084	14,374	67,594	54,684	1,155	11,755
Banks and finance companies	73,318	26,651	19,846	26,821	71,440	29,392	20,372	21,676
Healthcare	48,487	11,638	3,359	33,490	42,247	8,908	3,021	30,318
Oil and gas	42,563	14,704	2,345	25,514	35,437	10,780	3,521	21,136
State and municipal governments	41,821	7,998	5,138	28,685	41,930	7,144	6,575	28,211
Consumer products	32,778	9,151	826	22,801	29,637	9,187	1,079	19,371
Asset managers	31,474	6,220	8,390	16,864	33,465	6,182	9,458	17,825
Utilities	29,533	6,814	2,649	20,070	28,650	5,191	3,602	19,857
Retail and consumer services	25,597	7,901	429	17,267	22,891	6,353	565	15,973
Central government	21,223	1,333	11,232	8,658	17,138	623	10,813	5,702
Metals/mining	20,958	6,059	624	14,275	15,254	6,073	690	8,491
Transportation	19,827	12,763	673	6,391	16,305	10,000	947	5,358
Machinery and equipment manufacturing	18,504	6,304	592	11,608	16,498	5,111	417	10,970
Technology	18,488	3,806	1,192	13,490	17,898	4,394	1,310	12,194
Media	16,007	3,967	973	11,067	11,909	3,655	202	8,052
All other[b]	299,243	120,173	15,631	163,439	285,318	110,718	28,750	145,850
Subtotal	816,019	306,222	74,983	434,814	753,611	278,395	92,477	382,739
Loans held-for-sale and loans at fair value	6,961	6,961	–	–	4,621	4,621	–	–
Receivables from customers and other	23,648	–	–	–	17,461	–	–	–
Total wholesale-related	846,628	313,183	74,983	434,814	$ 775,693	$ 283,016	92,477	382,739
Total exposure[d]	$ 1,860,528	$ 733,796	$ 74,983	$ 1,027,988	$ 1,809,420	$ 723,720	$ 92,477	$ 975,662

(a) As of December 31, 2012 and 2011, credit exposure for total consumer, excluding credit card, includes receivables from customers of $113 million and $100 million, respectively.
(b) For more information on exposures to SPEs included within All other see Note 16 on pages 280–291 of this Annual Report.
(c) Represents lending-related financial instruments.
(d) For further information regarding on-balance sheet credit concentrations by major product and/or geography, see Notes 6, 14 and 15 on pages 218–227, 250–275 and 276–279, respectively, of this Annual Report. For information regarding concentrations of off-balance sheet lending-related financial instruments by major product, see Note 29 on pages 308–315 of this Annual Report.

Note 6 – Derivative instruments

Derivative instruments enable end-users to modify or mitigate exposure to credit or market risks. Counterparties to a derivative contract seek to obtain risks and rewards similar to those that could be obtained from purchasing or selling a related cash instrument without having to exchange upfront the full purchase or sales price. JPMorgan Chase makes markets in derivatives for customers and also uses derivatives to hedge or manage its own risk exposures. Predominantly all of the Firm's derivatives are entered into for market-making or risk management purposes.

Market-making derivatives

The majority of the Firm's derivatives are entered into for market-making purposes. Customers use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives. The Firm also seeks to earn a spread between the client derivatives and offsetting positions, and from the remaining open risk positions.

Risk management derivatives

The Firm manages its market risk exposures using various derivative instruments.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increases or decreases as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency–denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar–equivalent values of the foreign currency–denominated assets and liabilities or forecasted revenue or expense increase or decrease. Gains or losses on the derivative instruments related to these foreign currency–denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities contracts are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset the depreciation or appreciation of the related inventory.

Also in the commodities portfolio, electricity and natural gas futures and forwards contracts are used to manage price risk associated with energy-related tolling and load-serving contracts and investments.

The Firm uses credit derivatives to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of credit default swaps. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 226–227 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 224 of this Note, and the hedge accounting gains and losses tables on pages 222–224 of this Note.

Accounting for derivatives

All free-standing derivatives are required to be recorded on the Consolidated Balance Sheets at fair value. As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The tabular disclosures on pages 220–227 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 3 and 4 on pages 196–214 and 214–216, respectively, of this Annual Report.

Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and commodity derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased credit default swaps used to manage the credit risk of loans and lending-related commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate and commodity derivatives used for risk management purposes.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed

prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the change in the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item and for interest-bearing instruments is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges primarily to hedge the exposure to variability in forecasted cash flows from floating-rate assets and liabilities and foreign currency–denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in OCI and recognized in the Consolidated Statements of Income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in accumulated other comprehensive income/(loss) ("AOCI") is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses foreign currency hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For foreign currency qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	Page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
◦ Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate/PE	222
◦ Interest rate	Hedge floating rate assets and liabilities	Cash flow hedge	Corporate/PE	223
◦ Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate/PE	222
◦ Foreign exchange	Hedge forecasted revenue and expense	Cash flow hedge	Corporate/PE	223
◦ Foreign exchange	Hedge the value of the Firm's investments in non-U.S. subsidiaries	Net investment hedge	Corporate/PE	224
◦ Commodity	Hedge commodity inventory	Fair value hedge	CIB	222
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
◦ Interest rate	Manage the risk of the mortgage pipeline, warehouse loans and MSRs	Specified risk management	CCB	224
◦ Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	224
◦ Credit[(a)]	Manage the credit risk of certain AFS securities	Specified risk management	Corporate/PE	224
◦ Commodity	Manage the risk of certain commodities-related contracts and investments	Specified risk management	CIB	224
◦ Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate/PE	224
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	224
• Various	Other derivatives, including the synthetic credit portfolio	Market-making and other	CIB, Corporate/PE	224

(a) Includes a limited number of single-name credit derivatives used to mitigate the credit risk arising from specified AFS securities.

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2012 and 2011.

	Notional amounts[b]	
December 31, (in billions)	**2012**	2011
Interest rate contracts		
Swaps	**$ 33,183**	$ 38,704
Futures and forwards	**11,824**	7,888
Written options	**3,866**	3,842
Purchased options	**3,911**	4,026
Total interest rate contracts	**52,784**	54,460
Credit derivatives[a]	**5,981**	5,774
Foreign exchange contracts		
Cross-currency swaps	**3,355**	2,931
Spot, futures and forwards	**4,033**	4,512
Written options	**651**	674
Purchased options	**661**	670
Total foreign exchange contracts	**8,700**	8,787
Equity contracts		
Swaps	**163**	119
Futures and forwards	**49**	38
Written options	**442**	460
Purchased options	**403**	405
Total equity contracts	**1,057**	1,022
Commodity contracts		
Swaps	**313**	341
Spot, futures and forwards	**190**	188
Written options	**265**	310
Purchased options	**260**	274
Total commodity contracts	**1,028**	1,113
Total derivative notional amounts	**$ 69,550**	$ 71,156

(a) Primarily consists of credit default swaps. For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 226–227 of this Note.

(b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.

Synthetic credit portfolio

The synthetic credit portfolio is a portfolio of index credit derivatives, including short and long positions, that was held by CIO. On July 2, 2012, CIO transferred the synthetic credit portfolio, other than a portion that aggregated to a notional amount of approximately $12 billion, to CIB. The positions making up the portion of the synthetic credit portfolio retained by CIO on July 2, 2012, were effectively closed out during the third quarter of 2012. The results of the synthetic credit portfolio, including the portion transferred to CIB, have been included in the gains and losses on derivatives related to market-making activities and other derivatives category discussed on page 224 of this Note.

Impact of derivatives on the Consolidated Balance Sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated Balance Sheets as of December 31, 2012 and 2011, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables[a]

	Gross derivative receivables				Gross derivative payables			
December 31, 2012 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[c]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[c]
Trading assets and liabilities								
Interest rate	**$ 1,323,184**	**$ 6,064**	**$ 1,329,248**	**$ 39,205**	**$ 1,284,494**	**$ 3,120**	**$ 1,287,614**	**$ 24,906**
Credit	**100,310**	**–**	**100,310**	**1,735**	**100,027**	**–**	**100,027**	**2,504**
Foreign exchange[b]	**146,682**	**1,577**	**148,259**	**14,142**	**159,509**	**2,133**	**161,642**	**18,601**
Equity	**40,938**	**–**	**40,938**	**9,266**	**42,810**	**–**	**42,810**	**11,819**
Commodity	**43,039**	**586**	**43,625**	**10,635**	**46,821**	**644**	**47,465**	**12,826**
Total fair value of trading assets and liabilities	**$ 1,654,153**	**$ 8,227**	**$ 1,662,380**	**$ 74,983**	**$ 1,633,661**	**$ 5,897**	**$ 1,639,558**	**$ 70,656**

	Gross derivative receivables				Gross derivative payables			
December 31, 2011 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[c]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[c]
Trading assets and liabilities								
Interest rate	$ 1,433,900	$ 7,621	$ 1,441,521	$ 46,369	$ 1,397,625	$ 2,192	$ 1,399,817	$ 28,010
Credit	169,650	–	169,650	6,684	165,121	–	165,121	5,610
Foreign exchange[b]	163,497	4,666	168,163	17,890	165,353	655	166,008	17,435
Equity	47,736	–	47,736	6,793	46,366	–	46,366	9,655
Commodity	53,894	3,535	57,429	14,741	58,836	1,108	59,944	14,267
Total fair value of trading assets and liabilities	$ 1,868,677	$ 15,822	$ 1,884,499	$ 92,477	$ 1,833,301	$ 3,955	$ 1,837,256	$ 74,977

(a) Balances exclude structured notes for which the fair value option has been elected. See Note 4 on pages 214–216 of this Annual Report for further information.

(b) Excludes $11 million of foreign currency-denominated debt designated as a net investment hedge at December 31, 2011. Foreign currency-denominated debt was not designated as a hedging instrument at December 31, 2012.

(c) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

Impact of derivatives on the Consolidated Statements of Income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pretax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2012, 2011 and 2010, respectively. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated Statements of Income.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2012 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	**$ (1,238)**	**$ 1,879**	**$ 641**	**$ (28)**	**$ 669**
Foreign exchange[b]	**(3,027)** [d]	**2,925**	**(102)**	**–**	**(102)**
Commodity[c]	**(2,530)**	**1,131**	**(1,399)**	**107**	**(1,506)**
Total	**$ (6,795)**	**$ 5,935**	**$ (860)**	**$ 79**	**$ (939)**

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2011 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	$ 532	$ 33	$ 565	$ 104	$ 461
Foreign exchange[b]	5,684 [d]	(3,761)	1,923	–	1,923
Commodity[c]	1,784	(2,880)	(1,096)	(10)	(1,086)
Total	$ 8,000	$ (6,608)	$ 1,392	$ 94	$ 1,298

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2010 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	$ 1,102	$ (376)	$ 726	$ 175	$ 551
Foreign exchange[b]	1,357 [d]	(1,812)	(455)	–	(455)
Commodity[c]	(1,354)	1,882	528	–	528
Total	$ 1,105	$ (306)	$ 799	$ 175	$ 624

(a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income. The current presentation excludes accrued interest. Prior period amounts have been revised to conform with the current presentation.

(b) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in foreign currency rates, were recorded in principal transactions revenue and net interest income.

(c) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value). Gains and losses were recorded in principal transactions revenue.

(d) Included $(3.1) billion, $4.9 billion and $278 million for the years ended December 31, 2012, 2011 and 2010, respectively, of revenue related to certain foreign exchange trading derivatives designated as fair value hedging instruments.

(e) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.

(f) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts and time values.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives, for the years ended December 31, 2012, 2011 and 2010, respectively. The Firm includes the gain/(loss) on the hedging derivative and the change in cash flows on the hedged item in the same line item in the Consolidated Statements of Income.

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2012 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	**$ (3)**	**$ 5**	**$ 2**	**$ 13**	**$ 16**
Foreign exchange[b]	**31**	**–**	**31**	**128**	**97**
Total	**$ 28**	**$ 5**	**$ 33**	**$ 141**	**$ 113**

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2011 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ 310	$ 19	$ 329	$ 107	$ (203)
Foreign exchange[b]	(9)	–	(9)	(57)	(48)
Total	$ 301	$ 19	$ 320	$ 50	$ (251)

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2010 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ 288	$ 20	$ 308	$ 388	$ 100
Foreign exchange[b]	(82)	(3)	(85)	(141)	(59)
Total	$ 206	$ 17	$ 223	$ 247	$ 41

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily net interest income, noninterest revenue and compensation expense.

(c) The Firm did not experience any forecasted transactions that failed to occur for the years ended December 31, 2012 and 2011. In 2010, the Firm reclassified a $25 million loss from AOCI to earnings because the Firm determined that it was probable that forecasted interest payment cash flows related to certain wholesale deposits would not occur.

(d) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

Over the next 12 months, the Firm expects that $32 million (after-tax) of net losses recorded in AOCI at December 31, 2012, related to cash flow hedges will be recognized in income. The maximum length of time over which forecasted transactions are hedged is 8 years, and such transactions primarily relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following tables present hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pretax gains/(losses) recorded on such instruments for the years ended December 31, 2012, 2011 and 2010.

	Gains/(losses) recorded in income and other comprehensive income/(loss)					
	2012		2011		2010	
Year ended December 31, (in millions)	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI
Contract type						
Foreign exchange derivatives	**$ (306)**	**$ (82)**	$ (251)	$ 225	$ (139)	$ (30)
Foreign currency denominated debt	**–**	**–**	–	1	–	41
Total	**$ (306)**	**$ (82)**	$ (251)	$ 226	$ (139)	$ 11

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in current-period income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates, and therefore there was no ineffectiveness for net investment hedge accounting relationships during 2012, 2011 and 2010.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pretax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from the mortgage pipeline, warehouse loans, MSRs, wholesale lending exposures, AFS securities, foreign currency-denominated liabilities, and commodities related contracts and investments.

	Derivatives gains/(losses) recorded in income		
Year ended December 31, (in millions)	**2012**	2011	2010
Contract type			
Interest rate[a]	**$ 5,353**	$ 8,084	$ 4,987
Credit[b]	**(175)**	(52)	(237)
Foreign exchange[c]	**47**	(157)	(64)
Commodity[d]	**94**	41	(48)
Total	**$ 5,319**	$ 7,916	$ 4,638

(a) Primarily relates to interest rate derivatives used to hedge the interest rate risks associated with the mortgage pipeline, warehouse loans and MSRs. Gains and losses were recorded predominantly in mortgage fees and related income.

(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses, and single-name credit derivatives used to mitigate credit risk arising from certain AFS securities. These derivatives do not include the synthetic credit portfolio or credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, both of which are included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.

(c) Primarily relates to hedges of the foreign exchange risk of specified foreign currency-denominated liabilities. Gains and losses were recorded in principal transactions revenue and net interest income.

(d) Primarily relates to commodity derivatives used to mitigate energy price risk associated with energy-related contracts and investments. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from the Firm's market-making activities, including the counterparty credit risk arising from derivative receivables. These derivatives, as well as all other derivatives (including the synthetic credit portfolio) that are not included in the hedge accounting or specified risk management categories above, are included in this category. Gains and losses on these derivatives are recorded in principal transactions revenue. See Note 7 on pages 228–229 of this Annual Report for information on principal transactions revenue.

Credit risk, liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk – the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to actively pursue the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated Balance Sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables that contain contingent collateral or termination features that may be triggered upon a downgrade and the associated collateral the Firm has posted in the normal course of business at December 31, 2012 and 2011.

Derivative payables containing downgrade triggers

December 31, (in millions)	2012	2011
Aggregate fair value of net derivative payables[a]	$ 40,844	$ 39,316
Collateral posted[a]	34,414	31,473

(a) The current period presentation excludes contracts with downgrade triggers that were in a net receivable position. Prior period amounts have been revised to conform with the current presentation.

The following table shows the impact of a single-notch and two-notch ratings downgrade to JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), at December 31, 2012 and 2011, related to derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral or termination payment requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating provided by major rating agencies.

Liquidity impact of derivative downgrade triggers

	2012		2011	
December 31, (in millions)	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Additional portion of net derivative payable to be posted as collateral upon downgrade	$ 1,012	$ 1,664	$ 1,460	$ 2,054
Amount required to settle contracts with termination triggers upon downgrade[a]	857	1,270	1,054	1,923

(a) Amounts represent fair value of derivative payables, and do not reflect collateral posted.

The following tables show the carrying value of derivative receivables and payables after netting adjustments, and adjustments for collateral held (including cash, U.S. government and agency securities and other G7 government bonds) and transferred as of December 31, 2012 and 2011.

Impact of netting adjustments on derivative receivables and payables

	Derivative receivables		Derivative payables	
December 31, (in millions)	2012	2011	2012	2011
Gross derivative fair value	$ 1,662,380	$ 1,884,499	$ 1,639,558	$ 1,837,256
Netting adjustment – offsetting receivables/payables[a]	(1,508,244)	(1,710,523)	(1,508,244)	(1,710,523)
Netting adjustment – cash collateral received/paid[a]	(79,153)	(81,499)	(60,658)	(51,756)
Carrying value on Consolidated Balance Sheets	$ 74,983	$ 92,477	$ 70,656	$ 74,977

Total derivative collateral

	Collateral held		Collateral transferred	
December 31, (in millions)	2012	2011	2012	2011
Netting adjustment for cash collateral[a]	$ 79,153	$ 81,499	$ 60,658	$ 51,756
Liquid securities and other cash collateral[b]	13,658	21,807	21,767	19,439
Additional liquid securities and cash collateral[c]	22,562	17,613	9,635	10,824
Total collateral for derivative transactions	$ 115,373	$ 120,919	$ 92,060	$ 82,019

(a) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists.

(b) Represents cash collateral received and paid that is not subject to a legally enforceable master netting agreement, and liquid securities collateral held and transferred.

(c) Represents liquid securities and cash collateral held and transferred at the initiation of derivative transactions, which is available as security against potential exposure that could arise should the fair value of the transactions move, as well as collateral held and transferred related to contracts that have non-daily call frequency for collateral to be posted, and collateral that the Firm or a counterparty has agreed to return but has not yet settled as of the reporting date. These amounts were not netted against the derivative receivables and payables in the tables above, because, at an individual counterparty level, the collateral exceeded the fair value exposure at both December 31, 2012 and 2011.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker, the Firm actively manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. Second, as an end-user, the Firm uses credit derivatives to manage credit risk associated with lending exposures (loans and unfunded commitments) and derivatives counterparty exposures in the Firm's wholesale businesses, and to manage the credit risk arising from certain AFS securities and from certain financial instruments in the Firm's market-making businesses. For more information on the synthetic credit portfolio, see the discussion on page 220 of this Note. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name CDS and index CDS contracts are OTC derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index comprises a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at the time of settling the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-related notes

A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a referenced entity. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity experiences a specified credit event. If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity. For a further discussion of credit-related notes, see Note 16 on pages 280–291 of this Annual Report.

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2012 and 2011. Upon a credit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased through credit-related notes.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

	Maximum payout/Notional amount			
December 31, 2012 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	**$ (2,954,705)**	**$ 2,879,105**	**$ (75,600)**	**$ 42,460**
Other credit derivatives[a]	**(66,244)**	**5,649**	**(60,595)**	**33,174**
Total credit derivatives	**(3,020,949)**	**2,884,754**	**(136,195)**	**75,634**
Credit-related notes	**(233)**	**–**	**(233)**	**3,255**
Total	**$ (3,021,182)**	**$ 2,884,754**	**$ (136,428)**	**$ 78,889**

	Maximum payout/Notional amount			
December 31, 2011 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (2,839,492)	$ 2,798,207	$ (41,285)	$ 29,139
Other credit derivatives[a]	(79,711)	4,954	(74,757)	22,292
Total credit derivatives	(2,919,203)	2,803,161	(116,042)	51,431
Credit-related notes	(742)	–	(742)	3,944
Total	$ (2,919,945)	$ 2,803,161	$ (116,784)	$ 55,375

(a) Primarily consists of total return swaps and CDS options.
(b) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(d) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional and fair value amounts of credit derivatives and credit-related notes as of December 31, 2012 and 2011, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings[a]/maturity profile

December 31, 2012 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	**$ (409,748)**	**$ (1,383,644)**	**$ (224,001)**	**$ (2,017,393)**	**$ 16,690**	**$ (22,393)**	**$ (5,703)**
Noninvestment-grade	**(214,949)**	**(722,115)**	**(66,725)**	**(1,003,789)**	**22,355**	**(36,815)**	**(14,460)**
Total	**$ (624,697)**	**$ (2,105,759)**	**$ (290,726)**	**$ (3,021,182)**	**$ 39,045**	**$ (59,208)**	**$ (20,163)**

December 31, 2011 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (352,215)	$ (1,262,143)	$ (345,996)	$ (1,960,354)	$ 7,809	$ (57,697)	$ (49,888)
Noninvestment-grade	(241,823)	(589,954)	(127,814)	(959,591)	13,212	(85,304)	(72,092)
Total	$ (594,038)	$ (1,852,097)	$ (473,810)	$ (2,919,945)	$ 21,021	$ (143,001)	$ (121,980)

(a) The ratings scale is based on the Firm's internal ratings, which generally correspond to ratings as defined by S&P and Moody's.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

Note 7 – Noninterest revenue

Investment banking fees

This revenue category includes advisory and equity and debt underwriting fees. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee. Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria. Advisory fees are recognized as revenue when the related services have been performed and the fee has been earned.

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	2012	2011	2010
Underwriting			
Equity	**$ 1,026**	$ 1,181	$ 1,589
Debt	**3,290**	2,934	3,172
Total underwriting	**4,316**	4,115	4,761
Advisory	**1,492**	1,796	1,429
Total investment banking fees	**$ 5,808**	$ 5,911	$ 6,190

Principal transactions

Principal transactions revenue includes realized and unrealized gains and losses recorded on derivatives, other financial instruments, private equity investments, and physical commodities used in market-making and client-driven activities.

In addition, principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk management activities disclosed separately in Note 6, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk but as to which qualifying hedge accounting is not applied, and (c) certain derivatives related to market-making activities and other. See Note 6 on pages 218–227 of this Annual Report for information on the income statement classification of gains and losses on derivatives.

The following table presents principal transactions revenue by major underlying type of risk exposures. This table does not include other types of revenue, such as net interest income on trading assets, which are an integral part of the overall performance of the Firm's client-driven market-making activities.

Year ended December 31, (in millions)	2012	2011	2010
Trading revenue by risk exposure			
Interest rate[a]	**$ 3,922**	$ (873)	$ (199)
Credit[b]	**(5,460)**	3,393	4,543
Foreign exchange	**1,436**	1,154	1,896
Equity	**2,504**	2,401	2,275
Commodity[c]	**2,363**	2,823	889
Total trading revenue	**4,765**	8,898	9,404
Private equity gains/(losses)[d]	**771**	1,107	1,490
Principal transactions[e]	**$ 5,536**	$ 10,005	$ 10,894

(a) Includes a pretax gain of $665 million for the year ended December 31, 2012, reflecting the recovery on a Bear Stearns-related subordinated loan.

(b) Includes $5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and $449 million of losses incurred by CIO from the retained index credit derivative positions for the three months ended September 30, 2012; and losses incurred by CIB from the synthetic credit portfolio.

(c) Includes realized gains and losses and unrealized losses on physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value), subject to any applicable fair value hedge accounting adjustments, and gains and losses on commodity derivatives and other financial instruments that are carried at fair value through income. Commodity derivatives are frequently used to manage the Firm's risk exposure to its physical commodities inventories. Gains/(losses) related to commodity fair value hedges were $(1.4) billion, $(1.1) billion and $528 million for the years ended December 31, 2012, 2011 and 2010, respectively.

(d) Includes revenue on private equity investments held in the Private Equity business within Corporate/Private Equity, as well as those held in other business segments.

(e) Principal transactions revenue included DVA related to structured notes and derivative liabilities measured at fair value in CIB. DVA gains/(losses) were $(930) million, $1.4 billion, and $509 million for the years ended December 31, 2012, 2011 and 2010, respectively.

Lending- and deposit-related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan-servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions
This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions, and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met.

The following table presents components of asset management, administration and commissions.

Year ended December 31, (in millions)	2012	2011	2010
Asset management			
Investment management fees	**$ 6,309**	$ 6,085	$ 5,632
All other asset management fees	**792**	605	496
Total asset management fees	**7,101**	6,690	6,128
Total administration fees[(a)]	**2,135**	2,171	2,023
Commission and other fees			
Brokerage commissions	**2,331**	2,753	2,804
All other commissions and fees	**2,301**	2,480	2,544
Total commissions and fees	**4,632**	5,233	5,348
Total asset management, administration and commissions	**$ 13,868**	$ 14,094	$ 13,499

(a) Includes fees for custody, securities lending, funds services and securities clearance.

Mortgage fees and related income
This revenue category primarily reflects CCB's Mortgage Production and Mortgage Servicing revenue, including: fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously-sold loans; the impact of risk management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. Changes in the fair value of CCB mortgage servicing rights are reported in mortgage fees and related income. Net interest income from mortgage loans, and securities gains and losses on AFS securities used in mortgage-related risk management activities, are recorded in interest income and securities gains/(losses), respectively. For a further discussion of MSRs, see Note 17 on pages 291–295 of this Annual Report.

Card income
This revenue category includes interchange income from credit and debit cards and net fees earned from processing credit card transactions for merchants. Card income is recognized as earned. Annual fees and direct loan origination costs are deferred and recognized on a straight-line basis over a 12-month period. Expense related to rewards programs is recorded when the rewards are earned by the customer and netted against interchange income.

Credit card revenue sharing agreements
The Firm has contractual agreements with numerous affinity organizations and co-brand partners (collectively, "partners"), which grant the Firm exclusive rights to market to the members or customers of such partners. These partners endorse the credit card programs and provide their mailing lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to 10 years.

The Firm typically makes incentive payments to the partners based on new account originations, charge volumes and the cost of the partners' marketing activities and awards. Payments based on new account originations are accounted for as direct loan origination costs. Payments to partners based on charge volumes are deducted from interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as noninterest expense.

Other income
Included in other income is operating lease income of $1.3 billion, $1.2 billion and $971 million for the years ended December 31, 2012, 2011 and 2010, respectively.

Note 8 – Interest income and Interest expense

Interest income and interest expense is recorded in the Consolidated Statements of Income and classified based on the nature of the underlying asset or liability. Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP absent the fair value option election; for those instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable.

Details of interest income and interest expense were as follows.

Year ended December 31, (in millions)	2012	2011	2010
Interest income			
Loans	**$ 35,832**	$ 37,098	$ 40,388
Securities	**7,939**	9,215	9,540
Trading assets	**9,039**	11,142	11,007
Federal funds sold and securities purchased under resale agreements	**2,442**	2,523	1,786
Securities borrowed	**(3)** [c]	110	175
Deposits with banks	**555**	599	345
Other assets[a]	**259**	606	541
Total interest income	**56,063**	61,293	63,782
Interest expense			
Interest-bearing deposits	**2,655**	3,855	3,424
Short-term and other liabilities[b]	**1,788**	2,873	2,364
Long-term debt	**6,062**	6,109	5,848
Beneficial interests issued by consolidated VIEs	**648**	767	1,145
Total interest expense	**11,153**	13,604	12,781
Net interest income	**44,910**	47,689	51,001
Provision for credit losses	**3,385**	7,574	16,639
Net interest income after provision for credit losses	**$ 41,525**	$ 40,115	$ 34,362

(a) Largely margin loans.
(b) Includes brokerage customer payables.
(c) Negative interest income for the year ended December 31, 2012, is a result of increased client-driven demand for certain securities combined with the impact of low interest rates; the offset of this matched book activity is reflected as lower net interest expense reported within short-term and other liabilities.

Note 9 – Pension and other postretirement employee benefit plans

The Firm's defined benefit pension plans and its other postretirement employee benefit ("OPEB") plans (collectively the "Plans") are accounted for in accordance with U.S. GAAP for retirement benefits.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based on eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after three years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws. The Firm does not anticipate at this time any contribution to the U.S. defined benefit pension plan in 2013. The 2013 contributions to the non-U.S. defined benefit pension plans are expected to be $40 million of which $36 million are contractually required.

JPMorgan Chase also has a number of defined benefit pension plans that are not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees previously earned pay credits on compensation amounts above the maximum stipulated by law under a qualified plan; no further pay credits are allocated under this plan. The Excess Retirement Plan had an unfunded projected benefit obligation in the amount of $276 million and $272 million, at December 31, 2012 and 2011, respectively.

Effective March 19, 2012, pursuant to the WaMu Global Settlement, JPMorgan Chase Bank, N.A. became the sponsor of the WaMu Pension Plan. This plan's assets were merged with and into the JPMorgan Chase Retirement Plan effective as of December 31, 2012.

Defined contribution plans

JPMorgan Chase currently provides two qualified defined contribution plans in the U.S. and other similar arrangements in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is The JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. The 401(k) Savings Plan allows employees to make pretax and Roth 401(k) contributions to tax-deferred investment portfolios. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan.

The Firm matches eligible employee contributions up to 5% of benefits-eligible compensation (e.g., base pay) on an annual basis. Employees begin to receive matching contributions after completing a one-year-of-service requirement. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. Matching contributions vest after three years of service for employees hired on or after May 1, 2009. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with the length of service and the date of hire and provide for limits on the Firm's share of covered medical benefits. The medical and life insurance benefits are both contributory. Postretirement medical benefits also are offered to qualifying U.K. employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations, plan assets and funded status amounts reported on the Consolidated Balance Sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

As of or for the year ended December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans[e]	
(in millions)	2012	2011	2012	2011	2012	2011
Change in benefit obligation						
Benefit obligation, beginning of year	$ (9,043)	$ (8,320)	$ (2,829)	$ (2,600)	$ (999)	$ (980)
Benefits earned during the year	(272)	(249)	(41)	(36)	(1)	(1)
Interest cost on benefit obligations	(466)	(451)	(126)	(133)	(44)	(51)
Plan amendments	–	–	6	–	–	–
WaMu Global Settlement	(1,425)	–	–	–	–	–
Employee contributions	NA	NA	(5)	(5)	(74)	(84)
Net gain/(loss)	(864)	(563)	(244)	(160)	(9)	(39)
Benefits paid	592	540	108	93	149	166
Expected Medicare Part D subsidy receipts	NA	NA	NA	NA	(10)	(10)
Foreign exchange impact and other	–	–	(112)	12	(2)	–
Benefit obligation, end of year	$ (11,478)	$ (9,043)	$ (3,243)	$ (2,829)	$ (990)	$ (999)
Change in plan assets						
Fair value of plan assets, beginning of year	$ 10,472	$ 10,828	$ 2,989	$ 2,647	$ 1,435	$ 1,381
Actual return on plan assets	1,292	147	237	277	142	78
Firm contributions	31	37	86	169	2	2
WaMu Global Settlement	1,809	–	–	–	–	–
Employee contributions	–	–	5	5	–	–
Benefits paid	(592)	(540)	(108)	(93)	(16)	(26)
Foreign exchange impact and other	–	–	121	(16)	–	–
Fair value of plan assets, end of year	$ 13,012 [b)(c)]	$ 10,472 [b)(c)]	$ 3,330 [c]	$ 2,989 [c]	$ 1,563	$ 1,435
Funded/(unfunded) status[a]	$ 1,534	$ 1,429 [d]	$ 87	$ 160	$ 573	$ 436
Accumulated benefit obligation, end of year	$ (11,447)	$ (9,008)	$ (3,221)	$ (2,800)	NA	NA

(a) Represents overfunded plans with an aggregate balance of $2.8 billion and $2.6 billion at December 31, 2012 and 2011, respectively, and underfunded plans with an aggregate balance of $612 million and $621 million at December 31, 2012 and 2011, respectively.
(b) At December 31, 2012 and 2011, approximately $418 million and $426 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.
(c) At December 31, 2012 and 2011, defined benefit pension plan amounts not measured at fair value included $137 million and $50 million, respectively, of accrued receivables, and $310 million and $245 million, respectively, of accrued liabilities, for U.S. plans; and $47 million and $56 million, respectively, of accrued receivables, and $46 million and $69 million of accrued liabilities, respectively, for non-U.S. plans.
(d) Does not include any amounts attributable to the WaMu Pension Plan.
(e) Includes an unfunded accumulated postretirement benefit obligation of $31 million and $33 million at December 31, 2012 and 2011, respectively, for the U.K. plan.

Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the projected benefit obligation or the fair value of the plan assets. Any excess is amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently nine years. In addition, prior service costs are amortized over the average remaining service period of active employees expected to receive benefits under the plan when the prior service cost is first recognized. The average remaining amortization period for current prior service costs is six years.

For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. This value is referred to as the market related value of assets. Amortization of net gains and losses, adjusted for gains and losses not yet recognized, is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market related value of assets. Any excess is amortized over the average future service period, which is currently four years; however, prior service costs are amortized over the average years of service remaining to full eligibility age, which is currently three years.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans	
(in millions)	**2012**	2011	**2012**	2011	**2012**	2011
Net gain/(loss)	**$ (3,814)**	$ (3,669)	**$ (676)**	$ (544)	**$ (133)**	$ (176)
Prior service credit/(cost)	**237**	278	**18**	12	**1**	1
Accumulated other comprehensive income/(loss), pretax, end of year	**$ (3,577)**	$ (3,391)	**$ (658)**	$ (532)	**$ (132)**	$ (175)

The following table presents the components of net periodic benefit costs reported in the Consolidated Statements of Income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension, defined contribution and OPEB plans.

	Pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2012**	2011	2010	**2012**	2011	2010	**2012**	2011	2010
Components of net periodic benefit cost									
Benefits earned during the year	**$ 272**	$ 249	$ 230	**$ 41**	$ 36	$ 31	**$ 1**	$ 1	$ 2
Interest cost on benefit obligations	**466**	451	468	**126**	133	128	**44**	51	55
Expected return on plan assets	**(861)**	(791)	(742)	**(137)**	(141)	(126)	**(90)**	(88)	(96)
Amortization:									
Net (gain)/loss	**289**	165	225	**36**	48	56	**(1)**	1	(1)
Prior service cost/(credit)	**(41)**	(43)	(43)	**–**	(1)	(1)	**–**	(8)	(13)
Settlement (gain)/loss	**–**	–	–	**–**	–	1	**–**	–	–
Special termination benefits	**–**	–	–	**–**	–	1	**–**	–	–
Net periodic defined benefit cost	**125**	31	138	**66**	75	90	**(46)**	(43)	(53)
Other defined benefit pension plans[a]	**15**	19	14	**8**	12	11	**NA**	NA	NA
Total defined benefit plans	**140**	50	152	**74**	87	101	**(46)**	(43)	(53)
Total defined contribution plans	**409**	370	332	**302**	285	251	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 549**	$ 420	$ 484	**$ 376**	$ 372	$ 352	**$ (46)**	$ (43)	$ (53)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	**$ 434**	$ 1,207	$ (187)	**$ 146**	$ 25	$ (21)	**$ (43)**	$ 58	$ (54)
Prior service credit arising during the year	**–**	–	–	**(6)**	–	(10)	**–**	–	–
Amortization of net loss	**(289)**	(165)	(225)	**(36)**	(48)	(56)	**1**	(1)	1
Amortization of prior service (cost)/credit	**41**	43	43	**–**	1	1	**–**	8	13
Settlement loss/(gain)	**–**	–	–	**–**	–	(1)	**–**	–	–
Foreign exchange impact and other	**–**	–	–	**22**	1	(23)	**(1)**	–	1
Total recognized in other comprehensive income	**$ 186**	$ 1,085	$ (369)	**$ 126**	$ (21)	$ (110)	**$ (43)**	$ 65	$ (39)
Total recognized in net periodic benefit cost and other comprehensive income	**$ 311**	$ 1,116	$ (231)	**$ 192**	$ 54	$ (20)	**$ (89)**	$ 22	$ (92)

(a) Includes various defined benefit pension plans which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2013 are as follows.

	Defined benefit pension plans		OPEB plans	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss/(gain)	$ 276	$ 50	$ 5	$ (1)
Prior service cost/(credit)	(41)	(2)	–	–
Total	$ 235	$ 48	$ 5	$ (1)

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
Year ended December 31,	**2012**	2011	2010	**2012**	2011	2010
Actual rate of return:						
Defined benefit pension plans	**12.66%**	0.72%	12.23%	**7.21 - 11.72%**	(4.29)-13.12%	0.77-10.65%
OPEB plans	**10.10**	5.22	11.23	**NA**	NA	NA

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration is also given to current market conditions and the short-term portfolio mix of each plan; as a result, in 2012 the Firm generally maintained the same expected return on assets as in the prior year.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The expected return on "AA" rated long-term corporate bonds is based on an implied yield for similar bonds.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension plan represents a rate implied from the yield curve of the year-end iBoxx £ corporate "AA" 15-year-plus bond index.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's significant U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S.	
December 31,	**2012**	2011	**2012**	2011
Discount rate:				
Defined benefit pension plans	**3.90%**	4.60%	**1.40 - 4.40%**	1.50-4.80%
OPEB plans	**3.90**	4.70	**–**	–
Rate of compensation increase	**4.00**	4.00	**2.75 - 4.10**	2.75-4.20
Health care cost trend rate:				
Assumed for next year	**7.00**	7.00	**–**	–
Ultimate	**5.00**	5.00	**–**	–
Year when rate will reach ultimate	**2017**	2017	**–**	–

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2012**	2011	2010	**2012**	2011	2010
Discount rate:						
Defined benefit pension plans	**4.60%**	5.50%	6.00%	**1.50 - 4.80%**	1.60-5.50%	2.00-5.70%
OPEB plans	**4.70**	5.50	6.00	**–**	–	–
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**7.50**	7.50	7.50	**2.50 - 4.60**	2.40-5.40	2.40-6.20
OPEB plans	**6.25**	6.25	7.00	**NA**	NA	NA
Rate of compensation increase	**4.00**	4.00	4.00	**2.75 - 4.20**	3.00-4.50	3.00-4.50
Health care cost trend rate:						
Assumed for next year	**7.00**	7.00	7.75	**–**	–	–
Ultimate	**5.00**	5.00	5.00	**–**	–	–
Year when rate will reach ultimate	**2017**	2017	2014	**–**	–	–

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's total service and interest cost and accumulated postretirement benefit obligation.

Year ended December 31, 2012 (in millions)	1-Percentage point increase	1-Percentage point decrease
Effect on total service and interest cost	$ 1	$ (1)
Effect on accumulated postretirement benefit obligation	28	(25)

At December 31, 2012, the Firm decreased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will result in an increase in expense of approximately $48 million for 2013. The 2013 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 7.50% and 6.25%, respectively, unchanged from 2012. For 2013, the initial health care benefit obligation trend assumption has been set at 7.00%, and the ultimate health care trend assumption and the year to reach the ultimate rate remains at 5.00% and 2017, respectively, unchanged from 2012. As of December 31, 2012, the interest crediting rate assumption and the assumed rate of compensation increase remained at 5.00% and 4.00%, respectively.

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an increase of approximately an aggregate $35 million in 2013 U.S. defined benefit pension and OPEB plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2013 U.S. defined benefit pension and OPEB plan expense of approximately an aggregate $19 million and an increase in the related benefit obligations of approximately an aggregate $272 million. A 25-basis point decrease in the interest crediting rate for the U.S. defined benefit pension plan would result in a decrease in 2013 U.S. defined benefit pension expense of approximately $25 million and a decrease in the related projected benefit obligations of approximately $116 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2013 non-U.S. defined benefit pension plan expense of approximately $14 million.

Investment strategy and asset allocation

The Firm's U.S. defined benefit pension plan assets are held in trust and are invested in a well-diversified portfolio of equity and fixed income securities, real estate, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity, real estate and real assets). Non-U.S. defined benefit pension plan assets are held in various trusts and are also invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to partially fund the U.S. OPEB plan, are held in separate accounts with an insurance company and are invested in equity and fixed income index funds.

The investment policy for the Firm's U.S. defined benefit pension plan assets is to optimize the risk-return relationship as appropriate to the needs and goals using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Assets are managed by a combination of internal and external investment managers. Periodically the Firm performs a comprehensive analysis on the U.S. defined benefit pension plan asset allocations, incorporating projected asset and liability data, which focuses on the short- and long-term impact of the asset allocation on cumulative pension expense, economic cost, present value of contributions and funded status. Currently, approved asset allocation ranges are: U.S. equity 15% to 35%, international equity 15% to 25%, debt securities 10% to 30%, hedge funds 10% to 30%, and real estate, real assets and private equity 5% to 20%. Asset allocations are not managed to a specific target but seek to shift asset class allocations within these stated ranges. Investment strategies incorporate the economic outlook and the anticipated implications of the macroeconomic environment on the various asset classes while maintaining an appropriate level of liquidity for the plan. The Firm regularly reviews the asset allocations and

asset managers, as well as other factors that impact the portfolio, which is rebalanced when deemed necessary.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, the assets are invested to maximize returns subject to an appropriate level of risk relative to the plans' liabilities. In order to reduce the volatility in returns relative to the plans' liability profiles, the U.K. defined benefit pension plans' largest asset allocations are to debt securities of appropriate durations. Other assets, mainly equity securities, are then invested for capital appreciation, to provide long-term investment growth. Similar to the U.S. defined benefit pension plan, asset allocations and asset managers for the U.K. plans are reviewed regularly and the portfolio is rebalanced when deemed necessary.

Investments held by the Plans include financial instruments which are exposed to various risks such as interest rate, market and credit risks. Exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments. As of December 31, 2012, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except in connection with investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $1.8 billion and $1.6 billion for U.S. plans and $220 million and $194 million for non-U.S. plans, as of December 31, 2012 and 2011, respectively.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[c]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2012**	2011	Allocation	**2012**	2011	Allocation	**2012**	2011
Asset category									
Debt securities[a]	10-30%	**20%**	20%	70%	**72%**	74%	50%	**50%**	50%
Equity securities	25-60	**41**	39	29	**27**	25	50	**50**	50
Real estate	5-20	**5**	5	–	**–**	–	–	**–**	–
Alternatives[b]	15-50	**34**	36	1	**1**	1	–	**–**	–
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Debt securities primarily include corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.
(b) Alternatives primarily include limited partnerships.
(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

Fair value measurement of the plans' assets and liabilities

For information on fair value measurements, including descriptions of level 1, 2, and 3 of the fair value hierarchy and the valuation methods employed by the Firm, see Note 3 on pages 196–214 of this Annual Report.

Pension and OPEB plan assets and liabilities measured at fair value

	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans			
December 31, 2012 (in millions)	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Level 3	Total fair value
Cash and cash equivalents	$ 162	$ –	$ –	$ 162	$ 142	$ –	$ –	$ 142
Equity securities:								
Capital equipment	702	6	–	708	115	15	–	130
Consumer goods	744	4	–	748	136	32	–	168
Banks and finance companies	425	54	–	479	94	23	–	117
Business services	424	–	–	424	125	8	–	133
Energy	192	–	–	192	54	12	–	66
Materials	211	–	–	211	30	6	–	36
Real Estate	18	–	–	18	10	–	–	10
Other	1,107	42	4	1,153	19	71	–	90
Total equity securities	3,823	106	4	3,933	583	167	–	750
Common/collective trust funds[a]	412	1,660	199	2,271	62	192	–	254
Limited partnerships:[b]								
Hedge funds	–	878	1,166	2,044	–	–	–	–
Private equity	–	–	1,743	1,743	–	–	–	–
Real estate	–	–	467	467	–	–	–	–
Real assets[c]	–	–	311	311	–	–	–	–
Total limited partnerships	–	878	3,687	4,565	–	–	–	–
Corporate debt securities[d]	–	1,114	1	1,115	–	765	–	765
U.S. federal, state, local and non-U.S. government debt securities	–	537	–	537	–	1,237	–	1,237
Mortgage-backed securities	107	30	–	137	100	–	–	100
Derivative receivables	3	5	–	8	109	–	–	109
Other[e]	7	34	420	461	21	67	–	88
Total assets measured at fair value[f][g]	$ 4,514	$ 4,364	$ 4,311	$ 13,189	$ 1,017	$ 2,428	$ –	$ 3,445
Derivative payables	$ –	$ (4)	$ –	$ (4)	$ (116)	$ –	$ –	$ (116)
Total liabilities measured at fair value[h]	$ –	$ (4)	$ –	$ (4)	$ (116)	$ –	$ –	$ (116)

December 31, 2011 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans			
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Level 3	Total fair value
Cash and cash equivalents	$ 117	$ –	$ –	$ 117	$ 72	$ –	$ –	$ 72
Equity securities:								
Capital equipment	607	7	–	614	69	12	–	81
Consumer goods	657	–	–	657	64	30	–	94
Banks and finance companies	301	2	–	303	83	13	–	96
Business services	332	–	–	332	48	10	–	58
Energy	173	–	–	173	52	10	–	62
Materials	161	–	1	162	35	6	–	41
Real estate	11	–	–	11	1	–	–	1
Other	766	274	–	1,040	160	5	–	165
Total equity securities	3,008	283	1	3,292	512	86	–	598
Common/collective trust funds[a]	401	1,125	202	1,728	138	170	–	308
Limited partnerships:[b]								
Hedge funds	–	933	1,039	1,972	–	–	–	–
Private equity	–	–	1,367	1,367	–	–	–	–
Real estate	–	–	306	306	–	–	–	–
Real assets[c]	–	–	264	264	–	–	–	–
Total limited partnerships	–	933	2,976	3,909	–	–	–	–
Corporate debt securities[d]	–	544	2	546	–	958	–	958
U.S. federal, state, local and non-U.S. government debt securities	–	328	–	328	–	904	–	904
Mortgage-backed securities	122	36	–	158	17	–	–	17
Derivative receivables	1	2	–	3	–	7	–	7
Other[e]	102	60	427	589	74	65	–	139
Total assets measured at fair value[f][g]	$ 3,751	$ 3,311	$ 3,608	$ 10,670	$ 813	$ 2,190	$ –	$ 3,003
Derivative payables	$ –	$ (3)	$ –	$ (3)	$ –	$ (1)	$ –	$ (1)
Total liabilities measured at fair value[h]	$ –	$ (3)	$ –	$ (3)	$ –	$ (1)	$ –	$ (1)

(a) At December 31, 2012 and 2011, common/collective trust funds primarily included a mix of short-term investment funds, domestic and international equity investments (including index) and real estate funds.
(b) Unfunded commitments to purchase limited partnership investments for the plans were $1.4 billion and $1.2 billion for 2012 and 2011, respectively.
(c) Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.
(d) Corporate debt securities include debt securities of U.S. and non-U.S. corporations.
(e) Other consists of exchange-traded funds and participating and non-participating annuity contracts. Exchange-traded funds are primarily classified within level 1 of the fair value hierarchy given they are valued using market observable prices. Participating and non-participating annuity contracts are classified within level 3 of the fair value hierarchy due to lack of market mechanisms for transferring each policy and surrender restrictions.
(f) At December 31, 2012 and 2011, the fair value of investments valued at NAV were $4.4 billion and $3.9 billion, respectively, which were classified within the valuation hierarchy as follows: $0.4 billion and $0.4 billion in level 1, $2.5 billion and $2.1 billion in level 2 and $1.5 billion and $1.4 billion in level 3.
(g) At December 31, 2012 and 2011, excluded U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $137 million and $50 million, respectively; and excluded non-U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $47 million and $56 million, respectively.
(h) At December 31, 2012 and 2011, excluded $306 million and $241 million, respectively, of U.S. defined benefit pension plan payables for investments purchased; and $4 million and $4 million, respectively, of other liabilities; and excluded non-U.S. defined benefit pension plan payables for investments purchased of $46 million and $69 million, respectively.

The Firm's OPEB plan was partially funded with COLI policies of $1.6 billion and $1.4 billion, at December 31, 2012 and 2011, respectively, which were classified in level 3 of the valuation hierarchy.

Changes in level 3 fair value measurements using significant unobservable inputs

Year ended December 31, 2012 (in millions)	Fair value, January 1, 2012	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2012
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	$ 1	$ –	$ (1)	$ –	$ 4	$ 4
Common/collective trust funds	202	2	22	(27)	–	199
Limited partnerships:						
Hedge funds	1,039	1	71	55	–	1,166
Private equity	1,367	59	54	263	–	1,743
Real estate	306	16	1	144	–	467
Real assets	264	–	10	37	–	311
Total limited partnerships	2,976	76	136	499	–	3,687
Corporate debt securities	2	–	–	(1)	–	1
Other	427	–	(7)	–	–	420
Total U.S. plans	$ 3,608	$ 78	$ 150	$ 471	$ 4	$ 4,311
Non-U.S. defined benefit pension plans						
Other	$ –	$ –	$ –	$ –	$ –	$ –
Total non-U.S. plans	$ –	$ –	$ –	$ –	$ –	$ –
OPEB plans						
COLI	$ 1,427	$ –	$ 127	$ –	$ –	$ 1,554
Total OPEB plans	$ 1,427	$ –	$ 127	$ –	$ –	$ 1,554

Year ended December 31, 2011 (in millions)	Fair value, January 1, 2011	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2011
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	$ –	$ –	$ –	$ –	$ 1	$ 1
Common/collective trust funds	194	35	1	(28)	–	202
Limited partnerships:						
Hedge funds	1,160	(16)	27	(76)	(56)	1,039
Private equity	1,232	56	2	77	–	1,367
Real estate	304	8	40	14	(60)	306
Real assets	–	5	(7)	150	116	264
Total limited partnerships	2,696	53	62	165	–	2,976
Corporate debt securities	1	–	–	1	–	2
Other	387	–	41	(1)	–	427
Total U.S. plans	$ 3,278	$ 88	$ 104	$ 137	$ 1	$ 3,608
Non-U.S. defined benefit pension plans						
Other	$ –	$ –	$ –	$ –	$ –	$ –
Total non-U.S. plans	$ –	$ –	$ –	$ –	$ –	$ –
OPEB plans						
COLI	$ 1,381	$ –	$ 70	$ (24)	$ –	$ 1,427
Total OPEB plans	$ 1,381	$ –	$ 70	$ (24)	$ –	$ 1,427

Year ended December 31, 2010 (in millions)	Fair value, January 1, 2010	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2010
U.S. defined benefit pension plans						
Equities	$ –	$ –	$ –	$ –	$ –	$ –
Common/collective trust funds[a]	284	–	(90)	–	–	194
Limited partnerships:						
Hedge funds	680	(1)	14	388	79	1,160
Private equity	874	3	108	235	12	1,232
Real estate	196	3	16	89	–	304
Real assets	–	–	–	–	–	–
Total limited partnerships	1,750	5	138	712	91	2,696
Corporate debt securities	–	–	–	–	1	1
Other	334	–	53	–	–	387
Total U.S. plans	$ 2,368	$ 5	$ 101	$ 712	$ 92	$ 3,278
Non-U.S. defined benefit pension plans						
Other	$ 13	$ –	$ (1)	$ (12)	$ –	$ –
Total non-U.S. plans	$ 13	$ –	$ (1)	$ (12)	$ –	$ –
OPEB plans						
COLI	$ 1,269	$ –	$ 137	$ (25)	$ –	$ 1,381
Total OPEB plans	$ 1,269	$ –	$ 137	$ (25)	$ –	$ 1,381

(a) The prior period has been revised to consider redemption notification periods in determining the classification of investments within the fair value hierarchy.

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2013	$ 1,159	$ 102	$ 92	$ 11
2014	1,162	101	91	12
2015	705	108	89	13
2016	709	110	87	14
2017	711	112	84	14
Years 2018–2022	3,555	626	376	65

Note 10 – Employee stock-based incentives

Employee stock-based awards

In 2012, 2011 and 2010, JPMorgan Chase granted long-term stock-based awards to certain key employees under the 2005 Long-Term Incentive Plan, which was last amended in May 2011 ("LTIP"). Under the terms of the LTIP, as of December 31, 2012, 283 million shares of common stock are available for issuance through May 2015. The LTIP is the only active plan under which the Firm is currently granting stock-based incentive awards. In the following discussion, the LTIP, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans," and such plans constitute the Firm's stock-based incentive plans.

Restricted stock units ("RSUs") are awarded at no cost to the recipient upon their grant. RSUs are generally granted annually and generally vest at a rate of 50% after two years and 50% after three years and convert into shares of common stock at the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All of these awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation prior to vesting under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding and, as such, are considered participating securities as discussed in Note 24 on page 301 of this Annual Report.

Under the LTI Plans, stock options and stock appreciation rights ("SARs") have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm typically awards SARs to certain key employees once per year; the Firm also periodically grants employee stock options and SARs to individual employees. The 2012, 2011 and 2010 grants of SARs to key employees vest ratably over five years (i.e., 20% per year) and contain clawback provisions similar to RSUs. The 2012, 2011 and 2010 grants of SARs contain full-career eligibility provisions. SARs generally expire ten years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2012, 2011 and 2010, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. Effective January 2013, the Compensation Committee and Board of Directors determined that, while all the requirements for vesting of these awards have been met, vesting should be deferred for a period of up to 18 months (i.e., up to July 22, 2014), to enable the Firm to make progress against the Firm's strategic priorities and performance goals, including remediation relating to the CIO matter. The SARs, which have a 10-year term, will become exercisable no earlier than July 22, 2014, and have an exercise price of $39.83 (the price of JPMorgan Chase common stock on the date of grant). Vesting will be subject to a Board determination taking into consideration the extent of such progress and such other factors as it deems relevant. The expense related to this award is dependent on changes in fair value of the SARs through the date at which the award is finalized, and the cumulative expense is recognized ratably over the service period, which was initially assumed to be five years but, effective in the first quarter of 2013, has been extended to six and one-half years. The Firm recognized $5 million, $(4) million and $4 million in compensation expense in 2012, 2011 and 2010, respectively, for this award.

RSUs, employee stock options and SARs activity

Compensation expense for RSUs is measured based on the number of shares granted multiplied by the stock price at the grant date, and for employee stock options and SARs, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorgan Chase's RSUs, employee stock options and SARs activity for 2012.

	RSUs		Options/SARs			
Year ended December 31, 2012 (in thousands, except weighted-average data, and where otherwise stated)	Number of shares	Weighted-average grant date fair value	Number of awards	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	166,631	$ 37.65	155,761	$ 40.58		
Granted	59,646	35.73	14,738	35.70		
Exercised or vested	(79,062)	30.91	(18,675)	26.45		
Forfeited	(5,209)	40.22	(3,888)	38.07		
Canceled	NA	NA	(32,030)	40.10		
Outstanding, December 31	142,006	$ 40.49	115,906	$ 42.44	5.5	$ 721,059
Exercisable, December 31	NA	NA	70,576	45.87	4.2	420,713

The total fair value of RSUs that vested during the years ended December 31, 2012, 2011 and 2010, was $2.8 billion, $5.4 billion and $2.3 billion, respectively. The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2012, 2011 and 2010, was $8.89, $13.04 and $12.27, respectively. The total intrinsic value of options exercised during the years ended December 31, 2012, 2011 and 2010, was $283 million, $191 million and $154 million, respectively.

Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated Statements of Income.

Year ended December 31, (in millions)	2012	2011	2010
Cost of prior grants of RSUs and SARs that are amortized over their applicable vesting periods	**$ 1,810**	$ 1,986	$ 2,479
Accrual of estimated costs of RSUs and SARs to be granted in future periods including those to full-career eligible employees	**735**	689	772
Total noncash compensation expense related to employee stock-based incentive plans	**$ 2,545**	$ 2,675	$ 3,251

At December 31, 2012, approximately $909 million (pretax) of compensation cost related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 0.9 years. The Firm does not capitalize any compensation cost related to share-based compensation awards to employees.

Cash flows and tax benefits

Income tax benefits related to stock-based incentive arrangements recognized in the Firm's Consolidated Statements of Income for the years ended December 31, 2012, 2011 and 2010, were $1.0 billion, $1.0 billion and $1.3 billion, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements, and the actual income tax benefit realized related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	2012	2011	2010
Cash received for options exercised	**$ 333**	$ 354	$ 205
Tax benefit realized[(a)]	**53**	31	14

(a) The tax benefit realized from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings are recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards.

Valuation assumptions

The following table presents the assumptions used to value employee stock options and SARs granted during the years ended December 31, 2012, 2011 and 2010, under the Black-Scholes valuation model.

Year ended December 31,	2012	2011	2010
Weighted-average annualized valuation assumptions			
Risk-free interest rate	**1.19%**	2.58%	3.89%
Expected dividend yield[a]	**3.15**	2.20	3.13
Expected common stock price volatility	**35**	34	37
Expected life (in years)	**6.6**	6.5	6.4

(a) In 2012 and 2011, the expected dividend yield was determined using forward-looking assumptions. In 2010 the expected dividend yield was determined using historical dividend yields.

The expected volatility assumption is derived from the implied volatility of JPMorgan Chase's stock options. The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled, and the assumption is based on the Firm's historical experience.

Note 11 – Noninterest expense

The following table presents the components of noninterest expense.

Year ended December 31, (in millions)	2012	2011	2010
Compensation expense[a]	**$ 30,585**	$ 29,037	$ 28,124
Noncompensation expense:			
Occupancy expense	**3,925**	3,895	3,681
Technology, communications and equipment expense	**5,224**	4,947	4,684
Professional and outside services	**7,429**	7,482	6,767
Marketing	**2,577**	3,143	2,446
Other expense[b][c]	**14,032**	13,559	14,558
Amortization of intangibles	**957**	848	936
Total noncompensation expense	**34,144**	33,874	33,072
Total noninterest expense	**$ 64,729**	$ 62,911	$ 61,196

(a) Expense for 2010 includes a payroll tax expense related to the United Kingdom ("U.K.") Bank Payroll Tax on certain compensation awarded from December 9, 2009, to April 5, 2010, to relevant banking employees.

(b) Included litigation expense of $5.0 billion, $4.9 billion and $7.4 billion for the years ended December 31, 2012, 2011 and 2010, respectively.

(c) Included FDIC-related expense of $1.7 billion, $1.5 billion and $899 million for the years ended December 31, 2012, 2011 and 2010, respectively.

Note 12 – Securities

Securities are primarily classified as AFS or trading. Securities classified as trading assets are discussed in Note 3 on pages 196–214 of this Annual Report. Predominantly all of the AFS securities portfolio is held by CIO in connection with its asset-liability management objectives. At December 31, 2012, the average credit rating of the debt securities comprising the AFS portfolio was AA+ (based upon external ratings where available, and where not available, based primarily upon internal ratings which correspond to ratings as defined by S&P and Moody's). AFS securities are carried at fair value on the Consolidated Balance Sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to accumulated other comprehensive income/(loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated Statements of Income.

Other-than-temporary impairment

AFS debt and equity securities in unrealized loss positions are analyzed as part of the Firm's ongoing assessment of other-than-temporary impairment ("OTTI"). For most types of debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm considers an OTTI to have occurred when there is an adverse change in expected cash flows. For AFS equity securities, the Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its amortized cost basis.

Potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and the Firm's intent and ability to hold the security until recovery.

For debt securities, the Firm recognizes OTTI losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost basis. In these circumstances the impairment loss is equal to the full difference between the amortized cost basis and the fair value of the securities. When the Firm has the intent and ability to hold AFS debt securities in an unrealized loss position, it evaluates the expected cash flows to be received and determines if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI.

The Firm's cash flow evaluations take into account the factors noted above and expectations of relevant market and economic data as of the end of the reporting period. For securities issued in a securitization, the Firm estimates cash flows considering underlying loan-level data and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios.

For equity securities, OTTI losses are recognized in earnings if the Firm intends to sell the security. In other cases the Firm considers the relevant factors noted above, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the carrying value. Any impairment loss on an equity security is equal to the full difference between the amortized cost basis and the fair value of the security.

Realized gains and losses

The following table presents realized gains and losses and credit losses that were recognized in income from AFS securities.

Year ended December 31, (in millions)	2012	2011	2010
Realized gains	$ 2,610	$ 1,811	$ 3,382
Realized losses	(457)	(142)	(317)
Net realized gains[a]	2,153	1,669	3,065
OTTI losses			
Credit-related[b]	(28)	(76)	(100)
Securities the Firm intends to sell[c]	(15) [d]	–	–
Total OTTI losses recognized in income	(43)	(76)	(100)
Net securities gains	$ 2,110	$ 1,593	$ 2,965

(a) Proceeds from securities sold were within approximately 4% of amortized cost in 2012 and 2011, and within approximately 3% of amortized cost in 2010.

(b) Includes other-than-temporary impairment losses recognized in income on certain prime mortgage-backed securities and obligations of U.S. states and municipalities for the year ended December 31, 2012; certain prime mortgage-backed securities for the year ended December 31, 2011; and certain prime mortgage-backed securities and obligations of U.S. states and municipalities for the year ended December 31, 2010.

(c) Represents the excess of the amortized cost over the fair value of certain non-U.S. corporate debt, and non-U.S. government debt securities the Firm intends to sell.

(d) Excludes realized losses of $24 million on sales of non-U.S. corporate debt, non-U.S. government debt and certain asset-backed securities that had been previously reported as an OTTI loss due to the intention to sell the securities during the year ended December 31, 2012.

The amortized costs and estimated fair values of AFS and held-to-maturity ("HTM") securities were as follows for the dates indicated.

	2012				2011			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies[a]	**$ 93,693**	**$ 4,708**	**$ 13**	**$ 98,388**	$ 101,968	$ 5,141	$ 2	$ 107,107
Residential:								
Prime and Alt-A	**1,853**	**83**	**3** [c]	**1,933**	2,170	54	218 [c]	2,006
Subprime	**825**	**28**	**–**	**853**	1	–	–	1
Non-U.S.	**70,358**	**1,524**	**29**	**71,853**	66,067	170	687	65,550
Commercial	**12,268**	**948**	**13**	**13,203**	10,632	650	53	11,229
Total mortgage-backed securities	**178,997**	**7,291**	**58**	**186,230**	180,838	6,015	960	185,893
U.S. Treasury and government agencies[a]	**12,022**	**116**	**8**	**12,130**	8,184	169	2	8,351
Obligations of U.S. states and municipalities	**19,876**	**1,845**	**10**	**21,711**	15,404	1,184	48	16,540
Certificates of deposit	**2,781**	**4**	**2**	**2,783**	3,017	–	–	3,017
Non-U.S. government debt securities	**65,168**	**901**	**25**	**66,044**	44,944	402	81	45,265
Corporate debt securities[b]	**37,999**	**694**	**84**	**38,609**	63,607	216	1,647	62,176
Asset-backed securities:								
Collateralized loan obligations	**27,483**	**465**	**52**	**27,896**	24,474	553	166	24,861
Other	**12,816**	**166**	**11**	**12,971**	15,779	251	57	15,973
Total available-for-sale debt securities	**357,142**	**11,482**	**250** [c]	**368,374**	356,247	8,790	2,961 [c]	362,076
Available-for-sale equity securities	**2,750**	**21**	**–**	**2,771**	2,693	14	2	2,705
Total available-for-sale securities	**$ 359,892**	**$ 11,503**	**$ 250** [c]	**$ 371,145**	$ 358,940	$ 8,804	$ 2,963 [c]	$ 364,781
Total held-to-maturity securities	**$ 7**	**$ 1**	**$ –**	**$ 8**	$ 12	$ 1	$ –	$ 13

(a) Includes total U.S. government-sponsored enterprise obligations with fair values of $84.0 billion and $89.3 billion at December 31, 2012 and 2011, respectively, which were predominantly mortgage-related.
(b) Consists primarily of bank debt including sovereign government-guaranteed bank debt.
(c) Includes a total of $91 million (pretax) of unrealized losses related to prime mortgage-backed securities for which credit losses have been recognized in income at December 31, 2011. These unrealized losses are not credit-related and remain reported in AOCI. There were no such losses at December 31, 2012.

Securities impairment

The following tables present the fair value and gross unrealized losses for AFS securities by aging category at December 31, 2012 and 2011.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2012 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 2,440	$ 13	$ –	$ –	$ 2,440	$ 13
Residential:						
Prime and Alt-A	218	2	76	1	294	3
Subprime	–	–	–	–	–	–
Non-U.S.	2,442	6	734	23	3,176	29
Commercial	1,159	8	312	5	1,471	13
Total mortgage-backed securities	6,259	29	1,122	29	7,381	58
U.S. Treasury and government agencies	4,198	8	–	–	4,198	8
Obligations of U.S. states and municipalities	907	10	–	–	907	10
Certificates of deposit	741	2	–	–	741	2
Non-U.S. government debt securities	14,527	21	1,927	4	16,454	25
Corporate debt securities	2,651	10	5,641	74	8,292	84
Asset-backed securities:						
Collateralized loan obligations	6,328	17	2,063	35	8,391	52
Other	2,076	7	275	4	2,351	11
Total available-for-sale debt securities	37,687	104	11,028	146	48,715	250
Available-for-sale equity securities	–	–	–	–	–	–
Total securities with gross unrealized losses	$ 37,687	$ 104	$ 11,028	$ 146	$ 48,715	$ 250

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2011 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 2,724	$ 2	$ –	$ –	$ 2,724	$ 2
Residential:						
Prime and Alt-A	649	12	970	206	1,619	218
Subprime	–	–	–	–	–	–
Non-U.S.	30,500	266	25,176	421	55,676	687
Commercial	837	53	–	–	837	53
Total mortgage-backed securities	34,710	333	26,146	627	60,856	960
U.S. Treasury and government agencies	3,369	2	–	–	3,369	2
Obligations of U.S. states and municipalities	147	42	40	6	187	48
Certificates of deposit	–	–	–	–	–	–
Non-U.S. government debt securities	11,901	66	1,286	15	13,187	81
Corporate debt securities	22,230	901	9,585	746	31,815	1,647
Asset-backed securities:						
Collateralized loan obligations	5,610	49	3,913	117	9,523	166
Other	4,735	40	1,185	17	5,920	57
Total available-for-sale debt securities	82,702	1,433	42,155	1,528	124,857	2,961
Available-for-sale equity securities	338	2	–	–	338	2
Total securities with gross unrealized losses	$ 83,040	$ 1,435	$ 42,155	$ 1,528	$ 125,195	$ 2,963

Other-than-temporary impairment

The following table presents OTTI losses that are included in the securities gains and losses table above.

Year ended December 31, (in millions)	2012	2011	2010
Debt securities the Firm does not intend to sell that have credit losses			
Total OTTI[a]	**$ (113)**	$ (27)	$ (94)
Losses recorded in/ (reclassified from) AOCI	**85**	(49)	(6)
Total credit losses recognized in income[b]	**(28)** [d]	(76) [f]	(100) [g]
Securities the Firm intends to sell[c]	**(15)** [e]	–	–
Total OTTI losses recognized in income	**$ (43)**	$ (76)	$ (100)

(a) For initial OTTI, represents the excess of the amortized cost over the fair value of AFS debt securities. For subsequent impairments of the same security, represents additional declines in fair value subsequent to previously recorded OTTI, if applicable.

(b) Subsequent credit losses may be recorded on securities without a corresponding further decline in fair value if there has been a decline in expected cash flows.

(c) Represents the excess of the amortized cost over the fair value of certain non-U.S. corporate debt, and non-U.S. government debt securities the Firm intends to sell.

(d) Represents the credit loss component on certain prime mortgage-backed securities and obligations of U.S. states and municipalities for the year ended December 31, 2012, that the Firm does not intend to sell. At December 31, 2012, there were no unrealized losses remaining in AOCI on securities for which credit losses were recognized in income during 2012.

(e) Excludes realized losses of $24 million on sales of non-U.S. corporate debt, non-U.S. government debt and certain asset-backed securities that had been previously reported as an OTTI loss due to the intention to sell the securities during the year ended December 31, 2012.

(f) Represents the credit loss component on certain prime mortgage-backed securities for the year ended December 31, 2011, that the Firm did not intend to sell.

(g) Represents the credit loss component on certain prime mortgage-backed securities and obligations of U.S. states and municipalities for the year ended December 31, 2010 that the Firm did not intend to sell.

Changes in the credit loss component of credit-impaired debt securities

The following table presents a rollforward for the years ended December 31, 2012, 2011 and 2010, of the credit loss component of OTTI losses that have been recognized in income, related to debt securities that the Firm does not intend to sell.

Year ended December 31, (in millions)	2012	2011	2010
Balance, beginning of period	**$ 708**	$ 632	$ 578
Additions:			
Newly credit-impaired securities	**21**	4	–
Increase in losses on previously credit-impaired securities	**–**	–	94
Losses reclassified from other comprehensive income on previously credit-impaired securities	**7**	72	6
Reductions:			
Sales of credit-impaired securities	**(214)**	–	(31)
Impact of new accounting guidance related to VIEs	**–**	–	(15)
Balance, end of period	**$ 522**	$ 708	$ 632

Gross unrealized losses

Gross unrealized losses have generally decreased since December 31, 2011, including those that have been in an unrealized loss position for 12 months or more. Except for certain securities that the Firm intends to sell for which the unrealized losses have been recognized in income, as of December 31, 2012, the Firm does not intend to sell the securities with a loss position in AOCI, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities reported in the table above for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2012.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2012, of JPMorgan Chase's AFS and HTM securities by contractual maturity.

By remaining maturity December 31, 2012 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities[a]					
Amortized cost	$ 102	$ 11,915	$ 10,568	$ 156,412	$ 178,997
Fair value	103	12,268	11,008	162,851	186,230
Average yield[b]	1.91%	1.94%	2.81%	3.15%	3.05%
U.S. Treasury and government agencies[a]					
Amortized cost	$ 7,779	$ 1,502	$ 1,651	$ 1,090	$ 12,022
Fair value	7,805	1,558	1,653	1,114	12,130
Average yield[b]	0.51%	2.29%	1.17%	0.78%	0.85%
Obligations of U.S. states and municipalities					
Amortized cost	$ 23	$ 436	$ 972	$ 18,445	$ 19,876
Fair value	23	471	1,033	20,184	21,711
Average yield[b]	3.45%	5.52%	4.08%	6.02%	5.91%
Certificates of deposit					
Amortized cost	$ 2,730	$ 51	$ –	$ –	$ 2,781
Fair value	2,729	54	–	–	2,783
Average yield[b]	5.78%	3.28%	–%	–%	5.73%
Non-U.S. government debt securities					
Amortized cost	$ 18,248	$ 21,937	$ 22,870	$ 2,113	$ 65,168
Fair value	18,254	22,172	23,386	2,232	66,044
Average yield[b]	1.23%	2.03%	1.40%	1.65%	1.57%
Corporate debt securities					
Amortized cost	$ 5,605	$ 23,342	$ 8,899	$ 153	$ 37,999
Fair value	5,618	23,732	9,098	161	38,609
Average yield[b]	2.09%	2.37%	2.57%	3.99%	2.38%
Asset-backed securities					
Amortized cost	$ 500	$ 3,104	$ 17,129	$ 19,566	$ 40,299
Fair value	501	3,145	17,468	19,753	40,867
Average yield[b]	1.08%	2.10%	1.75%	2.09%	1.93%
Total available-for-sale debt securities					
Amortized cost	$ 34,987	$ 62,287	$ 62,089	$ 197,779	$ 357,142
Fair value	35,033	63,400	63,646	206,295	368,374
Average yield[b]	1.57%	2.17%	1.94%	3.29%	2.69%
Available-for-sale equity securities					
Amortized cost	$ –	$ –	$ –	$ 2,750	$ 2,750
Fair value	–	–	–	2,771	2,771
Average yield[b]	–%	–%	–%	0.36%	0.36%
Total available-for-sale securities					
Amortized cost	$ 34,987	$ 62,287	$ 62,089	$ 200,529	$ 359,892
Fair value	35,033	63,400	63,646	209,066	371,145
Average yield[b]	1.57%	2.17%	1.94%	3.25%	2.67%
Total held-to-maturity securities					
Amortized cost	$ –	$ 6	$ 1	$ –	$ 7
Fair value	–	7	1	–	8
Average yield[b]	–%	6.85%	6.64%	–%	6.83%

(a) U.S. government agencies and U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2012.

(b) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid.

(c) Includes securities with no stated maturity. Substantially all of the Firm's residential mortgage-backed securities and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated duration, which reflects anticipated future prepayments based on a consensus of dealers in the market, is approximately three years for agency residential mortgage-backed securities, two years for agency residential collateralized mortgage obligations and four years for nonagency residential collateralized mortgage obligations.

Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated Balance Sheets. Resale and repurchase agreements are generally carried at the amounts at which the securities will be subsequently sold or repurchased, plus accrued interest. Securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. Fees received and paid in connection with securities financing agreements are recorded in interest income and interest expense, respectively.

The Firm has elected the fair value option for certain securities financing agreements. For further information regarding the fair value option, see Note 4 on pages 214–216 of this Annual Report. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements; securities loaned or sold under repurchase agreements; and securities borrowed on the Consolidated Balance Sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

The following table details the Firm's securities financing agreements, all of which are accounted for as collateralized financings during the periods presented.

December 31, (in millions)	2012	2011
Securities purchased under resale agreements[a]	$ 295,413	$ 235,000
Securities borrowed[b]	119,017	142,462
Securities sold under repurchase agreements[c]	$ 215,560	$ 197,789
Securities loaned[d]	23,582	14,214

(a) At December 31, 2012 and 2011, included resale agreements of $24.3 billion and $22.2 billion, respectively, accounted for at fair value.
(b) At December 31, 2012 and 2011, included securities borrowed of $10.2 billion and $15.3 billion, respectively, accounted for at fair value.
(c) At December 31, 2012 and 2011, included repurchase agreements of $3.9 billion and $6.8 billion, respectively, accounted for at fair value.
(d) At December 31, 2012, included securities loaned of $457 million accounted for at fair value. There were no securities loaned accounted for at fair value at December 31, 2011.

The amounts reported in the table above were reduced by $96.9 billion and $115.7 billion at December 31, 2012 and 2011, respectively, as a result of agreements in effect that meet the specified conditions for net presentation under applicable accounting guidance.

JPMorgan Chase's policy is to take possession, where possible, of securities purchased under resale agreements and of securities borrowed. The Firm monitors the value of the underlying securities (primarily G7 government securities, U.S. agency securities and agency MBS, and equities) that it has received from its counterparties and either requests additional collateral or returns a portion of the collateral when appropriate in light of the market value of the underlying securities. Margin levels are established initially based upon the counterparty and type of collateral and monitored on an ongoing basis to protect against declines in collateral value in the event of default. JPMorgan Chase typically enters into master netting agreements and other collateral arrangements with its resale agreement and securities borrowed counterparties, which provide for the right to liquidate the purchased or borrowed securities in the event of a customer default. As a result of the Firm's credit risk mitigation practices with respect to resale and securities borrowed agreements as described above, the Firm did not hold any reserves for credit impairment with respect to these agreements as of December 31, 2012 and 2011.

For further information regarding assets pledged and collateral received in securities financing agreements, see Note 30 on pages 315–316 of this Annual Report.

Note 14 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained"), other than purchased credit-impaired ("PCI") loans
- Loans held-for-sale
- Loans at fair value
- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories:

Loans held-for-investment (other than PCI loans)

Originated or purchased loans held-for-investment, other than PCI loans, are measured at the principal amount outstanding, net of the following: allowance for loan losses; net charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and net deferred loan fees or costs.

Interest income

Interest income on performing loans held-for-investment, other than PCI loans, is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is in doubt, which for consumer loans, excluding credit card, is generally determined when principal or interest is 90 days or more past due and collateral, if any, is insufficient to cover principal and interest. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. Consumer, excluding credit card, loans that are less than 90 days past due may be placed on nonaccrual status when there is evidence that full payment of principal and interest is in doubt (e.g., performing junior liens that are subordinate to nonperforming senior liens). Finally, collateral-dependent loans are typically maintained on nonaccrual status.

On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance for the estimated uncollectible portion of accrued interest and fee income on credit card loans. The allowance is established with a charge to interest income and is reported as an offset to loans.

Allowance for loan losses

The allowance for loan losses represents the estimated probable losses on held-for-investment loans. Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated Statements of Income. See Note 15 on pages 276–279 of this Annual Report for further information on the Firm's accounting polices for the allowance for loan losses.

Charge-offs

Consumer loans, other than risk-rated business banking, risk-rated auto and PCI loans, are generally charged off or charged down to the net realizable value of the underlying collateral (i.e., fair value less costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the Federal Financial Institutions Examination Council ("FFIEC"). Residential real estate loans, non-modified credit card loans and scored business banking loans are generally charged off at 180 days past due. In the second quarter of 2012, the Firm revised its policy to charge-off modified credit card loans that do not comply with their modified payment terms at 120 days past due rather than 180 days past due. Auto and student loans are charged off no later than 120 days past due.

Certain consumer loans will be charged off earlier than the FFIEC charge-off standards in certain circumstances as follows:

- A charge-off is recognized when a loan is modified in a TDR if the loan is determined to be collateral-dependent. A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.
- Loans to borrowers who have experienced an event (e.g., bankruptcy) that suggests a loss is either known or highly certain are subject to accelerated charge-off standards. Residential real estate and auto loans are charged off when the loan becomes 60 days past due, or sooner if the loan is determined to be collateral-dependent. Credit card and scored business banking loans are charged off within 60 days of receiving notification of the bankruptcy filing or other event. Student loans are generally charged off when the loan becomes 60 days past due after receiving notification of a bankruptcy.
- Auto loans are written down to net realizable value upon repossession of the automobile and after a redemption period (i.e., the period during which a borrower may cure the loan) has passed.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on government-guaranteed loans.

Wholesale loans, risk-rated business banking loans and risk-rated auto loans are charged off when it is highly certain that a loss has been realized, including situations where a loan is determined to be both impaired and collateral-dependent. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the estimated net realizable value, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every six months thereafter. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), generally, either through foreclosure or upon the execution of a deed in lieu of foreclosure transaction with the borrower, the Firm obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared to the estimated values provided by exterior opinions and interior appraisals, considering state- and product-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

Loans held-for-sale

Held-for-sale loans are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or losses recognized at the time of sale.

Held-for-sale loans are subject to the nonaccrual policies described above.

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

Loans at fair value

Loans used in a market-making strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue.

For these loans, the earned current contractual interest payment is recognized in interest income. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's nonaccrual, allowance for loan losses, and charge-off policies do not apply to these loans.

See Note 4 on pages 214–216 of this Annual Report for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 and Note 4 on pages 196–214 and 214–216 of this Annual Report for further information on loans carried at fair value and classified as trading assets.

PCI loans

PCI loans held-for-investment are initially measured at fair value. PCI loans have evidence of credit deterioration since the loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected. Because PCI loans are initially measured at fair value, which includes an estimate of future credit losses, no allowance for loan losses related to PCI loans is recorded at the acquisition date. See page 266 of this Note for information on accounting for PCI loans subsequent to their acquisition.

Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; losses due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at the lower of cost or fair value on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 15 on pages 276–279 of this Annual Report.

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss, avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, principal forgiveness, or the acceptance of equity or other assets in lieu of payments.

Such modifications are accounted for and reported as troubled debt restructurings ("TDRs"). A loan that has been modified in a TDR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless of whether the borrower performs under the modified terms. In certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring. In such circumstances, and assuming that the loan subsequently performs under its modified terms and the Firm expects to collect all contractual principal and interest cash flows, the loan is disclosed as impaired and as a TDR only during the year of the modification; in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (a) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (b) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, LTV ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

Because loans modified in TDRs are considered to be impaired, these loans are measured for impairment using the Firm's established asset-specific allowance methodology, which considers the expected re-default rates for the modified loans. A loan modified in a TDR remains subject to the asset-specific allowance methodology throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status. For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 15 on pages 276–279 of this Annual Report.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, buildings, and fixtures) and commercial and personal property (e.g., aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a debt (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated Balance Sheets and initially recognized at fair value less costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment, the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class:

Consumer, excluding credit card[a]	Credit card	Wholesale[c]
Residential real estate – excluding PCI • Home equity – senior lien • Home equity – junior lien • Prime mortgage, including option ARMs • Subprime mortgage Other consumer loans • Auto[b] • Business banking[b] • Student and other Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Credit card loans	• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other

(a) Includes loans reported in CCB and residential real estate loans reported in the AM business segment and in Corporate/Private Equity.
(b) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included with the other consumer loan classes.
(c) Includes loans reported in CIB, CB and AM business segments and in Corporate/Private Equity.

The following tables summarize the Firm's loan balances by portfolio segment.

December 31, 2012 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total
Retained	$ 292,620	$ 127,993	$ 306,222	$ 726,835 [b]
Held-for-sale	–	–	4,406	4,406
At fair value	–	–	2,555	2,555
Total	$ 292,620	$ 127,993	$ 313,183	$ 733,796

December 31, 2011 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total
Retained	$ 308,427	$ 132,175	$ 278,395	$ 718,997 [b]
Held-for-sale	–	102	2,524	2,626
At fair value	–	–	2,097	2,097
Total	$ 308,427	$ 132,277	$ 283,016	$ 723,720

(a) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(b) Loans (other than PCI loans and those for which the fair value option has been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs of $2.5 billion and $2.7 billion at December 31, 2012 and 2011, respectively.

The following table provides information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. These tables exclude loans recorded at fair value. On an ongoing basis, the Firm manages its exposure to credit risk. Selling loans is one way that the Firm reduces its credit exposures.

	2012				2011			
Years ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 6,601	$ –	$ 827	$ 7,428	$ 7,525	$ –	$ 906	$ 8,431
Sales	1,852	–	3,423	5,275	1,384	–	3,289	4,673
Retained loans reclassified to held-for-sale	–	1,043	504	1,547	–	2,006	538	2,544

The following table provides information about gains/(losses) on loan sales by portfolio segment.

Year ended December 31, (in millions)	2012	2011	2010
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]			
Consumer, excluding credit card	$ 122	$ 131	$ 265
Credit card	(9)	(24)	(16)
Wholesale	180	121	215
Total net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]	$ 293	$ 228	$ 464

(a) Excludes sales related to loans accounted for at fair value.

Consumer, excluding credit card, loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, business banking loans, and student and other loans, with a primary focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens and mortgage loans with interest-only payment options to predominantly prime borrowers, as well as certain payment-option loans originated by Washington Mutual that may result in negative amortization.

The table below provides information about retained consumer loans, excluding credit card, by class.

December 31, (in millions)	2012	2011
Residential real estate – excluding PCI		
Home equity:		
Senior lien	**$ 19,385**	$ 21,765
Junior lien	**48,000**	56,035
Mortgages:		
Prime, including option ARMs	**76,256**	76,196
Subprime	**8,255**	9,664
Other consumer loans		
Auto	**49,913**	47,426
Business banking	**18,883**	17,652
Student and other	**12,191**	14,143
Residential real estate – PCI		
Home equity	**20,971**	22,697
Prime mortgage	**13,674**	15,180
Subprime mortgage	**4,626**	4,976
Option ARMs	**20,466**	22,693
Total retained loans	**$ 292,620**	$ 308,427

Delinquency rates are a primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear that the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, including both non-PCI and PCI portfolios, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit-quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (660 or below) is considered to be of higher risk than a loan to a borrower with a high FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For scored auto, scored business banking and student loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.
- Risk-rated business banking and auto loans are similar to wholesale loans in that the primary credit quality indicators are the risk rating that is assigned to the loan and whether the loans are considered to be criticized and/or nonaccrual. Risk ratings are reviewed on a regular and ongoing basis by Credit and Risk Management and are adjusted as necessary for updated information about borrowers' ability to fulfill their obligations. For further information about risk-rated wholesale loan credit quality indicators, see page 271 of this Note.

Residential real estate – excluding PCI loans

The following table provides information by class for residential real estate – excluding retained PCI loans in the consumer, excluding credit card, portfolio segment.

The following factors should be considered in analyzing certain credit statistics applicable to the Firm's residential real estate – excluding PCI loans portfolio: (i) junior lien home equity loans may be fully charged off when the loan becomes 180 days past due, and the value of the collateral does not support the repayment of the loan, resulting in relatively high charge-off rates for this product class; and (ii) the lengthening of loss-mitigation timelines may result in higher delinquency rates for loans carried at the net realizable value of the collateral that remain on the Firm's Consolidated Balance Sheets.

Residential real estate – excluding PCI loans

December 31, (in millions, except ratios)	Home equity			
	Senior lien		Junior lien	
	2012	2011	2012	2011
Loan delinquency[a]				
Current	$ 18,688	$ 20,992	$ 46,805	$ 54,533
30–149 days past due	330	405	960	1,272
150 or more days past due	367	368	235	230
Total retained loans	$ 19,385	$ 21,765	$ 48,000	$ 56,035
% of 30+ days past due to total retained loans	3.60%	3.55%	2.49%	2.68%
90 or more days past due and still accruing	$ –	$ –	$ –	$ –
90 or more days past due and government guaranteed[b]	–	–	–	–
Nonaccrual loans[c]	931	495	2,277 [h]	792
Current estimated LTV ratios[d][e][f]				
Greater than 125% and refreshed FICO scores:				
Equal to or greater than 660	$ 197	$ 341	$ 4,561	$ 6,463
Less than 660	93	160	1,338	2,037
101% to 125% and refreshed FICO scores:				
Equal to or greater than 660	491	663	7,089	8,775
Less than 660	191	241	1,971	2,510
80% to 100% and refreshed FICO scores:				
Equal to or greater than 660	1,502	1,850	9,604	11,433
Less than 660	485	601	2,279	2,616
Less than 80% and refreshed FICO scores:				
Equal to or greater than 660	13,988	15,350	18,252	19,326
Less than 660	2,438	2,559	2,906	2,875
U.S. government-guaranteed	–	–	–	–
Total retained loans	$ 19,385	$ 21,765	$ 48,000	$ 56,035
Geographic region				
California	$ 2,786	$ 3,066	$ 10,969	$ 12,851
New York	2,847	3,023	9,753	10,979
Illinois	1,358	1,495	3,265	3,785
Florida	892	992	2,572	3,006
Texas	2,508	3,027	1,503	1,859
New Jersey	652	687	2,838	3,238
Arizona	1,183	1,339	2,151	2,552
Washington	651	714	1,629	1,895
Ohio	1,514	1,747	1,091	1,328
Michigan	910	1,044	1,169	1,400
All other[g]	4,084	4,631	11,060	13,142
Total retained loans	$ 19,385	$ 21,765	$ 48,000	$ 56,035

(a) Individual delinquency classifications included mortgage loans insured by U.S. government agencies as follows: current includes $3.8 billion and $3.0 billion; 30–149 days past due includes $2.3 billion and $2.3 billion; and 150 or more days past due includes $9.5 billion and $10.3 billion at December 31, 2012 and 2011, respectively.

(b) These balances, which are 90 days or more past due but insured by U.S. government agencies, are excluded from nonaccrual loans. In predominately all cases, 100% of the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting agreed-upon servicing guidelines. These amounts are excluded from nonaccrual loans because reimbursement of insured and guaranteed amounts is proceeding normally. At December 31, 2012 and 2011, these balances included $6.8 billion and $7.0 billion, respectively, of loans that are no longer accruing interest because interest has been curtailed by the U.S. government agencies although, in predominantly all cases, 100% of the principal is still insured. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate.

(c) At December 31, 2012, included $1.7 billion of loans recorded in accordance with regulatory guidance requiring loans discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower to be reported as nonaccrual loans, regardless of their delinquency status. This $1.7 billion consisted of $450 million, $440 million, $500 million, and $357 million for home equity - senior lien, home equity - junior lien, prime mortgage, including option ARMs, and subprime mortgages, respectively. Certain of these loans have previously been reported as performing TDRs (e.g., loans that were previously modified under one of the Firm's loss mitigation programs and that have made at least six payments under the modified payment terms).

(d) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates.

(e) Junior lien represents combined LTV, which considers all available lien positions related to the property. All other products are presented without consideration of subordinate liens on the property.

(f) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(g) At both December 31, 2012 and 2011, included mortgage loans insured by U.S. government agencies of $15.6 billion.

(h) Includes $1.2 billion of performing junior liens at December 31, 2012, that are subordinate to senior liens that are 90 days or more past due; such junior liens are now being reported as nonaccrual loans based upon regulatory guidance issued in the first quarter of 2012. Of the total, $1.1 billion were current at December 31, 2012. Prior periods have not been restated.

(i) At December 31, 2012 and 2011, excluded mortgage loans insured by U.S. government agencies of $11.8 billion and $12.6 billion, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

(table continued from previous page)

Mortgages						
Prime, including option ARMs		Subprime		Total residential real estate – excluding PCI		
2012	2011	**2012**	2011	**2012**	2011	
$ 61,439	$ 59,855	**$ 6,673**	$ 7,585	**$ 133,605**	$ 142,965	
3,237	3,475	**727**	820	**5,254**	5,972	
11,580	12,866	**855**	1,259	**13,037**	14,723	
$ 76,256	$ 76,196	**$ 8,255**	$ 9,664	**$ 151,896**	$ 163,660	
3.97% [(i)]	4.96% [(i)]	**19.16%**	21.51%	**4.28%** [(i)]	4.97% [(i)]	
$ –	$ –	**$ –**	$ –	**$ –**	$ –	
10,625	11,516	**–**	–	**10,625**	11,516	
3,445	3,462	**1,807**	1,781	**8,460**	6,530	
$ 2,573	$ 3,168	**$ 236**	$ 367	**$ 7,567**	$ 10,339	
991	1,416	**653**	1,061	**3,075**	4,674	
3,697	4,626	**457**	506	**11,734**	14,570	
1,376	1,636	**985**	1,284	**4,523**	5,671	
7,070	9,343	**726**	817	**18,902**	23,443	
2,117	2,349	**1,346**	1,556	**6,227**	7,122	
38,281	33,849	**1,793**	1,906	**72,314**	70,431	
4,549	4,225	**2,059**	2,167	**11,952**	11,826	
15,602	15,584	**–**	–	**15,602**	15,584	
$ 76,256	$ 76,196	**$ 8,255**	$ 9,664	**$ 151,896**	$ 163,660	
$ 17,539	$ 18,029	**$ 1,240**	$ 1,463	**$ 32,534**	$ 35,409	
11,190	10,200	**1,081**	1,217	**24,871**	25,419	
3,999	3,922	**323**	391	**8,945**	9,593	
4,372	4,565	**1,031**	1,206	**8,867**	9,769	
2,927	2,851	**257**	300	**7,195**	8,037	
2,131	2,042	**399**	461	**6,020**	6,428	
1,162	1,194	**165**	199	**4,661**	5,284	
1,741	1,878	**177**	209	**4,198**	4,696	
405	441	**191**	234	**3,201**	3,750	
866	909	**203**	246	**3,148**	3,599	
29,924	30,165	**3,188**	3,738	**48,256**	51,676	
$ 76,256	$ 76,196	**$ 8,255**	$ 9,664	**$ 151,896**	$ 163,660	

The following tables represent the Firm's delinquency statistics for junior lien home equity loans as of December 31, 2012 and 2011.

December 31, 2012 (in millions, except ratios)	Delinquencies			Total loans	Total 30+ day delinquency rate
	30–89 days past due	90–149 days past due	150+ days past due		
HELOCs:[a]					
Within the revolving period[b]	**$ 514**	**$ 196**	**$ 185**	**$ 40,794**	**2.19%**
Beyond the revolving period	**48**	**19**	**27**	**2,127**	**4.42**
HELOANs	**125**	**58**	**23**	**5,079**	**4.06**
Total	**$ 687**	**$ 273**	**$ 235**	**$ 48,000**	**2.49%**

December 31, 2011 (in millions, except ratios)	Delinquencies			Total loans	Total 30+ day delinquency rate
	30–89 days past due	90–149 days past due	150+ days past due		
HELOCs:[a]					
Within the revolving period[b]	$ 606	$ 314	$ 173	$ 47,760	2.29%
Beyond the revolving period	45	19	15	1,636	4.83
HELOANs	188	100	42	6,639	4.97
Total	$ 839	$ 433	$ 230	$ 56,035	2.68%

(a) These HELOCs are predominantly revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period, but also include HELOCs originated by Washington Mutual that require interest-only payments beyond the revolving period.

(b) The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty or when the collateral does not support the loan amount.

Home equity lines of credit ("HELOCs") within the required amortization period and home equity loans ("HELOANs") have higher delinquency rates than do HELOCs within the revolving period. That is primarily because the fully-amortizing payment required for those products is higher than the minimum payment options available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the loss estimates produced by the Firm's delinquency roll-rate methodology, which estimates defaults based on the current delinquency status of a portfolio.

Impaired loans

At December 31, 2012, the Firm reported, in accordance with regulatory guidance, $1.6 billion of residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual TDRs, regardless of their delinquency status. Pursuant to that guidance, these Chapter 7 loans were charged off to the net realizable value of the collateral, resulting in $747 million of charge-offs for the year ended December 31, 2012. Prior periods were not restated for this policy change. Prior to September 30, 2012, the Firm's policy was to charge down to net realizable value, and also to place on nonaccrual status, loans to borrowers who had filed for bankruptcy when such loans became 60 days past due; however, the Firm did not previously report Chapter 7 loans as TDRs unless otherwise modified under one of the Firm's loss mitigation programs.

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 on pages 276–279 of this Annual Report.

	Home equity				Mortgages				Total residential real estate – excluding PCI	
	Senior lien		Junior lien		Prime, including option ARMs		Subprime			
December 31, (in millions)	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011
Impaired loans										
With an allowance	**$ 542**	$ 319	**$ 677**	$ 622	**$ 5,810**	$ 4,332	**$ 3,071**	$ 3,047	**$ 10,100**	$ 8,320
Without an allowance[a]	**550**	16	**546**	35	**1,308**	545	**741**	172	**3,145**	768
Total impaired loans[b][c]	**$ 1,092**	$ 335	**$ 1,223**	$ 657	**$ 7,118**	$ 4,877	**$ 3,812**	$ 3,219	**$ 13,245**	$ 9,088
Allowance for loan losses related to impaired loans	**$ 159**	$ 80	**$ 188**	$ 141	**$ 70**	$ 4	**$ 174**	$ 366	**$ 591**	$ 591
Unpaid principal balance of impaired loans[d][e]	**1,408**	433	**2,352**	994	**9,095**	6,190	**5,700**	4,827	**18,555**	12,444
Impaired loans on nonaccrual status[f]	**607**	77	**599**	159	**1,888**	922	**1,308**	832	**4,402**	1,990

(a) Represents collateral-dependent residential mortgage loans, including Chapter 7 loans, that are charged off to the fair value of the underlying collateral less cost to sell.

(b) At December 31, 2012 and 2011, $7.5 billion and $4.3 billion, respectively, of loans permanently modified subsequent to repurchase from Government National Mortgage Association ("Ginnie Mae") in accordance with the standards of the appropriate government agency (i.e., Federal Housing Administration ("FHA"), U.S. Department of Veterans Affairs ("VA"), Rural Housing Services ("RHS")) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure.

(c) At December 31, 2012, included $1.6 billion of Chapter 7 loans, consisting of $450 million of senior lien home equity loans, $448 million of junior lien home equity loans, $465 million of prime including option ARMs, and $245 million of subprime mortgages. Certain of these loans were previously reported as nonaccrual loans (e.g., based upon the delinquency status of the loan).

(d) Represents the contractual amount of principal owed at December 31, 2012 and 2011. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, net deferred loan fees or costs, and unamortized discounts or premiums on purchased loans.

(e) At December 31, 2012, included $2.7 billion of Chapter 7 loans, consisting of $596 million of senior lien home equity loans, $990 million of junior lien home equity loans, $713 million of prime, including option ARMs, and $379 million of subprime mortgages.

(f) As of December 31, 2012 and 2011, nonaccrual loans included $2.9 billion and $886 million, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status refer to the Loan accounting framework on pages 250–252 of this Note.

The following table presents average impaired loans and the related interest income reported by the Firm.

	Average impaired loans			Interest income on impaired loans[a]			Interest income on impaired loans on a cash basis[a]		
Year ended December 31, (in millions)	**2012**	2011	2010	**2012**	2011	2010	**2012**	2011	2010
Home equity									
Senior lien	**$ 610**	$ 287	$ 207	**$ 27**	$ 10	$ 15	**$ 12**	$ 1	$ 1
Junior lien	**848**	521	266	**42**	18	10	**16**	2	1
Mortgages									
Prime, including option ARMs	**5,989**	3,859	1,530	**238**	147	70	**28**	14	14
Subprime	**3,494**	3,083	2,539	**183**	148	121	**31**	16	19
Total residential real estate – excluding PCI	**$ 10,941**	$ 7,750	$ 4,542	**$ 490**	$ 323	$ 216	**$ 87**	$ 33	$ 35

(a) Generally, interest income on loans modified in TDRs is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms.

Loan modifications

The global settlement, which became effective on April 5, 2012, required the Firm to, among other things, provide approximately $500 million of refinancing relief to certain "underwater" borrowers under the Refi Program and approximately $3.7 billion of additional relief to certain borrowers under the Consumer Relief Program, including reductions of principal on first and second liens.

The purpose of the Refi Program was to allow eligible borrowers who were current on their mortgage loans to refinance their existing loans; such borrowers were otherwise unable to do so because they had no equity or, in many cases, negative equity in their homes. Under the Refi Program, the interest rate on each refinanced loan could have been reduced either for the remaining life of the loan or for five years. The Firm reduced the interest rates on loans that it refinanced under the Refi Program for the remaining lives of those loans. The refinancings generally did not result in term extensions and accordingly, in that regard, were more similar to loan modifications than to traditional refinancings.

The Firm continues to modify first and second lien loans under the Consumer Relief Program. These loan modifications are primarily expected to be executed under the terms of either the U.S. Treasury's Making Home Affordable ("MHA") programs (e.g., the Home Affordable Modification Program ("HAMP"), the Second Lien Modification Program ("2MP")) or one of the Firm's proprietary modification programs. For further information on the global settlement, see Global settlement on servicing and origination of mortgages in Note 2 on page 195 of this Annual Report.

Modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

TDR activity rollforward

The following table reconciles the beginning and ending balances of residential real estate loans, excluding PCI loans, modified in TDRs for the periods presented.

Year ended December 31, (in millions)	Home equity				Mortgages				Total residential real estate – excluding PCI	
	Senior lien		Junior lien		Prime, including option ARMs		Subprime			
	2012	2011	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011
Beginning balance of TDRs	**$ 335**	$ 226	**$ 657**	$ 283	**$ 4,877**	$ 2,084	**$ 3,219**	$ 2,751	**$ 9,088**	$ 5,344
New TDRs[a]	**835**	138	**711**	518	**2,918**	3,268	**1,043**	883	**5,507**	4,807
Charge-offs post-modification[b]	**(31)**	(15)	**(2)**	(78)	**(135)**	(119)	**(208)**	(234)	**(376)**	(446)
Foreclosures and other liquidations (e.g., short sales)	**(5)**	–	**(21)**	(11)	**(138)**	(108)	**(113)**	(82)	**(277)**	(201)
Principal payments and other	**(42)**	(14)	**(122)**	(55)	**(404)**	(248)	**(129)**	(99)	**(697)**	(416)
Ending balance of TDRs	**$ 1,092**	$ 335	**$ 1,223**	$ 657	**$ 7,118**	$ 4,877	**$ 3,812**	$ 3,219	**$ 13,245**	$ 9,088
Permanent modifications[a]	**$ 1,058**	$ 285	**$ 1,218**	$ 634	**$ 6,834**	$ 4,601	**$ 3,661**	$ 3,029	**$ 12,771**	$ 8,549
Trial modifications	**$ 34**	$ 50	**$ 5**	$ 23	**$ 284**	$ 276	**$ 151**	$ 190	**$ 474**	$ 539

(a) For the year ended December 31, 2012, included $1.6 billion of Chapter 7 loans consisting of $450 million of senior lien home equity loans, $448 million of junior lien home equity loans, $465 million of prime, including option ARMs, and $245 million of subprime mortgages. Certain of these loans were previously reported as nonaccrual loans (e.g., based upon the delinquency status of the loan).

(b) Includes charge-offs on unsuccessful trial modifications.

Nature and extent of modifications

MHA, as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following table provides information about how residential real estate loans, excluding PCI loans, were modified under the Firm's loss mitigation programs during the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt. At December 31, 2012, there were approximately 37,300 of such Chapter 7 loans, consisting of approximately 9,000 senior lien home equity loans, 20,700 junior lien home equity loans, 3,800 prime mortgage, including option ARMs, and 3,800 subprime mortgages.

	Home equity				Mortgages				Total residential real estate - excluding PCI	
	Senior lien		Junior lien		Prime, including option ARMs		Subprime			
Year ended December 31,	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011
Number of loans approved for a trial modification, but not permanently modified	**410**	654	**528**	778	**1,101**	898	**1,168**	1,730	**3,207**	4,060
Number of loans permanently modified	**4,385**	1,006	**7,430**	9,142	**9,043**	9,579	**9,964**	4,972	**30,822**	24,699
Concession granted:[(a)]										
Interest rate reduction	**81%**	76%	**89%**	95%	**75%**	54%	**70%**	79%	**77%**	75%
Term or payment extension	**49**	86	**76**	81	**61**	71	**45**	74	**57**	76
Principal and/or interest deferred	**8**	12	**19**	22	**21**	18	**12**	19	**16**	19
Principal forgiveness	**12**	8	**22**	20	**30**	3	**43**	14	**30**	12
Other[(b)]	**3**	27	**5**	7	**31**	68	**8**	26	**13**	35

(a) As a percentage of the number of loans modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession.

(b) Represents variable interest rate to fixed interest rate modifications.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under the Firm's loss mitigation programs and about redefaults of certain loans modified in TDRs for the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

Year ended December 31, (in millions, except weighted-average data and number of loans)	Home equity				Mortgages				Total residential real estate – excluding PCI	
	Senior lien		Junior lien		Prime, including option ARMs		Subprime			
	2012	2011	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011
Weighted-average interest rate of loans with interest rate reductions – before TDR	**7.14%**	7.25%	**5.40%**	5.44%	**6.12%**	5.99%	**7.78%**	8.27%	**6.56%**	6.47%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**4.56**	3.54	**1.89**	1.48	**3.57**	3.32	**4.09**	3.50	**3.62**	3.09
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**19**	18	**20**	21	**25**	25	**23**	23	**23**	24
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**28**	30	**32**	34	**36**	35	**32**	34	**34**	35
Charge-offs recognized upon permanent modification	**$ 8**	$ 1	**$ 65**	$ 117	**$ 35**	$ 61	**$ 29**	$ 19	**$ 137**	$ 198
Principal deferred	**5**	4	**26**	36	**164**	176	**50**	68	**245**	284
Principal forgiven	**23**	1	**58**	62	**318**	24	**371**	55	**770**	142
Number of loans that redefaulted within one year of permanent modification[a]	**374**	201	**1,436**	1,170	**920**	1,041	**1,426**	1,742	**4,156**	4,154
Balance of loans that redefaulted within one year of permanent modification[a]	**$ 30**	$ 17	**$ 46**	$ 47	**$ 255**	$ 319	**$ 156**	$ 245	**$ 487**	$ 628

(a) Represents loans permanently modified in TDRs that experienced a payment default in the period presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

Approximately 85% of the trial modifications approved on or after July 1, 2010 (the approximate date on which substantial revisions were made to the HAMP program), that are seasoned more than six months have been successfully converted to permanent modifications.

The primary performance indicator for TDRs is the rate at which permanently modified loans redefault. At December 31, 2012, the cumulative redefault rates of residential real estate loans that have been modified under the Firm's loss mitigation programs, excluding PCI loans, based upon permanent modifications that were completed after October 1, 2009, and that are seasoned more than six months, are 25% for senior lien home equity, 20% for junior lien home equity, 14% for prime mortgages including option ARMs, and 24% for subprime mortgages.

Default rates of Chapter 7 loans vary significantly based on the delinquency status of the loan and overall economic conditions at the time of discharge. Default rates for Chapter 7 residential real estate loans that were less than 60 days past due at the time of discharge have ranged between approximately 10% and 40% in recent years based on the economic conditions at the time of discharge. At December 31, 2012, Chapter 7 residential real estate loans included approximately 19% of senior lien home equity, 12% of junior lien home equity, 45% of prime mortgages, including option ARMs, and 32% of subprime mortgages that were 30 days or more past due.

At December 31, 2012, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 6 years for senior lien home equity, 7 years for junior lien home equity, 10 years for prime mortgage, including option ARMs and 8 years for subprime mortgage. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

Other consumer loans

The table below provides information for other consumer retained loan classes, including auto, business banking and student loans.

December 31, (in millions, except ratios)	Auto		Business banking		Student and other		Total other consumer	
	2012	2011	2012	2011	2012	2011	2012	2011
Loan delinquency[a]								
Current	$49,290	$46,891	$18,482	$ 17,173	$11,038	$ 12,905	$ 78,810	$ 76,969
30–119 days past due	616	528	263	326	709	777	1,588	1,631
120 or more days past due	7	7	138	153	444	461	589	621
Total retained loans	$49,913	$47,426	$18,883	$ 17,652	$12,191	$ 14,143	$ 80,987	$ 79,221
% of 30+ days past due to total retained loans	1.25%	1.13%	2.12%	2.71%	2.12% [e]	1.76% [e]	1.58% [e]	1.59% [e]
90 or more days past due and still accruing [b]	$ –	$ –	$ –	$ –	$ 525	$ 551	$ 525	$ 551
Nonaccrual loans	163 [d]	118	481	694	70	69	714	881
Geographic region								
California	$ 4,962	$ 4,413	$ 1,983	$ 1,342	$ 1,108	$ 1,261	$ 8,053	$ 7,016
New York	3,742	3,616	2,981	2,792	1,202	1,401	7,925	7,809
Illinois	2,738	2,496	1,404	1,364	556	851	4,698	4,711
Florida	1,922	1,881	527	313	748	658	3,197	2,852
Texas	4,739	4,467	2,749	2,680	891	1,053	8,379	8,200
New Jersey	1,921	1,829	379	376	409	460	2,709	2,665
Arizona	1,719	1,495	1,139	1,165	265	316	3,123	2,976
Washington	824	735	202	160	287	249	1,313	1,144
Ohio	2,462	2,633	1,443	1,541	770	880	4,675	5,054
Michigan	2,091	2,282	1,368	1,389	548	637	4,007	4,308
All other	22,793	21,579	4,708	4,530	5,407	6,377	32,908	32,486
Total retained loans	$49,913	$47,426	$18,883	$ 17,652	$12,191	$ 14,143	$ 80,987	$ 79,221
Loans by risk ratings[c]								
Noncriticized	$ 8,882	$ 6,775	$13,336	$ 11,749	NA	NA	$ 22,218	$ 18,524
Criticized performing	130	166	713	817	NA	NA	843	983
Criticized nonaccrual	4	3	386	524	NA	NA	390	527

(a) Individual delinquency classifications included loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") as follows: current includes $5.4 billion and $7.0 billion; 30-119 days past due includes $466 million and $542 million; and 120 or more days past due includes $428 million and $447 million at December 31, 2012 and 2011, respectively.

(b) These amounts represent student loans, which are insured by U.S. government agencies under the FFELP. These amounts were accruing as reimbursement of insured amounts is proceeding normally.

(c) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.

(d) At December 31, 2012, included $51 million of Chapter 7 auto loans.

(e) December 31, 2012 and 2011, excluded loans 30 days or more past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $894 million and $989 million, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

Other consumer impaired loans and loan modifications

The table below sets forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

December 31, (in millions)	Auto		Business banking		Total other consumer[e]	
	2012	2011	**2012**	2011	**2012**	2011
Impaired loans						
With an allowance	**$ 78**	$ 88	**$ 543**	$ 713	**$ 621**	$ 801
Without an allowance[a]	**72**	3	**—**	—	**72**	3
Total impaired loans[b]	**$ 150**	$ 91	**$ 543**	$ 713	**$ 693**	$ 804
Allowance for loan losses related to impaired loans	**$ 12**	$ 12	**$ 126**	$ 225	**$ 138**	$ 237
Unpaid principal balance of impaired loans[c][d]	**259**	126	**624**	822	**883**	948
Impaired loans on nonaccrual status[b]	**109**	41	**394**	551	**503**	592

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) At December 31, 2012, included $72 million of Chapter 7 auto loans. Certain of these loans were previously reported as nonaccrual loans (e.g., based upon the delinquency status of the loan).
(c) At December 31, 2012, included $146 million of Chapter 7 auto loans.
(d) Represents the contractual amount of principal owed at December 31, 2012 and 2011. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the principal balance; net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.
(e) There were no impaired student and other loans at December 31, 2012 and 2011.

The following table presents average impaired loans for the periods presented.

Year ended December 31, (in millions)	Average impaired loans[b]		
	2012	2011	2010
Auto	**$ 111**	$ 92	$ 120
Business banking	**622**	760	682
Total other consumer[a]	**$ 733**	$ 852	$ 802

(a) There were no impaired student and other loans for the years ended 2012, 2011 and 2010.
(b) The related interest income on impaired loans, including those on a cash basis, was not material for the years ended 2012, 2011 and 2010.

Loan modifications

The following table provides information about the Firm's other consumer loans modified in TDRs. All of these TDRs are reported as impaired loans in the tables above.

December 31, (in millions)	Auto		Business banking		Total other consumer[d]	
	2012	2011	**2012**	2011	**2012**	2011
Loans modified in troubled debt restructurings[a][b][c]	**$ 150**	$ 88	**$ 352**	$ 415	**$ 502**	$ 503
TDRs on nonaccrual status	**109**	38	**203**	253	**312**	291

(a) These modifications generally provided interest rate concessions to the borrower or deferral of principal repayments.
(b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2012 and 2011, were immaterial.
(c) At December 31, 2012, included $72 million of Chapter 7 auto loans. Certain of these loans were previously reported as nonaccrual loans (e.g., based upon the delinquency status of the loan).
(d) There were no student and other loans modified in TDRs at December 31, 2012 and 2011.

TDR activity rollforward

The following table reconciles the beginning and ending balances of other consumer loans modified in TDRs for the periods presented.

Year ended December 31, (in millions)	Auto		Business banking		Total other consumer	
	2012	2011	**2012**	2011	**2012**	2011
Beginning balance of TDRs	**$ 88**	$ 91	**$ 415**	$ 395	**$ 503**	$ 486
New TDRs[a]	**145**	54	**104**	195	**249**	249
Charge-offs post-modification	**(9)**	(5)	**(9)**	(11)	**(18)**	(16)
Foreclosures and other liquidations	**–**	–	**(1)**	(3)	**(1)**	(3)
Principal payments and other	**(74)**	(52)	**(157)**	(161)	**(231)**	(213)
Ending balance of TDRs	**$ 150**	$ 88	**$ 352**	$ 415	**$ 502**	$ 503

(a) At December 31, 2012, included $72 million of Chapter 7 auto loans. Certain of these loans were previously reported as nonaccrual loans (e.g., based upon the delinquency status of the loan).

Financial effects of modifications and redefaults

For auto loans, TDRs typically occur in connection with the bankruptcy of the borrower. In these cases, the loan is modified with a revised repayment plan that typically incorporates interest rate reductions and, to a lesser extent, principal forgiveness. Beginning September 30, 2012, Chapter 7 auto loans are also considered TDRs.

For business banking loans, concessions are dependent on individual borrower circumstances and can be of a short-term nature for borrowers who need temporary relief or longer term for borrowers experiencing more fundamental financial difficulties. Concessions are predominantly term or payment extensions, but also may include interest rate reductions.

The balance of business banking loans modified in TDRs that experienced a payment default, and for which the payment default occurred within one year of the modification, was $42 million and $80 million, during the years ended December 31, 2012 and 2011, respectively. The balance of auto loans modified in TDRs that experienced a payment default, and for which the payment default occurred within one year of the modification, was $46 million during the year ended December 31, 2012. The corresponding amount for the year ended December 31, 2011 was insignificant. A payment default is deemed to occur as follows: (1) for scored auto and business banking loans, when the loan is two payments past due; and (2) for risk-rated business banking loans and auto loans, when the borrower has not made a loan payment by its scheduled due date after giving effect to the contractual grace period, if any.

The following table provides information about the financial effects of the various concessions granted in modifications of other consumer loans for the periods presented.

	Auto		Business banking	
Year ended December 31,	**2012**	2011	**2012**	2011
Weighted-average interest rate of loans with interest rate reductions – before TDR	**12.64%**	12.45%	**7.33%**	7.55%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**4.83**	5.70	**5.49**	5.52
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**NM**	NM	**1.4**	1.4
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**NM**	NM	**2.4**	2.6

Purchased credit-impaired loans

PCI loans are initially recorded at fair value at acquisition; PCI loans acquired in the same fiscal quarter may be aggregated into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer loans were aggregated into pools of loans with common risk characteristics.

On a quarterly basis, the Firm estimates the total cash flows (both principal and interest) expected to be collected over the remaining life of each pool. These estimates incorporate assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that reflect then-current market conditions. Probable decreases in expected cash flows (i.e., increased credit losses) trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related foregone interest cash flows, discounted at the pool's effective interest rate. Impairments are recognized through the provision for credit losses and an increase in the allowance for loan losses. Probable and significant increases in expected cash flows (e.g., decreased credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans. The impacts of (i) prepayments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are recognized prospectively as adjustments to interest income. Disposals of loans — which may include sales of loans, receipt of payments in full by the borrower, or foreclosure — result in removal of the loans from the PCI portfolio.

The Firm continues to modify certain PCI loans. The impact of these modifications is incorporated into the Firm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans. In evaluating the effect of modifications on expected cash flows, the Firm incorporates the effect of any foregone interest and also considers the potential for redefault. The Firm develops product-specific probability of default estimates, which are used to compute expected credit losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment based upon industry-wide data. The Firm also considers its own historical loss experience to date based on actual redefaulted PCI modified loans.

The excess of cash flows expected to be collected over the carrying value of the underlying loans is referred to as the accretable yield. This amount is not reported on the Firm's Consolidated Balance Sheets but is accreted into interest income at a level rate of return over the remaining estimated lives of the underlying pools of loans.

If the timing and/or amounts of expected cash flows on PCI loans were determined not to be reasonably estimable, no interest would be accreted and the loans would be reported as nonaccrual loans; however, since the timing and amounts of expected cash flows for the Firm's PCI consumer loans are reasonably estimable, interest is being accreted and the loans are being reported as performing loans.

Charge-offs are not recorded on PCI loans until actual losses exceed the estimated losses that were recorded as purchase accounting adjustments at acquisition date. Actual losses in excess of the purchase accounting adjustment are charged off against the PCI allowance for credit losses. To date, no charge-offs have been recorded for these consumer loans.

The PCI portfolio affects the Firm's results of operations primarily through: (i) contribution to net interest margin; (ii) expense related to defaults and servicing resulting from the liquidation of the loans; and (iii) any provision for loan losses. The PCI loans acquired in the Washington Mutual transaction were funded based on the interest rate characteristics of the loans. For example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with fixed-rate liabilities with a similar maturity profile. A net spread will be earned on the declining balance of the portfolio, which is estimated as of December 31, 2012, to have a remaining weighted-average life of 8 years.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

December 31, (in millions, except ratios)	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
	2012	2011	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011
Carrying value[a]	**$20,971**	$22,697	**$13,674**	$15,180	**$ 4,626**	$ 4,976	**$20,466**	$22,693	**$59,737**	$65,546
Related allowance for loan losses[b]	**1,908**	1,908	**1,929**	1,929	**380**	380	**1,494**	1,494	**5,711**	5,711
Loan delinquency (based on unpaid principal balance)										
Current	**$20,331**	$22,682	**$11,078**	$12,148	**$ 4,198**	$ 4,388	**$16,415**	$17,919	**$52,022**	$57,137
30–149 days past due	**803**	1,130	**740**	912	**698**	782	**1,314**	1,467	**3,555**	4,291
150 or more days past due	**1,209**	1,252	**2,066**	3,000	**1,430**	2,059	**4,862**	6,753	**9,567**	13,064
Total loans	**$22,343**	$25,064	**$13,884**	$16,060	**$ 6,326**	$ 7,229	**$22,591**	$26,139	**$65,144**	$74,492
% of 30+ days past due to total loans	**9.01%**	9.50%	**20.21%**	24.36%	**33.64%**	39.30%	**27.34%**	31.45%	**20.14%**	23.30%
Current estimated LTV ratios (based on unpaid principal balance)[c][d]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 4,508**	$ 5,915	**$ 1,478**	$ 2,313	**$ 375**	$ 473	**$ 1,597**	$ 2,509	**$ 7,958**	$11,210
Less than 660	**2,344**	3,299	**1,449**	2,319	**1,300**	1,939	**2,729**	4,608	**7,822**	12,165
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**4,966**	5,393	**2,968**	3,328	**434**	434	**3,281**	3,959	**11,649**	13,114
Less than 660	**2,098**	2,304	**1,983**	2,314	**1,256**	1,510	**3,200**	3,884	**8,537**	10,012
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**3,531**	3,482	**1,872**	1,629	**416**	372	**3,794**	3,740	**9,613**	9,223
Less than 660	**1,305**	1,264	**1,378**	1,457	**1,182**	1,197	**2,974**	3,035	**6,839**	6,953
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	**2,524**	2,409	**1,356**	1,276	**255**	198	**2,624**	2,189	**6,759**	6,072
Less than 660	**1,067**	998	**1,400**	1,424	**1,108**	1,106	**2,392**	2,215	**5,967**	5,743
Total unpaid principal balance	**$22,343**	$25,064	**$13,884**	$16,060	**$ 6,326**	$ 7,229	**$22,591**	$26,139	**$65,144**	$74,492
Geographic region (based on unpaid principal balance)										
California	**$13,493**	$15,091	**$ 7,877**	$ 9,121	**$ 1,444**	$ 1,661	**$11,889**	$13,565	**$34,703**	$39,438
New York	**1,067**	1,179	**927**	1,018	**649**	709	**1,404**	1,548	**4,047**	4,454
Illinois	**502**	558	**433**	511	**338**	411	**587**	702	**1,860**	2,182
Florida	**2,054**	2,307	**1,023**	1,265	**651**	812	**2,480**	3,201	**6,208**	7,585
Texas	**385**	455	**148**	168	**368**	405	**118**	140	**1,019**	1,168
New Jersey	**423**	471	**401**	445	**260**	297	**854**	969	**1,938**	2,182
Arizona	**408**	468	**215**	254	**105**	126	**305**	362	**1,033**	1,210
Washington	**1,215**	1,368	**328**	388	**142**	160	**563**	649	**2,248**	2,565
Ohio	**27**	32	**71**	79	**100**	114	**89**	111	**287**	336
Michigan	**70**	81	**211**	239	**163**	187	**235**	268	**679**	775
All other	**2,699**	3,054	**2,250**	2,572	**2,106**	2,347	**4,067**	4,624	**11,122**	12,597
Total unpaid principal balance	**$22,343**	$25,064	**$13,884**	$16,060	**$ 6,326**	$ 7,229	**$22,591**	$26,139	**$65,144**	$74,492

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.

(b) Management concluded as part of the Firm's regular assessment of the PCI loan pools that it was probable that higher expected credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions related to the property.

(d) Refreshed FICO scores, which the Firm obtains at least quarterly, represent each borrower's most recent credit score.

Approximately 21% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following tables set forth delinquency statistics for PCI junior lien home equity loans based on unpaid principal balance as of December 31, 2012 and 2011.

December 31, 2012 (in millions, except ratios)	Delinquencies			Total loans	Total 30+ day delinquency rate
	30–89 days past due	90–149 days past due	150+ days past due		
HELOCs:[a]					
Within the revolving period[b]	**$ 361**	**$ 175**	**$ 591**	**$ 15,915**	**7.08%**
Beyond the revolving period[c]	**30**	**13**	**20**	**666**	**9.46**
HELOANs	**37**	**18**	**44**	**1,085**	**9.12**
Total	**$ 428**	**$ 206**	**$ 655**	**$ 17,666**	**7.30%**

December 31, 2011 (in millions, except ratios)	Delinquencies			Total loans	Total 30+ day delinquency rate
	30–89 days past due	90–149 days past due	150+ days past due		
HELOCs:[a]					
Within the revolving period[b]	$ 500	$ 296	$ 543	$ 18,246	7.34%
Beyond the revolving period[c]	16	11	5	400	8.00
HELOANs	53	29	44	1,327	9.50
Total	$ 569	$ 336	$ 592	$ 19,973	7.50%

(a) In general, these HELOCs are revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.
(b) Substantially all undrawn HELOCs within the revolving period have been closed.
(c) Predominantly all of these loans have been modified into fixed-rate amortizing loans.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the years ended December 31, 2012, 2011 and 2010, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. The table excludes the cost to fund the PCI portfolios, and therefore the accretable yield does not represent net interest income expected to be earned on these portfolios.

Year ended December 31, (in millions, except ratios)	Total PCI		
	2012	2011	2010
Beginning balance	**$ 19,072**	$ 19,097	$ 25,544
Accretion into interest income	**(2,491)**	(2,767)	(3,232)
Changes in interest rates on variable-rate loans	**(449)**	(573)	(819)
Other changes in expected cash flows[a]	**2,325**	3,315	(2,396)
Balance at December 31	**$ 18,457**	$ 19,072	$ 19,097
Accretable yield percentage	**4.38%**	4.33%	4.35%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model and periodically updates model assumptions. For the years ended December 31, 2012 and 2011, other changes in expected cash flows were principally driven by the impact of modifications, but also related to changes in prepayment assumptions. For the year ended December 31, 2010, other changes in expected cash flows were principally driven by changes in prepayment assumptions, as well as reclassification to the nonaccretable difference. Changes to prepayment assumptions change the expected remaining life of the portfolio, which drives changes in expected future interest cash collections. Such changes do not have a significant impact on the accretable yield percentage.

The factors that most significantly affect estimates of gross cash flows expected to be collected, and accordingly the accretable yield balance, include: (i) changes in the benchmark interest rate indices for variable-rate products such as option ARM and home equity loans; and (ii) changes in prepayment assumptions.

From the date of acquisition through 2011, the decrease in the accretable yield percentage has been primarily related to a decrease in interest rates on variable-rate loans and, to a lesser extent, extended loan liquidation periods. More recently, however, the Firm has observed loan liquidation periods start to shorten, thus increasing the accretable yield percentage. Certain events, such as extended or shortened loan liquidation periods, affect the timing of expected cash flows and the accretable yield percentage, but not the amount of cash expected to be received (i.e., the accretable yield balance). While extended loan liquidation periods reduce the accretable yield percentage (because the same accretable yield balance is recognized against a higher-than-expected loan balance over a longer-than-expected period of time), shortened loan liquidation periods would have the opposite effect.

Credit card loan portfolio

The Credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30 days past due), as well as information on those borrowers that have been delinquent for a longer period of time (90 days past due). In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, because the borrower's credit score tends to be a lagging indicator, the Firm does not view credit scores as a primary indicator of credit quality. However, the distribution of such scores provides a general indicator of credit quality trends within the portfolio. Refreshed FICO score information for a statistically significant random sample of the credit card portfolio is indicated in the table below; FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in credit score technology.

The table below sets forth information about the Firm's credit card loans.

As of or for the year ended December 31, (in millions, except ratios)	2012	2011
Net charge-offs	$ 4,944	$ 6,925
% of net charge-offs to retained loans	3.95%	5.44%
Loan delinquency		
Current and less than 30 days past due and still accruing	$ 125,309	$ 128,464
30–89 days past due and still accruing	1,381	1,808
90 or more days past due and still accruing	1,302	1,902
Nonaccrual loans	1	1
Total retained credit card loans	$ 127,993	$ 132,175
Loan delinquency ratios		
% of 30+ days past due to total retained loans	2.10%	2.81%
% of 90+ days past due to total retained loans	1.02	1.44
Credit card loans by geographic region		
California	$ 17,115	$ 17,598
New York	10,379	10,594
Texas	10,209	10,239
Illinois	7,399	7,548
Florida	7,231	7,583
New Jersey	5,503	5,604
Ohio	4,956	5,202
Pennsylvania	4,549	4,779
Michigan	3,745	3,994
Virginia	3,193	3,298
All other	53,714	55,736
Total retained credit card loans	$ 127,993	$ 132,175
Percentage of portfolio based on carrying value with estimated refreshed FICO scores[(a)]		
Equal to or greater than 660	84.1%	81.4%
Less than 660	15.9	18.6

(a) Refreshed FICO scores are estimated based on a statistically significant random sample of credit card accounts in the credit card portfolio for the periods shown. The Firm obtains refreshed FICO scores at least quarterly.

Credit card impaired loans and loan modifications

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

December 31, (in millions)	2012	2011
Impaired credit card loans with an allowance[a][b]		
Credit card loans with modified payment terms[c]	$ 4,189	$ 6,075
Modified credit card loans that have reverted to pre-modification payment terms[d]	573	1,139
Total impaired credit card loans	$ 4,762	$ 7,214
Allowance for loan losses related to impaired credit card loans	$ 1,681	$ 2,727

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
(b) There were no impaired loans without an allowance.
(c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.
(d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At December 31, 2012 and 2011, $341 million and $762 million, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. The remaining $232 million and $377 million at December 31, 2012 and 2011, respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

Year ended December 31, (in millions)	2012	2011	2010
Average impaired credit card loans	$ 5,893	$ 8,499	$10,730
Interest income on impaired credit card loans	308	463	605

Loan modifications

JPMorgan Chase may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. The Firm has short-term programs for borrowers who may be in need of temporary relief, and long-term programs for borrowers who are experiencing more fundamental financial difficulties. Most of the credit card loans have been modified under long-term programs. Modifications under long-term programs involve placing the customer on a fixed payment plan, generally for 60 months. Modifications under all short- and long-term programs typically include reducing the interest rate on the credit card. Certain borrowers enrolled in a short-term modification program may be given the option to re-enroll in a long-term program. Substantially all modifications are considered to be TDRs. If the cardholder does not comply with the modified payment terms, then the credit card loan agreement reverts back to its pre-modification payment terms. Assuming that the cardholder does not begin to perform in accordance with those payment terms, the loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In addition, if a borrower successfully completes a short-term modification program, then the loan reverts back to its pre-modification payment terms. However, in most cases, the Firm does not reinstate the borrower's line of credit.

The following table provides information regarding the nature and extent of modifications of credit card loans for the periods presented.

Year ended December 31,	New enrollments	
(in millions)	2012	2011
Short-term programs	$ 47	$ 167
Long-term programs	1,607	2,523
Total new enrollments	$ 1,654	$ 2,690

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the period presented.

Year ended December 31, (in millions, except weighted-average data)	2012	2011
Weighted-average interest rate of loans – before TDR	15.67%	16.05%
Weighted-average interest rate of loans – after TDR	5.19	5.28
Loans that redefaulted within one year of modification[a]	$ 309	$ 687

(a) Represents loans modified in TDRs that experienced a payment default in the period presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default is deemed to have occurred when the loans become two payments past due. A substantial portion of these loans is expected to be charged-off in accordance with the Firm's standard charge-off policy. Based on historical experience, the estimated weighted-average expected default rate for modified credit card loans was 38.23% at December 31, 2012, and 35.47% at December 31, 2011.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the probability of default ("PD") and the loss given default ("LGD"). PD is the likelihood that a loan will not be repaid at default. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. As of September 30, 2012, the Firm revised its definition of the criticized component of the wholesale portfolio to align with the banking regulators' definition of criticized exposures, which consists of the special mention, substandard and doubtful categories. Prior periods have been reclassified to conform with the current presentation. Risk ratings generally represent ratings profiles similar to those defined by S&P and Moody's. Investment grade ratings range from "AAA/Aaa" to "BBB-/Baa3." Noninvestment grade ratings are classified as noncriticized ("BB+/Ba1 and B-/B3") and criticized ("CCC+"/"Caa1 and below"), and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note 5 on page 217 in this Annual Report for further detail on industry concentrations.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

As of or for the year ended December 31, (in millions, except ratios)	Commercial and industrial		Real estate	
	2012	2011	2012	2011
Loans by risk ratings				
Investment grade	$ 61,870	$ 52,379	$ 41,796	$ 33,920
Noninvestment grade:				
Noncriticized	44,651	37,870	14,567	14,394
Criticized performing	2,636	3,077	3,857	5,484
Criticized nonaccrual	708	889	520	886
Total noninvestment grade	47,995	41,836	18,944	20,764
Total retained loans	$ 109,865	$ 94,215	$ 60,740	$ 54,684
% of total criticized to total retained loans	3.04 %	4.21%	7.21%	11.65%
% of nonaccrual loans to total retained loans	0.64	0.94	0.86	1.62
Loans by geographic distribution[a]				
Total non-U.S.	$ 35,494	$ 30,813	$ 1,533	$ 1,497
Total U.S.	74,371	63,402	59,207	53,187
Total retained loans	$ 109,865	$ 94,215	$ 60,740	$ 54,684
Net charge-offs/(recoveries)	$ (212)	$ 124	$ 54	$ 256
% of net charge-offs/(recoveries) to end-of-period retained loans	(0.19)%	0.13%	0.09%	0.47%
Loan delinquency[b]				
Current and less than 30 days past due and still accruing	$ 109,019	$ 93,060	$ 59,829	$ 53,387
30–89 days past due and still accruing	119	266	322	327
90 or more days past due and still accruing[c]	19	—	69	84
Criticized nonaccrual	708	889	520	886
Total retained loans	$ 109,865	$ 94,215	$ 60,740	$ 54,684

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality. For a discussion of more significant risk factors, see page 271 of this Note.
(c) Represents loans that are considered well-collateralized and therefore still accruing interest.
(d) Other primarily includes loans to SPEs and loans to private banking clients. See Note 1 on pages 193–194 of this Annual Report for additional information on SPEs.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio segment for the periods indicated. The real estate class primarily consists of secured commercial loans mainly to borrowers for multi-family and commercial lessor properties. Multifamily lending specifically finances apartment buildings. Commercial lessors receive financing specifically for real estate leased to retail, office and industrial tenants. Commercial construction and development loans represent financing for the construction of apartments, office and professional buildings and malls. Other real estate loans include lodging, real estate investment trusts ("REITs"), single-family, homebuilders and other real estate.

December 31, (in millions, except ratios)	Multifamily		Commercial lessors	
	2012	2011	2012	2011
Real estate retained loans	$ 38,030	$ 32,524	$ 14,668	$ 14,444
Criticized exposure	2,118	3,452	1,951	2,192
% of criticized exposure to total real estate retained loans	5.57%	10.61%	13.30%	15.18%
Criticized nonaccrual	$ 249	$ 412	$ 207	$ 284
% of criticized nonaccrual to total real estate retained loans	0.65%	1.27%	1.41%	1.97%

(table continued from previous page)

Financial institutions		Government agencies		Other[d]		Total retained loans	
2012	2011	**2012**	2011	**2012**	2011	**2012**	2011
$ 22,064	$ 28,803	**$ 9,183**	$ 7,421	**$ 79,533**	$ 74,475	**$ 214,446**	$ 196,998
13,760	8,849	**356**	377	**9,914**	7,450	**83,248**	68,940
395	530	**5**	5	**201**	963	**7,094**	10,059
8	37	**–**	16	**198**	570	**1,434**	2,398
14,163	9,416	**361**	398	**10,313**	8,983	**91,776**	81,397
$ 36,227	$ 38,219	**$ 9,544**	$ 7,819	**$ 89,846**	$ 83,458	**$ 306,222**	$ 278,395
1.11 %	1.48 %	**0.05%**	0.27%	**0.44%**	1.84%	**2.78 %**	4.47%
0.02	0.10	**–**	0.20	**0.22**	0.68	**0.47**	0.86
$ 26,326	$ 29,996	**$ 1,582**	$ 583	**$ 39,421**	$ 32,275	**$ 104,356**	$ 95,164
9,901	8,223	**7,962**	7,236	**50,425**	51,183	**201,866**	183,231
$ 36,227	$ 38,219	**$ 9,544**	$ 7,819	**$ 89,846**	$ 83,458	**$ 306,222**	$ 278,395
$ (36)	$ (137)	**$ 2**	$ –	**$ 14**	$ 197	**$ (178)**	$ 440
(0.10)%	(0.36)%	**0.02%**	–%	**0.02%**	0.24%	**(0.06)%**	0.16%
$ 36,151	$ 38,129	**$ 9,516**	$ 7,780	**$ 88,177**	$ 81,802	**$ 302,692**	$ 274,158
62	51	**28**	23	**1,427**	1,072	**1,958**	1,739
6	2	**–**	–	**44**	14	**138**	100
8	37	**–**	16	**198**	570	**1,434**	2,398
$ 36,227	$ 38,219	**$ 9,544**	$ 7,819	**$ 89,846**	$ 83,458	**$ 306,222**	$ 278,395

(table continued from previous page)

Commercial construction and development		Other		Total real estate loans	
2012	2011	**2012**	2011	**2012**	2011
$ 2,989	$ 3,148	**$ 5,053**	$ 4,568	**$ 60,740**	$ 54,684
119	304	**189**	422	**4,377**	6,370
3.98%	9.66%	**3.74%**	9.24%	**7.21%**	11.65%
$ 21	$ 69	**$ 43**	$ 121	**$ 520**	$ 886
0.70%	2.19%	**0.85%**	2.65%	**0.86%**	1.62%

Wholesale impaired loans and loan modifications

Wholesale impaired loans are comprised of loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 on pages 276–279 of this Annual Report.

The table below sets forth information about the Firm's wholesale impaired loans.

December 31, (in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	2012	2011	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011
Impaired loans												
With an allowance	**$ 588**	$ 828	**$ 375**	$ 621	**$ 6**	$ 21	**$ –**	$ 16	**$ 122**	$ 473	**$ 1,091**	$ 1,959
Without an allowance[a]	**173**	177	**133**	292	**2**	18	**–**	–	**76**	103	**384**	590
Total impaired loans	**$ 761**	$ 1,005	**$ 508**	$ 913	**$ 8**	$ 39	**$ –**	$ 16	**$ 198**	$ 576	**$ 1,475**	$ 2,549
Allowance for loan losses related to impaired loans	**$ 205**	$ 276	**$ 82**	$ 148	**$ 2**	$ 5	**$ –**	$ 10	**$ 30**	$ 77	**$ 319**	$ 516
Unpaid principal balance of impaired loans[b]	**957**	1,705	**626**	1,124	**22**	63	**–**	17	**318**	1,008	**1,923**	3,917

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, then the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.

(b) Represents the contractual amount of principal owed at December 31, 2012 and 2011. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.

The following table presents the Firm's average impaired loans for the years ended 2012, 2011 and 2010.

Year ended December 31, (in millions)	**2012**	2011	2010
Commercial and industrial	**$ 873**	$ 1,309	$ 1,655
Real estate	**784**	1,813	3,101
Financial institutions	**17**	84	304
Government agencies	**9**	20	5
Other	**277**	634	884
Total[a]	**$ 1,960**	$ 3,860	$ 5,949

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the years ended December 31, 2012, 2011 and 2010.

Loan modifications

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above.

The following table provides information about the Firm's wholesale loans that have been modified in TDRs, including a reconciliation of the beginning and ending balances of such loans and information regarding the nature and extent of modifications during the periods presented.

Years ended December 31, (in millions)	Commercial and industrial		Real estate		Other[b]		Total	
	2012	2011	**2012**	2011	**2012**	2011	**2012**	2011
Beginning balance of TDRs	**$ 531**	$ 212	**$ 176**	$ 907	**$ 43**	$ 24	**$ 750**	$ 1,143
New TDRs	**162**	$ 665	**43**	113	**73**	32	**278**	810
Increases to existing TDRs	**183**	96	**–**	16	**–**	–	**183**	112
Charge-offs post-modification	**(27)**	(30)	**(2)**	(146)	**(7)**	–	**(36)**	(176)
Sales and other[a]	**(274)**	(412)	**(118)**	(714)	**(87)**	(13)	**(479)**	(1,139)
Ending balance of TDRs	**$ 575**	$ 531	**$ 99**	$ 176	**$ 22**	$ 43	**$ 696**	$ 750
TDRs on nonaccrual status	**$ 522**	$ 415	**$ 92**	$ 128	**$ 22**	$ 35	**$ 636**	$ 578
Additional commitments to lend to borrowers whose loans have been modified in TDRs	**44**	147	**–**	–	**2**	–	**46**	147

(a) Sales and other are largely sales and paydowns, but also includes performing loans restructured at market rates that were removed from the reported TDR balance of $44 million and $152 million during the years ended December 31, 2012 and 2011, respectively.

(b) Includes loans to Financial institutions, Government agencies and Other.

Financial effects of modifications and redefaults

Loans modified as TDRs are typically term or payment extensions and, to a lesser extent, deferrals of principal and/or interest on commercial and industrial and real estate loans. For the years ended December 31, 2012 and 2011, the average term extension granted on loans with term or payment extensions was 1.1 years and 3.3 years, respectively. The weighted-average remaining term for all loans modified during these periods was 3.6 years and 4.5 years, respectively. Wholesale TDR loans that redefaulted within one year of the modification were $56 million and $96 million during the years ended December 31, 2012 and 2011, respectively. A payment default is deemed to occur when the borrower has not made a loan payment by its scheduled due date after giving effect to any contractual grace period.

Note 15 – Allowance for credit losses

JPMorgan Chase's allowance for loan losses covers the consumer, including credit card, portfolio segments (primarily scored); and wholesale (risk-rated) portfolio, and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. The allowance for loan losses includes an asset-specific component, a formula-based component and a component related to PCI loans, as described below. Management also estimates an allowance for wholesale and consumer lending-related commitments using methodologies similar to those used to estimate the allowance on the underlying loans. During 2012, the Firm did not make any significant changes to the methodologies or policies used to determine its allowance for credit losses; such policies are described in the following paragraphs.

The asset-specific component of the allowance relates to loans considered to be impaired, which includes loans that have been modified in TDRs as well as risk-rated loans that have been placed on nonaccrual status. To determine the asset-specific component of the allowance, larger loans are evaluated individually, while smaller loans are evaluated as pools using historical loss experience for the respective class of assets. Scored loans (i.e., consumer loans) are pooled by product type, while risk-rated loans (primarily wholesale loans) are segmented by risk rating.

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are reported as an adjustment to the provision for loan losses. In certain cases, the asset-specific allowance is determined using an observable market price, and the allowance is measured as the difference between the recorded investment in the loan and the loan's fair value. Impaired collateral-dependent loans are charged down to the fair value of collateral less costs to sell and therefore may not be subject to an asset-specific reserve as for other impaired loans. See Note 14 on pages 250–275 of this Annual Report for more information about charge-offs and collateral-dependent loans.

The asset-specific component of the allowance for impaired loans that have been modified in TDRs incorporates the effects of foregone interest, if any, in the present value calculation and also incorporates the effect of the modification on the loan's expected cash flows, which considers the potential for redefault. For residential real estate loans modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to date based on actual redefaulted modified loans. For credit card loans modified in TDRs, expected losses incorporate projected redefaults based on the Firm's historical experience by type of modification program. For wholesale loans modified in TDRs, expected losses incorporate redefaults based on management's expectation of the borrower's ability to repay under the modified terms.

The formula-based component is based on a statistical calculation to provide for probable principal losses inherent in performing risk-rated loans and all consumer loans, except for any loans restructured in TDRs and PCI loans. See Note 14 on pages 250–275 of this Annual Report for more information on PCI loans.

For scored loans, the statistical calculation is performed on pools of loans with similar risk characteristics (e.g., product type) and generally computed by applying expected loss factors to outstanding principal balances over an estimated loss emergence period. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends.

Loss factors are statistically derived and sensitive to changes in delinquency status, credit scores, collateral values and other risk factors. The Firm uses a number of different forecasting models to estimate both the PD and the loss severity, including delinquency roll rate models and credit loss severity models. In developing PD and loss severity assumptions, the Firm also considers known and anticipated changes in the economic environment, including changes in home prices, unemployment rates and other risk indicators.

A nationally recognized home price index measure is used to estimate both the PD and the loss severity on residential real estate loans at the metropolitan statistical areas ("MSA") level. Loss severity estimates are regularly validated by comparison to actual losses recognized on defaulted loans, market-specific real estate appraisals and property sales activity. The economic impact of potential modifications of residential real estate loans is not included in the statistical calculation because of the uncertainty regarding the type and results of such modifications.

For risk-rated loans, the statistical calculation is the product of an estimated PD and an estimated LGD. These factors are differentiated by risk rating and expected maturity. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm to that loan. PD estimates are based on observable external through-the-cycle data, using credit-rating agency default statistics. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle.

Management applies judgment within an established framework to adjust the results of applying the statistical calculation described above. The determination of the appropriate adjustment is based on management's view of uncertainties that have occurred but that are not yet reflected in the loss factors and that relate to current macroeconomic and political conditions, the quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the portfolio. For the scored loan portfolios, adjustments to the statistical calculation are accomplished in part by analyzing the historical loss experience for each major product segment. Factors related to unemployment, home prices, borrower behavior and lien position, the estimated effects of the mortgage foreclosure-related settlement with federal and state officials and uncertainties regarding the ultimate success of loan modifications are incorporated into the calculation, as appropriate. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. In addition, for the risk-rated portfolios, any adjustments made to the statistical calculation also consider concentrated and deteriorating industries.

Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing consumer and wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2012, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses that are inherent in the portfolio).

Allowance for credit losses and loans and lending-related commitments by impairment methodology

The table below summarizes information about the allowance for loan losses, loans by impairment methodology, the allowance for lending-related commitments and lending-related commitments by impairment methodology.

	2012			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses				
Beginning balance at January 1,	$ 16,294	$ 6,999	$ 4,316	$ 27,609
Cumulative effect of change in accounting principles[a]	–	–	–	–
Gross charge-offs	4,805 [c]	5,755	346	10,906
Gross recoveries	(508)	(811)	(524)	(1,843)
Net charge-offs	4,297 [c]	4,944	(178)	9,063
Provision for loan losses	302	3,444	(359)	3,387
Other	(7)	2	8	3
Ending balance at December 31,	$ 12,292	$ 5,501	$ 4,143	$ 21,936
Allowance for loan losses by impairment methodology				
Asset-specific[b]	$ 729	$ 1,681 [d]	$ 319	$ 2,729
Formula-based	5,852	3,820	3,824	13,496
PCI	5,711	–	–	5,711
Total allowance for loan losses	$ 12,292	$ 5,501	$ 4,143	$ 21,936
Loans by impairment methodology				
Asset-specific	$ 13,938	$ 4,762	$ 1,475	$ 20,175
Formula-based	218,945	123,231	304,728	646,904
PCI	59,737	–	19	59,756
Total retained loans	$ 292,620	$ 127,993	$ 306,222	$ 726,835
Impaired collateral-dependent loans				
Net charge-offs	$ 973 [c]	$ –	$ 77	$ 1,050
Loans measured at fair value of collateral less cost to sell	3,272	–	445	3,717
Allowance for lending-related commitments				
Beginning balance at January 1,	$ 7	$ –	$ 666	$ 673
Cumulative effect of change in accounting principles[a]	–	–	–	–
Provision for lending-related commitments	–	–	(2)	(2)
Other	–	–	(3)	(3)
Ending balance at December 31,	$ 7	$ –	$ 661	$ 668
Allowance for lending-related commitments by impairment methodology				
Asset-specific	$ –	$ –	$ 97	$ 97
Formula-based	7	–	564	571
Total allowance for lending-related commitments	$ 7	$ –	$ 661	$ 668
Lending-related commitments by impairment methodology				
Asset-specific	$ –	$ –	$ 355	$ 355
Formula-based	60,156	533,018	434,459	1,027,633
Total lending-related commitments	$ 60,156	$ 533,018	$ 434,814	$ 1,027,988

(a) Effective January 1, 2010, the Firm adopted accounting guidance related to VIEs. Upon adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, its Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related. As a result, $7.4 billion, $14 million and $127 million, respectively, of allowance for loan losses were recorded on-balance sheet with the consolidation of these entities. For further discussion, see Note 16 on pages 280–291 of this Annual Report.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) Consumer, excluding credit card, charge-offs for the year ended December 31, 2012, included $747 million of charge-offs for Chapter 7 residential real estate loans and $53 million of charge-offs for Chapter 7 auto loans.

(d) The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(table continued from previous page)

	2011				2010			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
	$ 16,471	$ 11,034	$ 4,761	$ 32,266	$ 14,785	$ 9,672	$ 7,145	$ 31,602
	–	–	–	–	127	7,353	14	7,494
	5,419	8,168	916	14,503	8,383	15,410	1,989	25,782
	(547)	(1,243)	(476)	(2,266)	(474)	(1,373)	(262)	(2,109)
	4,872	6,925	440	12,237	7,909	14,037	1,727	23,673
	4,670	2,925	17	7,612	9,458	8,037	(673)	16,822
	25	(35)	(22)	(32)	10	9	2	21
	$ 16,294	$ 6,999	$ 4,316	$ 27,609	$ 16,471	$ 11,034	$ 4,761	$ 32,266
	$ 828	$ 2,727 [(d)]	$ 516	$ 4,071	$ 1,075	$ 4,069 [(d)]	$ 1,574	$ 6,718
	9,755	4,272	3,800	17,827	10,455	6,965	3,187	20,607
	5,711	–	–	5,711	4,941	–	–	4,941
	$ 16,294	$ 6,999	$ 4,316	$ 27,609	$ 16,471	$ 11,034	$ 4,761	$ 32,266
	$ 9,892	$ 7,214	$ 2,549	$ 19,655	$ 6,220	$ 10,005	$ 5,486	$ 21,711
	232,989	124,961	275,825	633,775	248,481	125,519	216,980	590,980
	65,546	–	21	65,567	72,763	–	44	72,807
	$ 308,427	$ 132,175	$ 278,395	$ 718,997	$ 327,464	$ 135,524	$ 222,510	$ 685,498
	$ 110	$ –	$ 128	$ 238	$ 304	$ –	$ 636	$ 940
	830	–	833	1,663	890	–	1,269	2,159
	$ 6	$ –	$ 711	$ 717	$ 12	$ –	$ 927	$ 939
	–	–	–	–	–	–	(18)	(18)
	2	–	(40)	(38)	(6)	–	(177)	(183)
	(1)	–	(5)	(6)	–	–	(21)	(21)
	$ 7	$ –	$ 666	$ 673	$ 6	$ –	$ 711	$ 717
	$ –	$ –	$ 150	$ 150	$ –	$ –	$ 180	$ 180
	7	–	516	523	6	–	531	537
	$ 7	$ –	$ 666	$ 673	$ 6	$ –	$ 711	$ 717
	$ –	$ –	$ 865	$ 865	$ –	$ –	$ 1,005	$ 1,005
	62,307	530,616	381,874	974,797	65,403	547,227	345,074	957,704
	$ 62,307	$ 530,616	$ 382,739	$ 975,662	$ 65,403	$ 547,227	$ 346,079	$ 958,709

Note 16 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1 on pages 193–194 of this Annual Report.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the principal beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper conduit.

Line-of-Business	*Transaction Type*	*Activity*	*Annual Report page reference*
CCB	Credit card securitization trusts	Securitization of both originated and purchased credit card receivables	281
	Other securitization trusts	Securitization of originated automobile and student loans	281–283
	Mortgage securitization trusts	Securitization of originated and purchased residential mortgages	281–283
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, automobile and student loans	281–283
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	284–285
	Investor intermediation activities:		
	Municipal bond vehicles		285–286
	Credit-related note and asset swap vehicles		286–288

The Firm's other business segments are also involved with VIEs, but to a lesser extent, as follows:

- Asset Management: Sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For fund entities that qualify as VIEs, AM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Commercial Banking: CB makes investments in and provides lending to community development entities that may meet the definition of a VIE. In addition, CB provides financing and lending related services to certain client-sponsored VIEs. In general, CB does not control the activities of these entities and does not consolidate these entities.
- Corporate/Private Equity: Corporate uses VIEs to issue trust preferred securities. See Note 21 on pages 297–299 of this Annual Report for further information. The Private Equity business, within Corporate/Private Equity, may be involved with entities that are deemed VIEs. However, the Firm's private equity business is subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs.

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 288 of this Note.

Significant Firm-sponsored variable interest entities

Credit card securitizations

The Card business securitizes originated and purchased credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.

The Firm is considered to be the primary beneficiary of these Firm-sponsored credit card securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

The underlying securitized credit card receivables and other assets of the securitization trusts are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's other creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (which generally ranges from 4% to 12%). As of December 31, 2012 and 2011, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $15.8 billion and $13.7 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 28% and 22% for the years ended December 31, 2012 and 2011, respectively. The Firm also retained $362 million and $541 million of senior securities and $4.6 billion and $3.0 billion of subordinated securities in certain of its credit card securitization trusts as of December 31, 2012 and 2011, respectively. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

Firm-sponsored mortgage and other securitization trusts

The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans (including automobile and student loans) primarily in its CIB and CCB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

The following table presents the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests, recourse or guarantee arrangements, and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. See Securitization activity on page 289 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and pages 289–290 of this Note for information on the Firm's loan sales to U.S. government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[d][e][f]		
December 31, 2012 [a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime and Alt-A	**$ 107.2**	**$ 2.5**	**$ 80.6**	**$ 0.3**	**$ –**	**$ 0.3**
Subprime	**34.5**	**1.3**	**31.3**	**0.1**	**–**	**0.1**
Option ARMs	**26.3**	**0.2**	**26.1**	**–**	**–**	**–**
Commercial and other[b]	**127.8**	**–**	**81.8**	**1.5**	**2.8**	**4.3**
Total	**$ 295.8**	**$ 4.0**	**$ 219.8**	**$ 1.9**	**$ 2.8**	**$ 4.7**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[d][e][f]		
December 31, 2011[a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime and Alt-A	$ 129.9	$ 2.7	$ 101.0	$ 0.6	$ –	$ 0.6
Subprime	39.4	1.4	35.8	–	–	–
Option ARMs	31.4	0.3	31.1	–	–	–
Commercial and other[b]	139.3	–	93.3	1.7	2.0	3.7
Total[c]	$ 340.0	$ 4.4	$ 261.2	$ 2.3	$ 2.0	$ 4.3

(a) Excludes U.S. government agency securitizations. See pages 289–290 of this Note for information on the Firm's loan sales to U.S. government agencies.
(b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties. The Firm generally does not retain a residual interest in its sponsored commercial mortgage securitization transactions.
(c) Prior period amounts have been revised to conform with the current presentation methodology.
(d) The table above excludes the following: retained servicing (see Note 17 on pages 291–295 of this Annual Report for a discussion of MSRs); securities retained from loans sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (See Note 6 on pages 218–227 of this Annual Report for further information on derivatives); senior and subordinated securities of $131 million and $45 million, respectively, at December 31, 2012, and $110 million and $8 million, respectively, at December 31, 2011, which the Firm purchased in connection with CIB's secondary market-making activities.
(e) Includes interests held in re-securitization transactions.
(f) As of December 31, 2012 and 2011, 74% and 68%, respectively, of the Firm's retained securitization interests, which are carried at fair value, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of $170 million and $136 million of investment-grade and $171 million and $427 million of noninvestment-grade retained interests at December 31, 2012 and 2011, respectively. The retained interests in commercial and other securitizations trusts consisted of $4.1 billion and $3.4 billion of investment-grade and $164 million and $283 million of noninvestment-grade retained interests at December 31, 2012 and 2011, respectively.

Residential mortgage

The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. CCB generally retains servicing for all residential mortgage loans originated or purchased by CCB, and for certain mortgage loans purchased by CIB. For securitizations serviced by CCB, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. CCB may also retain an interest upon securitization.

In addition, CIB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, CIB at times retains senior and/or subordinated interests (including residual interests) in residential mortgage securitizations upon securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by CIB or held by CCB, when considered together with the servicing arrangements entered into by CCB, the Firm is deemed to be the primary beneficiary of certain securitization trusts. See the table on page 288 of this Note for more information on consolidated residential mortgage securitizations.

The Firm does not consolidate a residential mortgage securitization (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust. At December 31, 2012 and 2011, the Firm did not consolidate the assets of certain Firm-sponsored residential mortgage securitization VIEs, in which the Firm had continuing involvement, primarily due to the fact that the Firm did not hold an interest in these trusts that could potentially be significant to the trusts. See the table on page 288 of this Note for more information on the consolidated residential mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations.

Commercial mortgages and other consumer securitizations

CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. CIB may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). See the table on page 288 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

The Firm also securitizes automobile and student loans. The Firm retains servicing responsibilities for all originated and certain purchased student and automobile loans and has the power to direct the activities of these VIEs through these servicing responsibilities. See the table on page 288 of this Note for more information on the consolidated student loan securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

Re-securitizations

The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both agency (Fannie Mae, Freddie Mac and Ginnie Mae) and nonagency (private-label) sponsored VIEs, which may be backed by either residential or commercial mortgages. The Firm's consolidation analysis is largely dependent on the Firm's role and interest in the re-securitization trusts. During the years ended December 31, 2012, 2011 and 2010, the Firm transferred $10.0 billion, $24.9 billion and $33.9 billion, respectively, of securities to agency VIEs, and $286 million, $381 million and $1.3 billion, respectively, of securities to private-label VIEs.

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients are seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its client(s), considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.

In more limited circumstances, the Firm creates a re-securitization trust independently and not in conjunction with specific clients. In these circumstances, the Firm is deemed to have the unilateral ability to direct the most significant activities of the re-securitization trust because of the decisions made during the establishment and design of the trust; therefore, the Firm consolidates the re-securitization VIE if the Firm holds an interest that could potentially be significant.

Additionally, the Firm may invest in beneficial interests of third-party securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it wasn't involved in the initial design of the trust, or the Firm is involved with an independent third party sponsor and demonstrates shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

As of December 31, 2012 and 2011, the Firm did not consolidate any agency re-securitizations. As of December 31, 2012 and 2011, the Firm consolidated $76 million and $348 million, respectively, of assets, and $5 million and $139 million, respectively, of liabilities of private-label re-securitizations. See the table on page 288 of this Note for more information on the consolidated re-securitization transactions.

As of December 31, 2012 and 2011, total assets (including the notional amount of interest-only securities) of nonconsolidated Firm-sponsored private-label re-securitization entities in which the Firm has continuing involvement were $4.6 billion and $3.3 billion, respectively. At December 31, 2012 and 2011, the Firm held approximately $2.0 billion and $3.6 billion, respectively, of interests in nonconsolidated agency re-securitization entities, and $61 million and $14 million, respectively, of senior and subordinated interests in nonconsolidated private-label re-securitization entities. See the table on page 282 of this Note for further information on interests held in nonconsolidated securitizations.

Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required is based upon commercial paper issuance and approximates 10% of the outstanding balance.

The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit enhancement facilities provided to the conduits. See page 288 of this Note for further information on consolidated VIE assets and liabilities.

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper, including commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $8.3 billion and $11.3 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2012 and 2011, respectively. The Firm's investments were not driven by market illiquidity and the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm provides lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded portion of these commitments was $10.8 billion at both December 31, 2012 and 2011, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 29 on pages 308–315 of this Annual Report.

VIEs associated with investor intermediation activities

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions with these VIEs, typically using derivatives, to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in on behalf of clients are municipal bond vehicles, credit-related note vehicles and asset swap vehicles.

Municipal bond vehicles

The Firm has created a series of trusts that provide short-term investors with qualifying tax-exempt investments, and that allow investors in tax-exempt securities to finance their investments at short-term tax-exempt rates. In a typical transaction, the vehicle purchases fixed-rate longer-term highly rated municipal bonds and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates and (2) inverse floating-rate residual interests ("residual interests"). The maturity of each of the puttable floating-rate certificates and the residual interests is equal to the life of the vehicle, while the maturity of the underlying municipal bonds is typically longer. Holders of the puttable floating-rate certificates may "put," or tender, the certificates if the remarketing agent cannot successfully remarket the floating-rate certificates to another investor. A liquidity facility conditionally obligates the liquidity provider to fund the purchase of the tendered floating-rate certificates. Upon termination of the vehicle, proceeds from the sale of the underlying municipal bonds would first repay any funded liquidity facility or outstanding floating-rate certificates and the remaining amount, if any, would be paid to the residual interests. If the proceeds from the sale of the underlying municipal bonds are not sufficient to repay the liquidity facility, in certain transactions the liquidity provider has recourse to the residual interest holders for reimbursement. Certain residual interest holders may be required to post collateral with the Firm, as liquidity provider, to support such reimbursement obligations should the market value of the municipal bonds decline.

JPMorgan Chase Bank, N.A. often serves as the sole liquidity provider, and J.P. Morgan Securities LLC serves as remarketing agent, of the puttable floating-rate certificates. The liquidity provider's obligation to perform is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the Firm's exposure as liquidity provider is further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or in certain transactions, the reimbursement agreements with the residual interest holders. However, a downgrade of JPMorgan Chase Bank, N.A.'s short-term rating does not affect the Firm's obligation under the liquidity facility.

The long-term credit ratings of the puttable floating rate certificates are directly related to the credit ratings of the underlying municipal bonds, the credit rating of any insurer of the underlying municipal bond, and the Firm's short-term credit rating as liquidity provider. A downgrade in any of these ratings would affect the rating of the puttable floating-rate certificates and could cause demand for these certificates by investors to decline or disappear.

As remarketing agent, the Firm may hold puttable floating-rate certificates of the municipal bond vehicles. At December 31, 2012 and 2011, the Firm held $893 million and $637 million, respectively, of these certificates on its Consolidated Balance Sheets. The largest amount held by the Firm at any time during 2012 was $1.8 billion, or 8%, of the municipal bond vehicles' aggregate outstanding puttable floating-rate certificates. The Firm did not have and continues not to have any intent to protect any residual interest holder from potential losses on any of the municipal bond holdings.

The Firm consolidates municipal bond vehicles if it owns the residual interest. The residual interest generally allows the owner to make decisions that significantly impact the economic performance of the municipal bond vehicle, primarily by directing the sale of the municipal bonds owned by the vehicle. In addition, the residual interest owners have the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle. The Firm does not consolidate municipal bond vehicles if it does not own the residual interests, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle. See page 288 of this Note for further information on consolidated municipal bond vehicles.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31, 2012 and 2011, including the ratings profile of the VIEs' assets, was as follows.

December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities	Excess/(deficit)[a]	Maximum exposure
Nonconsolidated municipal bond vehicles				
2012	**$ 14.2**	**$ 8.0**	**$ 6.2**	**$ 8.0**
2011	13.5	7.9	5.6	7.9

	Ratings profile of VIE assets[b]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions, except where otherwise noted)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB+ to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
2012	**$ 1.6**	**$ 11.8**	**$ 0.8**	**$ –**	**$ –**	**$ 14.2**	**5.9**
2011	1.5	11.2	0.7	–	0.1	13.5	6.6

(a) Represents the excess/(deficit) of the fair values of municipal bond assets available to repay the liquidity facilities, if drawn.
(b) The ratings scale is based on the Firm's internal risk ratings and is presented on an S&P-equivalent basis.

Credit-related note and asset swap vehicles

Credit-related note vehicles

The Firm structures transactions with credit-related note vehicles in which the VIE purchases highly rated assets, such as asset-backed securities, and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit which the VIE otherwise does not hold. The VIE then issues credit-linked notes ("CLNs") with maturities predominantly ranging from one to ten years in order to transfer the risk of the referenced credit to the VIE's investors. Clients and investors often prefer using a CLN vehicle since the CLNs issued by the VIE generally carry a higher credit rating than such notes would if issued directly by JPMorgan Chase. As a derivative counterparty in a credit-related note structure, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. The collateral purchased by such VIEs is largely investment-grade, with a significant amount being rated "AAA." The Firm divides its credit-related note structures broadly into two types: static and managed.

In a static credit-related note structure, the CLNs and associated credit derivative contract either reference a single credit (e.g., a multi-national corporation), or all or part of a fixed portfolio of credits. In a managed credit-related note structure, the CLNs and associated credit derivative generally reference all or part of an actively managed portfolio of credits. An agreement exists between a portfolio manager and the VIE that gives the portfolio manager the ability to substitute each referenced credit in the portfolio for an alternative credit. The Firm does not act as portfolio manager; its involvement with the VIE is generally limited to being a derivative counterparty. As a net buyer of credit protection, in both static and managed credit-related note structures, the Firm pays a premium to the VIE in return for the receipt of a payment (up to the notional of the derivative) if one or more of the credits within the portfolio defaults, or if the losses resulting from the default of reference credits exceed specified levels. The Firm does not provide any additional contractual financial support to the VIE. In addition, the Firm has not historically provided any financial support to the CLN vehicles over and above its contractual obligations. Since each CLN is established to the specifications of the investors, the investors have the power over the activities of that VIE that most significantly affect the performance of the CLN. Furthermore, the Firm does not generally have a variable interest that could potentially be significant. Accordingly, the Firm does not generally consolidate these credit-related note entities. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Asset swap vehicles

The Firm structures and executes transactions with asset swap vehicles on behalf of investors. In such transactions, the VIE purchases a specific asset or assets and then enters into a derivative with the Firm in order to tailor the interest rate or foreign exchange currency risk, or both, according to investors' requirements. Generally, the assets are held by the VIE to maturity, and the tenor of the derivatives would match the maturity of the assets. Investors typically invest in the notes issued by such VIEs in order to obtain exposure to the credit risk of the specific assets, as well as exposure to foreign exchange and interest rate risk that is tailored to their specific needs. The derivative transaction between the Firm and the VIE may include currency swaps to hedge assets held by the VIE denominated in foreign currency into the investors' local currency or interest rate swaps to hedge the interest rate risk of assets held by the VIE; to add additional interest rate exposure into the VIE in order to increase the return on the issued notes; or to convert an interest-bearing asset into a zero-coupon bond.

The Firm's exposure to asset swap vehicles is generally limited to its rights and obligations under the interest rate and/or foreign exchange derivative contracts. The Firm historically has not provided any financial support to the asset swap vehicles over and above its contractual obligations. The Firm does not generally consolidate these asset swap vehicles, since the Firm does not have the power to direct the significant activities of these entities and does not have a variable interest that could potentially be significant. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Exposure to nonconsolidated credit-related note and asset swap VIEs at December 31, 2012 and 2011, was as follows.

December 31, 2012 (in billions)	**Net derivative receivables**	**Total exposure**	**Par value of collateral held by VIEs[a]**
Credit-related notes			
Static structure	**$ 0.5**	**$ 0.5**	**$ 7.3**
Managed structure	**0.6**	**0.6**	**5.6**
Total credit-related notes	**1.1**	**1.1**	**12.9**
Asset swaps	**0.4**	**0.4**	**7.9**
Total	**$ 1.5**	**$ 1.5**	**$ 20.8**

December 31, 2011 (in billions)	Net derivative receivables	Total exposure	Par value of collateral held by VIEs[a]
Credit-related notes			
Static structure	$ 1.0	$ 1.0	$ 9.1
Managed structure	2.7	2.7	7.7
Total credit-related notes	3.7	3.7	16.8
Asset swaps	0.6	0.6	8.6
Total	$ 4.3	$ 4.3	$ 25.4

(a) The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies on the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts.

The Firm consolidated Firm-sponsored and third-party credit-related note vehicles with collateral fair values of $483 million and $231 million, at December 31, 2012 and 2011, respectively. The Firm consolidated these vehicles, because it held positions in these entities that provided the Firm with control of certain vehicles. The Firm did not consolidate any asset swap vehicles at December 31, 2012 and 2011.

VIEs sponsored by third parties

VIE used in FRBNY transaction

In conjunction with the Bear Stearns merger in June 2008, the Federal Reserve Bank of New York ("FRBNY") took control, through an LLC formed for this purpose, of a portfolio of $30.0 billion in assets, based on the value of the portfolio as of March 14, 2008. The assets of the LLC were funded by a $28.85 billion term loan from the FRBNY and a $1.15 billion subordinated loan from JPMorgan Chase. The JPMorgan Chase loan was subordinated to the FRBNY loan and bore the first $1.15 billion of any losses of the portfolio. Any remaining assets in the portfolio after repayment of the FRBNY loan, repayment of the JPMorgan Chase loan and the expense of the LLC was for the account of the FRBNY. The extent to which the FRBNY and JPMorgan Chase loans were repaid depended on the value of the assets in the portfolio and the liquidation strategy directed by the FRBNY. The Firm did not consolidate the LLC, as it did not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance. In June 2012, the FRBNY loan was repaid in full and in November 2012, the JPMorgan Chase loan was repaid in full. During the year ended December 31, 2012, JPMorgan Chase recognized a pretax gain of $665 million reflecting the recovery on the $1.15 billion subordinated loan plus contractual interest.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2012 and 2011.

	Assets				Liabilities		
December 31, 2012 (in billions)[a]	Trading assets – debt and equity instruments	Loans	Other[d]	Total assets[e]	Beneficial interests in VIE assets[f]	Other[g]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	**$ –**	**$ 51.9**	**$ 0.8**	**$ 52.7**	**$ 30.1**	**$ –**	**$ 30.1**
Firm-administered multi-seller conduits	**–**	**25.4**	**0.1**	**25.5**	**17.2**	**–**	**17.2**
Municipal bond vehicles	**9.8**	**–**	**0.1**	**9.9**	**11.0**	**–**	**11.0**
Mortgage securitization entities[b]	**1.4**	**2.0**	**–**	**3.4**	**2.3**	**1.1**	**3.4**
Other[c]	**0.8**	**3.4**	**1.1**	**5.3**	**2.6**	**0.1**	**2.7**
Total	**$ 12.0**	**$ 82.7**	**$ 2.1**	**$ 96.8**	**$ 63.2**	**$ 1.2**	**$ 64.4**

	Assets				Liabilities		
December 31, 2011 (in billions)[a]	Trading assets – debt and equity instruments	Loans	Other[d]	Total assets[e]	Beneficial interests in VIE assets[f]	Other[g]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	$ –	$ 50.7	$ 0.8	$ 51.5	$ 32.5	$ –	$ 32.5
Firm-administered multi-seller conduits	–	29.7	0.2	29.9	18.7	–	18.7
Municipal bond vehicles	9.2	–	0.1	9.3	9.2	–	9.2
Mortgage securitization entities[b]	1.4	2.3	–	3.7	2.3	1.3	3.6
Other[c]	1.5	4.1	1.5	7.1	3.3	0.2	3.5
Total	$ 12.1	$ 86.8	$ 2.6	$ 101.5	$ 66.0	$ 1.5	$ 67.5

(a) Excludes intercompany transactions which were eliminated in consolidation.
(b) Includes residential and commercial mortgage securitizations as well as re-securitizations.
(c) Primarily comprises student loan securitization entities. The Firm consolidated $3.3 billion and $4.1 billion of student loan securitization entities as of December 31, 2012 and 2011, respectively.
(d) Includes assets classified as cash, derivative receivables, AFS securities, and other assets within the Consolidated Balance Sheets.
(e) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.
(f) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated Balance Sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $35.0 billion and $39.7 billion at December 31, 2012 and 2011, respectively. The maturities of the long-term beneficial interests as of December 31, 2012, were as follows: $11.9 billion under one year, $16.0 billion between one and five years, and $7.1 billion over five years, all respectively.
(g) Includes liabilities classified as accounts payable and other liabilities in the Consolidated Balance Sheets.

Supplemental information on loan securitizations

The Firm securitizes and sells a variety of loans, including residential mortgage, credit card, automobile, student and commercial (primarily related to real estate) loans, as well as debt securities. The primary purposes of these securitization transactions are to satisfy investor demand and to generate liquidity for the Firm.

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when the accounting criteria for a sale are met. Those criteria are: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

Securitization activity

The following tables provide information related to the Firm's securitization activities for the years ended December 31, 2012, 2011 and 2010, related to assets held in JPMorgan Chase-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved based on the accounting rules in effect at the time of the securitization.

	2012		2011		2010	
Year ended December 31, (in millions, except rates)[a]	Residential mortgage[d][e]	Commercial and other[f][g]	Residential mortgage[d][e]	Commercial and other[f][g]	Residential mortgage[d][e]	Commercial and other[f][g]
Principal securitized	$ –	$ 5,421	$ –	$ 5,961	$ 35	$ 2,237
All cash flows during the period:						
Proceeds from new securitizations[b]	$ –	$ 5,705	$ –	$ 6,142	$ 36	$ 2,369
Servicing fees collected	662	4	755	4	968	4
Purchases of previously transferred financial assets (or the underlying collateral)[c]	222	–	772	–	321	–
Cash flows received on interests	185	163	235	178	319	143

(a) Excludes re-securitization transactions.
(b) Proceeds from commercial mortgage securitizations were received in the form of securities. During 2012, $5.7 billion of commercial mortgage securitizations were classified in level 2 of the fair value hierarchy. During 2011, $4.0 billion and $2.1 billion of commercial mortgage securitizations were classified in levels 2 and 3 of the fair value hierarchy, respectively. During 2010, $2.2 billion and $172 million of residential and commercial mortgage securitizations were classified in levels 2 and 3 of the fair value hierarchy, respectively.
(c) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities – for example, loan repurchases due to representation and warranties and servicer clean-up calls
(d) Includes prime, Alt-A, subprime, and option ARMs. Excludes sales for which the Firm did not securitize the loan (including loans sold to Ginnie Mae, Fannie Mae and Freddie Mac).
(e) There were no residential mortgage securitizations during 2012 and 2011.
(f) Includes commercial and student loan securitizations.
(g) Key assumptions used to measure retained interests originated during the year included weighted-average life (in years) of 8.8, 1.7 and 7.1 for the years ended December 31, 2012, 2011, and 2010, respectively, and weighted-average discount rate of 3.6%, 3.5% and 7.7% for the years ended December 31, 2012, 2011, and 2010, respectively.

Loans and excess mortgage servicing rights sold to agencies and other third-party-sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess mortgage servicing rights on a nonrecourse basis, predominantly to Ginnie Mae, Fannie Mae and Freddie Mac (the "Agencies"). These loans and excess mortgage servicing rights are sold primarily for the purpose of securitization by the Agencies, which also provide credit enhancement of the loans and excess mortgage servicing rights through certain guarantee provisions. The Firm does not consolidate these securitization vehicles as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. See Note 29 on pages 308–315 of this Annual Report for additional information about the Firm's loan sales- and securitization-related indemnifications. See Note 17 on pages 291–295 of this Annual Report for additional information about the impact of the Firm's sale of certain excess mortgage servicing rights.

The following table summarizes the activities related to loans sold to U.S. government-sponsored agencies and third-party-sponsored securitization entities.

Year ended December 31, (in millions)	2012	2011	2010
Carrying value of loans sold[a]	$ 180,097	$ 150,632	$ 156,615
Proceeds received from loan sales as cash	$ 1,270	$ 2,864	$ 3,887
Proceeds from loan sales as securities[b]	176,592	145,340	149,786
Total proceeds received from loan sales[c]	$ 177,862	$ 148,204	$ 153,673
Gains on loan sales[d]	141	133	212

(a) Predominantly to U.S. government agencies.
(b) Predominantly includes securities from U.S. government agencies that are generally sold shortly after receipt.
(c) Excludes the value of MSRs retained upon the sale of loans. Gains on loan sales include the value of MSRs.
(d) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 29 on pages 308–315 of this Annual Report, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated Balance Sheets as a loan with a corresponding liability. As of December 31, 2012 and 2011, the Firm had recorded on its Consolidated Balance Sheets $15.6 billion and $15.7 billion, respectively, of loans that either had been repurchased or for which the Firm had an option to repurchase. Predominately all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools. Additionally, real estate owned resulting from voluntary repurchases of loans was $1.6 billion and $1.0 billion as of December 31, 2012 and 2011, respectively. Substantially all of these loans and real estate owned are insured or guaranteed by U.S. government agencies and reimbursement is proceeding normally. For additional information, refer to Note 14 on pages 250–275 of this Annual Report.

JPMorgan Chase's interest in securitized assets held at fair value

The following table outlines the key economic assumptions used to determine the fair value, as of December 31, 2012 and 2011, of certain of the Firm's retained interests in nonconsolidated VIEs (other than MSRs), that are valued using modeling techniques. The table also outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in assumptions used to determine fair value. For a discussion of MSRs, see Note 17 on pages 291–295 of this Annual Report.

	Commercial and other	
December 31, (in millions, except rates and where otherwise noted)[a]	2012	2011[d]
JPMorgan Chase interests in securitized assets[b]	$ 1,488	$ 1,585
Weighted-average life (in years)	6.1	1.0
Weighted-average discount rate[c]	4.1%	59.1%
Impact of 10% adverse change	$ (34)	$ (45)
Impact of 20% adverse change	(65)	(76)

(a) The Firm's interests in prime mortgage securitizations were $341 million and $555 million, as of December 31, 2012 and 2011, respectively. These include retained interests in Alt-A loans and re-securitization transactions. The Firm's interests in subprime mortgage securitizations were $68 million and $31 million, as of December 31, 2012 and 2011, respectively. Additionally, the Firm had interests in option ARM mortgage securitizations of $23 million at December 31, 2011.
(b) Includes certain investments acquired in the secondary market but predominantly held for investment purposes.
(c) Incorporates the Firm's weighted-average loss assumption.
(d) The prior period has been reclassified to conform with the current presentation.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based on a 10% or 20% variation in assumptions generally cannot be extrapolated easily, because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in the table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might counteract or magnify the sensitivities. The above sensitivities also do not reflect risk management practices the Firm may undertake to mitigate such risks.

Loan delinquencies and liquidation losses

The table below includes information about components of nonconsolidated securitized financial assets, in which the Firm has continuing involvement, and delinquencies as of December 31, 2012 and 2011.

	Securitized assets		90 days past due		Liquidation losses	
As of or for the year ended December 31, (in millions)	**2012**	2011	**2012**	2011	**2012**	2011
Securitized loans[a]						
Residential mortgage:						
Prime mortgage[b]	**$ 80,572**	$ 101,004	**$ 16,270**	$ 24,285	**$ 6,850**	$ 5,650
Subprime mortgage	**31,264**	35,755	**10,570**	14,293	**3,013**	3,086
Option ARMs	**26,095**	31,075	**6,595**	9,999	**2,268**	1,907
Commercial and other	**81,834**	93,336	**4,077**	4,836	**1,265**	1,101
Total loans securitized[c]	**$ 219,765**	$ 261,170	**$ 37,512**	$ 53,413	**$ 13,396**	$ 11,744

(a) Total assets held in securitization-related SPEs were $295.8 billion and $340.0 billion, respectively, at December 31, 2012 and 2011. The $219.8 billion and $261.2 billion, respectively, of loans securitized at December 31, 2012 and 2011, excludes: $72.0 billion and $74.4 billion, respectively, of securitized loans in which the Firm has no continuing involvement, and $4.0 billion and $4.4 billion, respectively, of loan securitizations consolidated on the Firm's Consolidated Balance Sheets at December 31, 2012 and 2011.
(b) Includes Alt-A loans.
(c) Includes securitized loans that were previously recorded at fair value and classified as trading assets.

Note 17 – Goodwill and other intangible assets

Goodwill and other intangible assets consist of the following.

December 31, (in millions)	**2012**	2011	2010
Goodwill	**$ 48,175**	$ 48,188	$ 48,854
Mortgage servicing rights	**7,614**	7,223	13,649
Other intangible assets:			
Purchased credit card relationships	**$ 295**	$ 602	$ 897
Other credit card-related intangibles	**229**	488	593
Core deposit intangibles	**355**	594	879
Other intangibles	**1,356**	1,523	1,670
Total other intangible assets	**$ 2,235**	$ 3,207	$ 4,039

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	**2012**	2011	2010
Consumer & Community Banking	**$ 31,048**	$ 30,996	$ 31,018
Corporate & Investment Bank	**6,895**	6,944	6,958
Commercial Banking	**2,863**	2,864	2,866
Asset Management	**6,992**	7,007	7,635
Corporate/Private Equity	**377**	377	377
Total goodwill	**$ 48,175**	$ 48,188	$ 48,854

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	**2012**	2011	2010
Balance at beginning of period[a]	**$ 48,188**	$ 48,854	$ 48,357
Changes during the period from:			
Business combinations	**43**	97	556
Dispositions	**(4)**	(685)	(19)
Other[b]	**(52)**	(78)	(40)
Balance at December 31,[a]	**$ 48,175**	$ 48,188	$ 48,854

(a) Reflects gross goodwill balances as the Firm has not recognized any impairment losses to date.
(b) Includes foreign currency translation adjustments and other tax-related adjustments.

The net reduction in goodwill from 2010 to 2011 was predominantly due to AM's sale of its investment in an asset manager.

Impairment testing

Goodwill was not impaired at December 31, 2012 or 2011, nor was any goodwill written off due to impairment during 2012, 2011 or 2010.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the

carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The Firm uses the reporting units' allocated equity plus goodwill capital as a proxy for the carrying amounts of equity for the reporting units in the goodwill impairment testing. Reporting unit equity is determined on a similar basis as the allocation of equity to the Firm's lines of business, which takes into consideration the capital the business segment would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III), economic risk measures and capital levels for similarly rated peers. Proposed line of business equity levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors. Allocated equity is further reviewed on a periodic basis and updated as needed.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. The models project cash flows for the forecast period and use the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' earnings forecasts, which include the estimated effects of regulatory and legislative changes (including, but not limited to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), the CARD Act, and limitations on non-sufficient funds and overdraft fees), and which are reviewed with the Operating Committee of the Firm. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firms' overall estimated cost of equity to ensure reasonableness.

The valuations derived from the discounted cash flow models are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to assess the general reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that naturally exist between the Firm's businesses and competitor institutions. Management also takes into consideration a comparison between the aggregate fair value of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (a) a control premium that would exist in a market transaction, (b) factors related to the level of execution risk that would exist at the firmwide level that do not exist at the reporting unit level and (c) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

While no impairment of goodwill was recognized, the Firm's mortgage lending business in CCB remain at an elevated risk of goodwill impairment due to its exposure to U.S. consumer credit risk and the effects of economic, regulatory and legislative changes. The valuation of this business is particularly dependent upon economic conditions (including new unemployment claims and home prices), regulatory and legislative changes (for example, those related to residential mortgage servicing, foreclosure and loss mitigation activities), and the amount of equity capital required. In addition, the earnings or estimated cost of equity of the Firm's capital markets businesses could also be affected by regulatory or legislative changes. The assumptions used in the discounted cash flow valuation models were determined using management's best estimates. The cost of equity reflected the related risks and uncertainties, and was evaluated in comparison to relevant market peers. Deterioration in these assumptions could cause the estimated fair values of these reporting units and their associated goodwill to decline, which may result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights

Mortgage servicing rights represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late charges and other ancillary revenue, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that comprise the MSR asset. Conversely, securities (e.g., mortgage-backed securities), principal-only certificates and certain derivatives (i.e., those for which the Firm receives fixed-rate interest payments) increase in value when interest rates decline. JPMorgan Chase uses combinations of derivatives and securities to manage changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2012, 2011 and 2010.

As of or for the year ended December 31, (in millions, except where otherwise noted)	2012	2011	2010
Fair value at beginning of period	$ 7,223	$ 13,649	$ 15,531
MSR activity			
Originations of MSRs	2,376	2,570	3,153
Purchase of MSRs	457	33	26
Disposition of MSRs	(579) [e]	–	(407)
Changes due to modeled amortization	(1,228)	(1,910)	(2,386)
Net additions and amortization	1,026	693	386
Changes due to market interest rates	(589)	(5,392)	(2,224)
Other changes in valuation due to inputs and assumptions[a]	(46)	(1,727)	(44)
Total change in fair value of MSRs[b]	(635)	(7,119)	(2,268)
Fair value at December 31[c]	$ 7,614	$ 7,223	$ 13,649
Change in unrealized gains/ (losses) included in income related to MSRs held at December 31	$ (635)	$ (7,119)	$ (2,268)
Contractual service fees, late fees and other ancillary fees included in income	$ 3,783	$ 3,977	$ 4,484
Third-party mortgage loans serviced at December 31 (in billions)	$ 867	$ 910	$ 976
Servicer advances at December 31 (in billions)[d]	$ 10.9	$ 11.1	$ 9.9

(a) Represents the aggregate impact of changes in model inputs and assumptions such as costs to service, home prices, mortgage spreads, ancillary income, and assumptions used to derive prepayment speeds, as well as changes to the valuation models themselves.

(b) Includes changes related to commercial real estate of $(8) million, $(9) million and $(1) million for the years ended December 31, 2012, 2011 and 2010, respectively.

(c) Includes $23 million, $31 million and $40 million related to commercial real estate at December 31, 2012, 2011 and 2010, respectively.

(d) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest to a trust, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these advances is minimal because reimbursement of the advances is senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance.

(e) Includes excess mortgage servicing rights transferred to an agency-sponsored trust in exchange for stripped mortgage backed securities ("SMBS"). A portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired and has retained the remaining balance of those SMBS as trading assets.

During the year ended December 31, 2011, the fair value of the MSR decreased by $6.4 billion. This decrease was predominately due to a decline in market interest rates, which resulted in a loss in fair value of $5.4 billion. These losses were offset by gains of $5.6 billion on derivatives used to hedge the MSR asset; these derivatives are recognized on the Consolidated Balance Sheets separately from the MSR asset. Also contributing to the decline in fair value of the MSR asset was a $1.7 billion decrease related to revised cost to service and ancillary income assumptions incorporated in the MSR valuation. The increased cost to service assumptions reflect the estimated impact of higher servicing costs to enhance servicing processes, particularly loan modification and foreclosure procedures, including costs to comply with Consent Orders entered into with banking regulators. The increase in the cost to service assumption contemplates significant and prolonged increases in staffing levels in the core and default servicing functions. The decreased ancillary income assumption is similarly related to a reassessment of business practices in consideration of the Consent Orders and the existing industry-wide regulatory environment, which is broadly affecting market participants.

Also in the fourth quarter of 2011, the Firm revised its OAS assumption and updated its proprietary prepayment model; these changes had generally offsetting effects. The Firm's OAS assumption is based upon capital and return requirements that the Firm believes a market participant would consider, taking into account factors such as the pending Basel III capital rules. Consequently, the OAS assumption for the Firm's portfolio increased by approximately 400 basis points and decreased the fair value of the MSR asset by approximately $1.2 billion.

Since 2009, the Firm has continued to refine its proprietary prepayment model based on a number of market-related factors, including a downward trend in home prices, a general tightening of credit underwriting standards and the associated impact on refinancing activity. In the fourth quarter of 2011, the Firm further enhanced its proprietary prepayment model to incorporate: (i) the impact of the Home Affordable Refinance Program ("HARP") 2.0, and (ii) assumptions that will limit modeled refinancings due to the combined influences of relatively strict underwriting standards and reduced levels of expected home price appreciation. In the aggregate, these refinements increased the fair value of the MSR asset by approximately $1.2 billion.

The decrease in the fair value of the MSR results in a lower asset value that will amortize in future periods against contractual and ancillary fee income received in future periods. While there is expected to be higher levels of noninterest expense associated with higher servicing costs

in those future periods, there will also be less MSR amortization, which will have the effect of increasing mortgage fees and related income. The amortization of the MSR is reflected in the tables above under "Changes due to modeled amortization."

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2012, 2011 and 2010.

Year ended December 31, (in millions)	2012	2011	2010
Mortgage fees and related income			
Net production revenue:			
Production revenue	**$5,783**	$ 3,395	$3,440
Repurchase losses	**(272)**	(1,347)	(2,912)
Net production revenue	**5,511**	2,048	528
Net mortgage servicing revenue			
Operating revenue:			
Loan servicing revenue	**3,772**	4,134	4,575
Changes in MSR asset fair value due to modeled amortization	**(1,222)**	(1,904)	(2,384)
Total operating revenue	**2,550**	2,230	2,191
Risk management:			
Changes in MSR asset fair value due to market interest rates	**(587)**	(5,390)	(2,224)
Other changes in MSR asset fair value due to inputs or assumptions in model[(a)]	**(46)**	(1,727)	(44)
Change in derivative fair value and other	**1,252**	5,553	3,404
Total risk management	**619**	(1,564)	1,136
Net mortgage servicing revenue	**3,169**	666	3,327
All other	**7**	7	15
Mortgage fees and related income	**$8,687**	$ 2,721	$3,870

(a) Represents the aggregate impact of changes in model inputs and assumptions such as costs to service, home prices, mortgage spreads, ancillary income, and assumptions used to derive prepayment speeds, as well as changes to the valuation models themselves.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2012 and 2011, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

December 31, (in millions, except rates)	2012	2011
Weighted-average prepayment speed assumption ("CPR")	**13.04%**	18.07%
Impact on fair value of 10% adverse change	**$ (517)**	$ (585)
Impact on fair value of 20% adverse change	**(1,009)**	(1,118)
Weighted-average option adjusted spread	**7.61%**	7.83%
Impact on fair value of 100 basis points adverse change	**$ (306)**	$ (269)
Impact on fair value of 200 basis points adverse change	**(591)**	(518)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly inter-related and may not be linear. In this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

Other intangible assets

Other intangible assets are recorded at their fair value upon completion of a business combination or certain other transactions, and generally represent the value of customer relationships or arrangements. Subsequently, the Firm's intangible assets with finite lives, including core deposit intangibles, purchased credit card relationships, and other intangible assets, are amortized over their useful lives in a manner that best reflects the economic benefits of the intangible asset. The $972 million decrease in other intangible assets during 2012 was due to $957 million in amortization, which included a $214 million impairment write-off of purchased credit card relationships and other credit card-related intangibles, as projected cash flows associated with a non-strategic credit card relationship within CCB had deteriorated.

The components of credit card relationships, core deposits and other intangible assets were as follows.

	2012			2011		
December 31, (in millions)	Gross amount[a]	Accumulated amortization[a]	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	**$ 3,775**	**$ 3,480**	**$ 295**	$ 3,826	$ 3,224	$ 602
Other credit card-related intangibles	**850**	**621**	**229**	844	356	488
Core deposit intangibles	**4,133**	**3,778**	**355**	4,133	3,539	594
Other intangibles[b]	**2,390**	**1,034**	**1,356**	2,467	944	1,523

(a) The decrease in the gross amount and accumulated amortization from December 31, 2011, was due to the removal of fully amortized assets.
(b) Includes intangible assets of approximately $600 million consisting primarily of asset management advisory contracts, which were determined to have an indefinite life and are not amortized.

Amortization expense

The following table presents amortization expense related to credit card relationships, core deposits and other intangible assets.

December 31, (in millions)	2012	2011	2010
Purchased credit card relationships	**$ 309**	$ 295	$ 355
Other credit card-related intangibles	**265**	106	111
Core deposit intangibles	**239**	285	328
Other intangibles	**144**	162	142
Total amortization expense	**$ 957**	$ 848	$ 936

Future amortization expense

The following table presents estimated future amortization expense related to credit card relationships, core deposits and other intangible assets at December 31, 2012.

Year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	Other intangibles	**Total**
2013	$ 192	$ 57	$ 196	$ 132	$ 577
2014	91	49	102	116	358
2015	7	39	26	96	168
2016	4	34	14	89	141
2017	1	29	13	88	131

Impairment testing

The Firm's intangible assets are tested for impairment annually or more often if events or changes in circumstances indicate that the asset might be impaired.

The impairment test for a finite-lived intangible asset compares the undiscounted cash flows associated with the use or disposition of the intangible asset to its carrying value. If the sum of the undiscounted cash flows exceeds its carrying value, then no impairment charge is recorded. If the sum of the undiscounted cash flows is less than its carrying value, then an impairment charge is recognized in amortization expense to the extent the carrying amount of the asset exceeds its fair value.

The impairment test for indefinite-lived intangible assets compares the fair value of the intangible asset to its carrying amount. If the carrying value exceeds the fair value, then an impairment charge is recognized in amortization expense for the difference.

Note 18 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset. JPMorgan Chase has recorded immaterial asset retirement obligations related to asbestos remediation in those cases where it has sufficient information to estimate the obligations' fair value.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 19 – Deposits

At December 31, 2012 and 2011, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	2012	2011
U.S. offices		
Noninterest-bearing	**$ 380,320**	$ 346,670
Interest-bearing		
Demand[a]	**53,980**	47,075
Savings[b]	**407,710**	375,051
Time (included **$5,140** and $3,861 at fair value)[c]	**90,416**	82,738
Total interest-bearing deposits	**552,106**	504,864
Total deposits in U.S. offices	**932,426**	851,534
Non-U.S. offices		
Noninterest-bearing	**17,845**	18,790
Interest-bearing		
Demand	**195,395**	188,202
Savings	**1,004**	687
Time (included **$593** and $1,072 at fair value)[c]	**46,923**	68,593
Total interest-bearing deposits	**243,322**	257,482
Total deposits in non-U.S. offices	**261,167**	276,272
Total deposits	**$ 1,193,593**	$ 1,127,806

(a) Includes Negotiable Order of Withdrawal ("NOW") accounts, and certain trust accounts.
(b) Includes Money Market Deposit Accounts ("MMDAs").
(c) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 4 on pages 214–216 of this Annual Report.

At December 31, 2012 and 2011, time deposits in denominations of $100,000 or more were as follows.

December 31, (in millions)	2012	2011
U.S. offices	**$ 70,008**	$ 57,802
Non-U.S. offices	**46,890**	60,066 [a]
Total	**$116,898**	$117,868

(a) The prior period balance has been revised.

At December 31, 2012, the maturities of interest-bearing time deposits were as follows.

December 31, 2012 (in millions)	U.S.	Non-U.S.	**Total**
2013	$ 74,469	$ 45,731	$ 120,200
2014	3,792	795	4,587
2015	3,374	34	3,408
2016	4,566	188	4,754
2017	1,195	110	1,305
After 5 years	3,020	65	3,085
Total	$ 90,416	$ 46,923	$ 137,339

Note 20 – Accounts payable and other liabilities

The following table details the components of accounts payable and other liabilities.

December 31, (in millions)	2012	2011
Brokerage payables[a]	**$ 108,398**	$ 121,353
Accounts payable and other liabilities[b]	**86,842**	81,542
Total	**$ 195,240**	$ 202,895

(a) Includes payables to customers, brokers, dealers and clearing organizations, and securities fails.
(b) Includes $36 million and $51 million accounted for at fair value at December 31, 2012 and 2011, respectively.

Note 21 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated Statements of Income. The following table is a summary of long-term debt carrying values (including unamortized original issue discount, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2012.

By remaining maturity at December 31,		2012					2011
(in millions, except rates)		Under 1 year	1-5 years	After 5 years	Total		Total
Parent company							
Senior debt:	Fixed rate[a]	$ 6,876	$ 47,101	$ 45,739	$ 99,716		$ 96,478
	Variable rate[b]	10,049	22,706	6,010	38,765		55,779
	Interest rates[c]	0.43-5.38%	0.35-7.00%	0.26-7.25%	0.26-7.25%		0.32-7.25%
Subordinated debt:	Fixed rate	$ 2,421	$ 8,259	$ 5,632	$ 16,312		$ 19,167
	Variable rate	–	3,431	9	3,440		1,954
	Interest rates[c]	5.25-5.75%	0.61-6.13%	3.88-8.53%	0.61-8.53%		1.09-8.53%
	Subtotal	$ 19,346	$ 81,497	$ 57,390	$ 158,233		$ 173,378
Subsidiaries							
FHLB advances:	Fixed rate	$ 1,510	$ 3,040	$ 162	$ 4,712		$ 4,738
	Variable rate	2,321	23,012	12,000	37,333		13,085
	Interest rates[c]	0.30-1.15%	0.30-2.04%	0.39-0.47%	0.30-2.04%		0.32-2.04%
Senior debt:	Fixed rate	$ 582	$ 2,397	$ 3,782	$ 6,761		$ 6,546
	Variable rate	7,577	11,390	2,640	21,607		28,257
	Interest rates[c]	0.33-2.10%	0.16-3.75%	1.00-7.28%	0.16-7.28%		0.13-14.21%
Subordinated debt:	Fixed rate	$ –	$ 5,651	$ 1,862	$ 7,513		$ 8,755
	Variable rate	–	2,466	–	2,466		1,150
	Interest rates[c]	–%	0.64-6.00%	4.38-8.25%	0.64-8.25%		0.87-8.25%
	Subtotal	$ 11,990	$ 47,956	$ 20,446	$ 80,392		$ 62,531
Junior subordinated debt:	Fixed rate	$ –	$ –	$ 7,131	$ 7,131		$ 15,784
	Variable rate	–	–	3,268	3,268		5,082
	Interest rates[c]	–%	–%	0.81-8.75%	0.81-8.75%		0.93-8.75%
	Subtotal	$ –	$ –	$ 10,399	$ 10,399		$ 20,866
Total long-term debt[d][e][f]		$ 31,336	$ 129,453	$ 88,235	$ 249,024	[h][i]	$ 256,775
Long-term beneficial interests:							
	Fixed rate	$ 1,629	$ 5,502	$ 3,262	$ 10,393		$ 6,261
	Variable rate	10,226	10,551	3,802	24,579		33,473
	Interest rates	0.27-5.40%	0.23-5.63%	0.32-13.91%	0.23-13.91%		0.02-11.00%
Total long-term beneficial interests[g]		$ 11,855	$ 16,053	$ 7,064	$ 34,972		$ 39,734

(a) Included $8.4 billion as of December 31, 2011, that was guaranteed by the FDIC under the Temporary Liquidity Guarantee ("TLG") Program. All long-term debt guaranteed under the TLG Program matured prior to December 31, 2012.
(b) Included $11.9 billion as of December 31, 2011 that was guaranteed by the FDIC under the TLG Program. All long-term debt guaranteed under the TLG Program matured prior to December 31, 2012.
(c) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2012, for total long-term debt was (0.76)% to 7.86%, versus the contractual range of 0.16% to 8.75% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.
(d) Included long-term debt of $48.0 billion and $23.8 billion secured by assets totaling $112.8 billion and $89.4 billion at December 31, 2012 and 2011, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.
(e) Included $30.8 billion and $34.7 billion of outstanding structured notes accounted for at fair value at December 31, 2012 and 2011, respectively.
(f) Included $1.6 billion and $2.1 billion of outstanding zero-coupon notes at December 31, 2012 and 2011, respectively. The aggregate principal amount of these notes at their respective maturities was $3.0 billion and $5.0 billion, respectively.
(g) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated VIEs. Also included $1.2 billion and $1.3 billion of outstanding structured notes accounted for at fair value at December 31, 2012 and 2011, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $28.2 billion and $26.2 billion at December 31, 2012 and 2011, respectively.
(h) At December 31, 2012, long-term debt in the aggregate of $22.1 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective notes.
(i) The aggregate carrying values of debt that matures in each of the five years subsequent to 2012 is $31.3 billion in 2013, $35.8 billion in 2014, $32.0 billion in 2015, $28.0 billion in 2016 and $33.6 billion in 2017.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 3.09% and 3.57% as of December 31, 2012 and 2011, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 2.33% and 2.67% as of December 31, 2012 and 2011, respectively.

The Parent Company has guaranteed certain long-term debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees rank on parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities were $1.7 billion and $3.0 billion at December 31, 2012 and 2011, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities
On July 12, 2012, JPMorgan Chase redeemed $9.0 billion, or 100% of the liquidation amount, of the following guaranteed capital debt securities ("trust preferred securities"): JPMorgan Chase Capital XV, JPMorgan Chase Capital XVII, JPMorgan Chase Capital XVIII, JPMorgan Chase Capital XX, JPMorgan Chase Capital XXII, JPMorgan Chase Capital XXV, JPMorgan Chase Capital XXVI, JPMorgan Chase Capital XXVII, and JPMorgan Chase Capital XXVIII. Other income for the year ended December 31, 2012, reflected $888 million of pretax extinguishment gains related to adjustments applied to the cost basis of the redeemed trust preferred securities during the period they were in a qualified hedge accounting relationship.

At December 31, 2012, the Firm had outstanding 17 wholly-owned Delaware statutory business trusts ("issuer trusts") that had issued guaranteed capital debt securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $10.4 billion and $20.9 billion at December 31, 2012 and 2011, respectively, were reflected in the Firm's Consolidated Balance Sheets in long-term debt, and in the table on the preceding page under the caption "Junior subordinated debt" (i.e., trust preferred securities). The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated Balance Sheets at December 31, 2012 and 2011. The debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, qualified as Tier 1 capital as of December 31, 2012.

The following is a summary of the outstanding trust preferred securities, including unamortized original issue discount, issued by each trust, and the junior subordinated deferrable interest debenture issued to each trust, as of December 31, 2012.

December 31, 2012 (in millions)	Amount of trust preferred securities issued by trust[a]	Principal amount of debenture issued to trust[b]	Issue date	Stated maturity of trust preferred securities and debentures	Earliest redemption date	Interest rate of trust preferred securities and debentures	Interest payment/ distribution dates
Bank One Capital III	$474	$757	2000	2030	Any time	8.75%	Semiannually
Bank One Capital VI	100	105	2001	2031	Any time	7.20%	Quarterly
Chase Capital II	482	498	1997	2027	Any time	LIBOR + 0.50%	Quarterly
Chase Capital III	296	305	1997	2027	Any time	LIBOR + 0.55%	Quarterly
Chase Capital VI	241	249	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	249	256	1997	2027	Any time	LIBOR + 0.55%	Quarterly
J.P. Morgan Chase Capital X	1,000	1,018	2002	2032	Any time	7.00%	Quarterly
J.P. Morgan Chase Capital XI	1,075	1,013	2003	2033	Any time	5.88%	Quarterly
J.P. Morgan Chase Capital XII	400	392	2003	2033	Any time	6.25%	Quarterly
JPMorgan Chase Capital XIII	465	480	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XIV	600	588	2004	2034	Any time	6.20%	Quarterly
JPMorgan Chase Capital XVI	500	494	2005	2035	Any time	6.35%	Quarterly
JPMorgan Chase Capital XIX	563	564	2006	2036	Any time	6.63%	Quarterly
JPMorgan Chase Capital XXI	836	837	2007	2037	Any time	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXIII	643	643	2007	2047	Any time	LIBOR + 1.00%	Quarterly
JPMorgan Chase Capital XXIV	700	700	2007	2047	Any time	6.88%	Quarterly
JPMorgan Chase Capital XXIX	1,500	1,500	2010	2040	2015	6.70%	Quarterly
Total	$10,124	$10,399					

(a) Represents the amount of trust preferred securities issued to the public by each trust, including unamortized original issue discount.

(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original-issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated Financial Statements.

Note 22 – Preferred stock

At December 31, 2012 and 2011, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock for the payment of dividends and the distribution of assets.

The following is a summary of JPMorgan Chase's preferred stock outstanding as of December 31, 2012 and 2011.

	Contractual rate in effect at December 31, 2012	Shares at December 31,[a]		Carrying value (in millions) at December 31,		Earliest redemption date	Share value and redemption price per share[b]
		2012	2011	**2012**	2011		
Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series I	7.900%	**600,000**	600,000	**$ 6,000**	$ 6,000	4/30/2018	$ 10,000
8.625% Non-Cumulative Perpetual Preferred Stock, Series J	8.625%	**180,000**	180,000	**1,800**	1,800	9/1/2013	10,000
5.50% Non-Cumulative Perpetual Preferred Stock, Series O	5.500%	**125,750**	–	**1,258**	–	9/1/2017	10,000
Total preferred stock		**905,750**	780,000	**$ 9,058**	$ 7,800		

(a) Represented by depositary shares.
(b) The redemption price includes the amount shown in the table plus any accrued but unpaid dividends.

Dividends on the Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series I shares are payable semiannually at a fixed annual dividend rate of 7.90% through April 2018, and then become payable quarterly at an annual dividend rate of three-month LIBOR plus 3.47%. Dividends on the 8.625% Non-Cumulative Preferred Stock, Series J and on the 5.50% Non-Cumulative Preferred Stock, Series O are payable quarterly. The 5.50% Non-Cumulative was issued in August 2012.

On August 20, 2010, the Firm redeemed all of the outstanding shares of its 6.15% Cumulative Preferred Stock, Series E; 5.72% Cumulative Preferred Stock, Series F; and 5.49% Cumulative Preferred Stock, Series G at their stated redemption value.

Redemption rights

Each series of the Firm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date for that series. The Series O preferred stock may also be redeemed following a capital treatment event, as described in the terms of that series. Any redemption of the Firm's preferred stock is subject to non-objection from the Federal Reserve.

Note 23 – Common stock

At December 31, 2012 and 2011, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during the years ended December 31, 2012, 2011 and 2010 were as follows.

Year ended December 31, (in millions)	**2012**	2011	2010
Issued – balance at January 1	**4,104.9**	4,104.9	4,104.9
New open market issuances	**–**	–	–
Total issued – balance at December 31	**4,104.9**	4,104.9	4,104.9
Treasury – balance at January 1	**(332.2)**	(194.6)	(162.9)
Purchase of treasury stock	**(33.5)**	(226.9)	(77.9)
Share repurchases related to employee stock-based awards[a]	**(0.2)**	(0.1)	(0.1)
Issued from treasury:			
Employee benefits and compensation plans	**63.7**	88.3	45.3
Employee stock purchase plans	**1.3**	1.1	1.0
Total issued from treasury	**65.0**	89.4	46.3
Total treasury – balance at December 31	**(300.9)**	(332.2)	(194.6)
Outstanding	**3,804.0**	3,772.7	3,910.3

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes.

Pursuant to the U.S. Treasury's Capital Purchase Program, the Firm issued to the U.S. Treasury a Warrant to purchase up to 88,401,697 shares of the Firm's common stock, at an exercise price of $42.42 per share, subject to certain antidilution and other adjustments. The U.S. Treasury exchanged the Warrant for 88,401,697 warrants, each of which was a warrant to purchase a share of the Firm's common stock at an exercise price of $42.42 per share and, on December 11, 2009, sold the warrants in a secondary public offering for $950 million. The warrants are exercisable, in whole or in part, at any time and from time to time until October 28, 2018. As part of its common equity repurchase program discussed below, during 2012 and 2011, the Firm repurchased 18,471,300 and 10,167,698 warrants, for $238 million and $122 million, respectively, which resulted in adjustments to capital surplus. The Firm did not repurchase any of the warrants during 2010. At December 31, 2012 and 2011, respectively, 59,762,699 and 78,233,999 warrants remained outstanding.

On March 18, 2011, the Board of Directors approved a $15.0 billion common equity (i.e., common stock and warrants) repurchase program, of which $8.95 billion was authorized for repurchase in 2011. On March 13, 2012, the Board of Directors authorized a $15.0 billion common equity repurchase program, of which up to $12.0 billion was approved for repurchase in 2012 and up to an additional $3.0 billion is approved for repurchases through the end of the first quarter of 2013. Following the voluntary cessation of its common equity repurchase program in May 2012, the Firm resubmitted its capital plan to the Federal Reserve under the 2012 CCAR process in August 2012. Pursuant to a non-objection received from the Federal Reserve on November 5, 2012, with respect to the resubmitted capital plan, the Firm is authorized to repurchase up to $3.0 billion of common equity in the first quarter of 2013.

During 2012, 2011 and 2010, the Firm repurchased (on a trade-date basis) 31 million, 229 million, and 78 million shares of common stock, for $1.3 billion, $8.8 billion and $3.0 billion, respectively. For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on pages 22–23 of JPMorgan Chase's 2012 Form 10-K.

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

As of December 31, 2012, approximately 325 million unissued shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the warrants sold by the U.S. Treasury as discussed above.

Note 24 – Earnings per share

Earnings per share ("EPS") is calculated under the two-class method under which all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities based on their respective rights to receive dividends. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities. Options issued under employee benefit plans that have an antidilutive effect are excluded from the computation of diluted EPS.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2012, 2011 and 2010.

Year ended December 31, (in millions, except per share amounts)	2012	2011	2010
Basic earnings per share			
Net income	$ 21,284	$ 18,976	$ 17,370
Less: Preferred stock dividends	653	629	642
Net income applicable to common equity	20,631	18,347	16,728
Less: Dividends and undistributed earnings allocated to participating securities	754	779	964
Net income applicable to common stockholders	$ 19,877	$ 17,568	$ 15,764
Total weighted-average basic shares outstanding	3,809.4	3,900.4	3,956.3
Net income per share	$ 5.22	$ 4.50	$ 3.98
Diluted earnings per share			
Net income applicable to common stockholders	$ 19,877	$ 17,568	$ 15,764
Total weighted-average basic shares outstanding	3,809.4	3,900.4	3,956.3
Add: Employee stock options, SARs and warrants[(a)]	12.8	19.9	20.6
Total weighted-average diluted shares outstanding[(b)]	3,822.2	3,920.3	3,976.9
Net income per share	$ 5.20	$ 4.48	$ 3.96

(a) Excluded from the computation of diluted EPS (due to the antidilutive effect) were options issued under employee benefit plans and the warrants originally issued in 2008 under the U.S. Treasury's Capital Purchase Program to purchase shares of the Firm's common stock. The aggregate number of shares issuable upon the exercise of such options and warrants was 148 million, 133 million and 233 million for the full years ended December 31, 2012, 2011 and 2010 respectively.

(b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

Note 25 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on AFS securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities, and net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

Year ended December 31, (in millions)	Unrealized gains/ (losses) on AFS securities[b]	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	Accumulated other comprehensive
Balance at December 31, 2009	$ 2,032	$ (16)	$ 181	$ (2,288)	$ (91)
Cumulative effect of changes in accounting principles[a]	(144)	–	–	–	(144)
Net change	610 [c]	269	25	332	1,236
Balance at December 31, 2010	$ 2,498 [d]	$ 253	$ 206	$ (1,956)	$ 1,001
Net change	1,067 [e]	(279)	(155)	(690)	(57)
Balance at December 31, 2011	$ 3,565 [d]	$ (26)	$ 51	$ (2,646)	$ 944
Net change	**3,303** [f]	**(69)**	**69**	**(145)**	**3,158**
Balance at December 31, 2012	**$ 6,868** [d]	**$ (95)**	**$ 120**	**$ (2,791)**	**$ 4,102**

(a) Reflects the effect of the adoption of accounting guidance related to the consolidation of VIEs and to embedded credit derivatives in beneficial interests in securitized financial assets. AOCI decreased by $129 million due to the adoption of the accounting guidance related to VIEs, as a result of the reversal of the fair value adjustments taken on retained AFS securities that were eliminated in consolidation; for further discussion see Note 16 on pages 280–291 of this Annual Report. AOCI decreased by $15 million due to the adoption of guidance related to credit derivatives embedded in certain of the Firm's AFS securities; for further discussion see Note 6 on pages 218–227 of this Annual Report.

(b) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS.

(c) The net change during 2010 was due primarily to the narrowing of spreads on commercial and non-agency MBS as well as on collateralized loan obligations; also reflects increased market value on pass-through MBS due to narrowing of spreads and other market factors.

(d) Included after-tax unrealized losses not related to credit on debt securities for which credit losses have been recognized in income of $(56) million and $(81) million at December 31, 2011 and 2010, respectively. There were no such losses at December 31, 2012.

(e) The net change for 2011 was due primarily to increased market value on agency MBS and municipal securities, partially offset by the widening of spreads on non-U.S. corporate debt and the realization of gains due to portfolio repositioning.

(f) The net change for 2012 was predominantly driven by increased market value on non-U.S. residential MBS, corporate debt securities and obligations of U.S. states and municipalities, partially offset by realized gains.

The following table presents the before- and after-tax changes in the components of other comprehensive income/(loss).

	2012			2011			2010		
Year ended December 31, (in millions)	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax
Unrealized gains/(losses) on AFS securities:									
Net unrealized gains/(losses) arising during the period	**$ 7,521**	**$ (2,930)**	**$ 4,591**	$ 3,361	$ (1,322)	$ 2,039	$ 3,982	$ (1,540)	$ 2,442
Reclassification adjustment for realized (gains)/ losses included in net income	**(2,110)**	**822**	**(1,288)**	(1,593)	621	(972)	(2,982)	1,150	(1,832)
Net change	**5,411**	**(2,108)**	**3,303**	1,768	(701)	1,067	1,000	(390)	610
Translation adjustments:									
Translation	**(26)**	**8**	**(18)**	(672)	255	(417)	402	(139)	263
Hedges	**(82)**	**31**	**(51)**	226	(88)	138	11	(5)	6
Net change	**(108)**	**39**	**(69)**	(446)	167	(279)	413	(144)	269
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**141**	**(55)**	**86**	50	(19)	31	247	(96)	151
Reclassification adjustment for realized (gains)/ losses included in net income	**(28)**	**11**	**(17)**	(301)	115	(186)	(206)	80	(126)
Net change	**113**	**(44)**	**69**	(251)	96	(155)	41	(16)	25
Defined benefit pension and OPEB plans:									
Prior service credits arising during the period	**6**	**(2)**	**4**	–	–	–	10	(4)	6
Net gains/(losses) arising during the period	**(537)**	**228**	**(309)**	(1,290)	502	(788)	262	(84)	178
Reclassification adjustments included in net income:									–
Amortization of net loss	**324**	**(126)**	**198**	214	(83)	131	280	(112)	168
Prior service costs/(credits)	**(41)**	**16**	**(25)**	(52)	20	(32)	(57)	22	(35)
Settlement gain/(loss)	**–**	**–**	**–**	–	–	–	1	–	1
Foreign exchange and other	**(21)**	**8**	**(13)**	(1)	–	(1)	22	(8)	14
Net change	**(269)**	**124**	**(145)**	(1,129)	439	(690)	518	(186)	332
Total other comprehensive income/(loss)	**$ 5,147**	**$ (1,989)**	**$ 3,158**	$ (58)	$ 1	$ (57)	$ 1,972	$ (736)	$ 1,236

Note 26 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

The components of income tax expense/(benefit) included in the Consolidated Statements of Income were as follows for each of the years ended December 31, 2012, 2011, and 2010.

Income tax expense/(benefit)

Year ended December 31, (in millions)	2012	2011	2010
Current income tax expense			
U.S. federal	**$ 3,225**	$ 3,719	$ 4,001
Non-U.S.	**1,782**	1,183	2,712
U.S. state and local	**1,496**	1,178	1,744
Total current income tax expense	**6,503**	6,080	8,457
Deferred income tax expense/(benefit)			
U.S. federal	**2,238**	2,109	(753)
Non-U.S.	**(327)**	102	169
U.S. state and local	**(781)**	(518)	(384)
Total deferred income tax expense/ (benefit)	**1,130**	1,693	(968)
Total income tax expense	**$ 7,633**	$ 7,773	$ 7,489

Total income tax expense includes $200 million, $76 million and $485 million of tax benefits recorded in 2012, 2011, and 2010, respectively, as a result of tax audit resolutions.

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity and certain tax benefits associated with the Firm's employee stock-based compensation plans. The tax effect of all items recorded directly to stockholders' equity resulted in a decrease of $1.9 billion in 2012, and increases of $927 million and $1.8 billion in 2011 and 2010, respectively.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. During 2012, as part of JPMorgan Chase's ongoing review of the business requirements and capital needs of certain of its non-U.S. subsidiaries and their associated U.S. parent, the Firm determined that the undistributed earnings of certain of its subsidiaries would no longer be indefinitely reinvested. This determination resulted in the establishment of deferred tax liabilities and the recognition of an income tax expense of $80 million associated with prior years' undistributed earnings. Based on JPMorgan Chase's ongoing review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill these requirements and needs, the Firm has determined that the undistributed earnings of certain of its subsidiaries would be indefinitely reinvested to fund current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. For 2012, pretax earnings of approximately $3.1 billion were generated and will be indefinitely reinvested in these subsidiaries. At December 31, 2012, the cumulative amount of undistributed pretax earnings in these subsidiaries approximated $25.1 billion. If the Firm were to record a deferred tax liability associated with these undistributed earnings, the amount would be approximately $5.7 billion at December 31, 2012.

Tax expense applicable to securities gains and losses for the years 2012, 2011 and 2010 was $822 million, $617 million, and $1.1 billion, respectively.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for each of the years ended December 31, 2012, 2011 and 2010, is presented in the following table.

Effective tax rate

Year ended December 31,	2012	2011	2010
Statutory U.S. federal tax rate	35.0%	35.0%	35.0%
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	1.6	1.6	3.6
Tax-exempt income	(2.9)	(2.1)	(2.4)
Non-U.S. subsidiary earnings[a]	(2.4)	(2.3)	(2.2)
Business tax credits	(4.2)	(4.0)	(3.7)
Other, net	(0.7)	0.9	(0.2)
Effective tax rate	26.4%	29.1%	30.1%

(a) Includes earnings deemed to be reinvested indefinitely in non-U.S. subsidiaries.

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2012 and 2011.

Deferred taxes

December 31, (in millions)	2012	2011
Deferred tax assets		
Allowance for loan losses	$ 8,712	$ 10,689
Employee benefits	4,308	4,570
Accrued expenses and other[a]	12,393	11,183
Non-U.S. operations	3,537	2,943
Tax attribute carryforwards	1,062	1,547
Gross deferred tax assets[a]	30,012	30,932
Valuation allowance	(689)	(1,303)
Deferred tax assets, net of valuation allowance[a]	$ 29,323	$ 29,629
Deferred tax liabilities		
Depreciation and amortization[a]	$ 2,563	$ 2,799
Mortgage servicing rights, net of hedges [a]	5,336	4,396
Leasing transactions[a]	2,242	2,348
Non-U.S. operations	3,582	2,790
Other, net[a]	4,340	2,520
Gross deferred tax liabilities[a]	18,063	14,853
Net deferred tax assets	$ 11,260	$ 14,776

(a) The prior period has been revised to conform with the current presentation.

JPMorgan Chase has recorded deferred tax assets of $1.1 billion at December 31, 2012, in connection with U.S. federal and state and local net operating loss carryforwards and foreign tax credit carryforwards. At December 31, 2012, the U.S. federal net operating loss carryforwards were approximately $1.5 billion; the state and local net operating loss carryforward was approximately $269 million; and the U.S. foreign tax credit carryforward was approximately $525 million. If not utilized, the U.S. federal net operating loss carryforwards and the state and local net operating loss carryforward will expire between 2027 and 2030; and the U.S. foreign tax credit carryforward will expire in 2022.

The valuation allowance at December 31, 2012, was due to losses associated with non-U.S. subsidiaries. During 2012, the valuation allowance decreased by $614 million largely related to the realization of state and local tax benefits.

At December 31, 2012, 2011 and 2010, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $7.2 billion, $7.2 billion and $7.8 billion, respectively, of which $4.2 billion, $4.0 billion and $3.8 billion, respectively, if recognized, would reduce the annual effective tax rate. Included in the amount of unrecognized tax benefits are certain items that would not affect the effective tax rate if they were recognized in the Consolidated Statements of Income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income tax deductions, and the portion of gross non-U.S. unrecognized tax benefits that would have offsets in other jurisdictions. As JPMorgan Chase is presently under audit by a number of taxing authorities, it is reasonably possible that significant changes in the gross balance of unrecognized tax benefits may occur within the next 12 months. JPMorgan Chase does not expect that any changes over the next 12 months in its gross balance of unrecognized tax benefits caused by such audits would result in a significant change in its annual effective tax rate.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2012, 2011 and 2010.

Unrecognized tax benefits

Year ended December 31, (in millions)	2012	2011	2010
Balance at January 1,	**$ 7,189**	$ 7,767	$ 6,608
Increases based on tax positions related to the current period	**680**	516	813
Decreases based on tax positions related to the current period	**–**	(110)	(24)
Increases based on tax positions related to prior periods	**234**	496	1,681
Decreases based on tax positions related to prior periods	**(853)**	(1,433)	(1,198)
Decreases related to settlements with taxing authorities	**(50)**	(16)	(74)
Decreases related to a lapse of applicable statute of limitations	**(42)**	(31)	(39)
Balance at December 31,	**$ 7,158**	$ 7,189	$ 7,767

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $147 million, $184 million and $(54) million in 2012, 2011 and 2010, respectively.

At December 31, 2012 and 2011, in addition to the liability for unrecognized tax benefits, the Firm had accrued $1.9 billion and $1.7 billion, respectively, for income tax-related interest and penalties.

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many states throughout the U.S. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2012.

December 31, 2012	Periods under examination	Status
JPMorgan Chase – U.S.	2003 - 2005	Field examination completed, JPMorgan Chase intends to file refund claims
JPMorgan Chase – U.S.	2006 - 2010	Field examination
Bear Stearns – U.S.	2006 – 2008	Field examination
JPMorgan Chase – United Kingdom	2006 – 2010	Field examination
JPMorgan Chase – New York State and City	2005 – 2007	Field examination
JPMorgan Chase – California	2006 – 2008	Field examination

The following table presents the U.S. and non-U.S. components of income before income tax expense for the years ended December 31, 2012, 2011 and 2010.

Income before income tax expense - U.S. and non-U.S.

Year ended December 31, (in millions)	2012	2011	2010
U.S.	**$ 24,895**	$ 16,336	$ 16,568
Non-U.S.[(a)]	**4,022**	10,413	8,291
Income before income tax expense	**$ 28,917**	$ 26,749	$ 24,859

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

Note 27 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the Office of the Comptroller of the Currency ("OCC"). The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC.

The Board of Governors of the Federal Reserve System (the "Federal Reserve") requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $5.6 billion and $4.4 billion in 2012 and 2011, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company-only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2013, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, $18.4 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2013 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2012 and 2011, cash in the amount of $25.1 billion and $25.4 billion, respectively, and securities with a fair value of $0.7 billion and $16.1 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers. In addition, as of December 31, 2012 and 2011, the Firm had other restricted cash of $3.4 billion and $4.2 billion, respectively, primarily representing cash reserves held at non-U.S. central banks and held for other general purposes.

Note 28 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A.

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital consists of common stockholders' equity, perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred securities, less goodwill and certain other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1 capital, subordinated long-term debt and other instruments qualifying as Tier 2 capital, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total capital is Tier 1 capital plus Tier 2 capital. Risk-weighted assets ("RWA") consist of on- and off-balance sheet assets that are assigned to one of several broad risk categories and weighted by factors representing their risk and potential for default. On-balance sheet assets are risk-weighted based on the perceived credit risk associated with the obligor or counterparty, the nature of any collateral, and the guarantor, if any. Off-balance sheet assets, such as lending-related commitments, guarantees, and derivatives, are risk-weighted by multiplying the contractual amount by the appropriate credit conversion factor to determine the on-balance sheet credit-equivalent amount, which is then risk-weighted based on the same factors used for on-balance sheet assets. Risk-weighted assets also incorporate a measure for the market risk related to applicable trading assets-debt and equity instruments, and foreign exchange and commodity derivatives. The resulting risk-weighted values for each of the risk categories are then aggregated to determine total risk-weighted assets.

Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Banking subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2012 and 2011, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

The following table presents the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant banking subsidiaries at December 31, 2012 and 2011. These amounts are determined in accordance with regulations issued by the Federal Reserve and/or OCC. The following table reflects an adjustment to RWA to reflect regulatory guidance regarding a limited number of market risk models used for certain positions held by the Firm and JPMorgan Chase Bank, N.A. during the first half of 2012, including the synthetic credit portfolio. In the fourth quarter of 2012, the adjustment to RWA decreased substantially as a result of regulatory approval of certain market risk models and a reduction in related positions.

December 31,	JPMorgan Chase & Co.[d]		JPMorgan Chase Bank, N.A.[d]		Chase Bank USA, N.A.[d]		Well-capitalized ratios[e]	Minimum capital ratios[e]
(in millions, except ratios)	**2012**	2011	**2012**	2011	**2012**	2011		
Regulatory capital								
Tier 1[a]	**$ 160,002**	$ 150,384	**$ 111,827**	$ 98,426	**$ 9,648**	$ 11,903		
Total	**194,036**	188,088	**146,870**	136,017	**13,131**	15,448		
Assets								
Risk-weighted[b]	**$1,270,378**	$1,221,198	**$1,094,155**	$1,042,898	**$103,593**	$107,421		
Adjusted average[c]	**2,243,242**	2,202,087	**1,815,816**	1,789,194	**103,688**	106,312		
Capital ratios								
Tier 1[a]	**12.6%**	12.3%	**10.2%**	9.4%	**9.3%**	11.1%	6.0%	4.0%
Total	**15.3**	15.4	**13.4**	13.0	**12.7**	14.4	10.0	8.0
Tier 1 leverage	**7.1**	6.8	**6.2**	5.5	**9.3**	11.2	5.0[f]	3.0[g]

(a) JPMorgan Chase redeemed $9.0 billion of trust preferred securities effective July 12, 2012. At December 31, 2012, for JPMorgan Chase and JPMorgan Chase Bank, N.A., trust preferred securities were $10.2 billion and $600 million, respectively. If these securities were excluded from the calculation at December 31, 2012, Tier 1 capital would be $149.8 billion and $111.2 billion, respectively, and the Tier 1 capital ratio would be 11.8% and 10.2%, respectively. At December 31, 2012, Chase Bank USA, N.A. had no trust preferred securities.

(b) Includes off–balance sheet risk-weighted assets at December 31, 2012, of $304.5 billion, $297.1 billion and $16 million, and at December 31, 2011, of $301.1 billion, $291.0 billion and $38 million, for JPMorgan Chase, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., respectively.

(c) Adjusted average assets, for purposes of calculating the leverage ratio, include total quarterly average assets adjusted for unrealized gains/(losses) on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries, and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.

(d) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions; whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

(e) As defined by the regulations issued by the Federal Reserve, OCC and FDIC.

(f) Represents requirements for banking subsidiaries pursuant to regulations issued under the FDIC Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.

(g) The minimum Tier 1 leverage ratio for bank holding companies and banks is 3% or 4%, depending on factors specified in regulations issued by the Federal Reserve and OCC.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both nontaxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from nontaxable business combinations totaling $291 million and $414 million at December 31, 2012 and 2011, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of $2.5 billion and $2.3 billion at December 31, 2012 and 2011, respectively.

A reconciliation of the Firm's Total stockholders' equity to Tier 1 capital and Total qualifying capital is presented in the table below.

December 31, (in millions)	2012	2011
Tier 1 capital		
Total stockholders' equity	**$ 204,069**	$ 183,573
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 capital	**(4,198)**	(970)
Qualifying hybrid securities and noncontrolling interests[a]	**10,608**	19,668
Less: Goodwill[b]	**45,663**	45,873
Fair value DVA on structured notes and derivative liabilities related to the Firm's credit quality	**1,577**	2,150
Investments in certain subsidiaries	**926**	993
Other intangible assets[b]	**2,311**	2,871
Total Tier 1 capital	**160,002**	150,384
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	**18,061**	22,275
Qualifying allowance for credit losses	**15,995**	15,504
Adjustment for investments in certain subsidiaries and other	**(22)**	(75)
Total Tier 2 capital	**34,034**	37,704
Total qualifying capital	**$ 194,036**	$ 188,088

(a) Primarily includes trust preferred securities of certain business trusts.
(b) Goodwill and other intangible assets are net of any associated deferred tax liabilities.

Note 29 – Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements.

To provide for the risk of loss inherent in consumer (excluding credit card) and wholesale contracts, an allowance for credit losses on lending-related commitments is maintained. See Note 15 on pages 276–279 of this Annual Report for further discussion regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2012 and 2011. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases, without notice as permitted by law. The Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower. Also, the Firm typically closes credit card lines when the borrower is 60 days or more past due.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity at December 31, (in millions)	Contractual amount						Carrying value[h]	
	2012					2011	2012	2011
	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total		
Lending-related								
Consumer, excluding credit card:								
Home equity – senior lien	$ 2,039	$ 5,208	$ 4,848	$ 3,085	$ 15,180	$ 16,542	$ –	$ –
Home equity – junior lien	3,739	8,343	6,361	3,353	21,796	26,408	–	–
Prime mortgage	4,107	–	–	–	4,107	1,500	–	–
Subprime mortgage	–	–	–	–	–	–	–	–
Auto	6,916	111	127	31	7,185	6,694	1	1
Business banking	10,160	476	94	362	11,092	10,299	6	6
Student and other	128	189	8	471	796	864	–	–
Total consumer, excluding credit card	27,089	14,327	11,438	7,302	60,156	62,307	7	7
Credit card	533,018	–	–	–	533,018	530,616	–	–
Total consumer	560,107	14,327	11,438	7,302	593,174	592,923	7	7
Wholesale:								
Other unfunded commitments to extend credit[a][b]	57,443	81,575	97,394	6,813	243,225	215,251	377	347
Standby letters of credit and other financial guarantees[a][b][c][d]	28,641	31,270	39,076	1,942	100,929	101,899	647	696
Unused advised lines of credit	73,967	10,328	375	417	85,087	60,203	–	–
Other letters of credit[a][d]	4,276	1,169	74	54	5,573	5,386	2	2
Total wholesale	164,327	124,342	136,919	9,226	434,814	382,739	1,026	1,045
Total lending-related	$ 724,434	$ 138,669	$ 148,357	$ 16,528	$1,027,988	$ 975,662	$ 1,033	$ 1,052
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[e]	$ 166,493	$ –	$ –	$ –	$ 166,493	$ 186,077	NA	NA
Derivatives qualifying as guarantees	2,336	2,441	19,946	37,015	61,738	75,593	$ 42	$ 457
Unsettled reverse repurchase and securities borrowing agreements[f]	34,871	–	–	–	34,871	39,939	–	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	NA	NA	NA	NA	NA	NA	2,811	3,557
Loans sold with recourse	NA	NA	NA	NA	9,305	10,397	141	148
Other guarantees and commitments[g]	609	319	1,400	4,452	6,780	6,321	(75)	(5)

(a) At December 31, 2012 and 2011, reflects the contractual amount net of risk participations totaling $473 million and $1.1 billion, respectively, for other unfunded commitments to extend credit; $16.6 billion and $19.8 billion, respectively, for standby letters of credit and other financial guarantees; and $690 million and $974 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.

(b) At December 31, 2012 and 2011, included credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other non-profit entities of $44.5 billion and $48.6 billion, respectively. These commitments also include liquidity facilities to nonconsolidated municipal bond VIEs; for further information, see Note 16 on pages 280–291 of this Annual Report.

(c) At December 31, 2012 and 2011, included unissued standby letters of credit commitments of $44.4 billion and $44.1 billion, respectively.

(d) At December 31, 2012 and 2011, JPMorgan Chase held collateral relating to $42.7 billion and $41.5 billion, respectively, of standby letters of credit; and $1.1 billion and $1.3 billion, respectively, of other letters of credit.

(e) At December 31, 2012 and 2011, collateral held by the Firm in support of securities lending indemnification agreements was $165.1 billion and $186.3 billion, respectively. Securities lending collateral comprises primarily cash and securities issued by governments that are members of the Organisation for Economic Co-operation and Development ("OECD") and U.S. government agencies.

(f) At December 31, 2012 and 2011, the amount of commitments related to forward-starting reverse repurchase agreements and securities borrowing agreements were $13.2 billion and $14.4 billion, respectively. Commitments related to unsettled reverse repurchase agreements and securities borrowing agreements with regular-way settlement periods were $21.7 billion and $25.5 billion, at December 31, 2012 and 2011, respectively.

(g) At December 31, 2012 and 2011, included unfunded commitments of $370 million and $789 million, respectively, to third-party private equity funds; and $1.5 billion and $1.5 billion, respectively, to other equity investments. These commitments included $333 million and $820 million, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 3 on pages 196–214 of this Annual Report. In addition, at December 31, 2012 and 2011, included letters of credit hedged by derivative transactions and managed on a market risk basis of $4.5 billion and $3.9 billion, respectively.

(h) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value.

Other unfunded commitments to extend credit

Other unfunded commitments to extend credit generally comprise commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors as well as committed liquidity facilities to clearing organizations.

Also included in other unfunded commitments to extend credit are commitments to noninvestment-grade counterparties in connection with leveraged and acquisition finance activities, which were $8.8 billion and $6.1 billion at December 31, 2012 and 2011, respectively. For further information, see Note 3 and Note 4 on pages 196–214 and 214–216 respectively, of this Annual Report.

In addition, the Firm acts as a clearing and custody bank in the U.S. tri-party repurchase transaction market. In its role as clearing and custody bank, the Firm is exposed to intra-day credit risk of the cash borrowers, usually broker-dealers; however, this exposure is secured by collateral and typically extinguished through the settlement process by the end of the day. For the three months ended December 31, 2012, the tri-party repurchase daily balances averaged $409 billion.

Guarantees

U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off–balance sheet lending-related arrangements to be guarantees under U.S. GAAP: standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For certain types of guarantees, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. For indemnifications provided in sales agreements, a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires). Any contingent liability that exists as a result of issuing the guarantee or indemnification is recognized when it becomes probable and reasonably estimable. The contingent portion of the liability is not recognized if the estimated amount is less than the carrying amount of the liability recognized at inception (adjusted for any amortization). The recorded amounts of the liabilities related to guarantees and indemnifications at December 31, 2012 and 2011, excluding the allowance for credit losses on lending-related commitments, are discussed below.

Standby letters of credit and other financial guarantees
Standby letters of credit ("SBLC") and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were $649 million and $698 million at December 31, 2012 and 2011, respectively, which were classified in accounts payable and other liabilities on the Consolidated Balance Sheets; these carrying values included $284 million and $319 million, respectively, for the allowance for lending-related commitments, and $365 million and $379 million, respectively, for the guarantee liability and corresponding asset.

The following table summarizes the types of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's customers, as of December 31, 2012 and 2011.

Standby letters of credit, other financial guarantees and other letters of credit

	2012		2011	
December 31, (in millions)	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade[a]	$ 77,081	$ 3,998	$ 78,884	$ 4,105
Noninvestment-grade[a]	23,848	1,575	23,015	1,281
Total contractual amount	$ 100,929 [b]	$ 5,573	$ 101,899 [b]	$ 5,386
Allowance for lending-related commitments	$ 282	$ 2	$ 317	$ 2
Commitments with collateral	42,654	1,145	41,529	1,264

(a) The ratings scale is based on the Firm's internal ratings which generally correspond to ratings as defined by S&P and Moody's.
(b) At December 31, 2012 and 2011, included unissued standby letters of credit commitments of $44.4 billion and $44.1 billion, respectively.

Advised lines of credit
An advised line of credit is a revolving credit line which specifies the maximum amount the Firm may make available to an obligor, on a nonbinding basis. The borrower receives written or oral advice of this facility. The Firm may cancel this facility at any time by providing the borrower notice or, in some cases, without notice as permitted by law.

Securities lending indemnifications
Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the borrower to return the lent securities. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

Derivatives qualifying as guarantees
In addition to the contracts described above, the Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less. Derivative guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps", are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio and are typically longer-term or may have no stated maturity, but allow the Firm to terminate the contract under certain conditions.

Derivative guarantees are recorded on the Consolidated Balance Sheets at fair value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was $61.7 billion and $75.6 billion at December 31, 2012 and 2011, respectively. The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees. However, exposure to certain stable value contracts is contractually limited to a substantially lower percentage of the notional amount; the notional amount on these stable value contracts was $26.5 billion and $26.1 billion and the maximum exposure to loss was $2.8 billion and $2.8 billion, at December 31, 2012 and 2011, respectively. The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract. The fair value related to derivatives that the Firm deems to be guarantees were derivative payables of $122 million and $555 million and derivative receivables of $80 million and $98 million at December 31, 2012 and 2011, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees. In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 6 on pages 218–227 of this Annual Report.

Unsettled reverse repurchase and securities borrowing agreements

In the normal course of business, the Firm enters into reverse repurchase agreements and securities borrowing agreements that settle at a future date. At settlement, these commitments require that the Firm advance cash to and accept securities from the counterparty. These agreements generally do not meet the definition of a derivative, and therefore, are not recorded on the Consolidated Balance Sheets until settlement date. At December 31, 2012 and 2011, the amount of commitments related to forward starting reverse repurchase agreements and securities borrowing agreements were $13.2 billion and $14.4 billion, respectively. Commitments related to unsettled reverse repurchase agreements and securities borrowing agreements with regular way settlement periods were $21.7 billion and $25.5 billion at December 31, 2012 and 2011, respectively.

Loan sales- and securitization-related indemnifications

Mortgage repurchase liability

In connection with the Firm's loan sale and securitization activities with the GSEs and other loan sale and private-label securitization transactions, as described in Note 16 on pages 280–291 of this Annual Report, the Firm has made representations and warranties that the loans sold meet certain requirements. The Firm may be, and has been, required to repurchase loans and/or indemnify the GSEs and other investors for losses due to material breaches of these representations and warranties. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans that are deemed to have defects that were sold to purchasers (including securitization-related SPEs) plus, in certain circumstances, accrued interest on such loans and certain expense.

Subsequent to the Firm's acquisition of certain assets and liabilities of Washington Mutual from the FDIC in September 2008, the Firm resolved and/or limited certain current and future repurchase demands for loans sold to the GSEs by Washington Mutual, although it remains the Firm's position that such obligations remain with the FDIC receivership. As of December 31, 2012, the Firm believes that it has no remaining exposure related to loans sold by Washington Mutual to the GSEs.

There have been generalized allegations, as well as specific demands, that the Firm repurchase loans sold or deposited into private-label securitizations (including claims from insurers that have guaranteed certain obligations of the securitization trusts). Although the Firm encourages parties to use the contractual repurchase process established in the governing agreements, these private-label repurchase claims have generally manifested themselves through threatened or pending litigation. Accordingly, the liability related to repurchase demands associated with all of the private-label securitizations is separately evaluated by the Firm in establishing its litigation reserves. For additional information regarding litigation, see Note 31 on pages 316–325 of this Annual Report.

To estimate the Firm's mortgage repurchase liability arising from breaches of representations and warranties, the Firm considers:

(i) the level of outstanding unresolved repurchase demands,

(ii) estimated probable future repurchase demands considering information about file requests, delinquent and liquidated loans, resolved and unresolved mortgage insurance rescission notices and the Firm's historical experience,

(iii) the potential ability of the Firm to cure the defects identified in the repurchase demands ("cure rate"),

(iv) the estimated severity of loss upon repurchase of the loan or collateral, make-whole settlement, or indemnification,

(v) the Firm's potential ability to recover its losses from third-party originators, and

(vi) the terms of agreements with certain mortgage insurers and other parties.

Based on these factors, the Firm has recognized a mortgage repurchase liability of $2.8 billion and $3.6 billion, as of December 31, 2012 and 2011, respectively, which is reported in accounts payable and other liabilities net of probable recoveries from third-party originators of $441 million and $577 million at December 31, 2012 and 2011, respectively. The Firm's mortgage repurchase liability is intended to cover losses associated with all loans previously sold in connection with loan sale and securitization transactions with the GSEs, regardless of when those losses occur or how they are ultimately resolved (e.g., repurchase, make-whole payment). The liability related to all repurchase demands associated with private-label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

Substantially all of the estimates and assumptions underlying the Firm's established methodology for computing its recorded mortgage repurchase liability — including the amount of probable future demands from the GSEs (based on both historical experience and the Firm's expectations about the GSEs future behavior), the ability of the Firm to cure identified defects, the severity of loss upon repurchase or foreclosure, and recoveries from third parties — require application of a significant level of management judgment.

While the Firm uses the best information available to it in estimating its mortgage repurchase liability, the estimation process is inherently uncertain and imprecise and, accordingly, losses in excess of the amounts accrued as of December 31, 2012, are reasonably possible. The Firm believes the estimate of the range of reasonably possible losses, in excess of its established repurchase liability, is from $0 to approximately $0.9 billion at December 31, 2012. This estimated range of reasonably possible loss considers the Firm's GSE-related exposure based on an assumed peak to trough decline in home prices of 40%, which is an additional 10 percentage point decline in home prices beyond the Firm's current assumptions (which were derived from a nationally recognized home price index). Although the Firm does not consider a further decline in home prices of this magnitude likely to occur, such a decline could increase the levels of loan delinquencies, which may, in turn, increase the level of repurchase demands from the GSEs and potentially result in additional repurchases of loans at greater loss severities; each of these factors could affect the Firm's mortgage repurchase liability.

The following table summarizes the change in the mortgage repurchase liability for each of the periods presented.

Summary of changes in mortgage repurchase liability[a]

Year ended December 31, (in millions)	2012	2011	2010
Repurchase liability at beginning of period	$ 3,557	$ 3,285	$ 1,705
Realized losses[b]	(1,158)	(1,263)	(1,423)
Provision for repurchase losses[c]	412	1,535	3,003
Repurchase liability at end of period	$ 2,811	$ 3,557	$ 3,285

(a) All mortgage repurchase demands associated with private-label securitizations are separately evaluated by the Firm in establishing its litigation reserves.

(b) Includes principal losses and accrued interest on repurchased loans, "make-whole" settlements, settlements with claimants, and certain related expense. Make-whole settlements were $524 million, $640 million and $632 million, for the years ended December 31, 2012, 2011 and 2010, respectively.

(c) Includes $112 million, $52 million and $47 million of provision related to new loan sales for the years ended December 31, 2012, 2011 and 2010, respectively.

Loans sold with recourse

The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2012 and 2011, the unpaid principal balance of loans sold with recourse totaled $9.3 billion and $10.4 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it will have to perform under its recourse obligations, was $141 million and $148 million at December 31, 2012 and 2011, respectively.

Other off-balance sheet arrangements

Indemnification agreements – general

In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Credit card charge-backs

Chase Paymentech Solutions, Card's merchant services business and a subsidiary of JPMorgan Chase Bank, N.A., is a global leader in payment processing and merchant acquiring.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is liable primarily for the amount of each processed credit card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Chase Paymentech will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Chase Paymentech is unable to collect the amount from the merchant, Chase Paymentech will bear the loss for the amount credited or refunded to the cardmember. Chase Paymentech mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Chase Paymentech does not have sufficient collateral from the merchant to provide customer refunds; and (3) Chase Paymentech does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would be liable for the amount of the transaction. For the year ended December 31, 2012, Chase Paymentech incurred aggregate credit losses of $16 million on $655.2 billion of aggregate volume processed, and at December 31, 2012, it held $203 million of collateral. For the year ended December 31, 2011, Chase Paymentech incurred aggregate credit losses of $13 million on $553.7 billion of aggregate volume processed, and at December 31, 2011, it held $204 million of collateral. For the year ended December 31, 2010, Chase Paymentech incurred aggregate credit losses of $12 million on $469.3 billion of aggregate volume processed, and at December 31, 2010, it held $189 million of collateral. The Firm believes that, based on historical experience and the collateral held by Chase Paymentech, the fair value of the Firm's charge back-related obligations, which are representative of the payment or performance risk to the Firm, is immaterial.

Exchange and clearinghouse guarantees

The Firm is a member of several securities and futures exchanges and clearinghouses, both in the U.S. and other countries. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to a member's guarantee fund, or, in a few cases, the obligation may be unlimited. It is difficult to estimate the Firm's maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

The Firm clears transactions on behalf of its clients through various clearinghouses, and the Firm stands behind the performance of its clients on such trades. The Firm mitigates its exposure to loss in the event of a client default by requiring that clients provide appropriate amounts of margin at the inception and throughout the life of the transaction, and can cease the provision of clearing services

if clients do not adhere to their obligations under the clearing agreement. It is difficult to estimate the Firm's maximum exposure under such transactions, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, management believes it is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

Guarantees of subsidiaries

In the normal course of business, JPMorgan Chase & Co. ("Parent Company") may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated Balance Sheets, or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees are not included in the table on page 309 of this Note. For additional information, see Note 21 on pages 297–299 of this Annual Report.

Note 30 – Commitments, pledged assets and collateral

Lease commitments

At December 31, 2012, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2012.

Year ended December 31, (in millions)	
2013	$ 1,788
2014	1,711
2015	1,571
2016	1,431
2017	1,318
After 2017	6,536
Total minimum payments required[(a)]	14,355
Less: Sublease rentals under noncancelable subleases	(1,732)
Net minimum payment required	$ 12,623

(a) Lease restoration obligations are accrued in accordance with U.S. GAAP, and are not reported as a required minimum lease payment.

Total rental expense was as follows.

Year ended December 31, (in millions)	2012	2011	2010
Gross rental expense	**$ 2,212**	$ 2,228	$ 2,212
Sublease rental income	**(288)**	(403)	(545)
Net rental expense	**$ 1,924**	$ 1,825	$ 1,667

Pledged assets

At December 31, 2012, assets were pledged to collateralize repurchase and other securities financing agreements, maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits. Certain of these pledged assets may be sold or repledged by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated Balance Sheets. In addition, at December 31, 2012 and 2011, the Firm had pledged $291.7 billion and $270.3 billion, respectively, of financial instruments it owns that may not be sold or repledged by the secured parties. Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 16 on pages 280–291 of this Annual Report for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities and long-term debt, see Note 13 on page 249, and Note 21 on pages 297–299, respectively, of this Annual report. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	2012	2011
Securities	**$ 110.1**	$ 134.8
Loans	**207.2**	198.6
Trading assets and other	**155.5**	122.8
Total assets pledged	**$ 472.8**	$ 456.2

Collateral

At December 31, 2012 and 2011, the Firm had accepted assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of approximately $825.7 billion and $742.1 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately $546.8 billion and $515.8 billion, respectively, were sold or repledged, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales and to collateralize deposits and derivative agreements.

Note 31 – Litigation

Contingencies

As of December 31, 2012, the Firm and its subsidiaries are defendants or putative defendants in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $6.1 billion at December 31, 2012. This estimated aggregate range of reasonably possible losses is based upon currently available information for those proceedings in which the Firm is involved, taking into account the Firm's best estimate of such losses for those cases for which such estimate can be made. For certain cases, the Firm does not believe that an estimate can currently be made. The Firm's estimate involves significant judgment, given the varying stages of the proceedings (including the fact that many are currently in preliminary stages), the existence in many such proceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings. Accordingly, the Firm's estimate will change from time to time, and actual losses may be more or less than the current estimate.

Set forth below are descriptions of the Firm's material legal proceedings.

Auction-Rate Securities Investigations and Litigation. Beginning in March 2008, several regulatory authorities initiated investigations of a number of industry participants, including the Firm, concerning possible state and federal securities law violations in connection with the sale of auction-rate securities ("ARS"). The market for many such securities had frozen and a significant number of auctions for those securities began to fail in February 2008.

The Firm, on behalf of itself and affiliates, agreed to a settlement in principle with the New York Attorney General's Office which provided, among other things, that the Firm would offer to purchase at par certain ARS purchased from J.P. Morgan Securities LLC, Chase Investment Services Corp. and Bear, Stearns & Co. Inc. by individual investors, charities and small- to medium-sized businesses. The Firm also agreed to a substantively similar settlement in principle with the Office of Financial Regulation for the State of Florida and the North American Securities Administrators Association ("NASAA") Task Force, which agreed to recommend approval of the settlement to all remaining states, Puerto Rico and the U.S. Virgin Islands. The Firm has finalized the settlement agreements with the New York Attorney General's Office and the Office of Financial Regulation for the State of Florida. The settlement agreements provide for the payment of penalties totaling $25 million to all states and territories. To date, final consent agreements have been reached with all but three of NASAA's members.

The Firm also was named in two putative antitrust class actions. The actions allege that the Firm, along with numerous other financial institution defendants, colluded to maintain and stabilize the ARS market and then to withdraw their support for the ARS market. In January 2010, the District Court dismissed both actions. An appeal is pending in the United States Court of Appeals for the Second Circuit.

Bank Secrecy Act/Anti-Money Laundering. In January 2013, JPMorgan Chase & Co. entered into a Consent Order with the Board of Governors of the Federal Reserve System (the "Federal Reserve") and JPMorgan Chase Bank, N.A., JPMorgan Bank and Trust Company, N.A. and Chase Bank USA, N.A. entered into a Consent Order with the Office of the Comptroller of the Currency (the "OCC") relating principally to JPMorgan Chase & Co.'s and such banks' policies, procedures and controls relating to compliance with Bank Secrecy Act and Anti-Money Laundering requirements. The Firm neither admitted nor denied the regulatory agencies' findings in the orders.

Bear Stearns Hedge Fund Matters. The Bear Stearns Companies LLC (formerly The Bear Stearns Companies Inc.) ("Bear Stearns"), certain current or former subsidiaries of Bear Stearns, including Bear Stearns Asset Management, Inc. ("BSAM") and Bear, Stearns & Co. Inc., and certain individuals formerly employed by Bear Stearns are named defendants (collectively the "Bear Stearns defendants") in multiple civil actions and arbitrations relating to alleged

losses resulting from the failure of the Bear Stearns High Grade Structured Credit Strategies Master Fund, Ltd. (the "High Grade Fund") and the Bear Stearns High Grade Structured Credit Strategies Enhanced Leverage Master Fund, Ltd. (the "Enhanced Leverage Fund") (collectively the "Funds"). BSAM served as investment manager for both of the Funds, which were organized such that there were U.S. and Cayman Islands "feeder funds" that invested substantially all their assets, directly or indirectly, in the Funds. The Funds are in liquidation.

There are currently three civil actions pending in the United States District Court for the Southern District of New York relating to the Funds. One of these actions involves a derivative lawsuit brought on behalf of purchasers of partnership interests in the U.S. feeder fund to the Enhanced Leverage Fund, alleging that the Bear Stearns defendants mismanaged the Funds. This action seeks, among other things, unspecified compensatory damages based on alleged investor losses. The parties have reached an agreement to settle this derivative action, pursuant to which BSAM would pay a maximum of approximately $18 million. In April 2012, the District Court granted final approval of this settlement. In May 2012, objectors representing certain interests in the U.S. feeder fund filed a notice of appeal to the United States Court of Appeals for the Second Circuit from the District Court's final approval of the settlement. That appeal is currently pending.

The second pending action, brought by the Joint Voluntary Liquidators of the Cayman Islands feeder funds, makes allegations similar to those asserted in the derivative lawsuits related to the U.S. feeder funds. This action alleges net losses of approximately $700 million and seeks compensatory and punitive damages. The parties recently reached an agreement in principle to resolve the litigation contingent on the execution of a written settlement agreement. The third action was brought by Bank of America and Banc of America Securities LLC (together "BofA") alleging breach of contract, fraud and breach of fiduciary duty in connection with a $4 billion securitization in May 2007 known as a "CDO-squared," for which BSAM served as collateral manager. This securitization was composed of certain collateralized debt obligation holdings that were purchased by BofA from the Funds. BofA currently seeks damages up to approximately $540 million. Motions for summary judgment are pending.

Bear Stearns Shareholder Litigation and Related Matters. Various shareholders of Bear Stearns have commenced purported class actions against Bear Stearns and certain of its former officers and/or directors on behalf of all persons who purchased or otherwise acquired common stock of Bear Stearns between December 14, 2006, and March 14, 2008 (the "Class Period"). The actions alleged that the defendants issued materially false and misleading statements regarding Bear Stearns' business and financial results and that, as a result of those false statements, Bear Stearns' common stock traded at artificially inflated prices during the Class Period. In November 2012, the United States District Court for the Southern District of New York granted final approval of a $275 million settlement.

Bear Stearns, former members of Bear Stearns' Board of Directors and certain of Bear Stearns' former executive officers have also been named as defendants in a shareholder derivative and class action suit which is pending in the United States District Court for the Southern District of New York. Plaintiffs assert claims for breach of fiduciary duty, violations of federal securities laws, waste of corporate assets and gross mismanagement, unjust enrichment, abuse of control, and indemnification and contribution in connection with the losses sustained by Bear Stearns as a result of its purchases of subprime loans and certain repurchases of its own common stock. Certain individual defendants are also alleged to have sold their holdings of Bear Stearns common stock while in possession of material nonpublic information. Plaintiffs seek compensatory damages in an unspecified amount. The District Court dismissed the action in January 2011, and plaintiffs have appealed. The appeal has been withdrawn pursuant to a stipulation that gives plaintiffs until March 1, 2013 to reinstate.

CIO Investigations and Litigation. The Firm is responding to a consolidated shareholder class action, a consolidated class action brought under the Employee Retirement Income Security Act ("ERISA"), shareholder derivative actions, shareholder demands and government investigations relating to losses in the synthetic credit portfolio managed by the Firm's Chief Investment Office ("CIO"). The Firm has received requests for documents and information in connection with governmental inquiries and investigations by Congress, the OCC, the Federal Reserve, the U.S. Department of Justice (the "DOJ"), the Securities and Exchange Commission (the "SEC"), the Commodity Futures Trading Commission (the "CFTC"), the UK Financial Services Authority, the State of Massachusetts and other government agencies. The Firm is cooperating with these investigations.

Four putative class actions alleging violations of Sections 10 (b) and 20(a) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder were filed on behalf of purchasers of the Firm's common stock. The cases were consolidated, lead plaintiffs were appointed pursuant to the Private Securities Litigation Reform Act, and a consolidated amended complaint was filed in November 2012 that defines the putative class as purchasers of the Firm's common stock between February 24, 2010 and May 21, 2012. The consolidated amended complaint alleges that the Firm and certain current and former officers made false or misleading statements concerning CIO's role, the Firm's risk management practices and the Firm's financial results, as well as in connection with the disclosure of losses in the synthetic credit portfolio in 2012.

Separately, two putative class actions were filed on behalf of participants who held the Firm's common stock in the Firm's retirement plans. These actions assert claims under ERISA for alleged breaches of fiduciary duties by the Firm, certain affiliates and certain current and former directors

and officers in connection with the management of those plans. The complaints generally allege that defendants breached the duty of prudence by allowing investment in the Firm's common stock when they knew or should have known that such stock was unsuitable for the plans and that the Firm and certain current and former officers made false or misleading statements concerning the Firm's financial condition. These actions have been consolidated, and a consolidated amended complaint was filed in December 2012 which alleges a class period of December 20, 2011 to July 12, 2012. The consolidated amended complaint contains allegations similar to those in the original complaints, but now asserts claims only on behalf of participants in the Firm's 401(k) Savings Plan.

Four shareholder derivative actions have also been filed, purportedly on behalf of the Firm, against certain of the Firm's current and former directors and officers for alleged breaches of their fiduciary duties. These actions generally allege that defendants failed to exercise adequate oversight over CIO and to manage the risk of CIO's trading activities, which allegedly led to CIO's losses. Two of these four actions have been consolidated, and a consolidated amended complaint was filed in December 2012. An amended complaint in one of the other derivative actions was filed in January 2013.

The consolidated securities action, consolidated ERISA action and the consolidated shareholder derivative action are pending in the United States District Court for the Southern District of New York, while the two other derivative actions are pending in New York State court. In October 2012, defendants moved to dismiss one of the two shareholder derivative actions pending in New York State court on the ground that plaintiff failed to make a demand on the Firm's Board of Directors or adequately allege demand futility, as required by applicable Delaware law. Defendants have not yet responded to the complaints in any of the other actions.

In January 2013, JPMorgan Chase & Co. entered into a Consent Order with the Federal Reserve and JPMorgan Chase Bank, N.A. entered into a Consent Order with the OCC arising out of the Federal Reserve's and the OCC's reviews of the CIO, including the synthetic credit portfolio previously held by the CIO. The Consent Orders relate to risk management, model governance and other control functions related to CIO and certain other trading activities at the Firm. Many of the actions required by the Consent Orders have already been, or are in the process of being, implemented by the Firm.

City of Milan Litigation and Criminal Investigation. In January 2009, the City of Milan, Italy (the "City") issued civil proceedings against (among others) JPMorgan Chase Bank, N.A. and J.P. Morgan Securities plc (together, "JPMorgan Chase") in the District Court of Milan. The proceedings relate to (a) a bond issue by the City in June 2005 (the "Bond"), and (b) an associated swap transaction, which was subsequently restructured on a number of occasions between 2005 and 2007 (the "Swap"). The City seeks damages and/or other remedies against JPMorgan Chase (among others) on the grounds of alleged "fraudulent and deceitful acts" and alleged breach of advisory obligations in connection with the Swap and the Bond, together with related swap transactions with other counterparties. The Firm has entered into a settlement agreement with the City to resolve the City's civil proceedings.

In March 2010, a criminal judge directed four current and former JPMorgan Chase personnel and JPMorgan Chase Bank, N.A. (as well as other individuals and three other banks) to go forward to a full trial that started in May 2010. The verdict, rendered in December 2012, acquitted two of the JPMorgan Chase personnel and found the other two guilty of aggravated fraud with sanctions of prison sentences (that were automatically suspended under applicable law), fines and a ban from dealing with Italian public bodies for one year. In addition, JPMorgan Chase (along with other banks involved) was found liable for breaches of Italian administrative law, fined €1 million and was ordered to forfeit its profit from the transaction, which totaled €24.7 million. JPMorgan Chase and the individuals plan to appeal the verdict, and none of the sanctions will take effect until all appeal avenues have been exhausted.

Enron Litigation. JPMorgan Chase and certain of its officers and directors are involved in two lawsuits seeking damages arising out of the Firm's banking relationships with Enron Corp. and its subsidiaries ("Enron"). Motions to dismiss are pending in both of these lawsuits: an individual action by Enron investors and an action by an Enron counterparty. A number of actions and other proceedings against the Firm previously were resolved, including a class action lawsuit captioned Newby v. Enron Corp. and adversary proceedings brought by Enron's bankruptcy estate.

FERC Matters. The Federal Energy Regulatory Commission (the "FERC") is investigating the Firm's bidding practices in certain organized power markets. Additionally, in November 2012, the FERC issued an Order suspending a JPMorgan Chase energy subsidiary's market-based rate authority for six months commencing on April 1, 2013, based on its finding that statements concerning discovery obligations made in submissions related to the FERC investigation violated FERC rules regarding misleading information.

Interchange Litigation. A group of merchants and retail associations filed a series of putative class action complaints relating to interchange in several federal courts. The complaints allege, among other claims, that Visa and MasterCard, as well as certain other banks, conspired to set the price of credit and debit card interchange fees, enacted respective rules in violation of antitrust laws, and engaged in tying/bundling and exclusive dealing. All cases were consolidated in the United States District Court for the Eastern District of New York for pretrial proceedings.

In October 2012, Visa, Inc., its wholly-owned subsidiaries Visa U.S.A. Inc. and Visa International Service Association, MasterCard Incorporated, MasterCard International Incorporated and various United States financial institution defendants, including JPMorgan Chase & Co., JPMorgan

Chase Bank, N.A., Chase Bank USA, N.A., Chase Paymentech Solutions, LLC and certain predecessor institutions, entered into a settlement agreement (the "Settlement Agreement") to resolve the claims of the U.S. merchant and retail association plaintiffs (the "Class Plaintiffs") in the multi-district litigation. In November 2012, the Court entered an order preliminarily approving the Settlement Agreement, which provides for, among other things, a cash payment of $6.05 billion to the Class Plaintiffs (of which the Firm's share is approximately 20%), and an amount equal to ten basis points of credit card interchange for a period of eight months to be measured from a date within 60 days of the end of the opt-out period. The Settlement Agreement also provides for modifications to each credit card network's rules, including those that prohibit surcharging credit card transactions. The rule modifications became effective in January 2013. The Settlement Agreement is subject to final approval by the Court.

Investment Management Litigation. The Firm is defending three pending cases that allege that investment portfolios managed by J.P. Morgan Investment Management Inc. were inappropriately invested in securities backed by residential real estate collateral. Plaintiffs claim that JPMorgan Investment Management is liable for losses of more than $1 billion in market value of these securities. In the case filed by Assured Guaranty (U.K.) and the case filed by Ambac Assurance UK Limited in New York state court, discovery is proceeding on claims for breach of contract, breach of fiduciary duty and gross negligence. The third case, filed by CMMF LLP in New York state court, asserts claims under New York law for breach of fiduciary duty, negligence, breach of contract and negligent misrepresentation. Trial of the CMMF action was completed in February 2013, and the Court's decision is pending.

Lehman Brothers Bankruptcy Proceedings. In May 2010, Lehman Brothers Holdings Inc. ("LBHI") and its Official Committee of Unsecured Creditors (the "Committee") filed a complaint (and later an amended complaint) against JPMorgan Chase Bank, N.A. in the United States Bankruptcy Court for the Southern District of New York that asserts both federal bankruptcy law and state common law claims, and seeks, among other relief, to recover $8.6 billion in collateral that was transferred to JPMorgan Chase Bank, N.A. in the weeks preceding LBHI's bankruptcy. The amended complaint also seeks unspecified damages on the grounds that JPMorgan Chase Bank, N.A.'s collateral requests hastened LBHI's bankruptcy. The Firm moved to dismiss plaintiffs' amended complaint in its entirety, and also moved to transfer the litigation from the Bankruptcy Court to the United States District Court for the Southern District of New York. In April 2012, the Bankruptcy Court issued a decision granting in part and denying in part the Firm's motion to dismiss. The Court dismissed the counts of the amended complaint seeking avoidance of the allegedly constructively fraudulent and preferential transfers made to the Firm during the months of August and September 2008. The Court denied the Firm's motion to dismiss as to the other claims, including claims that allege intentional misconduct. In September 2012, the District Court denied the transfer motion without prejudice to its renewal in the future, but stated that any trial would likely have to be conducted before the District Court.

The Firm also filed counterclaims against LBHI alleging that LBHI fraudulently induced the Firm to make large clearing advances to Lehman against inappropriate collateral, which left the Firm with more than $25 billion in claims (the "Clearing Claims") against the estate of Lehman Brothers Inc. ("LBI"), LBHI's broker-dealer subsidiary. These claims have been paid in full, subject to the outcome of the litigation. Discovery is ongoing.

LBHI and the Committee have filed an objection to the deficiency claims asserted by JPMorgan Chase Bank, N.A. against LBHI with respect to the Clearing Claims, principally on the grounds that the Firm had not conducted the sale of the securities collateral held for such claims in a commercially reasonable manner. The Firm responded to LBHI's objection in November 2011. Discovery is ongoing.

LBHI and several of its subsidiaries that had been Chapter 11 debtors have filed a separate complaint and objection to derivatives claims asserted by the Firm alleging that the amount of the derivatives claims had been overstated and challenging certain set-offs taken by JPMorgan Chase entities to recover on the claims. The Firm has not yet responded to the amended derivatives complaint and objection, and discovery has not begun.

LIBOR Investigations and Litigation. JPMorgan Chase has received subpoenas and requests for documents and, in some cases, interviews, from federal and state agencies and entities, including the DOJ, CFTC, SEC, and various state attorneys general, as well as the European Commission, UK Financial Services Authority, Canadian Competition Bureau, Swiss Competition Commission and other regulatory authorities and banking associations around the world. The documents and information sought relate primarily to the process by which interest rates were submitted to the British Bankers Association ("BBA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR") for various currencies, principally in 2007 and 2008. Some of the inquiries also relate to similar processes by which information on rates is submitted to European Banking Federation ("EBF") in connection with the setting of the EBF's Euro Interbank Offered Rates ("EURIBOR") and to the Japanese Bankers' Association for the setting of Tokyo Interbank Offered Rates ("TIBOR") as well as to other processes for the setting of other reference rates in various parts of the world during similar time periods. The Firm is cooperating with these inquiries.

In addition, the Firm has been named as a defendant along with other banks in a series of individual and class actions filed in various United States District Courts in which plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively manipulated the U.S. dollar LIBOR, Yen LIBOR and Euroyen TIBOR rates by submitting rates that were artificially low or high. Plaintiffs allege that they transacted

in loans, derivatives or other financial instruments whose values are impacted by changes in U.S. dollar LIBOR, Yen LIBOR, or Euroyen TIBOR and assert a variety of claims including antitrust claims seeking treble damages.

In 2011, a number of class actions were filed against LIBOR panel banks, including the Firm, asserting various federal and state law claims relating to the alleged manipulation of U.S. dollar LIBOR. These purported class actions were consolidated for pre-trial purposes in the United States District Court for the Southern District of New York before District Judge Buchwald, who appointed interim lead counsel for three proposed classes: (i) direct purchasers of U.S. dollar LIBOR-based financial instruments in the over-the-counter market; (ii) purchasers of U.S. dollar LIBOR-based financial instruments on an exchange; and (iii) purchasers of debt securities that pay an interest rate linked to U.S. dollar LIBOR. The defendants moved to dismiss all claims in these three putative class actions and three related individual actions pending before the Court. The Court has not yet ruled on the defendants' motions to dismiss.

Since April 2012, a number of additional U.S. dollar LIBOR putative class actions and individual actions have been filed in various courts. Defendants have moved to transfer each of these cases to the consolidated action pending in the Southern District of New York. To date, all but three of these actions have been transferred. The actions that have been transferred are stayed until the Court rules on the defendants' pending motions to dismiss.

The Firm also has been named as a defendant in a purported class action filed in the United States District Court for the Southern District of New York which seeks to bring claims on behalf of plaintiffs who purchased or sold exchange-traded Euroyen futures and options contracts. The plaintiff has been granted leave to file a Second Amended Complaint, and defendants will have 60 days after the filing of that amended pleading to respond.

Madoff Litigation. JPMorgan Chase & Co., JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC, and J.P. Morgan Securities plc have been named as defendants in a lawsuit brought by the trustee (the "Trustee") for the liquidation of Bernard L. Madoff Investment Securities LLC ("Madoff"). The Trustee has served an amended complaint in which he has asserted 28 causes of action against JPMorgan Chase, 20 of which seek to avoid certain transfers (direct or indirect) made to JPMorgan Chase that are alleged to have been preferential or fraudulent under the federal Bankruptcy Code and the New York Debtor and Creditor Law. The remaining causes of action involve claims for, among other things, aiding and abetting fraud, aiding and abetting breach of fiduciary duty, conversion, contribution and unjust enrichment in connection with Madoff's Ponzi scheme. The complaint asserts common law claims that purport to seek approximately $19 billion in damages, together with bankruptcy law claims to recover approximately $425 million in transfers that JPMorgan Chase allegedly received directly or indirectly from Bernard Madoff's brokerage firm. In October 2011, the United States District Court for the Southern District of New York granted JPMorgan Chase's motion to dismiss the common law claims asserted by the Trustee, and returned the remaining claims to the Bankruptcy Court for further proceedings. The Trustee appealed this decision and oral argument on the appeal was held in November 2012. The Firm is awaiting the Court's decision.

Separately, J.P. Morgan Trust Company (Cayman) Limited, JPMorgan (Suisse) SA, J.P. Morgan Securities plc, Bear Stearns Alternative Assets International Ltd., J.P. Morgan Clearing Corp., J.P. Morgan Bank Luxembourg SA, and J.P. Morgan Markets Limited (formerly Bear Stearns International Limited) have been named as defendants in lawsuits presently pending in Bankruptcy Court in New York arising out of the liquidation proceedings of Fairfield Sentry Limited and Fairfield Sigma Limited (together, "Fairfield"), so-called Madoff feeder funds. These actions are based on theories of mistake and restitution, among other theories, and seek to recover payments made to defendants by the funds totaling approximately $155 million. Pursuant to an agreement with the Trustee, the liquidators of Fairfield have voluntarily dismissed their action against J.P. Morgan Securities plc without prejudice to refiling. The other actions remain outstanding. In addition, a purported class action was brought by investors in certain feeder funds against JPMorgan Chase in the United States District Court for the Southern District of New York, as was a motion by separate potential class plaintiffs to add claims against JPMorgan Chase & Co., JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC and J.P. Morgan Securities plc to an already-pending purported class action in the same court. The allegations in these complaints largely track those raised by the Trustee. The Court dismissed these complaints and plaintiffs have appealed.

The Firm is a defendant in five other Madoff-related actions pending in New York state court and one purported class action in federal District Court in New York. The allegations in all of these actions are essentially identical, and involve claims against the Firm for, among other things, aiding and abetting breach of fiduciary duty, conversion and unjust enrichment. The Firm has moved to dismiss both the state and federal actions.

The Firm is also responding to various governmental inquiries concerning the Madoff matter.

MF Global. JPMorgan Chase & Co. was named as one of several defendants in a number of putative class action lawsuits brought by former customers of MF Global in federal District Courts in New York, Illinois and Montana. The lawsuits have been consolidated before the United States District Court for the Southern District of New York. The actions alleged, among other things, that the Firm aided and abetted MF Global's alleged misuse of customer money and breaches of fiduciary duty and was unjustly enriched by the transfer of certain customer segregated funds by MF Global. The Firm has entered into a tolling agreement with counsel for the customer class plaintiffs

and an individual plaintiff, pursuant to which the plaintiffs have agreed not to pursue any such claims against the Firm in these actions for so long as the tolling agreement remains in effect.

J.P. Morgan Securities LLC has been named as one of several defendants in a number of purported class actions filed by purchasers of MF Global's publicly traded securities, including the securities issued pursuant to MF Global's June 2010 secondary offering of common stock and February 2011 and August 2011 convertible note offerings. The actions have been consolidated before the United States District Court for the Southern District of New York. In August 2012, the lead plaintiffs filed an amended complaint which asserts violations of the Securities Act of 1933 against the underwriter defendants and alleges that the offering documents contained materially false and misleading statements and omissions regarding MF Global's financial position, internal controls and risk management, as such topics relate to its exposure to European sovereign debt. Defendants moved to dismiss in October 2012. Those motions remain pending.

In June 2012, the Securities Investor Protection Act ("SIPA") Trustee issued a Report of the Trustee's Investigation and Recommendations, and stated that he is considering potential claims against the Firm with respect to certain transfers identified in the Report. Discussions regarding possible resolution of potential SIPA Trustee claims and customer claims against the Firm are ongoing.

The Firm has responded to and continues to respond to inquiries from the CFTC, SEC, SIPA Trustee and Bankruptcy Trustee concerning MF Global.

Mortgage-Backed Securities and Repurchase Litigation and Mortgage-Related Regulatory Investigations. JPMorgan Chase and affiliates, Bear Stearns and affiliates and Washington Mutual affiliates have been named as defendants in a number of cases in their various roles as issuer, originator or underwriter in MBS offerings. These cases include purported class action suits, actions by individual purchasers of securities or by trustees for the benefit of purchasers of securities, an action by the New York State Attorney General and actions by monoline insurance companies that guaranteed payments of principal and interest for particular tranches of securities offerings. Although the allegations vary by lawsuit, these cases generally allege that the offering documents for securities issued by numerous securitization trusts contained material misrepresentations and omissions, including with regard to the underwriting standards pursuant to which the underlying mortgage loans were issued, or assert that various representations or warranties relating to the loans were breached at the time of origination. There are currently pending and tolled investor claims involving approximately $170 billion of such securities. In addition, and as described below, there are pending and threatened claims by monoline insurers and by and on behalf of trustees that involve some of these and other securitizations.

In the actions against the Firm as an MBS issuer (and, in some cases, also as an underwriter of its own MBS offerings), three purported class actions are pending against JPMorgan Chase and Bear Stearns, and/or certain of their affiliates and current and former employees, in the United States District Courts for the Eastern and Southern Districts of New York. Motions to dismiss have been largely denied in these cases, although in certain cases defendants have sought to appeal aspects of the decision, and they are in various stages of litigation. A settlement of a fourth purported class action that is pending in the United States District Court for the Western District of Washington against Washington Mutual affiliates, WaMu Asset Acceptance Corp. and WaMu Capital Corp. and certain former officers or directors of WaMu Asset Acceptance Corp., has received final court approval.

In addition to class actions, the Firm is also a defendant in individual actions brought against certain affiliates of JPMorgan Chase, Bear Stearns and Washington Mutual as issuers (and, in some cases, as underwriters) of MBS. These actions involve claims by or to benefit various institutional investors and governmental agencies. These actions are pending in federal and state courts across the United States and are in various stages of litigation.

In actions against the Firm solely as an underwriter of other issuers' MBS offerings, the Firm has contractual rights to indemnification from the issuers. However, those indemnity rights may prove effectively unenforceable where the issuers are now defunct, such as in pending cases where the Firm has been named involving affiliates of IndyMac Bancorp. A settlement of a purported class action involving Thornburg Mortgage MBS offerings that was pending against the Firm has received preliminary court approval. The Firm may also be contractually obligated to indemnify underwriters in certain deals it issued.

EMC Mortgage LLC (formerly EMC Mortgage Corporation) ("EMC"), an indirect subsidiary of JPMorgan Chase & Co., and certain other JPMorgan Chase entities currently are defendants in nine pending actions commenced by bond insurers that guaranteed payments of principal and interest on certain classes of 19 different MBS offerings. These actions are pending in federal and state courts in New York and are in various stages of litigation. Certain JPMorgan Chase entities, in their capacities as alleged successors in interest to Bear Stearns and EMC, have been named as defendants in a civil suit filed by the New York State Attorney General in New York state court in connection with Bear Stearns' due diligence and quality control practices relating to MBS.

The Firm or its affiliates are defendants in actions brought by trustees or master servicers of various MBS trusts and others on behalf of the purchasers of securities issued by those trusts. The first action was commenced by Deutsche Bank National Trust Company, acting as trustee for various

MBS trusts, against the Firm and the FDIC based on MBS issued by Washington Mutual Bank and its affiliates; that case is described in the Washington Mutual Litigations section below. The other actions are at various initial stages of litigation in the New York and Delaware state courts, including actions brought by MBS trustees, each specific to one or more MBS transactions, against EMC and/or JPMorgan Chase. These cases generally allege breaches of various representations and warranties regarding securitized loans and seek repurchase of those loans, as well as indemnification of attorneys' fees and costs and other remedies.

There is no assurance that the Firm will not be named as a defendant in additional MBS-related litigation, and the Firm has entered into agreements with a number of entities that purchased such securities that toll applicable limitations periods with respect to their claims. In addition, the Firm has received several demands by securitization trustees that threaten litigation, as well as demands by investors directing or threatening to direct trustees to investigate claims or bring litigation, based on purported obligations to repurchase loans out of securitization trusts and alleged servicing deficiencies. These include but are not limited to a demand from a law firm, as counsel to a group of purchasers of MBS that purport to have 25% or more of the voting rights in as many as 191 different trusts sponsored by the Firm or its affiliates with an original principal balance of more than $174 billion (excluding 52 trusts sponsored by Washington Mutual, with an original principal balance of more than $58 billion), made to various trustees to investigate potential repurchase and servicing claims. Further, there have been repurchase and servicing claims made in litigation against trustees not affiliated with the Firm, but involving trusts that the Firm sponsored.

In April 2012, the New York state court granted the Firm's motion to dismiss a shareholder complaint against the Firm and two affiliates, members of the boards of directors thereof and certain employees, asserting claims based on alleged wrongful actions and inactions relating to residential mortgage originations and securitizations. The plaintiff has appealed the order. A second shareholder complaint has been filed in New York state court against current and former members of the Firm's Board of Directors and the Firm, as nominal defendant, alleging that the Board allowed the Firm to engage in wrongful conduct regarding the sale of residential MBS and failed to implement adequate internal controls to prevent such wrongdoing.

In addition to the above-described litigation, the Firm has also received, and responded to, a number of subpoenas and informal requests for information from federal and state authorities concerning mortgage-related matters, including inquiries concerning a number of transactions involving the Firm and its affiliates' origination and purchase of whole loans, underwriting and issuance of MBS, treatment of early payment defaults, potential breaches of securitization representations and warranties, reserves and due diligence in connection with securitizations. In November 2012, the Firm settled with the SEC over its investigations of J.P. Morgan Securities LLC and J.P. Morgan Acceptance Corporation I relating to delinquency disclosures, and of Bear Stearns entities and J.P. Morgan Securities LLC relating to disclosures concerning settlements of claims against originators involving loans included in a number of Bear Stearns securitizations. Pursuant to the settlement, the named entities, without admitting or denying the SEC's allegations, consented to the entry of a final judgment ordering certain relief, including an injunction and the payment of approximately $296.9 million in disgorgement, penalties and interest. The United States District Court for the District of Columbia approved the settlement and entered the judgment in January 2013. The Firm continues to respond to other MBS-related regulatory inquiries.

Mortgage Foreclosure-Related Investigations and Litigation. The Attorneys General of Massachusetts and New York have separately filed lawsuits against the Firm, other servicers and a mortgage recording company asserting claims for various alleged wrongdoings relating to mortgage assignments and use of the industry's electronic mortgage registry. The court granted in part and denied in part the defendants' motion to dismiss the Massachusetts action and the Firm has moved to dismiss the New York action.

Six purported class action lawsuits were filed against the Firm relating to its mortgage foreclosure procedures. Two of the class actions have been dismissed with prejudice and one settled on an individual basis. Of the remaining active actions, two are in the discovery phase and a motion to dismiss is pending in the remaining action. Additionally, a purported class action brought against Bank of America involving an EMC loan has been dismissed.

Two shareholder derivative actions have been filed in New York Supreme Court against the Firm's Board of Directors alleging that the Board failed to exercise adequate oversight as to wrongful conduct by the Firm regarding mortgage servicing. These actions seek declaratory relief and damages. In July 2012, the Court granted defendants' motion to dismiss the complaint in the first-filed action and gave plaintiff 45 days in which to file an amended complaint. In October 2012, the Court entered a stipulated order consolidating the actions and staying all proceedings pending the plaintiffs' decision whether to file a consolidated complaint after the Firm completes its response to a demand submitted by one of the plaintiffs under Section 220 of the Delaware General Corporation Law.

The Civil Division of the United States Attorney's Office for the Southern District of New York is conducting an investigation concerning the Firm's compliance with the requirements of the Federal Housing Administration's Direct Endorsement Program. The Firm is cooperating in that investigation.

On January 7, 2013, the Firm announced that it and a number of other financial institutions entered into a

settlement agreement with the OCC and the Federal Reserve providing for the termination of the Independent Foreclosure Review programs that had been required under the Consent Orders with such banking regulators relating to each bank's residential mortgage servicing, foreclosure and loss-mitigation activities. Under this settlement, the Firm will make a cash payment of $753 million into a settlement fund for distribution to qualified borrowers. The Firm has also committed an additional $1.2 billion to foreclosure prevention actions under the settlement, which will be fulfilled through credits given to the Firm for modifications, short sales and other types of borrower relief.

Municipal Derivatives Investigations and Litigation. Purported class action lawsuits and individual actions have been filed against JPMorgan Chase and Bear Stearns, as well as numerous other providers and brokers, alleging antitrust violations in the market for financial instruments related to municipal bond offerings referred to collectively as "municipal derivatives." In July 2011, the Firm settled with federal and state governmental agencies to resolve their investigations into similar alleged conduct. The municipal derivatives actions were consolidated and/or coordinated in the United States District Court for the Southern District of New York. In December 2012, the District Court granted final approval of a settlement calling for payment of approximately $43 million. Certain class members opted out of the settlement, including 27 plaintiffs named in individual actions already pending against JPMorgan.

In addition, civil actions have been commenced against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions. In November 2009, J.P. Morgan Securities LLC settled with the SEC to resolve its investigation into those transactions. Following that settlement, the County filed an action against the Firm and several other defendants in Alabama state court. An action on behalf of a purported class of sewer rate payers has also been filed in Alabama state court. The suits allege that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The complaints also allege that the Firm concealed these third-party payments and that, but for this concealment, the County would not have entered into the transactions. The Court denied the Firm's motions to dismiss the complaints in both proceedings. In November and December 2011, the County filed notices of bankruptcy with the trial court in each of the cases and with the Alabama Supreme Court stating that it was a Chapter 9 Debtor in the U.S. Bankruptcy Court for the Northern District of Alabama. Subsequently, the portion of the sewer rate payer action involving claims against the Firm was removed by certain defendants to the United States District Court for the Northern District of Alabama. In its order finding that removal of this action was proper, the District Court referred the action to the District's Bankruptcy Court, where the action remains pending. Limited discovery has taken place in the County's action and additional discovery may take place in 2013.

In September 2012, a group of purported creditors of the County initiated an adversary proceeding and filed a purported class action complaint alleging that certain warrants were issued unlawfully and were thus null and void and seeking $1.6 billion in damages from the Firm and other defendants involved in the Jefferson County financing transactions. The Firm, along with a number of other defendants, moved to dismiss the complaint in November 2012. Plaintiffs subsequently agreed to dismiss their tort claims seeking damages and are solely pursuing their claims relating to the validity of the warrants. The motion to dismiss these claims remains pending.

Two insurance companies that guaranteed the payment of principal and interest on warrants issued by the County have filed separate actions against the Firm in New York state court. Their complaints assert that the Firm fraudulently misled them into issuing insurance based upon substantially the same alleged conduct described above and other alleged non-disclosures. One insurer claims that it insured an aggregate principal amount of nearly $1.2 billion and seeks unspecified damages in excess of $400 million as well as unspecified punitive damages. The other insurer claims that it insured an aggregate principal amount of more than $378 million and seeks recovery of $4 million allegedly paid under the policies to date as well as any future payments and unspecified punitive damages. In December 2010, the court denied the Firm's motions to dismiss each of the complaints. The Firm has filed a cross-claim and a third party claim against the County for indemnity and contribution. The County moved to dismiss, which the court denied in August 2011. In consequence of its November 2011 bankruptcy filing, the County has asserted that these actions are stayed. In February 2012, one of the insurers filed a motion for a declaration that its action is not stayed as against the Firm or, in the alternative, for an order lifting the stay as against the Firm. The Firm and the County opposed the motion, which remains pending.

Option Adjustable Rate Mortgage Litigation. The Firm is defending one purported and three certified class actions, all pending in federal courts in California, which assert that several JPMorgan Chase entities violated the federal Truth in Lending Act and state unfair business practice statutes in failing to provide adequate disclosures in Option Adjustable Rate Mortgage ("ARM") loans regarding the resetting of introductory interest rates and that negative amortization was certain to occur if a borrower made the minimum monthly payment. With respect to the former Washington Mutual and Bear Stearns defendants who purchased Option ARM loans from third-party originators, plaintiffs allege that those entities aided and abetted the original lenders' alleged violations. Classes have been certified in three of the actions. In one of the certified class actions, the Firm has moved for decertification of the class and for summary

judgment. The Firm was unsuccessful in seeking permission to appeal the remaining class certification decisions.

Overdraft Fee/Debit Posting Order Litigation. JPMorgan Chase Bank, N.A. has been named as a defendant in several purported class actions relating to its practices in posting debit card transactions to customers' deposit accounts. Plaintiffs allege that the Firm improperly re-ordered debit card transactions from the highest amount to the lowest amount before processing these transactions in order to generate unwarranted overdraft fees. Plaintiffs contend that the Firm should have processed such transactions in the chronological order in which they were authorized. Plaintiffs seek the disgorgement of all overdraft fees paid to the Firm by plaintiffs since approximately 2003 as a result of the re-ordering of debit card transactions. The claims against the Firm have been consolidated with numerous complaints against other national banks in multi-District litigation pending in the United States District Court for the Southern District of Florida. The Firm reached an agreement to settle this matter in exchange for the Firm paying $110 million and agreeing to change certain overdraft fee practices. In December 2012, the Court granted final approval of the settlement.

Petters Bankruptcy and Related Matters. JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), have been named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain affiliated entities (collectively, "Petters") and the Polaroid Corporation. The principal actions against JPMorgan Chase and its affiliates have been brought by a court-appointed receiver for Petters and the trustees in bankruptcy proceedings for three Petters entities. These actions generally seek to avoid, on fraudulent transfer and preference grounds, certain purported transfers in connection with (i) the 2005 acquisition by Petters of Polaroid, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions entered into with Polaroid; and (iii) a credit line and investment accounts held by Petters. The actions collectively seek recovery of approximately $450 million. Defendants have moved to dismiss the complaints in the actions filed by the Petters bankruptcy trustees and the parties have agreed to stay the action brought by the Receiver until after the Bankruptcy Court rules on the pending motions.

Securities Lending Litigation. JPMorgan Chase Bank, N.A. was named as a defendant in a putative class action asserting ERISA and other claims pending in the United States District Court for the Southern District of New York brought by participants in the Firm's securities lending business.

The action concerns investments of approximately $500 million in Lehman Brothers medium-term notes. The Court granted the Firm's motion to dismiss all claims in April 2012. The plaintiff filed a third amended complaint, and the Firm's motion to dismiss this complaint is pending. Discovery has been stayed until the Firm's motion to dismiss is decided.

Washington Mutual Litigations. Proceedings related to Washington Mutual's failure are pending before the United States District Court for the District of Columbia and include a lawsuit brought by Deutsche Bank National Trust Company, initially against the FDIC, asserting an estimated $6 billion to $10 billion in damages based upon alleged breach of various mortgage securitization agreements and alleged violation of certain representations and warranties given by certain Washington Mutual, Inc. ("WMI") subsidiaries in connection with those securitization agreements. The case includes assertions that JPMorgan Chase may have assumed liabilities for alleged breaches of representations and warranties in the mortgage securitization agreements. The District Court denied as premature motions by the Firm and the FDIC that sought a ruling on whether the FDIC retained liability for Deutsche Bank's claims. Discovery is underway.

In addition, JPMorgan Chase was sued in an action originally filed in state court in Texas (the "Texas Action") by certain holders of WMI common stock and debt of WMI and Washington Mutual Bank who seek unspecified damages alleging that JPMorgan Chase acquired substantially all of the assets of Washington Mutual Bank from the FDIC at a price that was allegedly too low. The Texas Action was transferred to the United States District Court for the District of Columbia, which ultimately granted JPMorgan Chase's and the FDIC's motions to dismiss the complaint, but the United States Court of Appeals for the District of Columbia Circuit reversed the District Court's dismissal and remanded the case for further proceedings. Plaintiffs, who sue now only as holders of Washington Mutual Bank debt following their voluntary dismissal of claims brought as holders of WMI common stock and debt, have filed an amended complaint alleging that JPMorgan Chase caused the closure of Washington Mutual Bank and damaged them by causing their bonds issued by Washington Mutual Bank, which had a total face value of $38 million, to lose substantially all of their value. JPMorgan Chase and the FDIC moved to dismiss this action and the District Court dismissed the case except as to the plaintiffs' claim that the Firm tortiously interfered with the plaintiffs' bond contracts with Washington Mutual Bank prior to its closure.

* * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously in all such matters. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. The Firm accrues for potential liability arising from such proceedings when it

is probable that such liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downwards, as appropriate, based on management's best judgment after consultation with counsel. During the years ended December 31, 2012, 2011 and 2010, the Firm incurred $5.0 billion, $4.9 billion and $7.4 billion, respectively, of litigation expense. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or impact related to those matters. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued; as a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

Note 32 – International operations

The following table presents income statement-related and balance sheet-related information for JPMorgan Chase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 33 on pages 326–329 of this Annual Report.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the United States.

As of or for the year ended December 31, (in millions)	Revenue[c]	Expense[d]	Income before income tax expense	Net income	Total assets	
2012						
Europe/Middle East and Africa	**$ 10,522**	**$ 9,326**	**$ 1,196**	**$ 1,508**	**$ 553,147**	[e]
Asia and Pacific	**5,605**	**3,952**	**1,653**	**1,048**	**167,955**	
Latin America and the Caribbean	**2,328**	**1,580**	**748**	**454**	**53,984**	
Total international	**18,455**	**14,858**	**3,597**	**3,010**	**775,086**	
North America[a]	**78,576**	**53,256**	**25,320**	**18,274**	**1,584,055**	
Total	**$ 97,031**	**$ 68,114**	**$ 28,917**	**$ 21,284**	**$ 2,359,141**	
2011						
Europe/Middle East and Africa	$ 16,212	$ 9,157	$ 7,055	$ 4,844	$ 566,866	[e]
Asia and Pacific	5,992	3,802	2,190	1,380	156,411	
Latin America and the Caribbean	2,273	1,711	562	340	51,481	
Total international	24,477	14,670	9,807	6,564	774,758	
North America[a]	72,757	55,815	16,942	12,412	1,491,034	
Total	$ 97,234	$ 70,485	$ 26,749	$ 18,976	$ 2,265,792	
2010[b]						
Europe/Middle East and Africa	$ 14,135	$ 8,777	$ 5,358	$ 3,635	$ 446,547	[e]
Asia and Pacific	6,073	3,677	2,396	1,614	151,379	
Latin America and the Caribbean	1,750	1,181	569	362	33,192	
Total international	21,958	13,635	8,323	5,611	631,118	
North America[a]	80,736	64,200	16,536	11,759	1,486,487	
Total	$ 102,694	$ 77,835	$ 24,859	$ 17,370	$ 2,117,605	

(a) Substantially reflects the U.S.
(b) The regional allocation of revenue, expense and net income for 2010 has been modified to conform with current allocation methodologies.
(c) Revenue is composed of net interest income and noninterest revenue.
(d) Expense is composed of noninterest expense and the provision for credit losses.
(e) Total assets for the U.K. were approximately $498 billion, $510 billion, and $419 billion at December 31, 2012, 2011 and 2010, respectively.

Note 33 – Business segments

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate/Private Equity segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 76–77 of this Annual Report. For a further discussion concerning JPMorgan Chase's business segments, see Business Segment Results on pages 78–79 of this Annual Report.

Business segment changes

Commencing with the fourth quarter of 2012, the Firm's business segments have been reorganized as follows: Retail Financial Services and Card Services & Auto ("Card") business segments were combined to form one business segment called Consumer & Community Banking ("CCB"), and Investment Bank and Treasury & Securities Services

business segments were combined to form one business segment called Corporate & Investment Bank ("CIB"). Commercial Banking ("CB") and Asset Management ("AM") were not affected by the aforementioned changes. A technology function supporting online and mobile banking was transferred from Corporate/Private Equity to the CCB business segment. This transfer did not materially affect the results of either the CCB business segment or Corporate/Private Equity.

The business segment information that follows has been revised to reflect the business reorganization retroactive to January 1, 2010.

The following is a description of each of the Firm's business segments, and the products and services they provide to their respective client bases.

Consumer & Community Banking
CCB serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card. Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.

Corporate & Investment Bank
CIB offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Commercial Banking
CB delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and non-profit entities with annual revenue generally ranging from $20 million to $2 billion. CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Asset Management
AM, with client assets of $2.1 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions to a broad range of clients' investment needs. For individual investors, AM also provides retirement products and services, brokerage and banking services including trust and estate, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Corporate/Private Equity
The Corporate/Private Equity segment comprises Private Equity, Treasury, Chief Investment Office ("CIO"), and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital and structural interest rate and foreign exchange risks. The corporate staff units include Central Technology and Operations, Internal Audit, Executive, Finance, Human Resources, Legal & Compliance, Global Real Estate, General Services, Operational Control, Risk Management, and Corporate Responsibility & Public Policy. Other centrally managed expense includes the Firm's occupancy and pension-related expense that are subject to allocation to the businesses.

Segment results

The following tables provide a summary of the Firm's segment results for 2012, 2011 and 2010 on a managed basis. Total net revenue (noninterest revenue and net interest income) for each of the segments is presented on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented on a basis comparable to taxable investments and securities; this non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit).

Effective January 1, 2012, the Firm revised the capital allocated to each of its businesses, reflecting additional refinement of each segment's Basel III Tier 1 common capital requirements.

Segment results and reconciliation[a]

As of or the year ended December 31, (in millions, except ratios)	Consumer & Community Banking			Corporate & Investment Bank			Commercial Banking			Asset Management		
	2012	2011	2010	**2012**	2011	2010	**2012**	2011	2010	**2012**	2011	2010
Noninterest revenue	**$ 20,795**	$ 15,306	$ 15,513	**$ 23,104**	$ 22,523	$ 22,889	**$ 2,283**	$ 2,195	$ 2,200	**$ 7,847**	$ 7,895	$ 7,485
Net interest income	**29,150**	30,381	33,414	**11,222**	11,461	10,588	**4,542**	4,223	3,840	**2,099**	1,648	1,499
Total net revenue	**49,945**	45,687	48,927	**34,326**	33,984	33,477	**6,825**	6,418	6,040	**9,946**	9,543	8,984
Provision for credit losses	**3,774**	7,620	17,489	**(479)**	(285)	(1,247)	**41**	208	297	**86**	67	86
Noninterest expense	**28,790**	27,544	23,706	**21,850**	21,979	22,869	**2,389**	2,278	2,199	**7,104**	7,002	6,112
Income/(loss) before income tax expense/ (benefit)	**17,381**	10,523	7,732	**12,955**	12,290	11,855	**4,395**	3,932	3,544	**2,756**	2,474	2,786
Income tax expense/ (benefit)	**6,770**	4,321	3,154	**4,549**	4,297	4,137	**1,749**	1,565	1,460	**1,053**	882	1,076
Net income/(loss)	**$ 10,611**	$ 6,202	$ 4,578	**$ 8,406**	$ 7,993	$ 7,718	**$ 2,646**	$ 2,367	$ 2,084	**$ 1,703**	$ 1,592	$ 1,710
Average common equity	**$ 43,000**	$ 41,000	$ 43,000	**$ 47,500**	$ 47,000	$ 46,500	**$ 9,500**	$ 8,000	$ 8,000	**$ 7,000**	$ 6,500	$ 6,500
Total assets	**463,608**	483,307	508,775	**876,107**	845,095	870,631	**181,502**	158,040	142,646	**108,999**	86,242	68,997
Return on average common equity	**25%**	15%	11%	**18%**	17%	17%	**28%**	30%	26%	**24%**	25%	26%
Overhead ratio	**58**	60	48	**64**	65	68	**35**	35	36	**71**	73	68

(a) Managed basis starts with the reported U.S. GAAP results and includes certain reclassifications as discussed below that do not have any impact on net income as reported by the lines of business or by the Firm as a whole.

(b) Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results. FTE adjustments for the years ended December 31, 2012, 2011, and 2010, were as follows.

Year ended December 31, (in millions)	**2012**	2011	2010
Noninterest revenue	**$ 2,116**	$ 2,003	$ 1,745
Net interest income	**743**	530	403
Income tax expense	**2,859**	2,533	2,148

(table continued from previous page)

Corporate/Private Equity			Reconciling Items[b]			Total		
2012	2011	2010	**2012**	2011	2010	**2012**	2011	2010
$ 208	$ 3,629	$ 5,351	**$ (2,116)**	$ (2,003)	$ (1,745)	**$ 52,121**	$ 49,545	$ 51,693
(1,360)	506	2,063	**(743)**	(530)	(403)	**44,910**	47,689	51,001
(1,152)	4,135	7,414	**(2,859)**	(2,533)	(2,148)	**97,031**	97,234	102,694
(37)	(36)	14	**–**	–	–	**3,385**	7,574	16,639
4,596	4,108	6,310	**–**	–	–	**64,729**	62,911	61,196
(5,711)	63	1,090	**(2,859)**	(2,533)	(2,148)	**28,917**	26,749	24,859
(3,629)	(759)	(190)	**(2,859)**	(2,533)	(2,148)	**7,633**	7,773	7,489
$ (2,082)	$ 822	$ 1,280	**$ –**	$ –	$ –	**$ 21,284**	$ 18,976	$ 17,370
$ 77,352	$ 70,766	$ 57,520	**$ –**	$ –	$ –	**$ 184,352**	$ 173,266	$ 161,520
728,925	693,108	526,556	**NA**	NA	NA	**2,359,141**	2,265,792	2,117,605
NM	NM	NM	**NM**	NM	NM	**11%**	11%	10%
NM	NM	NM	**NM**	NM	NM	**67**	65	60

Note 34 – Parent company

Parent company – Statements of income

Year ended December 31, (in millions)	2012	2011	2010
Income			
Dividends from subsidiaries and affiliates:			
Bank and bank holding company	$ 4,828	$ 10,852	$ 16,554
Nonbank[a]	1,972	2,651	932
Interest income from subsidiaries	1,041	1,099	985
Other interest income	293	384	294
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	939	809	680
Nonbank	1,207	92	312
Other income/(loss)	579	(85)	157
Total income	10,859	15,802	19,914
Expense			
Interest expense to subsidiaries and affiliates[a]	836	1,121	1,263
Other interest expense	4,679	4,447	3,782
Other noninterest expense	2,399	649	540
Total expense	7,914	6,217	5,585
Income before income tax benefit and undistributed net income of subsidiaries	2,945	9,585	14,329
Income tax benefit	1,665	1,089	511
Equity in undistributed net income of subsidiaries	16,674	8,302	2,530
Net income	$ 21,284	$ 18,976	$ 17,370

Parent company – Balance sheets

December 31, (in millions)	2012	2011
Assets		
Cash and due from banks	$ 216	$ 132
Deposits with banking subsidiaries	75,521	91,622
Trading assets	8,128	18,485
Available-for-sale securities	3,541	3,657
Loans	2,101	1,880
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	39,773	39,888
Nonbank	86,904	83,138
Investments (at equity) in subsidiaries and affiliates:		
Bank and bank holding company	170,276	157,160
Nonbank[a]	45,305	42,231
Goodwill and other intangibles	1,018	1,027
Other assets	16,481	15,506
Total assets	$ 449,264	$ 454,726
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries and affiliates[a]	$ 16,744	$ 30,231
Other borrowed funds, primarily commercial paper	62,010	59,891
Other liabilities	8,208	7,653
Long-term debt[b][c]	158,233	173,378
Total liabilities[c]	245,195	271,153
Total stockholders' equity	204,069	183,573
Total liabilities and stockholders' equity	$ 449,264	$ 454,726

Parent company – Statements of cash flows

Year ended December 31, (in millions)	2012	2011	2010
Operating activities			
Net income	$ 21,284	$ 18,976	$ 17,370
Less: Net income of subsidiaries and affiliates[a]	23,474	21,805	20,016
Parent company net loss	(2,190)	(2,829)	(2,646)
Cash dividends from subsidiaries and affiliates[a]	6,798	13,414	17,432
Other, net	2,401	889	1,685
Net cash provided by operating activities	7,009	11,474	16,471
Investing activities			
Net change in:			
Deposits with banking subsidiaries	16,100	20,866	7,692
Available-for-sale securities:			
Purchases	(364)	(1,109)	(1,387)
Proceeds from sales and maturities	621	886	745
Loans, net	(350)	153	(90)
Advances to subsidiaries, net	5,951	(28,105)	8,051
Investments (at equity) in subsidiaries and affiliates, net[a]	3,546	(1,530)	(871)
Net cash provided by/(used in) investing activities	25,504	(8,839)	14,140
Financing activities			
Net change in borrowings from subsidiaries and affiliates[a]	(14,038)	2,827	(2,039)
Net change in other borrowed funds	3,736	16,268	(11,843)
Proceeds from the issuance of long-term debt	28,172	33,566	21,610
Repayments of long-term debt	(44,240)	(41,747)	(32,893)
Excess tax benefits related to stock-based compensation	255	867	26
Redemption of preferred stock	–	–	(352)
Proceeds from issuance of preferred stock	1,234	–	–
Treasury stock and warrants repurchased	(1,653)	(8,863)	(2,999)
Dividends paid	(5,194)	(3,895)	(1,486)
All other financing activities, net	(701)	(1,622)	(641)
Net cash used in financing activities	(32,429)	(2,599)	(30,617)
Net increase/(decrease) in cash and due from banks	84	36	(6)
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	132	96	102
Cash and due from banks at the end of the year, primarily with bank subsidiaries	$ 216	$ 132	$ 96
Cash interest paid	$ 5,690	$ 5,800	$ 5,090
Cash income taxes paid, net	3,080	5,885	7,001

(a) Affiliates include trusts that issued guaranteed capital debt securities ("issuer trusts"). The Parent received dividends of $12 million, $13 million and $13 million from the issuer trusts in 2012, 2011 and 2010, respectively. For further discussion on these issuer trusts, see Note 21 on pages 297–299 of this Annual Report.

(b) At December 31, 2012, long-term debt that contractually matures in 2013 through 2017 totaled $19.3 billion, $25.1 billion, $21.6 billion, $17.5 billion and $17.3 billion, respectively.

(c) For information regarding the Firm's guarantees of its subsidiaries' obligations, see Note 21 and Note 29 on pages 297–299 and 308–315, respectively, of this Annual Report.

Selected quarterly financial data (unaudited)

(Table continued on next page)

As of or for the period ended	2012				2011			
(in millions, except per share, ratio and headcount data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Total net revenue	$ 23,653	$ 25,146	$ 22,180	$ 26,052	$ 21,471	$ 23,763	$ 26,779	$ 25,221
Total noninterest expense	16,047	15,371	14,966	18,345	14,540	15,534	16,842	15,995
Pre-provision profit	7,606	9,775	7,214	7,707	6,931	8,229	9,937	9,226
Provision for credit losses	656	1,789	214	726	2,184	2,411	1,810	1,169
Income before income tax expense	6,950	7,986	7,000	6,981	4,747	5,818	8,127	8,057
Income tax expense	1,258	2,278	2,040	2,057	1,019	1,556	2,696	2,502
Net income	$ 5,692	$ 5,708	$ 4,960	$ 4,924	$ 3,728	$ 4,262	$ 5,431	$ 5,555
Per common share data								
Net income per share: Basic	$ 1.40	$ 1.41	$ 1.22	$ 1.20	$ 0.90	$ 1.02	$ 1.28	$ 1.29
Diluted	1.39	1.40	1.21	1.19	0.90	1.02	1.27	1.28
Cash dividends declared per share[a]	0.30	0.30	0.30	0.30	0.25	0.25	0.25	0.25
Book value per share	51.27	50.17	48.40	47.48	46.59	45.93	44.77	43.34
Tangible book value per share[b]	38.75	37.53	35.71	34.79	33.69	33.05	32.01	30.77
Common shares outstanding								
Average: Basic	3,806.7	3,803.3	3,808.9	3,818.8	3,801.9	3,859.6	3,958.4	3,981.6
Diluted	3,820.9	3,813.9	3,820.5	3,833.4	3,811.7	3,872.2	3,983.2	4,014.1
Common shares at period-end	3,804.0	3,799.6	3,796.8	3,822.0	3,772.7	3,798.9	3,910.2	3,986.6
Share price[c]								
High	$ 44.54	$ 42.09	$ 46.35	$ 46.49	$ 37.54	$ 42.55	$ 47.80	$ 48.36
Low	38.83	33.10	30.83	34.01	27.85	28.53	39.24	42.65
Close	43.97	40.48	35.73	45.98	33.25	30.12	40.94	46.10
Market capitalization	167,260	153,806	135,661	175,737	125,442	114,422	160,083	183,783
Selected ratios								
Return on common equity	11%	12%	11%	11%	8%	9%	12%	13%
Return on tangible common equity[b]	15	16	15	15	11	13	17	18
Return on assets	0.98	1.01	0.88	0.88	0.65	0.76	0.99	1.07
Return on risk-weighted assets[d]	1.76	1.74	1.52	1.57	1.21	1.40	1.82	1.90
Overhead ratio	68	61	67	70	68	65	63	63
Deposits-to-loans ratio	163	158	153	157	156	157	152	145
Tier 1 capital ratio	12.6	11.9	11.3	11.9	12.3	12.1	12.4	12.3
Total capital ratio	15.3	14.7	14.0	14.9	15.4	15.3	15.7	15.6
Tier 1 leverage ratio	7.1	7.1	6.7	7.1	6.8	6.8	7.0	7.2
Tier 1 common capital ratio[e]	11.0	10.4	9.9	9.8	10.1	9.9	10.1	10.0
Selected balance sheet data (period-end)								
Trading assets	$ 450,028	$ 447,053	$ 417,324	$ 455,633	$ 443,963	$ 461,531	$ 458,722	$ 501,148
Securities	371,152	365,901	354,595	381,742	364,793	339,349	324,741	334,800
Loans	733,796	721,947	727,571	720,967	723,720	696,853	689,736	685,996
Total assets	2,359,141	2,321,284	2,290,146	2,320,164	2,265,792	2,289,240	2,246,764	2,198,161
Deposits	1,193,593	1,139,611	1,115,886	1,128,512	1,127,806	1,092,708	1,048,685	995,829
Long-term debt	249,024	241,140	239,539	255,831	256,775	273,688	279,228	269,616
Common stockholders' equity	195,011	190,635	183,772	181,469	175,773	174,487	175,079	172,798
Total stockholders' equity	204,069	199,639	191,572	189,269	183,573	182,287	182,879	180,598
Headcount	258,965	259,547	262,882	261,453	260,157	256,663	250,095	242,929

(Table continued from previous page)

As of or for the period ended	2012				2011			
(in millions, except ratio data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Credit quality metrics								
Allowance for credit losses	**$ 22,604**	**$ 23,576**	**$ 24,555**	**$ 26,621**	$ 28,282	$ 29,036	$ 29,146	$ 30,438
Allowance for loan losses to total retained loans	**3.02%**	**3.18%**	**3.29%**	**3.63%**	3.84%	4.09%	4.16%	4.40%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[f]	**2.43**	**2.61**	**2.74**	**3.11**	3.35	3.74	3.83	4.10
Nonperforming assets	**$ 11,734**	**$ 12,481**	**$ 11,397**	**$ 11,953**	$ 11,315	$ 12,468	$ 13,435	$ 15,149
Net charge-offs	**1,628**	**2,770**	**2,278**	**2,387**	2,907	2,507	3,103	3,720
Net charge-off rate	**0.90%**	**1.53%**	**1.27%**	**1.35%**	1.64%	1.44%	1.83%	2.22%

(a) On March 13, 2012, the Firm's quarterly stock dividend was increased from $0.25 to $0.30 per share.

(b) Tangible book value per share and ROTCE are non-GAAP financial measures. Tangible book value per share represents the Firm's tangible common equity divided by period-end common shares. ROTCE measures the Firm's annualized earnings as a percentage of tangible common equity. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 76–77 of this Annual Report.

(c) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.

(d) Return on Basel I risk-weighted assets is the annualized earnings of the Firm divided by its average risk-weighted assets.

(e) Basel I Tier 1 common capital ratio ("Tier 1 common ratio") is Tier 1 common capital ("Tier 1 common") divided by risk-weighted assets. The Firm uses Tier 1 common capital along with the other capital measures to assess and monitor its capital position. For further discussion of the Tier 1 common ratio, see Regulatory capital on pages 117–120 of this Annual Report.

(f) Excludes the impact of residential real estate PCI loans. For further discussion, see Allowance for credit losses on pages 159–162 of this Annual Report.

Active mobile customers: Retail banking users of all mobile platforms who have been active in the past 90 days.

Allowance for loan losses to total loans: Represents period-end allowance for loan losses divided by retained loans.

Assets under management: Represent assets actively managed by AM on behalf of its Private Banking, Institutional and Retail clients. Includes "Committed capital not Called," on which AM earns fees. Excludes assets managed by American Century Companies, Inc., in which the Firm sold its ownership interest on August 31, 2011.

Assets under supervision: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Beneficial interests issued by consolidated VIEs: Represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Client advisors: Investment product specialists, including Private Client Advisors, Financial Advisors, Financial Advisor Associates, Senior Financial Advisors, Independent Financial Advisors and Financial Advisor Associate trainees, who advise clients on investment options, including annuities, mutual funds, stock trading services, etc., sold by the Firm or by third party vendors through retail branches, Chase Private Client branches and other channels.

Client investment managed accounts: Assets actively managed by Chase Wealth Management on behalf of clients. The percentage of managed accounts is calculated by dividing managed account assets by total client investment assets.

Contractual credit card charge-off: In accordance with the Federal Financial Institutions Examination Council policy, credit card loans are charged off at the earlier of: (i) the end of the month in which the account becomes 180 days past due or (ii) within 60 days from receiving notification about a specific event (e.g., bankruptcy of the borrower).

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event, which may include, among other events, the bankruptcy or failure to pay by, or certain restructurings of the debt of, the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee, comprised of 10 sell-side and five buy-side ISDA member firms.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again (or vice versa). The duration of a credit cycle can vary from a couple of years to several years.

CUSIP number: A CUSIP (i.e., Committee on Uniform Securities Identification Procedures) number consists of nine characters (including letters and numbers) that uniquely identify a company or issuer and the type of security and is assigned by the American Bankers Association and operated by Standard & Poor's. This system facilitates the clearing and settlement process of securities. A similar system is used to identify non-U.S. securities (CUSIP International Numbering System).

Deposit margin: Represents net interest income expressed as a percentage of average deposits.

FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

Group of Seven ("G7") nations: Countries in the G7 are Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

G7 government bonds: Bonds issued by the government of one of countries in the G7 nations.

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

Home equity - senior lien: Represents loans where JP Morgan Chase holds the first security interest on the property.

Home equity - junior lien: Represents loans where JP Morgan Chase holds a security interest that is subordinate in rank to other liens.

Interchange income: A fee paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

LLC: Limited Liability Company.

Loan-to-value ("LTV") ratio: For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices comprise actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised

loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all lien positions related to the property. Combined LTV ratios are used for junior lien home equity products.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management uses this non- GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Master netting agreement: An agreement between two counterparties who have multiple derivative contracts with each other that provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high combined loan-to-value ("CLTV") ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime

Prime mortgage loans are made to borrowers with good credit records and a monthly income at least three to four times greater than their monthly housing expense (mortgage payments plus taxes and other debt payments). These borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are loans to customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

MSR risk management revenue: Includes changes in the fair value of the MSR asset due to market-based inputs, such as interest rates and volatility, as well as updates to assumptions used in the MSR valuation model; and derivative valuation adjustments and other, which represents changes in the fair value of derivative instruments used to offset the impact of changes in the market-based inputs to the MSR valuation model.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

NA: Data is not applicable or available for the period presented.

Net charge-off rate: Represents net charge-offs (annualized) divided by average retained loans for the reporting period.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Participating securities: Represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

Personal bankers: Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.

Portfolio activity: Describes changes to the risk profile of existing lending-related exposures and their impact on the allowance for credit losses from changes in customer profiles and inputs used to estimate the allowances.

Pre-provision profit: Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pretax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by

measuring earnings after all costs are taken into consideration. It is one basis upon which management evaluates the performance of AM against the performance of their respective competitors.

Principal transactions revenue: Principal transactions revenue includes realized and unrealized gains and losses recorded on derivatives, other financial instruments, private equity investments, and physical commodities used in market making and client-driven activities. In addition, Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk management activities including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specified risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives, including the synthetic credit portfolio.

Purchased credit-impaired ("PCI") loans: Represents loans that were acquired in the Washington Mutual transaction and deemed to be credit-impaired on the acquisition date in accordance with FASB guidance. The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

Real assets: Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.

Real estate investment trust ("REIT"): A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate related assets by pooling their capital to purchase and manage income property (i.e., equity REIT) and/or mortgage loans (i.e., mortgage REIT). REITs can be publicly-or privately-held and they also qualify for certain favorable tax considerations.

Receivables from customers: Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets for the wholesale lines of business.

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e. excludes loans held-for-sale and loans at fair value).

Risk-weighted assets ("RWA"): Risk-weighted assets consist of on- and off-balance sheet assets that are assigned to one of several broad risk categories and weighted by factors representing their risk and potential for default. On-balance sheet assets are risk-weighted based on the estimated credit risk associated with the obligor or counterparty, the nature of any collateral, and the guarantor, if any. Off-balance sheet assets such as lending-related commitments, guarantees, derivatives and other applicable off-balance sheet positions are risk-weighted by multiplying the contractual amount by the appropriate credit conversion factor to determine the on-balance sheet credit equivalent amount, which is then risk-weighted based on the same factors used for on-balance sheet assets. Risk-weighted assets also incorporate a measure for market risk related to applicable trading assets-debt and equity instruments, and foreign exchange and commodity derivatives. The resulting risk-weighted values for each of the risk categories are then aggregated to determine total risk-weighted assets.

Sales specialists: Retail branch office and field personnel, including Business Bankers, Relationship Managers and Loan Officers, who specialize in marketing and sales of various business banking products (i.e., business loans, letters of credit, deposit accounts, Chase Paymentech, etc.) and mortgage products to existing and new clients.

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Short sale: A short sale is a sale of real estate in which proceeds from selling the underlying property are less than the amount owed the Firm under the terms of the related mortgage and the related lien is released upon receipt of such proceeds.

Taxable-equivalent basis: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

Troubled debt restructuring ("TDR"): A TDR is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury.

Value-at-risk ("VaR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired certain of the assets of the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC.

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Gordon A. Smith
CEO, Consumer & Community Banking

Matthew E. Zames
Co-Chief Operating Officer

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Corporate Communications

Anthony J. Horan
Secretary

Mark W. O'Donovan
Controller

Lauren M. Tyler
General Auditor

Sarah M. Youngwood
Investor Relations

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Robert C. Priestley, ASEAN CEO

Gregory L. Guyett, Greater China CEO

Europe, Middle East, Africa

Daniel E. Pinto

Emilio Saracho, Deputy CEO

Latin America

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Robert C. Priestley

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Switzerland
Pascal Ravery

Turkey
Emre Derman

Middle East, North Africa

Middle East/North Africa
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Ali Moosa

Saudi Arabia
Abdulaziz Al Helaissi

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Sub-Saharan Africa
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Ghana
Roderic Norman

Nigeria
Tosin T. Adewuyi

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Glenn Tilton

JPMorgan Chase & Co.

Corporate headquarters

270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000
jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities LLC
J.P. Morgan Securities plc

Annual Report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the U.S. Securities and Exchange Commission will be made available without charge upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070

Stock listing

New York Stock Exchange
London Stock Exchange
Tokyo Stock Exchange

The New York Stock Exchange ticker symbol for the common stock of JPMorgan Chase & Co. is JPM.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations website at jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000

Directors

To contact any of the Board members or committee chairs, the Presiding Director or the non-management directors as a group, please mail correspondence to:

JPMorgan Chase & Co.
Attention (Board member(s))
Office of the Secretary
270 Park Avenue
New York, NY 10017-2070

The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct, the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting our website at jpmorganchase.com and clicking on "Governance" under the "About us" tab.

Transfer agent and registrar

Computershare Shareowner Services LLC
480 Washington Boulevard
Jersey City, NJ 07310-2053
Telephone: 800-758-4651
computershare.com

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From all other locations: 201-680-6578 (collect)

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Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, NY 10017

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2013 Investor Day agenda

Presentation	Speaker	Start time
Opening remarks Firmwide Overview	Marianne Lake	8:30AM
Consumer & Community Banking	Gordon Smith	9:15AM
Break		10:45AM
Commercial Banking	Doug Petno	11:00AM
Asset Management	Mary Erdoes	11:30AM
Break		12:00PM
Lunch		12:15PM
Corporate & Investment Bank	Mike Cavanagh/Daniel Pinto	1:15PM
Closing remarks and Q&A	Jamie Dimon	2:35PM

FIRM OVERVIEW

Marianne Lake, Chief Financial Officer

February 26, 2013

JPMorgan Chase & Co.

Agenda

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JPMorgan Chase's fundamentals are extremely strong

JPMorgan Chase overview

Excellent client franchises

- Best-in-class client franchises; focus on serving clients
- Strong leadership positions
- Experienced management team; deep bench of talent

Competitive advantages

- Strength of the platform provides competitive advantage
- Broad customer base; global reach; full platform
- $14B of cross-sell revenue and $3B of cost synergies
- Additional branding, funding benefits and earnings diversification

Strong returns and growth opportunities

- Delivered strong consistent returns
- Continuous investments support organic growth
- Continuous expense discipline

Capital and regulatory

- Consistent focus on "fortress" operating model
- Committed to comply with broad set of regulatory changes
- Compliant with Basel III Tier I common[1] ratio of 9.5% and 100% LCR by end of 2013

[1] See note 3 on slide 41; will depend on interpretation of rules and decisions on usage of excess capital

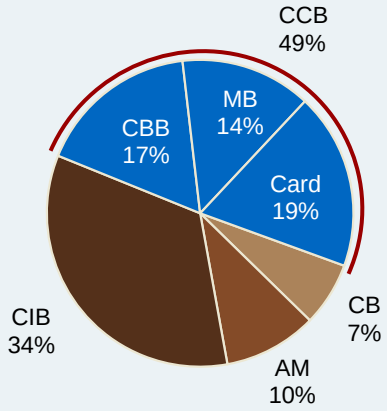
Performance summary

JPMorgan Chase overview – Performance summary

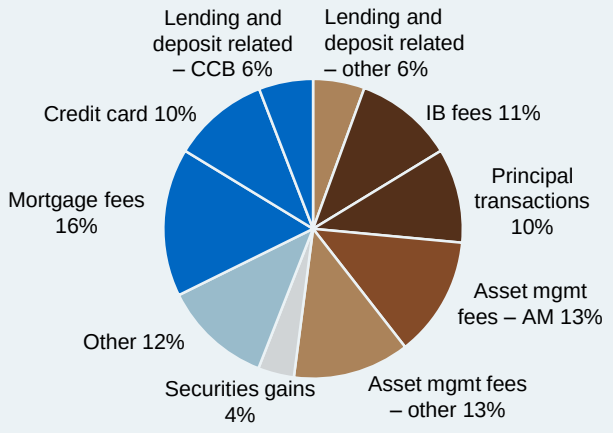
$mm, excluding EPS	FY2011	FY2012
Revenue (FTE)[1]	$99,767	$99,890
Credit Costs	7,574	3,385
Expense	62,911	64,729
Reported net income	$18,976	$21,284
Net income applicable to common stock	$17,568	$19,877
Reported EPS	$4.48	$5.20
ROTCE[2]	15%	15%
Return on Basel I RWA (excl. DVA)[3]	1.5	1.7
Basel I Tier 1 common ratio[4]	10.1	11.0
Basel III Tier 1 common ratio[4,5]	7.9	8.7

Impact of run-off and mitigants through 2014 would add ~+100bps[6]

Firmwide revenue – FY2012[1,7]



NIR represents 54% of revenue – FY2012 NIR mix[1]



Note: Totals may not sum due to rounding
[1] See note 1 on slide 41
[2] See note 2 on slide 41
[3] See note 4 on slide 41
[4] See note 3 on slide 41
[5] Estimated impact of final Basel 2.5 Rules and Basel III Advanced NPR reflected in 2012, but not 2011
[6] Includes the effect of bringing forward run-off and data/model enhancements
[7] Excludes Corp/PE 2012 loss of $1.2B from total revenue

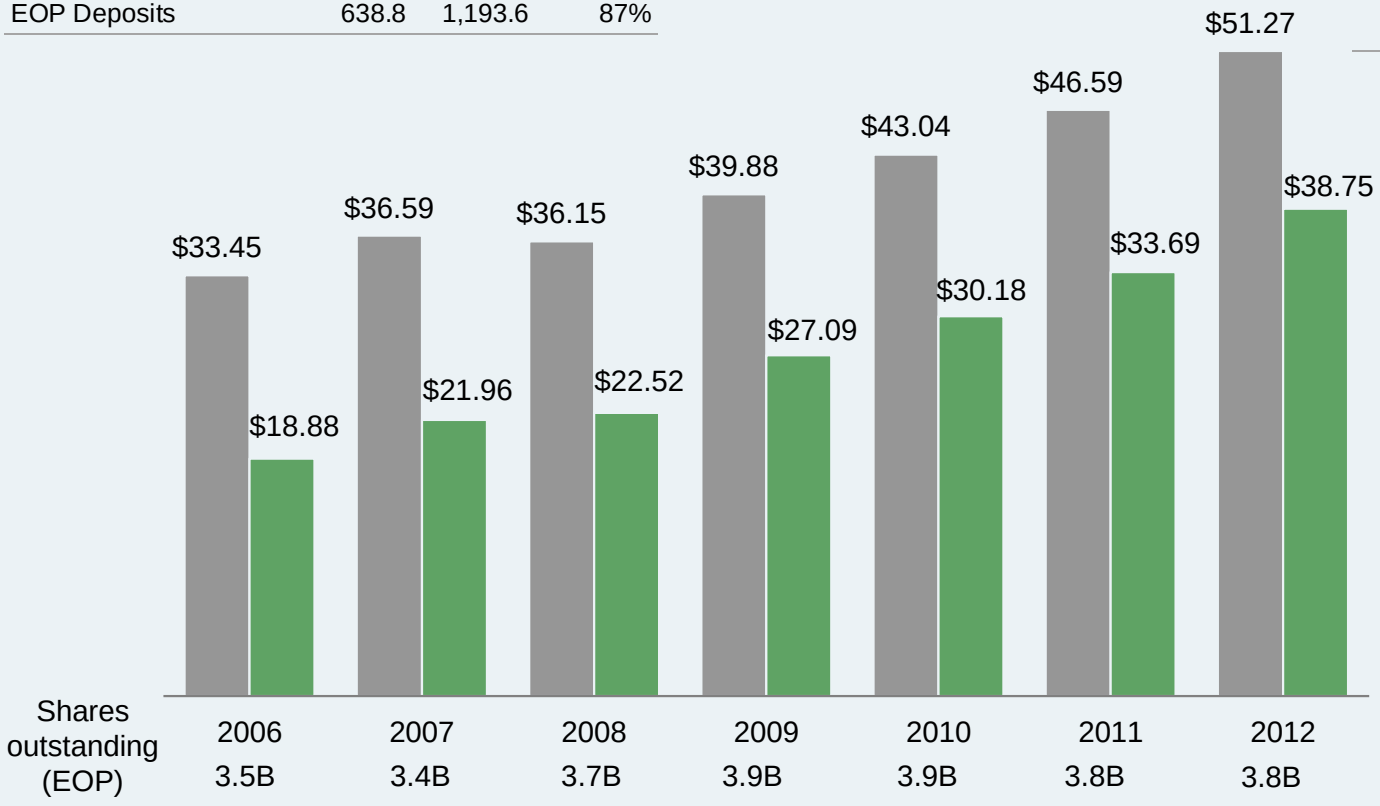
Book value per share: Growing our fortress balance sheet

JPMorgan Chase overview – Performance summary

Key metrics since FY2006

($B)	2006	2012	%Δ
Tangible common equity	$65.4	$147.4	126%
Basel I Tier 1 common	7.3%	11.0%	3.7[1]
Loan loss reserve	$7.3	$21.9	$14.6[1]
Repurchase reserve[2]	0.0	2.8	2.8[1]
EOP Deposits	638.8	1,193.6	87%

Growth	YoY	5Y[3]	10Y[3]
BVPS	10%	7%	10%
TBVPS	15	12	9
EPS[4]	16	4	21



[1] Actual change
[2] Excludes legal reserves associated with mortgage-backed securities litigation
[3] CAGR
[4] Excl.DVA, growth YoY would be 25%; see note 6 of slide 41

Total shareholder returns

JPMorgan Chase overview – Returns

1 Annualized total return

Annualized total return	3/26/00-2/19/13
ONE/JPM[2]	9.4%
BKX	(0.1)
S5FINL	(0.3)
SPX	1.9

2 Annualized total return

Annualized total return	1/13/04-2/19/13
JPM	5.4%
BKX	(3.3)
S5FINL	(2.6)
SPX	5.6

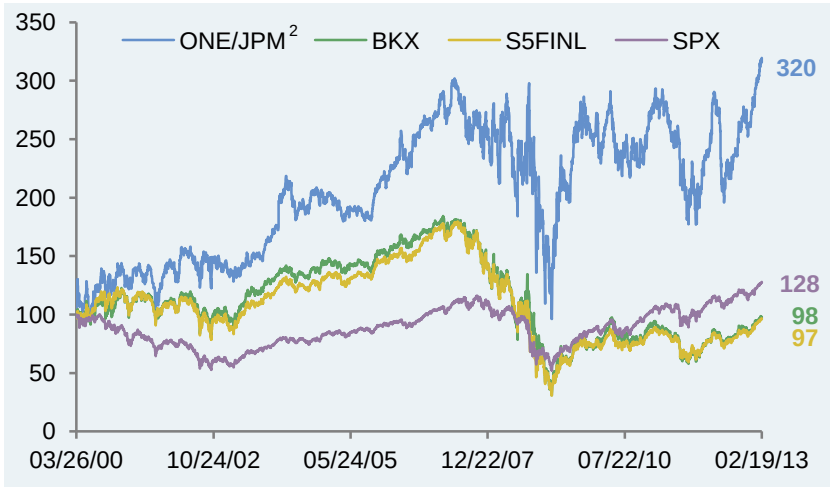
3 Annualized total return

Annualized total return	1/1/08-2/19/13
JPM	4.8%
BKX	(6.6)
S5FINL	(7.0)
SPX	3.1

4 Annualized total return

Annualized total return	1/1/12-2/19/13
JPM	46.5%
BKX	38.2
S5FINL	35.4
SPX	21.7

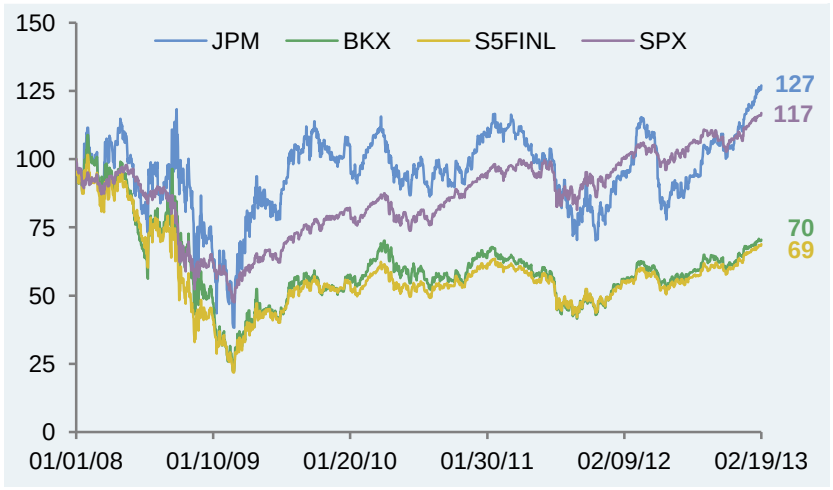
1 Annualized total shareholder returns – March 26, 2000[1]



2 Annualized total shareholder returns – January 13, 2004[1]



3 Annualized total shareholder returns – 5-year return



4 Annualized total shareholder returns – 1-year return



Source: Bloomberg

Note: Annualized total shareholder returns assume dividends are reinvested on pay-date

Note: "BKX" is the KBW Bank Index; "S5FINL" is the S&P 500 Financials Index; "SPX" is the S&P 500 Index

[1] March 26, 2000 represents the day before Jamie Dimon started as CEO of Bank One Corporation (ONE); January 13, 2004 represents the day before JPM agreed to acquire ONE

[2] Represents ONE's annualized total return until June 30, 2004 and is subsequently projected to mirror JPM's total return post merger completion on July 1, 2004

Building market leading franchises

JPMorgan Chase overview – Franchise leadership

Chase – CCB

"Acquiring and deepening relationships; focus on customer satisfaction"

- ~50% of U.S. households have a Chase relationship
- #1 customer satisfaction among large banks[1]
- #1 rated mobile app[2] ; #1 online financial services destination[3]
- #1 ATM network; #2 in branches; ~3x industry avg. deposit growth[4]
- #1 customer satisfaction of large banks for originations/servicing[5]
- #1 Small Business Administration lender[6] – 3rd straight year
- #2 in mortgage originations[7], up from #5 in 2006
- #1 in total U.S. payments volume[8]; #1 Global Visa issuer

JPMorgan – CIB

"Market share gains, client relationships, international expansion"

- ~80% of Fortune 500 companies are our clients
- CIB presence in 59 countries
- #1 in Global IB fees; #1 in Markets revenue share
- #1 in All American Fixed Income & Equity Research
- $1T+ of securities traded and settled daily
- $980T of USD payments in FY2012; $4T average daily
- #1 USD wire clearer with 20% share of Fed and CHIPS
- $356B in average client deposits and other third-party liabilities

Commercial Banking

"Deep relationships, efficiency, new markets expansion"

- 10 consecutive quarters of loan growth
- #1 U.S. multifamily lender since 2008[10]
- #1 large middle market syndicated lender[9]
- 89% customer satisfaction[11]

Asset Management

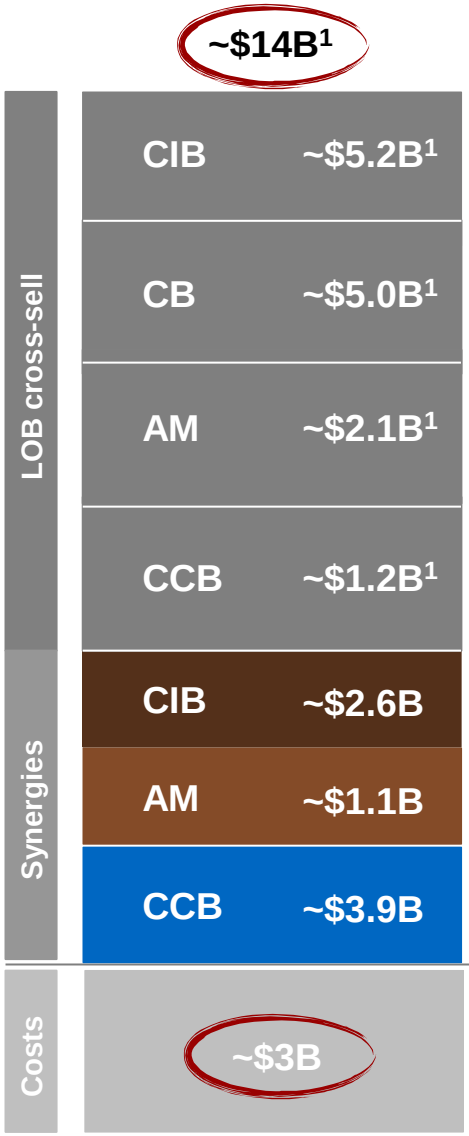
"Global reach, breadth of product and clients, investment performance"

- #2 U.S. active mutual fund rank (by flows)[12]
- #1 Private Bank for Ultra-High-Net Worth globally[13]; 10 consecutive years of Private Banking revenue growth
- 15 consecutive quarters of positive long-term flows; $2.1T in clients assets; 76% of fund AUM in top two quartiles (5-year)

[1] American Customer Satisfaction Index (ACSI), December 2012
[2] Keynote, November 2012
[3] Compete.com Rankings, December 2012
[4] FDIC data as of June 2012
[5] J.D. Power Survey; JPM ranked #4 for customer satisfaction in originations and #4 in servicing on an overall basis
[6] # of units, per SBA data
[7] Based on Inside Mortgage Finance
[8] Represents credit, debit and prepaid combined payments volume
[9] Thomson Reuters FY2012
[10] FDIC 2008 – YTD 3Q12
[11] 2012 Chase Relationship Survey
[12] Strategic Insight 2012
[13] Euromoney 2012

Firmwide cross-sell and synergies

JPMorgan Chase overview – Franchise leadership



Select revenue cross-sell examples (2012 data)

- CB and CIB cross-sell: $4.0B
  - ~$2.4B: TS revenue reported in CB (>80% of CB clients use TS products)
  - ~$1.6B: gross IB revenue from CB clients (31% of NA IB revenue[2])
- AM and CIB cross-sell: ~$1.0B
  - AM is an important client of CIB's global custody and fund services
  - The Private Bank (PB) is a key distribution channel for CIB equity offerings
  - Referrals between CIB and PB result in incremental IB transactions/PB clients
- AM and CCB cross-sell: ~$0.6B – JPM IM products sold through branches (incl. CPC)
- AM and CB cross-sell: ~$0.5B – Sale of IM products to CB clients
- CB and CCB cross-sell: ~$0.2B – Paymentech revenue for CB clients; ~$0.2B – Global Commercial Card revenue for CB clients; ~55% of CB clients visit a branch quarterly
- CIB and CCB cross-sell: ~$0.2B – TS products sold through Business Banking clients

- ~$2.0B: Global Corporate Bank incremental revenue between 2009 and 2012
- ~$0.5B: Gross FX revenue generated by TSS clients

- ~$1.1B: IM products sold through the PB

- ~$1.5B: Credit Cards sold through branches
- ~$0.2B: Products sold to Card customers
- ~$0.1B: Bus. Banking referrals to Paymentech
- ~$2.2B: Mortgage originations though branches

- Primarily procurement, also includes technology, operations and other

Other network benefits – branding, funding and earnings diversification

Note: Totals may not sum due to rounding

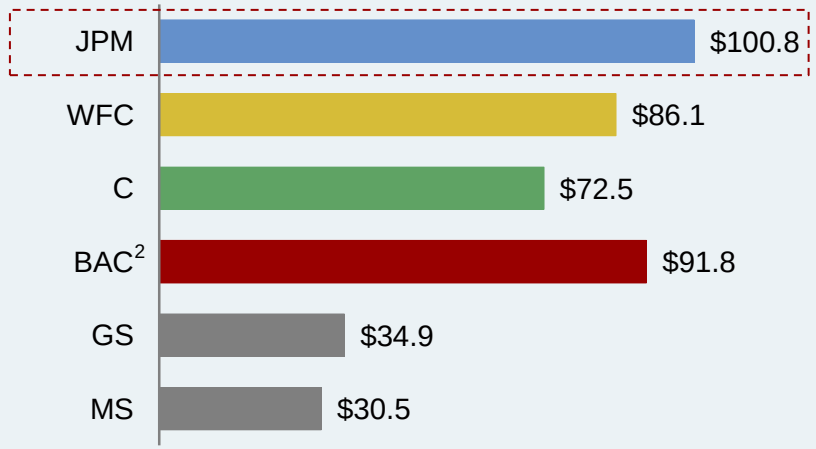
[1] Cross-sell revenue counted in both LOBs generating the revenue in partnership and therefore must be divided by 2 as they are totaled into the $14B

[2] Calculated based on gross domestic IB revenue for SLF, M&A, Equity Underwriting and Bond Underwriting

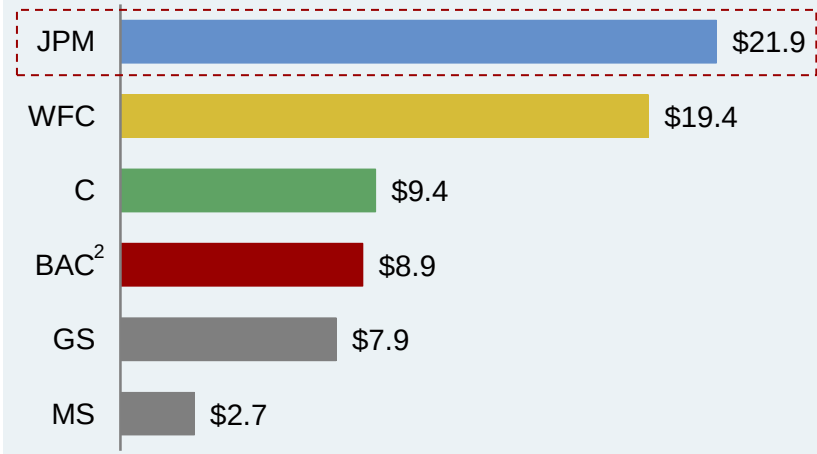
JPM continues to be a leader

JPMorgan Chase overview – Franchise leadership

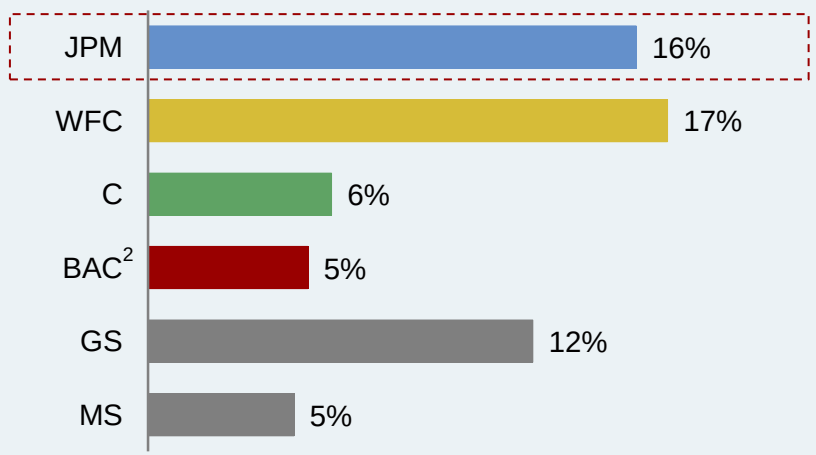
FY2012 Managed revenue[1] ($B)



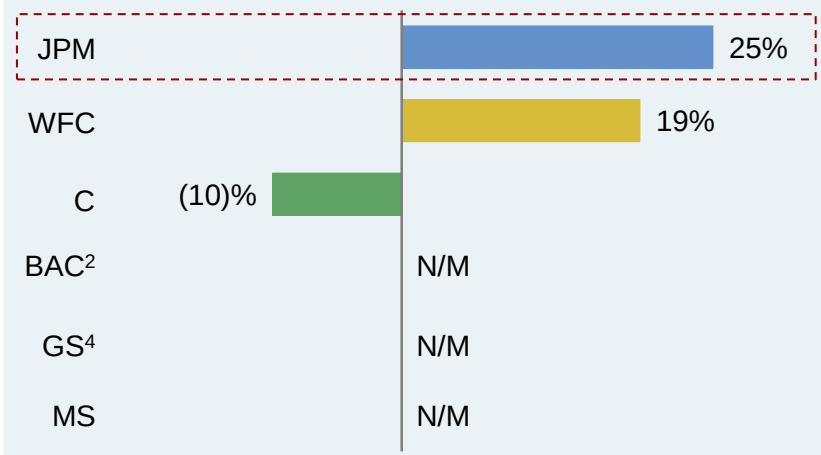
FY2012 Net income[1] ($B)



FY2012 ROTCE[1]



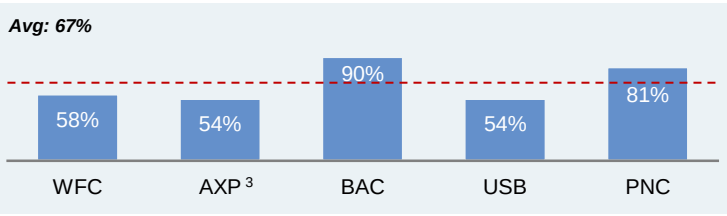
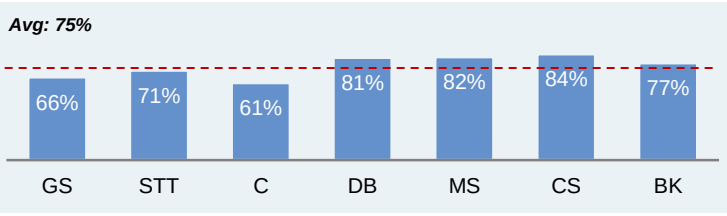
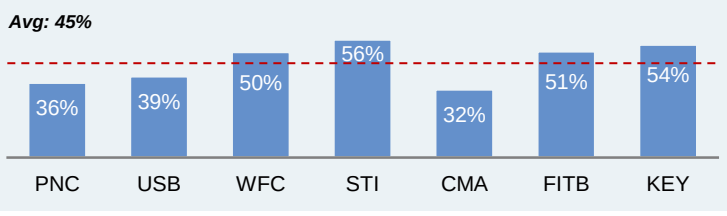
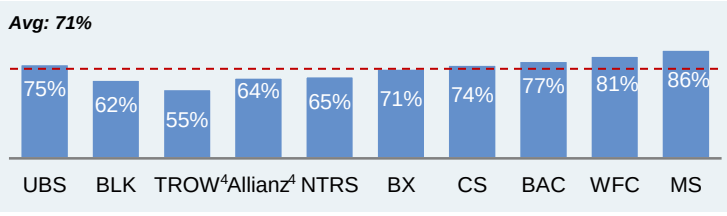
YoY EPS growth[1,3]



[1] All metrics are excluding DVA. All metrics adjust for DVA at a marginal tax rate of 38% for all peers; see note 4 on slide 41
[2] BAC adjusted for DVA and fair value option adjustment of ($7.6)B
[3] YoY growth from 2011 to 2012
[4] 290%

JPM efficiency versus best-in-class peers

JPMorgan Chase overview – Franchise leadership

	JPMorgan Chase	Best-in-class	
	JPM overhead ratio	Best-in-class peer[1] overhead ratios weighted by JPM revenue mix	Peer overhead ratios[1]
CCB	58%	56% WFC & AXP	
CIB	62%[2] (excl. DVA)	67% GS (excl. DVA) & STT	
CB	35%	37% Avg. of PNC & USB	
AM	71%	69% UBS WM & BLK	
Overhead ratio (excl. DVA)	64%[5]	65%[6]	

Note: JPM data presented on a managed basis; JPM and peer data represent full-year 2012 data, except where noted; All data for CIB and peer banking businesses is excl. DVA

[1] Peer data reflects JPM equivalent business segment results with the exception of Goldman Sachs, T. Rowe Price, Blackrock and Blackstone

[2] See note 6 on slide 41

[3] For American Express U.S. Card Services (USCS), estimated rewards expense is removed from expenses and netted against revenue, consistent with industry practice

[4] Allianz Asset Management and Northern Trust Personal Financial Services results as of 3Q12

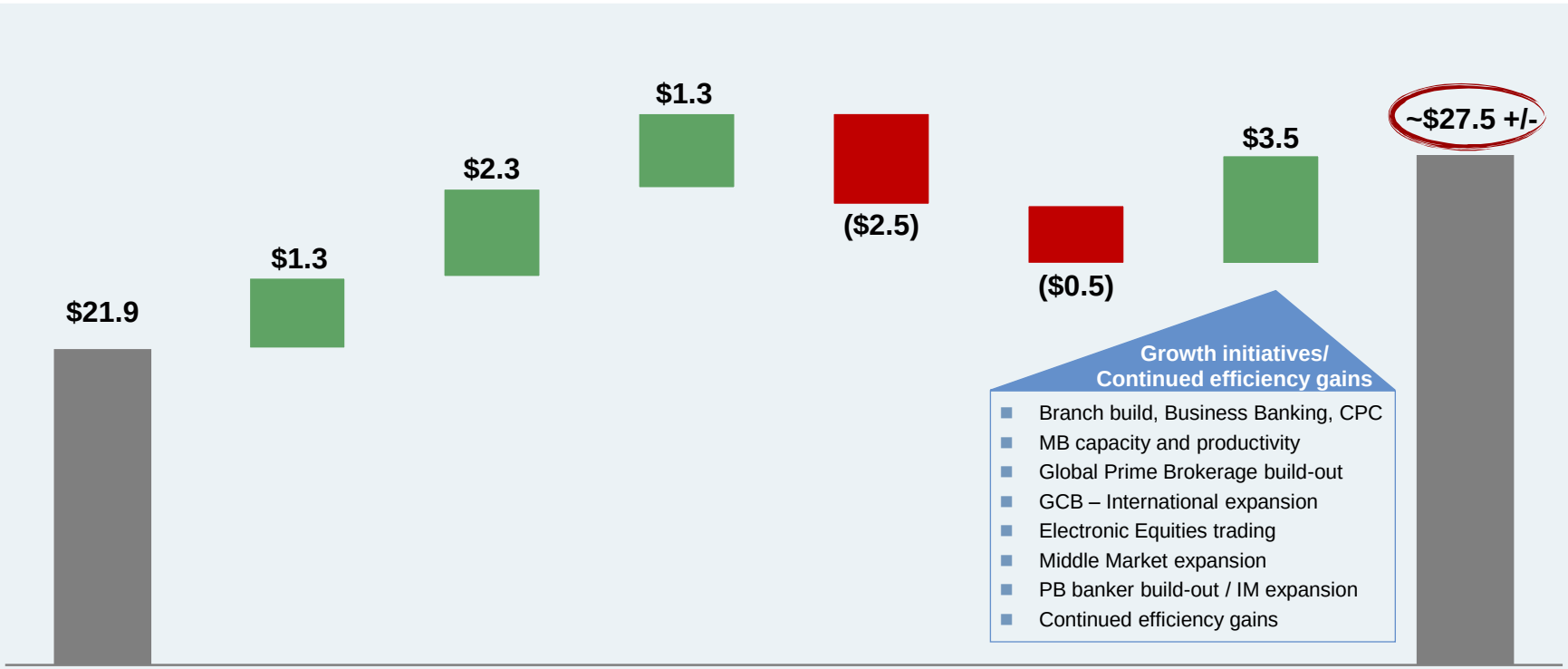
[5] See note 4 on slide 41

[6] Best-in-class overhead ratio represents Wells Fargo Community Banking, American Express USCS, Goldman Sachs, State Street Investment Servicing, US Bancorp Wholesale Banking and CRE, PNC Corporate & Institutional Banking, UBS International Wealth Management and Wealth Management Americas and Blackrock weighted based on JPM's revenue mix

Earnings walk

JPMorgan Chase overview – Earnings power

Net income build simulation ($B)



Note: Figures tax effected at 38%, where applicable

[1] See note 4 on slide 41

[2] Represents $2.2B (pretax) of significant revenue items including ($5.8)B of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and ($449)mm of losses incurred by CIO from the retained index credit derivative positions for the three months ended September 30, 2012; $1.5B CIO securities gains, $1.1B benefit from WaMu bankruptcy settlement (1Q12), $0.7B from full recovery of Bear Stearns related first loss note (FY2012) and $0.9B gains from TruPS redemption (3Q12)

[3] Represents total Corporate litigation expense in FY2012 ($3.7B pretax)

[4] Represents estimated 12 month NII benefit of $2.1B (pretax) from +100bp interest rate change

[5] Includes FY2012 loan loss releases ($3.5B after tax negative adjustment) and normalized net charge-offs ($1.0B after tax positive adjustment) based on through-the-cycle NCO rates

[6] Represents Mortgage Banking earnings target less 2012 Mortgage Banking reported earnings. Excludes REP credit costs

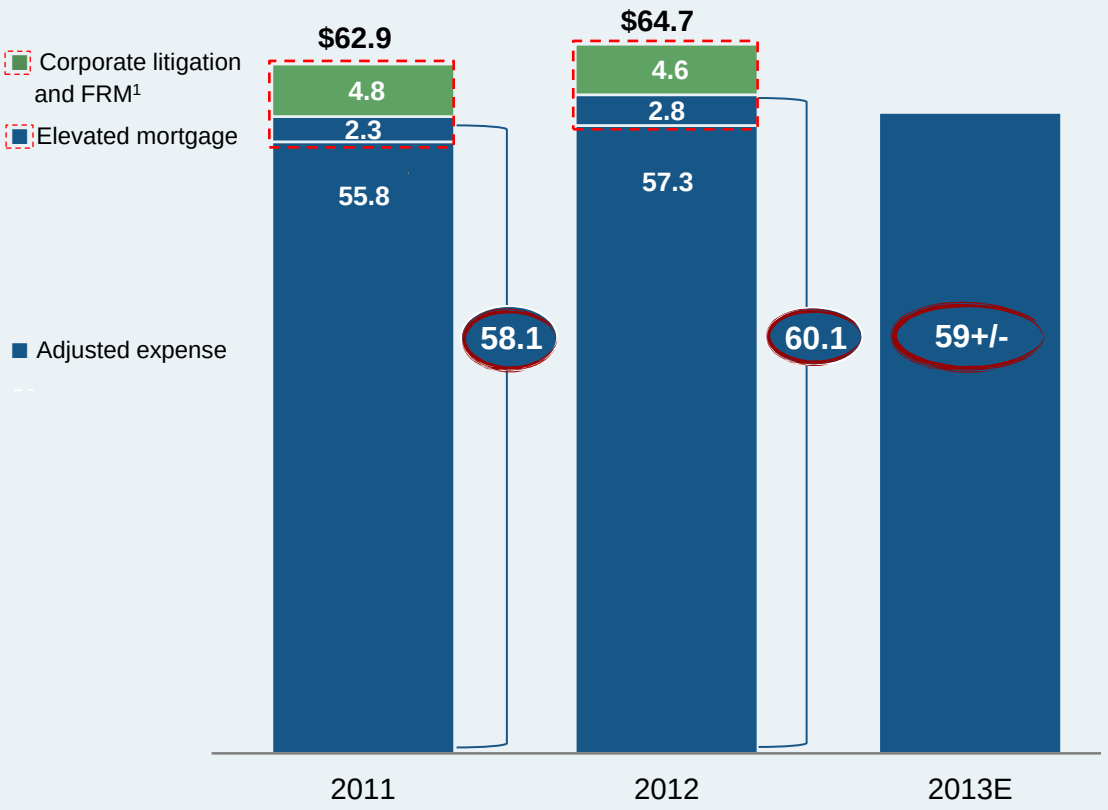
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Firmwide expense by category – An important focus area for us

Expense and investments

Firmwide expense ($B)



Adj. exp. incl. IB comp	**$58.1**	**$60.1**
IB comp	(8.9)	(8.5)
Adjusted exp.	**$49.2**	**$51.6**

- **Expense reduction of $1B +/-**
  - MB expense reduction
  - CIB cost synergies
  - Continued efficiency initiatives
  - Significant ongoing investment
  - Higher compliance costs self-funded by efficiencies
  - IB comp expected to remain relatively consistent
- Overall headcount will decrease by 4,000 +/-

[1] Foreclosure-related matters

Overview of select investments

Expense and investments

2012 expense and NI impact of cumulative spend from select investments ($mm, except where noted)

LOB	Investment	2012 Expense for aggregate investments[1]	Comments	Target annual net income
CCB	Branch builds	~$1,200	■ Portfolio of branches built since beginning of 2002, 150 in 2012 ■ Average branch contributes $1mm+ to pre-tax income when mature ■ 4-year +/- break-even and 8-year +/- payback for 2002-2012 portfolio	$600 +/-
	Business Banking	~120	■ 1,200 new RMs & business bankers hired since beginning of 2009 ■ Expansion market branches fully staffed and approaching core market productivity levels	600 +/-
	Chase Private Client	~115	■ Added 1,200 CPC locations since beginning of 2011 ■ 22K clients as of 2011; 100K+ clients as of 2012 ■ $11B net new money in 2012	600 +/-
	Retail loan officers	~50	■ Added nearly 1,600 loan officers since beginning of 2011 to grow retail capacity ■ Target net income reflects 2011 and 2012 hires	300 +/-
	Mortgage Express	~140	■ Improve productivity through origination platform investments ■ Investment started in 2011; system live effective Dec '12; fully deployed by 2014	100 +/-
CIB	Global Prime Brokerage build-out	~35	■ Build out int'l platform to facilitate clients' regional strategies ■ Successful launch of int'l platform in 2011; steady state 2014/15	175 +/-
	International expansion/ Global Corporate Bank	~275	■ Build out int'l platforms and branches to offer local product capabilities ■ ~400 new hires, include ~185 bankers hired since end 2009	600 +/-
	Equities electronic trading	~50	■ Focused on building best-in-class electronic trading capabilities ■ Grew low-touch equities revenue at 17% CAGR since 2010	100 +/-
CB	Middle Market expansion[2]	~125	■ Expand CB coverage into new markets ■ Positive return on investment in 2012; continue to add 250+ clients a year	400 +/-
AM	Private Bankers/ IM sales expansion IM business initiatives	~500	■ Hired ~500 PB client advisors and ~300 IM salespeople and investors since beginning of 2010 ■ Expansion investments were breakeven in 2012	600 +/-
		~$2,600	**2012 NI impact: ~$600mm**	**~$4,100**

Expect ~$3B of net income in 2016 run-rate

[1] Reflects expenses related to select investments with overhead ratios higher than business average
[2] Includes WaMu as well as out-of-footprint expansion markets

Building international leading franchises – Substantial progress

Investments

	CIB	CB	AM
International clients	■ 61% of CIB clients	■ 26% of our Middle Market clients have operations in foreign countries ■ 58% of Chase Middle Market clients are active globally[1] and expect international sales to increase in 5 years[2]	■ 27% of HNW and UHNW clients
International revenue[3]	■ 47%	■ 3%; up 74% from 2010	■ 34%
International expansion target	■ $175mm net income for Prime Brokerage ■ $600mm net income for GCB	■ ~$165mm 5-year international net income	■ ~$300mm/year of international AM net income growth
Other international metrics	■ 50% international loan growth since 2010 ■ 31% growth in international EFT volume since 2010 ■ Best IB in Latin America (Latin Finance, 2012) ■ European IB of the year (Financial News, 2011)	■ 45% international loan growth since 2010 ■ 118% international deposit growth since 2010 ■ Excellence Award for International Service in Middle Market Banking (Greenwich Associates, 2012)	■ 90% international loan growth since 2010 ■ 16% international deposit growth since 2010 ■ Best Private Bank for UHNW clients for Western Europe (Euromoney, 2012) ■ Asset Manager of the Year in Asia (Asian Investor, 2012)

[1] Includes FX
[2] Chase Middle Market Business Leaders Outlook survey, March 2012
[3] Represents international percentage of LOB revenue

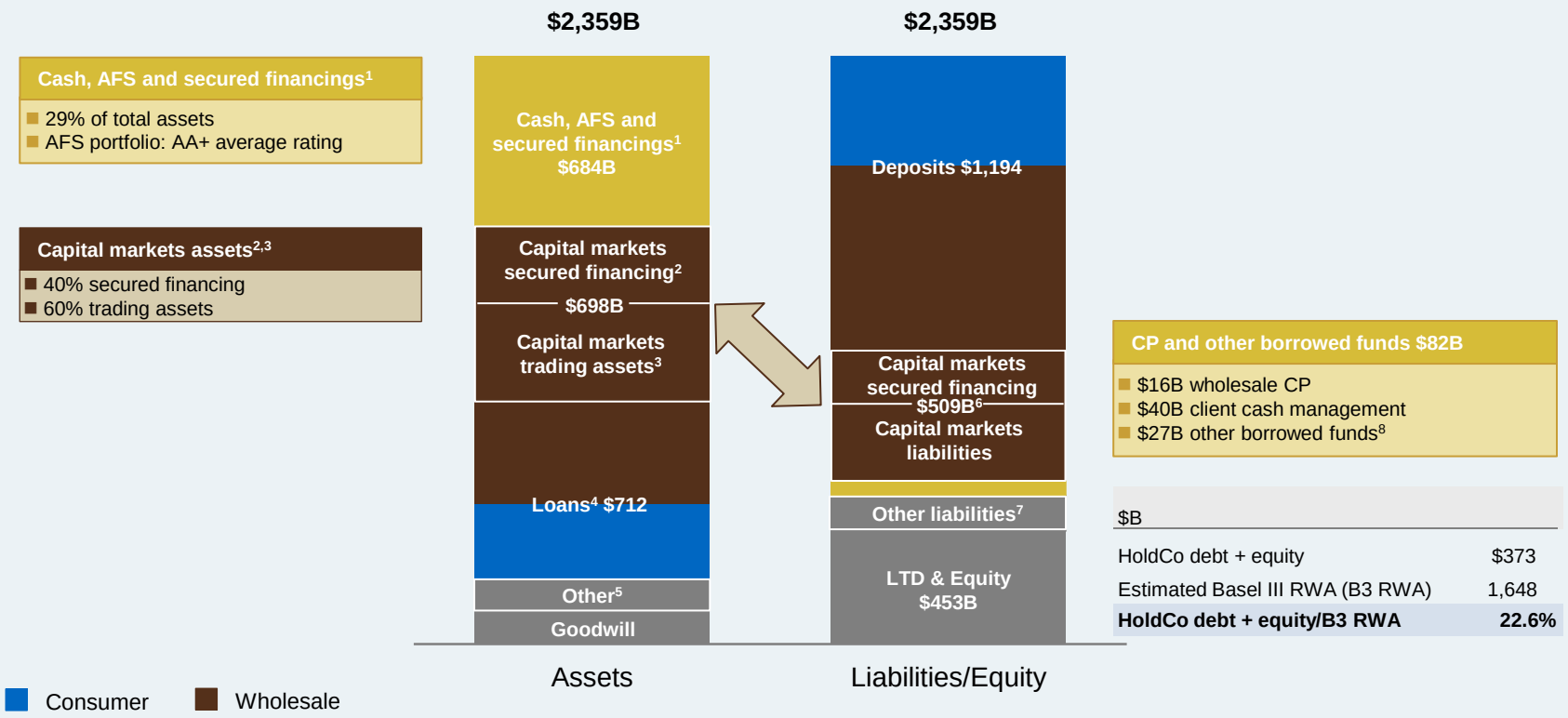
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Fortress JPMorgan Chase balance sheet

Balance sheet – Fortress balance sheet

JPMorgan Chase balance sheet – December 31, 2012 ($B)



- ~$700B[1] high quality available assets
- 60% loan-to-deposit ratio
- HoldCo pre-funding[9]: 23 months
- Less than $40B wholesale ST unsecured debt[10]

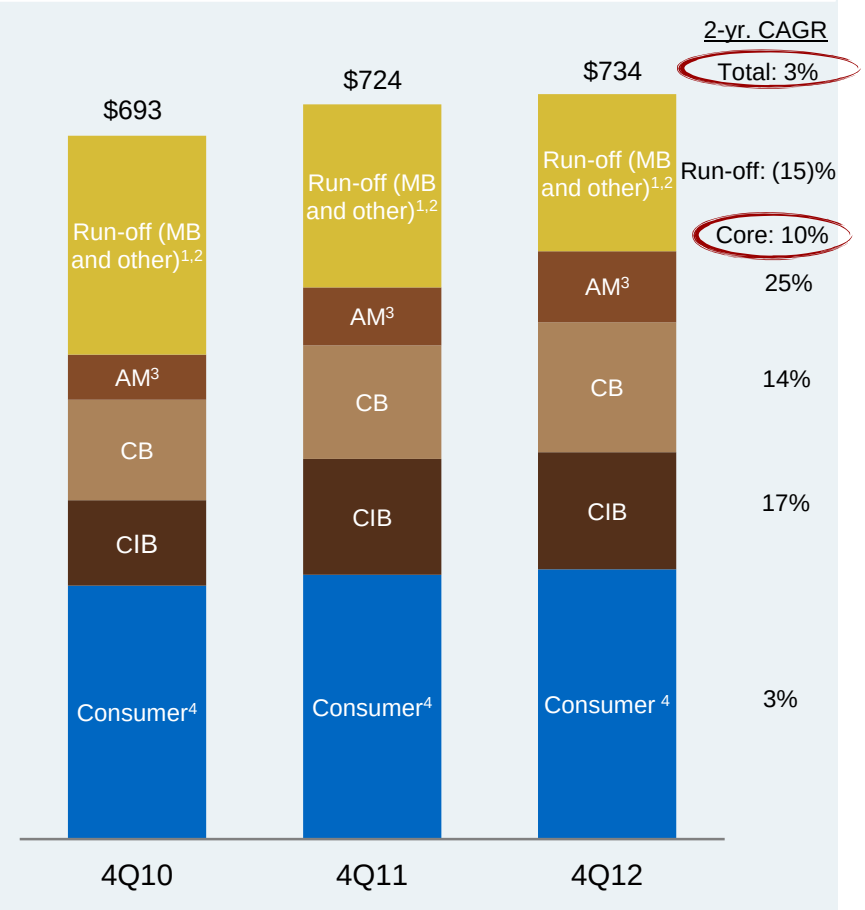
Note: Totals may not sum due to rounding

[1] Includes cash and due from banks and deposits with banks (excluding CIB), AFS securities, Fed funds sold and securities purchased under resale agreements and securities borrowed (excluding CIB)
[2] Includes resales, securities borrowed and cash and due from banks from CIB
[3] Includes CIB trading assets and derivatives receivables
[4] Net of allowance for loan losses
[5] Includes other assets, other intangible assets, MSR, premises and equipment, accrued interest and accounts receivable and non-CIB trading assets
[6] Includes trading liabilities, Fed funds purchased and securities loaned or sold under repurchase agreements, VIEs, other borrowed funds and other liabilities all in CIB and derivatives payable
[7] Includes accounts payable and other liabilities, Fed funds purchased and securities loaned or sold under repurchase agreements and VIEs (excluding CIB)
[8] Portion already included in capital markets liabilities
[9] Number of months of pre-funding: The Firm targets pre-funding of the parent holding company to ensure that both contractual and non-contractual obligations can be met assuming no access to wholesale funding markets; minimum target pre-funding is 18 months
[10] Includes wholesale CP funding and a portion of other borrowed funds, which are unsecured

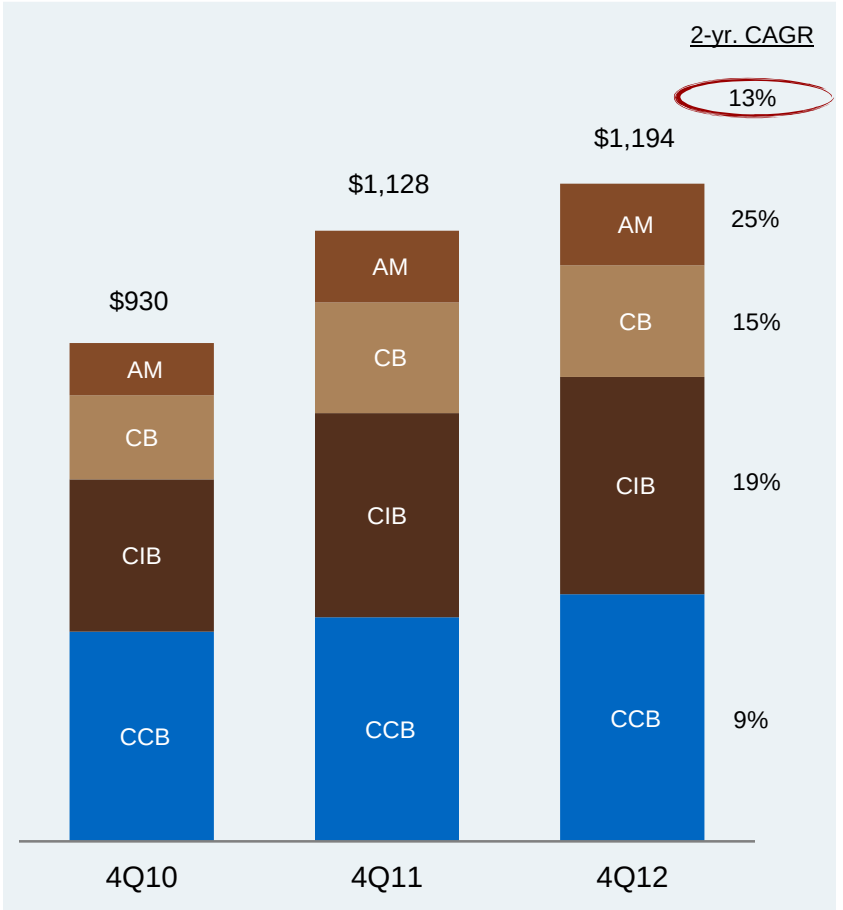
Loan and deposit growth

Balance sheet – NII and NIM drivers

Total EOP loans and core loans ($B)



EOP deposits by LOB[5] ($B)



Strong core loan and deposit growth helps support net interest income

Note: Totals may not sum due to rounding

[1] Other includes Card run-off portfolio, including certain legacy WaMu loans, legacy balance transfer programs and terminated partner portfolios (e.g. Kohl's), and CBB run-off portfolio, including discontinued products

[2] MB run-off portfolio includes WaMu purchased credit-impaired loans, discontinued products, and certain prime loans with estimated current LTVs greater than 80% as of January 2010

[3] AM loans include Wholesale loans originated by AM and Wholesale loans that are held in Corporate

[4] Consumer includes CBB, MB and Card, Merchant Services & Auto loans and prime mortgage loans held by AM and Corporate that are classified as Consumer loans (classification is consistent with SEC filings)

[5] Total deposits include $46B, $44B and $27B of deposits in the Corporate/Private Equity segment for 4Q10, 4Q11 and 4Q12, respectively

Firmwide NII drivers

Balance sheet – NII and NIM drivers

Commentary

- *Modest NIM compression,* largely driven by:
  - Consumer businesses
  - Limited reinvestment opportunities
  - Increased deployment into HQLA[2] for LCR compliance

Guidance

~$(400)mm annual NI impact in CBB; ~$(600)mm annual NII impact in MB[1]

~$(300)mm +/- NI for 1Q13 for Treasury and CIO

Simulated core NIM

Simulated core NIM	
Rate environment	Forward curve
Trough/stabilization	1Q14
Cumulative impact[3]	**~(15)bps**
Annual NII (pretax, $B), assuming static balance sheet	~$2.0B
Growth in core average interest-earning assets required to offset rate compression[4]	~7%
2012 Growth in core average interest-earning assets	8%

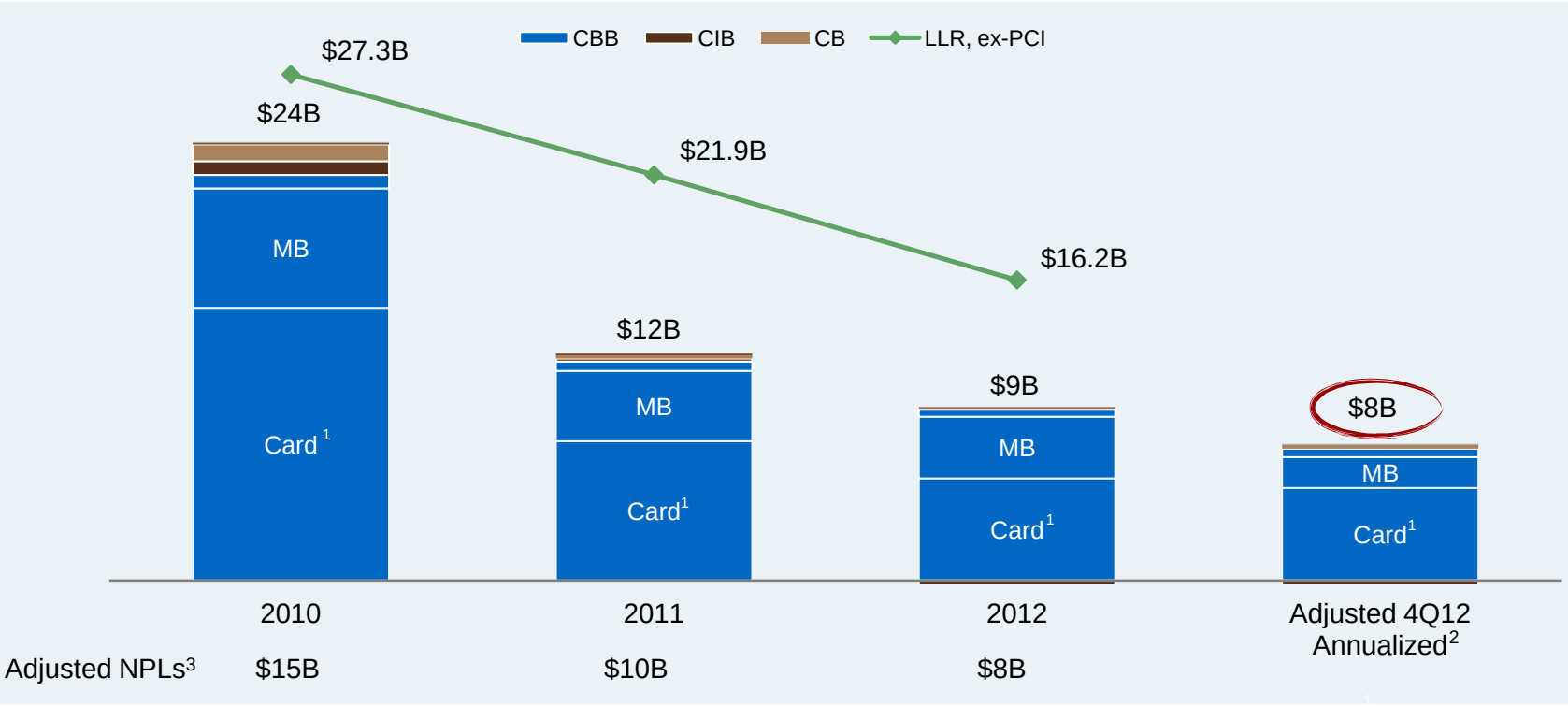
NII expected to be generally flat, supported by growth of interest-earning assets

[1] In CBB, deposit spread compression will negatively impact annual net income by $400mm +/- in 2013. In MB, expect annual reduction in NII of $600mm +/- from run-off in Real Estate Portfolios in 2013; only partially related to NIM
[2] High Quality Liquid Assets (previously referred to as LAB)
[3] Reflects cumulative impact from 4Q12 through 1Q14
[4] Assumes simulated approximate reinvestment rates for securities and loans

Credit quality trends

Balance sheet – Credit quality

NCOs by line of business



Strong coverage and reserve position

- The Firm's net charge-offs and nonperforming loans are down 80%[4] and 40%[4], respectively, from peak levels
- Strong reserve coverage ratio

[1] Card, Merchant Services & Auto
[2] 4Q12 adjusted NCOs exclude CIB and CB recoveries
[3] 2012 NPLs are impacted by regulatory guidance issued in the first quarter of 2012 as a result of which the Firm began reporting performing junior liens that are subordinate to nonaccrual senior liens as nonaccrual loans and by regulatory guidance issued in the third quarter of 2012 requiring loans not reaffirmed by the borrower and discharged under Chapter 7 bankruptcy to be reported as nonaccrual loans. For reference, reported NPLs were $14,841mm, $9,993mm and $10,720mm for 2010, 2011 and 2012, respectively
[4] Based on peak levels of NCOs and NPLs in 3Q09

Normalized net charge-off estimates

Balance sheet – Credit quality

Through-the-cycle (TTC) net charge-off estimates

		2012 avg. loans ($B)	2012 NCOs ($B)	2012 NCO rate (%)	TTC NCO rate (%)
CCB	Prime mortgage[1]	$35.3	$0.40	1.14%	0.10%
	Home equity	72.7	2.39	3.28	0.50
	Credit card	125.5	4.94	3.95[2]	4.00
	Auto	48.4	0.19	0.39	1.00
	Business banking[3]	18.1	0.28	1.53	1.10
CIB	CIB excl. trade and conduits	47.9	(0.28)	(0.59)	1.00
	Trade and conduits	62.2	(0.01)	(0.01)	0.05
CB	CB	119.2	0.04	0.03	0.50
AM	Lending	62.1	0.06	0.10	0.15
	Mortgage[4]	16.4	0.01	0.08	0.05
			~$9B NCOs[5]		**~$7–8B NCOs**

[1] Real Estate Portfolios, excluding option ARMs and PCI
[2] Excludes loans held-for-sale
[3] CBB reported NCO was 2.27%, including Business banking and the impact of retail overdraft losses
[4] Includes $10B of mortgages originated in PB but held in CIO
[5] Adjusted 4Q12 NCOs of $8B

Common equity and performance targets

Balance sheet – Capital

($B)	Attributed common equity			Targets	
	2012	1/1/2013	2012 Pro forma ROE[1]	Through-the-cycle ROE	Basel III Tier 1 Common[2]
Total Consumer & Community Banking	$43.0	$46.0	23%	20% +	8.5%
Consumer & Business Banking	*9.0*	*11.0*	*30*	*30% +*	*8.5*
Mortgage Banking	*17.5*	*19.5*	*22*[3]	*15% +/-*[3]	*8.5*
Card Services	*13.1*	*12.4*	*27*	*23% +/-*	*8.5*
Auto & Student	*3.4*	*3.1*	*21*	*18% +/-*	*8.5*
Corporate & Investment Bank	47.5	56.5	15[4]	16% +/-	9.5
Commercial Banking	9.5	13.5	20	20% +/-	8.5
Asset Management[5]	7.0	9.0	19	25% +	8.5
Total LOBs	**$107.0**	**$125.0**	**19%**	**19% +/-**	
Corporate	46.0	28.0 A			
Corporate Goodwill	42.0	42.0			
Total Firm	**$195.0**	**$195.0**	**15%**[6]	**16% +/-**[6]	**$24B NI target**

Corporate detail as of 1/1/2013 ($B)

A

Item	Attributed common equity	Comments
Legacy portfolios and model enhancements	$19	Accelerated benefits of short-term legacy portfolios and model enhancements
Private Equity/Other Corporate	9	PE capital expected to generate appropriate return over time; also includes corporate operational risk capital, real estate, BOLI/COLI, DTA and pension
	$28	

[1] Reflects 2012 net income divided by 2013 attributed common equity
[2] Basel III Tier 1 common targets reflect 2014 target of 9.5% for CIB, 2013 target of 8.5% for all other LOBs
[3] Excludes liquidating real estate portfolios; 17% in 2012 including REP
[4] ROE of 16% excluding DVA; see note 4 on slide 41
[5] AM pretax margin target remains unchanged at 35%+/- through the cycle; see note 7 on slide 41
[6] Total firm ROTCE

Capital projections

Balance sheet – Capital

Estimated Basel III capital projections[1] – After dividends[2], before share repurchases[3]

$B	2012	2013[3]	2014[3]	bps
Analysts' estimated net income[4]		~$22	~$22	
RWA, beginning		**~$1,650**	**$1,600**	
Run-off and mitigants (passive)		*(105)*	*(75)*	~100bps
Core growth		*55*	*15*	(40)bps
RWA, at year-end		**$1,600**	**$1,540**	
B3T1C (%)	8.7%	≥ 9.5%	≤ 11.5%	
Cumulative excess capital[5] at 9.5%			**$28B**	

Commentary

- Committed to 9.5% B3T1C by year-end, based on current understanding of rules
- There are potential risks, including model approvals and operational risk capital
- Additional levers include asset allocations in CIO and active mitigation in CIB
- Changes in AOCI not included in the analysis and will depend on rate environment

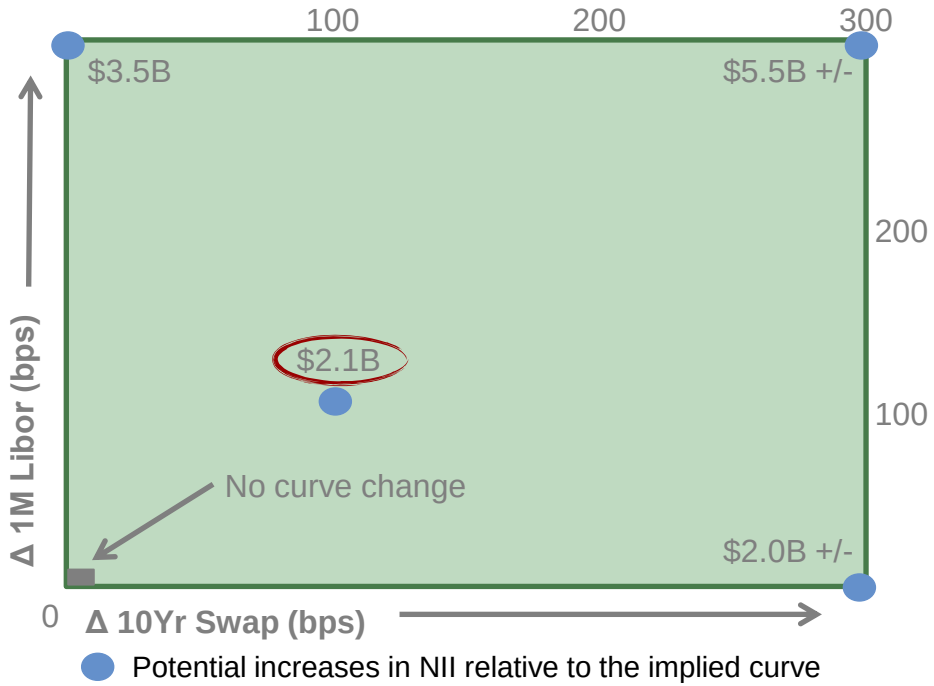
Significant excess capital in 2014

[1] See note 3 on slide 41
[2] Reflects Bloomberg average of analysts' estimates for dividends of $1.40 per share in 2013 and $1.58 in 2014 as of 2/22/13
[3] Net of annual preferred dividends of $700mm; assumes no share repurchases in 2013 and 2014 other than to offset the impact of employee issuance ($2B each year)
[4] Reflects Bloomberg average of analysts' estimates for net income of $21.5B in 2013 and $22.3B in 2014 as of 2/22/13
[5] Reflects estimated impact of final Basel 2.5 rules and Basel III Advanced NPR

Firm well-positioned for rising rates

Balance sheet – Capital

EaR – Potential net interest income increases[1]



Commentary

- The forward curve implies moderate rate increases
- The Firm is positioned to benefit from rising rates
- EaR of $2.1B for a 100bps parallel move beyond forward curve
- AOCI/NII relationship
  - Significant rate rise scenarios could move AOCI by $15B after-tax
  - Would increase NII and be recovered over 2 or 3 year period

[1] As of 12/31/2012. Reflects risk exposure to pretax NII of the Firm's non-market-based business activities (see 3Q12 Form 10-Q disclosure for further discussion on interest rate exposure). Implied curve represents the market expectation of rates over the next 12 months

2013 CCAR process update

Balance sheet – Capital

January 7th

- CCAR submitted to the Fed with planned capital actions request
  - Planning to use the already approved $3B for 1Q13 in share repurchases
  - Dividend increases subject to Board and CCAR approval
  - Repurchases for 2Q13-1Q14, subject to the Fed CCAR approval

March 7th (after market close)

- Fed to release results of its calculations of the Dodd-Frank Act Stress Test (DFAST)
  - Assumes no share repurchases or changes to current dividend levels
  - Table with PPNR, provisions, loan losses by category, OTTI, trading and counterparty losses, other losses, pre-tax income, as well as beginning, ending and minimum pro forma regulatory capital ratios
  - Will not disclose CCAR results reflective of requested repurchases or dividends, or qualitative assessments

March 7th (after Fed release)

- Banks may choose to disclose their own DFAST results
  - Banks required to release DFAST results no later than March 31st
  - Banks may not comment on CCAR requests or status of quantitative or qualitative assessments
  - Banks may not have a detailed understanding of the Fed's DFAST results relative to own
  - Banks permitted to provide one-time downward adjustments to their capital requests if the Fed objects to the initial request

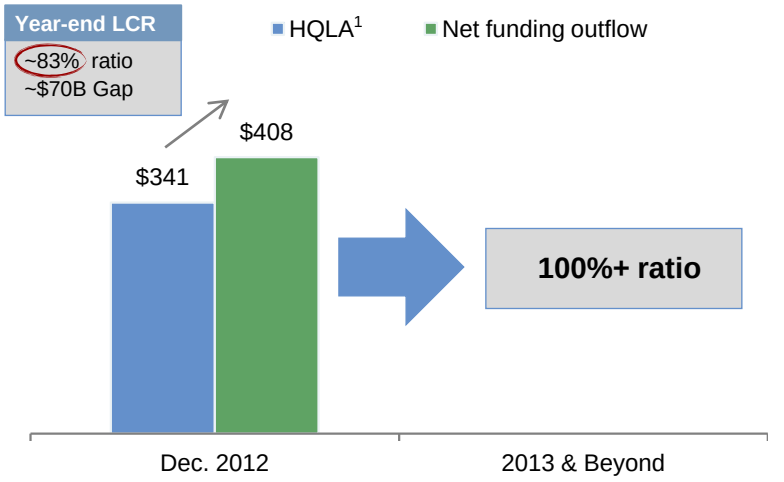
March 14th (after market close)

- Final CCAR results including non-objection/objection to requested capital actions released by the Fed
  - Disclosure format expected to be similar to prior years

Basel III – Liquidity Coverage Ratio (LCR)

Balance sheet – Firmwide liquidity

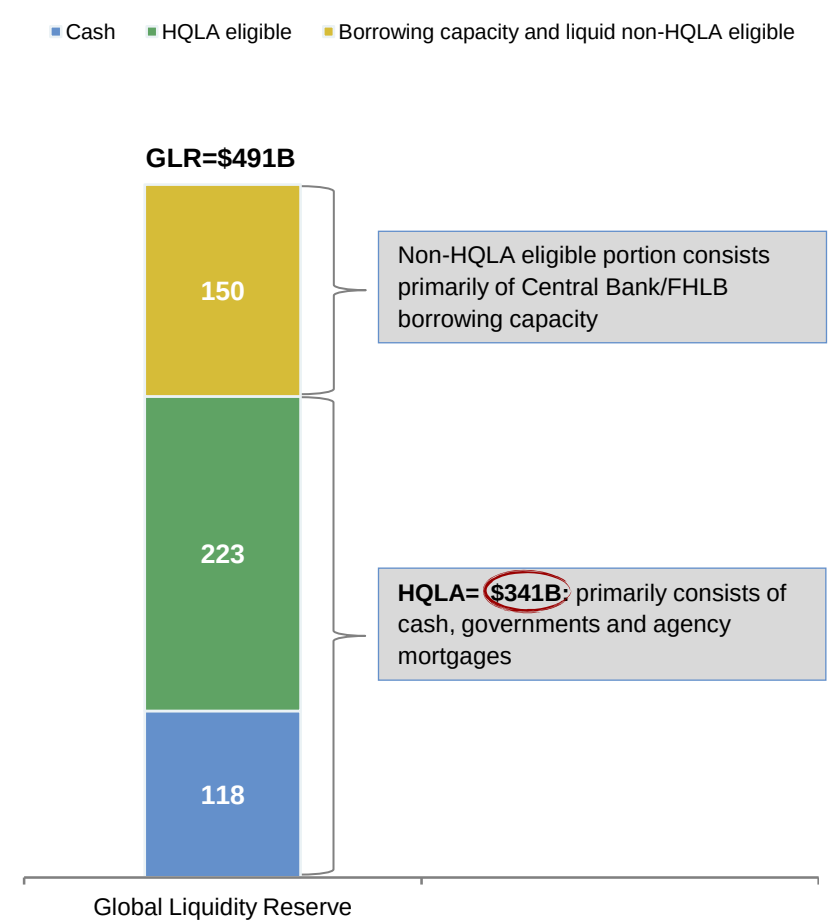
Estimated LCR Trajectory



Commentary

- 100% LCR compliance through:
  - Organic deposit growth
  - Reinvestment of AFS maturities into HQLA[1]
  - Funding mix optimization
- Recently released final Basel rules – marginally positive
- Awaiting final U.S. rules

Global Liquidity Reserve – December 2012 ($B)



[1] High Quality Liquid Assets (previously referred to as LAB)

Conclusion

- Clear and consistent strategy
  - Consistent client focus
  - Consistent investment strategies contributing to growth
  - Consistent partnership between our businesses
  - Consistent expense discipline
- Strong leadership positions and market share growth
- Best-in-class returns and efficiencies
  - Expect NII generally flat, supported by growth of interest-earning assets
  - Expect adjusted expense to trend down and improvement in overhead ratio
  - Significant opportunity for net income growth
- Maintain “fortress” operating model
  - Ability to adapt to new regulatory rules
  - Return excess capital to our shareholders

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JPMorgan Chase & Co.

Jamie Dimon
Chairman and Chief Executive Officer

Frank Bisignano
Co-Chief Operating Officer
7 years at JPM
31 in industry

Matt Zames
Co-Chief Operating Officer
8 years at JPM
20 in industry

Marianne Lake
Chief Financial Officer
13 years at JPM
21 in industry

John Hogan[1]
Chief Risk Officer
13 years at JPM
24 in industry

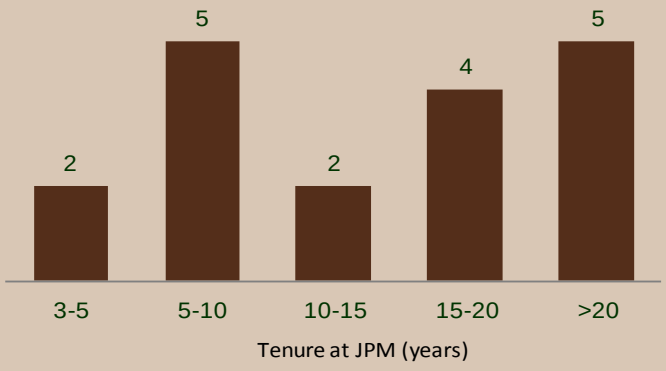
Steve Cutler
General Counsel
6 years at JPM
12 in industry

John Donnelly
Head of Human Resources
4 years at JPM
34 in industry

Mike Cavanagh
Co-CEO, Corporate & Investment Bank
13 years at JPM
25 in industry

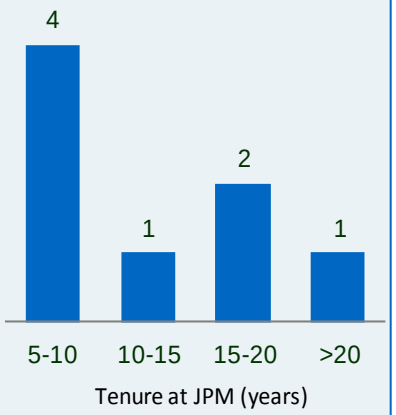
Daniel Pinto
Co-CEO, Corporate & Investment Bank
30 years at JPM
30 in industry

- 16 direct reports
- Average industry experience ~24 years
- Average years at JPM ~15 years



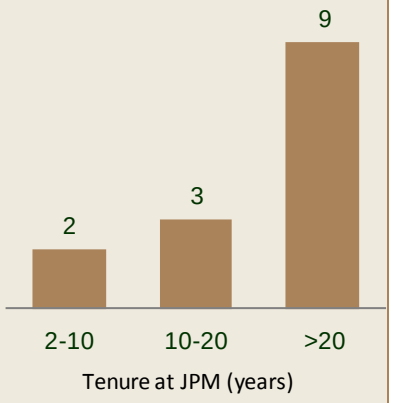
Gordon Smith
CEO, Consumer & Community Banking
6 years at JPM
32 in industry

- 7 direct reports
- Avg. industry experience ~27 years
- Avg. years at JPM ~13 yrs



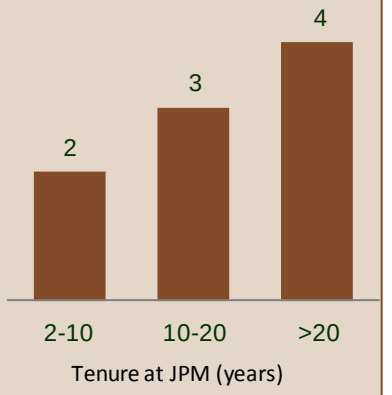
Doug Petno
CEO, Commercial Banking
24 years at JPM
24 in industry

- 13 direct reports
- Avg. industry experience ~30 years
- Avg. years at JPM ~21 yrs



Mary Erdoes
CEO, Asset Management
17 years at JPM
23 in industry

- 8 direct reports
- Avg. industry experience ~28 years
- Avg. years at JPM ~18 yrs



Attrition rates – best by industry standard – less than 1% attrition over last year for top senior talent

Note: Years shown inside of boxes indicate tenure at JPM and years of industry experience; Not all direct reports to Jamie Dimon are shown in chart

[1] Currently on leave of absence; Ashley Bacon acting Chief Risk Officer – 20 years at JPM

Peripheral European exposure[1]

Key investor topics – Europe

As of December 31, 2012 ($B)

		Securities and trading				
	Lending	AFS securities	Trading	Derivative collateral	Portfolio hedging	Net exposure
Spain	**$3.1**	**$0.5**	**$4.8**	**($3.3)**	**($0.4)**	**$4.7**
Sovereign	0.0	0.5	(0.4)	0.0	(0.1)	0.0
Non-sovereign	3.1	0.0	5.2	(3.3)	(0.3)	4.7
Italy	**$2.8**	**$0.0**	**$12.6**	**($2.6)**	**($5.3)**	**$7.5**
Sovereign	0.0	0.0	11.6	(1.4)	(4.9)	5.3
Non-sovereign	2.8	0.0	1.0	(1.2)	(0.4)	2.2
Other (Ireland, Portugal, and Greece)	**$1.1**	**$0.3**	**$2.5**	**($1.6)**	**($0.7)**	**$1.6**
Sovereign	0.0	0.3	0.5	0.0	(0.6)	0.2
Non-sovereign	1.1	0.0	2.0	(1.6)	(0.1)	1.4
Total firmwide exposure	**$7.0**	**$0.8**	**$19.9**	**($7.5)**	**($6.4)**	**$13.8**

- $13.8B total firmwide net exposure as of 4Q12, up from $11.7B as of 3Q12
  - Net exposure increased primarily due to the impact of client transactions in Italy
- The Firm continues to be active with clients in the region

[1] Exposure is a risk management view. Lending is net of liquid collateral. Trading includes net inventory, derivative netting under legally enforceable trading agreements, net CDS underlying exposure from market-making flows, unsecured net derivative receivables and under-collateralized securities financing counterparty exposure

Investment and duration management for CIO

Key investor topics – CIO AFS portfolio

CIO AFS portfolio (December 31, 2012)

($B)	Fair value	Pretax AOCI	Avg. credit rating[1]
Mortgage-backed securities:			
U.S. government agencies	$98	$4.7	AA+
Residential:			
Prime and Alt-A	2	0.1	AA-
Subprime	1	0.0	AA
Non-U.S.	72	1.5	AAA
Commercial	13	0.9	AA+
Total mortgage-backed securities	**186**	**7.2**	AA+
U.S. Treasury and government agencies	6	0.1	AA+
Obligations of U.S. states and municipalities	22	1.8	AA-
Certificates of deposit	2	0.0	NR
Non-U.S. government debt securities	50	0.9	AA+
Corporate debt securities	37	0.6	A+
Asset-backed securities:			
Collateralized loan obligations	28	0.4	AA+
Other	13	0.2	AAA
CIO AFS portfolio[2]	**$344**	**$11.2**	**AA+[3]**

Comments

- Current CIO AFS portfolio composition balanced between rates and credit products
- AA+ average rating; 1.4 year interest rate duration[4]
- Over 80% of CIO AFS portfolio is either government backed, U.S. government agency, or U.S. government rated or better

[1] Certain U.S. government and Agency products may not be externally rated, but are included in the AA+ categorization
[2] Data only includes CIO. Treasury and other lines of business comprise ~$27B in additional AFS
[3] Unrated/locally rated securities of ~$5B were omitted for purposes of calculating average rating
[4] Represents the estimated change in a security's value due to a 1% change in interest rates across the curve, expressed as a number of years (i.e., normalized by the value of the security)

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Managed financial results[1]

Firmwide results ($mm)	2010	2011	2012
Revenue (FTE)[1]	$104,842	$99,767	$99,890
Credit Costs[1]	16,639	7,574	3,385
Expense	61,196	62,911	64,729
Reported net income	**$17,370**	**$18,976**	**$21,284**
Reported EPS	**$3.96**	**$4.48**	**$5.20**
ROE	10%	11%	11%
ROTCE[2]	15	15	15

Net income by lines of business ($mm)	2010	2011	2012
Consumer & Community Banking	$4,578	$6,202	$10,611
Corporate & Investment Banking	7,718	7,993	8,406
Commercial Banking	2,084	2,367	2,646
Asset Management	1,710	1,592	1,703
Corporate/Private Equity	1,280	822	(2,082)
Total firm net income	**$17,370**	**$18,976**	**$21,284**

[1] See note 1 on slide 41
[2] See note 4 on slide 41

Consumer & Community Banking[1]

$mm	2010	2011	2012
Net interest income	$33,414	$30,381	$29,150
Noninterest revenue	15,513	15,306	20,795
Revenue	$48,927	$45,687	$49,945
Expense	23,706	27,544	28,790
Credit costs	17,489	7,620	3,774
Net income	$4,578	$6,202	$10,611
Key drivers/statistics ($B)			
EOP Equity ($B)	$43.0	$41.0	$43.0
ROE	11%	15%	25%
Overhead ratio	48	60	58
Average loans ($B)	$492.2	$447.2	$426.6
Average deposits ($B)	363.6	382.7	413.9
Number of branches	5,268	5,508	5,614
Number of ATMs	16,145	17,235	18,699
Active online customers (000's)	28,708	29,749	31,114
Active mobile customers (000's)	4,873	8,203	12,359

[1] See note 1 on slide 41

Consumer & Community Banking

Consumer & Business Banking ("CBB")

$mm	2010	2011	2012
Net interest income	$10,884	$10,808	$10,673
Noninterest revenue	6,852	7,210	6,539
Revenue	$17,736	$18,018	$17,212
Expense	10,762	11,243	11,453
Credit costs	630	419	311
Net income	$3,630	$3,796	$3,263
Key drivers/statistics ($B)			
Average total deposits	$340.8	$360.7	$392.1
Deposit margin	3.00%	2.82%	2.57%
Accounts[1] (mm)	27.3	26.6	28.1
Business Banking loan originations	$4.7	$5.8	$6.5
Business Banking loan balances (Avg)	16.9	17.1	18.1
Investment sales	23.6	22.7	26.0
Client investment assets (EOP)	133.1	137.9	158.5

[1] Includes checking accounts and Chase Liquid® cards beginning in the 2nd quarter of 2012
[2] Per compete.com as of December 2012
[3] Based on number of loans as of January 2013

Leadership positions

- #1 in customer satisfaction among large banks in ACSI survey
- #1 ATM network
- #2 in branches
- #1 most visited banking portal – Chase.com[2]
- #1 SBA lender[3]
- Leading investment sales force with nearly 3,000 client advisors, $150B+ client investment assets and 1,218 Chase Private Client locations

Consumer & Community Banking

Mortgage Banking

$mm	2010	2011	2012
Mortgage Production			
Production-related revenue, excl. repurchase losses	$4,309	$4,235	$6,570
Production expense	1,613	1,895	2,747
Income, excl. repurchase losses	$2,696	$2,340	$3,823
Repurchase losses	(2,912)	(1,347)	(272)
Income/(loss) before income tax expense/(benefit)	($216)	$993	$3,551
Mortgage Servicing			
Net servicing-related revenue	$2,624	$2,620	$2,957
Default servicing expense	1,747	3,814	3,707
Core servicing expense	837	1,031	1,033
Servicing expense	$2,584	$4,845	$4,740
Income/(loss), excl. MSR risk management	40	(2,225)	(1,783)
MSR risk management	1,151	(1,572)	616
Income/(loss) before income tax expense/(benefit)	$1,191	($3,797)	($1,167)
Real Estate Portfolios			
Revenue	$5,547	$4,592	$4,092
Expense	1,627	1,521	1,653
Net charge-offs	6,450	3,805	3,341
Change in allowance	1,781	(230)	(3,850)
Credit costs	8,231	3,575	(509)
Income/(loss) before income tax expense/(benefit)	($4,311)	($504)	$2,948
Mortgage Banking net income/(loss)	($1,924)	($2,138)	$3,341

Key drivers/statistics ($B)			
Mortgage loan originations	$155.6	$145.6	$180.8
Retail channel originations	68.8	87.2	101.4
3rd party mtg loans svc'd (EOP)	967.5	902.2	859.4
EOP NCI owned portfolio[1]	150.3	132.5	117.6
ALL/EOP loans[1,2]	6.47%	6.58%	4.14%
Net charge-off rate[1,2]	3.98	2.70	2.68

[1] Real Estate Portfolios only
[2] Excludes the impact of purchased credit-impaired loans acquired as part of the WaMu transaction
[3] Based on Inside Mortgage Finance

Leadership positions

- #2 mortgage originator[3]
- #2 retail mortgage originator[3]
- #3 mortgage servicer[3]
- We are working to help homeowners and prevent foreclosures; offered over 1.4mm mortgage modifications and completed ~610K since 2009

Consumer & Community Banking

Card, Merchant Services & Auto

$mm	2010	2011	2012
Revenue	$20,472	$19,141	$18,770
Expense	7,178	8,045	8,216
Net charge-offs[1]	14,722	7,511	5,509
Change in allowance	(6,152)	(3,890)	(1,556)
Credit costs	$8,570	$3,621	$3,953
Net income	$2,872	$4,544	$4,007
Card Services – Key drivers/statistics ($B)			
Average loans	$144.4	$128.2	$125.5
Sales volume[2]	313.0	343.7	381.1
Net revenue rate	11.89%	12.35%	12.35%
Net charge-off rate[3]	9.72	5.40	3.94
30+ Day delinquency rate[3]	4.07	2.81	2.10
# of accounts with sales activity (mm)[2]	39.9	30.7	30.6
% of accounts acquired online[2]	15%	32%	51%
Merchant Services – Key drivers (B)			
Merchant processing volume	$469.3	$553.7	$655.2
# of total transactions	20.5	24.4	29.5
Auto – Key drivers ($B)			
Average loans	$47.6	$47.0	$48.4
Originations	23.0	21.0	23.4

[1] Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $53mm of charge-offs related to regulatory guidance
[2] Excludes Commercial Card
[3] See note 5 on slide 41
[4] Based on disclosures by peers and internal estimates
[5] Based on Visa data as of December 31, 2012
[6] Based on Nilson report, 2011
[7] YTD as of November 30, 2012 data per Autocount

Leadership positions

- #1 credit card issuer in the U.S. based on loans outstanding[4]
- #1 Global Visa issuer based on consumer and business credit card sales volume[5]
- #1 U.S. co-brand credit card issuer[4]
- #2 wholly-owned merchant acquirer[6]
- #2 non-captive in new/used vehicles sold at franchised dealers[7]

Corporate & Investment Bank[1]

$mm	2010	2011	2012
Corporate & Investment Bank revenue	33,477	33,984	34,326
Investment banking fees	6,186	5,859	5,769
Treasury services	3,698	3,841	4,249
Lending[2]	811	1,054	1,331
Total Banking	**10,695**	**10,754**	**11,349**
Fixed income markets[3]	14,738	14,784	15,412
Equity markets	4,582	4,476	4,406
Securities services	3,683	3,861	4,000
Credit adjustments & Other[4]	(221)	109	(841)
Total Markets & Investor Services	**22,782**	**23,230**	**22,977**
Credit costs	(1,247)	(285)	(479)
Expense	22,869	21,979	21,850
Net income	$7,718	$7,993	$8,406
Key statistics ($B)			
EOP equity	$46.5	$47.0	$47.5
ROE[5]	17%	17%	18%
Overhead ratio	68	65	64
Comp/revenue[6]	37	34	33
EOP loans	$84	$114	$115
Client deposits & liability balances[7]	248.5	318.8	355.8
Assets under custody ($T)	16.1	16.9	18.8
ALL/EOP loans ex conduits and trade[8]	4.90%	3.06%	2.52%
Net charge-off/(recovery) rate	0.95	0.18	(0.26)
VaR ($mm)	$87	$76	$96

[1] See notes 1 and 6 on slide 41
[2] Lending revenue includes net interest income, fees, gains or losses on loan sale activity, gains or losses on securities received as part of a loan restructuring, and the risk management results related to the credit portfolio (excluding trade finance)
[3] Includes results of the synthetic credit portfolio that was transferred from the CIO effective July 2, 2012
[4] Primarily includes credit portfolio credit valuation adjustments ("CVA") net of associated hedging activities; DVA on structured notes and derivative liabilities; and nonperforming derivative receivable results effective in the first quarter of 2012 and thereafter. Included DVA on structured notes and derivative liabilities measured at fair value. DVA gains/(losses) were $(930) million, $1.4 billion and $509 million for the years ended December 31, 2012, 2011 and 2010, respectively
[5] Return on equity excluding DVA, a non-GAAP financial measure, was 19%, 15% and 16% for the years ended December 31, 2012, 2011 and 2010, respectively
[6] Compensation expense as a percentage of total net revenue excluding DVA, a non-GAAP financial measure, was 32%, 36% and 38% for the years ended December 31, 2012, 2011 and 2010, respectively. In addition, compensation expense as a percent of total net revenue for the year ended December 31, 2010, excluding both DVA and the payroll tax expense related to the U.K. Bank Payroll Tax on certain compensation awarded from December 9, 2009, to April 5, 2010, to relevant banking employees, which is a non-GAAP financial measure, was 36%
[7] Average client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses, and include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs
[8] ALL/EOP Loans as reported was 1.19%, 1.35%, and 2.40% for FY12, FY11, and FY10, respectively
[9] Represents FY2012 rank of JPM Fixed Income Markets revenue of 10 leading competitors (which have released FY2012 as of 2/20/13; HSBC TTM 3Q12 basis)

Leadership positions

Corporate & Investment Bank

- 47% international revenue for FY2012; FY2012 up 6% excl. DVA
- International deposits increased 29% from FY2010, driven by growth in Asia
- International loans up 50% since FY2010
- Gross CIB revenue from CB clients up 9% YoY
- Strategic Reengineering Program ~80% complete

Banking

- Widened the gap to #2 competitor YoY in Global IB fees per Dealogic
- TS firmwide revenue up 9% YoY
- #1 in combined Fedwire and CHIPS volume, Federal Reserve, 2002 – 2012
- Total international electronic funds transfer volume up 31% from FY2010

Markets & Investor Services

- #1 Fixed Income Markets revenue share of top 10 investment banks[9]
- International AUC up 33% from FY2010; 44% of FY2012 total AUC
- JPM ranks #1 for FY2012, FY2011, and FY2010 for both All-American Fixed Income Research and Equity Research

Commercial Banking[1]

$mm	2010	2011	2012
Revenue	$6,040	$6,418	$6,825
Middle Market	3,060	3,145	3,334
Corp. Client Banking	1,154	1,261	1,456
Comm. Term Lending	1,023	1,168	1,194
Real Estate	460	416	438
Other	343	428	403
Expense	2,199	2,278	2,389
Credit Costs	297	208	41
Net Income	$2,084	$2,367	$2,646
Key Statistics ($B)			
Avg Loans	$97.0	$104.2	$120.1
EOP Loans	98.9	112.0	128.2
Avg client deposits[2]	138.9	174.7	195.9
Investment banking revenue, gross[3] ($mm)	1,335	1,421	1,597
Allow. for loan losses	2.6	2.6	2.6
Nonaccrual loans	2.0	1.1	0.7
Net charge-off rate[4]	0.94%	0.18%	0.03%
ALL/loans[4]	2.61%	2.34%	2.06%
ROE[5]	26%	30%	28%
Overhead ratio	36%	35%	35%
EOP equity	$8.0	$8.0	$9.5

[1] See note 1 on slide 41
[2] Includes deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs
[3] Represents the total revenue related to investment banking products sold to CB clients
[4] Loans held-for-sale and loans at fair value were excluded when calculating the loan loss coverage ratio and net charge-off rate
[5] Calculated based on average equity
[6] Based on CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, PNC, STI, USB, WFC and KEY
[7] Thomson Reuters FY12
[8] FDIC 9/30/12

Leadership positions

- Lowest net charge-off ratio in peer group[6]
- #1 large middle market syndicated lender in the U.S.[7]
- #1 multifamily lender in the U.S.[8]

Asset Management[1]

$mm	2010	2011	2012
Revenue	$8,984	$9,543	$9,946
Private Banking	4,860	5,116	5,426
Institutional	2,180	2,273	2,386
Retail	1,944	2,154	2,134
Credit costs	$86	$67	$86
Expense	6,112	7,002	7,104
Net income	$1,710	$1,592	$1,703
Key statistics ($B)			
EOP equity	$6.5	$6.5	$7.0
ROE[2]	26%	25%	24%
Pretax margin[3]	31	26	28
Assets under management	$1,298	$1,336	$1,426
Assets under supervision	1,840	1,921	2,095
Average loans	38.9	50.3	68.7
EOP loans	44.1	57.6	80.2
Average deposits	86.1	106.4	129.2

[1] See note 1 on slide 41
[2] Calculated based on average equity
[3] See note 7 on slide 41
[4] Source: iMoneyNet, 2012
[5] Source: Euromoney, 2012
[6] Source: Institutional Investor, 2012
[7] Source: Pensions & Investments, 2012
[8] Source: Absolute Return, 2012
[9] Source: Strategic Insight, 2012
[10] Source: Thomson Reuters, 2012
[11] Source: The Asset, 2012

Leadership positions

- #1 Institutional Money Market Fund Manager Worldwide[4]
- #1 Ultra High Net Worth Private Bank Globally[5]
- #1 Manager of the Year for Large Cap Growth & Infrastructure[6]
- #1 U.S. Private Equity & Alpha Strategies Manager[7]
- #2 Hedge Fund Manager[8]
- #2 U.S. Total New Mutual Fund flows[9]
- Top European Buyside Firm[10]
- Best Asset Management Company for Asia, Hong Kong, and Japan[11]

Corporate/Private Equity[1]

Net income ($mm)	2010	2011	2012
Private Equity	$588	$391	$292
Treasury and CIO	3,576	1,349	(2,093)
Other Corporate	(2,884)	(918)	(281)
Net Income	$1,280	$822	($2,082)

[1] See note 1 on slide 41

Notes

Notes on non-GAAP financial measures

1. In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

2. Tangible common equity ("TCE") represents common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. Return on tangible common equity measures the Firm's earnings as a percentage of TCE. In management's view, these measures are meaningful to the Firm, as well as analysts and investors, in assessing the Firm's use of equity, and in facilitating comparisons with peers.

3. The Basel I Tier 1 common ratio is Tier 1 common capital divided by Basel I risk-weighted assets. Tier 1 common capital is defined as Tier 1 capital less elements of Tier 1 capital not in the form of common equity, such as perpetual preferred stock, noncontrolling interests in subsidiaries, and trust preferred capital debt securities. Tier 1 common capital, a non-GAAP financial measure, is used by banking regulators, investors and analysts to assess and compare the quality and composition of the Firm's capital with the capital of other financial services companies. The Firm uses Tier 1 common capital along with other capital measures to assess and monitor its capital position. In December 2010, the Basel Committee finalized further revisions to the Basel Capital Accord, commonly referred to as "Basel III." In June 2012, U.S. federal banking agencies published final rules on Basel 2.5 that went into effect on January 1, 2013, that provide for additional capital requirements for trading positions and securitizations. In June 2012, U.S. federal banking agencies also published a Notice of Proposed Rulemaking (the "NPR") for implementing Basel III, in the United States. Basel III revised Basel II by, among other things, narrowing the definition of capital, and increasing capital requirements for specific exposures. Basel III also includes higher capital ratio requirements. The Firm's estimate of its Tier 1 common ratio under Basel III is a non-GAAP financial measure and reflects the Firm's current understanding of the Basel III rules based on information currently published by the Basel Committee and U.S. federal banking agencies and on the application of such rules to its businesses as currently conducted; it excludes the impact of any changes the Firm may make in the future to its businesses as a result of implementing the Basel III rules, possible enhancements to certain market risk models, and any further implementation guidance from the regulators. Management considers this estimate as a key measure to assess the Firm's capital position in conjunction with its capital ratios under Basel I requirements, in order to enable management, bank regulators, investors and analysts to assess the Firm's capital position and to compare the Firm's capital under the Basel III capital standards with similar estimates provided by other financial services companies.

4. In addition to reviewing JPMorgan Chase's net interest income on a managed basis, management also reviews core net interest income to assess the performance of its core lending, investing (including asset/liability management) and deposit-raising activities, excluding the impact of Corporate & Investment Bank ("CIB") market-based activities. The presentation includes information on managed core net interest income and core net interest margin. Each of these amounts is a non-GAAP financial measure due to the exclusion of CIB's market-based net interest income and the related assets. Management believes the exclusion of CIB's market-based activities provides investors and analysts a more meaningful measure by which to analyze non-market related business trends of the Firm and provides a comparable measure to other financial institutions primarily focused on core lending, investing and deposit-raising activities. Further, the impact of DVA is excluded from the calculation of return on Basel I risk-weighted assets, EPS growth, firmwide overhead ratio, and return on equity, which are non-GAAP financial measures used by management to assess the underlying performance of the business and for comparability with peers.

5. In Consumer & Community Banking, supplemental information is provided for Card Services, to provide more meaningful measures that enable comparability with prior periods. The net charge-off rate and 30+ day delinquency rate presented include loans held-for-sale.

6. CIB provides several non-GAAP financial measures which exclude the impact of DVA on: net revenue, net income, overhead ratio, compensation ratio and return on equity. These measures are used by management to assess the underlying performance of the business and for comparability with peers. The ratio for the allowance for loan losses to period-end loans is calculated excluding the impact of trade finance loans and consolidated Firm-administered multi-seller conduits, to provide a more meaningful assessment of CIB's allowance coverage ratio.

Additional notes on financial measures

7. Pretax margin represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is, therefore, another basis that management uses to evaluate the performance of AM against the performance of their respective peers.

CONSUMER & COMMUNITY BANKING

Gordon Smith, Chief Executive Officer Consumer & Community Banking

February 26, 2013

JPMorgan Chase & Co.

Chase Consumer & Community Banking is a consumer and small business franchise of unparalleled scope and quality – and would be nearly impossible to replicate

Strong financial returns	■ Delivered returns at target levels, despite a challenging environment ■ Three major growth opportunities – Chase Private Client, Business Banking, and New Branch Builds
Powerful customer franchise	■ We have consumer relationships with almost half of U.S. households ■ #1 in customer satisfaction[1], leading to cross-sell and relationship deepening
Firmwide capabilities to meet customer needs	■ Chase Private Client access to J.P. Morgan Private Bank investments platform ■ Business Banking access to Commercial Bank specialty lending and Treasury Services cash management
Attractive footprint	■ #2 Branch and #1 ATM network ■ Branch network heavily concentrated in the most attractive U.S. markets
Leading position in Digital Banking	■ #1 online financial services destination, #1 rated mobile app ■ The cost to serve fully digital customers is substantially lower
World-class payments franchise	■ #1 in total U.S. credit, debit, prepaid combined payments volume, #1 global Visa issuer ■ #2 wholly-owned merchant acquirer
National, scale lending businesses	■ Mortgage: #2 in originations, #3 in servicing ■ Auto: #3 Bank originator, #1 in super prime (FICO >740) originations ■ Business Banking: #1 Small Business Administration lender[2]

Sources: American Customer Satisfaction Index; compete.com; Keynote Systems; Inside Mortgage Finance; Autocount Market Report; Small Business Administration; Nilson report; SNL Financial

[1] Among large banks

[2] Based on number of loans issued, per SBA data

The underlying profitability of each of our businesses is strong

Consumer & Community Banking (CCB) lines of business outlook

		2012	2012 adjusted	Targets
Consumer & Business Banking (CBB)	Net branch-build	106	106	100 +/-
	ROE[1]	36%	30%	30% +
Mortgage Banking	Net charge-off rate[2]	2.68%	2.10%	0.35% +/-
	ROE[1,3]	19%	22%	15% +/-
Card Services	Revenue margin	12.4%	12.4%	12.0-12.5%
	Net charge-off rate	3.9%	3.9%	4.0% +/-
	ROE[1]	25%	27%	23% +/-
Auto & Student	ROE[1]	20%	21%	18% +/-

		2012	2012 adjusted	Targets
Consumer & Community Banking	ROE[1,4]	25%	23%	20% +

We continue to deliver target returns, even through a challenging environment

[1] Adjusted reflects 2012 net income divided by 2013 attributed common equity
[2] 2012 adjusted net charge-off rate reflects Real Estate Portfolios only, and excludes PCI loans and one-time adjustments related to the adoption of Chapter 7 Bankruptcy discharge regulatory guidance
[3] Adjusted and target ROE excludes liquidating real estate portfolios. Adjusted 2012 ROE including liquidating real estate portfolios would have been 17%
[4] Includes liquidating real estate portfolios

CCB (excluding Mortgage) expense expected to modestly increase as we continue to grow the business, while Mortgage expense will decline through year-end 2014

	2012 expense	2014
CCB (excluding Mortgage)	$19.7B	■ ~3% expense growth in 2013 ■ ~2% expense growth in 2014 ■ 3-4K headcount reduction by year-end 2014
Mortgage Banking	$9.1B[1]	■ Full year expense down $3B vs. 2012 ■ 13-15K headcount reduction by year-end 2014

While we continue to control costs, we also continue to invest in the business to realize key opportunities

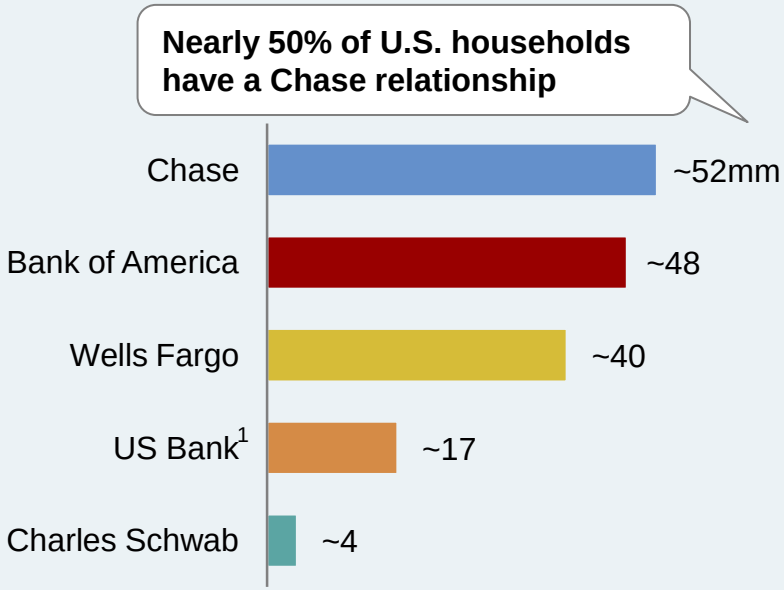
[1] Represents total 2012 MB expense, including Production, Servicing and REP. Includes $900mm expense for Foreclosure Related Matters, predominantly IFR settlement; also includes $2.8B of elevated (above normalized target) expense across Mortgage Banking

The impact of most regulatory changes from Dodd-Frank, Durbin Amendment and the CARD Act are fully accounted for in our 2012 financials

	On-book regulatory reform yet to take effect	Already in 2012 financials
Consumer & Business Banking	■ None	■ Regulation E (implemented Jul. '10) and voluntary actions to reduce NSF/OD fees ■ Net income impact of $700mm+/- (full run rate impact starting in 3Q10) ■ Durbin Amendment (implemented Oct. '11) ■ Net income impact of $600mm+/- (full run rate impact starting in 4Q11)
Mortgage Banking	■ Qualified Mortgage / Ability to Repay	■ Implemented DOJ servicing standards
Card, Merchant Services & Auto	■ None	■ CARD Act (implemented Feb. '10) ■ Net income impact of $750mm+/- (full run rate impact starting in 4Q10) ■ Includes impact to penalty pricing, limits on late fees, and changes to due date and payment allocation rules

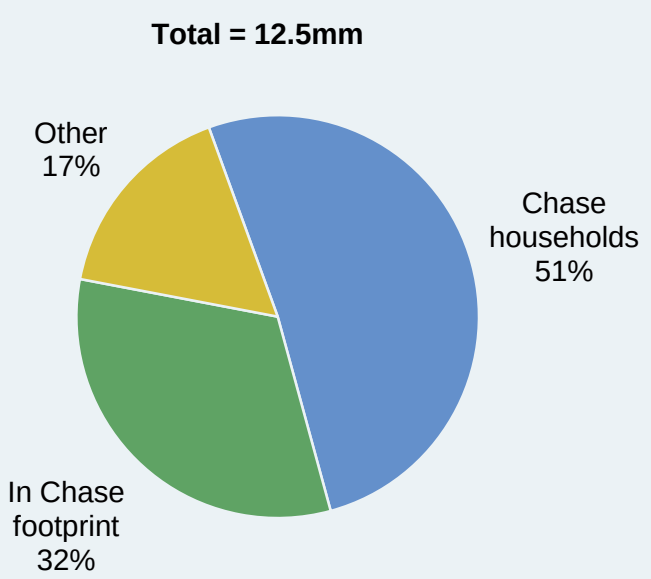
Chase has relationships with more U.S. households than any other financial services provider

Estimated penetration of U.S. households



Sources: Bank of America's and US Bank's Goldman Sachs Financial Services Conference presentations (12/04/12), Wells Fargo's 2011 Annual Reports, Charles Schwab 2012 Summer Business update, Fidelity.com, American Express 2012 Semi-Annual Financial Community Meeting

U.S. households with $500K-$5mm in deposits and investments



Source: Internal data

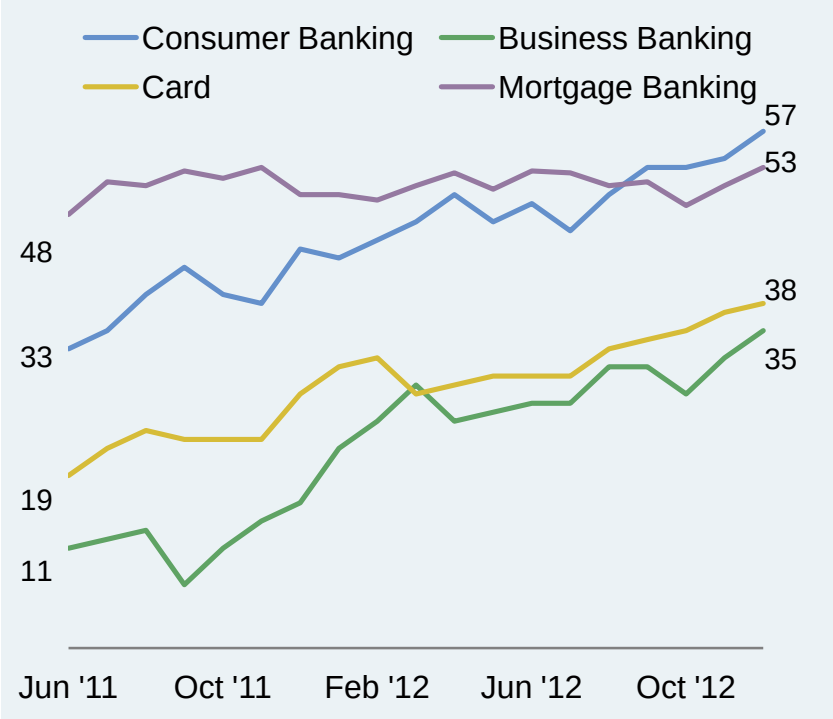
Implications

- Allows us to focus holistically on customer needs
- Provides deep insights into our customers
- Significant synergies: e.g., Card cross-sell to existing customers costs 25-50% less than to new customers

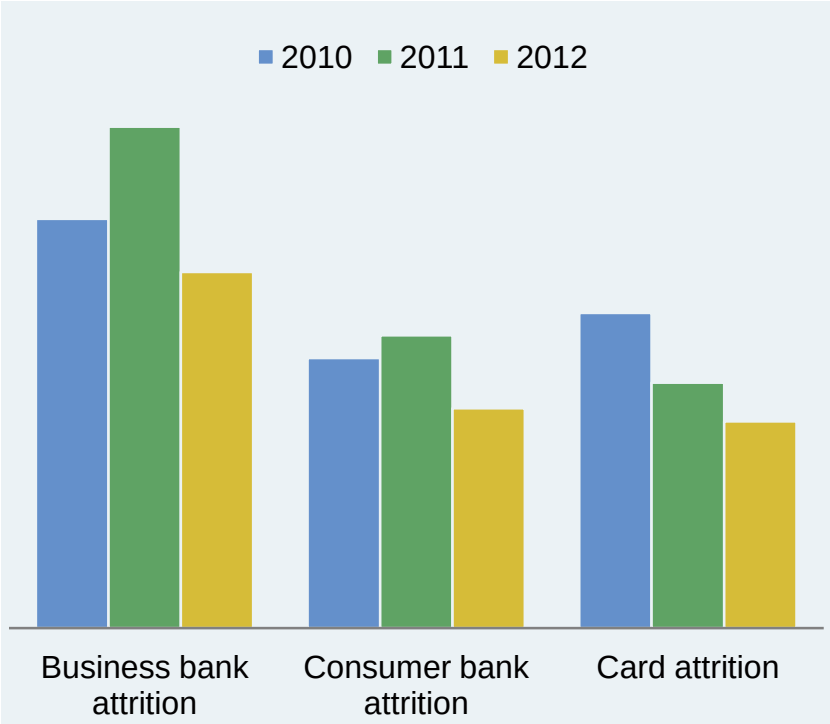
[1] Self-reported number of customers – by definition number of households must be equal to or lower than customer figure

Our focus on customer experience is driving improved customer retention

Net promoter score[1]



Household attrition[2] by business line



#1 Customer Satisfaction: Large Banks – ACSI

#1 Customer Satisfaction: Major Banks – Harris

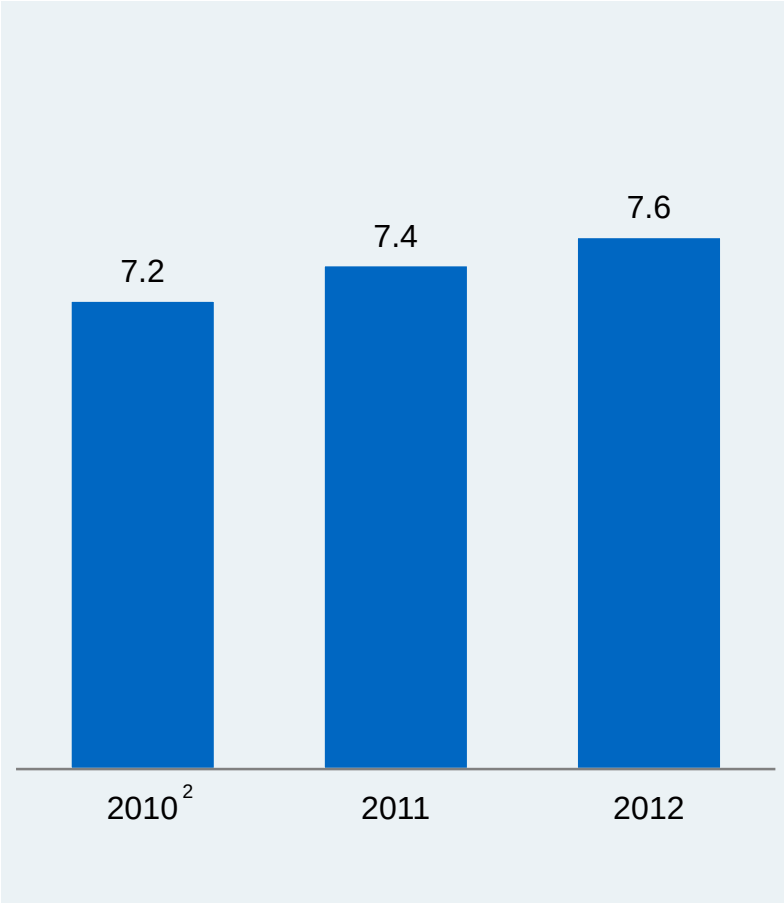
Source: Internal data, 2012 American Customer Satisfaction Index, 2012 Harris Poll

[1] % promoters minus % detractors

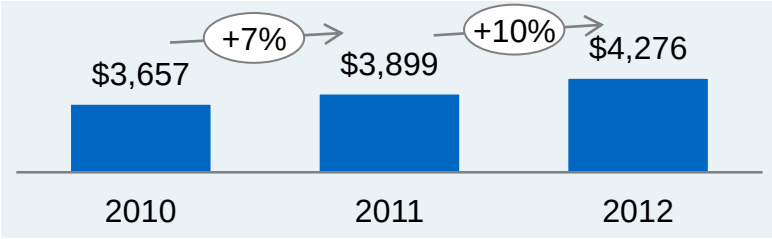
[2] Households that close all Chase relationships

We are among the best at cross-selling, but we manage the business to deepen relationships

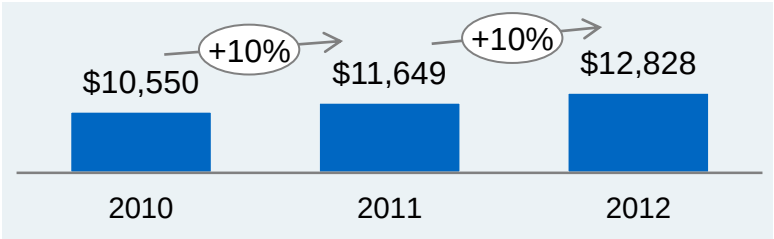
Products and services[1] per Consumer Bank household



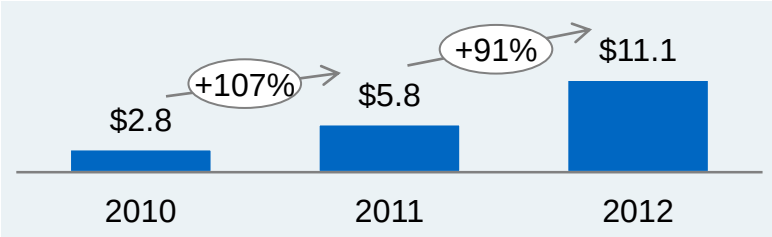
Average balance per consumer checking account



Card spend per active account[3]



Net new investments ($B)



Source: Internal Chase data

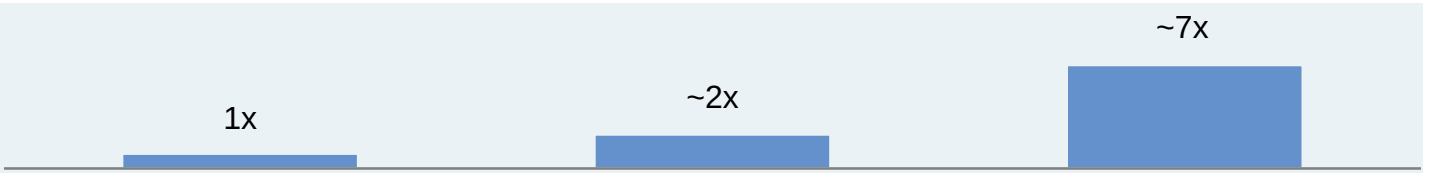
[1] Products and services counted in the Chase cross-sell definition include deposits (interest checking, money market, etc.), credit (mortgage loans, credit cards, etc.), investments, and services (online banking, mobile banking, etc.)

[2] Previously disclosed 2010 cross-sell of 6.7 has been restated to include mobile banking and pre-authorized transfers

[3] Reflects accounts that had sales activity during the year; excludes Commercial Card and Kohl's

We have organized around three consumer segments to better serve our customers' needs…

Indexed variable contribution[1] per household

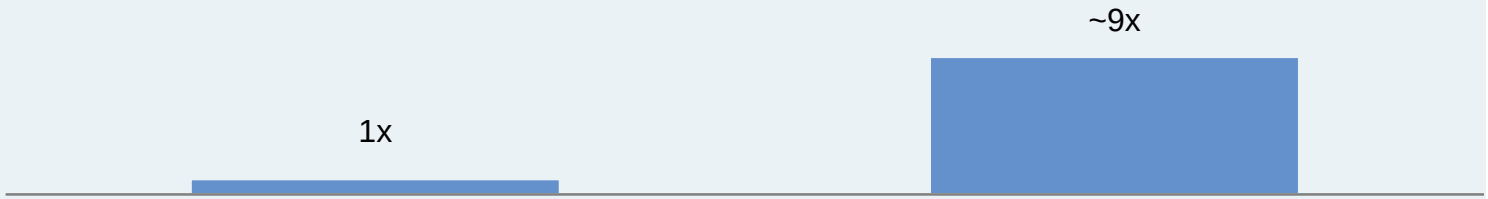


	Segment I	Segment II	Segment III
Total investable assets[2]	<$25K *and*	$25K-$500K *or*	$500K+ *or*
Income	<$75K	$75K-$150K	$150K+
# of CB[3] households	8.7mm	9.4mm	3.2mm
% of CB households with positive variable contribution[4]	82%	89%	92%
Goals	Expand access and enhance self-service	Drive relationship consolidation through integrated solutions	Deepen relationships and provide wealth management services
Example products	Chase Liquid, Chase Savings, Chase Slate, Chase Mortgage	Chase Checking & Savings, Chase Investments, Chase Freedom, Chase Mortgage	CHASE PRIVATE CLIENT, Chase Sapphire, Chase Mortgage

Source: Internal Chase data
Note: Variable contribution and household counts exclude Chase Private Client households
[1] Post-implementation of Durbin Amendment and Regulation E opt-in requirement
[2] All of a household's liquid investable assets, held across all financial relationships
[3] Consumer Bank
[4] Consumer Bank households that cover variable costs and contribute to fixed costs

…and have similarly segmented our Business Banking clients

Indexed revenue to Chase per client



	Small Business	Business Banking
Client revenue	<$0.5mm in annual company revenue	$0.5-20mm in annual company revenue
# of clients	1.7mm	570K
Total deposits ($B)	$11.0	$61.8
Total loans outstanding ($B)[1]	$25.3	

- ~2,500 dedicated Relationship Managers in the market
- ~2,500 Small Business Specialists supporting client needs in branches today
- $3.3B annual revenue, ~20% of CBB

Source: Internal Chase data (analysis shows full year deposit and credit ADBs)
[1] Includes credit card

We have an attractive footprint and leading market share in top markets

Chase branch footprint

Market[1] rank (by deposits and investments)	Market	Chase deposit share rank
1	New York, NY	1
2	Los Angeles, CA	3
3	San Francisco, CA	3
5	Chicago, IL	1
7	Miami, FL	3
9	Houston, TX	1
10	Dallas, TX	1
11	San Jose, CA	3
12	Seattle, WA	2
13	San Diego, CA	2
14	Phoenix, AZ	1
15	Bridgeport, CT	2
17	Detroit, MI	2
18	Denver, CO	4
20	Atlanta, GA	11
22	Portland, OR	3
23	Austin, TX	2
24	Tampa, FL	10
25	Riverside, CA	3
26	Sacramento, CA	3
27	Cleveland, OH	7
30	San Antonio, TX	5

Total Deposits and Investments ($T): 13.9

= Top 3 market share

Out of branch footprint

Market rank (by deposits and investments)	Market
4	Washington, DC
6	Boston, MA
8	Philadelphia, PA
16	Baltimore, MD
19	Minneapolis, MN
21	St. Louis, MO
28	Pittsburgh, PA
29	Hartford, CT

Total Deposits and Investments ($T): 3.8

- Highly attractive network
  - 26% higher wealth per capita[2]
  - 16% more people per branch[2]
  - 12% faster projected population growth[3]
- ~50% of all affluent households are within 2 miles of a Chase branch or ATM

Source: SNL Financial, Internal Chase data

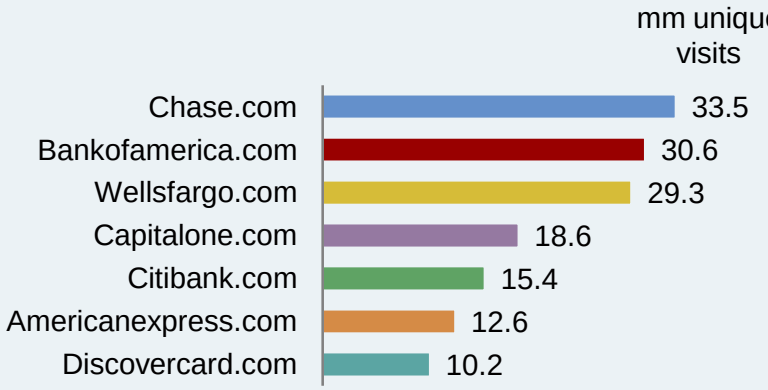
[1] Market defined as Core Based Statistical Area

[2] Weighted by Chase branches on the Core Based Statistical Area-level and vs. the national average

[3] Weighted by Chase branches on the State-level and vs. the national average

We are a leader in digital banking

Most-visited banking portal



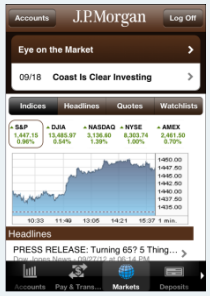
Source: December 2012 compete.com rankings

Award-winning mobile channel

"#1 Mobile bank" awarded by:

- Keynote Systems
- Forrester
- Celent
- Mobile Commerce Daily

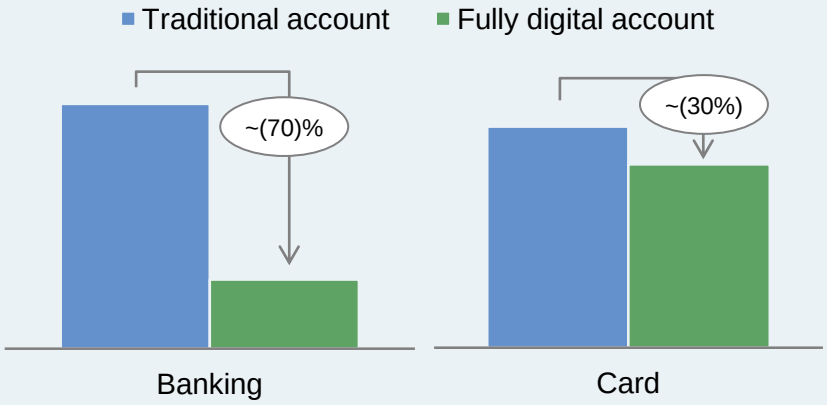
Morgan Online



Introducing Chase My New Home

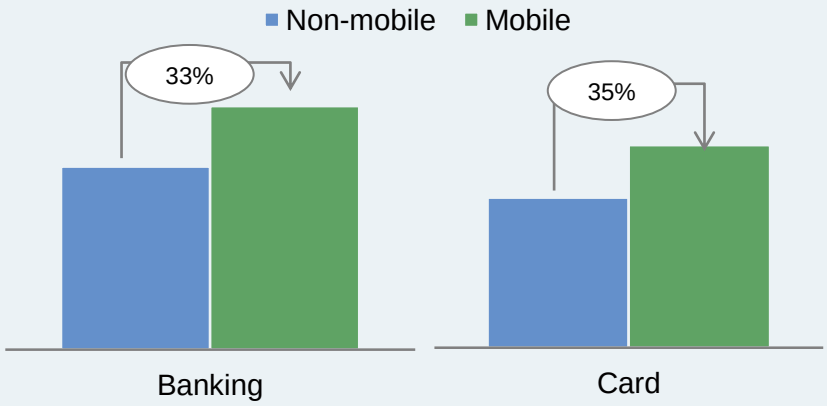


Lower cost per household



Source: Internal Chase data

Higher retention



We have the largest consumer card and mobile payments business

Chase credit



Chase debit



Chase Liquid℠



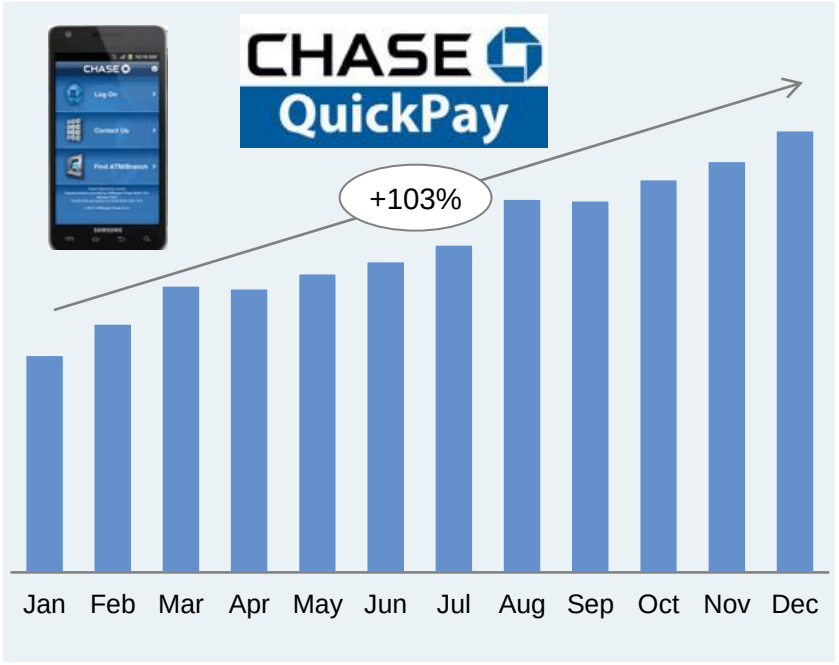
Partner credit



Partner debit



2012 Chase QuickPay volumes



- Over 100mm open cards[1] across debit, credit and Chase Liquid℠
- $600B+ credit and debit spend, ~15% of total US credit and debit spend[2]
- $18B in Mobile payments[3]

Source: Internal Chase data, Nilson

[1] Includes private label cards

[2] Excludes WaMu card spend

[3] Includes QuickPay, Mobile Bill Pay and ePay

We have a leading position in Auto lending

2012 Bank auto[1] lenders

Rank	Bank	Market share
1	Ally	8.4%
2	Wells Fargo	5.6%
3	Chase	5.5%
4	Capital One	4.3%
5	Bank of America	2.4%
6	Santander	1.7%

Chase's advantages

- Full credit spectrum underwriter
- Complementary dealer floorplan and commercial banking businesses
- Proprietary partnerships with strong manufacturers







Source: Autocount Market Report (New & Recent Used at Franchised Dealers and J.D. Power and Associates Power Information Network)

[1] Excludes captive lenders

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We have a strong management team with deep experience at JPMorgan Chase and in the industry

Today's presenters



- Ryan McInerney
- CEO, Consumer Banking
- 7 years with JPMorgan Chase



- Kevin Watters
- CEO, Mortgage Banking
- 14 years with JPMorgan Chase



- Eileen Serra
- CEO, Card Services
- 6 years with JPMorgan Chase

Agenda

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Consumer & Business Banking	**15**
Mortgage Banking	36
Card Services	54
Wrap-up	71

Consumer & Business Banking includes three best-in-class businesses

Consumer & Business Banking

Consumer Banking

- ~21mm consumer households
  - 12mm online households
  - ~8mm mobile households, up 35% YoY
- $300B+ deposits
- #2 branch network
- #1 ATM network

Chase Wealth Management

- 1.7mm households
- $159B client investment assets
- 70% of client investment sales in managed money products
- 90% growth in net investment flows YoY

Business Banking

- 2.2mm businesses
- ~$75B deposits
- ~$19B in loans outstanding[1]
- # 1 Small Business Administration lender[2]

Source: Internal Chase data, Small Business Administration; SNL Financial

[1] Excludes small business credit card

[2] By number of loans

The underlying business drivers are strong

		2011	2012	Δ
Relationships	Consumer household relationships (mm)	20.4	21.2	↑4%
	Business client relationships (mm)	2.3	2.2	↓0.1
	Consumer households per branch	~3,700	~3,775	↑2%
	Consumer bank household attrition rate (annualized)[1]	14.3%	10.7%	↓360bps
	Business bank household attrition rate (annualized)[1]	24.5%	17.4%	↓710bps
Distribution	Branches	5,508	5,614	↑2%
	ATMs	17,235	18,699	↑8%
Investments ($B)	Investment sales	23	26	↑15%
	Client investment assets (EOP)	138	159	↑15%
Average deposits ($B)	*Same-store – Branches >3 years old[2]*	*359.3*	*387.5*	*↑8%*
	New build – Branches <3 years old[2]	*1.4*	*4.6*	*↑228%*
	Total	360.7	392.1	↑9%
Branch employees (K)[3]	*Same-store*	*61.8*	*58.4*	*↓5%*
	New build	*4.1*	*5.1*	*↑23%*
	Total	65.9	63.5	↓4%

		2011	2012	Δ
Performance ($B)	Revenue	18.0	17.2	↓4%
	Net income	3.8	3.3	↓14%
	ROE	40%	36%	↓400bps

Source: Internal Chase data

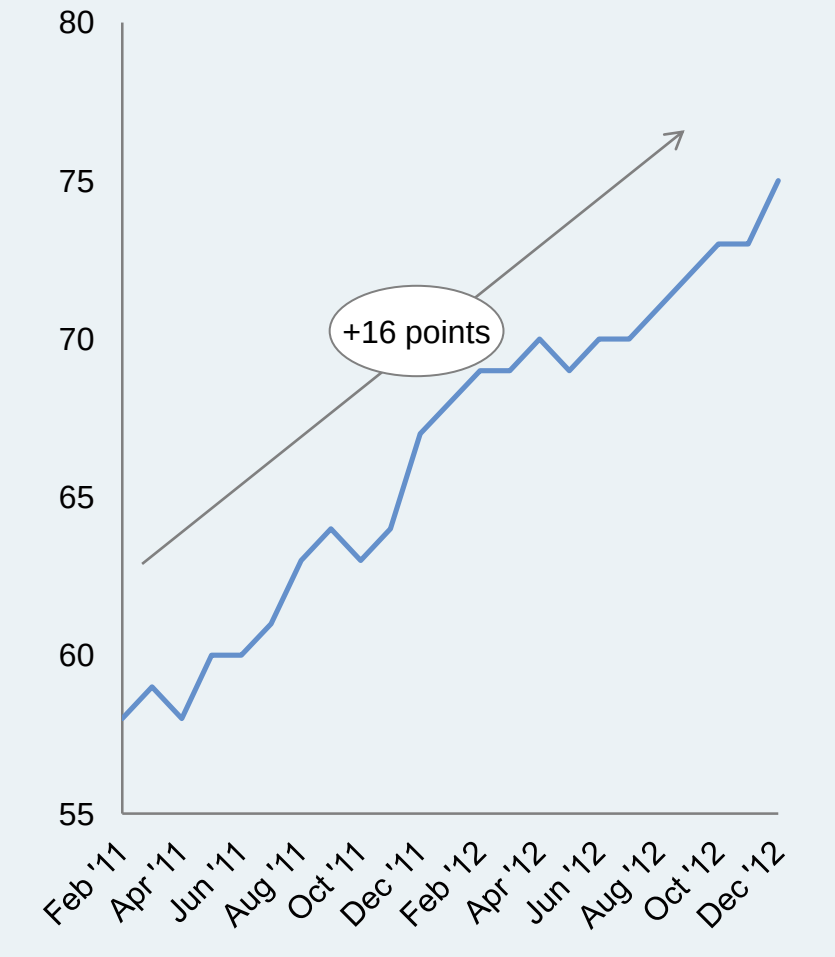
[1] Households that close all Chase account relationships

[2] Age as of 1/1/2013

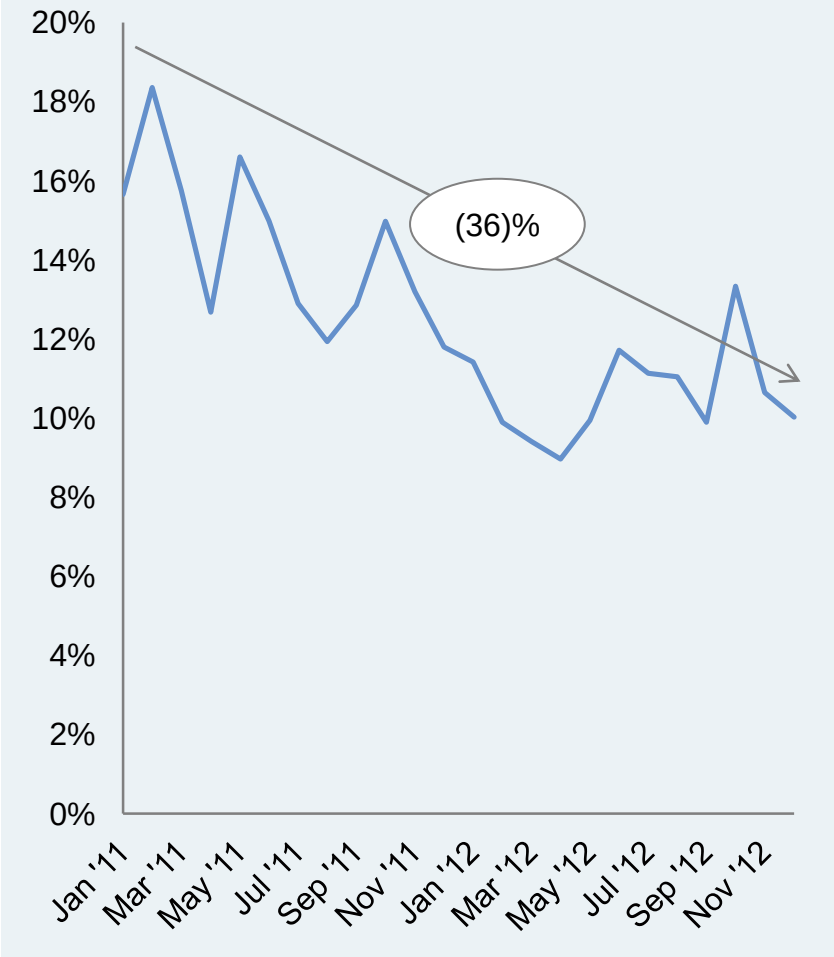
[3] Includes all CBB branch employees: Tellers (FTE), Personal Bankers, Branch management, SSAs, Business Bankers, and CWM Advisors

We have made great strides in improving the customer experience

Improved customer satisfaction[1]



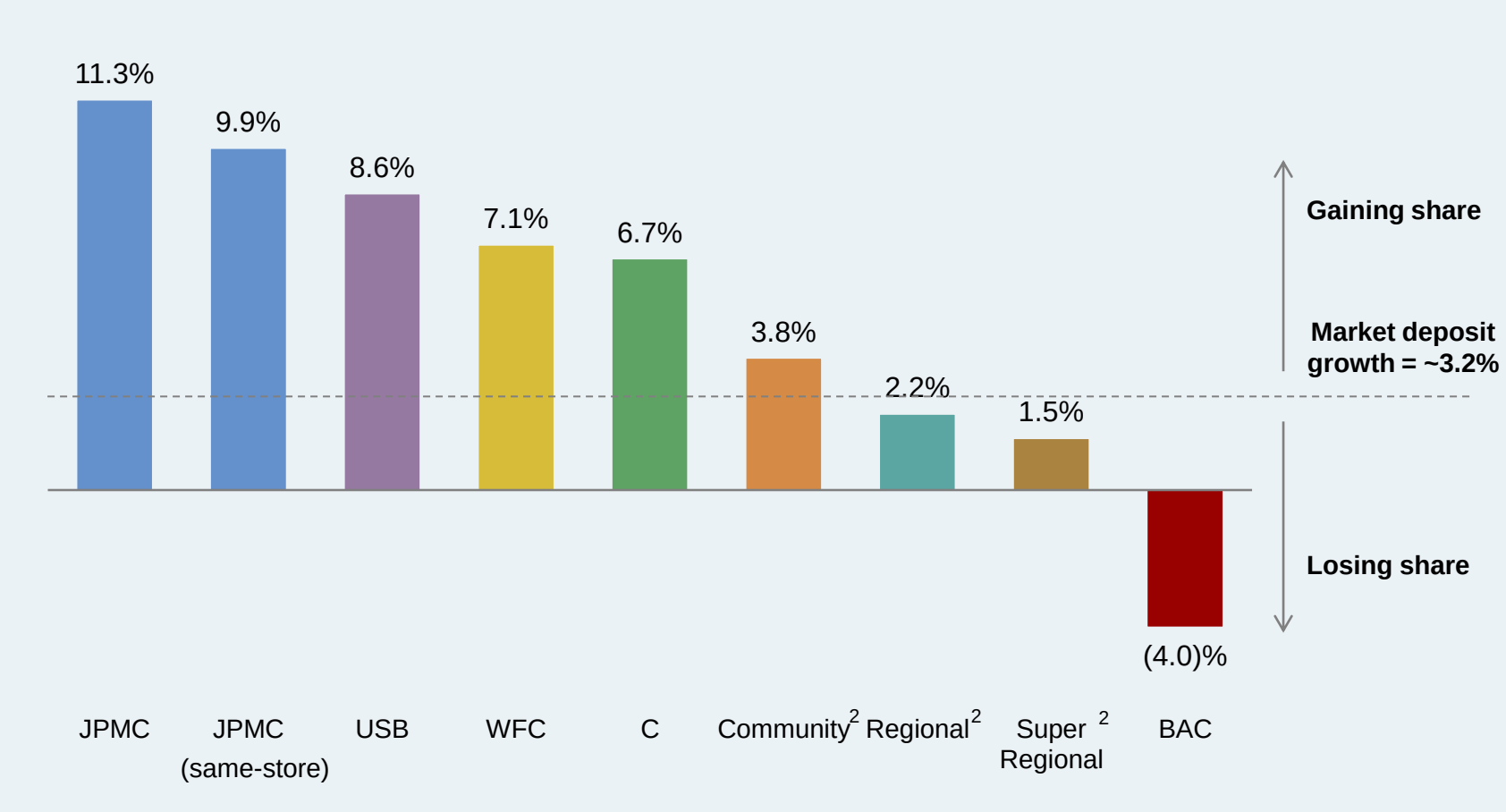
Lower household attrition (annualized rate)[2]



Source: Internal Chase data
Note: Consumer bank only
[1] Top 2 box on a 10 point scale, overall satisfaction
[2] Adjusted for incremental 25K households in October 2012 due to escheatment rule changes

Chase has been taking share from other large banks and regional competitors…

Change in consumer and business banking deposits 2011-2012[1]



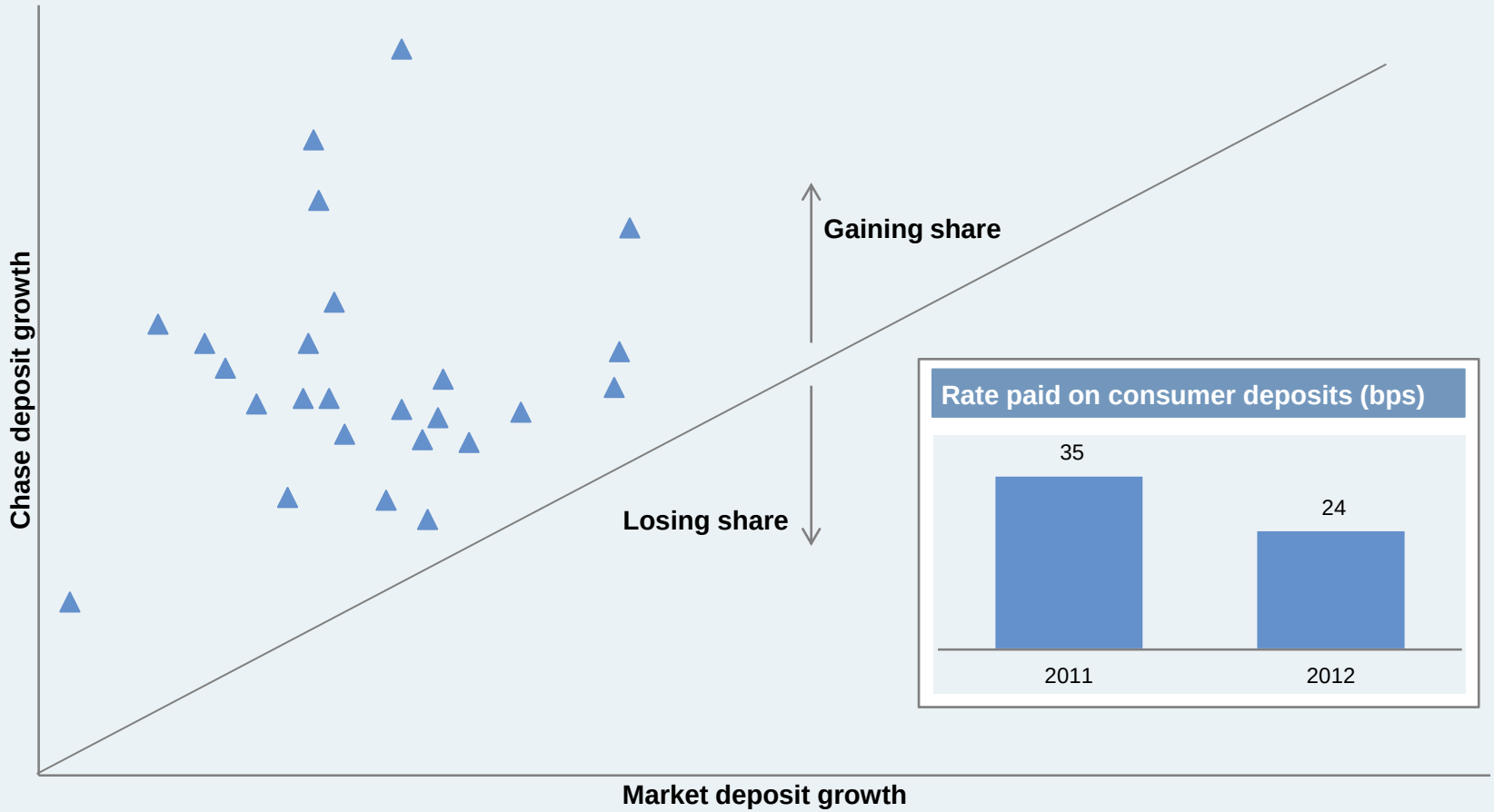
Source: FDIC 2012 Summary of Deposits (as of 6/30/2012)

[1] All branches with $1B+ in deposits excluded to adjust for commercial deposits and only capture consumer and small business deposits; includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC

[2] Super Regionals defined as banks ranked 7-50 in retail deposits (minimum retail deposits in the group ~$10B) and PNC; Regionals defined as banks ranked 51-150 by retail deposits (minimum retail deposits in the group ~$2.9B); Community banks defined as all other institutions; Named competitors are excluded from the Super Regional bucket

…and we gained share in all of our top 25 markets, while maintaining price discipline

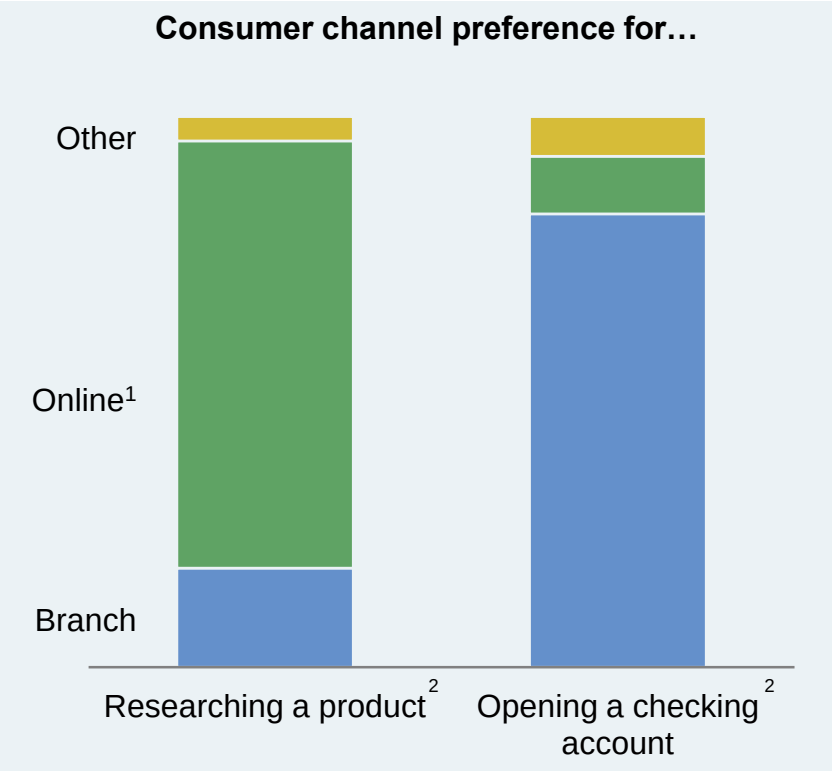
Chase deposit growth in our top 25 markets[1]



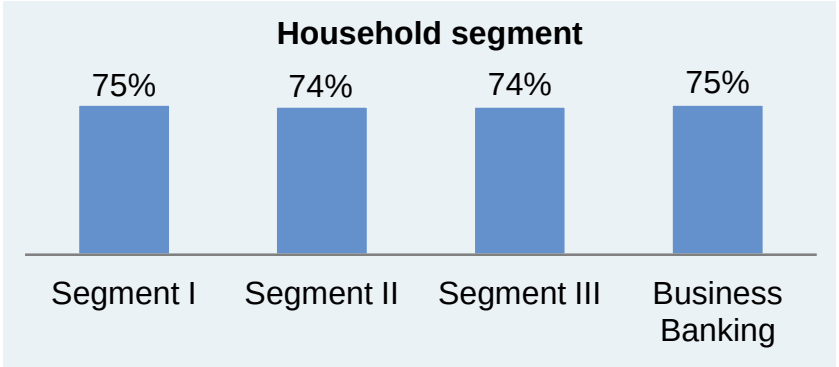
Source: FDIC 2012 Summary of Deposits (as of 6/30/2012)
Note: Excludes branches with >$1B in deposits
[1] Market defined as Core Based Statistical Area

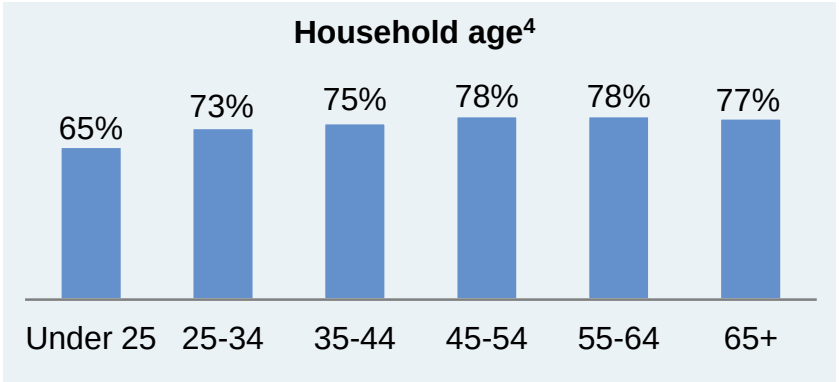
Branches are critical to serving all of our customers…

Consumers typically research online and finalize account opening in branch



% of Chase households that visited a branch[3] quarterly





On average, consumer households visit a branch ~4 times per quarter

Source: Novantas U.S. Multi-Channel Survey (2012), Internal Chase data

[1] Includes mobile, tablet computers, and online chat

[2] How do you prefer to research bank products?; Which of the following situations best describes how you opened your primary checking account? (N = 3,316)

[3] All CBB households, defined by CRM code

[4] Age of oldest member of household

…and they deliver value across all of JPMorgan Chase's businesses

Consumer & Business Banking

#1 Small Business Administration lender[1]	#1 ATM network	#3 in deposit market share[2]	#2 in branches

Leveraging the retail branch platform

Mortgage Banking

- ~50% of retail mortgages originated through branches
- In-footprint consumers 45+% more likely to consider[3] Chase for a Mortgage relationship

Card Services

- ~50% of Chase branded cards sold through branches
- ~65% of Chase Paymentech new sales sourced from Business Banking
- In-footprint consumers 20+% more likely to consider[3] Chase for a Card relationship

Commercial Banking

- ~55% of Commercial Bank customers visit a branch each quarter
- 1mm branch transactions per month

Asset Management

- ~30% of Private Bank households visit a branch each quarter
- $67B AUM managed for Chase clients
- Single largest retail distributor – branches account for $38B or ~20% of J.P. Morgan Investment Management US Retail AUM

Source: Internal Chase data, Small Business Administration, SNL Financial, Millward-Brown brand tracker

[1] By number of loans

[2] FDIC data as of June 2012

[3] Top 2 box, among those aware

However, customer behavior is evolving and we are responding by managing our branches to best serve our customers going forward

Network optimization

- New builds
  - Higher value markets where we are underpenetrated
  - Out of footprint markets
  - Ensure access for all customer segments
- Repositioning
  - Evaluate evolving real estate costs
  - Evaluate evolving local population growth and traffic patterns
- Consolidations

+

Maximizing value per branch

- Acquire attractive customers
- Reduce costs
  - Enable self-service
  - Staff more efficiently
- Deepen relationships
  - Evolve from service centers to sales and advice centers
  - Leverage existing branches and staff to pursue new initiatives, such as Chase Private Client

We actively manage our network to drive growth

Network optimization

Network activity

		2010	2011	2012
Beginning branch count		5,154	5,268	5,508
Network management	Total new branches opened	171	282	179
	New builds	*154*	*260*	*150*
	Relocations	*17*	*22*	*29*
	Total branches closed	(57)	(42)	(73)
	Net branches opened	114	240	106
Ending branch count		5,268	5,508	5,614

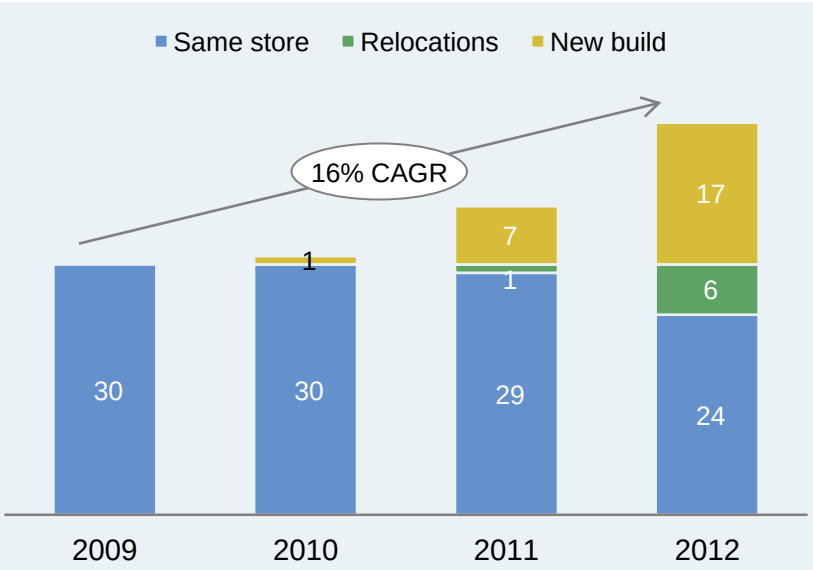
For 2013-2014, we expect to add +/- 100 net branches annually (~+2% of our current network)

Source: Internal Chase data

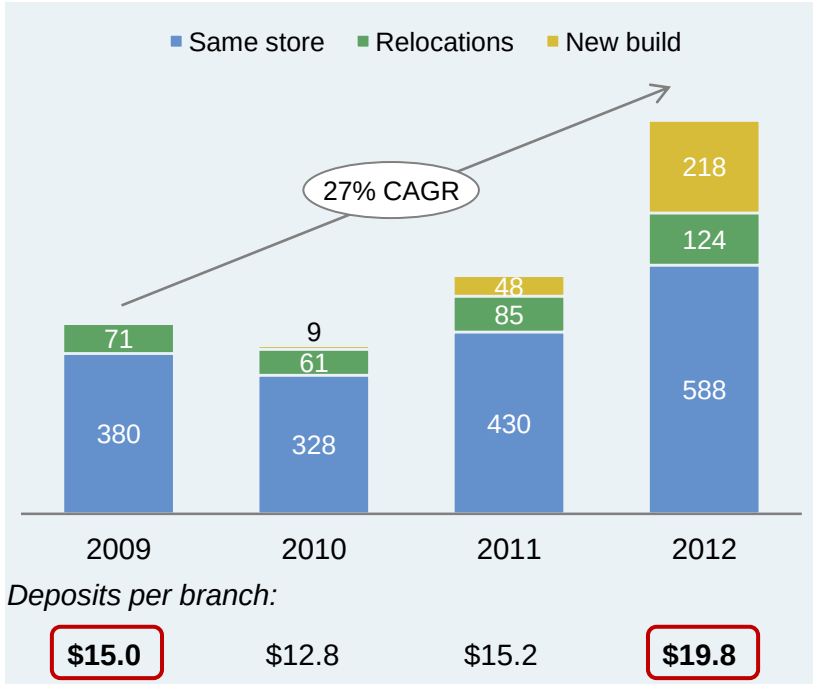
Our network repositioning is driving strong results in Tampa and many other markets

Network optimization

Tampa market[1] branches



Tampa market[1] deposits ($mm)



- **Business Banking deposits: CAGR of 57%**
- **Consumer investments: CAGR of 57%**
- **Cards sold in branches: CAGR of 30%**
- **Mortgage origination share rank: from #8 in 2009 to #2 in 2012**
- **Commercial: loans outstanding up $425mm+**

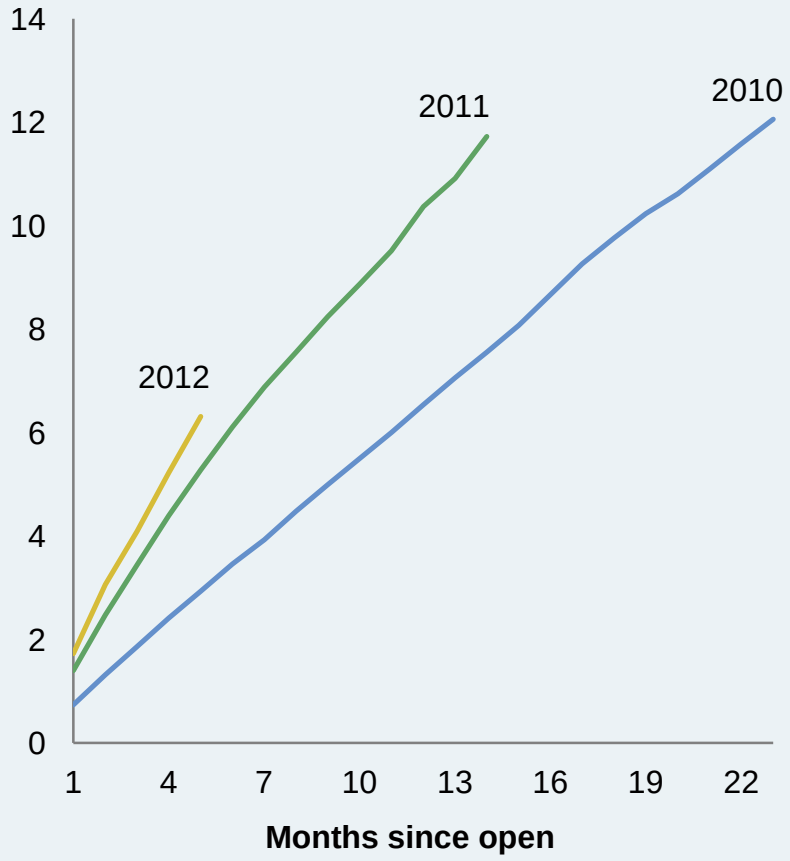
Source: SNL Financial, Marketrac

[1] Market defined as Core Based Statistical Area

We are seeing continuous improvement in new build performance

New builds

Consumer and business deposits per branch ($mm) by vintage



Source: Internal Chase data

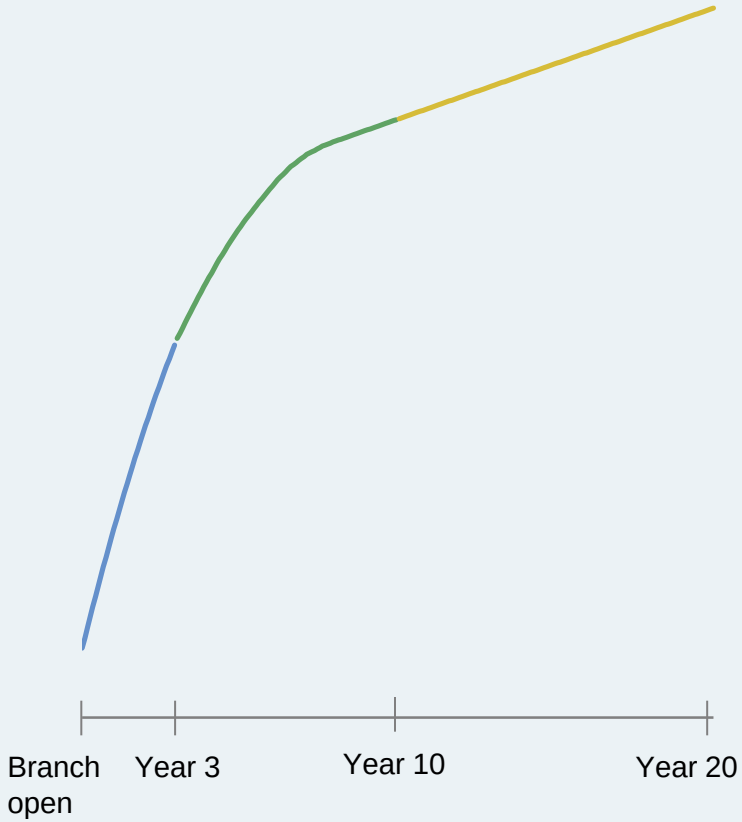
Evolving branch model

- **Lower costs**
  - ~70% of new builds <4,000 square feet by 2014
  - 100% of new builds equipped with self-service banking kiosks
- **Higher opportunity**
  - ~80% of new builds will offer Chase Private Client services by 2014
  - More new builds staffed with Mortgage Bankers, Business Bankers, and CWM Advisors
- **Faster breakeven**
  - 6+ months faster breakeven

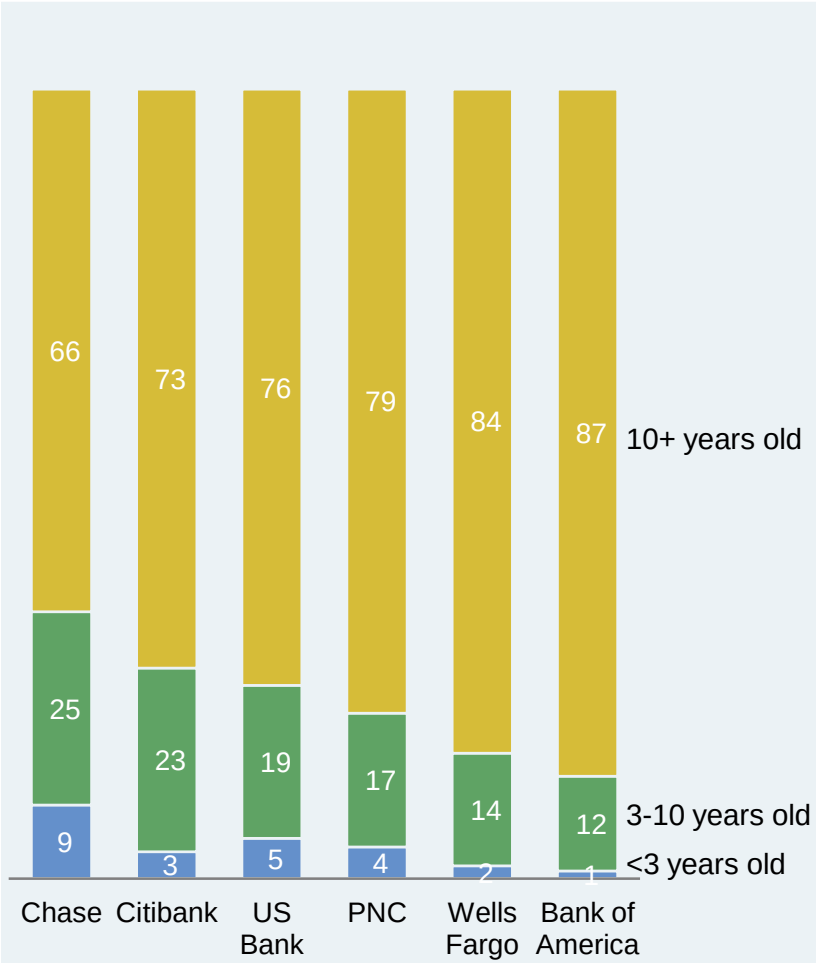
Our consistent investments in building our network will drive future growth

New builds

Typical branch consumer household growth



Branch network age (%)

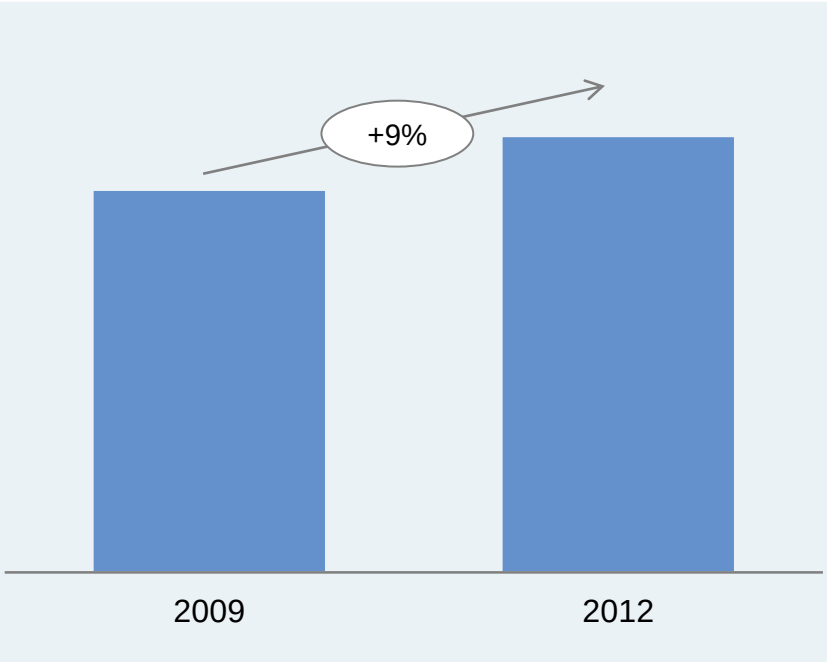


Source: Internal Chase data, SNL Financial
Note: Excludes branches for which SNL lacks open date information

Chase outpaces peers in acquiring and retaining customers

Acquire attractive customers

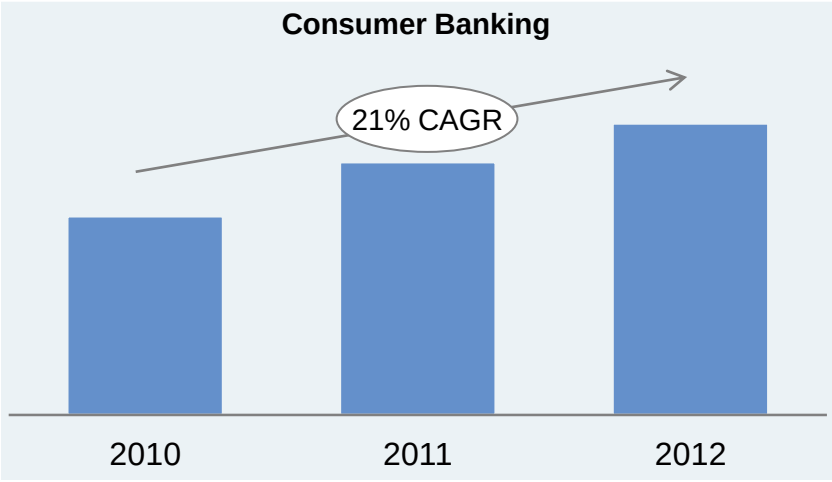
Chase share of primary bank relationships[1]

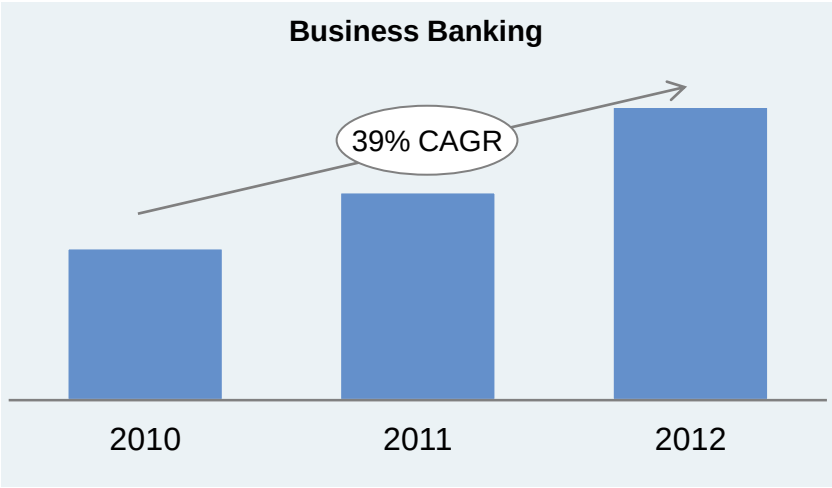


"Chase captured more new primary bank relationships than any other bank in the U.S. in 2012"

TNS

Average deposits[2] per new checking account





Source: TNS' multi-client Retail Banking Monitor; Internal Chase data

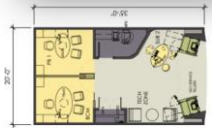
TNS survey question = "Most people have one bank they rely on more than any other. Which one of these banks do you consider to be your main or primary bank?"

[1] Share of entire US consumer base

[2] At month 2

We continue to reduce costs through technology and self-service

Reduce costs

Product		83% of Chase Liquid[SM] customers receive digital statements	~40% lower variable expense vs. traditional checking
Mobile		~6% of consumer deposits made through QuickDeposit in 4Q12	Cost to process deposits ~95% lower than at teller
ATM		~43% of consumer deposits occur at ATMs	Cost to process deposits ~85% lower than at teller
Self-service banking kiosks		Self-service banking kiosks can perform ~90% of all teller transactions	~25% reduction in teller transactions in more than 130 branches to date
Branch design		~25% reduction in average new build size by 2014	Cost to build ~33% lower and cost to operate ~25% lower vs. 2012 new builds
Online		20% of active households are direct (online- and phone-only)	Cost to serve direct customers ~70% lower
Payments	CHASE QuickPay	~6.5B annual Chase QuickPay $ volume[1], ~22mm annual transactions[1]	Cost to process digital payments ~65% lower than physical checks

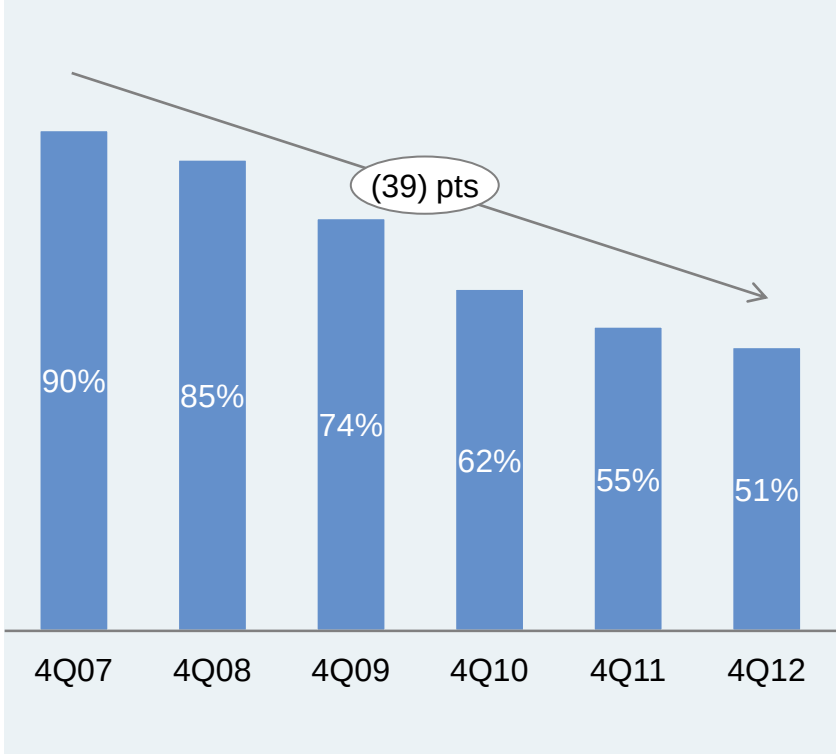
Source: Internal Chase data

[1] Run rate basis from December actuals

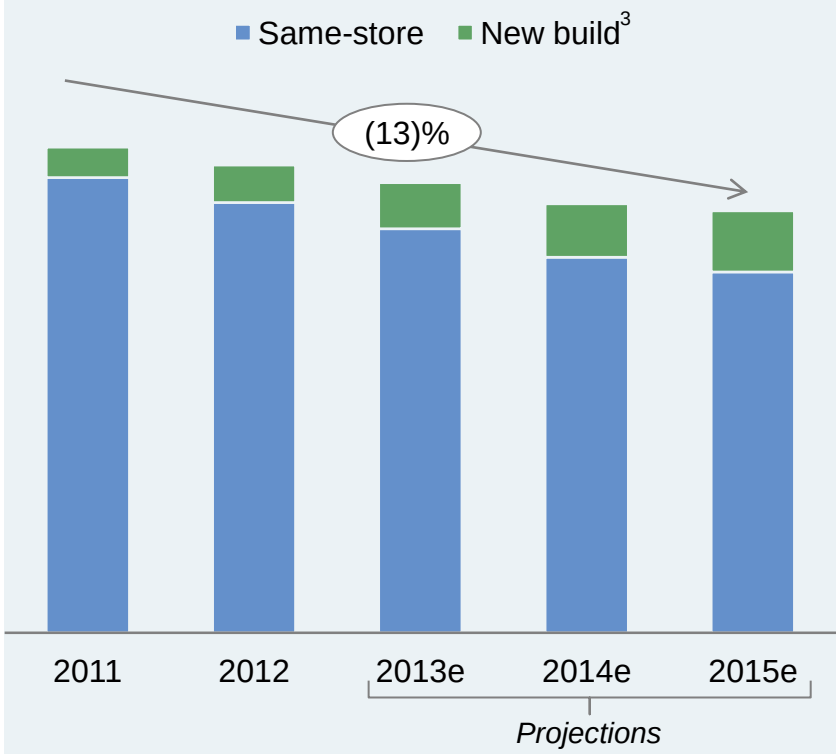
We are reducing staff as customers adopt self-service

Reduce costs

% of consumer deposits through tellers[1]



CBB branch staff 2011-2015e[2]



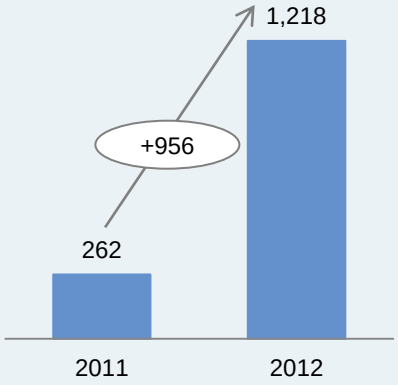
~20% same-store staffing decline by 2015 via attrition, while simultaneously growing the business

Source: Internal Chase data
[1] Includes non-Chase ATMs.
[2] Includes Tellers (FTE), Personal Bankers, Branch management, SSAs, Business Bankers, and CWM Advisors
[3] New builds defined as all branches opened post 1/1/2010

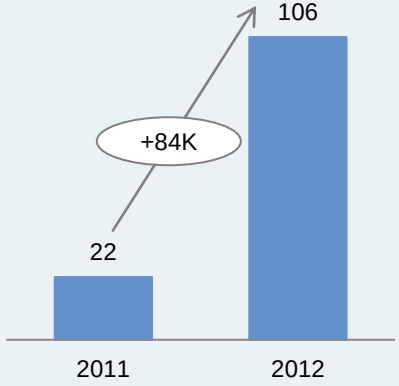
In 2012, we have taken Chase Private Client from a concept to a successful working model

Deepen relationships

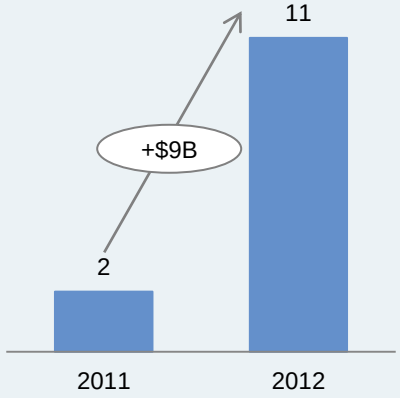
Branches offering Chase Private Client



Chase Private Clients (K)



Net new deposits and investments ($B)



New investment $ per branch ($mm)[1]



2012

- Performance well above expectations in:
  - Deepening previously small relationships
  - Increasing investment penetration
- Leverages existing branches, bankers, advisors, and J.P. Morgan Private Bank investment platform – minimal incremental cost

2013

- By end of 2013, we will have about two thousand existing branches offering Chase Private Client
- Over 80% of Chase's Segment III clients will be within 5 miles of a branch offering Chase Private Client

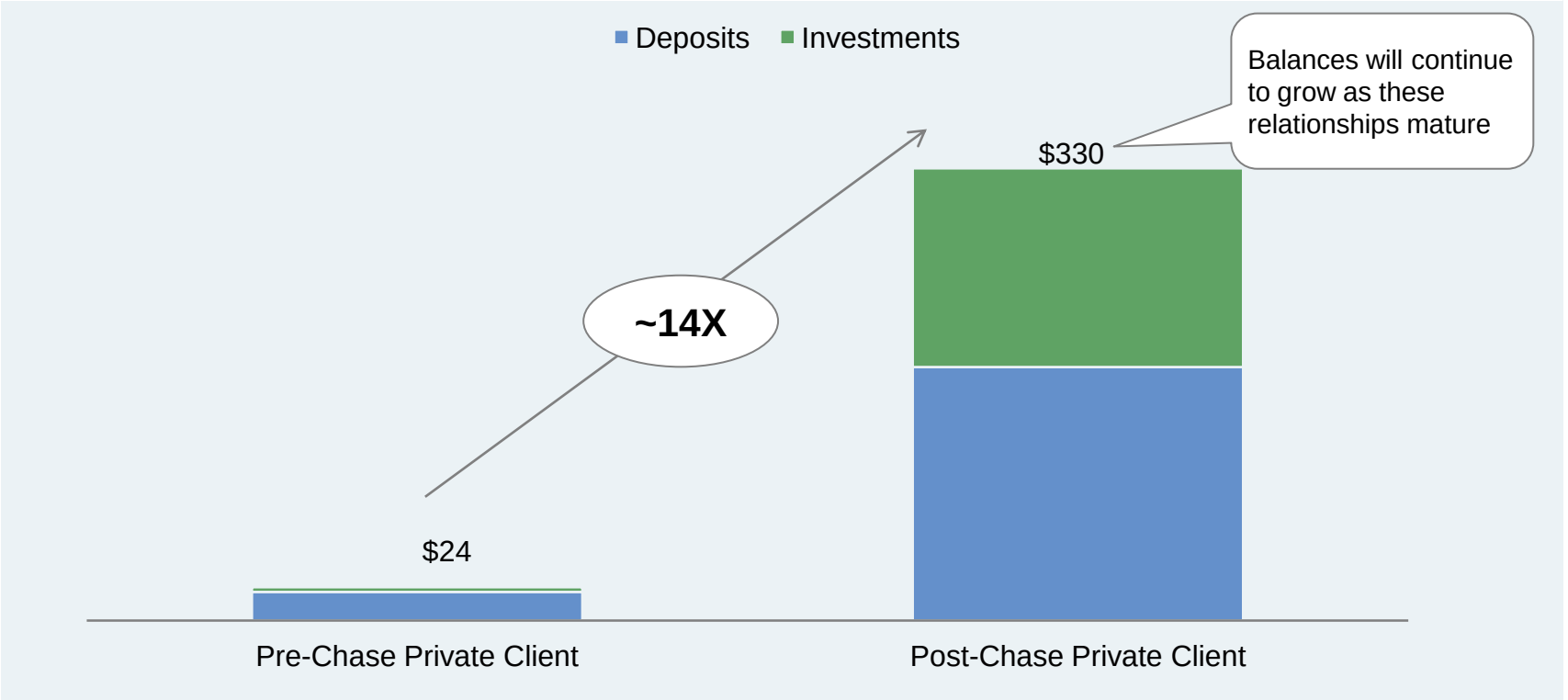
Source: Internal Chase data

[1] Excludes Chase Private Client pilot branches

~56% of Chase Private Client net new funds come from customers previously holding under $100K in balances with Chase, including those new to the bank

Deepen relationships

Balance ($K) per household for those with <$100K in balances at Chase before joining Chase Private Client[1]



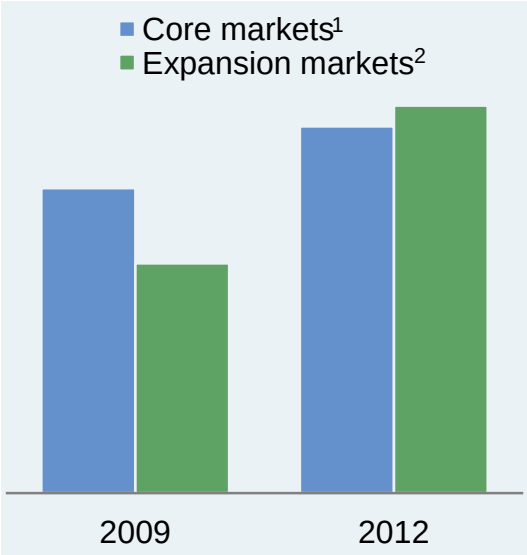
Source: Internal Chase data

[1] Includes new to bank households

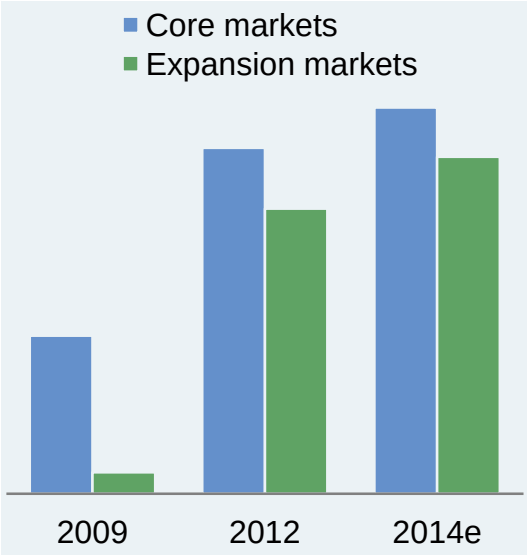
We continue to invest in bringing Chase Business Banking to expansion markets and our performance is on track to meet prior guidance

Deepen relationships

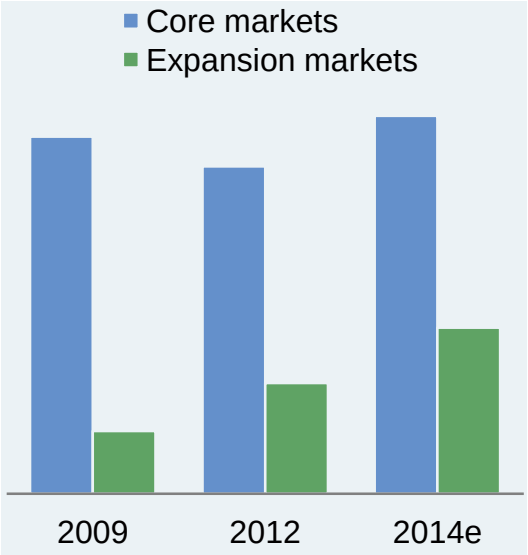
Business relationship managers per branch



Loan originations per branch



Loan balance per branch



Implications

- We have achieved our target staffing levels across our markets
- We will continue to see balance/revenue gains as newly deployed bankers in expansion markets mature and continue to build their books of business
- We are on track to realize the $1B Business Banking opportunity

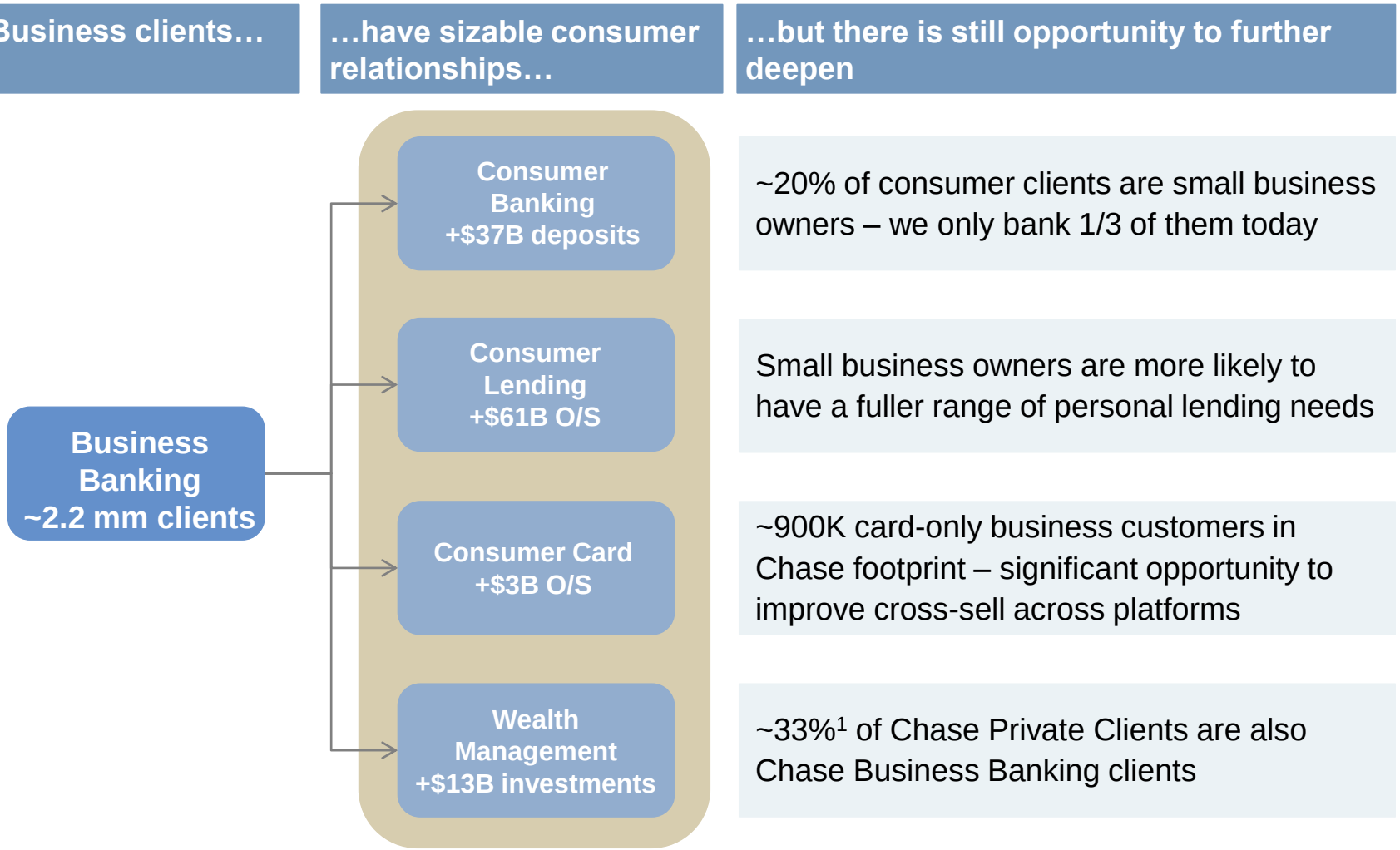
Source: JPM Chase internal data

[1] Arizona, Colorado, Idaho, Utah, Kentucky, Illinois, Indiana, Michigan, Ohio, West Virginia, Wisconsin, Louisiana, Oklahoma, Texas, Connecticut, New Jersey, New York

[2] California, Florida, Georgia, Nevada, Oregon, Washington

We have a significant opportunity to further deepen personal relationships with Business Banking clients

Deepen relationships



Source: Internal Chase data
Note: Consumer Lending includes Home Equity Lending, Mortgages, Student Loans, and Auto Loans; Card Services includes small business cards and personal cards, excludes commercial and corporate cards
[1] CPC and Business client overlap as of Nov 2012, including primary and beneficiary CPC relationships.

We are well positioned to outperform

- Very strong momentum across all of our key business drivers
- Significantly improved customer experience helping us grow our customer base, deepen relationships with our clients, and win market share in all of our markets
- Thoughtful optimization of our branch network – new builds, relocations, and consolidations
- Disciplined cost management
  - Enabling self-service
  - ~20% reduction in same-store staff via attrition by 2015[1]
  - Smaller branch formats
- Chase Private Client and Business Banking are generating significant growth
- We expect to deliver 30%+ ROE, while growing the business

[1] Includes Tellers (FTE), Personal Bankers, Branch management, SSAs, Business Bankers, and CWM Advisors

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The Mortgage business is core to the Chase consumer franchise

Mortgage: a critical connection to our customers

- #2 in originations: $192 billion in 2012[1]
- #3 in servicing: 7.6 million customers in our servicing portfolio

Enormous competitive advantage on distribution and brand

- 4,700 Mortgage Bankers
- 5,600 bank branches
- Brand: strongest consideration among large bank peers[2]

Superior customer relationships, operations scale and capital strength

- Platform to build upon economies of scale
- Capital strength to grow servicing business
- Top ranked large bank in origination (#4) and servicer (#4) customer satisfaction by J.D. Power[3]

Source: Inside Mortgage Finance

[1] Includes private bank and home equity originations

[2] Source: Millward Brown, 3Q12 Mortgage Brand Tracker

[3] J.D. Power and Associates industry-wide survey based on satisfaction index

2012 results demonstrate the strength of the Mortgage franchise

P&L ($mm)	2010 Actuals	2011 Actuals	2012 Actuals
Mortgage Production pretax [1]	($216)	$993	$3,551
Mortgage Servicing pretax	1,191	(3,797)	(1,167)
Real Estate Portfolios pretax	(4,311)	(504)	2,948
Mortgage Banking net income	($1,924)	($2,138)	$3,341

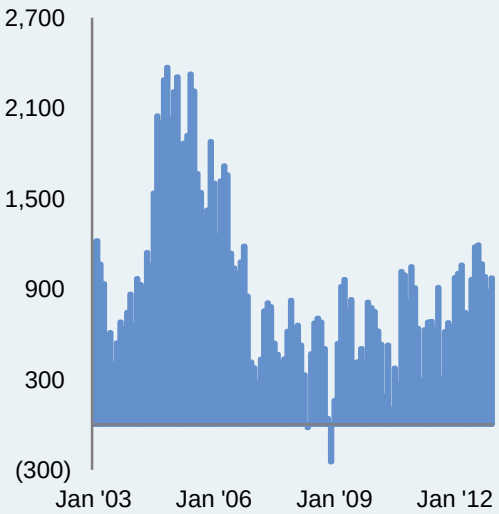
[1] Production pretax includes repurchases

Key indicators suggest the housing market has turned the corner

Commentary

- Demand is strong
- Supply is tight
- Capacity to purchase has improved

Household formation (K)



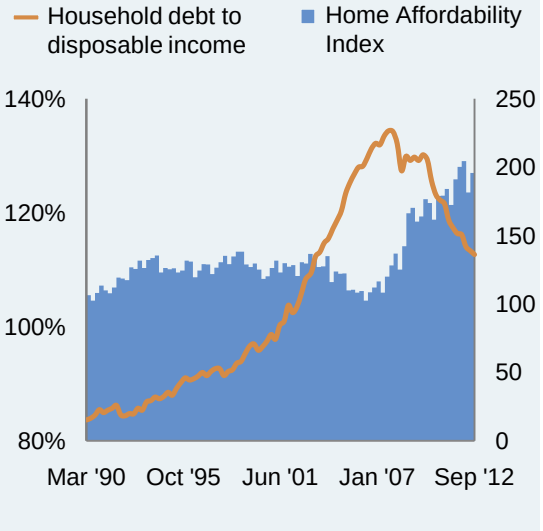
Source: Bloomberg

U.S. housing starts (K)



Source: Census Bureau

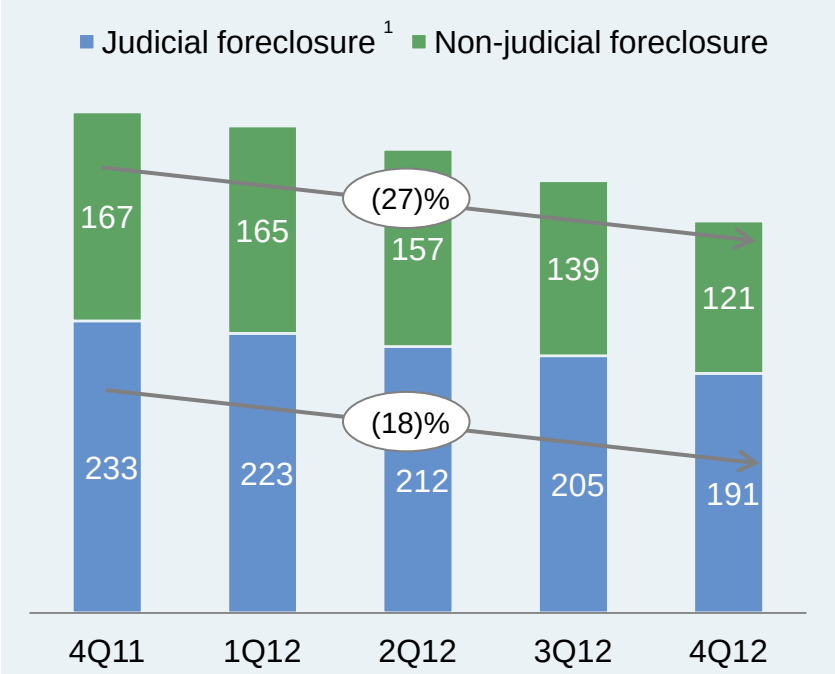
Capacity to purchase homes



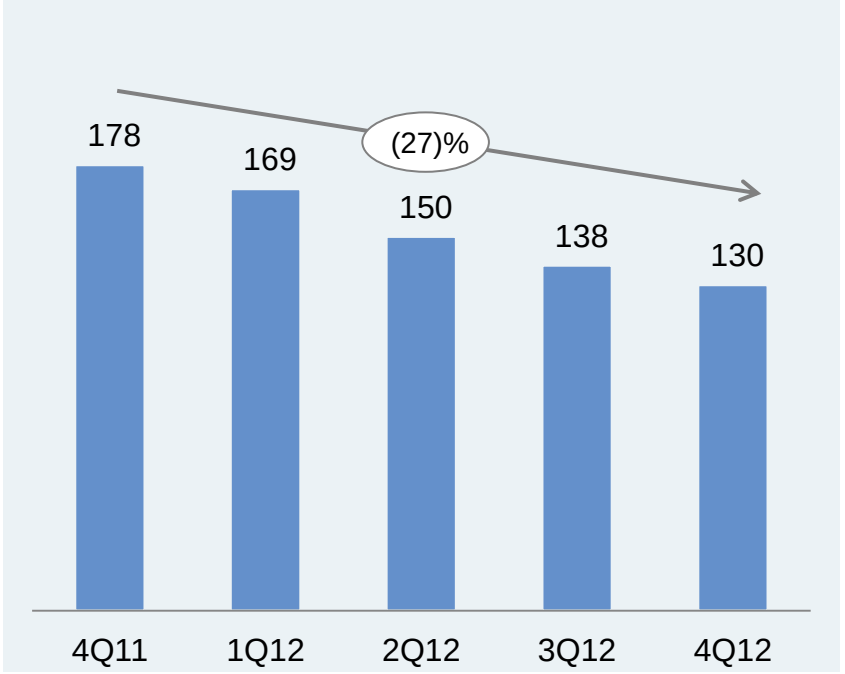
Source: Bloomberg, Fed, BEA, JPMorgan

Legacy servicing and owned portfolio issues are resolving

Foreclosure inventory (in 000's)



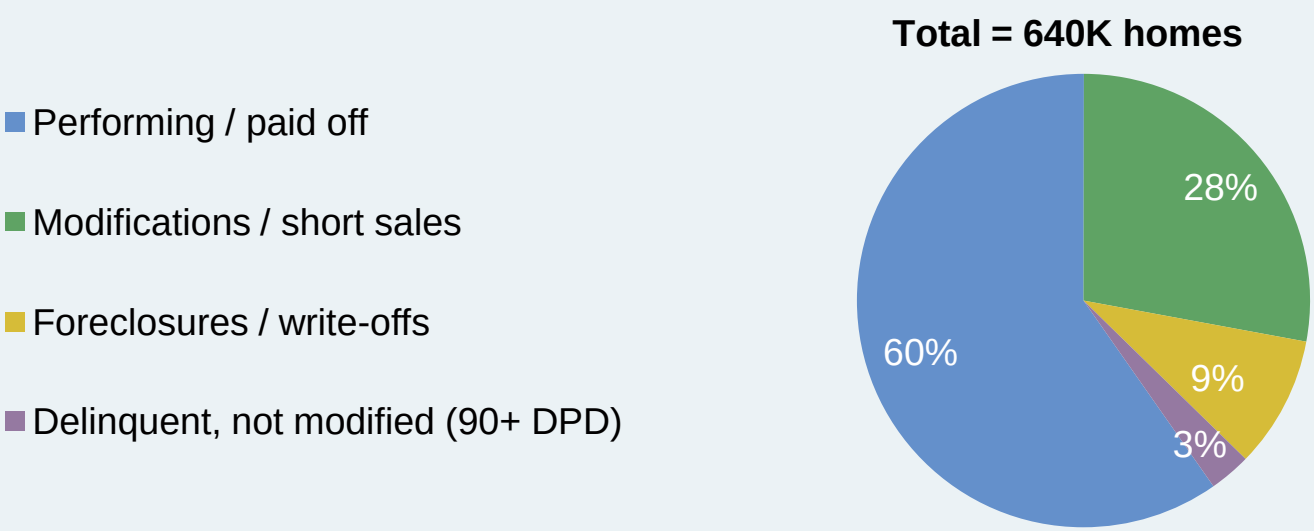
Modification inventory (in 000's)



[1] Judicial foreclosure is a foreclosure method by which the mortgaged property is sold through a court proceeding

Doing our part – Our efforts to prevent foreclosures have yielded tremendous results

JPMorgan Chase owned mortgages (2009 to 2012[1])



[1] Excludes government insured loans, all statistics since 2009

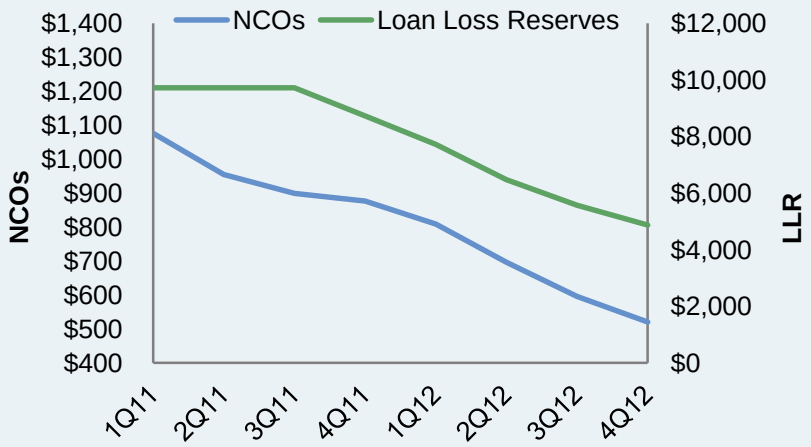
Commentary

- For our owned mortgages, we have completed modifications/short sales for 28% of the portfolio, effectively forgiving over $10B of principal for more than 179,000 borrowers
- We have completed approximately 610,000 modifications to date across our owned and serviced portfolios
- Modifications have reduced borrowers payments by a current annual run rate of approximately $1.6B for our owned and serviced loans

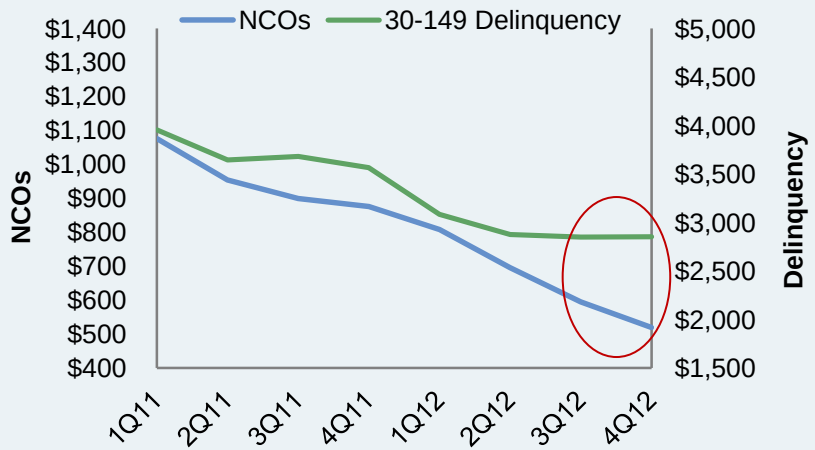
Credit Update – Real Estate Portfolios

Non-credit-impaired (NCI, $mm)

Net charge-offs[1] vs. loan loss reserve ($mm)



Net charge-offs[1] vs. 30-149 delinquencies ($mm)



- Real Estate Portfolios reserves and net charge-offs generally declining at a consistent rate
- Net charge-offs declining faster than delinquencies as HPI improves and loss severities decline
- Total quarterly net charge-offs likely to be $550mm +/-

Purchased credit-impaired (PCI)

- Reserve and purchase accounting mark cover remaining lifetime losses
- Current reserve and mark reflect ~$34B of lifetime losses – ~$25B has been realized to date

[1] 4Q12 adjusted net charge-offs exclude the effect of an $825mm Chapter 7 Bankruptcy discharge adjustment based on regulatory guidance

Target earnings: Mortgage Banking can earn $2B

($mm)	2012 Total	Target
Mortgage Production		
Pretax income	$3,551	$1,500
Mortgage Servicing		
Servicing operating pretax	(1,783)	1,000
MSR risk management	616	-
Pretax income	($1,167)	$1,000
Real Estate Portfolios		
Total net revenue	4,092	2,400
Noninterest expense	1,653	950
Credit costs	(509)	450
Pretax income	$2,948	$1,000
Mortgage Banking pretax income	$5,332	$3,500
Mortgage Banking net income	$3,341	$2,100

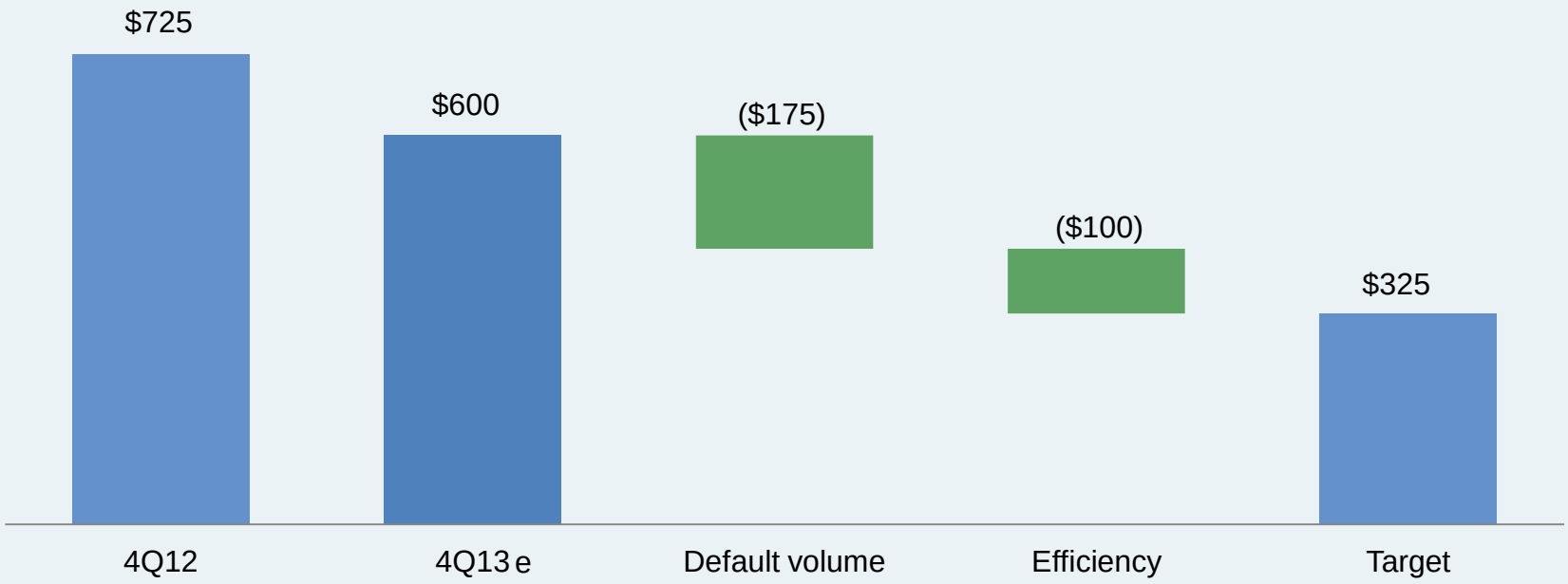
- Market volume $1.5T
- Market share 15%
- Pre-tax margin 65bps

- Third party serviced UPB $1.0T
- Target expense $325mm/qtr

- Portfolio $125B
- Credit costs 35bps

Servicing and default expense will normalize over time

Servicing and default expense[1] ($mm)



[1] 4Q12 Servicing expense excludes Independent Foreclosure Review settlement of ~$700mm and IFR run rate of ~$150mm

Momentum toward normalizing expense (2+ years to achieve)

- Default volume continuing to decline naturally
- Pursuing delinquent loan sales to further reduce inventories
- IFR engagement ending
- Normalizing level of operating losses
- Realizing benefits of technology and control investments

Real Estate Portfolios update

Real Estate Portfolios[1] – Simulated ending loan balance run-off and pretax income ($mm)

	2011 Actuals	2012 Actuals	2013 Estimate	2014 Estimate	2015 Estimate	Target
Ending loan balances ($B)	$198	$177	$165	$155	$146	$125
Ongoing ($B)	*36*	*36*	*43*	*47*	*52*	
Legacy ($B)	*162*	*141*	*122*	*108*	*94*	
Revenue	$4,592	$4,092	$3,500	$3,100	$2,900	$2,400
Net Charge-offs	3,805	3,341	2,200	1,800	1,000	450
Change in reserves	(230)	(3,850)				
Expense	1,521	1,653	1,500	1,300	1,200	950
Pretax income/(loss)	**($504)**	**$2,948**	**($200)**	**$0**	**$700**	**$1,000**

[1] Assumes provision for credit losses equals net charge-offs; other reserve actions not simulated

- Although NII will decline as portfolio runs down, expense and credit losses will also decline
- Additional portfolio growth opportunity exists by retaining high quality agency conforming product

We have powerful competitive advantages in mortgage originations

Customer focus	■ Up to #4 in 2012 Originations Satisfaction Survey[1] ■ Complaints down ~70% from March 2011 to December 2012
Distribution	■ 4,700 Mortgage Bankers serving 5,600 bank branches and call centers ■ Branch traffic and marketing drives high sales force productivity ■ Hiring Mortgage Bankers to deepen branch coverage ■ Large, receptive customer base to cross-sell, including Chase Private Client ■ #2 Correspondent franchise, growing share
Marketing	■ Strong refinance recapture of existing mortgage customers ■ Chase brand has highest consideration, intent to apply[2]
Technology	■ Chase *My New Home* mobile app publicly released with strong media support in 2013 ■ 2013-2014 implementation of origination platform currently used by originator with best-in-class customer satisfaction

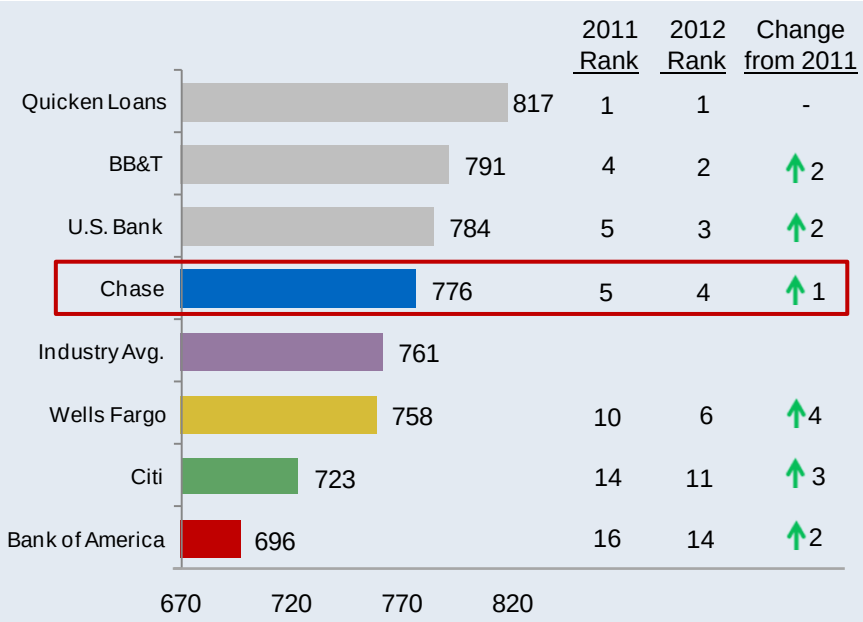
[1] J.D. Power and Associates industry-wide survey based on satisfaction index
[2] Source: Millward Brown, Mortgage Brand Tracker, as of 3Q12

Consistent focus on the customer experience is driving results

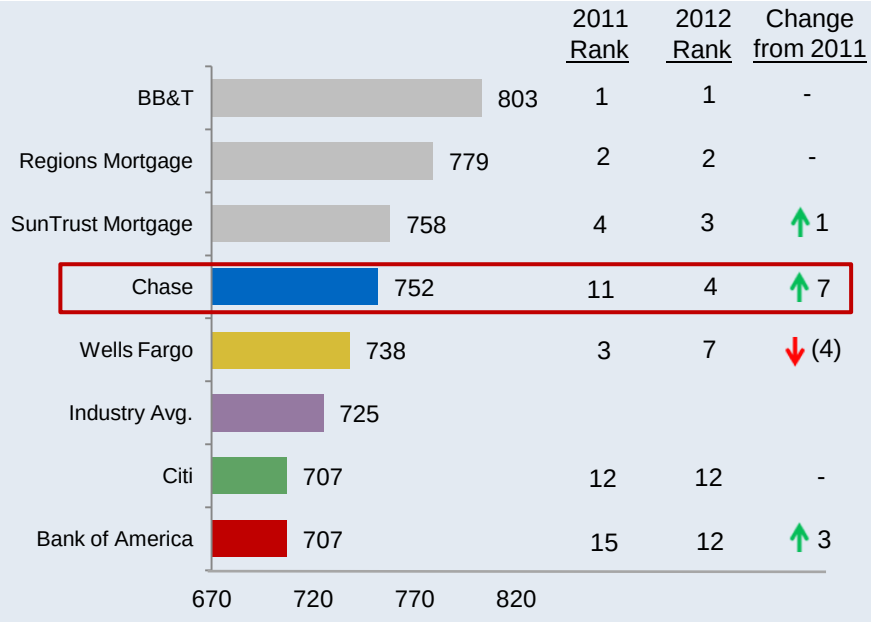
Commentary

- #1 among large bank peers, for both origination and servicing rankings
- Ranking up 8 spots since 2010 for Origination; up 9 spots for Servicing

J.D. Power Mortgage Origination Survey – Satisfaction index

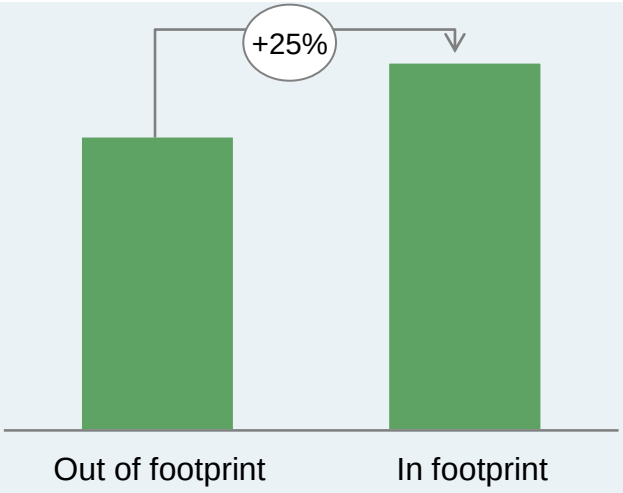


J.D. Power Mortgage Servicer Survey – Satisfaction index

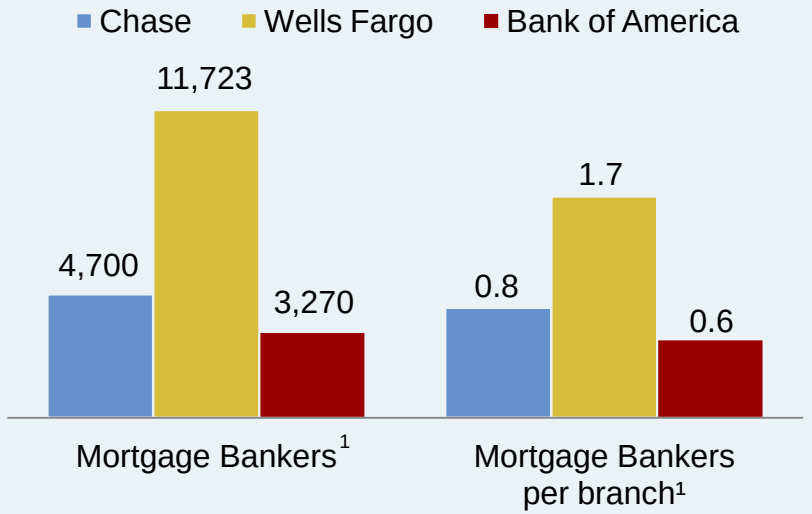


Productive sales force with opportunity to deepen coverage

2012 Chase mortgage banker productivity (applications per banker)



4Q12 mortgage bankers vs. branches

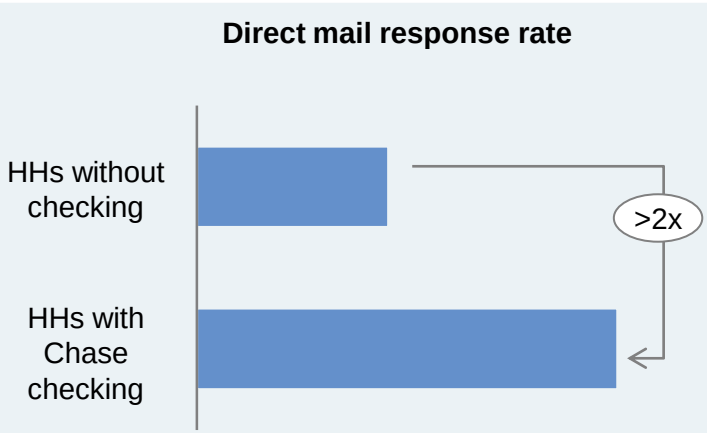


Source: Public documents
Note: Chase includes branch, out of footprint, and call center mortgage bankers
[1] EOP; Wells Fargo includes bank branches and mortgage stores

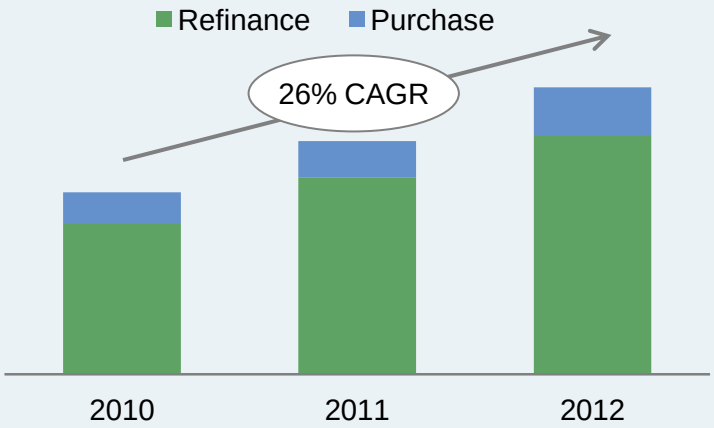
- Chase sales force is located in 5,600-strong branch network, five call centers, and mortgage offices in out of branch footprint strategic markets
- Chase increased size of Mortgage Banking sales force by 900 in 2012

While cross-sell volumes to banking customers have increased, significant opportunity remains

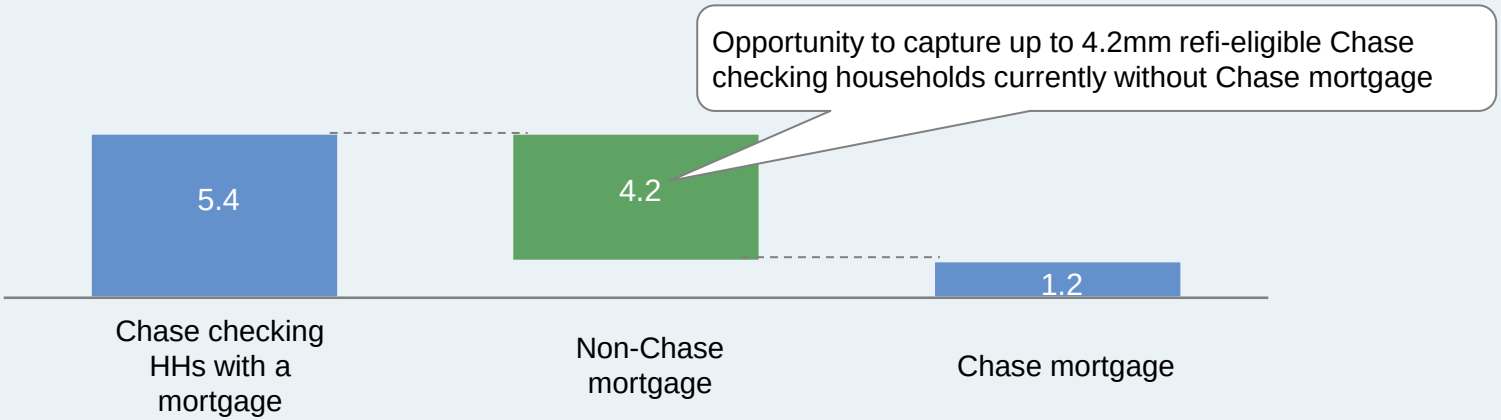
Chase checking HHs are more likely to respond to our offers…



…and cross-sell of mortgages to them has grown rapidly[1]…



…but we still have significant opportunity (Dec. 2012, mm households)[2]

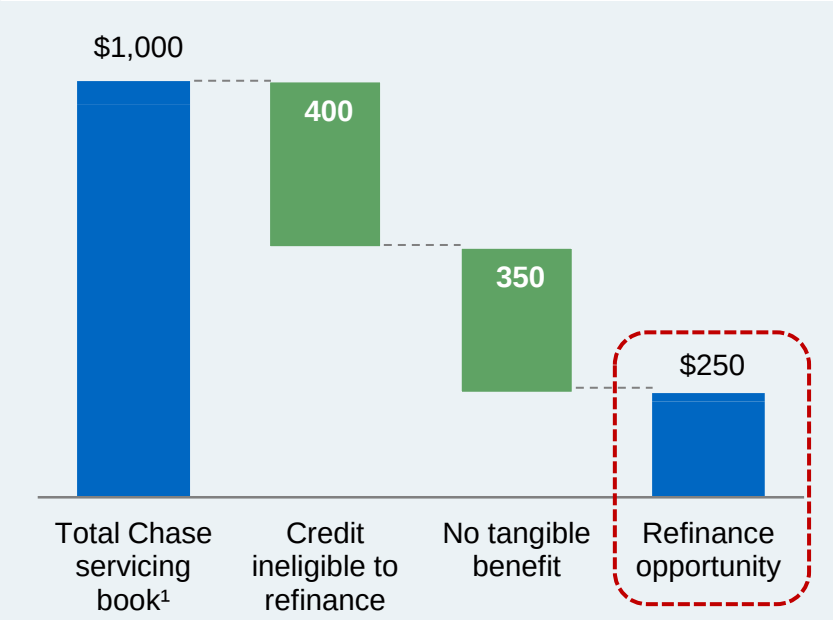


[1] Loans per branch

[2] Households eligible for refinance at 3.5% into a product with offer rate 50 bps lower than the current loan mortgage rate and credit eligible defined as meets FICO and LTV requirements with no bankruptcy or foreclosure history; analysis excludes Home Equity households

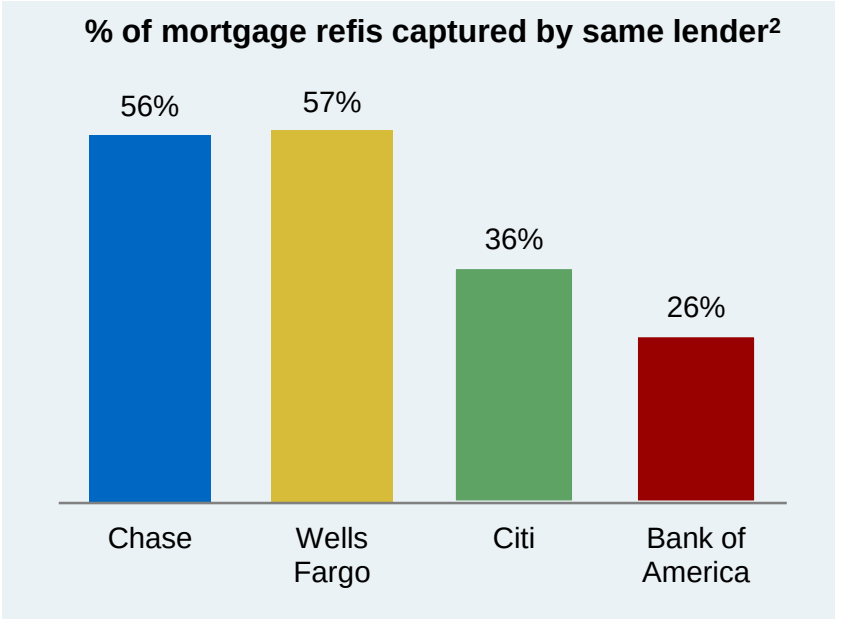
Similarly, the Chase Mortgage servicing portfolio represents an additional refinance opportunity

We have a significant refinance opportunity (Dec. 2012, $B)…



[1] Excludes Home Equity

…and we are strong at retaining our existing customers when they refinance



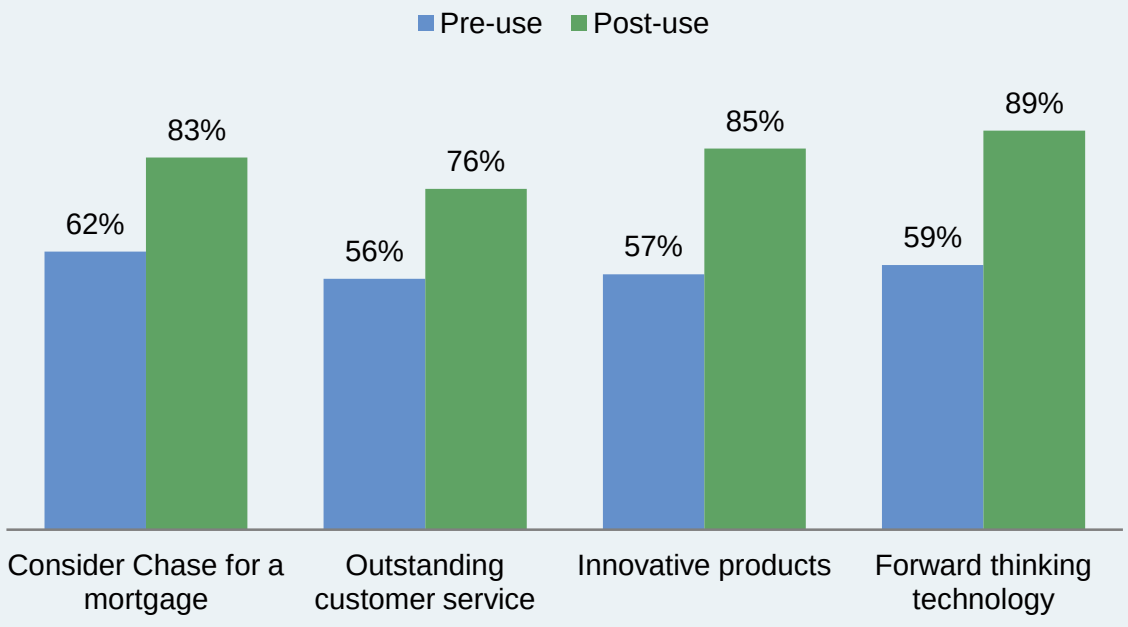
Recapture source: County courthouse recordings
Note: These recapture rates are limited to loans recorded at the county courthouse funded by specific lender brand (primarily direct originations, but also includes broker when applicable)
[2] In footprint and includes purchases captured by same lender

Chase's My New Home Mobile App develops customer relationships as they start their home purchase process

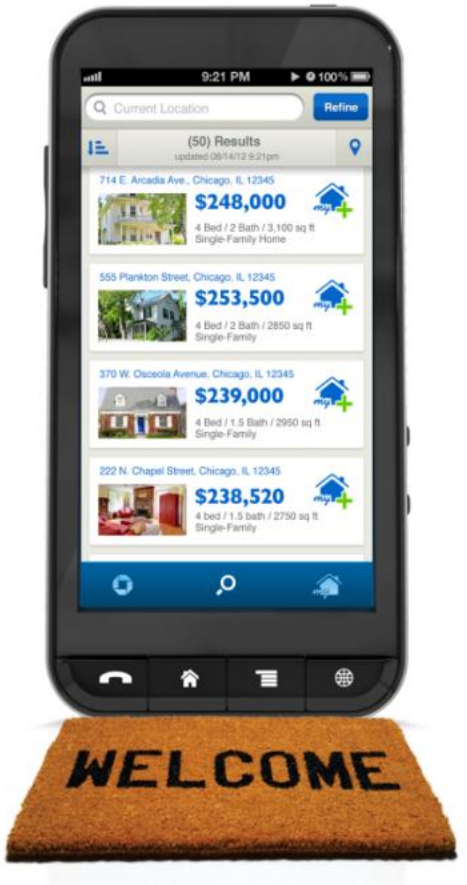
Chase My New Home Mobile App

- Critical to capture mortgage customers via mobile/internet
  - 90% of home buyers use the internet in their home search[1]
- Chase mobile app helps customers find and finance a home – the only app that brings both together

Chase My New Home impact on the brand and mortgage consideration



myNew Home℠



[1] 2012 Profile of Home Buyers and Sellers from the National Association of Realtors

Improving servicing profitability

Normalizing costs	■ Near term run rate savings from resolution of foreclosure-related matters and other operating losses ■ Longer term savings will come from decreasing inventories and technology and efficiency gains
Servicing strategies	■ Grow performing servicing portfolio to leverage economies of scale ■ Pursuing the sale (or subservicing) of high risk and non-performing segments ■ Continue to build off of #2 originations business
Controls	■ Implemented servicing standards required by the DOJ/AG settlement and Consent orders[1] ■ Marked improvements in audit and compliance reviews
Customer satisfaction[2]	■ Servicing customer satisfaction improved 10% points since mid-2011 to 73%

[1] Subject to regulatory reviews
[2] Internal Chase customer satisfaction rating

We have a strong and improving franchise

Mortgage Production	■ Broad distribution ■ Brand ■ Unique opportunity to enhance customer experience through technology
Mortgage Servicing	■ Sourced by #2 share originations business ■ Platform to build upon economies of scale ■ Capital strength to grow servicing business
Real Estate Portfolios	■ Capital strength to grow high quality loan portfolio ■ Robust deposit growth efficiently funds loan portfolio

Challenges to our business will continue, but the worst is behind us

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Chase Card Services: a leading credit card franchise

Key metrics and performance targets

		2011	2012	Current Targets	Revised Targets
Performance ($B)	Revenue	$15.8	$15.5		
	Expense	6.5	6.6		
	Net Charge-offs	6.9	4.9		
	Pretax Pre-LLR	2.4	4.0		
Key drivers – Card Services ($B)	Average loans outstanding[1]	$127	$124		
	EOP loans outstanding[1]	131	127		
	Sales volume[1]	344	381		
	Net charge-off rate[2]	5.40%	3.94%	4.5%+/-	4.0%+/-
Segment results	**Affluent and High Net Worth**				
	Revenue Margin	*11.1%*	*11.3%*	11- 13%	
	ROE	*16%*	*22%*	> 20%	
	Mass Affluent[3]				
	Revenue Margin	*11.7%*	*11.9%*	10 – 12%	
	ROE	*12%*	*21%*	15 – 18%	
	Small Business				
	Revenue Margin	*14.2%*	*14.0%*	13 – 15%	
	ROE	*13%*	*35%*	> 20%	
Overall Card Services Results	*Revenue Margin*	12.35%	12.35%	12.0 – 12.5%	
	ROE[4]	30%	25%	20%+/-	23%+/-

Source: Internal Chase data
[1] Excludes Commercial Card
[2] Includes Loans held for sale
[3] Mass Affluent includes WaMu (except for sub-prime portion)
[4] Excluding the impact of loan loss reserve release, Card Services ROE would have been 11% and 19% in 2011 and 2012, respectively. Assumes tax rate of 38%

Chase growth since 1Q10 resulted in industry-leading gains in sales share

YoY sales growth

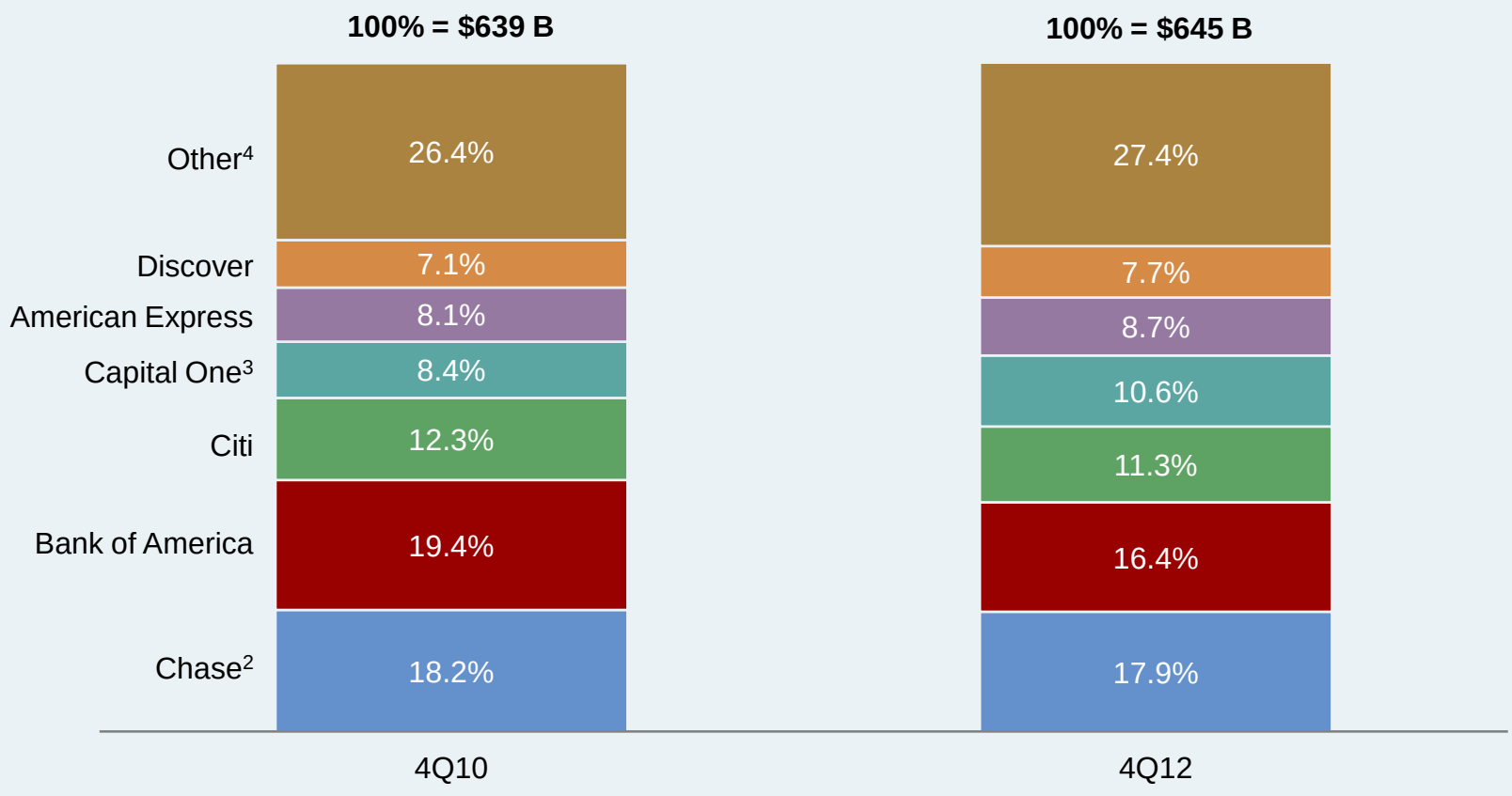


	Δ in sales share, 1Q10 - 4Q12	2012 sales volumes
Chase[1]	+2.10%	$372B
COF ex HSBC[2]	+0.91%	$127B
AXP – US Card[3]	+1.26%	$462B
Discover	(0.89)%	$105B

Source: Earnings releases; internal Chase data; internal Chase estimates
[1] Chase sales data excludes Commercial Card, WaMu, Kohl's, cash advances, balance transfers
[2] COF excludes Kohl's
[3] AXP – US Card includes cash advances, excludes Commercial Card, Global Network Services (GNS) volumes

Industry outstandings have stabilized after several years of sharp declines. We have maintained our relative position

Card – domestic GPCC (excluding private label) outstandings[1] (in $B)



Source: Earnings releases, internal Chase estimates, unless otherwise noted

[1] Excludes Private Label, Commercial Card, Amex Charge Card, Citi Retail Cards, WaMu; GPCC Outstandings = General Purpose Credit Card Outstandings

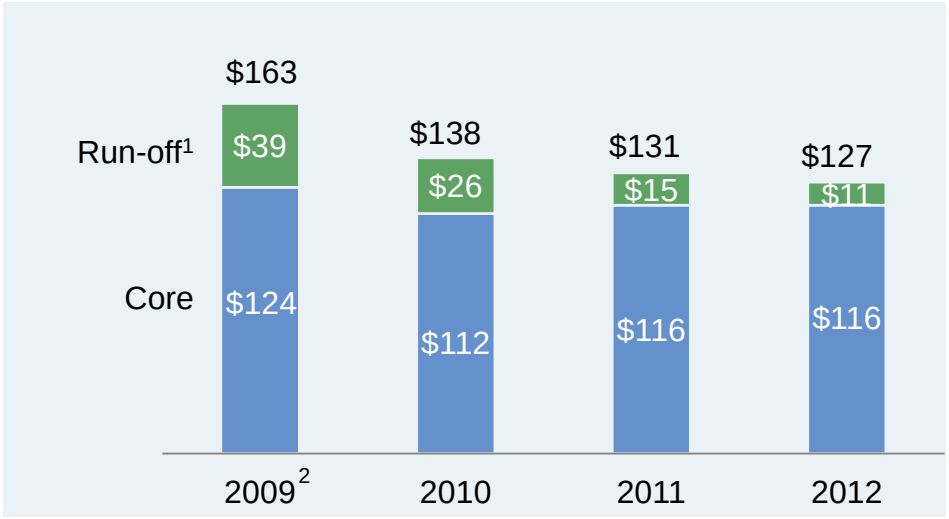
[2] Excludes WaMu

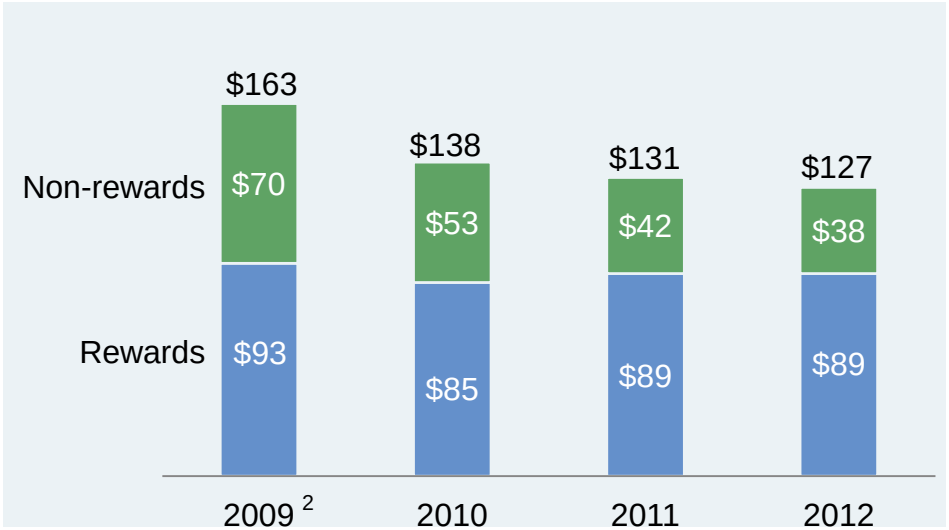
[3] Cap One includes HSBC, Kohl's and Sony acquisitions. Cap One acquired HSBC in 2Q12

[4] Other includes WFC, US Bank, USAA, WaMu and other smaller issuers

In 2013, we expect modest single digit growth in outstandings

Consumer and Small Business Card O/S ($B)





Growth initiatives

Products

- Reinforce product benefits to stimulate engagement and increase wallet share
- Ensure customers are in the right products

Channels

- Expand customer engagement in digital channels
- Optimize channel mix for acquisition and servicing
- Continue to leverage branch network for cross-selling

Customer experience

- Optimize underwriting within risk appetite
- Optimize line management
- Roll out new retention initiatives

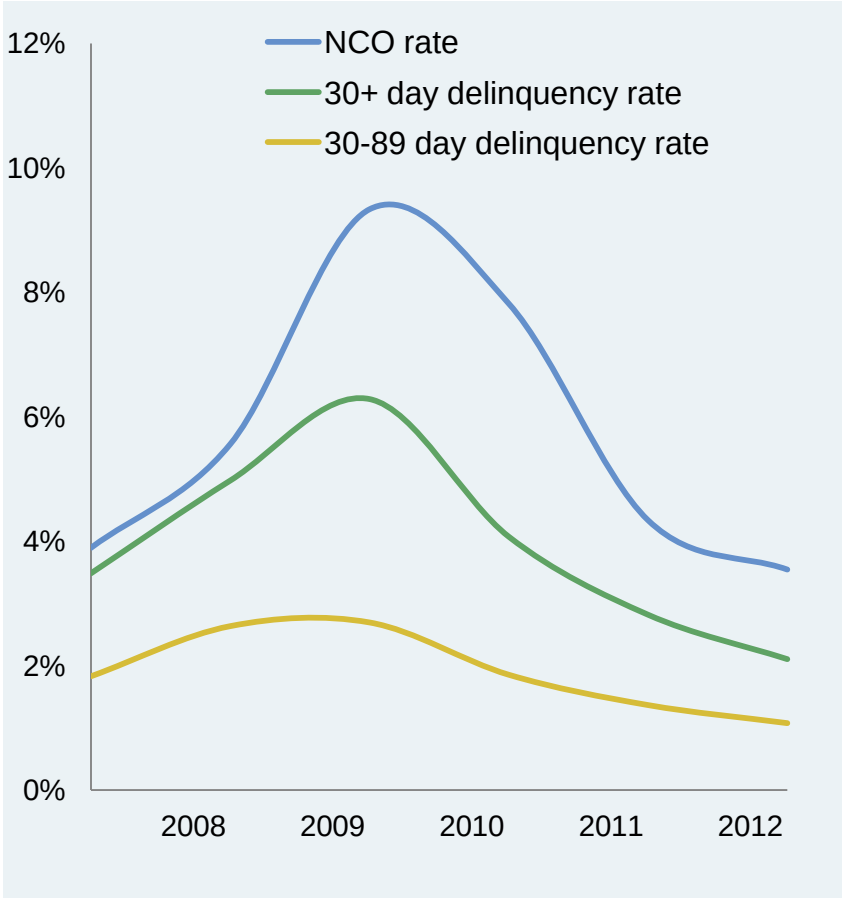
Source: Internal Chase estimates

[1] Run-off balances include certain legacy WaMu loans and terminated partner portfolios (e.g., Kohl's). Run-off balances have been adjusted since 2009 to include additional terminated portfolios

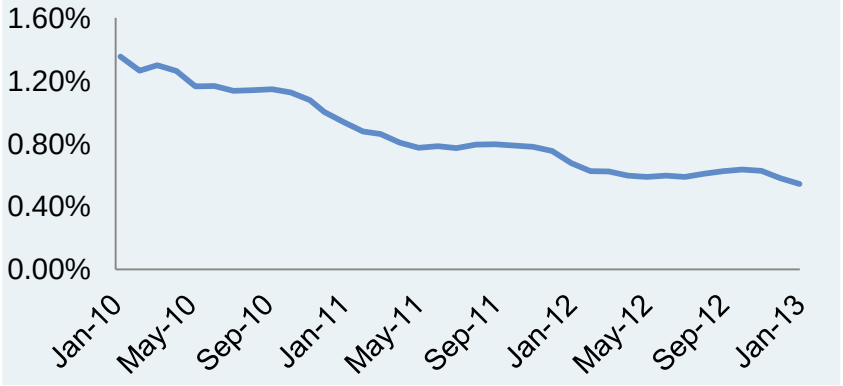
[2] Presented on a managed basis

Post-recession, our portfolio has maintained high credit quality

Consumer and Small Business Card net charge-off and delinquency rate trends



Delinquency $ roll-rate from current to bucket 2 (0-60 days past due)



Delinquency $ roll-rate from current to charge-off (0-180 days past due)



Source: Internal Chase data.
Note: Presented on a managed basis

Our customer-centric strategy has focused on customer engagement, and has generated strong results

Strategic priority	Outcomes
■ Offer best-in-class Chase-branded products and leading portfolio of partner products	■ Launched Sapphire, Sapphire Preferred, Freedom and Ink ■ Built strong partnerships with United, Southwest, Marriott, and Amazon ■ Signed Ritz Carlton and Fairmont Hotels
■ Improve customer experience	■ Enhanced platforms and capabilities for customers and merchants ■ Restructured call centers ■ Focused on knowledgeable and relationship-focused product specialists ■ Improved cardholder retention
■ Strengthen brand	■ Invested in marketing to drive awareness, consideration, and usage
■ Optimize investments to drive greater efficiencies	■ Improved marketing efficiency by leveraging digital channels ■ Managed operating expense closely

Our Chase-branded rewards cards offer best-in-class value propositions and effectively target affluent consumers and small businesses

Focus on customer engagement

Chase-branded products: 2011 vs. 2012	Sales growth	Revenue growth
	↑22.5%	↑12.4%
	↑20.7%	↑20.9%
	↑21.3%	↑5.0%

Source: Internal Chase data

Our co-brand partners provide unique access to affluent markets and customers

Focus on customer engagement

Partner products key metrics: 2011 vs. 2012

	Sales growth	Revenue growth
All partners (including airlines and hotels)[1]		
Examples: amazon.com, Disney	↑12.6%	↑10.1%
Airline and hotel partners only[2]		
Examples: British Airways, Hyatt, Fairmont Hotels & Resorts, Marriott, Priority Club Rewards, The Ritz-Carlton, United, Southwest	↑14.1%	↑15.4%

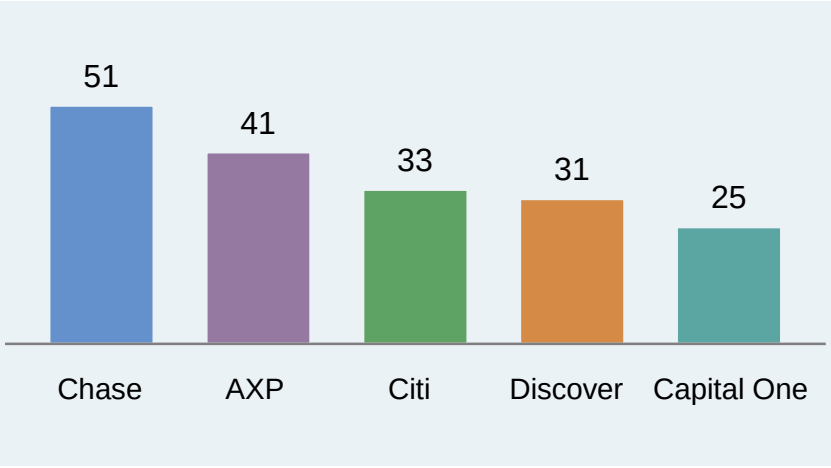
Source: Internal Chase data

[1] Excludes terminated portfolios

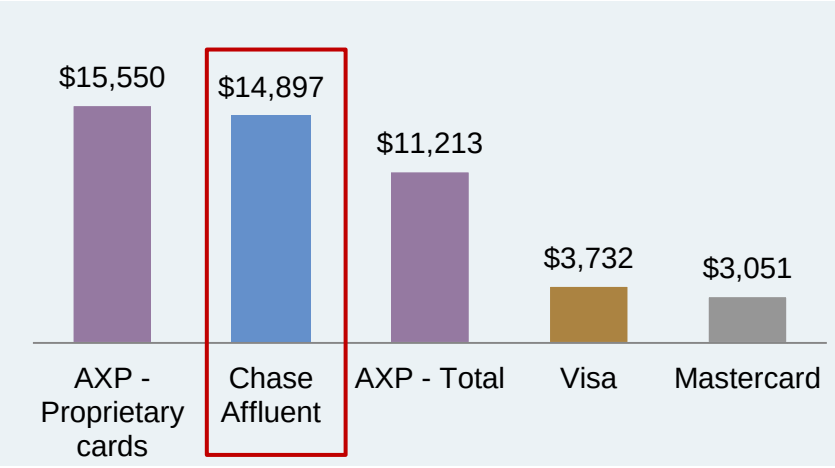
[2] Includes Amtrak

Among affluent consumers, Chase has strong brand consideration and has outperformed the market on growth of outstandings and sales

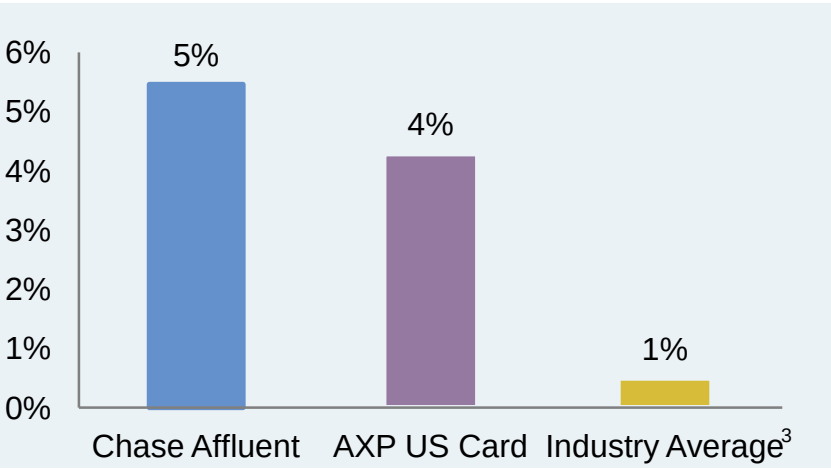
Brand consideration for affluent consumers[1]



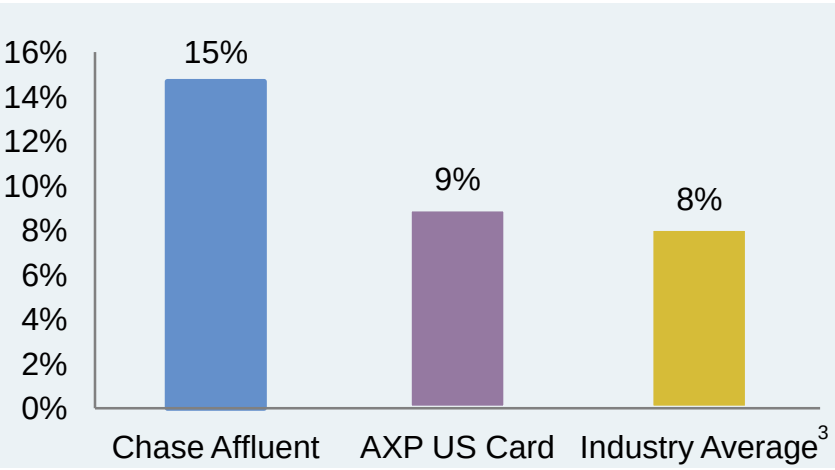
Annual average cardholder spend[2]



2012 outstandings growth



2012 sales growth



Sources: Brand Tracker Q4 2012; Federal Reserve Board revolving credit data; internal estimates; Visa and MasterCard data; American Express financial community meeting, February 6, 2013

[1] For affluent consumers (HHI $125K+ and/or investable assets of $250K+)

[2] 3Q12 trailing 12 months; average cardholder spend is defined as spend per open account

[3] Excludes Private Label

Service model improvements have strengthened the customer experience and improved retention

Improve the customer experience

Manager escalations ↓51%

Dissatisfaction ↓29%

Inbound service Net Promoter Score ↑20%

Call transfers ↓28%

Retention is up 6 percentage points from 2010 to 2012[1]

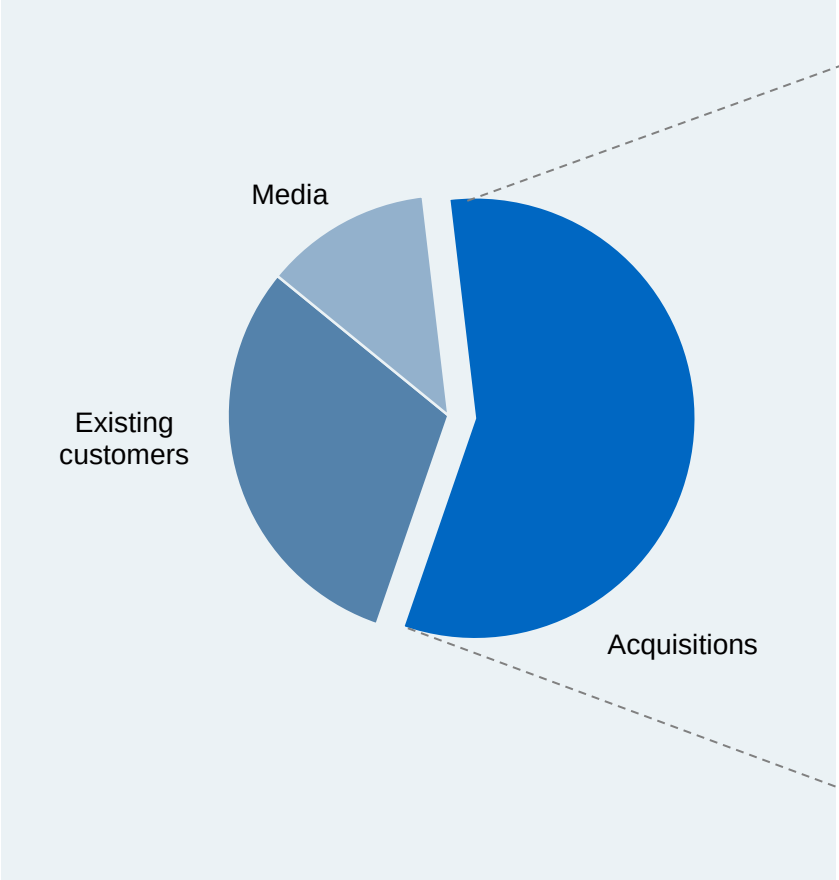
Source: Internal Chase data, for the period from January – December 2012

[1] Based on open accounts for Chase excluding WaMu, Commercial Card and International

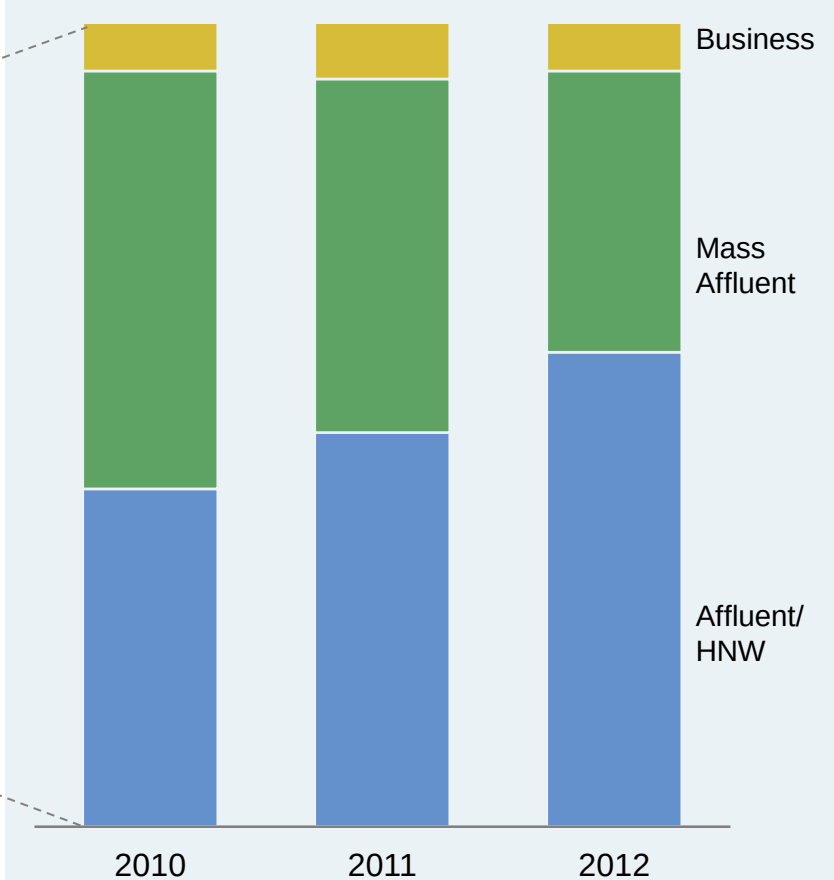
We continue to find strong opportunities to grow through targeted acquisition of new customers

Strengthen the brand

Distribution of marketing spend for U.S. cards, 2012



Distribution of acquisition spend for U.S. cards, 2010-2012



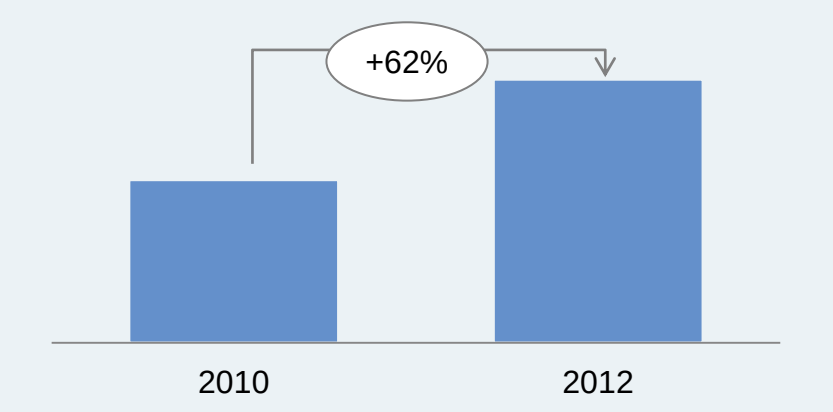
To guide acquisition spend, we use a rigorous approach and clear criteria to ensure each marketing investment meets NPV, payback and ROE hurdles

Source: Internal Chase data
Note: All charts include partner cards and exclude Commercial cards

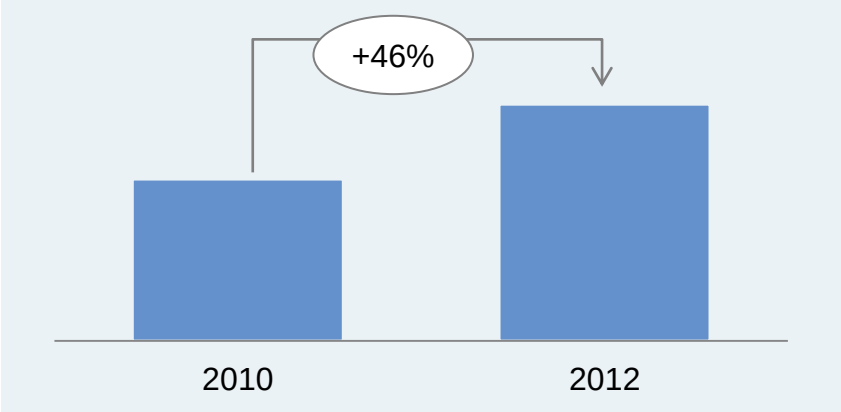
Our recent marketing investments have generated more engaged accounts

Optimize investments to drive greater efficiencies

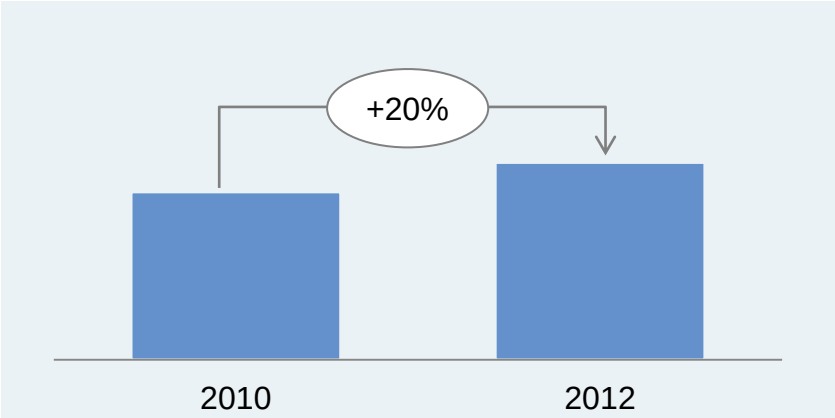
Sales
2010 vs. 2012 vintages[1]



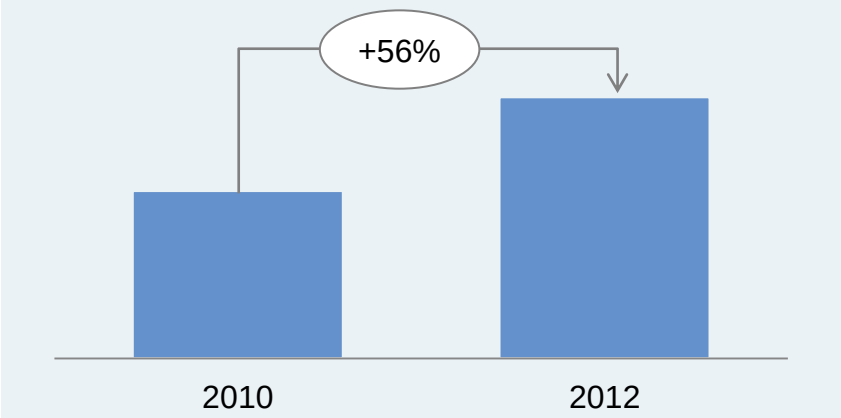
Outstandings
2010 vs. 2012 vintages[1]



Debit active rate[2]
2010 vs. 2012 vintages[1]



Sales per new account
2010 vs. 2012 vintages[1]

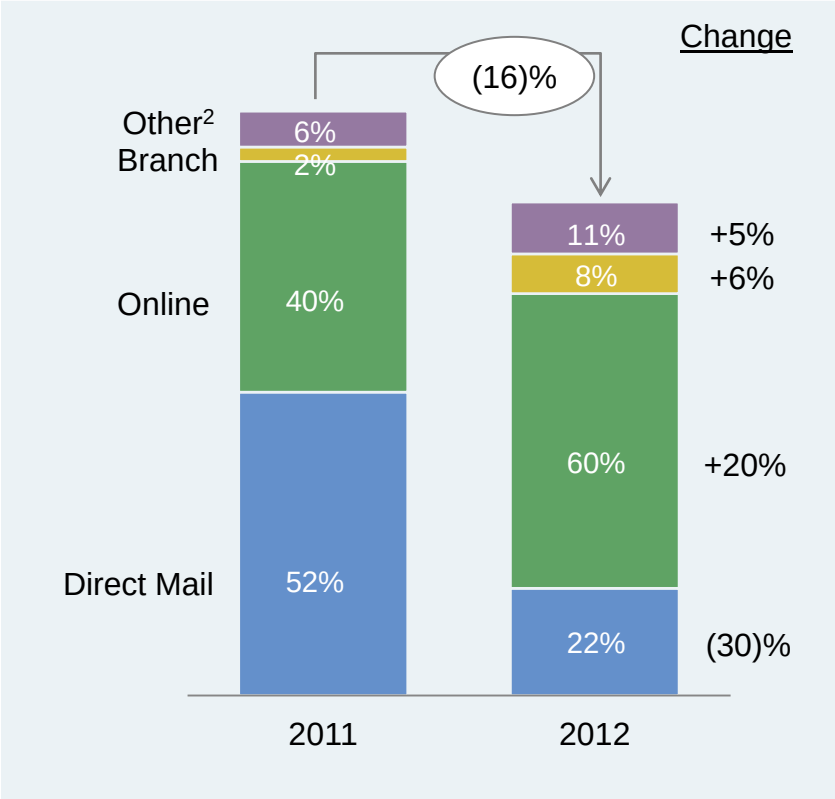


Source: Internal Chase data
[1] Data as of month 3 for accounts booked from Jan to Sep. Excludes international and Kohl's
[2] Debit active rate is accounts with spend activity as a % of total new accounts

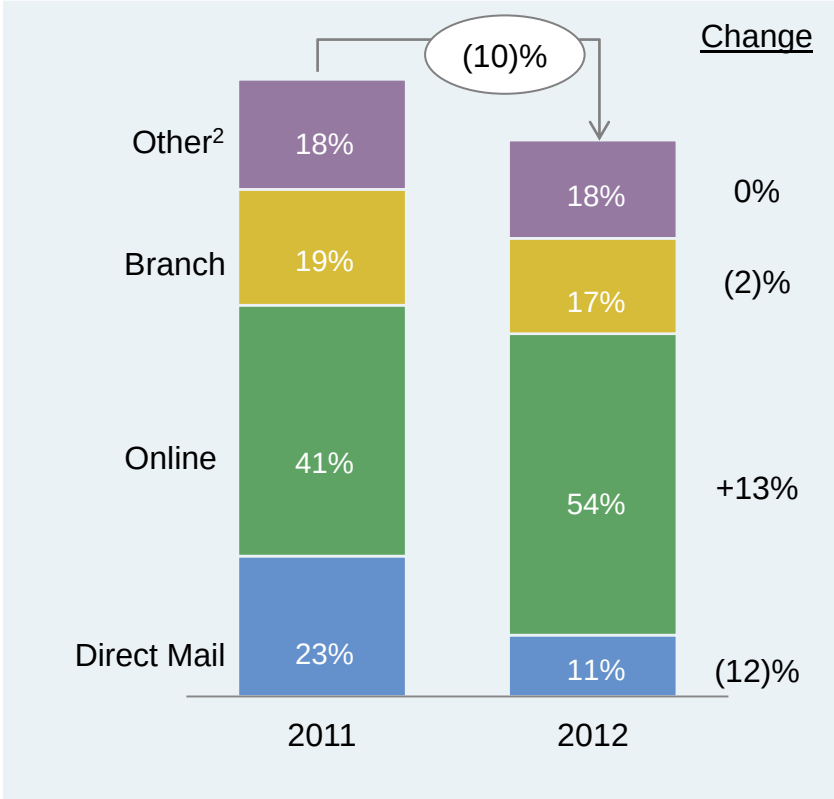
We adjusted acquisitions towards digital channels based on customer behavior

Optimize investments to drive greater efficiencies

New account acquisition expense[1]



Accounts[1] opened (partner and branded)

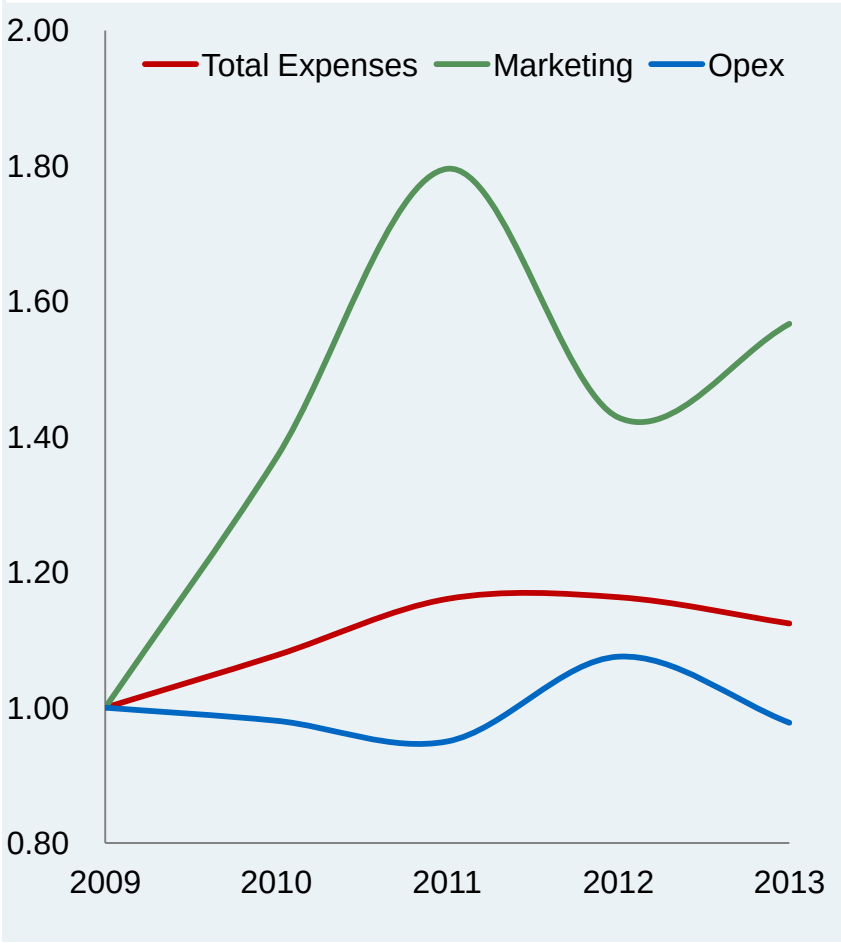


- **In 2012, we opened 6.6[1] million new accounts**
- **We invested 16% less on new account acquisitions than in 2011**
- **These accounts generated 8% more in first year sales than accounts acquired in 2011**

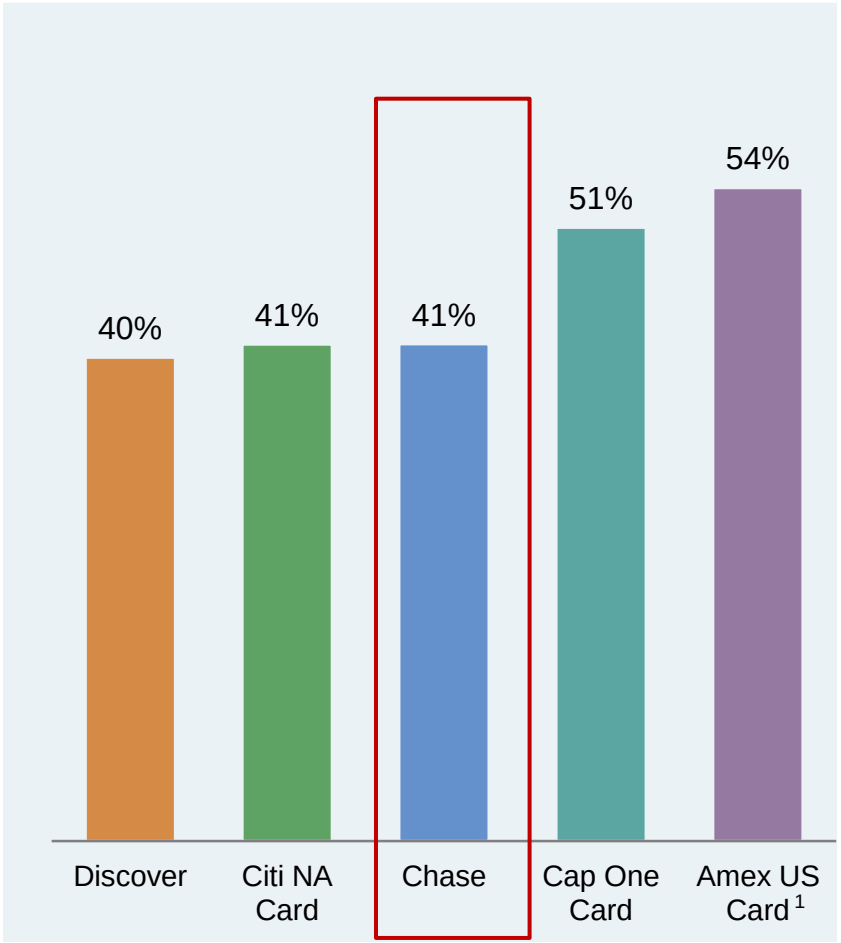
Source: Internal Chase data
Note: Numbers may not add to 100% due to rounding
[1] Excludes terminated partners
[2] Other includes primarily instant credit

Operating expense and total expense are projected to decline in 2013 while marketing is projected to increase modestly

Consumer and Small Business Card expense (indexed to 2009)



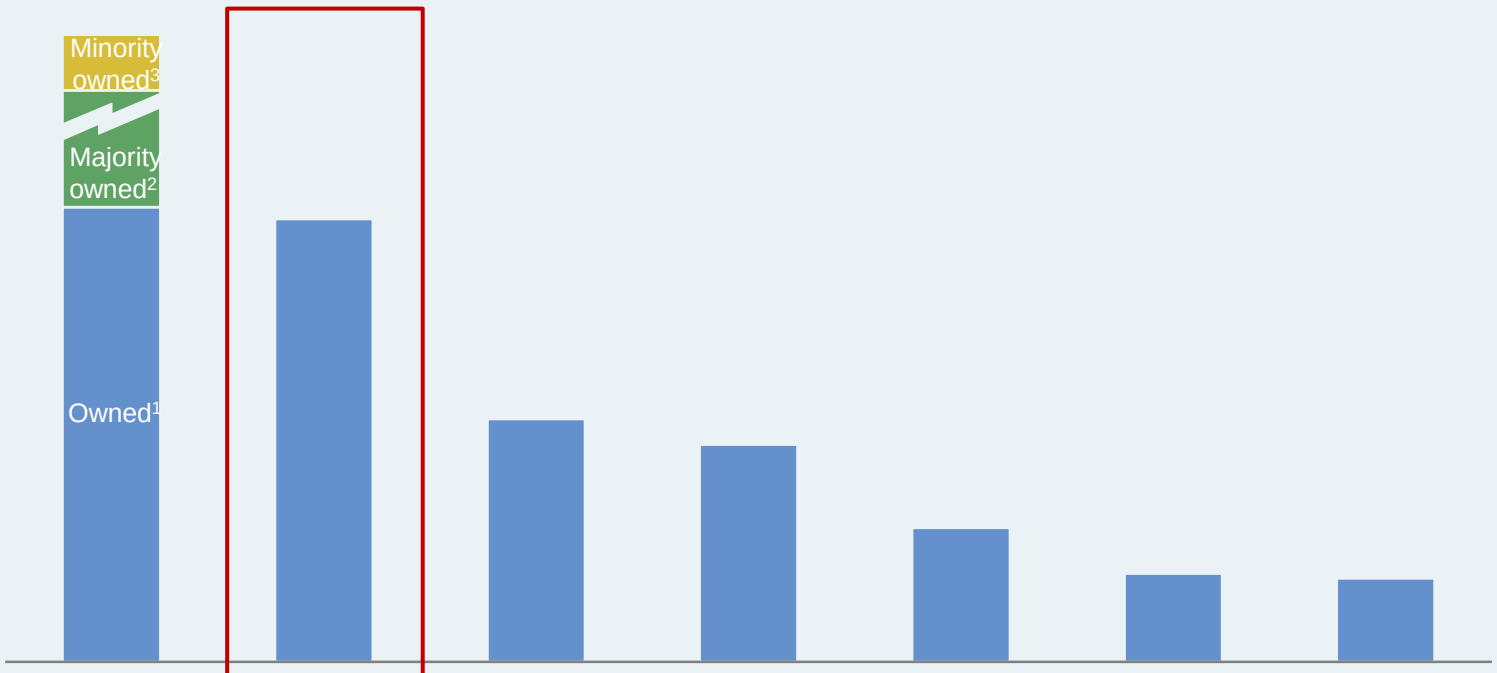
2012 overhead ratio[1] (total expense/ revenue) vs. competitors



Source: Earnings releases; internal Chase data.
[1]Amex's estimated rewards expense is removed from expense and netted against revenue, consistent with the industry practice
[2] Excludes Commercial Card

Our full ownership of Paymentech, a highly-scaled, leading acquiring business, enables us to meaningfully influence the payments value chain

#2 wholly-owned merchant acquirer



	First Data	Chase Paymentech	Vantiv	USB	Global Payments	Heartland	TSYS
Majority owner	First Data	Chase	Vantiv	USB	Global Payments	Heartland	TSYS
Other Partners/ stakeholders	Multiple	N/A	FITB/Pvt. Equity	N/A	N/A	N/A	N/A

Source: Chase analysis of 2011 bankcard volumes as published by The Nilson Report

[1] Includes owned and managed business distinct from alliances/joint ventures

[2] Includes BAMS, Citi Merchant Services, SunTrust Merchant Services and Sovereign Merchant Services

[3] Includes Wells Fargo Merchant Services and PNC Merchant Services

Today we are announcing Chase Merchant Services – a new payments partnership with Visa that will be in market by year end

Chase Merchant Services

- A customized processing and end-to-end payments platform, leveraging an expanded, 10-year strategic partnership with Visa
  - Provides merchants with an additional option for consumer payments
  - Chase Visa Cards continue to benefit from Visa's U.S. and international acceptance network
- Enables Chase to build direct relationships with merchants
  - Flexibility to negotiate pricing
  - Ability to streamline operating standards
  - Opportunity to work directly with merchants on differentiated issuing and acquiring solutions
- In the future, Chase cardholders will receive enhanced benefits at Chase Merchant Services merchants, e.g.,:
  - Targeted, data driven offers
  - Discounts at point of sale
  - Expanded pay-with-points capabilities

Chase is uniquely positioned to pursue this opportunity

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Chase Consumer & Community Banking is a consumer and small business franchise of unparalleled scope and quality – and would be nearly impossible to replicate

Strong financial returns	■ Delivered returns at target levels, despite a challenging environment ■ Three major growth opportunities – Chase Private Client, Business Banking, and New Branch Builds
Powerful customer franchise	■ We have consumer relationships with almost half of U.S. households ■ #1 in customer satisfaction[1], leading to cross-sell and relationship deepening
Firmwide capabilities to meet customer needs	■ Chase Private Client access to J.P. Morgan Private Bank investments platform ■ Business Banking access to Commercial Bank specialty lending and Treasury Services cash management
Attractive footprint	■ #2 Branch and #1 ATM network ■ Branch network heavily concentrated in the most attractive U.S. markets
Leading position in Digital Banking	■ #1 online financial services destination, #1 rated mobile app ■ The cost to serve fully digital customers is substantially lower
World-class payments franchise	■ #1 in total U.S. credit, debit, prepaid combined payments volume, #1 global Visa issuer ■ #2 wholly-owned merchant acquirer
National, scale lending businesses	■ Mortgage: #2 in originations, #3 in servicing ■ Auto: #3 Bank originator, #1 in super prime (FICO >740) originations ■ Business Banking: #1 Small Business Administration lender[2]

Sources: American Customer Satisfaction Index; compete.com; Keynote Systems; Inside Mortgage Finance; Autocount Market Report; Small Business Administration; Nilson report; SNL Financial

[1] Among large banks

[2] Based on number of loans issued, per SBA data

COMMERCIAL BANKING

Doug Petno, Chief Executive Officer Commercial Banking

February 26, 2013

JPMorgan Chase & Co.

Commercial Banking

Investment highlights

Excellent client-facing franchises

- ~ 23,000 corporate, state, municipal, financial institution and non-profit clients, and ~ 36,000 real estate clients, owners and investors
- Bankers, underwriters and service teams in 125 locations across 29 states, D.C. and 13 major international cities delivering global capabilities locally
- Full service client-driven model delivers unique solutions and global connectivity to our clients

Competitive advantages

- Carefully selected clients
- Local knowledge and delivery, global reach
- Broad range of solutions
- Supported by the entire JPMorgan Chase platform
- Seasoned and focused team

Strong returns and growth opportunities

- Consistent, repeated strong financial performance
  - Steady growth – 10% revenue and 17% net income CAGR since 2006
  - Strong returns – ROE of 20% +/- through-the-cycle
  - Risk discipline – NCOs below 50bps through-the-cycle
- Steadily investing in the business with long term view
- Tremendous opportunity in high potential markets

Industry leading capabilities and track record

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Our client franchise

Commercial Banking

Commercial & Industrial
~23,000 clients; ~36,000 prospects
72% of CB revenue; 57% of CB loans

Commercial Real Estate
~36,000 real estate clients, owners & investors
28% of CB revenue; 43% of CB loans

Bankers, underwriters and service teams in 125 locations across 29 states, D.C. and 13 major international cities delivering global capabilities locally

Middle Market Banking

- ✓ Long standing client relationships, including ~6,000 government, non-profit, healthcare and educational institutions
- ✓ Local delivery approach, with close ties to communities served nationwide
- ✓ Recognized with 2012 Greenwich Awards for excellence in TS product capabilities and customer service, international service, and online services
- ✓ #1 large middle market syndicated lender[1]

Corporate Client Banking

- ✓ ~1,300 larger corporate clients served nationally through geographic and industry-focused banking teams
- ✓ Nearly doubled loan portfolio since 2010
- ✓ More than doubled gross investment banking revenue since 2006

Commercial Term Lending

- ✓ #1 U.S. multifamily lender since 2008[2]
- ✓ Serving 15 major markets nationwide
- ✓ Consistently delivering straightforward financing solutions – cheaper and faster than the competition

Community Development Banking

- ✓ Provided nearly $900mm in new loans in 2012, supporting ~9,500 affordable housing units in the U.S.
- ✓ Major New Markets Tax Credits investor in underserved communities

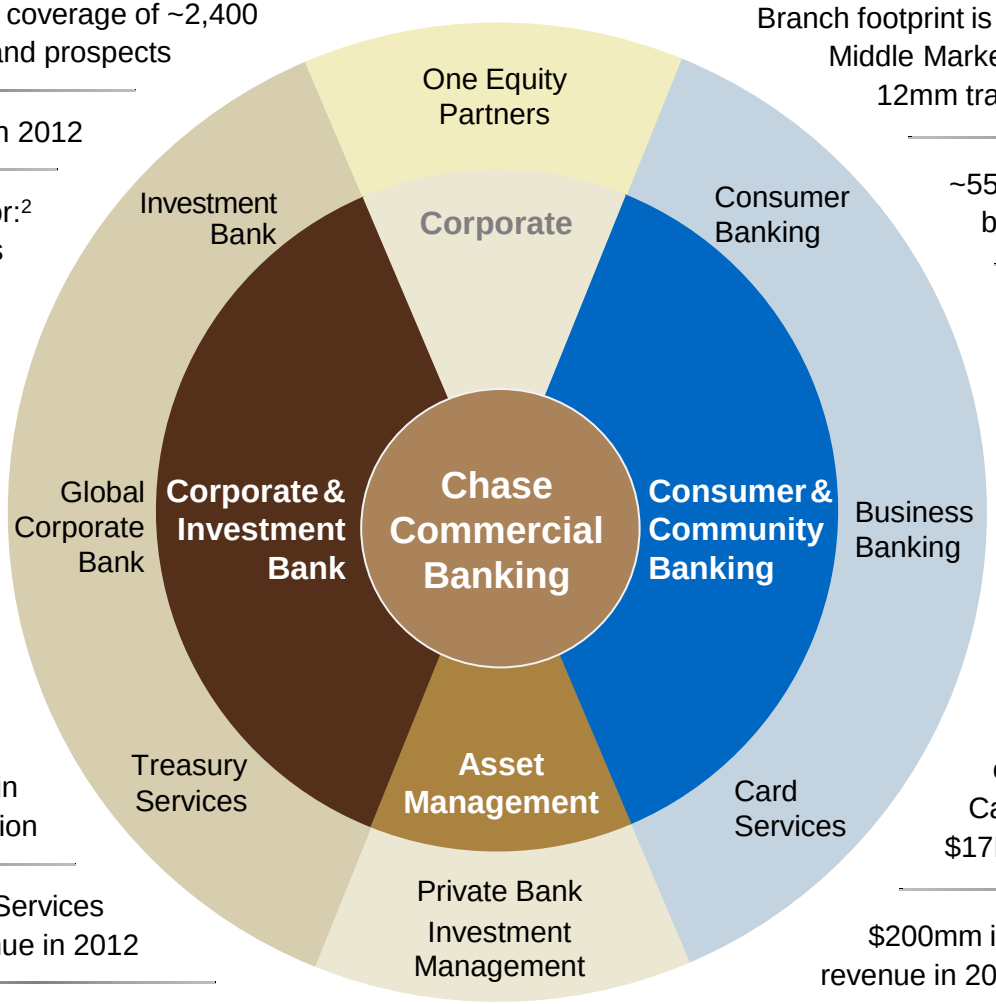
Real Estate Banking

- ✓ Full service banking platform focused on top-tier real estate companies
- ✓ National focus

■ Uses Chase brand ■ Uses J.P. Morgan brand [1] Thomson Reuters FY2012

Note: Client count and financial data as of year-end 2012 [2] FDIC 2008-YTD 3Q12

Commercial Banking touches every part of JPMorgan Chase



Key referral source for private equity investments by One Equity Partners

Joint coverage of ~2,400 CB clients and prospects

$1.6B gross revenue in 2012

In 2012 CB clients accounted for:[2]
31% of NA total IB fees
32% of NA M&A fees
34% of NA Equity UW fees

Joint coverage of foreign multinational clients

Leveraging CIB's presence in 59 countries

Over 80% of CB clients use Treasury Services products

Leveraging cash management and trade finance platform in CB international expansion

$2.4B in Treasury Services revenue in 2012

Robust referral source for Private Banking and Investment Management

Branch footprint is foundation for Middle Market clients; nearly 12mm transactions annually[1]

~55% of total CB clients use branches to transact business

Referral source for Chase at Work employee banking

Referrals from Business Banking to CB

Over $180mm in Global Commercial Card revenue in 2012

CB clients accounting for 47% of total Global Commercial Card clients, driving nearly $17B in Card spend in 2012

$200mm in Paymentech revenue in 2012

$415mm in Investment Management revenue from CB clients

Over $110B in AUM from CB clients

[1] Annualized based on September – November 2012 transaction data
[2] Calculated based on gross domestic IB revenue for SLF, M&A, Equity Underwriting and Bond Underwriting

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Business performance	**5**
Growth opportunities	13

2012: another record year

We continue to focus on executing our strategy

Record

		2006	2012	2006-2012 CAGR
Expanded our market presence	Number of top-50 MSAs covered[1]	27	42	
	Number of international cities with CB presence	6	13	
	Number of international clients (U.S. parents)	890	2,482	**19%**
Invested in people	Total headcount[2]	4,459	6,120	**5%**
	Revenue/banker[3] ($mm)	$3.5	$5.5	**8**
Served our customers	Average number of products per client[4]	7.0[5]	9.1	
	Non-interest revenue/total revenue[6]	28%	40%	
	Investment banking revenue, gross[7] ($B)	$0.7	$1.6	**14%**
Maintained risk and expense discipline	Nonperforming loans[8]	0.23%	0.52%	
	Net charge-offs	0.05%	0.03%	
	Overhead ratio	52%	35%	
	Non-interest expense ($B)	$2.0	$2.4	**3%**
Delivered record results	Total loan balances[9] ($B)	$53.6	128.2	**16%**
	Total client deposits[10] ($B)	73.6	195.9	**18**
	Revenue ($B)	3.8	6.8	**10**
	Pre-provision pretax income ($B)	1.8	4.4	**16**
	Net income ($B)	1.0	2.6	**17**
	ROE	**18%**	**28%**	

[1] Denotes Middle Market Banking presence
[2] Includes internal transfers, including transfer of Treasury Services Sales team from CIB into CB in 3Q12
[3] Based on total number of revenue producing employees
[4] Based on actively pursued client relationships; excludes CTL
[5] Reflects average number of products per client as of 2007
[6] CB revenue excludes CTL for this purpose
[7] Represents the total revenue related to investment banking products sold to CB clients
[8] 2006 NPLs based on period-average loan balances; 2012 NPLs based on end-of-period loan balances
[9] 2006 loan balances are period-average; 2012 loan balances are end-of-period
[10] Client deposits are period-average

Proven business model

CB has delivered strong financial results and consistent growth

Steady performance

- Deep customer relationships and broad product base provide resilient revenue
- Consistent organic growth in a volatile market environment
- M&A not a key growth driver

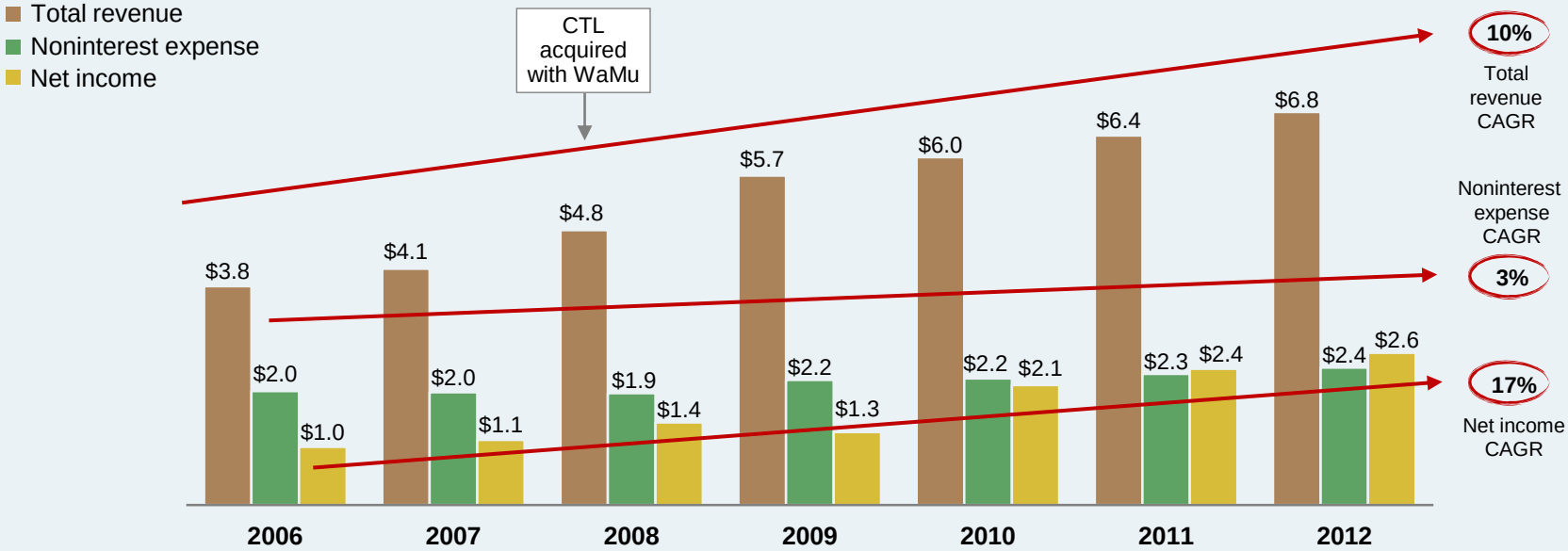
Long-term orientation

- Invest for long-term results
- Increase banker productivity
- Focus on asset and customer quality versus near-term growth

Exceptional returns

- Continuous expense discipline
- Excellent returns despite low deposit spreads and low utilization
- Strong margins, even with substantial investments
- Value of investments not fully realized

Historical performance ($B)



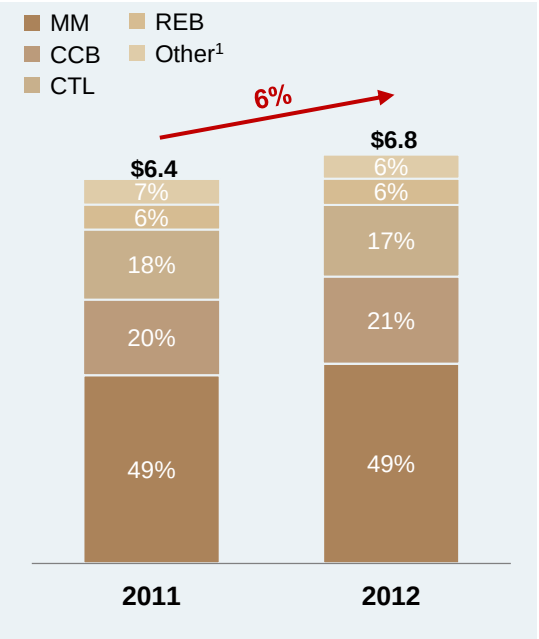
	2006	2007	2008	2009	2010	2011	2012
Overhead ratio	52%	48%	41%	38%	36%	35%	35%
Revenue/banker ($mm)	$3.5	$4.0	$4.2	$6.1	$5.3	$5.4	$5.5
ROE	18%	17%	20%	16%	26%	30%	28%
Real GDP growth[1]	2.7%	1.9%	(0.3)%	(3.1)%	2.4%	1.8%	2.2%

[1] Source: U.S. Bureau of Economic Analysis, as of February 20, 2013

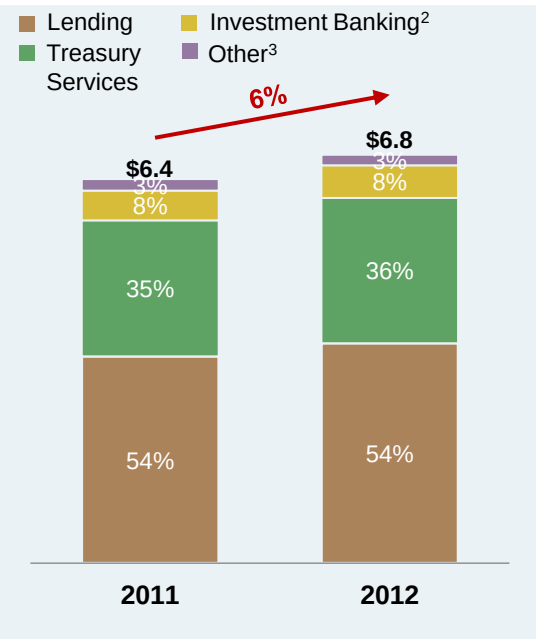
Diversified revenues

Growth across all business segments and products

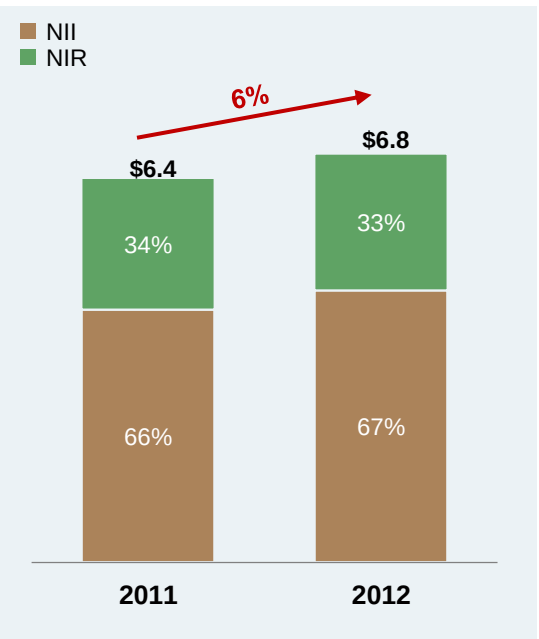
Revenue by segment ($B)



Revenue by product ($B)



Revenue mix ($B)



2012 key highlights

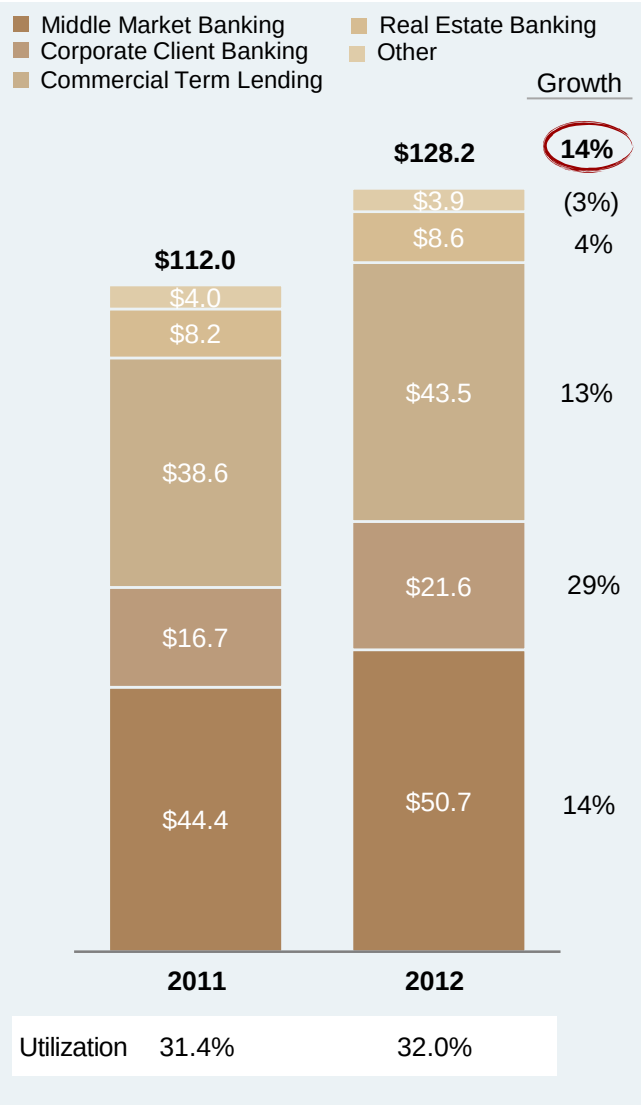
- ✓ **Middle Market Banking**
  Double digit growth in both loans and deposits; ~950 new clients added; expansion markets contributing 49% of revenue growth
- ✓ **Corporate Client Banking**
  15% increase in revenue; record performance across all products
- ✓ **Commercial Term Lending**
  Record originations – 73% increase in 2012; improvement in credit quality
- ✓ **Real Estate Banking**
  Record originations – 19% increase in 2012; double digit deposit growth
- ✓ **Asset-Based Lending & Chase Equipment Finance**
  25% and 18% increase in loans respectively
- ✓ **Treasury Services**
  7% revenue growth driven by liquidity products
- ✓ **Investment Banking**
  Record gross revenue of $1.6B
- ✓ **International**
  Double digit growth in revenue, deposits and loans[4]

[1] Other primarily includes lending and investment activities within the Community Development Banking and Chase Capital businesses
[2] Includes revenue recognized by CB from a range of investment banking products provided to CB clients
[3] Other product revenue includes tax-equivalent adjustments generated from Community Development Banking activity and certain income derived from principal transactions
[4] Denotes U.S. multinational clients with overseas revenue

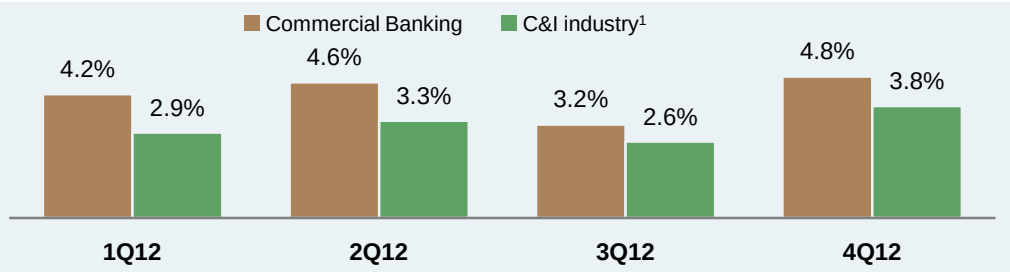
Strong loan growth across all businesses

Record loans in Middle Market, Corporate Client Banking and Commercial Term Lending

EOP loan balances ($B)

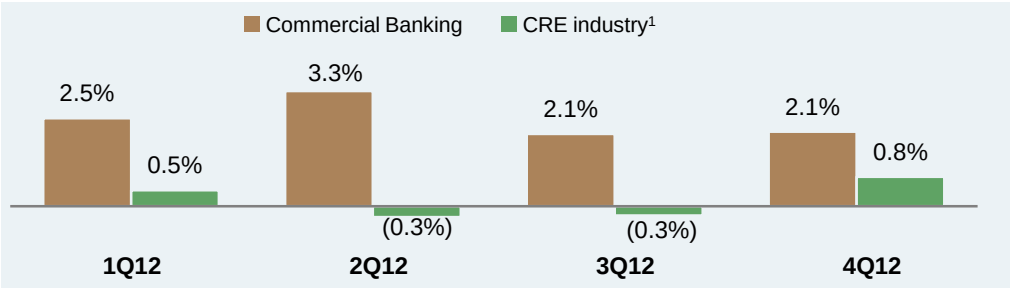


2012 C&I loan growth (QoQ)



- Broad based demand for credit across a range of industries
- Taking substantial share as the lead bank among larger corporate clients
- 11 consecutive quarters of loan growth in Middle Market
- Expansion markets continue to show solid growth momentum
- Competition on new deals has intensified
- Pressure on spreads but saw signs of stabilization in 4Q12

2012 CRE loan growth (QoQ)



- CTL loans increased 13% in 2012; record originations in REB
- Real estate fundamentals continue to improve; remain strong in core markets
- Spreads holding steady; competition is increasing

Note: Numbers may not sum due to rounding

[1] Source: FRB H.8 Assets and Liabilities of Commercial Banks in the United States for February 6, 2012 (not seasonally adjusted)

High quality and granular portfolio

Risk discipline and asset quality remain our key focus

Risk culture

- Strong risk culture – joint client ownership between banking and risk teams
- Seasoned team – over 20 years average experience
- Local decision making – our teams really know our clients

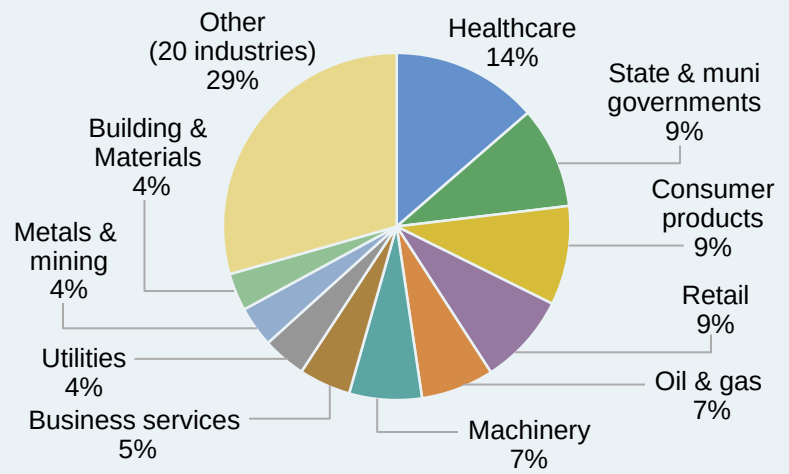
Client selection

- Select good companies in attractive industries with proven management teams and broad product needs
- Bank clients that share our risk philosophy
- Long term relationship approach – building a lasting franchise
- Long-term client relationships

Risk discipline

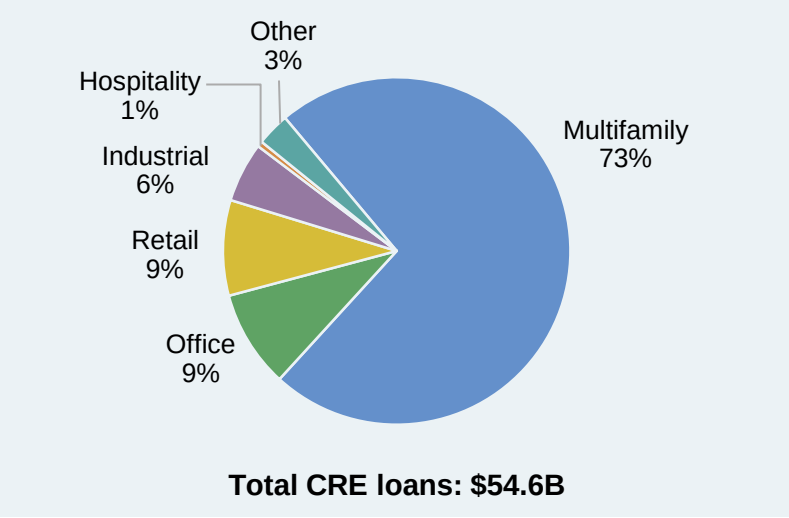
- Discipline over growth philosophy – we don't need to do every deal
- Maintain granularity
- Sound structures
- Manage cyclical risks
- Track new originations

Commercial & Industrial



Total C&I loans: $73.6B

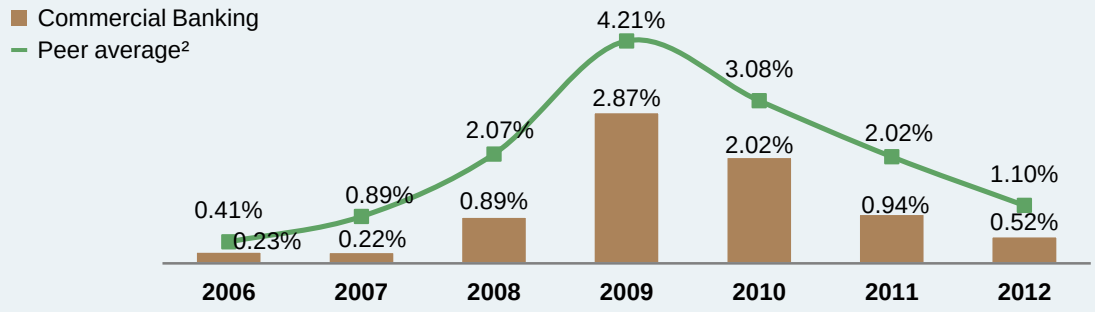
Commercial Real Estate



Total CRE loans: $54.6B

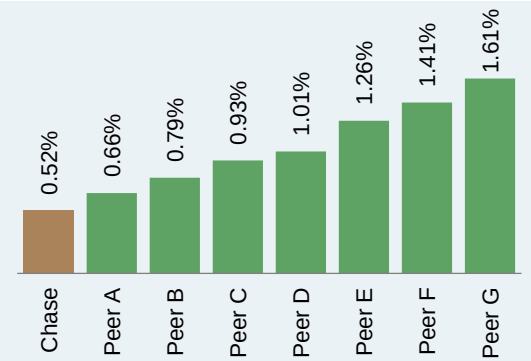
Best-in-class credit performance

Nonperforming loans[1]

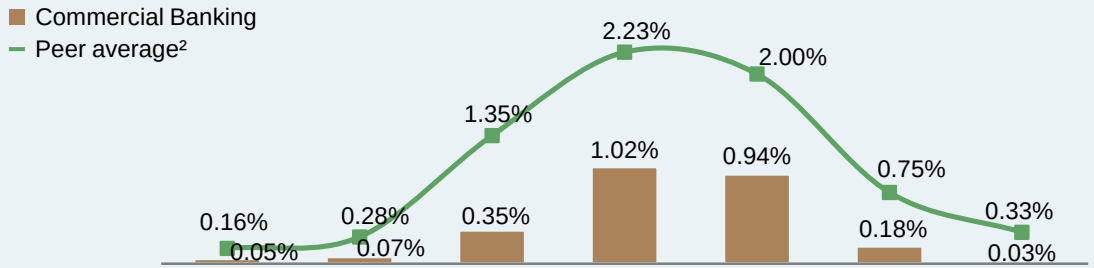


	2006	2007	2008	2009	2010	2011	2012
C&I NPLs	0.26%	0.16%	0.62%	1.01%	0.75%	0.36%	0.28%
CRE NPLs[3]	0.03%	0.70%	2.75%	4.67%	3.37%	1.67%	0.86%

2012 peer group NPLs

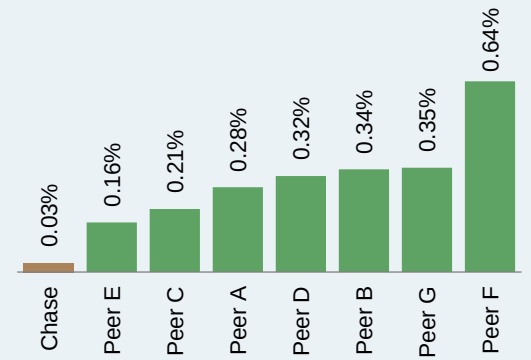


Net charge-offs



	2006	2007	2008	2009	2010	2011	2012
C&I NCOs	0.05%	0.05%	0.17%	0.71%	0.61%	0.09%	0.00%
CRE NCOs[3]	0.06%	0.23%	1.62%	1.36%	1.26%	0.28%	0.07%

2012 peer group NCOs



We are maintaining our discipline on new originations

Note: Numbers may not sum due to rounding

[1] 2006 Commercial Banking NPL ratios are based on average loans; 2007-2012 Commercial Banking NPL ratios are based on end-of-period loans

[2] Peer averages include CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC

[3] 2006-2007 CRE NPLs and NCOs reflect Real Estate Banking only; 2008-2012 CRE NPLs and NCOs also include Community Development Banking; 2009-2012 NPLs and NCOs also include Commercial Term Lending

Stable and diversified deposit base

Excellent deposit gathering capabilities

- Over 17,300 deposit holding clients
- Geographically diverse deposit base using extensive branch network and client franchise
- Cross sell opportunity over time – average tenure of deposit holding clients is 17 years

Meaningful earnings source

- Shift to higher-value deposits – 52% DDA in 2012 versus 33% DDA in 2006
- Deposits will have material value when interest rates rise
- Mitigated NIM compression through disciplined deposit and earnings credit pricing

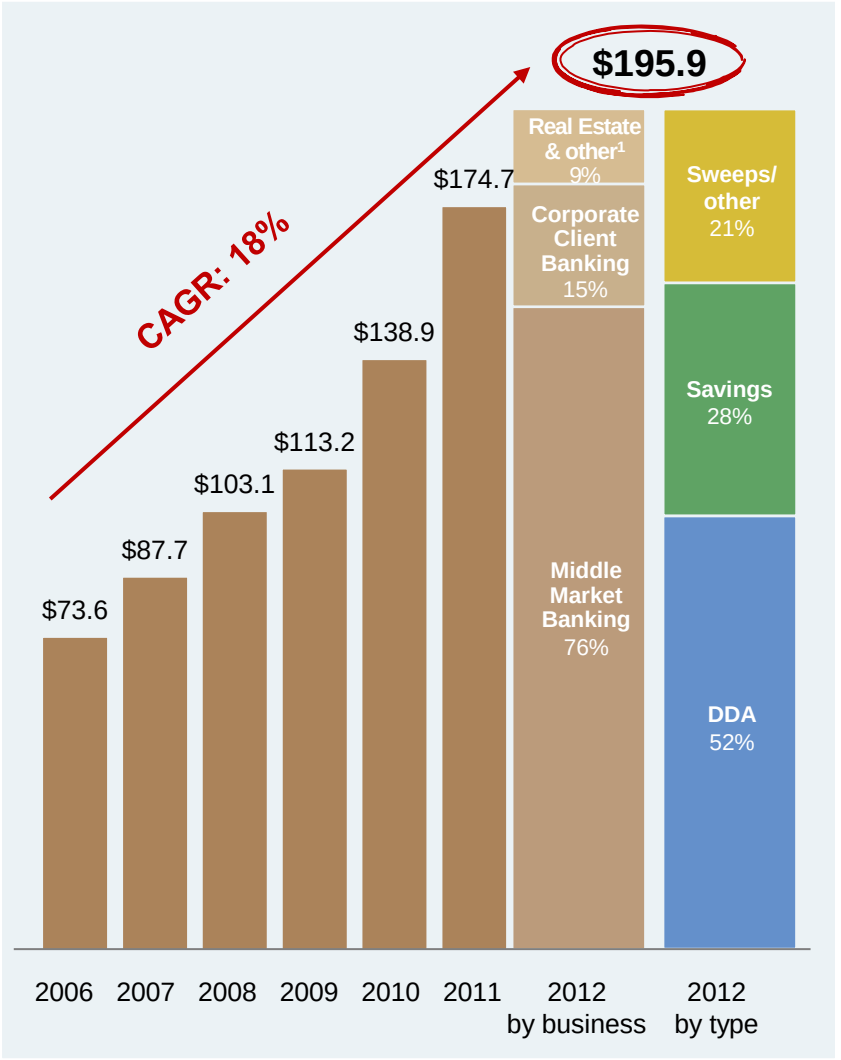
Outlook

- Minimal impact from expiration of Transaction Account Guarantee coverage on non-interest bearing deposits
- Expect clients to redeploy cash or seek other investments when interest rates rise

Note: Numbers may not sum due to rounding

[1] Includes Community Development Banking and Commercial Term Lending

Average deposits ($B)



Agenda

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Franchise strength	2
Business performance	5
Growth opportunities	**13**

Core Commercial & Industrial businesses

We continue to grow in our legacy markets and through our core products

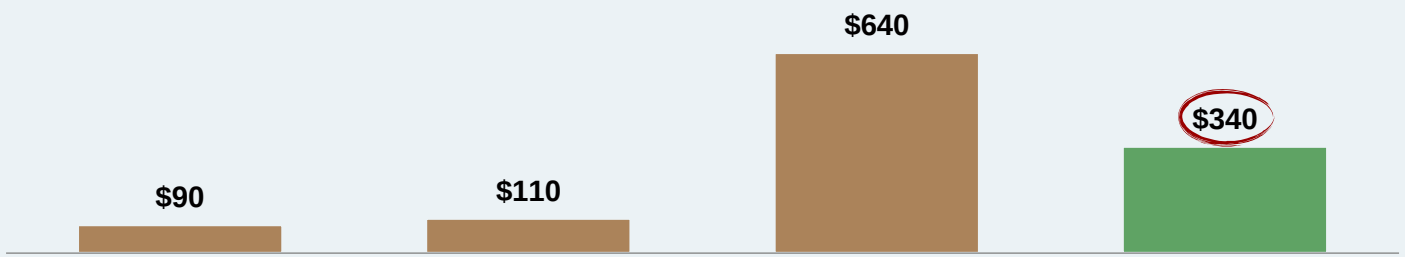
1 Expand our client base

- 17,000+ targeted prospects in legacy, non-expansion markets
  - ~700 new Middle Market clients in non-expansion markets in 2012
- Substantial revenue growth potential in legacy markets
  - Weak or distracted competition presents opportunities

2 Deepen relationships

- Up-tiering relationships through disciplined account targeting
- Increase client penetration of core products
  - Grow asset-based lending and equipment finance portfolio
  - Deliver expanded treasury capabilities
  - Increase Commercial Card and Merchant Services penetration of CB client base

Illustrative revenue per relationship[1] ($'000)



	Credit-only relationship[2]	Non-credit relationship[3]	Full relationship[4]	Average 2012
Average products per relationship[5]	**1.8**	**7.0**	**11.6**	**9.1**

Long-term, multi-solution relationships are core to our success

[1] Revenue numbers rounded to nearest $10K; revenue represents full JPM relationship totals and does not incorporate any revenue sharing agreements; excludes CTL clients
[2] Uses credit only; no other product category revenue
[3] No credit relationship; uses one or more products of AM, IB, TS or Card
[4] Uses credit and one or more of AM, IB, TS or Card
[5] Based on actively pursued client relationships; excludes CTL

Middle Market expansion – $1B long-term revenue opportunity

Extending a proven business model and building a long-term franchise

Key expansion markets

In-footprint
Out-of-footprint

MSA	Rank by size	Years of in-market presence[1]
Los Angeles	2nd	4
Philadelphia	5th	2
Washington D.C.	7th	2
Miami	8th	3
Atlanta	9th	5
Boston	10th	6
San Francisco	11th	4
Seattle/Tacoma	15th	4
Minneapolis	16th	9
San Diego	17th	2
St. Louis	18th	9
Tampa	19th	3
Pittsburgh	22nd	1
Portland	23th	4
Sacramento	24th	New
Orlando	26th	3
Kansas City	29th	1
Charlotte	33rd	2
Nashville	38th	3
Jacksonville	40th	New
Richmond	43rd	2
Birmingham	49th	1

Incremental prospects: ~18,000

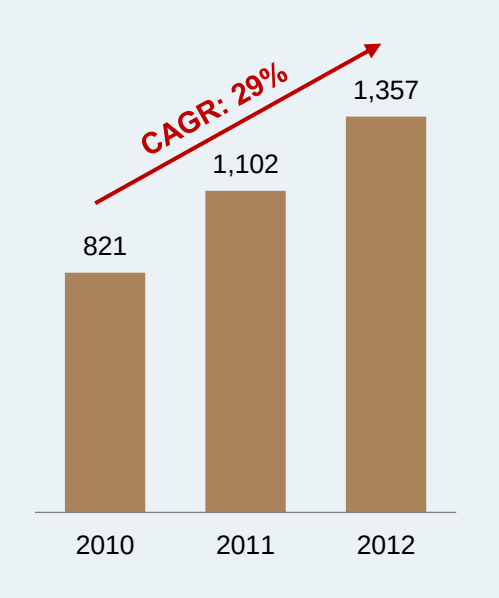
or equivalent to ~85% of total existing MM clients

[1] Reflects number of years of Middle Market banker presence in each MSA

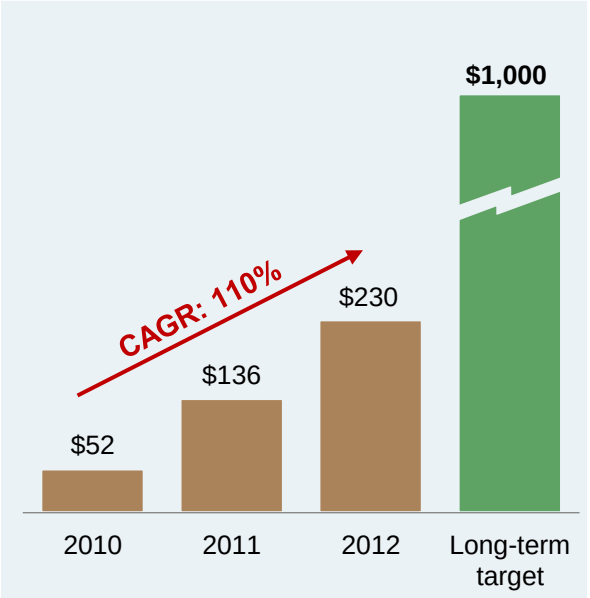
Highlights

- Creating scale in 22 new top-50 MSAs and expanding into new high-potential markets
- Disciplined organic growth; only targeting best clients in the market
- JPMC's full capabilities and brand differentiate versus competitors
- Export Chase business model and culture; add to team by hiring the best bankers in each market
- 272 dedicated CB resources; continuing to add bankers, underwriting and service professionals

Total expansion clients



Total expansion revenue ($mm)



Investment banking – $2B long-term revenue opportunity

On track to deliver our growth target

Opportunity

- Strong partnership with leading investment bank
- ~2,400 CB clients and prospects jointly covered with IB bankers
- Middle Market clients
  - Increasing penetration nationally

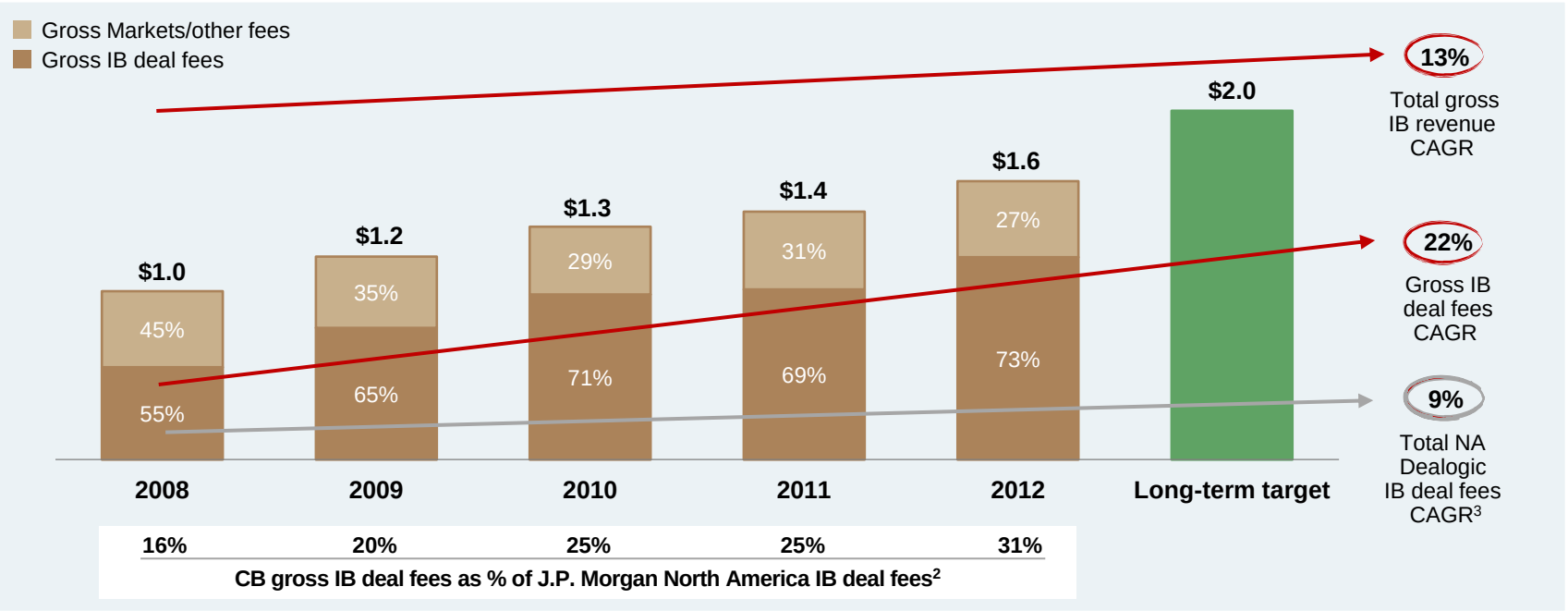
Strategy

- Syndicated & Leveraged Finance
  - Continuing to strategically expand lead bookrunner roles
- M&A / Corporate Finance Advisory
  - Continuing build-out of dedicated, regionally-focused IB teams

2012 highlights

- Record gross IB revenue up 12% YoY despite market headwinds
  - IB deal fees are primary growth driver
- Record number of clients generating fees over $5mm
- More clients using multiple IB products

CB investment banking revenue (gross)[1]



[1] Represents the total revenue related to investment banking products sold to CB clients
[2] Calculated based on gross domestic IB revenue for SLF, M&A, Equity Underwriting, Bond Underwriting
[3] Source: Dealogic

International – $500 million long-term revenue opportunity

Delivering international banking solutions locally and differentiating from the competition

Small and mid-sized businesses are expanding overseas

- 58% of Chase Middle Market clients are active in global markets, up from 43% in 2011[1]
- 26% have operations in foreign countries today[1]
- Clients are expecting overseas revenue and activity to increase in 5 years[1]

We are best positioned

- Our global solutions delivered locally is a key differentiator
- J.P. Morgan platform in 59 countries and growing
- Leveraging CIB's capabilities and global scope
- Dedicated local coverage of CB clients in major foreign markets for lending, cash management, FX and trade finance

Continue to make progress

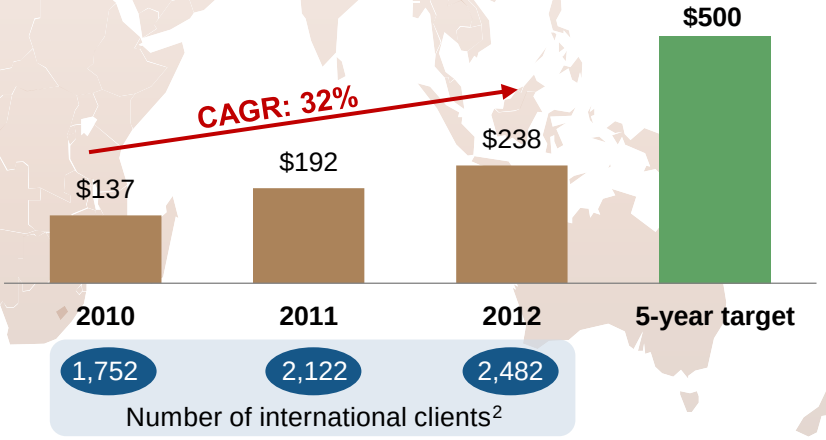
- Double digit growth in international revenue, loans and deposits between 2010 and 2012
- Adding bankers and expanding CB client coverage in major foreign markets
- Investing in dedicated CB client support infrastructure globally

Mid-sized companies aiming high in global expansion

Select responses of mid-sized U.S. companies from KPMG 2012 global expansion survey[3]



CB overseas revenue growth ($mm)



[1] Chase Middle Market Business Leaders Outlook survey, March 2012

[2] Denotes U.S. multinational clients with overseas revenue; periods prior to 2012 have been restated to conform with current presentation

[3] Source: KPMG survey *Global Rewards Within Reach*, September 2012; conducted among 1,150 U.S. companies with annual sales generally between $200 million and $1 billion that have sold a product or service in a foreign market in the previous year

Commercial Term Lending

A sizable and profitable business with record originations in 2012

We acquired a valuable franchise

- #1 U.S. multifamily lender since 2008[1]
- Proven business model
- Strong profitability
- Profitable through-the-cycle

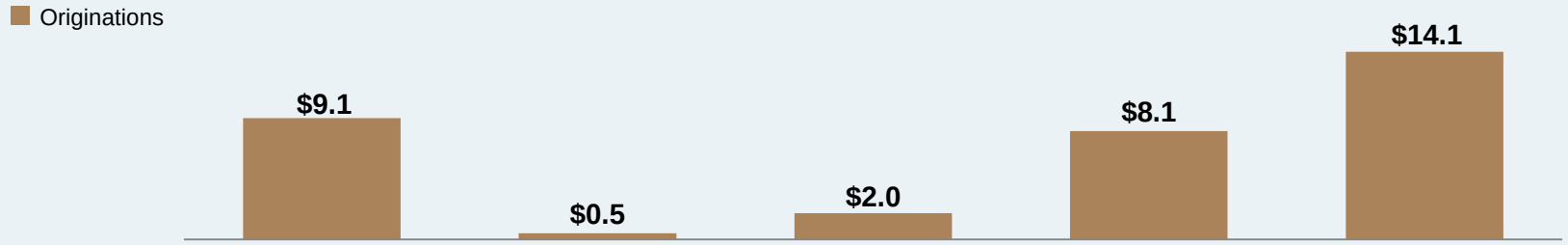
Invested in the business since acquisition

- Improved underwriting process
- Expanded in key markets
- Invested in platform and people
- Improved client response times

Focus on an attractive asset class

- Multifamily fundamentals remain favorable
- Core target markets; stabilized properties
- Average new loan size of $1.8mm[2]
- Strong underwriting standards for new originations

CTL originations have returned to pre-downturn levels ($B)



	2008	2009	2010	2011	2012
Portfolio size	$36.9	$36.2	$37.9	$38.6	$43.5
Weighted avg. LTV[3]	55%	51%	60%	62%	63%
Weighted avg. DSC[3]	1.46x	1.80x	1.52x	1.51x	1.57x
Overhead ratio[4]	17%	21%	20%	18%	17%
Net charge-offs[4]	0.04%	0.91%	0.99%	0.27%	0.10%
	CTL acquired by Chase from WaMu	Exited non-core markets Remediated problem assets	Acquired and integrated a $3.5B multifamily portfolio	Revived originations Invested in platform expansion	Record originations, up 73% YoY Credit metrics close to pre-crisis levels

[1] FDIC 2008–YTD 3Q12
[2] Average loan size based on 2012 originations
[3] Reflects weighted average LTV and DSC of originations held for investment
[4] 2008 overhead and net charge-off ratios reflect 4Q only

Real Estate Banking

Strategy remains unchanged – Asset quality over absolute scale

Attractive opportunity

- Strong overall market fundamentals
- Debt markets are open and active
- ~$1.7T in CRE debt maturities expected for 2013–2017[1]
- Capacity to grow CB portfolio

Top tier client base

- Relationships with over 500 high-quality developers and investors
  - Well-diversified portfolios
  - Broad product needs
  - Long-term relationships
- Dedicated TS and IB coverage teams

Strong risk discipline and portfolio quality

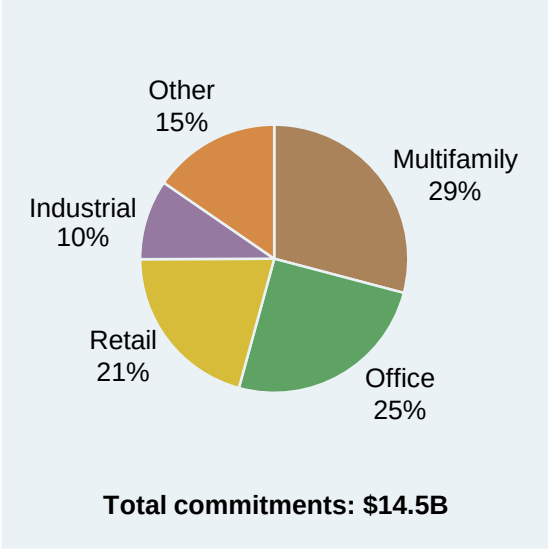
- Maintain underwriting standards
- Continuously monitor market fundamentals
- Low leverage and strong debt service coverage levels
- Well-diversified across core markets
- Limited construction risk

Targeted, market sensitive growth

Commitments and originations ($B)

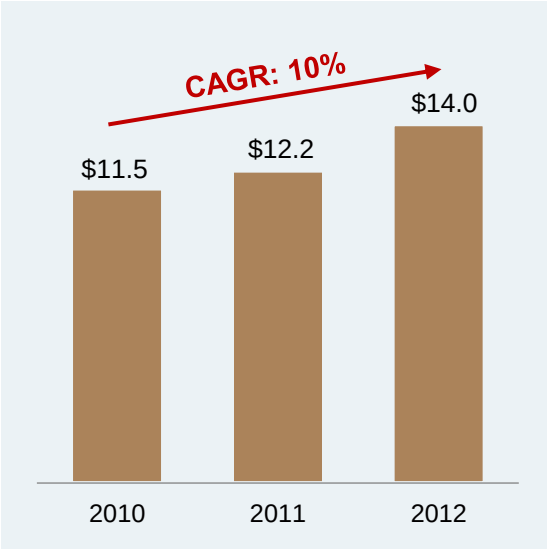


2012 commitments by industry



Total commitments: $14.5B

Average client deposits ($B)



[1] Source: Trepp LLC, 4Q11

Outlook

Our financial targets remain the same

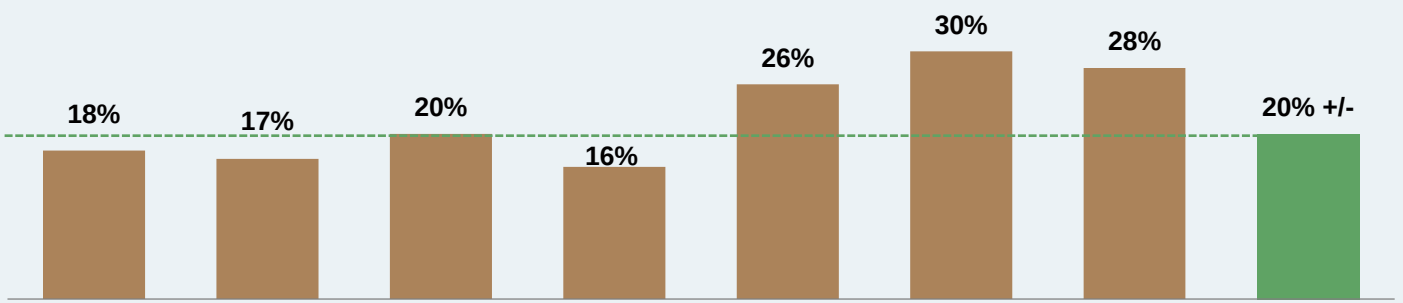
		Long term target	2012 result	2010-2012 CAGR	
Key revenue growth initiatives	Middle Market expansion	**$1.0B**	**$230mm**	110%	Making progress towards long-term revenue goals
	Investment Banking[1]	**$2.0B**	**$1.6B**	9%	
	International	**$500mm**	**$238mm**	32%	
Overhead & credit costs	Overhead ratio	**35%**	**35%**	Maintaining expense and risk discipline	
	Through-the-cycle net charge-offs	**0.50%**	**0.03%**		
				2012 pro forma[2]	
Returns	Return on equity	**20% +/-**	**28%**	20%	Allocated capital increasing by 42% to $13.5B

[1] Reflects gross investment banking revenue
[2] Illustrative ROE calculated based on $13.5B in common equity; CB common equity increased from $9.5B to $13.5B on 1/1/2013

Common equity and returns

We should continue to generate solid returns, even with higher capital

ROE



Common equity ($B)	$5.7	$6.5	$7.3	$8.0	$8.0	$8.0	$9.5	$13.5[1]

Our overall returns are substantially enhanced by:

Competitive advantage

- ✓ Cost structure
- ✓ Credit cost performance
- ✓ Valuable deposit base
- ✓ Breadth of non-lending capabilities
- ✓ Cross-LOB revenue and expense synergy

Value differentiators

- ✓ Our brand
- ✓ Our scale and branch presence
- ✓ The quality of our bankers and industry insight
- ✓ Our fortress balance sheet

Future return on investments

- ✓ New relationships will continue to grow in profitability
- ✓ Market penetration with key non-lending services will increase returns over time

Market-driven upside, if

- ✓ Business confidence strengthens
- ✓ Deposit spreads improve
- ✓ Utilization increases with client activity

[1] Reflects attributed common equity effective 1/1/13

Commercial Banking

Wrap up

Excellent client-facing franchises

- ~ 23,000 corporate, state, municipal, financial institution and non-profit clients, and ~ 36,000 real estate clients, owners and investors
- Bankers, underwriters and service teams in 125 locations across 29 states, D.C. and 13 major international cities delivering global capabilities locally
- Full service client-driven model delivers unique solutions and global connectivity to our clients

Competitive advantages

- Carefully selected clients
- Local knowledge and delivery, global reach
- Broad range of solutions
- Supported by the entire JPMorgan Chase platform
- Seasoned and focused team

Strong returns and growth opportunities

- Consistent, repeated strong financial performance
  - Steady growth – 10% revenue and 17% net income CAGR since 2006
  - Strong returns – ROE of 20% +/- through-the-cycle
  - Risk discipline – NCOs below 50bps through-the-cycle
- Steadily investing in the business with long term view
- Tremendous opportunity in high potential markets

Industry leading capabilities and track record

ASSET MANAGEMENT

Mary Erdoes, Chief Executive Officer Asset Management

February 26, 2013

JPMorgan Chase & Co.

J.P. Morgan Asset Management – A world-class global client franchise

Growth business within JPMC

- Consistent, predictable high growth business for the firm – revenues, earnings, ROE
- Long-term, robust client-centric model
- Diversified earnings from broad set of products, channels, and regions

World's best clients

- J.P. Morgan Private Bank unmatched in serving the world's wealthiest
- Over 55% of top sovereign wealth funds, pension funds, and central banks
- ~3,000 financial intermediaries, ~60% outside the U.S.

Tenured top talent

- Over 95% retention of top talent
- >80 PMs with top quartile 10-year mutual fund performance
- Fiduciary culture ingrained in each and every hire

Difficult to replicate

- Managing clients' assets since 1832
- Celebrating 100-year relationships in the Private Bank
- Invaluable benefit of being part of JPMorgan Chase

2012 performance highlights – Another record year

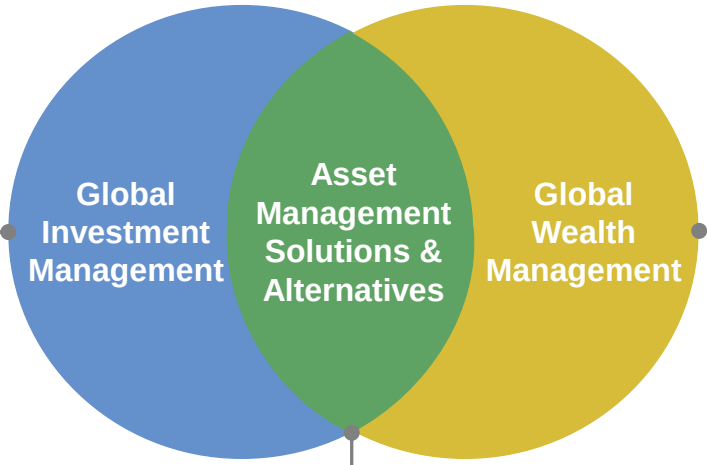
Record

Performance highlights

			2006	2012	*2006-12 growth*
Top investment performance		Mutual funds AUM in 1st/2nd quartiles (% over 5 years)	79%	76%	
		4/5 star mutual funds (#)	136	218	*60%*
		Assets under management ($T)	$1.0	$1.4	*41%*
Franchise expansion	GWM	U.S. Private Bank client advisors (#)	1,169	1,597	*37%*
		International Private Bank client advisors (#)	337	774	*130%*
		JPMS financial advisors (#)	324	450	*39%*
	GIM	Salespeople (#)	659	858	*30%*
		Investment professionals (#)	1,159	1,307	*13%*
		Investment strategies (#)	254	378	*49%*
Record growth		Client assets ($T)	$1.3	$2.1	*56%*
		Long-term client asset flows ($B)	58	103	*78%*
		Deposits ($B)	$52	$145	*180%*
		Loans ($B)	$25	$69	*183%*
		Mortgages ($B)	$5	$18	*240%*
Investing for growth		Revenue ($B)	$6.8	$9.9	*47%*
		Net income ($B)	$1.4	$1.7	*21%*
		Pretax margin	33%	28%	
		ROE	40%	24%	

An integrated model with unique advantages

Revenue $10B | **Pretax income $3B** | **Client assets $2T**

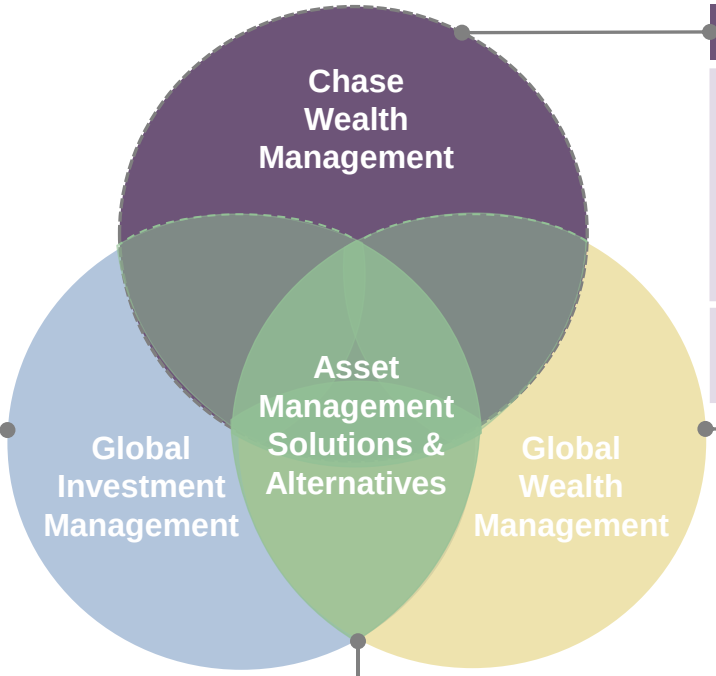


Global Investment Management	AM Solutions & Alternatives	Global Wealth Management
■ Global Funds ■ Global Institutional ■ Equities, Fixed Income, Cash ■ Focus on consistent, long-term investment performance	■ Center of innovation to serve evolving client needs ■ Multi-asset, outcome-oriented solutions ■ Alternatives and absolute return continuum	■ U.S. Private Banking ■ International Private Banking ■ J.P. Morgan Securities ■ Full range of investment and banking services
15 consecutive quarters of positive long-term flows	***14 consecutive quarters of positive flows***	***10 consecutive years of positive client asset flows***

Insurance	Sovereigns	Pension Funds	Inter-mediaries	Endowments & Foundations	Family Offices	UHNW	HNW	Affluent

ASSET MANAGEMENT

AM expertise accessible to CWM clients



Chase Wealth Management

- Focused on the $5T investment opportunity with Chase clients
- ~3,000 financial advisors covering 5,600 Chase branches
- #3 UMA manager

Positive net flows every quarter since CPC launch in 2Q11

Global Investment Management

- Global Funds
- Global Institutional
- Equities, Fixed Income, Cash
- Focus on consistent, long-term investment performance

15 consecutive quarters of positive long-term flows

AM Solutions & Alternatives

- Center of innovation to serve evolving client needs
- Multi-asset, outcome-oriented solutions
- Alternatives and absolute return continuum

14 consecutive quarters of positive flows

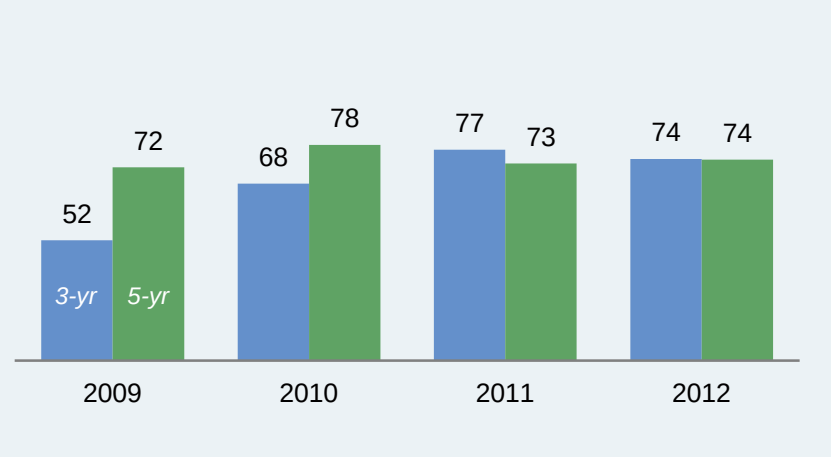
Global Wealth Management

- U.S. Private Banking
- International Private Banking
- J.P. Morgan Securities
- Full range of investment and banking services

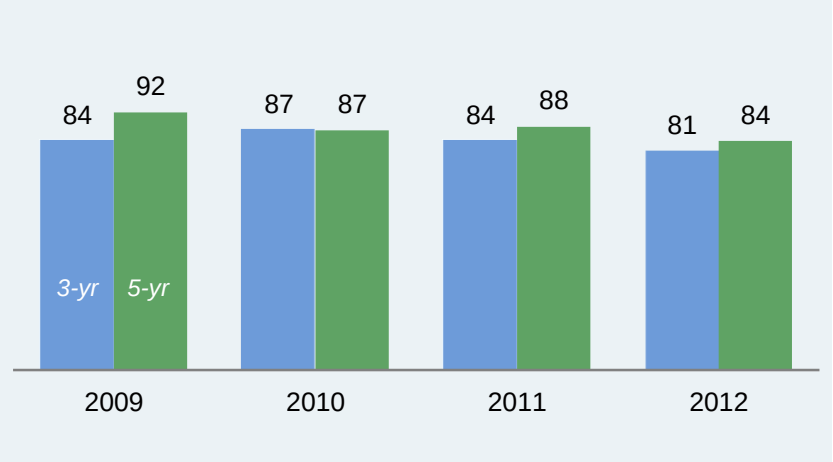
10 consecutive years of positive client asset flows

Consistent world-class investment performance in Equity and Fixed Income…

Equity – % of MF AUM in top 2 quartiles



Fixed Income – % of MF AUM in top 2 quartiles



Select regional Equity funds excess return (bps)

Fund	3-year	1-year
U.S. Value Advantage	106	24
Europe Equity Plus	776	983
ASEAN Equity	418	768
Emerging Markets Opportunity	419	605

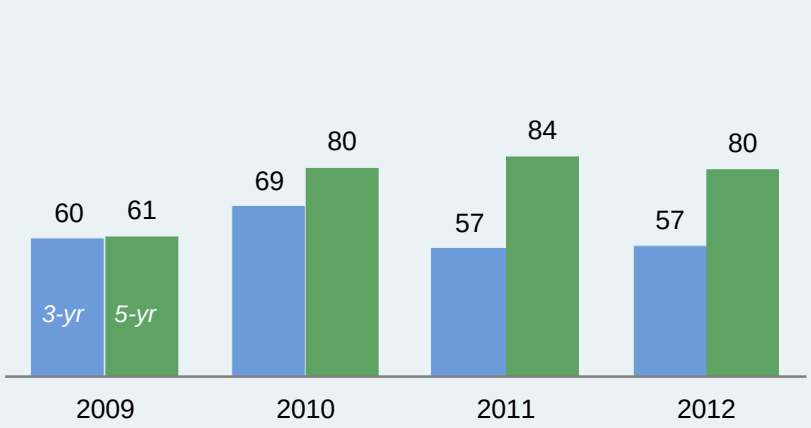
Select regional Fixed Income funds excess return (bps)

Fund	3-year	1-year
U.S. Core Plus Bond	186	277
Global Bond	208	158
MBS	208	238
Emerging Markets Debt	81	176

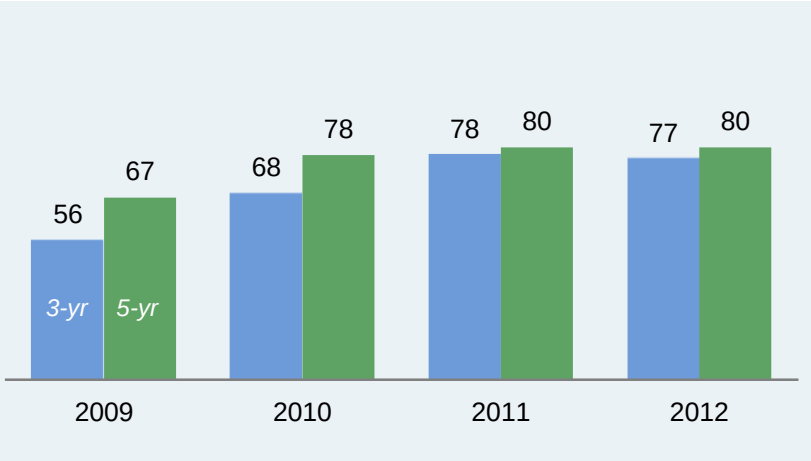
Note: All returns are annualized. Select regional funds' excess returns are as of 01/31/13

…as well as in Solutions and Alternatives

Solutions – % of MF AUM in top 2 quartiles



Alternatives / Abs. return – % of AUM above benchmark



Select regional Solutions funds excess returns (bps)

Fund	3-year	1-year
SmartRetirement 2035	42	186
Diversified	235	299
Income Builder	191	470
Asia Pacific Income	75	652

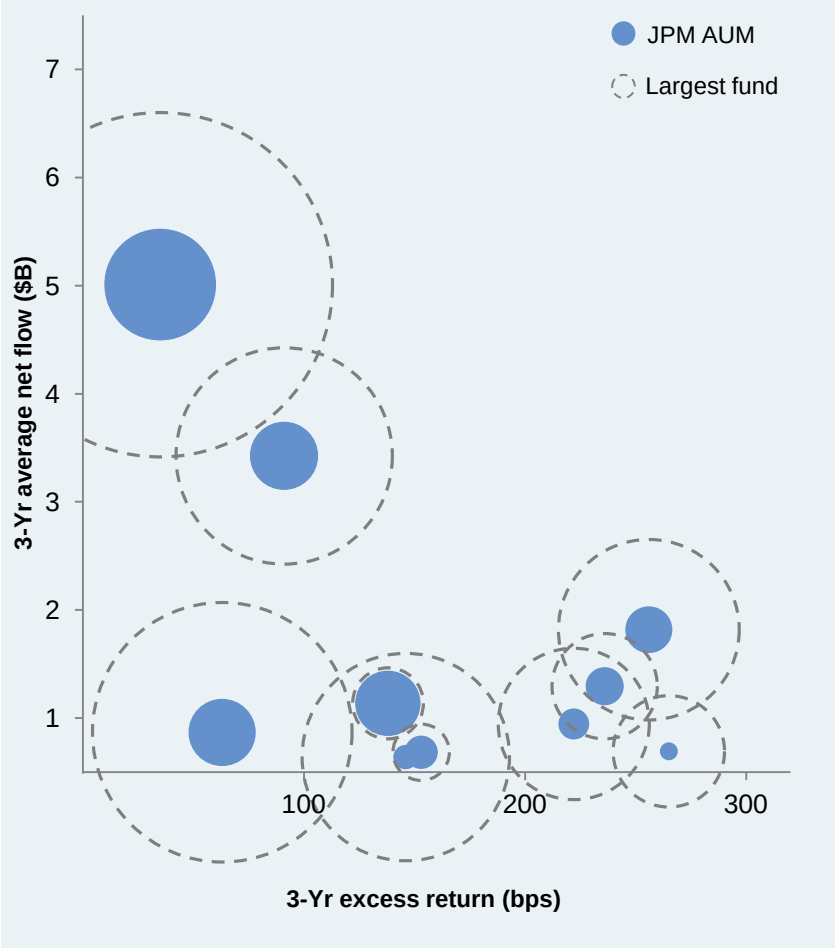
Select Alts / Abs. return strategies[1] excess return (bps)

Strategy	3-year	1-year
Multi-Strategy	140	290
Global Macro	280	620
U.S. Real Estate[2]	550	190
Private Equity[3]	190	(190)

Note: All returns are annualized. Select regional funds' excess returns are as of 01/31/13 (unless otherwise noted)
[1] Alternatives / Absolute return strategies' excess returns rounded to nearest 10bps
[2] Gross return vs. NPI benchmark, as of 12/31/12
[3] Net return vs. Cambridge PE & VC benchmark, as of 09/30/12

Top-performing funds with significant capacity to grow

10 JPM funds compared to largest funds in category



Incremental impact from fund growth

	10 JPM funds as of today	If each fund reached Top 3 position by size
AUM	~$75B	+$175B
Revenue	~$520mm	+$900mm
Pretax income	~$210mm	+$450mm

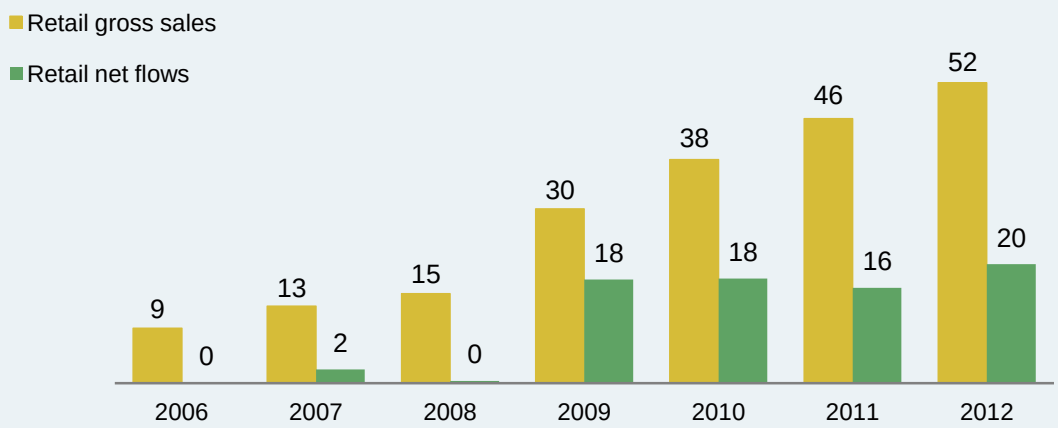
Source: Strategic Insight, Morningstar Direct
AUM as of 12/31/12. Net flows reflect average yearly flows over 3 yr period as of 12/31/12. Excess returns as of 12/31/12, Select Shares

Client advisor growth and enhanced productivity drive success in U.S. Funds

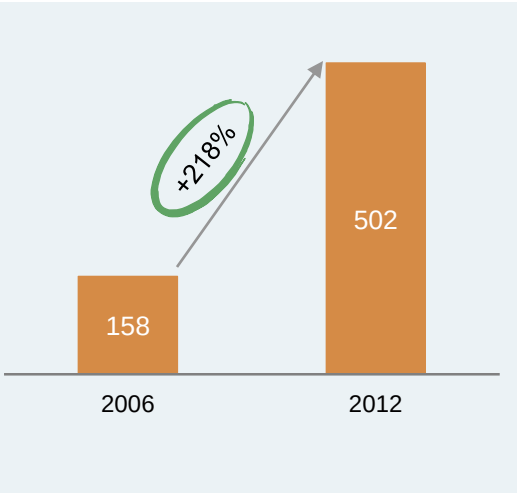
External client advisors (#)



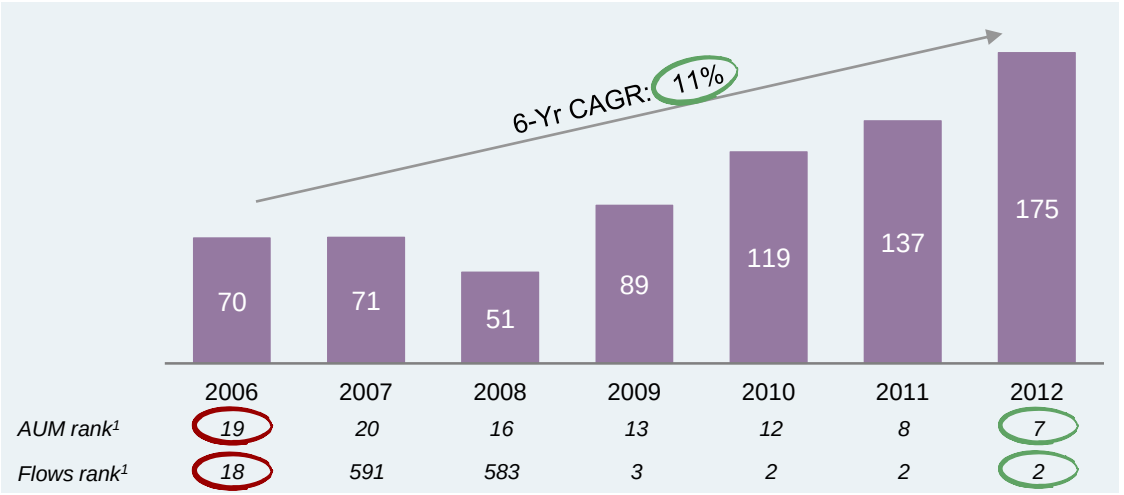
U.S. Funds retail distribution active long-term gross sales / net flows ($B)



Gross sales per external CA ($mm)



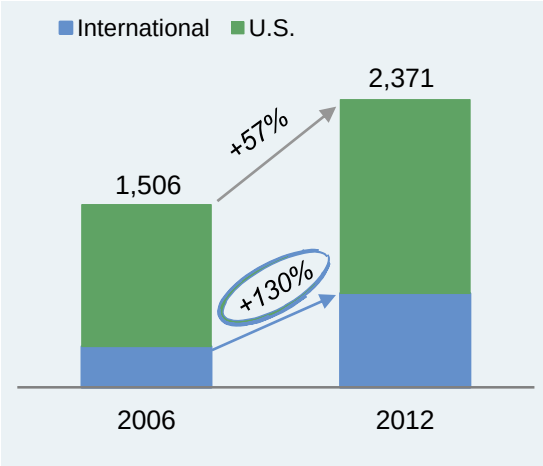
U.S. Funds active long-term mutual fund AUM ($B)



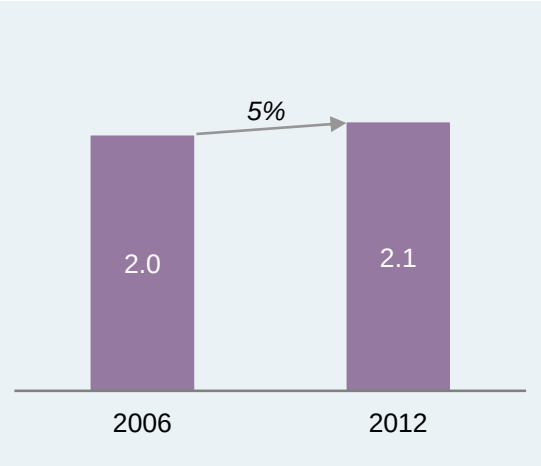
[1] Based on Strategic Insights data

A premier global private banking franchise

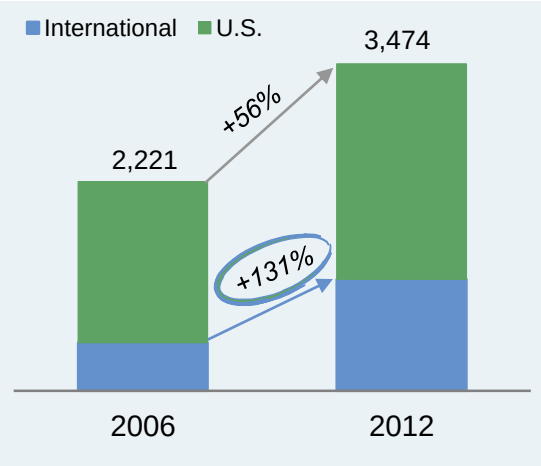
Global client advisors (excl. JPMS)



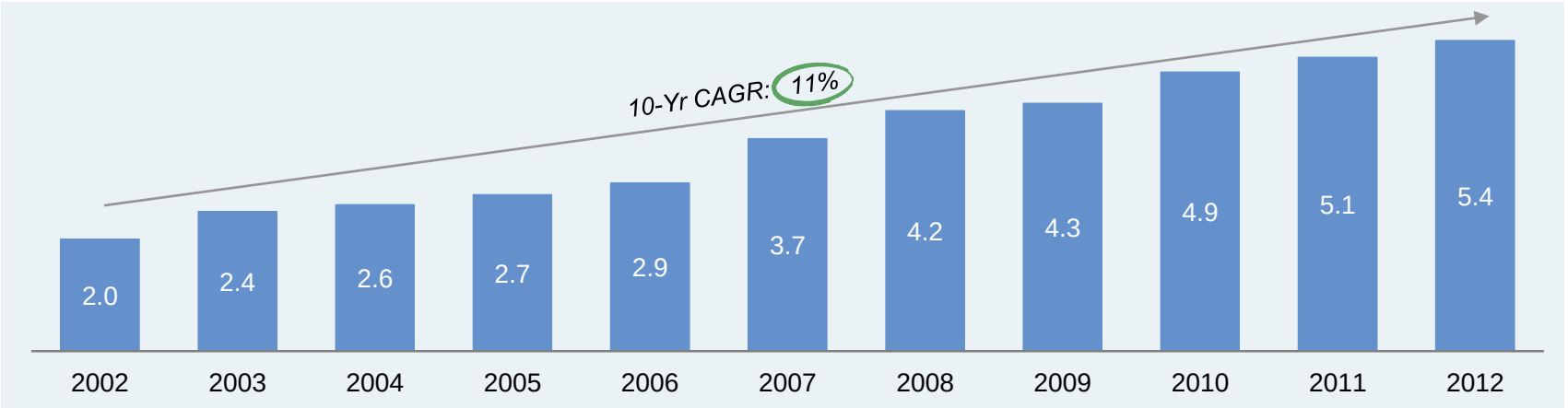
Revenue per CA ($mm, excl. JPMS)



Global net new clients (excl. JPMS)



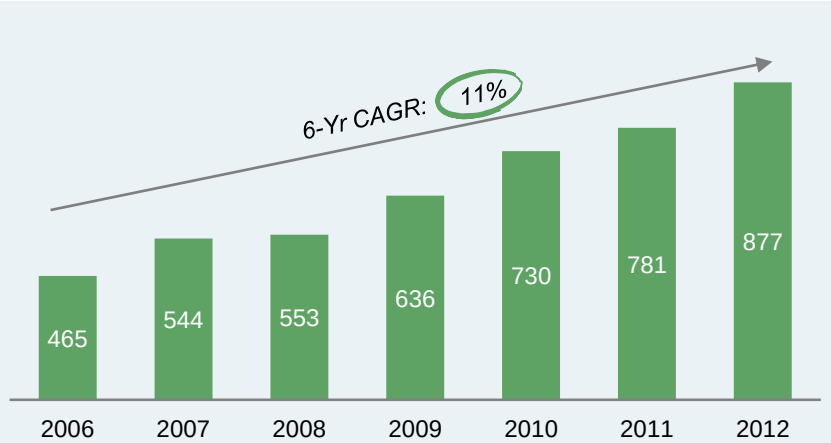
Consistent revenue growth ($B)



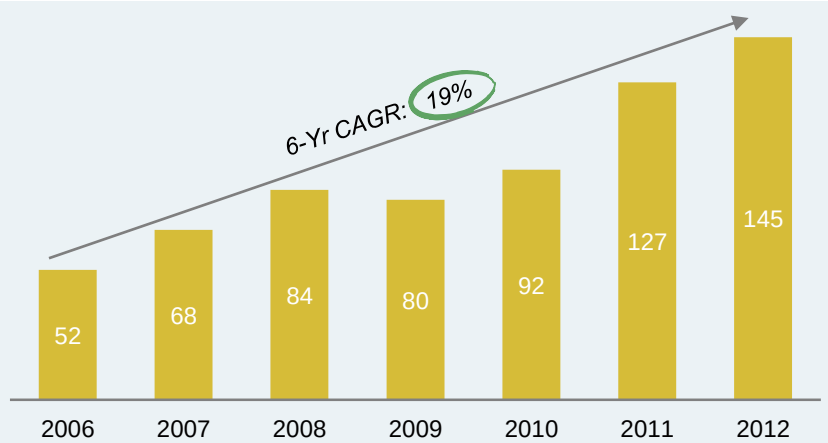
ASSET MANAGEMENT

Consistent growth across investment products, deposits, and loans

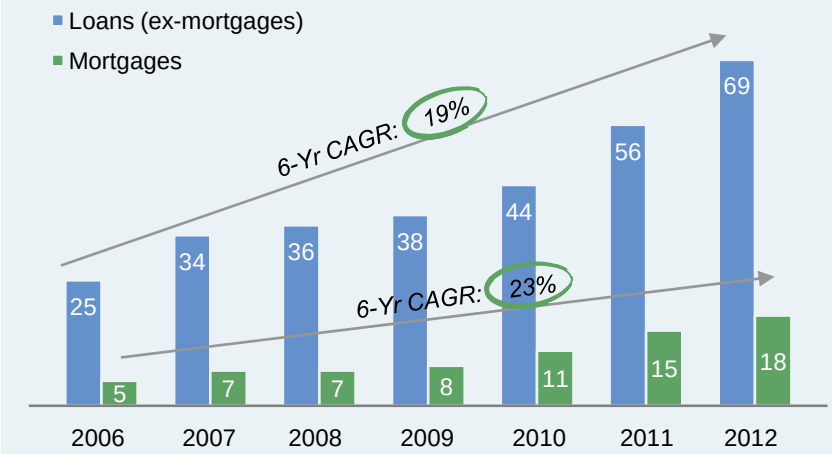
GWM Client assets ($B)



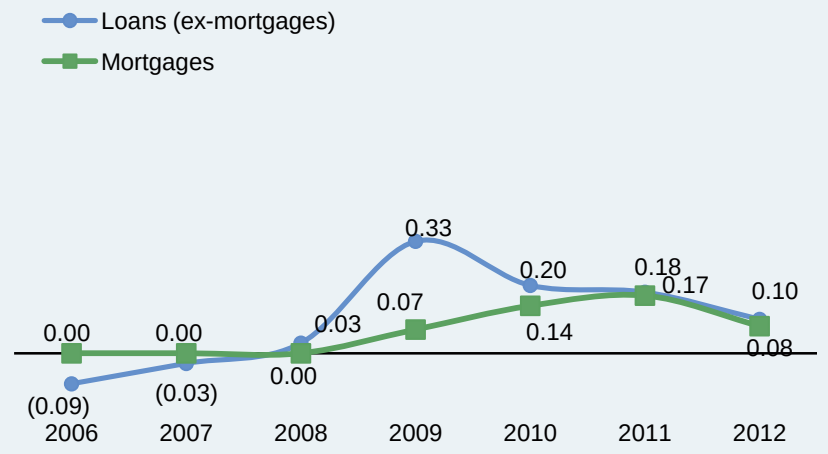
GWM Deposits ($B)



GWM Loans ($B) – 94% with secured collateral



GWM net charge-off rate (%)

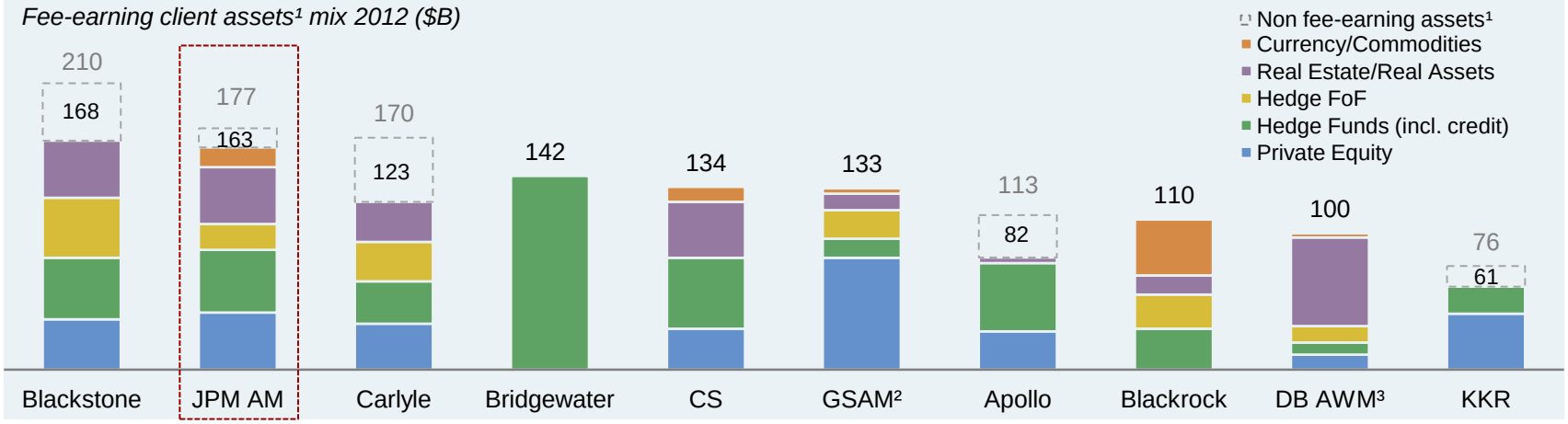


ASSET MANAGEMENT

A global leader in Alternatives, Absolute return, and Solutions

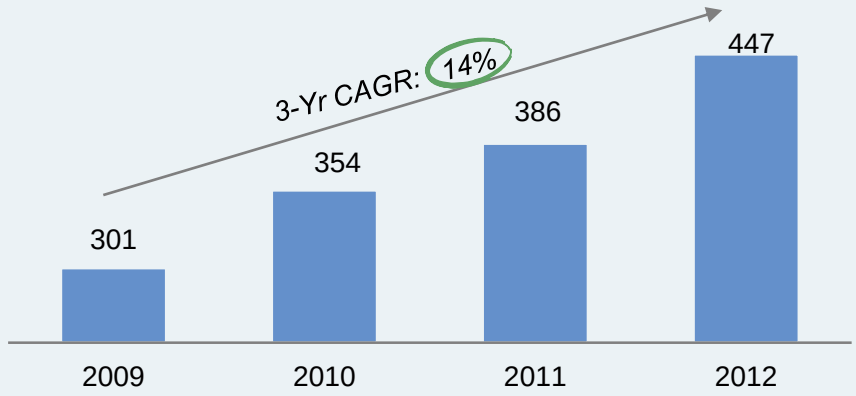
Diversified Alternatives / Absolute return platform

Fee-earning client assets[1] mix 2012 ($B)



Innovative Alternatives and outcome-oriented Solutions offerings

JPM AM Alternatives, Absolute return, and Solutions AUM ($B)



- SmartRetirement grew 7x from '08, +$18B
- Thematic Advisory Program launched '10, +$12B
- Absolute Return Fixed Income launched Nov '12, +$1.5B

Source: Company filings, J.P. Morgan estimates

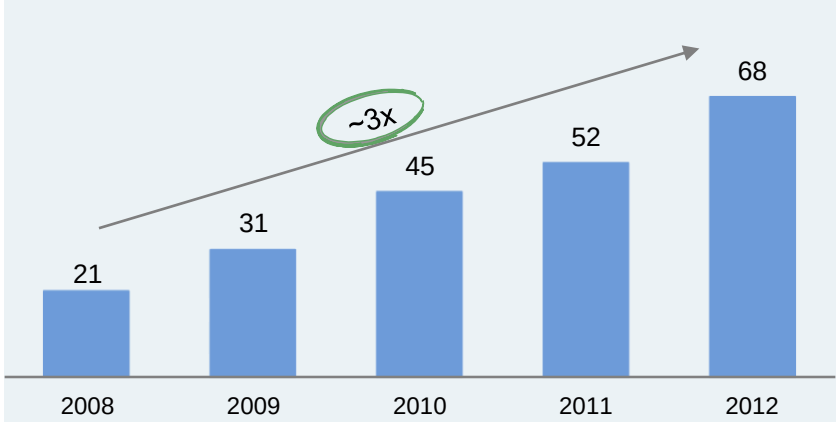
[1] Fee-earning client assets exclude assets which do not earn fees, such as firm capital invested in its own funds, uncalled capital commitments, and asset appreciation based on changes in the fair value of underlying investments. Non fee-earning assets include these items

[2] GSAM breakdown based on FT Towers Watson Global Alternatives Survey 2012 (July 2012)

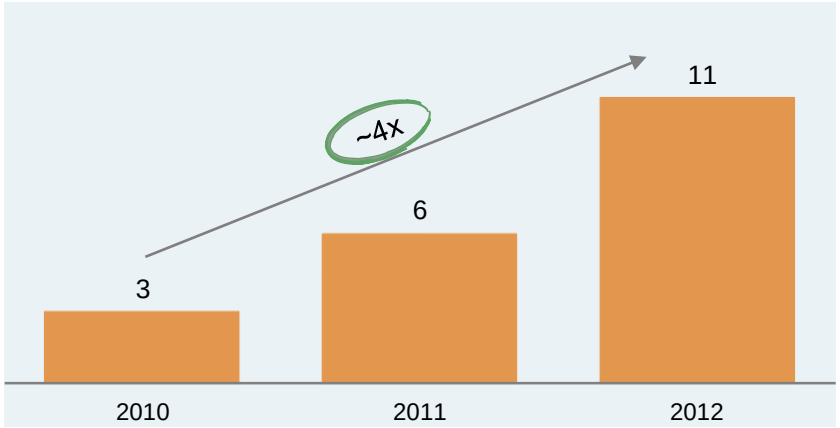
[3] Deutsche Bank AWM figures based on J.P. Morgan estimates

Partnership with CWM further adds to growth trajectory

Assets managed for CWM clients ($B)



CWM net new investment flows ($B)

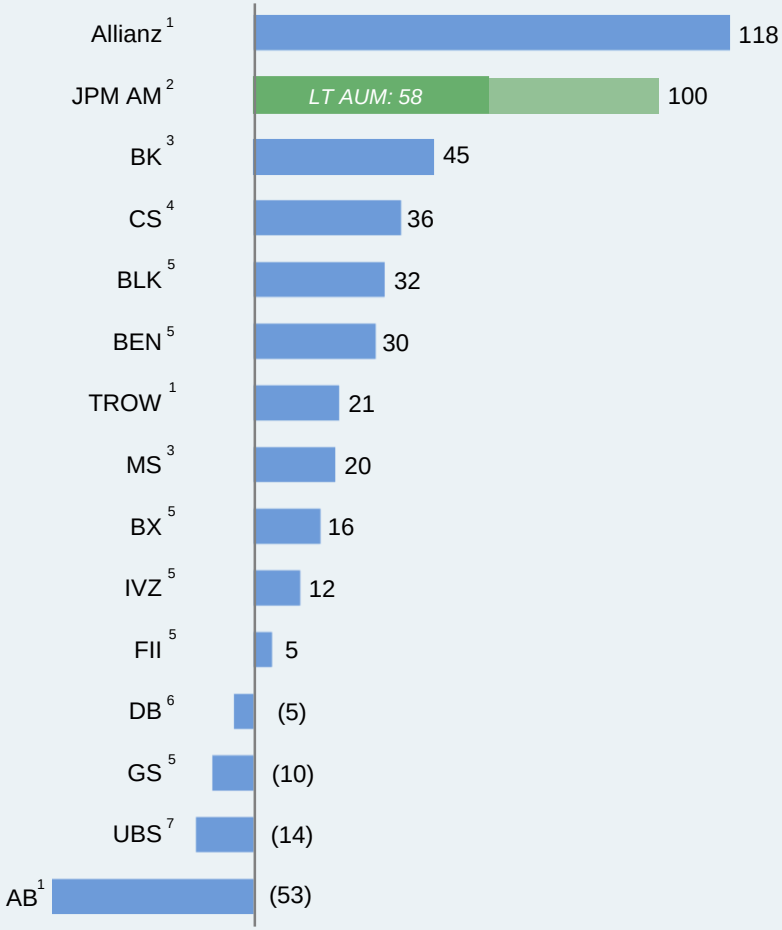


Highlights

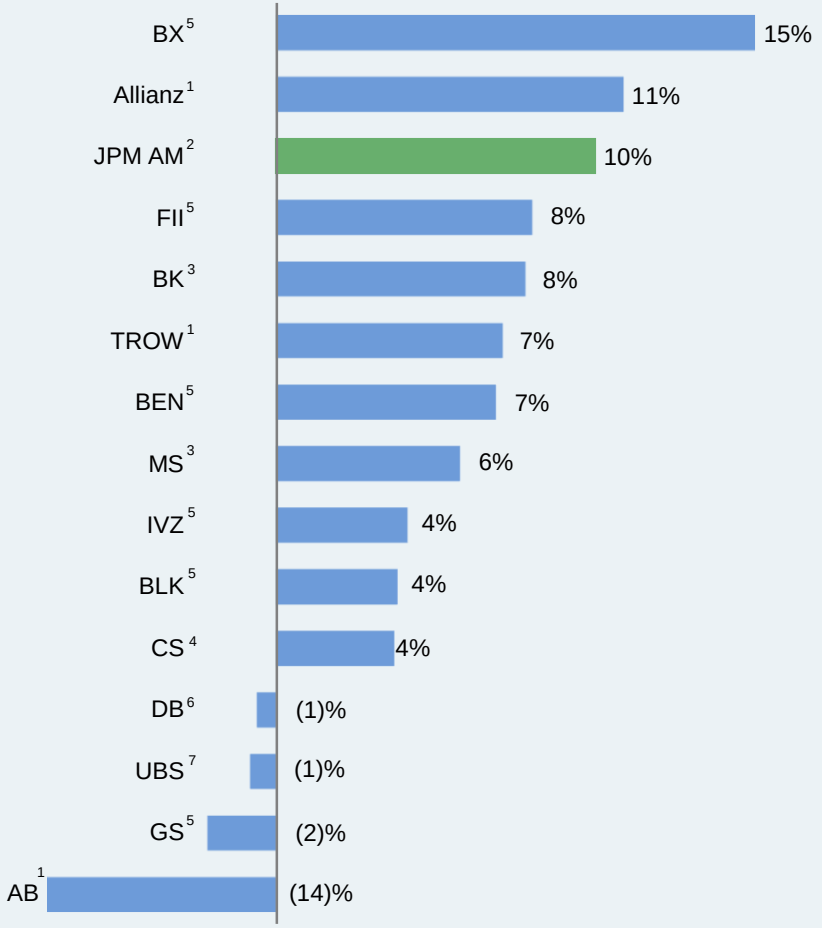
- **AM and CWM to cover U.S. wealth continuum**
  - CWM focuses on investment opportunity in the branches
  - One single affluent business – integrating ~77,000 U.S. PB affluent clients ($38B of assets) with CWM
  - Client referrals seamless between CWM and AM
- **Clients benefit from best-in-class investment and operating platform**
  - U.S. PB platform and investment expertise available for CWM clients
  - Fastest growing CWM products are managed accounts that leverage expertise of AM Solutions
- **CWM important distribution channel for U.S. Funds**
- **Accelerated growth expected going forward through CPC expansion**

Strong investment performance enables outsized flows

2009-2012 avg annual client asset flows ex-liquidity ($B)



2009-2012 compound annual client asset growth rate



~$20B in long-term AUM flows in 2012 from <u>each</u> of our <u>three</u> channels

Source: Company filings, J.P. Morgan estimates
Note: 2009-2012 represents 4 years of flows. Allianz, CS, DB, and UBS non-USD flows converted at average annual exchange rates. BX flows based on fee-earning assets.
[1] Total AUM flows
[2] Long-term AUM, brokerage, custody, and deposit flows
[3] Long-term AUM and brokerage flows
[4] Total AUM and brokerage flows
[5] Long-term AUM flows
[6] Total AUM, brokerage, and deposit flows
[7] Long-term AUM, brokerage, and deposit flows

Consistent long-term flows across channels, regions, and products

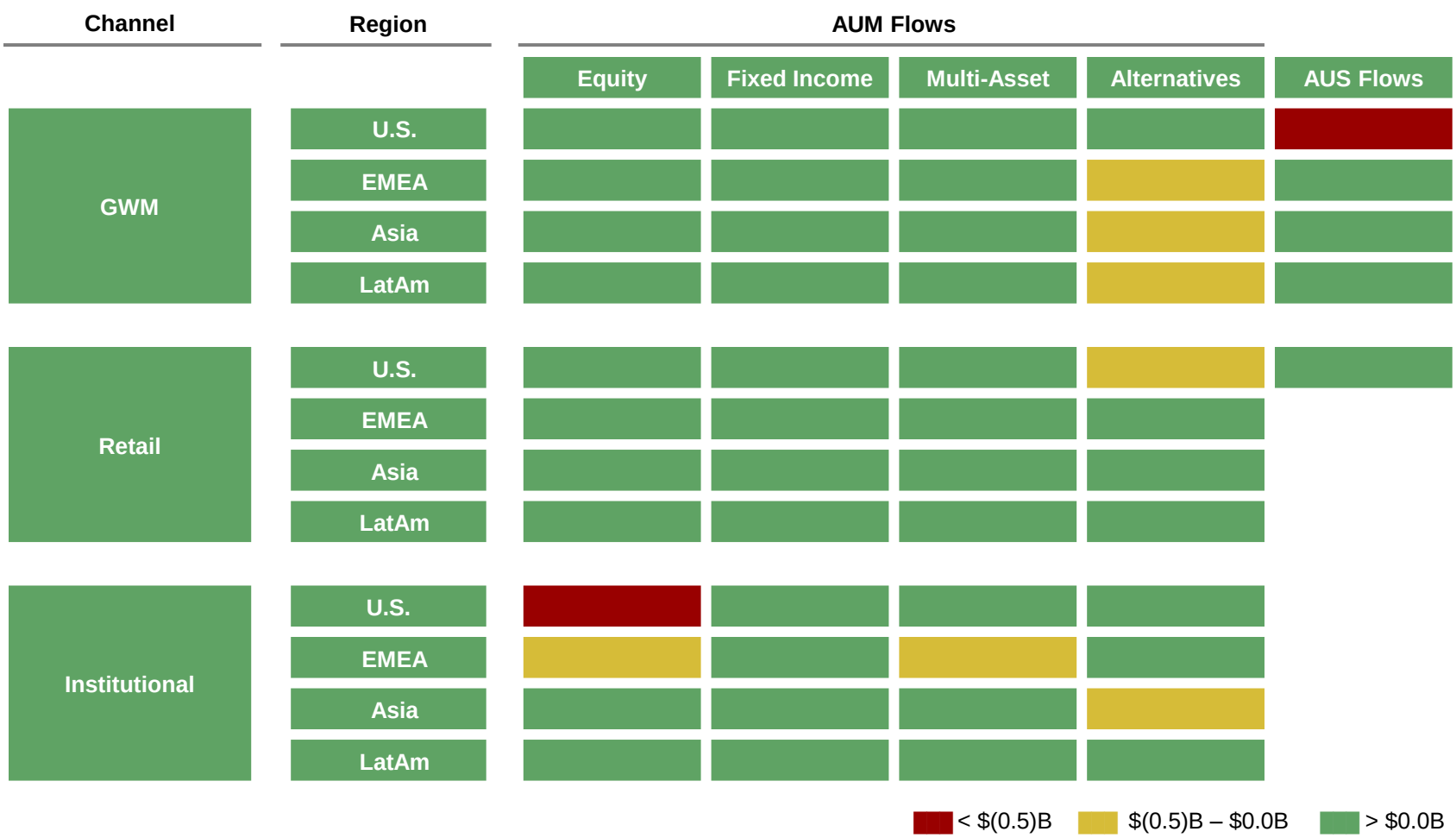
2009-2012 cumulative long-term flows by channel, region, and product ($B)

Channel	Region	AUM Flows				
		Equity	Fixed Income	Multi-Asset	Alternatives	AUS Flows
GWM	U.S.					
	EMEA					
	Asia					
	LatAm					
Retail	U.S.					
	EMEA					
	Asia					
	LatAm					
Institutional	U.S.					
	EMEA					
	Asia					
	LatAm					

< $(0.5)B $(0.5)B – $0.5B > $0.5B

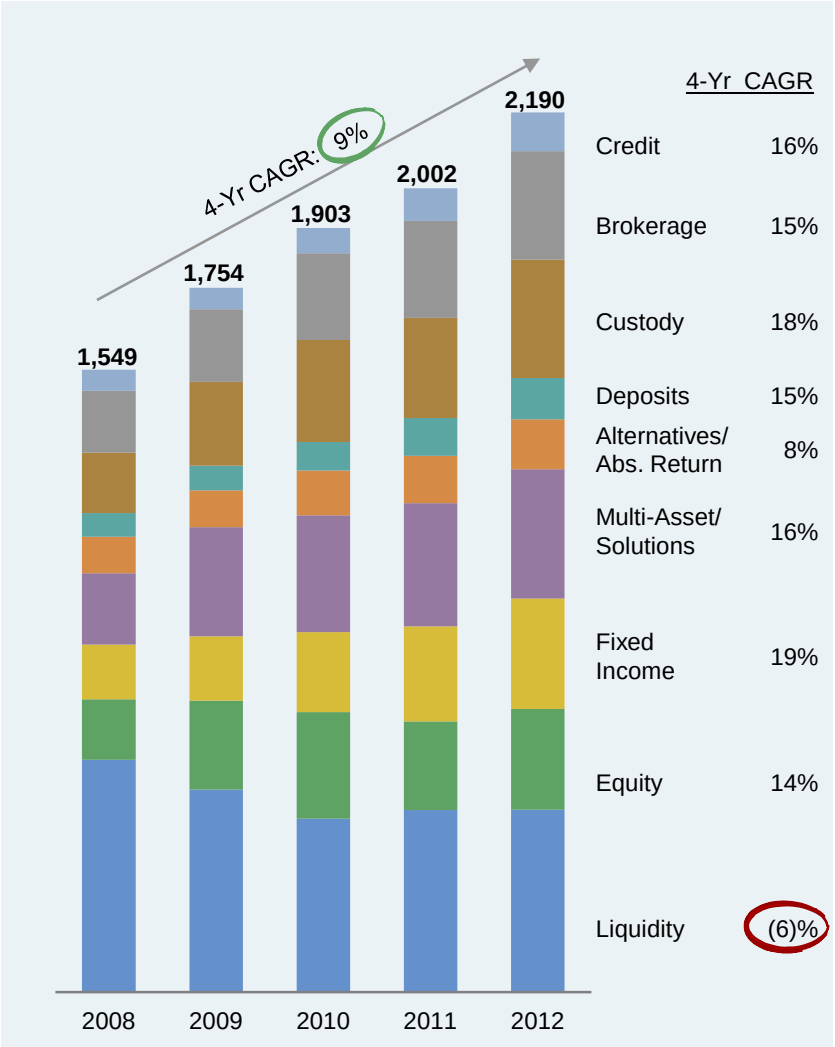
Consistent long-term flows across channels, regions, and products

2013 YTD cumulative long-term flows by channel, region, and product ($B)

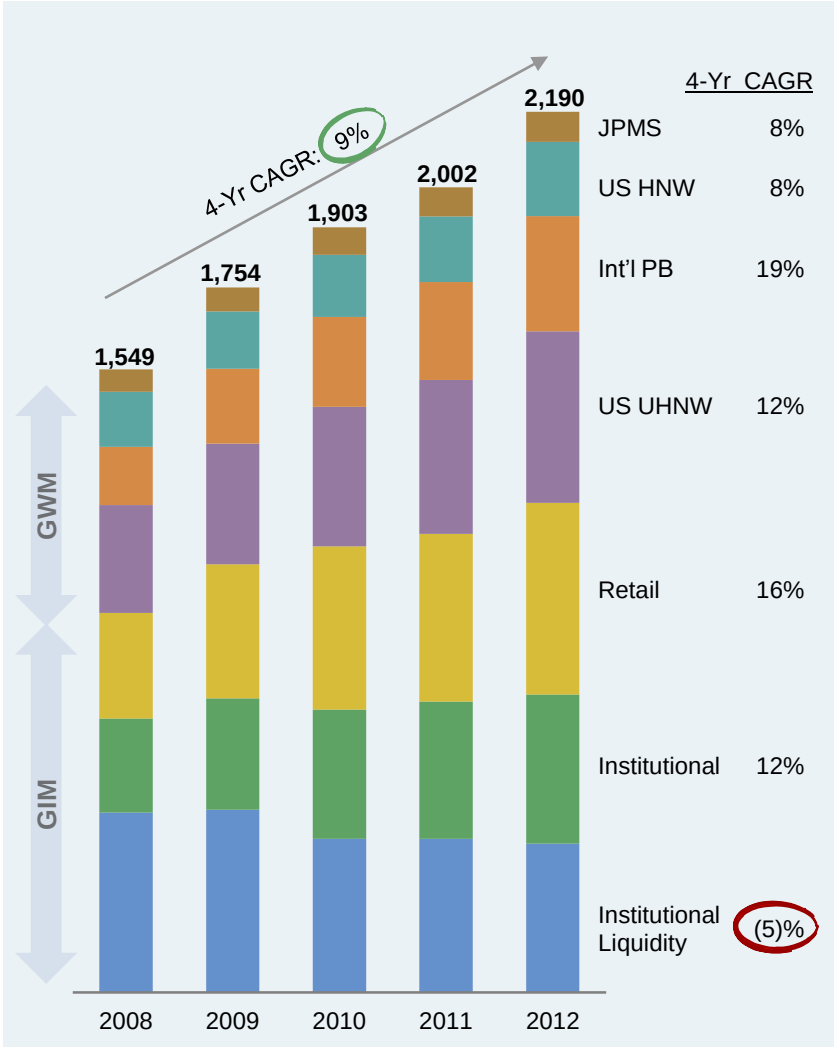


Growing in every product and client channel since the crisis (except liquidity)

Total client positions by product ($B)



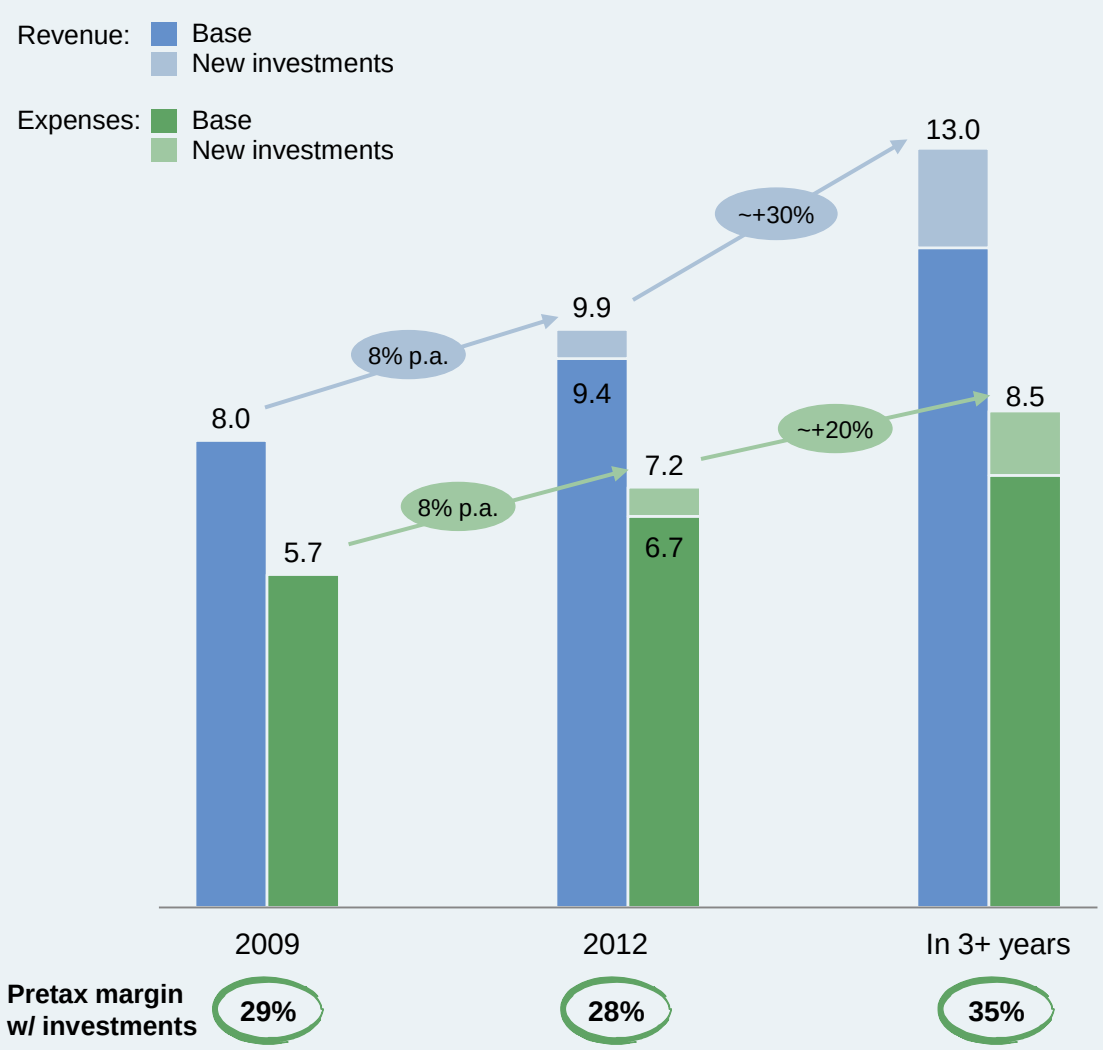
Total client positions by channel ($B)



ASSET MANAGEMENT

Expansion investments in 2010–2012 will fuel future growth and increase margins

Total AM P&L ($B)

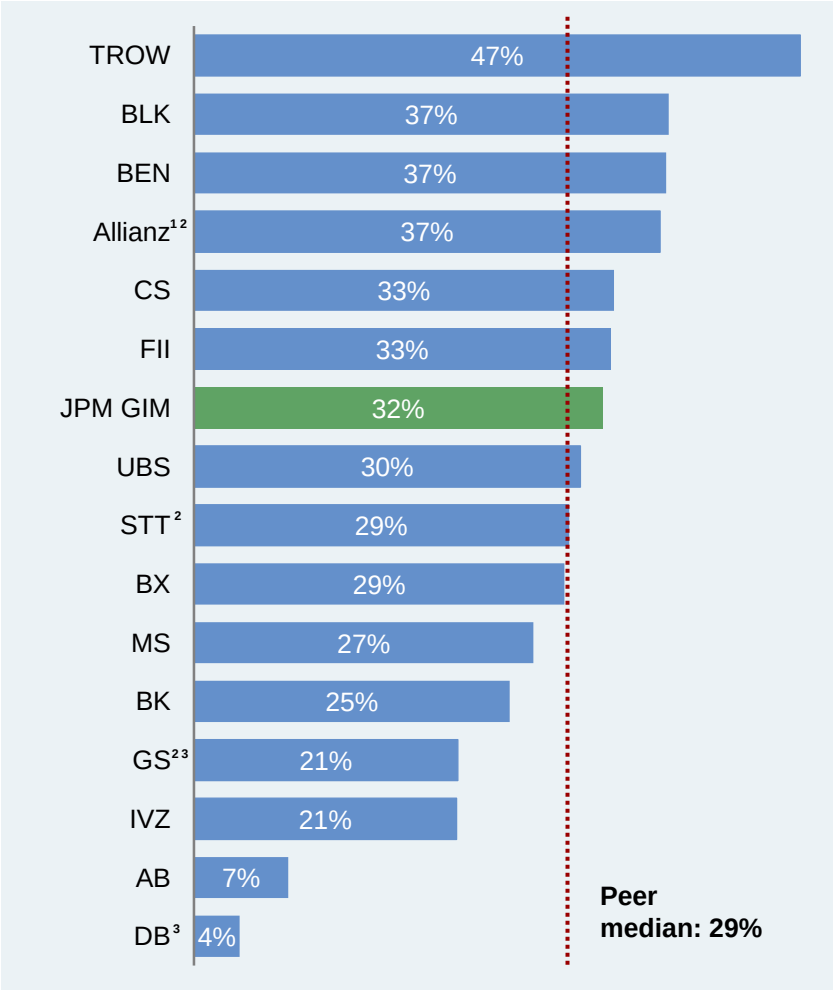


Commentary

- Hired ~800 client advisors and investors across GWM and GIM
- Launched several new business initiatives in GIM (e.g., DCIS, Insurance)
- Targeting incremental, annual net income impact of ~$600mm
- Continued and accelerated revenue growth from new hires as they approach full productivity
- Expense growth will decline as:
  - Tech/infrastructure investment growth rates come down
  - Expense discipline continues

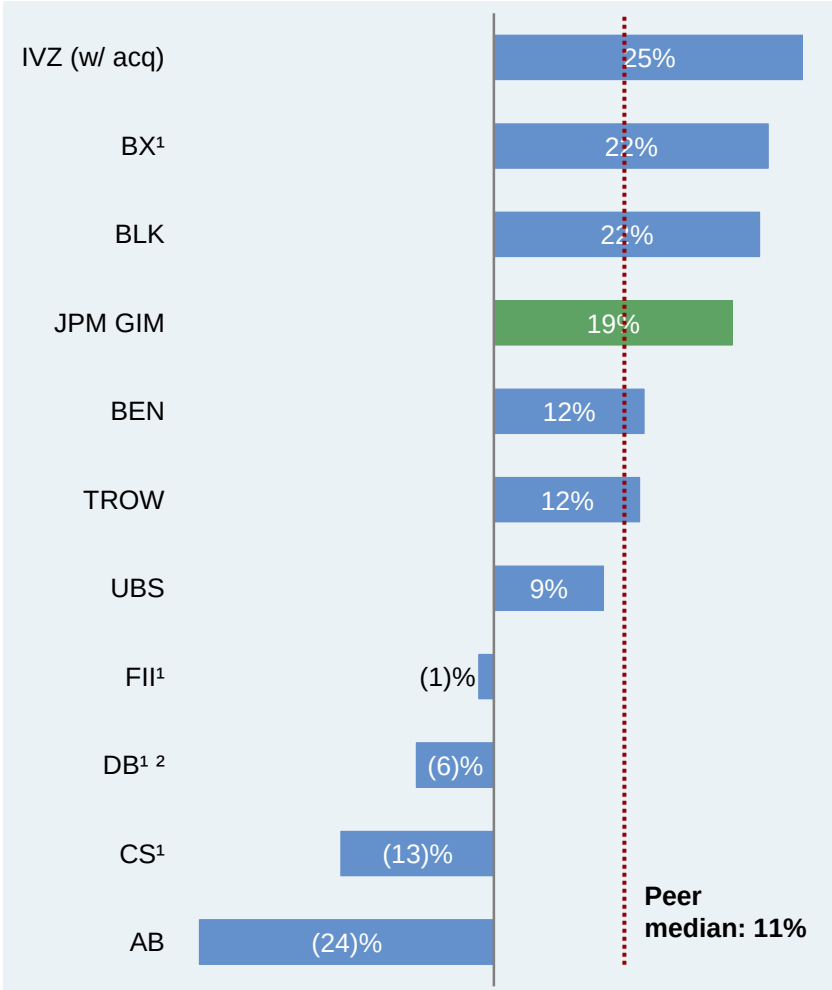
GIM delivered strong margins while continuously investing

2012 pretax margin



Source: Company filings, J.P. Morgan estimates
Note: Figures shown on an as-reported basis. BX margin figures reflect pretax distributable earnings divided by total revenues
[1] Revenue presented gross of fees and commission expenses to ensure comparability with peers
[2] Has not yet reported segment margin for 2012; LTM through 3Q12 used instead
[3] Wealth Management vs. Investment Management margin split unavailable

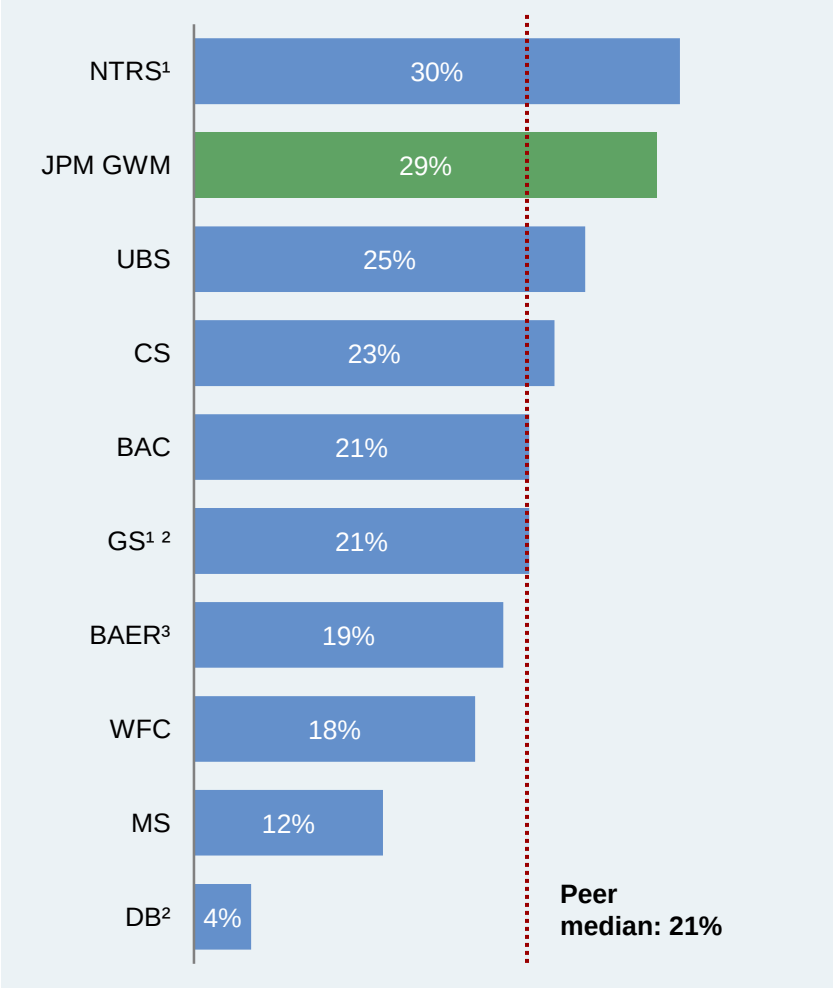
3-year total headcount growth



Source: Company filings, J.P. Morgan estimates
Note: Figures as of year end shown on an as-reported basis. Not adjusted for acquisitions or divestitures
[1] Growth rates represent different time periods due to changes in reporting format and/or pending 2012 disclosure: BX (2009–2011); CS (2009–3Q12); DB (2010–2012); and FII (2009–2011)
[2] Wealth Management vs. Investment Management headcount split unavailable

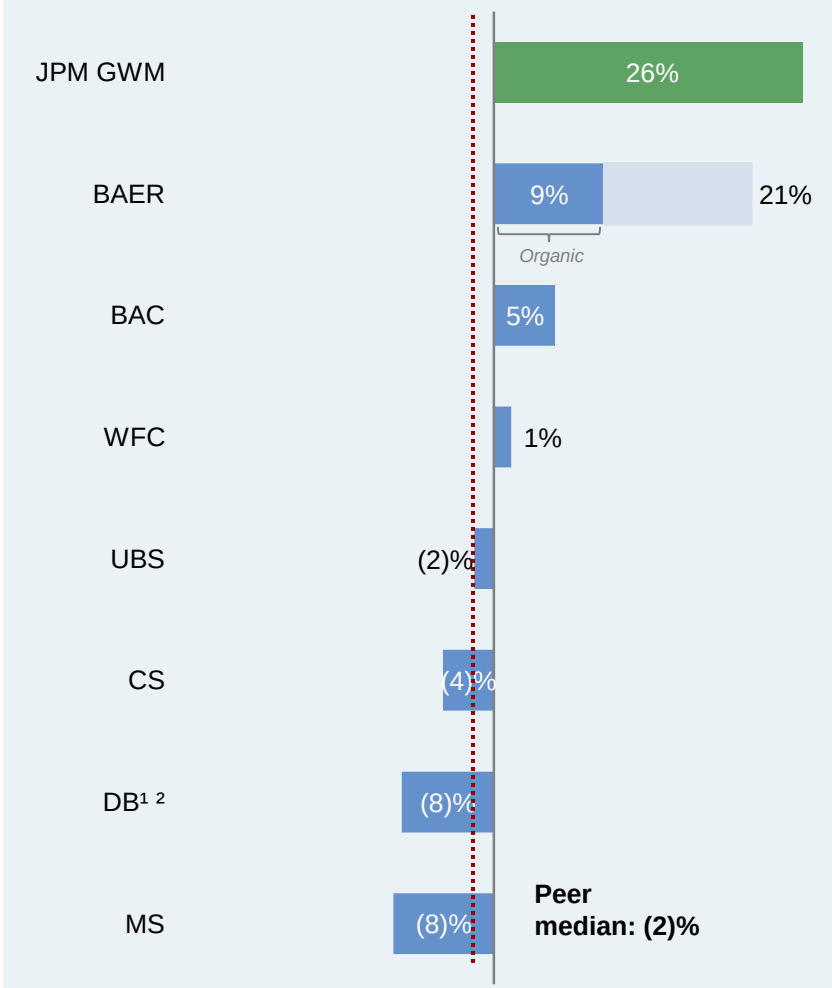
GWM delivered industry-leading margins with unmatched investment levels

2012 pretax margin



Source: Company filings, J.P. Morgan estimates
Note: Figures shown on an as-reported basis
[1] Has not yet reported segment margin for 2012; LTM through 3Q12 used instead
[2] Wealth Management vs. Investment Management margin split unavailable
[3] Revenue presented gross of fees and commission expenses to ensure comparability with peers

3-year client-facing headcount growth



Source: Company filings, J.P. Morgan estimates
Note: Figures as of year end shown on an as-reported basis. Not adjusted for acquisitions or divestitures
[1] Wealth Management vs. Investment Management headcount split unavailable
[2] DB figure reflects 2-year growth rate due to changes in reporting format

High ROE relative to peers

AM Return on Equity

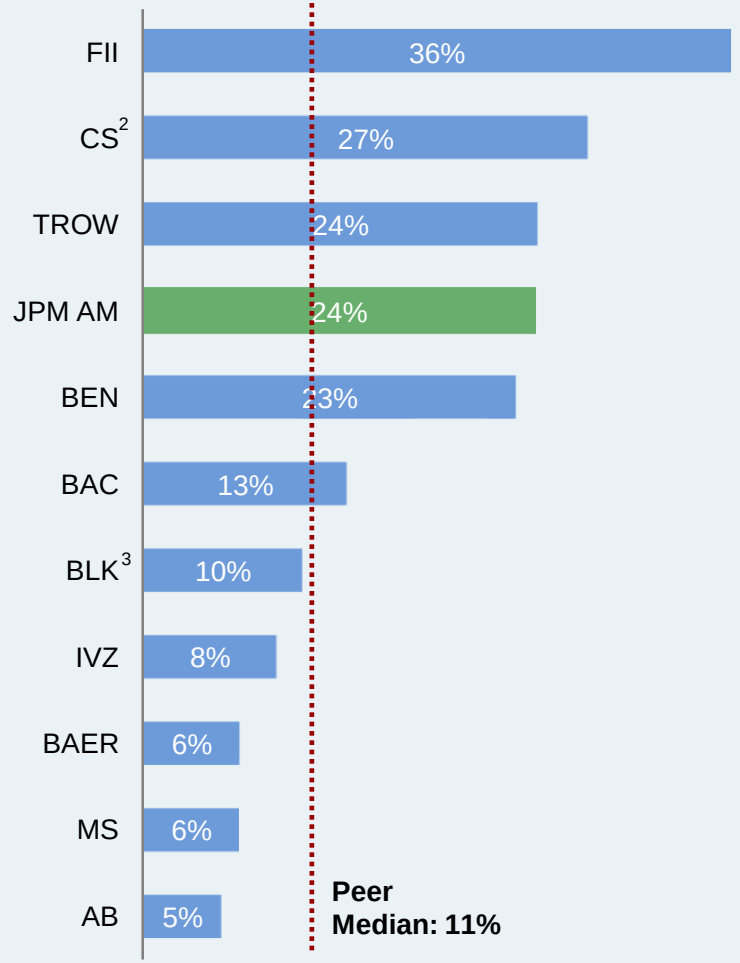


[1] 2012 net income applied to 2013 allocated capital of $9.0B

Observations

- Stable ROE despite capital increases and re-investments
- 2012 ROE comparable or better than most peers
- As of 1/13, JPM AM has $9B of allocated capital due to increased corporate allocations and expanding loan book

Comparative asset management 2012 ROE[1]



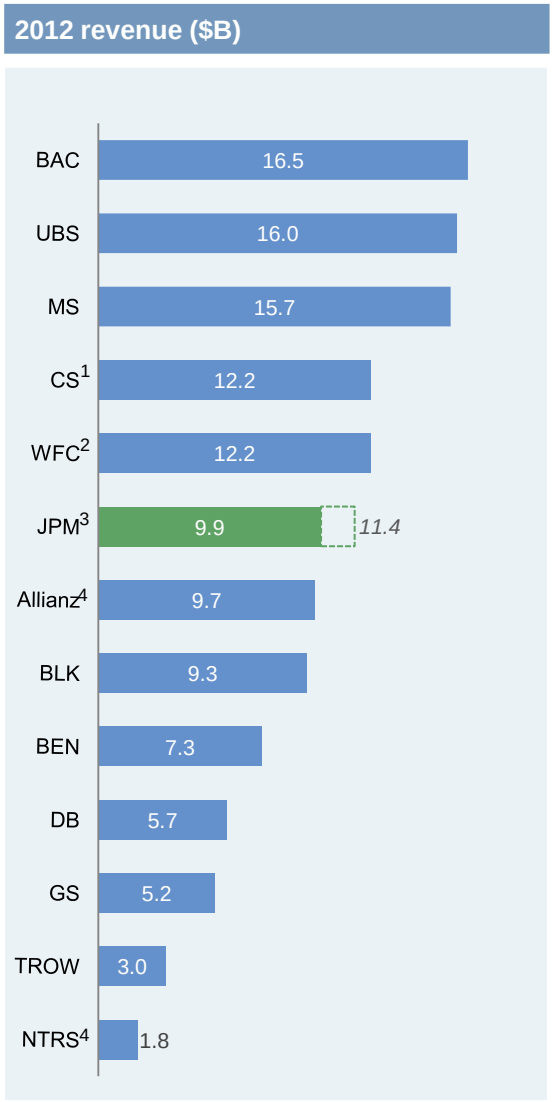
Source: Company filings, J.P. Morgan estimates

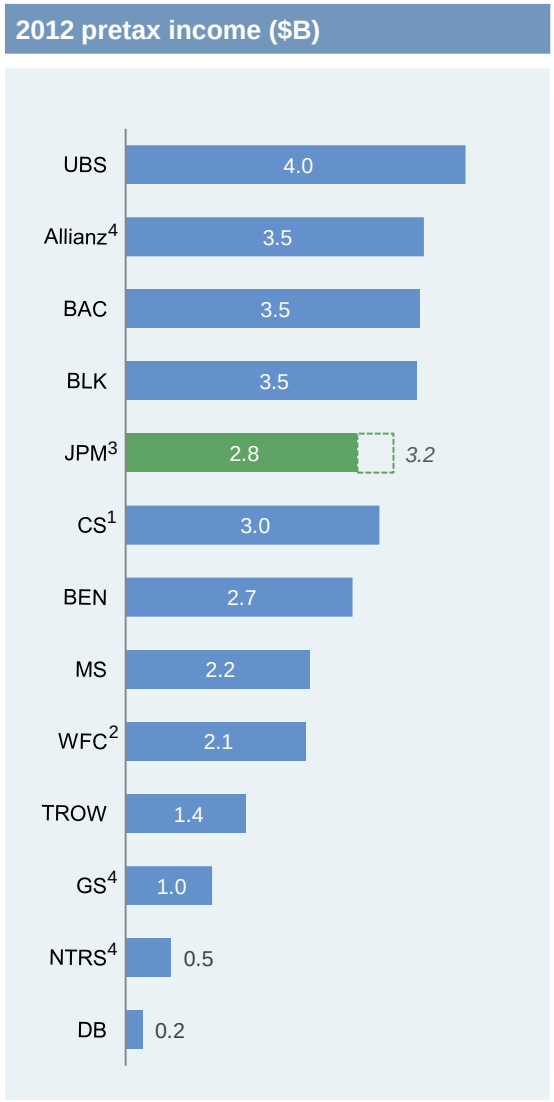
[1] Based on reported capital (including goodwill and intangibles where disclosed)

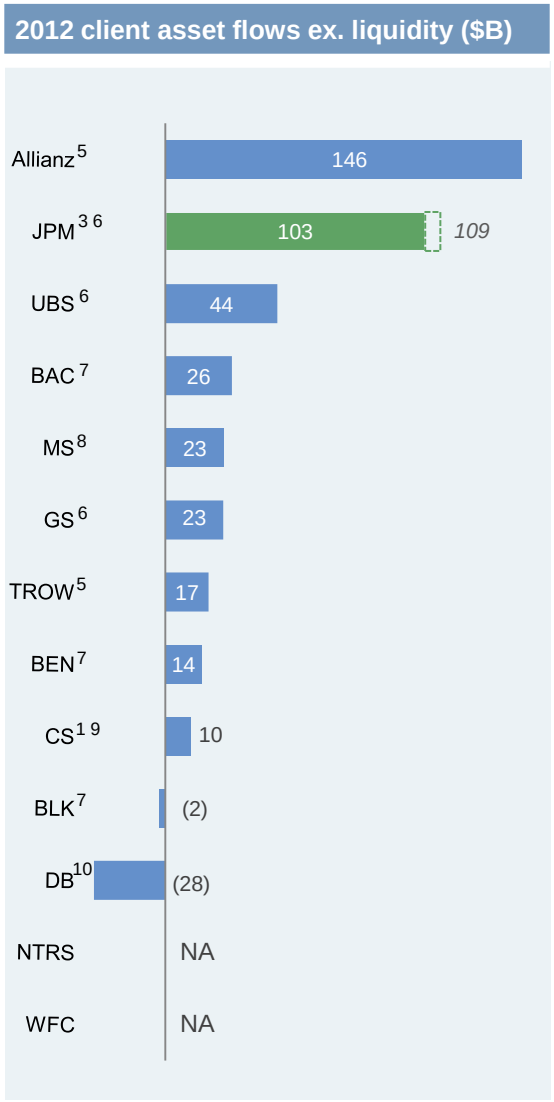
[2] Pretax income taxed at firmwide Core Results tax rate. Average utilized capital pro rated for pretax earnings of PBWM segment excluding Corporate and Institutional Clients

[3] Uses end of period shareholders' equity as of 9/30/12; 12/31/12 equity not yet reported

Combined Asset and Wealth Management space offers earnings growth potential



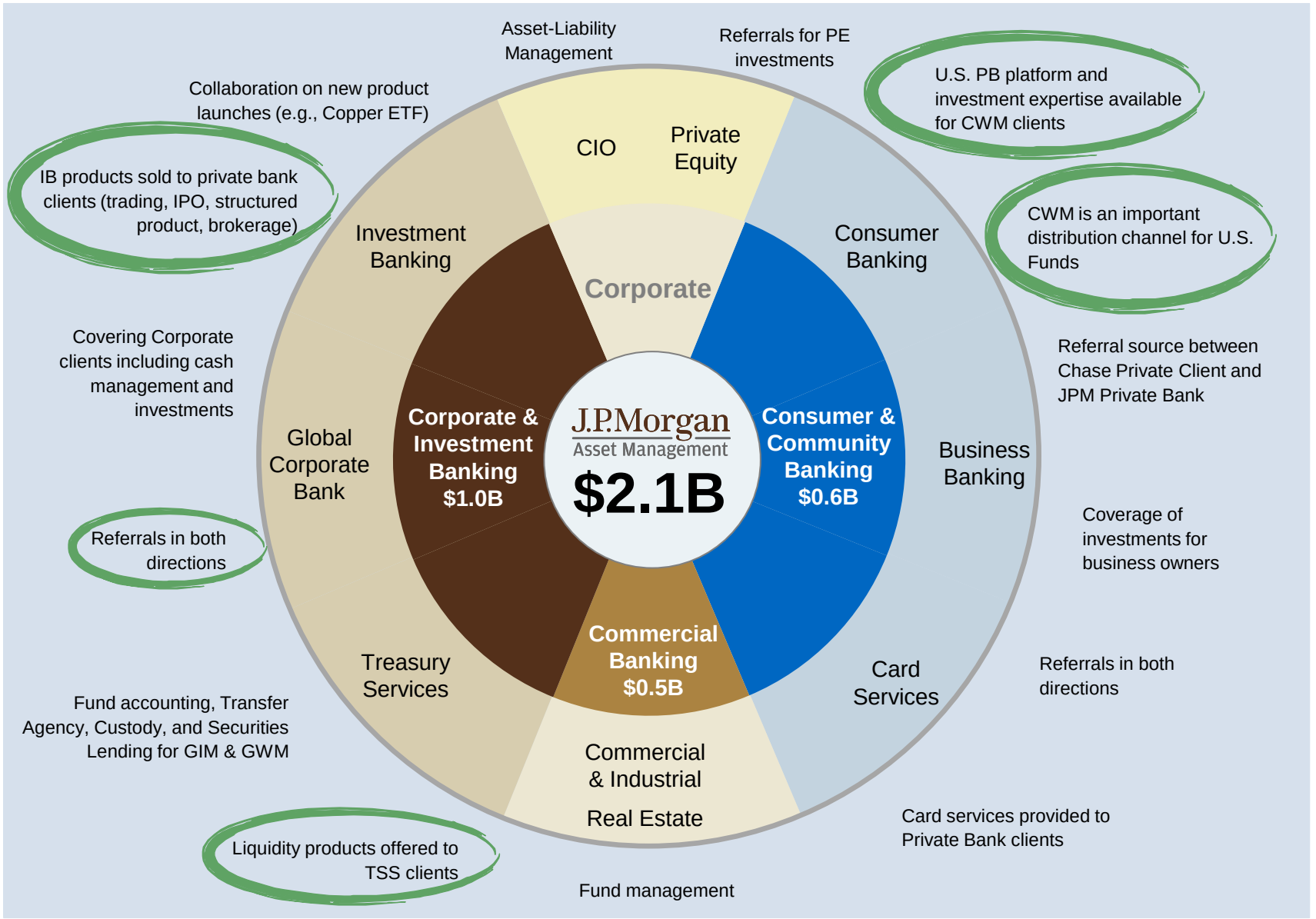




Source: Company filings, J.P. Morgan estimates
Note: Allianz, CS, DB, and UBS figures converted at average annual exchange rate
[1] Excludes revenue, pretax income, and client asset flows attributable to Corporate and Institutional Client unit
[2] Excludes Asset Management Group (AMG) which is reported in Wholesale Banking unit. AMG consists of $444B of AUM, of which $112B is accounted for in Wealth, Brokerage and Retirement unit (source: Wells Fargo Wholesale Banking Investor Relations presentation, May 2012)
[3] Includes GIM and GWM with CWM reflecting dashed extension. Client asset flows dashed extension reflects CWM net new investments
[4] Reflects LTM through 3Q12 as 2012 disclosure not yet available. Allianz revenue is presented gross of fees and commission expenses to ensure comparability with peers
[5] Total AUM flows
[6] Long-term AUM, brokerage, custody (where disclosed), and deposit flows
[7] Long-term AUM flows
[8] Long-term AUM and brokerage flows
[9] Total AUM and brokerage flows
[10] Total AUM, brokerage, and deposit flows

Substantial cross-sell with the JPMorgan Chase franchise

~$2B in cross-sell revenue across lines of business



Continued delivery of strong growth and high returns

Key takeaways

- Consistent growth with high margins and ROE
- Strong, long-term investment performance
- Fiduciary culture since 1832
- Diversified by products, channels, and regions
- World's best clients
- Invaluable benefit of being part of JPMC

Future growth

- High-growth areas:
  - First wave of front office hires fully productive
  - Increased flows into strong performing strategies
  - International turnaround and expansion
  - New business initiatives including Insurance, Solutions, Alternatives, and CWM
- Financial targets:
  - Client assets: 7–10% p.a.
  - Revenue: 7–12% p.a.
  - Pretax income: 10–15% p.a.
  - Pretax margin: 30–35%
  - ROE: 25% +

3+ years

Revenue $13B | **Pretax income $4B** | **Client assets $3T**

CORPORATE & INVESTMENT BANK

Mike Cavanagh, Co-Chief Executive Officer Corporate & Investment Bank
Daniel Pinto, Co-Chief Executive Officer Corporate & Investment Bank

February 26, 2013

JPMorgan Chase & Co.

The Corporate & Investment Bank ("CIB") is operating from a position of strength

CIB performance

World class franchise – delivering best-in-class returns with leading market shares
Superior risk discipline and controls
Long-term outlook for capital markets and flow businesses is strong

More leadership positions in banking and markets businesses than any competitor

Banking

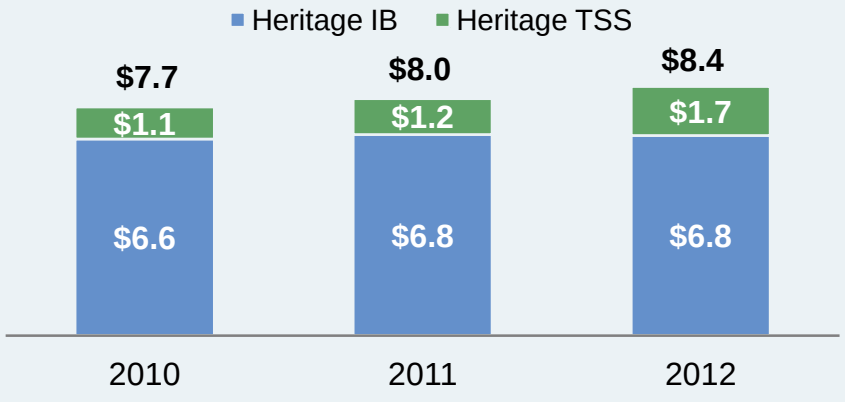
- #1 in IB Fees; widened gap to #2
- IB Fees of $5.8B; record debt underwriting
- Record Treasury Services revenue of $4.2B
- Lending revenue of $1.3B

Markets & Investor Services

- #1 in Fixed Income; revenue of $15.4B
- #4 in Equities; revenue of $4.4B
- Securities Services revenue of $4.0B; record $19T in Assets under Custody

CIB delivering strong results

- Revenue: $34.3B (largest in the industry[1])
- Cumulative 3-year earnings of $24.1B



	2010	2011	2012
H-IB	17%	17%	17%
H-TSS	17%	17%	22%
CIB	17%	17%	18%[2]

16% +/- through-the-cycle ROE on increased capital allocation of $56.5B

[1] Based on CIB/IB segment equivalent revenue, excl. DVA

[2] 19% CIB ROE excl. DVA, 15% CIB pro forma ROE based on new allocated capital,16% CIB pro forma ROE on new allocated capital excl. DVA. Throughout this presentation, CIB provides several non-GAAP financial measures which exclude the impact of DVA on: net revenue, net income, overhead ratio, compensation ratio and return on equity. These measures are used by management to assess the underlying performance of the business and for comparability with peers

Agenda

	Page
J.P. Morgan is positioned to maintain leadership in wholesale banking	**2**
Macro trends support long-term attractiveness of global wholesale banking	24
Management priorities for 2013	32
Wrap-up	44

CIB is positioned to maintain our leadership in wholesale banking

CIB possesses all of the best-in-class and global elements required to serve our clients

1. **Client-driven franchise** – CIB organization aligned to best serve the full set of needs of corporate and investor clients
2. **Economies of scale** – Scale and operating efficiency afford us the ability to continue to invest in and expand our platform
3. **Fortress balance sheet** – Being well-capitalized with stable funding sources gives us a durable business model and makes us a preferred and resilient counterparty
4. **Completeness of capabilities and global reach** – Leadership position in each business helps us deliver better solutions to clients
5. **Stable earnings** – Flow-based markets franchise generates very stable, consistent earnings with lower risk

6. ***Positioned to generate strong through-the-cycle returns on the stand-alone risk-based capital needs of the business***

1

Our client franchise is large and diverse with deepening global relationships

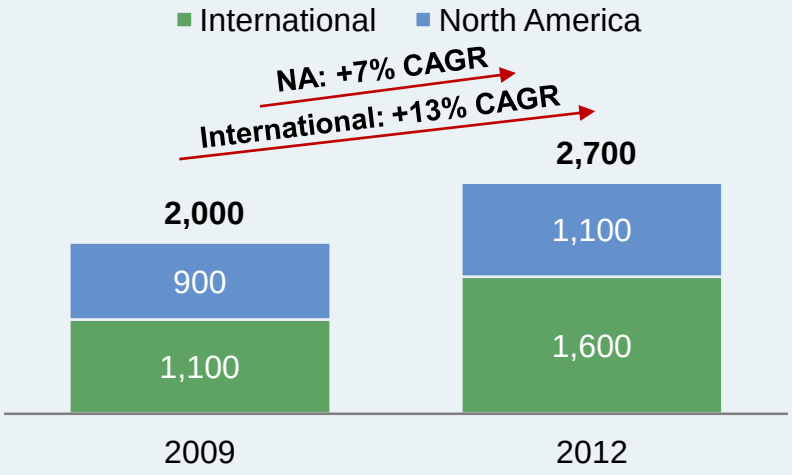
Client-driven franchise

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

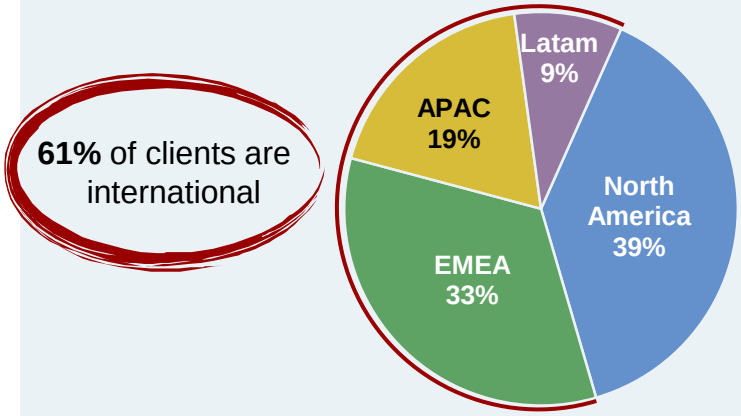
Highlights

- ~7,600 clients generating revenue >$50K
- ~22,000 accounts
- ~2,700 clients generating >$1mm in revenue
  - International business growing the fastest
- 61% of our clients are outside the U.S.
- 48% of our revenues are outside the U.S.

Significant clients (>$1mm in revenue)

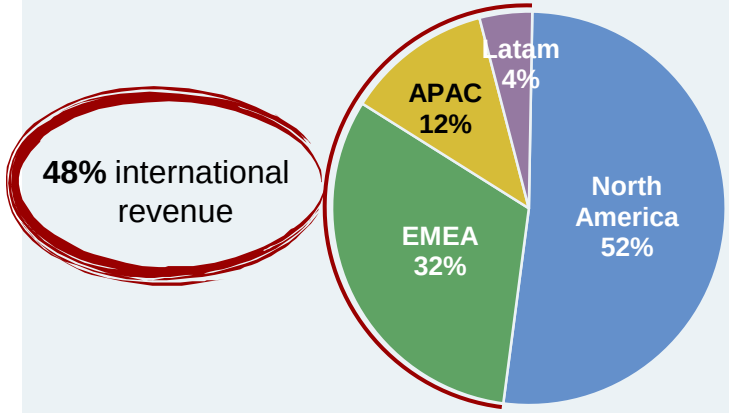


Clients with >$50K in revenue (2012)



2012 CIB clients: ~7,600

CIB revenue by region (2012)



2012 CIB revenue, excl. DVA: $35.3B

1 We are recognized as best-in-class across all businesses

Client-driven franchise

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

JPM select product rankings (2006-2012)

	2006	2009	2012
Investment Banking[1]			
IB Fees	2	1	1
Advisory	2	3	2
Equity underwriting[2]	5[2]	1[2]	4[2]
Syndicated loans	1	1	1
Long-term debt	3	1	1
Treasury Services[3]			
USD clearing	1	1	1
Research[4]			
US Equity	6	2	1
US Fixed Income	2	2	1
Global Markets[5]			
Fixed Income Markets	7	3	1
Equity Markets	8	5	4
Securities Services[6]			
Assets Under Custody	2	2	2

JPM select international rankings (2012)

2012	Asia	EMEA	LatAm
Investment Banking			
IB Fees[1]	4	2	3
1H 2012	**Asia**	**EMEA**	**Americas**
Fixed Income Markets[7]			
Rates	2	3	1
FX	5	4	1
Credit	10	1	2
Equity Markets[7]			
Derivatives & Convertibles	1	2	3
Institutional Cash Equities	7	6	5

Top 3 2nd Tier 3rd Tier

Industry-leading positions (3Q 2012)[8]

	RBS	UBS	BARC	CS	C	MS	BAC	DB	GS	JPM
Total leadership positions	0	1	2	3	3	4	4	4	7	**11**

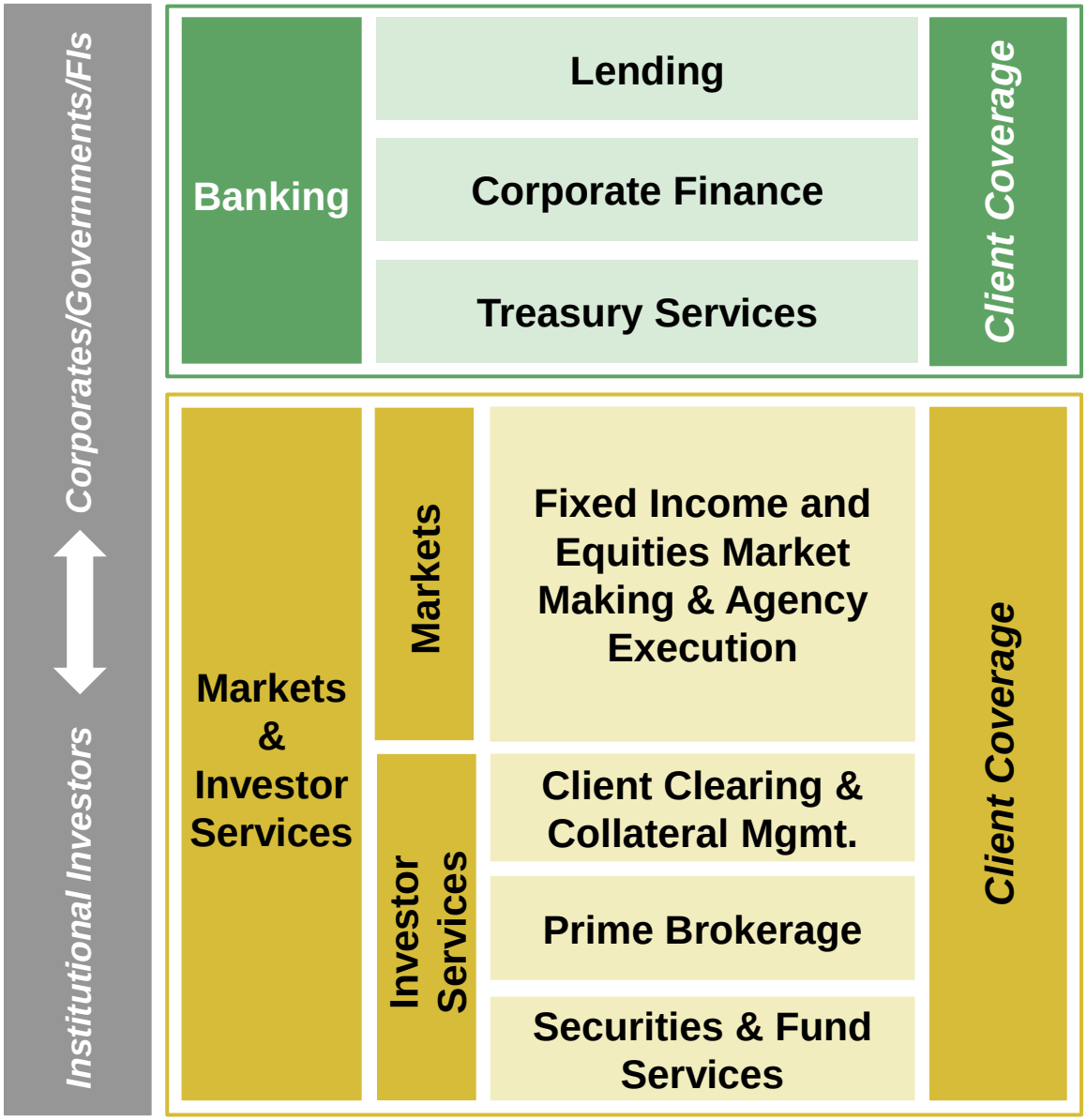


Top 3 2nd Tier 3rd Tier

[1] Dealogic, pro forma for industry mergers. Rankings are volume-based, except for IB Fees; [2] Equity underwriting ranking excluding accelerated book builds, as well as block trades: 2006 – #6, 2009 – #1, 2012 – #1; [3] CHIPS & Fedwire report; [4] *Institutional Investor*; [5] JPM estimates revenue share using public disclosure of Top 10 competitors, excl. DVA; '06 is heritage JPM; [6] Company reports; [7] Coalition as of 1H12; Americas includes North America and Latin America. Coalition competitor set includes BAC, BARC, BNPP, C, CS, DB, GS, MS, SG, and UBS; [8] Coalition IndexPlus as of 3Q12 YTD

1 CIB is organized to best serve the full set of needs of corporate and investor clients

Client-driven franchise



- *Ability to leverage risk capital across transaction, commercial, and investment banking solutions*
- *Better combination of top-tier capabilities globally than almost any competitor*

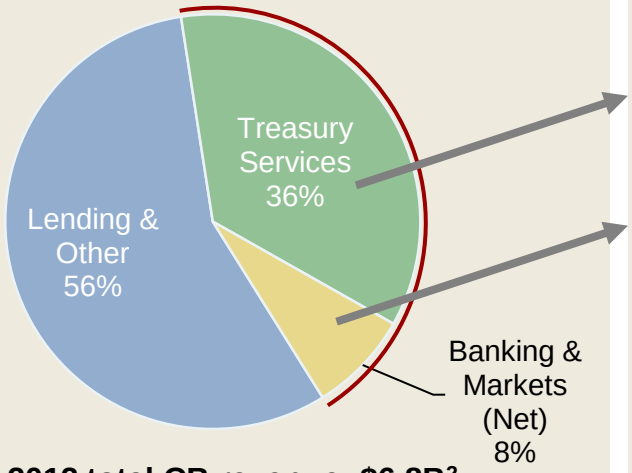
- *No competitor combines a best-in-class Markets business with a top tier Investor Services business*

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

1 Leveraging the broad client franchise of JPMC – Resulting in significant benefits to all businesses

Client-driven franchise

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

$5.2B CIB[1]	2012 CB revenue by product	2012 CB cross-sell highlights
CB **$4.0B**	 **2012 total CB revenue: $6.8B[2]**	■ **44%** of CB revenue comes from CIB products ■ **$2.4B** of gross revenue from CB clients using Treasury Services (TS) products ■ **$1.6B** of gross IB revenue from CB clients ■ $1.1B from Banking & $0.4B from Markets ■ **23,000** CB Commercial & Industrial clients ■ 20,000+ use TS products[3] ■ ~1,000 use IB underwriting/advisory services[3]
AM **$1.0B**	■ Asset Management is an important client of CIB's research, execution, custody and fund services ■ Private Bank is a key distribution channel for CIB equity offerings and a source of referrals for investment banking mandates ■ CIB is a steady source of client referrals for the Private Bank	
CCB **$0.2B**	■ Strong linkages between Chase Mortgage and CIB Fixed Income ■ Our CIB Corporate clients benefit from processing through Chase Paymentech	

Note: Totals may not sum due to rounding

[1] Reflects gross CIB cross-LOB revenue for FY2012

[2] Treasury Services reflects gross revenue, Banking & Markets reflects net revenue

[3] Client count for TS products and IB underwriting/advisory includes CB Commercial & Industrial and select Commercial Real Estate clients that are not included in the 23,000 Commercial & Industrial figure

2

We have achieved scale that allows for efficiency and ongoing investment

Economies of scale

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

Trading	■ $1T+ of securities traded & settled daily ■ 125mm+ equity shares traded daily ■ 60K+ Fixed Income trades daily
Processing	■ $980T of USD payments; $4T average daily ■ #1 USD wire clearer with 20% share of Fedwire and CHIPS[1] ■ $19T in Assets under Custody
Lending & Capital Raising	■ In 2012, arranged $650B of loans & commitments for clients ■ $500B of debt and equity raised for clients in 2012
Resources & Footprint	■ 52,000+ employees (11,700+ technology professionals) ■ Conduct business in 100+ markets ■ Local presence in ~60 countries and growing

Scale gives us a natural efficiency advantage over smaller competitors

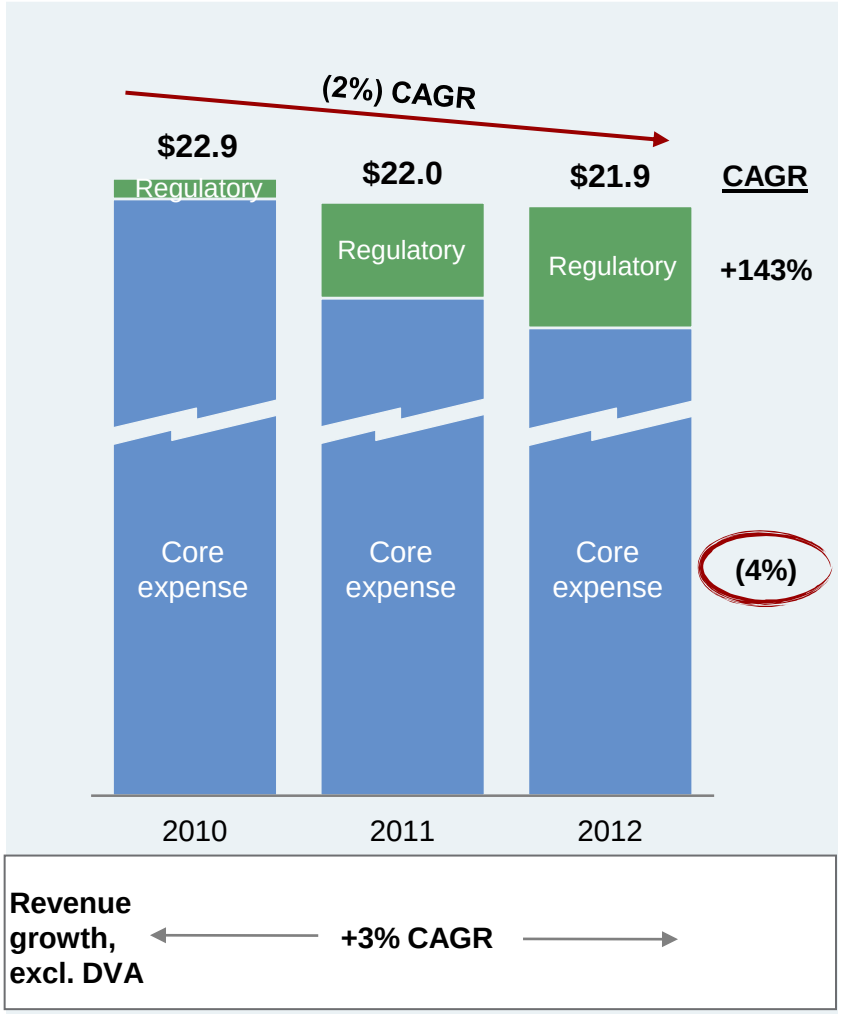
[1] Clearing House Interbank Payments System

2 Our disciplined focus on expenses is ongoing…

Economies of scale

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

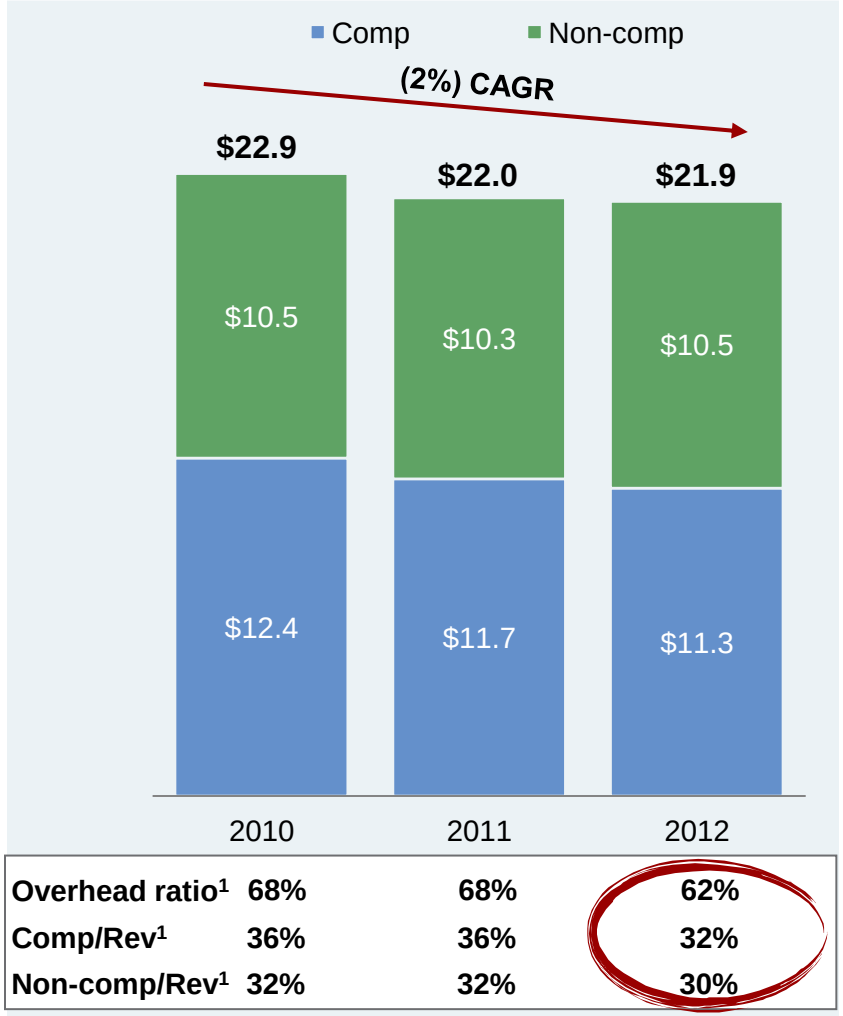
CIB expense trend[1] ($B)



Revenue growth, excl. DVA	←	**+3% CAGR**	→

Note: Core expense scale broken for illustrative purposes
[1] Regulatory assessments include FDIC, UK Bank levy, FSA and other regulatory fees

CIB comp and non-comp expense ($B)



	2010	2011	2012
Overhead ratio[1]	**68%**	**68%**	**62%**
Comp/Rev[1]	**36%**	**36%**	**32%**
Non-comp/Rev[1]	**32%**	**32%**	**30%**

[1] Overhead, comp/revenue and non-comp/revenue ratios exclude DVA impact. Comp/revenue and overhead ratio in 2010 also excludes impact of UK Bank Payroll Tax

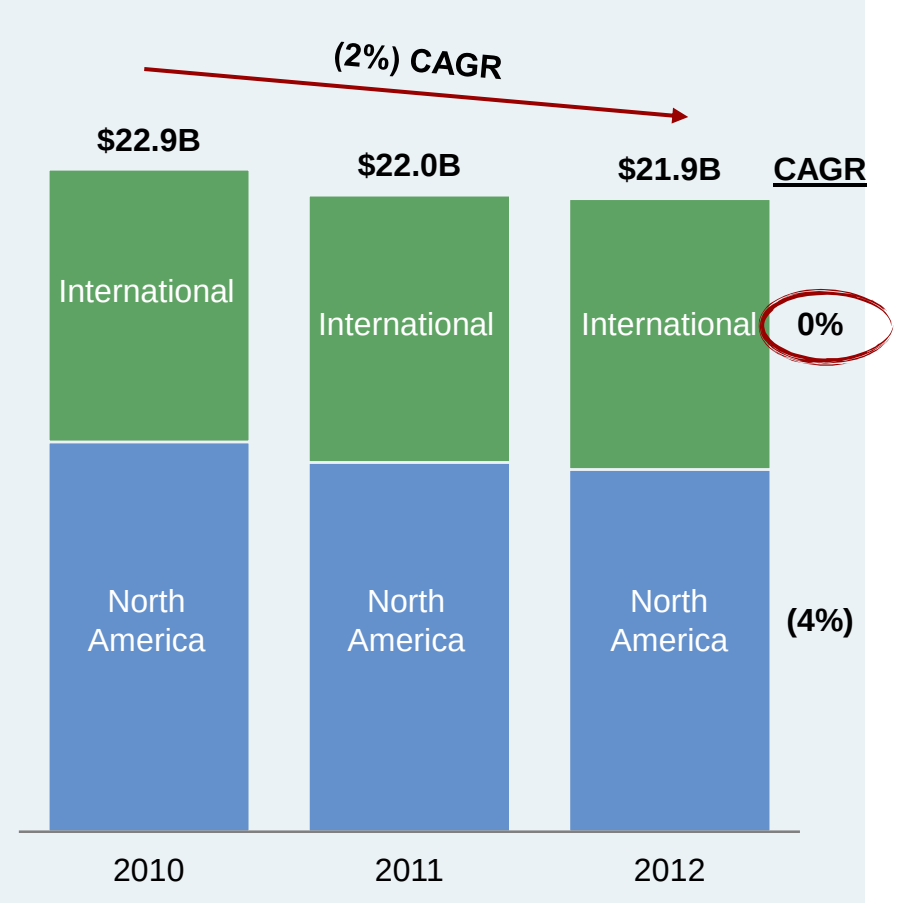
2

…and allows us to continue to commit resources to building a strong franchise

Economies of scale

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

Rebalancing expenses towards international opportunities…



…and other priorities

- Attracting the best talent
- Maintaining pay for performance culture
- Expanding businesses & products globally (e.g., Prime Brokerage, Commodities)
- Building leading electronic trading capabilities
- Funding best-in-class technology
- Investing in robust controls

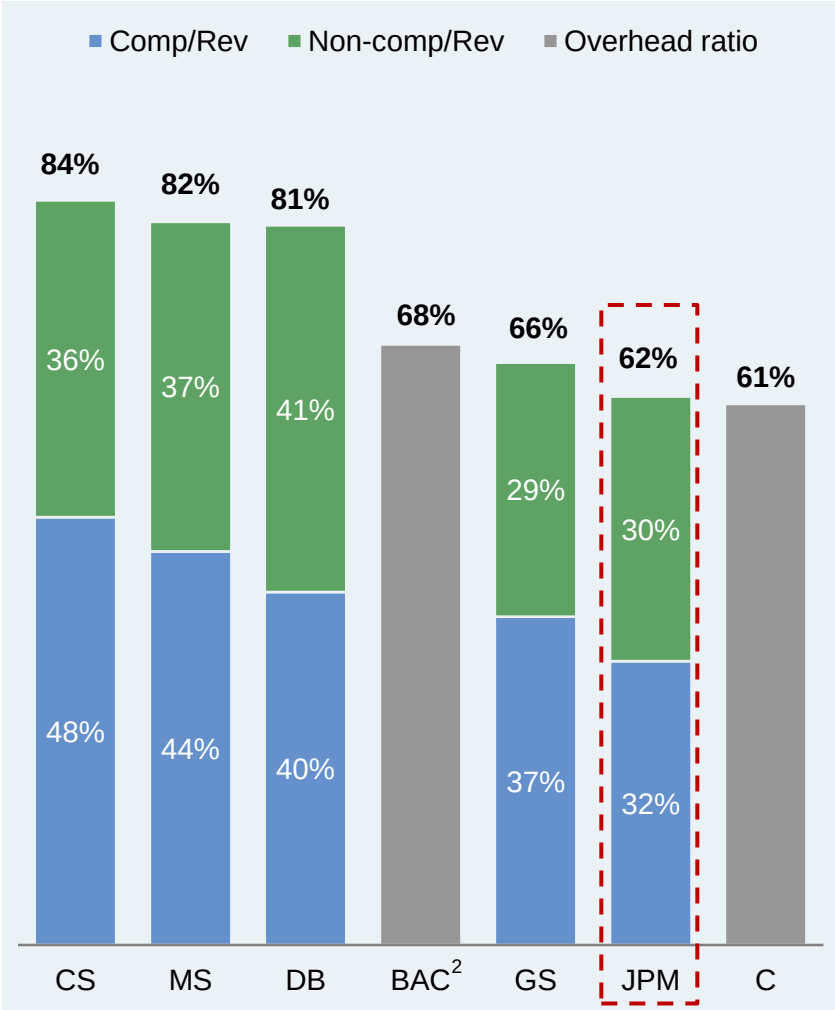
2

We expect to continue to be able to deliver market leading margins

Economies of scale

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

2012 overhead ratio vs. peers[1]



[1] Represents CIB/IB equivalent segments of competitors, excluding the impact of DVA
[2] Global Markets only

Outlook

- Ample ongoing efficiency opportunities
  - Heritage IB and Heritage TSS efforts (SRP, Value for Scale, WSS expense improvements, etc.)
  - New CIB opportunities (e.g., rationalize technology platforms, streamline coverage teams, improve client on-boarding, extract support area synergies, etc.)
- Continued support of new growth initiatives and investments
- We expect to maintain our compensation philosophy and approach
- Maintain our leading overhead ratio

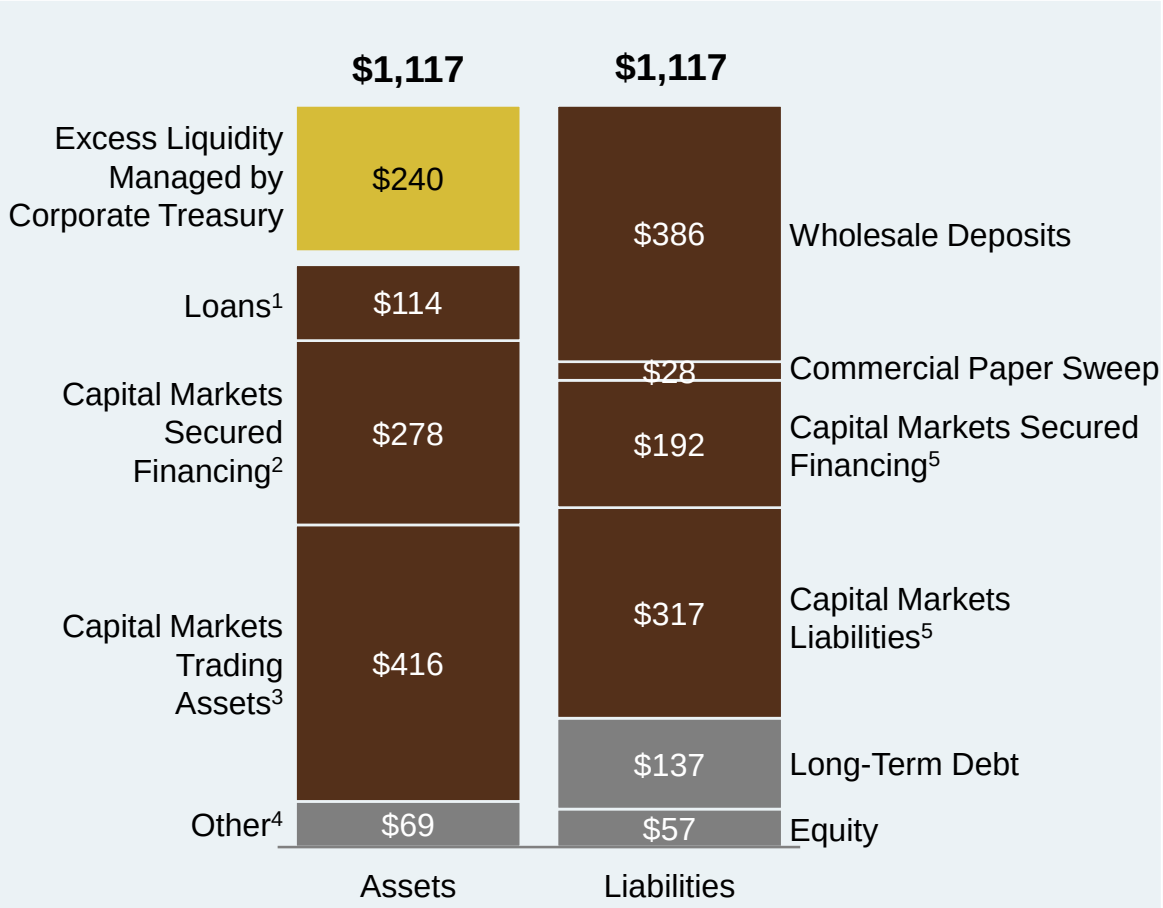
3

We have a strong balance sheet and natural sources of funding from wholesale deposits

Fortress balance sheet

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

4Q12 pro forma balance sheet ($B)



Note: Reflects adjustments to 4Q12 spot balance sheet to reflect CIB capital realignment of $56.5B. Reported 4Q12 CIB allocated capital is $47.5B

[1] Net of allowance for loan losses

[2] Includes resales, securities borrowed and cash and due from banks from CIB

[3] Includes CIB trading assets and derivatives receivable

[4] Includes other assets, other intangible assets, MSR, premises and equipment, accrued interest and accounts receivable and non-CIB trading assets

[5] Includes trading liabilities, Fed funds purchased and securities loaned or sold under repurchase agreements, VIEs, other borrowed funds and other liabilities all in CIB and derivatives payable

Highlights

- Substantial excess wholesale deposits are used to create a strong liquid asset pool (managed by Corporate)
- Allocated equity supports a 9.5% pro forma Basel III Tier 1 Common ratio

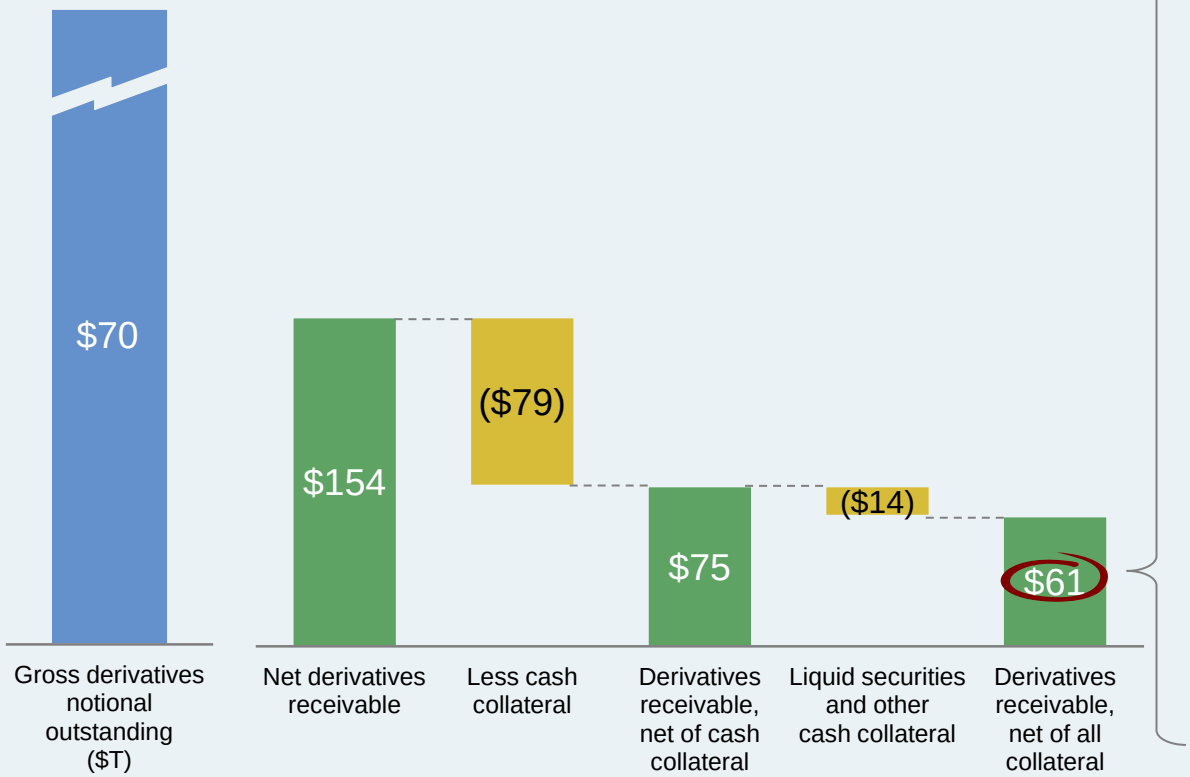
3

Our derivatives exposure is client-driven and high quality

Fortress balance sheet

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

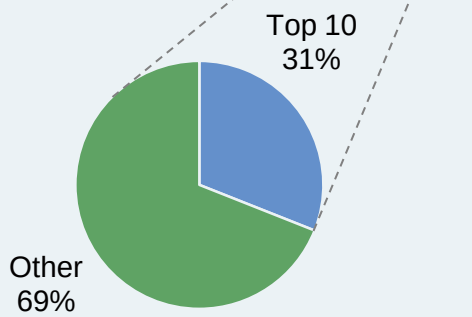
Firmwide derivative receivables, net (4Q12; $B unless otherwise specified)



Counterparty credit exposure

Maturity (years)	4Q12
Less than 1 year	22%
Between 1 and 5 years	41%
Greater than 5 years	37%

Risk Rating	4Q12
Investment grade	82%
Unrated or Non-investment grade	18%



Total: $11B

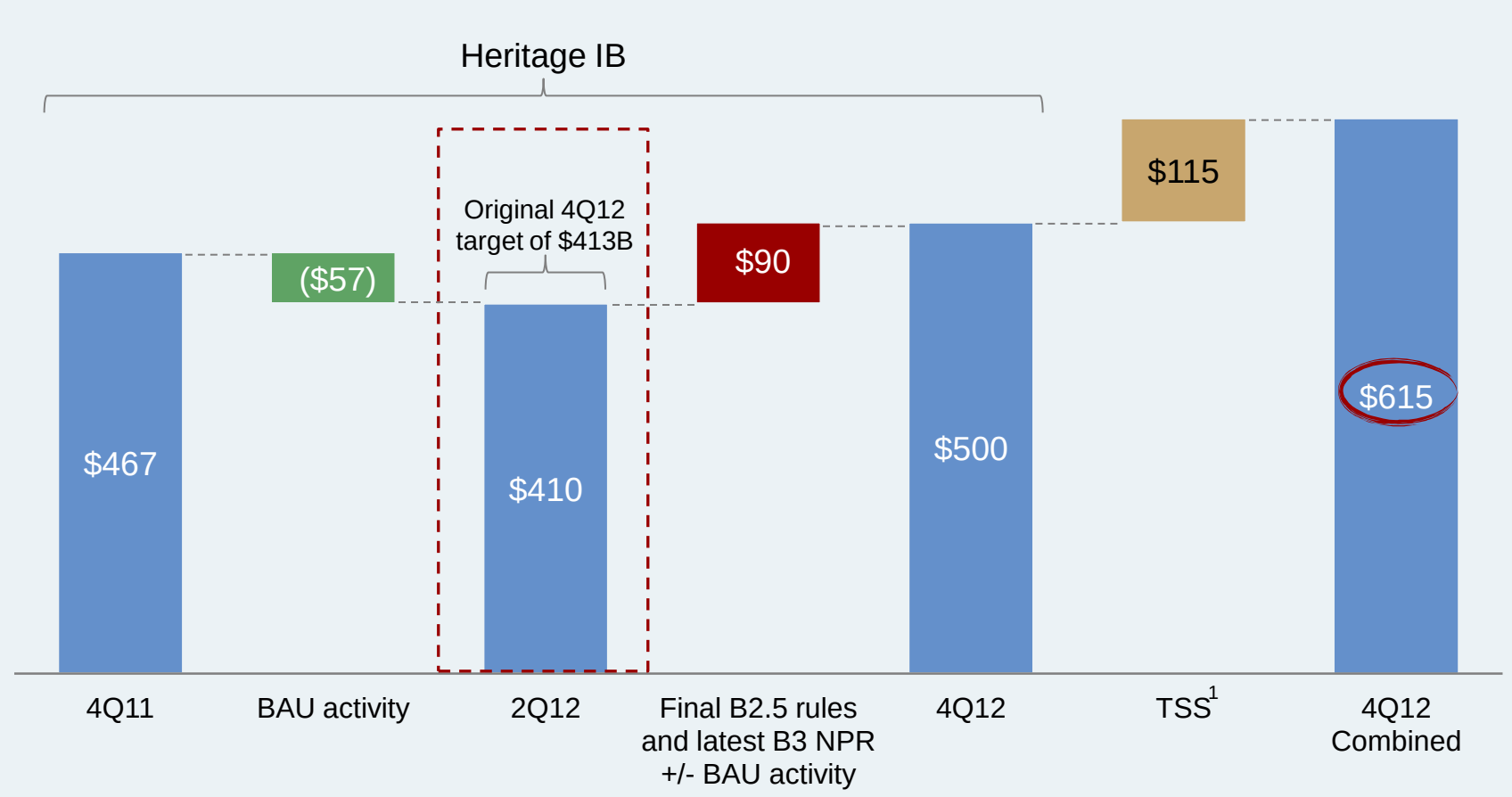
3

We achieved our 2012 RWA targets but new rules have now come into effect

Fortress balance sheet

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

Basel III RWA – 4Q11 to 4Q12 ($B)



[1] Includes impact of Corporate allocations

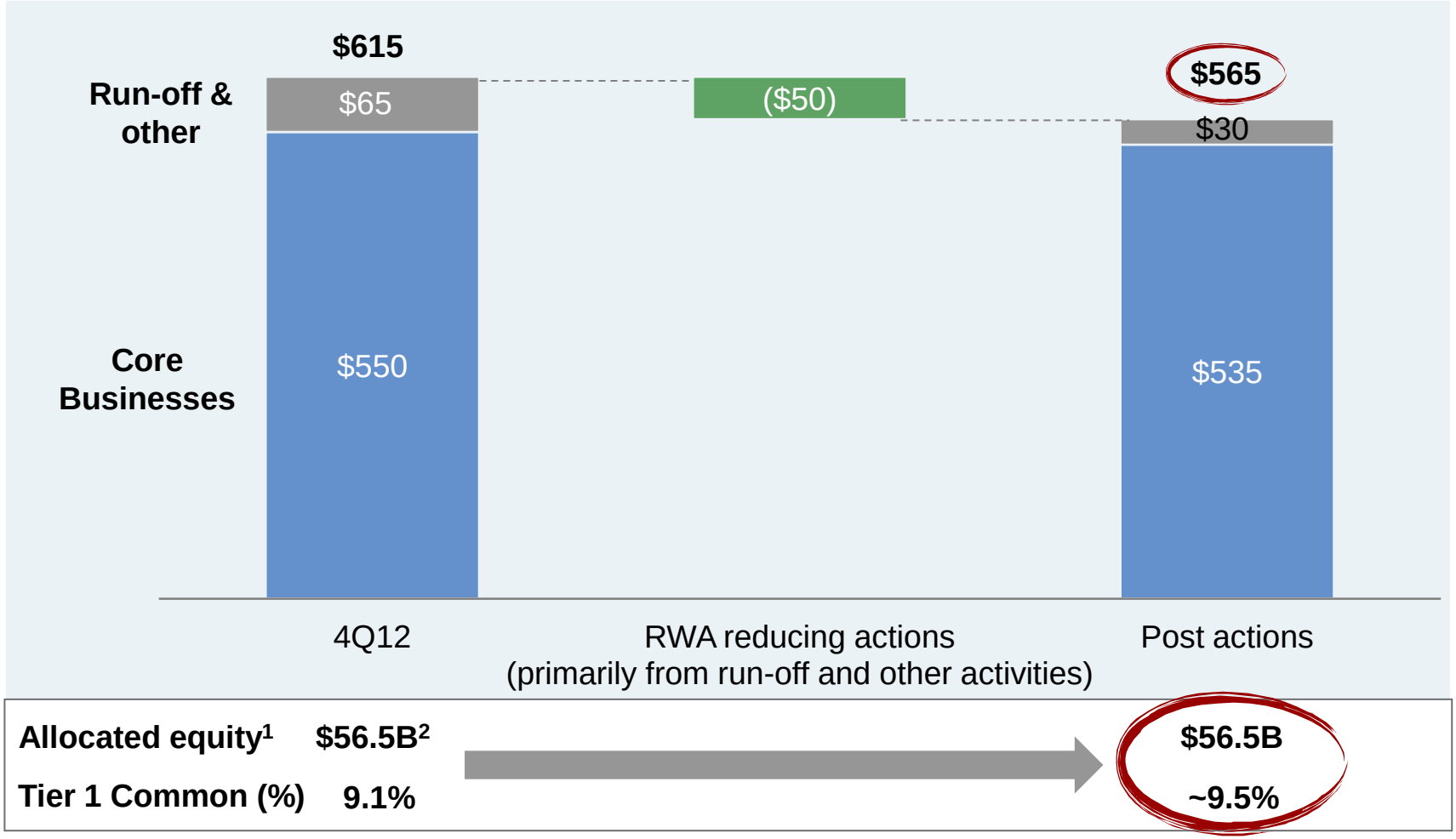
3

We are well-capitalized, targeting ~9.5% Tier 1 common on a stand-alone basis

Fortress balance sheet

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

Basel III RWA glidepath ($B)



[1] Tier 1 common equity equals allocated equity less $1B in goodwill
[2] Reflects attributed common equity effective 1/1/13

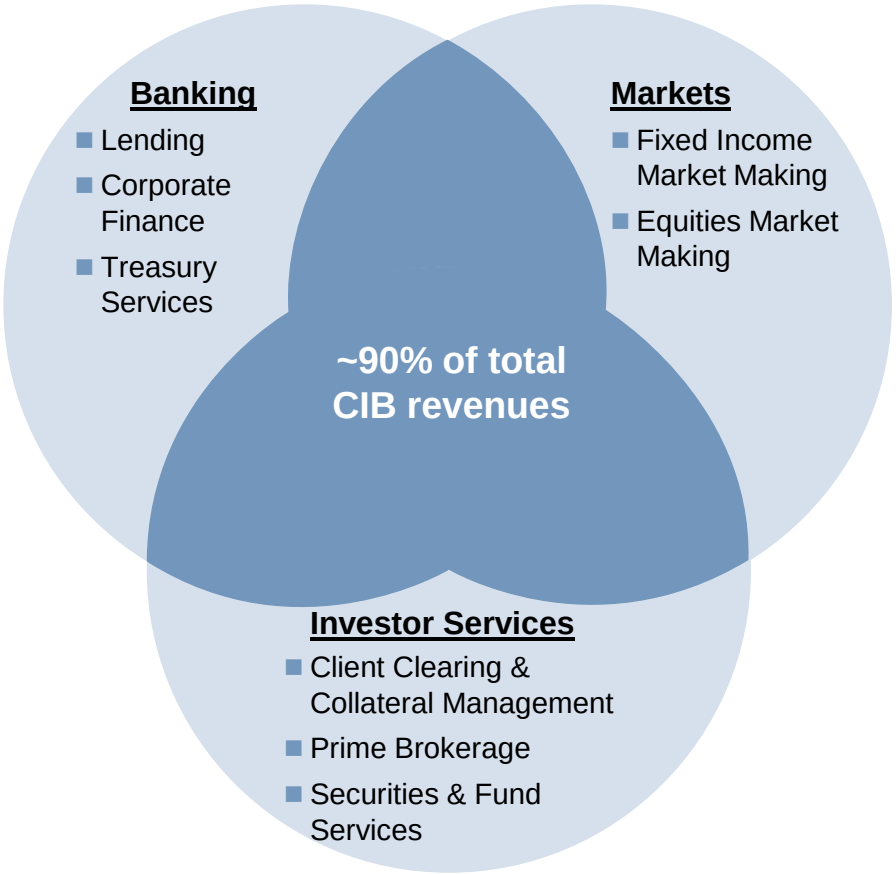
4

Our leadership position in each business helps us deliver better solutions for clients

Completeness of capabilities and global reach

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

Leadership position in each business…



…helps deliver more complete client solutions

- Insights from best-in-class Markets franchise lead to differentiated credit & advisory solutions
- Leading cross-border capital raising and execution capability allow for more efficient financing solutions for clients
- Deep lending and transaction banking relationships with corporate clients lead to superior capital markets advisory
- Best-in-class financing, clearing and custody drive superior execution for Equity and Fixed Income clients
- Physical and financial commodity hedging offering provide superior trade finance solutions for corporate and government clients

4

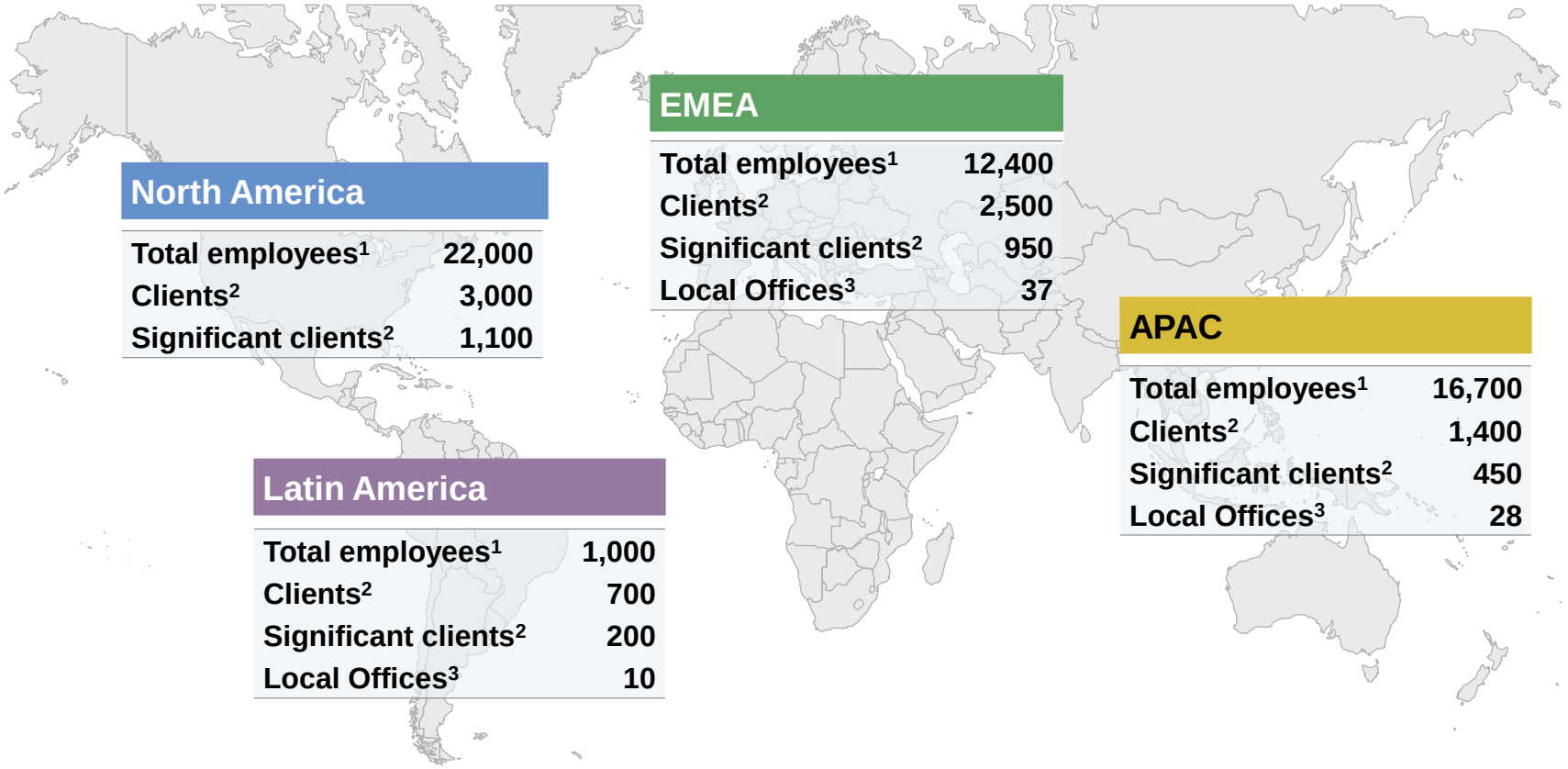
We have a strong global network to support our clients

Completeness of capabilities and global reach

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

How we serve our clients globally

52,000+ professionals serving ~7,600 clients across the globe



North America

Total employees[1]	22,000
Clients[2]	3,000
Significant clients[2]	1,100

EMEA

Total employees[1]	12,400
Clients[2]	2,500
Significant clients[2]	950
Local Offices[3]	37

APAC

Total employees[1]	16,700
Clients[2]	1,400
Significant clients[2]	450
Local Offices[3]	28

Latin America

Total employees[1]	1,000
Clients[2]	700
Significant clients[2]	200
Local Offices[3]	10

Few institutions have the commitment and resources required to build and maintain a global network

[1] Reflects total number of employees located in the region per MD&A view. APAC includes ~8,800 employees in India, including those in global data and service centers
[2] Clients defined as clients with $50K+ in revenue; Significant clients defined as clients with $1mm+ in revenue
[3] Represents cities where CIB has client facing activity per the definition of "client facing" utilized in MD&A disclosure

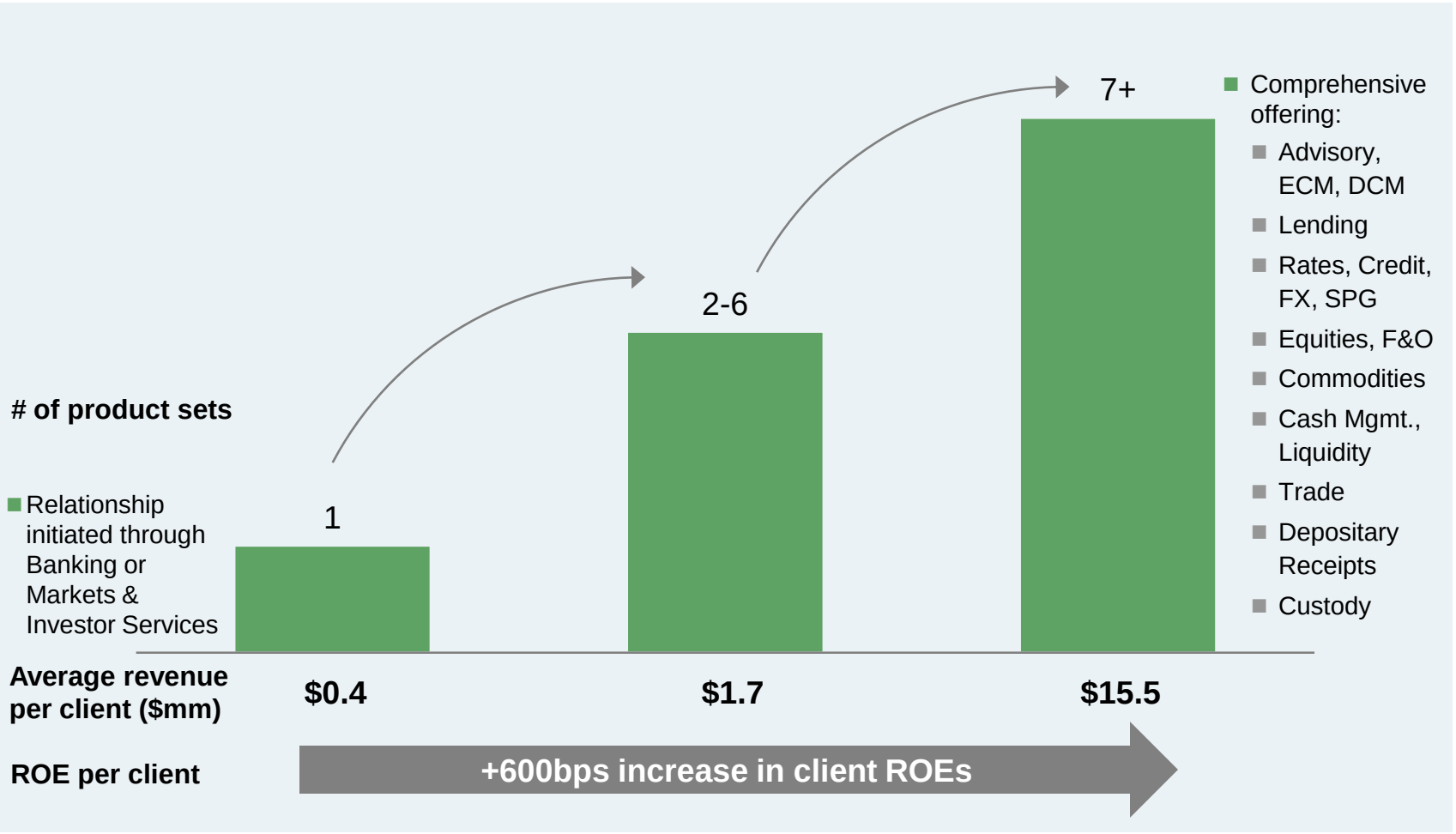
4

This has helped us significantly deepen our relationships with our clients

Completeness of capabilities and global reach

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

Evolution of product set usage among clients



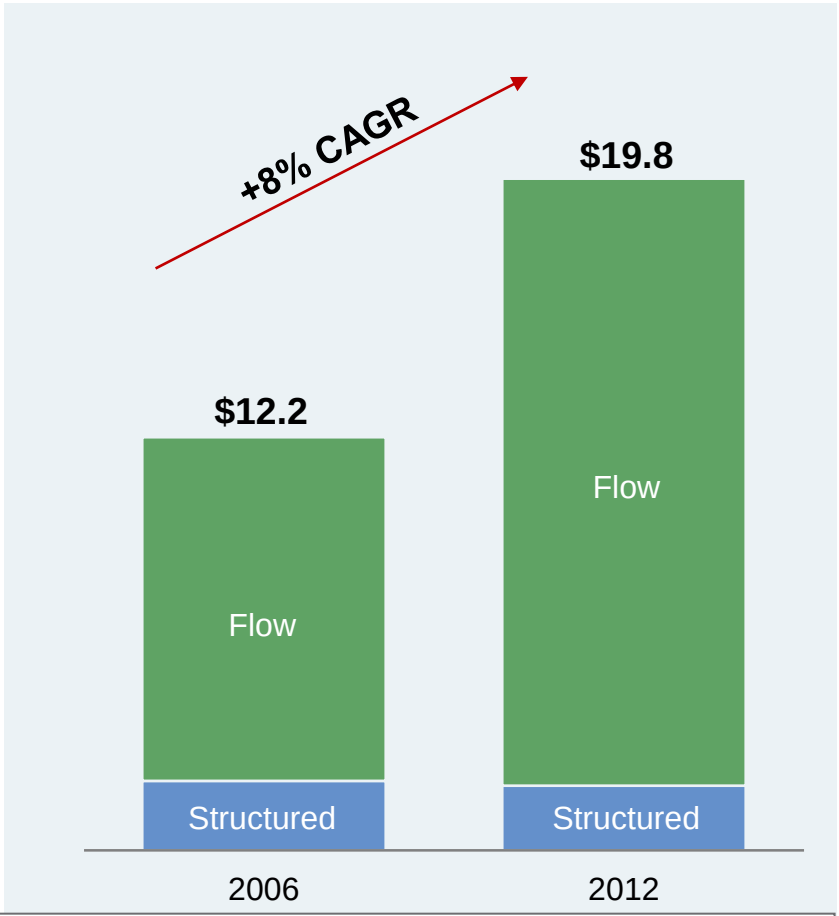
5

Our Markets business is flow-based and diverse…

Stable earnings

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

Markets revenue by flow vs. structured

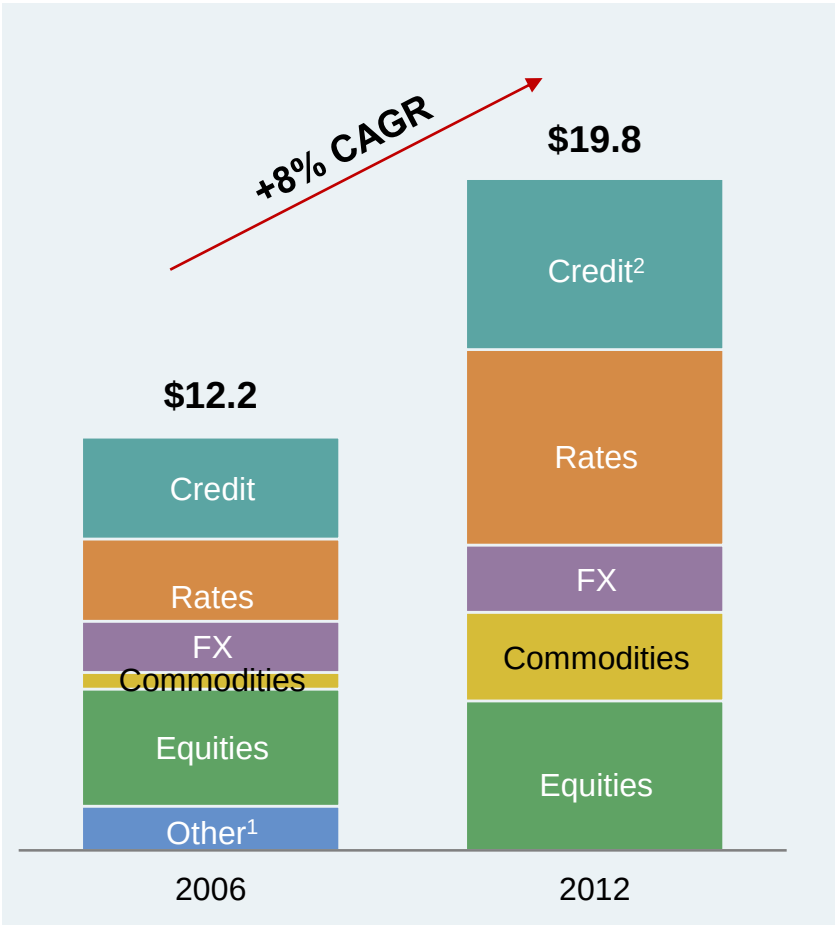


Total Markets revenue wallet[1]	**$217B**	**$169B[2]**
JPM share (%)	**~5%**	**~11%[2]**

[1] Oliver Wyman industry revenue wallet estimates

[2] Represents 2011 industry revenue wallet and JPM Markets revenue wallet share; 2012 wallet results are not available

Markets revenue by product



Note: Rates includes Public Finance, Credit includes Securitized Products and Equities includes Prime Services

[1] "Other" in 2006 primarily includes results from discontinued activities

[2] 2012 "Credit" includes impact from Synthetic Credit Portfolio transferred from CIO to CIB on 7/2/12

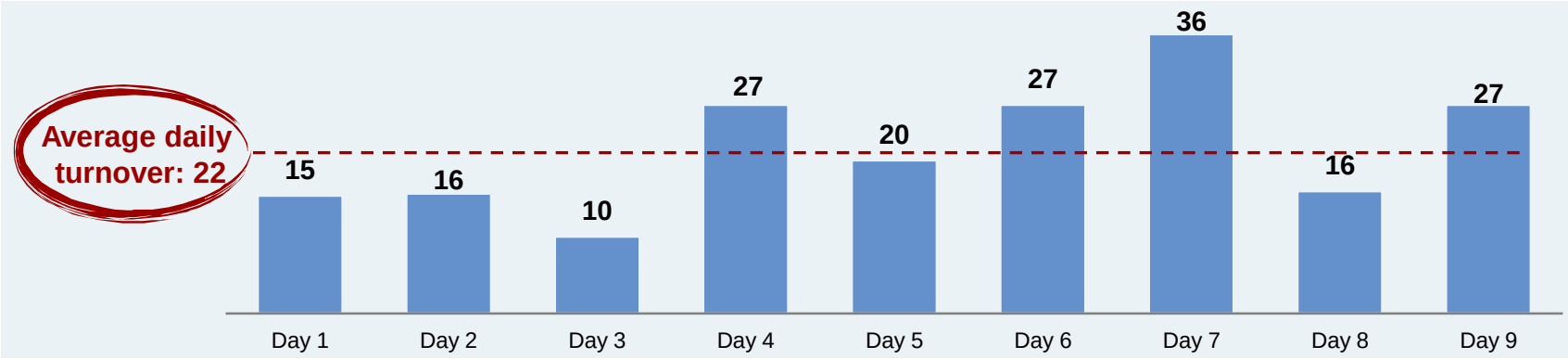
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… and has high daily risk turnover

Stable earnings

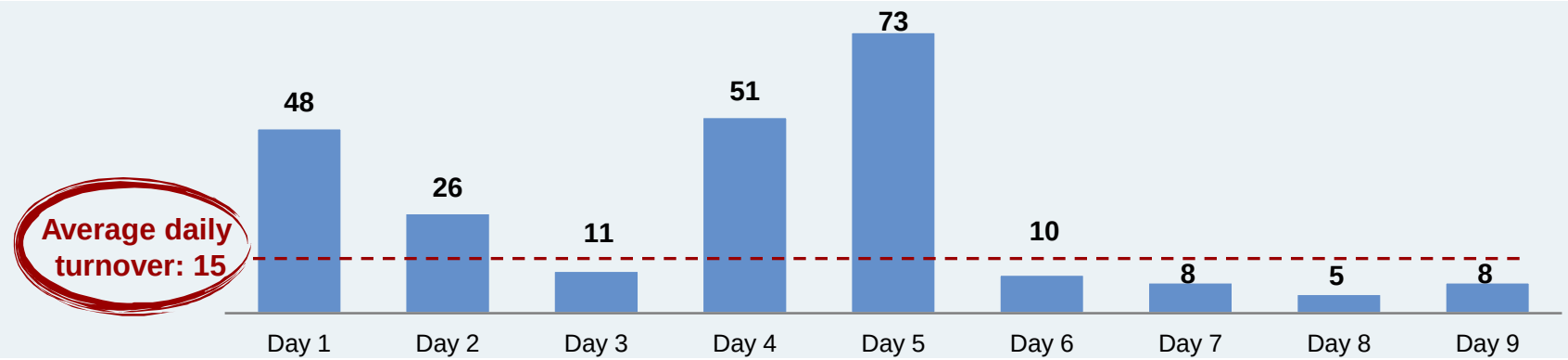
J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

Case study – North America interest rate swaps daily turnover metrics



Note: Turnover defined as daily DV01 risk traded divided by starting DV01. DV01 is the risk position for a desk (amount of money desk makes or loses on a one-basis-point move in the yield curve); actual two-week period

Case study – EMEA Credit Trading daily turnover metrics



Note: Turnover defined as daily CR01 risk traded divided by starting CR01. CR01 is the risk position for a desk (amount of money desk makes or loses on a one-basis-point move in the credit spreads); actual two-week period

Inventory turns over multiple times a day from client transactions

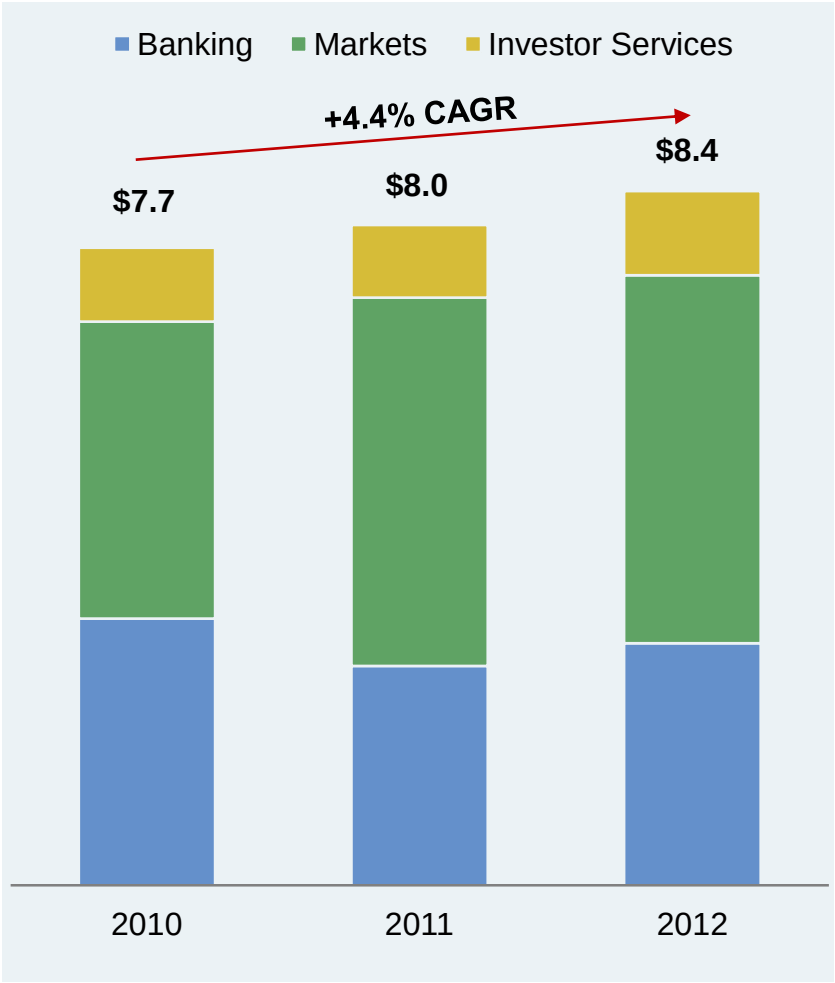
5

This helps us deliver quality earnings…

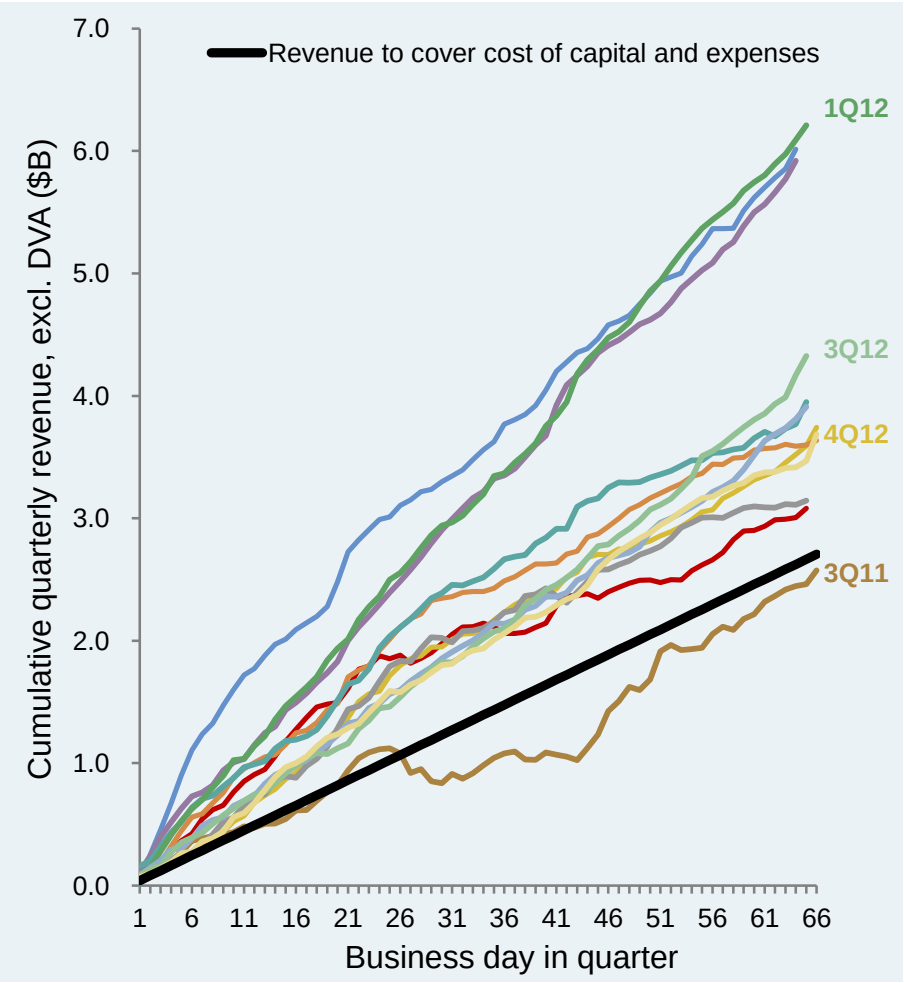
Stable earnings

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

CIB earnings ($B)



Cumulative quarterly Markets revenue by business day (last 12 quarters)



Note: Discontinued businesses and management netted from operating businesses

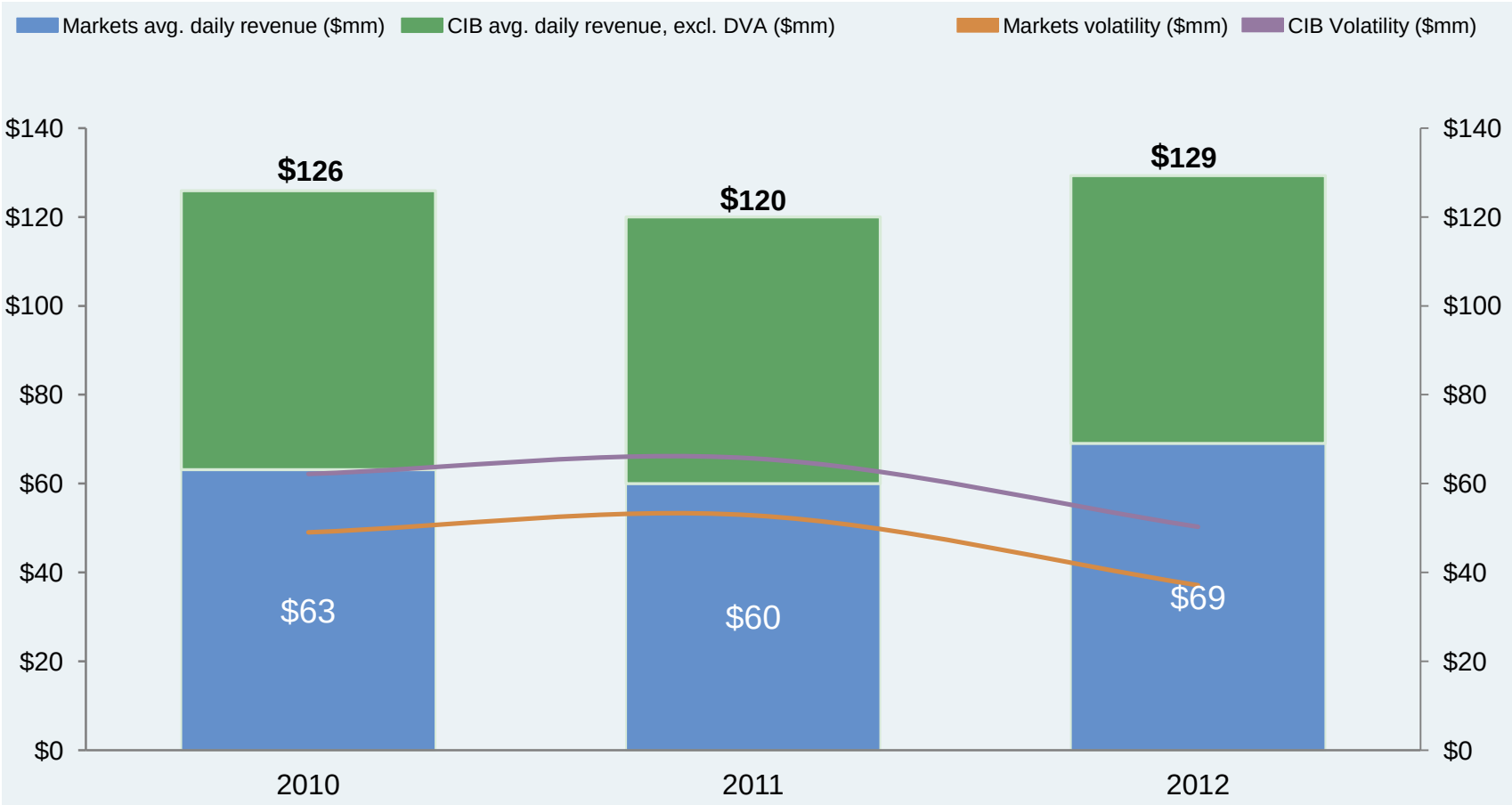
5

…with unique stability and growth

Stable earnings

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

Markets and CIB average daily revenue (excl. DVA) and volatility ($mm)



	2010	2011	2012
# of trading day losses[1]	**8**	**26**	**7 / 4[3]**
CIB VaR ($mm)[2]	**$99**	**$76**	**$84**

Note: Volatility equals standard deviation

[1] Heritage IB businesses trading loss days only

[2] EOP total CIB trading and credit portfolio VaR. 2012 includes VaR related to synthetic credit portfolio ("SCP") transferred from CIO to CIB on 7/2/12

[3] Reflects trading loss days excl. DVA and excl. SCP

6

Each of our businesses will continue to deliver best-in-class shareholder returns

Best-in-class returns

J.P. MORGAN IS POSITIONED TO MAINTAIN LEADERSHIP IN WHOLESALE BANKING

Through-the-cycle ("TTC") RWA, Capital and Returns ($B)

Business	TTC RWA	TTC Capital[1]	2012 pro forma ROE	TTC ROE	Outlook for achieving returns
Banking	$150	$14.4	20%	18% +/-	■ Improved interest rate environment ■ Growth initiatives – international expansion ■ Normalized credit costs ■ High RWA rule certainty
Markets	$320	$31.8	19%	16% +/-	■ Leading businesses, flow & scale model, strong client franchise ■ Regulatory impact ■ RWA rule uncertainty
Investor Services	$65	$6.2	16%	20% +/-	■ Improved interest rate environment ■ Ongoing efficiency improvements ■ Market Structure changes create opportunities (e.g. Collateral Management) ■ High RWA rule certainty
Run-off & Other	$30	$4.1	N/A	N/A	N/A
CIB	$565	$56.5	15%	16% +/-	

[1] Represents allocated equity

Agenda

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J.P. Morgan is positioned to maintain leadership in wholesale banking	2
Macro trends support long-term attractiveness of global wholesale banking	**24**
Management priorities for 2013	32
Wrap-up	44

Macro trends support the long-term attractiveness of global wholesale banking

Macro trends affecting wholesale banking

1. **Regulation** – Global industry regulation will lead to increased operating expenses; scaled players better positioned
2. **Bank deleveraging, primarily in Europe** – Resulting in increased reliance on capital markets and opportunities for capital markets leaders
3. **Financial market deepening** – Continued deepening in financial markets, particularly in emerging markets
4. **Global commerce growth** – Renewed growth in global commerce post-crisis, resulting in growing cross-border opportunities
5. **Changing client demand** – Shift away from structured products; clients focused on less complex solutions

JPM is uniquely positioned to navigate these market forces

- **Client focus**
- **Scale**
- **Global reach**
- **Investment capacity**

1 We are well positioned to adapt to changing regulations

Regulation

	Regulations	Market-wide impact
Market structure[1]	■ Dodd Frank-Title VII ■ EMIR ■ MiFID II	■ Reduced importance of **counterparty strength** ■ Increased importance of **e-trading capabilities** ■ **Blocks and less liquid instruments** harder to trade ■ Constrained **client leverage**
Bank structure	■ Volcker ■ Vickers ■ Liikanen ■ Dodd Frank-Section 716 ■ Recovery/Resolution	■ Potential changes in **legal entity structure** ■ Could hurt **liquidity** ■ Cost to implement changes
Customer protection	■ Dodd Frank-Title VII External Business Conduct ■ MiFID II	■ Additional **compliance effort** ■ Major **client re-documentation** program ■ **Technology investment** required

JPM position

- Depth and breadth of franchise provides sufficient ability to absorb changes
- Our business model is client-driven
- Strong culture of control, compliance and treating customers fairly
- Able to absorb necessary spend
- Aggressively expanding into new business areas

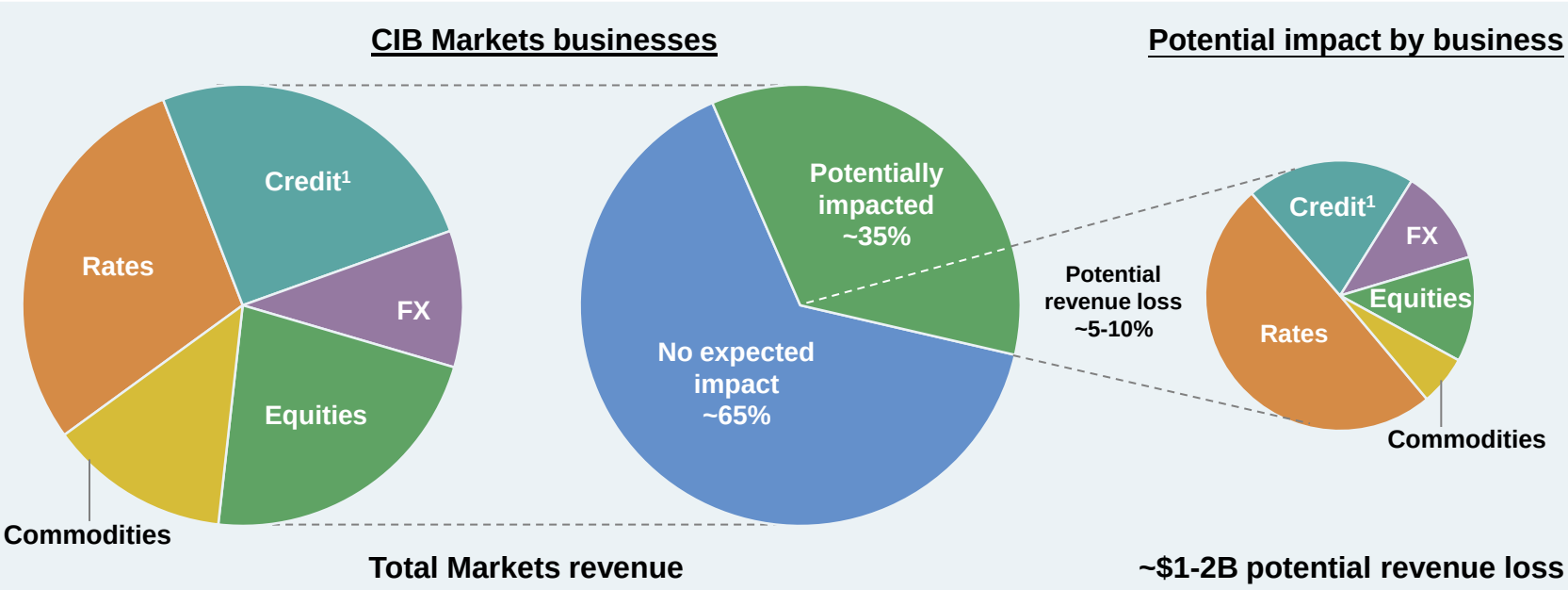
Our scale, franchise strength, large client base, operational excellence and ability to invest in new technology positions us well in changing regulatory environment

[1] Includes central clearing, trading on Swap Execution Facilities or similar platforms, post-trade transparency and additional margin for OTC derivatives

1 Depth and breadth of franchise provides sufficient ability to absorb regulatory impact

Regulation

CIB Markets business: Range of potential revenue impact from market structure regulations



Considerations

- Considers impact of post-trade transparency, mandatory clearing, SEF trading, new margin rules, and extraterritoriality: $1-2B potential revenue impact
- Does not take into consideration new revenue opportunities in OTC Clearing & Collateral Management: $0.3-0.5B potential revenue benefit
- Impact of Volcker not included above – will only see true effect 2-3 years post implementation – our well-established, flow-driven, client-focused franchise is a source of strength

[1] Credit includes Securitized Products

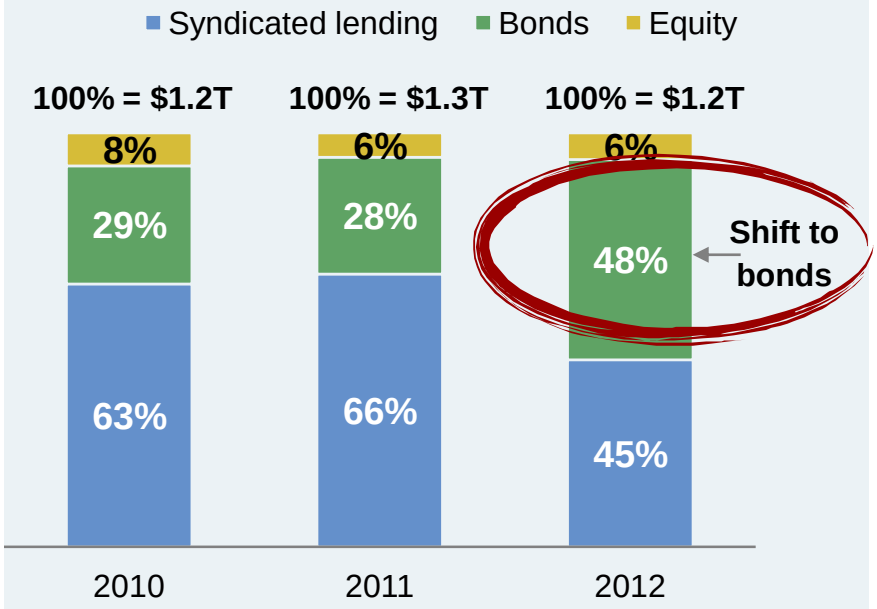
2

Bank deleveraging, especially in Europe, creates new capital markets opportunities

Bank deleveraging

MACRO TRENDS SUPPORT LONG-TERM ATTRACTIVENESS OF GLOBAL WHOLESALE BANKING

Shift from syndicated lending to bonds – Western European example



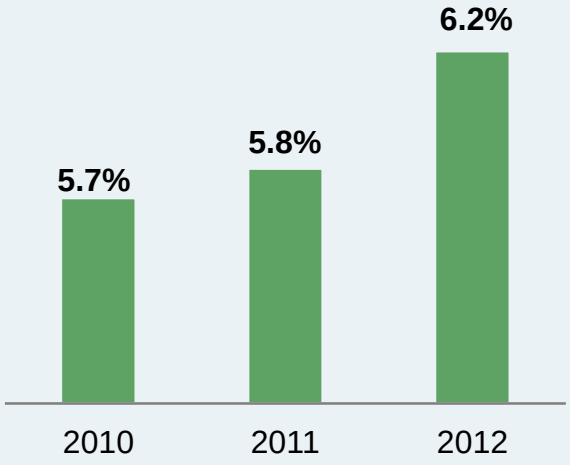
Source: Dealogic; new issuance volumes for Western European headquartered corporates

Driven by bank deleveraging

- **Tighter regulatory capital requirements forcing European & U.S. banks to reduce RWA by ~$1T[1]**
  - Banks scaling back/selling assets
  - Clients will need new sources of funding, primarily in Europe
  - Shift from lending to capital markets

[1] Source: McKinsey

JPM EMEA corporate finance fee share



	2010	2011	2012
JPM Rank	#2	#2	#2
Gap to #1	120bps	130bps	60bps

Source: Dealogic

JPM DCM franchise – fee rankings

	2010	2011	2012
Global	#1	#1	#1
Yankee[1]	#1	#1	#1
EMEA	#5	#4	#3

Source: Dealogic

[1]Yankee bonds defined as U.S. denominated bonds issued in the U.S. by a foreign issuer

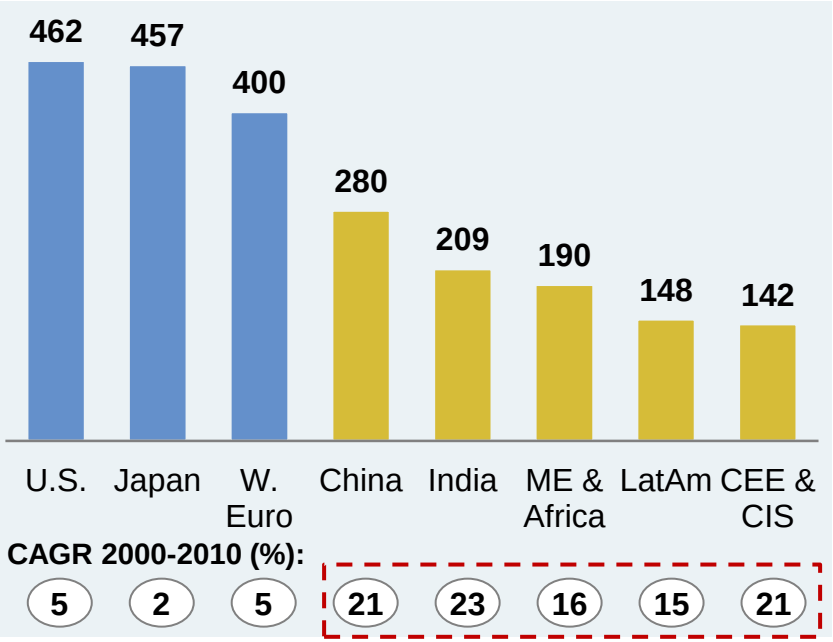
3

Financial market deepening is driving increased capital markets opportunities

Financial market deepening

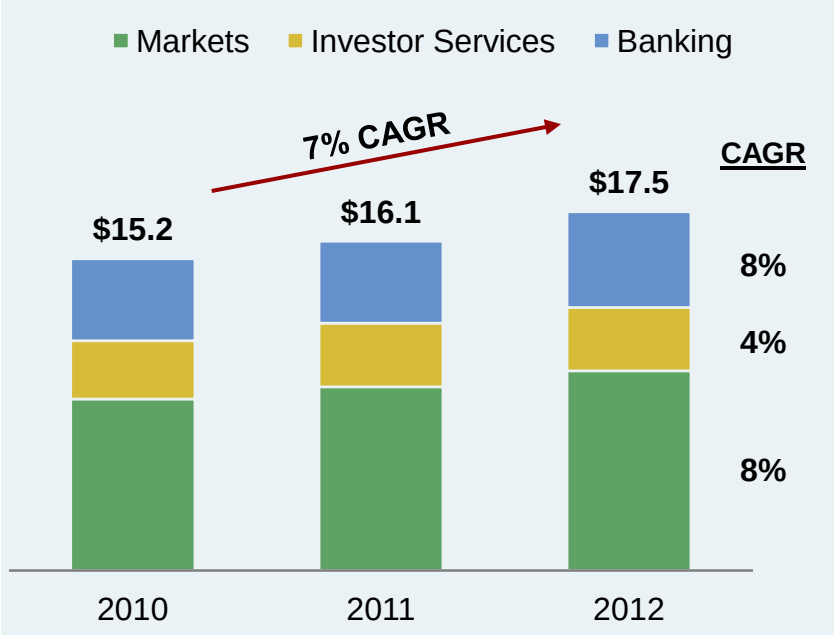
MACRO TRENDS SUPPORT LONG-TERM ATTRACTIVENESS OF GLOBAL WHOLESALE BANKING

Financial market depth as % of GDP



Source: McKinsey Global Institute

JPM international revenue by segment ($B)



Note: Excl. DVA and certain discontinued / run-off businesses

Positive long-term industry outlook

- Credit is expected to double from $109T in 2009 to $213T by 2020, driven by emerging markets (12% CAGR)
- Corporate need for equity will double over the next 10 years, triple in emerging markets

Source: World Economic Forum, McKinsey Global Institute

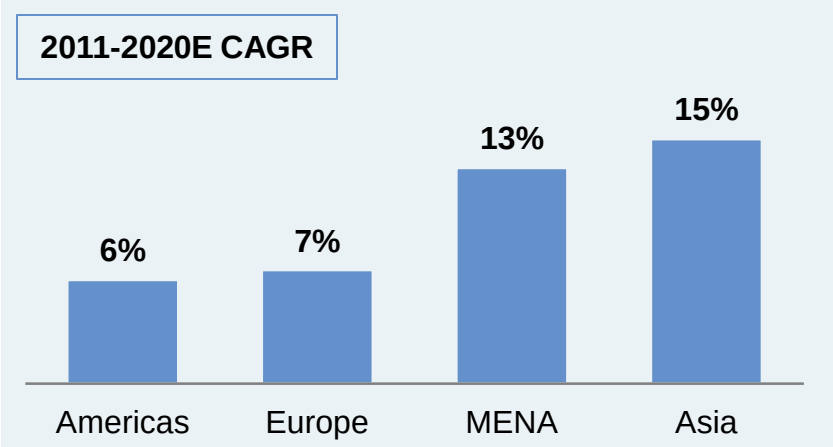
JPM is increasingly international

- Built a strong global capital markets franchise over the past several years
- Strong on-shore trading & execution capabilities in all major markets and continue to expand into new local markets

Significant growth in global commerce and flows will benefit global banks

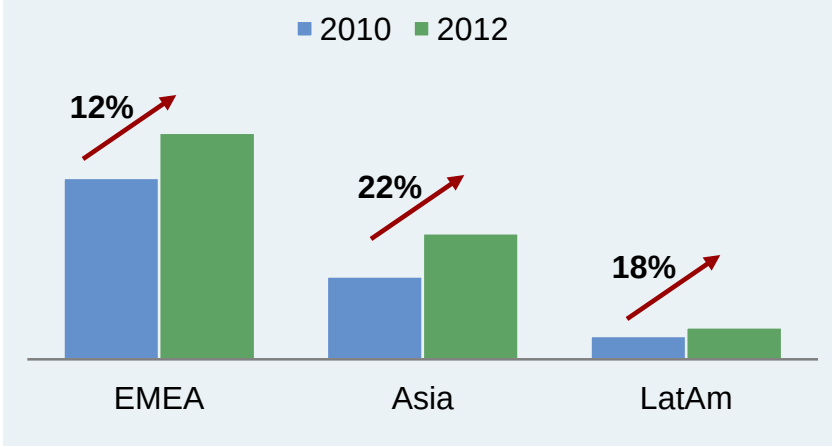
Global commerce growth

Growth in transaction banking revenues

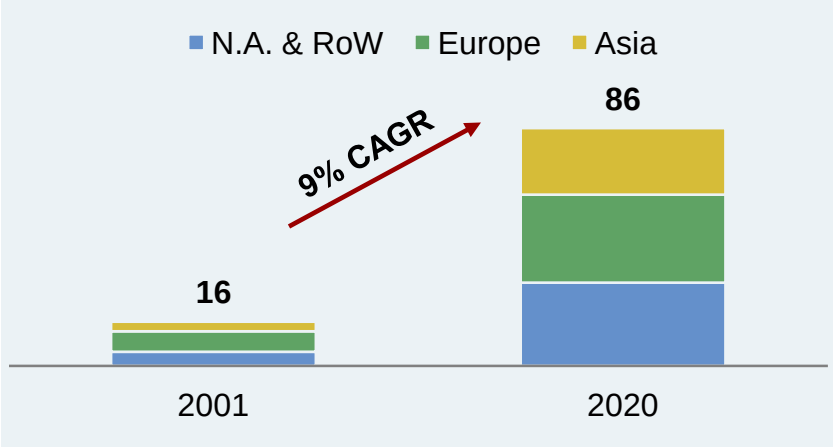


Source: Boston Consulting Group
Note: Represents wholesale

JPM Transaction Services revenue & CAGR

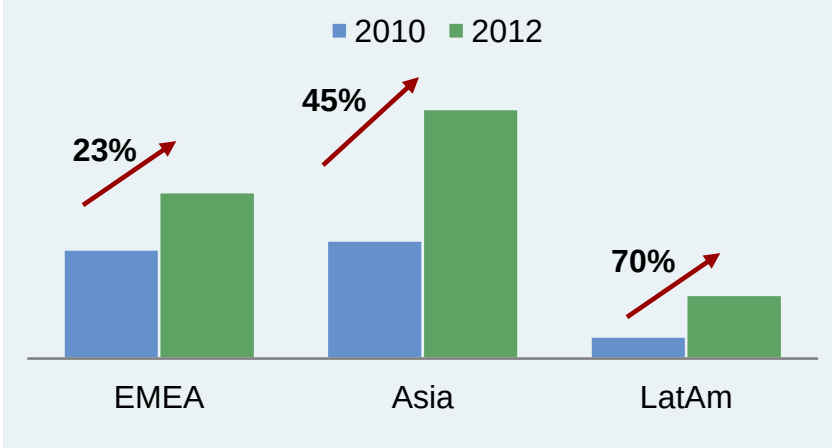


Growth in cross-border trade flows ($T)



Source: Boston Consulting Group

JPM Trade Finance revenue & CAGR



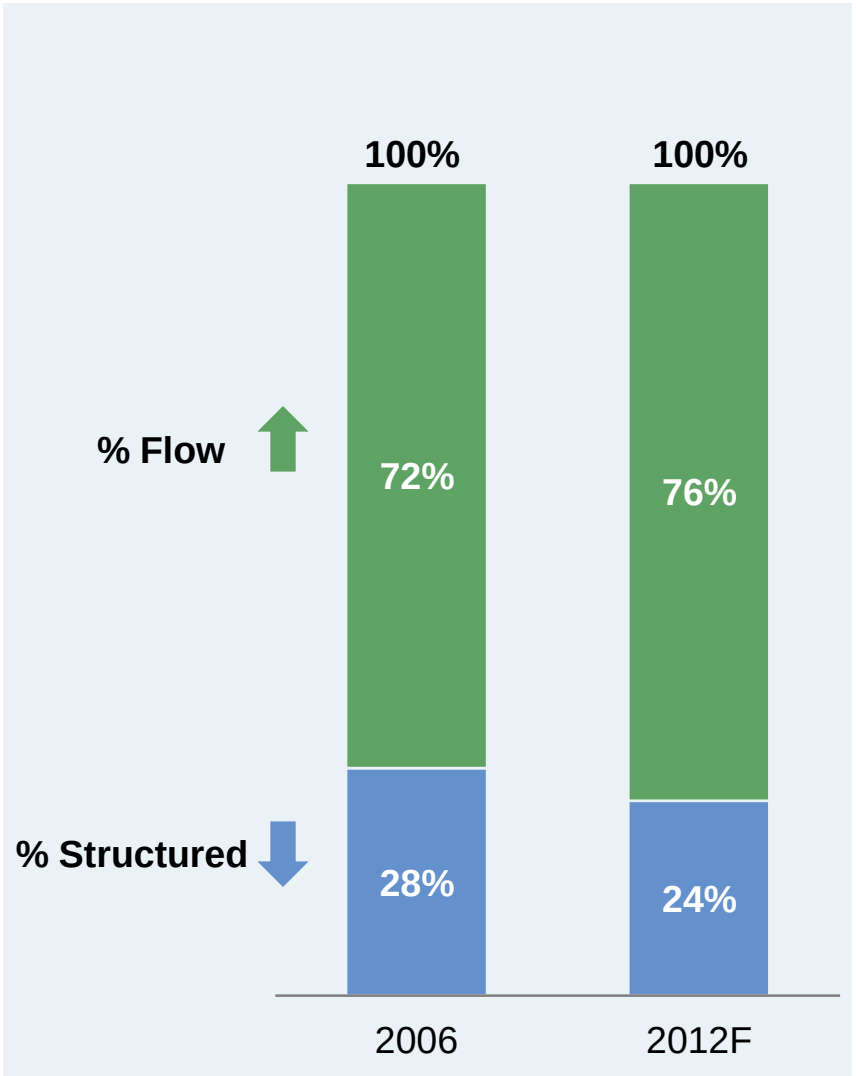
5

Clients have shifted to flow solutions; our model is already flow and scale driven

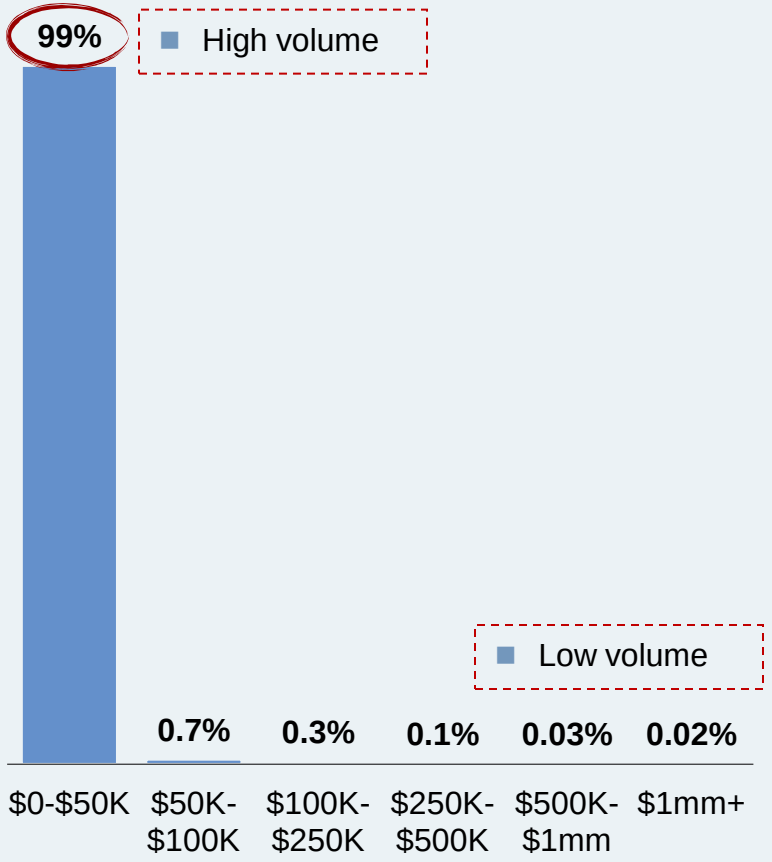
Changing client demand

MACRO TRENDS SUPPORT LONG-TERM ATTRACTIVENESS OF GLOBAL WHOLESALE BANKING

Industry client revenue – flow vs. structured



JPM client revenue per trade



- **~75% of our Markets revenue is from trades below $500K – business model is well-positioned for electronification**

Source: Coalition. Flow includes Cash and Flow Equity Derivatives, F&O, Flow Credit, Flow Rates, U.S. Munis, Repo/STIR, FX Spots, Forwards, & Options. Structured includes Structured EQD, Exotic & Structured Credit, and Exotic & Structured Rates. Excludes Commodities, Prime Services, Securitized Products, Emerging Markets, O&A, Risk/Prop revenues

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Management priorities for 2013

2013 CIB priorities

1. **International expansion** – Deepen Global Corporate Bank and Treasury Services solutions around the world, ensuring full integration of FX and Payments
2. **Prime Brokerage, Clearing & Collateral Management** – Continue Global Prime Brokerage build-out, expand OTC clearing platform, and build cutting-edge collateral management solutions
3. **Electronic trading** – Close the gap with leaders in Equities electronic trading and invest in Fixed Income capabilities to prepare for the future
4. **Technology efficiency & innovation** – Complete Strategic Reengineering Program and execute on Value for Scale efforts while continuing to invest and innovate
5. **Continued business optimization** – Optimize businesses across the CIB to effectively and efficiently service clients

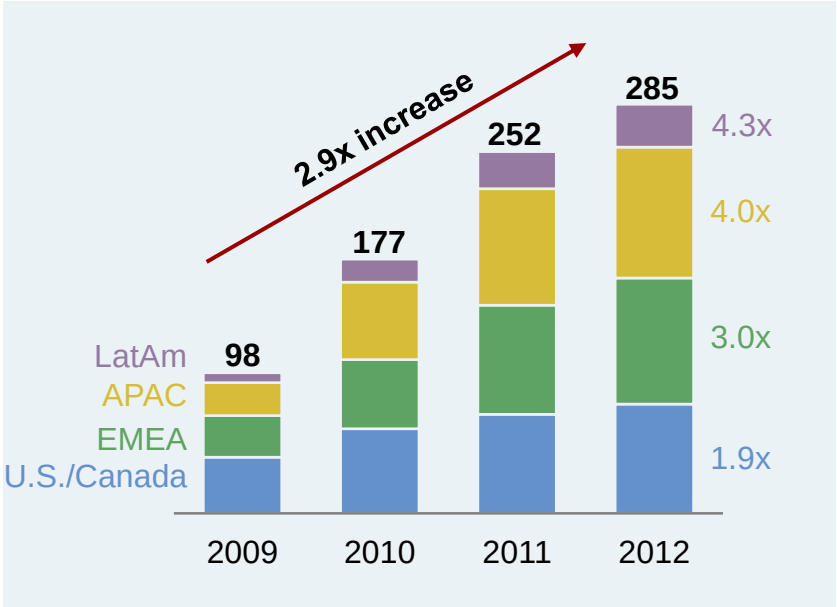
Continued focus on strong risk management and controls, talent management and investment discipline

1

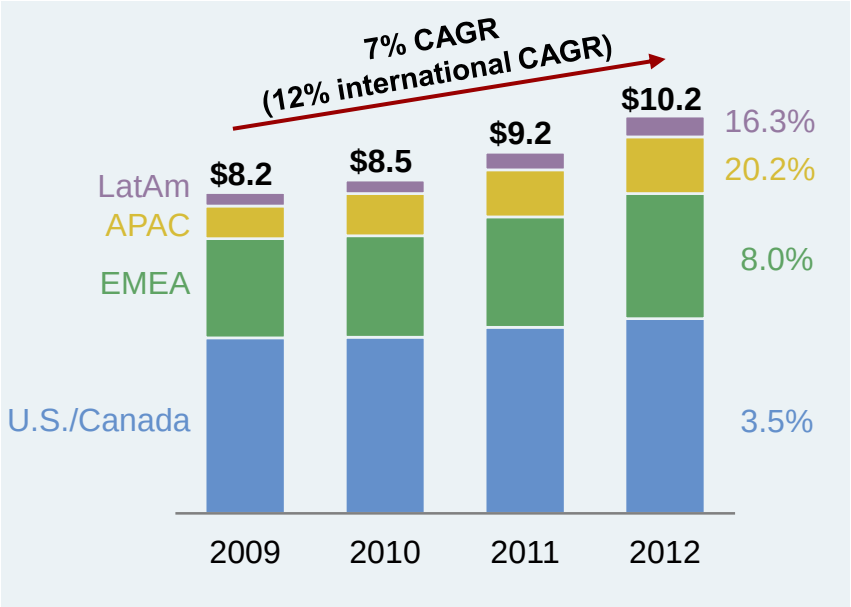
The firm has invested heavily in international coverage and product capabilities

International expansion

Global Corporate Bank banker growth (2009-2012)



Global Corporate Bank associated revenue ($B) (2009-2012)



Priorities

- **Continue to deepen capabilities across key international locations:**
  - ~$800mm spent since 2010 on product investments (including local products and lending capabilities and global platform build)
  - Deep, differentiated capabilities in key emerging markets (India, China, Brazil, Mexico, Saudi Arabia)
  - Completing a competitive offering in ASEAN, Emerging EMEA (Russia, South Africa, UAE, Turkey) and Latin America (Argentina, Chile and Colombia)
  - Building innovative solutions in developed markets – Western Europe (e.g. SEPA payments), Japan, Australia
- **We expect the majority of these investments to be at or close to completion by the end of 2013**

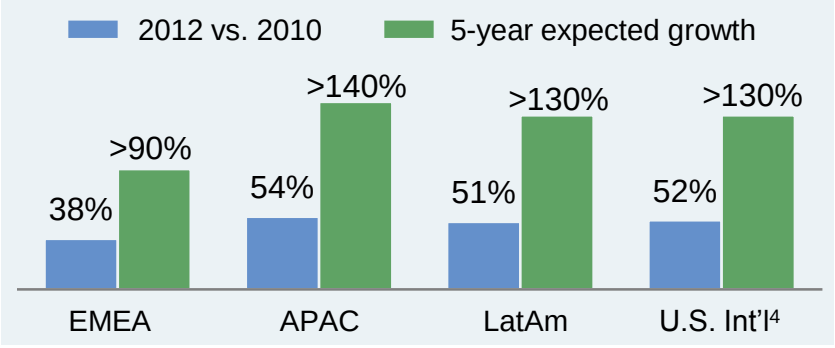
1 We are making significant progress across all products and countries

International expansion

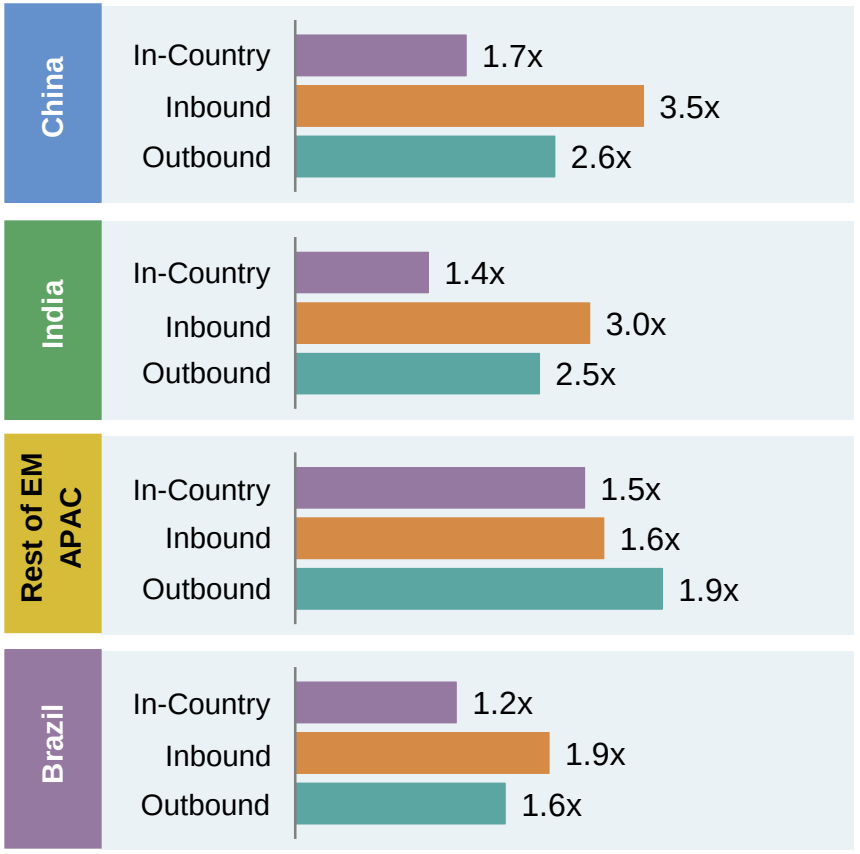
International revenue product growth with Corporate clients



International revenue growth by region[3] with Corporate clients



Revenue growth in key emerging markets – 2012 vs. 2010[2]



Revenue growth ahead of plan; ~30% of pre-tax target achieved

[1] IB products include derivatives (mainly Commodities, FX, and Rates) and DCM (Debt Underwriting and Loan Syndication fees)
[2] Inbound refers to revenue with subsidiaries of foreign multinationals in the country (e.g. Wal-Mart in China). Outbound refers to revenue from subsidiaries of companies headquartered in these countries (e.g. Reliance revenue in Indonesia)
[3] Represents global revenue from companies headquartered in each respective region
[4] U.S. International includes revenue from subsidiaries of U.S. headquartered companies and FX revenue globally

2

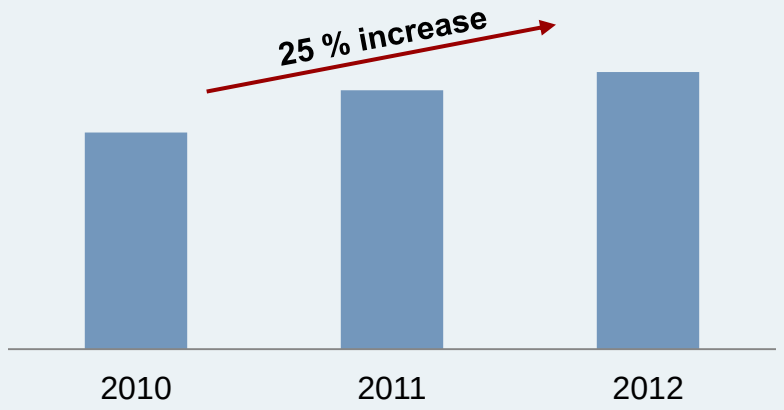
Continued global Prime Brokerage build-out

Prime Brokerage

International Prime Brokerage

- JPM Prime Brokerage has historically been a leading U.S. focused business
- Prime Brokerage clients need round-the-world coverage to finance and execute global trading strategies
- Goal is to be a top-tier player in EMEA and Asia

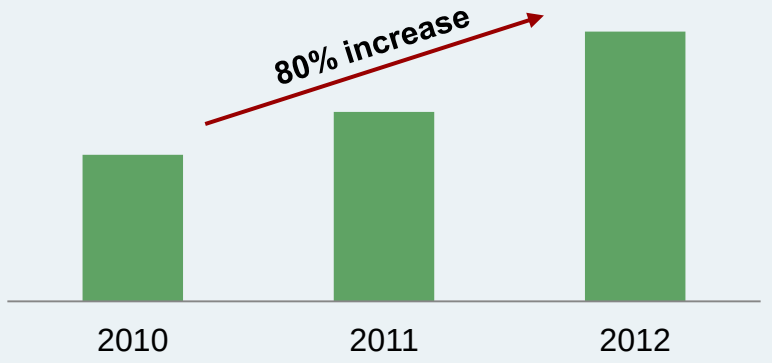
JPM Prime Brokerage balances increase



Status of build-out

- **In EMEA**
  - Executed key hires
  - Launched International Prime Brokerage in June 2011
  - Onboarding of new clients significantly ahead of expectations
- **In Asia**
  - Executed key hires
  - Developed regional strategy
  - Enhancing region-specific capabilities in 2013

JPM Int'l. Prime Brokerage balances increase



- Significant growth from a small starting base
- International revenue expected to approach ~$600mm in steady state (~2015), excluding future benefits to Equities

2

We are launching innovative solutions to help clients navigate the changing collateral management landscape

Collateral Management

Significant new client needs

- New regulations creating additional clearing and collateral requirements, most starting in 2013
- Wide ranging industry estimates on the need for additional collateral: ~$500B-$5T

JPM is uniquely positioned

- **Strong existing product capability:** leveraging existing collateral management products and platform
- **Entrenched client relationships:** deep relationships with all target clients across Custody, Financing, Clearing, and Execution

We will offer end-to-end solutions...

Consolidated collateral view → **Margin management and analytics** → **Collateral optimization** → **Collateral transformation** → **Reporting and service delivery**

...that will deliver significant value to clients

- **Economic**
  - Optimal collateral posting mix
  - Reduce financing costs
  - Enhance yield on excess cash/securities
- **Risk mitigation**
  - Manage counterparty credit exposure
  - Verify margin requirements
  - Support dispute resolution
- **Operational efficiency**
  - Access to robust & scalable infrastructure
  - Transparent, efficient & cost effective collateral posting

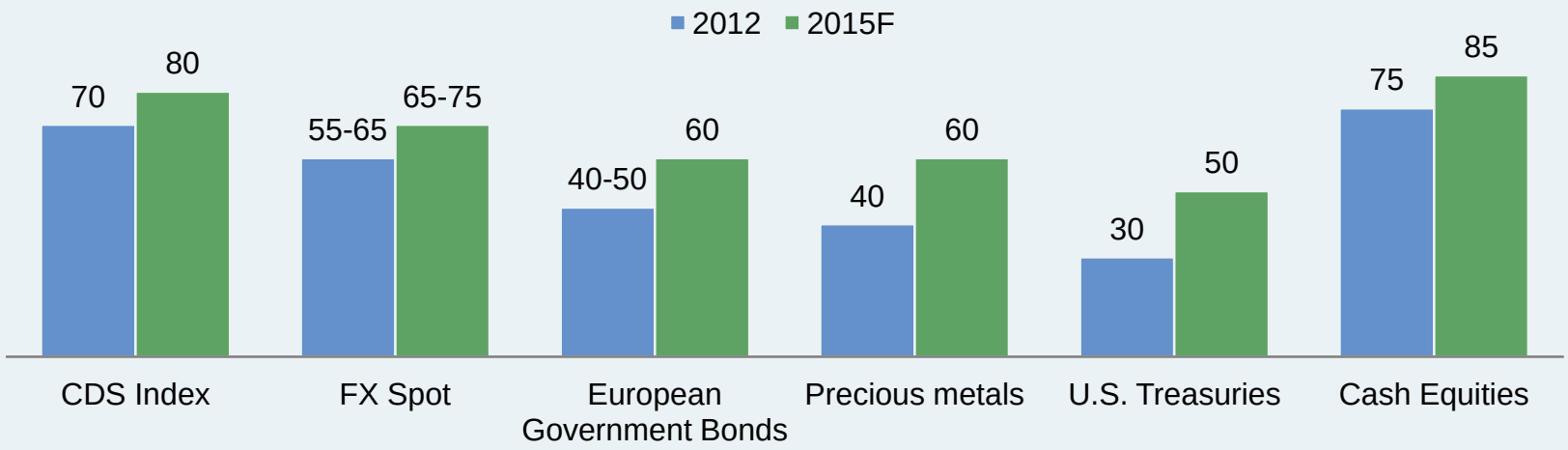
Expected to generate incremental direct and ancillary revenue of ~$300-500mm from OTC Clearing & Collateral Management

3

Growth of electronic trading will continue to drive higher flow volumes at tighter spreads; players with best-in-class electronic capabilities will have a competitive advantage

Electronic trading

Industry Fixed Income & Equities e-trading volumes (%) by asset class



Source: McKinsey, Oliver Wyman, Greyspark

Evolution of Fixed Income e-trading landscape

- **Introduction of Swap Execution Facilities likely to accelerate trading electronification of Interest Rates and Credit default swaps**
  - Extent of electronification will depend on final regulation but likely to result in increased price transparency and automated execution and clearing capabilities
  - Non-standard end-user swaps likely to remain voice-traded for now
- **Emerging crossing networks for bonds are complementary to traditional dealer services**
  - Expect dealers will continue to provide inventory and liquidity and bring new issuance into the markets

3

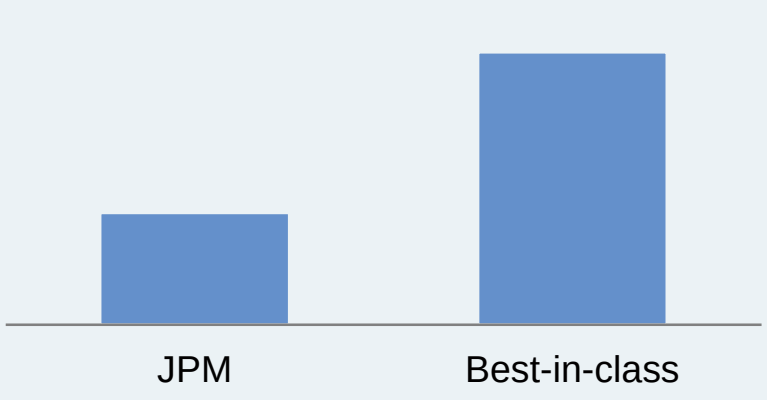
We are aggressively building best-in-class electronic trading capabilities

Electronic trading

Continue to close the gap in Equities

- Algorithms and trading infrastructure now on par with market leaders
- Driving full integration of electronic and voice-based sales and trading
- Full integration across cash, derivatives, and prime brokerage offerings

Equities low touch revenue (2012)



Source: Coalition, JPM internal estimates

Preparing for the future in Fixed Income

- Building flexible platform that allows us to be ready to trade on any new format (e.g., RFQ, CLOB)
- Launched J.P. Morgan Markets – aggregating all research, execution, analytics and post-trade services across Fixed Income
- Scale FX, Rates, and Commodities e-trading capabilities to reach additional products and clients
- Continuing to invest in cross-asset infrastructure and venue connectivity

Potential to add ~$300-400mm in revenue as we build a leadership position; significant investments to ensure robust controls across the board

4

Multi-year technology investments are beginning to pay off – will deliver savings of $650mm+ in steady-state

Technology efficiency & innovation

Investments to drive efficiency…

Strategic Reengineering Program (SRP)

- 80% complete; on track for 2013 completion
- Cumulative spend of ~$700mm out of 4-year plan of ~$775mm; cumulative savings of $400mm+
- Annual savings achieved to date ~$215mm vs. $300mm+ (target at the end of 2013)
- 40 major applications decommissioned

Value for Scale

- Combining IB and TSS Technology & Operations components with focus on rationalizing:
  - Processing & Operating units – e.g., securities, derivatives, client on-boarding, reference data
  - International branches
- ~$150mm estimated spend to be incurred over-time
- $365mm+ in incremental annual savings by 2015

…and enhanced client experience

Investor clients

- Launched **J.P. Morgan Markets (JPMM)**, new web and mobile platform, as single client facing platform
  - 50,000 external users
  - 37 systems consolidated
- Merging Securities Services Portal with JPMM
- Integrated approach to client on-boarding process and tools, increasing transparency, quality and control and reducing duplication

Corporate clients

- Launched Cash Management portal – **J.P. Morgan ACCESS Next Generation**; will service 25,000 global clients and 180,000 users
- Launching **Global Payments Hub** - will provide leading payments capabilities globally

Continuing to differentiate through innovation – Athena, Mobile research and trading applications, Big Data, etc.

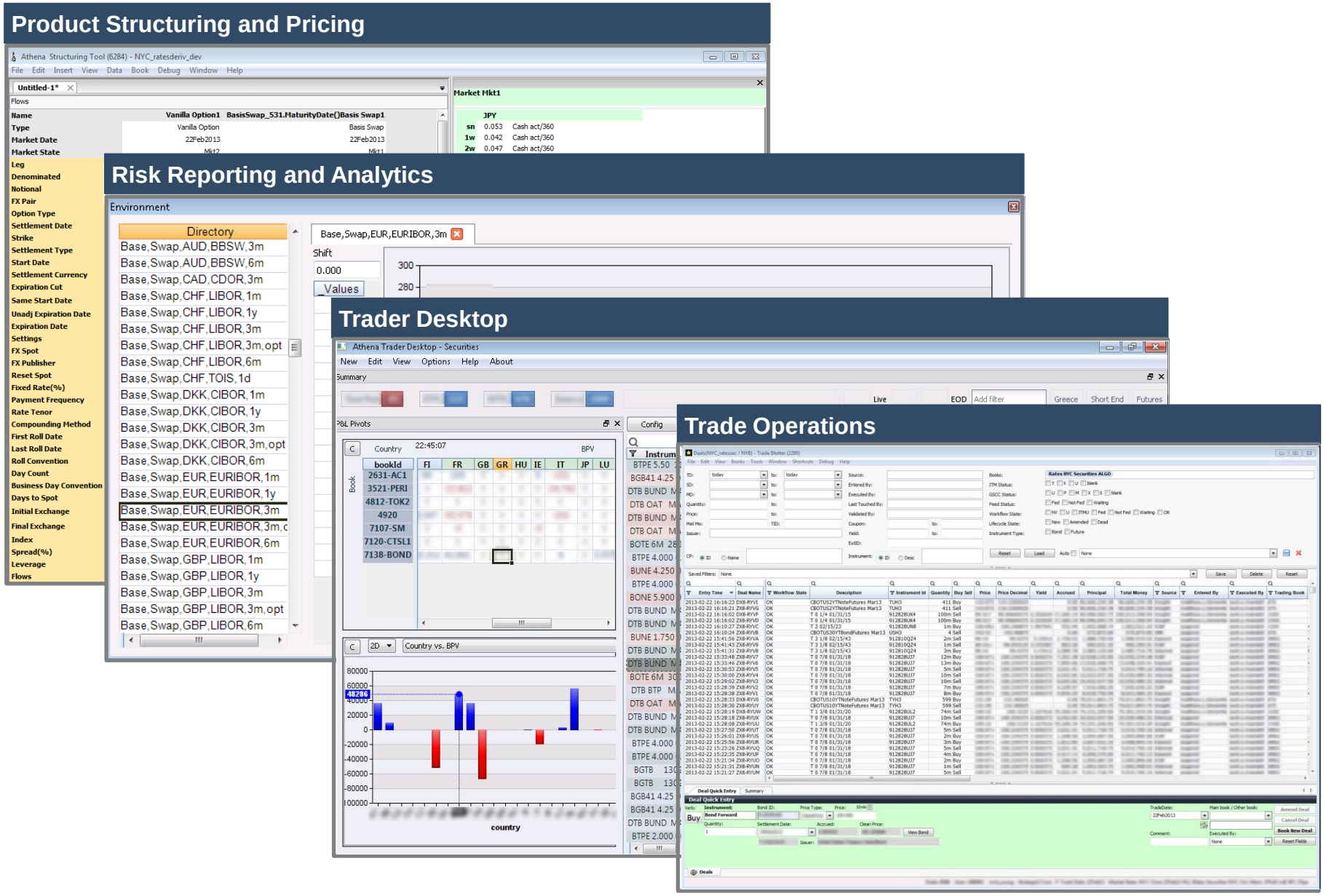
J.P. Morgan Markets: A single global platform offering clients access to advanced tools across the trade lifecycle

Technology efficiency & innovation



Athena is a next generation pricing, risk management, analysis and trade management platform that spans many asset classes

Technology efficiency & innovation



5 Optimize businesses across CIB to effectively & efficiently serve clients

Continued business optimization (select examples)

Equities

- ***Investing to be a top-tier Equities business***
  - Strategic foundation in place – diverse client base, talent, integrated platform
  - Integrating cash & derivatives sales and trading resources, optimizing equity research, driving productivity
  - Accelerating electronification of our execution services business model to drive incremental client commission revenue and internal efficiencies

Commodities

- ***Optimizing business for new regulation and improving efficiency***
  - Top 3 player with full product capabilities across Financial and Physical
  - Strong and diverse client driven franchise; we have 2,000+ clients
  - Significant efficiencies expected as old technology platforms and related infrastructure are retired

Client coverage

- ***Aligning client coverage models to create better client experience***
  - Integrated Banking Coverage teams regionally – bringing together best-in-class solutions for clients
  - Established regional Markets & Investor Service sales forces – delivering full suite of products across and within all regions

Continual identification & execution of new areas for optimization and integration

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In summary…

- Leadership position across Banking, Markets and Investor Services, with room for growth
- Strong client franchise
- Scale & completeness of offerings
- Financial strength
- Capacity to continue to invest in future growth
- Strong track record of performance through challenging markets
- Regulatory headwinds, but long-term outlook for wholesale banking is strong

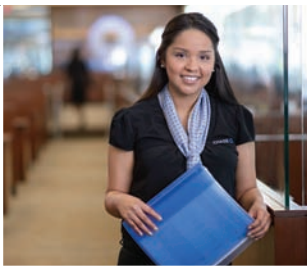
Significant earnings & return potential with a 16% +/- through-the-cycle ROE

JPMorgan Chase & Co.

&

ANNUAL
REPORT
2013



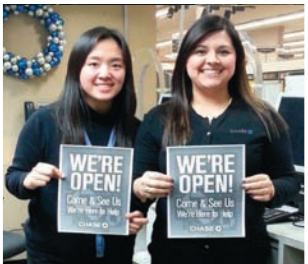















Financial Highlights

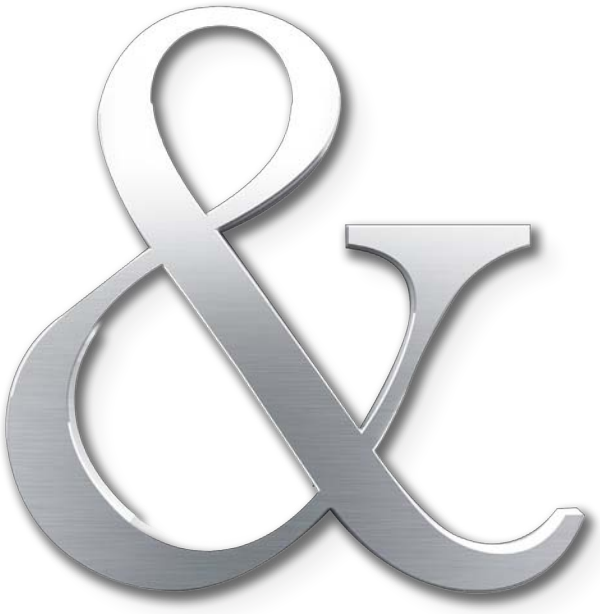
As of or for the year ended December 31, (in millions, except per share, ratio data and headcount)	2013	2012
Reported basis[a]		
Total net revenue	**$ 96,606**	$ 97,031
Total noninterest expense	**70,467**	64,729
Pre-provision profit	**26,139**	32,302
Provision for credit losses	**225**	3,385
Net income	**$ 17,923**	$ 21,284
Per common share data		
Net income per share:		
Basic	**$ 4.39**	$ 5.22
Diluted	**4.35**	5.20
Cash dividends declared	**1.44**	1.20
Book value	**53.25**	51.27
Tangible book value[b]	**40.81**	38.75
Selected ratios		
Return on common equity	**9%**	11%
Return on tangible common equity[b]	**11**	15
Tier 1 capital ratio	**11.9**	12.6
Total capital ratio	**14.4**	15.3
Tier 1 common capital ratio[b]	**10.7**	11.0
Selected balance sheet data (period-end)		
Loans	**$ 738,418**	$ 733,796
Total assets	**2,415,689**	2,359,141
Deposits	**1,287,765**	1,193,593
Total stockholders' equity	**211,178**	204,069
Headcount	**251,196**	258,753

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP), except where otherwise noted.
(b) Non-GAAP financial measure. For further discussion, see "Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures" and "Regulatory capital" in this Annual Report.

JPMorgan Chase & Co. (NYSE symbol: JPM) is a leading global financial services firm and one of the largest banking institutions in the United States of America (U.S.), with operations worldwide; the firm has $2.4 trillion in assets and $211.2 billion in stockholders' equity. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, asset management and private equity. A component of the Dow Jones Industrial Average, JPMorgan Chase & Co. serves millions of consumers in the U.S. and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands.

Information about J.P. Morgan's capabilities can be found at jpmorgan.com and about Chase's capabilities at chase.com. Information about the firm is available at jpmorganchase.com.

JPMorgan Chase & Co.



communities

clients

customers

employees

veterans

nonprofits

business owners

schools

hospitals

local governments

Together we can.

Dear Fellow Shareholders,



Jamie Dimon,
Chairman and
Chief Executive Officer

What a year. Despite tremendous challenges, your company earned $17.9 billion in net income on revenue of $96.6 billion in 2013. Our financial results reflected strong underlying performance across our four main businesses – unfortunately marred by significant legal settlements largely related to mortgages. These legal expenses cost the company $8.6 billion after-tax. Excluding these expenses and some one-time positive benefits from reserve reductions (which we never have considered true earnings) and one-time gains on the sale of assets, your company earned about $23 billion.

As tough as the year was – the company was under constant and intense pressure – I can hardly express the admiration, even pride, I feel because of the enduring resolve and resiliency of our management team and our employees. They never wavered as they attacked our problems while maintaining a relentless focus on serving our clients. We all owe them a great deal of gratitude.

The bad news was bad. The most painful, difficult and nerve-wracking experience that I have ever dealt with professionally was trying to resolve the legal issues we had this past year with multiple government agencies and regulators as we tried to get many large and risky legal issues behind us, including the Chief Investment Office (CIO) situation (that happened in 2012) and mortgage-related matters (that happened

primarily in 2005-2008, a significant portion of which occurred at heritage Bear Stearns and Washington Mutual (WaMu)).

There is much to say and a lot to be learned in analyzing what happened, but I am not going to do so in this letter – more distance and perspective are required. Suffice it to say, we thought the best option, perhaps the only sensible option – for our company, our clients and our shareholders – was to acknowledge our issues and settle as much as we could all at once, albeit at a high price. This allowed us to focus on what we are here for: serving our clients and communities around the world.

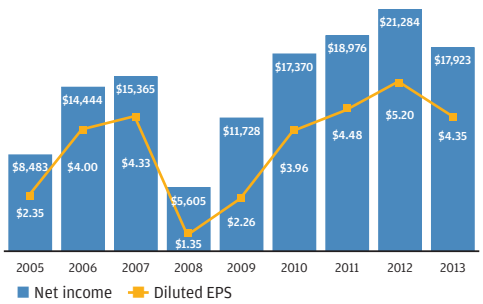
The good news is that our four franchises maintained – and even strengthened – our leadership positions as we continued to gain market share and improve customer satisfaction in every business.

When I look back at our company last year with all of our ups and downs, I see it as *A Tale of Two Cities:* "It was the best of times, it was the worst of times." We came through it scarred but strengthened – steadfast in our commitment to do the best we can.

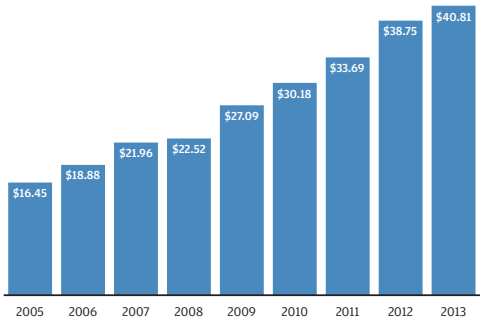
And we believe that we continued to deliver for our shareholders. For Bank One shareholders since March 27, 2000, the stock has performed far better than most financial companies and the Standard & Poor's 500 Index (S&P 500). And since the JPMorgan Chase & Co. merger with Bank One on July 1, 2004, we have performed well vs. other financial companies and slightly below the S&P 500. The details are shown in the tables on the following page. One of the tables also shows the growth in tangible book value per share, which we believe is a conservative measure of value. You can see that it has grown far more than the S&P 500 in both time periods.

Earnings and Diluted Earnings per Share 2005–2013

($ in millions, except diluted EPS)



Tangible Book Value per Share 2005–2013



Stock and Book Value Performance

Stock Total Return Analysis

	Bank One	S&P 500	S&P Financials Index
Performance since becoming CEO of Bank One (3/26/2000–12/31/2013)[a]:			
Compounded Annual Gain	10.4%	3.3%	1.3%
Overall Gain	289.8%	57.3%	19.3%

	JPMorgan Chase & Co.	S&P 500	S&P Financials Index
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2013):			
Compounded Annual Gain (Loss)	7.2%	7.4%	(0.5)%
Overall Gain (Loss)	94.1%	97.5%	(5.0)%

These charts show actual returns of the stock, with dividends included, for heritage shareholders of Bank One and JPMorgan Chase & Co. vs. the Standard & Poor's 500 Index (S&P 500) and the Standard & Poor's Financials Index (S&P Financials Index).

[a] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One

Bank One/JPMorgan Chase & Co. Tangible Book Value per Share Performance vs. S&P 500

	Bank One (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since becoming CEO of Bank One (3/26/2000–12/31/2013)[a]:			
Compounded Annual Gain	12.9%	4.6%	8.3%
Overall Gain	385.7%	80.4%	305.3%

	JPMorgan Chase & Co. (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2013):			
Compounded Annual Gain	14.5%	7.4%	7.1%
Overall Gain	261.9%	97.5%	164.4%

Tangible book value over time captures the company's use of capital, balance sheet and profitability. In this chart, we are looking at heritage Bank One shareholders and JPMorgan Chase & Co. shareholders. The chart shows the increase in tangible book value per share; it is an after-tax number assuming all dividends were retained vs. the S&P 500 (a pre-tax number with dividends reinvested).

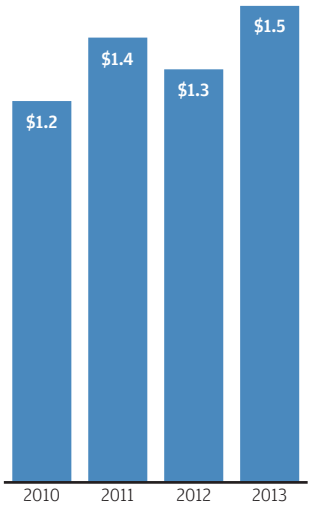
[a] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One

Here's what most of the headlines left out: JPMorgan Chase continued to serve our clients and make a significant positive impact on our communities. In 2013, the firm **provided credit and raised capital of more than $2.1 trillion for our clients**. The firm also has hired more than 6,300 military veterans since 2011 as a proud founding member of the 100,000 Jobs Mission, which now has increased the goal to 200,000 jobs. Our firm was there to help small businesses – we **provided $19 billion of credit to U.S. small businesses,** which allowed them to develop new products, expand their operations and hire more workers. We also were there for families to buy their first home with a mortgage we made possible – overall, we **originated more than 800,000 mortgages** last year. In total, we **provided $274 billion of credit to consumers**. Our strength allows us to be there for our clients and communities in good times – and, more important, in bad times. In this, we have never faltered.

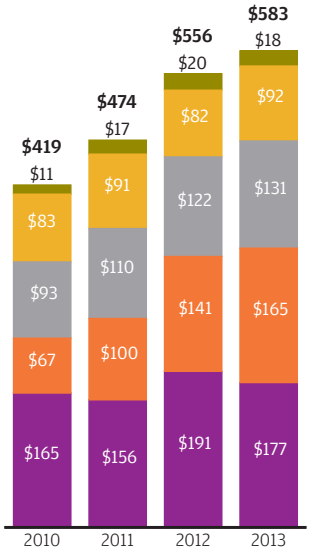
New and Renewed Credit and Capital for Clients

at December 31,

Corporate Clients
($ in trillions)



Consumer and Commercial Banking
($ in billions)



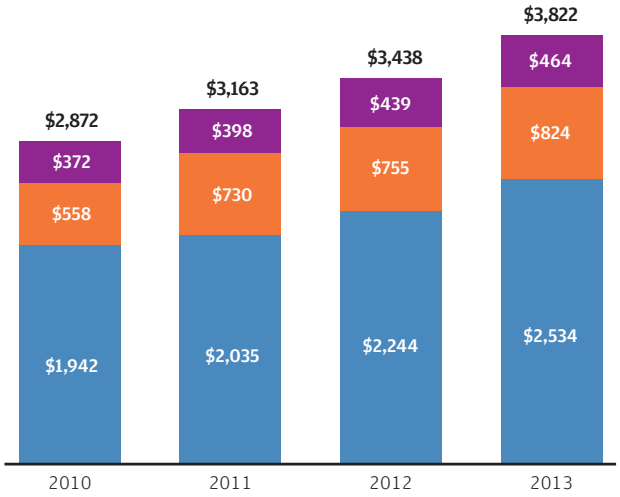
	Year-over-Year Change		
	'10 to '11	'11 to '12	'12 to '13
Corporate Clients	20%	(9)%	20%
Small Business	52%	18%	(8)%
Card & Auto	10%	(10)%	12%
Commercial/ Middle Market	18%	11%	8%
Asset Management	48%	41%	17%
Mortgage/ Home Equity	(5)%	22%	(7)%
Total Consumer & Commercial Banking	13%	17%	5%

Our clients also exhibit their faith in us by entrusting us to take care of their money – either as deposits or as client assets entrusted to us – as shown in the chart below.

Assets Entrusted to Us by Our Clients

at December 31,

Deposits and Client Assets
($ in billions)



	Year-over-Year Change		
	'10 to '11	'11 to '12	'12 to '13
Deposits			
Consumer	7%	10%	6%
Wholesale	31%	3%	9%
Client assets[a]	5%	10%	13%

Assets under custody[b]
($ in billions)

$16,120	$16,870	$18,835	$20,485

[a] Client assets include assets under management, custody, brokerage, administration accounts and all Chase Wealth Management assets not managed by Asset Management

[b] Represents activities associated with the safekeeping and servicing of assets

In this letter, I will discuss the issues highlighted below. I also encourage you to read the letters written by several of our business leaders about our main businesses, our critical operations and controls, and some of our corporate responsibility efforts.

As usual, this letter will describe some of our successes and opportunities, as well as our challenges and issues. The main sections of the letter are as follows:

I. We face the future with a strong foundation and excellent franchises built to serve our clients

II. We will dedicate extraordinary effort in 2014 adapting to the new global financial architecture

III. We have made significant progress strengthening our company

IV. We believe our long-term outlook is bright

I. WE FACE THE FUTURE WITH A STRONG FOUNDATION AND EXCELLENT FRANCHISES BUILT TO SERVE OUR CLIENTS

During 2014, most of the contours of the new and complex global financial architecture will be put in place. The changes are extensive – and later in this letter, I will talk about just how extensive they are. All banks will have to adjust to the new rules, which will be harder for some than for others. Some may have to make drastic changes to their business plan and strategies. So as we enter the year, we should take stock of where we stand.

We have consistently shown good financial performance and maintained our fortress balance sheet

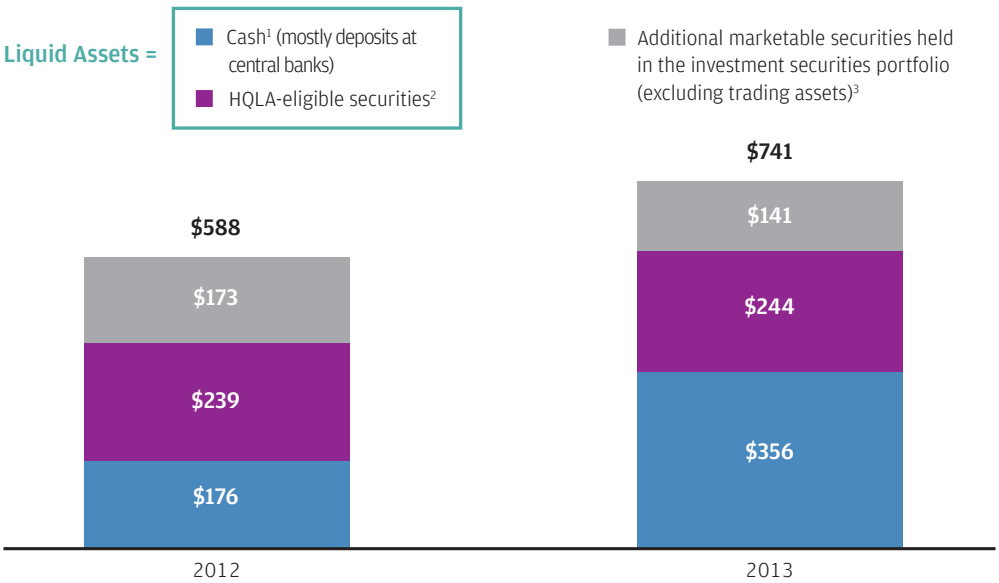
All of our businesses have had good – in fact, close to best-in-class – financial performance over the last several years in terms of margins and returns on tangible common equity. We have done this while meeting increasingly higher standards in liquidity and capital. Our fortress balance sheet is stronger than ever.

We have an enormous amount of what we consider highly liquid assets

First and foremost are the High Quality Liquid Assets (HQLA), shown in the chart below, which are mostly deposits at central banks, agency mortgage-backed securities and Treasuries. Only HQLA count for liquid assets under the banking regulators' definition of liquidity. These assets are super safe and can provide cash to the company should it need cash in a crisis situation.

Cash and High Quality Securities

at December 31,
($ in billions)



[1] Represents total amount of cash reported on the balance sheet, including $294 billion and $120 billion of eligible cash included in HQLA in the Basel III Liquidity Coverage Ratio at December 31, 2013 and 2012, respectively

[2] HQLA is the estimated amount of assets the firm believes will qualify for inclusion in the Basel III Liquidity Coverage Ratio and primarily includes U.S. agency mortgage-backed securities, U.S. Treasuries, sovereign bonds and other government-guaranteed or government-sponsored securities

[3] Additionally, the firm has other unencumbered marketable securities available to raise liquidity if required. Excludes trading securities and collateral received in reverse repo agreements

In addition to the HQLA securities, other unencumbered marketable securities can provide significant liquidity for the company. (This category does not include any securities held in our trading portfolio.) Our investment securities portfolio has an average duration of 2.8 years and an average AA+ rating. The majority of securities balances presented above reside in our investment securities. These securities could be utilized to provide liquidity and a source of cash for the company if necessary.

Our total assets are $2.4 trillion so you can see just how liquid our balance sheet is. As a reference point, our cash and high-quality securities are essentially the same as the $740 billion of our total loans. This is a very conservative utilization of our total deposits of approximately $1.3 trillion.

We have increasingly strong capital ratios

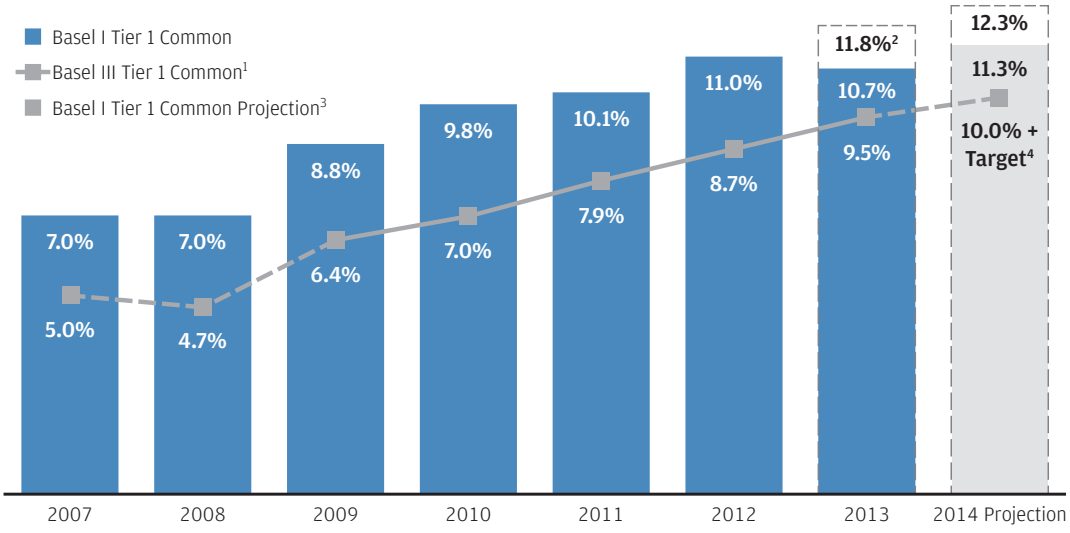
You can see on the capital chart below that under Basel I, our Tier 1 Common has gone from 7.0% to 10.7% from 2007–2013 (if Basel I had been consistently applied, that number would have been 11.8%), and our new Basel III ratio has gone from 5.0% to 9.5% over that same time period.

In 2014, we will meet all of our current targets in capital, liquidity and leverage. One ratio not shown in the chart is called the Supplementary Leverage Ratio (SLR) that is, simply, the ratio of equity to assets and certain off-balance sheet exposures, regardless of the quality of assets. While that calculation still is being finalized, we currently are at 4.6% vs. a requirement of 5%. We intend to have a cushion over 5% by the end of this year.

We have good returns on capital despite increasingly higher capital ratios

Even with the increasingly higher capital ratios over the past several years, all of our main businesses have been earning strong returns on tangible equity (see Return on Equity (ROE) chart on the following page). Some of our competitors are not earning similar returns, and they likely will feel more pressure to alter their business strategies going forward.

JPMorgan Chase Capital Levels



[1] Through 2013, Basel III capital ratios reflect the firm's best estimate based on its understanding of the rules in the relevant period (2007-2008 ratios are pro forma)

[2] Reflects the firm's estimated Basel I capital ratio, excluding the impact on the firm's positions as of December 31, 2013 of Basel 2.5 market-risk rules, which became effective January 1, 2013

[3] Effective January 1, 2014, the Basel I ratio is no longer a regulatory capital measure. The ratios shown reflect an approximation of what the firm's Basel I capital ratio would be as of December 31, 2014, both including and excluding the impact of Basel 2.5 market-risk rules, were Basel I still in effect

[4] Reflects the firm's stated 2014 Basel III Tier 1 Common ratio objective

Return on Equity

	2011	2012	2013	Excluding significant items[c] 2013
JPMorgan Chase & Co. (ROTCE[a])	15%	15%	11%	15%
ROE by line of business				
Consumer & Community Banking	15%	25%	23%	
Corporate & Investment Bank	17%	18%	15%[b]	
Commercial Banking	30%	28%	19%	
Asset Management	25%	24%	23%	
Corporate/Private Equity	0%	(3)%	(9)%[d]	

[a] Represents return on tangible common equity

[b] Excluding funding and debit valuation adjustments (FVA and DVA), CIB ROE was 17% in 2013

[c] Primarily excludes legal expenses, benefits from reserve releases, one-time gains on the sale of assets and FVA/DVA

[d] Includes legal expenses and one-time gains on the sale of assets

Later in this letter, I will discuss how we think all the new rules will affect our returns.

Our scale and breadth create large cross-sell opportunities and strong competitive advantage

Each of our four major businesses operates at good economies of scale and gets significant additional advantages from the other businesses. We believe this is one of the key reasons we have maintained good financial performance.

Below are some pretty powerful examples:

- Our North America Investment Bank generates 29% of its investment banking revenue[1] through Commercial Bank clients covered locally. This helps both our Investment Bank and our Commercial Bank do a better job serving their clients.
- Our Global Corporate Bank helped generate $1.3 billion in revenue for our fixed income sales and trading operation, increasing business to our trading desks and helping them offer better pricing to our clients.
- Our Private Bank gets new clients from both our Investment Bank and our Commercial Bank. And the Private Bank and Commercial Bank would have a hard time existing without our Chase retail branch network. In fact, 55% of Commercial Bank clients and 35% of Private Bank households visit our retail branches each quarter.
- Of our $1.6 trillion of assets under management, approximately $300 billion comes from the Corporate & Investment Bank (CIB), the Commercial Bank or the Consumer Bank.
- Fifty-five percent of retail mortgages and 40% of Chase-branded credit cards are sold through the retail branches.

In total, we believe that the combination of our businesses accounts for $15 billion of additional revenue, which helps drive both profits and customer satisfaction. Each of our businesses would be worse off but for the other three.

Our capabilities are extraordinary and are difficult to replicate — we can bring huge resources to bear for the benefit of our company and our clients

Our scale creates huge cost efficiencies and enables significant resources to be brought to bear for the benefit of our company. For example, in global technology, we have nearly 30,000 programmers, application developers and information technology employees who keep our 7,200 applications, 32 data centers, 58,000 servers, 300,000 desktops and global network operating smoothly for all our clients. Resources like these allow us to constantly improve our operating efficiencies and bring enormous capability to deal with issues when we need to do so such as adjusting to all the new global rules and requirements. In total, we believe that expense synergies across the company save us approximately $3 billion a year.

[1] Calculated based on gross domestic investment banking revenue for syndicated leverage finance, mergers and acquisitions (M&A), equity underwriting and bond underwriting

Across the firm, we serve approximately 50% of U.S. households, approximately 80% of Fortune 500 companies, and 60% of the world's largest pensions, sovereigns and central banks. Today, our firm has on-the-ground operations in 60 countries and serves clients in more than 100 countries around the world. To support those clients, we move up to $10 trillion a day and lend or raise capital of over $500 billion each quarter. The markets in which we operate cover 5.6 billion people who speak 100+ languages and use close to 50 currencies. It would be difficult to replicate the size, capabilities and knowledgeable staff of our businesses globally. We can help our clients when and where they need it.

It is important to remember our capabilities and efficiencies accrue to our clients – over time, they get the benefit in improved pricing or better services.

This has led to increasing market share and customer satisfaction in all of our main businesses

None of the things previously mentioned would matter if they didn't help us do a better job for our customers. You know your business model is working when customers – voting with their feet – give you more business. Increasing market share and customer satisfaction may not always immediately show on the bottom line – but both are critical to the future growth of our businesses and drive current and ***potential*** earnings power of the company. The bullet points that follow say it strongly.

Consumer & Community Banking

- Total deposits of $453 billion up 10% from the prior year – more than two times the industry average.
- #1 credit card issuer in the U.S. based on loans outstanding. Record credit card sales volume of $420 billion was up 10% from the prior year – outpacing the industry in sales growth for 23 consecutive quarters.
- #1 in customer satisfaction among the largest banks for the second year in a row, as ranked by the American Customer Satisfaction Index (and, in the future, we want to be #1 among ***all*** banks).
- Customer attrition at an all-time low.
- #1 in customer satisfaction in small business banking in three of four regions of the U.S. by J.D. Power and Associates and #1 Small Business Administration lender for the fourth year in a row.
- #1 online financial services destination (chase.com) (per *compete.com* as of December 2013).
- #1 mobile banking functionality (Forrester Research's 2013 Global and U.S. Mobile Banking Functionality Rankings).
- #1 ATM network; #2 retail branch network.

Corporate & Investment Bank

- #1 in Global Investment Banking Fees.
- #1 Fixed Income Market revenue share of top 10 investment banks; #1 Total Markets revenue share of top 10 investment banks.
- #1 in Global Long-Term Debt.
- #1 in Global Loan Syndications.
- #1 in U.S. Announced M&A.
- #2 in Global Equity and Equity-Related; #2 in Global Announced M&A.
- #6 in Cash Equities (we're working on that one).

- Several groundbreaking transactions, including transformational deals for Verizon, Sprint, Facebook, Virgin Media and the University of California, to name just a few.
- #1 for both All-America Fixed Income Research and Equity Research – for the previous four years.

Commercial Banking

- #1 traditional Middle Market syndicated lender in the U.S.
- #1 multifamily lender in the U.S. – since 2008.
- Loan balances of $137 billion up 7% vs. the year before – reflecting 14 consecutive quarters of loan growth.
- Gains in market share in our Middle Market expansion regions and within our commercial real estate businesses – as we deliver our capabilities locally in 119 U.S. cities and 13 international ones.

Asset Management

- Client assets of $2.3 trillion up by $248 billion from the year before – reflecting 19 straight quarters of positive long-term inflows.
- Client assets double since the beginning of 2006.
- 80% of 10-year mutual fund assets under management in top two quartiles.
- #1 Ultra-High-Net-Worth Global Private Bank (*Euromoney*, 2013).
- #1 Institutional Money Market Fund Manager Worldwide (*iMoneyNet*, 2013).

We have never been a fair-weather friend – we hope that, over time, this builds more trust and respect

During the recent financial crisis and throughout our 200-year history, JPMorgan Chase always has been there for our constituents around the world – not only in good times but, more critically, in the toughest of times when strong banks are needed the most. However terrifying events became, we never wavered in supporting our clients and communities. In fact, we did many bold and unprecedented things, including acquiring Bear Stearns and WaMu. And we never stopped raising capital and providing credit for companies, nonprofits, states, municipalities, hospitals and universities during times of trouble. And when the situation became very difficult in European countries such as Greece, Italy and Spain, we stayed to help our clients, which included the countries themselves. While we may make mistakes along the way, we never lose sight of why we are here. We believe that our long-term view and consistent behavior earn us the trust and respect of our clients and the communities in which we operate.

Our strategy remains the same – and we always invest for the long run

While we need to make a lot of adjustments to adapt to the new world (I will discuss later in this letter how we intend to do that), we are fortunate not to have to do a strategic reset. Our strategies have worked – a consistent strategy properly executed is important for the long-term success of any company.

So whatever the future brings, we will face it from a position of strength and stability. And we will continue to do what we always have done – manage the company and invest for the long run.

II. WE WILL DEDICATE EXTRAORDINARY EFFORT IN 2014 ADAPTING TO THE NEW GLOBAL FINANCIAL ARCHITECTURE

While we will meet all of our new capital and liquidity requirements this year, we still have an enormous amount of work to do to conform and adapt to the plethora of new global rules.

The changes are substantial and will require significant changes to business practices

A quick look at the chart on the next page will give you a sense of the enormous number of new rules and reporting requirements with which we need to comply. They are global and range from the new European Union (EU) Markets in Financial Instruments Directive (MiFID) rules to the 398 Dodd-Frank rules to the Basel III capital and liquidity requirements, the Volcker Rule, and new mortgage rules around both origination and servicing, to name just a few. Fully complying with and adapting to the new world is a daunting task and will require enormous effort and energy on the part of all of us at JPMorgan Chase. We are going to get it right – both to meet the letter and spirit of the new regulations and to minimize disruption to our clients.

These rules will affect every client, every product, every system and every country in which we operate. We do not underestimate the extent of the changes. Never before have we focused so much time, technology, money and brainpower on such an enterprise-wide undertaking. In the end, all these efforts will make us a better and stronger company.

Importantly, these new regulations in total have unquestionably made the global banking system safer, more transparent and more accountable – which is good for everybody. Every bank is far better capitalized than in the past, and the liquidity in the system probably has never been higher. In addition, the new rules around minimum unsecured debt levels, the Recovery and Resolution plans (or so-called living wills), and the strengthened capabilities of the regulators have put an end, we hope, to the idea that anybody is "Too Big to Fail."

We are applying enormous resources to the task

Reading the bullet points below will give you a sense of the time, money and manpower we are applying to adapt to the new rules:

- **13,000** employees will have been added since the beginning of 2012 through the end of 2014 to support our regulatory, compliance and control effort (Risk, Compliance, Legal, Finance, Technology, Oversight and Control, and Audit) across the entire firm.
- **8,000** of our employees across our lines of business will be dedicated solely to building and maintaining an industry-leading Anti-Money Laundering (AML) program.
- **500** professionals (and thousands of additional contributors) were dedicated to the 2013 resubmission and 2014 submission of the Federal Reserve's capital stress test or Comprehensive Capital Analysis and Review (CCAR). These individuals developed and reviewed more than 100 new models and submodels; conducted over 130 independent qualitative and quantitative assessments of the firm's forecast methodologies and results; and established new permanent functions and processes to enhance the firm's overall capital planning process.
- **500** professionals globally across our lines of business and support functions are working on the firm's annual Recovery and Resolution plans.
- **400** people are dedicated to continue to build out our Liquidity Risk Management infrastructure, which will create far more detailed reporting on our daily global liquidity.

New Financial Architecture

	Description	Selected requirements	Selected JPMorgan Chase actions
Capital CCAR stress testing, leverage and risk-based requirements	■ Improving the banking sector's ability to absorb losses arising from financial and economic stress	■ 750+ requirements with 21 regulators involved ■ ~25 different capital ratio requirements	■ 500+ people ■ 5,000+ pages of supporting documentation ■ 100+ new models
Liquidity Liquidity Coverage Ratio and Net Stable Funding Ratio	■ Ensuring banks hold sufficient liquid assets to survive acute liquidity stress ■ Prevent overreliance on short-term wholesale funding	■ 258 requirements ■ 15+ jurisdictional variations expected	■ 400+ people ■ 5 billion records processed from over 200 feeds ■ 20+ million calculations performed daily
Recovery and Resolution U.S. Dodd-Frank[1] Title I & II, UK[2] Recovery and Resolution, EU BRRD[3]	■ Ensuring the resolvability of systemically important financial institutions ■ Preparing living wills	■ Resolution plans for 35 entities and plans by business, sub-business and for critical operations	■ 1+ million work hours devoted annually
Mortgages U.S. Dodd-Frank[1], Housing Finance Reform Legislation	■ Reforming the nation's housing finance system	■ ~9,000 pages of rules, guidance and legislative text	■ ~100,000 work hours of training ■ 1+ million work hours dedicated to system and process implementation
Securitization Basel Revised Securitization Framework, Risk Retention, Regulation AB II	■ Enhancing capital requirements and market standards for originators and investors ■ Improving the strength and safety of securitization markets	■ 2,000+ pages of proposals	■ 35,000+ work hours dedicated to system development to comply with Basel risk-weighted assets rules
Derivatives U.S. Dodd-Frank[1] Title VII, European Market Infrastructure Regulation, Markets in Financial Instruments Directive II/Markets in Financial Instruments Regulation	■ Enhancing pre- and post-trade transparency ■ Promoting the use of electronic trading venues and central clearing ■ Bolstering capital and margin requirements	■ 83 key rules (U.S.) and 237 articles (EU) finalized	■ 700+ people ■ 60 workstreams
Volcker Rule	■ Restricting banks from undertaking certain types of market activities ■ Insulating retail banking from wholesale banking	■ 1,000+ pages of rules and preamble text with 5 regulators involved ■ 36 requirements	■ 300+ people ■ 7 trading metrics in development across 13 business areas

Note: This list of regulations is not comprehensive; estimates of resources are approximate

[1] U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act

[2] United Kingdom

[3] Bank Recovery and Resolution Directive

- **250+** employees are working in Model Risk and Development – up by more than 130 employees. In 2013, this highly specialized team completed over 450 model reviews, built capital models that enabled the firm to achieve the regulatory approval required to exit parallel Basel III reporting, and implemented a permanent new governance and control structure for the proper creation and implementation of models.
- **$600+ million** has been spent on technology focused on our agenda in the Regulatory and Control space – an increase of approximately 25% since 2011. We also have built a state-of-the-art control room in our corporate headquarters to provide streamlined data analysis and reporting capabilities of control and operational risk data across the firm.
- **$2+ billion** in additional expenses in our overall control effort will have been made since 2012 through the end of 2014.

The numbers above show some of the ***additional*** resources dedicated to this objective but barely represent the full resources dedicated to our regulatory and control agenda. It is hard to estimate, but perhaps 20%-30% of all our Risk, Compliance, Legal, Finance, Technology, Oversight and Control, and Audit employees have been reassigned

and will be devoted to this effort. In total, it is hard to measure the overall scope and investment since nearly all employees and systems are engaged in some way or another.

We will be applying the new rules all the way to the client level, the product level and the trading desk

We will be applying the new rules, particularly around capital, liquidity and the SLR (and the factors that increase our capital surcharge as a global systemically important bank), all the way down to each client we serve, each product we offer and each trading desk we operate. Doing so will allow our client executives as well as product and trading managers to understand how the new rules affect us at a very granular level and allow our professionals to begin making proper and compensating adjustments. At the most basic level, some of these rules conflict with one another; for example, the client may be profitable on Basel III capital but not on SLR capital or vice versa. The binding constraint at the client level may be very different from the binding constraint at the firmwide level. To be successful, we will need to actively manage all these constraints so we get a fair return on our capital and properly manage our risks.

At the firmwide level, once we satisfy Basel III capital, SLR capital and the Liquidity Coverage Ratio, the binding constraints on the firm may very well become the CCAR test, the annual stress test from the Federal Reserve Board. By its nature, the CCAR test is less predictable because it will change every year. And while you can't effectively manage stress testing at the client or product level, we will manage it at the business level so that it has more predictable outcomes, allowing for more predictable capital planning.

We are big believers in stress testing, and you should know that we do it all the time and successfully conduct a large number of different kinds of stress tests every week. This enables us to effectively manage risk to protect your company.

The new rules will have a major effect on certain clients and products

All the new rules will not affect all clients and all products equally. I obviously can't cover all client types and products, but I would like to give some examples of those that may be affected more than most – and what that impact means for both JPMorgan Chase and our clients.

Derivatives. Non-corporate users of derivatives (asset managers, hedge funds, financial companies, governments, etc.) will have to move all their standardized derivatives (mostly interest rate and credit derivatives) to exchanges, as opposed to handling them directly with a bank. Corporate end users of derivatives will be allowed to continue to trade bilaterally with a bank. However, for both of these segments, the cost to offer derivatives to our various client groups will increase due to capital, liquidity and margin requirements imposed on us. It still remains to be seen how all this will sort out.

Non-operational deposits. Essentially, these are deposits that wholesale clients hold with us that typically are short term and transactional in nature. We take these deposits more as a service to the client – not because they are profitable for us. The new rules require us to hold 100% of HQLA against financial institution deposits and 40% against non-financial corporate deposits. In addition, based on current proposals, we would have to hold 6% equity against the assets we maintain for financial institutions even if those assets consist of cash or other low-risk assets such as government bonds. This makes non-operational deposits hugely

unprofitable; therefore, over time, banks probably will minimize this type of deposit, and clients will seek other alternatives, probably in the money markets.

Committed, undrawn revolvers. Many clients have large, committed, unused revolvers so they can manage their cash flows and not leave too much unused cash on their balance sheet. Because new rules impose liquidity and additional capital requirements on committed, undrawn revolvers, the cost involved in providing them could increase by up to 60 basis points, depending on the client segment and nature of the facility. Banks will either have to charge more for this product or focus more acutely on the nature and value of the particular client relationship as a whole in considering whether to make revolvers available to that client.

Trade finance. The cost of short-term trade finance and standby letters of credit also will increase dramatically, with pricing potentially up by 75 basis points in the long term.

The rates business (mostly trading government securities and interest rate swaps). The new rules have a huge effect on this business because they require substantially more capital and liquidity. And for some banks, the rates business has gone from profitable to unprofitable, causing some banks to exit the business altogether. Because of our large volume and low costs, we already have begun to make significant changes to this business and expect to maintain decent profitability.

The mortgage business. The U.S. mortgage market still faces huge hurdles and has a long way to go before it is a well-functioning market that is good for consumers and the country's economic health (and makes sense for financial companies). There has been a large increase in the capital required to service and hold mortgages. Servicing itself has become far more costly and dangerous to the servicer – servicing costs alone have gone up 20 basis points. We still have been unable to reform the government-sponsored enterprises (GSE) or to get the securitization markets healthy again. This has real costs to consumers, especially for lower credit-quality consumers and particularly for government-guaranteed mortgages, which have become more expensive, more time intensive and less available for consumers. Originators are being more conservative because making loans that may default has become far more risky and costly due to:

- The highly litigious environment and uncertainty surrounding Federal Housing Administration (FHA) guarantees with respect to FHA mortgages.
- The ongoing "put-back" risk and the litigation costs around reps and warranties from the GSEs and sophisticated private investors.
- The increasing prescriptiveness of rules on servicing from different – and sometimes conflicting – regulators and government agencies.
- The increasing difficulty of moving servicing – again, especially for high-risk loans, which often are unprofitable to us and other large financial institutions – to other servicers that have systems and processes better able to serve these customers.

These issues make mortgages more costly and unpredictable for companies and far less consumer friendly. In many cases, deserving lower- and middle-income consumers may pay far more than they might have in the past for a mortgage or, worse yet, they won't be able to get one.

We need for all those involved in the mortgage business to come up with a practical set of coherent and consistent policies that work for originators, servicers, investors,

consumers and regulators. While it's critical to protect the consumer, the new rules should not allow for arbitrary and capricious interpretations or overly punitive penalties and litigation.

When you look at how the cost of specific products has changed, it's easy to see how some clients will be affected more than others. While most clients will see some higher costs, certain clients – for example, municipalities (which will see far higher costs for certain types of deposits and credit lines), clients with large amounts of trade, credit-only clients and specific types of financial companies – will experience far higher costs to transact banking business.

We need to achieve proper cross-border regulatory coordination

One of the initial objectives of the global regulatory regime was to set out fairly consistent global rules; i.e., a level playing field. The rules don't have to be exactly the same in all countries, but if they are dramatically different, that could cause large and unfair distortions in global competition. Some areas at risk are: 1) dramatically different calculations of risk-weighted assets, 2) much lower leverage ratios in some countries vs. others and 3) varying capital structures for a bank's subsidiaries in different countries. We are convinced that the regulators want to get this right, but there are a lot of interests involved, and only time will tell if they succeed.

We need to recognize that models and risk-weighted assets do not reflect all knowledge or judgment

We recognize the importance of detailed and disciplined modeling and forecasting, particularly around risk and risk-weighted assets. But we want our shareholders to know that even the best models provide an incomplete, sometimes misleading and backward-looking view of risk. Let me list a few things that are not incorporated in risk-weighted asset models:

- Character of the borrower.
- Changes in the tax code.
- Changes in the structure of the industry (usually driven by technology – look at what the Internet did to media and some types of retail).
- Changes in business practices (for example, virtually no one offers subprime mortgage lending anymore).
- Changes in government or regulatory policy.
- Geopolitical risk.

We need to do our math right, but we also need to remind ourselves to always try to add judgment and wisdom.

All things being equal, returns will be reduced

If you have to hold higher capital and higher liquidity and some of your costs are higher – all things being equal – your returns obviously will come down. Many analysts have estimated that the average effect of the higher capital, liquidity and costs on banks will reduce their return on equity substantially and for some banks far below fair market returns. These banks possibly would need to take dramatic action – shareholders would not accept poor market returns for long.

But all things are not equal

Clients, markets and businesses adjust to changing economic circumstances. Our company already has taken action that gives us some confidence that we will be able to maintain decent returns in spite of what a static analysis would show. The list below notes some of those things that likely will change over time and, in general, will allow banks, on average, to earn market returns:

- **Run-off of unprofitable products.** Banks simply will stop handling some very expensive products. For example, many exotic derivatives, subprime mortgages and other products no longer will be offered.
- **Product repricing.** Some products will reprice. For example, we expect the cost to the client for revolvers and transactional deposits to go up.
- **Product redesign.** Some products will be redesigned. For example, uncommitted lines of credit (that were popular many years ago) may make a comeback. Or revolvers may be written so that the borrower cannot borrow all the money all at once, reducing the liquidity burden and cost to the bank.
- **Client selection and re-optimization.** Banks will focus on clients that can be served profitably with a mix of products and services. For example, we may seek to earn more of certain clients' capital-lite business like cash management or a higher share of their fee-based business such as M&A or issuance. Some clients will go to other banks with a different mix of products and services, and some will be banked in the shadow banking market, which may be able to serve some clients in a less expensive way.
- **Tactical and strategic changes.** These changes are hard to forecast – but they will happen. Not all banks will adjust to the new world in the same way. Some banks will stop offering certain products or will leave certain markets – market shares will change and, in some cases, consolidate. This eventually should lead to margins in each product and business that are adequate for those that remain in the business.
- **Return on equity.** Some banks will continue to earn better-than-average ROEs. Not all companies are created equal, and in every industry that I have observed, some companies have outperformed for an extended period of time. Sometimes it is because these companies have lower cost structures, better technology or simply greater economies of scale due to higher market share. It also is important to remember that a complex business that has many products is not earning the same ROE on every product. Many industries have historic structural issues that lead to some products being loss leaders (e.g., selling milk at grocery stores). And some products have an extremely high return because there is little equity involved (for example, think of money management, transaction processing, etc.). It is the combination of how a company does all these things that determines the company's aggregate ROE.

In the past, we told you we would expect our average return on tangible equity through the cycle (by this, we mean in average times with normalized credit losses) to be 16%. With higher levels of capital, significant regulatory changes and some remaining uncertainties, we moved the number to be somewhere between 15% and 16%.

We continue to have a healthy fear of the unknown because we cannot predict the cumulative effect of so many changes on a complex system

We still worry about the cumulative effect of all the changes, which simply cannot be known. It is our nature to worry more about the downside than to guess about the upside; however, some of these changes actually may be good for JPMorgan Chase (and other banks). It could be that these changes may make it harder for new competitors. It is possible that many of these changes will create a bigger "moat" around the banking system. Regardless, we will be vigilant in looking for, and reacting to, any negative effects that we simply cannot predict today.

What we can predict is that we are going to have tough global competitors

We have a healthy fear of and respect for our competitors. No matter what business you're in or how strong you might look, there are a lot of smart, devoted, tough competitors that have the potential to gain on you. So we always make the assumption that we will have tough competition. In addition to the regular lineup of great competitors that we currently have, I want to point out three areas (among others) that we will be keeping an eye on.

Large, global Chinese banks. Today, there are four very large and rapidly growing Chinese banks. They may be operating under less restrictive rules than we are. They are ambitious, and they have a strategic reason to go global (following their rapidly growing Chinese companies overseas). They have begun their global expansion, and, over time, they will become tough global competitors.

Technological obsolescence. It's easy to be scared about this one. Many companies are working on new payment systems, trading has become increasingly electronic, customers want more and more mobile services, and, increasingly, companies are starting to handle lending online. Your company is deploying substantial resources and launching new programs and products and will try to be creative, innovative and nimble in all these areas, which we will talk more about in the last section of this letter.

Increasingly sophisticated shadow banks. We really should not call them "shadow" banks – they do not operate in shadows. They are non-bank financial competitors, and there is a wide set of them. They range from money market funds and asset managers, mortgage real estate investment trusts and mortgage servicers, and middle market lending funds to PayPal and clearinghouses. Many of these institutions are smart and sophisticated and will benefit as banks move out of certain products and services. Non-bank financial competitors will look at every product we price, and if they can do it cheaper with their set of capital providers, they will. There is nothing inherently wrong with this – it is a natural state of affairs and, in some cases, may benefit the clients who get the better price. But regulators should – and will – be looking at how all financial companies (including non-bank competitors) need to be regulated and will be evaluating what is better to be done by banks vs. non-banks and vice versa.

We will spend a lot of energy in 2014 adapting, adjusting and navigating to the new financial architecture, as well as monitoring its impact on our clients and keeping a watchful eye on the landscape as we move forward.

III. WE HAVE MADE SIGNIFICANT PROGRESS STRENGTHENING OUR COMPANY

We continue to make substantial progress strengthening our company. We have made enormous strides on our control agenda, which is detailed in a letter by our Chief Operating Officer on pages 33-35. We have continued our disciplined organic growth while also simplifying our business and continuing to reduce expenses. But first and foremost is the importance of maintaining the strength of our client franchises.

In this new global financial architecture, we will protect our great client franchises – at the expense of profits, if necessary

As we adapt to all the new rules, we will deliberately maintain our franchises even at the expense of sub-optimal profits. Since we don't know what the impact of all the new rules will be, we don't want to guess or make major changes in strategy in anticipation of these new rules. If some of the changes cause disappointing profits in the short term, so be it. We are fairly convinced that we will be able to adjust and earn fair profits in the long run.

We are aggressively pruning and simplifying our business – allowing us to reduce risk and to focus our resources on what is important

In general, it is good for any company to diligently prune and simplify its business so that it can focus on what it does best. This is just simple good housekeeping. It is even more important in this environment, largely to help with the control agenda. The chart below notes that we are exiting certain products and businesses. None of these exits will affect our main franchises. These actions eventually will reduce revenue by about $3 billion, but they will have little impact on profits. Some of the businesses we are selling originally had great promise – and we still have no problem trying things (and failing at them) as long as we have the discipline to stop doing them if they don't work. Some don't fit the new regulatory environment, some are not customer friendly and some are just simply too small to matter.

Business Simplification

Simplifying our business

- Exiting products non-core to our customers or with outsized operational risk – for example:
  - One Equity Partners
  - Physical commodities
  - Global Special Opportunities Group
  - Student lending originations
  - Canadian money orders
  - Co-branded business debit cards and gift cards
  - Rationalization of products in Mortgage Banking[1]
  - Identity theft protection
  - Credit insurance
- Discontinuing certain client businesses on a case-by-case basis in light of the new global requirements

Financial impact of business simplification ($ in billions)

	2014 impact	Run-rate impact
Revenue	$1.5	$2.8
Expense	(0.9)	(2.3)
Pre-tax income	0.6	0.4
Net income	$0.3	**$0.3**

Expense reductions lag revenue reductions

[1] Not included in the analysis

We still are investing in organic growth, and our investments from the past are paying off

As we have shown you in previous letters, the following nine investment initiatives (outlined in the chart below) will contribute to our profits over the next 10 years. All these projects are pretty much on track, and we expect they will provide substantial value for our clients and our shareholders in the future. Our current estimate is that they will add another $2 billion in profits by 2017. We like organic growth, and while we have not started as many major new initiatives this year as in previous years so we can focus on our control agenda, there will be great opportunities in the future.

We continue to be vigilant about our expenses

Earlier, we spoke about the regulatory and control issues that, by year-end 2014, will have increased our overhead expenses by $2 billion since 2012. Our total overhead (except litigation) was $60 billion in 2013, and we expect it will be less than $59 billion in 2014. We expect to continue to drive down expenses as a percentage of revenue over

Overview of Select Investments

Expense and net income impact of cumulative spend from select investments ($ in millions)

Line of business	Investment	Status	Comments	Target annual net income
Consumer & Community Banking	Branch builds	✓	■ Portfolio of branches opened from 2002–2012 ■ Average branch contributes $1 million+ to pre-tax income when mature ■ 4-year+/- breakeven and 7-year+/- payback for 2002–2012 portfolio	>$600
	Business Banking	✓	■ Expansion market branches fully staffed ■ Approaching core market productivity levels	$600+/-
	Chase Private Client	✓	■ Added 2,100+ Chase Private Client locations since beginning of 2011 ■ 22,000 clients as of 2011; 100,000+ clients as of 2012; 215,000+ clients as of 2013 ■ $14 billion net new money in 2013	$600+/-
Corporate & Investment Bank	Over-the-Counter Clearing & Collateral Management	In progress	■ Delivered a global platform and top three market share ■ Timing of steady state dependent on implementation of final Europe, Middle East and Africa and Asia Pacific rules	$150+/-
	Global Prime Brokerage build-out	✓	■ Build out international platform to facilitate clients' regional strategies ■ Successful launch of international prime brokerage in Europe, the Middle East and Africa in 2011; Asia Pacific launch in 2014	$175+/-
	Global Corporate Bank	✓	■ Committed to meeting needs of international clients ■ ~200 bankers hired since 2009	$600+/-
	Equities electronic trading	✓	■ Focused on building best-in-class electronic trading capabilities ■ Grew low-touch equities revenue at 21% CAGR since 2010	$100+/-
Commercial Banking	Middle Market expansion[1]	Ongoing	■ Expand Commercial Banking coverage into new markets ■ New cities added in 2013 include Tacoma and Jacksonville ■ Continue to add ~200 clients per year	$450+/-
Asset Management	Private Bankers/ Investment Management sales expansion Investment Management business initiatives	Ongoing	■ Hired ~700 Private Bank client advisors and ~300 Investment Management salespeople since beginning of 2010 ■ Expansion investments contributed net income of ~$100 million in 2013	$800+/-

✓ Indicates investment complete

2013 expense[2]	~$2.6 billion	**~$4,100**
2013 net income	**~$1 billion**	

Expect $3.5 billion+/– of net income in 2017 run-rate

[1] Includes WaMu, as well as out-of-footprint expansion markets

[2] Expense for aggregate investments reflects expenses related to select investments with overhead ratios higher than business average

the years. We are not doing this by skimping on investments – we never will do that since we believe investments in technology, training, controls, effective marketing and other efforts are critical for the long-term health and growth of the company. We are driving down costs by being extremely vigilant on expenses – always seeking out ways to automate and improve efficiency and operations. While we don't have a formal expense-cutting program, you can rest assured that we always are looking for ways to cut ***wasteful*** expenditures. We also believe that new industry utilities will emerge that will sharply reduce costs; for example, a utility could manage Know Your Customer processes (this way, corporate customers would not have to fill out the same forms and answer the same questions for all their banking partners). The financial sector always has been a large user of industry-wide utilities, particularly with regard to processes like settlement, clearance and payments.

And we always are learning (which also will make us a stronger company)

We always have believed that analyzing your mistakes makes you a better company. We often are asked about some of the management lessons we've learned over the past few years so let me share a few of them with you.

Customer advocacy. Treat the customer the way you want to be treated and make sure you see everything from the customer's eyes. Read customer complaints – and be the customer's advocate. This acts as an early warning system, it reduces problems and it will make you a better company.

Constantly improving systems and processes. We always have believed in this, but there is an example of where we didn't with our Anti-Money Laundering systems. For years, we scored fairly well on our AML program, but we did not continually improve our systems and processes, and, in hindsight, we fell behind. All systems and processes need to have regular review and continual improvement.

A tin ear. In the past few years, we had started to see regulatory and enforcement actions against our competitors – and saw signals from our regulators that things were going to get tougher going forward. Our response generally was, "We know what we're doing." Well, we should have done more self-examination. We need to be better listeners and do a better job at examining critiques of others so we can learn from other people's mistakes, too.

Enterprise-wide controls. We generally have had a preference for leaving things somewhat decentralized, if possible, to foster responsibility and innovation throughout the organization. We've prided ourselves on our controls, and, for the most part, we did them well. But not all critical controls were consistently executed throughout the firm – and they should have been. This reduces the chance of a control gap somewhere in the company, and it ensures a sustainable, rigorous discipline and process in place everywhere. In addition to our fortress balance sheet, we want a fortress control system.

Processes should be known, front to back. From the moment a customer is opening his or her account to conducting business through the middle office to properly recording that business on your books and records, you are only as strong as your weakest link. Management teams need to understand and review all the processes in their business.

Sustainability. It's not enough for an activity to be done well – it needs to be done well on a sustained basis. This means a rigorous risk assessment, a constant review of all processes, properly functioning risk and control committees, vigilant compliance and a thorough rechecking of everything by Audit.

Your management is taking full responsibility for all aspects of our business operations. Transparency and escalation are key so we can deal with problems properly and quickly. While we need to be extremely self-critical, we intend to do this in an environment of collaboration without finger-pointing.

CYBERSECURITY UPDATE

In last year's letter, I gave a frank assessment about cybersecurity and why it is such a critical priority for the entire company. We outlined how JPMorgan Chase had spent approximately $200 million in 2012 to protect ourselves from cyberwarfare and to make sure our data were safe and secure, and we dedicated more than 600 employees across the firm to the task. Despite these intense efforts, we acknowledged that the issue of cybersecurity worried us — and, today, that worry only has continued to intensify.

By the end of 2014, we will have spent more than $250 million annually with approximately 1,000 people focused on the effort. This effort will continue to grow exponentially over the years.

In our existing environment and at our company, cybersecurity attacks are becoming increasingly complex and more dangerous. The threats are coming in not just from computer hackers trying to take over our systems and steal our data but also from highly coordinated external attacks both directly and via third-party systems (e.g., suppliers, vendors, partners, exchanges, etc.). It appears that a large, successful attack on a major retailer last year was the result of a third-party system breach.

We are continuing to carefully protect our perimeter from external threats, beef up our processes to detect internal threats and monitor related third-party systems to make sure their protections are adequate. In addition, we are moving rapidly ahead with Europay Mastercard Visa (EMV) and tokenization for credit and debit card transactions, which we will need to do in conjunction with merchants. We also are building three state-of-the-art Cybersecurity Operations Centers in our regional headquarters to provide points of coordination for all incoming information, the identification of threats, the protocol around managing our responses and the security of our buildings around the world. A major focus of these centers is the concept of intelligence fusion, which will pull together all our internal information from Internet and systems monitoring, as well as reconnaissance from our partners in industry and government. This approach will give us a comprehensive and consolidated view of all the threats facing our firm and our customers, and it will help to inform our view on how best to combat them.

We're making good progress on these and other efforts, but cyberattacks are growing every day in strength and velocity across the globe. It is going to be a continual and likely never-ending battle to stay ahead of it — and, unfortunately, not every battle will be won. Rest assured that we will stay vigilant and do what we need to do to enhance our defenses and protect our company.

IV. WE BELIEVE OUR LONG-TERM OUTLOOK IS BRIGHT

In the last seven years, we have been through a global financial crisis, massive regulatory changes and a number of setbacks – but our company has been able to recover and prosper. Most important, our client franchises consistently got stronger. All companies, at some point, are going to have tough times. The ability of a company to overcome them and be better for having done so is a sign of its strength, not weakness.

As we navigate through 2014, our fortress company and the power of our franchises put us in good stead. We are in this business forever. And we need to look beyond current challenges so that we properly invest and plan for the future. When all is said and done, there is reason to believe that the future of banking will be quite good. The following paragraphs explain why.

The world has been getting better, not worse

It is hard to believe sometimes – when you read in the newspapers and see on TV all the terrible events happening on the planet – that the world has consistently, over the course of history, become a better place for human beings. A recent book by Harvard professor Steven Pinker entitled *The Better Angels of Our Nature* chronicles how mankind has made enormous progress and has improved society throughout the centuries. His research looks at issues like murder, torture and other acts of violence over the past thousands of years and shows how today's world is much safer and more humane than in the past. It's amazing that even the 20th century, bloodied by two world wars, was less violent than all other centuries before it. Cruelties such as torture and slavery over many, many years have become increasingly rare (though they tragically still exist). There are many contributing factors, but Pinker points out some of the reasons: increasingly just and moral governments; the invention of new institutions like courts of law and police forces; and expansion of human knowledge and a heightened sense of morality spread by the written word, religious institutions and schools, all of which have helped influence people's minds about what is acceptable – and what is not.

Dr. Martin Luther King said, "The arc of the moral universe is long, but it bends toward justice." Progress, sometimes painful and slow, has been happening all around us all the time, and the optimist in me believes that it will continue.

We have an abiding faith in the United States of America

I have spoken about this in the past, and I don't believe that it is blind optimism or patriotism. America today may be stronger than ever before. For example:

- The United States has the world's strongest military, and this will be the case for decades. We also are fortunate to be at peace with our neighbors and to have the protection of two great oceans.
- The United States has among the world's best universities and hospitals.
- The United States has a reliable rule of law and low corruption.
- The people of the United States have a great work ethic and "can do" attitude.
- Americans are among the most entrepreneurial and innovative people in the world – from those who work on the factory floors to geniuses like Steve Jobs. Improving "things" and increasing productivity are American pastimes. And America still fosters an entrepreneurial culture where risk taking is allowed – accepting that it can result in success or failure.

- The United States is home to many of the best businesses on the planet – from small and middle-sized companies to large, global multinationals.
- The United States also has the widest, deepest, most transparent and best financial markets in the world. And I'm not talking just about Wall Street and banks – I include the whole mosaic: venture capital, private equity, asset managers, individual and corporate investors, and the public and private capital markets. Our financial markets have been an essential part of the great American business machine.

America's future is not guaranteed, and, of course, America has its issues. Later in this section, I will discuss some of the issues, especially the ones possibly holding back our country's growth. But throughout history, we have shown great resiliency and a capacity to face our problems. Warren Buffett, the greatest investor of all time and my friend, has said, "It's never paid to bet against America." I think we all should take his advice.

The outlook for long-term growth is excellent – our clients are growing, and they need us

The financial needs of countries, companies and individuals will continue to grow over time. And that growth will be broad based and global. A few examples suffice.

GDP and trade

- World gross domestic product (GDP) is projected to grow an average of 7% per year through 2023, from $73 trillion in 2013 to $139 trillion in 2023.
- The value of the world's exports grew at an average rate of 11% per year between 2002 and 2012, from $8.1 trillion to $22.8 trillion. Many economists expect international trade to grow faster than world GDP over time.

Infrastructure

- Keeping pace with global GDP growth will require an estimated $57 trillion in infrastructure investment between now and 2030 – this is 60% more than the $36 trillion spent over the past 18 years. Emerging economies are likely to account for 40% to 50% of this infrastructure spending.
- Infrastructure-related trade is forecast to grow by 9% per year on average between 2013 and 2030, outpacing overall merchandise trade growth of 8% per year so that by 2030, infrastructure-related trade will account for 54% of total goods traded globally.

Growth of large companies

- A staggering 7,000 new large companies (those with revenue greater than $1 billion) are expected to develop between 2010 and 2025; 70% are expected to be in emerging regions, with the share of large company revenue generated from those based in emerging regions rising from 24% in 2010 to 46% in 2025.
- By 2025, emerging regions are expected to be home to almost 230 companies in the Fortune Global 500, up from 85 in 2010. Of the 230 emerging region companies, 120 are expected to be based in the China region.
- Today, 80% of the 2,200 large companies in emerging economies are spread across almost 100 cities; by 2025, 80% of the 7,000 large companies are likely to be spread across nearly 160 cities.

Urbanization and population growth

- A majority of the world's population now lives in urban areas for the first time in history, and by 2050, that number is expected to grow to 67%. This mass urbanization will create cities on a scale beyond what most of the world has seen. Providing the infrastructure and clean water, schooling, healthcare and social safety nets (to name just a few) to anticipate, accommodate and sustain this growth will be hugely challenging.

Financial assets

- Total global financial assets of consumers and businesses grew to $248 trillion by the end of 2013 and are projected to grow at a compound annual growth rate of 6.6% through 2023 to roughly $453 trillion.
- Much of this growth is expected to come from emerging market economies, which consisted of 20% of global financial assets in 2013 and is expected to grow to 34% by 2023.

All the points above are the fuel that drives all of our businesses. The growth will be there. The hard part about our businesses is managing the complexity and the often volatile and violent swings of moods and markets, as well as the episodic nature of some of the businesses. (Not all of our businesses operate on a convenient annual cycle.) What we try to do is see through the fog and noise and the madness of crowds to clearly, consistently and safely manage our businesses and invest in our future.

Of course risk and uncertainty remain, but we need to put it all into perspective

Of course there is risk in the system. There always was, and there always will be. As a company, we need to be prepared for even the unlikely and unpredictable bad outcomes. But like everything else, it helps to put risk into perspective. Some of the common risks spoken about today include geopolitical risks and what some think are inflated stock market values (I am not going to talk about the stock market as I have little to add to that debate). Probably the most discussed area of uncertainty is what effect the reversal of the Fed's Quantitative Easing (QE) policy will have on the economy and markets. I will speak about Fed policy later in this section. Here I will briefly review some of the risk issues we see today.

Geopolitical risk is a constant

History teaches us that geopolitical risk is always there. Some of the risks are well-known to us such as Afghanistan, Iran, North Korea, etc. But many of the risks are not known, and they often are the ones that create huge problems. For example, most people did not foresee the events in the Middle East (the "Arab Spring"), the start of World War I or the serious issues in the Eurozone, to name a few. Many of the changes in the geopolitical world were hugely positive; for example, the falling of the Berlin Wall, the re-emergence of China in the global economy and the spreading of democracy throughout many parts of the world. Two years ago, there was deep fear about the collapse of the Eurozone, which, of course, hasn't happened. When I graduated from business school 30 years ago, the great fear at the time was that America had seen its best days and was soon to be surpassed by a resurgent Japan.

While we are prepared and watchful, we see nothing that would change our long-term plans.

There are many positive factors:

- Consumers are in increasingly good financial shape. Over 6 million more Americans are working since the depths of the financial crisis. The amount of consumer income that they spend to service their debt is the lowest it has been since it has been recorded, dating back to 1980. And Americans' net worth has been increasing, along with stock market prices and the value of homes.
- Housing has turned the corner in most markets. We've moved from a buyer's market to a seller's market in four years, construction of new homes has steadily improved and home values have increased nationally more than 19% in the past two years due to the strengthening economy.
- Capital markets are wide open – credit, for the most part, is flowing freely. (The only exception I see here is that it still is too hard to get a mortgage for many people.)
- Corporations and middle market companies are in extremely good shape. Corporate cash balances now are 11.4% of assets, up from 5.2% in 2000.
- The banking system is almost fully recovered, and banks are better capitalized than they have been in 60 years. Banks had average equity to assets of 11.1% in 2013 – the highest it's been since 1950. And banks in total have $10 trillion in deposits vs. $7.6 trillion in loans today – the lowest loan-to-deposit ratio since 1970. In addition, banks currently hold HQLA of approximately $2 trillion.
- Consumers are benefiting from abundant and less costly oil and gas due to technological advances in extraction.

But something is holding back our growth

Something is holding back the strong recovery of the great American economic engine. It is not lack of access to capital or loans, but it might be a combination of some of the following factors:

- Concerns around excessive regulation and red tape – I travel around the U.S. all the time, and this is a loud and growing complaint that I hear from businesses, small to large, across virtually all industries.
- Whether you were for or against "Obamacare," when massive changes to such an important part of the American economy are made, it does create uncertainty for many businesses.
- The inability to face our fiscal reality is a concern. I believe that if we had adopted some form of the Simpson-Bowles plan to fix the debt, it would have been extremely beneficial to the economy.
- Entitlement spending – which now is 60% of federal spending and is growing – is crowding out infrastructure spending and spending on initiatives like research and development and training.
- In addition, uncertainty about the ultimate outcome of the Fed's unconventional QE policy (and our inability to deal with some fiscal issues) makes future Fed policy more complicated.
- Political gridlock resulting not only in our government shutdown but in two debt ceiling crises was damaging and irresponsible.
- U.S. corporate tax policy is hugely inefficient and, at the margin, drives American capital overseas.
- U.S. immigration policy (which we should fix for moral reasons alone) also is driving brains and entrepreneurs overseas. Most economists think a good immigration policy could accelerate U.S. economic growth by 0.2% right away and by 2% over a 10-year period. This, alone, could create 3 million jobs.

In addition, uncertainty and hypersensitivity to risk may be holding back growth

Uncertainty also has always been a constant in business. But coming out of a financial crisis, in addition to the items I mentioned above, we may be living in a time of heightened sensitivity, uncertainty and risk aversion. It seems that just about everyone has become a risk expert and sees risk behind every rock. They don't want to miss it – like they did in 2008. They want to be able to say, "I told you so." And, therefore, they identify everything as risky. Here are a few facts that support the uncertainty and risk aversion hypothesis:

- Corporations seem unduly conservative. We already have mentioned how much excess cash they hold.
- U.S. gross capital formation as a percentage of GDP has been at lower levels in the last five years than it has been for more than 40 years. Capital expenditures ultimately are the drivers of productivity, jobs and growth.
- The top 1,000 companies account for approximately 50% of all capital expenditures. One reason that large companies may be more conservative in their use of cash and debt is that rating agencies are much tougher on ratings. In 1993, the number of AAA and AA issuers was 413, and in 2013, that number was 147. Today, the companies are bigger, basic financial metrics (i.e., debt to equity and margins) essentially are the same and defaults are lower. I have defended the rating agencies' right to their opinions, but it seems they also may have largely overreacted to the financial crisis.
- Finally, one of the great aspects of the American system is that it is okay to fail and to try again. But even that seems to be diminishing as failure, other than in Silicon Valley, is severely punished.

This all can be fixed

There is nothing in all of the negative items that I mentioned above that can't be fixed through our own actions. Collaboration as opposed to destructive finger-pointing is needed. A few smart decisions and a lot of

constructive collaboration will improve confidence – and confidence is the "secret sauce" of growth. As consumers and businesses grow more confident, they will spend more and invest more. Stronger economic growth will create more jobs and higher incomes and give us the necessary resources to tackle pressing and important issues like inner city school education, income inequality and proper infrastructure investing.

The impact of tapering

Today, there is hyperfocus on central bank policy and, in particular, on what's called "Fed tapering." The U.S. Federal Reserve had been buying $85 billion a month in Treasuries and mortgage securities (it recently reduced that amount to $55 billion a month). Most observers expect that number to come down to zero by the end of the year. Eventually, the Fed may need to begin selling some of the securities it has purchased.

The Fed's balance sheet has gone from $1 trillion in 2007 to an estimated $4.5 trillion by the end of this year. Some feel the Fed's QE policies have been too aggressive and ultimately will be inflationary. Additionally, there is a fear that ending QE will be risky and complex, particularly since QE has little precedence.

We cannot predict the future, and it is rational to have a healthy fear of new and untested policies. However, we think it will be helpful to put some of these issues in perspective, too.

Put it in perspective

The value of all financial assets in America today is approximately $90 trillion. When the Fed stops buying securities, the $4.5 trillion it owns will run off to $2 trillion by 2020 simply from paydowns of principal in Treasuries and mortgages. While it is not clear what the new steady state will be – the Fed probably will not need to take its balance sheet all the way back down to $1 trillion. Even if the Fed eventually needs to sell some securities, the American economy should be able to handle it easily – particularly in a strong economy.

This unconventional monetary policy (QE) may have worked, but it is confusing

Figuring out the full effect of QE is hard to do. And, therefore, figuring out the effect of the reversal of QE is even harder to do.

QE replaced $3 trillion in Treasuries and mortgage securities held by individuals, investors, funds and others with cash reserves created by the Fed. If all that might happen is the various investors involved took the cash and deposited it at a bank and the bank, in turn, deposited it at the Fed, there essentially would be no real change in economic effect. But if those involved spent the money, bought additional stocks or bonds and invested in long-term assets, there would be an effect on the real economy.

There is little question that QE – because it drove long-term rates down – lifted asset prices, including stocks and home prices (there were other global effects, but I won't talk about them here), reduced funding costs, improved economic activity and helped the economy recover. This probably was more true early on with QE and less true later on.

But much of QE appeared to be "unused." At the end of 2007, before QE started, banks had $6.7 trillion in deposits, $6.8 trillion in loans and only $20.8 billion in deposits[2] at the Fed. Today, banks have $10 trillion in deposits, $7.6 trillion in loans and $2.6 trillion in deposits at the Fed. You can see that loans increased very little, while deposits and reserves at the Fed increased dramatically. Banks clearly did not use all of these additional deposits to make more loans, though this was due to several factors, including the weak economy and the banks' need to build up their capital and liquidity ratios. One concern is that this "unused" money will one day be aggressively used – and cause too much inflation.

The Fed has tools in place to reverse QE if necessary – and banks have more constraints in lending out the money anyway

The Fed has many tools to reverse QE if necessary, which it can readily use if too much credit is created in the system. However, banks will be far more constrained in how much they can lend than in the past because of the new, higher liquidity and

[2] Regardless of what those receiving cash for their securities did with the cash, it ultimately will end up back in the banking system in the form of deposits, both at the bank and, therefore, deposits at the Fed. The deposits at the Fed are called reserves

capital requirements. In the new regulatory environment, the transmission and effect of monetary policy by the Fed will be different from the way it was in the past. It is very hard to calculate this impact, although I'm sure the Fed is taking it into consideration. In addition, business financing needs are likely to be moderate because businesses will be able to fund many of their projects with their own excess cash and strong earnings.

Normalization is a good thing

Ultimately, a normalization of interest rates, capital flow and allocation without central bank interference, concurrent with a strengthening economy, has to be a good thing – something that we all eventually should want even though it probably will be accompanied by volatile movements in interest rates. When rates do normalize, we know one thing for certain – it will happen ***differently*** from what people expect. And my guess is that when it happens, it will be faster than people expect. A normalized interest rate curve might have short-term interest rates at 3%-4% and 10-year Treasury bond rates at 5% plus or minus. If the yield curve returns to those kinds of levels in a healthy economy, we all will be okay. And the Fed already has made it absolutely clear that it will normalize its monetary policy only as the economy strengthens.

Focus on the real economy vs. the money economy

The real U.S. economy includes 145 million people who get up and go to work every day, trying to improve their lives and the lives of their family (and counter to what you read in the newspapers, 80% of those people are happy with their job). The real economy includes millions of companies serving clients every day and generally building to expand and meet their customers' order flows. In fact, most people in the real economy appropriately pay very little attention to the money economy. I would remind our readers that there are 320 million Americans, but only a small fraction watch CNBC or read *The Wall Street Journal*. In the real economy, what matters to most people is one's family, job and quality of life.

Those of us who operate in the money economy are very sensitive to interest rates – maybe overly sensitive. And we should look through the ***volatility*** at interest rates, which will almost definitely be there as the Fed changes its policy. Volatility in interest rates will not ***necessarily*** dampen real growth in the real economy.

Rising interest rates (all things being equal) will be a big plus for your company

Even as we have grown deposits and market share in many of our businesses, profit margins have been squeezed because of abnormally low interest rates. If interest rates rise to the normalized scenario that I described earlier, our net interest margins could expand 2.2%-2.7%, increasing our net interest income and profits by approximately $6 billion after-tax, all things being equal. This, of course, would take place over three to five years and not in a straight line. But, indeed, all things are not equal – many other factors will have an impact on our business flows and results.

We have been vigilant in trying to analyze the effect of interest rates on interest margins (we have managed the balance sheet to benefit from rising interest rates), and we also have been vigilant in trying to predict the effect of interest rates and Fed monetary policy on deposit flows. There is little question that the Fed's QE policy increased deposits substantially and that, as QE is reversed, it will reduce deposits. It is possible that we could see significant outflows of certain types of deposits over the years – an event for which we will be prepared.

Banks still need to be there in good times and in bad times – but it will be a little harder in the new world

In the last financial crisis, many banks stood against the tide. They were there for their clients and continued to fund businesses, cities, schools, hospitals and investments when many other banks wouldn't or couldn't do so. It is not because these banks were irrational but because that is their job. Imagine yourself being a client of a bank, and, at the first sign of trouble, the bank runs like a rabbit.

The money markets and some of the capital markets are like rabbits – at the first sign of trouble, they run as far and as fast as they can. Human psychology isn't going to change, and even the Fed can only mitigate the effect of this reaction. It is quite possible that some shadow banks will act that way – they may make loans only in good times but not in bad times. So when the regulators finish designing the new system, they should try to keep this in mind.

Many of the new rules have added procyclicality. For example, Basel III capital rules require that risk-weighted assets will go up in a stressed environment. We estimate that between 10% to 20% of our capital may be used in an extreme stressed environment to satisfy additional regulatory requirements, and this will force us more quickly and more aggressively to reduce, or not add to, risk assets as the stressed environment unfolds. And the new liquidity rules require us to hold 100% of liquid assets against possible outflows. So as a crisis unfolds, by definition, we will have outflows higher than expected that will require more liquid assets. This will require the selling of risky assets to buy liquid assets. We hope the regulators will come up with a schematic that allows the use of liquid assets in stressed times without penalty so that banks can continue to lend when times are tough. We certainly don't want to have liquidity or capital rules aggravating a crisis.

And we have many exciting new things coming

We have focused a lot of attention in this letter on the new rules and regulations and on many issues about which we need to be worried. But there still are a lot of initiatives and innovative new products and services coming down the pike about which we are excited. I'd like to mention just a few of them:

- **Better client data management leading to deeper penetration.** In all of our businesses, we are building better client data management systems. This gives us a deeper understanding of our clients and better coordination of our selling efforts. This allows us to more effectively sell additional products to the same customers – which helps drive both profitability and customer satisfaction.
- **Increasing segmentation and focus on more refined market segments.** For example, this includes advertising and products specifically designed for market segments like retirees, women and certain minority groups. Our Commercial Bank has formed specialty lending departments so that, as a whole, this line of business has deep expertise about particular industries. And our mobile banking products will be specifically designed for different market segments. Even in areas where we already are ranked #1, like fixed income sales and trading, when you dig deeper, there still is a lot of room for improvement in certain parts of the world and in certain sub-businesses and products.
- **An exceptional customer experience.** We have been on this journey for a while, and we are getting better, but there is so much more to do. We want to be known for our customer service – and we want to be compared in this regard with the best in the business.
- **JPMorgan Chase Institute.** We are going to form a thought-leading institute backed by all of the knowledge, broad relationships and resources across the firm to help continue to educate the world on topics in which JPMorgan Chase has a distinct and deep knowledge. We intend to analyze and publish our insights on small, middle-sized and large businesses, the development of cities and communities, global trade and capital flows, and workforce development, among other themes.
- **Big Data.** We have created a high-powered group of experts to enhance our use of data (generated across JPMorgan Chase or purchased externally) to create intelligent solutions for our clients. For example, we are looking at our data assets to help clients in managing collateral positions, assist merchants in gaining insights and aid consumers in validating credit reports, among others. This group will have an unending supply of work.
- **ChaseNet.** We announced this initiative last year. It allows us to rethink the whole end-to-end payment experience for both

consumers and merchants. We now have several clients on a beta test, and we are hoping to roll out some exciting programs that are good for consumers and merchants alike.

- **Payments.** While this topic does keep us up at night due to the talent and innovation of the competition that would love to make us obsolete, we should point out that JPMorgan Chase is one of the biggest payment companies in the world (across credit cards, merchant payments, global wire transfers, etc.). We are even one of the biggest mobile payment companies. So in this space, there is both risk and opportunity. We have some good ideas and action plans so stay tuned!
- **European capital markets.** As the bank markets are shrinking in Europe, the public bond markets will be growing. It is hard for us to compete in the bank lending markets in Europe, but we are very qualified to gain market share in the public capital markets.

THE ROLE OF BANKS IN DEVELOPING SOCIETY

At JPMorgan Chase, we believe we have a responsibility to be part of the solution to the world's most pressing problems, not only because it's the right thing to do but because our own long-term success depends on the success of our communities and the people, companies and institutions we serve.

JPMorgan Chase contributes approximately $200 million a year — much of it to help the poor and disadvantaged — and our people dedicated more than 540,000 hours of volunteer service in local communities around the globe. The volunteer work that our employees do helps to define the meaning of corporate responsibility by creating tangible connections in communities around the world — from the largest countries to the smallest towns.

And our efforts go well beyond philanthropic work. We also develop programs that bring together our financial capital, as well as our core strengths, capabilities, and the expertise of our business and our people to help improve the world in which we live. It is a big responsibility to be a bank — and communities around the globe are better off if we do it well.

We will continue to use our size, scale and expertise to make a difference and to be a real, positive contributor to society — from fighting income inequality to improving education and work skills. I see evidence of the difference we make every day, and following are just a few examples that I'd like to mention.

Helping Close the Skills Gap

Even in the face of high unemployment, we hear from our clients daily about how hard it is to find workers with the right skills. Some 4 million jobs stand open, while 11 million Americans remain unemployed, and millions more have given up seeking employment. That's why we launched New Skills at Work, an unprecedented $250 million, five-year private sector initiative to improve job training at the middle-skill level (for jobs that require training beyond high school but not a four-year degree). The sense of urgency to address this issue is something we see everywhere we do business, and we are working with community leaders across the country — community colleges, technical training programs, policymakers and employers — to tackle the skills gap. We know that helping workers gain the skills they need is only one part of the solution to the unemployment challenge, but it is an area we can do something about right now. And JPMorgan Chase is uniquely suited to the task of rallying a broad range of business leaders around the goal of aligning our investments in education and skills training with current job openings and future career pathways.

- **Emerging markets.** As the world grows, so does the number of countries and companies that we can serve. Every time we open an operation in a country, we support companies from around the world to do business there – and we help the country's companies explore the world. The network effect is huge and hard to duplicate.

Taking everything on balance, all the risks and all the opportunities in what essentially is an improving and growing world, we remain optimistic about the future of banking.

Improving Educational Outcomes for Young Men of Color

We're also willing to roll up our sleeves. Over the last four years, our employees coached 24 young men of color from low-income New York City neighborhoods – where less than 30% of black and Hispanic males graduate from high school – in an end-to-end program that supplemented their academics, gave them leadership training and helped them apply for college. All 24 got into college – they started last fall – with $8 million in scholarships, and we're hoping we see them this summer in internships here.

Attracting Private Capital to Social and Environmental Challenges

Foundations and governments, with their limited resources, can do only so much to solve the challenges facing low-income populations around the world. To make progress at the scale required, we need to create vehicles that attract private capital and apply it to generate measurable social and environmental benefits – alongside financial returns. The Global Health Investment Fund that we established with the Bill & Melinda Gates Foundation raised private capital to invest in new drugs and vaccines, emerging diagnostic tools, child-friendly formulations of existing products, and technologies to reduce maternal and infant mortality – all focusing on diseases that disproportionately affect the world's poorest countries. By including global access requirements, products are available at affordable prices to the populations most in need. And we're working now with The Nature Conservancy to establish a new center for natural capital investing that will structure transactions that generate revenue from sustainable use of a property – monetizing habitat protection, water conservation, sustainable timber harvesting, wetlands, etc. Stay tuned for more on that.

Serving Cities as Clients and the Engines of Economic Growth

JPMorgan Chase continues to focus on ways to help metropolitan communities operate and grow. We offer states and cities our best advice and considerable financial support. Last year, the firm provided more than $85 billion in capital or credit to nearly 1,500 government entities, including states, municipalities, hospitals, universities and nonprofits.

We extended the reach of our Global Cities Initiative with The Brookings Institution by creating a network of trading cities across the United States and ultimately around the globe – these are cities that will build new commercial relationships by strengthening trade and investment ties and by learning from each other about how to grow industries with real export potential. Our Global Cities Initiative with Brookings, which we launched two years ago, includes a $10 million financial commitment and the ability to tap our network of relationships around the world to convene an extraordinary series of events in cities from Los Angeles to São Paulo. These sessions bring together policymakers, business leaders and non-governmental organizations to share best practices and formulate strategies for improved competitiveness. As a result of these meetings, participants are developing locally driven, actionable strategies to strengthen their respective region's trade and investment practices.

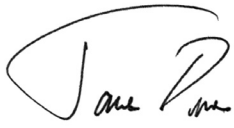
IN CLOSING

It is important to acknowledge that no matter how good one's position is, no one has a divine right to success. Many of you have seen companies in extraordinary positions erode over time. Sometimes this happens because of structural or technological changes, but, frequently, it happens because of plain and simple mismanagement. And this is even more true when you operate in tough, complex, competitive and sometimes volatile global markets.

So to succeed long term, we need an excellent management team. And in my opinion, your management team has the character, culture, intellect, experience and wisdom necessary to succeed.

And importantly, this management team does not rest on its laurels and is continually questioning itself and often focusing not on what we do well but on what we have ***not*** done well. Years ago, the U.S. military adopted a review process called the After Action Reviews (AAR). An AAR is a disciplined process where military leaders review the results of all missions taken. This examination is conducted not so the commanders in charge can find faults and point fingers – but so everyone can continually get better. At our company, we have the same attitude and just hope that we can do it half as well as the U.S. military.

In closing, I want to reiterate how honored I am to work at this company and with its people. What they have accomplished during these difficult circumstances has been extraordinary. On behalf of JPMorgan Chase and its management, I want to express my deepest gratitude to our people – I am proud to be their partner.



Jamie Dimon
Chairman and Chief Executive Officer

April 9, 2014

Safeguarding the business



Matt Zames

Our goal is to be the safest, soundest and most profitable financial services company in the world, doing the highest-quality business and delivering to our clients and customers best-in-class products every day. How we operate as a company is key to accomplishing that goal. Looking across our entire enterprise, the Chief Operating Officer's office drives many of the processes and corporate utilities, as well as the infrastructure, to that end, ranging from managing the firm's liquidity, funding and structural interest rate risk to overseeing strategic firmwide functions such as global Technology and Operations, Oversight and Control, Compliance, Corporate Strategy and Regulatory Affairs, among others.

In the past year, we re-prioritized our major projects and initiatives, deployed massive new resources and refocused critical managerial time on these efforts. We've enhanced significantly our governance process and developed a system for management reporting that enables much greater transparency up to senior management and our Board. We are simplifying our business model, eliminating products and services that are not essential to serving our customers and are not core to our businesses. We are ensuring that our systems, practices, controls, technology and, above all, culture meet the highest standards.

Liquidity and interest rate risk management more critical than ever

Last year, we continued to advance our approach to liquidity and interest rate risk management, cornerstones of safety and soundness. We have focused on striking the appropriate calibration when it comes to managing our balance sheet, protecting the deposits our clients and customers entrust to us and, ultimately, our shareholders.

2013 represents a year of significant progress in managing the firm's liquidity risk. We evolved our internal liquidity framework to ensure that the firm has sufficient liquidity resources to continue business-as-usual operations under both a short-term and prolonged market and company-specific stress. Consistent with this new framework, we more narrowly defined the JPMorgan Chase liquid asset buffer available to meet short-term liquidity needs to be more conservative and consistent with the scale of our balance sheet. We further built out technology that will enable more flexible and timely liquidity stress testing for the enterprise and our major legal entities. Our internal framework is more conservative than the related Basel liquidity measures. Compliance with our framework, which was achieved in 2013, results in the firm exceeding regulatory minimums, notably the Basel III Liquidity Coverage Ratio. Of course, we are diligent in understanding new regulations as they are introduced and stand ready to comply.

We continued to make strides in advancing our Asset-Liability Management (ALM) capabilities, which are critically important as we contemplate the reversal of Fed monetary policy and the ensuing impact on interest rates. We established a global ALM portfolio strategy team in 2013, whose mandate includes working across the firm to ensure consistency in our analytical approach and modeling in relation to structural interest rate risk. A significant area of focus for us this past year was advancing our scenario and analytical capabilities, including materially investing in our technology and supporting infrastructure to allow for more dynamic analysis.

We continue to actively and conservatively manage our substantial investment securities portfolio, which is the primary vehicle we use to manage our firmwide structural interest rate risk. In 2013, we applied held-to-maturity accounting for certain investment securities the firm purchased, which will help to mitigate Basel III capital volatility in a

rising rate environment. The average yield of our investment securities portfolio increased by more than 50 basis points from 4Q 2012 to 4Q 2013, reflecting our ability to deploy new investments at higher yields throughout the year.

We have put enormous resources on the control and compliance agenda

We have developed and implemented an end-to-end control and compliance agenda, central to which is early issue identification and escalation and sustainable remediation. Over the course of 2013 and 2014, we will have increased our total spend on that agenda by approximately $2 billion.

We are looking at issues on a firmwide basis

One of the things we focused on last year is a series of firmwide reviews – issues raised by our regulators and issues we identified internally – that we thought should be examined on an enterprise-wide basis. We stood up 24 separate programs and dedicated teams around the globe to look at these issues across businesses and geographies to make sure we are appropriately and consistently managing the associated risks. They include matters like Anti-Money Laundering (AML), Basel implementation and how we evaluate new business initiatives. Oversight of our tens of thousands of vendors across our front and back offices is another example of a process we re-evaluated, so that across our company, we manage these relationships and their associated risks to a common set of highly developed standards. We report on these programs regularly to our Board of Directors.

Another thing we worked on in 2013 is how to take problems we find in one area of the firm and determine whether there are any similar risks in another part of the firm. We created a state-of-the-art controls room in our executive headquarters to maintain a repository of firmwide control-related information and to enable rapid access to relevant data, reporting capabilities, sophisticated analytics and more proactive issue identification.

We have made substantial progress in AML

We also are deploying unprecedented resources, dedicating senior managerial time and prioritizing efforts to build and maintain an industry-leading AML program. By the end of 2014, we will have dedicated close to 8,000 full-time employees solely to AML. We are making progress in strengthening our ability to measure AML risk, are improving how we onboard clients and perform customer due diligence, and are enhancing how we monitor client transactions to detect potentially suspicious activity. At the same time, we have taken substantial steps to de-risk, or simplify, our businesses. We have exited more than 500 relationships with foreign correspondent banks and are moving any accounts for foreign government officials/politically exposed persons out of Consumer Banking.

We want to make sure we have nothing but open and honest dialogues with our regulators

We have hundreds of regulators around the globe and are examined extensively each year. We also have thousands of documents and data points we periodically share with them. It is imperative that we are fully transparent with our regulators at every level of our organization.

We pay close attention to our regulatory environment, not only to make sure we behave in ways consistent with the spirit as well as the letter of the rules but to anticipate the evolving regulatory agenda. I personally meet with our primary regulators at least twice a month to make sure we as a company understand their expectations and fully address them.

Technology drives the experience of our clients and customers and our risk and controls management

Technology fuels almost every aspect of this company and is a core part of our value proposition to clients and customers. Over the past five years, the firm has invested 8%-9% of its annual revenue to fund our global technology capabilities. This is one of our largest investments as a company. Technology enables our business growth, supports our worldwide operations, helps us build stronger controls and meet regulatory requirements, enhances our productivity and efficiency, and, most important, protects the safety of our clients' assets.

The scale of our businesses continues to expand. Information Technology (IT) supports 300,000 desktops, 58,000 servers in 32 data centers, 26,000 databases and 7,250 business applications. Our global telecommunications network connects our presence in 60 countries along with our 5,600 Chase branches and 19,000 ATMs. Technology in our Consumer business supports 30+ million customers via our digital platform and 15+ million customers using our innovative mobile capabilities. In our Corporate & Investment Bank (CIB), we process up to $4 trillion of U.S. dollar payments daily.

Innovation is happening across our business lines every day. Our Consumer Branch of the Future is powered by IT innovation. Our recently completed Strategic Reengineering Program in the CIB has improved efficiency by hundreds of millions of dollars. IT is improving not only the speed and scale of our credit card authorizations but has enhanced our fraud protection capabilities and is the engine behind new, innovative products, including Blueprint™.

Each year, we invest hundreds of millions of dollars in our risk and controls technology agenda. A sizable part of this investment is dedicated to ensuring that we have the systems to identify problems – whether these problems have to do with AML risk, fraud risk or something else – on a real-time basis. A core objective of our technology strategy is to reduce variability and increase consistency and standardization. As such, one of our most important goals is to lessen our reliance on manual controls, which are more susceptible to human error. We also are seeking to substantially reduce subjectivity to allow for a more consistent and predictable way to identify control gaps in the environment. Systems enhancements, including information technology and data architecture, are critical to the broad management of financial risks.

Our technology environment continues to be tested. In the past two years, we have faced unprecedented cyber threats from sophisticated adversaries bent on wreaking havoc in the financial industry. Two years ago, we saw a rise in "denial of service" attacks aimed at disrupting the flow of financial transactions. We have invested heavily in improving our overall cyber defenses and dramatically improved our ability to withstand these attacks. However, as the threats continue to grow and attacks continue to evolve, it's crucial that we evolve as well and focus on tomorrow's threats, as well as today's. To that end, we've nearly doubled our investment in cybersecurity, including deployment of increased monitoring and protection technology, and we've expanded the number of dedicated cybersecurity professionals in the company to focus on protecting our customers and our staff.

Last year, we kicked off an effort to develop multi-year technology plans for our businesses and corporate functions that reflect the firm's top priorities and business requirements. These "road maps" will enable us to manage the firm's technology investments against the backdrop of a strategic plan, which we'll continue to revisit and refine.

As we look to 2014, our reliance on technology will continue to expand. We will spend close to $250 million on our cyber capabilities. IT will be at the core of what we need to do to adapt to the new global financial architecture and to meet regulatory requirements, including AML, Comprehensive Capital Analysis and Review (CCAR), Volcker and Dodd-Frank, among others. We will leverage our internal cloud platforms to further improve the efficiency and time to market for our IT infrastructure. Each of our business lines has a robust set of strategic initiatives. Whether it is upgrading our next-generation digital and mobile programs, enhancing our Asset Management Solutions business, improving our e-trading platforms, enabling growth in Commercial Banking or making our corporate functions more effective, technology is core to the delivery.

Conclusion

Not every organization has the leadership team, the talent and the fortitude to make this level of investment for the future. We feel privileged to be able to do so on behalf of our clients, our customers and our shareholders. I could not be more proud of our employees and our accomplishments to date. 2014 is another important year for us, and I am confident that we will continue to deliver at the level you expect of us – holding ourselves, our business practices and our culture to the highest standards.



Matt Zames
Chief Operating Officer

Consumer & Community Banking



Gordon Smith

Across Consumer & Community Banking (CCB), we are growing our business by building lifelong relationships with our customers. Throughout 2013, we maintained our strong momentum in creating a great customer experience across all of our channels. Chase ranked #1 among the largest banks by the American Customer Satisfaction Index (ACSI) for the second year in a row, and J.D. Power and Associates ranked us #1 in customer satisfaction in three out of four small business banking regions. These are all significant improvements from three years ago.

We started with the simple theory that if we treat people well, they will want to do more business with us; and this steady focus on improving the customer experience is working. We have relationships with nearly half of the households in America, and that number is growing. The number of households that we serve in Consumer Banking is up 5% from 2012. Average total deposits are up 10% from a year ago, and we've grown deposits at a rate that's more than twice the industry average – that's more than any other bank for the second year in a row.

But improving our customers' experiences does ***not*** mean being all things to all customers. Reducing operational complexity and simplifying our products were top priorities for us in 2013. Complexity can kill a great customer experience. In 2013, we exited products that were not core to our business or that served only a small number of customers. These products more often led to uneven experiences for customers, added complexity for our employees and required additional operational support. As one example, we have greatly streamlined our Mortgage products and programs. In 2010, we offered a suite of 37 products/programs in Mortgage. Over the course of 2013, we reduced them to 25, and throughout 2014, we will further reduce them to 15.

In 2013, we made significant investments in improving our controls. It was a challenging year, and I am very proud of all our Chase colleagues who stepped up to tackle these issues. Having strong controls is simply how we do business going forward, and it will make us a better, more efficient company. We still have work ahead in 2014, but I am confident that as we start 2015, we will have put many of these legacy issues behind us.

Exceptional franchise

CCB is an exceptional franchise with leadership positions across our businesses. I wouldn't trade our portfolio of businesses for anyone's. We are the #1 credit card issuer in the U.S. based on loans outstanding, the #1 Small Business Administration (SBA) lender, the #1 U.S. co-brand credit card issuer, #1 in total U.S. credit and debit card payments volume, the #2 mortgage originator and servicer, and the #3 bank auto loan originator.

In addition, we are leading the way in making it easier for our customers to do their banking when they want and how they want. Chase has the #1 ATM network, #2 retail branch network and #1 mobile banking functionality, and chase.com is the #1 online financial services destination. Few, if any, banks can provide customers the quality of products and channels that Chase can.

2013 financial results

In 2013, CCB delivered strong results in a challenging environment. Our net income was $10.7 billion, up slightly from $10.6 billion in 2012. Our revenue of $46.0 billion was down 8% from $49.9 billion in 2012, driven by lower mortgage production volume as fewer Americans refinanced when interest rates rose in the second half of the year. We also felt the impact of lower deposit margins and lower loan balances. We ended 2013 with a strong return on equity of 23%.

CCB had double-digit growth in most of our businesses. Consumer Banking average deposits were up 11%, client investment assets were up 19%, Business Banking average deposits were up 13%, credit card sales volume was up 10%, merchant processing volume was up 14% and auto originations were up 12%. These numbers are the strongest we've seen in years. The outlier was mortgage originations, which were down 8%, consistent with the industry.

Here are some highlights from our individual business units:

- Consumer & Business Banking net income of $2.9 billion was down 10% from 2012, but net revenue of $17.3 billion was up 1%. Chase Private Client (CPC) continues to be a big success with our customers. We reached a record $189 billion in client investment assets. Our net new investments per household have grown 77% per year since 2010. To date, we have opened roughly 2,150 CPC locations to serve more than 200,000 clients. We remain the #1 SBA lender for the fourth year in a row even with Business Banking loan originations down 21% from 2012.
- We are managing Mortgage Banking toward becoming a smaller, higher-quality and less volatile business. While Mortgage Production was strong in the first half of the year, our origination volume dropped 37% in the second half as rates increased. As a result, our full-year net income was $3.1 billion, down 8% from 2012. Return on equity was 16% for 2013. Although these results are lower than last year when production volume was a record, we are pleased that Mortgage Banking is maintaining profitability.
- Card, Merchant Services & Auto performed exceptionally well in 2013. Net income was up a very strong 19% to $4.8 billion from $4.0 billion in 2012, driven by lower provision for credit losses. Card Services sales volume of $419.5 billion was up 10% year-over-year, outperforming the industry for the 23rd consecutive quarter. Credit trends continue to improve, and charge-off rates continue to fall to historic lows. Our 2013 net charge-off rate for Credit Card of 3.14% was down from 3.95% in 2012.
- Over the years, Chase has developed a leading end-to-end payments franchise. Merchant Servicing processing volume of $750.1 billion was up 14% year-over-year, and transaction volume of 35.6 billion was up 21%.
- In Auto, our average loans were up 5% year-over-year, and originations were up 12%. The Auto net charge-off rate of 0.31% was down from 0.39% in 2012. In 2013, we also made the strategic decision to stop student loan originations. Student loan originations were becoming a smaller and smaller part of our business, and we chose to further de-risk our franchise by getting out of that product.

Expenses

CCB expenses were down by nearly $1 billion, or 3%, during 2013, and we will continue to drive out waste and improve efficiency. We are pleased that we met or exceeded our expense and headcount targets for 2013. Going forward, we have set a more ambitious goal to exit 2016 with expenses nearly $4 billion lower than they were in 2013. We intend to meet that goal while making further investments in controls, technology and self-service channels. We are keenly aware that every dollar of our budget is a dollar of shareholders' money, and we intend to manage our business with extreme financial discipline while producing strong, long-term returns.

2014 priorities

As we move into 2014, we recognize that the environment in which we operate has fundamentally changed. Our core strategy includes **further strengthening our controls, investing in digital service** and **running great community branches**.

Further strengthening our controls

Controls remain the #1 priority for the firm.

In 2014, CCB will invest approximately $500 million more in technology-related controls. That investment will be directed at automating manual processes and reducing complexity for our employees and our customers. We believe these investments will more than pay for themselves with fewer errors, more consistency and a higher-quality service experience for customers down the road.

Investing in digital service

Technology is changing our business rapidly, and consumer adoption of digital and mobile channels is staggering. In just the past three years, customer deposits made through self-service channels increased from 38% to 53%. The number of active mobile customers has more than tripled from 2010. Technology is driving service enhancements for our customers that will not only improve their banking experience but will serve them more efficiently and lower our cost base.

As an example, in December of 2013, we launched an Ultimate Rewards mobile app for our customers to redeem their credit card points. Within the first month, mobile reward redemptions reached 15%. Customers are very pleased by how easy it is to cash in their points. It's also far more efficient to do so; a mobile redemption costs about a penny vs. $3 through a call center. Technology innovations really are a win-win. They make banking more convenient for our customers ***and*** reduce our cost to serve them.

We intend to continue to be at the forefront of innovation in Payments. In 2014-2015, we will roll out two new features – Chase Wallet and Pay with Chase. Chase Wallet will greatly simplify online and mobile shopping for our customers by allowing users to access all their credit and debit cards, including non-Chase cards, in one digital wallet. And unlike other digital wallets, the Chase Wallet will automatically update the Chase card numbers when cards are replaced.

Chase Quick Checkout will give customers a "Pay with Chase" option when they shop online. Using their Chase log-in, they can access their digital wallet, select a payment option and place their order. It will reduce the online/mobile checkout from about two minutes to roughly 30 seconds. It's more convenient and safer for customers, and online businesses should see increased sales and lower shopping cart abandonment.

Running great community branches

Branches remain very important to our customers. More than 95% of Chase accounts are opened in a branch, and branches are essential to our other businesses across JPMorgan Chase. For example, 55% of Commercial Banking customers and 35% of Private Banking households visit a Chase branch every quarter. Branches are a core distribution channel for our other products as well – 55% of retail mortgages are originated through a branch, and 40% of Chase-branded credit cards are sold through the branches.

Branches aren't just a store – they also are centers of community. During and after severe storms or community crises, we've seen people come to the branch for help. They come in to make calls and charge their phones when they are out of power or they stop by simply for a hot cup of coffee. In addition, we've hosted events in branches on how to manage a small business or to better understand personal finance.

Branches will always be the lifeblood of our business, but we are seeing foot traffic and transaction volume come down as more customers prefer to do their daily banking online and through mobile. Teller transactions have declined 4% per year from 2010 to 2013, and nearly 60% of all traditional branch transactions now are handled through self-service channels.

Over the past several years, we have built out our network in growth markets, and that expansion now is complete. We have a terrific network to serve customers, and we plan to keep the number of branches in our footprint in the current range. We will further optimize the network we have – opening locations where we see growth opportunity and consolidating where we have enough density or low traffic. As always, customer behavior and satisfaction will drive those decisions.

The branches are changing. We used to talk about the "branch of the future," and, in many cases, it's here. Branches are becoming more and more automated. Today, over 300 branches have Express Banking Kiosks, which are designed to perform 85% of what can be done by a teller. Today's branch also will be more focused on providing great financial advice from one of our experts. If you haven't been to a Chase branch lately, I encourage you to stop by. We've come a long way.

Conclusion

I'm proud to work at Chase. Our more than 150,000 employees work so hard to help customers achieve their goals, whether assisting in a branch or a call center or working hard behind the scenes. Thank you to our shareholders for your investment in us, and thank you to our customers for your business.

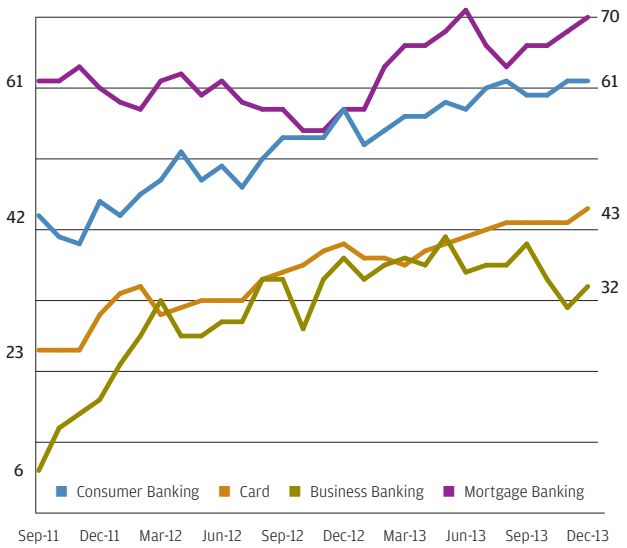


Gordon Smith
CEO, Consumer & Community Banking

2013 HIGHLIGHTS AND ACCOMPLISHMENTS

- #1 in customer satisfaction by ACSI among the largest banks for the second year in a row
- #1 in customer satisfaction by J.D. Power and Associates in three out of four small business banking regions
- #1 SBA lender for the fourth year in a row
- #1 for women-owned and minority-owned SBA loans
- Deposit growth more than double the industry average
- Customer relationships with almost half of U.S. households
- #1 credit card issuer in the U.S. based on loans outstanding
- #1 online financial services destination (chase.com) and #1 mobile banking functionality
- #1 in total U.S. credit and debit payments volume
- Record credit card sales and client investment assets
- #2 mortgage originator and servicer
- #1 ATM and #2 retail branch network for the second year in a row
- #2 wholly owned merchant acquirer
- #3 non-captive auto lender
- #5 in customer satisfaction by J.D. Power and Associates in mortgage originations and servicing
- 135,000 homeowner foreclosure preventions
- 360,000 downloads of the Chase My New Home℠ mobile app

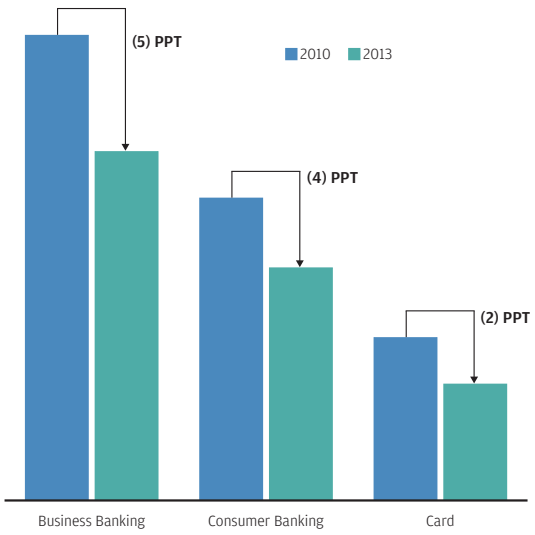
Net Promoter Score[1]



Source: Internal data

[1] Net Promoter Score (NPS) represents the percentage of customers who say they would definitely recommend Chase to a friend or colleague (promoter who gave Chase a rating of 9 or 10 on a 10-point scale) vs. those who would not (detractors who gave Chase a rating of 0 to 6); a higher NPS signifies greater customer loyalty

Household Attrition[2] by Business Line



Source: Internal data

PPT = Percentage points

[2] Households that close all Chase accounts



The future is here

Chase reopened its Water Street branch in downtown New York City after flooding from Superstorm Sandy destroyed it. The new Chase branch design uses some of the most advanced technology for customers. Chase has been redesigning many of its new locations to this format, about 400 in total.

Corporate & Investment Bank



Daniel Pinto

As the world's economy regained momentum in 2013, J.P. Morgan's Corporate & Investment Bank (CIB) solidified its leadership in an increasingly global financial market.

A truly global business, the CIB has 52,250 employees in 60 countries with a mission to serve 7,700 of the world's most significant companies, governments and institutions. To provide those clients with the range of services they need, more than 13,000 employees are in front office lines of business such as banking, markets, investor services and research. The remainder is primarily dedicated to technology, operations, risk and finance to ensure we have best-in-class controls and a robust operating infrastructure.

Demonstrating our ability to deliver strategic solutions, we helped clients raise nearly $500 billion in the public equity and bond capital markets in 2013, according to Dealogic. Overall, the CIB provided credit and raised capital for clients of more than $1.5 trillion[1] in 2013. Of that, $65 billion[2] was raised on behalf of states, local governments, hospitals, school districts and nonprofits, providing them with necessary funds to build schools, roads and college facilities and to support other infrastructure projects.

Markets revenue of $20 billion was up materially from the level in 2006, at $12 billion. More than 85% of the 2013 markets revenue was attributable to client-driven, flow-oriented products.

On the processing side of the CIB's operations, J.P. Morgan continues to rank as the #1 U.S. dollar clearer, processing up to $4 trillion of U.S. dollar payments daily. In our custodial business, clients entrusted the firm with a record $20.5 trillion in assets under custody, up 9% from 2012.

When J.P. Morgan combined the strengths of the heritage Investment Bank and Treasury & Securities Services in 2012, the aim was to ensure that clients benefit from the most effective mix of products, delivered in the most integrated way. Now organized within the CIB as Banking and Markets & Investor Services, the businesses have been aligned to promote their working together across sales, products and services, a structure that makes cohesive sense for our clients.

That collaborative structure enables the CIB to cover clients more comprehensively. Recognizing that trust is the cornerstone of our client relationships, we are committed to recommending only the solutions that serve our clients' long-term objectives. We never forget that their success is the best measure of our own.

We also know that our work for clients helps support a healthy global economy. Our deep and broad relationships enable us to connect investors looking for promising opportunities with the corporations and governments looking to access capital.

By raising money or by guiding a business through its initial public offering, we are providing clients with the resources they need to grow, to develop new products or to extend their footprint into new markets. When our Treasury Services business provides clients with liquidity management solutions for cash balances or helps clients secure trade financing, we're helping those clients enhance their operational efficiency. And when our Public Finance business provides financing for a metropolitan transit system, we're helping cities work better and improve the environment.

Those positive results ripple through the global economy. Ultimately, they help raise standards of living, expand job opportunities and create innovative technologies. We are proud of our accomplishments and look forward to continuing our work in 2014.

Our 2013 financial performance

The CIB's product strength and client focus were evident in our leadership roles on some of the major landmark transactions of 2013:

- J.P. Morgan advised Verizon on its $130 billion buyout of Vodafone's

45% stake in Verizon Wireless, serving as global coordinator, joint lead arranger, joint bookrunner and administrative agent on Verizon's $61 billion bridge facility, the largest corporate debt facility ever, and as joint bookrunner on the subsequent $49 billion bond. This transformational deal drew on the expertise of J.P. Morgan's franchise across multiple product and coverage groups globally.

- Just two days later, we followed that up with another significant transaction for a telecommunications company – a $6.5 billion bond offering for Sprint, the largest high-yield transaction ever sold to investors. The two transactions, coming within days of each other, made it a week the Technology, Media and Telecommunications team will long remember.
- In equities, Facebook closed out 2013 with a $3.9 billion follow-on offering, with J.P. Morgan acting as joint bookrunner. This was the largest follow-on offering of 2013 and the second-largest technology follow-on since 2006.
- In Public Finance, we came through for public agencies around the U.S. During the year, it led a $656 million series of bonds to modernize housing for New York City's lowest income residents and to refund previously outstanding debt. It served as senior manager on a $1.5 billion bond offering for JobsOhio, a unique program aimed at growing existing jobs and attracting new ones to the state, and was lead manager on $1.3 billion in revenue bonds for the University of California in a refinancing transaction that produced more than $200 million in debt service savings for the university system.

What distinguishes the CIB further, beyond our strong product capabilities, is how our integrated model works for our clients.

Because of that integrated approach, a leading European insurance company, after assigning a custody mandate to our Investor Services unit, also ultimately benefited from a credit facility from J.P. Morgan. And when a large asset manager, with a historically long relationship with the firm across Markets, Banking and Custody, needed prime brokerage services, it chose J.P. Morgan.

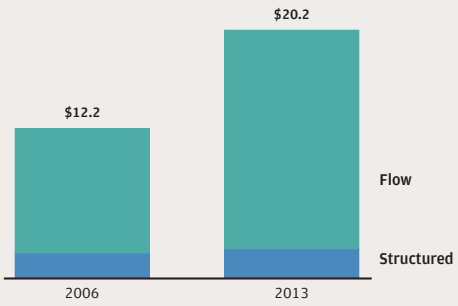
Turning to our financial results, 2013 was a strong year for the CIB, which reported net income of $8.5 billion

CIB Integrated Client Coverage Model



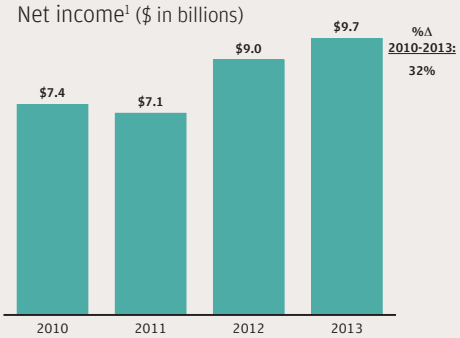
Markets Revenue Dominated by Client-Driven Flow Business

Markets revenue by flow vs. structured ($ in billions)



Strong Earnings Power

Net income[1] ($ in billions)



[1] Net income excludes funding valuation adjustments (FVA, effective 4Q 2013) and debit valuation adjustments (DVA)

on revenue of $34.2 billion and a reported return on equity of 15%. Excluding the impact of funding and debit valuation adjustments (FVA and DVA), the CIB delivered net revenue of $36.1 billion[3]; net income of $9.7 billion[3], an increase from last year's $9.0 billion[3] and up 32% from 2010; and a return on equity in 2013 of 17%[3], one of the strongest in the industry.

Our share of total industry revenue continues to grow. We put more distance between ourselves and our competitors with market share gains, as measured by both fee wallet and markets revenue share.

In an industry where investment banking fee wallet grew by 11% compared with the previous year, J.P. Morgan's wallet share advanced 110 basis points, according to Dealogic, more than what most other large firms experienced. Along with our #1 ranking in Global Investment Banking fee wallet share, Dealogic ranked J.P. Morgan, based on volume, #1 in Global Debt, Equity and Equity-Related; #1 in Global Long-Term Debt; and #1 in Global Loan Syndications. J.P. Morgan also earned a strong position in Global Equity and Equity-Related and Global M&A Announced, ranking #2 in both categories. Our M&A teams advised on eight of the top 10 transactions announced globally in 2013, ranking #1 in the U.S. and #2 in the Europe, Middle East and Africa (EMEA) region.

On the Markets side, we are a leader in fixed income, with an 18.6% market share in 2013, up from 15.6% in 2012[4]. We also earned a strong market position in Equity Markets this year, and we continue to be focused on moving from our current #4 equity markets overall revenue position[4] to a top three ranking as we build out key areas within our franchise. The CIB's Equity Markets performance in 2013 was materially strengthened by our #2 position in derivatives, according to Coalition, and the investments made in our electronic capabilities, which now are on par with the market leaders.

As noted above, our markets revenue is well-diversified, with the majority derived from client-driven, flow-oriented products. The remainder is driven by structured products, which are geared toward helping clients with their more complex risk management and other needs.

Across the spectrum of products in Banking and Markets & Investor Services, the CIB ranked among the top three in 15 out of 16 key product categories in 2013[5]. While we take pride in those rankings, we never are complacent about them. Nor do we take them for granted. The rankings are not the goal; they're a reflection of the quality of our product offerings, the dedication of our people to serving clients around the globe and a demonstration of our clients' increasing interest in working with us.

International reach

We are committed to having a presence where our multinational clients need us to be. And we intend to actively assist developing corporations in pursuing their growth aspirations so they, too, can take their place among the next generation of multinationals. Virtually half of the CIB's revenue today stems from international business activities and has grown at a compound annual growth rate of 5%[3] since 2010. More than 60% of our clients are international. Of our total employees, close to 60% are based in offices throughout EMEA, Asia Pacific and Latin America.

This international platform lays the foundation necessary to provide our multinational clients with the coverage to serve their needs, both in their headquarters and in subsidiary locations. Our international focus is not new. We've been in China for 93 years; we've done business in the United Kingdom since the mid-1800s; we've been in Mexico for more than 100 years. We are one of the few institutions that has the commitment and resources required to maintain a global client and product network of this magnitude. Although we continue to see growth in our existing international platform, the pace of that growth may slow in the near future as we ensure that we have best-in-class controls.

Being invested globally requires a long-term view as inevitable periods of volatility will arise from time to time. It's during those times, when capital is more scarce or when market-making becomes more challenged, that our clients need us the most. That's when our steady presence helps cement client relationships in a way that's lasting years later.

Our 2014 priorities

In 2013, our leadership across the breadth of Banking and Markets & Investor Services positioned us well to build on our strengths and provide clients with the financial tools to seed their growth and economic vitality into the future.

In support of these objectives, the CIB's 2014 priorities are focused on three broad pillars:

- Optimizing our business mix while investing in core growth opportunities;
- Adapting to the evolving regulatory landscape and market structure changes; and

- Maintaining expense discipline while absorbing increased regulatory and controls costs.

As the CIB, we strive to be at the forefront of market structure changes. As a major custody bank and leading broker-dealer, we are well-positioned to act as the agent of choice for clients – taking them from execution to clearing and custody. By our estimate, we have a top-three share in over-the-counter clearing and are connected with all the major swap venues. We also are assisting our clients to adapt to market structure changes through creative, new offerings such as Collateral Central. Launched in 2013, the service helps clients manage their collateral across multiple venues and enables them to continually track and optimize the use of their available assets against their obligations across all counterparties. And finally, also in the Investor Services space, our international prime brokerage platform has seen significant growth from EMEA-based managers since its 2011 launch, and as our Asia core platform now is live, we expect to ramp up meaningfully over the next several years.

Across Markets, we continue to develop our electronic market-making capabilities in equities, as well as in fixed income. We've seen significantly greater e-trading volume in both foreign exchange and equities since 2011, and we were the top-ranked bank by volume in U.S. Treasuries trading on electronic interdealer platforms in 2013.

While we are investing in these growth opportunities, we are selectively exiting certain activities – such as the Global Special Opportunities Group and our physical commodities business – having determined that they are not core offerings to our clients or no longer fit our desired risk profile. We do not expect these exits to meaningfully affect the CIB's return profile.

Our integrated platform of core businesses provides us with significant economies of scale, and our financial strength allows us to make the investments necessary to ensure compliance with an expanding set of regulations. By maintaining a disciplined approach in expenses, we have been able to largely offset increased spending on regulatory assessments and controls. In fact, the market share gains achieved during 2013 occurred even as the CIB's overhead ratio was reduced from 62%[3] in 2012 to 60%[3] in 2013.

Closing thoughts

Deep market knowledge, a global platform and long-lasting client relationships built on trust have served our firm and our clients well. We are a market leader because we set the standards for what can be done, not what has been done before.

Our top priority remains helping our clients achieve their objectives with the best possible advice and products we can provide. Since the formation of the CIB, clients have shown they are embracing our model and actively seek the range of capabilities and expertise we possess. With the continued energy and commitment that our employees demonstrate, we expect to earn our clients' business again this year, setting new standards for their success – and for ours.



Daniel Pinto
CEO, Corporate & Investment Bank

2013 HIGHLIGHTS AND ACCOMPLISHMENTS

- The CIB provided credit and raised capital of more than $1.5 trillion[1] for clients in 2013, up 20% from 2012
- The CIB produced net income of $9.7 billion[3] in 2013, up 32% from 2010, and a return on equity of 17%[3]
- The CIB ranked among the top three market positions in 15 out of 16 major products[5]
- J.P. Morgan ranked #1 in Global Investment Banking fees, with an 8.6% share, up from 7.5% in 2012, according to Dealogic
- Assets under custody reached a record $20.5 trillion, a 9% gain over 2012
- There are 52,250 employees globally, serving approximately 7,700 clients in 60 countries
- Key growth initiatives include global prime brokerage, electronic trading and market structure changes

[1] Dealogic and internal reporting

[2] Thomson Financial, internal sources

[3] Net revenue, net income, return on equity and overhead ratio, excluding FVA (effective fourth quarter 2013) and DVA, are non-GAAP financial measures. These measures are used by management to assess the underlying performance of the business

[4] Represents rank and share of J.P. Morgan Fixed Income Markets and Equity Markets revenue of 10 leading competitors based on reported information, excluding FVA and DVA

[5] Dealogic, Fedwire & Clearing House for Interbank Payments System, Coalition and internal reporting

Commercial Banking



Douglas Petno

In Commercial Banking, serving our clients is at the heart of everything we do. Each day, we come to work to generate ideas, deliver solutions and provide capital to help them grow and succeed. We take a long-term view and stand by our clients in tough times.

It is difficult to capture in words the strength of our relationships. There are so many incredible stories that I could share, but one of the most memorable came from a small business owner in Cleveland. He described how his international operations were crippled by the tsunami in Japan in 2011, and when – despite their 40-year relationship – his former bank refused to help, he turned to our team. In a matter of days, we were able to raise the needed capital to help him make it through a very difficult time. Today, the client's business is thriving again, and we have found additional ways to support him along the way. His emotional testament to our partnership was quite moving – and spoke to the power of our franchise and the quality of our bankers across the country.

Our people

The strength of our business starts and ends with our people – integrity, fortitude, compassion and partnership are the values they bring to work every day. These are what power our long-standing relationships and drive our success. Our 1,300 bankers[1], who average more than 20 years of experience, have deep local perspective and tested credit judgment.

Across Commercial Banking, our nearly 7,000 employees are dedicated to their communities, working with chambers of commerce, sitting on local boards, and staying active in school and service organizations. Over the past year, our people have made a difference in many ways, including volunteering their time to provide job counseling to military veterans, serving meals to families at a Ronald McDonald house in Chicago, stuffing backpacks for underprivileged children in Dallas and painting a community center in Brooklyn. I am inspired by our team's passion for their clients and communities.

Our model

Commercial Banking's proven business model provides the flexibility to manage challenging market conditions, regulatory changes and evolving client needs. Experienced teams in 29 states, 119 U.S. cities and 13 major international locations give us broad reach, and we serve approximately 59,000 clients, owners and investors in more than 40 of the top 50 U.S. metropolitan areas. Our bankers understand their markets, which enables them to make decisions locally and react quickly and proactively for clients. Rigorous client selection is one of the pillars of our model and results in a high-quality client base. Our industry expertise coupled with our local perspective allow us to select the best clients in the markets we serve.

Being a part of JPMorgan Chase means we can offer a broad range of unique capabilities. There are many examples of how we work across lines of business to deliver the firm to our clients. Our partnership with the Corporate & Investment Bank has never been stronger. We were extremely active last year, leading 833 financing transactions, including 31 initial public offerings, and advising clients on 67 merger and acquisition (M&A) transactions. In addition, the Corporate & Investment Bank's treasury services products are essential to our business, generating $2.4 billion in revenue last year.

The Consumer & Community Banking network has been critical to the success of our Middle Market Banking business. Our clients used Chase branches almost 18 million times last year. Increasingly, they use our commercial card and merchant processing services, and we see an opportunity to bring specialized payments solutions to even more clients.

Ultimately, there are many reasons why clients choose us. They recognize the quality of our professionals, the value of our brand, our financial strength and stability, our global reach and the ease of dealing with one firm for all of their financial services needs.

2013 results

Although the economy remained fragile and competition intensified in 2013, we continued to stay focused, invest in our business and maintain our risk discipline. Commercial Banking delivered revenue of $7.0 billion and net income of $2.6 billion, up 2% and down 3%, respectively, from 2012. Demonstrating our strong partnerships across the company, we had record-setting revenue in several areas, including investment banking revenue[2] of $1.7 billion, Card Services revenue[2] of $438 million and International Banking revenue of $261 million.

Even as many of our clients remained cautious, paying down debt and increasing liquidity, Commercial Banking continued to perform and has delivered 14 consecutive quarters of overall loan growth. Importantly, we achieved these results while adhering to our strict credit standards, and our net charge-off rate of 0.03% was one of the best in the industry. A solid credit culture and strong risk discipline have been critical to the success and stability of our franchise.

We continued to see our Middle Market Banking expansion strategy deliver steady results. Since 2006, we have successfully entered 16 major new markets across the country. Commercial Banking's growth in the Florida market is one of many excellent examples highlighting this progress. Five years ago, we entered the state with 20 employees and seven Middle Market Banking clients. By 2013, our Florida business had 77 employees, 250 clients, and more than $1.3 billion in loans and $1.2 billion in deposits. Over time, we believe this to be a tremendous opportunity to expand and deepen our Middle Market Banking franchise. Our long-term success will depend upon continuous investment, patience and the determination to stick to our strategy.

Since 2008, we have concentrated on selectively building our real estate loan portfolios, and the success of our real estate business remains a highlight. Commercial Term Lending saw record loan growth and continued to be the top multifamily lender in the U.S. Real Estate Banking had a record $9 billion in loan originations last year, and we continued to see excellent opportunities to support our clients and grow our portfolio. Exemplifying our strong focus on local communities, Community Development Banking remained quite active. The team completed transactions that financed the development of more than 8,200 units of affordable housing across the U.S., as well as other community-based projects, including charter schools, health clinics and grocers.

Overall, return on equity for the business was 19%. We achieved these returns despite a materially higher capital allocation and continual significant investments to grow our franchise and improve our compliance capabilities and controls. While we are proud of these results and our business is strong, we are committed to making Commercial Banking even better.

Looking ahead

As the U.S. economy continues to improve and our clients gain the confidence to increase borrowing for new projects and growth initiatives, we stand ready to support them. With greater economic activity, we expect to see more M&A and capital markets transactions, and we will work closely with the Corporate & Investment Bank to assist in these efforts. Our corporate clients are increasingly expanding outside the U.S., and we are well-placed to help them. In addition, to help our clients navigate transformational changes in key industries, we have invested in specialized teams covering areas that include healthcare, energy and technology.

A top priority across the firm is ensuring we fully meet the letter and spirit of all regulations governing our business. We will continue to improve our regulatory and compliance processes, and we have asked several of our key executives to lead those efforts full time.

In 2013, the Commercial Banking team rose to the occasion and overcame market uncertainty and regulatory challenges. I want to thank our dedicated professionals for their continued commitment and hard work. I am incredibly proud of what we have accomplished.

We have a solid foundation built upon our people and the extraordinary capabilities and scope of our firm. I believe we have the strategy and resources in place to continue to deliver dynamic opportunities for our employees, a great experience for our clients and strong returns for our shareholders.



Douglas Petno
CEO, Commercial Banking

2013 HIGHLIGHTS AND ACCOMPLISHMENTS

Performance highlights

- Record revenue of $7 billion
- Grew end-of-period loans 7%; 14 consecutive quarters of loan growth
- Generated return on equity of 19% on $13.5 billion of allocated capital
- Continued superior credit quality – net charge-off ratio at 0.03% for second consecutive year

Leadership positions

- #1 traditional middle market syndicated lender[3]
- #1 U.S. multifamily lender[4]
- Recognized with 2013 Greenwich Associates' Excellence Awards in Middle Market online services, international service and treasury management and Mid-Corporate Banking investment banking and international service

Business segment highlights

- Middle Market Banking – Record revenue of more than $3 billion; nearly 800 new client relationships; double-digit growth in both loans and deposits in expansion markets
- Corporate Client Banking – Record gross investment banking revenue[2] and credit quality improvement
- Commercial Term Lending – Record growth: $6 billion increase in multifamily loan balances (up 17%)
- Real Estate Banking – Record originations (up 35%); 6% deposit growth
- Community Development Banking – More than $1 billion in new commitments, supporting ~8,200 affordable housing units in the U.S.

Firmwide contribution

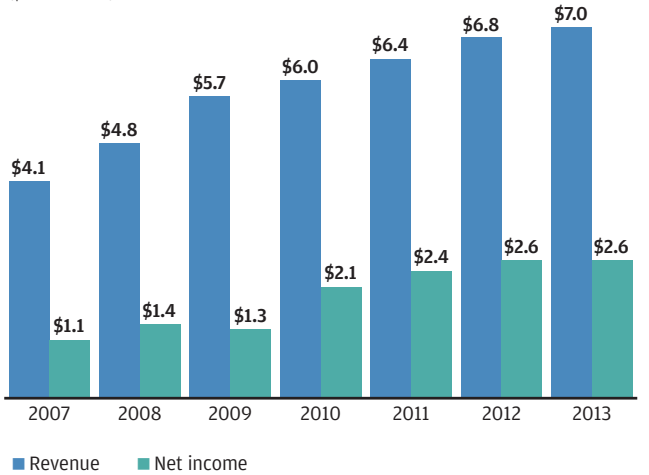
- Commercial Banking clients accounted for 29% of total North America investment banking fees[5]
- $2.4 billion in treasury services revenue
- Almost $100 billion in assets under management from Commercial Banking clients, generating close to $500 million in Investment Management revenue
- Nearly $440 million in Card Services revenue[2]

Progress in key growth areas

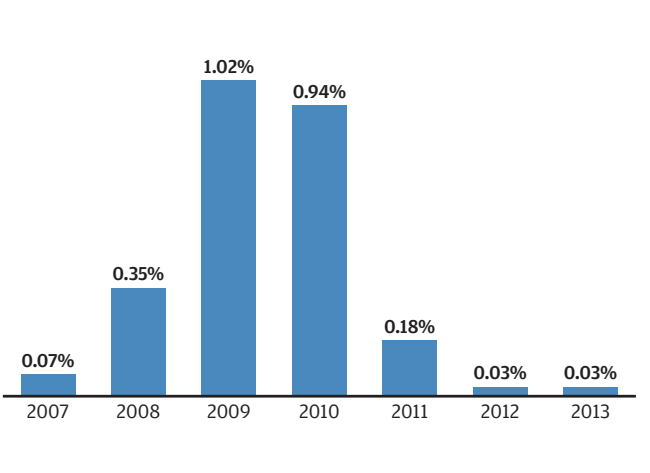
- Middle Market expansion – Record revenue of $287 million; 46% CAGR[6] since 2011
- Investment banking – Record gross revenue[2] of $1.7 billion; 9% CAGR[6] since 2011
- International Banking – Record revenue[7] of $261 million; 16% CAGR[6] since 2011

Strong Growth and Resilient Earnings

($ in billions)



Strong Credit Portfolio (net charge-offs)



[1] Based on total number of revenue-producing employees

[2] Investment banking and Card Services revenue represents gross revenue generated by Commercial Banking clients. Investment banking includes Banking and Markets revenue. Card Services includes Commercial Card and Paymentech revenue

[3] Thomson Reuters as of year-end 2013. Traditional middle market is defined as credit facilities of < $100 million from clients with < $500 million in revenue

[4] Federal Deposit Insurance Corporation data as of 4Q 2013

[5] Calculated based on gross domestic investment banking fees for syndicated and leveraged finance, M&A, equity underwriting and bond underwriting

[6] Compound annual growth rate

[7] Denotes overseas revenue from U.S. multinational clients

Asset Management



Mary Callahan Erdoes

Strong fiduciary culture of managing money

In Asset Management, our heritage of managing client assets dates back over 180 years. During that time, we've stood side by side with our clients as markets have reached record highs, hit bottom and seen everything in between. Through the highs and lows, clients have relied on us to help them see through the noise to make smart, long-term decisions that are always in their best interests.

Our strong fiduciary culture enables us to provide advice and solutions that help individuals retire more comfortably, pension funds meet their obligations, universities reinvest in important endeavors and wealthy families ensure lasting legacies. Although difficult to quantify, those are our ultimate measures of success.

60% of the largest institutions and many of the world's wealthiest individuals

The core roots of our business began with serving the world's most sophisticated institutional clients. Today, not only do we work with 60% of the largest pensions and sovereigns, we also advise wealthy families and individuals on everything from money management to trusts and estates to mortgages, banking and lending.

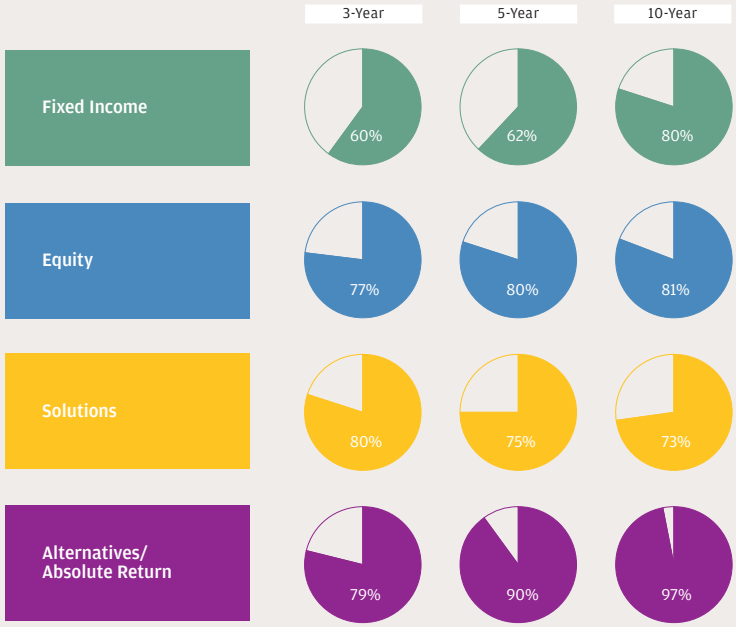
3,000 intermediaries investing for clients

Our success in working with institutions and individuals provided the foundation for packaging our investment expertise into mutual funds. Globally, more than 3,000 financial intermediary firms invest on their clients' behalf in our full range of solutions, which spans fixed income, equities, multi-asset and alternatives strategies.

20,000 people in 30+ countries

Across the more than 30 countries where we operate, all of our 20,000 employees live by our ethos of first-class business in a first-class way. The heart of what they do is managing money for our clients. We are proud that 241 of our mutual funds ranked 4 or 5 stars by Morningstar and that 80% of all our assets

% of 2013 AUM Over Peers/Benchmark[1]
(net of fees)



[1] Fixed Income, Equity and Solutions represent percentage of mutual fund assets under management (AUM) in top two quartiles vs. Lipper, Morningstar and Nomura peers; Alternatives/Absolute Return represent percentage of AUM exceeding benchmark

are in the first or second performance quartile during the 10-year period.

Part of a global leader in every segment

In addition to insights from some of the industry's best advisors and strategists, we can offer clients solutions that span their broad personal and business financial needs by partnering across the JPMorgan Chase franchise, which has best-in-class consumer and community banking, commercial banking and investment banking capabilities.

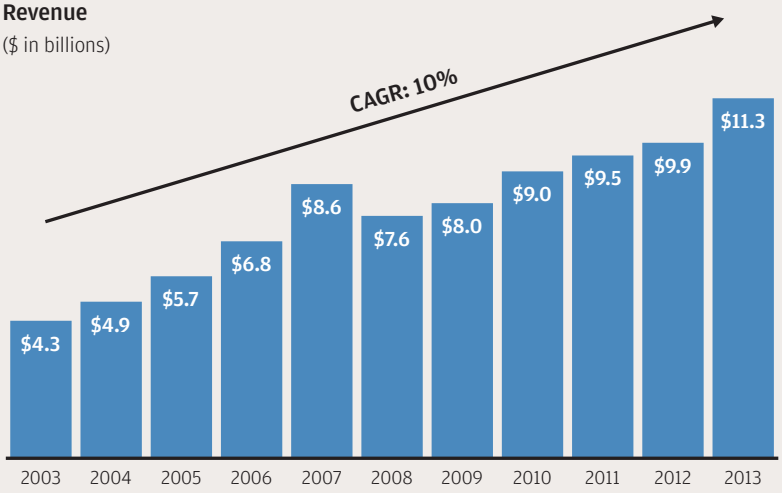
Half a trillion in five years

The stability and strength of the relationships we have built – some of which span generations and more than 100 years – perhaps are most evident in the $475 billion of cumulative positive long-term flows we received following the 2008 financial crisis. Since 2009, we have achieved positive net flows from every channel, every asset class and every region.

19 quarters and 11 years

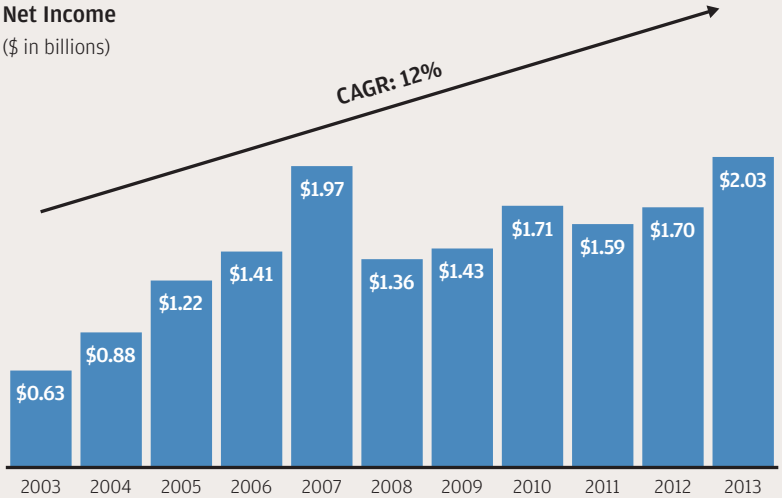
Equally impressive, our investment management business reached its 19th consecutive quarter of net long-term inflows, the longest such streak by any of our key competitors. Our wealth management business marked its 11th year of positive client flows, as well as record year-end balances in deposits, mortgages and loans.

Revenue
($ in billions)



CAGR = Compound annual growth rate

Net Income
($ in billions)



Record financial results driven by continued investment

Asset Management's financial performance maintained its steady growth trajectory in 2013. Our revenue of $11.3 billion, net income of $2.0 billion and client assets of $2.3 trillion all were records – up 14%, 19% and 12%, respectively. While that's clearly an outstanding year, our long-term performance is just as strong, with a 10-year compound annual growth rate[2] of 10% for revenue, 12% for net income and 7% for client assets.

1,000+ new advisors and continued reinvestment

Our financial success is the result of having advisors who are laser-focused on our clients' needs and our constant dedication to growing the business by continually reinvesting in our people, technology and innovation. We have been focused on adding top talent on the ground where

[2] The 10-year compound annual growth rate for revenue, net income and client assets is based upon pro forma combined historical financial information reflecting how the operations of JPMorgan Chase & Co. and Bank One may have appeared on a combined basis had the two companies actually been merged as of January 1, 2003

clients need us most. We have hired more than 1,000 advisors globally since 2009. It's a virtuous cycle: As revenue and net income increase, both provide us with capital to fuel future growth and strengthen our infrastructure and coverage of clients around the world.

Priority #1: Controls

As we continue to invest, we also are scaling our infrastructure to ensure we have the appropriate oversight and controls. We've made great progress in these efforts, which will remain a top priority in 2014. We have a strong partnership with our regulators around the world and are committed to maintaining a world-class culture of compliance and controls.

2014 strategic priorities

Our long-term strategy and approach mean that many of our priorities remain consistent with what I have shared in recent years. Four of our core focuses continue to be:

- Strong investment performance across a broad range of products.
- Predictable delivery of financial targets.
- Continuous reinvestment into the business.
- Global enhancement of our clients' experience.

Deepening our client relationships

In addition, one of our biggest opportunities in 2014 is deepening existing client relationships. With strong performance across our franchise and a best-in-class offering spanning virtually every product and region, we want to meet even more of our clients' needs. When we can solve multiple problems for our clients, it simplifies their lives and enables them to get more complete financial solutions.

Sustaining leadership in alternatives and multi-asset strategies

Innovation also continues to be an important focus area for us, particularly in alternatives and multi-asset solutions, where more clients are turning to find enhanced returns.

We are the second-largest alternatives/absolute return manager with $207 billion in client assets. A number of our Alternatives strategies have exhibited consistent long-term outperformance, including U.S. Core Real Estate, Private Equity, Multi-Strategy Fund of Funds and Global Macro. In these funds, 100% of our assets under management have outperformed their benchmark over the three- and five-year periods.

Above all, we are humbled to have consistently maintained our clients' trust and confidence for nearly two centuries. There's no greater privilege or responsibility than being entrusted with a client's assets, and we are grateful every day that clients choose us as their first call.



Mary Callahan Erdoes
CEO, Asset Management

2013 HIGHLIGHTS AND ACCOMPLISHMENTS

- #1 Ultra-High-Net-Worth Global Private Bank, *Euromoney*
- #1 U.S. Mid-Cap Value Equity Manager of the Year, *Institutional Investor*
- #1 Non-U.S. Equity Growth Manager of the Year, *Institutional Investor*
- #1 Equity and Fixed Income Private Bank Portfolio Management, *Euromoney*
- #1 Institutional Money Market Fund Manager Worldwide, *iMoneyNet*
- #1 U.S. Real Estate Money Manager, *Pensions & Investments*
- #1 U.S. and overall active equity mutual fund flows, *Strategic Insight*
- Top European Buyside Firm, *Thomson Reuters Extel*
- Best Asset Management Company for Asia, *The Asset*
- Best Private Bank in Asia, *WealthBriefing Asia*
- Second-largest hedge fund manager, *Absolute Return*

Corporate Responsibility



Peter Scher

About corporate responsibility

Tremendous progress has been made in recent decades to address many of the world's most pressing social, economic and environmental problems. But a host of challenges persist, and there is an urgent need to find solutions that create greater economic opportunity for more people.

Companies like JPMorgan Chase have a responsibility to be part of the solution, not only because it's the right thing to do but because our own long-term success depends on the success of our communities and the people, companies and institutions we serve.

In the past, most corporations found it sufficient to fulfill this responsibility by simply donating money to charities. But today, we recognize that spurring greater economic growth and employment requires much more than writing checks. At a time when public sector resources are increasingly constrained, there is a compelling need for the private sector to do even more – in our case, by putting our financial expertise in the service of broader community needs. We are at our best when our core business helps communities thrive.

To be sure, the financial resources that firms provide are critical, but they are only one of many assets we can bring to bear. We can help make a difference by leveraging the skills, technology, data and expertise we use to drive our own business and then applying these assets to meet the global challenges that impact our communities.

At JPMorgan Chase, corporate responsibility always has been central to how we do business, starting with operating with integrity in all we do and extending to all the ways we help our clients and communities navigate a complex global economy. We strive to develop innovative programs that leverage the core strengths, capabilities and expertise of our business and our people – and those of our partners – to maximize our impact. We are very proud of what we accomplished in 2013.

2013 results

To help reduce unemployment and expand economic opportunity, we launched New Skills at Work, an unprecedented $250 million, five-year initiative aimed at helping close the skills gap around the world (see next page). The effort brings together our resources and capabilities with those of proven partners to help address the mismatch between the skills available in the workforce and those that employers need in order to grow their business.

Ongoing global health challenges presented another opportunity to work with great partners to launch a groundbreaking initiative. In partnership with the Bill & Melinda Gates Foundation, we created the Global Health Investment Fund to attract private capital into an investment vehicle with the potential to save millions of lives in low-income countries (see next page).

And there are many more examples of our work over the last year. JPMorgan Chase has collaborated with best-in-class partners to address the unique challenges military and veterans face in employment, education and housing; to help metro areas create global trade strategies through our Global Cities Initiative with The Brookings Institution; and to advance environmental stewardship and spur innovation across our business in partnership with our clients. And we roll up our sleeves to support these and other initiatives – last year, our employees provided more than 540,000 hours of volunteer service in local communities around the globe.

While there is much we were proud of during 2013, we know there is much more work to be done. The more we can break down the traditional barriers among the public, private and nonprofit sectors, the more we can achieve for our communities. It is a tall order, but JPMorgan Chase is profoundly optimistic about how much can be accomplished when people come together to do extraordinary things.



Peter Scher
Head of Corporate Responsibility

New Skills at Work



Helping people gain the skills they need to compete for jobs can transform lives — and strengthen economies. That's why JPMorgan Chase launched **New Skills at Work,** a $250 million, five-year initiative aimed at helping inform and accelerate efforts to develop a demand-driven approach to education and skills training.

The numbers seem contradictory: Unemployment is high across the globe, yet recent data reveal that employers are having trouble finding workers who are trained for the jobs that are available, particularly in middle-skill jobs — those jobs that require more than a high school but less than a four-year degree. Around the world, employers, educators, policymakers, training organizations and others have recognized the critical importance of tackling this skills gap. JPMorgan Chase believes doing so can be one of our most powerful tools for reducing unemployment, strengthening economies and creating more broadly shared prosperity.

New Skills at Work, the largest-ever private sector philanthropic effort in this area, will help address the skills gap by:

- **Encouraging industry collaboration:** Convening people from across sectors to share experiences and formulate strategies for building demand-driven workforce training systems
- **Investing in training programs:** Making targeted investments to strengthen and scale the most effective workforce training programs
- **Improving data:** Sponsoring data-driven analysis of skills demand and supply gaps in local markets

JPMorgan Chase has identified an initial set of best-in-class partner organizations, and we will add new local and regional partners in 2014. Our national partners in the U.S. include the Aspen Institute's Forum for Community Solutions, Jobs for the Future, National Academy Foundation, National Fund for Workforce Solutions, Year Up and YouthBuild USA, and in the U.K., they include the Institute for Public Policy Research and Participle.

Global Health Investment Fund



Emerging scientific and technological advances hold great hope for addressing infectious diseases and medical conditions that kill millions of people every year, mainly in low-income countries. But breakthroughs can save lives only if these new developments make it out of clinical trials and into the marketplace. And that requires financing. Filling that need is the new $108 million **Global Health Investment Fund (GHIF)** from JPMorgan Chase and the Bill & Melinda Gates Foundation.

The GHIF is a unique vehicle that was structured to attract investment capital as an alternative to grant-based funding for global health, building upon research and development executed by visionary philanthropists, sovereign donors and industry leaders over the past decade. The GHIF is intended to act as a pilot both to attract more capital of this nature into the global health sector and to serve as a model for delivering impact via investment in other sectors.

The GHIF brings together a diverse pool of investors to provide financing to advance the development of drugs, vaccines, diagnostics and other interventions against diseases that disproportionately burden low-income countries while at the same time seek a financial return for investors. The social impact of the fund will be achieved by focusing investments on diseases like tuberculosis, malaria, HIV and diarrhea and on conditions that contribute to maternal and infant mortality; investments will also include requirements to ensure the accessibility of products to the populations most in need. Financial returns will be linked to commercial success in developed country markets, while investors' downside is limited by a partial backstop provided by the Bill & Melinda Gates Foundation and the Swedish government. This structure allows individual investors, corporations, private foundations, development finance institutions and others to come together around the shared objective of ensuring that cutting-edge global health technologies reach the populations most in need.

2013 HIGHLIGHTS AND ACCOMPLISHMENTS

Supporting small business development

- Provided $19 billion in new credit to American small businesses and, for the fourth fiscal year in a row, was the #1 U.S. Small Business Administration lender by units.
- Awarded $3 million through our Mission Main Street℠ Grants program to support small businesses around the U.S. that are making a positive impact in their communities.
- Provided seed grants to four small business clusters across the U.S. to foster the development of investing networks, facilitate innovation and technology transfer, provide access to specialized suppliers and speed commercialization of new technologies.

Building financial capability

- Provided nearly $7 million in grants to leading nonprofits to promote the financial capability of consumers in cities around the world, including $1.15 million to Bank On 2.0, a program sponsored by the Cities for Financial Empowerment Fund to create a national approach in the U.S. to delivering safe, affordable banking products and services to low-income and underbanked people.
- Provided $600,000 over two years to Mission Asset Fund to help replicate its Lending Circle program, in which individuals in a community borrow from and loan to one another via zero-fee, zero-interest credit-building social loans and to develop high-quality financial education resources to support participants.
- Became the first financial institution to adopt The Pew Charitable Trusts' new model disclosure box for reloadable prepaid cards for Chase Liquid®.

Strengthening local economies and communities

- Provided approximately $1.1 billion in community development loans and $1.6 billion in equity investments to build or preserve 45,000 units of affordable housing for low- and moderate-income families in more than 260 U.S. cities.
- Lent $181 million to community development financial institutions (CDFI) that leveraged our capital to secure financing for more affordable housing, schools, healthcare clinics and small businesses.
- Launched the CDFI Collaboratives program, a three-year, $33 million philanthropic initiative to foster growth, collaboration and capacity building among smaller, regionally focused CDFIs that can uniquely reach communities that lack access to affordable financial products and services.
- Provided more than $31 million to nonprofits working to help first-time homebuyers, to offer home ownership counseling and to develop affordable housing in the U.S.



- Donated $275 million in the form of more than 6,100 free or discounted homes since 2008 to community associations, municipalities, veterans groups and nonprofit housing providers across the U.S., with nearly 1,600 homes donated or discounted in 2013 alone.
- Launched the Global Cities Exchange, a network of U.S. and international cities that will develop and implement regional strategies to boost global trade and investment. The network is part of the Global Cities Initiative, a joint project with The Brookings Institution launched in 2012 aimed at helping metropolitan leaders strengthen their regional economy.
- Launched New Skills at Work, a $250 million, five-year workforce development initiative (see previous page).

Honoring U.S. military and veterans



- Continued our leadership of the 100,000 Jobs Mission, a coalition of employers that collectively hired 117,439 U.S. military veterans by the end of 2013, prompting it to double its hiring goal to 200,000 veterans by 2020. JPMorgan Chase has hired more than 6,300 veterans since 2011.
- Joined the U.S. Department of Defense Military Spouse Employment Partnership, committing to recruit, hire, promote and retain military spouses.
- Launched internal training programs to help military-experienced employees assimilate into the firm and to educate our hiring managers about the skills that servicemembers bring to the table. We made our Military 101 program for hiring managers publicly available to other employers.
- Provided grants totaling more than $1 million to educational institutions focused on improving veteran performance and retention in higher education.

Promoting sustainable investing

- Led our industry in an effort to support responsible natural gas development by engaging with more than 100 oil and gas clients to understand how they manage environmental and community impacts from hydraulic fracturing, by funding research and by convening our clients to share insights on best practices.
- Worked with a group of peer investment banks to develop the Green Bond Principles, a set of voluntary guidelines designed to promote integrity and transparency in the growing market for Green Bonds, which are issued to finance environmentally beneficial projects.
- Announced the Global Health Investment Fund, a $108 million innovative social impact fund (see previous page) and invested an additional $9 million in best-in-class funds addressing the needs of low-income populations around the world.

Increasing transparency with stakeholders

- Collaborated with Ceres to engage a group of external stakeholders in a dialogue focused on sharing perspectives and priorities to help us enhance our approach to environmental sustainability and corporate responsibility.
- Convened regular Chase Advisory Panel sessions with experts from leading U.S. consumer policy groups to gain insight into the challenges facing low- and moderate-income consumers and learn how Chase can better serve them.
- Strengthened the firm's political disclosure and accountability policies, which led a leading nonprofit oversight organization to score JPMorgan Chase in the top 10 companies on the Center for Political Accountability-Zicklin Index of Corporate Political Accountability and Disclosure.

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FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

(unaudited)
As of or for the year ended December 31,

(in millions, except per share, ratio and headcount data)	2013	2012	2011	2010	2009
Selected income statement data					
Total net revenue	**$ 96,606**	$ 97,031	$ 97,234	$ 102,694	$ 100,434
Total noninterest expense	**70,467**	64,729	62,911	61,196	52,352
Pre-provision profit	**26,139**	32,302	34,323	41,498	48,082
Provision for credit losses	**225**	3,385	7,574	16,639	32,015
Income before income tax expense and extraordinary gain	**25,914**	28,917	26,749	24,859	16,067
Income tax expense	**7,991**	7,633	7,773	7,489	4,415
Income before extraordinary gain	**17,923**	21,284	18,976	17,370	11,652
Extraordinary gain	**–**	–	–	–	76
Net income	**$ 17,923**	$ 21,284	$ 18,976	$ 17,370	$ 11,728
Per common share data					
Basic earnings					
Income before extraordinary gain	**$ 4.39**	$ 5.22	$ 4.50	$ 3.98	$ 2.25
Net income	**4.39**	5.22	4.50	3.98	2.27
Diluted earnings					
Income before extraordinary gain	**$ 4.35**	$ 5.20	$ 4.48	$ 3.96	$ 2.24
Net income	**4.35**	5.20	4.48	3.96	2.26
Cash dividends declared per share	**1.44**	1.20	1.00	0.20	0.20
Book value per share	**53.25**	51.27	46.59	43.04	39.88
Tangible book value per share ("TBVS")[a]	**40.81**	38.75	33.69	30.18	27.09
Common shares outstanding					
Average: Basic	**3,782.4**	3,809.4	3,900.4	3,956.3	3,862.8
Diluted	**3,814.9**	3,822.2	3,920.3	3,976.9	3,879.7
Common shares at period-end	**3,756.1**	3,804.0	3,772.7	3,910.3	3,942.0
Share price[b]					
High	**$ 58.55**	$ 46.49	$ 48.36	$ 48.20	$ 47.47
Low	**44.20**	30.83	27.85	35.16	14.96
Close	**58.48**	43.97	33.25	42.42	41.67
Market capitalization	**219,657**	167,260	125,442	165,875	164,261
Selected ratios					
Return on common equity ("ROE")					
Income before extraordinary gain	**9%**	11%	11%	10%	6%
Net income	**9**	11	11	10	6
Return on tangible common equity ("ROTCE")[a]					
Income before extraordinary gain	**11**	15	15	15	10
Net income	**11**	15	15	15	10
Return on assets ("ROA")					
Income before extraordinary gain	**0.75**	0.94	0.86	0.85	0.58
Net income	**0.75**	0.94	0.86	0.85	0.58
Return on risk-weighted assets[c][d]					
Income before extraordinary gain	**1.28**	1.65	1.58	1.50	0.95
Net income	**1.28**	1.65	1.58	1.50	0.95
Overhead ratio	**73**	67	65	60	52
Loans-to-deposits ratio	**57**	61	64	74	68
High Quality Liquid Assets ("HQLA") (in billions)[e]	**$ 522**	$ 341	NA	NA	NA
Tier 1 capital ratio [d]	**11.9%**	12.6%	12.3%	12.1%	11.1%
Total capital ratio[d]	**14.4**	15.3	15.4	15.5	14.8
Tier 1 leverage ratio	**7.1**	7.1	6.8	7.0	6.9
Tier 1 common capital ratio[d][f]	**10.7**	11.0	10.1	9.8	8.8
Selected balance sheet data (period-end)					
Trading assets	**$ 374,664**	$ 450,028	$ 443,963	$ 489,892	$ 411,128
Securities[g]	**354,003**	371,152	364,793	316,336	360,390
Loans	**738,418**	733,796	723,720	692,927	633,458
Total assets	**2,415,689**	2,359,141	2,265,792	2,117,605	2,031,989
Deposits	**1,287,765**	1,193,593	1,127,806	930,369	938,367
Long-term debt[h]	**267,889**	249,024	256,775	270,653	289,165
Common stockholders' equity	**200,020**	195,011	175,773	168,306	157,213
Total stockholders' equity	**211,178**	204,069	183,573	176,106	165,365
Headcount[i]	**251,196**	258,753	259,940	239,515	221,200
Credit quality metrics					
Allowance for credit losses	**$ 16,969**	$ 22,604	$ 28,282	$ 32,983	$ 32,541
Allowance for loan losses to total retained loans	**2.25%**	3.02%	3.84%	4.71%	5.04%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[j]	**1.80**	2.43	3.35	4.46	5.51
Nonperforming assets	**$ 9,706**	$ 11,906	$ 11,315	$ 16,682	$ 19,948
Net charge-offs	**5,802**	9,063	12,237	23,673	22,965
Net charge-off rate	**0.81%**	1.26%	1.78%	3.39%	3.42%

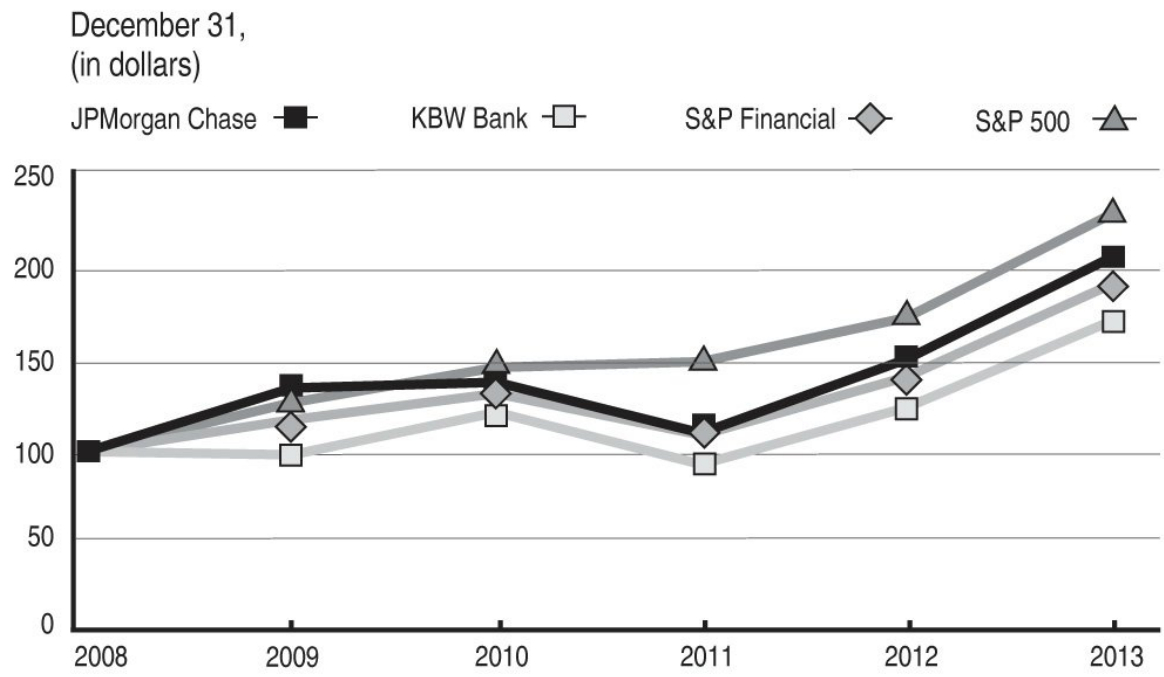
(a) TBVS and ROTCE are non-GAAP financial measures. TBVS represents the Firm's tangible common equity divided by period-end common shares. ROTCE measures the Firm's annualized earnings as a percentage of tangible common equity. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 82–83 of this Annual Report.
(b) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.
(c) Return on Basel I risk-weighted assets is the annualized earnings of the Firm divided by its average risk-weighted assets ("RWA").
(d) Basel 2.5 rules became effective for the Firm on January 1, 2013. The implementation of these rules in the first quarter of 2013 resulted in an increase of approximately $150 billion in RWA compared with the Basel I rules. The implementation of these rules also resulted in decreases of the Firm's Tier 1 capital, Total capital and Tier 1 common capital ratios by 140 basis points, 160 basis points and 120 basis points, respectively, at March 31, 2013. For further discussion of Basel 2.5, see Regulatory capital on pages 160–167 of this Annual Report.
(e) The Firm began estimating its total HQLA as of December 31, 2012, based on its current understanding of the Basel III LCR rules. For further discussion about HQLA, including its components, see Liquidity Risk on page 172 of this Annual Report.
(f) Basel I Tier 1 common capital ratio ("Tier 1 common ratio") is Tier 1 common capital ("Tier 1 common") divided by RWA. The Firm uses Tier 1 common capital along with the other capital measures to assess and monitor its capital position. For further discussion of the Tier 1 common capital ratio, see Regulatory capital on pages 161–165 of this Annual Report.
(g) Included held-to-maturity balances of $24.0 billion at December 31, 2013. Held-to-maturity balances for the other periods were not material.
(h) Included unsecured long-term debt of $199.4 billion, $200.6 billion, $231.3 billion, $238.2 billion and $258.1 billion, respectively, as of December 31, of each year presented.
(i) Effective January 1, 2013, interns are excluded from the firmwide and business segment headcount metrics. Prior periods were revised to conform with this presentation.
(j) Excludes the impact of residential real estate purchased credit-impaired ("PCI") loans. For further discussion, see Allowance for credit losses on pages 139–141 of this Annual Report.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Index, the KBW Bank Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced U.S. equity benchmark consisting of leading companies from different economic sectors. The KBW Bank Index seeks to reflect the performance of banks and thrifts that are publicly-traded in the U.S. and is composed of 24 leading national money center and regional banks and thrifts. The S&P Financial Index is an index of 81 financial companies, all of which are components of the S&P 500. The Firm is a component of all three industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2008, in JPMorgan Chase common stock and in each of the above indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2008	2009	2010	2011	2012	**2013**
JPMorgan Chase	$ 100.00	$ 134.36	$ 137.45	$ 110.00	$ 149.79	**$ 204.78**
KBW Bank Index	100.00	98.24	121.19	93.08	123.69	**170.39**
S&P Financial Index	100.00	117.15	131.36	108.95	140.27	**190.19**
S&P 500 Index	100.00	126.45	145.49	148.55	172.31	**228.10**



This section of JPMorgan Chase's Annual Report for the year ended December 31, 2013 ("Annual Report"), provides Management's discussion and analysis ("MD&A") of the financial condition and results of operations of JPMorgan Chase. See the Glossary of Terms on pages 341–345 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 181 of this Annual Report) and in JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2013 ("2013 Form 10-K"), in Part I, Item 1A: Risk factors; reference is hereby made to both.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide; the Firm has $2.4 trillion in assets and $211.2 billion in stockholders' equity as of December 31, 2013. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, asset management and private equity. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national bank with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national bank that is the Firm's credit card–issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), the Firm's U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm's principal operating subsidiaries in the United Kingdom ("U.K.") is J.P. Morgan Securities plc (formerly J.P. Morgan Securities Ltd.), a subsidiary of JPMorgan Chase Bank, N.A.

JPMorgan Chase's activities are organized, for management reporting purposes, into four major reportable business segments, as well as a Corporate/Private Equity segment. The Firm's consumer business is the Consumer & Community Banking segment. The Corporate & Investment Bank, Commercial Banking, and Asset Management segments comprise the Firm's wholesale businesses. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows.

Consumer & Community Banking

Consumer & Community Banking ("CCB") serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Merchant Services & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the purchased credit-impaired ("PCI") portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.

Corporate & Investment Bank
The Corporate & Investment Bank ("CIB") comprised of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which includes custody, fund accounting and administration, and securities lending products sold principally to asset managers, insurance companies and public and private investment funds.

Commercial Banking
Commercial Banking ("CB") delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Asset Management
Asset Management ("AM"), with client assets of $2.3 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions to a broad range of clients' investment needs. For individual investors, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Corporate/Private Equity
The Corporate/Private Equity segment comprises Private Equity, Treasury and Chief Investment Office ("CIO") and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Central Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm's occupancy and pension-related expense that are subject to allocation to the businesses.

EXECUTIVE OVERVIEW

This executive overview of the MD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of events, trends and uncertainties, as well as the enterprise risks and critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Economic environment

The global economy regained momentum in 2013, led by faster growth in the advanced economies, helped by decisive policy actions in the U.S., European Union, U.K., and Japan. Uncertainties about U.S. fiscal policy were reduced substantially by year-end, as were extreme downside risks to performance in the Eurozone and China that had been concerns earlier in the year. In addition, real consumer spending in the U.S. was supported late in the year by solid job growth, falling gasoline prices, and rising equity and house prices.

The U.S. economic forecast for 2014 looks for a gradual acceleration in real sales growth and for inflation to remain well below the Federal Reserve's Open Market Committee's long-run target of 2%. If the economic forecast for 2014 is realized, the tapering of asset purchases by the Federal Reserve's Open Market Committee will proceed and is expected to be completed before the end of 2014. However, the forecast does not look for a first rate hike by the Federal Reserve's Open Market Committee until sometime in 2015.

The European Central Bank's ("ECB") support in stabilizing European financial markets, along with the constructive steps taken by the European Union to lay the groundwork for a more coherent banking union, helped the region to return to growth during the first half of 2013. However, later in the year, the pace of the Eurozone's recovery remained slow, high unemployment tested the social and political stability of several of Europe's weaker economies, and Cyprus became the fourth country in the Eurozone to receive a full bail-out. While Germany and the northern European economies continued to drive growth, elsewhere in Europe growth was more subdued. More encouraging were signs that the peripheral economies in the region are showing signs of healing.

Economic performance in Asia was mixed in 2013. Japan boomed; in contrast, activity decelerated across much of the rest of the region. Growth outcomes were also mixed across Latin America. Economic activity decelerated in Mexico. Brazil began 2013 with positive momentum but then lost significant steam, with a widening gap between projected growth outcomes and inflation indicators. Policy uncertainties, slowing China demand for commodities, credit overhangs, and elevated inflation all weighed on investment in many emerging countries.

In summary, there is reason to be optimistic about the U.S. economic outlook in 2014. The economy finally appears to have broken out of the 2% range of growth experienced in the first several years of recovery, and the extent of both fiscal policy restraint and fiscal policy uncertainty should be sharply reduced. While growth in emerging markets is expected to remain subdued, economic activity is expected to continue accelerating in Europe.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	2013	2012	Change
Selected income statement data			
Total net revenue	**$ 96,606**	$ 97,031	— %
Total noninterest expense	**70,467**	64,729	9
Pre-provision profit	**26,139**	32,302	(19)
Provision for credit losses	**225**	3,385	(93)
Net income	**17,923**	21,284	(16)
Diluted earnings per share	**4.35**	5.20	(16)
Return on common equity	**9%**	11%	
Capital ratios			
Tier 1 capital	**11.9**	12.6	
Tier 1 common	**10.7**	11.0	

Summary of 2013 Results

JPMorgan Chase reported full-year 2013 net income of $17.9 billion, or $4.35 per share, on net revenue of $96.6 billion. Net income decreased by $3.3 billion, or 16%, compared with net income of $21.3 billion, or $5.20 per share, in 2012. ROE for the year was 9%, compared with 11% for the prior year.

The decrease in net income in 2013 was driven by a higher noninterest expense, partially offset by lower provision for credit losses. The increase in noninterest expense was driven by higher legal expense. The reduction in the provision for credit losses reflected continued favorable credit trends across the consumer and wholesale portfolios.

The decline in the provision for credit losses reflected lower consumer and wholesale provisions as net charge-offs decreased and the related allowance for credit losses was reduced by $5.6 billion in 2013. The decline in the allowance reflected improved home prices in the residential real estate portfolios, as well as improved delinquency trends in the residential real estate, credit card loan and wholesale portfolios. Firmwide, net charge-offs were $5.8 billion for the year, down $3.3 billion, or 36%, from 2012, which included $800 million of incremental charge-offs related to regulatory guidance. Nonperforming assets at year-end were $9.7 billion, down $2.2 billion, or 18%. Total firmwide allowance for credit losses was $17.0 billion, resulting in a loan loss coverage ratio of 1.80%, excluding the purchased credit-impaired portfolio, compared with 2.43% in 2012.

The Firm's results reflected strong underlying performance across its four major reportable business segments, with strong lending and deposit growth. Consumer & Business Banking within Consumer & Community Banking was #1 in deposit growth for the second year in a row and #1 in customer satisfaction among the largest banks for the second year in a row as measured by The American Customer Satisfaction Index ("ACSI"). In Card, Merchant Services & Auto, credit card sales volume (excluding Commercial Card) was up 10% for the year. The Corporate & Investment Bank maintained its #1 ranking in Global Investment Banking Fees and reported record assets under custody of $20.5 trillion at December 31, 2013. Commercial Banking loans increased to a record $137.1 billion, a 7% increase compared with the prior year. Asset Management achieved nineteen consecutive quarters of positive net long-term client flows into assets under management. Asset Management also increased loan balances to a record $95.4 billion at December 31, 2013.

JPMorgan Chase ended the year with a Basel I Tier 1 common ratio of 10.7%, compared with 11% at year-end 2012. The Firm estimated that its Tier 1 common ratio under the Basel III Advanced Approach on a fully phased-in basis, based on the interim final rule issued in October 2013, was 9.5% as of December 31, 2013. Total deposits increased to $1.3 trillion, up 8% from the prior year. Total stockholders' equity at December 31, 2013, was $211.2 billion. (The Basel I and III Tier 1 common ratios are non-GAAP financial measures, which the Firm uses along with the other capital measures, to assess and monitor its capital position. For further discussion of the Tier 1 common capital ratios, see Regulatory capital on pages 161–165 of this Annual Report.)

During 2013, the Firm worked to help its customers, corporate clients and the communities in which it does business. The Firm provided credit to and raised capital of more than $2.1 trillion for its clients during 2013; this included $19 billion lent to small businesses and $79 billion to nonprofit and government entities, including states, municipalities, hospitals and universities. The Firm also originated more than 800,000 mortgages.

The discussion that follows highlights the performance of each business segment compared with the prior year and presents results on a managed basis. Managed basis starts with the reported results under accounting principles generally accepted in the United States of America ("U.S. GAAP") and, for each line of business and the Firm as a whole, includes certain reclassifications to present total net revenue on a tax-equivalent basis. For more information about managed basis, as well as other non-GAAP financial measures used by management to evaluate the performance of each line of business, see pages 82–83 of this Annual Report.

Consumer & Community Banking net income increased compared with the prior year due to lower provision for credit losses and lower noninterest expense, predominantly offset by lower net revenue. Net interest income decreased, driven by lower deposit margins, lower loan balances due to net portfolio runoff and spread compression in Credit Card, largely offset by the impact of higher deposit balances. Noninterest revenue decreased, driven by lower mortgage fees and related income, partially offset by higher card income. The provision for credit losses was $335 million compared with $3.8 billion in the prior year. The current-year provision reflected a $5.5 billion reduction in the allowance for loan losses and total net charge-offs of $5.8 billion. The prior-year provision reflected a $5.5 billion reduction in the allowance for loan losses and total net charge-offs of $9.3 billion, including $800 million of incremental charge-offs related to regulatory guidance. Noninterest expense decreased compared with the prior year, driven by lower mortgage servicing expense, partially offset by investments in Chase Private Client expansion, higher non-MBS related legal expense in Mortgage Production, higher auto lease depreciation and costs related to the control agenda.

Corporate & Investment Bank net income increased by 2% compared with the prior year. Net revenue included a $1.5 billion loss from the implementation of a funding valuation adjustment ("FVA") framework for over-the-counter ("OTC") derivatives and structured notes in the fourth quarter, and a $452 million loss from debit valuation adjustments ("DVA") on structured notes and derivative liabilities. The prior year net revenue included a $930 million loss from DVA. Banking revenue increased compared with the prior year, reflecting higher lending and investment banking fees revenue, partially offset by Treasury Services revenue which was down slightly from the prior year. Lending revenue increased driven by gains on securities received from restructured loans. Investment banking fees revenue increased compared with the prior year driven by higher equity and debt underwriting fees, partially offset by lower advisory fees. Excluding FVA (effective fourth quarter 2013) and DVA, Markets and Investor Services revenue increased compared with the prior year. The provision for credit losses was a lower benefit reflecting lower recoveries compared with the prior year. Noninterest expense was slightly down from the prior year primarily driven by lower compensation expense.

Commercial Banking net income was slightly lower for 2013 compared with the prior year, reflecting higher noninterest expense and an increase in the provision for credit losses, partially offset by higher net revenue. Net interest income increased, driven by growth in loan balances and the proceeds from a lending-related workout, partially offset by lower purchase discounts recognized on loan repayments. Noninterest expense increased, primarily reflecting higher product- and headcount-related expense.

Asset Management net income increased in 2013, driven by higher net revenue, largely offset by higher noninterest expense. Net revenue increased, driven by net client inflows, the effect of higher market levels and net interest income resulting from higher loan and deposit balances. Noninterest expense increased, driven by higher headcount related expenses, higher performance-based compensation and costs related to the control agenda.

Corporate/Private Equity reported a higher net loss compared with the prior year driven by higher noninterest expense partially offset by higher net revenue. Noninterest expense for 2013 included $10.2 billion in legal expenses compared with $3.7 billion in the prior year. The current year net revenue included a $1.3 billion gain from the sale of Visa shares and a $493 million gain from the sale of One Chase Manhattan Plaza. The prior year net revenue included losses from the synthetic credit portfolio in the CIO.

Consent Orders and Settlements

During the course of 2013, the Firm continued to make progress on its control, regulatory, and litigation agenda and put some significant issues behind it. In January 2013, the Firm entered into the Consent Orders with its banking regulators relating to the Firm's Bank Secrecy Act/Anti-Money Laundering policies, procedures and controls, and with respect to the risk management and control functions in the CIO, as well as with respect to its other trading activities. Other settlements during the year included the Consent Orders entered into in September 2013 concerning oversight of third parties, operational processes and control functions related to credit card collections litigation practices and to billing practices for credit monitoring products formerly offered by the Firm; the settlements in November 2013 of certain repurchase representation and warranty claims by a group of institutional investors and with the U.S. Department of Justice, several other federal agencies and several State Attorneys General relating to certain residential mortgage-backed securitization activities of the Firm, Bear Stearns and Washington Mutual; the Deferred Prosecution Agreement entered into in January 2014 with the U.S. Department of Justice and related agreements with the OCC and FinCEN relating to Bernard L. Madoff Investment Securities LLC and the Firm's AML compliance programs; and the February 2014 settlement entered into with several federal government agencies relating to the Firm's participation in certain federal mortgage insurance programs.

In addition to the payment of restitution and, in several instances, significant penalties, these Consent Orders and settlements require that the Firm modify or enhance its processes and controls with respect to, among other items, its mortgage foreclosure and servicing procedures, Anti-Money Laundering procedures, oversight of third parties, credit card litigation practices, and risk management, model governance, and other control functions related to the CIO and certain other trading activities at the Firm. The Firm believes it was in the best interest of the company and its shareholders to accept responsibility for these matters, resolve them, and move forward. These settlements will allow the Firm to focus on continuing to serve its clients and communities, and to continue to build the Firm's businesses.

Business outlook

The following forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking Statements on page 181 of this Annual Report and the Risk Factors section on pages 9–18 of the 2013 Form 10-K.

As a global financial services firm, JPMorgan Chase is subject to extensive regulation under state and federal laws in the United States, as well as the applicable laws of each of the various other jurisdictions outside the U.S. in which the Firm does business. The Firm is currently experiencing an unprecedented increase in regulations and supervision, and such changes could have a significant impact on how the Firm conducts business. For a summary of the more significant rules and regulations to which it currently is or will shortly be subject, as well as the more noteworthy rules and regulations currently being proposed to be implemented, see Supervision and Regulation on pages 1–9 of the 2013 Form 10-K.

Having reached the minimum capital levels required by the new and proposed rules, the Firm intends to continue to hold excess capital in order to support its businesses. However, the new rules will require the Firm to modify its on- and off-balance sheet assets and liabilities to meet the supplementary leverage ratio requirements, restrict or limit the way the Firm offers products to customers or charges fees for services, exit certain activities and product offerings, and make structural changes with respect to which of its legal entities offer certain products in order to comply with the margin, extraterritoriality and clearing rules promulgated pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act").

The Firm intends to respond to the new financial architecture resulting from this changing landscape in a way that will allow it to grow its revenues over time, manage its expenses, and comply with the new regulatory requirements, while at the same time investing in its businesses and meeting the needs of its customers and clients. Initiatives will include a disciplined approach to capital and liquidity management as well as optimization of the Firm's balance sheet. The Firm intends to continue to meet the higher U.S. and Basel III liquidity requirements and make progress towards meeting all of its capital targets in advance of regulatory deadlines, while at the same time returning capital to its shareholders. For further information, see Liquidity Risk Management and Capital Management on pages 168–173 and 160–167, respectively, of this Annual Report.

The Firm is also devoting substantial resources in order to continue to execute on its control and regulatory agendas. In 2012, it established its Oversight and Control function, which works closely with all control disciplines, including Compliance, Legal, Risk Management, Internal Audit and other functions, to provide a cohesive and centralized view of control functions and issues and to address complex control-related projects that are cross-line of business and that have significant regulatory impact or respond to regulatory actions such as the Consent Orders. See Operational Risk Management on pages 155–157 in this Annual Report for further information on the Oversight and Control function. The Firm's control agenda is receiving significant senior management and Board of Director attention and oversight, and represents a very high priority for the Firm, with 23 work-streams currently underway involving more than 3,500 employees. In 2013, the Firm increased the amount spent on the control agenda by approximately $1 billion, and expects to spend an incremental amount of slightly more than $1 billion on the control agenda in 2014.

The Firm is also executing a business simplification agenda that will allow it to focus on core activities for its core clients and better manage its operational, regulatory and litigation risks. These initiatives include ceasing student loan originations, ceasing to offer traveler's checks and money orders for non-customers, exiting certain high-complexity arrangements (such as third-party lockbox services), and being more selective about on-boarding certain customers, among other initiatives. These business simplification changes will not fundamentally change the breadth of the Firm's business model. However, they are anticipated to reduce both revenues and expenses over time, although the effect on annualized net income is expected to be modest. In addition, the efforts are also expected to have the benefit of freeing up capital over time.

The Firm expects it will continue to make appropriate adjustments to its business and operations, capital and liquidity management practices, and legal entity structure in the year ahead in response to developments in the legal and regulatory, as well as business and economic, environment in which it operates.

2014 Business Outlook

JPMorgan Chase's outlook for the full year 2014 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these inter-related factors will affect the performance of the Firm and its lines of business.

The Firm expects that net interest margin will be relatively stable in the near term. Firmwide adjusted expense is expected to be below $59 billion for the full year 2014, excluding firmwide (Corporate and non-Corporate) legal expenses and foreclosure-related matters, even as the Firm continues to invest in controls and compliance.

In the Mortgage Banking business within CCB, management expects that higher levels of mortgage interest rates will continue to have a negative impact on refinancing volumes and margins, and, accordingly, the pretax income of Mortgage Production is anticipated to be modestly negative for the first quarter of 2014. For Real Estate Portfolios within Mortgage Banking, if delinquencies continue to trend down and the macro-economic environment remains stable or improves, management expects charge-offs to decline and a further reduction in the allowance for loan losses.

In Card Services within CCB, the Firm expects that spread compression will continue in 2014; the shift from high-rate and low-FICO balances is expected to be replaced by more engaged customers or transactors, which is expected to positively affect card spend and credit performance in 2014. If current positive credit trends continue, the card-related allowance for loan losses could be reduced over the course of 2014.

The currently anticipated results for CCB described above could be adversely affected if economic conditions, including U.S. housing prices or the unemployment rate, do not continue to improve. Management continues to closely monitor the portfolios in these businesses.

In Private Equity, within the Corporate/Private Equity segment, earnings will likely continue to be volatile and influenced by capital markets activity, market levels, the performance of the broader economy and investment-specific factors.

For Treasury and CIO, within the Corporate/Private Equity segment, as the Firm continues to reinvest its investment securities portfolio, net interest income is expected to improve and to reach break-even during the second half of 2014.

Business events

Visa B Shares

In December 2013, the Firm sold 20 million Visa Class B shares, resulting in a net pretax gain of approximately $1.3 billion recorded in Other income. After the sale, the Firm continues to own approximately 40 million Visa Class B shares. For further information, see Note 2 on pages 326-332 of this Annual Report.

One Chase Manhattan Plaza

On December 17, 2013, the Firm sold One Chase Manhattan Plaza, an office building located in New York City, and recognized a pretax gain of $493 million in Other Income.

Other events

For information about the Firm's announcements regarding the physical commodities business, One Equity Partners, and the student loan business, see Note 2 on pages 326-332 of this Annual Report.

Subsequent events

Settlement agreement with The U.S. Departments Of Justice, Housing and Urban Development, and Veterans Affairs, and The Federal Housing Administration

On February 4, 2014, the Firm announced that it had reached a settlement with the U.S. Attorney's Office for the Southern District of New York, Federal Housing Administration ("FHA"), the U.S. Department of Housing and Urban Development ("HUD"), and the U.S. Department of Veterans Affairs ("VA") resolving claims relating to the Firm's participation in federal mortgage insurance programs overseen by FHA, HUD and VA ("FHA Settlement"). Under the FHA Settlement, which relates to FHA and VA insurance claims that have been paid to the Firm from 2002 through the date of the settlement, the Firm will pay $614 million in cash, and agree to enhance its quality control program for loans that are submitted in the future to FHA's Direct Endorsement Lender Program. The Firm is fully reserved for the settlement, and any financial impact related to exposure on future claims is not expected to be significant. For information about the ongoing collectibility of insurance reimbursements on loans sold to Ginnie Mae, see Note 31 on pages 326-332 of this Annual Report.

Madoff Litigation and Investigations

On January 7, 2014, the Firm announced that certain of its bank subsidiaries had entered into settlements with various governmental agencies in resolution of investigations relating to Bernard L. Madoff Investment Securities LLC ("BLMIS"). The Firm and certain of its subsidiaries also entered into settlements with several private parties in resolution of civil litigation relating to BLMIS. At the same time, certain bank subsidiaries of the Firm consented to the assessment of a civil money penalty by the OCC in connection with various Bank Secrecy Act/Anti-Money Laundering deficiencies, including with relation to the BLMIS fraud, and JPMorgan Chase Bank, N.A. additionally agreed to the assessment of a civil money penalty by the Financial Crimes Enforcement Network for failure to detect and adequately report suspicious transactions relating to BLMIS. For further information on these settlements, see Note 31 on pages 326-332 of this Annual Report.

The following section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2013. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 174–178 of this Annual Report.

Revenue

Year ended December 31, (in millions)	2013	2012	2011
Investment banking fees	**$ 6,354**	$ 5,808	$ 5,911
Principal transactions[(a)]	**10,141**	5,536	10,005
Lending- and deposit-related fees	**5,945**	6,196	6,458
Asset management, administration and commissions	**15,106**	13,868	14,094
Securities gains	**667**	2,110	1,593
Mortgage fees and related income	**5,205**	8,687	2,721
Card income	**6,022**	5,658	6,158
Other income[(b)]	**3,847**	4,258	2,605
Noninterest revenue	**53,287**	52,121	49,545
Net interest income	**43,319**	44,910	47,689
Total net revenue	**$ 96,606**	$ 97,031	$ 97,234

(a) Included a $(1.5) billion loss in the fourth quarter of 2013 as a result of implementing an FVA framework for OTC derivatives and structured notes. Also included DVA on structured notes and derivative liabilities measured at fair value. DVA gains/(losses) were $(452) million, $(930) million and $1.4 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) Included operating lease income of $1.5 billion, $1.3 billion and $1.2 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

2013 compared with 2012

Total net revenue for 2013 was $96.6 billion, down by $425 million, or less than 1%. The results of 2013 were driven by lower mortgage fees and related income, net interest income, and securities gains. These items were predominantly offset by higher principal transactions revenue, and asset management, administration and commissions revenue.

Investment banking fees increased compared with the prior year, reflecting higher equity and debt underwriting fees, partially offset by lower advisory fees. Equity and debt underwriting fees increased, driven by strong market issuance and improved wallet share in equity capital markets and loans. Advisory fees decreased, as the industry-wide M&A wallet declined. For additional information on investment banking fees, see CIB segment results on pages 98–102 and Note 7 on pages 234–235 of this Annual Report.

Principal transactions revenue, which consists of revenue primarily from the Firm's market-making and private equity investing activities, increased compared with the prior year. The current-year period reflected CIB's strong equity markets revenue, partially offset by a $1.5 billion loss as a result of implementing a funding valuation adjustment ("FVA") framework for OTC derivatives and structured notes in the fourth quarter of 2013, and a $452 million loss from DVA on structured notes and derivative liabilities (compared with a $930 million loss from DVA in the prior year). The prior year included a $5.8 billion loss on the synthetic credit portfolio incurred by CIO in the six months ended June 30, 2012; a $449 million loss on the index credit derivative positions retained by CIO in the three months ended September 30, 2012; and additional modest losses incurred by CIB from the synthetic credit portfolio in the last six months of 2012; these were partially offset by a $665 million gain recognized in 2012 in Other Corporate, representing the recovery on a Bear Stearns-related subordinated loan. For additional information on principal transactions revenue, see CIB and Corporate/Private Equity segment results on pages 98–102 and 109–111, respectively, and Note 7 on pages 234–235 of this Annual Report.

Lending- and deposit-related fees decreased compared with the prior year, largely due to lower deposit-related fees in CCB, resulting from reductions in certain product and transaction fees. For additional information on lending- and deposit-related fees, see the segment results for CCB on pages 86–97, CIB on pages 98–102 and CB on pages 103–105 of this Annual Report.

Asset management, administration and commissions revenue increased from 2012. The increase was driven by higher investment management fees in AM, due to net client inflows, the effect of higher market levels, and higher performance fees, as well as higher investment sales revenue in CCB. For additional information on these fees and commissions, see the segment discussions for CIB on pages 98–102, CCB on pages 86–97, AM on pages 106–108, and Note 7 on pages 234–235 of this Annual Report.

Securities gains decreased compared with the prior-year period, reflecting the results of repositioning the CIO available-for-sale ("AFS") portfolio. For additional information on securities gains, see the Corporate/Private Equity segment discussion on pages 109–111, and Note 12 on pages 249–254 of this Annual Report.

Mortgage fees and related income decreased in 2013 compared with 2012. The decrease resulted from lower Mortgage Banking net production and servicing revenue. The decrease in net production revenue was due to lower margins and volumes. The decrease in net servicing revenue was predominantly due to lower mortgage servicing rights ("MSR") risk management results. For additional

information on mortgage fees and related income, see CCB's Mortgage Banking's discussion on pages 92–93, and Note 17 on pages 299–304 of this Annual Report.

Card income increased compared with the prior year period. The increase was driven by higher net interchange income on credit and debit cards and merchant servicing revenue, due to growth in sales volume. For additional information on credit card income, see the CCB segment results on pages 86–97 of this Annual Report.

Other income decreased in 2013 compared with the prior year, predominantly reflecting lower revenues from significant items recorded in Corporate/Private Equity. In 2013, the Firm recognized a $1.3 billion gain on the sale of Visa shares, a $493 million gain from the sale of One Chase Manhattan Plaza, and a modest loss related to the redemption of trust preferred securities ("TruPS"). In 2012, the Firm recognized a $1.1 billion benefit from the Washington Mutual bankruptcy settlement and an $888 million extinguishment gain related to the redemption of TruPS. The net decrease was partially offset by higher revenue in CIB, largely from client-driven activity.

Net interest income decreased in 2013 compared with the prior year, primarily reflecting the impact of the runoff of higher yielding loans and originations of lower yielding loans, and lower trading-related net interest income. The decrease in net interest income was partially offset by lower long-term debt and other funding costs. The Firm's average interest-earning assets were $2.0 trillion in 2013, and the net interest yield on those assets, on a fully taxable-equivalent ("FTE") basis, was 2.23%, a decrease of 25 basis points from the prior year.

2012 compared with 2011

Total net revenue for 2012 was $97.0 billion, down slightly from 2011. Results for 2012 were driven by lower principal transactions revenue from losses incurred by CIO, and lower net interest income. These items were predominantly offset by higher mortgage fees and related income and higher other income.

Investment banking fees decreased slightly from 2011, reflecting lower advisory fees on lower industry-wide volumes, and to a lesser extent, slightly lower equity underwriting fees on industry-wide volumes that were flat from the prior year. These declines were predominantly offset by record debt underwriting fees, driven by favorable market conditions and the impact of continued low interest rates.

Principal transactions revenue decreased compared with 2011, predominantly due to $5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and $449 million of losses incurred by CIO from the retained index credit derivative positions for the three months ended September 30, 2012; and additional modest losses incurred by CIB from the synthetic credit portfolio in the last six months of 2012.

Principal transaction revenue also included a $930 million loss in 2012, compared with a $1.4 billion gain in 2011, from DVA on structured notes and derivative liabilities, resulting from the tightening of the Firm's credit spreads. These declines were partially offset by higher market-making revenue in CIB, driven by strong client revenue and higher revenue in rates-related products, as well as a $665 million gain recognized in Other Corporate associated with the recovery on a Bear Stearns-related subordinated loan. Private equity gains decreased in 2012, predominantly due to lower unrealized and realized gains on private investments, partially offset by higher unrealized gains on public securities.

Lending- and deposit-related fees decreased in 2012 compared with the prior year. The decrease predominantly reflected lower lending-related fees in CIB and lower deposit-related fees in CCB.

Asset management, administration and commissions revenue decreased from 2011, largely driven by lower brokerage commissions in CIB. This decrease was largely offset by higher asset management fees in AM driven by net client inflows, the effect of higher market levels, and higher performance fees; and higher investment service fees in CCB, as a result of growth in sales of investment products.

Securities gains increased, compared with the 2011 level, reflecting the results of repositioning the CIO AFS securities portfolio.

Mortgage fees and related income increased significantly in 2012 compared with 2011, due to higher Mortgage Banking net production and servicing revenue. The increase in net production revenue, reflected wider margins driven by favorable market conditions; and higher volumes due to historically low interest rates and the Home Affordable Refinance Programs ("HARP"). The increase in net servicing revenue resulted from a favorable swing in risk management results related to mortgage servicing rights ("MSR"), which was a gain of $619 million in 2012, compared with a loss of $1.6 billion in 2011.

Card income decreased during 2012, driven by lower debit card revenue, reflecting the impact of the Durbin Amendment; and to a lesser extent, higher amortization of loan origination costs. The decrease in credit card income was offset partially by higher net interchange income associated with growth in credit card sales volume, and higher merchant servicing revenue.

Other income increased in 2012 compared with the prior year, largely due to a $1.1 billion benefit from the Washington Mutual bankruptcy settlement, and $888 million of extinguishment gains in Corporate/Private Equity related to the redemption of TruPS. The extinguishment gains were related to adjustments applied to the cost basis of the TruPS during the period they were in a qualified hedge accounting relationship. These items were offset partially by the absence of a prior-year gain on the sale of an investment in AM.

Net interest income decreased in 2012 compared with the prior year, predominantly reflecting the impact of lower average trading asset balances, the runoff of higher-yielding

loans, faster prepayment of mortgage-backed securities, limited reinvestment opportunities, as well as the impact of lower interest rates across the Firm's interest-earning assets. The decrease in net interest income was partially offset by lower deposit and other borrowing costs. The Firm's average interest-earning assets were $1.8 trillion for 2012, and the net yield on those assets, on a fully taxable-equivalent ("FTE") basis, was 2.48%, a decrease of 26 basis points from 2011.

Provision for credit losses

Year ended December 31, (in millions)	2013	2012	2011
Consumer, excluding credit card	**$ (1,871)**	$ 302	$ 4,672
Credit card	**2,179**	3,444	2,925
Total consumer	**308**	3,746	7,597
Wholesale	**(83)**	(361)	(23)
Total provision for credit losses	**$ 225**	$ 3,385	$ 7,574

2013 compared with 2012

The provision for credit losses decreased compared with the prior year, due to a decline in the provision for total consumer credit losses. The decrease in the consumer provision was attributable to continued reductions in the allowance for loan losses, resulting from the impact of improved home prices on the residential real estate portfolio, and improved delinquency trends in the residential real estate and credit card portfolios, as well as lower net charge-offs partially due to the prior-year incremental charge-offs recorded in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy. The wholesale provision in the current period reflected a favorable credit environment and stable credit quality trends. For a more detailed discussion of the loan portfolio and the allowance for credit losses, see the segment discussions for CCB on pages 86–97, CIB on pages 98–102, CB on pages 103–105, and Allowance For Credit Losses on pages 139–141 of this Annual Report.

2012 compared with 2011

The provision for credit losses decreased by $4.2 billion from 2011. The decrease was driven by a lower provision for consumer, excluding credit card loans, which reflected a reduction in the allowance for loan losses, due primarily to lower estimated losses in the non-PCI residential real estate portfolio as delinquency trends improved, partially offset by the impact of charge-offs of Chapter 7 loans. A higher level of recoveries and lower charge-offs in the wholesale provision also contributed to the decrease. These items were partially offset by a higher provision for credit card loans, largely due to a smaller reduction in the allowance for loan losses in 2012 compared with the prior year.

Noninterest expense

Year ended December 31, (in millions)	2013	2012	2011
Compensation expense	**$30,810**	$30,585	$29,037
Noncompensation expense:			
Occupancy	**3,693**	3,925	3,895
Technology, communications and equipment	**5,425**	5,224	4,947
Professional and outside services	**7,641**	7,429	7,482
Marketing	**2,500**	2,577	3,143
Other[(a)(b)]	**19,761**	14,032	13,559
Amortization of intangibles	**637**	957	848
Total noncompensation expense	**39,657**	34,144	33,874
Total noninterest expense	**$70,467**	$64,729	$62,911

(a) Included firmwide legal expense of $11.1 billion, $5.0 billion and $4.9 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) Included FDIC-related expense of $1.5 billion, $1.7 billion and $1.5 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

2013 compared with 2012

Total noninterest expense for 2013 was $70.5 billion, up by $5.7 billion, or 9%, compared with the prior year. The increase was predominantly due to higher legal expense.

Compensation expense increased in 2013 compared with the prior year, due to the impact of investments across the businesses, including front office sales and support staff, as well as costs related to the Firm's control agenda; partially offset by lower compensation expense in CIB and a decline in CCB's mortgage business, which included the effect of lower servicing headcount.

Noncompensation expense increased in 2013 from the prior year. The increase was due to higher other expense, reflecting $11.1 billion of firmwide legal expense, predominantly in Corporate/Private Equity, representing additional reserves for several litigation and regulatory proceedings, compared with $5.0 billion of expense in the prior year. Investments in the businesses, higher legal-related professional services expense, and costs related to the Firm's control agenda also contributed to the increase. The increase was offset partially by lower mortgage servicing expense in CCB and lower occupancy expense for the Firm, which predominantly reflected the absence of charges recognized in 2012 related to vacating excess space. For a further discussion of legal expense, see Note 31 on pages 326–332 of this Annual Report. For a discussion of amortization of intangibles, refer to Note 17 on pages 299–304 of this Annual Report.

2012 compared with 2011
Total noninterest expense for 2012 was $64.7 billion , up by $1.8 billion, or 3%, from 2011. Compensation expense drove the increase from the prior year.

Compensation expense increased from the prior year, predominantly due to investments in the businesses, including the sales force in CCB and bankers in the other businesses, partially offset by lower compensation expense in CIB.

Noncompensation expense for 2012 increased from the prior year, reflecting continued investments in the businesses, including branch builds in CCB; higher expense related to growth in business volume in CIB and CCB; higher regulatory deposit insurance assessments; expenses related to exiting a non-core product and writing-off intangible assets in CCB; and higher legal expense in Corporate/Private Equity. These increases were partially offset by lower legal expense in AM and CCB (including the Independent Foreclosure Review settlement) and lower marketing expense in CCB.

Income tax expense

Year ended December 31, (in millions, except rate)	**2013**	2012	2011
Income before income tax expense	**$25,914**	$28,917	$26,749
Income tax expense	**7,991**	7,633	7,773
Effective tax rate	**30.8%**	26.4%	29.1%

2013 compared with 2012
The increase in the effective tax rate compared with the prior year was predominantly due to the effect of higher nondeductible expense related to litigation and regulatory proceedings in 2013. This was largely offset by the impact of lower reported pre-tax income in combination with changes in the mix of income and expense subject to U.S. federal, state and local taxes, business tax credits, tax benefits associated with prior year tax adjustments and audit resolutions. For additional information on income taxes, see Critical Accounting Estimates Used by the Firm on pages 174–178 and Note 26 on pages 313–315 of this Annual Report.

2012 compared with 2011
The decrease in the effective tax rate compared with the prior year was largely the result of changes in the proportion of income subject to U.S. federal and state and local taxes, as well as higher tax benefits associated with tax audits and tax-advantaged investments. This was partially offset by higher reported pretax income and lower benefits associated with the disposition of certain investments. The current and prior periods include deferred tax benefits associated with state and local income taxes.

Selected Consolidated Balance Sheets data

December 31, (in millions)	2013	2012	Change
Assets			
Cash and due from banks	**$ 39,771**	$ 53,723	(26)%
Deposits with banks	**316,051**	121,814	159
Federal funds sold and securities purchased under resale agreements	**248,116**	296,296	(16)
Securities borrowed	**111,465**	119,017	(6)
Trading assets:			
Debt and equity instruments	**308,905**	375,045	(18)
Derivative receivables	**65,759**	74,983	(12)
Securities	**354,003**	371,152	(5)
Loans	**738,418**	733,796	1
Allowance for loan losses	**(16,264)**	(21,936)	(26)
Loans, net of allowance for loan losses	**722,154**	711,860	1
Accrued interest and accounts receivable	**65,160**	60,933	7
Premises and equipment	**14,891**	14,519	3
Goodwill	**48,081**	48,175	–
Mortgage servicing rights	**9,614**	7,614	26
Other intangible assets	**1,618**	2,235	(28)
Other assets	**110,101**	101,775	8
Total assets	**$ 2,415,689**	$ 2,359,141	2
Liabilities			
Deposits	**$ 1,287,765**	$ 1,193,593	8
Federal funds purchased and securities loaned or sold under repurchase agreements	**181,163**	240,103	(25)
Commercial paper	**57,848**	55,367	4
Other borrowed funds	**27,994**	26,636	5
Trading liabilities:			
Debt and equity instruments	**80,430**	61,262	31
Derivative payables	**57,314**	70,656	(19)
Accounts payable and other liabilities	**194,491**	195,240	–
Beneficial interests issued by consolidated VIEs	**49,617**	63,191	(21)
Long-term debt	**267,889**	249,024	8
Total liabilities	**2,204,511**	2,155,072	2
Stockholders' equity	**211,178**	204,069	3
Total liabilities and stockholders' equity	**$ 2,415,689**	$ 2,359,141	2 %

Consolidated Balance Sheets overview

Total assets increased by $56.5 billion or 2%, and total liabilities increased by $49.4 billion or 2%, from December 31, 2012. The following is a discussion of the significant changes in the specific line item captions on the Consolidated Balance Sheets during 2013.

Cash and due from banks and deposits with banks

The net increase reflected the placement of the Firm's excess funds with various central banks, predominantly Federal Reserve Banks. For additional information, refer to the Liquidity Risk Management discussion on pages 168–173 of this Annual Report.

Federal funds sold and securities purchased under resale agreements; and securities borrowed

The decrease in securities purchased under resale agreements and securities borrowed was predominantly due to a shift in the deployment of the Firm's excess cash by Treasury.

Trading assets and liabilities – debt and equity instruments

The decrease in trading assets was driven by client-driven market-making activity in CIB, which resulted in lower levels of debt securities. For additional information, refer to Note 3 on pages 195–215 of this Annual Report.

The increase in trading liabilities was driven by client-driven market-making activity in CIB, which resulted in higher levels of short positions in debt and equity securities.

Trading assets and liabilities – derivative receivables and payables

Derivative receivables and payables decreased predominantly due to reductions in interest rate derivatives driven by an increase in interest rates and reductions in commodity derivatives due to market movements. The decreases were partially offset by an increase in equity derivatives driven by a rise in equity markets.

For additional information, refer to Derivative contracts on pages 135–136, and Note 3 and Note 6 on pages 195–215 and 220–233, respectively, of this Annual Report.

Securities

The decrease in securities was largely due to repositioning which resulted in lower levels of corporate debt, non-U.S. government securities and non-U.S. residential MBS. The decrease was partially offset by higher levels of U.S. Treasury and government agency obligations and obligations of U.S. states and municipalities. For additional information related to securities, refer to the discussion in the Corporate/Private Equity segment on pages 109–111, and Note 3 and Note 12 on pages 195–215 and 249–254, respectively, of this Annual Report.

Loans and allowance for loan losses

Loans increased predominantly due to continued growth in wholesale loans partially offset by a decrease in consumer,

excluding credit card loans, predominantly due to paydowns and the charge-off or liquidation of delinquent loans, partially offset by new mortgage and auto originations.

The allowance for loan losses decreased as a result of a $5.5 billion reduction in the consumer allowance, reflecting the impact of improved home prices on the residential real estate portfolio and improved delinquency trends in the residential real estate and credit card portfolios. For a more detailed discussion of the loan portfolio and the allowance for loan losses, refer to Credit Risk Management on pages 119–141, and Notes 3, 4, 14 and 15 on pages 195–215, 215–218, 258–283 and 284–287, respectively, of this Annual Report.

Premises and Equipment
The increase in premises and equipment was largely due to investments in CBB in the U.S. and other investments in facilities globally.

Mortgage servicing rights
The increase was predominantly due to originations and changes in market interest rates, partially offset by collection/realization of expected cash flows, dispositions, and changes in valuation due to model inputs and assumptions. For additional information on MSRs, see Note 17 on pages 299–304 of this Annual Report.

Other assets
The increase is primarily driven by the implementation of gross initial margin requirements for certain U.S. counterparties for exchange-traded derivatives ("ETD"), higher ETD margin balances, and mandatory clearing for certain over-the-counter derivative contracts in the U.S.

Deposits
The increase was due to growth in both wholesale and consumer deposits. The increase in wholesale client balances was due to higher short-term deposits as well as growth in client operating balances. Consumer deposit balances increased from the effect of continued strong growth in business volumes and strong customer retention. For more information on consumer deposits, refer to the CCB segment discussion on pages 86–97; the Liquidity Risk Management discussion on pages 168–173; and Notes 3 and 19 on pages 195–215 and 305, respectively, of this Annual Report. For more information on wholesale client deposits, refer to the AM, CB and CIB segment discussions on pages 106–108, 103–105 and 98–102, respectively, of this Annual Report.

Federal funds purchased and securities loaned or sold under repurchase agreements
The decrease was predominantly due to a change in the mix of the Firm's funding sources. For additional information on the Firm's Liquidity Risk Management, see pages 168–173 of this Annual Report.

Commercial paper and other borrowed funds
Commercial paper increased slightly due to higher commercial paper issuance from wholesale funding markets and an increase in the volume of liability balances related to CIB's liquidity management product, whereby clients choose to sweep their deposits into commercial paper. Other borrowed funds increased slightly due to higher secured short-term borrowings to meet short-term funding needs. For additional information on the Firm's Liquidity Risk Management and other borrowed funds, see pages 168–173 of this Annual Report.

Accounts payable and other liabilities
Accounts payable and other liabilities remained relatively flat compared with the prior year. For additional information on the Firm's accounts payable and other liabilities, see Note 20 on page 305 of this Annual Report.

Beneficial interests issued by consolidated VIEs
Beneficial interests issued by consolidated VIEs decreased primarily due to unwinds of municipal bond vehicles, net credit card maturities and a reduction in outstanding conduit commercial paper held by third parties. For additional information on Firm-sponsored VIEs and loan securitization trusts, see Note 16 on pages 288–299 of this Annual Report.

Long-term debt
The increase was primarily due to net issuances, which also reflected the redemption of trust preferred securities in the second quarter of 2013. For additional information on the Firm's long-term debt activities, see the Liquidity Risk Management discussion on pages 168–173 of this Annual Report.

Stockholders' equity
Total stockholders' equity increased, predominantly due to net income; net issuance of preferred stock; and the issuances and commitments to issue under the Firm's employee stock-based compensation plans. The increase was partially offset by the declaration of cash dividends on common and preferred stock, repurchases of common stock and a net decrease in accumulated other comprehensive income. The net decrease in accumulated other comprehensive income was primarily related to the decline in fair value of U.S. government agency issued MBS and obligations of U.S. states and municipalities due to market changes, as well as net realized gains. For additional information on the Firm's capital actions, see Capital actions on pages 166–167 of this Annual Report.

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are off-balance sheet under U.S. GAAP. The Firm is involved with several types of off-balance sheet arrangements, including through nonconsolidated special-purpose entities ("SPEs"), which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important part of the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits, investor intermediation activities, and loan securitizations. See Note 16 on pages 288–299 for further information on these types of SPEs.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, JPMorgan Chase Bank, N.A. could be required to provide funding if its short-term credit rating were downgraded below specific levels, primarily "P-1", "A-1" and "F1" for Moody's, Standard & Poor's and Fitch, respectively. These liquidity commitments support the issuance of asset-backed commercial paper by both Firm-administered consolidated and third-party sponsored nonconsolidated SPEs. In the event of such a short-term credit rating downgrade, JPMorgan Chase Bank, N.A., absent other solutions, would be required to provide funding to the SPE, if the commercial paper could not be reissued as it matured. The aggregate amounts of commercial paper outstanding, issued by both Firm-administered and third-party sponsored SPEs, that are held by third parties as of December 31, 2013 and 2012, was $15.5 billion and $18.1 billion, respectively. The aggregate amounts of commercial paper outstanding could increase in future periods should clients of the Firm-administered consolidated or third-party sponsored nonconsolidated SPEs draw down on certain unfunded lending-related commitments. These unfunded lending-related commitments were $9.2 billion and $10.9 billion at December 31, 2013 and 2012, respectively. The Firm could facilitate the refinancing of some of the clients' assets in order to reduce the funding obligation. For further information, see the discussion of Firm-administered multi-seller conduits in Note 16 on pages 292–293 of this Annual Report.

The Firm also acts as liquidity provider for certain municipal bond vehicles. The Firm's obligation to perform as liquidity provider is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. See Note 16 on pages 288–299 of this Annual Report for additional information.

Off–balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. For further discussion of lending-related financial instruments, guarantees and other commitments, and the Firm's accounting for them, see Lending-related commitments on page 135, and Note 29 (including the table that presents the related amounts by contractual maturity as of December 31, 2013) on pages 318–324 of this Annual Report. For a discussion of loan repurchase liabilities, see Mortgage repurchase liability on pages 78–79 and Note 29 on pages 318–324, respectively, of this Annual Report.

Contractual cash obligations

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's significant contractual cash obligations at December 31, 2013. The contractual cash obligations included in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the below table are certain liabilities with variable cash flows and/or no contractual maturity.

The carrying amount of on-balance sheet obligations on the Consolidated Balance Sheets may differ from the minimum contractual amount of the obligations reported below. For a discussion of mortgage loan repurchase liabilities, see Mortgage repurchase liability on pages 78–79 of this Annual Report. For further discussion of other obligations, see the Notes to Consolidated Financial Statements in this Annual Report.

Contractual cash obligations

By remaining maturity at December 31, (in millions)	2013					2012
	2014	2015-2016	2017-2018	After 2018	**Total**	Total
On-balance sheet obligations						
Deposits[a]	**$ 1,269,092**	**$ 11,382**	**$ 2,143**	**$ 3,970**	**$ 1,286,587**	$ 1,191,776
Federal funds purchased and securities loaned or sold under repurchase agreements	**177,109**	**2,097**	**608**	**1,349**	**181,163**	240,103
Commercial paper	**57,848**	**–**	**–**	**–**	**57,848**	55,367
Other borrowed funds[a]	**15,655**	**–**	**–**	**–**	**15,655**	15,357
Beneficial interests issued by consolidated VIEs[a]	**21,578**	**12,567**	**7,986**	**5,490**	**47,621**	62,021
Long-term debt[a]	**41,966**	**74,900**	**64,354**	**75,519**	**256,739**	231,223
Other[b]	**2,864**	**1,214**	**973**	**2,669**	**7,720**	7,012
Total on-balance sheet obligations	**1,586,112**	**102,160**	**76,064**	**88,997**	**1,853,333**	1,802,859
Off-balance sheet obligations						
Unsettled reverse repurchase and securities borrowing agreements[c]	**38,211**	**–**	**–**	**–**	**38,211**	34,871
Contractual interest payments[d]	**7,230**	**10,363**	**6,778**	**23,650**	**48,021**	56,280
Operating leases[e]	**1,936**	**3,532**	**2,796**	**6,002**	**14,266**	14,915
Equity investment commitments[f]	**516**	**82**	**28**	**1,493**	**2,119**	1,909
Contractual purchases and capital expenditures[g]	**1,227**	**1,042**	**615**	**541**	**3,425**	3,052
Obligations under affinity and co-brand programs	**921**	**1,861**	**447**	**54**	**3,283**	4,306
Other	**11**	**–**	**–**	**–**	**11**	34
Total off-balance sheet obligations	**50,052**	**16,880**	**10,664**	**31,740**	**109,336**	115,367
Total contractual cash obligations	**$ 1,636,164**	**$ 119,040**	**$ 86,728**	**$ 120,737**	**$ 1,962,669**	$ 1,918,226

(a) Excludes structured notes where the Firm is not obligated to return a stated amount of principal at the maturity of the notes, but is obligated to return an amount based on the performance of the structured notes.
(b) Primarily includes dividends declared on preferred and common stock, deferred annuity contracts, pension and postretirement obligations and insurance liabilities. Prior periods were revised to conform with the current presentation.
(c) For further information, refer to unsettled reverse repurchase and securities borrowing agreements in Note 29 on pages 321–322 of this Annual Report.
(d) Includes accrued interest and future contractual interest obligations. Excludes interest related to structured notes where the Firm's payment obligation is based on the performance of certain benchmarks.
(e) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of $2.6 billion and $1.9 billion at December 31, 2013 and 2012, respectively. Prior periods were revised to conform with the current presentation.
(f) At December 31, 2013 and 2012, included unfunded commitments of $215 million and $370 million, respectively, to third-party private equity funds that are generally fair valued at net asset value as discussed in Note 3 on pages 195–215 of this Annual Report; and $1.9 billion and $1.5 billion of unfunded commitments, respectively, to other equity investments.
(g) Prior periods were revised to conform with the current presentation.

Mortgage repurchase liability

In connection with the Firm's mortgage loan sale and securitization activities with Fannie Mae and Freddie Mac (the "GSEs") and other mortgage loan sale and private-label securitization transactions, the Firm has made representations and warranties that the loans sold meet certain requirements. The Firm has been, and may be, required to repurchase loans and/or indemnify the GSEs (e.g., with "make-whole" payments to reimburse the GSEs for realized losses on liquidated loans) and other investors for losses due to material breaches of these representations and warranties. To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the third party.

On October 25, 2013, the Firm announced it had reached a $1.1 billion agreement with the Federal Housing Finance Agency ("FHFA") to resolve, other than certain limited types of exposures, outstanding and future mortgage repurchase demands associated with loans sold to the GSEs from 2000

to 2008 ("FHFA Settlement Agreement"). The majority of the mortgage repurchase demands that the Firm had received from the GSEs related to loans originated from 2005 to 2008.

The Firm has recognized a mortgage repurchase liability of $681 million and $2.8 billion as of December 31, 2013 and 2012, respectively. The amount of the mortgage repurchase liability at December 31, 2013, relates to repurchase losses associated with loans sold in connection with loan sale and securitization transactions with the GSEs that are not covered by the FHFA Settlement Agreement (e.g., post-2008 loan sale and securitization transactions, mortgage insurance rescissions and certain mortgage insurance settlement-related exposures, as well as certain other specific exclusions). At December 31, 2013, the Firm had outstanding repurchase demands of $330 million and unresolved mortgage insurance rescission notices of $263 million (excluding mortgage insurance rescission notices on loans for which a repurchase demand also has been received).

The following table summarizes the change in the mortgage repurchase liability for each of the periods presented.

Summary of changes in mortgage repurchase liability

Year ended December 31, (in millions)	**2013**	2012	2011
Repurchase liability at beginning of period	**$ 2,811**	$ 3,557	$ 3,285
Net realized losses[a][b]	**(1,561)**	(1,158)	(1,263)
Reclassification to litigation reserve[c]	**(179)**	–	–
Provision for repurchase losses[d]	**(390)**	412	1,535
Repurchase liability at end of period	**$ 681**	$ 2,811	$ 3,557

(a) Presented net of third-party recoveries and includes principal losses and accrued interest on repurchased loans, "make-whole" settlements, settlements with claimants, and certain related expense. Make-whole settlements were $414 million, $524 million and $640 million, for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) The 2013 amount includes $1.1 billion for the FHFA Settlement Agreement.

(c) Prior to December 31, 2013, in the absence of a repurchase demand by a party to the relevant contracts, the Firm's decision to repurchase loans from private-label securitization trusts when it determined it had an obligation to do so was recognized in the mortgage repurchase liability. Pursuant to the terms of the RMBS Trust Settlement, all repurchase obligations relating to the subject private-label securitization trusts, whether resulting from a repurchase demand or otherwise, are now recognized in the Firm's litigation reserves for this settlement. The RMBS Trust Settlement is fully accrued as of December 31, 2013.

(d) Included a provision related to new loan sales of $20 million, $112 million and $52 million, for the years ended December 31, 2013, 2012 and 2011, respectively.

Private label securitizations

The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

On November 15, 2013, the Firm announced it had reached a $4.5 billion agreement with 21 major institutional investors to make a binding offer to the trustees of 330 residential mortgage-backed securities trusts issued by J.P.Morgan, Chase and Bear Stearns ("RMBS Trust Settlement") to resolve all representation and warranty claims, as well as all servicing claims, on all trusts issued by J.P.Morgan, Chase and Bear Stearns between 2005 and 2008. The RMBS Trust Settlement may be subject to court approval. For further information about the RMBS Trust Settlement, see Note 31 on pages 326–332 of this Annual Report.

In addition, from 2005 to 2008, Washington Mutual made certain loan level representations and warranties in connection with approximately $165 billion of residential mortgage loans that were originally sold or deposited into private-label securitizations by Washington Mutual. Of the $165 billion, approximately $75 billion has been repaid. In addition, approximately $47 billion of the principal amount of such loans has liquidated with an average loss severity of 59%. Accordingly, the remaining outstanding principal balance of these loans as of December 31, 2013, was approximately $43 billion, of which $10 billion was 60 days or more past due. The Firm believes that any repurchase obligations related to these loans remain with the FDIC receivership.

For additional information regarding the mortgage repurchase liability, see Note 29 on pages 318–324 of this Annual Report.

CASH FLOWS ANALYSIS

For the years ended December 31, 2013, 2012 and 2011, cash and due from banks decreased $14.0 billion and $5.9 billion, and increased $32.0 billion, respectively. The following discussion highlights the major activities and transactions that affected JPMorgan Chase's cash flows during 2013, 2012 and 2011, respectively.

Cash flows from operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's capital markets and lending activities, including the origination or purchase of loans initially designated as held-for-sale. Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities, and market conditions. Management believes cash flows from operations, available cash balances and the Firm's ability to generate cash through short- and long-term borrowings are sufficient to fund the Firm's operating liquidity needs.

For the year ended December 31, 2013, net cash provided by operating activities was $108.0 billion, and it was significantly higher than net income. This resulted from a decrease in trading assets - debt and equity instruments driven by client-driven market-making activity in CIB, which resulted in lower levels of debt securities; and an increase in trading liabilities – debt and equity instruments driven by client-driven market-making activity in CIB, which resulted in higher levels of short positions in debt and equity securities. Net cash generated from operating activities also reflected adjustments for noncash items such as deferred taxes, depreciation and amortization, and stock-based compensation. Partially offsetting these cash inflows was cash used for loans originated and purchased with an initial intent to sell, which was slightly higher than the cash proceeds received from sales and paydowns of the loans, and also reflected significantly higher levels of activities over the prior-year period.

For the year ended December 31, 2012, net cash provided by operating activities was $25.1 billion. This resulted from a decrease in securities borrowed reflecting a shift in the deployment of excess cash to resale agreements, as well as lower client activity in CIB, and lower trading assets - derivative receivables, primarily related to the decline in the U.S. dollar and tightening of credit spreads. Partially offsetting these cash inflows was a decrease in accounts payable and other liabilities predominantly due to lower CIB client balances, and an increase in trading assets - debt and equity instruments driven by client-driven market-making activity in CIB. Net cash generated from operating activities was higher than net income largely as a result of adjustments for noncash items such as depreciation and amortization, provision for credit losses, and stock-based compensation. Cash used to acquire loans was slightly higher than cash proceeds received from sales and paydowns of such loans originated and purchased with an initial intent to sell, and also reflected a lower level of activity compared with the prior-year period.

For the year ended December 31, 2011, net cash provided by operating activities was $95.9 billion, and it was significantly higher than net income. This resulted from a net decrease in trading assets and liabilities – debt and equity instruments, driven by client-driven market-making activity in CIB; an increase in accounts payable and other liabilities predominantly due to higher CIB client balances, and a decrease in accrued interest and accounts receivables, primarily in CIB, driven by a large reduction in customer margin receivables due to changes in client activity. Net cash generated from operating activities also reflected adjustments for noncash items such as the provision for credit losses, depreciation and amortization, and stock-based compensation. Additionally, cash provided from sales and paydowns of loans originated or purchased with an initial intent to sell was higher than cash used to acquire such loans. Partially offsetting these cash proceeds was an increase in securities borrowed, predominantly in Corporate due to higher excess cash positions at year-end.

Cash flows from investing activities

The Firm's investing activities predominantly include loans originated to be held for investment, the investment securities portfolio and other short-term interest-earning assets. For the year ended December 31, 2013, net cash of $150.5 billion was used in investing activities. This resulted from an increase in deposits with banks reflecting the placement of the Firm's excess funds with various central banks, predominantly Federal Reserve banks; and continued growth of wholesale loans. Partially offsetting this cash outflow was a decrease in securities purchased under resale agreements predominantly due to a shift in the deployment of the Firm's excess cash by Treasury; a decrease in consumer loans excluding credit card loans, predominantly due to paydowns and liquidation of delinquent loans, partially offset by new mortgage and auto originations; and proceeds from maturities and sales of investment securities which were higher than the cash used to acquire new investment securities.

For the year ended December 31, 2012, net cash of $119.8 billion was used in investing activities. This resulted from an increase in securities purchased under resale agreements due to deployment of the Firm's excess cash by Treasury; higher deposits with banks reflecting placements of the Firm's excess cash with various central banks, primarily Federal Reserve Banks; and higher levels of wholesale loans, primarily in CB and AM, driven by higher wholesale activity across most of the Firm's regions and businesses. Partially offsetting these cash outflows were a decline in consumer, excluding credit card, loans predominantly due to mortgage-related paydowns and portfolio runoff, and a decline in credit card loans due to higher repayment rates; and proceeds from maturities and sales of AFS securities,

which were higher than the cash used to acquire new AFS securities.

For the year ended December 31, 2011, net cash of $170.8 billion was used in investing activities. This resulted from a significant increase in deposits with banks reflecting the placement of funds with various central banks, including Federal Reserve Banks, predominantly resulting from the overall growth in wholesale client deposits; an increase in loans reflecting continued growth in client activity across all of the Firm's wholesale businesses and regions; net purchases of AFS securities, largely due to repositioning of the portfolio in Corporate in response to changes in the market environment; and an increase in securities purchased under resale agreements, predominantly in Corporate due to higher excess cash positions at year-end. Partially offsetting these cash outflows were a decline in consumer, excluding credit card, loan balances due to paydowns and portfolio runoff, and in credit card loans, due to higher repayment rates, runoff of the Washington Mutual portfolio and the Firm's sale of the Kohl's portfolio.

Cash flows from financing activities

The Firm's financing activities predominantly include taking customer deposits, and issuing long-term debt as well as preferred and common stock. For the year ended December 31, 2013, net cash provided by financing activities was $28.3 billion. This increase was driven by growth in both wholesale and consumer deposits; net issuances of long-term borrowings, which also reflected the redemption of trust preferred securities in the second quarter of 2013; and proceeds from the net issuance of preferred stock. The increase in wholesale client deposit balances was due to higher short-term deposits as well as growth in client operating balances. Consumer deposit balances increased from the effect of continued strong growth in business volumes and strong customer retention. Partially offsetting these cash inflows was a decrease in securities loaned or sold under repurchase agreements, predominantly due to a change in the mix of the Firm's funding sources; repurchases of common stock; and payments of cash dividends on common and preferred stock.

For the year ended December 31, 2012, net cash provided by financing activities was $87.7 billion. This was driven by proceeds from long-term borrowings and a higher level of securitized credit cards; an increase in deposits due to growth in both consumer and wholesale deposits; an increase in federal funds purchased and securities loaned or sold under repurchase agreements due to higher secured financings of the Firm's assets; an increase in commercial paper issuance in the wholesale funding markets to meet short-term funding needs, partially offset by a decline in the volume of client deposits and other third-party liability balances related to CIB's liquidity management product; an increase in other borrowed funds due to higher secured and unsecured short-term borrowings to meet short-term funding needs; and proceeds from the issuance of preferred stock. Partially offsetting these cash inflows were redemptions and maturities of long-term borrowings, including trust preferred securities, and securitized credit cards; and payments of cash dividends on common and preferred stock and repurchases of common stock and warrants.

For the year ended December 31, 2011, net cash provided by financing activities was $107.7 billion. This was largely driven by a significant increase in deposits, predominantly due to an overall growth in wholesale client balances and, to a lesser extent, consumer deposit balances. The increase in wholesale client balances, particularly in CIB and CB, was primarily driven by lower returns on other available alternative investments and low interest rates during 2011, and in AM, driven by growth in the number of clients and level of deposits. In addition, there was an increase in commercial paper due to growth in the volume of liability balances in sweep accounts related to CIB's cash management program. Cash was used to reduce securities sold under repurchase agreements, predominantly in CIB, reflecting the lower funding requirements of the Firm based on lower trading inventory levels, and change in the mix of funding sources; for net repayments of long-term borrowings, including a decrease in long-term debt, predominantly due to net redemptions and maturities, as well as a decline in long-term beneficial interests issued by consolidated VIEs due to maturities of Firm-sponsored credit card securitization transactions; to reduce other borrowed funds, predominantly driven by maturities of short-term secured borrowings, unsecured bank notes and short-term Federal Home Loan Banks ("FHLB") advances; and for repurchases of common stock and warrants, and payments of cash dividends on common and preferred stock.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its consolidated financial statements using accounting principles generally accepted in the U.S. ("U.S. GAAP"); these financial statements appear on pages 184–188 of this Annual Report. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Management also uses certain non-GAAP financial measures at the business-segment level, because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and, therefore, facilitate a comparison of the business segment with the performance of its competitors. Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

	2013			2012			2011		
Year ended December 31, (in millions, except ratios)	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis
Other income	**$ 3,847**	**$ 2,495**	**$ 6,342**	$ 4,258	$ 2,116	$ 6,374	$ 2,605	$ 2,003	$ 4,608
Total noninterest revenue	**53,287**	**2,495**	**55,782**	52,121	2,116	54,237	49,545	2,003	51,548
Net interest income	**43,319**	**697**	**44,016**	44,910	743	45,653	47,689	530	48,219
Total net revenue	**96,606**	**3,192**	**99,798**	97,031	2,859	99,890	97,234	2,533	99,767
Pre-provision profit	**26,139**	**3,192**	**29,331**	32,302	2,859	35,161	34,323	2,533	36,856
Income before income tax expense	**25,914**	**3,192**	**29,106**	28,917	2,859	31,776	26,749	2,533	29,282
Income tax expense	**7,991**	**3,192**	**11,183**	7,633	2,859	10,492	7,773	2,533	10,306
Overhead ratio	**73%**	**NM**	**71%**	67%	NM	65%	65%	NM	63%

(a) Predominantly recognized in CIB and CB business segments and Corporate/Private Equity.

Tangible common equity ("TCE"), ROTCE, tangible book value per share ("TBVS"), and Tier 1 common under Basel I and III rules are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's earnings as a percentage of TCE. TBVS represents the Firm's tangible common equity divided by period-end common shares. Tier 1 common under Basel I and III rules are used by management, along with other capital measures, to assess and monitor the Firm's capital position. TCE, ROTCE, and TBVS are meaningful to the Firm, as well as investors and analysts, in assessing the Firm's use of equity. The Firm uses ROTCE, a non-GAAP financial measure, to evaluate its use of equity and to facilitate comparisons with competitors. For additional information on Tier 1 common under Basel I and III, see Regulatory capital on pages 161–165 of this Annual Report.

Calculation of certain U.S. GAAP and non-GAAP metrics

The following U.S. GAAP and non-GAAP measures, we calculated as follows:

Return on common equity
Net income* / Average common stockholders' equity

Return on tangible common equity
Net income* / Average tangible common equity

Return on assets
Reported net income / Total average assets

Return on risk-weighted assets
Annualized earnings / Average risk-weighted assets

Overhead ratio
Total noninterest expense / Total net revenue

* Represents net income applicable to common equity

Average tangible common equity

Year ended December 31, (in millions)	2013	2012	2011
Common stockholders' equity	**$ 196,409**	$ 184,352	$ 173,266
Less: Goodwill	**48,102**	48,176	48,632
Less: Certain identifiable intangible assets	**1,950**	2,833	3,632
Add: Deferred tax liabilities[a]	**2,885**	2,754	2,635
Tangible common equity	**$ 149,242**	$ 136,097	$ 123,637

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Core net interest income

In addition to reviewing net interest income on a managed basis, management also reviews core net interest income to assess the performance of its core lending, investing (including asset-liability management) and deposit-raising activities (which excludes the impact of CIB's market-based activities). The core data presented below are non-GAAP financial measures due to the exclusion of CIB's market-based net interest income and the related assets. Management believes this exclusion provides investors and analysts a more meaningful measure by which to analyze the non-market-related business trends of the Firm and provides a comparable measure to other financial institutions that are primarily focused on core lending, investing and deposit-raising activities.

Core net interest income data

Year ended December 31, (in millions, except rates)	2013	2012	2011
Net interest income - managed basis[a][b]	**$ 44,016**	$ 45,653	$ 48,219
Less: Market-based net interest income	**4,979**	5,787	7,329
Core net interest income[a]	**$ 39,037**	$ 39,866	$ 40,890
Average interest-earning assets	**$1,970,231**	$1,842,417	$1,761,355
Less: Average market-based earning assets	**504,218**	499,339	519,655
Core average interest-earning assets	**$1,466,013**	$1,343,078	$1,241,700
Net interest yield on interest-earning assets - managed basis	**2.23%**	2.48%	2.74%
Net interest yield on market-based activities	**0.99**	1.16	1.41
Core net interest yield on core average interest-earning assets	**2.66%**	2.97%	3.29%

(a) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(b) For a reconciliation of net interest income on a reported and managed basis, see reconciliation from the Firm's reported U.S. GAAP results to managed basis on page 82 of this Annual Report.

2013 compared with 2012

Core net interest income decreased by $829 million to $39.0 billion for 2013, and core average interest-earning assets increased by $122.9 billion in 2013 to $1,466.0 billion. The decline in net interest income in 2013 primarily reflected the impact of the runoff of higher yielding loans and originations of lower yielding loans. The decrease in net interest income was partially offset by lower long-term debt and other funding costs. The increase in average interest-earning assets reflected the impact of higher deposits with banks. The core net interest yield decreased by 31 basis points to 2.66% in 2013, primarily reflecting the impact of a significant increase in deposits with banks and lower loan yields, partially offset by the impact of lower long-term debt yields and deposit rates.

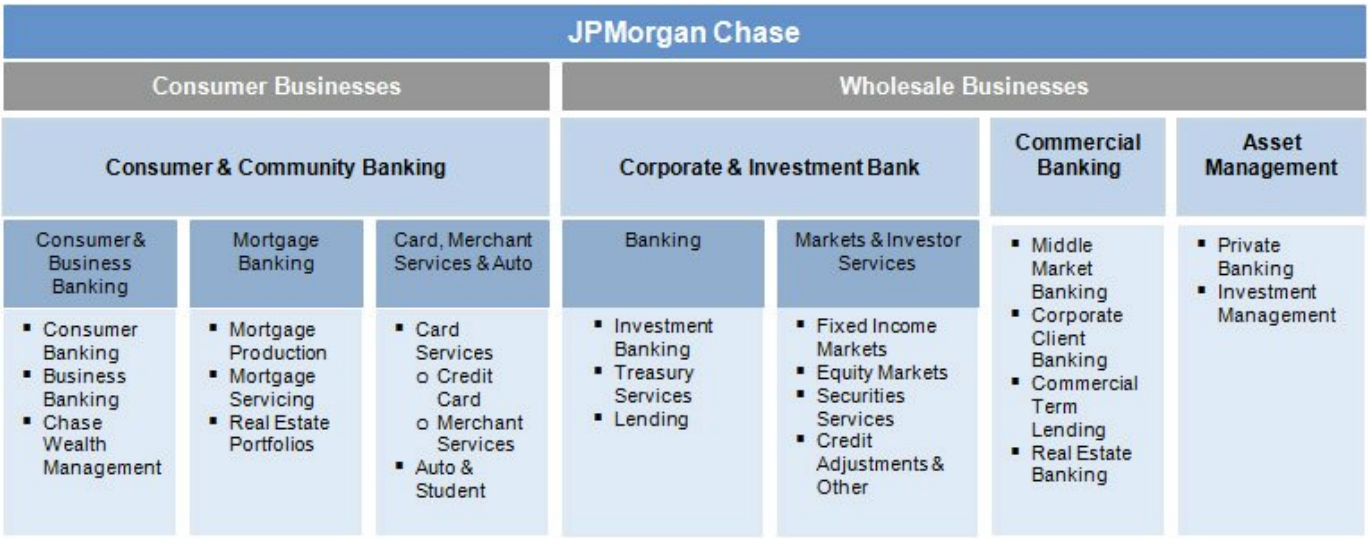
2012 compared with 2011

Core net interest income decreased by $1.0 billion to $39.9 billion for 2012, and core average interest-earning assets increased by $101.4 billion in 2012 to $1,343.1 billion. The decline in net interest income in 2012 reflected the impact of the runoff of higher-yielding loans, faster prepayment of mortgage-backed securities, and limited reinvestment opportunities, as well as the impact of lower interest rates across the Firm's interest-earning assets. The decrease in net interest income was partially offset by lower deposit and other borrowing costs. The increase in average interest-earning assets was driven by higher deposits with banks and other short-term investments, increased levels of loans, and an increase in investment securities. The core net interest yield decreased by 32 basis points to 2.97% in 2012, primarily driven by the runoff of higher-yielding loans, lower customer loan rates, higher financing costs associated with mortgage-backed securities, and limited reinvestment opportunities, slightly offset by lower customer deposit rates.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate/Private Equity segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 82–83 of this Annual Report.



Description of business segment reporting methodology
Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies. The Firm continues to assess the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing
When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing
Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Treasury group within Corporate/Private Equity. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment as if it were operating independently, and as compared with its stand-alone peers. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO").

Business segment capital allocation changes
Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, regulatory capital requirements (as estimated under Basel III) and economic risk measures. The amount of capital assigned to each business is referred to as equity. Effective January 1, 2013, the Firm refined the capital allocation framework to align it with the line of business structure described above. The increase in equity levels for the lines of businesses is largely driven by evolving regulatory requirements and the higher capital targets the Firm has established under the Basel III Advanced Approach. For further information about these capital changes, see Line of business equity on pages 165–166 of this Annual Report.

Expense allocation

Where business segments use services provided by support units within the Firm, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally allocated based on actual cost and upon usage of the services provided. In contrast, certain other expense related to certain corporate functions, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Retained expense includes: parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other items not aligned with a particular business segment.

Segment Results – Managed Basis

The following table summarizes the business segment results for the periods indicated.

Year ended December 31,	Total net revenue			Total noninterest expense			Pre-provision profit/(loss)		
(in millions)	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Consumer & Community Banking[a]	**$ 46,026**	$ 49,884	$ 45,619	**$ 27,842**	$ 28,827	$ 27,637	**$ 18,184**	$ 21,057	$ 17,982
Corporate & Investment Bank	**34,225**	34,326	33,984	**21,744**	21,850	21,979	**12,481**	12,476	12,005
Commercial Banking	**6,973**	6,825	6,418	**2,610**	2,389	2,278	**4,363**	4,436	4,140
Asset Management	**11,320**	9,946	9,543	**8,016**	7,104	7,002	**3,304**	2,842	2,541
Corporate/Private Equity[a]	**1,254**	(1,091)	4,203	**10,255**	4,559	4,015	**(9,001)**	(5,650)	188
Total	**$ 99,798**	$ 99,890	$ 99,767	**$ 70,467**	$ 64,729	$ 62,911	**$ 29,331**	$ 35,161	$ 36,856

Year ended December 31,	Provision for credit losses			Net income/(loss)			Return on equity		
(in millions, except ratios)	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Consumer & Community Banking[a]	**$ 335**	$ 3,774	$ 7,620	**$ 10,749**	$ 10,551	$ 6,105	**23%**	25%	15%
Corporate & Investment Bank	**(232)**	(479)	(285)	**8,546**	8,406	7,993	**15**	18	17
Commercial Banking	**85**	41	208	**2,575**	2,646	2,367	**19**	28	30
Asset Management	**65**	86	67	**2,031**	1,703	1,592	**23**	24	25
Corporate/Private Equity[a]	**(28)**	(37)	(36)	**(5,978)**	(2,022)	919	NM	NM	NM
Total	**$ 225**	$ 3,385	$ 7,574	**$ 17,923**	$ 21,284	$ 18,976	**9%**	11%	11%

(a) The 2012 and 2011 data for certain income statement line items (predominantly net interest income, compensation and noncompensation expense) were revised to reflect the transfer of certain technology and operations, as well as real estate-related functions and staff, from Corporate/Private Equity to CCB, effective January 1, 2013.

CONSUMER & COMMUNITY BANKING

Consumer & Community Banking ("CCB") serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Merchant Services & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.

Selected income statement data[a]

Year ended December 31, (in millions, except ratios)	2013	2012	2011
Revenue			
Lending- and deposit-related fees	**$ 2,983**	$ 3,121	$ 3,219
Asset management, administration and commissions	**2,116**	2,093	2,046
Mortgage fees and related income	**5,195**	8,680	2,714
Card income	**5,785**	5,446	6,152
All other income	**1,473**	1,473	1,183
Noninterest revenue	**17,552**	20,813	15,314
Net interest income	**28,474**	29,071	30,305
Total net revenue	**46,026**	49,884	45,619
Provision for credit losses	**335**	3,774	7,620
Noninterest expense			
Compensation expense	**11,686**	11,632	10,329
Noncompensation expense	**15,740**	16,420	16,669
Amortization of intangibles	**416**	775	639
Total noninterest expense	**27,842**	28,827	27,637
Income before income tax expense	**17,849**	17,283	10,362
Income tax expense	**7,100**	6,732	4,257
Net income	**$ 10,749**	$10,551	$ 6,105
Financial ratios			
Return on common equity	**23%**	25%	15%
Overhead ratio	**60**	58	61

(a) The 2012 and 2011 data for certain income statement line items (predominantly net interest income, compensation and noncompensation expense) were revised to reflect the transfer of certain technology and operations, as well as real estate-related functions and staff, from Corporate/Private Equity to CCB, effective January 1, 2013.

2013 compared with 2012

Consumer & Community Banking net income was $10.7 billion, an increase of $198 million, or 2%, compared with the prior year, due to lower provision for credit losses and lower noninterest expense, predominantly offset by lower net revenue.

Net revenue was $46.0 billion, a decrease of $3.9 billion, or 8%, compared with the prior year. Net interest income was $28.5 billion, down $597 million, or 2%, driven by lower deposit margins, lower loan balances due to net portfolio runoff and spread compression in Credit Card, largely offset by higher deposit balances. Noninterest revenue was $17.6 billion, a decrease of $3.3 billion, or 16%, driven by lower mortgage fees and related income, partially offset by higher card income.

The provision for credit losses was $335 million, compared with $3.8 billion in the prior year. The current-year provision reflected a $5.5 billion reduction in the allowance for loan losses and total net charge-offs of $5.8 billion. The prior-year provision reflected a $5.5 billion reduction in the allowance for loan losses and total net charge-offs of $9.3 billion, including $800 million of incremental charge-offs related to regulatory guidance. For more information, including net charge-off amounts and rates, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

Noninterest expense was $27.8 billion, a decrease of $985 million, or 3%, from the prior year, driven by lower mortgage servicing expense, partially offset by investments in Chase Private Client expansion, higher non-MBS related legal expense in Mortgage Production, higher auto lease depreciation, and costs related to the control agenda.

2012 compared with 2011

Consumer & Community Banking net income was $10.6 billion, up 73% when compared with the prior year. The increase was driven by higher net revenue and lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was $49.9 billion, up $4.3 billion, or 9%, compared with the prior year. Net interest income was $29.1 billion, down $1.2 billion, or 4%, driven by lower deposit margins and lower loan balances due to portfolio runoff, largely offset by higher deposit balances. Noninterest revenue was $20.8 billion, up $5.5 billion, or 36%, driven by higher mortgage fees and related income, partially offset by lower debit card revenue, reflecting the impact of the Durbin Amendment.

The provision for credit losses was $3.8 billion compared with $7.6 billion in the prior year. The current-year provision reflected a $5.5 billion reduction in the allowance for loan losses due to improved delinquency trends and reduced estimated losses in the real estate and credit card loan portfolios. Current-year total net charge-offs were $9.3 billion, including $800 million of incremental charge-offs

related to regulatory guidance. Excluding these charge-offs, net charge-offs during the year would have been $8.5 billion compared with $11.8 billion in the prior year. For more information, including net charge-off amounts and rates, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

Noninterest expense was $28.8 billion, an increase of $1.2 billion, or 4%, compared with the prior year, driven by higher production expense reflecting higher volumes, and investments in sales force, partially offset by lower costs related to mortgage-related matters and lower marketing expense in Card.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2013	2012	2011
Selected balance sheet data (period-end)[a]			
Total assets	**$ 452,929**	$ 467,282	$ 486,697
Loans:			
Loans retained	**393,351**	402,963	425,581
Loans held-for-sale and loans at fair value[b]	**7,772**	18,801	12,796
Total loans	**401,123**	421,764	438,377
Deposits	**464,412**	438,517	397,868
Equity	**46,000**	43,000	41,000
Selected balance sheet data (average)[a]			
Total assets	**456,468**	467,641	491,035
Loans:			
Loans retained	**392,797**	408,559	429,975
Loans held-for-sale and loans at fair value[b]	**15,812**	18,006	17,187
Total loans	**408,609**	426,565	447,162
Deposits	**453,304**	413,948	382,702
Equity	**46,000**	43,000	41,000
Headcount[a]	**151,333**	164,391	166,053

(a) The 2012 and 2011 data for certain balance sheet line items (predominantly total assets) as well as headcount were revised to reflect the transfer of certain technology and operations, as well as real estate-related functions and staff, from Corporate/Private Equity to CCB, effective January 1, 2013.

(b) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2013	2012	2011
Credit data and quality statistics			
Net charge-offs[a][b]	**$ 5,826**	$ 9,280	$ 11,815
Nonaccrual loans:			
Nonaccrual loans retained	**7,455**	9,114	7,354
Nonaccrual loans held-for-sale and loans at fair value	**40**	39	103
Total nonaccrual loans[c][d][e][f]	**7,495**	9,153	7,457
Nonperforming assets[c][d][e][f]	**8,149**	9,830	8,292
Allowance for loan losses[a]	**12,201**	17,752	23,256
Net charge-off rate[b][g]	**1.48%**	2.27%	2.75%
Net charge-off rate, excluding PCI loans[a][b][g]	**1.73**	2.68	3.27
Allowance for loan losses to period-end loans retained	**3.10**	4.41	5.46
Allowance for loan losses to period-end loans retained, excluding PCI loans[h]	**2.36**	3.51	4.87
Allowance for loan losses to nonaccrual loans retained, excluding credit card[c][f][h]	**57**	72	143
Nonaccrual loans to total period-end loans, excluding credit card[f]	**2.74**	3.12	2.44
Nonaccrual loans to total period-end loans, excluding credit card and PCI loans[c][f]	**3.40**	3.91	3.10
Business metrics			
Number of:			
Branches	**5,630**	5,614	5,508
ATMs	**19,211**	18,699	17,235
Active online customers (in thousands)	**33,742**	31,114	29,749
Active mobile customers (in thousands)	**15,629**	12,359	8,203

(a) Net charge-offs and net charge-off rates for the year ended December 31, 2013 excluded $53 million of write-offs in the PCI portfolio. These write-offs decreased the allowance for loan losses for PCI loans. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

(b) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $800 million of charge-offs, recorded in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") to be charged off to the net realizable value of the collateral and to be considered nonaccrual, regardless of their delinquency status. Excluding these charges-offs, net charge-offs for the year ended December 31, 2012, would have been $8.5 billion and excluding these charge-offs and PCI loans, the net charge-off rate for the year ended December 31, 2012, would have been 2.45%. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

(c) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.

(d) Certain mortgages originated with the intent to sell are classified as trading assets on the Consolidated Balance Sheets.

(e) At December 31, 2013, 2012 and 2011, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $8.4 billion, $10.6 billion, and $11.5 billion, respectively, that are 90 or more days past due; (2) real estate owned insured by U.S. government agencies of $2.0 billion, $1.6 billion, and $954 million, respectively; and (3) student loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") of $428 million, $525 million, and $551 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

(f) Nonaccrual loans included $3.0 billion of loans at December 31, 2012, based upon regulatory guidance. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

(g) Loans held-for-sale and loans accounted for at fair value were excluded when calculating the net charge-off rate.

(h) An allowance for loan losses of $4.2 billion at December 31, 2013, and $5.7 billion at December 31, 2012 and 2011 was recorded for PCI loans; these amounts were also excluded from the applicable ratios.

Consumer & Business Banking

Selected income statement data[a]

Year ended December 31, (in millions, except ratios)	2013	2012	2011
Revenue			
Lending- and deposit-related fees	**$ 2,942**	$ 3,068	$ 3,160
Asset management, administration and commissions	**1,815**	1,638	1,561
Card income	**1,495**	1,353	2,024
All other income	**492**	498	473
Noninterest revenue	**6,744**	6,557	7,218
Net interest income	**10,566**	10,594	10,732
Total net revenue	**17,310**	17,151	17,950
Provision for credit losses	**347**	311	419
Noninterest expense	**12,162**	11,490	11,336
Income before income tax expense	**4,801**	5,350	6,195
Net income	**$ 2,881**	$ 3,203	$ 3,699
Return on common equity	**26%**	36%	39%
Overhead ratio	**70**	67	63
Overhead ratio, excluding core deposit intangibles[b]	**69**	66	62
Equity (period-end and average)	**$ 11,000**	$ 9,000	$ 9,500

(a) The 2012 and 2011 data for certain income statement line items were revised to reflect the transfer of certain functions and staff from Corporate/Private Equity to CCB, effective January 1, 2013.

(b) Consumer & Business Banking ("CBB") uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business. Including CDI amortization expense in the overhead ratio calculation would result in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would therefore result in an improving overhead ratio over time, all things remaining equal. This non-GAAP ratio excluded CBB's CDI amortization expense related to prior business combination transactions of $163 million, $200 million, and $238 million for the years ended December 31, 2013, 2012 and 2011, respectively.

2013 compared with 2012

Consumer & Business Banking net income was $2.9 billion, a decrease of $322 million, or 10%, compared with the prior year, due to higher noninterest expense, partially offset by higher noninterest revenue.

Net revenue was $17.3 billion, up 1% compared with the prior year. Net interest income was $10.6 billion, flat compared with the prior year, driven by higher deposit balances, offset by lower deposit margin. Noninterest revenue was $6.7 billion, an increase of 3%, driven by higher investment sales revenue and debit card revenue, partially offset by lower deposit-related fees.

The provision for credit losses was $347 million, compared with $311 million in the prior year.

Noninterest expense was $12.2 billion, up 6% from the prior year, reflecting continued investments in the business, and costs related to the control agenda.

2012 compared with 2011

Consumer & Business Banking net income was $3.2 billion, a decrease of $496 million, or 13%, compared with the prior year. The decrease was driven by lower net revenue and higher noninterest expense, partially offset by lower provision for credit losses.

Net revenue was $17.2 billion, down 4% from the prior year. Net interest income was $10.6 billion, down 1% from the prior year, driven by the impact of lower deposit margins, predominantly offset by higher deposit balances. Noninterest revenue was $6.6 billion, down 9% from the prior year, driven by lower debit card revenue, reflecting the impact of the Durbin Amendment.

The provision for credit losses was $311 million, compared with $419 million in the prior year. The current-year provision reflected a $100 million reduction in the allowance for loan losses. Net charge-offs were $411 million compared with $494 million in the prior year.

Noninterest expense was $11.5 billion, up 1% from the prior year, resulting from investment in the sales force and new branch builds.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2013	2012	2011
Business metrics			
Business banking origination volume	**$ 5,148**	$ 6,542	$ 5,827
Period-end loans	**19,416**	18,883	17,652
Period-end deposits:[a]			
Checking	**187,182**	170,354	147,821
Savings	**238,223**	216,422	191,891
Time and other	**26,022**	31,753	36,746
Total period-end deposits	**451,427**	418,529	376,458
Average loans	**18,844**	18,104	17,121
Average deposits:[a]			
Checking	**176,005**	153,422	136,602
Savings	**229,341**	204,449	182,587
Time and other	**29,227**	34,224	41,577
Total average deposits	**434,573**	392,095	360,766
Deposit margin	**2.32%**	2.57%	2.82%
Average assets[a]	**$ 37,174**	$ 34,431	$ 32,886

(a) The 2012 and 2011 data for certain balance sheet line items were revised to reflect the transfer of certain functions and staff from Corporate/Private Equity to CCB, effective January 1, 2013.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2013	2012	2011
Credit data and quality statistics			
Net charge-offs	**$ 337**	$ 411	$ 494
Net charge-off rate	**1.79%**	2.27%	2.89%
Allowance for loan losses	**$ 707**	$ 698	$ 798
Nonperforming assets	**391**	488	710
Retail branch business metrics			
Investment sales volume	**$ 35,050**	$ 26,036	$ 22,716
Client investment assets	**188,840**	158,502	137,853
% managed accounts	**36%**	29%	24%
Number of:			
Chase Private Client locations	**2,149**	1,218	262
Personal bankers	**23,588**	23,674	24,308
Sales specialists	**5,740**	6,076	6,017
Client advisors	**3,044**	2,963	3,201
Chase Private Clients	**215,888**	105,700	21,723
Accounts (in thousands)[(a)]	**29,437**	28,073	26,626

(a) Includes checking accounts and Chase Liquid℠ cards (launched in the second quarter of 2012).

Mortgage Banking

Selected income statement data

Year ended December 31, (in millions, except ratios)	2013	2012	2011
Revenue			
Mortgage fees and related income	**$ 5,195**	$ 8,680	$ 2,714
All other income	**283**	475	490
Noninterest revenue	**5,478**	9,155	3,204
Net interest income	**4,548**	4,808	5,324
Total net revenue	**10,026**	13,963	8,528
Provision for credit losses	**(2,681)**	(490)	3,580
Noninterest expense	**7,602**	9,121	8,256
Income/(loss) before income tax expense/(benefit)	**5,105**	5,332	(3,308)
Net income/(loss)	**$ 3,082**	$ 3,341	$ (2,138)
Return on equity	**16%**	19%	(14)%
Overhead ratio	**76**	65	97
Equity (period-end and average)	**$ 19,500**	$ 17,500	$15,500

2013 compared with 2012

Mortgage Banking net income was $3.1 billion, a decrease of $259 million, or 8%, compared with the prior year, driven by lower net revenue, predominantly offset by a higher benefit from the provision for credit losses and lower noninterest expense.

Net revenue was $10.0 billion, a decrease of $3.9 billion compared with the prior year. Net interest income was $4.5 billion, a decrease of $260 million, or 5%, driven by lower loan balances due to net portfolio runoff. Noninterest revenue was $5.5 billion, a decrease of $3.7 billion, driven by lower mortgage fees and related income.

The provision for credit losses was a benefit of $2.7 billion, compared with a benefit of $490 million in the prior year. The current year reflected a $3.8 billion reduction in the allowance for loan losses due to continued improvement in home prices and delinquencies. The prior year included a $3.9 billion reduction in the allowance for loan losses.

Noninterest expense was $7.6 billion, a decrease of $1.5 billion, or 17%, from the prior year, due to lower servicing expense, partially offset by higher non-MBS related legal expense in Mortgage Production.

2012 compared with 2011

Mortgage Banking net income was $3.3 billion, compared with a net loss of $2.1 billion in the prior year. The increase was driven by higher net revenue and lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was $14.0 billion, up $5.4 billion, or 64%, compared with the prior year. Net interest income was $4.8 billion, down $516 million, or 10%, resulting from lower loan balances due to net portfolio runoff. Noninterest revenue was $9.2 billion, up $6.0 billion compared with the prior year, driven by higher mortgage fees and related income.

The provision for credit losses was a benefit of $490 million, compared with a provision expense of $3.6 billion in the prior year. The current year reflected a $3.85 billion reduction in the allowance for loan losses due to improved delinquency trends and lower estimated losses.

Noninterest expense was $9.1 billion, an increase of $865 million, or 10%, compared with the prior year, driven by higher production expense reflecting higher volumes, partially offset by lower costs related to mortgage-related matters.

Functional results

Year ended December 31, (in millions, except ratios)	2013	2012	2011
Mortgage Production			
Production revenue	**$ 2,673**	$ 5,783	$ 3,395
Production-related net interest & other income	**909**	787	840
Production-related revenue, excluding repurchase (losses)/benefits	**3,582**	6,570	4,235
Production expense[a]	**3,088**	2,747	1,895
Income, excluding repurchase (losses)/ benefits	**494**	3,823	2,340
Repurchase (losses)/benefits	**331**	(272)	(1,347)
Income before income tax expense	**825**	3,551	993
Mortgage Servicing			
Loan servicing revenue	**3,552**	3,772	4,134
Servicing-related net interest & other income	**411**	407	390
Servicing-related revenue	**3,963**	4,179	4,524
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(1,094)**	(1,222)	(1,904)
Default servicing expense	**2,069**	3,707	3,814
Core servicing expense	**904**	1,033	1,031
Income/(loss), excluding MSR risk management	**(104)**	(1,783)	(2,225)
MSR risk management, including related net interest income/(expense)	**(268)**	616	(1,572)
Income/(loss) before income tax expense/(benefit)	**(372)**	(1,167)	(3,797)
Real Estate Portfolios			
Noninterest revenue	**(209)**	43	38
Net interest income	**3,721**	4,049	4,554
Total net revenue	**3,512**	4,092	4,592
Provision for credit losses	**(2,693)**	(509)	3,575
Noninterest expense	**1,553**	1,653	1,521
Income/(loss) before income tax expense/(benefit)	**4,652**	2,948	(504)
Mortgage Banking income/(loss) before income tax expense/ (benefit)	**$ 5,105**	$ 5,332	$ (3,308)
Mortgage Banking net income/ (loss)	**$ 3,082**	$ 3,341	$ (2,138)
Overhead ratios			
Mortgage Production	**79%**	43%	65%
Mortgage Servicing	**114**	133	462
Real Estate Portfolios	**44**	40	33

(a) Includes provision for credit losses associated with Mortgage Production.

Selected income statement data

Year ended December 31, (in millions)	2013	2012	2011
Supplemental mortgage fees and related income details			
Net production revenue:			
Production revenue	**$ 2,673**	$ 5,783	$ 3,395
Repurchase (losses)/benefits	**331**	(272)	(1,347)
Net production revenue	**3,004**	5,511	2,048
Net mortgage servicing revenue:			
Operating revenue:			
Loan servicing revenue	**3,552**	3,772	4,134
Changes in MSR asset fair value due to collection/ realization of expected cash flows	**(1,094)**	(1,222)	(1,904)
Total operating revenue	**2,458**	2,550	2,230
Risk management:			
Changes in MSR asset fair value due to market interest rates and other[a]	**2,119**	(587)	(5,390)
Other changes in MSR asset fair value due to other inputs and assumptions in model[b]	**(511)**	(46)	(1,727)
Changes in derivative fair value and other	**(1,875)**	1,252	5,553
Total risk management	**(267)**	619	(1,564)
Total net mortgage servicing revenue	**2,191**	3,169	666
Mortgage fees and related income	**$ 5,195**	$ 8,680	$ 2,714

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g. cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g. changes in prepayments due to changes in home prices).

Net production revenue includes net gains or losses on originations and sales of mortgage loans, other production-related fees and losses related to the repurchase of previously-sold loans.

Net mortgage servicing revenue includes the following components:

(a) Operating revenue predominantly represents the return on Mortgage Servicing's MSR asset and includes:

- Actual gross income earned from servicing third-party mortgage loans, such as contractually specified servicing fees and ancillary income; and
- The change in the fair value of the MSR asset due to the collection or realization of expected cash flows.

(b) Risk management represents the components of Mortgage Servicing's MSR asset that are subject to ongoing risk management activities, together with derivatives and other instruments used in those risk management activities

Mortgage origination channels comprise the following:

Retail – Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Wholesale – Includes loans guaranteed by the U.S. Department of Agriculture under its Section 502 Guaranteed Loan program that serves low-and-moderate income families in small rural communities.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

2013 compared with 2012

Mortgage Production pretax income was $825 million, a decrease of $2.7 billion from the prior year, reflecting lower margins, lower volumes and higher legal expense, partially offset by a benefit in repurchase losses. Production-related revenue, excluding repurchase losses, was $3.6 billion, a decrease of $3.0 billion, or 45%, from the prior year, largely reflecting lower margins and lower volumes from rising rates. Production expense was $3.1 billion, an increase of $341 million from the prior year, due to higher non-MBS related legal expense and higher compensation-related expense. Repurchase losses for the current year reflected a benefit of $331 million, compared with repurchase losses of $272 million in the prior year. The current year reflected a reduction in repurchase liability largely as a result of the settlement with the GSEs. For further information, see Mortgage repurchase liability on pages 78–79 of this Annual Report.

Mortgage Servicing pretax loss was $372 million, compared with a pretax loss of $1.2 billion in the prior year, driven by lower expense, partially offset by mortgage servicing rights ("MSR") risk management loss. Mortgage net servicing-related revenue was $2.9 billion, a decrease of $88 million. MSR risk management was a loss of $268 million, compared with income of $616 million in the prior year, driven by the net impact of various changes in model inputs and assumptions. See Note 17 on pages 299–304 of this Annual Report for further information regarding changes in value of the MSR asset and related hedges. Servicing expense was $3.0 billion, a decrease of $1.8 billion from the prior year, reflecting lower costs associated with the Independent Foreclosure Review and lower servicing headcount.

Real Estate Portfolios pretax income was $4.7 billion, up $1.7 billion from the prior year, due to a higher benefit from the provision for credit losses, partially offset by lower net revenue. Net revenue was $3.5 billion, a decrease of $580 million, or 14%, from the prior year. This decrease was due to lower net interest income, resulting from lower loan balances due to net portfolio runoff, and lower noninterest revenue due to higher loan retention. The provision for credit losses was a benefit of $2.7 billion, compared with a benefit of $509 million in the prior year. The current-year provision reflected a $3.8 billion reduction in the allowance for loan losses, $2.3 billion from the non credit-impaired allowance and $1.5 billion from the purchased credit-impaired allowance, reflecting continued improvement in home prices and delinquencies. The prior-year provision included a $3.9 billion reduction in the allowance for loan losses from the non credit-impaired allowance. Net charge-offs were $1.1 billion, compared with $3.3 billion in the prior year. Prior-year total net charge-offs included $744 million of incremental charge-offs reported in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for the net charge-off amounts and rates. Noninterest expense was $1.6 billion, a decrease of $100 million, or 6%, compared with the prior year, driven by lower foreclosed asset expense due to lower foreclosure inventory, largely offset by higher FDIC-related expense.

2012 compared with 2011

Mortgage Production pretax income was $3.6 billion, an increase of $2.6 billion compared with the prior year. Mortgage production-related revenue, excluding repurchase losses, was $6.6 billion, an increase of $2.3 billion, or 55%, from the prior year. These results reflected wider margins, driven by favorable market conditions, and higher volumes due to historically low interest rates and the Home Affordable Refinance Programs ("HARP"). Production expense, including credit costs, was $2.7 billion, an increase of $852 million, or 45%, reflecting higher volumes and additional litigation costs. Repurchase losses were $272 million, compared with $1.3 billion in the prior year. The current-year reflected a reduction in the repurchase liability of $683 million compared with a build of $213 million in the prior year, primarily driven by improved cure rates on Agency repurchase demands and lower outstanding repurchase demand pipeline. For further information, see Mortgage repurchase liability on pages 78–79 of this Annual Report.

Mortgage Servicing reported a pretax loss of $1.2 billion, compared with a pretax loss of $3.8 billion in the prior year. Mortgage servicing revenue, including amortization, was $3.0 billion, an increase of $337 million, or 13%, from the

prior year, driven by lower mortgage servicing rights ("MSR") asset amortization expense as a result of lower MSR asset value, partially offset by lower loan servicing revenue due to the decline in the third-party loans serviced. MSR risk management income was $616 million, compared with a loss of $1.6 billion in the prior year. The prior year MSR risk management loss was driven by refinements to the valuation model and related inputs. See Note 17 on pages 299–304 of this Annual Report for further information regarding changes in value of the MSR asset and related hedges. Servicing expense was $4.7 billion, down 2% from the prior year, but elevated in both the current and prior year primarily due to higher default servicing costs.

Real Estate Portfolios pretax income was $2.9 billion, compared with a pretax loss of $504 million in the prior year. The improvement was driven by a benefit from the provision for credit losses, reflecting the continued improvement in credit trends, partially offset by lower net revenue. Net revenue was $4.1 billion, down $500 million, or 11%, from the prior year. The decrease was driven by a decline in net interest income as a result of lower loan balances due to net portfolio runoff. The provision for credit losses reflected a benefit of $509 million, compared with a provision expense of $3.6 billion in the prior year. The current-year provision reflected a $3.9 billion reduction in the non credit-impaired allowance for loan losses due to improved delinquency trends and lower estimated losses. Current-year net charge-offs totaled $3.3 billion, including $744 million of incremental charge-offs reported in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy, compared with $3.8 billion in the prior year. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for the net charge-off amounts and rates. Nonaccrual loans were $7.9 billion, compared with $5.9 billion in the prior year. Excluding the impact of certain regulatory guidance, nonaccrual loans would have been $4.9 billion at December 31, 2012. For more information on the reporting of Chapter 7 loans and performing junior liens that are subordinate to senior liens that are 90 days or more past due as nonaccrual, see Consumer Credit Portfolio on pages 120–129 of this Annual Report. Noninterest expense was $1.7 billion, up $132 million, or 9%, compared with the prior year due to an increase in servicing costs.

PCI Loans

Included within Real Estate Portfolios are PCI loans that the Firm acquired in the Washington Mutual transaction. For PCI loans, the excess of the undiscounted gross cash flows expected to be collected over the carrying value of the loans (the "accretable yield") is accreted into interest income at a level rate of return over the expected life of the loans.

The net spread between the PCI loans and the related liabilities are expected to be relatively constant over time, except for any basis risk or other residual interest rate risk that remains and for certain changes in the accretable yield percentage (e.g., from extended loan liquidation periods and from prepayments). As of December 31, 2013, the remaining weighted-average life of the PCI loan portfolio is expected to be 8 years. The loan balances are expected to decline more rapidly over the next three years as the most troubled loans are liquidated, and more slowly thereafter as the remaining troubled borrowers have limited refinancing opportunities. Similarly, default and servicing expense are expected to be higher in the earlier years and decline over time as liquidations slow down.

For further information, see Note 14, PCI loans, on pages 274–276 of this Annual Report.

Mortgage Production and Servicing

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2013	2012	2011
Selected balance sheet data			
Period-end loans:			
Prime mortgage, including option ARMs[a]	**$15,136**	$17,290	$16,891
Loans held-for-sale and loans at fair value[b]	**7,446**	18,801	12,694
Average loans:			
Prime mortgage, including option ARMs[a]	**16,495**	17,335	14,580
Loans held-for-sale and loans at fair value[b]	**15,717**	17,573	16,354
Average assets	**57,131**	59,837	59,891
Repurchase liability (period-end)[c]	**651**	2,530	3,213
Credit data and quality statistics			
Net charge-offs:			
Prime mortgage, including option ARMs	**12**	19	5
Net charge-off rate:			
Prime mortgage, including option ARMs	**0.07%**	0.11%	0.03%
30+ day delinquency rate[d]	**2.75**	3.05	3.15
Nonperforming assets[e]	**$ 559**	$ 638	$ 716

(a) Predominantly represents prime loans repurchased from Government National Mortgage Association ("Ginnie Mae") pools, which are insured by U.S. government agencies. See further discussion of loans repurchased from Ginnie Mae pools in Mortgage repurchase liability on pages 78–79 of this Annual Report.

(b) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets.

(c) For more information on the Firm's mortgage repurchase liability, see Mortgage repurchase liability on pages 78–79 of this Annual Report.

(d) At December 31, 2013, 2012 and 2011, excluded mortgage loans insured by U.S. government agencies of $9.6 billion, $11.8 billion, and $12.6 billion, respectively, that are 30 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee. For further discussion, see Note 14 on pages 258–283 of this Annual Report which summarizes loan delinquency information.

(e) At December 31, 2013, 2012 and 2011, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $8.4 billion, $10.6 billion, and $11.5 billion, respectively, that are 90

or more days past due; and (2) real estate owned insured by U.S. government agencies of $2.0 billion, $1.6 billion, and $954 million, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee. For further discussion, see Note 14 on pages 258–283 of this Annual Report which summarizes loan delinquency information.

Selected metrics

As of or for the year ended December 31,

(in millions, except ratios and where otherwise noted)	2013	2012	2011
Business metrics (in billions)			
Mortgage origination volume by channel			
Retail	**$ 77.0**	$ 101.4	$ 87.2
Wholesale[a]	**0.2**	0.3	0.5
Correspondent[a]	**88.3**	79.1	57.9
Total mortgage origination volume[b]	**$ 165.5**	$ 180.8	$ 145.6
Mortgage application volume by channel			
Retail	**$ 108.0**	$ 164.5	$ 137.2
Wholesale[a]	**0.2**	0.7	1.0
Correspondent[a]	**89.0**	100.5	66.5
Total mortgage application volume	**$ 197.2**	$ 265.7	$ 204.7
Third-party mortgage loans serviced (period-end)	**$ 815.5**	$ 859.4	$ 902.2
Third-party mortgage loans serviced (average)	**837.3**	847.0	937.6
MSR carrying value (period-end)	**9.6**	7.6	7.2
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	**1.18%**	0.88%	0.80%
Ratio of loan servicing-related revenue to third-party mortgage loans serviced (average)	**0.40**	0.46	0.44
MSR revenue multiple[c]	**2.95x**	1.91x	1.82x

(a) Includes rural housing loans sourced through brokers and correspondents, which are underwritten and closed with pre-funding loan approval from the U.S. Department of Agriculture Rural Development, which acts as the guarantor in the transaction.

(b) Firmwide mortgage origination volume was $176.4 billion, $189.9 billion, and $154.2 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(c) Represents the ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end) divided by the ratio of loan servicing-related revenue to third-party mortgage loans serviced (average).

Real Estate Portfolios

Selected metrics

As of or for the year ended December 31,

(in millions)	2013	2012	2011
Loans, excluding PCI			
Period-end loans owned:			
Home equity	**$ 57,863**	$ 67,385	$ 77,800
Prime mortgage, including option ARMs	**49,463**	41,316	44,284
Subprime mortgage	**7,104**	8,255	9,664
Other	**551**	633	718
Total period-end loans owned	**$114,981**	$117,589	$132,466
Average loans owned:			
Home equity	**$ 62,369**	$ 72,674	$ 82,886
Prime mortgage, including option ARMs	**44,988**	42,311	46,971
Subprime mortgage	**7,687**	8,947	10,471
Other	**588**	675	773
Total average loans owned	**$115,632**	$124,607	$141,101
PCI loans			
Period-end loans owned:			
Home equity	**$ 18,927**	$ 20,971	$ 22,697
Prime mortgage	**12,038**	13,674	15,180
Subprime mortgage	**4,175**	4,626	4,976
Option ARMs	**17,915**	20,466	22,693
Total period-end loans owned	**$ 53,055**	$ 59,737	$ 65,546
Average loans owned:			
Home equity	**$ 19,950**	$ 21,840	$ 23,514
Prime mortgage	**12,909**	14,400	16,181
Subprime mortgage	**4,416**	4,777	5,170
Option ARMs	**19,236**	21,545	24,045
Total average loans owned	**$ 56,511**	$ 62,562	$ 68,910
Total Real Estate Portfolios			
Period-end loans owned:			
Home equity	**$ 76,790**	$ 88,356	$100,497
Prime mortgage, including option ARMs	**79,416**	75,456	82,157
Subprime mortgage	**11,279**	12,881	14,640
Other	**551**	633	718
Total period-end loans owned	**$168,036**	$177,326	$198,012
Average loans owned:			
Home equity	**$ 82,319**	$ 94,514	$106,400
Prime mortgage, including option ARMs	**77,133**	78,256	87,197
Subprime mortgage	**12,103**	13,724	15,641
Other	**588**	675	773
Total average loans owned	**$172,143**	$187,169	$210,011
Average assets	**$163,898**	$175,712	$197,096
Home equity origination volume	**2,124**	1,420	1,127

Credit data and quality statistics

As of or for the year ended December 31, (in millions, except ratios)	2013	2012	2011
Net charge-offs, excluding PCI loans:[a][b]			
Home equity	**$ 966**	$ 2,385	$ 2,472
Prime mortgage, including option ARMs	**41**	454	682
Subprime mortgage	**90**	486	626
Other	**10**	16	25
Total net charge-offs, excluding PCI loans	**$ 1,107**	$ 3,341	$ 3,805
Net charge-off rate, excluding PCI loans:[b]			
Home equity	**1.55%**	3.28%	2.98%
Prime mortgage, including option ARMs	**0.09**	1.07	1.45
Subprime mortgage	**1.17**	5.43	5.98
Other	**1.70**	2.37	3.23
Total net charge-off rate, excluding PCI loans	**0.96**	2.68	2.70
Net charge-off rate – reported:[a][b]			
Home equity	**1.17%**	2.52%	2.32%
Prime mortgage, including option ARMs	**0.05**	0.58	0.78
Subprime mortgage	**0.74**	3.54	4.00
Other	**1.70**	2.37	3.23
Total net charge-off rate – reported	**0.64**	1.79	1.81
30+ day delinquency rate, excluding PCI loans[c]	**3.66%**	5.03%	5.69%
Allowance for loan losses, excluding PCI loans	**$ 2,568**	$ 4,868	$ 8,718
Allowance for PCI loans[a]	**4,158**	5,711	5,711
Allowance for loan losses	**$ 6,726**	$ 10,579	$ 14,429
Nonperforming assets[d][e]	**6,919**	8,439	6,638
Allowance for loan losses to period-end loans retained	**4.00%**	5.97%	7.29%
Allowance for loan losses to period-end loans retained, excluding PCI loans	**2.23**	4.14	6.58

(a) Net charge-offs and net charge-off rates for the year ended December 31, 2013 excluded $53 million of write-offs in the PCI portfolio. These write-offs decreased the allowance for loan losses for PCI loans. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

(b) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $744 million of charge-offs related to regulatory guidance. Excluding these charges-offs, net charge-offs for the year ended December 31, 2012, would have been $1.8 billion, $410 million and $416 million for the home equity, prime mortgage, including option ARMs, and subprime mortgage portfolios, respectively. Net charge-off rates for the same period, excluding these charge-offs and PCI loans, would have been 2.41%, 0.97% and 4.65% for the home equity, prime mortgage, including option ARMs, and subprime mortgage portfolios, respectively. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

(c) The 30+ day delinquency rate for PCI loans was 15.31%, 20.14%, and 23.30% at December 31, 2013, 2012 and 2011, respectively.

(d) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.

(e) Nonperforming assets at December 31, 2012, included loans based upon regulatory guidance. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

Mortgage servicing-related matters

The financial crisis resulted in unprecedented levels of delinquencies and defaults of 1-4 family residential real estate loans. Such loans required varying degrees of loss mitigation activities. Foreclosure is usually a last resort, and accordingly, the Firm has made, and continues to make, significant efforts to help borrowers remain in their homes.

The Firm has a well-defined foreclosure prevention process when a borrower fails to pay on his or her loan. The Firm makes multiple attempts, in various ways, to contact the borrower in an effort to pursue home retention or options other than foreclosure. If the Firm is unable to contact a borrower, the Firm completes various reviews of the borrower's facts and circumstances before a foreclosure sale is completed. Over the last year, the average delinquency period for the borrower at the time of foreclosure was approximately 28 months.

The high volume of delinquent and defaulted mortgages experienced during the financial crisis placed a significant amount of stress on servicing operations in the industry. The GSEs impose compensatory fees on mortgage servicers, including the Firm, if such servicers are unable to comply with the foreclosure timetables mandated by the GSEs. The Firm has incurred, and continues to incur, compensatory fees, which are reported in default servicing expense. The Firm has made, and will continue to make changes to and refine its mortgage operations to address mortgage servicing, loss mitigation, and foreclosure issues.

Since 2011, the Firm has entered into Consent Orders and settlements with federal and state governmental agencies and private parties related to mortgage servicing, origination, and residential mortgage-backed securities activities. The terms of these Consent Orders and settlements vary, but in general, required cash compensatory payments or fines and/or "borrower relief," including principal reductions, refinancing, short sale assistance, and other specified types of borrower relief. The Firm has satisfied or is committed to satisfying these obligations within the mandated timeframes.

Other obligations required under Consent Orders and settlements, as well as under new regulatory requirements, include enhanced mortgage servicing and foreclosure standards and processes. Among other initiatives, the Firm has implemented a new Customer Assistance Specialist organization to serve as a single point of contact for borrowers requiring assistance in the foreclosure or loss mitigation process; implemented specific controls on "dual tracking" of foreclosure and loss mitigation activities; strengthened its compliance program to ensure mortgage servicing and foreclosure operations comply with applicable legal requirements; and made technological enhancements to automate and streamline processes for document management, payment processing, training, and skills assessment. For further information on these settlements and Consent Orders, see Note 2 and Note 31 on pages 192–

194 and pages 326–332, respectively, of this Annual Report.

The mortgage servicing consent order is subject to ongoing oversight by the Mortgage Compliance Committee of the Board, and certain Consent Orders and settlements are the subject of ongoing reporting to various regulators, and the Office of Mortgage Settlement Oversight ("OMSO").

Card, Merchant Services & Auto

Selected income statement data

Year ended December 31, (in millions, except ratios)	2013	2012	2011
Revenue			
Card income	**$ 4,289**	$ 4,092	$ 4,127
All other income	**1,041**	1,009	765
Noninterest revenue	**5,330**	5,101	4,892
Net interest income	**13,360**	13,669	14,249
Total net revenue	**18,690**	18,770	19,141
Provision for credit losses	**2,669**	3,953	3,621
Noninterest expense	**8,078**	8,216	8,045
Income before income tax expense	**7,943**	6,601	7,475
Net income	**$ 4,786**	$ 4,007	$ 4,544
ROE	**31%**	24%	28%
Overhead ratio	**43**	44	42
Equity (period-end and average)	**$ 15,500**	$ 16,500	$ 16,000

2013 compared with 2012

Card, Merchant Services & Auto net income was $4.8 billion, an increase of $779 million, or 19%, compared with the prior year, driven by lower provision for credit losses.

Net revenue was $18.7 billion, flat compared with the prior year. Net interest income was $13.4 billion, down $309 million, or 2%, from the prior year. The decrease was primarily driven by spread compression in Credit Card and Auto and lower average credit card loan balances, largely offset by the impact of lower revenue reversals associated with lower net charge-offs in Credit Card. Noninterest revenue was $5.3 billion, an increase of $229 million, or 4%, compared with the prior year primarily driven by higher net interchange income, auto lease income and merchant servicing revenue, largely offset by lower revenue from an exited non-core product and a gain on an investment security recognized in the prior year.

The provision for credit losses was $2.7 billion, compared with $4.0 billion in the prior year. The current-year provision reflected lower net charge-offs and a $1.7 billion reduction in the allowance for loan losses due to lower estimated losses reflecting improved delinquency trends and restructured loan performance. The prior-year provision included a $1.6 billion reduction in the allowance for loan losses. The Credit Card net charge-off rate was 3.14%, down from 3.95% in the prior year; and the 30+ day delinquency rate was 1.67%, down from 2.10% in the prior year. The Auto net charge-off rate was 0.31%, down from 0.39% in the prior year.

Noninterest expense was $8.1 billion, a decrease of $138 million, or 2%, from the prior year. This decrease is due to one-time expense items recognized in the prior year related to the exit of a non-core product and the write-off of intangible assets associated with a non-strategic relationship. The reduction in expenses was partially offset by increased auto lease depreciation and payments to customers required by a regulatory Consent Order during 2013.

2012 compared with 2011

Card, Merchant Services & Auto net income was $4.0 billion, a decrease of $537 million, or 12%, compared with the prior year. The decrease was driven by lower net revenue and higher provision for credit losses.

Net revenue was $18.8 billion, a decrease of $371 million, or 2%, from the prior year. Net interest income was $13.7 billion, down $580 million, or 4%, from the prior year. The decrease was driven by narrower loan spreads and lower average loan balances, partially offset by lower revenue reversals associated with lower net charge-offs. Noninterest revenue was $5.1 billion, an increase of $209 million, or 4%, from the prior year. The increase was driven by higher net interchange income, including lower partner revenue-sharing due to the impact of the Kohl's portfolio sale on April 1, 2011, and higher merchant servicing revenue, partially offset by higher amortization of loan origination costs.

The provision for credit losses was $4.0 billion, compared with $3.6 billion in the prior year. The current-year provision reflected lower net charge-offs and a $1.6 billion reduction in the allowance for loan losses due to lower estimated losses. The prior-year provision included a $3.9 billion reduction in the allowance for loan losses. The Credit Card net charge-off rate was 3.95%, down from 5.44% in the prior year; and the 30+ day delinquency rate was 2.10%, down from 2.81% in the prior year. The net charge-off rate would have been 3.88% absent a policy change on restructured loans that do not comply with their modified payment terms. The Auto net charge-off rate was 0.39%, up from 0.32% in the prior year, including $53 million of charge-offs related to regulatory guidance. Excluding these charge-offs, the net charge-off rate would have been 0.28%.

Noninterest expense was $8.2 billion, an increase of $171 million, or 2%, from the prior year, driven by expenses related to a non-core product that is being exited and the write-off of intangible assets associated with a non-strategic relationship, partially offset by lower marketing expense.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2013	2012	2011
Selected balance sheet data (period-end)			
Loans:			
Credit Card	**$127,791**	$127,993	$132,277
Auto	**52,757**	49,913	47,426
Student	**10,541**	11,558	13,425
Total loans	**$191,089**	$189,464	$193,128
Selected balance sheet data (average)			
Total assets	**$198,265**	$197,661	$201,162
Loans:			
Credit Card	**123,613**	125,464	128,167
Auto	**50,748**	48,413	47,034
Student	**11,049**	12,507	13,986
Total loans	**$185,410**	$186,384	$189,187
Business metrics			
Credit Card, excluding Commercial Card			
Sales volume (in billions)	**$ 419.5**	$ 381.1	$ 343.7
New accounts opened	**7.3**	6.7	8.8
Open accounts	**65.3**	64.5	65.2
Accounts with sales activity	**32.3**	30.6	30.7
% of accounts acquired online	**55%**	51%	32%
Merchant Services (Chase Paymentech Solutions)			
Merchant processing volume (in billions)	**$ 750.1**	$ 655.2	$ 553.7
Total transactions (in billions)	**35.6**	29.5	24.4
Auto & Student			
Origination volume (in billions)			
Auto	**$ 26.1**	$ 23.4	$ 21.0
Student	**0.1**	0.2	0.3

The following are brief descriptions of selected business metrics within Card, Merchant Services & Auto.

Card Services includes the Credit Card and Merchant Services businesses.

Merchant Services is a business that processes transactions for merchants.

Total transactions – Number of transactions and authorizations processed for merchants.

Commercial Card provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

Sales volume - Dollar amount of cardmember purchases, net of returns.

Open accounts – Cardmember accounts with charging privileges.

Auto origination volume - Dollar amount of auto loans and leases originated.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2013	2012	2011
Credit data and quality statistics			
Net charge-offs:			
Credit Card	**$ 3,879**	$ 4,944	$ 6,925
Auto[a]	**158**	188	152
Student	**333**	377	434
Total net charge-offs	**$ 4,370**	$ 5,509	$ 7,511
Net charge-off rate:			
Credit Card[b]	**3.14%**	3.95%	5.44%
Auto[a]	**0.31**	0.39	0.32
Student	**3.01**	3.01	3.10
Total net charge-off rate	**2.36**	2.96	3.99
Delinquency rates			
30+ day delinquency rate:			
Credit Card[c]	**1.67**	2.10	2.81
Auto	**1.15**	1.25	1.13
Student[d]	**2.56**	2.13	1.78
Total 30+ day delinquency rate	**1.58**	1.87	2.32
90+ day delinquency rate – Credit Card[c]	**0.80**	1.02	1.44
Nonperforming assets[e]	**$ 280**	$ 265	$ 228
Allowance for loan losses:			
Credit Card	**$ 3,795**	$ 5,501	$ 6,999
Auto & Student	**953**	954	1,010
Total allowance for loan losses	**$ 4,748**	$ 6,455	$ 8,009
Allowance for loan losses to period-end loans:			
Credit Card[c]	**2.98%**	4.30%	5.30%
Auto & Student	**1.51**	1.55	1.66
Total allowance for loan losses to period-end loans	**2.49**	3.41	4.15

(a) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $53 million of charge-offs of Chapter 7 loans. Excluding these incremental charge-offs, net charge-offs for the year ended December 31, 2012 would have been $135 million, and the net charge-off rate would have been 0.28%. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

(b) Average credit card loans included loans held-for-sale of $95 million, $433 million, and $833 million for the years ended December 31, 2013, 2012 and 2011, respectively. These amounts are excluded when calculating the net charge-off rate.

(c) Period-end credit card loans included loans held-for-sale of $326 million and $102 million at December 31, 2013 and 2011, respectively. There were no loans held-for-sale at December 31, 2012. These amounts are excluded when calculating delinquency rates and the allowance for loan losses to period-end loans.

(d) Excluded student loans insured by U.S. government agencies under the FFELP of $737 million, $894 million and $989 million at December 31, 2013, 2012 and 2011, respectively, that are 30 or more days past due. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

(e) Nonperforming assets excluded student loans insured by U.S. government agencies under the FFELP of $428 million, $525 million and $551 million at December 31, 2013, 2012 and 2011, respectively, that are 90 or more days past due. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

Card Services supplemental information

Year ended December 31, (in millions, except ratios)	2013	2012	2011
Revenue			
Noninterest revenue	**$ 3,977**	$ 3,887	$ 3,740
Net interest income	**11,466**	11,611	12,084
Total net revenue	**15,443**	15,498	15,824
Provision for credit losses	**2,179**	3,444	2,925
Noninterest expense	**6,245**	6,566	6,544
Income before income tax expense	**7,019**	5,488	6,355
Net income	**$ 4,235**	$ 3,344	$ 3,876
Percentage of average loans:			
Noninterest revenue	**3.22%**	3.10%	2.92%
Net interest income	**9.28**	**9.25**	**9.43**
Total net revenue	**12.49**	**12.35**	**12.35**

CORPORATE & INVESTMENT BANK

The Corporate & Investment Bank ("CIB") offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Selected income statement data

Year ended December 31,

(in millions)	2013	2012	2011
Revenue			
Investment banking fees	**$ 6,331**	$ 5,769	$ 5,859
Principal transactions[a]	**9,289**	9,510	8,347
Lending- and deposit-related fees	**1,884**	1,948	2,098
Asset management, administration and commissions	**4,713**	4,693	4,955
All other income	**1,593**	1,184	1,264
Noninterest revenue	**23,810**	23,104	22,523
Net interest income	**10,415**	11,222	11,461
Total net revenue[b]	**34,225**	34,326	33,984
Provision for credit losses	**(232)**	(479)	(285)
Noninterest expense			
Compensation expense	**10,835**	11,313	11,654
Noncompensation expense	**10,909**	10,537	10,325
Total noninterest expense	**21,744**	21,850	21,979
Income before income tax expense	**12,713**	12,955	12,290
Income tax expense	**4,167**	4,549	4,297
Net income	**$ 8,546**	$ 8,406	$ 7,993

(a) Included a $(1.5) billion loss in the fourth quarter of 2013 as a result of implementing a FVA framework for OTC derivatives and structured notes. Also included DVA on structured notes and derivative liabilities. DVA gains/(losses) were $(452) million, $(930) million and $1.4 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) Included tax-equivalent adjustments, predominantly due to income tax credits related to affordable housing and alternative energy investments, as well as tax-exempt income from municipal bond investments of $2.3 billion, $2.0 billion and $1.9 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

Selected income statement data

Year ended December 31,

(in millions, except ratios)	2013	2012	2011
Financial ratios			
Return on common equity[a]	**15%**	18%	17%
Overhead ratio[B]	**64**	64	65
Compensation expense as percentage of total net revenue[c]	**32**	33	34
Revenue by business			
Advisory	**$ 1,315**	$ 1,491	$ 1,792
Equity underwriting	**1,499**	1,026	1,181
Debt underwriting	**3,517**	3,252	2,886
Total investment banking fees	**6,331**	5,769	5,859
Treasury Services	**4,135**	4,249	3,841
Lending	**1,595**	1,331	1,054
Total Banking	**12,061**	11,349	10,754
Fixed Income Markets[d]	**15,468**	15,412	14,784
Equity Markets	**4,758**	4,406	4,476
Securities Services	**4,082**	4,000	3,861
Credit Adjustments & Other[e]	**(2,144)**	(841)	109
Total Markets & Investor Services	**22,164**	22,977	23,230
Total net revenue	**$34,225**	$34,326	$33,984

(a) Return on equity excluding FVA (effective fourth quarter 2013) and DVA, a non-GAAP financial measure, was 17%, 19% and 15% for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) Overhead ratio excluding FVA (effective fourth quarter 2013) and DVA, a non-GAAP financial measure, was 60%, 62% and 68% for the years ended December 31, 2013, 2012 and 2011, respectively.

(c) Compensation expense as a percentage of total net revenue excluding FVA (effective fourth quarter 2013) and DVA, a non-GAAP financial measure, was 30%, 32% and 36% for the years ended December 31, 2013, 2012 and 2011, respectively.

(d) Includes results of the synthetic credit portfolio that was transferred from the CIO effective July 2, 2012.

(e) Primarily credit portfolio credit valuation adjustments ("CVA") net of associated hedging activities; DVA gains/(losses) on structured notes and derivative liabilities of $(452) million, $(930) million and $1.4 billion for the years ended December 31, 2013, 2012 and 2011, respectively; a $(1.5) billion loss in the fourth quarter of 2013 as a result of implementing an FVA framework for OTC derivatives and structured notes, and nonperforming derivative receivable results.

CIB provides several non-GAAP financial measures which exclude the impact of FVA (effective fourth quarter 2013) and DVA on: net revenue, net income, compensation ratio, overhead ratio, and return on equity. The ratio for the allowance for loan losses to end-of-period loans is calculated excluding the impact of consolidated Firm-administered multi-seller conduits and trade finance, to provide a more meaningful assessment of CIB's allowance coverage ratio. These measures are used by management to assess the underlying performance of the business and for comparability with peers.

2013 compared with 2012

Net income was $8.6 billion, up 2% compared with the prior year.

Net revenue was $34.2 billion compared with $34.3 billion in the prior year. Net revenue in the current year's fourth quarter included a $1.5 billion loss as a result of implementing a funding valuation adjustment ("FVA") framework for over-the-counter ("OTC") derivatives and structured notes. The FVA framework incorporates the impact of funding into the Firm's valuation estimates for OTC derivatives and structured notes and reflects an industry migration towards incorporating the market cost of unsecured funding in the valuation of such instruments. The loss recorded in the fourth quarter of 2013 is a one-time adjustment arising on implementation of the new FVA framework. In future periods the Firm will incorporate FVA in its estimates of fair value for OTC derivatives and structured notes from the date of initial recognition.

Net revenue also included a $452 million loss from debit valuation adjustments ("DVA") on structured notes and derivative liabilities, compared with a loss of $930 million in the prior year. Excluding the impact of FVA (effective fourth quarter of 2013) and DVA, net revenue was $36.1 billion and net income was $9.7 billion, compared with $35.3 billion and $9.0 billion in the prior year, respectively.

Banking revenues were $12.1 billion, compared with $11.3 billion in the prior year. Investment banking fees were $6.3 billion, up 10% from the prior year, driven by higher equity underwriting fees of $1.5 billion (up 46%) and record debt underwriting fees of $3.5 billion (up 8%), partially offset by lower advisory fees of $1.3 billion (down 12%). Equity underwriting results were driven by higher industry-wide issuance and an increase in the Firm's wallet share compared with the prior year, according to Dealogic. Industry-wide loan syndication volumes and wallet increased as the low rate environment continued to fuel refinancing activity. The Firm also ranked #1 in wallet and volumes shares across high grade, high yield and loan products. Advisory fees were lower compared with the prior year as industry-wide completed M&A wallet declined 13%. The Firm maintained its #2 ranking and improved share for both announced and completed volumes during the period.

Treasury Services revenue was $4.1 billion, down 3% compared with the prior year, primarily reflecting lower trade finance spreads, partially offset by higher net interest income on higher deposit balances. Lending revenue was $1.6 billion, up from $1.3 billion, in the prior year reflecting net interest income on retained loans, fees on lending related commitments, as well as gains on securities received from restructured loans.

Markets and Investor Services revenue was $22.2 billion compared to $23.0 billion in the prior year. Combined Fixed Income and Equity Markets revenue was $20.2 billion, up from $19.8 billion the prior year. Fixed Income Markets revenue of $15.5 billion was slightly higher reflecting consistently strong client revenue and lower losses from the synthetic credit portfolio, which was partially offset by lower rates-related revenue given an uncertain rate outlook and low spread environment. Equities Markets revenue of $4.8 billion was up 8% compared with the prior year driven by higher revenue in derivatives and cash equities products as well as Prime Services primarily on higher balances. Securities Services revenue was $4.1 billion compared with $4.0 billion in the prior year on higher custody and fund services revenue primarily driven by record assets under custody of $20.5 trillion. Credit Adjustments & Other was a loss of $2.1 billion predominantly driven by FVA (effective the fourth quarter of 2013) and DVA.

The provision for credit losses was a benefit of $232 million, compared with a benefit of $479 million in the prior year. The current year benefit reflected lower recoveries as compared to 2012 as the prior year benefited from the restructuring of certain nonperforming loans. Net recoveries were $78 million, compared with $284 million in the prior year reflecting a continued favorable credit environment with stable credit quality trends. Nonperforming loans were down 57% from the prior year.

Noninterest expense of $21.7 billion was slightly down compared with the prior year, driven by lower compensation expense, offset by higher non compensation expense related to higher litigation expense as compared to the prior year. The compensation ratio, excluding the impact of DVA and FVA which was effective for the fourth quarter of 2013, was 30% and 32% for 2013 and 2012, respectively.

Return on equity was 15% on $56.5 billion of average allocated capital and 17% excluding FVA (effective fourth quarter of 2013) and DVA.

2012 compared with 2011

Net income was $8.4 billion, up 5% compared with the prior year. These results primarily reflected slightly higher net revenue compared with 2011, lower noninterest expense and a larger benefit from the provision for credit losses. Net revenue was $34.3 billion, compared with $34.0 billion in the prior year. Net revenue included a $930 million loss from DVA on structured notes and derivative liabilities resulting from the tightening of the Firm's credit spreads. Excluding the impact of DVA, net revenue was $35.3 billion and net income was $9.0 billion, compared with $32.5 billion and $7.1 billion in the prior year, respectively.

Banking revenues were $11.3 billion, compared with $10.8 billion in the prior year. Investment banking fees were

$5.8 billion, down 2% from the prior year; these consisted of record debt underwriting fees of $3.3 billion (up 13%), advisory fees of $1.5 billion (down 17%) and equity underwriting fees of $1.0 billion (down 13%). Industry-wide debt capital markets volumes were at their second highest annual level since 2006, as the low rate environment continued to fuel issuance and refinancing activity. In contrast there was lower industry-wide announced mergers and acquisitions activity, while industry-wide equity underwriting volumes remained steady. Treasury Services revenue was a record $4.2 billion compared with $3.8 billion in the prior year driven by continued deposit balance growth and higher average trade loans outstanding during the year. Lending revenue was $1.3 billion, compared with $1.1 billion in the prior year due to higher net interest income on increased average retained loans as well as higher fees on lending-related commitments. This was partially offset by higher fair value losses on credit risk-related hedges of the retained loan portfolio.

Markets and Investor Services revenue was $23.0 billion compared to $23.2 billion in the prior year. Combined Fixed Income and Equity Markets revenue was $19.8 billion, up from $19.3 billion the prior year as client revenue remained strong across most products, with particular strength in rates-related products, which improved from the prior year. 2012 generally saw credit spread tightening and lower volatility in both the credit and equity markets compared with the prior year, during which macroeconomic concerns, including those in the Eurozone, caused credit spread widening and generally more volatile market conditions, particularly in the second half of the year. Securities Services revenue was $4.0 billion compared with $3.9 billion the prior year primarily driven by higher deposit balances. Assets under custody grew to a record $18.8 trillion by the end of 2012, driven by both market appreciation as well as net inflows. Credit Adjustments & Other was a loss of $841 million, driven predominantly by DVA, which was a loss of $930 million due to the tightening of the Firm's credit spreads.

The provision for credit losses was a benefit of $479 million, compared with a benefit of $285 million in the prior year, as credit trends remained stable. The 2012 benefit reflected recoveries and a net reduction in the allowance for credit losses, both related to the restructuring of certain nonperforming loans, credit trends and other portfolio activities. Net recoveries were $284 million, compared with net charge-offs of $161 million in the prior year. Nonperforming loans were down 35% from the prior year.

Noninterest expense was $21.9 billion, down 1%, driven primarily by lower compensation expense.

Return on equity was 18% on $47.5 billion of average allocated capital.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2013	2012	2011
Selected balance sheet data (period-end)			
Assets	**$ 843,577**	$ 876,107	$ 845,095
Loans:			
Loans retained[a]	**95,627**	109,501	111,099
Loans held-for-sale and loans at fair value	**11,913**	5,749	3,016
Total loans	**107,540**	115,250	114,115
Equity	**56,500**	47,500	47,000
Selected balance sheet data (average)			
Assets	**$ 859,071**	$ 854,670	$ 868,930
Trading assets-debt and equity instruments	**321,585**	312,944	348,234
Trading assets-derivative receivables	**70,353**	74,874	73,200
Loans:			
Loans retained[a]	**104,864**	110,100	91,173
Loans held-for-sale and loans at fair value	**5,158**	3,502	3,221
Total loans	**110,022**	113,602	94,394
Equity	**56,500**	47,500	47,000
Headcount	**52,250**	52,022	53,557

(a) Loans retained includes credit portfolio loans, trade finance loans, other held-for-investment loans and overdrafts.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2013	2012	2011
Credit data and quality statistics			
Net charge-offs/ (recoveries)	**$ (78)**	$ (284)	$ 161
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[a][b]	**163**	535	1,039
Nonaccrual loans held-for-sale and loans at fair value[c]	**180**	254	166
Total nonaccrual loans	**343**	789	1,205
Derivative receivables	**415**	239	293
Assets acquired in loan satisfactions	**80**	64	79
Total nonperforming assets	**838**	1,092	1,577
Allowance for credit losses:			
Allowance for loan losses	**1,096**	1,300	1,501
Allowance for lending-related commitments	**525**	473	467
Total allowance for credit losses	**1,621**	1,773	1,968
Net charge-off/(recovery) rate[a]	**(0.07)**	(0.26)	0.18%
Allowance for loan losses to period-end loans retained[a]	**1.15**	1.19	1.35
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits	**2.02**	2.52	3.06
Allowance for loan losses to nonaccrual loans retained[a][b]	**672**	243	144
Nonaccrual loans to total period-end loans[c]	**0.32**	0.68	1.06
Business metrics			
Assets under custody ("AUC") by asset class (period-end) in billions:			
Fixed Income	**$ 11,903**	$ 11,745	$ 10,926
Equity	**6,913**	5,637	4,878
Other[d]	**1,669**	1,453	1,066
Total AUC	**$ 20,485**	$ 18,835	$ 16,870
Client deposits and other third party liabilities (average)[e]	**$ 383,667**	$ 355,766	$ 318,802
Trade finance loans (period-end)	**30,752**	35,783	36,696

(a) Loans retained includes credit portfolio loans, trade finance loans, other held-for-investment loans and overdrafts.

(b) Allowance for loan losses of $51 million, $153 million and $263 million were held against these nonaccrual loans at December 31, 2013, 2012 and 2011, respectively.

(c) In 2013 certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

(d) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.

(e) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses, and include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of their client cash management program.

Market shares and rankings[a]

Year ended December 31,	2013 Market Share	2013 Rankings	2012 Market Share	2012 Rankings	2011 Market Share	2011 Rankings
Global investment banking fees[b]	**8.6%**	**#1**	7.5%	#1	8.1%	#1
Debt, equity and equity-related						
Global	**7.3**	**1**	7.2	1	6.7	1
U.S.	**11.8**	**1**	11.5	1	11.1	1
Syndicated loans						
Global	**10.0**	**1**	9.5	1	10.8	1
U.S.	**17.5**	**1**	17.6	1	21.2	1
Long-term debt[c]						
Global	**7.2**	**1**	7.1	1	6.7	1
U.S.	**11.7**	**1**	11.6	1	11.2	1
Equity and equity-related						
Global[d]	**8.2**	**2**	7.8	4	6.8	3
U.S.	**12.1**	**2**	10.4	5	12.5	1
Announced M&A[e]						
Global	**23.0**	**2**	19.9	2	18.3	2
U.S.	**36.1**	**1**	24.3	2	26.7	2

(a) Source: Dealogic. Global Investment Banking fees reflects the ranking of fees and market share. The remaining rankings reflects transaction volume and market share. Global announced M&A is based on transaction value at announcement; because of joint M&A assignments, M&A market share of all participants will add up to more than 100%. All other transaction volume-based rankings are based on proceeds, with full credit to each book manager/equal if joint.

(b) Global investment banking fees rankings exclude money market, short-term debt and shelf deals.

(c) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and mortgage-backed securities; and exclude money market, short-term debt, and U.S. municipal securities.

(d) Global equity and equity-related ranking includes rights offerings and Chinese A-Shares.

(e) Announced M&A reflects the removal of any withdrawn transactions. U.S. announced M&A represents any U.S. involvement ranking.

International metrics

Year ended December 31,

(in millions)	2013	2012	2011
Total net revenue[a]			
Europe/Middle East/Africa	**$ 10,509**	$ 10,639	$ 11,102
Asia/Pacific	**4,698**	4,100	4,589
Latin America/Caribbean	**1,329**	1,524	1,409
Total international net revenue	**16,536**	16,263	17,100
North America	**17,689**	18,063	16,884
Total net revenue	**$ 34,225**	$ 34,326	$ 33,984
Loans (period-end)[a]			
Europe/Middle East/Africa	**$ 29,392**	$ 30,266	$ 29,484
Asia/Pacific	**22,151**	27,193	27,803
Latin America/Caribbean	**8,362**	10,220	9,692
Total international loans	**59,905**	67,679	66,979
North America	**35,722**	41,822	44,120
Total loans	**$ 95,627**	$ 109,501	$ 111,099
Client deposits and other third-party liabilities (average)[a]			
Europe/Middle East/Africa	**$ 143,807**	$ 127,326	$ 123,920
Asia/Pacific	**54,428**	51,180	43,524
Latin America/Caribbean	**15,301**	11,052	12,625
Total international	**213,536**	189,558	180,069
North America	**170,131**	166,208	138,733
Total client deposits and other third-party liabilities	**$ 383,667**	$ 355,766	$ 318,802
AUC (period-end) (in billions)[a]			
North America	**$ 11,299**	$ 10,504	$ 9,735
All other regions	**9,186**	8,331	7,135
Total AUC	**$ 20,485**	$ 18,835	$ 16,870

(a) Total net revenue is based predominantly on the domicile of the client or location of the trading desk, as applicable. Loans outstanding (excluding loans held-for-sale and loans at fair value), client deposits and other third-party liabilities, and AUC are based predominantly on the domicile of the client.

Commercial Banking delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2013	2012	2011
Revenue			
Lending- and deposit-related fees	**$ 1,033**	$ 1,072	$ 1,081
Asset management, administration and commissions	**116**	130	136
All other income[a]	**1,149**	1,081	978
Noninterest revenue	**2,298**	2,283	2,195
Net interest income	**4,675**	4,542	4,223
Total net revenue[b]	**6,973**	6,825	6,418
Provision for credit losses	**85**	41	208
Noninterest expense			
Compensation expense[c]	**1,115**	1,014	936
Noncompensation expense[c]	**1,472**	1,348	1,311
Amortization of intangibles	**23**	27	31
Total noninterest expense	**2,610**	2,389	2,278
Income before income tax expense	**4,278**	4,395	3,932
Income tax expense	**1,703**	1,749	1,565
Net income	**$ 2,575**	$ 2,646	$ 2,367
Revenue by product			
Lending	**$ 3,826**	$ 3,675	$ 3,455
Treasury services	**2,429**	2,428	2,270
Investment banking	**575**	545	498
Other	**143**	177	195
Total Commercial Banking revenue	**$ 6,973**	$ 6,825	$ 6,418
Investment banking revenue, gross	**$ 1,676**	$ 1,597	$ 1,421
Revenue by client segment			
Middle Market Banking[d]	**$ 3,019**	$ 2,971	$ 2,803
Corporate Client Banking[d]	**1,824**	1,819	1,603
Commercial Term Lending	**1,215**	1,194	1,168
Real Estate Banking	**549**	438	416
Other	**366**	403	428
Total Commercial Banking revenue	**$ 6,973**	$ 6,825	$ 6,418
Financial ratios			
Return on common equity	**19%**	28%	30%
Overhead ratio	**37**	35	35

(a) Includes revenue from investment banking products and commercial card transactions.
(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities, as well as tax-exempt income from municipal bond activity of $407 million, $381 million, and $345 million for the years ended December 31, 2013, 2012 and 2011, respectively.
(c) Effective July 1, 2012, certain Treasury Services product sales staff supporting CB were transferred from CIB to CB. As a result, compensation expense for these sales staff is now reflected in CB's compensation expense rather than as an allocation from CIB in noncompensation expense. CB's and CIB's previously reported headcount, compensation expense and noncompensation expense have been revised to reflect this transfer.
(d) Effective January 1, 2013, the financial results of financial institution clients were transferred to Corporate Client Banking from Middle Market Banking. Prior periods were revised to conform with this presentation.

CB revenue comprises the following:

Lending includes a variety of financing alternatives, which are predominantly provided on a basis secured by receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, commercial card products and standby letters of credit.

Treasury services includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

Investment banking includes revenue from a range of products providing CB clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from Fixed income and Equity market products available to CB clients is also included. Investment banking revenue, gross, represents total revenue related to investment banking products sold to CB clients.

Other product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activity and certain income derived from principal transactions.

Commercial Banking is divided into four primary client segments for management reporting purposes: Middle Market Banking, Commercial Term Lending, Corporate Client Banking, and Real Estate Banking.

Middle Market Banking covers corporate, municipal and nonprofit clients, with annual revenue generally ranging between $20 million and $500 million.

Commercial Term Lending primarily provides term financing to real estate investors/owners for multifamily properties as well as financing office, retail and industrial properties.

Corporate Client Banking covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs.

Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate properties.

Other primarily includes lending and investment activity within the Community Development Banking and Chase Capital businesses.

2013 compared with 2012

Net income was $2.6 billion, a decrease of $71 million, or 3%, from the prior year, driven by an increase in noninterest expense and the provision for credit losses partially offset by an increase in net revenue.

Net revenue was a record $7.0 billion, an increase of $148 million, or 2%, from the prior year. Net interest income was $4.7 billion, up by $133 million, or 3%, driven by higher loan balances and the proceeds from a lending-related workout, partially offset by lower purchase discounts recognized on loan repayments. Noninterest revenue was $2.3 billion, flat compared with the prior year.

Revenue from Middle Market Banking was $3.0 billion, an increase of $48 million, or 2%, from the prior year. Revenue from Commercial Term Lending was $1.2 billion, an increase of $21 million, or 2%, from the prior year. Revenue from Corporate Client Banking was $1.8 billion, flat compared with the prior year. Revenue from Real Estate Banking was $549 million, an increase of $111 million, or 25%, driven by the proceeds from a lending related-workout.

The provision for credit losses was $85 million, compared with $41 million in the prior year. Net charge-offs were $43 million (0.03% net charge-off rate) compared with net charge-offs of $35 million (0.03% net charge-off rate) in 2012. Nonaccrual loans were $514 million, down by $159 million, or 24%, due to repayments. The allowance for loan losses to period-end retained loans was 1.97%, down slightly from 2.06%.

Noninterest expense was $2.6 billion, an increase of $221 million, or 9%, from the prior year, reflecting higher product- and headcount-related expense.

2012 compared with 2011

Record net income was $2.6 billion, an increase of $279 million, or 12%, from the prior year. The improvement was driven by an increase in net revenue and a decrease in the provision for credit losses, partially offset by higher noninterest expense.

Net revenue was a record $6.8 billion, an increase of $407 million, or 6%, from the prior year. Net interest income was $4.5 billion, up by $319 million, or 8%, driven by growth in loans and client deposits, partially offset by spread compression. Loan growth was strong across all client segments and industries. Noninterest revenue was $2.3 billion, up by $88 million, or 4%, compared with the prior year, largely driven by increased investment banking revenue.

Revenue from Middle Market Banking was $3.0 billion, an increase of $168 million, or 6%, from the prior year driven by higher loans and client deposits, partially offset by lower spreads from lending and deposit products. Revenue from Commercial Term Lending was $1.2 billion, an increase of $26 million, or 2%. Revenue from Corporate Client Banking was $1.8 billion, an increase of $216 million, or 13%, driven by growth in loans and client deposits and higher revenue from investment banking products, partially offset by lower lending spreads. Revenue from Real Estate Banking was $438 million, an increase of $22 million, or 5%, partially driven by higher loan balances.

The provision for credit losses was $41 million, compared with $208 million in the prior year. Net charge-offs were $35 million (0.03% net charge-off rate) compared with net charge-offs of $187 million (0.18% net charge-off rate) in 2011. The decrease in the provision and net charge-offs was largely driven by improving trends in the credit quality of the portfolio. Nonaccrual loans were $673 million, down by $380 million, or 36%, due to repayments and loan sales. The allowance for loan losses to period-end retained loans was 2.06%, down from 2.34%.

Noninterest expense was $2.4 billion, an increase of $111 million, or 5%, from the prior year, reflecting higher compensation expense driven by expansion, portfolio growth and increased regulatory requirements.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount and ratios)	2013	2012	2011
Selected balance sheet data (period-end)			
Total assets	**$ 190,782**	$ 181,502	$ 158,040
Loans:			
Loans retained[a]	**135,750**	126,996	111,162
Loans held-for-sale and loans at fair value	**1,388**	1,212	840
Total loans	**$ 137,138**	$ 128,208	$ 112,002
Equity	**13,500**	9,500	8,000
Period-end loans by client segment			
Middle Market Banking[b]	**$ 52,289**	$ 50,552	$ 44,224
Corporate Client Banking[b]	**20,925**	21,707	16,960
Commercial Term Lending	**48,925**	43,512	38,583
Real Estate Banking	**11,024**	8,552	8,211
Other	**3,975**	3,885	4,024
Total Commercial Banking loans	**$ 137,138**	$ 128,208	$ 112,002
Selected balance sheet data (average)			
Total assets	**$ 185,776**	$ 165,111	$ 146,230
Loans:			
Loans retained[a]	**131,100**	119,218	103,462
Loans held-for-sale and loans at fair value	**930**	882	745
Total loans	**$ 132,030**	$ 120,100	$ 104,207
Client deposits and other third-party liabilities[c]	**198,356**	195,912	174,729
Equity	**13,500**	9,500	8,000
Average loans by client segment			
Middle Market Banking[b]	**$ 51,830**	$ 47,009	$ 40,497
Corporate Client Banking[b]	**20,918**	19,572	14,255
Commercial Term Lending	**45,989**	40,872	38,107
Real Estate Banking	**9,582**	8,562	7,619
Other	**3,711**	4,085	3,729
Total Commercial Banking loans	**$ 132,030**	$ 120,100	$ 104,207
Headcount[d][e]	**6,848**	6,117	5,782

(a) Effective January 1, 2013, whole loan financing agreements, previously reported as other assets, were reclassified as loans. For the year ended December 31, 2013, the impact on period-end and average loans was $1.6 billion.

(b) Effective January 1, 2013, the financial results of financial institution clients were transferred to Corporate Client Banking from Middle Market Banking. Prior periods were revised to conform with this presentation.

(c) Client deposits and other third-party liabilities include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased, and securities loaned or sold under repurchase agreements) as part of client cash management programs.

(d) Effective January 1, 2013, headcount includes transfers from other business segments largely related to operations, technology and other support staff.

(e) Effective July 1, 2012, certain Treasury Services product sales staff supporting CB were transferred from CIB to CB. For further discussion of this transfer, see footnote (c) on page 103 of this Annual Report.

As of or for the year ended December 31, (in millions, except headcount and ratios)	2013	2012	2011
Credit data and quality statistics			
Net charge-offs	**$ 43**	$ 35	$ 187
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**471**	644	1,036
Nonaccrual loans held-for-sale and loans at fair value	**43**	29	17
Total nonaccrual loans	**514**	673	1,053
Assets acquired in loan satisfactions	**15**	14	85
Total nonperforming assets	**529**	687	1,138
Allowance for credit losses:			
Allowance for loan losses	**2,669**	2,610	2,603
Allowance for lending-related commitments	**142**	183	189
Total allowance for credit losses	**2,811**	2,793	2,792
Net charge-off rate[b]	**0.03%**	0.03%	0.18%
Allowance for loan losses to period-end loans retained	**1.97**	2.06	2.34
Allowance for loan losses to nonaccrual loans retained[a]	**567**	405	251
Nonaccrual loans to total period-end loans	**0.37**	0.52	0.94

(a) Allowance for loan losses of $81 million, $107 million and $176 million was held against nonaccrual loans retained at December 31, 2013, 2012 and 2011, respectively.

(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off rate.

ASSET MANAGEMENT

Asset Management, with client assets of $2.3 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions to a broad range of clients' investment needs. For individual investors, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2013	2012	2011
Revenue			
Asset management, administration and commissions	**$ 8,232**	$ 7,041	$ 6,748
All other income	**797**	806	1,147
Noninterest revenue	**9,029**	7,847	7,895
Net interest income	**2,291**	2,099	1,648
Total net revenue	**11,320**	9,946	9,543
Provision for credit losses	**65**	86	67
Noninterest expense			
Compensation expense	**4,875**	4,405	4,152
Noncompensation expense	**3,002**	2,608	2,752
Amortization of intangibles	**139**	91	98
Total noninterest expense	**8,016**	7,104	7,002
Income before income tax expense	**3,239**	2,756	2,474
Income tax expense	**1,208**	1,053	882
Net income	**$ 2,031**	$ 1,703	$ 1,592
Revenue by client segment			
Private Banking	**$ 6,020**	$ 5,426	$ 5,116
Institutional	**2,536**	2,386	2,273
Retail	**2,764**	2,134	2,154
Total net revenue	**$11,320**	$ 9,946	$ 9,543
Financial ratios			
Return on common equity	**23%**	24%	25%
Overhead ratio	**71**	71	73
Pretax margin ratio	**29**	28	26

2013 compared with 2012

Net income was $2.0 billion, an increase of $328 million, or 19%, from the prior year, reflecting higher net revenue, largely offset by higher noninterest expense.

Net revenue was $11.3 billion, an increase of $1.4 billion, or 14%, from the prior year. Noninterest revenue was $9.0 billion, up $1.2 billion, or 15%, from the prior year, due to net client inflows, the effect of higher market levels and higher performance fees. Net interest income was $2.3 billion, up $192 million, or 9%, from the prior year, due to higher loan and deposit balances, partially offset by narrower loan and deposit spreads.

Revenue from Private Banking was $6.0 billion, up 11% from the prior year due to higher net interest income from loan and deposit balances and higher brokerage revenue. Revenue from Retail was $2.8 billion, up 30% due to net client inflows and the effect of higher market levels. Revenue from Institutional was $2.5 billion, up 6% due to higher valuations of seed capital investments, the effect of higher market levels and higher performance fees.

The provision for credit losses was $65 million, compared with $86 million in the prior year.

Noninterest expense was $8.0 billion, an increase of $912 million, or 13%, from the prior year, primarily due to higher headcount-related expense driven by continued front office expansion efforts, higher performance-based compensation and costs related to the control agenda.

2012 compared with 2011

Net income was $1.7 billion, an increase of $111 million, or 7%, from the prior year. These results reflected higher net revenue, partially offset by higher noninterest expense and a higher provision for credit losses.

Net revenue was $9.9 billion, an increase of $403 million, or 4%, from the prior year. Noninterest revenue was $7.8 billion, down $48 million, or 1%, due to lower loan-related revenue and the absence of a prior-year gain on the sale of an investment. These decreases were predominantly offset by net client inflows, higher valuations of seed capital investments, the effect of higher market levels, higher brokerage revenue and higher performance fees. Net interest income was $2.1 billion, up $451 million, or 27%, due to higher loan and deposit balances.

Revenue from Private Banking was $5.4 billion, up 6% from the prior year due to higher net interest income from loan and deposit balances and higher brokerage revenue, partially offset by lower loan-related fee revenue. Revenue from Institutional was $2.4 billion, up 5% due to net client inflows and the effect of higher market levels. Revenue from Retail was $2.1 billion, down 1% due to the absence of a prior-year gain on the sale of an investment, predominantly offset by higher valuations of seed capital investments and higher performance fees.

The provision for credit losses was $86 million, compared with $67 million in the prior year.

Noninterest expense was $7.1 billion, an increase of $102 million, or 1%, from the prior year, due to higher performance-based compensation and higher headcount-related expense, partially offset by the absence of non-client-related litigation expense.

Selected metrics

Business metrics

As of or for the year ended December 31, (in millions, except headcount, ranking data, ratios and where otherwise noted)	2013	2012	2011
Number of:			
Client advisors	**2,962**	2,821	2,883
% of customer assets in 4 & 5 Star Funds[a]	**49%**	47%	43%
% of AUM in 1st and 2nd quartiles:[b]			
1 year	**68**	67	48
3 years	**68**	74	72
5 years	**69**	76	78
Selected balance sheet data (period-end)			
Total assets	**$122,414**	$108,999	$ 86,242
Loans[c]	**95,445**	80,216	57,573
Deposits	**146,183**	144,579	127,464
Equity	**9,000**	7,000	6,500
Selected balance sheet data (average)			
Total assets	**$113,198**	$ 97,447	$ 76,141
Loans	**86,066**	68,719	50,315
Deposits	**139,707**	129,208	106,421
Equity	**9,000**	7,000	6,500
Headcount	**20,048**	18,465	18,036
Credit data and quality statistics			
Net charge-offs	**$ 40**	$ 64	$ 92
Nonaccrual loans	**167**	250	317
Allowance for credit losses:			
Allowance for loan losses	**278**	248	209
Allowance for lending-related commitments	**5**	5	10
Total allowance for credit losses	**283**	253	219
Net charge-off rate	**0.05%**	0.09%	0.18%
Allowance for loan losses to period-end loans	**0.29**	0.31	0.36
Allowance for loan losses to nonaccrual loans	**166**	99	66
Nonaccrual loans to period-end loans	**0.17**	0.31	0.55
AM firmwide disclosures[d]			
Total net revenue	**$ 13,391**	$ 11,443	$ 10,715
Client assets (in billions)[e]	**2,534**	2,244	2,035
Number of client advisors	**6,006**	5,784	6,084

(a) Derived from Morningstar for the U.S., the U.K., Luxembourg, France, Hong Kong and Taiwan; and Nomura for Japan.
(b) Quartile ranking sourced from: Lipper for the U.S. and Taiwan; Morningstar for the U.K., Luxembourg, France and Hong Kong; and Nomura for Japan.
(c) Included $18.9 billion, $10.9 billion and $2.1 billion of prime mortgage loans reported in the Consumer, excluding credit card, loan portfolio at December 31, 2013, 2012 and 2011, respectively. For the same periods, excluded $3.7 billion, $6.7 billion and $13.0 billion of prime mortgage loans reported in the CIO portfolio within the Corporate/Private Equity segment, respectively.
(d) Includes Chase Wealth Management ("CWM"), which is a unit of Consumer & Business Banking. The firmwide metrics are presented in order to capture AM's partnership with CWM. Management reviews firmwide metrics in assessing the financial performance of AM's client asset management business.
(e) Excludes CWM client assets that are managed by AM.

AM's client segments comprise the following:

Private Banking offers investment advice and wealth management services to high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty-wealth advisory services.

Institutional brings comprehensive global investment services – including asset management, pension analytics, asset-liability management and active risk-budgeting strategies – to corporate and public institutions, endowments, foundations, non-profit organizations and governments worldwide.

Retail provides worldwide investment management services and retirement planning and administration, through financial intermediaries and direct distribution of a full range of investment products.

J.P. Morgan Asset Management has two high-level measures of its overall fund performance.

- Percentage of assets under management in funds rated 4- and 5-stars (three years). Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22% of industry wide ranked funds. The worst rating is a 1-star rating.
- Percentage of assets under management in first- or second- quartile funds (one, three and five years). Mutual fund rating services rank funds according to a peer-based performance system, which measures returns according to specific time and fund classification (small-, mid-, multi- and large-cap).

Client assets

2013 compared with 2012

Client assets were $2.3 trillion at December 31, 2013, an increase of $248 billion, or 12%, compared with the prior year. Assets under management were $1.6 trillion, an increase of $172 billion, or 12%, from the prior year, due to net inflows to long-term products and the effect of higher market levels. Custody, brokerage, administration and deposit balances were $745 billion, up $76 billion, or 11%, from the prior year, due to the effect of higher market levels and custody inflows, partially offset by brokerage outflows.

2012 compared with 2011

Client assets were $2.1 trillion at December 31, 2012, an increase of $174 billion, or 9%, from the prior year. Assets under management were $1.4 trillion, an increase of $90 billion, or 7%, due to the effect of higher market levels and net inflows to long-term products, partially offset by net outflows from liquidity products. Custody, brokerage, administration and deposit balances were $669 billion, up $84 billion, or 14%, due to the effect of higher market levels and custody and brokerage inflows.

Client assets

December 31, (in billions)	2013	2012	2011
Assets by asset class			
Liquidity	**$ 451**	$ 458	$ 501
Fixed income	**330**	330	287
Equity	**370**	277	236
Multi-asset and alternatives	**447**	361	312
Total assets under management	**1,598**	1,426	1,336
Custody/brokerage/ administration/deposits	**745**	669	585
Total client assets	**$ 2,343**	$ 2,095	$ 1,921
Alternatives client assets	**158**	142	134
Assets by client segment			
Private Banking	**$ 361**	$ 318	$ 291
Institutional	**777**	741	722
Retail	**460**	367	323
Total assets under management	**$ 1,598**	$ 1,426	$ 1,336
Private Banking	**$ 977**	$ 877	$ 781
Institutional	**777**	741	723
Retail	**589**	477	417
Total client assets	**$ 2,343**	$ 2,095	$ 1,921
Mutual fund assets by asset class			
Liquidity	**$ 392**	$ 410	$ 458
Fixed income	**137**	136	107
Equity	**198**	139	116
Multi-asset and alternatives	**77**	46	39
Total mutual fund assets	**$ 804**	$ 731	$ 720

Year ended December 31, (in billions)	2013	2012	2011
Assets under management rollforward			
Beginning balance	**$ 1,426**	$ 1,336	$ 1,298
Net asset flows:			
Liquidity	**(4)**	(41)	20
Fixed income	**8**	27	36
Equity	**34**	8	–
Multi-asset and alternatives	**48**	23	15
Market/performance/other impacts	**86**	73	(33)
Ending balance, December 31	**$ 1,598**	$ 1,426	$ 1,336
Client assets rollforward			
Beginning balance	**$ 2,095**	$ 1,921	$ 1,840
Net asset flows	**80**	60	123
Market/performance/other impacts	**168**	114	(42)
Ending balance, December 31	**$ 2,343**	$ 2,095	$ 1,921

International metrics

Year ended December 31, (in billions, except where otherwise noted)	2013	2012	2011
Total net revenue (in millions)[a]			
Europe/Middle East/Africa	**$ 1,852**	$ 1,641	$ 1,704
Asia/Pacific	**1,175**	967	971
Latin America/Caribbean	**867**	772	808
North America	**7,426**	6,566	6,060
Total net revenue	**$ 11,320**	$ 9,946	$ 9,543
Assets under management			
Europe/Middle East/Africa	**$ 305**	$ 258	$ 278
Asia/Pacific	**132**	114	105
Latin America/Caribbean	**47**	45	34
North America	**1,114**	1,009	919
Total assets under management	**$ 1,598**	$ 1,426	$ 1,336
Client assets			
Europe/Middle East/Africa	**$ 367**	$ 317	$ 329
Asia/Pacific	**180**	160	139
Latin America/Caribbean	**117**	110	89
North America	**1,679**	1,508	1,364
Total client assets	**$ 2,343**	$ 2,095	$ 1,921

(a) Regional revenue is based on the domicile of the client.

The Corporate/Private Equity segment comprises Private Equity, Treasury and Chief Investment Office ("CIO"), and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Central Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm's occupancy and pension-related expense that are subject to allocation to the businesses.

Selected income statement data[a]

Year ended December 31, (in millions, except headcount)	2013	2012	2011
Revenue			
Principal transactions	**$ 563**	$ (4,268)	$ 1,434
Securities gains	**666**	2,024	1,600
All other income	**1,864**	2,434	587
Noninterest revenue	**3,093**	190	3,621
Net interest income	**(1,839)**	(1,281)	582
Total net revenue[b]	**1,254**	(1,091)	4,203
Provision for credit losses	**(28)**	(37)	(36)
Noninterest expense			
Compensation expense	**2,299**	2,221	1,966
Noncompensation expense[c]	**13,208**	6,972	6,325
Subtotal	**15,507**	9,193	8,291
Net expense allocated to other businesses	**(5,252)**	(4,634)	(4,276)
Total noninterest expense	**10,255**	4,559	4,015
Income before income tax expense/(benefit)	**(8,973)**	(5,613)	224
Income tax expense/(benefit)	**(2,995)**	(3,591)	(695)
Net income/(loss)	**$ (5,978)**	$ (2,022)	$ 919
Total net revenue			
Private equity	**$ 589**	$ 601	$ 836
Treasury and CIO	**(792)**	(3,064)	3,196
Other Corporate[a]	**1,457**	1,372	171
Total net revenue	**$ 1,254**	$ (1,091)	$ 4,203
Net income/(loss)			
Private equity	**$ 285**	$ 292	$ 391
Treasury and CIO	**(676)**	(2,093)	1,349
Other Corporate[a]	**(5,587)**	(221)	(821)
Total net income/(loss)	**$ (5,978)**	$ (2,022)	$ 919
Total assets (period-end)[a]	**$805,987**	$ 725,251	$ 689,718
Headcount[a]	**20,717**	17,758	16,653

(a) The 2012 and 2011 data for certain income statement line items (predominantly net interest income, compensation, and non compensation) were revised to reflect the transfer of certain technology and operations, as well as real estate-related functions and staff from Corporate/Private Equity to CCB, effective January 1, 2013. For further information on this transfer, see footnote (a) on page 86 of this Annual Report.

(b) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $480 million, $443 million and $298 million for the years ended December 31, 2013, 2012 and 2011, respectively.

(c) Included litigation expense of $10.2 billion, $3.7 billion and $3.2 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

2013 compared with 2012

Net loss was $6.0 billion, compared with a net loss of $2.0 billion in the prior year.

Private Equity reported net income of $285 million, compared with net income of $292 million in the prior year. Net revenue was of $589 million, compared with $601 million in the prior year.

Treasury and CIO reported a net loss of $676 million, compared with a net loss of $2.1 billion in the prior year. Net revenue was a loss of $792 million, compared with a loss of $3.1 billion in the prior year. Net revenue in the current year includes $659 million of net securities gains from the sales of available-for-sale investment securities, compared with securities gains of $2.0 billion and $888 million of pretax extinguishment gains related to the redemption of trust preferred capital debt securities in the prior year. The extinguishment gains were related to adjustments applied to the cost basis of the trust preferred securities during the period they were in a qualified hedge accounting relationship. The prior year loss also reflected $5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and $449 million of losses from the retained index credit derivative positions for the three months ended September 30, 2012. Current year net interest income was a loss of $1.4 billion compared with a loss of $683 million in the prior year, primarily due to low interest rates and limited reinvestment opportunities. Net interest income improved in the fourth quarter of 2013 due to higher interest rates and better reinvestment opportunities.

Other Corporate reported a net loss of $5.6 billion, compared with a net loss of $221 million in the prior year. Current year noninterest revenue was $1.8 billion compared with $1.8 billion in the prior year. Current year noninterest revenue included gains of $1.3 billion and $493 million on the sales of Visa shares and One Chase Manhattan Plaza, respectively. Noninterest revenue in the prior year included a $1.1 billion benefit for the Washington Mutual bankruptcy settlement and a $665 million gain for the recovery on a Bear Stearns-related subordinated loan. Noninterest expense of $9.7 billion was up $5.9 billion compared to the prior year. The current year included $10.2 billion of legal expense, including reserves for litigation and regulatory proceedings compared with $3.7 billion of expense for additional litigation reserves, largely for mortgage-related matters, in the prior year.

2012 compared with 2011

Net loss was $2.0 billion, compared with a net income of $919 million in the prior year.

Private Equity reported net income of $292 million, compared with net income of $391 million in the prior year. Net revenue was $601 million, compared with $836 million in the prior year, due to lower unrealized and realized gains on private investments, partially offset by higher unrealized gains on public securities. Noninterest expense was $145 million, down from $238 million in the prior year.

Treasury and CIO reported a net loss of $2.1 billion, compared with net income of $1.3 billion in the prior year. Net revenue was a loss of $3.1 billion, compared with net revenue of $3.2 billion in the prior year. The current year loss reflected $5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and $449 million of losses from the retained index credit derivative positions for the three months ended September 30, 2012. These losses were partially offset by securities gains of $2.0 billion. The current year revenue reflected $888 million of extinguishment gains related to the redemption of trust preferred securities, which are included in all other income in the above table. The extinguishment gains were related to adjustments applied to the cost basis of the trust preferred securities during the period they were in a qualified hedge accounting relationship. Net interest income was negative $683 million, compared with $1.4 billion in the prior year, primarily reflecting the impact of lower portfolio yields and higher deposit balances across the Firm.

Other Corporate reported a net loss of $221 million, compared with a net loss of $821 million in the prior year. Noninterest revenue of $1.8 billion was driven by a $1.1 billion benefit for the Washington Mutual bankruptcy settlement, which is included in all other income in the above table, and a $665 million gain from the recovery on a Bear Stearns-related subordinated loan. Noninterest expense of $3.8 billion was up $1.0 billion compared with the prior year. The current year included expense of $3.7 billion for additional litigation reserves, largely for mortgage-related matters. The prior year included expense of $3.2 billion for additional litigation reserves.

Treasury and CIO overview

Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's four major reportable business segments to serve their respective client bases, which generate both on- and off-balance sheet assets and liabilities.

CIO achieves the Firm's asset-liability management objectives generally by investing in high-quality securities that are managed for the longer-term as part of the Firm's AFS and HTM investment securities portfolios (the "investment securities portfolio"). CIO also uses derivatives, as well as securities that are not classified as AFS or HTM, to meet the Firm's asset-liability management objectives. For further information on derivatives, see Note 6 on pages 220–233 of this Annual Report. For further information about securities not classified within the AFS or HTM portfolio, see Note 3 on pages 195–215 of this Annual Report. The Treasury and CIO investment securities portfolio primarily consists of U.S. and non-U.S. government securities, agency and non-agency mortgage-backed securities, other asset-backed securities, corporate debt securities and obligations of U.S. states and municipalities. At December 31, 2013, the total Treasury and CIO investment securities portfolio was $347.6 billion; the average credit rating of the securities comprising the Treasury and CIO investment securities portfolio was AA+ (based upon external ratings where available and where not available, based primarily upon internal ratings that correspond to ratings as defined by S&P and Moody's). See Note 12 on pages 249–254 of this Annual Report for further information on the details of the Firm's investment securities portfolio.

For further information on liquidity and funding risk, see Liquidity Risk Management on pages 168–173 of this Annual Report. For information on interest rate, foreign exchange and other risks, Treasury and CIO Value-at-risk ("VaR") and the Firm's structural interest rate-sensitive revenue at risk, see Market Risk Management on pages 142–148 of this Annual Report.

Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	2013	2012	2011
Securities gains	**$ 659**	$ 2,028	$ 1,385
Investment securities portfolio (average)	**353,712**	358,029	330,885
Investment securities portfolio (period-end)[(a)]	**347,562**	365,421	355,605
Mortgage loans (average)	**5,145**	10,241	13,006
Mortgage loans (period-end)	**3,779**	7,037	13,375

(a) Period-end investment securities included held-to-maturity balance of $24.0 billion at December 31, 2013. Held-to-maturity balances for the other periods were not material.

Private Equity portfolio

Selected income statement and balance sheet data

Year ended December 31, (in millions)	2013	2012	2011
Private equity gains/(losses)			
Realized gains	**$ (170)**	$ 17	$ 1,842
Unrealized gains/(losses)[a]	**734**	639	(1,305)
Total direct investments	**564**	656	537
Third-party fund investments	**137**	134	417
Total private equity gains/ (losses)[b]	**$ 701**	$ 790	$ 954

(a) Includes reversals of unrealized gains and losses that were recognized in prior periods and have now been realized.
(b) Included in principal transactions revenue in the Consolidated Statements of Income.

Private equity portfolio information[a]

Direct investments

December 31, (in millions)	2013	2012	2011
Publicly held securities			
Carrying value	**$ 1,035**	$ 578	$ 805
Cost	**672**	350	573
Quoted public value	**1,077**	578	896
Privately held direct securities			
Carrying value	**5,065**	5,379	4,597
Cost	**6,022**	6,584	6,793
Third-party fund investments[b]			
Carrying value	**1,768**	2,117	2,283
Cost	**1,797**	1,963	2,452
Total private equity portfolio			
Carrying value	**$ 7,868**	$ 8,074	$ 7,685
Cost	**8,491**	8,897	9,818

(a) For more information on the Firm's policies regarding the valuation of the private equity portfolio, see Note 3 on pages 195–215 of this Annual Report.
(b) Unfunded commitments to third-party private equity funds were $215 million, $370 million and $789 million at December 31, 2013, 2012 and 2011, respectively.

2013 compared with 2012

The carrying value of the private equity portfolio at December 31, 2013 was $7.9 billion, down from $8.1 billion at December 31, 2012. The decrease in the portfolio was predominantly driven by sales of investments, partially offset by new investments and unrealized gains.

2012 compared with 2011

The carrying value of the private equity portfolio at December 31, 2012 was $8.1 billion, up from $7.7 billion at December 31, 2011. The increase in the portfolio was predominantly driven by new investments and unrealized gains, partially offset by sales of investments.

INTERNATIONAL OPERATIONS

During the years ended December 31, 2013, 2012 and 2011, the Firm recorded $24.0 billion, $18.5 billion and $24.5 billion, respectively, of managed revenue derived from clients, customers and counterparties domiciled outside of North America. Of those amounts, 65%, 57% and 66%, respectively, were derived from Europe/Middle East/Africa ("EMEA"); 26%, 30% and 25%, respectively, from Asia/Pacific; and 9%, 13% and 9%, respectively, from Latin America/Caribbean. For additional information regarding international operations, see Note 32 on page 333 of this Annual Report.

International wholesale activities

The Firm is committed to meeting the needs of its clients as part of a coordinated international business strategy.

Set forth below are certain key metrics related to the Firm's wholesale international operations, including, for each of EMEA, Asia/Pacific and Latin America/Caribbean, the number of countries in each such region in which they operate, front-office headcount, number of significant clients, revenue and selected balance-sheet data.

As of or for the year ended December 31,	EMEA			Asia/Pacific			Latin America/Caribbean		
(in millions, except headcount and where otherwise noted)	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Revenue[a]	**$ 15,441**	$ 10,398	$ 16,141	**$ 6,138**	$ 5,590	$ 5,971	**$ 2,233**	$ 2,327	$ 2,232
Countries of operation[b]	**33**	33	33	**17**	17	16	**9**	9	9
New offices	**–**	–	1	**–**	2	2	**–**	–	4
Total headcount[c]	**15,560**	15,485	16,185	**21,699**	20,509	20,212	**1,495**	1,435	1,380
Front-office headcount	**6,285**	5,805	5,937	**4,353**	4,166	4,263	**655**	591	524
Significant clients[d]	**1,071**	1,008	950	**498**	509	496	**177**	162	138
Deposits (average)[e]	**$ 192,064**	$ 169,693	$ 168,882	**$ 56,440**	$ 57,329	$ 57,684	**$ 5,546**	$ 4,823	$ 5,318
Loans (period-end)[f]	**45,571**	40,760	36,637	**26,560**	30,287	31,119	**29,214**	30,322	25,141
Assets under management (in billions)	**305**	258	278	**132**	114	105	**47**	45	34
Client assets (in billions)	**367**	317	329	**180**	160	139	**117**	110	89
Assets under custody (in billions)	**7,348**	6,502	5,430	**1,607**	1,577	1,426	**231**	252	279

Note: International wholesale operations is comprised of CIB, AM, CB and Treasury and CIO.

(a) Revenue is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk.

(b) Countries of operation represents locations where the Firm has a physical presence with employees actively engaged in "client facing" activities.

(c) Total headcount includes all employees, including those in service centers, located in the region. Effective January 1, 2013, interns are excluded from the firmwide and business segment headcount metrics. Prior periods were revised to conform with this presentation.

(d) Significant clients are defined as companies with over $1 million in revenue over a trailing 12-month period in the region (excludes private banking clients).

(e) Deposits are based on the location from which the client relationship is managed.

(f) Loans outstanding are based predominantly on the domicile of the borrower and exclude loans held-for-sale and loans carried at fair value.

ENTERPRISE-WIDE RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase's business activities. The Firm employs a holistic approach to risk management that is intended to ensure the broad spectrum of risk types are considered in managing its business activities.

The Firm believes effective risk management requires:

- Acceptance of responsibility by all individuals within the Firm;
- Ownership of risk management within each line of business; and
- Firmwide structures for risk governance and oversight.

Firmwide Risk Management is overseen and managed on an enterprise-wide basis. The Firm's Chief Executive Officer ("CEO"), Chief Financial Officer ("CFO"), Chief Risk Officer ("CRO") and Chief Operating Officer ("COO") develop and set the risk management framework and governance structure for the Firm which is intended to provide comprehensive controls and ongoing management of the major risks inherent in the Firm's business activities. The Firm's risk management framework is intended to create a culture of risk transparency and awareness, and personal responsibility throughout the Firm where collaboration, discussion, escalation and sharing of information are encouraged. The CEO, CFO, CRO and COO are ultimately responsible and accountable to the Firm's Board of Director's.

The Firm believes that risk management is the responsibility of every employee. Employees are expected to operate with the highest standards of integrity and identify, escalate, and correct mistakes. The Firm's risk culture strives for continual improvement through ongoing employee training and development, as well as talent retention. The Firm also approaches its incentive compensation arrangements through an integrated risk, compensation and financial management framework to encourage a culture of risk awareness and personal accountability. The Firm's overall objective in managing risk is to protect the safety and soundness of the Firm, and avoid excessive risk taking.

The following sections outline the key risks that are inherent in the Firm's business activities.

	Risk	Definition	Key risk management metrics	Page references
Risks managed centrally	Capital risk	The risk the Firm has insufficient capital resources to support the Firm's business activities and related risks.	Risk-based capital ratios, Supplementary Leverage ratio	160-167
	Liquidity risk	The risk the Firm will not have the appropriate amount, composition or tenor of funding and liquidity to support its assets and obligations.	LCR; Stress; Parent Holding Company Pre-Funding	168-173
	Non-USD FX risk	Risk arising from capital investments, forecasted expense and revenue, investment securities portfolio or issuing debt in denominations other than the U.S. dollar.	FX Net Open Position ("NOP")	220, 229-231
	Structural interest rate risk	Risk resulting from the Firm's traditional banking activities (both on- and off-balance sheet positions) arising from the extension of loans and credit facilities, taking deposits and issuing debt, and the impact of the CIO investment securities portfolio.	Earnings-at-risk	147-148
Risks managed on an LOB aligned basis	Country risk	Risk that a sovereign's unwillingness or inability to pay will result in market, credit, or other losses.	Default exposure at 0% recovery, Stress	149-152
	Credit risk	Risk of loss from obligor or counterparty default.	Total exposure; industry and geographic concentrations; risk ratings; delinquencies; loss experience; stress	117-141
	Fiduciary risk	Risk of failing to exercise the applicable standard of care or to act in the best interests of clients or treat all clients fairly as required under applicable law or regulation.	Not Applicable	159
	Legal risk	Risk of loss or imposition of damages, fines, penalties or other liability arising from failure to comply with a contractual obligation or to comply with laws or regulations to which the Firm is subject.	Not Applicable	158
	Market risk	Risk of loss arising from adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity and commodity prices and their implied volatilities, and credit spreads.	VaR, Stress, Sensitivities	142-148
	Model risk	Risk of a material inaccuracy in the quantification of the value of, or an inaccuracy of the identification and measurement of a position held by or activity engaged in by the Firm.	Model Status, Model Tier	153
	Operational risk	Risk of loss resulting from inadequate or failed processes or systems, human factors or external events	Various metrics- see page 156	155-157
	Principal risk	Risk of an adverse change in the value of privately-held financial assets and instruments, typically representing an ownership or junior capital position. These positions have unique risks due to their illiquidity or for which there is less observable market or valuation data.	Carrying Value, Stress	154
	Regulatory and Compliance risk	Risk of regulatory actions, including fines or penalties, arising from the failure to comply with the various U.S. federal and state laws and regulations and the laws and regulations of the various jurisdictions outside the United States in which the Firm conducts business.	Not Applicable	158
	Reputation risk	Risk that an action, transaction, investment or event will reduce the trust that clients, shareholders, employees or the broader public has in the Firm's integrity or competence.	Not Applicable	159

Risk governance and oversight

The Board of Directors provides oversight of risk principally through the Board of Directors' Risk Policy Committee ("DRPC"), Audit Committee and, with respect to compensation, Compensation & Management Development Committee.

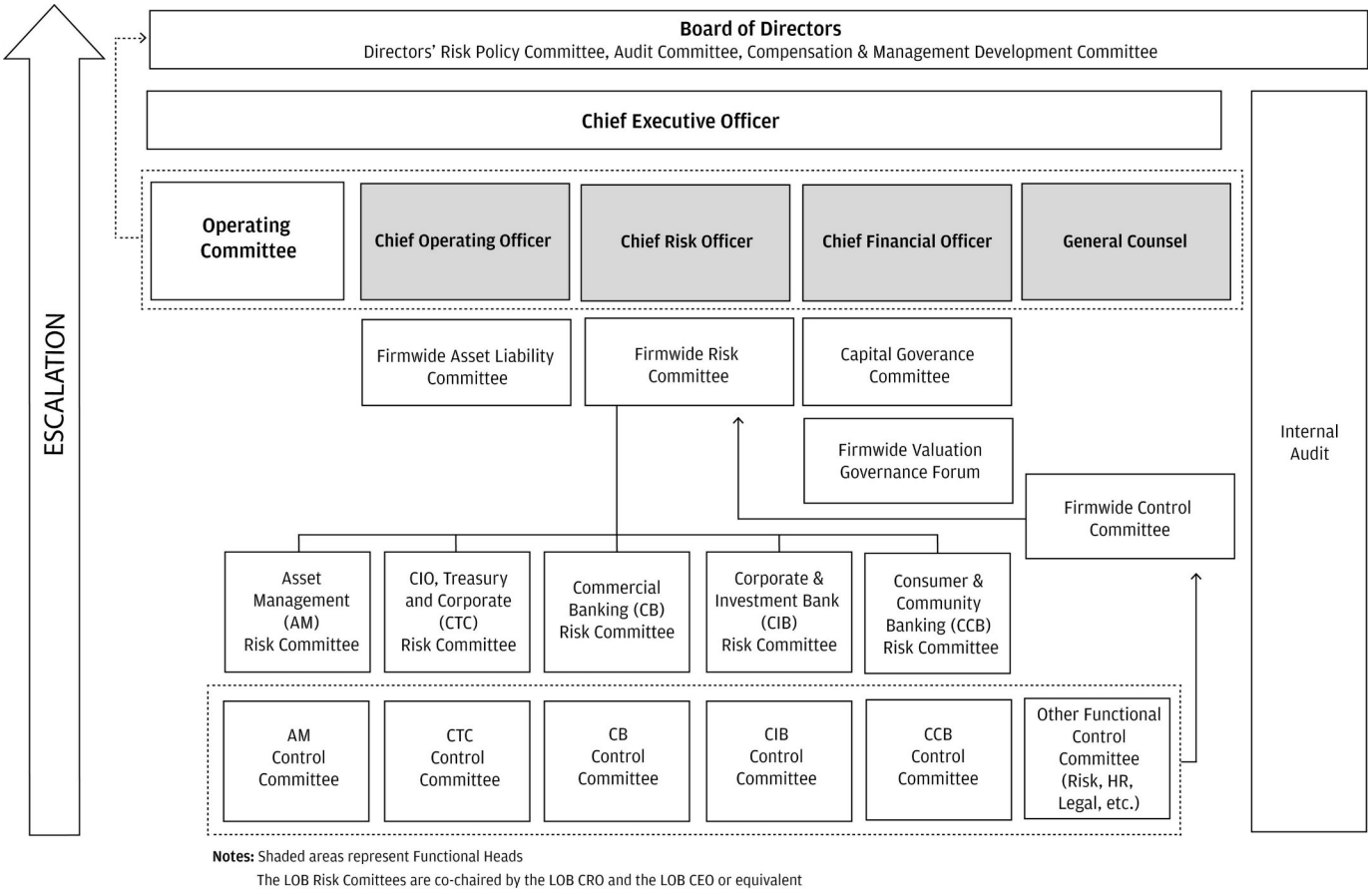
The Firm's overall risk appetite is established by management taking into consideration the Firm's capital and liquidity positions, earnings power, and diversified business model. The risk appetite framework is a tool to measure the capacity to take risk and is expressed in loss tolerance parameters at the Firm and/or LOB levels, including net income loss tolerances, liquidity limits and market limits. Performance against these parameters informs management's strategic decisions and is reported to the DRPC.

The Firm-level risk appetite parameters are set and approved by the Firm's CEO, CFO, CRO and COO. LOB-level risk appetite parameters are set by the LOB CEO, CFO, and CRO and are approved by the Firm's functional heads as noted above. Firmwide LOB diversification allows the sum of the LOBs' loss tolerances to be greater than the Firmwide loss tolerance.

The CRO is responsible for the overall direction of the Firm's Risk Management function and is the head of the Risk Management Organization. The LOBs and legal entities are ultimately responsible for managing the risks inherent in their respective business activities.

The Firm's Risk Management Organization and other Firmwide functions with risk-related responsibilities (i.e., Regulatory Capital Management Office ("RCMO"), Oversight and Control Group, Valuation Control Group ("VCG"), Legal and Compliance) provide independent oversight of the monitoring, evaluation and escalation of risk.

The chart below illustrates the Firm's Risk Governance structure and certain key management level committees that are primarily responsible for key risk-related functions; there are additional committees not represented in the chart (e.g. Firmwide Fiduciary Risk Committee, and other functional forums) that are also responsible for management and oversight of risk. Additionally, the chart illustrates how the primary escalation mechanism works.



Notes: Shaded areas represent Functional Heads
The LOB Risk Comittees are co-chaired by the LOB CRO and the LOB CEO or equivalent

In assisting the Board in its oversight of risk, primary responsibility with respect to credit risk, market risk, structural interest rate risk, principal risk, liquidity risk, country risk, fiduciary risk and model risk rests with the DRPC, while primary responsibility with respect to operating risk, legal risk and compliance risk rests with the Audit Committee. Each committee of the Board oversees reputation risk issues within its scope of responsibility.

The Directors' Risk Policy Committee ("DRPC") assists the Board in its oversight of management's exercise of its responsibility to (i) assess and manage the Firm's risk; (ii) ensure that there is in place an effective system reasonably designed to evaluate and control such risks throughout the Firm; and (iii) manage capital and liquidity planning and analysis. The DRPC reviews and approves Primary Risk Policies (as designated by the DRPC), reviews firmwide value-at-risk, stress limits and any other metrics agreed to with management, and performance against such metrics. The Firm's CRO, LOB CROs, LOB CEOs, heads of risk for Country Risk, Market Risk, Wholesale Credit Risk, Consumer Credit Risk, Model Risk, Risk Management Policy, Reputation Risk Governance, Fiduciary Risk Governance, and Operational Risk Governance (all referred to as Firmwide Risk Executives) meet with and provide updates and escalations to the DRPC. Additionally, breaches in risk appetite tolerances, liquidity issues that may have a material adverse impact on the Firm and other significant matters as determined by the CRO or Firmwide functions with risk responsibility are escalated to the DRPC.

The Audit Committee assists the Board in its oversight of guidelines and policies that govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal control that is relied upon to provide reasonable assurance of compliance with the Firm's execution of operational risk. In addition, Internal Audit, an independent function within the Firm that provides independent and objective assessments of the control environment, reports directly to the Audit Committee and administratively to the CEO. Internal Audit conducts independent reviews to evaluate the Firm's internal control structure and compliance with applicable regulatory requirements and is responsible for providing the Audit Committee, senior management and regulators with an independent assessment of the Firm's ability to manage and control risk.

The Compensation & Management Development Committee, assists the Board in its oversight of the Firm's compensation programs and reviews and approves the Firm's overall compensation philosophy and practices. The Committee

reviews the Firm's compensation practices as they relate to risk and risk management in light of the Firm's objectives, including its safety and soundness and the avoidance of excessive risk taking. The Committee reviews and approves the terms of compensation award programs, including recovery provisions, restrictive covenants and vesting periods. The Committee also reviews and approves the Firm's overall incentive compensation pools and reviews those of each of the Firm's lines of business and Corporate/ Private Equity segment. The Committee reviews the performance and approves all compensation awards for the Firm's Operating Committee on a name-by-name basis. The full Board's independent directors review the performance and approve the compensation of the Firm's CEO.

Among the Firm's management level committees that are primarily responsible for key risk-related functions are:

The Asset-Liability Committee ("ALCO"), chaired by the Corporate Treasurer under the direction of the COO, monitors the Firm's overall liquidity risk. ALCO is responsible for reviewing and approving the Firm's liquidity policy and contingency funding plan. ALCO also reviews the Firm's funds transfer pricing policy (through which lines of business "transfer" interest rate and foreign exchange risk to Treasury), overall structural interest rate risk position, funding requirements and strategy, and the Firm's securitization programs (and any required liquidity support by the Firm of such programs).

The Capital Governance Committee, chaired by the Firm's CFO, is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution alternatives. The Committee is also responsible for governing the capital adequacy assessment process, including overall design, assumptions and risk streams; and, ensuring that capital stress test programs are designed to adequately capture the idiosyncratic risks across the Firm's businesses.

The Firmwide Risk Committee ("FRC") provides oversight of the risks inherent in the Firm's businesses, including market, credit, principal, structural interest rate, operational risk framework, fiduciary, reputational, country, liquidity and model risks. The Committee is co-chaired by the Firm's CEO and CRO. Members of the committee include the the Firm's COO, LOB CEOs, LOB CROs, General Counsel, and other senior managers from risk and control functions. This committee serves as an escalation point for risk topics and issues raised by the Firm's Operating Committee, the Line of Business Risk Committees, Firmwide Control Committee ("FCC") and other subordinate committees.

The Firmwide Control Committee ("FCC") provides a forum for senior management to review and discuss firmwide operational risks including existing and emerging issues, as well as operational risk metrics, management and execution. The FCC serves as an escalation point for significant issues raised from LOB and Functional Control Committees, particularly those with potential enterprise-wide impact. The FCC (as well as the LOB and Functional Control Committees) oversees the risk and control environment, which includes reviewing the identification, management and monitoring of operational risk, control issues, remediation actions and enterprise-wide trends. The FCC escalates significant issues to the FRC.

Each LOB Risk Committee is responsible for decisions relating to risk strategy, policy, measurement and control within its respective LOB. The committee is co-chaired by the LOB CRO and LOB CEO or equivalent. The committee has a clear set of escalation rules and it is the responsibility of committee members to escalate line of business risk topics to the Firmwide Risk Committee as appropriate.

Other corporate functions and forums with risk management-related responsibilities include:

The Firm's Oversight and Control Group is comprised of dedicated control officers within each of the lines of business and Corporate functional areas, as well as a central oversight team. The group is charged with enhancing the Firm's controls by looking within and across the lines of business and Corporate functional areas to identify and control issues. The group enables the Firm to detect control problems more quickly, escalate issues promptly and get the right people involved to understand common themes and interdependencies among the various parts of the Firm. The group works closely with the Firm's other control-related functions, including Compliance, Legal, Internal Audit and Risk Management, to effectively remediate identified control issues across all affected areas of the Firm. As a result, the group facilitates the effective execution of the Firm's control framework and helps support operational risk management across the Firm.

The Firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the firmwide head of the Valuation Control function (under the direction of the Firm's CFO), and also includes sub-forums for the CIB, Mortgage Bank, and certain corporate functions, including Treasury and CIO.

In addition to the committees, forums and groups listed above, the Firm has other management committees and forums at the LOB and regional levels, where risk-related topics are discussed and escalated as necessary. The membership of these committees is composed of senior management of the Firm including representation from the business and various control functions. The committees meet regularly to discuss a broad range of topics.

The JPMorgan Chase Bank N.A. Board of Directors is responsible for the oversight of management on behalf of JPMorgan Chase Bank N.A. The JPMorgan Chase Bank N.A. Board accomplishes this function acting directly and through the principal standing committees of the Firm's Board of Directors. Risk oversight on behalf of JPMorgan Chase Bank N.A. is primarily the responsibility of the Firm's DRPC, Audit Committee and, with respect to compensation-related matters, the Compensation & Management Development Committee.

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk through its residential real estate, credit card, auto, business banking and student lending businesses. Originated mortgage loans are retained in the mortgage portfolio, or securitized or sold to U.S. government agencies and U.S. government-sponsored enterprises; other types of consumer loans are typically retained on balance sheet. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending and derivatives activities with and for clients and counterparties, as well as through its operating services activities, such as cash management and clearing activities. A portion of the loans originated or acquired by the Firm's wholesale businesses are generally retained on the balance sheet; the Firm's syndicated loan business distributes a significant percentage of originations into the market and is an important component of portfolio management.

Credit risk organization

Credit risk management is overseen by the Chief Risk Officer and implemented within the lines of business. The Firm's credit risk management governance consists of the following activities:

- Establishing a comprehensive credit risk policy framework
- Monitoring and managing credit risk across all portfolio segments, including transaction and line approval
- Assigning and managing credit authorities in connection with the approval of all credit exposure
- Managing criticized exposures and delinquent loans
- Determining the allowance for credit losses and ensuring appropriate credit risk-based capital management

Risk identification and measurement

Credit Risk Management works in partnership with the business segments in identifying and aggregating exposures across all lines of business. To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the probability of default of an obligor or counterparty, the loss severity given a default event and the exposure at default.

Based on these factors and related market-based inputs, the Firm estimates credit losses for its exposures. Probable credit losses inherent in the consumer and wholesale loan portfolios are reflected in the allowance for loan losses, and probable credit losses inherent in lending-related commitments are reflected in the allowance for lending-related commitments. These losses are estimated using statistical analyses and other factors as described in Note 15 on pages 284–287 of this Annual Report. In addition, potential and unexpected credit losses are reflected in the allocation of credit risk capital and represent the potential volatility of actual losses relative to the established allowances for loan losses and lending-related commitments. The analyses for these losses include stress testing (considering alternative economic scenarios) as described in the Stress Testing section below.

The methodologies used to estimate credit losses depend on the characteristics of the credit exposure, as described below.

Scored exposure

The scored portfolio is generally held in CCB and includes residential real estate loans, credit card loans, certain auto and business banking loans, and student loans. For the scored portfolio, credit loss estimates are based on statistical analysis of credit losses over discrete periods of time and are estimated using portfolio modeling, credit scoring, and decision-support tools, which consider loan level factors such as delinquency status, credit scores, collateral values, and other risk factors. Credit loss analyses also consider, as appropriate, uncertainties and other factors, including those related to current macroeconomic and political conditions, the quality of underwriting standards, and other internal and external factors. The factors and analysis are updated on a quarterly basis or more frequently as market conditions dictate.

Risk-rated exposure

Risk-rated portfolios are generally held in CIB, CB and AM, but also include certain business banking and auto dealer loans held in CCB that are risk-rated because they have characteristics similar to commercial loans. For the risk-rated portfolio, credit loss estimates are based on estimates of the probability of default and loss severity given a default. The estimation process begins with risk-ratings that are assigned to each loan facility to differentiate risk within the portfolio. These risk-ratings are reviewed on an ongoing basis by Credit Risk management and revised as needed to reflect the borrower's current financial position, risk profile and related collateral. The probability of default is the likelihood that a loan will default and not be fully repaid by the borrower. The probability of default is estimated for each borrower, and a loss given default is estimated considering the collateral and structural support for each credit facility. The calculations and assumptions are based on management information systems and methodologies that are under continual review.

Stress testing

Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied across the businesses. These scenarios are articulated in terms of macroeconomic factors, and the stress test results may indicate credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, as necessary. The Firm uses stress testing to inform our decisions on setting risk appetite both at a Firm and line of business level, as well as for assessing the impact of stress on industry concentrations.

Risk monitoring and management

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

For consumer credit risk, delinquency and other trends, including any concentrations at the portfolio level, are monitored, as certain of these trends can be modified through changes in underwriting policies and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Loss mitigation strategies are employed for all residential real estate portfolios. These strategies include interest rate reductions, term or payment extensions, principal and interest deferral and other actions intended to minimize economic loss and avoid foreclosure. Historical and forecasted trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio. Under the Firm's model risk policy, new significant risk management models, as well as major changes to such models, are required to be reviewed and approved by the Model Review Group prior to implementation into the operating environment. Internal Audit also periodically tests the internal controls around the modeling process including the integrity of the data utilized. For a discussion of the Model Review Group, see page 153 of this Annual Report. For further discussion of consumer loans, see Note 14 on pages 258–283 of this Annual Report.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry and individual counterparty level with established concentration limits that are reviewed and revised, as deemed appropriate by management, typically on an annual basis. Industry and counterparty limits, as measured in terms of exposure and economic credit risk capital, are subject to stress-based loss constraints.

Management of the Firm's wholesale credit risk exposure is accomplished through a number of means including:

- Loan underwriting and credit approval process
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Use of master netting agreements
- Collateral and other risk-reduction techniques

In addition to Risk Management, Internal Audit performs periodic exams, as well as continuous review, where appropriate, of the Firm's consumer and wholesale portfolios. For risk-rated portfolios, a credit review group within Internal Audit is responsible for:

- Independently assessing and validating the changing risk grades assigned to exposures; and
- Evaluating the effectiveness of business units' risk-ratings, including the accuracy and consistency of risk grades, the timeliness of risk grade changes and the justification of risk grades in credit memoranda

Risk reporting

To enable monitoring of credit risk and effective decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior Credit Risk Management. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, senior management and the Board of Directors as appropriate.

2013 Credit Risk Overview

The credit environment in 2013 continued to improve, with reduced concerns around the European financial crisis and improving market conditions in the U.S. Over the course of the year, the Firm continued to actively manage its underperforming and nonaccrual loans and reduce such exposures through repayments, loan sales and workouts. The Firm saw decreased downgrade, default and charge-off activity and improved consumer delinquency trends. The Firm increased its overall lending activity driven by the wholesale businesses. The combination of these factors resulted in an improvement in the credit quality of the portfolio compared with 2012 and contributed to the Firm's reduction in the allowance for credit losses. For further discussion of the consumer credit environment and consumer loans, see Consumer Credit Portfolio on pages 120–129 and Note 14 on pages 258–283 of this Annual Report. For further discussion of wholesale credit environment and wholesale loans, see Wholesale Credit Portfolio on pages 130–138 and Note 14 on pages 258–283 of this Annual Report.

The following tables present the Firm's credit-related information with respect to its credit portfolio. Total credit exposure was $1.9 trillion at December 31, 2013, an increase of $2.2 billion from December 31, 2012, reflecting an increase in the wholesale portfolio of $13.7 billion offset by a decrease in the consumer portfolio of $11.5 billion. For further information on the changes in the credit portfolio, see Consumer Credit Portfolio on pages 120–129, and Wholesale Credit Portfolio on pages 130–138, of this Annual Report.

In the following tables, reported loans include loans retained (i.e., held-for-investment); loans held-for-sale (which are carried at the lower of cost or fair value, with valuation changes recorded in noninterest revenue); and certain loans accounted for at fair value. In addition, the Firm records certain loans accounted for at fair value in trading assets. For further information regarding these loans see Note 3 on pages 195–215 of this Annual Report. For additional information on the Firm's loans and derivative receivables, including the Firm's accounting policies, see Note 14 and Note 6 on pages 258–283 and 220–233, respectively, of this Annual Report.

For further information regarding the credit risk inherent in the Firm's investment securities portfolio, see Note 12 on pages 249–254 of this Annual Report.

Total credit portfolio

December 31, 2013	Credit exposure		Nonperforming[c][d][e]	
(in millions)	**2013**	2012	**2013**	2012
Loans retained	**$ 724,177**	$ 726,835	**$ 8,317**	$ 10,609
Loans held-for-sale	**12,230**	4,406	**26**	18
Loans at fair value[a]	**2,011**	2,555	**197**	265
Total loans – reported	**738,418**	733,796	**8,540**	10,892
Derivative receivables	**65,759**	74,983	**415**	239
Receivables from customers and other	**26,883**	23,761	**–**	–
Total credit-related assets	**831,060**	832,540	**8,955**	11,131
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**710**	738
Other	**NA**	NA	**41**	37
Total assets acquired in loan satisfactions	**NA**	NA	**751**	775
Total assets	**831,060**	832,540	**9,706**	11,906
Lending-related commitments	**1,031,672**	1,027,988	**206**	355
Total credit portfolio	**$1,862,732**	$1,860,528	**$ 9,912**	$ 12,261
Credit Portfolio Management derivatives notional, net[b]	**$ (27,996)**	$ (27,447)	**$ (5)**	$ (25)
Liquid securities and other cash collateral held against derivatives	**(14,435)**	(15,201)	**NA**	NA

Year ended December 31, (in millions, except ratios)	**2013**	2012
Net charge-offs[f]	**$ 5,802**	$ 9,063
Average retained loans		
Loans – reported	**720,152**	717,035
Loans – reported, excluding residential real estate PCI loans	**663,629**	654,454
Net charge-off rates[f]		
Loans – reported	**0.81%**	1.26%
Loans – reported, excluding PCI	**0.87**	1.38

(a) During 2013, certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

(b) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. Excludes the synthetic credit portfolio. For additional information, see Credit derivatives on pages 137–138 and Note 6 on pages 220–233 of this Annual Report.

(c) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.

(d) At December 31, 2013 and 2012, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $8.4 billion and $10.6 billion, respectively, that are 90 or more days past due; (2) real estate owned insured by U.S. government agencies of $2.0 billion and $1.6 billion, respectively; and (3) student loans insured by U.S. government agencies under the FFELP of $428 million and $525 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council ("FFIEC").

(e) At December 31, 2013 and 2012, total nonaccrual loans represented 1.16% and 1.48%, respectively, of total loans.

(f) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $800 million of incremental charge-offs of Chapter 7 loans. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for further details.

CONSUMER CREDIT PORTFOLIO

JPMorgan Chase's consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, business banking loans, and student loans. The Firm's focus is on serving the prime segment of the consumer credit market. For further information on consumer loans, see Note 14 on pages 258–283 of this Annual Report.

A substantial portion of the consumer loans acquired in the Washington Mutual transaction were identified as purchased credit-impaired ("PCI") based on an analysis of high-risk characteristics, including product type, loan-to-value ("LTV") ratios, FICO risk scores and delinquency status. These PCI loans are accounted for on a pool basis, and the pools are considered to be performing. For further information on PCI loans see Note 14 on pages 258–283 of this Annual Report.

The credit performance of the consumer portfolio continues to improve as the economy slowly expands and home prices improve. Loss rates are improving, particularly in the credit card and residential real estate portfolios. Early-stage residential real estate delinquencies (30–89 days delinquent), excluding government guaranteed loans, declined from December 31, 2012. Late-stage delinquencies (150+ days delinquent) continued to decline but remain elevated. The elevated level of the late-stage delinquent loans is due, in part, to loss mitigation activities currently being undertaken and to elongated foreclosure processing timelines. Losses related to these loans continue to be recognized in accordance with the Firm's standard charge-off practices, but some delinquent loans that would otherwise have been foreclosed upon remain in the mortgage and home equity loan portfolios.

The following table presents consumer credit-related information with respect to the credit portfolio held by CCB as well as for prime mortgage loans held in the Asset Management and the Corporate/Private Equity segments for the dates indicated. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 14 on pages 258–283 of this Annual Report.

Consumer credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonaccrual loans[f][g]		Net charge-offs[h][i]		Average annual net charge-off rate[h][i][j]	
	2013	2012	**2013**	2012	**2013**	2012	**2013**	2012
Consumer, excluding credit card								
Loans, excluding PCI loans and loans held-for-sale								
Home equity – senior lien	**$ 17,113**	$ 19,385	**$ 932**	$ 931	**$ 132**	$ 279	**0.72%**	1.33%
Home equity – junior lien	**40,750**	48,000	**1,876**	2,277	**834**	2,106	**1.90**	4.07
Prime mortgage, including option ARMs	**87,162**	76,256	**2,666**	3,445	**59**	487	**0.07**	0.64
Subprime mortgage	**7,104**	8,255	**1,390**	1,807	**90**	486	**1.17**	5.43
Auto[a]	**52,757**	49,913	**161**	163	**158**	188	**0.31**	0.39
Business banking	**18,951**	18,883	**385**	481	**337**	411	**1.81**	2.27
Student and other	**11,557**	12,191	**86**	70	**297**	340	**2.51**	2.58
Total loans, excluding PCI loans and loans held-for-sale	**235,394**	232,883	**7,496**	9,174	**1,907**	4,297	**0.82**	1.81
Loans – PCI								
Home equity	**18,927**	20,971	**NA**	NA	**NA**	NA	**NA**	NA
Prime mortgage	**12,038**	13,674	**NA**	NA	**NA**	NA	**NA**	NA
Subprime mortgage	**4,175**	4,626	**NA**	NA	**NA**	NA	**NA**	NA
Option ARMs	**17,915**	20,466	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – PCI	**53,055**	59,737	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – retained	**288,449**	292,620	**7,496**	9,174	**1,907**	4,297	**0.66**	1.43
Loans held-for-sale[b]	**614**	–	**–**	–	**–**	–	**–**	–
Total consumer, excluding credit card loans	**289,063**	292,620	**7,496**	9,174	**1,907**	4,297	**0.66**	1.43
Lending-related commitments								
Home equity – senior lien[c]	**13,158**	15,180						
Home equity – junior lien[c]	**17,837**	21,796						
Prime mortgage	**4,817**	4,107						
Subprime mortgage	**–**	–						
Auto	**8,309**	7,185						
Business banking	**11,251**	11,092						
Student and other	**685**	796						
Total lending-related commitments	**56,057**	60,156						
Receivables from customers[d]	**139**	113						
Total consumer exposure, excluding credit card	**345,259**	352,889						
Credit Card								
Loans retained[e]	**127,465**	127,993	**–**	1	**3,879**	4,944	**3.14**	3.95
Loans held-for-sale	**326**	–	**–**	–	**–**	–	**–**	–
Total credit card loans	**127,791**	127,993	**–**	1	**3,879**	4,944	**3.14**	3.95
Lending-related commitments[c]	**529,383**	533,018						
Total credit card exposure	**657,174**	661,011						
Total consumer credit portfolio	**$ 1,002,433**	$ 1,013,900	**$ 7,496**	$ 9,175	**$ 5,786**	$ 9,241	**1.40%**	2.17%
Memo: Total consumer credit portfolio, excluding PCI	**$ 949,378**	$ 954,163	**$ 7,496**	$ 9,175	**$ 5,786**	$ 9,241	**1.62%**	2.55%

(a) At December 31, 2013 and 2012, excluded operating lease-related assets of $5.5 billion and $4.7 billion, respectively.
(b) Represents prime mortgage loans held-for-sale.
(c) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases, without notice as permitted by law.
(d) Receivables from customers primarily represent margin loans to retail brokerage customers, which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.
(e) Includes accrued interest and fees net of an allowance for the uncollectible portion of accrued interest and fee income.
(f) At December 31, 2013 and 2012, nonaccrual loans excluded: (1) mortgage loans insured by U.S. government agencies of $8.4 billion and $10.6 billion, respectively, that are 90 or more days past due; and (2) student loans insured by U.S. government agencies under the FFELP of $428 million and $525 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

(g) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.
(h) Charge-offs and net charge-off rates for the year ended December 31, 2012, included incremental Chapter 7 loan net charge-offs of $91 million for senior lien home equity, $539 million for junior lien home equity, $47 million for prime mortgage, including option ARMs, $70 million for subprime mortgage and $53 million for auto loans. Net charge-off rates for the for the year ended December 31, 2012, excluding these incremental net charge-offs would have been 0.90%, 3.03%, 0.58%, 4.65% and 0.28% for the senior lien home equity, junior lien home equity, prime mortgage, including option ARMs, subprime mortgages and auto loans, respectively. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for further details.
(i) Net charge-offs and net charge-off rates excluded $53 million of write-offs of prime mortgages in the PCI portfolio for the year ended December 31, 2013. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for further details.
(j) Average consumer loans held-for-sale were $209 million and $433 million, respectively, for the years ended December 31, 2013 and 2012. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances declined during the year ended December 31, 2013, due to paydowns and the charge-off or liquidation of delinquent loans, partially offset by new mortgage and auto originations. Credit performance has improved across most portfolios but residential real estate charge-offs and delinquent loans remain elevated compared with pre-recessionary levels.

The following discussion relates to the specific loan and lending-related categories. PCI loans are generally excluded from individual loan product discussions and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, see Note 14 on pages 258–283 of this Annual Report.

Home equity: The home equity portfolio at December 31, 2013, was $57.9 billion, compared with $67.4 billion at December 31, 2012. The decrease in this portfolio primarily reflected loan paydowns and charge-offs. Early-stage delinquencies showed improvement from December 31, 2012, for both senior and junior lien home equity loans. Late-stage delinquencies also improved from December 31, 2012, but continue to be elevated as improvement in the number of loans becoming severely delinquent was offset by higher average carrying value on these loans, reflecting improving collateral values. Senior lien nonaccrual loans were flat compared with the prior year while junior lien nonaccrual loans decreased in 2013. Net charge-offs for both senior and junior lien home equity loans declined when compared with the prior year as a result of improvement in delinquencies and home prices, as well as the impact of prior year incremental charge-offs reported in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy.

Approximately 20% of the Firm's home equity portfolio consists of home equity loans ("HELOANs") and the remainder consists of home equity lines of credit ("HELOCs"). HELOANs are generally fixed-rate, closed-end, amortizing loans, with terms ranging from 3–30 years. Approximately half of the HELOANs are senior liens and the remainder are junior liens. In general, HELOCs originated by the Firm are revolving loans for a 10-year period, after which time the HELOC recasts into a loan with a 20-year amortization period. At the time of origination, the borrower typically selects one of two minimum payment options that will generally remain in effect during the revolving period: a monthly payment of 1% of the outstanding balance, or interest-only payments based on a variable index (typically Prime). HELOCs originated by Washington Mutual were generally revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.

The unpaid principal balance of non-PCI HELOCs outstanding was $50 billion at December 31, 2013. Based on the contractual terms of the loans, $30 billion of the non-PCI HELOCs outstanding are scheduled to recast at which time the borrower must begin to make fully amortizing payments, of which, $7 billion, $8 billion and $7 billion are scheduled to recast in 2015, 2016 and 2017, respectively. However, of the $30 billion in non-PCI HELOCs scheduled to recast, approximately $14 billion are currently expected to recast, with the remaining $16 billion representing loans to borrowers who are expected to prepay (including borrowers who appear to have the ability to refinance based on the borrower's LTV ratio and FICO score) or are loans that are expected to charge-off. The Firm has considered this payment recast risk in its allowance for loan losses based upon the estimated amount of payment shock (i.e., the excess of the fully-amortizing payment over the interest-only payment in effect prior to recast) expected to occur at the payment recast date, along with the corresponding estimated probability of default and loss severity assumptions. Certain factors, such as future developments in both unemployment and home prices, could have a significant impact on the expected and/or actual performance of these loans.

The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile or when the collateral does not support the loan amount. The Firm will continue to evaluate both the near-term and longer-term repricing and recast risks inherent in its HELOC portfolio to ensure that changes in the Firm's estimate of incurred losses are appropriately considered in the allowance for loan losses and that the Firm's account management practices are appropriate given the portfolio's risk profile.

At December 31, 2013, the Firm estimated that its home equity portfolio contained approximately $2.3 billion of current junior lien loans where the borrower has a first mortgage loan that is either delinquent or has been modified ("high-risk seconds"), compared with $3.1 billion

at December 31, 2012. Such loans are considered to pose a higher risk of default than that of junior lien loans for which the senior lien is neither delinquent nor modified. The Firm estimates the balance of its total exposure to high-risk seconds on a quarterly basis using internal data and loan level credit bureau data (which typically provides the delinquency status of the senior lien). The estimated balance of these high-risk seconds may vary from quarter to quarter for reasons such as the movement of related senior liens into and out of the 30+ day delinquency bucket.

Current high risk junior liens

December 31, (in billions)	2013	2012
Junior liens subordinate to:		
Modified current senior lien	$ 0.9	$ 1.1
Senior lien 30 – 89 days delinquent	0.6	0.9
Senior lien 90 days or more delinquent[a]	0.8	1.1
Total current high risk junior liens	**$ 2.3**	$ 3.1

(a) Junior liens subordinate to senior liens that are 90 days or more past due are classified as nonaccrual loans. At both December 31, 2013 and 2012, excluded approximately $100 million of junior liens that are performing but not current, which were also placed on nonaccrual in accordance with the regulatory guidance.

Of the estimated $2.3 billion of high-risk junior liens at December 31, 2013, the Firm owns approximately 5% and services approximately 25% of the related senior lien loans to the same borrowers. The performance of the Firm's junior lien loans is generally consistent regardless of whether the Firm owns, services or does not own or service the senior lien. The increased probability of default associated with these higher-risk junior lien loans was considered in estimating the allowance for loan losses.

Mortgage: Mortgage loans at December 31, 2013, including prime, subprime and loans held-for-sale, were $94.9 billion, compared with $84.5 billion at December 31, 2012. The mortgage portfolio increased in 2013 as retained prime mortgage originations, which represent loans with high credit quality, were greater than paydowns and the charge-off or liquidation of delinquent loans. Net charge-offs decreased from the prior year reflecting continued home price improvement and favorable delinquency trends. Delinquency levels remain elevated compared with pre-recessionary levels.

Prime mortgages, including option adjustable-rate mortgages ("ARMs") and loans held-for-sale, were $87.8 billion at December 31, 2013, compared with $76.3 billion at December 31, 2012. Prime mortgage loans increased as retained originations exceeded paydowns, the run-off of option ARM loans and the charge-off or liquidation of delinquent loans. Excluding loans insured by U.S. government agencies, both early-stage and late-stage delinquencies showed improvement from December 31, 2012. Nonaccrual loans decreased from the prior year but remain elevated as a result of elongated foreclosure processing timelines. Net charge-offs continued to improve, as a result of improvement in delinquencies and home prices.

At December 31, 2013 and 2012, the Firm's prime mortgage portfolio included $14.3 billion and $15.6 billion, respectively, of mortgage loans insured and/or guaranteed by U.S. government agencies, of which $9.6 billion and $11.8 billion, respectively, were 30 days or more past due, including $8.4 billion and $10.6 billion, respectively, which were 90 days or more past due. Following the Firm's settlement regarding loans insured under federal mortgage insurance programs overseen by FHA, HUD, and VA, the Firm will continue to monitor exposure on future claim payments for government insured loans; however, any financial impact related to exposure on future claims is not expected to be significant.

At December 31, 2013 and 2012, the Firm's prime mortgage portfolio included $15.6 billion and $16.0 billion, respectively, of interest-only loans, which represented 18% and 21% of the prime mortgage portfolio, respectively. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment to maturity and are typically originated as higher-balance loans to higher-income borrowers. The decrease in this portfolio was primarily due to voluntary prepayments, as borrowers are generally refinancing into lower rate products. To date, losses on this portfolio generally have been consistent with the broader prime mortgage portfolio and the Firm's expectations. The Firm continues to monitor the risks associated with these loans.

Non-PCI option ARM loans acquired by the Firm as part of the Washington Mutual transaction, which are included in the prime mortgage portfolio, were $5.6 billion and $6.5 billion and represented 6% and 9% of the prime mortgage portfolio at December 31, 2013 and 2012, respectively. The decrease in option ARM loans resulted from portfolio runoff. As of December 31, 2013, approximately 4% of option ARM borrowers were delinquent. Substantially all of the remaining borrowers were making amortizing payments, although such payments are not necessarily fully amortizing and may be subject to risk of payment shock due to future payment recast. The Firm estimates the following balances of option ARM loans will undergo a payment recast that results in a payment increase: $807 million in 2014, $675 million in 2015 and $164 million in 2016. As the Firm's option ARM loans, other than those held in the PCI portfolio, are primarily loans with lower LTV ratios and higher borrower FICO scores, it is possible that many of these borrowers will be able to refinance into a lower rate product, which would reduce this payment recast risk. To date, losses realized on option ARM loans that have undergone payment recast have been immaterial and consistent with the Firm's expectations.

Subprime mortgages at December 31, 2013, were $7.1 billion, compared with $8.3 billion at December 31, 2012. The decrease was due to portfolio runoff. Early-stage and late-stage delinquencies as well as nonaccrual loans have improved from December 31, 2012, but remain at elevated

levels. Net charge-offs continued to improve as a result of improvement in delinquencies and home prices.

Auto: Auto loans at December 31, 2013, were $52.8 billion, compared with $49.9 billion at December 31, 2012. Loan balances increased due to new originations, partially offset by paydowns and payoffs. Delinquencies and nonaccrual loans improved compared with December 31, 2012. Net charge-offs decreased from the prior year due to prior year incremental charge-offs reported in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy. Loss levels are considered low as a result of favorable trends in both loss frequency and loss severity, mainly due to enhanced underwriting standards and a strong used car market. The auto loan portfolio reflected a high concentration of prime-quality credits.

Business banking: Business banking loans at December 31, 2013, were $19.0 billion, compared with $18.9 billion at December 31, 2012. Business Banking loans primarily include loans that are collateralized, often with personal loan guarantees, and may also include Small Business Administration guarantees. Nonaccrual loans showed improvement from December 31, 2012. Net charge-offs declined for the year ended December 31, 2013, compared with the year ended December 31, 2012.

Student and other: Student and other loans at December 31, 2013, were $11.6 billion, compared with $12.2 billion at December 31, 2012. The decrease was primarily due to runoff of the student loan portfolio. Other loans primarily include other secured and unsecured consumer loans. Nonaccrual loans increased compared with December 31, 2012, while net charge-offs decreased for the year ended December 31, 2013, compared with the prior year.

Purchased credit-impaired loans: PCI loans at December 31, 2013, were $53.1 billion, compared with $59.7 billion at December 31, 2012. This portfolio represents loans acquired in the Washington Mutual transaction, which were recorded at fair value at the time of acquisition. PCI HELOCs originated by Washington Mutual were generally revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term. Substantially all undrawn HELOCs within the revolving period have been blocked.

As of December 31, 2013, approximately 19% of the option ARM PCI loans were delinquent and approximately 54% have been modified into fixed-rate, fully amortizing loans. Substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing. This latter group of loans are subject to the risk of payment shock due to future payment recast.

Default rates generally increase on option ARM loans when payment recast results in a payment increase. The expected increase in default rates is considered in the Firm's quarterly impairment assessment. The cumulative amount of unpaid interest added to the unpaid principal balance of the option ARM PCI pool was $724 million and $879 million at December 31, 2013, and December 31, 2012, respectively. The Firm estimates the following balances of option ARM PCI loans will undergo a payment recast that results in a payment increase: $487 million in 2014, $810 million in 2015 and $710 million in 2016.

The following table provides a summary of lifetime principal loss estimates included in both the nonaccretable difference and the allowance for loan losses.

Summary of lifetime principal loss estimates

December 31, (in billions)	Lifetime loss estimates[a]		LTD liquidation losses[b]	
	2013	2012	**2013**	2012
Home equity	**$ 14.7**	$ 14.9	**$ 12.1**	$ 11.5
Prime mortgage	**3.8**	4.2	**3.3**	2.9
Subprime mortgage	**3.3**	3.6	**2.6**	2.2
Option ARMs	**10.2**	11.3	**8.8**	8.0
Total	**$ 32.0**	$ 34.0	**$ 26.8**	$ 24.6

(a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses only plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses only was $3.8 billion and $5.8 billion at December 31, 2013 and 2012, respectively.

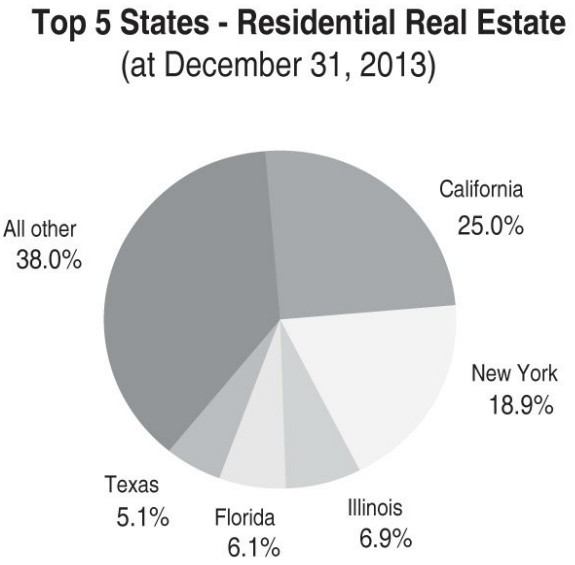
(b) Life-to-date ("LTD") liquidation losses represent both realization of loss upon loan resolution and any principal forgiven upon modification. LTD liquidation losses included $53 million of write-offs of prime mortgages for the year ended December 31, 2013.

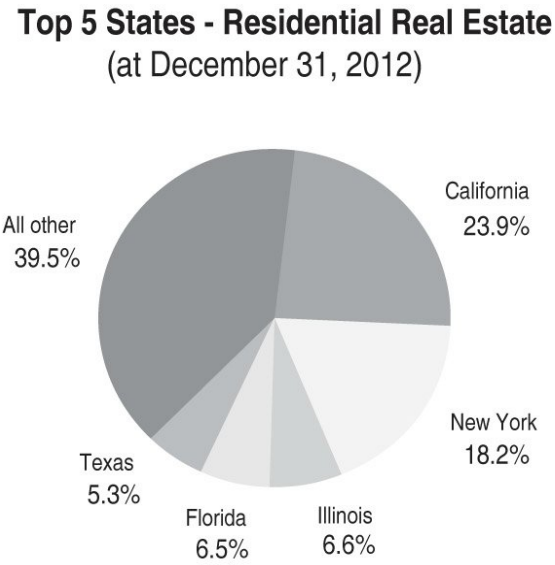
Lifetime principal loss estimates declined from December 31, 2012, to December 31, 2013, reflecting improvement in home prices and delinquencies. The decline in lifetime principal loss estimates during the year ended December 31, 2013, resulted in a $1.5 billion reduction of the PCI allowance for loan losses ($1.0 billion related to option ARM loans, $200 million to subprime mortgage, $150 million to home equity loans and $150 million to prime mortgage). In addition, for the year ended December 31, 2013, PCI write-offs of $53 million were recorded against the prime mortgage allowance for loan losses. For further information about the Firm's PCI loans, including write-offs, see Note 14 on pages 258–283 of this Annual Report.

As a result of reserve actions and PCI prime mortgage write-offs, the allowance for loan loss for the PCI portfolio declined from $5.7 billion at December 31, 2012, to $4.2 billion at December 31, 2013. The allowance for loan losses decreased from $1.5 billion to $494 million for the option ARM portfolio, from $1.9 billion to $1.7 billion for prime mortgage, from $380 million to $180 million for subprime mortgage and from $1.9 billion to $1.8 billion for the home equity portfolio from December 31, 2012 to December 31, 2013.

Geographic composition of residential real estate loans

At December 31, 2013, California had the greatest concentration of residential real estate loans with 25% of the total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans, compared with 24% at December 31, 2012. Of these loans, $85.9 billion, or 62%, were concentrated in California, New York, Illinois, Florida and Texas at December 31, 2013, compared with $82.4 billion, or 60%, at December 31, 2012. The unpaid principal balance of PCI loans concentrated in these five states represented 74% of total PCI loans at December 31, 2013, compared with 73% at December 31, 2012.





Current estimated LTVs of residential real estate loans

The current estimated average LTV ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 75% at December 31, 2013, compared with 81% at December 31, 2012. Of these loans, 9% had a current estimated LTV ratio greater than 100%, and 2% had a current estimated LTV ratio greater than 125% at December 31, 2013, compared with 20% and 8%, respectively, at December 31, 2012.

Although home prices continue to recover, the decline in home prices since 2007 has had a significant impact on the collateral values underlying the Firm's residential real estate loan portfolio. In general, the delinquency rate for loans with high LTV ratios is greater than the delinquency rate for loans in which the borrower has equity in the collateral. While a large portion of the loans with current estimated LTV ratios greater than 100% continue to pay and are current, the continued willingness and ability of these borrowers to pay remains a risk.

The following table for PCI loans presents the current estimated LTV ratios, as well as the ratios of the carrying value of the underlying loans to the current estimated collateral value. Because such loans were initially measured at fair value, the ratios of the carrying value to the current estimated collateral value will be lower than the current estimated LTV ratios, which are based on the unpaid principal balances. The estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting ratios are necessarily imprecise and should therefore be viewed as estimates.

LTV ratios and ratios of carrying values to current estimated collateral values – PCI loans

	2013				2012			
December 31, (in millions, except ratios)	Unpaid principal balance	Current estimated LTV ratio[a]	Net carrying value[c]	Ratio of net carrying value to current estimated collateral value[c]	Unpaid principal balance	Current estimated LTV ratio[a]	Net carrying value[c]	Ratio of net carrying value to current estimated collateral value[c]
Home equity	**$ 19,830**	**90%** [b]	**$ 17,169**	**78%**	$ 22,343	111% [b]	$ 19,063	95%
Prime mortgage	**11,876**	**83**	**10,312**	**72**	13,884	104	11,745	88
Subprime mortgage	**5,471**	**91**	**3,995**	**66**	6,326	107	4,246	72
Option ARMs	**19,223**	**82**	**17,421**	**74**	22,591	101	18,972	85

(a) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated at least quarterly based on home valuation models that utilize nationally recognized home price index valuation estimates; such models incorporate actual data to the extent available and forecasted data where actual data is not available.

(b) Represents current estimated combined LTV for junior home equity liens, which considers all available lien positions, as well as unused lines, related to the property. All other products are presented without consideration of subordinate liens on the property.

(c) Net carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition and is also net of the allowance for loan losses at December 31, 2013 and 2012 of $1.8 billion and $1.9 billion for home equity, $1.7 billion and $1.9 billion for prime mortgage, $494 million and $1.5 billion for option ARMs, and $180 million and $380 million for subprime mortgage, respectively.

The current estimated average LTV ratios were 85% and 103% for California and Florida PCI loans, respectively, at December 31, 2013, compared with 110% and 125%, respectively, at December 31, 2012. Average LTV ratios have declined consistent with recent improvement in home prices. Although home prices have improved, home prices in California and Florida are still lower than at the peak of the housing market; this continues to negatively contribute to current estimated average LTV ratios and the ratio of net carrying value to current estimated collateral value for loans in the PCI portfolio. Of the total PCI portfolio, 26% had a current estimated LTV ratio greater than 100%, and 7% had a current LTV ratio of greater than 125% at December 31, 2013, compared with 55% and 24%, respectively, at December 31, 2012.

While the current estimated collateral value is greater than the net carrying value of PCI loans, the ultimate performance of this portfolio is highly dependent on borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity, as well as on the cost of alternative housing. For further information on the geographic composition and current estimated LTVs of residential real estate – non-PCI and PCI loans, see Note 14 on pages 258–283 of this Annual Report.

Loan modification activities – residential real estate loans

For both the Firm's on-balance sheet loans and loans serviced for others, more than 1.5 million mortgage modifications have been offered to borrowers and approximately 734,000 have been approved since the beginning of 2009. Of these, more than 725,000 have achieved permanent modification as of December 31, 2013. Of the remaining modifications offered, 9% are in a trial period or still being reviewed for a modification, while 91% have dropped out of the modification program or otherwise were deemed not eligible for final modification.

The Firm is participating in the U.S. Treasury's Making Home Affordable ("MHA") programs and is continuing to offer its other loss-mitigation programs to financially distressed borrowers who do not qualify for the U.S. Treasury's programs. The MHA programs include the Home Affordable Modification Program ("HAMP") and the Second Lien Modification Program ("2MP"). The Firm's other loss-mitigation programs for troubled borrowers who do not qualify for HAMP include the traditional modification programs offered by the GSEs and other governmental agencies, as well as the Firm's proprietary modification programs, which include concessions similar to those offered under HAMP and 2MP but with expanded eligibility criteria. In addition, the Firm has offered specific targeted modification programs to higher risk borrowers, many of whom were current on their mortgages prior to modification. For further information about how loans are modified, see Note 14, Loan modifications, on pages 268–273 of this Annual Report.

Loan modifications under HAMP and under one of the Firm's proprietary modification programs, which are largely modeled after HAMP, require at least three payments to be made under the new terms during a trial modification period, and must be successfully re-underwritten with income verification before the loan can be permanently modified. In the case of specific targeted modification programs, re-underwriting the loan or a trial modification period is generally not required, unless the targeted loan is

delinquent at the time of modification. When the Firm modifies home equity lines of credit, future lending commitments related to the modified loans are canceled as part of the terms of the modification.

The primary indicator used by management to monitor the success of the modification programs is the rate at which the modified loans redefault. Modification redefault rates are affected by a number of factors, including the type of loan modified, the borrower's overall ability and willingness to repay the modified loan and macroeconomic factors. Reduction in payment size for a borrower has shown to be the most significant driver in improving redefault rates.

The performance of modified loans generally differs by product type and also on whether the underlying loan is in the PCI portfolio, due both to differences in credit quality and in the types of modifications provided. Performance metrics for modifications to the residential real estate portfolio, excluding PCI loans, that have been seasoned more than six months show weighted average redefault rates of 20% for senior lien home equity, 20% for junior lien home equity, 15% for prime mortgages including option ARMs, and 26% for subprime mortgages. The cumulative performance metrics for modifications to the PCI residential real estate portfolio seasoned more than six months show weighted average redefault rates of 20% for home equity, 16% for prime mortgages, 14% for option ARMs and 29% for subprime mortgages. The favorable performance of the PCI option ARM modifications is the result of a targeted proactive program which fixes the borrower's payment at the current level. The cumulative redefault rates reflect the performance of modifications completed under both HAMP and the Firm's proprietary modification programs from October 1, 2009, through December 31, 2013.

Certain loans that were modified under HAMP and the Firm's proprietary modification programs (primarily the Firm's modification program that was modeled after HAMP) have interest rate reset provisions ("step-rate modifications"). Beginning in 2014, interest rates on these loans will generally increase by 1% per year until the rate reaches a specified cap, typically at a prevailing market interest rate for a fixed-rate loan as of the modification date. The carrying value of non-PCI loans modified in step-rate modifications was $5 billion at December 31, 2013, with $1 billion and $2 billion scheduled to experience the initial interest rate increase in 2015 and 2016, respectively. The unpaid principal balance of PCI loans modified in step-rate modifications was $11 billion at December 31, 2013, with $2 billion and $3 billion scheduled to experience the initial interest rate increase in 2015 and 2016, respectively. The impact of these potential interest rate increases is appropriately considered in the Firm's allowance for loan losses. The Firm will continue to monitor this risk exposure to ensure that it is appropriately considered in the Firm's allowance for loan losses.

The following table presents information as of December 31, 2013 and 2012, relating to modified on-balance sheet residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. Modifications of PCI loans continue to be accounted for and reported as PCI loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of estimated future cash flows. Modifications of consumer loans other than PCI loans are generally accounted for and reported as troubled debt restructurings ("TDRs"). For further information on TDRs for the years ended December 31, 2013 and 2012, see Note 14 on pages 258–283 of this Annual Report.

Modified residential real estate loans

	2013		2012	
December 31, (in millions)	On-balance sheet loans	Nonaccrual on-balance sheet loans[d]	On-balance sheet loans	Nonaccrual on-balance sheet loans[d]
Modified residential real estate loans, excluding PCI loans[a][b]				
Home equity – senior lien	**$ 1,146**	**$ 641**	$ 1,092	$ 607
Home equity – junior lien	**1,319**	**666**	1,223	599
Prime mortgage, including option ARMs	**7,004**	**1,737**	7,118	1,888
Subprime mortgage	**3,698**	**1,127**	3,812	1,308
Total modified residential real estate loans, excluding PCI loans	**$ 13,167**	**$ 4,171**	$ 13,245	$ 4,402
Modified PCI loans[c]				
Home equity	**$ 2,619**	**NA**	$ 2,302	NA
Prime mortgage	**6,977**	**NA**	7,228	NA
Subprime mortgage	**4,168**	**NA**	4,430	NA
Option ARMs	**13,131**	**NA**	14,031	NA
Total modified PCI loans	**$ 26,895**	**NA**	$ 27,991	NA

(a) Amounts represent the carrying value of modified residential real estate loans.

(b) At December 31, 2013 and 2012, $7.6 billion and $7.5 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. For additional information about sales of loans in securitization transactions with Ginnie Mae, see Note 16 on pages 288–299 of this Annual Report.

(c) Amounts represent the unpaid principal balance of modified PCI loans.

(d) As of December 31, 2013 and 2012, nonaccrual loans included $3.0 billion and $2.9 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status, see Note 14 on pages 258–283 of this Annual Report.

Nonperforming assets

The following table presents information as of December 31, 2013 and 2012, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[a]

December 31, (in millions)	2013	2012
Nonaccrual loans[b]		
Residential real estate	**$ 6,864**	$ 8,460
Other consumer	**632**	714
Total nonaccrual loans	**7,496**	9,174
Assets acquired in loan satisfactions		
Real estate owned	**614**	647
Other	**41**	37
Total assets acquired in loan satisfactions	**655**	684
Total nonperforming assets	**$ 8,151**	$ 9,858

(a) At December 31, 2013 and 2012, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $8.4 billion and $10.6 billion, respectively, that are 90 or more days past due; (2) real estate owned insured by U.S. government agencies of $2.0 billion and $1.6 billion, respectively; and (3) student loans insured by U.S. government agencies under the FFELP of $428 million and $525 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

(b) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

Nonaccrual loans: The following table presents changes in the consumer, excluding credit card, nonaccrual loans for the years ended December 31, 2013 and 2012.

Nonaccrual loans

Year ended December 31, (in millions)	2013	2012	
Beginning balance	**$ 9,174**	$ 7,411	
Additions	**6,618**	12,605	[b]
Reductions:			
Principal payments and other[a]	**1,559**	1,445	
Charge-offs	**1,869**	2,771	
Returned to performing status	**3,793**	4,738	
Foreclosures and other liquidations	**1,075**	1,888	
Total reductions	**8,296**	10,842	
Net additions/(reductions)	**(1,678)**	1,763	
Ending balance	**$ 7,496**	$ 9,174	

(a) Other reductions includes loan sales.

(b) Included $1.7 billion of Chapter 7 loans at September 30, 2012, and $1.6 billion as a result of reporting performing junior lien home equity loans that are subordinate to senior liens that are 90 days or more past due as nonaccrual loans based on regulatory guidance at March 31, 2012.

Nonaccrual loans in the residential real estate portfolio totaled $6.9 billion at December 31, 2013, of which 34% were greater than 150 days past due, compared with $8.5 billion at December 31, 2012, of which 42% were greater than 150 days past due. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 51% and 52% to estimated net realizable value of the collateral at December 31, 2013 and 2012, respectively. The elongated foreclosure processing timelines are expected to continue to result in elevated levels of nonaccrual loans in the residential real estate portfolios.

At December 31, 2012, the Firm reported, in accordance with regulatory guidance, $1.7 billion of residential real estate and auto loans that were discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual TDRs, regardless of their delinquency status. Pursuant to that guidance, these Chapter 7 loans were charged off to the net realizable value of the collateral, resulting in $800 million of charge-offs for the year ended December 31, 2012. The Firm expects to recover a significant amount of these losses over time as principal payments are received. The Firm also began reporting performing junior liens that are subordinate to senior liens that are 90 days or more past due as nonaccrual loans in the first quarter of 2012, based upon regulatory guidance. Nonaccrual loans included $3.0 billion of loans at December 31, 2012 based upon the regulatory guidance noted above. The prior year was not restated for the policy changes.

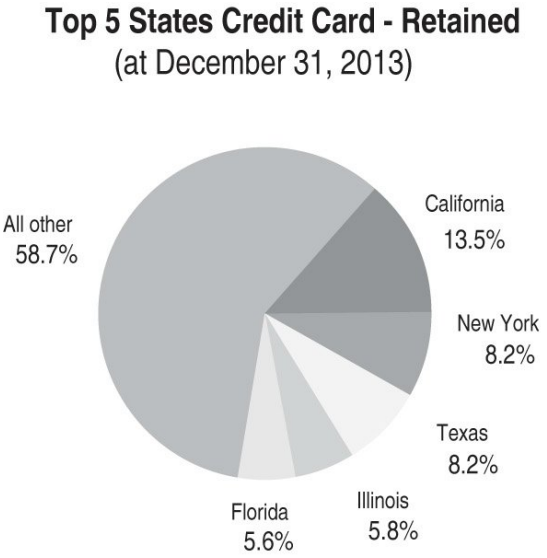
Real estate owned ("REO"): REO assets are managed for prompt sale and disposition at the best possible economic value. REO assets are those individual properties where the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession). The Firm generally recognizes REO assets at the completion of the foreclosure process or upon execution of a deed in lieu of foreclosure with the borrower. REO assets, excluding those insured by U.S. government agencies, decreased by $33 million from $647 million at December 31, 2012, to $614 million at December 31, 2013.

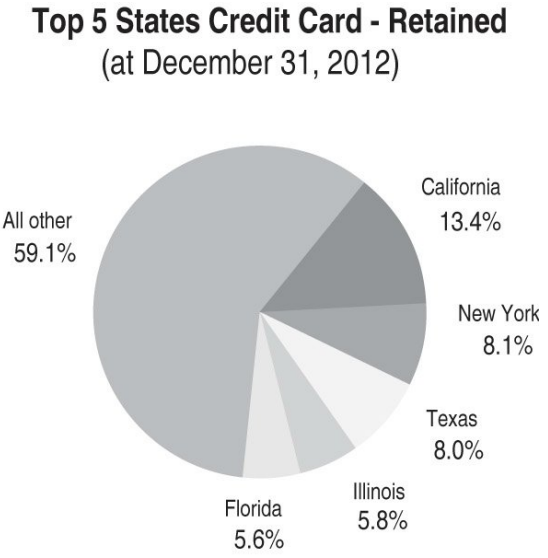
At December 31, 2013 and 2012, the Firm had non-PCI residential real estate loans, excluding those insured by the U.S. government agencies, with a carrying value of $2.1 billion and $3.4 billion, respectively; not included in REO, that were in the process of active or suspended foreclosure. The Firm also had PCI residential real estate loans that were in the process of active or suspended foreclosure at December 31, 2013 and 2012, with an unpaid principal balance of $4.8 billion and $8.2 billion, respectively.

Credit Card

Total credit card loans were $127.8 billion at December 31, 2013, a decrease of $202 million from December 31, 2012. The 30+ day delinquency rate decreased to 1.67% at December 31, 2013, from 2.10% at December 31, 2012. For the years ended December 31, 2013 and 2012, the net charge-off rates were 3.14% and 3.95% respectively. Charge-offs have improved compared with a year ago as a result of continued improvement in delinquent loans. The credit card portfolio continues to reflect a well-seasoned, largely rewards-based portfolio that has good U.S. geographic diversification. The greatest geographic concentration of credit card retained loans is in California, which represented 13% of total retained loans at both December 31, 2013 and 2012. Loan outstanding concentration for the top five states of California, New York, Texas, Illinois and Florida consisted of $52.7 billion in receivables, or 41% of the retained loan portfolio, at December 31, 2013, compared with $52.3 billion, or 41%, at December 31, 2012.

Geographic composition of Credit Card loans





Modifications of credit card loans

At December 31, 2013 and 2012, the Firm had $3.1 billion and $4.8 billion, respectively, of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms. The decrease in modified credit card loans outstanding from December 31, 2012, was attributable to a reduction in new modifications as well as ongoing payments and charge-offs on previously modified credit card loans.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged-off. However, the Firm establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued interest and fee income.

For additional information about loan modification programs to borrowers, see Note 14 on pages 258–283 of this Annual Report.

WHOLESALE CREDIT PORTFOLIO

The wholesale credit environment remained favorable throughout 2013 driving an increase in commercial client activity. Discipline in underwriting across all areas of lending continues to remain a key point of focus, consistent with evolving market conditions and the Firm's risk management activities. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of credit quality and of industry, product and client concentrations. During the year, wholesale criticized assets and nonperforming assets decreased from higher levels experienced in 2012, including a reduction in nonaccrual loans by 39%.

As of December 31, 2013, wholesale exposure (primarily CIB, CB and AM) increased by $13.7 billion from December 31, 2012, primarily driven by increases of $11.4 billion in lending-related commitments and $8.4 billion in loans reflecting increased client activity primarily in CB and AM. These increases were partially offset by a $9.2 billion decrease in derivative receivables. Derivative receivables decreased predominantly due to reductions in interest rate derivatives driven by an increase in interest rates and reductions in commodity derivatives due to market movements. The decreases were partially offset by an increase in equity derivatives driven by a rise in equity markets.

Wholesale credit portfolio

December 31,	Credit exposure		Nonperforming[d]	
(in millions)	**2013**	2012	**2013**	2012
Loans retained	**$308,263**	$306,222	**$ 821**	$ 1,434
Loans held-for-sale	**11,290**	4,406	**26**	18
Loans at fair value[a]	**2,011**	2,555	**197**	265
Loans – reported	**321,564**	313,183	**1,044**	1,717
Derivative receivables	**65,759**	74,983	**415**	239
Receivables from customers and other[b]	**26,744**	23,648	**–**	–
Total wholesale credit-related assets	**414,067**	411,814	**1,459**	1,956
Lending-related commitments	**446,232**	434,814	**206**	355
Total wholesale credit exposure	**$860,299**	$846,628	**$ 1,665**	$ 2,311
Credit Portfolio Management derivatives notional, net[c]	**$ (27,996)**	$ (27,447)	**$ (5)**	$ (25)
Liquid securities and other cash collateral held against derivatives	**(14,435)**	(15,201)	**NA**	NA

(a) During 2013, certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

(b) Receivables from customers and other primarily includes margin loans to prime and retail brokerage customers; these are classified in accrued interest and accounts receivable on the Consolidated Balance Sheets.

(c) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. Excludes the synthetic credit portfolio. For additional information, see Credit derivatives on pages 137–138, and Note 6 on pages 220–233 of this Annual Report.

(d) Excludes assets acquired in loan satisfactions.

The following table presents summaries of the maturity and ratings profiles of the wholesale credit portfolio as of December 31, 2013 and 2012. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings as defined by S&P and Moody's.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[e]				Ratings profile			
December 31, 2013 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	Investment-grade AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	**Total**	Total % of IG
Loans retained	**$ 108,392**	**$ 124,111**	**$ 75,760**	**$ 308,263**	**$ 226,070**	**$ 82,193**	**$ 308,263**	**73%**
Derivative receivables				**65,759**			**65,759**	
Less: Liquid securities and other cash collateral held against derivatives				**(14,435)**			**(14,435)**	
Total derivative receivables, net of all collateral	**13,550**	**15,935**	**21,839**	**51,324**	**44,677**	**6,647**	**51,324**	**87**
Lending-related commitments	**179,301**	**255,426**	**11,505**	**446,232**	**353,974**	**92,258**	**446,232**	**79**
Subtotal	**301,243**	**395,472**	**109,104**	**805,819**	**624,721**	**181,098**	**805,819**	**78**
Loans held-for-sale and loans at fair value[a]				**13,301**			**13,301**	
Receivables from customers and other				**26,744**			**26,744**	
Total exposure – net of liquid securities and other cash collateral held against derivatives				**$ 845,864**			**$ 845,864**	
Credit Portfolio Management derivatives net notional by reference entity ratings profile[b][c][d]	**$ (1,149)**	**$ (19,516)**	**$ (7,331)**	**$ (27,996)**	**$ (24,649)**	**$ (3,347)**	**$ (27,996)**	**88%**

	Maturity profile[e]				Ratings profile			
December 31, 2012 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	Investment-grade AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	**Total**	Total % of IG
Loans retained	$ 115,227	$ 117,673	$ 73,322	$ 306,222	$ 214,446	$ 91,776	$ 306,222	70%
Derivative receivables				74,983			74,983	
Less: Liquid securities and other cash collateral held against derivatives				(15,201)			(15,201)	
Total derivative receivables, net of all collateral	13,344	17,310	29,128	59,782	50,069	9,713	59,782	84
Lending-related commitments	164,327	261,261	9,226	434,814	347,316	87,498	434,814	80
Subtotal	292,898	396,244	111,676	800,818	611,831	188,987	800,818	76
Loans held-for-sale and loans at fair value[a]				6,961			6,961	
Receivables from customers and other				23,648			23,648	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 831,427			$ 831,427	
Credit Portfolio Management derivatives net notional by reference entity ratings profile[b][c][d]	$ (1,579)	$ (16,475)	$ (9,393)	$ (27,447)	$ (24,622)	$ (2,825)	$ (27,447)	90%

(a) Represents loans held-for-sale primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
(b) These derivatives do not quality for hedge accounting under U.S. GAAP. Excludes the synthetic credit portfolio.
(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased.
(d) Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection, including Credit Portfolio Management derivatives, are executed with investment grade counterparties.
(e) The maturity profile of retained loans, lending-related commitments and derivative receivables is based on remaining contractual maturity. Derivatives contracts that are in a receivable position at December 31, 2013, may become a payable prior to maturity based on their cash flow profile or changes in market conditions. Prior to this Annual Report, the maturity profile of derivative receivables was based on the maturity profile of average exposure (see pages 135–136 of this Annual Report for more detail); prior period amounts have been revised to conform to the current presentation.

Wholesale credit exposure – selected industry exposures

The Firm focuses on the management and diversification of its industry exposures, paying particular attention to industries with actual or potential credit concerns. Exposures deemed criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, decreased by 22% to $12.2 billion at December 31, 2013, from $15.6 billion at December 31, 2012, primarily due to repayments and sales.

Below are summaries of the top 25 industry exposures as of December 31, 2013 and 2012. For additional information on industry concentrations, see Note 5 on page 219 of this Annual Report.

As of or for the year ended **December 31, 2013** (in millions)	Credit exposure[d]	Investment-grade	Noninvestment-grade[e]			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[f]	Liquid securities and other cash collateral held against derivative receivables
Top 25 industries[a]									
Real Estate	$ 87,102	$ 62,964	$ 21,505	$ 2,286	$ 347	$ 178	$ 6	$ (66)	$ (125)
Banks & Finance Cos	66,881	56,675	9,707	431	68	14	(22)	(2,692)	(6,227)
Oil & Gas	46,934	34,708	11,779	436	11	34	13	(227)	(67)
Healthcare	45,910	37,635	7,952	317	6	49	3	(198)	(195)
State & Municipal Govt[b]	35,666	34,563	826	157	120	40	1	(161)	(144)
Consumer Products	34,145	21,100	12,505	537	3	4	11	(149)	(1)
Asset Managers	33,506	26,991	6,477	38	–	217	(7)	(5)	(3,191)
Utilities	28,983	25,521	3,045	411	6	2	28	(445)	(306)
Retail & Consumer Services	25,068	16,101	8,453	492	22	6	–	(91)	–
Technology	21,403	13,787	6,771	825	20	–	–	(512)	–
Central Govt	21,049	20,633	345	71	–	–	–	(10,088)	(1,541)
Machinery & Equipment Mfg	19,078	11,154	7,549	368	7	20	(18)	(257)	(8)
Metals/Mining	17,434	9,266	7,508	594	66	1	16	(621)	(36)
Business Services	14,601	7,838	6,447	286	30	9	10	(10)	(2)
Transportation	13,975	9,683	4,165	100	27	10	8	(68)	–
Telecom Services	13,906	9,130	4,284	482	10	–	7	(272)	(8)
Media	13,858	7,783	5,658	315	102	6	36	(26)	(5)
Insurance	13,761	10,681	2,757	84	239	–	(2)	(98)	(1,935)
Building Materials/Construction	12,901	5,701	6,354	839	7	15	3	(132)	–
Automotive	12,532	7,881	4,490	159	2	3	(3)	(472)	–
Chemicals/Plastics	10,637	7,189	3,211	222	15	–	–	(13)	(83)
Securities Firms & Exchanges	10,035	7,781	2,233	14	7	1	(68)	(4,169)	(175)
Agriculture/Paper Mfg	7,387	4,238	3,064	82	3	31	–	(4)	(4)
Aerospace/Defense	6,873	5,447	1,426	–	–	–	–	(142)	(1)
Leisure	5,331	2,950	1,797	495	89	5	–	(10)	(14)
All other[c]	201,298	180,460	19,911	692	235	1,249	(6)	(7,068)	(367)
Subtotal	$ 820,254	$ 637,860	$ 170,219	$ 10,733	$ 1,442	$ 1,894	$ 16	$ (27,996)	$ (14,435)
Loans held-for-sale and loans at fair value	13,301								
Receivables from customers and other	26,744								
Total	$ 860,299								

As of or for the year ended December 31, 2012 (in millions)	Credit exposure[d]	Investment-grade	Noninvestment-grade[e]			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[f]	Liquid securities and other cash collateral held against derivative receivables
Top 25 industries[a]									
Real Estate	$ 76,198	$ 50,103	$ 21,503	$ 4,067	$ 525	$ 391	$ 54	$ (41)	$ (509)
Banks & Finance Cos	73,318	55,805	16,928	578	7	20	(34)	(3,524)	(6,027)
Oil & Gas	42,563	31,258	11,012	270	23	9	–	(155)	(101)
Healthcare	48,487	41,146	6,761	569	11	38	9	(238)	(459)
State & Municipal Govt[b]	41,821	40,562	1,093	52	114	28	2	(186)	(221)
Consumer Products	32,778	21,428	10,473	868	9	2	(16)	(275)	(12)
Asset Managers	31,474	26,283	4,987	204	–	46	–	–	(2,714)
Utilities	29,533	24,917	4,257	175	184	2	15	(315)	(368)
Retail & Consumer Services	25,597	16,100	8,763	700	34	20	(11)	(37)	(1)
Technology	18,488	12,089	5,683	696	20	–	1	(226)	–
Central Govt	21,223	20,678	484	61	–	–	–	(11,620)	(1,154)
Machinery & Equipment Mfg	18,504	10,228	7,827	444	5	–	2	(23)	–
Metals/Mining	20,958	12,912	7,608	406	32	8	(1)	(409)	(126)
Business Services	13,577	7,172	6,132	232	41	9	23	(10)	–
Transportation	19,827	15,128	4,353	283	63	5	2	(82)	(1)
Telecom Services	12,239	7,792	3,244	1,200	3	5	1	(229)	–
Media	16,007	7,473	7,754	517	263	2	(218)	(93)	(8)
Insurance	14,446	12,156	2,119	171	–	2	(2)	(143)	(1,729)
Building Materials/Construction	12,377	5,690	4,172	791	4	8	1	(114)	(11)
Automotive	11,511	6,447	5,892	101	–	–	–	(530)	–
Chemicals/Plastics	11,591	7,234	4,172	169	16	18	2	(55)	(74)
Securities Firms & Exchanges	5,756	4,096	1,612	46	2	–	–	(171)	(183)
Agriculture/Paper Mfg	7,729	5,029	2,657	42	1	5	–	–	–
Aerospace/Defense	6,702	5,518	1,150	33	1	–	–	(141)	–
Leisure	7,748	3,160	3,724	551	313	–	(13)	(63)	(24)
All other[c]	195,567	174,264	21,353	384	357	1,478	5	(8,767)	(1,479)
Subtotal	$ 816,019	$ 624,668	$ 175,713	$ 13,610	$ 2,028	$ 2,096	$ (178)	$ (27,447)	$ (15,201)
Loans held-for-sale and loans at fair value	6,961								
Receivables from customers and other	23,648								
Total	$ 846,628								

(a) The industry rankings presented in the table as of December 31, 2012, are based on the industry rankings of the corresponding exposures at December 31, 2013, not actual rankings of such exposures at December 31, 2012.

(b) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2013 and 2012, noted above, the Firm held $7.9 billion and $18.2 billion, respectively, of trading securities and $30.4 billion and $21.7 billion, respectively, of AFS and HTM securities issued by U.S. state and municipal governments. For further information, see Note 3 and Note 12 on pages 195–215 and 249–254, respectively, of this Annual Report.

(c) All other includes: individuals, private education and civic organizations; SPEs; and holding companies, representing approximately 64%, 22% and 5%, respectively, at December 31, 2013, and 57%, 28% and 7%, respectively, at December 31, 2012.

(d) Credit exposure is net of risk participations and excludes the benefit of "Credit Portfolio Management derivatives net notional" held against derivative receivables or loans and "Liquid securities and other cash collateral held against derivative receivables".

(e) Exposures deemed criticized correspond to special mention, substandard and doubtful categories as defined by US bank regulatory agencies.

(f) Represents the net notional amounts of protection purchased and sold through credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The all other category includes purchased credit protection on certain credit indices. Credit Portfolio Management derivatives excludes the synthetic credit portfolio.

Presented below is a discussion of several industries to which the Firm has significant exposure and continues to monitor because of actual or potential credit concerns. For additional information, refer to the tables on the previous pages.

- Real estate: Exposure to this industry increased by $10.9 billion or 14%, in 2013 to $87.1 billion. The increase was largely driven by growth in multifamily exposure in the CB. The credit quality of this industry improved as the investment-grade portion of the exposures to this industry increased by 26% from 2012. The ratio of nonaccrual retained loans to total retained loans decreased to 0.50% at December 31, 2013 from 0.86% at December 31, 2012. For further information on commercial real estate loans, see Note 14 on pages 258–283 of this Annual Report.
- **State and municipal governments:** Exposure to this sector decreased by $6.2 billion in 2013 to $35.7 billion. Lending-related commitments comprise approximately 66% of the exposure to this sector, generally in the form of liquidity and standby letter of credit facilities backing bonds and commercial paper. The credit quality of the portfolio remains high as 97% of the portfolio was rated investment-grade, unchanged from 2012. The Firm continues to actively monitor this exposure in light of the challenging environment faced by certain state and municipal governments. For further discussion of commitments for bond liquidity and standby letters of credit, see Note 29 on pages 318–324 of this Annual Report.

Loans

In the normal course of its wholesale business, the Firm provides loans to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals. For further discussion on loans, including information on credit quality indicators, see Note 14 on pages 258–283 of this Annual Report.

The Firm actively manages its wholesale credit exposure. One way of managing credit risk is through secondary market sales of loans and lending-related commitments. During 2013 and 2012, the Firm sold $16.3 billion and $8.4 billion, respectively, of loans and lending-related commitments.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2013 and 2012. Nonaccrual wholesale loans decreased by $673 million from December 31, 2012, largely reflecting paydowns.

Wholesale nonaccrual loan activity

Year ended December 31, (in millions)	2013	2012
Beginning balance	**$ 1,717**	$ 2,581
Additions[a]	**1,293**	1,920
Reductions:		
Paydowns and other	**1,075**	1,784
Gross charge-offs	**241**	335
Returned to performing status	**279**	240
Sales	**371**	425
Total reductions	**1,966**	2,784
Net reductions	**(673)**	(864)
Ending balance	**$ 1,044**	$ 1,717

(a) During 2013, certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2013 and 2012. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

Wholesale net charge-offs/(recoveries)

Year ended December 31, (in millions, except ratios)	2013	2012
Loans – reported		
Average loans retained	**$ 307,340**	$ 291,980
Gross charge-offs	**241**	346
Gross recoveries	**(225)**	(524)
Net charge-offs/(recoveries)	**16**	(178)
Net charge-off/(recovery) rate	**0.01%**	(0.06)%

Receivables from customers

Receivables from customers primarily represent margin loans to prime and retail brokerage clients that are collateralized through a pledge of assets maintained in clients' brokerage accounts that are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's position may be liquidated by the Firm to meet the minimum collateral requirements.

Lending-related commitments

JPMorgan Chase uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to meet the financing needs of its customers. The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligations under these guarantees, and the counterparties subsequently fails to perform according to the terms of these contracts.

In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's actual future credit exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these commitments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn upon in an event of a default by an obligor. The loan-equivalent amount of the Firm's lending-related commitments was $218.9 billion and $223.7 billion as of December 31, 2013 and 2012, respectively.

Clearing services

The Firm provides clearing services for clients entering into securities and derivative transactions. Through the provision of these services the Firm is exposed to the risk of non-performance by its clients and may be required to share in losses incurred by central counterparties ("CCPs"). Where possible, the Firm seeks to mitigate its credit risk to its clients through the collection of adequate margin at inception and throughout the life of the transactions and can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement. For further discussion of Clearing services, see Note 29 on 318–324, of this Annual Report.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activities. Derivatives enable customers to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its own credit exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For over-the-counter ("OTC") derivatives the Firm is exposed to the credit risk of the derivative counterparty. For exchange traded derivatives ("ETD") such as futures and options, and "cleared" over-the-counter ("OTC-cleared") derivatives, the firm is generally exposed to the credit risk of the relevant CCP. Where possible, the Firm seeks to mitigate its credit risk exposures arising on derivatives transactions through the use of legally enforceable master netting arrangements and collateral agreements. For further discussion of derivative contracts, counterparties and settlement types, see Note 6 on pages 220–233 of this Annual Report. The following table summarizes the net derivative receivables for the periods presented.

Derivative receivables

	Derivative receivables	
December 31, (in millions)	**2013**	2012
Interest rate	**$ 25,782**	$ 39,205
Credit derivatives	**1,516**	1,735
Foreign exchange	**16,790**	14,142
Equity	**12,227**	9,266
Commodity	**9,444**	10,635
Total, net of cash collateral	**65,759**	74,983
Liquid securities and other cash collateral held against derivative receivables	**(14,435)**	(15,201)
Total, net of all collateral	**$ 51,324**	$ 59,782

Derivative receivables reported on the Consolidated Balance Sheets were $65.8 billion and $75.0 billion at December 31, 2013 and 2012, respectively. These amounts represent the fair value of the derivative contracts, after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. However, in management's view, the appropriate measure of current credit risk should also take into consideration additional liquid securities (primarily U.S. government and agency securities and other G7 government bonds) and other cash collateral held by the Firm aggregating $14.4 billion and $15.2 billion at December 31, 2013 and 2012, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor.

In addition to the collateral described in the preceding paragraph, the Firm also holds additional collateral (primarily: cash; G7 government securities; other liquid government-agency and guaranteed securities; and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Though this collateral does not reduce the balances and is not included in the table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative transactions move in the Firm's favor. As of December 31, 2013 and 2012, the Firm held $29.0 billion, of this additional collateral. The derivative receivables fair value, net of all collateral, also does not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of collateral agreements, see Note 6 on pages 220–233 of this Annual Report.

While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

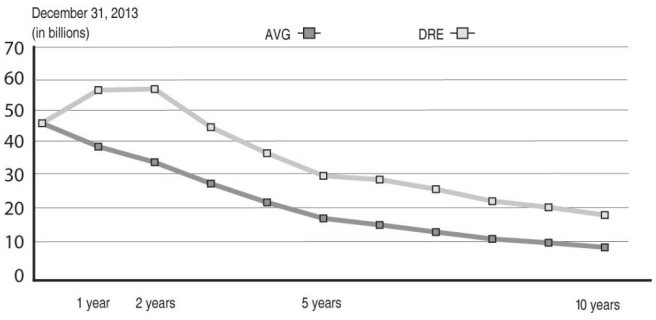
Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, AVG is a measure of the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the CVA, as further described below. The three year AVG exposure was $35.4 billion and $42.3 billion at December 31, 2013 and 2012, respectively, compared with derivative receivables, net of all collateral, of $51.3 billion and $59.8 billion at December 31, 2013 and 2012, respectively.

The fair value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk management process takes into consideration the potential impact of wrong-way risk, which is broadly defined as the potential for increased correlation between the Firm's exposure to a counterparty (AVG) and the counterparty's credit quality. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with that counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to derivatives over the next 10 years as calculated by the DRE and AVG metrics. The two measures generally show that exposure will decline after the first year, if no new trades are added to the portfolio.

Exposure profile of derivatives measures



The following table summarizes the ratings profile by derivative counterparty of the Firm's derivative receivables, including credit derivatives, net of other liquid securities collateral, for the dates indicated.

Ratings profile of derivative receivables

Rating equivalent	2013		2012	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 12,453**	**24%**	$ 19,964	34%
A+/A1 to A-/A3	**17,243**	**34**	12,039	20
BBB+/Baa1 to BBB-/Baa3	**14,981**	**29**	18,066	30
BB+/Ba1 to B-/B3	**5,820**	**11**	8,434	14
CCC+/Caa1 and below	**827**	**2**	1,279	2
Total	**$ 51,324**	**100%**	$ 59,782	100%

As noted above, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's derivatives transactions subject to collateral agreements – excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity – was 86% as of December 31, 2013, largely unchanged compared with December 31, 2012.

Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker; and second, as an end-user, to manage the Firm's own credit risk associated with various exposures.

For a detailed description of credit derivatives, see Credit derivatives in Note 6 on pages 220–233 of this Annual Report.

Credit portfolio management activities

Included in end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management" activities). Information on credit portfolio management activities is provided in the table below. For further information on derivatives used in credit portfolio management activities, see Credit derivatives in Note 6 on pages 220–233 of this Annual Report.

The Firm also uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain AFS securities and from certain securities held in the Firm's market-making businesses. These credit derivatives, as well as the synthetic credit portfolio, are not included in credit portfolio management activities; for further information on these credit derivatives as well as credit derivatives used in the Firm's capacity as a market maker in credit derivatives, see Credit derivatives in Note 6 on pages 231–233 of this Annual Report.

Credit derivatives used in credit portfolio management activities

	Notional amount of protection purchased and sold [(a)]	
December 31, (in millions)	**2013**	2012
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 2,764**	$ 2,166
Derivative receivables	**25,328**	25,347
Total net protection purchased	**28,092**	27,513
Total net protection sold	**96**	66
Credit portfolio management derivatives notional, net	**$ 27,996**	$ 27,447

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

The credit derivatives used in credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure.

The effectiveness of the Firm's credit default swap ("CDS") protection as a hedge of the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS), and the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm) and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm.

Credit portfolio hedges

The following table sets out the fair value related to the Firm's credit derivatives used in credit portfolio management activities, the fair value related to the CVA (which reflects the credit quality of derivatives counterparty exposure), as well as certain other hedges used in the risk management of CVA. These results can vary from period-to-period due to market conditions that affect specific positions in the portfolio.

Net gains and losses on credit portfolio hedges

Year ended December 31, (in millions)	**2013**	2012	2011
Hedges of loans and lending-related commitments	**$ (142)**	$ (163)	$ (32)
CVA and hedges of CVA	**(130)**	127	(769)
Net gains/(losses)	**$ (272)**	$ (36)	$ (801)

COMMUNITY REINVESTMENT ACT EXPOSURE

The Community Reinvestment Act ("CRA") encourages banks to meet the credit needs of borrowers in all segments of their communities, including neighborhoods with low or moderate incomes. The Firm is a national leader in community development by providing loans, investments and community development services in communities across the United States.

At December 31, 2013 and 2012, the Firm's CRA loan portfolio was approximately $18 billion and $16 billion, respectively. At December 31, 2013 and 2012, 50% and 62%, respectively, of the CRA portfolio were residential mortgage loans; 26% and 13%, respectively, were commercial real estate loans; 16% and 18%, respectively, were business banking loans; and 8% and 7%, respectively, were other loans. CRA nonaccrual loans were 3% and 4%, respectively, of the Firm's total nonaccrual loans. For the years ended December 31, 2013 and 2012, net charge-offs in the CRA portfolio were 1% and 3%, respectively, of the Firm's net charge-offs in both years.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers the consumer (primarily scored) portfolio; and wholesale (risk-rated) portfolio. The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also determines an allowance for wholesale and certain consumer lending-related commitments.

The allowance for loan losses includes an asset-specific component, a formula-based component, and a component related to PCI loans. For a further discussion of the components of the allowance for credit losses and related management judgments, see Critical Accounting Estimates Used by the Firm on pages 174–178 and Note 15 on pages 284–287 of this Annual Report.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2013, JPMorgan Chase deemed the allowance for credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio.

The allowance for credit losses was $17.0 billion at December 31, 2013, a decrease of $5.6 billion from $22.6 billion at December 31, 2012. The decrease in the allowance for loan losses was due to a $5.5 billion reduction in the consumer portfolio allowance reflecting lower estimated losses due to the impact of improved home prices on the residential real estate portfolio and improved delinquency trends in the residential real estate and credit card portfolios. However, relatively high unemployment, uncertainties regarding the ultimate success of loan modifications, and the risk attributes of certain loans within the portfolio (e.g., loans with high LTV ratios, junior lien loans that are subordinate to a delinquent or modified senior lien, HELOCs with future payment recast) continued to contribute to uncertainty regarding the performance of the residential real estate portfolio; these uncertainties were considered in estimating the allowance for loan losses.

The consumer, excluding credit card, allowance for loan losses decreased $3.8 billion from December 31, 2012, of which $2.3 billion was from the real estate portfolio non credit-impaired allowance and $1.6 billion from the PCI allowance. The decrease in the allowance was largely due to the impact of improved home prices as well as improved delinquency trends. For additional information about delinquencies and nonaccrual loans in the consumer, excluding credit card, loan portfolio, see Consumer Credit Portfolio on pages 120–129 and Note 14 on pages 258–283 of this Annual Report.

The credit card allowance for loan losses decreased by $1.7 billion from December 31, 2012. The decrease included reductions in both the asset-specific and formula-based allowance. The reduction in the asset-specific allowance, which relates to loans restructured in TDRs, largely reflects the changing profile of the TDR portfolio. The volume of new TDRs, which have higher loss rates due to expected redefaults, continues to decrease, and the loss rate on existing TDRs is also decreasing over time as previously restructured loans continue to perform. The reduction in the formula-based allowance was primarily driven by the continuing trend of improving delinquencies and a reduction in bankruptcies. For additional information about delinquencies in the credit card loan portfolio, see Consumer Credit Portfolio on pages 120–129 and Note 14 on pages 258–283 of this Annual Report.

The wholesale allowance was relatively unchanged reflecting a favorable credit environment and stable credit quality trends.

The allowance for lending-related commitments for both the consumer, excluding credit card, and wholesale portfolios, which is reported in other liabilities, was $705 million and $668 million at December 31, 2013, and December 31, 2012, respectively.

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2013 Consumer, excluding credit card	2013 Credit card	2013 Wholesale	2013 Total	2012 Consumer, excluding credit card	2012 Credit card	2012 Wholesale	2012 Total
Allowance for loan losses								
Beginning balance at January 1,	**$ 12,292**	**$ 5,501**	**$ 4,143**	**$ 21,936**	$ 16,294	$ 6,999	$ 4,316	$ 27,609
Gross charge-offs	**2,754**	**4,472**	**241**	**7,467**	4,805 [d]	5,755	346	10,906
Gross recoveries	**(847)**	**(593)**	**(225)**	**(1,665)**	(508)	(811)	(524)	(1,843)
Net charge-offs/(recoveries)	**1,907**	**3,879**	**16**	**5,802**	4,297 [d]	4,944	(178)	9,063
Write-offs of PCI loans[a]	**53**	**–**	**–**	**53**	–	–	–	–
Provision for loan losses	**(1,872)**	**2,179**	**(119)**	**188**	302	3,444	(359)	3,387
Other	**(4)**	**(6)**	**5**	**(5)**	(7)	2	8	3
Ending balance at December 31,	**$ 8,456**	**$ 3,795**	**$ 4,013**	**$ 16,264**	$ 12,292	$ 5,501	$ 4,143	$ 21,936
Impairment methodology								
Asset-specific[b]	**$ 601**	**$ 971**	**$ 181**	**$ 1,753**	$ 729	$ 1,681	$ 319	$ 2,729
Formula-based	**3,697**	**2,824**	**3,832**	**10,353**	5,852	3,820	3,824	13,496
PCI	**4,158**	**–**	**–**	**4,158**	5,711	–	–	5,711
Total allowance for loan losses	**$ 8,456**	**$ 3,795**	**$ 4,013**	**$ 16,264**	$ 12,292	$ 5,501	$ 4,143	$ 21,936
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 7**	**$ –**	**$ 661**	**$ 668**	$ 7	$ –	$ 666	$ 673
Provision for lending-related commitments	**1**	**–**	**36**	**37**	–	–	(2)	(2)
Other	**–**	**–**	**–**	**–**	–	–	(3)	(3)
Ending balance at December 31,	**$ 8**	**$ –**	**$ 697**	**$ 705**	$ 7	$ –	$ 661	$ 668
Impairment methodology								
Asset-specific	**$ –**	**$ –**	**$ 60**	**$ 60**	$ –	$ –	$ 97	$ 97
Formula-based	**8**	**–**	**637**	**645**	7	–	564	571
Total allowance for lending-related commitments	**$ 8**	**$ –**	**$ 697**	**$ 705**	$ 7	$ –	$ 661	$ 668
Total allowance for credit losses	**$ 8,464**	**$ 3,795**	**$ 4,710**	**$ 16,969**	$ 12,299	$ 5,501	$ 4,804	$ 22,604
Memo:								
Retained loans, end of period	**$ 288,449**	**$ 127,465**	**$ 308,263**	**$ 724,177**	$ 292,620	$ 127,993	$ 306,222	$ 726,835
Retained loans, average	**289,294**	**123,518**	**307,340**	**720,152**	300,024	125,031	291,980	717,035
PCI loans, end of period	**53,055**	**–**	**6**	**53,061**	59,737	–	19	59,756
Credit ratios								
Allowance for loan losses to retained loans	**2.93%**	**2.98%**	**1.30%**	**2.25%**	4.20%	4.30%	1.35 %	3.02%
Allowance for loan losses to retained nonaccrual loans[c]	**113**	**NM**	**489**	**196**	134	NM	289	207
Allowance for loan losses to retained nonaccrual loans excluding credit card	**113**	**NM**	**489**	**150**	134	NM	289	155
Net charge-off/(recovery) rates	**0.66**	**3.14**	**0.01**	**0.81**	1.43 [d]	3.95	(0.06)	1.26
Credit ratios, excluding residential real estate PCI loans								
Allowance for loan losses to retained loans	**1.83**	**2.98**	**1.30**	**1.80**	2.83	4.30	1.35	2.43
Allowance for loan losses to retained nonaccrual loans[c]	**57**	**NM**	**489**	**146**	72	NM	289	153
Allowance for loan losses to retained nonaccrual loans excluding credit card[b]	**57**	**NM**	**489**	**100**	72	NM	289	101
Net charge-off/(recovery) rates	**0.82%**	**3.14%**	**0.01%**	**0.87%**	1.81% [d]	3.95%	(0.06)%	1.38%

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. Any write-offs of PCI loans are recognized when the underlying loan is removed from a pool (e.g., upon liquidation).
(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.
(c) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.
(d) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $800 million of charge-offs of Chapter 7 loans. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for further details.

Provision for credit losses

For the year ended December 31, 2013, the provision for credit losses was $225 million, down by 93% from 2012. The provision for the year ended December 31, 2013 included a $5.6 billion reduction in the allowance for loan losses, due to the impact of improved home prices on the residential real estate portfolio and improved delinquency trends in the residential real estate and credit card portfolios.

Total consumer provision for credit losses was $308 million in 2013, compared with $3.7 billion in 2012. The decline in the total consumer provision was attributable to continued reductions in the allowance for loan losses, resulting from the impact of improved home prices on the residential real estate portfolio, and improved delinquency trends in the residential real estate and credit card portfolios, as well as lower net charge-offs, partially due to the prior year incremental charge-offs of $800 million recorded in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy.

In 2013 the wholesale provision for credit losses was a benefit of $83 million, compared with a benefit of $361 million in 2012. The current periods' wholesale provision for credit losses reflected a favorable credit environment and stable credit quality trends. For further information on the provision for credit losses, see the Consolidated Results of Operations on pages 71–74 of this Annual Report.

Year ended December 31,	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
(in millions)	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Consumer, excluding credit card	**$ (1,872)**	$ 302	$ 4,670	**$ 1**	$ –	$ 2	**$ (1,871)**	$ 302	$ 4,672
Credit card	**2,179**	3,444	2,925	**–**	–	–	**2,179**	3,444	2,925
Total consumer	**307**	3,746	7,595	**1**	–	2	**308**	3,746	7,597
Wholesale	**(119)**	(359)	17	**36**	(2)	(40)	**(83)**	(361)	(23)
Total provision for credit losses	**$ 188**	$ 3,387	$ 7,612	**$ 37**	$ (2)	$ (38)	**$ 225**	$ 3,385	$ 7,574

MARKET RISK MANAGEMENT

Market risk is the potential for adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.

Market risk management

Market Risk is an independent risk management function that works in close partnership with the lines of business, including Treasury and CIO within Corporate/Private Equity, to identify and monitor market risks throughout the Firm and to define market risk policies and procedures. The Market Risk function reports to the Firm's CRO.

Market Risk seeks to control risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk identification and classification

Each line of business is responsible for the management of the market risks within its units. The independent risk management group responsible for overseeing each line of business is charged with ensuring that all material market risks are appropriately identified, measured, monitored and managed in accordance with the risk policy framework set out by Market Risk.

Risk measurement

Tools used to measure risk

Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- VaR
- Economic-value stress testing
- Nonstatistical risk measures
- Loss advisories
- Profit and loss drawdowns
- Risk identification for large exposures ("RIFLEs")
- Earnings-at-risk

The following table summarizes by LOB the predominant business activities that give rise to market risks, and the market risk management tools utilized to manage those risks; CB is not presented in the table below as it does not give rise to significant market risk.

Risk identification and classification for business activities

LOB	Predominant business activities and related market risks	Positions included in Risk Management VaR	Positions included in other risk measures *(Not included in Risk Management VaR)*[a][b]
CIB	• Makes markets and services its clients' activity in products across fixed income, foreign exchange, equities and commodities • Market risk arising from market making and other derivatives activities which may lead to a potential decline in net income as a result of changes in market prices; e.g. rates and credit spreads	• Trading assets/liabilities - debt and equity instruments, and derivatives • Certain securities purchased under resale agreements and securities borrowed • Certain securities loaned or sold under repurchase agreements • Structured notes, see Note 4 on pages 215-218 of this Annual Report • Derivative CVA • Hedges of the retained loan portfolio and CVA, classified as derivatives	• Principal investing activities • Retained loan portfolio • Deposits
CCB	• Origination and servicing of mortgage loans • Complex, non-linear interest rate risks, as well as basis risk • Non-linear risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing • Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates	*Mortgage Banking* • Mortgage pipeline loans, classified as derivatives • Warehouse loans, classified as trading assets - debt instruments • MSRs • Hedges of the MSRs and loans, classified as derivatives • Interest only securities, classified as trading assets and related hedges classified as derivatives	• Retained loan portfolio • Deposits
Corporate/ Private equity	• Predominantly responsible for managing the Firm's liquidity, funding, structural interest rate and foreign exchange risks arising from activities undertaken by the Firm's four major reportable business segments, as well as executing the Firm's capital plan	*Treasury and CIO* • Primarily derivative positions measured at fair value through earnings, classified as derivatives	• Private Equity • Investment securities portfolio and related hedges • Deposits • Long-term debt and related hedges
AM	• Market risk arising from the Firm's initial capital investments in products, such as mutual funds, which are managed by AM	• Hedges of seed capital investments, classified as derivatives	• Initial seed capital investments • Capital invested alongside third-party investors, typically in privately distributed collective vehicles managed by AM (i.e., Co-Investments) • Retained loan portfolio • Deposits

(a) Additional market risk positions result from debit valuation adjustments ("DVA") taken on structured notes and derivative liabilities to reflect the credit quality of the Firm. Neither DVA nor the additional market risk positions resulting from it are included in VaR.

(b) During the fourth quarter of 2013, the Firm implemented a funding valuation adjustment ("FVA") framework in order to incorporate the impact of funding into its valuation estimates for OTC derivatives and structured notes. FVA gives rise to additional market risk positions, and is not currently included in VaR. Effective in the first quarter of 2014, the FVA market risk exposure and its associated hedges will be included in CIB's average VaR.

Value-at-risk

JPMorgan Chase utilizes VaR, a statistical risk measure, to estimate the potential loss from adverse market moves in a normal market environment consistent with the day-to-day risk decisions made by the lines of business.

The Firm has one overarching VaR model framework, Risk Management VaR, used for risk management purposes across the Firm, which utilizes historical simulation based on data for the previous 12 months. The framework's approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. The Firm believes the use of Risk Management VaR provides a stable measure of VaR that closely aligns to the day-to-day risk management decisions made by the lines of business and provides necessary/appropriate information to respond to risk events on a daily basis.

Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. This means that, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR "band breaks," defined as losses greater than that predicted by VaR estimates, not more than five times every 100 trading days. The number of VaR band breaks observed can differ from the statistically expected number of band breaks if the current level of market volatility is materially different from the level of market volatility during the twelve months of historical data used in the VaR calculation.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual products and/or risk factors. To capture material market risks as part of the Firm's risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period; inputs are selected based on the risk profile of each portfolio as sensitivities and historical time series used to generate daily market values may be different across product types or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

Data sources used in VaR models may be the same as those used for financial statement valuations. However, in cases where market prices are not observable, or where proxies are used in VaR historical time series, the sources may differ. In addition, the daily market data used in VaR models may be different than the independent third-party data collected for VCG price testing in their monthly valuation process (see pages 196–200 of this Annual Report for further information on the Firm's valuation process.) VaR model calculations require more timely (i.e., daily) data and a consistent source for valuation and therefore it is not practical to use the data collected in the VCG monthly valuation process.

VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks across businesses and monitoring limits. These VaR results are reported to senior management, the Board of Directors and regulators.

Since VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses, and it is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions. As VaR cannot be used to determine future losses in the Firm's market risk positions, the Firm considers other metrics, such as economic-value stress testing and other techniques, as described further below, to capture and manage its market risk positions under stressed scenarios.

For certain products, specific risk parameters are not captured in VaR due to the lack of inherent liquidity and availability of appropriate historical data. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. The Firm uses alternative methods to capture and measure those risk parameters that are not otherwise captured in VaR, including economic-value stress testing, nonstatistical measures and risk identification for large exposures as described further below.

The Firm's VaR model calculations are continuously evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and other factors. Such changes will also affect historical comparisons of VaR results. Model changes go through a review and approval process by the Model Review Group prior to implementation into the operating environment. For further information, see Model risk on page 153 of this Annual Report.

Separately, the Firm calculates a daily aggregated VaR in accordance with regulatory rules ("Regulatory VaR"), which is used to derive the Firm's regulatory VaR-based capital requirements under the Basel 2.5 Market Risk Rule ("Basel 2.5"). This Regulatory VaR model framework currently assumes a ten business-day holding period and an expected tail loss methodology which approximates a 99% confidence level. Regulatory VaR is applied to "covered" positions as defined by Basel 2.5, which may be different than the positions included in the Firm's Risk Management VaR. For example, credit derivative hedges of accrual loans

are included in the Firm's Risk Management VaR, while Regulatory VaR excludes these credit derivative hedges. For additional information on Regulatory VaR and the other components of market risk regulatory capital (e.g. VaR-based measure, stressed VaR-based measure and the respective backtesting) for the Firm, see JPMorgan Chase's "Regulatory Capital Disclosures – Market Risk Pillar 3 Report" which are available on the Firm's website (http://investor.shareholder.com/jpmorganchase/basel.cfm) and Capital Management on pages 160–167 of this Annual Report.

The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level.

Total VaR

As of or for the year ended December 31,	2013			2012			At December 31,	
(in millions)	Avg.	Min	Max	Avg.	Min	Max	**2013**	2012
CIB trading VaR by risk type								
Fixed income	**$ 43** [a]	**$ 23**	**$ 62**	$ 83 [a]	$ 47	$ 131	**$ 36** [a]	$ 69 [a]
Foreign exchange	**7**	**5**	**11**	10	6	22	**9**	8
Equities	**13**	**9**	**21**	21	12	35	**14**	22
Commodities and other	**14**	**11**	**18**	15	11	27	**13**	15
Diversification benefit to CIB trading VaR	**(34)** [b]	**NM** [c]	**NM** [c]	(45) [b]	NM [c]	NM [c]	**(36)** [b]	(39) [b]
CIB trading VaR	**43**	**21**	**66**	84	50	128	**36**	75
Credit portfolio VaR	**13**	**10**	**18**	25	16	42	**11**	18
Diversification benefit to CIB VaR	**(9)** [b]	**NM** [c]	**NM** [c]	(13) [b]	NM [c]	NM [c]	**(5)** [b]	(9) [b]
CIB VaR	**47** [a][e]	**25**	**74**	96 [a][e]	58	142	**42** [a][e]	84 [a][e]
Mortgage Banking VaR	**12**	**4**	**24**	17	8	43	**5**	24
Treasury and CIO VaR [f]	**6** [a]	**3**	**14**	92 [d]	5 [d]	196 [d]	**4**	6
Asset Management VaR	**4**	**2**	**5**	2	– [g]	5	**3**	2
Diversification benefit to other VaR	**(8)** [b]	**NM** [c]	**NM** [c]	(10) [b]	NM [c]	NM [c]	**(5)** [b]	(7) [b]
Other VaR	**14**	**6**	**28**	101	18	204	**7**	25
Diversification benefit to CIB and other VaR	**(9)** [b]	**NM** [c]	**NM** [c]	(45) [b]	NM [c]	NM [c]	**(5)** [b]	(11) [b]
Total VaR	**$ 52**	**$ 29**	**$ 87**	$ 152	$ 93	$ 254	**$ 44**	$ 98

(a) On July 2, 2012, CIO transferred its synthetic credit portfolio, other than a portion aggregating approximately $12 billion notional, to CIB; CIO's retained portfolio was effectively closed out during the three months ended September 30, 2012.
(b) Average portfolio VaR and period-end portfolio VaR were less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects the fact that risks are not perfectly correlated.
(c) Designated as not meaningful ("NM"), because the minimum and maximum may occur on different days for distinct risk components, and hence it is not meaningful to compute a portfolio-diversification effect.
(d) The Firm restated its 2012 first quarter financial statements regarding the CIO synthetic credit portfolio. The CIO VaR amounts for 2012 were not recalculated to reflect the restatement.
(e) Effective in the fourth quarter of 2012, CIB's VaR includes the VaR of the former reportable business segments, Investment Bank and Treasury & Securities Services ("TSS"), which were combined to form the CIB business segment as a result of the reorganization of the Firm's business segments. TSS VaR was not material and was previously classified within Other VaR. Prior period VaR disclosures were not revised as a result of the business segment reorganization.
(f) The Treasury and CIO VaR includes Treasury VaR as of the third quarter of 2013.
(g) The minimum Asset Management VaR for 2012 was immaterial.

As presented in the table above, average Total VaR and average CIB VaR decreased during 2013 compared with 2012. These decreases were primarily driven by reduced risk in the synthetic credit portfolio and lower market volatility across multiple asset classes.

During the third quarter of 2012, the Firm applied a new VaR model to calculate VaR for CIO's synthetic credit portfolio that had been transferred to the CIB on July 2, 2012. In the first quarter of 2013, in order to achieve consistency among like products within CIB and in conjunction with the implementation of Basel 2.5 requirements, the Firm moved CIO's synthetic credit portfolio to an existing VaR model within the CIB. This change had an insignificant impact to the average fixed income VaR and average total CIB trading and credit portfolio VaR, and it had no impact to the average Total VaR compared with the model used in the third and fourth quarters of 2012.

Average Treasury and CIO VaR for the year ended December 31, 2013, decreased from 2012, predominantly reflecting the reduction in and transfer of risk from CIO's synthetic credit portfolio to the CIB on July 2, 2012. The index credit derivative positions retained by CIO were effectively closed out during the three months ended September 30, 2012.

Average Mortgage Banking VaR for the year ended December 31, 2013, decreased from 2012. The decrease is attributable to reduced risk across the Mortgage Production and Mortgage Servicing businesses.

The Firm's average Total VaR diversification benefit was $9 million or 15% of the sum for 2013, compared with $45 million or 23% of the sum for 2012. In general, over the course of the year, VaR exposure can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

VaR back-testing

The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses recognized on market-risk related revenue.

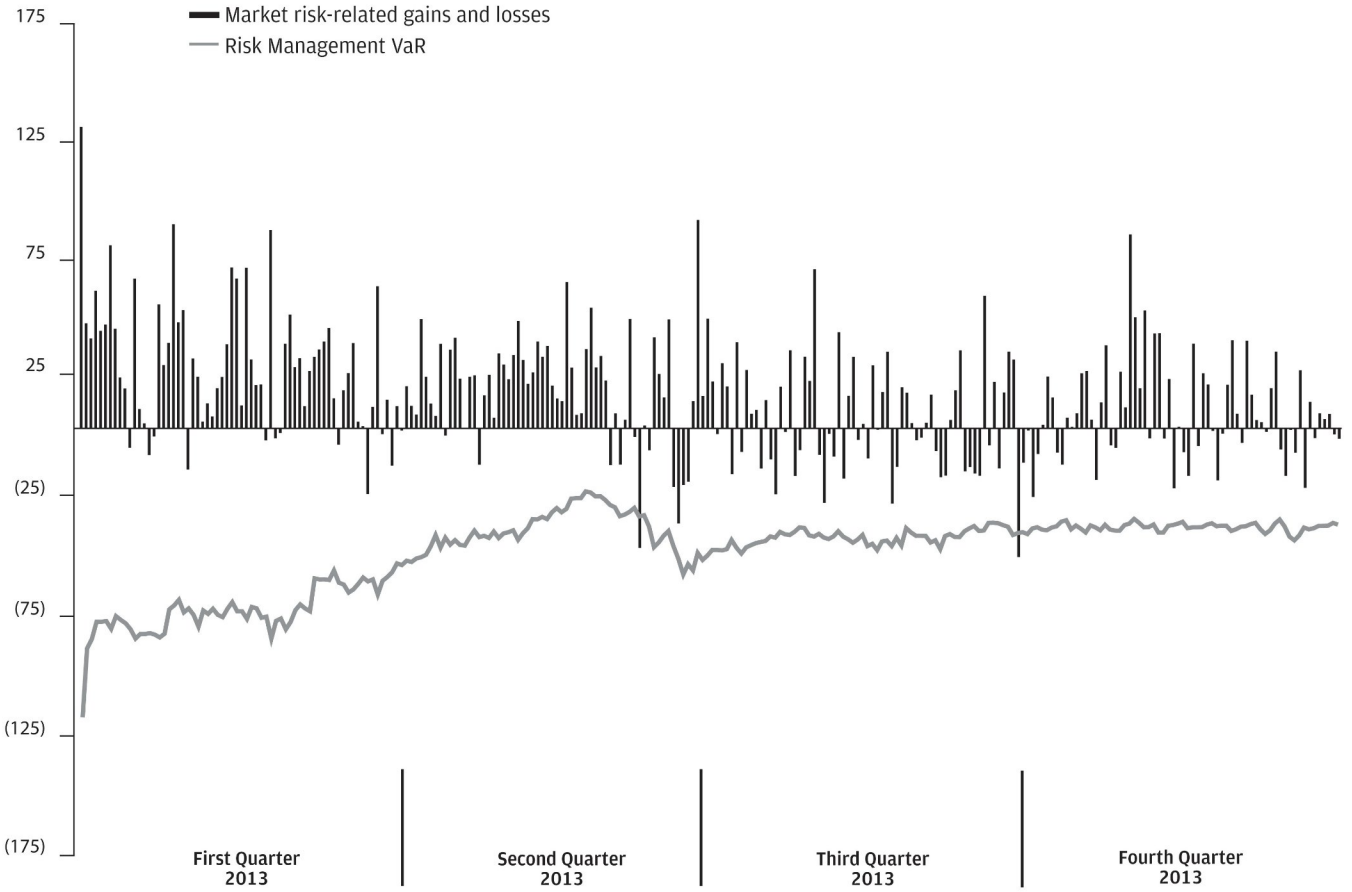
Effective during the fourth quarter of 2013, the Firm revised its definition of market risk-related gains and losses to be consistent with the definition used by the banking regulators under Basel 2.5. Under this definition market risk-related gains and losses are defined as: profits and losses on the Firm's Risk Management positions, *excluding* fees, commissions, fair value adjustments, net interest income, and gains and losses arising from intraday trading.

The following chart compares the daily market risk-related gains and losses on the Firm's Risk Management positions for the year ended December 31, 2013, under the revised definition. As the chart presents market risk-related gains and losses related to those positions included in the Firm's Risk Management VaR, the results in the table below differ from the results of backtesting disclosed in the Firm's Basel 2.5 report, which are based on Regulatory VaR. The chart shows that for the year ended December 31, 2013, the Firm observed two VaR band breaks and posted gains on 177 of the 260 days in this period.

Daily market risk-related gains and losses vs. Risk Management VaR (1-day, 95% confidence level)

Year ended December 31, 2013

($ in millions)



Prior to the fourth quarter of 2013, the Firm disclosed a histogram which presented the results of daily backtesting against its daily market risk-related gains and losses for positions included in the Firm's Risk Management VaR calculation. Under this previous presentation, the market risk related revenue was defined as the change in value of: principal transactions revenue for CIB, and Treasury and CIO; trading-related net interest income for CIB, Treasury and CIO, and Mortgage Production and Mortgage Servicing in CCB; CIB brokerage commissions, underwriting fees or other revenue; revenue from syndicated lending facilities that the Firm intends to distribute; mortgage fees and related income for the Firm's mortgage pipeline and warehouse loans, MSRs, and all related hedges; and market-risk related revenue from Asset Management hedges; gains and losses from DVA were excluded. Under this prior measure there were no VaR band breaks nor any trading loss days for the year ended December 31, 2013.

Other risk measures

Economic-value stress testing

Along with VaR, stress testing is an important tool in measuring and controlling risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing is intended to capture the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates or commodity prices. The framework uses a grid-based approach, which calculates multiple magnitudes of stress for both market rallies and market sell-offs for each risk factor. Stress-test results, trends and explanations based on current market risk positions are reported to the Firm's senior management and to the lines of business to allow them to better understand the sensitivity of positions to certain defined events and to enable them to manage their risks with more transparency.

Stress scenarios are defined and reviewed by Market Risk, and significant changes are reviewed by the relevant Risk Committees. While most of the scenarios estimate losses based on significant market moves, such as an equity market collapse or credit crisis, the Firm also develops scenarios to quantify risk arising from specific portfolios or concentrations of risks, which attempt to capture certain idiosyncratic market movements. Scenarios may be redefined on an ongoing basis to reflect current market conditions. Ad hoc scenarios are run in response to specific market events or concerns. Furthermore, the Firm's stress testing framework is utilized in calculating results under scenarios mandated by the Federal Reserve's CCAR and ICAAP ("Internal Capital Adequacy Assessment Process") processes.

Nonstatistical risk measures

Nonstatistical risk measures include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line-of-business and by risk type, and are used for tactical control and monitoring limits.

Loss advisories and profit and loss drawdowns

Loss advisories and profit and loss drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Profit and loss drawdowns are defined as the decline in net profit and loss since the year-to-date peak revenue level.

Risk identification for large exposures

Individuals who manage risk positions consider potential material losses that could arise from specific, unusual events, such as a potential change in tax legislation, or a particular combination of unusual market moves. This information allows the Firm to monitor further earnings vulnerability that is not adequately covered by standard risk measures.

Earnings-at-risk

The VaR and stress-test measures described above illustrate the total economic sensitivity of the Firm's Consolidated Balance Sheets to changes in market variables. The effect of interest rate exposure on reported net income is also important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits and issuing debt. The CIO, Treasury and Corporate ("CTC") Risk Committee establishes the Firm's structural interest rate risk policies and market risk limits, which are subject to approval by the Risk Policy Committee of the Firm's Board of Directors. CIO, working in partnership with the lines of business, calculates the Firm's structural interest rate risk profile and reviews it with senior management including the CTC Risk Committee and the Firm's ALCO.

Structural interest rate risk can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments.
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time.
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve).
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change.

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, corporate-wide basis. Business units transfer their interest rate risk to Treasury through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

Oversight of structural interest rate risk is managed through a dedicated risk function reporting to the CTC CRO. This risk function is responsible for providing independent oversight,

creating governance over assumptions and establishing and monitoring limits for structural interest rate risk.

The Firm manages structural interest rate risk generally through its investment securities portfolio and related derivatives. The Firm evaluates its structural interest rate risk exposure through earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's core net interest income (see page 83 of this Annual Report for further discussion of core net interest income) and interest rate-sensitive fees. Earnings-at-risk excludes the impact of trading activities and MSR, as these sensitivities are captured under VaR.

The Firm conducts simulations of changes in structural interest rate-sensitive revenue under a variety of interest rate scenarios. Earnings-at-risk scenarios estimate the potential change in this revenue, and the corresponding impact to the Firm's pretax core net interest income, over the following 12 months, utilizing multiple assumptions as described below. These scenarios highlight exposures to changes in interest rates, pricing sensitivities on deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, as well as prepayment and reinvestment behavior. Mortgage prepayment assumptions are based on current interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience.

JPMorgan Chase's 12-month pretax core net interest income sensitivity profiles.
(Excludes the impact of trading activities and MSRs)

	Instantaneous change in rates[a]			
(in millions)	+200 bps	+100 bps	-100 bps	-200 bps
December 31, 2013	**$ 4,718**	**$ 2,518**	**NM** [b]	**NM** [b]
December 31, 2012	3,886	2,145	NM [b]	NM [b]

(a) Instantaneous changes in interest rates present a limited view of risk, and so alternative scenarios are also reviewed.
(b) Downward 100- and 200-basis-points parallel shocks result in a federal funds target rate of zero and negative three- and six-month treasury rates. The earnings-at-risk results of such a low-probability scenario are not meaningful.

The change in earnings-at-risk from December 31, 2012, resulted from higher expected deposit balances, partially offset by repositioning the investment securities portfolio. The Firm's benefit to rising rates is largely a result of reinvesting at higher yields and assets re-pricing at a faster pace than deposits.

Additionally, another interest rate scenario used by the Firm — involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels — results in a 12-month pretax core net interest income benefit of $407 million. The increase in core net interest income under this scenario reflects the Firm reinvesting at the higher long-term rates, with funding costs remaining unchanged.

Risk monitoring and control

Limits

Market risk is controlled primarily through a series of limits set in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity and accommodation of client business and management experience. The Firm maintains different levels of limits. Corporate level limits include VaR and stress limits. Similarly, line of business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns. Limits may also be allocated within the lines of business, as well at the portfolio level.

Limits are established by Market Risk in agreement with the lines of business. Limits are reviewed regularly by Market Risk and updated as appropriate, with any changes approved by lines of business management and Market Risk. Senior management, including the Firm's Chief Executive Officer and Chief Risk Officer, are responsible for reviewing and approving certain of these risk limits on an ongoing basis. All limits that have not been reviewed within specified time periods by Market Risk are escalated to senior management. The lines of business are responsible for adhering to established limits against which exposures are monitored and reported.

Limit breaches are required to be reported in a timely manner by Risk Management to limit approvers, Market Risk and senior management. In the event of a breach, Market Risk consults with Firm senior management and lines of business senior management to determine the appropriate course of action required to return to compliance, which may include a reduction in risk in order to remedy the excess. Any Firm or line of business-level limits that are in excess for three business days or longer, or that are over limit by more than 30%, are escalated to senior management and the Firmwide Risk Committee.

COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers, or adversely impacts markets related to a country. The Firm has a comprehensive country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring direct country exposures in the Firm. The Country Risk Management group is responsible for developing guidelines and policy for managing country risk in both emerging and developed countries. The Country Risk Management group actively monitors the various portfolios giving rise to country risk to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

Country risk organization

The Country Risk Management group is an independent risk management function which works in close partnership with other risk functions to identify and monitor country risk within the Firm. The Firmwide Risk Executive for Country Risk reports to the Firm's CRO.

Country Risk Management is responsible for the following functions:

- Developing guidelines and policies consistent with a comprehensive country risk framework
- Assigning sovereign ratings and assessing country risks
- Measuring and monitoring country risk exposure and stress across the Firm
- Managing country limits and reporting trends and limit breaches to senior management
- Developing surveillance tools for early identification of potential country risk concerns
- Providing country risk scenario analysis

Country risk identification and measurement

The Firm is exposed to country risk through its lending, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country. Under the Firm's internal country risk management approach, country exposure is reported based on the country where the majority of the assets of the obligor, counterparty, issuer or guarantor are located or where the majority of its revenue is derived, which may be different than the domicile (legal residence) or country of incorporation of the obligor, counterparty, issuer or guarantor. Country exposures are generally measured by considering the Firm's risk to an immediate default of the counterparty or obligor, with zero recovery. Assumptions are sometimes required in determining the measurement and allocation of country exposure, particularly in the case of certain tranched credit derivatives. Different measurement approaches or assumptions would affect the amount of reported country exposure.

Under the Firm's internal country risk measurement framework:

- Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and cash and marketable securities collateral received
- Securities financing exposures are measured at their receivable balance, net of collateral received
- Debt and equity securities are measured at the fair value of all positions, including both long and short positions
- Counterparty exposure on derivative receivables, including credit derivative receivables, is measured at the derivative's fair value, net of the fair value of the related collateral
- Credit derivatives protection purchased and sold is reported based on the underlying reference entity and is measured at the notional amount of protection purchased or sold, net of the fair value of the recognized derivative receivable or payable. Credit derivatives protection purchased and sold in the Firm's market-making activities is presented on a net basis, as such activities often result in selling and purchasing protection related to the same underlying reference entity; this reflects the manner in which the Firm manages these exposures

The Firm also has indirect exposures to country risk (for example, related to the collateral received on securities financing receivables or related to client clearing activities). These indirect exposures are managed in the normal course of business through the Firm's credit, market, and operational risk governance, rather than through Country Risk Management.

The Firm's internal country risk reporting differs from the reporting provided under FFIEC bank regulatory requirements as there are significant differences in reporting methodology. For further information on the FFIEC's reporting methodology, see Cross-border outstandings on page 357 of the 2013 Form 10-K.

Country risk stress testing

The country risk stress framework aims to identify potential losses arising from a country crisis by capturing the impact of large asset price movements in a country based on market shocks combined with counterparty specific assumptions. Country Risk Management periodically defines and runs ad hoc stress scenarios for individual countries in response to specific market events and sector performance concerns.

Country risk monitoring and control

The Country Risk Management Group establishes guidelines for sovereign ratings reviews and limit management. Country stress and nominal exposures are measured under a comprehensive country limit framework. Country ratings and limits activity are actively monitored and reported on a regular basis. Country limit requirements are reviewed and approved by senior management as often as necessary, but at least annually. In addition, the Country Risk Management group uses surveillance tools for early identification of potential country risk concerns, such as signaling models and ratings indicators.

Country risk reporting

The following table presents the Firm's top 20 exposures by country (excluding the U.S.). The selection of countries is based solely on the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions.

Top 20 country exposures

	December 31, 2013			
(in billions)	Lending[a]	Trading and investing[b][c]	Other[d]	**Total exposure**
United Kingdom	$ 34.4	$ 43.5	$ 1.4	$ 79.3
Germany	13.0	29.1	0.2	42.3
Netherlands	5.3	25.5	2.6	33.4
France	13.9	17.0	–	30.9
Switzerland	19.9	1.7	0.6	22.2
Canada	13.8	5.4	0.2	19.4
Australia	7.4	11.3	–	18.7
China	11.1	3.9	0.7	15.7
Brazil	5.7	5.6	–	11.3
India	6.8	3.8	0.1	10.7
Hong Kong	3.8	3.5	1.7	9.0
Korea	4.8	2.9	–	7.7
Italy	3.4	4.0	–	7.4
Singapore	3.4	2.0	1.3	6.7
Mexico	2.3	4.4	–	6.7
Japan	3.9	2.6	–	6.5
Sweden	1.8	4.0	0.1	5.9
Russia	4.7	0.7	–	5.4
Spain	3.2	1.3	–	4.5
Malaysia	2.4	1.5	0.6	4.5

(a) Lending includes loans and accrued interest receivable, net of collateral and the allowance for loan losses, deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities.

(b) Includes market-making inventory, securities held in AFS accounts and hedging.

(c) Includes single-name and index and tranched credit derivatives for which one or more of the underlying reference entities is in a country listed in the above table.

(d) Includes capital invested in local entities and physical commodity inventory.

Selected European exposure

Notwithstanding the economic and fiscal situation in Europe showing signs of stabilization, with Spain and Ireland exiting their bail out programs and some encouraging progress on financial reform, the Firm continues to closely monitor its exposures in Spain, Italy, Ireland, Portugal and Greece. Management believes its exposure to these five countries is modest relative to the Firm's aggregate exposures. The Firm continues to conduct business and support client activity in these countries and, therefore, the Firm's aggregate net exposures and sector distribution may vary over time. In addition, the net exposures may be affected by changes in market conditions, including the effects of interest rates and credit spreads on market valuations.

The following table presents the Firm's direct exposure to Spain, Italy, Ireland, Portugal and Greece at December 31, 2013, as measured under the Firm's internal country risk management approach. For individual exposures, corporate clients represent approximately 93% of the Firm's non-sovereign exposure in these five countries, and substantially all of the remaining 7% of the non-sovereign exposure is to the banking sector.

December 31, 2013 (in billions)	Lending net of Allowance[a]	AFS securities	Trading[b]	Derivative collateral[c]	Portfolio hedging[d]	**Total exposure**
Spain						
Sovereign	$ –	$ 0.5	$ (0.2)	$ –	$ (0.2)	$ 0.1
Non-sovereign	3.2	–	3.3	(1.9)	(0.2)	4.4
Total Spain exposure	$ 3.2	$ 0.5	$ 3.1	$ (1.9)	$ (0.4)	$ 4.5
Italy						
Sovereign	$ –	$ –	$ 8.0	$ (1.0)	$ (4.3)	$ 2.7
Non-sovereign	3.4	–	3.0	(1.1)	(0.6)	4.7
Total Italy exposure	$ 3.4	$ –	$ 11.0	$ (2.1)	$ (4.9)	$ 7.4
Ireland						
Sovereign	$ –	$ –	$ –	$ –	$ (0.1)	$ (0.1)
Non-sovereign	0.2	–	0.5	(0.1)	–	0.6
Total Ireland exposure	$ 0.2	$ –	$ 0.5	$ (0.1)	$ (0.1)	$ 0.5
Portugal						
Sovereign	$ –	$ –	$ 0.1	$ –	$ –	$ 0.1
Non-sovereign	0.5	–	0.9	(0.4)	(0.1)	0.9
Total Portugal exposure	$ 0.5	$ –	$ 1.0	$ (0.4)	$ (0.1)	$ 1.0
Greece						
Sovereign	$ –	$ –	$ 0.1	$ –	$ –	$ 0.1
Non-sovereign	0.1	–	0.5	(0.5)	–	0.1
Total Greece exposure	$ 0.1	$ –	$ 0.6	$ (0.5)	$ –	$ 0.2
Total exposure	$ 7.4	$ 0.5	$ 16.2	$ (5.0)	$ (5.5)	$ 13.6

(a) Lending includes loans and accrued interest receivable, deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities. Amounts are presented net of the allowance for credit losses of $100 million (Spain), $43 million (Italy), $6 million (Ireland), $19 million (Portugal), and $13 million (Greece) specifically attributable to these countries. Includes $3.0 billion of unfunded lending exposure at December 31, 2013. These exposures consist typically of committed, but unused corporate credit agreements, with market-based lending terms and covenants.

(b) Primarily includes: $13.9 billion of counterparty exposure on derivative and securities financings, $1.6 billion of issuer exposure on debt and equity securities. Securities financings of approximately $25.2 billion were collateralized with approximately $27.5 billion of cash and marketable securities as of December 31, 2013.

(c) Includes cash and marketable securities pledged to the Firm, of which approximately 95% of the collateral was cash at December 31, 2013.

(d) Reflects net protection purchased through the Firm's credit portfolio management activities, which are managed separately from its market-making activities. Predominantly includes single-name CDS and also includes index credit derivatives and short bond positions.

Effect of credit derivatives on selected European exposures

Country exposures in the Selected European exposure table above have been reduced by purchasing protection through single name, index, and tranched credit derivatives. The following table presents the effect of purchased and sold credit derivatives on the trading and portfolio hedging activities in the Selected European exposure table.

December 31, 2013	Trading			Portfolio hedging		
(in billions)	Purchased	Sold	Net	Purchased	Sold	Net
Spain	$ (92.5)	$ 92.3	$ (0.2)	$ (7.8)	$ 7.4	$ (0.4)
Italy	(139.7)	140.9	1.2	(23.6)	18.7	(4.9)
Ireland	(7.2)	7.1	(0.1)	(0.7)	0.6	(0.1)
Portugal	(32.9)	33.2	0.3	(2.8)	2.7	(0.1)
Greece	(7.7)	7.7	–	(0.7)	0.7	–
Total	$ (280.0)	$ 281.2	$ 1.2	$ (35.6)	$ 30.1	$ (5.5)

Under the Firm's internal country risk management approach, credit derivatives are generally reported based on the country where the majority of the assets of the reference entity are located. Exposures are measured assuming that all of the reference entities in a particular country default simultaneously with zero recovery. For example, single-name and index credit derivatives are measured at the notional amount, net of the fair value of the derivative receivable or payable. Exposures for index credit derivatives, which may include several underlying reference entities, are determined by evaluating the relevant country for each of the reference entities underlying the named index, and allocating the applicable amount of the notional and fair value of the index credit derivative to each of the relevant countries. Tranched credit derivatives are measured at the modeled change in value of the derivative assuming the simultaneous default of all underlying reference entities in a specific country; this approach considers the tranched nature of the derivative (i.e., that some tranches are subordinate to others) and the Firm's own position in the structure.

The "Total" line in the table above represents the simple sum of the individual countries. Changes in the Firm's methodology or assumptions would produce different results.

The credit derivatives reflected in the "Portfolio hedging" column are predominantly single-name CDS used in the Firm's credit portfolio management activities, which are intended to mitigate the credit risk associated with traditional lending activities and derivative counterparty exposure. The effectiveness of the Firm's CDS protection as a hedge of the Firm's exposures may vary depending upon a number of factors, including the maturity of the Firm's CDS protection, the named reference entity, and the contractual terms of the CDS. For further information about credit derivatives see Credit derivatives on pages 137–138, and Note 6 on pages 220–233 of this Annual Report.

The Firm's net presentation of purchased and sold credit derivatives reflects the manner in which this exposure is managed, and reflects, in the Firm's view, the substantial mitigation of market and counterparty credit risk in its credit derivative activities. Market risk is substantially mitigated because market-making activities, and to a lesser extent, hedging activities, often result in selling and purchasing protection related to the same underlying reference entity. For example, for each of the five named countries as of December 31, 2013, the protection sold by the Firm was more than 94% offset by protection purchased on the identical reference entity.

In addition, counterparty credit risk has also been substantially mitigated by the master netting and collateral agreements in place for these credit derivatives. As of December 31, 2013, 100% of the purchased protection presented in the table above is purchased under contracts that require posting of cash collateral; 88% is purchased from investment-grade counterparties domiciled outside of the selected European countries; and 68% of the protection purchased offsets protection sold on the identical reference entity, with the identical counterparty subject to a master netting agreement.

Model risk

The Firm uses models, for many purposes, but primarily for the measurement, monitoring and management of risk positions. Valuation models are employed by the Firm to value certain financial instruments which cannot otherwise be valued using quoted prices. These valuation models may also be employed as inputs to risk management models, including VaR and economic stress models. The Firm also makes use of models for a number of other purposes, including the calculation of regulatory capital requirements and estimating the allowance for credit losses.

Models are owned by various functions within the Firm based on the specific purposes of such models. For example, VaR models and certain regulatory capital models are owned by the line-of-business aligned risk management functions. Owners of models are responsible for the development, implementation and testing of their models, as well as referral of models to the Model Risk function (within the Model Risk and Development unit) for review and approval. Once models have been approved, model owners are responsible for the maintenance of a robust operating environment and must monitor and evaluate the performance of the models on an ongoing basis. Model owners may seek to enhance models in response to changes in the portfolios and for changes in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities.

The Model Risk function is part of the Firm's Model Risk and Development unit, which in turn reports to the Chief Risk Officer. The Model Risk function is independent of the model owners and reviews and approves a wide range of models, including risk management, valuation and certain regulatory capital models used by the Firm.

Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on the model. This tiering is subject to the approval of the Model Risk function. A model review conducted by the Model Risk function considers the model's suitability for the specific uses to which it will be put. The factors considered in reviewing a model include whether the model accurately reflects the characteristics of the product and its significant risks, the selection and reliability of model inputs, consistency with models for similar products, the appropriateness of any model-related adjustments, and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes. Model reviews are approved by the appropriate level of management within the Model Risk function based on the relevant tier of the model.

Under the Firm's model risk policy, new models, as well as material changes to existing models, are reviewed and approved by the Model Risk function prior to implementation in the operating environment.

In the event that the Model Risk function does not approve a model, the model owner is required to remediate the model within a time period agreed upon with the Model Risk function. The model owner is also required to resubmit the model for review to the Model Risk function and to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity. The Firm may also implement other appropriate risk measurement tools to augment the model that is subject to remediation.

Exceptions to the Firm's model risk policy may be granted by the head of the Model Risk function to allow a model to be used prior to review or approval.

For a summary of valuations based on models, see Critical Accounting Estimates Used by the Firm on pages 176–177 and Note 3 on pages 195–215 of this Annual Report.

PRINCIPAL RISK MANAGEMENT

Principal investments are predominantly privately-held financial assets and instruments, typically representing an ownership or junior capital position, that have unique risks due to their illiquidity or for which there is less observable market or valuation data. Such investing activities, including private equity investments, mezzanine financing, and tax-oriented investments are typically intended to be held over extended investment periods and, accordingly, the Firm has no expectation for short-term gain with respect to these investments.

The Firm's approach to managing principal risk is consistent with the Firm's general risk governance structure. A firm-wide risk policy framework exists for all principal investing activities. All investments are approved by investment committees that include executives who are independent from the investing businesses. An independent valuation function is responsible for reviewing the appropriateness of the carrying values of principal investments, in accordance with relevant accounting, valuation and risk policies. Targeted levels for total and annual investments are established in order to manage the overall size of the portfolios. Industry, geographic, and position level concentration limits are in place and intended to ensure diversification of the portfolios. The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves and/or other risk events.

The Firm's principal investments are managed under various lines of business and are captured within the respective LOB's financial results. Principal investments cover multiple asset classes and occur either as a standalone investing businesses or as part of a broader business platform. Asset classes include private equity, tax equity investments including affordable housing, and mezzanine/junior debt investments. The majority of the Firm's private equity is reported separately under Corporate/Private Equity (for detailed information, see Private Equity portfolio on page 111 of this Annual Report).

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, fraudulent acts, business interruptions, inappropriate behavior of employees, or vendors that do not perform in accordance with their arrangements. These events could result in financial losses, including litigation and regulatory fines, as well as other damage to the Firm, including reputational harm. To monitor and control operational risk, the Firm maintains an overall framework that includes oversight and governance, policies and procedures, consistent practices across the lines of business, and enterprise risk management tools intended to provide a sound and well-controlled operational environment.

The framework clarifies:

- Roles and Responsibilities
  - Ownership of the risk by the businesses and functional areas
  - Monitoring and validation by business control officers
  - Oversight by independent risk management
- Governance through business risk and control committees
- Risk Categories
- Independent review by Internal Audit
- Tools to measure, monitor, and mitigate risk

The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject.

In order to strengthen the focus on the Firm's control environment and drive consistent practices across businesses and functional areas, the Firm established a Firmwide Oversight and Control Group during 2012. Oversight and Control is comprised of dedicated control officers within each of the lines of business and Corporate functional areas, as well as a central oversight team. The group is charged with enhancing the Firm's controls by looking within and across the lines of business and Corporate functional areas to identify and control issues. The group enables the Firm to detect control problems more quickly, escalate issues promptly and get the right people involved to understand common themes and interdependencies among the various parts of the Firm. The group works closely with the Firm's other control-related functions, including Compliance, Legal, Internal Audit and Risk Management, to effectively remediate identified control issues across all affected areas of the Firm. As a result, the group facilitates the effective execution of the Firm's control framework and helps support operational risk management across the Firm.

Risk Management is responsible for defining the Operational Risk Management Framework and providing independent oversight of the framework across the Firm.

Operational risk management framework

The Firm's approach to operational risk management is intended to identify potential issues and mitigate losses by supplementing traditional control-based approaches to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

In addition to the standard Basel risk event categories, the Firm has developed the operational risk categorization taxonomy below for purposes of identification, monitoring, reporting and analysis:

- Fraud risk
- Market practices
- Client management
- Processing error
- Financial reporting error
- Information risk
- Technology risk (including cybersecurity risk)
- Third-party risk
- Disruption and safety risk
- Employee risk
- Risk management error (including model risk)
- Oversight and governance errors

Key components of the Operational Risk Management Framework include:

Risk governance

The Firmwide Control Committee ("FCC") provides a forum for senior management to review and discuss firmwide operational risks including existing and emerging issues as well as operational risk metrics, management and execution. The FCC serves as an escalation point for significant issues raised from LOB and Functional Control Committees, particularly those with potential enterprise-wide impact. The FCC (as well as the LOB and Functional Control Committees) oversees the risk and control environment, which includes reviewing the identification, management and monitoring of operational risk, control issues, remediation actions and enterprise-wide trends. The FCC escalates significant issues to the FRC.

Risk identification assessment
In order to evaluate and monitor operational risk, businesses and functions utilize the Firm's standard risk and control self-assessment ("RCSA") process and supporting architecture. The RCSA process requires management to identify material inherent operational risks, assess the design and operating effectiveness of relevant controls designed to mitigate such risks, and evaluate residual risk.

Action plans are developed for control issues that are identified, and businesses are held accountable for tracking and resolving issues on a timely basis.

Risk monitoring
The Firm has a process for monitoring operational risk event data, which permits analysis of errors and losses as well as trends. Such analysis, performed both at a line of business level and by risk-event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns.

Risk reporting and analysis
Operational risk management reports provide information, including actual operational loss levels, self-assessment results and the status of issue resolution to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and functions.

Risk measurement
Operational risk is measured using a statistical model based on the loss distribution approach. The operational risk capital model uses actual losses, a comprehensive inventory of forward looking potential loss scenarios and adjustments to reflect changes in the quality of the control environment in determining firmwide operational risk capital. This methodology is designed to comply with the Advanced Measurement rules under the Basel framework. For additional information on operational risk capital, see Regulatory Capital on pages 161–165 of this Annual Report.

Operational risk management system
The Firm's operational risk framework is supported by Phoenix, an internally designed operational risk system, which integrates the individual components of the operational risk management framework into a unified, web-based tool. Phoenix enhances the capture, reporting and analysis of operational risk data by enabling risk identification, measurement, monitoring, reporting and analysis to be done in an integrated manner across the Firm.

Audit alignment
Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. This includes reviewing the operational risk framework, the effectiveness of the business self-assessment process, and the loss data-collection and reporting activities.

Insurance
One of the ways operational loss is mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations (e.g., workers compensation), as well as to serve other needs (e.g., property loss and public liability). Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

Cybersecurity
The Firm devotes significant resources to maintain and regularly update its systems and processes that are designed to protect the security of the Firm's computer systems, software, networks and other technology assets against attempts by third parties to obtain unauthorized access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage. The Firm and several other U.S. financial institutions continue to experience significant distributed denial-of-service attacks from technically sophisticated and well-resourced third parties which are intended to disrupt online banking services. The Firm is also regularly targeted by third-parties using malicious code and viruses, and has also experienced other attempts to breach the security of the Firm's systems and data which, in certain instances, have resulted in unauthorized access to customer account data. The Firm has established, and continues to establish, defenses on an ongoing basis to mitigate these attacks, and these cyberattacks have not, to date, resulted in any material disruption of the Firm's operations, material harm to the Firm's customers, and have not had a material adverse effect on the Firm's results of operations.

Third parties with which the Firm does business or that facilitate the Firm's business activities (e.g., vendors, exchanges, clearing houses, central depositories, and financial intermediaries) could also be sources of cybersecurity risk to the Firm, including with respect to breakdowns or failures of their systems, misconduct by the employees of such parties, or cyberattacks which could affect their ability to deliver a product or service to the Firm or result in lost or compromised information of the Firm or its clients.

The Firm is working with appropriate government agencies and other businesses, including the Firm's third-party service providers, to continue to enhance defenses and improve resiliency to cybersecurity threats.

Business resiliency

JPMorgan Chase's global resiliency and crisis management program is intended to ensure that the Firm has the ability to recover its critical business functions and supporting assets (i.e., staff, technology and facilities) in the event of a business interruption, and to remain in compliance with global laws and regulations as they relate to resiliency risk. The program includes corporate governance, awareness and training, as well as strategic and tactical initiatives to ensure that risks are properly identified, assessed, and managed.

The Firm's Global Resiliency team has established comprehensive and qualitative tracking and reporting of resiliency plans in order to proactively anticipate and manage various potential disruptive circumstances such as severe weather, technology and communications outages, flooding, mass transit shutdowns and terrorist threats, among others. The resiliency measures utilized by the Firm include backup infrastructure for data centers, a geographically distributed workforce, dedicated recovery facilities, ensuring technological capabilities to support remote work capacity for displaced staff and accommodation of employees at alternate locations. JPMorgan Chase continues to coordinate its global resiliency program across the Firm and mitigate business continuity risks by reviewing and testing recovery procedures. The strength and proficiency of the Firm's global resiliency program has played an integral role in maintaining the Firm's business operations during and quickly after various events that have resulted in business interruptions, such as Superstorm Sandy and Hurricane Isaac in the U.S., monsoon rains in the Philippines, tsunamis in Asia, and earthquakes in Latin America.

LEGAL RISK, REGULATORY RISK, AND COMPLIANCE RISK MANAGEMENT

The Firm's success depends not only on its prudent management of the liquidity, capital, credit, market, principal and operational risks that are part of its business risks, but equally on the recognition among its many constituents – customers and clients, employees, investors, government officials, regulators, as well as the general public – that the Firm adheres consistently to a set of core values that drive the way the Firm conducts business. The Firm has established policies and procedures, and has in place various oversight functions intended to promote its core values and the Firm's culture of "doing the right thing" by doing "first class business in a first class way".

The Firm has in place a Code of Conduct (the "Code"), and each employee is given annual training in respect of the Code and is required annually to affirm his or her compliance with the Code. The Code sets forth the Firm's core principles and fundamental values, including that no employee should ever sacrifice integrity – or give the impression that he or she has – even if one thinks it would help the Firm's business. The Code requires prompt reporting of any known or suspected violation of the Code, any internal Firm policy, or any law or regulation applicable to the Firm's business. It also requires the reporting of any illegal conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's customers, suppliers, contract workers, business partners, or agents. Specified employees are specially trained and designated as "code specialists" who act as a resource to employees on Code of Conduct matters. In addition, concerns may be reported anonymously and the Firm prohibits retaliation against employees for the good faith reporting of any actual or suspected violations of the Code.

Management of conflicts of interest is essential to the maintenance of the Firm's client relationships, and its reputation. Each of the various committees of senior management that oversee and approve transactions and activities undertaken by the Firm are responsible for considering any potential conflicts that may arise from such transactions or activities. In addition, the Firm's Conflicts Office examines the Firm's wholesale transactions that may have the potential to create conflicts of interest for the Firm.

The risk of legal or regulatory fines or sanctions or of financial damage or loss due to the failure to comply with laws, rules, and regulations, is a primary focus of the Legal, Compliance and Oversight and Controls functions. In recent years, the Firm has experienced heightened scrutiny by its regulators of its compliance with regulations, and with respect to its controls and operational processes. The Firm expects such regulatory scrutiny will continue, and that regulators will increasingly use formal actions (such as Consent Orders) instead of informal supervisory actions (such as "Matters Requiring Attention"), resulting in findings of violations of law and impositions of fines and penalties.

In addition to providing legal services and advice to the Firm, and communicating and helping businesses adjust to the legal and regulatory changes facing the businesses, including the heightened scrutiny and expectations of its regulators, the global Legal function is responsible for partnering with the businesses to fully understand and assess the businesses' adherence to laws and regulations, as well as potential exposures on key litigation and transactional matters.

Global Compliance Risk Management is responsible for identifying and advising on compliance risks, establishing policies and procedures intended to mitigate and control compliance risks, implementing training and communication forums to provide appropriate oversight and coordination of compliance risks, overseeing remediation of compliance risks and issues, and independently monitoring and testing the Firm's compliance risk controls.

Legal and Compliance, together with the Oversight and Control function, share responsibility with the businesses for identifying legal, compliance and regulatory issues, escalating these issues through the Firm's risk governance structures, and, as necessary, in assisting the businesses in their remediation efforts. For information about the Oversight & Control function, see Enterprise-Wide Risk Management on pages 113–173.

FIDUCIARY RISK MANAGEMENT

Fiduciary risk is the risk of failing to exercise the applicable standard of loyalty and care, or to act in the best interests of clients or to treat all clients fairly as required under applicable law or regulation, potentially resulting in regulatory action, reputational harm or financial liability.

Depending on the fiduciary activity and capacity in which the Firm is acting, federal and state statutes, common law and regulations require the Firm to adhere to specific duties in which the Firm must always place the client's interests above its own.

Fiduciary risk governance
Fiduciary Risk Management is the responsibility of the relevant LOB risk committees. Senior business, legal, risk and compliance management, who have particular responsibility for fiduciary issues, work with the relevant LOB risk committees with the goal of ensuring that businesses providing investment, trusts and estates, or other fiduciary products or services that give rise to fiduciary duties to clients, perform at the appropriate standard relative to their fiduciary relationship with a client. Each LOB and its respective risk and governance committees are responsible for the oversight and management of the fiduciary risks in their businesses. Of particular focus are the policies and practices that address a business' responsibilities to a client, including performance and service requirements and expectations; client suitability determinations; and disclosure obligations and communications. In this way, the relevant LOB risk committees provide oversight of the Firm's efforts to monitor, measure and control the performance and risks that may arise in the delivery of products or services to clients that give rise to such fiduciary duties, as well as those stemming from any of the Firm's fiduciary responsibilities under the Firm's various employee benefit plans.

During 2013 the Firm created the Firmwide Fiduciary Risk Committee ("FFRC"). The FFRC provides a forum for discussing the risks inherent in the Firm's fiduciary activities. The Committee is responsible for a cross-LOB process to support the consistent identification, escalation and reporting of fiduciary risk issues firmwide. Issues from the FFRC may be escalated to the Firmwide Risk Committee.

REPUTATION RISK MANAGEMENT

Maintenance of the Firm's reputation is the responsibility of each individual employee of the Firm.The Firm's Reputation Risk policy explicitly vests each employee with the responsibility to consider the reputation of the Firm, rather than business benefits and regulatory requirements alone, in deciding whether to pursue any new product, transaction, client, or any other activity. Since the types of events that could harm the Firm's reputation are so varied across the Firm's lines of business, each line of business has a separate reputation risk governance infrastructure in place, which comprises three key elements: clear, documented escalation criteria appropriate to the business footprint; a designated primary discussion forum – in most cases, one or more dedicated reputation risk committees; and a list of designated contacts. Line of business reputation risk governance is overseen by a Firmwide Reputation Risk Governance function, which provides oversight of the governance infrastructure and process to support the consistent identification, escalation, management and reporting of reputation risk issues firmwide.

CAPITAL MANAGEMENT

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables the Firm to build and invest in market-leading businesses, even in a highly stressed environment. Prior to making any decisions on future business activities, senior management considers the implications on the Firm's capital. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to preserving the Firm's capital strength. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative by the Firm's Board of Directors, CEO and Operating Committee. The Firm's balance sheet philosophy focuses on risk-adjusted returns, strong capital and reserves, and robust liquidity.

The Firm's capital management objectives are to hold capital sufficient to:

- Cover all material risks underlying the Firm's business activities;
- Maintain "well-capitalized" status under regulatory requirements;
- Maintain debt ratings that enable the Firm to optimize its funding mix and liquidity sources while minimizing costs;
- Retain flexibility to take advantage of future investment opportunities;
- Maintain sufficient capital in order to continue to build and invest in its businesses through the cycle and in stressed environments; and
- Distribute excess capital to shareholders while balancing other stated objectives.

These objectives are achieved through ongoing monitoring of the Firm's capital position, regular stress testing, and a capital governance framework. Capital management is intended to be flexible in order to react to a range of potential events. JPMorgan Chase has firmwide and LOB processes for ongoing monitoring and active management of its capital position.

Capital strategy and governance

The Firm's CEO and Operating Committee establish principles and guidelines for capital planning, capital issuance, usage and distributions; and, establish capital targets and minimums for the level and composition of capital in both business-as-usual and highly-stressed environments.

The Firm's capital targets and minimums are calibrated to the U.S. Basel III requirements. The Firm's target Tier 1 common ratio under the Basel III Advanced approach, on a fully phased-in basis, is 10%+. This long-term Tier 1 common ratio target level will enable the Firm to retain market access, continue the Firm's strategy to invest in and grow its businesses; and, maintain flexibility to distribute excess capital. The Firm intends to manage its capital so that it achieves the required capital levels and composition during the transition from Basel I to Basel III, in line with, or ahead of, the required timetable.

The Firm's senior management recognizes the importance of a capital management function that supports strategic decision-making. The Firm has established the Capital Governance Committee and the Regulatory Capital Management Office ("RCMO") as key components in support of this objective. The Capital Governance Committee is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution alternatives. The Committee is also responsible for governing the capital adequacy assessment process, including overall design, assumptions and risk streams, and ensuring that capital stress test programs are designed to adequately capture the idiosyncratic risks across the Firm's businesses. The RCMO is responsible for reviewing, approving and monitoring the implementation of the Firm's capital policies and strategies, as well as its capital adequacy assessment process. The Board of Director's Risk Policy Committee assesses the Firm's capital adequacy process and its components. This review encompasses determining the effectiveness of the capital adequacy process, the appropriateness of the risk tolerance levels, and the strength of the control infrastructure. For additional discussion on the Board's Risk Policy Committee, see Risk Management on pages 113–173 of this Annual Report.

Internal Capital Adequacy Assessment Process

Semiannually, the Firm completes the Internal Capital Adequacy Assessment Process ("ICAAP"), which provides management with a view of the impact of severe and unexpected events on earnings, balance sheet positions, reserves and capital. The Firm's ICAAP integrates stress testing protocols with capital planning.

The process assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. However, when defining a broad range of scenarios, realized events can always be worse. Accordingly, management considers additional stresses outside these scenarios, as necessary. ICAAP results are reviewed by management and the Board of Directors.

Comprehensive Capital Analysis and Review ("CCAR")

The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. The Federal Reserve uses the CCAR and Dodd-Frank Act Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") stress test processes

to ensure that large bank holding companies have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each bank holding company's unique risks to enable them to have the ability to absorb losses under certain stress scenarios. Through the CCAR, the Federal Reserve evaluates each bank holding company's capital adequacy and internal capital adequacy assessment processes, as well as its plans to make capital distributions, such as dividend payments or stock repurchases.

The Firm's CCAR process is integrated into and employs the same methodologies utilized in the Firm's ICAAP process. On January 7, 2013, the Firm submitted its capital plan to the Federal Reserve under the Federal Reserve's 2013 CCAR process. On March 14, 2013, the Federal Reserve informed the Firm that it did not object to the Firm's 2013 capital plan, but asked the Firm to submit an additional capital plan.

On September 18, 2013, the Firm submitted the additional capital plan which addressed the weaknesses the Federal Reserve had identified in the Firm's original 2013 submission. On December 2, 2013, the Federal Reserve informed the Firm it did not object to the Firm's 2013 capital plan, as resubmitted.

On January 6, 2014, the Firm submitted its 2014 capital plan to the Federal Reserve under the Federal Reserve's 2014 CCAR process. The Firm expects to receive the Federal Reserve's final response to its plan no later than March 14, 2014.

For additional information on the Firm's capital actions, see Capital actions on pages 166–167, and Notes 22 and 23 on pages 309 and 310, respectively, of this Annual Report.

Capital Disciplines

The Firm uses three primary capital disciplines:

- *Regulatory capital*
- *Economic capital*
- *Line of business equity*

Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

In connection with the U.S. Government's Supervisory Capital Assessment Program in 2009 ("SCAP"), U.S. banking regulators developed an additional measure of capital, Tier 1 common, which is defined as Tier 1 capital less elements of Tier 1 capital not in the form of common equity, such as perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred securities. In 2013, the Federal Reserve employed a minimum 5% Tier 1 common ratio standard for CCAR purposes, in addition to other minimum capital requirements, to assess a bank holding company's capital adequacy. For the 2014 CCAR process, the Federal Reserve has introduced a requirement to include, in addition to the Basel I Tier 1 common standards, a Basel III Tier 1 common test with a minimum of 4% for 2014 projections and 4.5% for 2015 projections.

Basel I and Basel 2.5

The minimum U.S. risk-based capital requirements in effect on December 31, 2013, follow the Capital Accord ("Basel I") of the Basel Committee. In June 2012, U.S. federal banking agencies published the final rule that specifies revised market risk regulatory capital requirements ("Basel 2.5"). While the Firm is still subject to the capital requirements of Basel I, Basel 2.5 rules also became effective for the Firm on January 1, 2013. The Basel 2.5 final rule revised the scope of positions subject to the market risk capital requirements and introduced new market risk measures, which resulted in additional capital requirements for covered positions as defined. The implementation of Basel 2.5 in the first quarter of 2013 resulted in an increase of approximately $150 billion in RWA compared with the Basel I rules at March 31, 2013. The implementation of these rules also resulted in decreases of the Firm's Tier 1 capital, Total capital and Tier 1 common capital ratios by 140 basis points, 160 basis points and 120 basis points, respectively, at March 31, 2013.

A reconciliation of total stockholders' equity to Tier 1 common, Tier 1 capital and Total qualifying capital is presented in the table below.

Risk-based capital components and assets

December 31, (in millions)	2013	2012
Total stockholders' equity	**$ 211,178**	$ 204,069
Less: Preferred stock	**11,158**	9,058
Common stockholders' equity	**200,020**	195,011
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 common	**(1,337)**	(4,198)
Less: Goodwill[a]	**45,320**	45,663
Other intangible assets[a]	**2,012**	2,311
Fair value DVA on structured notes and derivative liabilities related to the Firm's credit quality	**1,300**	1,577
Investments in certain subsidiaries and other	**1,164**	920
Tier 1 common	**148,887**	140,342
Preferred stock	**11,158**	9,058
Qualifying hybrid securities and noncontrolling interests[b]	**5,618**	10,608
Other	**–**	(6)
Total Tier 1 capital	**165,663**	160,002
Long-term debt and other instruments qualifying as Tier 2	**16,695**	18,061
Qualifying allowance for credit losses	**16,969**	15,995
Other	**(41)**	(22)
Total Tier 2 capital	**33,623**	34,034
Total qualifying capital	**$ 199,286**	$ 194,036
Credit risk RWA	**$ 1,223,147**	$ 1,156,102
Market risk RWA	**164,716**	114,276
Total RWA	**$ 1,387,863**	$ 1,270,378
Total adjusted average assets	**$ 2,343,713**	$ 2,243,242

(a) Goodwill and other intangible assets are net of any associated deferred tax liabilities.

(b) Primarily includes trust preferred securities of certain business trusts. Under the Basel III interim final rule published by U.S. federal banking agencies in October 2013, trust preferred securities will be phased out from inclusion as Tier 1 capital, but included as Tier 2 capital, beginning in 2014 through the end of 2015 and phased out from inclusion as Tier 2 capital beginning in 2016 through the end of 2021.

Capital rollforward

The following table presents the changes in Basel I Tier 1 common, Tier 1 capital and Tier 2 capital for the year ended December 31, 2013.

Year ended December 31, (in millions)	2013
Tier 1 common at December 31, 2012	$ 140,342
Net income applicable to common equity	17,118
Dividends declared on common stock	(5,585)
Net issuance of treasury stock	(2,845)
Changes in capital surplus	(776)
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 common	(40)
Qualifying noncontrolling minority interests in consolidated subsidiaries	(47)
DVA on structured notes and derivative liabilities	277
Goodwill and other nonqualifying intangibles (net of deferred tax liabilities)	642
Other	(199)
Increase in Tier 1 common	8,545
Tier 1 common at December 31, 2013	$ 148,887
Tier 1 capital at December 31, 2012	$ 160,002
Change in Tier 1 common	8,545
Net issuance of noncumulative perpetual preferred stock	2,100
Redemption of qualifying trust preferred securities	(4,942)
Other	(42)
Increase in Tier 1 capital	5,661
Tier 1 capital at December 31, 2013	$ 165,663
Tier 2 capital at December 31, 2012	$ 34,034
Change in long-term debt and other instruments qualifying as Tier 2	(1,366)
Change in allowance for credit losses	974
Other	(19)
Decrease in Tier 2 capital	(411)
Tier 2 capital at December 31, 2013	$ 33,623
Total capital at December 31, 2013	$ 199,286

RWA Rollforward

The following table presents the changes in the credit risk and market risk components of RWA under Basel I including Basel 2.5 for the year ended December 31, 2013. The rollforward categories are estimates, based on the predominant driver of the change.

	Year ended December 31, 2013		
(in billions)	Credit risk RWA	Market risk RWA	Total RWA
RWA at December 31, 2012	$ 1,156	$ 114	$ 1,270
Rule changes[a]	39	134	
Model & data changes[b]	24	1	
Portfolio runoff[c]	(11)	(45)	
Movement in portfolio levels[d]	15	(39)	
Increase in RWA	67	51	118
RWA at December 31, 2013	$ 1,223	$ 165	$ 1,388

(a) Rule changes refer to movements in RWA as a result of changes in regulations, in particular, Basel 2.5, which resulted in certain positions previously captured under market risk under Basel I being included as noncovered positions under credit risk RWA.

(b) Model & data changes refer to movements in RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).

(c) Portfolio runoff for credit risk RWA reflects lower loan balances in Mortgage Banking and for market risk RWA reflects reduced risk from position rolloffs, including changes in the synthetic credit portfolio.

(d) Movement in portfolio levels for credit risk RWA refers to changes in book size, composition, quality, as well as market movements; and for market risk RWA, refers to changes in position and market movements.

The following table presents the risk-based capital ratios for JPMorgan Chase at December 31, 2013 and 2012, under Basel I (and, for December 31, 2013, inclusive of Basel 2.5)

Risk-based capital ratios

December 31,	**2013**	2012
Capital ratios		
Tier 1 capital	**11.9%**	12.6%
Total capital	**14.4**	15.3
Tier 1 leverage	**7.1**	7.1
Tier 1 common[a]	**10.7**	11.0

(a) The Tier 1 common ratio is Tier 1 common capital divided by RWA.

At December 31, 2013 and 2012, JPMorgan Chase maintained Basel I Tier 1 and Total capital ratios in excess of the well-capitalized standards established by the Federal Reserve. In addition, at December 31, 2013 and 2012, the Firm's Basel I Tier 1 common ratio was significantly above the 2013 5% CCAR standard.

Additional information regarding the Firm's capital ratios and the federal regulatory capital standards to which the Firm is subject is presented in Note 28 on pages 316–318 of this Annual Report and the Supervision and Regulation section of the 2013 10-K. For further information on the Firm's Basel 2.5 measures and additional market risk disclosures, see the Firm's consolidated Basel 2.5 Market Risk Pillar 3 Reports which are available on the Firm's website (http://investor.shareholder.com/jpmorganchase/basel.cfm) within 60 days after December 31, 2013.

Basel II & Basel III

U.S. banking regulators published a final Basel II rule in December 2007, which was intended to be more risk sensitive than Basel I and eventually replace Basel I for large and internationally active U.S. banks, including the Firm. The Firm has been reporting Basel II capital ratios in parallel to the banking agencies since 2008. In October 2013, U.S. federal banking agencies published an interim final rule implementing further revisions to the Capital Accord in the U.S.; such further revisions are commonly referred to as "Basel III." Basel III is comprised of a Standardized Approach and an Advanced Approach. For large and internationally active banks, including the Firm, both the Basel III Standardized and Advanced Approaches became effective commencing January 1, 2014.

For 2014, the Basel III Standardized Approach requires the Firm to calculate its capital ratios using the Basel III definition of capital divided by the Basel I definition of RWA, inclusive of Basel 2.5 for market risk. Commencing January 1, 2015 the Basel III Standardized Approach requires the Firm to calculate the ratios using the Basel III definition of capital divided by the Basel III Standardized RWA, inclusive of Basel 2.5 for market risk.

Prior to full implementation of the Basel III Advanced Approach, the Firm is required to complete a qualification period ("parallel run") of at least four consecutive quarters (inclusive of quarters in which the Firm reported in parallel under Basel II) during which it needs to demonstrate that it meets the requirements of the rule to the satisfaction of its U.S. banking regulators. Pursuant to the requirements of the Dodd-Frank Act, the Firm, upon exiting the Basel III Advanced Approach parallel run, will be required to calculate regulatory capital ratios under both the Standardized and Advanced Approaches. The Firm's capital adequacy will be evaluated against the approach that results in the lower ratio.

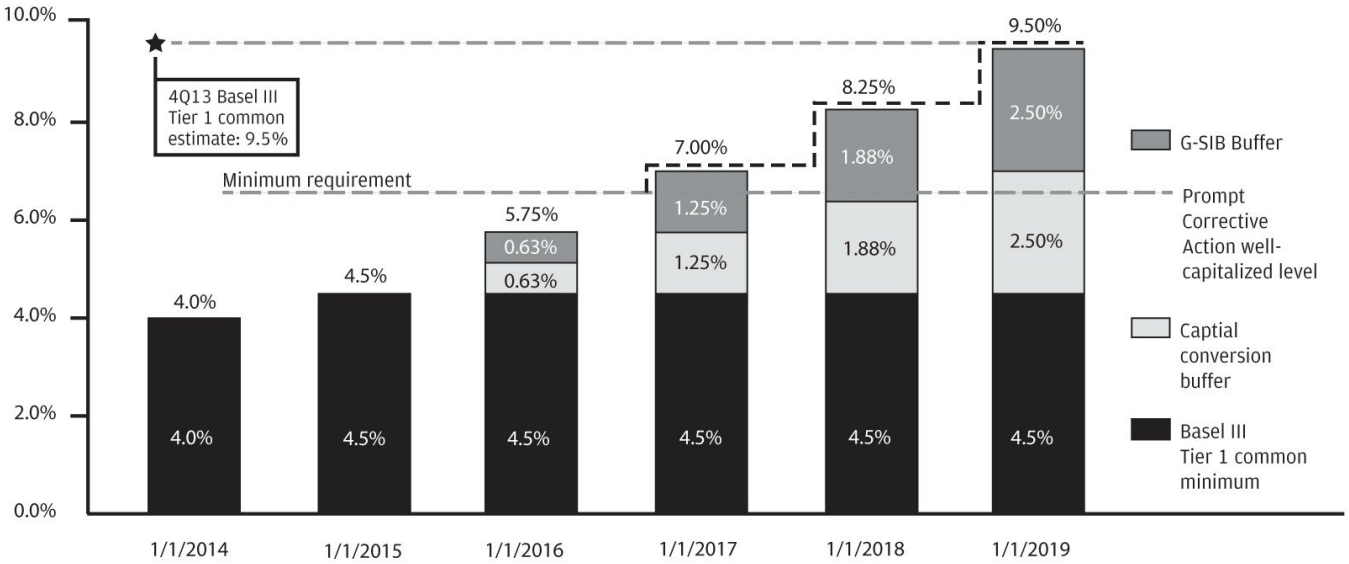
Basel III revises Basel I and II by, among other things, narrowing the definition of capital, and increasing capital requirements for specific exposures. Basel III introduces a new Tier 1 common ratio requirement which has a phase-in period from 2015 to 2019. By January 1, 2019, the minimum Tier 1 common ratio requirement is 7%, comprised of a minimum ratio of 4.5% plus a 2.5% capital conservation buffer.

Global systemically important banks ("GSIBs") will also be required to maintain Tier 1 common requirements above the 7% minimum, in amounts ranging from an additional 1% to an additional 2.5%. In November 2013, the Financial Stability Board ("FSB") indicated that it would require the Firm, as well as one other bank, to hold the additional 2.5% of Tier 1 common; the requirement will be phased in beginning in 2016. The Basel Committee also stated that certain GSIBs could be required to hold as much as an additional 3.5% of Tier 1 common above the 7% minimum if they were to take actions that further increase their systemic importance. Currently, no GSIB (including the

Firm) is required to hold more than the additional 2.5% of Tier 1 common.

In addition, Basel III establishes a 6.5% Tier I common equity standard for the definition of "well capitalized" under the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA"). The Tier I common equity standard is effective from the first quarter of 2015.

The following chart presents the Basel III minimum risk-based capital ratios during the transitional periods and on a fully phased-in basis. The chart also includes management's target for the Firm's Tier 1 common ratio. It is the Firm's current expectation that its Basel III Tier 1 common ratio will exceed the regulatory minimums, both during the transition period and upon full implementation in 2019 and thereafter.



The Firm estimates that its Tier 1 common ratio under the Basel III Advanced Approach on a fully phased-in basis would be 9.5% as of December 31, 2013, achieving management's previously stated objectives. The Tier 1 common ratio as calculated under the Basel III Standardized Approach is estimated at 9.4% as of December 31, 2013. The Tier 1 common ratio under both Basel I and Basel III are non-GAAP financial measures. However, such measures are used by bank regulators, investors and analysts to assess the Firm's capital position and to compare the Firm's capital to that of other financial services companies.

The following table presents a comparison of the Firm's Tier 1 common under Basel I rules to its estimated Tier 1 common under the Advanced Approach of the Basel III rules, along with the Firm's estimated risk-weighted assets. Key differences in the calculation of RWA between Basel I and Basel III Advanced Approach include: (1) Basel III credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas Basel I RWA is based on fixed supervisory risk-weightings which vary only by counterparty type and asset class; and (2) Basel III includes RWA for operational risk, whereas Basel I does not. Operational risk capital takes into consideration operational losses in the quarter following the period in which those losses were realized, and the calculation generally incorporates such losses irrespective of whether the issues or business activity giving rise to the losses have been remediated or reduced. The Firm's operational risk capital model continues to be refined in conjunction with the Firm's Basel III Advanced Approach parallel run. As a result of model enhancements in 2013, as well as taking into consideration the legal expenses incurred by the Firm in 2013, the Firm's operational risk capital increased substantially in 2013 over 2012.

Tier 1 common under Basel III includes additional adjustments and deductions not included in Basel I Tier 1 common, such as the inclusion of accumulated other comprehensive income ("AOCI") related to AFS securities and defined benefit pension and other postretirement employee benefit ("OPEB") plans.

December 31, 2013 (in millions, except ratios)		
Tier 1 common under Basel I rules	$	148,887
Adjustments related to AOCI for AFS securities and defined benefit pension and OPEB plans		1,474
Add back of Basel I deductions[(a)]		1,780
Deduction for deferred tax asset related to net operating loss and foreign tax credit carryforwards		(741)
All other adjustments		(198)
Estimated Tier 1 common under Basel III rules	$	151,202
Estimated risk-weighted assets under Basel III Advanced Approach[(b)]	$	1,590,873
Estimated Tier 1 common ratio under Basel III Advanced Approach[(c)]		9.5%

(a) Certain exposures, which are deducted from capital under Basel I, are risked-weighted under Basel III.

(b) RWA under Basel III Advanced Approach is on a fully phased-in basis. Effective January 1, 2013, market risk RWA requirements under Basel 2.5 became largely consistent across Basel I and Basel III.
(c) The Tier 1 common ratio under Basel III rules is Tier 1 common divided by RWA under Basel III Advanced Approach.

Additionally, the Firm estimates that its Tier 1 capital ratio under the Basel III Advanced Approach on a fully phased-in basis would be 10.2% as of December 31, 2013. The Tier 1 capital ratio as calculated under the Basel III Standardized Approach on a fully phased-in basis is estimated at 10.1% as of December 31, 2013.

Management's current objective is for the Firm to reach an estimated Basel III Tier I common ratio of 10%+ and a Basel III Tier 1 capital ratio of 11.0%, both by the end of 2014. Tier 1 common capital and the Tier 1 common and Tier 1 capital ratios under Basel III are all non-GAAP financial measures. However, such measures are used by bank regulators, investors and analysts to assess the Firm's capital position and to compare the Firm's capital to that of other financial services companies.

The Basel III interim final rule also includes a requirement for advanced approach banking organizations, including the Firm, to calculate a supplementary leverage ratio ("SLR"). The SLR, a non-GAAP financial measure, is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. Total leverage exposure is calculated by taking the Firm's total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-balance sheet exposures, such as undrawn commitments and derivatives future exposure.

Following approval of the Basel III interim final rule, the U.S. banking agencies issued proposed rulemaking relating to the SLR that would require U.S. bank holding companies, including JPMorgan Chase, to have a minimum SLR of at least 5% and insured depository institutions ("IDI"), including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., to have a minimum SLR of at least 6%. The Firm and its IDI subsidiaries are not required to meet the minimum SLR until January 1, 2018. The Firm estimates, based on its current understanding of the U.S. rules, that if the rules were in effect at December 31, 2013, the Firm's SLR would have been approximately 4.7% and JPMorgan Chase Bank, N.A.'s SLR would have been approximately 4.7%. Management's current objective is to achieve an SLR of 5.5% for the Firm and an SLR of 6% for JPMorgan Chase Bank, N.A, each in advance of the SLR effective date.

On January 12, 2014, the Basel Committee issued a revised framework for the calculation of the denominator of the SLR. The estimated impact of these revisions would have been to reduce each of the Firm's SLR and J.P. Morgan Chase Bank, N.A.'s SLR by 10 basis points as of December 31, 2013.

The Firm's estimates of its Tier 1 common ratio under Basel III and of the Firm's and JPMorgan Chase Bank, N.A.'s SLR reflect its current understanding of the U.S. Basel III rules based on the current published rules and on the application of such rules to its businesses as currently conducted. The actual impact on the Firm's capital and SLR ratios at the effective date of the rules may differ from the Firm's current estimates depending on changes the Firm may make to its businesses in the future, further implementation guidance from the regulators, and regulatory approval of certain of the Firm's internal risk models (or, alternatively, regulatory disapproval of the Firm's internal risk models that have previously been conditionally approved).

Economic risk capital

Economic risk capital is another of the disciplines the Firm uses to assess the capital required to support its businesses. Economic risk capital is a measure of the capital needed to cover JPMorgan Chase's business activities in the event of unexpected losses. The Firm measures economic risk capital using internal risk-assessment methodologies and models based primarily on four risk factors: credit, market, operational and private equity risk and considers factors, assumptions and inputs that differ from those required to be used for regulatory capital requirements. Accordingly economic risk capital provides a complementary measure to regulatory capital. As economic risk capital is a separate component of the capital framework for Advanced Approach banking organizations under Basel III, the Firm is currently in the process of enhancing its economic risk capital framework to address the Basel III interim final rule.

Line of business equity

The Firm's framework for allocating capital to its business segments is based on the following objectives:

- Integrate firmwide and line of business capital management activities;
- Measure performance consistently across all lines of business; and
- Provide comparability with peer firms for each of the lines of business

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, considering capital levels for similarly rated peers, regulatory capital requirements (as estimated under Basel III) and economic risk measures. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Line of business equity Year ended December 31, (in billions)	Yearly average 2013	2012	2011
Consumer & Community Banking	**$ 46.0**	$ 43.0	$ 41.0
Corporate & Investment Bank	**56.5**	47.5	47.0
Commercial Banking	**13.5**	9.5	8.0
Asset Management	**9.0**	7.0	6.5
Corporate/Private Equity	**71.4**	77.4	70.8
Total common stockholders' equity	**$ 196.4**	$ 184.4	$ 173.3

Effective January 1, 2012, the Firm revised the capital allocated to each of its businesses, reflecting each segment's Basel III Tier 1 common capital requirements.

Effective January 1, 2013, the Firm further refined the capital allocation framework to align it with the revised line of business structure that became effective in the fourth quarter of 2012. The increase in equity levels for the lines of businesses was largely driven by the evolving regulatory requirements and higher capital targets the Firm has established under the Basel III Advanced Approach.

Effective January 1, 2014, the Firm further revised the capital allocated to certain businesses and will continue to assess the level of capital required for each line of business, as well as the assumptions and methodologies used to allocate capital to the business segments. Further refinements may be implemented in future periods.

Capital actions

Dividends

On March 18, 2011, the Board of Directors increased the Firm's quarterly common stock dividend from $0.05 to $0.25 per share, effective with the dividend paid on April 30, 2011, to shareholders of record on April 6, 2011.

On March 13, 2012, the Board of Directors increased the Firm's quarterly common stock dividend from $0.25 to $0.30 per share, effective with the dividend paid on April 30, 2012, to shareholders of record on April 5, 2012.

On May 21, 2013, the Board of Directors increased the Firm's quarterly common stock dividend from $0.30 to $0.38 per share, effective with the dividend paid on July 31, 2013, to shareholders of record on July 5, 2013.

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratio, capital objectives, and alternative investment opportunities.

The Firm's current expectation is to continue to target a payout ratio of approximately 30% of normalized earnings over time.

For information regarding dividend restrictions, see Note 22 and Note 27 on pages 309 and 316, respectively, of this Annual Report.

The following table shows the common dividend payout ratio based on reported net income.

Year ended December 31,	2013	2012	2011
Common dividend payout ratio	**33%**	23%	22%

Preferred stock

On August 27, 2012, the Firm issued $1.3 billion of fixed-rate noncumulative perpetual preferred stock.

On February 5, 2013 the Firm issued $900 million of noncumulative preferred stock. On each of April 23, 2013, and July 29, 2013, the Firm issued $1.5 billion of noncumulative preferred stock.

The Firm redeemed all $1.8 billion of its outstanding 8.625% noncumulative preferred stock, Series J on September 1, 2013.

On January 22, 2014, January 30, 2014, and February 6, 2014, the Firm issued $2.0 billion, $850 million, and $75 million, respectively, of noncumulative preferred stock. For additional information on the Firm's preferred stock, see Note 22 on page 309 of this Annual Report.

Redemption of outstanding trust preferred securities

On May 8, 2013, the Firm redeemed approximately $5.0 billion, or 100% of the liquidation amount, of the following eight series of trust preferred securities: JPMorgan Chase Capital X, XI, XII, XIV, XVI, XIX, XXIV, and BANK ONE Capital VI. For a further discussion of trust preferred securities, see Note 21 on pages 306–308 of this Annual Report.

Common equity repurchases

On March 13, 2012, the Board of Directors authorized a $15.0 billion common equity (i.e., common stock and warrants) repurchase program. The amount of equity that may be repurchased is also subject to the amount that is set forth in the Firm's annual capital plan that is submitted to the Federal Reserve as part of the CCAR process. As part of this authorization, and in conjunction with the Firm's 2013 CCAR submission, the Board of Directors authorized the Firm to repurchase up to $6 billion gross of common equity commencing with the second quarter of 2013 through the end of the first quarter of 2014. From April 1, 2013, through December 31, 2013, the Firm repurchased $2.2 billion of common equity. The following table shows the Firm's repurchases of common equity for the years ended December 31, 2013, 2012 and 2011, on a trade-date basis. As of December 31, 2013, $8.6 billion of authorized repurchase capacity remained under the $15.0 billion repurchase program.

Year ended December 31, (in millions)	2013	2012	2011
Total number of shares of common stock repurchased	**96**	31	229
Aggregate purchase price of common stock repurchases	**$ 4,789**	$ 1,329	$ 8,827
Total number of warrants repurchased	**–**	18	10
Aggregate purchase price of warrant repurchases	**$ –**	$ 238	$ 122

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities on pages 20–21 of JPMorgan Chase's 2013 Form 10-K.

Broker-dealer regulatory capital

JPMorgan Chase's principal U.S. broker-dealer subsidiaries are J.P. Morgan Securities LLC ("JPMorgan Securities") and J.P. Morgan Clearing Corp. ("JPMorgan Clearing"). JPMorgan Clearing is a subsidiary of JPMorgan Securities and provides clearing and settlement services. JPMorgan Securities and JPMorgan Clearing are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities and JPMorgan Clearing are also each registered as futures commission merchants and subject to Rule 1.17 of the Commodity Futures Trading Commission ("CFTC").

JPMorgan Securities and JPMorgan Clearing have elected to compute their minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule. At December 31, 2013, JPMorgan Securities' net capital, as defined by the Net Capital Rule, was $12.9 billion, exceeding the minimum requirement by $10.8 billion, and JPMorgan Clearing's net capital was $7.1 billion, exceeding the minimum requirement by $5.3 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of $1.0 billion and is also required to notify the Securities and Exchange Commission ("SEC") in the event that tentative net capital is less than $5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2013, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

J.P. Morgan Securities plc (formerly J.P. Morgan Securities Ltd.) is a wholly owned subsidiary of JPMorgan Chase Bank, N.A. and is the Firm's principal operating subsidiary in the U.K. It has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities plc is jointly regulated by the U.K. Prudential Regulation Authority ("PRA") and Financial Conduct Authority ("FCA") (together, formerly the U.K. Financial Services Authority). During the fourth quarter of 2013, J.P. Morgan Securities plc received a capital contribution of $3.3 billion from JPMorgan Chase Bank, N.A., which was made to cover the anticipated capital requirements related to the introduction of Basel III rules, to which J.P. Morgan Securities plc is subject beginning January 1, 2014. Following this capital contribution, at December 31, 2013, J.P. Morgan Securities plc had total capital of $26.5 billion, or a Pillar 1 Total capital ratio of 18.1%, which exceeded the 8% well-capitalized standard applicable to it under Basel 2.5.

LIQUIDITY RISK MANAGEMENT

Liquidity risk management is intended to ensure that the Firm has the appropriate amount, composition and tenor of funding and liquidity in support of its assets. The primary objectives of effective liquidity management are to ensure that the Firm's core businesses are able to operate in support of client needs and meet contractual and contingent obligations through normal economic cycles, as well as during market stress events, and to maintain debt ratings that enable the Firm to optimize its funding mix and liquidity sources while minimizing costs.

The Firm manages liquidity and funding using a centralized, global approach in order to optimize liquidity sources and uses for the Firm as a whole, monitor exposures, identify constraints on the transfer of liquidity among legal entities within the Firm, and maintain the appropriate amount of surplus liquidity as part of the Firm's overall balance sheet management strategy.

In the context of the Firm's liquidity management, Treasury is responsible for:

- Measuring, managing, monitoring and reporting the Firm's current and projected liquidity sources and uses;
- Understanding the liquidity characteristics of the Firm's assets and liabilities;
- Defining and monitoring firmwide and legal entity liquidity strategies, policies, guidelines, and contingency funding plans;
- Liquidity stress testing under a variety of adverse scenarios
- Managing funding mix and deployment of excess short-term cash;
- Defining and implementing funds transfer pricing ("FTP") across all lines of business and regions; and
- Defining and addressing the impact of regulatory changes on funding and liquidity.

The Firm has a liquidity risk governance framework to review, approve and monitor the implementation of liquidity risk policies at the firmwide, regional and line of business levels.

Specific risk committees responsible for liquidity risk governance include ALCO as well as lines of business and regional asset and liability management committees, and the CTC Risk Committee. For further discussion of the risk committees, see Enterprise-wide Risk Management on pages 113–173 of this Annual Report. In addition, during 2013, the Firm established an independent liquidity risk oversight function reporting into the CIO, Treasury and Corporate ("CTC") CRO, which provides independent assessments and monitoring of liquidity risk across the Firm.

Management considers the Firm's liquidity position to be strong as of December 31, 2013, and believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations.

LCR and NSFR

In December 2010, the Basel Committee introduced two new measures of liquidity risk: the liquidity coverage ratio ("LCR"), which is intended to measure the amount of "high-quality liquid assets" ("HQLA") held by the Firm in relation to estimated net cash outflows within a 30-day period during an acute stress event; and the net stable funding ratio ("NSFR") which is intended to measure the "available" amount of stable funding relative to the "required" amount of stable funding over a one-year horizon. The standards require that the LCR be no lower than 100% and the NSFR be greater than 100%.

In January 2013, the Basel Committee introduced certain amendments to the formulation of the LCR, and a revised timetable to phase in the standard. The LCR will continue to become effective on January 1, 2015, but the minimum requirement will begin at 60%, increasing in equal annual increments to reach 100% on January 1, 2019. At December 31, 2013, the Firm was compliant with the Basel III LCR. The LCR may fluctuate from period-to-period due to normal flows from client activity.

On October 24, 2013, the U.S. banking regulators released a proposal to implement a U.S. quantitative liquidity requirement consistent with, but more conservative than, Basel III LCR for large banks and bank holding companies ("U.S. LCR"). The proposal also provides for an accelerated transition period compared to that which is currently required under the Basel III LCR rules. At December 31, 2013, the Firm was also compliant with the U.S. LCR based on its current understanding of the proposed rules.

On January 12, 2014, the Basel Committee released proposed revisions to the NSFR. Based on its current understanding of the proposed revisions, the Firm was compliant with the NSFR as of December 31, 2013.

Funding

Sources of funds

The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio, aggregating approximately $722.2 billion, net of allowance, at December 31, 2013, is funded with a portion of the Firm's deposits (aggregating approximately $1,287.8 billion at December 31, 2013), and through securitizations and, with respect to a portion of the Firm's real estate-related loans, with secured borrowings from the Federal Home Loan Banks. Deposits in excess of the amount utilized to fund loans are primarily invested in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity

risk characteristics. Capital markets secured financing assets and trading assets are primarily funded by the Firm's capital market secured financing liabilities, trading liabilities and a portion of the Firm's long-term debt and equity.

In addition to funding capital markets assets, proceeds from the Firm's debt and equity issuances are used to fund certain loans, and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio. See the discussion below for additional disclosures relating to Deposits, Short-term funding, and Long-term funding and issuance.

Deposits

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. As of December 31, 2013, the Firm's loans-to-deposits ratio was 57%, compared with 61% at December 31, 2012.

As of December 31, 2013, total deposits for the Firm were $1,287.8 billion, compared with $1,193.6 billion at December 31, 2012 (58% and 55% of total liabilities at December 31, 2013 and 2012, respectively). The increase was due to growth in both wholesale and consumer deposits. For further information, see Balance Sheet Analysis on pages 75–76 of this Annual Report.

The Firm typically experiences higher customer deposit inflows at period-ends. Therefore, the Firm believes average deposit balances are more representative of deposit trends. The table below summarizes, by line of business, the period-end and average deposit balances as of and for the years ended December 31, 2013 and 2012.

Deposits			Year ended December 31,	
As of or for the period ended December 31,			Average	
(in millions)	**2013**	2012	**2013**	2012
Consumer & Community Banking	**$ 464,412**	$ 438,517	**$ 453,304**	$ 413,948
Corporate & Investment Bank	**446,237**	385,560	**384,289**	353,048
Commercial Banking	**206,127**	198,383	**184,409**	181,805
Asset Management	**146,183**	144,579	**139,707**	129,208
Corporate/Private Equity	**24,806**	26,554	**27,433**	27,874
Total Firm	**$ 1,287,765**	$ 1,193,593	**$ 1,189,142**	$ 1,105,883

A significant portion of the Firm's deposits are consumer deposits (36% and 37% at December 31, 2013 and 2012, respectively), which are considered particularly stable as they are less sensitive to interest rate changes or market volatility. Additionally, the majority of the Firm's institutional deposits are also considered to be stable sources of funding since they are generated from customers that maintain operating service relationships with the Firm. For further discussions of deposit and liability balance trends, see the discussion of the results for the Firm's business segments and the Balance Sheet Analysis on pages 86–111 and 75–76, respectively, of this Annual Report.

The following table summarizes short-term and long-term funding, excluding deposits, as of December 31, 2013 and 2012, and average balances for the years ended December 31, 2013 and 2012. For additional information, see the Balance Sheet Analysis on pages 75–76 and Note 21 on pages 306–308 of this Annual Report.

Sources of funds (excluding deposits)

As of or for the year ended December 31, (in millions)	2013	2012	Average 2013	Average 2012
Commercial paper:				
Wholesale funding	**$ 17,249**	$ 15,589	**$ 17,785**	$ 14,302
Client cash management	**40,599**	39,778	**35,932**	36,478
Total commercial paper	**$ 57,848**	$ 55,367	**$ 53,717**	$ 50,780
Other borrowed funds	**$ 27,994**	$ 26,636	**$ 30,449**	$ 24,174
Securities loaned or sold under agreements to repurchase:				
Securities sold under agreements to repurchase	**$ 155,808**	$ 212,278	**$ 207,106**	$ 219,625
Securities loaned	**19,509**	23,125	**26,068**	20,763
Total securities loaned or sold under agreements to repurchase[a][b][c]	**$ 175,317**	$ 235,403	**$ 233,174**	$ 240,388
Total senior notes	**$ 135,754**	$ 130,297	**$ 137,662**	$ 141,936
Trust preferred securities	**5,445**	10,399	**7,178**	15,814
Subordinated debt	**29,578**	29,731	**27,955**	29,410
Structured notes	**28,603**	30,194	**29,517**	31,330
Total long-term unsecured funding	**$ 199,380**	$ 200,621	**$ 202,312**	$ 218,490
Credit card securitization	**$ 26,580**	$ 30,123	**$ 27,834**	$ 29,249
Other securitizations[d]	**3,253**	3,680	**3,501**	3,974
FHLB advances	**61,876**	42,045	**55,487**	20,415
Other long-term secured funding[e]	**6,633**	6,358	**6,284**	6,757
Total long-term secured funding	**$ 98,342**	$ 82,206	**$ 93,106**	$ 60,395
Preferred stock[f]	**$ 11,158**	$ 9,058	**$ 10,960**	$ 8,236
Common stockholders' equity[f]	**$ 200,020**	$ 195,011	**$ 196,409**	$ 184,352

(a) Excludes federal funds purchased.
(b) Excluded long-term structured repurchase agreements of $4.6 billion and $3.3 billion as of December 31, 2013 and 2012, respectively, and average balance of $4.2 billion and $7.0 billion for the years ended December 31, 2013 and 2012, respectively.
(c) Excluded long-term securities loaned of $483 million and $457 million as of December 31, 2013 and 2012, respectively, and average balance of $414 million and $113 million for the years ended December 31, 2013 and 2012, respectively.
(d) Other securitizations includes securitizations of residential mortgages and student loans. The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table.
(e) Includes long-term structured notes which are secured.
(f) For additional information on preferred stock and common stockholders' equity see Capital Management on pages 160–167, Consolidated Statements of Changes in Stockholders' Equity on page 187, Note 22 on page 309 and Note 23 on page 310 of this Annual Report.

Short-term funding

A significant portion of the Firm's total commercial paper liabilities, approximately 70% as of December 31, 2013, are not sourced from wholesale funding markets, but were originated from deposits that customers choose to sweep into commercial paper liabilities as a cash management program offered to customers of the Firm.

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. Securities loaned or sold under agreements to repurchase are secured predominantly by high-quality securities collateral, including government-issued debt, agency debt and agency MBS, and constitute a significant portion of the federal funds purchased and securities loaned or sold under purchase agreements. The amounts of securities loaned or sold under agreements to repurchase at December 31, 2013, decreased predominantly due to a change in the mix of the Firm's funding sources. The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment and market-making portfolios); and other market and portfolio factors.

Long-term funding and issuance

Long-term funding provides additional sources of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven by expected client activity and the liquidity required to support this activity. Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding cost, as well as maintaining a certain level of pre-funding at the parent holding company. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

The majority of the Firm's long-term unsecured funding is issued by the parent holding company to provide maximum flexibility in support of both bank and nonbank subsidiary funding. The following table summarizes long-term unsecured issuance and maturities or redemption for the years ended December 31, 2013 and 2012. For additional information, see Note 21 on pages 306–308 of this Annual Report.

Long-term unsecured funding

Year ended December 31, (in millions)	2013	2012
Issuance		
Senior notes issued in the U.S. market	**$ 19,835**	$ 15,566
Senior notes issued in non-U.S. markets	**8,843**	8,341
Total senior notes	**28,678**	23,907
Trust preferred securities	**–**	–
Subordinated debt	**3,232**	–
Structured notes	**16,979**	15,120
Total long-term unsecured funding – issuance	**$ 48,889**	$ 39,027
Maturities/redemptions		
Total senior notes	**$ 18,418**	$ 40,244
Trust preferred securities[(a)]	**5,052**	9,482
Subordinated debt	**2,418**	1,045
Structured notes	**17,785**	18,638
Total long-term unsecured funding – maturities/redemptions	**$ 43,673**	$ 69,409

(a) On May 8, 2013, the Firm redeemed approximately $5.0 billion, or 100% of the liquidation amount, of trust preferred securities pursuant to the optional redemption provisions set forth in the documents governing those trust preferred securities.

In addition, from January 1, 2014, through February 19, 2014, the Firm issued $12.7 billion of senior notes.

The Firm raises secured long-term funding through securitization of consumer credit card loans and advances from the FHLBs. It may also in the future raise long-term funding through securitization of residential mortgages, auto loans and student loans, which will increase funding and investor diversity.

The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemption for the years ended December 31, 2013 and 2012.

Long-term secured funding

Year ended December 31,	Issuance		Maturities/Redemptions	
(in millions)	**2013**	2012	**2013**	2012
Credit card securitization	**$ 8,434**	$ 10,800	**$ 11,853**	$ 13,187
Other securitizations[(a)]	**–**	–	**427**	487
FHLB advances	**23,650**	35,350	**3,815**	11,124
Other long-term secured funding	**$ 751**	$ 534	**$ 159**	$ 1,785
Total long-term secured funding	**$ 32,835**	$ 46,684	**$ 16,254**	$ 26,583

(a) Other securitizations includes securitizations of residential mortgages and student loans.

On January 27, 2014, the Firm securitized $1.8 billion of consumer credit card loans.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. For further description of the client-driven loan securitizations, see Note 16 on pages 288–299 of this Annual Report.

Parent holding company and subsidiary funding

The parent holding company acts as an important source of funding to its subsidiaries. The Firm's liquidity management is intended to ensure that liquidity at the parent holding company is maintained at levels sufficient to fund the operations of the parent holding company and its subsidiaries for an extended period of time in a stress environment where access to normal funding sources is disrupted.

To effectively monitor the adequacy of liquidity and funding at the parent holding company, the Firm uses three primary measures:

- Number of months of pre-funding: The Firm targets pre-funding of the parent holding company to ensure that both contractual and non-contractual obligations can be met for at least 18 months assuming no access to wholesale funding markets. However, due to conservative liquidity management actions taken by the Firm, the current pre-funding of such obligations is greater than target.
- Excess cash: Excess cash is managed to ensure that daily cash requirements can be met in both normal and stressed environments. Excess cash generated by parent holding company issuance activity is placed on deposit with or is advanced to both bank and nonbank subsidiaries or held as liquid collateral purchased through reverse repurchase agreements.
- Stress testing: The Firm conducts regular stress testing for the parent holding company and major subsidiaries to

ensure sufficient liquidity for the Firm in a stressed environment. The Firm's liquidity management takes into consideration its subsidiaries' ability to generate replacement funding in the event the parent holding company requires repayment of the aforementioned deposits and advances. For further information, see the Stress testing discussion below.

HQLA

HQLA is the estimated amount of assets the Firm believes will qualify for inclusion in the Basel III LCR. HQLA primarily consists of cash and certain unencumbered high quality, liquid assets as defined in the rule.

As of December 31, 2013, HQLA was estimated to be approximately $522 billion, compared with $341 billion as of December 31, 2012. The increase in HQLA was due to higher cash balances primarily driven by increased deposits and long-term debt issuance, as well as by a reduction in trading assets. HQLA may fluctuate from period-to-period due to normal flows from client activity.

The following table presents the estimated Basel III LCR HQLA broken out by HQLA-eligible cash and HQLA-eligible securities as of December 31, 2013.

(in billions)	December 31, 2013
HQLA[(a)]	
Eligible cash	$ 294
Eligible securities	228
Total HQLA	$ 522

(a) Table represents Basel III LCR HQLA. HQLA under proposed U.S. LCR is estimated to be lower primarily due to exclusions of certain security types based on the Firm's understanding of the proposed rule.

In addition to HQLA, as of December 31, 2013, the Firm has approximately $282 billion of unencumbered marketable securities, such as equity securities and fixed income debt securities, available to raise liquidity, if required. Furthermore, the Firm maintains borrowing capacity at various FHLBs, the Federal Reserve Bank discount window and various other central banks as a result of collateral pledged by the Firm to such banks. Although available, the Firm does not view the borrowing capacity at the Federal Reserve Bank discount window and the various other central banks as a primary source of liquidity. As of December 31, 2013, the Firm's remaining borrowing capacity at various FHLBs and the Federal Reserve Bank discount window was approximately $109 billion. This borrowing capacity excludes the benefit of securities included above in HQLA or other unencumbered securities held at the Federal Reserve Bank discount window for which the Firm has not drawn liquidity.

Stress testing

Liquidity stress tests are intended to ensure sufficient liquidity for the Firm under a variety of adverse scenarios. Results of stress tests are therefore considered in the formulation of the Firm's funding plan and assessment of its liquidity position. Liquidity outflow assumptions are modeled across a range of time horizons and varying degrees of market and idiosyncratic stress. Standard stress tests are performed on a regular basis and ad hoc stress tests are performed in response to specific market events or concerns. Stress scenarios are produced for the parent holding company and the Firm's major subsidiaries. In addition, separate regional liquidity stress testing is performed.

Liquidity stress tests assume all of the Firm's contractual obligations are met and then take into consideration varying levels of access to unsecured and secured funding markets. Additionally, assumptions with respect to potential non-contractual and contingent outflows include, but are not limited to, the following:

- Deposits
  - For bank deposits that have no contractual maturity, the range of potential outflows reflects the type and size of deposit account, and the nature and extent of the Firm's relationship with the depositor.
- Secured funding
  - Range of haircuts on collateral based on security type and counterparty.
- Derivatives
  - Margin calls by exchanges or clearing houses;
  - Collateral calls associated with ratings downgrade triggers and variation margin;
  - Outflows of excess client collateral;
  - Novation of derivative trades.
- Unfunded commitments
  - Potential facility drawdowns reflecting the type of commitment and counterparty.

Contingency funding plan

The Firm's contingency funding plan ("CFP"), which is reviewed and approved by ALCO, provides a documented framework for managing both temporary and longer-term unexpected adverse liquidity stress. The CFP incorporates the limits and indicators set by the Liquidity Risk Oversight group. These limits and indicators are reviewed regularly to identify emerging risks or increased vulnerabilities in the Firm's liquidity position. The CFP is also regularly updated to identify alternative contingent liquidity resources that can be accessed under adverse liquidity circumstances.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on page 77, and Credit risk, liquidity risk and credit-related contingent features in Note 6 on pages 220–233, of this Annual Report.

The credit ratings of the parent holding company and certain of the Firm's significant operating subsidiaries as of December 31, 2013, were as follows.

	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A. Chase Bank USA, N.A.			J.P. Morgan Securities LLC		
December 31, 2013	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investor Services	A3	P-2	Stable	Aa3	P-1	Stable	Aa3	P-1	Stable
Standard & Poor's	A	A-1	Negative	A+	A-1	Stable	A+	A-1	Stable
Fitch Ratings	A+	F1	Stable	A+	F1	Stable	A+	F1	Stable

On June 11, 2013, S&P announced a reassessment of the government support assumptions reflected in its holding company ratings of eight systemically important financial institutions, including the Firm. As a result of this reassessment, the outlook for the parent company was revised to negative from stable; the outlook for the Firm's operating subsidiaries remained unchanged at stable.

On November 14, 2013, Moody's downgraded the Firm and several other bank holding companies based on Moody's reassessment of its assumptions relating to implicit government support for such companies. Specifically, Moody's downgraded the senior and subordinated debt ratings of JPMorgan Chase and Co., and the subordinated debt rating of JPMorgan Chase Bank, N.A. and upgraded the long-term issuer rating of JPMorgan Securities. The parent company downgrade also resulted in Moody's downgrade of the parent company's short-term rating. The rating actions did not have a material adverse impact on the Firm's cost of funds or its ability to fund itself.

Additional downgrades of the Firm's long-term ratings by one notch or two notches could result in a further downgrade of the Firm's short-term ratings. If this were to occur, the Firm believes its cost of funds could increase and access to certain funding markets could be reduced. The nature and magnitude of the impact of further ratings downgrades depends on numerous contractual and behavioral factors (which the Firm believes are incorporated in its liquidity risk and stress testing metrics). The Firm believes it maintains sufficient liquidity to withstand a potential decrease in funding capacity due to further ratings downgrades.

JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, rating uplift assumptions surrounding government support, future profitability, risk management practices, and legal expenses, all of which could lead to adverse ratings actions. Although the Firm closely monitors and endeavors to manage factors influencing its credit ratings, there is no assurance that its credit ratings will not be further changed in the future.

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the value of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's consumer and wholesale lending-related commitments. The allowance for loan losses is intended to adjust the carrying value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date.

The allowance for loan losses includes an asset-specific component, a formula-based component, and a component related to PCI loans. The determination of each of these components involves significant judgment on a number of matters, as discussed below. For further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Note 15 on pages 284–287 of this Annual Report.

Asset-specific component

The asset-specific allowance for loan losses for each of the Firm's portfolio segments is generally measured as the difference between the recorded investment in the impaired loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections further rely upon estimates such as redefault rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are, in turn, dependent on factors such as the level of future home prices, the duration of current overall economic conditions, and other macroeconomic and portfolio-specific factors. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Formula-based component - Consumer loans and lending-related commitments, excluding PCI loans

The formula-based allowance for credit losses for the consumer portfolio, including credit card, is calculated by applying statistical credit loss factors to outstanding principal balances over an estimated loss emergence period to arrive at an estimate of incurred credit losses in the portfolio. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends. In addition, management applies judgment to the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate the total incurred credit losses in the portfolio. Management uses additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate.

The statistical calculation is then adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation; these adjustments are accomplished in part by analyzing the historical loss experience for each major product segment. However, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment in making this adjustment, taking into account uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, borrower behavior, the potential impact of payment recasts within the HELOC portfolio, and other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties. For example, the performance of a HELOC that experiences a payment recast may be affected by both the quality of underwriting standards applied in originating the loan and the general economic conditions in effect at the time of the payment recast. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. The application of different inputs into the statistical calculation, and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for loan losses for the consumer credit portfolio.

Overall, the allowance for credit losses for the consumer portfolio, including credit card, is sensitive to changes in the economic environment (e.g., unemployment rates), delinquency rates, the realizable value of collateral (e.g.,

housing prices), FICO scores, borrower behavior and other risk factors. While all of these factors are important determinants of overall allowance levels, changes in the various factors may not occur at the same time or at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across all geographies or product types. Finally, it is difficult to predict the extent to which changes in these factors would ultimately affect the frequency of losses, the severity of losses or both.

PCI loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain PCI loans, which are accounted for as described in Note 14 on pages 258–283 of this Annual Report. The allowance for loan losses for the PCI portfolio is based on quarterly estimates of the amount of principal and interest cash flows expected to be collected over the estimated remaining lives of the loans.

These cash flow projections are based on estimates regarding default rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are dependent on assumptions regarding the level of future home price declines, and the duration of current overall economic conditions, among other factors. These estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Formula-based component - Wholesale loans and lending-related commitments

The Firm's methodology for determining the allowance for loan losses and the allowance for lending-related commitments requires the early identification of credits that are deteriorating. The Firm uses a risk-rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm to that loan.

The Firm applies its judgment to establish loss factors used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances. Many factors can affect estimates of loss, including volatility of loss given default, probability of default and rating migrations. Consideration is given to the particular source of external data used as well as the time period to which loss data relates (for example, point-in-time loss estimates and estimates that reflect longer views of the credit cycle). Finally, differences in loan characteristics between the Firm's specific loan portfolio and those reflected in the external data could also affect loss estimates. The application of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the modeled loss estimates, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both loss given default and probability of default are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

Allowance for credit losses sensitivity

As noted above, the Firm's allowance for credit losses is sensitive to numerous factors, depending on the portfolio. Changes in economic conditions or in the Firm's assumptions could affect its estimate of probable credit losses inherent in the portfolio at the balance sheet date. For example, deterioration in the following inputs would have the following effects on the Firm's modeled loss estimates as of December 31, 2013, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- For PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment from current levels could imply an increase to modeled credit loss estimates of approximately $1.4 billion.
- For the residential real estate portfolio, excluding PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment from current levels could imply an increase to modeled annual loss estimates of approximately $300 million.
- A 50 basis point deterioration in forecasted credit card loss rates could imply an increase to modeled annualized credit card loan loss estimates of approximately $600 million.
- A one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately $2.1 billion.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors.

These analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm follows in evaluating the risk factors related to its loans, including risk ratings, home price assumptions, and credit card loss estimates, management believes that its current estimate of the allowance for credit loss is appropriate.

Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy. For further information, see Note 3 on pages 195–215 of this Annual Report.

December 31, 2013 (in billions, except ratio data)	Total assets at fair value	Total level 3 assets	
Trading debt and equity instruments	$ 308.9	$ 27.2	
Derivative receivables	65.8	18.6	
Trading assets	374.7	45.8	
AFS securities	330.0	2.3	(a)
Loans	2.0	1.9	
MSRs	9.6	9.6	
Private equity investments	7.5	6.5	
Other	36.5	3.2	
Total assets measured at fair value on a recurring basis	760.3	69.3	
Total assets measured at fair value on a nonrecurring basis	6.2	5.8	
Total assets measured at fair value	$ 766.5	$ 75.1	
Total Firm assets	$ 2,415.7		
Level 3 assets as a percentage of total Firm assets		3.1%	(a)
Level 3 assets as a percentage of total Firm assets at fair value		9.8%	(a)

(a) Reflects $27.4 billion of collateralized loan obligations ("CLOs") transferred from level 3 to level 2 during the year ended December 31, 2013. For further discussion of the transfers, see Note 3 on pages 195–215 of this Annual Report.

Valuation

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Firm has established well-documented processes for determining fair value; for further details see Note 3 on pages 195–215 of this Annual Report. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available for an instrument or a similar instrument, fair value is generally based on models that consider relevant transaction characteristics (such as maturity) and use as inputs market-based or independently sourced parameters.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the valuation hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs — including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 3 on pages 195–215 of this Annual Report.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's credit-worthiness, liquidity considerations, unobservable parameters, and for certain portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole.

During the fourth quarter of 2013 the Firm implemented the FVA framework to incorporate the impact of funding into its valuation estimates for OTC derivatives and structured notes, reflecting an industry migration towards incorporating the market cost of unsecured funding in the valuation of such instruments. Implementation of the FVA framework required a number of important management judgments including: (i) determining when the accumulation of market evidence was sufficiently compelling to implement the FVA framework; (ii) estimating the market clearing price for funding in the relevant market; and (iii) determining the interaction between DVA and FVA, given that DVA already reflects credit spreads, which are a significant component of funding spreads that drive FVA. For further discussion of valuation adjustments applied by the Firm, including FVA, see Note 3 on pages 195–215 of this Annual Report.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, see Note 3 on pages 195–215 of this Annual Report.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 17 on pages 299–304 of this Annual Report.

Management applies significant judgment when estimating the fair value of its reporting units. Estimates of fair value are dependent upon estimates of (a) the future earnings potential of the Firm's reporting units, including the estimated effects of regulatory and legislative changes, such as the Dodd-Frank Act, (b) long-term growth rates and (c) the relevant cost of equity. Imprecision in estimating these factors can affect the estimated fair value of the reporting units.

Based upon the updated valuations for all of its reporting units, the Firm concluded that goodwill allocated to its reporting units was not impaired at December 31, 2013, nor was any goodwill written off during 2013. The fair values of almost all of the Firm's reporting units exceeded their carrying values and did not indicate a significant risk of goodwill impairment based on current projections and valuations. For those reporting units where fair value exceeded carrying value, the excess fair value as a percent of carrying value ranged from approximately 15% to 180%.

As of December 31, 2013, the estimated fair value of the Firm's mortgage lending business within CCB did not exceed its carrying value. While the implied fair value of the goodwill allocated to the mortgage lending business exceeded its carrying value as of December 31, 2013, the associated goodwill remains at an elevated risk for goodwill impairment due to its exposure to U.S. consumer credit risk and the effects of economic, regulatory and legislative changes. The assumptions used in the valuation of this business include: (a) estimates of future cash flows for the business (which are dependent on outstanding loan balances, net interest margin, operating expense, credit losses and the amount of capital necessary to meet regulatory capital requirements), and (b) the cost of equity used to discount those cash flows to a present value. Each of these factors requires significant judgment and the assumptions used are based on management's current best estimate and most current projections, including the anticipated effects of regulatory and legislative changes, derived from the Firm's business forecasting process as reviewed with senior management.

The projections for all of the Firm's reporting units are consistent with the short-term assumptions discussed in the Business Outlook on pages 68–69 of this Annual Report, and, in the longer term, incorporate a set of macroeconomic assumptions and the Firm's best estimates of long-term growth and returns of its businesses. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.

Deterioration in economic market conditions, increased estimates of the effects of recent regulatory or legislative changes, or additional regulatory or legislative changes may result in declines in projected business performance beyond management's current expectations. For example, in the Firm's mortgage lending business, such declines could result from increases in primary mortgage interest rates, lower mortgage origination volume, higher costs to resolve foreclosure-related matters or from deterioration in economic conditions that result in increased credit losses, including decreases in home prices beyond management's current expectations. Declines in business performance, increases in equity capital requirements, or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

For additional information on goodwill, see Note 17 on pages 299–304 of this Annual Report.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations and tax planning strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. The Firm has also recognized deferred tax assets in connection with certain net operating losses. The Firm performs regular reviews to ascertain whether deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize net operating losses before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2013, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

JPMorgan Chase does not provide U.S. federal income taxes on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Changes to the income tax rates applicable to these non-U.S. subsidiaries may have a material impact on the effective tax rate in a future period if such changes were to occur.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective tax rate in the period in which the reassessment occurs.

For additional information on income taxes, see Note 26 on pages 313–315 of this Annual Report.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 31 on pages 326–332 of this Annual Report.

Presentation of other comprehensive income
In June 2011, the FASB issued guidance that modifies the presentation of other comprehensive income in the Consolidated Financial Statements. The guidance requires that items of net income, items of other comprehensive income, and total comprehensive income be presented in one continuous statement or in two separate but consecutive statements. The guidance was effective in the first quarter of 2012, and the Firm adopted the new guidance by electing the two-statement approach, effective January 1, 2012. The application of this guidance only affected the presentation of the Consolidated Financial Statements and had no impact on the Firm's Consolidated Balance Sheets or results of operations.

In February 2013, the FASB issued guidance that requires enhanced disclosures of any reclassifications out of accumulated other comprehensive income. The guidance was effective in the first quarter of 2013. The application of this guidance had no impact on the Firm's Consolidated Balance Sheets or results of operations. For further information, see Note 25 on page 312 of this Annual Report.

Balance sheet netting
In December 2011, the FASB issued guidance that requires enhanced disclosures about certain financial assets and liabilities that are subject to enforceable master netting agreements or similar agreements, or that have otherwise been offset on the balance sheet under certain specific conditions that permit net presentation. In January 2013, the FASB clarified that the scope of this guidance is limited to derivatives, repurchase and reverse repurchase agreements, and securities borrowing and lending transactions. The Firm adopted the new guidance effective the first quarter of 2013. The application of this guidance had no impact on the Firm's Consolidated Balance Sheets or results of operations. For further information, see Notes 1, 6, and 13 on pages 189–191, 220–233, and 255–257, respectively, of this Annual Report.

Investment companies
In June 2013, the FASB issued guidance that clarifies the characteristics of an investment company and requires new disclosures for investment companies. Under the guidance, a company regulated under the Investment Company Act of 1940 is considered an investment company for accounting purposes. All other companies must meet all of the fundamental characteristics described in the guidance and consider other typical characteristics to qualify as an investment company. An investment company will be required to provide additional disclosures, including the fact that the company is an investment company, information about changes, if any, in a company's status as an investment company, and information about financial support provided or contractually required to be provided by an investment company to any of its investees. The guidance will become effective in the first quarter of 2014. The adoption of the guidance is not expected to have a material impact on the Firm's Consolidated Balance Sheets or results of operations.

Inclusion of the Fed funds effective swap rate
In July 2013, the FASB issued guidance that amends the acceptable U.S. benchmark interest rates for hedge accounting involving interest rate risk. In addition to interest rates on direct U.S. Treasury obligations and the LIBOR swap rate, the guidance also permits the overnight indexed swap rate ("OIS") to be designated as a benchmark interest rate for hedge accounting purposes. The amendments are effective prospectively for qualifying new or redesignated hedging relationships entered into on or after July 17, 2013. For further information on the Firm's benchmark interest rate hedges, see Note 6 on pages 220–233 of this Annual Report.

Investments in qualified affordable housing projects
In January 2014, the FASB issued guidance regarding the accounting for investments in affordable housing projects that qualify for the low-income housing tax credit. The guidance replaces the effective yield method and allows companies to make an accounting policy election to amortize the cost of its investments in proportion to the tax benefits received if certain criteria are met, and present the amortization as a component of income tax expense. The guidance will become effective in the first quarter of 2015, with early adoption permitted in the first quarter of 2014. The Firm is currently evaluating this guidance to determine any potential impact on the Firm's Consolidated Financial Statements.

NONEXCHANGE TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based on internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2013.

Year ended December 31, 2013 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2013[a]	$ 7,934	$ 10,745
Effect of legally enforceable master netting agreements[a]	20,729	22,392
Gross fair value of contracts outstanding at January 1, 2013	28,663	33,137
Contracts realized or otherwise settled	(21,406)	(23,246)
Fair value of new contracts	11,955	12,709
Changes in fair values attributable to changes in valuation techniques and assumptions	–	–
Other changes in fair value	3,998	2,647
Gross fair value of contracts outstanding at December 31, 2013	23,210	25,247
Effect of legally enforceable master netting agreements	(15,082)	(15,318)
Net fair value of contracts outstanding at December 31, 2013	$ 8,128	$ 9,929

(a) The prior period has been revised.

The following table indicates the maturities of nonexchange-traded commodity derivative contracts at December 31, 2013.

December 31, 2013 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 13,750	$ 14,766
Maturity 1–3 years	7,155	6,733
Maturity 4–5 years	1,214	1,048
Maturity in excess of 5 years	1,091	2,700
Gross fair value of contracts outstanding at December 31, 2013	23,210	25,247
Effect of legally enforceable master netting agreements	(15,082)	(15,318)
Net fair value of contracts outstanding at December 31, 2013	$ 8,128	$ 9,929

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the Securities and Exchange Commission. In addition, the Firm's senior management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and international business, economic and political conditions and geopolitical events;
- Changes in laws and regulatory requirements, including as a result of recent financial services legislation;
- Changes in trade, monetary and fiscal policies and laws;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity, including approval of its capital plans by banking regulators;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- Technology changes instituted by the Firm, its counterparties or competitors;
- Mergers and acquisitions, including the Firm's ability to integrate acquisitions;
- Ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Ability of the Firm to address enhanced regulatory requirements affecting its mortgage business;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to increase market share;
- Ability of the Firm to attract and retain employees;
- Ability of the Firm to control expense;
- Competitive pressures;
- Changes in the credit quality of the Firm's customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities or conflicts, including any effect of any such disasters, calamities or conflicts on the Firm's power generation facilities and the Firm's other physical commodity-related activities;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operating systems and facilities;
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2013.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2013. In making the assessment, management used the framework in "Internal Control - Integrated Framework (1992)" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2013, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO 1992 criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2013.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2013, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Marianne Lake
Executive Vice President and Chief Financial Officer

February 19, 2014



To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2013 and 2012 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2013 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2013 based on criteria established in *Internal Control - Integrated Framework (1992)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting". Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



February 19, 2014

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2013	2012	2011
Revenue			
Investment banking fees	**$ 6,354**	$ 5,808	$ 5,911
Principal transactions	**10,141**	5,536	10,005
Lending- and deposit-related fees	**5,945**	6,196	6,458
Asset management, administration and commissions	**15,106**	13,868	14,094
Securities gains[(a)]	**667**	2,110	1,593
Mortgage fees and related income	**5,205**	8,687	2,721
Card income	**6,022**	5,658	6,158
Other income	**3,847**	4,258	2,605
Noninterest revenue	**53,287**	52,121	49,545
Interest income	**52,996**	56,063	61,293
Interest expense	**9,677**	11,153	13,604
Net interest income	**43,319**	44,910	47,689
Total net revenue	**96,606**	97,031	97,234
Provision for credit losses	**225**	3,385	7,574
Noninterest expense			
Compensation expense	**30,810**	30,585	29,037
Occupancy expense	**3,693**	3,925	3,895
Technology, communications and equipment expense	**5,425**	5,224	4,947
Professional and outside services	**7,641**	7,429	7,482
Marketing	**2,500**	2,577	3,143
Other expense	**19,761**	14,032	13,559
Amortization of intangibles	**637**	957	848
Total noninterest expense	**70,467**	64,729	62,911
Income before income tax expense	**25,914**	28,917	26,749
Income tax expense	**7,991**	7,633	7,773
Net income	**$ 17,923**	$ 21,284	$ 18,976
Net income applicable to common stockholders	**$ 16,593**	$ 19,877	$ 17,568
Net income per common share data			
Basic earnings per share	**$ 4.39**	$ 5.22	$ 4.50
Diluted earnings per share	**4.35**	5.20	4.48
Weighted-average basic shares	**3,782.4**	3,809.4	3,900.4
Weighted-average diluted shares	**3,814.9**	3,822.2	3,920.3
Cash dividends declared per common share	**$ 1.44**	$ 1.20	$ 1.00

(a) The following other-than-temporary impairment losses are included in securities gains for the periods presented.

Year ended December 31, (in millions)	2013	2012	2011
Debt securities the Firm does not intend to sell that have credit losses			
Total other-than-temporary impairment losses	**$ (1)**	$ (113)	$ (27)
Losses recorded in/(reclassified from) other comprehensive income	**–**	85	(49)
Total credit losses recognized in income	**(1)**	(28)	(76)
Securities the Firm intends to sell	**(20)**	(15)	–
Total other-than-temporary impairment losses recognized in income	**$ (21)**	$ (43)	$ (76)

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of comprehensive income

Year ended December 31, (in millions)	2013	2012	2011
Net income	**$ 17,923**	$ 21,284	$ 18,976
Other comprehensive income/(loss), after-tax			
Unrealized gains/(losses) on AFS securities	**(4,070)**	3,303	1,067
Translation adjustments, net of hedges	**(41)**	(69)	(279)
Cash flow hedges	**(259)**	69	(155)
Defined benefit pension and OPEB plans	**1,467**	(145)	(690)
Total other comprehensive income/(loss), after-tax	**(2,903)**	3,158	(57)
Comprehensive income	**$ 15,020**	$ 24,442	$ 18,919

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2013	2012
Assets		
Cash and due from banks	**$ 39,771**	$ 53,723
Deposits with banks	**316,051**	121,814
Federal funds sold and securities purchased under resale agreements (included **$25,135** and $24,258 at fair value)	**248,116**	296,296
Securities borrowed (included **$3,739** and $10,177 at fair value)	**111,465**	119,017
Trading assets (included assets pledged of **$106,299** and $108,784)	**374,664**	450,028
Securities (included **$329,977** and $371,145 at fair value and assets pledged of **$23,446** and $52,063)	**354,003**	371,152
Loans (included **$2,011** and $2,555 at fair value)	**738,418**	733,796
Allowance for loan losses	**(16,264)**	(21,936)
Loans, net of allowance for loan losses	**722,154**	711,860
Accrued interest and accounts receivable	**65,160**	60,933
Premises and equipment	**14,891**	14,519
Goodwill	**48,081**	48,175
Mortgage servicing rights	**9,614**	7,614
Other intangible assets	**1,618**	2,235
Other assets (included **$15,187** and $16,458 at fair value and assets pledged of **$2,066** and $1,127)	**110,101**	101,775
Total assets[(a)]	**$ 2,415,689**	$ 2,359,141
Liabilities		
Deposits (included **$6,624** and $5,733 at fair value)	**$ 1,287,765**	$ 1,193,593
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$5,426** and $4,388 at fair value)	**181,163**	240,103
Commercial paper	**57,848**	55,367
Other borrowed funds (included **$13,306** and $11,591 at fair value)	**27,994**	26,636
Trading liabilities	**137,744**	131,918
Accounts payable and other liabilities (included **$25** and $36 at fair value)	**194,491**	195,240
Beneficial interests issued by consolidated variable interest entities (included **$1,996** and $1,170 at fair value)	**49,617**	63,191
Long-term debt (included **$28,878** and $30,788 at fair value)	**267,889**	249,024
Total liabilities[(a)]	**2,204,511**	2,155,072
Commitments and contingencies (see Notes 29, 30 and 31 of this Annual Report)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares: issued **1,115,750** and **905,750** shares)	**11,158**	9,058
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Capital surplus	**93,828**	94,604
Retained earnings	**115,756**	104,223
Accumulated other comprehensive income	**1,199**	4,102
Shares held in RSU Trust, at cost (476,642 and 479,126 shares)	**(21)**	(21)
Treasury stock, at cost (**348,825,583** and 300,981,690 shares)	**(14,847)**	(12,002)
Total stockholders' equity	**211,178**	204,069
Total liabilities and stockholders' equity	**$ 2,415,689**	$ 2,359,141

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2013 and 2012. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which were eliminated in consolidation.

December 31, (in millions)	2013	2012
Assets		
Trading assets	**$ 6,366**	$ 11,966
Loans	**70,072**	82,723
All other assets	**2,168**	2,090
Total assets	**$ 78,606**	$ 96,779
Liabilities		
Beneficial interests issued by consolidated variable interest entities	**$ 49,617**	$ 63,191
All other liabilities	**1,061**	1,244
Total liabilities	**$ 50,678**	$ 64,435

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. At December 31, 2013 and 2012, the Firm provided limited program-wide credit enhancement of $2.6 billion and $3.1 billion, respectively, related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 16 on pages 288–299 of this Annual Report.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity

Year ended December 31, (in millions, except per share data)	2013	2012	2011
Preferred stock			
Balance at January 1	**$ 9,058**	$ 7,800	$ 7,800
Issuance of preferred stock	**3,900**	1,258	–
Redemption of preferred stock	**(1,800)**	–	–
Balance at December 31	**11,158**	9,058	7,800
Common stock			
Balance at January 1 and December 31	**4,105**	4,105	4,105
Capital surplus			
Balance at January 1	**94,604**	95,602	97,415
Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects	**(752)**	(736)	(1,688)
Other	**(24)**	(262)	(125)
Balance at December 31	**93,828**	94,604	95,602
Retained earnings			
Balance at January 1	**104,223**	88,315	73,998
Net income	**17,923**	21,284	18,976
Dividends declared:			
Preferred stock	**(805)**	(647)	(629)
Common stock (**$1.44**, $1.20 and $1.00 per share for 2013, 2012 and 2011, respectively)	**(5,585)**	(4,729)	(4,030)
Balance at December 31	**115,756**	104,223	88,315
Accumulated other comprehensive income/(loss)			
Balance at January 1	**4,102**	944	1,001
Other comprehensive income/(loss)	**(2,903)**	3,158	(57)
Balance at December 31	**1,199**	4,102	944
Shares held in RSU Trust, at cost			
Balance at January 1	**(21)**	(38)	(53)
Reissuance from RSU Trust	**–**	17	15
Balance at December 31	**(21)**	(21)	(38)
Treasury stock, at cost			
Balance at January 1	**(12,002)**	(13,155)	(8,160)
Purchase of treasury stock	**(4,789)**	(1,415)	(8,741)
Reissuance from treasury stock	**1,944**	2,574	3,750
Share repurchases related to employee stock-based compensation awards	**–**	(6)	(4)
Balance at December 31	**(14,847)**	(12,002)	(13,155)
Total stockholders' equity	**$ 211,178**	$ 204,069	$ 183,573

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2013	2012	2011
Operating activities			
Net income	**$ 17,923**	$ 21,284	$ 18,976
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Provision for credit losses	**225**	3,385	7,574
Depreciation and amortization	**4,669**	4,190	4,257
Amortization of intangibles	**637**	957	848
Deferred tax expense	**8,003**	1,130	1,693
Investment securities gains	**(667)**	(2,110)	(1,593)
Stock-based compensation	**2,219**	2,545	2,675
Originations and purchases of loans held-for-sale	**(75,928)**	(34,026)	(52,561)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**73,566**	33,202	54,092
Net change in:			
Trading assets	**89,110**	(5,379)	36,443
Securities borrowed	**7,562**	23,455	(18,936)
Accrued interest and accounts receivable	**(2,340)**	1,732	8,655
Other assets	**526**	(4,683)	(15,456)
Trading liabilities	**(9,772)**	(3,921)	7,905
Accounts payable and other liabilities	**(5,743)**	(13,069)	35,203
Other operating adjustments	**(2,037)**	(3,613)	6,157
Net cash provided by operating activities	**107,953**	25,079	95,932
Investing activities			
Net change in:			
Deposits with banks	**(194,363)**	(36,595)	(63,592)
Federal funds sold and securities purchased under resale agreements	**47,726**	(60,821)	(12,490)
Held-to-maturity securities:			
Proceeds from paydowns and maturities	**189**	4	6
Purchases	**(24,214)**	–	–
Available-for-sale securities:			
Proceeds from paydowns and maturities	**89,631**	112,633	86,850
Proceeds from sales	**73,312**	81,957	68,631
Purchases	**(130,266)**	(189,630)	(202,309)
Proceeds from sales and securitizations of loans held-for-investment	**12,033**	6,430	10,478
Other changes in loans, net	**(23,721)**	(30,491)	(58,365)
Net cash (used in)/received from business acquisitions or dispositions	**(149)**	88	102
All other investing activities, net	**(679)**	(3,400)	(63)
Net cash used in investing activities	**(150,501)**	(119,825)	(170,752)
Financing activities			
Net change in:			
Deposits	**81,476**	67,250	203,420
Federal funds purchased and securities loaned or sold under repurchase agreements	**(58,867)**	26,546	(63,116)
Commercial paper and other borrowed funds	**2,784**	9,315	7,230
Beneficial interests issued by consolidated variable interest entities	**(10,433)**	345	1,165
Proceeds from long-term borrowings and trust preferred securities	**83,546**	86,271	54,844
Payments of long-term borrowings and trust preferred securities	**(60,497)**	(96,473)	(82,078)
Excess tax benefits related to stock-based compensation	**137**	255	867
Proceeds from issuance of preferred stock	**3,873**	1,234	–
Redemption of preferred stock	**(1,800)**	–	–
Treasury stock and warrants repurchased	**(4,789)**	(1,653)	(8,863)
Dividends paid	**(6,056)**	(5,194)	(3,895)
All other financing activities, net	**(1,050)**	(189)	(1,868)
Net cash provided by financing activities	**28,324**	87,707	107,706
Effect of exchange rate changes on cash and due from banks	**272**	1,160	(851)
Net (decrease)/increase in cash and due from banks	**(13,952)**	(5,879)	32,035
Cash and due from banks at the beginning of the period	**53,723**	59,602	27,567
Cash and due from banks at the end of the period	**$ 39,771**	$ 53,723	$ 59,602
Cash interest paid	**$ 9,573**	$ 11,161	$ 13,725
Cash income taxes paid, net	**3,502**	2,050	8,153

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small business, commercial banking, financial transaction processing, asset management and private equity. For a discussion of the Firm's business segments, see Note 33 on pages 334–337 of this Annual Report.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the U.S. ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Certain amounts reported in prior periods have been reclassified to conform with the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated. The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity ("VIE").

Voting Interest Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Firm to recognize its proportionate share of the entity's net earnings), or (ii) at fair value if the fair value option was elected. These investments are generally included in other assets, with income or loss included in other income.

Certain Firm-sponsored asset management funds are structured as limited partnerships or limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these funds. In the limited cases where the nonaffiliated partners or members do not have substantive kick-out or participating rights, the Firm consolidates the funds.

The Firm's investment companies make investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated Balance Sheets at fair value, and are recorded in other assets.

Variable Interest Entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is a special purpose entity ("SPE"). SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset

managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivative or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

In January 2010, the Financial Accounting Standards Board ("FASB") issued an amendment which deferred the requirements of the accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds. For the funds to which the deferral applies, the Firm continues to apply other existing authoritative accounting guidance to determine whether such funds should be consolidated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated Balance Sheets.

Use of estimates in the preparation of consolidated financial statements

The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in other comprehensive income/(loss) ("OCI") within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated Statements of Income.

Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the balance sheet when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities sold and purchased under repurchase agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances when the specified conditions are met.

The Firm uses master netting agreements to mitigate counterparty credit risk in certain transactions, including derivatives transactions, repurchase and reverse repurchase agreements, and securities borrowed and loaned agreements. A master netting agreement is a single contract with a counterparty that permits multiple transactions governed by that contract to be terminated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due after expiration of any grace period). Upon the exercise of termination rights by the non-defaulting party, (i) all transactions are terminated, (ii) all transactions are valued and the positive value or "in the money" transactions are netted against the negative value or "out of the money" transactions and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount. Upon exercise of repurchase agreement and securities loaned default rights (i) all securities loan transactions are terminated and accelerated, (ii) all values of securities or cash held or to be delivered are calculated, and all such sums are netted against each other and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount.

Typical master netting agreements for these types of transactions also often contain a collateral/margin agreement that provides for a security interest in or title transfer of securities or cash collateral/margin to the party that has the right to demand margin (the "demanding party"). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount of the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold. The collateral/margin agreement grants to the demanding party, upon default by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin. It also grants to the demanding party the right to liquidate collateral/margin and to apply the proceeds to an amount payable by the counterparty.

For further discussion of the Firm's derivative instruments, see Note 6 on pages 220–233 of this Annual Report. For further discussion of the Firm's repurchase and reverse repurchase agreements, and securities borrowing and lending agreements, see Note 13 on pages 255–257 of this Annual Report.

Statements of cash flows

For JPMorgan Chase's Consolidated Statements of Cash Flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Business changes and developments	Note 2	Page 192
Fair value measurement	Note 3	Page 195
Fair value option	Note 4	Page 215
Derivative instruments	Note 6	Page 220
Noninterest revenue	Note 7	Page 234
Interest income and interest expense	Note 8	Page 236
Pension and other postretirement employee benefit plans	Note 9	Page 237
Employee stock-based incentives	Note 10	Page 247
Securities	Note 12	Page 249
Securities financing activities	Note 13	Page 255
Loans	Note 14	Page 258
Allowance for credit losses	Note 15	Page 284
Variable interest entities	Note 16	Page 288
Goodwill and other intangible assets	Note 17	Page 299
Premises and equipment	Note 18	Page 305
Long-term debt	Note 21	Page 306
Income taxes	Note 26	Page 313
Off-balance sheet lending-related financial instruments, guarantees and other commitments	Note 29	Page 318
Litigation	Note 31	Page 326

Note 2 – Business changes and developments

Student loan business
In September 2013, the Firm announced it ceased student loan originations.

Physical commodities businesses
On July 26, 2013 the Firm announced that it is pursuing strategic alternatives for its physical commodities businesses. Pursuant to that announcement, the Firm is exploring the sale of certain physical commodities operations, including physical oil, gas, power, warehousing facilities and transportation operations. During this process, the Firm will continue to run its physical commodities business as a going concern. The Firm remains fully committed to its traditional banking activities in the commodities markets, including financial derivatives and the trading of precious metals, which are not part of these strategic alternatives.

One Equity Partners
As announced on June 14, 2013, One Equity Partners ("OEP") is expected to raise its next fund from an external group of limited partners and then become independent from JPMorgan Chase. Until it becomes independent from the Firm, OEP will continue to make direct investments for JPMorgan Chase, and thereafter is expected to continue managing the then-existing group of portfolio companies for JPMorgan Chase in order to maximize value for the Firm.

Other business events

Visa B Shares
In December 2013, JP Morgan Chase sold 20 million Visa Class B shares, resulting in a net pre-tax gain of approximately $1.3 billion recorded in other income. In conjunction with the sale, the Firm entered into a derivative instrument with the purchaser under which the Firm will (a) make periodic fixed payments, calculated by reference to the market price of Visa Class A common shares and (b) make or receive payments based on subsequent changes in the conversion rate of Visa Class B shares into Visa Class A shares. The payments under the derivative continue as long as Class B shares remain "restricted". The derivative is accounted for as a trading liability. The fair value of the derivative is estimated using a discounted cash flow methodology and is dependent upon the final resolution of certain Visa litigation matters; changes in fair value will be recognized in other income.

After the sale, the Firm continues to own approximately 40 million Visa Class B shares. These shares will be converted into Visa Class A shares upon final resolution of certain Visa litigation matters; the conversion rate of Visa Class B shares to Visa Class A shares is 0.4206 as of December 31, 2013 and will be adjusted by Visa depending on developments related to certain Visa litigation matters.

One Chase Manhattan Plaza
On December 17, 2013, the Firm sold One Chase Manhattan Plaza, an office building located in New York City, and recognized a pretax gain of $493 million in Other Income.

Settlement with the President's Task Force on Residential Mortgage-Backed Securities ("RMBS")
On November 19, 2013, the Firm announced a resolution of actual and potential civil claims by a number of federal and state government agencies, including the U.S. Department of Justice and, several State Attorneys General, as well as litigation by the Federal Deposit Insurance Corporation, the National Credit Union Administration and the Federal Housing Finance Agency relating to residential mortgage-backed securities activities by JPMorgan Chase, Bear Stearns and Washington Mutual (the "RMBS settlement"). Under the settlement, the Firm paid a total of $9 billion in cash, and committed to provide $4 billion in borrower relief. The cash portion consists of a $2 billion civil monetary penalty and $7 billion in compensatory payments, including $4 billion to resolve the Federal Housing Finance Agency litigation (see "Mortgage-backed securities settlements with the Federal Housing Finance Agency, Freddie Mac, and Fannie Mae" below). The $4 billion of borrower relief will be in the form of principal reduction, forbearance and other direct benefits from various relief programs. The Firm has committed to complete the delivery of the relief to borrowers before the end of 2017.

The Firm's 2013 results of operations reflected the estimated costs of the settlement (i.e., the cash payments as well as the borrower relief). The estimated impact of the cash settlement has been considered in the Firm's legal reserve, whereas the impact of the borrower relief portion of the settlement has been considered in the allowance for loan losses.

RMBS Trust Settlement
On November 15, 2013, the Firm announced it had reached a $4.5 billion agreement with 21 major institutional investors to make a binding offer to the trustees of 330 residential mortgage-backed securities trusts issued by J.P. Morgan, Chase, and Bear Stearns ("RMBS Trust Settlement") to resolve all representation and warranty claims, as well as all servicing claims, on all trusts issued by J.P. Morgan, Chase, and Bear Stearns between 2005 and 2008. The RMBS Trust Settlement is under consideration by the trustees and may be subject to court approval. This agreement does not resolve claims on trusts issued by Washington Mutual. For further information about the RMBS Trust Settlement, see Note 31 on pages 326–332 of this Annual Report.

Mortgage-backed securities settlements with the Federal Housing Finance Agency, Freddie Mac and Fannie Mae
On October 25, 2013, the Firm announced that it had reached a $4.0 billion agreement to resolve all of its mortgage-backed securities ("MBS") litigation with the Federal Housing Finance Agency ("FHFA") as conservator for Freddie Mac and Fannie Mae. The Firm also simultaneously agreed to resolve, for $1.1 billion, other than certain limited types of exposures, outstanding and future mortgage repurchase demands associated with loans sold to the GSEs from 2000 to 2008 ("FHFA Settlement Agreement").

Mortgage foreclosure settlement agreement with the Office of the Comptroller of the Currency and the Board of Governors of the Federal Reserve System
On January 7, 2013, the Firm announced that it and a number of other financial institutions entered into a settlement agreement with the Office of the Comptroller of the Currency ("OCC") and the Board of Governors of the Federal Reserve System ("Federal Reserve") providing for the termination of the independent foreclosure review programs (the "Independent Foreclosure Review"). Under this settlement, the Firm made a cash payment of approximately $760 million into a settlement fund for distribution to qualified borrowers. The Firm has also committed $1.2 billion to foreclosure prevention actions, which will be fulfilled through credits given to the Firm for modifications, short sales and other specified types of borrower relief. Foreclosure prevention actions that earn credit under the Independent Foreclosure Review settlement are in addition to actions taken by the Firm to earn credit under the global settlement entered into by the Firm with state and federal agencies (see "Global settlement on servicing and origination of mortgages" below). The estimated impact of the foreclosure prevention actions required under the Independent Foreclosure Review settlement have been considered in the Firm's allowance for loan losses. The Firm recognized a pretax charge of approximately $700 million in the fourth quarter of 2012 related to the Independent Foreclosure Review settlement.

Washington Mutual, Inc. bankruptcy plan confirmation
On March 19, 2012, a bankruptcy court approved the joint plan containing the global settlement agreement resolving numerous disputes among Washington Mutual, Inc. ("WMI"), JPMorgan Chase and the Federal Deposit Insurance Corporation ("FDIC") as well as significant creditor groups (the "WaMu Global Settlement"). The Firm recognized additional assets, including certain pension-related assets, as well as tax refunds, resulting in a pretax gain of $1.1 billion in 2012.

Global settlement on servicing and origination of mortgages
On February 9, 2012, the Firm announced that it had agreed to a settlement in principle (the "global settlement") with a number of federal and state government agencies, including the U.S. Department of Justice ("DOJ"), the U.S. Department of Housing and Urban Development, the Consumer Financial Protection Bureau and the State Attorneys General, relating to the servicing and origination of mortgages.

The global settlement releases the Firm from certain further claims by the participating government entities related to servicing activities, including foreclosures and loss mitigation activities; certain origination activities; and certain bankruptcy-related activities. Not included in the global settlement are any claims arising out of securitization activities, including representations made to investors with respect to mortgage-backed securities; criminal claims; and repurchase demands from U.S. government-sponsored entities ("GSEs"), among other items.

Also on February 9, 2012, the Firm entered into agreements with the Federal Reserve and the OCC for the payment of civil money penalties related to conduct that was the subject of consent orders entered into with the banking regulators in April 2011.

Subsequent events

Settlement agreement with The U.S. Departments Of Justice, Housing and Urban Development, and Veterans Affairs, and The Federal Housing Administration

On February 4, 2014, the Firm announced that it had reached a settlement with the U.S. Attorney's Office for the Southern District of New York, Federal Housing Administration ("FHA"), the U.S. Department of Housing and Urban Development ("HUD"), and the U.S. Department of Veterans Affairs ("VA") resolving claims relating to the Firm's participation in federal mortgage insurance programs overseen by FHA, HUD and VA ("FHA Settlement"). Under the FHA Settlement, which relates to FHA and VA insurance claims that have been paid to the Firm from 2002 through the date of the settlement, the Firm will pay $614 million in cash, and agree to enhance its quality control program for loans that are submitted in the future to FHA's Direct Endorsement Lender Program. The Firm is fully reserved for the settlement, and any financial impact related to exposure on future claims is not expected to be significant.

Madoff Litigation and Investigations

On January 7, 2014, the Firm announced that certain of its bank subsidiaries had entered into settlements with various governmental agencies in resolution of investigations relating to Bernard L. Madoff Investment Securities LLC ("BLMIS"). The Firm and certain of its subsidiaries also entered into settlements with several private parties in resolution of civil litigation relating to BLMIS. At the same time, certain bank subsidiaries of the Firm consented to the assessment of a civil money penalty by the OCC in connection with various Bank Secrecy Act/Anti-Money Laundering deficiencies, including with relation to the BLMIS fraud, and JPMorgan Chase Bank, N.A. additionally agreed to the assessment of a civil money penalty by the Financial Crimes Enforcement Network for failure to detect and adequately report suspicious transactions relating to BLMIS. For further information on these settlements, see Note 31 on pages 326–332 of this Annual Report.

Note 3 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Firm's Consolidated Balance Sheets). Certain assets (e.g., certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral), liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment).

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on models that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions to those used by the Firm could result in a different estimate of fair value at the reporting date.

Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated Balance Sheets at fair value. The Firm's valuation control function, which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value. In addition, the Firm has a firmwide Valuation Governance Forum ("VGF") comprising senior finance and risk executives to oversee the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the firm-wide head of the valuation control function, and also includes sub-forums for the Corporate & Investment Bank ("CIB"), Mortgage Banking, (part of Consumer & Community Banking) and certain corporate functions including Treasury and Chief Investment Office ("CIO").

The valuation control function verifies fair value estimates leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, additional review is performed by the valuation control function to ensure the reasonableness of estimates that cannot be verified to external independent data, and may include: evaluating the limited market activity including client unwinds; benchmarking of valuation inputs to those for similar instruments; decomposing the valuation of structured instruments into individual components; comparing expected to actual cash flows; reviewing profit and loss trends; and reviewing trends in collateral valuation. In addition there are additional levels of management review for more significant or complex positions.

The valuation control function determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments are applied to the quoted market price for instruments classified within level 1 of the fair value hierarchy (see below for further information on the fair value hierarchy). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

- Liquidity valuation adjustments are considered when the Firm may not be able to observe a recent market price for a financial instrument that trades in an inactive (or less active) market. The Firm estimates the amount of uncertainty in the initial fair value estimate based on the degree of liquidity in the market. Factors that may be considered in determining the liquidity adjustment include: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quotes or alternatively pricing points for similar instruments in active markets; and (3) the volatility of the principal risk component of the financial instrument.

  The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by US GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that a relevant market participant would consider in the transfer of the net open risk position including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.

- Unobservable parameter valuation adjustments may be made when positions are valued using internally developed models that incorporate unobservable parameters – that is, parameters that must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the valuation estimate provided by the model.

Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality and the Firm's own creditworthiness, applying a consistent framework across the Firm. For more information on such adjustments see Credit adjustments on page 212 of this Note

Impact of funding on valuation estimates

The Firm incorporates the impact of funding in its valuation estimates where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. As a result, the fair value of collateralized derivatives is estimated by discounting expected future cash flows at the relevant overnight indexed swap ("OIS") rate given the underlying collateral agreement with the counterparty. Prior to the fourth quarter of 2013, the Firm did not incorporate the impact of funding in its valuation of uncollateralized (including partially collateralized) derivatives and structured notes. However, during the fourth quarter of 2013, the Firm implemented a funding valuation adjustment ("FVA") framework to incorporate its best estimate of the funding cost or benefit that a relevant market participant would consider in the transfer of an OTC derivative or structured note. As a result, the Firm recorded a one time $1.5 billion loss in principal transactions revenue in the fourth quarter, which was recorded in the CIB.

The FVA framework applies to both assets and liabilities, but the adjustment in the fourth quarter largely relates to uncollateralized derivative receivables given that the impact of the Firm's own credit risk, which is a significant component of funding costs, is already incorporated in the valuation of liabilities through the application of DVA.

Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs to those models.

The Firm's Model Risk function within the Firm's Model Risk and Development Group, which in turn reports to the Chief Risk Officer, reviews and approves valuation models used by the Firm. Model reviews consider a number of factors about the model's suitability for valuation of a particular product including whether it accurately reflects the characteristics and significant risks of a particular instrument; the selection and reliability of model inputs; consistency with models for similar products; the appropriateness of any model-related adjustments; and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes.

New significant valuation models, as well as material changes to existing models, are reviewed and approved prior to implementation except where specified conditions are met. The Model Risk function performs an annual firmwide model risk assessment where developments in the product or market are considered in determining whether valuation models which have already been reviewed need to be reviewed and approved again.

Valuation hierarchy

A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following table describes the valuation methodologies used by the Firm to measure its more significant products/ instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology	Classifications in the valuation hierarchy
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features. For further information refer to the discussion of derivatives below. • Market rates for the respective maturity • Collateral	Level 2
Loans and lending-related commitments - wholesale		
Trading portfolio	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are limited) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Yield • Lifetime credit losses • Loss severity • Prepayment speed • Servicing costs	Level 2 or 3
Loans held for investment and associated lending related commitments	Valuations are based on discounted cash flows, which consider: • Credit spreads, derived from the cost of CDS; or benchmark credit curves developed by the Firm, by industry and credit rating, and which take into account the difference in loss severity rates between bonds and loans • Prepayment speed Lending related commitments are valued similar to loans and reflect the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become funded prior to an obligor default For information regarding the valuation of loans measured at collateral value, see Note 14 on pages 258-283 of this Annual Report.	Predominantly level 3
Loans - consumer		
Held for investment consumer loans, excluding credit card	Valuations are based on discounted cash flows, which consider: • Discount rates (derived from primary origination rates and market activity) • Expected lifetime credit losses (considering expected and current default rates for existing portfolios, collateral prices, and economic environment expectations (i.e., unemployment rates)) • Estimated prepayments • Servicing costs • Market liquidity For information regarding the valuation of loans measured at collateral value, see Note 14 on pages 258-283 of this Annual Report.	Predominantly level 3
Held for investment credit card receivables	Valuations are based on discounted cash flows, which consider: • Projected interest income and late fee revenue, funding, servicing and credit costs, and loan repayment rates • Estimated life of receivables (based on projected loan payment rates) • Discount rate - based on expected return on receivables • Credit costs - allowance for loan losses is considered a reasonable proxy for the credit cost based on the short-term nature of credit card receivables	Level 3
Trading loans - Conforming residential mortgage loans expected to be sold	Fair value is based upon observable prices for mortgage-backed securities with similar collateral and incorporates adjustments to these prices to account for differences between the securities and the value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity.	Predominantly level 2

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Securities	Quoted market prices are used where available.	Level 1
	In the absence of quoted market prices, securities are valued based on: • Observable market prices for similar securities • Relevant broker quotes • Discounted cash flows In addition, the following inputs to discounted cash flows are used for the following products: *Mortgage- and asset-backed securities specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity *Collateralized loan obligations ("CLOs"), specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Expected prepayment speed, conditional default rates, loss severity • Credit spreads • Credit rating data	Level 2 or 3
Physical commodities	Valued using observable market prices or data	Predominantly Level 1 and 2
Derivatives	Exchange-traded derivatives that are actively traded and valued using the exchange price, and over-the-counter contracts where quoted prices are available in an active market.	Level 1
	Derivatives that are valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models, that use observable or unobservable valuation inputs (e.g. plain vanilla options and interest rate and credit default swaps). Inputs include: • Contractual terms including the period to maturity • Readily observable parameters including interest rates and volatility • Credit quality of the counterparty and of the Firm • Market funding levels • Correlation levels In addition, the following specific inputs are used for the following derivatives that are valued based on models with significant unobservable inputs: *Structured credit derivatives specific inputs include:* • CDS spreads and recovery rates • Credit correlation between the underlying debt instruments (levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices) • Actual transactions, where available, are used to regularly recalibrate unobservable parameters *Certain long-dated equity option specific inputs include:* • Long-dated equity volatilities *Certain interest rate and FX exotic options specific inputs include:* • Interest rate correlation • Interest rate spread volatility • Foreign exchange correlation • Correlation between interest rates and foreign exchange rates • Parameters describing the evolution of underlying interest rates *Certain commodity derivatives specific inputs include:* • Commodity volatility • Forward commodity price Adjustments to reflect counterparty credit quality (credit valuation adjustments or "CVA"), the Firms own creditworthiness (debit valuation adjustments or "DVA"), and FVA to incorporate the impact of funding see page 212 of this Note.	Level 2 or 3

Product/instrument	Valuation methodology, inputs and assumptions	Classification in the valuation hierarchy
Mortgage servicing rights ("MSRs")	See Mortgage servicing rights in Note 17 on pages 299-304 of this Annual Report.	Level 3
Private equity direct investments	*Private equity direct investments* Fair value is estimated using all available information and considering the range of potential inputs, including: • Transaction prices • Trading multiples of comparable public companies • Operating performance of the underlying portfolio company • Additional available inputs relevant to the investment • Adjustments as required, since comparable public companies are not identical to the company being valued, and for company-specific issues and lack of liquidity	Level 3
	Public investments held in the Private Equity portfolio • Valued using observable market prices less adjustments for relevant restrictions, where applicable	Level 1 or 2
Fund investments (i.e., mutual/collective investment funds, private equity funds, hedge funds, and real estate funds)	Net asset value ("NAV") • NAV is validated by sufficient level of observable activity (i.e., purchases and sales)	Level 1
	• Adjustments to the NAV as required, for restrictions on redemption (e.g., lock up periods or withdrawal limitations) or where observable activity is limited	Level 2 or 3
Beneficial interests issued by consolidated VIE	Valued using observable market information, where available In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE	Level 2 or 3
Long-term debt, not carried at fair value	Valuations are based on discounted cash flows, which consider: • Market rates for respective maturity • The Firm's own creditworthiness (DVA), see page 212 of this Note.	Predominantly level 2
Structured notes (included in deposits, other borrowed funds and long-term debt)	• Valuations are based on discounted cash flow analyses that consider the embedded derivative and the terms and payment structure of the note. • The embedded derivative features are considered using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that use observable or unobservable valuation inputs, depending on the embedded derivative. The specific inputs used vary according to the nature of the embedded derivative features, as described in the discussion above regarding derivative valuation. Adjustments are then made to this base valuation to reflect the Firm's own credit risk (DVA) and to incorporate the impact of funding (FVA). See page 212 of this Note.	Level 2 or 3

The following table presents the asset and liabilities measured at fair value as of December 31, 2013 and 2012 by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2013 (in millions)	Level 1	Level 2	Level 3	Netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 25,135	$ –	$ –	$ 25,135
Securities borrowed	–	3,739	–	–	3,739
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	4	25,582	1,005	–	26,591
Residential – nonagency	–	1,749	726	–	2,475
Commercial – nonagency	–	871	432	–	1,303
Total mortgage-backed securities	4	28,202	2,163	–	30,369
U.S. Treasury and government agencies[a]	14,933	10,547	–	–	25,480
Obligations of U.S. states and municipalities	–	6,538	1,382	–	7,920
Certificates of deposit, bankers' acceptances and commercial paper	–	3,071	–	–	3,071
Non-U.S. government debt securities	25,762	22,379	143	–	48,284
Corporate debt securities	–	24,802	5,920	–	30,722
Loans[b]	–	17,331	13,455	–	30,786
Asset-backed securities	–	3,647	1,272	–	4,919
Total debt instruments	40,699	116,517	24,335	–	181,551
Equity securities	107,667	954	885	–	109,506
Physical commodities[c]	4,968	5,217	4	–	10,189
Other	–	5,659	2,000	–	7,659
Total debt and equity instruments[d]	153,334	128,347	27,224	–	308,905
Derivative receivables:					
Interest rate	419	848,862	5,398	(828,897)	25,782
Credit	–	79,754	3,766	(82,004)	1,516
Foreign exchange	434	151,521	1,644	(136,809)	16,790
Equity	–	45,892	7,039	(40,704)	12,227
Commodity	320	34,696	722	(26,294)	9,444
Total derivative receivables[e]	1,173	1,160,725	18,569	(1,114,708)	65,759
Total trading assets	154,507	1,289,072	45,793	(1,114,708)	374,664
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	77,815	–	–	77,815
Residential – nonagency	–	61,760	709	–	62,469
Commercial – nonagency	–	15,900	525	–	16,425
Total mortgage-backed securities	–	155,475	1,234	–	156,709
U.S. Treasury and government agencies[a]	21,091	298	–	–	21,389
Obligations of U.S. states and municipalities	–	29,461	–	–	29,461
Certificates of deposit	–	1,041	–	–	1,041
Non-U.S. government debt securities	25,648	30,600	–	–	56,248
Corporate debt securities	–	21,512	–	–	21,512
Asset-backed securities:					
Collateralized loan obligations	–	27,409	821	–	28,230
Other	–	11,978	267	–	12,245
Equity securities	3,142	–	–	–	3,142
Total available-for-sale securities	49,881	277,774	2,322	–	329,977
Loans	–	80	1,931	–	2,011
Mortgage servicing rights	–	–	9,614	–	9,614
Other assets:					
Private equity investments[f]	606	429	6,474	–	7,509
All other	4,213	289	3,176	–	7,678
Total other assets	4,819	718	9,650	–	15,187
Total assets measured at fair value on a recurring basis	$ 209,207	$ 1,596,518[g]	$ 69,310[g]	$ (1,114,708)	$ 760,327
Deposits	$ –	$ 4,369	$ 2,255	$ –	$ 6,624
Federal funds purchased and securities loaned or sold under repurchase agreements	–	5,426	–	–	5,426
Other borrowed funds	–	11,232	2,074	–	13,306
Trading liabilities:					
Debt and equity instruments[d]	61,262	19,055	113	–	80,430
Derivative payables:					
Interest rate	321	822,014	3,019	(812,071)	13,283
Credit	–	78,731	3,671	(80,121)	2,281
Foreign exchange	443	156,838	2,844	(144,178)	15,947
Equity	–	46,552	8,102	(39,935)	14,719
Commodity	398	36,609	607	(26,530)	11,084
Total derivative payables[e]	1,162	1,140,744	18,243	(1,102,835)	57,314
Total trading liabilities	62,424	1,159,799	18,356	(1,102,835)	137,744
Accounts payable and other liabilities	–	–	25	–	25
Beneficial interests issued by consolidated VIEs	–	756	1,240	–	1,996
Long-term debt	–	18,870	10,008	–	28,878
Total liabilities measured at fair value on a recurring basis	$ 62,424	$ 1,200,452	$ 33,958	$ (1,102,835)	$ 193,999

December 31, 2012 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 24,258	$ –	$ –	$ 24,258
Securities borrowed	–	10,177	–	–	10,177
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	36,240	498	–	36,738
Residential – nonagency	–	1,509	663	–	2,172
Commercial – nonagency	–	1,565	1,207	–	2,772
Total mortgage-backed securities	–	39,314	2,368	–	41,682
U.S. Treasury and government agencies[a][h]	15,170	7,255	–	–	22,425
Obligations of U.S. states and municipalities	–	16,726	1,436	–	18,162
Certificates of deposit, bankers' acceptances and commercial paper	–	4,759	–	–	4,759
Non-U.S. government debt securities[h]	26,095	44,028	67	–	70,190
Corporate debt securities[h]	–	31,882	5,308	–	37,190
Loans[b]	–	30,754	10,787	–	41,541
Asset-backed securities	–	4,182	3,696	–	7,878
Total debt instruments	41,265	178,900	23,662	–	243,827
Equity securities	106,898	2,687	1,114	–	110,699
Physical commodities[c]	10,107	6,066	–	–	16,173
Other	–	3,483	863	–	4,346
Total debt and equity instruments[d]	158,270	191,136	25,639	–	375,045
Derivative receivables:					
Interest rate[h]	476	1,295,239	6,617	(1,263,127)	39,205
Credit	–	93,821	6,489	(98,575)	1,735
Foreign exchange[h]	450	143,752	3,051	(133,111)	14,142
Equity[h]	–	37,758	4,921	(33,413)	9,266
Commodity[h]	316	42,300	1,155	(33,136)	10,635
Total derivative receivables[e]	1,242	1,612,870	22,233	(1,561,362)	74,983
Total trading assets	159,512	1,804,006	47,872	(1,561,362)	450,028
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	98,388	–	–	98,388
Residential – nonagency	–	74,189	450	–	74,639
Commercial – nonagency	–	12,948	255	–	13,203
Total mortgage-backed securities	–	185,525	705	–	186,230
U.S. Treasury and government agencies[a][h]	11,089	1,041	–	–	12,130
Obligations of U.S. states and municipalities	35	21,489	187	–	21,711
Certificates of deposit	–	2,783	–	–	2,783
Non-U.S. government debt securities[h]	29,556	36,488	–	–	66,044
Corporate debt securities	–	38,609	–	–	38,609
Asset-backed securities:					
Collateralized loan obligations	–	–	27,896	–	27,896
Other	–	12,843	128	–	12,971
Equity securities	2,733	38	–	–	2,771
Total available-for-sale securities	43,413	298,816	28,916	–	371,145
Loans	–	273	2,282	–	2,555
Mortgage servicing rights	–	–	7,614	–	7,614
Other assets:					
Private equity investments[f]	578	–	7,181	–	7,759
All other	4,188	253	4,258	–	8,699
Total other assets	4,766	253	11,439	–	16,458
Total assets measured at fair value on a recurring basis	$ 207,691	$ 2,137,783[g]	$ 98,123[g]	$ (1,561,362)	$ 882,235
Deposits	$ –	$ 3,750	$ 1,983	$ –	$ 5,733
Federal funds purchased and securities loaned or sold under repurchase agreements	–	4,388	–	–	4,388
Other borrowed funds	–	9,972	1,619	–	11,591
Trading liabilities:					
Debt and equity instruments[d][h]	47,469	13,588	205	–	61,262
Derivative payables:					
Interest rate[h]	490	1,256,989	3,295	(1,235,868)	24,906
Credit	–	95,411	4,616	(97,523)	2,504
Foreign exchange[h]	428	155,323	4,801	(141,951)	18,601
Equity[h]	–	37,808	6,727	(32,716)	11,819
Commodity[h]	176	46,548	901	(34,799)	12,826
Total derivative payables[e]	1,094	1,592,079	20,340	(1,542,857)	70,656
Total trading liabilities	48,563	1,605,667	20,545	(1,542,857)	131,918
Accounts payable and other liabilities	–	–	36	–	36
Beneficial interests issued by consolidated VIEs	–	245	925	–	1,170
Long-term debt	–	22,312	8,476	–	30,788
Total liabilities measured at fair value on a recurring basis	$ 48,563	$ 1,646,334	$ 33,584	$ (1,542,857)	$ 185,624

(a) At December 31, 2013 and 2012, included total U.S. government-sponsored enterprise obligations of $91.5 billion and $119.4 billion, respectively, which were predominantly mortgage-related.

(b) At December 31, 2013 and 2012, included within trading loans were $14.8 billion and $26.4 billion, respectively, of residential first-lien mortgages, and $2.1 billion and $2.2 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $6.0 billion and $17.4 billion, respectively, and reverse mortgages of $3.6 billion and $4.0 billion, respectively.

(c) Physical commodities inventories are generally accounted for at the lower of cost or market. "Market" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, market approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when market is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. For a further discussion of the Firm's hedge accounting relationships, see Note 6 on pages 220–233 of this Annual Report. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.

(d) Balances reflect the reduction of securities owned (long positions) by the amount of securities sold but not yet purchased (short positions) when the long and short positions have identical Committee on Uniform Security Identification Procedures numbers ("CUSIPs").

(e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. Therefore, the balances reported in the fair value hierarchy table are gross of any counterparty netting adjustments. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivables and payables balances would be $7.6 billion and $7.4 billion at December 31, 2013 and 2012, respectively; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.

(f) Private equity instruments represent investments within the Corporate/Private Equity line of business. The cost basis of the private equity investment portfolio totaled $8.0 billion and $8.4 billion at December 31, 2013 and 2012, respectively.

(g) Includes investments in hedge funds, private equity funds, real estate and other funds that do not have readily determinable fair values. The Firm uses net asset value per share when measuring the fair value of these investments. At December 31, 2013 and 2012, the fair values of these investments were $3.2 billion and $4.9 billion, respectively, of which $899 million and $1.1 billion, respectively were classified in level 2, and $2.3 billion and $3.8 billion, respectively, in level 3.

(h) The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.

Transfers between levels for instruments carried at fair value on a recurring basis

For the year ended December 31, 2013 and 2011, there were no significant transfers between levels 1 and 2.

During the year ended December 31, 2013, transfers from level 3 to level 2 included certain highly rated CLOs, including $27.4 billion held in the Firm's available-for-sale ("AFS") securities portfolio and $1.4 billion held in the trading portfolio, based on increased liquidity and price transparency; and $1.3 billion of long-term debt, largely driven by an increase in observability of certain equity structured notes. Transfers from level 2 to level 3 included $1.4 billion of corporate debt securities in the trading portfolio largely driven by a decrease in observability for certain credit instruments.

For the year ended December 31, 2012, $113.9 billion of settled U.S. government agency mortgage-backed securities were transferred from level 1 to level 2. While the U.S. government agency mortgage-backed securities market remained highly liquid and transparent, the transfer reflected greater market price differentiation between settled securities based on certain underlying loan specific factors. There were no significant transfers from level 2 to level 1 for the year ended December 31, 2012.

For the years ended December 31, 2012 and 2011, there were no significant transfers from level 2 into level 3. For the year ended December 31, 2012, transfers from level 3 into level 2 included $1.2 billion of derivative payables based on increased observability of certain structured equity derivatives; and $1.8 billion of long-term debt due to increased observability of certain equity structured notes. For the year ended December 31, 2011, transfers from level 3 into level 2 included $2.6 billion of long-term debt due to a decrease in valuation uncertainty of certain structured notes.

All transfers are assumed to occur at the beginning of the quarterly reporting period in which they occur.

During 2012 the liquidity for certain collateralized loan obligations increased and price transparency improved. Accordingly, the Firm incorporated a revised valuation model into its valuation process for CLOs to better calibrate to market data where available. The Firm began to verify fair value estimates from this model to independent sources during the fourth quarter of 2012. Although market liquidity and price transparency have improved, CLO market prices were not yet considered materially observable and therefore CLOs remained in level 3 as of December 31, 2012. The change in the valuation process did not have a significant impact on the fair value of the Firm's CLO positions. As previously described, a portion of the CLOs that were subject to the revised valuation model (namely certain highly rated CLOs) were transferred from level 3 to level 2 of the fair value hierarchy during the year ended December 31, 2013.

Level 3 valuations

The Firm has established well-documented processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3). For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, see pages 196–200 of this Note.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs — including, but not limited to, transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves.

Finally, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, the impact of funding, constraints on liquidity and unobservable parameters, where relevant. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and, for certain instruments, the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. The input range does not reflect the level of input uncertainty; rather, it is driven by the different underlying characteristics of the various instruments within the classification. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices.

Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value. In the Firm's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. The input range and weighted average values will therefore vary from period-to-period and parameter to parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

For the Firm's derivatives and structured notes positions classified within level 3, the equity and interest rate correlation inputs used in estimating fair value were concentrated at the upper end of the range presented, while the credit correlation inputs were distributed across the range presented and the foreign exchange correlation inputs were concentrated at the lower end of the range presented. In addition, the interest rate volatility inputs used in estimating fair value were concentrated at the upper end of the range presented, while equity volatilities were concentrated at the lower end of the range. The forward commodity prices used in estimating the fair value of commodity derivatives were concentrated within the lower end of the range presented.

Level 3 inputs[a]

December 31, 2013 (in millions, except for ratios and basis points)

Product/Instrument	Fair value	Principal valuation technique	Unobservable inputs	Range of input values	Weighted average
Residential mortgage-backed securities and loans	$ 11,089	Discounted cash flows	Yield	3 % - 18%	7%
			Prepayment speed	0 % - 15%	7%
			Conditional default rate	0 % - 100%	26%
			Loss severity	0 % - 100%	21%
Commercial mortgage-backed securities and loans[b]	1,204	Discounted cash flows	Yield	6 % - 29%	11%
			Conditional default rate	0 % - 100%	10%
			Loss severity	0 % - 40%	33%
Corporate debt securities, obligations of U.S. states and municipalities, and other[c]	15,209	Discounted cash flows	Credit spread	88 bps - 255 bps	154 bps
			Yield	1 % - 40%	10%
	5,843	Market comparables	Price	3 - 122	95
Net interest rate derivatives	2,379	Option pricing	Interest rate correlation	(75)% - 95%	
			Interest rate spread volatility	0 % - 60%	
Net credit derivatives[b][c]	95	Discounted cash flows	Credit correlation	34 % - 82%	
Net foreign exchange derivatives	(1,200)	Option pricing	Foreign exchange correlation	45 % - 75%	
Net equity derivatives	(1,063)	Option pricing	Equity volatility	20 % - 55%	
Net commodity derivatives	115	Discounted cash flows	Forward commodity price	$20 - $160 per megawatt hour	
Collateralized loan obligations	821	Discounted cash flows	Credit spread	214 bps - 575 bps	234 bps
			Prepayment speed	20%	20%
			Conditional default rate	2%	2%
			Loss severity	40%	40%
	487	Market comparables	Price	0 - 114	88
Mortgage servicing rights (“MSRs”)	9,614	Discounted cash flows	Refer to Note 17 on pages 299–304 of this Annual Report.		
Private equity direct investments	4,872	Market comparables	EBITDA multiple	4.0x - 14.7x	8.1x
			Liquidity adjustment	0 % - 37%	11%
Private equity fund investments[d]	1,602	Net asset value	Net asset value[f]		
Long-term debt, other borrowed funds, and deposits[e]	13,282	Option pricing	Interest rate correlation	(75)% - 95%	
			Foreign exchange correlation	0 % - 75%	
			Equity correlation	(50)% - 85%	
	1,055	Discounted cash flows	Credit correlation	34 % - 82%	

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated Balance Sheets.

(b) The unobservable inputs and associated input ranges for approximately $735 million of credit derivative receivables and $644 million of credit derivative payables with underlying mortgage risk have been included in the inputs and ranges provided for commercial mortgage-backed securities and loans.

(c) The unobservable inputs and associated input ranges for approximately $1.0 billion of credit derivative receivables and $890 million of credit derivative payables with underlying asset-backed securities risk have been included in the inputs and ranges provided for corporate debt securities, obligations of U.S. states and municipalities and other.

(d) As of December 31, 2013, $757 million of private equity fund exposure was carried at a discount to net asset value per share.

(e) Long-term debt, other borrowed funds and deposits include structured notes issued by the Firm that are predominantly financial instruments containing embedded derivatives. The estimation of the fair value of structured notes is predominantly based on the derivative features embedded within the instruments. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.

(f) The range has not been disclosed due to the wide range of possible values given the diverse nature of the underlying investments.

Changes in and ranges of unobservable inputs

The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent as a change in one unobservable input may give rise to a change in another unobservable input, and where relationships exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline). Such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

In addition, the following discussion provides a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.

Yield – The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

Credit spread – The credit spread is the amount of additional annualized return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

The yield and the credit spread of a particular mortgage-backed security primarily reflect the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield and credit spreads reflects the range of risk inherent in various instruments owned by the Firm. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, loan-to-value ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages. For corporate debt securities, obligations of U.S. states and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.

Prepayment speed – The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool to collateral pool, and are driven by the type and location of the underlying borrower, the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

Conditional default rate – The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral have high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement. Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Firm's market-making portfolios, conditional default rates are most typically at the lower end of the range presented.

Loss severity – The loss severity (the inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

The loss severity applied in valuing a mortgage-backed security investment depends on a host of factors relating to the underlying mortgages. This includes the loan-to-value ratio, the nature of the lender's charge over the property and various other instrument-specific factors.

Correlation – Correlation is a measure of the relationship between the movements of two variables (e.g., how the change in one variable influences the change in the other). Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity and foreign exchange) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement. Correlation inputs between risks within the same asset class are generally narrower than those between underlying risks across asset classes. In addition, the ranges of credit correlation inputs tend to be narrower than those affecting other asset classes.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input as the relationship between the underlying risks may be different over different time periods. Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

Volatility – Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options, commodity options, and interest rate options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option (e.g., the volatility of a particular equity security may be significantly different from that of a particular commodity index), the tenor of the derivative as well as the strike price of the option.

EBITDA multiple – EBITDA multiples refer to the input (often derived from the value of a comparable company) that is multiplied by the historic and/or expected earnings before interest, taxes, depreciation and amortization ("EBITDA") of a company in order to estimate the company's value. An increase in the EBITDA multiple, in isolation, net of adjustments, would result in an increase in a fair value measurement.

Net asset value – Net asset value is the total value of a fund's assets less liabilities. An increase in net asset value would result in an increase in a fair value measurement.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated Balance Sheet amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2013, 2012 and 2011. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains and losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2013 (in millions)	Fair value at January 1, 2013	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2013	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2013
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 498	$ 169	$ 819	$ (381)	$ (100)	$ –	$ 1,005	$ 200
Residential – nonagency	663	407	780	(1,028)	(91)	(5)	726	205
Commercial – nonagency	1,207	114	841	(1,522)	(208)	–	432	(4)
Total mortgage-backed securities	2,368	690	2,440	(2,931)	(399)	(5)	2,163	401
Obligations of U.S. states and municipalities	1,436	71	472	(251)	(346)	–	1,382	18
Non-U.S. government debt securities	67	4	1,449	(1,479)	(8)	110	143	(1)
Corporate debt securities	5,308	103	7,602	(5,975)	(1,882)	764	5,920	466
Loans	10,787	665	10,411	(7,431)	(685)	(292)	13,455	315
Asset-backed securities	3,696	191	1,912	(2,379)	(292)	(1,856)	1,272	105
Total debt instruments	23,662	1,724	24,286	(20,446)	(3,612)	(1,279)	24,335	1,304
Equity securities	1,114	(41)	328	(266)	(135)	(115)	885	46
Physical commodities	–	(4)	–	(8)	–	16	4	(4)
Other	863	558	659	(95)	(120)	135	2,000	1,074
Total trading assets – debt and equity instruments	25,639	2,237 [c]	25,273	(20,815)	(3,867)	(1,243)	27,224	2,420 [c]
Net derivative receivables:[a]								
Interest rate	3,322	1,358	344	(220)	(2,391)	(34)	2,379	107
Credit	1,873	(1,697)	115	(12)	(357)	173	95	(1,449)
Foreign exchange	(1,750)	(101)	3	(4)	683	(31)	(1,200)	(110)
Equity	(1,806)	2,587	2,918	(3,783)	(1,353)	374	(1,063)	872
Commodity	254	816	105	(3)	(1,107)	50	115	410
Total net derivative receivables	1,893	2,963 [c]	3,485	(4,022)	(4,525)	532	326	(170) [c]
Available-for-sale securities:								
Asset-backed securities	28,024	4	579	(57)	(57)	(27,405)	1,088	4
Other	892	26	508	(216)	(6)	30	1,234	25
Total available-for-sale securities	28,916	30 [d]	1,087	(273)	(63)	(27,375)	2,322	29 [d]
Loans	2,282	81 [c]	1,065	(191)	(1,306)	–	1,931	(21) [c]
Mortgage servicing rights	7,614	1,612 [e]	2,215	(725)	(1,102)	–	9,614	1,612 [e]
Other assets:								
Private equity investments	7,181	645 [c]	673	(1,137)	(687)	(201)	6,474	262 [c]
All other	4,258	98 [f]	272	(730)	(722)	–	3,176	53 [f]

Year ended December 31, 2013 (in millions)	Fair value at January 1, 2013	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2013	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2013
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 1,983	$ (82) [c]	$ –	$ –	$ 1,248	$ (222)	$ (672)	$ 2,255	$ (88) [c]
Other borrowed funds	1,619	(177) [c]	–	–	7,108	(6,845)	369	2,074	291 [c]
Trading liabilities – debt and equity instruments	205	(83) [c]	(2,418)	2,594	–	(54)	(131)	113	(100) [c]
Accounts payable and other liabilities	36	(2) [f]	–	–	–	(9)	–	25	(2) [f]
Beneficial interests issued by consolidated VIEs	925	174 [c]	–	–	353	(212)	–	1,240	167 [c]
Long-term debt	8,476	(435) [c]	–	–	6,830	(4,362)	(501)	10,008	(85) [c]

Year ended December 31, 2012 (in millions)	Fair value at January 1, 2012	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2012	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2012
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 86	$ (44)	$ 575	$ (103)	$ (16)	$ –	$ 498	$ (21)
Residential – nonagency	796	151	417	(533)	(145)	(23)	663	74
Commercial – nonagency	1,758	(159)	287	(475)	(104)	(100)	1,207	(145)
Total mortgage-backed securities	2,640	(52)	1,279	(1,111)	(265)	(123)	2,368	(92)
Obligations of U.S. states and municipalities	1,619	37	336	(552)	(4)	–	1,436	(15)
Non-U.S. government debt securities	104	(6)	661	(668)	(24)	–	67	(5)
Corporate debt securities	6,373	187	8,391	(6,186)	(3,045)	(412)	5,308	689
Loans	12,209	836	5,342	(3,269)	(3,801)	(530)	10,787	411
Asset-backed securities	7,965	272	2,550	(6,468)	(614)	(9)	3,696	184
Total debt instruments	30,910	1,274	18,559	(18,254)	(7,753)	(1,074)	23,662	1,172
Equity securities	1,177	(209)	460	(379)	(12)	77	1,114	(112)
Other	880	186	68	(108)	(163)	–	863	180
Total trading assets – debt and equity instruments	32,967	1,251 [c]	19,087	(18,741)	(7,928)	(997)	25,639	1,240 [c]
Net derivative receivables:[a]								
Interest rate	3,561	6,930	406	(194)	(7,071)	(310)	3,322	905
Credit	7,732	(4,487)	124	(84)	(1,416)	4	1,873	(3,271)
Foreign exchange	(1,263)	(800)	112	(184)	436	(51)	(1,750)	(957)
Equity	(3,105)	168	1,676	(2,579)	899	1,135	(1,806)	580
Commodity	(687)	(673)	74	64	1,278	198	254	(160)
Total net derivative receivables	6,238	1,138 [c]	2,392	(2,977)	(5,874)	976	1,893	(2,903) [c]
Available-for-sale securities:								
Asset-backed securities	24,958	135	9,280	(3,361)	(3,104)	116	28,024	118
Other	528	55	667	(113)	(245)	–	892	59
Total available-for-sale securities	25,486	190 [d]	9,947	(3,474)	(3,349)	116	28,916	177 [d]
Loans	1,647	695 [c]	1,536	(22)	(1,718)	144	2,282	12 [c]
Mortgage servicing rights	7,223	(635) [e]	2,833	(579)	(1,228)	–	7,614	(635) [e]
Other assets:								
Private equity investments	6,751	420 [c]	1,545	(512)	(977)	(46)	7,181	333 [c]
All other	4,374	(195) [f]	818	(238)	(501)	–	4,258	(200) [f]

Year ended December 31, 2012 (in millions)	Fair value at January 1, 2012	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2012	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2012
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 1,418	$ 212 [c]	$ –	$ –	$ 1,236	$ (380)	$ (503)	$ 1,983	$ 185 [c]
Other borrowed funds	1,507	148 [c]	–	–	1,646	(1,774)	92	1,619	72 [c]
Trading liabilities – debt and equity instruments	211	(16) [c]	(2,875)	2,940	–	(50)	(5)	205	(12) [c]
Accounts payable and other liabilities	51	1 [f]	–	–	–	(16)	–	36	1 [f]
Beneficial interests issued by consolidated VIEs	791	181 [c]	–	–	221	(268)	–	925	143 [c]
Long-term debt	10,310	328 [c]	–	–	3,662	(4,511)	(1,313)	8,476	(101) [c]

Year ended December 31, 2011 (in millions)	Fair value at January 1, 2011	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2011	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2011
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 174	$ 24	$ 28	$ (39)	$ (43)	$ (58)	$ 86	$ (51)
Residential – nonagency	687	109	708	(432)	(221)	(55)	796	(9)
Commercial – nonagency	2,069	37	796	(973)	(171)	–	1,758	33
Total mortgage-backed securities	2,930	170	1,532	(1,444)	(435)	(113)	2,640	(27)
Obligations of U.S. states and municipalities	2,257	9	807	(1,465)	(1)	12	1,619	(11)
Non-U.S. government debt securities	202	35	552	(531)	(80)	(74)	104	38
Corporate debt securities	4,946	32	8,080	(5,939)	(1,005)	259	6,373	26
Loans	13,144	329	5,532	(3,873)	(2,691)	(232)	12,209	142
Asset-backed securities	8,460	90	4,185	(4,368)	(424)	22	7,965	(217)
Total debt instruments	31,939	665	20,688	(17,620)	(4,636)	(126)	30,910	(49)
Equity securities	1,685	267	180	(541)	(352)	(62)	1,177	278
Other	930	48	36	(39)	(95)	–	880	79
Total trading assets – debt and equity instruments	34,554	980 [c]	20,904	(18,200)	(5,083)	(188)	32,967	308 [c]
Net derivative receivables:[a]								
Interest rate	2,836	5,205	511	(219)	(4,534)	(238)	3,561	1,497
Credit	5,386	2,240	22	(13)	116	(19)	7,732	2,744
Foreign exchange	(614)	(1,913)	191	(20)	886	207	(1,263)	(1,878)
Equity	(2,446)	(60)	715	(1,449)	37	98	(3,105)	(132)
Commodity	(805)	596	328	(350)	(294)	(162)	(687)	208
Total net derivative receivables	4,357	6,068 [c]	1,767	(2,051)	(3,789)	(114)	6,238	2,439 [c]
Available-for-sale securities:								
Asset-backed securities	13,775	(95)	15,268	(1,461)	(2,529)	–	24,958	(106)
Other	512	–	57	(15)	(26)	–	528	8
Total available-for-sale securities	14,287	(95) [d]	15,325	(1,476)	(2,555)	–	25,486	(98) [d]
Loans	1,466	504 [c]	326	(9)	(639)	(1)	1,647	484 [c]
Mortgage servicing rights	13,649	(7,119) [e]	2,603	–	(1,910)	–	7,223	(7,119) [e]
Other assets:								
Private equity investments	7,862	943 [c]	1,452	(2,746)	(594)	(166)	6,751	(242) [c]
All other	4,179	(54) [f]	938	(139)	(521)	(29)	4,374	(83) [f]

Year ended December 31, 2011 (in millions)	Fair value at January 1, 2011	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2011	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2011
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 773	$ 15 [c]	$ –	$ –	$ 433	$ (386)	$ 583	$ 1,418	$ 4 [c]
Other borrowed funds	1,384	(244) [c]	–	–	1,597	(834)	(396)	1,507	(85) [c]
Trading liabilities – debt and equity instruments	54	17 [c]	(533)	778	–	(109)	4	211	(7) [c]
Accounts payable and other liabilities	236	(61) [f]	–	–	–	(124)	–	51	5 [f]
Beneficial interests issued by consolidated VIEs	873	17 [c]	–	–	580	(679)	–	791	(15) [c]
Long-term debt	13,044	60 [c]	–	–	2,564	(3,218)	(2,140)	10,310	288 [c]

(a) All level 3 derivatives are presented on a net basis, irrespective of underlying counterparty.
(b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 18%, 18% and 22% at December 31, 2013, 2012 and 2011, respectively.
(c) Predominantly reported in principal transactions revenue, except for changes in fair value for Consumer & Community Banking ("CCB") mortgage loans, lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.

(d) Realized gains/(losses) on AFS securities, as well as other-than-temporary impairment losses that are recorded in earnings, are reported in securities gains. Unrealized gains/(losses) are reported in OCI. Realized gains/(losses) and foreign exchange remeasurement adjustments recorded in income on AFS securities were $17 million, $145 million, and $(240) million for the years ended December 31, 2013, 2012 and 2011, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were $13 million, $45 million and $145 million for the years ended December 31, 2013, 2012 and 2011, respectively.
(e) Changes in fair value for CCB mortgage servicing rights are reported in mortgage fees and related income.
(f) Largely reported in other income.
(g) Loan originations are included in purchases.
(h) All transfers into and/or out of level 3 are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 analysis

Consolidated Balance Sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 3.1% of total Firm assets at December 31, 2013. The following describes significant changes to level 3 assets since December 31, 2012, for those items measured at fair value on a recurring basis. For further information on changes impacting items measured at fair value on a nonrecurring basis, see Assets and liabilities measured at fair value on a nonrecurring basis on page 213 of this Annual Report.

For the year ended December 31, 2013

Level 3 assets were $69.3 billion at December 31, 2013, reflecting a decrease of $28.8 billion from December 31, 2012, due to the following:

- $27.0 billion decrease in asset-backed AFS securities, predominantly driven by transfers of highly rated CLOs from level 3 to into level 2 during the year ended 2013, based on increased liquidity and price transparency;
- $3.7 billion decrease in gross derivative receivables, predominantly driven by a $2.7 billion decrease from the impact of tightening reference entity credit spreads and risk reductions of credit derivatives, $1.4 billion decrease in foreign exchange derivatives due to market movements, and $1.2 billion decrease in interest rate derivatives due to the increase in interest rates, partially offset by $2.1 billion increase in equity derivatives due to client-driven market-making activity;
- $1.1 billion decrease in all other assets, predominantly driven by sales of tax-oriented and hedge fund investments, and redemptions from investment funds.

The decreases above are partially offset by:

- $2.0 billion increase in MSRs. For further discussion of the change, refer to Note 17 on pages 299–304 of this Annual Report;
- $1.6 billion increase in trading assets – debt and equity instruments, largely driven by net purchases of trading loans, new client-driven financing transactions, and partially offset by transfers of highly rated CLOs from level 3 to into level 2 during the year ended 2013, based on increased liquidity and price transparency.

Gains and Losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the years ended 2013, 2012 and 2011. For further information on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 207–210 of this Annual Report.

2013

- $3.0 billion of net gains on derivatives, largely driven by $2.6 billion of gains on equity derivatives, primarily related to client-driven market-making activity and a rise in equity markets; and $1.4 billion of gains, predominantly on interest rate lock and mortgage loan purchase commitments; partially offset by $1.7 billion of losses on credit derivatives from the impact of tightening reference entity credit spreads;
- $2.2 billion of net gains on trading assets - debt and equity instruments, largely driven by market making and credit spread tightening in nonagency mortgage-backed securities and trading loans, and the impact of market movements on client-driven financing transactions;
- $1.6 billion of net gains on MSRs. For further discussion of the change, refer to Note 17 on pages 299–304 of this Annual Report.

2012

- $1.3 billion of net gains on trading assets - debt and equity instruments, largely driven by tightening of credit spreads and fluctuation in foreign exchange rates;
- $1.1 billion of net gains on derivatives, driven by $6.9 billion of net gains predominantly on interest rate lock commitments due to increased volumes and lower interest rates, partially offset by $4.5 billion of net losses on credit derivatives largely as a result of tightening of reference entity credit spreads.

2011

- $7.1 billion of losses on MSRs. For further discussion of the change, refer to Note 17 on pages 299–304 of this Annual Report;
- $6.1 billion of net gains on derivatives, related to declining interest rates and widening of reference entity credit spreads, partially offset by losses due to fluctuation in foreign exchange rates.

Credit and funding adjustments

When determining the fair value of an instrument, it may be necessary to record adjustments to the Firm's estimates of fair value in order to reflect the counterparty credit quality and the Firm's own creditworthiness:

- Credit valuation adjustments ("CVA") are taken to reflect the credit quality of a counterparty in the valuation of derivatives. CVA adjustments are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few classes of derivative contracts are listed on an exchange, derivative positions are predominantly valued using models that use as their basis observable market parameters. An adjustment therefore may be necessary to reflect the credit quality of each derivative counterparty to arrive at fair value.

  The Firm estimates derivatives CVA using a scenario analysis to estimate the expected credit exposure across all of the Firm's positions with each counterparty, and then estimates losses as a result of a counterparty credit event. The key inputs to this methodology are (i) the expected positive exposure to each counterparty based on a simulation that assumes the current population of existing derivatives with each counterparty remains unchanged and considers contractual factors designed to mitigate the Firm's credit exposure, such as collateral and legal rights of offset; (ii) the probability of a default event occurring for each counterparty, as derived from observed or estimated credit default swap ("CDS") spreads; and (iii) estimated recovery rates implied by CDS, adjusted to consider the differences in recovery rates as a derivative creditor relative to those reflected in CDS spreads, which generally reflect senior unsecured creditor risk.

- Debit valuation adjustments ("DVA") are taken to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. The DVA calculation methodology is generally consistent with the CVA methodology described above and incorporates JPMorgan Chase's credit spread as observed through the CDS market to estimate the probability of default and loss given default as a result of a systemic event affecting the Firm. Structured notes DVA is estimated using the current fair value of the structured note as the exposure amount, and is otherwise consistent with the derivative DVA methodology.

During the fourth quarter of 2013 the Firm implemented the FVA framework to incorporate the impact of funding into its valuation estimates for OTC derivatives and structured notes. The Firm's FVA framework leverages its existing CVA and DVA calculation methodologies, and the key inputs are: (i) the expected funding requirements arising from the Firm's positions with each counterparty and collateral arrangements; (ii) for assets, the estimated market funding cost in the principal market; and (iii) for liabilities, the hypothetical market funding cost for a transfer to a market participant with similar credit standing as the Firm.

The following table provides the credit and funding adjustments, excluding the effect of any hedging activity, reflected within the Consolidated Balance Sheets as of the dates indicated.

December 31, (in millions)	**2013**	2012
Derivative receivables balance[a]	**$ 65,759**	$ 74,983
Derivative payables balance[a]	**57,314**	70,656
Derivatives CVA[b][c]	**(2,352)**	(4,238)
Derivatives DVA and FVA[b][d]	**(322)**	830
Structured notes balance (net of structured notes DVA and FVA)[b][e]	**48,808**	48,112
Structured notes DVA and FVA[b][f]	**952**	1,712

(a) Balances are presented net of applicable credit and funding adjustments.
(b) Positive credit and funding adjustments represent amounts that increased receivable balances or decreased payable balances; negative credit and funding adjustments represent amounts that decreased receivable balances or increased payable balances.
(c) Derivatives CVA, gross of hedges, includes results managed by the Credit Portfolio and other lines of business within the CIB.
(d) At December 31, 2013 and 2012 included derivatives DVA of $715 million and $830 million, respectively.
(e) Structured notes are predominantly financial instruments containing embedded derivatives. At December 31, 2013 and 2012, included $1.1 billion and $1.1 billion, respectively, of financial instruments with with no embedded derivative for which the fair value option has been elected.
(f) At December 31, 2013 and 2012 included structured notes DVA of $1.4 billion and $1.7 billion, respectively.

The following table provides the impact of credit and funding adjustments on earnings in the respective periods, excluding the effect of any hedging activity.

Year ended December 31, (in millions)	**2013**	2012	2011
Derivative CVA[a]	**$ 1,886**	$ 2,698	$ (2,574)
Derivative DVA and FVA[b]	**(1,152)**	(590)	538
Structured notes DVA and FVA[c][d]	**(760)**	(340)	899

(a) Derivatives CVA, gross of hedges, includes results managed by the Credit Portfolio and other lines of business within the CIB.
(b) At December 31, 2013, 2012 and 2011 included derivatives DVA of $(115) million, $(590) million and $538 million, respectively.
(c) Structured notes are measured at fair value based on the Firm's election under the fair value option. For further information on these elections, see Note 4 on pages 215–218 of this Annual Report.
(d) At December 31, 2013, 2012 and 2011 included structured notes DVA of $(337) million, $(340) million and $899 million, respectively.

Assets and liabilities measured at fair value on a nonrecurring basis

At December 31, 2013 and 2012, assets measured at fair value on a nonrecurring basis were $6.2 billion and $5.1 billion, respectively, comprised predominantly of loans. At December 31, 2013, $339 million and $5.8 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. At December 31, 2012, $667 million and $4.4 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. Liabilities measured at fair value on a nonrecurring basis were not significant at December 31, 2013 and 2012. For the years ended December 31, 2013, 2012 and 2011, there were no significant transfers between levels 1, 2, and 3.

Of the $6.2 billion of assets measured at fair value on a nonrecurring basis, $3.6 billion related to trade finance loans that were reclassified to held-for-sale during the fourth quarter of 2013 and subject to a lower of cost or fair value adjustment. These loans were classified as level 3, as they are valued based on the indicative pricing received from external investors, which ranged from a spread of 30 bps to 78 bps, with a weighted average of 60 bps.

At December 31, 2013, the assets measured at fair value on a nonrecurring basis also included $1.7 billion related to residential real estate loans at the net realizable value of the underlying collateral (i.e., collateral-dependent loans and other loans charged off in accordance with regulatory guidance). These amounts are classified as level 3, as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values. These discounts to the broker price opinions ranged from 17% to 62%, with a weighted average of 29%.

The total change in the value of assets and liabilities for which a fair value adjustment has been included in the Consolidated Statements of Income for the years ended December 31, 2013, 2012 and 2011, related to financial instruments held at those dates were losses of $789 million, $1.6 billion and $2.2 billion, respectively; these losses were predominantly associated with loans. The changes reported for the year ended December 31, 2012, included the impact of charge-offs recognized on residential real estate loans discharged under Chapter 7 bankruptcy, as described in Note 14 on page 267 of this Annual Report.

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), see Note 14 on pages 258–283 of this Annual Report.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated Balance Sheets at fair value

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table. However, certain financial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements. Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of JPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated Balance Sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks; deposits with banks; federal funds sold; securities purchased under resale agreements and securities borrowed with short-dated maturities; short-term receivables and accrued interest receivable; commercial paper; federal funds purchased; securities loaned and sold under repurchase agreements with short-dated maturities; other borrowed funds; accounts payable; and accrued liabilities. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents the carrying values and estimated fair values at December 31, 2013 and 2012, of financial assets and liabilities, excluding financial instruments which are carried at fair value on a recurring basis, and information is provided on their classification within the fair value hierarchy. For additional information regarding the financial instruments within the scope of this disclosure, and the methods and significant assumptions used to estimate their fair value, see pages 196–200 of this Note.

	December 31, 2013					December 31, 2012				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value
Financial assets										
Cash and due from banks	**$ 39.8**	**$ 39.8**	**$ –**	**$ –**	**$ 39.8**	$ 53.7	$ 53.7	$ –	$ –	$ 53.7
Deposits with banks	**316.1**	**309.7**	**6.4**	**–**	**316.1**	121.8	114.1	7.7	–	121.8
Accrued interest and accounts receivable	**65.2**	**–**	**64.9**	**0.3**	**65.2**	60.9	–	60.3	0.6	60.9
Federal funds sold and securities purchased under resale agreements	**223.0**	**–**	**223.0**	**–**	**223.0**	272.0	–	272.0	–	272.0
Securities borrowed	**107.7**	**–**	**107.7**	**–**	**107.7**	108.8	–	108.8	–	108.8
Securities, held-to-maturity[a]	**24.0**	**–**	**23.7**	**–**	**23.7**	–	–	–	–	–
Loans, net of allowance for loan losses[b]	**720.1**	**–**	**23.0**	**697.2**	**720.2**	709.3	–	26.4	685.4	711.8
Other	**58.1**	**–**	**54.5**	**4.3**	**58.8**	49.7	–	42.7	7.4	50.1
Financial liabilities										
Deposits	**$ 1,281.1**	**$ –**	**$ 1,280.3**	**$ 1.2**	**$ 1,281.5**	$ 1,187.9	$ –	$ 1,187.2	$ 1.2	$ 1,188.4
Federal funds purchased and securities loaned or sold under repurchase agreements	**175.7**	**–**	**175.7**	**–**	**175.7**	235.7	–	235.7	–	235.7
Commercial paper	**57.8**	**–**	**57.8**	**–**	**57.8**	55.4	–	55.4	–	55.4
Other borrowed funds	**14.7**	**–**	**14.7**	**–**	**14.7**	15.0	–	15.0	–	15.0
Accounts payable and other liabilities	**160.2**	**–**	**158.2**	**1.8**	**160.0**	156.5	–	153.8	2.5	156.3
Beneficial interests issued by consolidated VIEs	**47.6**	**–**	**44.3**	**3.2**	**47.5**	62.0	–	57.7	4.4	62.1
Long-term debt and junior subordinated deferrable interest debentures[c]	**239.0**	**–**	**240.8**	**6.0**	**246.8**	218.2	–	220.0	5.4	225.4

(a) Carrying value includes unamortized discount or premium.

(b) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in the allowance for loan loss calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in the allowance for loan losses. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see Valuation hierarchy on pages 196–200 of this Annual Report.

(c) Carrying value includes unamortized original issue discount and other valuation adjustments.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated Balance Sheets, nor are they actively traded. The carrying value and estimated fair value of the Firm's wholesale lending-related commitments were as follows for the periods indicated.

	December 31, 2013					December 31, 2012				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value
Wholesale lending-related commitments	**$ 0.7**	**$ –**	**$ –**	**$ 1.0**	**$ 1.0**	$ 0.7	$ –	$ –	$ 1.9	$ 1.9

(a) Represents the allowance for wholesale lending-related commitments. Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which are recognized at fair value at the inception of guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases, without notice as permitted by law. For a further discussion of the valuation of lending-related commitments, see page 198 of this Note.

Trading assets and liabilities

Trading assets include debt and equity instruments owned by JPMorgan Chase ("long" positions) that are held for client market-making and client-driven activities, as well as for certain risk management activities, certain loans managed on a fair value basis and for which the Firm has elected the fair value option, and physical commodities inventories that are generally accounted for at the lower of cost or market (market approximates fair value). Trading liabilities include debt and equity instruments that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase instruments at a future date to cover the short positions. Included in trading assets and trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. Trading assets and liabilities are carried at fair value on the Consolidated Balance Sheets. Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).

Trading assets and liabilities – average balances

Average trading assets and liabilities were as follows for the periods indicated.

Year ended December 31, (in millions)	2013	2012	2011
Trading assets – debt and equity instruments	**$ 340,449**	$ 349,337	$ 393,890
Trading assets – derivative receivables	**72,629**	85,744	90,003
Trading liabilities – debt and equity instruments[(a)]	**77,706**	69,001	81,916
Trading liabilities – derivative payables	**64,553**	76,162	71,539

(a) Primarily represent securities sold, not yet purchased.

Note 4 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments not previously carried at fair value.

Elections

Elections were made by the Firm to:

- Mitigate income statement volatility caused by the differences in the measurement basis of elected instruments (for example, certain instruments elected were previously accounted for on an accrual basis) while the associated risk management arrangements are accounted for on a fair value basis;
- Eliminate the complexities of applying certain accounting models (e.g., hedge accounting or bifurcation accounting for hybrid instruments); and/or
- Better reflect those instruments that are managed on a fair value basis.

Elections include the following:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis.
- Securities financing arrangements with an embedded derivative and/or a maturity of greater than one year.
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument.
- Certain investments that receive tax credits and other equity investments acquired as part of the Washington Mutual transaction.
- Structured notes issued as part of CIB's client-driven activities. (Structured notes are predominantly financial instruments that contain embedded derivatives.)
- Long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value.

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated Statements of Income for the years ended December 31, 2013, 2012 and 2011, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2013			2012			2011		
December 31, (in millions)	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	**$ (454)**	**$ –**	**$ (454)**	$ 161	$ –	$ 161	$ 270	$ –	$ 270
Securities borrowed	**10**	**–**	**10**	10	–	10	(61)	–	(61)
Trading assets:									
Debt and equity instruments, excluding loans	**582**	**7** [c]	**589**	513	7 [c]	520	53	(6) [c]	47
Loans reported as trading assets:									
Changes in instrument-specific credit risk	**1,161**	**23** [c]	**1,184**	1,489	81 [c]	1,570	934	(174) [c]	760
Other changes in fair value	**(133)**	**1,833** [c]	**1,700**	(183)	7,670 [c]	7,487	127	5,263 [c]	5,390
Loans:									
Changes in instrument-specific credit risk	**36**	**–**	**36**	(14)	–	(14)	2	–	2
Other changes in fair value	**17**	**–**	**17**	676	–	676	535	–	535
Other assets	**32**	**(29)** [d]	**3**	–	(339) [d]	(339)	(49)	(19) [d]	(68)
Deposits[a]	**260**	**–**	**260**	(188)	–	(188)	(237)	–	(237)
Federal funds purchased and securities loaned or sold under repurchase agreements	**73**	**–**	**73**	(25)	–	(25)	(4)	–	(4)
Other borrowed funds[a]	**(399)**	**–**	**(399)**	494	–	494	2,986	–	2,986
Trading liabilities	**(46)**	**–**	**(46)**	(41)	–	(41)	(57)	–	(57)
Beneficial interests issued by consolidated VIEs	**(278)**	**–**	**(278)**	(166)	–	(166)	(83)	–	(83)
Other liabilities	**–**	**2** [d]	**2**	–	–	–	(3)	(5) [d]	(8)
Long-term debt:									
Changes in instrument-specific credit risk[a]	**(271)**	**–**	**(271)**	(835)	–	(835)	927	–	927
Other changes in fair value[b]	**1,280**	**–**	**1,280**	(1,025)	–	(1,025)	322	–	322

(a) Total changes in instrument-specific credit risk related to structured notes were $(337) million, $(340) million, and $899 million for the years ended December 31, 2013, 2012 and 2011, respectively. These totals include adjustments for structured notes classified within deposits and other borrowed funds, as well as long-term debt.

(b) Structured notes are predominantly financial instruments containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings during December 31, 2013, 2012 and 2011, which were attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2013 and 2012, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2013			2012		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding
Loans[a]						
Nonaccrual loans						
Loans reported as trading assets	**$ 5,156**	**$ 1,491**	**$ (3,665)**	$ 4,217	$ 960	$ (3,257)
Loans[d]	**209**	**154**	**(55)**	293	236	(57)
Subtotal	**5,365**	**1,645**	**(3,720)**	4,510	1,196	(3,314)
All other performing loans						
Loans reported as trading assets	**33,069**	**29,295**	**(3,774)**	44,084	40,581	(3,503)
Loans[d]	**1,618**	**1,563**	**(55)**	2,034	1,927	(107)
Total loans	**$ 40,052**	**$ 32,503**	**$ (7,549)**	$ 50,628	$ 43,704	$ (6,924)
Long-term debt						
Principal-protected debt	**$ 15,797** [c]	**$ 15,909**	**$ 112**	$ 16,541 [c]	$ 16,391	$ (150)
Nonprincipal-protected debt[b]	**NA**	**12,969**	**NA**	NA	14,397	NA
Total long-term debt	**NA**	**$ 28,878**	**NA**	NA	$ 30,788	NA
Long-term beneficial interests						
Nonprincipal-protected debt[b]	**NA**	**$ 1,996**	**NA**	NA	$ 1,170	NA
Total long-term beneficial interests	**NA**	**$ 1,996**	**NA**	NA	$ 1,170	NA

(a) There were no performing loans that were ninety days or more past due as of December 31, 2013 and 2012, respectively.
(b) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note.
(c) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflected as the remaining contractual principal is the final principal payment at maturity.
(d) During 2013, certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

At December 31, 2013 and 2012, the contractual amount of letters of credit for which the fair value option was elected was $4.5 billion and $4.5 billion, respectively, with a corresponding fair value of $(99) million and $(75) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29 on pages 318–324 of this Annual Report.

Structured note products by balance sheet classification and risk component

The table below presents the fair value of the structured notes issued by the Firm, by balance sheet classification and the primary risk to which the structured notes' embedded derivative relates.

	December 31, 2013				December 31, 2012			
(in millions)	Long-term debt	Other borrowed funds	Deposits	Total	Long-term debt	Other borrowed funds	Deposits	Total
Risk exposure								
Interest rate	**$ 9,516**	**$ 615**	**$ 1,270**	**$ 11,401**	$ 8,669	$ 1,143	$ 559	$ 10,371
Credit	**4,248**	**13**	**–**	**4,261**	6,166	–	–	6,166
Foreign exchange	**2,321**	**194**	**27**	**2,542**	2,819	–	29	2,848
Equity	**11,082**	**11,936**	**3,736**	**26,754**	11,580	9,809	2,972	24,361
Commodity	**1,260**	**310**	**1,133**	**2,703**	1,379	332	1,555	3,266
Total structured notes	**$ 28,427**	**$ 13,068**	**$ 6,166**	**$ 47,661**	$ 30,613	$ 11,284	$ 5,115	$ 47,012

Note 5 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential concentration risks and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. In the wholesale portfolio, risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis. Management of the Firm's wholesale exposure is accomplished through loan syndications and participations, loan sales, securitizations, credit derivatives, use of master netting agreements, and collateral and other risk-reduction techniques. For additional information on loans see Note 14 on pages 258–283 of this Annual Report.

The Firm does not believe that its exposure to any particular loan product (e.g., option adjustable rate mortgages ("ARMs")), industry segment (e.g., commercial real estate) or its exposure to residential real estate loans with high loan-to-value ratios results in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

Customer receivables representing primarily margin loans to prime and retail brokerage clients of $26.9 billion and $23.8 billion at December 31, 2013 and 2012, respectively, are included in the table below. These margin loans are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's positions may be liquidated by the Firm to meet the minimum collateral requirements. As a result of the Firm's credit risk mitigation practices, the Firm did not hold any reserves for credit impairment on these receivables as of December 31, 2013 and 2012.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale-related credit exposure by the Firm's three credit portfolio segments as of December 31, 2013 and 2012.

	2013				2012			
	Credit exposure	On-balance sheet		Off-balance sheet[b]	Credit exposure	On-balance sheet		Off-balance sheet[b]
December 31, (in millions)		Loans	Derivatives			Loans	Derivatives	
Total consumer, excluding credit card	**$ 345,259**	**$ 289,063**	**$ –**	**$ 56,057**	$ 352,889	$ 292,620	$ –	$ 60,156
Total credit card	**657,174**	**127,791**	**–**	**529,383**	661,011	127,993	–	533,018
Total consumer	**1,002,433**	**416,854**	**–**	**585,440**	1,013,900	420,613	–	593,174
Wholesale-related								
Real Estate	**87,102**	**69,151**	**460**	**17,491**	76,198	60,740	1,084	14,374
Banks & Finance Cos	**66,881**	**25,482**	**18,888**	**22,511**	73,318	26,651	19,846	26,821
Oil & Gas	**46,934**	**14,383**	**2,203**	**30,348**	42,563	14,704	2,345	25,514
Healthcare	**45,910**	**13,319**	**3,202**	**29,389**	48,487	11,638	3,359	33,490
State & Municipal Govt	**35,666**	**8,708**	**3,319**	**23,639**	41,821	7,998	5,138	28,685
Consumer Products	**34,145**	**9,099**	**715**	**24,331**	32,778	9,151	826	22,801
Asset Managers	**33,506**	**5,656**	**7,175**	**20,675**	31,474	6,220	8,390	16,864
Utilities	**28,983**	**5,582**	**2,248**	**21,153**	29,533	6,814	2,649	20,070
Retail & Consumer Services	**25,068**	**7,504**	**273**	**17,291**	25,597	7,901	429	17,267
Technology	**21,403**	**4,426**	**1,392**	**15,585**	18,488	3,806	1,192	13,490
Central Govt	**21,049**	**1,754**	**9,998**	**9,297**	21,223	1,333	11,232	8,658
Machinery & Equipment Mfg	**19,078**	**5,969**	**476**	**12,633**	18,504	6,304	592	11,608
Metals/Mining	**17,434**	**5,825**	**560**	**11,049**	20,958	6,059	624	14,275
Business Services	**14,601**	**4,497**	**594**	**9,510**	13,577	4,550	190	8,837
Transportation	**13,975**	**6,845**	**621**	**6,509**	19,827	12,763	673	6,391
All other[a]	**308,519**	**120,063**	**13,635**	**174,821**	301,673	119,590	16,414	165,669
Subtotal	**820,254**	**308,263**	**65,759**	**446,232**	816,019	306,222	74,983	434,814
Loans held-for-sale and loans at fair value	**13,301**	**13,301**	**–**	**–**	6,961	6,961	–	–
Receivables from customers and other	**26,744**	**–**	**–**	**–**	23,648	–	–	–
Total wholesale-related	**860,299**	**321,564**	**65,759**	**446,232**	846,628	313,183	74,983	434,814
Total exposure[c]	**$ 1,862,732**	**$ 738,418**	**$ 65,759**	**$ 1,031,672**	$ 1,860,528	$ 733,796	$ 74,983	$ 1,027,988

(a) For more information on exposures to SPEs included within All other see Note 16 on pages 288–299 of this Annual Report.
(b) Represents lending-related financial instruments.
(c) For further information regarding on-balance sheet credit concentrations by major product and/or geography, see Notes 6, 14 and 15 on pages 220–233, 258–283 and 284–287, respectively, of this Annual Report. For information regarding concentrations of off-balance sheet lending-related financial instruments by major product, see Note 29 on pages 318–324 of this Annual Report.

Note 6 – Derivative instruments

Derivative instruments enable end-users to modify or mitigate exposure to credit or market risks. Counterparties to a derivative contract seek to obtain risks and rewards similar to those that could be obtained from purchasing or selling a related cash instrument without having to exchange upfront the full purchase or sales price. JPMorgan Chase makes markets in derivatives for customers and also uses derivatives to hedge or manage its own risk exposures. Predominantly all of the Firm's derivatives are entered into for market-making or risk management purposes.

Market-making derivatives
The majority of the Firm's derivatives are entered into for market-making purposes. Customers use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives. The Firm also seeks to earn a spread between the client derivatives and offsetting positions, and from the remaining open risk positions.

Risk management derivatives
The Firm manages its market risk exposures using various derivative instruments.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increases or decreases as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar-equivalent values of the foreign currency-denominated assets and liabilities or forecasted revenue or expense increase or decrease. Gains or losses on the derivative instruments related to these foreign currency-denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities contracts are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset the depreciation or appreciation of the related inventory. Also in the commodities portfolio, electricity and natural gas futures and forwards contracts are used to manage price risk associated with energy-related tolling and load-serving contracts and investments.

The Firm uses credit derivatives to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of credit default swaps. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 231–233 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 231 of this Note, and the hedge accounting gains and losses tables on pages 229–231 of this Note.

Derivative counterparties and settlement types
The Firm enters into over-the-counter ("OTC") derivatives, which are negotiated and settled bilaterally with the derivative counterparty. The Firm also enters into, as principal, certain exchange traded derivatives ("ETD") such as futures and options, and "cleared" over-the-counter ("OTC-cleared") derivative contracts with central counterparties ("CCPs"). ETD contracts are generally standardized contracts traded on an exchange and cleared by the CCP, which is the counterparty from the inception of the transactions. OTC-cleared derivatives are traded on a bilateral basis and then novated to the CCP for clearing.

Accounting for derivatives
All free-standing derivatives that the Firm executes for its own account are required to be recorded on the Consolidated Balance Sheets at fair value. For information on the derivatives that the Firm clears for its clients' accounts, see Note 29 on pages 318–324 of this Annual Report.

As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. For further discussion of the offsetting of assets and liabilities, see Note 1 on pages 189–191 of this Annual Report. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The tabular disclosures on pages 223–233 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 3 and 4 on pages 195–215 and 215–218, respectively, of this Annual Report.

Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and commodity derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased credit default swaps used to manage the credit risk of loans and lending-related commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate and commodity derivatives used for risk management purposes.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the change in the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item and for interest-bearing instruments is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges primarily to hedge the exposure to variability in forecasted cash flows from floating-rate assets and liabilities and foreign currency–denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in OCI and recognized in the Consolidated Statements of Income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in accumulated other comprehensive income/(loss) ("AOCI") is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is expected to not occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses foreign currency hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For foreign currency qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	Page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
◦ Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate/PE	229
◦ Interest rate	Hedge floating rate assets and liabilities	Cash flow hedge	Corporate/PE	230
◦ Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate/PE	229
◦ Foreign exchange	Hedge forecasted revenue and expense	Cash flow hedge	Corporate/PE	230
◦ Foreign exchange	Hedge the value of the Firm's investments in non-U.S. subsidiaries	Net investment hedge	Corporate/PE	231
◦ Commodity	Hedge commodity inventory	Fair value hedge	CIB	229
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
◦ Interest rate	Manage the risk of the mortgage pipeline, warehouse loans and MSRs	Specified risk management	CCB	231
◦ Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	231
◦ Credit[(a)]	Manage the credit risk of certain AFS securities	Specified risk management	Corporate/PE	231
◦ Commodity	Manage the risk of certain commodities-related contracts and investments	Specified risk management	CIB	231
◦Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate/PE	231
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	231
• Various[(b)]	Other derivatives, including the synthetic credit portfolio	Market-making and other	CIB, Corporate/PE	231

(a) Includes a limited number of single-name credit derivatives used to mitigate the credit risk arising from specified AFS securities.

(b) The synthetic credit portfolio is a portfolio of index credit derivatives, including short and long positions, that was held by CIO. On July 2, 2012, CIO transferred the synthetic credit portfolio, other than a portion that aggregated to a notional amount of approximately $12 billion, to CIB. The positions making up the portion of the synthetic credit portfolio retained by CIO on July 2, 2012, were effectively closed out during the third quarter of 2012. The results of the synthetic credit portfolio, including the portion transferred to CIB, have been included in the gains and losses on derivatives related to market-making activities and other derivatives category discussed on page 231 of this Note.

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2013 and 2012.

	Notional amounts[c]	
December 31, (in billions)	**2013**	2012
Interest rate contracts[a]		
Swaps	**$ 35,221**	$ 33,037
Futures and forwards	**11,251**	11,756
Written options	**3,991**	3,860
Purchased options	**4,187**	3,909
Total interest rate contracts	**54,650**	52,562
Credit derivatives[b]	**5,386**	5,981
Foreign exchange contracts[a]		
Cross-currency swaps	**3,488**	3,413
Spot, futures and forwards	**3,773**	4,005
Written options	**659**	651
Purchased options	**652**	662
Total foreign exchange contracts	**8,572**	8,731
Equity contracts		
Swaps	**205**	163
Futures and forwards[a]	**49**	38
Written options[a]	**425**	441
Purchased options	**380**	403
Total equity contracts	**1,059**	1,045
Commodity contracts		
Swaps[a]	**124**	120
Spot, futures and forwards[a]	**234**	367
Written options	**202**	262
Purchased options	**203**	260
Total commodity contracts	**763**	1,009
Total derivative notional amounts	**$ 70,430**	$ 69,328

(a) The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.

(b) Primarily consists of credit default swaps. For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 231–233 of this Note.

(c) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.

Impact of derivatives on the Consolidated Balance Sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated Balance Sheets as of December 31, 2013 and 2012, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables[a]

	Gross derivative receivables				Gross derivative payables			
December 31, 2013 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[c]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[c]
Trading assets and liabilities								
Interest rate	**$ 851,189**	**$ 3,490**	**$ 854,679**	**$ 25,782**	**$ 820,811**	**$ 4,543**	**$ 825,354**	**$ 13,283**
Credit	**83,520**	**–**	**83,520**	**1,516**	**82,402**	**–**	**82,402**	**2,281**
Foreign exchange	**152,240**	**1,359**	**153,599**	**16,790**	**158,728**	**1,397**	**160,125**	**15,947**
Equity	**52,931**	**–**	**52,931**	**12,227**	**54,654**	**–**	**54,654**	**14,719**
Commodity	**34,344**	**1,394**	**35,738**	**9,444**	**37,605**	**9**	**37,614**	**11,084**
Total fair value of trading assets and liabilities	**$ 1,174,224**	**$ 6,243**	**$ 1,180,467**	**$ 65,759**	**$ 1,154,200**	**$ 5,949**	**$ 1,160,149**	**$ 57,314**

	Gross derivative receivables				Gross derivative payables			
December 31, 2012 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[c]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[c]
Trading assets and liabilities								
Interest rate[b]	$ 1,296,268	$ 6,064	$ 1,302,332	$ 39,205	$ 1,257,654	$ 3,120	$ 1,260,774	$ 24,906
Credit	100,310	–	100,310	1,735	100,027	–	100,027	2,504
Foreign exchange[b]	145,676	1,577	147,253	14,142	158,419	2,133	160,552	18,601
Equity[b]	42,679	–	42,679	9,266	44,535	–	44,535	11,819
Commodity[b]	43,185	586	43,771	10,635	46,981	644	47,625	12,826
Total fair value of trading assets and liabilities	$ 1,628,118	$ 8,227	$ 1,636,345	$ 74,983	$ 1,607,616	$ 5,897	$ 1,613,513	$ 70,656

(a) Balances exclude structured notes for which the fair value option has been elected. See Note 4 on pages 215–218 of this Annual Report for further information.

(b) The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.

(c) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

The following table presents, as of December 31, 2013 and 2012, the gross and net derivative receivables by contract and settlement type. Derivative receivables have been netted on the Consolidated Balance Sheets against derivative payables to the same counterparty with respect to derivative contracts for which the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the receivables are not eligible under U.S. GAAP for netting against related derivative payables on the Consolidated Balance Sheets, and are shown separately in the table below.

	2013			2012		
December 31, (in millions)	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables
U.S. GAAP nettable derivative receivables						
Interest rate contracts:						
Over-the-counter ("OTC")[a]	**$ 486,449**	**$ (466,493)**	**$ 19,956**	$ 794,282	$ (771,449)	$ 22,833
OTC-cleared	**362,426**	**(362,404)**	**22**	491,947	(491,678)	269
Exchange traded[b]	**–**	**–**	**–**	–	–	–
Total interest rate contracts	**848,875**	**(828,897)**	**19,978**	1,286,229	(1,263,127)	23,102
Credit contracts:						
OTC	**66,269**	**(65,725)**	**544**	90,744	(90,104)	640
OTC-cleared	**16,841**	**(16,279)**	**562**	8,471	(8,471)	–
Total credit contracts	**83,110**	**(82,004)**	**1,106**	99,215	(98,575)	640
Foreign exchange contracts:						
OTC[a]	**148,953**	**(136,763)**	**12,190**	141,053	(133,088)	7,965
OTC-cleared	**46**	**(46)**	**–**	23	(23)	–
Exchange traded[b]	**–**	**–**	**–**	–	–	–
Total foreign exchange contracts	**148,999**	**(136,809)**	**12,190**	141,076	(133,111)	7,965
Equity contracts:						
OTC[a]	**31,870**	**(29,289)**	**2,581**	26,025	(24,645)	1,380
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange traded[b]	**17,732**	**(11,415)**	**6,317**	12,841	(8,768)	4,073
Total equity contracts	**49,602**	**(40,704)**	**8,898**	38,866	(33,413)	5,453
Commodity contracts:						
OTC[a]	**21,619**	**(15,082)**	**6,537**	26,850	(20,729)	6,121
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange traded[b]	**12,528**	**(11,212)**	**1,316**	15,108	(12,407)	2,701
Total commodity contracts	**34,147**	**(26,294)**	**7,853**	41,958	(33,136)	8,822
Derivative receivables with appropriate legal opinion	**$ 1,164,733**	**$ (1,114,708)[c]**	**$ 50,025**	$ 1,607,344	$ (1,561,362)[c]	$ 45,982
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	**15,734**		**15,734**	29,001		29,001
Total derivative receivables recognized on the Consolidated Balance Sheets	**$ 1,180,467**		**$ 65,759**	$ 1,636,345		$ 74,983

(a) The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.
(b) Exchange traded derivative amounts that relate to futures contracts are settled daily.
(c) Included netted cash collateral payables of $63.9 billion and $79.2 billion at December 31, 2013, and December 31, 2012, respectively.

The following table presents, as of December 31, 2013 and 2012, the gross and net derivative payables by contract and settlement type. Derivative payables have been netted on the Consolidated Balance Sheets against derivative receivables to the same counterparty with respect to derivative contracts for which the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the payables are not eligible under U.S. GAAP for netting against related derivative receivables on the Consolidated Balance Sheets, and are shown separately in the table below.

	2013			2012		
December 31, (in millions)	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC[a]	**$ 467,850**	**$ (458,081)**	**$ 9,769**	$ 774,824	$ (754,105)	$ 20,719
OTC-cleared	**354,698**	**(353,990)**	**708**	482,018	(481,763)	255
Exchange traded[b]	**–**	**–**	**–**	–	–	–
Total interest rate contracts	**822,548**	**(812,071)**	**10,477**	1,256,842	(1,235,868)	20,974
Credit contracts:						
OTC	**65,223**	**(63,671)**	**1,552**	89,170	(88,151)	1,019
OTC-cleared	**16,506**	**(16,450)**	**56**	9,372	(9,372)	–
Total credit contracts	**81,729**	**(80,121)**	**1,608**	98,542	(97,523)	1,019
Foreign exchange contracts:						
OTC[a]	**155,110**	**(144,119)**	**10,991**	153,181	(141,928)	11,253
OTC-cleared	**61**	**(59)**	**2**	29	(23)	6
Exchange traded[b]	**–**	**–**	**–**	–	–	–
Total foreign exchange contracts	**155,171**	**(144,178)**	**10,993**	153,210	(141,951)	11,259
Equity contracts:						
OTC[a]	**33,295**	**(28,520)**	**4,775**	28,321	(23,949)	4,372
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange traded[b]	**17,349**	**(11,415)**	**5,934**	12,000	(8,767)	3,233
Total equity contracts	**50,644**	**(39,935)**	**10,709**	40,321	(32,716)	7,605
Commodity contracts:						
OTC[a]	**21,993**	**(15,318)**	**6,675**	28,744	(22,392)	6,352
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange traded[b]	**12,367**	**(11,212)**	**1,155**	14,488	(12,407)	2,081
Total commodity contracts	**34,360**	**(26,530)**	**7,830**	43,232	(34,799)	8,433
Derivative payables with appropriate legal opinions	**$ 1,144,452**	**$ (1,102,835)** [c]	**$ 41,617**	$ 1,592,147	$ (1,542,857) [c]	$ 49,290
Derivative payables where an appropriate legal opinion has not been either sought or obtained	**15,697**		**15,697**	21,366		21,366
Total derivative payables recognized on the Consolidated Balance Sheets	**$ 1,160,149**		**$ 57,314**	$ 1,613,513		$ 70,656

(a) The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.
(b) Exchange traded derivative balances that relate to futures contracts are settled daily.
(c) Included netted cash collateral receivables of $52.1 billion and $60.7 billion related to OTC and OTC-cleared derivatives at December 31, 2013, and December 31, 2012, respectively.

In addition to the cash collateral received and transferred that is presented on a net basis with net derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments but are not eligible for net presentation, because (a) the collateral is non-cash financial instruments (generally U.S. government and agency securities and other G7 government bonds), (b) the amount of collateral held or transferred exceeds the fair value exposure, at the individual counterparty level, as of the date presented, or (c) the collateral relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained.

The following tables present information regarding certain financial instrument collateral received and transferred as of December 31, 2013 and 2012, that is not eligible for net presentation under U.S. GAAP. The collateral included in these tables relates only to the derivative instruments for which appropriate legal opinions have been obtained; excluded are (i) additional collateral that exceeds the fair value exposure and (ii) all collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

Derivative receivable collateral

	2013			2012		
December 31, (in millions)	Net derivative receivables	Collateral not nettable on the Consolidated balance sheets	Net exposure	Net derivative receivables	Collateral not nettable on the Consolidated balance sheets	Net exposure
Derivative receivables with appropriate legal opinions	**$ 50,025**	**$ (12,414)** [(a)]	**$ 37,611**	$ 45,982	$ (11,350) [(a)]	$ 34,632

Derivative payable collateral[(b)]

	2013			2012		
December 31, (in millions)	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount[(c)]	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount[(c)]
Derivative payables with appropriate legal opinions	**$ 41,617**	**$ (6,873)** [(a)]	**$ 34,744**	$ 49,290	$ (20,109) [(a)]	$ 29,181

(a) Represents liquid security collateral as well as cash collateral held at third party custodians. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.

(b) Derivative payable collateral relates only to OTC and OTC-cleared derivative instruments. Amounts exclude collateral transferred related to exchange-traded derivative instruments.

(c) Net amount represents exposure of counterparties to the Firm.

Liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk – the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to actively pursue, where possible, the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated Balance Sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at December 31, 2013 and 2012.

OTC and OTC-cleared derivative payables containing downgrade triggers

December 31, (in millions)	**2013**	2012
Aggregate fair value of net derivative payables	**$ 24,631**	$ 40,844
Collateral posted	**20,346**	34,414

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), at December 31, 2013 and 2012, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral, except in certain instances in which additional initial margin may be required upon a ratings downgrade, or termination payment requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating of the rating agencies referred to in the derivative contract.

Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

	2013		2012	
December 31, (in millions)	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted upon downgrade[(a)]	**$ 952**	**$ 3,244**	$ 1,234	$ 4,090
Amount required to settle contracts with termination triggers upon downgrade[(b)]	**540**	**876**	857	1,270

(a) Includes the additional collateral to be posted for initial margin. Prior period amounts have been revised to conform with the current presentation.
(b) Amounts represent fair value of derivative payables, and do not reflect collateral posted.

Impact of derivatives on the Consolidated Statements of Income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pretax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2013, 2012 and 2011, respectively. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated Statements of Income.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2013 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	**$ (3,469)**	**$ 4,851**	**$ 1,382**	**$ (132)**	**$ 1,514**
Foreign exchange[b]	**(1,096)** [d]	**864**	**(232)**	**–**	**(232)**
Commodity[c]	**485**	**(1,304)**	**(819)**	**38**	**(857)**
Total	**$ (4,080)**	**$ 4,411**	**$ 331**	**$ (94)**	**$ 425**

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2012 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	$ (1,238)	$ 1,879	$ 641	$ (28)	$ 669
Foreign exchange[b]	(3,027) [d]	2,925	(102)	–	(102)
Commodity[c]	(2,530)	1,131	(1,399)	107	(1,506)
Total	$ (6,795)	$ 5,935	$ (860)	$ 79	$ (939)

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2011 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a]	$ 532	$ 33	$ 565	$ 104	$ 461
Foreign exchange[b]	5,684 [d]	(3,761)	1,923	–	1,923
Commodity[c]	1,784	(2,880)	(1,096)	(10)	(1,086)
Total	$ 8,000	$ (6,608)	$ 1,392	$ 94	$ 1,298

(a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income. The current presentation excludes accrued interest.

(b) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in foreign currency rates, were recorded in principal transactions revenue and net interest income.

(c) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value). Gains and losses were recorded in principal transactions revenue.

(d) Included $(556) million, $(3.1) billion and $4.9 billion for the years ended December 31, 2013, 2012 and 2011, respectively, of revenue related to certain foreign exchange trading derivatives designated as fair value hedging instruments.

(e) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.

(f) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts and time values.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives, for the years ended December 31, 2013, 2012 and 2011, respectively. The Firm includes the gain/(loss) on the hedging derivative and the change in cash flows on the hedged item in the same line item in the Consolidated Statements of Income.

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2013 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	**$ (108)**	**$ –**	**$ (108)**	**$ (565)**	**$ (457)**
Foreign exchange[b]	**7**	**–**	**7**	**40**	**33**
Total	**$ (101)**	**$ –**	**$ (101)**	**$ (525)**	**$ (424)**

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2012 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (3)	$ 5	$ 2	$ 13	$ 16
Foreign exchange[b]	31	–	31	128	97
Total	$ 28	$ 5	$ 33	$ 141	$ 113

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2011 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ 310	$ 19	$ 329	$ 107	$ (203)
Foreign exchange[b]	(9)	–	(9)	(57)	(48)
Total	$ 301	$ 19	$ 320	$ 50	$ (251)

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily noninterest revenue and compensation expense.

(c) The Firm did not experience any forecasted transactions that failed to occur for the years ended December 31, 2013, 2012 or 2011.

(d) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

Over the next 12 months, the Firm expects that $4.6 million (after-tax) of net losses recorded in AOCI at December 31, 2013, related to cash flow hedges will be recognized in income. The maximum length of time over which forecasted transactions are hedged is 10 years, and such transactions primarily relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following tables present hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pretax gains/(losses) recorded on such instruments for the years ended December 31, 2013, 2012 and 2011.

	Gains/(losses) recorded in income and other comprehensive income/(loss)					
	2013		2012		2011	
Year ended December 31, (in millions)	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI
Contract type						
Foreign exchange derivatives	**$ (383)**	**$ 773**	$ (306)	$ (82)	$ (251)	$ 225
Foreign currency denominated debt	**–**	**–**	–	–	–	1
Total	**$ (383)**	**$ 773**	$ (306)	$ (82)	$ (251)	$ 226

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in current-period income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates, and therefore there was no ineffectiveness for net investment hedge accounting relationships during 2013, 2012 and 2011.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pretax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from the mortgage pipeline, warehouse loans, MSRs, wholesale lending exposures, AFS securities, foreign currency-denominated liabilities, and commodities-related contracts and investments.

	Derivatives gains/(losses) recorded in income		
Year ended December 31, (in millions)	**2013**	2012	2011
Contract type			
Interest rate[a]	**$ 617**	$ 5,353	$ 8,084
Credit[b]	**(142)**	(175)	(52)
Foreign exchange[c]	**1**	47	(157)
Commodity[d]	**178**	94	41
Total	**$ 654**	$ 5,319	$ 7,916

(a) Primarily relates to interest rate derivatives used to hedge the interest rate risks associated with the mortgage pipeline, warehouse loans and MSRs. Gains and losses were recorded predominantly in mortgage fees and related income.

(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses, and single-name credit derivatives used to mitigate credit risk arising from certain AFS securities. These derivatives do not include the synthetic credit portfolio or credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, both of which are included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.

(c) Primarily relates to hedges of the foreign exchange risk of specified foreign currency-denominated liabilities. Gains and losses were recorded in principal transactions revenue and net interest income.

(d) Primarily relates to commodity derivatives used to mitigate energy price risk associated with energy-related contracts and investments. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from the Firm's market-making activities, including the counterparty credit risk arising from derivative receivables. These derivatives, as well as all other derivatives (including the synthetic credit portfolio) that are not included in the hedge accounting or specified risk management categories above, are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. See Note 7 on pages 234–235 of this Annual Report for information on principal transactions revenue.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker, the Firm actively manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. Second, as an end-user, the Firm uses credit derivatives to manage credit risk associated with lending exposures (loans and unfunded commitments) and derivatives counterparty exposures in the Firm's wholesale businesses, and to manage the credit risk arising from

certain AFS securities and from certain financial instruments in the Firm's market-making businesses. For more information on the synthetic credit portfolio, see the discussion on page 222 of this Note. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name CDS and index CDS contracts are typically OTC-cleared derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index comprises a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-related notes

A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a reference entity or an index. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity experiences a specified credit event (or one of the entities that makes up a reference index). If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity. For a further discussion of credit-related notes, see Note 16 on pages 288–299 of this Annual Report.

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2013 and 2012. Upon a credit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased through credit-related notes.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

	Maximum payout/Notional amount			
December 31, 2013 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	**$ (2,601,581)**	**$ 2,610,198**	**$ 8,617**	**$ 8,722**
Other credit derivatives[a]	**(95,094)**	**45,921**	**(49,173)**	**24,192**
Total credit derivatives	**(2,696,675)**	**2,656,119**	**(40,556)**	**32,914**
Credit-related notes	**(130)**	**–**	**(130)**	**2,720**
Total	**$ (2,696,805)**	**$ 2,656,119**	**$ (40,686)**	**$ 35,634**

	Maximum payout/Notional amount			
December 31, 2012 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (2,954,705)	$ 2,879,105	$ (75,600)	$ 42,460
Other credit derivatives[a]	(66,244)	5,649	(60,595)	33,174
Total credit derivatives	(3,020,949)	2,884,754	(136,195)	75,634
Credit-related notes	(233)	–	(233)	3,255
Total	$ (3,021,182)	$ 2,884,754	$ (136,428)	$ 78,889

(a) Other credit derivatives predominantly consists of put options on fixed income portfolios.
(b) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(d) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional and fair value amounts of credit derivatives and credit-related notes as of December 31, 2013 and 2012, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings[a]/maturity profile

December 31, 2013 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	**$ (365,660)**	**$ (1,486,394)**	**$ (130,597)**	**$ (1,982,651)**	**$ 31,727**	**$ (5,629)**	**$ 26,098**
Noninvestment-grade	**(140,540)**	**(544,671)**	**(28,943)**	**(714,154)**	**27,426**	**(16,674)**	**10,752**
Total	**$ (506,200)**	**$ (2,031,065)**	**$ (159,540)**	**$ (2,696,805)**	**$ 59,153**	**$ (22,303)**	**$ 36,850**

December 31, 2012 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (409,748)	$ (1,383,644)	$ (224,001)	$ (2,017,393)	$ 16,690	$ (22,393)	$ (5,703)
Noninvestment-grade	(214,949)	(722,115)	(66,725)	(1,003,789)	22,355	(36,815)	(14,460)
Total	$ (624,697)	$ (2,105,759)	$ (290,726)	$ (3,021,182)	$ 39,045	$ (59,208)	$ (20,163)

(a) The ratings scale is based on the Firm's internal ratings, which generally correspond to ratings as defined by S&P and Moody's.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

Note 7 – Noninterest revenue

Investment banking fees

This revenue category includes equity and debt underwriting and advisory fees. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee. Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria. Advisory fees are recognized as revenue when the related services have been performed and the fee has been earned.

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	2013	2012	2011
Underwriting			
Equity	**$ 1,499**	$ 1,026	$ 1,181
Debt	**3,537**	3,290	2,934
Total underwriting	**5,036**	4,316	4,115
Advisory	**1,318**	1,492	1,796
Total investment banking fees	**$ 6,354**	$ 5,808	$ 5,911

Principal transactions

Principal transactions revenue includes realized and unrealized gains and losses recorded on derivatives, other financial instruments, and private equity investments.

Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk management activities disclosed separately in Note 6, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives, including the synthetic credit portfolio. See Note 6 on pages 220–233 of this Form Annual Report for information on the income statement classification of gains and losses on derivatives.

Principal transactions revenue also includes revenue associated with market-making and client-driven activities that involve physical commodities. The Firm, through its Global Commodities Group within CIB ("Commodities Group") generally provides risk management, investment and financing solutions to clients globally both through financial derivatives transactions, as well as through physical commodities transactions. On the financial side, the Commodities Group engages in OTC derivatives transactions (e.g., swaps, forwards, options) and exchange-traded derivatives referencing various types of commodities (see below and Note 6 – Derivative instruments for further information). On the physical side, the Commodities Group engages in the purchase, sale, transport, and storage of power, gas, liquefied natural gas, coal, crude oil, refined products, precious and base metals among others. Realized gains and losses and unrealized losses arising from market-making and client-driven activities involving physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value), subject to any applicable fair value hedge accounting adjustments, are recorded in principal transactions revenue. Fees relating to storage and transportation are recorded in other income. These fees are generally recognized over the arrangement period. Expenses relating to such activities are recorded in other expense (see Note 11 on page 249 of this Annual Report for further information). Additional information on the physical commodities business can be found in Note 2 – Business Changes and Developments on pages 192–194 of this Annual Report.

The following table presents principal transactions revenue by major underlying type of risk exposures. This table does not include other types of revenue, such as net interest income on trading assets, which are an integral part of the overall performance of the Firm's client-driven market-making activities.

Year ended December 31, (in millions)	2013	2012	2011
Trading revenue by risk exposure			
Interest rate[a]	**$ 776**	$ 3,922	$ (873)
Credit[b]	**2,424**	(5,460)	3,393
Foreign exchange	**1,540**	1,436	1,154
Equity	**2,526**	2,504	2,401
Commodity[c]	**2,073**	2,363	2,823
Total trading revenue[d][e]	**9,339**	4,765	8,898
Private equity gains[f]	**802**	771	1,107
Principal transactions	**$ 10,141**	$ 5,536	$ 10,005

(a) Includes a pretax gain of $665 million for the year ended December 31, 2012, reflecting the recovery on a Bear Stearns-related subordinated loan.

(b) Includes $5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and $449 million of losses incurred by CIO from the retained index credit derivative positions for the three months ended September 30, 2012; and losses incurred by CIB from the synthetic credit portfolio.

(c) Includes realized gains and losses and unrealized losses on physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value), subject to any applicable fair value hedge accounting adjustments, and gains and losses on commodity derivatives and other financial instruments that are carried at fair value through income. Commodity derivatives are frequently used to manage the Firm's risk exposure to its physical commodities inventories. Gains/(losses) related to commodity fair value hedges were $(819) million, $(1.4) billion and $(1.1) billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(d) Principal transactions revenue included DVA related to structured notes and derivative liabilities measured at fair value in CIB. DVA gains/(losses) were $(452) million, $(930) million, and $1.4 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(e) During the fourth quarter of 2013, the Firm implemented a funding valuation adjustment ("FVA") framework in order to incorporate the impact of funding into its valuation estimates for over-the-counter ("OTC") derivatives and structured notes. As a result the Firm recorded a $1.5 billion loss in principal transactions revenue in the fourth quarter of 2013, reported in the CIB. This reflects an industry migration towards incorporating the cost of unsecured funding in the valuation of such instruments.

(f) Includes revenue on private equity investments held in the Private Equity business within Corporate/Private Equity, as well as those held in other business segments.

Lending- and deposit-related fees
This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan-servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions
This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions, and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met. The Firm has contractual arrangements with third parties to provide certain services in connection with its asset management activities. Amounts paid to third-party service providers are predominantly expensed, such that asset management fees are recorded gross of payments made to third parties.

The following table presents components of asset management, administration and commissions.

Year ended December 31, (in millions)	2013	2012	2011
Asset management			
Investment management fees[a]	**$ 8,044**	$ 6,744	$ 6,449
All other asset management fees[b]	**505**	357	241
Total asset management fees	**8,549**	7,101	6,690
Total administration fees[c]	**2,101**	2,135	2,171
Commissions and other fees			
Brokerage commissions	**2,321**	2,331	2,753
All other commissions and fees	**2,135**	2,301	2,480
Total commissions and fees	**4,456**	4,632	5,233
Total asset management, administration and commissions	**$ 15,106**	$ 13,868	$ 14,094

(a) Represents fees earned from managing assets on behalf of Firm clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts.
(b) Represents fees for services that are ancillary to investment management services, such as commissions earned on the sales or distribution of mutual funds to clients.
(c) Predominantly, includes fees for custody, securities lending, funds services and securities clearance.

Mortgage fees and related income
This revenue category primarily reflects CCB's Mortgage Production and Mortgage Servicing revenue, including: fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously-sold loans; the impact of risk management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. Changes in the fair value of CCB MSRs are reported in mortgage fees and related income. Net interest income from mortgage loans is recorded in interest income. For a further discussion of MSRs, see Note 17 on pages 299–304 of this Annual Report.

Card income
This revenue category includes interchange income from credit and debit cards and net fees earned from processing credit card transactions for merchants. Card income is recognized as earned. Annual fees and direct loan origination costs are deferred and recognized on a straight-line basis over a 12-month period. Expense related to rewards programs is recorded when the rewards are earned by the customer and netted against interchange income.

Credit card revenue sharing agreements
The Firm has contractual agreements with numerous co-brand partners and affinity organizations (collectively, "partners"), which grant the Firm exclusive rights to market to the customers or members of such partners. These partners endorse the credit card programs and provide their customer and member lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to ten years.

The Firm typically makes incentive payments to the partners based on new account originations, charge volumes and the cost of the partners' marketing activities and awards. Payments based on new account originations are accounted for as direct loan origination costs. Payments to partners based on charge volumes are deducted from interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as noninterest expense.

Other income
Included in other income is operating lease income of $1.5 billion, $1.3 billion and $1.2 billion for the years ended December 31, 2013, 2012 and 2011, respectively. Additionally, included in other income is a net pre-tax gain of approximately $1.3 billion, from the sale of the Visa B Shares. See Note 2 on pages 192–194 of this Annual Report for more information.

Note 8 – Interest income and Interest expense

Interest income and interest expense is recorded in the Consolidated Statements of Income and classified based on the nature of the underlying asset or liability. Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP absent the fair value option election; for those instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable.

Details of interest income and interest expense were as follows.

Year ended December 31, (in millions)	**2013**	2012	2011
Interest income			
Loans	**$33,489**	$ 35,832	$ 37,098
Securities	**7,812**	7,939	9,215
Trading assets	**8,426**	9,039	11,142
Federal funds sold and securities purchased under resale agreements	**1,940**	2,442	2,523
Securities borrowed	**(127)** [c]	(3) [c]	110
Deposits with banks	**918**	555	599
Other assets[a]	**538**	259	606
Total interest income	**52,996**	56,063	61,293
Interest expense			
Interest-bearing deposits	**2,067**	2,655	3,855
Short-term and other liabilities[b]	**2,125**	1,788	2,873
Long-term debt	**5,007**	6,062	6,109
Beneficial interests issued by consolidated VIEs	**478**	648	767
Total interest expense	**9,677**	11,153	13,604
Net interest income	**43,319**	44,910	47,689
Provision for credit losses	**225**	3,385	7,574
Net interest income after provision for credit losses	**$43,094**	$ 41,525	$ 40,115

(a) Largely margin loans.
(b) Includes brokerage customer payables.
(c) Negative interest income for the years ended December 31, 2013 and 2012, is a result of increased client-driven demand for certain securities combined with the impact of low interest rates; the offset of this matched book activity is reflected as lower net interest expense reported within short-term and other liabilities.

Note 9 – Pension and other postretirement employee benefit plans

The Firm's defined benefit pension plans and its other postretirement employee benefit ("OPEB") plans (collectively the "Plans") are accounted for in accordance with U.S. GAAP for retirement benefits.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based on eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after three years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws. The Firm does not anticipate at this time any contribution to the U.S. defined benefit pension plan in 2014. The 2014 contributions to the non-U.S. defined benefit pension plans are expected to be $49 million of which $32 million are contractually required.

JPMorgan Chase also has a number of defined benefit pension plans that are not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees previously earned pay credits on compensation amounts above the maximum stipulated by law under a qualified plan; no further pay credits are allocated under this plan. The Excess Retirement Plan had an unfunded projected benefit obligation in the amount of $245 million and $276 million, at December 31, 2013 and 2012, respectively.

Effective March 19, 2012, pursuant to the WaMu Global Settlement, JPMorgan Chase Bank, N.A. became the sponsor of the WaMu Pension Plan. This plan's assets were merged with and into the JPMorgan Chase Retirement Plan effective as of December 31, 2012.

Defined contribution plans

JPMorgan Chase currently provides two qualified defined contribution plans in the U.S. and other similar arrangements in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is The JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. The 401(k) Savings Plan allows employees to make pretax and Roth 401(k) contributions to tax-deferred investment portfolios. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan.

The Firm matches eligible employee contributions up to 5% of benefits-eligible compensation (e.g., base pay) on an annual basis. Employees begin to receive matching contributions after completing a one-year-of-service requirement. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. Matching contributions vest after three years of service for employees hired on or after May 1, 2009. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with the length of service and the date of hire and provide for limits on the Firm's share of covered medical benefits. The medical and life insurance benefits are both contributory. Postretirement medical benefits also are offered to qualifying U.K. employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations, plan assets and funded status amounts reported on the Consolidated Balance Sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

As of or for the year ended December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans[d]	
(in millions)	**2013**	2012	**2013**	2012	**2013**	2012
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (11,478)**	$ (9,043)	**$ (3,243)**	$ (2,829)	**$ (990)**	$ (999)
Benefits earned during the year	**(314)**	(272)	**(34)**	(41)	**(1)**	(1)
Interest cost on benefit obligations	**(447)**	(466)	**(125)**	(126)	**(35)**	(44)
Plan amendments	**–**	–	**–**	6	**–**	–
WaMu Global Settlement	**–**	(1,425)	**–**	–	**–**	–
Employee contributions	**NA**	NA	**(7)**	(5)	**(72)**	(74)
Net gain/(loss)	**794**	(864)	**(62)**	(244)	**138**	(9)
Benefits paid	**669**	592	**106**	108	**144**	149
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(10)**	(10)
Foreign exchange impact and other	**–**	–	**(68)**	(112)	**–**	(2)
Benefit obligation, end of year	**$ (10,776)**	$(11,478)	**$ (3,433)**	$ (3,243)	**$ (826)**	$ (990)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 13,012**	$ 10,472	**$ 3,330**	$ 2,989	**$ 1,563**	$ 1,435
Actual return on plan assets	**1,979**	1,292	**187**	237	**211**	142
Firm contributions	**32**	31	**45**	86	**2**	2
WaMu Global Settlement	**–**	1,809	**–**	–	**–**	–
Employee contributions	**–**	–	**7**	5	**–**	–
Benefits paid	**(669)**	(592)	**(106)**	(108)	**(19)**	(16)
Foreign exchange impact and other	**–**	–	**69**	121	**–**	–
Fair value of plan assets, end of year	**$ 14,354** [b][c]	$ 13,012 [b][c]	**$ 3,532** [c]	$ 3,330 [c]	**$ 1,757**	$ 1,563
Funded/(unfunded) status[a]	**$ 3,578**	$ 1,534	**$ 99**	$ 87	**$ 931**	$ 573
Accumulated benefit obligation, end of year	**$ (10,685)**	$(11,447)	**$ (3,406)**	$ (3,221)	**NA**	NA

(a) Represents plans with an aggregate overfunded balance of $5.1 billion and $2.8 billion at December 31, 2013 and 2012, respectively, and plans with an aggregate underfunded balance of $540 million and $612 million at December 31, 2013 and 2012, respectively.
(b) At December 31, 2013 and 2012, approximately $429 million and $418 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.
(c) At December 31, 2013 and 2012, defined benefit pension plan amounts not measured at fair value included $96 million and $137 million, respectively, of accrued receivables, and $104 million and $310 million, respectively, of accrued liabilities, for U.S. plans; and at December 31, 2012, $47 million of accrued receivables, and $46 million of accrued liabilities, for non-U.S. plans.
(d) Includes an unfunded accumulated postretirement benefit obligation of $34 million and $31 million at December 31, 2013 and 2012, respectively, for the U.K. plan.

Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the projected benefit obligation or the fair value of the plan assets. Any excess is amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently nine years. In addition, prior service costs are amortized over the average remaining service period of active employees expected to receive benefits under the plan when the prior service cost is first recognized. The average remaining amortization period for current prior service costs is six years.

For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. This value is referred to as the market related value of assets. Amortization of net gains and losses, adjusted for gains and losses not yet recognized, is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market related value of assets. Any excess net gain or loss is amortized over the average expected lifetime of retired participants, which is currently thirteen years; however, prior service costs resulting from plan changes are amortized over the average years of service remaining to full eligibility age, which is currently two years.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans	
(in millions)	**2013**	2012	**2013**	2012	**2013**	2012
Net gain/(loss)	**$ (1,726)**	$ (3,814)	**$ (658)**	$ (676)	**$ 125**	$ (133)
Prior service credit/(cost)	**196**	237	**14**	18	**1**	1
Accumulated other comprehensive income/(loss), pretax, end of year	**$ (1,530)**	$ (3,577)	**$ (644)**	$ (658)	**$ 126**	$ (132)

The following table presents the components of net periodic benefit costs reported in the Consolidated Statements of Income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension, defined contribution and OPEB plans.

	Pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Components of net periodic benefit cost									
Benefits earned during the year	**$ 314**	$ 272	$ 249	**$ 34**	$ 41	$ 36	**$ 1**	$ 1	$ 1
Interest cost on benefit obligations	**447**	466	451	**125**	126	133	**35**	44	51
Expected return on plan assets	**(956)**	(861)	(791)	**(142)**	(137)	(141)	**(92)**	(90)	(88)
Amortization:									
Net (gain)/loss	**271**	289	165	**49**	36	48	**1**	(1)	1
Prior service cost/(credit)	**(41)**	(41)	(43)	**(2)**	–	(1)	**–**	–	(8)
Net periodic defined benefit cost	**35**	125	31	**64**	66	75	**(55)**	(46)	(43)
Other defined benefit pension plans[a]	**15**	15	19	**14**	8	12	**NA**	NA	NA
Total defined benefit plans	**50**	140	50	**78**	74	87	**(55)**	(46)	(43)
Total defined contribution plans	**447**	409	370	**321**	302	285	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 497**	$ 549	$ 420	**$ 399**	$ 376	$ 372	**$ (55)**	$ (46)	$ (43)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	**$ (1,817)**	$ 434	$ 1,207	**$ 19**	$ 146	$ 25	**$ (257)**	$ (43)	$ 58
Prior service credit arising during the year	**–**	–	–	**–**	(6)	–	**–**	–	–
Amortization of net loss	**(271)**	(289)	(165)	**(49)**	(36)	(48)	**(1)**	1	(1)
Amortization of prior service (cost)/credit	**41**	41	43	**2**	–	1	**–**	–	8
Foreign exchange impact and other	**–**	–	–	**14** [a]	22	1	**–**	(1)	–
Total recognized in other comprehensive income	**$ (2,047)**	$ 186	$ 1,085	**$ (14)**	$ 126	$ (21)	**$ (258)**	$ (43)	$ 65
Total recognized in net periodic benefit cost and other comprehensive income	**$ (2,012)**	$ 311	$ 1,116	**$ 50**	$ 192	$ 54	**$ (313)**	$ (89)	$ 22

(a) Includes various defined benefit pension plans which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2014 are as follows.

	Defined benefit pension plans		OPEB plans	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss/(gain)	$ 35	$ 47	$ –	$ –
Prior service cost/(credit)	(41)	(2)	–	–
Total	$ (6)	$ 45	$ –	$ –

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
Year ended December 31,	**2013**	2012	2011	**2013**	2012	2011
Actual rate of return:						
Defined benefit pension plans	**15.95%**	12.66%	0.72%	**3.74 - 23.80%**	7.21 - 11.72%	(4.29)-13.12%
OPEB plans	**13.88**	10.10	5.22	**NA**	NA	NA

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration is also given to current market conditions and the short-term portfolio mix of each plan; as a result, in 2013 the Firm generally maintained the same expected return on assets as in the prior year.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The expected return on "AA" rated long-term corporate bonds is based on an implied yield for similar bonds.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension plan represents a rate implied from the yield curve of the year-end iBoxx £ corporate "AA" 15-year-plus bond index.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's significant U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S.	
December 31,	**2013**	2012	**2013**	2012
Discount rate:				
Defined benefit pension plans	**5.00%**	3.90%	**1.10 - 4.40%**	1.40 - 4.40%
OPEB plans	**4.90**	3.90	**–**	–
Rate of compensation increase	**3.50**	4.00	**2.75 - 4.60**	2.75 - 4.10
Health care cost trend rate:				
Assumed for next year	**6.50**	7.00	**–**	–
Ultimate	**5.00**	5.00	**–**	–
Year when rate will reach ultimate	**2017**	2017	**–**	–

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2013**	2012	2011	**2013**	2012	2011
Discount rate:						
Defined benefit pension plans	**3.90%**	4.60%	5.50%	**1.40 - 4.40%**	1.50 - 4.80%	1.60-5.50%
OPEB plans	**3.90**	4.70	5.50	**–**	–	–
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**7.50**	7.50	7.50	**2.40 - 4.90**	2.50 - 4.60	2.40-5.40
OPEB plans	**6.25**	6.25	6.25	**NA**	NA	NA
Rate of compensation increase	**4.00**	4.00	4.00	**2.75 - 4.10**	2.75 - 4.20	3.00-4.50
Health care cost trend rate:						
Assumed for next year	**7.00**	7.00	7.00	**–**	–	–
Ultimate	**5.00**	5.00	5.00	**–**	–	–
Year when rate will reach ultimate	**2017**	2017	2017	**–**	–	–

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's total service and interest cost and accumulated postretirement benefit obligation.

Year ended December 31, 2013 (in millions)	1-Percentage point increase	1-Percentage point decrease
Effect on total service and interest cost	$ 1	$ (1)
Effect on accumulated postretirement benefit obligation	31	(26)

At December 31, 2013, the Firm increased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will result in a decrease in expense of approximately $84 million for 2014. The 2014 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 7.00% and 6.25%, respectively. For 2014, the initial health care benefit obligation trend assumption has been set at 6.50%, and the ultimate health care trend assumption and the year to reach the ultimate rate remains at 5.00% and 2017, respectively, unchanged from 2013. As of December 31, 2013, the interest crediting rate assumption remained at 5.00% while the assumed rate of compensation increase decreased to 3.50%.

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an aggregate increase of approximately $39 million in 2014 U.S. defined benefit pension and OPEB plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2014 U.S. defined benefit pension and OPEB plan expense of approximately an aggregate $26 million and an increase in the related benefit obligations of approximately an aggregate $254 million. A 25-basis point decrease in the interest crediting rate for the U.S. defined benefit pension plan would result in a decrease in 2014 U.S. defined benefit pension expense of approximately $32 million and a decrease in the related projected benefit obligations of approximately $130 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2014 non-U.S. defined benefit pension plan expense of approximately $15 million.

Investment strategy and asset allocation

The Firm's U.S. defined benefit pension plan assets are held in trust and are invested in a well-diversified portfolio of equity and fixed income securities, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity, real estate and real assets). Non-U.S. defined benefit pension plan assets are held in various trusts and are also invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to partially fund the U.S. OPEB plan, are held in separate accounts with an insurance company and are invested in funds intended to replicate equity and fixed income indices.

The investment policy for the Firm's U.S. defined benefit pension plan assets is to optimize the risk-return relationship as appropriate to the needs and goals using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Assets are managed by a combination of internal and external investment managers. Periodically the Firm performs a comprehensive analysis on the U.S. defined benefit pension plan asset allocations, incorporating projected asset and liability data, which focuses on the short- and long-term impact of the asset allocation on cumulative pension expense, economic cost, present value of contributions and funded status. As the U.S. defined benefit pension plan is overfunded, the investment strategy for this plan was adjusted in 2013 to provide for greater liquidity. Currently, approved asset allocation ranges are: U.S. equity 0% to 45%, international equity 0% to 40%, debt securities 0% to 80%, hedge funds 0% to 20%, and real estate 0% to 10%, real assets 0% to 10% and private equity 0% to 20%. Asset allocations are not managed to a specific target but seek to shift asset class allocations within these stated ranges. Investment strategies incorporate the economic outlook and the anticipated implications of the

macroeconomic environment on the various asset classes while maintaining an appropriate level of liquidity for the plan. The Firm regularly reviews the asset allocations and asset managers, as well as other factors that impact the portfolio, which is rebalanced when deemed necessary.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, the assets are invested to maximize returns subject to an appropriate level of risk relative to the plans' liabilities. In order to reduce the volatility in returns relative to the plans' liability profiles, the U.K. defined benefit pension plans' largest asset allocations are to debt securities of appropriate durations. Other assets, mainly equity securities, are then invested for capital appreciation, to provide long-term investment growth. Similar to the U.S. defined benefit pension plan, asset allocations and asset managers for the U.K. plans are reviewed regularly and the portfolio is rebalanced when deemed necessary.

Investments held by the Plans include financial instruments which are exposed to various risks such as interest rate, market and credit risks. Exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments. As of December 31, 2013, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except through indirect exposures through investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $2.9 billion and $1.8 billion for U.S. plans and $242 million and $220 million for non-U.S. plans, as of December 31, 2013 and 2012, respectively.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[c]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2013**	2012	Allocation	**2013**	2012	Allocation	**2013**	2012
Asset category									
Debt securities[a]	0-80%	**25%**	20%	64%	**63%**	72%	50%	**50%**	50%
Equity securities	0-85	**48**	41	35	**36**	27	50	**50**	50
Real estate	0-10	**4**	5	–	**–**	–	–	**–**	–
Alternatives[b]	0-50	**23**	34	1	**1**	1	–	**–**	–
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Debt securities primarily include corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.
(b) Alternatives primarily include limited partnerships.
(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

Fair value measurement of the plans' assets and liabilities

For information on fair value measurements, including descriptions of level 1, 2, and 3 of the fair value hierarchy and the valuation methods employed by the Firm, see Note 3 on pages 195–215 of this Annual Report.

Pension and OPEB plan assets and liabilities measured at fair value

	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans[i]		
December 31, 2013 (in millions)	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	$ 62	$ –	$ –	$ 62	$ 221	$ 3	$ 224
Equity securities:							
Capital equipment	1,084	–	–	1,084	86	17	103
Consumer goods	1,085	–	–	1,085	225	50	275
Banks and finance companies	737	–	–	737	233	29	262
Business services	510	–	–	510	209	14	223
Energy	292	–	–	292	64	20	84
Materials	344	–	–	344	36	9	45
Real Estate	38	–	–	38	–	1	1
Other	1,337	18	4	1,359	25	103	128
Total equity securities	5,427	18	4	5,449	878	243	1,121
Common/collective trust funds[a]	–	1,308	4	1,312	98	248	346
Limited partnerships:[b]							
Hedge funds	–	355	718	1,073	–	–	–
Private equity	–	–	1,969	1,969	–	–	–
Real estate	–	–	558	558	–	–	–
Real assets[c]	–	–	271	271	–	–	–
Total limited partnerships	–	355	3,516	3,871	–	–	–
Corporate debt securities[d]	–	1,223	7	1,230	–	787	787
U.S. federal, state, local and non-U.S. government debt securities	343	299	–	642	–	777	777
Mortgage-backed securities	37	50	–	87	73	–	73
Derivative receivables	–	30	–	30	–	302	302
Other[e]	1,214	41	430	1,685	148	52	200
Total assets measured at fair value[f][g]	$ 7,083	$ 3,324	$ 3,961	$ 14,368	$ 1,418	$ 2,412	$ 3,830
Derivative payables	$ –	$ (6)	$ –	$ (6)	$ –	$ (298)	$ (298)
Total liabilities measured at fair value[h]	$ –	$ (6)	$ –	$ (6)	$ –	$ (298)	$ (298)

December 31, 2012 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans[i]		
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	$ 162	$ –	$ –	$ 162	$ 142	$ –	$ 142
Equity securities:							
Capital equipment	702	6	–	708	115	15	130
Consumer goods	744	4	–	748	136	32	168
Banks and finance companies	425	54	–	479	94	23	117
Business services	424	–	–	424	125	8	133
Energy	192	–	–	192	54	12	66
Materials	211	–	–	211	30	6	36
Real estate	18	–	–	18	10	–	10
Other	1,107	42	4	1,153	19	71	90
Total equity securities	3,823	106	4	3,933	583	167	750
Common/collective trust funds[a]	412	1,660	199	2,271	62	192	254
Limited partnerships:[b]							
Hedge funds	–	878	1,166	2,044	–	–	–
Private equity	–	–	1,743	1,743	–	–	–
Real estate	–	–	467	467	–	–	–
Real assets[c]	–	–	311	311	–	–	–
Total limited partnerships	–	878	3,687	4,565	–	–	–
Corporate debt securities[d]	–	1,114	1	1,115	–	765	765
U.S. federal, state, local and non-U.S. government debt securities	–	537	–	537	–	1,237	1,237
Mortgage-backed securities	107	30	–	137	100	–	100
Derivative receivables	3	5	–	8	109	–	109
Other[e]	7	34	420	461	21	67	88
Total assets measured at fair value[f][g]	$ 4,514	$ 4,364	$ 4,311	$ 13,189	$ 1,017	$ 2,428	$ 3,445
Derivative payables	$ –	$ (4)	$ –	$ (4)	$ (116)	$ –	$ (116)
Total liabilities measured at fair value[h]	$ –	$ (4)	$ –	$ (4)	$ (116)	$ –	$ (116)

(a) At December 31, 2013 and 2012, common/collective trust funds primarily included a mix of short-term investment funds, domestic and international equity investments (including index) and real estate funds.
(b) Unfunded commitments to purchase limited partnership investments for the plans were $1.6 billion and $1.4 billion for 2013 and 2012, respectively.
(c) Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.
(d) Corporate debt securities include debt securities of U.S. and non-U.S. corporations.
(e) Other consists of money markets, exchange-traded funds and participating and non-participating annuity contracts. Money markets and exchange-traded funds are primarily classified within level 1 of the fair value hierarchy given they are valued using market observable prices. Participating and non-participating annuity contracts are classified within level 3 of the fair value hierarchy due to lack of market mechanisms for transferring each policy and surrender restrictions.
(f) At December 31, 2013 and 2012, the fair value of investments valued at NAV were $2.7 billion and $4.4 billion, respectively, which were classified within the valuation hierarchy as follows: $100 million and $400 million in level 1, $1.9 billion and $2.5 billion in level 2 and $700 million and $1.5 billion in level 3.
(g) At December 31, 2013 and 2012, excluded U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $96 million and $137 million, respectively; and at December 31, 2012, excluded non-U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $47 million.
(h) At December 31, 2013 and 2012, excluded $102 million and $306 million, respectively, of U.S. defined benefit pension plan payables for investments purchased; and $2 million and $4 million, respectively, of other liabilities; and at December 31, 2012, excluded non-U.S. defined benefit pension plan payables for investments purchased of $46 million.
(i) There were no assets or liabilities classified as level 3 for the non-U.S. defined benefit pension plans as of December 31, 2013 and 2012.

The Firm's U.S. OPEB plan was partially funded with COLI policies of $1.7 billion and $1.6 billion at December 31, 2013 and 2012, respectively, which were classified in level 3 of the valuation hierarchy.

Changes in level 3 fair value measurements using significant unobservable inputs

Year ended December 31, 2013 (in millions)	Fair value, January 1, 2013	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2013
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	**$ 4**	**$ –**	**$ –**	**$ –**	**$ –**	**$ 4**
Common/collective trust funds	**199**	**59**	**(32)**	**(222)**	**–**	**4**
Limited partnerships:						
Hedge funds	**1,166**	**137**	**14**	**(593)**	**(6)**	**718**
Private equity	**1,743**	**108**	**170**	**(4)**	**(48)**	**1,969**
Real estate	**467**	**21**	**44**	**26**	**–**	**558**
Real assets	**311**	**4**	**12**	**(98)**	**42**	**271**
Total limited partnerships	**3,687**	**270**	**240**	**(669)**	**(12)**	**3,516**
Corporate debt securities	**1**	**–**	**–**	**–**	**6**	**7**
Other	**420**	**–**	**10**	**–**	**–**	**430**
Total U.S. defined benefit pension plans	**$ 4,311**	**$ 329**	**$ 218**	**$ (891)**	**$ (6)**	**$ 3,961**
OPEB plans						
COLI	**$ 1,554**	**$ –**	**$ 195**	**$ –**	**$ –**	**$ 1,749**
Total OPEB plans	**$ 1,554**	**$ –**	**$ 195**	**$ –**	**$ –**	**$ 1,749**

Year ended December 31, 2012 (in millions)	Fair value, January 1, 2012	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2012
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	$ 1	$ –	$ (1)	$ –	$ 4	$ 4
Common/collective trust funds	202	2	22	(27)	–	199
Limited partnerships:						
Hedge funds	1,039	1	71	55	–	1,166
Private equity	1,367	59	54	263	–	1,743
Real estate	306	16	1	144	–	467
Real assets	264	–	10	37	–	311
Total limited partnerships	2,976	76	136	499	–	3,687
Corporate debt securities	2	–	–	(1)	–	1
Other	427	–	(7)	–	–	420
Total U.S. defined benefit pension plans	$ 3,608	$ 78	$ 150	$ 471	$ 4	$ 4,311
OPEB plans						
COLI	$ 1,427	$ –	$ 127	$ –	$ –	$ 1,554
Total OPEB plans	$ 1,427	$ –	$ 127	$ –	$ –	$ 1,554

Year ended December 31, 2011 (in millions)	Fair value, January 1, 2011	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2011
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	$ –	$ –	$ –	$ –	$ 1	$ 1
Common/collective trust funds	194	35	1	(28)	–	202
Limited partnerships:						
Hedge funds	1,160	(16)	27	(76)	(56)	1,039
Private equity	1,232	56	2	77	–	1,367
Real estate	304	8	40	14	(60)	306
Real assets	–	5	(7)	150	116	264
Total limited partnerships	2,696	53	62	165	–	2,976
Corporate debt securities	1	–	–	1	–	2
Other	387	–	41	(1)	–	427
Total U.S. defined benefit pension plans	$ 3,278	$ 88	$ 104	$ 137	$ 1	$ 3,608
OPEB plans						
COLI	$ 1,381	$ –	$ 70	$ (24)	$ –	$ 1,427
Total OPEB plans	$ 1,381	$ –	$ 70	$ (24)	$ –	$ 1,427

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2014	$ 703	$ 112	$ 86	$ 10
2015	731	118	85	11
2016	872	123	83	12
2017	907	129	81	12
2018	931	140	78	13
Years 2019–2023	4,139	785	345	47

Note 10 – Employee stock-based incentives

Employee stock-based awards

In 2013, 2012 and 2011, JPMorgan Chase granted long-term stock-based awards to certain employees under its Long-Term Incentive Plan, which was last amended in May 2011 ("LTIP"). Under the terms of the LTIP, as of December 31, 2013, 266 million shares of common stock were available for issuance through May 2015. The LTIP is the only active plan under which the Firm is currently granting stock-based incentive awards. In the following discussion, the LTIP, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans," and such plans constitute the Firm's stock-based incentive plans.

Restricted stock units ("RSUs") are awarded at no cost to the recipient upon their grant. Generally, RSUs are granted annually and vest at a rate of 50% after two years and 50% after three years and are converted into shares of common stock as of the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All RSUs awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding and, as such, are considered participating securities as discussed in Note 24 on page 311 of this Annual Report.

Under the LTI Plans, stock options and stock appreciation rights ("SARs") have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm typically awards SARs to certain key employees once per year; the Firm also periodically grants employee stock options and SARs to individual employees. The 2013, 2012 and 2011 grants of SARs become exercisable ratably over five years (i.e., 20% per year) and contain clawback provisions similar to RSUs. The 2013, 2012 and 2011 grants of SARs contain full-career eligibility provisions. SARs generally expire ten years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2013, 2012 and 2011, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. Effective January 2013, the Compensation Committee and Board of Directors determined that, while all the requirements for vesting of these awards have been met, vesting should be deferred for a period of up to 18 months (i.e., up to July 22, 2014), to enable the Firm to make progress against the Firm's strategic priorities and performance goals, including remediation relating to the CIO matter. The SARs, which will expire in January 2018, will become exercisable no earlier than July 22, 2014, and have an exercise price of $39.83 (the price of JPMorgan Chase common stock on the date of grant). Vesting will be subject to a Board determination taking into consideration the extent of such progress and such other factors as it deems relevant. The expense related to this award is dependent on changes in fair value of the SARs through the date when the vested number of SARs are determined, if any, and the cumulative expense is recognized ratably over the service period, which was initially assumed to be five years but, effective in the first quarter of 2013, has been extended to six and one-half years. The Firm recognized $14 million, $5 million and $(4) million in compensation expense in 2013, 2012 and 2011, respectively, for this award.

RSUs, employee stock options and SARs activity

Compensation expense for RSUs is measured based on the number of shares granted multiplied by the stock price at the grant date, and for employee stock options and SARs, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorgan Chase's RSUs, employee stock options and SARs activity for 2013.

	RSUs		Options/SARs			
Year ended December 31, 2013 (in thousands, except weighted-average data, and where otherwise stated)	Number of shares	Weighted-average grant date fair value	Number of awards	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	142,006	$ 40.49	115,906	$ 42.44		
Granted	46,171	46.92	12,563	46.77		
Exercised or vested	(62,331)	43.28	(35,825)	37.32		
Forfeited	(4,605)	40.77	(4,007)	39.44		
Canceled	NA	NA	(1,562)	104.49		
Outstanding, December 31	121,241	$ 41.47	87,075	$ 44.24	5.6	$ 1,622,238
Exercisable, December 31	NA	NA	46,855	47.50	4.2	904,017

The total fair value of RSUs that vested during the years ended December 31, 2013, 2012 and 2011, was $2.9 billion, $2.8 billion and $5.4 billion, respectively. The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2013, 2012 and 2011, was $9.58, $8.89 and $13.04, respectively. The total intrinsic value of options exercised during the years ended December 31, 2013, 2012 and 2011, was $507 million, $283 million and $191 million, respectively.

Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated Statements of Income.

Year ended December 31, (in millions)	**2013**	2012	2011
Cost of prior grants of RSUs and SARs that are amortized over their applicable vesting periods	**$ 1,440**	$ 1,810	$ 1,986
Accrual of estimated costs of RSUs and SARs to be granted in future periods including those to full-career eligible employees	**779**	735	689
Total noncash compensation expense related to employee stock-based incentive plans	**$ 2,219**	$ 2,545	$ 2,675

At December 31, 2013, approximately $848 million (pretax) of compensation cost related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.0 year. The Firm does not capitalize any compensation cost related to share-based compensation awards to employees.

Cash flows and tax benefits

Income tax benefits related to stock-based incentive arrangements recognized in the Firm's Consolidated Statements of Income for the years ended December 31, 2013, 2012 and 2011, were $865 million, $1.0 billion and $1.0 billion, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements, and the actual income tax benefit realized related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	**2013**	2012	2011
Cash received for options exercised	**$ 166**	$ 333	$ 354
Tax benefit realized[(a)]	**42**	53	31

(a) The tax benefit realized from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings are recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards.

Valuation assumptions

The following table presents the assumptions used to value employee stock options and SARs granted during the years ended December 31, 2013, 2012 and 2011, under the Black-Scholes valuation model.

Year ended December 31,	**2013**	2012	2011
Weighted-average annualized valuation assumptions			
Risk-free interest rate	**1.18%**	1.19%	2.58%
Expected dividend yield	**2.66**	3.15	2.20
Expected common stock price volatility	**28**	35	34
Expected life (in years)	**6.6**	6.6	6.5

The expected dividend yield is determined using forward-looking assumptions. The expected volatility assumption is derived from the implied volatility of JPMorgan Chase's stock options. The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled, and the assumption is based on the Firm's historical experience.

Note 11 – Noninterest expense

The following table presents the components of noninterest expense.

Year ended December 31, (in millions)	2013	2012	2011
Compensation expense	$ 30,810	$ 30,585	$ 29,037
Noncompensation expense:			
Occupancy expense	3,693	3,925	3,895
Technology, communications and equipment expense	5,425	5,224	4,947
Professional and outside services	7,641	7,429	7,482
Marketing	2,500	2,577	3,143
Other expense[a][b]	19,761	14,032	13,559
Amortization of intangibles	637	957	848
Total noncompensation expense	39,657	34,144	33,874
Total noninterest expense	$ 70,467	$ 64,729	$ 62,911

(a) Included firmwide legal expense of $11.1 billion, $5.0 billion and $4.9 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) Included FDIC-related expense of $1.5 billion, $1.7 billion and $1.5 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

Note 12 – Securities

Securities are classified as AFS, held-to-maturity ("HTM") or trading. Securities classified as trading assets are discussed in Note 3 on pages 195–215 of this Annual Report. Predominantly all of the Firm's AFS and HTM investment securities (the "investment securities portfolio") is held by CIO in connection with its asset-liability management objectives. At December 31, 2013, the average credit rating of the debt securities comprising the investment securities portfolio was AA+ (based upon external ratings where available, and where not available, based primarily upon internal ratings which correspond to ratings as defined by S&P and Moody's). AFS securities are carried at fair value on the Consolidated Balance Sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to accumulated other comprehensive income/(loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated Statements of Income. HTM debt securities, which management has the intent and ability to hold until maturity, are carried at amortized cost on the Consolidated Balance Sheets. For both AFS and HTM debt securities, purchase discounts or premiums are amortized into interest income.

Other-than-temporary impairment

AFS debt and equity securities and HTM debt securities in unrealized loss positions are analyzed as part of the Firm's ongoing assessment of other-than-temporary impairment ("OTTI"). For most types of debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm considers an OTTI to have occurred when there is an adverse change in expected cash flows. For AFS equity securities, the Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its amortized cost basis.

Potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and the Firm's intent and ability to hold the security until recovery.

For AFS debt securities, the Firm recognizes OTTI losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost basis. In these circumstances the impairment loss is equal to the full difference between the amortized cost basis and the fair value of the securities. For debt securities in an unrealized loss position, including AFS securities the Firm has the intent and ability to hold, the expected cash flows to be received from the securities are evaluated to determine if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI.

The Firm's cash flow evaluations take into account the factors noted above and expectations of relevant market and economic data as of the end of the reporting period. For securities issued in a securitization, the Firm estimates cash flows considering underlying loan-level data and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios.

For equity securities, OTTI losses are recognized in earnings if the Firm intends to sell the security. In other cases the Firm considers the relevant factors noted above, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the carrying value. Any impairment loss on an equity security is equal to the full difference between the amortized cost basis and the fair value of the security.

Realized gains and losses

The following table presents realized gains and losses and credit losses that were recognized in income from AFS securities.

Year ended December 31, (in millions)	2013	2012	2011
Realized gains	**$1,302**	$2,610	$1,811
Realized losses	**(614)**	(457)	(142)
Net realized gains[a]	**688**	2,153	1,669
OTTI losses			
Credit-related	**(1)**	(28)	(76)
Securities the Firm intends to sell	**(20)** [b]	(15) [b]	–
Total OTTI losses recognized in income	**(21)**	(43)	(76)
Net securities gains	**$ 667**	$2,110	$1,593

(a) Proceeds from securities sold were within approximately 2% of amortized cost in 2013, and within approximately 4% of amortized cost in 2012 and 2011.
(b) Excludes realized losses of $12 million and $24 million for the years ended December 31, 2013 and 2012, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

	2013				2012			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies[a]	**$ 76,428**	**$ 2,364**	**$ 977**	**$ 77,815**	$ 93,693	$ 4,708	$ 13	$ 98,388
Residential:								
Prime and Alt-A	**2,744**	**61**	**27**	**2,778**	1,853	83	3	1,933
Subprime	**908**	**23**	**1**	**930**	825	28	–	853
Non-U.S.	**57,448**	**1,314**	**1**	**58,761**	70,358	1,524	29	71,853
Commercial	**15,891**	**560**	**26**	**16,425**	12,268	948	13	13,203
Total mortgage-backed securities	**153,419**	**4,322**	**1,032**	**156,709**	178,997	7,291	58	186,230
U.S. Treasury and government agencies[a]	**21,310**	**385**	**306**	**21,389**	12,022	116	8	12,130
Obligations of U.S. states and municipalities	**29,741**	**707**	**987**	**29,461**	19,876	1,845	10	21,711
Certificates of deposit	**1,041**	**1**	**1**	**1,041**	2,781	4	2	2,783
Non-U.S. government debt securities	**55,507**	**863**	**122**	**56,248**	65,168	901	25	66,044
Corporate debt securities	**21,043**	**498**	**29**	**21,512**	37,999	694	84	38,609
Asset-backed securities:								
Collateralized loan obligations	**28,130**	**236**	**136**	**28,230**	27,483	465	52	27,896
Other	**12,062**	**186**	**3**	**12,245**	12,816	166	11	12,971
Total available-for-sale debt securities	**322,253**	**7,198**	**2,616**	**326,835**	357,142	11,482	250	368,374
Available-for-sale equity securities	**3,125**	**17**	**–**	**3,142**	2,750	21	–	2,771
Total available-for-sale securities	**$ 325,378**	**$ 7,215**	**$ 2,616**	**$ 329,977**	$ 359,892	$ 11,503	$ 250	$ 371,145
Total held-to-maturity securities[b]	**$ 24,026**	**$ 22**	**$ 317**	**$ 23,731**	$ 7	$ 1	$ –	$ 8

(a) Includes total U.S. government-sponsored enterprise obligations with fair values of $67.0 billion and $84.0 billion at December 31, 2013 and 2012, respectively, which were predominantly mortgage-related.
(b) As of December 31, 2013, consists of MBS issued by U.S. government-sponsored enterprises with an amortized cost of $23.1 billion and obligations of U.S. states and municipalities with an amortized cost of $920 million.

Securities impairment

The following tables present the fair value and gross unrealized losses for the investment securities portfolio by aging category at December 31, 2013 and 2012.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2013 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	**$ 20,293**	**$ 895**	**$ 1,150**	**$ 82**	**$ 21,443**	**$ 977**
Residential:						
Prime and Alt-A	**1,061**	**27**	**—**	**—**	**1,061**	**27**
Subprime	**152**	**1**	**—**	**—**	**152**	**1**
Non-U.S.	**—**	**—**	**158**	**1**	**158**	**1**
Commercial	**3,980**	**26**	**—**	**—**	**3,980**	**26**
Total mortgage-backed securities	**25,486**	**949**	**1,308**	**83**	**26,794**	**1,032**
U.S. Treasury and government agencies	**6,293**	**250**	**237**	**56**	**6,530**	**306**
Obligations of U.S. states and municipalities	**15,387**	**975**	**55**	**12**	**15,442**	**987**
Certificates of deposit	**988**	**1**	**—**	**—**	**988**	**1**
Non-U.S. government debt securities	**11,286**	**110**	**821**	**12**	**12,107**	**122**
Corporate debt securities	**1,580**	**21**	**505**	**8**	**2,085**	**29**
Asset-backed securities:						
Collateralized loan obligations	**18,369**	**129**	**393**	**7**	**18,762**	**136**
Other	**1,114**	**3**	**—**	**—**	**1,114**	**3**
Total available-for-sale debt securities	**80,503**	**2,438**	**3,319**	**178**	**83,822**	**2,616**
Available-for-sale equity securities	**—**	**—**	**—**	**—**	**—**	**—**
Held-to-maturity securities	**20,745**	**317**	**—**	**—**	**20,745**	**317**
Total securities with gross unrealized losses	**$ 101,248**	**$ 2,755**	**$ 3,319**	**$ 178**	**$ 104,567**	**$ 2,933**

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2012 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 2,440	$ 13	$ –	$ –	$ 2,440	$ 13
Residential:						
Prime and Alt-A	218	2	76	1	294	3
Subprime	–	–	–	–	–	–
Non-U.S.	2,442	6	734	23	3,176	29
Commercial	1,159	8	312	5	1,471	13
Total mortgage-backed securities	6,259	29	1,122	29	7,381	58
U.S. Treasury and government agencies	4,198	8	–	–	4,198	8
Obligations of U.S. states and municipalities	907	10	–	–	907	10
Certificates of deposit	741	2	–	–	741	2
Non-U.S. government debt securities	14,527	21	1,927	4	16,454	25
Corporate debt securities	2,651	10	5,641	74	8,292	84
Asset-backed securities:						
Collateralized loan obligations	6,328	17	2,063	35	8,391	52
Other	2,076	7	275	4	2,351	11
Total available-for-sale debt securities	37,687	104	11,028	146	48,715	250
Available-for-sale equity securities	–	–	–	–	–	–
Held-to-maturity securities	–	–	–	–	–	–
Total securities with gross unrealized losses	$ 37,687	$ 104	$ 11,028	$ 146	$ 48,715	$ 250

Other-than-temporary impairment

The following table presents OTTI losses that are included in the securities gains and losses table above.

Year ended December 31, (in millions)	2013	2012	2011
Debt securities the Firm does not intend to sell that have credit losses			
Total OTTI[a]	**$ (1)**	$ (113)	$ (27)
Losses recorded in/ (reclassified from) AOCI	**–**	85	(49)
Total credit losses recognized in income[b]	**(1)**	(28)	(76)
Securities the Firm intends to sell	**(20)** [c]	(15) [c]	–
Total OTTI losses recognized in income	**$ (21)**	$ (43)	$ (76)

(a) For initial OTTI, represents the excess of the amortized cost over the fair value of AFS debt securities. For subsequent impairments of the same security, represents additional declines in fair value subsequent to previously recorded OTTI, if applicable.

(b) Subsequent credit losses may be recorded on securities without a corresponding further decline in fair value if there has been a decline in expected cash flows.

(c) Excludes realized losses of $12 million and $24 million for the years ended December 31, 2013 and 2012, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

Changes in the credit loss component of credit-impaired debt securities

The following table presents a rollforward for the years ended December 31, 2013, 2012 and 2011, of the credit loss component of OTTI losses that have been recognized in income, related to AFS debt securities that the Firm does not intend to sell.

Year ended December 31, (in millions)	2013	2012	2011
Balance, beginning of period	**$ 522**	$ 708	$ 632
Additions:			
Newly credit-impaired securities	**1**	21	4
Losses reclassified from other comprehensive income on previously credit-impaired securities	**–**	7	72
Reductions:			
Sales and redemptions of credit-impaired securities	**(522)**	(214)	–
Balance, end of period	**$ 1**	$ 522	$ 708

Gross unrealized losses

Gross unrealized losses, including those that have been in an unrealized loss position for 12 months or more, have generally increased since December 31, 2012. The Firm has recognized the unrealized losses on securities it intends to sell. As of December 31, 2013, the Firm does not intend to sell any securities with a loss position in AOCI, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities reported in the table above for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2013.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2013, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity December 31, 2013 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities[a]					
Amortized cost	$ 209	$ 13,689	$ 8,239	$ 131,282	$ 153,419
Fair value	210	14,117	8,489	133,893	156,709
Average yield[b]	2.17%	2.10%	2.83%	2.93%	2.85%
U.S. Treasury and government agencies[a]					
Amortized cost	$ 8,781	$ 10,246	$ 1,425	$ 858	$ 21,310
Fair value	8,792	10,257	1,425	915	21,389
Average yield[b]	0.36%	0.39%	0.34%	0.59%	0.38%
Obligations of U.S. states and municipalities					
Amortized cost	$ 57	$ 479	$ 1,644	$ 27,561	$ 29,741
Fair value	58	505	1,664	27,234	29,461
Average yield[b]	3.12%	4.91%	4.27%	6.19%	6.06%
Certificates of deposit					
Amortized cost	$ 990	$ 51	$ –	$ –	$ 1,041
Fair value	988	53	–	–	1,041
Average yield[b]	6.37%	3.28%	–%	–%	6.22%
Non-U.S. government debt securities					
Amortized cost	$ 11,210	$ 16,999	$ 24,735	$ 2,563	$ 55,507
Fair value	11,223	17,191	25,166	2,668	56,248
Average yield[b]	2.72%	2.26%	1.39%	1.64%	1.94%
Corporate debt securities					
Amortized cost	$ 2,871	$ 12,318	$ 5,854	$ –	$ 21,043
Fair value	2,873	12,638	6,001	–	21,512
Average yield[b]	1.94%	2.41%	2.60%	–%	2.40%
Asset-backed securities					
Amortized cost	$ 42	$ 2,412	$ 15,135	$ 22,603	$ 40,192
Fair value	42	2,438	15,258	22,737	40,475
Average yield[b]	2.17%	1.98%	1.74%	1.80%	1.79%
Total available-for-sale debt securities					
Amortized cost	$ 24,160	$ 56,194	$ 57,032	$ 184,867	$ 322,253
Fair value	24,186	57,199	58,003	187,447	326,835
Average yield[b]	1.91%	1.93%	1.87%	3.25%	2.67%
Available-for-sale equity securities					
Amortized cost	$ –	$ –	$ –	$ 3,125	$ 3,125
Fair value	–	–	–	3,142	3,142
Average yield[b]	–%	–%	–%	0.20%	0.20%
Total available-for-sale securities					
Amortized cost	$ 24,160	$ 56,194	$ 57,032	$ 187,992	$ 325,378
Fair value	24,186	57,199	58,003	190,589	329,977
Average yield[b]	1.91%	1.93%	1.87%	3.20%	2.65%
Total held-to-maturity securities					
Amortized cost	$ –	$ 3	$ 1	$ 24,022	$ 24,026
Fair value	–	4	1	23,726	23,731
Average yield[b]	–%	6.86%	6.48%	3.53%	3.53%

(a) U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2013.

(b) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid.

(c) Includes securities with no stated maturity. Substantially all of the Firm's residential mortgage-backed securities and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated duration, which reflects anticipated future prepayments based on a consensus of dealers in the market, is approximately five years for agency residential mortgage-backed securities, two years for agency residential collateralized mortgage obligations and three years for nonagency residential collateralized mortgage obligations.

Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated Balance Sheets. Resale and repurchase agreements are generally carried at the amounts at which the securities will be subsequently sold or repurchased. Securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. For further discussion of the offsetting of assets and liabilities, see Note 1 on pages 189–191 of this Annual Report. Fees received and paid in connection with securities financing agreements are recorded in interest income and interest expense on the Consolidated Statements of Income.

The Firm has elected the fair value option for certain securities financing agreements. For further information regarding the fair value option, see Note 4 on pages 215–218 of this Annual Report. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements; securities loaned or sold under repurchase agreements; and securities borrowed on the Consolidated Balance Sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

The following table presents as of December 31, 2013 and 2012, the gross and net securities purchased under resale agreements and securities borrowed. Securities purchased under resale agreements have been presented on the Consolidated Balance Sheets net of securities sold under repurchase agreements where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities purchased under resale agreements are not eligible for netting and are shown separately in the table below. Securities borrowed are presented on a gross basis on the Consolidated Balance Sheets.

	2013			2012		
December 31, (in millions)	Gross asset balance	Amounts netted on the Consolidated Balance Sheets	Net asset balance	Gross asset balance	Amounts netted on the Consolidated Balance Sheets	Net asset balance
Securities purchased under resale agreements						
Securities purchased under resale agreements with an appropriate legal opinion	**$ 354,814**	**$ (115,408)**	**$ 239,406**	$ 381,377	$ (96,947)	$ 284,430
Securities purchased under resale agreements where an appropriate legal opinion has not been either sought or obtained	**8,279**		**8,279**	10,983		10,983
Total securities purchased under resale agreements	**$ 363,093**	**$ (115,408)**	**$ 247,685** [(a)]	$ 392,360	$ (96,947)	$ 295,413 [(a)]
Securities borrowed	**$ 111,465**	**N/A**	**$ 111,465** [(b)(c)]	$ 119,017	N/A	$ 119,017 [(b)(c)]

(a) At December 31, 2013 and 2012, included securities purchased under resale agreements of $25.1 billion and $24.3 billion, respectively, accounted for at fair value.

(b) At December 31, 2013 and 2012, included securities borrowed of $3.7 billion and $10.2 billion, respectively, accounted for at fair value.

(c) Included $26.9 billion and $28.4 billion at December 31, 2013 and 2012, respectively, of securities borrowed where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement. The prior period amounts have been revised with a corresponding impact in the table below. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.

The following table presents information as of December 31, 2013 and 2012, regarding the securities purchased under resale agreements and securities borrowed for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to resale agreements and securities borrowed where such a legal opinion has not been either sought or obtained.

	2013				2012			
		Amounts not nettable on the Consolidated Balance Sheets[a]				Amounts not nettable on the Consolidated Balance Sheets[a]		
December 31, (in millions)	Net asset balance	Financial instruments[b]	Cash collateral	Net exposure	Net asset balance	Financial instruments[b]	Cash collateral	Net exposure
Securities purchased under resale agreements with an appropriate legal opinion	**$ 239,406**	**$ (234,495)**	**$ (98)**	**$ 4,813**	$ 284,430	$ (282,468)	$ (998)	$ 964
Securities borrowed	**$ 84,531**	**$ (81,127)**	**$ –**	**$ 3,404**	$ 90,609	$ (87,651)	$ –	$ 2,958

(a) For some counterparties, the sum of the financial instruments and cash collateral not nettable on the Consolidated Balance Sheets may exceed the net asset balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net reverse repurchase agreement or securities borrowed asset with that counterparty. As a result a net exposure amount is reported even though the Firm, on an aggregate basis for its securities purchased under resale agreements and securities borrowed, has received securities collateral with a total fair value that is greater than the funds provided to counterparties.

(b) Includes financial instrument collateral received, repurchase liabilities and securities loaned liabilities with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated Balance Sheets because other U.S. GAAP netting criteria are not met.

The following table presents as of December 31, 2013 and 2012, the gross and net securities sold under repurchase agreements and securities loaned. Securities sold under repurchase agreements have been presented on the Consolidated Balance Sheets net of securities purchased under resale agreements where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities sold under repurchase agreements are not eligible for netting and are shown separately in the table below. Securities loaned are presented on a gross basis on the Consolidated Balance Sheets.

	2013				2012			
December 31, (in millions)	Gross liability balance	Amounts netted on the Consolidated Balance Sheets	Net liability balance		Gross liability balance	Amounts netted on the Consolidated Balance Sheets	Net liability balance	
Securities sold under repurchase agreements								
Securities sold under repurchase agreements with an appropriate legal opinion	**$ 261,265**	**$ (115,408)**	**$ 145,857**		$ 301,352	$ (96,947)	$ 204,405	
Securities sold under repurchase agreements where an appropriate legal opinion has not been either sought or obtained[a]	**14,508**		**14,508**		11,155		11,155	
Total securities sold under repurchase agreements	**$ 275,773**	**$ (115,408)**	**$ 160,365**	[c]	$ 312,507	$ (96,947)	$ 215,560	[c]
Securities loaned[b]	**$ 25,769**	**N/A**	**$ 25,769**	[d][e]	$ 30,458	N/A	$ 30,458	[d][e]

(a) Includes repurchase agreements that are not subject to a master netting agreement but do provide rights to collateral.

(b) Included securities-for-securities borrow vs. pledge transactions of $5.8 billion and $6.9 billion at December 31, 2013 and 2012, respectively, when acting as lender and as presented within other liabilities in the Consolidated Balance Sheets.

(c) At December 31, 2013 and 2012, included securities sold under repurchase agreements of $4.9 billion and $3.9 billion, respectively, accounted for at fair value.

(d) At December 31, 2013 and 2012, included securities loaned of $483 million and $457 million, respectively, accounted for at fair value.

(e) Included $397 million and $889 million at December 31, 2013 and 2012, respectively, of securities loaned where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.

The following table presents information as of December 31, 2013 and 2012, regarding the securities sold under repurchase agreements and securities loaned for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to repurchase agreements and securities loaned where such a legal opinion has not been either sought or obtained.

	2013				2012			
		Amounts not nettable on the Consolidated balance sheets[a]				Amounts not nettable on the Consolidated balance sheets[a]		
December 31, (in millions)	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]
Securities sold under repurchase agreements with an appropriate legal opinion	**$ 145,857**	**$ (142,686)**	**$ (450)**	**$ 2,721**	$ 204,405	$ (202,925)	$ (162)	$ 1,318
Securities loaned	**$ 25,372**	**$ (25,125)**	**$ —**	**$ 247**	$ 29,569	$ (28,465)	$ —	$ 1,104

(a) For some counterparties the sum of the financial instruments and cash collateral not nettable on the Consolidated Balance Sheets may exceed the net liability balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net repurchase agreement or securities loaned liability with that counterparty.

(b) Includes financial instrument collateral transferred, reverse repurchase assets and securities borrowed assets with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated Balance Sheets because other U.S. GAAP netting criteria are not met.

(c) Net amount represents exposure of counterparties to the Firm.

JPMorgan Chase's policy is to take possession, where possible, of securities purchased under resale agreements and of securities borrowed. The Firm monitors the value of the underlying securities (primarily G7 government securities, U.S. agency securities and agency MBS, and equities) that it has received from its counterparties and either requests additional collateral or returns a portion of the collateral when appropriate in light of the market value of the underlying securities. Margin levels are established initially based upon the counterparty and type of collateral and monitored on an ongoing basis to protect against declines in collateral value in the event of default. JPMorgan Chase typically enters into master netting agreements and other collateral arrangements with its resale agreement and securities borrowed counterparties, which provide for the right to liquidate the purchased or borrowed securities in the event of a customer default. As a result of the Firm's credit risk mitigation practices with respect to resale and securities borrowed agreements as described above, the Firm did not hold any reserves for credit impairment with respect to these agreements as of December 31, 2013 and 2012.

For further information regarding assets pledged and collateral received in securities financing agreements, see Note 30 on page 325 of this Annual Report.

Transfers not qualifying for sale accounting

In addition, at December 31, 2013 and 2012, the Firm held $14.6 billion and $9.6 billion, respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets, other assets and loans, and the corresponding liabilities are recorded in other borrowed funds, accounts payable and other liabilities, and long-term debt, on the Consolidated Balance Sheets.

Note 14 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained"), other than purchased credit-impaired ("PCI") loans
- Loans held-for-sale
- Loans at fair value
- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories:

Loans held-for-investment (other than PCI loans)

Originated or purchased loans held-for-investment, other than PCI loans, are measured at the principal amount outstanding, net of the following: allowance for loan losses; net charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and net deferred loan fees or costs. Credit card loans also include billed finance charges and fees net of an allowance for uncollectible amounts.

Interest income

Interest income on performing loans held-for-investment, other than PCI loans, is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is in doubt, which for consumer loans, excluding credit card, generally occurs when principal or interest is 90 days or more past due unless the loan is both well secured and in the process of collection. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. Consumer, excluding credit card, loans that are less than 90 days past due may be placed on nonaccrual status when there is evidence that full payment of principal and interest is in doubt (e.g., performing junior liens that are subordinate to nonperforming senior liens). Finally, collateral-dependent loans are typically maintained on nonaccrual status.

On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance for the estimated uncollectible portion of accrued interest and fee income on credit card loans. The allowance is established with a charge to interest income and is reported as an offset to loans.

Allowance for loan losses

The allowance for loan losses represents the estimated probable credit losses inherent in the held-for-investment loan portfolio at the balance sheet date. Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated Statements of Income. See Note 15 on pages 284–287 of this Annual Report for further information on the Firm's accounting polices for the allowance for loan losses.

Charge-offs

Consumer loans, other than risk-rated business banking, risk-rated auto and PCI loans, are generally charged off or charged down to the net realizable value of the underlying collateral (i.e., fair value less costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the Federal Financial Institutions Examination Council ("FFIEC"). Residential real estate loans, non-modified credit card loans and scored business banking loans are generally charged off at 180 days past due. In the second quarter of 2012, the Firm revised its policy to charge-off modified credit card loans that do not comply with their modified payment terms at 120 days past due rather than 180 days past due. Auto and student loans are charged off no later than 120 days past due.

Certain consumer loans will be charged off earlier than the FFIEC charge-off standards in certain circumstances as follows:

- A charge-off is recognized when a loan is modified in a TDR if the loan is determined to be collateral-dependent. A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.
- Loans to borrowers who have experienced an event (e.g., bankruptcy) that suggests a loss is either known or highly certain are subject to accelerated charge-off standards. Residential real estate and auto loans are charged off when the loan becomes 60 days past due, or sooner if the loan is determined to be collateral-dependent. Credit card and scored business banking loans are charged off within 60 days of receiving notification of the bankruptcy filing or other event. Student loans are generally charged off when the loan becomes 60 days past due after receiving notification of a bankruptcy.
- Auto loans are written down to net realizable value upon repossession of the automobile and after a redemption period (i.e., the period during which a borrower may cure the loan) has passed.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on government-guaranteed loans.

Wholesale loans, risk-rated business banking loans and risk-rated auto loans are charged off when it is highly certain that a loss has been realized, including situations where a loan is determined to be both impaired and collateral-dependent. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the estimated net realizable value, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every six months thereafter. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), generally, either through foreclosure or upon the execution of a deed in lieu of foreclosure transaction with the borrower, the Firm obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared to the estimated values provided by exterior opinions and interior appraisals, considering state- and product-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

Loans held-for-sale

Held-for-sale loans are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or losses recognized at the time of sale.

Held-for-sale loans are subject to the nonaccrual policies described above.

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

Loans at fair value

Loans used in a market-making strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue.

For these loans, the earned current contractual interest payment is recognized in interest income. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's nonaccrual, allowance for loan losses, and charge-off policies do not apply to these loans.

See Note 4 on pages 215–218 of this Annual Report for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 and Note 4 on pages 195–215 and 215–218 of this Annual Report for further information on loans carried at fair value and classified as trading assets.

PCI loans

PCI loans held-for-investment are initially measured at fair value. PCI loans have evidence of credit deterioration since the loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected. Because PCI loans are initially measured at fair value, which includes an estimate of future credit losses, no allowance for loan losses related to PCI loans is recorded at the acquisition date. See page 274 of this Note for information on accounting for PCI loans subsequent to their acquisition.

Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; losses due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at the lower of cost or fair value on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 15 on pages 284–287 of this Annual Report.

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss, avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, principal forgiveness, or the acceptance of equity or other assets in lieu of payments.

Such modifications are accounted for and reported as troubled debt restructurings ("TDRs"). A loan that has been modified in a TDR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless of whether the borrower performs under the modified terms. In certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring. In such circumstances, and assuming that the loan subsequently performs under its modified terms and the Firm expects to collect all contractual principal and interest cash flows, the loan is disclosed as impaired and as a TDR only during the year of the modification; in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (a) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (b) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, loan-to-value ("LTV") ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

Because loans modified in TDRs are considered to be impaired, these loans are measured for impairment using the Firm's established asset-specific allowance methodology, which considers the expected re-default rates for the modified loans. A loan modified in a TDR remains subject to the asset-specific allowance methodology throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status and/or the loan has been removed from the impaired loans disclosures (i.e., loans restructured at market rates). For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 15 on pages 284–287 of this Annual Report.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, and buildings) and commercial and personal property (e.g., automobiles, aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated Balance Sheets and initially recognized at fair value less costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment, the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class:

Consumer, excluding credit card[a]	Credit card	Wholesale[c]
Residential real estate – excluding PCI • Home equity – senior lien • Home equity – junior lien • Prime mortgage, including option ARMs • Subprime mortgage Other consumer loans • Auto[b] • Business banking[b] • Student and other Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Credit card loans	• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other[d]

(a) Includes loans held in CCB, and prime mortgage loans held in the AM business segment and in Corporate/Private Equity.

(b) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included with the other consumer loan classes.

(c) Includes loans held in CIB, CB and AM business segments and in Corporate/Private Equity. Classes are internally defined and may not align with regulatory definitions.

(d) Other primarily includes loans to SPEs and loans to private banking clients. See Note 1 on pages 189–191 of this Annual Report for additional information on SPEs.

The following tables summarize the Firm's loan balances by portfolio segment.

December 31, 2013 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total
Retained	**$ 288,449**	**$ 127,465**	**$ 308,263**	**$ 724,177** [b]
Held-for-sale	**614**	**326**	**11,290**	**12,230**
At fair value	**–**	**–**	**2,011**	**2,011**
Total	**$ 289,063**	**$ 127,791**	**$ 321,564**	**$ 738,418**

December 31, 2012 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total
Retained	$ 292,620	$ 127,993	$ 306,222	$ 726,835 [b]
Held-for-sale	–	–	4,406	4,406
At fair value	–	–	2,555	2,555
Total	$ 292,620	$ 127,993	$ 313,183	$ 733,796

(a) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(b) Loans (other than PCI loans and those for which the fair value option has been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs of $1.9 billion and $2.5 billion at December 31, 2013 and 2012, respectively.

The following table provides information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. These tables exclude loans recorded at fair value. The Firm manages its exposure to credit risk on an ongoing basis. Selling loans is one way that the Firm reduces its credit exposures.

	2013				2012			
Years ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 7,616** [a][b]	**$ 328**	**$ 697**	**$ 8,641**	$ 6,601 [a][b]	$ –	$ 827	$ 7,428
Sales	**4,845**	**–**	**4,232**	**9,077**	1,852	–	3,423	5,275
Retained loans reclassified to held-for-sale	**1,261**	**309**	**5,641**	**7,211**	–	1,043	504	1,547

(a) Purchases predominantly represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Ginnie Mae guidelines. The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, the Federal Housing Administration ("FHA"), Rural Housing Services ("RHS") and/or the U.S. Department of Veterans Affairs ("VA").
(b) Excluded retained loans purchased from correspondents that were originated in accordance with the Firm's underwriting standards. Such purchases were $5.7 billion and $1.4 billion for the years ended December 31, 2013 and 2012, respectively.

The following table provides information about gains/(losses) on loan sales by portfolio segment.

Year ended December 31, (in millions)	**2013**	2012	2011
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]			
Consumer, excluding credit card	**$ 313**	$ 122	$ 131
Credit card	**3**	(9)	(24)
Wholesale	**(76)**	180	121
Total net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)	**$ 240**	$ 293	$ 228

(a) Excludes sales related to loans accounted for at fair value.

Consumer, excluding credit card, loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, business banking loans, and student and other loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period, and certain payment-option loans originated by Washington Mutual that may result in negative amortization.

The table below provides information about retained consumer loans, excluding credit card, by class.

December 31, (in millions)	2013	2012
Residential real estate – excluding PCI		
Home equity:		
Senior lien	**$ 17,113**	$ 19,385
Junior lien	**40,750**	48,000
Mortgages:		
Prime, including option ARMs	**87,162**	76,256
Subprime	**7,104**	8,255
Other consumer loans		
Auto	**52,757**	49,913
Business banking	**18,951**	18,883
Student and other	**11,557**	12,191
Residential real estate – PCI		
Home equity	**18,927**	20,971
Prime mortgage	**12,038**	13,674
Subprime mortgage	**4,175**	4,626
Option ARMs	**17,915**	20,466
Total retained loans	**$ 288,449**	$ 292,620

Delinquency rates are a primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear that the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, including both non-PCI and PCI portfolios, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit-quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (660 or below) is considered to be of higher risk than a loan to a borrower with a high FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For scored auto, scored business banking and student loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.
- Risk-rated business banking and auto loans are similar to wholesale loans in that the primary credit quality indicators are the risk rating that is assigned to the loan and whether the loans are considered to be criticized and/or nonaccrual. Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information about borrowers' ability to fulfill their obligations. For further information about risk-rated wholesale loan credit quality indicators, see page 279 of this Note.

Residential real estate – excluding PCI loans

The following table provides information by class for residential real estate – excluding retained PCI loans in the consumer, excluding credit card, portfolio segment.

The following factors should be considered in analyzing certain credit statistics applicable to the Firm's residential real estate – excluding PCI loans portfolio: (i) junior lien home equity loans may be fully charged off when the loan becomes 180 days past due, and the value of the collateral does not support the repayment of the loan, resulting in relatively high charge-off rates for this product class; and (ii) the lengthening of loss-mitigation timelines may result in higher delinquency rates for loans carried at the net realizable value of the collateral that remain on the Firm's Consolidated Balance Sheets.

Residential real estate – excluding PCI loans

December 31, (in millions, except ratios)	Home equity			
	Senior lien		Junior lien	
	2013	2012	**2013**	2012
Loan delinquency[a]				
Current	**$ 16,470**	$ 18,688	**$ 39,864**	$ 46,805
30–149 days past due	**298**	330	**662**	960
150 or more days past due	**345**	367	**224**	235
Total retained loans	**$ 17,113**	$ 19,385	**$ 40,750**	$ 48,000
% of 30+ days past due to total retained loans	**3.76%**	3.60%	**2.17%**	2.49%
90 or more days past due and still accruing	**$ –**	$ –	**$ –**	$ –
90 or more days past due and government guaranteed[b]	**–**	–	**–**	–
Nonaccrual loans	**932**	931	**1,876**	2,277
Current estimated LTV ratios[c][d][e]				
Greater than 125% and refreshed FICO scores:				
Equal to or greater than 660	**$ 40**	$ 197	**$ 1,101**	$ 4,561
Less than 660	**22**	93	**346**	1,338
101% to 125% and refreshed FICO scores:				
Equal to or greater than 660	**212**	491	**4,645**	7,089
Less than 660	**107**	191	**1,407**	1,971
80% to 100% and refreshed FICO scores:				
Equal to or greater than 660	**858**	1,502	**7,995**	9,604
Less than 660	**326**	485	**2,128**	2,279
Less than 80% and refreshed FICO scores:				
Equal to or greater than 660	**13,186**	13,988	**19,732**	18,252
Less than 660	**2,362**	2,438	**3,396**	2,906
U.S. government-guaranteed	**–**	–	**–**	–
Total retained loans	**$ 17,113**	$ 19,385	**$ 40,750**	$ 48,000
Geographic region				
California	**$ 2,397**	$ 2,786	**$ 9,240**	$ 10,969
New York	**2,732**	2,847	**8,429**	9,753
Illinois	**1,248**	1,358	**2,815**	3,265
Florida	**847**	892	**2,167**	2,572
Texas	**2,044**	2,508	**1,199**	1,503
New Jersey	**630**	652	**2,442**	2,838
Arizona	**1,019**	1,183	**1,827**	2,151
Washington	**555**	651	**1,378**	1,629
Michigan	**799**	910	**976**	1,169
Ohio	**1,298**	1,514	**907**	1,091
All other[f]	**3,544**	4,084	**9,370**	11,060
Total retained loans	**$ 17,113**	$ 19,385	**$ 40,750**	$ 48,000

(a) Individual delinquency classifications included mortgage loans insured by U.S. government agencies as follows: current included $4.7 billion and $3.8 billion; 30–149 days past due included $2.4 billion and $2.3 billion; and 150 or more days past due included $6.6 billion and $9.5 billion at December 31, 2013 and 2012, respectively.

(b) These balances, which are 90 days or more past due but insured by U.S. government agencies, are excluded from nonaccrual loans. In predominantly all cases, 100% of the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting agreed-upon servicing guidelines. These amounts have been excluded from nonaccrual loans based upon the government guarantee. At December 31, 2013 and 2012, these balances included $4.7 billion and $6.8 billion, respectively, of loans that are no longer accruing interest because interest has been curtailed by the U.S. government agencies although, in predominantly all cases, 100% of the principal is still insured. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates.

(d) Junior lien represents combined LTV, which considers all available lien positions, as well as unused lines, related to the property. All other products are presented without consideration of subordinate liens on the property.

(e) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(f) At December 31, 2013 and 2012, included mortgage loans insured by U.S. government agencies of $13.7 billion and $15.6 billion, respectively.

(g) At December 31, 2013 and 2012, excluded mortgage loans insured by U.S. government agencies of $9.0 billion and $11.8 billion, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

(table continued from previous page)

Mortgages								
Prime, including option ARMs		Subprime		Total residential real estate – excluding PCI				
2013	2012	**2013**	2012	**2013**	2012			
$ 76,108	$ 61,439	**$ 5,956**	$ 6,673	**$ 138,398**	$ 133,605			
3,155	3,237	**646**	727	**4,761**	5,254			
7,899	11,580	**502**	855	**8,970**	13,037			
$ 87,162	$ 76,256	**$ 7,104**	$ 8,255	**$ 152,129**	$ 151,896			
2.32% [g]	3.97% [g]	**16.16%**	19.16%	**3.09%** [g]	4.28% [g]			
$ –	$ –	**$ –**	$ –	**$ –**	$ –			
7,823	10,625	**–**	–	**7,823**	10,625			
2,666	3,445	**1,390**	1,807	**6,864**	8,460			
$ 1,084	$ 2,573	**$ 52**	$ 236	**$ 2,277**	$ 7,567			
303	991	**197**	653	**868**	3,075			
1,433	3,697	**249**	457	**6,539**	11,734			
687	1,376	**597**	985	**2,798**	4,523			
4,528	7,070	**614**	726	**13,995**	18,902			
1,579	2,117	**1,141**	1,346	**5,174**	6,227			
58,477	38,281	**1,961**	1,793	**93,356**	72,314			
5,359	4,549	**2,293**	2,059	**13,410**	11,952			
13,712	15,602	**–**	–	**13,712**	15,602			
$ 87,162	$ 76,256	**$ 7,104**	$ 8,255	**$ 152,129**	$ 151,896			
$ 21,876	$ 17,539	**$ 1,069**	$ 1,240	**$ 34,582**	$ 32,534			
14,085	11,190	**942**	1,081	**26,188**	24,871			
5,216	3,999	**280**	323	**9,559**	8,945			
4,598	4,372	**885**	1,031	**8,497**	8,867			
3,565	2,927	**220**	257	**7,028**	7,195			
2,679	2,131	**339**	399	**6,090**	6,020			
1,385	1,162	**144**	165	**4,375**	4,661			
1,951	1,741	**150**	177	**4,034**	4,198			
998	866	**178**	203	**2,951**	3,148			
466	405	**161**	191	**2,832**	3,201			
30,343	29,924	**2,736**	3,188	**45,993**	48,256			
$ 87,162	$ 76,256	**$ 7,104**	$ 8,255	**$ 152,129**	$ 151,896			

The following tables represent the Firm's delinquency statistics for junior lien home equity loans and lines as of December 31, 2013 and 2012.

December 31, 2013 (in millions, except ratios)	Delinquencies			Total loans	Total 30+ day delinquency rate
	30–89 days past due	90–149 days past due	150+ days past due		
HELOCs:[a]					
Within the revolving period[b]	**$ 341**	**$ 104**	**$ 162**	**$ 31,848**	**1.91%**
Beyond the revolving period	**84**	**21**	**46**	**4,980**	**3.03**
HELOANs	**86**	**26**	**16**	**3,922**	**3.26**
Total	**$ 511**	**$ 151**	**$ 224**	**$ 40,750**	**2.17%**

December 31, 2012 (in millions, except ratios)	Delinquencies			Total loans	Total 30+ day delinquency rate
	30–89 days past due	90–149 days past due	150+ days past due		
HELOCs:[a]					
Within the revolving period[b]	$ 514	$ 196	$ 185	$ 40,794	2.19%
Beyond the revolving period	48	19	27	2,127	4.42
HELOANs	125	58	23	5,079	4.06
Total	$ 687	$ 273	$ 235	$ 48,000	2.49%

(a) These HELOCs are predominantly revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period, but also include HELOCs originated by Washington Mutual that require interest-only payments beyond the revolving period.

(b) The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty or when the collateral does not support the loan amount.

Home equity lines of credit ("HELOCs") beyond the revolving period and home equity loans ("HELOANs") have higher delinquency rates than do HELOCs within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the loss estimates produced by the Firm's delinquency roll-rate methodology, which estimates defaults based on the current delinquency status of a portfolio.

Impaired loans

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 on pages 284–287 of this Annual Report.

December 31, (in millions)	Home equity				Mortgages				Total residential real estate – excluding PCI	
	Senior lien		Junior lien		Prime, including option ARMs		Subprime			
	2013	2012	**2013**	2012	**2013**	2012	**2013**	2012	**2013**	2012
Impaired loans										
With an allowance	**$ 567**	$ 542	**$ 727**	$ 677	**$ 5,871**	$ 5,810	**$ 2,989**	$ 3,071	**$ 10,154**	$ 10,100
Without an allowance[a]	**579**	550	**592**	546	**1,133**	1,308	**709**	741	**3,013**	3,145
Total impaired loans[b]	**$ 1,146**	$ 1,092	**$ 1,319**	$ 1,223	**$ 7,004**	$ 7,118	**$ 3,698**	$ 3,812	**$ 13,167**	$ 13,245
Allowance for loan losses related to impaired loans	**$ 94**	$ 159	**$ 162**	$ 188	**$ 144**	$ 70	**$ 94**	$ 174	**$ 494**	$ 591
Unpaid principal balance of impaired loans[c]	**1,515**	1,408	**2,625**	2,352	**8,990**	9,095	**5,461**	5,700	**18,591**	18,555
Impaired loans on nonaccrual status[d]	**641**	607	**666**	599	**1,737**	1,888	**1,127**	1,308	**4,171**	4,402

(a) Represents collateral-dependent residential mortgage loans that are charged off to the fair value of the underlying collateral less cost to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual TDRs, regardless of their delinquency status.

(b) At December 31, 2013 and 2012, $7.6 billion and $7.5 billion, respectively, of loans modified subsequent to repurchase from Government National Mortgage Association ("Ginnie Mae") in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure.

(c) Represents the contractual amount of principal owed at December 31, 2013 and 2012. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.

(d) As of December 31, 2013 and 2012, nonaccrual loans included $3.0 billion and $2.9 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status refer to the Loan accounting framework on pages 258–260 of this Note.

The following table presents average impaired loans and the related interest income reported by the Firm.

Year ended December 31, (in millions)	Average impaired loans			Interest income on impaired loans[a]			Interest income on impaired loans on a cash basis[a]		
	2013	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Home equity									
Senior lien	**$ 1,151**	$ 610	$ 287	**$ 59**	$ 27	$ 10	**$ 40**	$ 12	$ 1
Junior lien	**1,297**	848	521	**82**	42	18	**55**	16	2
Mortgages									
Prime, including option ARMs	**7,214**	5,989	3,859	**280**	238	147	**59**	28	14
Subprime	**3,798**	3,494	3,083	**200**	183	148	**55**	31	16
Total residential real estate – excluding PCI	**$ 13,460**	$ 10,941	$ 7,750	**$ 621**	$ 490	$ 323	**$ 209**	$ 87	$ 33

(a) Generally, interest income on loans modified in TDRs is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms.

Loan modifications

As required under the terms of certain settlements, the Firm is required to provide borrower relief, which will include, for example, reductions of principal and forbearance. For further information on the global and RMBS settlements, see Business changes and developments in Note 2 on pages 192–194 of this Annual Report.

Modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

TDR activity rollforward

The following table reconciles the beginning and ending balances of residential real estate loans, excluding PCI loans, modified in TDRs for the periods presented.

Year ended December 31, (in millions)	Home equity						Mortgages						Total residential real estate – excluding PCI		
	Senior lien			Junior lien			Prime, including option ARMs			Subprime					
	2013	2012	2011	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Beginning balance of TDRs	**$1,092**	$ 335	$ 226	**$1,223**	$ 657	$ 283	**$ 7,118**	$ 4,877	$2,084	**$3,812**	$3,219	$2,751	**$13,245**	$ 9,088	$ 5,344
New TDRs	**210**	835	138	**388**	711	518	**770**	2,918	3,268	**319**	1,043	883	**1,687**	5,507	4,807
Charge-offs post-modification[(a)]	**(31)**	(31)	(15)	**(100)**	(2)	(78)	**(51)**	(135)	(119)	**(93)**	(208)	(234)	**(275)**	(376)	(446)
Foreclosures and other liquidations (e.g., short sales)	**(18)**	(5)	–	**(24)**	(21)	(11)	**(145)**	(138)	(108)	**(73)**	(113)	(82)	**(260)**	(277)	(201)
Principal payments and other	**(107)**	(42)	(14)	**(168)**	(122)	(55)	**(688)**	(404)	(248)	**(267)**	(129)	(99)	**(1,230)**	(697)	(416)
Ending balance of TDRs	**$1,146**	$1,092	$ 335	**$1,319**	$1,223	$ 657	**$ 7,004**	$ 7,118	$4,877	**$3,698**	$3,812	$3,219	**$13,167**	$13,245	$ 9,088
Permanent modifications	**$1,107**	$1,058	$ 285	**$1,313**	$1,218	$ 634	**$ 6,838**	$ 6,834	$4,601	**$3,596**	$3,661	$3,029	**$12,854**	$12,771	$ 8,549
Trial modifications	**$ 39**	$ 34	$ 50	**$ 6**	$ 5	$ 23	**$ 166**	$ 284	$ 276	**$ 102**	$ 151	$ 190	**$ 313**	$ 474	$ 539

(a) Includes charge-offs on unsuccessful trial modifications.

Nature and extent of modifications

Making Home Affordable ("MHA"), as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following table provides information about how residential real estate loans, excluding PCI loans, were modified under the Firm's loss mitigation programs during the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt. At December 31, 2013, there were approximately 36,700 of such Chapter 7 loans, consisting of approximately 8,800 senior lien home equity loans, 21,700 junior lien home equity loans, 3,100 prime mortgage, including option ARMs, and 3,100 subprime mortgages.

	Home equity						Mortgages								
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			Total residential real estate - excluding PCI		
Year ended Dec. 31,	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Number of loans approved for a trial modification[a]	**1,719**	1,695	1,219	**884**	918	1,308	**2,846**	3,895	4,676	**4,233**	4,841	6,446	**9,682**	11,349	13,649
Number of loans permanently modified	**1,765**	4,385	1,006	**5,040**	7,430	9,142	**4,356**	9,043	9,579	**5,364**	9,964	4,972	**16,525**	30,822	24,699
Concession granted:[a][b]															
Interest rate reduction	**70%**	83%	80%	**88%**	88%	95%	**73%**	74%	53%	**72%**	69%	80%	**77%**	77%	75%
Term or payment extension	**76**	47	88	**80**	76	81	**73**	57	71	**56**	41	72	**70**	55	75
Principal and/or interest deferred	**12**	6	10	**24**	17	21	**30**	16	17	**13**	7	19	**21**	12	19
Principal forgiveness	**38**	11	7	**32**	23	20	**38**	29	2	**48**	42	13	**39**	29	11
Other[c]	**–**	–	29	**–**	–	7	**23**	29	68	**14**	8	26	**11**	11	35

(a) Prior period amounts have been revised to conform with the current presentation.

(b) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession. A significant portion of trial modifications include interest rate reductions and/or term or payment extensions.

(c) Represents variable interest rate to fixed interest rate modifications.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under the Firm's loss mitigation programs and about redefaults of certain loans modified in TDRs for the periods presented. Because the specific types and amounts of concessions offered to borrowers frequently change between the trial modification and the permanent modification, the following tables present only the financial effects of permanent modifications. These tables also exclude Chapter 7 loans where the sole concession granted is the discharge of debt.

Year ended December 31, (in millions, except weighted-average data and number of loans)	Home equity						Mortgages								
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			Total residential real estate – excluding PCI		
	2013	2012	2011	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Weighted-average interest rate of loans with interest rate reductions – before TDR	**6.35%**	7.20%	7.25%	**5.05%**	5.45%	5.46%	**5.28%**	6.14%	5.98%	**7.33%**	7.73%	8.25%	**5.88%**	6.57%	6.44%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**3.23**	4.61	3.51	**2.14**	1.94	1.49	**2.77**	3.67	3.34	**3.52**	4.14	3.46	**2.92**	3.69	3.09
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**19**	18	18	**20**	20	21	**25**	25	25	**24**	24	23	**23**	24	24
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**31**	28	30	**34**	32	34	**37**	36	35	**35**	32	34	**36**	34	35
Charge-offs recognized upon permanent modification	**$ 7**	$ 8	$ 1	**$ 70**	$ 65	$ 117	**$ 16**	$ 35	$ 61	**$ 5**	$ 29	$ 19	**$ 98**	$ 137	$ 198
Principal deferred	**7**	4	4	**24**	23	35	**129**	133	167	**43**	43	61	**203**	203	267
Principal forgiven	**30**	20	1	**51**	58	62	**206**	249	20	**218**	324	46	**505**	651	129
Number of loans that redefaulted within one year of permanent modification[(a)]	**404**	374	222	**1,069**	1,436	1,310	**673**	920	1,142	**1,072**	1,426	1,989	**3,218**	4,156	4,663
Balance of loans that redefaulted within one year of permanent modification[(a)]	**$ 26**	$ 30	$ 18	**$ 20**	$ 46	$ 52	**$ 164**	$ 255	$ 340	**$ 106**	$ 156	$ 281	**$ 316**	$ 487	$ 691

(a) Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

Approximately 85% of the trial modifications approved on or after July 1, 2010 (the approximate date on which substantial revisions were made to the HAMP program), that are seasoned more than six months have been successfully converted to permanent modifications.

The primary performance indicator for TDRs is the rate at which permanently modified loans redefault. At December 31, 2013, the cumulative redefault rates of residential real estate loans that have been modified under the Firm's loss mitigation programs, excluding PCI loans, based upon permanent modifications that were completed after October 1, 2009, and that are seasoned more than six months, are 20% for senior lien home equity, 20% for junior lien home equity, 15% for prime mortgages, including option ARMs, and 26% for subprime mortgages.

Default rates of Chapter 7 loans vary significantly based on the delinquency status of the loan and overall economic conditions at the time of discharge. Default rates for Chapter 7 residential real estate loans that were less than 60 days past due at the time of discharge have ranged between approximately 10% and 40% in recent years based on the economic conditions at the time of discharge. At December 31, 2013, Chapter 7 residential real estate loans included approximately 20% of senior lien home equity, 11% of junior lien home equity, 33% of prime mortgages, including option ARMs, and 23% of subprime mortgages that were 30 days or more past due.

At December 31, 2013, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 6 years for senior lien home equity, 7 years for junior lien home equity, 10 years for prime mortgages, including option ARMs and 8 years for subprime mortgage. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

Other consumer loans

The table below provides information for other consumer retained loan classes, including auto, business banking and student loans.

December 31, (in millions, except ratios)	Auto		Business banking		Student and other		Total other consumer	
	2013	2012	**2013**	2012	**2013**	2012	**2013**	2012
Loan delinquency[a]								
Current	**$52,152**	$49,290	**$18,511**	$ 18,482	**$10,529**	$ 11,038	**$ 81,192**	$ 78,810
30–119 days past due	**599**	616	**280**	263	**660**	709	**1,539**	1,588
120 or more days past due	**6**	7	**160**	138	**368**	444	**534**	589
Total retained loans	**$52,757**	$49,913	**$18,951**	$ 18,883	**$11,557**	$ 12,191	**$ 83,265**	$ 80,987
% of 30+ days past due to total retained loans	**1.15%**	1.25%	**2.32%**	2.12%	**2.52%** [d]	2.12% [d]	**1.60%** [d]	1.58% [d]
90 or more days past due and still accruing [b]	**$ –**	$ –	**$ –**	$ –	**$ 428**	$ 525	**$ 428**	$ 525
Nonaccrual loans	**161**	163	**385**	481	**86**	70	**632**	714
Geographic region								
California	**$ 5,615**	$ 4,962	**$ 2,374**	$ 1,983	**$ 1,112**	$ 1,108	**$ 9,101**	$ 8,053
New York	**3,898**	3,742	**3,084**	2,981	**1,218**	1,202	**8,200**	7,925
Illinois	**2,917**	2,738	**1,341**	1,404	**740**	748	**4,998**	4,890
Florida	**2,012**	1,922	**646**	527	**539**	556	**3,197**	3,005
Texas	**5,310**	4,739	**2,646**	2,749	**878**	891	**8,834**	8,379
New Jersey	**2,014**	1,921	**392**	379	**397**	409	**2,803**	2,709
Arizona	**1,855**	1,719	**1,046**	1,139	**252**	265	**3,153**	3,123
Washington	**950**	824	**234**	202	**227**	287	**1,411**	1,313
Michigan	**1,902**	2,091	**1,383**	1,368	**513**	548	**3,798**	4,007
Ohio	**2,229**	2,462	**1,316**	1,443	**708**	770	**4,253**	4,675
All other	**24,055**	22,793	**4,489**	4,708	**4,973**	5,407	**33,517**	32,908
Total retained loans	**$52,757**	$49,913	**$18,951**	$ 18,883	**$11,557**	$ 12,191	**$ 83,265**	$ 80,987
Loans by risk ratings[c]								
Noncriticized	**$ 9,968**	$ 8,882	**$13,622**	$ 13,336	**NA**	NA	**$ 23,590**	$ 22,218
Criticized performing	**54**	130	**711**	713	**NA**	NA	**765**	843
Criticized nonaccrual	**38**	4	**316**	386	**NA**	NA	**354**	390

(a) Individual delinquency classifications included loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") as follows: current included $4.9 billion and $5.4 billion; 30-119 days past due included $387 million and $466 million; and 120 or more days past due included $350 million and $428 million at December 31, 2013 and 2012, respectively.

(b) These amounts represent student loans, which are insured by U.S. government agencies under the FFELP. These amounts were accruing as reimbursement of insured amounts is proceeding normally.

(c) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.
(d) December 31, 2013 and 2012, excluded loans 30 days or more past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $737 million and $894 million, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

Other consumer impaired loans and loan modifications

The table below sets forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

December 31, (in millions)	Auto		Business banking		Total other consumer[c]	
	2013	2012	**2013**	2012	**2013**	2012
Impaired loans						
With an allowance	**$ 96**	$ 78	**$ 475**	$ 543	**$ 571**	$ 621
Without an allowance[a]	**47**	72	**—**	—	**47**	72
Total impaired loans	**$ 143**	$ 150	**$ 475**	$ 543	**$ 618**	$ 693
Allowance for loan losses related to impaired loans	**$ 13**	$ 12	**$ 94**	$ 126	**$ 107**	$ 138
Unpaid principal balance of impaired loans[b]	**235**	259	**553**	624	**788**	883
Impaired loans on nonaccrual status	**113**	109	**328**	394	**441**	503

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) Represents the contractual amount of principal owed at December 31, 2013 and 2012. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the principal balance; net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.
(c) There were no impaired student and other loans at December 31, 2013 and 2012.

The following table presents average impaired loans for the periods presented.

Year ended December 31, (in millions)	Average impaired loans[b]		
	2013	2012	2011
Auto	**$ 132**	$ 111	$ 92
Business banking	**516**	622	760
Total other consumer[a]	**$ 648**	$ 733	$ 852

(a) There were no impaired student and other loans for the years ended 2013, 2012 and 2011.
(b) The related interest income on impaired loans, including those on a cash basis, was not material for the years ended 2013, 2012 and 2011.

Loan modifications

The following table provides information about the Firm's other consumer loans modified in TDRs. All of these TDRs are reported as impaired loans in the tables above.

December 31, (in millions)	Auto		Business banking		Total other consumer[c]	
	2013	2012	**2013**	2012	**2013**	2012
Loans modified in troubled debt restructurings[a][b]	**$ 107**	$ 150	**$ 271**	$ 352	**$ 378**	$ 502
TDRs on nonaccrual status	**77**	109	**124**	203	**201**	312

(a) These modifications generally provided interest rate concessions to the borrower or term or payment extensions.
(b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2013 and 2012 were immaterial.
(c) There were no student and other loans modified in TDRs at December 31, 2013 and 2012.

TDR activity rollforward

The following table reconciles the beginning and ending balances of other consumer loans modified in TDRs for the periods presented.

Year ended December 31, (in millions)	Auto			Business banking			Total other consumer		
	2013	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Beginning balance of TDRs	**$ 150**	$ 88	$ 91	**$ 352**	$ 415	$ 395	**$ 502**	$ 503	$ 486
New TDRs	**90**	145	54	**66**	104	195	**156**	249	249
Charge-offs post-modification	**(10)**	(9)	(5)	**(10)**	(9)	(11)	**(20)**	(18)	(16)
Foreclosures and other liquidations	**–**	–	–	**–**	(1)	(3)	**–**	(1)	(3)
Principal payments and other	**(123)**	(74)	(52)	**(137)**	(157)	(161)	**(260)**	(231)	(213)
Ending balance of TDRs	**$ 107**	$ 150	$ 88	**$ 271**	$ 352	$ 415	**$ 378**	$ 502	$ 503

Financial effects of modifications and redefaults

For auto loans, TDRs typically occur in connection with the bankruptcy of the borrower. In these cases, the loan is modified with a revised repayment plan that typically incorporates interest rate reductions and, to a lesser extent, principal forgiveness. Beginning September 30, 2012, Chapter 7 auto loans are also considered TDRs.

For business banking loans, concessions are dependent on individual borrower circumstances and can be of a short-term nature for borrowers who need temporary relief or longer term for borrowers experiencing more fundamental financial difficulties. Concessions are predominantly term or payment extensions, but also may include interest rate reductions.

The balance of business banking loans modified in TDRs that experienced a payment default, and for which the payment default occurred within one year of the modification, was $43 million, $42 million and $80 million, during the years ended December 31, 2013, 2012 and 2011, respectively. The balance of auto loans modified in TDRs that experienced a payment default, and for which the payment default occurred within one year of the modification, was $54 million and $46 million during the years ended December 31, 2013 and 2012, respectively. The corresponding amount for the year ended December 31, 2011 was insignificant. A payment default is deemed to occur as follows: (1) for scored auto and business banking loans, when the loan is two payments past due; and (2) for risk-rated business banking loans and auto loans, when the borrower has not made a loan payment by its scheduled due date after giving effect to the contractual grace period, if any.

The following table provides information about the financial effects of the various concessions granted in modifications of other consumer loans for the periods presented.

Year ended December 31,	Auto			Business banking		
	2013	2012	2011	**2013**	2012	2011
Weighted-average interest rate of loans with interest rate reductions – before TDR	**13.66%**	12.64%	12.45%	**8.37%**	7.33%	7.55%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**4.94**	4.83	5.70	**6.05**	5.49	5.52
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**NM**	NM	NM	**1.1**	1.4	1.4
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**NM**	NM	NM	**3.1**	2.4	2.6

Purchased credit-impaired loans

PCI loans are initially recorded at fair value at acquisition; PCI loans acquired in the same fiscal quarter may be aggregated into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer PCI loans were aggregated into pools of loans with common risk characteristics.

On a quarterly basis, the Firm estimates the total cash flows (both principal and interest) expected to be collected over the remaining life of each pool. These estimates incorporate assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that reflect then-current market conditions. Probable decreases in expected cash flows (i.e., increased credit losses) trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related foregone interest cash flows, discounted at the pool's effective interest rate. Impairments are recognized through the provision for credit losses and an increase in the allowance for loan losses. Probable and significant increases in expected cash flows (e.g., decreased credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans. The impacts of (i) prepayments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are recognized prospectively as adjustments to interest income.

The Firm continues to modify certain PCI loans. The impact of these modifications is incorporated into the Firm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans. In evaluating the effect of modifications on expected cash flows, the Firm incorporates the effect of any foregone interest and also considers the potential for redefault. The Firm develops product-specific probability of default estimates, which are used to compute expected credit losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment based upon industry-wide data. The Firm also considers its own historical loss experience to-date based on actual redefaulted modified PCI loans.

The excess of cash flows expected to be collected over the carrying value of the underlying loans is referred to as the accretable yield. This amount is not reported on the Firm's Consolidated Balance Sheets but is accreted into interest income at a level rate of return over the remaining estimated lives of the underlying pools of loans.

If the timing and/or amounts of expected cash flows on PCI loans were determined not to be reasonably estimable, no interest would be accreted and the loans would be reported as nonaccrual loans; however, since the timing and amounts of expected cash flows for the Firm's PCI consumer loans are reasonably estimable, interest is being accreted and the loans are being reported as performing loans.

The liquidation of PCI loans, which may include sales of loans, receipt of payment in full by the borrower, or foreclosure, results in removal of the loans from the underlying PCI pool. When the amount of the liquidation proceeds (e.g., cash, real estate), if any, is less than the unpaid principal balance of the loan, the difference is first applied against the PCI pool's nonaccretable difference for principal losses (i.e., the lifetime credit loss estimate established as a purchase accounting adjustment at the acquisition date). When the nonaccretable difference for a particular loan pool has been fully depleted, any excess of the unpaid principal balance of the loan over the liquidation proceeds is written off against the PCI pool's allowance for loan losses. Because the Firm's PCI loans are accounted for at a pool level, the Firm does not recognize charge-offs of PCI loans when they reach specified stages of delinquency (i.e., unlike non-PCI consumer loans, these loans are not charged off based on FFIEC standards).

The PCI portfolio affects the Firm's results of operations primarily through: (i) contribution to net interest margin; (ii) expense related to defaults and servicing resulting from the liquidation of the loans; and (iii) any provision for loan losses. The PCI loans acquired in the Washington Mutual transaction were funded based on the interest rate characteristics of the loans. For example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with fixed-rate liabilities with a similar maturity profile. A net spread will be earned on the declining balance of the portfolio, which is estimated as of December 31, 2013, to have a remaining weighted-average life of 8 years.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

December 31, (in millions, except ratios)	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
	2013	2012	**2013**	2012	**2013**	2012	**2013**	2012	**2013**	2012
Carrying value[a]	**$18,927**	$20,971	**$12,038**	$13,674	**$ 4,175**	$ 4,626	**$17,915**	$20,466	**$53,055**	$59,737
Related allowance for loan losses[b]	**1,758**	1,908	**1,726**	1,929	**180**	380	**494**	1,494	**4,158**	5,711
Loan delinquency (based on unpaid principal balance)										
Current	**$18,135**	$20,331	**$10,118**	$11,078	**$ 4,012**	$ 4,198	**$15,501**	$16,415	**$47,766**	$52,022
30–149 days past due	**583**	803	**589**	740	**662**	698	**1,006**	1,314	**2,840**	3,555
150 or more days past due	**1,112**	1,209	**1,169**	2,066	**797**	1,430	**2,716**	4,862	**5,794**	9,567
Total loans	**$19,830**	$22,343	**$11,876**	$13,884	**$ 5,471**	$ 6,326	**$19,223**	$22,591	**$56,400**	$65,144
% of 30+ days past due to total loans	**8.55%**	9.01%	**14.80%**	20.21%	**26.67%**	33.64%	**19.36%**	27.34%	**15.31%**	20.14%
Current estimated LTV ratios (based on unpaid principal balance)[c][d]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 1,168**	$ 4,508	**$ 240**	$ 1,478	**$ 115**	$ 375	**$ 301**	$ 1,597	**$ 1,824**	$ 7,958
Less than 660	**662**	2,344	**290**	1,449	**459**	1,300	**575**	2,729	**1,986**	7,822
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**3,248**	4,966	**1,017**	2,968	**316**	434	**1,164**	3,281	**5,745**	11,649
Less than 660	**1,541**	2,098	**884**	1,983	**919**	1,256	**1,563**	3,200	**4,907**	8,537
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**4,473**	3,531	**2,787**	1,872	**544**	416	**3,311**	3,794	**11,115**	9,613
Less than 660	**1,782**	1,305	**1,699**	1,378	**1,197**	1,182	**2,769**	2,974	**7,447**	6,839
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	**5,077**	2,524	**2,897**	1,356	**521**	255	**5,671**	2,624	**14,166**	6,759
Less than 660	**1,879**	1,067	**2,062**	1,400	**1,400**	1,108	**3,869**	2,392	**9,210**	5,967
Total unpaid principal balance	**$19,830**	$22,343	**$11,876**	$13,884	**$ 5,471**	$ 6,326	**$19,223**	$22,591	**$56,400**	$65,144
Geographic region (based on unpaid principal balance)										
California	**$11,937**	$13,493	**$ 6,845**	$ 7,877	**$ 1,293**	$ 1,444	**$10,419**	$11,889	**$30,494**	$34,703
New York	**962**	1,067	**807**	927	**563**	649	**1,196**	1,404	**3,528**	4,047
Illinois	**451**	502	**353**	433	**283**	338	**481**	587	**1,568**	1,860
Florida	**1,865**	2,054	**826**	1,023	**526**	651	**1,817**	2,480	**5,034**	6,208
Texas	**327**	385	**106**	148	**328**	368	**100**	118	**861**	1,019
New Jersey	**381**	423	**334**	401	**213**	260	**701**	854	**1,629**	1,938
Arizona	**361**	408	**187**	215	**95**	105	**264**	305	**907**	1,033
Washington	**1,072**	1,215	**266**	328	**112**	142	**463**	563	**1,913**	2,248
Michigan	**62**	70	**189**	211	**145**	163	**206**	235	**602**	679
Ohio	**23**	27	**55**	71	**84**	100	**75**	89	**237**	287
All other	**2,389**	2,699	**1,908**	2,250	**1,829**	2,106	**3,501**	4,067	**9,627**	11,122
Total unpaid principal balance	**$19,830**	$22,343	**$11,876**	$13,884	**$ 5,471**	$ 6,326	**$19,223**	$22,591	**$56,400**	$65,144

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.

(b) Management concluded as part of the Firm's regular assessment of the PCI loan pools that it was probable that higher expected credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.

(d) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

Approximately 20% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following tables set forth delinquency statistics for PCI junior lien home equity loans and lines of credit based on unpaid principal balance as of December 31, 2013 and 2012.

December 31, 2013 (in millions, except ratios)	Delinquencies			Total loans	Total 30+ day delinquency rate
	30–89 days past due	90–149 days past due	150+ days past due		
HELOCs:[a]					
Within the revolving period[b]	**$ 243**	**$ 88**	**$ 526**	**$ 12,670**	**6.76%**
Beyond the revolving period[c]	**54**	**21**	**82**	**2,336**	**6.72**
HELOANs	**24**	**11**	**39**	**908**	**8.15**
Total	**$ 321**	**$ 120**	**$ 647**	**$ 15,914**	**6.84%**

December 31, 2012 (in millions, except ratios)	Delinquencies			Total loans	Total 30+ day delinquency rate
	30–89 days past due	90–149 days past due	150+ days past due		
HELOCs:[a]					
Within the revolving period[b]	$ 361	$ 175	$ 591	$ 15,915	7.08%
Beyond the revolving period[c]	30	13	20	666	9.46
HELOANs	37	18	44	1,085	9.12
Total	$ 428	$ 206	$ 655	$ 17,666	7.30%

(a) In general, these HELOCs are revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.
(b) Substantially all undrawn HELOCs within the revolving period have been closed.
(c) Includes loans modified into fixed-rate amortizing loans.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the years ended December 31, 2013, 2012 and 2011, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. The table excludes the cost to fund the PCI portfolios, and therefore the accretable yield does not represent net interest income expected to be earned on these portfolios.

Year ended December 31, (in millions, except ratios)	Total PCI		
	2013	2012	2011
Beginning balance	**$ 18,457**	$ 19,072	$ 19,097
Accretion into interest income	**(2,201)**	(2,491)	(2,767)
Changes in interest rates on variable-rate loans	**(287)**	(449)	(573)
Other changes in expected cash flows[a]	**198**	2,325	3,315
Balance at December 31	**$ 16,167**	$ 18,457	$ 19,072
Accretable yield percentage	**4.31%**	4.38%	4.33%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model and periodically updates model assumptions. For the year ended December 31, 2013, other changes in expected cash flows were due to refining the expected interest cash flows on HELOCs with balloon payments, partially offset by changes in prepayment assumptions. For the years ended December 31, 2012 and December 31, 2011, other changes in expected cash flows were principally driven by the impact of modifications, but also related to changes in prepayment assumptions.

The factors that most significantly affect estimates of gross cash flows expected to be collected, and accordingly the accretable yield balance, include: (i) changes in the benchmark interest rate indices for variable-rate products such as option ARM and home equity loans; and (ii) changes in prepayment assumptions.

Since the date of acquisition, the decrease in the accretable yield percentage has been primarily related to a decrease in interest rates on variable-rate loans and, to a lesser extent, extended loan liquidation periods. Certain events, such as extended or shortened loan liquidation periods, affect the timing of expected cash flows and the accretable yield percentage, but not the amount of cash expected to be received (i.e., the accretable yield balance). While extended loan liquidation periods reduce the accretable yield percentage (because the same accretable yield balance is recognized against a higher-than-expected loan balance over a longer-than-expected period of time), shortened loan liquidation periods would have the opposite effect.

Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30 days past due); information on those borrowers that have been delinquent for a longer period of time (90 days past due) is also considered. In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, the Firm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends to be a lagging indicator. However, the distribution of such scores provides a general indicator of credit quality trends within the portfolio. Refreshed FICO score information, which is obtained at least quarterly, for a statistically significant random sample of the credit card portfolio is indicated in the table below; FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in credit score technology.

The table below sets forth information about the Firm's credit card loans.

As of or for the year ended December 31, (in millions, except ratios)	2013	2012
Net charge-offs	**$ 3,879**	$ 4,944
% of net charge-offs to retained loans	**3.14%**	3.95%
Loan delinquency		
Current and less than 30 days past due and still accruing	**$ 125,335**	$ 125,309
30–89 days past due and still accruing	**1,108**	1,381
90 or more days past due and still accruing	**1,022**	1,302
Nonaccrual loans	**–**	1
Total retained credit card loans	**$ 127,465**	$ 127,993
Loan delinquency ratios		
% of 30+ days past due to total retained loans	**1.67%**	2.10%
% of 90+ days past due to total retained loans	**0.80**	1.02
Credit card loans by geographic region		
California	**$ 17,194**	$ 17,115
New York	**10,497**	10,379
Texas	**10,400**	10,209
Illinois	**7,412**	7,399
Florida	**7,178**	7,231
New Jersey	**5,554**	5,503
Ohio	**4,881**	4,956
Pennsylvania	**4,462**	4,549
Michigan	**3,618**	3,745
Virginia	**3,239**	3,193
All other	**53,030**	53,714
Total retained credit card loans	**$ 127,465**	$ 127,993
Percentage of portfolio based on carrying value with estimated refreshed FICO scores		
Equal to or greater than 660	**85.1%**	84.1%
Less than 660	**14.9**	15.9

Credit card impaired loans and loan modifications

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

December 31, (in millions)	2013	2012
Impaired credit card loans with an allowance[a][b]		
Credit card loans with modified payment terms[c]	**$ 2,746**	$ 4,189
Modified credit card loans that have reverted to pre-modification payment terms[d]	**369**	573
Total impaired credit card loans	**$ 3,115**	$ 4,762
Allowance for loan losses related to impaired credit card loans	**$ 971**	$ 1,681

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
(b) There were no impaired loans without an allowance.
(c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.
(d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At December 31, 2013 and 2012, $226 million and $341 million, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. The remaining $143 million and $232 million at December 31, 2013 and 2012, respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

Year ended December 31, (in millions)	2013	2012	2011
Average impaired credit card loans	**$ 3,882**	$ 5,893	$ 8,499
Interest income on impaired credit card loans	**198**	308	463

Loan modifications

JPMorgan Chase may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. Most of the credit card loans have been modified under long-term programs for borrowers who are experiencing financial difficulties. Modifications under long-term programs involve placing the customer on a fixed payment plan, generally for 60 months. The Firm may also offer short-term programs for borrowers who may be in need of temporary relief; however, none are currently being offered. Modifications under all short- and long-term programs typically include reducing the interest rate on the credit card. Substantially all modifications are considered to be TDRs.

If the cardholder does not comply with the modified payment terms, then the credit card loan agreement reverts back to its pre-modification payment terms. Assuming that the cardholder does not begin to perform in accordance with those payment terms, the loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In addition, if a borrower successfully completes a short-term modification program, then the loan reverts back to its pre-modification payment terms. However, in most cases, the Firm does not reinstate the borrower's line of credit.

The following table provides information regarding the nature and extent of modifications of credit card loans for the periods presented.

Year ended December 31,	New enrollments		
(in millions)	2013	2012	2011
Short-term programs	**$ –**	$ 47	$ 167
Long-term programs	**1,180**	1,607	2,523
Total new enrollments	**$ 1,180**	$ 1,654	$ 2,690

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the periods presented.

Year ended December 31, (in millions, except weighted-average data)	2013	2012	2011
Weighted-average interest rate of loans – before TDR	**15.37%**	15.67%	16.05%
Weighted-average interest rate of loans – after TDR	**4.38**	5.19	5.28
Loans that redefaulted within one year of modification[a]	**$ 167**	$ 309	$ 687

(a) Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default is deemed to have occurred when the loans become two payments past due. A substantial portion of these loans is expected to be charged-off in accordance with the Firm's standard charge-off policy. Based on historical experience, the estimated weighted-average default rate was expected to be 30.72%, 38.23% and 35.47% for credit card loans modified as of December 31, 2013, 2012 and 2011, respectively.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the probability of default ("PD") and the loss given default ("LGD"). PD is the likelihood that a loan will default and not be repaid. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. The Firm's definition of criticized aligns with the banking regulatory definition of criticized exposures, which consist of special mention, substandard and doubtful categories. Risk ratings generally represent ratings profiles similar to those defined by S&P and Moody's. Investment-grade ratings range from "AAA/Aaa" to "BBB-/Baa3." Noninvestment-grade ratings are classified as noncriticized ("BB+/Ba1 and B-/B3") and criticized ("CCC+"/"Caa1 and below"), and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note 5 on page 219 in this Annual Report for further detail on industry concentrations.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

As of or for the year ended December 31, (in millions, except ratios)	Commercial and industrial		Real estate	
	2013	2012	**2013**	2012
Loans by risk ratings				
Investment grade	**$ 57,690**	$ 61,870	**$ 52,195**	$ 41,796
Noninvestment grade:				
Noncriticized	**43,477**	44,651	**14,381**	14,567
Criticized performing	**2,385**	2,636	**2,229**	3,857
Criticized nonaccrual	**294**	708	**346**	520
Total noninvestment grade	**46,156**	47,995	**16,956**	18,944
Total retained loans	**$ 103,846**	$ 109,865	**$ 69,151**	$ 60,740
% of total criticized to total retained loans	**2.58%**	3.04 %	**3.72%**	7.21%
% of nonaccrual loans to total retained loans	**0.28**	0.64	**0.50**	0.86
Loans by geographic distribution[a]				
Total non-U.S.	**$ 34,440**	$ 35,494	**$ 1,369**	$ 1,533
Total U.S.	**69,406**	74,371	**67,782**	59,207
Total retained loans	**$ 103,846**	$ 109,865	**$ 69,151**	$ 60,740
Net charge-offs/(recoveries)	**$ 99**	$ (212)	**$ 6**	$ 54
% of net charge-offs/(recoveries) to end-of-period retained loans	**0.10%**	(0.19)%	**0.01%**	0.09%
Loan delinquency[b]				
Current and less than 30 days past due and still accruing	**$ 103,357**	$ 109,019	**$ 68,627**	$ 59,829
30–89 days past due and still accruing	**181**	119	**164**	322
90 or more days past due and still accruing[c]	**14**	19	**14**	69
Criticized nonaccrual	**294**	708	**346**	520
Total retained loans	**$ 103,846**	$ 109,865	**$ 69,151**	$ 60,740

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality. For a discussion of more significant risk factors, see page 279 of this Note.
(c) Represents loans that are considered well-collateralized and therefore still accruing interest.
(d) Other primarily includes loans to SPEs and loans to private banking clients. See Note 1 on pages 189–191 of this Annual Report for additional information on SPEs.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio segment for the periods indicated. The real estate class primarily consists of secured commercial loans mainly to borrowers for multi-family and commercial lessor properties. Multifamily lending specifically finances apartment buildings. Commercial lessors receive financing specifically for real estate leased to retail, office and industrial tenants. Commercial construction and development loans represent financing for the construction of apartments, office and professional buildings and malls. Other real estate loans include lodging, real estate investment trusts ("REITs"), single-family, homebuilders and other real estate.

December 31, (in millions, except ratios)	Multifamily		Commercial lessors	
	2013	2012	**2013**	2012
Real estate retained loans	**$ 44,389**	$ 38,030	**$ 15,949**	$ 14,668
Criticized	**1,142**	2,118	**1,323**	1,951
% of criticized to total real estate retained loans	**2.57%**	5.57%	**8.30%**	13.30%
Criticized nonaccrual	**$ 191**	$ 249	**$ 143**	$ 207
% of criticized nonaccrual to total real estate retained loans	**0.43%**	0.65%	**0.90%**	1.41%

(table continued from previous page)

Financial institutions		Government agencies		Other[d]		Total retained loans	
2013	2012	**2013**	2012	**2013**	2012	**2013**	2012
$ 26,712	$ 22,064	**$ 9,979**	$ 9,183	**$ 79,494**	$ 79,533	**$ 226,070**	$ 214,446
6,674	13,760	**440**	356	**10,992**	9,914	**75,964**	83,248
272	395	**42**	5	**480**	201	**5,408**	7,094
25	8	**1**	–	**155**	198	**821**	1,434
6,971	14,163	**483**	361	**11,627**	10,313	**82,193**	91,776
$ 33,683	$ 36,227	**$ 10,462**	$ 9,544	**$ 91,121**	$ 89,846	**$ 308,263**	$ 306,222
0.88 %	1.11 %	**0.41%**	0.05%	**0.70%**	0.44%	**2.02%**	2.78 %
0.07	0.02	**0.01**	–	**0.17**	0.22	**0.27**	0.47
$ 22,726	$ 26,326	**$ 2,146**	$ 1,582	**$ 43,376**	$ 39,421	**$ 104,057**	$ 104,356
10,957	9,901	**8,316**	7,962	**47,745**	50,425	**204,206**	201,866
$ 33,683	$ 36,227	**$ 10,462**	$ 9,544	**$ 91,121**	$ 89,846	**$ 308,263**	$ 306,222
$ (99)	$ (36)	**$ 1**	$ 2	**$ 9**	$ 14	**$ 16**	$ (178)
(0.29)%	(0.10)%	**0.01%**	0.02%	**0.01%**	0.02%	**0.01%**	(0.06)%
$ 33,426	$ 36,151	**$ 10,421**	$ 9,516	**$ 89,717**	$ 88,177	**$ 305,548**	$ 302,692
226	62	**40**	28	**1,233**	1,427	**1,844**	1,958
6	6	**–**	–	**16**	44	**50**	138
25	8	**1**	–	**155**	198	**821**	1,434
$ 33,683	$ 36,227	**$ 10,462**	$ 9,544	**$ 91,121**	$ 89,846	**$ 308,263**	$ 306,222

(table continued from previous page)

Commercial construction and development		Other		Total real estate loans	
2013	2012	**2013**	2012	**2013**	2012
$ 3,674	$ 2,989	**$ 5,139**	$ 5,053	**$ 69,151**	$ 60,740
81	119	**29**	189	**2,575**	4,377
2.20%	3.98%	**0.56%**	3.74%	**3.72%**	7.21%
$ 3	$ 21	**$ 9**	$ 43	**$ 346**	$ 520
0.08%	0.70%	**0.18%**	0.85%	**0.50%**	0.86%

Wholesale impaired loans and loan modifications

Wholesale impaired loans are comprised of loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 on pages 284–287 of this Annual Report.

The table below sets forth information about the Firm's wholesale impaired loans.

December 31, (in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	2013	2012	**2013**	2012	**2013**	2012	**2013**	2012	**2013**	2012	**2013**	2012
Impaired loans												
With an allowance	**$ 236**	$ 588	**$ 258**	$ 375	**$ 17**	$ 6	**$ 1**	$ –	**$ 85**	$ 122	**$ 597**	$ 1,091
Without an allowance[a]	**58**	173	**109**	133	**8**	2	**–**	–	**73**	76	**248**	384
Total impaired loans	**$ 294**	$ 761	**$ 367**	$ 508	**$ 25**	$ 8	**$ 1**	$ –	**$ 158**	$ 198	**$ 845**	$ 1,475
Allowance for loan losses related to impaired loans	**$ 75**	$ 205	**$ 63**	$ 82	**$ 16**	$ 2	**$ –**	$ –	**$ 27**	$ 30	**$ 181**	$ 319
Unpaid principal balance of impaired loans[b]	**448**	957	**454**	626	**24**	22	**1**	–	**241**	318	**1,168**	1,923

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.

(b) Represents the contractual amount of principal owed at December 31, 2013 and 2012. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.

The following table presents the Firm's average impaired loans for the years ended 2013, 2012 and 2011.

Year ended December 31, (in millions)	**2013**	2012	2011
Commercial and industrial	**$ 412**	$ 873	$ 1,309
Real estate	**484**	784	1,813
Financial institutions	**17**	17	84
Government agencies	**–**	9	20
Other	**211**	277	634
Total[a]	**$ 1,124**	$ 1,960	$ 3,860

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the years ended December 31, 2013, 2012 and 2011.

Loan modifications

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above.

The following table provides information about the Firm's wholesale loans that have been modified in TDRs, including a reconciliation of the beginning and ending balances of such loans and information regarding the nature and extent of modifications during the periods presented.

Years ended December 31, (in millions)	Commercial and industrial			Real estate			Other[b]			Total		
	2013	2012	2011	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Beginning balance of TDRs	**$ 575**	$ 531	$ 212	**$ 99**	$ 176	$ 907	**$ 22**	$ 43	$ 24	**$ 696**	$ 750	$ 1,143
New TDRs	**60**	162	665	**43**	43	113	**50**	73	32	**153**	278	810
Increases to existing TDRs	**4**	183	96	**–**	–	16	**–**	–	–	**4**	183	112
Charge-offs post-modification	**(9)**	(27)	(30)	**(3)**	(2)	(146)	**–**	(7)	–	**(12)**	(36)	(176)
Sales and other[a]	**(553)**	(274)	(412)	**(51)**	(118)	(714)	**(39)**	(87)	(13)	**(643)**	(479)	(1,139)
Ending balance of TDRs	**$ 77**	$ 575	$ 531	**$ 88**	$ 99	$ 176	**$ 33**	$ 22	$ 43	**$ 198**	$ 696	$ 750
TDRs on nonaccrual status	**$ 77**	$ 522	$ 415	**$ 61**	$ 92	$ 128	**$ 30**	$ 22	$ 35	**$ 168**	$ 636	$ 578
Additional commitments to lend to borrowers whose loans have been modified in TDRs	**19**	44	147	**–**	–	–	**–**	2	–	**19**	46	147

(a) Sales and other are largely sales and paydowns, but also includes performing loans restructured at market rates that were removed from the reported TDR balance of $12 million, $44 million and $152 million during the years ended December 31, 2013, 2012 and 2011 respectively. Loans that have been removed continue to be evaluated along with other impaired loans to determine the asset-specific component of the allowance for loan losses (see page 260 of this Note).

(b) Includes loans to Financial institutions, Government agencies and Other.

Financial effects of modifications and redefaults

Wholesale loans modified as TDRs are typically term or payment extensions and, to a lesser extent, deferrals of principal and/or interest on commercial and industrial and real estate loans. For the years ended December 31, 2013, 2012 and 2011, the average term extension granted on wholesale loans with term or payment extensions was 2.1 years, 1.1 years and 3.3 years, respectively. The weighted-average remaining term for all loans modified during these periods was 2.0 years, 3.6 years and 4.5 years respectively. Wholesale TDR loans that redefaulted within one year of the modification were $1 million, $56 million and $96 million during the years ended December 31, 2013, 2012 and 2011, respectively. A payment default is deemed to occur when the borrower has not made a loan payment by its scheduled due date after giving effect to any contractual grace period.

Note 15 – Allowance for credit losses

JPMorgan Chase's allowance for loan losses covers the consumer, including credit card, portfolio segments (primarily scored); and wholesale (risk-rated) portfolio, and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. The allowance for loan losses includes an asset-specific component, a formula-based component and a component related to PCI loans, as described below. Management also estimates an allowance for wholesale and consumer lending-related commitments using methodologies similar to those used to estimate the allowance on the underlying loans. During 2013, the Firm did not make any significant changes to the methodologies or policies used to determine its allowance for credit losses; such policies are described in the following paragraphs.

The asset-specific component of the allowance relates to loans considered to be impaired, which includes loans that have been modified in TDRs as well as risk-rated loans that have been placed on nonaccrual status. To determine the asset-specific component of the allowance, larger loans are evaluated individually, while smaller loans are evaluated as pools using historical loss experience for the respective class of assets. Scored loans (i.e., consumer loans) are pooled by product type, while risk-rated loans (primarily wholesale loans) are segmented by risk rating.

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are reported as an adjustment to the provision for loan losses. In certain cases, the asset-specific allowance is determined using an observable market price, and the allowance is measured as the difference between the recorded investment in the loan and the loan's fair value. Impaired collateral-dependent loans are charged down to the fair value of collateral less costs to sell and therefore may not be subject to an asset-specific reserve as for other impaired loans. See Note 14 on pages 258–283 of this Annual Report for more information about charge-offs and collateral-dependent loans.

The asset-specific component of the allowance for impaired loans that have been modified in TDRs incorporates the effects of foregone interest, if any, in the present value calculation and also incorporates the effect of the modification on the loan's expected cash flows, which considers the potential for redefault. For residential real estate loans modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to date based on actual redefaulted modified loans. For credit card loans modified in TDRs, expected losses incorporate projected redefaults based on the Firm's historical experience by type of modification program. For wholesale loans modified in TDRs, expected losses incorporate redefaults based on management's expectation of the borrower's ability to repay under the modified terms.

The formula-based component is based on a statistical calculation to provide for incurred credit losses in performing risk-rated loans and all consumer loans, except for any loans restructured in TDRs and PCI loans. See Note 14 on pages 258–283 of this Annual Report for more information on PCI loans.

For scored loans, the statistical calculation is performed on pools of loans with similar risk characteristics (e.g., product type) and generally computed by applying loss factors to outstanding principal balances over an estimated loss emergence period. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends.

Loss factors are statistically derived and sensitive to changes in delinquency status, credit scores, collateral values and other risk factors. The Firm uses a number of different forecasting models to estimate both the PD and the loss severity, including delinquency roll rate models and credit loss severity models. In developing PD and loss severity assumptions, the Firm also considers known and anticipated changes in the economic environment, including changes in home prices, unemployment rates and other risk indicators.

A nationally recognized home price index measure is used to estimate both the PD and the loss severity on residential real estate loans at the metropolitan statistical areas ("MSA") level. Loss severity estimates are regularly validated by comparison to actual losses recognized on defaulted loans, market-specific real estate appraisals and property sales activity. The economic impact of potential modifications of residential real estate loans is not included in the statistical calculation because of the uncertainty regarding the type and results of such modifications.

For risk-rated loans, the statistical calculation is the product of an estimated PD and an estimated LGD. These factors are differentiated by risk rating and expected maturity. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm to that loan. PD estimates are based on observable external through-the-cycle data, using credit-rating agency default statistics. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle.

Management applies judgment within an established framework to adjust the results of applying the statistical calculation described above. The determination of the appropriate adjustment is based on management's view of loss events that have occurred but that are not yet reflected in the loss factors and that relate to current macroeconomic and political conditions, the quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the portfolio. For the scored loan portfolios, adjustments to the statistical calculation are accomplished in part by analyzing the historical loss experience for each major product segment. Factors related to unemployment, home prices, borrower behavior and lien position, the estimated effects of the mortgage foreclosure-related settlement with federal and state officials and uncertainties regarding the ultimate success of loan modifications are incorporated into the calculation, as appropriate. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. In addition, for the risk-rated portfolios, any adjustments made to the statistical calculation also consider concentrated and deteriorating industries.

Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing consumer and wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods. At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2013, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses inherent in the portfolio).

Allowance for credit losses and loans and lending-related commitments by impairment methodology

The table below summarizes information about the allowance for loan losses, loans by impairment methodology, the allowance for lending-related commitments and lending-related commitments by impairment methodology.

	2013			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses				
Beginning balance at January 1,	$ 12,292	$ 5,501	$ 4,143	$ 21,936
Gross charge-offs	2,754	4,472	241	7,467
Gross recoveries	(847)	(593)	(225)	(1,665)
Net charge-offs/(recoveries)	1,907	3,879	16	5,802
Write-offs of PCI loans[a]	53	—	—	53
Provision for loan losses	(1,872)	2,179	(119)	188
Other	(4)	(6)	5	(5)
Ending balance at December 31,	$ 8,456	$ 3,795	$ 4,013	$ 16,264
Allowance for loan losses by impairment methodology				
Asset-specific[b]	$ 601	$ 971 [c]	$ 181	$ 1,753
Formula-based	3,697	2,824	3,832	10,353
PCI	4,158	—	—	4,158
Total allowance for loan losses	$ 8,456	$ 3,795	$ 4,013	$ 16,264
Loans by impairment methodology				
Asset-specific	$ 13,785	$ 3,115	$ 845	$ 17,745
Formula-based	221,609	124,350	307,412	653,371
PCI	53,055	—	6	53,061
Total retained loans	$ 288,449	$ 127,465	$ 308,263	$ 724,177
Impaired collateral-dependent loans				
Net charge-offs	$ 235	$ —	$ 37	$ 272
Loans measured at fair value of collateral less cost to sell	3,105	—	362	3,467
Allowance for lending-related commitments				
Beginning balance at January 1,	$ 7	$ —	$ 661	$ 668
Provision for lending-related commitments	1	—	36	37
Other	—	—	—	—
Ending balance at December 31,	$ 8	$ —	$ 697	$ 705
Allowance for lending-related commitments by impairment methodology				
Asset-specific	$ —	$ —	$ 60	$ 60
Formula-based	8	—	637	645
Total allowance for lending-related commitments	$ 8	$ —	$ 697	$ 705
Lending-related commitments by impairment methodology				
Asset-specific	$ —	$ —	$ 206	$ 206
Formula-based	56,057	529,383	446,026	1,031,466
Total lending-related commitments	$ 56,057	$ 529,383	$ 446,232	$ 1,031,672

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. Any write-offs of PCI loans are recognized when the underlying loan is removed from a pool (e.g., upon liquidation).

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(d) Consumer, excluding credit card, charge-offs for the year ended December 31, 2012, included $747 million of charge-offs for Chapter 7 residential real estate loans and $53 million of charge-offs for Chapter 7 auto loans.

(table continued from previous page)

	2012				2011			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
	$ 16,294	$ 6,999	$ 4,316	$ 27,609	$ 16,471	$ 11,034	$ 4,761	$ 32,266
	4,805 [d]	5,755	346	10,906	5,419	8,168	916	14,503
	(508)	(811)	(524)	(1,843)	(547)	(1,243)	(476)	(2,266)
	4,297 [d]	4,944	(178)	9,063	4,872	6,925	440	12,237
	–	–	–	–	–	–	–	–
	302	3,444	(359)	3,387	4,670	2,925	17	7,612
	(7)	2	8	3	25	(35)	(22)	(32)
	$ 12,292	$ 5,501	$ 4,143	$ 21,936	$ 16,294	$ 6,999	$ 4,316	$ 27,609
	$ 729	$ 1,681 [c]	$ 319	$ 2,729	$ 828	$ 2,727 [c]	$ 516	$ 4,071
	5,852	3,820	3,824	13,496	9,755	4,272	3,800	17,827
	5,711	–	–	5,711	5,711	–	–	5,711
	$ 12,292	$ 5,501	$ 4,143	$ 21,936	$ 16,294	$ 6,999	$ 4,316	$ 27,609
	$ 13,938	$ 4,762	$ 1,475	$ 20,175	$ 9,892	$ 7,214	$ 2,549	$ 19,655
	218,945	123,231	304,728	646,904	232,989	124,961	275,825	633,775
	59,737	–	19	59,756	65,546	–	21	65,567
	$ 292,620	$ 127,993	$ 306,222	$ 726,835	$ 308,427	$ 132,175	$ 278,395	$ 718,997
	$ 973 [c]	$ –	$ 77	$ 1,050	$ 110	$ –	$ 128	$ 238
	3,272	–	445	3,717	830	–	833	1,663
	$ 7	$ –	$ 666	$ 673	$ 6	$ –	$ 711	$ 717
	–	–	(2)	(2)	2	–	(40)	(38)
	–	–	(3)	(3)	(1)	–	(5)	(6)
	$ 7	$ –	$ 661	$ 668	$ 7	$ –	$ 666	$ 673
	$ –	$ –	$ 97	$ 97	$ –	$ –	$ 150	$ 150
	7	–	564	571	7	–	516	523
	$ 7	$ –	$ 661	$ 668	$ 7	$ –	$ 666	$ 673
	$ –	$ –	$ 355	$ 355	$ –	$ –	$ 865	$ 865
	60,156	533,018	434,459	1,027,633	62,307	530,616	381,874	974,797
	$ 60,156	$ 533,018	$ 434,814	$ 1,027,988	$ 62,307	$ 530,616	$ 382,739	$ 975,662

Note 16 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1 on pages 189–191 of this Annual Report.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the principal beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper conduit.

Line-of-Business	*Transaction Type*	*Activity*	*Annual Report page references*
CCB	Credit card securitization trusts	Securitization of both originated and purchased credit card receivables	289
	Other securitization trusts	Securitization of originated student loans	290-292
	Mortgage securitization trusts	Securitization of originated and purchased residential mortgages	290-292
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, automobile and student loans	290-292
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	292-296
	Investor intermediation activities:		
	Municipal bond vehicles		293-294
	Credit-related note and asset swap vehicles		294-296

The Firm's other business segments are also involved with VIEs, but to a lesser extent, as follows:

- Asset Management: Sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For fund entities that qualify as VIEs, AM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Commercial Banking: CB makes investments in and provides lending to community development entities that may meet the definition of a VIE. In addition, CB provides financing and lending related services to certain client-sponsored VIEs. In general, CB does not control the activities of these entities and does not consolidate these entities.
- Corporate/Private Equity: The Private Equity business, within Corporate/Private Equity, may be involved with entities that are deemed VIEs. However, the Firm's private equity business is subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs.

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 296 of this Note.

Significant Firm-sponsored variable interest entities

Credit card securitizations

The Card business securitizes originated and purchased credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.

The Firm is considered to be the primary beneficiary of these Firm-sponsored credit card securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

The underlying securitized credit card receivables and other assets of the securitization trusts are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's other creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (which is generally 4%). As of December 31, 2013 and 2012, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $14.3 billion and $15.8 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 30% and 28% for the years ended December 31, 2013 and 2012, respectively. The Firm also retained $130 million and $362 million of senior securities and $5.5 billion and $4.6 billion of subordinated securities in certain of its credit card securitization trusts as of December 31, 2013 and 2012, respectively. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

Firm-sponsored mortgage and other securitization trusts

The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans (including automobile and student loans) primarily in its CIB and CCB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

The following table presents the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests, recourse or guarantee arrangements, and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. See Securitization activity on page 297 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and pages 297–298 of this Note for information on the Firm's loan sales to U.S. government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[d][e][f]		
December 31, 2013 [a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime/Alt-A and Option ARMs	**$ 109.2**	**$ 3.2**	**$ 90.4**	**$ 0.5**	**$ 0.3**	**$ 0.8**
Subprime	**32.1**	**1.3**	**28.0**	**0.1**	**–**	**0.1**
Commercial and other[b]	**130.4**	**–**	**98.0**	**0.5**	**3.5**	**4.0**
Total	**$ 271.7**	**$ 4.5**	**$ 216.4**	**$ 1.1**	**$ 3.8**	**$ 4.9**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[d][e][f]		
December 31, 2012[a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime/Alt-A and Option ARMs[c]	$ 133.5	$ 2.7	$ 106.7	$ 0.3	$ –	$ 0.3
Subprime	34.5	1.3	31.3	0.1	–	0.1
Commercial and other[b]	127.8	–	81.8	1.5	2.8	4.3
Total	$ 295.8	$ 4.0	$ 219.8	$ 1.9	$ 2.8	$ 4.7

(a) Excludes U.S. government agency securitizations. See pages 297–298 of this Note for information on the Firm's loan sales to U.S. government agencies.
(b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties. The Firm generally does not retain a residual interest in its sponsored commercial mortgage securitization transactions.
(c) The prior period has been reclassified to conform with the current presentation methodology.
(d) The table above excludes the following: retained servicing (see Note 17 on pages 299–304 of this Annual Report for a discussion of MSRs); securities retained from loans sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (See Note 6 on pages 220–233 of this Annual Report for further information on derivatives); senior and subordinated securities of $151 million and $30 million, respectively, at December 31, 2013, and $131 million and $45 million, respectively, at December 31, 2012, which the Firm purchased in connection with CIB's secondary market-making activities.
(e) Includes interests held in re-securitization transactions.
(f) As of December 31, 2013 and 2012, 69% and 74%, respectively, of the Firm's retained securitization interests, which are carried at fair value, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of $551 million and $170 million of investment-grade and $260 million and $171 million of noninvestment-grade retained interests at December 31, 2013 and 2012, respectively. The retained interests in commercial and other securitizations trusts consisted of $3.9 billion and $4.1 billion of investment-grade and $80 million and $164 million of noninvestment-grade retained interests at December 31, 2013 and 2012, respectively.

Residential mortgage

The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. CCB generally retains servicing for all residential mortgage loans originated or purchased by CCB, and for certain mortgage loans purchased by CIB. For securitizations serviced by CCB, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. CCB may also retain an interest upon securitization.

In addition, CIB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, CIB at times retains senior and/or subordinated interests (including residual interests) in residential mortgage securitizations upon securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by CIB or held by CCB, when considered together with the servicing arrangements entered into by CCB, the Firm is deemed to be the primary beneficiary of certain securitization trusts. See the table on page 296 of this Note for more information on consolidated residential mortgage securitizations.

The Firm does not consolidate a residential mortgage securitization (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust. At December 31, 2013 and 2012, the Firm did not consolidate the assets of certain Firm-sponsored residential mortgage securitization VIEs, in which the Firm had continuing involvement, primarily due to the fact that the Firm did not hold an interest in these trusts that could potentially be significant to the trusts. See the table on page 296 of this Note for more information on the consolidated residential mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations.

Commercial mortgages and other consumer securitizations

CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. CIB may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). See the table on page 296 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

The Firm also securitizes student loans. The Firm retains servicing responsibilities for all originated and certain purchased student loans and has the power to direct the activities of these VIEs through these servicing responsibilities. See the table on page 296 of this Note for more information on the consolidated student loan securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

Re-securitizations

The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both agency (Fannie Mae, Freddie Mac and Ginnie Mae) and nonagency (private-label) sponsored VIEs, which may be backed by either residential or commercial mortgages. The Firm's consolidation analysis is largely dependent on the Firm's role and interest in the re-securitization trusts. During the years ended December 31, 2013, 2012 and 2011, the Firm transferred $25.3 billion, $10.0 billion and $24.9 billion, respectively, of securities to agency VIEs, and $55 million, $286 million and $381 million, respectively, of securities to private-label VIEs.

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients are seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its client(s), considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.

In more limited circumstances, the Firm creates a re-securitization trust independently and not in conjunction with specific clients. In these circumstances, the Firm is deemed to have the unilateral ability to direct the most significant activities of the re-securitization trust because of the decisions made during the establishment and design of the trust; therefore, the Firm consolidates the re-securitization VIE if the Firm holds an interest that could potentially be significant.

Additionally, the Firm may invest in beneficial interests of third-party securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it wasn't involved in the initial design of the trust, or the Firm is involved with an independent third party sponsor and demonstrates shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

As of December 31, 2013 and 2012, the Firm did not consolidate any agency re-securitizations. As of December 31, 2013 and 2012, the Firm consolidated $86 million and $76 million, respectively, of assets, and $23 million and $5 million, respectively, of liabilities of private-label re-securitizations. See the table on page 296 of this Note for more information on the consolidated re-securitization transactions.

As of December 31, 2013 and 2012, total assets (including the notional amount of interest-only securities) of nonconsolidated Firm-sponsored private-label re-securitization entities in which the Firm has continuing involvement were $2.8 billion and $4.6 billion, respectively. At December 31, 2013 and 2012, the Firm held approximately $1.3 billion and $2.0 billion, respectively, of interests in nonconsolidated agency re-securitization entities, and $6 million and $61 million, respectively, of senior and subordinated interests in nonconsolidated private-label re-securitization entities. See the table on page 290 of this Note for further information on interests held in nonconsolidated securitizations.

Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, and to provide the conduits with funding to purchase interests in or make loans secured by pools of receivables in the event that the conduits do not obtain funding in the commercial paper market, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required is based upon commercial paper issuance and approximates 10% of the outstanding balance.

The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit enhancement facilities provided to the conduits. See page 296 of this Note for further information on consolidated VIE assets and liabilities.

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper, including commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $4.1 billion and $8.3 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2013 and 2012, respectively. The Firm's investments were not driven by market illiquidity and the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded portion of these commitments was $9.1 billion and $10.8 billion at December 31, 2013 and 2012, respectively, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 29 on pages 318–324 of this Annual Report.

VIEs associated with investor intermediation activities

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions with these VIEs, typically using derivatives, to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in on behalf of clients are municipal bond vehicles, credit-related note vehicles and asset swap vehicles.

Municipal bond vehicles

The Firm has created a series of trusts that provide short-term investors with qualifying tax-exempt investments, and that allow investors in tax-exempt securities to finance their investments at short-term tax-exempt rates. In a typical transaction, the vehicle purchases fixed-rate longer-term highly rated municipal bonds and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates and (2) inverse floating-rate residual interests ("residual interests"). The maturity of each of the puttable floating-rate certificates and the residual interests is equal to the life of the vehicle, while the maturity of the underlying municipal bonds is typically longer. Holders of the puttable floating-rate certificates may "put," or tender, the certificates if the remarketing agent cannot successfully remarket the floating-rate certificates to another investor. A liquidity facility conditionally obligates the liquidity provider to fund the purchase of the tendered floating-rate certificates. Upon termination of the vehicle, proceeds from the sale of the underlying municipal bonds would first repay any funded liquidity facility or outstanding floating-rate certificates and the remaining amount, if any, would be paid to the residual interests. If the proceeds from the sale of the underlying municipal bonds are not sufficient to repay the liquidity facility, in certain transactions the liquidity provider has recourse to the residual interest holders for reimbursement. Certain residual interest holders may be required to post collateral with the Firm, as liquidity provider, to support such reimbursement obligations should the market value of the municipal bonds decline.

JPMorgan Chase Bank, N.A. often serves as the sole liquidity provider, and J.P. Morgan Securities LLC serves as remarketing agent, of the puttable floating-rate certificates. The liquidity provider's obligation to perform is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the Firm's exposure as liquidity provider is further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or in certain transactions, the reimbursement agreements with the residual interest holders.

The long-term credit ratings of the puttable floating rate certificates are directly related to the credit ratings of the underlying municipal bonds, the credit rating of any insurer of the underlying municipal bond, and the Firm's short-term credit rating as liquidity provider. A downgrade in any of these ratings would affect the rating of the puttable floating-rate certificates and could cause demand for these certificates by investors to decline or disappear. However, a downgrade of JPMorgan Chase Bank, N.A.'s short-term rating does not affect the Firm's obligation under the liquidity facility.

As remarketing agent, the Firm may hold puttable floating-rate certificates of the municipal bond vehicles. At December 31, 2013 and 2012, the Firm held $262 million and $252 million, respectively, of these certificates on its Consolidated Balance Sheets. The largest amount held by the Firm at any time during 2013 was $470 million, or 4.8%, of the municipal bond vehicles' aggregate outstanding puttable floating-rate certificates. The Firm did not have and continues not to have any intent to protect any residual interest holder from potential losses on any of the municipal bond holdings.

The Firm consolidates municipal bond vehicles if it owns the residual interest. The residual interest generally allows the owner to make decisions that significantly impact the economic performance of the municipal bond vehicle, primarily by directing the sale of the municipal bonds owned by the vehicle. In addition, the residual interest owners have the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle. The Firm does not consolidate municipal bond vehicles if it does not own the residual interests, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle. See page 296 of this Note for further information on consolidated municipal bond vehicles.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31, 2013 and 2012, including the ratings profile of the VIEs' assets, was as follows.

December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities	Excess/(deficit)[a]	Maximum exposure
Nonconsolidated municipal bond vehicles				
2013	**$ 11.8**	**$ 6.9**	**$ 4.9**	**$ 6.9**
2012	14.2	8.0	6.2	8.0

	Ratings profile of VIE assets[b]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions, except where otherwise noted)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB+ to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
2013	**$ 2.7**	**$ 8.9**	**$ 0.2**	**$ –**	**$ –**	**$ 11.8**	**7.2**
2012	3.1	11.0	0.1	–	–	14.2	5.9

(a) Represents the excess/(deficit) of the fair values of municipal bond assets available to repay the liquidity facilities, if drawn.
(b) The ratings scale is presented on an S&P-equivalent basis. The prior period has been reclassified to conform with the current presentation.

Credit-related note and asset swap vehicles

Credit-related note vehicles

The Firm structures transactions with credit-related note vehicles in which the VIE purchases highly rated assets, such as asset-backed securities, and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit which the VIE otherwise does not hold. The VIE then issues credit-linked notes ("CLNs") with maturities predominantly ranging from one to ten years in order to transfer the risk of the referenced credit to the VIE's investors. Clients and investors often prefer using a CLN vehicle since the CLNs issued by the VIE generally carry a higher credit rating than such notes would if issued directly by JPMorgan Chase. As a derivative counterparty in a credit-related note structure, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. The collateral purchased by such VIEs is predominantly investment grade. The Firm divides its credit-related note structures broadly into two types: static and managed.

In a static credit-related note structure, the CLNs and associated credit derivative contract either reference a single credit (e.g., a multi-national corporation), or all or part of a fixed portfolio of credits. In a managed credit-related note structure, the CLNs and associated credit derivative generally reference all or part of an actively managed portfolio of credits. An agreement exists between a portfolio manager and the VIE that gives the portfolio manager the ability to substitute each referenced credit in the portfolio for an alternative credit. The Firm does not act as portfolio manager; its involvement with the VIE is generally limited to being a derivative counterparty. As a net buyer of credit protection, in both static and managed credit-related note structures, the Firm pays a premium to the VIE in return for the receipt of a payment (up to the notional of the derivative) if one or more of the credits within the portfolio defaults, or if the losses resulting from the default of reference credits exceed specified levels. The Firm does not provide any additional contractual financial support to the VIE. In addition, the Firm has not historically provided any financial support to the CLN vehicles over and above its contractual obligations. Since each CLN is established to the specifications of the investors, the investors have the power over the activities of that VIE that most significantly affect the performance of the CLN. Furthermore, the Firm does not generally have a variable interest that could potentially be significant. Accordingly, the Firm does not generally consolidate these credit-related note entities. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Asset swap vehicles

The Firm structures and executes transactions with asset swap vehicles on behalf of investors. In such transactions, the VIE purchases a specific asset or assets and then enters into a derivative with the Firm in order to tailor the interest rate or foreign exchange currency risk, or both, according to investors' requirements. Generally, the assets are held by the VIE to maturity, and the tenor of the derivatives would match the maturity of the assets. Investors typically invest in the notes issued by such VIEs in order to obtain exposure to the credit risk of the specific assets, as well as exposure to foreign exchange and interest rate risk that is tailored to their specific needs. The derivative transaction between the Firm and the VIE may include currency swaps to hedge assets held by the VIE denominated in foreign currency into the investors' local currency or interest rate swaps to hedge the interest rate risk of assets held by the VIE; to add additional interest rate exposure into the VIE in order to increase the return on the issued notes; or to convert an interest-bearing asset into a zero-coupon bond.

The Firm's exposure to asset swap vehicles is generally limited to its rights and obligations under the interest rate and/or foreign exchange derivative contracts. The Firm historically has not provided any financial support to the asset swap vehicles over and above its contractual obligations. The Firm does not generally consolidate these asset swap vehicles, since the Firm does not have the power to direct the significant activities of these entities and does not have a variable interest that could potentially be significant. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Exposure to nonconsolidated credit-related note and asset swap VIEs at December 31, 2013 and 2012, was as follows.

December 31, 2013 (in billions)	Net derivative receivables	Total exposure	Par value of collateral held by VIEs[a]
Credit-related notes			
Static structure	**$ –**	**$ –**	**$ 4.8**
Managed structure	**–**	**–**	**3.9**
Total credit-related notes	**–**	**–**	**8.7**
Asset swaps	**0.4**	**0.4**	**7.7**
Total	**$ 0.4**	**$ 0.4**	**$ 16.4**

December 31, 2012 (in billions)	Net derivative receivables	Total exposure	Par value of collateral held by VIEs[a]
Credit-related notes			
Static structure	$ 0.5	$ 0.5	$ 7.3
Managed structure	0.6	0.6	5.6
Total credit-related notes	1.1	1.1	12.9
Asset swaps	0.4	0.4	7.9
Total	$ 1.5	$ 1.5	$ 20.8

(a) The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies on the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts.

The Firm consolidated Firm-sponsored and third-party credit-related note vehicles with collateral fair values of $311 million and $483 million, at December 31, 2013 and 2012, respectively. These consolidated VIEs included some that were structured by the Firm where the Firm provides the credit derivative, and some that have been structured by third parties where the Firm is not the credit derivative provider. The Firm consolidated these vehicles, because it held positions in these entities that provided the Firm with control of certain vehicles. The Firm did not consolidate any asset swap vehicles at December 31, 2013 and 2012.

VIEs sponsored by third parties

VIE used in FRBNY transaction

In conjunction with the Bear Stearns merger in June 2008, the Federal Reserve Bank of New York ("FRBNY") took control, through an LLC formed for this purpose, of a portfolio of $30.0 billion in assets, based on the value of the portfolio as of March 14, 2008. The assets of the LLC were funded by a $28.85 billion term loan from the FRBNY and a $1.15 billion subordinated loan from JPMorgan Chase. The JPMorgan Chase loan was subordinated to the FRBNY loan and bore the first $1.15 billion of any losses of the portfolio. Any remaining assets in the portfolio after repayment of the FRBNY loan, repayment of the JPMorgan Chase loan and the expense of the LLC was for the account of the FRBNY. The extent to which the FRBNY and JPMorgan Chase loans were repaid depended on the value of the assets in the portfolio and the liquidation strategy directed by the FRBNY. The Firm did not consolidate the LLC, as it did not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance. In June 2012, the FRBNY loan was repaid in full and in November 2012, the JPMorgan Chase loan was repaid in full. During the year ended December 31, 2012, JPMorgan Chase recognized a pretax gain of $665 million reflecting the recovery on the $1.15 billion subordinated loan plus contractual interest.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2013 and 2012.

	Assets				Liabilities		
December 31, 2013 (in billions)[a]	Trading assets – debt and equity instruments	Loans	Other[d]	Total assets[e]	Beneficial interests in VIE assets[f]	Other[g]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	**$ –**	**$ 46.9**	**$ 1.1**	**$ 48.0**	**$ 26.6**	**$ –**	**$ 26.6**
Firm-administered multi-seller conduits	**–**	**19.0**	**0.1**	**19.1**	**14.9**	**–**	**14.9**
Municipal bond vehicles	**3.4**	**–**	**–**	**3.4**	**2.9**	**–**	**2.9**
Mortgage securitization entities[b]	**2.3**	**1.7**	**–**	**4.0**	**2.9**	**0.9**	**3.8**
Other[c]	**0.7**	**2.5**	**1.0**	**4.2**	**2.3**	**0.2**	**2.5**
Total	**$ 6.4**	**$ 70.1**	**$ 2.2**	**$ 78.7**	**$ 49.6**	**$ 1.1**	**$ 50.7**

	Assets				Liabilities		
December 31, 2012 (in billions)[a]	Trading assets – debt and equity instruments	Loans	Other[d]	Total assets[e]	Beneficial interests in VIE assets[f]	Other[g]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	$ –	$ 51.9	$ 0.8	$ 52.7	$ 30.1	$ –	$ 30.1
Firm-administered multi-seller conduits	–	25.4	0.1	25.5	17.2	–	17.2
Municipal bond vehicles	9.8	–	0.1	9.9	11.0	–	11.0
Mortgage securitization entities[b]	1.4	2.0	–	3.4	2.3	1.1	3.4
Other[c]	0.8	3.4	1.1	5.3	2.6	0.1	2.7
Total	$ 12.0	$ 82.7	$ 2.1	$ 96.8	$ 63.2	$ 1.2	$ 64.4

(a) Excludes intercompany transactions which were eliminated in consolidation.
(b) Includes residential and commercial mortgage securitizations as well as re-securitizations.
(c) Primarily comprises student loan securitization entities. The Firm consolidated $2.5 billion and $3.3 billion of student loan securitization entities as of December 31, 2013 and 2012, respectively.
(d) Includes assets classified as cash, derivative receivables, AFS securities, and other assets within the Consolidated Balance Sheets.
(e) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.
(f) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated Balance Sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $31.8 billion and $35.0 billion at December 31, 2013 and 2012, respectively. The maturities of the long-term beneficial interests as of December 31, 2013, were as follows: $3.8 billion under one year, $20.6 billion between one and five years, and $7.4 billion over five years, all respectively.
(g) Includes liabilities classified as accounts payable and other liabilities in the Consolidated Balance Sheets.

Supplemental information on loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgage, credit card, automobile, student and commercial (primarily related to real estate) loans, as well as debt securities. The primary purposes of these securitization transactions were to satisfy investor demand and to generate liquidity for the Firm.

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when the accounting criteria for a sale are met. Those criteria are: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

Securitization activity

The following tables provide information related to the Firm's securitization activities for the years ended December 31, 2013, 2012 and 2011, related to assets held in JPMorgan Chase-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved based on the accounting rules in effect at the time of the securitization.

	2013		2012		2011	
Year ended December 31, (in millions, except rates)[a]	Residential mortgage[d]	Commercial and other[f][g]	Residential mortgage[d][e]	Commercial and other[f][g]	Residential mortgage[d][e]	Commercial and other[f][g]
Principal securitized	**$ 1,404**	**$ 11,318**	$ –	$ 5,421	**$ –**	$ 5,961
All cash flows during the period:						
Proceeds from new securitizations[b]	**$ 1,410**	**$ 11,507**	$ –	$ 5,705	**$ –**	$ 6,142
Servicing fees collected	**576**	**5**	662	4	755	4
Purchases of previously transferred financial assets (or the underlying collateral)[c]	**294**	**–**	222	–	772	–
Cash flows received on interests	**156**	**325**	185	163	235	178

(a) Excludes re-securitization transactions.

(b) Proceeds from residential mortgage securitizations were received in the form of securities. During 2013, $1.4 billion of residential mortgage securitizations were classified in level 2 of the fair value hierarchy. Proceeds from commercial mortgage securitizations were received as securities and cash. During 2013, $11.3 billion of commercial mortgage securitizations were classified in level 2 of the fair value hierarchy, and $207 million of proceeds from commercial mortgage securitizations were received as cash. During 2012, $5.7 billion of commercial mortgage securitizations were classified in level 2 of the fair value hierarchy. During 2011, $4.0 billion and $2.1 billion commercial mortgage securitizations were classified in levels 2 and 3 of the fair value hierarchy, respectively.

(c) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities – for example, loan repurchases due to representation and warranties and servicer clean-up calls.

(d) Includes prime, Alt-A, subprime, and option ARMs. Excludes sales for which the Firm did not securitize the loan (including loans sold to Ginnie Mae, Fannie Mae and Freddie Mac).

(e) There were no residential mortgage securitizations during 2012 and 2011.

(f) Includes commercial and student loan securitizations.

(g) Key assumptions used to measure retained interests originated during the year included weighted-average life (in years) of 8.3, 8.8 and 1.7 for the years ended December 31, 2013, 2012, and 2011, respectively, and weighted-average discount rate of 3.2%, 3.6% and 3.5% for the years ended December 31, 2013, 2012, and 2011, respectively.

Loans and excess mortgage servicing rights sold to agencies and other third-party-sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess mortgage servicing rights on a nonrecourse basis, predominantly to Ginnie Mae, Fannie Mae and Freddie Mac (the "Agencies"). These loans and excess mortgage servicing rights are sold primarily for the purpose of securitization by the Agencies, which also provide credit enhancement of the loans and excess mortgage servicing rights through certain guarantee provisions. The Firm does not consolidate these securitization vehicles as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. See Note 29 on pages 318–324 of this Annual Report for additional information about the Firm's loan sales- and securitization-related indemnifications. See Note 17 on pages 299–304 of this Annual Report for additional information about the impact of the Firm's sale of certain excess mortgage servicing rights.

The following table summarizes the activities related to loans sold to U.S. government-sponsored agencies and third-party-sponsored securitization entities.

Year ended December 31, (in millions)	2013	2012[e]	2011[e]
Carrying value of loans sold[a]	**$ 166,028**	$ 179,008	$ 149,247
Proceeds received from loan sales as cash	**$ 782**	$ 195	$ 122
Proceeds from loan sales as securities[b]	**163,373**	176,592	146,704
Total proceeds received from loan sales[c]	**$ 164,155**	$ 176,787	$ 146,826
Gains on loan sales[d]	**302**	141	133

(a) Predominantly to U.S. government agencies.
(b) Predominantly includes securities from U.S. government agencies that are generally sold shortly after receipt.
(c) Excludes the value of MSRs retained upon the sale of loans. Gains on loan sales include the value of MSRs.
(d) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.
(e) Prior periods have been revised to conform with the current presentation.

Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 29 on pages 318–324 of this Annual Report, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated Balance Sheets as a loan with a corresponding liability. As of December 31, 2013 and 2012, the Firm had recorded on its Consolidated Balance Sheets $14.3 billion and $15.6 billion, respectively, of loans that either had been repurchased or for which the Firm had an option to repurchase. Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools. Additionally, real estate owned resulting from voluntary repurchases of loans was $2.0 billion and $1.6 billion as of December 31, 2013 and 2012, respectively. Substantially all of these loans and real estate owned are insured or guaranteed by U.S. government agencies. For additional information, refer to Note 14 on pages 258–283 of this Annual Report.

JPMorgan Chase's interest in securitized assets held at fair value

The following table outlines the key economic assumptions used to determine the fair value, as of December 31, 2013 and 2012, of certain of the Firm's retained interests in nonconsolidated VIEs (other than MSRs), that are valued using modeling techniques. The table also outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in assumptions used to determine fair value. For a discussion of MSRs, see Note 17 on pages 299–304 of this Annual Report.

	Commercial and other	
December 31, (in millions, except rates and where otherwise noted)[a]	**2013**	2012
JPMorgan Chase interests in securitized assets[b]	**$ 520**	$ 1,488
Weighted-average life (in years)	**5.5**	6.1
Weighted-average discount rate[b]	**3.8%**	4.1%
Impact of 10% adverse change	**$ (9)**	$ (34)
Impact of 20% adverse change	**(18)**	(65)

(a) The Firm's interests in prime mortgage securitizations were $552 million and $341 million, as of December 31, 2013 and 2012, respectively. These include retained interests in Alt-A loans and re-securitization transactions. The Firm's interests in subprime mortgage securitizations were $91 million and $68 million, as of December 31, 2013 and 2012, respectively.
(b) Incorporates the Firm's weighted-average loss assumption.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based on a 10% or 20% variation in assumptions generally cannot be extrapolated easily, because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in the table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might counteract or magnify the sensitivities. The above sensitivities also do not reflect risk management practices the Firm may undertake to mitigate such risks.

Loan delinquencies and liquidation losses

The table below includes information about components of nonconsolidated securitized financial assets, in which the Firm has continuing involvement, and delinquencies as of December 31, 2013 and 2012.

	Securitized assets		90 days past due		Liquidation losses	
As of or for the year ended December 31, (in millions)	**2013**	2012	**2013**	2012	**2013**	2012
Securitized loans[a]						
Residential mortgage:						
Prime/ Alt-A & Option ARMs	**$ 90,381**	$ 106,667	**$ 14,882**	$ 22,865	**$ 4,688**	$ 9,118
Subprime mortgage	**28,008**	31,264	**7,726**	10,570	**2,420**	3,013
Commercial and other	**98,018**	81,834	**2,350**	4,077	**1,003**	1,265
Total loans securitized[b]	**$ 216,407**	$ 219,765	**$ 24,958**	$ 37,512	**$ 8,111**	$ 13,396

(a) Total assets held in securitization-related SPEs were $271.7 billion and $295.8 billion, respectively, at December 31, 2013 and 2012. The $216.4 billion and $219.8 billion, respectively, of loans securitized at December 31, 2013 and 2012, excludes: $50.8 billion and $72.0 billion, respectively, of securitized loans in which the Firm has no continuing involvement, and $4.5 billion and $4.0 billion, respectively, of loan securitizations consolidated on the Firm's Consolidated Balance Sheets at December 31, 2013 and 2012.

(b) Includes securitized loans that were previously recorded at fair value and classified as trading assets.

Note 17 – Goodwill and other intangible assets

Goodwill and other intangible assets consist of the following.

December 31, (in millions)	**2013**	2012	2011
Goodwill	**$ 48,081**	$ 48,175	$ 48,188
Mortgage servicing rights	**9,614**	7,614	7,223
Other intangible assets:			
Purchased credit card relationships	**$ 131**	$ 295	$ 602
Other credit card-related intangibles	**173**	229	488
Core deposit intangibles	**159**	355	594
Other intangibles	**1,155**	1,356	1,523
Total other intangible assets	**$ 1,618**	$ 2,235	$ 3,207

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	**2013**	2012	2011
Consumer & Community Banking	**$ 30,985**	$ 31,048	$ 30,996
Corporate & Investment Bank	**6,888**	6,895	6,944
Commercial Banking	**2,862**	2,863	2,864
Asset Management	**6,969**	6,992	7,007
Corporate/Private Equity	**377**	377	377
Total goodwill	**$ 48,081**	$ 48,175	$ 48,188

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	**2013**	2012	2011
Balance at beginning of period[a]	**$ 48,175**	$ 48,188	$ 48,854
Changes during the period from:			
Business combinations	**64**	43	97
Dispositions	**(5)**	(4)	(685)
Other[b]	**(153)**	(52)	(78)
Balance at December 31,[a]	**$ 48,081**	$ 48,175	$ 48,188

(a) Reflects gross goodwill balances as the Firm has not recognized any impairment losses to date.

(b) Includes foreign currency translation adjustments and other tax-related adjustments.

Impairment testing

Goodwill was not impaired at December 31, 2013 or 2012, nor was any goodwill written off due to impairment during 2013, 2012 or 2011.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The Firm uses the reporting units' allocated equity plus goodwill capital as a proxy for the carrying amounts of equity for the reporting units in the goodwill impairment testing. Reporting unit equity is determined on a similar basis as the allocation of equity to the Firm's lines of business, which takes into consideration the capital the business segment would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III), economic risk measures and capital levels for similarly rated peers. Proposed line of business equity levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors. Allocated equity is further reviewed on a periodic basis and updated as needed.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. The models project cash flows for the forecast period and use the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' earnings forecasts, which include the estimated effects of regulatory and legislative changes (including, but not limited to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act")), and which are reviewed with the Operating Committee of the Firm. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firms' overall estimated cost of equity to ensure reasonableness.

The valuations derived from the discounted cash flow models are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to assess the general reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that naturally exist between the Firm's businesses and competitor institutions. Management also takes into consideration a comparison between the aggregate fair value of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (a) a control premium that would exist in a market transaction, (b) factors related to the level of execution risk that would exist at the firmwide level that do not exist at the reporting unit level and (c) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

While no impairment of goodwill was recognized, the Firm's Mortgage Banking business in CCB remains at an elevated risk of goodwill impairment due to its exposure to U.S. consumer credit risk and the effects of economic, regulatory and legislative changes. The valuation of this business is particularly dependent upon economic conditions (including primary mortgage interest rates, lower mortgage origination volume, new unemployment claims and home prices), regulatory and legislative changes (for example, those related to residential mortgage servicing, foreclosure and loss mitigation activities), and the amount of equity capital required. The assumptions used in the discounted cash flow valuation models including the amount of capital necessary given the risk of business activities to meet regulatory capital requirements were determined using management's best estimates. The cost of equity reflected the related risks and uncertainties, and was evaluated in comparison to relevant market peers. Deterioration in these assumptions could cause the estimated fair values of these reporting units and their associated goodwill to decline, which may result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights

Mortgage servicing rights represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late charges and other ancillary revenue, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that comprise the MSR asset. Conversely, securities (e.g., mortgage-backed securities), principal-only certificates and certain derivatives (i.e., those for which the Firm receives fixed-rate interest payments) increase in value when interest rates decline. JPMorgan Chase uses combinations of derivatives and securities to manage changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2013, 2012 and 2011.

As of or for the year ended December 31, (in millions, except where otherwise noted)	2013	2012	2011
Fair value at beginning of period	**$ 7,614**	$ 7,223	$ 13,649
MSR activity:			
Originations of MSRs	**2,214**	2,376	2,570
Purchase of MSRs	**1**	457	33
Disposition of MSRs[a]	**(725)**	(579)	–
Net additions	**1,490**	2,254	2,603
Changes due to collection/realization of expected cash flows[b]	**(1,102)**	(1,228)	(1,910)
Changes in valuation due to inputs and assumptions:			
Changes due to market interest rates and other[c]	**2,122**	(589)	(5,392)
Changes in valuation due to other inputs and assumptions:			
Projected cash flows (e.g., cost to service)[d]	**109**	(452)	(1,757)
Discount rates	**(78)**	(98)	(1,238)
Prepayment model changes and other[e]	**(541)**	504	1,268
Total changes in valuation due to other inputs and assumptions	**(510)**	(46)	(1,727)
Total changes in valuation due to inputs and assumptions[b]	**$ 1,612**	$ (635)	$ (7,119)
Fair value at December 31,[f]	**$ 9,614**	$ 7,614	$ 7,223
Change in unrealized gains/(losses) included in income related to MSRs held at December 31,	**$ 1,612**	$ (635)	$ (7,119)
Contractual service fees, late fees and other ancillary fees included in income	**$ 3,309**	$ 3,783	$ 3,977
Third-party mortgage loans serviced at December 31, (in billions)	**$ 822**	$ 867	$ 910
Servicer advances, net of an allowance for uncollectible amounts, at December 31, (in billions)[g]	**$ 9.6**	$ 10.9	$ 11.1

(a) Predominantly represents excess mortgage servicing rights transferred to agency-sponsored trusts in exchange for stripped mortgage backed securities ("SMBS"). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired and has retained the remaining balance of those SMBS as trading securities. Also includes sales of MSRs in 2013 and 2012.

(b) Included changes related to commercial real estate of $(5) million, $(8) million and $(9) million for the years ended December 31, 2013, 2012 and 2011, respectively.

(c) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(d) For the year ended December 31, 2013, the increase was driven by the inclusion in the MSR valuation model of servicing fees receivable on certain delinquent loans.

(e) Represents changes in prepayments other than those attributable to changes in market interest rates. For the year ended December 31, 2013, the decrease was driven by changes in the inputs and assumptions used to derive prepayment speeds, primarily increases in home prices.

(f) Included $18 million, $23 million and $31 million related to commercial real estate at December 31, 2013, 2012, and 2011, respectively.

(g) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest to a trust, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

During the year ended December 31, 2011, the fair value of the MSR decreased by $6.4 billion. This decrease was predominantly due to a decline in market interest rates, which resulted in a loss in fair value of $5.4 billion. These losses were offset by gains of $5.6 billion on derivatives used to hedge the MSR asset; these derivatives are recognized on the Consolidated Balance Sheets separately from the MSR asset. Also contributing to the decline in fair value of the MSR asset was a $1.7 billion decrease related to revised cost to service and ancillary income assumptions incorporated in the MSR valuation. The increased cost to service assumptions reflected the estimated impact of higher servicing costs to enhance servicing processes, particularly loan modification and foreclosure procedures, including costs to comply with Consent Orders entered into with banking regulators. The increase in the cost to service assumption contemplated significant and prolonged increases in staffing levels in the core and default servicing functions. The decreased ancillary income assumption was similarly related to a reassessment of business practices in consideration of the Consent Orders and the existing industry-wide regulatory environment, which was broadly affecting market participants.

Also in the fourth quarter of 2011, the Firm revised its OAS assumption and updated its proprietary prepayment model; these changes had generally offsetting effects. The Firm's OAS assumption is based upon capital and return requirements that the Firm believes a market participant would consider, taking into account factors such as the pending Basel III capital rules. Consequently, the OAS assumption for the Firm's portfolio increased by approximately 400 basis points and decreased the fair value of the MSR asset by approximately $1.2 billion.

Finally, in the fourth quarter of 2011, the Firm further enhanced its proprietary prepayment model to incorporate: (i) the impact of the Home Affordable Refinance Program ("HARP") 2.0, and (ii) assumptions that to limit modeled refinancings due to the combined influences of relatively strict underwriting standards and reduced levels of expected home price appreciation. In the aggregate, these refinements increased the fair value of the MSR asset by approximately $1.2 billion.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2013, 2012 and 2011.

Year ended December 31, (in millions)	2013	2012	2011
CCB mortgage fees and related income			
Net production revenue:			
Production revenue	**$2,673**	$ 5,783	$3,395
Repurchase losses	**331**	(272)	(1,347)
Net production revenue	**3,004**	5,511	2,048
Net mortgage servicing revenue			
Operating revenue:			
Loan servicing revenue	**3,552**	3,772	4,134
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(1,094)**	(1,222)	(1,904)
Total operating revenue	**2,458**	2,550	2,230
Risk management:			
Changes in MSR asset fair value due to market interest rates and other[(a)]	**2,119**	(587)	(5,390)
Other changes in MSR asset fair value due to other inputs and assumptions in model[(b)]	**(511)**	(46)	(1,727)
Change in derivative fair value and other	**(1,875)**	1,252	5,553
Total risk management	**(267)**	619	(1,564)
Total CCB net mortgage servicing revenue	**2,191**	3,169	666
All other	**10**	7	7
Mortgage fees and related income	**$5,205**	$ 8,687	$2,721

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices). For the year ended December 31, 2013, the decrease was driven by changes in the inputs and assumptions used to derive prepayment speeds, primarily increases in home prices.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2013 and 2012, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

December 31, (in millions, except rates)	2013	2012
Weighted-average prepayment speed assumption ("CPR")	**8.07%**	13.04%
Impact on fair value of 10% adverse change	**$ (362)**	$ (517)
Impact on fair value of 20% adverse change	**(705)**	(1,009)
Weighted-average option adjusted spread	**7.77%**	7.61%
Impact on fair value of 100 basis points adverse change	**$ (389)**	$ (306)
Impact on fair value of 200 basis points adverse change	**(750)**	(591)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

Other intangible assets

Other intangible assets are recorded at their fair value upon completion of a business combination or certain other transactions, and generally represent the value of customer relationships or arrangements. Subsequently, the Firm's intangible assets with finite lives, including core deposit intangibles, purchased credit card relationships, and other intangible assets, are amortized over their useful lives in a manner that best reflects the economic benefits of the intangible asset. The $617 million decrease in other intangible assets during 2013 was predominantly due to $637 million in amortization.

The components of credit card relationships, core deposits and other intangible assets were as follows.

	2013			2012		
December 31, (in millions)	Gross amount[a]	Accumulated amortization[a]	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	**$ 3,540**	**$ 3,409**	**$ 131**	$ 3,775	$ 3,480	$ 295
Other credit card-related intangibles	**542**	**369**	**173**	850	621	229
Core deposit intangibles	**4,133**	**3,974**	**159**	4,133	3,778	355
Other intangibles[b]	**2,374**	**1,219**	**1,155**	2,390	1,034	1,356

(a) The decrease in the gross amount and accumulated amortization from December 31, 2012, was due to the removal of fully amortized assets.
(b) Includes intangible assets of approximately $600 million consisting primarily of asset management advisory contracts, which were determined to have an indefinite life and are not amortized.

Amortization expense

The following table presents amortization expense related to credit card relationships, core deposits and other intangible assets.

Year ended December 31, (in millions)	2013	2012	2011
Purchased credit card relationships	**$ 195**	$ 309	$ 295
Other credit card-related intangibles	**58**	265	106
Core deposit intangibles	**196**	239	285
Other intangibles	**188**	144	162
Total amortization expense	**$ 637**	$ 957	$ 848

Future amortization expense

The following table presents estimated future amortization expense related to credit card relationships, core deposits and other intangible assets at December 31, 2013.

Year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	Other intangibles	**Total**
2014	$ 96	$ 51	$ 102	$ 111	$ 360
2015	12	39	26	92	169
2016	9	34	14	86	143
2017	5	29	7	61	102
2018	3	20	5	52	80

Impairment testing

The Firm's intangible assets are tested for impairment annually or more often if events or changes in circumstances indicate that the asset might be impaired.

The impairment test for a finite-lived intangible asset compares the undiscounted cash flows associated with the use or disposition of the intangible asset to its carrying value. If the sum of the undiscounted cash flows exceeds its carrying value, then no impairment charge is recorded. If the sum of the undiscounted cash flows is less than its carrying value, then an impairment charge is recognized in amortization expense to the extent the carrying amount of the asset exceeds its fair value.

The impairment test for indefinite-lived intangible assets compares the fair value of the intangible asset to its carrying amount. If the carrying value exceeds the fair value, then an impairment charge is recognized in amortization expense for the difference.

Note 18 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset. JPMorgan Chase has recorded immaterial asset retirement obligations related to asbestos remediation in those cases where it has sufficient information to estimate the obligations' fair value.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 19 – Deposits

At December 31, 2013 and 2012, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	**2013**	2012
U.S. offices		
Noninterest-bearing	**$ 389,863**	$ 380,320
Interest-bearing		
Demand[a]	**84,631**	53,980
Savings[b]	**450,405**	407,710
Time (included **$5,995** and $5,140 at fair value)[c]	**91,356**	90,416
Total interest-bearing deposits	**626,392**	552,106
Total deposits in U.S. offices	**1,016,255**	932,426
Non-U.S. offices		
Noninterest-bearing	**17,611**	17,845
Interest-bearing		
Demand	**214,391**	195,395
Savings	**1,083**	1,004
Time (included **$629** and $593 at fair value)[c]	**38,425**	46,923
Total interest-bearing deposits	**253,899**	243,322
Total deposits in non-U.S. offices	**271,510**	261,167
Total deposits	**$ 1,287,765**	$ 1,193,593

(a) Includes Negotiable Order of Withdrawal ("NOW") accounts, and certain trust accounts.
(b) Includes Money Market Deposit Accounts ("MMDAs").
(c) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 4 on pages 215–218 of this Annual Report.

At December 31, 2013 and 2012, time deposits in denominations of $100,000 or more were as follows.

December 31, (in millions)	**2013**	2012
U.S. offices	**$ 74,804**	$ 70,008
Non-U.S. offices	**38,412**	46,890
Total	**$113,216**	$116,898

At December 31, 2013, the maturities of interest-bearing time deposits were as follows.

December 31, 2013 (in millions)	U.S.	Non-U.S.	**Total**
2014	$ 73,130	$ 37,394	$ 110,524
2015	5,395	361	5,756
2016	6,274	402	6,676
2017	1,387	55	1,442
2018	1,845	201	2,046
After 5 years	3,325	12	3,337
Total	$ 91,356	$ 38,425	$ 129,781

Note 20 – Accounts payable and other liabilities

Accounts payable and other liabilities consist of payables to customers; payables to brokers, dealers and clearing organizations; payables from failed securities purchases; income taxes payables; accrued expense, including interest-bearing liabilities; and all other liabilities, including litigation reserves and obligations to return securities received as collateral.

The following table details the components of accounts payable and other liabilities.

December 31, (in millions)	**2013**	2012
Brokerage payables[a]	**$ 116,391**	$ 108,398
Accounts payable and other liabilities[b]	**78,100**	86,842
Total	**$ 194,491**	$ 195,240

(a) Includes payables to customers, brokers, dealers and clearing organizations, and securities fails.
(b) Includes $25 million and $36 million accounted for at fair value at December 31, 2013 and 2012, respectively.

Note 21 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated Statements of Income. The following table is a summary of long-term debt carrying values (including unamortized original issue discount, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2013.

By remaining maturity at December 31,		2013				2012
(in millions, except rates)		Under 1 year	1-5 years	After 5 years	**Total**	Total
Parent company						
Senior debt:	Fixed rate	**$ 11,100**	**$ 49,241**	**$ 40,733**	**$ 101,074**	$ 99,716
	Variable rate	**12,411**	**22,790**	**5,829**	**41,030**	38,765
	Interest rates[a]	**0.38-6.25%**	**0.35-7.25%**	**0.19-6.40%**	**0.19-7.25%**	0.26-7.25%
Subordinated debt:	Fixed rate	**$ 2,904**	**$ 4,966**	**$ 7,328**	**$ 15,198**	$ 16,312
	Variable rate	**–**	**4,557**	**9**	**4,566**	3,440
	Interest rates[a]	**1.92-5.13%**	**0.63-6.13%**	**3.38-8.53%**	**0.63-8.53%**	0.61-8.53%
	Subtotal	**$ 26,415**	**$ 81,554**	**$ 53,899**	**$ 161,868**	$ 158,233
Subsidiaries						
Federal Home Loan Banks ("FHLB") advances:	Fixed rate	**$ 1,029**	**$ 2,022**	**$ 185**	**$ 3,236**	$ 4,712
	Variable rate	**11,050**	**39,590**	**8,000**	**58,640**	37,333
	Interest rates[a]	**0.20-1.54%**	**0.16-2.04%**	**0.36-0.43%**	**0.16-2.04%**	0.30-2.04%
Senior debt:	Fixed rate	**$ 347**	**$ 1,655**	**$ 3,426**	**$ 5,428**	$ 6,761
	Variable rate	**6,593**	**14,117**	**2,748**	**23,458**	21,607
	Interest rates[a]	**0.12-3.75%**	**0.21-8.00%**	**7.28%**	**0.12-8.00%**	0.16-7.28%
Subordinated debt:	Fixed rate	**$ –**	**$ 5,445**	**$ 1,841**	**$ 7,286**	$ 7,513
	Variable rate	**–**	**2,528**	**–**	**2,528**	2,466
	Interest rates[a]	**–%**	**0.57-6.00%**	**4.38-8.25%**	**0.57-8.25%**	0.64-8.25%
	Subtotal	**$ 19,019**	**$ 65,357**	**$ 16,200**	**$ 100,576**	$ 80,392
Junior subordinated debt:	Fixed rate	**$ –**	**$ –**	**$ 2,176**	**$ 2,176**	$ 7,131
	Variable rate	**–**	**–**	**3,269**	**3,269**	3,268
	Interest rates[a]	**–%**	**–%**	**0.74-8.75%**	**0.74-8.75%**	0.81-8.75%
	Subtotal	**$ –**	**$ –**	**$ 5,445**	**$ 5,445**	$ 10,399
Total long-term debt[b][c][d]		**$ 45,434**	**$ 146,911**	**$ 75,544**	**$ 267,889** [f][g]	$ 249,024
Long-term beneficial interests:						
	Fixed rate	**$ 353**	**$ 7,537**	**$ 3,068**	**$ 10,958**	$ 10,393
	Variable rate	**3,438**	**13,056**	**4,378**	**20,872**	24,579
	Interest rates	**0.19-5.63%**	**0.19-5.35%**	**0.04-15.93%**	**0.04-15.93%**	0.23-13.91%
Total long-term beneficial interests[e]		**$ 3,791**	**$ 20,593**	**$ 7,446**	**$ 31,830**	$ 34,972

(a) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2013, for total long-term debt was (0.18)% to 8.00%, versus the contractual range of 0.12% to 8.75% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.

(b) Included long-term debt of $68.4 billion and $48.0 billion secured by assets totaling $131.3 billion and $112.8 billion at December 31, 2013 and 2012, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.

(c) Included $28.9 billion and $30.8 billion of long-term debt accounted for at fair value at December 31, 2013 and 2012, respectively.

(d) Included $2.7 billion and $1.6 billion of outstanding zero-coupon notes at December 31, 2013 and 2012, respectively. The aggregate principal amount of these notes at their respective maturities is $4.5 billion and $3.0 billion, respectively.

(e) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated VIEs. Also included $2.0 billion and $1.2 billion of outstanding structured notes accounted for at fair value at December 31, 2013 and 2012, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $17.8 billion and $28.2 billion at December 31, 2013 and 2012, respectively.

(f) At December 31, 2013, long-term debt in the aggregate of $24.6 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective notes.

(g) The aggregate carrying values of debt that matures in each of the five years subsequent to 2013 is $45.4 billion in 2014, $43.3 billion in 2015, $36.3 billion in 2016, $32.5 billion in 2017 and $34.8 billion in 2018.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 2.56% and 3.09% as of December 31, 2013 and 2012, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 1.54% and 2.33% as of December 31, 2013 and 2012, respectively.

The Parent Company has guaranteed certain long-term debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees rank on parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities were $478 million and $1.7 billion at December 31, 2013 and 2012, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities
On May 8, 2013, the Firm redeemed approximately $5.0 billion , or 100% of the liquidation amount, of the following eight series of guaranteed capital debt securities ("trust preferred securities"): JPMorgan Chase Capital X, XI, XII, XIV, XVI, XIX and XXIV, and BANK ONE Capital VI. Other income for the year ended December 31, 2013, reflected a modest loss related to the redemption of trust preferred securities. On July 12, 2012, the Firm redeemed $9.0 billion, or 100% of the liquidation amount, of the following nine series of trust preferred securities: JPMorgan Chase Capital XV, XVII, XVIII, XX, XXII, XXV, XXVI, XXVII and XXVIII. Other income for the year ended December 31, 2012, reflected $888 million of pretax extinguishment gains related to adjustments applied to the cost basis of the redeemed trust preferred securities during the period they were in a qualified hedge accounting relationship.

At December 31, 2013, the Firm had outstanding 9 wholly owned Delaware statutory business trusts ("issuer trusts") that had issued guaranteed capital debt securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $5.4 billion and $10.4 billion at December 31, 2013 and 2012, respectively, were reflected on the Firm's Consolidated Balance Sheets in long-term debt, and in the table on the preceding page under the caption "Junior subordinated debt" (i.e., trust preferred securities). The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated Balance Sheets at December 31, 2013 and 2012. The debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, qualified as Tier 1 capital as of December 31, 2013 and 2012.

The following is a summary of the outstanding trust preferred securities, including unamortized original issue discount, issued by each trust, and the junior subordinated deferrable interest debenture issued to each trust, as of December 31, 2013.

December 31, 2013 (in millions)	Amount of trust preferred securities issued by trust[a]	Principal amount of debenture issued to trust[b]	Issue date	Stated maturity of trust preferred securities and debentures	Earliest redemption date	Interest rate of trust preferred securities and debentures	Interest payment/ distribution dates
Bank One Capital III	$ 474	$ 675	2000	2030	Any time	8.75%	Semiannually
Chase Capital II	482	498	1997	2027	Any time	LIBOR + 0.50%	Quarterly
Chase Capital III	296	305	1997	2027	Any time	LIBOR + 0.55%	Quarterly
Chase Capital VI	241	249	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	249	257	1997	2027	Any time	LIBOR + 0.55%	Quarterly
JPMorgan Chase Capital XIII	465	480	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXI	836	837	2007	2037	Any time	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXIII	643	644	2007	2047	Any time	LIBOR + 1.00%	Quarterly
JPMorgan Chase Capital XXIX	1,500	1,500	2010	2040	2015	6.70%	Quarterly
Total	$ 5,186	$ 5,445					

(a) Represents the amount of trust preferred securities issued to the public by each trust, including unamortized original issue discount.
(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original-issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated Financial Statements.

Note 22 – Preferred stock

At December 31, 2013 and 2012, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock for the payment of dividends and the distribution of assets.

The following is a summary of JPMorgan Chase's preferred stock outstanding as of December 31, 2013 and 2012.

	Contractual rate in effect at December 31, 2013	Shares at December 31,[a]		Carrying value (in millions) at December 31,		Earliest redemption date	Share value and redemption price per share[b]
		2013	2012	**2013**	2012		
Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series I	7.900%	**600,000**	600,000	**$ 6,000**	$ 6,000	4/30/2018	$ 10,000
8.625% Non-Cumulative Perpetual Preferred Stock, Series J	N/A	**–**	180,000	**–**	1,800	9/1/2013	10,000
5.50% Non-Cumulative Perpetual Preferred Stock, Series O	5.500%	**125,750**	125,750	**1,258**	1,258	9/1/2017	10,000
5.45% Non-Cumulative Perpetual Preferred Stock, Series P	5.450%	**90,000**	–	**900**	–	3/1/2018	10,000
Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series Q	5.150%	**150,000**	–	**1,500**	–	5/1/2023	10,000
Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series R	6.000%	**150,000**	–	**1,500**	–	8/1/2023	10,000
Total preferred stock		**1,115,750**	905,750	**$ 11,158**	$ 9,058		

(a) Represented by depositary shares.
(b) The redemption price includes the amount shown in the table plus any accrued but unpaid dividends.

Dividends on the Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series I shares are payable semiannually at a fixed annual dividend rate of 7.90% through April 2018, and then become payable quarterly at an annual dividend rate of three-month LIBOR plus 3.47%. Dividends on the 5.50% Non-Cumulative Preferred Stock, Series O and the 5.45% Non-Cumulative Preferred Stock, Series P are payable quarterly. Dividends on the Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series Q shares are payable semi-annually at a fixed annual rate of 5.15% through April 2023, and then become payable at a dividend rate of three-month LIBOR plus 3.25%. Dividends on the Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series R shares are payable semi-annually at a fixed annual dividend rate of 6.00% through July 2023, and then become payable at a dividend rate of three-month LIBOR plus 3.30%.

The Series O Non-Cumulative Preferred Stock was issued in August 2012. Series P Non-Cumulative Preferred Stock was issued in February 2013; Series Q Fixed-to-Floating Non-Cumulative Preferred Stock was issued in April 2013; and Series R Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series R was issued in July 2013.

On September 1, 2013, the Firm redeemed all of the outstanding shares of its 8.625% Non-Cumulative Preferred Stock, Series J at their stated redemption value.

Redemption rights

Each series of the Firm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date for that series. The Series O, Series P, Series Q and Series R preferred stock may also be redeemed following a capital treatment event, as described in the terms of that series. Any redemption of the Firm's preferred stock is subject to non-objection from the Federal Reserve.

Subsequent events

Issuance of preferred stock

On January 22, 2014, January 30, 2014, and February 6, 2014, the Firm issued $2.0 billion , $850 million, and $75 million, respectively, of noncumulative preferred stock.

Note 23 – Common stock

At December 31, 2013 and 2012, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during the years ended December 31, 2013, 2012 and 2011 were as follows.

Year ended December 31, (in millions)	**2013**	2012	2011
Total issued – balance at January 1 and December 31	**4,104.9**	4,104.9	4,104.9
Treasury – balance at January 1	**(300.9)**	(332.2)	(194.6)
Purchase of treasury stock	**(96.1)**	(33.5)	(226.9)
Share repurchases related to employee stock-based awards[a]	**–**	(0.2)	(0.1)
Issued from treasury:			
Employee benefits and compensation plans	**47.1**	63.7	88.3
Employee stock purchase plans	**1.1**	1.3	1.1
Total issued from treasury	**48.3**	65.0	89.4
Total treasury – balance at December 31	**(348.8)**	(300.9)	(332.2)
Outstanding	**3,756.1**	3,804.0	3,772.7

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes.

At December 31, 2013, 2012, and 2011, respectively, the Firm had 59.8 million, 59.8 million and 78.2 million warrants outstanding to purchase shares of common stock. The warrants were originally issued pursuant to the U.S. Treasury Capital Purchase Program in 2008, and are currently traded on the New York Stock Exchange. The warrants are exercisable, in whole or in part, at any time and from time to time until October 28, 2018, at an exercise price of $42.42 per share. The number of shares issuable upon the exercise of each warrant and the warrant exercise price is subject to adjustment upon the occurrence of certain events, including in the case of: stock splits, subdivisions, reclassifications or combinations of common stock; cash dividends or distributions to all holders of the Firm's common stock of assets, rights or warrants (and with respect to cash dividends, only to the extent regular quarterly cash dividends exceed $0.38 per share (as adjusted for any stock split, reverse stock split, reclassification or similar transaction)); pro rata repurchases of common stock (as defined in the warrants) pursuant to an offer available to substantially all holders of common stock; and certain business combinations (as defined in the warrants) requiring the approval of the Firm's stockholders or a reclassification of the Firm's common stock.

On March 13, 2012, the Board of Directors authorized a $15.0 billion common equity (i.e., common stock and warrants) repurchase program. The amount of equity that may be repurchased is also subject to the amount that is set forth in the Firm's annual capital plan that is submitted to the Federal Reserve as part of the CCAR process. The following table shows the Firm's repurchases of common equity for the years ended December 31, 2013, 2012 and 2011, on a trade-date basis. As of December 31, 2013, $8.6 billion of authorized repurchase capacity remained under the program.

Year ended December 31, (in millions)	**2013**	2012	2011
Total number of shares of common stock repurchased	**96**	31	229
Aggregate purchase price of common stock repurchases	**$ 4,789**	$ 1,329	$ 8,827
Total number of warrants repurchased	**–**	18	10
Aggregate purchase price of warrant repurchases	**$ –**	$ 238	$ 122

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information. For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on pages 20–21 of JPMorgan Chase's 2013 Form 10-K.

On March 18, 2011, the Board of Directors raised the Firm's quarterly common stock dividend from $0.05 to $0.25 per share, effective with the dividend paid on April 30, 2011, to shareholders of record on April 6, 2011. On March 13, 2012, the Board of Directors increased the Firm's quarterly common stock dividend from $0.25 to $0.30 per share, effective with the dividend paid on April 30, 2012, to shareholders of record on April 5, 2012. On May 21, 2013, the Board of Directors increased the Firm's quarterly common stock dividend from $0.30 per share to $0.38 per share, effective with the dividend paid on July 31, 2013, to shareholders of record on July 5, 2013.

As of December 31, 2013, approximately 290 million unissued shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the warrants sold by the U.S. Treasury as discussed above.

Note 24 – Earnings per share

Earnings per share ("EPS") is calculated under the two-class method under which all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities based on their respective rights to receive dividends. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities. Options issued under employee benefit plans that have an antidilutive effect are excluded from the computation of diluted EPS.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2013, 2012 and 2011.

Year ended December 31, (in millions, except per share amounts)	**2013**	2012	2011
Basic earnings per share			
Net income	**$ 17,923**	$ 21,284	$ 18,976
Less: Preferred stock dividends	**805**	653	629
Net income applicable to common equity	**17,118**	20,631	18,347
Less: Dividends and undistributed earnings allocated to participating securities	**525**	754	779
Net income applicable to common stockholders	**$ 16,593**	$ 19,877	$ 17,568
Total weighted-average basic shares outstanding	**3,782.4**	3,809.4	3,900.4
Net income per share	**$ 4.39**	$ 5.22	$ 4.50
Diluted earnings per share			
Net income applicable to common stockholders	**$ 16,593**	$ 19,877	$ 17,568
Total weighted-average basic shares outstanding	**3,782.4**	3,809.4	3,900.4
Add: Employee stock options, SARs and warrants[(a)]	**32.5**	12.8	19.9
Total weighted-average diluted shares outstanding[(b)]	**3,814.9**	3,822.2	3,920.3
Net income per share	**$ 4.35**	$ 5.20	$ 4.48

(a) Excluded from the computation of diluted EPS (due to the antidilutive effect) were options issued under employee benefit plans and the warrants originally issued in 2008 under the U.S. Treasury's Capital Purchase Program to purchase shares of the Firm's common stock. The aggregate number of shares issuable upon the exercise of such options and warrants was 6 million, 148 million and 133 million for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

Note 25 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on AFS securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities, and net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

Year ended December 31, (in millions)	Unrealized gains/ (losses) on AFS securities[a]	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	Accumulated other comprehensive income/(loss)
Balance at December 31, 2010	$ 2,498	$ 253	$ 206	$ (1,956)	$ 1,001
Net change	1,067 [b]	(279)	(155)	(690)	(57)
Balance at December 31, 2011	$ 3,565 [c]	$ (26)	$ 51	$ (2,646)	$ 944
Net change	3,303 [d]	(69)	69	(145)	3,158
Balance at December 31, 2012	$ 6,868 [c]	$ (95)	$ 120	$ (2,791)	$ 4,102
Net change	**(4,070)** [e]	**(41)**	**(259)**	**1,467**	**(2,903)**
Balance at December 31, 2013	**$ 2,798** [c]	**$ (136)**	**$ (139)**	**$ (1,324)**	**$ 1,199**

(a) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS.
(b) The net change for 2011 was due primarily to increased market value on U.S. government agency issued MBS and obligations of U.S. states and municipalities, partially offset by the widening of spreads on non-U.S. corporate debt and the realization of gains due to portfolio repositioning.
(c) Included after-tax unrealized losses not related to credit on debt securities for which credit losses have been recognized in income of $(56) million at December 31, 2011. There were no such losses at December 31, 2012 and 2013.
(d) The net change for 2012 was predominantly driven by increased market value on non-U.S. residential MBS, corporate debt securities and obligations of U.S. states and municipalities, partially offset by realized gains.
(e) The net change for 2013 was primarily related to the decline in fair value of U.S. government agency issued MBS and obligations of U.S. states and municipalities due to market changes, as well as net realized gains.

The following table presents the before- and after-tax changes in the components of other comprehensive income/(loss).

	2013			2012			2011		
Year ended December 31, (in millions)	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax
Unrealized gains/(losses) on AFS securities:									
Net unrealized gains/(losses) arising during the period	**$(5,987)**	**$ 2,323**	**$(3,664)**	$ 7,521	$(2,930)	$ 4,591	$ 3,361	$(1,322)	$ 2,039
Reclassification adjustment for realized (gains)/losses included in net income[a]	**(667)**	**261**	**(406)**	(2,110)	822	(1,288)	(1,593)	621	(972)
Net change	**(6,654)**	**2,584**	**(4,070)**	5,411	(2,108)	3,303	1,768	(701)	1,067
Translation adjustments:									
Translation[b]	**(807)**	**295**	**(512)**	(26)	8	(18)	(672)	255	(417)
Hedges[b]	**773**	**(302)**	**471**	(82)	31	(51)	226	(88)	138
Net change	**(34)**	**(7)**	**(41)**	(108)	39	(69)	(446)	167	(279)
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**(525)**	**206**	**(319)**	141	(55)	86	50	(19)	31
Reclassification adjustment for realized (gains)/losses included in net income[c]	**101**	**(41)**	**60**	(28)	11	(17)	(301)	115	(186)
Net change	**(424)**	**165**	**(259)**	113	(44)	69	(251)	96	(155)
Defined benefit pension and OPEB plans:									
Prior service credits arising during the period	**–**	**–**	**–**	6	(2)	4	–	–	–
Net gains/(losses) arising during the period	**2,055**	**(750)**	**1,305**	(537)	228	(309)	(1,290)	502	(788)
Reclassification adjustments included in net income[d]:									–
Amortization of net loss	**321**	**(124)**	**197**	324	(126)	198	214	(83)	131
Prior service costs/(credits)	**(43)**	**17**	**(26)**	(41)	16	(25)	(52)	20	(32)
Foreign exchange and other	**(14)**	**5**	**(9)**	(21)	8	(13)	(1)	–	(1)
Net change	**2,319**	**(852)**	**1,467**	(269)	124	(145)	(1,129)	439	(690)
Total other comprehensive income/(loss)	**$(4,793)**	**$ 1,890**	**$(2,903)**	$ 5,147	$(1,989)	$ 3,158	$ (58)	$ 1	$ (57)

(a) The pretax amount is reported in securities gains in the Consolidated Statements of Income.
(b) Reclassifications of pretax realized gains/(losses) on translation adjustments and related hedges are reported in other income in the Consolidated Statements of Income. The amounts were not material for the year ended December 31, 2013.
(c) The pretax amount is reported in the same line as the hedged items, which are predominantly recorded in net interest income in the Consolidated Statements of Income.
(d) The pretax amount is reported in compensation expense in the Consolidated Statements of Income.

Note 26 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for each of the years ended December 31, 2013, 2012 and 2011, is presented in the following table.

Effective tax rate

Year ended December 31,	**2013**	2012	2011
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	**2.2**	1.6	1.6
Tax-exempt income	**(3.1)**	(2.9)	(2.1)
Non-U.S. subsidiary earnings[a]	**(4.9)**	(2.4)	(2.3)
Business tax credits	**(5.4)**	(4.2)	(4.0)
Nondeductible legal expense[b]	**8.0**	(0.2)	0.9
Other, net	**(1.0)**	(0.5)	–
Effective tax rate	**30.8%**	26.4%	29.1%

(a) Includes earnings deemed to be reinvested indefinitely in non-U.S. subsidiaries.

(b) The prior periods have been revised to conform with the current presentation.

The components of income tax expense/(benefit) included in the Consolidated Statements of Income were as follows for each of the years ended December 31, 2013, 2012, and 2011.

Income tax expense/(benefit)

Year ended December 31, (in millions)	**2013**	2012	2011
Current income tax expense/(benefit)			
U.S. federal	**$ (1,316)**	$ 3,225	$ 3,719
Non-U.S.	**1,308**	1,782	1,183
U.S. state and local	**(4)**	1,496	1,178
Total current income tax expense/ (benefit)	**(12)**	6,503	6,080
Deferred income tax expense/(benefit)			
U.S. federal	**7,080**	2,238	2,109
Non-U.S.	**10**	(327)	102
U.S. state and local	**913**	(781)	(518)
Total deferred income tax expense/ (benefit)	**8,003**	1,130	1,693
Total income tax expense	**$ 7,991**	$ 7,633	$ 7,773

Total income tax expense was $8.0 billion in 2013 with an effective tax rate of 30.8%. The relationship between current and deferred income tax expense is largely driven by the reversal of significant deferred tax assets as well as prior year tax adjustments and audit resolutions. Total income tax expense includes $531 million, $200 million and $76 million of tax benefits recorded in 2013, 2012, and 2011, respectively, as a result of tax audit resolutions.

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity and certain tax benefits associated with the Firm's employee stock-based compensation plans. The tax effect of all items recorded directly to stockholders' equity resulted in an increase of $2.1 billion in 2013, a decrease of $1.9 billion in 2012, and an increase of $927 million in 2011.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Based on JPMorgan Chase's ongoing review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill these requirements and needs, the Firm has determined that the undistributed earnings of certain of its subsidiaries would be indefinitely reinvested to fund current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. For 2013, pretax earnings of approximately $3.4 billion were generated and will be indefinitely reinvested in these subsidiaries. At December 31, 2013, the cumulative amount of undistributed pretax earnings in these subsidiaries approximated $28.5 billion. If the Firm were to record a deferred tax liability associated with these

undistributed earnings, the amount would be approximately $6.4 billion at December 31, 2013.

Tax expense applicable to securities gains and losses for the years 2013, 2012 and 2011 was $261 million, $822 million, and $617 million, respectively.

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2013 and 2012.

Deferred taxes

December 31, (in millions)	2013	2012
Deferred tax assets		
Allowance for loan losses	**$ 6,593**	$ 8,712
Employee benefits	**4,468**	4,308
Accrued expenses and other	**9,179**	12,393
Non-U.S. operations	**5,493**	3,537
Tax attribute carryforwards	**748**	1,062
Gross deferred tax assets	**26,481**	30,012
Valuation allowance	**(724)**	(689)
Deferred tax assets, net of valuation allowance	**$ 25,757**	$ 29,323
Deferred tax liabilities		
Depreciation and amortization	**$ 3,196**	$ 2,563
Mortgage servicing rights, net of hedges	**5,882**	5,336
Leasing transactions	**2,352**	2,242
Non-U.S. operations	**4,705**	3,582
Other, net	**3,459**	4,340
Gross deferred tax liabilities	**19,594**	18,063
Net deferred tax assets	**$ 6,163**	$ 11,260

JPMorgan Chase has recorded deferred tax assets of $748 million at December 31, 2013, in connection with U.S. federal and state and local net operating loss carryforwards and foreign tax credit carryforwards. At December 31, 2013, the U.S. federal net operating loss carryforwards were approximately $1.5 billion; the state and local net operating loss carryforward was approximately $156 million; and the U.S. foreign tax credit carryforward was approximately $203 million. If not utilized, the U.S. federal net operating loss carryforwards and the state and local net operating loss carryforward will expire between 2027 and 2030; and the U.S. foreign tax credit carryforward will expire in 2022.

The valuation allowance at December 31, 2013, was due to losses associated with non-U.S. subsidiaries.

At December 31, 2013, 2012 and 2011, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $5.5 billion, $7.2 billion and $7.2 billion, respectively, of which $3.7 billion, $4.2 billion and $4.0 billion, respectively, if recognized, would reduce the annual effective tax rate. Included in the amount of unrecognized tax benefits are certain items that would not affect the effective tax rate if they were recognized in the Consolidated Statements of Income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income tax deductions, and the portion of gross non-U.S. unrecognized tax benefits that would have offsets in other jurisdictions. JPMorgan Chase is presently under audit by a number of taxing authorities, most notably by the Internal Revenue Service, New York State and City, and the State of California as summarized in the Tax examination status table below. Based upon the status of all of the tax examinations currently in process, it is reasonably possible that over the next 12 months the resolution of some of these examinations could result in a significant reduction in the gross balance of unrecognized tax benefits; however, at this time, it is not possible to reasonably estimate the amount of the reduction, if any.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2013, 2012 and 2011.

Unrecognized tax benefits

Year ended December 31, (in millions)	2013	2012	2011
Balance at January 1,	**$ 7,158**	$ 7,189	$ 7,767
Increases based on tax positions related to the current period	**542**	680	516
Decreases based on tax positions related to the current period	**–**	–	(110)
Increases based on tax positions related to prior periods	**88**	234	496
Decreases based on tax positions related to prior periods	**(2,200)**	(853)	(1,433)
Decreases related to settlements with taxing authorities	**(53)**	(50)	(16)
Decreases related to a lapse of applicable statute of limitations	**–**	(42)	(31)
Balance at December 31,	**$ 5,535**	$ 7,158	$ 7,189

After-tax interest (benefit)/expense and penalties related to income tax liabilities recognized in income tax expense were $(184) million, $147 million and $184 million in 2013, 2012 and 2011, respectively.

At December 31, 2013 and 2012, in addition to the liability for unrecognized tax benefits, the Firm had accrued $1.2 billion and $1.9 billion, respectively, for income tax-related interest and penalties.

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many states throughout the U.S. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2013.

Tax examination status

December 31, 2013	Periods under examination	Status
JPMorgan Chase – U.S.	2003 - 2005	Field examination completed, JPMorgan Chase intends to appeal
JPMorgan Chase – U.S.	2006 - 2010	Field examination
Bear Stearns – U.S.	2003 – 2005	Refund claims under review
Bear Stearns – U.S.	2006 – 2008	Field examination
JPMorgan Chase – United Kingdom	2006 – 2011	Field examination
JPMorgan Chase – New York State and City	2005 – 2007	Field examination
JPMorgan Chase – California	2006 – 2010	Field examination

The following table presents the U.S. and non-U.S. components of income before income tax expense for the years ended December 31, 2013, 2012 and 2011.

Income before income tax expense - U.S. and non-U.S.

Year ended December 31, (in millions)	2013	2012	2011
U.S.	**$ 17,229**	$ 24,895	$ 16,336
Non-U.S.[(a)]	**8,685**	4,022	10,413
Income before income tax expense	**$ 25,914**	$ 28,917	$ 26,749

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

Note 27 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the OCC. The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC.

The Federal Reserve requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $5.3 billion and $5.6 billion in 2013 and 2012, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company-only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2014, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, $29.8 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2014 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2013 and 2012, cash in the amount of $17.2 billion and $25.1 billion, respectively, and securities with a fair value of $1.5 billion and $0.7 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers. In addition, as of December 31, 2013 and 2012, the Firm had other restricted cash of $3.9 billion and $3.4 billion, respectively, primarily representing cash reserves held at non-U.S. central banks and held for other general purposes.

Note 28 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A.

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital consists of common stockholders' equity, perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred securities, less goodwill and certain other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1 capital, subordinated long-term debt and other instruments qualifying as Tier 2 capital, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total capital is Tier 1 capital plus Tier 2 capital. Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Banking subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2013 and 2012, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

The following table presents the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant banking subsidiaries at December 31, 2013 and 2012. These amounts are determined in accordance with regulations issued by the Federal Reserve and/or OCC. The table reflects the Firm's and JPMorgan Chase Bank, N.A.'s implementation of rules that provide for additional capital requirements for trading positions and securitizations ("Basel 2.5"). Basel 2.5 rules became effective for the Firm and JPMorgan Chase Bank, N.A. on January 1, 2013. The implementation of these rules in the first quarter of 2013 resulted in an increase of approximately $150 billion and $140 billion, respectively, in the Firm's and JPMorgan Chase Bank, N.A.'s risk-weighted assets compared with the Basel I rules at March 31, 2013. The implementation of these rules also resulted in decreases of the Firm's Tier 1 capital and Total capital ratios of 140 basis points and 160 basis points, respectively, at March 31, 2013, and decreases of JPMorgan Chase Bank, N.A.'s Tier 1 capital and Total capital ratios of 130 basis points and 150 basis points, respectively, at March 31, 2013. Implementation of Basel 2.5 in the first quarter of 2013 did not impact Chase Bank USA, N.A.'s RWA or Tier 1 capital and Total capital ratios.

December 31,	JPMorgan Chase & Co.[d]		JPMorgan Chase Bank, N.A.[d]		Chase Bank USA, N.A.[d]		Well-capitalized ratios[e]	Minimum capital ratios[e]
(in millions, except ratios)	**2013**	2012	**2013**	2012	**2013**	2012		
Regulatory capital								
Tier 1[a]	**$ 165,663**	$ 160,002	**$ 139,727**	$ 111,827	**$ 12,956**	$ 9,648		
Total	**199,286**	194,036	**165,496**	146,870	**16,389**	13,131		
Assets								
Risk-weighted[b]	**$1,387,863**	$1,270,378	**$1,171,574**	$1,094,155	**$100,990**	$103,593		
Adjusted average[c]	**2,343,713**	2,243,242	**1,900,770**	1,815,816	**109,731**	103,688		
Capital ratios								
Tier 1[a]	**11.9%**	12.6%	**11.9%**	10.2%	**12.8%**	9.3%	6.0%	4.0%
Total	**14.4**	15.3	**14.1**	13.4	**16.2**	12.7	10.0	8.0
Tier 1 leverage	**7.1**	7.1	**7.4**	6.2	**11.8**	9.3	5.0 [f]	3.0 [g]

(a) At December 31, 2013, for JPMorgan Chase and JPMorgan Chase Bank, N.A., trust preferred securities were $5.3 billion and $600 million, respectively. If these securities were excluded from the calculation at December 31, 2013, Tier 1 capital would be $160.4 billion and $139.1 billion, respectively, and the Tier 1 capital ratio would be 11.6% and 11.9%, respectively. At December 31, 2013, Chase Bank USA, N.A. had no trust preferred securities.

(b) Included off-balance sheet risk-weighted assets at December 31, 2013, of $315.9 billion, $304.0 billion and $14 million, and at December 31, 2012, of $304.5 billion, $297.1 billion and $16 million, for JPMorgan Chase, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., respectively.

(c) Adjusted average assets, for purposes of calculating the leverage ratio, included total quarterly average assets adjusted for unrealized gains/(losses) on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries, and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.

(d) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions; whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

(e) As defined by the regulations issued by the Federal Reserve, OCC and FDIC.

(f) Represents requirements for banking subsidiaries pursuant to regulations issued under the FDIC Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.

(g) The minimum Tier 1 leverage ratio for bank holding companies and banks is 3% or 4%, depending on factors specified in regulations issued by the Federal Reserve and OCC.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both nontaxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from nontaxable business combinations totaling $192 million and $291 million at December 31, 2013 and 2012, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of $2.8 billion and $2.5 billion at December 31, 2013 and 2012, respectively.

A reconciliation of the Firm's Total stockholders' equity to Tier 1 capital and Total qualifying capital is presented in the table below.

December 31, (in millions)	2013	2012
Tier 1 capital		
Total stockholders' equity	**$ 211,178**	$ 204,069
Effect of certain items in AOCI excluded from Tier 1 capital	**(1,337)**	(4,198)
Qualifying hybrid securities and noncontrolling interests[a]	**5,618**	10,608
Less: Goodwill[b]	**45,320**	45,663
Other intangible assets[b]	**2,012**	2,311
Fair value DVA on structured notes and derivative liabilities related to the Firm's credit quality	**1,300**	1,577
Investments in certain subsidiaries and other	**1,164**	926
Total Tier 1 capital	**165,663**	160,002
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	**16,695**	18,061
Qualifying allowance for credit losses	**16,969**	15,995
Other	**(41)**	(22)
Total Tier 2 capital	**33,623**	34,034
Total qualifying capital	**$ 199,286**	$ 194,036

(a) Primarily includes trust preferred securities of certain business trusts.
(b) Goodwill and other intangible assets are net of any associated deferred tax liabilities.

Note 29 – Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements.

To provide for probable credit losses inherent in consumer (excluding credit card) and wholesale lending commitments, an allowance for credit losses on lending-related commitments is maintained. See Note 15 on pages 284–287 of this Annual Report for further discussion regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2013 and 2012. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases, without notice as permitted by law. The Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower. Also, the Firm typically closes credit card lines when the borrower is 60 days or more past due.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity at December 31, (in millions)	Contractual amount						Carrying value[g]	
	2013					2012	2013	2012
	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total		
Lending-related								
Consumer, excluding credit card:								
Home equity – senior lien	**$ 2,471**	**$ 4,411**	**$ 4,202**	**$ 2,074**	**$ 13,158**	$ 15,180	**$ –**	$ –
Home equity – junior lien	**3,918**	**6,908**	**4,865**	**2,146**	**17,837**	21,796	**–**	–
Prime mortgage	**4,817**	**–**	**–**	**–**	**4,817**	4,107	**–**	–
Subprime mortgage	**–**	**–**	**–**	**–**	**–**	–	**–**	–
Auto	**7,992**	**191**	**115**	**11**	**8,309**	7,185	**1**	1
Business banking	**10,282**	**548**	**101**	**320**	**11,251**	11,092	**7**	6
Student and other	**108**	**111**	**4**	**462**	**685**	796	**–**	–
Total consumer, excluding credit card	**29,588**	**12,169**	**9,287**	**5,013**	**56,057**	60,156	**8**	7
Credit card	**529,383**	**–**	**–**	**–**	**529,383**	533,018	**–**	–
Total consumer	**558,971**	**12,169**	**9,287**	**5,013**	**585,440**	593,174	**8**	7
Wholesale:								
Other unfunded commitments to extend credit[a][b]	**61,459**	**79,519**	**97,139**	**8,378**	**246,495**	243,225	**432**	377
Standby letters of credit and other financial guarantees[a][b][c]	**25,223**	**32,331**	**32,773**	**2,396**	**92,723**	100,929	**943**	647
Unused advised lines of credit	**88,443**	**12,411**	**423**	**717**	**101,994**	85,087	**–**	–
Other letters of credit[a]	**4,176**	**722**	**107**	**15**	**5,020**	5,573	**2**	2
Total wholesale	**179,301**	**124,983**	**130,442**	**11,506**	**446,232**	434,814	**1,377**	1,026
Total lending-related	**$ 738,272**	**$ 137,152**	**$ 139,729**	**$ 16,519**	**$1,031,672**	$1,027,988	**$ 1,385**	$ 1,033
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[d]	**$ 169,709**	**$ –**	**$ –**	**$ –**	**$ 169,709**	$ 166,493	**NA**	NA
Derivatives qualifying as guarantees	**1,922**	**765**	**16,061**	**37,526**	**56,274**	61,738	**$ 72**	$ 42
Unsettled reverse repurchase and securities borrowing agreements[e]	**38,211**	**–**	**–**	**–**	**38,211**	34,871	**–**	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	**NA**	**NA**	**NA**	**NA**	**NA**	NA	**681**	2,811
Loans sold with recourse	**NA**	**NA**	**NA**	**NA**	**7,692**	9,305	**131**	141
Other guarantees and commitments[f]	**654**	**256**	**1,484**	**4,392**	**6,786**	6,780	**(99)**	(75)

(a) At December 31, 2013 and 2012, reflects the contractual amount net of risk participations totaling $476 million and $473 million, respectively, for other unfunded commitments to extend credit; $14.8 billion and $16.6 billion, respectively, for standby letters of credit and other financial guarantees; and $622 million and $690 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.

(b) At December 31, 2013 and 2012, included credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other non-profit entities of $18.9 billion and $21.3 billion, respectively, within other unfunded commitments to extend credit; and $17.2 billion and $23.2 billion, respectively, within standby letters of credit and other financial guarantees. These commitments also include liquidity facilities to nonconsolidated municipal bond VIEs; for further information, see Note 16 on pages 288–299 of this Annual Report.

(c) At December 31, 2013 and 2012, included unissued standby letters of credit commitments of $42.8 billion and $44.4 billion, respectively.

(d) At December 31, 2013 and 2012, collateral held by the Firm in support of securities lending indemnification agreements was $176.4 billion and $165.1 billion, respectively. Securities lending collateral comprises primarily cash and securities issued by governments that are members of the Organisation for Economic Co-operation and Development ("OECD") and U.S. government agencies.

(e) At December 31, 2013 and 2012, the amount of commitments related to forward-starting reverse repurchase agreements and securities borrowing agreements were $9.9 billion and $13.2 billion, respectively. Commitments related to unsettled reverse repurchase agreements and securities borrowing agreements with regular-way settlement periods were $28.3 billion and $21.7 billion, at December 31, 2013 and 2012, respectively.

(f) At December 31, 2013 and 2012, included unfunded commitments of $215 million and $370 million, respectively, to third-party private equity funds; and $1.9 billion and $1.5 billion, respectively, to other equity investments. These commitments included $184 million and $333 million, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 3 on pages 195–215 of this Annual Report. In addition, at both December 31, 2013 and 2012, included letters of credit hedged by derivative transactions and managed on a market risk basis of $4.5 billion.

(g) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value.

Other unfunded commitments to extend credit
Other unfunded commitments to extend credit generally comprise commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors as well as committed liquidity facilities to clearing organizations.

Also included in other unfunded commitments to extend credit are commitments to noninvestment-grade counterparties in connection with leveraged and acquisition finance activities, which were $18.3 billion at December 31, 2013. In the fourth quarter of 2013, the Firm implemented prospectively interagency guidance that revised the Firm's definition of leveraged lending to include all Commercial and Industrial borrowers, whether or not they are affiliated with financial sponsors, which meet certain leverage criteria and use of proceeds purpose tests related to a buyout, acquisition or capital distribution. Prior to this change, the Firm defined leveraged lending as primarily being affiliated with a financial sponsor-related company and used internal risk grades to identify the leveraged lending portfolio. For further information, see Note 3 and Note 4 on pages 195–215 and 215–218 respectively, of this Annual Report.

In addition, the Firm acts as a clearing and custody bank in the U.S. tri-party repurchase transaction market. In its role as clearing and custody bank, the Firm is exposed to intra-day credit risk of the cash borrowers, usually broker-dealers; however, this exposure is secured by collateral and typically extinguished through the settlement process by the end of the day. Tri-party repurchase daily balances averaged $307 billion and $370 billion for the years ended December 31, 2013 and 2012, respectively.

Guarantees
U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off-balance sheet lending-related arrangements to be guarantees under U.S. GAAP: standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For certain types of guarantees, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. For indemnifications provided in sales agreements, a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires). Any contingent liability that exists as a result of issuing the guarantee or indemnification is recognized when it becomes probable and reasonably estimable. The contingent portion of the liability is not recognized if the estimated amount is less than the carrying amount of the liability recognized at inception (adjusted for any amortization). The recorded amounts of the liabilities related to guarantees and indemnifications at December 31, 2013 and 2012, excluding the allowance for credit losses on lending-related commitments, are discussed below.

Standby letters of credit and other financial guarantees
Standby letters of credit ("SBLC") and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were $945 million and $649 million at December 31, 2013 and 2012, respectively, which were classified in accounts payable and other liabilities on the Consolidated Balance Sheets; these carrying values included $265 million and $284 million, respectively, for the allowance for lending-related commitments, and $680 million and $365 million, respectively, for the guarantee liability and corresponding asset.

The following table summarizes the types of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's customers, as of December 31, 2013 and 2012.

Standby letters of credit, other financial guarantees and other letters of credit

December 31, (in millions)	2013		2012	
	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade[a]	**$ 69,109**	**$ 3,939**	$ 77,081	$ 3,998
Noninvestment-grade[a]	**23,614**	**1,081**	23,848	1,575
Total contractual amount	**$ 92,723**	**$ 5,020**	$ 100,929	$ 5,573
Allowance for lending-related commitments	**$ 263**	**$ 2**	$ 282	$ 2
Commitments with collateral	**40,410**	**1,473**	42,654	1,145

(a) The ratings scale is based on the Firm's internal ratings which generally correspond to ratings as defined by S&P and Moody's.

Advised lines of credit

An advised line of credit is a revolving credit line which specifies the maximum amount the Firm may make available to an obligor, on a nonbinding basis. The borrower receives written or oral advice of this facility. The Firm may cancel this facility at any time by providing the borrower notice or, in some cases, without notice as permitted by law.

Securities lending indemnifications

Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the borrower to return the lent securities. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

Derivatives qualifying as guarantees

In addition to the contracts described above, the Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less. Derivative guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps", are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio and are typically longer-term or may have no stated maturity, but allow the Firm to terminate the contract under certain conditions.

Derivative guarantees are recorded on the Consolidated Balance Sheets at fair value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was $56.3 billion and $61.7 billion at December 31, 2013 and 2012, respectively. The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees. However, exposure to certain stable value contracts is contractually limited to a substantially lower percentage of the notional amount; the notional amount on these stable value contracts was $27.0 billion and $26.5 billion at December 31, 2013 and 2012, respectively, and the maximum exposure to loss was $2.8 billion at both December 31, 2013 and 2012. The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract. The fair value related to derivatives that the Firm deems to be guarantees were derivative payables of $109 million and $122 million and derivative receivables of $37 million and $80 million at December 31, 2013 and 2012, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 6 on pages 220–233 of this Annual Report.

Unsettled reverse repurchase and securities borrowing agreements

In the normal course of business, the Firm enters into reverse repurchase agreements and securities borrowing agreements that settle at a future date. At settlement, these commitments require that the Firm advance cash to and accept securities from the counterparty. These agreements generally do not meet the definition of a derivative, and

therefore, are not recorded on the Consolidated Balance Sheets until settlement date. At December 31, 2013 and 2012, the amount of commitments related to forward starting reverse repurchase agreements and securities borrowing agreements were $9.9 billion and $13.2 billion, respectively. Commitments related to unsettled reverse repurchase agreements and securities borrowing agreements with regular way settlement periods were $28.3 billion and $21.7 billion at December 31, 2013 and 2012, respectively.

Loan sales- and securitization-related indemnifications

Mortgage repurchase liability

In connection with the Firm's mortgage loan sale and securitization activities with the GSEs and other mortgage loan sale and private-label securitization transactions, as described in Note 16 on pages 288–299 of this Annual Report, the Firm has made representations and warranties that the loans sold meet certain requirements. The Firm has been, and may be, required to repurchase loans and/or indemnify the GSEs (e.g., with "make-whole" payments to reimburse the GSEs for their realized losses on liquidated loans) and other investors for losses due to material breaches of these representations and warranties. To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the third party. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans that are deemed to have defects that were sold to purchasers (including securitization-related SPEs) plus, in certain circumstances, accrued interest on such loans and certain expense.

On October 25, 2013, the Firm announced that it had reached a $1.1 billion agreement with the FHFA to resolve, other than certain limited types of exposures, outstanding and future mortgage repurchase demands associated with loans sold to the GSEs from 2000 to 2008 ("FHFA Settlement Agreement"). The majority of the mortgage repurchase demands that the Firm had received from the GSEs related to loans originated from 2005 to 2008.

The Firm has recognized a mortgage repurchase liability of $681 million and $2.8 billion as of December 31, 2013 and 2012, respectively. The amount of the mortgage repurchase liability at December 31, 2013, relates to repurchase losses associated with loans sold in connection with loan sale and securitization transactions with the GSEs that are not covered by the FHFA Settlement Agreement (e.g., post-2008 loan sale and securitization transactions, mortgage insurance rescissions and certain mortgage insurance settlement-related exposures, as well as certain other specific exclusions).

The following table summarizes the change in the mortgage repurchase liability for each of the periods presented.

Summary of changes in mortgage repurchase liability

Year ended December 31, (in millions)	2013	2012	2011
Repurchase liability at beginning of period	**$ 2,811**	$ 3,557	$ 3,285
Net realized losses[a][b]	**(1,561)**	(1,158)	(1,263)
Reclassification to litigation reserve[c]	**(179)**	–	–
Provision for repurchase losses[d]	**(390)**	412	1,535
Repurchase liability at end of period	**$ 681**	$ 2,811	$ 3,557

(a) Presented net of third-party recoveries and include principal losses and accrued interest on repurchased loans, "make-whole" settlements, settlements with claimants, and certain related expense. Make-whole settlements were $414 million, $524 million and $640 million, for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) The 2013 amount includes $1.1 billion, for the FHFA Settlement Agreement.

(c) Prior to December 31, 2013, in the absence of a repurchase demand by a party to the relevant contracts, the Firm's decision to repurchase loans from private-label securitization trusts when it determined it had an obligation to do so was recognized in the mortgage repurchase liability. Pursuant to the terms of the RMBS Trust Settlement, all repurchase obligations relating to the subject private-label securitization trusts, whether resulting from a repurchase demand or otherwise, are now recognized in the Firm's litigation reserves for this settlement. The RMBS Trust Settlement is fully accrued as of December 31, 2013.

(d) Included a provision related to new loan sales of $20 million, $112 million and $52 million, for the years ended December 31, 2013, 2012 and 2011, respectively.

Private label securitizations

The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

On November 15, 2013, the Firm announced that it had reached a $4.5 billion agreement with 21 major institutional investors to make a binding offer to the trustees of 330 residential mortgage-backed securities trust issued by J.P.Morgan, Chase, and Bear Stearns ("RMBS Trust Settlement") to resolve all representation and warranty claims, as well as all servicing claims, on all trust issued by J.P.Morgan, Chase, and Bear Stearns between 2005 and 2008. The RMBS Trust Settlement may be subject to court approval.

In addition, from 2005 to 2008, Washington Mutual made certain loan level representations and warranties in connection with approximately $165 billion of residential mortgage loans that were originally sold or deposited into private-label securitizations by Washington Mutual. Of the $165 billion, approximately $75 billion has been repaid. In addition, approximately $47 billion of the principal amount of such loans has liquidated with an average loss severity of 59%. Accordingly, the remaining outstanding principal balance of these loans as of December 31, 2013, was approximately $43 billion, of which $10 billion was 60 days or more past due. The Firm believes that any repurchase

obligations related to these loans remain with the FDIC receivership.

For additional information regarding litigation, see Note 31 on pages 326–332 of this Annual Report.

Loans sold with recourse
The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2013 and 2012, the unpaid principal balance of loans sold with recourse totaled $7.7 billion and $9.3 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it will have to perform under its recourse obligations, was $131 million and $141 million at December 31, 2013 and 2012, respectively.

Other off-balance sheet arrangements

Indemnification agreements – general
In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Credit card charge-backs
Chase Paymentech Solutions, Card's merchant services business and a subsidiary of JPMorgan Chase Bank, N.A., is a global leader in payment processing and merchant acquiring.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is primarily liable for the amount of each processed credit card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Chase Paymentech will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Chase Paymentech is unable to collect the amount from the merchant, Chase Paymentech will bear the loss for the amount credited or refunded to the cardmember. Chase Paymentech mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Chase Paymentech does not have sufficient collateral from the merchant to provide customer refunds; and (3) Chase Paymentech does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would recognize the loss.

Chase Paymentech incurred aggregate losses of $14 million, $16 million, and $13 million on $750.1 billion, $655.2 billion, and $553.7 billion of aggregate volume processed for the years ended December 31, 2013, 2012 and 2011, respectively. Incurred losses from merchant charge-backs are charged to Other expense, with the offset recorded in a valuation allowance against Accrued interest and accounts receivable on the Consolidated Balance Sheets. The carrying value of the valuation allowance was $5 million and $6 million at December 31, 2013 and 2012, respectively, which the Firm believes, based on historical experience and the collateral held by Chase Paymentech of $208 million and $203 million at December 31, 2013 and 2012, respectively, is representative of the payment or performance risk to the Firm related to charge-backs.

Clearing Services - Client Credit Risk
The Firm provides clearing services for clients entering into securities purchases and sales and derivative transactions, with central counterparties ("CCPs"), including exchange traded derivatives ("ETDs") such as futures and options, as well as cleared over-the-counter ("OTC-cleared") derivative contracts. As a clearing member, the Firm stands behind the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin. Variation margin is posted on a daily basis based on the value of clients' derivative contracts. Initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

As clearing member, the Firm is exposed to the risk of non-performance by its clients, but is not liable to clients for the performance of the CCPs. Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions and can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement. In the event of non-performance by a client, the Firm would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as clearing member.

The Firm reflects its exposure to non-performance risk of the client through the recognition of margin payables or receivables to clients and CCPs, but does not reflect the clients underlying securities or derivative contracts in its Consolidated Financial Statements.

It is difficult to estimate the Firm's maximum possible exposure through its role as clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, and the credit risk mitigants available to the Firm, management believes it is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

For information on the derivatives that the Firm executes for its own account and records in its Consolidated Financial Statements, see Note 6 on pages 220–233 of this Annual Report.

Exchange & Clearing House Memberships
Through the provision of clearing services, the Firm is a member of several securities and derivative exchanges and clearinghouses, both in the U.S. and other countries. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to the guarantee fund. Alternatively, these obligations may be a full pro-rata share of the residual losses after applying the guarantee fund. It is difficult to estimate the Firm's maximum possible exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Guarantees of subsidiaries
In the normal course of business, JPMorgan Chase & Co. ("Parent Company") may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated Balance Sheets, or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees are not included in the table on page 319 of this Note. For additional information, see Note 21 on pages 306–308 of this Annual Report.

Note 30 – Commitments, pledged assets and collateral

Lease commitments

At December 31, 2013, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2013.

Year ended December 31, (in millions)	
2014	$ 1,936
2015	1,845
2016	1,687
2017	1,529
2018	1,267
After 2018	6,002
Total minimum payments required[a]	14,266
Less: Sublease rentals under noncancelable subleases	(2,595)
Net minimum payment required	$ 11,671

(a) Lease restoration obligations are accrued in accordance with U.S. GAAP, and are not reported as a required minimum lease payment.

Total rental expense was as follows.

Year ended December 31, (in millions)	**2013**	2012	2011
Gross rental expense	**$ 2,187**	$ 2,212	$ 2,228
Sublease rental income	**(341)**	(288)	(403)
Net rental expense	**$ 1,846**	$ 1,924	$ 1,825

Pledged assets

At December 31, 2013, assets were pledged to maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits, and to collateralize repurchase and other securities financing agreements. Certain of these pledged assets may be sold or repledged by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated Balance Sheets. At December 31, 2013 and 2012, the Firm had pledged assets of $251.3 billion and $236.4 billion, respectively, at Federal Reserve Banks and FHLBs. In addition, as of December 31, 2013 and 2012, the Firm had pledged $60.6 billion and $74.5 billion, respectively, of financial instruments it owns that may not be sold or repledged by the secured parties. The prior period amount (and the corresponding pledged assets parenthetical disclosure for securities on the Consolidated Balance Sheets) have been revised to conform with the current period presentation. Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 16 on pages 288–299 of this Annual Report for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities and long-term debt, see Note 13 on pages 255–257, and Note 21 on pages 306–308, respectively, of this Annual report. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	**2013**	2012
Securities	**$ 68.1**	$ 110.1
Loans	**230.3**	207.2
Trading assets and other	**145.2**	155.5
Total assets pledged	**$ 443.7**	$ 472.8

Collateral

At December 31, 2013 and 2012, the Firm had accepted assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of approximately $726.7 billion and $757.1 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately $543.5 billion and $545.0 billion, respectively, were sold or repledged, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales and to collateralize deposits and derivative agreements.

Note 31 – Litigation

Contingencies

As of December 31, 2013, the Firm and its subsidiaries are defendants or putative defendants in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $5.0 billion at December 31, 2013. This estimated aggregate range of reasonably possible losses is based upon currently available information for those proceedings in which the Firm is involved, taking into account the Firm's best estimate of such losses for those cases for which such estimate can be made. For certain cases, the Firm does not believe that an estimate can currently be made. The Firm's estimate involves significant judgment, given the varying stages of the proceedings (including the fact that many are currently in preliminary stages), the existence in many such proceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings. Accordingly, the Firm's estimate will change from time to time, and actual losses may vary.

Set forth below are descriptions of the Firm's material legal proceedings.

Bear Stearns Hedge Fund Matter. In September 2013, an action brought by Bank of America and Banc of America Securities LLC (together "BofA") in the United States District Court for the Southern District of New York against Bear Stearns Asset Management, Inc. ("BSAM") relating to alleged losses resulting from the failure of the Bear Stearns High Grade Structured Credit Strategies Master Fund, Ltd. and the Bear Stearns High Grade Structured Credit Strategies Enhanced Leverage Master Fund, Ltd. was dismissed after the court granted BSAM's motion for summary judgment. BofA has determined not to appeal the dismissal.

CIO Investigations and Litigation. The Firm is responding to a consolidated shareholder purported class action, a consolidated purported class action brought under the Employee Retirement Income Security Act and shareholder derivative actions that have been filed in New York state court and the United States District Court for the Southern District of New York, as well as shareholder demands and government investigations, relating to losses in the synthetic credit portfolio managed by the Firm's Chief Investment Office ("CIO"). The Firm continues to cooperate with ongoing government investigations, including by the United States Attorney's Office for the Southern District of New York and the State of Massachusetts. The purported class actions and shareholder derivative actions are in early stages with defendants' motions to dismiss pending.

Credit Default Swaps Investigations and Litigation. In July 2013, the European Commission (the "EC") filed a Statement of Objections against the Firm (including various subsidiaries) and other industry members in connection with its ongoing investigation into the credit default swaps ("CDS") marketplace. The EC asserts that between 2006 and 2009, a number of investment banks acted collectively through the International Swaps and Derivatives Association ("ISDA") and Markit Group Limited ("Markit") to foreclose exchanges from the potential market for exchange-traded credit derivatives by instructing Markit and ISDA to license their respective data and index benchmarks only for over-the-counter ("OTC") trading and not for exchange trading, allegedly to protect the investment banks' revenues from the OTC market. The Firm submitted a response to the Statement of Objections in January 2014. The U.S. Department of Justice (the "DOJ") also has an ongoing investigation into the CDS marketplace, which was initiated in July 2009.

Separately, the Firm is a defendant in nine purported class actions (all consolidated in the United States District Court for the Southern District of New York) filed on behalf of purchasers and sellers of CDS and asserting federal antitrust law claims. Each of the complaints refers to the ongoing investigations by the EC and DOJ into the CDS market, and alleges that the defendant investment banks and dealers, including the Firm, as well as Markit and/or ISDA, collectively prevented new entrants into the CDS market, in order to artificially inflate the defendants' OTC revenues.

Foreign Exchange Investigations and Litigation. The Firm has received information requests, document production notices and related inquiries from various U.S. and non-U.S. government authorities regarding the Firm's foreign exchange trading business. These investigations are in the early stages and the Firm is cooperating with the relevant authorities.

Since November 2013, a number of class actions have been filed in the United Stated District Court for the Southern District of New York against a number of foreign exchange dealers, including the Firm, for alleged violations of federal and state antitrust laws and unjust enrichment based on an alleged conspiracy to manipulate foreign exchange rates reported on the WM/Reuters service.

Interchange Litigation. A group of merchants and retail associations filed a series of class action complaints relating to interchange in several federal courts. The complaints alleged that Visa and MasterCard, as well as certain banks, conspired to set the price of credit and debit card interchange fees, enacted respective rules in violation of antitrust laws, and engaged in tying/bundling and exclusive dealing. All cases were consolidated in the United States District Court for the Eastern District of New York for pretrial proceedings.

The parties have entered into an agreement to settle those cases, for a cash payment of $6.05 billion to the class plaintiffs (of which the Firm's share is approximately 20%) and an amount equal to ten basis points of credit card interchange for a period of eight months to be measured from a date within 60 days of the end of the opt-out period. The agreement also provides for modifications to each credit card network's rules, including those that prohibit surcharging credit card transactions. The rule modifications became effective in January 2013. In December 2013, the Court issued a decision granting final approval of the settlement. A number of merchants have filed notices of appeal. Certain merchants that opted out of the class settlement have filed actions against Visa and MasterCard, as well as against the Firm and other banks.

Investment Management Litigation. The Firm is defending two pending cases that allege that investment portfolios managed by J.P. Morgan Investment Management ("JPMIM") were inappropriately invested in securities backed by residential real estate collateral. Plaintiffs Assured Guaranty (U.K.) and Ambac Assurance UK Limited claim that JPMIM is liable for losses of more than $1 billion in market value of these securities. Discovery is proceeding.

Italian Proceedings.

City of Milan. In January 2009, the City of Milan, Italy (the "City") issued civil proceedings against (among others) JPMorgan Chase Bank, N.A. and J.P. Morgan Securities plc in the District Court of Milan alleging a breach of advisory obligations in connection with a bond issue by the City in June 2005 and an associated swap transaction. The Firm has entered into a settlement agreement with the City to resolve the City's civil proceedings.

Four current and former JPMorgan Chase employees and JPMorgan Chase Bank, N.A. (as well as other individuals and three other banks) were directed by a criminal judge to participate in a trial that started in May 2010. As it relates to JPMorgan Chase individuals, two were acquitted and two were found guilty of aggravated fraud with sanctions of prison sentences, fines and a ban from dealing with Italian public bodies for one year. JPMorgan Chase (along with other banks involved) was found liable for breaches of Italian administrative law, fined €1 million and ordered to forfeit the profit from the transaction (for JPMorgan Chase, totaling €24.7 million). JPMorgan Chase and the individuals are appealing the verdict, and none of the sanctions will take effect until all appeal avenues have been exhausted. The first appeal hearing took place in January 2014.

Parmalat. In 2003, following the bankruptcy of the Parmalat group of companies ("Parmalat"), criminal prosecutors in Italy investigated the activities of Parmalat, its directors and the financial institutions that had dealings with them following the collapse of the company. In March 2012, the criminal prosecutor served a notice indicating an intention to pursue criminal proceedings against four former employees of the Firm (but not against the Firm) on charges of conspiracy to cause Parmalat's insolvency by underwriting bonds and continuing derivatives trading when Parmalat's balance sheet was false. A preliminary hearing is scheduled for February 2014, at which the judge will determine whether to recommend that the matter go to a full trial.

In addition, the administrator of Parmalat commenced five civil actions against JPMorgan Chase entities including: two claw-back actions; a claim relating to bonds issued by Parmalat in which it is alleged that JPMorgan Chase kept Parmalat "artificially" afloat and delayed the declaration of insolvency; and similar allegations in two claims relating to derivatives transactions.

Lehman Brothers Bankruptcy Proceedings. In May 2010, Lehman Brothers Holdings Inc. ("LBHI") and its Official Committee of Unsecured Creditors (the "Committee") filed a complaint (and later an amended complaint) against JPMorgan Chase Bank, N.A. in the United States Bankruptcy Court for the Southern District of New York that asserts both federal bankruptcy law and state common law claims, and seeks, among other relief, to recover $8.6 billion in collateral that was transferred to JPMorgan Chase Bank, N.A. in the weeks preceding LBHI's bankruptcy. The amended complaint also seeks unspecified damages on the grounds that JPMorgan Chase Bank, N.A.'s collateral requests hastened LBHI's bankruptcy. The Court dismissed the counts of the amended complaint that sought to void the allegedly constructively fraudulent and preferential transfers made to the Firm during the months of August and September 2008.

The Firm has also filed counterclaims against LBHI alleging that LBHI fraudulently induced the Firm to make large clearing advances to Lehman against inappropriate collateral, which left the Firm with more than $25 billion in claims (the "Clearing Claims") against the estate of Lehman Brothers Inc. ("LBI"), LBHI's broker-dealer subsidiary. LBHI and the Committee have filed an objection to the claims asserted by JPMorgan Chase Bank, N.A. against LBHI with respect to the Clearing Claims, principally on the grounds that the Firm had not conducted the sale of the securities collateral held for such claims in a commercially reasonable manner. The Clearing Claims, together with approximately $3 billion of other claims of the Firm against Lehman entities, have been paid in full, subject to the outcome of the objections filed by LBHI and the Committee. Discovery is ongoing.

LBHI and several of its subsidiaries that had been Chapter 11 debtors have filed a separate complaint and objection to derivatives claims asserted by the Firm alleging that the amount of the derivatives claims had been overstated and

challenging certain set-offs taken by JPMorgan Chase entities to recover on the claims. The Firm responded to this separate complaint and objection in February 2013. Discovery is ongoing.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has received subpoenas and requests for documents and, in some cases, interviews, from federal and state agencies and entities, including the DOJ, the Commodity Futures Trading Commission (the "CFTC"), the Securities and Exchange Commission (the "SEC") and various state attorneys general, as well as the European Commission, the U.K. Financial Conduct Authority (the "FCA"), Canadian Competition Bureau, Swiss Competition Commission and other regulatory authorities and banking associations around the world relating primarily to the process by which interest rates were submitted to the British Bankers Association ("BBA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR") for various currencies, principally in 2007 and 2008. Some of the inquiries also relate to similar processes by which information on rates is submitted to the European Banking Federation ("EBF") in connection with the setting of the EBF's Euro Interbank Offered Rates ("EURIBOR") and to the Japanese Bankers' Association for the setting of Tokyo Interbank Offered Rates ("TIBOR") as well as to other processes for the setting of other reference rates in various parts of the world during similar time periods. The Firm is cooperating with these inquiries. In December 2013, JPMorgan Chase reached a settlement with the European Commission regarding its Japanese Yen LIBOR investigation and agreed to pay a fine of €79.9 million. Investigations by the European Commission with regard to other reference rates remain open. In January 2014, the Canadian Competition Bureau announced that it has discontinued its investigation related to Yen LIBOR.

In addition, the Firm has been named as a defendant along with other banks in a series of individual and class actions filed in various United States District Courts in which plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively manipulated the U.S. dollar LIBOR, Yen LIBOR and/or Euroyen TIBOR rates by submitting rates that were artificially low or high. Plaintiffs allege that they transacted in loans, derivatives or other financial instruments whose values are impacted by changes in U.S. dollar LIBOR, Yen LIBOR, or Euroyen TIBOR and assert a variety of claims including antitrust claims seeking treble damages.

The U.S. dollar LIBOR-related purported class actions have been consolidated for pre-trial purposes in the United States District Court for the Southern District of New York. In March 2013, the Court granted in part and denied in part the defendants' motions to dismiss the claims, including dismissal with prejudice of the antitrust claims, and the United States Court of Appeals for the Second Circuit dismissed the appeals for lack of jurisdiction. In September 2013, certain plaintiffs filed amended complaints and others sought leave to amend their complaints to add additional allegations. Defendants have moved to dismiss the amended complaints and have opposed the requests to amend. Those motions remain pending.

The Firm has also been named as a defendant in a purported class action filed in the United States District Court for the Southern District of New York on behalf of plaintiffs who purchased or sold exchange-traded Euroyen futures and options contracts. The action alleges manipulation of Yen LIBOR. Defendants have filed a motion to dismiss.

The Firm has also been named as a nominal defendant in a derivative action in the Supreme Court of New York in the County of New York against certain current and former members of the Firm's board of directors for alleged breach of fiduciary duty in connection with the Firm's purported role in manipulating LIBOR. The defendants have filed a motion to dismiss.

Madoff Litigation and Investigations. In January 2014, certain of the Firm's bank subsidiaries entered into settlements with various governmental agencies in resolution of investigations relating to Bernard L. Madoff Investment Securities LLC ("BLMIS"). The Firm and certain of its subsidiaries also entered into settlements with several private parties in resolution of civil litigation relating to BLMIS.

JPMorgan Chase Bank, N.A. entered into a Deferred Prosecution Agreement (the "DPA") with the United States Attorney's Office for the Southern District of New York (the "U.S. Attorney") in which it agreed to forfeit $1.7 billion to the United States as a non-tax-deductible payment. JPMorgan Chase Bank, N.A. also consented, subject to the terms and conditions of the DPA, to the filing by the U.S. Attorney of an Information charging the bank with failure to maintain an adequate anti-money laundering program, and a failure to file a suspicious activity report in the United States in October 2008 with respect to BLMIS, in violation of the Bank Secrecy Act. Pursuant to the DPA, the U.S. Attorney will defer any prosecution of JPMorgan Chase Bank, N.A. for a two-year period and will dismiss the Information with prejudice at the end of that time if the bank is in compliance with its obligations under the DPA. The DPA has been approved by the court.

JPMorgan Chase Bank, N.A., JPMorgan Bank and Trust Company, N.A. and Chase Bank USA, N.A., have also consented to the assessment of a $350 million Civil Money Penalty by the Office of the Comptroller of the Currency ("OCC") in connection with various Bank Secrecy Act/Anti-Money Laundering deficiencies, including in relation to the BLMIS fraud. In addition, JPMorgan Chase Bank, N.A. has agreed to the assessment of a $461 million Civil Money Penalty by the Financial Crimes Enforcement Network ("FinCEN") for failure to detect and adequately report suspicious transactions relating to BLMIS. The FinCEN penalty, but not the OCC penalty, has been deemed satisfied by the forfeiture payment to the U.S. Attorney.

Additionally, the Firm and certain subsidiaries, including JPMorgan Chase Bank, N.A., have agreed to enter into settlements with the court-appointed trustee for BLMIS (the "Trustee") and with plaintiffs representing a class of former

BLMIS customers who lost all or a portion of their principal investments with BLMIS. As part of these settlements, the Firm and the bank have agreed to pay the Trustee a total of $325 million. Separately, the Firm and the bank have agreed to pay the class action plaintiffs $218 million, as well as attorneys' fees, in exchange for a release of all damages claims relating to BLMIS. The settlements with the Trustee and the class action plaintiffs are subject to court approval. BLMIS customers who did not suffer losses on their principal investments are not eligible to participate in the class action settlement, and certain customers in that category have stated that they intend to pursue claims against the Firm.

Also, various subsidiaries of the Firm, including J.P. Morgan Securities plc, have been named as defendants in lawsuits filed in Bankruptcy Court in New York arising out of the liquidation proceedings of Fairfield Sentry Limited and Fairfield Sigma Limited (together, "Fairfield"), so-called Madoff feeder funds. These actions seek to recover payments made by the funds to defendants totaling approximately $155 million. Pursuant to an agreement with the Trustee, the liquidators of Fairfield have voluntarily dismissed their action against J.P. Morgan Securities plc without prejudice to re-filing. The other actions remain outstanding.

In addition, a purported class action was brought by investors in certain feeder funds against JPMorgan Chase in the United States District Court for the Southern District of New York, as was a motion by separate potential class plaintiffs to add claims against the Firm and certain subsidiaries to an already pending purported class action in the same court. The allegations in these complaints largely track those raised by the Trustee. The Court dismissed these complaints and plaintiffs have appealed. In September 2013, the United States Court of Appeals for the Second Circuit affirmed the District Court's decision. The plaintiffs have petitioned the entire Court for a rehearing of the appeal and the Court has deferred decision pending a ruling by the United States Supreme Court on a potentially related issue.

The Firm is a defendant in five other Madoff-related investor actions pending in New York state court. The allegations in all of these actions are essentially identical, and involve claims against the Firm for, among other things, aiding and abetting breach of fiduciary duty, conversion and unjust enrichment. The Firm has moved to dismiss these actions.

Additionally, a shareholder derivative action has been filed in New York state court against the Firm, as nominal defendant, and certain of its current and former Board members, alleging breach of fiduciary duty for failure to maintain effective internal controls to detect fraudulent transactions.

MF Global. The Firm has responded to inquiries from the CFTC relating to the Firm's banking and other business relationships with MF Global, including as a depository for MF Global's customer segregated accounts.

J.P. Morgan Securities LLC has been named as one of several defendants in a number of purported class actions filed by purchasers of MF Global's publicly traded securities asserting violations of federal securities laws and alleging that the offering documents contained materially false and misleading statements and omissions regarding MF Global. The actions have been consolidated before the United States District Court for the Southern District of New York. Discovery is ongoing.

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory Investigations. JPMorgan Chase and affiliates (together, "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and Washington Mutual affiliates (together, "Washington Mutual") have been named as defendants in a number of cases in their various roles in offerings of mortgage-backed securities ("MBS"). These cases include purported class action suits on behalf of MBS purchasers, actions by individual MBS purchasers and actions by monoline insurance companies that guaranteed payments of principal and interest for particular tranches of MBS offerings. Following the settlements referred to under "Repurchase Litigation" and "Government Enforcement Investigations and Litigation" below, there are currently pending and tolled investor and monoline insurer claims involving MBS with an original principal balance of approximately $74 billion, of which $67 billion involves JPMC, Bear Stearns or Washington Mutual as issuer and $7 billion involves JPMC, Bear Stearns or Washington Mutual solely as underwriter. The Firm and certain of its current and former officers and Board members have also been sued in shareholder derivative actions relating to the Firm's MBS activities, and trustees have asserted or have threatened to assert claims that loans in securitization trusts should be repurchased.

Issuer Litigation – Class Actions. The Firm is a defendant in three purported class actions brought against JPMC and Bear Stearns as MBS issuers (and, in some cases, also as underwriters of their own MBS offerings) in the United States District Courts for the Eastern and Southern Districts of New York. The Firm has reached an agreement in principle to settle one of these purported class actions, pending in the United States District Court for the Eastern District of New York. Motions to dismiss have largely been denied in the remaining two cases pending in the United States District Court for the Southern District of New York, which are in various stages of litigation.

Issuer Litigation – Individual Purchaser Actions. In addition to class actions, the Firm is defending individual actions brought against JPMC, Bear Stearns and Washington Mutual as MBS issuers (and, in some cases, also as underwriters of their own MBS offerings). These actions are pending in federal and state courts across the United States and are in various stages of litigation.

Monoline Insurer Litigation. The Firm is defending five pending actions relating to monoline insurers' guarantees of principal and interest on certain classes of 14 different Bear Stearns MBS offerings. These actions are pending in

federal and state courts in New York and are in various stages of litigation.

Underwriter Actions. In actions against the Firm solely as an underwriter of other issuers' MBS offerings, the Firm has contractual rights to indemnification from the issuers. However, those indemnity rights may prove effectively unenforceable in various situations, such as where the issuers are now defunct. There are currently such actions pending against the Firm in federal and state courts in various stages of litigation.

Repurchase Litigation. The Firm is defending a number of actions brought by trustees or master servicers of various MBS trusts and others on behalf of purchasers of securities issued by those trusts. These cases generally allege breaches of various representations and warranties regarding securitized loans and seek repurchase of those loans or equivalent monetary relief, as well as indemnification of attorneys' fees and costs and other remedies. Deutsche Bank National Trust Company, acting as trustee for various MBS trusts, has filed such a suit against JPMC, Washington Mutual and the FDIC in connection with a significant number of MBS issued by Washington Mutual; that case is described in the Washington Mutual Litigations section below. Other repurchase actions, each specific to one or more MBS transactions issued by JPMC and/or Bear Stearns, are in various stages of litigation.

In addition, the Firm received demands by securitization trustees that threaten litigation, as well as demands by investors directing or threatening to direct trustees to investigate claims or bring litigation, based on purported obligations to repurchase loans out of securitization trusts and alleged servicing deficiencies. These include but are not limited to a demand from a law firm, as counsel to a group of 21 institutional MBS investors, to various trustees to investigate potential repurchase and servicing claims. These investors purported to have 25% or more of the voting rights in as many as 191 different trusts sponsored by the Firm or its affiliates with an original principal balance of more than $174 billion (excluding 52 trusts sponsored by Washington Mutual, with an original principal balance of more than $58 billion). Pursuant to a settlement agreement with the group of institutional investors, JPMC and the investor group have made a binding offer to the trustees of MBS issued by JPMC and Bear Stearns that provides for the payment of $4.5 billion and the implementation of certain servicing changes to mortgage loans serviced by JPMC, to resolve all repurchase and servicing claims that have been asserted or could have been asserted with respect to the 330 MBS trusts. The offer, which is subject to acceptance by the trustees, and potentially a judicial approval process, does not resolve claims relating to WaMu MBS. JPMC and the trustees have agreed to toll and forbear from asserting repurchase and servicing claims with respect to most of the JPMC and Bear Stearns trusts subject to the settlement during the pendency of the settlement approval process.

There are additional repurchase and servicing claims made against trustees not affiliated with the Firm, but involving trusts that the Firm sponsored, which have been tolled.

Derivative Actions. Seven shareholder derivative actions relating to the Firm's MBS activities have been filed to date against the Firm, as nominal defendant, and certain of its current and former officers and members of its Board of Directors, in New York state court and California federal court. In one of the actions, the Firm's motion to dismiss was granted and the dismissal was affirmed on appeal. Defendants have filed, or intend to file, motions to dismiss the remaining actions.

Government Enforcement Investigations and Litigation. The Firm resolved actual and potential civil claims by the DOJ and several State Attorneys General relating to residential mortgage-backed securities activities by JPMC, Bear Stearns and Washington Mutual, in addition to resolving litigation by the Federal Housing Finance Agency, the Federal Deposit Insurance Corporation and the National Credit Union Administration. The Firm paid a total of $9.0 billion, which is comprised of a $2.0 billion civil monetary penalty and $7.0 billion in compensatory payments (including $4.0 billion to resolve the Federal Housing Finance Agency litigation) and made a commitment to provide $4.0 billion in borrower relief before the end of 2017. In connection with this settlement, including the resolution of litigation by the Federal Housing Finance Agency, the Federal Deposit Insurance Corporation and the National Credit Union Administration, the Firm agreed to waive its right to seek indemnification from the Federal Deposit Insurance Corporation, in its capacity as receiver for Washington Mutual Bank and in its corporate capacity, with respect to any portion of this settlement relating to residential mortgage-backed securities activities of Washington Mutual Bank. The Firm retained its rights to seek indemnification from the Federal Deposit Insurance Corporation for all other liabilities relating to the residential mortgage-backed securities activities of Washington Mutual Bank.

Simultaneously with the resolution of litigation by the Federal Housing Finance Agency, the Firm also agreed to resolve Fannie Mae's and Freddie Mac's repurchase claims associated with whole loan purchases from 2000 to 2008, for $1.1 billion.

The Firm is responding to an ongoing investigation being conducted by the Criminal Division of the United States Attorney's Office for the Eastern District of California relating to MBS offerings securitized and sold by the Firm and its subsidiaries. The Firm has also received other subpoenas and informal requests for information from federal and state authorities concerning the issuance and underwriting of MBS-related matters. The Firm continues to respond to these MBS-related regulatory inquiries.

In addition, the Firm is responding to and cooperating with requests for information from the U.S. Attorney's Office for the District of Connecticut, subpoenas and requests from the SEC Division of Enforcement, and a request from the Office of the Special Inspector General for the Troubled Asset Relief Program to conduct a review of certain activities, all of which relate to, among other matters, communications with counterparties in connection with certain secondary market trading in MBS.

The Firm has entered into agreements with a number of entities that purchased MBS that toll applicable limitations periods with respect to their claims, and has settled, and in the future may settle, tolled claims. There is no assurance that the Firm will not be named as a defendant in additional MBS-related litigation.

Mortgage-Related Investigations and Litigation. The Attorney General of Massachusetts filed an action against the Firm, other servicers and a mortgage recording company, asserting claims for various alleged wrongdoings relating to mortgage assignments and use of the industry's electronic mortgage registry. The court granted in part and denied in part the defendants' motion to dismiss the action, which remains pending.

The Firm is named as a defendant in a purported class action lawsuit relating to its mortgage foreclosure procedures. The plaintiffs have moved for class certification.

Two shareholder derivative actions have been filed in New York Supreme Court against the Firm's Board of Directors alleging that the Board failed to exercise adequate oversight as to wrongful conduct by the Firm regarding mortgage servicing. These actions seek declaratory relief and damages. In October 2012, the Court consolidated the actions and stayed all proceedings pending the plaintiffs' decision whether to file a consolidated complaint after the Firm completes its response to a demand submitted by one of the plaintiffs under Section 220 of the Delaware General Corporation Law.

In February 2014, the Firm entered into a settlement with the United States Attorney's Office for the Southern District of New York, the Federal Housing Administration ("FHA"), the United States Department of Housing and Urban Development ("HUD") and the United States Department of Veterans Affairs ("VA") resolving claims relating to the Firm's participation in federal mortgage insurance programs overseen by FHA, HUD and VA. Under the settlement, JPMorgan Chase will pay $614 million and agree to enhance its quality control program for loans that are submitted in the future to FHA's Direct Endorsement Lender program. This settlement releases the Firm from False Claims Act, FIRREA and other civil and administrative liability for FHA and VA insurance claims that have been paid to JPMorgan Chase since 2002 through the date of the settlement.

The Civil Division of the United States Attorney's Office for the Southern District of New York is conducting an investigation concerning the Firm's compliance with the Fair Housing Act ("FHA") and Equal Credit Opportunity Act ("ECOA") in connection with its mortgage lending practices. In addition, two municipalities are pursuing investigations into the impact, if any, of alleged violations of the FHA and ECOA on their respective communities. The Firm is cooperating in these investigations.

Municipal Derivatives Litigation. Several civil actions were commenced in New York and Alabama courts against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions. The claims in the civil actions generally alleged that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The County filed for bankruptcy in November 2011. In June 2013, the County filed a Chapter 9 Plan of Adjustment, as amended (the "Plan of Adjustment"), which provided that all the above-described actions against the Firm would be released and dismissed with prejudice. In November 2013, the Bankruptcy Court confirmed the Plan of Adjustment, and in December 2013, certain sewer rate payers filed an appeal challenging the confirmation of the Plan of Adjustment. All conditions to the Plan of Adjustment's effectiveness, including the dismissal of the actions against the Firm, were satisfied or waived and the transactions contemplated by the Plan of Adjustment occurred in December 2013. Accordingly, all the above-described actions against the Firm have been dismissed pursuant to the terms of the Plan of Adjustment. The appeal of the Bankruptcy Court's order confirming the Plan of Adjustment remains pending.

Petters Bankruptcy and Related Matters. JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), have been named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain affiliated entities (collectively, "Petters") and the Polaroid Corporation. The principal actions against JPMorgan Chase and its affiliates have been brought by a court-appointed receiver for Petters and the trustees in bankruptcy proceedings for three Petters entities. These actions generally seek to avoid certain purported transfers in connection with (i) the 2005 acquisition by Petters of Polaroid, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions entered into with Polaroid; and (iii) a credit line and investment accounts held by Petters. The actions collectively seek recovery of approximately $450 million. Defendants have moved to dismiss the complaints in the actions filed by the Petters bankruptcy trustees.

Power Matters. The United States Attorney's Office for the Southern District of New York is investigating matters relating to the bidding activities that were the subject of the July 2013 settlement between J.P. Morgan Ventures Energy Corp. and the Federal Energy Regulatory Commission. The Firm is cooperating with the investigation.

Referral Hiring Practices Investigations. The SEC and DOJ are investigating, among other things, the Firm's compliance with the Foreign Corrupt Practices Act and other laws with respect to the Firm's hiring practices related to candidates referred by clients, potential clients and government officials, and its engagement of consultants in the Asia Pacific region. The Firm is cooperating with these investigations. Separate inquiries on these or similar topics have been made by other authorities, including authorities in other jurisdictions, and the Firm is responding to those inquiries.

Sworn Documents, Debt Sales and Collection Litigation Practices. The Firm has been responding to formal and informal inquiries from various state and federal regulators regarding practices involving credit card collections litigation (including with respect to sworn documents), the sale of consumer credit card debt and securities backed by credit card receivables. In September 2013, JPMorgan Chase Bank, N.A., Chase Bank USA, N.A. and JPMorgan Bank and Trust Company, N.A. (collectively, the "Banks") entered into a consent order with the OCC regarding collections litigation processes pursuant to which the Banks agreed to take certain corrective actions in connection with certain of JPMorgan Chase's credit card, student loan, auto loan, business banking and commercial banking customers who defaulted on their loan or contract.

Separately, the Consumer Financial Protection Bureau and multiple state Attorneys General are conducting investigations into the Firm's collection and sale of consumer credit card debt. The California and Mississippi Attorneys General have filed separate civil actions against JPMorgan Chase & Co., Chase Bank USA, N.A. and Chase BankCard Services, Inc. alleging violations of law relating to debt collection practices.

Washington Mutual Litigations. Proceedings related to Washington Mutual's failure are pending before the United States District Court for the District of Columbia and include a lawsuit brought by Deutsche Bank National Trust Company, initially against the FDIC, asserting an estimated $6 billion to $10 billion in damages based upon alleged breach of various mortgage securitization agreements and alleged violation of certain representations and warranties given by certain Washington Mutual, Inc. ("WMI") subsidiaries in connection with those securitization agreements. The case includes assertions that JPMorgan Chase may have assumed liabilities for the alleged breaches of representations and warranties in the mortgage securitization agreements. The District Court denied as premature motions by the Firm and the FDIC that sought a ruling on whether the FDIC retained liability for Deutsche Bank's claims. Discovery is underway.

An action filed by certain holders of Washington Mutual Bank debt against JPMorgan Chase, which alleged that JPMorgan Chase acquired substantially all of the assets of Washington Mutual Bank from the FDIC at a price that was allegedly too low, remains pending. JPMorgan Chase and the FDIC moved to dismiss this action and the District Court dismissed the case except as to the plaintiffs' claim that the Firm tortiously interfered with the plaintiffs' bond contracts with Washington Mutual Bank prior to its closure. Discovery is ongoing.

JPMorgan Chase has also filed a complaint in the United States District Court for the District of Columbia against the FDIC in its capacity as receiver for Washington Mutual Bank and in its corporate capacity asserting multiple claims for indemnification under the terms of the Purchase & Assumption Agreement between JPMorgan Chase and the FDIC relating to JPMorgan Chase's purchase of most of the assets and certain liabilities of Washington Mutual Bank.

* * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously in all such matters. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. The Firm accrues for potential liability arising from such proceedings when it is probable that such liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downwards, as appropriate, based on management's best judgment after consultation with counsel. During the years ended December 31, 2013, 2012 and 2011, the Firm incurred $11.1 billion, $5.0 billion and $4.9 billion, respectively, of legal expense. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or impact related to those matters. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued; as a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

Note 32 – International operations

The following table presents income statement-related and balance sheet-related information for JPMorgan Chase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 33 on pages 334–337 of this Annual Report.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the United States.

As of or for the year ended December 31, (in millions)	Revenue[b]	Expense[c]	Income before income tax expense	Net income	Total assets	
2013						
Europe/Middle East and Africa	**$ 15,585**	**$ 9,069**	**$ 6,516**	**$ 4,842**	**$ 514,747**	[d]
Asia and Pacific	**6,168**	**4,248**	**1,920**	**1,254**	**145,999**	
Latin America and the Caribbean	**2,251**	**1,626**	**625**	**381**	**41,473**	
Total international	**24,004**	**14,943**	**9,061**	**6,477**	**702,219**	
North America[a]	**72,602**	**55,749**	**16,853**	**11,446**	**1,713,470**	
Total	**$ 96,606**	**$ 70,692**	**$ 25,914**	**$ 17,923**	**$ 2,415,689**	
2012						
Europe/Middle East and Africa	$ 10,522	$ 9,326	$ 1,196	$ 1,508	$ 553,147	[d]
Asia and Pacific	5,605	3,952	1,653	1,048	167,955	
Latin America and the Caribbean	2,328	1,580	748	454	53,984	
Total international	18,455	14,858	3,597	3,010	775,086	
North America[a]	78,576	53,256	25,320	18,274	1,584,055	
Total	$ 97,031	$ 68,114	$ 28,917	$ 21,284	$ 2,359,141	
2011						
Europe/Middle East and Africa	$ 16,212	$ 9,157	$ 7,055	$ 4,844	$ 566,866	[d]
Asia and Pacific	5,992	3,802	2,190	1,380	156,411	
Latin America and the Caribbean	2,273	1,711	562	340	51,481	
Total international	24,477	14,670	9,807	6,564	774,758	
North America[a]	72,757	55,815	16,942	12,412	1,491,034	
Total	$ 97,234	$ 70,485	$ 26,749	$ 18,976	$ 2,265,792	

(a) Substantially reflects the U.S.
(b) Revenue is composed of net interest income and noninterest revenue.
(c) Expense is composed of noninterest expense and the provision for credit losses.
(d) Total assets for the U.K. were approximately $451 billion, $498 billion, and $510 billion at December 31, 2013, 2012 and 2011, respectively.

Note 33 – Business segments

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate/Private Equity segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 82–83 of this Annual Report. For a further discussion concerning JPMorgan Chase's business segments, see Business Segment Results on pages 84–85 of this Annual Report.

The following is a description of each of the Firm's business segments, and the products and services they provide to their respective client bases.

Consumer & Community Banking

CCB serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card. Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.

Corporate & Investment Bank

CIB offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

Commercial Banking

CB delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and non-profit entities with annual revenue generally ranging from$20 million to $2.0 billion. CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Asset Management
AM, with client assets of $2.3 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions to a broad range of clients' investment needs. For individual investors, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Corporate/Private Equity
The Corporate/Private Equity segment comprises Private Equity, Treasury and CIO, and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Central Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm's occupancy and pension-related expense that are subject to allocation to the businesses.

Segment results

The following tables provide a summary of the Firm's segment results for 2013, 2012 and 2011 on a managed basis. Total net revenue (noninterest revenue and net interest income) for each of the segments is presented on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented on a basis comparable to taxable investments and securities; this non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit).

The increase in equity levels for the lines of businesses since December 31, 2012, is largely driven by the evolving regulatory requirements and higher capital targets the firm has established under Basel III Advanced approach.

Segment results and reconciliation[a]

As of or the year ended December 31, (in millions, except ratios)	Consumer & Community Banking[b]			Corporate & Investment Bank			Commercial Banking		
	2013	2012	2011	**2013**	2012	2011	**2013**	2012	2011
Noninterest revenue	**$ 17,552**	$ 20,813	$ 15,314	**$ 23,810**	$ 23,104	$ 22,523	**$ 2,298**	$ 2,283	$ 2,195
Net interest income	**28,474**	29,071	30,305	**10,415**	11,222	11,461	**4,675**	4,542	4,223
Total net revenue	**46,026**	49,884	45,619	**34,225**	34,326	33,984	**6,973**	6,825	6,418
Provision for credit losses	**335**	3,774	7,620	**(232)**	(479)	(285)	**85**	41	208
Noninterest expense	**27,842**	28,827	27,637	**21,744**	21,850	21,979	**2,610**	2,389	2,278
Income/(loss) before income tax expense/(benefit)	**17,849**	17,283	10,362	**12,713**	12,955	12,290	**4,278**	4,395	3,932
Income tax expense/(benefit)	**7,100**	6,732	4,257	**4,167**	4,549	4,297	**1,703**	1,749	1,565
Net income/(loss)	**$ 10,749**	$ 10,551	$ 6,105	**$ 8,546**	$ 8,406	$ 7,993	**$ 2,575**	$ 2,646	$ 2,367
Average common equity	**$ 46,000**	$ 43,000	$ 41,000	**$ 56,500**	$ 47,500	$ 47,000	**$ 13,500**	$ 9,500	$ 8,000
Total assets	**452,929**	467,282	486,697	**843,577**	876,107	845,095	**190,782**	181,502	158,040
Return on average common equity	**23%**	25%	15%	**15%**	18%	17%	**19%**	28%	30%
Overhead ratio	**60**	58	61	**64**	64	65	**37**	35	35

(a) Managed basis starts with the reported U.S. GAAP results and includes certain reclassifications as discussed below that do not have any impact on net income as reported by the lines of business or by the Firm as a whole.

(b) The 2012 and 2011 data for certain income statement line items (predominantly net interest income, compensation and noncompensation expense) and balance sheet items were revised to reflect the transfer of certain technology and operations, as well as real estate-related functions and staff, from Corporate/Private Equity to CCB, effective January 1, 2013.

(c) Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

(table continued from previous page)

Asset Management			Corporate/Private Equity[b]			Reconciling Items[c]			Total		
2013	2012	2011	**2013**	2012	2011	**2013**	2012	2011	**2013**	2012	2011
$ 9,029	$ 7,847	$ 7,895	**$ 3,093**	$ 190	$ 3,621	**$ (2,495)**	$ (2,116)	$ (2,003)	**$ 53,287**	$ 52,121	$ 49,545
2,291	2,099	1,648	**(1,839)**	(1,281)	582	**(697)**	(743)	(530)	**43,319**	44,910	47,689
11,320	9,946	9,543	**1,254**	(1,091)	4,203	**(3,192)**	(2,859)	(2,533)	**96,606**	97,031	97,234
65	86	67	**(28)**	(37)	(36)	**–**	–	–	**225**	3,385	7,574
8,016	7,104	7,002	**10,255**	4,559	4,015	**–**	–	–	**70,467**	64,729	62,911
3,239	2,756	2,474	**(8,973)**	(5,613)	224	**(3,192)**	(2,859)	(2,533)	**25,914**	28,917	26,749
1,208	1,053	882	**(2,995)**	(3,591)	(695)	**(3,192)**	(2,859)	(2,533)	**7,991**	7,633	7,773
$ 2,031	$ 1,703	$ 1,592	**$ (5,978)**	$ (2,022)	$ 919	**$ –**	$ –	$ –	**$ 17,923**	$ 21,284	$ 18,976
$ 9,000	$ 7,000	$ 6,500	**$ 71,409**	$ 77,352	$ 70,766	**$ –**	$ –	$ –	**$ 196,409**	$ 184,352	$ 173,266
122,414	108,999	86,242	**805,987**	725,251	689,718	**NA**	NA	NA	**2,415,689**	2,359,141	2,265,792
23%	24%	25%	**NM**	NM	NM	**NM**	NM	NM	**9%**	11%	11%
71	71	73	**NM**	NM	NM	**NM**	NM	NM	**73**	67	65

Note 34 – Parent company

Parent company – Statements of income and comprehensive income

Year ended December 31, (in millions)	2013	2012	2011
Income			
Dividends from subsidiaries and affiliates:			
Bank and bank holding company	**$ 1,175**	$ 4,828	$ 10,852
Nonbank[a]	**876**	1,972	2,651
Interest income from subsidiaries	**757**	1,041	1,099
Other interest income	**303**	293	384
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**318**	939	809
Nonbank	**2,065**	1,207	92
Other income/(loss)	**(1,380)**	579	(85)
Total income	**4,114**	10,859	15,802
Expense			
Interest expense to subsidiaries and affiliates[a]	**309**	836	1,121
Other interest expense	**4,031**	4,679	4,447
Other noninterest expense	**9,597**	2,399	649
Total expense	**13,937**	7,914	6,217
Income (loss) before income tax benefit and undistributed net income of subsidiaries	**(9,823)**	2,945	9,585
Income tax benefit	**4,301**	1,665	1,089
Equity in undistributed net income of subsidiaries	**23,445**	16,674	8,302
Net income	**$ 17,923**	$ 21,284	$ 18,976
Other comprehensive income, net	**(2,903)**	3,158	(57)
Comprehensive income	**$ 15,020**	$ 24,442	$ 18,919

Parent company – Balance sheets

December 31, (in millions)	2013	2012
Assets		
Cash and due from banks	**$ 264**	$ 216
Deposits with banking subsidiaries	**64,843**	75,521
Trading assets	**13,727**	8,128
Available-for-sale securities	**15,228**	3,541
Loans	**2,829**	2,101
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**21,693**	39,773
Nonbank	**68,788**	86,904
Investments (at equity) in subsidiaries and affiliates:[b]		
Bank and bank holding company	**196,950**	170,297
Nonbank[a]	**50,996**	46,302
Other assets	**18,877**	16,481
Total assets	**$ 454,195**	$ 449,264
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries and affiliates[a]	**$ 14,328**	$ 16,744
Other borrowed funds, primarily commercial paper	**55,454**	62,010
Other liabilities	**11,367**	8,208
Long-term debt[c][d]	**161,868**	158,233
Total liabilities[d]	**243,017**	245,195
Total stockholders' equity	**211,178**	204,069
Total liabilities and stockholders' equity	**$ 454,195**	$ 449,264

Parent company – Statements of cash flows

Year ended December 31, (in millions)	2013	2012	2011
Operating activities			
Net income	**$ 17,923**	$ 21,284	$ 18,976
Less: Net income of subsidiaries and affiliates[a]	**25,496**	23,474	21,805
Parent company net loss	**(7,573)**	(2,190)	(2,829)
Cash dividends from subsidiaries and affiliates[a]	**1,917**	6,798	13,414
Other operating adjustments[b]	**3,180**	2,376	860
Net cash (used in)/provided by operating activities[b]	**(2,476)**	6,984	11,445
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**10,679**	16,100	20,866
Available-for-sale securities:			
Proceeds from paydowns and maturities	**61**	621	886
Purchases	**(12,009)**	(364)	(1,109)
Other changes in loans, net	**(713)**	(350)	153
Advances to subsidiaries, net	**13,769**	5,951	(28,105)
Investments (at equity) in subsidiaries and affiliates, net[a]	**700**	3,546	(1,530)
All other investing activities, net[b]	**22**	25	29
Net cash provided by/(used in) investing activities[b]	**12,509**	25,529	(8,810)
Financing activities			
Net change in:			
Borrowings from subsidiaries and affiliates[a]	**(2,715)**	(14,038)	2,827
Other borrowed funds	**(7,297)**	3,736	16,268
Proceeds from the issuance of long-term debt	**31,303**	28,172	33,566
Payments of long-term debt	**(21,510)**	(44,240)	(41,747)
Excess tax benefits related to stock-based compensation	**137**	255	867
Proceeds from issuance of preferred stock	**3,873**	1,234	–
Redemption of preferred stock	**(1,800)**	–	–
Treasury stock and warrants repurchased	**(4,789)**	(1,653)	(8,863)
Dividends paid	**(6,056)**	(5,194)	(3,895)
All other financing activities, net	**(1,131)**	(701)	(1,622)
Net cash used in financing activities	**(9,985)**	(32,429)	(2,599)
Net increase in cash and due from banks	**48**	84	36
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	**216**	132	96
Cash and due from banks at the end of the year, primarily with bank subsidiaries	**$ 264**	$ 216	$ 132
Cash interest paid	**$ 4,409**	$ 5,690	$ 5,800
Cash income taxes paid, net	**2,390**	3,080	5,885

(a) Affiliates include trusts that issued guaranteed capital debt securities ("issuer trusts"). The Parent received dividends of $5 million, $12 million and $13 million from the issuer trusts in 2013, 2012 and 2011, respectively. For further discussion on these issuer trusts, see Note 21 on pages 306-308 of this Annual Report.
(b) Prior periods were revised to conform with the current presentation.
(c) At December 31, 2013, long-term debt that contractually matures in 2014 through 2018 totaled $26.4 billion, $23.8 billion, $22.5 billion, $16.6 billion and $18.7 billion, respectively.
(d) For information regarding the Firm's guarantees of its subsidiaries' obligations, see Note 21 and Note 29 on pages 306-308 and 318-324, respectively, of this Annual Report.

Selected quarterly financial data (unaudited)

(Table continued on next page)

As of or for the period ended	2013				2012			
(in millions, except per share, ratio and headcount data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Total net revenue	**$ 23,156**	**$ 23,117**	**$ 25,211**	**$ 25,122**	$ 23,653	$ 25,146	$ 22,180	$ 26,052
Total noninterest expense	**15,552**	**23,626**	**15,866**	**15,423**	16,047	15,371	14,966	18,345
Pre-provision profit/(loss)	**7,604**	**(509)**	**9,345**	**9,699**	7,606	9,775	7,214	7,707
Provision for credit losses	**104**	**(543)**	**47**	**617**	656	1,789	214	726
Income before income tax expense	**7,500**	**34**	**9,298**	**9,082**	6,950	7,986	7,000	6,981
Income tax expense	**2,222**	**414**	**2,802**	**2,553**	1,258	2,278	2,040	2,057
Net income/(loss)	**$ 5,278**	**$ (380)**	**$ 6,496**	**$ 6,529**	$ 5,692	$ 5,708	$ 4,960	$ 4,924
Per common share data								
Net income/(loss) per share: Basic	**$ 1.31**	**$ (0.17)**	**$ 1.61**	**$ 1.61**	$ 1.40	$ 1.41	$ 1.22	$ 1.20
Diluted	**1.30**	**(0.17)**	**1.60**	**1.59**	1.39	1.40	1.21	1.19
Cash dividends declared per share	**0.38**	**0.38**	**0.38**	**0.30**	0.30	0.30	0.30	0.30
Book value per share	**53.25**	**52.01**	**52.48**	**52.02**	51.27	50.17	48.40	47.48
Tangible book value per share ("TBVS")[a]	**40.81**	**39.51**	**39.97**	**39.54**	38.75	37.53	35.71	34.79
Common shares outstanding								
Average: Basic	**3,762.1**	**3,767.0**	**3,782.4**	**3,818.2**	3,806.7	3,803.3	3,808.9	3,818.8
Diluted	**3,797.1**	**3,767.0**	**3,814.3**	**3,847.0**	3,820.9	3,813.9	3,820.5	3,833.4
Common shares at period-end	**3,756.1**	**3,759.2**	**3,769.0**	**3,789.8**	3,804.0	3,799.6	3,796.8	3,822.0
Share price[b]								
High	**$ 58.55**	**$ 56.93**	**$ 55.90**	**$ 51.00**	$ 44.54	$ 42.09	$ 46.35	$ 46.49
Low	**50.25**	**50.06**	**46.05**	**44.20**	38.83	33.10	30.83	34.01
Close	**58.48**	**51.69**	**52.79**	**47.46**	43.97	40.48	35.73	45.98
Market capitalization	**219,657**	**194,312**	**198,966**	**179,863**	167,260	153,806	135,661	175,737
Selected ratios								
Return on common equity ("ROE")	**10%**	**(1)%**	**13%**	**13%**	11%	12%	11%	11%
Return on tangible common equity ("ROTCE")[a]	**14**	**(2)**	**17**	**17**	15	16	15	15
Return on assets ("ROA")	**0.87**	**(0.06)**	**1.09**	**1.14**	0.98	1.01	0.88	0.88
Return on risk-weighted assets[c][d]	**1.52**	**(0.11)**	**1.85**	**1.88**	1.76	1.74	1.52	1.57
Overhead ratio	**67**	**102**	**63**	**61**	68	61	67	70
Loans-to-deposits ratio	**57**	**57**	**60**	**61**	61	63	65	64
High Quality Liquid Assets ("HQLA")(in billions)[e]	**$ 522**	**$ 538**	**$ 454**	**$ 413**	$ 341	NA	NA	NA
Tier 1 capital ratio[d]	**11.9%**	**11.7 %**	**11.6%**	**11.6%**	12.6%	11.9%	11.3%	11.9%
Total capital ratio[d]	**14.3**	**14.3**	**14.1**	**14.1**	15.3	14.7	14.0	14.9
Tier 1 leverage ratio	**7.1**	**6.9**	**7.0**	**7.3**	7.1	7.1	6.7	7.1
Tier 1 common capital ratio[d][f]	**10.7**	**10.5**	**10.4**	**10.2**	11.0	10.4	9.9	9.8
Selected balance sheet data (period-end)								
Trading assets	**$ 374,664**	**$ 383,348**	**$ 401,470**	**$ 430,991**	$ 450,028	$ 447,053	$ 417,324	$ 455,633
Securities[g]	**354,003**	**356,556**	**354,725**	**365,744**	371,152	365,901	354,595	381,742
Loans	**738,418**	**728,679**	**725,586**	**728,886**	733,796	721,947	727,571	720,967
Total assets	**2,415,689**	**2,463,309**	**2,439,494**	**2,389,349**	2,359,141	2,321,284	2,290,146	2,320,164
Deposits	**1,287,765**	**1,281,102**	**1,202,950**	**1,202,507**	1,193,593	1,139,611	1,115,886	1,128,512
Long-term debt[h]	**267,889**	**263,372**	**266,212**	**268,361**	249,024	241,140	239,539	255,831
Common stockholders' equity	**200,020**	**195,512**	**197,781**	**197,128**	195,011	190,635	183,772	181,469
Total stockholders' equity	**211,178**	**206,670**	**209,239**	**207,086**	204,069	199,639	191,572	189,269
Headcount[i]	**251,196**	**255,041**	**254,063**	**255,898**	258,753	259,144	260,398	261,169

(Table continued from previous page)

As of or for the period ended	2013				2012			
(in millions, except ratio data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Credit quality metrics								
Allowance for credit losses	**$ 16,969**	**$ 18,248**	**$ 20,137**	**$ 21,496**	$ 22,604	$ 23,576	$ 24,555	$ 26,621
Allowance for loan losses to total retained loans	**2.25%**	**2.43%**	**2.69%**	**2.88%**	3.02%	3.18%	3.29%	3.63%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[(j)]	**1.80**	**1.89**	**2.06**	**2.27**	2.43	2.61	2.74	3.11
Nonperforming assets	**$ 9,706**	**$ 10,380**	**$ 11,041**	**$ 11,739**	$ 11,906	$ 12,481	$ 11,397	$ 11,953
Net charge-offs	**1,328**	**1,346**	**1,403**	**1,725**	1,628	2,770	2,278	2,387
Net charge-off rate	**0.73%**	**0.74%**	**0.78%**	**0.97%**	0.90%	1.53%	1.27%	1.35%

(a) TBVS and ROTCE are non-GAAP financial measures. Tangible book value per share represents the Firm's tangible common equity divided by period-end common shares. ROTCE measures the Firm's annualized earnings as a percentage of tangible common equity. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 82–83 of this Annual Report.

(b) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.

(c) Return on Basel I risk-weighted assets is the annualized earnings of the Firm divided by its average RWA.

(d) Basel 2.5 rules became effective for the Firm on January 1, 2013. The implementation of these rules in the first quarter of 2013 resulted in an increase of approximately $150 billion in RWA compared with the Basel I rules. The implementation of these rules also resulted in decreases of the Firm's Tier 1 capital, Total capital and Tier 1 common capital ratios by 140 basis points, 160 basis points and 120 basis points, respectively, at March 31, 2013. For further discussion of Basel 2.5, see Regulatory capital on pages 161–165 of this Annual Report.

(e) The Firm began estimating its total HQLA as of December 31, 2012, based on its current understanding of the Basel III LCR rules. See HQLA on page 172 of this Annual Report.

(f) Basel I Tier 1 common capital ratio ("Tier 1 common ratio") is Tier 1 common capital ("Tier 1 common") divided by risk-weighted assets. The Firm uses Tier 1 common capital along with the other capital measures to assess and monitor its capital position. For further discussion of the Tier 1 common ratio, see Regulatory capital on pages 161–165 of this Annual Report.

(g) Included held-to-maturity securities of $24.0 billion and $4.5 billion at December 31, 2013 and September 30, 2013. Held-to-maturity balances for the other periods were not material.

(h) Included unsecured long-term debt of $199.4 billion, $199.2 billion, $199.1 billion, $206.1 billion, $200.6 billion, $207.3 billion and $213.4 billion, and $235.4 billion, respectively, for the periods presented.

(i) Effective January 1, 2013, interns are excluded from the firmwide and business segment headcount metrics. Prior periods were revised to conform with this presentation.

(j) Excludes the impact of residential real estate PCI loans. For further discussion, see Allowance for credit losses on pages 139–141 of this Annual Report.

Active foreclosures: Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

Active online customers: Users of all internet browsers and mobile platforms who have logged in within the past 90 days.

Active mobile customers: Users of all mobile platforms, which include: SMS, mobile smartphone and tablet, who have logged in within the past 90 days.

Allowance for loan losses to total loans: Represents period-end allowance for loan losses divided by retained loans.

Assets under management: Represent assets actively managed by AM on behalf of its Private Banking, Institutional and Retail clients. Includes "Committed capital not Called," on which AM earns fees. Excludes assets managed by American Century Companies, Inc., in which the Firm sold its ownership interest on August 31, 2011.

Beneficial interests issued by consolidated VIEs: Represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Chase Liquid℠ cards - Refers to a prepaid, reloadable card product.

Client advisors: Investment product specialists, including private client advisors, financial advisors, financial advisor associates, senior financial advisors, independent financial advisors and financial advisor associate trainees, who advise clients on investment options, including annuities, mutual funds, stock trading services, etc., sold by the Firm or by third-party vendors through retail branches, Chase Private Client locations and other channels.

Client assets: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Client investment managed accounts: Assets actively managed by Chase Wealth Management on behalf of clients. The percentage of managed accounts is calculated by dividing managed account assets by total client investment assets.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again (or vice versa). The duration of a credit cycle can vary from a couple of years to several years.

CUSIP number: A CUSIP (i.e., Committee on Uniform Securities Identification Procedures) number consists of nine characters (including letters and numbers) that uniquely identify a company or issuer and the type of security and is assigned by the American Bankers Association and operated by Standard & Poor's. This system facilitates the clearing and settlement process of securities. A similar system is used to identify non-U.S. securities (CUSIP International Numbering System).

Deposit margin/deposit spread: Represents net interest income expressed as a percentage of average deposits.

Exchange traded derivatives: Derivative contracts that are executed on an exchange and settled via a central clearing house.

FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

Group of Seven ("G7") nations: Countries in the G7 are Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

G7 government bonds: Bonds issued by the government of one of the G7 nations.

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

Home equity - senior lien: Represents loans and commitments where JP Morgan Chase holds the first security interest on the property.

Home equity - junior lien: Represents loans and commitments where JP Morgan Chase holds a security interest that is subordinate in rank to other liens.

Interchange income: A fee paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

LLC: Limited Liability Company.

Loan-to-value ("LTV") ratio: For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices comprise actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all lien positions related to the property. Combined LTV ratios are used for junior lien home equity products.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Master netting agreement: An agreement between two counterparties who have multiple derivative contracts with each other that provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high combined loan-to-value ("CLTV") ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime

Prime mortgage loans are made to borrowers with good credit records and a monthly income at least three to four times greater than their monthly housing expense (mortgage payments plus taxes and other debt payments). These borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are loans to customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

NA: Data is not applicable or available for the period presented.

Net charge-off/(recovery) rate: Represents net charge-offs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

Over-the-counter derivatives ("OTC"): Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

Over-the-counter cleared derivatives ("OTC cleared"): Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Participating securities: Represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

Personal bankers: Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.

Portfolio activity: Describes changes to the risk profile of existing lending-related exposures and their impact on the allowance for credit losses from changes in customer profiles and inputs used to estimate the allowances.

Pre-provision profit/(loss): Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pretax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is one basis upon which management evaluates the performance of AM against the performance of their respective competitors.

Principal transactions revenue: Principal transactions revenue includes realized and unrealized gains and losses recorded on derivatives, other financial instruments, private equity investments, and physical commodities used in market making and client-driven activities. In addition, Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk management activities including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specified risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives, including the synthetic credit portfolio.

Purchased credit-impaired ("PCI") loans: Represents loans that were acquired in the Washington Mutual transaction and deemed to be credit-impaired on the acquisition date in accordance with the guidance of the Financial Accounting Standards Board ("FASB"). The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

Real assets: Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.

Real estate investment trust ("REIT"): A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate related assets by pooling their capital to purchase and manage income property (i.e., equity REIT) and/or mortgage loans (i.e., mortgage REIT). REITs can be publicly- or privately-held and they also qualify for certain favorable tax considerations.

Receivables from customers: Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e. excludes loans held-for-sale and loans at fair value).

Risk-weighted assets ("RWA"): Risk-weighted assets consist of on- and off-balance sheet assets that are assigned to one of several broad risk categories and weighted by factors representing their risk and potential for default. On-balance sheet assets are risk-weighted based on the estimated credit risk associated with the obligor or counterparty, the nature of any collateral, and the guarantor, if any. Off-balance sheet assets such as lending-related commitments, guarantees, derivatives and other applicable off-balance sheet positions are risk-weighted by multiplying the contractual amount by the appropriate credit conversion factor to determine the on-balance sheet credit equivalent amount, which is then risk-weighted based on the same factors used for on-balance sheet assets. Risk-weighted assets also incorporate a measure for market risk related to applicable trading assets-debt and equity instruments, and foreign exchange and commodity derivatives. The resulting risk-weighted values for each of the risk categories are then aggregated to determine total risk-weighted assets.

Sales specialists: Retail branch office and field personnel, including relationship managers and loan officers, who specialize in marketing and sales of various business banking products (i.e., business loans, letters of credit, deposit accounts, Chase Paymentech, etc.) and mortgage products to existing and new clients.

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Short sale: A short sale is a sale of real estate in which proceeds from selling the underlying property are less than the amount owed the Firm under the terms of the related mortgage and the related lien is released upon receipt of such proceeds.

Structural Interest Rate Risk: Represents interest rate risk of the non-trading assets and liabilities of the firm.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

Trade-date and settlement-date: For financial instruments, the trade-date is the date that an order to purchase, sell or otherwise acquire an instrument is executed in the market. The trade-date may differ from the settlement-date, which is the date on which the actual transfer of a financial instrument between two parties is executed. The amount of time that passes between the trade-date and the settlement-date differs depending on the financial instrument. For repurchases under the common equity repurchase program, except where the trade-date is specified, the amounts disclosed are presented on a settlement-date basis. In the Capital Management section on pages 160–167, of this Form 10-K, and where otherwise specified, repurchases under the common equity repurchase program are presented on a trade-date basis because the trade-date is used to calculate the Firm's regulatory capital.

Troubled debt restructuring ("TDR"): A TDR is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury.

Value-at-risk ("VaR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

Wallet: Proportion of fee revenues based on estimates of investment banking fees generated across the industry (i.e. the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third party provider of investment banking competitive analysis and volume-based league tables for the above noted industry products.

Warehouse loans: Consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired certain of the assets of the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC.

Board of Directors

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Retired Deputy Head of Risk Management
JPMorgan Chase & Co.
(Financial services)

James A. Bell [1]
Retired Executive Vice President
The Boeing Company
(Aerospace)

Crandall C. Bowles [1, 4]
Chairman
The Springs Company
(Diversified investments)

Stephen B. Burke [2, 3]
Chief Executive Officer
NBCUniversal, LLC
(Television and entertainment)

James S. Crown [5]
President
Henry Crown and Company
(Diversified investments)

Jamie Dimon
Chairman and
Chief Executive Officer
JPMorgan Chase & Co.

Timothy P. Flynn [4, 5]
Retired Chairman
KPMG International
(Professional services)

Laban P. Jackson, Jr. [1]
Chairman and Chief Executive Officer
Clear Creek Properties, Inc.
(Real estate development)

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Retired Vice Chairman of
General Electric Company
and Retired Chairman
and Chief Executive Officer
of GE Capital
(Industrial and financial services)

Lee R. Raymond [2, 3]
Retired Chairman and
Chief Executive Officer
Exxon Mobil Corporation
(Oil and gas)

William C. Weldon [2, 3]
Retired Chairman and
Chief Executive Officer
Johnson & Johnson
(Health care products)

Member of:

1 Audit Committee
2 Compensation & Management Development Committee
3 Corporate Governance & Nominating Committee
4 Public Responsibility Committee
5 Risk Policy Committee

Operating Committee

Jamie Dimon
Chairman and
Chief Executive Officer

Ashley Bacon
Chief Risk Officer

Stephen M. Cutler
General Counsel

John L. Donnelly
Head of Human Resources

Mary Callahan Erdoes
CEO, Asset Management

Marianne Lake
Chief Financial Officer

Douglas B. Petno
CEO, Commercial Banking

Daniel E. Pinto
CEO, Corporate & Investment Bank
and CEO, EMEA

Gordon A. Smith
CEO, Consumer & Community Banking

Matthew E. Zames
Chief Operating Officer

Other Corporate Officers

Joseph M. Evangelisti
Corporate Communications

Anthony J. Horan
Secretary

Mark W. O'Donovan
Controller

Lauren M. Tyler
General Auditor

Sarah M. Youngwood
Investor Relations

Regional Chief Executive Officers

Asia Pacific

Nicolas Aguzin

Robert C. Priestley, ASEAN CEO

Gregory L. Guyett, Greater China CEO

Europe, Middle East, Africa

Daniel E. Pinto

Emilio Saracho, Deputy CEO

Latin America

Martin G. Marron

Senior Country Officers

Asia Pacific

ASEAN

Australia/New Zealand
Robert C. Priestley

Indonesia
Haryanto T. Budiman

Malaysia
Steve R. Clayton

Philippines
Roberto L. Panlilio

Singapore
Edmund Y. Lee

Thailand
M.L. Chayotid Kridakon

Vietnam
Van Bich Phan

GREATER CHINA

China
Zili Shao

Hong Kong
Andrew Butcher

Taiwan
Carl K. Chien

India
Kalpana Morparia

Japan
Steve Teru Rinoie

Korea
Steve Lim

Europe

Benelux/Nordics
Jake Donavan

Central & Eastern Europe
Walter Schuster

France/Francophone North Africa
Kyril Courboin

Germany
Martin Weismann

Ireland
Carin Bryans

Israel
Roy Navon

Italy
Francesco Rossi Ferrini

Russia/Central Asia
Yan Tavrovsky

Spain/Portugal
Enrique Casanueva Nardiz

Switzerland
Niklaus Bossart

Turkey/Azerbaijan
Emre Derman

Middle East, North Africa

Bahrain/Egypt/Lebanon
Ali Moosa

Middle East/North Africa
Sjoerd Leenart

Saudi Arabia
Rayan Fayez

Sub-Saharan Africa

Nigeria
Tosin T. Adewuyi

Sub-Saharan Africa
John J. Coulter

Latin America

Andean/Central America/Caribbean
Moises Mainster

Argentina/Uruguay/Bolivia/Paraguay
Facundo D. Gomes Minujin

Brazil
Jose Berenguer

Chile
Alfonso Eyzaguirre

Mexico
Eduardo F. Cepeda

North America

Canada
David E. Rawlings

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Todd Maclin

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David Mayhew

Glenn Tilton

J.P. Morgan International Council

As of March 31, 2014

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Chairman of the Council
Quartet Representative and
Former Prime Minister of Great Britain
and Northern Ireland
London, United Kingdom

Khalid A. Al-Falih
President and Chief Executive Officer
Saudi Aramco
Dhahran, Saudi Arabia

Alberto Baillères
Presidente del Consejo de Administración
Grupo Bal
México D.F., Mexico

Franco Bernabé
Chairman
FB Group
Rome, Italy

Paul Bulcke
Chief Executive Officer
Nestlé S.A.
Vevey, Switzerland

Michael A. Chaney
Chairman
National Australia Bank Limited
Perth, Western Australia

Hon. Richard M. Daley
Former Mayor of Chicago
Chicago, Illinois

Martin Feldstein
Professor of Economics
Harvard University
Cambridge, Massachusetts

Gao Xi-Qing
Vice Chairman and President
China Investment Corporation
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Corporate headquarters

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Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities LLC
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Stock listing

New York Stock Exchange
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The New York Stock Exchange ticker symbol for the common stock of JPMorgan Chase & Co. is JPM.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations website at jpmorganchase.com. Additional questions should be addressed to:

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Investor Day: February 25, 2014

Timetable — Investor Day 2014 — Held in 2nd Floor Conference Center

Location: 270 Park Avenue

Presentation	Speaker	Start time	End time	Duration
Registration		8:00AM	8:30AM	0:30
Opening remarks & Firmwide Overview	Marianne Lake	8:30AM	9:25AM	0:55
Consumer & Community Banking	Gordon Smith	9:25AM	10:45AM	1:20
Break		10:45AM	11:00AM	0:15
Commercial Banking	Doug Petno	11:00AM	11:30AM	0:30
Asset Management	Mary Erdoes	11:30AM	12:00PM	0:30
Break		12:00PM	12:15PM	0:15
Lunch		12:15PM	1:30PM	1:15
Corporate & Investment Bank	Mike Cavanagh/Daniel Pinto	1:30PM	2:30PM	1:00
Closing remarks and Q&A	Jamie Dimon	2:30PM	3:30PM	1:00
Refreshments		3:30PM	4:30PM	1:00

FIRM OVERVIEW

Marianne Lake, Chief Financial Officer

February 25, 2014

JPMorgan Chase & Co.

Agenda

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JPMorgan Chase – extremely strong fundamentals and well positioned to adapt

JPMorgan Chase overview

Excellent client franchises

- Four best-in-class client franchises – each performing strongly
- Together driving significant synergies – diversification, complete platform, scale and efficiencies
- Demonstrated earnings capacity, resilience and superior returns
- Maintain best-in-class margins and improve operating leverage
- Experienced management teams with deep talent

Regulatory, control and simplification agendas

- Executing on our regulatory and control agendas
  - Significant effort – will make us a better company
- Business simplification agenda – reduce complexity and focus on core competencies

New financial architecture

- Optimize returns against capital targets
  - Manage at granular level – legal entity, sub-LOB, product and client level
  - Focus on impact to broader franchise and client relationships
- Continue progress towards Firm's capital targets while balancing capital returns
- Transition year – protect franchise value and future earnings power

Performance summary

JPMorgan Chase overview

$mm, excluding EPS

	FY2010	FY2011	FY2012	FY2013	Excl. DVA/FVA & sig items[2] FY2012	Excl. DVA/FVA & sig items[2] FY2013
Revenue (FTE)[1]	$104,842	$99,767	$99,890	$99,798	$103,035	$99,907
Credit costs	16,639	7,574	3,385	225	8,010	5,725
Expense	61,196	62,911	64,729	70,467	60,631	59,900
Reported – net income	$17,370	$18,976	$21,284	$17,923	$22,299	$23,241
Reported EPS	$3.96	$4.48	$5.20	$4.35	$5.46	$5.70
ROTCE[3]	15%	15%	15%	11%	16%	15%
Basel III Tier 1 common ratio[3,4]	7.0	7.9	8.7	9.5		
Memo: Adjusted expense[5]	*$53,440*	*$57,401*	*$59,742*	*$59,031*		
ROE by LOB						
Consumer & Community Banking	11%	15%	25%	23%		
Corporate & Investment Bank	17	17	18	15		
Commercial Banking	26	30	28	19		
Asset Management	26	25	24	23		

Excl. total legal expense & FRM[5]

Comments

- Diversification of our business has enabled us to invest through-the-cycle and maintain strong returns on increasing levels of capital
  - Despite significant items, the rate environment and mortgage volatility – stable revenue for the last 3 years
    - NIR >50% of total revenue, across a broad set of categories and growing strongly
  - Expense – maintained adjusted overhead ratio of ~58-59% over last 3 years

Note: Totals may not sum due to rounding
[1] See note 1 on slide 48
[2] See note 2 on slide 48
[3] See note 4 on slide 49
[4] Estimated impact of final Basel 2.5 Rules and Basel III Advanced NPR reflected in 2012, but not in 2010 and 2011
[5] See note 3 on slide 49

Maintain excellent client-based franchises

JPMorgan Chase overview

Key drivers/statistics/highlights ($B, except where noted)

		2013	CAGR 2010-2013
CCB	CBB deposits (Avg)	$435	8.4%
	Client inv. assets (EOP)	189	12.4
	Mortgage originations[1]	166	NM
	Card sales volume	420	10.3
	Auto originations	26	4.3
	Merchant processing volume	750	16.9
CIB	Loans (EOP)	$108	8.6%
	Client deposits (Avg)[2]	384	15.6
	AUC ($T, EOP)	20	8.3
	Average VaR ($mm)[3]	47	NM
CB	Loans (EOP)	$137	11.5%
	Deposits (Avg)	198	12.6
AM	AUM (EOP)	$1,598	7.2%
	Long-term AUM Flows	90	NM
	Loans (EOP)	95	29.4
	Deposits (Avg)	140	17.5

Note: For footnoted information, refer to slide 42

Four unparalleled client franchises…

- ~50% of U.S. households have a Chase relationship
- ~80% of Fortune 500 companies are our clients[4]
- #1 customer satisfaction among largest banks for the 2nd year in a row[5]
- Nearly 900 new quality clients added in CB in 2013

…each performing strongly…

- **CCB**
  - Deposit growth more than 2x industry average[6]
  - #1 credit card issuer in the U.S.[7]
  - Record credit card sales and client investment assets
- **CIB**
  - Top 3 in 15 product categories out of 16[8]
  - #1 in global IB fees with 8.6% market share[9] – up 110 bps from 2012
  - #1 in markets revenue with 16.0% market share[10] – up 140 bps from 2012
    - FICC: 18.6% market share[10] – up 300 bps from 2012
- **CB**
  - 14 consecutive quarters of loan growth
  - #1 traditional Middle Market syndicated lender in the U.S.
  - #1 U.S. multifamily lender
  - Strong credit performance – <5 bps net charge-offs in 2012 and 2013
- **AM**
  - 19 consecutive quarters of positive long-term flows
  - 80% of 10-year mutual fund AUM in top 2 quartiles
  - 29% pretax margin[11], up 90 bps YoY

…and together driving $18B of gross synergies

- Record gross IB revenue from CB clients[12]
- CB clients generate 29% of NA IB fees
- ~55% of retail mortgages & ~40% of Chase branded cards sold through branches
- ~55% of CB clients & ~35% of PB households visit branches each quarter
- CWM assets managed by AM increased by 34% YoY to $90B

Book value per share – growing our fortress balance sheet

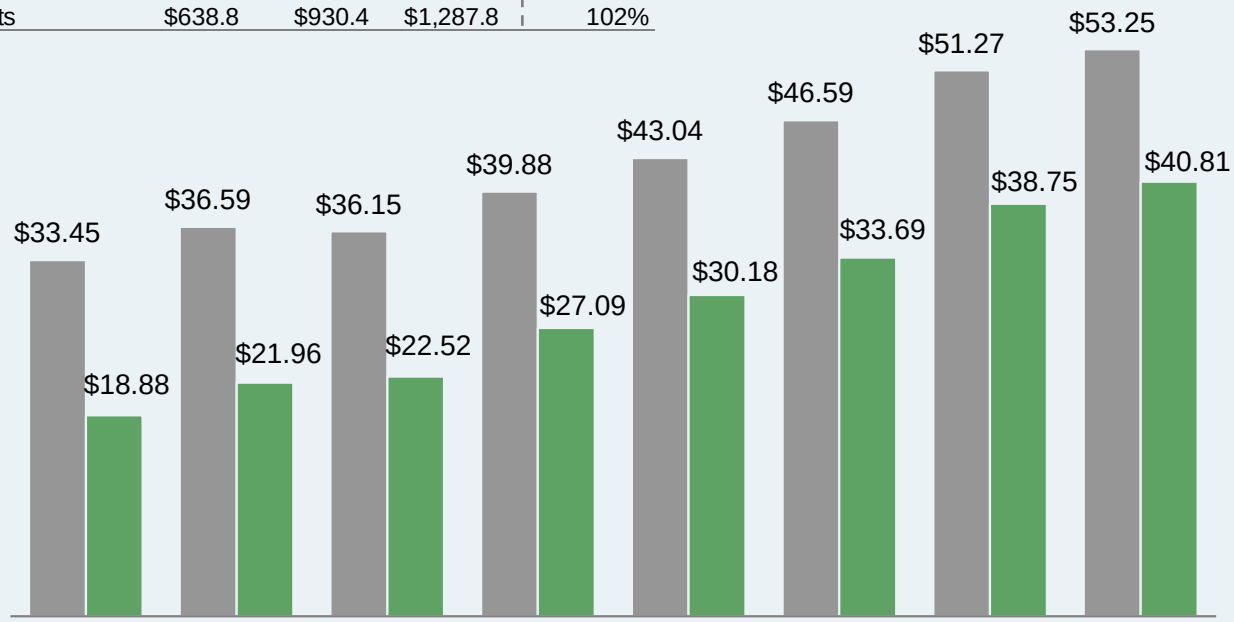
JPMorgan Chase overview

Key metrics since FY2006[1]

($B)	2006	2010	2013	%Δ '06-'13
Tangible common equity	$65.4	$118.0	$153.3	134%
Basel I Tier 1 common	7.3%	9.8%	10.7%	3.4%[2]
Loan loss reserve	$7.3	$32.3	$16.3	$9.0[2]
EOP Deposits	$638.8	$930.4	$1,287.8	102%

B3T1C of 9.5% as of 4Q13

Growth	YoY	5Y[3]	10Y[3]
BVPS	4%	8%	9%
TBVPS	5	13	9



Shares outstanding (EOP)	2006	2007	2008	2009	2010	2011	2012	2013
	3.5B	3.4B	3.7B	3.9B	3.9B	3.8B	3.8B	3.8B

- Durbin – Card Act – Reg E
- Controls – Regulatory assessments – Liquidity compliance

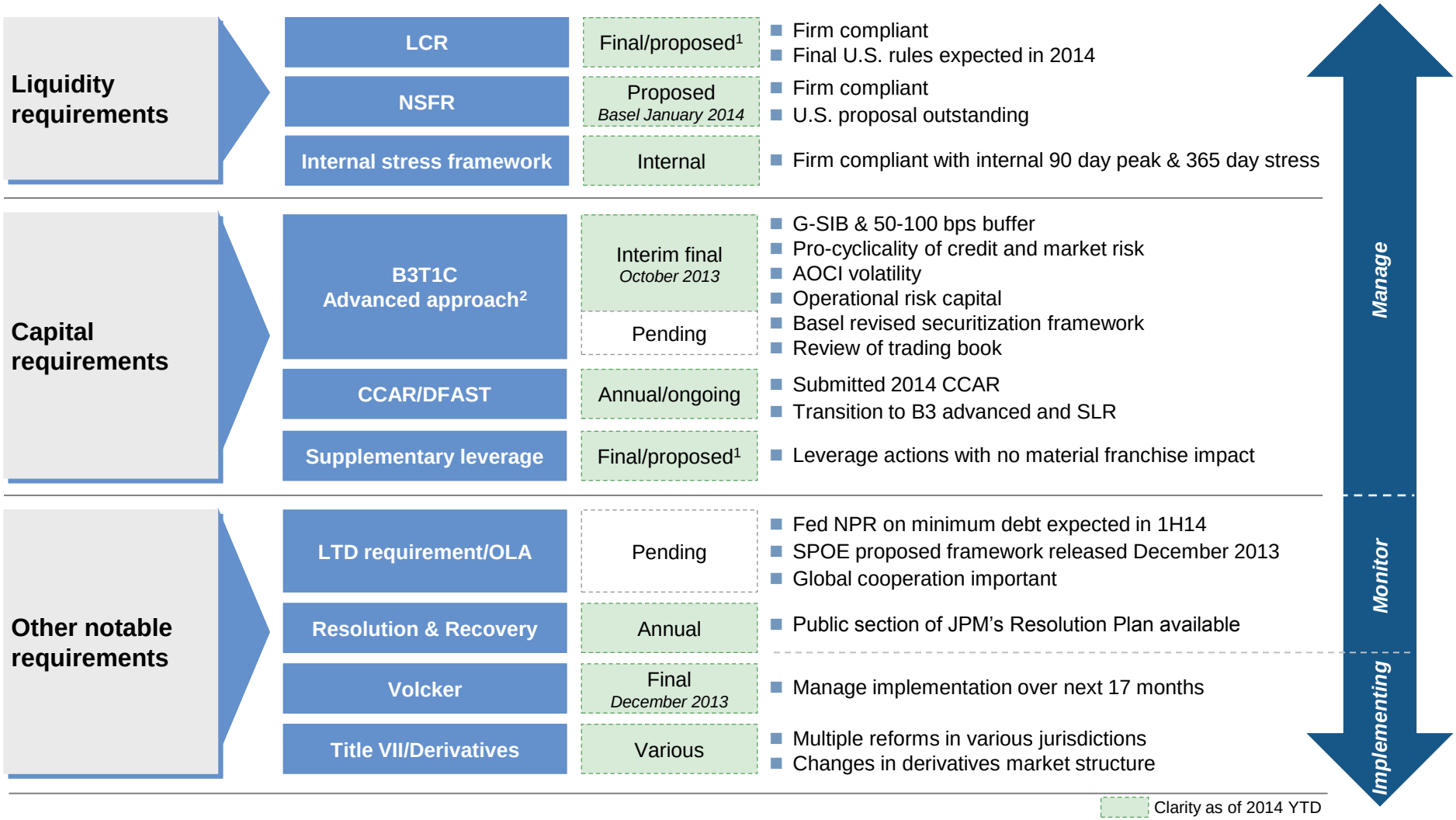
Since 2010, JPM's profits were ~$76B, despite ~$20B in after-tax legal expense and ~$9B of regulatory costs
Over last 4 years, added ~$47B to capital after return to shareholders of ~$23B

[1] See note 4 on slide 49
[2] Actual change
[3] CAGR

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New financial architecture



- For many of the rules above, there are compliance considerations at the LOB, sub-LOB and legal entity levels

The Firm has made significant progress toward compliance and is well-positioned against a clearer framework

Note: For footnoted information, refer to slide 43; estimated compliance based on current understanding of rules

What to expect in 2014

New financial architecture

2014 objectives[1]		Estimated 4Q13	2014 Objectives
Liquidity	Firm & Bank LCR[2] and NSFR	>100%	>100%
	JPM internal 90 day peak & 365[3] day stress	>100%	>100%
Capital[4]	Basel III Tier 1 common ratio	9.5%	10%+
	Basel III Tier 1 capital ratio	10.2%	11%+/-
	Firm SLR[5]	4.6%[6]	5%+
	Bank SLR[5,6]	4.6%[6]	5%+
	Available Resources for OLA[7]	~19%	~2x current equity capitalization rate

Stated target for Firm of 5.5%+/- and 6%+ for Bank, over time

Comments

- JPM approved to exit Basel III Advanced Parallel
  - Effective 2Q14, the Firm will be subject to Basel III Adv.
  - Report on a transition basis; binding constraint lower of Standardized or Advanced
- In addition, continue to report and manage to our Basel III Advanced fully phased-in capital ratios

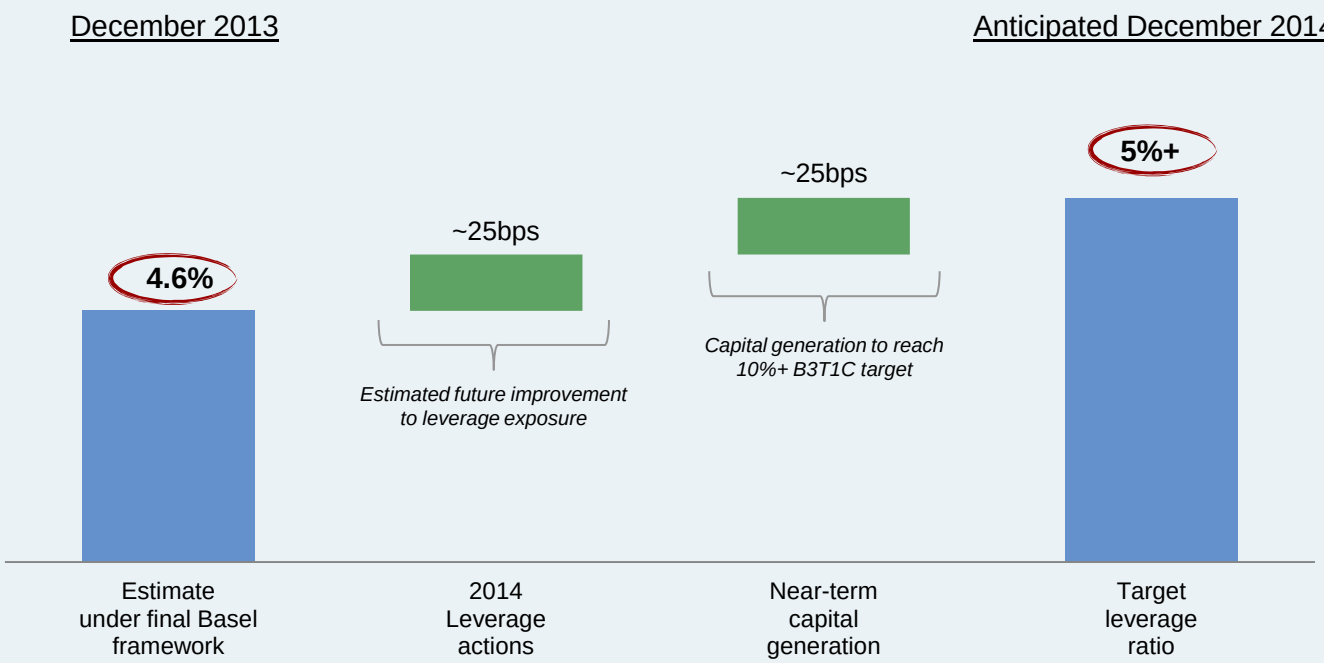
Maximizing returns within the new financial architecture while staying focused on broader franchise and client relationships

[1] Based on current rules and minimums
[2] Firm compliant with both Basel and U.S. proposed rules; Bank compliant with Basel rules
[3] While 2014 objective is >100%, it allows for management actions within capital impact tolerance
[4] See note 4 on slide 49
[5] Basel framework; both Bank & Firm SLR under U.S. NPR of 4.7%
[6] Corresponds to the Firm's lead bank, JPMorgan Chase Bank, National Association
[7] Available resources include Basel III Tier 1 common equity, preferred and trust preferred securities, as well as holding company unsecured long-term debt with maturities greater than 1 year

Basel III Supplementary Leverage Ratio ("SLR")

New financial architecture

Firm pro forma Basel III SLR with exposure reduction and capital generation – illustrative case



Excludes the following:

- Issuance of preferred
- Additional capital generation
- Leverage actions in 2015
- ~30 bps for Derivatives PFE model change[1]

Bank	***4.6%***	***5%+***

Anticipated 2014 leverage actions

- Run-off in CCB as well as legacy structured credit portfolios in CIB
- Reduce discretionary short-term financing transactions (repos) in CIB
- Targeted reduction of non-operating deposits in CB/CIB
- Additional cash collateral netting and reduced derivative margin requirements

Leverage compliance achievable with minimal client or financial impact

[1] Derivatives Potential Future Exposure (PFE) model change denotes change from Current Exposure Method (CEM) to Non-Internal Models Methodology (NIMM). Best estimate of impact is ~40 bps for the Bank

G-SIB and balance sheet optimization

New financial architecture

Commentary

- **JPM falls within the 2.5% G-SIB bucket**
  - G-SIB score is a function of our operating model, including our complete platform, leadership positions and market share, which we believe are a competitive advantage
  - CIB is the main contributor to the Firm's score, but also key to synergies
- **JPM is currently at 9.5%, consistent with peers' average target**
  - All peers operating above stated targets – peer average >10% – which is consistent with JPM's target

Basel III Tier 1 common capital – 4Q13 peer comparison

	JPM	Peer average[1]
Tier 1 common regulatory minimum	9.5%	8.5%
Reported	9.5%	>10%
Target	10%+	~9.5%

Benefits of JPM operating model

- Two great brands
- Diversification and depth of funding access
- Complete platform – deep client relationships and global reach
- Competitive pricing through scale advantage
- Experienced management team – deep bench

Equates to $6-7B net income contribution[4]

$18B gross synergies[2]
Revenue: $15B, Expense: $3B

Only $3-6B required to be SVA positive on an incremental 50-100 bps of B3T1C[3,4]

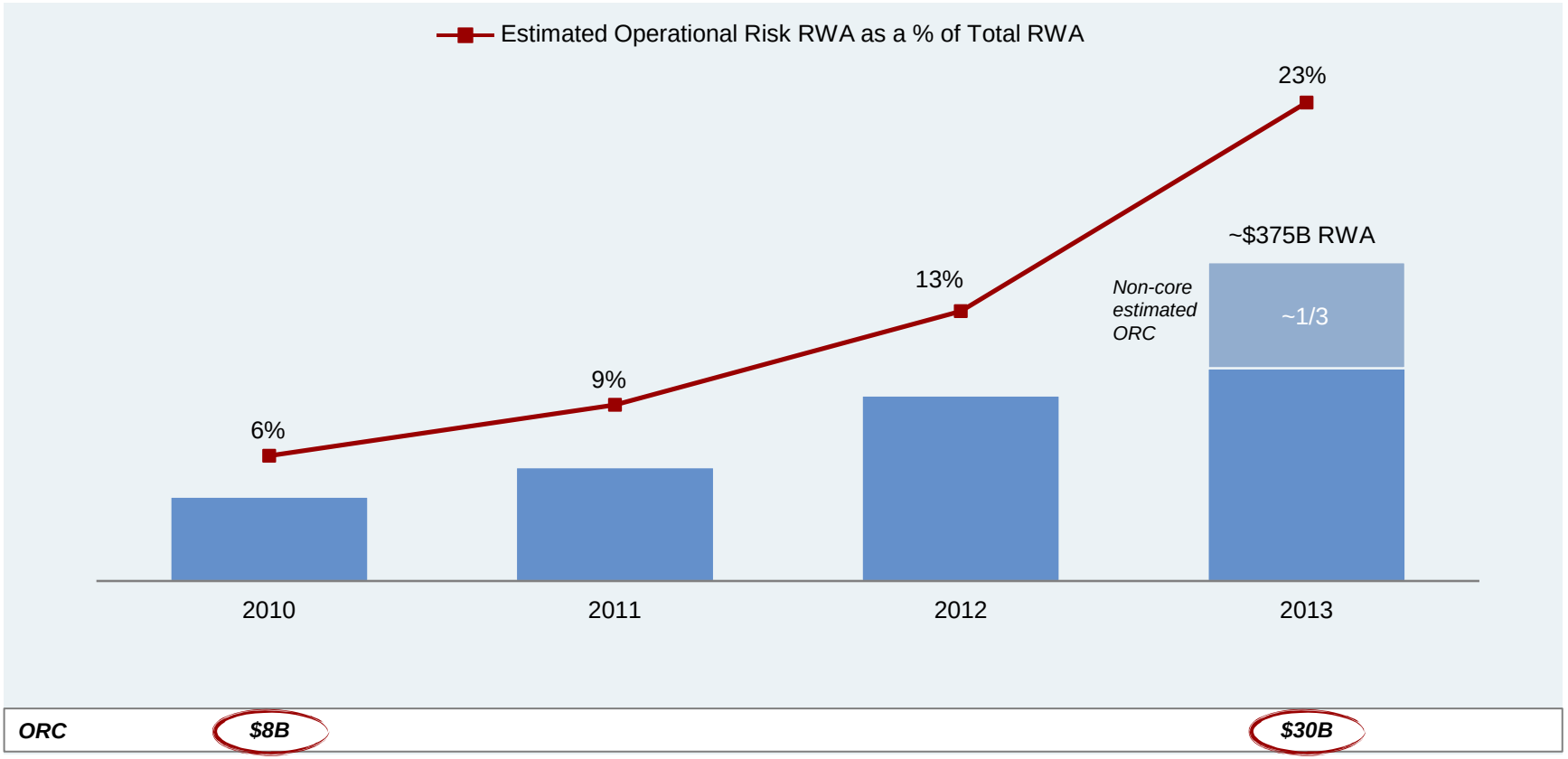
Synergies drive positive SVA on any incremental capital

Source: Company disclosures
[1] Peers include BAC, C, GS, MS and WFC
[2] For additional details on synergies, refer to slide 29
[3] Assumes 12% cost of equity based on the 5-year historical average using CAPM and $1,591B Basel III RWA as of December 31, 2013
[4] Assumes 50% overhead ratio and 38% tax rate

Operational Risk Capital ("ORC") Overview

New financial architecture

JPM operational risk RWA growth from 2010-2013

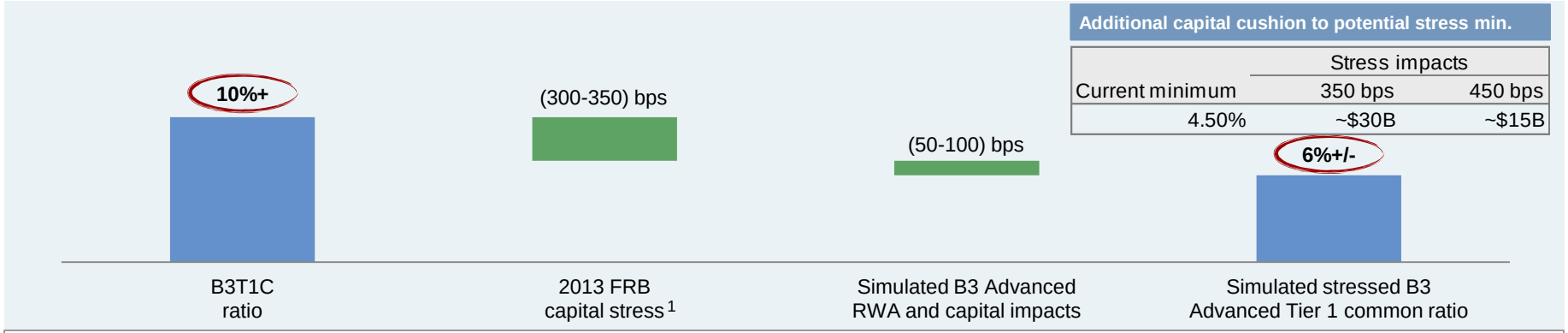


Large losses have a long-term impact on capital – not reflecting current risk exposure

Capital simulations

New financial architecture

Basel III advanced simulation under stress



Firm Leverage	***5.5%+/-***	***(150) bps+/-***	***0 bps+***	***~4%** (current B1 minimum)*

Note: Minimum requirements for CCAR may evolve over time

Baseline Basel III advanced simulation – after dividends, before share repurchases ($B)

	2013	2014		2015
Analysts estimated net income[2]		~$23		~$24
RWA, beginning	**$1,650**	**$1,591**		**$1,550**
Models and run-off, net of growth	*(59)*	*(40)*	2015 RWA projected to be down ~$150B from YE2012 incl. the impact of ORC	*(50)*
RWA, at year-end	**$1,591**	**$1,550**		**$1,500**
Pre-share repurchase B3T1C (%)[3]	9.5%	≥10.5%		≥11.5%
Cumulative excess capital at 10% B3T1C		**>$10**		**~$30**

Note: Totals may not sum due to rounding

[1] ~300 bps FRB capital impact excludes ~110 bps impact of Basel 2.5 market risk rule, effective 1Q13, and ~50 bps impact of projected repurchases

[2] Reflects Bloomberg average of analysts' estimates for net income of $23.1B in 2014 and $24.2B in 2015 as of 2/19/14

[3] Includes net income after common stock and existing preferred dividends, AOCI and employee issuance

Capital targets withstand stress scenarios and should allow for excess capital to be used or returned

We believe our stock price is attractive – even significantly above current valuation

New financial architecture

Capital hierarchy

- Available capital is used to support business growth
- Excess capital is used to:
  - Pay common stock dividends – objective to increase payout over time from current levels
  - Share repurchases – offset employee issuance and consider additional repurchases

Reasons why JPM stock is attractive

- Exceptional franchises – will continue to deliver strong profitability and returns
- JPM has traded at a discount to peers since the crisis on a P/E and P/TBVPS vs. ROTCE regression basis
- JPM stock price reflects cost of equity of ~10%[1], which implies a TTC ROTCE for JPM of 13%[1] – below target of 15-16%

Capital return framework

- JPM's view of share repurchases takes capital hierarchy and valuation into account
- Based upon regression analysis of P/TBVPS vs. ROTCE – repurchasing stock at prices significantly higher than current levels creates shareholder value

Source: SNL Financial, FactSet, Alacra

[1] Cost of equity based on most recent one-month average using Capital Asset Pricing Model (GEM3 historical beta used). TTC ROTCE based on Gordon Growth Model

Common equity allocation and performance targets

New financial architecture

Common equity and performance targets ($B)

	Retained common equity				
	2013 Investor Day	2014 Investor Day	Pro forma 2013 ROE[1]	TTC ROE target	Basel III Tier 1 Common
Total Consumer & Community Banking	$46.0	$51.0 [2]	21%	20%+	9.5%
Consumer & Business Banking	*11.0*	*10.9*	26%	30%+	*9.5%*
Mortgage Banking	*19.5*	*18.0*	17%	15%+/-[3]	*9.5%*
Card Services	*12.4*	*15.4*	28%	20%+/-	*9.5%*
Auto & Student	*3.1*	*3.7*	15%	16%+/-[4]	*9.5%*
Corporate & Investment Bank	56.5	61.0	16%[5]	15%+/-	10.5%
Commercial Banking	13.5	14.0	18%	18%+/-	9.5%
Asset Management[6]	9.0	9.0	23%	25%+	9.5%
Total LOBs	**$125.0**	**$135.0**		**18%+/-**[7]	
Corporate	*28.0*	*25.7*			
Total Firm (ex. Corporate Goodwill[8])	**$153.0**	**~$161 at 10%**		**15-16%**[9]	**10%+**
Memo: Corporate Goodwill[8]	*$42.0*	*$42.0*			

A

Corporate detail as of 1/1/2014 ($B)

	Retained common equity		
	2013 Investor Day at 9.5%	2014 Investor Day at 10%	Comments
Legacy Portfolio & Model Enhancements	$19.1	$12.4	Accelerated benefits of short-term legacy portfolios and model enhancements
Private Equity/Other Corporate	8.9	13.2	Includes PE, retained operational risk capital, real estate, BOLI/COLI, DTA, and pension
Total Corporate	**$28.0**	**$25.7**	

A Corporate net income ~0+/- with legal expense offsetting return on Corporate assets

Note: Totals may not sum due to rounding

[1] Reflects 2013 net income divided by 2014 retained common equity

[2] Includes $3B of legacy mortgage servicing operational risk capital held at CCB level

[3] TTC Mortgage Banking ROE excludes liquidating portfolios

[4] TTC Auto & Student ROE excludes liquidating student lending portfolio

[5] Excludes FVA/DVA; CIB's pro forma ROE using reported net income was 14%; see note 5 on slide 49

[6] AM pretax margin target at 30-35% TTC; see note 6 on slide 49

[7] Cost of preferred embedded in LOB targets

[8] Total Firm goodwill of $48B

[9] Total Firm ROTCE

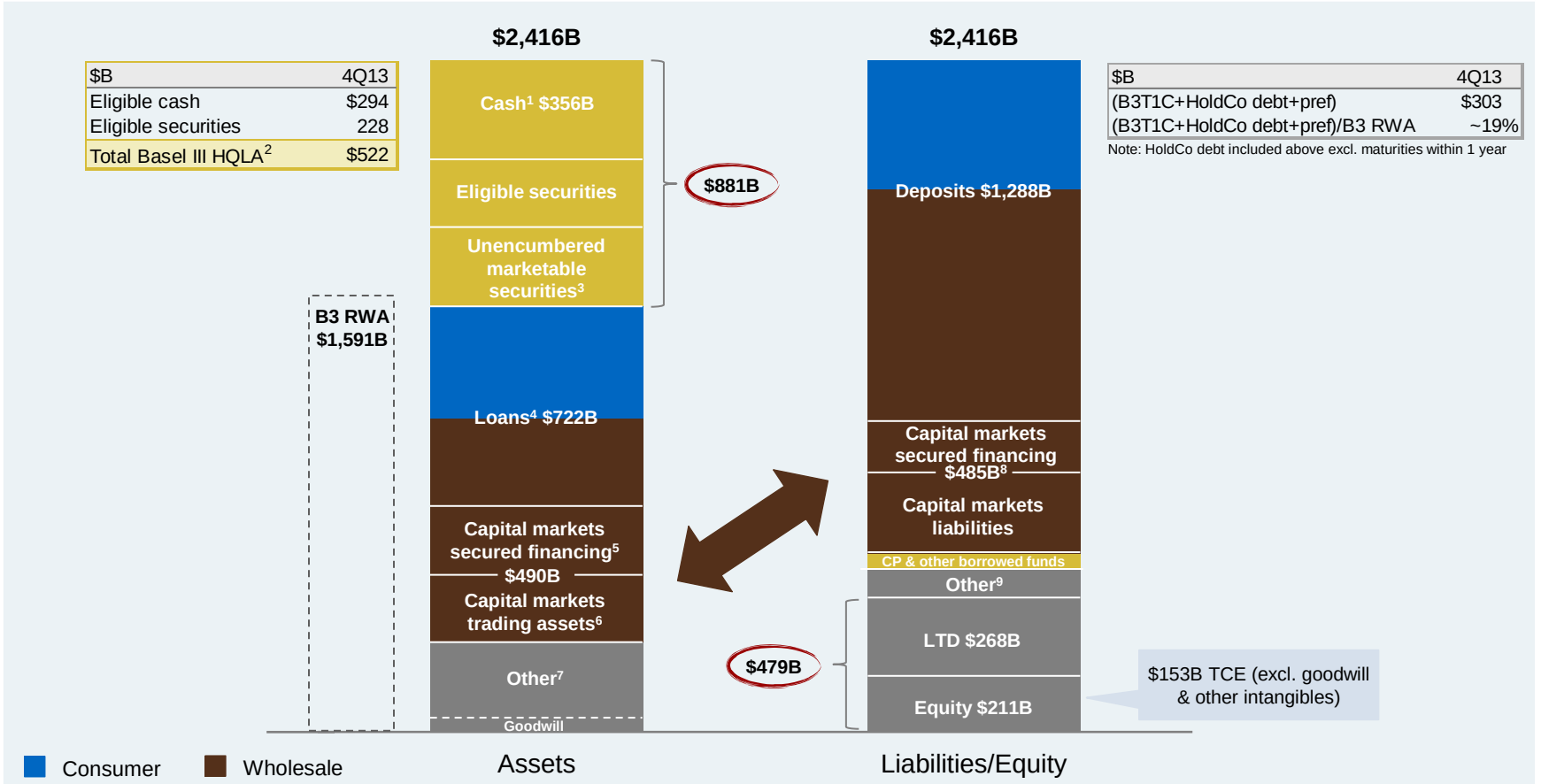
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JPMorgan Chase fortress balance sheet

Balance sheet/NII and credit update

JPMorgan Chase EOP balance sheet – December 31, 2013 ($B)



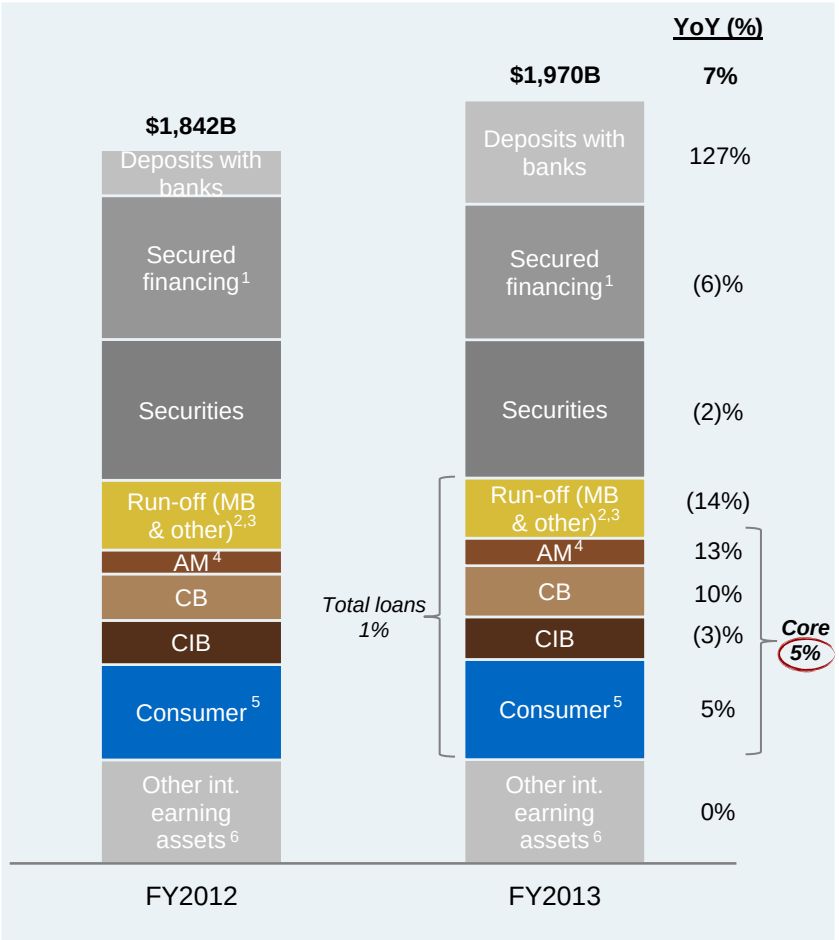
- ~$900B cash and high quality assets
- 57% loan-to-deposit ratio[10]
- HoldCo pre-funding[11]: greater than 18 months
- ~$30B wholesale ST unsecured debt[12]

Note: Totals may not sum due to rounding; for footnoted information, refer to slide 44

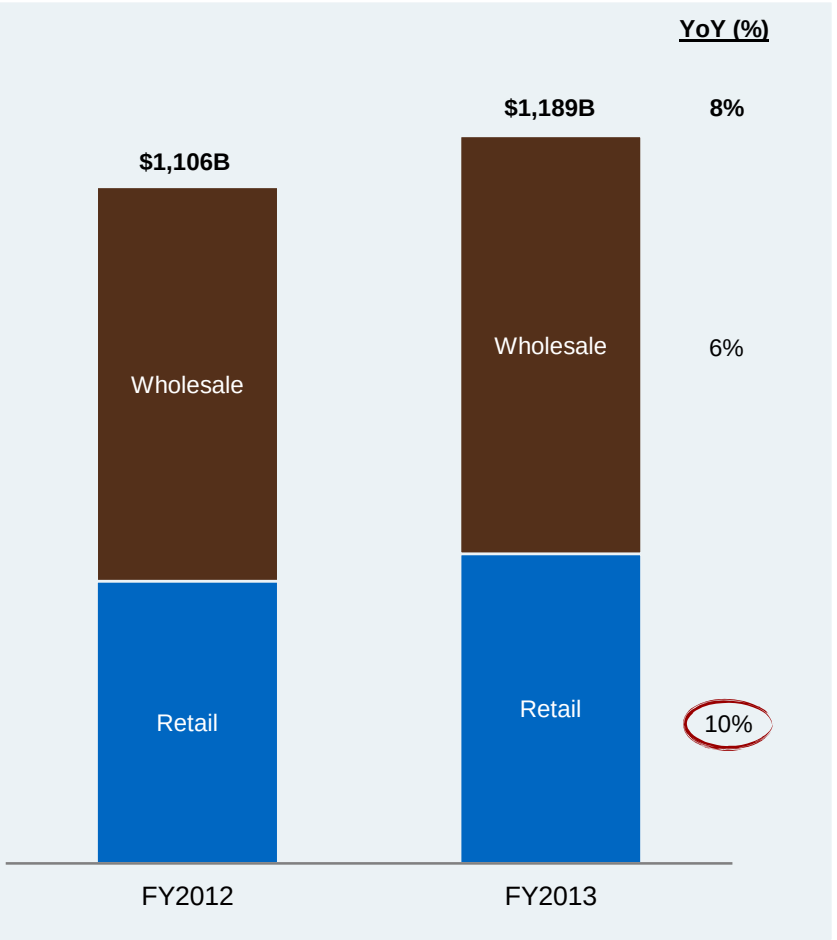
Interest-earning assets and deposit growth

Balance sheet/NII and credit update

Total average interest-earning assets ($B)



Total average deposits ($B)



Expect core loan growth of 5%+/- in 2014[7]

Note: For footnoted information, refer to slide 45

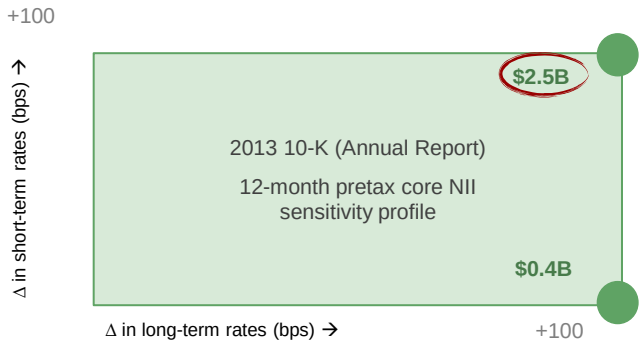
Illustrative earnings power of the balance sheet – NII

Balance sheet/NII and credit update

Commentary

- The average Firm NIM from 2005-2010 was 2.95%
  - 2013 NIM was 2.23% due to prolonged low rates, legacy loan run-off and liquidity requirements
- Firm NIM over the next rate cycle could be **~2.65%-2.75%**
  - Expect that normalization of rates and balance sheet mix will increase NIM ~60 bps+/-
    - Largely driven by front-end rates as the Fed tightens
  - Expect increased competition for deposits and loan run-off will further decrease expected NIM (15 bps+/-)

EaR – potential NII increase



Firm NIM simulation



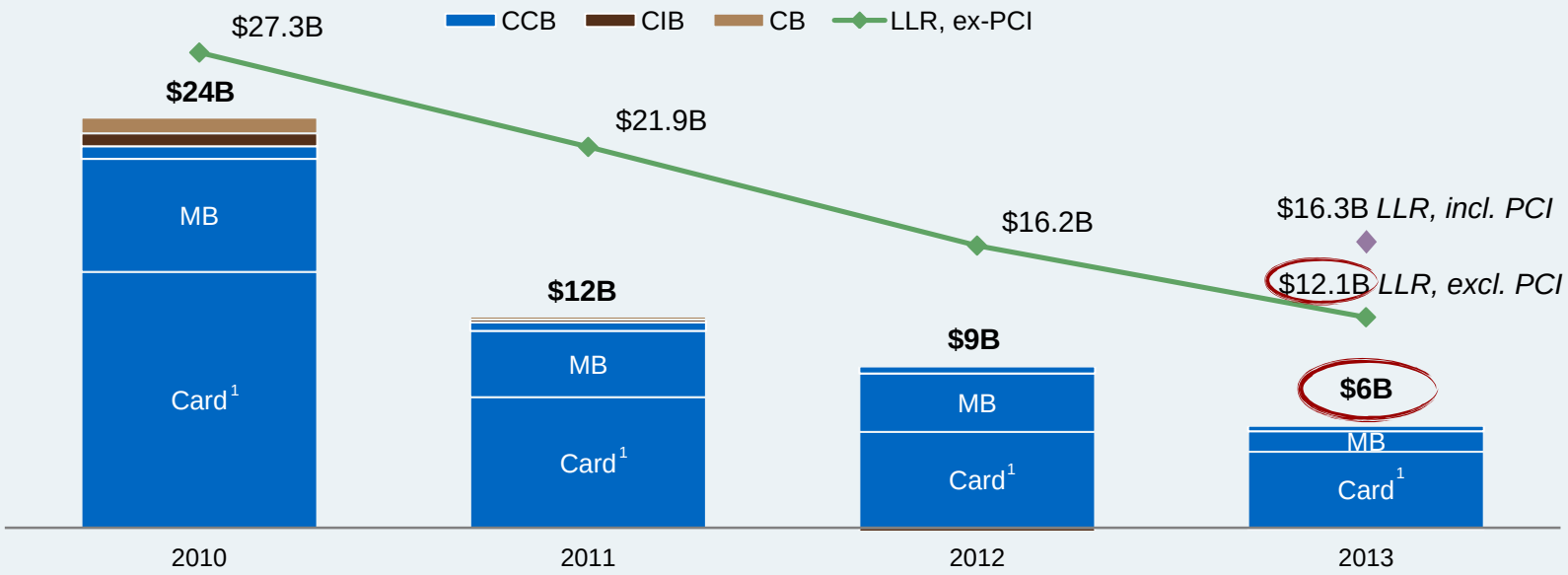
Expect core NIM and NII to be relatively stable over the next two years
Most significant upside will occur when front-end rates increase

Note: Managed basis

Credit quality trends

Balance sheet/NII and credit update

NCOs by line of business ($B)



Adjusted NPLs[2]	$15B	$10B	$8B	$6B	4Q13
NCO rate MB[3]	3.59%[4]	2.70%	2.10%[5]	0.96%[6]	0.57%[6]
NCO rate Card[7]	9.73%	5.44%	3.95%	3.14%	2.86%

Strong coverage and reserve position

- The Firm's net charge-offs and nonperforming loans are down 84%[8] and 52%[8], respectively, from peak levels
- MB NCI – reserve of $2.6B as of 2013; expect to reduce to $1.5B+/- by YE 2015
- MB PCI – reserve of $4.2B as of 2013
- Card – reserve of $3.8B as of 2013

Expect an incremental $1B+/- in releases over next two years[9] – majority in 2014
Expect $200mm+/- release for each MB and Card in 1Q14

Note: For footnoted information, refer to slide 46

Net charge-off trends and estimates

Balance sheet/NII and credit update

Through-the-cycle (TTC) net charge-off estimates

		2013 NCO rate (%)	4Q13 NCO rates (%)	TTC NCO rate (%)
CCB	MB[1]	0.96%[2]	0.57%[2]	0.25%+/-[3]
	Card[4]	3.14	2.86	3.75+/-
	Auto	0.31	0.39	0.75
	Business Banking[5]	0.92	1.11	1.00
CIB	CIB excl. trade and conduits	(0.16)	(0.09)	1.00
	Trade and conduits	(0.01)	0.03	0.05
CB	CB	0.03	0.07	0.50
AM	Lending	0.06	0.02	0.15
	Mortgage[6]	0.03	0.04	0.05
		~$6B NCOs		**~$7B NCOs**

Note: For footnoted information, refer to slide 47

Expect NCO rates in Card, CIB and CB to remain low in 2014 and 2015
Expect firmwide NCOs of $5B+/- in 2014 and <$5B in 2015

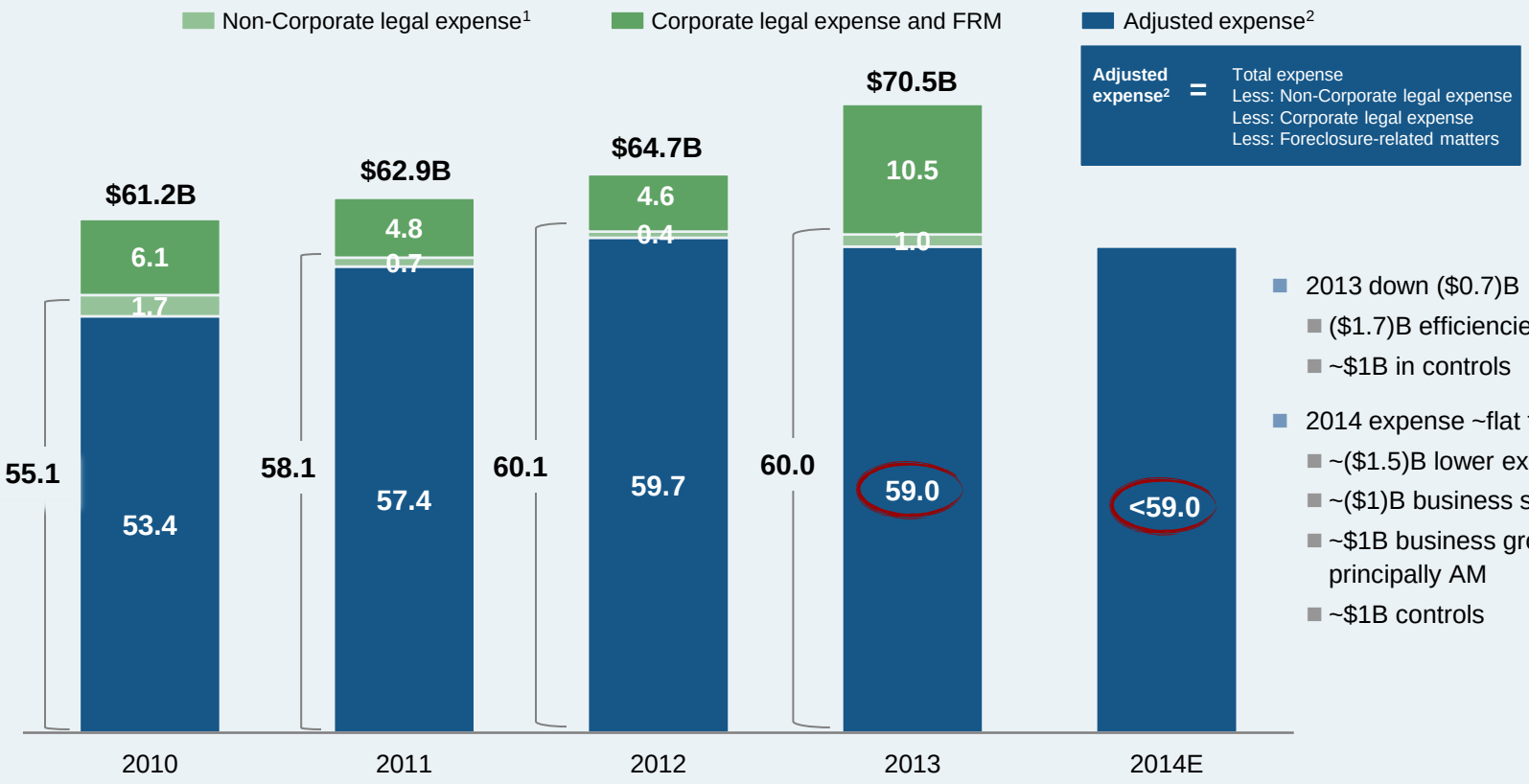
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Firmwide expense targets – strong expense discipline

Expense, investments and outlook

Firmwide adjusted expense ($B); headcount in 000s



- 2013 down ($0.7)B
  - ($1.7)B efficiencies offset by
  - ~$1B in controls
- 2014 expense ~flat to down
  - ~($1.5)B lower expense in MB[3]
  - ~($1)B business simplification
  - ~$1B business growth, principally AM
  - ~$1B controls

Adj. Overhead Ratio	52%	58%	58%	59%	
Total Headcount[4]	258	280	276	265	260
CCB[4]	158	177	173	157	149

- 2014 headcount down ~5K
- CCB headcount down ~8K in 2014

[1] Excludes FRM
[2] Adjusted expense newly defined as total expense, excluding total legal expense and FRM; former definition of adjusted expense only excluded Corporate legal expense and FRM
[3] MB expense reduction excludes the impact of $0.4B legal expense and $0.3B FRM in 2013
[4] Includes employees and contractors; 2013 headcount adjusted for ~1,250 reduction effective January 1, 2014

Business simplification

Expense, investments and outlook

Simplifying our business

- Exiting products non-core to our customers or with outsized operational risk – for example:
  - One Equity Partners
  - Physical commodities
  - Global Special Opportunities Group (GSOG)
  - Student lending originations
  - Canadian Money Orders
  - Co-branded business debit cards and gift cards
  - Rationalization of products in Mortgage Banking[1]
  - Identity theft protection
  - Credit insurance
- Discontinuing certain business with select clients:
  - Lending to check cashing businesses
  - Transaction services for ~500 Correspondent Banking clients
  - Checking accounts for certain foreign domiciled clients
  - Checking accounts for foreign Politically Exposed Persons

Financial impact of business simplification ($B)

	2014 impact	Run-rate impact
Revenue	$1.5	$2.8
Expense	(0.9)	(2.3)
Pre-tax income	0.6	0.4
Net income	$0.3	$0.3

Expense reductions lag revenue reductions

[1] Not included in the analysis – already captured in normalization of Mortgage Banking in the simulation on slide 25

Overview of select investments

Expense, investments and outlook

Expense and net income impact of cumulative spend from select investments ($mm)

LOB	Investment	Status	Comments	Target annual net income
CCB	Branch builds	✓	■ Portfolio of branches opened from 2002-2012 ■ Average branch contributes $1mm+ to pretax income when mature ■ 4-year+/- break-even and 7-year+/- payback for 2002-2012 portfolio	>$600
	Business Banking	✓	■ Expansion market branches fully staffed ■ Approaching core market productivity levels	600+/-
	Chase Private Client	✓	■ Added 2,100+ CPC locations since beginning of 2011 ■ 22K clients as of 2011; 100K+ clients as of 2012; 215K+ clients as of 2013 ■ $14B net new money in 2013	600+/-
CIB	OTC Clearing & Collateral Management	*In progress*	■ OTC Clearing has delivered a global platform and top 3 market share ■ Timing of steady state dependent on implementation of final EMEA & APAC rules	150+/-
	Global Prime Brokerage build-out	✓	■ Build out international platform to facilitate clients' regional strategies ■ Successful launch of international PB in EMEA in 2011; Asia launch in 2014	175+/-
	Global Corporate Bank	✓	■ Committed to meeting needs of international clients ■ ~200 bankers hired since 2009	600+/-
	Equities electronic trading	✓	■ Focused on building best-in-class electronic trading capabilities ■ Grew low-touch equities revenue at 21% CAGR since 2010	100+/-
CB	Middle Market expansion[1]	*Ongoing*	■ Expand CB coverage into new markets ■ New cities added in 2013 include Tacoma and Jacksonville ■ Continue to add ~200 clients per year	450+/-
AM	Private Bankers/ IM sales expansion IM business initiatives	*Ongoing*	■ Hired ~700 PB client advisors and ~300 IM sales people since beginning of 2010 ■ Expansion investments contributed net income of ~$100mm in 2013	800+/-

✓ *Indicates investment complete*

2013 expense[2]	~$2.6B
2013 net income	~$1B

~$4,100

Expect $3.5B+/- of net income in 2017 run-rate

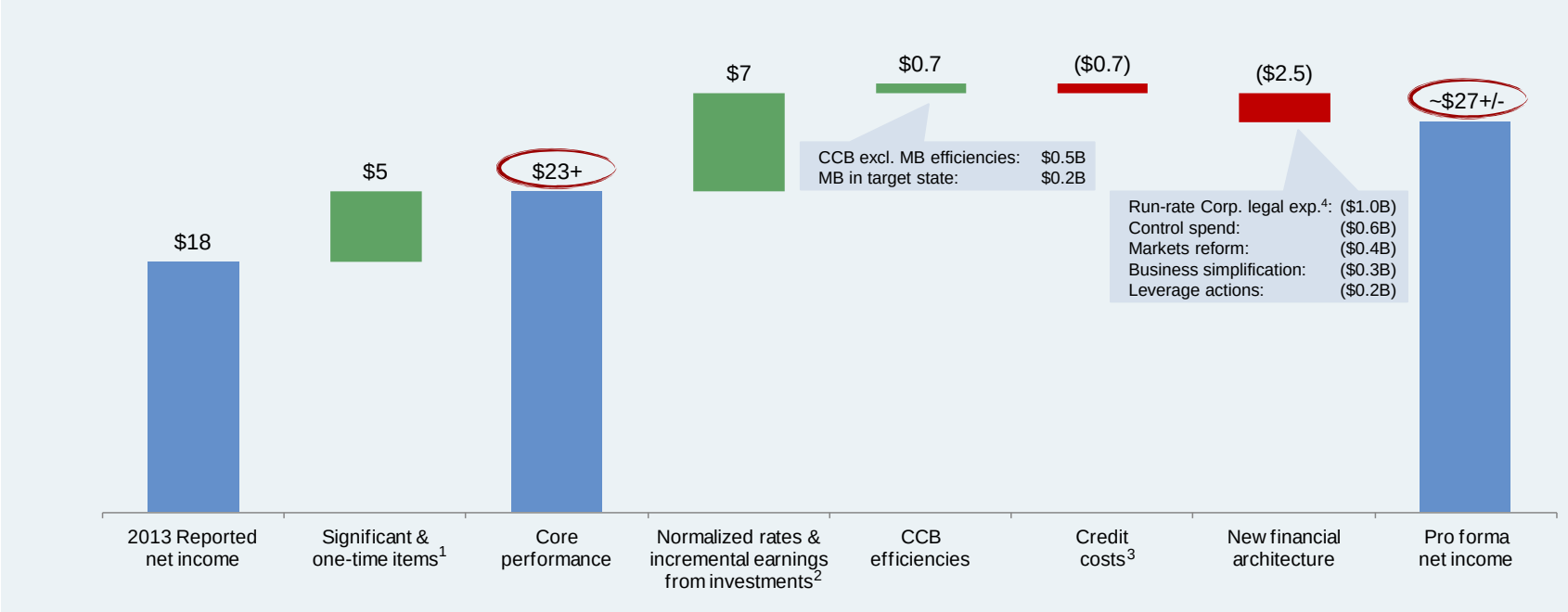
[1] Includes WaMu, as well as out-of-footprint expansion markets

[2] Expense for aggregate investments reflects expenses related to select investments with overhead ratios higher than business average

Earnings power – simulation

Expense, investments and outlook

Net income build simulation ($B) – 4-5 year horizon



RWA	**$1.6T**	**$1.6T**	**~$1.6T**
ROTCE	**11%**	**15%**	**15-16%**
Overhead ratio[5]	**71%**	**59%[6]**	**~55%+/-**

Note: Numbers may not sum due to rounding for illustrative purposes. Figures are tax effected at an incremental tax rate of 38%, where applicable

[1] Includes 2013 disclosed significant items. See note 2 on slide 48

[2] Represents estimated NII benefit from normalized rates (includes incremental charge-offs to support loan growth; overlap with investments and MB has been removed)

[3] Increase in NCOs due to normalized through-the-cycle rates and assumes no release

[4] Simulation includes assumed total pretax legal expense of $2B. Amount is for illustrative purposes only, and is not intended to be forward-looking guidance. Actual amounts may vary from assumed amount

[5] Managed basis

[6] Represents adjusted overhead ratio

Normalized rates combined with flat RWA delivers ROTCE of 15-16% and implied overhead ratio of ~55%+/-

Conclusion

Excellent client franchises

- Four best-in-class client franchises – each performing strongly
- Together driving significant synergies – diversification, complete platform, scale and efficiencies
- Demonstrated earnings capacity, resilience and superior returns
- Maintain best-in-class margins and improve operating leverage
- Experienced management teams with deep talent

Regulatory, control and simplification agendas

- Executing on our regulatory and control agendas
  - Significant effort – will make us a better company
- Business simplification agenda – reduce complexity and focus on core competencies

New financial architecture

- Optimize returns against capital targets
  - Manage at granular level – legal entity, sub-LOB, product and client level
  - Focus on impact to broader franchise and client relationships
- Continue progress towards Firm's capital targets while balancing capital returns
- Transition year – protect franchise value and future earnings power

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Jamie Dimon
Chairman and Chief Executive Officer

Ashley Bacon
Chief Risk Officer
21 years at JPM
21 in industry

Steve Cutler
General Counsel
7 years at JPM
13 in industry

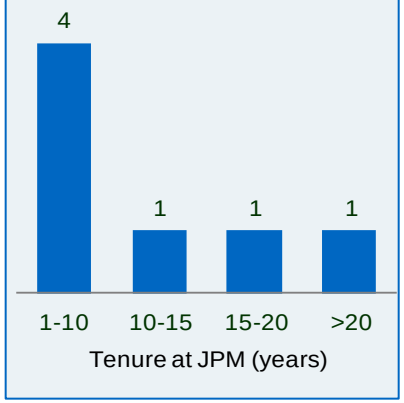
John Donnelly
Head of Human Resources
5 years at JPM
35 in industry

Marianne Lake
Chief Financial Officer
14 years at JPM
22 in industry

Matt Zames
Chief Operating Officer
9 years at JPM
21 in industry

Gordon Smith
CEO, Consumer & Community Banking
7 years at JPM
33 in industry

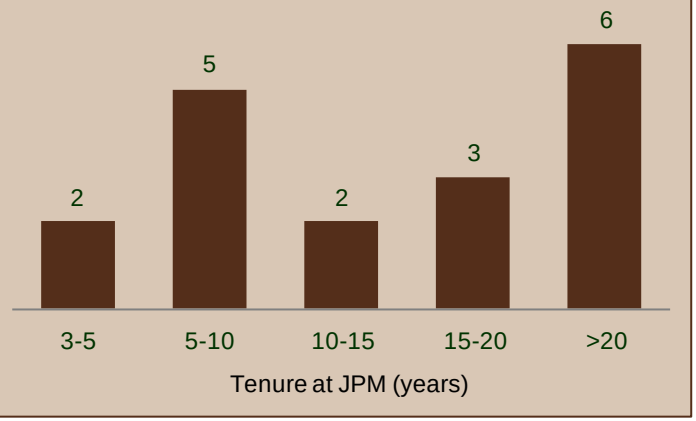
- 6 direct reports[1]
- Avg. industry experience ~24 years
- Avg. years at JPM ~12 yrs



Mike Cavanagh
Co-CEO, Corporate & Investment Bank
14 years at JPM
26 in industry

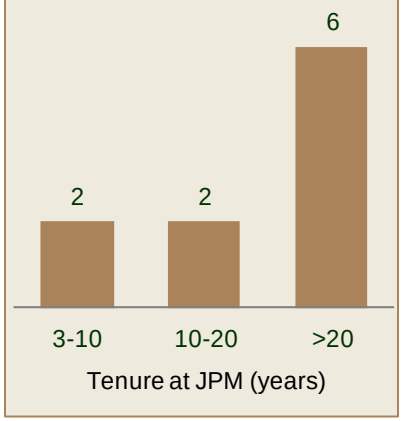
Daniel Pinto
Co-CEO, Corporate & Investment Bank
31 years at JPM
31 in industry

- 16 direct reports[1]
- Average industry experience ~25 years
- Average years at JPM ~16 years



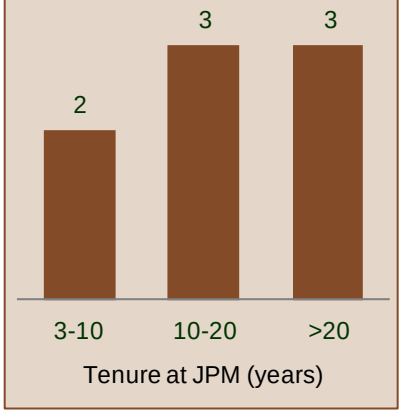
Doug Petno
CEO, Commercial Banking
25 years at JPM
25 in industry

- 9 direct reports[1]
- Avg. industry experience ~32 years
- Avg. years at JPM ~21 yrs



Mary Erdoes
CEO, Asset Management
18 years at JPM
24 in industry

- 7 direct reports[1]
- Avg. industry experience ~26 years
- Avg. years at JPM ~18 yrs



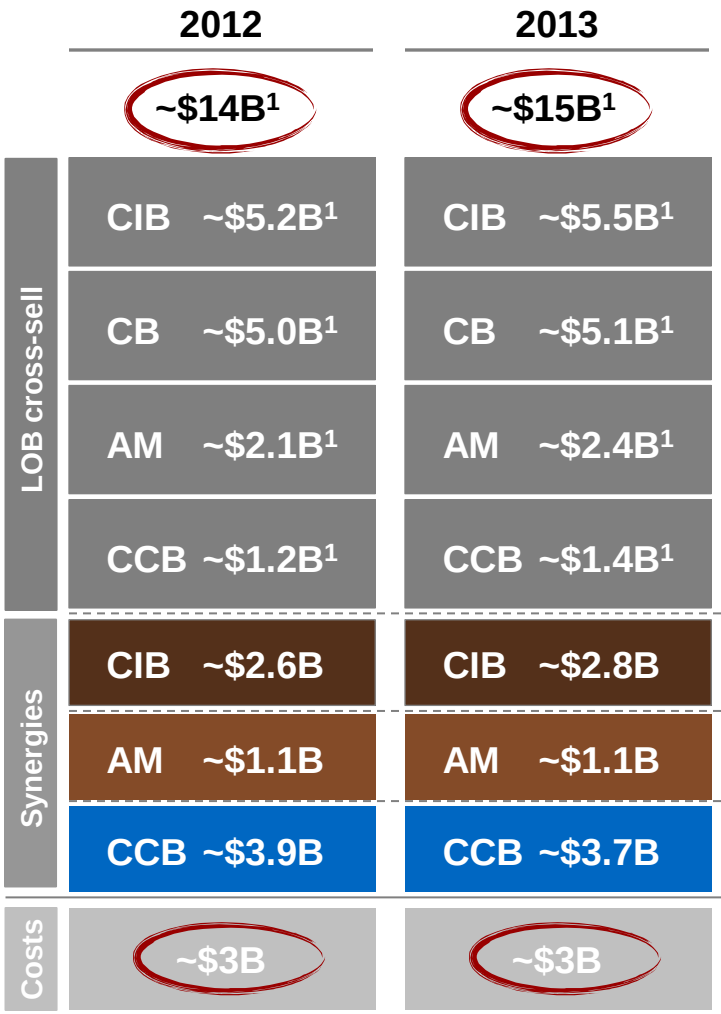
Attrition rates among best in industry – <4% over last year for Managing Directors/Senior Vice Presidents

Note: Years shown inside of boxes indicate tenure at JPM and years of industry experience; not all direct reports to Jamie Dimon are shown

[1] Direct reports include business heads only

Benefits of universal banking model continue to grow

Appendix – investor topics



Select revenue cross-sell examples (2013 data)

- CB and CIB cross-sell: ~$4.1B
  - ~$2.4B: TS revenue reported in CB (>80% of CB clients use TS products)
  - ~$1.7B: gross IB revenue from CB clients (29% of NA IB fees[2])
- AM and CIB cross-sell: ~$1.1B
  - AM is an important client of CIB's global custody and fund services
  - The Private Bank (PB) is a key distribution channel for CIB equity offerings
  - Referrals between CIB and PB result in incremental IB transactions/PB clients
- AM and CCB cross-sell: ~$0.7B – JPM IM products sold through branches (incl. CPC); leveraging PB platform to offer managed product solutions to CPC clients
- AM and CB cross-sell: ~$0.5B – Sale of IM products to CB clients
- CB and CCB cross-sell: ~$0.4B – Card Services revenue from CB clients; ~55% of CB clients visit a branch quarterly
- CIB and CCB cross-sell: ~$0.3B – Includes $0.2B of TS products sold through CBB clients

- ~$2.3B: Global Corporate Bank incremental revenue between 2009 and 2013
- ~$0.4B: Gross FX revenue generated by TSS clients

- ~$1.1B: IM products sold through the PB

- ~$1.6B: Credit cards sold through branches
- ~$0.3B: Products sold to Card customers
- ~$0.1B: Bus. Banking referrals to Paymentech
- ~$1.6B: Mortgage originations through branches

- Primarily procurement, also includes technology, operations and other

Other network benefits – branding, funding and earnings diversification

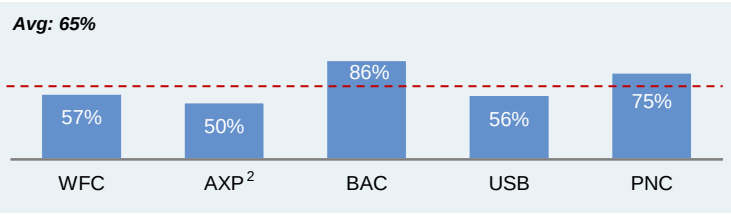
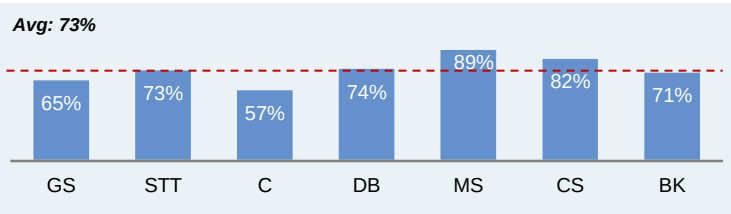
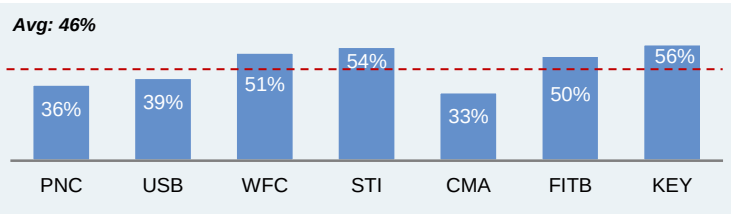
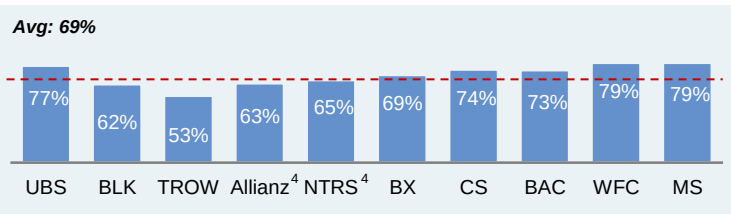
Note: Totals may not sum due to rounding

[1] Cross-sell revenue counted in both LOBs generating the revenue in partnership and therefore must be divided by 2 as they are totaled into the $14B for 2012 and $15B for 2013

[2] Calculated based on gross domestic IB fees for SLF, M&A, Equity Underwriting and Bond Underwriting

JPM efficiency versus best-in-class peers

Appendix – investor topics

	JPMorgan Chase	Best-in-class	
	JPM overhead ratio	Best-in-class peer[1] overhead ratios weighted by JPM revenue mix	Peer overhead ratios[1]
CCB	60%	54% WFC & AXP	
CIB	60%[3] (excl. FVA/DVA)	67% GS (excl. FVA/DVA) & STT	
CB	37%	37% Avg. of PNC & USB	
AM	71%	70% UBS WM & BLK	
Overhead ratio (excl. FVA/DVA)	69%[3]	69%[5]	

Note: JPM data presented on a managed basis; JPM and peer data represent full-year 2013 data, except where noted; all data for CIB and peer banking businesses is excl. FVA/DVA

[1] Peer data reflects JPM equivalent business segment results with the exception of Goldman Sachs, T. Rowe Price, Blackrock and Blackstone

[2] For American Express U.S. Card Services (USCS), estimated rewards expense is removed from expenses and netted against revenue, consistent with industry practice

[3] See note 5 on slide 49

[4] Allianz Asset Management and Northern Trust Personal Financial Services results as of 3Q13

[5] Best-in-class overhead ratio represents Wells Fargo Community Banking, American Express USCS, Goldman Sachs, State Street Investment Servicing, US Bancorp Wholesale Banking and CRE, PNC Corporate & Institutional Banking, UBS International Wealth Management and Wealth Management Americas and Blackrock weighted based on JPM's revenue mix

Basel III capital and liquidity – JPM well positioned

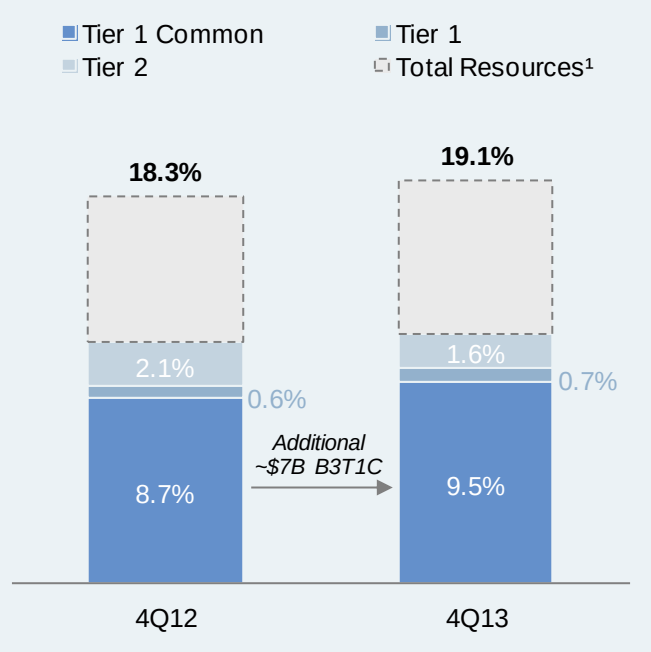
Appendix – investor topics

Commentary

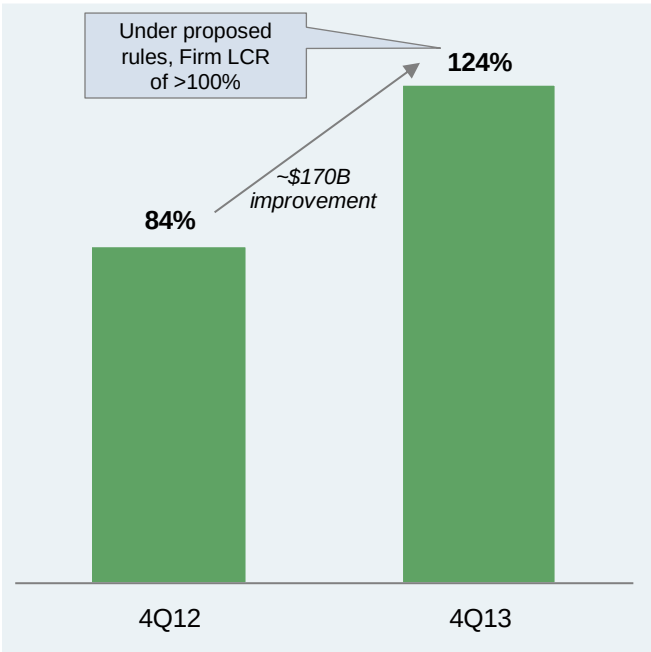
- 4Q13 estimated 9.5% Basel III Tier 1 Common Ratio
- Firm continues to maintain Available Resources[1] in anticipation of Orderly Liquidation Authority ("OLA") requirements
- Based on our understanding of current definitions, Firm is compliant with both LCR and NSFR requirements
- HoldCo pre-funding: greater than 18 months

Estimated capital and liquidity metrics

Basel III Capital (as % of RWA)[2]



Basel III LCR[3]



Basel III NSFR[4]



Higher capital and increased liquidity are key foundations of JPM's fortress balance sheet

[1] Include Basel III Tier 1 common equity, preferred and trust preferred securities, as well as holding company unsecured long-term debt with maturities greater than 1 year
[2] Using Advanced Approach method
[3] 4Q12 LCR calculation based on old Basel III rules. 4Q13 LCR calculation based on new Basel III rules published in January 2013
[4] Based on the Firm's current understanding of the proposed rules

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Managed financial results[1]

Firmwide results ($mm)	2011	2012	2013
Revenue (FTE)[1]	$99,767	$99,890	$99,798
Credit costs[1]	7,574	3,385	225
Expense	62,911	64,729	70,467
Reported net income	**$18,976**	**$21,284**	**$17,923**
Reported EPS	**$4.48**	**$5.20**	**$4.35**
ROE	11%	11%	9%
ROTCE[2]	15	15	11

Net income by lines of business ($mm)	2011	2012	2013
Consumer & Community Banking	$6,105	$10,551	$10,749
Corporate & Investment Banking	7,993	8,406	8,546
Commercial Banking	2,367	2,646	2,575
Asset Management	1,592	1,703	2,031
Corporate/Private Equity	919	(2,022)	(5,978)
Total Firm net income	**$18,976**	**$21,284**	**$17,923**

[1] See note 1on slide 48
[2] See note 4 on slide 49

Consumer & Community Banking[1]

$mm	2011	2012	2013
Net interest income	$30,305	$29,071	$28,474
Noninterest revenue	15,314	20,813	17,552
Revenue	$45,619	$49,884	$46,026
Expense	27,637	28,827	27,842
Credit costs	7,620	3,774	335
Net income	$6,105	$10,551	$10,749
Key drivers/statistics ($B)			
EOP Equity	$41.0	$43.0	$46.0
ROE	15%	25%	23%
Overhead ratio	61	58	60
Average loans	$447.2	$426.6	$408.6
Average deposits	382.7	413.9	453.3
Client investment assets (EOP)	137.9	158.5	188.8
Number of branches	5,508	5,614	5,630
Active mobile customers (000's)	8,203	12,359	15,629

[1] See note 1 on slide 48

Consumer & Community Banking

Consumer & Business Banking

$mm	2011	2012	2013
Net interest income	$10,732	$10,594	$10,566
Noninterest revenue	7,218	6,557	6,744
Revenue	$17,950	$17,151	$17,310
Expense	11,336	11,490	12,162
Credit costs	419	311	347
Net income	$3,699	$3,203	$2,881
Key drivers/statistics ($B)			
EOP Equity	$9.5	$9.0	$11.0
ROE	39%	36%	26%
Average total deposits	$360.8	$392.1	$434.6
Deposit margin	2.82%	2.57%	2.32%
Accounts[1] (mm)	26.6	28.1	29.4
Business Banking loan originations	$5.8	$6.5	$5.1
Business Banking loan balances (Avg)	17.1	18.1	18.7
Investment sales	22.7	26.0	35.1
Client investment assets (EOP)	137.9	158.5	188.8

[1] Includes checking accounts and Chase Liquid® cards beginning in the 2nd quarter of 2012
[2] Per compete.com as of December 2013
[3] Based on number of loans for SBA fiscal year 2013 (as of September 2013)

Leadership positions

- #1 in customer satisfaction among large banks in ACSI survey
- #1 ATM network
- #2 in branches
- #1 most visited banking portal – Chase.com[2]
- #1 SBA lender[3]
- Leading investment sales force with over 3,000 client advisors, $180B+ client investment assets and 2,149 Chase Private Client locations

Consumer & Community Banking

Mortgage Banking

$mm	2011	2012	2013
Mortgage Production			
Production-related revenue, excl. repurchase losses	$4,235	$6,570	$3,582
Production expense[1]	1,895	2,747	3,088
Income, excl. repurchase losses	$2,340	$3,823	$494
Repurchase losses	(1,347)	(272)	331
Income/(loss) before income tax expense/(benefit)	$993	$3,551	$825
Mortgage Servicing			
Net servicing-related revenue	$2,620	$2,957	$2,869
Default servicing expense	3,814	3,707	2,069
Core servicing expense	1,031	1,033	904
Servicing expense	$4,845	$4,740	$2,973
Income/(loss), excl. MSR risk management	(2,225)	(1,783)	(104)
MSR risk management	(1,572)	616	(268)
Income/(loss) before income tax expense/(benefit)	($3,797)	($1,167)	($372)
Real Estate Portfolios			
Revenue	$4,592	$4,092	$3,512
Expense	1,521	1,653	1,553
Net charge-offs[2]	3,805	3,341	1,107
Change in allowance[2]	(230)	(3,850)	(3,800)
Credit costs	3,575	(509)	(2,693)
Income/(loss) before income tax expense/(benefit)	($504)	$2,948	$4,652
Mortgage Banking net income/(loss)	($2,138)	$3,341	$3,082
Key drivers/statistics ($B)[3]			
EOP Equity	$15.5	$17.5	$19.5
ROE	(14)%	19%	16%
Mortgage originations	$145.6	$180.8	$165.5
EOP third-party mortgage loans serviced	902.2	859.4	815.5
EOP NCI owned portfolio[3]	132.5	117.6	115.0
ALL/EOP loans[3,4]	6.58%	4.14%	2.23%
Net charge-off rate[2,3,4]	2.70	2.68	0.96

[1] Includes the provision for credit losses associated with Mortgage Production
[2] Excludes PCI write-offs of $53 million in 2013
[3] Real Estate Portfolios only
[4] Excludes the impact of purchased credit-impaired loans acquired as part of the WaMu transaction. The allowance for loan losses was $4.2B, $5.7B and $5.7B for these loans at the end of 2013, 2012 and 2011, respectively
[5] Origination & Servicer rankings as of 4Q13 Inside Mortgage Finance, Retail Originations as of 3Q13 Inside Mortgage Finance

Leadership positions

- #2 mortgage originator[5]
- #3 retail mortgage originator[5]
- #2 mortgage servicer[5]
- We are working to help homeowners and prevent foreclosures; offered over 1.5mm mortgage modifications and completed ~725K since 2009

Consumer & Community Banking

Card, Merchant Services & Auto

$mm	2011	2012	2013
Revenue	$19,141	$18,770	$18,690
Expense	8,045	8,216	8,078
Net charge-offs[1]	7,511	5,509	4,370
Change in allowance	(3,890)	(1,556)	(1,701)
Credit costs	$3,621	$3,953	$2,669
Net income	$4,544	$4,007	$4,786
EOP Equity	16,000	16,500	15,500
ROE	28%	24%	31%
Card Services – Key drivers/statistics ($B)			
Average loans	$128.2	$125.5	$123.6
Sales volume[2]	343.7	381.1	419.5
Net revenue rate	12.35%	12.35%	12.49%
Net charge-off rate	5.44	3.95	3.14
30+ Day delinquency rate	2.81	2.10	1.67
# of accounts with sales activity (mm)[2]	30.7	30.6	32.3
% of accounts acquired online[2]	32%	51%	55%
Merchant Services – Key drivers ($B)			
Merchant processing volume	$553.7	$655.2	$750.1
# of total transactions	24.4	29.5	35.6
Auto – Key drivers ($B)			
Average loans	$47.0	$48.4	$50.7
Originations	21.0	23.4	26.1

[1] Net charge-offs and the net charge-off rate for full year 2012 included $53 million of charge-offs of Chapter 7 loans
[2] Excludes Commercial Card
[3] Based on disclosures by peers and internal estimates as of 4Q13
[4] Based on Visa data as of 4Q13
[5] Based on Nilson report ranking of largest merchant acquirers for 2012
[6] As of December 31, 2013 data per Autocount

Leadership positions

- #1 credit card issuer in the U.S. based on loans outstanding[3]
- #1 Global Visa issuer based on consumer and business credit card sales volume[4]
- #1 U.S. co-brand credit card issuer[3]
- #2 wholly-owned merchant acquirer[5]
- #3 non-captive auto lender[6]

Corporate & Investment Bank[1]

$mm	2011	2012	2013
Corporate & Investment Bank revenue	$33,984	$34,326	$34,225
Investment banking fees	5,859	5,769	6,331
Treasury services	3,841	4,249	4,135
Lending[2]	1,054	1,331	1,595
Total Banking	**10,754**	**11,349**	**12,061**
Fixed income markets	14,784	15,412	15,468
Equity markets	4,476	4,406	4,758
Securities services	3,861	4,000	4,082
Credit Adjustments & Other[3]	109	(841)	(2,144)
Total Markets & Investor Services	**23,230**	**22,977**	**22,164**
Credit costs	(285)	(479)	(232)
Expense	21,979	21,850	21,744
Net income	$7,993	$8,406	$8,546

Key statistics ($B)[4]			
EOP equity	$47.0	$47.5	$56.5
ROE[5]	17%	18%	15%
Overhead ratio[6]	65	64	64
Comp/revenue[7]	34	33	32
EOP loans	$114	$115	$108
Average client deposits	318.8	355.8	383.7
Assets under custody ($T)	16.9	18.8	20.5
ALL/EOP loans ex-conduits and trade[8]	3.06%	2.52%	2.02%
Net charge-off/(recovery) rate	0.18	(0.26)	(0.07)
Average VaR ($mm)	$76	$96	$47

[1] See notes 1 and 5 on slides 48 and 49, respectively
[2] Lending revenue includes net interest income, fees, gains or losses on loan sale activity, gains or losses on securities received as part of a loan restructuring, and the risk management results related to the credit portfolio (excluding trade finance)
[3] Credit Adjustments & Other primarily includes net credit portfolio credit valuation adjustments ("CVA") and associated hedging activities; debit valuation adjustments ("DVA") on structured notes and derivative liabilities; funding valuation adjustments ("FVA") on OTC derivatives and structured notes; and nonperforming derivative receivable results
[4] Actual numbers for all periods, not over/under
[5] Return on equity excluding both FVA (effective 4Q13) and DVA, a non-GAAP financial measure, was 17%, 19% and 15% for FY2013, FY2012 and FY2011, respectively
[6] Overhead ratio excluding FVA (effective 4Q13) and DVA, a non-GAAP financial measure, was 60%, 62% and 68% for FY2013, FY2012 and FY2011, respectively
[7] Compensation expense as a percentage of total net revenue excluding both FVA (effective 4Q13) and DVA, a non-GAAP financial measure, was 30%, 32% and 36% for FY2013, FY2012 and FY2011, respectively
[8] ALL/EOP Loans as reported was 1.15%, 1.19% and 1.35% for FY2013, FY2012 and FY2011, respectively
[9] Represents FY2013 rank of JPM Fixed Income Markets revenue of 10 leading competitors (which have released FY2013 as of 2/18/14; HSBC TTM 3Q13 basis)

Leadership positions

Corporate & Investment Bank

- 48% of revenue is international for FY2013
- International deposits increased 46% from FY2010 driven by growth across regions
- International loans up 32% from FY2010

Banking

- Improved ranking to #2 in Global Equity and Equity-related
- #1 in combined Fedwire and CHIPS volume
- FY2013 total international electronic funds transfer volume up 40% from FY2010

Markets & Investor Services

- #1 Fixed income markets revenue share of top 10 investment banks[9]
- International AUC up 46% from FY2010; represents 45% of FY2013 total AUC
- JPM ranked #1 for FY2013, FY2012, FY2011 and FY2010 for both All-America Fixed Income Research and Equity Research

Commercial Banking[1]

$mm	2011	2012	2013
Revenue	$6,418	$6,825	$6,973
Middle Market	2,803	2,971	3,019
Corp. Client Banking	1,603	1,819	1,824
Comm. Term Lending	1,168	1,194	1,215
Real Estate	416	438	549
Other	428	403	366
Expense	2,278	2,389	2,610
Credit Costs	208	41	85
Net Income	$2,367	$2,646	$2,575
Key statistics ($B)			
Avg Loans	$104.2	$120.1	$132.0
EOP Loans	112.0	128.2	137.1
Avg client deposits[2]	174.7	195.9	198.4
Investment banking revenue, gross[3] ($mm)	1,421	1,597	1,676
Allowance for loan losses	2.6	2.6	2.7
Nonaccrual loans	1.1	0.7	0.5
Net charge-off rate[4]	0.18%	0.03%	0.03%
ALL/loans[4]	2.34%	2.06%	1.97%
ROE[5]	30%	28%	19%
Overhead ratio	35%	35%	37%
EOP equity	$8.0	$9.5	$13.5

Leadership positions

- Lowest net charge-off ratio in peer group[6]
- #1 traditional Middle Market syndicated lender in the U.S.[7]
- #1 multifamily lender in the U.S.[8]

[1] See note 1 on slide 48
[2] Includes deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs
[3] Represents the total revenue related to investment banking products sold to CB clients
[4] Loans held-for-sale and loans at fair value were excluded when calculating the loan loss coverage ratio and net charge-off rate
[5] Calculated based on average equity
[6] Based on average net charge-off ratio from 2006-2013 for CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, PNC, STI, USB, WFC and KEY
[7] Thomson Reuters FY2013. Traditional Middle Market is defined as credit facilities of <$100mm from clients with <$500mm in revenue
[8] SNL Financial based on FDIC data as of 3Q13

Asset Management[1]

$mm	2011	2012	2013
Revenue	$9,543	$9,946	$11,320
Private Banking	5,116	5,426	6,020
Institutional	2,273	2,386	2,536
Retail	2,154	2,134	2,764
Credit Costs	$67	$86	$65
Expense	7,002	7,104	8,016
Net Income	$1,592	$1,703	$2,031
Key statistics ($B)			
EOP Equity	$6.5	$7.0	$9.0
ROE[2]	25%	24%	23%
Pretax margin[3]	26	28	29
Assets under management	$1,336	$1,426	$1,598
Client assets	1,921	2,095	2,343
Average loans	50.3	68.7	86.1
EOP loans	57.6	80.2	95.4
Average deposits	106.4	129.2	139.7

[1] See note 1 on slide 48
[2] Calculated based on average equity
[3] See note 6 on slide 49
[4] Source: iMoneyNet, 2013
[5] Source: Euromoney, 2013
[6] Source: Institutional Investor, 2013
[7] Source: Pensions & Investments, 2013
[8] Source: Absolute Return, 2013
[9] Source: Strategic Insight, 2013
[10] Source: Thomson Reuters Extel, 2013
[11] Source: The Asset, 2013

Leadership positions

- #1 Institutional Money Market Fund Manager Worldwide[4]
- #1 Ultra-High-Net-Worth Global Private Bank[5]
- #1 U.S. Mid Cap Value Equity Manager of the Year[6]
- #1 U.S. Real Estate Money Manager[7]
- #2 Hedge Fund Manager[8]
- #1 active equity mutual fund flows in the U.S. and globally[9]
- Top European Buyside Firm[10]
- Best Asset Management Company for Asia[11]

Corporate/Private Equity[1]

($mm)	2011	2012	2013
Private Equity	$391	$292	$285
Treasury and CIO	1,349	(2,093)	(676)
Other Corporate	(821)	(221)	(5,587)
Net income/(loss)	$919	($2,022)	($5,978)

[1] See note 1 on slide 48

Notes on slide 4 – Maintain excellent client-based franchises

1. CAGR 2010-2013 for mortgage originations was 2%
2. Represents client deposits and other third-party liabilities
3. Represents total CIB trading and Credit Portfolio VaR
4. As of FY2012
5. By both J.D. Power (April 2013) and the American Customer Satisfaction Index (ACSI) for the second straight year (December 2012 and 2013); Chase ranked #4 by J.D. Power (April 2013) for customer satisfaction in retail banking among large bank peers
6. Based on FDIC 2013 Summary of Deposits survey per SNL Financial
7. Based on disclosures by peers and internal estimates as of 4Q13; based on loans outstanding
8. Dealogic FY2013 wallet rankings for Banking and Coalition 3Q13 YTD rankings for Markets & Investor Services; includes Origination & Advisory, Equities and FICC
9. Dealogic for 2013 (vs. 7.5% in 2012)
10. Rank of JPM Markets and Fixed Income Markets revenue of 10 leading competitors based on reported information, excluding FVA/DVA
11. As of FY2013
12. Based on gross IB fees for SLF, M&A, Equity Underwriting and Bond Underwriting as of FY2013

Notes on slide 7 – New financial architecture

Note: LCR – Liquidity Coverage Ratio; NSFR – Net Stable Funding Ratio; B3T1C – Basel III Tier 1 common CCAR – Comprehensive Capital Analysis Review; SLR – Supplementary Leverage Ratio; OLA – Orderly Liquidity Authority; SPOE – Single Point of Entry

1. Basel rules finalized. U.S. NPR released October 2013; final rule pending
2. Monitor Basel standardized approaches

Notes on slide 16 – JPMorgan Chase fortress balance sheet

1. In addition to eligible cash included in High Quality Liquid Assets ("HQLA"), cash balance includes non-operational deposits with third party banks and float (considered inflows under Basel III Liquidity Coverage Ratio ("LCR")), as well as operational cash primarily used for settlement purposes
2. HQLA is the estimated amount of assets the Firm believes will qualify for inclusion in the Basel III LCR
3. The Firm has approximately $282 billion of unencumbered marketable securities, such as equity and fixed income securities available to raise liquidity if required
4. Net of allowance for loan losses
5. Other capital secured financing includes resales, securities borrowed and cash and due from banks from CIB not included in the $881 billion total cash and unencumbered securities
6. Includes CIB trading assets and derivatives receivables
7. Includes other assets, other intangible assets, MSR, premises and equipment, accrued interest and accounts receivable and non-CIB trading assets
8. Includes trading liabilities, Fed funds purchased and securities loaned or sold under repurchase agreements, VIEs, other borrowed funds and other liabilities all in CIB and derivatives payable
9. Includes accounts payable and other liabilities, Fed funds purchased and securities loaned or sold under repurchase agreements and VIEs (excluding CIB)
10. Loan-to-deposit ratio is calculated on a gross loans basis
11. Number of months of pre-funding: the Firm targets pre-funding of the parent holding company to ensure that both contractual and non-contractual obligations can be met for at least 18 months assuming no access to wholesale funding markets
12. Includes wholesale CP funding and a portion of other borrowed funds, which are unsecured

Notes on slide 17 – Interest-earning assets and deposit growth

1. Includes federal funds sold and securities purchased under resale agreements and securities borrowed
2. MB run-off portfolio includes WaMu purchased credit-impaired, discontinued products, broker originated loans, limited documentation loans, and certain loans with effective combined loan to value ratios greater than 80%
3. Other includes Card run-off portfolio, including certain legacy WaMu loans, legacy balance transfer programs and terminated partner portfolios (e.g., Kohl's), and CBB run-off portfolio, including discontinued products
4. Includes Wholesale loans originated by AM and other Wholesale loans that are held in Corporate
5. Includes CBB, MB and Card, Merchant Services & Auto loans and prime mortgage loans held by AM and Corporate that are classified as Consumer loans (classification is consistent with SEC filings)
6. Includes trading assets (debt instruments) and other assets (incl. margin loans)
7. Will depend on decisions to retain or sell mortgage loans

Notes on slide 19 – Credit quality trends

1. Card, Merchant Services & Auto
2. 2012 NPLs are impacted by regulatory guidance issued in the first quarter of 2012 as a result of which the Firm began reporting performing junior liens that are subordinate to nonaccrual senior liens as nonaccrual loans and by regulatory guidance issued in the third quarter of 2012 requiring loans not reaffirmed by the borrower and discharged under Chapter 7 bankruptcy to be reported as nonaccrual loans. For reference, reported NPLs were $14,841mm, $9,993mm, $10,892mm and $8,540mm for 2010, 2011, 2012 and 2013, respectively
3. Represents Real Estate Portfolios (“REP”) only; excludes the impact of purchased credit-impaired loans acquired as part of the WaMu transaction
4. Excludes a one-time $632mm adjustment related to the timing of when the Firm recognizes charge-offs on delinquent loans
5. Excludes the effect of incremental net charge-offs based on regulatory guidance
6. Excludes PCI write-offs of $53mm
7. Represents Credit Card only; excludes loans held-for-sale
8. Based on peak levels of NCOs and reported NPLs in 3Q09
9. Represents net reduction to reserves

Notes on slide 20 – Net charge-off trends and estimates

1. Represents Real Estate Portfolios (“REP”) only; excludes the impact of purchased credit-impaired loans acquired as part of the WaMu transaction
2. Excludes PCI write-offs of $53mm
3. TTC NCO rate of 0.25%+/- will depend on portfolio mix of mortgage and home equity
4. Excludes loans held-for-sale
5. CBB reported NCO rate was 1.79% in 2013 and 2.13% in 4Q13, including Business banking and the impact of retail overdraft losses
6. Includes mortgages originated in PB but held in CIO

Notes

Notes on non-GAAP financial measures

1. In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax exempt securities is presented in the managed results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

2. The Firm presents revenue, credit costs, expense, net income and earnings per share excluding certain reported significant items. These measures should be viewed in addition to, and not as a substitute for, the Firm's reported results. Management believes this information helps investors understand the effect of these items on reported results and provides an additional presentation of the Firm's performance. The tables below provide a reconciliation of reported results to these non-GAAP measures.

2013	Revenue	Credit costs	Expense	Net income	Reported EPS
Reported	$99,798	($225)	($70,467)	$17,923	$4.35
Adjustments:					
Gain on sale of Visa shares	(1,310)			(812)	(0.21)
Gain on sale of One Chase Manhattan Plaza	(493)			(306)	(0.08)
FVA/DVA	1,912			1,221	0.31
Reduced reserves in CCB		(5,500)		(3,409)	(0.86)
Firmwide legal expense (a)			847	1,052	0.27
Corporate legal expense (b)			9,720	7,572	1.92
Adjusted	$99,907	($5,725)	($59,900)	$23,241	$5.70

(a) 4Q13
(b) 2Q13 and 3Q13

2012	Revenue	Credit costs	Expense	Net income	Reported EPS
Reported	$99,890	($3,385)	($64,729)	$21,284	$5.20
Adjustments:					
WaMu bankruptcy settlement - Merger-related	(1,126)			(687)	(0.17)
DVA	930			577	0.15
CIO trading losses	5,787			3,588	0.90
CIO securities gains	(1,013)			(628)	(0.16)
Treasury extinguishment gains on redeemed TruPS	(888)			(551)	(0.14)
Merger-related – Maiden Lane B-Note	(545)			(338)	(0.08)
Reduced reserves in CCB		(4,625)		(2,867)	(0.72)
Foreclosure-related matters			900	558	0.14
Corporate legal expense			3,198	1,983	0.50
Benefit from tax adjustments				(620)	(0.16)
Adjusted	$103,035	($8,010)	($60,631)	$22,299	$5.46

Notes

Notes on non-GAAP financial measures (cont'd)

3. Adjusted expense, a non-GAAP financial measure, excludes firmwide legal expense and expense related to foreclosure-related matters ("FRM"). Where indicated, this definition formerly only excluded Corporate legal expense and disclosed FRM. Management believes this information helps investors understand the effect of these items on reported results and provides an alternate presentation of the Firm's performance.

4. Tangible common equity ("TCE"), return on tangible common equity ("ROTCE"), tangible book value per share ("TBVPS"), Tier 1 common under Basel I and III rules, Tier 1 capital under Basel III rules, and the supplementary leverage ratio ("SLR") are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's earnings as a percentage of TCE. TBVPS represents the Firm's tangible common equity divided by period-end common shares. Tier 1 common under Basel I and III rules, and Tier 1 capital and the SLR under Basel III rules, are used by management, bank regulators, investors and analysts to assess and monitor the Firm's capital position and liquidity. TCE, ROTCE, and TBVPS are meaningful to the Firm, as well as analysts and investors in assessing the Firm's use of equity. For additional information on Tier 1 common under Basel I and III, and Tier 1 capital and the SLR under Basel III rules, see Regulatory capital on pages 161-165 of JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2013. All of the aforementioned measures are useful to the Firm, as well as analysts and investors, in facilitating comparisons of the Firm with competitors.

5. CIB provides several non-GAAP financial measures which exclude the impact of FVA (effective Q4 2013) and DVA on: net revenue, net income, overhead ratio, compensation ratio and return on equity. Further, the impact of FVA/DVA is excluded from the calculation of the firmwide overhead ratio. These measures are used by management to assess the underlying performance of the business and for comparability with peers. The ratio for the allowance for loan losses to period-end loans is calculated excluding the impact of trade finance loans and consolidated Firm-administered multi-seller conduits, to provide a more meaningful assessment of CIB's allowance coverage ratio.

Additional notes on financial measures

6. Pretax margin represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is, therefore, another basis that management uses to evaluate the performance of AM against the performance of their respective peers.

CONSUMER & COMMUNITY BANKING

Gordon Smith, Chief Executive Officer Consumer & Community Banking

February 25, 2014

JPMorgan Chase & Co.

Agenda

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The Chase Consumer & Community Banking ("CCB") franchise has leadership positions across all its businesses

Strong financial returns	■ FY 2013 ROE: CCB: 23%; Consumer & Business Banking ("CBB"): 26%; Mortgage Banking: 16%; Card, Merchant Services & Auto: 31%
Powerful customer franchise	■ Consumer relationships with almost half of U.S. households ■ #1 in customer satisfaction among the largest banks for the 2nd year in a row[1]
Firmwide capabilities to meet customer needs	■ Chase Private Client integration with J.P. Morgan Private Bank investments platform ■ Business Banking access to Commercial Bank specialty lending and Treasury Services
Attractive footprint	■ Branch network concentrated in the highest growth U.S. markets ■ #1 ATM and #2 retail branch network for the 2nd year in a row[2]
Leading position in digital banking	■ #1 online financial services destination (Chase.com)[3] and #1 mobile banking functionality[4]
World-class payments franchise	■ #1 in total U.S. credit and debit payments volume[5] ■ #2 wholly-owned merchant acquirer[6] ■ Proprietary end-to-end payments solution
National, scale lending businesses	■ #1 credit card issuer in the U.S. based on loans outstanding[7] and #1 U.S. co-brand credit card issuer[7] ■ #2 mortgage originator[8] and servicer[8] ■ #3 non-captive auto lender[9]

Note: For footnoted information, refer to Appendix

The underlying performance of the business is strong

Consumer & Community Banking lines of business drivers				
$ in billions, except where otherwise noted		**2012**	**2013**	**YoY Δ**
Consumer Banking	Households (mm)	21.2	22.3	5%
	Deposits (average)	$320	$354	11%
	Client investment assets	$159	$189	19%
Business Banking	Deposits (average)	$72	$81	13%
	Loans (end of period)[1]	$19	$19	-
Mortgage Banking	Total mortgage originations	$181	$166	(8%)
	Purchase originations	$45	$63	40%
	Refinance originations	$136	$103	(24%)
	Third-party mortgage loans serviced (end of period)	$859	$816	(5%)
	Real Estate Portfolios net charge-offs[2]	$3.3	$1.1	(67%)
Card Services	Accounts with sales activity[3] (mm)	30.6	32.3	6%
	New accounts opened[3] (mm)	6.7	7.3	9%
	Sales volume[3]	$381	$420	10%
	End of period loans outstanding	$128	$128	-
	Net charge-off rate[4]	3.95%	3.14%	
Merchant Services	Merchant processing volume	$655	$750	14%
Auto	Auto originations	$23	$26	12%
	Loans (end of period)	$50	$53	6%

[1] Excludes Small Business Credit Card
[2] Excludes purchased credit-impaired (PCI) loans; 2013 actuals exclude PCI write-offs of $53mm
[3] Excludes Commercial Card
[4] Excludes held-for-sale loans

Performance targets

Consumer & Community Banking				
		2013 actuals	2013 Investor Day targets	Targets
Consumer & Business Banking	ROE	26%	30% +	30% +
Mortgage Banking	Net charge-off rate[1]	0.96%	0.35% +/-	0.25% +/-[2]
	ROE	16%	15% +/-	15% +/-[3]
Card Services	Revenue margin	12.49%	12.0-12.5%	12.0-12.5%
	Net charge-off rate[4]	3.14%	4.0% +/-	3.75% +/-
	ROE	34%	23% +/-	20% +/-
Auto Finance	ROE	26%	18% +/-	16% +/-
Consumer & Community Banking	ROE	23%	20% +	20% +

Source: Chase internal data
[1] Real Estate Portfolios only, excluding purchased credit-impaired (PCI) loans; 2013 actuals exclude PCI write-offs of $53mm
[2] Through-the-cycle net charge-off rate of 0.25% +/- will depend on portfolio mix of mortgage and home equity
[3] Target ROE excludes liquidating real estate portfolios
[4] Excludes held-for-sale loans

We have exceeded our 2013 targets and are updating 2014 targets

	2013 Investor Day targets	2013 performance	2014 updated targets
Consumer & Business Banking **Card, Merchant Services & Auto**	■ ~3% expense growth in 2013 ■ 3-4K[1] headcount reduction by YE 2014	✓ 2.7% expense growth in 2013 ✓ Reduced headcount by 5.5K[1] in 2013	■ ~1% expense growth in 2014 ■ ~2K[1] headcount reduction in 2014
Mortgage Banking	■ Full year expense down $3B in 2014 vs. 2012 ■ 13-15K[1] headcount reduction by YE 2014	✓ Reduced $1.5B in expense in 2013 ✓ Reduced headcount by 11K[1,2] in 2013	■ Expense reduction of ~$2B[3] from 2013 to 2014 ■ ~6K[1] headcount reduction in 2014

While we continue to control costs, we also continue to invest in the business

Source: Chase internal data
[1] Includes employees and contractors
[2] 2013 headcount reduction of 11K includes 1,250 effective January 1, 2014
[3] Includes reductions of ~$0.4B related to litigation and ~$0.3B related to foreclosure-related matters

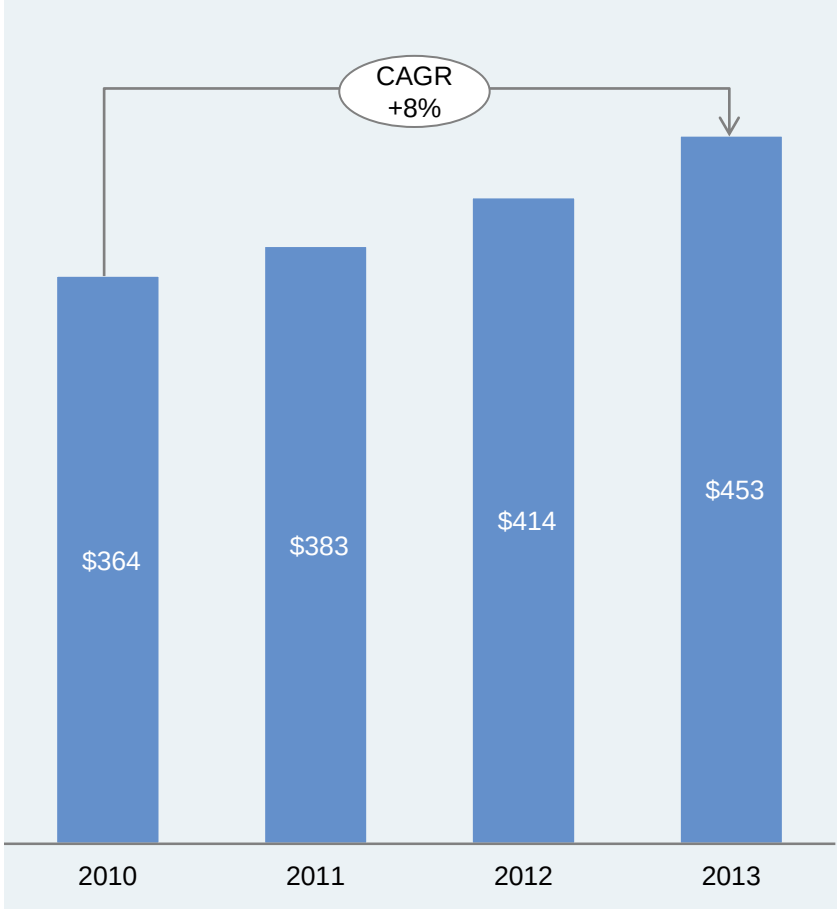
We expect to exit 2016 with expense ~$2B lower than 2014 expense

Key expense reduction initiatives across CCB

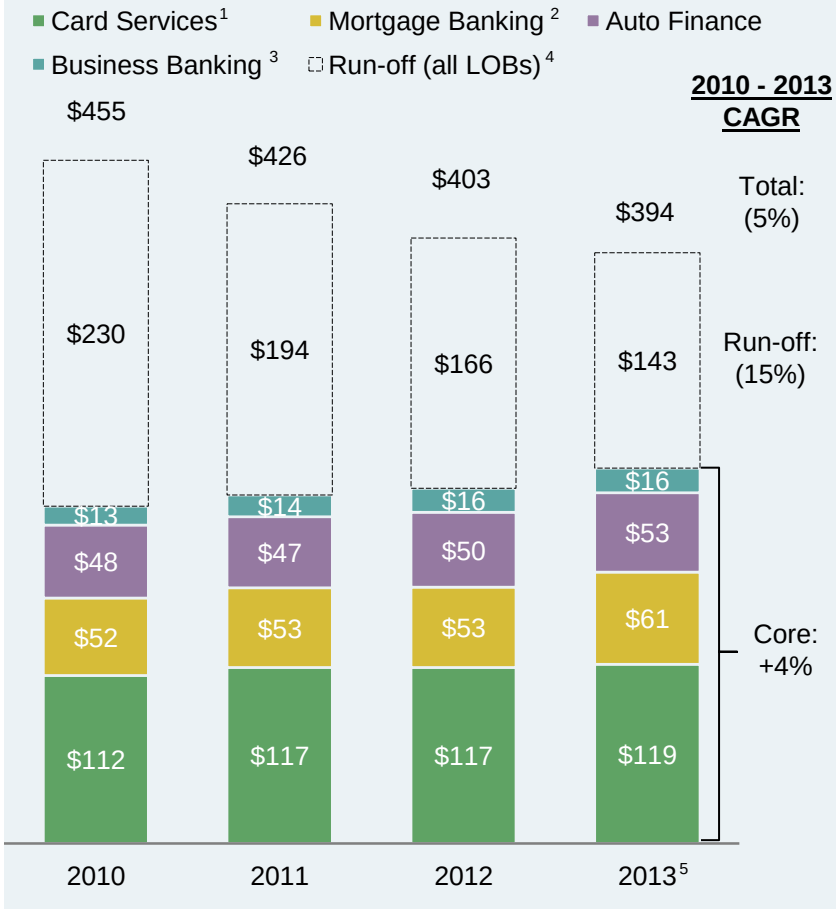
- Reduce cost-to-serve through use of digital channels and self-service for transactional needs
- Automate manual controls and processes
- Simplify our business through exit of non-core products
- Further consolidate operating centers
- Continue optimizing our branch network and operating model based on customer needs and branch usage trends
- Consolidate and rationalize vendors
- Continue to actively manage down mortgage default inventory

Deposit growth has been strong and core loans show continued growth

CCB average deposits ($B)



CCB end of period loans ($B)



Source: Chase internal data; numbers may not sum due to rounding

[1] Card Services core loans exclude certain legacy WaMu loans, legacy balance transfer programs, and certain terminated partner portfolios; Core loans include held-for-sale loans

[2] Mortgage Banking core loans exclude WaMu purchased credit-impaired, discontinued products, broker originated loans, limited documentation loans, and certain loans with effective combined loan to value ratios greater than 80%; and include loans repurchased from Ginnie Mae pools

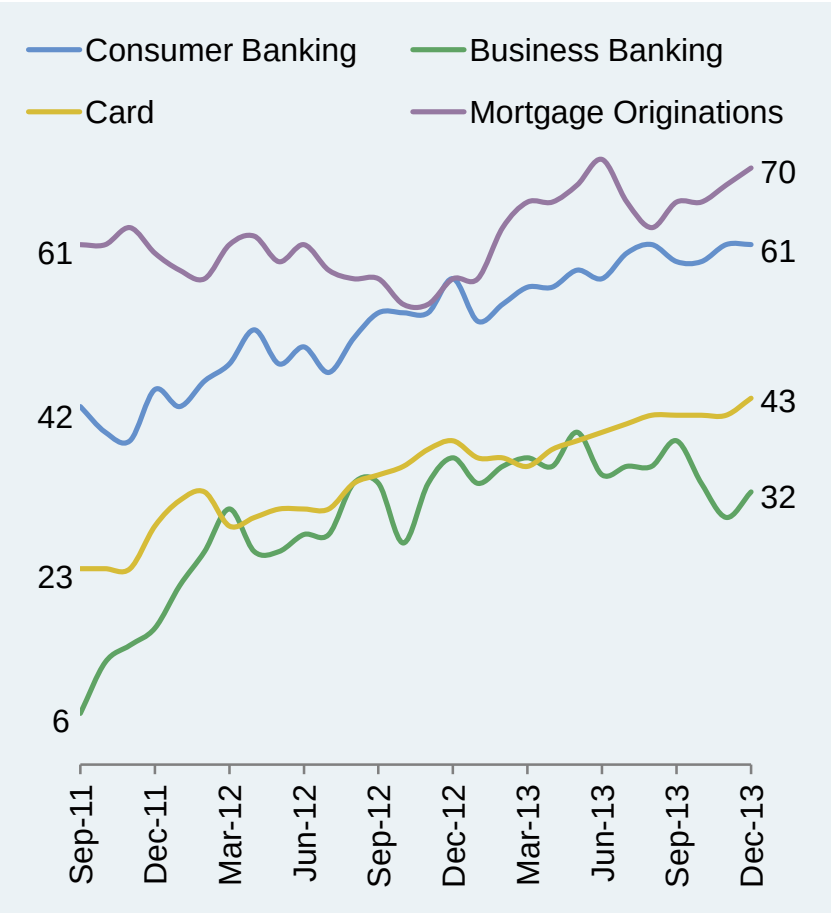
[3] Business Banking core loans exclude WaMu loans and Chase stated income (unverified self-stated) loans

[4] Includes Student Lending

[5] 2013 includes securities-based lending loans of $0.5B

Customer experience continues to improve…

Net promoter scores[1]



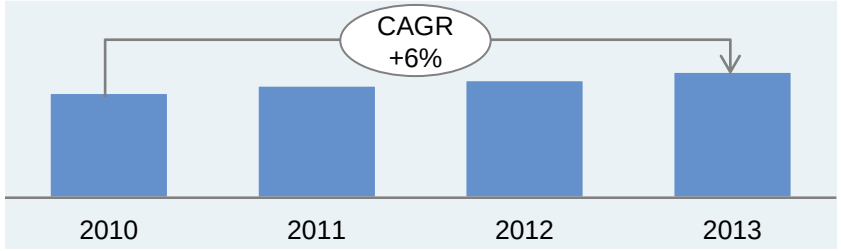
J.D. Power rankings

Line of Business	2010 rank	2013 rank
Retail Banking[2]	#13	#4
Small Business[3]	#22	#1 in West, Midwest, and South #5 in Northeast
Credit Card[4]	#5	#3
Mortgage Banking[5]	Originations: #12 Servicing: #13	Originations: #5 Servicing: #5

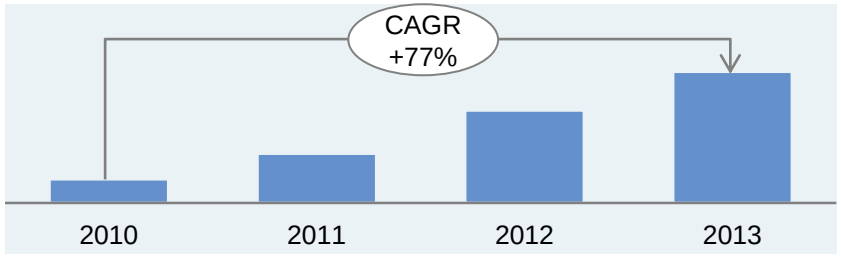
Note: For footnoted information, refer to Appendix

…resulting in deeper relationships and lower attrition with existing customers

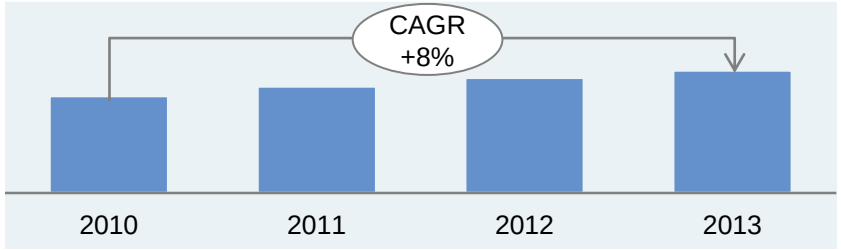
Average deposit and investment balance per household[1]



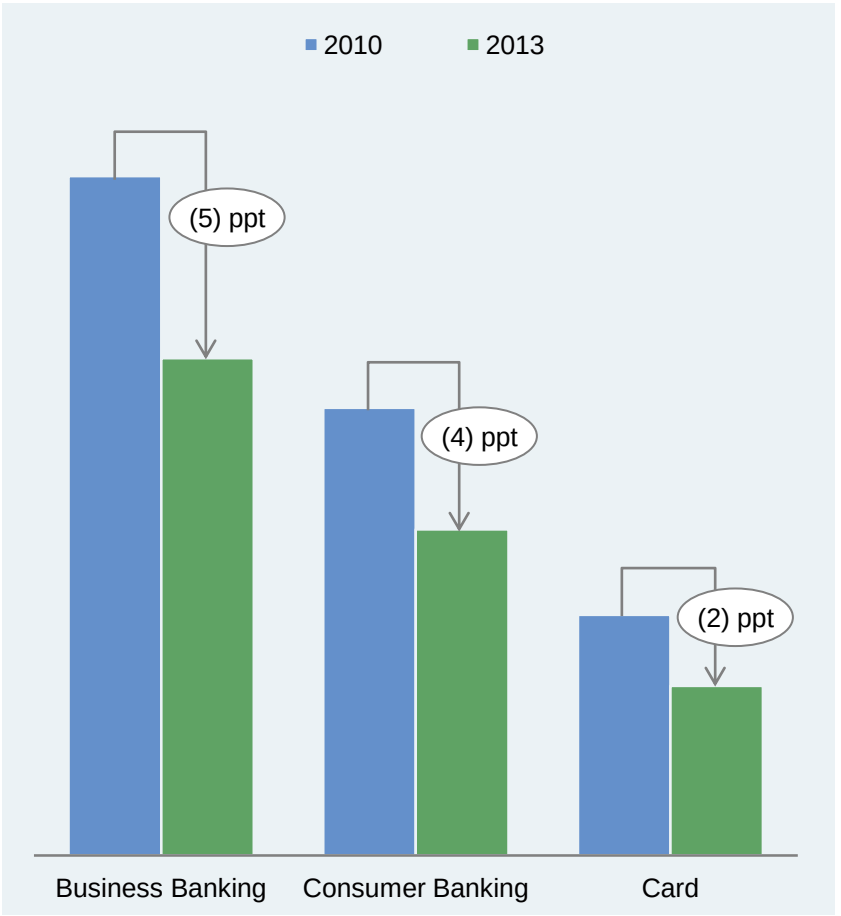
Net new investments per investment household



Credit card spend per account[2]



Household attrition rates[3]



Source: Chase internal data

[1] Includes households with Chase Liquid® cards

[2] Reflects accounts that had sales activity during the year; excludes Commercial Card and certain terminated partner portfolios

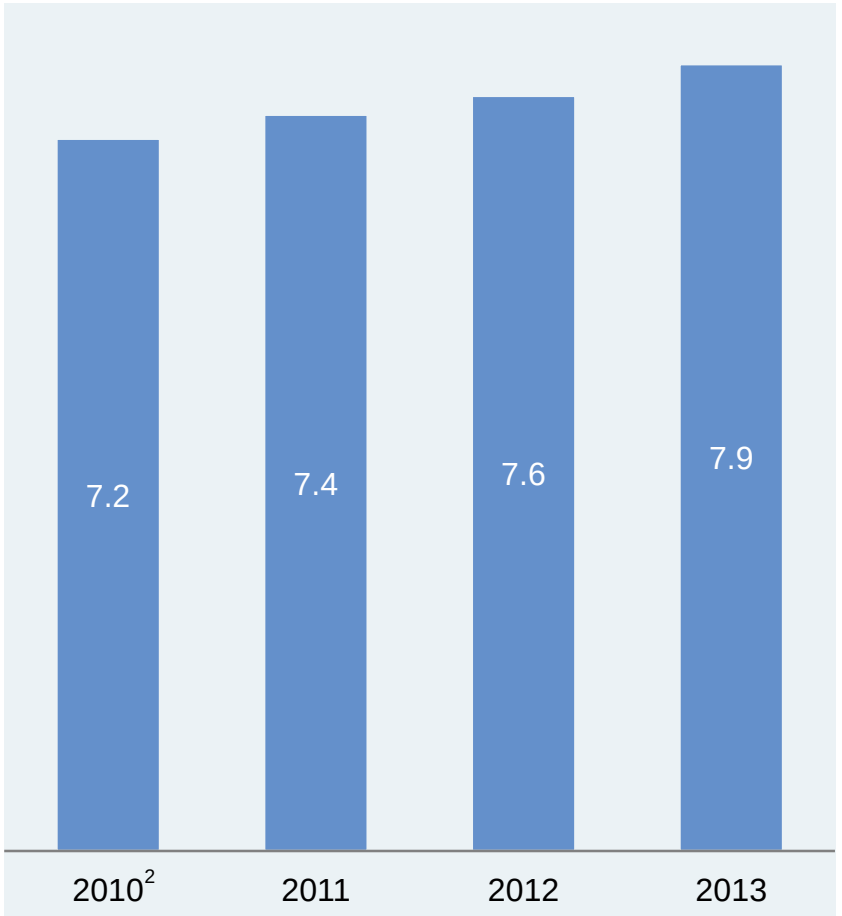
[3] Includes households that close all Chase accounts; average of annualized monthly attrition rate over 12 months

We continue to leverage the strength of our franchise to deepen relationships

Leveraging the strength of the franchise

Commercial Banking	~55% of Commercial Bank customers visit a branch each quarter
Asset Management	~35% of Private Banking households visit a branch each quarter ~$90B of Chase client assets
Card Services	~40% of Chase branded cards sold through branches ~70% of Chase Paymentech new sales sourced from Business Banking
Mortgage Banking	~55% of retail mortgages originated through branches

Number of products & services[1] per Consumer Bank household



Source: Chase internal data

[1] Products and services counted in the Chase cross-sell definition include deposits (interest checking, money market, etc.), credit (mortgage loans, credit cards, etc.), investments, and services (online banking, mobile banking, etc.)

[2] Previously disclosed 2010 cross-sell of 6.7 has been restated to include mobile banking and pre-authorized transfers

We are responding to the current environment…

Continuing to strengthen controls

- Established Controls organization
- Significant investments to ensure quality

Disciplined focus on distinct customer segments

- Simplifying our product offering
- Products targeted to specific market segments
- Exiting products non-core to our customers and de-risking through client exits
  - Less than $100mm reduction in pretax income

Rationalizing the cost structure

- Digital self-service
- Optimize branch network
  - Less density
  - Smaller branches
- Automation of processes and controls
  - Fewer people

… and have proven that we can successfully adapt our business to changes

Example: Card Services

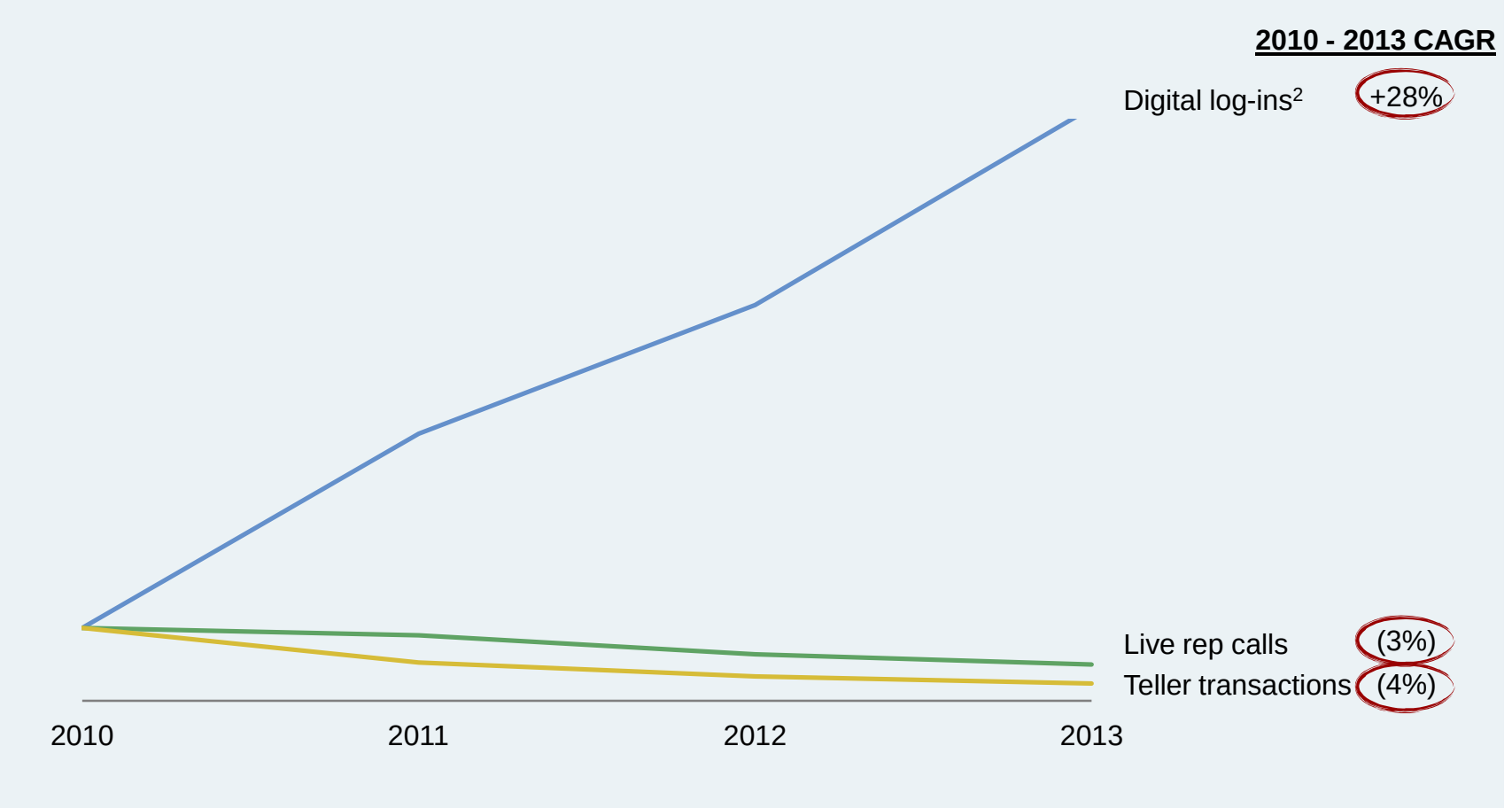
Market changes	Response	Chase performance (2008 vs. 2013)
■ CARD Act ■ Pricing and fee restrictions ■ Payment allocation ■ Time to make payments ■ Payment processing ■ Pricing review ■ Recession ■ Competitive pressures	■ Developed products focused on specific customer segments ■ Launched simplified rewards program ■ Reduced balance transfer volumes ■ Refined offer targeting within our risk appetite ■ Reduced non-core partnerships and products	■ Strong financial results ■ ROE increased from 14% to 26%[1] ■ Net revenue rate up ~240bps ■ Net charge-off rate down ~190bps ■ Industry-leading sales volume growth

Source: Chase internal data

[1] Excluding the impact of changes in loan loss reserves

Customers are increasingly using digital channels for self-service…

Chase servicing interactions per household, indexed to 2010[1]

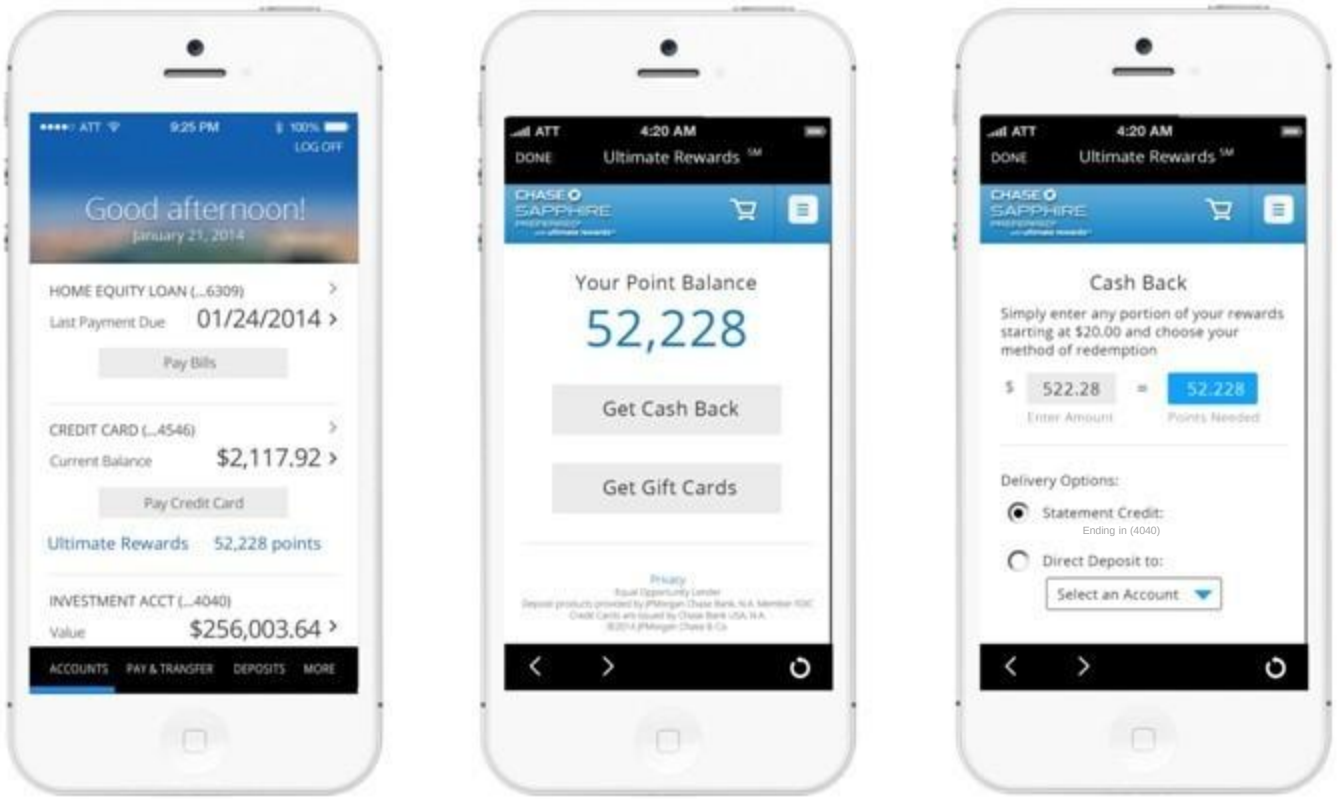


[1] Analysis includes Chase Consumer & Business Banking and Card lines of business
[2] Digital log-ins includes Online and Mobile

… which will have significant cost benefits

Example: Ultimate Rewards mobile app redemption activity

- Enabled mobile app-based reward redemptions in December 2013
- Within first month, app-based redemptions reached 15% of daily redemption volume



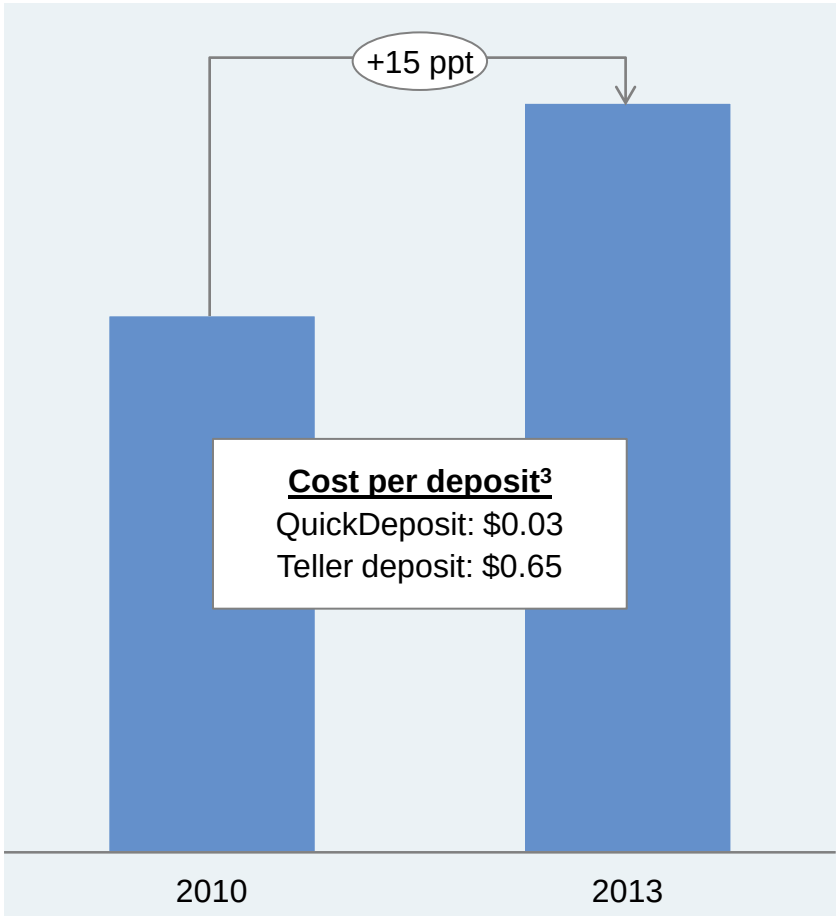
A mobile redemption costs ~$0.01[1] vs. a call center redemption cost of ~$3[1]

Source: Chase internal data

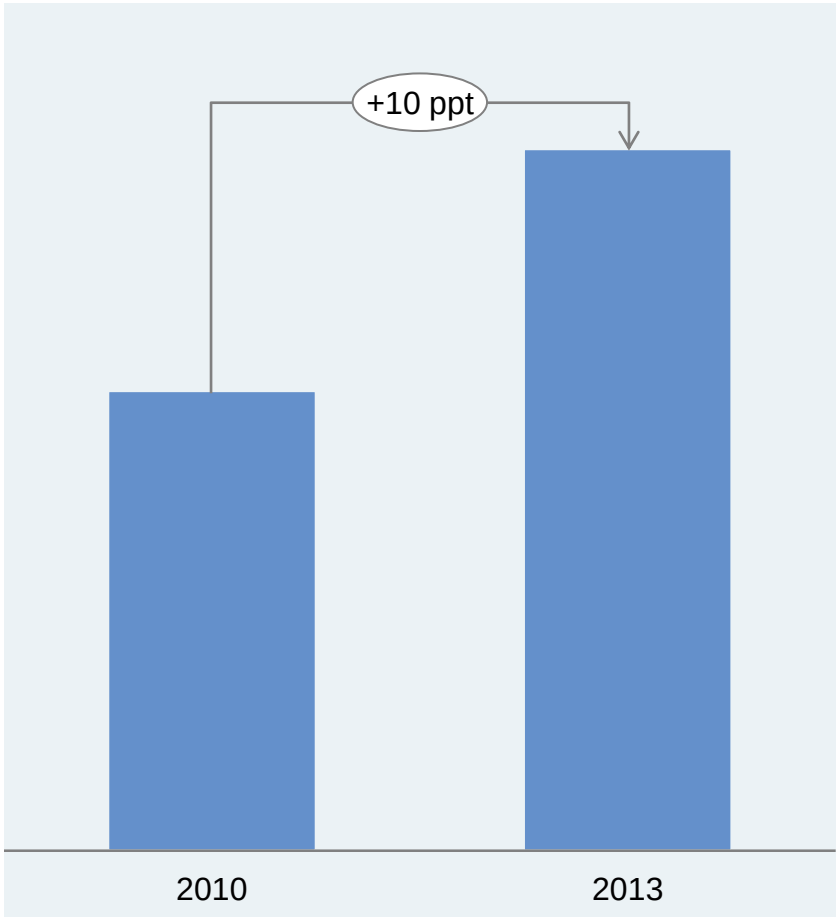
[1] Based on variable cost; call center redemption cost based on average redemption transaction time of ~4 minutes

We are leveraging the digital trend to lower cost-to-serve

% of deposits through self-service[1]



% of statements delivered electronically[2]



Source: Chase internal data

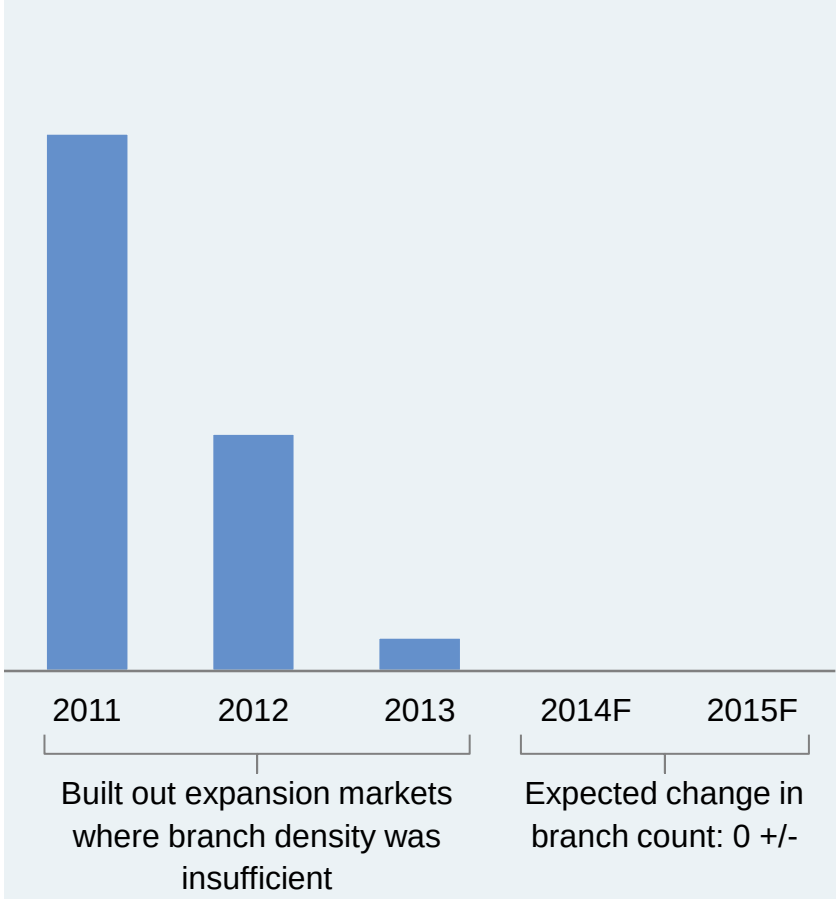
[1] Based on Consumer Banking customers

[2] Across all CCB Business

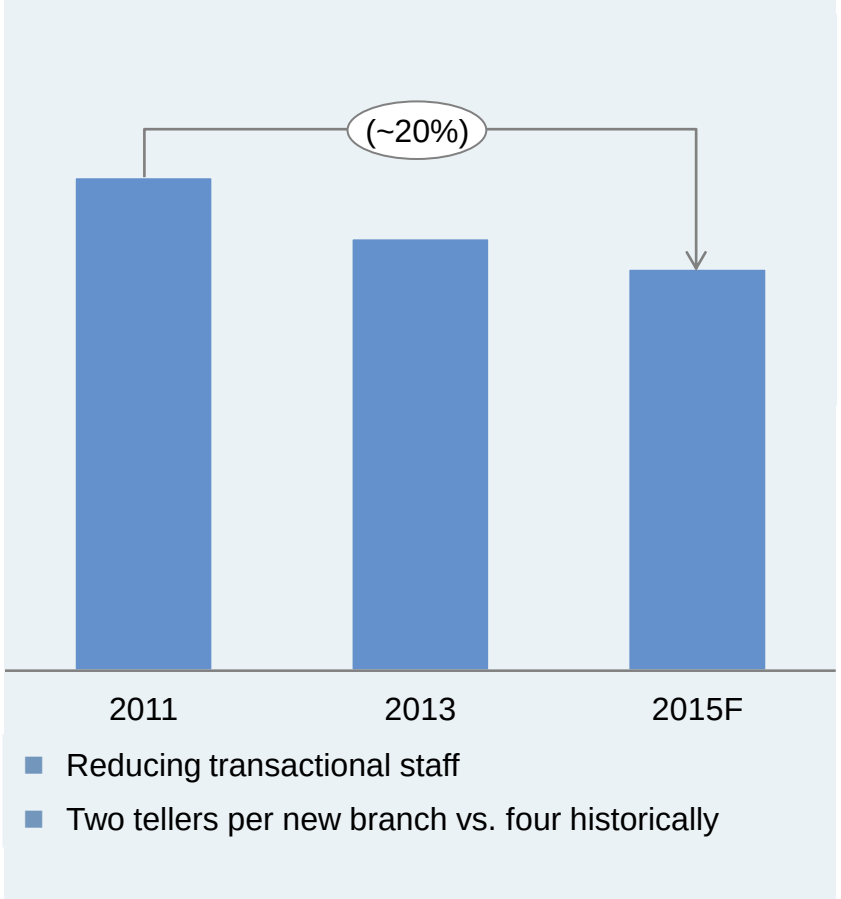
[3] Based on variable cost; teller deposit cost based on average deposit transaction time of ~1 minute

The Chase branch network of the future will be more efficient, automated, and consultative

Net change in Chase branches over time



Consumer Bank total branch staff[1]



Source: Chase internal data

[1] Excludes Branch Managers

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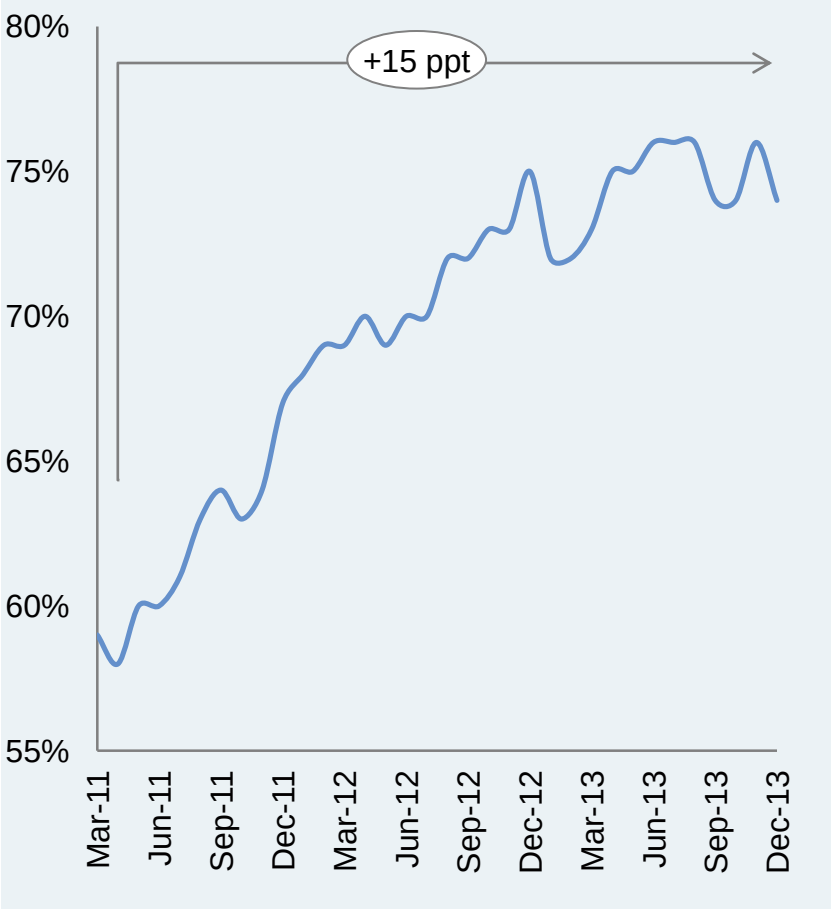
Consumer and Business Banking business drivers

Consumer & Business Banking business drivers				
		2012	2013	YoY Δ
Relationships	Consumer household relationships (mm)	21.2	22.3	5%
	Consumer bank household attrition rate[1]	11%	10%	
	Business client relationships (mm)	2.2	2.3	2%
	Business bank client attrition rate[1]	17%	15%	
Deposits & Investment Balances ($B)	Average deposit balances	392.1	434.6	11%
	Client investment assets (end of period)	159	189	19%
	% managed assets	29%	36%	
	Net new investments	11.1	16.0	44%
Distribution channels	Branches	5,614	5,630	-
	Branch employees[2] (K)	64.4	59.2	(8%)
	ATMs	18,699	19,211	3%
	% Self-service deposits[3]	49%	53%	
	Active mobile users (mm)	12.4	15.6	26%
Performance ($B)	Net revenue	17.2	17.3	1%
	Net income	3.2	2.9	(10%)
	ROE	36%	26%	

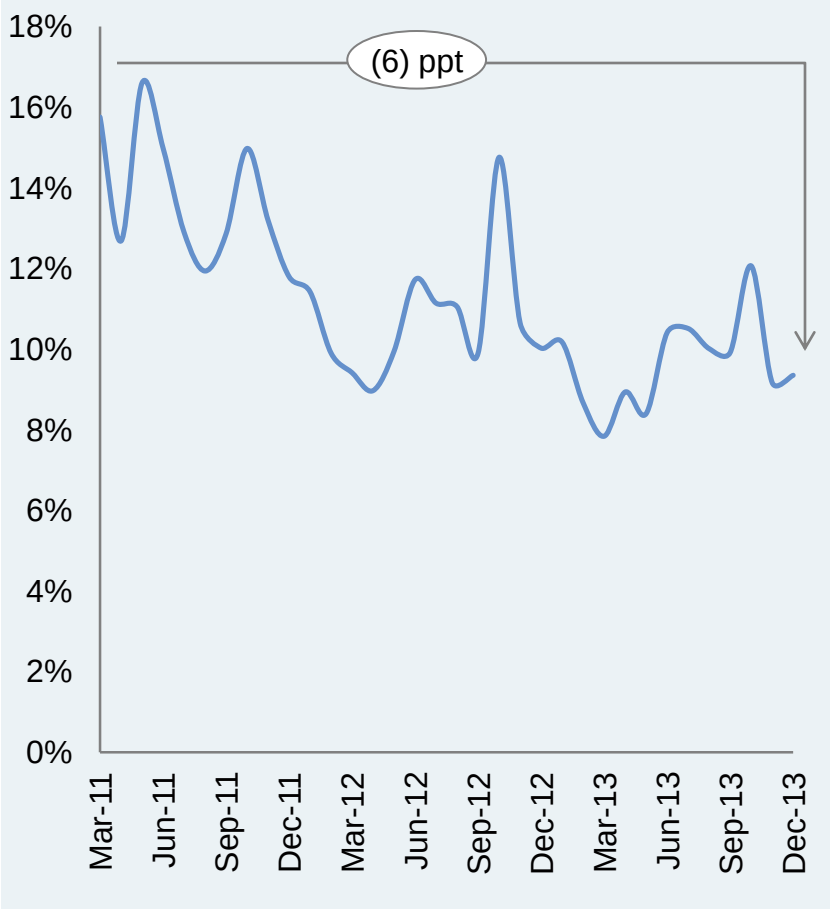
Source: Chase internal data
[1] Households and clients that close all Chase account relationships
[2] Includes all CBB branch employees: Tellers (FTE), Personal Bankers, Branch management, Sales and Service Associates, Financial Advisors, and Relationship Managers
[3] Data for fourth quarter; includes ATM / Express Banking Kiosk and mobile

Customer satisfaction and retention are at all time highs

Consumer Bank overall satisfaction[1]

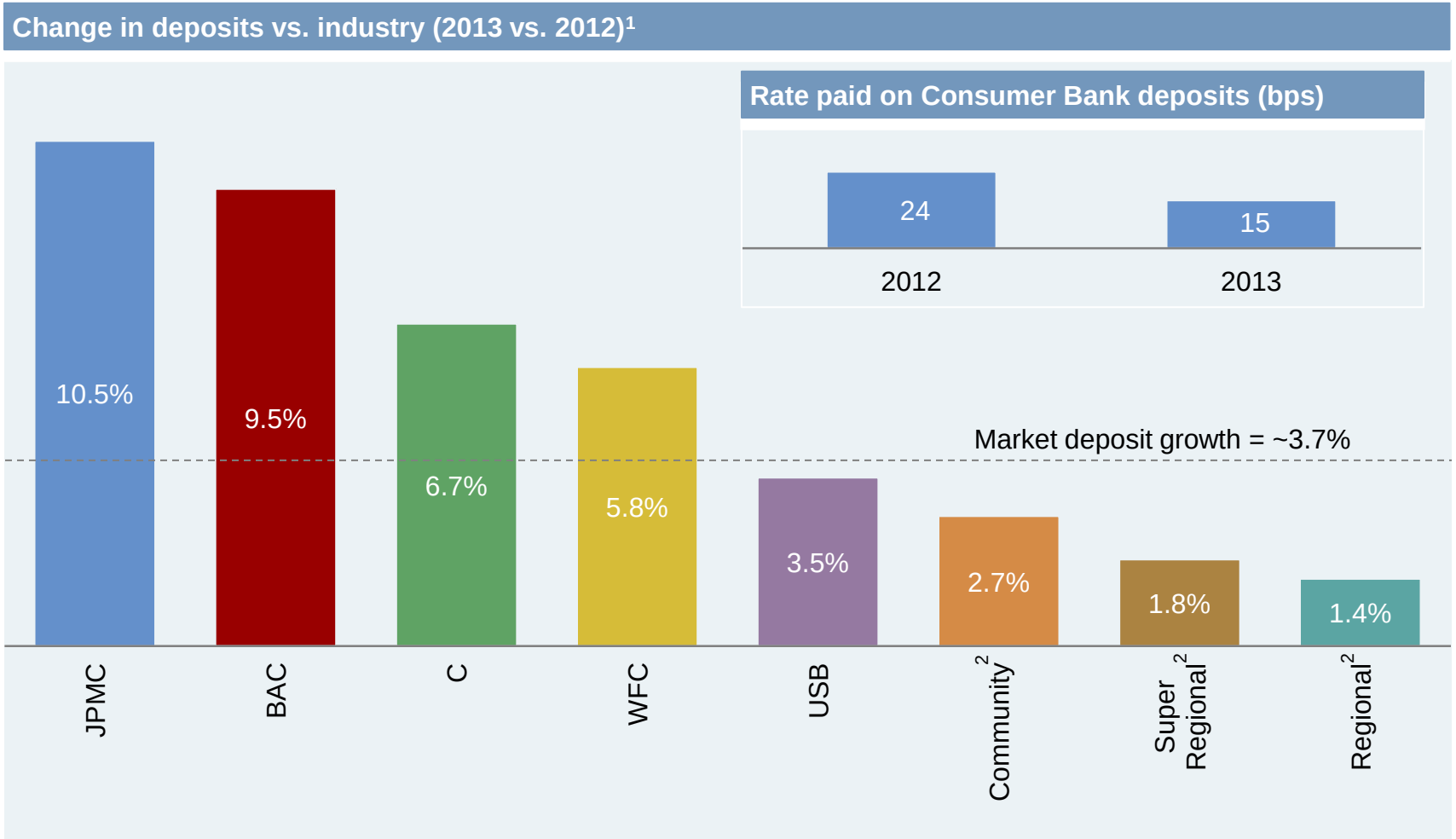


Household attrition (annualized rate)[2]



Source: Chase internal data
Note: Consumer bank only
[1] Top 2 box on a 10 point scale, overall satisfaction
[2] Adjusted for incremental 25K households in October 2012 due to escheatment rule changes

Deposit balance growth remains strong, and outperforms the industry



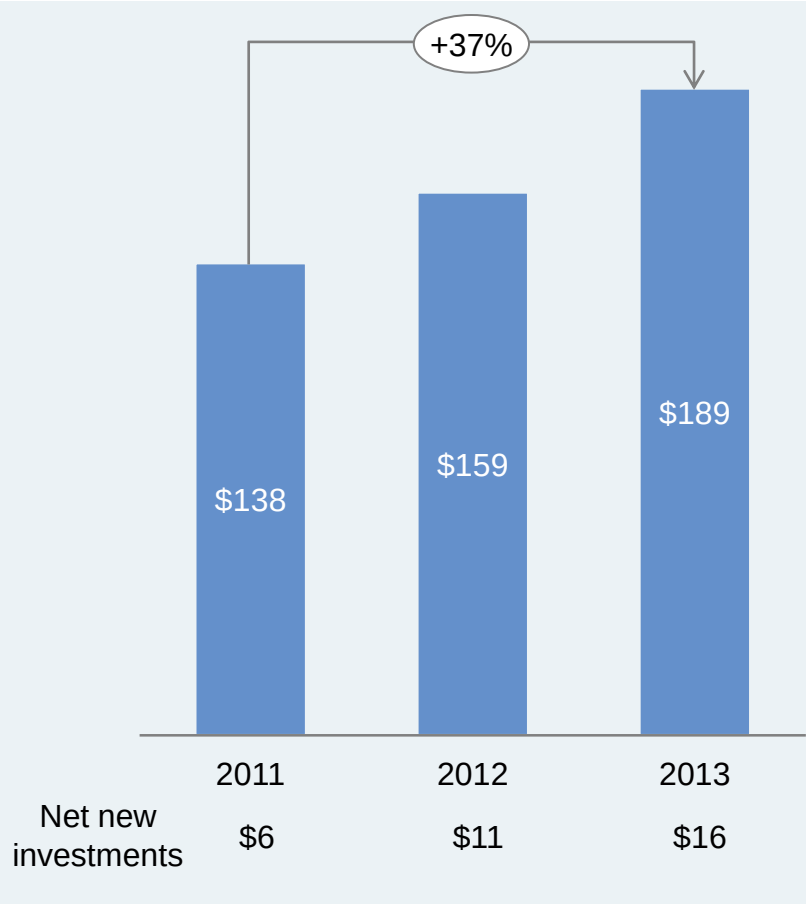
Source: Based on FDIC Summary of Deposits survey per SNL Financial as of June 2013

[1] All branches with $1B+ in deposits at any point in the last ten years excluded to adjust for commercial deposits and capture only consumer and small business deposits; includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC

[2] Named competitors are excluded from the Super Regional bucket; Super Regionals defined as banks ranked 7-50 in retail deposit volume per SNL (minimum retail deposits in the group ~$10B), PNC, and TD Bank; Regionals defined as banks ranked 51-150 by retail deposits (minimum retail deposits in the group ~$2.9B); Community banks defined as all other institutions

Investment balance growth is at record levels

Client investment assets ($B)



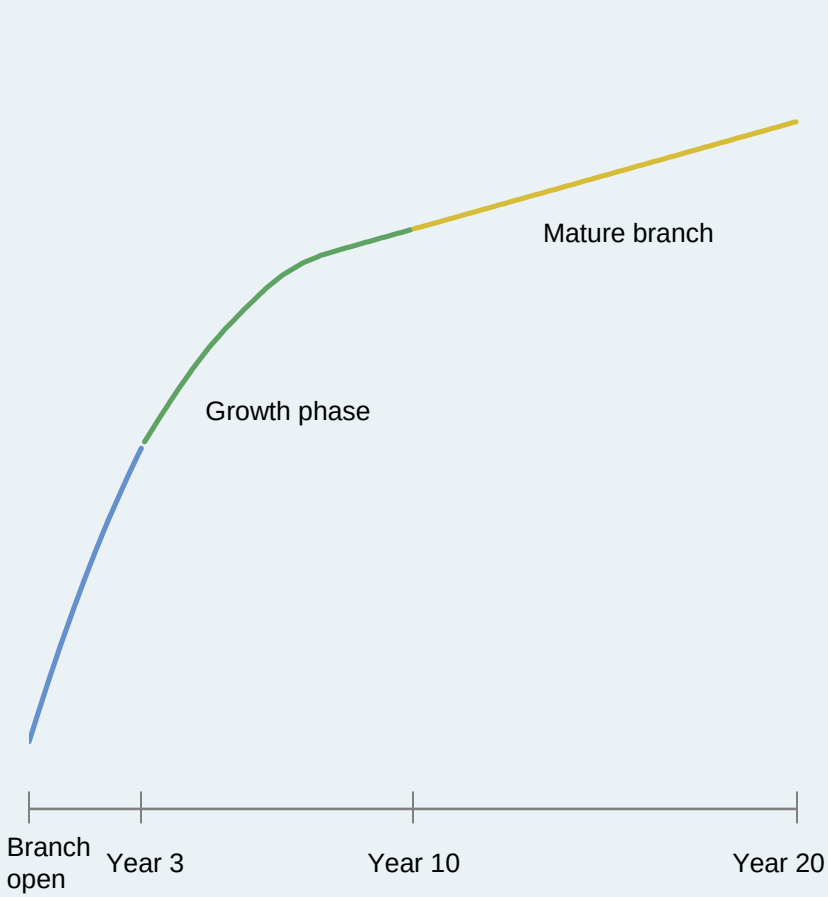
Source: Chase internal data

Key takeaways

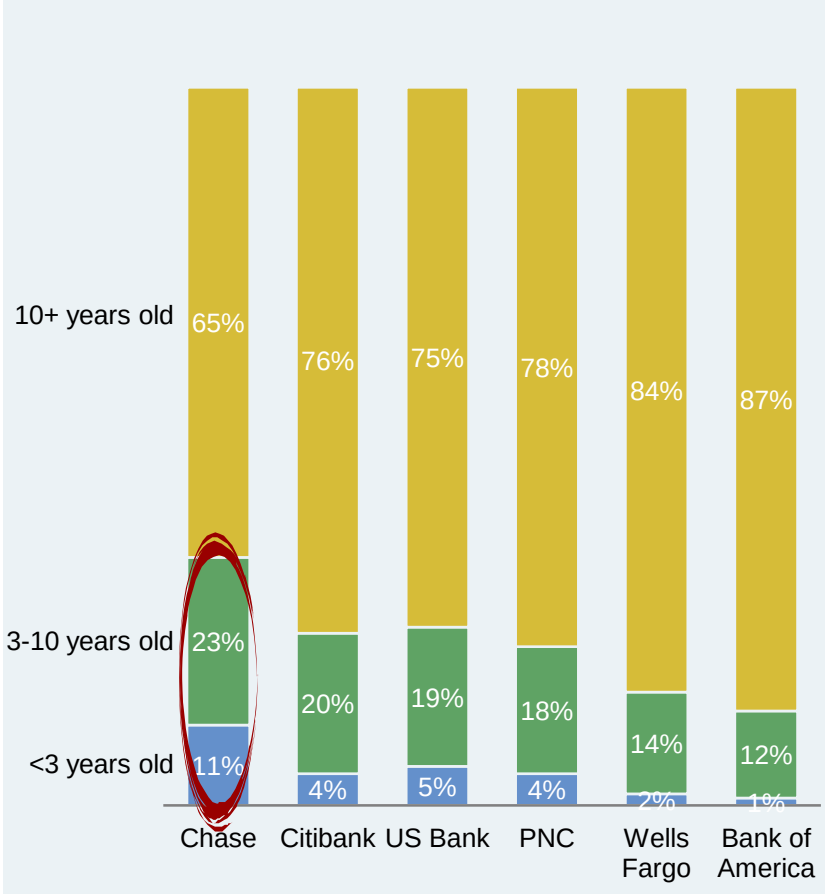
- Investments are critical to becoming our customers' primary bank
- Growth has been driven by $33B of net new investment flows over the past 3 years
- 70% of revenue is fee-based
- Chase Private Client is key to more investment relationships with our currently deposit-only clients
- We are leveraging JPM Asset Management product capabilities and infrastructure to support further investment growth

Our investments in the network will continue to drive future growth

Typical branch consumer household growth



Branch network age (%)



1/3 of our branches are in the growth phase

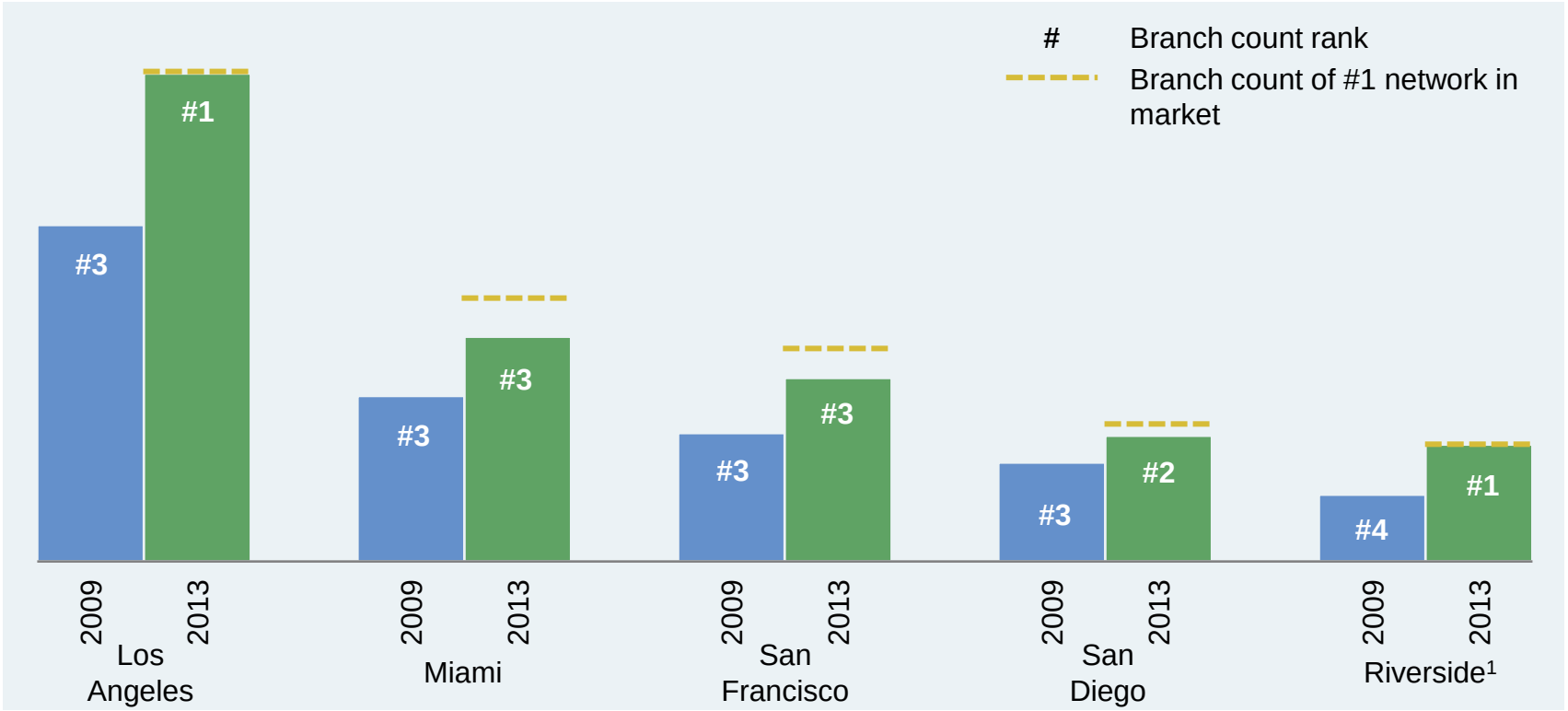
Source: Internal Chase data; SNL Financial
Note: Excludes branches for which SNL lacks open date information

Core elements of strategic vision

Optimize our branch network	■ Branch footprint ■ Transactions to advice
Lower cost-to-serve	■ Efficiency through innovations ■ Branch staffing models
Deepen relationships	■ Become customers' primary bank ■ Chase Private Client

We have completed our build-out in key expansion markets, resulting in an attractive footprint

Chase branch count and rank in select expansion markets



Key highlights

- ~2/3 of new builds in California and Florida
- #1 branch share in the top three deposit markets
- Markets in our footprint account for ~2/3 of deposit and investment opportunity in the U.S.[2]

Source: SNL Financial; Chase internal data
[1] JPMC is tied for #1 branch count rank in Riverside
[2] Market indicates Core Based Statistical Area

We will continue to optimize our network

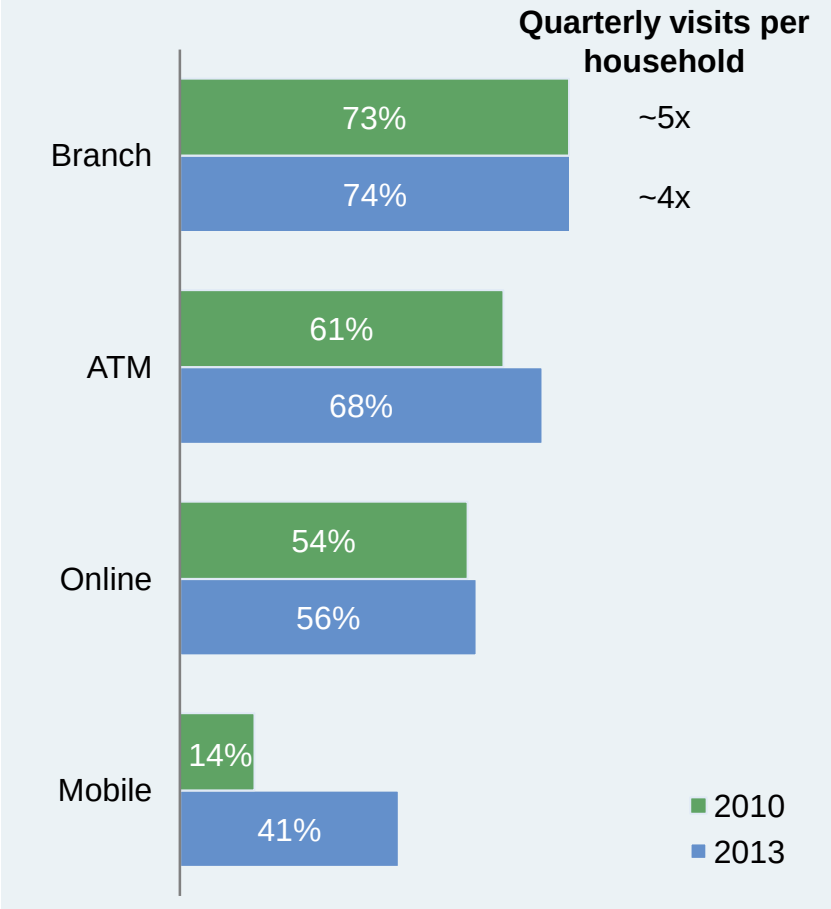
Network activity

		2011	2012	2013
Beginning branch count		5,268	5,508	5,614
Network management	Total new branches opened	282	179	156
	New builds	*260*	*150*	*132*
	Relocations	*22*	*29*	*24*
	Total branches closed	(42)	(73)	(140)
	Consolidations	*(20)*	*(44)*	*(116)*
	Relocations	*(22)*	*(29)*	*(24)*
	Net branches opened	240	106	16
Ending branch count		5,508	5,614	5,630

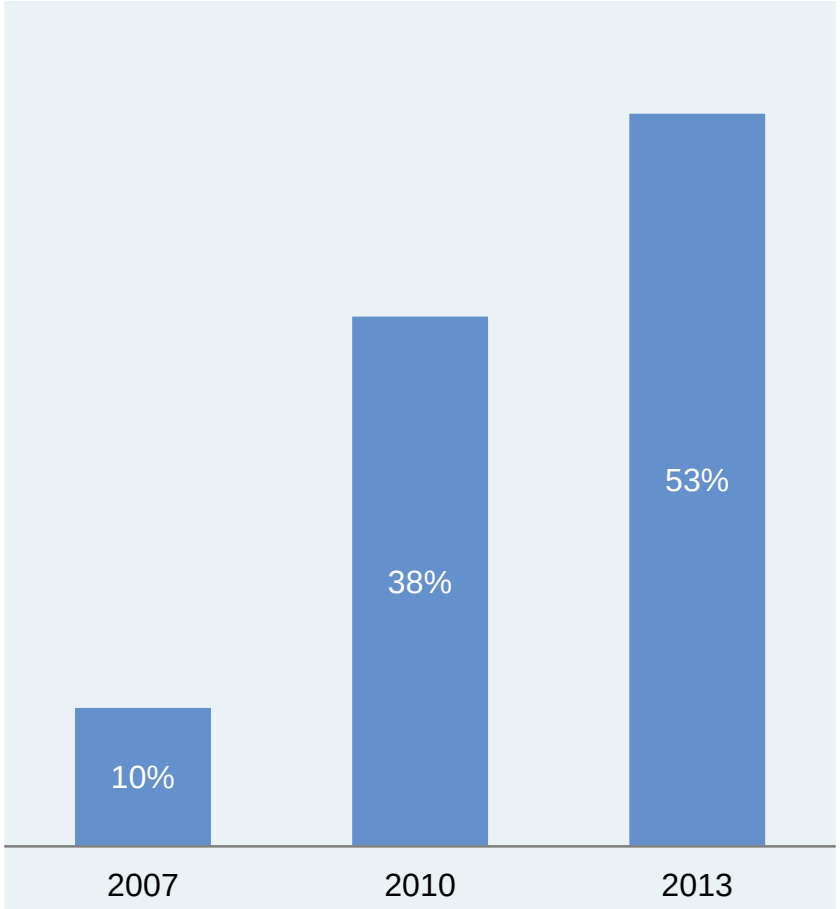
Source: Chase internal data

Customers are using branches differently

% of Consumer Bank households using each channel per quarter[1]



% of Consumer Bank deposits through self-service channels per quarter[2]



Source: Chase internal data
[1] Data for third quarter
[2] Data for fourth quarter; includes ATM / Express Banking Kiosk and mobile

We are optimizing how we run our branches …

Traditional branch



Branch of the future

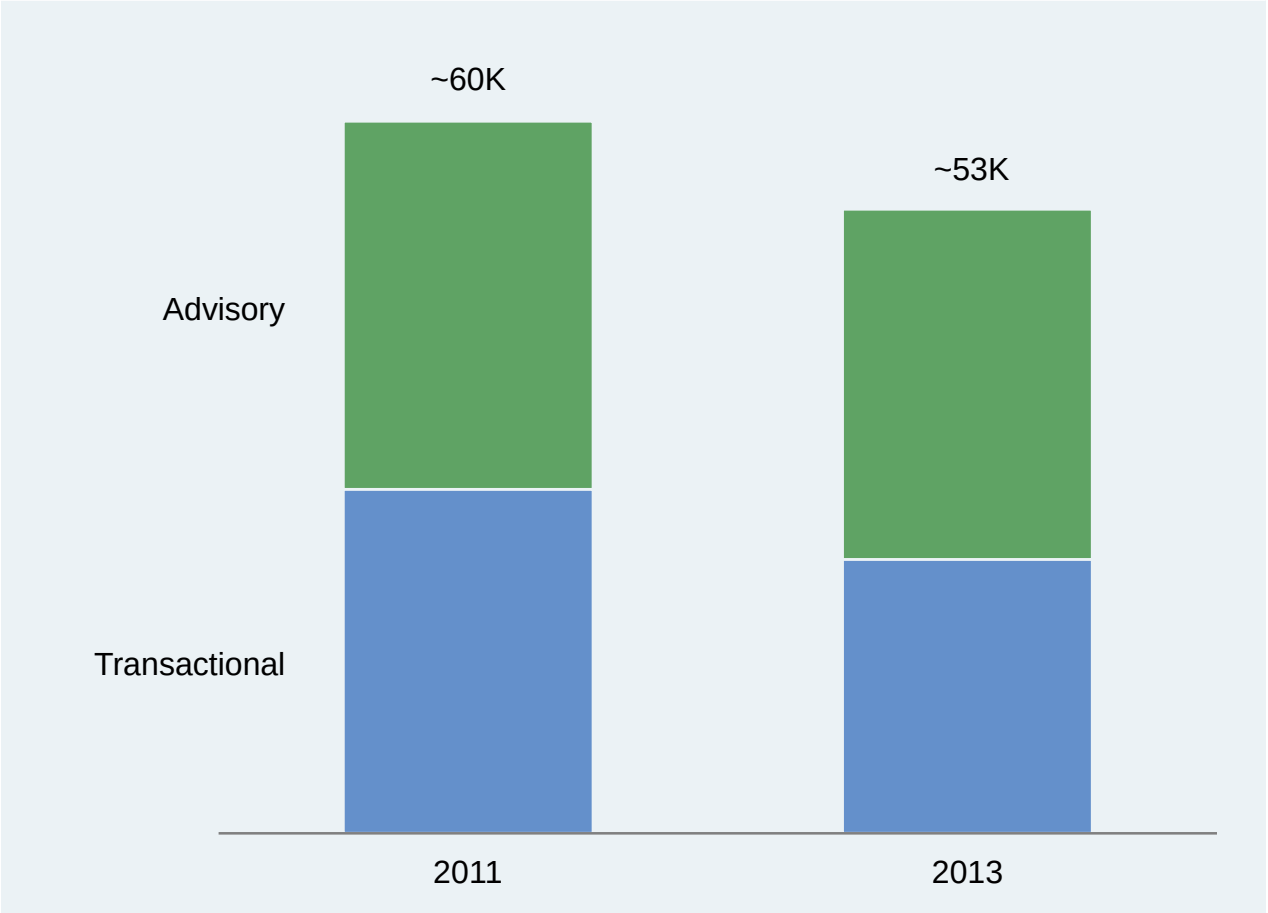


Branch headcount	9	6	↓
% advisory staff[1]	40%	60%	↑
# Express Banking Kiosks	0	2	↑
# of offices	1	3	↑
Square footage	4,400	2,500-3,500	↓

[1] Advisory staff includes Bankers, Business Banking Relationship Managers, Financial Advisors; Transactional staff includes Tellers, Sales & Service Associates, Branch Managers, and Assistant Branch Managers

… which has enabled us to reduce branch staff

CBB year-end network branch staff[1]



Key takeaways

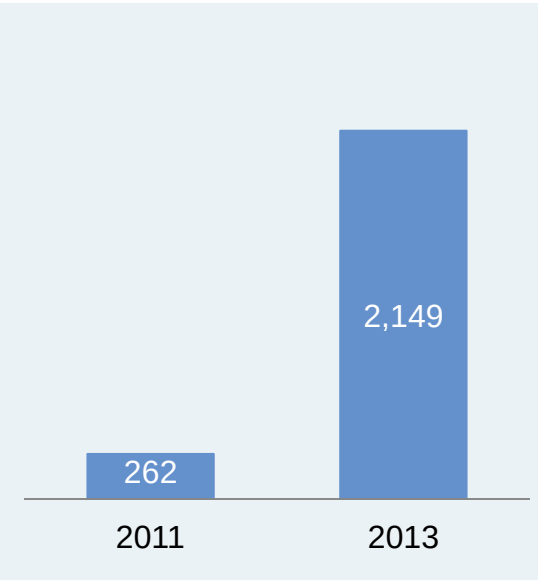
- 2/3 of branch expenses are people-related
- Overall branch staff is down 7K over the last two years
- Expect continued staffing declines as customer self-service trends continue

Source: Chase internal data

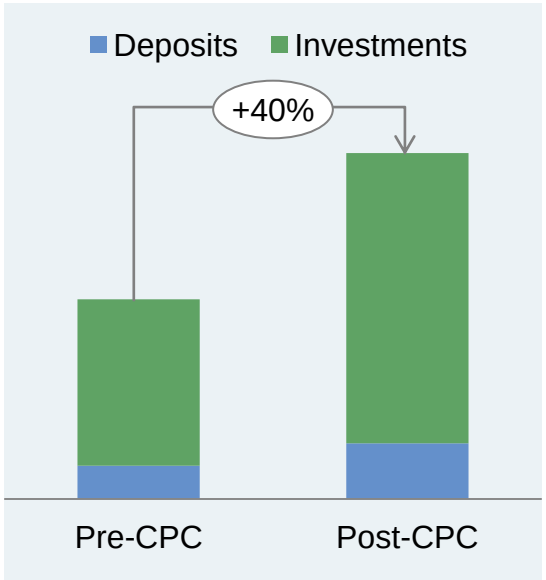
[1] Includes Tellers (FTE), Bankers, Assistant Branch Managers, Sales & Service Associates, Financial Advisors, and Business Banking Relationship Managers; excludes Branch Managers

Chase Private Client has deepened relationships with our affluent customers

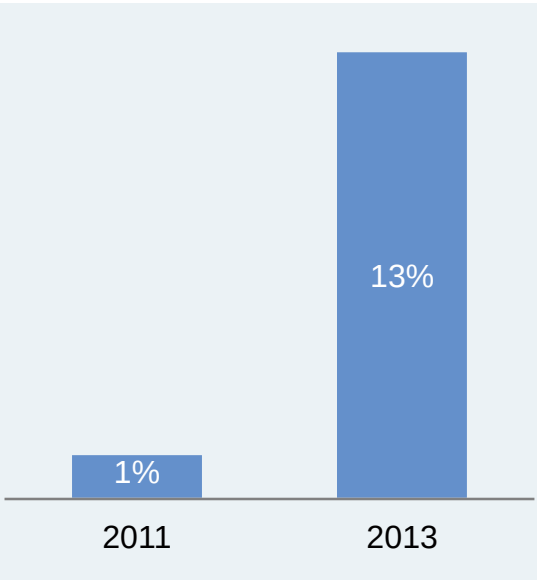
Branches offering Chase Private Client



Average deposits & investments per CPC household ($K)



CPC penetration of eligible households[1]



Key takeaways

- CPC roll-out is largely complete; now offered in 2,000+ branches covering 70% of our affluent clients
- Clients are growing their relationships with Chase
- Significant progress in penetrating affluent households
  - 1/3 of the way to our $100B target
  - Substantial opportunity remains

Source: Chase internal data

[1]CPC-eligible household defined as Segment III households in the CPC footprint; yearly penetration calculated based on eligible household count as of year-end 2013

Summary

- Strong underlying performance drivers
- Our branch build-out and Chase Private Client expansion are largely complete and performing well
- We have an attractive footprint and will continue to optimize our network
- We are focused on operating our branches more efficiently and will continue to drive down cost-to-serve as customer behavior changes

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We have a strong mortgage franchise; however, profitability headwinds exist given declining origination volumes and continued elevated default servicing costs

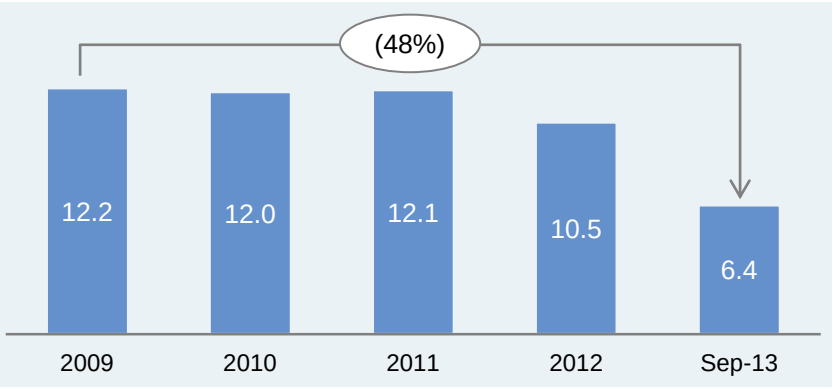
P&L ($mm)	2012	2013	2013	
			1H13	2H13
Mortgage Production pretax[1]	$3,551	$825	$1,009	$(184)
Mortgage Servicing pretax	(1,167)	(372)	32	(404)
Real Estate Portfolios pretax	2,948	4,652	1,950	2,702
Mortgage Banking net income	$3,341	$3,082	$1,815	$1,267

Key drivers ($B, except where otherwise noted)	2012	2013	2013	
			1H13	2H13
Total mortgage origination volume	$180.8	$165.5	$101.7	$63.8
Purchase origination volume	44.8	62.5	29.5	33.0
Refinance origination volume	136.0	103.0	72.2	30.8
Third-party mortgage loans serviced (period end)	859.4	815.5	832.0	815.5
Foreclosure units - end of period (K)	312	167	241	167
Real Estate Portfolios loans - end of period	177.3	168.0	171.4	168.0
Real Estate Portfolios net charge-offs ($mm)[2]	3,341	1,107	736	371

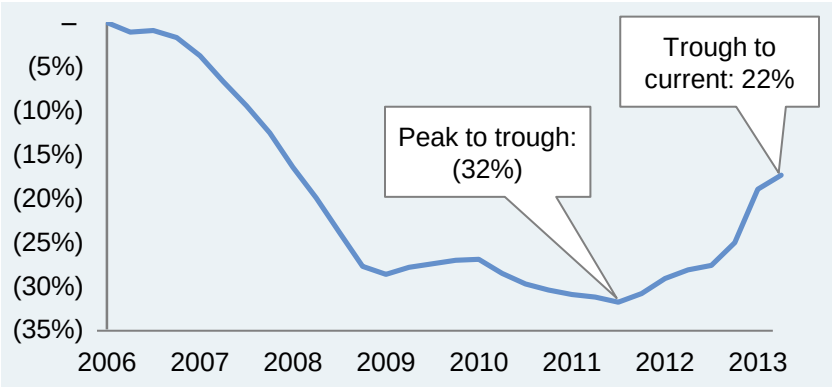
Source: Chase internal data
[1] Mortgage Production pretax includes repurchases
[2] Excludes purchased credit-impaired (PCI) loans; 2013 actuals exclude PCI write-offs of $53mm

Housing market fundamentals continue to improve

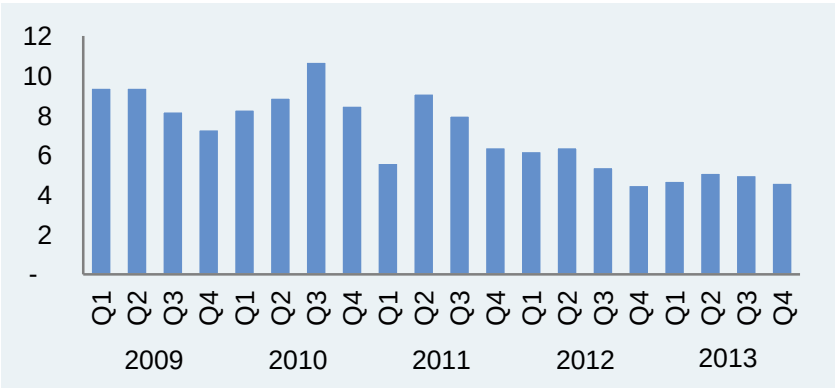
Number of underwater homes in the U.S. (mm)



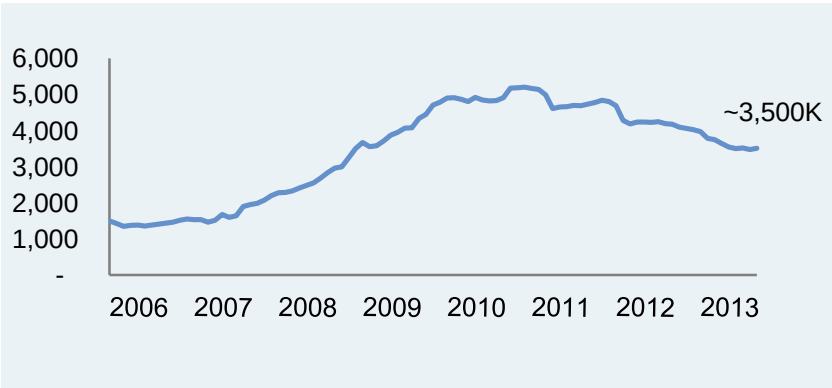
Home price index (HPI) – peak to September 2013



Months of inventory



30+ day delinquent units (K) through September 2013

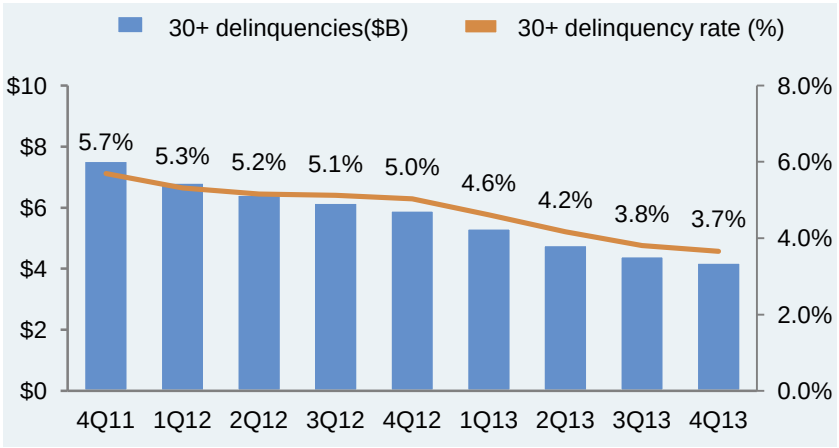


Source: CoreLogic; Realtor.org; Chase internal data

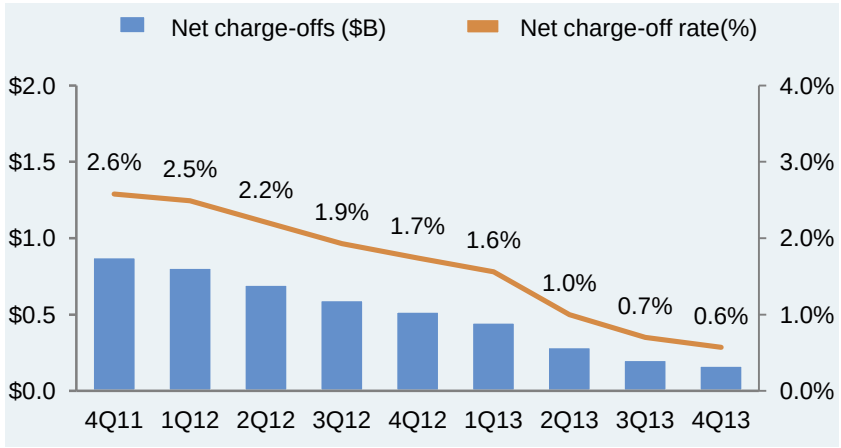
[1] Seasonally adjusted annualized

We continue to see improving credit performance in Real Estate Portfolios

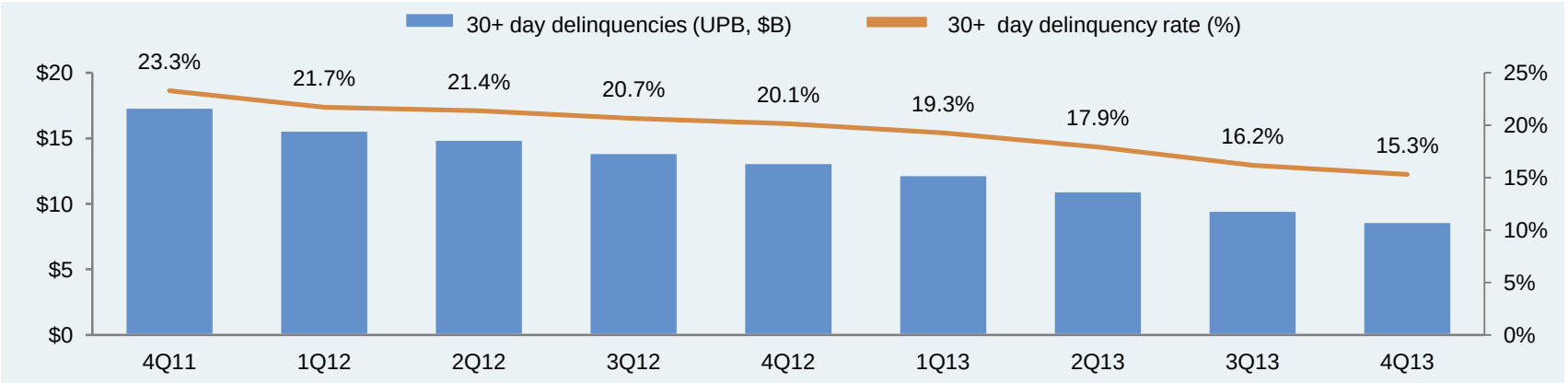
Non-credit impaired 30+ day delinquencies[1]



Non-credit impaired net charge-offs[2]



Purchased credit-impaired 30+ day delinquencies



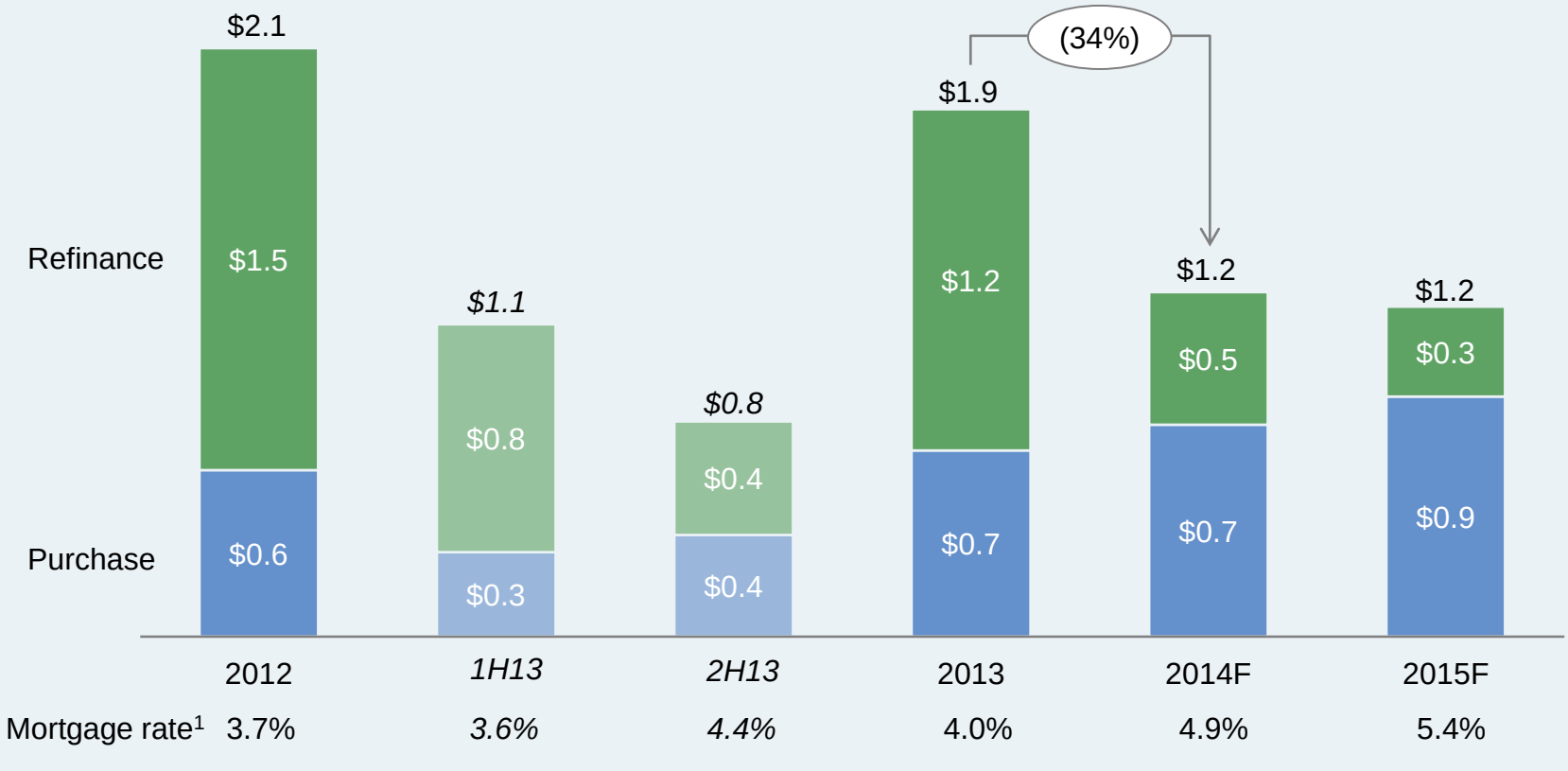
Source: Chase internal data

[1] Based on carrying value

[2] 3Q12 and 4Q12 net charge-offs exclude the effect of Chapter 7 Bankruptcy discharge adjustment based on regulatory guidance; 4Q13 net charge-offs exclude PCI write-offs of $53mm

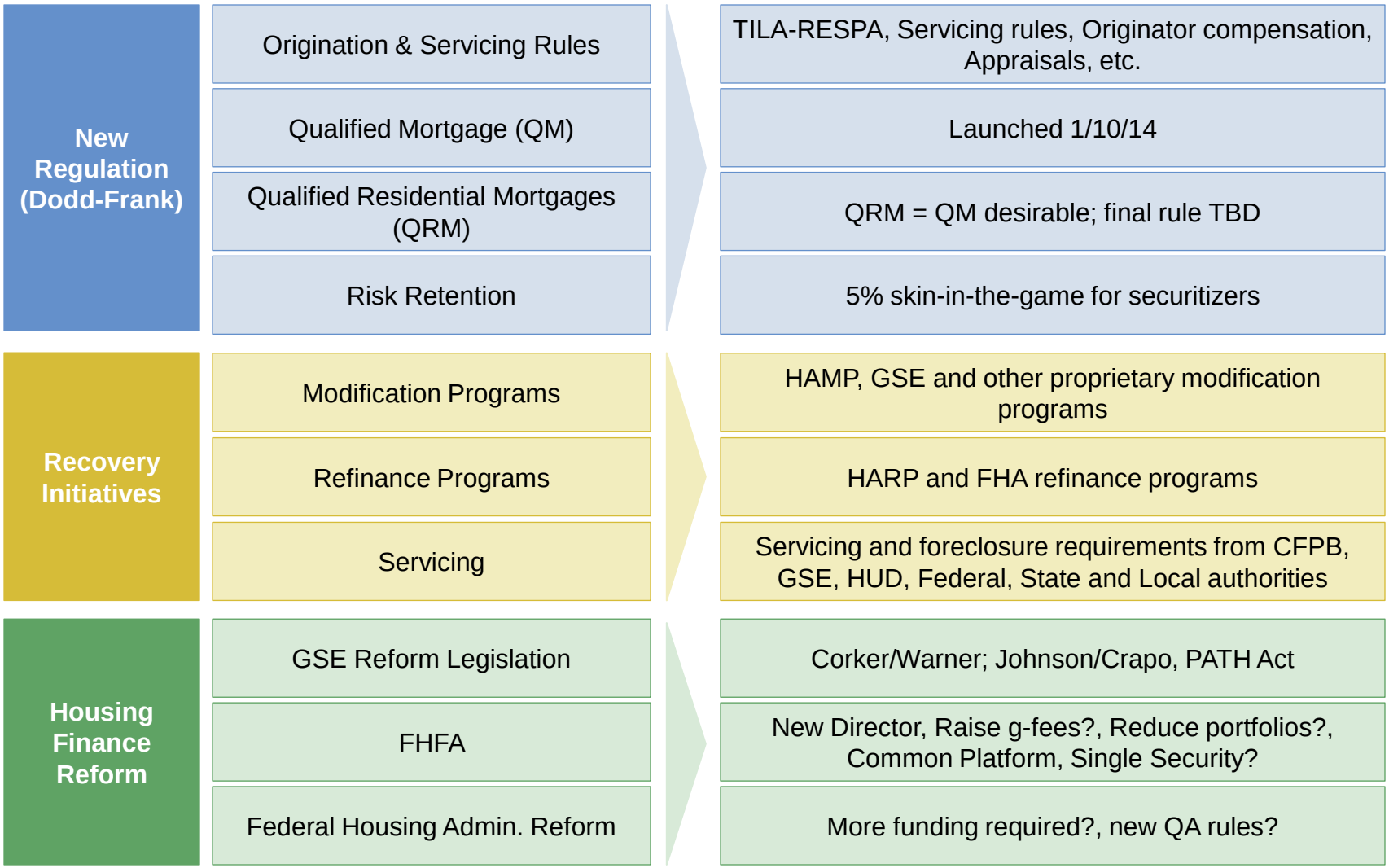
The mortgage market is projected to decline 34% in 2014 and remain relatively flat in 2015

Market size ($T)



Note: 2012 through 2013 Inside Mortgage Finance; 2014F - 2015F reflects average of forecasts from Fannie Mae (1/10/14), Freddie Mac (1/16/14), and MBA (1/14/14)
[1] Mortgage rate reflects conforming 30-yr PMMS (Primary Mortgage Market Survey) rate issued by Freddie Mac

Significant regulatory and legal complexity exists



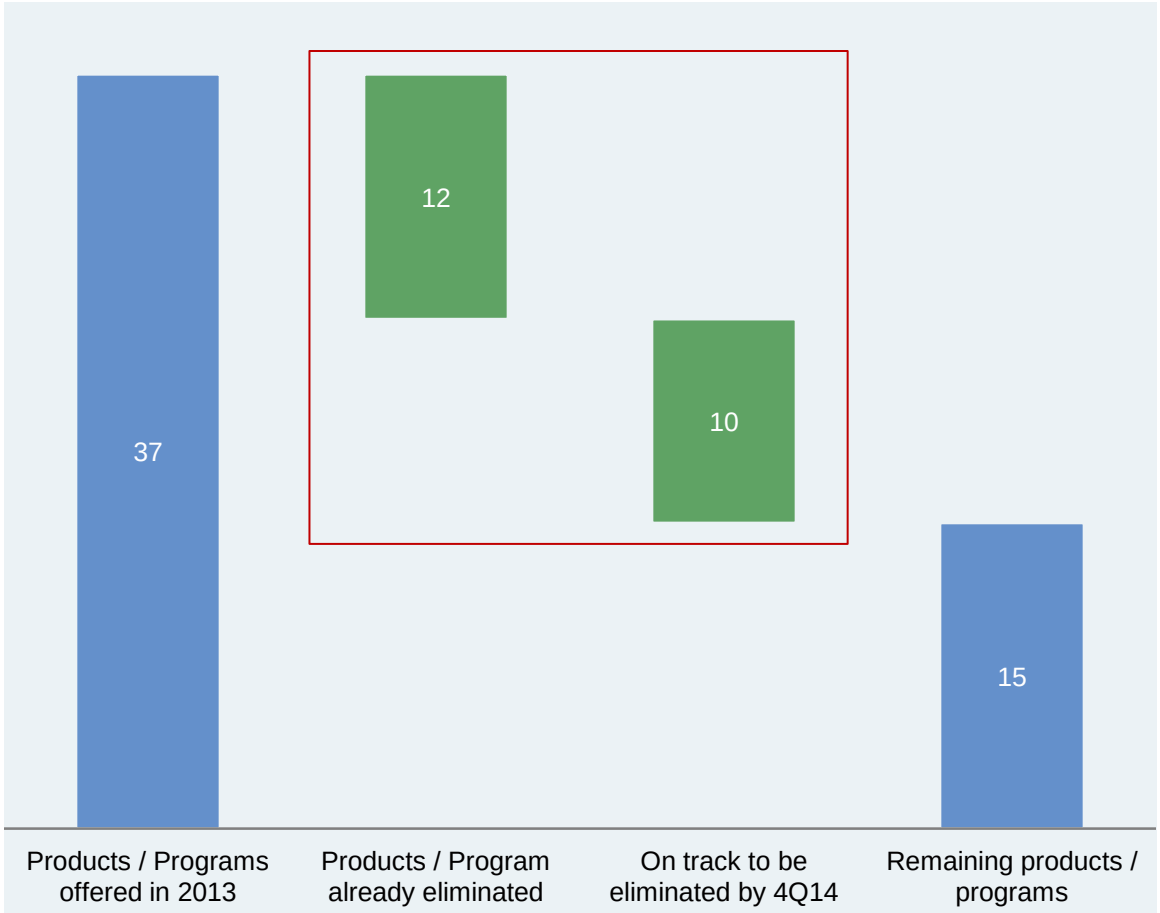
Despite the challenges and complexities, we are committed to being in the mortgage business and will adjust our business model to be successful over the long-run

Production	■ Simplify our product set and invest in new technology to enhance the customer experience ■ Leverage our balance sheet ■ Price to reflect higher servicing risks and expense
Servicing	■ Actively manage down our default inventory ■ Smaller, higher quality servicing book ■ Continue to invest in technology to improve operations

Our efforts will lead to a smaller, less volatile, and higher quality mortgage business

We are simplifying our product set to reduce complexity and further de-risk the business

Product / Program simplification



Source: Chase internal data

Examples of eliminated Products / Programs

- Agency Interest Only Fixed / ARM
- Partnership Rewards Program
- Non-agency relationship credit program (NARC)
- Annual Renewal / Draw HELOC
- 2nd Lien Home Equity Loan

We will continue to invest in technology to enhance the home financing process for customers

Example: Chase My New Home Mobile App



- Mobile app launched in 4Q12 to help customers find and finance a home
- Critical to capture mortgage customers via mobile / internet
- 360,000 app downloads to date

Example: Mortgage Express

- We continue to build out a new originations platform that leverages technology and process, leading to best-in-class customer satisfaction
  - Reduced originations operations expense as a result of efficient and consistent processes
  - Better customer experience by providing better loan tracking through process and lower, more consistent cycle times

We have seen strong improvements in customer satisfaction

J.D. Power 2013 Mortgage Origination survey

Provider	2010 Rank	2013 Rank	Change
Quicken Loans	1	1	-
BB&T	6	2	+4
U.S. Bank	4	3	+1
PNC	3	4	-1
Chase	12	5	+7
Wells Fargo	8	6	+2
Citi	13	7	+6
Sun Trust	5	8	-3
Fifth Third	6	9	-3
Provident Funding	10	10	-

Source: J.D. Power 2010 and 2013 U.S. Primary Mortgage Origination Satisfaction Studies

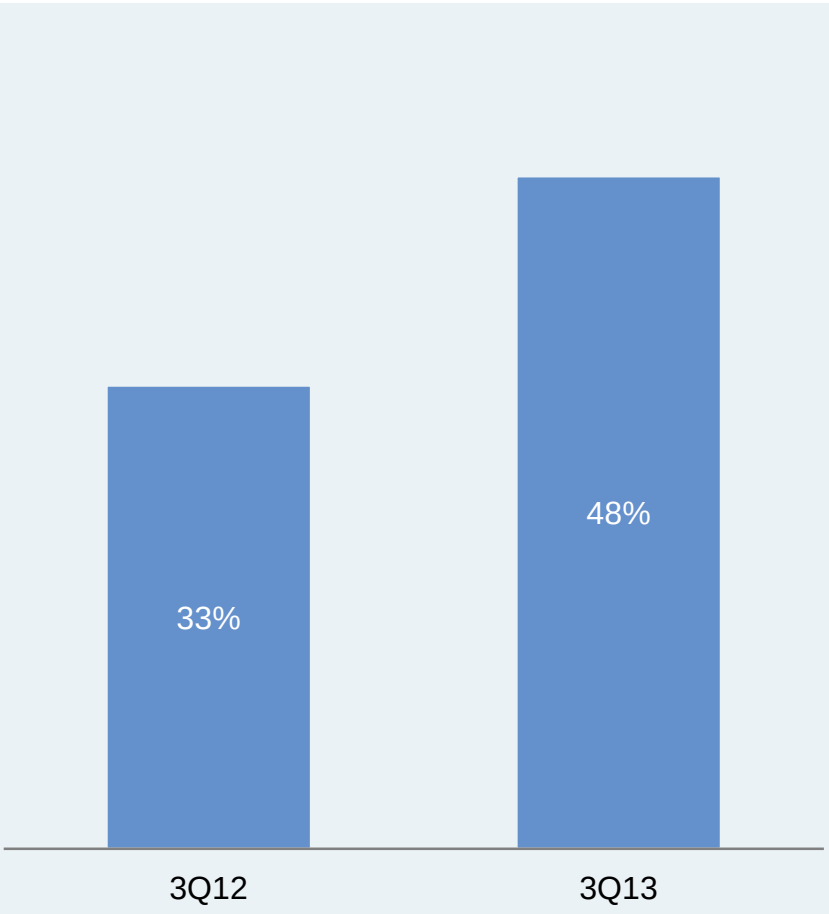
J.D. Power 2013 Mortgage Servicer survey

Provider	2010 Rank	2013 Rank	Change
BB&T	1	1	-
Regions	5	2	+3
Sun Trust	2	3	-1
Wells Fargo	4	4	-
Chase	13	5	+8
U.S. Bank	3	6	-3
Citi	9	7	+2
Flagstar	9	7	+2
PHH	7	9	-2
PNC	14	10	+4

Source: J.D. Power 2010 and 2013 U.S. Primary Mortgage Servicer Satisfaction Studies

Our mortgage penetration of Chase Private Client households continues to improve

% of Chase Private Client households that originated a mortgage with Chase[1]



Source: Chase internal data

[1] Of those households that originated a mortgage during each specified time period

Key drivers of success

- Strong partnership between the CPC Bankers, Advisors, and Mortgage Bankers
- Compelling value proposition
  - Closing cost discounts
  - Dedicated processing and underwriting queue
  - Expanded credit and specialty underwriting review
  - Enhanced servicing
- Proactive pipeline management
- Enhanced CPC training and marketing tools

Leverage our balance sheet: Real Estate Portfolios simulation

Real Estate Portfolios — simulated ending loan balance runoff and pretax income ($mm)

	2010	2011	2012	2013	2014F	2015F
Ending Balances ($B)	$223	$198	$177	$168	$170	$175
Ongoing ($B)	*37*	*36*	*36*	*46*	*65*	*85*
Legacy ($B)	*186*	*162*	*141*	*122*	*105*	*90*
Net revenue	$5,547	$4,592	$4,092	$3,512	$3,000	$2,800
Net charge-offs[1]	6,450	3,805	3,341	1,107	450+/-	400+/-
Change in allowance[1]	1,781	(230)	(3,850)	(3,800)	TBD[2]	TBD[2]
Expense	1,627	1,521	1,653	1,553	1,300	1,100
Pretax income / (loss)	**($4,311)**	**($504)**	**$2,948**	**$4,652**	**$1,250+/-**	**$1,300+/-**
Pretax income / (loss) excluding change in allowance	**($2,530)**	**($734)**	**($902)**	**$852**	**$1,250+/-**	**$1,300+/-**

Commentary

- Ongoing loan growth driven by higher jumbo originations as well as increased retention of conforming-eligible loans
- Quality of legacy loans continues to improve

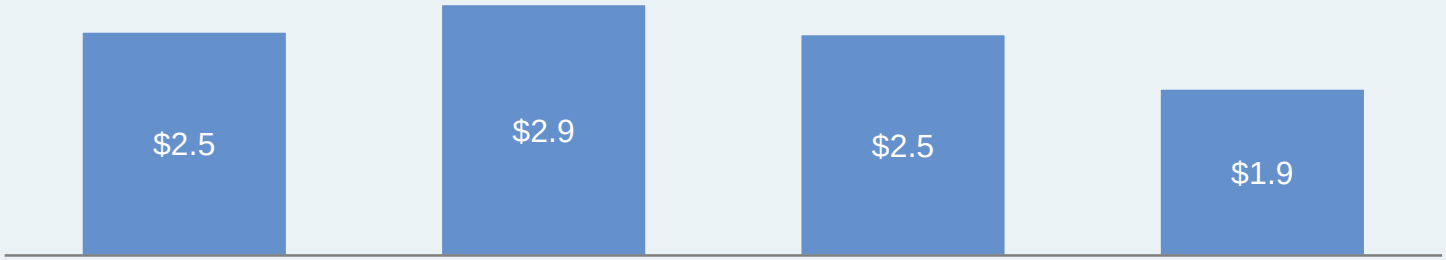
Source: Chase internal data

[1] Net charge-offs exclude purchased credit-impaired (PCI) loans; net charge-offs and change in allowance exclude $53mm of PCI write-offs in 2013

[2] Future reserve actions not simulated

We are investing in the future, but the next few years will be challenging

Production expense[1] ($B)



	2012	1H13 Annualized	2H13 Annualized	2014F
Market size[2]	$2.1T	$2.2T	$1.6T	$1.2T

Commentary

- Given headwinds, anticipate Mortgage Production pretax income to be negative in 2014
- Expect 2014 production expense to decline ~30% from 2013
- Initiatives to improve profitability include:
  - Investing in technology to improve operational efficiency
  - Optimizing retail loan officer coverage based on local market opportunity
  - Continuing to utilize centralized call centers for lower opportunity geographies
  - Maintaining price discipline for risk adjusted returns as opposed to market share

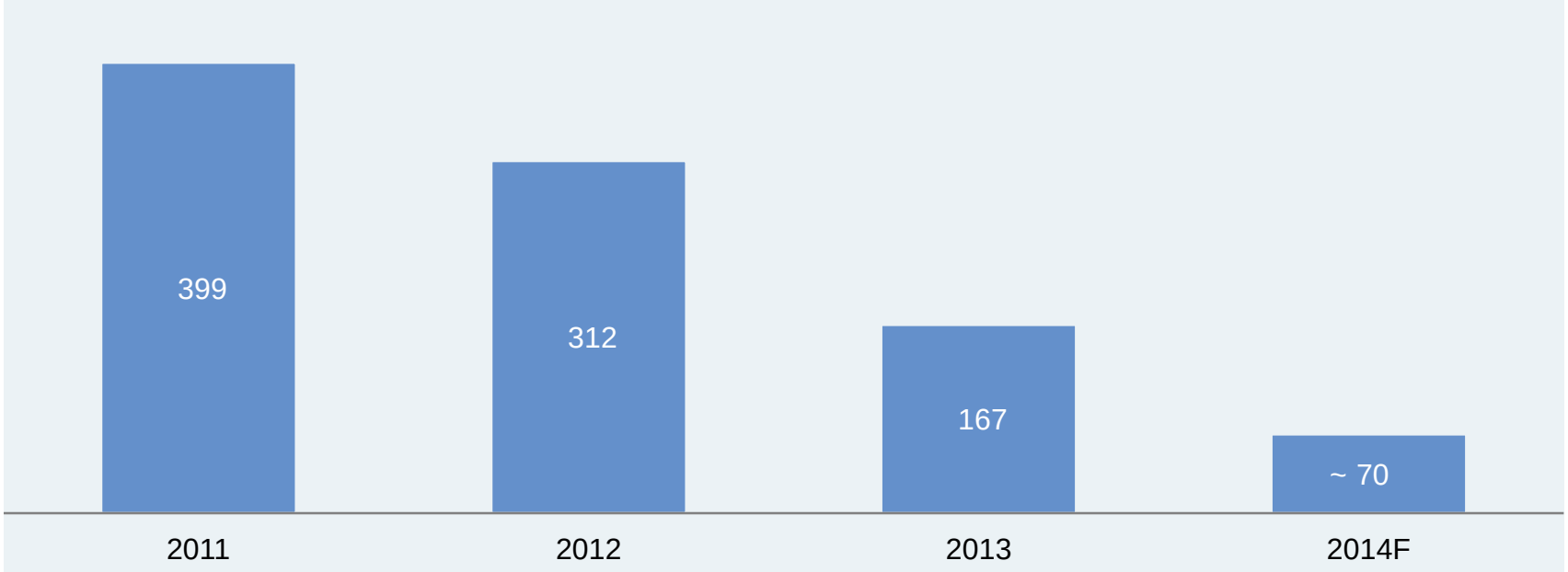
Source: Chase internal data

[1] 2012 and 2H13 production expense and pretax margin (%) normalized to exclude $0.2B and $0.4B of non-MBS-related legal expense, respectively

[2] Inside Mortgage Finance for 2012 and 2013. 2014F reflects average of forecasts from Fannie Mae (1/10/14), Freddie Mac (1/16/14), and MBA (1/14/14)

In Servicing, we are actively managing down our existing default inventory to reduce expense

Foreclosure inventory (K)



Commentary

- Reduction in default volume and increased efficiencies in core servicing will continue to drive servicing and default costs down
- Expect servicing and default expense of $500mm+/- in 4Q14

Source: Chase internal data

Core servicing is an attractive business

- We have competitive advantages in core servicing
  - Funding advantages
  - Mortgage Servicing Rights (“MSR”) risk management expertise
  - Higher barriers to entry due to required compliance and controls infrastructure
- We will continue to invest in technology
  - Improved process and technology workflow for customer service representatives
  - Leverage voice recognition software analytics to effectively manage incoming call volume
  - Improve customer adoption of paperless and self-service

Going forward, our business will have lower risk and volatility

In $mm, except where otherwise noted	2013	2013 Investor Day through-the-cycle	Through-the- cycle
Pretax Income			
Mortgage Production	$825	$1,500	$1,000
Mortgage Servicing	($372)	$1,000	$600
Real Estate Portfolios	$4,652	$1,000	$1,100
Mortgage Banking	**$5,105**	**$3,500**	**$2,700**
Key statistics / assumptions			
Mortgage Production			
Market volume	$1.9T[1]	$1.5T	$1.5T
Mortgage Servicing			
Third-party mortgage loans serviced[2]	$816B	$1.0T	$600B
Real Estate Portfolios			
Loans (end of period)	$168B	$125B	$175B
Net charge-off rate[3]	96bps	35bps	25bps+/-[4]

Source: Chase internal data
[1] Inside Mortgage Finance
[2] Mortgage only
[3] Excludes purchased credit-impaired (PCI) loans; 2013 actuals exclude PCI write-offs of $53mm
[4] Through-the-cycle net charge-off rate of 25bps+/- will depend on portfolio mix of mortgage and home equity

Key changes from last year

- Originations pricing updated to reflect servicing risk resulting in:
  - Lower modeled market share
  - Smaller, higher quality servicing book
  - Less exposure to default servicing
- Greater percent of loans originated for portfolio; continue best execution

Summary

The business will face challenges in the near term…

- Production: pretax income to be negative in 2014
- Servicing: expect servicing and default expense of $500mm+/- in 4Q14
- Real Estate Portfolios: ~$1.25B in pretax income excluding changes in reserves in 2014

…but we are taking steps to return the business to profitability

- Build a streamlined and simpler business
- Actively de-risk the business
- Rightsize production
- Strategically invest in technology to create a unique customer experience

Agenda

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Chase Card Services is a leading franchise that has delivered strong returns

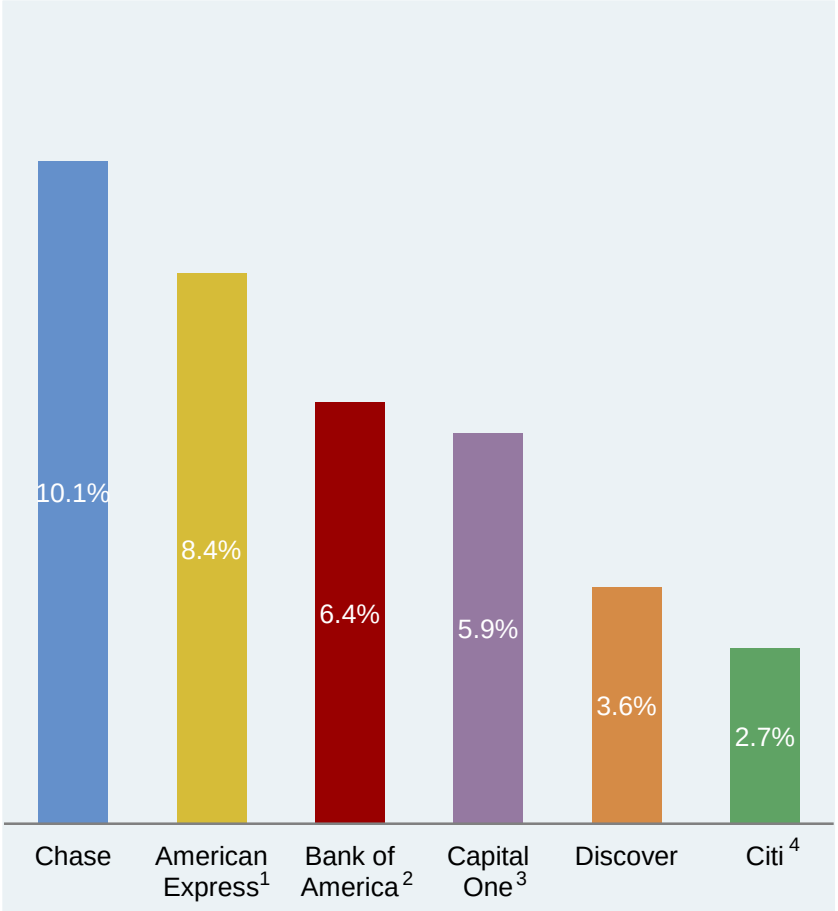
Key metrics and performance targets

$ in billions, except where otherwise noted		2012	2013	YoY Δ
Performance	Revenue	$15.5	$15.4	-
	Expense	$6.6	$6.2	(5%)
	Net Charge-offs	$4.9	$3.9	(22%)
	Pretax Pre-LLR	$4.0	$5.3	33%
	Revenue Margin	12.35%	12.49%	
	ROE[1]	25%	34%	
Key drivers	Average loans outstanding	$125	$124	(1%)
	End of period loans outstanding	$128	$128	-
	Sales volume[2]	$381	$420	10%
	Merchant processing volume	$655	$750	14%
	Net charge-off rate[3]	3.95%	3.14%	

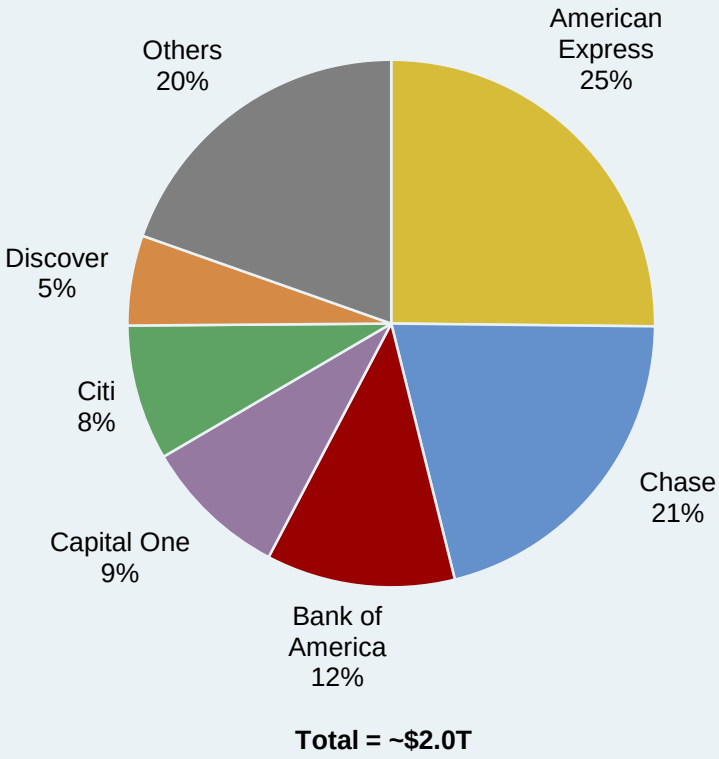
Source: Chase internal data
[1] Excluding the impact of loan loss reserve release, Card Services ROE would have been 18% in 2012, and 26% in 2013; LLR tax effected at 38% tax rate
[2] Excludes Commercial Card
[3] Excludes held-for-sale loans

Our focus on spend engagement continues to deliver results

Credit card sales volume growth (2013 vs. 2012)



Total General Purpose Credit Card[5] sales market share (FY 2013)



Source: Earnings releases, Chase internal data, internal Chase estimates; based on disclosures by peers as of 4Q13

[1] U.S. Card

[2] Consumer & Small Business estimate

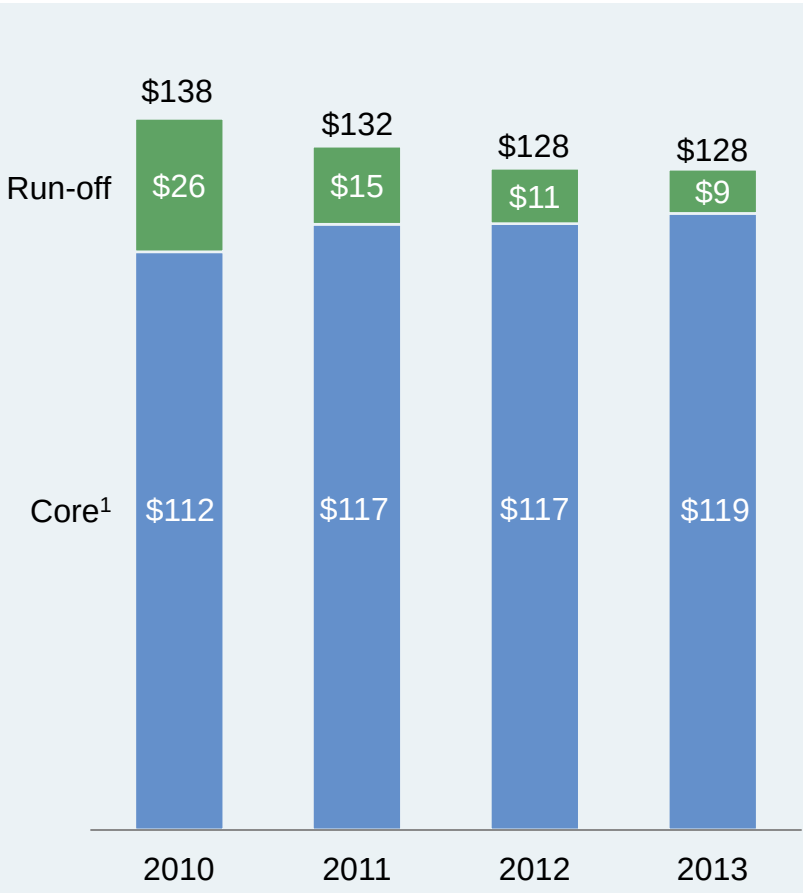
[3] Estimated by excluding HSBC acquisition. Including impact of HSBC, Capital One sales grew 12% YoY for FY 2013

[4] Includes North America Citi-Branded cards and excludes Citi Retail Services (estimated to be mostly Private Label)

[5] Excludes Private Label

Our overall portfolio has stabilized and our core portfolio is showing growth

Card Services outstandings ($B)



Growth drivers[2]

Rewards products driving engaged customer relationships

- Over 60% growth in rewards outstandings from 2010 to 2013 acquisition vintages
- Total outstandings on rewards products up 11% from 2010 to 2013

Small Business Card Growth

- Improved engagement of our customers by leveraging business banking channel
  - 64% growth in spend per active account from 2010 to 2013

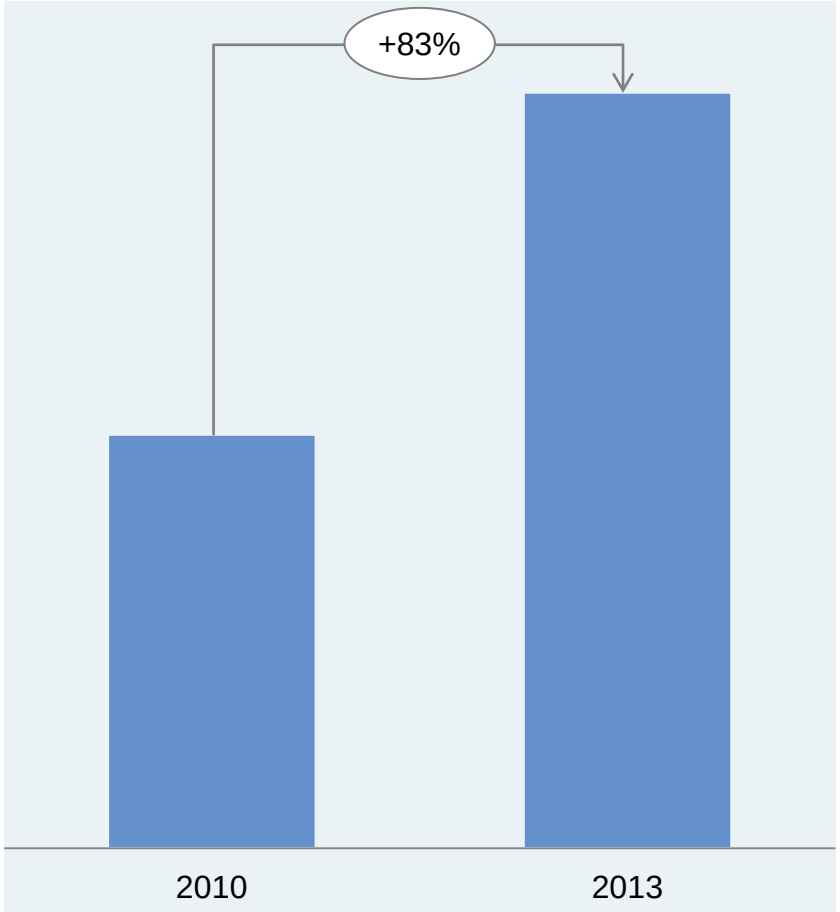
Source: Internal Chase estimates

[1] Core loans exclude certain legacy WaMu loans, legacy balance transfer programs, and certain terminated partner portfolios

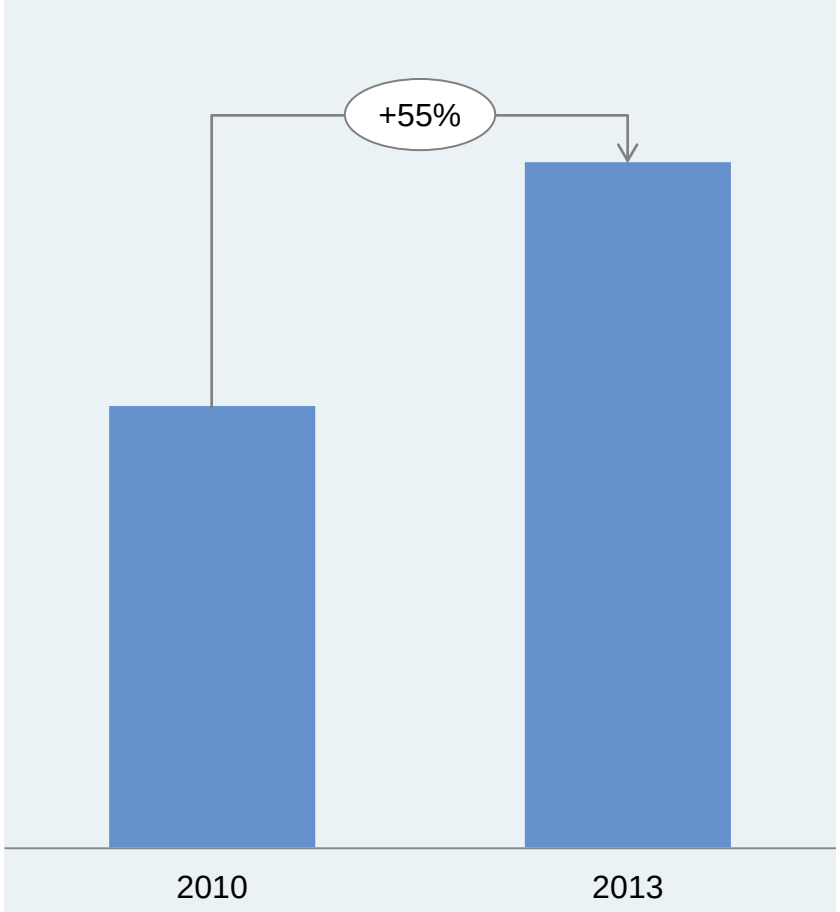
[2] Excludes Commercial Card and certain terminated partner portfolios

We continue to attract more engaged customers, with the 2013 vintage outperforming the 2010 vintage in both sales and outstandings

In-year sales by vintage[1]



In-year outstandings by vintage[1]

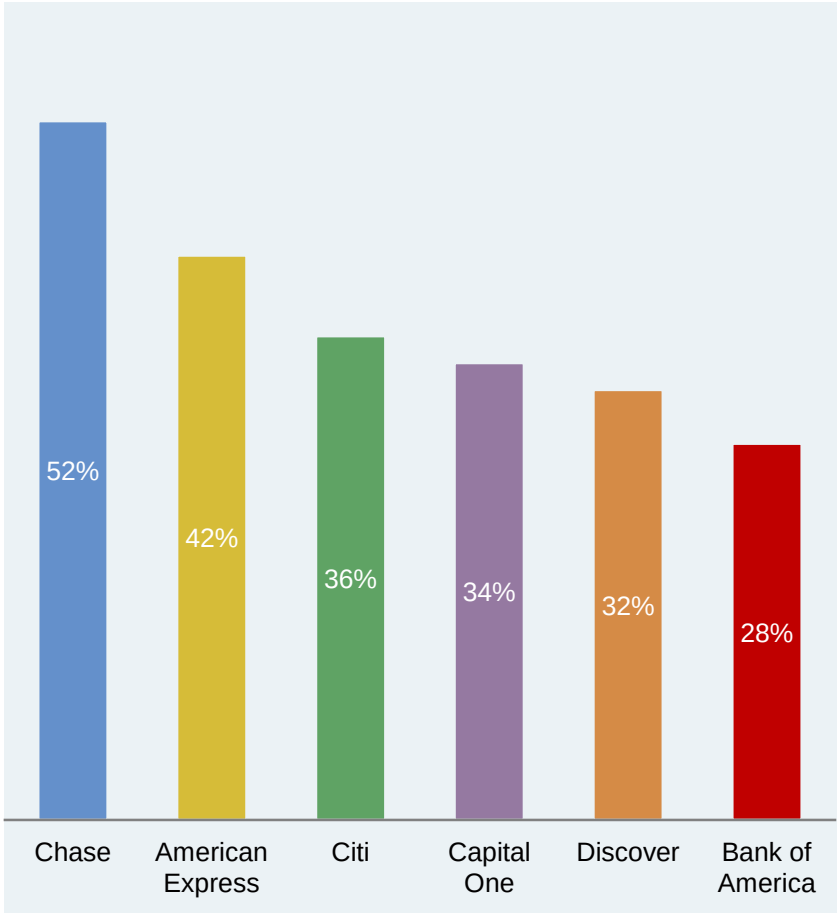


Source: Chase internal data

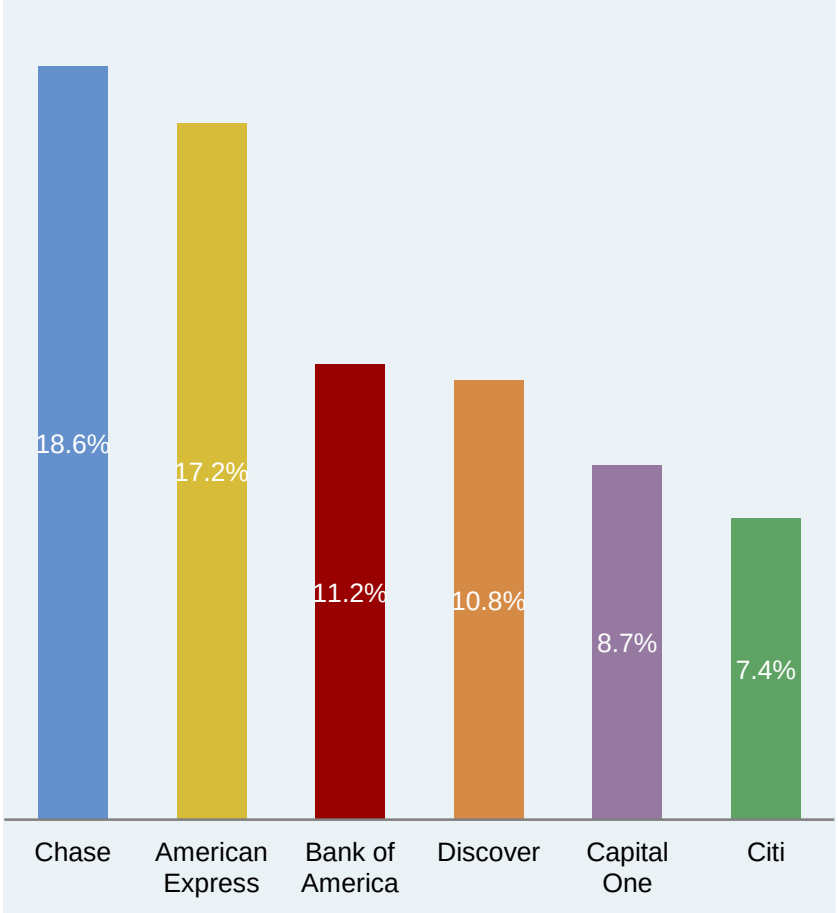
[1] Excludes Commercial Card and certain terminated partner portfolios

Among affluent consumers, we are ahead of peers in consideration and are more consistently the primary card in wallet

Credit card consideration among consumers with $125K+ income or $250K+ assets[1]



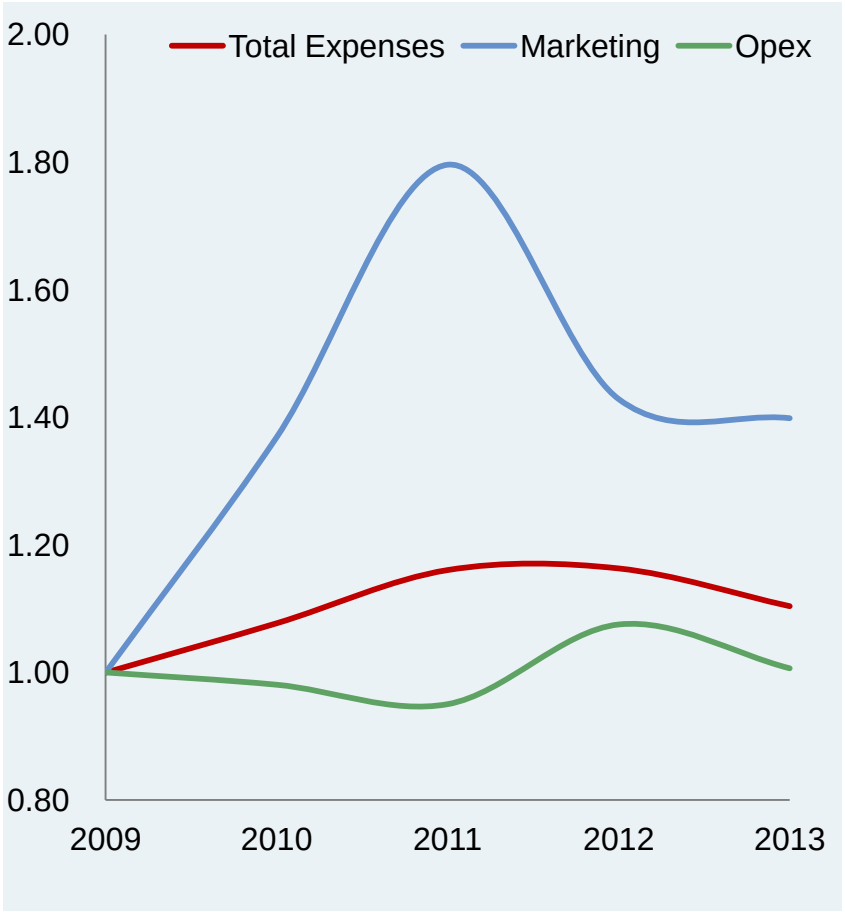
Primary credit card among those with $125K+ income[2]



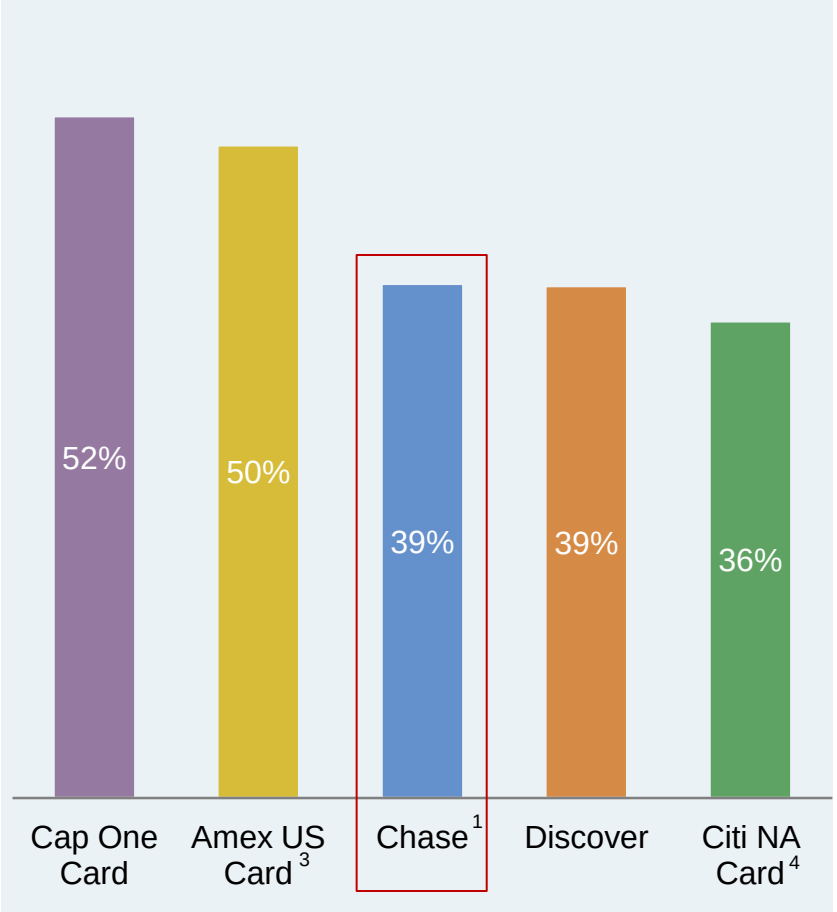
Note: For more footnoted information, refer to Appendix
[1] Source: Consumer Card Brand Health Tracker; FY 2013
[2] Source: Phoenix Global Wealth Monitor 2013 Study; August 2012 - July 2013

We maintain a healthy efficiency ratio even with significant investment in marketing; expense declined by 5% in 2013

Chase Consumer and Small Business Card expense (indexed to 2009)[1]



Overhead ratio[2] vs. competitors (FY 2013) (%)



Source: Earnings releases; Chase internal data

[1] Excludes Commercial Card

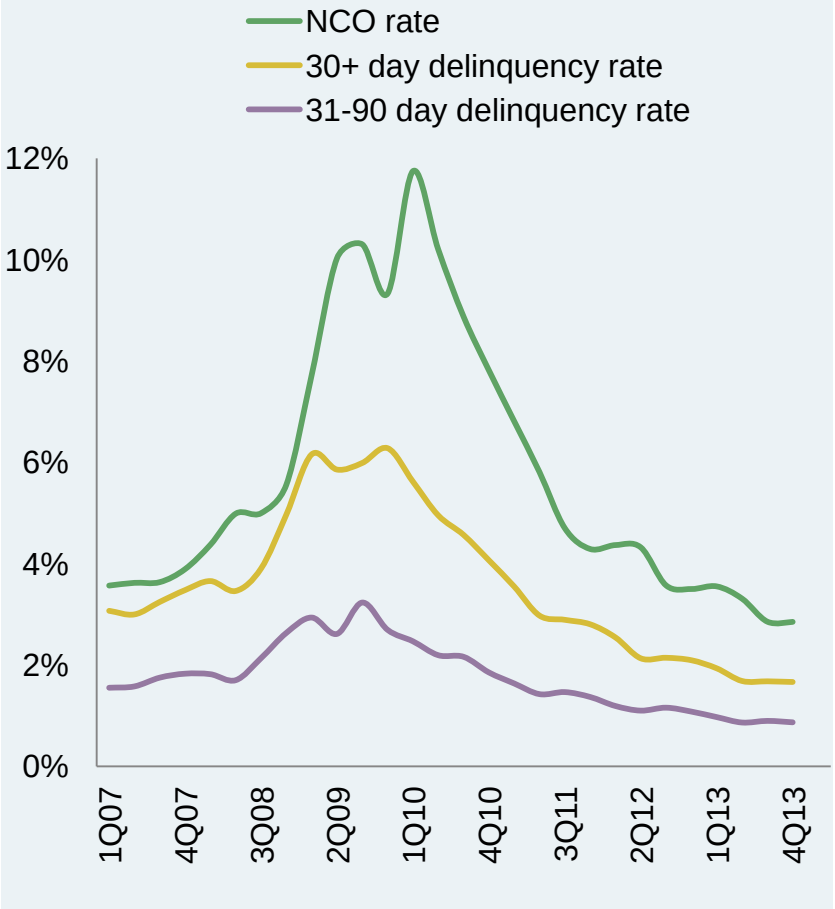
[2] Overhead ratio = total expense / revenue; Total expense includes marketing

[3] Amex's estimated rewards expense is removed from expense and netted against revenue, consistent with the industry practice

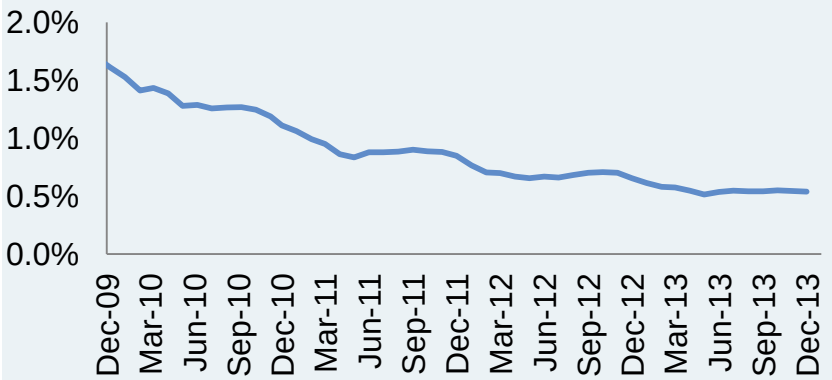
[4] Includes both branded and retail partner cards

Credit trends remain positive with losses at historically low levels

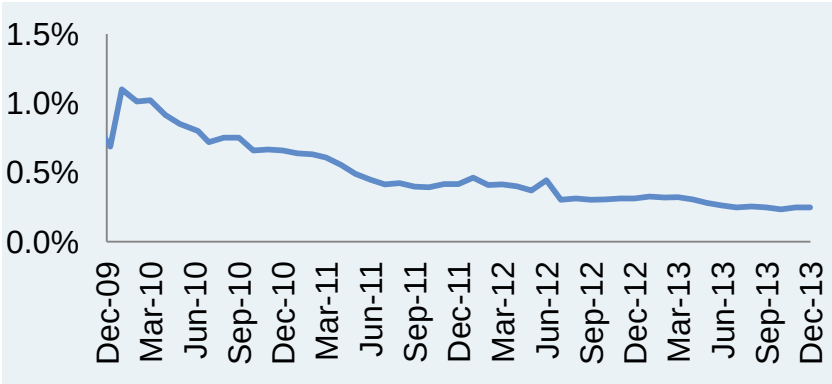
Net charge-off and delinquency rate trends



Delinquency $ roll-rate from current to bucket 2 (0-60 days past due)



Delinquency $ roll-rate from current to charge-off (0-180 days past due)



Source: Chase internal data
Note: Includes held-for-sale loans

Core elements of strategic vision

Deliver best-in-class rewards	■ Continue to build and market Ultimate Rewards and Co-brand partner products ■ Leverage “non-point” value proposition
Drive digital engagement	■ Continue digital innovation ■ Improve customer experience by providing access through preferred channels ■ Drive cost efficiencies
Lead payments innovation	■ Deliver innovative payment solutions to both consumers and merchants ■ Rapidly scale via large existing consumer and merchant base ■ Leverage ChaseNet to deliver seamless online and mobile payment solutions, enabled by control over entire transaction

Creating a single rewards platform through Ultimate Rewards has improved the customer experience while lowering cost-to-serve

Greater engagement and satisfaction

- Since launch of Ultimate Rewards:
  - Percentage of accounts actively spending up 18 percentage points[1]
  - Spend on those accounts up 37%[1]
- UltimateRewards.com website customer satisfaction rating of 83 out of 100[2]
- More than 50% of Ultimate Rewards accounts are actively engaged in the rewards program

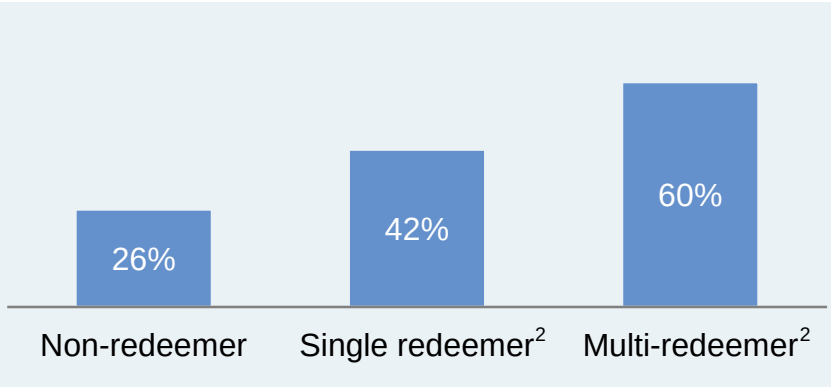
Improved servicing efficiencies

- 78% of Ultimate Rewards redemptions now occur through digital channels
- The percentage of redemption orders processed by a Customer Service Specialist has decreased by 11 percentage points
- Customer communication has been migrated to digital channels

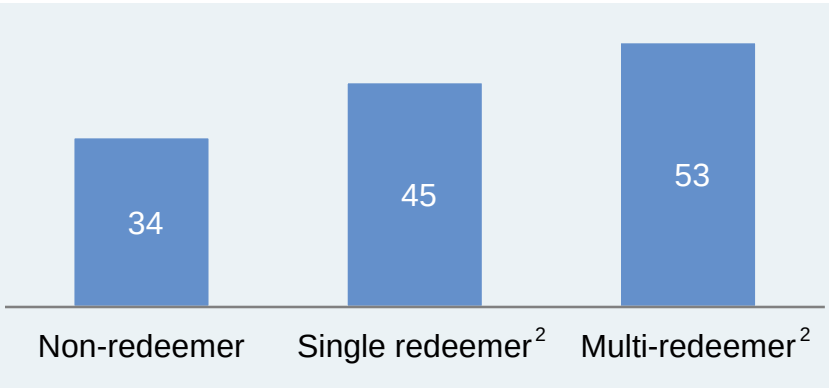
[1] Based on Chase branded rewards accounts excluding Commercial Card and certain terminated partners, comparing full year 2008 to full year 2013
[2] Ultimate Rewards had a ForeSee® online satisfaction rating of 83 in the month of December. ForeSee is a registered trademark of ForeSee Results, Inc.

We will continue to build on our successful rewards products

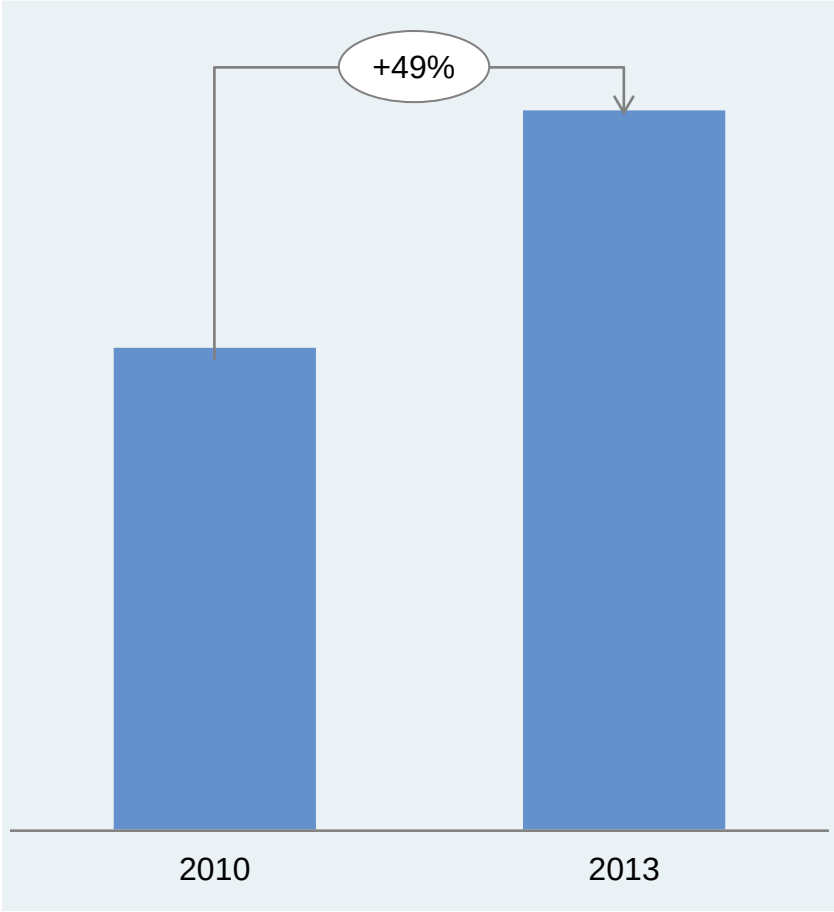
Share of wallet by redemption category – reward products[1] (%)



Net promoter score by redemption category – reward products[1]



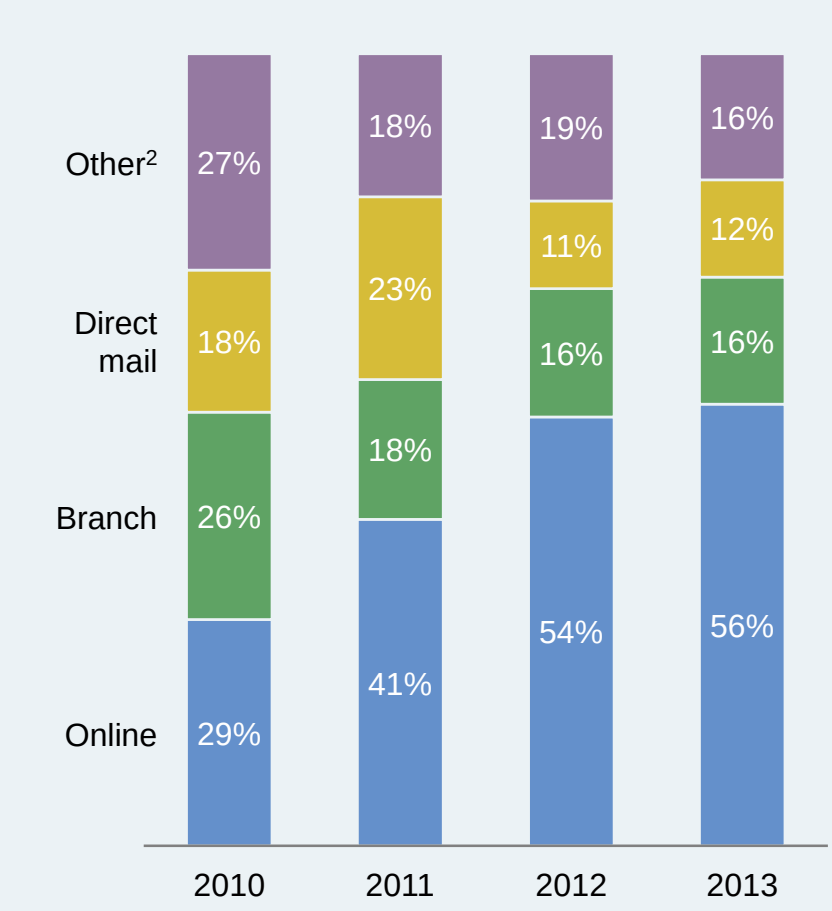
Annual sales volume for rewards products[3]



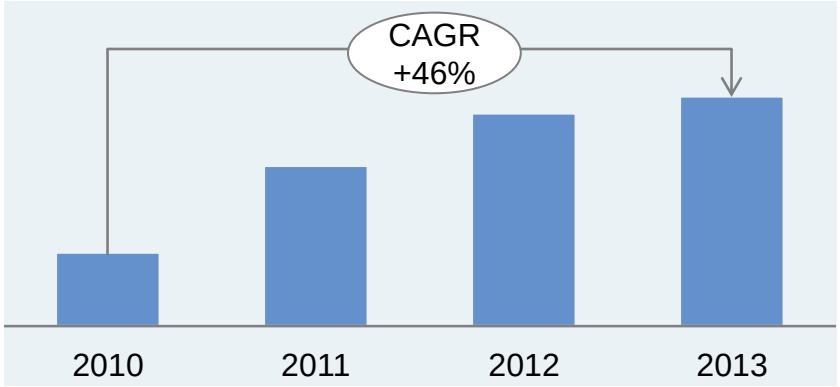
Source: Chase internal data
[1] Based on Ultimate Rewards consumer accounts
[2] Single redeemer defined as one redemption in prior 24 months; Multi-redeemer defined as more than one redemption in prior 24 months
[3] Includes Chase branded and partner rewards consumer and small business products, excludes certain terminated partners

Our key digital engagement metrics continue to grow rapidly

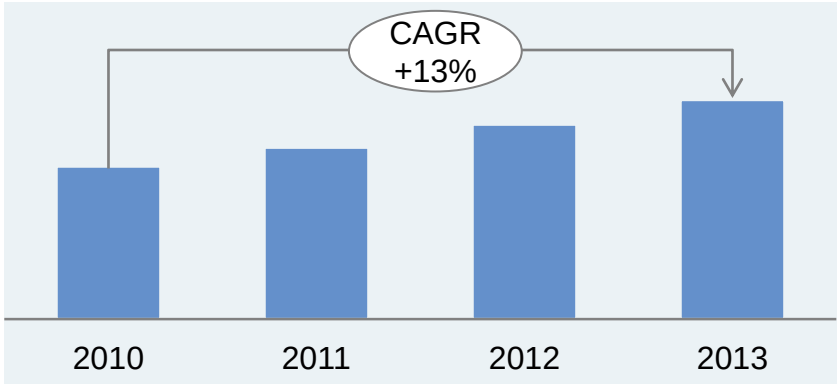
Card originations by channel[1] (%)



Digital rewards redemption transactions[3]



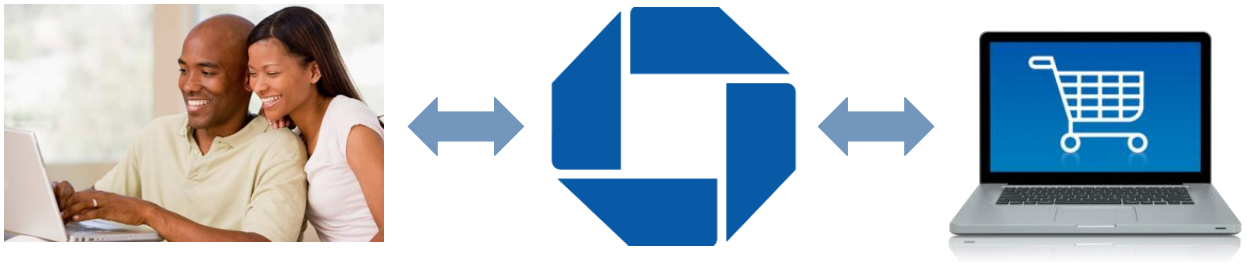
E-statements[4]



Source: Chase internal data
[1] Excludes Commercial Card and certain terminated partner portfolios
[2] Other includes primarily point of sale instant credit accounts
[3] Based on Ultimate Rewards consumer and business account redemptions through online and mobile channels; Ultimate Rewards online platform launched in May 2009
[4] Consumer Card and Small Business

Our proprietary ChaseNet platform has been launched …

ChaseNet



Consumer **Merchant**

Progress to date

- ✓ Platform launched as planned
- ✓ In pilot mode with select merchants
- ✓ Streamlined operating standards in place
- ✓ System tested and scalable

… enabling us to deliver an enhanced experience to consumers and merchants







Consumer

- "Quick Checkout" – simplified checkout for online/mobile payments
- Targeted merchant offers
- Pay with points
- Chase Wallet

Merchant

- Deliver a new, simple payment option to customers
- Simplified pricing
- Lower shopping cart abandonment
- Reduced fraud leveraging tokenization
- Deliver targeted merchant offers

We will deliver a simplified checkout experience for Chase cardholders and merchants, positioning us to become the preferred digital "way to pay"

Chase "Quick Checkout"

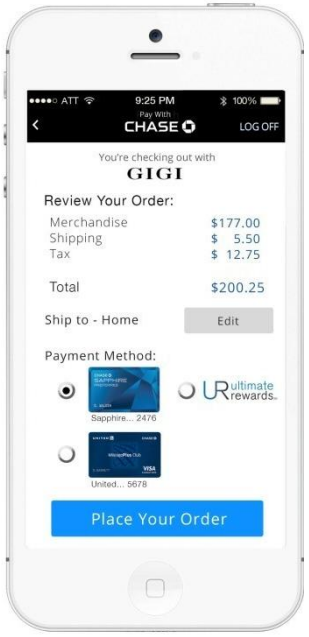
1 Consumer sees product and payment options



2 Consumer logs into Chase digital wallet



3 Consumer confirms information and places order

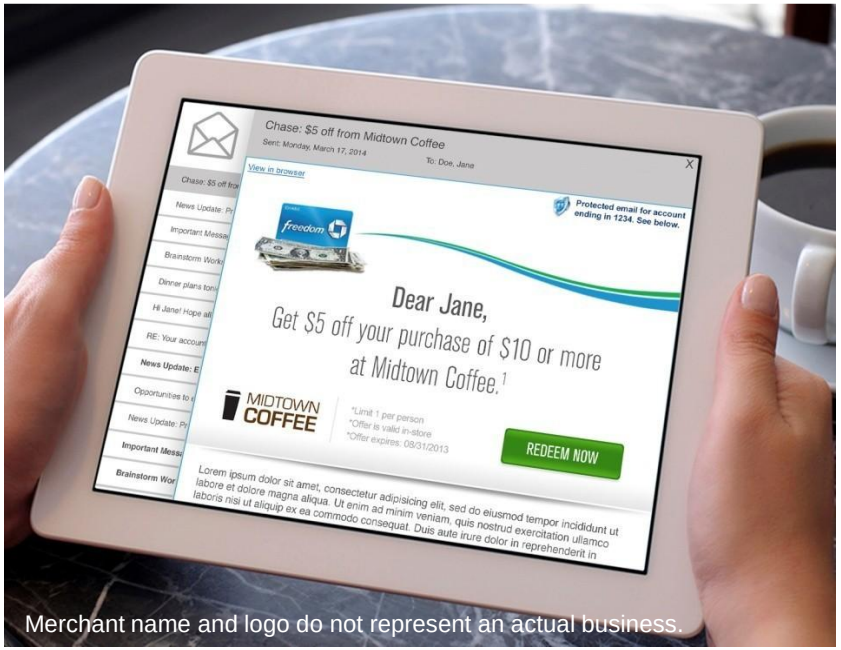


- Auto-fill shipping address, address changes, new card numbers
- Online / mobile checkout in **~30 seconds vs. 2 minutes**
- 34mm[1] active online users on "day 1"

[1] Chase customers using internet browsers and mobile platforms who have been active in the past 90 days

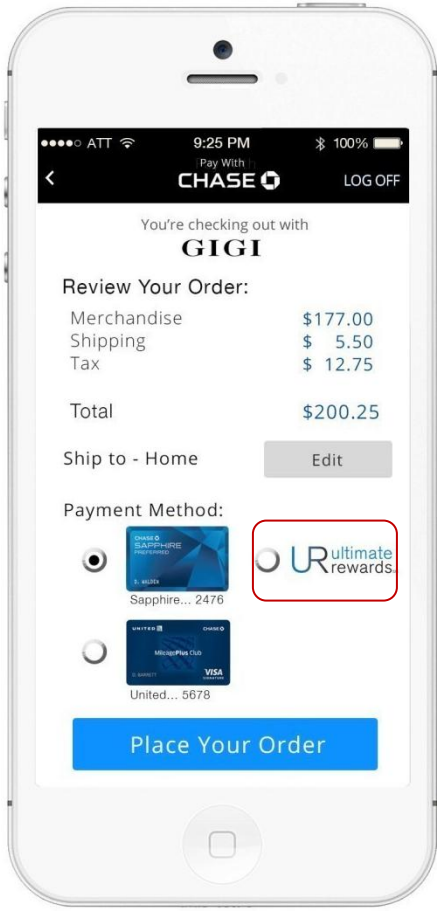
We are also developing new ways to bring merchants and customers together

Compelling offers



- ChaseNet allows merchants to tailor offers based on customer behaviors and specific purchase history

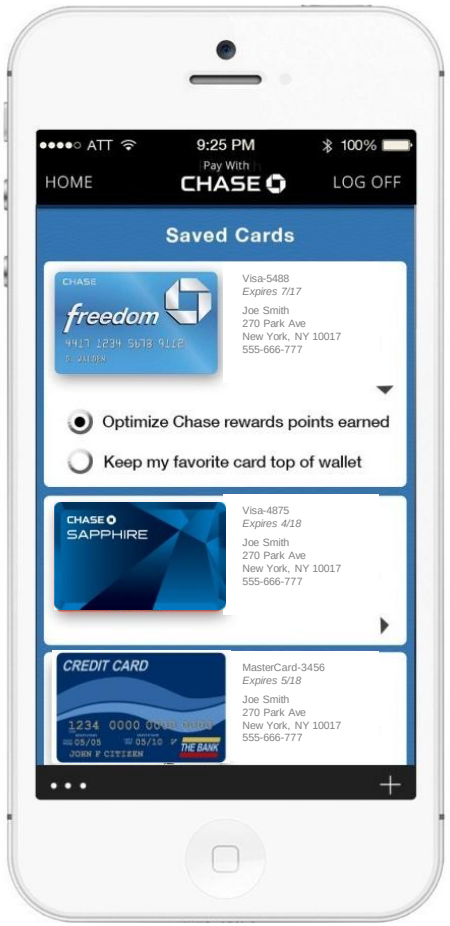
Pay with points



- Leverages card and Ultimate Rewards customer base
- Access to new currency for both merchants and consumers

Chase Wallet will make online and mobile shopping simple

Chase Wallet



Auto-population of all Chase cards

With 100mm+ open cards, we can scale very quickly[1]

Auto-update of Chase cards when lost/stolen/expired

Customers won't have to re-enter card information

Allow non-Chase products

Open platform to boost adoption and convenience

[1] Includes consumer and small business credit, debit, and prepaid cards

We are also focused on ensuring the safety and security of all transactions

Tokenization replaces real account data with a highly secure "token" which is useless when taken out of the secure environment

1 **Wallet** sends token to **Merchant**



2 **Merchant** sends token for approval



3 **Chase** responds with approval

Tokenization will reduce fraud

Summary

- Underlying performance drivers are strong, and we continue to gain market share of general purpose credit card sales volume
- Credit quality of our portfolio is excellent; credit trends remain positive
- Tight focus on expense management resulting in a strong efficiency ratio
- Adoption of digital channels continues to enhance the customer experience and lower costs
- Strength of our issuing and acquiring businesses positions us well to innovate in payments

The Chase Consumer & Community Banking ("CCB") franchise has leadership positions across all businesses

Strong financial returns	■ FY 2013 ROE: CCB: 23%; Consumer & Business Banking ("CBB"): 26%; Mortgage Banking: 16%; Card, Merchant Services & Auto: 31%
Powerful customer franchise	■ Consumer relationships with almost half of U.S. households ■ #1 in customer satisfaction among the largest banks for the 2nd year in a row[1]
Firmwide capabilities to meet customer needs	■ Chase Private Client integration with J.P. Morgan Private Bank investments platform ■ Business Banking access to Commercial Bank specialty lending and Treasury Services
Attractive footprint	■ Branch network concentrated in the highest growth U.S. markets ■ #1 ATM and #2 retail branch network for the 2nd year in a row[2]
Leading position in digital banking	■ #1 online financial services destination (Chase.com)[3] and #1 mobile banking functionality[4]
World-class payments franchise	■ #1 in total U.S. credit and debit payments volume[5] ■ #2 wholly-owned merchant acquirer[6] ■ Proprietary end-to-end payments solution
National, scale lending businesses	■ #1 credit card issuer in the U.S. based on loans outstanding[7] and #1 U.S. co-brand credit card issuer[7] ■ #2 mortgage originator[8] and servicer[8] ■ #3 non-captive auto lender[9]

Note: For footnoted information, refer to Appendix

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Notes on slides 2 and 67 – The scope and quality of the Chase Consumer & Community Banking ("CCB") franchise would be nearly impossible to replicate

1. Based on the American Customer Satisfaction Index
2. Based on disclosures by peers as of 4Q13
3. Per compete.com as of December 2013
4. Forrester Research's 2013 Global and U.S. Mobile Banking Functionality Rankings
5. Based on Nilson Report as of May 2013
6. Based on Nilson Report ranking largest merchant acquirers for 2012
7. Based on disclosures by peers and internal estimates as of 4Q13
8. Based on Inside Mortgage Finance as of 4Q13
9. Per Auto count data for December 2013 YTD

Notes on slide 8 – Customer experience continues to improve…

1. Source: Chase internal relationship surveys; NPS = % promoters minus % detractors
2. J.D. Power U.S. Retail Banking Satisfaction Study 4/18/13 and 1/1/10; among large bank peers
3. J.D. Power U.S. Small Business Banking Satisfaction Study Results 10/31/13 and 10/21/10; ranking system changed from national to regional ranking in 2013
4. J.D. Power U.S. Credit Card Satisfaction Study 8/22/13 and 8/19/10
5. J.D. Power U.S. Primary Mortgage Origination Satisfaction Study 11/14/13 and 11/18/10 and J.D. Power U.S. Primary Mortgage Servicer Satisfaction Study 7/18/13 and 8/26/10

Notes on slide 54 – Among affluent consumers, we are ahead of peers in consideration and are more consistently the primary card in wallet

1. Issuer-level consideration; survey question = “We’d like you to think about the next time you would choose a new credit card. How likely would you be to consider each of the following credit cards?”; % of survey respondents that selected one of the top 2 boxes (“Only one” or “one of 2 or 3 I would consider”) on a 5 point scale
2. Phoenix Global Wealth Monitor survey question for network = “Regarding your primary credit or charge card, the card that you charge the most dollars on: What type of card is it? (Select one)” and survey question for card = “What is the name of the company that issues your primary card?”

COMMERCIAL BANKING

Doug Petno, Chief Executive Officer of Commercial Banking

February 25, 2014

JPMorgan Chase & Co.

Commercial Banking

A proven business model

Franchise strength

- Platform aligned to best serve client needs
- JPMC's leading global capabilities delivered locally – unique competitive advantage
- Seasoned and experienced team deeply rooted in local communities
- High quality customer base through rigorous client selection and focus
- Best-in-class credit performance through the cycle
- Stable and resilient earnings

2013 performance

- Executing on core strategies – expanded and deepened client base
- Adapting to changing regulatory and market environment
- Strong 2013 financial results despite challenging environment:
  - Revenue: $7.0B
  - Net income: $2.6B
  - ROE: 19%

Outlook

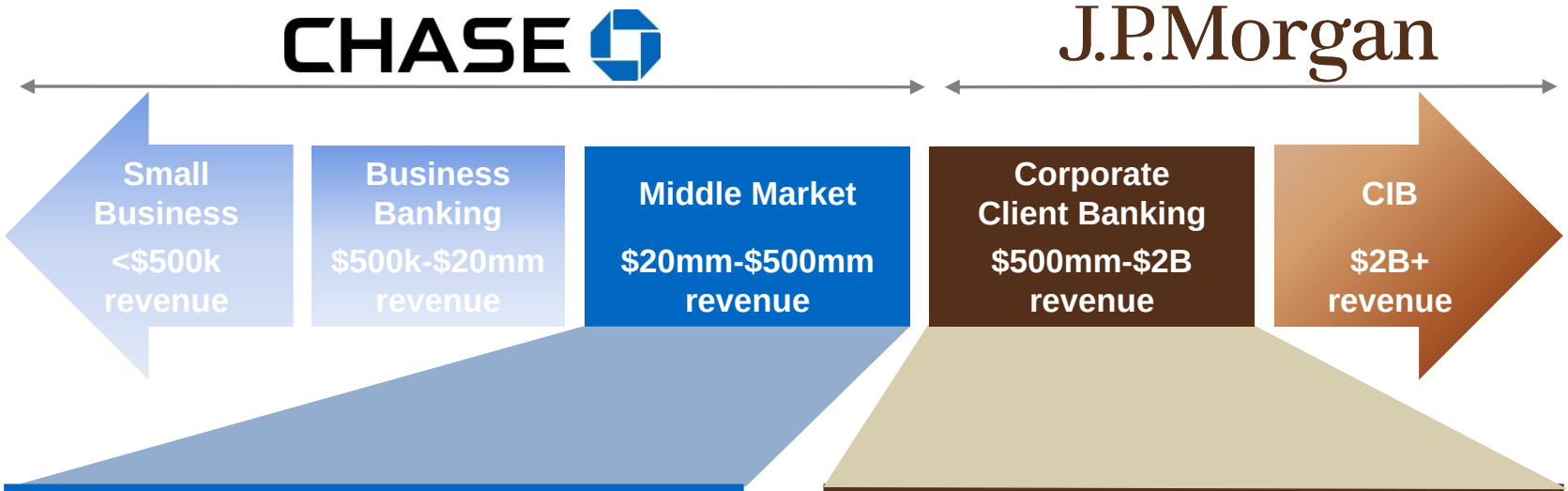
- Challenging environment in 2014 but expected improvement in the medium/long-term
- At 9.5% Basel III capital, we will be able to absorb near-term pressures and continue to generate strong returns
- 2014 priorities: Continue to adapt to higher capital and regulatory requirements, maintain discipline and execute against our growth strategy

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Our business

Commercial & Industrial overview



Middle Market Banking

- 43% of CB revenues
- Long standing client relationships
  - ~19,000 clients, ~36,000 prospects
  - Includes government, nonprofit and healthcare clients
- Local delivery model
- #1 traditional MM syndicated lender in the U.S.[1]

Corporate Client Banking

- 26% of CB revenues
- Larger, mostly public companies with complex needs
  - ~1,600 corporate clients, ~1,100 prospects
  - Served by dedicated industry coverage teams
- Strong partnership with CIB – more than doubled IB revenues since 2006

Coverage model structured to best serve our clients' needs

Note: Data as of YE2013. Dollar ranges beneath segment title represent clients' annual revenue. Middle Market Banking abbreviated as MM. Corporate Client Banking abbreviated as CCB. CB's Commercial & Industrial (C&I) grouping is internally defined to include certain client segments (MM, which includes Government, Nonprofit & Healthcare Clients, and CCB) and will not align with regulatory definitions

[1] Thomson Reuters as of YE2013. Traditional MM is defined as credit facilities of < $100mm from clients with < $500mm in revenue

Our business

Commercial Real Estate overview

Commercial Term Lending

- 17% of CB revenue
- $49B in loans
- Stabilized properties
- Acquired with WaMu in 2008
- #1 multifamily lender in U.S.[1]

Real Estate Banking

- 8% of CB revenue
- $19B in credit commitments
- Top-tier sponsors
- Institutional quality assets
- Diversified portfolio and products

Community Development Banking

- 3% of CB revenue
- $4B in credit commitments
- Specialized construction lending for affordable housing







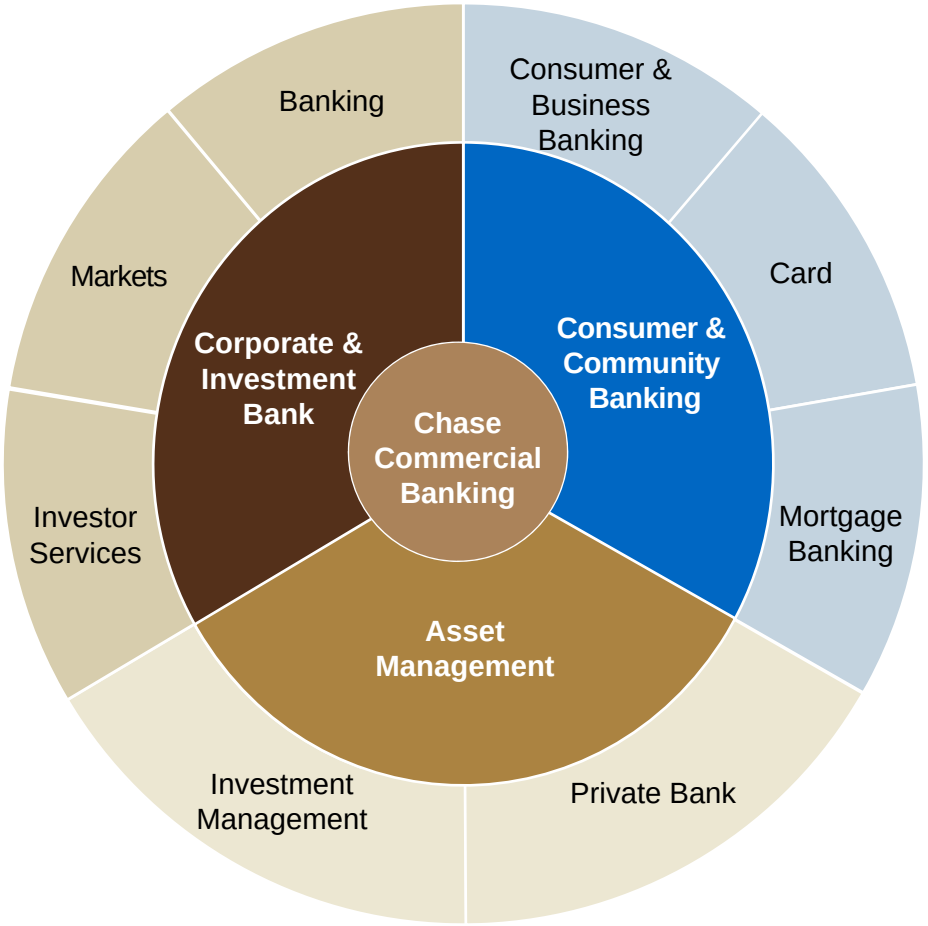
■ Uses Chase brand ■ Uses J.P. Morgan brand

Note: Data as of YE2013 except where noted. Commercial Term Lending abbreviated as CTL. Real Estate Banking abbreviated as REB. Community Development Banking abbreviated as CDB. CB's Commercial Real Estate (CRE) grouping is internally defined to include certain client segments (REB, CTL and CDB) and will not align with regulatory definitions

[1] SNL Financial based on FDIC data as of 3Q13

Our platform

A unique competitive advantage as a part of JPMC



Corporate & Investment Bank

- Treasury Services revenue of $2.4B
- Record IB revenues of $1.7B

Consumer & Community Banking

- Card Services revenue of $438mm
- ~18mm branch transactions in 2013

Asset Management

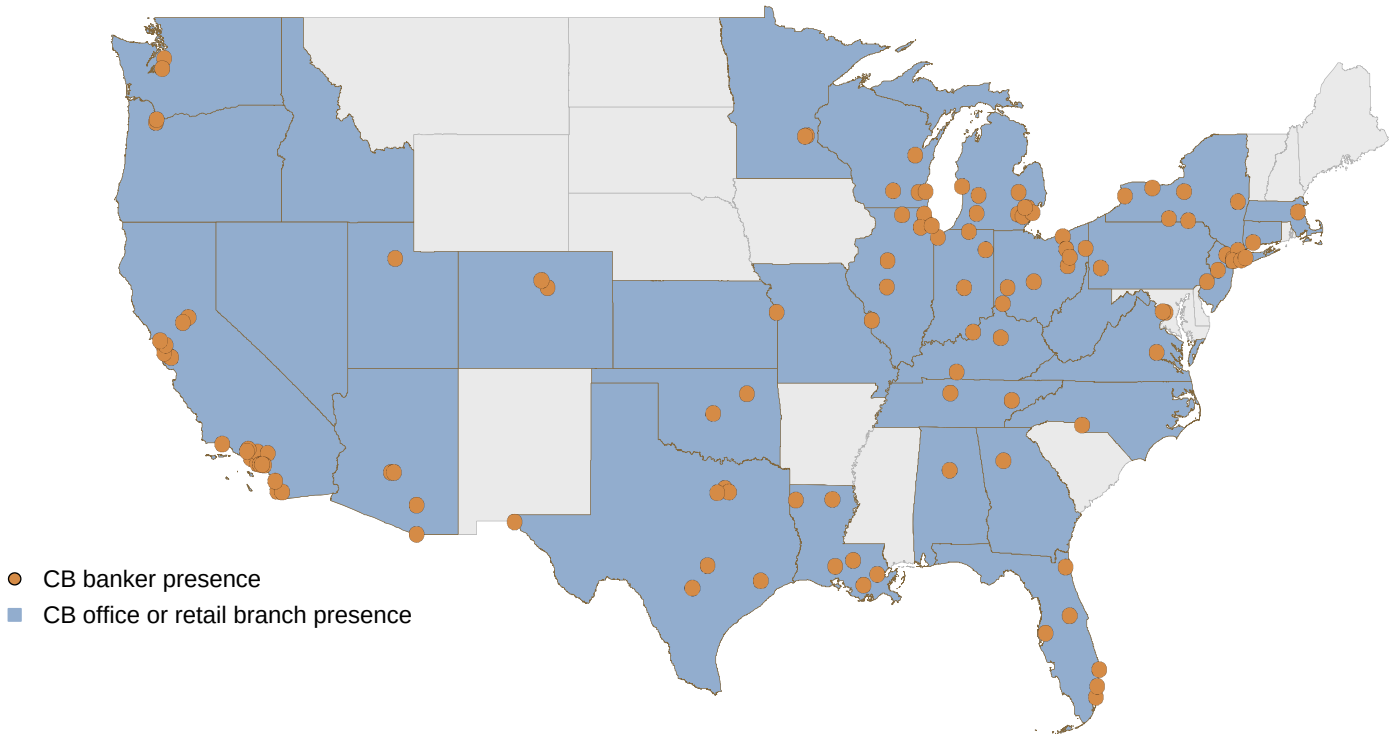
- Investment Management revenue of ~$500mm
- ~$100B of AuM

Scale and stability | **Iconic brands** | **Access to talent** | **Broad product capability**

Note: Data as of YE2013. All cross-sell information represents gross revenue, transactions or assets generated by CB clients. Investment Banking (IB) includes Banking and Markets revenue. Card Services includes Commercial Card and Paymentech revenue

Our people and presence

Global JPMC capabilities delivered locally



- Presence in 119 U.S. cities, 40+ of the top 50 MSAs and 13 major international cities
- Leverages Chase's extensive branch network and CIB's presence in 60 countries
- ~1,300 bankers[1]; average 20+ years of industry experience

Single point of contact → **Local decision making** → **Rooted in local communities**

[1] Based on total number of revenue producing employees

Our clients

Rigorous client selection

Our client selection criteria

- Strategic clients with broad and complex needs
- Strong management track record
- Reputable in local markets
- Share our risk philosophy
- Preferred industries
- Transparent operations

Results in a high quality client base…

- Long-term, deep relationships: average of ~9 products/client
- Well-diversified portfolio of clients in our target segments
- Lower credit, operating and reputational risk
- We know our clients

…and a positive impact on economics

- Higher revenue per client given broad product needs
- Lower cost-to-serve (e.g., capital requirements, on-boarding, monitoring)
- Greater earnings resiliency
- Stronger returns

Our credit culture and discipline

Through-the-cycle credit costs below our target of 50bps

Portfolio quality driven by…

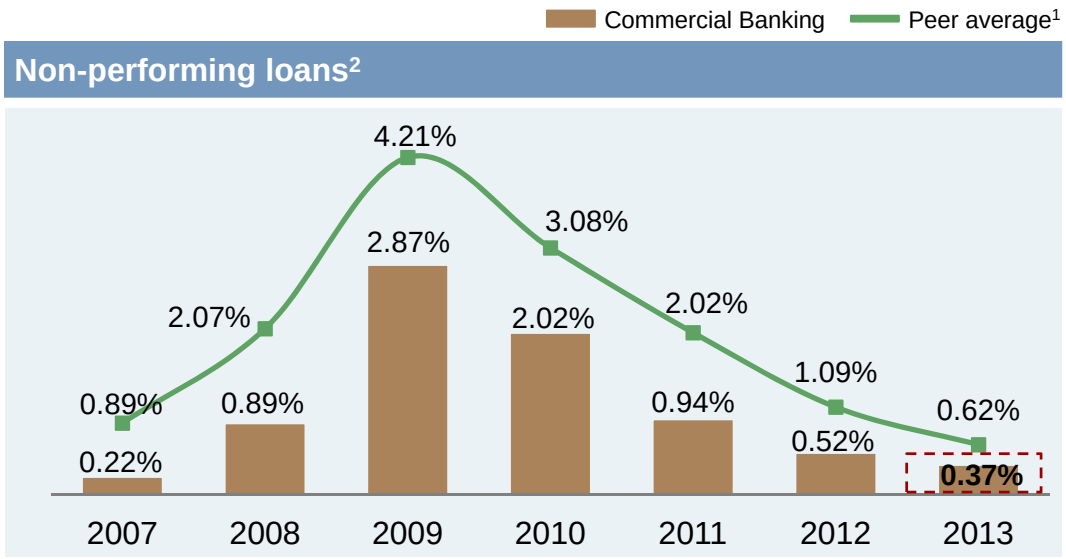
Strong credit culture

- Discipline over growth
- Joint ownership between banking and risk teams
- Experienced credit and risk teams in market
- Deep local knowledge

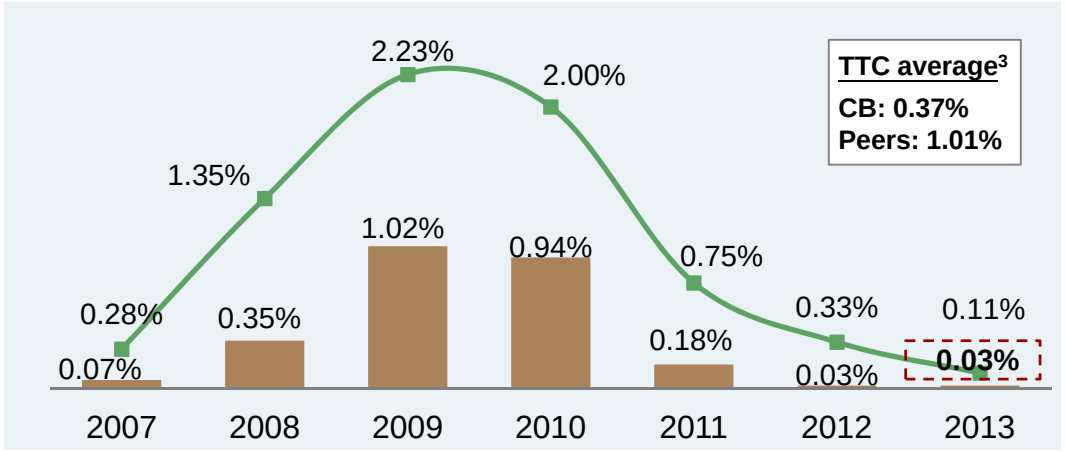
Risk discipline

- Granular, high quality portfolio
- Prudent with private equity sponsors
- Sound structures
- Cyclical risks managed
- New originations carefully monitored

Non-performing loans[2]



Net charge-offs

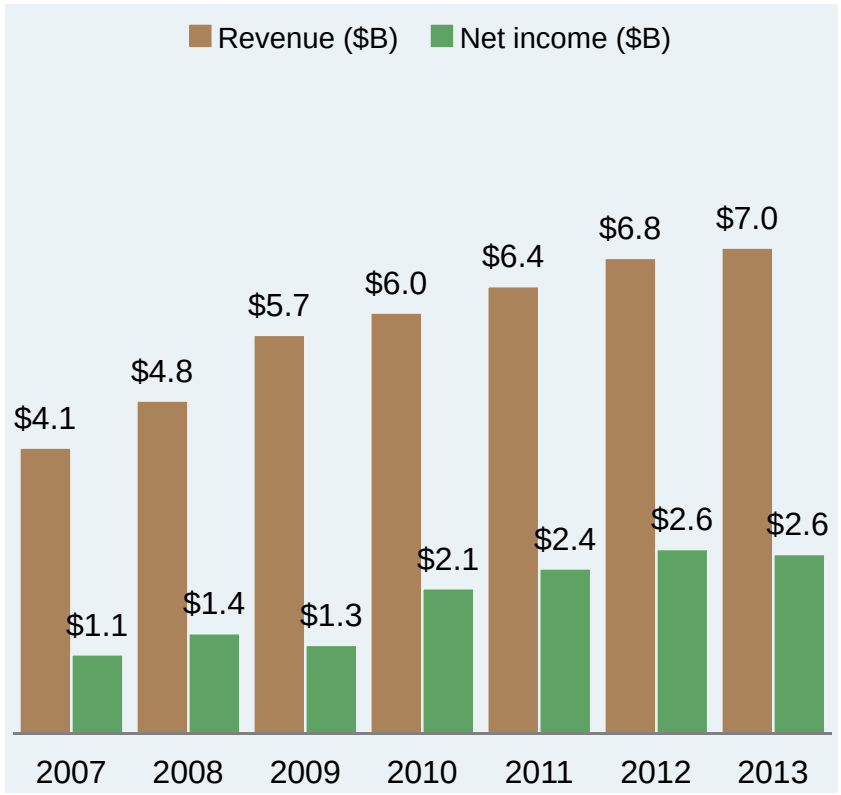


[1] Peer averages include CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC
[2] Based on end of period loans
[3] Through-the-cycle, 2007-2013 average

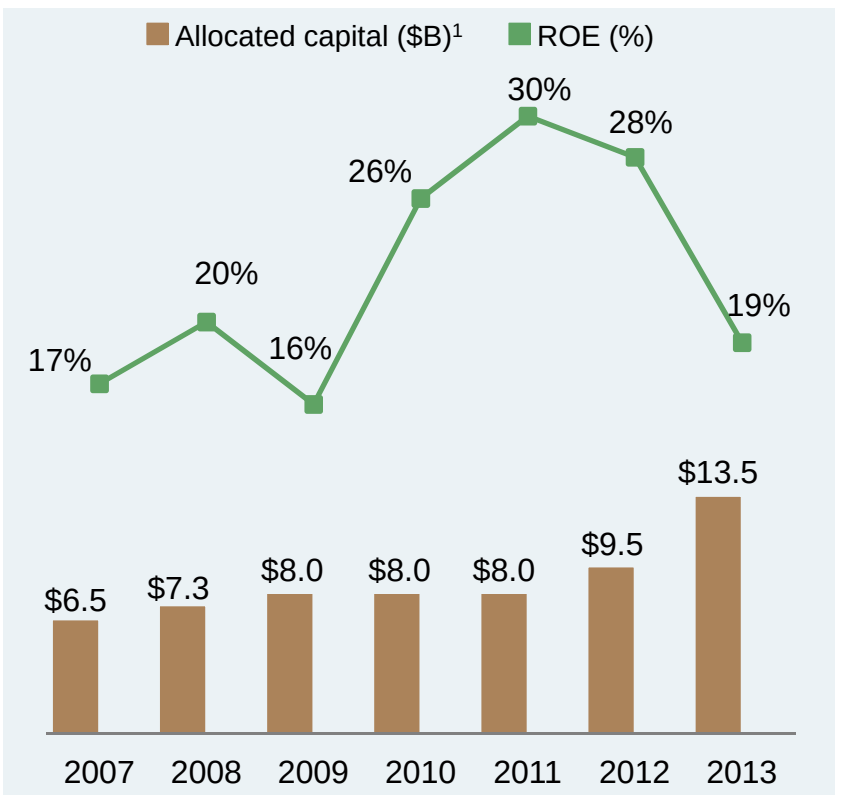
Our through-the-cycle performance

Resilient, high quality earnings

Resilient earnings



Strong ROE despite higher capital and continued investment in the business



High quality clients → **Credit & expense discipline** → **Broad product capability** → **Capital efficiency**

[1] Average allocated common equity for the period

FRANCHISE STRENGTH

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2013 results

Strong underlying business performance

Delivered strong performance

- Disciplined loan growth
- Higher deposits, particularly DDA[1]
- Strong credit performance
- Expense discipline

Deepened client relationships

- Footprint expansion
- Record IB revenues
- Strong growth across key products

Adapted to regulatory changes

- Higher capital due to Basel III
- Higher compliance and control expenses

Record

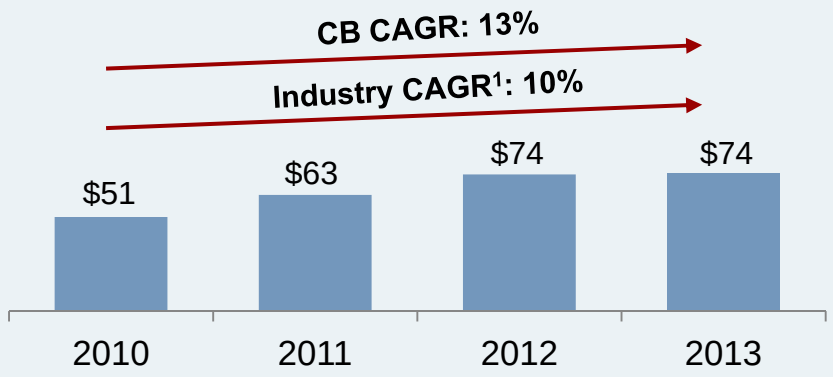
($B, except where noted)	2012	2013	YoY (%)
Total loan balance (EOP)	128	137	7%
Net charge-offs (%)	0.03%	0.03%	
Non-performing loans (%)	0.52%	0.37%	
Total deposits (avg.)	196	198	1%
Overhead ratio (%)	35%	37%	
Return on equity (%)	28%	19%	
Investment Banking revenue[2]	1.6	1.7	5%
Card Services revenue[2] ($mm)	381	438	15%
International revenue[3] ($mm)	238	261	10%
Allocated capital	9.5	13.5	42%
Dedicated regulatory FTEs[4]	64	215	236%

[1] Demand Deposit Accounts
[2] Investment Banking and Card Services revenue represent gross revenue generated by CB clients. Investment Banking includes Banking and Markets revenue. Card Services includes Commercial Card and Paymentech revenue
[3] Denotes overseas revenue from U.S. multinational clients
[4] Full-time equivalents

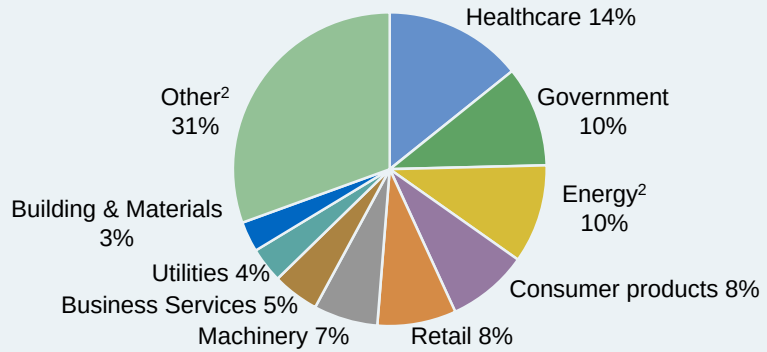
C&I loan growth

Maintaining discipline even when the industry is easing

CB C&I loans ($B, EOP)



Diversified portfolio (2013 C&I loans, EOP)



2013 industry observations

- Demand slowed versus initial years of economic recovery in 2010-2012
  - Less pure interest rate driven demand
  - Clients remained cautious and held onto cash
  - Record leveraged finance activity from institutions, replacing bank loans for larger corporate clients
- Fierce competition from traditional competitors and new non-bank lenders
- Easing of credit standards[3] and very aggressive pricing

CB performance summary

- Outperformed industry in both growth and credit quality since onset of recovery
- Growth lagged industry in 2013
  - Passed on deals that didn't meet our credit standards or economic hurdle rates
  - Competitors refinanced lower quality loans from portfolio
  - Maintained focus on core industries with selective exposure to private equity transactions
- Revolver utilization of 30% remains low

Proven track record and well-positioned for an economic expansion

Note: CB's C&I grouping is internally defined to include certain client segments (MM, which includes Government, Nonprofit & Healthcare Clients, and CCB) and will not align with regulatory definitions

[1] Industry data sourced from FRB H.8 Assets and Liabilities of Commercial Banks in the United States (not seasonally adjusted)

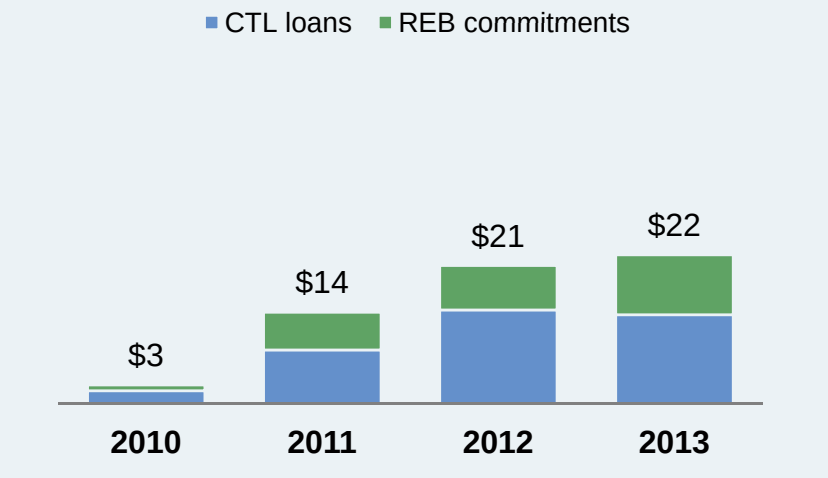
[2] "Energy" includes Oil & Gas and Metals & Mining. "Other" includes nine additional industry groups

[3] Based on FRB Senior Loan Officer Opinion Survey on Bank Lending Practices – released 2/3/2014

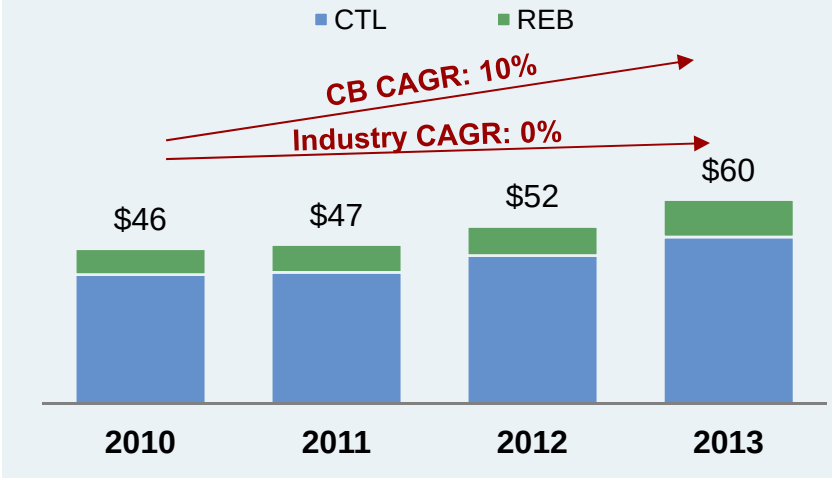
CRE loan growth

Capturing market opportunity

Credit originations ($B)[1]



Loan balances ($B, EOP)[1]



Sector fundamentals remain strong

- Strong multifamily fundamentals
- Modest commercial construction aiding stability
- 33% of $3.1T CRE debt maturing between 2014-2016[2]
- Sound credit structures

Scale advantage → **Client and asset selection** → **Rigorous underwriting standards** → **Market conditions closely monitored**

Note: CB's Commercial Real Estate (CRE) grouping is internally defined to include certain client segments (REB, CTL and CDB) and will not align with regulatory definitions

[1] Excludes CDB

[2] Source: Trepp, LLC and FRB Flow of Funds Data, Balance Sheets, and Integrated Macroeconomic Accounts, as of 3Q13

Deposit growth

Stable and diversified deposit base

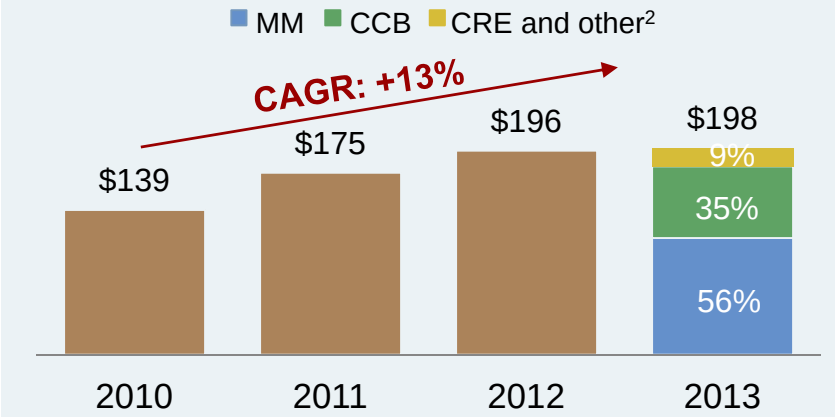
Excellent deposit gathering franchise

- 17,000+ depository clients
- Complete set of cash management products to attract valuable operating deposits
- 54% of deposit base comprised of DDA, with strong growth over 2012
- Stable spreads in 2013
- $2.4B revenue generated from deposits and product fees

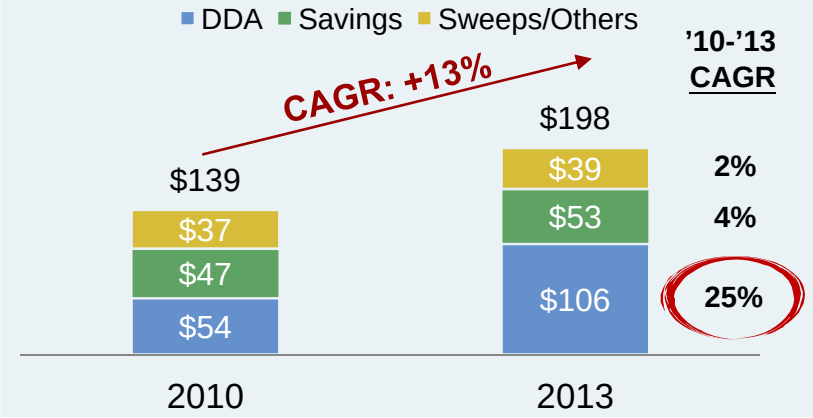
Managing deposits closely

- Regulatory changes will impact the value of certain types of deposits, but we are actively managing through pricing
- Expect non-operating deposits to decline as economy improves[1]
- Well-positioned for a rising rate environment

Average deposits ($B)



Deposit mix by type ($B)



Our deposits will be very valuable as interest rates rise

Note: Deposits represent client deposits and other third party liabilities. DDA = Demand Deposit Account

[1] Non-operating deposits include deposits in excess of what a client requires to fund their transactional/operating needs

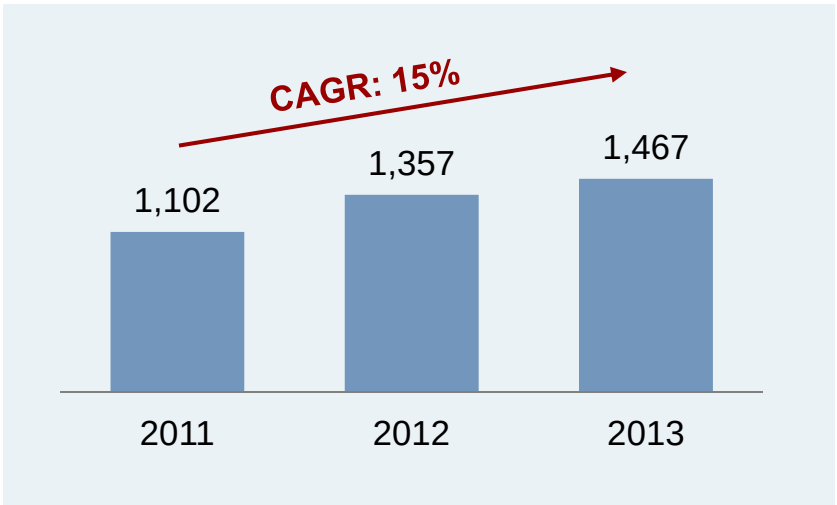
[2] Includes REB, CDB and CTL

Expanding our client base

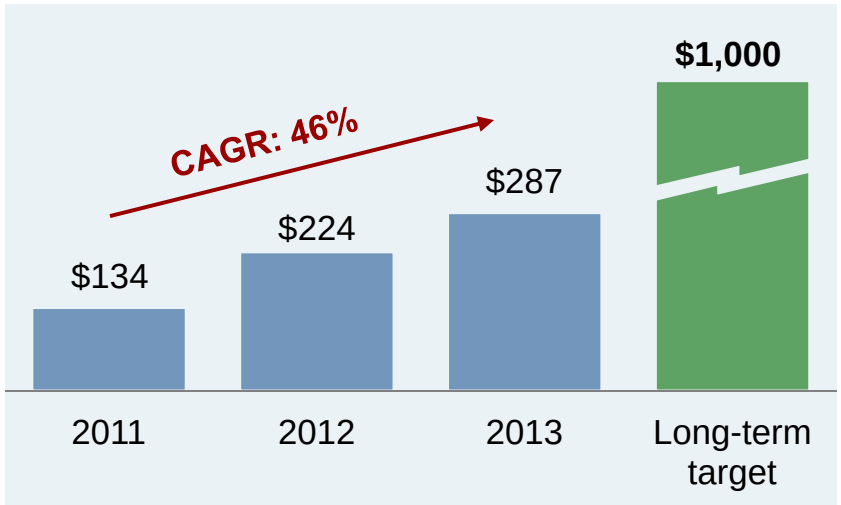
Growth in high potential markets

- Expanded into 5 of the top 15 MSAs
- Huge growth opportunity – ~16,500 prospects in expansion markets
- Delivered differentiated model into new markets (well-received by clients)
- Positive return contribution as we reach scale

Total expansion clients



Total expansion revenue ($mm)

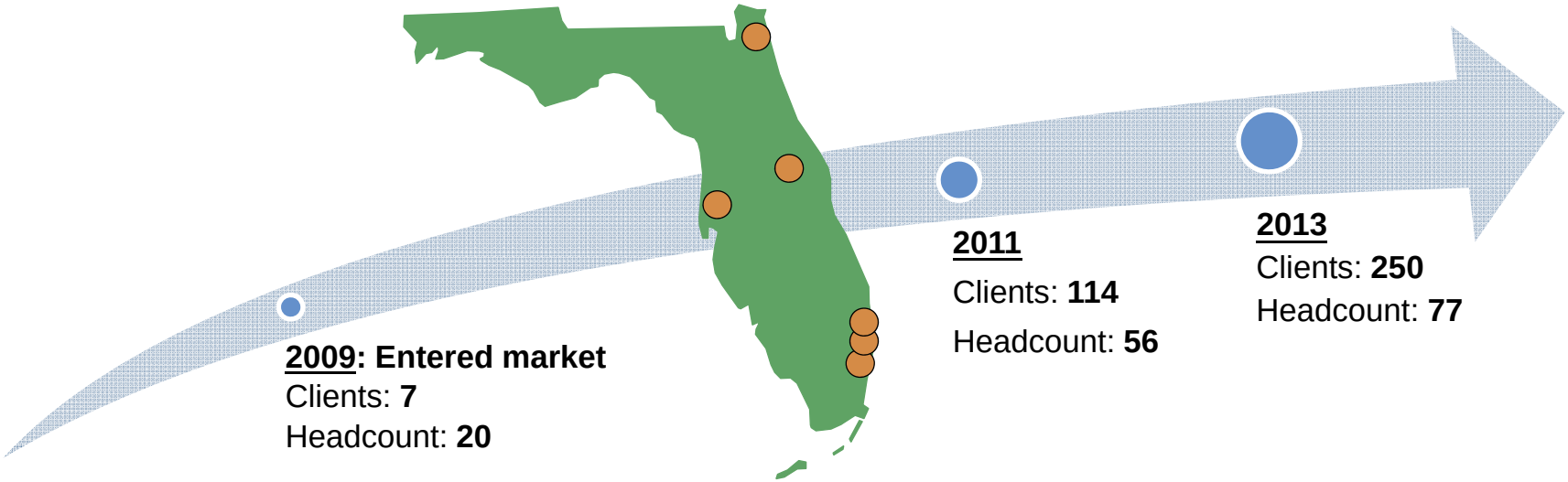


Right people | **Patience** | **Discipline** | **LOB partnerships**

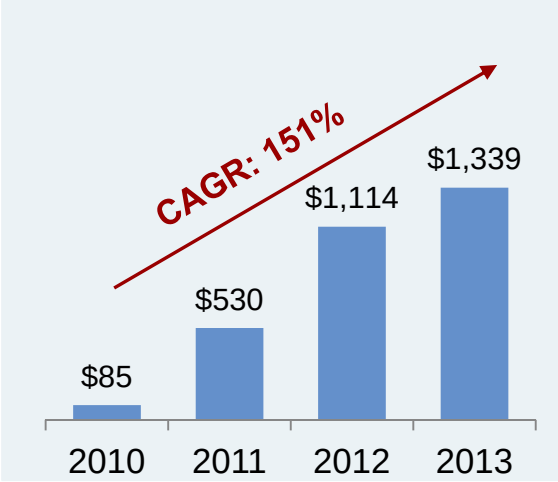
Note: Reflects MM expansion. Defined as heritage Washington Mutual locations plus locations out-of-footprint of retail branch presence

Middle Market expansion success story

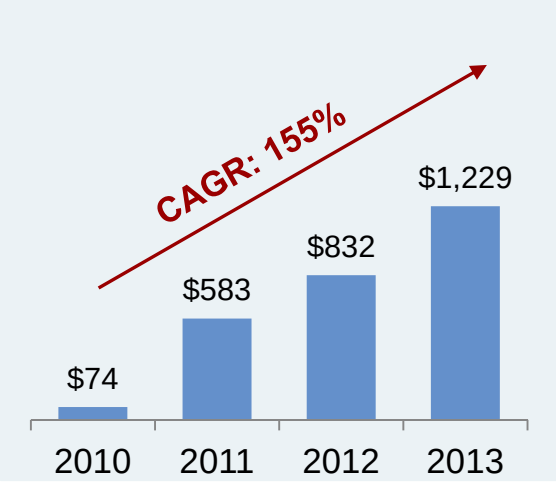
Florida



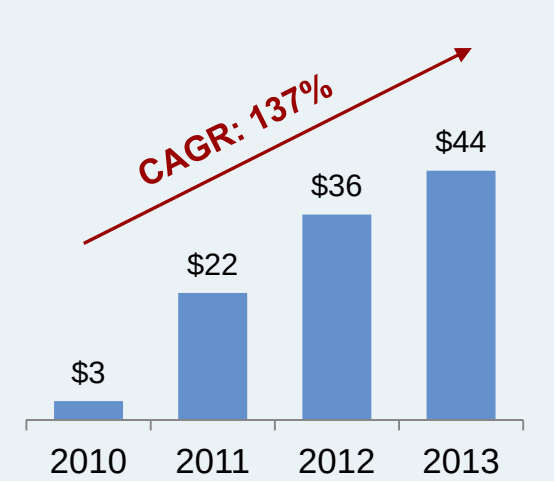
Loans ($mm, average)



Deposits ($mm, average)



Revenues ($mm)



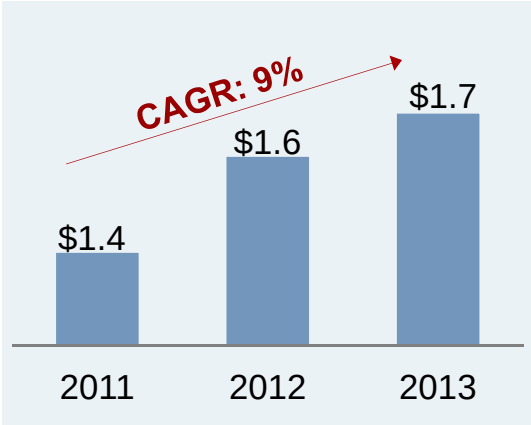
Deepening client relationships

Strong cross-sell through our differentiated capabilities

- Unique capabilities delivered locally
- High margin products that enhance returns
- Record revenue in 2013
- Dedicated teams
- Substantial room to grow

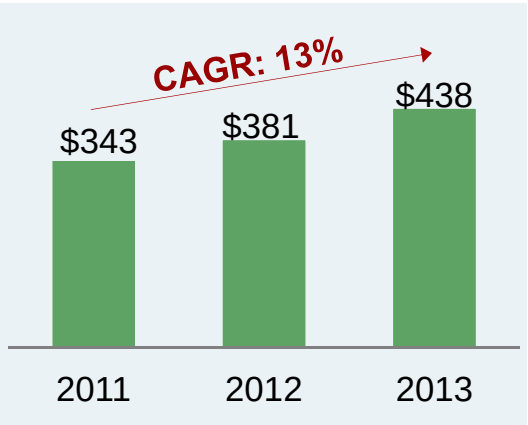
Investment Banking

Revenue ($B)[1]



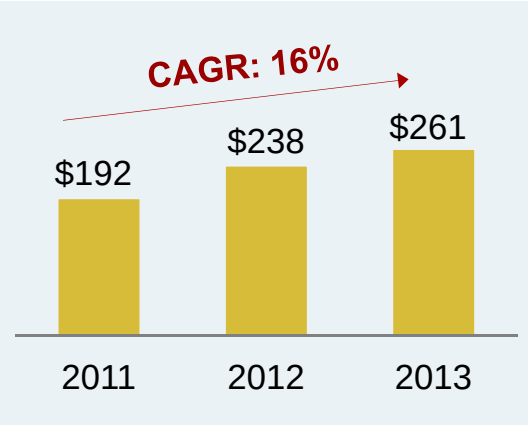
Card Services

Revenue ($mm)[1]



International

Revenue ($mm)[2]



Competitive advantage

[1] Investment Banking and Card Services revenue represent gross revenue generated by CB clients. Investment Banking includes Banking and Markets revenue. Card Services includes Commercial Card and Paymentech revenue

[2] Denotes overseas revenue from U.S. multinational clients

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Market outlook

Well-positioned to absorb near-term challenges and benefit from market opportunities

Near-term, we face some challenges…

- Regulatory changes
- Low deposit spreads
- Intense competition
- Slow economic recovery

…but are best positioned against these challenges...

- Strong credit portfolio
- Regulatory and compliance infrastructure
- Investing for the future
- Power of JPMorgan Chase platform

…and will benefit as the U.S. economy recovers

- Rising deposit spreads
- Increased business borrowing
- Greater M&A and capital markets activity
- Increase in international activity

Business targets

Strong through-the-cycle returns

		2013 result	Long-term target	
Key revenue growth initiatives	Middle Market expansion	**$287mm**	**$1.0B**	Making strong progress towards our long-term revenue targets
	Investment Banking[1]	**$1.7B**	**$2.0B+**	
	International[2]	**$261mm**	**$500mm**	
			TTC target	
Overhead & credit costs	Overhead ratio	**37%**	**35%**	Maintaining expense and risk discipline while investing in the business
	Net charge-offs	**0.03%**	**0.50%**	
Returns	Return on equity	**19%**	**18% +/-**	Strong TTC ROE despite higher capital

Note: TTC = through-the-cycle

[1] Investment Banking revenue represents gross revenue generated by CB clients. Includes Banking and Markets revenue

[2] Denotes overseas revenue from U.S. multinational clients

2014 priorities

Continue to deliver for our clients

- ☑ **Ensure a fortress compliance and control environment**
- ☑ **Fully adapt to regulatory capital, liquidity and leverage requirements**
- ☑ **Maintain risk discipline – monitor market conditions**
- ☑ **Execute our growth strategy**
- ☑ **Invest in our people and platform**

Deliver for our clients

ASSET MANAGEMENT

Mary Erdoes, Chief Executive Officer Asset Management

February 25, 2014

JPMorgan Chase & Co.

A consistently growing, sustainable, world-class global client franchise

Strong investment culture

- 80% of 10-year mutual fund AUM in top 2 quartiles
- Retention of top talent and senior portfolio managers both over 95%
- A rigorous, client-focused, fiduciary culture for nearly 200 years

Growth engine within JPMC

- Consistency: predictable, high growth business – revenues, earnings, ROE
- Breadth: diversified earnings from multiple products, channels, and regions
- Depth: solid global client-centric franchises, each with significant room to grow

World's best clients

- J.P. Morgan Private Bank unmatched in serving the world's wealthiest
- Serving institutional and individual clients in over 130 countries
- 60% of the world's largest pensions, sovereigns, and central banks

Difficult to replicate

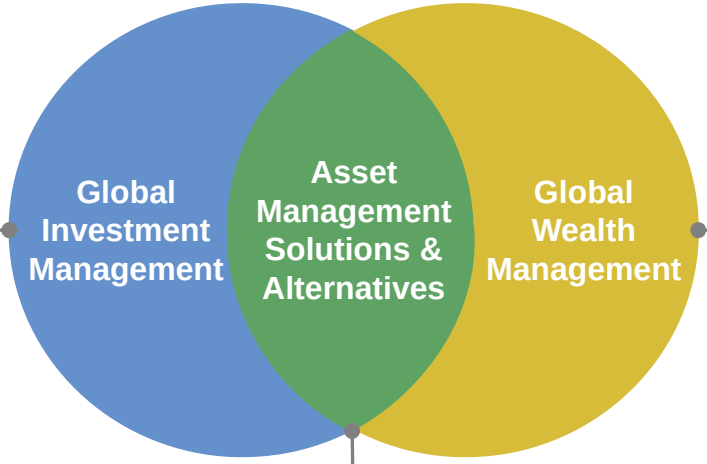
- Celebrating 100-year relationships in the Private Bank
- Integrated model of Private Banking/Investment Management strengthens our franchise
- Invaluable benefit of being part of JPMorgan Chase

An integrated model with unique advantages

	2012	2013	
Revenue	$9.9B	**$11.3B**	✓
Growth target	*7-12%*	***14%***	✓

	2012	2013	
Pretax income	$2.8B	**$3.2B**	✓
Growth target	*10-15%*	***18%***	✓

	2012	2013	
Client assets	$2.1T	**$2.3T**	✓
Growth target	*7-10%*	***12%***	✓



Global Investment Management

- Global Funds/Global Institutional
- Public markets continuum

Consecutive quarters of positive LT flows: ***19***

AM Solutions & Alternatives

- Multi-asset, thematic portfolios
- Alternatives and absolute return

Consecutive quarters of positive LT flows: ***18***

Global Wealth Management

- Global Private Bank
- J.P. Morgan Securities

Consecutive years of positive flows: ***11***

22% Institutional | **78% Individual**

66% North America | **34% International**

2013 performance highlights – Another record year

Record

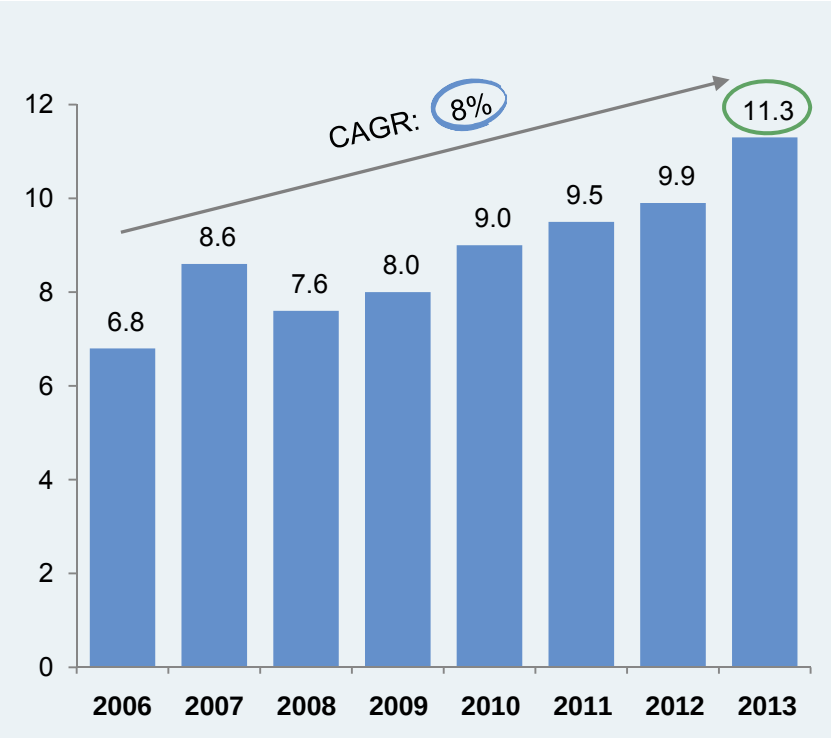
Performance highlights

		2006	2013	7-yr CAGR
Top investment performance	4/5 star mutual funds (#)	136	241	9%
	Assets under management ($T)	$1.0	$1.6	7%
Record growth and results	Client assets ($T)	$1.3	$2.3	8%
	Long-term AUM flows ($B)	$45	$90	2x
	Deposits ($B)	$52	$146	16%
	Loans (ex-mortgages) ($B)	$25	$77	18%
	Mortgages ($B)	$5	$23	24%
	Revenue ($B)	$6.8	$11.3	8%
	Net income ($B)	$1.4	$2.0	5%
	Pretax margin	33%	29%	
	ROE	40%	23%	
Investing in the future	GWM – PB client advisors (#)	1,506	2,512	8%
	GWM – PB revenue / Client advisor ($mm)	$2.0	$2.3	2%
	GIM – Institutional salespeople (#)	97	108	2%
	GIM – Institutional revenue / Direct salesperson ($mm)	$9.4	$13.0	5%

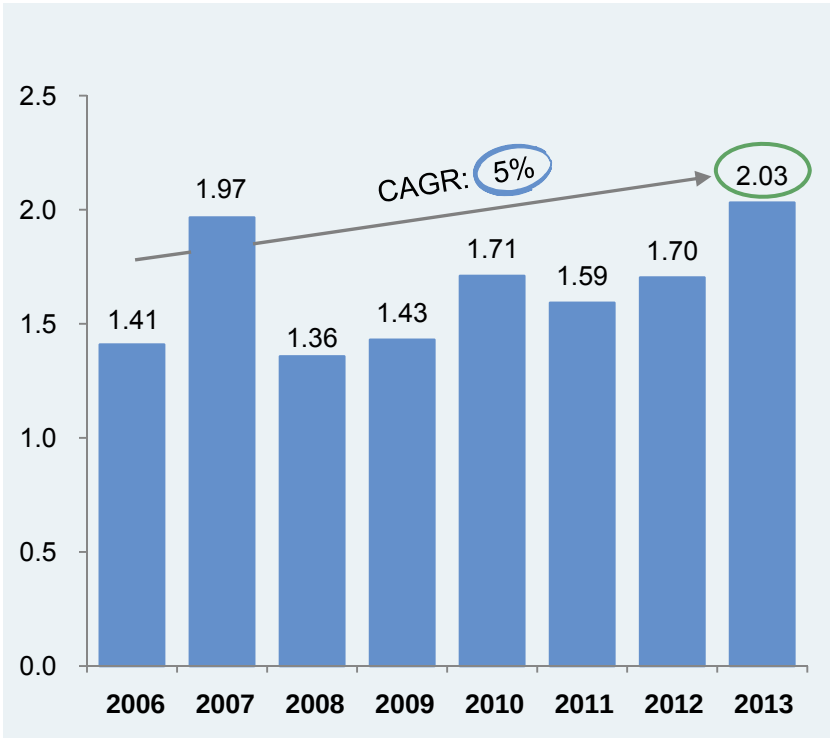
Consistently growing revenues, net income, and long-term flows

Record

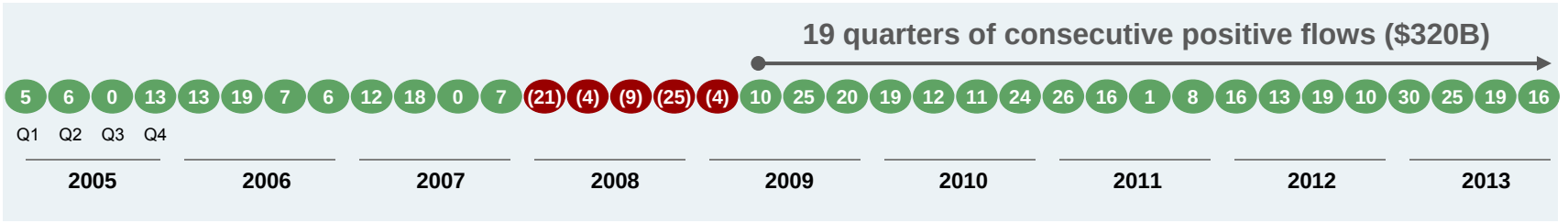
Revenue ($B)



Net income ($B)



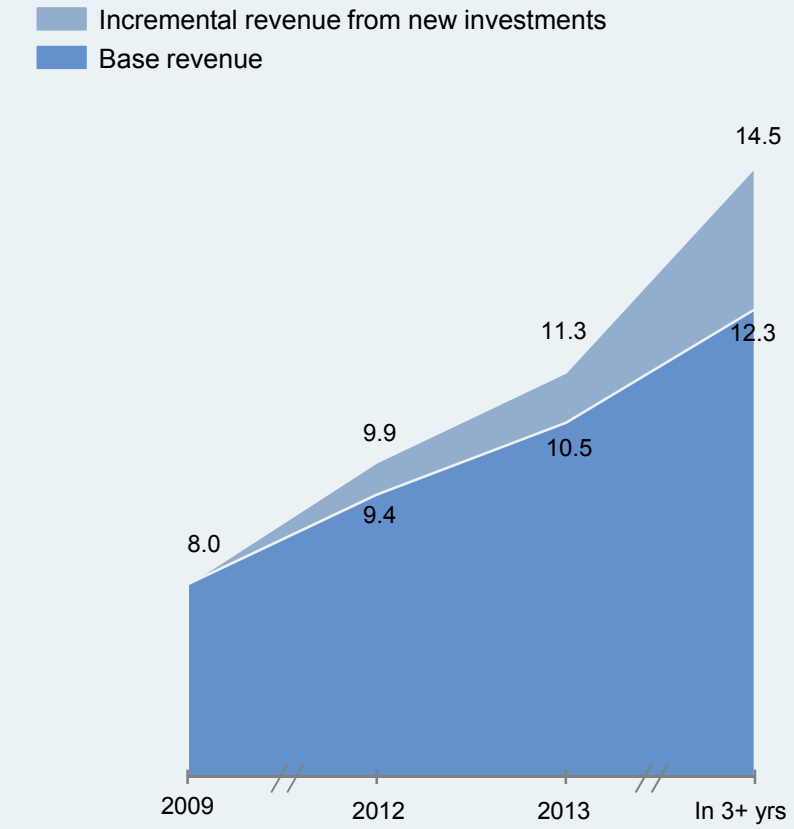
Long-term AUM net flows ($B)



ASSET MANAGEMENT

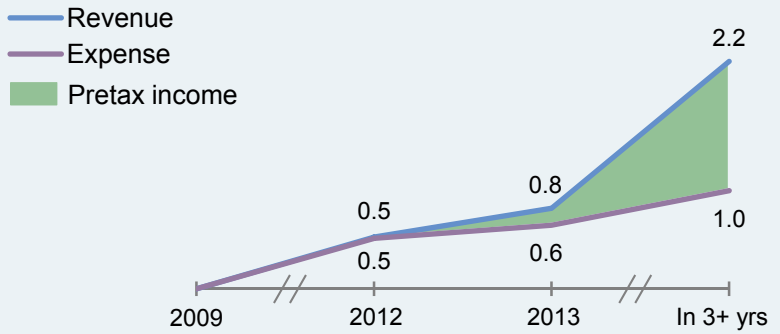
Continuous investments to fuel future growth while strengthening controls

Revenue ($B)



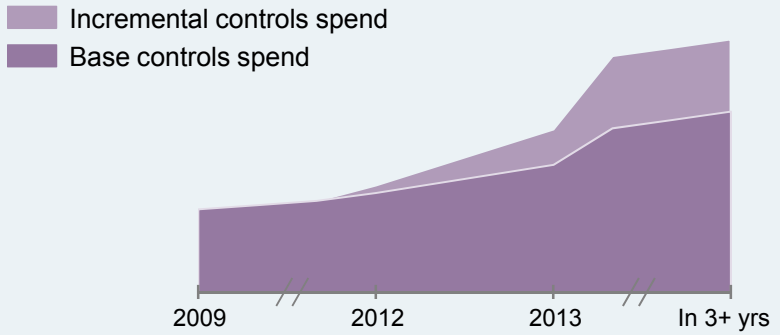
Pretax margin	**29%**	**28%**	**29%**	**30-35%**

New investments P&L ($B)



New investments margin impact	**NA**	**(1.4%)**	**(0.6%)**	**3-4%**

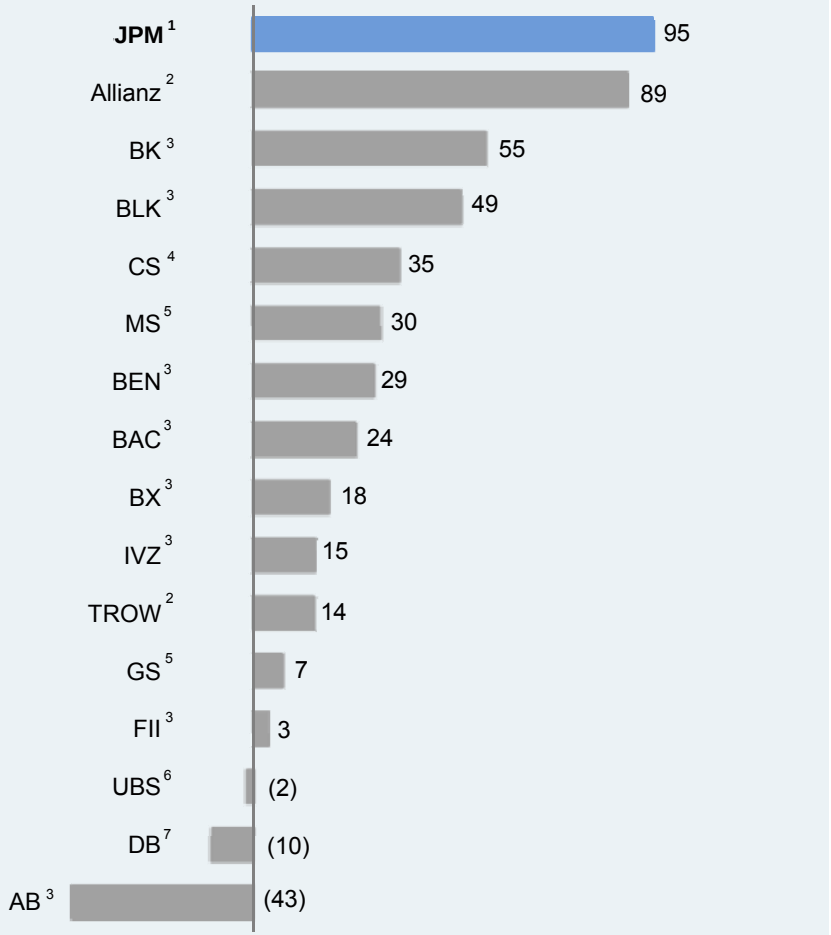
Controls spend ($mm)



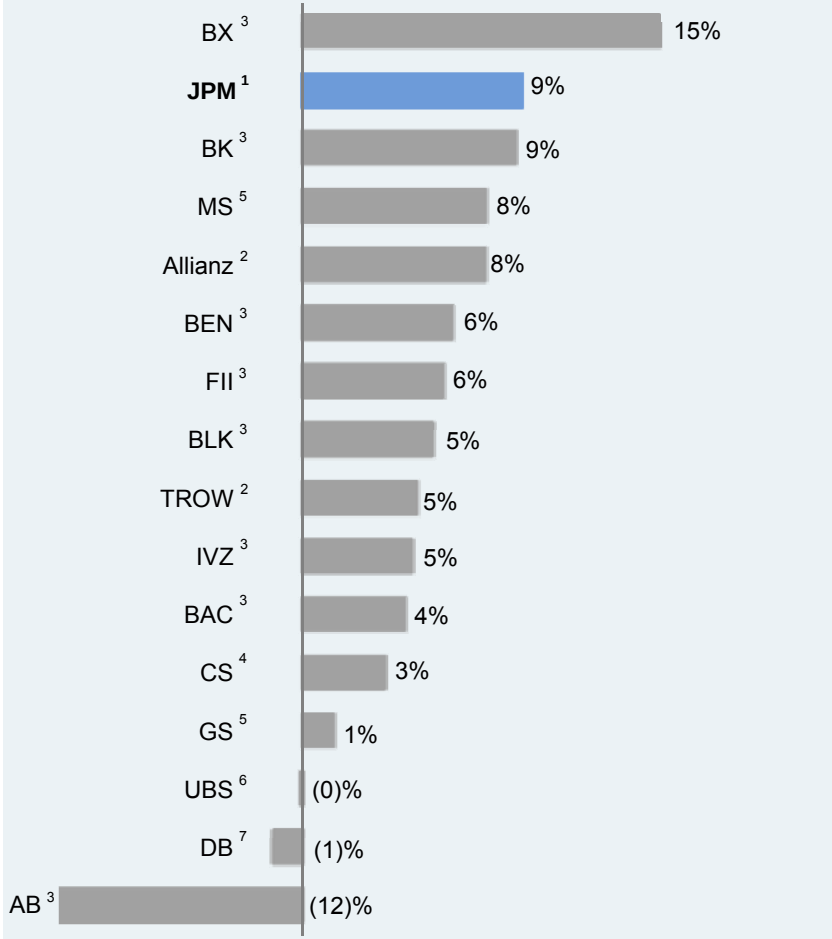
Incremental controls margin impact	**NA**	**(0.2%)**	**(1%)**	**(1-2%)**

Our industry leading flows demonstrate the continued success of our model

5-year average annual LT client asset flows ($B)

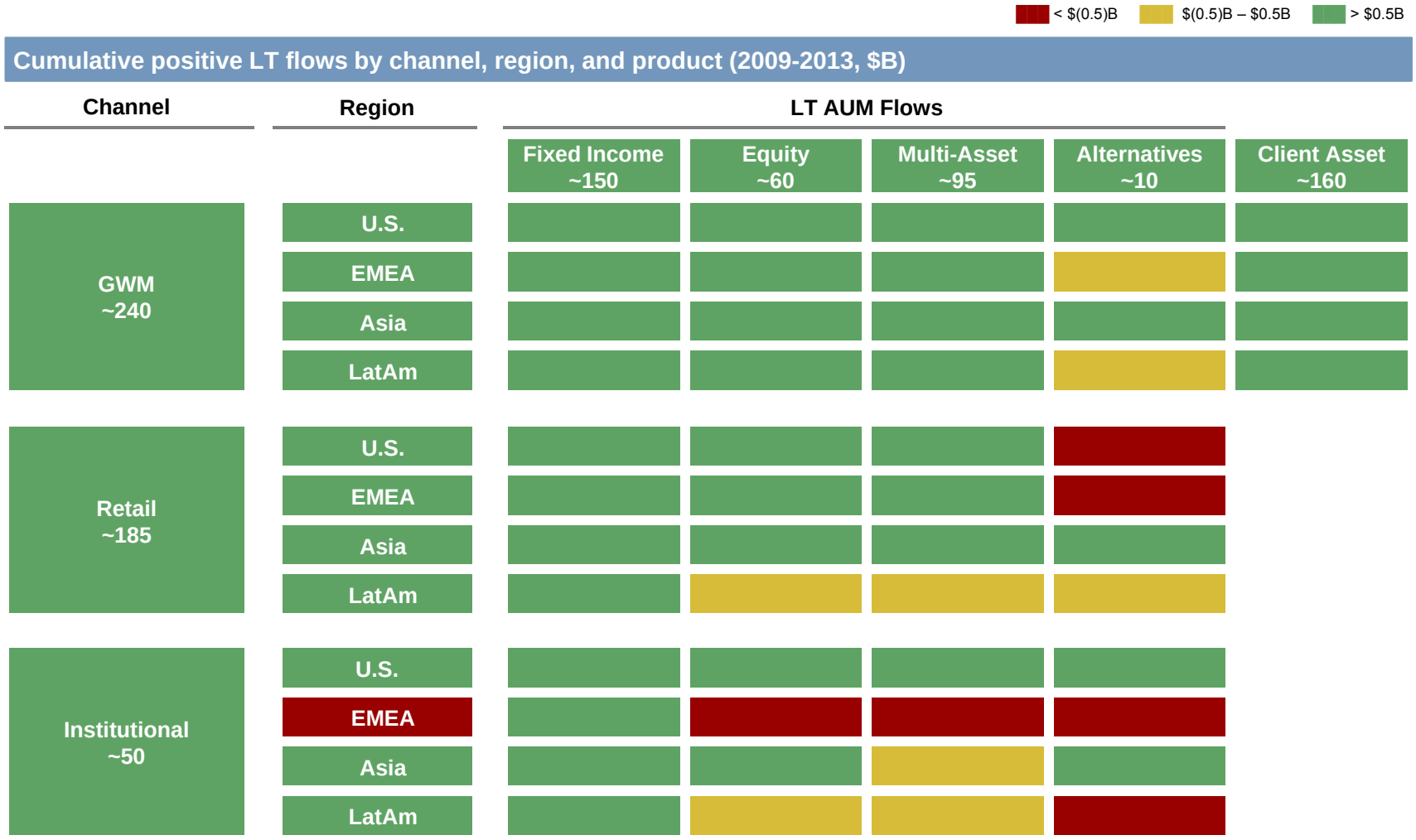


5-year LT client asset flows annualized growth rate



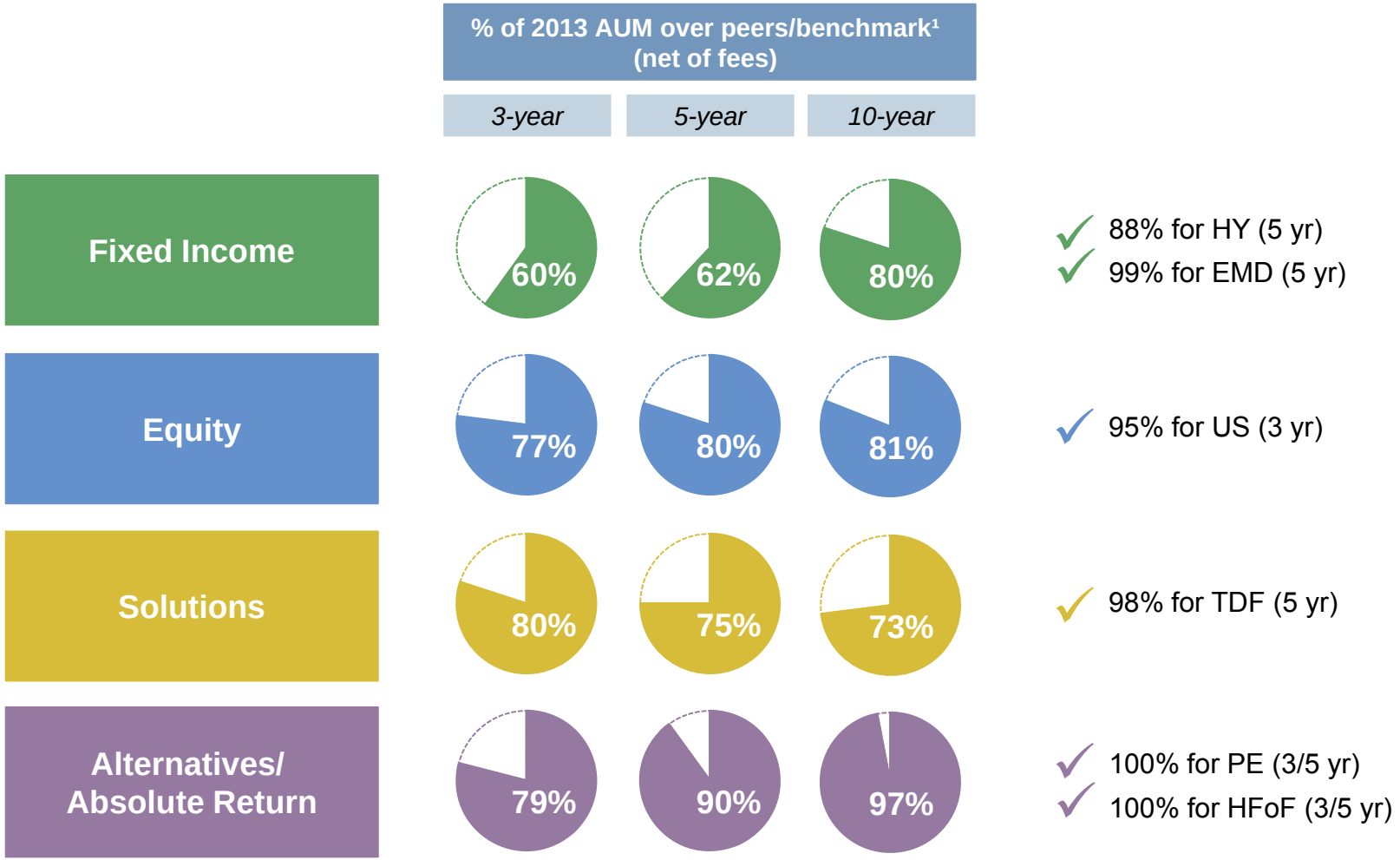
Source: Company filings, J.P. Morgan estimates
Note: 2009-2013 represents 5 years of flows. Allianz, CS, DB, and UBS non-USD flows converted at average annual exchange rates. BX flows based on fee-earning assets
[1] Long-term AUM, administration, brokerage, custody, and deposit flows
[2] Total AUM flows; for Allianz (includes PIMCO) reflects last 20 available quarters, going back from 3Q13
[3] Long-term AUM flows
[4] Total AUM and brokerage flows
[5] Long-term AUM and brokerage flows
[6] Long-term AUM, brokerage, and deposit flows
[7] Total AUM, brokerage, and deposit flows

Consistency of flows comes from having multiple products, channels, and regions



$475B of cumulative positive LT flows since beginning of 2009

Flows come from proven active management across asset classes



[1] Equity, Fixed Income, and Solutions represent % of mutual fund AUM in top 2 quartiles vs. Lipper, Morningstar, and Nomura peers; Alternatives/Absolute Return represent % of AUM exceeding benchmark

Diversified Fixed Income platform leads to consistent flows

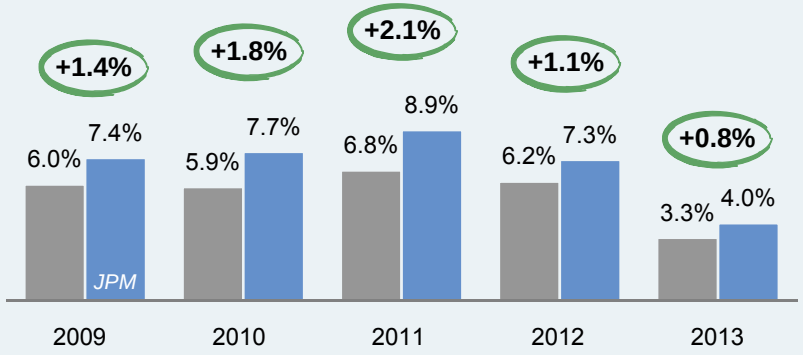
Consistent flows[1]

2010	2011	2012	2013	Top 10 in past 4 yrs
1. PIMCO	1. BEN	1. PIMCO	1. BlackRock	
2. BEN	2. PIMCO	**2. JPM**	2. Goldman	
3. Nomura	3. DoubleLine	3. Fidelity	**3. JPM**	✓
4. JPM	**4. JPM**	4. DoubleLine	4. DFA	
5. Fidelity	5. Fidelity	5. AB	5. Deutsche	
6. Pictet	6. Daiwa	6. Vanguard	6. Eaton Vance	
7. MUFJ	7. M&G	7. BEN	7. ING	
8. Lord Abbett	8. TCW	8. BlackRock	8. M&G	
9. Eaton Vance	9. UBS	9. Lord Abbett	9. Lord Abbett	
10. AB	10. DFA	10. AXA	10. UniCredit	

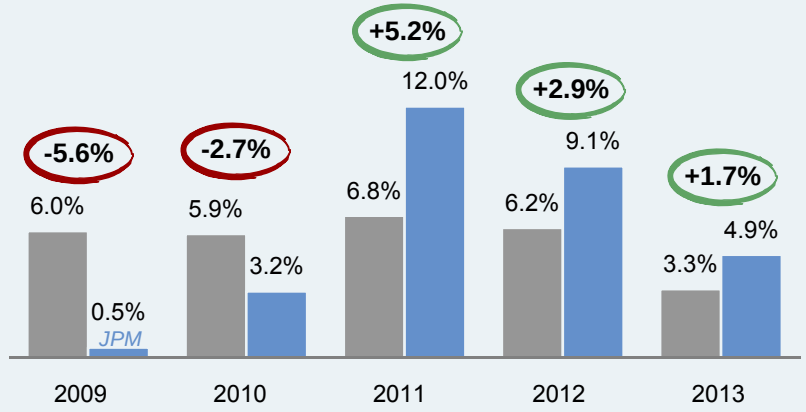
AUM rank[1]

2010	2011	2012	2013
1. PIMCO	1. PIMCO	1. PIMCO	1. PIMCO
2. Vanguard	2. Vanguard	2. Vanguard	2. BEN
3. BEN	3. BEN	3. BEN	3. Vanguard
4. Fidelity	4. Fidelity	4. Fidelity	4. Fidelity
5. American	**5. JPM**	**5. JPM**	**5. JPM**
6. JPM	6. American	6. American	6. BlackRock
7. UniCredit	7. TROW	7. AB	7. American
8. Intesa	8. UBS	8. TROW	8. TROW
9. UBS	9. AB	9. BlackRock	9. AB
10. TROW	10. Intesa	10. UBS	10. UniCredit

Strong Columbus platform (3-yrs vs. BARC Agg[2])



NY/London platform turnaround (3-yrs vs. BARC Agg[2])



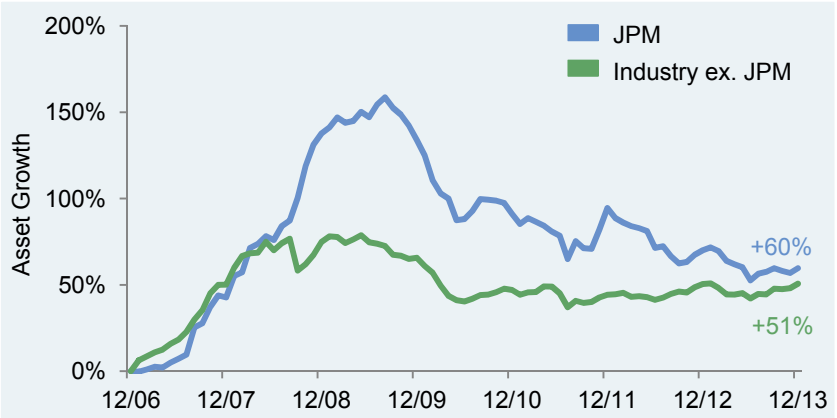
Source: Strategic Insight

[1] Global (US, APAC, EMEA) long-term active fixed income mutual funds rankings

[2] Columbus and NY/London respective Core Bond Composites vs. Barclays Aggregate Total US benchmark; all figures gross of fees; numbers may not tie due to rounding

Market leading Liquidity business prepared for evolving regulatory landscape

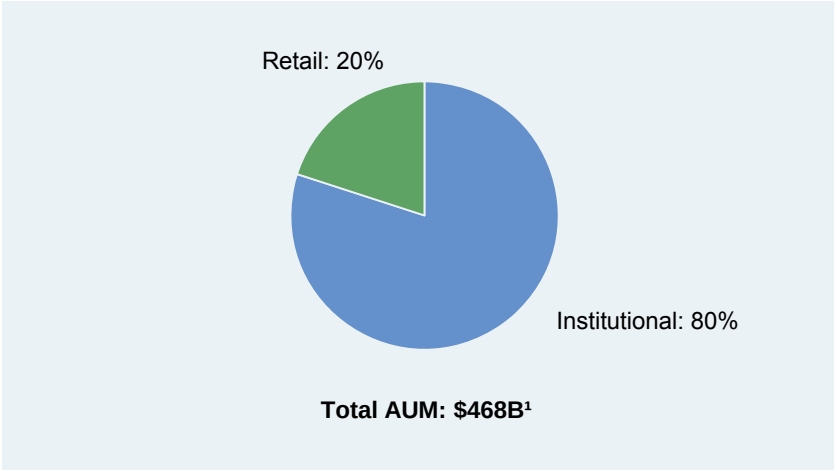
Global Inst. Money Market asset growth (USD and EUR)



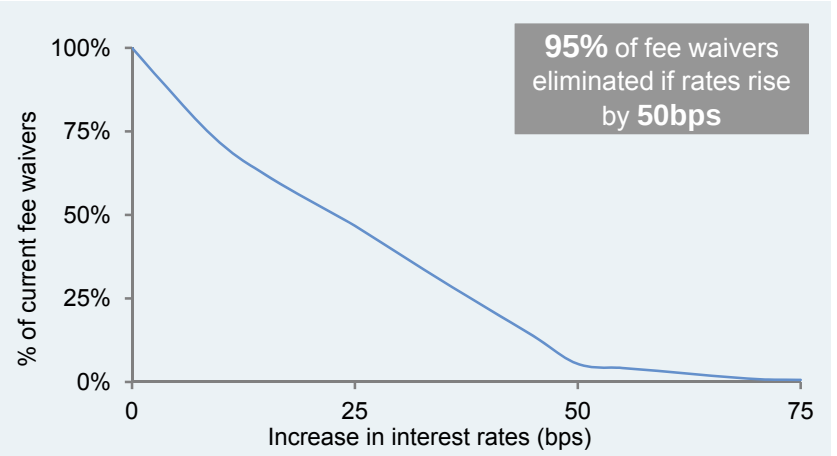
Consistent global MMF Rankings

2006	Firm	AUM ($B)	2013	Firm	AUM ($B)
1	Fidelity	$271	1	Fidelity	$440
2	**J.P. Morgan**	**246**	**2**	**J.P. Morgan**	**381**
3	BlackRock	183	3	BlackRock	312
4	Federated	155	4	Federated	240
5	Vanguard	147	5	Goldman Sachs	208
6	BofA Global Capital	138	6	Dreyfus/BK	200
7	Schwab	136	7	Vanguard	176
8	Goldman Sachs	120	8	Schwab	168
9	Legg Mason	108	9	Legg Mason	131
10	Dreyfus/BK	106	10	Wells Fargo	124

Strong institutional client base (% of 2013 AUM)



Impact of rising rates



Source: iMoneyNet

¹ Includes separate accounts and commingled funds

Equities are a strong growth driver across multiple alpha engines

Leading flows[1]

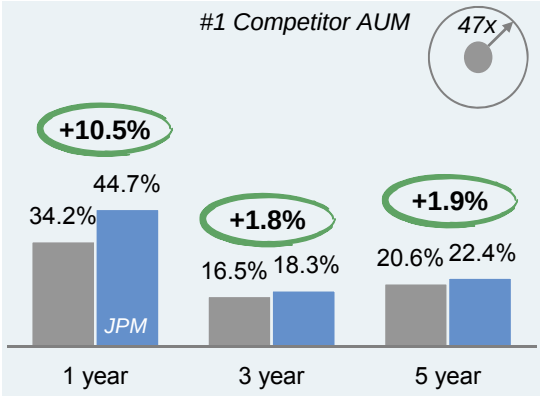
2010	2011	2012	2013	Top 10 in past 4 yrs
1. PIMCO	1. DFA	1. MFS	**1. JPM**	
2. Aberdeen	2. MainStay	2. DFA	2. MFS	✓
3. DFA	3. First Eagle	**3. JPM**	3. DFA	✓
4. BlackRock	4. PIMCO	4. PIMCO	4. Oppen.	
5. Thornburg	5. TROW	5. TROW	5. PIMCO	✓
6. TROW	6. Pacific Heights	6. Aberdeen	6. Harris	
7. Lazard	7. BlackRock	7. Harbor	7. MainStay	
8. BEN	8. Nomura	8. Vontobel	8. BEN	
9. M&G	9. Thornburg	9. KBC	9. Nomura	
10. MFS	10. MFS	10. First Eagle	10. Vanguard	
16. JPM	**15. JPM**			

Rising AUM rank[1]

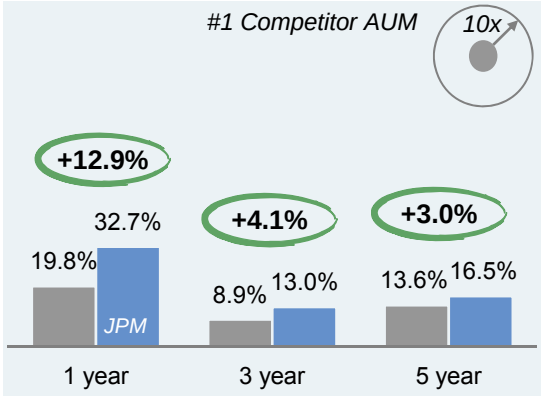
2010	2011	2012	2013
1. American	1. American	1. American	1. American
2. Fidelity	2. Fidelity	2. Fidelity	2. Fidelity
3. Vanguard	3. Vanguard	3. Vanguard	3. Vanguard
4. BEN	4. BEN	4. BEN	4. TROW
5. TROW	5. TROW	5. TROW	5. BEN
6. BlackRock	6. BlackRock	6. BlackRock	**6. JPM**
7. Invesco	7. Invesco	7. Invesco	7. BlackRock
8. JPM	**8. JPM**	**8. JPM**	8. Invesco
9. DFA	9. DFA	9. DFA	9. DFA
10. Columbia	10. Columbia	10. Columbia	10. MFS

Strong performance across our funds[2]

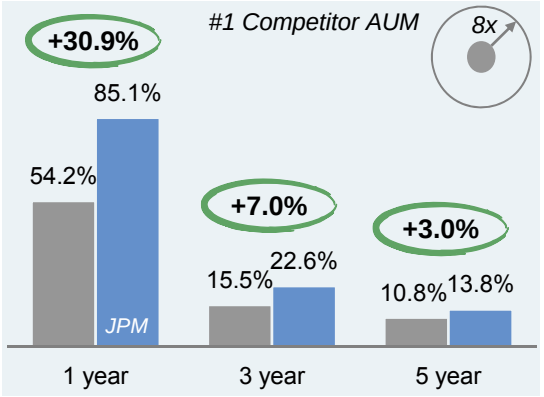
Growth Advantage (Russell 3000 Growth)



Europe Dynamic (MSCI Europe)



Japan (TSE 1st Section Net Index)



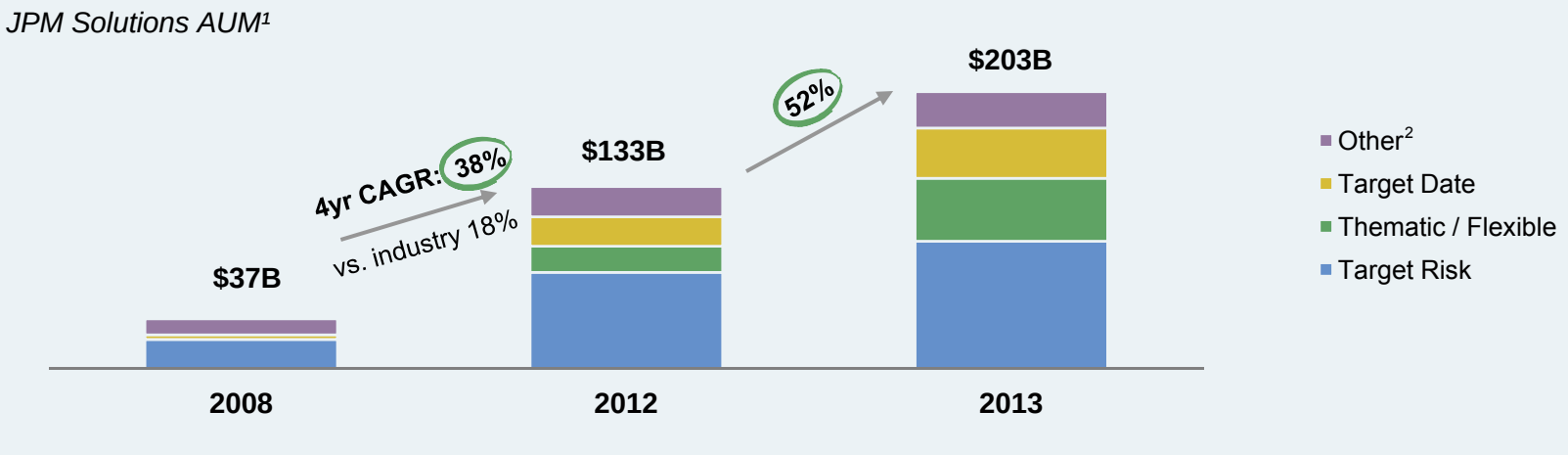
Source: Strategic Insight, Morningstar

[1] Global (US, EMEA, APAC) long-term active equity mutual fund rankings

[2] Fund and index performance as of 12/31/13; Fund performance is net of fees; Growth Advantage reflects US Select shares; Europe Dynamic represents A shares in EUR; Japan Fund represents Hong Kong Unit Trust denominated in Yen; Numbers may not tie due to rounding

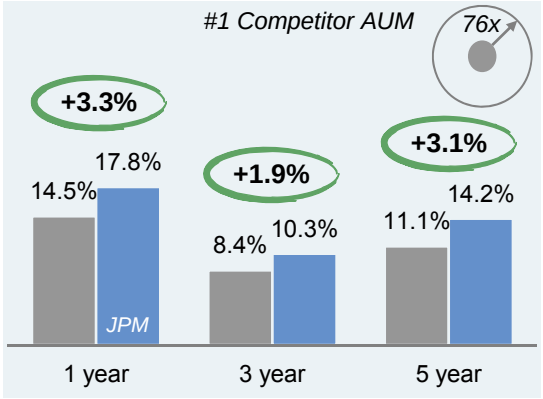
Solutions is a new growth area demonstrating strong performance

High growth area with accelerating momentum in 2013

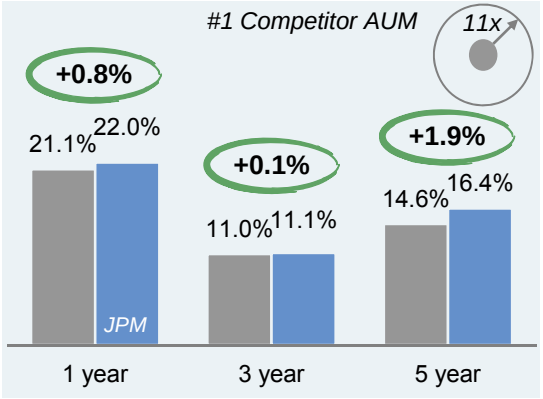


Strong performance across our funds[3]

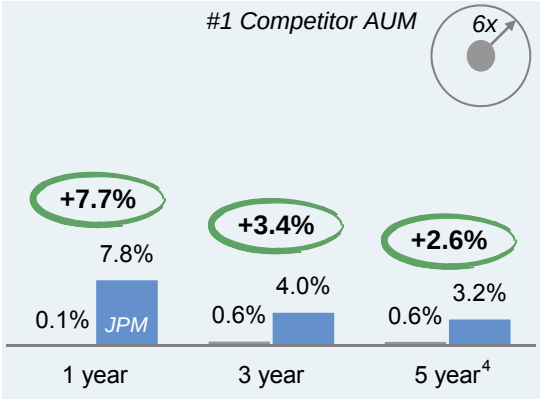
Diversified (60% MSCI World/40% Agg.)



SmartRetirement 2035 (S&P TD 2035)



Systematic Alpha (BBA Libor 1 Month)



Source: BCG, Morningstar, Strategic Insight

[1] Includes ~$6B of client assets for which JPM provides only asset allocation advice

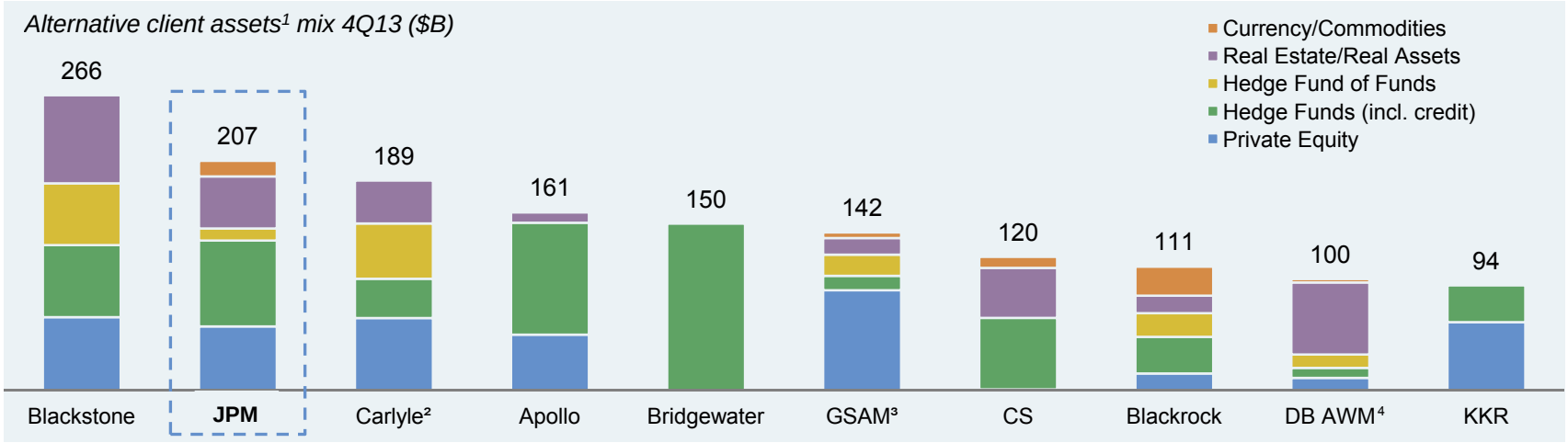
[2] Includes total return, liability-aware, and single-asset

[3] Fund and index performance as of 12/31/13; Fund performance is net of fees; Diversified and SmartRetirement are US Select shares; Systematic Alpha represents A shares in EUR; S&P TD 2035 represents Gross Return Index; Numbers may not tie due to rounding

[4] Since inception of July 1, 2009

Our leading Alternatives capabilities provide diverse exposures to clients

Leading Alternatives/Absolute Return providers

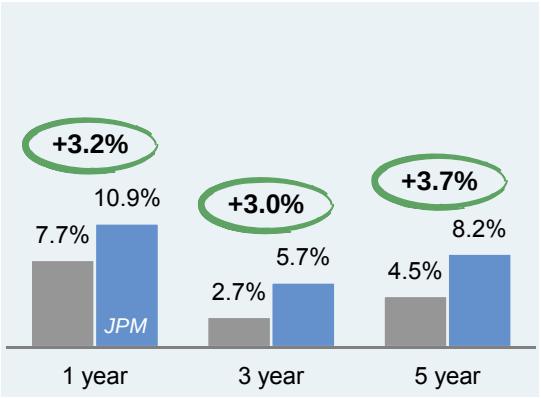


Strong performance across our funds[5]

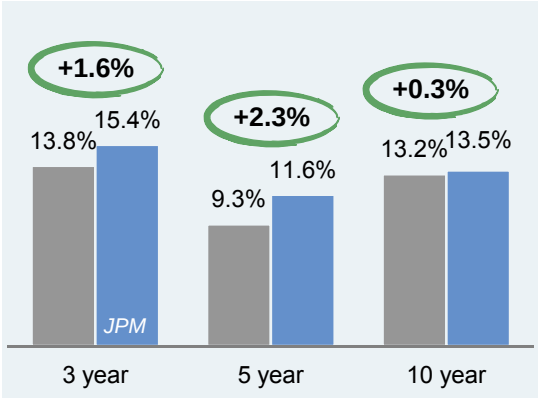
U.S. Core Real Estate (NFI-ODCE Value)



Multi-Strategy FoF (HFRI FoF Conservative)



Private Equity (Cambridge Global PE & VC)



Source: Company filings, J.P. Morgan estimates

[1] Client assets include non fee-earning client assets (e.g., firm capital invested in its own funds, uncalled capital commitments for funds charging fees on invested capital, and asset appreciation based on changes in the fair value of underlying investments) where available

[2] Carlyle Hedge FoF include PE FoF and Real Estate FoF

[3] GSAM mix based on FT Towers Watson Global Alternatives Survey 2013 (July 2013)

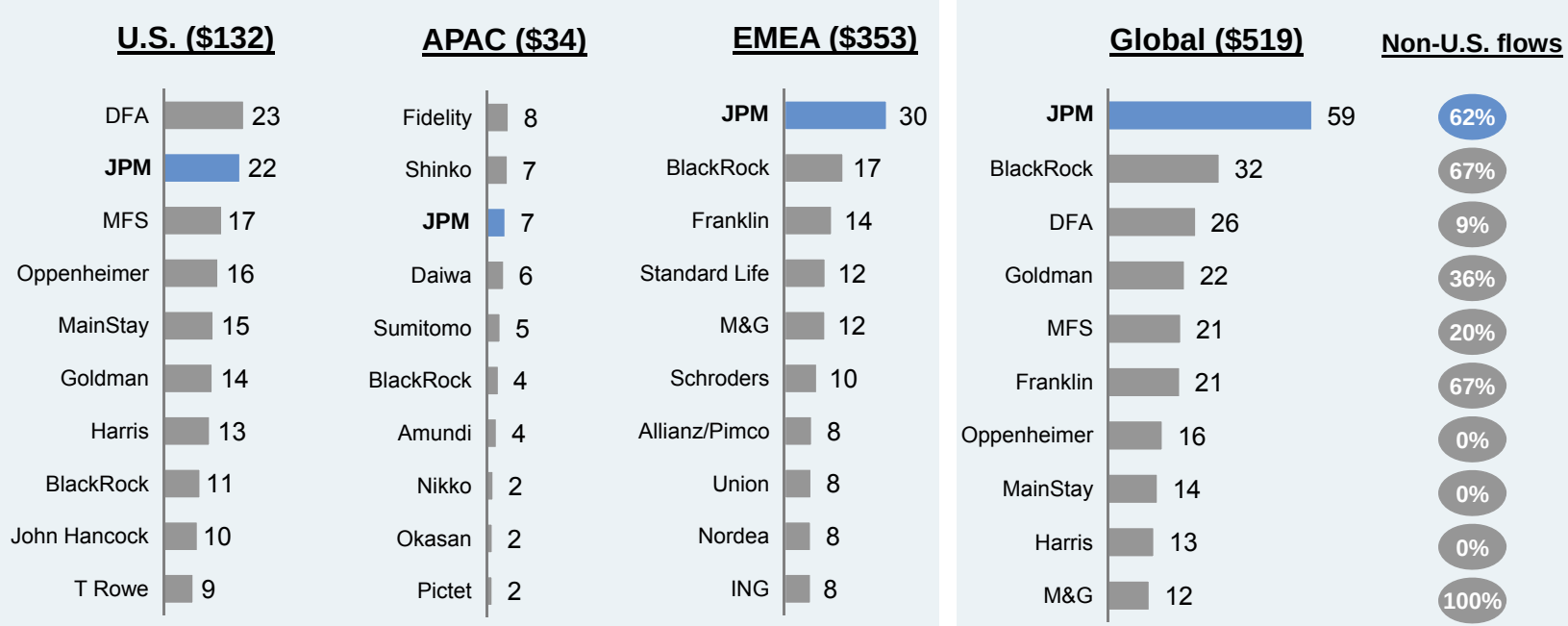
[4] Deutsche Bank AWM figures based on J.P. Morgan estimates

[5] US Core Real Estate and Multi-Strategy and benchmark returns are net, as of 12/31/13; Private Equity is net of underlying fees and expenses, gross of Advisor fees, and is as of 09/30/13; Numbers may not tie due to rounding

Global Funds focus

Expand footprint: 9% CAGR Salespeople (2009-2013) + **Intense focus:** 85% of global net flows from Focus funds + **Strong performance:** 80% of 10-year MF AUM in top 2 quartiles

Active LT MF net flows by region in 2013 ($B)

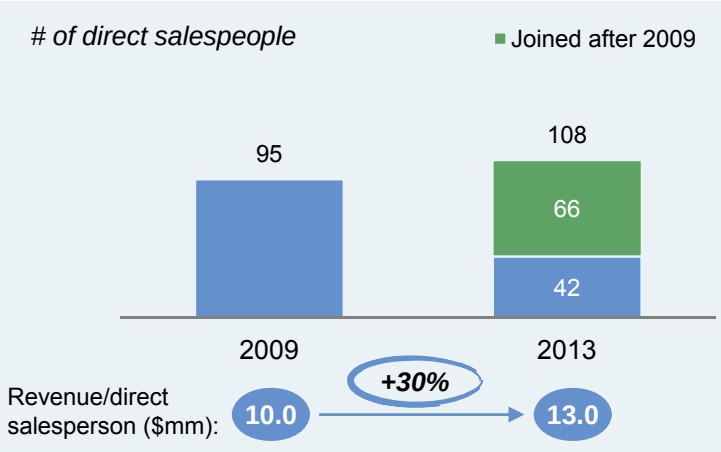


Source: Strategic Insight

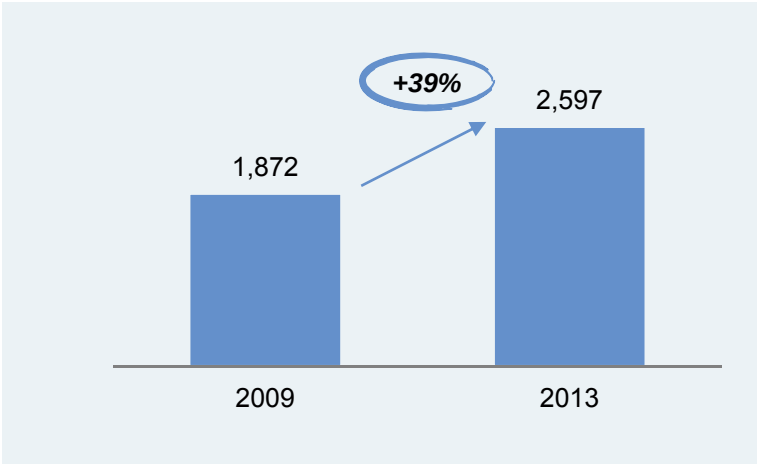
ASSET MANAGEMENT

Global Institutional focus

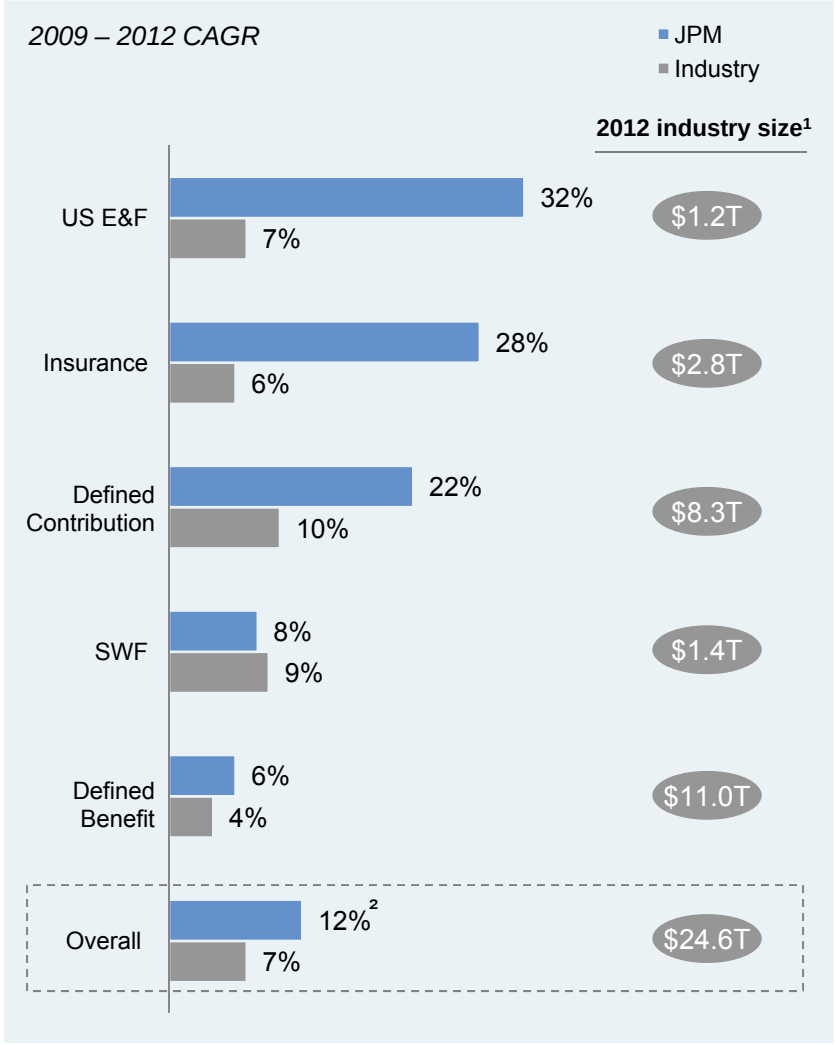
Upgrading talent yields higher productivity…



…facilitating increase in clients…



…resulting in above industry growth



Source: McKinsey, Reuters/Patpatia, Sovereign Wealth Institute
Note: Numbers may not tie due to rounding
[1] McKinsey Global Asset Management Market Sizing Database (3rd party AUM)
[2] JPM Institutional growth vs. comparable categories

GWM is a superior franchise

Leading financial results

Since 2006…

- **Doubled** client assets (2X industry average growth rate)
- **Doubled** revenue (highest organic growth of key peers)
- **Doubled** pretax income (highest organic growth of key peers)

Successful expansion

Since 2006…

- Grew front office by **~70%** organically (**~150%** internationally)
- Increased PB front office efficiency by **~20%** (highest efficiency among key peers)
- Generated industry leading margins globally (**29%** for 2013)

Compelling market position

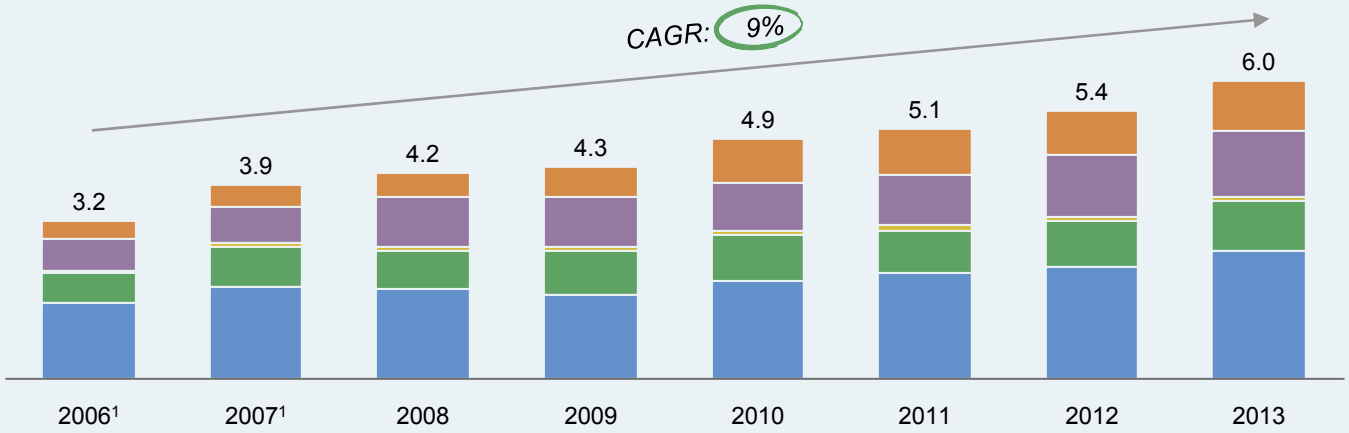
- UHNW market leader, expanding franchise to broader HNW market
- Poised to capture industry growth (in 10 years, millionaires in US → **2X**, in APAC → **3X**)
- Received **>100** awards with #1 ranking in 2013

Invaluable benefit from JPMC franchise

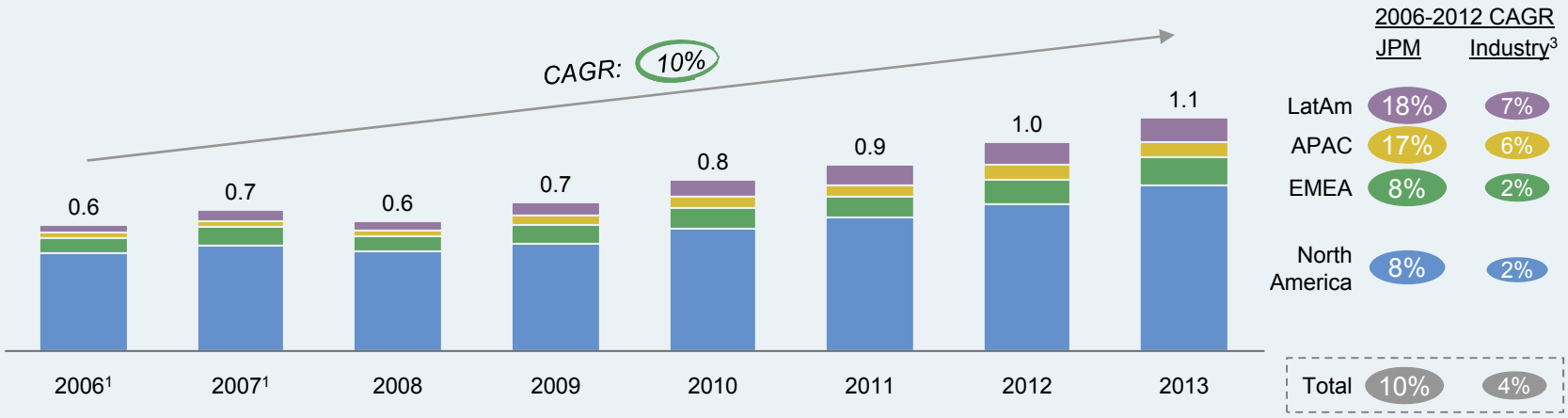
- **~500** referrals from CIB to PB globally
- **260+** new US PB relationships originated from CB referrals
- Partnering with AMS to manage CWM's $16B of NNI Flows, up **5X** from 2010

GWM demonstrating consistent and diversified growth

Diversified GWM revenue growth… ($B)



…with total client positions gaining share in all regions ($T)

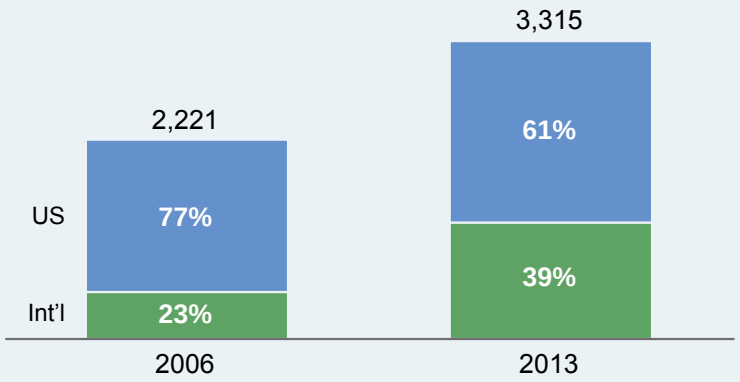


[1] Pro forma including JPMS (acquired in 2008)
[2] Includes other revenues averaging 1% of annual revenue
[3] $1mm+ wealth, CapGemini World Wealth Report. Market data only available for 2006-2012, excludes credit

Driving future growth through new and existing relationships while prudently expanding our credit book

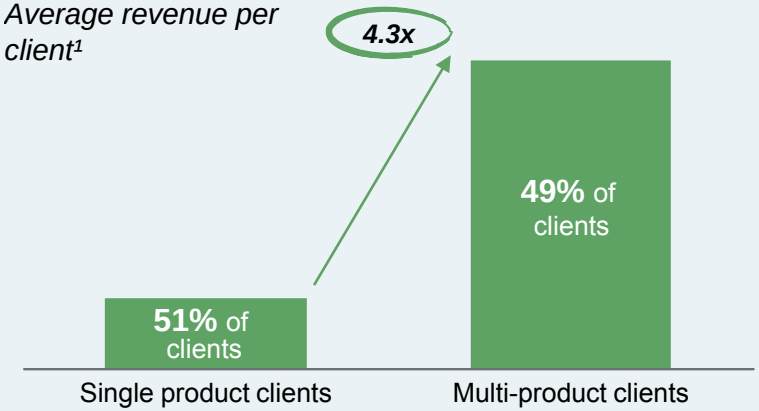
Growing client base

Net new clients[1]

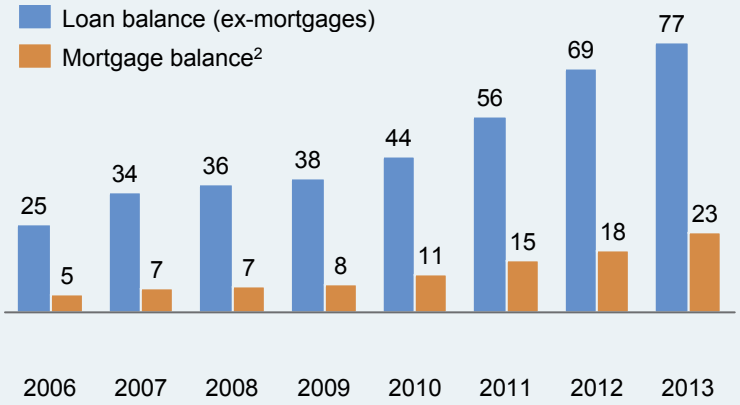


Deepening existing client relationships

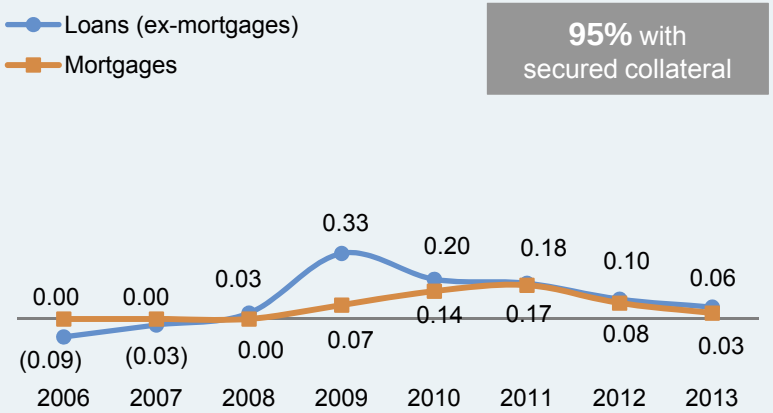
Average revenue per client[1]



Growing credit balances ($B)



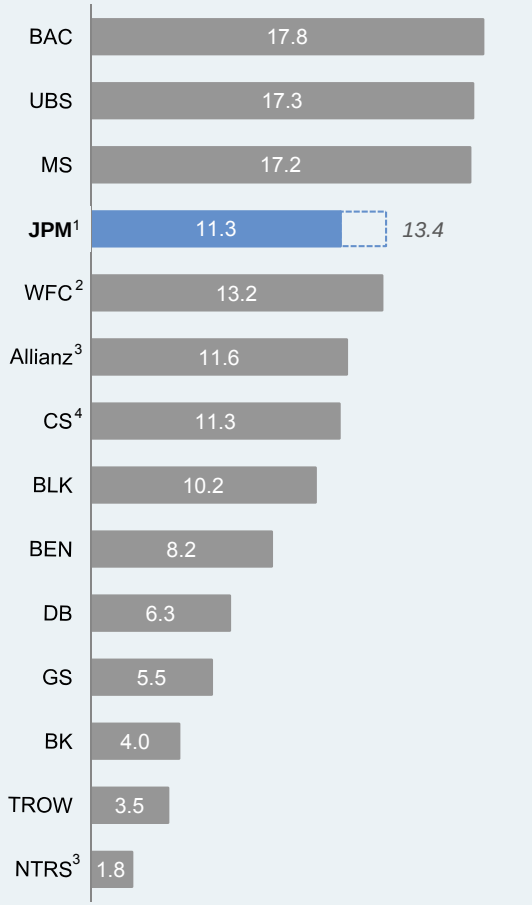
Low net charge-offs (%)



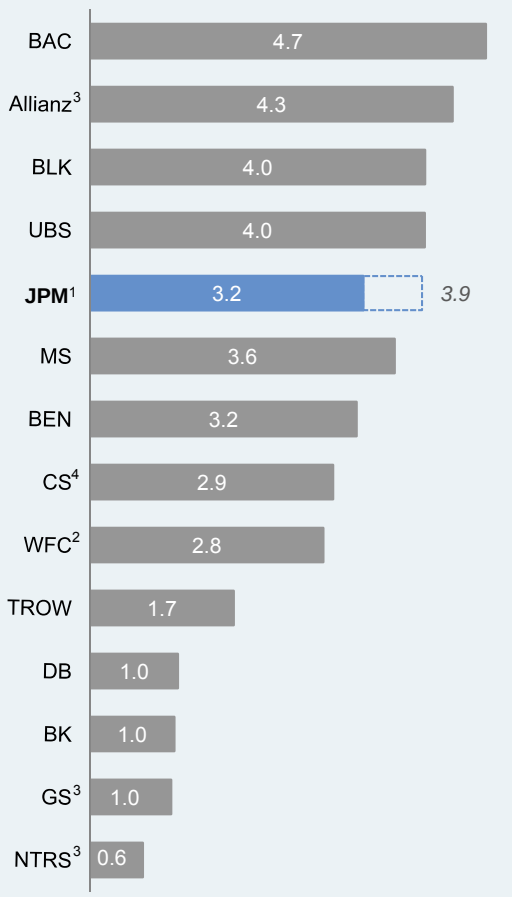
[1] UHNW/HNW clients
[2] Includes $3.7B of CIO portfolio prime mortgage loans

Combined Asset and Wealth Management produces strong results

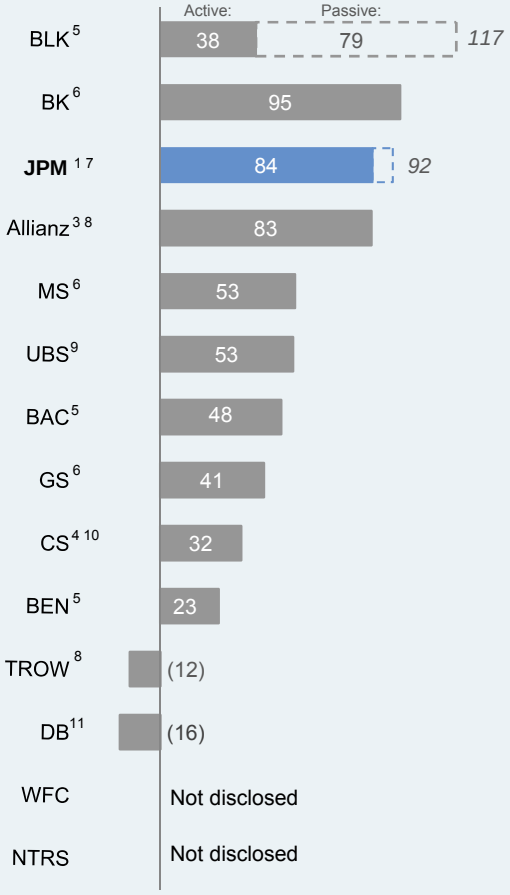
2013 Revenue ($B)



2013 Pretax income ($B)



2013 LT client asset flows ex. MMFs ($B)



Source: Company filings, J.P. Morgan estimates
Note: Allianz, CS, DB, and UBS figures converted at average exchange rate
[1] Includes GIM and GWM with CWM reflecting dashed extension. Client asset flows dashed extension reflects CWM net new investments
[2] Excludes Asset Management Group (AMG) which is reported in Wholesale Banking unit. AMG consists of $487B of AUM
[3] Reflects LTM through 3Q13 as 2013 disclosure not yet available; Allianz (includes PIMCO) revenue is presented gross of fees and commission expenses to ensure comparability with peers
[4] Excludes revenue, pretax income, and client asset flows attributable to Corporate and Institutional Client unit
[5] Long-term AUM flows
[6] Long-term AUM and brokerage flows
[7] Long-term AUM, administration, brokerage, custody, and deposit flows
[8] Total AUM flows
[9] Long-term AUM, brokerage, and deposit flows
[10] Total AUM and brokerage flows
[11] Total AUM, brokerage, and deposit flows

Continued delivery of strong growth and high returns

Key takeaways

- Strong **investment performance** across broad range of products
- Continuously investing, especially in **international** and **retail**
- Unique franchise, **difficult to replicate**, increasing barriers to entry
- **Predictable** delivery of financial targets

	Long-term targets	2006-2013 CAGR	2013 momentum
Client assets	+7-10% p.a.	8%	12%
LT AUM	+7-12% p.a.	7%	18%
Revenue	+7-12% p.a.	8%	14%
Pretax income	+10-15% p.a.	5%	18%
Pretax margin	30-35%	30% (avg)	29%
ROE	25%+	29% (avg)	23%

3+ years

Revenue $11B → $15B | **Pretax income $3B → $5B** | **Client assets $2T → $3T**

CORPORATE & INVESTMENT BANK

Mike Cavanagh, Co-Chief Executive Officer Corporate & Investment Bank
Daniel Pinto, Co-Chief Executive Officer Corporate & Investment Bank

February 25, 2014

JPMorgan Chase & Co.

Introduction

Market-leading performance

- Market-leading positions across key business segments
  - #1 in Global IB Fees[1]; 8.6% share, up from 7.5% in FY2012
  - Markets revenue share of 10 leading competitors[2] 16.0% for FY2013, up 140 bps from FY2012; #1 in Fixed Income Markets[2]

Client-driven franchise

- Strong synergies with the rest of JPM
- Completeness of capabilities and integrated coverage enables deeper client relationships
- Global reach with strong U.S. base to capture long-term international growth

Management priorities

- Optimize businesses while continuing to invest in core growth opportunities
- Continue to adapt to evolving regulations and market structure changes
- Maintain expense discipline while absorbing increased regulatory and controls costs

Through-the-cycle capital & ROE

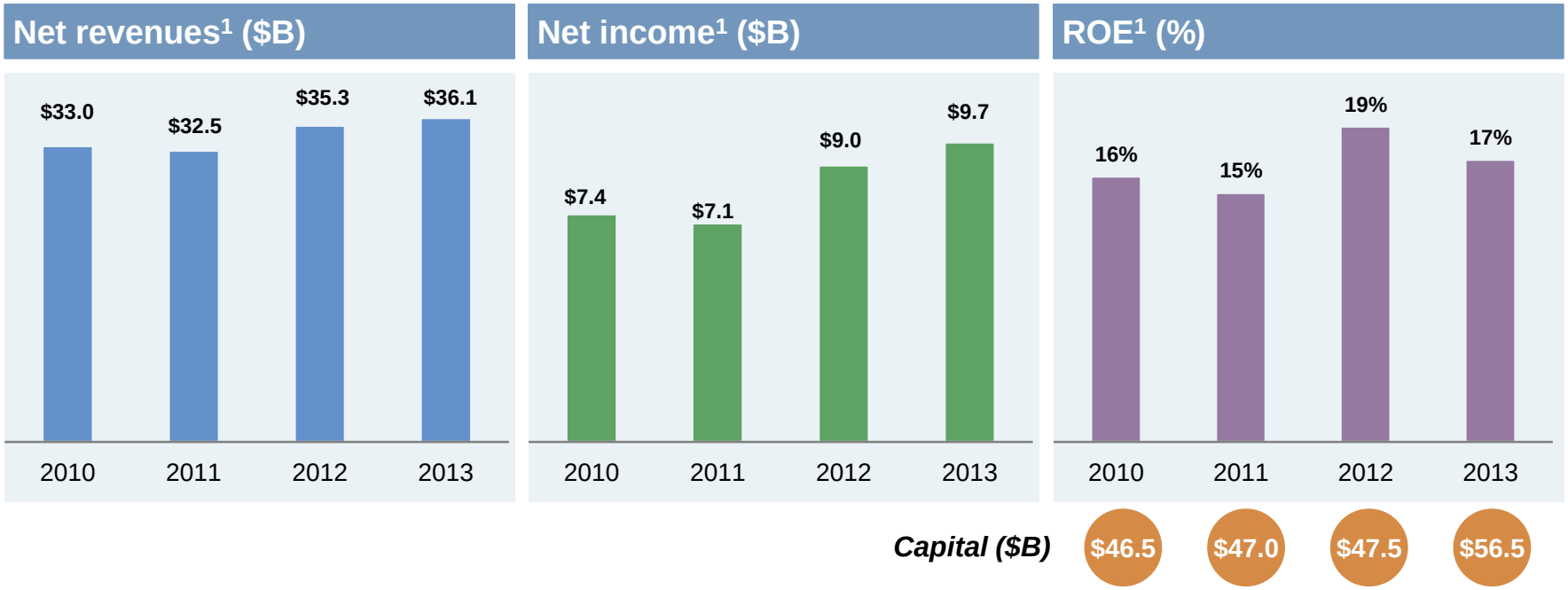
- Continued optimization of RWA and capital
- Fortress balance sheet optimized for leverage ratio, liquidity stress, and rising rates
- Best-in-class ROE through-the-cycle

[1] Dealogic FY2013 wallet rankings
[2] Represents FY2013 rank and share of JPM Total Markets and Fixed Income Markets revenue of 10 leading competitors

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Management priorities	14
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Stable earnings and best-in-class return on equity



Highlights

Continued growth

- FY2013 net income of over $9.7B, up $2.3B (+32%) from FY2010[1]

Sound expense discipline

- Overhead Ratio of 60%[1], among the lowest of peers

Strong client partnerships

- Raised $1.5T of capital for our clients during FY2013

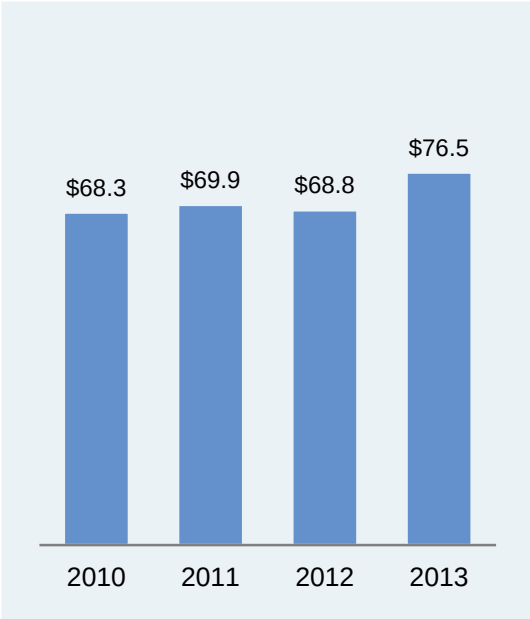
Financial strength enables investment in future

[1] Net revenues, net income, ROE, and overhead ratio excluding FVA (effective 4Q13) and DVA, are non-GAAP financial measures. Throughout this presentation, CIB provides several non-GAAP financial measures which exclude the impact of FVA (effective 4Q13) and DVA on: revenues, net income, overhead ratio, comp/revenue ratio, non-comp/revenue ratio and return on equity. These measures are used by management to assess the underlying performance of the business and for comparability with peers. For additional information on non-GAAP measures, please refer to the Notes section of the Firmwide presentation.

Leading market share across business segments, with room to improve in equities

Global revenue pools ($B)

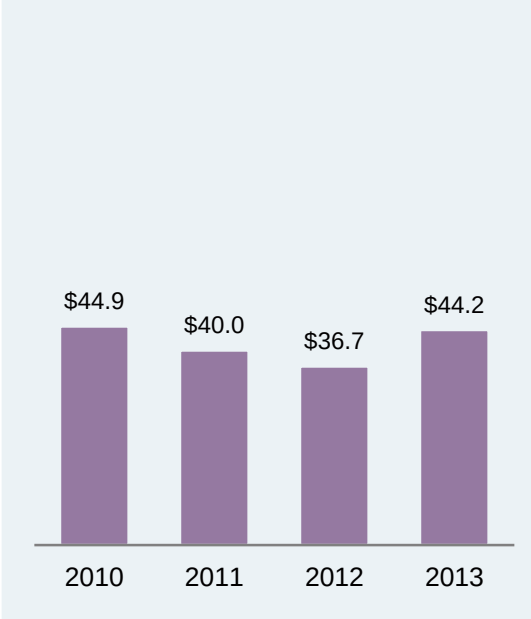
Global IB fees[1]



Fixed income markets[2]



Equity markets[2]



	Global IB fees[1]				Fixed income markets[2]				Equity markets[2]			
	2010	2011	2012	2013	2010	2011	2012	2013	2010	2011	2012	2013
JPM revenue ($B)	6.2	5.9	5.8	6.3	14.7	14.8	15.4	15.5	4.6	4.5	4.4	4.8
JPM share	7.6%	8.1%	7.5%	8.6%	13.5%	17.8%	15.6%	18.6%	10.2%	11.2%	12.0%	10.8%
JPM rank	1	1	1	1	1	1	1	1	5	4	4	4

[1] Industry revenue pool; wallet rank and share per Dealogic; JPM reported revenue shown

[2] Revenues of 10 leading competitors, excluding FVA (effective 4Q13 for JPM) and DVA, are a non-GAAP financial measure; includes JPM , GS, MS, C, BAC, CS, BARC, UBS, DB, HSBC; certain competitor revenues adjusted for one-time items

Market-leading positions in most products

Competitive ranking in 16 product areas

	JPM			Peer 1	Peer 2	Peer 3	Peer 4	Peer 5	Peer 6	Peer 7	Peer 8	Peer 9
	2006	2009	2013	2013								
Total leadership positions	7	11	**15**	8	5	5	5	4	2	2	1	0
Banking (FY2013)[1]												
Bond underwriting	1	5	1									
Loan syndication	2	2	1									
ECM	5	1	2									
M&A	3	3	2									
USD clearing[2]	1	1	1	--		--			--	--	--	--
MARKETS (3Q13YTD)[3]												
G10 rates	2	5	1									
G10 credit	5	1	3									
G10 foreign exchange	1	2	2									
Securitization	10	3	1									
Emerging markets	2	2	3									
Commodities	5	4	1									
Municipal finance	5	2	3									
Cash equities	8	5	6									
Derivatives & converts	5	2	2									
INVESTOR SERVICES (3Q13YTD)[3]												
Prime brokerage	9	4	3									
Futures & options	9	2	2									

[1] Dealogic wallet rankings; [2] CHIPS & Fedwire report; [3] 2006 based on JPM internal estimates; 2009 and 3Q13YTD based on Coalition for Markets and Investor Services; Coalition Index banks include: BAC, BARC, BNPP, CITI, CS, DB, GS, JPM, MS, UBS; Coalition outside-in estimates of JPM and competitor revenues

Top 3 2nd Tier 3rd Tier

MARKET-LEADING PERFORMANCE

Opportunities to improve market share across different regions

Top 3 2nd Tier 3rd Tier

JPM select international rankings

BANKING (FY2013)[1]	Asia	EMEA	LatAm	NA
Investment banking fees	5	2	5	1

FIXED INCOME (1H13)[2]	Asia	EMEA	Americas
Overall	3	2	1
G10 Rates	2	3	1
G10 FX	4	4	2
G10 Credit	5	2	4
EQUITIES (1H13)[2]			
Overall	5	4	3
Cash equities	8	7	5
Derivatives & converts	3	4	1

JPM market share

FY2013[1]	Asia	EMEA	LatAm	NA
Investment banking fees	4%	7%	7%	11%

1H13[2]	Asia	EMEA	Americas
Fixed income	14%	18%	18%
Equities	10%	11%	14%

[1] Dealogic wallet rankings and market share
[2] Coalition; overall Fixed Income include Rates, FX, Credit, Commodities, Emerging Markets, Securitization, Munis; overall Equities includes Cash, Derivatives and Converts; G10 Rates includes Flow Rates, Financing, Exotic Rates; G10 Credit includes Flow Credit, Loan Trading, Exotic Credit; Coalition Index banks include: BAC, BARC, BNPP, CITI, CS, DB, GS, JPM, MS, UBS; Note: Coalition outside-in estimates of JPM and competitor revenues

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As part of JPM, CIB taps into a broad firmwide client franchise

LOB	Synergy
Commercial Bank	■ Treasury Services distributed through the CB ■ Investment Banking for corporate clients of CB ■ Markets products (mainly FX and Rates)
Asset Management	■ Distribution through Private Bank for CIB equity offerings ■ Referrals
Consumer & Community Banking	■ Treasury Services products for small business clients ■ Risk management for Chase Mortgage ■ Distribution of Chase Paymentech services

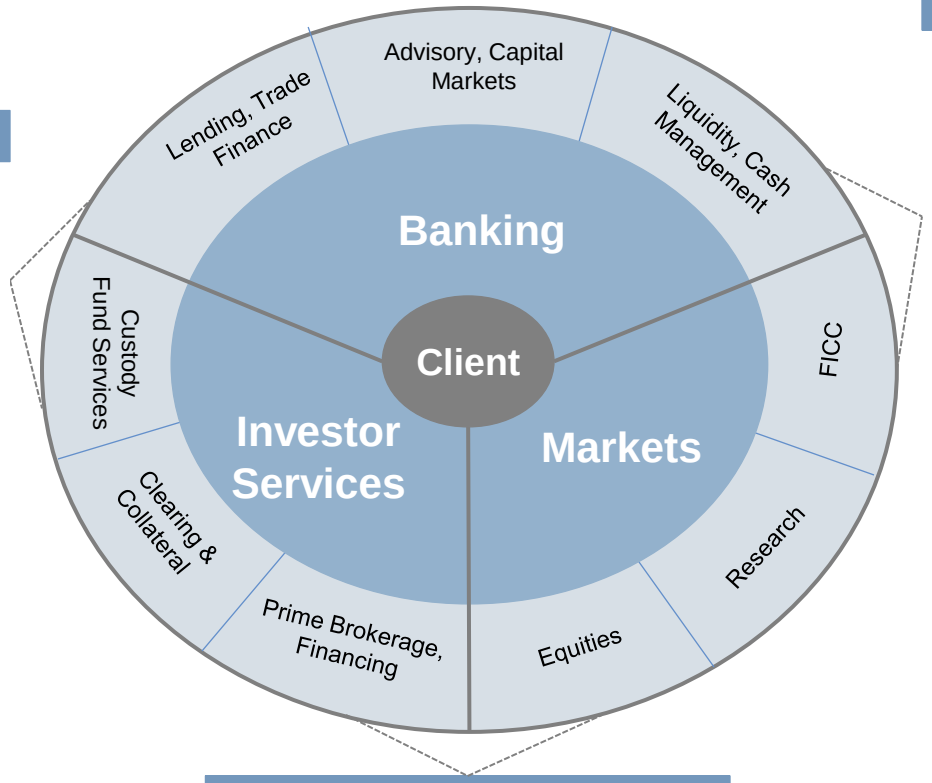
CLIENT-DRIVEN FRANCHISE

CIB scale and completeness has facilitated an integrated client coverage model

Client example

Leading European Insurance Co.

- Pitched and won increased custody mandate
- Extended optimally sized credit facility to support client requirements



Client example

Multinational Corporates

- Corporate clients with Treasury services relationships can receive FX payments through standard payment channels
- FX desk in Markets prices and executes trades in line with other comparable market flows
- Holistic approach for FX payments, cash management, and execution opportunities

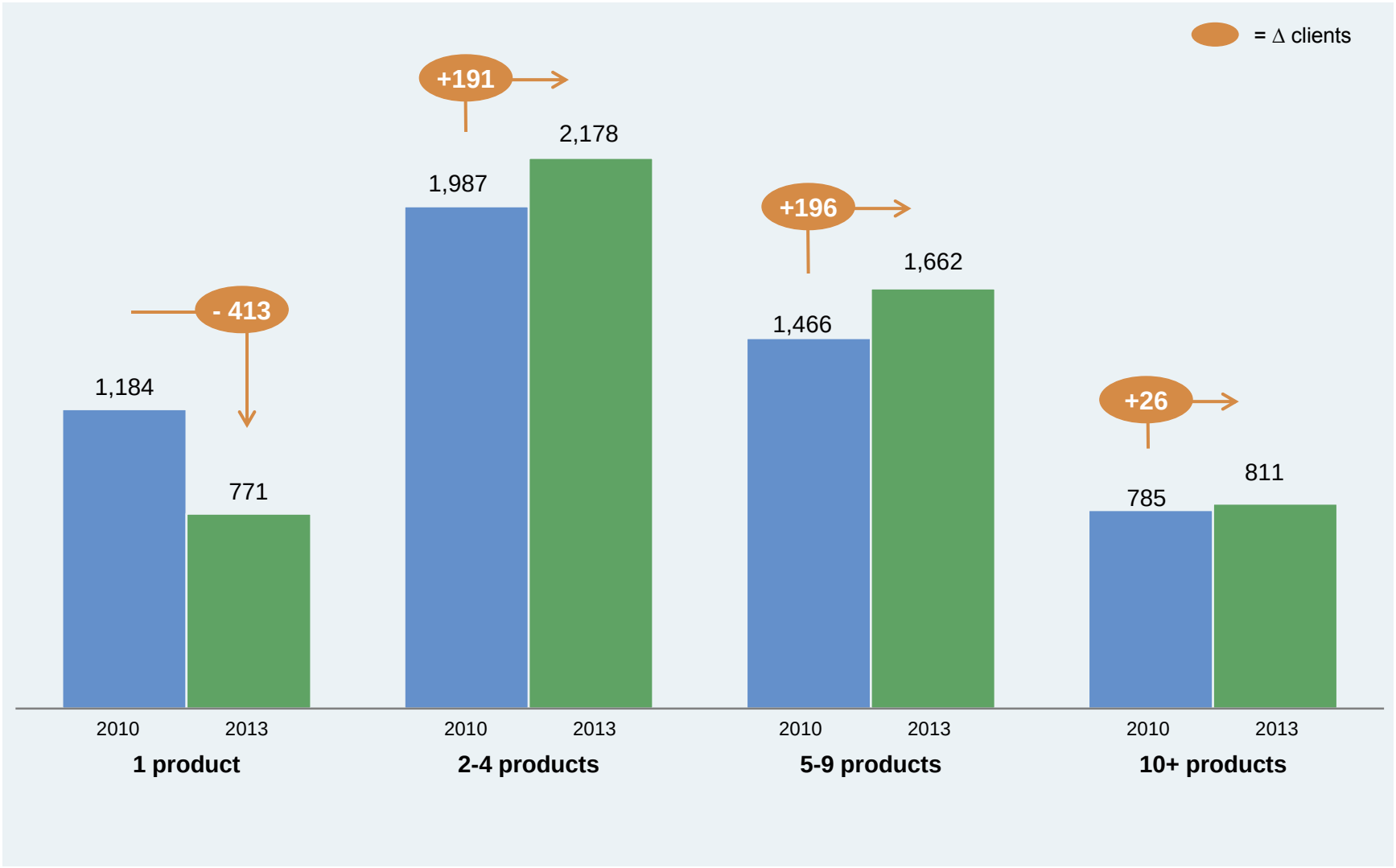
Client example

Large Asset Manager

- Historically a longstanding client of Markets, Banking, and Custody
- Expanded relationship to include Prime Brokerage

Integrated coverage with portfolio approach drives deep and broad client relationships

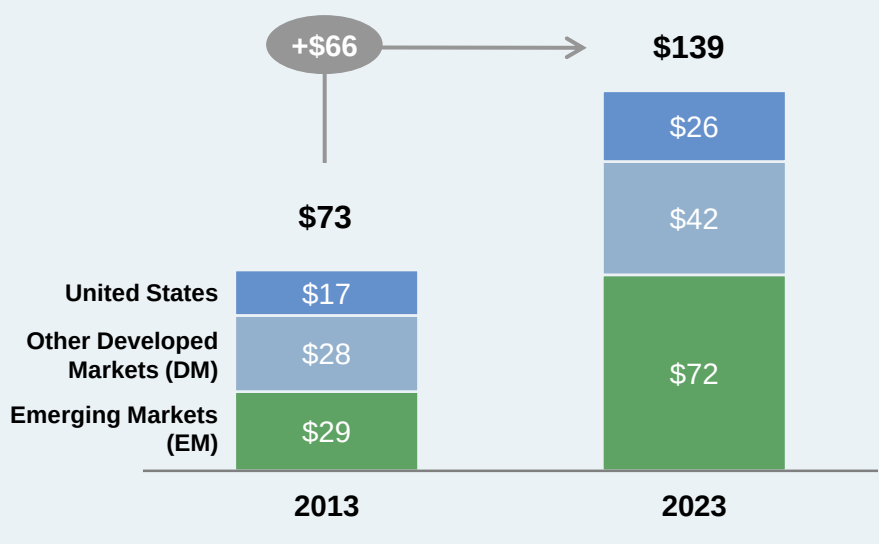
Increased product penetration (number of clients)



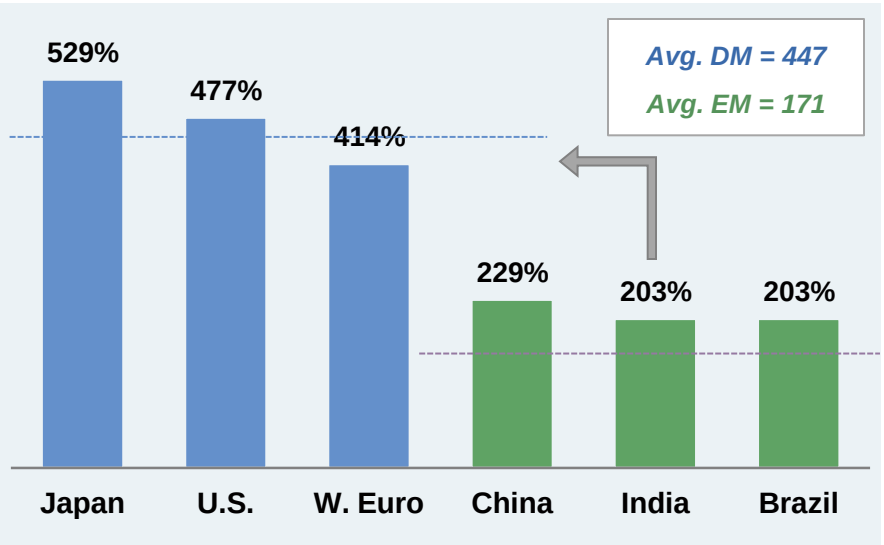
Note: Multi-year product trends for active clients in 2010, which is roughly ~75% of current client base

Long-term macro trends favor global wholesale banks

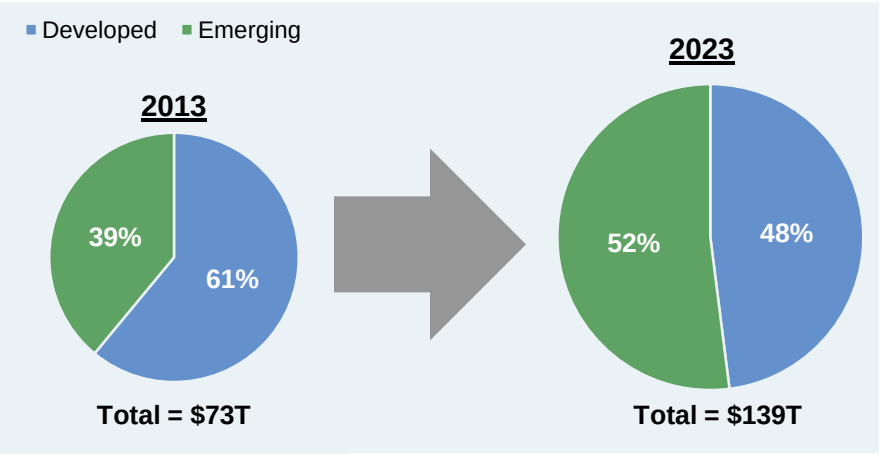
Global GDP ($T)



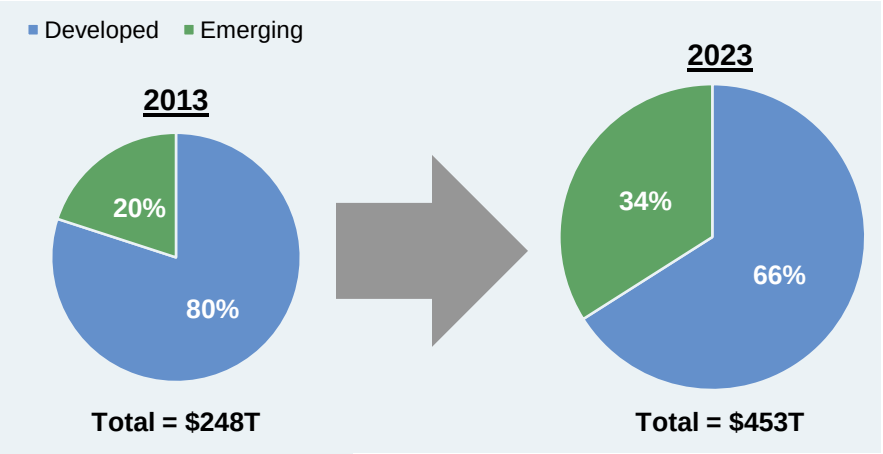
Financial depth (% of GDP)[1]



Global GDP distribution



Global financial assets distribution



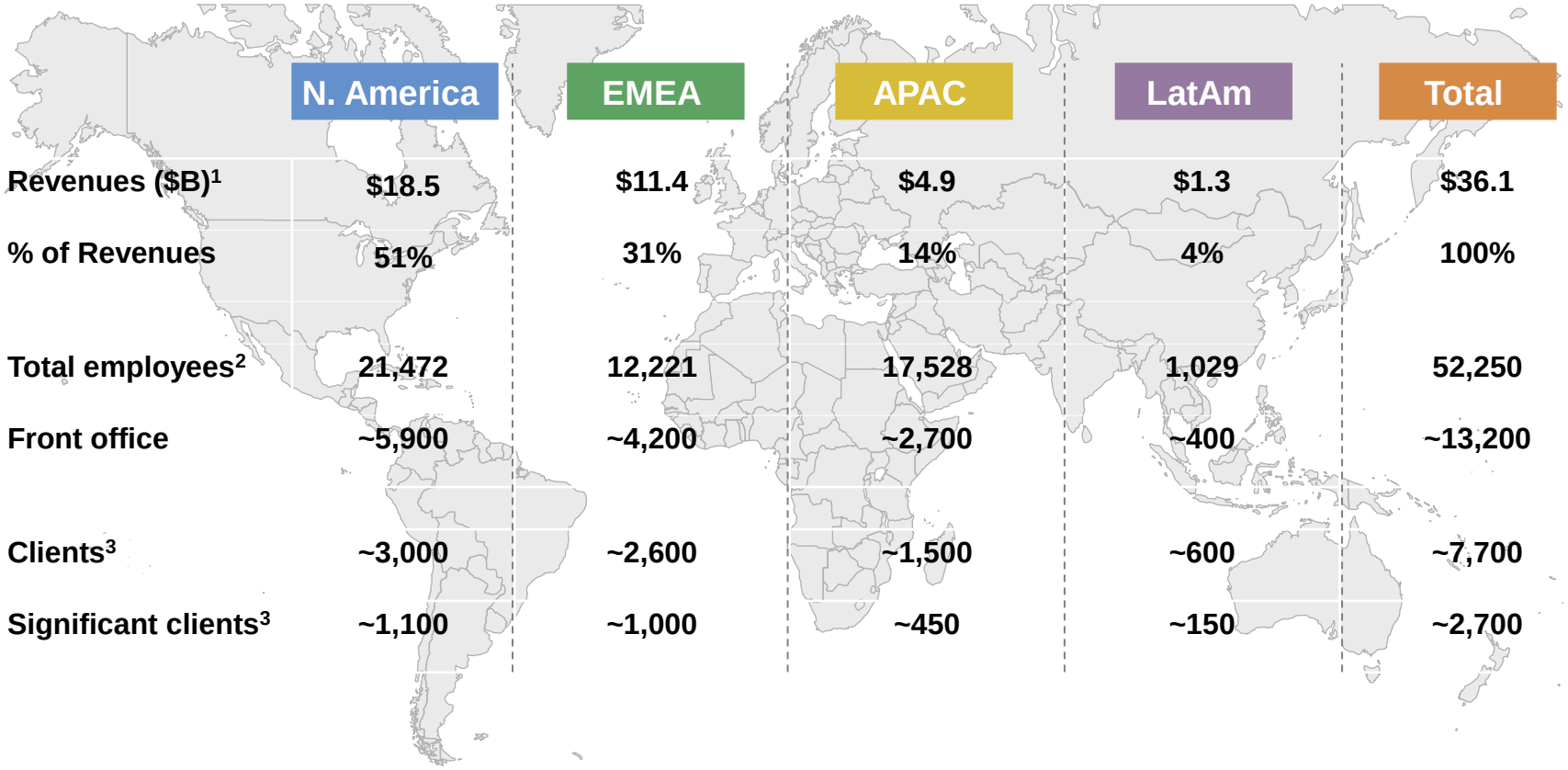
Source: McKinsey, Global Insights

[1] Financial depth calculated as debt and equity divided by GDP

Source: McKinsey

We have a strong global network to cover our clients comprehensively

Global reach



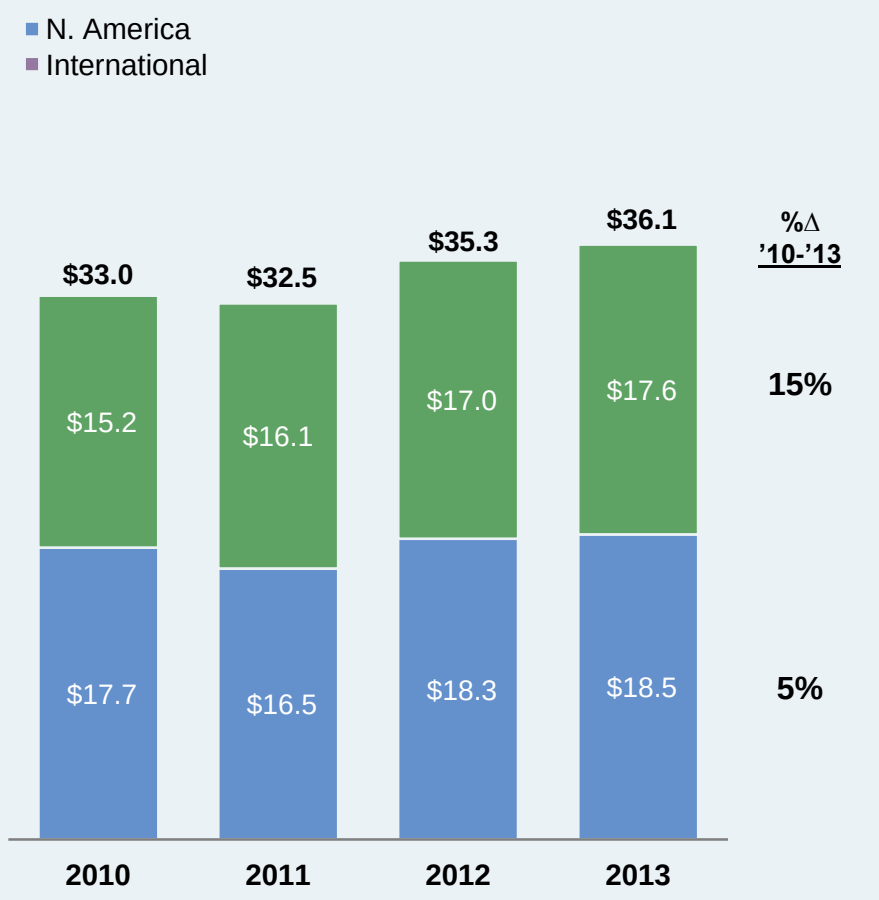
	N. America	EMEA	APAC	LatAm	Total
Revenues ($B)[1]	$18.5	$11.4	$4.9	$1.3	$36.1
% of Revenues	51%	31%	14%	4%	100%
Total employees[2]	21,472	12,221	17,528	1,029	52,250
Front office	~5,900	~4,200	~2,700	~400	~13,200
Clients[3]	~3,000	~2,600	~1,500	~600	~7,700
Significant clients[3]	~1,100	~1,000	~450	~150	~2,700

52,250 employees in 60 countries serving ~7,700 clients

[1] Revenues excluding FVA (effective 4Q13) and DVA, are a non-GAAP financial measure
[2] Reflects total number of employees located in the region per MD&A view. APAC includes ~8,800 employees in India, including those in global data and service centers
[3] Clients defined as clients with $50K+ in revenue; significant clients defined as clients with $1mm+ in revenue

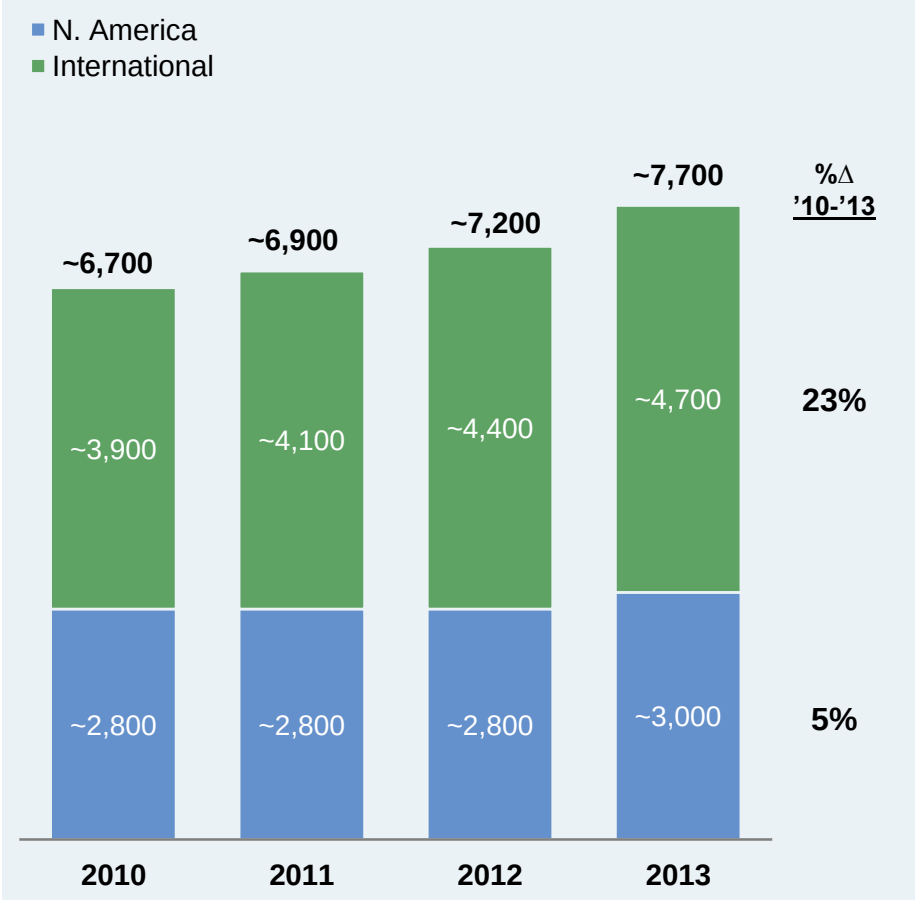
We are observing strong organic growth from our existing international platform

JPM revenue by region ($B)



Note: Revenues excl. FVA (effective 4Q13) and DVA, are a non-GAAP financial measure
*Amounts do not foot due to rounding

JPM clients by region



Note: Includes CIB clients with $50K+ in revenues.
Investor Day 2012 client count of ~7,600 was based on CIB clients with $50K+ in revenues, but also included 36-month average revenues for corporate finance

Completed hiring of 200 additional corporate bankers to drive integrated global coverage of MNCs at both HQ and subsidiary locations

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Management priorities

2014 CIB priorities

1. **Optimize business mix while investing in core growth opportunities**

2. **Adapt to evolving regulatory landscape and market structure changes**

3. **Maintain expense discipline while absorbing increased regulatory and controls costs**

1 Optimize business mix while investing in core growth opportunities

Exiting businesses that are either non-core or no longer fit risk profile

Notable exits	Description
Physical Commodities	■ Optimizing commodities business to better fit banking business model
Global Special Opportunities	■ Strong track record of investments in U.S./European mezzanine and Asian principal financing ■ Not a core offering to CIB clients
Pre-paid cards	■ Limited scalability and low operating margins ■ Operational risk
Select Foreign Correspondent Banks	■ Exiting relationships with select correspondent banks as we optimize business for heightened regulatory and compliance costs

No significant ROE impact

1 Optimize business mix while investing in core growth opportunities

Continued investment in key businesses of our core franchise

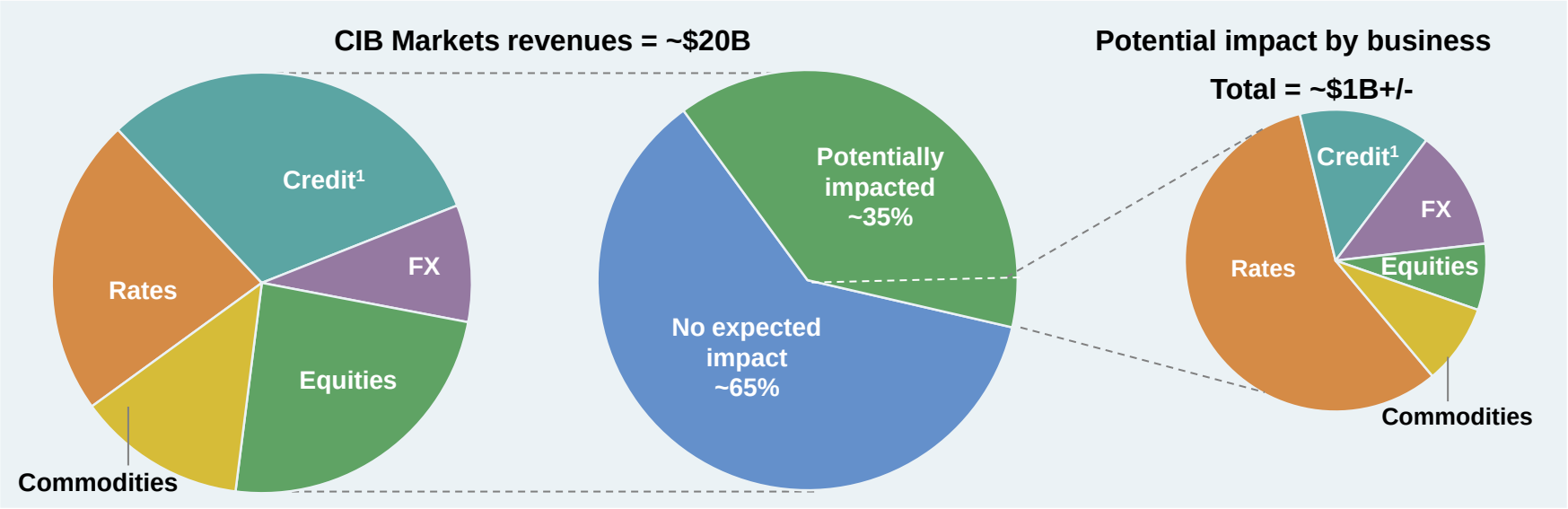
Key businesses	Description
Prime Brokerage	■ EMEA – Completed build of end-to-end operating platform in EMEA, now fully positioned to capture strong growth ■ Asia – Core platform launched in 2014, ramping up over next several years
Electronic Trading	■ Significant progress with increase in electronic trading activity in Equities (+49% average daily trading volume vs. 2011) and FX (+50% in annual trading value vs. 2011) ■ Continue to develop electronic market making capabilities – JPM was the top ranked bank by volume in U.S. Treasuries trading on electronic interdealer platforms in 2013
Equities	■ Strengthening Equities position while focusing on bottom line ■ Leveraging our strength in ECM, Derivatives, and Equity Research ■ Cash e-trading capabilities now on par with leaders – volume growth outpacing market volumes in all regions
OTC Clearing & Collateral Management	■ More than 200 relationships and 2,000+ legal entities on-boarded in the 3 phases of CFTC mandated clearing; established top 3 market share ■ Replicate U.S. execution and seamless on-boarding of clients in EMEA ■ Continue to expand CCP and product footprint

Initiatives tracking to 2015 growth targets

2 Adapt to evolving regulatory landscape and market structure changes

Impact of global derivatives regulatory changes could be approximately $1B+/-

CIB Markets business: Potential impact from market structure regulations



[1] Credit includes Securitized Products

Management commentary

Regulation	Comment
Post-trade transparency	■ Live in U.S. for CFTC products ■ Impact limited to date but difficult to isolate and quantify
Clearing	■ Live in U.S. for CFTC products, with no significant impact ■ Credit sensitive corporates exempt
SEF trading	■ Went live last week in U.S. for Rates – too early to observe impact
Initial margin on un-cleared swaps	■ Additional funding cost for initial margin expected to be significant, but phase-in over a long period

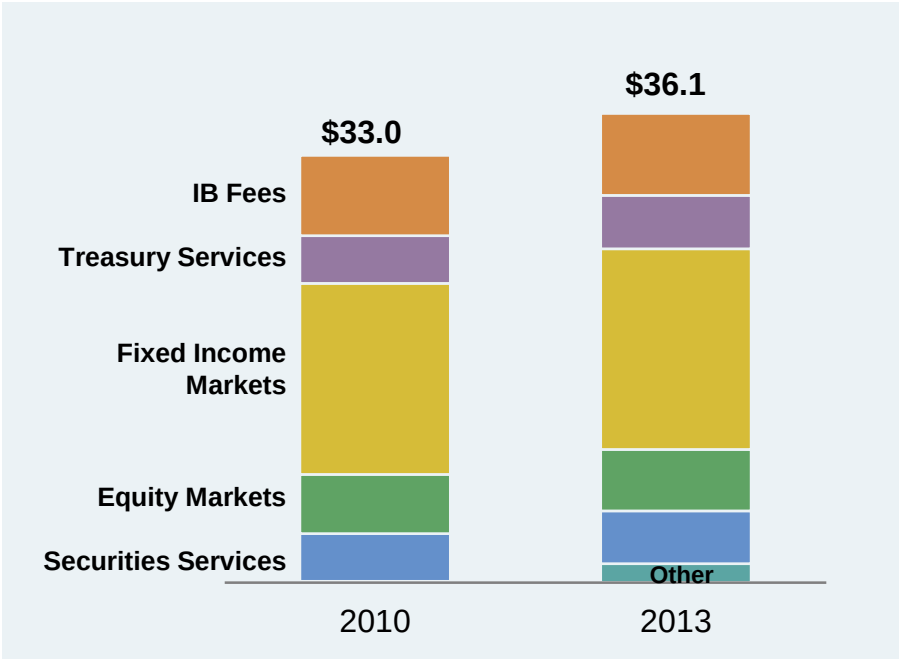
Expected timing by region

U.S.	Europe	Asia
In progress	2016	2016+
In progress	2014+	In progress - Japan only
2014	End 2016	2016+
2015+	2015+	2015+

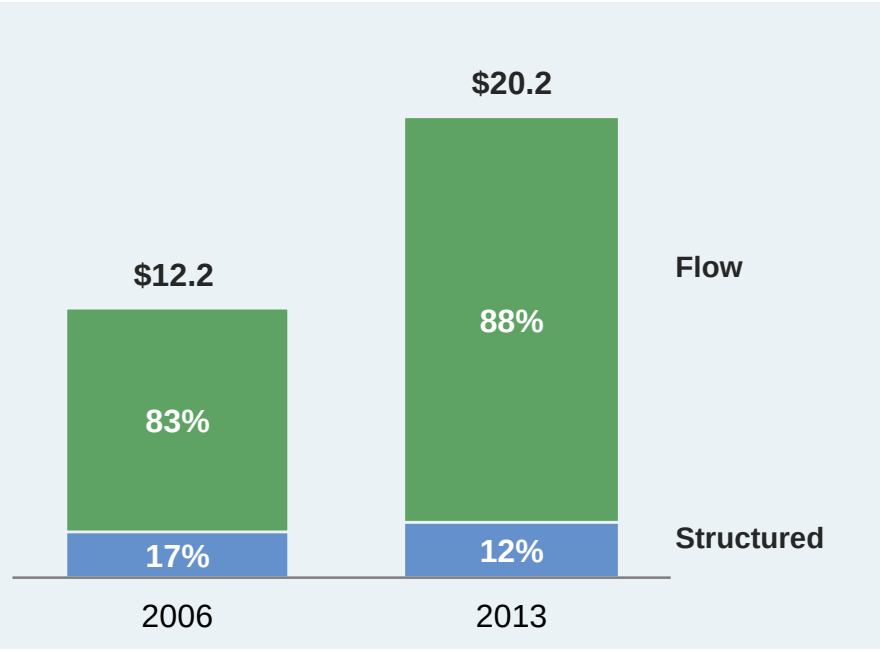
2 Adapt to evolving regulatory landscape and market structure changes

Our business is well diversified, with resiliency across macro conditions

Total CIB revenue by product[1] ($B)



Markets revenue by flow vs. structured ($B)



Client-driven and diversified business model

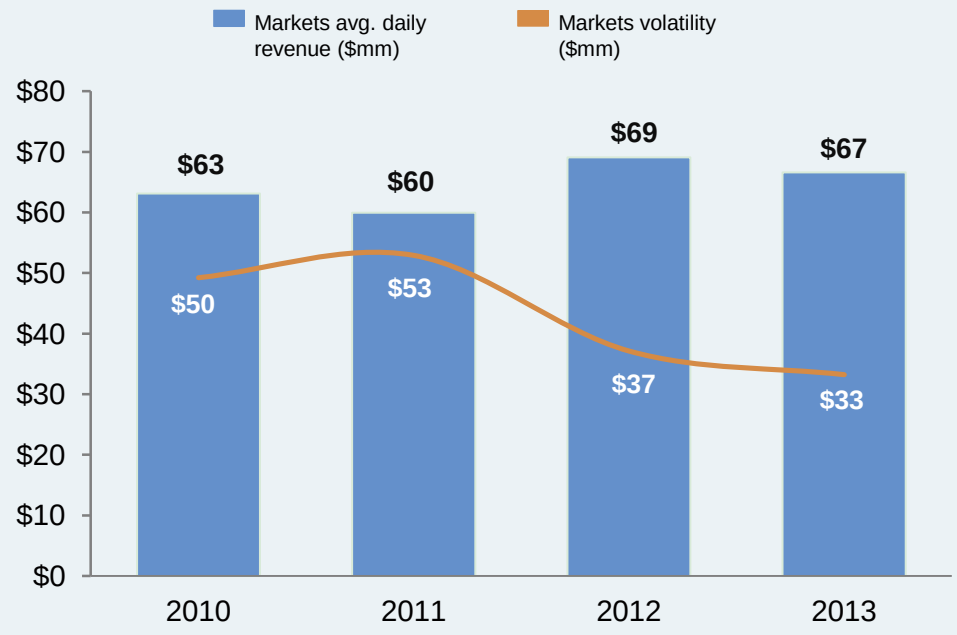
- CIB business model is well diversified with a mix of advisory, execution, and operational services
- Markets more driven by client flows, risk appetite, and bid/ask spread, than by interest rate or credit cycle
- Trending markets with moderate levels of volatility generally positive for trading volume

[1] Revenues excluding FVA (effective 4Q13) and DVA, are a non-GAAP financial measure. "Other" includes Lending and CVA & Other excluding FVA/DVA

2 Adapt to evolving regulatory landscape and market structure changes

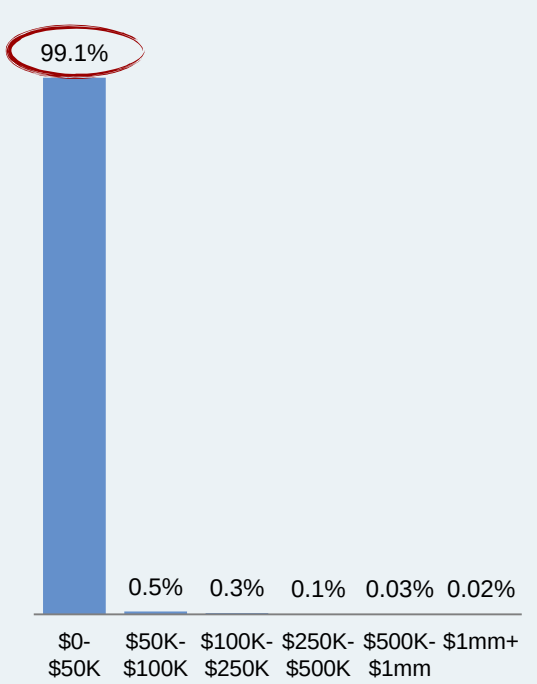
Our market-making business is flow-driven and client-focused

Markets average daily revenue and volatility[1] ($mm)



	2010	2011	2012	2013
# of trading day losses	8	26	4[3]	0
CIB VaR ($mm)[2]	$99	$76	$84	$42

JPM client trade volume distribution by revenue/trade buckets

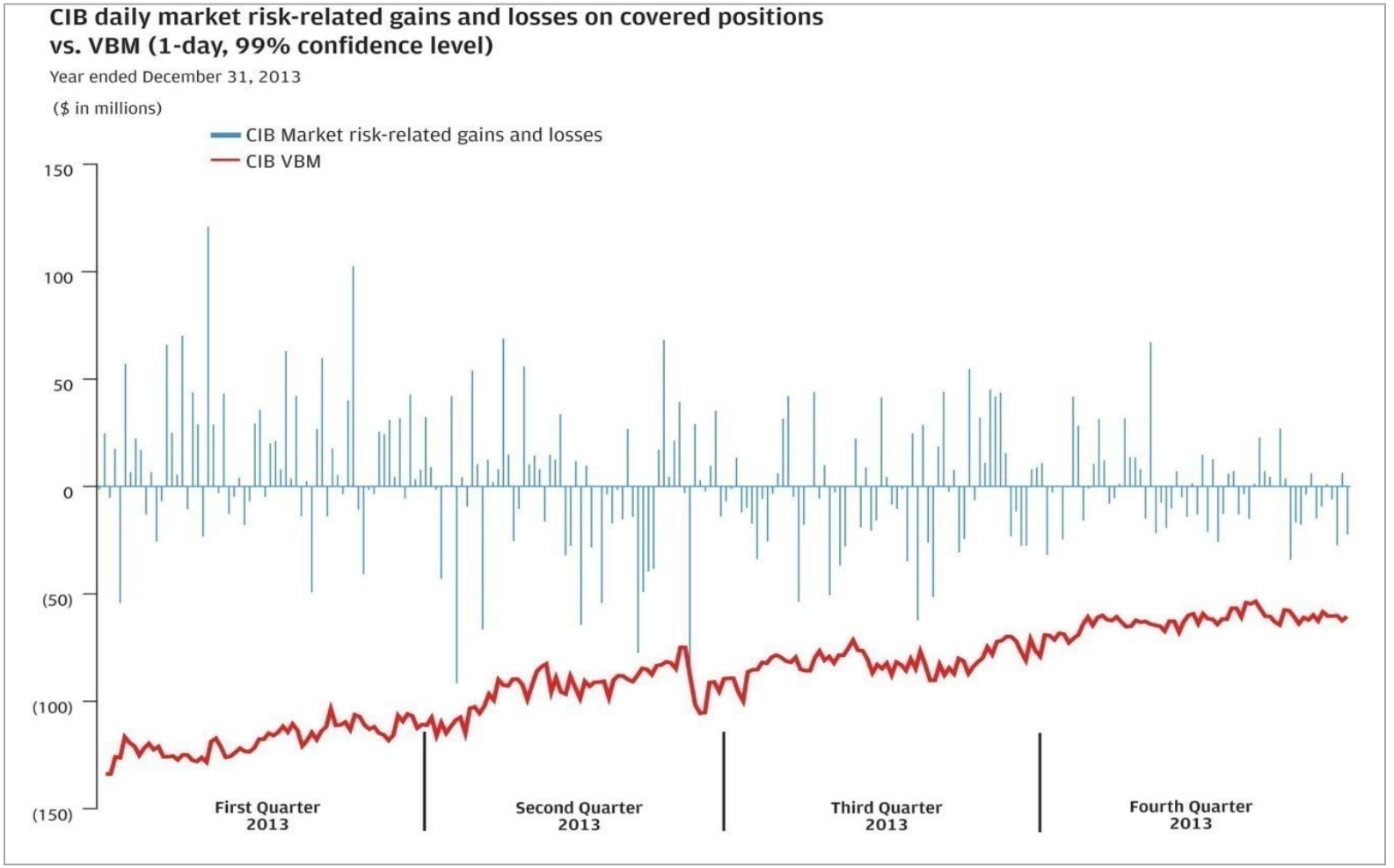


- Stable revenues indicative of client franchise with a flow-driven model – e.g., ~78% of Markets revenue is from trades below $500K in revenue/trade
- Bright-line prop trading desks have been discontinued

[1] Volatility equals standard deviation
[2] EOP total CIB trading and credit portfolio VaR. 2012 and 2013 include VaR related to synthetic credit portfolio ("SCP") transferred from CIO to CIB on 7/2/12; management uses trading loss days excluding FVA (effective 4Q13) and DVA, a non-GAAP financial measure, to provide a more meaningful comparison to each period
[3] Reflects trading loss days excl. FVA/DVA and excl. SCP; 7 trading day losses excl. FVA/DVA and incl. SCP

2 Adapt to evolving regulatory landscape and market structure changes

We believe our business model is fundamentally compliant with the Volcker rule



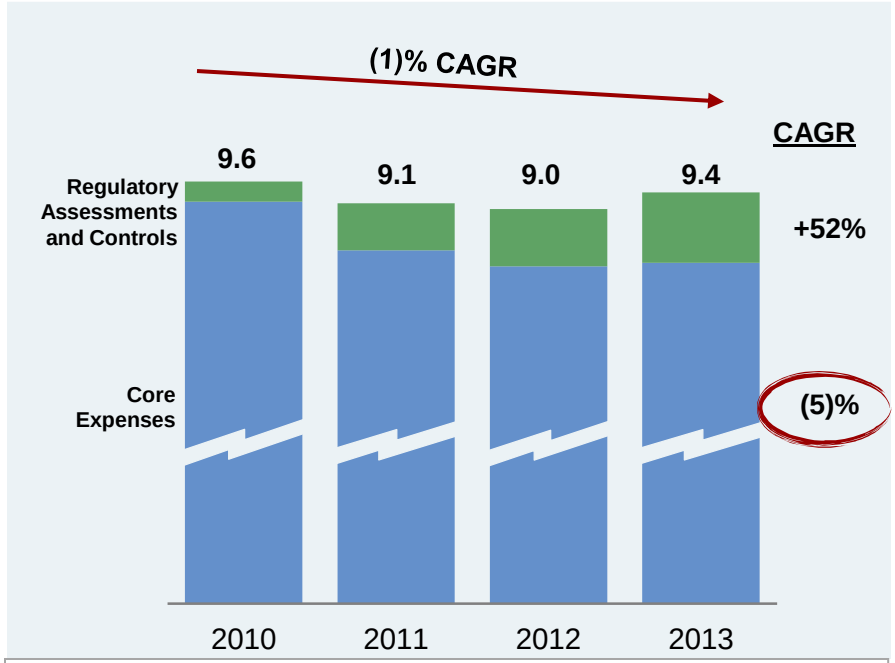
- Revenue generation in Markets is driven by client flows
- Commitment to provide liquidity and deploy capital to serve clients remains core to our franchise
- Implementation will be challenging but manageable

Note: From "Regulatory Capital Disclosure – Market Risk Pillar 3 Report", December 31, 2013; VBM = VaR-based Measure

3 Maintain expense discipline

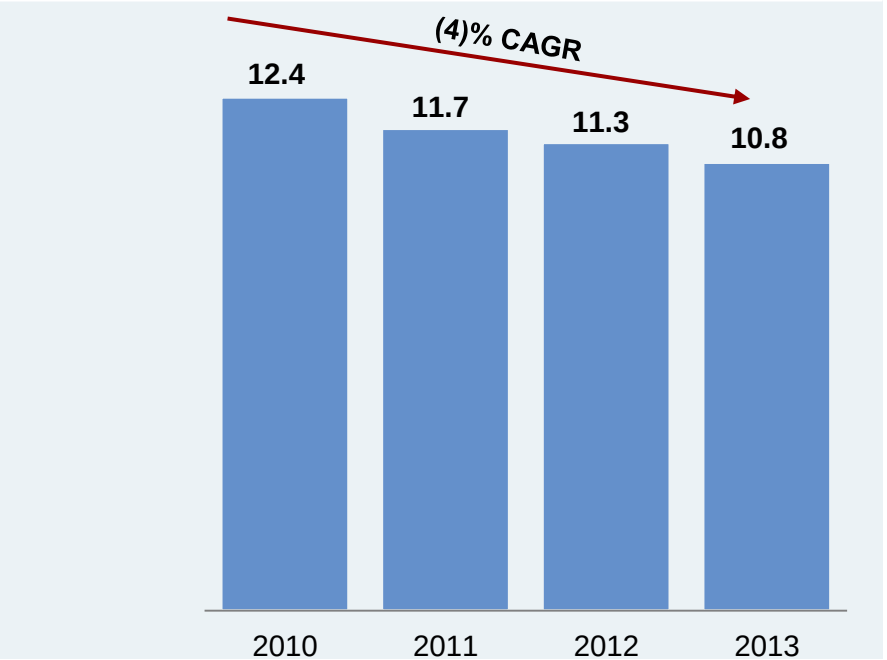
Expense discipline across both non-comp and comp have offset increases in regulatory and controls spend

Pro forma non-compensation expense[1,2] ($B)



	2010	2011	2012	2013
Overhead ratio[3]	68%	68%	62%	60%
Non-comp/Rev[3]	32%	32%	30%	30%

Compensation expense ($B)



	2010	2011	2012	2013
Comp/Rev[3]	36%	36%	32%	30%
Revenue growth (excl. FVA/DVA)	←		+3% CAGR	→

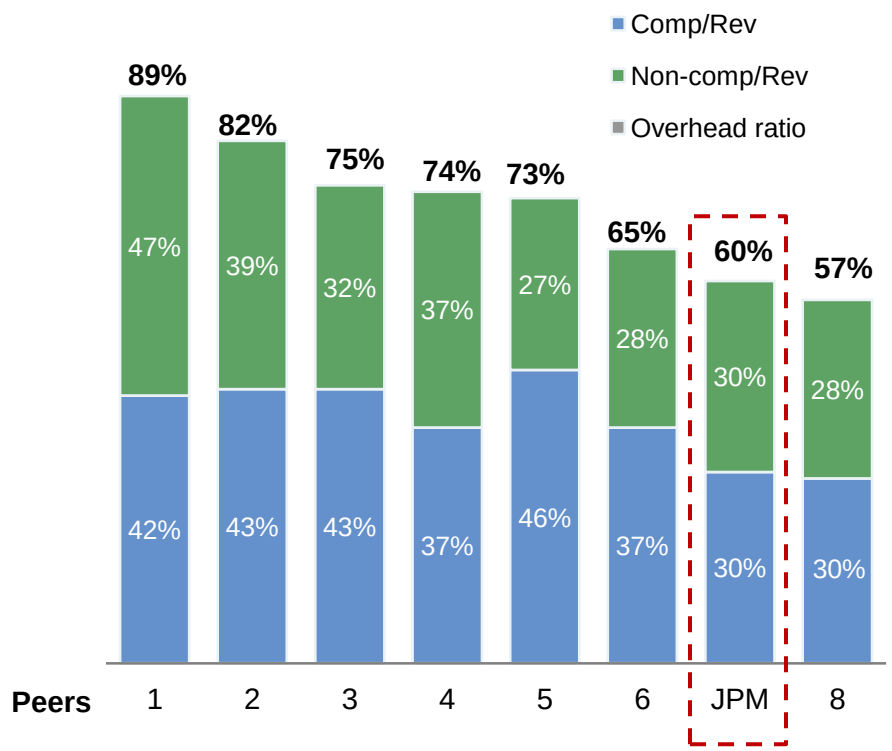
- Significant investment in enhancing controls driven by AML / KYC, trading surveillance, cyber uplift
- Increase in control spend for legal, compliance, operations and risk functions
- Disciplined SVA accrual driven framework for compensation

[1] Excludes Commodities transaction fees and related expenses; litigation losses included as core expense
[2] Regulatory assessments include FDIC, UK Bank levy, FSA and other regulatory fees. Controls expense includes both Corporate-allocated and CIB incremental expense
[3] Overhead, comp/revenue and non-comp/revenue ratios exclude FVA and DVA impact. 2010 compensation expense of $12.4B includes $0.6B related to UK Bank Payroll tax, while the comp/revenue and overhead ratios in 2010 excludes the UK Bank Payroll Tax impact

3 Maintain expense discipline while absorbing increased regulatory and controls costs

Able to maintain both market-leading overhead ratio and high revenue productivity

FY2013 overhead ratio vs. peers (%)[1]



Revenue per headcount[2] ($mm/FTE)[3] – 3Q13 YTD

	JPM	Best in class[4]		Average[4]	
		$	%Δ	$	%Δ
Origination & Advisory	**2.0**	**2.1**	**(7)%**	**1.6**	**18%**
Equities[5]	**1.7**	**2.0**	**(18)%**	**1.7**	**(4)%**
FICC	**3.5**	**3.9**	**(11)%**	**2.9**	**18%**

Note: Coalition outside-in estimates of JPM and competitor revenues

[1] JPM estimates; represents CIB/IB equivalent segments of competitors, excluding the impact of FVA (effective 4Q13 for JPM) and DVA, which are non-GAAP financial measures

[2] Front office headcount includes revenue generating headcount across all levels of seniority and front office administrative staff

[3] Coalition 3Q13 YTD revenue figures, 3Q13 YTD headcount figures; headcount includes sales, trading, research, advisory, ECM, DCM

[4] Coalition Index banks include: BAC, BARC, BNPP, CITI, CS, DB, GS, JPM, MS, UBS; average excludes JPM

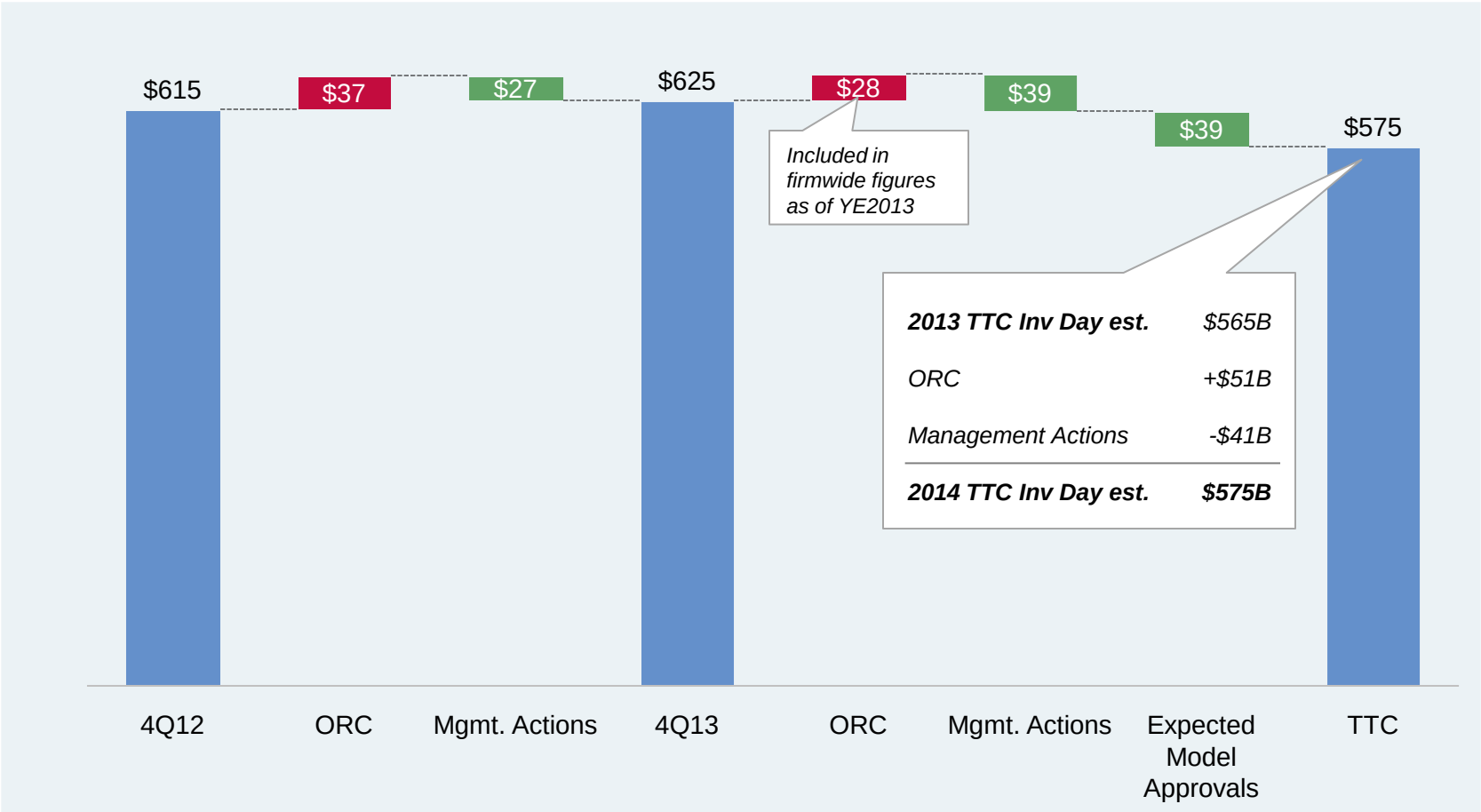
[5] Equities only includes Cash Equities, Equity Derivatives, Converts (Securities)

Agenda

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Market-leading performance	2
Client-driven franchise	7
Management priorities	14
Through-the-cycle capital & ROE	**24**

Expected RWA glide path

RWA ($B)

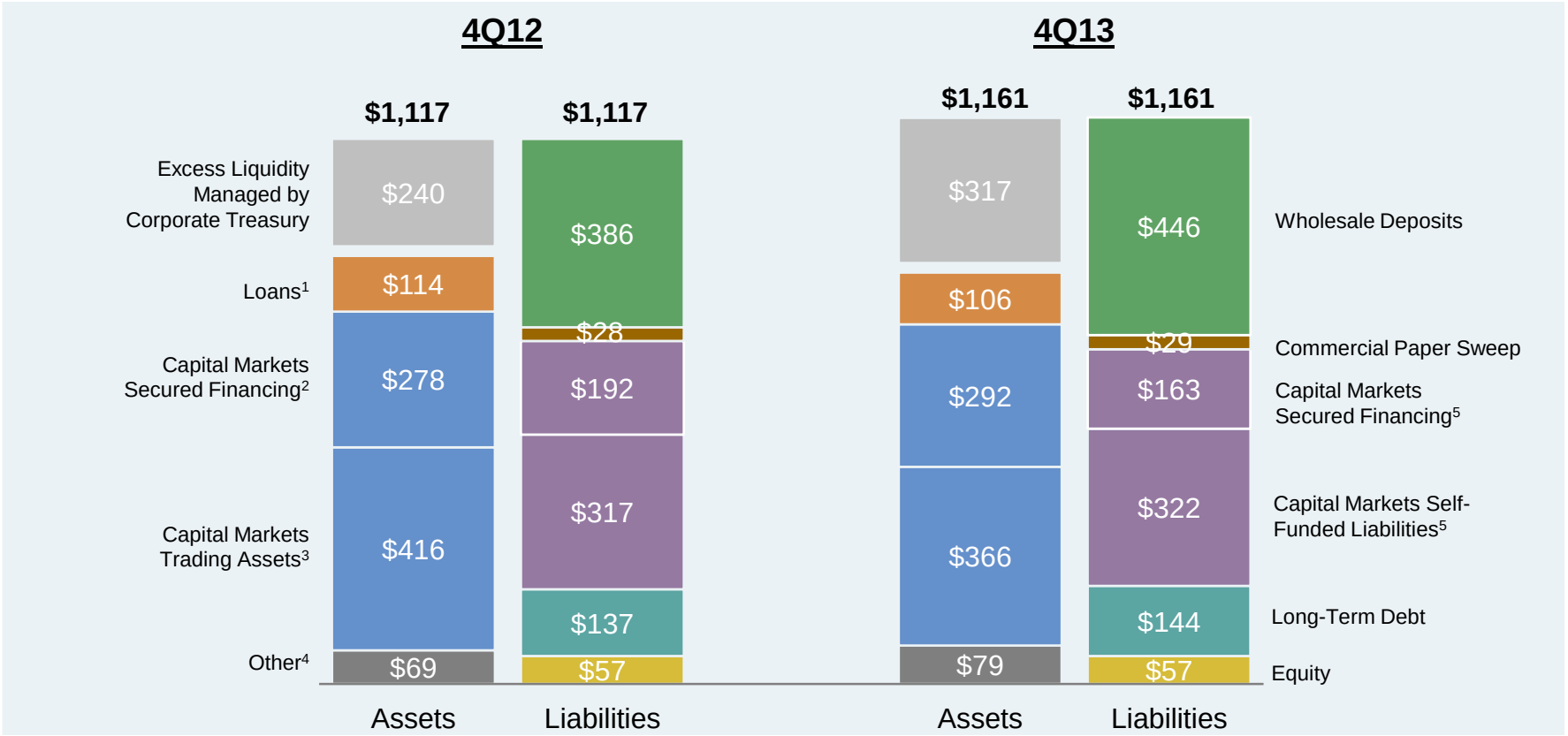


Allocated equity	**$61B**	**$61B**
Basel III Tier 1 Common (%)	**9.8%**	**~10.5%**

THROUGH-THE-CYCLE CAPITAL & ROE

Fortress balance sheet

YoY pro forma balance sheet ($B)



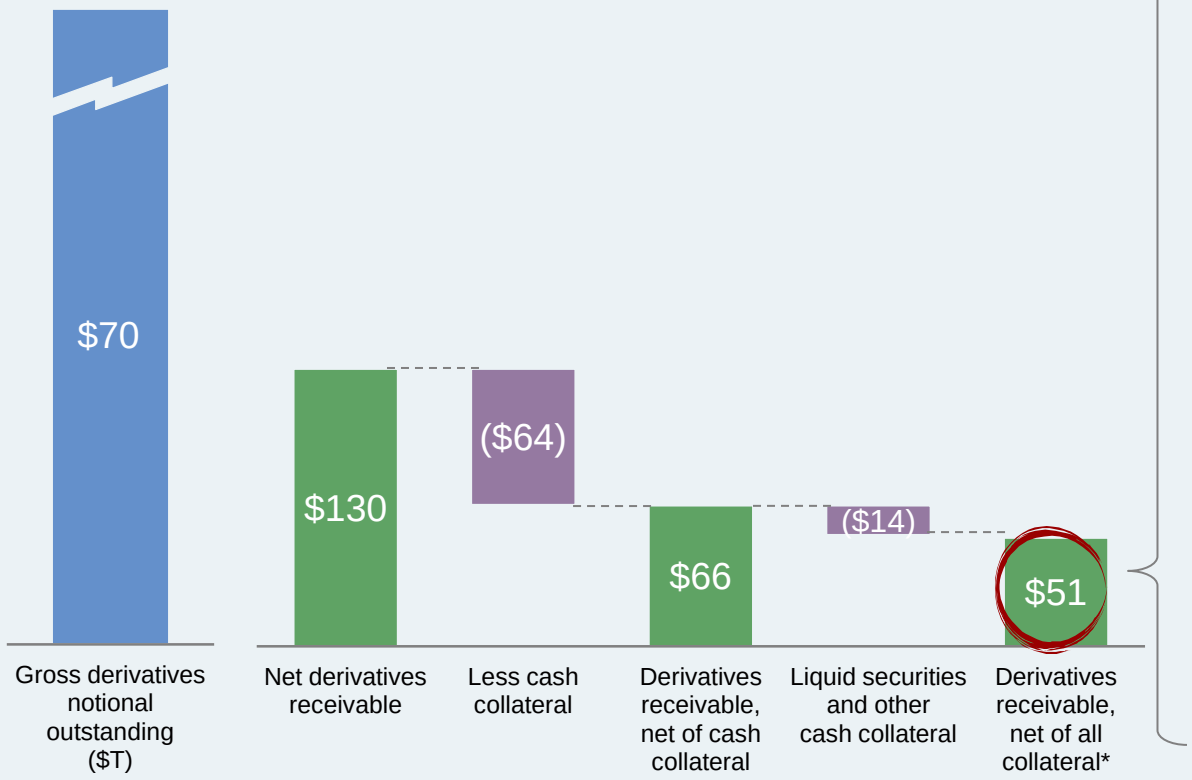
Highlights

- Highly liquid balance sheet supported by diversified wholesale funding mix and well-distributed term structure
- Supporting firmwide leverage ratio compliance with non-franchise impacting actions

[1] Net of allowance for loan losses
[2] Includes resales, securities borrowed and cash and due from banks
[3] Includes trading assets and derivatives receivable
[4] Includes other assets, other intangible assets, MSR, premises and equipment, accrued interest, and accounts receivable
[5] Includes trading liabilities, Fed funds purchased and securities loaned or sold under repurchase agreements, VIEs, other borrowed funds, derivatives payable, and other liabilities

Our derivatives exposure is client-driven and high quality

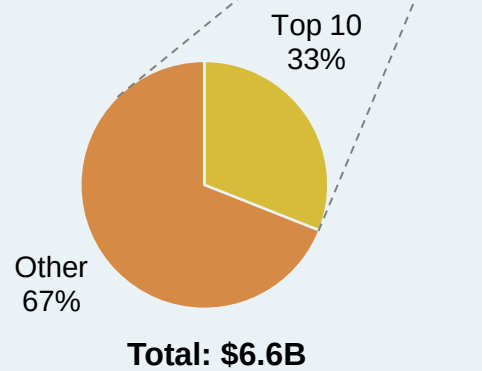
Firmwide derivative receivables, net (4Q13; $B unless otherwise specified)



Counterparty credit exposure

Maturity (years)	4Q13
Less than 1 year	26%
Between 1 and 5 years	31%
Greater than 5 years	43%

Risk Rating	4Q13
Investment grade	87%
Unrated or Non-investment grade	13%



Total: $6.6B

*Amounts do not foot due to rounding

Through-the-cycle (TTC) ROE

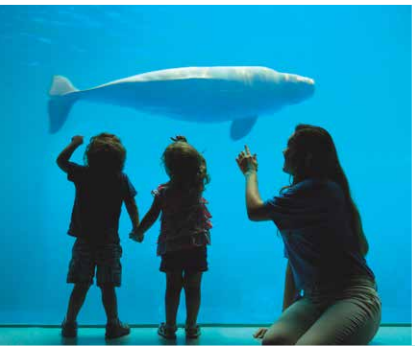
Through-the-cycle ("TTC") RWA, Capital and Returns ($B)				
Business	TTC RWA	TTC Capital[1]	TTC ROE	Outlook for achieving returns
Banking	$140	$14.7	17%+/-	■ Higher rate environment for deposits ■ Normalized credit costs ■ Coverage efficiencies
Markets	$335	$35.2	14%+/-	■ Leading businesses, flow and scale model, strong client franchise ■ Regulatory impact
Investor Services	$75	$7.9	19%+/-	■ Higher rate environment for deposits ■ Ongoing efficiency improvements ■ Market structure driven initiatives
Run-off & Other	$25	$3.2	N/A	
CIB	$575	$61.0	15%+/-	

[1] Represents allocated equity

In summary…

- **Deep client franchise,** supported by our **scale, completeness and global reach.**
- **Fortress balance sheet** with strong capital and liquidity position**, with earnings power** to continue to invest in business
- Continued **headwinds in regulatory and controls environment –** but will make the firm more resilient and lead to new business opportunities
- **International** will continue to be a key priority and **long-term driver of growth,** despite short-term slowing as we focus on strengthening controls
- **Disciplined expense management** with room to generate more efficiencies, creating the capacity to invest in the future
- **Very strong pool of talent** across the CIB and focused on continuing to attract and retain the best













ANNUAL REPORT 2014

JPMorgan Chase & Co.

Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio data and headcount)	2014	2013
Reported basis[a]		
Total net revenue	$ 94,205	$ 96,606
Total noninterest expense	61,274	70,467
Pre-provision profit	32,931	26,139
Provision for credit losses	3,139	225
Net income	$ 21,762	$ 17,923
Per common share data		
Net income per share:		
Basic	$ 5.34	$ 4.39
Diluted	5.29	4.35
Cash dividends declared	1.58	1.44
Book value	57.07	53.25
Tangible book value[b]	44.69	40.81
Selected ratios		
Return on common equity	10%	9%
Return on tangible common equity[b]	13	11
Common equity Tier 1 ("CET1") capital ratio[c]	10.2	10.7
Tier 1 capital ratio[c]	11.6	11.9
Total capital ratio[c]	13.1	14.4
Selected balance sheet data (period-end)		
Loans	$ 757,336	$ 738,418
Total assets	2,573,126	2,415,689
Deposits	1,363,427	1,287,765
Total stockholders' equity	232,065	211,178
Headcount	241,359	251,196

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP), except where otherwise noted.
(b) Non-GAAP financial measure. For further discussion, see "Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures" in this Annual Report.
(c) Basel III Transitional rules became effective on January 1, 2014; prior period data is based on Basel I rules. As of December 31, 2014, the ratios presented are calculated under the Basel III Advanced Transitional Approach. CET1 capital under Basel III replaced Tier 1 common capital under Basel I. Prior to Basel III becoming effective, Tier 1 common capital under Basel I was a non-GAAP financial measure. For further discussion, see "Regulatory capital" in this Annual Report.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $2.6 trillion and operations worldwide. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. A component of the Dow Jones Industrial Average, JPMorgan Chase & Co. serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands.

Information about J.P. Morgan's capabilities can be found at jpmorgan.com and about Chase's capabilities at chase.com. Information about JPMorgan Chase & Co. is available at jpmorganchase.com.











communities

clients

customers

employees

veterans

nonprofits

business owners

schools

hospitals

local governments

JPMorgan Chase & Co.

Dear Fellow Shareholders,



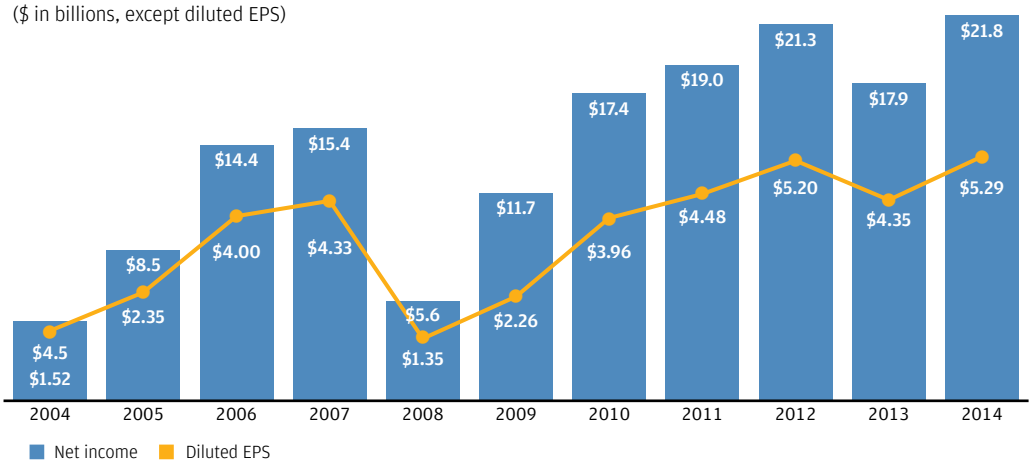
Jamie Dimon,
Chairman and
Chief Executive Officer

Seven years ago, the world was shaken by the global financial crisis. And since then, our company has been dealing with extraordinary challenges as a result of that crisis. We have endured an unprecedented economic, political and social storm – the impact of which will continue to be felt for years and possibly decades to come. What is most striking to me, in spite of all the turmoil, is that our company became safer and stronger – and it never stopped supporting clients, communities and the growth of economies around the world.

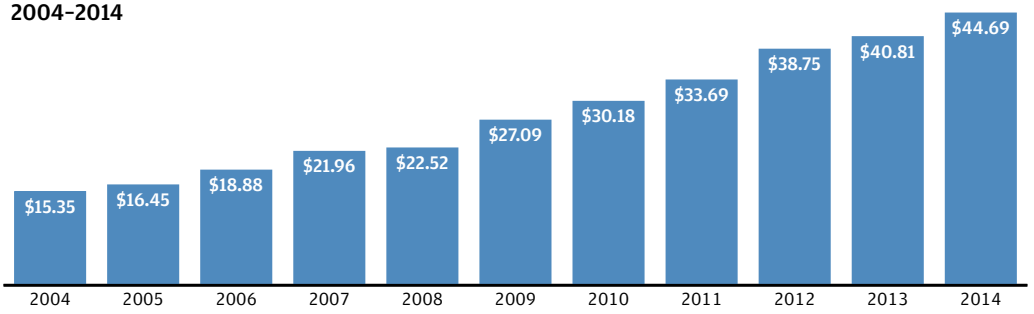
I feel extraordinarily privileged to work for this great company with such talented people. Our management team and our employees do outstanding work every single day – sometimes under enormous pressure – while dealing with an extreme number of complex business and regulatory issues. The way our people and our firm are able to address our challenges and admit our mistakes while continuing to grow our businesses and support our clients fills me with pride.

Our company earned a record $21.8 billion in net income on revenue[1] of $97.9 billion in 2014. In fact, we have delivered record results in the last four out of five years, and we hope to continue to deliver in the future. Our financial results reflected strong underlying performance across our businesses. Over the course of last year, our four franchises maintained – and even strengthened – our leadership positions and continued to gain market share, improve customer satisfaction and foster innovation. We also continued to deliver on our many commitments – including business simplification, regulatory requirements, controls, expense discipline and capital requirements.

Earnings and Diluted Earnings per Share
2004–2014
($ in billions, except diluted EPS)



Tangible Book Value per Share
2004–2014



[1] Represents managed revenue

Bank One/JPMorgan Chase & Co. tangible book value per share performance vs. S&P 500

	Bank One (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since becoming CEO of Bank One (3/27/2000–12/31/2014)[a]:			
Compounded annual gain	12.7%	5.3%	7.4%
Overall gain	434.9%	105.1%	329.8%
	JPMorgan Chase & Co. (A)	**S&P 500 (B)**	**Relative Results (A) – (B)**
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2014):			
Compounded annual gain	14.1%	8.0%	6.1%
Overall gain	300.5%	124.5%	176.0%

Tangible book value over time captures the company's use of capital, balance sheet and profitability. In this chart, we are looking at heritage Bank One shareholders and JPMorgan Chase & Co. shareholders. The chart shows the increase in tangible book value per share; it is an aftertax number assuming all dividends were retained vs. the S&P 500 (a pretax number with dividends reinvested).

[a] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One

We believe that, in 2014, we continued to deliver for our shareholders. The table above shows the growth in tangible book value per share, which we believe is a conservative measure of value. You can see that the tangible book value per share has grown far more than the Standard & Poor's 500 Index (S&P 500) in both time periods. For Bank One shareholders since March 27, 2000, the stock has performed far better than most financial companies and the S&P 500. And since the JPMorgan Chase & Co. merger with Bank One on July 1, 2004, we have performed well versus other financial companies and slightly below the S&P 500. The details are shown in the table below.

Stock total return analysis

	Bank One	S&P 500	S&P Financials Index
Performance since becoming CEO of Bank One (3/27/2000–12/31/2014)[a]:			
Compounded annual gain	10.4%	4.0%	2.2%
Overall gain	328.3%	78.8%	37.4%
	JPMorgan Chase & Co.	**S&P 500**	**S&P Financials Index**
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2014):			
Compounded annual gain	7.5%	8.0%	0.9%
Overall gain	113.3%	124.5%	9.5%

This chart shows actual returns of the stock, with dividends included, for heritage shareholders of Bank One and JPMorgan Chase & Co. vs. the Standard & Poor's 500 Index (S&P 500) and the Standard & Poor's Financials Index (S&P Financials Index).

[a] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One

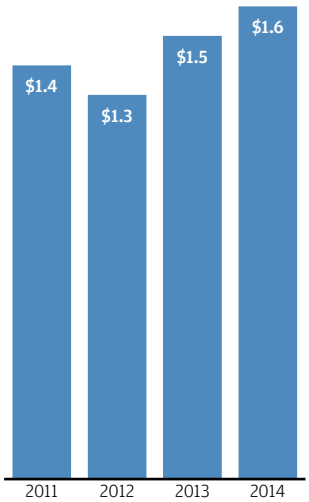
However, our stock performance has not been particularly good in the last five years. While the business franchise has become stronger, I believe that legal and regulatory costs and ***future uncertainty*** regarding legal and regulatory costs have hurt our company and the value of our stock and have led to a price/earnings ratio lower than some of our competitors. We are determined to limit (we can never completely eliminate them) our legal costs over time, and as we do, we expect that the strength and quality of the underlying business will shine through.

JPMorgan Chase continued to support consumers and businesses and make a significant positive impact on our communities. In 2014, the firm **provided credit and raised capital of more than $2.1 trillion for our clients.** The firm also has hired nearly 8,700 military veterans since 2011 as a proud founding member of the 100,000 Jobs Mission, which recently has increased the goal to 300,000 jobs. Our firm was there to help small businesses – we **provided $19 billion of credit to U.S. small businesses**, which allowed them to develop new products, expand operations and hire more workers. In total, we **provided $197 billion of credit to consumers.** And we provided credit and raised capital of **more than $75 billion for nonprofit and government entities, including states, municipalities, hospitals and universities.** Our strength allows us to be there for our clients and communities in good times – and, more important, in bad times. In the face of many difficult challenges, we never stopped doing our job, and we demonstrated that the work we do matters. And we also continue to build our business by investing in infrastructure, systems, technology and new products and by adding bankers and branches around the world.

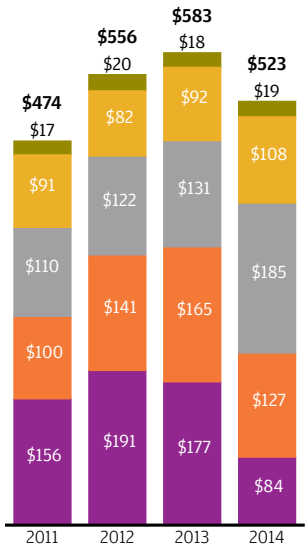
New and Renewed Credit and Capital for Clients

at December 31,

Corporate clients
($ in trillions)



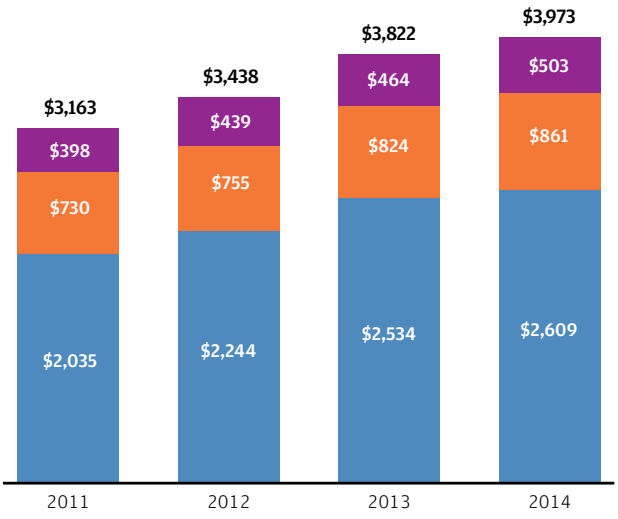
Consumer and Commercial Banking
($ in billions)



	Year-over-year change		
	'11 to '12	'12 to '13	'13 to '14
Corporate clients	(9)%	20%	7%
Small business	18%	(8)%	5%
Card & Auto	(10)%	12%	18%
Commercial/ Middle market	11%	8%	41%
Asset management	41%	17%	(23)%
Mortgage/ Home equity	22%	(7)%	(53)%
Total Consumer and Commercial Banking	17%	5%	(10)%

Our clients also exhibit their faith in us by entrusting us to take care of their money — either as deposits or as client assets entrusted to us — as shown in the chart below.

Assets Entrusted to Us by Our Clients
at December 31,



	Year-over-year change		
	'11 to '12	'12 to '13	'13 to '14
Deposits			
Consumer	10%	6%	8%
Wholesale	3%	9%	4%
Client assets[a]	10%	13%	3%

Assets under custody[b]
($ in billions)

$16,870	$18,835	$20,485	$20,549

[a] Represent assets under management as well as custody, brokerage, administration and deposit accounts

[b] Represents activities associated with the safekeeping and servicing of assets

In this letter, I will discuss the issues highlighted below. I also encourage you to read the letters written by several of our business leaders about our main businesses, our critical operations and controls, and some of our corporate responsibility efforts.

As usual, this letter will describe some of our successes and opportunities, as well as our challenges and issues. The main sections of the letter are as follows:

I. We have an outstanding franchise — our company has emerged as an endgame winner, but we need to earn it every day

II. We build for the long term — we manage through-the-cycle, and we always are prepared for the toughest of times

III. We will successfully navigate the new global financial architecture (and we are well on our way to having fortress controls)

IV. We have a solid strategy and believe our future outlook is very good — but, as usual, there still are a lot of things to think and worry about

V. We have a fully engaged board, an exceptional management team and a strong corporate culture

I. WE HAVE AN OUTSTANDING FRANCHISE – OUR COMPANY HAS EMERGED AS AN ENDGAME WINNER, BUT WE NEED TO EARN IT EVERY DAY

If you think back 10, 20 or 30 years ago, my predecessors and I struggled to try to build a great company, which we hoped would emerge as an endgame winner. The ultimate outcome was unclear – and many competitors did not survive (this is true for most large-scale consolidating industries). Even for those of us that did, it was quite a struggle. Today, it is clear that our company is an endgame winner – both in the United States and globally – which is invaluable in *any* industry. And while we have had some difficult times since the financial crisis, the power of the franchise has shone through. We also know that future success is not guaranteed – only consistently good management over a long period of time can ensure long-term success in any business. But we certainly are in a very good place.

We have delivered good multi-year financial results (strong margins and returns and low volatility) and have shown a great ability to adapt to changes – both from the marketplace and the regulatory environment

We always compare our margins and returns with those of our best competitors in each business. The chart below, which is very similar to a chart we showed at our Investor Day, shows some of these numbers for 2014. We believe that the right discipline is to compare each of our businesses against *its* best competitor. It is a mistake just to look at the consolidated numbers and compare them – every company has a different mix of businesses. The chart below also shows how our businesses compare in terms of margins,

JPMorgan Chase Is in Line with Best-in-Class Peers in Both Efficiency and Returns

	Efficiency			Returns		
	JPM 2014 overhead ratios	Best-in-class peer overhead ratios[2] weighted by JPM revenue mix	JPM target overhead ratios	JPM 2014 ROE	Best-in-class peer ROTCE[4] weighted by JPM equity mix	JPM target ROE
Consumer & Community Banking	58%	55% WFC	~50%	18%	16% WFC	20%
Corporate & Investment Bank	62%[1]	60% Citi	55%-60%	13%[1]	14% Citi	13%
Commercial Banking	39%	38% PNC	35%	18%	13% PNC	18%
Asset Management	71%	69% UBS WM & BLK	≤70%	23%	27% BEN	25%+
JPMorgan Chase	60%[1]	59%[1]	55%+/-	13%[3]	13%	~15%[3]

[1] Excludes legal expense
[2] Best-in-class overhead ratio represents implied expenses of comparable peer segments weighted by JPMorgan Chase (JPM) revenue: Wells Fargo Community Banking (WFC), Citi Institutional Clients Group (Citi), PNC Corporate and Institutional Banking (PNC), UBS Wealth Management and Wealth Management Americas (UBS WM) and BlackRock (BLK), and JPM Corporate segment
[3] Represents ROTCE for total JPMorgan Chase. Goodwill is primarily related to the Bank One merger and prior acquisitions and is predominantly retained by Corporate
[4] Best-in-class ROTCE represents implied net income minus preferred stock dividends of comparable peers weighted by JPM tangible common equity: WFC, Citi, PNC, Franklin Templeton (BEN) and JPM Corporate segment

our target margins in a normal environment and, most important, our return on equity (ROE). On most of these measures, we are very close to the best-in-class competitor.

A good company should be able to earn competitive margins over an extended period of time regardless of economic conditions while investing and without taking excessive risk

Any company can improve earnings in the short run by taking on additional risk or cutting back on investments. Any company can grow rapidly if it takes on too much risk – but that usually is the kind of growth one comes to regret. Our margins have been quite good, even as we have been investing for the long run. These investment expenses lower our short-term returns, but they are "good" expenses. In addition to the tremendous amount that we invest annually in technology and infrastructure, some examples of where we have invested over the past five years are:

- 448 retail branches in the United States
- 28 wholesale offices abroad
- 2,498 Chase Private Client locations/ branches, supported by 594 new Private Client advisors
- 20 Commercial Banking expansion cities, including approximately 350 Commercial Banking bankers
- 205 small business bankers

A good company always should be investing while it also is waste cutting; i.e., cutting out any unnecessary expenses. However, I often have received bad advice on what are unnecessary expenses. For example, spending on important strategic off-sites, research and development for innovation, marketing that has a positive return – those are good expenses. We take a bus trip annually to visit branches, operating centers and clients. It is both fun and enormously productive – and it is not an unnecessary expense – it makes us a better company.

Even our annual Retail National Sales Conference with the top 5% of our branch bankers, loan officers and tellers is critical – we spend time working together, we learn a lot and we get to thank these outstanding employees at an awards recognition dinner. While it is perfectly reasonable in tough times to dramatically reduce the cost of that conference, it is unwise to cancel it. I have been to every single one of these events since I started running Bank One, and I intend to continue that tradition.

We earned adequate returns while building an increasingly stronger capital base

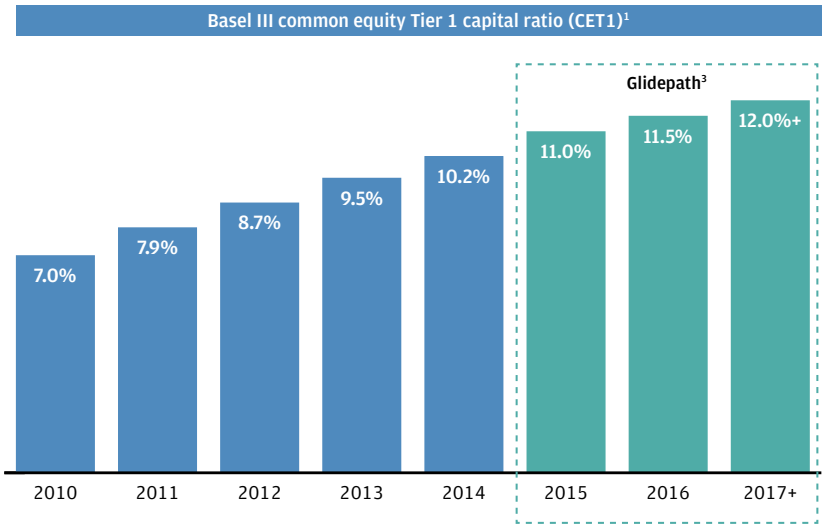
During these challenging years, our company has confronted difficult markets, billions of dollars of additional regulatory costs, billions of dollars of costs due to changes in products and services, and, unfortunately, very high legal costs. And we have had to hold an increasing amount of capital throughout this time. While there is no question that these events did reduce our performance and returns, we have been able to adapt, meet the new rules and perform fairly well financially.

The chart below shows earnings, the capital we returned to shareholders through dividends and stock buybacks, our returns on tangible common equity and our high quality liquid assets (HQLA). High quality liquid assets essentially are deposits held at the Federal Reserve and central banks, agency mortgage-backed securities and Treasuries, and they are the component of our balance sheet that has grown most dramatically. Only HQLA count for liquid assets under banking regulators' definition of liquidity – and we currently have more than is required by the regulators.

The chart below also shows that even after dramatically increasing capital and liquidity, both of which reduce returns on capital, we were able to earn an adequate return on tangible common equity, grow our capital base as needed and still return capital to shareholders.

Capital, Liquidity, Returns

($ in billions, except ratios)



Earnings	$ 17	$ 19	$ 21	$ 18	$ 22
Total capital returned[2]	4	13	6	10	11
HQLA	NA	NA	341	522	600
ROTCE	15%	15%	15%	11%	13%

[1] Basel III rules became effective on January 1, 2014. The ratios presented for 2010-2014 are calculated under the Basel III Advanced Fully Phased-In Approach and, for 2010-2013, reflect the firm's best estimate based on its understanding of the rules in the relevant period
[2] Represents common dividends plus stock buybacks, which are gross of employee issuance
[3] Reflects the firm's Basel III CET1 ratio glidepath for 2015-2017+

Leading Client Franchises

Building exceptional client franchises

We have built our client franchises over time with substantial share gains and opportunity for more

		2006	2014	
Consumer & Community Banking	Deposits market share	3.6%[1]	7.5%	■ Relationships with ~50% of U.S. households
	# of top 50 Chase markets where we are #1 (top 3) deposits	11 (25)	15 (40)	■ #1 customer satisfaction among largest U.S. banks for the third consecutive year[14]
	Card sales market share	16%[2]	21%[2]	■ #1 primary banking relationship share in Chase footprint[15]
	Merchant processing volume	#3[3]	#1[4]	■ #1 U.S. credit card issuer based on loans outstanding[2]
				■ ~50% of U.S. e-Commerce volume[16]
Corporate & Investment Bank	Global Investment Banking fees[5]	#2	#1	■ >80% of Fortune 500 companies do business with us
	Market share[5]	8.6%	8.1%	■ Top 3 in 15 product categories out of 16[17]
	Total Markets[6,7]	#8	#1	■ #1 in both U.S. and EMEA Investment Banking fees[18]
	Market share[6,7]	7.9%	16.2%	■ #1 in Global debt, equity and equity-related[18]
	FICC[6,7]	#7	#1	■ #1 in Global long-term debt and Loan syndications[18]
	Market share[6,7]	9.1%	18.6%	■ Top 3 Custodian globally with AUC of $20.5 trillion
	Equities[6,7]	#8	#3	■ #1 USD clearinghouse with 19.2% share in 2014[19]
	Market share[6,7]	6.0%	11.5%	
Commercial Banking	# of states with Middle Market banking presence	22	30	■ Average loans grew by 13% CAGR 2006-2014[20]
	# of states with top 3 Middle Market banking market share[8]	6	10	■ Industry-leading credit performance TTC – 8 consecutive quarters of net recoveries or single-digit NCO rate
	Multifamily lending[9]	#28	#1	■ Leveraging the firm's platform – average ~9 products/client
	Gross Investment Banking revenue ($ in billions)	$0.7	$2.0	
	% of North America Investment Banking fees	16%	35%	
Asset Management	Global active long-term open-end mutual fund AUM flows[10]	#2	#1	■ 84% of 10-year long-term mutual fund AUM in top 2 quartiles[21]
	AUM market share[10]	1.8%	2.5%	■ 23 consecutive quarters of positive long-term AUM flows
	Overall Global Private Bank *(Euromoney)*	#5	#1	■ Revenue growth >70% and long-term AUM growth >80% since 2006
	Client assets market share[11]	~1%	~2%	■ Doubled Global Wealth Management client assets (2x industry rate) since 2006[22]
	U.S. Hedge Fund Manager *(Absolute Return)*[12]	#11[13]	#2	
	AUM market share[12]	1.4%	3.4%	

For footnoted information, refer to slides 11 and 50 in the 2015 Firm Overview Investor Day presentation, which is available on JPMorgan Chase & Co.'s website at (http://investor.shareholder.com/jpmorganchase/presentations.cfm), under the heading Investor Relations, Investor Presentations, JPMorgan Chase 2015 Investor Day, Firm Overview, and on Form 8-K as furnished to the SEC on February 24, 2015, which is available on the SEC's website (www.sec.gov). Further, for footnote 20, CAGR represents compound annual growth rate

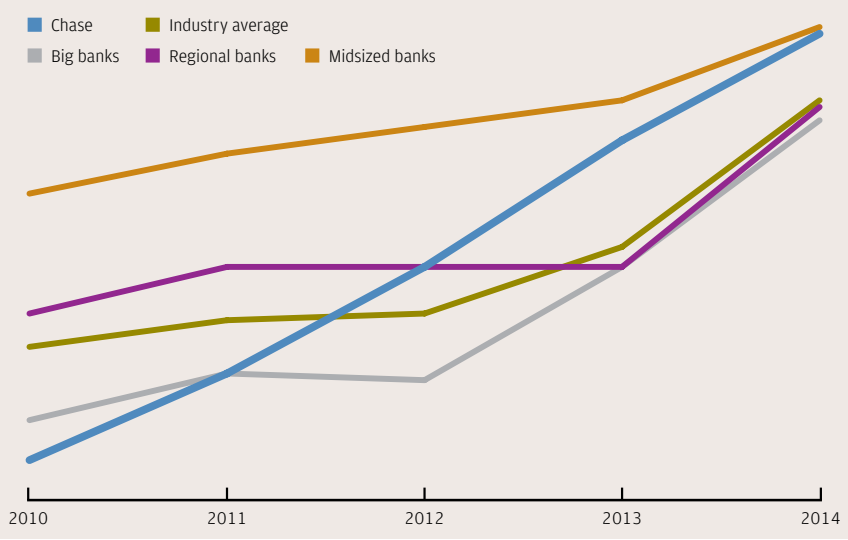
Our businesses have been able to gain market share, which only happens when we are creating happy clients

Importantly, much of the growth has been organic. Please review some of the numbers in the chart above – they speak for themselves. If you had asked me back in 2006 if we could have accomplished those kinds of market share numbers, I would have been skeptical. And, fortunately, we have plenty of areas where we still can grow or do better – I will talk about this in a later section of this letter.

Most of our businesses have exhibited improving customer satisfaction

The chart on the next page shows the great progress that our Consumer Bank has made in improving satisfaction scores. In fact, American Customer Satisfaction Index named Chase #1 in customer satisfaction among large banks in 2014. We have received even better scores than most of the regional banks and essentially are equal in ranking to the midsized banks. (We still are not satisfied, however, and want to be even better.) We believe that our customer satisfaction has been going up for multiple reasons: error rate reduction, better products and services, good old-fashioned service with a smile, and, importantly, innovations like deposit-friendly ATMs and continual improvement in online and mobile banking services. While the chart shows satisfaction in the Consumer Bank, we also have had increasing customer satisfaction scores in our small business, mortgage, auto finance and credit card franchises.

Consumer Satisfaction Score: 2010-2014 [1]



[1] Source: J.D. Power U.S. Retail Banking Satisfaction Study; Big Banks defined as Chase, Bank of America, Wells Fargo, Citibank, U.S. Bank, PNC Bank

Our mix of businesses works for clients – and for shareholders

All companies, including banks, have a slightly different mix of businesses, products and services. The most critical question is, "***Does what you do work for clients?***" Our franchise does work for clients by virtue of the fact that we are gaining share in each of our businesses, and it works for shareholders by virtue of the fact that we are earning decent returns – and some of our competitors are not.

Other considerations are whether your company has "moats" – is it protected in some way from debilitating competition or events? And has it performed consistently – in good times and in bad? We believe that we have well-fortified moats in the form of economies of scale, brand, expertise, technology and operations, and – importantly – competitive advantages created by our ability to cross sell (more on this later in this letter). In addition, we have performed fairly consistently in good times and in bad. Even in 2008, the worst year in perhaps 75 years for financial companies, we earned 6% return on common tangible equity – not great but not bad, all things considered. Additionally, we have embedded strengths that are hard to replicate – the knowledge and cohesiveness of our people, our long-standing client relationships, our technology and product capabilities, our fortress balance sheet and our global presence in more than 100 countries.

Our mix of businesses leads to effective cross sell and substantial competitive advantages. We are not a conglomerate of separate, unrelated businesses – we are an operating company providing financial services to consumers, companies and communities

A conglomerate is a group of unrelated businesses held under one umbrella holding company. There is nothing wrong with a conglomerate, but we are not that. In our case, whether you are an individual, a company (large or small) or a government, when you walk in the front door and talk with our bankers, we provide you with essential financial products, services and advice. We have a broad product offering and some distinct capabilities, which, combined, create a mix of businesses that works well for each of our client segments.

Part of our mix of businesses, however, is not unique. While we divide our company into four distinct businesses, the truth is that many regional banks do a lot of what three of our four businesses do (i.e., Chase Consumer & Community Banking, Commercial Banking and Asset Management). The biggest difference between us and regional banks is our global Corporate & Investment Bank (and the non-U.S. part of our Asset Management business).

Our broad product set and some of our unique capabilities (some we inherited, and some we built carefully over time), combined with effective cross sell, create substantial competitive advantage. The examples below make some of those advantages clear:

- Commercial Banking now generates 35% of our U.S. investment banking business. This means we are able to bring JPMorgan Chase's exceptional Investment Bank to serve hundreds of midsized corporations and institutions with the best global investment banking products and services in the industry. We can do this because our Commercial Bank is in hundreds of towns across the country where we can serve clients locally – person to person – and also bring the best of JPMorgan Chase to them.
- Around the world, we can bring exceptional private banking services to CEOs and company owners or help private banking clients with their global commercial banking needs.
- Because of our international footprint, we bring global banking services – from cash management to M&A – to approximately 2,500 of our more than 20,000 Corporate Client Banking and Middle Market Banking clients, who are rapidly expanding overseas and who need these services from someone they know and can trust.
- We market Chase Paymentech, our merchant acquirer, through our branches to small businesses, through the Commercial Bank to midsized companies and through our Corporate & Investment Bank to large, multinational corporations.

America's financial system is still the best the world has ever seen – it is large and diverse – and it serves the best economy the world has ever seen, which also is large and diverse

America's financial system still is the best the world has ever seen, and it includes not just banks but asset managers, private equity, venture capital, individual and corporate investors, non-bank financial companies, and public and private markets. In fact, in the United States, banks are a much smaller part of the financial system and the economy than in most other countries. And there is a great need for the services of all banks, from large global banks to smaller regional and community banks.

Our large global Corporate & Investment Bank does things that regional and community banks simply cannot do. We offer unique capabilities to large corporations, large investors and governments, including federal institutions, states and cities. For example, we provide extensive credit lines or raise capital for these clients, often in multiple jurisdictions and in multiple currencies. We essentially manage the checking accounts for these large institutions, often in many different countries. On the average day, JPMorgan Chase moves approximately $6 trillion for these types of institutions. On the average day, we raise or lend $6 billion for these institutions. On the average day, we buy or sell approximately $800 billion of securities to serve investors and issuers. In 2014, our Corporate & Investment Bank raised $61 billion for states, cities, governments and universities, including funds to renovate the historic Arthur Ashe (Tennis) Stadium in New York City, revenue

bonds to assist municipalities and hospitals, and green bonds to finance environmentally beneficial projects such as green buildings, clean water and renewable energy. As a firm, we spend approximately $700 million a year on research so that we can educate investors, institutions and governments about economies, markets and companies. The needs of these clients will be met – one way or another – by large financial institutions that can bear the costs and risks involved. Simply put, if it is not done by a large American financial institution, it will be done by a large non-American financial institution.

Regional and community banks are critical to their communities – in fact, we are a huge supporter and their largest banking partner. These banks are deeply embedded in their communities, many of which are not served by larger banks. They have an intimate knowledge of the local economy and local small businesses, which allows them to cost-effectively serve those clients. JPMorgan Chase, as a traditional "money center bank" and "bankers' bank," in fact, is the largest banker in America to regional and community banks. We provide them with many services so they can continue to serve their clients. For example, we directly lend to them, we process payments for them, we finance some of their mortgage activities, we raise capital for them (both debt and equity), we advise them on acquisitions, and we buy and sell securities for them. We also provide them with interest rate swaps and foreign exchange both for themselves – to help them hedge some of their exposures – and for their clients.

However, large does not necessarily mean complex (and things should be complex only for a good reason)

Many of the activities we do that are considered large are easy to understand. All of our 5,600 Chase consumer branches do essentially the same thing, and many of our large global transactions are not any more complicated than a loan for a middle market client.

While we agree with the concept that you should keep things as simple as possible, some things, by their very nature, are more complex. And that complexity cannot be reduced by wishful thinking. In fact, basic lending, whether to a large company or a midsized company, is one of the more complex things we do because one must understand the economy, the nature of the business and often the types of collateral involved. There are many judgmental factors to consider as well, which might include the character of the borrower, the growth prospects of the business, and an understanding of the products and services and technology of the business.

There are understandable questions about the role that large financial institutions play. Some of these questions make people nervous, in part because they do not understand the larger picture. These are important questions, and we always are willing to help explain what we do and why we do it. Taken in small component pieces, these activities generally are easier to understand. While some may criticize a bank's activities instead of taking the time to understand them, this does not contribute to a genuinely constructive dialogue around the role of banks.

People also should ask themselves one basic question: ***Why do banks offer these services?*** The fact is, almost everything we do is because clients want and need our various and sometimes complex services. (We do many activities that are ancillary to clients' direct needs, but we must do these things to provide clients with what they need. For example, in order to support our operation, we run global data centers, we hedge our own exposures and we maintain liquid pools of investments.)

I would venture to say that banking is not as complex as making airplanes, discovering effective pharmaceuticals, building safe cars, developing innovative electronics and, of course, understanding nuclear physics. There are huge benefits to the complexity involved in those other industries – but there also are sometimes negative consequences. The question for society is: Are we, in total,

better off or worse off because of some of the great products and services that come with complexity? The answer in our opinion is a resounding yes, though you should always strive to minimize the risks. But we want to acknowledge that the difference with banks, as pointed out by critics, is that if and when they make mistakes, they can severely harm the economy. This concern is legitimate, and I will talk about it in a later section.

Larger does not necessarily mean more risky

For example, many large banks had no problem navigating the financial crisis, while many smaller banks went bankrupt. Many of these smaller banks went bankrupt because they were undiversified, meaning that most of their lending took place in a specific geography. A good example was when oil collapsed in the late 1980s. Texas banks went bankrupt because of their direct exposure to oil companies and also because of their exposure to real estate whose value depended largely on the success of the oil business. Since the crisis began seven years ago, more than 500 smaller banks have gone bankrupt, and JPMorgan Chase has contributed approximately $8 billion to the Federal Deposit Insurance Corporation to help pay for the resolution of those banks.

And, yes, there are both costs and benefits to size and complexity

The benefits of size are obvious: huge economies of scale, the ability to serve large clients and make large investments, and safe diversification, among others. And, yes, there sometimes are clear negatives to size – usually in the form of arrogance, greed, complacency or lack of attention to detail. (There also are many small businesses afflicted with these diseases – they kill companies both large and small.) Good companies get the benefits of size and continuously are fighting off the negatives. And there are lots of winners and losers, particularly as industries consolidate. In every industry, you will see companies that benefit from size – and those that don't.

Our size and strength allow us to create benefits for society by helping economies and communities around the world grow and prosper

We are able to do our part in supporting communities and economies around the world because we are strong, stable and permanent. And because of this strength and stability, we can continue to support our clients in good times and, more important, in the toughest of times. The most important thing we can do is keep our company healthy and vibrant so that we can serve the needs of customers, consumers and businesses and help local economies and the thousands of cities and various communities around the world where we operate to grow and prosper.

In addition, we strongly believe in being a good corporate citizen. We are one of the most philanthropic companies in the world (we give away more than $200 million a year), but we are able to do much more than provide money. We bring the skills, resources and global knowledge of our entire firm to support the economic growth and progress of communities across the globe. One example is our research, such as studying how our communities analyze labor market conditions so they can get better at training people for jobs or how cities can further develop their economies. See Peter Scher's Corporate Responsibility letter on page 58 for more details on our efforts to support cities and communities around the globe. Following are three unique initiatives that we'd like to focus on:

JPMorgan Chase Institute. We will be officially launching an exciting new initiative called the JPMorgan Chase Institute, which is a global think tank dedicated to delivering data-rich analyses, expert insights and thought leadership for the public good. Drawing on the knowledge, market access, broad relationships and resources across the firm, the JPMorgan Chase Institute will help inform both business and policy decisions by grounding them with facts, data and thoughtful analysis. Our aim is to help decision makers – policymakers, businesses and nonprofit leaders – appreciate the scale,

granularity, diversity and interconnectedness of the global economic system to inform smarter decisions and good policies that advance global prosperity for consumers, businesses and countries. The research agenda will include groundbreaking analytic work on the financial behavior of individuals, insights on the small business sector, and expert profiling of global trade and capital flows.

Detroit. We brought all of our resources to bear in a special, coordinated way, which we never have done before, to try to help the city of Detroit. We have been doing business there for more than 80 years and already are the largest consumer, commercial and investment bank serving Detroit's consumers and companies. But we wanted to do more to help kick-start the city's recovery. This effort is a $100 million commitment, which includes investments, philanthropy and our people working in tandem with a set of city leaders who have come together to work toward a common purpose. Our initial interest in undertaking this effort was made possible because of our faith in the extraordinary work and talent of Mayor Duggan and Gov. Snyder (and Kevyn Orr, who recently left as Emergency Manager). Their dedication to coherently, comprehensively and pragmatically attacking the city's enormous problems made us want to do more. In fact, everything we have done to help is the result of asking a broad array of the city's leaders what they really needed and then working with them to come up with some creative solutions. Let me give just a few examples:

- We expanded the city's effort to systematically map every single parcel in Detroit and provided the technology assistance so that residents can use their phones to continually update the database.
- We helped provide financing for people who wanted to purchase land or to buy and renovate homes.
- We supported nonprofit organizations, including Focus: HOPE, in their efforts to help people gain skills from job training programs.
- We helped small businesses get access to the advice, training and other resources needed to grow, including a new commercial kitchen at Eastern Market that will allow more food businesses to expand.
- We provided lending for development – both commercial development to let businesses like Global Titanium expand jobs and residential development and new construction of apartment buildings in Detroit's urban core and neighborhoods.
- We created the Detroit Service Corps to bring more than 50 of our top managers to work full time with Detroit nonprofits to help them analyze challenges, solve problems and give them the best chance for success.

Helping Detroit's economy recover and thrive would be a shining example of American resilience and ingenuity at work.

Military and veterans. Another effort that we want you to know about is what JPMorgan Chase has done to help position military members, veterans and their families for success in their post-service lives through employment, housing and educational programs. In 2011, JPMorgan Chase and 10 other companies launched the 100,000 Jobs Mission, setting a goal of collectively hiring 100,000 veterans. The 100,000 Jobs Mission now includes more than 190 companies that have collectively hired more than 217,000 veterans since 2011 and has pledged to hire a total of 300,000 veterans. JPMorgan Chase hired over 1,800 veterans in 2014, nearly a 40% year-over-year increase, for a total of nearly 8,700 veterans hired since 2011. Further, we expanded our employment programs to address the unique needs of women veterans and military spouses. We hope that this makes you as proud of JPMorgan Chase as it does for all of us.

II. WE BUILD FOR THE LONG TERM – WE MANAGE THROUGH-THE-CYCLE, AND WE ALWAYS ARE PREPARED FOR THE TOUGHEST OF TIMES

Our paramount responsibility to society and to our clients is to be there in good times and bad times

We have a huge obligation to society – not only must we never fail, but we need to be steadfast. Never failing means having the financial strength, liquidity, margins, and strong and diverse earnings where you can weather any storm. It also means having the ability to adapt, survive and even thrive through the cycles.

Steadfast means that you will be there no matter what happens, and being there means that you can continue to properly serve your clients even in tough times. In the toughest of times, it is not about making a profit. It is about helping your clients survive. I should point out that in the toughest of times, particularly in 2009, JPMorgan Chase rolled over and extended credit to small and medium-sized businesses a total of $63 billion, to governments and nonprofits a total of $110 billion, and to large corporations a total of $1.1 trillion. I will talk more about this later.

We extensively manage our risks so that we can survive in any scenario. The Federal Reserve's stress test is a tough measure of our survival capability – though our ability to survive is stronger than that test implies

We are fanatics about stress testing and risk management. It is in our best interest to protect this company – for the sake of our shareholders, clients, employees and communities. If you went to our risk committee meetings, you would see a number of professionals working to thoughtfully manage and reduce our risk – we don't want a bunch of cowboys trying to increase it. We run hundreds of stress tests a week, across our global credit and trading operations, to ensure our ability to withstand and survive many bad scenarios. These scenarios include events like what happened in 2008, other historically damaging events and also new situations that might occur. Our stress tests include analyzing extremely bad outcomes relating to the Eurozone, Russia and the Middle East.

Regarding the Eurozone, we must be prepared for a potential exit by Greece. We continually stress test our company for possible repercussions resulting from such an event (even though, in our opinion, after the initial turmoil, it is quite possible that it would prompt greater structural reform efforts by countries that remain). Also regarding geopolitical crises, one of our firm's great thinkers, Michael Cembalest, reviewed all of the major geopolitical crises going back to the Korean War, which included multiple crises involving the Soviet Union and countries in the Middle East, among others. Only one of these events derailed global financial markets: the 1973 war in the Middle East that resulted in an oil embargo, caused oil prices to quadruple and put much of the world into recession. We stress test frequently virtually every country and all credit, market and interest rate exposures; and we analyze not only the primary effects but the secondary and tertiary consequences. And we stress test for extreme moves – like the one you recently saw around oil prices. Rest assured, we extensively manage our risks.

The Federal Reserve's Comprehensive Capital Analysis and Review (CCAR) stress test is another tough measure of our survival capability. The stress test is good for our industry in that it clearly demonstrates the ability of each and every bank to be properly capitalized, even after an extremely difficult environment. Specifically, the test is a nine-quarter scenario where unemployment suddenly goes to 10.1%, home prices drop 25%, equities plummet approximately 60%, credit losses skyrocket and market-making loses a lot of money (like in the Lehman Brothers crisis).

To make sure the test is severe enough, the Fed essentially built into *every* bank's results some of the insufficient and poor decisions that *some* banks made during the crisis. While I don't explicitly know, I believe that the Fed makes the following assumptions:

- The stress test essentially assumes that certain models don't work properly, particularly in credit (this clearly happened with mortgages in 2009).
- The stress test assumes all of the negatives of market moves but none of the positives.
- The stress test assumes that all banks' risk-weighted assets would grow fairly significantly. (The Fed wants to make sure that a bank can continue to lend into a crisis and still pass the test.) This could clearly happen to any one bank though it couldn't happen to all banks at the same time.
- The stress test does not allow a reduction for stock buybacks and dividends. Again, many banks did not do this until late in the last crisis.

I believe the Fed is appropriately conservatively measuring the above-mentioned aspects and wants to make sure that each and every bank has adequate capital in a crisis without having to rely on good management decisions, perfect models and rapid responses.

We believe that we would perform far better under the Fed's stress scenario than the Fed's stress test implies. Let me be perfectly clear – I support the Fed's stress test, and we at JPMorgan Chase think that it is important that the Fed stress test each bank the way it does. But it also is important for our shareholders to understand the difference between the Fed's stress test and what we think actually would happen. Here are a few examples of where we are fairly sure we would do better than the stress test would imply:

- We would be far more aggressive on cutting expenses, particularly compensation, than the stress test allows.
- We would quickly cut our dividend and stock buyback programs to conserve capital. In fact, we reduced our dividend dramatically in the first quarter of 2009 and stopped all stock buybacks in the first quarter of 2008.
- We would not let our balance sheet grow quickly. And if we made an acquisition, we would make sure we were properly capitalized for it. When we bought Washington Mutual (WaMu) in September of 2008, we immediately raised $11.5 billion in common equity to protect our capital position. There is no way we would make an acquisition that would leave us in a precarious capital position.
- And last, our trading losses would unlikely be $20 billion as the stress test shows. The stress test assumes that dramatic market moves all take place on one day and that there is very little recovery of values. In the real world, prices drop over time, and the volatility of prices causes bid/ask spreads to widen – which helps market-makers. In a real-world example, in the six months after the Lehman Brothers crisis, J.P. Morgan's actual trading results were $4 billion of losses – a significant portion of which related to the Bear Stearns acquisition – which would not be repeated. We also believe that our trading exposures are much more conservative today than they were during the crisis.

Finally, and this should give our shareholders a strong measure of comfort: During the ***actual*** financial crisis of 2008 and 2009, ***we never lost money in any quarter***.

We hope that, over time, capital planning becomes more predictable. We do not believe that banks are trying to "game" the system. What we are trying to do is understand the regulatory goals and objectives so we can properly embed them in our decision-making process. It is critical for the banking system that the treatment of capital is coherent and

consistent over time and is not in any way capricious. Capital is precious, and it needs to be deployed intelligently in the business or properly returned to shareholders. If shareholders do not have a clear understanding of capital management and have unreasonable expectations, then that capital will be devalued. This is a bad outcome for all involved.

While there always will be cycles, we need to keep our eye on the important things, too – the outlook for long-term growth is excellent

The needs of countries, companies, investor clients and individuals will continue to grow over time. The chart below shows some of the long-term growth that is expected in some critical areas, including the underlying growth of gross domestic product and trade, investable/financial assets, infrastructure and capital markets activities. This is the *fuel* that will drive our business in the future.

Therefore, we take a long-term perspective on investing. How we currently view low net interest margins is a good example of making decisions for the long run

To capture our share of the growth in our underlying businesses, we need to continually invest in bankers, branches and capabilities (research, products and technology) to drive down our costs and better serve our clients. It is a lot of hard work that needs to be supported by all of our critical functions, from finance and human resources to operations and controls. This kind of investing should not be done in a stop-start way to manage short-term profitability.

Quarterly earnings – even annual earnings – frequently are the result of actions taken over the past five or 10 years. Our company continued to invest through the crisis – often when others could not – in order to capture future growth.

Global Macro Themes

	2014	2024	Growth
World gross domestic product ($ in trillions)	$ 78	$ 133	■ 5.5% CAGR
World exports ($ in trillions)	$ 22	$ 38	■ 1.7x
Investable assets ($ in trillions)	$ 263	$ 481	■ 6% CAGR ■ 12% emerging ■ 4% developed
Infrastructure spend ($ in trillions)	$36 over last 18 years	$57 over next 18 years	■ 1.6x ■ 2.6x emerging ■ 1.1x developed
Number of companies with $1+ billion revenue	8,000	15,000[1]	■ 1.9x ■ 3.8x emerging ■ 1.2x developed

Source: International Monetary Fund, World Bank, McKinsey, JPMorgan Chase analysis

[1] 2025 estimate

A very good current example of how we view investing and long-term decision making is how we are dealing with the squeeze on our net interest margins (NIM) due to extremely low interest rates. The best example of this is in our consumer business, where NIM has gone from 2.95% to 2.20% (from 2009 to 2014). This spread reduction has reduced our net interest income by $2.5 billion, from $10 billion to $7.5 billion – or if you look at it per account, from $240 to $180. Since we strongly believe this is a temporary phenomenon and we did not want to take more risk to increase our NIM (which we easily could have done), we continued to open new accounts. Over those years, we added 4.5 million accounts – and, in fact, very good sizable accounts. This has reduced our operating margins from 36% to 32%, but we don't care. When normal interest rates return, we believe this will add $3 billion to revenue and improve our operating margin to more than 40%.

Our long-term view means that we do not manage to temporary P/E ratios – the tail should not wag the dog

Price/earnings (P/E) ratios, like stock prices, are temporary and volatile and should not be used to run and build a business. We have built one great franchise, our way, which has been quite successful for some time. As long as the business being built is a real franchise and can stand the test of time, one should not overreact to Mr. Market. This does not mean we should not listen to what investors are saying – it just means we should not overreact to their comments – particularly if their views reflect temporary factors. While the stock market over a long period of time is the ultimate judge of performance, it is not a particularly good judge over a short period of time. A more consistent measure of value is our tangible book value, which has had healthy growth over time. Because of our conservative accounting, tangible book value is a very good measure of the growth of the value of our company. In fact, when Mr. Market gets very moody and depressed, we think it might be a good time to buy back stock.

I often have received bad advice about what we should do to earn a higher P/E ratio. Before the crisis, I was told that we were too conservatively financed and that more leverage would help our earnings. Outsiders said that one of our weaknesses in fixed income trading was that we didn't do enough collateralized debt obligations and structured investment vehicles. And others said that we couldn't afford to invest in initiatives like our own branded credit cards and the buildout of our Chase Private Client franchise during the crisis. Examples like these are exactly the reasons why one should not follow the herd.

While we acknowledge that our P/E ratio is lower than many of our competitors' ratio, one must ask why. I believe our stock price has been hurt by higher legal and regulatory costs and continues to be depressed due to future *uncertainty* regarding both.

We still face legal uncertainty though we are determined to reduce it over time. Though we still face legal uncertainty (particularly around foreign exchange trading), we are determined to reduce it and believe it will diminish over time. I should point out that while we certainly have made our share of costly mistakes, a large portion of our legal expense over the last few years has come from issues that we acquired with Bear Stearns and WaMu. These problems were far in excess of our expectations. Virtually 70% of all our mortgage legal costs, which have been extraordinary (they now total close to $19 billion), resulted from those two acquisitions. In the Bear Stearns case, we did not anticipate that we would have to pay the penalties we ultimately were required to pay. And in the WaMu case, we thought we had robust indemnities from the Federal Deposit Insurance Corporation and the WaMu receivership, but as part of our negotiations with the Department of Justice that led to our big mortgage settlement, we had to give those up. In case you were wondering: No, we would not do something like Bear Stearns

again – in fact, I don't think our Board would let me take the call. The WaMu deal might still make sense but at a much lower price to make up for the ongoing legal uncertainty (including the government's ability to take away our bargained-for indemnities). I did not, and perhaps could not, have anticipated such a turn of events. These are expensive lessons that I will not forget.

Part of the issue around legal costs is that banks are now frequently paying penalties to five or six different regulators (both domestic and international) on exactly the same issue. This is an unprecedented approach that probably warrants a serious policy discussion – especially if those regulators (as at least some of them have acknowledged) don't take into account what is being paid to the others. For now, it's simply a reality for big banks, and certainly for us, that when one or more employees do something wrong, we'll hear from multiple regulators on the subject.

The good news is that our legal costs are coming down and, we hope, will normalize by 2016.

Uncertainty remains around regulatory requirements, though we believe this will diminish over time, too. That uncertainty is particularly acute around the extra capital that JPMorgan Chase will have to hold because of the new Global Systemically Important Bank (G-SIB) rules, the ultimate impact of the Volcker Rule, total loss-absorbing capacity, CCAR and Recovery & Resolution. And it's because of that uncertainty that a majority of the time I spend with analysts and investors these days is devoted to regulation. Very little time is spent talking about the actual business, like client transactions, market share gains or other business drivers. Many questions still remain, and they are hard to explain or are difficult to answer, including: Why did American regulators simply double the G-SIB capital requirements for American banks versus all other global banks? Will higher capital requirements be added later? Given that much uncertainty, which is greater for JPMorgan Chase than for most other banks, it is understandable that people would pay less for our earnings than they otherwise might pay.

Having said all this, the contours of all of the new regulations have emerged, and we believe that regulatory uncertainty will diminish over time. And, we hope, so will the drag on our P/E ratio.

Think like a long-term investor, manage like an operator

So our ultimate goal is to think like a long-term investor – build great franchises, strengthen moats and have good through-the-cycle financial results. Achieve the benefits of scale and eliminate the negatives. Develop great long-term achievable strategies. And manage the business relentlessly, like a great operator. Finally, continue to develop excellent management that keeps it all going. As Thomas Edison said, "Vision without execution is hallucination."

III. WE WILL SUCCESSFULLY NAVIGATE THE NEW GLOBAL FINANCIAL ARCHITECTURE (AND WE ARE WELL ON OUR WAY TO HAVING FORTRESS CONTROLS)

We have meaningfully simplified the company

While I have said that it is good housekeeping to keep our company as simple as possible, we have done an extraordinary amount of cleaning out this past year. More important, last year, we *said* that we would do it, and this year we actually *did it*. The chart below shows that we did it by shedding businesses, reducing products and materially de-risking by reducing certain types of clients that simply create too much risk in the new world. In total, we have reduced approximately $25 billion in assets through this effort. All of this makes the work of our compliance and control executives that much easier, as they can focus more on what's important.

We are well on our way to having fortress controls

The intense effort over the last few years now is yielding real results and will go a long way in protecting the company in the future. When we are done, we hope not just to have met the heightened expectations of our regulators but to have exceeded them. In addition to successfully completing CCAR (which we will strive to do every year), there are other examples of tangible progress. Following are some of our accomplishments:

- **Strengthened compliance.** We have added approximately 8,000 people across the firm with a mission to strengthen our compliance capabilities. We have further aligned global leadership to drive focus and consistency across key risk areas such as AML/BSA (Anti-Money Laundering/

Executed Significant Business Simplification Agenda

Operating with fortress principles

Simplifying our business

- ✓ Completed the spin-out of One Equity Partners and closed on the sale of a portion of our Private Equity portfolio
- ✓ Exited physical commodities business
- ✓ Sold Global Special Opportunities Group portfolio
- ✓ Exit in process of majority of Broker Dealer Services business
- ✓ Terminated transaction services for ~500 Foreign Correspondent Banking clients
- ✓ Ceased originating student loans
- ✓ Announced exit of Sears Canada and several smaller non-core card partnerships
- ✓ Announced exit of International Commercial Card
- ✓ Sold interest in Carlson Wagonlit Travel agency
- ✓ Sold Retirement Plan Services unit
- ✓ Exited prepaid card and Order to Pay businesses
- ✓ Sold health savings account business

Other meaningful business actions

- ✓ Simplified Mortgage Banking products from 37 to 18 products as of 2014, with a target of further reducing to 15
- ✓ Rationalized Global Investment Management products: reduced U.S. funds # by net 6%, Asia funds net 4% and Europe funds net 2% in 2014
- ✓ De-risking through client selection –discontinuing certain businesses with select clients:
  - ✓ Exited ~8,000 clients in Business Banking and Commercial Banking
  - ✓ Exited ~5,500 foreign Politically Exposed Person relationships
- ✓ Sold significant portion of CIB's trade finance EXIM/ECA[2] portfolio

Incremental financial impact[1]

($ in billions)	2015	2016 and beyond
Revenue	$1.6 ▼	$0.7 ▼
Expense	$1.6 ▼	$0.6 ▼

[1] Does not include impact of the One Equity Partners and Private Equity portfolio sale
[2] EXIM = Export-Import Bank; ECA = Export Credit Agency

Bank Secrecy Act), fiduciary risk, market conduct risk, employee compliance and privacy. We have enhanced our policies and implemented new procedures and technology support.

- **New anti-money laundering systems deployed.** We have implemented Mantas, an industry-leading transaction monitoring platform, for all U.S. dollar payment transactions. This provides a significant improvement in our transaction monitoring capabilities and allows us to decommission multiple less effective legacy systems. We also have upgraded our processes and technology support in AML investigations and sanctions. We have more to do, but a strong foundation is in place.
- **Foreign correspondent banking review.** Given the regulatory scrutiny around these activities, we have exited many relationships with foreign correspondent banks where we have risk-related concerns or where we needed to simplify our business. In addition to the relationship exits, we have improved our controls for foreign correspondent banking activities, including enhancing our technology to better monitor U.S. dollar correspondent bank transactions – which allowed us to implement 10 new transaction monitoring scenarios to better track millions of transactions each day.
- **Enhanced controls in connection with payday lender practices.** We reviewed our policies, systems and processes to decrease financial burdens on our customers and hinder payday lenders' ability to engage in predatory collection practices. And then we did the following: eliminated multiple return item fees, enhanced our policy and systems for stop payment requests, and allowed account closure with a pending transaction and/or a negative balance. (NACHA rules originally did not allow a bank to close an account with a pending transaction. Consumers wanted to close the account to stop payday lenders from trying to take money from the account on a daily basis.) In addition, we are working with NACHA to develop new standards for the entire industry.
- **Mortgage servicing improvements.** As one of the United States' largest mortgage lenders, some of our practices were not designed to handle the unprecedented increase in volume that occurred as a result of the financial crisis. Therefore, we reviewed the areas that needed enhancement and took the appropriate actions. We focused on improving our operating model, we dedicated more than 10,000 employees to assist customers that were having difficulty making payments, and we improved our communications with customers to provide better counseling and more clarity about the options available. We also invested more than 280,000 hours of our technology employees' time to improve our Mortgage Servicing business, including enhancing the loan modification application to improve the systems that track and manage customer complaints and responses.
- **Model review.** More than 300 employees are working in Model Risk and Development. In 2014, this highly specialized team completed over 500 model reviews, implemented a system to assess the ongoing performance of the 1,000+ most complex models in the firm, and continued to enhance capital and loss models for our company.

Fortunately, most of our strategies stay essentially the same

Many banks will have to make some fairly drastic changes to their strategies, and because various banks are facing different overarching constraints, those strategies may be dramatically dissimilar. We are fortunate that our strategies will remain essentially the same, which allows us to avoid the upheaval, both internally and externally with clients, that often comes when strategies need to be changed dramatically.

However, a small percentage of our products and services will require some surgery (more on that later). In addition, because some companies are making large strategic moves, we would expect to see an ongoing shift in market shares and pricing. It is possible that we will benefit from both of these trends.

While uncertainty remains, the contours to the new rules are largely known, and we have made enormous progress adapting to them

The chart below describes the new rules and regulations with which we need to comply. And remember, these new rules affect each product, business, legal entity and client. Every requirement has a few hundred

2015 Financial Architecture

	Description	Selected requirements	Selected JPMorgan Chase actions
Capital	■ Improving the banking sector's ability to absorb losses arising from financial and economic stress	■ 750+ requirements with 21 regulators involved ■ ~27 different capital ratio requirements	■ 950+ people ■ 20,000+ pages of supporting documentation ■ 225+ new models
Liquidity	■ Ensuring banks hold sufficient liquid assets to survive acute liquidity stress ■ Prevent overreliance on short-term wholesale funding	■ 500+ requirements ■ 15+ jurisdictional variations expected	■ 400+ people ■ Process and store 1+ billion records per day from 200+ feeds
Recovery & Resolution	■ Ensuring the resiliency of firms to prevent failure ■ Preparing living wills	■ Annual global recovery plan ■ Annual resolution plans for 34 entities, with plans by business and critical operations ■ 10+ jurisdictions issued or proposed Recovery & Resolution regulation, with more expected	■ 1,000+ people ■ 1+ million work hours devoted annually
Mortgages	■ Reforming the nation's housing finance system ■ Expanding origination, servicing and securitization regulation	■ 90+ new, proposed or amended rules, notices and regulations contained within ~13,000 pages of regulatory text ■ ~2,000 pages of systemic reform legislation introduced	■ ~800,000 compliance training hours ■ ~1.4 million work hours dedicated to systems and process implementation
Data reporting and management	■ Enhancing data-related capabilities by increasing accountability and transparency for data quality ■ Improving the firm's ability to collect, manage and report on data in order to facilitate greater market and product transparency	■ 11 principles with 1,000+ requirements ■ 3,300+ pages of requirements, principles and guidance	■ 1,000+ people working across 43 business groups ■ 120+ distinct programs with 1,400+ milestones
Derivatives	■ Enhancing pre- and post-trade transparency ■ Promoting use of electronic trading venues and central clearing ■ Bolstering capital and margin requirements	■ 99 proposed or finalized regulations (U.S.) and 237 final articles (European Union) ■ 3,150+ pages of requirements and guidance	■ 700+ people ■ 60 workstreams
Volcker	■ Restricting banks from undertaking certain types of market activities ■ Controlling risks associated with certain trading and funds-related activity	■ 1,000+ pages covering 36 requirements, with 5 regulators involved	■ 300+ people ■ 7 trading metrics reported monthly across 15 business areas

Note: This list of regulations is not comprehensive; estimates of resources are approximate

detailed rules around it to which we need to adapt. While it is a lot of work, we believe we will be able to successfully accomplish all of it. We have spoken about many of these rules and requirements in the past so we won't go into greater detail here, other than on the new G-SIB capital rules, which will have some material effects on some of our businesses.

Intense effort is going into understanding and adapting to the new G-SIB capital rules. Last year, we described how we had to manage the company to satisfy several new constraints (all of the liquidity, leverage, capital and CCAR requirements). To do this, we were *pushing* these new rules and requirements all the way down to the product and client levels. The G-SIB capital rules are a new constraint that we also need to manage to, and for JPMorgan Chase, they possibly are the most important constraint, though this may change over time. Therefore, we also need to push the new G-SIB rules to the product and client levels.

Unlike RWA, which lets one measure the risk embedded in each asset and, thus, the capital needed to hold against it, G-SIB is multivariate. G-SIB is not a simple calculation. It requires thousands of calculations, and it does not look at just assets – it looks at products, services, assets, type of client (i.e., international and financial or corporate) and collateral type, among others in order to determine capital levels.

G-SIB will have its highest impact on non-operating deposits, gross derivatives, the clearing business in general and certain clients, particularly financial institutions, including central banks. At the end of the day, we believe that we can manage through this process and reduce our capital requirements while maintaining our core franchises. To the extent that these changes materially impact clients, we will do it thoughtfully and carefully and help them find appropriate alternatives.

G-SIB is not a direct measure of risk. The G-SIB calculations show that JPMorgan Chase is the most Global Systemically Important Bank, and, therefore, we have to hold more capital than any other bank in the world. Some of our shareholders believe that this designation implies that before the additional capital is held, we may be the riskiest institution, too. But G-SIB is not a true measure of risk, like RWA or CCAR. (And as shareholders have mentioned to me, many of these measures do not indicate how they would look at risk; i.e., margins, earnings diversification and actual performance in tough times, in addition to criteria such as capital and liquidity.)

In fact, parts of G-SIB are very risk insensitive – for example, it does not measure our actual and largest risks in credit markets (still our largest exposures) – and it adds a lot of capital for some activities that have absolutely no risk involved. One example will suffice: We take non-operating deposits (deposits that are very short term in nature from investors so they can manage their short-term cash needs) from central banks and large financial institutions. We have approximately $350 billion of non-operating deposits, a large portion from financial institutions, which we immediately turn around and deposit at the Federal Reserve, and this is risk-free to us. We mostly do this as an accommodation to large institutions that need to move extensive sums of money around and we generate minimal earnings from this activity. We recently announced that we are going to reduce these deposits by $100 billion, which in the context of the firm's broader actions will reduce our common equity requirements by approximately $3.5 billion. (Since these changes involve some of the largest financial institutions in the world, we are doing this very carefully and are trying to make sure that clients have access to alternatives such as access to money market funds and direct access to Federal Reserve facilities.)

We hope to learn a lot more about the G-SIB calculations. Many questions remain, which we hope will be answered over time such as:

- It is unclear (it has not been made transparent to us) how and why these calculations are supposed to reflect systemic risk. In addition, they are relative calculations, which means that even if we and everybody else all reduced these exposures, our surcharge would not change, while presumably systemic risk would drop.
- It is unclear how these calculations take into consideration the extensive number of new rules and regulations that are supposed to reduce systemic risk (i.e., total loss-absorbing capacity, net stable funding ratio, liquidity coverage ratio, supplementary leverage ratio and the new Recovery & Resolution rules).
- It is unclear why the U.S. regulators doubled the calculations versus everyone else in the world, particularly since the U.S. banking system, as a percentage of the U.S. economy, is smaller than in most other countries.

G-SIB is important, and we take it seriously. The G-SIB capital surcharge, however calculated, is an important part of our capital needs. And since we are outsized, relative to our competitors (our capital surcharge currently is estimated as 4.5% of risk-weighted assets, yet many of our competitors are between 2%-4% of risk-weighted assets), we will be more comfortable when the surcharge is reduced. We already have begun to lower the surcharge by 0.5%, and, over time, expect to do more than that. Marianne Lake and Daniel Pinto gave details on this topic in their Investor Day presentations. The regulators have made it clear that these are important measures of global systemic risk, and they have given us a clear road map to how we can reduce these exposures – and we are going to take that road.

We must and will meet the regulators' demands on Recovery & Resolution – whatever it takes

A critical part of eliminating "Too Big to Fail" is meeting the regulators' demands on Recovery & Resolution. The Recovery Plan is the first line of defense in a crisis situation and serves as the road map for how to prevent the firm from actually failing. It gives the regulators the comfort that the firm has done sufficient upfront planning and analysis and has an outline for how the firm could recover if confronted with a severe financial crisis. The plan essentially helps the regulators understand the comprehensive set of alternatives and actions available to enable the firm to fully recover and prevent a failure. Resolution Plans, on the other hand, are the playbooks for how the company can be restructured or unwound in an orderly way in the event of a failure so that other banks and the general economy would not suffer. The plans outline for the regulators a set of strategies, necessary information and detailed plans by legal entity. For instance, JPMorgan Chase has reported that it has 34 legal entities and branches housing the vast majority of the firm's essential operations and businesses. Each legal entity has to be understood by the regulators and must have distinct intercompany agreements and a comprehensive plan in place to manage the legal entity in the event that it needs to be resolved. We have taken these requirements very seriously as evidenced by the more than 1,000 people working diligently on the extensive Recovery & Resolution requirements. In addition, we are working to reduce the number of entities we have and to simplify our structure and inter-entity arrangements. We need to satisfy all of our regulators on these plans, and we will do whatever it takes to meet their expectations.

There have been two critical developments toward giving governments and regulators comfort on Recovery & Resolution, which, according to some key regulators, will effectively end Too Big to Fail and will

be completed in 2015. First, the regulators have almost finished plans around total loss-absorbing capacity, which will require large banks to hold a lot of additional long-term debt, which could be converted to equity in the event of a failure and thereby enable the firm to remain open to serve customers and markets. Second, the industry agreed to put in place specific rules and guidelines on how to deal globally with derivatives contracts of a failed institution. This gives regulators and governments the knowledge that, in a failure, derivatives contracts can be properly managed and will not make the situation worse.

The industry will be stronger and safer because of all of the new regulations, and the future is bright for well-run banks

There is no question that, today, the global banking system is safer and stronger – possibly more so than it has ever been. That is not to say that the changes do not create a whole range of challenges, complexities and new risks (which we will talk about in the next section). But at the end of the day, the system will be safer and more stable than ever. I may sound a little like Voltaire's optimistic character Dr. Pangloss for saying this, but I am hopeful that in the next five to 10 years, high-quality banks will be thriving in their work to support economies and help society.

IV. WE HAVE A SOLID STRATEGY AND BELIEVE OUR FUTURE OUTLOOK IS VERY GOOD – BUT, AS USUAL, THERE STILL ARE A LOT OF THINGS TO THINK AND WORRY ABOUT

We already have spoken about the fact that most of our strategy will stay essentially the same and that while some areas may require a little surgery, we strongly believe we will be able to successfully navigate the new world. Some of that surgery will slow down our growth a little bit in certain areas, but we are quite optimistic that we can grow in others.

Most of our growth will be organic – we have been doing this successfully for a decade – and opportunities abound

We are optimistic that all of our businesses can grow, and, below, I describe some initiatives that are particularly exciting.

Chase Private Client started as a gleam in our eye back in 2010. Chase Private Client branches are dedicated to serving our affluent clients' investment needs. From one test branch (which didn't go very well, but, fortunately, we kept on trying), we now have more than 2,500 Chase Private Client offices. They now manage investments and deposits of $190 billion. While the branch buildout is essentially complete, we think the potential for growth remains large.

Small business. We are making our premier products and services work better together for a more holistic experience for our small business customers, whose time and attention should be spent on running their business, not going to the bank. We see a huge opportunity in this fragmented market – there is no dominant bank for the 28 million small businesses in the United States. At JPMorgan Chase, we serve 3.9 million American small businesses across Business Banking, Card Services and Chase Commerce Solutions, and we have successfully grown all of these businesses. We want to become the easiest bank to do business with, and we are working hard to speed applications, simplify forms and add digital conveniences. For example, we want a small business to fill out an application that can qualify it for Ink® (our small business credit card), Paymentech, deposits and loans all at once. We believe that if we bundle the services that small businesses really want and also provide meaningful advice, we can dramatically grow this business. Looking ahead, we know small businesses become large companies at a much more rapid pace than in years past. Serving these companies well now can solidify long-term client relationships that could span several lines of business in the future.

Excellent prospects for our Corporate & Investment Bank. Our Corporate & Investment Bank is an example of a business that has had exceptional relative multi-year performance. And even recently when it has been under a lot of regulatory pressure due to higher capital constraints and other regulatory demands, the business has been able to earn a 13% return on equity[1]. It is an endgame winner, and it benefits substantially from the rest of the company, which helps drive its best-in-class results.

However, in our current environment, we don't expect a lot of growth or robust returns as we adjust to the new world. But we continue to believe that the long run is quite attractive. At Investor Day, we showed that the Corporate & Investment Bank in 2006 was #1, #2 or #3 in eight of the 16 product categories that we are in. Now we are #1, #2 or #3 in 15 of the 16 product categories that we are in. But the exciting part is a program that Daniel Pinto calls Path to #1, which shows when you divide those 16 businesses into sub-businesses and geographies, there are lots of areas where we are not close to #1, #2 or #3, and, in most of those places, we should be able to improve. So as the business goes through an inordinate amount of change, the underlying needs of our clients continue to grow, and we will grow with them and believe we can gain share, too.

[1] Excludes legal expense

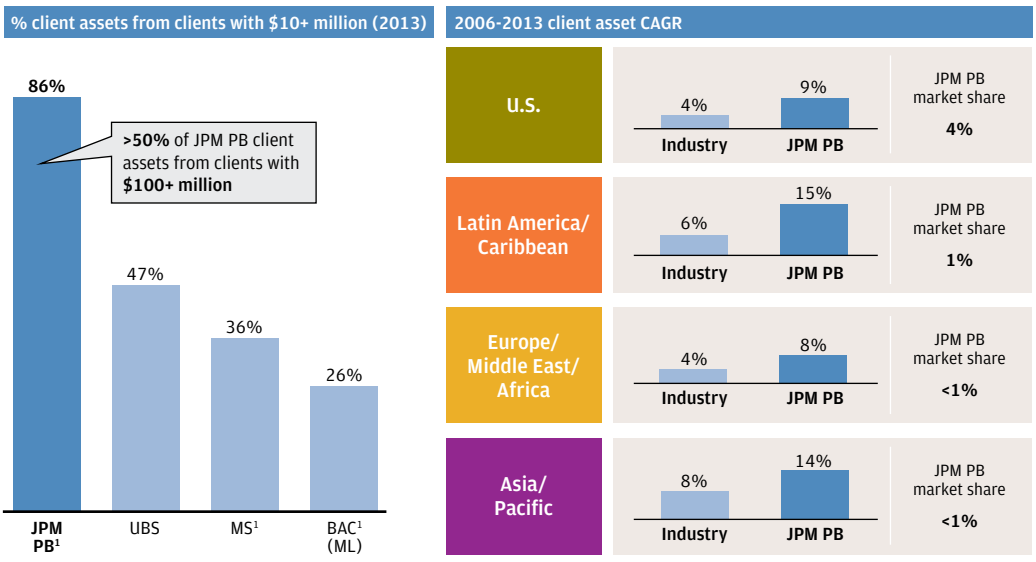
We are going to do a better job of covering family and private offices in both the Private Bank and the Investment Bank. Family offices have become larger, more sophisticated and more global, and they actively buy minority or whole stakes in businesses. More than 2,300 families across the globe had assets of $1 billion or more in 2014. Together, they control over $7 trillion in assets, a number that has grown in excess of 10% since 2011. While J.P. Morgan already works with many of these families as clients, we believe we can do a far better job of providing the full range of products and services offered by our Private Bank and Investment Bank.

Private banking will grow for years. In Mary Erdoes' Investor Day presentation, she showed that while we have the best private bank in the United States, our business still is rather small, and there is plenty of room to grow. This is even truer in Asia Pacific and Latin America. The chart below shows how strong our business is and illustrates that there is plenty of room to grow our market share internationally.

Retail banking presence still has room to grow. While we cannot acquire a retail bank in the United States, we can – and intend to – enter cities where we have never been. We will keep those cities we might choose to enter a surprise – but we hope to begin doing this in 2016. And remember, when we enter a city, we can bring the full force of JPMorgan Chase to bear, from retail, small business and private banking to middle market and local coverage of large corporations.

We particularly are excited about our payments business in total. The combination of Chase Paymentech, our merchant acquirer, ChaseNet, our proprietary Visa-supported network, and ChasePay, our proprietary wallet, allows us to offer merchants – large and small – better deals in terms of economics, simpler contracts, better data and more effective marketing to their clients. It also allows us to better serve consumer clients with a wide variety of offers and ease of use. We are going to be very aggressive in growing this business, and we will be disappointed if we don't announce some exciting and potentially market-changing ventures.

Trusted Advisor to the World's Most Sophisticated Clients



Every +10 basis points in market share internationally = $150+ million of revenue

[1] PB = Private Bank; MS = Morgan Stanley; BAC = Bank of America (Merrill Lynch)

Big, fast data. We continue to leverage the data generated across JPMorgan Chase, as well as data that we purchase to create intelligent solutions that support our internal activities and allow us to provide value and insights to our clients. For example, we are monitoring our credit card and treasury services transactions to catch fraudulent activities before they impact our clients, we are helping our clients mitigate costs by optimizing the collateral they post in support of derivatives contracts, and we are highlighting insights to our merchant acquiring and co-brand partners.

There always will be new emerging competitors that we need to keep an eye on

New competitors always will be emerging – and that is even truer today because of new technologies and large changes in regulations. The combination of these factors will have a lot of people looking to compete with banks because they have fewer capital and regulatory constraints and fewer legacy systems. We also have a healthy fear of the potential effects of an uneven playing field, which may be developing. Below are some areas that we are keeping an eye on.

Large banks outside the United States are coming. In terms of profitability, the top two Chinese banks are almost twice our size. Thirty years ago, Industrial and Commercial Bank of China operated in only a handful of countries, but it now has branches or subsidiaries in more than 50 countries. It has a huge home market and a strategic reason to follow the large, rapidly growing global Chinese multinationals overseas. It may take 10 years, but we'd be foolish to discount their ambition and resources. We're also seeing world-class banks emerge and grow in places like India and Brazil, and Japanese and Canadian banks are coming on strong, too. Many of these banks are supported in their expansionary efforts by their government and will not need to live by some of the same rules that we in the United States must adhere to, including capital requirements. We welcome the competition, but we are worried that an uneven playing field may hamper us many years from now.

Silicon Valley is coming. There are hundreds of startups with a lot of brains and money working on various alternatives to traditional banking. The ones you read about most are in the lending business, whereby the firms can lend to individuals and small businesses very quickly and – these entities believe – effectively by using Big Data to enhance credit underwriting. They are very good at reducing the "pain points" in that they can make loans in minutes, which might take banks weeks. We are going to work hard to make our services as seamless and competitive as theirs. And we also are completely comfortable with partnering where it makes sense.

Competitors are coming in the payments area. You all have read about Bitcoin, merchants building their own networks, PayPal and PayPal look-alikes. Payments are a critical business for us – and we are quite good at it. But there is much for us to learn in terms of real-time systems, better encryption techniques, and reduction of costs and "pain points" for customers.

Some payments systems, particularly the ACH system controlled by NACHA, cannot function in real time and, worse, are continuously misused by free riders on the system. There is a true cost to allowing people to move money. For example, it costs retailers 50-70 basis points to use cash (due to preventing fraud and providing security, etc.). And retailers often will pay 1% to an intermediary to guarantee that a check is good. A guaranteed check essentially is the same as a debit card transaction for which they want to pay 0%. For some competitors, free riding is the only thing that makes their competition possible. Having said that, we need to acknowledge our own flaws. We need to build a real-time system that properly charges participants for usage, allows for good customer service, and minimizes fraud and bad behavior.

Rest assured, we analyze all of our competitors in excruciating detail – so we can learn what they are doing and develop our own strategies accordingly.

Cybersecurity, fraud and privacy need intensive investment on the part of your entire company, and we must do it in collaboration with the government and regulators

Matt Zames describes on page 40 some of the efforts we are making on cyber. What I want to emphasize to our shareholders is the absolute, critical and immediate need to combat cybersecurity threats and the related issues of fighting fraud and protecting privacy. In these areas, we will do whatever it takes to protect the company and its clients. Regarding privacy, I do not believe that most people fully understand what no longer is private and how their information is being bought, sold and used. As a bank, we are appropriately restricted in how we can use our data, but we have found many examples of our data being misused by a third party. We are going to be very aggressive in limiting and controlling how third parties can use JPMorgan Chase data.

It is critical that government and business and regulators collaborate effectively and in real time. Cybersecurity is an area where government and business have been working well together, but there is much more to be done. And if it is not done in a concerted way, we all will pay a terrible price.

The banking system is far safer than it has been in the past, but we need to be mindful of the consequences of the myriad new regulations and current monetary policy on the money markets and liquidity in the marketplace – particularly if we enter a highly stressed environment

There are many new rules, and, in conjunction with current monetary policy, they already are having a large effect on money markets and liquidity in the marketplace. One famous scientist once said, "A Rule of Three (ART): A statistical specification with more than three explanatory variables is meaningless." Simply put, it is impossible to figure out the cumulative effect of all these changes even in a benign environment. But what is far more important is what the effect of these changes might be if we enter a *stressed environment*. As a risk policy matter, we need to make the assumption that there will be unpredictable and unintended consequences – sometimes these are to good effect, but what we need to worry about are those that have a potentially bad effect.

In the rest of this section, we will look at how the table is set – what is going on that is the same or different than in the past. Later in this section, we will speculate on what might happen differently if we enter a new crisis.

Most important, we will enter the next crisis with a banking system that is stronger than it has ever been

Each individual bank is safer than before, and the banking sector overall is stronger and sounder because, among other things:

- Capital levels are far higher today than before the crisis and, by some measures, higher than they have ever been. For example, a very basic measure of capital, going back around 100 years, was a simple ratio of equity to assets. In the last six years, it's back to high numbers not seen since the late 1930s.
- Highly liquid assets held by banks probably are much higher than ever before.
- Many exotic and complex products are gone.
- Many standardized derivatives are moving to clearinghouses.
- Both consumer and commercial loans are underwritten to better standards than before the crisis.
- Transparency to investors is far higher.
- Boards and regulators are far more engaged.

But many things will be different – for example, there will be far more risk residing in the central clearinghouses, and non-bank competitors will have become bigger lenders in the marketplace

Clearinghouses will be the repository of far more risk than they were in the last crisis because more derivatives will be cleared in central clearinghouses. It is important to remember that clearinghouses consolidate – but don't necessarily eliminate – risk. That risk, however, is mitigated by proper margining and collateral. We have long maintained that it is important to stress test central clearinghouses in a similar way that banks are stress tested to make sure the central clearinghouses' capital and resources are sufficient for a highly stressed environment. Clearinghouses are a good thing but not if they are a point of failure in the next crisis.

Non-bank competitors are increasingly beginning to do basic lending in consumer, small business and middle market. In middle market syndicated lending, their share recently has increased from 3% a few years ago to 5% today, and many people estimate that it will continue to increase over the years to come. There is nothing wrong with having competitors, including non-bank competitors. However, they will act differently from banks in the next stressed environment. I will write about this later in this section when we go through a thought exercise of the next crisis.

There already is far less liquidity in the general marketplace: why this is important to issuers and investors

Liquidity in the marketplace is of value to both issuers of securities and investors in securities. For issuers, it reduces their cost of issuance, and for investors, it reduces their cost when they buy or sell. Liquidity can be even more important in a stressed time because investors need to sell quickly, and without liquidity, prices can gap, fear can grow and illiquidity can quickly spread – even in supposedly the most liquid markets.

Some investors take comfort in the fact that spreads (i.e., the price between bid and ask) have remained rather low and healthy. But market depth is far lower than it was, and we believe that is a precursor of liquidity. For example, the market depth of 10-year Treasuries (defined as the average size of the best three bids and offers) today is $125 million, down from $500 million at its peak in 2007. The likely explanation for the lower depth in almost all bond markets is that inventories of market-makers' positions are dramatically lower than in the past. For instance, the total inventory of Treasuries readily available to market-makers today is $1.7 trillion, down from $2.7 trillion at its peak in 2007. Meanwhile, the Treasury market is $12.5 trillion; it was $4.4 trillion in 2007. The trend in dealer positions of corporate bonds is similar. Dealer positions in corporate securities are down by about 75% from their 2007 peak, while the amount of corporate bonds outstanding has grown by 50% since then.

Inventories are lower – not because of one new rule but because of the multiple new rules that affect market-making, including far higher capital and liquidity requirements and the pending implementation of the Volcker Rule. There are other potential rules, which also may be adding to this phenomenon. For example, post-trade transparency makes it harder to do sizable trades since the whole world will know one's position, in short order.

Recent activity in the Treasury markets and the currency markets is a warning shot across the bow

Treasury markets were quite turbulent in the spring and summer of 2013, when the Fed hinted that it soon would slow its asset purchases. Then on one day, October 15, 2014, Treasury securities moved 40 basis points, statistically 7 to 8 standard deviations – an unprecedented move – an event that is supposed to happen only once in every 3 billion years or so (the Treasury market has only been around for 200 years or so – of course, this should make you question statistics to begin with). Some currencies recently have had similar large moves. Importantly, Treasuries and major country currencies are considered the most *standardized* and *liquid* financial instruments in the world.

The good news is that almost no one was significantly hurt by this, which does show good resilience in the system. But this happened in what we still would consider a fairly benign environment. If it were to happen in a stressed environment, it could have far worse consequences.

Some things never change – there will be another crisis, and its impact will be felt by the financial markets

The trigger to the next crisis will not be the same as the trigger to the last one – but there will be another crisis. Triggering events could be geopolitical (the 1973 Middle East crisis), a recession where the Fed rapidly increases interest rates (the 1980-1982 recession), a commodities price collapse (oil in the late 1980s), the commercial real estate crisis (in the early 1990s), the Asian crisis (in 1997), so-called "bubbles" (the 2000 Internet bubble and the 2008 mortgage/housing bubble), etc. While the past crises had different roots (you could spend a lot of time arguing the degree to which geopolitical, economic or purely financial factors caused each crisis), they generally had a strong effect across the financial markets.

While crises look different, the anatomy of how they play out does have common threads. When a crisis starts, investors try to protect themselves. First, they sell the assets they believe are at the root of the problem. Second, they generally look to put more of their money in safe havens, commonly selling riskier assets like credit and equities and buying safer assets by putting deposits in strong banks, buying Treasuries or purchasing very safe money market funds. Often at one point in a crisis, investors can sell only less risky assets if they need to raise cash because, virtually, there may be no market for the riskier ones. These investors include individuals, corporations, mutual funds, pension plans, hedge funds – pretty much everyone – each individually doing the right thing for themselves but, collectively, creating the market disruption that we've witnessed before. This is the "run-on-the-market" phenomenon that you saw in the last crisis.

And now, a thought exercise of what might be different in the next crisis

It sometimes is productive to conduct a thought exercise – in effect trying to re-enact a "run on the market" but, in this case, applying the new rules to see what effect they might have. Even though we must necessarily be prepared for a crisis at all times, we hope a real crisis is many years down the road. And in the United States, we would be entering the crisis with a banking system that is far stronger than in the past, which, on its own, could reduce the probability *and* severity of the next crisis. We are not going to guess at the potential cause of the crisis, but we will assume that, as usual, we will have the normal "run-on-the-market" type of behavior by investors. So let's now turn to look at how a crisis might affect the markets in the new world.

The money markets (deposits, repos, short-term Treasuries) will behave differently in the next crisis

- Banks are required to hold liquid assets against 100% of potential cash outflows in a crisis. Liquid assets essentially are cash held at central banks, Treasuries and agency mortgage-backed securities. Outflows are an estimate of how much cash would leave the bank in the first 30 days of a crisis. This would include things like deposit outflows, depending on the type of deposit, and revolver take-downs, depending primarily on the type of borrower. In my opinion, banks and their board of directors will be very reluctant to allow a liquidity coverage ratio below 100% – even if the regulators say it is okay. And, in particular, no bank will want to be the *first* institution to report a liquidity coverage ratio below 100% for fear of looking weak.

- In a crisis, weak banks lose deposits, while strong banks usually gain them. In 2008, JPMorgan Chase's deposits went up more than $100 billion. It is unlikely that we would want to accept new deposits the next time around because they would be considered non-operating deposits (short term in nature) and would require valuable capital under both the supplementary leverage ratio and G-SIB.

- In a crisis, everyone rushes into Treasuries to protect themselves. In the last crisis, many investors sold risky assets and added more than $2 trillion to their ownership of Treasuries (by buying Treasuries or government money market funds). This will be even more true in the next crisis. But it seems to us that there is a greatly reduced supply of Treasuries to go around – in effect, there may be a shortage of all forms of good collateral. Currently, $13 trillion of Treasuries are outstanding, but, according to our estimates, less than half of this amount is effectively free to be sold. Approximately $6 trillion is accounted for by foreign exchange reserve holdings for foreign countries that have a strong desire to hold Treasuries in order to manage their currencies. The Federal Reserve owns $2.5 trillion in Treasuries, which it has said it will not sell for now; and banks hold $0.5 trillion, which, for the most part, they are required to hold due to liquidity requirements. Many people point out that the banks now hold $2.7 trillion in "excess" reserves at the Federal Reserve (JPMorgan Chase alone has more than $450 billion at the Fed). But in the new world, these reserves are not "excess" sources of liquidity at all, as they are required to maintain a bank's liquidity coverage ratio. In a crisis, if banks turn away deposits, most investors will have other options, which include:

  1. Buying Treasuries directly.
  2. Buying money market funds, which own Treasuries.
  3. Buying repos, which are collateralized by Treasuries.
  4. Investing directly at the Fed for a limited set of investors (government-sponsored enterprises, money funds).
  5. Purchasing credit instruments like commercial paper.

Buyers of credit (loans, secured loans, underwriting and investments) will be more reluctant to extend credit

- In the crisis, many banks lent against various forms of good collateral (but not necessarily the highest quality collateral) to help clients create liquidity and navigate through the crisis. The collateral often came with significant haircuts and was of the type that banks thought they easily could risk-manage, and, for the most part, they did. In the last crisis, JPMorgan Chase did tens of billions of this type of lending. In the next crisis, banks will have a hard time increasing this type of credit because it will require capital and more liquidity.
- In a crisis, clients also draw down revolvers (for JPMorgan Chase alone, this peaked at approximately $20 billion at one point in 2009) – sometimes because they want to be conservative and have cash on hand and sometimes because they need the money. As clients draw down revolvers, risk-weighted assets go up, as will the capital needed to support the revolver. In addition, under the advanced Basel rules, we calculate that capital requirements can go up more than 15% because, in a crisis, assets are calculated to be even riskier. This certainly is very procyclical and would force banks to hoard capital.
- In addition, banks may have a decrease in capital because new regulatory capital rules require losses on investment securities to reduce regulatory capital. This would be particularly true if interest rates were rising in the next crisis, which cannot be ruled out. (Typically, Treasury yields drop dramatically in a crisis, and that possibly could happen in this case, too, especially as they would be in short supply. But, again, one cannot rely on this.)
- In the last crisis, some healthy banks used their investment portfolios to buy and hold securities or loans. In the next crisis, banks will not be able to do that because buying most types of securities or loans would increase their RWA and reduce their liquidity.

- In the last crisis, banks underwrote (for other banks) $110 billion of stock issuance through rights offerings. Banks might be reluctant to do this again because it utilizes precious capital and requires more liquidity.
- It is my belief that in a crisis environment, non-bank lenders will not continue rolling over loans or extending new credit except at exorbitant prices that take advantage of the crisis situation.

On the other hand, banks continued to lend at fair prices in the last crisis because of the long-term and total relationship involved. Banks knew they had to lend freely because effectively they are the "lender of last resort" to their clients as the Federal Reserve is to the banks. ***This is a critical point: JPMorgan Chase and most other banks understood their vital role in actively lending to clients.*** In 2008 and 2009, JPMorgan Chase rolled over more than $260 billion of loans and credit facilities to small businesses, middle market companies and large companies, in addition to $18 billion for states and municipalities, hospitals and nonprofits. We rolled over these capital and lending commitments to support our clients and always maintained fair (and not rapacious) pricing, reflecting our long-term relationship with them.

The markets in general could be more volatile — this could lead to a more rapid reduction of valuations

The items mentioned above (low inventory, reluctance to extend credit, etc.) make it more likely that a crisis will cause more volatile market movements with a rapid decline in valuations even in what are very liquid markets. It will be harder for banks either as lenders or market-makers to "stand against the tide."

But the American financial markets and, more important, the American economy generally have been extraordinarily resilient

Banks may be less able to act positively in the next crisis, but they also are far stronger and unlikely, in our opinion, to create the next crisis. Many other actors in the financial system, from hedge funds to long-term investors, including corporations and large money managers, will, at some point, step in and buy assets. The government, of course, always is able to step in and play an important role.

In addition, regulators can improve the liquidity rules to allow banks to provide liquidity on a more "graduated" basis against more types of assets and give more flexibility on the "margin" than is required. That is, they can give themselves both gas and brakes; i.e., change liquidity rules to fit the environment. In addition, we should try to eliminate procyclical rules, which can exacerbate a crisis.

Fundamentally, as long as the economy is not collapsing, financial markets generally recover. Whatever the turn of events, JPMorgan Chase will have the capability to play its role in supporting clients and communities in the countries in which we operate.

V. WE HAVE A FULLY ENGAGED BOARD, AN EXCEPTIONAL MANAGEMENT TEAM AND A STRONG CORPORATE CULTURE

We want to be a standard-bearer in the industry when it comes to meeting the heightened standards demanded by our regulators – and not just because it's required but because we think it's the right thing to do for our shareholders, clients, employees and communities. And we want to do this across all measures – from our controls to board governance, the cultivating of a strong culture and how we are fighting cyber attacks to how we treat our clients. It starts at the top – with the Board of Directors.

Your Board is fully engaged in all critical matters

The entire Board is fully engaged in the affairs of the company. Board members are fully engaged in the company, from setting the agenda of the Board meetings to reviewing strategy and demanding strong controls to determining CEO compensation and succession planning. Board members also are increasingly engaged in regulatory and shareholder affairs. Several of the Board members meet regularly with our key regulators and major shareholders.

Management succession planning is a priority of the Board. Regarding succession planning, the Board always must be prepared for the "hit-by-the-bus" scenario (which, of course, is not my preference), but ongoing succession planning for the medium and long term is the highest priority of the Board. Importantly, our Board members have complete access to and relationships with the key senior people and continually interact with them, both formally and informally. Both the Board members and I believe that, under all scenarios, this company has several capable potential successors.

The full Board meets without the CEO at every Board meeting. Going way back to Bank One's Board more than a decade ago and before it was mandated, the Board would meet without the CEO (that's me) because we all thought it was best for Board members to have an open conversation about the CEO and the company without feeling any pressure. The Board continues that practice today. New rules mandate that directors meet at least once a year without the CEO – yet our Board does so at every Board meeting; i.e., eight times a year. And usually at the end of the session, the Lead Director comes to see me to give feedback and guidance about what the Board is thinking and what it wants.

We have a strong corporate culture – but we must continuously strengthen it

JPMorgan Chase has served its shareholders, customers and communities with distinction for more than 200 years. Since we were founded, our company has been guided by a simple principle that perhaps was best articulated by J.P. Morgan, Jr., in 1933, when he said: "I should state that at all times, the idea of doing only first-class business, and that in a first-class way, has been before our minds." We continue to strive to meet that principle.

Acknowledging mistakes – and learning from them – is part of the fabric of this company. We also recognize that we have made a number of mistakes – some of them quite painful and costly – over the last several years. One of the things we learned was that we needed to redouble our efforts around culture – not reinvent our culture but recommit to it and ensure that it is an enduring strength of this institution. While we have done an extensive amount of work over the past year and a half to make sure we get this right, we know that it can't be a one-time effort. It's like keeping physically fit – you can't get in shape and expect to stay that way if you stop exercising.

Our efforts around culture and conduct are substantial and include the following:

We will continuously reinforce our business principles. Back in July 2004 at the close of the JPMorgan Chase and Bank One merger, we sent a small blue book to all employees outlining the capabilities of the combined firm, as well as our mission and business principles. While much has changed over the past decade, our commitment to these principles remains the same. In July 2014, we marked the 10-year anniversary of JPMorgan Chase and Bank One coming together to form this exceptional company. It was fitting that on this special occasion, we rededicated ourselves to those same business principles by distributing the rearticulated business principles on How We Do Business to every person in the company. These core principles (which are written in plain English and include lots of specific examples) describe how we want to conduct business, and they will continue to guide us as we move forward. What we are doing ***differently*** today is that we are taking substantial actions to continuously inculcate our employees and our leadership on these principles:

- We want to make the How We Do Business principles part of every major conversation at the company – from the hiring, onboarding and training of new recruits to town halls and management meetings.
- We conduct a substantial amount of ongoing training and certification, from the Code of Conduct for all employees to the Code of Ethics for Finance Professionals that applies to the CEO, Chief Financial Officer, Controller and all professionals of the firm worldwide serving in a finance, accounting, corporate treasury, tax or investor relations role.
- We have enhanced our leadership training. We have thousands of educational programs, and we have consistently trained the top several hundred people on leadership. But we did not train people when they became first-time managers or, importantly, managers of managers. This will be another opportunity to drive home our How We Do Business principles. The heart of this training provides the chance to teach our leadership how to do the right thing – not the easy thing – and to continually reinforce the principle of treating others in the way you would like to be treated.
- We also developed a pilot program within our Corporate & Investment Bank in Europe, the Middle East and Africa on How We Do Business, which includes focus groups and other efforts to analyze cultural themes and address any concerns around conduct and behavior. This year, we have taken the learnings from that pilot and will be rolling them out in a global, firmwide Culture and Conduct Program.

These initiatives will make us a better company. We hope they will reduce any bad behavior. No human endeavor can ever be perfect, but we are hopeful that as incidences of bad behavior decline and as management's responses to bad behavior are vigorous, governments and regulators will appreciate the intensity of our efforts.

Compensation has been consistent and fair and is awarded with proper pay-for-performance

Our long-term success depends on the talents of our employees. And our firm's compensation system plays a significant role in our ability to attract, retain and motivate the highest quality workforce. We design our compensation program to encompass best practices, support our business objectives and enhance shareholder value. For example:

- We do not have change-of-control agreements, special executive retirement plans, golden parachutes or things like special severance packages for senior executives.
- We do not pay bonuses for completing a merger, which we regard as part of the job. (When a merger has proved successful, compensation might go up.)

- We virtually have no private "deals" or multi-year contracts for senior management.
- We always have looked at financial performance as a critical factor, but not the only factor, in pay-for-performance. We have formulas (which always have been properly charged for capital usage) for how we accrue compensation, but we do not pay it out in a formulaic way to anyone. Financial performance alone is not a comprehensive picture of performance. Broader contributions are important, like qualitative skills such as leadership attributes, character and integrity, and management ability. This also includes recruiting, coaching and training, building better systems and fostering innovation, just to name a few.
- We also have invoked comprehensive clawbacks of previously granted awards and/or repayment of previously vested awards when we thought it was appropriate. In 2014 alone, more than 200 employees had compensation reduced for risk- and control-related events. Importantly, many more than that were terminated for poor performance or ethical lapses during the course of the year.

Compensation alone is not enough, and one should not confuse good compensation with good morale. Getting compensation right is critical – everyone wants to feel they are being paid fairly, and most people have other alternatives. But proper compensation alone is not enough. I have seen many companies try to make up for politics, bureaucracy and low morale with high compensation – it does not work. When a company has been doing poorly, or treats its customers badly, the company should expect low morale. What employees want to see is that the company faces its issues, reduces politics and bureaucracy, and improves customer service and satisfaction. Maintaining a corporate culture where the right people are promoted and everyone is treated with respect is as important as compensation. Then morale will improve, and employees will be proud of where they work every day.

We need to operate like a partnership. If, for example, a company's largest, and perhaps most important, business unit is under enormous stress and strain, unlikely to earn money regardless of who is in charge, a manager might ask his or her best leader to take on the job of running that business. This may be the toughest job in the company, one that will take years to work through before the ship has been righted. When the manager asks a leader to take on the responsibility, she quite appropriately will want to know whether she will be supported in the toughest of times: "Will you make sure the organization doesn't desert me?" "Will you stop the politics of people using my unit's poor performance against me?" "Will you compensate me fairly?" My answer to these questions would be yes. And as long as I thought she was doing the job well, I would want to pay her like our best leaders, profits aside. Conversely, we all know that a rising tide lifts all boats. When that's the case, paying that leader too much possibly is the worst thing one can do – because it teaches people the wrong lesson.

We still believe deeply in share ownership. We would like all our senior managers to have a large portion of their net worth in the company. We believe this fosters partnership. While some make the argument that it causes excessive risk taking – we disagree. The first people to lose all of their money if a company fails are the shareholders and the management team. We want your management team to be good stewards of your capital and to treat it as they would their own. It is formulaic compensation plans, where people are paid solely on financial performance, that can cause undue risky and bad behavior.

The entire Operating Committee gets involved in compensation – it is not done in a back room. One way we make sure we are fair and just with compensation is that the entire Operating Committee spends a substantial amount of time reviewing the compensation of our top 500 people – this way, we have

internal justice, we can review someone's total performance across all measures, and we can understand how a manager manages up, down and across the organization – not just up.

We want to have the best people, and competitive compensation is critical. We must continue to pay our people properly, competitively and well for doing a good job. It is imperative at JPMorgan Chase that we continue to attract and retain the best.

We treat all of our people fairly. While we generally talk about compensation for the most senior managers, the compensation levels of our entire employee population are fairly similar to that of the U.S. population's household income distribution. We invest a significant amount of time and money to ensure that all of our employees are properly compensated. We still have a defined benefit pension plan for most of our employees that provides a fixed income upon retirement to supplement Social Security and any other savings they have. We also provide a 401(k) plan with matching dollars. In addition, we have excellent healthcare plans that incentivize people to take care of themselves. For example, premiums are lower if an employee gets an annual physical examination or stops smoking. We also subsidize these healthcare plans more for lower paid employees (at 90%) versus our higher paid employees (who are at 50%). And each year, we are recognized as a great place to work by various groups, including *Working Mother* 100 Best Companies, Top 100 Military Friendly Employers by *G.I. Jobs* magazine and Best Employers for Healthy Lifestyles by the National Business Group on Health, among many others.

As we centralize all risk functions, we also must be certain that line of business CEOs remain empowered to manage their business end to end

We always have tried to be very thoughtful about which functions are centralized or decentralized at the company. We always have centralized functions that can create huge economies of scale like data centers or utilities that are used by the entire company (like general ledgers and payroll) or critical control functions (like Corporate Legal, firmwide accounting policies, etc.). We try to decentralize where we can and when it makes sense to do so. For example, while a lot of finance functions reside at Corporate (like accounting policy), some finance people are devoted to only one line of business, so we keep them within that line of business. We do this to provide direct accountability, speed up decision making and minimize bureaucracy.

In the new world, in order to improve the consistency of controls, regulators have demanded that most risk and control functions be centralized, including Risk, Compliance, Finance, Oversight & Control, Audit and Legal. In doing this, we have given huge amounts of additional authority to functions at our corporate headquarters. Corporate headquarters can sometimes forget that it exists only because there is a banker in front of a client somewhere. The Home Depot, one of America's great companies, does not call its corporate headquarters the corporate headquarters – it's called Store Support Center to remind employees every day why they are there: to support the stores and the clients. This still remains true at JPMorgan Chase – we at Corporate would not be here if we didn't have our bankers in front of clients.

We need to work hard to get the best of both centralization and decentralization. And we need to manage Corporate so the line of business CEOs and management teams are fully responsible and empowered to manage their businesses. Centralization should not mean demoralizing bureaucracy or slowing down services as multiple committees and layers

sign off on every decision and stifle innovation. We have been managing through this process with our eyes wide open. The Operating Committee members of the company spend a considerable amount of time to make sure we get this right.

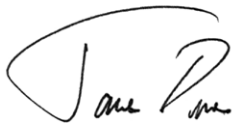
We need to develop the right culture and avoid creating a culture of finger-pointing. We need to analyze our mistakes because that is the only way we can fix them and consistently improve. But we cannot allow this to devolve into crippling bureaucratic activity or create a culture of backstabbing and blame. We need to develop a safe environment where people can raise issues and admit and analyze mistakes without fear of retribution. We must treat people properly and respectfully – even if we have to make tough decisions.

I believe this company currently has the best management team with whom I have ever been associated – and I mean their character, culture and capabilities. I now ask questions that I did not ask when I was a younger manager: "Would I want to work for these managers?" "Would I want my children to work for these managers?" My answer would not always have been yes, but now it is. These leaders have navigated the last several years with fortitude and a smile, driving results, making tough decisions and treating each other as complete partners. They are the reason why both performance and morale remain strong in this environment.

CLOSING COMMENTS

I feel enormously fortunate to be part of the remarkable 200-year journey of this exceptional company.

I wish you all could see our employees and your management team at work, particularly in these challenging times. If you did, I know that you, like me, would be bursting with appreciation and pride and have great comfort in knowing that our wonderful legacy will continue.



Jamie Dimon
Chairman and Chief Executive Officer

April 8, 2015

A Culture of Excellence



Matt Zames

Our firm has a rich, 200-year history of serving its clients and customers with integrity and establishing relationships based on trust. It is our responsibility to preserve and build upon the solid values on which this firm was founded. The tone we set as stewards of the firm is critical, and managing a culture of excellence, as well as integrity, requires us to have a sophisticated and comprehensive infrastructure.

The Chief Operating Office is central to delivering operational excellence. It is responsible for many of the firm's corporate utilities, including Treasury, the Chief Investment Office, Global Technology, Operations, Oversight & Control, Compliance, Corporate Strategy, Global Real Estate, Global Security & Military Affairs and Regulatory Affairs, among others. In 2014, we focused a great deal on what it means to be a Global Systemically Important Bank (G-SIB) and how best to ensure we manage to the needs of our critical stakeholders – shareholders, clients, customers and employees – given our significance to worldwide markets and the global economy. We continue to respond to the changing regulatory landscape, including requirements for G-SIBs, and we are evaluating the businesses we manage and the products and services we offer in the context of these new requirements. As an example, we announced the firm is targeting up to a $100 billion reduction in non-operating wholesale deposits. At a minimum, we are committed to ensuring we remain safely within the 4.5% G-SIB capital surcharge bucket and are looking at additional actions to potentially reduce our surcharge by an incremental 50 basis points.

Last year, we published Business Principles, key themes around which we want to drive the firm. These principles are fundamental to our success and provide guidance for our identity as a company while informing our firmwide strategic priorities.

EXCEPTIONAL CLIENT SERVICE

OPERATIONAL EXCELLENCE

A COMMITMENT TO INTEGRITY, FAIRNESS AND RESPONSIBILITY

A GREAT TEAM AND WINNING CULTURE

We distributed the principles to our employees and regulators and followed up with a more extensive "How We Do Business – The Report," which is available on our public website.

We recently launched a firmwide Culture and Conduct Program to further reinforce the behavioral standards implicit in these Business Principles. The program is not about reinventing our culture but recommitting to it. It considers our culture, business models, tone from senior executives, governance and incentive structures; how they influence daily decision making at all levels; and the impact of those decisions on our clients, our reputation and the integrity of the markets. Our objective is to instill in our employees a strong sense of personal accountability through broad, deep integration of common standards across businesses and geographies. In 2015, we will develop a suite of metrics to enable management to keep a pulse on how we are doing in regard to our company culture and with respect to specific conduct risks. We have committed, in 2015, that each line of business and function will implement a Culture and Conduct Program aligned to the firmwide framework.

Execution against our principles requires us to be ever mindful of new opportunities to reduce complexity and improve efficiency. As part of our business simplification strategy, we spun off One Equity Partners, the firm's private equity

unit, which was completed in early January 2015. We realized significant savings through the reshaping of our workforce and consolidation of jobs in the right locations, creating efficiencies in labor and real estate costs and promoting consistency in our control culture. We are committed to managing expenses tightly, eliminating waste, and running the firm in a nimble and flexible manner.

We continue to look for additional opportunities to do business in smarter ways. For example, over the last few years, the firm made a significant investment in telecommunications and collaboration tools to facilitate alternatives to air travel. We have rationalized the population of vendors, in large part through the establishment of preferred vendors in categories such as information technology (IT), real estate services, printing, and marketing and advertising. In addition, we are in the process of rationalizing our population of law firms and physical security vendors.

We will not compromise on the control environment and, to that end, continue to tighten data controls for ourselves, as well as for our third parties. This involves fortifying our defenses to ensure all of our managers, employees and vendors are following the appropriate security and hygiene practices with regard to work email, password protection, data encryption, system entitlements and social media. We continue to carefully monitor third-party systems and to increase our oversight of all the vendors with whom we work to make sure their protections are adequate.

Liquidity and interest rate risk management continue to be important

Liquidity and interest rate risk management are fundamental to how we manage the firm and take on increasing importance for the firm as a G-SIB. As we advance our thinking in response to an evolving set of regulatory requirements, we are driving a coordinated approach to management of the firm's balance sheet.

2014 featured final versions of important regulatory liquidity rules, notably the liquidity coverage ratio by U.S. banking regulators and Basel's final rule on the net stable funding ratio, with which we are compliant. We devoted significant resources to understanding the potential liquidity impact of changing Fed monetary policy and rising rates, particularly the impact on our wholesale deposit base. As a direct result of this effort, we further refined and improved our internal stress framework. We continue to be in compliance with our internal measures.

We progressed our technology buildout to enable more flexible and timely liquidity stress testing for the enterprise and major legal entities. We further evolved the Liquidity Risk Oversight group, which provides independent assessment, measurement, monitoring and control of liquidity risk. We established a firmwide program to set up a best-in-class intraday liquidity management process and infrastructure in preparation for a changing market environment and emerging regulatory expectations.

We continue to actively manage our investment securities portfolio of over $340 billion, the primary vehicle used to offset the firm's loan and deposit mismatch and moderate firmwide structural interest rate risk. In 2014, we further increased the proportion of investment securities that we intend to hold to maturity to nearly $50 billion, which will help to mitigate Basel III capital volatility in a rising rate environment. The average yield of our investment securities portfolio increased by 45 basis points from a yield of 2.32 in 2013 to 2.77 in 2014 despite generally lower interest rates, and we maintained an average portfolio rating of AA+.

Cybersecurity remains a top priority

In 2014, we experienced cyber threats of an unprecedented scale. This included a data breach we incurred last summer, which we voluntarily disclosed. We continue to discover and block new and unique malware, viruses and phishing attempts to obtain access to our data. Importantly, cyber attacks to date have not resulted in material harm to our clients or customers and have not had a material adverse impact on our results or operations.

To defend against these threats, we spent more than $250 million in 2014 on our cyber capabilities. We established three global Security Operations Centers to monitor, detect and defend the firm. We organized cyber defense exercises to test our capabilities and conducted an independent assessment of our cybersecurity program to identify actions for continual improvement. We doubled the number of cybersecurity personnel over the past two years and hired top-notch security experts.

Over the next two years, we will increase our cybersecurity spend by nearly 80% and enhance our cyber defense capabilities with robust testing, advanced analytics and

improved technology coverage. We will strengthen our partnerships with government agencies to understand the full spectrum of cyber risks in the environment and increase our response capabilities.

Technology is critical to our competitive advantage and to the protection of our clients and customers

Over the past six years, the firm has invested 8%-9% of its annual revenue to fund our global technology capabilities, one of the largest investments we make at JPMorgan Chase. Even as we are committed to expense management, we will not compromise our investment opportunities for the future, especially as they relate to innovative and efficient delivery to our clients and customers and protection of their security.

Demand for technology continues to grow. IT supports 318,000 desktops, 66,000 servers in 32 strategic data centers, 25,000 databases and 7,100 business applications. Our global telecommunications network connects our presence in 60 countries along with our 5,600 Chase branches and 18,000 ATMs. We have more than 35 million active online, and over 19 million active mobile, clients and customers. We process approximately $6 trillion of payments daily on behalf of the firm and its clients and customers.

In 2015, approximately 50% of our technology investment spend will be in support of our strategic business priorities, including:

- Digital: End-to-end digital commerce across web, mobile and future channels and across our businesses.
- Data & Analytics: Leveraging of our firmwide data assets for operational stability, customer value, revenue generation, and risk and security.
- Mobile, Unified Communications: Communications channel integration into business applications to enrich interaction among employees, clients and customers.
- Next Generation Cloud Infrastructure: Increased cloud footprint to enhance cost efficiency and flexibility using highly elastic, on-demand, self-service infrastructure.
- Next Generation Development: Increased developer productivity, quality and pace of application delivery.
- Security & Controls: Framework to address the increasing volume, pace and sophistication of security threats.

In addition, we will continue to innovate in 2015 by improving branch automation and efficiency, extending our electronic trading platforms, launching an advisor workstation platform for Asset Management and implementing a new commercial real estate loan originations system.

Our focus on the control agenda has become "business as usual"

We have made substantial investments and transformative changes to strengthen our control environment. Since the creation of Oversight & Control in 2012 to embed greater focus and discipline on controls within each business, the group has successfully integrated into each business and function to make the control agenda a core strategy and priority.

Over the past few years, Oversight & Control has significantly enhanced the quality of, and standard requirements for, our business self-assessment process, designed to identify and assess key operating risks in each area. We introduced common control reporting on a range of metrics and, in 2015, will further develop capabilities to analyze trends and conduct impact analysis across businesses. Of the original 24 enterprise-wide programs established in 2013 to tackle top control issues, many now are complete, and the work has transitioned from projects to business-as-usual operations. We anticipate closing the lion's share of the programs in 2015.

The compliance agenda is continuously evolving

Our firm's compliance capabilities have improved significantly over the past year. 2014 was focused on execution across the foundational components of the compliance program. We enhanced standards and protocols across core practices, strengthened our employee compliance program, and continue to evolve and develop

trade and e-communications surveillance programs. Building a world-class Anti-Money Laundering (AML) program remains a top priority, and a significant amount of work has been completed on the Bank Secrecy Act/AML and Sanctions programs, including a new, global set of Know Your Customer standards.

This year, Compliance will focus on enhancing standards for market conduct risk, fiduciary responsibilities, employee compliance and regulatory reporting. Ongoing strategic technology investments and process improvements will position us to continue delivering in a heightened regulatory environment.

Conclusion

We understand the importance of operational excellence, effective risk management across all risk categories, a fortress infrastructure, and a culture that is rooted in integrity, fairness and responsibility. We have addressed new challenges by applying lessons learned more effectively, and we are able to respond more quickly owing to the talent of our people and our investments in infrastructure and controls.

We continue to strengthen our client- and customer-centered culture and set high standards for performance as we invest in targeted growth opportunities and first-rate systems and operations, simplify our businesses and redouble expense management efforts. Our Business Principles will be our guidepost as we make decisions each step of the way. We are indebted to our predecessors for the solid foundation we inherited and will be vigilant in our commitment to maintaining the world-class reputation we have worked so hard to build. The company is well-positioned to help our clients and customers to the fullest, with integrity, and that is what we intend to do. To achieve our objectives, we must execute strategically and with urgency.



Matt Zames
Chief Operating Officer

2014 HIGHLIGHTS AND ACCOMPLISHMENTS

- Evaluated business activities in light of G-SIB; committed to operating at or below the 4.5% G-SIB capital surcharge bucket
- Targeted a $100 billion reduction in non-operating wholesale deposits
- Launched a firmwide Culture and Conduct Program to reinforce our Business Principles across all businesses and functions globally
- Met liquidity regulatory requirements; advanced our own internal framework, including technology capabilities and independent risk oversight
- Maintained AA+ average rating in our investment securities portfolio; improved the average yield of investment securities from 2.32 in 2013 to 2.77 in 2014 despite low rate environment
- Spun off One Equity Partners as part of ongoing business simplification efforts
- Managed expenses tightly through, among other things, creating economies of scale through consolidation of jobs in strategic locations and establishment of preferred vendors
- Matured our efforts to further strengthen controls, including transitioning many enterprise-wide programs to business-as-usual
- For the sixth consecutive year, invested 8%-9% of the firm's annual revenue in global technology capabilities and digital innovation
- Processed an average of approximately $6 trillion in payments daily
- Spent more than $250 million in 2014 to protect the firm from cyber attacks and will increase cyber spend by nearly 80% over the next two years

Consumer & Community Banking



Gordon Smith

I'm proud to say that Consumer & Community Banking (CCB) has grown stronger in 2014, adding more customers, building market share and improving the customer experience across all of our channels. Today, we've earned relationships with nearly half of all U.S. households and 3.9 million small businesses. In 2014, we added approximately 600,000 new CCB households, bringing our total to almost 58 million. As important, we've deepened the relationships with our existing customers. More people consider Chase their primary bank than any other bank in our footprint, and customer attrition has reached historic lows. More customers are doing business with Chase, and they are staying with us for the long term.

Leading the industry

Our core strategy for CCB for the past four years has been to build lifetime, engaged relationships with our customers. That begins and ends with a consistent and outstanding customer experience across Chase. I have yet to see any business that can grow over time without happy customers. And in our business, where customers have extensive choices across all of our products, that's acutely true.

We're pleased with our progress. I don't think anyone can ever declare victory on the customer experience, but we can celebrate the success we've had. One key measure that we track is our Net Promoter Score (NPS), which simply is how many customers say they would refer a friend to Chase. Since mid-2011, our NPS has roughly doubled in Consumer Banking and Card and tripled in Business Banking. In fact, nearly all CCB businesses are at or close to all-time highs.

We also received validation from respected outside groups. The American Customer Satisfaction Index named Chase #1 in customer satisfaction among large banks in 2014. J.D. Power ranked us #3 in Highest Customer Satisfaction in Mortgage Originations (up from #12 in 2010) and #2 in Mortgage Servicing (up from #13 in 2010). In Business Banking, we are #1 or #2 in every region (up from #22 in 2010).

Building stronger relationships with customers has led to measurable improvement in our leadership positions. This year, the Federal Deposit Insurance Corporation (FDIC) named us #1 in deposit growth among the largest 50 U.S. banks. We are the #1 credit card issuer, #1 in total U.S. credit and debit payments volume, the #2 mortgage originator and servicer, and the #3 non-captive auto lender. Chase is #1 in ATMs and #2 in branches, and chase.com is the #1 online banking portal. Forrester Research named us #1 in mobile banking functionality for the third consecutive year.

With our combination of scale, leading products and outstanding service, we wouldn't trade our franchise for anyone's.

2014 financial results

Across CCB, our businesses delivered strong underlying results throughout 2014 despite market and industry headwinds. Our net income was $9.2 billion, down from $11.1 billion in 2013. Our revenue of $44.4 billion was down 5% from $46.5 billion in 2013, primarily due to the smaller mortgage originations market during 2014. In 2014, we also experienced lower reserve releases across the Mortgage and Credit Card businesses and felt the continued impact of lower deposit margins. While credit performance still is very strong, the rate of improvement compared with last year has slowed. Overall, we ended the year with a strong return on equity (ROE) of 18%, just under our long-term target of 20% ROE.

We particularly are pleased that we achieved this positive momentum while hitting our aggressive expense target. Since 2012, we have taken

$3.2 billion of expense out of CCB, and we are on track to reduce expenses by an additional $2 billion by the end of 2016. Staying disciplined and being as efficient as possible allow us to invest back into our businesses and create strong returns for all of you who have chosen to invest in our company.

CCB demonstrated significant growth in nearly every business in 2014.

Here are some highlights from our businesses:

Consumer & Business Banking

Consumer & Business Banking deposits were up 8% to nearly half a trillion dollars by the end of the year. We talked about customer attrition reaching historic lows – it is down 4% since 2010. To put this in perspective, that equates to 1 million Consumer Banking households and an incremental $15 billion in deposits.

Chase Private Client (CPC) continues to be a notable success. We have grown to more than 325,000 CPC clients, up 51% from 2013. Client investment assets were up 13%. Since 2012, we've tripled our net new CPC deposits and investments, with 60% of new investments coming from customers who are investing with Chase for the first time. With 55% of affluent households living within two miles of a Chase branch or ATM, we feel well-positioned to continue that growth.

Business Banking loan originations were up 28% in 2014. Loans were up 6%, and deposits were up 12%. And we are extremely proud that we were the #1 Small Business Administration lender for women and minorities in the United States for the third year in a row.

Mortgage

The 2014 mortgage market was one of the most challenging we have faced. We have been very focused on transforming our Mortgage franchise to a simpler, higher quality and less volatile business. In 2014, Mortgage originations were down 53% from 2013 due to the challenging rate environment. But we didn't forget the industry lessons learned over the past several years and remained disciplined. We ceded some market share to focus on our strategy of acquiring high-quality loans. And we actively reduced our foreclosure inventory from roughly 170,000 in 2013 to 90,000 in 2014.

One of the lessons we learned from the industry crisis in Mortgage is that complexity kills. We have reduced the number of mortgage products from 37 to 18, and by the end of 2015, it will be down to 15. Yet those 15 products still will meet 97% of customers' needs. I'm sure the 22 products we are exiting were developed with good intentions to help customers, but they created unnecessary complexity for employees and more expense and execution risk than we needed.

Mortgage Banking also has made tremendous progress in reducing expenses. Mortgage expenses were down 30% over 2013.

Credit Card and Payments

Card Services sales volume of $465.6 billion was up 11% year-over-year, outperforming the industry for the 28th consecutive quarter. Credit trends continue to improve, and credit card net charge-offs were down 12% from 2013. Our Merchant Services business processes nearly half of the total e-commerce payment volume in the United States. Our processing volume was $847.9 billion, up 13% year-over-year.

Payments is one of the most interesting areas in our business as consumers are adapting to new ways to pay. We like our strategic position as both a bank that issues cards for consumers and a payment processor for merchants. Through ChaseNet, we also have our own network and can complete every aspect of the payment transaction.

One of the most exciting developments of the year was Apple Pay™. Chase participated as both a consumer issuer and a merchant acquirer. Chase cardholders can register their cards in Apple Pay™ and make digital payments simply by hitting a fingerprint button on their iPhone® 6. Our merchant customers will be able to use our software development kit to enable payments online, in-app and in-store. Tokenization will make those payments safe and secure.

Auto

In Auto, we continue to grow while maintaining our credit discipline. Our originations volume of $27.5 billion was up 5%, with our average loans up 4%. Here, too, we have stayed disciplined by retaining high credit standards. Our average FICO score on loan originations was 32 points higher than the industry average.

Digital

Digital is transforming our industry. We've seen tremendous growth rates in customer adoption of our digital services. The number of customers who are active on Chase mobile went from 8.2 million in 2011 to 19.1 million in 2014. On average, we added about 18,000 new mobile users per day throughout 2014.

Quite simply, we plan to be the bank of choice for digitally savvy customers. Digital is core to our commitment to an outstanding customer experience. We're bringing digital service to everything from routine deposits to credit card applications, rewards redemptions and mortgage application tracking.

Today's customers expect to be able to transact with us whenever and wherever they choose, whether that's through a superior digital experience, a convenient ATM or a neighborhood branch. Every experience needs to be personal, easy and fast.

With advances in technology, customers will be able to complete 90% of teller transactions at our smart ATMs by the end of 2016. We have made things easier by increasing withdrawal limits and allowing customers to receive their cash in any bill denomination they choose. Mobile also is changing quickly. Customers now can securely view their balances without having to log in and print statements directly from their phone.

Customers aren't choosing between digital and branches – they are using both. When our customers use digital, we see lower attrition, and we're more likely to be their primary bank. We know that our customers still want to come into the branch when they need advice or support, but for a basic transaction, they increasingly prefer to do it themselves.

Here are some of the indicators of the rapid growth in digital in just one year:

- 19 million mobile app users, up 20%
- 45 million Mobile QuickDeposit℠ transactions, up 25%
- 30 million Mobile Chase QuickPay℠ transactions, up 80%
- 60 million in Mobile Bill Pay, up 30%
- 200 million deposits made in a Chase ATM, up 10%

Providing a best-in-class digital experience also is more efficient for the bank. It costs us 3 cents to accept a deposit made from a smartphone and 8 cents for one at an ATM. With our new technologies, we have lowered our costs per deposit by ~50% in 2014 versus 2007.

Our 5,600 branch network is one of our most important assets for acquiring and deepening relationships. Last year, our branches helped nearly 20,000 first-time homebuyers and 400,000 new small businesses and approved more than 1 million credit cards for customers. We've built a footprint that covers the highest growth markets in the United States. But now that our buildout is complete, we won't open as many new branches over the next few years. As all effective retailers do, we continually review locations to determine where we can consolidate and still remain convenient for customers. As a result, our overall branch count will be down slightly from prior years.

Controls: Strengthen and simplify our business

Over the past two years, we have made significant investments in improving our controls. We hired dedicated teams to focus on de-risking the business and invested in technology to automate more processes and reduce manual errors. As one example, we have strengthened our Anti-Money Laundering (AML) procedures with a technology fix. Employees must fill out every data field before completing a new customer application.

Throughout 2014, we made excellent progress on our control agenda. We exited 5,000 Politically Exposed Person relationships and 4,000 relationships with small businesses in high-risk geographies and industries. And we closed more than 100,000 accounts through AML screening and monitoring processes. We hope that by the end of 2015, we will have closed most of our legacy issues and invested in a stronger, simpler and safer business for the long term.

As we move forward into 2015, our core strategy is focused on three key areas: customers, controls and profitability. We will continue to focus on a great customer experience while investing in the best mobile and digital capabilities in the industry. We will continue to further simplify our business by reducing the number of non-core products we have and investing in automation. And to deliver shareholder value, we will meet our expense targets and drive out unnecessary costs while continuing to invest in our business.

Conclusion

Across CCB, we feel very well-positioned for the future. The CCB Leadership Team and I are so proud to serve our customers and shareholders and to lead this exceptional business. Thank you for your investment in our company.

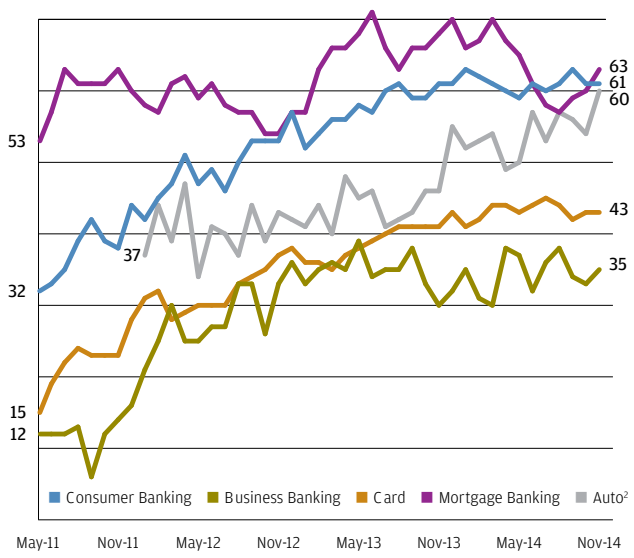


Gordon Smith
CEO, Consumer & Community Banking

2014 HIGHLIGHTS AND ACCOMPLISHMENTS

- Consumer relationships with almost half of U.S. households
- #1 among large banks in the 2014 American Customer Satisfaction Index survey for the third year in a row
- #1 primary banking relationship share in our footprint
- #1 in deposit growth among the largest 50 U.S. banks by the FDIC
- Outpaced the industry in deposit growth for the third consecutive year
- #1 in deposit share in three of the largest deposit markets
- #1 most visited banking portal in the United States – chase.com; #1 mobile banking functionality
- #1 Small Business Administration lender for women and minorities in the United States for the third year in a row
- #1 credit card issuer in the United States based on loans outstanding
- #1 U.S. co-brand credit card issuer
- #1 in total U.S. credit and debit payments volume
- #1 wholly-owned merchant acquirer in the United States
- #2 mortgage originator; #2 mortgage servicer
- #3 non-captive auto lender

Net Promoter Score[1]

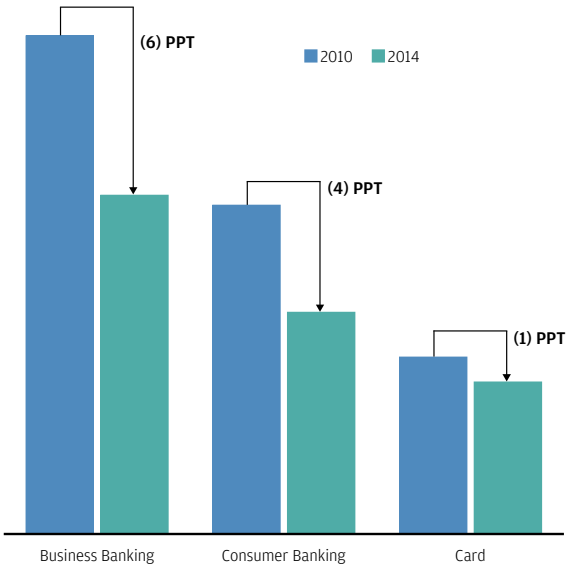


Source: Internal data

[1] Note: Net Promoter Score (NPS) = % promoters minus % detractors

[2] Auto NPS score tracked beginning in January 2012

Chase Household Attrition Rates[3]



Source: Internal data

[3] Includes households that close all Chase accounts; average of annualized monthly attrition rates over 12 months for 2010 and 2014

PPT = Percentage points



The Branch of the Future is here today

In our branches, state-of-the-art smart ATMs allow customers to self-serve for transactions. Today, 50% of all transactions can be made at an ATM. By the end of 2016, that number will be 90%.

Corporate & Investment Bank



Daniel Pinto

In 2014, the Corporate & Investment Bank (CIB) continued to deliver for clients on the strength of its unique scale, its complete range of offerings and its global reach.

By any measure, the J.P. Morgan CIB is an outstanding franchise. No other firm places so consistently among the top ranks of products across Investment Banking, Markets and Investor Services. Our 2014 performance stands as an example of our ability to adapt to new capital and regulatory rules while optimizing our business, capturing efficiencies and targeting expense reductions – even as we continued to invest for the future.

With a global roster of 7,200 clients, counting more than 80% among the Fortune 500, the CIB offers an inventory of integrated financial products and services. To serve that client base, the CIB has more than 51,000 employees and a presence in 60 countries. Our expertise runs the gamut across investment banking, market-making, investor services, treasury services and research. The work we accomplished in 2014 on behalf of our clients is reflected in our top-tier rankings across the CIB's spectrum of products and services.

Last year, J.P. Morgan helped clients raise $1.6 trillion in capital, a 7% increase over the previous year. Of that amount, $61 billion was raised on behalf of states, local governments, hospitals, universities, school districts and nonprofits. Those funds were earmarked to build research facilities, construct children's hospitals, finance clean water projects through green bonds and extend new rail lines in cities to alleviate traffic congestion, among other public service projects. The CIB also was the #1 firm in U.S. dollar clearing for clients with a 19% share on Fedwire and the Clearing House Interbank Payments System (CHIPS).

It is a franchise that would be extremely difficult to replicate, especially in the regulatory and economic environment we encounter today.

But we are not complacent. Nor do we take our top rankings for granted. In an evolving industry, we must be willing to anticipate and embrace change, operate efficiently and be vigilant in ensuring that our conduct doesn't just meet high standards – it sets them.

In a year marked by uneven economic recovery in Europe, low market volatility and the implementation of additional capital standards, the ability to embrace change and adapt enabled the CIB to maintain its leading market share across all business lines and generate strong returns on $34.6 billion in net revenue – the highest among our corporate and investment bank peers.

With an improving global economy in 2015, I am confident that many of the headwinds we encountered last year will turn into tailwinds. As the recovery spreads throughout regions, countries and industry sectors, we foresee CEOs gaining confidence to pursue more opportunities. We remain one of the few truly global banks that can provide the complete array of products and services to fuel corporate growth, which, in turn, underpins economic expansion.

Earnings

For the year, the CIB reported net income of $6.9 billion on net revenue of $34.6 billion with a reported return on equity (ROE) of 10%. Excluding legal expense, the CIB earned $8.7 billion with an ROE of 13%. Investment Banking fees of $6.6 billion were up 4% from the year before. And since 2010, the CIB's Global Investment Banking fees have risen by 25% compared with 17% for the rest of the industry, according to Dealogic.

Combined revenue in Treasury Services and Securities Services rose by 15% during the past five years, far outpacing the rest of the top players' 2% gain.

The Corporate & Investment Bank's broad range of products and services has the positive effect of smoothing out business fluctuations in different market and economic environments. For example, since 2010, the CIB

experienced overall volatility in annual revenue of just 4% compared with 6% for its top competitors. That stability, across fixed income and equity markets, is rooted in our tradition of strong risk management.

What's more, this year's ROE is calculated on $61 billion of allocated capital, which is $13.5 billion, or 28%, greater today than it was in 2012.

But strong results going forward depend upon our maintaining a disciplined approach to expenses. Since 2010, we have reduced front office costs by more than $2 billion. Although much of that reduction has been offset by cost increases in controls, litigation and regulatory fees, we believe those areas are reaching a peak and will normalize over time.

Over the next three years, we have targeted expense reductions of $2.8 billion, partly coming from more end-to-end efficiencies in technology and operations and a better allocation of resources according to the depth of client relationships. We also expect to capture cost savings from divestitures and simplification efforts already undertaken in 2014.

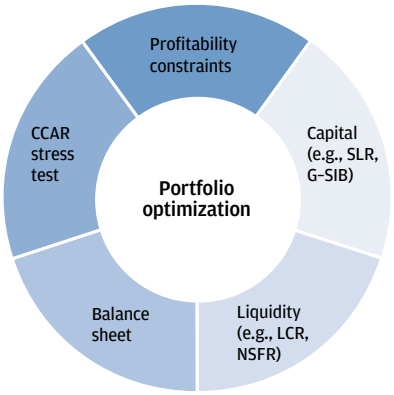
Serving clients = gaining share

J.P. Morgan gained share and continued to hold top-tier positions across our lines of business, a testament to the firm's client focus and resiliency. In a difficult year, the CIB share of Investment Banking fee revenue led the industry at 8.1%, maintaining its #1 ranking for the sixth year in a row, according to Dealogic.

Also impressive is our ability to work collaboratively across business lines, making it easier for clients to realize their strategic growth plans. For instance, by collaborating across the firm, the CIB once again was able to facilitate client strategies through its partnerships, notably with Asset Management and Commercial Banking. In fact, more Commercial Banking business flowed to the CIB during 2014 than ever before, generating a record $2 billion in Investment Banking revenue, up by 18% compared with the year before. The power of our partnership with Commercial Banking has been an important factor in bolstering J.P. Morgan's market share, even as the overall industry wallet has declined in recent years.

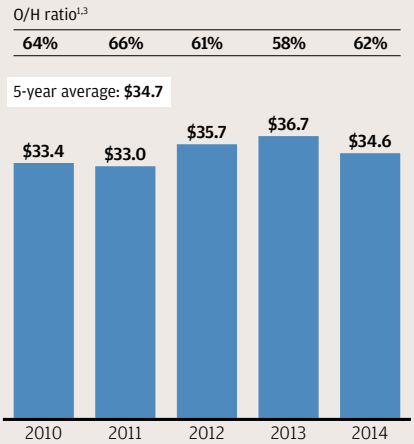
In 2014, our client demographic continued its shift toward international business. Since 2010, the CIB's combined revenue from Europe, the Middle East and Africa (EMEA), Asia Pacific and Latin America grew by

Optimizing the Businesses under Multiple Constraints



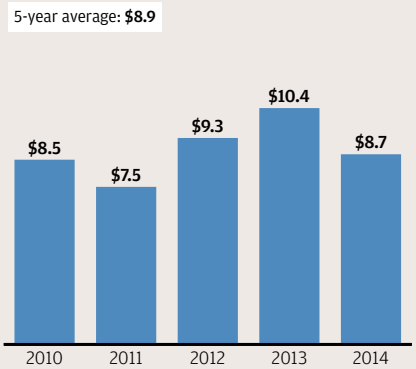
Net Revenue and Overhead Ratio[1,2]

($ in billions)



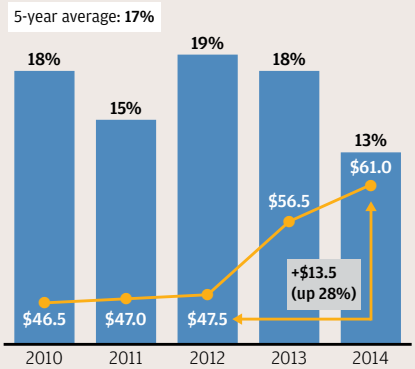
Net Income[1,2,3]

($ in billions)



ROE[1,3] (%) and Capital

($ in billions)



[1] Net revenue, net income, ROE and overhead (O/H) ratio, exclude FVA (effective 2013) and DVA, non-GAAP financial measures, for 2013 and prior years. These measures are used by management for assessment of the underlying performance of the business and for comparability with peers

[2] All years have been revised for preferred dividends

[3] All years exclude the impact of legal expense

DVA = debit valuation adjustment; FVA = funding valuation adjustment; GAAP = generally accepted accounting principles in the U.S.; LCR = liquidity coverage ratio; NSFR = net stable funding ratio; SLR = supplementary leverage ratio

12%. In recent years, international clients collectively have accounted for half of our revenue. They are progressively seeking a broader range of our services and using more of J.P. Morgan's product lineup. As of 2014, about half of our international clients use five or more products, while single-product client relationships have declined by 30%. Internationally, loans grew by 24%, assets under custody are up 36% and cross-border revenue with corporate clients has grown by 13% since 2010.

In Investor Services, clients entrusted J.P. Morgan with $20.5 trillion in assets under custody, up from $16.1 trillion in 2010, driven by asset appreciation, as well as client inflows.

Treasury Services operating deposits have nearly doubled since 2010. In Markets, we now have an 11.5% market share in equities due to a 7% gain in revenue since 2010 compared with revenue for the rest of the top 10 banks, which is down collectively by 7%. And in fixed income markets, our share has consistently ranked #1 during the last five years.

Achieving completeness while simplifying

Having a complete set of core products, accessible to clients across a global network, does not mean we intend to be all things to all people.

As a result of shifts in the regulatory and market environments, we shed ancillary businesses in 2014, including the Global Special Opportunities Group investment portfolio, as well as our physical commodities activities – though we kept our core financial commodities business.

No industry operates in a static environment, least of all ours, so we recognize the necessity of being adaptable and nimble. The CIB has established a successful track record of optimizing its business model while adjusting to multiple regulatory and other constraints, among them leverage, liquidity, Comprehensive Capital Analysis and Review stress testing, G-SIB and Basel rules. We push down to a very granular level in the organization the achievement of strong risk-adjusted returns in order to maximize long-term shareholder value. For our newest constraint, G-SIB, the CIB will be optimizing capital usage across clients, products and G-SIB factors.

In implementing those efforts, along with others, we have simplified our structure, improved our overall risk profile, and focused our attention on the business lines most valuable to clients and the CIB. By selectively narrowing our business, we also improved our ability to invest in the technologies and services our clients will require and demand in the future while making us stronger for the long term.

"How We Do Business — The Report"

During the course of last year, one of our most important projects was a self-examination leading to an in-depth report called "How We Do Business – The Report." J.P. Morgan's culture and conduct must be based on integrity, respect for our colleagues and, above all, a commitment to always act in our clients' best interests. In putting the lessons we've learned into practice, we are escalating issues promptly. We also have developed enhanced training programs and are working with our regulators around the world to improve our communication and transparency. When every one of our employees comes to work in the morning, the guiding principle should be, and I believe it is, to do the right thing for our clients at all times.

Drawing from the report, we have rededicated ourselves to the principles espoused by J.P. Morgan, Jr., in 1933 when he said: "I should state that at all times, the idea of doing only first-class business, and that in a first-class way, has been before our minds."

Our strategies

We are continually looking for ways to improve, be more efficient and serve our clients better. Efficiency is not a code word for eliminating worthwhile and beneficial products and services. To us, it means cultivating and mining our business to find ways we can provide our services faster, better and more effectively.

Efficiency means making incremental investments to enhance and expand what we offer, closing gaps to increase our longer term profitability and embracing the raft of change that is sure to define our industry going forward. We also will be looking to leverage a best-in-class infrastructure across the CIB, retiring duplicative platforms and participating in industry utilities to perform non-proprietary functions across our lines of business.

In our Global Investment Banking business, we will build on our leadership positions across advisory, investing in sectors and geographies where we see areas of opportunity and continued growth.

At the same time, we are making the necessary investments across our Markets businesses and are implementing trading technologies to ensure we are operationally prepared to capture client flows in whichever form our clients want to trade. Already, we have seen gains through our efforts to date. Equity e-commerce volume is up by 22% in the United States and by 57% in EMEA, just in the last year. Recently, we have

consistently captured share gains in foreign exchange e-commerce, and we hold top-tier rankings on most of the major multi-dealer platforms.

As an active market-maker, we can foresee the increasing complexity that will define the Markets business. Our strategy recognizes that change is inevitable, even if its exact nature cannot be foretold. But in whatever form our clients need us, the CIB will be prepared to capture client flow in all its various forms. Whether it's by voice, electronic or direct market access; whether we are acting on a principal basis or on an agency basis, we will be there for our clients with the products they want.

Our Treasury Services business will focus on the needs of global multinationals to capture the cross-border payments and foreign exchange business associated with increasing global trade flows. With our investments in electronic commerce, we actively will pursue opportunities to migrate clients to electronic solutions and look for more efficiencies across our technology platforms.

Our Investor Services business, which contains some of our most important businesses on behalf of institutional investors and broker-dealers, has made great strides to improve the end-to-end client experience. We want to make doing business with us as easy as possible – from sales to onboarding to operations and technology to client service.

From a capital perspective, the CIB will continue to be affected by rules based on risk-weighted assets. We will adjust our mix of capital-intensive businesses accordingly and fine-tune the platform as needed. We are intent on reducing our capital-footprint and on keeping ourselves nimble while remaining true to our reputation of providing liquidity and capital in any market environment.

Looking ahead, the signals are positive for a global economy that is gaining momentum. Increasing confidence among consumers and CEOs is expected to continue. That would underpin strong corporate earnings and healthy markets and sustain the active level of merger and acquisition (M&A) activity that marked 2014. Our M&A practice particularly was strong in 2014, with improved wallet share on global industry-wide volume that was up by 26% for the year. We believe 2015 will be another active period in which clients will look to us for global advisory capabilities and cross-border expertise. Our proven track record includes advising on the largest, most complex deals, which, in many cases, involved acquisition financing and strategies to address shareholder views and other marketplace forces.

Emerging markets economies are becoming increasingly important in global commerce. Both as consumers and as sources of new products and services, multinational companies are expanding their operations in those economies and will require the breadth of services J.P. Morgan uniquely is able to provide.

In 2015, we will execute our strategy in a way that optimizes capital, supports our clients and aids economic growth. Global institutions turn to J.P. Morgan because it has the talent, expertise and portfolio of services needed to conduct their business. We look forward to continuing that tradition in 2015 and beyond.



Daniel Pinto
CEO, Corporate & Investment Bank

2014 HIGHLIGHTS AND ACCOMPLISHMENTS

- The Corporate & Investment Bank delivered market-leading performance in 2014; $34.6 billion in net revenue was the largest in the industry.
- J.P. Morgan helped clients raise $1.6 trillion in capital – 7% more than in the previous year. Of that amount, $61 billion was raised on behalf of states, local governments and public institutions to finance educational facilities, healthcare, environmental projects and other similar purposes.
- Clients entrusted J.P. Morgan with $20.5 trillion in assets under custody, up from $16.1 trillion in 2010.
- Treasury Services and Securities Services revenue rose by 15% during the past five years, far outpacing the rest of the top players' 2% gain.
- The CIB has more than 51,000 employees with a presence in 60 countries, serving 7,200 of the world's most significant corporates and financial institutions, governments and nonprofit organizations.
- No other firm in 2014 placed so consistently among the top ranks of products across Investment Banking, Markets and Investor Services.
- The CIB is targeting $2.8 billion in expense reductions by 2017, including capturing cost savings from divestitures and simplification efforts already undertaken in 2014.
- The firm's business mix is increasingly becoming international; since 2010, the CIB's combined revenue from EMEA, Asia Pacific and Latin America has grown by 12%.

Commercial Banking



Douglas Petno

Our commitment is to be the best commercial bank by helping our clients succeed and by making a positive difference in our communities. In 2014, this meant investing in our business and controls, remaining focused on our clients, and continuing to execute our proven strategy with discipline and patience.

For the year, Commercial Banking (CB) delivered strong results, earning $2.6 billion of net income on revenue of $6.9 billion. Our continued expense discipline and exceptional credit performance helped us achieve a return on equity of 18%. We are quite proud of these results as our business continues to navigate changes in the regulatory landscape and adapt to shifting market pressures.

The drivers of our success remain consistent over time: We have an outstanding client franchise, real competitive advantages and a sustainable growth plan. I'm proud to convey our progress for 2014 and share our exciting plans for 2015.

Everything starts with our clients

Selecting the best clients is absolutely critical to the value of our franchise and is deeply embedded in our culture. We seek clients that are highly reputable, share our risk philosophy, have strong management teams and work in preferred industries we truly understand. We believe that we are judged by the company we keep, and, as such, our fantastic client franchise is the foundation for our entire business.

With our global reach and broad-based capabilities, we empower our bankers to be there for our clients with advice, capital and industry insights. By knowing their business, supporting their ambitions and understanding their challenges, we are able to best serve our clients and build strong relationships.

Trust and relationships are often reinforced in times of trouble. That was the case for one of our clients, a large beverage distributor based in the Seattle area. A few years ago, an unexpected industry sales tax increase caused the company to lose a significant portion of revenue within a short time period. The family-run business needed patience to execute a long-term recovery plan and avoid dramatic job reductions. During this stressful and challenging period, our beverage industry bankers consistently met with senior managers at the company to provide advice and guidance while they developed their plan. In 2014, the company successfully completed its turnaround. Staying with our clients through times like this, and earning their trust and gratitude, is the reason we come to work each day. We pride ourselves on our relationship focus and the loyal support we provide our clients.

Real competitive advantages

Our clients rely on our industry-leading capabilities and comprehensive services that no other commercial bank can provide. As part of JPMorgan Chase, CB is uniquely positioned with access to the #1 investment bank, a leading asset management business, comprehensive payments and treasury services, and an extensive branch footprint. Today, our typical client uses nine of our products and services, and it is common to see our longer-term relationships use more than 20.

When our clients seek to make more efficient payments, generate better reporting, and securely process transactions from their own customers, we leverage our market-leading commercial payments platforms. In 2014, less than 30% of our clients utilized our commercial card and merchant services capabilities. We believe we can double the usage rates of both of these products over time.

Collaborating with the Corporate & Investment Bank (CIB) enables us to bring differentiated advice and market access to our clients. In 2014, CB relationships generated a record $2 billion in investment banking revenue, representing 35% of the CIB's North American investment banking revenue and reaching the revenue target we set in

2011. We accomplished this by advising 75 clients on strategic transactions and executing more than 1,200 capital markets financings. As we expand our coverage, we believe we can do even more for our clients. We have set a new, long-term goal of $3 billion in investment banking revenue, and we are confident our partnership with the CIB will enable us to deliver over time.

While our platform and capabilities differentiate us, our success ultimately hinges on our people. We have 7,300 employees, including 1,400 bankers in 118 U.S. cities and 14 international locations. These employees average 20 years of experience, have deep industry expertise and are firmly rooted in their local communities. I'm incredibly proud of the quality and integrity of our people. Their continuous focus on our clients and positive impact in their communities never cease to impress.

Sustainable growth

We continue to execute our disciplined, long-term growth plan, which is designed to add new, high-quality clients and deepen those relationships over time. We are growing our customer base by selectively expanding our geographic footprint and focusing on key growth industries.

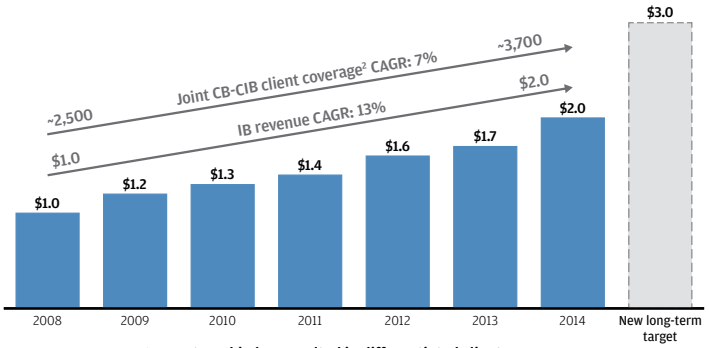
In 2014, we continued to pursue our market expansion strategy in the United States, increasing our footprint to 34 new markets, where we served nearly 1,700 clients and generated $327 million in revenue. We are on our way to reaching our long-term revenue target of $1 billion from these expansion markets.

To enhance our long-standing industry leadership positions, we are adding specialized bankers and underwriters in many key industries such as technology, healthcare, and food and agriculture. Industry specialization allows us to better deliver client-specific solutions, manage industry risks and demonstrate continuity across the industry life cycle. We see real opportunities to expand our relationships in these key industries and have positioned our teams to best serve these markets.

More and more of our Middle Market Banking clients expect their international activity to increase and be a meaningful percentage of total sales in the next few years. Our International Banking team is well-positioned to help these clients grow and operate in overseas markets. We've added dedicated resources in 14 key international locations and have access to JPMorgan Chase's international footprint in 60 countries.

Commercial Banking Gross Investment Banking Revenue[1]

($ in billions)



CIB partnership has resulted in differentiated client coverage

In our real estate businesses, we continue to see an excellent opportunity to grow our loan portfolio. We believe we can add high-quality assets through the current market environment, as well as benefit from the $1 trillion of industry maturities that are due over the next three years. In addition, our lending platform is unique in the market and has allowed us to support new clients throughout the life of their loans. We are well-positioned to take advantage of this tremendous opportunity and be a stable source of capital for clients.

Clear priorities

Our priorities for 2015 reflect our mission. To help our clients succeed and make a difference in our communities, we will continue to invest in our business and hire the best people in our markets. We will focus on delivering individual customer solutions to build deeper, stronger relationships. We will continue to safeguard our clients and our business by maintaining our fortress controls. This means understanding all risks in our business and investing in process improvements as needed.

I am incredibly proud of the entire Commercial Banking team. Because of its leadership and fortitude, we've been able to successfully adapt to the evolving regulatory environment and remain disciplined in a competitive market. 2014 showed the real power of our franchise, and I am excited about what we will achieve this year and beyond for our shareholders, clients and employees.



Douglas Petno
CEO, Commercial Banking

[1] Represents the total revenue related to investment banking products sold to CB clients

[2] Commercial Banking clients and prospects jointly covered by the CIB

CAGR = Compound annual growth rate

2014 HIGHLIGHTS AND ACCOMPLISHMENTS

Performance highlights

- Revenue of $6.9 billion
- Grew end-of-period loans 8%; 18 consecutive quarters of loan growth
- Generated return on equity of 18% on $14 billion of allocated capital
- Continued superior credit quality – net charge-off ratio of 0%

Leadership positions

- Top 3 traditional middle market syndicated lender[1]
- #1 U.S. multifamily lender[2]
- J.P. Morgan ACCESS Online ranked the #1 cash management portal in North America by Greenwich Associates[3]

Business segment highlights

- Middle Market Banking – Fifth consecutive year of loan growth; added more than 550 new clients
- Corporate Client Banking – Record gross investment banking revenue[4]
- Commercial Term Lending – Record quarterly originations; full-year originations of nearly $13 billion
- Real Estate Banking – Eighth consecutive quarter of loan growth with a record $10 billion in originations
- Community Development Banking – Originated more than $1 billion in new construction loans, building 9,000 units of affordable housing in nearly 90 cities within our footprint

Firmwide contribution

- Commercial Banking clients accounted for 35% of total North American investment banking fees[5]
- $2.4 billion in treasury services revenue
- Almost $120 billion in assets under management from Commercial Banking clients, generating close to $500 million in investment management revenue
- $490 million in Card Services revenue[4]

Progress in key growth areas

- Middle Market expansion – Record revenue of $327 million; 19% CAGR[6] since 2012
- Investment Banking – Record gross revenue[4] of $2 billion; 12% CAGR[6] since 2012
- International Banking – Record revenue[7] of $304 million; 13% CAGR[6] since 2012

[1] Thomson Reuters as of year-end 2014. Traditional middle market is defined as credit facilities of <$100 million from clients with <$500 million in revenue

[2] Federal Deposit Insurance Corporation data as of 3Q 2014

[3] Greenwich Associates 2014 Online Services Benchmarking Study

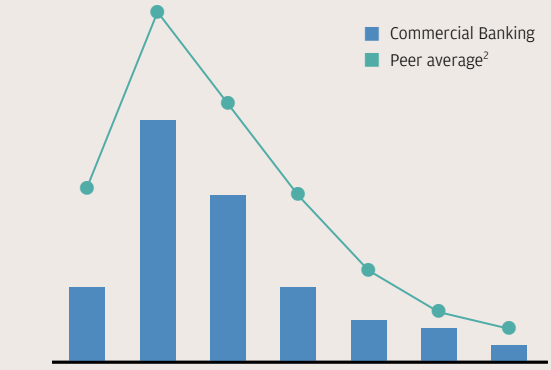
[4] Investment banking and Card Services revenue represents gross revenue generated by CB clients. Investment banking includes Banking and Markets revenue. Card Services includes Commercial Card and Paymentech revenue

[5] Calculated based on gross domestic investment banking revenue for syndicated and leveraged finance, M&A, equity underwriting and bond underwriting

[6] Compound annual growth rate

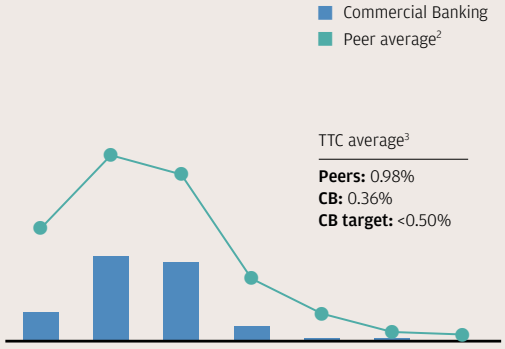
[7] Denotes overseas revenue from U.S. multinational clients

Non-performing Loans[1]



	2008	2009[4]	2010[4]	2011	2012	2013	2014
Peers	2.1%	4.2%	3.1%	2.0%	1.1%	0.6%	0.4%
CB	0.9%	2.9%	2.0%	0.9%	0.5%	0.4%	0.2%

Net Charge-offs



	2008	2009[5]	2010[5]	2011	2012	2013	2014
Peers	1.4%	2.2%	2.0%	0.8%	0.3%	0.1%	0.1%
CB	0.4%	1.0%	0.9%	0.2%	0.0%[6]	0.0%[6]	0.0%

[1] Based on end-of-period loans

[2] Peer averages include CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC

[3] Through-the-cycle (TTC), 2008-2014 average

[4] Excluding pre-acquisition Washington Mutual (WaMu) originations, Chase represented 1.67% in 2009 and 1.02% in 2010

[5] Excluding pre-acquisition WaMu originations, Chase represented 0.93% in 2009 and 0.74% in 2010

[6] Commercial Banking net charge-offs for 2012 and 2013 were 0.03%

Asset Management



Mary Callahan Erdoes

At J.P. Morgan Asset Management, we take great pride in the fact that so many institutions and individuals around the world entrust us to manage their money. Clients rely on our advice, ideas and solutions for some of their most meaningful life events, from saving for college or retirement to securing their family's future to supporting philanthropic and charitable endeavors. With a heritage dating back nearly 200 years, we know how important it is to earn clients' trust, and we recognize that it is our responsibility to re-earn that trust every day.

Our strong fiduciary culture enables us to stay focused first and foremost on our top priority: long-term investment performance. This core principle of our business, combined with advice-driven client coverage teams, has enabled us to build a leading global client franchise that delivers superior investment strategies to our clients and strong financial performance to our shareholders.

Consistently reporting strong investment performance for clients

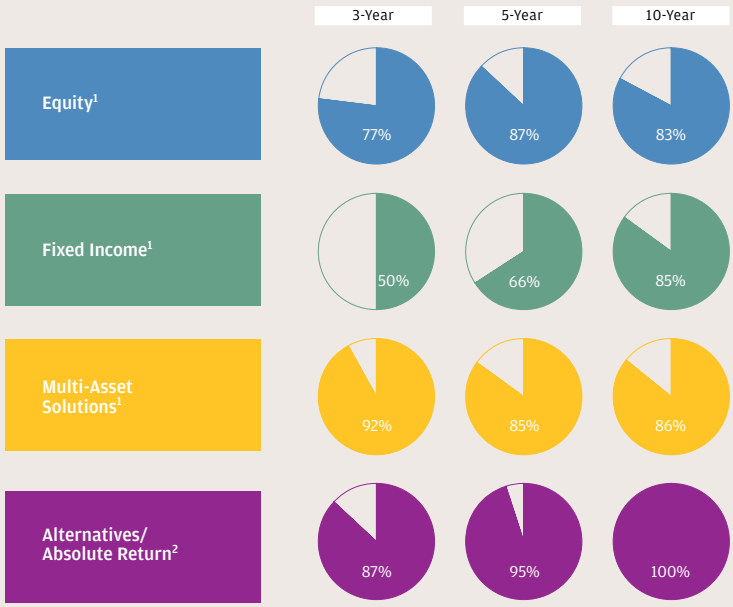
Success, both for our clients and our business, begins with our continuous investment in research for our clients. Our investment management platform, for example, has a global network of more than 600 portfolio managers, 250 research analysts and 30 market strategists.

Our research-based approach has led to 84% of our 10-year long-term mutual fund assets under management (AUM) placing in the top two performance quartiles and 228 of our mutual funds being 4- or 5-star rated. It is worth noting that our performance is not the result of strength in one particular asset class or region. It represents top-tier performance spanning asset classes around the world.

Client flows

Clients around the globe vote with their feet, and they continue to entrust us with more of their assets every year. In 2014, our client assets grew to $2.4 trillion as we received an additional $100 billion in net long-term client asset flows. In fact, since 2010, we have averaged $100 billion per year in net long-term client asset flows.

% of 2014 Assets Under Management Over Peer Median[1]/Benchmark[2]
(net of fees)



[1] Represents the proportion of retail open-ended mutual fund assets that are ranked above peer category median

[2] Represents the proportion of GIM assets in mutual funds, commingled funds and segregated portfolios that are exceeding (net of management fees) their respective official benchmark. Excludes private equity, real assets and other longer-dated or closed-end investment strategies

For footnoted information, refer to slides 23 and 24 in the 2015 Asset Management Investor Day presentation, which is available on JPMorgan Chase & Co.'s website at http://investor.shareholder.com/jpmorganchase/presentations.cfm, under the heading JPMorgan Chase 2015 Investor Day, Asset Management, and on Form 8-K as furnished to the SEC on February 24, 2015, which is available on the SEC's website at www.sec.gov.

We also have achieved 23 consecutive quarters of positive long-term AUM flows, a milestone that few, if any, of our competitors can match. Our active equity mutual fund flows ranked #2 in the industry in 2014, marking our third consecutive year ranking in the top three. In fixed income, we ranked #4 in long-term active mutual fund AUM flows, and, importantly, we are the only firm that ranked in the top four in each of the past five years.

Creating strong financial performance for shareholders

We are proud of being able to deliver such impactful results to our clients while, at the same time, delivering first-rate financial performance to our shareholders. In 2014, we achieved revenue growth of 5%, pre-tax income growth of 5%, pre-tax margin of 29% and return on equity of 23%.

Within the business, each of our client franchises – Global Investment Management (GIM) and Global Wealth Management (GWM) – continues to deliver impressive growth. In 2014, both businesses achieved record annual revenue and strong pre-tax earnings growth. Given the long-term approach we take to running our business, we are even prouder of our sustained performance over the past five years.

GIM

Since 2009, GIM has a compound annual growth rate (CAGR) of 9% for revenue and 7% for pre-tax earnings. That success is due, in large part, to our core strengths of being insight driven, taking a long-term approach and leveraging our global talent. Our retail funds business has had impressive asset gains, with five-year growth of 120%. Our institutional business is growing faster than the market in all client channels – insurance, defined contribution, U.S. endowments and foundations, sovereign wealth funds and defined benefit.

GWM

It is an equally powerful story in GWM, where revenue and pre-tax income have increased at a CAGR of 8% and 7%, respectively, since 2009. We continue to differentiate ourselves in the marketplace as the firm that can offer unparalleled insights to help clients fulfill their vision. As an example of our clients' commitment to GWM, more than 50% of our assets come from clients with at least $100 million entrusted with the firm. All of our clients, no matter the size of their relationship with us, choose to work with J.P. Morgan because we take the time to get to know their personal needs, and we can help them across both sides of their balance sheet.

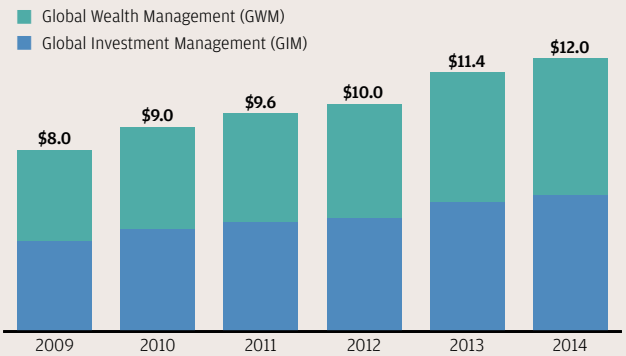
Continuously reinvesting for the future

Our success would not be possible without continued reinvestment in the business – both to expand our offering and to maintain a strong control and risk environment. Our long-term commitment to building the best possible franchise means that we always are focused on ways to improve our business across all market cycles.

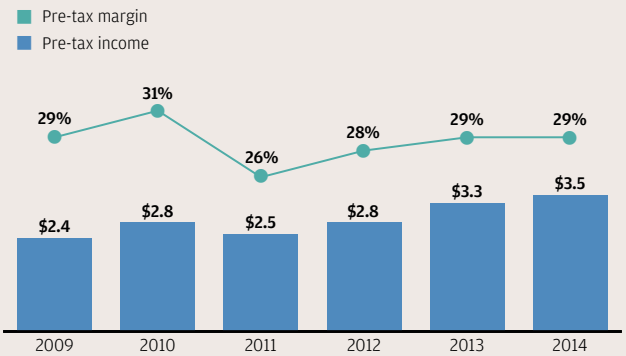
Adding top advisors to cover more clients

We continue to invest in bringing on world-class talent. Over the last five years, we hired and trained hundreds of new advisors. Expanding our client coverage teams enables us to help more clients around the world who need investment expertise and long-

Revenue
($ in billions)



Pre-tax Income
($ in billions)



term solutions. We have nearly 20,000 people serving clients in more than 130 countries across the globe, including 60% of the world's largest pension funds, sovereign wealth funds and central banks; more than 3,000 global financial intermediaries; and many of the world's wealthiest individuals and families.

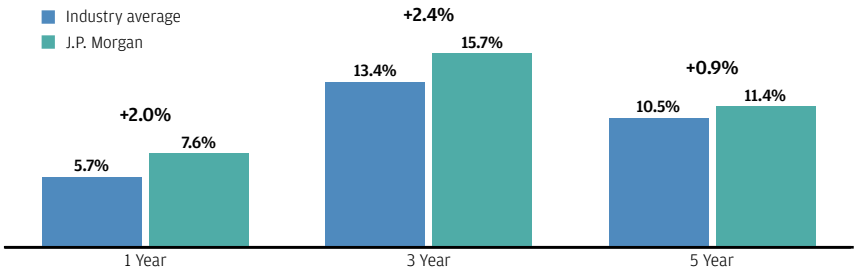
Leader in Alternatives

We are one of the leading alternatives providers, with $214 billion in alternatives/absolute return client assets across our client franchises. That places us ahead of nearly all of the largest players in this space. Much of our growth is due to our focus on innovating to meet client needs. In 2014, we introduced more than 30 new strategies focusing on timely themes that include private technology late-stage equity, emerging markets growth equity, specialty insurance and credit, liquid alternatives and infrastructure.

High-growth multi-asset solutions platform

In 2015, we are faced with global central bank policy divergence, regulatory changes, complex geopolitical issues and increasing market volatility. Given this landscape, investors are looking for solutions providers who can act quickly and offer go-anywhere and absolute return-focused strategies to complement their portfolios.

SmartRetirement 2035 (S&P Target Date 2035)[1]



[1] Fund and index performance as of 12/31/14. Fund performance is net of fees. SmartRetirement performance is reflective of U.S. select shares. S&P Target Date 2035 total return USD represents Total Return Index. Past performance is not indicative of future performance, which may vary. Industry average source: Morningstar, *Strategic Insight* and eVestment

GIM's multi-asset solutions business is designed to help clients in this regard. The business has seen tremendous growth over the past five years, with a CAGR of 31%. That places us firmly in front of the industry average of 13%. Our momentum includes having our SmartRetirement offering named 2014 U.S. Allocation Fund Manager of the Year by Morningstar, with seven of its nine vintages in the top decile over the past five years.

A strong position with room to grow

We are incredibly proud of how our business has evolved over the past years, decades and centuries. We are doing more for clients than ever before, and our commitment to first-class business in a first-class way has created a franchise that would be hard to replicate. It is a great privilege to be entrusted with so many client assets from around the world. In return, we are committed to working hard every day to continue to generate value for clients, shareholders and employees.



Mary Callahan Erdoes
CEO, Asset Management

2014 HIGHLIGHTS AND ACCOMPLISHMENTS

- Best Global Wealth Manager, *Euromoney* Global Excellence Awards
- #1 U.S. Large Cap Core Equity Manager of the Year, *Institutional Investor*
- #1 Equity and Fixed Income Private Bank Portfolio Management, *Euromoney*
- #1 Institutional Money Market Fund Manager Worldwide, *iMoneyNet*
- #1 Global Active Long-Term Mutual Fund Flows, *Strategic Insight*
- 2014 U.S. Allocation Fund Manager of the Year, Morningstar
- Top European Buyside Firm, Thomson Reuters Extel
- Best Asset Management Company for Asia, *The Asset*
- Best Private Bank for Asia High-Net-Worth, *The Asset*
- #1 Large Fund of Hedge Funds Manager of the Year, *Institutional Investor*

Corporate Responsibility



Peter Scher

A common challenge facing communities around the world is the need for greater economic growth and more widely shared prosperity. Creating more jobs, starting and expanding businesses, and removing barriers to opportunity will not only benefit society but, by extension, our firm.

At the core of our business, JPMorgan Chase is in a unique position to help our clients navigate an ever more complex global economy and spur the growth that fuels their progress. We not only understand the challenges clients are facing, we have the skills, resources and expertise to make a meaningful difference in helping solve them.

Our corporate responsibility work has the same objective – to use the skills, resources and expertise of our firm to support the economic growth and progress of our communities. In recent years, we have sharpened that focus. With millions of people around the world migrating to urban areas, cities are fast becoming the key drivers of global economic growth – and essential linchpins in expanding access to opportunity. So we have refocused many of our efforts on helping develop strategies to bolster the long-term economic vitality of the world's cities.

In 2014, we developed and expanded our programs with a focus on three distinct challenges:

First, we are helping metropolitan regions compete more effectively in the global economy. Through our Global Cities Initiative with the Brookings Institution, we have expanded our work to help cities in the United States, Europe, Asia and Latin America develop strategies for increasing international trade and investment ties.

Second, we are helping cities around the world address one of their biggest challenges: the need for a better trained workforce to fill the millions of jobs left open due to a shortage of applicants with the right skills. Through our New Skills at Work program, we are developing strategies that align workforce training with the skills employers seek and are providing much-needed data to strengthen workforce systems.

Finally, we are helping cities create thriving small business sectors centered around high-growth industries through our Small Business Forward initiative.

All of these challenges come together in Detroit. In 2014, we made a $100 million, five-year commitment to the city's economic recovery that brings together both business and philanthropic resources to support and accelerate some of the most innovative efforts underway to revitalize an iconic American city. But we're putting more than just our money to work; our people have significant expertise to offer, and, in 2014, we sent a dozen of our top managers from around the world to Detroit to work with local nonprofits. It's a model we plan to replicate and expand in the coming years.

Underpinning all of these efforts is the belief that achieving meaningful impact requires us to apply the same standard to our philanthropic investments as we do to our business investments: a genuine commitment to accountability, transparency and impact.

To that end, we recently formed a five-year partnership with the Urban Institute, one of the most well-respected nonprofit research organizations in the United States, to assess our major philanthropic initiatives – to analyze our efforts, produce independent research and strengthen our programs – further advancing our commitment to maximum impact for our communities and accountability to our shareholders.

We are very proud of our work over this past year and are committed to making our communities and our firm even stronger.



Peter Scher
Head of Corporate Responsibility

Invested in Detroit

JPMorgan Chase has roots in Detroit going back to the 1930s, supporting our clients and the community through the investments, loans and other services that are core to our business. And while we recognize that the city's challenges remain significant, JPMorgan Chase believes that Detroit has the ingredients and intrinsic strengths to rebuild a vibrant, modern economy.

In 2014, JPMorgan Chase launched a $100 million, five-year commitment to support and accelerate the dynamic recovery that is underway in Detroit:

- Community Development: We provided $40 million in responsive, long-term investment capital to two leading community development financial institutions to finance vital projects that often lack access to traditional sources of capital.
- Stronger Neighborhoods: Our support of the Detroit Land Bank Authority and our innovative partnership with a local community bank to provide rehabilitation loan financing are accelerating the city's ambitious efforts to reduce blight and stabilize neighborhoods.
- Workforce Readiness: We are helping the city strengthen its workforce system, build partnerships between employers and training programs, and give residents access to training in the skills employers are seeking.
- Small Business Growth: We are partnering with local nonprofits to help Detroit's vibrant small businesses access the resources and expertise needed to get their businesses off the ground.

Detroit's recovery will take time, but we are excited by the progress we have seen so far. We're in the city for the long term, and we will continue to learn and adapt as we work with our partners to help tackle Detroit's challenges.

New Skills at Work

In December 2013, we launched New Skills at Work, a $250 million, five-year workforce readiness initiative to close skills gaps in sectors where employers struggle to fill vacancies and to help job seekers access the education and training required for these positions. A key component of the program is focused on research that provides actionable data to better understand the dynamics of labor markets. Based on those findings, we directed grants to support innovative nonprofit programs around the world that demonstrate success working with employers to articulate demand in growing sectors and training workers in those high-demand areas. Here are some examples:

- In Houston, we co-chaired a task force composed of businesses, training programs and educational institutions that developed UpSkill Houston, a five-year plan to raise awareness of middle-skill job opportunities, increase access to technical education and training, and improve the alignment between employers and education/training providers.



- In Europe, we provided data-driven, country-specific analyses that map the latest employment trends and identify barriers to full and inclusive employment in the United Kingdom, Germany, Spain and France. In conjunction with U.K.-based Institute for Public Policy Research, we released a comprehensive review of European jobs and skills.
- In New York City, we published a report that identified high-growth employment sectors for middle-skill jobs and outlined recommendations to address the skills gaps impeding employment in these industries. We supported an innovative partnership among a large employer, a social service organization and a community college that helps young adults in a low-income community acquire the credentials needed to secure a job in the expanding healthcare sector.

Global Cities Initiative

The Global Cities Initiative (GCI), a joint project launched by the Brookings Institution and JPMorgan Chase in 2012, equips metropolitan leaders with the data, policy ideas and networks needed to support the economic growth of metropolitan regions through trade and investment.

In 2014, GCI introduced innovative research, including an analysis of the role foreign direct investment (FDI) plays in rebuilding metro economies, a report on the economic contributions of foreign students to U.S. cities, an analysis of the changing patterns of London's exports, and research on the global competitiveness of Munich, Hong Kong and Mumbai.

Supporting this new research, GCI held high-profile convenings around the world that brought together leaders from business, government and nonprofits to explore best practices and catalyze local action. GCI held meetings in Hong Kong, London, Louisville-Lexington, Munich, Phoenix and Seattle — each of which attracted hundreds of participants interested in understanding how their metropolitan area was developing trade and investment strategies.

To transform knowledge about global trade and investment into local action, GCI launched the Global Cities Exchange (GCX) — an academy for cities seeking to develop and implement actionable global strategies. By the end of 2014, GCX had enrolled 28 cities, of which 12 had completed export strategies, and six were working on FDI strategies.

Small Business Forward

Small businesses act as vital engines driving job creation and economic development, but many entrepreneurs lack access to the resources needed for growth. In 2014, JPMorgan Chase launched Small Business Forward, a $30 million, five-year initiative to catalyze small business development in cities around the world.

We know that having a good business idea is only part of what it takes for entrepreneurs to succeed. They also need access to investors, training, facilities, customers and export opportunities. Research has shown that these supports become even more effective when they target clusters of small businesses working in the same sector and geography. According to a study conducted by the Initiative for a Competitive Inner City and supported by JPMorgan Chase, businesses in well-established clusters outpaced overall regional growth by more than 300% between 2003 and 2011.

Small Business Forward supports nonprofits around the world that provide small business clusters with the critical resources they need to succeed. By helping regional economies build on their core assets to develop thriving enterprises, we are strengthening communities across the globe.

2014 HIGHLIGHTS AND ACCOMPLISHMENTS

Developing local economies and communities

- Provided $2.6 billion to low- and moderate-income communities through our community development lending and equity investments to build or preserve 35,100 units of affordable housing, serve 5,000 students, create nearly 2,200 manufacturing jobs and serve 380,000 patients at healthcare facilities.
- Implemented year one of the firm's New Skills at Work program, a $250 million, five-year initiative to strengthen local workforce systems by providing real-time data and supporting partners to align training with employer and job seeker needs (see previous page).
- Committed $5 million over two years to help underserved youth across the United States obtain the skills necessary to build lasting careers and partnered with other organizations to create almost 50,000 summer jobs for teens and learning opportunities for more than 54,000 young people in 14 cities. In 2014, we released a report highlighting best practices from our network of nonprofit partners and identifying opportunities to advance summer youth programs.



- Expanded The Fellowship Initiative, a JPMorgan Chase college-access program for young men of color that provides academic, leadership and experiential learning opportunities for 120 student Fellows in New York, Chicago and Los Angeles to develop the knowledge, skills and networks needed to complete high school and succeed in college and beyond.
- Expanded the impact of the Global Cities Initiative beyond the United States and assessed the global competitiveness of European and Asian cities, convened leaders from around the world and broadened the reach of the Global Cities Exchange network of cities (see previous page).
- Exceeded 560,000 hours of volunteer service by JPMorgan Chase employees globally and provided $3.3 million of technical assistance to nonprofits through Technology for Social Good, an initiative utilizing our employees' skills to develop technology solutions for the social sector.

Honoring U.S. military and veterans

- Continued our leadership of the 100,000 Jobs Mission, a coalition of employers formed in 2011 that collectively hired more than 217,000 U.S. veterans and military spouses by the end of 2014 and raised its hiring goal to 300,000 hires. From 2011 through March 2015, JPMorgan Chase has hired nearly 8,700 veterans.
- Supported research conducted by RAND Corporation to capture the lessons and experiences from 100,000 Jobs Mission companies on integrating veterans into the private sector workforce.
- Exceeded the first-year goal of the firm's $20 million, five-year commitment by deploying $8 million to help U.S. military veterans and their families develop in-demand job skills, retain quality employment, increase college graduation rates and connect to stable housing opportunities.
- Awarded more than 750 newly renovated, mortgage-free homes worth over $125 million to veterans and their families since 2010.

Supporting small business development

- Provided $19 billion in new credit to small businesses across the United States and was recognized as the #1 lender by units to women- and minority-owned businesses for the third consecutive year by the U.S. Small Business Administration.
- Launched Small Business Forward, a $30 million, five-year commitment to support small business clusters that provide comprehensive support services to entrepreneurs (see previous page).
- Awarded $3 million to support small businesses making a positive impact in communities across the United States through our Mission Main Street Grants® program.

Strengthening financial capability



- Launched the Financial Solutions Lab, a $30 million, five-year initiative to identify, test and expand promising innovations to help Americans increase savings, improve credit and build assets. The first Lab competition focuses on supporting solutions to help consumers manage their household finances.
- Committed $35 million over two years to support and expand proven financial capability programs with nonprofits globally, investing in the development of technology-driven products and services designed to meet consumer needs, the infrastructure to expand the availability of these products and services, and the research to evaluate and share best practices with the field.

Promoting sustainable investment

- Underwrote more than $2.2 billion in green bonds – debt issuances where proceeds are directed toward environmentally beneficial or climate-friendly purposes – in 2014.
- Provided founding sponsorship of NatureVest, an initiative of The Nature Conservancy to attract investment capital to conservation.
- Invested $5 million through a new joint investment with the U.K. government in Novastar Ventures to develop early-stage businesses that provide essential basic services to underserved communities in East Africa.
- Announced the first investments through the Global Health Investment Fund, an innovative financing vehicle structured by JPMorgan Chase and the Bill & Melinda Gates Foundation, to support the final development and distribution of a new treatment for cholera and a powerful diagnostic for tuberculosis.

Increasing transparency with stakeholders

- Convened senior business leaders and leading national policy groups to foster open conversations about Chase products, policies and public policy matters that impact, in particular, low- and moderate-income communities, communities of color and people with disabilities.
- Released an Environmental and Social Policy Framework, after extensive engagement with external stakeholders, to communicate our approach to environmental and social risks in our business.
- Collaborated with Ceres to engage a group of external stakeholders in a dialogue focused on sharing perspectives and priorities to help us enhance our approach to human rights.

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FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

(unaudited)
As of or for the year ended December 31,

(in millions, except per share, ratio, headcount data and where otherwise noted)	2014	2013	2012	2011	2010
Selected income statement data					
Total net revenue	**$ 94,205**	$ 96,606	$ 97,031	$ 97,234	$ 102,694
Total noninterest expense	**61,274**	70,467	64,729	62,911	61,196
Pre-provision profit	**32,931**	26,139	32,302	34,323	41,498
Provision for credit losses	**3,139**	225	3,385	7,574	16,639
Income before income tax expense	**29,792**	25,914	28,917	26,749	24,859
Income tax expense	**8,030**	7,991	7,633	7,773	7,489
Net income	**$ 21,762**	$ 17,923	$ 21,284	$ 18,976	$ 17,370
Earnings per share data					
Net income: Basic	**$ 5.34**	$ 4.39	$ 5.22	$ 4.50	$ 3.98
Diluted	**5.29**	4.35	5.20	4.48	3.96
Average shares: Basic	**3,763.5**	3,782.4	3,809.4	3,900.4	3,956.3
Diluted	**3,797.5**	3,814.9	3,822.2	3,920.3	3,976.9
Market and per common share data					
Market capitalization	**$ 232,472**	$ 219,657	$ 167,260	$ 125,442	$ 165,875
Common shares at period-end	**3,714.8**	3,756.1	3,804.0	3,772.7	3,910.3
Share price[a]					
High	**$ 63.49**	$ 58.55	$ 46.49	$ 48.36	$ 48.20
Low	**52.97**	44.20	30.83	27.85	35.16
Close	**62.58**	58.48	43.97	33.25	42.42
Book value per share	**57.07**	53.25	51.27	46.59	43.04
Tangible book value per share ("TBVPS")[b]	**44.69**	40.81	38.75	33.69	30.18
Cash dividends declared per share	**1.58**	1.44	1.20	1.00	0.20
Selected ratios and metrics					
Return on common equity ("ROE")	**10%**	9%	11%	11%	10%
Return on tangible common equity ("ROTCE")[b]	**13**	11	15	15	15
Return on assets ("ROA")	**0.89**	0.75	0.94	0.86	0.85
Overhead ratio	**65**	73	67	65	60
Loans-to-deposits ratio	**56**	57	61	64	74
High quality liquid assets ("HQLA") (in billions)[c]	**$ 600**	$ 522	$ 341	NA	NA
Common equity tier 1 ("CET1") capital ratio[d]	**10.2%**	10.7%	11.0%	10.1%	9.8%
Tier 1 capital ratio [d]	**11.6**	11.9	12.6	12.3	12.1
Total capital ratio[d]	**13.1**	14.4	15.3	15.4	15.5
Tier 1 leverage ratio[d]	**7.6**	7.1	7.1	6.8	7.0
Selected balance sheet data (period-end)					
Trading assets	**$ 398,988**	$ 374,664	$ 450,028	$ 443,963	$ 489,892
Securities[e]	**348,004**	354,003	371,152	364,793	316,336
Loans	**757,336**	738,418	733,796	723,720	692,927
Total assets	**2,573,126**	2,415,689	2,359,141	2,265,792	2,117,605
Deposits	**1,363,427**	1,287,765	1,193,593	1,127,806	930,369
Long-term debt[f]	**276,836**	267,889	249,024	256,775	270,653
Common stockholders' equity	**212,002**	200,020	195,011	175,773	168,306
Total stockholders' equity	**232,065**	211,178	204,069	183,573	176,106
Headcount	**241,359**	251,196	258,753	259,940	239,515
Credit quality metrics					
Allowance for credit losses	**$ 14,807**	$ 16,969	$ 22,604	$ 28,282	$ 32,983
Allowance for loan losses to total retained loans	**1.90%**	2.25%	3.02%	3.84%	4.71%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[g]	**1.55**	1.80	2.43	3.35	4.46
Nonperforming assets	**$ 7,967**	$ 9,706	$ 11,906	$ 11,315	$ 16,682
Net charge-offs	**4,759**	5,802	9,063	12,237	23,673
Net charge-off rate	**0.65%**	0.81%	1.26%	1.78%	3.39%

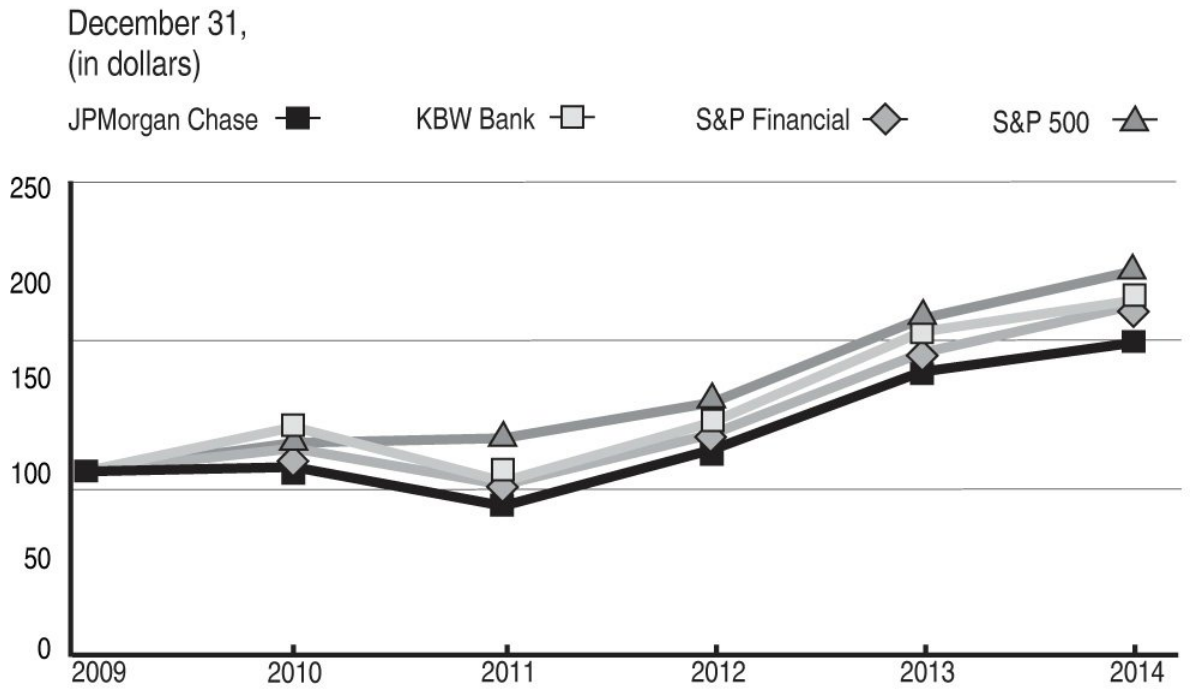
(a) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.
(b) TBVPS and ROTCE are non-GAAP financial measures. TBVPS represents the Firm's tangible common equity divided by common shares at period-end. ROTCE measures the Firm's annualized earnings as a percentage of tangible common equity. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 77–78.
(c) HQLA represents the Firm's estimate of the amount of assets that qualify for inclusion in the liquidity coverage ratio under the final U.S. rule ("U.S. LCR") as of December 31, 2014, and under the Basel III liquidity coverage ratio ("Basel III LCR") for prior periods. The Firm did not begin estimating HQLA until December 31, 2012. For additional information, see HQLA on page 157.
(d) Basel III Transitional rules became effective on January 1, 2014; prior period data is based on Basel I rules. As of December 31, 2014 the ratios presented are calculated under the Basel III Advanced Transitional Approach. CET1 capital under Basel III replaced Tier 1 common capital under Basel I. Prior to Basel III becoming effective on January 1, 2014, Tier 1 common capital under Basel I was a non-GAAP financial measure. See Regulatory capital on pages 146–153 for additional information on Basel III and non-GAAP financial measures of regulatory capital.
(e) Included held-to-maturity securities of $49.3 billion and $24.0 billion at December 31, 2014 and 2013, respectively. Held-to-maturity balances for the other periods were not material.
(f) Included unsecured long-term debt of $207.5 billion, $199.4 billion, $200.6 billion, $231.3 billion and $238.2 billion respectively, as of December 31, of each year presented.
(g) Excludes the impact of residential real estate purchased credit-impaired ("PCI") loans. For further discussion, see Allowance for credit losses on pages 128–130.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Index, the KBW Bank Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced U.S. equity benchmark consisting of leading companies from different economic sectors. The KBW Bank Index seeks to reflect the performance of banks and thrifts that are publicly traded in the U.S. and is composed of 24 leading national money center and regional banks and thrifts. The S&P Financial Index is an index of 85 financial companies, all of which are components of the S&P 500. The Firm is a component of all three industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2009, in JPMorgan Chase common stock and in each of the above indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2009	2010	2011	2012	2013	**2014**
JPMorgan Chase	$ 100.00	$ 102.30	$ 81.87	$ 111.49	$ 152.42	**$ 167.48**
KBW Bank Index	100.00	123.36	94.75	125.91	173.45	**189.69**
S&P Financial Index	100.00	112.13	93.00	119.73	162.34	**186.98**
S&P 500 Index	100.00	115.06	117.48	136.27	180.39	**205.07**



This section of JPMorgan Chase's Annual Report for the year ended December 31, 2014 ("Annual Report"), provides Management's discussion and analysis ("MD&A") of the financial condition and results of operations of JPMorgan Chase. See the Glossary of Terms on pages 309–313 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 169) and in JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2014 ("2014 Form 10-K"), in Part I, Item 1A: Risk factors; reference is hereby made to both.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the U.S., with operations worldwide; the Firm had $2.6 trillion in assets and $232.1 billion in stockholders' equity as of December 31, 2014. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national banking association that is the Firm's credit card-issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), the Firm's U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm's principal operating subsidiaries in the U.K. is J.P. Morgan Securities plc, a subsidiary of JPMorgan Chase Bank, N.A.

JPMorgan Chase's activities are organized, for management reporting purposes, into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business is the Consumer & Community Banking ("CCB") segment. The Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset Management ("AM") segments comprise the Firm's wholesale businesses. For a description of the Firm's business segments, and the products and services they provide to their respective client bases refer to Business Segment Results on pages 79–104, and Note 33.

This executive overview of the MD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of events, trends and uncertainties, as well as the enterprise risks and critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	2014	2013	Change
Selected income statement data			
Total net revenue	**$ 94,205**	$ 96,606	(2)%
Total noninterest expense	**61,274**	70,467	(13)
Pre-provision profit	**32,931**	26,139	26
Provision for credit losses	**3,139**	225	NM
Net income	**21,762**	17,923	21
Diluted earnings per share	**5.29**	4.35	22
Return on common equity	**10%**	9%	
Capital ratios[a]			
CET1	**10.2**	10.7	
Tier 1 capital	**11.6**	11.9	

(a) Basel III Transitional rules became effective on January 1, 2014; December 31, 2013 data is based on Basel I rules. As of December 31, 2014 the ratios presented are calculated under the Basel III Advanced Transitional Approach. CET1 capital under Basel III replaced Tier 1 common capital under Basel I. Prior to Basel III becoming effective on January 1, 2014, Tier 1 common capital under Basel I was a non-GAAP financial measure. See Regulatory capital on pages 146–153 for additional information on Basel III and non-GAAP financial measures of regulatory capital.

Summary of 2014 Results

JPMorgan Chase reported record full-year 2014 net income of $21.8 billion, and record earnings per share of $5.29, on net revenue of $94.2 billion. Net income increased by $3.8 billion, or 21%, compared with net income of $17.9 billion, or $4.35 per share, in 2013. ROE for the year was 10%, compared with 9% for the prior year.

The increase in net income in 2014 was driven by lower noninterest expense, largely offset by higher provision for credit losses and lower net revenue. The decrease in noninterest expense was driven by lower legal expense as well as lower compensation expense.

The provision for credit losses increased from the prior year as result of a lower level of benefit from reductions in the consumer allowance for loan losses, partially offset by lower net charge-offs. The decrease in the consumer allowance for loan losses was predominantly the result of continued improvement in home prices and delinquencies in the residential real estate portfolio. The wholesale provision reflected a continued favorable credit environment.

Total firmwide allowance for credit losses was $14.8 billion resulting in a loan loss coverage ratio of 1.55%, excluding the purchase credit-impaired ("PCI") portfolio, compared with 1.80% in the prior year. The Firm's allowance for loan losses to nonperforming loans retained, excluding the PCI portfolio and credit card, was 106% compared with 100% in 2013.

Firmwide, net charge-offs were $4.8 billion for the year, down $1.0 billion, or 18% from 2013. Nonperforming assets at year-end were $8.0 billion, down $1.7 billion, or 18%.

The Firm's results reflected solid underlying performance across its four major reportable business segments, with continued strong lending and deposit growth. Consumer & Community Banking was #1 in deposit growth for the third consecutive year and Consumer & Business Banking within Consumer & Community Banking was #1 in customer satisfaction among the largest U.S. banks for the third consecutive year as measured by The American Customer Satisfaction Index ("ACSI"). Credit card sales volume (excluding Commercial Card) was up 11% for the year. The Corporate & Investment Bank maintained its #1 ranking in Global Investment Banking Fees and moved up to a #1 ranking in Europe, Middle East and Africa ("EMEA"), according to Dealogic. Commercial Banking loans increased to $149 billion, an 8% increase compared with the prior year. Commercial Banking also had record gross investment banking revenue of $2.0 billion, up 18% compared with the prior year. Asset Management achieved twenty-three consecutive quarters of positive net long-term client flows and increased average loan balances by 16% in 2014.

The Firm maintained its fortress balance sheet, ending the year with an estimated Basel III Advanced Fully Phased-in CET1 capital ratio of 10.2%, compared with 9.5% in the prior year. Total deposits increased to $1.4 trillion, up 6% from the prior year. Total stockholders' equity was $232 billion at December 31, 2014. (The Basel III Advanced Fully Phased-in CET1 capital ratio is a non-GAAP financial measure, which the Firm uses along with the other capital measures, to assess and monitor its capital position. For further discussion of the Firm's capital ratios, see Regulatory capital on pages 146–153.)

During 2014, the Firm continued to serve customers, corporate clients and the communities in which it does business. The Firm provided credit to and raised capital of $2.1 trillion for its clients during 2014; this included $19 billion lent to U.S. small businesses and $75 billion to nonprofit and government entities, including states, municipalities, hospitals and universities.

The discussion that follows highlights the performance of each business segment compared with the prior year and presents results on a managed basis. For more information about managed basis, as well as other non-GAAP financial measures used by management to evaluate the performance of each line of business, see pages 77–78.

Consumer & Community Banking net income was $9.2 billion, a decrease of 17% compared with the prior year, due to higher provision for credit losses and lower net revenue, partially offset by lower noninterest expense. Net interest income decreased, driven by spread compression and lower mortgage warehouse balances, largely offset by higher deposit balances in Consumer & Business Banking

and higher loan balances in Credit Card. Noninterest revenue decreased, driven by lower mortgage fees and related income. The provision for credit losses was $3.5 billion, compared with $335 million in the prior year. The current-year provision reflected a $1.3 billion reduction in the allowance for loan losses and total net charge-offs of $4.8 billion. Noninterest expense decreased from the prior year, driven by lower Mortgage Banking expense.

Corporate & Investment Bank net income was $6.9 billion, a decrease of 22% compared with the prior year, primarily reflecting lower revenue as well as higher noninterest expense. Banking revenues decreased from the prior year primarily due to lower Lending revenues, driven by mark to market losses on securities received from restructured loans, compared to gains in the prior year, partially offset by higher investment banking fees. Markets & Investor Services revenues increased slightly from the prior year as 2013 included losses from FVA/DVA, primarily driven by FVA implementation, while the current year reflected lower Fixed Income Markets revenue. Credit Adjustments & Other revenue was a loss of $272 million. Noninterest expense increased compared with the prior year driven by higher noncompensation expense, predominantly due to higher legal expense and investment in controls. This was partially offset by lower performance-based compensation expense.

Commercial Banking net income was $2.6 billion, flat compared with the prior year, reflecting lower net revenue and higher noninterest expense, predominantly offset by a lower provision for credit losses. Net interest income decreased from the prior year, reflecting yield compression, the absence of proceeds received in the prior year from a lending-related workout, and lower purchase discounts recognized on loan repayments, partially offset by higher loan balances. Noninterest revenue increased, reflecting higher investment banking revenue, largely offset by business simplification and lower lending fees. Noninterest expense increased from the prior year, largely reflecting higher investments in controls.

Asset Management net income was $2.2 billion, an increase of 3% from the prior year, reflecting higher net revenue and lower provision for credit losses, predominantly offset by higher noninterest expense. Noninterest revenue increased from the prior year, due to net client inflows and the effect of higher market levels, partially offset by lower valuations of seed capital investments. Noninterest expense increased from the prior year, as the business continues to invest in both infrastructure and controls.

Corporate net income was $864 million, an increase compared with a loss in the prior year. The current year included $821 million of legal expense, compared with $10.2 billion of legal expense, which included reserves for litigation and regulatory proceedings, in the prior year.

Business outlook

The following forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking Statements on page 169 and the Risk Factors section on pages 8–17.

Over the past few years, the Firm has been adapting to the regulatory environment while continuing to serve its clients and customers, invest in its businesses, and deliver strong returns to its shareholders. The Firm's initiatives include building a fortress control environment, de-risking and simplification of the organization, a disciplined approach to managing expense, evolving its capital assessment framework as well as rigorous optimization of the Firm's balance sheet and funding.

The Firm has been devoting substantial resources to execute on its control agenda. The Oversight and Control function, established in 2012, has been working closely and extensively with the Firm's other control disciplines, including Compliance, Risk Management, Legal, Internal Audit, and other functions, to address the Firm's control-related projects that are cross-line of business and that have significant regulatory impact or respond to regulatory actions. The Firm's investment in the control agenda and investment in technology, are considered by management to be essential to the Firm's future.

The Firm has substantially completed executing its business simplification agenda. In 2013, the Firm ceased originating student loans, exited certain high risk customers and became more selective about on-boarding certain customers. Following on these initiatives, in 2014, the Firm exited several non-core credit card co-branded relationships, sold the Retirement Plan Services business within AM, exited certain prepaid card businesses, reduced its offering of mortgage banking products, completed the sale of the CIB's Global Special Opportunity Group investment portfolio, and the sale and liquidation of a significant part of CIB's physical commodities business. In January 2015, the Firm completed the "spin out" of the One Equity Partners ("OEP") private equity business (together with a sale of a portion of the OEP portfolio to a group of private equity firms). These actions will allow the Firm to focus on core activities for its core clients and reduce risk to the Firm. While it is anticipated that these exits will reduce revenues and expenses, they are not expected to have a meaningful impact on the Firm's profitability.

The Firm's simplification agenda, however, is more extensive than exiting businesses, products or clients that were non-core, not at scale or not returning the appropriate level of return. The Firm is also focused on operational and structural simplicity, and streamlining and centralizing certain operational functions and processes in order to attain more consistencies and efficiencies across the Firm. To that end, the Firm is working on simplifying its legal entity structure, simplifying its Global Technology function,

rationalizing its use of vendors, and optimizing its real estate location strategy.

As the Firm continues to experience an unprecedented increase in regulation and supervision, it continues to evolve its financial architecture to respond to this changing landscape. In 2014, the Firm exceeded the minimum capital levels required by the current rules and intends to continue to build capital in response to the higher Global Systemically Important Bank ("G-SIB") capital surcharge proposed by U.S. banking regulators. In addition, the Firm is adapting its capital assessment framework to review businesses and client relationships against G-SIB and applicable capital requirements, and imposing internal limits on business activities to align or optimize the Firm's balance sheet and RWA with regulatory requirements in order to ensure that business activities generate appropriate levels of shareholder value.

The Firm intends to balance return of capital to shareholders with achieving higher capital ratios over time. The Firm expects the capital ratio calculated under the Basel III Standardized Approach to become its binding constraint by the end of 2015, or slightly thereafter. The Firm anticipates reaching Basel III Fully Phased-In Advanced and Standardized CET1 ratios of approximately 11% by the end of 2015 and is targeting a Basel III CET1 ratio of approximately 12% by the end of 2018, assuming a 4.5% G-SIB capital surcharge. If the Firm's G-SIB capital surcharge is lower than 4.5%, the Firm will adjust its Basel III CET1 target accordingly.

Likewise, the Firm will be evolving its funding framework to ensure it meets the current and proposed more stringent regulatory liquidity rules, including those relating to the availability of adequate Total Loss Absorbing Capacity ("TLAC") at G-SIB organizations. The Firm estimated that it had, as of December 31, 2014, approximately 15% minimum TLAC as a percentage of Basel III Advanced Fully Phased-in RWA, excluding capital buffers currently in effect, based on its understanding of how the Financial Stability Board's proposal may be implemented in the U.S. While the precise composition and calibration of TLAC, as well as the conformance period, are yet to be defined by U.S. banking regulators, the Firm expects the requirement will lead to incremental debt issuance by the Firm and higher funding costs over the next few years.

The Firm expects it will continue to make appropriate adjustments to its businesses and operations in the year ahead in response to ongoing developments in the legal and regulatory, as well as business and economic, environment in which it operates. The Firm intends to take a disciplined approach to growing revenues and controlling expenses in light of its capital and liquidity constraints. The Firm's deep client relationships and its investments in its businesses, including branch optimization, new card relationships, expansion into new markets, and hiring additional sales staff and client advisors, are expected to generate significant revenue growth over the next several years. At the same time, the Firm intends to leverage its scale and improve its operating efficiencies so that it can fund these growth initiatives, as well as maintain its control and technology programs, without increasing its expenses. As a result, the Firm anticipates achieving a managed overhead ratio of approximately 55% over the next several years, including the impact of revenue growth.

2015 Business Outlook

JPMorgan Chase's outlook for the full-year 2015 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these inter-related factors will affect the performance of the Firm and its lines of business.

Management expects core loan growth of approximately 10% in 2015. The Firm continues to experience charge-offs at levels lower than its through-the-cycle expectations; if favorable credit trends continue, management expects the Firm's total net charge offs could remain low, at an amount modestly over $4 billion in 2015, and expects a reduction in the consumer allowance for loan losses over the next two years.

Firmwide adjusted expense in 2015 is expected to be approximately $57 billion, excluding Firmwide legal expenses and foreclosure-related matters.

In Consumer & Business Banking within CCB, management expects continued spread compression in the deposit margin and a modest decline in net interest income in the first quarter of 2015. In Mortgage Banking within CCB, management expects quarterly servicing expense to decline to below $500 million by the second quarter of 2015 as default volume continues to decline. In Card Services within CCB, management expects the revenue rate in 2015 to remain at the low end of the target range of 12% to 12.5%.

In CIB, Markets revenue in the first quarter of 2015 will be impacted by the Firm's business simplification initiatives completed in 2014, resulting in a decline of approximately $500 million, or 10%, in Markets revenue and a decline of approximately $300 million in expense, compared to the prior year first quarter. Based on strong performance to date, particularly in January, management currently expects 2015 first quarter Markets revenue to be higher than the prior year first quarter, even with the negative impact of business simplification; however, Markets revenue actual results will depend on performance through the remainder of the quarter, which can be volatile.

Overall, the Firm expects the impact from its business simplification initiatives will be a reduction of approximately $1.6 billion in revenue and a corresponding reduction of approximately $1.6 billion in expense resulting in no meaningful impact on the Firm's 2015 anticipated net income.

CONSOLIDATED RESULTS OF OPERATIONS

The following section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2014. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 161–165.

Revenue

Year ended December 31, (in millions)	2014	2013	2012
Investment banking fees	$ 6,542	$ 6,354	$ 5,808
Principal transactions[a]	10,531	10,141	5,536
Lending- and deposit-related fees	5,801	5,945	6,196
Asset management, administration and commissions	15,931	15,106	13,868
Securities gains	77	667	2,110
Mortgage fees and related income	3,563	5,205	8,687
Card income	6,020	6,022	5,658
Other income[b]	2,106	3,847	4,258
Noninterest revenue	50,571	53,287	52,121
Net interest income	43,634	43,319	44,910
Total net revenue	$ 94,205	$ 96,606	$ 97,031

(a) Included funding valuation adjustments ((“FVA”) effective 2013)) and debit valuation adjustments (“DVA”) on over-the-counter (“OTC”) derivatives and structured notes, measured at fair value. FVA and DVA gains/(losses) were $468 million and $(1.9) billion for the years ended December 31, 2014 and 2013, respectively. DVA losses were ($930) million for the year ended December 31, 2012.

(b) Included operating lease income of $1.7 billion, $1.5 billion and $1.3 billion for the years ended December 31, 2014, 2013 and 2012, respectively.

2014 compared with 2013

Total net revenue for 2014 was down by $2.4 billion, or 2%, compared with the prior year, predominantly due to lower mortgage fees and related income, and lower other income. The decrease was partially offset by higher asset management, administration and commissions revenue.

Investment banking fees increased compared with the prior year, due to higher advisory and equity underwriting fees, largely offset by lower debt underwriting fees. The increase in advisory fees was driven by the combined impact of a greater share of fees for completed transactions, and growth in industry-wide fee levels. The increase in equity underwriting fees was driven by higher industry-wide issuance. The decrease in debt underwriting fees was primarily related to lower bond underwriting compared with a stronger prior year, and lower loan syndication fees on lower industry-wide fee levels. Investment banking fee share and industry-wide data are sourced from Dealogic, an external vendor. For additional information on investment banking fees, see CIB segment results on pages 92–96, CB segment results on pages 97–99, and Note 7.

Principal transactions revenue, which consists of revenue primarily from the Firm's client-driven market-making and private equity investing activities, increased compared with the prior year as the prior year included a $1.5 billion loss related to the implementation of the FVA framework for OTC derivatives and structured notes. The increase was also due to higher private equity gains as a result of higher net gains on sales. The increase was partially offset by lower fixed income markets revenue in CIB, primarily driven by credit-related and rates products, as well as the impact of business simplification initiatives. For additional information on principal transactions revenue, see CIB and Corporate segment results on pages 92–96 and pages 103–104, respectively, and Note 7.

Lending- and deposit-related fees decreased compared with the prior year, reflecting the impact of business simplification initiatives and lower trade finance revenue in CIB. For additional information on lending- and deposit-related fees, see the segment results for CCB on pages 81–91, CIB on pages 92–96 and CB on pages 97–99.

Asset management, administration and commissions revenue increased compared with the prior year, reflecting higher asset management fees driven by net client inflows and the effect of higher market levels in AM and CCB. The increase was offset partially by lower commissions and other fee revenue in CCB as a result of the exit of a non-core product in the second half of 2013. For additional information on these fees and commissions, see the segment discussions of CCB on pages 81–91, AM on pages 100–102, and Note 7.

Securities gains decreased compared with the prior year, reflecting lower repositioning activity related to the Firm's investment securities portfolio. For additional information, see the Corporate segment discussion on pages 103–104 and Note 12.

Mortgage fees and related income decreased compared with the prior year. The decrease was predominantly due to lower net production revenue driven by lower volumes due to higher levels of mortgage interest rates, and tighter margins. The decline in net production revenue was partially offset by a lower loss on the risk management of mortgage servicing rights (“MSRs”). For additional information, see the segment discussion of CCB on pages 85–87 and Note 17.

Card income remained relatively flat but included higher net interchange income on credit and debit cards due to growth in sales volume, offset by higher amortization of new account origination costs. For additional information on credit card income, see CCB segment results on pages 81–91.

Other income decreased from the prior year, predominantly as a result of the absence of two significant items recorded in Corporate in 2013, namely: a $1.3 billion gain on the sale of Visa shares and a $493 million gain from the sale of One Chase Manhattan Plaza. Lower valuations of seed capital investments in AM and losses related to the exit of non-core portfolios in Card also contributed to the decrease. These items were partially offset by higher auto lease income as a result of growth in auto lease volume, and a benefit from a tax settlement.

Net interest income increased slightly from the prior year, predominantly reflecting higher yields on investment securities, the impact of lower interest expense, and higher average loan balances. The increase was partially offset by lower yields on loans due to the run-off of higher-yielding loans and new originations of lower-yielding loans, and lower average interest-earning trading asset balances. The Firm's average interest-earning assets were $2.0 trillion, and the net interest yield on these assets, on a fully taxable-equivalent ("FTE") basis, was 2.18%, a decrease of 5 basis points from the prior year.

2013 compared with 2012

Total net revenue for 2013 was down by $425 million, or less than 1%. The 2013 results were driven by lower mortgage fees and related income, net interest income, and securities gains, predominantly offset by higher principal transactions revenue, and asset management, administration and commissions revenue.

Investment banking fees increased compared with the prior year, reflecting higher equity and debt underwriting fees, partially offset by lower advisory fees. Equity and debt underwriting fees increased, driven by strong market issuance and greater share of fees in equity capital markets and loans. Advisory fees decreased, as industry-wide M&A fee levels declined. Investment banking fee share and industry-wide data are sourced from Dealogic, an external vendor.

Principal transactions revenue increased compared with the prior year, reflecting CIB's strong equity markets revenue, partially offset by a $1.5 billion loss from implementing a FVA framework for OTC derivatives and structured notes in the fourth quarter of 2013, and a $452 million loss from DVA on structured notes and derivative liabilities (compared with a $930 million loss from DVA in the prior year). The prior year also included a $5.8 billion loss on the synthetic credit portfolio incurred by CIO in the six months ended June 30, 2012; a $449 million loss on the index credit derivative positions retained by CIO in the three months ended September 30, 2012; and additional modest losses incurred by CIB from the synthetic credit portfolio in the last six months of 2012. These losses were partially offset by a $665 million gain recognized in 2012 in Corporate, representing the recovery on a Bear Stearns-related subordinated loan.

Lending- and deposit-related fees decreased compared with the prior year, largely due to lower deposit-related fees in CCB, resulting from reductions in certain product and transaction fees.

Asset management, administration and commissions revenue increased from 2012, driven by higher investment management fees in AM due to net client inflows, the effect of higher market levels, and higher performance fees, and to higher investment sales revenue in CCB.

Securities gains decreased compared with the prior-year period, reflecting the results of repositioning the CIO available-for-sale ("AFS") portfolio.

Mortgage fees and related income decreased in 2013 compared with 2012, reflecting lower Mortgage Banking net production and servicing revenue. The decrease in net production revenue was due to lower margins and volumes. The decrease in net servicing revenue was predominantly due to lower MSR risk management results.

Card income increased compared with the prior year period, driven by higher net interchange income on credit and debit cards and higher merchant servicing revenue due to growth in sales volume.

Other income decreased in 2013 compared with the prior year, predominantly reflecting lower revenues from significant items recorded in Corporate. In 2013, the Firm recognized a $1.3 billion gain on the sale of Visa shares, a $493 million gain from the sale of One Chase Manhattan Plaza, and a modest loss related to the redemption of TruPS. In 2012, the Firm recognized a $1.1 billion benefit from the Washington Mutual bankruptcy settlement and an $888 million extinguishment gain related to the redemption of TruPS. The net decrease was partially offset by higher revenue in CIB, largely from client-driven activity.

Net interest income decreased in 2013 compared with the prior year, primarily reflecting the impact of the runoff of higher yielding loans and originations of lower yielding loans, and lower trading-related net interest income. The decrease in net interest income was partially offset by lower long-term debt and other funding costs. The Firm's average interest-earning assets were $2.0 trillion in 2013, and the net interest yield on those assets, on a FTE basis, was 2.23%, a decrease of 25 basis points from the prior year.

Provision for credit losses

Year ended December 31, (in millions)	2014	2013	2012
Consumer, excluding credit card	**$ 419**	$ (1,871)	$ 302
Credit card	**3,079**	2,179	3,444
Total consumer	**3,498**	308	3,746
Wholesale	**(359)**	(83)	(361)
Total provision for credit losses	**$ 3,139**	$ 225	$ 3,385

2014 compared with 2013

The provision for credit losses increased by $2.9 billion from the prior year as result of a lower benefit from reductions in the consumer allowance for loan losses, partially offset by lower net charge-offs. The consumer allowance release in 2014 was primarily related to the consumer, excluding credit card portfolio, and reflected the continued improvement in home prices and delinquencies in the residential real estate portfolio. The wholesale provision reflected a continued favorable credit environment. For a more detailed discussion of the credit portfolio and the allowance for credit losses, see the segment discussions of CCB on pages 81–91, CIB on pages 92–96 and CB on pages 97–99, and the Allowance for credit losses section on pages 128–130.

2013 compared with 2012

The provision for credit losses decreased by $3.2 billion compared with the prior year, due to a higher benefit from reductions in the allowance for loan losses, as well as lower net charge-offs partially due to incremental charge-offs recorded in 2012 in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy. The consumer allowance release in 2013 reflected the improvement in home prices in the residential real estate portfolio and improvement in delinquencies in the residential real estate and credit card portfolios. The 2013 wholesale provision reflected a favorable credit environment and stable credit quality trends.

Noninterest expense

Year ended December 31, (in millions)	2014	2013	2012
Compensation expense	**$30,160**	$30,810	$30,585
Noncompensation expense:			
Occupancy	**3,909**	3,693	3,925
Technology, communications and equipment	**5,804**	5,425	5,224
Professional and outside services	**7,705**	7,641	7,429
Marketing	**2,550**	2,500	2,577
Other[a][b]	**11,146**	20,398	14,989
Total noncompensation expense	**31,114**	39,657	34,144
Total noninterest expense	**$61,274**	$70,467	$64,729

(a) Included firmwide legal expense of $2.9 billion, $11.1 billion and $5.0 billion for the years ended December 31, 2014, 2013 and 2012, respectively.

(b) Included FDIC-related expense of $1.0 billion, $1.5 billion and $1.7 billion for the years ended December 31, 2014, 2013 and 2012, respectively.

2014 compared with 2013

Total noninterest expense decreased by $9.2 billion, or 13%, from the prior year, driven by lower other expense (in particular, legal expense) and lower compensation expense.

Compensation expense decreased compared with the prior year, predominantly driven by lower headcount in CCB's Mortgage Banking business, lower performance-based compensation expense in CIB, and lower postretirement benefit costs. The decrease was partially offset by investments in the businesses, including headcount, for controls.

Noncompensation expense decreased compared with the prior year, due to lower other expense, predominantly reflecting lower legal expense. Lower expense for foreclosure-related matters and lower production and servicing-related expense in CCB's Mortgage Banking business, lower FDIC-related assessments, and lower amortization expense due to the completion of the amortization of certain intangibles, also contributed to the decline. The decrease was offset partially by investments in the businesses, including for controls, and costs related to business simplification initiatives across the Firm. For a further discussion of legal expense, see Note 31. For a discussion of amortization of intangibles, refer to Note 17.

2013 compared with 2012

Total noninterest expense was up by $5.7 billion, or 9%, compared with the prior year, predominantly due to higher legal expense.

Compensation expense increased in 2013 compared with the prior year, due to the impact of investments across the businesses, including front office sales and support staff, and costs related to the Firm's control agenda; these were partially offset by lower compensation expense in CIB and in CCB's Mortgage Banking business, reflecting the effect of lower servicing headcount.

Noncompensation expense increased in 2013 from the prior year. The increase was due to higher other expense, reflecting $11.1 billion of firmwide legal expense, predominantly in Corporate, representing additional reserves for several litigation and regulatory proceedings, compared with $5.0 billion of expense in the prior year. Investments in the businesses, higher legal-related professional services expense, and costs related to the Firm's control agenda also contributed to the increase. The increase was offset partially by lower mortgage servicing expense in CCB and lower occupancy expense for the Firm, which predominantly reflected the absence of charges recognized in 2012 related to vacating excess space.

Income tax expense

Year ended December 31, (in millions, except rate)	**2014**	2013	2012
Income before income tax expense	**$29,792**	$25,914	$28,917
Income tax expense	**8,030**	7,991	7,633
Effective tax rate	**27.0%**	30.8%	26.4%

2014 compared with 2013

The decrease in the effective tax rate from the prior year was largely attributable to the effect of the lower level of nondeductible legal-related penalties, partially offset by higher 2014 pretax income, in combination with changes in the mix of income and expense subject to U.S. federal, state and local income taxes, and lower tax benefits associated with tax adjustments and the settlement of tax audits. For additional information on income taxes, see Critical Accounting Estimates Used by the Firm on pages 161–165 and Note 26.

2013 compared with 2012

The increase in the effective tax rate compared with the prior year was predominantly due to the effect of higher nondeductible legal-related penalties in 2013. This was largely offset by the impact of lower pretax income, in combination with changes in the mix of income and expense subject to U.S. federal, state and local taxes, business tax credits, tax benefits associated with prior year tax adjustments and audit resolutions.

CONSOLIDATED BALANCE SHEETS ANALYSIS

Selected Consolidated balance sheets data

December 31, (in millions)	2014	2013	Change
Assets			
Cash and due from banks	**$ 27,831**	$ 39,771	(30)%
Deposits with banks	**484,477**	316,051	53
Federal funds sold and securities purchased under resale agreements	**215,803**	248,116	(13)
Securities borrowed	**110,435**	111,465	(1)
Trading assets:			
Debt and equity instruments	**320,013**	308,905	4
Derivative receivables	**78,975**	65,759	20
Securities	**348,004**	354,003	(2)
Loans	**757,336**	738,418	3
Allowance for loan losses	**(14,185)**	(16,264)	(13)
Loans, net of allowance for loan losses	**743,151**	722,154	3
Accrued interest and accounts receivable	**70,079**	65,160	8
Premises and equipment	**15,133**	14,891	2
Goodwill	**47,647**	48,081	(1)
Mortgage servicing rights	**7,436**	9,614	(23)
Other intangible assets	**1,192**	1,618	(26)
Other assets	**102,950**	110,101	(6)
Total assets	**$ 2,573,126**	$ 2,415,689	7
Liabilities			
Deposits	**$ 1,363,427**	$ 1,287,765	6
Federal funds purchased and securities loaned or sold under repurchase agreements	**192,101**	181,163	6
Commercial paper	**66,344**	57,848	15
Other borrowed funds	**30,222**	27,994	8
Trading liabilities:			
Debt and equity instruments	**81,699**	80,430	2
Derivative payables	**71,116**	57,314	24
Accounts payable and other liabilities	**206,954**	194,491	6
Beneficial interests issued by consolidated VIEs	**52,362**	49,617	6
Long-term debt	**276,836**	267,889	3
Total liabilities	**2,341,061**	2,204,511	6
Stockholders' equity	**232,065**	211,178	10
Total liabilities and stockholders' equity	**$ 2,573,126**	$ 2,415,689	7 %

Consolidated balance sheets overview

JPMorgan Chase's total assets and total liabilities increased by $157.4 billion and $136.6 billion, respectively, from December 31, 2013.

The following is a discussion of the significant changes in the Consolidated balance sheets from December 31, 2013.

Cash and due from banks and deposits with banks

The net increase was attributable to higher levels of excess funds primarily as a result of growth in deposits. The Firm's excess funds were placed with various central banks, predominantly Federal Reserve Banks.

Federal funds sold and securities purchased under resale agreements

The decrease in federal funds sold and securities purchased under resale agreements was predominantly attributable to a shift in the deployment of the Firm's excess cash by Treasury to deposits with banks and to client activity, including a decline in public deposits that require collateral.

Trading assets and liabilities–debt and equity instruments

The increase in trading assets and liabilities predominantly related to client-driven market-making activities in CIB was primarily driven by higher levels of debt securities and trading loans. For additional information, refer to Note 3.

Trading assets and liabilities–derivative receivables and payables

The increase in both receivables and payables was predominantly due to client-driven market-making activities in CIB, specifically in interest rate derivatives as a result of market movements; commodity derivatives predominantly driven by the significant decline in oil prices; and foreign exchange derivatives reflecting the appreciation of the U.S. dollar against certain currencies. The increases were partially offset by a decline in equity derivatives. For additional information, refer to Derivative contracts on pages 125–127, and Notes 3 and 5.

Securities

The decrease was predominantly due to lower levels of non-U.S. residential mortgage-backed securities and U.S. Treasuries, partially offset by higher levels of obligations of U.S. states and municipalities and U.S. residential mortgage-backed securities. For additional information related to securities, refer to the discussion in the Corporate segment on pages 103–104, and Notes 3 and 12.

Loans and allowance for loan losses

The increase in loans was attributable to higher consumer and wholesale loans. The increase in consumer loans was due to prime mortgage originations in CCB and AM, as well as credit card, business banking and auto loan originations in CCB, partially offset by paydowns and charge-offs or liquidation of delinquent loans. The increase in wholesale loans was due to a favorable credit environment throughout 2014, which drove an increase in client activity.

The decrease in the allowance for loan losses was driven by a reduction in the consumer allowance, predominantly as a result of continued improvement in home prices and delinquencies in the residential real estate portfolio. For a more detailed discussion of the loan portfolio and the allowance for loan losses, refer to Credit Risk Management on pages 110–111, and Notes 3, 4, 14 and 15.

Accrued interest and accounts receivable
The increase was due to higher receivables from security sales that did not settle, and higher client receivables related to client-driven market-making activities in CIB.

Mortgage servicing rights
For additional information on MSRs, see Note 17.

Other assets
The decrease was driven by several factors, including lower deferred tax assets; lower private equity investments due to sales, partially offset by unrealized gains; and lower real estate owned.

Deposits
The increase was attributable to higher consumer and wholesale deposits. The increase in consumer deposits reflected a continuing positive growth trend, resulting from strong customer retention, maturing of recent branch builds, and net new business. The increase in wholesale deposits was driven by client activity and business growth. For more information on consumer deposits, refer to the CCB segment discussion on pages 81–91; the Liquidity Risk Management discussion on pages 156–160; and Notes 3 and 19. For more information on wholesale client deposits, refer to the AM, CB and CIB segment discussions on pages 100–102, pages 97–99 and pages 92–96, respectively, and the Liquidity Risk Management discussion on pages 156–160.

Federal funds purchased and securities loaned or sold under repurchase agreements
The increase in federal funds purchased and securities loaned or sold under repurchase agreements was predominantly attributable to higher financing of the Firm's trading assets-debt and equity instruments. The increase was partially offset by client activity in CIB. For additional information on the Firm's Liquidity Risk Management, see pages 156–160.

Commercial paper
The increase was due to commercial paper issuances in the wholesale markets consistent with Treasury's liquidity and short-term funding plans and, to a lesser extent, a higher volume of liability balances related to CIB's liquidity management product whereby clients choose to sweep their deposits into commercial paper. For additional information on the Firm's other borrowed funds, see Liquidity Risk Management on pages 156–160.

Accounts payable and other liabilities
The increase was attributable to higher client payables related to client short positions, and higher payables from security purchases that did not settle, both in CIB. The increase was partially offset by lower legal reserves, largely reflecting the settlement of legal and regulatory matters.

Beneficial interests issued by consolidated VIEs
The increase was predominantly due to net new consolidated credit card and municipal bond vehicles, partially offset by a reduction in conduit commercial paper issued to third parties and the deconsolidation of certain mortgage securitization trusts. For further information on Firm-sponsored VIEs and loan securitization trusts, see Off-Balance Sheet Arrangements on pages 74–75 and Note 16.

Long-term debt
The increase was due to net issuances, consistent with Treasury's long-term funding plans. For additional information on the Firm's long-term debt activities, see Liquidity Risk Management on pages 156–160.

Stockholders' equity
The increase was due to net income and preferred stock issuances, partially offset by the declaration of cash dividends on common and preferred stock, and repurchases of common stock. For additional information on accumulated other comprehensive income/(loss) ("AOCI"), see Note 25; for the Firm's capital actions, see Capital actions on page 154.

OFF-BALANCE SHEET ARRANGEMENTS AND CONTRACTUAL CASH OBLIGATIONS

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are off-balance sheet under U.S. GAAP. The Firm is involved with several types of off-balance sheet arrangements, including through nonconsolidated special-purpose entities ("SPEs"), which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important part of the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits, investor intermediation activities, and loan securitizations. See Note 16 for further information on these types of SPEs.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, JPMorgan Chase Bank, N.A. could be required to provide funding if its short-term credit rating were downgraded below specific levels, primarily "P-1", "A-1" and "F1" for Moody's, Standard & Poor's and Fitch, respectively. These liquidity commitments support the issuance of asset-backed commercial paper by Firm-administered consolidated SPEs. In the event of a short-term credit rating downgrade, JPMorgan Chase Bank, N.A., absent other solutions, would be required to provide funding to the SPE, if the commercial paper could not be reissued as it matured. The aggregate amounts of commercial paper outstanding held by third parties as of December 31, 2014 and 2013, was $12.1 billion and $15.5 billion, respectively. The aggregate amounts of commercial paper outstanding could increase in future periods should clients of the Firm-administered consolidated SPEs draw down on certain unfunded lending-related commitments. These unfunded lending-related commitments were $9.9 billion and $9.2 billion at December 31, 2014 and 2013, respectively. The Firm could facilitate the refinancing of some of the clients' assets in order to reduce the funding obligation. For further information, see the discussion of Firm-administered multi-seller conduits in Note 16.

The Firm also acts as liquidity provider for certain municipal bond vehicles. The Firm's obligation to perform as liquidity provider is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. See Note 16 for additional information.

Off–balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. For further discussion of lending-related financial instruments, guarantees and other commitments, and the Firm's accounting for them, see Lending-related commitments on page 125 and Note 29. For a discussion of liabilities associated with loan sales-and securitization-related indemnifications, see Note 29.

Contractual cash obligations

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's significant contractual cash obligations at December 31, 2014. The contractual cash obligations included in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the below table are certain liabilities with variable cash flows and/or no obligation to return a stated amount of principal at the maturity.

The carrying amount of on-balance sheet obligations on the Consolidated balance sheets may differ from the minimum contractual amount of the obligations reported below. For a discussion of mortgage repurchase liabilities and other obligations, see Note 29.

Contractual cash obligations

By remaining maturity at December 31, (in millions)	2014					2013
	2015	2016-2017	2018-2019	After 2019	**Total**	Total
On-balance sheet obligations						
Deposits[a]	**$ 1,345,919**	**$ 8,200**	**$ 3,318**	**$ 4,160**	**$ 1,361,597**	$ 1,286,587
Federal funds purchased and securities loaned or sold under repurchase agreements	**189,002**	**2,655**	**30**	**441**	**192,128**	181,163
Commercial paper	**66,344**	**–**	**–**	**–**	**66,344**	57,848
Other borrowed funds[a]	**15,734**	**–**	**–**	**–**	**15,734**	15,655
Beneficial interests issued by consolidated VIEs[a]	**27,833**	**12,860**	**6,125**	**3,382**	**50,200**	47,621
Long-term debt[a]	**33,982**	**86,620**	**61,468**	**80,818**	**262,888**	256,739
Other[b]	**3,494**	**1,217**	**1,022**	**2,622**	**8,355**	7,720
Total on-balance sheet obligations	**1,682,308**	**111,552**	**71,963**	**91,423**	**1,957,246**	1,853,333
Off-balance sheet obligations						
Unsettled reverse repurchase and securities borrowing agreements[c]	**40,993**	**–**	**–**	**–**	**40,993**	38,211
Contractual interest payments[d]	**6,980**	**10,006**	**6,596**	**24,456**	**48,038**	48,021
Operating leases[e]	**1,722**	**3,216**	**2,402**	**5,101**	**12,441**	14,266
Equity investment commitments[f]	**454**	**92**	**50**	**512**	**1,108**	2,119
Contractual purchases and capital expenditures	**1,216**	**970**	**366**	**280**	**2,832**	3,425
Obligations under affinity and co-brand programs	**906**	**1,262**	**96**	**39**	**2,303**	3,283
Other	**–**	**–**	**–**	**–**	**–**	11
Total off-balance sheet obligations	**52,271**	**15,546**	**9,510**	**30,388**	**107,715**	109,336
Total contractual cash obligations	**$ 1,734,579**	**$ 127,098**	**$ 81,473**	**$ 121,811**	**$ 2,064,961**	$ 1,962,669

(a) Excludes structured notes where the Firm is not obligated to return a stated amount of principal at the maturity of the notes, but is obligated to return an amount based on the performance of the structured notes.
(b) Primarily includes dividends declared on preferred and common stock, deferred annuity contracts, pension and postretirement obligations and insurance liabilities. Prior periods were revised to conform with the current presentation.
(c) For further information, refer to unsettled reverse repurchase and securities borrowing agreements in Note 29.
(d) Includes accrued interest and future contractual interest obligations. Excludes interest related to structured notes where the Firm's payment obligation is based on the performance of certain benchmarks.
(e) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of $2.2 billion and $2.6 billion at December 31, 2014 and 2013, respectively.
(f) At December 31, 2014 and 2013, included unfunded commitments of $147 million and $215 million, respectively, to third-party private equity funds; and $961 million and $1.9 billion of unfunded commitments, respectively, to other equity investments.

CONSOLIDATED CASH FLOWS ANALYSIS

(in millions)	Year ended December 31, 2014	2013	2012
Net cash provided by/(used in)			
Operating activities	**$ 36,593**	$ 107,953	$ 25,079
Investing activities	**(165,636)**	(150,501)	(119,825)
Financing activities	**118,228**	28,324	87,707
Effect of exchange rate changes on cash	**(1,125)**	272	1,160
Net decrease in cash and due from banks	**$ (11,940)**	$ (13,952)	$ (5,879)

Operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's capital markets and lending activities, including the origination or purchase of loans initially designated as held-for-sale. Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities and market conditions. The Firm believes cash flows from operations, available cash balances and the Firm's ability to generate cash through short- and long-term borrowings are sufficient to fund the Firm's operating liquidity needs.

Cash provided by operating activities in 2014 predominantly resulted from net income after noncash operating adjustments and reflected higher net proceeds from loan securitizations and sales activities when compared with 2013. In 2013 cash provided reflected a decrease in trading assets from client-driven market-making activities in CIB, resulting in lower levels of debt securities. Cash used in 2013 for loans originated and purchased with an initial intent to sell was slightly higher than the cash proceeds received from sales and paydowns of loans and reflected significantly higher levels of activities over the prior-year period. Cash provided during 2012 resulted from a decrease in securities borrowed reflecting a shift in the deployment of excess cash to resale agreements as well as lower client activity in CIB; partially offset by a decrease in accounts payable and other liabilities predominantly due to lower CIB client balances.

Investing activities

The Firm's investing activities predominantly include loans originated to be held for investment, the investment securities portfolio and other short-term interest-earning assets. Cash used in investing activities during 2014, 2013, and 2012 resulted from increases in deposits with banks, attributable to higher levels of excess funds; in 2014, cash was used for growth in wholesale and consumer loans, while in 2013 and 2012 cash used reflected growth in wholesale loans. Partially offsetting these cash outflows in 2014 and 2013 was a net decline in securities purchased under resale agreements due to a shift in the deployment of the Firm's excess cash by Treasury, and a net decline in consumer loans in 2013 and 2012 from paydowns and portfolio runoff or liquidation of delinquent loans. In 2012, additional cash was used for securities purchased under resale agreements. All years reflected cash proceeds from net maturities and sales of investment securities.

Financing activities

The Firm's financing activities includes cash from customer deposits, and cash proceeds from issuing long-term debt, and preferred and common stock. Cash provided by financing activities in 2014 predominantly resulted from higher consumer and wholesale deposits. The increase in consumer deposits reflected a continuing positive growth trend resulting from strong customer retention, maturing of recent branch builds, and net new business. The increase in wholesale deposits was driven by client activity and deposit growth. Cash provided in 2013 was driven by growth in both wholesale and consumer deposits, net proceeds from long-term borrowings, and net issuance of preferred stock; partially offset by a decrease in securities loaned or sold under repurchase agreements, predominantly due to changes in the mix of the Firm's funding sources. Cash provided in 2012 was due to growth in both consumer and wholesale deposits and an increase in federal funds purchased and securities loaned or sold under repurchase agreements due to higher secured financings of the Firm's assets. In all periods, cash proceeds were offset by repurchases of common stock and cash dividends on common and preferred stock.

* * *

For a further discussion of the activities affecting the Firm's cash flows, see Balance Sheet Analysis on pages 72–73.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its Consolidated Financial Statements using U.S. GAAP; these financial statements appear on pages 172–176. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on a FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Management also uses certain non-GAAP financial measures at the business-segment level, because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and, therefore, facilitate a comparison of the business segment with the performance of its competitors. Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

	2014			2013			2012		
Year ended December 31, (in millions, except ratios)	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis
Other income	**$ 2,106**	**$ 2,733**	**$ 4,839**	$ 3,847	$ 2,495	$ 6,342	$ 4,258	$ 2,116	$ 6,374
Total noninterest revenue	**50,571**	**2,733**	**53,304**	53,287	2,495	55,782	52,121	2,116	54,237
Net interest income	**43,634**	**985**	**44,619**	43,319	697	44,016	44,910	743	45,653
Total net revenue	**94,205**	**3,718**	**97,923**	96,606	3,192	99,798	97,031	2,859	99,890
Pre-provision profit	**32,931**	**3,718**	**36,649**	26,139	3,192	29,331	32,302	2,859	35,161
Income before income tax expense	**29,792**	**3,718**	**33,510**	25,914	3,192	29,106	28,917	2,859	31,776
Income tax expense	**8,030**	**3,718**	**11,748**	7,991	3,192	11,183	7,633	2,859	10,492
Overhead ratio	**65%**	**NM**	**63%**	73%	NM	71%	67%	NM	65%

(a) Predominantly recognized in CIB and CB business segments and Corporate.

Calculation of certain U.S. GAAP and non-GAAP financial measures

Certain U.S. GAAP and non-GAAP financial measures are calculated as follows:

Book value per share ("BVPS")
Common stockholders' equity at period-end / Common shares at period-end

Overhead ratio
Total noninterest expense / Total net revenue

Return on assets ("ROA")
Reported net income / Total average assets

Return on common equity ("ROE")
Net income* / Average common stockholders' equity

Return on tangible common equity ("ROTCE")
Net income* / Average tangible common equity

Tangible book value per share ("TBVPS")
Tangible common equity at period-end / Common shares at period-end

* Represents net income applicable to common equity

Tangible common equity ("TCE"), ROTCE and TBVPS are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's earnings as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. TCE, ROTCE, and TBVPS are meaningful to the Firm, as well as investors and analysts, in assessing the Firm's use of equity.

Additionally, certain credit and capital metrics and ratios disclosed by the Firm are non-GAAP measures. For additional information on these non-GAAP measures, see Credit Risk Management on pages 110–111, and Regulatory capital on pages 146–153.

Tangible common equity

(in millions, except per share and ratio data)	Period-end		Average		
	Dec 31, 2014	Dec 31, 2013	Year ended December 31, 2014	2013	2012
Common stockholders' equity	$ 212,002	$ 200,020	$ 207,400	$ 196,409	$ 184,352
Less: Goodwill	47,647	48,081	48,029	48,102	48,176
Less: Certain identifiable intangible assets	1,192	1,618	1,378	1,950	2,833
Add: Deferred tax liabilities[a]	2,853	2,953	2,950	2,885	2,754
Tangible common equity	$ 166,016	$ 153,274	$ 160,943	$ 149,242	$ 136,097
Return on tangible common equity	NA	NA	13%	11%	15%
Tangible book value per share	$ 44.69	$ 40.81	NA	NA	NA

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Core net interest income

In addition to reviewing net interest income on a managed basis, management also reviews core net interest income to assess the performance of its core lending, investing (including asset-liability management) and deposit-raising activities. These activities exclude the impact of CIB's market-based activities. The core data presented below are non-GAAP financial measures due to the exclusion of CIB's market-based net interest income and related assets. Management believes this exclusion provides investors and analysts another measure by which to analyze the non-market-related business trends of the Firm and provides a comparable measure to other financial institutions that are primarily focused on core lending, investing and deposit-raising activities.

Core net interest income data

Year ended December 31, (in millions, except rates)	2014	2013	2012
Net interest income - managed basis[a][b]	$ 44,619	$ 44,016	$ 45,653
Less: Market-based net interest income[c]	5,552	5,492	6,223
Core net interest income[a][c]	$ 39,067	$ 38,524	$ 39,430
Average interest-earning assets	$ 2,049,093	$ 1,970,231	$ 1,842,417
Less: Average market-based earning assets	510,261	504,218	499,339
Core average interest-earning assets	$ 1,538,832	$ 1,466,013	$ 1,343,078
Net interest yield on interest-earning assets - managed basis	2.18%	2.23%	2.48%
Net interest yield on market-based activities[c]	1.09	1.09	1.25
Core net interest yield on core average interest-earning assets[c]	2.54%	2.63%	2.94%

(a) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.

(b) For a reconciliation of net interest income on a reported and managed basis, see reconciliation from the Firm's reported U.S. GAAP results to managed basis on page 77.

(c) Effective with the fourth quarter of 2014, the Firm changed the methodology it uses to allocate preferred stock dividends to the lines of business. Prior period amounts were revised to conform with the current allocation methodology. The Firm's Consolidated balance sheets and consolidated results of operations were not affected by this reporting change. For further discussion please see Preferred stock dividend allocation reporting change on pages 79–80.

2014 compared with 2013

Core net interest income increased by $543 million in 2014 to $39.1 billion, and core average interest-earning assets increased by $72.8 billion to $1.5 trillion. The increase in net interest income in 2014 predominantly reflected higher yields on investment securities, the impact of lower interest expense, and higher average loan balances. The increase was partially offset by lower yields on loans due to the run-off of higher-yielding loans and new originations of lower-yielding loans. The increase in average interest-earning assets largely reflected the impact of higher average balance of deposits with banks. These changes in net interest income and interest-earning assets resulted in the core net interest yield decreasing by 9 basis points to 2.54% for 2014.

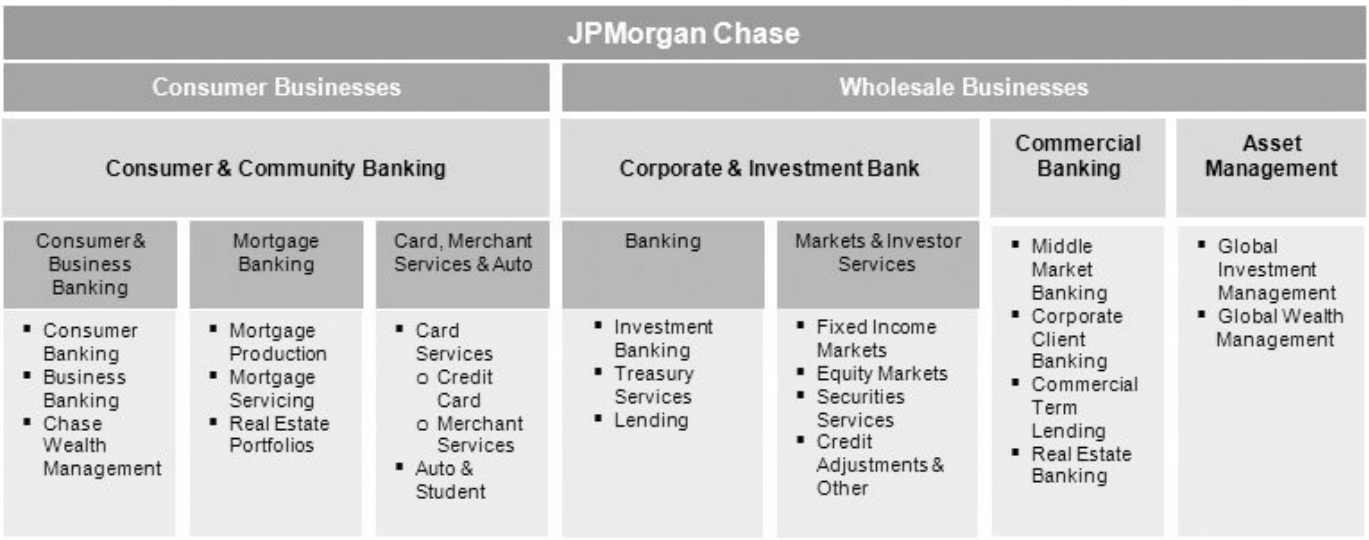
2013 compared with 2012

Core net interest income decreased by $906 million in 2013 to $38.5 billion, and core average interest-earning assets increased by $122.9 billion to $1.5 trillion. The decline in net interest income in 2013 primarily reflected the impact of the runoff of higher-yielding loans and originations of lower-yielding loans. The decrease in net interest income was partially offset by lower long-term debt and other funding costs. The increase in average interest-earning assets reflected the impact of higher deposits with banks. The core net interest yield decreased by 31 basis points to 2.63% in 2013, primarily reflecting the impact of a significant increase in deposits with banks and lower loan yields, partially offset by the impact of lower long-term debt yields and deposit rates.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 77–78.



Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies. The Firm continues to assess the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

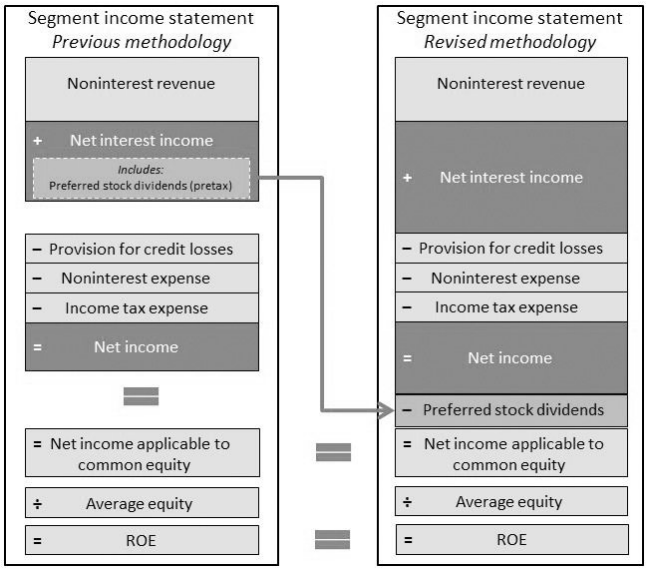
Funds transfer pricing

Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Treasury group within Corporate. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment as if it were operating independently, and as compared with its stand-alone peers. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO").

Preferred stock dividend allocation reporting change

As part of its funds transfer pricing process, the Firm allocates substantially all of the cost of its outstanding preferred stock to its reportable business segments, while retaining the balance of the cost in Corporate. Prior to the fourth quarter of 2014, this cost was allocated to the Firm's reportable business segments as interest expense, with an offset recorded as interest income in Corporate. Effective with the fourth quarter of 2014, this cost is no longer included in interest income and interest expense in the segments, but rather is now included in net income applicable to common equity to be consistent with the presentation of firmwide results. As a result of this reporting change, net interest income and net income in the reportable business segments increases; however, there was no impact to the segments' return on common equity ("ROE"). The Firm's net interest income, net income, Consolidated balance sheets and consolidated results of operations were not impacted by this reporting change, as preferred stock dividends have been and continue to be distributed from retained earnings and, accordingly, were never reported as a component of the Firm's consolidated net interest income or net income. Prior period segment and core net interest income amounts throughout this Annual Report have been revised to conform with the current period presentation.

The following chart depicts how preferred stock dividends were allocated to the business segments before and after the aforementioned methodology change.



Business segment capital allocation changes

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In) and economic risk measures. The amount of capital assigned to each business is referred to as equity. On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital to its lines of business and updates the equity allocations to its lines of business as refinements are implemented. For further information about these capital changes, see Line of business equity on page 153.

Expense allocation

Where business segments use services provided by support units within the Firm, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally allocated based on actual cost and upon usage of the services provided. In contrast, certain other expense related to certain corporate functions, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Retained expense includes: parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other items not aligned with a particular business segment.

Segment Results – Managed Basis[(a)]

The following table summarizes the business segment results for the periods indicated.

Year ended December 31,	Total net revenue			Total noninterest expense			Pre-provision profit/(loss)		
(in millions)	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Consumer & Community Banking	**$ 44,368**	$ 46,537	$ 50,278	**$ 25,609**	$ 27,842	$ 28,827	**$ 18,759**	$ 18,695	$ 21,451
Corporate & Investment Bank	**34,633**	34,786	34,762	**23,273**	21,744	21,850	**11,360**	13,042	12,912
Commercial Banking	**6,882**	7,092	6,912	**2,695**	2,610	2,389	**4,187**	4,482	4,523
Asset Management	**12,028**	11,405	10,010	**8,538**	8,016	7,104	**3,490**	3,389	2,906
Corporate	**12**	(22)	(2,072)	**1,159**	10,255	4,559	**(1,147)**	(10,277)	(6,631)
Total	**$ 97,923**	$ 99,798	$ 99,890	**$ 61,274**	$ 70,467	$ 64,729	**$ 36,649**	$ 29,331	$ 35,161

Year ended December 31,	Provision for credit losses			Net income/(loss)			Return on equity		
(in millions, except ratios)	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Consumer & Community Banking	**$ 3,520**	$ 335	$ 3,774	**$ 9,185**	$ 11,061	$ 10,791	**18%**	23%	25%
Corporate & Investment Bank	**(161)**	(232)	(479)	**6,925**	8,887	8,672	**10**	15	18
Commercial Banking	**(189)**	85	41	**2,635**	2,648	2,699	**18**	19	28
Asset Management	**4**	65	86	**2,153**	2,083	1,742	**23**	23	24
Corporate	**(35)**	(28)	(37)	**864**	(6,756)	(2,620)	NM	NM	NM
Total	**$ 3,139**	$ 225	$ 3,385	**$ 21,762**	$ 17,923	$ 21,284	10%	9%	11%

(a) Effective with the fourth quarter of 2014, the Firm changed the methodology it uses to allocate preferred stock dividends to the lines of business. Prior period amounts for net revenue, pre-provision profit/(loss) and net income/(loss) for each of the business segments were revised to conform with the current allocation methodology. The Firm's Consolidated balance sheets and consolidated results of operations were not affected by this reporting change. For further discussion please see Preferred stock dividend allocation reporting change in Business Segment Results on pages 79–80.

Consumer & Community Banking serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Merchant Services & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2014	2013	2012
Revenue			
Lending- and deposit-related fees	**$ 3,039**	$ 2,983	$ 3,121
Asset management, administration and commissions	**2,096**	2,116	2,093
Mortgage fees and related income	**3,560**	5,195	8,680
Card income	**5,779**	5,785	5,446
All other income	**1,463**	1,473	1,473
Noninterest revenue	**15,937**	17,552	20,813
Net interest income	**28,431**	28,985	29,465
Total net revenue	**44,368**	46,537	50,278
Provision for credit losses	**3,520**	335	3,774
Noninterest expense			
Compensation expense	**10,538**	11,686	11,632
Noncompensation expense	**15,071**	16,156	17,195
Total noninterest expense	**25,609**	27,842	28,827
Income before income tax expense	**15,239**	18,360	17,677
Income tax expense	**6,054**	7,299	6,886
Net income	**$ 9,185**	$ 11,061	$ 10,791
Financial ratios			
Return on common equity	**18%**	23%	25%
Overhead ratio	**58**	60	57

Note: As discussed on pages 79–80, effective with the fourth quarter of 2014 the Firm changed its methodology for allocating the cost of preferred stock to its reportable business segments. Prior periods have been revised to conform with the current period presentation.

Note: In the discussion and the tables which follow, CCB presents certain financial measures which exclude the impact of PCI loans; these are non-GAAP financial measures. For additional information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures.

2014 compared with 2013

Consumer & Community Banking net income was $9.2 billion, a decrease of $1.9 billion, or 17%, compared with the prior year, due to higher provision for credit losses and lower net revenue, partially offset by lower noninterest expense.

Net revenue was $44.4 billion, a decrease of $2.2 billion, or 5%, compared with the prior year. Net interest income was $28.4 billion, down $554 million, or 2%, driven by spread compression and lower mortgage warehouse balances, largely offset by higher deposit balances in Consumer & Business Banking and higher loan balances in Credit Card. Noninterest revenue was $16.0 billion, a decrease of $1.6 billion, or 9%, driven by lower mortgage fees and related income.

The provision for credit losses was $3.5 billion, compared with $335 million in the prior year. The current-year provision reflected a $1.3 billion reduction in the allowance for loan losses and total net charge-offs of $4.8 billion. The prior-year provision reflected a $5.5 billion reduction in the allowance for loan losses and total net charge-offs of $5.8 billion. For more information, including net charge-off amounts and rates, see Consumer Credit Portfolio.

Noninterest expense was $25.6 billion, a decrease of $2.2 billion, or 8%, from the prior year, driven by lower Mortgage Banking expense.

2013 compared with 2012

Consumer & Community Banking net income was $11.1 billion, an increase of $270 million, or 3%, compared with the prior year, due to lower provision for credit losses and lower noninterest expense, predominantly offset by lower net revenue.

Net revenue was $46.5 billion, a decrease of $3.7 billion, or 7%, compared with the prior year. Net interest income was $29.0 billion, down $480 million, or 2%, driven by lower deposit margins, lower loan balances due to net portfolio runoff and spread compression in Credit Card, largely offset by higher deposit balances. Noninterest revenue was $17.6 billion, a decrease of $3.3 billion, or 16%, driven by lower mortgage fees and related income, partially offset by higher card income.

The provision for credit losses was $335 million, compared with $3.8 billion in the prior year. The current-year provision reflected a $5.5 billion reduction in the allowance for loan losses and total net charge-offs of $5.8 billion. The prior-year provision reflected a $5.5 billion reduction in the allowance for loan losses and total net charge-offs of $9.3 billion, including $800 million of incremental charge-offs related to regulatory guidance. For more information, including net charge-off amounts and rates, see Consumer Credit Portfolio on pages 113–119.

Noninterest expense was $27.8 billion, a decrease of $985 million, or 3%, from the prior year, driven by lower mortgage servicing expense, partially offset by investments in Chase Private Client expansion, higher non-MBS related legal expense in Mortgage Production, higher auto lease depreciation, and costs related to the control agenda.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2014	2013	2012
Selected balance sheet data (period-end)			
Total assets	**$ 455,634**	$ 452,929	$ 467,282
Trading assets - loans[a]	**8,423**	6,832	18,801
Loans:			
Loans retained	**396,288**	393,351	402,963
Loans held-for-sale	**3,416**	940	—
Total loans	**399,704**	394,291	402,963
Deposits	**502,520**	464,412	438,517
Equity[b]	**51,000**	46,000	43,000
Selected balance sheet data (average)			
Total assets	**$ 447,750**	$ 456,468	$ 467,641
Trading assets - loans[a]	**8,040**	15,603	17,573
Loans:			
Loans retained	**389,967**	392,797	408,559
Loans held-for-sale	**917**	209	433
Total loans	**$ 390,884**	$ 393,006	$ 408,992
Deposits	**486,919**	453,304	413,948
Equity[b]	**51,000**	46,000	43,000
Headcount	**137,186**	151,333	164,391

(a) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value.
(b) 2014 includes $3.0 billion of capital held at the CCB level related to legacy mortgage servicing matters.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2014	2013	2012
Credit data and quality statistics			
Net charge-offs[a][b]	**$ 4,773**	$ 5,826	$ 9,280
Nonaccrual loans[c][d]	**6,401**	7,455	9,114
Nonperforming assets[c][d][e]	**6,872**	8,109	9,791
Allowance for loan losses[a]	**10,404**	12,201	17,752
Net charge-off rate[a][b]	**1.22%**	1.48%	2.27%
Net charge-off rate, excluding PCI loans[b]	**1.40**	1.73	2.68
Allowance for loan losses to period-end loans retained	**2.63**	3.10	4.41
Allowance for loan losses to period-end loans retained, excluding PCI loans[f]	**2.02**	2.36	3.51
Allowance for loan losses to nonaccrual loans retained, excluding credit card[c][f]	**58**	57	72
Nonaccrual loans to total period-end loans, excluding credit card[e]	**2.38**	2.80	3.31
Nonaccrual loans to total period-end loans, excluding credit card and PCI loans[c][e]	**2.88**	3.49	4.23
Business metrics			
Number of:			
Branches	**5,602**	5,630	5,614
ATMs[g]	**18,056**	20,290	19,062
Active online customers (in thousands)	**36,396**	33,742	31,114
Active mobile customers (in thousands)	**19,084**	15,629	12,359

(a) Net charge-offs and the net charge-off rates excluded $533 million and $53 million of write-offs in the PCI portfolio for the years ended December 31, 2014 and 2013, respectively. These write-offs decreased the allowance for loan losses for PCI loans. For further information on PCI write-offs, see Allowance for Credit Losses on pages 128–130.
(b) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $800 million of charge-offs, recorded in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") to be charged off to the net realizable value of the collateral and to be considered nonaccrual, regardless of their delinquency status. Excluding these charges-offs, net charge-offs for the year ended December 31, 2012, would have been $8.5 billion and excluding these charge-offs and PCI loans, the net charge-off rate for the year ended December 31, 2012, would have been 2.45%.
(c) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.
(d) At December 31, 2014, 2013 and 2012, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $7.8 billion, $8.4 billion and $10.6 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") of $367 million, $428 million and $525 million respectively, that are 90 or more days past due; (3) real estate owned ("REO") insured by U.S. government agencies of $462 million, $2.0 billion and $1.6 billion, respectively. These amounts have been excluded based upon the government guarantee.
(e) Prior periods were revised to conform with the current presentation.
(f) The allowance for loan losses for PCI loans of $3.3 billion, $4.2 billion and $5.7 billion at December 31, 2014, December 31, 2013, and December 31, 2012, respectively; these amounts were also excluded from the applicable ratios.
(g) Includes eATMs, formerly Express Banking Kiosks ("EBK"). Prior periods were revised to conform with the current presentation.

Consumer & Business Banking

Selected income statement data

As of or for the year ended December 31, (in millions, except ratios)	2014	2013	2012
Revenue			
Lending- and deposit-related fees	**$ 3,010**	$ 2,942	$ 3,068
Asset management, administration and commissions	**2,025**	1,815	1,638
Card income	**1,605**	1,495	1,353
All other income	**534**	492	498
Noninterest revenue	**7,174**	6,744	6,557
Net interest income	**11,052**	10,668	10,629
Total net revenue	**18,226**	17,412	17,186
Provision for credit losses	**305**	347	311
Noninterest expense	**12,149**	12,162	11,490
Income before income tax expense	**5,772**	4,903	5,385
Net income	**$ 3,443**	$ 2,943	$ 3,224
Return on common equity	**31%**	26%	36%
Overhead ratio	**67**	70	67
Equity (period-end and average)	**$11,000**	$ 11,000	$ 9,000

2014 compared with 2013

Consumer & Business Banking net income was $3.4 billion, an increase of $500 million, or 17%, compared with the prior year, due to higher net revenue.

Net revenue was $18.2 billion, up 5% compared with the prior year. Net interest income was $11.1 billion, up $384 million, or 4% compared with the prior year, driven by higher deposit balances, largely offset by deposit spread compression. Noninterest revenue was $7.2 billion, up $430 million, or 6%, driven by higher investment revenue, reflecting record client investment assets, higher debit card revenue, reflecting an increase in transaction volume, and higher deposit-related fees as a result of an increase in customer accounts.

Noninterest expense was $12.1 billion, flat from the prior year, reflecting lower costs driven by efficiencies implemented in the business, offset by the increased cost of controls.

2013 compared with 2012

Consumer & Business Banking net income was $2.9 billion, a decrease of $281 million, or 9%, compared with the prior year, due to higher noninterest expense, partially offset by higher noninterest revenue.

Net revenue was $17.4 billion, up 1% compared with the prior year. Net interest income was $10.7 billion, flat compared with the prior year, driven by higher deposit balances, offset by lower deposit margin. Noninterest revenue was $6.7 billion, an increase of 3%, driven by higher investment sales revenue and debit card revenue, partially offset by lower deposit-related fees.

Noninterest expense was $12.2 billion, up 6% from the prior year, reflecting continued investments in the business, and costs related to the control agenda.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2014	2013	2012
Business metrics			
Business banking origination volume	**$ 6,599**	$ 5,148	$ 6,542
Period-end loans	**21,200**	19,416	18,883
Period-end deposits:			
Checking	**213,049**	187,182	170,354
Savings	**255,148**	238,223	216,422
Time and other	**21,349**	26,022	31,753
Total period-end deposits	**489,546**	451,427	418,529
Average loans	**20,152**	18,844	18,104
Average deposits:			
Checking	**198,996**	176,005	153,422
Savings	**249,281**	229,341	204,449
Time and other	**24,057**	29,227	34,224
Total average deposits	**472,334**	434,573	392,095
Deposit margin	**2.21%**	2.32%	2.57%
Average assets	**$ 38,298**	$ 37,174	$ 34,431

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2014	2013	2012
Credit data and quality statistics			
Net charge-offs	**$ 305**	$ 337	$ 411
Net charge-off rate	**1.51%**	1.79%	2.27%
Allowance for loan losses	**$ 703**	$ 707	$ 698
Nonperforming assets	**286**	391	488
Retail branch business metrics			
Net new investment assets	**$ 16,088**	$ 16,006	$ 11,128
Client investment assets	**213,459**	188,840	158,502
% managed accounts	**39%**	36%	29%
Number of:			
Chase Private Client locations	**2,514**	2,149	1,218
Personal bankers	**21,039**	23,588	23,674
Sales specialists	**3,994**	5,740	6,076
Client advisors	**3,090**	3,044	2,963
Chase Private Clients	**325,653**	215,888	105,700
Accounts (in thousands)[(a)]	**30,481**	29,437	28,073
Households (in millions)	**25.7**	25.0	24.1

(a) Includes checking accounts and Chase Liquid® cards.

Mortgage Banking

Selected Financial statement data

As of or for the year ended December 31, (in millions, except ratios)	2014	2013	2012
Revenue			
Mortgage fees and related income	**$ 3,560**	$ 5,195	$ 8,680
All other income	**37**	283	475
Noninterest revenue	**3,597**	5,478	9,155
Net interest income	**4,229**	4,758	5,016
Total net revenue	**7,826**	10,236	14,171
Provision for credit losses	**(217)**	(2,681)	(490)
Noninterest expense	**5,284**	7,602	9,121
Income before income tax expense	**2,759**	5,315	5,540
Net income	**$ 1,668**	$ 3,211	$ 3,468
Return on common equity	**9%**	16%	19%
Overhead ratio	**68**	74	64
Equity (period-end and average)	**$ 18,000**	$ 19,500	$ 17,500

2014 compared with 2013

Mortgage Banking net income was $1.7 billion, a decrease of $1.5 billion, or 48%, from the prior year, driven by a lower benefit from the provision for credit losses and lower net revenue, partially offset by lower noninterest expense.

Net revenue was $7.8 billion, a decrease of $2.4 billion, or 24%, compared with the prior year. Net interest income was $4.2 billion, a decrease of $529 million, or 11%, driven by spread compression and lower loan balances due to portfolio runoff and lower warehouse balances. Noninterest revenue was $3.6 billion, a decrease of $1.9 billion, or 34%, driven by lower mortgage fees and related income.

The provision for credit losses was a benefit of $217 million, compared with a benefit of $2.7 billion in the prior year. The current year reflected a $700 million reduction in the allowance for loan losses, reflecting continued improvement in home prices and delinquencies. The prior year included a $3.8 billion reduction in the allowance for loan losses. Net charge-offs were $483 million, compared with $1.1 billion in the prior year.

Noninterest expense was $5.3 billion, a decrease of $2.3 billion, or 30%, from the prior year, due to lower expense in production and servicing reflecting lower headcount-related expense, the absence of non-MBS related legal expense and lower expense on foreclosure-related matters.

2013 compared with 2012

Mortgage Banking net income was $3.2 billion, a decrease of $257 million, or 7%, compared with the prior year, driven by lower net revenue, predominantly offset by a higher benefit from the provision for credit losses and lower noninterest expense.

Net revenue was $10.2 billion, a decrease of $3.9 billion, or 28%, compared with the prior year. Net interest income was $4.8 billion, a decrease of $258 million, or 5%, driven by lower loan balances due to net portfolio runoff. Noninterest revenue was $5.5 billion, a decrease of $3.7 billion, driven by lower mortgage fees and related income.

The provision for credit losses was a benefit of $2.7 billion, compared with a benefit of $490 million in the prior year. The current year reflected a $3.8 billion reduction in the allowance for loan losses due to continued improvement in home prices and delinquencies. The prior year included a $3.9 billion reduction in the allowance for loan losses.

Noninterest expense was $7.6 billion, a decrease of $1.5 billion, or 17%, from the prior year, due to lower servicing expense, partially offset by higher non-MBS related legal expense in Mortgage Production.

Functional results

Year ended December 31, (in millions, except ratios)	2014	2013	2012
Mortgage Production			
Production revenue and other income[a]	**$ 1,060**	$ 2,973	$ 5,877
Production-related net interest income[a]	**422**	635	705
Production-related revenue, excluding repurchase (losses)/benefits	**1,482**	3,608	6,582
Production expense[b]	**1,646**	3,088	2,747
Income, excluding repurchase (losses)/ benefits	**(164)**	520	3,835
Repurchase (losses)/benefits	**458**	331	(272)
Income before income tax expense	**294**	851	3,563
Mortgage Servicing			
Loan servicing revenue and other income[a]	**3,294**	3,744	4,110
Servicing-related net interest income[a]	**314**	253	93
Servicing-related revenue	**3,608**	3,997	4,203
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(905)**	(1,094)	(1,222)
Net servicing-related revenue	**2,703**	2,903	2,981
Default servicing expense	**1,406**	2,069	3,707
Core servicing expense[b]	**865**	904	1,033
Servicing Expense	**2,271**	**2,973**	4,740
Income/(loss), excluding MSR risk management	**432**	(70)	(1,759)
MSR risk management, including related net interest income/(expense)	**(28)**	(268)	616
Income/(loss) before income tax expense/(benefit)	**404**	(338)	(1,143)
Real Estate Portfolios			
Noninterest revenue	**(282)**	(209)	43
Net interest income	**3,493**	3,871	4,221
Total net revenue	**3,211**	3,662	4,264
Provision for credit losses	**(223)**	(2,693)	(509)
Noninterest expense	**1,373**	1,553	1,653
Income before income tax expense	**2,061**	4,802	3,120
Mortgage Banking income before income tax expense	**$ 2,759**	$ 5,315	$ 5,540
Mortgage Banking net income	**$ 1,668**	$ 3,211	$ 3,468
Overhead ratios			
Mortgage Production	**85%**	78%	43%
Mortgage Servicing	**85**	113	132
Real Estate Portfolios	**43**	42	39

(a) Prior periods were revised to conform with the current presentation.
(b) Includes provision for credit losses.

2014 compared with 2013

Mortgage Production pretax income was $294 million, a decrease of $557 million, or 65%, from the prior year, reflecting lower revenue, largely offset by lower expense and higher benefit from repurchase losses. Mortgage production-related revenue, excluding repurchase losses, was $1.5 billion, a decrease of $2.1 billion, from the prior year, driven by lower volumes due to higher levels of mortgage interest rates and tighter margins. Production expense was $1.6 billion, a decrease of $1.4 billion, or 47%, from the prior year, driven by lower headcount-related expense and the absence of non-MBS related legal expense.

Mortgage Servicing pretax income was $404 million, compared with a loss of $338 million in the prior year, reflecting lower expenses and lower MSR risk management loss, partially offset by lower net revenue. Mortgage net servicing-related revenue was $2.7 billion, a decrease of $200 million, or 7%, from the prior year, driven by lower average third-party loans serviced and lower revenue from an exited non-core product, partially offset by lower MSR asset amortization expense as a result of lower MSR asset value. MSR risk management was a loss of $28 million, compared with a loss of $268 million in the prior year. See Note 17 for further information regarding changes in value of the MSR asset and related hedges. Servicing expense was $2.3 billion, a decrease of $702 million, or 24%, from the prior year, reflecting lower headcount-related expense and lower expense for foreclosure related matters.

Real Estate Portfolios pretax income was $2.1 billion, down $2.7 billion, or 57%, from the prior year, due to a lower benefit from the provision for credit losses and lower net revenue, partially offset by lower noninterest expense. Net revenue was $3.2 billion, a decrease of $451 million, or 12%, from the prior year, driven by lower net interest income as a result of spread compression and lower loan balances due to portfolio runoff. The provision for credit losses was a benefit of $223 million, compared with a benefit of $2.7 billion in the prior year. The current-year provision reflected a $700 million reduction in the allowance for loan losses, $400 million from the non credit-impaired allowance and $300 million from the purchased credit-impaired allowance, due to continued improvement in home prices and delinquencies. The prior-year provision reflected a $3.8 billion reduction in the allowance for loan losses, $2.3 billion from the non credit-impaired allowance and $1.5 billion from the purchased credit-impaired allowance. Net charge-offs were $477 million, compared with $1.1 billion in the prior year. See Consumer Credit Portfolio on pages 113–119 for the net charge-off amounts and rates. Noninterest expense was $1.4 billion, a decrease of $180 million, or 12%, compared with the prior year, driven by lower FDIC-related expense and lower foreclosed asset expense due to lower foreclosure inventory.

2013 compared with 2012

Mortgage Production pretax income was $851 million, a decrease of $2.7 billion from the prior year, reflecting lower margins, lower volumes and higher legal expense, partially offset by a benefit in repurchase losses. Production-related revenue, excluding repurchase losses, was $3.6 billion, a decrease of $3.0 billion, or 45%, from the prior year, largely reflecting lower margins and lower volumes from rising rates. Production expense was $3.1 billion, an increase of $341 million, or 12%, from the prior year, due to higher non-MBS related legal expense and higher compensation-related expense. Repurchase losses for the current year reflected a benefit of $331 million, compared with repurchase losses of $272 million in the prior year. The current year reflected a reduction in the repurchase liability largely as a result of the settlement with the GSEs.

Mortgage Servicing pretax loss was $338 million, compared with a pretax loss of $1.1 billion in the prior year, driven by lower expense, partially offset by a MSR risk management loss. Mortgage net servicing-related revenue was $2.9 billion, a decrease of $78 million. MSR risk management was a loss of $268 million, compared with income of $616 million in the prior year, driven by the net impact of various changes in model inputs and assumptions. See Note 17 for further information regarding changes in value of the MSR asset and related hedges. Servicing expense was $3.0 billion, a decrease of $1.8 billion, or 37%, from the prior year, reflecting lower costs associated with the Independent Foreclosure Review and lower servicing headcount.

Real Estate Portfolios pretax income was $4.8 billion, up $1.7 billion from the prior year, or 54%, due to a higher benefit from the provision for credit losses, partially offset by lower net revenue. Net revenue was $3.7 billion, a decrease of $602 million, or 14%, from the prior year. This decrease was due to lower net interest income, resulting from lower loan balances due to net portfolio runoff, and lower noninterest revenue due to higher loan retention. The provision for credit losses was a benefit of $2.7 billion, compared with a benefit of $509 million in the prior year. The current-year provision reflected a $3.8 billion reduction in the allowance for loan losses, $2.3 billion from the non credit-impaired allowance and $1.5 billion from the purchased credit-impaired allowance, reflecting continued improvement in home prices and delinquencies. The prior-year provision included a $3.9 billion reduction in the allowance for loan losses from the non credit-impaired allowance. Net charge-offs were $1.1 billion, compared with $3.3 billion in the prior year. Prior-year total net charge-offs included $744 million of incremental charge-offs reported in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy. Noninterest expense was $1.6 billion, a decrease of $100 million, or 6%, compared with the prior year, driven by lower foreclosed asset expense due to lower foreclosure inventory, largely offset by higher FDIC-related expense.

Mortgage Production and Mortgage Servicing

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2014	2013	2012
Selected balance sheet data (Period-end)			
Trading assets - loans[a]	**$ 8,423**	$ 6,832	$18,801
Loans:			
Prime mortgage, including option ARMs[b]	**$13,557**	$15,136	$17,290
Loans held-for-sale	**314**	614	–
Selected balance sheet data (average)			
Trading assets - loans[a]	**8,040**	15,603	17,573
Loans:			
Prime mortgage, including option ARMs[b]	**14,993**	16,495	17,335
Loans held-for-sale	**394**	114	–
Average assets	**42,456**	57,131	59,837
Repurchase liability (period-end)	**249**	651	2,530
Credit data and quality statistics			
Net charge-offs:			
Prime mortgage, including option ARMs	**6**	12	19
Net charge-off rate:			
Prime mortgage, including option ARMs	**0.04%**	0.07%	0.11%
30+ day delinquency rate[c]	**2.06**	2.75	3.05
Nonperforming assets[d][e]	**$ 389**	$ 519	$ 599

(a) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value.

(b) Predominantly represents prime mortgage loans repurchased from Government National Mortgage Association ("Ginnie Mae") pools, which are insured by U.S. government agencies.

(c) At December 31, 2014, 2013 and 2012, excluded mortgage loans insured by U.S. government agencies of $9.7 billion, $9.6 billion and $11.8 billion respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee. For further discussion, see Note 14 which summarizes loan delinquency information.

(d) At December 31, 2014, 2013 and 2012, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $7.8 billion, $8.4 billion and $10.6 billion respectively, that are 90 or more days past due; and (2) REO insured by U.S. government agencies of $462 million, $2.0 billion and $1.6 billion, respectively. These amounts have been excluded based upon the government guarantee.

(e) Prior periods were revised to conform with the current presentation.

Selected metrics

As of or for the year ended December 31,

(in billions, except ratios)	2014	2013	2012
Business metrics			
Mortgage origination volume by channel			
Retail	**$ 29.5**	$ 77.0	$ 101.4
Correspondent[a]	**48.5**	88.5	79.4
Total mortgage origination volume[b]	**$ 78.0**	$ 165.5	$ 180.8
Mortgage application volume by channel			
Retail	**$ 55.6**	$ 108.0	$ 164.5
Correspondent[a]	**63.2**	89.2	101.2
Total mortgage application volume	**$ 118.8**	$ 197.2	$ 265.7
Third-party mortgage loans serviced (period-end)	**$ 751.5**	$ 815.5	$ 859.4
Third-party mortgage loans serviced (average)	**784.6**	837.3	847.0
MSR carrying value (period-end)	**7.4**	9.6	7.6
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	**0.98%**	1.18%	0.88%
Ratio of loan servicing-related revenue to third-party mortgage loans serviced (average)	**0.36**	0.40	0.46
MSR revenue multiple[c]	**2.72x**	2.95x	1.91x

(a) Includes rural housing loans sourced through correspondents, and prior to November 2013, through both brokers and correspondents, which are underwritten and closed with pre-funding loan approval from the U.S. Department of Agriculture Rural Development, which acts as the guarantor in the transaction.

(b) Firmwide mortgage origination volume was $83.3 billion, $176.4 billion and $189.9 billion for the years ended December 31, 2014, 2013 and 2012, respectively.

(c) Represents the ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end) divided by the ratio of loan servicing-related revenue to third-party mortgage loans serviced (average).

Real Estate Portfolios

Selected metrics

As of or for the year ended December 31,

(in millions)	2014	2013	2012
Loans, excluding PCI			
Period-end loans owned:			
Home equity	**$ 50,899**	$ 57,863	$ 67,385
Prime mortgage, including option ARMs	**66,543**	49,463	41,316
Subprime mortgage	**5,083**	7,104	8,255
Other	**477**	551	633
Total period-end loans owned	**$123,002**	$114,981	$117,589
Average loans owned:			
Home equity	**$ 54,410**	$ 62,369	$ 72,674
Prime mortgage, including option ARMs	**56,104**	44,988	42,311
Subprime mortgage	**6,257**	7,687	8,947
Other	**511**	588	675
Total average loans owned	**$117,282**	$115,632	$124,607
PCI loans			
Period-end loans owned:			
Home equity	**$ 17,095**	$ 18,927	$ 20,971
Prime mortgage	**10,220**	12,038	13,674
Subprime mortgage	**3,673**	4,175	4,626
Option ARMs	**15,708**	17,915	20,466
Total period-end loans owned	**$ 46,696**	$ 53,055	$ 59,737
Average loans owned:			
Home equity	**$ 18,030**	$ 19,950	$ 21,840
Prime mortgage	**11,257**	12,909	14,400
Subprime mortgage	**3,921**	4,416	4,777
Option ARMs	**16,794**	19,236	21,545
Total average loans owned	**$ 50,002**	$ 56,511	$ 62,562
Total Real Estate Portfolios			
Period-end loans owned:			
Home equity	**$ 67,994**	$ 76,790	$ 88,356
Prime mortgage, including option ARMs	**92,471**	79,416	75,456
Subprime mortgage	**8,756**	11,279	12,881
Other	**477**	551	633
Total period-end loans owned	**$169,698**	$168,036	$177,326
Average loans owned:			
Home equity	**$ 72,440**	$ 82,319	$ 94,514
Prime mortgage, including option ARMs	**84,155**	77,133	78,256
Subprime mortgage	**10,178**	12,103	13,724
Other	**511**	588	675
Total average loans owned	**$167,284**	$172,143	$187,169
Average assets	**$164,387**	$163,898	$175,712
Home equity origination volume	**3,102**	2,124	1,420

Credit data and quality statistics

As of or for the year ended December 31, (in millions, except ratios)	2014	2013	2012
Net charge-offs/ (recoveries), excluding PCI loans:[a][b]			
Home equity	$ 473	$ 966	$ 2,385
Prime mortgage, including option ARMs	22	41	454
Subprime mortgage	(27)	90	486
Other	9	10	16
Total net charge-offs/ (recoveries), excluding PCI loans	**$ 477**	$ 1,107	$ 3,341
Net charge-off/(recovery) rate, excluding PCI loans:[b]			
Home equity	0.87%	1.55%	3.28%
Prime mortgage, including option ARMs	0.04	0.09	1.07
Subprime mortgage	(0.43)	1.17	5.43
Other	1.76	1.70	2.37
Total net charge-off/ (recovery) rate, excluding PCI loans	0.41	0.96	2.68
Net charge-off/(recovery) rate – reported:[a][b]			
Home equity	0.65%	1.17%	2.52%
Prime mortgage, including option ARMs	0.03	0.05	0.58
Subprime mortgage	(0.27)	0.74	3.54
Other	1.76	1.70	2.37
Total net charge-off/ (recovery) rate – reported	0.29	0.64	1.79
30+ day delinquency rate, excluding PCI loans[c]	2.67%	3.66%	5.03%
Allowance for loan losses, excluding PCI loans	$ 2,168	$ 2,568	$ 4,868
Allowance for PCI loans[a]	3,325	4,158	5,711
Allowance for loan losses	**$ 5,493**	$ 6,726	$ 10,579
Nonperforming assets[d]	5,786	6,919	8,439
Allowance for loan losses to period-end loans retained	3.24%	4.00%	5.97%
Allowance for loan losses to period-end loans retained, excluding PCI loans	1.76	2.23	4.14

(a) Net charge-offs and the net charge-off rates excluded $533 million and $53 million of write-offs in the PCI portfolio for the years ended December 31, 2014 and 2013, respectively. These write-offs decreased the allowance for loan losses for PCI loans. For further information on PCI write-offs, see Allowance for Credit Losses on pages 128–130.

(b) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $744 million of charge-offs related to regulatory guidance. Excluding these charges-offs, net charge-offs for the year ended December 31, 2012, would have been $1.8 billion, $410 million and $416 million for the home equity, prime mortgage, including option ARMs, and subprime mortgage portfolios, respectively. Net charge-off rates for the same period, excluding these charge-offs and PCI loans, would have been 2.41%, 0.97% and 4.65% for the home equity, prime mortgage, including option ARMs, and subprime mortgage portfolios, respectively.

(c) The 30+ day delinquency rate for PCI loans was 13.33% 15.31% and 20.14% at December 31, 2014, 2013 and 2012, respectively.

(d) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.

Mortgage servicing-related matters

The financial crisis resulted in unprecedented levels of delinquencies and defaults of 1-4 family residential real estate loans. Such loans required varying degrees of loss mitigation activities. Foreclosure is usually a last resort, and accordingly, the Firm has made, and continues to make, significant efforts to help borrowers remain in their homes.

The Firm has entered into various Consent Orders and settlements with federal and state governmental agencies and private parties related to mortgage servicing, origination, and residential mortgage-backed securities activities. The requirements of these Consent Orders and settlements vary, but in the aggregate, include cash compensatory payments (in addition to fines) and/or "borrower relief," which may include principal reduction, refinancing, short sale assistance, and other specified types of borrower relief. Other obligations required under certain Consent Orders and settlements, as well as under new regulatory requirements, include enhanced mortgage servicing and foreclosure standards and processes. The Firm has satisfied or is committed to satisfying these obligations within the mandated timeframes.

The mortgage servicing Consent Orders and settlements are subject to ongoing oversight by the Mortgage Compliance Committee of the Firm's Board of Directors. In addition, certain of the Consent Orders and settlements are the subject of ongoing reporting to various regulators and independent overseers.

The Firm's compliance with the Global Settlement and the RMBS Settlement are detailed in periodic reports published by the independent overseers.

Card, Merchant Services & Auto

Selected income statement data

As of or for the year ended December 31, (in millions, except ratios)	2014	2013	2012
Revenue			
Card income	**$ 4,173**	$ 4,289	$ 4,092
All other income	**993**	1,041	1,009
Noninterest revenue	**5,166**	5,330	5,101
Net interest income	**13,150**	13,559	13,820
Total net revenue	**18,316**	18,889	18,921
Provision for credit losses	**3,432**	2,669	3,953
Noninterest expense[(a)]	**8,176**	8,078	8,216
Income before income tax expense	**6,708**	8,142	6,752
Net income	**$ 4,074**	$ 4,907	$ 4,099
Return on common equity	**21%**	31%	24%
Overhead ratio	**45**	43	43
Equity (period-end and average)	**$ 19,000**	$ 15,500	$16,500

(a) Included operating lease depreciation expense of $1.2 billion, $972 million and $817 million for the years ended December 31, 2014, 2013 and 2012, respectively.

2014 compared with 2013

Card net income was $4.1 billion, a decrease of $833 million, or 17%, compared with the prior year, predominantly driven by higher provision for credit losses and lower net revenue.

Net revenue was $18.3 billion, down $573 million or 3% compared with the prior year. Net interest income was $13.2 billion, a decrease of $409 million, or 3%, from the prior year primarily driven by spread compression in Credit Card and Auto, partially offset by higher average loan balances. Noninterest revenue was $5.2 billion, down $164 million, or 3%, from the prior year. The decrease was primarily driven by higher amortization of new account origination costs and the impact of non-core portfolio exits, largely offset by higher auto lease income and net interchange income from higher sales volume.

The provision for credit losses was $3.4 billion, compared with $2.7 billion in the prior year. The current-year provision reflected lower net charge-offs and a $554 million reduction in the allowance for loan losses. The reduction in the allowance for loan losses was primarily related to a decrease in the asset-specific allowance resulting from increased granularity of the impairment estimates and lower balances related to credit card loans modified in TDRs, runoff in the student loan portfolio, and lower estimated losses in auto loans. The prior-year provision included a $1.7 billion reduction in the allowance for loan losses.

Noninterest expense was $8.2 billion, up $98 million, or 1% from the prior year primarily driven by higher auto lease depreciation expense and higher investment in controls, predominantly offset by lower intangible amortization and lower remediation costs.

2013 compared with 2012

Card net income was $4.9 billion, an increase of $808 million, or 20%, compared with the prior year, driven by lower provision for credit losses.

Net revenue was $18.9 billion, flat compared with the prior year. Net interest income was $13.6 billion, down $261 million, or 2%, from the prior year. The decrease was primarily driven by spread compression in Credit Card and Auto and lower average credit card loan balances, largely offset by the impact of lower revenue reversals associated with lower net charge-offs in Credit Card. Noninterest revenue was $5.3 billion, an increase of $229 million, or 4%, compared with the prior year primarily driven by higher net interchange income, auto lease income and merchant servicing revenue, largely offset by lower revenue from an exited non-core product and a gain on an investment security recognized in the prior year.

The provision for credit losses was $2.7 billion, compared with $4.0 billion in the prior year. The current-year provision reflected lower net charge-offs and a $1.7 billion reduction in the allowance for loan losses due to lower estimated losses reflecting improved delinquency trends and restructured loan performance. The prior-year provision included a $1.6 billion reduction in the allowance for loan losses. The Credit Card net charge-off rate was 3.14%, down from 3.95% in the prior year; and the 30+ day delinquency rate was 1.67%, down from 2.10% in the prior year. The Auto net charge-off rate was 0.31%, down from 0.39% in the prior year.

Noninterest expense was $8.1 billion, a decrease of $138 million, or 2%, from the prior year. This decrease was due to one-time expense items recognized in the prior year related to the exit of a non-core product and the write-off of intangible assets associated with a non-strategic relationship. The reduction in expenses was partially offset by increased auto lease depreciation and payments to customers required by a regulatory Consent Order during 2013.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2014	2013	2012
Selected balance sheet data (period-end)			
Loans:			
Credit Card	**$ 131,048**	$ 127,791	$ 127,993
Auto	**54,536**	52,757	49,913
Student	**9,351**	10,541	11,558
Total loans	**$ 194,935**	$ 191,089	$ 189,464
Selected balance sheet data (average)			
Total assets	**$ 202,609**	$ 198,265	$ 197,661
Loans:			
Credit Card	**125,113**	123,613	125,464
Auto	**52,961**	50,748	48,413
Student	**9,987**	11,049	12,507
Total loans	**$ 188,061**	$ 185,410	$ 186,384
Business metrics			
Credit Card, excluding Commercial Card			
Sales volume (in billions)	**$ 465.6**	$ 419.5	$ 381.1
New accounts opened	**8.8**	7.3	6.7
Open accounts	**64.6**	65.3	64.5
Accounts with sales activity	**34.0**	32.3	30.6
% of accounts acquired online	**56%**	55%	51%
Merchant Services (Chase Paymentech Solutions)			
Merchant processing volume (in billions)	**$ 847.9**	$ 750.1	$ 655.2
Total transactions (in billions)	**38.1**	35.6	29.5
Auto			
Origination volume (in billions)	**27.5**	26.1	23.4

The following are brief descriptions of selected business metrics within Card, Merchant Services & Auto.

Card Services includes the Credit Card and Merchant Services businesses.

Merchant Services processes transactions for merchants.

Total transactions – Number of transactions and authorizations processed for merchants.

Commercial Card provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

Sales volume – Dollar amount of cardmember purchases, net of returns.

Open accounts – Cardmember accounts with charging privileges.

Auto origination volume – Dollar amount of auto loans and leases originated.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2014	2013	2012
Credit data and quality statistics			
Net charge-offs:			
Credit Card	**$ 3,429**	$ 3,879	$ 4,944
Auto[a]	**181**	158	188
Student	**375**	333	377
Total net charge-offs	**$ 3,985**	$ 4,370	$ 5,509
Net charge-off rate:			
Credit Card[b]	**2.75%**	3.14%	3.95%
Auto[a]	**0.34**	0.31	0.39
Student	**3.75**	3.01	3.01
Total net charge-off rate	**2.12**	2.36	2.96
Delinquency rates			
30+ day delinquency rate:			
Credit Card[c]	**1.44**	1.67	2.10
Auto	**1.23**	1.15	1.25
Student[d]	**2.35**	2.56	2.13
Total 30+ day delinquency rate	**1.42**	1.58	1.87
90+ day delinquency rate – Credit Card[c]	**0.70**	0.80	1.02
Nonperforming assets[e]	**$ 411**	$ 280	$ 265
Allowance for loan losses:			
Credit Card	**$ 3,439**	$ 3,795	$ 5,501
Auto & Student	**749**	953	954
Total allowance for loan losses	**$ 4,188**	**$ 4,748**	**$ 6,455**
Allowance for loan losses to period-end loans:			
Credit Card[c]	**2.69%**	2.98%	4.30%
Auto & Student	**1.17**	1.51	1.55
Total allowance for loan losses to period-end loans	**2.18**	2.49	3.41

(a) Net charge-offs and net charge-off rates for the year ended December 31, 2012, included $53 million of charge-offs of Chapter 7 loans. Excluding these incremental charge-offs, net charge-offs for the year ended December 31, 2012 would have been $135 million, and the net charge-off rate would have been 0.28%.

(b) Average credit card loans included loans held-for-sale of $509 million, $95 million and $433 million for the years ended December 31, 2014, 2013 and 2012, respectively. These amounts are excluded when calculating the net charge-off rate.

(c) Period-end credit card loans included loans held-for-sale of $3.0 billion and $326 million at December 31, 2014 and 2013, respectively. There were no loans held-for-sale at December 31, 2012. These amounts are excluded when calculating delinquency rates and the allowance for loan losses to period-end loans.

(d) Excluded student loans insured by U.S. government agencies under the FFELP of $654 million, $737 million and $894 million at December 31, 2014, 2013 and 2012, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

(e) Nonperforming assets excluded student loans insured by U.S. government agencies under the FFELP of $367 million, $428 million and $525 million at December 31, 2014, 2013 and 2012, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

Card Services supplemental information

Year ended December 31, (in millions, except ratios)	2014	2013	2012
Revenue			
Noninterest revenue	**$ 3,593**	$ 3,977	$ 3,887
Net interest income	**11,462**	11,638	11,745
Total net revenue	**15,055**	15,615	15,632
Provision for credit losses	**3,079**	2,179	3,444
Noninterest expense	**6,152**	6,245	6,566
Income before income tax expense	**5,824**	7,191	5,622
Net income	**$ 3,547**	$ 4,340	$ 3,426
Percentage of average loans:			
Noninterest revenue	**2.87%**	3.22%	3.10%
Net interest income	**9.16**	9.41	9.36
Total net revenue	**12.03**	12.63	12.46

CORPORATE & INVESTMENT BANK

The Corporate & Investment Bank, comprised of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which includes custody, fund accounting and administration, and securities lending products sold principally to asset managers, insurance companies and public and private investment funds.

Selected income statement data

Year ended December 31, (in millions)	2014	2013	2012
Revenue			
Investment banking fees	**$ 6,570**	$ 6,331	$ 5,769
Principal transactions[a]	**8,947**	9,289	9,510
Lending- and deposit-related fees	**1,742**	1,884	1,948
Asset management, administration and commissions	**4,687**	4,713	4,693
All other income	**1,512**	1,593	1,184
Noninterest revenue	**23,458**	23,810	23,104
Net interest income	**11,175**	10,976	11,658
Total net revenue[b]	**34,633**	34,786	34,762
Provision for credit losses	**(161)**	(232)	(479)
Noninterest expense			
Compensation expense	**10,449**	10,835	11,313
Noncompensation expense	**12,824**	10,909	10,537
Total noninterest expense	**23,273**	21,744	21,850
Income before income tax expense	**11,521**	13,274	13,391
Income tax expense	**4,596**	4,387	4,719
Net income	**$ 6,925**	$ 8,887	$ 8,672

Note: As discussed on pages 79–80, effective with the fourth quarter of 2014 the Firm changed its methodology for allocating the cost of preferred stock to its reportable business segments. Prior periods have been revised to conform with the current period presentation.

(a) Included FVA (effective 2013) and DVA on OTC derivatives and structured notes, measured at fair value. FVA and DVA gains/(losses) were $468 million and $(1.9) billion for the years ended December 31, 2014 and 2013, respectively. DVA losses were ($930) million for the year ended December 31, 2012.

(b) Included tax-equivalent adjustments, predominantly due to income tax credits related to affordable housing and alternative energy investments, as well as tax-exempt income from municipal bond investments, of $2.5 billion, $2.3 billion and $2.0 billion for the years ended December 31, 2014, 2013 and 2012, respectively.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2014	2013	2012
Financial ratios			
Return on common equity[a]	**10%**	15%	18%
Overhead ratio[b]	**67**	63	63
Compensation expense as percentage of total net revenue[c]	**30**	31	33
Revenue by business			
Advisory	**$ 1,627**	$ 1,315	$ 1,491
Equity underwriting	**1,571**	1,499	1,026
Debt underwriting	**3,372**	3,517	3,252
Total investment banking fees	**6,570**	6,331	5,769
Treasury Services	**4,145**	4,171	4,249
Lending	**1,130**	1,669	1,389
Total Banking	**11,845**	12,171	11,407
Fixed Income Markets[d]	**13,848**	15,832	15,701
Equity Markets	**4,861**	4,803	4,448
Securities Services	**4,351**	4,100	4,000
Credit Adjustments & Other[e]	**(272)**	(2,120)	(794)
Total Markets & Investor Services	**22,788**	22,615	23,355
Total net revenue	**$34,633**	$34,786	$34,762

(a) Return on equity excluding FVA (effective 2013) and DVA, a non-GAAP financial measure, was 17% and 19% for the years ended December 31, 2013 and 2012, respectively.

(b) Overhead ratio excluding FVA (effective 2013) and DVA, a non-GAAP financial measure, was 59% and 61% for the years ended December 31, 2013 and 2012, respectively.

(c) Compensation expense as a percentage of total net revenue excluding FVA (effective 2013) and DVA, a non-GAAP financial measure, was 30% and 32% for the years ended December 31, 2013 and 2012, respectively.

(d) Includes results of the synthetic credit portfolio that was transferred from the CIO effective July 2, 2012.

(e) Consists primarily of credit valuation adjustments ("CVA") managed by the credit portfolio group, and FVA (effective 2013) and DVA on OTC derivatives and structured notes. Results are presented net of associated hedging activities and net of CVA and FVA amounts allocated to Fixed Income Markets and Equity Markets.

Prior to January 1, 2014, CIB provided several non-GAAP financial measures excluding the impact of implementing the FVA framework (effective 2013) and DVA on: net revenue, net income, compensation ratio, overhead ratio, and return on equity. Beginning in the first quarter 2014, the Firm did not exclude FVA and DVA from its assessment of business performance; however, the Firm continues to present these non-GAAP measures for the periods prior to January 1, 2014, as they reflected how management assessed the underlying business performance of the CIB in those prior periods. In addition, the ratio for the allowance for loan losses to end-of-period loans, also a non-GAAP financial measure, is

calculated excluding the impact of consolidated Firm-administered multi-seller conduits and trade finance, to provide a more meaningful assessment of CIB's allowance coverage ratio. These measures are used by management to assess the underlying performance of the business and for comparability with peers.

2014 compared with 2013
Net income was $6.9 billion, down 22% compared with $8.9 billion in the prior year. These results primarily reflected lower revenue as well as higher noninterest expense. Net revenue was $34.6 billion, flat compared with the prior year.

Banking revenue was $11.8 billion, down 3% from the prior year. Investment banking fees were $6.6 billion, up 4% from the prior year. The increase was driven by higher advisory and equity underwriting fees, partially offset by lower debt underwriting fees. Advisory fees were $1.6 billion up 24% on stronger share of fees for completed transactions as well as growth in the industry-wide fee levels, according to Dealogic. Equity underwriting fees were $1.6 billion up 5%, driven by higher industry wide issuance. Debt underwriting fees were $3.4 billion, down 4%, primarily related to lower loan syndication fees on lower industry-wide fee levels and lower bond underwriting fees. The Firm also ranked #1 globally in fees and volumes share across high grade, high yield and loan products. The Firm maintained its #2 ranking for M&A, and improved share of fees both globally and in the U.S. compared to the prior year. Treasury Services revenue was $4.1 billion, down 1% compared with the prior year, primarily driven by lower trade finance revenue as well as the impact of business simplification initiatives, largely offset by higher net interest income from increased deposits. Lending revenue was $1.1 billion, down from $1.7 billion in the prior year, driven by losses, compared with gains in the prior periods, on securities received from restructured loans, as well as lower net interest income.

Markets & Investor Services revenue was $22.8 billion, up 1% from the prior year. Fixed Income Markets revenue was $13.8 billion down 13% from the prior year driven by lower revenues in Fixed Income primarily from credit-related and rates products as well as the impact of business simplification. Equity Markets revenue was $4.9 billion up 1% as higher prime services revenue was partially offset by lower equity derivatives revenue. Securities Services revenue was $4.4 billion, up 6% from the prior year, primarily driven by higher net interest income on increased deposits and higher fees and commissions. Credit Adjustments & Other revenue was a loss of $272 million driven by net CVA losses partially offset by gains, net of hedges, related to FVA/DVA. The prior year was a loss of $2.1 billion (including the FVA implementation loss of $1.5 billion and DVA losses of $452 million).

Noninterest expense was $23.3 billion, up 7% compared to the prior year as a result of higher legal expense and investment in controls. This was partially offset by lower performance-based compensation expense as well as the impact of business simplification, including the sale or liquidation of a significant part of the physical commodities business. The compensation expense to net revenue ratio was 30%.

Return on equity was 10% on $61.0 billion of average allocated capital.

2013 compared with 2012
Net income was $8.9 billion, up 2% compared with the prior year.

Net revenue was $34.8 billion, flat compared with the prior year. Net revenue in 2013 included a $1.5 billion loss as a result of implementing a FVA framework for OTC derivatives and structured notes. The FVA framework incorporates the impact of funding into the Firm's valuation estimates for OTC derivatives and structured notes and reflects an industry migration towards incorporating the market cost of unsecured funding in the valuation of such instruments. The loss recorded in 2013 was a one-time adjustment arising on implementation of the new FVA framework.

Net revenue in 2013 also included a $452 million loss from DVA on structured notes and derivative liabilities, compared with a loss of $930 million in the prior year. Excluding the impact of FVA and DVA, net revenue was $36.7 billion and net income was $10.1 billion, compared with $35.7 billion and $9.2 billion, respectively in the prior year.

Banking revenue was $12.2 billion, compared with $11.4 billion in the prior year. Investment banking fees were $6.3 billion, up 10% from the prior year, driven by higher equity underwriting fees of $1.5 billion (up 46%) and record debt underwriting fees of $3.5 billion (up 8%), partially offset by lower advisory fees of $1.3 billion (down 12%). Equity underwriting results were driven by higher industry-wide issuance and an increase in share of fees compared with the prior year, according to Dealogic. Industry-wide loan syndication volumes and fees increased as the low-rate environment continued to fuel refinancing activity. The Firm also ranked #1 in industry-wide fee shares across high grade, high yield and loan products. Advisory fees were lower compared with the prior year as industry-wide completed M&A industry-wide fee levels declined 13%. The Firm maintained its #2 ranking and improved share for both announced and completed volumes during the year.

Treasury Services revenue was $4.2 billion, down 2% compared with the prior year, primarily reflecting lower trade finance spreads, partially offset by higher net interest income on higher deposit balances. Lending revenue was $1.7 billion, up from $1.4 billion, in the prior year reflecting net interest income on retained loans, fees on lending-related commitments, and gains on securities received from restructured loans.

Markets and Investor Services revenue was $22.6 billion compared to $23.4 billion in the prior year. Combined Fixed Income and Equity Markets revenue was $20.6 billion, up from $20.1 billion the prior year. Fixed Income Markets revenue was $15.8 billion slightly higher reflecting consistently strong client revenue and lower losses from the synthetic credit portfolio, which was partially offset by lower rates-related revenue given an uncertain rate outlook and low spread environment. Equities Markets revenue was

$4.8 billion up 8% compared with the prior year driven by higher revenue in derivatives and cash equities products and Prime Services primarily on higher balances. Securities Services revenue was $4.1 billion compared with $4.0 billion in the prior year on higher custody and fund services revenue primarily driven by higher assets under custody of $20.5 trillion. Credit Adjustments & Other was a loss of $2.1 billion predominantly driven by FVA (effective 2013) and DVA.

The provision for credit losses was a benefit of $232 million, compared with a benefit of $479 million in the prior year. The 2013 benefit reflected lower recoveries as compared with 2012 as the prior year benefited from the restructuring of certain nonperforming loans. Net recoveries were $78 million, compared with $284 million in the prior year reflecting a continued favorable credit environment with stable credit quality trends. Nonperforming loans were down 57% from the prior year.

Noninterest expense was $21.7 billion slightly down compared with the prior year, driven by lower compensation expense, offset by higher noncompensation expense related to higher litigation expense as compared with the prior year. The compensation ratio, excluding the impact of DVA and FVA (effective 2013), was 30% and 32% for 2013 and 2012, respectively.

Return on equity was 15% on $56.5 billion of average allocated capital and 17% excluding FVA (effective 2013) and DVA.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2014	2013	2012
Selected balance sheet data (period-end)			
Assets	**$ 861,819**	$ 843,577	$ 876,107
Loans:			
Loans retained[a]	**96,409**	95,627	109,501
Loans held-for-sale and loans at fair value	**5,567**	11,913	5,749
Total loans	**101,976**	107,540	115,250
Equity	**61,000**	56,500	47,500
Selected balance sheet data (average)			
Assets	**$ 854,712**	$ 859,071	$ 854,670
Trading assets-debt and equity instruments	**317,535**	321,585	312,944
Trading assets-derivative receivables	**64,833**	70,353	74,874
Loans:			
Loans retained[a]	**95,764**	104,864	110,100
Loans held-for-sale and loans at fair value	**7,599**	5,158	3,502
Total loans	**103,363**	110,022	113,602
Equity	**61,000**	56,500	47,500
Headcount	**51,129**	52,250	52,022

(a) Loans retained includes credit portfolio loans, trade finance loans, other held-for-investment loans and overdrafts.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2014	2013	2012
Credit data and quality statistics			
Net charge-offs/ (recoveries)	**$ (12)**	$ (78)	$ (284)
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[a][b]	**110**	163	535
Nonaccrual loans held-for-sale and loans at fair value	**11**	180	254
Total nonaccrual loans	**121**	343	789
Derivative receivables	**275**	415	239
Assets acquired in loan satisfactions	**67**	80	64
Total nonperforming assets	**463**	838	1,092
Allowance for credit losses:			
Allowance for loan losses	**1,034**	1,096	1,300
Allowance for lending-related commitments	**439**	525	473
Total allowance for credit losses	**1,473**	1,621	1,773
Net charge-off/(recovery) rate[a]	**(0.01)%**	(0.07)%	(0.26)%
Allowance for loan losses to period-end loans retained[a]	**1.07**	1.15	1.19
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits	**1.82**	2.02	2.52
Allowance for loan losses to nonaccrual loans retained[a][b]	**940**	672	243
Nonaccrual loans to total period-end loans	**0.12**	0.32	0.68

(a) Loans retained includes credit portfolio loans, trade finance loans, other held-for-investment loans and overdrafts.

(b) Allowance for loan losses of $18 million, $51 million and $153 million were held against these nonaccrual loans at December 31, 2014, 2013 and 2012, respectively.

Business metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2014	2013	2012
Market risk-related revenue – trading loss days[a]	**9**	0	7
Assets under custody ("AUC") by asset class (period-end) in billions:			
Fixed Income	**$ 12,328**	$ 11,903	$ 11,745
Equity	**6,524**	6,913	5,637
Other[b]	**1,697**	1,669	1,453
Total AUC	**$ 20,549**	$ 20,485	$ 18,835
Client deposits and other third party liabilities (average)[c]	**$417,369**	$383,667	$355,766
Trade finance loans (period-end)	**25,713**	30,752	35,783

(a) Market risk-related revenue is defined as the change in value of: principal transactions revenue; trading-related net interest income; brokerage commissions, underwriting fees or other revenue; and revenue from syndicated lending facilities that the Firm intends to distribute; gains and losses from DVA and FVA are excluded. Market risk-related revenue – trading loss days represent the number of days for which the CIB posted losses under this measure. The loss days determined under this measure differ from the loss days that are determined based on the disclosure of market risk-related gains and losses for the Firm in the VaR back-testing discussion on pages 134–135.

(b) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.

(c) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses, and include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of their client cash management program.

League table results – IB Fee Share[a]

	2014		2013		2012	
Year ended December 31,	Fee Share	Rankings	Fee Share	Rankings	Fee Share	Rankings
Debt, equity and equity-related						
Global	**7.6%**	**#1**	8.3%	#1	7.8%	#1
U.S.	**10.7**	**1**	11.5	1	11.1	1
Long-term debt[b]						
Global	**8.0**	**1**	8.2	1	8.3	1
U.S.	**11.6**	**1**	11.6	1	11.7	1
Equity and equity-related						
Global[c]	**7.1**	**3**	8.4	2	7.1	1
U.S.	**9.6**	**2**	11.3	2	10.1	2
M&A[d]						
Global	**8.2**	**2**	7.6	2	6.5	2
U.S.	**10.0**	**2**	8.8	2	7.7	2
Loan syndications						
Global	**9.5**	**1**	9.9	1	8.2	2
U.S.	**13.3**	**1**	13.8	1	11.2	2
Global Investment Banking fees	**8.1%**	**#1**	8.5%	#1	7.5%	#1

League table results – volumes[e]

	2014		2013		2012	
Year ended December 31,	Market Share	Rankings	Market Share	Rankings	Market Share	Rankings
Debt, equity and equity-related						
Global	**6.8%**	**#1**	7.3%	#1	7.2%	#1
U.S.	**11.8**	**1**	12.0	1	11.5	1
Long-term debt[b]						
Global	**6.7**	**1**	7.2	1	7.1	1
U.S.	**11.3**	**1**	11.7	1	11.6	1
Equity and equity-related						
Global[c]	**7.6**	**3**	8.2	2	7.8	4
U.S.	**11.0**	**2**	12.1	2	10.4	5
M&A announced[d]						
Global	**21.6**	**2**	23.5	2	20.0	2
U.S.	**27.8**	**2**	36.4	2	24.3	2
Loan syndications						
Global	**12.4**	**1**	11.6	1	11.6	1
U.S.	**19.4**	**1**	17.8	1	18.2	1

(a) Source: Dealogic. Reflects the ranking and share of Global Investment Banking fees

(b) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and mortgage-backed securities; and exclude money market, short-term debt, and U.S. municipal securities.

(c) Global equity and equity-related rankings include rights offerings and Chinese A-Shares.

(d) M&A and Announced M&A rankings reflect the removal of any withdrawn transactions. U.S. M&A revenue wallet represents wallet from client parents based in the U.S. U.S. announced M&A volumes represents any U.S. involvement ranking.

(e) Source: Dealogic. Reflects transaction volume and market share. Global announced M&A is based on transaction value at announcement; because of joint M&A assignments, M&A market share of all participants will add up to more than 100%. All other transaction volume-based rankings are based on proceeds, with full credit to each book manager/equal if joint.

International metrics

Year ended December 31,

(in millions)	2014	2013	2012
Total net revenue[a]			
Europe/Middle East/Africa	**$ 11,598**	$ 10,689	$ 10,787
Asia/Pacific	**4,698**	4,736	4,128
Latin America/Caribbean	**1,179**	1,340	1,533
Total international net revenue	**17,475**	16,765	16,448
North America	**17,158**	18,021	18,314
Total net revenue	**$ 34,633**	$ 34,786	$ 34,762
Loans (period-end)[a]			
Europe/Middle East/Africa	**$ 27,155**	$ 29,392	$ 30,266
Asia/Pacific	**19,992**	22,151	27,193
Latin America/Caribbean	**8,950**	8,362	10,220
Total international loans	**56,097**	59,905	67,679
North America	**40,312**	35,722	41,822
Total loans	**$ 96,409**	$ 95,627	$ 109,501
Client deposits and other third-party liabilities (average)[a]			
Europe/Middle East/Africa	**$ 152,712**	$ 143,807	$ 127,326
Asia/Pacific	**66,933**	54,428	51,180
Latin America/Caribbean	**22,360**	15,301	11,052
Total international	**$ 242,005**	$ 213,536	$ 189,558
North America	**175,364**	170,131	166,208
Total client deposits and other third-party liabilities	**$ 417,369**	$ 383,667	$ 355,766
AUC (period-end) (in billions)[a]			
North America	**$ 11,987**	$ 11,299	$ 10,504
All other regions	**8,562**	9,186	8,331
Total AUC	**$ 20,549**	$ 20,485	$ 18,835

(a) Total net revenue is based predominantly on the domicile of the client or location of the trading desk, as applicable. Loans outstanding (excluding loans held-for-sale and loans at fair value), client deposits and other third-party liabilities, and AUC are based predominantly on the domicile of the client.

Commercial Banking delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2014	2013	2012
Revenue			
Lending- and deposit-related fees	**$ 978**	$ 1,033	$ 1,072
Asset management, administration and commissions	**92**	116	130
All other income[a]	**1,279**	1,149	1,081
Noninterest revenue	**2,349**	2,298	2,283
Net interest income	**4,533**	4,794	4,629
Total net revenue[b]	**6,882**	7,092	6,912
Provision for credit losses	**(189)**	85	41
Noninterest expense			
Compensation expense	**1,203**	1,115	1,014
Noncompensation expense	**1,492**	1,495	1,375
Total noninterest expense	**2,695**	2,610	2,389
Income before income tax expense	**4,376**	4,397	4,482
Income tax expense	**1,741**	1,749	1,783
Net income	**$ 2,635**	$ 2,648	$ 2,699
Revenue by product			
Lending	**$ 3,576**	$ 3,945	$ 3,762
Treasury services	**2,448**	2,429	2,428
Investment banking	**684**	575	545
Other	**174**	143	177
Total Commercial Banking net revenue	**$ 6,882**	$ 7,092	$ 6,912
Investment banking revenue, gross	**$ 1,986**	$ 1,676	$ 1,597
Revenue by client segment			
Middle Market Banking	**$ 2,838**	$ 3,075	$ 3,010
Corporate Client Banking	**1,935**	1,851	1,843
Commercial Term Lending	**1,252**	1,239	1,206
Real Estate Banking	**495**	561	450
Other	**362**	366	403
Total Commercial Banking net revenue	**$ 6,882**	$ 7,092	$ 6,912
Financial ratios			
Return on common equity	**18%**	19%	28%
Overhead ratio	**39**	37	35

Note: As discussed on pages 79–80, effective with the fourth quarter of 2014 the Firm changed its methodology for allocating the cost of preferred stock to its reportable business segments. Prior periods have been revised to conform with the current period presentation.

(a) Includes revenue from investment banking products and commercial card transactions.

(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities, as well as tax-exempt income from municipal bond activity of $462 million, $407 million and $381 million for the years ended December 31, 2014, 2013 and 2012, respectively.

2014 compared with 2013

Net income was $2.6 billion, flat compared with the prior year, reflecting lower net revenue and higher noninterest expense, predominantly offset by a lower provision for credit losses.

Net revenue was $6.9 billion, a decrease of $210 million, or 3%, compared with the prior year. Net interest income was $4.5 billion, a decrease of $261 million, or 5%, reflecting yield compression, the absence of proceeds received in the prior year from a lending-related workout, and lower purchase discounts recognized on loan repayments, partially offset by higher loan balances. Noninterest revenue was $2.3 billion, up $51 million, or 2%, reflecting higher investment banking revenue largely offset by business simplification and lower lending fees.

Noninterest expense was $2.7 billion, an increase of $85 million, or 3%, from the prior year, largely reflecting higher investments in controls.

2013 compared with 2012

Net income was $2.6 billion, a decrease of $51 million, or 2%, from the prior year, driven by an increase in noninterest expense and the provision for credit losses, partially offset by an increase in net revenue.

Net revenue was a record $7.1 billion, an increase of $180 million, or 3%, from the prior year. Net interest income was $4.8 billion, up by $165 million, or 4%, driven by higher loan balances and proceeds from a lending-related workout, partially offset by lower purchase discounts recognized on loan repayments. Noninterest revenue was $2.3 billion, flat compared with the prior year.

Noninterest expense was $2.6 billion, an increase of $221 million, or 9%, from the prior year, reflecting higher product- and headcount-related expense.

CB revenue comprises the following:

Lending includes a variety of financing alternatives, which are predominantly secured by receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, commercial card products and standby letters of credit.

Treasury services includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

Investment banking includes revenue from a range of products that provide CB clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from Fixed income and Equity market products used by CB clients is also included. Investment banking revenue, gross, represents total revenue related to investment banking products sold to CB clients.

Other product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activities and certain income derived from principal transactions.

CB is divided into four primary client segments: Middle Market Banking, Corporate Client Banking, Commercial Term Lending, and Real Estate Banking.

Middle Market Banking covers corporate, municipal and nonprofit clients, with annual revenue generally ranging between $20 million and $500 million.

Corporate Client Banking covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs.

Commercial Term Lending primarily provides term financing to real estate investors/owners for multifamily properties as well as office, retail and industrial properties.

Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate investment properties.

Other primarily includes lending and investment activities within the Community Development Banking and Chase Capital businesses.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2014	2013	2012
Selected balance sheet data (period-end)			
Total assets	**$ 195,267**	$ 190,782	$ 181,502
Loans:			
Loans retained	**147,661**	135,750	126,996
Loans held-for-sale and loans at fair value	**845**	1,388	1,212
Total loans	**$ 148,506**	$ 137,138	$ 128,208
Equity	**14,000**	13,500	9,500
Period-end loans by client segment			
Middle Market Banking	**$ 53,635**	$ 52,289	$ 50,552
Corporate Client Banking	**22,695**	20,925	21,707
Commercial Term Lending	**54,038**	48,925	43,512
Real Estate Banking	**13,298**	11,024	8,552
Other	**4,840**	3,975	3,885
Total Commercial Banking loans	**$ 148,506**	$ 137,138	$ 128,208
Selected balance sheet data (average)			
Total assets	$ 191,857	$ 185,776	$ 165,111
Loans:			
Loans retained	140,982	131,100	119,218
Loans held-for-sale and loans at fair value	782	930	882
Total loans	$ 141,764	$ 132,030	$ 120,100
Client deposits and other third-party liabilities	204,017	198,356	195,912
Equity	14,000	13,500	9,500
Average loans by client segment			
Middle Market Banking	**$ 52,444**	$ 51,830	$ 47,009
Corporate Client Banking	**21,608**	20,918	19,572
Commercial Term Lending	**51,120**	45,989	40,872
Real Estate Banking	**12,080**	9,582	8,562
Other	**4,512**	3,711	4,085
Total Commercial Banking loans	**$ 141,764**	$ 132,030	$ 120,100
Headcount	**7,262**	6,848	6,117

Selected metrics (continued)

As of or for the year ended December 31, (in millions, except ratios)	2014	2013	2012
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ (7)**	$ 43	$ 35
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**317**	471	644
Nonaccrual loans held-for-sale and loans at fair value	**14**	43	29
Total nonaccrual loans	**331**	514	673
Assets acquired in loan satisfactions	**10**	15	14
Total nonperforming assets	**341**	529	687
Allowance for credit losses:			
Allowance for loan losses	**2,466**	2,669	2,610
Allowance for lending-related commitments	**165**	142	183
Total allowance for credit losses	**2,631**	2,811	2,793
Net charge-off/(recovery) rate[b]	**—%**	0.03%	0.03%
Allowance for loan losses to period-end loans retained	1.67	1.97	2.06
Allowance for loan losses to nonaccrual loans retained[a]	778	567	405
Nonaccrual loans to total period-end loans	0.22	0.37	0.52

(a) An allowance for loan losses of $45 million, $81 million and $107 million was held against nonaccrual loans retained at December 31, 2014, 2013 and 2012, respectively.

(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.

ASSET MANAGEMENT

Asset Management, with client assets of $2.4 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For Global Wealth Management clients, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios and headcount)	2014	2013	2012
Revenue			
Asset management, administration and commissions	**$ 9,024**	$ 8,232	$ 7,041
All other income	**564**	797	806
Noninterest revenue	**9,588**	9,029	7,847
Net interest income	**2,440**	2,376	2,163
Total net revenue	**12,028**	11,405	10,010
Provision for credit losses	**4**	65	86
Noninterest expense			
Compensation expense	**5,082**	4,875	4,405
Noncompensation expense	**3,456**	3,141	2,699
Total noninterest expense	**8,538**	8,016	7,104
Income before income tax expense	**3,486**	3,324	2,820
Income tax expense	**1,333**	1,241	1,078
Net income	**$ 2,153**	$ 2,083	$ 1,742
Revenue by line of business			
Global Investment Management	**$ 6,327**	$ 5,951	$ 5,141
Global Wealth Management	**5,701**	5,454	4,869
Total net revenue	**$12,028**	$11,405	$10,010
Financial ratios			
Return on common equity	**23%**	23%	24%
Overhead ratio	**71**	70	71
Pretax margin ratio:			
Global Investment Management	**31**	32	30
Global Wealth Management	**27**	26	26
Asset Management	**29**	29	28
Headcount	**19,735**	20,048	18,645
Number of client advisors	**2,836**	2,962	2,821

Note: As discussed on pages 79–80, effective with the fourth quarter of 2014 the Firm changed its methodology for allocating the cost of preferred stock to its reportable business segments. Prior periods have been revised to conform with the current period presentation.

2014 compared with 2013

Net income was $2.2 billion, an increase of $70 million, or 3%, from the prior year, reflecting higher net revenue and lower provision for credit losses, predominantly offset by higher noninterest expense.

Net revenue was $12.0 billion, an increase of $623 million, or 5%, from the prior year. Noninterest revenue was $9.6 billion, up $559 million, or 6%, from the prior year, due to net client inflows and the effect of higher market levels, partially offset by lower valuations of seed capital investments. Net interest income was $2.4 billion, up $64 million, or 3%, from the prior year, due to higher loan and deposit balances, largely offset by spread compression.

Revenue from Global Investment Management was $6.3 billion, up 6% due to net client inflows and the effect of higher market levels, partially offset by lower valuations of seed capital investments. Revenue from Global Wealth Management was $5.7 billion, up 5% from the prior year due to higher net interest income from loan and deposit balances and net client inflows, partially offset by spread compression and lower brokerage revenue.

Noninterest expense was $8.5 billion, an increase of $522 million, or 7%, from the prior year, as the business continues to invest in both infrastructure and controls.

2013 compared with 2012

Net income was $2.1 billion, an increase of $341 million, or 20%, from the prior year, reflecting higher net revenue, largely offset by higher noninterest expense.

Net revenue was $11.4 billion, an increase of $1.4 billion, or 14%, from the prior year. Noninterest revenue was $9.0 billion, up $1.2 billion, or 15%, from the prior year, due to net client inflows, the effect of higher market levels and higher performance fees. Net interest income was $2.4 billion, up $213 million, or 10%, from the prior year, due to higher loan and deposit balances, partially offset by narrower loan and deposit spreads.

Revenue from Global Investment Management was $6.0 billion, up 16% due to net client inflows, the effect of higher market levels and higher performance fees. Revenue from Global Wealth Management was $5.5 billion, up 12% from the prior year due to higher net interest income from loan and deposit balances and higher brokerage revenue.

Noninterest expense was $8.0 billion, an increase of $912 million, or 13%, from the prior year, primarily due to higher headcount-related expense driven by continued front office expansion efforts, higher performance-based compensation and costs related to the control agenda.

AM's lines of business comprise the following:

Global Investment Management provides comprehensive global investment services, including asset management, pension analytics, asset-liability management and active risk-budgeting strategies.

Global Wealth Management offers investment advice and wealth management, including investment management, capital markets and risk management, tax and estate planning, banking, lending and specialty-wealth advisory services.

AM's client segments comprise the following:

Private Banking clients include high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide.

Institutional clients include both corporate and public institutions, endowments, foundations, nonprofit organizations and governments worldwide.

Retail clients include financial intermediaries and individual investors.

J.P. Morgan Asset Management has two high-level measures of its overall fund performance.

- **Percentage of mutual fund assets under management in funds rated 4- or 5-star:** Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best rating and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22.5% of industry-wide ranked funds. A 3-star rating represents the next 35% of industry-wide ranked funds. A 2-star rating represents the next 22.5% of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom 10% of industry-wide ranked funds. The "overall Morningstar rating" is derived from a weighted average of the performance figures associated with a fund's three-, five- and ten-year (if applicable) Morningstar Rating metrics. For U.S. domiciled funds, separate star ratings are given at the individual share class level. The Nomura "star rating" is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and hence excluded from this analysis. All ratings, the assigned peer categories and the asset values used to derive this analysis are sourced from these fund rating providers as mentioned in footnote (a). The data providers re-denominate the asset values into USD. This % of AUM is based on star ratings at the share class level for U.S. domiciled funds, and at a "primary share class" level to represent the star rating of all other funds except for Japan where Nomura provides ratings at the fund level. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Past performance is not indicative of future results.
- **Percentage of mutual fund assets under management in funds ranked in the 1st or 2nd quartile (one, three and five years):** All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from the fund ranking providers mentioned in footnote (b). Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers re-denominate the asset values into USD. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of Luxembourg, U.K. and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). Past performance is not indicative of future results.

Selected metrics

As of or for the year ended December 31, (in millions, except ranking data and ratios)	2014	2013	2012
% of JPM mutual fund assets rated as 4- or 5-star[a]	**52%**	49%	47%
% of JPM mutual fund assets ranked in 1st or 2nd quartile:[b]			
1 year	**72**	68	67
3 years	**72**	68	74
5 years	**76**	69	76
Selected balance sheet data (period-end)			
Total assets	**$ 128,701**	$ 122,414	$ 108,999
Loans[c]	**104,279**	95,445	80,216
Deposits	**155,247**	146,183	144,579
Equity	**9,000**	9,000	7,000
Selected balance sheet data (average)			
Total assets	**$ 126,440**	$ 113,198	$ 97,447
Loans	**99,805**	86,066	68,719
Deposits	**150,121**	139,707	129,208
Equity	**9,000**	9,000	7,000
Credit data and quality statistics			
Net charge-offs	**$ 6**	$ 40	$ 64
Nonaccrual loans	**218**	167	250
Allowance for credit losses:			
Allowance for loan losses	**271**	278	248
Allowance for lending-related commitments	**5**	5	5
Total allowance for credit losses	**276**	283	253
Net charge-off rate	**0.01%**	0.05%	0.09%
Allowance for loan losses to period-end loans	**0.26**	0.29	0.31
Allowance for loan losses to nonaccrual loans	**124**	166	99
Nonaccrual loans to period-end loans	**0.21**	0.17	0.31

(a) Represents the "overall star rating" derived from Morningstar for the U.S., the U.K., Luxembourg, Hong Kong and Taiwan domiciled funds; and Nomura 'star rating' for Japan domiciled funds. Includes only retail open ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds.

(b) Quartile ranking sourced from: Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only retail open ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds.

(c) Included $22.1 billion, $18.9 billion and $10.9 billion of prime mortgage loans reported in the Consumer, excluding credit card, loan portfolio at December 31, 2014, 2013 and 2012, respectively. For the same periods, excluded $2.7 billion, $3.7 billion and $6.7 billion, respectively, of prime mortgage loans reported in the CIO portfolio within the Corporate segment.

Client assets

2014 compared with 2013

Client assets were $2.4 trillion, an increase of $44 billion, or 2%, compared with the prior year. Excluding the sale of Retirement Plan Services, client assets were up 8% compared with the prior year. Assets under management were $1.7 trillion, an increase of $146 billion, or 9%, from the prior year, due to net inflows to long-term products and the effect of higher market levels.

2013 compared with 2012

Client assets were $2.3 trillion at December 31, 2013, an increase of $248 billion, or 12%, compared with the prior year. Assets under management were $1.6 trillion, an increase of $172 billion, or 12%, from the prior year, due to net inflows to long-term products and the effect of higher market levels. Custody, brokerage, administration and deposit balances were $745 billion, up $76 billion, or 11%, from the prior year, due to the effect of higher market levels and custody inflows, partially offset by brokerage outflows.

Client assets

December 31, (in billions)	2014	2013	2012
Assets by asset class			
Liquidity	**$ 461**	$ 451	$ 458
Fixed income	**359**	330	330
Equity	**375**	370	277
Multi-asset and alternatives	**549**	447	361
Total assets under management	**1,744**	1,598	1,426
Custody/brokerage/administration/ deposits	**643**	745	669
Total client assets	**$ 2,387**	$ 2,343	$ 2,095
Memo:			
Alternatives client assets[a]	**166**	158	142
Assets by client segment			
Private Banking	**$ 428**	$ 361	$ 318
Institutional	**827**	777	741
Retail	**489**	460	367
Total assets under management	**$ 1,744**	$ 1,598	$ 1,426
Private Banking	**$ 1,057**	$ 977	$ 877
Institutional	**835**	777	741
Retail	**495**	589	477
Total client assets	**$ 2,387**	$ 2,343	$ 2,095

(a) Represents assets under management, as well as client balances in brokerage accounts.

Client assets (continued)

Year ended December 31, (in billions)	2014	2013	2012
Assets under management rollforward			
Beginning balance	**$ 1,598**	$ 1,426	$ 1,336
Net asset flows:			
Liquidity	**18**	(4)	(41)
Fixed income	**33**	8	27
Equity	**5**	34	8
Multi-asset and alternatives	**42**	48	23
Market/performance/other impacts	**48**	86	73
Ending balance, December 31	**$ 1,744**	$ 1,598	$ 1,426
Client assets rollforward			
Beginning balance	**$ 2,343**	$ 2,095	$ 1,921
Net asset flows	**118**	80	60
Market/performance/other impacts	**(74)**	168	114
Ending balance, December 31	**$ 2,387**	$ 2,343	$ 2,095

International metrics

Year ended December 31, (in billions, except where otherwise noted)	2014	2013	2012
Total net revenue (in millions)[a]			
Europe/Middle East/Africa	**$ 2,080**	$ 1,881	$ 1,641
Asia/Pacific	**1,199**	1,133	958
Latin America/Caribbean	**841**	879	773
North America	**7,908**	7,512	6,638
Total net revenue	**$ 12,028**	$ 11,405	$ 10,010
Assets under management			
Europe/Middle East/Africa	**$ 329**	$ 305	$ 258
Asia/Pacific	**126**	132	114
Latin America/Caribbean	**46**	47	45
North America	**1,243**	1,114	1,009
Total assets under management	**$ 1,744**	$ 1,598	$ 1,426
Client assets			
Europe/Middle East/Africa	**$ 391**	$ 367	$ 317
Asia/Pacific	**174**	180	160
Latin America/Caribbean	**115**	117	110
North America	**1,707**	1,679	1,508
Total client assets	**$ 2,387**	$ 2,343	$ 2,095

(a) Regional revenue is based on the domicile of the client.

The Corporate segment comprises Private Equity, Treasury and Chief Investment Office ("CIO") and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Enterprise Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm's occupancy and pension-related expenses that are subject to allocation to the businesses.

Selected income statement data

Year ended December 31, (in millions, except headcount)	2014	2013	2012
Revenue			
Principal transactions	**$ 1,197**	$ 563	$ (4,268)
Securities gains	**71**	666	2,024
All other income	**704**	1,864	2,434
Noninterest revenue	**1,972**	3,093	190
Net interest income	**(1,960)**	(3,115)	(2,262)
Total net revenue[a]	**12**	(22)	(2,072)
Provision for credit losses	**(35)**	(28)	(37)
Noninterest expense			
Compensation expense	**2,888**	2,299	2,221
Noncompensation expense[b]	**4,589**	13,208	6,972
Subtotal	**7,477**	15,507	9,193
Net expense allocated to other businesses	**(6,318)**	(5,252)	(4,634)
Total noninterest expense	**1,159**	10,255	4,559
Income/(loss) before income tax expense/(benefit)	**(1,112)**	(10,249)	(6,594)
Income tax expense/(benefit)	**(1,976)**	(3,493)	(3,974)
Net income/(loss)	**$ 864**	$ (6,756)	$ (2,620)
Total net revenue			
Private equity	**$ 1,118**	$ 589	$ 645
Treasury and CIO	**(1,317)**	(2,068)	(4,089)
Other Corporate	**211**	1,457	1,372
Total net revenue	**$ 12**	$ (22)	$ (2,072)
Net income/(loss)			
Private equity	**$ 400**	$ 285	$ 319
Treasury and CIO	**(1,165)**	(1,454)	(2,718)
Other Corporate	**1,629**	(5,587)	(221)
Total net income/(loss)	**$ 864**	$ (6,756)	$ (2,620)
Total assets (period-end)	**$931,705**	$ 805,987	$ 725,251
Headcount	**26,047**	20,717	17,758

Note: As discussed on pages 79–80, effective with the fourth quarter of 2014 the Firm changed its methodology for allocating the cost of preferred stock to its reportable business segments. Prior periods have been revised to conform with the current period presentation.

(a) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $730 million, $480 million and $443 million for the years ended December 31, 2014, 2013 and 2012, respectively.

(b) Included legal expense of $821 million, $10.2 billion and $3.7 billion for the years ended December 31, 2014, 2013 and 2012, respectively.

2014 compared with 2013

Net income was $864 million, compared with a net loss of $6.8 billion in the prior year.

Private Equity reported net income of $400 million, compared with net income of $285 million in the prior year, primarily due to higher net gains on sales, largely offset by higher noninterest expense related to goodwill impairment.

Treasury and CIO reported a net loss of $1.2 billion, compared with a net loss of $1.5 billion in the prior year. Net revenue was a loss of $1.3 billion, compared with a loss of $2.1 billion in the prior year. Current year net interest income was a loss of $1.7 billion compared with a loss of $2.7 billion in the prior year, primarily reflecting higher yields on investment securities. Securities gains were $71 million, compared to $659 million in the prior year, reflecting lower repositioning activity of the investment securities portfolio in the current period.

Other Corporate reported net income of $1.6 billion, compared with a net loss of $5.6 billion in the prior year. Current year noninterest revenue was $353 million compared with $1.8 billion in the prior year. Prior year noninterest revenue included gains of $1.3 billion and $493 million on the sales of Visa shares and One Chase Manhattan Plaza, respectively. The current year included $821 million of legal expense, compared with $10.2 billion, which included reserves for litigation and regulatory proceedings, in the prior year.

2013 compared with 2012

Net loss was $6.8 billion, compared with a net loss of $2.6 billion in the prior year.

Private Equity reported net income of $285 million, compared with net income of $319 million in the prior year. Net revenue was of $589 million, compared with $645 million in the prior year.

Treasury and CIO reported a net loss of $1.5 billion, compared with a net loss of $2.7 billion in the prior year. Net revenue was a loss of $2.1 billion, compared with a loss of $4.1 billion in the prior year. Net revenue in 2013 included $659 million of net securities gains from sales of available-for-sale investment securities, compared with securities gains of $2.0 billion; and $888 million of pretax extinguishment gains related to the redemption of trust preferred securities in the prior year. The extinguishment gains were related to adjustments applied to the cost basis of the trust preferred securities during the period they were in a qualified hedge accounting relationship. The prior year loss also reflected $5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and $449 million of losses from the retained index credit derivative positions for the three

months ended September 30, 2012. Net interest income in 2013 was a loss of $2.7 billion compared with a loss of $1.7 billion in the prior year, primarily due to low interest rates and limited reinvestment opportunities. Net interest income improved in the fourth quarter of 2013 due to higher interest rates and better reinvestment opportunities.

Other Corporate reported a net loss of $5.6 billion, compared with a net loss of $221 million in the prior year. Noninterest revenue in 2013 was $1.8 billion, down 2% compared with the prior year. In 2013, noninterest revenue included gains of $1.3 billion and $493 million on the sales of Visa shares and One Chase Manhattan Plaza, respectively. Noninterest revenue in the prior year included a $1.1 billion benefit for the Washington Mutual bankruptcy settlement and a $665 million gain from the recovery on a Bear Stearns-related subordinated loan. Noninterest expense of $9.7 billion was up $5.9 billion compared with the prior year. Included in 2013 noninterest expense was $10.2 billion of legal expense, including reserves for litigation and regulatory proceedings, compared with $3.7 billion of expense for additional litigation reserves, largely for mortgage-related matters, in the prior year.

Treasury and CIO overview

Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's four major reportable business segments to serve their respective client bases, which generate both on- and off-balance sheet assets and liabilities.

Treasury and CIO achieve the Firm's asset-liability management objectives generally by investing in high-quality securities that are managed for the longer-term as part of the Firm's investment securities portfolio. Treasury and CIO also use derivatives to meet the Firm's asset-liability management objectives. For further information on derivatives, see Note 6. The investment securities portfolio primarily consists of U.S. and non-U.S. government securities, agency and nonagency mortgage-backed securities, other asset-backed securities, corporate debt securities and obligations of U.S. states and municipalities. At December 31, 2014, the investment securities portfolio was $343.1 billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available and where not available, based primarily upon internal ratings that correspond to ratings as defined by S&P and Moody's). See Note 12 for further information on the details of the Firm's investment securities portfolio.

For further information on liquidity and funding risk, see Liquidity Risk Management on pages 156–160. For information on interest rate, foreign exchange and other risks, Treasury and CIO Value-at-risk ("VaR") and the Firm's structural interest rate-sensitive revenue at risk, see Market Risk Management on pages 131–136.

Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	2014	2013	2012
Securities gains	**$ 71**	$ 659	$ 2,028
Investment securities portfolio (average)	**349,285**	353,712	358,029
Investment securities portfolio (period-end)[a]	**343,146**	347,562	365,421
Mortgage loans (average)	**3,308**	5,145	10,241
Mortgage loans (period-end)	**2,834**	3,779	7,037

(a) Period-end investment securities included held-to-maturity securities of $49.3 billion and $24.0 billion at December 31, 2014, and 2013, respectively. Held-to-maturity securities as of December 31, 2012, were not material.

Private Equity portfolio

Selected income statement and balance sheet data

Year ended December 31, (in millions)	2014	2013	2012
Private equity gains/(losses)			
Realized gains	**$ 1,164**	$ (170)	$ 17
Unrealized gains/(losses)[a]	**43**	734	639
Total direct investments	**1,207**	564	656
Third-party fund investments	**34**	137	134
Total private equity gains/(losses)[b]	**$ 1,241**	$ 701	$ 790

(a) Includes reversals of unrealized gains and losses that were recognized in prior periods and have now been realized.
(b) Included in principal transactions revenue in the Consolidated statements of income.

Private equity portfolio information[a]

December 31, (in millions)	2014	2013	2012
Publicly held securities			
Carrying value	**$ 878**	$ 1,035	$ 578
Cost	**583**	672	350
Quoted public value	**893**	1,077	578
Privately held direct securities			
Carrying value	**4,555**	5,065	5,379
Cost	**5,275**	6,022	6,584
Third-party fund investments[b]			
Carrying value	**433**	1,768	2,117
Cost	**423**	1,797	1,963
Total private equity portfolio			
Carrying value	**$ 5,866**	$ 7,868	$ 8,074
Cost	**6,281**	8,491	8,897

(a) For more information on the Firm's methodologies regarding the valuation of the Private Equity portfolio, see Note 3. For information on the sale of a portion of the Private Equity business in January 2015, see Note 2.
(b) Unfunded commitments to third-party private equity funds were $147 million, $215 million and $370 million at December 31, 2014, 2013 and 2012, respectively.

2014 compared with 2013

The carrying value of the private equity portfolio at December 31, 2014 was $5.9 billion, down from $7.9 billion at December 31, 2013. The decrease in the portfolio was predominantly driven by sales of investments, partially offset by unrealized gains.

2013 compared with 2012

The carrying value of the private equity portfolio at December 31, 2013 was $7.9 billion, down from $8.1 billion at December 31, 2012. The decrease in the portfolio was predominantly driven by sales of investments, partially offset by new investments and unrealized gains.

ENTERPRISE-WIDE RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase's business activities. When the Firm extends a consumer or wholesale loan, advises customers on their investment decisions, makes markets in securities, or conducts any number of other services or activities, the Firm takes on some degree of risk. The Firm's overall objective in managing risk is to protect the safety and soundness of the Firm, avoid excessive risk taking, and manage and balance risk in a manner that serves the interest of our clients, customers and shareholders.

The Firm's approach to risk management covers a broad spectrum of risk areas, such as credit, market, liquidity, model, structural interest rate, principal, country, operational, fiduciary and reputation risk.

The Firm believes that effective risk management requires:

- Acceptance of responsibility, including identification and escalation of risk issues, by all individuals within the Firm;
- Ownership of risk management within each line of business and corporate functions; and
- Firmwide structures for risk governance.

Firmwide Risk Management is overseen and managed on an enterprise-wide basis. The Firm's Chief Executive Officer ("CEO"), Chief Financial Officer ("CFO"), Chief Risk Officer ("CRO") and Chief Operating Officer ("COO") develop and set the risk management framework and governance structure for the Firm, which is intended to provide comprehensive controls and ongoing management of the major risks inherent in the Firm's business activities. The Firm's risk management framework is intended to create a culture of transparency, awareness and personal responsibility through reporting, collaboration, discussion, escalation and sharing of information. The CEO, CFO, CRO and COO are ultimately responsible and accountable to the Firm's Board of Directors.

The Firm's risk culture strives for continual improvement through ongoing employee training and development, as well as talent retention. The Firm also approaches its incentive compensation arrangements through an integrated risk, compensation and financial management framework to encourage a culture of risk awareness and personal accountability.

The following sections outline the key risks that are inherent in the Firm's business activities.

Risk	Definition	Key risk management metrics	Page references
Capital risk	The risk the Firm has an insufficient level and composition of capital to support the Firm's business activities and associated risks during normal economic environments and stressed conditions.	Risk-based capital ratios, Supplementary Leverage ratio	146-155
Compliance risk	The risk of fines or sanctions or of financial damage or loss due to the failure to comply with laws, rules, and regulations.	Not Applicable	144
Country risk	The risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers or adversely affects markets related to a particular country.	Default exposure at 0% recovery, Stress	137-138
Credit risk	The risk of loss arising from the default of a customer, client or counterparty.	Total exposure; industry, geographic and customer concentrations; risk ratings; delinquencies; loss experience; stress	110-130
Fiduciary risk	The risk of a failure to exercise the applicable high standard of care, to act in the best interests of clients or to treat clients fairly, as required under applicable law or regulation.	Not Applicable	145
Legal risk	The risk of loss or imposition of damages, fines, penalties or other liability arising from failure to comply with a contractual obligation or to comply with laws or regulations to which the Firm is subject.	Not Applicable	144
Liquidity risk	The risk that the Firm will not have the appropriate amount, composition and tenor of funding and liquidity in support of its assets, and that the Firm will be unable to meet its contractual and contingent obligations through normal economic cycles and market stress events.	LCR; Stress	156-160
Market risk	The risk of loss arising from potential adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.	VaR, Stress, Sensitivities	131-136
Model risk	The risk of the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports.	Model Status, Model Tier	139
Non-USD FX risk	The risk arising from capital investments, forecasted expense and revenue, investment securities portfolio or issuing debt in denominations other than the U.S. dollar.	FX Net Open Position ("NOP")	203, 211-213
Operational risk	The risk of loss resulting from inadequate or failed processes or systems or due to external events that are neither market nor credit-related.	Firm-specific loss experience; industry loss experience; business environment and internal control factors ("BEICF")	140-143
Principal risk	The risk of an adverse change in the value of privately-held financial assets and instruments, typically representing an ownership or junior capital position. These positions have unique risks due to their illiquidity or for which there is less observable market or valuation data.	Carrying Value, Stress	140
Reputation risk	The risk that an action, transaction, investment or event will reduce the trust that clients, shareholders, employees or the broader public has in the Firm's integrity or competence.	Not Applicable	145
Structural interest rate risk	The risk resulting from the Firm's traditional banking activities (both on- and off-balance sheet positions) arising from the extension of loans and credit facilities, taking deposits and issuing debt (collectively referred to as "non-trading activities"), and also the impact from the CIO investment securities portfolio and other related CIO, Treasury activities.	Earnings-at-risk	136

Risk organization

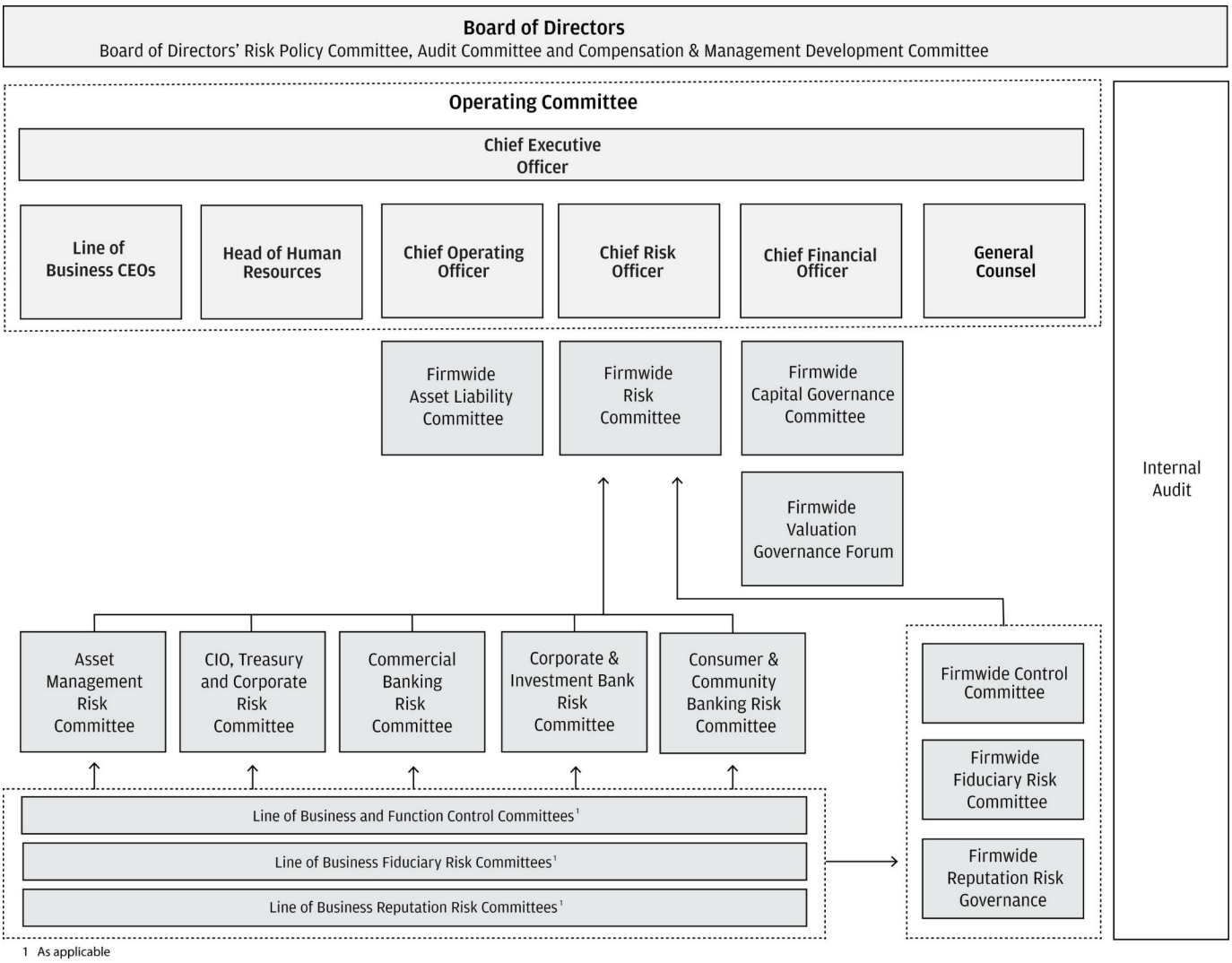
The LOBs are responsible for managing the risks inherent in their respective business activities. The Risk organization operates independently from the revenue-generating businesses, providing a credible challenge to them. The CRO is the head of the Risk organization and is responsible for the overall direction of Risk oversight. The CRO is supported by individuals and organizations that align to lines of business and corporate functions, as well as others that align to specific risk types.

The Firm's Risk Management Organization and other Firmwide functions with risk-related responsibilities (i.e., Regulatory Capital Management Office ("RCMO"), Firmwide Oversight and Control Group, Valuation Control Group ("VCG"), Legal and Compliance) provide independent oversight of the monitoring, evaluation and escalation of risk.

Risk governance

The independent stature of the Risk organization is supported by a governance structure that provides for escalation of risk issues up to senior management and the Board of Directors.

The chart below illustrates the governance structure and certain senior management level committees and forums that are primarily responsible for key risk-related functions. There are additional committees and forums not represented in the chart that are also responsible for management and oversight of risk.



The Board of Directors provides oversight of risk principally through the Board of Directors' Risk Policy Committee ("DRPC"), Audit Committee and, with respect to compensation, Compensation & Management Development Committee. Each committee of the Board oversees reputation risk issues within its scope of responsibility.

The Directors' Risk Policy Committee approves and periodically reviews the primary risk management policies of the Firm's global operations and oversees the operation of the Firm's global risk management framework. The committee's responsibilities include oversight of management's exercise of its responsibility to assess and manage: (i) credit risk, market risk, liquidity risk, model risk, structural interest rate risk, principal risk and country risk; (ii) the governance frameworks or policies for operational, fiduciary, reputational risks and the New Business Initiative Approval ("NBIA") process; and (iii) capital and liquidity planning and analysis. The DRPC reviews the firmwide value-at-risk and market stress tolerances, as well as any other parameter tolerances established by management in accordance with the Firm's Risk Appetite Policy. It reviews reports of significant issues identified by risk management officers, including reports describing the Firm's credit risk profile, and information about concentrations and country risks. The Firm's CRO, LOB CROs, LOB CEOs, heads of risk for Country Risk, Market Risk, Structural Interest Rate Risk, Liquidity Risk, Principal Risk, Wholesale Credit Risk, Consumer Credit Risk, Model Risk, Risk Management Policy, Reputation Risk Governance, Fiduciary Risk Governance, and Operational Risk Governance (all referred to as Firmwide Risk Executives) meet with and provide updates to the DRPC. Additionally, breaches in risk appetite tolerances, liquidity issues that may have a material adverse impact on the Firm and other significant matters as determined by the CRO or Firmwide functions with risk responsibility are escalated to the DRPC.

The Audit Committee has primary responsibility for assisting the Board in its oversight of the system of controls designed to reasonably assure the quality and integrity of the Firm's financial statements and that are relied upon to provide reasonable assurance of the Firm's management of operational risk. The Audit Committee also assists the Board in its oversight of legal and compliance risk. Internal Audit, an independent function within the Firm that provides independent and objective assessments of the control environment, reports directly to the Audit Committee and administratively to the CEO. Internal Audit conducts independent reviews to evaluate the Firm's internal control structure and compliance with applicable regulatory requirements and is responsible for providing the Audit Committee, senior management and regulators with an independent assessment of the Firm's ability to manage and control risk.

The Compensation & Management Development Committee assists the Board in its oversight of the Firm's compensation programs and reviews and approves the Firm's overall compensation philosophy and practices. The Committee reviews the Firm's compensation practices as they relate to risk and risk management in light of the Firm's objectives, including its safety and soundness and the avoidance of practices that encourage excessive risk taking. The Committee reviews and approves the terms of compensation award programs, including recovery provisions, vesting periods, and restrictive covenants, taking into account regulatory requirements. The Committee also reviews and approves the Firm's overall incentive compensation pools and reviews those of each of the Firm's lines of business and the Corporate segment. The Committee reviews the goals relevant to compensation for the Firm's Operating Committee, reviews Operating Committee members' performance against such goals, and approves their compensation awards. The Committee recommends to the full Board's independent directors, for ratification, the CEO's compensation. In addition, the Committee periodically reviews the Firm's management development and succession planning, as well as the Firm's diversity programs.

Among the Firm's senior management level committees that are primarily responsible for key risk-related functions are:

The Firmwide Risk Committee ("FRC") is the Firm's highest management-level Risk Committee. It provides oversight of the risks inherent in the Firm's businesses, including credit risk, market risk, liquidity risk, model risk, structural interest rate risk, principal risk and country risk. It also provides oversight of the governance frameworks for operational, fiduciary and reputational risks. The Committee is co-chaired by the Firm's CEO and CRO. Members of the committee include the Firm's COO, the Firm's CFO, LOB CEOs, LOB CROs, General Counsel, and other senior managers from risk and control functions. This committee serves as an escalation point for risk topics and issues raised by its members, the Line of Business Risk Committees, Firmwide Control Committee, Firmwide Fiduciary Risk Committee, Reputation Risk committees and regional Risk Committees. The committee escalates significant issues to the Board of Directors, as appropriate.

The Firmwide Control Committee ("FCC") is a forum to review and discuss firmwide operational risk, metrics and management, including existing and emerging issues, and execution against the operational risk management framework. The committee is co-chaired by the Firm's Chief Control Officer and the head of Firmwide Operational Risk Governance/Model Risk and Development. It serves as an escalation point for the line of business, function and regional Control Committees and escalates significant issues to the Firmwide Risk Committee, as appropriate.

The Firmwide Fiduciary Risk Committee ("FFRC") is a forum for risk matters related to the Firm's fiduciary activities and oversees the firmwide fiduciary risk governance framework, which supports the consistent identification and escalation of fiduciary risk matters by the relevant lines of business or corporate functions responsible for managing fiduciary activities. The committee escalates significant issues to the Firmwide Risk Committee and any other committee considered appropriate.

The Firmwide Reputation Risk Governance group seeks to promote consistent management of reputational risk across the Firm. Its objectives are to increase visibility of reputation risk governance; promote and maintain a globally consistent governance model for reputation risk across lines of business; promote early self-identification of potential reputation risks to the Firm; and provide thought leadership on cross-line of business reputation risk issues. Each line of business has a separate reputation risk governance structure which includes, in most cases, one or more dedicated reputation risk committees.

Line of business, corporate function, and regional risk and control committees:
Risk committees oversee the inherent risks in the respective line of business, function or region, including the review, assessment and decision making relating to specific risks, risk strategy, policy and controls. These committees escalate issues to the Firmwide Risk Committee, as appropriate.

Control committees oversee the operational risks and control environment of the respective line of business, function or region. These committees escalate operational risk issues to their respective line of business, function or regional Risk committee and also escalate significant risk issues (and/or risk issues with potential firmwide impact) to the Firmwide Control Committee.

The Asset-Liability Committee ("ALCO"), chaired by the Corporate Treasurer under the direction of the COO, monitors the Firm's overall balance sheet, liquidity risk and interest rate risk. ALCO is responsible for reviewing and approving the Firm's funds transfer pricing policy (through which lines of business "transfer" interest rate and foreign exchange risk to Treasury). ALCO is responsible for reviewing the Firm's Liquidity Risk Management and

Oversight Policy and contingency funding plan. ALCO also reviews the Firm's overall structural interest rate risk position, funding requirements and strategy, and the Firm's securitization programs (and any required liquidity support by the Firm of such programs).

The Capital Governance Committee, chaired by the Head of Regulatory Capital Management Office (under the direction of the Firm's CFO) is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution alternatives. The Committee is also responsible for governing the capital adequacy assessment process, including overall design, assumptions and risk streams and ensuring that capital stress test programs are designed to adequately capture the idiosyncratic risks across the Firm's businesses.

Other corporate functions and forums with risk management-related responsibilities include:

The Firmwide Oversight and Control Group is comprised of dedicated control officers within each of the lines of business and corporate functional areas, as well as a central oversight team. The group is charged with enhancing the Firm's controls by looking within and across the lines of business and corporate functional areas to identify and control issues. The group enables the Firm to detect control problems more quickly, escalate issues promptly and get the right people involved to understand common themes and interdependencies among the various parts of the Firm. The group works closely with the Firm's other control-related functions, including Compliance, Legal, Internal Audit and Risk Management, to effectively remediate identified control issues across all affected areas of the Firm. As a result, the group facilitates the effective execution of the Firm's control framework and helps support operational risk management across the Firm.

The Firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the firmwide head of the Valuation Control function (under the direction of the Firm's CFO), and also includes sub-forums for the CIB, Consumer & Community Banking, Commercial Banking, Asset Management and certain corporate functions, including Treasury and CIO.

In addition to the committees, forums and groups listed above, the Firm has other management committees and forums at the LOB and regional levels, where risk-related topics are discussed and escalated as necessary. The membership of these committees is composed of senior management of the Firm including representation from the business and various control functions. The committees meet regularly to discuss a broad range of topics.

The JPMorgan Chase Bank N.A. Board of Directors is responsible for the oversight of management on behalf of JPMorgan Chase Bank N.A. The JPMorgan Chase Bank N.A. Board accomplishes this function acting directly and through the principal standing committees of the Firm's Board of Directors. Risk oversight on behalf of JPMorgan Chase Bank N.A. is primarily the responsibility of the Firm's DRPC, Audit Committee and, with respect to compensation-related matters, the Compensation & Management Development Committee.

Risk appetite

The Firm's overall risk appetite is established by management taking into consideration the Firm's capital and liquidity positions, earnings power, and diversified business model. The risk appetite framework is a tool to measure the capacity to take risk and is expressed in loss tolerance parameters at the Firm and/or LOB levels, including net income loss tolerances, liquidity limits and market limits. Performance against these parameters informs management's strategic decisions and is reported to the DRPC.

The Firm-level risk appetite parameters are set and approved by the Firm's CEO, CFO, CRO and COO. LOB-level risk appetite parameters are set by the LOB CEO, CFO, and CRO and are approved by the Firm's functional heads as noted above. Firmwide LOB diversification allows the sum of the LOBs' loss tolerances to be greater than the Firmwide loss tolerance.

Risk identification for large exposures

The Firm has certain potential low-probability but plausible and material, idiosyncratic risks not well captured by its other existing risk analysis and reporting for credit, market, and other risks. These idiosyncratic risks may arise in a number of forms, e.g. changes in legislation, an unusual combination of market events, or specific counterparty events. These identified risks are grouped under the term Risk Identification for Large Exposures ("RIFLEs"). The identified and monitored RIFLEs allow the Firm to monitor earnings vulnerability that is not adequately covered by its other standard risk measurements.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss arising from the default of a customer, client or counterparty. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk primarily through its residential real estate, credit card, auto, business banking and student lending businesses. Originated mortgage loans are retained in the mortgage portfolio, or securitized or sold to U.S. government agencies and U.S. government-sponsored enterprises; other types of consumer loans are typically retained on the balance sheet. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending and derivatives activities with and for clients and counterparties, as well as through its operating services activities, such as cash management and clearing activities. A portion of the loans originated or acquired by the Firm's wholesale businesses are generally retained on the balance sheet; the Firm's syndicated loan business distributes a significant percentage of originations into the market and is an important component of portfolio management.

Credit risk organization

Credit risk management is overseen by the Firm's CRO. The Firm's credit risk management governance consists of the following activities:

- Establishing a comprehensive credit risk policy framework
- Monitoring and managing credit risk across all portfolio segments, including transaction and line approval
- Assigning and managing credit authorities in connection with the approval of all credit exposure
- Managing criticized exposures and delinquent loans
- Determining the allowance for credit losses and ensuring appropriate credit risk-based capital management

Risk identification and measurement

The Credit Risk Management function identifies, measures, limits, manages and monitors credit risk across our businesses. To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the probability of default of an obligor or counterparty, the loss severity given a default event and the exposure at default.

Based on these factors and related market-based inputs, the Firm estimates credit losses for its exposures. Probable credit losses inherent in the consumer and wholesale loan portfolios are reflected in the allowance for loan losses, and probable credit losses inherent in lending-related commitments are reflected in the allowance for lending-related commitments. These losses are estimated using statistical analyses and other factors as described in Note 15. In addition, potential and unexpected credit losses are reflected in the allocation of credit risk capital and represent the potential volatility of actual losses relative to the established allowances for loan losses and lending-related commitments. The analyses for these losses include stress testing (considering alternative economic scenarios) as described in the Stress testing section below.

The methodologies used to estimate credit losses depend on the characteristics of the credit exposure, as described below.

Scored exposure

The scored portfolio is generally held in CCB and predominantly includes residential real estate loans, credit card loans, certain auto and business banking loans, and student loans. For the scored portfolio, credit loss estimates are based on statistical analysis of credit losses over discrete periods of time and are estimated using portfolio modeling, credit scoring, and decision-support tools, which consider loan-level factors such as delinquency status, credit scores, collateral values, and other risk factors. Credit loss analyses also consider, as appropriate, uncertainties and other factors, including those related to current macroeconomic and political conditions, the quality of underwriting standards, and other internal and external factors. The factors and analysis are updated on a quarterly basis or more frequently as market conditions dictate.

Risk-rated exposure

Risk-rated portfolios are generally held in CIB, CB and AM, but also include certain business banking and auto dealer loans held in CCB that are risk-rated because they have characteristics similar to commercial loans. For the risk-rated portfolio, credit loss estimates are based on estimates of the probability of default ("PD") and loss severity given a default. The estimation process begins with risk-ratings that are assigned to each loan facility to differentiate risk within the portfolio. These risk ratings are reviewed regularly by Credit Risk management and revised as needed to reflect the borrower's current financial position, risk profile and related collateral. The probability of default is the likelihood that a loan will default and not be fully repaid by the borrower. The loss given default ("LGD") is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility. The probability of default is estimated for each borrower, and a loss given default is estimated for each credit facility. The calculations and assumptions are based on historic experience and management judgment and are reviewed regularly.

Stress testing
Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios, and the parameters underlying those scenarios, are defined centrally, are articulated in terms of macroeconomic factors, and applied across the businesses. The stress test results may indicate credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, as necessary. The Firm uses stress testing to inform decisions on setting risk appetite both at a Firm and LOB level, as well as to assess the impact of stress on industry concentrations.

Risk monitoring and management
The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

For consumer credit risk, delinquency and other trends, including any concentrations at the portfolio level, are monitored, as certain of these trends can be modified through changes in underwriting policies and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Historical and forecasted trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio. Under the Firm's model risk policy, new significant risk management models, as well as major changes to such models, are required to be reviewed and approved by the Model Review Group prior to implementation into the operating environment. Internal Audit also periodically tests the internal controls around the modeling process including the integrity of the data utilized. For a discussion of the Model Review Group, see page 139. For further discussion of consumer loans, see Note 14.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry and individual client and counterparty level with established concentration limits that are reviewed and revised as deemed appropriate by management, typically on an annual basis. Industry and counterparty limits, as measured in terms of exposure and economic credit risk capital, are subject to stress-based loss constraints.

Management of the Firm's wholesale credit risk exposure is accomplished through a number of means, including:

- Loan underwriting and credit approval process
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Master netting agreements
- Collateral and other risk-reduction techniques

In addition to Risk Management, Internal Audit performs periodic exams, as well as continuous review, where appropriate, of the Firm's consumer and wholesale portfolios. For risk-rated portfolios, a credit review group within Internal Audit is responsible for:

- Independently assessing and validating the changing risk grades assigned to exposures; and
- Evaluating the effectiveness of business units' risk-ratings, including the accuracy and consistency of risk grades, the timeliness of risk grade changes and the justification of risk grades in credit memoranda

Risk reporting
To enable monitoring of credit risk and effective decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior Credit Risk Management. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, senior management and the Board of Directors as appropriate.

CREDIT PORTFOLIO

2014 Credit Risk Overview

In 2014, the consumer credit environment continued to improve and the wholesale credit environment remained favorable. Over the course of the year, the Firm continued to actively manage its underperforming and nonaccrual loans and reduce such exposures through loan restructurings, loan sales and workouts. The Firm saw decreased downgrade, default and charge-off activity and improved consumer delinquency trends. The Firm increased its overall lending activity in both wholesale and consumer businesses. The combination of these factors resulted in an improvement in the credit quality of the portfolio compared with 2013 and contributed to the Firm's reduction in the allowance for credit losses. For further discussion of the consumer credit environment and consumer loans, see Consumer Credit Portfolio on pages 113–119 and Note 14. For further discussion of wholesale credit environment and wholesale loans, see Wholesale Credit Portfolio on pages 120–127 and Note 14.

In the following tables, reported loans include loans retained (i.e., held-for-investment); loans held-for-sale (which are carried at the lower of cost or fair value, with valuation changes recorded in noninterest revenue); and certain loans accounted for at fair value. In addition, the Firm records certain loans accounted for at fair value in trading assets. For further information regarding these loans, see Note 3 and Note 4. For additional information on the Firm's loans and derivative receivables, including the Firm's accounting policies, see Note 14 and Note 6.

For further information regarding the credit risk inherent in the Firm's investment securities portfolio, see Note 12.

Total credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming[b][c][d]	
	2014	2013	**2014**	2013
Loans retained	**$ 747,508**	$ 724,177	**$ 7,017**	$ 8,317
Loans held-for-sale	**7,217**	12,230	**95**	26
Loans at fair value	**2,611**	2,011	**21**	197
Total loans – reported	**757,336**	738,418	**7,133**	8,540
Derivative receivables	**78,975**	65,759	**275**	415
Receivables from customers and other	**29,080**	26,883	**–**	–
Total credit-related assets	**865,391**	831,060	**7,408**	8,955
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**515**	710
Other	**NA**	NA	**44**	41
Total assets acquired in loan satisfactions	**NA**	NA	**559**	751
Total assets	**865,391**	831,060	**7,967**	9,706
Lending-related commitments	**1,056,172**	1,031,672	**103**	206
Total credit portfolio	**$1,921,563**	$1,862,732	**$ 8,070**	$ 9,912
Credit Portfolio Management derivatives notional, net[a]	**$ (26,703)**	$ (27,996)	**$ –**	$ (5)
Liquid securities and other cash collateral held against derivatives	**(19,604)**	(14,435)	**NA**	NA

Year ended December 31, (in millions, except ratios)	**2014**	2013
Net charge-offs	**$ 4,759**	$ 5,802
Average retained loans		
Loans – reported	**729,876**	720,152
Loans – reported, excluding residential real estate PCI loans	**679,869**	663,629
Net charge-off rates		
Loans – reported	**0.65%**	0.81%
Loans – reported, excluding PCI	**0.70**	0.87

(a) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on page 127 and Note 6.

(b) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.

(c) At December 31, 2014 and 2013, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $7.8 billion and $8.4 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of $367 million and $428 million, respectively, that are 90 or more days past due; and (3) real estate owned ("REO") insured by U.S. government agencies of $462 million and $2.0 billion, respectively. These amounts have been excluded based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council ("FFIEC").

(d) At December 31, 2014 and 2013, total nonaccrual loans represented 0.94% and 1.16%, respectively, of total loans.

CONSUMER CREDIT PORTFOLIO

The Firm's consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, business banking loans, and student loans. The Firm's focus is on serving the prime segment of the consumer credit market. For further information on consumer loans, see Note 14.

The credit performance of the consumer portfolio continues to benefit from the improvement in the economy and home prices. Both early-stage delinquencies (30–89 days delinquent) and late-stage delinquencies (150+ days delinquent) for residential real estate, excluding government guaranteed loans, declined from December 31, 2013. Although late-stage delinquencies declined, they remain elevated due to loss-mitigation activities and to elongated foreclosure processing timelines. Losses related to these loans continue to be recognized in accordance with the Firm's standard charge-off practices, but some delinquent loans that would otherwise have been foreclosed upon remain in the mortgage and home equity loan portfolios. The Credit Card 30+ day delinquency rate remains near historic lows.

The following table presents consumer credit-related information with respect to the credit portfolio held by CCB, prime mortgage and home equity loans held by AM, and prime mortgage loans held by Corporate. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 14.

Consumer credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonaccrual loans[f][g]		Net charge-offs/ (recoveries)[h]		Average annual net charge-off/(recovery) rate[h][i]	
	2014	2013	**2014**	2013	**2014**	2013	**2014**	2013
Consumer, excluding credit card								
Loans, excluding PCI loans and loans held-for-sale								
Home equity – senior lien	**$ 16,367**	$ 17,113	**$ 938**	$ 932	**$ 82**	$ 132	**0.50%**	0.72%
Home equity – junior lien	**36,375**	40,750	**1,590**	1,876	**391**	834	**1.03**	1.90
Prime mortgage, including option ARMs	**104,921**	87,162	**2,190**	2,666	**39**	59	**0.04**	0.07
Subprime mortgage	**5,056**	7,104	**1,036**	1,390	**(27)**	90	**(0.43)**	1.17
Auto[a]	**54,536**	52,757	**115**	161	**181**	158	**0.34**	0.31
Business banking	**20,058**	18,951	**279**	385	**305**	337	**1.58**	1.81
Student and other	**10,970**	11,557	**270**	86	**347**	297	**3.07**	2.51
Total loans, excluding PCI loans and loans held-for-sale	**248,283**	235,394	**6,418**	7,496	**1,318**	1,907	**0.55**	0.82
Loans – PCI								
Home equity	**17,095**	18,927	**NA**	NA	**NA**	NA	**NA**	NA
Prime mortgage	**10,220**	12,038	**NA**	NA	**NA**	NA	**NA**	NA
Subprime mortgage	**3,673**	4,175	**NA**	NA	**NA**	NA	**NA**	NA
Option ARMs	**15,708**	17,915	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – PCI	**46,696**	53,055	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – retained	**294,979**	288,449	**6,418**	7,496	**1,318**	1,907	**0.46**	0.66
Loans held-for-sale	**395**[e]	614[e]	**91**	–	**–**	–	**–**	–
Total consumer, excluding credit card loans	**295,374**	289,063	**6,509**	7,496	**1,318**	1,907	**0.46**	0.66
Lending-related commitments[b]	**58,153**	56,057						
Receivables from customers[c]	**108**	139						
Total consumer exposure, excluding credit card	**353,635**	345,259						
Credit Card								
Loans retained[d]	**128,027**	127,465	**–**	–	**3,429**	3,879	**2.75**	3.14
Loans held-for-sale	**3,021**	326	**–**	–	**–**	–	**–**	–
Total credit card loans	**131,048**	127,791	**–**	–	**3,429**	3,879	**2.75**	3.14
Lending-related commitments[b]	**525,963**	529,383						
Total credit card exposure	**657,011**	657,174						
Total consumer credit portfolio	**$ 1,010,646**	$ 1,002,433	**$ 6,509**	$ 7,496	**$ 4,747**	$ 5,786	**1.15%**	1.40%
Memo: Total consumer credit portfolio, excluding PCI	**$ 963,950**	$ 949,378	**$ 6,509**	$ 7,496	**$ 4,747**	$ 5,786	**1.30%**	1.62%

(a) At December 31, 2014 and 2013, excluded operating lease-related assets of $6.7 billion and $5.5 billion, respectively.

(b) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice.

(c) Receivables from customers represent margin loans to retail brokerage customers, and are included in accrued interest and accounts receivable on the Consolidated balance sheets.

(d) Includes accrued interest and fees net of an allowance for the uncollectible portion of accrued interest and fee income.
(e) Predominantly represents prime mortgage loans held-for-sale.
(f) At December 31, 2014 and 2013, nonaccrual loans excluded: (1) mortgage loans insured by U.S. government agencies of $7.8 billion and $8.4 billion, respectively, that are 90 or more days past due; and (2) student loans insured by U.S. government agencies under the FFELP of $367 million and $428 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.
(g) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.
(h) Net charge-offs and net charge-off rates excluded $533 million and $53 million of write-offs of prime mortgages in the PCI portfolio for the years ended December 31, 2014 and 2013. These write-offs decreased the allowance for loan losses for PCI loans. See Allowance for Credit Losses on pages 128–130 for further details.
(i) Average consumer loans held-for-sale were $917 million and $209 million, respectively, for the years ended December 31, 2014 and 2013. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances increased during the year ended December 31, 2014, due to prime mortgage, business banking and auto loan originations, partially offset by paydowns and the charge-off or liquidation of delinquent loans. Credit performance has improved across most portfolios but delinquent residential real estate loans and home equity charge-offs remain elevated compared with pre-recessionary levels.

In the following discussion of loan and lending-related categories, PCI loans are excluded from individual loan product discussions and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, see Note 14.

Home equity: The home equity portfolio declined from December 31, 2013 primarily reflecting loan paydowns and charge-offs. Early-stage delinquencies showed improvement from December 31, 2013. Late-stage delinquencies continue to be elevated as improvement in the number of loans becoming severely delinquent was offset by a higher number of loans remaining in late-stage delinquency due to higher average carrying values on these delinquent loans, reflecting improving collateral values. Senior lien nonaccrual loans were flat compared with the prior year while junior lien nonaccrual loans decreased in 2014. Net charge-offs for both senior and junior lien home equity loans declined when compared with the prior year as a result of improvement in home prices and delinquencies.

Approximately 15% of the Firm's home equity portfolio consists of home equity loans ("HELOANs") and the remainder consists of home equity lines of credit ("HELOCs"). HELOANs are generally fixed-rate, closed-end, amortizing loans, with terms ranging from 3–30 years. Approximately half of the HELOANs are senior liens and the remainder are junior liens. In general, HELOCs originated by the Firm are revolving loans for a 10-year period, after which time the HELOC recasts into a loan with a 20-year amortization period. At the time of origination, the borrower typically selects one of two minimum payment options that will generally remain in effect during the revolving period: a monthly payment of 1% of the outstanding balance, or interest-only payments based on a variable index (typically Prime). HELOCs originated by Washington Mutual were generally revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.

The unpaid principal balance of non-PCI HELOCs outstanding was $47 billion at December 31, 2014. Of the $47 billion, approximately $29 billion have recently recast or are scheduled to recast from interest-only to fully amortizing payments, with $3 billion having recast in 2014; $6 billion, $7 billion, and $6 billion are scheduled to recast in 2015, 2016, and 2017, respectively; and $7 billion is scheduled to recast after 2017. However, of the total $26 billion still remaining to recast, $18 billion are expected to actually recast; and the remaining $8 billion represents loans to borrowers who are expected either to pre-pay or charge-off prior to recast. In the third quarter of 2014, the Firm refined its approach for estimating the number of HELOCs expected to voluntarily pre-pay prior to recast. Based on the refined methodology, the number of loans expected to pre-pay declined, resulting in an increase in the number of loans expected to recast. The Firm has considered this payment recast risk in its allowance for loan losses based upon the estimated amount of payment shock (i.e., the excess of the fully-amortizing payment over the interest-only payment in effect prior to recast) expected to occur at the payment recast date, along with the corresponding estimated probability of default and loss severity assumptions. Certain factors, such as future developments in both unemployment rates and home prices, could have a significant impact on the performance of these loans.

The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile. The Firm will continue to evaluate both the near-term and longer-term repricing and recast risks inherent in its HELOC portfolio to ensure that changes in the Firm's estimate of incurred losses are appropriately considered in the allowance for loan losses and that the Firm's account management practices are appropriate given the portfolio's risk profile.

High-risk seconds are loans where the borrower has a first mortgage loan that is either delinquent or has been modified. Such loans are considered to pose a higher risk of default than junior lien loans for which the senior lien is neither delinquent nor modified. At December 31, 2014, the Firm estimated that its home equity portfolio contained approximately $1.8 billion of current high-risk seconds, compared with $2.3 billion at December 31, 2013. The Firm estimates the balance of its total exposure to high-risk seconds on a quarterly basis using internal data and loan

level credit bureau data (which typically provides the delinquency status of the senior lien). The estimated balance of these high-risk seconds may vary from quarter to quarter for reasons such as the movement of related senior liens into and out of the 30+ day delinquency bucket.

Current high-risk seconds

December 31, (in billions)	2014	2013
Junior liens subordinate to:		
Modified current senior lien	**$ 0.7**	$ 0.9
Senior lien 30 – 89 days delinquent	**0.5**	0.6
Senior lien 90 days or more delinquent[(a)]	**0.6**	0.8
Total current high-risk seconds	**$ 1.8**	$ 2.3

(a) Junior liens subordinate to senior liens that are 90 days or more past due are classified as nonaccrual loans. At December 31, 2014 and 2013, excluded approximately $50 million and approximately $100 million, respectively, of junior liens that are performing but not current, which were placed on nonaccrual in accordance with the regulatory guidance.

Of the estimated $1.8 billion of current high-risk seconds at December 31, 2014, the Firm owns approximately 10% and services approximately 25% of the related senior lien loans to the same borrowers. The performance of the Firm's junior lien loans is generally consistent regardless of whether the Firm owns, services or does not own or service the senior lien. The increased probability of default associated with these higher-risk junior lien loans was considered in estimating the allowance for loan losses.

Mortgage: Prime mortgages, including option adjustable-rate mortgages ("ARMs") and loans held-for-sale, increased from December 31, 2013 due to higher retained originations partially offset by paydowns, the run-off of option ARM loans and the charge-off or liquidation of delinquent loans. Excluding loans insured by U.S. government agencies, both early-stage and late-stage delinquencies showed improvement from December 31, 2013. Nonaccrual loans decreased from the prior year but remain elevated primarily due to loss mitigation activities and elongated foreclosure processing timelines. Net charge-offs remain low, reflecting continued improvement in home prices and delinquencies.

At December 31, 2014 and 2013, the Firm's prime mortgage portfolio included $12.4 billion and $14.3 billion, respectively, of mortgage loans insured and/or guaranteed by U.S. government agencies, of which $9.7 billion and $9.6 billion, respectively, were 30 days or more past due (of these past due loans, $7.8 billion and $8.4 billion, respectively, were 90 days or more past due). The Firm has entered into a settlement regarding loans insured under federal mortgage insurance programs overseen by the FHA, HUD, and VA; the Firm will continue to monitor exposure on future claim payments for government insured loans, but any financial impact related to exposure on future claims is not expected to be significant and was considered in estimating the allowance for loan losses. For further discussion of the settlement, see Note 31.

At December 31, 2014 and 2013, the Firm's prime mortgage portfolio included $16.3 billion and $15.6 billion, respectively, of interest-only loans, which represented 15% and 18%, respectively, of the prime mortgage portfolio. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment period to maturity and are typically originated as higher-balance loans to higher-income borrowers. To date, losses on this portfolio generally have been consistent with the broader prime mortgage portfolio and the Firm's expectations. The Firm continues to monitor the risks associated with these loans.

Subprime mortgages continued to decrease due to portfolio runoff. Early-stage and late-stage delinquencies have improved from December 31, 2013, but remain at elevated levels. Net charge-offs continued to improve as a result of improvement in home prices and delinquencies.

Auto: Auto loans increased from December 31, 2013 as new originations outpaced paydowns and payoffs. Nonaccrual loans improved compared with December 31, 2013. Net charge-offs for the year ended December 31, 2014 increased compared with the prior year, reflecting higher average loss per default as national used car valuations declined from historically strong levels. The auto loan portfolio reflects a high concentration of prime-quality credits.

Business banking: Business banking loans increased from December 31, 2013 due to an increase in loan originations. Nonaccrual loans improved compared with December 31, 2013. Net charge-offs for the year ended December 31, 2014 decreased from the prior year.

Student and other: Student and other loans decreased from December 31, 2013 due primarily to the run-off of the student loan portfolio. Student nonaccrual loans increased from December 31, 2013 due to a modification program began in May 2014 that extended the deferment period for up to 24 months for certain student loans, which resulted in extending the maturity of these loans at their original contractual interest rates.

Purchased credit-impaired loans: PCI loans acquired in the Washington Mutual transaction decreased as the portfolio continues to run off.

As of December 31, 2014, approximately 16% of the option ARM PCI loans were delinquent and approximately 57% of the portfolio has been modified into fixed-rate, fully amortizing loans. Substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing. This latter group of loans is subject to the risk of payment shock due to future payment recast. Default rates generally increase on option ARM loans when payment recast results in a payment increase. The expected increase in default rates is considered in the Firm's quarterly impairment assessment.

The following table provides a summary of lifetime principal loss estimates included in either the nonaccretable difference or the allowance for loan losses.

Summary of lifetime principal loss estimates

December 31, (in billions)	Lifetime loss estimates[a]		LTD liquidation losses[b]	
	2014	2013	**2014**	2013
Home equity	**$ 14.6**	$ 14.7	**$ 12.4**	$ 12.1
Prime mortgage	**3.8**	3.8	**3.5**	3.3
Subprime mortgage	**3.3**	3.3	**2.8**	2.6
Option ARMs	**9.9**	10.2	**9.3**	8.8
Total	**$ 31.6**	$ 32.0	**$ 28.0**	$ 26.8

(a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses was $2.3 billion and $3.8 billion at December 31, 2014 and 2013, respectively.

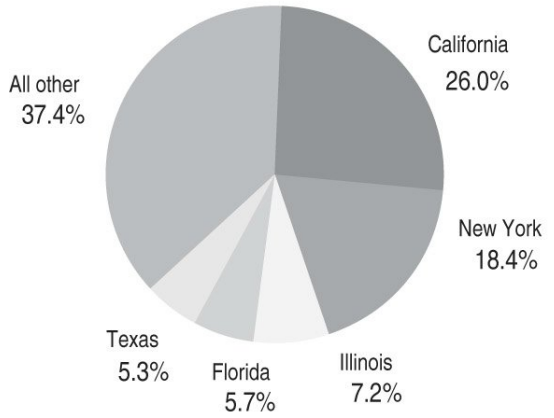
(b) Life-to-date ("LTD") liquidation losses represent both realization of loss upon loan resolution and any principal forgiven upon modification.

Lifetime principal loss estimates declined from December 31, 2013, to December 31, 2014, reflecting improvement in home prices and delinquencies. The decline in lifetime principal loss estimates during the year ended December 31, 2014, resulted in a $300 million reduction of the PCI allowance for loan losses related to option ARM loans. In addition, for the year ended December 31, 2014, PCI write-offs of $533 million were recorded against the prime mortgage allowance for loan losses. For further information on the Firm's PCI loans, including write-offs, see Note 14.

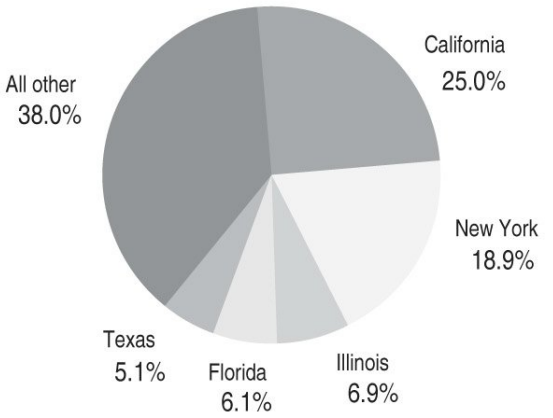
Geographic composition of residential real estate loans

At December 31, 2014, $94.3 billion, or 63% of total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans, were concentrated in California, New York, Illinois, Florida and Texas, compared with $85.9 billion, or 62%, at December 31, 2013. California had the greatest concentration of these loans with 26% at December 31, 2014, compared with 25% at December 31, 2013. The unpaid principal balance of PCI loans concentrated in these five states represented 74% of total PCI loans at both December 31, 2014 and December 31, 2013. For further information on the geographic composition of the Firm's residential real estate loans, see Note 14.

Top 5 States - Residential Real Estate
(at December 31, 2014)



Top 5 States - Residential Real Estate
(at December 31, 2013)



Current estimated LTVs of residential real estate loans

The current estimated average loan-to-value ("LTV") ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 71% at December 31, 2014, compared with 75% at December 31, 2013.

Although home prices continue to recover, the decline in home prices since 2007 has had a significant impact on the collateral values underlying the Firm's residential real estate loan portfolio. In general, the delinquency rate for loans with high LTV ratios is greater than the delinquency rate for loans in which the borrower has greater equity in the collateral. While a large portion of the loans with current estimated LTV ratios greater than 100% continue to pay and are current, the continued willingness and ability of these borrowers to pay remains a risk.

The following table presents the current estimated LTV ratios for PCI loans, as well as the ratios of the carrying value of the underlying loans to the current estimated collateral value. Because such loans were initially measured at fair value, the ratios of the carrying value to the current estimated collateral value will be lower than the current estimated LTV ratios, which are based on the unpaid principal balances. The estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting ratios are necessarily imprecise and should therefore be viewed as estimates.

LTV ratios and ratios of carrying values to current estimated collateral values – PCI loans

	2014				2013			
December 31, (in millions, except ratios)	Unpaid principal balance	Current estimated LTV ratio[a]	Net carrying value[c]	Ratio of net carrying value to current estimated collateral value[c]	Unpaid principal balance	Current estimated LTV ratio[a]	Net carrying value[c]	Ratio of net carrying value to current estimated collateral value[c]
Home equity	**$ 17,740**	**83%** [b]	**$ 15,337**	**72%**	$ 19,830	90% [b]	$ 17,169	78%
Prime mortgage	**10,249**	**76**	**9,027**	**67**	11,876	83	10,312	72
Subprime mortgage	**4,652**	**82**	**3,493**	**62**	5,471	91	3,995	66
Option ARMs	**16,496**	**74**	**15,514**	**70**	19,223	82	17,421	74

(a) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated at least quarterly based on home valuation models that utilize nationally recognized home price index valuation estimates; such models incorporate actual data to the extent available and forecasted data where actual data is not available.

(b) Represents current estimated combined LTV for junior home equity liens, which considers all available lien positions, as well as unused lines, related to the property. All other products are presented without consideration of subordinate liens on the property.

(c) Net carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition and is also net of the allowance for loan losses at December 31, 2014 and 2013 of $1.2 billion and $1.7 billion for prime mortgage, $194 million and $494 million for option ARMs, respectively, and $1.8 billion for home equity and $180 million for subprime mortgage for both periods.

The current estimated average LTV ratios were 77% and 88% for California and Florida PCI loans, respectively, at December 31, 2014, compared with 85% and 103%, respectively, at December 31, 2013. Average LTV ratios have declined consistent with recent improvements in home prices. Although home prices have improved, home prices in most areas of California and Florida are still lower than at the peak of the housing market; this continues to negatively contribute to current estimated average LTV ratios and the ratio of net carrying value to current estimated collateral value for loans in the PCI portfolio. Of the total PCI portfolio, 15% had a current estimated LTV ratio greater than 100%, and 3% had a current LTV ratio of greater than 125% at December 31, 2014, compared with 26% and 7%, respectively, at December 31, 2013.

While the current estimated collateral value is greater than the net carrying value of PCI loans, the ultimate performance of this portfolio is highly dependent on borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity, as well as on the cost of alternative housing.

For further information on current estimated LTVs of residential real estate loans, see Note 14.

Loan modification activities – residential real estate loans

The performance of modified loans generally differs by product type due to differences in both the credit quality and the types of modifications provided. Performance metrics for the residential real estate portfolio, excluding PCI loans, that have been modified and seasoned more than six months show weighted-average redefault rates of 20% for senior lien home equity, 22% for junior lien home equity, 16% for prime mortgages including option ARMs, and 29% for subprime mortgages. The cumulative performance metrics for the PCI residential real estate portfolio modified and seasoned more than six months show weighted average redefault rates of 20% for home equity, 17% for prime mortgages, 15% for option ARMs and 32% for subprime mortgages. The favorable performance of the PCI option ARM modifications is the result of a targeted proactive program which fixed the borrower's payment to the amount at the point of modification. The cumulative redefault rates reflect the performance of modifications completed under both the Home Affordable Modification Program ("HAMP") and the Firm's proprietary modification programs (primarily the Firm's modification program that was modeled after HAMP) from October 1, 2009, through December 31, 2014.

Certain loans that were modified under HAMP and the Firm's proprietary modification programs have interest rate reset provisions ("step-rate modifications"). Interest rates on these loans will generally increase beginning in 2014 by 1% per year until the rate reaches a specified cap, typically at a prevailing market interest rate for a fixed-rate loan as of the modification date. The carrying value of non-PCI loans modified in step-rate modifications was $5 billion at December 31, 2014, with $1 billion scheduled to experience the initial interest rate increase in each of 2015 and 2016. The unpaid principal balance of PCI loans modified in step-rate modifications was $10 billion at December 31, 2014, with $2 billion and $3 billion scheduled to experience the initial interest rate increase in 2015 and 2016, respectively. The impact of these potential interest rate increases is considered in the Firm's allowance for loan losses. The Firm will continue to monitor this risk exposure to ensure that it is appropriately considered in the Firm's allowance for loan losses.

The following table presents information as of December 31, 2014 and 2013, relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. Modifications of PCI loans continue to be accounted for and reported as PCI loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of estimated future cash flows. Modifications of consumer loans other than PCI loans are generally accounted for and reported as troubled debt restructurings ("TDRs"). For further information on modifications for the years ended December 31, 2014 and 2013, see Note 14.

Modified residential real estate loans

	2014		2013	
December 31, (in millions)	On-balance sheet loans	Nonaccrual on-balance sheet loans[d]	On-balance sheet loans	Nonaccrual on-balance sheet loans[d]
Modified residential real estate loans, excluding PCI loans[a][b]				
Home equity – senior lien	**$ 1,101**	**$ 628**	$ 1,146	$ 641
Home equity – junior lien	**1,304**	**632**	1,319	666
Prime mortgage, including option ARMs	**6,145**	**1,559**	7,004	1,737
Subprime mortgage	**2,878**	**931**	3,698	1,127
Total modified residential real estate loans, excluding PCI loans	**$ 11,428**	**$ 3,750**	$ 13,167	$ 4,171
Modified PCI loans[c]				
Home equity	**$ 2,580**	**NA**	$ 2,619	NA
Prime mortgage	**6,309**	**NA**	6,977	NA
Subprime mortgage	**3,647**	**NA**	4,168	NA
Option ARMs	**11,711**	**NA**	13,131	NA
Total modified PCI loans	**$ 24,247**	**NA**	$ 26,895	NA

(a) Amounts represent the carrying value of modified residential real estate loans.
(b) At December 31, 2014 and 2013, $4.9 billion and $7.6 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. For additional information about sales of loans in securitization transactions with Ginnie Mae, see Note 16.
(c) Amounts represent the unpaid principal balance of modified PCI loans.
(d) As of December 31, 2014 and 2013, nonaccrual loans included $2.9 billion and $3.0 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status, see Note 14.

Nonperforming assets

The following table presents information as of December 31, 2014 and 2013, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[a]

December 31, (in millions)	2014	2013
Nonaccrual loans[b]		
Residential real estate	**$ 5,845**	$ 6,864
Other consumer	**664**	632
Total nonaccrual loans	**6,509**	7,496
Assets acquired in loan satisfactions		
Real estate owned	**437**	614
Other	**36**	41
Total assets acquired in loan satisfactions	**473**	655
Total nonperforming assets	**$ 6,982**	$ 8,151

(a) At December 31, 2014 and 2013, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $7.8 billion and $8.4 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of $367 million and $428 million, respectively, that are 90 or more days past due; and (3) real estate owned insured by U.S. government agencies of $462 million and $2.0 billion, respectively. These amounts have been excluded based upon the government guarantee.
(b) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

Nonaccrual loans in the residential real estate portfolio totaled $5.8 billion and $6.9 billion at December 31, 2014 and December 31, 2013, respectively, of which 32% and 34%, respectively, were greater than 150 days past due. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 50% to the estimated net realizable value of the collateral at both December 31, 2014 and 2013. The elongated foreclosure processing timelines are expected to continue to result in elevated levels of nonaccrual loans in the residential real estate portfolios.

Active and suspended foreclosure: For information on loans that were in the process of active or suspended foreclosure, see Note 14.

Nonaccrual loans: The following table presents changes in the consumer, excluding credit card, nonaccrual loans for the years ended December 31, 2014 and 2013.

Nonaccrual loans

Year ended December 31, (in millions)	2014	2013
Beginning balance	**$ 7,496**	$ 9,174
Additions	**4,905**	6,618
Reductions:		
Principal payments and other[a]	**1,859**	1,559
Charge-offs	**1,306**	1,869
Returned to performing status	**2,083**	3,793
Foreclosures and other liquidations	**644**	1,075
Total reductions	**5,892**	8,296
Net additions/(reductions)	**(987)**	(1,678)
Ending balance	**$ 6,509**	$ 7,496

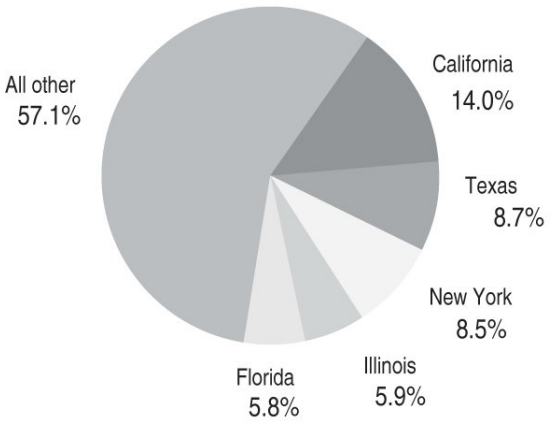
(a) Other reductions includes loan sales.

Credit Card

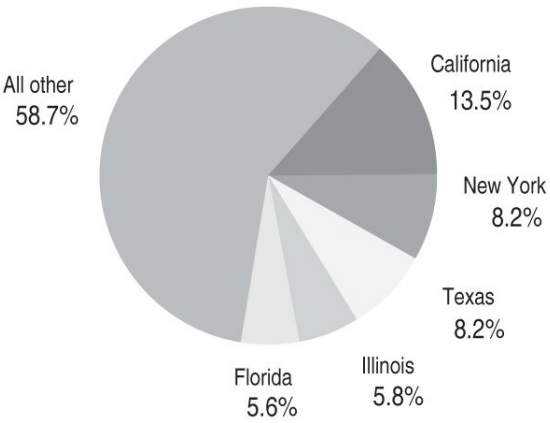
Total credit card loans increased from December 31, 2013 due to higher new account originations and increased credit card sales volume. The 30+ day delinquency rate decreased to 1.44% at December 31, 2014, from 1.67% at December 31, 2013. For the years ended December 31, 2014 and 2013, the net charge-off rates were 2.75% and 3.14%, respectively. Charge-offs have improved compared with a year ago as a result of improvement in delinquent loans. The credit card portfolio continues to reflect a well-seasoned, largely rewards-based portfolio that has good U.S. geographic diversification.

Loans outstanding in the top five states of California, Texas, New York, Illinois and Florida consisted of $54.9 billion in receivables, or 43% of the retained loan portfolio, at December 31, 2014, compared with $52.7 billion, or 41%, at December 31, 2013. The greatest geographic concentration of credit card retained loans is in California, which represented 14% and 13% of total retained loans at December 31, 2014 and 2013, respectively. For further information on the geographic composition of the Firm's credit card loans, see Note 14.

Top 5 States Credit Card - Retained
(at December 31, 2014)



Top 5 States Credit Card - Retained
(at December 31, 2013)



Modifications of credit card loans

At December 31, 2014 and 2013, the Firm had $2.0 billion and $3.1 billion, respectively, of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms. The decrease in modified credit card loans outstanding from December 31, 2013, was attributable to a reduction in new modifications as well as ongoing payments and charge-offs on previously modified credit card loans.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged-off. However, the Firm establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued interest and fee income.

For additional information about loan modification programs to borrowers, see Note 14.

WHOLESALE CREDIT PORTFOLIO

The Firm's wholesale businesses are exposed to credit risk through underwriting, lending and trading activities with and for clients and counterparties, as well as through various operating services such as cash management and clearing activities. A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk.

The wholesale credit environment remained favorable throughout 2014 driving an increase in client activity. Growth in loans retained was driven primarily by activity in Commercial Banking, while growth in lending-related commitments reflected increased activity in both the Corporate & Investment Bank and Commercial Banking. Discipline in underwriting across all areas of lending continues to remain a key point of focus, consistent with evolving market conditions and the Firm's risk management activities. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of client credit quality and transaction structure, inclusive of collateral where applicable; and of industry, product and client concentrations. During the year, wholesale criticized assets decreased from 2013, including a reduction in nonaccrual loans by 40%.

Wholesale credit portfolio

December 31,	Credit exposure		Nonperforming[d]	
(in millions)	**2014**	2013	**2014**	2013
Loans retained	**$324,502**	$308,263	**$ 599**	$ 821
Loans held-for-sale	**3,801**	11,290	**4**	26
Loans at fair value	**2,611**	2,011	**21**	197
Loans – reported	**330,914**	321,564	**624**	1,044
Derivative receivables	**78,975**	65,759	**275**	415
Receivables from customers and other[a]	**28,972**	26,744	**–**	–
Total wholesale credit-related assets	**438,861**	414,067	**899**	1,459
Lending-related commitments[b]	**472,056**	446,232	**103**	206
Total wholesale credit exposure	**$910,917**	$860,299	**$ 1,002**	$ 1,665
Credit Portfolio Management derivatives notional, net[c]	**$ (26,703)**	$ (27,996)	**$ –**	$ (5)
Liquid securities and other cash collateral held against derivatives	**(19,604)**	(14,435)	**NA**	NA

(a) Receivables from customers and other include $28.8 billion and $26.5 billion of margin loans at December 31, 2014 and 2013, respectively, to prime and retail brokerage customers; these are classified in accrued interest and accounts receivable on the Consolidated balance sheets.

(b) Includes unused advised lines of credit of $105.2 billion and $102.0 billion as of December 31, 2014 and 2013, respectively. An advised line of credit is a revolving credit line which specifies the maximum amount the Firm may make available to an obligor, on a nonbinding basis. The borrower receives written or oral advice of this facility. The Firm may cancel this facility at any time by providing the borrower notice or, in some cases, without notice as permitted by law.

(c) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on page 127, and Note 6.

(d) Excludes assets acquired in loan satisfactions.

The following tables present the maturity and ratings profiles of the wholesale credit portfolio as of December 31, 2014 and 2013. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings as defined by S&P and Moody's.

Wholesale credit exposure – maturity and ratings profile

December 31, 2014	Maturity profile[e]				Ratings profile			
					Investment-grade	Noninvestment-grade		
(in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	**Total**	Total % of IG
Loans retained	**$ 112,411**	**$ 134,277**	**$ 77,814**	**$ 324,502**	**$ 241,666**	**$ 82,836**	**$ 324,502**	**74%**
Derivative receivables				**78,975**			**78,975**	
Less: Liquid securities and other cash collateral held against derivatives				**(19,604)**			**(19,604)**	
Total derivative receivables, net of all collateral	**20,032**	**16,130**	**23,209**	**59,371**	**52,150**	**7,221**	**59,371**	**88**
Lending-related commitments	**185,451**	**276,793**	**9,812**	**472,056**	**379,214**	**92,842**	**472,056**	**80**
Subtotal	**317,894**	**427,200**	**110,835**	**855,929**	**673,030**	**182,899**	**855,929**	**79**
Loans held-for-sale and loans at fair value[a]				**6,412**			**6,412**	
Receivables from customers and other				**28,972**			**28,972**	
Total exposure – net of liquid securities and other cash collateral held against derivatives				**$ 891,313**			**$ 891,313**	
Credit Portfolio Management derivatives net notional by reference entity ratings profile[b][c][d]	**$ (2,050)**	**$ (18,653)**	**$ (6,000)**	**$ (26,703)**	**$ (23,571)**	**$ (3,132)**	**$ (26,703)**	**88%**

December 31, 2013	Maturity profile[e]				Ratings profile			
					Investment-grade	Noninvestment-grade		
(in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	**Total**	Total % of IG
Loans retained	$ 108,392	$ 124,111	$ 75,760	$ 308,263	$ 226,070	$ 82,193	$ 308,263	73%
Derivative receivables				65,759			65,759	
Less: Liquid securities and other cash collateral held against derivatives				(14,435)			(14,435)	
Total derivative receivables, net of all collateral	13,550	15,935	21,839	51,324	41,104 [f]	10,220 [f]	51,324	80
Lending-related commitments	179,301	255,426	11,505	446,232	353,974	92,258	446,232	79
Subtotal	301,243	395,472	109,104	805,819	621,148	184,671	805,819	77
Loans held-for-sale and loans at fair value[a]				13,301			13,301	
Receivables from customers and other				26,744			26,744	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 845,864			$ 845,864	
Credit Portfolio Management derivatives net notional by reference entity ratings profile[b][c][d]	$ (1,149)	$ (19,516)	$ (7,331)	$ (27,996)	$ (24,649)	$ (3,347)	$ (27,996)	88%

(a) Represents loans held-for-sale, primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
(b) These derivatives do not quality for hedge accounting under U.S. GAAP.
(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased.
(d) Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection, including Credit Portfolio Management derivatives, are executed with investment grade counterparties.
(e) The maturity profile of retained loans, lending-related commitments and derivative receivables is based on remaining contractual maturity. Derivative contracts that are in a receivable position at December 31, 2014, may become a payable prior to maturity based on their cash flow profile or changes in market conditions.
(f) The prior period amounts have been revised to conform with the current period presentation.

Wholesale credit exposure – selected industry exposures

The Firm focuses on the management and diversification of its industry exposures, paying particular attention to industries with actual or potential credit concerns. Exposures deemed criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, decreased by 16% to $10.2 billion at December 31, 2014, from $12.2 billion at December 31, 2013.

Below are summaries of the top 25 industry exposures as of December 31, 2014 and 2013. For additional information on industry concentrations, see Note 5.

As of or for the year ended **December 31, 2014** (in millions)	Credit exposure[d]	Investment-grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[e]	Liquid securities and other cash collateral held against derivative receivables
Top 25 industries[a]									
Real Estate	$ 107,386	$ 80,219	$ 25,558	$ 1,356	$ 253	$ 309	$ (9)	$ (36)	$ (27)
Banks & Finance Cos	68,203	58,360	9,266	508	69	46	(4)	(1,232)	(9,369)
Healthcare	57,707	49,361	7,816	488	42	193	17	(94)	(244)
Oil & Gas	48,315	33,547	14,685	82	1	15	2	(144)	(161)
Consumer Products	37,818	26,070	11,081	650	17	21	–	(20)	(2)
Asset Managers	36,374	31,880	4,436	57	1	38	(12)	(9)	(4,545)
State & Municipal Govt[b]	31,858	30,919	837	102	–	69	24	(148)	(130)
Retail & Consumer Services	28,258	18,233	9,023	971	31	56	4	(47)	(1)
Utilities	28,060	24,058	3,747	255	–	198	(3)	(155)	(193)
Central Govt	21,081	20,868	155	58	–	–	–	(11,297)	(1,071)
Technology	20,977	13,759	6,557	641	20	24	(3)	(225)	–
Machinery & Equipment Mfg	20,573	12,094	8,229	250	–	5	(2)	(157)	(19)
Transportation	16,365	11,444	4,835	86	–	5	(3)	(34)	(107)
Business Services	16,201	8,450	7,512	224	15	10	5	(9)	–
Metals/Mining	15,911	8,845	6,562	504	–	–	18	(377)	(19)
Media	14,534	9,131	5,107	266	30	1	(1)	(69)	(6)
Building Materials/Construction	13,672	6,721	6,271	674	6	12	2	(104)	–
Insurance	13,637	10,790	2,605	80	162	–	–	(52)	(2,372)
Automotive	13,586	8,647	4,778	161	–	1	(1)	(140)	–
Chemicals/Plastics	13,545	9,800	3,716	29	–	1	(2)	(14)	–
Telecom Services	13,136	8,277	4,303	546	10	–	(2)	(813)	(6)
Securities Firms & Exchanges	8,936	6,198	2,726	10	2	20	4	(102)	(216)
Agriculture/Paper Mfg	7,242	4,890	2,224	122	6	36	(1)	(4)	(4)
Aerospace/Defense	6,070	5,088	958	24	–	–	–	(71)	–
Leisure	5,562	2,937	2,023	478	124	6	–	(5)	(23)
All other[c]	210,526	190,135	19,581	622	188	1,235	(21)	(11,345)	(1,089)
Subtotal	$ 875,533	$ 690,721	$ 174,591	$ 9,244	$ 977	$ 2,301	$ 12	$ (26,703)	$ (19,604)
Loans held-for-sale and loans at fair value	6,412								
Receivables from customers and other	28,972								
Total	$ 910,917								

As of or for the year ended December 31, 2013 (in millions)	Credit exposure[d]	Investment-grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[e]	Liquid securities and other cash collateral held against derivative receivables
Top 25 industries[a]									
Real Estate	$ 87,102	$ 62,964	$ 21,505	$ 2,286	$ 347	$ 178	$ 6	$ (66)	$ (125)
Banks & Finance Cos	66,881	56,675	9,707	431	68	14	(22)	(2,692)	(6,227)
Healthcare	45,910	37,635	7,952	317	6	49	3	(198)	(195)
Oil & Gas	46,934	34,708	11,779	436	11	34	13	(227)	(67)
Consumer Products	34,145	21,100	12,505	537	3	4	11	(149)	(1)
Asset Managers	33,506	26,991	6,477	38	–	217	(7)	(5)	(3,191)
State & Municipal Govt[b]	35,666	34,563	826	157	120	40	1	(161)	(144)
Retail & Consumer Services	25,068	16,101	8,453	492	22	6	–	(91)	–
Utilities	28,983	25,521	3,045	411	6	2	28	(445)	(306)
Central Govt	21,049	20,633	345	71	–	–	–	(10,088)	(1,541)
Technology	21,403	13,787	6,771	825	20	–	–	(512)	–
Machinery & Equipment Mfg	19,078	11,154	7,549	368	7	20	(18)	(257)	(8)
Transportation	13,975	9,683	4,165	100	27	10	8	(68)	–
Business Services	14,601	7,838	6,447	286	30	9	10	(10)	(2)
Metals/Mining	17,434	9,266	7,508	594	66	1	16	(621)	(36)
Media	13,858	7,783	5,658	315	102	6	36	(26)	(5)
Building Materials/Construction	12,901	5,701	6,354	839	7	15	3	(132)	–
Insurance	13,761	10,681	2,757	84	239	–	(2)	(98)	(1,935)
Automotive	12,532	7,881	4,490	159	2	3	(3)	(472)	–
Chemicals/Plastics	10,637	7,189	3,211	222	15	–	–	(13)	(83)
Telecom Services	13,906	9,130	4,284	482	10	–	7	(272)	(8)
Securities Firms & Exchanges	10,035	4,208	[f] 5,806	[f] 14	7	1	(68)	(4,169)	(175)
Agriculture/Paper Mfg	7,387	4,238	3,064	82	3	31	–	(4)	(4)
Aerospace/Defense	6,873	5,447	1,426	–	–	–	–	(142)	(1)
Leisure	5,331	2,950	1,797	495	89	5	–	(10)	(14)
All other[c]	201,298	180,460	19,911	692	235	1,249	(6)	(7,068)	(367)
Subtotal	$ 820,254	$ 634,287	$ 173,792	$ 10,733	$ 1,442	$ 1,894	$ 16	$ (27,996)	$ (14,435)
Loans held-for-sale and loans at fair value	13,301								
Receivables from customers and other	26,744								
Total	$ 860,299								

(a) The industry rankings presented in the table as of December 31, 2013, are based on the industry rankings of the corresponding exposures at December 31, 2014, not actual rankings of such exposures at December 31, 2013.

(b) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2014 and 2013, noted above, the Firm held: $10.6 billion and $7.9 billion, respectively, of trading securities; $30.1 billion and $29.5 billion, respectively, of AFS securities; and $10.2 billion and $920 million, respectively, of HTM securities, issued by U.S. state and municipal governments. For further information, see Note 3 and Note 12.

(c) All other includes: individuals, private education and civic organizations; SPEs; and holding companies, representing approximately 68%, 21% and 5%, respectively, at December 31, 2014, and 64%, 22% and 5%, respectively, at December 31, 2013.

(d) Credit exposure is net of risk participations and excludes the benefit of "Credit Portfolio Management derivatives net notional" held against derivative receivables or loans and "Liquid securities and other cash collateral held against derivative receivables".

(e) Represents the net notional amounts of protection purchased and sold through credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The all other category includes purchased credit protection on certain credit indices.

(f) The prior period amounts have been revised to conform with the current period presentation.

Presented below is a discussion of several industries to which the Firm has significant exposure and/or present actual or potential credit concerns. The Firm is actively monitoring these exposures. For additional information, refer to the tables on the previous pages.

- **Real Estate:** Exposure to this industry increased by $20.3 billion or 23%, in 2014 to $107.4 billion. The increase was largely driven by growth in multifamily exposure in the CB. The credit quality of this industry improved as the investment-grade portion of the exposures to this industry increased to 75% in 2014 from 72% in 2013. The ratio of nonaccrual retained loans to total retained loans decreased to 0.32% at December 31, 2014 from 0.50% at December 31, 2013. For further information on commercial real estate loans, see Note 14.
- **Oil & Gas:** Exposure to this industry increased by $1.4 billion in 2014 to $48.3 billion, of which $15.6 billion was drawn at year-end. The portfolio largely consisted of exposure in North America, and was concentrated in the Exploration and Production subsector. The Oil & Gas portfolio was comprised of 69% investment-grade exposure, and was approximately 5% of the Firm's total wholesale credit exposure as of December 31, 2014.

Loans

In the normal course of its wholesale business, the Firm provides loans to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals. For further discussion on loans, including information on credit quality indicators, see Note 14.

The Firm actively manages its wholesale credit exposure. One way of managing credit risk is through secondary market sales of loans and lending-related commitments. During the years ended December 31, 2014 and 2013, the Firm sold $22.8 billion and $16.3 billion, respectively, of loans and lending-related commitments.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2014 and 2013.

Wholesale nonaccrual loan activity

Year ended December 31, (in millions)	2014	2013
Beginning balance	**$ 1,044**	$ 1,717
Additions	**882**	1,293
Reductions:		
Paydowns and other	**756**	1,075
Gross charge-offs	**148**	241
Returned to performing status	**303**	279
Sales	**95**	371
Total reductions	**1,302**	1,966
Net reductions	**(420)**	(673)
Ending balance	**$ 624**	$ 1,044

The following table presents net charge-offs, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2014 and 2013. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

Wholesale net charge-offs

Year ended December 31, (in millions, except ratios)	2014	2013
Loans – reported		
Average loans retained	**$ 316,060**	$ 307,340
Gross charge-offs	**151**	241
Gross recoveries	**(139)**	(225)
Net charge-offs	**12**	16
Net charge-off rate	**–%**	0.01%

Receivables from customers

Receivables from customers primarily represent margin loans to prime and retail brokerage clients that are collateralized through a pledge of assets maintained in clients' brokerage accounts that are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's position may be liquidated by the Firm to meet the minimum collateral requirements.

Lending-related commitments

The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to meet the financing needs of its customers. The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligations under these guarantees, and the counterparties subsequently fail to perform according to the terms of these contracts.

In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's actual future credit exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these commitments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn upon in an event of a default by an obligor. The loan-equivalent amount of the Firm's lending-related commitments was $229.6 billion and $218.9 billion as of December 31, 2014 and 2013, respectively.

Clearing services

The Firm provides clearing services for clients entering into securities and derivative transactions. Through the provision of these services the Firm is exposed to the risk of non-performance by its clients and may be required to share in losses incurred by central counterparties ("CCPs"). Where possible, the Firm seeks to mitigate its credit risk to its clients through the collection of adequate margin at inception and throughout the life of the transactions and can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement. For further discussion of Clearing services, see Note 29.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activities. Derivatives enable customers to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its own credit exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For OTC derivatives the Firm is exposed to the credit risk of the derivative counterparty. For exchange-traded derivatives ("ETD") such as futures and options, and "cleared" over-the-counter ("OTC-cleared") derivatives, the Firm is generally exposed to the credit risk of the relevant CCP. Where possible, the Firm seeks to mitigate its credit risk exposures arising from derivative transactions through the use of legally enforceable master netting arrangements and collateral agreements. For further discussion of derivative contracts, counterparties and settlement types, see Note 6.

The following table summarizes the net derivative receivables for the periods presented.

Derivative receivables

December 31, (in millions)	2014	2013
Interest rate	$ 33,725	$ 25,782
Credit derivatives	1,838	1,516
Foreign exchange	21,253	16,790
Equity	8,177	12,227
Commodity	13,982	9,444
Total, net of cash collateral	78,975	65,759
Liquid securities and other cash collateral held against derivative receivables	(19,604)	(14,435)
Total, net of all collateral	$ 59,371	$ 51,324

Derivative receivables reported on the Consolidated balance sheets were $79.0 billion and $65.8 billion at December 31, 2014 and 2013, respectively. These amounts represent the fair value of the derivative contracts, after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. However, in management's view, the appropriate measure of current credit risk should also take into consideration additional liquid securities (primarily U.S. government and agency securities and other G7 government bonds) and other cash collateral held by the Firm aggregating $19.6 billion and $14.4 billion at December 31, 2014 and 2013, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor.

In addition to the collateral described in the preceding paragraph, the Firm also holds additional collateral (primarily: cash; G7 government securities; other liquid government-agency and guaranteed securities; and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Although this collateral does not reduce the balances and is not included in the table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative transactions move in the Firm's favor. As of December 31, 2014 and 2013, the Firm held $48.6 billion and $50.8 billion, respectively, of this additional collateral. The prior period amount has been revised to conform with the current period presentation. The derivative receivables fair value, net of all collateral, also does not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of collateral agreements, see Note 6.

While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

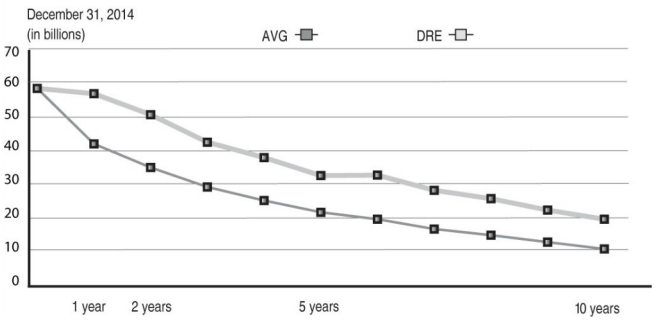
Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, AVG is a measure of the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the CVA, as further described below. The three year AVG exposure was $37.5 billion and $35.4 billion at December 31, 2014 and 2013, respectively, compared with derivative receivables, net of all collateral, of $59.4 billion and $51.3 billion at December 31, 2014 and 2013, respectively.

The fair value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk management process takes into consideration the potential impact of wrong-way risk, which is broadly defined as the potential for increased correlation between the Firm's exposure to a counterparty (AVG) and the counterparty's credit quality. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with that counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to the Firm's current derivatives portfolio over the next 10 years as calculated by the DRE and AVG metrics. The two measures generally show that exposure will decline after the first year, if no new trades are added to the portfolio.

Exposure profile of derivatives measures



The following table summarizes the ratings profile by derivative counterparty of the Firm's derivative receivables, including credit derivatives, net of other liquid securities collateral, for the dates indicated. The ratings scale is based on the Firm's internal ratings, which generally correspond to the ratings as defined by S&P and Moody's.

Ratings profile of derivative receivables

Rating equivalent	**2014**		2013[a]	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 19,202**	**32%**	$ 12,953	25%
A+/A1 to A-/A3	**13,940**	**24**	12,930	25
BBB+/Baa1 to BBB-/Baa3	**19,008**	**32**	15,220	30
BB+/Ba1 to B-/B3	**6,384**	**11**	6,806	13
CCC+/Caa1 and below	**837**	**1**	3,415	7
Total	**$ 59,371**	**100%**	$ 51,324	100%

(a) The prior period amounts have been revised to conform with the current period presentation.

As previously noted, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's derivatives transactions subject to collateral agreements – excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity – was 88% as of December 31, 2014, largely unchanged compared with 86% as of December 31, 2013.

Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker; and second, as an end-user, to manage the Firm's own credit risk associated with various exposures. For a detailed description of credit derivatives, see Credit derivatives in Note 6.

Credit portfolio management activities

Included in the Firm's end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management" activities). Information on credit portfolio management activities is provided in the table below. For further information on derivatives used in credit portfolio management activities, see Credit derivatives in Note 6.

The Firm also uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain securities held in the Firm's market-making businesses. These credit derivatives are not included in credit portfolio management activities; for further information on these credit derivatives as well as credit derivatives used in the Firm's capacity as a market maker in credit derivatives, see Credit derivatives in Note 6.

Credit derivatives used in credit portfolio management activities

	Notional amount of protection purchased and sold [a]	
December 31, (in millions)	**2014**	2013
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 2,047**	$ 2,764
Derivative receivables	**24,656**	25,328
Total net protection purchased	**26,703**	28,092
Total net protection sold	**–**	96
Credit portfolio management derivatives notional, net	**$ 26,703**	$ 27,996

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

The credit derivatives used in credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure.

The effectiveness of the Firm's credit default swap ("CDS") protection as a hedge of the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS); the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm); and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers both the consumer (primarily scored) portfolio and wholesale (risk-rated) portfolio. The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also determines an allowance for wholesale and certain consumer lending-related commitments.

The allowance for loan losses includes an asset-specific component, a formula-based component, and a component related to PCI loans. For a further discussion of the components of the allowance for credit losses and related management judgments, see Critical Accounting Estimates Used by the Firm on pages 161–165 and Note 15.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the DRPC and Audit Committees of the Board of Directors of the Firm. As of December 31, 2014, JPMorgan Chase deemed the allowance for credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio.

The allowance for credit losses was $14.8 billion at December 31, 2014, a decrease of $2.2 billion from $17.0 billion at December 31, 2013.

The consumer, excluding credit card, allowance for loan losses reflected a reduction from December 31, 2013, primarily due to the continued improvement in home prices and delinquencies in the residential real estate portfolio and the run-off of the student loan portfolio. For additional information about delinquencies and nonaccrual loans in the consumer, excluding credit card, loan portfolio, see Consumer Credit Portfolio on pages 113–119 and Note 14.

The credit card allowance for loan losses reflected a reduction from December 31, 2013, primarily related to a decrease in the asset-specific allowance resulting from increased granularity of the impairment estimates and lower balances related to credit card loans modified in TDRs. For additional information about delinquencies in the credit card loan portfolio, see Consumer Credit Portfolio on pages 113–119 and Note 14.

The wholesale allowance for credit losses decreased from December 31, 2013, reflecting a continued favorable credit environment as evidenced by low charge-off rates, and declining nonaccrual balances and other portfolio activity.

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2014 Consumer, excluding credit card	2014 Credit card	2014 Wholesale	2014 Total	2013 Consumer, excluding credit card	2013 Credit card	2013 Wholesale	2013 Total
Allowance for loan losses								
Beginning balance at January 1,	**$ 8,456**	**$ 3,795**	**$ 4,013**	**$ 16,264**	$ 12,292	$ 5,501	$ 4,143	$ 21,936
Gross charge-offs	**2,132**	**3,831**	**151**	**6,114**	2,754	4,472	241	7,467
Gross recoveries	**(814)**	**(402)**	**(139)**	**(1,355)**	(847)	(593)	(225)	(1,665)
Net charge-offs	**1,318**	**3,429**	**12**	**4,759**	1,907	3,879	16	5,802
Write-offs of PCI loans[a]	**533**	**–**	**–**	**533**	53	–	–	53
Provision for loan losses	**414**	**3,079**	**(269)**	**3,224**	(1,872)	2,179	(119)	188
Other	**31**	**(6)**	**(36)**	**(11)**	(4)	(6)	5	(5)
Ending balance at December 31,	**$ 7,050**	**$ 3,439**	**$ 3,696**	**$ 14,185**	$ 8,456	$ 3,795	$ 4,013	$ 16,264
Impairment methodology								
Asset-specific[b]	**$ 539**	**$ 500**	**$ 87**	**$ 1,126**	$ 601	$ 971	$ 181	$ 1,753
Formula-based	**3,186**	**2,939**	**3,609**	**9,734**	3,697	2,824	3,832	10,353
PCI	**3,325**	**–**	**–**	**3,325**	4,158	–	–	4,158
Total allowance for loan losses	**$ 7,050**	**$ 3,439**	**$ 3,696**	**$ 14,185**	$ 8,456	$ 3,795	$ 4,013	$ 16,264
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 8**	**$ –**	**$ 697**	**$ 705**	$ 7	$ –	$ 661	$ 668
Provision for lending-related commitments	**5**	**–**	**(90)**	**(85)**	1	–	36	37
Other	**–**	**–**	**2**	**2**	–	–	–	–
Ending balance at December 31,	**$ 13**	**$ –**	**$ 609**	**$ 622**	$ 8	$ –	$ 697	$ 705
Impairment methodology								
Asset-specific	**$ –**	**$ –**	**$ 60**	**$ 60**	$ –	$ –	$ 60	$ 60
Formula-based	**13**	**–**	**549**	**562**	8	–	637	645
Total allowance for lending-related commitments[c]	**$ 13**	**$ –**	**$ 609**	**$ 622**	$ 8	$ –	$ 697	$ 705
Total allowance for credit losses	**$ 7,063**	**$ 3,439**	**$ 4,305**	**$ 14,807**	$ 8,464	$ 3,795	$ 4,710	$ 16,969
Memo:								
Retained loans, end of period	**$ 294,979**	**$ 128,027**	**$ 324,502**	**$ 747,508**	$ 288,449	$ 127,465	$ 308,263	$ 724,177
Retained loans, average	**289,212**	**124,604**	**316,060**	**729,876**	289,294	123,518	307,340	720,152
PCI loans, end of period	**46,696**	**–**	**4**	**46,700**	53,055	–	6	53,061
Credit ratios								
Allowance for loan losses to retained loans	**2.39%**	**2.69%**	**1.14%**	**1.90%**	2.93%	2.98%	1.30%	2.25%
Allowance for loan losses to retained nonaccrual loans[d]	**110**	**NM**	**617**	**202**	113	NM	489	196
Allowance for loan losses to retained nonaccrual loans excluding credit card	**110**	**NM**	**617**	**153**	113	NM	489	150
Net charge-off rates	**0.46**	**2.75**	**–**	**0.65**	0.66	3.14	0.01	0.81
Credit ratios, excluding residential real estate PCI loans								
Allowance for loan losses to retained loans	**1.50**	**2.69**	**1.14**	**1.55**	1.83	2.98	1.30	1.80
Allowance for loan losses to retained nonaccrual loans[d]	**58**	**NM**	**617**	**155**	57	NM	489	146
Allowance for loan losses to retained nonaccrual loans excluding credit card	**58**	**NM**	**617**	**106**	57	NM	489	100
Net charge-off rates	**0.55%**	**2.75%**	**–%**	**0.70%**	0.82%	3.14%	0.01%	0.87%

Note: In the table above, the financial measures which exclude the impact of PCI loans are non-GAAP financial measures. For additional information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 77–78.

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation). During the fourth quarter of 2014, the Firm recorded a $291 million adjustment to reduce the PCI allowance and the recorded investment in the Firm's PCI loan portfolio, primarily reflecting the cumulative effect of interest forgiveness modifications. This adjustment had no impact to the Firm's Consolidated statements of income.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) The allowance for lending-related commitments is reported in other liabilities on the Consolidated balance sheets.

(d) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

Provision for credit losses

For the year ended December 31, 2014, the provision for credit losses was $3.1 billion, compared with $225 million for the year ended December 31, 2013.

The increase in consumer, excluding credit card, provision for credit losses for the year ended December 31, 2014 reflected a $904 million reduction in the allowance for loan losses, as noted above in the Allowance for Credit Losses discussion, which was lower than the $3.8 billion reduction in the prior year. The lower allowance reduction was partially offset by lower net charge-offs in 2014.

The increase in credit card provision for credit losses for the year ended December 31, 2014 reflected a $350 million reduction in the allowance for loan losses, as noted above in the Allowance for Credit Losses discussion, which was lower than the $1.7 billion reduction in the prior year. The lower allowance reduction was partially offset by lower net charge-offs in 2014.

The wholesale provision for credit losses for the year ended December 31, 2014 reflected a continued favorable credit environment as evidenced by low charge-off rates, and declining nonaccrual balances and other portfolio activity.

For further information on the provision for credit losses, see the Consolidated Results of Operations on pages 68–71.

Year ended December 31,	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
(in millions)	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Consumer, excluding credit card	**$ 414**	$ (1,872)	$ 302	**$ 5**	$ 1	$ –	**$ 419**	$ (1,871)	$ 302
Credit card	**3,079**	2,179	3,444	**–**	–	–	**3,079**	2,179	3,444
Total consumer	**3,493**	307	3,746	**5**	1	–	**3,498**	308	3,746
Wholesale	**(269)**	(119)	(359)	**(90)**	36	(2)	**(359)**	(83)	(361)
Total	**$ 3,224**	$ 188	$ 3,387	**$ (85)**	$ 37	$ (2)	**$ 3,139**	$ 225	$ 3,385

Market risk is the potential for adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.

Market risk management

Market Risk is an independent risk management function that identifies and monitors market risks throughout the Firm and defines market risk policies and procedures. The Market Risk function reports to the Firm's CRO.

Market Risk seeks to control risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk identification and classification

Each line of business is responsible for the management of the market risks within its units. The independent risk management group responsible for overseeing each line of business is charged with ensuring that all material market risks are appropriately identified, measured, monitored and managed in accordance with the risk policy framework set out by Market Risk.

Risk measurement

Tools used to measure risk

Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- VaR
- Economic-value stress testing
- Nonstatistical risk measures
- Loss advisories
- Profit and loss drawdowns
- Earnings-at-risk

Risk monitoring and control

Market risk is controlled primarily through a series of limits set in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity and accommodation of client business and management experience. The Firm maintains different levels of limits. Corporate level limits include VaR and stress limits. Similarly, line of business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns. Limits may also be set within the lines of business, as well at the portfolio or legal entity level.

Limits are set by Market Risk and are regularly reviewed and updated as appropriate, with any changes approved by lines of business management and Market Risk. Senior management, including the Firm's CEO and CRO, are responsible for reviewing and approving certain of these risk limits on an ongoing basis. All limits that have not been reviewed within specified time periods by Market Risk are escalated to senior management. The lines of business are responsible for adhering to established limits against which exposures are monitored and reported.

Limit breaches are required to be reported in a timely manner by Risk Management to limit approvers, Market Risk and senior management. In the event of a breach, Market Risk consults with Firm senior management and lines of business senior management to determine the appropriate course of action required to return to compliance, which may include a reduction in risk in order to remedy the breach. Certain Firm or line of business-level limits that have been breached for three business days or longer, or by more than 30%, are escalated to senior management and the Firmwide Risk Committee.

The following table summarizes by LOB the predominant business activities that give rise to market risk, and the market risk management tools utilized to manage those risks; CB is not presented in the table below as it does not give rise to significant market risk.

Risk identification and classification for business activities

LOB	Predominant business activities and related market risks	Positions included in Risk Management VaR	Positions included in other risk measures *(Not included in Risk Management VaR)*
CIB	• Makes markets and services clients across fixed income, foreign exchange, equities and commodities • Market risk arising from a potential decline in net income as a result of changes in market prices; e.g. rates and credit spreads	• Market risk[(a)] related to: • Trading assets/liabilities - debt and equity instruments, and derivatives, including hedges of the retained loan portfolio and CVA • Certain securities purchased under resale agreements and securities borrowed • Certain securities loaned or sold under repurchase agreements • Structured notes • Derivative CVA	• Principal investing activities • Retained loan portfolio • Deposits • DVA and FVA on derivatives and structured notes
CCB	• Originates and services mortgage loans • Complex, non-linear interest rate and basis risk • Non-linear risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing • Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates	*Mortgage Banking* • Mortgage pipeline loans, classified as derivatives • Warehouse loans, classified as trading assets - debt instruments • MSRs • Hedges of the MSRs and loans, classified as derivatives • Interest-only securities, classified as trading assets and related hedges classified as derivatives	• Retained loan portfolio • Deposits
Corporate	• Manages the Firm's liquidity, funding, structural interest rate and foreign exchange risks arising from activities undertaken by the Firm's four major reportable business segments	*Treasury and CIO* • Primarily derivative positions measured at fair value through earnings, classified as derivatives	• Private equity and other related investments • Investment securities portfolio and related hedges • Deposits • Long-term debt and related hedges
AM	• Market risk arising from the Firm's initial capital investments in products, such as mutual funds, managed by AM	• Initial seed capital investments and related hedges classified as derivatives	• Capital invested alongside third-party investors, typically in privately distributed collective vehicles managed by AM (i.e., co-Investments) • Retained loan portfolio • Deposits

(a) Market risk for derivatives is generally measured after consideration of DVA and FVA on those positions; market risk for structured notes is generally measured without consideration to such adjustments.

Value-at-risk

JPMorgan Chase utilizes VaR, a statistical risk measure, to estimate the potential loss from adverse market moves in a normal market environment. The Firm has a single overarching VaR model framework used for calculating Risk Management VaR and Regulatory VaR.

The framework is employed across the Firm using historical simulation based on data for the previous 12 months. The framework's approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. The Firm believes the use of Risk Management VaR provides a stable measure of VaR that closely aligns to the day-to-day risk management decisions made by the lines of business and provides necessary/appropriate information to respond to risk events on a daily basis.

Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. This means that, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR "band breaks," defined as losses greater than that predicted by VaR estimates, not more than five times every 100 trading days. The number of VaR band breaks observed can differ from the statistically expected number of band breaks if the current level of market volatility is materially different from the level of market volatility during the twelve months of historical data used in the VaR calculation.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual products and/or risk factors. To capture material market risks as part of the Firm's risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period; inputs are selected based on the risk profile of each portfolio as sensitivities and historical time series used to generate daily market values may be different across product types or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

Data sources used in VaR models may be the same as those used for financial statement valuations. However, in cases where market prices are not observable, or where proxies are used in VaR historical time series, the sources may differ. In addition, the daily market data used in VaR models may be different than the independent third-party data collected for VCG price testing in their monthly valuation process (see Valuation process in Note 3 for further information on the Firm's valuation process). VaR model calculations require daily data and a consistent source for valuation and therefore it is not practical to use the data collected in the VCG monthly valuation process.

VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks across businesses and monitoring limits. These VaR results are reported to senior management, the Board of Directors and regulators.

Since VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses, and it is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions. The Firm therefore considers other measures in addition to VaR, such as stress testing, to capture and manage its market risk positions.

In addition, for certain products, specific risk parameters are not captured in VaR due to the lack of inherent liquidity and availability of appropriate historical data. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented.

The Firm uses alternative methods to capture and measure those risk parameters that are not otherwise captured in VaR, including economic-value stress testing and nonstatistical measures as described further below.

The Firm's VaR model calculations are periodically evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and other factors. Such changes will also affect historical comparisons of VaR results. Model changes go through a review and approval process by the Model Review Group prior to implementation into the operating environment. For further information, see Model risk on page 139.

Separately, the Firm calculates a daily aggregated VaR in accordance with regulatory rules ("Regulatory VaR"), which is used to derive the Firm's regulatory VaR-based capital requirements under Basel III. This Regulatory VaR model framework currently assumes a ten business-day holding period and an expected tail loss methodology which approximates a 99% confidence level. Regulatory VaR is applied to "covered" positions as defined by Basel III, which may be different than the positions included in the Firm's Risk Management VaR. For example, credit derivative hedges of accrual loans are included in the Firm's Risk Management VaR, while Regulatory VaR excludes these credit derivative hedges. In addition, in contrast to the Firm's Risk Management VaR, Regulatory VaR currently excludes the diversification benefit for certain VaR models.

For additional information on Regulatory VaR and the other components of market risk regulatory capital (e.g. VaR-based measure, stressed VaR-based measure and the respective backtesting) for the Firm, see JPMorgan Chase's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (http://investor.shareholder.com/jpmorganchase/basel.cfm).

The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level.

Total VaR

As of or for the year ended December 31,	2014			2013			At December 31,	
(in millions)	Avg.	Min	Max	Avg.	Min	Max	**2014**	2013
CIB trading VaR by risk type								
Fixed income	**$ 34**	**$ 23**	**$ 45**	$ 43	$ 23	$ 62	**$ 34**	$ 36
Foreign exchange	**8**	**4**	**25**	7	5	11	**8**	9
Equities	**15**	**10**	**23**	13	9	21	**22**	14
Commodities and other	**8**	**5**	**14**	14	11	18	**6**	13
Diversification benefit to CIB trading VaR	**(30)** [a]	**NM** [b]	**NM** [b]	(34) [a]	NM [b]	NM [b]	**(32)** [a]	(36) [a]
CIB trading VaR	**35**	**24**	**49**	43	21	66	**38**	36
Credit portfolio VaR	**13**	**8**	**18**	13	10	18	**16**	11
Diversification benefit to CIB VaR	**(8)** [a]	**NM** [b]	**NM** [b]	(9) [a]	NM [b]	NM [b]	**(9)** [a]	(5) [a]
CIB VaR	**40**	**29**	**56**	47	25	74	**45**	42
Mortgage Banking VaR	**7**	**2**	**28**	12	4	24	**3**	5
Treasury and CIO VaR [c]	**4**	**3**	**6**	6	3	14	**4**	4
Asset Management VaR	**3**	**2**	**4**	4	2	5	**2**	3
Diversification benefit to other VaR	**(4)** [a]	**NM** [b]	**NM** [b]	(8) [a]	NM [b]	NM [b]	**(3)** [a]	(5) [a]
Other VaR	**10**	**5**	**27**	14	6	28	**6**	7
Diversification benefit to CIB and other VaR	**(7)** [a]	**NM** [b]	**NM** [b]	(9) [a]	NM [b]	NM [b]	**(5)** [a]	(5) [a]
Total VaR	**$ 43**	**$ 30**	**$ 70**	$ 52	$ 29	$ 87	**$ 46**	$ 44

(a) Average portfolio VaR and period-end portfolio VaR were less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects the fact that risks are not perfectly correlated.
(b) Designated as not meaningful ("NM"), because the minimum and maximum may occur on different days for distinct risk components, and hence it is not meaningful to compute a portfolio-diversification effect.
(c) The Treasury and CIO VaR includes Treasury VaR as of the third quarter of 2013.

As presented in the table above, average Total VaR and average CIB VaR decreased during 2014, compared with 2013. The decrease in Total VaR was primarily due to risk reduction in CIB and Mortgage Banking as well as lower volatility in the historical one-year look-back period during 2014 versus 2013.

Average CIB trading VaR decreased during 2014 primarily due to lower VaR in Fixed Income (driven by unwinding of risk and redemptions in the synthetic credit portfolio, and lower volatility in the historical one-year look-back period) and to reduced risk positions in commodities.

Average Mortgage Banking VaR decreased during 2014 as a result of reduced exposures due to lower loan originations.

Average Treasury and CIO VaR decreased during 2014, compared with 2013. The decrease predominantly reflected the unwind and roll-off of certain marked to market positions, and lower market volatility in the historical one-year look-back period.

The Firm's average Total VaR diversification benefit was $7 million or 16% of the sum for 2014, compared with $9 million or 17% of the sum for 2013. In general, over the course of the year, VaR exposure can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

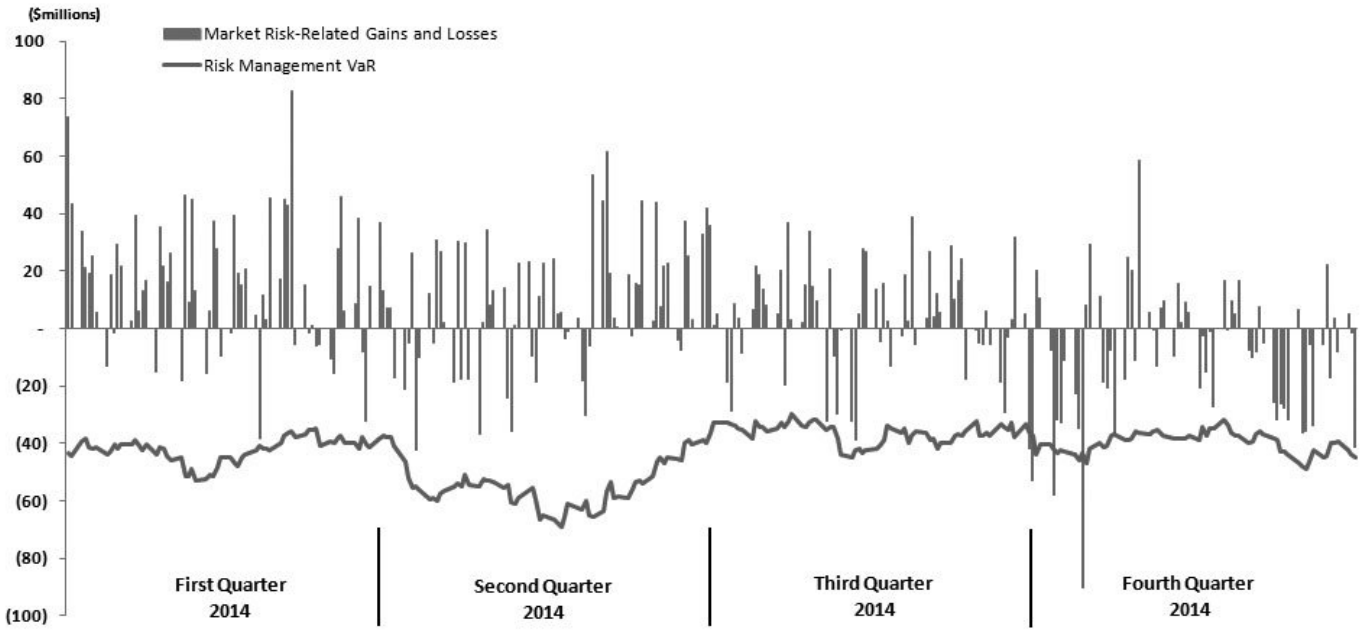
VaR back-testing

The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses recognized on market-risk related revenue.

The Firm's definition of market risk-related gains and losses is consistent with the definition used by the banking regulators under Basel III. Under this definition market risk-related gains and losses are defined as: profits and losses on the Firm's Risk Management positions, excluding fees, commissions, certain valuation adjustments (e.g., liquidity and DVA), net interest income, and gains and losses arising from intraday trading.

The following chart compares the daily market risk-related gains and losses on the Firm's Risk Management positions for the year ended December 31, 2014. As the chart presents market risk-related gains and losses related to those positions included in the Firm's Risk Management VaR, the results in the table below differ from the results of backtesting disclosed in the Market Risk section of the Firm's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are based on Regulatory VaR applied to covered positions. The chart shows that for the year ended December 31, 2014, the Firm observed five VaR band breaks and posted gains on 157 of the 260 days in this period.

Daily Market Risk-Related Gains and Losses vs. Risk Management VaR (1-day, 95% Confidence level)
Year ended December 31, 2014



Other risk measures

Economic-value stress testing

Along with VaR, stress testing is an important tool in measuring and controlling risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing is intended to capture the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates or commodity prices. The framework uses a grid-based approach, which calculates multiple magnitudes of stress for both market rallies and market sell-offs for each risk factor. Stress-test results, trends and explanations based on current market risk positions are reported to the Firm's senior management and to the lines of business to allow them to better understand the sensitivity of positions to certain defined events and to enable them to manage their risks with more transparency.

Stress scenarios are defined and reviewed by Market Risk, and significant changes are reviewed by the relevant Risk Committees. While most of the scenarios estimate losses based on significant market moves, such as an equity market collapse or credit crisis, the Firm also develops scenarios to quantify risk arising from specific portfolios or concentrations of risks, which attempt to capture certain idiosyncratic market movements. Scenarios may be redefined on an ongoing basis to reflect current market conditions. Ad hoc scenarios are run in response to specific market events or concerns. The Firm's stress testing framework is utilized in calculating results under scenarios mandated by the Federal Reserve's CCAR and ICAAP ("Internal Capital Adequacy Assessment Process") processes.

Nonstatistical risk measures

Nonstatistical risk measures include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line-of-business and by risk type, and are used for tactical control and monitoring limits.

Loss advisories and profit and loss drawdowns

Loss advisories and profit and loss drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Profit and loss drawdowns are defined as the decline in net profit and loss since the year-to-date peak revenue level.

Earnings-at-risk

The VaR and stress-test measures described above illustrate the total economic sensitivity of the Firm's Consolidated balance sheets to changes in market variables. The effect of interest rate exposure on the Firm's reported net income is also important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits and issuing debt. The Firm evaluates its structural interest rate risk exposure through earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's core net interest income (see page 78 for further discussion of core net interest income) and interest rate-sensitive fees. Earnings-at-risk excludes the impact of trading activities and MSR, as these sensitivities are captured under VaR.

The CIO, Treasury and Corporate ("CTC") Risk Committee establishes the Firm's structural interest rate risk policies and market risk limits, which are subject to approval by the Risk Policy Committee of the Firm's Board of Directors. CIO, working in partnership with the lines of business, calculates the Firm's structural interest rate risk profile and reviews it with senior management including the CTC Risk Committee and the Firm's ALCO. In addition, oversight of structural interest rate risk is managed through a dedicated risk function reporting to the CTC CRO. This risk function is responsible for providing independent oversight and governance around assumptions; and establishing and monitoring limits for structural interest rate risk.

Structural interest rate risk can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments.
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time.
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve).
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change.

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, corporate-wide basis. Business units transfer their interest rate risk to Treasury through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm manages structural interest rate risk generally through its investment securities portfolio and related derivatives.

The Firm conducts simulations of changes in structural interest rate-sensitive revenue under a variety of interest rate scenarios. Earnings-at-risk scenarios estimate the potential change in this revenue, and the corresponding impact to the Firm's pretax core net interest income, over the following 12 months, utilizing multiple assumptions as described below. These scenarios highlight exposures to changes in interest rates, pricing sensitivities on deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, as well as prepayment and reinvestment behavior. Mortgage prepayment assumptions are based on current interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience.

JPMorgan Chase's 12-month pretax core net interest income sensitivity profiles.
(Excludes the impact of trading activities and MSRs)

	Instantaneous change in rates			
(in millions)	+200 bps	+100 bps	-100 bps	-200 bps
December 31, 2014	**$ 4,667**	**$ 2,864**	**NM** [(a)]	**NM** [(a)]

(a) Downward 100- and 200-basis-points parallel shocks result in a federal funds target rate of zero and negative three- and six-month U.S. Treasury rates. The earnings-at-risk results of such a low-probability scenario are not meaningful.

The Firm's benefit to rising rates is largely a result of reinvesting at higher yields and assets re-pricing at a faster pace than deposits.

Additionally, another interest rate scenario used by the Firm — involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels — results in a 12-month pretax core net interest income benefit of $566 million. The increase in core net interest income under this scenario reflects the Firm reinvesting at the higher long-term rates, with funding costs remaining unchanged.

COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers or adversely affects markets related to a particular country. The Firm has a comprehensive country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring direct country exposures in the Firm. The Country Risk Management group is responsible for developing guidelines and policies for managing country risk in both emerging and developed countries. The Country Risk Management group actively monitors the various portfolios giving rise to country risk to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

Country risk organization

The Country Risk Management group is an independent risk management function which works in close partnership with other risk functions to identify and monitor country risk within the Firm. The Firmwide Risk Executive for Country Risk reports to the Firm's CRO.

Country Risk Management is responsible for the following functions:

- Developing guidelines and policies consistent with a comprehensive country risk framework
- Assigning sovereign ratings and assessing country risks
- Measuring and monitoring country risk exposure and stress across the Firm
- Managing country limits and reporting trends and limit breaches to senior management
- Developing surveillance tools for early identification of potential country risk concerns
- Providing country risk scenario analysis

Country risk identification and measurement

The Firm is exposed to country risk through its lending, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country. Under the Firm's internal country risk management approach, country exposure is reported based on the country where the majority of the assets of the obligor, counterparty, issuer or guarantor are located or where the majority of its revenue is derived, which may be different than the domicile (legal residence) or country of incorporation of the obligor, counterparty, issuer or guarantor. Country exposures are generally measured by considering the Firm's risk to an immediate default of the counterparty or obligor, with zero recovery. Assumptions are sometimes required in determining the measurement and allocation of country exposure, particularly in the case of certain tranched credit derivatives. Different measurement approaches or assumptions would affect the amount of reported country exposure.

Under the Firm's internal country risk measurement framework:

- Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and cash and marketable securities collateral received.
- Securities financing exposures are measured at their receivable balance, net of collateral received.
- Debt and equity securities are measured at the fair value of all positions, including both long and short positions.
- Counterparty exposure on derivative receivables is measured at the derivative's fair value, net of the fair value of the related collateral. Counterparty exposure on derivatives can change significantly because of market movements.
- Credit derivatives protection purchased and sold is reported based on the underlying reference entity and is measured at the notional amount of protection purchased or sold, net of the fair value of the recognized derivative receivable or payable. Credit derivatives protection purchased and sold in the Firm's market-making activities is measured on a net basis, as such activities often result in selling and purchasing protection related to the same underlying reference entity; this reflects the manner in which the Firm manages these exposures.

The Firm also has indirect exposures to country risk (for example, related to the collateral received on securities financing receivables or related to client clearing activities). These indirect exposures are managed in the normal course of business through the Firm's credit, market, and operational risk governance, rather than through Country Risk Management.

The Firm's internal country risk reporting differs from the reporting provided under the Federal Financial Institutions Examination Council ("FFIEC") bank regulatory requirements as there are significant differences in reporting methodology. For further information on the FFIEC's reporting methodology, see Cross-border outstandings on page 325.

Country risk stress testing

The country risk stress framework aims to identify potential losses arising from a country crisis by capturing the impact of large asset price movements in a country based on market shocks combined with counterparty specific assumptions. Country Risk Management periodically defines and runs ad hoc stress scenarios for individual countries in response to specific market events and sector performance concerns.

Country risk monitoring and control

The Country Risk Management Group establishes guidelines for sovereign ratings reviews and limit management. Country stress and nominal exposures are measured under a comprehensive country limit framework. Country ratings and limits activity are actively monitored and reported on a regular basis. Country limit requirements are reviewed and approved by senior management as often as necessary, but at least annually. In addition, the Country Risk Management group uses surveillance tools for early identification of potential country risk concerns, such as signaling models and ratings indicators.

Country risk reporting

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of December 31, 2014. The selection of countries is based solely on the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions. Country exposures may fluctuate from period-to-period due to normal client activity and market flows.

Top 20 country exposures

	December 31, 2014			
(in billions)	Lending[a]	Trading and investing[b][c]	Other[d]	Total exposure
United Kingdom	$ 25.8	$ 31.1	$ 1.4	$ 58.3
Germany	23.5	21.6	0.2	45.3
Netherlands	6.1	19.2	2.1	27.4
France	11.4	15.2	0.2	26.8
China	10.8	7.0	0.5	18.3
Japan	11.5	5.5	0.4	17.4
Australia	6.4	10.8	–	17.2
Canada	12.4	4.2	0.3	16.9
Switzerland	9.3	1.7	2.3	13.3
India	5.8	6.2	0.6	12.6
Brazil	6.3	6.3	–	12.6
Korea	5.1	5.2	0.1	10.4
Spain	3.4	3.5	–	6.9
Hong Kong	1.7	4.1	1.0	6.8
Italy	2.4	3.4	0.2	6.0
Belgium	3.1	2.6	0.1	5.8
Taiwan	2.2	3.5	–	5.7
Singapore	3.1	1.9	0.5	5.5
Mexico	2.5	3.0	–	5.5
Luxembourg	3.5	0.3	1.1	4.9

(a) Lending includes loans and accrued interest receivable, net of collateral and the allowance for loan losses, deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities.
(b) Includes market-making inventory, securities held in AFS accounts, counterparty exposure on derivative and securities financings net of collateral and hedging.
(c) Includes single-name and index and tranched credit derivatives for which one or more of the underlying reference entities is in a country listed in the above table.
(d) Includes capital invested in local entities and physical commodity inventory.

The Firm's country exposure to Russia was $4.2 billion at December 31, 2014. The Firm is closely monitoring events in the region, and assessing the impact of falling oil prices, a weakening currency, ongoing sanctions and potential countermeasures such as capital controls. The Firm is also focused on possible contagion effects, via trade, financial or political channels.

Model risk

Model risk is the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports.

The Firm uses models, for many purposes, but primarily for the measurement, monitoring and management of risk positions. Valuation models are employed by the Firm to value certain financial instruments that cannot otherwise be valued using quoted prices. These valuation models may also be employed as inputs to risk management models, including VaR and economic stress models. The Firm also makes use of models for a number of other purposes, including the calculation of regulatory capital requirements and estimating the allowance for credit losses.

Models are owned by various functions within the Firm based on the specific purposes of such models. For example, VaR models and certain regulatory capital models are owned by the line of business-aligned risk management functions. Owners of models are responsible for the development, implementation and testing of their models, as well as referral of models to the Model Risk function (within the Model Risk and Development unit) for review and approval. Once models have been approved, model owners are responsible for the maintenance of a robust operating environment and must monitor and evaluate the performance of the models on an ongoing basis. Model owners may seek to enhance models in response to changes in the portfolios and for changes in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities.

The Model Risk review and governance functions are independent of the model owners and they review and approve a wide range of models, including risk management, valuation and regulatory capital models used by the Firm. The Model Risk review and governance functions are part of the Firm's Model Risk and Development unit, and the Firmwide Model Risk and Development Executive reports to the Firm's CRO.

Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on the model. This tiering is subject to the approval of the Model Risk function. A model review conducted by the Model Risk function considers the model's suitability for the specific uses to which it will be put. The factors considered in reviewing a model include whether the model accurately reflects the characteristics of the product and its significant risks, the selection and reliability of model inputs, consistency with models for similar products, the appropriateness of any model-related adjustments, and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes. Model reviews are approved by the appropriate level of management within the Model Risk function based on the relevant tier of the model.

Under the Firm's model risk policy, new models, as well as material changes to existing models, are reviewed and approved by the Model Risk function prior to implementation in the operating environment.

In the event that the Model Risk function does not approve a model, the model owner is required to remediate the model within a time period agreed upon with the Model Risk function. The model owner is also required to resubmit the model for review to the Model Risk function and to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity. The Firm may also implement other appropriate risk measurement tools to augment the model that is subject to remediation. In certain circumstances, exceptions to the Firm's model risk policy may be granted by the head of the Model Risk function to allow a model to be used prior to review or approval.

For a summary of valuations based on models, see Critical Accounting Estimates Used by the Firm and Note 3.

PRINCIPAL RISK MANAGEMENT

Principal investments are predominantly privately-held financial assets and instruments, typically representing an ownership or junior capital position, that have unique risks due to their illiquidity or for which there is less observable market or valuation data. Such investing activities are typically intended to be held over extended investment periods and, accordingly, the Firm has no expectation for short-term gain with respect to these investments. Principal investments cover multiple asset classes and are made either in stand-alone investing businesses or as part of a broader business platform. Asset classes include tax-oriented investments including affordable housing and alternative energy investments, private equity, and mezzanine/junior debt investments.

The Firm's principal investments are managed under various lines of business and are captured within the respective LOB's financial results. The Firm's approach to managing principal risk is consistent with the Firm's general risk governance structure. A Firmwide risk policy framework exists for all principal investing activities. All investments are approved by investment committees that include executives who are independent from the investing businesses. The Firm's independent control functions are responsible for reviewing the appropriateness of the carrying value of principal investments in accordance with relevant policies. Targeted levels for total and annual investments are established in order to manage the overall size of the portfolios. Industry, geographic, and position level concentration limits are in place intended to ensure diversification of the portfolios. The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves and/or other risk events.

The Firm has taken steps to reduce its exposure to principal investments, selling portions of Corporate's One Equity Partners private equity portfolio and the CIB's Global Special Opportunities Group equity and mezzanine financing portfolio.

Operational risk is the risk of loss resulting from inadequate or failed processes or systems or due to external events that are neither market nor credit-related. Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business interruptions, inappropriate behavior of employees, failure to comply with applicable laws and regulations or failure of vendors to perform in accordance with their arrangements. These events could result in financial losses, litigation and regulatory fines, as well as other damage to the Firm. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject.

Overview

To monitor and control operational risk, the Firm maintains an overall Operational Risk Management Framework ("ORMF") which comprises governance oversight, risk assessment, capital measurement, and reporting and monitoring. The ORMF is intended to enable the Firm to function with a sound and well-controlled operational environment.

Risk Management is responsible for prescribing the ORMF to the lines of business and corporate functions and to provide independent oversight of its implementation. In 2014, Operational Risk Officers ("OROs") were appointed across each line of business and corporate function to provide this independent oversight.

The lines of business and corporate functions are responsible for implementing the ORMF. The Firmwide Oversight and Control Group, comprised of dedicated control officers within each of the lines of business and corporate functional areas, as well as a central oversight team, is responsible for day to day review and monitoring of ORMF execution.

Operational risk management framework

The components of the Operational Risk Management Framework are:

Oversight and governance

Control committees oversee the operational risks and control environment of the respective line of business, function or region. These committees escalate operational risk issues to their respective line of business, function or regional Risk committee and also escalate significant risk issues (and/or risk issues with potential Firmwide impact) to the Firmwide Control Committee ("FCC"). The FCC provides a monthly forum for reviewing and discussing Firmwide operational risk metrics and management, including existing and emerging issues, and reviews execution against the ORMF. It escalates significant issues to the Firmwide Risk Committee, as appropriate. For additional information on the Firmwide Control Committee, see Risk Governance on pages 106–109.

Risk self-assessment

In order to evaluate and monitor operational risk, the lines of business and functions utilize the Firm's standard risk and control self-assessment ("RCSA") process and supporting architecture. The RCSA process requires management to identify material inherent operational risks, assess the design and operating effectiveness of relevant controls in place to mitigate such risks, and evaluate residual risk. Action plans are developed for control issues that are identified, and businesses are held accountable for tracking and resolving issues on a timely basis. Commencing in 2015, Risk Management will perform sample independent challenge of the RCSA program.

Risk reporting and monitoring

Operational risk management and control reports provide information, including actual operational loss levels, self-assessment results and the status of issue resolution to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and functions.

The Firm has a process for capturing, tracking and monitoring operational risk events. The Firm analyzes errors and losses and identifies trends. Such analysis enables identification of the causes associated with risk events faced by the lines of business.

Capital measurement

Operational risk capital is measured primarily using a statistical model based on the Loss Distribution Approach ("LDA"). The operational risk capital model uses actual losses (internal and external to the Firm), an inventory of material forward-looking potential loss scenarios and adjustments to reflect changes in the quality of the control environment in determining Firmwide operational risk capital. This methodology is designed to comply with the Advanced Measurement rules under the Basel framework.

The Firm's capital methodology incorporates four required elements of the Advanced Measurement Approach ("AMA"):

- Internal losses,
- External losses,
- Scenario analysis, and
- Business environment and internal control factors ("BEICF").

The primary component of the operational risk capital estimate is the result of a statistical model, the LDA, which simulates the frequency and severity of future operational risk losses based on historical data. The LDA model is used to estimate an aggregate operational loss over a one-year time horizon, at a 99.9% confidence level. The LDA model incorporates actual operational losses in the quarter following the period in which those losses were realized,

and the calculation generally continues to reflect such losses even after the issues or business activities giving rise to the losses have been remediated or reduced.

The LDA is supplemented by both management's view of plausible tail risk, which is captured as part of the Scenario Analysis process, and evaluation of key LOB internal control metrics (BEICF). The Firm may further supplement such analysis to incorporate management judgment and feedback from its bank regulators. For information related to operational risk RWA, see Regulatory capital on pages 146–153.

Audit alignment
Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. This includes reviewing the operational risk framework, the effectiveness of the RCSA process, and the loss data-collection and reporting activities.

Insurance
One of the ways operational loss is mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations (e.g., workers compensation), as well as to serve other needs (e.g., property loss and public liability). Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

Cybersecurity
The Firm devotes significant resources to maintain and regularly update its systems and processes that are designed to protect the security of the Firm's computer systems, software, networks and other technology assets against attempts by unauthorized parties to obtain access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage. In 2014, the Firm spent more than $250 million, and had approximately 1,000 people focused on cybersecurity efforts, and these efforts are expected to grow significantly over the coming years.

Third parties with which the Firm does business or that facilitate the Firm's business activities (e.g., vendors, exchanges, clearing houses, central depositories, and financial intermediaries) could also be sources of cybersecurity risk to the Firm, including with respect to breakdowns or failures of their systems, misconduct by the employees of such parties, or cyberattacks which could affect their ability to deliver a product or service to the Firm or result in lost or compromised information of the Firm or its clients. In addition, customers with which or whom the Firm does business can also be sources of cybersecurity risk to the Firm, particularly when their activities and systems are beyond the Firm's own security and control systems. Customers will generally be responsible for losses incurred due to their own failure to maintain the security of their own systems and processes.

The Firm and several other U.S. financial institutions have experienced significant distributed denial-of-service attacks from technically sophisticated and well-resourced unauthorized parties which are intended to disrupt online banking services. The Firm and its clients are also regularly targeted by unauthorized parties using malicious code and viruses.

On September 10, 2014, the Firm disclosed that a cyberattack against the Firm had occurred. On October 2, 2014, the Firm updated that information and disclosed that, while user contact information (name, address, phone number and email address) and internal JPMorgan Chase information relating to such users had been compromised, there had been no evidence that account information for such affected customers -- account numbers, passwords, user IDs, dates of birth or Social Security numbers -- was compromised during the attack. The Firm continues to vigilantly monitor the situation. In addition, as of the October 2, 2014 announcement, as well as of the date of this Annual Report, the Firm has not seen any unusual customer fraud related to this incident. The Firm is cooperating with government agencies in connection with their investigation of the incident. The Firm also notified its customers that they were not liable for unauthorized transactions in their accounts attributable to this attack that they promptly alerted the Firm about.

The Firm has established, and continues to establish, defenses on an ongoing basis to mitigate this and other possible future attacks. The cyberattacks experienced to date have not resulted in any material disruption to the Firm's operations or had a material adverse effect on the Firm's results of operations. The Board of Directors and the Audit Committee are regularly apprised regarding the cybersecurity policies and practices of the Firm as well as the Firm's efforts regarding this attack and other significant cybersecurity events.

Cybersecurity attacks, like the one experienced by the Firm, highlight the need for continued and increased cooperation among businesses and the government, and the Firm continues to work with the appropriate government and law enforcement agencies and other businesses, including the Firm's third-party service providers, to continue to enhance defenses and improve resiliency to cybersecurity threats.

Business and Technology Resiliency
JPMorgan Chase's global resiliency and crisis management program is intended to ensure that the Firm has the ability to recover its critical business functions and supporting assets (i.e., staff, technology and facilities) in the event of a business interruption, and to remain in compliance with global laws and regulations as they relate to resiliency risk. The program includes corporate governance, awareness and training, as well as strategic and tactical initiatives aimed to ensure that risks are properly identified, assessed, and managed.

The Firm has established comprehensive tracking and reporting of resiliency plans in order to proactively anticipate and manage various potential disruptive circumstances such as severe weather, technology and communications outages, flooding, mass transit shutdowns and terrorist threats, among others. The resiliency measures utilized by the Firm include backup infrastructure for data centers, a geographically distributed workforce, dedicated recovery facilities, providing technological capabilities to support remote work capacity for displaced staff and accommodation of employees at alternate locations. JPMorgan Chase continues to coordinate its global resiliency program across the Firm and mitigate business continuity risks by reviewing and testing recovery procedures. The strength and proficiency of the Firm's global resiliency program has played an integral role in maintaining the Firm's business operations during and quickly after various events in 2014 that have resulted in business interruptions, such as severe winter weather in the U.S., tropical storms in the Philippines, and geopolitical events in Brazil and Hong Kong.

LEGAL RISK MANAGEMENT

Legal risk is the risk of loss or imposition of damages, fines, penalties or other liability arising from failure to comply with a contractual obligation or to comply with laws or regulations to which the Firm is subject.

Overview
In addition to providing legal services and advice to the Firm, and communicating and helping the lines business adjust to the legal and regulatory changes they face, including the heightened scrutiny and expectations of the Firm's regulators, the global Legal function is responsible for working with the businesses and corporate functions to fully understand and assess their adherence to laws and regulations, as well as potential exposures on key litigation and transactional matters. In particular, Legal assists Oversight & Control, Risk, Finance, Compliance and Internal Audit in their efforts to ensure compliance with all applicable laws and regulations and the Firm's corporate standards for doing business. The Firm's lawyers also advise the Firm on potential legal exposures on key litigation and transactional matters, and perform a significant defense and advocacy role by defending the Firm against claims and potential claims and, when needed, pursuing claims against others.

Governance and Oversight
The Firm's General Counsel reports to the CEO and is a member of the Operating Committee, the Firmwide Risk Committee and the Firmwide Control Committee. The General Counsel's leadership team includes a General Counsel for each line of business, the heads of the Litigation and Corporate & Regulatory practices, as well as the Firm's Corporate Secretary. Each region (e.g., Latin America, Asia Pacific) has a General Counsel who is responsible for managing legal risk across all lines of business and functions in the region.

Legal works with various committees (including new business initiative and reputation risk committees) and the Firm's businesses to protect the Firm's reputation beyond any particular legal requirements. In addition, the Firm's Conflicts Office examines the Firm's wholesale transactions that may have the potential to create conflicts of interest for the Firm.

COMPLIANCE RISK MANAGEMENT

Compliance risk is the risk fines or sanctions or of financial damage or loss due to the failure to comply with laws, rules, and regulations.

Overview
Global Compliance Risk Management's ("Compliance") role is to identify, measure, monitor, and report on and provide oversight regarding compliance risks arising from business operations, and provide guidance on how the Firm can mitigate these risks.

While each line of business is accountable for managing its compliance risk, the Firm's Compliance teams work closely with the Operating Committee and senior management to provide independent review and oversight of the lines of business operations, with a focus on compliance with applicable global, regional and local laws and regulations. In recent years, the Firm has experienced heightened scrutiny by its regulators of its compliance with regulations, and with respect to its controls and operational processes. The Firm expects such regulatory scrutiny will continue.

Governance and Oversight
Compliance operates independent of the lines of business, and is led by the Chief Compliance Officer ("CCO") who reports directly to the Firm's COO. The Firm maintains oversight and coordination in its Compliance Risk Management practices globally through ongoing dialog and reporting between the lines of business, Regional Chief Compliance Officers and the CCO regarding significant compliance and regulatory management matters, as well as implementation of the Compliance program across the lines of business and Regions.

The Firm has in place a Code of Conduct (the "Code"), and each employee is given annual training in respect of the Code and is required annually to affirm his or her compliance with the Code. The Code sets forth the Firm's core principles and fundamental values, including that no employee should ever sacrifice integrity - or give the impression that he or she has - even if one thinks it would help the Firm's business. The Code requires prompt reporting of any known or suspected violation of the Code, any internal Firm policy, or any law or regulation applicable to the Firm's business. It also requires the reporting of any illegal conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's customers, suppliers, contract workers, business partners, or agents. Specified employees are specially trained and designated as "code specialists" who act as a resource to employees on Code of Conduct matters. In addition, concerns may be reported anonymously and the Firm prohibits retaliation against employees for the good faith reporting of any actual or suspected violations of the Code.

FIDUCIARY RISK MANAGEMENT

Fiduciary risk is the risk of a failure to exercise the applicable high standard of care, to act in the best interests of clients or to treat clients fairly, as required under applicable law or regulation.

Depending on the fiduciary activity and capacity in which the Firm is acting, federal and state statutes and regulations, and common law require the Firm to adhere to specific duties in which the Firm must always place the client's interests above its own.

Fiduciary risk governance
Fiduciary Risk Management is the responsibility of the relevant LOB risk and/or other governance committees. Senior business, legal, risk and compliance managers, who have particular responsibility for fiduciary matters, work with the relevant LOB risk committees with the goal of ensuring that businesses providing investment, trusts and estates, or other fiduciary products or services that give rise to fiduciary duties to clients perform at the appropriate standard relative to their fiduciary relationship with a client. Each LOB and its respective risk and/or other governance committees are responsible for the oversight and management of the fiduciary risks in their businesses. Of particular focus are the policies and practices that address a business's responsibilities to a client, including performance and service requirements and expectations; client suitability determinations; and disclosure obligations and communications. In this way, the relevant LOB risk and/or other governance committees provide oversight of the Firm's efforts to monitor, measure and control the performance and delivery of the products or services to clients that may give rise to such fiduciary duties, as well as the Firm's fiduciary responsibilities with respect to the Firm's employee benefit plans.

The Firmwide Fiduciary Risk Committee ("FFRC") is a forum for risk matters related to the Firm's fiduciary activities and oversees the firmwide fiduciary risk governance framework. It supports the consistent identification and escalation of fiduciary risk matters by the relevant lines of business or corporate functions responsible for managing fiduciary activities. The committee escalates significant issues to the Firmwide Risk Committee and any other committee considered appropriate.

REPUTATION RISK MANAGEMENT

Reputation risk is the risk that an action, transaction, investment or event will reduce the trust that clients, shareholders, employees or the broader public has in the Firm's integrity or competence. Maintaining the Firm's reputation is the responsibility of each individual employee of the Firm. The Firm's Reputation Risk policy explicitly vests each employee with the responsibility to consider the reputation of the Firm when engaging in any activity. Since the types of events that could harm the Firm's reputation are so varied across the Firm's lines of business, each line of business has a separate reputation risk governance infrastructure in place, which comprises three key elements: clear, documented escalation criteria appropriate to the business footprint; a designated primary discussion forum – in most cases, one or more dedicated reputation risk committees; and a list of designated contacts. Line of business reputation risk governance is overseen by a Firmwide Reputation Risk Governance function, which provides oversight of the governance infrastructure and process to support the consistent identification, escalation, management and reporting of reputation risk issues firmwide.

CAPITAL MANAGEMENT

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables the Firm to build and invest in market-leading businesses, even in a highly stressed environment. Prior to making any decisions on future business activities, senior management considers the implications on the Firm's capital. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to preserving the Firm's capital strength. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative by the Firm's Board of Directors, CEO and Operating Committee. The Firm's balance sheet philosophy focuses on risk-adjusted returns, strong capital and reserves, and robust liquidity.

The Firm's capital management objectives are to hold capital sufficient to:

- Cover all material risks underlying the Firm's business activities;
- Maintain "well-capitalized" status under regulatory requirements;
- Maintain debt ratings that enable the Firm to optimize its funding mix and liquidity sources while minimizing costs;
- Retain flexibility to take advantage of future investment opportunities;
- Maintain sufficient capital in order to continue to build and invest in its businesses through the cycle and in stressed environments; and
- Distribute excess capital to shareholders while balancing other stated objectives.

These objectives are achieved through ongoing monitoring of the Firm's capital position, regular stress testing, and a capital governance framework. Capital management is intended to be flexible in order to react to a range of potential events. JPMorgan Chase has firmwide and LOB processes for ongoing monitoring and active management of its capital position.

Capital strategy and governance

The Firm's CEO, in conjunction with the Board and its subcommittees, establish principles and guidelines for capital planning, capital issuance, usage and distributions, and establish capital targets for the level and composition of capital in both business-as-usual and highly stressed environments.

The Firm's senior management recognizes the importance of a capital management function that supports strategic decision-making. The Firm has established the Capital Governance Committee and the Regulatory Capital Management Office ("RCMO") as key components in support of this objective. The Capital Governance Committee is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution alternatives. The Committee is also responsible for governing the capital adequacy assessment process, including overall design, assumptions and risk streams, and ensuring that capital stress test programs are designed to adequately capture the idiosyncratic risks across the Firm's businesses. RCMO, which reports to the Firm's CFO, is responsible for reviewing, approving and monitoring the implementation of the Firm's capital policies and strategies, as well as its capital adequacy assessment process. The DRPC assesses the Firm's capital adequacy process and its components. This review determines the effectiveness of the capital adequacy process, the appropriateness of the risk tolerance levels, and the strength of the control infrastructure. For additional discussion on the DRPC, see Enterprise-wide Risk Management on pages 105–109.

Capital disciplines

In its capital management, the Firm uses three primary disciplines, which are further described below:

- *Regulatory capital*
- *Economic capital*
- *Line of business equity*

Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

The U.S. capital requirements follow the Capital Accord of the Basel Committee, as amended from time to time. Prior to January 1, 2014, the Firm and its banking subsidiaries were subject to the capital requirements of Basel I and Basel 2.5. Effective January 1, 2014, the Firm became subject to Basel III (which incorporates Basel 2.5).

Basel III overview

Basel III, for U.S. bank holding companies and banks, revises, among other things, the definition of capital and introduces a new common equity Tier 1 capital ("CET1 capital") requirement; presents two comprehensive methodologies for calculating risk-weighted assets ("RWA"), a general (Standardized) approach, which replaces Basel I RWA ("Basel III Standardized") and an advanced approach, which replaces Basel II RWA ("Basel III Advanced"); and sets out minimum capital ratios and overall capital adequacy standards. Certain of the requirements of Basel III are subject to phase-in periods that began January 1, 2014 and continue through the end of 2018 ("Transitional period") as described below. Both Basel III Standardized and Basel III Advanced became effective commencing January 1, 2014 for large and internationally active U.S. bank holding companies and banks, including the Firm and its insured depository institution ("IDI") subsidiaries.

Prior to the implementation of Basel III Advanced, the Firm was required to complete a qualification period ("parallel run") during which it needed to demonstrate that it met the requirements of the rule to the satisfaction of its U.S. banking regulators. On February 21, 2014, the Federal Reserve and the OCC informed the Firm and its national bank subsidiaries that they had satisfactorily completed the parallel run requirements and were approved to calculate capital under Basel III Advanced, in addition to Basel III Standardized, as of April 1, 2014. In conjunction with its exit from the parallel run, the capital adequacy of the Firm and its national bank subsidiaries is evaluated against the Basel III approach (Standardized or Advanced) which results, for each quarter beginning with the second quarter of 2014, in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.

Definition of capital

Basel III revises Basel I and II by narrowing the definition of capital and increasing the capital requirements for specific exposures. Under Basel III, CET1 capital predominantly includes common stockholders' equity (including capital for AOCI related to debt and equity securities classified as AFS as well as for defined benefit pension and other post-retirement employee benefit ("OPEB") plans), less certain deductions for goodwill, MSRs and deferred tax assets that arise from net operating loss ("NOL") and tax credit carryforwards. Tier 1 capital is predominantly comprised of CET1 capital as well as perpetual preferred stock. Tier 2 capital includes long-term debt qualifying as Tier 2 and qualifying allowance for credit losses. Total capital is Tier 1 capital plus Tier 2 capital. The revisions to CET1 capital, Tier 1 capital and Tier 2 capital are subject to phase-in periods that began January 1, 2014, and continue through the end of 2018, and during that period, CET1 capital, Tier 1 capital and Tier 2 capital represent Basel III Transitional capital.

Risk-weighted assets

Basel III establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced, both of which incorporate the requirements set forth in Basel 2.5. In addition to the RWA calculated under these methodologies, the Firm may supplement such amounts to incorporate management judgment and feedback from its bank regulators.

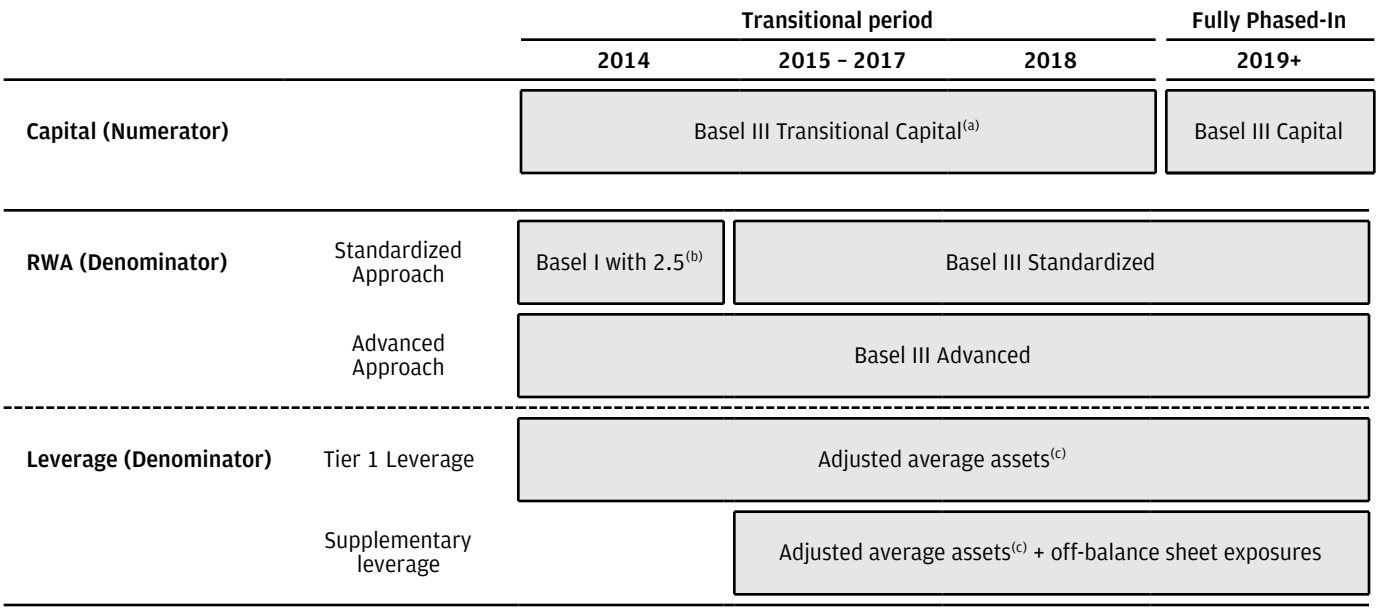
Supplementary leverage ratio ("SLR")

Basel III also includes a requirement for Advanced Approach banking organizations, including the Firm, to calculate a SLR. The SLR, a non-GAAP financial measure, is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. Total leverage exposure is calculated by taking the Firm's total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-balance sheet exposures, such as undrawn commitments and derivatives potential future exposure.

On September 3, 2014, the U.S. banking regulators adopted a final rule for the calculation of the SLR. The U.S. final rule requires public disclosure of the SLR beginning with the first quarter of 2015, and also requires U.S. bank holding companies, including the Firm, to have a minimum SLR of at least 5% and IDI subsidiaries, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., to have a minimum SLR of at least 6%, both beginning January 1, 2018.

Capital ratios

The basis to calculate the Firm's capital ratios (both risk-based and leverage) under Basel III during the transitional period and when fully phased-in are shown in the table below.



(a) Trust preferred securities ("TruPS") are being phased out from inclusion in Basel III capital commencing January 1, 2014, continuing through the end of 2021.
(b) Defined as Basel III Standardized Transitional for 2014. Beginning January 1, 2015, Basel III Standardized RWA is calculated under the Basel III definition of the Standardized Approach.
(c) Adjusted average assets, for purposes of calculating the leverage ratio and SLR, includes total quarterly average assets adjusted for unrealized gains/(losses) on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries, and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.

Risk-based capital regulatory minimums

The Basel III rules include minimum capital ratio requirements that are also subject to phase-in periods through January 1, 2019.

In addition to the regulatory minimum capital requirements, certain banking organizations, including the Firm, will be required to hold an additional 2.5% of CET1 capital to serve as a "capital conservation buffer." The capital conservation buffer is intended to be used to absorb potential losses in times of financial or economic stress; if not maintained, the Firm could be limited in the amount of capital that may be distributed, including dividends and common equity repurchases. The capital conservation buffer will be phased-in beginning January 1, 2016.

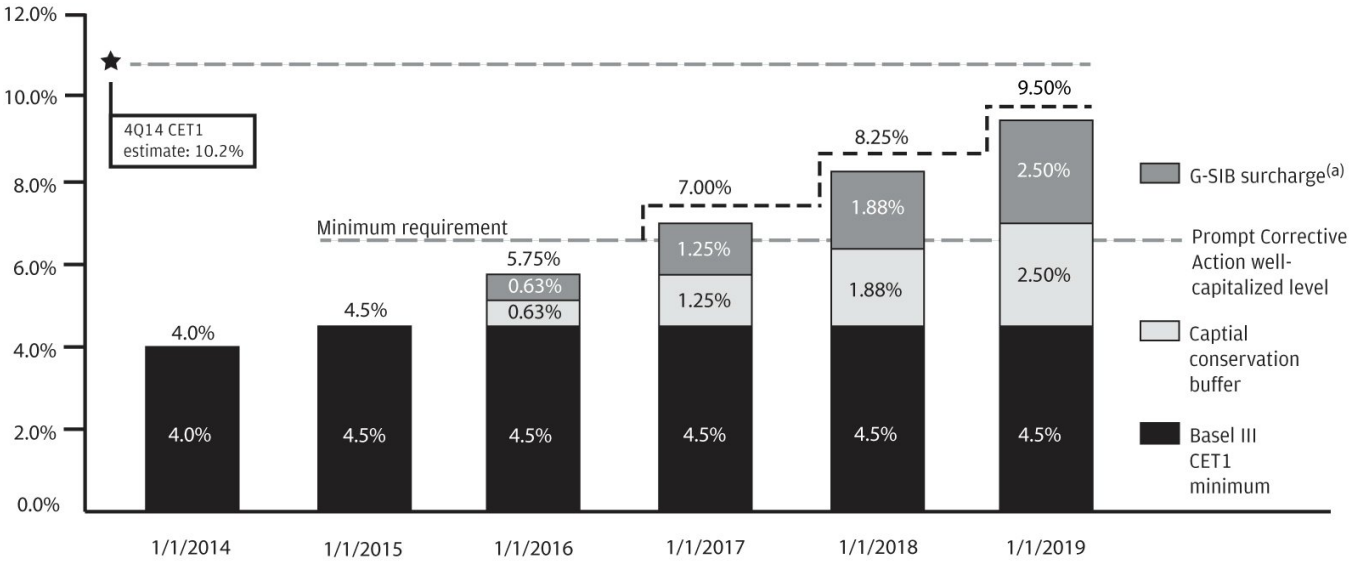
Moreover, G-SIBs will be required to maintain, in addition to the capital conservation buffer, further amounts of capital ranging from 1% to 2.5% across all tiers of regulatory capital. In November 2014, based upon data as of December 31, 2013, the Financial Stability Board ("FSB") indicated that certain G-SIBs, including the Firm, would be required to hold the additional 2.5% of capital; the requirement will be phased-in beginning January 1, 2016.

The Basel Committee has stated that G-SIBs could in the future be required to hold 3.5% or more of additional capital if their relative systemic importance were to increase. Currently, no G-SIB is required to hold more than the additional 2.5% of capital.

Consequently, based upon the final rules currently in effect, the minimum Basel III CET1 capital ratio requirement for the Firm is expected to be 9.5%, comprised of the minimum ratio of 4.5% plus the 2.5% capital conservation buffer and the 2.5% G-SIB requirement both beginning January 1, 2019.

Basel III also establishes a minimum 6.5% CET1 standard for the definition of "well capitalized" under the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA"). The CET1 standard is effective beginning with the first quarter of 2015.

The following chart presents the Basel III minimum CET1 capital ratio during the transitional periods and on a fully phased-in basis under the Basel III rules currently in effect. It is the Firm's current expectation that its Basel III CET1 ratio will exceed the regulatory minimums, both during the transition period and upon full implementation in 2019 and thereafter.



(a) G-SIB surcharge presented does not reflect the December 9, 2014, U.S. NPR.

On December 9, 2014, the Federal Reserve issued a Notice of Proposed Rulemaking ("NPR") that would establish a new capital surcharge across all tiers of regulatory capital for G-SIBs in the U.S., including the Firm. The Firm estimates its fully phased-in G-SIB surcharge (based upon data as of December 31, 2013) would be 4.5% under the NPR, compared to a fully phased-in G-SIB surcharge of 2.5% as estimated under the Basel III rules currently in effect.

Basel III Advanced Fully Phased-In

Based on the U.S. capital rules currently in effect, Basel III capital rules will become fully phased-in on January 1, 2019, at which point the Firm will continue to calculate its capital ratios under both the Basel III Standardized and Advanced Approaches, and the Firm will continue to have its capital adequacy evaluated against the approach that results in the lower ratio. While the Firm has recently imposed Basel III Standardized Fully Phased-In RWA limits on the lines of business in adapting its capital framework, the Firm currently expects to manage each of the businesses (including line of business equity allocations), as well as the corporate functions, primarily on a Basel III Advanced Fully Phased-In basis.

The Firm's capital, RWA and capital ratios that are presented under Basel III Advanced Fully Phased-In (and CET1 under Basel I as of December 31, 2013), are non-GAAP financial measures. However, such measures are used by bank regulators, investors and analysts to assess the Firm's capital position and to compare the Firm's capital to that of other financial services companies.

The Firm's estimates of its Basel III Advanced Fully Phased-In capital, RWA and capital ratios and of the Firm's, JPMorgan Chase Bank, N.A.'s, and Chase Bank USA, N.A.'s SLRs reflect management's current understanding of the U.S. Basel III rules based on the current published rules and on the application of such rules to the Firm's businesses as currently conducted. The actual impact on the Firm's capital ratios and SLR as of the effective date of the rules may differ from the Firm's current estimates depending on changes the Firm may make to its businesses in the future, further implementation guidance from the regulators, and regulatory approval of certain of the Firm's internal risk models (or, alternatively, regulatory disapproval of the Firm's internal risk models that have previously been conditionally approved).

The following table presents the estimated Basel III Advanced Fully Phased-In Capital ratios for JPMorgan Chase at December 31, 2014. Also included in the table are the regulatory minimum ratios currently expected to be in effect beginning January 1, 2019.

	Basel III Advanced Fully Phased-In		
	December 31, 2014	Fully phased-in minimum capital ratios[a]	Fully phased-in well-capitalized ratios[b]
Risk-based capital ratios:			
CET1 capital	**10.2%**	9.5%	6.5%
Tier 1 capital	**11.4**	11.0	8.0
Total capital	**12.8**	13.0	10.0
Leverage ratio:			
Tier 1	**7.5**	4.0	5.0
SLR	**5.6**	3.0	5.0

(a) Represents the minimum capital ratios applicable to the Firm under fully phased-in Basel III rules currently in effect.
(b) Represents the minimum Basel III Fully Phased-In capital ratios applicable to the Firm under the PCA requirements of FDICIA.

A reconciliation of total stockholders' equity to Basel III Advanced Fully Phased-In CET1 capital, Tier 1 capital and Total qualifying capital is presented in the table below.

Risk-based capital components and assets

	Basel III Advanced Fully Phased-In
(in millions)	December 31, 2014
Total stockholders' equity	**$ 232,065**
Less: Preferred stock	**20,063**
Common stockholders' equity	**212,002**
Less:	
Goodwill[(a)]	**44,925**
Other intangible assets[(a)]	**1,062**
Other CET1 capital adjustments	**1,163**
CET1 capital	**164,852**
Preferred stock	**20,063**
Less:	
Other Tier 1 adjustments	**5**
Total Tier 1 capital	**184,910**
Long-term debt and other instruments qualifying as Tier 2 capital	**17,504**
Qualifying allowance for credit losses	**4,266**
Other	**(86)**
Total Tier 2 capital	**21,684**
Total capital	**$ 206,594**
Credit risk RWA	**$ 1,040,087**
Market risk RWA	**179,200**
Operational risk RWA	**400,000**
Total RWA	**$ 1,619,287**
SLR leverage exposure	**$ 3,320,404**

(a) Goodwill and other intangible assets are net of any associated deferred tax liabilities.

Capital rollforward

The following table presents the changes in CET1 capital, Tier 1 capital and Tier 2 capital for the year ended December 31, 2014. Under Basel I CET1 represents Tier 1 common capital.

Year ended December 31, (in millions)	2014
Basel I CET1 capital at December 31, 2013	**$ 148,887**
Effect of rule changes[(a)]	**2,315**
Basel III Advanced Fully Phased-In CET1 capital at December 31, 2013	**151,202**
Net income applicable to common equity	**20,637**
Dividends declared on common stock	**(6,078)**
Net purchases of treasury stock	**(3,009)**
Changes in additional paid-in capital	**(558)**
Changes related to AOCI	**1,327**
Adjustment related to FVA/DVA	**580**
Other	**751**
Increase in CET1 capital	**13,650**
Basel III Advanced Fully Phased-In CET1 capital at December 31, 2014	**$ 164,852**
Basel I Tier 1 capital at December 31, 2013	**$ 165,663**
Effect of rule changes[(b)]	**(3,295)**
Basel III Advanced Fully Phased-In Tier 1 capital at December 31, 2013	**162,368**
Change in CET1 capital	**13,650**
Net issuance of noncumulative perpetual preferred stock	**8,905**
Other	**(13)**
Increase in Tier 1 capital	**22,542**
Basel III Advanced Fully Phased-In Tier 1 capital at December 31, 2014	**$ 184,910**
Basel I Tier 2 capital at December 31, 2013	**$ 33,623**
Effect of rule changes[(c)]	**(11,644)**
Basel III Advanced Fully Phased-In Tier 2 capital at December 31, 2013	**21,979**
Change in long-term debt and other instruments qualifying as Tier 2	**809**
Change in allowance for credit losses	**(1,063)**
Other	**(41)**
Decrease in Tier 2 capital	**(295)**
Basel III Advanced Fully Phased-In Tier 2 capital at December 31, 2014	**$ 21,684**
Basel III Advanced Fully Phased-In Total capital at December 31, 2014	**$ 206,594**

(a) Predominantly represents: (1) the addition of certain exposures, which were deducted from capital under Basel I, that are risk-weighted under Basel III; (2) adjustments related to AOCI for AFS securities and defined benefit pension and OPEB plans; and (3) a deduction for deferred tax assets related to NOL carryforwards.

(b) Predominantly represents the exclusion of TruPS from Tier 1 capital under Basel III.

(c) Predominantly represents a change in the calculation of qualifying allowance for credit losses under Basel III.

RWA rollforward

The following table presents changes in the components of RWA under Basel III Advanced Fully Phased-In for the year ended December 31, 2014. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

	Year ended December 31, (in millions)			
(in billions)	Credit risk RWA	Market risk RWA	Operational risk RWA	Total RWA
Basel I RWA at December 31, 2013	$1,223	$ 165	NA	$1,388
Effect of rule changes[a]	(168)	(4)	375	203
Basel III Advanced Fully Phased-In RWA at December 31, 2013	1,055	161	375	1,591
Model & data changes[b]	56	36	25	117
Portfolio runoff[c]	(22)	(22)	–	(44)
Movement in portfolio levels[d]	(49)	4	–	(45)
Changes in RWA	(15)	18	25	28
Basel III Advanced Fully Phased-In RWA at December 31, 2014	**$1,040**	**$ 179**	**$ 400**	**$1,619**

(a) Effect of rule changes refers to movements in levels of RWA as a result of changing to calculating RWA under the Basel III Advanced Fully Phased-In rules. See Risk-weighted assets on page 147 for additional information on the calculation of RWA under Basel III.

(b) Model & data changes refer to movements in levels of RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).

(c) Portfolio runoff for credit risk RWA reflects lower loan balances in Mortgage Banking and reduced risk from position rolloffs in legacy portfolios, and for market risk RWA reflects reduced risk from position rolloffs in legacy portfolios.

(d) Movement in portfolio levels for credit risk RWA refers to changes in book size, composition, credit quality, and market movements; and for market risk RWA, refers to changes in position and market movements.

Basel III Transitional

Basel III Transitional capital requirements became effective on January 1, 2014, and will become fully phased-in on January 1, 2019. The following table presents a reconciliation of the Firm's Basel III Advanced Transitional capital and RWA to the Firm's estimated Basel III Advanced Fully Phased-In capital and RWA as of December 31, 2014.

December 31, 2014 (in millions)		
Basel III Advanced Transitional CET1 capital	**$**	**164,764**
AOCI phase-in[a]		**2,249**
CET1 capital deduction phased-in[b]		**(1,212)**
Intangibles deduction phase-in[c]		**(850)**
Other adjustments to CET1 capital[d]		**(99)**
Basel III Advanced Fully Phased-In CET1 capital	**$**	**164,852**
Basel III Advanced Transitional Additional Tier 1 capital	**$**	**21,868**
Non-qualifying instruments phase-out		**(2,670)**
Tier 1 capital deduction phased-out[b]		**1,212**
Other adjustments to Tier 1 capital[d]		**(352)**
Basel III Advanced Fully Phased-In Additional Tier 1 capital	**$**	**20,058**
Basel III Advanced Fully Phased-In Tier 1 capital	**$**	**184,910**
Basel III Advanced Transitional Tier 2 capital	**$**	**24,390**
Non-qualifying instruments phase-out		**(2,670)**
Other adjustments to Tier 2 capital[e]		**(36)**
Basel III Advanced Fully Phased-In Tier 2 capital	**$**	**21,684**
Basel III Advanced Fully Phased-In Total capital	**$**	**206,594**
Basel III Advanced Transitional RWA	**$**	**1,608,240**
Adjustment related to change in risk-weighting[f]		**11,047**
Basel III Advanced Fully Phased-In RWA	**$**	**1,619,287**

(a) Includes the remaining balance of AOCI related to AFS debt securities and defined benefit pension and OPEB plans that will qualify as Basel III CET1 capital upon full phase-in.

(b) Predominantly includes regulatory adjustments related to changes in FVA/DVA, as well as CET1 deductions for defined benefit pension plan assets and DTA related to net operating loss carryforwards.

(c) Relates to intangible assets, other than goodwill and MSRs, that are required to be deducted from CET1 capital upon full phase-in.

(d) Includes minority interest and the Firm's investments in its own CET1 capital instruments.

(e) Includes the Firm's investments in its own Tier 2 capital instruments and unrealized gains on AFS equity securities.

(f) Primarily relates to the risk-weighting of items not subject to capital deduction thresholds including MSRs.

The following table presents the regulatory capital ratios as of December 31 2014, under Basel III Standardized Transitional and Basel III Advanced Transitional. Also included in the table are the regulatory minimum ratios in effect as of December 31, 2014.

	December 31, 2014				
	Basel III Standardized Transitional	Basel III Advanced Transitional	Minimum capital ratios[b]	Well-capitalized ratios[c]	
Risk-based capital ratios[a]:					
CET1 capital	**11.2%**	**10.2%**	4.0%	NA	[d]
Tier 1 capital	**12.7**	**11.6**	5.5	6.0%	
Total capital	**15.0**	**13.1**	8.0	10.0	
Leverage ratio:					
Tier 1 leverage	**7.6**	**7.6**	4.0	5.0	

(a) For each of the risk-based capital ratios the lower of the Standardized Transitional or Advanced Transitional ratio represents the Collins Floor.
(b) Represents the minimum capital ratios for 2014 currently applicable to the Firm under Basel III.
(c) Represents the minimum capital ratios for 2014 currently applicable to the Firm under the PCA requirements of the FDICIA.
(d) The CET1 capital ratio became a relevant measure of capital under the prompt corrective action requirements on January 1, 2015.

At December 31, 2014, JPMorgan Chase maintained Basel III Standardized Transitional and Basel III Advanced Transitional capital ratios in excess of the well-capitalized standards established by the Federal Reserve.

Additional information regarding the Firm's capital ratios and the U.S. federal regulatory capital standards to which the Firm is subject is presented in Note 28. For further information on the Firm's Basel III measures, see the Firm's consolidated Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (http://investor.shareholder.com/jpmorganchase/basel.cfm).

Supplementary leverage ratio

The Firm estimates that if the U.S. SLR final rule were in effect at December 31, 2014, the Firm's SLR would have been approximately 5.6% and JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s SLRs would have been approximately 5.9% and 8.1%, respectively, at that date.

Comprehensive Capital Analysis and Review ("CCAR")

The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. The Federal Reserve uses the CCAR and Dodd-Frank Act stress test processes to ensure that large bank holding companies have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each BHC's unique risks to enable them to have the ability to absorb losses under certain stress scenarios. Through the CCAR, the Federal Reserve evaluates each BHC's capital adequacy and internal capital adequacy assessment processes, as well as its plans to make capital distributions, such as dividend payments or stock repurchases.

On March 26, 2014, the Federal Reserve informed the Firm that it did not object, on either a quantitative or qualitative basis, to the Firm's 2014 capital plan. For information on actions taken by the Firm's Board of Directors following the 2014 CCAR results, see Capital actions on page 154.

On January 5, 2015, the Firm submitted its 2015 capital plan to the Federal Reserve under the Federal Reserve's 2015 CCAR process. The Firm expects to receive the Federal Reserve's final response to its plan no later than March 31, 2015.

The Firm's CCAR process is integrated into and employs the same methodologies utilized in the Firm's Internal Capital Adequacy Assessment Process ("ICAAP") process, as discussed below.

Internal Capital Adequacy Assessment Process

Semiannually, the Firm completes the ICAAP, which provides management with a view of the impact of severe and unexpected events on earnings, balance sheet positions, reserves and capital. The Firm's ICAAP integrates stress testing protocols with capital planning.

The process assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. However, when defining a broad range of scenarios, realized events can always be worse. Accordingly, management considers additional stresses outside these scenarios, as necessary. ICAAP results are reviewed by management and the Board of Directors.

Minimum Total Loss Absorbing Capacity ("TLAC")

In November 2014, the FSB, in consultation with the Basel Committee on Banking Supervision, issued a consultative document proposing that, in order for G-SIBs to have sufficient loss absorbing and recapitalization capacity to support an orderly resolution, they would be required to have outstanding a sufficient amount and type of debt and capital instruments. This amount and type of debt and capital instruments (or "total loss absorbing capacity" or TLAC) is intended to effectively absorb losses, as necessary, upon a failure of a G-SIB, without imposing such losses on taxpayers of the relevant jurisdiction or causing severe systemic disruptions, and thereby ensuring the continuity of the G-SIBs critical functions. The document identifies specific criteria that must be met for instruments to be considered eligible under TLAC and sets out minimum requirements that include existing Basel III minimum capital requirements, excluding capital buffers. The FSB's proposed range for a common minimum TLAC requirement is 16-20% of the financial institution's RWA and at least twice its Basel III Tier 1 leverage ratio. The Firm estimated that it has approximately 15% minimum TLAC as a percentage of

Basel III Advanced Fully Phased-in RWA, excluding capital buffers currently in effect, at year end 2014 based on its understanding of how the FSB proposal may be implemented in the United States. The FSB is expected to revise its proposal following a period of public consultation and findings from a quantitative impact study and market survey to be conducted in the first quarter of 2015. The final proposal is expected to be submitted to the G-20 in advance of the G-20 Summit scheduled for fourth quarter of 2015. U.S. banking regulators are expected to issue an NPR that would outline TLAC requirements specific to U.S. banks.

Regulatory capital outlook

The Firm expects to continue to accrete capital in the near term and believes its current capital levels enable it to retain market access, continue its strategy to invest in and grow its businesses and maintain flexibility to distribute excess capital. The Firm intends to balance return of capital to shareholders with achieving higher capital ratios over time. Additionally, the Firm expects the capital ratio calculated under the Basel III Standardized Fully Phased-In Approach to become its binding constraint by the end of 2015, or slightly thereafter. As a result, the Firm expects to reach Basel III Advanced and Standardized Fully Phased-In CET1 ratios of approximately 11% by the end of 2015 and is targeting reaching a Basel III CET1 ratio of approximately 12% by the end of 2018.

The Firm's capital targets take into consideration the current U.S. Basel III requirements and contemplate the requirements under the U.S. G-SIB proposal issued on December 9, 2014 and therefore, assume a 4.5% G-SIB capital surcharge. These targets are subject to revision in the future as a result of changes that may be introduced by banking regulators to the required minimum ratios to which the Firm is subject. In particular, if the Firm's G-SIB capital surcharge is determined to be lower than 4.5%, the capital targets would be adjusted accordingly. The Firm intends to manage its capital so that it achieves the required capital levels and composition in line with or in advance of the required timetables of current and proposed rules.

Economic risk capital

Economic risk capital is another of the disciplines the Firm uses to assess the capital required to support its businesses. Economic risk capital is a measure of the capital needed to cover JPMorgan Chase's business activities in the event of unexpected losses. The Firm measures economic risk capital using internal risk-assessment methodologies and models based primarily on four risk factors: credit, market, operational and private equity risk and considers factors, assumptions and inputs that differ from those required to be used for regulatory capital requirements. Accordingly, economic risk capital provides a complementary measure to regulatory capital. As economic risk capital is a separate component of the capital framework for Advanced Approach banking organizations under Basel III, the Firm continues to enhance its economic risk capital framework.

Line of business equity

The Firm's framework for allocating capital to its business segments is based on the following objectives:

- Integrate firmwide and line of business capital management activities;
- Measure performance consistently across all lines of business; and
- Provide comparability with peer firms for each of the lines of business

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, considering capital levels for similarly rated peers, regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In) and economic risk measures. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Line of business equity	Yearly average		
Year ended December 31, (in billions)	**2014**	2013	2012
Consumer & Community Banking	**$ 51.0**	$ 46.0	$ 43.0
Corporate & Investment Bank	**61.0**	56.5	47.5
Commercial Banking	**14.0**	13.5	9.5
Asset Management	**9.0**	9.0	7.0
Corporate	**72.4**	71.4	77.4
Total common stockholders' equity	**$ 207.4**	$ 196.4	$ 184.4

Effective January 1, 2013, the Firm refined the capital allocation framework to align it with the revised line of business structure that became effective in the fourth quarter of 2012. The change in equity levels for the lines of businesses was largely driven by the evolving regulatory requirements and higher capital targets the Firm had established under the Basel III Advanced Approach.

On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital to its lines of business and updates the equity allocations to its lines of business as refinements are implemented.

Line of business equity	January 1,	December 31,	
(in billions)	**2015[a]**	2014	2013
Consumer & Community Banking	**$ 51.0**	$ 51.0	$ 46.0
Corporate & Investment Bank	**62.0**	61.0	56.5
Commercial Banking	**14.0**	14.0	13.5
Asset Management	**9.0**	9.0	9.0
Corporate	**76.0**	77.0	75.0
Total common stockholders' equity	**$ 212.0**	$ 212.0	$ 200.0

(a) Reflects refined capital allocations effective January 1, 2015.

Capital actions

Dividends

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratio, capital objectives, and alternative investment opportunities.

The Firm's current expectation is to continue to target a payout ratio of approximately 30% of normalized earnings over time. Following the Federal Reserve's non-objection to the Firm's 2014 capital plan, the Board of Directors increased the quarterly common stock dividend on May 20, 2014, from $0.38 to $0.40 per share, effective beginning with the dividend paid on July 31, 2014, to stockholders of record on July 3, 2014.

For information regarding dividend restrictions, see Note 22 and Note 27.

The following table shows the common dividend payout ratio based on reported net income.

Year ended December 31,	**2014**	2013	2012
Common dividend payout ratio	**29%**	33%	23%

Preferred stock

During the year ended December 31, 2014, the Firm issued $8.9 billion of noncumulative preferred stock. Preferred stock dividends declared were $1.1 billion for the year ended December 31, 2014. Assuming all preferred stock issuances were outstanding for the entire year and quarterly dividends were declared on such issuances, preferred stock dividends would have been $1.3 billion for the year ended December 31, 2014. For additional information on the Firm's preferred stock, see Note 22.

Redemption of outstanding trust preferred securities

On May 8, 2013, the Firm redeemed approximately $5.0 billion, or 100% of the liquidation amount, of the following eight series of trust preferred securities: JPMorgan Chase Capital X, XI, XII, XIV, XVI, XIX, XXIV, and BANK ONE Capital VI. For a further discussion of trust preferred securities, see Note 21.

Common equity

On March 13, 2012, the Board of Directors authorized a $15.0 billion common equity (i.e., common stock and warrants) repurchase program. As of December 31, 2014, $3.8 billion (on a trade-date basis) of authorized repurchase capacity remained under the program. The amount of equity that may be repurchased by the Firm is also subject to the amount that is set forth in the Firm's annual capital plan submitted to the Federal Reserve as part of the CCAR process. In conjunction with the Federal Reserve's release of its 2014 CCAR results, the Firm's Board of Directors has authorized the Firm to repurchase $6.5 billion of common equity between April 1, 2014, and March 31, 2015. As of December 31, 2014, $2.1 billion (on a trade-date basis) of such repurchase capacity remains. This authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plans.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2014, 2013 and 2012, on a trade-date basis. There were no warrants repurchased during the years ended December 31, 2014, and 2013.

Year ended December 31, (in millions)	**2014**	2013	2012
Total number of shares of common stock repurchased	**83.4**	96.1	30.9
Aggregate purchase price of common stock repurchases	**$ 4,834**	$ 4,789	$ 1,329
Total number of warrants repurchased	**–**	–	18.5
Aggregate purchase price of warrant repurchases	**$ –**	$ –	$ 238

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "blackout periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities on pages 18–19.

Broker-dealer regulatory capital

JPMorgan Chase's principal U.S. broker-dealer subsidiaries are J.P. Morgan Securities LLC ("JPMorgan Securities") and J.P. Morgan Clearing Corp. ("JPMorgan Clearing"). JPMorgan Clearing is a subsidiary of JPMorgan Securities and provides clearing and settlement services. JPMorgan Securities and JPMorgan Clearing are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities and JPMorgan Clearing are also each registered as futures commission merchants and subject to Rule 1.17 of the Commodity Futures Trading Commission ("CFTC").

JPMorgan Securities and JPMorgan Clearing have elected to compute their minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule. At December 31, 2014, JPMorgan Securities' net capital, as defined by the Net Capital Rule, was $12.8 billion, exceeding the minimum requirement by $10.6 billion, and JPMorgan Clearing's net capital was $7.5 billion, exceeding the minimum requirement by $5.6 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of $1.0 billion and is also required to notify the Securities and Exchange Commission ("SEC") in the event that tentative net capital is less than $5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2014, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

J.P. Morgan Securities plc is a wholly owned subsidiary of JPMorgan Chase Bank, N.A. and is the Firm's principal operating subsidiary in the U.K. It has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities plc is jointly regulated by the U.K. Prudential Regulation Authority ("PRA") and Financial Conduct Authority ("FCA"). Commencing January 1, 2014, J.P. Morgan Securities plc became subject to the U.K. Basel III capital rules.

At December 31, 2014, J.P. Morgan Securities plc had estimated total capital of $30.1 billion; its estimated CET1 capital ratio was 10.7% and its estimated Total capital ratio was 14.1%. Both ratios exceeded the minimum transitional standards (4.0% and 8.0% for the CET1 ratio and Total capital ratio, respectively) as established by the Capital Requirements Directive and Regulation (the European Union ("EU") implementation of Basel III) as well as additional minimum requirements specified by the Prudential Regulatory Authority as Individual Capital Guidance and PRA Buffer requirements.

LIQUIDITY RISK MANAGEMENT

Liquidity risk is the risk that the Firm will be unable to meet its contractual and contingent obligations. Liquidity risk management is intended to ensure that the Firm has the appropriate amount, composition and tenor of funding and liquidity in support of its assets.

Liquidity Risk Oversight

The Firm has an independent liquidity risk oversight function whose primary objective is to provide assessment, measurement, monitoring, and control of liquidity risk across the Firm. Liquidity risk oversight is managed through a dedicated firmwide Liquidity Risk Oversight group reporting into the CIO, Treasury, and Corporate ("CTC") Chief Risk Officer ("CRO"). The CTC CRO has responsibility for firmwide Liquidity Risk Oversight and reports to the Firm's CRO. Liquidity Risk Oversight's responsibilities include but are not limited to:

- Establishing and monitoring limits, indicators, and thresholds, including liquidity appetite tolerances;
- Defining and monitoring internal Firmwide and legal entity stress tests and regulatory defined stress testing;
- Reporting and monitoring liquidity positions, balance sheet variances and funding activities;
- Conducting ad hoc analysis to identify potential emerging liquidity risks.

Risk Governance and Measurement

Specific committees responsible for liquidity governance include firmwide ALCO as well as lines of business and regional ALCOs, and the CTC Risk Committee. For further discussion of the risk and risk-related committees, see Enterprise-wide Risk Management on pages 105–109.

Internal Stress testing

Liquidity stress tests are intended to ensure sufficient liquidity for the Firm under a variety of adverse scenarios. Results of stress tests are therefore considered in the formulation of the Firm's funding plan and assessment of its liquidity position. Liquidity outflow assumptions are modeled across a range of time horizons and contemplate both market and idiosyncratic stress. Standard stress tests are performed on a regular basis and ad hoc stress tests are performed in response to specific market events or concerns. In addition, stress scenarios are produced for the parent holding company and the Firm's major subsidiaries.

Liquidity stress tests assume all of the Firm's contractual obligations are met and then take into consideration varying levels of access to unsecured and secured funding markets. Additionally, assumptions with respect to potential non-contractual and contingent outflows are contemplated.

Liquidity Management

Treasury is responsible for liquidity management. The primary objectives of effective liquidity management are to ensure that the Firm's core businesses are able to operate in support of client needs, meet contractual and contingent obligations through normal economic cycles as well as during stress events, ensure funding mix optimization, and availability of liquidity sources. The Firm manages liquidity and funding using a centralized, global approach in order to optimize liquidity sources and uses.

In the context of the Firm's liquidity management, Treasury is responsible for:

- Analyzing and understanding the liquidity characteristics of the Firm, lines of business and legal entities' assets and liabilities, taking into account legal, regulatory, and operational restrictions;
- Defining and monitoring firmwide and legal entity liquidity strategies, policies, guidelines, and contingency funding plans;
- Managing liquidity within approved liquidity risk appetite tolerances and limits;
- Setting transfer pricing in accordance with underlying liquidity characteristics of balance sheet assets and liabilities as well as certain off-balance sheet items.

Contingency funding plan

The Firm's contingency funding plan ("CFP"), which is reviewed by ALCO and approved by the DRPC, is a compilation of procedures and action plans for managing liquidity through stress events. The CFP incorporates the limits and indicators set by the Liquidity Risk Oversight group. These limits and indicators are reviewed regularly to identify the emergence of risks or vulnerabilities in the Firm's liquidity position. The CFP identifies the alternative contingent liquidity resources available to the Firm in a stress event.

Parent holding company and subsidiary funding

The parent holding company acts as a source of funding to its subsidiaries. The Firm's liquidity management is intended to maintain liquidity at the parent holding company, in addition to funding and liquidity raised at the subsidiary operating level, at levels sufficient to fund the operations of the parent holding company and its subsidiaries for an extended period of time in a stress environment where access to normal funding sources is disrupted. The parent holding company currently holds more than 18 months of pre-funding assuming no access to wholesale funding markets.

LCR and NSFR

In December 2010, the Basel Committee introduced two new measures of liquidity risk: the liquidity coverage ratio ("LCR"), which is intended to measure the amount of "high-quality liquid assets" ("HQLA") held by the Firm in relation to estimated net cash outflows within a 30-day period during an acute stress event; and the net stable funding ratio ("NSFR") which is intended to measure the "available" amount of stable funding relative to the "required" amount of stable funding over a one-year horizon. The standards require that the LCR be no lower than 100% and the NSFR be greater than 100%.

On September 3, 2014, the U.S. banking regulators approved the final LCR rule ("U.S. LCR"), which became effective on January 1, 2015. Under the final rules, the LCR is required to be 80% at January 1, 2015, increasing by 10% each year until reaching 100% at January 1, 2017. At December 31, 2014, the Firm was compliant with the fully phased-in U.S. LCR based on its current understanding of the final rule. The Firm's LCR may fluctuate from period-to-period due to normal flows from client activity.

On October 31, 2014, the Basel Committee issued the final standard for the NSFR which will become a minimum standard by January 1, 2018. At December 31, 2014, the Firm was compliant with the NSFR based on its current understanding of the final Basel rule. The U.S. Banking Regulators are expected to issue a proposal on the NSFR that would outline requirements specific to U.S. banks.

HQLA

HQLA is the estimated amount of assets that qualify for inclusion in the U.S. LCR. HQLA primarily consists of cash and certain unencumbered high quality liquid assets as defined in the rule.

As of December 31, 2014, HQLA was estimated to be approximately $600 billion, as determined under the U.S. LCR final rule, compared with $522 billion as of December 31, 2013, which was calculated using the Basel Committee's definition of HQLA. The increase in HQLA was due to higher cash balances largely driven by higher deposit balances, partially offset by the impact of the application of the U.S. LCR rule which excludes certain types of securities that are permitted under the Basel Rules. HQLA may fluctuate from period-to-period primarily due to normal flows from client activity.

The following table presents the estimated HQLA included in the U.S. LCR broken out by HQLA-eligible cash and HQLA-eligible securities as of December 31, 2014.

(in billions)	December 31, 2014
HQLA	
Eligible cash[(a)]	$ 454
Eligible securities[(b)]	146
Total HQLA	$ 600

(a) Predominantly cash on deposit at central banks.
(b) Predominantly includes U.S. agency mortgage-backed securities, U.S. Treasuries, and sovereign bonds.

In addition to HQLA, as of December 31, 2014, the Firm has approximately $321 billion of unencumbered marketable securities, such as equity securities and fixed income debt securities, available to raise liquidity, if required. Furthermore, the Firm maintains borrowing capacity at various Federal Home Loan Banks ("FHLBs"), the Federal Reserve Bank discount window and various other central banks as a result of collateral pledged by the Firm to such banks. Although available, the Firm does not view the borrowing capacity at the Federal Reserve Bank discount window and the various other central banks as a primary source of liquidity. As of December 31, 2014, the Firm's remaining borrowing capacity at various FHLBs and the Federal Reserve Bank discount window was approximately $143 billion. This borrowing capacity excludes the benefit of securities included above in HQLA or other unencumbered securities held at the Federal Reserve Bank discount window for which the Firm has not drawn liquidity.

Funding

Sources of funds

Management believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations.

The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio (aggregating approximately $757.3 billion at December 31, 2014), is funded with a portion of the Firm's deposits (aggregating approximately $1,363.4 billion at December 31, 2014) and through securitizations and, with respect to a portion of the Firm's real estate-related loans, with secured borrowings from the FHLBs. Deposits in excess of the amount utilized to fund loans are primarily invested in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity risk characteristics. Capital markets secured financing assets and trading assets are primarily funded by the Firm's capital markets secured financing liabilities, trading liabilities and a portion of the Firm's long-term debt and stockholders' equity.

In addition to funding capital markets assets, proceeds from the Firm's debt and equity issuances are used to fund certain loans, and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio. See the discussion below for additional disclosures relating to Deposits, Short-term funding, and Long-term funding and issuance.

Deposits

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. As of December 31, 2014, the Firm's loans-to-deposits ratio was 56%, compared with 57% at December 31, 2013.

As of December 31, 2014, total deposits for the Firm were $1,363.4 billion, compared with $1,287.8 billion at December 31, 2013 (58% of total liabilities at both December 31, 2014 and 2013). The increase was due to growth in both wholesale and consumer deposits. For further information, see Balance Sheet Analysis on pages 72–73.

The Firm typically experiences higher customer deposit inflows at period-ends. Therefore, the Firm believes average deposit balances are more representative of deposit trends. The table below summarizes, by line of business, the period-end and average deposit balances as of and for the years ended December 31, 2014 and 2013.

Deposits			Year ended December 31,	
As of or for the period ended December 31,			Average	
(in millions)	**2014**	2013	**2014**	2013
Consumer & Community Banking	**$ 502,520**	$ 464,412	**$ 486,919**	$ 453,304
Corporate & Investment Bank	**468,423**	446,237	**417,517**	384,289
Commercial Banking	**213,682**	206,127	**190,425**	184,409
Asset Management	**155,247**	146,183	**150,121**	139,707
Corporate	**23,555**	24,806	**19,319**	27,433
Total Firm	**$ 1,363,427**	$ 1,287,765	**$ 1,264,301**	$ 1,189,142

A significant portion of the Firm's deposits are consumer deposits (37% and 36% at December 31, 2014 and 2013, respectively), which are considered particularly stable as they are less sensitive to interest rate changes or market volatility. Additionally, the majority of the Firm's institutional deposits are also considered to be stable sources of funding since they are generated from customers that maintain operating service relationships with the Firm. For further discussions of deposit and liability balance trends, see the discussion of the results for the Firm's business segments and the Balance Sheet Analysis on pages 79–104 and pages 72–73, respectively.

The following table summarizes short-term and long-term funding, excluding deposits, as of December 31, 2014 and 2013, and average balances for the years ended December 31, 2014 and 2013. For additional information, see the Balance Sheet Analysis on pages 72–73 and Note 21.

Sources of funds (excluding deposits)				
As of or for the year ended December 31,			Average	
(in millions)	**2014**	2013	**2014**	2013
Commercial paper:				
Wholesale funding	**$ 24,052**	$ 17,249	**$ 19,442**	$ 17,785
Client cash management	**42,292**	40,599	**40,474**	35,932
Total commercial paper	**$ 66,344**	$ 57,848	**$ 59,916**	$ 53,717
Obligations of Firm-administered multi-seller conduits[a]	**$ 12,047**	$ 14,892	**$ 10,427**	$ 15,504
Other borrowed funds	**$ 30,222**	$ 27,994	**$ 31,721**	$ 30,449
Securities loaned or sold under agreements to repurchase:				
Securities sold under agreements to repurchase	**$ 167,077**	$ 155,808	**$ 181,186**	$ 207,106
Securities loaned	**21,798**	19,509	**22,586**	26,068
Total securities loaned or sold under agreements to repurchase[b][c][d]	**$ 188,875**	$ 175,317	**$ 203,772**	$ 233,174
Total senior notes	**$ 142,480**	$ 135,754	**$ 139,707**	$ 137,662
Trust preferred securities	**5,496**	5,445	**5,471**	7,178
Subordinated debt	**29,472**	29,578	**29,082**	27,955
Structured notes	**30,021**	28,603	**30,311**	29,517
Total long-term unsecured funding	**$ 207,469**	$ 199,380	**$ 204,571**	$ 202,312
Credit card securitization	**$ 31,239**	$ 26,580	**$ 28,935**	$ 27,834
Other securitizations[e]	**2,008**	3,253	**2,734**	3,501
FHLB advances	**64,994**	61,876	**60,667**	55,487
Other long-term secured funding[f]	**4,373**	6,633	**5,031**	6,284
Total long-term secured funding	**$ 102,614**	$ 98,342	**$ 97,367**	$ 93,106
Preferred stock[g]	**$ 20,063**	$ 11,158	**17,018**	$ 10,960
Common stockholders' equity[g]	**$ 212,002**	$ 200,020	**207,400**	$ 196,409

(a) Included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.
(b) Excludes federal funds purchased.
(c) Excluded long-term structured repurchase agreements of $2.7 billion and $4.6 billion as of December 31, 2014 and 2013, respectively, and average balance of $4.2 billion for the years ended December 31, 2014 and 2013.

(d) Excluded long-term securities loaned of $483 million as of December 31, 2013, and average balance of $24 million and $414 million for the years ended December 31, 2014 and 2013, respectively. There were no long-term securities loaned as of December 31, 2014.
(e) Other securitizations includes securitizations of residential mortgages and student loans. The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table.
(f) Includes long-term structured notes which are secured.
(g) For additional information on preferred stock and common stockholders' equity see Capital Management on pages 146–155, Consolidated statements of changes in stockholders' equity, Note 22 and Note 23.

Short-term funding

A significant portion of the Firm's total commercial paper liabilities, approximately 64% as of December 31, 2014, were not sourced from wholesale funding markets, but were originated from deposits that customers choose to sweep into commercial paper liabilities as a cash management program offered to customers of the Firm.

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. Securities loaned or sold under agreements to repurchase are secured predominantly by high-quality securities collateral, including government-issued debt, agency debt and agency MBS, and constitute a significant portion of the federal funds purchased and securities loaned or sold under purchase agreements. The amounts of securities loaned or sold under agreements to repurchase at December 31, 2014, increased predominantly due to a change in the mix of the Firm's funding sources. The decrease in average balances for the year ended December 31, 2014, compared with December 31, 2013, was predominantly due to less secured financing of the Firm's investment securities portfolio, and a change in the mix of the Firm's funding sources. The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment securities and market-making portfolios); and other market and portfolio factors.

Long-term funding and issuance

Long-term funding provides additional sources of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven by expected client activity, liquidity considerations, and regulatory requirements. Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding costs, as well as maintaining a certain level of pre-funding at the parent holding company. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

The significant majority of the Firm's long-term unsecured funding is issued by the parent holding company to provide maximum flexibility in support of both bank and nonbank subsidiary funding. The following table summarizes long-term unsecured issuance and maturities or redemptions for the years ended December 31, 2014 and 2013. For additional information, see Note 21.

Long-term unsecured funding

Year ended December 31, (in millions)	2014	2013
Issuance		
Senior notes issued in the U.S. market	**$ 16,373**	$ 19,835
Senior notes issued in non-U.S. markets	**11,221**	8,843
Total senior notes	**27,594**	28,678
Subordinated debt	**4,979**	3,232
Structured notes	**19,806**	16,979
Total long-term unsecured funding – issuance	**$ 52,379**	$ 48,889
Maturities/redemptions		
Total senior notes	**$ 21,169**	$ 18,418
Trust preferred securities	**–**	5,052
Subordinated debt	**4,487**	2,418
Structured notes	**18,554**	17,785
Total long-term unsecured funding – maturities/redemptions	**$ 44,210**	$ 43,673

In addition, from January 1, 2015, through February 24, 2015, the Firm issued $10.1 billion of senior notes.

The Firm raises secured long-term funding through securitization of consumer credit card loans and advances from the FHLBs. It may also in the future raise long-term funding through securitization of residential mortgages, auto loans and student loans, which will increase funding and investor diversity.

The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemption for the years ended December 31, 2014 and 2013.

Long-term secured funding

Year ended December 31,	Issuance		Maturities/Redemptions	
(in millions)	2014	2013	2014	2013
Credit card securitization	**$ 8,350**	$ 8,434	**$ 3,774**	$ 11,853
Other securitizations[a]	**–**	–	**309**	427
FHLB advances	**15,200**	23,650	**12,079**	3,815
Other long-term secured funding	**$ 802**	$ 751	**$ 3,076**	$ 159
Total long-term secured funding	**$ 24,352**	$ 32,835	**$ 19,238**	$ 16,254

(a) Other securitizations includes securitizations of residential mortgages and student loans.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. For further description of the client-driven loan securitizations, see Note 16.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on page 74, and Credit risk, liquidity risk and credit-related contingent features in Note 6.

The credit ratings of the parent holding company and the Firm's principal bank and nonbank subsidiaries as of December 31, 2014, were as follows.

	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A. Chase Bank USA, N.A.			J.P. Morgan Securities LLC		
December 31, 2014	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investor Services	A3	P-2	Stable	Aa3	P-1	Stable	Aa3	P-1	Stable
Standard & Poor's	A	A-1	Negative	A+	A-1	Stable	A+	A-1	Stable
Fitch Ratings	A+	F1	Stable	A+	F1	Stable	A+	F1	Stable

Downgrades of the Firm's long-term ratings by one or two notches could result in a downgrade of the Firm's short-term ratings. If this were to occur, the Firm believes its cost of funds could increase and access to certain funding markets could be reduced as noted above. The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral factors (which the Firm believes are incorporated in its liquidity risk and stress testing metrics). The Firm believes it maintains sufficient liquidity to withstand a potential decrease in funding capacity due to ratings downgrades.

JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, rating uplift assumptions surrounding government support, future profitability, risk management practices, and litigation matters, as well as their broader ratings methodologies. Changes in any of these factors could lead to changes in the Firm's credit ratings.

On September 18, 2014, S&P revised its ratings methodology for hybrid capital securities issued by financial institutions, and on September 29, 2014, the ratings of the Firm's hybrid capital securities (including trust preferred securities and preferred stock) were lowered by 1 notch from BBB to BBB-, reflecting the new methodology. Furthermore, S&P has announced a Request for Comment on a proposed change to rating criteria related to additional loss absorbing capacity. In addition, Moody's and Fitch are in the process of reviewing their ratings methodologies: Moody's has announced a Request for Comment on the revision to its Bank Rating Methodology and Fitch has announced a review of the ratings differential that it applies between bank holding companies and their bank subsidiaries.

Although the Firm closely monitors and endeavors to manage, to the extent it is able, factors influencing its credit ratings, there is no assurance that its credit ratings will not be changed in the future.

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and the related business and risk management strategies, which may vary across the Firm's businesses and portfolios. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the carrying value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's consumer and wholesale lending-related commitments. The allowance for loan losses is intended to adjust the carrying value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date.

The allowance for loan losses includes an asset-specific component, a formula-based component, and a component related to PCI loans. The determination of each of these components involves significant judgment on a number of matters, as discussed below. For further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Note 15.

Asset-specific component

The asset-specific allowance for loan losses for each of the Firm's portfolio segments is generally measured as the difference between the recorded investment in the impaired loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections rely upon estimates such as redefault rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are, in turn, dependent on factors such as the level of future home prices, the duration of current overall economic conditions, and other macroeconomic and portfolio-specific factors. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Formula-based component - Consumer loans and lending-related commitments, excluding PCI loans

The formula-based allowance for credit losses for the consumer portfolio, including credit card, is calculated by applying statistical credit loss factors to outstanding principal balances over an estimated loss emergence period to arrive at an estimate of incurred credit losses in the portfolio. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends. In addition, management applies judgment to the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate the total incurred credit losses in the portfolio. Management uses additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate.

The statistical calculation is then adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation; these adjustments are accomplished in part by analyzing the historical loss experience for each major product segment. However, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment in making this adjustment, taking into account uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, borrower behavior, the potential impact of payment recasts within the HELOC portfolio, and other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties. For example, the performance of a HELOC that experiences a payment recast may be affected by both the quality of underwriting standards applied in originating the loan and the general economic conditions in effect at the time of the payment recast. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. The application of different inputs into the statistical calculation, and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for loan losses for the consumer credit portfolio.

Overall, the allowance for credit losses for the consumer portfolio, including credit card, is sensitive to changes in the economic environment (e.g., unemployment rates), delinquency rates, the realizable value of collateral (e.g.,

housing prices), FICO scores, borrower behavior and other risk factors. While all of these factors are important determinants of overall allowance levels, changes in the various factors may not occur at the same time or at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across all geographies or product types. Finally, it is difficult to predict the extent to which changes in these factors would ultimately affect the frequency of losses, the severity of losses or both.

PCI loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain PCI loans, which are accounted for as described in Note 14. The allowance for loan losses for the PCI portfolio is based on quarterly estimates of the amount of principal and interest cash flows expected to be collected over the estimated remaining lives of the loans.

These cash flow projections are based on estimates regarding default rates (including redefault rates on modified loans), loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are dependent on assumptions regarding the level of future home price declines, and the duration of current overall economic conditions, among other factors. These estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Formula-based component - Wholesale loans and lending-related commitments

The Firm's methodology for determining the allowance for loan losses and the allowance for lending-related commitments requires the early identification of credits that are deteriorating. The formula-based component of the allowance calculation for wholesale loans and lending-related components is the product of an estimated PD and estimated LGD. These factors are determined based on the credit quality and specific attributes of the Firm's loans and lending-related commitments to each obligor.

The Firm uses a risk rating system to determine the credit quality of its wholesale loans and lending-related commitments. In assessing the risk rating of a particular loan or lending-related commitment, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm to that loan.

PD estimates are based on observable external through-the-cycle data, using credit rating agency default statistics. A LGD estimate is assigned to each loan or lending-related commitment. The estimate represents the amount of economic loss if the obligor were to default. The type of obligor, quality of collateral, and the seniority of the Firm's loans in the obligor's capital structure affect LGD. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle. Changes to the time period used for PD and LGD estimates (for example, point-in-time loss versus longer views of the credit cycle) could also affect the allowance for credit losses.

The Firm applies judgment in estimating PD and LGD used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances, but differences in loan characteristics between the Firm's specific loan portfolio and those reflected in external and Firm-specific historical data could affect loss estimates. Estimates of PD and LGD are subject to periodic refinement based on any changes to underlying external and Firm-specific historical data. The use of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the modeled loss estimates, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both LGD and PD are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

Allowance for credit losses sensitivity

As noted above, the Firm's allowance for credit losses is sensitive to numerous factors, depending on the portfolio. Changes in economic conditions or in the Firm's assumptions could affect its estimate of probable credit losses inherent in the portfolio at the balance sheet date. For example, changes in the inputs below would have the following effects on the Firm's modeled loss estimates as of December 31, 2014, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- For PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment from current levels could imply an increase to modeled credit loss estimates of approximately $1.2 billion.
- For the residential real estate portfolio, excluding PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment from current levels could

imply an increase to modeled annual loss estimates of approximately $100 million.
- A 50 basis point deterioration in forecasted credit card loss rates could imply an increase to modeled annualized credit card loan loss estimates of approximately $600 million.
- A one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately $1.8 billion.
- A 100 basis point increase in estimated loss given default for the Firm's entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately $140 million.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors. In addition, these analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the overall allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm follows and the judgments made in evaluating the risk factors related to its loans and credit card loss estimates, management believes that its current estimate of the allowance for credit loss is appropriate.

Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy. For further information, see Note 3.

December 31, 2014 (in billions, except ratio data)	Total assets at fair value	Total level 3 assets
Trading debt and equity instruments	$ 320.0	$ 22.5
Derivative receivables	79.0	12.6
Trading assets	399.0	35.1
AFS securities	298.8	1.0
Loans	2.6	2.5
MSRs	7.4	7.4
Private equity investments[(a)]	5.7	2.5
Other	36.2	2.4
Total assets measured at fair value on a recurring basis	749.7	50.9
Total assets measured at fair value on a nonrecurring basis	4.5	3.2
Total assets measured at fair value	$ 754.2	$ 54.1
Total Firm assets	$ 2,573.1	
Level 3 assets as a percentage of total Firm assets		2.1%
Level 3 assets as a percentage of total Firm assets at fair value		7.2%

(a) Private equity instruments represent investments within the Corporate line of business.

Valuation

Details of the Firm's processes for determining fair value are set out in Note 3. Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the valuation hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs — including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 3.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's credit-worthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk

position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. For further discussion of valuation adjustments applied by the Firm see Note 3.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, see Note 3.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 17.

Management applies significant judgment when estimating the fair value of its reporting units. Estimates of fair value are dependent upon estimates of (a) the future earnings potential of the Firm's reporting units, including the estimated effects of regulatory and legislative changes, such as the Dodd-Frank Act, (b) long-term growth rates and (c) the relevant cost of equity. Imprecision in estimating these factors can affect the estimated fair value of the reporting units.

During 2014, the Firm recognized an impairment of the Private Equity business' goodwill totaling $276 million. Remaining goodwill of $101 million at December 31, 2014 associated with the Private Equity business was disposed of as part of the Private Equity sale completed in January 2015. For further information on the Private Equity sale, see Note 2.

Based upon the updated valuations for all of its reporting units, the Firm concluded that the goodwill allocated to its other reporting units was not impaired at December 31, 2014. The fair values of these reporting units exceeded their carrying values. Except for the Firm's mortgage banking business, the excess fair value as a percentage of carrying value ranged from approximately 20-210% for the other reporting units and did not indicate a significant risk of goodwill impairment based on current projections and valuations. The fair value of the Firm's Mortgage Banking business exceeded its carrying value by less than 5% and accordingly, the associated goodwill of approximately $2 billion remains at an elevated risk for goodwill impairment.

The projections for all of the Firm's reporting units are consistent with the short-term assumptions discussed in the Business outlook on pages 66–67, and in the longer term, incorporate a set of macroeconomic assumptions and the Firm's best estimates of long-term growth and returns of its businesses. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.

Deterioration in economic market conditions, increased estimates of the effects of recent regulatory or legislative changes, or additional regulatory or legislative changes may result in declines in projected business performance beyond management's current expectations. For example, in the Firm's Mortgage Banking business, such declines could result from increases in primary mortgage interest rates, lower mortgage origination volume, higher costs to resolve foreclosure-related matters or from deterioration in economic conditions, including decreases in home prices that result in increased credit losses. Declines in business performance, increases in equity capital requirements, or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

For additional information on goodwill, see Note 17.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations and tax planning strategies. It is possible that revisions in the Firm's estimate of income

taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. The Firm has also recognized deferred tax assets in connection with certain NOLs. The Firm performs regular reviews to ascertain whether deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize NOLs before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2014, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

JPMorgan Chase does not record U.S. federal income taxes on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Changes to the income tax rates applicable to these non-U.S. subsidiaries may have a material impact on the effective tax rate in a future period if such changes were to occur.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective tax rate in the period in which the reassessment occurs.

For additional information on income taxes, see Note 26.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 31.

ACCOUNTING AND REPORTING DEVELOPMENTS

Amendments to the consolidation analysis
In February 2015, the Financial Accounting Standards Board ("FASB") issued guidance regarding consolidation of legal entities such as limited partnerships, limited liability corporations, and securitization structures. The guidance eliminates the deferral issued by the FASB in February 2010 of the accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds. In addition, the guidance amends the evaluation of fees paid to a decision maker or a service provider, and exempts certain money market funds from consolidation. The guidance will be effective in the first quarter of 2016 with early adoption permitted. The Firm is currently evaluating the potential impact on the Consolidated Financial Statements.

Reclassification of residential real estate collateralized consumer mortgage loans upon foreclosure and classification of certain government-guaranteed mortgage loans upon foreclosure
In January 2014, the FASB issued guidance which clarified the timing of when a creditor is considered to have taken physical possession of residential real estate collateral for a consumer mortgage loan, resulting in the reclassification of the loan receivable to real estate owned. The final standard also requires disclosure of outstanding foreclosed residential real estate and the amount of the recorded investment in residential real estate mortgage loans in the process of foreclosure. In August 2014, the FASB issued separate guidance clarifying the classification and measurement of certain foreclosed government-guaranteed mortgage loans. Under the final standard, certain foreclosed government-insured mortgage loan amounts were reclassified on the balance sheet as a receivable from the guarantor at the guaranteed amount. The Firm early adopted both of these new standards in the third quarter of 2014 with a cumulative-effect adjustment as of January 1, 2014; the adoption of these standards (and related reclassification adjustment) had no material impact on the Firm's Consolidated Financial Statements.

Measuring the financial assets and financial liabilities of a consolidated collateralized financing entity
In August 2014, the FASB issued guidance to address diversity in the accounting for differences in the measurement of the fair values of financial assets and liabilities of consolidated financing VIEs. The new guidance provides an alternative for consolidated financing VIEs to elect: (1) to measure their financial assets and liabilities separately under existing U.S. GAAP for fair value measurement with any differences in such fair values reflected in earnings; or (2) to measure both their financial assets and liabilities using the more observable of the fair value of the financial assets or the fair value of the financial liabilities. The guidance will become effective in the first quarter of 2016, with early adoption permitted. The adoption of this guidance is not expected to have a material impact on the Firm's Consolidated Financial Statements.

Repurchase agreements and similar transactions
In June 2014, the FASB issued guidance that amends the accounting for certain secured financing transactions, and requires enhanced disclosures with respect to transactions recognized as sales in which exposure to the derecognized asset is retained through a separate agreement with the counterparty. In addition, the guidance requires enhanced disclosures with respect to the types and quality of financial assets pledged in secured financing transactions. The guidance will become effective in the first quarter of 2015, except for the disclosures regarding the types and quality of financial assets pledged, which will become effective in the second quarter of 2015. The adoption of this guidance is not expected to have a material impact on the Firm's Consolidated Financial Statements.

Revenue recognition – revenue from contracts with customers
In May 2014, the FASB issued revenue recognition guidance that is intended to create greater consistency with respect to how and when revenue from contracts with customers is shown in the statements of income. The guidance requires that revenue from contracts with customers be recognized upon delivery of a good or service based on the amount of consideration expected to be received, and requires additional disclosures about revenue. The guidance will be effective in the first quarter of 2017 and early adoption is prohibited. The Firm is currently evaluating the potential impact on the Consolidated Financial Statements.

Reporting discontinued operations and disclosures of disposals of components of an entity
In April 2014, the FASB issued guidance regarding the reporting of discontinued operations. The guidance changes the criteria for determining whether a disposition qualifies for discontinued operations presentation. It also requires enhanced disclosures about discontinued operations and significant dispositions that do not qualify to be presented as discontinued operations. The guidance will become effective in the first quarter of 2015. The adoption of this guidance is not expected to have a material impact on the Firm's Consolidated Financial Statements.

Investments in qualified affordable housing projects
In January 2014, the FASB issued guidance regarding the accounting for investments in affordable housing projects that qualify for the low-income housing tax credit. The guidance replaces the effective yield method and allows companies to make an accounting policy election to amortize the initial cost of its investments in proportion to the tax credits and other benefits received if certain criteria are met, and to present the amortization as a component of income tax expense. The guidance will become effective in the first quarter of 2015 and is required to be applied retrospectively, such that the Firm's results of operations for prior periods will be revised to reflect the guidance.

The Firm intends to adopt the guidance for all qualifying investments. The adoption of this guidance is estimated to reduce retained earnings by approximately $230 million. The Firm expects that reported other income and income tax expense will each increase as a result of presenting the amortization of the initial cost of its investments as component of income tax expense. The amount of this increase in each period depends on the size and characteristics of the Firm's portfolio of affordable housing investments; the estimated increase for 2014 is approximately $900 million. The effect of this guidance on the Firm's net income is not expected to be material.

NONEXCHANGE-TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based on internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2014.

Year ended December 31, 2014 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2014	$ 8,128	$ 9,929
Effect of legally enforceable master netting agreements	15,082	15,318
Gross fair value of contracts outstanding at January 1, 2014	23,210	25,247
Contracts realized or otherwise settled	(14,451)	(15,557)
Fair value of new contracts	13,954	15,664
Changes in fair values attributable to changes in valuation techniques and assumptions	–	–
Other changes in fair value	1,440	1,783
Gross fair value of contracts outstanding at December 31, 2014	24,153	27,137
Effect of legally enforceable master netting agreements	(14,327)	(13,211)
Net fair value of contracts outstanding at December 31, 2014	$ 9,826	$ 13,926

The following table indicates the maturities of nonexchange-traded commodity derivative contracts at December 31, 2014.

December 31, 2014 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 15,635	$ 16,376
Maturity 1–3 years	6,561	8,459
Maturity 4–5 years	1,230	1,790
Maturity in excess of 5 years	727	512
Gross fair value of contracts outstanding at December 31, 2014	24,153	27,137
Effect of legally enforceable master netting agreements	(14,327)	(13,211)
Net fair value of contracts outstanding at December 31, 2014	$ 9,826	$ 13,926

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the Securities and Exchange Commission. In addition, the Firm's senior management may make forward-looking statements orally to investors, analysts, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and international business, economic and political conditions and geopolitical events;
- Changes in laws and regulatory requirements;
- Changes in trade, monetary and fiscal policies and laws;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity, including approval of its capital plans by banking regulators;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- Technology changes instituted by the Firm, its counterparties or competitors;
- The success of the Firm's business simplification initiatives and the effectiveness of its control agenda;
- Ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Ability of the Firm to address enhanced regulatory requirements affecting its consumer businesses;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to increase market share;
- Ability of the Firm to attract and retain qualified employees;
- Ability of the Firm to control expense;
- Competitive pressures;
- Changes in the credit quality of the Firm's customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities or conflicts;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operating systems and facilities;
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2014.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

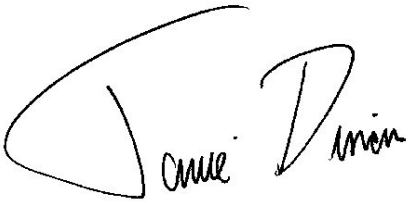
Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

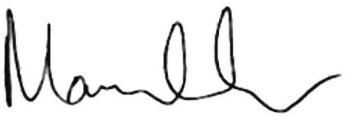
Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2014. In making the assessment, management used the framework in "Internal Control - Integrated Framework (2013)" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2014, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO 2013 criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2014.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2014, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Marianne Lake
Executive Vice President and Chief Financial Officer

February 24, 2015



To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2014 and 2013 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2014 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2014 based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting". Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



February 24, 2015

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2014	2013	2012
Revenue			
Investment banking fees	**$ 6,542**	$ 6,354	$ 5,808
Principal transactions	**10,531**	10,141	5,536
Lending- and deposit-related fees	**5,801**	5,945	6,196
Asset management, administration and commissions	**15,931**	15,106	13,868
Securities gains[(a)]	**77**	667	2,110
Mortgage fees and related income	**3,563**	5,205	8,687
Card income	**6,020**	6,022	5,658
Other income	**2,106**	3,847	4,258
Noninterest revenue	**50,571**	53,287	52,121
Interest income	**51,531**	52,669	55,953
Interest expense	**7,897**	9,350	11,043
Net interest income	**43,634**	43,319	44,910
Total net revenue	**94,205**	96,606	97,031
Provision for credit losses	**3,139**	225	3,385
Noninterest expense			
Compensation expense	**30,160**	30,810	30,585
Occupancy expense	**3,909**	3,693	3,925
Technology, communications and equipment expense	**5,804**	5,425	5,224
Professional and outside services	**7,705**	7,641	7,429
Marketing	**2,550**	2,500	2,577
Other expense	**11,146**	**20,398**	**14,989**
Total noninterest expense	**61,274**	70,467	64,729
Income before income tax expense	**29,792**	25,914	28,917
Income tax expense	**8,030**	7,991	7,633
Net income	**$ 21,762**	$ 17,923	$ 21,284
Net income applicable to common stockholders	**$ 20,093**	$ 16,593	$ 19,877
Net income per common share data			
Basic earnings per share	**$ 5.34**	$ 4.39	$ 5.22
Diluted earnings per share	**5.29**	4.35	5.20
Weighted-average basic shares	**3,763.5**	3,782.4	3,809.4
Weighted-average diluted shares	**3,797.5**	3,814.9	3,822.2
Cash dividends declared per common share	**$ 1.58**	$ 1.44	$ 1.20

(a) The following other-than-temporary impairment losses are included in securities gains for the periods presented.

Year ended December 31, (in millions)	2014	2013	2012
Debt securities the Firm does not intend to sell that have credit losses			
Total other-than-temporary impairment losses	**$ (2)**	$ (1)	$ (113)
Losses recorded in/(reclassified from) accumulated other comprehensive income	**–**	–	85
Total credit losses recognized in income	**(2)**	(1)	(28)
Securities the Firm intends to sell	**(2)**	(20)	(15)
Total other-than-temporary impairment losses recognized in income	**$ (4)**	$ (21)	$ (43)

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of comprehensive income

Year ended December 31, (in millions)	2014	2013	2012
Net income	**$ 21,762**	$ 17,923	$ 21,284
Other comprehensive income/(loss), after-tax			
Unrealized gains/(losses) on investment securities	**1,975**	(4,070)	3,303
Translation adjustments, net of hedges	**(11)**	(41)	(69)
Cash flow hedges	**44**	(259)	69
Defined benefit pension and OPEB plans	**(1,018)**	1,467	(145)
Total other comprehensive income/(loss), after-tax	**990**	(2,903)	3,158
Comprehensive income	**$ 22,752**	$ 15,020	$ 24,442

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2014	2013
Assets		
Cash and due from banks	**$ 27,831**	$ 39,771
Deposits with banks	**484,477**	316,051
Federal funds sold and securities purchased under resale agreements (included **$28,585** and $25,135 at fair value)	**215,803**	248,116
Securities borrowed (included **$992** and $3,739 at fair value)	**110,435**	111,465
Trading assets (included assets pledged of **$125,034** and $116,499)	**398,988**	374,664
Securities (included **$298,752** and $329,977 at fair value and assets pledged of **$24,912** and $23,446)	**348,004**	354,003
Loans (included **$2,611** and $2,011 at fair value)	**757,336**	738,418
Allowance for loan losses	**(14,185)**	(16,264)
Loans, net of allowance for loan losses	**743,151**	722,154
Accrued interest and accounts receivable	**70,079**	65,160
Premises and equipment	**15,133**	14,891
Goodwill	**47,647**	48,081
Mortgage servicing rights	**7,436**	9,614
Other intangible assets	**1,192**	1,618
Other assets (included **$12,366** and $15,187 at fair value and assets pledged of **$1,396** and $2,066)	**102,950**	110,101
Total assets[(a)]	**$ 2,573,126**	$ 2,415,689
Liabilities		
Deposits (included **$8,807** and $6,624 at fair value)	**$ 1,363,427**	$ 1,287,765
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$2,979** and $5,426 at fair value)	**192,101**	181,163
Commercial paper	**66,344**	57,848
Other borrowed funds (included **$14,739** and $13,306 at fair value)	**30,222**	27,994
Trading liabilities	**152,815**	137,744
Accounts payable and other liabilities (included **$36** and $25 at fair value)	**206,954**	194,491
Beneficial interests issued by consolidated variable interest entities (included **$2,162** and $1,996 at fair value)	**52,362**	49,617
Long-term debt (included **$30,226** and $28,878 at fair value)	**276,836**	267,889
Total liabilities[(a)]	**2,341,061**	2,204,511
Commitments and contingencies (see Notes 29, 30 and 31)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares: issued **2,006,250** and 1,115,750 shares)	**20,063**	11,158
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Additional paid-in capital	**93,270**	93,828
Retained earnings	**130,315**	115,756
Accumulated other comprehensive income	**2,189**	1,199
Shares held in RSU trust, at cost (**472,953** and 476,642 shares)	**(21)**	(21)
Treasury stock, at cost (**390,144,630** and 348,825,583 shares)	**(17,856)**	(14,847)
Total stockholders' equity	**232,065**	211,178
Total liabilities and stockholders' equity	**$ 2,573,126**	$ 2,415,689

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2014 and 2013. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which were eliminated in consolidation.

December 31, (in millions)	2014	2013
Assets		
Trading assets	**$ 9,090**	$ 6,366
Loans	**68,880**	70,072
All other assets	**1,815**	2,168
Total assets	**$ 79,785**	$ 78,606
Liabilities		
Beneficial interests issued by consolidated variable interest entities	**$ 52,362**	$ 49,617
All other liabilities	**949**	1,061
Total liabilities	**$ 53,311**	$ 50,678

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. At December 31, 2014 and 2013, the Firm provided limited program-wide credit enhancement of $2.0 billion and $2.6 billion, respectively, related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 16.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity

Year ended December 31, (in millions, except per share data)	2014	2013	2012
Preferred stock			
Balance at January 1	**$ 11,158**	$ 9,058	$ 7,800
Issuance of preferred stock	**8,905**	3,900	1,258
Redemption of preferred stock	**–**	(1,800)	–
Balance at December 31	**20,063**	11,158	9,058
Common stock			
Balance at January 1 and December 31	**4,105**	4,105	4,105
Additional paid-in capital			
Balance at January 1	**93,828**	94,604	95,602
Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects	**(508)**	(752)	(736)
Other	**(50)**	(24)	(262)
Balance at December 31	**93,270**	93,828	94,604
Retained earnings			
Balance at January 1	**115,756**	104,223	88,315
Net income	**21,762**	17,923	21,284
Dividends declared:			
Preferred stock	**(1,125)**	(805)	(647)
Common stock (**$1.58**, $1.44 and $1.20 per share for 2014, 2013 and 2012, respectively)	**(6,078)**	(5,585)	(4,729)
Balance at December 31	**130,315**	115,756	104,223
Accumulated other comprehensive income/(loss)			
Balance at January 1	**1,199**	4,102	944
Other comprehensive income/(loss)	**990**	(2,903)	3,158
Balance at December 31	**2,189**	1,199	4,102
Shares held in RSU Trust, at cost			
Balance at January 1	**(21)**	(21)	(38)
Reissuance from RSU Trust	**–**	–	17
Balance at December 31	**(21)**	(21)	(21)
Treasury stock, at cost			
Balance at January 1	**(14,847)**	(12,002)	(13,155)
Purchase of treasury stock	**(4,760)**	(4,789)	(1,415)
Reissuance from treasury stock	**1,751**	1,944	2,574
Share repurchases related to employee stock-based compensation awards	**–**	–	(6)
Balance at December 31	**(17,856)**	(14,847)	(12,002)
Total stockholders' equity	**$ 232,065**	$ 211,178	$ 204,069

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2014	2013	2012
Operating activities			
Net income	**$ 21,762**	$ 17,923	$ 21,284
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Provision for credit losses	**3,139**	225	3,385
Depreciation and amortization	**4,759**	5,306	5,147
Deferred tax expense	**4,210**	8,003	1,130
Investment securities gains	**(77)**	(667)	(2,110)
Stock-based compensation	**2,190**	2,219	2,545
Originations and purchases of loans held-for-sale	**(67,525)**	(75,928)	(34,026)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**71,407**	73,566	33,202
Net change in:			
Trading assets	**(24,814)**	89,110	(5,379)
Securities borrowed	**1,020**	7,562	23,455
Accrued interest and accounts receivable	**(3,637)**	(2,340)	1,732
Other assets	**(9,166)**	526	(4,683)
Trading liabilities	**26,818**	(9,772)	(3,921)
Accounts payable and other liabilities	**6,065**	(5,743)	(13,069)
Other operating adjustments	**442**	(2,037)	(3,613)
Net cash provided by operating activities	**36,593**	107,953	25,079
Investing activities			
Net change in:			
Deposits with banks	**(168,426)**	(194,363)	(36,595)
Federal funds sold and securities purchased under resale agreements	**30,848**	47,726	(60,821)
Held-to-maturity securities:			
Proceeds from paydowns and maturities	**4,169**	189	4
Purchases	**(10,345)**	(24,214)	–
Available-for-sale securities:			
Proceeds from paydowns and maturities	**90,664**	89,631	112,633
Proceeds from sales	**38,411**	73,312	81,957
Purchases	**(121,504)**	(130,266)	(189,630)
Proceeds from sales and securitizations of loans held-for-investment	**20,115**	12,033	6,430
Other changes in loans, net	**(51,749)**	(23,721)	(30,491)
Net cash received from/(used in) business acquisitions or dispositions	**843**	(149)	88
All other investing activities, net	**1,338**	(679)	(3,400)
Net cash used in investing activities	**(165,636)**	(150,501)	(119,825)
Financing activities			
Net change in:			
Deposits	**89,346**	81,476	67,250
Federal funds purchased and securities loaned or sold under repurchase agreements	**10,905**	(58,867)	26,546
Commercial paper and other borrowed funds	**9,242**	2,784	9,315
Beneficial interests issued by consolidated variable interest entities	**(834)**	(10,433)	345
Proceeds from long-term borrowings	**78,515**	83,546	86,271
Payments of long-term borrowings	**(65,275)**	(60,497)	(96,473)
Excess tax benefits related to stock-based compensation	**407**	137	255
Proceeds from issuance of preferred stock	**8,847**	3,873	1,234
Redemption of preferred stock	**–**	(1,800)	–
Treasury stock and warrants repurchased	**(4,760)**	(4,789)	(1,653)
Dividends paid	**(6,990)**	(6,056)	(5,194)
All other financing activities, net	**(1,175)**	(1,050)	(189)
Net cash provided by financing activities	**118,228**	28,324	87,707
Effect of exchange rate changes on cash and due from banks	**(1,125)**	272	1,160
Net decrease in cash and due from banks	**(11,940)**	(13,952)	(5,879)
Cash and due from banks at the beginning of the period	**39,771**	53,723	59,602
Cash and due from banks at the end of the period	**$ 27,831**	$ 39,771	$ 53,723
Cash interest paid	**$ 8,194**	$ 9,573	$ 11,161
Cash income taxes paid, net	**1,392**	3,502	2,050

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small business, commercial banking, financial transaction processing and asset management. For a discussion of the Firm's business segments, see Note 33.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the U.S. ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Certain amounts reported in prior periods have been reclassified to conform with the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated balance sheets.

The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity ("VIE").

Voting Interest Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Firm to recognize its proportionate share of the entity's net earnings), or (ii) at fair value if the fair value option was elected. These investments are generally included in other assets, with income or loss included in other income.

Certain Firm-sponsored asset management funds are structured as limited partnerships or limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these funds. In the limited cases where the nonaffiliated partners or members do not have substantive kick-out or participating rights, the Firm consolidates the funds.

The Firm's investment companies have investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated balance sheets at fair value, and are recorded in other assets.

Variable Interest Entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is a special purpose entity ("SPE"). SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those activities. In general, the parties that make the most

significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivative or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

In February 2010, the Financial Accounting Standards Board ("FASB") issued an amendment which deferred the requirements of the accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds. For the funds to which the deferral applies, the Firm continues to apply other existing authoritative accounting guidance to determine whether such funds should be consolidated.

Use of estimates in the preparation of consolidated financial statements

The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in other comprehensive income/(loss) ("OCI") within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated statements of income.

Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the balance sheet when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities sold and purchased under repurchase agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances when the specified conditions are met.

The Firm uses master netting agreements to mitigate counterparty credit risk in certain transactions, including derivatives transactions, repurchase and reverse repurchase agreements, and securities borrowed and loaned agreements. A master netting agreement is a single contract with a counterparty that permits multiple transactions governed by that contract to be terminated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due after expiration of any grace period). Upon the exercise of termination rights by the non-defaulting party (i) all transactions are terminated, (ii) all transactions are valued and the positive value or "in the money" transactions are netted against the negative value or "out of the money" transactions and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount. Upon exercise of repurchase agreement and securities loaned default rights (i) all securities loan transactions are terminated and accelerated, (ii) all values of securities or cash held or to be delivered are calculated, and all such sums are netted against each other and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount.

Typical master netting agreements for these types of transactions also often contain a collateral/margin agreement that provides for a security interest in, or title transfer of, securities or cash collateral/margin to the party that has the right to demand margin (the "demanding party"). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount of the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold. The collateral/margin agreement grants to the demanding party, upon default by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin. It also grants to the demanding party the right to liquidate collateral/margin and to apply the proceeds to an amount payable by the counterparty.

For further discussion of the Firm's derivative instruments, see Note 6. For further discussion of the Firm's repurchase and reverse repurchase agreements, and securities borrowing and lending agreements, see Note 13.

Statements of cash flows

For JPMorgan Chase's Consolidated statements of cash flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Fair value measurement	Note 3	Page 180
Fair value option	Note 4	Page 199
Derivative instruments	Note 6	Page 203
Noninterest revenue	Note 7	Page 216
Interest income and interest expense	Note 8	Page 218
Pension and other postretirement employee benefit plans	Note 9	Page 218
Employee stock-based incentives	Note 10	Page 228
Securities	Note 12	Page 230
Securities financing activities	Note 13	Page 235
Loans	Note 14	Page 238
Allowance for credit losses	Note 15	Page 258
Variable interest entities	Note 16	Page 262
Goodwill and other intangible assets	Note 17	Page 271
Premises and equipment	Note 18	Page 276
Long-term debt	Note 21	Page 277
Income taxes	Note 26	Page 282
Off-balance sheet lending-related financial instruments, guarantees and other commitments	Note 29	Page 287
Litigation	Note 31	Page 295

Note 2 – Business changes and developments

Subsequent events

As part of the Firm's business simplification agenda, the sale of a portion of the Private Equity Business ("Private Equity sale") was completed on January 9, 2015. Concurrent with the sale, a new independent management company was formed by the former One Equity Partners ("OEP") investment professionals. The new management company will provide investment management services to the acquirer of the investments sold in the Private Equity sale and for the portion of private equity investments retained by the Firm. Upon closing, this transaction did not have a material impact on the Firm's Consolidated balance sheets or its results of operations.

Note 3 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Firm's Consolidated balance sheets). Certain assets (e.g., certain mortgage, home equity and other loans where the carrying value is based on the fair value of the underlying collateral), liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment).

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on models that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below.

The level of precision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions to those used by the Firm could result in a different estimate of fair value at the reporting date.

Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated balance sheets at fair value. The Firm's valuation control function, which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value. In addition, the Firm has a firmwide Valuation Governance Forum ("VGF") comprised of senior finance and risk executives to oversee the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the Firmwide head of the valuation control function, and also includes sub-forums for the Corporate & Investment Bank ("CIB"), Mortgage Banking, (part of Consumer & Community Banking) and certain corporate functions including Treasury and Chief Investment Office ("CIO").

The valuation control function verifies fair value estimates provided by the risk-taking functions by leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, additional review is performed by the valuation control function to ensure the reasonableness of the estimates, and may include: evaluating the limited market activity including client unwinds; benchmarking of valuation inputs to those for similar instruments; decomposing the valuation of structured instruments into individual components; comparing expected to actual cash flows; reviewing profit and loss trends; and reviewing trends in collateral valuation. In addition there are additional levels of management review for more significant or complex positions.

The valuation control function determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments are applied to the quoted market price for instruments classified within level 1 of the fair value hierarchy (see below for further information on the fair value hierarchy). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

- Liquidity valuation adjustments are considered where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity. Liquidity valuation adjustments are applied and determined based on current market conditions. Factors that may be considered in determining the liquidity adjustment include analysis of: (1) the estimated bid-offer spread for the instrument being traded; (2) alternative pricing points for similar instruments in active markets; and (3) the range of reasonable values that the price or parameter could take.
- The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by U.S. GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that a relevant market participant would consider in the transfer of the net open risk position including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.

- Unobservable parameter valuation adjustments may be made when positions are valued using prices or input parameters to valuation models that are unobservable due to a lack of market activity or because they cannot be implied from observable market data. Such prices or parameters must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the resulting valuation estimate.

Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality, the Firm's own creditworthiness and the impact of funding, applying a consistent framework across the Firm. For more information on such adjustments see Credit and funding adjustments on pages 196–197 of this Note.

Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs to those models.

The Model Risk function is independent of the model owners and reviews and approves a wide range of models, including risk management, valuation and certain regulatory capital models used by the Firm. The Model Risk function is part of the Firm's Model Risk and Development unit, and the Firmwide Model Risk and Development Executive reports to the Firm's CRO. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes.

New significant valuation models, as well as material changes to existing valuation models, are reviewed and approved prior to implementation except where specified conditions are met. The Model Risk function performs an annual firmwide model risk assessment where developments in the product or market are considered in determining whether valuation models which have already been reviewed need to be reviewed and approved again.

Valuation hierarchy

A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following table describes the valuation methodologies used by the Firm to measure its more significant products/ instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology	Classifications in the valuation hierarchy
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features. For further information refer to the discussion of derivatives below. • Market rates for the respective maturity • Collateral	Level 2
Loans and lending-related commitments - wholesale		
Trading portfolio	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are infrequent) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Yield • Lifetime credit losses • Loss severity • Prepayment speed • Servicing costs	Level 2 or 3
Loans held for investment and associated lending-related commitments	Valuations are based on discounted cash flows, which consider: • Credit spreads, derived from the cost of credit default swaps ("CDS"); or benchmark credit curves developed by the Firm, by industry and credit rating, and which take into account the difference in loss severity rates between bonds and loans • Prepayment speed Lending-related commitments are valued similar to loans and reflect the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become funded prior to an obligor default For information regarding the valuation of loans measured at collateral value, see Note 14.	Predominantly level 3
Loans - consumer		
Held for investment consumer loans, excluding credit card	Valuations are based on discounted cash flows, which consider: • Discount rates (derived from primary origination rates and market activity) • Expected lifetime credit losses (considering expected and current default rates for existing portfolios, collateral prices, and economic environment expectations (e.g., unemployment rates)) • Estimated prepayments • Servicing costs • Market liquidity For information regarding the valuation of loans measured at collateral value, see Note 14.	Predominantly level 3
Held for investment credit card receivables	Valuations are based on discounted cash flows, which consider: • Projected interest income and late fee revenue, servicing and credit costs, and loan repayment rates • Estimated life of receivables (based on projected loan payment rates) • Discount rate - based on cost of funding and expected return on receivables • Credit costs - allowance for loan losses is considered a reasonable proxy for the credit cost based on the short-term nature of credit card receivables	Level 3
Trading loans - Conforming residential mortgage loans expected to be sold	Fair value is based upon observable prices for mortgage-backed securities with similar collateral and incorporates adjustments to these prices to account for differences between the securities and the value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity.	Predominantly level 2

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Securities	Quoted market prices are used where available.	Level 1
	In the absence of quoted market prices, securities are valued based on: • Observable market prices for similar securities • Relevant broker quotes • Discounted cash flows In addition, the following inputs to discounted cash flows are used for the following products: *Mortgage- and asset-backed securities specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity *Collateralized loan obligations ("CLOs"), specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Expected prepayment speed, conditional default rates, loss severity • Credit spreads • Credit rating data	Level 2 or 3
Physical commodities	Valued using observable market prices or data	Predominantly Level 1 and 2
Derivatives	Exchange-traded derivatives that are actively traded and valued using the exchange price, and over-the-counter contracts where quoted prices are available in an active market.	Level 1
	Derivatives that are valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models, that use observable or unobservable valuation inputs (e.g., plain vanilla options and interest rate and credit default swaps). Inputs include: • Contractual terms including the period to maturity • Readily observable parameters including interest rates and volatility • Credit quality of the counterparty and of the Firm • Market funding levels • Correlation levels In addition, the following specific inputs are used for the following derivatives that are valued based on models with significant unobservable inputs: *Structured credit derivatives specific inputs include:* • CDS spreads and recovery rates • Credit correlation between the underlying debt instruments (levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices) • Actual transactions, where available, are used to regularly recalibrate unobservable parameters *Certain long-dated equity option specific inputs include:* • Long-dated equity volatilities *Certain interest rate and foreign exchange ("FX") exotic options specific inputs include:* • Interest rate correlation • Interest rate spread volatility • Foreign exchange correlation • Correlation between interest rates and foreign exchange rates • Parameters describing the evolution of underlying interest rates *Certain commodity derivatives specific inputs include:* • Commodity volatility • Forward commodity price Additionally, adjustments are made to reflect counterparty credit quality (credit valuation adjustments or "CVA"), the Firm's own creditworthiness (debit valuation adjustments or "DVA"), and funding valuation adjustment ("FVA") to incorporate the impact of funding. See pages 196–197 of this Note.	Level 2 or 3

Product/instrument	Valuation methodology, inputs and assumptions	Classification in the valuation hierarchy
Mortgage servicing rights ("MSRs")	See Mortgage servicing rights in Note 17.	Level 3
Private equity direct investments	*Private equity direct investments* Fair value is estimated using all available information and considering the range of potential inputs, including: • Transaction prices • Trading multiples of comparable public companies • Operating performance of the underlying portfolio company • Additional available inputs relevant to the investment • Adjustments as required, since comparable public companies are not identical to the company being valued, and for company-specific issues and lack of liquidity	Level 2 or 3
	Public investments held in the Private Equity portfolio • Valued using observable market prices less adjustments for relevant restrictions, where applicable	Level 1 or 2
Fund investments (i.e., mutual/collective investment funds, private equity funds, hedge funds, and real estate funds)	Net asset value ("NAV") • NAV is validated by sufficient level of observable activity (i.e., purchases and sales)	Level 1
	• Adjustments to the NAV as required, for restrictions on redemption (e.g., lock up periods or withdrawal limitations) or where observable activity is limited	Level 2 or 3
Beneficial interests issued by consolidated VIEs	Valued using observable market information, where available In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE	Level 2 or 3
Long-term debt, not carried at fair value	Valuations are based on discounted cash flows, which consider: • Market rates for respective maturity • The Firm's own creditworthiness (DVA). See pages 196-197 of this Note.	Predominantly level 2
Structured notes (included in deposits, other borrowed funds and long-term debt)	• Valuations are based on discounted cash flow analyses that consider the embedded derivative and the terms and payment structure of the note. • The embedded derivative features are considered using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that use observable or unobservable valuation inputs, depending on the embedded derivative. The specific inputs used vary according to the nature of the embedded derivative features, as described in the discussion above regarding derivative valuation. Adjustments are then made to this base valuation to reflect the Firm's own creditworthiness (DVA) and to incorporate the impact of funding (FVA). See pages 196–197 of this Note.	Level 2 or 3

The following table presents the asset and liabilities reported at fair value as of December 31, 2014 and 2013, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2014 (in millions)	Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 28,585	$ –	$ –	$ 28,585
Securities borrowed	–	992	–	–	992
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	14	31,904	922	–	32,840
Residential – nonagency	–	1,381	663	–	2,044
Commercial – nonagency	–	927	306	–	1,233
Total mortgage-backed securities	14	34,212	1,891	–	36,117
U.S. Treasury and government agencies[a]	17,816	8,460	–	–	26,276
Obligations of U.S. states and municipalities	–	9,298	1,273	–	10,571
Certificates of deposit, bankers' acceptances and commercial paper	–	1,429	–	–	1,429
Non-U.S. government debt securities	25,854	27,294	302	–	53,450
Corporate debt securities	–	28,099	2,989	–	31,088
Loans[b]	–	23,080	13,287	–	36,367
Asset-backed securities	–	3,088	1,264	–	4,352
Total debt instruments	43,684	134,960	21,006	–	199,650
Equity securities	104,890	748	431	–	106,069
Physical commodities[c]	2,739	1,741	2	–	4,482
Other	–	8,762	1,050	–	9,812
Total debt and equity instruments[d]	151,313	146,211	22,489	–	320,013
Derivative receivables:					
Interest rate	473	951,901	4,149	(922,798)	33,725
Credit	–	73,853	2,989	(75,004)	1,838
Foreign exchange	758	205,887	2,276	(187,668)	21,253
Equity	–	44,240	2,552	(38,615)	8,177
Commodity	247	42,807	599	(29,671)	13,982
Total derivative receivables[e]	1,478	1,318,688	12,565	(1,253,756)	78,975
Total trading assets	152,791	1,464,899	35,054	(1,253,756)	398,988
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	65,319	–	–	65,319
Residential – nonagency	–	50,865	30	–	50,895
Commercial – nonagency	–	21,009	99	–	21,108
Total mortgage-backed securities	–	137,193	129	–	137,322
U.S. Treasury and government agencies[a]	13,591	54	–	–	13,645
Obligations of U.S. states and municipalities	–	30,068	–	–	30,068
Certificates of deposit	–	1,103	–	–	1,103
Non-U.S. government debt securities	24,074	28,669	–	–	52,743
Corporate debt securities	–	18,532	–	–	18,532
Asset-backed securities:					
Collateralized loan obligations	–	29,402	792	–	30,194
Other	–	12,499	116	–	12,615
Equity securities	2,530	–	–	–	2,530
Total available-for-sale securities	40,195	257,520	1,037	–	298,752
Loans	–	70	2,541	–	2,611
Mortgage servicing rights	–	–	7,436	–	7,436
Other assets:					
Private equity investments[f]	648	2,624	2,475	–	5,747
All other	4,018	230	2,371	–	6,619
Total other assets	4,666	2,854	4,846	–	12,366
Total assets measured at fair value on a recurring basis	$ 197,652	$ 1,754,920[g]	$ 50,914[g]	$ (1,253,756)	$ 749,730
Deposits	$ –	$ 5,948	$ 2,859	$ –	$ 8,807
Federal funds purchased and securities loaned or sold under repurchase agreements	–	2,979	–	–	2,979
Other borrowed funds	–	13,286	1,453	–	14,739
Trading liabilities:					
Debt and equity instruments[d]	62,914	18,713	72	–	81,699
Derivative payables:					
Interest rate	499	920,623	3,523	(906,900)	17,745
Credit	–	73,095	2,800	(74,302)	1,593
Foreign exchange	746	214,800	2,802	(195,378)	22,970
Equity	–	46,228	4,337	(38,825)	11,740
Commodity	141	44,318	1,164	(28,555)	17,068
Total derivative payables[e]	1,386	1,299,064	14,626	(1,243,960)	71,116
Total trading liabilities	64,300	1,317,777	14,698	(1,243,960)	152,815
Accounts payable and other liabilities	–	–	36	–	36
Beneficial interests issued by consolidated VIEs	–	1,016	1,146	–	2,162
Long-term debt	–	18,349	11,877	–	30,226
Total liabilities measured at fair value on a recurring basis	$ 64,300	$ 1,359,355	$ 32,069	$ (1,243,960)	$ 211,764

December 31, 2013 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 25,135	$ –	$ –	$ 25,135
Securities borrowed	–	3,739	–	–	3,739
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	4	25,582	1,005	–	26,591
Residential – nonagency	–	1,749	726	–	2,475
Commercial – nonagency	–	871	432	–	1,303
Total mortgage-backed securities	4	28,202	2,163	–	30,369
U.S. Treasury and government agencies[a]	14,933	10,547	–	–	25,480
Obligations of U.S. states and municipalities	–	6,538	1,382	–	7,920
Certificates of deposit, bankers' acceptances and commercial paper	–	3,071	–	–	3,071
Non-U.S. government debt securities	25,762	22,379	143	–	48,284
Corporate debt securities[h]	–	24,802	5,920	–	30,722
Loans[b]	–	17,331	13,455	–	30,786
Asset-backed securities	–	3,647	1,272	–	4,919
Total debt instruments	40,699	116,517	24,335	–	181,551
Equity securities	107,667	954	885	–	109,506
Physical commodities[c]	4,968	5,217	4	–	10,189
Other	–	5,659	2,000	–	7,659
Total debt and equity instruments[d]	153,334	128,347	27,224	–	308,905
Derivative receivables:					
Interest rate	419	848,862	5,398	(828,897)	25,782
Credit	–	79,754	3,766	(82,004)	1,516
Foreign exchange	434	151,521	1,644	(136,809)	16,790
Equity	–	45,892	7,039	(40,704)	12,227
Commodity	320	34,696	722	(26,294)	9,444
Total derivative receivables[e]	1,173	1,160,725	18,569	(1,114,708)	65,759
Total trading assets	154,507	1,289,072	45,793	(1,114,708)	374,664
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	77,815	–	–	77,815
Residential – nonagency	–	61,760	709	–	62,469
Commercial – nonagency	–	15,900	525	–	16,425
Total mortgage-backed securities	–	155,475	1,234	–	156,709
U.S. Treasury and government agencies[a]	21,091	298	–	–	21,389
Obligations of U.S. states and municipalities	–	29,461	–	–	29,461
Certificates of deposit	–	1,041	–	–	1,041
Non-U.S. government debt securities	25,648	30,600	–	–	56,248
Corporate debt securities	–	21,512	–	–	21,512
Asset-backed securities:					
Collateralized loan obligations	–	27,409	821	–	28,230
Other	–	11,978	267	–	12,245
Equity securities	3,142	–	–	–	3,142
Total available-for-sale securities	49,881	277,774	2,322	–	329,977
Loans	–	80	1,931	–	2,011
Mortgage servicing rights	–	–	9,614	–	9,614
Other assets:					
Private equity investments[f]	606	429	6,474	–	7,509
All other	4,213	289	3,176	–	7,678
Total other assets	4,819	718	9,650	–	15,187
Total assets measured at fair value on a recurring basis	$ 209,207	$ 1,596,518[g]	$ 69,310[g]	$ (1,114,708)	$ 760,327
Deposits	$ –	$ 4,369	$ 2,255	$ –	$ 6,624
Federal funds purchased and securities loaned or sold under repurchase agreements	–	5,426	–	–	5,426
Other borrowed funds	–	11,232	2,074	–	13,306
Trading liabilities:					
Debt and equity instruments[d]	61,262	19,055	113	–	80,430
Derivative payables:					
Interest rate	321	822,014	3,019	(812,071)	13,283
Credit	–	78,731	3,671	(80,121)	2,281
Foreign exchange	443	156,838	2,844	(144,178)	15,947
Equity	–	46,552	8,102	(39,935)	14,719
Commodity	398	36,609	607	(26,530)	11,084
Total derivative payables[e]	1,162	1,140,744	18,243	(1,102,835)	57,314
Total trading liabilities	62,424	1,159,799	18,356	(1,102,835)	137,744
Accounts payable and other liabilities	–	–	25	–	25
Beneficial interests issued by consolidated VIEs	–	756	1,240	–	1,996
Long-term debt	–	18,870	10,008	–	28,878
Total liabilities measured at fair value on a recurring basis	$ 62,424	$ 1,200,452	$ 33,958	$ (1,102,835)	$ 193,999

(a) At December 31, 2014 and 2013, included total U.S. government-sponsored enterprise obligations of $84.1 billion and $91.5 billion, respectively, which were predominantly mortgage-related.

(b) At December 31, 2014 and 2013, included within trading loans were $17.0 billion and $14.8 billion, respectively, of residential first-lien mortgages, and $5.8 billion and $2.1 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $7.7 billion and $6.0 billion, respectively, and reverse mortgages of $3.4 billion and $3.6 billion, respectively.

(c) Physical commodities inventories are generally accounted for at the lower of cost or market. "Market" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, market approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when market is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. For a further discussion of the Firm's hedge accounting relationships, see Note 6. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.

(d) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).

(e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. Therefore, the balances reported in the fair value hierarchy table are gross of any counterparty netting adjustments. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivables and payables balances would be $2.5 billion and $7.6 billion at December 31, 2014 and 2013, respectively; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.

(f) Private equity instruments represent investments within the Corporate line of business. The cost basis of the private equity investment portfolio totaled $6.0 billion and $8.0 billion at December 31, 2014 and 2013, respectively.

(g) Includes investments in hedge funds, private equity funds, real estate and other funds that do not have readily determinable fair values. The Firm uses net asset value per share when measuring the fair value of these investments. At December 31, 2014 and 2013, the fair values of these investments were $1.8 billion and $3.2 billion, respectively, of which $337 million and $899 million, respectively were classified in level 2, and $1.4 billion and $2.3 billion, respectively, in level 3.

Transfers between levels for instruments carried at fair value on a recurring basis

For the year ended December 31, 2014 and 2013, there were no significant transfers between levels 1 and 2.

During the year ended December 31, 2014, transfers from level 3 to level 2 included the following:

- $4.3 billion and $4.4 billion of gross equity derivative receivables and payables, respectively, due to increased observability of certain equity option valuation inputs;
- $2.7 billion of trading loans, $2.6 billion of margin loans, $2.3 billion of private equity investments, $2.0 billion of corporate debt, and $1.3 billion of long-term debt, based on increased liquidity and price transparency.

Transfers from level 2 into level 3 included $1.1 billion of other borrowed funds, $1.1 billion of trading loans and $1.0 billion of long-term debt, based on a decrease in observability of valuation inputs and price transparency.

During the year ended December 31, 2013, transfers from level 3 to level 2 included certain highly rated CLOs, including $27.4 billion held in the Firm's available-for-sale ("AFS") securities portfolio and $1.4 billion held in the trading portfolio, based on increased liquidity and price transparency; and $1.3 billion of long-term debt, largely driven by an increase in observability of certain equity structured notes. Transfers from level 2 to level 3 included $1.4 billion of corporate debt securities in the trading portfolio largely driven by a decrease in observability for certain credit instruments.

For the year ended December 31, 2012, $113.9 billion of settled U.S. government agency mortgage-backed securities were transferred from level 1 to level 2. While the U.S. government agency mortgage-backed securities market remained highly liquid and transparent, the transfer reflected greater market price differentiation between settled securities based on certain underlying loan specific factors. There were no significant transfers from level 2 to level 1 for the year ended December 31, 2012.

For the year ended December 31, 2012, there were no significant transfers from level 2 into level 3. For the year ended December 31, 2012, transfers from level 3 into level 2 included $1.2 billion of derivative payables based on increased observability of certain structured equity derivatives; and $1.8 billion of long-term debt due to increased observability of certain equity structured notes.

All transfers are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 valuations

The Firm has established well-documented processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3). For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, see pages 181–184 of this Note.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs including, but not limited to, transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and, for certain instruments, the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

In the Firm's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted average values will therefore vary from period-to-period and parameter to parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

For the Firm's derivatives and structured notes positions classified within level 3, the equity and interest rate correlation inputs used in estimating fair value were concentrated at the upper end of the range presented, while the credit correlation inputs were distributed across the range presented and the foreign exchange correlation inputs were concentrated at the lower end of the range presented. In addition, the interest rate volatility inputs used in estimating fair value were concentrated at the upper end of the range presented and the foreign exchange correlation inputs were concentrated at the lower end of the range presented. The equity volatility is concentrated in the lower half end of the range. The forward commodity prices used in estimating the fair value of commodity derivatives were concentrated within the lower end of the range presented.

Level 3 inputs[a]

December 31, 2014 (in millions, except for ratios and basis points)

Product/Instrument	Fair value	Principal valuation technique	Unobservable inputs	Range of input values	Weighted average
Residential mortgage-backed securities and loans	$ 8,917	Discounted cash flows	Yield	1% - 25%	5%
			Prepayment speed	0% - 18%	6%
			Conditional default rate	0% - 100%	22%
			Loss severity	0% - 90%	27%
Commercial mortgage-backed securities and loans[b]	5,319	Discounted cash flows	Yield	2% - 32%	5%
			Conditional default rate	0% - 100%	8%
			Loss severity	0% - 50%	29%
Corporate debt securities, obligations of U.S. states and municipalities, and other[c]	6,387	Discounted cash flows	Credit spread	53 bps - 270 bps	140 bps
			Yield	1% - 22%	7%
	6,629	Market comparables	Price	$ – - $131	$90
Net interest rate derivatives	626	Option pricing	Interest rate correlation	(75)% - 95%	
			Interest rate spread volatility	0% - 60%	
Net credit derivatives[b][c]	189	Discounted cash flows	Credit correlation	47% - 90%	
Net foreign exchange derivatives	(526)	Option pricing	Foreign exchange correlation	0% - 60%	
Net equity derivatives	(1,785)	Option pricing	Equity volatility	15% - 65%	
Net commodity derivatives	(565)	Discounted cash flows	Forward commodity price	$ 50 - $90 per barrel	
Collateralized loan obligations	792	Discounted cash flows	Credit spread	260 bps - 675 bps	279 bps
			Prepayment speed	20%	20%
			Conditional default rate	2%	2%
			Loss severity	40%	40%
	393	Market comparables	Price	$ – - $146	$79
Mortgage servicing rights	7,436	Discounted cash flows	Refer to Note 17		
Private equity direct investments	2,054	Market comparables	EBITDA multiple	6x - 12.4x	9.1x
			Liquidity adjustment	0% - 15%	7%
Private equity fund investments	421	Net asset value	Net asset value[e]		
Long-term debt, other borrowed funds, and deposits[d]	15,069	Option pricing	Interest rate correlation	(75)% - 95%	
			Interest rate spread volatility	0% - 60%	
			Foreign exchange correlation	0% - 60%	
			Equity correlation	(55)% - 85%	
	1,120	Discounted cash flows	Credit correlation	47% - 90%	

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated balance sheets.

(b) The unobservable inputs and associated input ranges for approximately $491 million of credit derivative receivables and $433 million of credit derivative payables with underlying commercial mortgage risk have been included in the inputs and ranges provided for commercial mortgage-backed securities and loans.

(c) The unobservable inputs and associated input ranges for approximately $795 million of credit derivative receivables and $715 million of credit derivative payables with underlying asset-backed securities risk have been included in the inputs and ranges provided for corporate debt securities, obligations of U.S. states and municipalities and other.

(d) Long-term debt, other borrowed funds and deposits include structured notes issued by the Firm that are predominantly financial instruments containing embedded derivatives. The estimation of the fair value of structured notes is predominantly based on the derivative features embedded within the instruments. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.

(e) The range has not been disclosed due to the wide range of possible values given the diverse nature of the underlying investments.

Changes in and ranges of unobservable inputs
The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent as a change in one unobservable input may give rise to a change in another unobservable input; where relationships exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline); such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

In addition, the following discussion provides a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.

Yield – The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

Credit spread – The credit spread is the amount of additional annualized return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

The yield and the credit spread of a particular mortgage-backed security primarily reflect the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield and credit spreads reflects the range of risk inherent in various instruments owned by the Firm. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, loan-to-value ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages. For corporate debt securities, obligations of U.S. states and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.

Prepayment speed – The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool to collateral pool, and are driven by the type and location of the underlying borrower, the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

Conditional default rate – The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral has high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement. Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Firm's market-making portfolios, conditional default rates are most typically at the lower end of the range presented.

Loss severity – The loss severity (the inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

The loss severity applied in valuing a mortgage-backed security investment depends on a host of factors relating to the underlying mortgages. This includes the loan-to-value ratio, the nature of the lender's lien on the property and various other instrument-specific factors.

Correlation – Correlation is a measure of the relationship between the movements of two variables (e.g., how the change in one variable influences the change in the other). Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity and foreign exchange) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement. The range of correlation inputs between risks within the same asset class are generally narrower than those between underlying risks across asset classes. In addition, the ranges of credit correlation inputs tend to be narrower than those affecting other asset classes.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input as the relationship between the underlying risks may be different over different time periods. Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

Volatility – Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options, commodity options, and interest rate options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option (e.g., the volatility of a particular equity security may be significantly different from that of a particular commodity index), the tenor of the derivative as well as the strike price of the option.

EBITDA multiple – EBITDA multiples refer to the input (often derived from the value of a comparable company) that is multiplied by the historic and/or expected earnings before interest, taxes, depreciation and amortization ("EBITDA") of a company in order to estimate the company's value. An increase in the EBITDA multiple, in isolation, net of adjustments, would result in an increase in a fair value measurement.

Net asset value – Net asset value is the total value of a fund's assets less liabilities. An increase in net asset value would result in an increase in a fair value measurement.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2014, 2013 and 2012. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2014 (in millions)	Fair value at January 1, 2014	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2014	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2014
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 1,005	$ (97)	$ 351	$ (186)	$ (121)	$ (30)	$ 922	$ (92)
Residential – nonagency	726	66	827	(761)	(41)	(154)	663	(15)
Commercial – nonagency	432	17	980	(914)	(60)	(149)	306	(12)
Total mortgage-backed securities	2,163	(14)	2,158	(1,861)	(222)	(333)	1,891	(119)
Obligations of U.S. states and municipalities	1,382	90	298	(358)	(139)	–	1,273	(27)
Non-U.S. government debt securities	143	24	719	(617)	(3)	36	302	10
Corporate debt securities	5,920	210	5,854	(3,372)	(4,531)	(1,092)	2,989	379
Loans	13,455	387	13,551	(7,917)	(4,623)	(1,566)	13,287	123
Asset-backed securities	1,272	19	2,240	(2,126)	(283)	142	1,264	(30)
Total debt instruments	24,335	716	24,820	(16,251)	(9,801)	(2,813)	21,006	336
Equity securities	885	112	248	(272)	(290)	(252)	431	46
Physical commodities	4	(1)	–	–	(1)	–	2	–
Other	2,000	239	1,426	(276)	(201)	(2,138)	1,050	329
Total trading assets – debt and equity instruments	27,224	1,066 [c]	26,494	(16,799)	(10,293)	(5,203)	22,489	711 [c]
Net derivative receivables:[a]								
Interest rate	2,379	184	198	(256)	(1,771)	(108)	626	(853)
Credit	95	(149)	272	(47)	92	(74)	189	(107)
Foreign exchange	(1,200)	(137)	139	(27)	668	31	(526)	(62)
Equity	(1,063)	154	2,044	(2,863)	10	(67)	(1,785)	583
Commodity	115	(465)	1	(113)	(109)	6	(565)	(186)
Total net derivative receivables	326	(413) [c]	2,654	(3,306)	(1,110)	(212)	(2,061)	(625) [c]
Available-for-sale securities:								
Asset-backed securities	1,088	(41)	275	(2)	(101)	(311)	908	(40)
Other	1,234	(19)	122	–	(223)	(985)	129	(2)
Total available-for-sale securities	2,322	(60) [d]	397	(2)	(324)	(1,296)	1,037	(42) [d]
Loans	1,931	(254) [c]	3,258	(845)	(1,549)	–	2,541	(234) [c]
Mortgage servicing rights	9,614	(1,826) [e]	768	(209)	(911)	–	7,436	(1,826) [e]
Other assets:								
Private equity investments	6,474	443 [c]	164	(1,967)	(360)	(2,279)	2,475	26 [c]
All other	3,176	33 [f]	190	(451)	(577)	–	2,371	11 [f]

Year ended December 31, 2014 (in millions)	Fair value at January 1, 2014	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2014	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2014
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 2,255	$ 149 [c]	$ –	$ –	$ 1,578	$ (197)	$ (926)	$ 2,859	$ 130 [c]
Other borrowed funds	2,074	(596) [c]	–	–	5,377	(6,127)	725	1,453	(415) [c]
Trading liabilities – debt and equity instruments	113	(5) [c]	(305)	323	–	(5)	(49)	72	2 [c]
Accounts payable and other liabilities	25	27 [f]	–	–	–	(16)	–	36	– [f]
Beneficial interests issued by consolidated VIEs	1,240	(4) [c]	–	–	775	(763)	(102)	1,146	(22) [c]
Long-term debt	10,008	(40) [c]	–	–	7,421	(5,231)	(281)	11,877	(9) [c]

Year ended December 31, 2013 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at January 1, 2013	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2013	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2013
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 498	$ 169	$ 819	$ (381)	$ (100)	$ –	$ 1,005	$ 200
Residential – nonagency	663	407	780	(1,028)	(91)	(5)	726	205
Commercial – nonagency	1,207	114	841	(1,522)	(208)	–	432	(4)
Total mortgage-backed securities	2,368	690	2,440	(2,931)	(399)	(5)	2,163	401
Obligations of U.S. states and municipalities	1,436	71	472	(251)	(346)	–	1,382	18
Non-U.S. government debt securities	67	4	1,449	(1,479)	(8)	110	143	(1)
Corporate debt securities	5,308	103	7,602	(5,975)	(1,882)	764	5,920	466
Loans	10,787	665	10,411	(7,431)	(685)	(292)	13,455	315
Asset-backed securities	3,696	191	1,912	(2,379)	(292)	(1,856)	1,272	105
Total debt instruments	23,662	1,724	24,286	(20,446)	(3,612)	(1,279)	24,335	1,304
Equity securities	1,114	(41)	328	(266)	(135)	(115)	885	46
Physical Commodities	–	(4)	–	(8)	–	16	4	(4)
Other	863	558	659	(95)	(120)	135	2,000	1,074
Total trading assets – debt and equity instruments	25,639	2,237 [c]	25,273	(20,815)	(3,867)	(1,243)	27,224	2,420 [c]
Net derivative receivables:[a]								
Interest rate	3,322	1,358	344	(220)	(2,391)	(34)	2,379	107
Credit	1,873	(1,697)	115	(12)	(357)	173	95	(1,449)
Foreign exchange	(1,750)	(101)	3	(4)	683	(31)	(1,200)	(110)
Equity	(1,806)	2,528 [i]	1,305 [i]	(2,111) [i]	(1,353)	374	(1,063)	872
Commodity	254	816	105	(3)	(1,107)	50	115	410
Total net derivative receivables	1,893	2,904 [c]	1,872	(2,350)	(4,525)	532	326	(170) [c]
Available-for-sale securities:								
Asset-backed securities	28,024	4	579	(57)	(57)	(27,405)	1,088	4
Other	892	26	508	(216)	(6)	30	1,234	25
Total available-for-sale securities	28,916	30 [d]	1,087	(273)	(63)	(27,375)	2,322	29 [d]
Loans	2,282	81 [c]	1,065	(191)	(1,306)	–	1,931	(21) [c]
Mortgage servicing rights	7,614	1,612 [e]	2,215	(725)	(1,102)	–	9,614	1,612 [e]
Other assets:								
Private equity investments	7,181	645 [c]	673	(1,137)	(687)	(201)	6,474	262 [c]
All other	4,258	98 [f]	272	(730)	(722)	–	3,176	53 [f]

Year ended December 31, 2013 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at January 1, 2013	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2013	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2013
Liabilities:[b]									
Deposits	$ 1,983	$ (82) [c]	$ –	$ –	$ 1,248	$ (222)	$ (672)	$ 2,255	$ (88) [c]
Other borrowed funds	1,619	(177) [c]	–	–	7,108	(6,845)	369	2,074	291 [c]
Trading liabilities – debt and equity instruments	205	(83) [c]	(2,418)	2,594	–	(54)	(131)	113	(100) [c]
Accounts payable and other liabilities	36	(2) [f]	–	–	–	(9)	–	25	(2) [f]
Beneficial interests issued by consolidated VIEs	925	174 [c]	–	–	353	(212)	–	1,240	167 [c]
Long-term debt	8,476	(435) [c]	–	–	6,830	(4,362)	(501)	10,008	(85) [c]

Year ended December 31, 2012 (in millions)	Fair value at January 1, 2012	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2012	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2012
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 86	$ (44)	$ 575	$ (103)	$ (16)	$ –	$ 498	$ (21)
Residential – nonagency	796	151	417	(533)	(145)	(23)	663	74
Commercial – nonagency	1,758	(159)	287	(475)	(104)	(100)	1,207	(145)
Total mortgage-backed securities	2,640	(52)	1,279	(1,111)	(265)	(123)	2,368	(92)
Obligations of U.S. states and municipalities	1,619	37	336	(552)	(4)	–	1,436	(15)
Non-U.S. government debt securities	104	(6)	661	(668)	(24)	–	67	(5)
Corporate debt securities	6,373	187	8,391	(6,186)	(3,045)	(412)	5,308	689
Loans	12,209	836	5,342	(3,269)	(3,801)	(530)	10,787	411
Asset-backed securities	7,965	272	2,550	(6,468)	(614)	(9)	3,696	184
Total debt instruments	30,910	1,274	18,559	(18,254)	(7,753)	(1,074)	23,662	1,172
Equity securities	1,177	(209)	460	(379)	(12)	77	1,114	(112)
Other	880	186	68	(108)	(163)	–	863	180
Total trading assets – debt and equity instruments	32,967	1,251 [c]	19,087	(18,741)	(7,928)	(997)	25,639	1,240 [c]
Net derivative receivables:[a]								
Interest rate	3,561	6,930	406	(194)	(7,071)	(310)	3,322	905
Credit	7,732	(4,487)	124	(84)	(1,416)	4	1,873	(3,271)
Foreign exchange	(1,263)	(800)	112	(184)	436	(51)	(1,750)	(957)
Equity	(3,105)	160 [i]	1,279 [i]	(2,174) [i]	899	1,135	(1,806)	580
Commodity	(687)	(673)	74	64	1,278	198	254	(160)
Total net derivative receivables	6,238	1,130 [c]	1,995	(2,572)	(5,874)	976	1,893	(2,903) [c]
Available-for-sale securities:								
Asset-backed securities	24,958	135	9,280	(3,361)	(3,104)	116	28,024	118
Other	528	55	667	(113)	(245)	–	892	59
Total available-for-sale securities	25,486	190 [d]	9,947	(3,474)	(3,349)	116	28,916	177 [d]
Loans	1,647	695 [c]	1,536	(22)	(1,718)	144	2,282	12 [c]
Mortgage servicing rights	7,223	(635) [e]	2,833	(579)	(1,228)	–	7,614	(635) [e]
Other assets:								
Private equity investments	6,751	420 [c]	1,545	(512)	(977)	(46)	7,181	333 [c]
All other	4,374	(195) [f]	818	(238)	(501)	–	4,258	(200) [f]

Year ended December 31, 2012 (in millions)	Fair value at January 1, 2012	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2012	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2012
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 1,418	$ 212 [c]	$ –	$ –	$ 1,236	$ (380)	$ (503)	$ 1,983	$ 185 [c]
Other borrowed funds	1,507	148 [c]	–	–	1,646	(1,774)	92	1,619	72 [c]
Trading liabilities – debt and equity instruments	211	(16) [c]	(2,875)	2,940	–	(50)	(5)	205	(12) [c]
Accounts payable and other liabilities	51	1 [f]	–	–	–	(16)	–	36	1 [f]
Beneficial interests issued by consolidated VIEs	791	181 [c]	–	–	221	(268)	–	925	143 [c]
Long-term debt	10,310	328 [c]	–	–	3,662	(4,511)	(1,313)	8,476	(101) [c]

(a) All level 3 derivatives are presented on a net basis, irrespective of underlying counterparty.
(b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 15%, 18% and 18% at December 31, 2014, 2013 and 2012, respectively.
(c) Predominantly reported in principal transactions revenue, except for changes in fair value for CCB mortgage loans, lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.

(d) Realized gains/(losses) on AFS securities, as well as other-than-temporary impairment losses that are recorded in earnings, are reported in securities gains. Unrealized gains/(losses) are reported in Other Comprehensive Income ("OCI"). Realized gains/(losses) and foreign exchange remeasurement adjustments recorded in income on AFS securities were $(43) million, $17 million, and $145 million for the years ended December 31, 2014, 2013 and 2012, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were $(16) million, $13 million and $45 million for the years ended December 31, 2014, 2013 and 2012, respectively.
(e) Changes in fair value for CCB mortgage servicing rights are reported in mortgage fees and related income.
(f) Predominantly reported in other income.
(g) Loan originations are included in purchases.
(h) All transfers into and/or out of level 3 are assumed to occur at the beginning of the quarterly reporting period in which they occur.
(i) The prior period amounts have been revised. The revision had no impact on the Firm's Consolidated balance sheets or its results of operations.

Level 3 analysis

Consolidated balance sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 2.1% of total Firm assets at December 31, 2014. The following describes significant changes to level 3 assets since December 31, 2013, for those items measured at fair value on a recurring basis. For further information on changes impacting items measured at fair value on a nonrecurring basis, see Assets and liabilities measured at fair value on a nonrecurring basis on page 197.

For the year ended December 31, 2014

Level 3 assets were $50.9 billion at December 31, 2014, reflecting a decrease of $18.4 billion from December 31, 2013, due to the following:

- $6.0 billion decrease in gross derivative receivables due to a $4.5 billion decrease in equity derivative receivables due to expirations and a transfer from level 3 into level 2 as a result of an increase in observability of certain equity option valuation inputs; and a $1.2 billion decrease in interest rate derivatives due to market movements;
- $4.7 billion decrease in trading assets - debt and equity instruments is largely due to a decrease of $2.9 billion in corporate debt securities. The decrease in corporate debt securities is driven by transfers from level 3 to level 2 as a result of an increase in observability of certain valuation inputs, as well as net sales and maturities;
- $4.0 billion decrease in private equity investments predominantly driven by $2.0 billion in sales and $2.3 billion of transfers into level 2 based on an increase in observability and price transparency;
- $2.2 billion decrease in MSRs. For further discussion of the change, refer to Note 17.

Gains and losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the years ended December 31, 2014, 2013 and 2012. For further information on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 191–195.

2014

- $1.8 billion of losses on MSRs. For further discussion of the change, refer to Note 17;
- $1.1 billion of net gains on trading assets - debt and equity instruments, largely driven by market movements and client-driven financing transactions.

2013

- $2.9 billion of net gains on derivatives, largely driven by $2.5 billion of gains on equity derivatives, primarily related to client-driven market-making activity and a rise in equity markets; and $1.4 billion of gains, predominantly on interest rate lock and mortgage loan purchase commitments; partially offset by $1.7 billion of losses on credit derivatives from the impact of tightening reference entity credit spreads;
- $2.2 billion of net gains on trading assets - debt and equity instruments, largely driven by market making and credit spread tightening in nonagency mortgage-backed securities and trading loans, and the impact of market movements on client-driven financing transactions;
- $1.6 billion of net gains on MSRs. For further discussion of the change, refer to Note 17.

2012

- $1.3 billion of net gains on trading assets - debt and equity instruments, largely driven by tightening of credit spreads and fluctuation in foreign exchange rates;
- $1.1 billion of net gains on derivatives, driven by $6.9 billion of net gains predominantly on interest rate lock commitments due to increased volumes and lower interest rates, partially offset by $4.5 billion of net losses on credit derivatives largely as a result of tightening of reference entity credit spreads.

Credit and funding adjustments

When determining the fair value of an instrument, it may be necessary to record adjustments to the Firm's estimates of fair value in order to reflect counterparty credit quality, the Firm's own creditworthiness, and the impact of funding:

- Credit valuation adjustments ("CVA") are taken to reflect the credit quality of a counterparty in the valuation of derivatives. CVA are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few classes of derivative contracts are listed on an exchange, derivative positions are predominantly valued using models that use as their basis observable market parameters. An adjustment therefore may be necessary to reflect the credit quality of each derivative counterparty to arrive at fair value.

  The Firm estimates derivatives CVA using a scenario analysis to estimate the expected credit exposure across all of the Firm's positions with each counterparty, and then estimates losses as a result of a counterparty credit event. The key inputs to this methodology are (i) the expected positive exposure to each counterparty based on a simulation that assumes the current population of existing derivatives with each counterparty remains unchanged and considers contractual factors designed to mitigate the Firm's credit exposure, such as collateral and legal rights of offset; (ii) the probability of a default event occurring for each counterparty, as derived from observed or estimated CDS spreads; and (iii) estimated recovery rates implied by CDS, adjusted to consider the differences in recovery rates as a derivative creditor relative to those reflected in CDS spreads, which generally reflect senior unsecured creditor risk. As such, the Firm estimates derivatives CVA relative to the relevant benchmark interest rate.

- DVA is taken to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. The DVA calculation methodology is generally consistent with the CVA methodology described above and incorporates JPMorgan Chase's credit spread as observed through the CDS market to estimate the probability of default and loss given default as a result of a systemic event affecting the Firm. Structured notes DVA is estimated using the current fair value of the structured note as the exposure amount, and is otherwise consistent with the derivative DVA methodology.

- The Firm incorporates the impact of funding in its valuation estimates where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. As a result, the fair value of collateralized derivatives is estimated by discounting expected future cash flows at the relevant overnight indexed swap ("OIS") rate given the underlying collateral agreement with the counterparty. Effective in 2013, the Firm implemented a FVA framework to incorporate the impact of funding into its valuation estimates for uncollateralized (including partially collateralized) over-the-counter ("OTC") derivatives and structured notes. The Firm's FVA framework leverages its existing CVA and DVA calculation methodologies, and considers the fact that the Firm's own credit risk is a significant component of funding costs. The key inputs are: (i) the expected funding requirements arising from the Firm's positions with each counterparty and collateral arrangements; (ii) for assets, the estimated market funding cost in the principal market; and (iii) for liabilities, the hypothetical market funding cost for a transfer to a market participant with a similar credit standing as the Firm.

Upon the implementation of the FVA framework in 2013, the Firm recorded a one time $1.5 billion loss in principal transactions revenue that was recorded in the CIB. While the FVA framework applies to both assets and liabilities, the loss on implementation largely related to uncollateralized derivative receivables given that the impact of the Firm's own credit risk, which is a significant component of funding costs, was already incorporated in the valuation of liabilities through the application of DVA.

The following table provides the credit and funding adjustments, excluding the effect of any associated hedging activities, reflected within the Consolidated balance sheets as of the dates indicated.

December 31, (in millions)	**2014**	2013
Derivative receivables balance[(a)]	**$ 78,975**	$ 65,759
Derivative payables balance[(a)]	**71,116**	57,314
Derivatives CVA[(b)]	**(2,674)**	(2,352)
Derivatives DVA and FVA[(b)(c)]	**(380)**	(322)
Structured notes balance [(a)(d)]	**53,772**	48,808
Structured notes DVA and FVA[(b)(e)]	**1,152**	952

(a) Balances are presented net of applicable CVA and DVA/FVA.
(b) Positive CVA and DVA/FVA represent amounts that increased receivable balances or decreased payable balances; negative CVA and DVA/FVA represent amounts that decreased receivable balances or increased payable balances.
(c) At December 31, 2014 and 2013, included derivatives DVA of $714 million and $715 million, respectively.
(d) Structured notes are predominantly financial instruments containing embedded derivatives that are measured at fair value based on the Firm's election under the fair value option. At December 31, 2014 and 2013, included $943 million and $1.1 billion, respectively, of financial instruments with no embedded derivative for which the fair value option has also been elected. For further information on these elections, see Note 4.
(e) At December 31, 2014 and 2013, included structured notes DVA of $1.4 billion and $1.4 billion, respectively.

The following table provides the impact of credit and funding adjustments on Principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities.

Year ended December 31, (in millions)	2014	2013	2012
Credit adjustments:			
Derivatives CVA	**$ (322)**	$ 1,886	$ 2,698
Derivatives DVA and FVA[(a)]	**(58)**	(1,152)	(590)
Structured notes DVA and FVA[(b)]	**200**	(760)	(340)

(a) Included derivatives DVA of $(1) million, $(115) million and $(590) million for the years ended December 31, 2014, 2013 and 2012, respectively.

(b) Included structured notes DVA of $20 million, $(337) million and $(340) million for the years ended December 31, 2014, 2013 and 2012, respectively.

Assets and liabilities measured at fair value on a nonrecurring basis

At December 31, 2014 and 2013, assets measured at fair value on a nonrecurring basis were $4.5 billion and $6.2 billion, respectively, comprised predominantly of loans that had fair value adjustments for the year ended December 31, 2014. At December 31, 2014, $1.3 billion and $3.2 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. At December 31, 2013, $339 million and $5.8 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. Liabilities measured at fair value on a nonrecurring basis were not significant at December 31, 2014 and 2013. For the years ended December 31, 2014, 2013 and 2012, there were no significant transfers between levels 1, 2 and 3.

Of the $3.2 billion of the level 3 assets measured at fair value on a nonrecurring basis as of December 31, 2014:

- $1.6 billion related to consumer loans that were reclassified to held-for-sale during the fourth quarter of 2014 subject to a lower of cost or fair value adjustment. These loans were classified as level 3, as they are valued based on the Firm's internal valuation methodology;
- $809 million related to residential real estate loans carried at the net realizable value of the underlying collateral (i.e., collateral-dependent loans and other loans charged off in accordance with regulatory guidance). These amounts are classified as level 3, as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values. These discounts to the broker price opinions ranged from 8% to 66%, with a weighted average of 26%.

The total change in the recorded value of assets and liabilities for which a fair value adjustment has been included in the Consolidated statements of income for the years ended December 31, 2014, 2013 and 2012, related to financial instruments held at those dates were losses of $992 million, $789 million and $1.6 billion, respectively; these reductions were predominantly associated with loans.

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), see Note 14.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance sheets at fair value

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table. However, certain financial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements. Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of JPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated balance sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks; deposits with banks; federal funds sold; securities purchased under resale agreements and securities borrowed with short-dated maturities; short-term receivables and accrued interest receivable; commercial paper; federal funds purchased; securities loaned and sold under repurchase agreements with short-dated maturities; other borrowed funds; accounts payable; and accrued liabilities. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents by fair value hierarchy classification the carrying values and estimated fair values at December 31, 2014 and 2013, of financial assets and liabilities, excluding financial instruments which are carried at fair value on a recurring basis. For additional information regarding the financial instruments within the scope of this disclosure, and the methods and significant assumptions used to estimate their fair value, see pages 181–184 of this Note.

	December 31, 2014					December 31, 2013				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value
Financial assets										
Cash and due from banks	**$ 27.8**	**$ 27.8**	**$ –**	**$ –**	**$ 27.8**	$ 39.8	$ 39.8	$ –	$ –	$ 39.8
Deposits with banks	**484.5**	**480.4**	**4.1**	**–**	**484.5**	316.1	309.7	6.4	–	316.1
Accrued interest and accounts receivable	**70.1**	**–**	**70.0**	**0.1**	**70.1**	65.2	–	64.9	0.3	65.2
Federal funds sold and securities purchased under resale agreements	**187.2**	**–**	**187.2**	**–**	**187.2**	223.0	–	223.0	–	223.0
Securities borrowed	**109.4**	**–**	**109.4**	**–**	**109.4**	107.7	–	107.7	–	107.7
Securities, held-to-maturity[a]	**49.3**	**–**	**51.2**	**–**	**51.2**	24.0	–	23.7	–	23.7
Loans, net of allowance for loan losses[b]	**740.5**	**–**	**21.8**	**723.1**	**744.9**	720.1	–	23.0	697.2	720.2
Other[c]	**58.1**	**–**	**55.7**	**7.1**	**62.8**	58.2	–	54.5	7.4	61.9
Financial liabilities										
Deposits	**$ 1,354.6**	**$ –**	**$ 1,353.6**	**$ 1.2**	**$ 1,354.8**	$ 1,281.1	$ –	$ 1,280.3	$ 1.2	$ 1,281.5
Federal funds purchased and securities loaned or sold under repurchase agreements	**189.1**	**–**	**189.1**	**–**	**189.1**	175.7	–	175.7	–	175.7
Commercial paper	**66.3**	**–**	**66.3**	**–**	**66.3**	57.8	–	57.8	–	57.8
Other borrowed funds	**15.5**		**15.5**	**–**	**15.5**	14.7	–	14.7	–	14.7
Accounts payable and other liabilities	**176.7**	**–**	**173.7**	**2.8**	**176.5**	160.2	–	158.2	1.8	160.0
Beneficial interests issued by consolidated VIEs	**50.2**	**–**	**48.2**	**2.0**	**50.2**	47.6	–	44.3	3.2	47.5
Long-term debt and junior subordinated deferrable interest debentures[d]	**246.6**	**–**	**251.6**	**3.8**	**255.4**	239.0	–	240.8	6.0	246.8

(a) Carrying value includes unamortized discount or premium.

(b) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in the allowance for loan loss calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in the allowance for loan losses. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see Valuation hierarchy on pages 181–184.

(c) Current period amounts have been updated to include certain nonmarketable equity securities. Prior period amounts have been revised to conform to the current presentation.

(d) Carrying value includes unamortized original issue discount and other valuation adjustments.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets, nor are they actively traded. The carrying value and estimated fair value of the Firm's wholesale lending-related commitments were as follows for the periods indicated.

	December 31, 2014					December 31, 2013				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value
Wholesale lending-related commitments	**$ 0.6**	**$ –**	**$ –**	**$ 1.6**	**$ 1.6**	$ 0.7	$ –	$ –	$ 1.0	$ 1.0

(a) Represents the allowance for wholesale lending-related commitments. Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which are recognized at fair value at the inception of guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases as permitted by law, without notice. For a further discussion of the valuation of lending-related commitments, see page 182 of this Note.

Trading assets and liabilities

Trading assets include debt and equity instruments owned by JPMorgan Chase ("long" positions) that are held for client market-making and client-driven activities, as well as for certain risk management activities, certain loans managed on a fair value basis and for which the Firm has elected the fair value option, and physical commodities inventories that are generally accounted for at the lower of cost or market (market approximates fair value). Trading liabilities include debt and equity instruments that the Firm has sold to other parties but does not own ("short" positions). The Firm is obligated to purchase instruments at a future date to cover the short positions. Included in trading assets and trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. Trading assets and liabilities are carried at fair value on the Consolidated balance sheets. Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).

Trading assets and liabilities – average balances

Average trading assets and liabilities were as follows for the periods indicated.

Year ended December 31, (in millions)	2014	2013	2012
Trading assets – debt and equity instruments	**$ 327,259**	$ 340,449	$ 349,337
Trading assets – derivative receivables	**67,123**	72,629	85,744
Trading liabilities – debt and equity instruments[a]	**84,707**	77,706	69,001
Trading liabilities – derivative payables	**54,758**	64,553	76,162

(a) Primarily represent securities sold, not yet purchased.

Note 4 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments not previously carried at fair value.

The Firm has elected to measure certain instruments at fair value in order to:

- Mitigate income statement volatility caused by the differences in the measurement basis of elected instruments (for example, certain instruments elected were previously accounted for on an accrual basis) while the associated risk management arrangements are accounted for on a fair value basis;
- Eliminate the complexities of applying certain accounting models (e.g., hedge accounting or bifurcation accounting for hybrid instruments); and/or
- Better reflect those instruments that are managed on a fair value basis.

The Firm has elected to measure the following instruments at fair value:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis.
- Securities financing arrangements with an embedded derivative and/or a maturity of greater than one year.
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument.
- Certain investments that receive tax credits and other equity investments acquired as part of the Washington Mutual transaction.
- Structured notes issued as part of CIB's client-driven activities. (Structured notes are predominantly financial instruments that contain embedded derivatives.)
- Long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value.

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated statements of income for the years ended December 31, 2014, 2013 and 2012, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2014			2013			2012		
December 31, (in millions)	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	**$ (15)**	**$ –**	**$ (15)**	$ (454)	$ –	$ (454)	$ 161	$ –	$ 161
Securities borrowed	**(10)**	**–**	**(10)**	10	–	10	10	–	10
Trading assets:						–			–
Debt and equity instruments, excluding loans	**639**	**–**	**639**	582	7	589	513	7	520
Loans reported as trading assets:									
Changes in instrument-specific credit risk	**885**	**29** [(c)]	**914**	1,161	23 [(c)]	1,184	1,489	81 [(c)]	1,570
Other changes in fair value	**352**	**1,353** [(c)]	**1,705**	(133)	1,833 [(c)]	1,700	(183)	7,670 [(c)]	7,487
Loans:									
Changes in instrument-specific credit risk	**40**	**–**	**40**	36	–	36	(14)	–	(14)
Other changes in fair value	**34**	**–**	**34**	17	–	17	676	–	676
Other assets	**24**	**(122)** [(d)]	**(98)**	32	(29) [(d)]	3	–	(339) [(d)]	(339)
Deposits[(a)]	**(287)**	**–**	**(287)**	260	–	260	(188)	–	(188)
Federal funds purchased and securities loaned or sold under repurchase agreements	**(33)**	**–**	**(33)**	73	–	73	(25)	–	(25)
Other borrowed funds[(a)]	**(891)**	**–**	**(891)**	(399)	–	(399)	494	–	494
Trading liabilities	**(17)**	**–**	**(17)**	(46)	–	(46)	(41)	–	(41)
Beneficial interests issued by consolidated VIEs	**(233)**	**–**	**(233)**	(278)	–	(278)	(166)	–	(166)
Other liabilities	**(27)**	**–**	**(27)**	–	2	2	–	–	–
Long-term debt:									
Changes in instrument-specific credit risk[(a)]	**101**	**–**	**101**	(271)	–	(271)	(835)	–	(835)
Other changes in fair value[(b)]	**(615)**	**–**	**(615)**	1,280	–	1,280	(1,025)	–	(1,025)

(a) Total changes in instrument-specific credit risk (DVA) related to structured notes were $20 million, $(337) million and $(340) million for the years ended December 31, 2014, 2013 and 2012, respectively. These totals include such changes for structured notes classified within deposits and other borrowed funds, as well as long-term debt.

(b) Structured notes are predominantly financial instruments containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings that are attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2014 and 2013, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2014			2013		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding
Loans[a]						
Nonaccrual loans						
Loans reported as trading assets	**$ 3,847**	**$ 905**	**$ (2,942)**	$ 5,156	$ 1,491	$ (3,665)
Loans	**7**	**7**	**—**	209	154	(55)
Subtotal	**3,854**	**912**	**(2,942)**	5,365	1,645	(3,720)
All other performing loans						
Loans reported as trading assets	**37,608**	**35,462**	**(2,146)**	33,069	29,295	(3,774)
Loans	**2,397**	**2,389**	**(8)**	1,618	1,563	(55)
Total loans	**$ 43,859**	**$ 38,763**	**$ (5,096)**	$ 40,052	$ 32,503	$ (7,549)
Long-term debt						
Principal-protected debt	**$ 14,660** [c]	**$ 15,484**	**$ 824**	$ 15,797 [c]	$ 15,909	$ 112
Nonprincipal-protected debt[b]	**NA**	**14,742**	**NA**	NA	12,969	NA
Total long-term debt	**NA**	**$ 30,226**	**NA**	NA	$ 28,878	NA
Long-term beneficial interests						
Nonprincipal-protected debt[b]	**NA**	**$ 2,162**	**NA**	NA	$ 1,996	NA
Total long-term beneficial interests	**NA**	**$ 2,162**	**NA**	NA	$ 1,996	NA

(a) There were no performing loans that were ninety days or more past due as of December 31, 2014 and 2013, respectively.
(b) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal protected notes.
(c) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflected as the remaining contractual principal is the final principal payment at maturity.

At December 31, 2014 and 2013, the contractual amount of letters of credit for which the fair value option was elected was $4.5 billion and $4.5 billion, respectively, with a corresponding fair value of $(147) million and $(99) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29.

Structured note products by balance sheet classification and risk component

The table below presents the fair value of the structured notes issued by the Firm, by balance sheet classification and the primary risk to which the structured notes' embedded derivative relates.

	December 31, 2014				December 31, 2013			
(in millions)	Long-term debt	Other borrowed funds	Deposits	Total	Long-term debt	Other borrowed funds	Deposits	Total
Risk exposure								
Interest rate	**$ 10,858**	**$ 460**	**$ 2,119**	**$ 13,437**	$ 9,516	$ 615	$ 1,270	$ 11,401
Credit	**4,023**	**450**	**—**	**4,473**	4,248	13	—	4,261
Foreign exchange	**2,150**	**211**	**17**	**2,378**	2,321	194	27	2,542
Equity	**12,348**	**12,412**	**4,415**	**29,175**	11,082	11,936	3,736	26,754
Commodity	**710**	**644**	**2,012**	**3,366**	1,260	310	1,133	2,703
Total structured notes	**$ 30,089**	**$ 14,177**	**$ 8,563**	**$ 52,829**	$ 28,427	$ 13,068	$ 6,166	$ 47,661

Note 5 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential concentration risks and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. In the wholesale portfolio, risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis. The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, and collateral and other risk-reduction techniques. For additional information on loans, see Note 14.

The Firm does not believe that its exposure to any particular loan product (e.g., option adjustable rate mortgages ("ARMs")), industry segment (e.g., commercial real estate) or its exposure to residential real estate loans with high loan-to-value ratios results in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale-related credit exposure by the Firm's three credit portfolio segments as of December 31, 2014 and 2013.

	2014				2013			
	Credit exposure	On-balance sheet		Off-balance sheet[d]	Credit exposure	On-balance sheet		Off-balance sheet[d]
December 31, (in millions)		Loans	Derivatives			Loans	Derivatives	
Total consumer, excluding credit card	**$ 353,635**	**$ 295,374**	**$ –**	**$ 58,153**	$ 345,259	$ 289,063	$ –	$ 56,057
Total credit card	**657,011**	**131,048**	**–**	**525,963**	657,174	127,791	–	529,383
Total consumer	**1,010,646**	**426,422**	**–**	**584,116**	1,002,433	416,854	–	585,440
Wholesale-related								
Real Estate	**107,386**	**79,113**	**333**	**27,940**	87,102	69,151	460	17,491
Banks & Finance Cos	**68,203**	**24,244**	**22,057**	**21,902**	66,881	25,482	18,888	22,511
Healthcare	**57,707**	**13,793**	**4,630**	**39,284**	46,934	14,383	2,203	30,348
Oil & Gas	**48,315**	**15,616**	**1,872**	**30,827**	45,910	13,319	3,202	29,389
Consumer Products	**37,818**	**10,646**	**593**	**26,579**	35,666	8,708	3,319	23,639
Asset Managers	**36,374**	**8,043**	**9,569**	**18,762**	34,145	9,099	715	24,331
State & Municipal Govt	**31,858**	**7,593**	**4,079**	**20,186**	33,506	5,656	7,175	20,675
Retail & Consumer Services	**28,258**	**7,752**	**361**	**20,145**	28,983	5,582	2,248	21,153
Utilities	**28,060**	**4,843**	**2,317**	**20,900**	25,068	7,504	273	17,291
Central Govt	**21,081**	**1,081**	**11,819**	**8,181**	21,403	4,426	1,392	15,585
Technology	**20,977**	**4,727**	**1,341**	**14,909**	21,049	1,754	9,998	9,297
Machinery & Equipment Mfg	**20,573**	**6,537**	**553**	**13,483**	19,078	5,969	476	12,633
Transportation	**16,365**	**9,107**	**699**	**6,559**	17,434	5,825	560	11,049
Business Services	**16,201**	**4,867**	**456**	**10,878**	14,601	4,497	594	9,510
Metals/Mining	**15,911**	**5,628**	**601**	**9,682**	13,975	6,845	621	6,509
All other[a]	**320,446**	**120,912**	**17,695**	**181,839**	308,519	120,063	13,635	174,821
Subtotal	**875,533**	**324,502**	**78,975**	**472,056**	820,254	308,263	65,759	446,232
Loans held-for-sale and loans at fair value	**6,412**	**6,412**	**–**	**–**	13,301	13,301	–	–
Receivables from customers and other[b]	**28,972**	**–**	**–**	**–**	26,744	–	–	–
Total wholesale-related	**910,917**	**330,914**	**78,975**	**472,056**	860,299	321,564	65,759	446,232
Total exposure[c]	**$ 1,921,563**	**$ 757,336**	**$ 78,975**	**$ 1,056,172**	$ 1,862,732	$ 738,418	$ 65,759	$ 1,031,672

(a) For more information on exposures to SPEs included within All other, see Note 16.
(b) Primarily consists of margin loans to prime brokerage customers that are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily minimum collateral requirements. As a result of the Firm's credit risk mitigation practices, the Firm did not hold any reserves for credit impairment on these receivables.
(c) For further information regarding on-balance sheet credit concentrations by major product and/or geography, see Note 6 and Note 14. For information regarding concentrations of off-balance sheet lending-related financial instruments by major product, see Note 29.
(d) Represents lending-related financial instruments.

Note 6 – Derivative instruments

Derivative instruments enable end-users to modify or mitigate exposure to credit or market risks. Counterparties to a derivative contract seek to obtain risks and rewards similar to those that could be obtained from purchasing or selling a related cash instrument without having to exchange upfront the full purchase or sales price. JPMorgan Chase makes markets in derivatives for customers and also uses derivatives to hedge or manage its own risk exposures. Predominantly all of the Firm's derivatives are entered into for market-making or risk management purposes.

Market-making derivatives
The majority of the Firm's derivatives are entered into for market-making purposes. Customers use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives. The Firm also seeks to earn a spread between the client derivatives and offsetting positions, and from the remaining open risk positions.

Risk management derivatives
The Firm manages its market risk exposures using various derivative instruments.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increases or decreases as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar-equivalent values of the foreign currency-denominated assets and liabilities or forecasted revenue or expense increase or decrease. Gains or losses on the derivative instruments related to these foreign currency-denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities contracts are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset the depreciation or appreciation of the related inventory.

Credit derivatives are used to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of credit default swaps. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 213–215 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 213 of this Note, and the hedge accounting gains and losses tables on pages 211–213 of this Note.

Derivative counterparties and settlement types
The Firm enters into OTC derivatives, which are negotiated and settled bilaterally with the derivative counterparty. The Firm also enters into, as principal, certain exchange-traded derivatives ("ETD") such as futures and options, and "cleared" over-the-counter ("OTC-cleared") derivative contracts with central counterparties ("CCPs"). ETD contracts are generally standardized contracts traded on an exchange and cleared by the CCP, which is the counterparty from the inception of the transactions. OTC-cleared derivatives are traded on a bilateral basis and then novated to the CCP for clearing.

Derivative Clearing Services
The Firm provides clearing services for clients where the Firm acts as a clearing member with respect to certain derivative exchanges and clearinghouses. The Firm does not reflect the clients' derivative contracts in its Consolidated Financial Statements. For further information on the Firm's clearing services, see Note 29.

Accounting for derivatives
All free-standing derivatives that the Firm executes for its own account are required to be recorded on the Consolidated balance sheets at fair value.

As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. For further discussion of the offsetting of assets and liabilities, see Note 1. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The tabular disclosures on pages 207–213 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 3 and 4.

Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and commodity derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased credit default swaps used to manage the credit risk of loans and lending-related commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate and commodity derivatives used for risk management purposes.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the change in the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item and for interest-bearing instruments is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges primarily to hedge the exposure to variability in forecasted cash flows from floating-rate assets and liabilities and foreign currency–denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in OCI and recognized in the Consolidated statements of income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in accumulated other comprehensive income/(loss) ("AOCI") is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses foreign currency hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For foreign currency qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	Page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
◦ Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate	211
◦ Interest rate	Hedge floating rate assets and liabilities	Cash flow hedge	Corporate	212
◦ Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	211
◦ Foreign exchange	Hedge forecasted revenue and expense	Cash flow hedge	Corporate	212
◦ Foreign exchange	Hedge the value of the Firm's investments in non-U.S. subsidiaries	Net investment hedge	Corporate	213
◦ Commodity	Hedge commodity inventory	Fair value hedge	CIB	211
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
◦ Interest rate	Manage the risk of the mortgage pipeline, warehouse loans and MSRs	Specified risk management	CCB	213
◦ Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	213
◦ Commodity	Manage the risk of certain commodities-related contracts and investments	Specified risk management	CIB	213
◦Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate	213
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	213
• Various	Other derivatives[(a)]	Market-making and other	CIB, Corporate	213

(a) Other derivatives included the synthetic credit portfolio. The synthetic credit portfolio was a portfolio of index credit derivatives, including short and long positions, that was originally held by CIO. On July 2, 2012, CIO transferred the synthetic credit portfolio, other than a portion that aggregated to a notional amount of approximately $12 billion, to CIB; these retained positions were effectively closed out during the third quarter of 2012. CIB effectively sold the positions that had been transferred to it by the end of 2014. The results of the synthetic credit portfolio, including the portion transferred to CIB, have been included in the gains and losses on derivatives related to market-making activities and other derivatives category discussed on page 213 of this Note.

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2014 and 2013.

	Notional amounts[c]	
December 31, (in billions)	**2014**	2013
Interest rate contracts		
Swaps	**$ 29,734**	$ 35,221
Futures and forwards[a]	**10,189**	11,238
Written options[a]	**3,903**	4,059
Purchased options	**4,259**	4,187
Total interest rate contracts	**48,085**	54,705
Credit derivatives[a][b]	**4,249**	5,331
Foreign exchange contracts		
Cross-currency swaps	**3,346**	3,488
Spot, futures and forwards	**4,669**	3,773
Written options	**790**	659
Purchased options	**780**	652
Total foreign exchange contracts	**9,585**	8,572
Equity contracts		
Swaps[a]	**206**	187
Futures and forwards[a]	**50**	50
Written options	**432**	425
Purchased options	**375**	380
Total equity contracts	**1,063**	1,042
Commodity contracts		
Swaps	**126**	124
Spot, futures and forwards	**193**	234
Written options	**181**	202
Purchased options	**180**	203
Total commodity contracts	**680**	763
Total derivative notional amounts	**$ 63,662**	$ 70,413

(a) The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated balance sheets or its results of operations.

(b) For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 213–215 of this Note.

(c) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.

Impact of derivatives on the Consolidated balance sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated balance sheets as of December 31, 2014 and 2013, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables[a]

	Gross derivative receivables				Gross derivative payables			
December 31, 2014 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[b]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[b]
Trading assets and liabilities								
Interest rate	**$ 951,151**	**$ 5,372**	**$ 956,523**	**$ 33,725**	**$ 921,634**	**$ 3,011**	**$ 924,645**	**$ 17,745**
Credit	**76,842**	**–**	**76,842**	**1,838**	**75,895**	**–**	**75,895**	**1,593**
Foreign exchange	**205,271**	**3,650**	**208,921**	**21,253**	**217,722**	**626**	**218,348**	**22,970**
Equity	**46,792**	**–**	**46,792**	**8,177**	**50,565**	**–**	**50,565**	**11,740**
Commodity	**43,151**	**502**	**43,653**	**13,982**	**45,455**	**168**	**45,623**	**17,068**
Total fair value of trading assets and liabilities	**$ 1,323,207**	**$ 9,524**	**$ 1,332,731**	**$ 78,975**	**$ 1,311,271**	**$ 3,805**	**$ 1,315,076**	**$ 71,116**

	Gross derivative receivables				Gross derivative payables			
December 31, 2013 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[b]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[b]
Trading assets and liabilities								
Interest rate	$ 851,189	$ 3,490	$ 854,679	$ 25,782	$ 820,811	$ 4,543	$ 825,354	$ 13,283
Credit	83,520	–	83,520	1,516	82,402	–	82,402	2,281
Foreign exchange	152,240	1,359	153,599	16,790	158,728	1,397	160,125	15,947
Equity	52,931	–	52,931	12,227	54,654	–	54,654	14,719
Commodity	34,344	1,394	35,738	9,444	37,605	9	37,614	11,084
Total fair value of trading assets and liabilities	$ 1,174,224	$ 6,243	$ 1,180,467	$ 65,759	$ 1,154,200	$ 5,949	$ 1,160,149	$ 57,314

(a) Balances exclude structured notes for which the fair value option has been elected. See Note 4 for further information.

(b) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

The following table presents, as of December 31, 2014 and 2013, the gross and net derivative receivables by contract and settlement type. Derivative receivables have been netted on the Consolidated balance sheets against derivative payables and cash collateral payables to the same counterparty with respect to derivative contracts for which the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the receivables are not eligible under U.S. GAAP for netting on the Consolidated balance sheets, and are shown separately in the table below.

	2014			2013		
December 31, (in millions)	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables
U.S. GAAP nettable derivative receivables						
Interest rate contracts:						
OTC	**$ 548,373**	**$ (521,180)**	**$ 27,193**	$ 486,449	$ (466,493)	$ 19,956
OTC-cleared	**401,656**	**(401,618)**	**38**	362,426	(362,404)	22
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total interest rate contracts	**950,029**	**(922,798)**	**27,231**	848,875	(828,897)	19,978
Credit contracts:						
OTC	**66,636**	**(65,720)**	**916**	66,269	(65,725)	544
OTC-cleared	**9,320**	**(9,284)**	**36**	16,841	(16,279)	562
Total credit contracts	**75,956**	**(75,004)**	**952**	83,110	(82,004)	1,106
Foreign exchange contracts:						
OTC	**202,537**	**(187,634)**	**14,903**	148,953	(136,763)	12,190
OTC-cleared	**36**	**(34)**	**2**	46	(46)	–
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total foreign exchange contracts	**202,573**	**(187,668)**	**14,905**	148,999	(136,809)	12,190
Equity contracts:						
OTC	**23,258**	**(22,826)**	**432**	31,870	(29,289)	2,581
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**18,143**	**(15,789)**	**2,354**	17,732	(11,415)	6,317
Total equity contracts	**41,401**	**(38,615)**	**2,786**	49,602	(40,704)	8,898
Commodity contracts:						
OTC	**22,555**	**(14,327)**	**8,228**	21,619	(15,082)	6,537
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**19,500**	**(15,344)**	**4,156**	12,528	(11,212)	1,316
Total commodity contracts	**42,055**	**(29,671)**	**12,384**	34,147	(26,294)	7,853
Derivative receivables with appropriate legal opinion	**$ 1,312,014**	**$ (1,253,756)[b]**	**$ 58,258**	$ 1,164,733	$ (1,114,708)[b]	$ 50,025
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	**20,717**		**20,717**	15,734		15,734
Total derivative receivables recognized on the Consolidated balance sheets	**$ 1,332,731**		**$ 78,975**	$ 1,180,467		$ 65,759

(a) Exchange-traded derivative amounts that relate to futures contracts are settled daily.
(b) Included cash collateral netted of $74.0 billion and $63.9 billion at December 31, 2014, and 2013, respectively.

The following table presents, as of December 31, 2014 and 2013, the gross and net derivative payables by contract and settlement type. Derivative payables have been netted on the Consolidated balance sheets against derivative receivables and cash collateral receivables from the same counterparty with respect to derivative contracts for which the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the payables are not eligible under U.S. GAAP for netting on the Consolidated balance sheets, and are shown separately in the table below.

	2014			2013		
December 31, (in millions)	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC	**$ 522,170**	**$ (509,650)**	**$ 12,520**	$ 467,850	$ (458,081)	$ 9,769
OTC-cleared	**398,518**	**(397,250)**	**1,268**	354,698	(353,990)	708
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total interest rate contracts	**920,688**	**(906,900)**	**13,788**	822,548	(812,071)	10,477
Credit contracts:						
OTC	**65,432**	**(64,904)**	**528**	65,223	(63,671)	1,552
OTC-cleared	**9,398**	**(9,398)**	**–**	16,506	(16,450)	56
Total credit contracts	**74,830**	**(74,302)**	**528**	81,729	(80,121)	1,608
Foreign exchange contracts:						
OTC	**211,732**	**(195,312)**	**16,420**	155,110	(144,119)	10,991
OTC-cleared	**66**	**(66)**	**–**	61	(59)	2
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total foreign exchange contracts	**211,798**	**(195,378)**	**16,420**	155,171	(144,178)	10,993
Equity contracts:						
OTC	**27,908**	**(23,036)**	**4,872**	33,295	(28,520)	4,775
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**17,167**	**(15,789)**	**1,378**	17,349	(11,415)	5,934
Total equity contracts	**45,075**	**(38,825)**	**6,250**	50,644	(39,935)	10,709
Commodity contracts:						
OTC	**25,129**	**(13,211)**	**11,918**	21,993	(15,318)	6,675
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**18,486**	**(15,344)**	**3,142**	12,367	(11,212)	1,155
Total commodity contracts	**43,615**	**(28,555)**	**15,060**	34,360	(26,530)	7,830
Derivative payables with appropriate legal opinions	**$ 1,296,006**	**$ (1,243,960)[b]**	**$ 52,046**	$ 1,144,452	$ (1,102,835)[b]	$ 41,617
Derivative payables where an appropriate legal opinion has not been either sought or obtained	**19,070**		**19,070**	15,697		15,697
Total derivative payables recognized on the Consolidated balance sheets	**$ 1,315,076**		**$ 71,116**	$ 1,160,149		$ 57,314

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.
(b) Included cash collateral netted of $64.2 billion and $52.1 billion related to OTC and OTC-cleared derivatives at December 31, 2014, and 2013, respectively.

In addition to the cash collateral received and transferred that is presented on a net basis with net derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments but are not eligible for net presentation, because (a) the collateral is comprised of non-cash financial instruments (generally U.S. government and agency securities and other G7 government bonds), (b) the amount of collateral held or transferred exceeds the fair value exposure, at the individual counterparty level, as of the date presented, or (c) the collateral relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained.

The following tables present information regarding certain financial instrument collateral received and transferred as of December 31, 2014 and 2013, that is not eligible for net presentation under U.S. GAAP. The collateral included in these tables relates only to the derivative instruments for which appropriate legal opinions have been obtained; excluded are (i) additional collateral that exceeds the fair value exposure and (ii) all collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

Derivative receivable collateral

	2014			2013		
December 31, (in millions)	Net derivative receivables	Collateral not nettable on the Consolidated balance sheets	Net exposure	Net derivative receivables	Collateral not nettable on the Consolidated balance sheets	Net exposure
Derivative receivables with appropriate legal opinions	**$ 58,258**	**$ (16,194)** [a]	**$ 42,064**	$ 50,025	$ (12,414) [a]	$ 37,611

Derivative payable collateral[b]

	2014			2013		
December 31, (in millions)	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount[c]	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount[c]
Derivative payables with appropriate legal opinions	**$ 52,046**	**$ (10,505)** [a]	**$ 41,541**	$ 41,617	$ (6,873) [a]	$ 34,744

(a) Represents liquid security collateral as well as cash collateral held at third party custodians. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.
(b) Derivative payable collateral relates only to OTC and OTC-cleared derivative instruments. Amounts exclude collateral transferred related to exchange-traded derivative instruments.
(c) Net amount represents exposure of counterparties to the Firm.

Liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk – the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to actively pursue, where possible, the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated balance sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at December 31, 2014 and 2013.

OTC and OTC-cleared derivative payables containing downgrade triggers

December 31, (in millions)	2014	2013
Aggregate fair value of net derivative payables	**$ 32,303**	$ 24,631
Collateral posted	**27,585**	20,346

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), at December 31, 2014 and 2013, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral, except in certain instances in which additional initial margin may be required upon a ratings downgrade, or termination payment requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating of the rating agencies referred to in the derivative contract.

Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

December 31, (in millions)	2014 Single-notch downgrade	2014 Two-notch downgrade	2013 Single-notch downgrade	2013 Two-notch downgrade
Amount of additional collateral to be posted upon downgrade[a]	**$ 1,046**	**$ 3,331**	$ 952	$ 3,244
Amount required to settle contracts with termination triggers upon downgrade[b]	**366**	**1,388**	540	876

(a) Includes the additional collateral to be posted for initial margin.
(b) Amounts represent fair value of derivative payables, and do not reflect collateral posted.

Impact of derivatives on the Consolidated statements of income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pretax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2014, 2013 and 2012, respectively. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated statements of income.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2014 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[d]	Excluded components[e]
Contract type					
Interest rate[a]	**$ 2,106**	**$ (801)**	**$ 1,305**	**$ 131**	**$ 1,174**
Foreign exchange[b]	**8,279**	**(8,532)**	**(253)**	**–**	**(253)**
Commodity[c]	**49**	**145**	**194**	**42**	**152**
Total	**$ 10,434**	**$ (9,188)**	**$ 1,246**	**$ 173**	**$ 1,073**

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2013 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[d]	Excluded components[e]
Contract type					
Interest rate[a]	$ (3,469)	$ 4,851	$ 1,382	$ (132)	$ 1,514
Foreign exchange[b]	(1,096)	864	(232)	–	(232)
Commodity[c]	485	(1,304)	(819)	38	(857)
Total	$ (4,080)	$ 4,411	$ 331	$ (94)	$ 425

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2012 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[d]	Excluded components[e]
Contract type					
Interest rate[a]	$ (1,238)	$ 1,879	$ 641	$ (28)	$ 669
Foreign exchange[b]	(3,027)	2,925	(102)	–	(102)
Commodity[c]	(2,530)	1,131	(1,399)	107	(1,506)
Total	$ (6,795)	$ 5,935	$ (860)	$ 79	$ (939)

(a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income. The current presentation excludes accrued interest.
(b) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in foreign currency rates, were recorded in principal transactions revenue and net interest income.
(c) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value). Gains and losses were recorded in principal transactions revenue.
(d) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.
(e) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts and time values.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives, for the years ended December 31, 2014, 2013 and 2012, respectively. The Firm includes the gain/(loss) on the hedging derivative and the change in cash flows on the hedged item in the same line item in the Consolidated statements of income.

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]			
Year ended December 31, 2014 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	**$ (54)**	**$ –**	**$ (54)**	**$ 189**	**$ 243**
Foreign exchange[b]	**78**	**–**	**78**	**(91)**	**(169)**
Total	**$ 24**	**$ –**	**$ 24**	**$ 98**	**$ 74**

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]			
Year ended December 31, 2013 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (108)	$ –	$ (108)	$ (565)	$ (457)
Foreign exchange[b]	7	–	7	40	33
Total	$ (101)	$ –	$ (101)	$ (525)	$ (424)

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]			
Year ended December 31, 2012 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (3)	$ 5	$ 2	$ 13	$ 16
Foreign exchange[b]	31	–	31	128	97
Total	$ 28	$ 5	$ 33	$ 141	$ 113

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily noninterest revenue and compensation expense.

(c) The Firm did not experience any forecasted transactions that failed to occur for the years ended December 31, 2014, 2013 or 2012.

(d) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

Over the next 12 months, the Firm expects that $33 million (after-tax) of net losses recorded in AOCI at December 31, 2014, related to cash flow hedges will be recognized in income. The maximum length of time over which forecasted transactions are hedged is 9 years, and such transactions primarily relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pretax gains/(losses) recorded on such instruments for the years ended December 31, 2014, 2013 and 2012.

	Gains/(losses) recorded in income and other comprehensive income/(loss)					
	2014		2013		2012	
Year ended December 31, (in millions)	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI
Foreign exchange derivatives	**$(448)**	**$1,698**	$(383)	$773	$(306)	$(82)

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in current-period income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates, and therefore there was no significant ineffectiveness for net investment hedge accounting relationships during 2014, 2013 and 2012.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pretax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from the mortgage pipeline, warehouse loans, MSRs, wholesale lending exposures, AFS securities, foreign currency-denominated liabilities, and commodities-related contracts and investments.

	Derivatives gains/(losses) recorded in income		
Year ended December 31, (in millions)	**2014**	2013	2012
Contract type			
Interest rate[a]	**$ 2,308**	$ 617	$ 5,353
Credit[b]	**(58)**	(142)	(175)
Foreign exchange[c]	**(7)**	1	47
Commodity[d]	**156**	178	94
Total	**$ 2,399**	$ 654	$ 5,319

(a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in the mortgage pipeline, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.

(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.

(c) Primarily relates to hedges of the foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

(d) Primarily relates to commodity derivatives used to mitigate energy price risk associated with energy-related contracts and investments. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from the Firm's market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. See Note 7 for information on principal transactions revenue.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker, the Firm actively manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. Second, as an end-user, the Firm uses credit derivatives to manage credit risk associated with lending exposures (loans and unfunded commitments) and derivatives counterparty exposures in the Firm's wholesale businesses, and to manage the credit risk arising from certain financial instruments in the Firm's market-making businesses. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name CDS and index CDS contracts are typically OTC-cleared derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index comprises a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-related notes

A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a reference entity or an index. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity experiences a specified credit event (or one of the entities that makes up a reference index). If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity. For a further discussion of credit-related notes, see Note 16.

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2014 and 2013. Upon a credit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased through credit-related notes.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

	Maximum payout/Notional amount			
December 31, 2014 (in millions)	Protection sold	Protection purchased with identical underlyings[c]	Net protection (sold)/ purchased[d]	Other protection purchased[e]
Credit derivatives				
Credit default swaps	**$ (2,056,982)**	**$ 2,078,096**	**$ 21,114**	**$ 18,631**
Other credit derivatives[a]	**(43,281)**	**32,048**	**(11,233)**	**19,475**
Total credit derivatives	**(2,100,263)**	**2,110,144**	**9,881**	**38,106**
Credit-related notes	**(40)**	**–**	**(40)**	**3,704**
Total	**$ (2,100,303)**	**$ 2,110,144**	**$ 9,841**	**$ 41,810**

	Maximum payout/Notional amount			
December 31, 2013 (in millions)	Protection sold	Protection purchased with identical underlyings[c]	Net protection (sold)/ purchased[d]	Other protection purchased[e]
Credit derivatives				
Credit default swaps	$ (2,601,581)	$ 2,610,198	$ 8,617	$ 8,722
Other credit derivatives[a]	(44,137) [b]	45,921	1,784	20,480 [b]
Total credit derivatives	(2,645,718)	2,656,119	10,401	29,202
Credit-related notes	(130)	–	(130)	2,720
Total	$ (2,645,848)	$ 2,656,119	$ 10,271	$ 31,922

(a) Other credit derivatives predominantly consists of credit swap options.
(b) The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated balance sheets or its results of operations.
(c) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(d) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(e) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional amounts by the ratings and maturity profile, and the total fair value, of credit derivatives as of December 31, 2014 and 2013, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings[a]/maturity profile

December 31, 2014 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[c]	Fair value of payables[c]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (323,398)	$ (1,118,293)	$ (79,486)	$ (1,521,177)	$ 25,767	$ (6,314)	$ 19,453
Noninvestment-grade	(157,281)	(396,798)	(25,047)	(579,126)	20,677	(22,455)	(1,778)
Total	$ (480,679)	$ (1,515,091)	$ (104,533)	$ (2,100,303)	$ 46,444	$ (28,769)	$ 17,675

December 31, 2013 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[c]	Fair value of payables[c]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (368,712) [b]	$ (1,469,773) [b]	$ (93,209) [b]	$ (1,931,694) [b]	$ 31,730 [b]	$ (5,664) [b]	$ 26,066 [b]
Noninvestment-grade	(140,540)	(544,671)	(28,943)	(714,154)	27,426	(16,674)	10,752
Total	$ (509,252)	$ (2,014,444)	$ (122,152)	$ (2,645,848)	$ 59,156	$ (22,338)	$ 36,818

(a) The ratings scale is primarily based on external credit ratings defined by S&P and Moody's.
(b) The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated balance sheets or its results of operations.
(c) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

Note 7 – Noninterest revenue

Investment banking fees

This revenue category includes equity and debt underwriting and advisory fees. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee. Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria. Advisory fees are recognized as revenue when the related services have been performed and the fee has been earned.

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	2014	2013	2012
Underwriting			
Equity	**$ 1,571**	$ 1,499	$ 1,026
Debt	**3,340**	3,537	3,290
Total underwriting	**4,911**	5,036	4,316
Advisory	**1,631**	1,318	1,492
Total investment banking fees	**$ 6,542**	$ 6,354	$ 5,808

Principal transactions

Principal transactions revenue consists of realized and unrealized gains and losses on derivatives and other instruments (including those accounted for under the fair value option) used in client-driven market-making activities and on private equity investments. In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities).

Principal transactions revenue also includes realized and unrealized gains and losses related to hedge accounting and specified risk-management activities, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives, including the synthetic credit portfolio. For further information on the income statement classification of gains and losses from derivatives activities, see Note 6.

In the financial commodity markets, the Firm transacts in OTC derivatives (e.g., swaps, forwards, options) and exchange-traded derivatives that reference a wide range of underlying commodities. In the physical commodity markets, the Firm primarily purchases and sells precious and base metals and may hold other commodities inventories under financing and other arrangements with clients. Prior to the 2014 sale of certain parts of its physical commodity business, the Firm also engaged in the purchase, sale, transport and storage of power, gas, liquefied natural gas, coal, crude oil and refined products.

Physical commodities inventories are generally carried at the lower of cost or market (market approximates fair value) subject to any applicable fair value hedge accounting adjustments, with realized gains and losses and unrealized losses recorded in principal transactions revenue.

The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven market-making activities. See Note 8 for further information on interest income and interest expense. Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual line of business.

Year ended December 31, (in millions)	2014	2013	2012
Trading revenue by instrument type [a]			
Interest rate[b]	**$ 1,362**	$ 284	$ 4,002
Credit[c]	**1,880**	2,654	(4,975)
Foreign exchange	**1,556**	1,801	918
Equity	**2,563**	2,517	2,455
Commodity[d]	**1,663**	2,083	2,365
Total trading revenue[e]	**9,024**	9,339	4,765
Private equity gains[f]	**1,507**	802	771
Principal transactions	**$ 10,531**	$ 10,141	$ 5,536

(a) Prior to the second quarter of 2014, trading revenue was presented by major underlying type of risk exposure, generally determined based upon the business primarily responsible for managing that risk exposure. Prior period amounts have been revised to conform with the current period presentation. This revision had no impact on the Firm's Consolidated balance sheets or results of operations.

(b) Includes a pretax gain of $665 million for the year ended December 31, 2012, reflecting the recovery on a Bear Stearns-related subordinated loan.

(c) Includes $5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and $449 million of losses incurred by CIO from the retained index credit derivative positions for the three months ended September 30, 2012; and losses incurred by CIB from the synthetic credit portfolio.

(d) Commodity derivatives are frequently used to manage the Firm's risk exposure to its physical commodities inventories. For gains/(losses) related to commodity fair value hedges, see Note 6.

(e) During 2013, the Firm implemented a FVA framework in order to incorporate the impact of funding into its valuation estimates for OTC derivatives and structured notes. As a result, the Firm recorded a $1.5 billion loss in principal transactions revenue in 2013, reported in the CIB. This reflected an industry migration towards incorporating the cost of unsecured funding in the valuation of such instruments.

(f) Includes revenue on private equity investments held in the Private Equity business within Corporate, as well as those held in other business segments.

Lending- and deposit-related fees
This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan-servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions
This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions, and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met. The Firm has contractual arrangements with third parties to provide certain services in connection with its asset management activities. Amounts paid to third-party service providers are predominantly expensed, such that asset management fees are recorded gross of payments made to third parties.

The following table presents components of asset management, administration and commissions.

Year ended December 31, (in millions)	2014	2013	2012
Asset management fees			
Investment management fees[a]	**$ 9,169**	$ 8,044	$ 6,744
All other asset management fees[b]	**477**	505	357
Total asset management fees	**9,646**	8,549	7,101
Total administration fees[c]	**2,179**	2,101	2,135
Commissions and other fees			
Brokerage commissions	**2,270**	2,321	2,331
All other commissions and fees	**1,836**	2,135	2,301
Total commissions and fees	**4,106**	4,456	4,632
Total asset management, administration and commissions	**$ 15,931**	$ 15,106	$ 13,868

(a) Represents fees earned from managing assets on behalf of Firm clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts.
(b) Represents fees for services that are ancillary to investment management services, such as commissions earned on the sales or distribution of mutual funds to clients.
(c) Predominantly includes fees for custody, securities lending, funds services and securities clearance.

Mortgage fees and related income
This revenue category primarily reflects CCB's Mortgage Production and Mortgage Servicing revenue, including fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously sold loans; the impact of risk-management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. Changes in the fair value of CCB MSRs are reported in mortgage fees and related income. Net interest income from mortgage loans is recorded in interest income. For a further discussion of MSRs, see Note 17.

Card income
This revenue category includes interchange income from credit and debit cards and net fees earned from processing credit card transactions for merchants. Card income is recognized as earned. Cost related to rewards programs is recorded when the rewards are earned by the customer and presented as a reduction to interchange income. Annual fees and direct loan origination costs are deferred and recognized on a straight-line basis over a 12-month period.

Credit card revenue sharing agreements
The Firm has contractual agreements with numerous co-brand partners and affinity organizations (collectively, "partners"), which grant the Firm exclusive rights to market to the customers or members of such partners. These partners endorse the credit card programs and provide their customer and member lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to ten years.

The Firm typically makes incentive payments to the partners based on new account originations, charge volumes and the cost of the partners' marketing activities and awards. Payments based on new account originations are accounted for as direct loan origination costs. Payments to partners based on sales volumes are deducted from interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as noninterest expense.

Other income
Included in other income is operating lease income of $1.7 billion, $1.5 billion and $1.3 billion for the years ended December 31, 2014, 2013 and 2012, respectively. Additionally, included in other income for the year ended December 31, 2013, is a net pretax gain of approximately $1.3 billion, from the sale of Visa B Shares.

Note 8 – Interest income and Interest expense

Interest income and interest expense are recorded in the Consolidated statements of income and classified based on the nature of the underlying asset or liability. Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP absent the fair value option election; for those instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable.

Details of interest income and interest expense were as follows.

Year ended December 31, (in millions)	2014	2013	2012
Interest income			
Loans	**$ 32,218**	$ 33,489	$ 35,832
Taxable securities	**7,617**	6,916	7,231
Non-taxable securities[a]	**1,423**	896	708
Total securities	**9,040**	7,812	7,939
Trading assets[b]	**7,312**	8,099	8,929
Federal funds sold and securities purchased under resale agreements	**1,642**	1,940	2,442
Securities borrowed [c]	**(501)**	(127)	(3)
Deposits with banks	**1,157**	918	555
Other assets[d]	**663**	538	259
Total interest income[b]	**51,531**	52,669	55,953
Interest expense			
Interest-bearing deposits	**1,633**	2,067	2,655
Short-term and other liabilities[b][e]	**1,450**	1,798	1,678
Long-term debt	**4,409**	5,007	6,062
Beneficial interests issued by consolidated VIEs	**405**	478	648
Total interest expense[b]	**7,897**	9,350	11,043
Net interest income	**43,634**	43,319	44,910
Provision for credit losses	**3,139**	225	3,385
Net interest income after provision for credit losses	**$ 40,495**	$ 43,094	$ 41,525

(a) Represents securities which are tax exempt for U.S. Federal Income Tax purposes.
(b) Prior period amounts have been reclassified to conform with the current period presentation.
(c) Negative interest income for the years ended December 31, 2014, 2013 and 2012, is a result of increased client-driven demand for certain securities combined with the impact of low interest rates; the offset of this matched book activity is reflected as lower net interest expense reported within short-term and other liabilities.
(d) Largely margin loans.
(e) Includes brokerage customer payables.

Note 9 – Pension and other postretirement employee benefit plans

The Firm's defined benefit pension plans and its other postretirement employee benefit ("OPEB") plans are accounted for in accordance with U.S. GAAP for retirement benefits.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based on years of service and eligible compensation (generally base pay capped at $100,000 annually; effective January 1, 2015, in addition to base pay, eligible compensation will include certain other types of variable incentive compensation capped at $100,000 annually). Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after three years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws. The Firm does not anticipate at this time any contribution to the U.S. defined benefit pension plan in 2015. The 2015 contributions to the non-U.S. defined benefit pension plans are expected to be $47 million of which $31 million are contractually required.

JPMorgan Chase also has a number of defined benefit pension plans that are not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees previously earned pay credits on compensation amounts above the maximum stipulated by law under a qualified plan; no further pay credits are allocated under this plan. The Excess Retirement Plan had an unfunded projected benefit obligation ("PBO") in the amount of $257 million and $245 million, at December 31, 2014 and 2013, respectively.

Defined contribution plans

JPMorgan Chase currently provides two qualified defined contribution plans in the U.S. and other similar arrangements in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is The JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. Employees can contribute to the 401(k) Savings Plan on a pretax and/or Roth 401(k) after-tax basis. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan.

The Firm matches eligible employee contributions up to 5% of eligible compensation (generally base pay; effective January 1, 2015, in addition to base pay, eligible compensation will include certain other types of variable incentive compensation) on an annual basis. Employees begin to receive matching contributions after completing a one-year-of-service requirement. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. Matching contributions vest after three years of service for employees hired on or after May 1, 2009. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with the length of service and the date of hire and provide for limits on the Firm's share of covered medical benefits. The medical and life insurance benefits are both contributory. Postretirement medical benefits also are offered to qualifying United Kingdom ("U.K.") employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations, plan assets and funded status amounts reported on the Consolidated balance sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

As of or for the year ended December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans[d]	
(in millions)	**2014**	2013	**2014**	2013	**2014**	2013
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (10,776)**	$(11,478)	**$ (3,433)**	$ (3,243)	**$ (826)**	$ (990)
Benefits earned during the year	**(281)**	(314)	**(33)**	(34)	**–**	(1)
Interest cost on benefit obligations	**(534)**	(447)	**(137)**	(125)	**(38)**	(35)
Plan amendments	**(53)**	–	**–**	–	**–**	–
Special termination benefits	**–**	–	**(1)**	–	**–**	–
Curtailments	**–**	–	**–**	–	**(3)**	–
Employee contributions	**NA**	NA	**(7)**	(7)	**(62)**	(72)
Net gain/(loss)	**(1,669)**	794	**(408)**	(62)	**(58)**	138
Benefits paid	**777**	669	**119**	106	**145**	144
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(2)**	(10)
Foreign exchange impact and other	**–**	–	**260**	(68)	**2**	–
Benefit obligation, end of year	**$ (12,536)**	$(10,776)	**$ (3,640)**	$ (3,433)	**$ (842)**	$ (826)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 14,354**	$ 13,012	**$ 3,532**	$ 3,330	**$ 1,757**	$ 1,563
Actual return on plan assets	**1,010**	1,979	**518**	187	**159**	211
Firm contributions	**36**	32	**46**	45	**3**	2
Employee contributions	**–**	–	**7**	7	**–**	–
Benefits paid	**(777)**	(669)	**(119)**	(106)	**(16)**	(19)
Foreign exchange impact and other	**–**	–	**(266)**	69	**–**	–
Fair value of plan assets, end of year	**$ 14,623**	$ 14,354 [b][c]	**$ 3,718**	$ 3,532	**$ 1,903**	$ 1,757
Net funded status[a]	**$ 2,087**	$ 3,578	**$ 78**	$ 99	**$ 1,061**	$ 931
Accumulated benefit obligation, end of year	**$ (12,375)**	$(10,685)	**$ (3,615)**	$ (3,406)	**NA**	NA

(a) Represents plans with an aggregate overfunded balance of $3.9 billion and $5.1 billion at December 31, 2014 and 2013, respectively, and plans with an aggregate underfunded balance of $708 million and $540 million at December 31, 2014 and 2013, respectively.

(b) At December 31, 2014 and 2013, approximately $336 million and $429 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.

(c) At December 31, 2014 and 2013, defined benefit pension plan amounts not measured at fair value included $106 million and $96 million, respectively, of accrued receivables, and $257 million and $104 million, respectively, of accrued liabilities, for U.S. plans.

(d) Includes an unfunded accumulated postretirement benefit obligation of $37 million and $34 million at December 31, 2014 and 2013, respectively, for the U.K. plan.

Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the PBO or the fair value of the plan assets. Any excess is amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently seven years. In addition, prior service costs are amortized over the average remaining service period of active employees expected to receive benefits under the plan when the prior service cost is first recognized. The average remaining amortization period for current prior service costs is five years.

For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. This value is referred to as the market related value of assets. Amortization of net gains and losses, adjusted for gains and losses not yet recognized, is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market related value of assets. Any excess net gain or loss is amortized over the average expected lifetime of retired participants, which is currently twelve years; however, prior service costs resulting from plan changes are amortized over the average years of service remaining to full eligibility age, which is currently two years.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

	Defined benefit pension plans					
December 31,	U.S.		Non-U.S.		OPEB plans	
(in millions)	**2014**	2013	**2014**	2013	**2014**	2013
Net gain/(loss)	**$ (3,346)**	$ (1,726)	**$ (628)**	$ (658)	**$ 130**	$ 125
Prior service credit/(cost)	**102**	196	**11**	14	**–**	1
Accumulated other comprehensive income/(loss), pretax, end of year	**$ (3,244)**	$ (1,530)	**$ (617)**	$ (644)	**$ 130**	$ 126

The following table presents the components of net periodic benefit costs reported in the Consolidated statements of income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension, defined contribution and OPEB plans.

	Pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Components of net periodic benefit cost									
Benefits earned during the year	**$ 281**	$ 314	$ 272	**$ 33**	$ 34	$ 41	**$ –**	$ 1	$ 1
Interest cost on benefit obligations	**534**	447	466	**137**	125	126	**38**	35	44
Expected return on plan assets	**(985)**	(956)	(861)	**(172)**	(142)	(137)	**(101)**	(92)	(90)
Amortization:									
Net (gain)/loss	**25**	271	289	**47**	49	36	**–**	1	(1)
Prior service cost/(credit)	**(41)**	(41)	(41)	**(2)**	(2)	–	**(1)**	–	–
Net periodic defined benefit cost	**(186)**	35	125	**43**	64	66	**(64)**	(55)	(46)
Other defined benefit pension plans[a]	**14**	15	15	**6**	14	8	**NA**	NA	NA
Total defined benefit plans	**(172)**	50	140	**49**	78	74	**(64)**	(55)	(46)
Total defined contribution plans	**438**	447	409	**329**	321	302	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 266**	$ 497	$ 549	**$ 378**	$ 399	$ 376	**$ (64)**	$ (55)	$ (46)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	**$ 1,645**	$ (1,817)	$ 434	**$ 57**	$ 19	$ 146	**$ (5)**	$ (257)	$ (43)
Prior service credit arising during the year	**53**	–	–	**–**	–	(6)	**–**	–	–
Amortization of net loss	**(25)**	(271)	(289)	**(47)**	(49)	(36)	**–**	(1)	1
Amortization of prior service (cost)/credit	**41**	41	41	**2**	2	–	**1**	–	–
Foreign exchange impact and other	**–**	–	–	**(39)** [a]	14 [a]	22 [a]	**–**	–	(1)
Total recognized in other comprehensive income	**$ 1,714**	$ (2,047)	$ 186	**$ (27)**	$ (14)	$ 126	**$ (4)**	$ (258)	$ (43)
Total recognized in net periodic benefit cost and other comprehensive income	**$ 1,528**	$ (2,012)	$ 311	**$ 16**	$ 50	$ 192	**$ (68)**	$ (313)	$ (89)

(a) Includes various defined benefit pension plans which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2015 are as follows.

	Defined benefit pension plans		OPEB plans	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss/(gain)	$ 257	$ 37	$ –	$ –
Prior service cost/(credit)	(34)	(2)	–	–
Total	$ 223	$ 35	$ –	$ –

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
Year ended December 31,	**2014**	2013	2012	**2014**	2013	2012
Actual rate of return:						
Defined benefit pension plans	**7.29%**	15.95%	12.66%	**5.62 - 17.69%**	3.74 - 23.80%	7.21 - 11.72%
OPEB plans	**9.84**	13.88	10.10	**NA**	NA	NA

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration is also given to current market conditions and the short-term portfolio mix of each plan.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The expected return on "AA" rated long-term corporate bonds is based on an implied yield for similar bonds.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension plan represents a rate of appropriate duration from the analysis of yield curves provided by our actuaries.

In 2014, the Society of Actuaries ("SOA") completed a comprehensive review of mortality experience of uninsured private retirement plans in the U.S. In October 2014, the SOA published new mortality tables and a new mortality improvement scale that reflects improved life expectancies and an expectation that this trend will continue. The Firm has adopted the SOA's tables and projection scale, resulting in an estimated increase in PBO of $533 million.

At December 31, 2014, the Firm decreased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will result in an increase in expense of approximately $139 million for 2015. The 2015 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 6.50% and 6.00%, respectively. For 2015, the initial health care benefit obligation trend assumption has been set at 6.00%, and the ultimate health care trend assumption and the year to reach the ultimate rate remains at 5.00% and 2017, respectively, unchanged from 2014. As of December 31, 2014, the interest crediting rate assumption and the assumed rate of compensation increase remained at 5.00% and 3.50%, respectively.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's significant U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S.	
December 31,	**2014**	2013	**2014**	2013
Discount rate:				
Defined benefit pension plans	**4.00%**	5.00%	**1.00 - 3.60%**	1.10 - 4.40%
OPEB plans	**4.10**	4.90	**–**	–
Rate of compensation increase	**3.50**	3.50	**2.75 - 4.20**	2.75 - 4.60
Health care cost trend rate:				
Assumed for next year	**6.00**	6.50	**–**	–
Ultimate	**5.00**	5.00	**–**	–
Year when rate will reach ultimate	**2017**	2017	**–**	–

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2014**	2013	2012	**2014**	2013	2012
Discount rate:						
Defined benefit pension plans	**5.00%**	3.90%	4.60%	**1.10 - 4.40%**	1.40 - 4.40%	1.50 - 4.80%
OPEB plans	**4.90**	3.90	4.70	**–**	–	–
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**7.00**	7.50	7.50	**1.20 - 5.30**	2.40 - 4.90	2.50 - 4.60
OPEB plans	**6.25**	6.25	6.25	**NA**	NA	NA
Rate of compensation increase	**3.50**	4.00	4.00	**2.75 - 4.60**	2.75 - 4.10	2.75 - 4.20
Health care cost trend rate:						
Assumed for next year	**6.50**	7.00	7.00	**–**	–	–
Ultimate	**5.00**	5.00	5.00	**–**	–	–
Year when rate will reach ultimate	**2017**	2017	2017	**–**	–	–

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's accumulated postretirement benefit obligation. As of December 31, 2014, there was no material effect on total service and interest cost.

Year ended December 31, 2014 (in millions)	1-Percentage point increase	1-Percentage point decrease
Effect on accumulated postretirement benefit obligation	$ 9	$ (8)

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an aggregate increase of approximately $40 million in 2015 U.S. defined benefit pension and OPEB plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2015 U.S. defined benefit pension and OPEB plan expense of approximately an aggregate $36 million and an increase in the related benefit obligations of approximately an aggregate $333 million. A 25-basis point decrease in the interest crediting rate for the U.S. defined benefit pension plan would result in a decrease in 2015 U.S. defined benefit pension expense of approximately $36 million and a decrease in the related PBO of approximately $148 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2015 non-U.S. defined benefit pension plan expense of approximately $19 million.

Investment strategy and asset allocation

The Firm's U.S. defined benefit pension plan assets are held in trust and are invested in a well-diversified portfolio of equity and fixed income securities, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity, real estate and real assets). Non-U.S. defined benefit pension plan assets are held in various trusts and are also invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to partially fund the U.S. OPEB plan, are held in separate accounts of an insurance company and are allocated to investments intended to replicate equity and fixed income indices.

The investment policy for the Firm's U.S. defined benefit pension plan assets is to optimize the risk-return relationship as appropriate to the needs and goals of the plan using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Assets are managed by a combination of internal and external investment managers. Periodically the Firm performs a comprehensive analysis on the U.S. defined benefit pension plan asset allocations, incorporating projected asset and liability data, which focuses on the short- and long-term impact of the asset allocation on cumulative pension expense, economic cost, present value of contributions and funded status. As the U.S. defined benefit pension plan is overfunded, the investment strategy for this plan was adjusted in 2013 to provide for greater liquidity. Currently, approved asset allocation ranges are: U.S. equity 0% to 45%, international equity 0% to 40%, debt securities 0% to 80%, hedge funds 0% to 5%, real estate 0% to 10%, real assets 0% to 10% and private equity 0% to 20%. Asset allocations are not managed to a specific target but seek to shift asset class allocations within these stated ranges. Investment strategies incorporate the economic outlook and the anticipated implications of the macroeconomic environment on the various asset classes while maintaining an appropriate level of liquidity for the plan. The Firm regularly reviews the asset allocations and asset managers, as well as other factors that impact the portfolio, which is rebalanced when deemed necessary.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, the assets are invested to maximize returns subject to an appropriate level of risk relative to the plans' liabilities. In order to reduce the volatility in returns relative to the plans' liability profiles, the U.K. defined benefit pension plans' largest asset allocations are to debt securities of appropriate durations. Other assets, mainly equity securities, are then invested for capital appreciation, to provide long-term investment growth. Similar to the U.S. defined benefit pension plan, asset allocations and asset managers for the U.K. plans are reviewed regularly and the portfolio is rebalanced when deemed necessary.

Investments held by the Plans include financial instruments which are exposed to various risks such as interest rate, market and credit risks. Exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments. As of December 31, 2014, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except through indirect exposures through investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $3.7 billion and $2.9 billion for U.S. plans and $1.4 billion and $242 million for non-U.S. plans, as of December 31, 2014 and 2013, respectively.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[c]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2014**	2013	Allocation	**2014**	2013	Allocation	**2014**	2013
Asset category									
Debt securities[a]	0-80%	**31%**	25%	62%	**61%**	63%	30-70%	**50%**	50%
Equity securities	0-85	**46**	48	37	**38**	36	30-70	**50**	50
Real estate	0-10	**4**	4	–	**–**	–	–	**–**	–
Alternatives[b]	0-35	**19**	23	1	**1**	1	–	**–**	–
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Debt securities primarily include corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.
(b) Alternatives primarily include limited partnerships.
(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

Fair value measurement of the plans' assets and liabilities

For information on fair value measurements, including descriptions of level 1, 2, and 3 of the fair value hierarchy and the valuation methods employed by the Firm, see Note 3.

Pension and OPEB plan assets and liabilities measured at fair value

	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans[i]		
December 31, 2014 (in millions)	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	$ 87	$ –	$ –	$ 87	$ 128	$ 1	$ 129
Equity securities:							
Capital equipment	1,249	–	–	1,249	96	24	120
Consumer goods	1,198	8	–	1,206	250	32	282
Banks and finance companies	778	7	–	785	279	31	310
Business services	458	–	–	458	277	18	295
Energy	267	–	–	267	50	15	65
Materials	319	1	–	320	40	9	49
Real Estate	46	–	–	46	1	–	1
Other	971	4	4	979	26	40	66
Total equity securities	5,286	20	4	5,310	1,019	169	1,188
Common/collective trust funds[a]	345	1,277	8	1,630	112	251	363
Limited partnerships:[b]							
Hedge funds	–	26	77	103	–	–	–
Private equity	–	–	2,208	2,208	–	–	–
Real estate	–	–	533	533	–	–	–
Real assets[c]	70	–	202	272	–	–	–
Total limited partnerships	70	26	3,020	3,116	–	–	–
Corporate debt securities[d]	–	1,454	9	1,463	–	724	724
U.S. federal, state, local and non-U.S. government debt securities	446	161	–	607	235	540	775
Mortgage-backed securities	1	73	1	75	2	77	79
Derivative receivables	–	114	–	114	–	258	258
Other[e]	2,031	27	337	2,395	283	58	341
Total assets measured at fair value[f]	$ 8,266	$ 3,152	$ 3,379	$ 14,797 [g]	$ 1,779	$ 2,078	$ 3,857
Derivative payables	$ –	$ (23)	$ –	$ (23)	$ –	$ (139)	$ (139)
Total liabilities measured at fair value	$ –	$ (23)	$ –	$ (23) [h]	$ –	$ (139)	$ (139)

December 31, 2013 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans[i]		
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	$ 62	$ –	$ –	$ 62	$ 221	$ 3	$ 224
Equity securities:							
Capital equipment	1,084	–	–	1,084	86	17	103
Consumer goods	1,085	–	–	1,085	225	50	275
Banks and finance companies	737	–	–	737	233	29	262
Business services	510	–	–	510	209	14	223
Energy	292	–	–	292	64	20	84
Materials	344	–	–	344	36	9	45
Real estate	38	–	–	38	–	1	1
Other	1,337	18	4	1,359	25	103	128
Total equity securities	5,427	18	4	5,449	878	243	1,121
Common/collective trust funds[a]	–	1,308	4	1,312	98	248	346
Limited partnerships:[b]							
Hedge funds	–	355	718	1,073	–	–	–
Private equity	–	–	1,969	1,969	–	–	–
Real estate	–	–	558	558	–	–	–
Real assets[c]	–	–	271	271	–	–	–
Total limited partnerships	–	355	3,516	3,871	–	–	–
Corporate debt securities[d]	–	1,223	7	1,230	–	787	787
U.S. federal, state, local and non-U.S. government debt securities	343	299	–	642	–	777	777
Mortgage-backed securities	37	50	–	87	73	–	73
Derivative receivables	–	30	–	30	–	302	302
Other[e]	1,214	41	430	1,685	148	52	200
Total assets measured at fair value[f]	$ 7,083	$ 3,324	$ 3,961	$ 14,368 [g]	$ 1,418	$ 2,412	$ 3,830
Derivative payables	$ –	$ (6)	$ –	$ (6)	$ –	$ (298)	$ (298)
Total liabilities measured at fair value	$ –	$ (6)	$ –	$ (6) [h]	$ –	$ (298)	$ (298)

(a) At December 31, 2014 and 2013, common/collective trust funds primarily included a mix of short-term investment funds, domestic and international equity investments (including index) and real estate funds.
(b) Unfunded commitments to purchase limited partnership investments for the plans were $1.2 billion and $1.6 billion for 2014 and 2013, respectively.
(c) Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.
(d) Corporate debt securities include debt securities of U.S. and non-U.S. corporations.
(e) Other consists of money markets, exchange-traded funds and participating and non-participating annuity contracts. Money markets and exchange-traded funds are primarily classified within level 1 of the fair value hierarchy given they are valued using market observable prices. Participating and non-participating annuity contracts are classified within level 3 of the fair value hierarchy due to lack of market mechanisms for transferring each policy and surrender restrictions.
(f) At December 31, 2014 and 2013, the fair value of investments valued at NAV were $2.1 billion and $2.7 billion, respectively, which were classified within the valuation hierarchy as follows: $500 million and $100 million in level 1, $1.6 billion and $1.9 billion in level 2, zero and $700 million in level 3.
(g) At December 31, 2014 and 2013, excluded U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $106 million and $96 million, respectively.
(h) At December 31, 2014 and 2013, excluded $241 million and $102 million, respectively, of U.S. defined benefit pension plan payables for investments purchased; and $16 million and $2 million, respectively, of other liabilities.
(i) There were no assets or liabilities classified as level 3 for the non-U.S. defined benefit pension plans as of December 31, 2014 and 2013.

The Firm's U.S. OPEB plan was partially funded with COLI policies of $1.9 billion and $1.7 billion at December 31, 2014 and 2013, respectively, which were classified in level 3 of the valuation hierarchy.

Changes in level 3 fair value measurements using significant unobservable inputs

Year ended December 31, 2014 (in millions)	Fair value, January 1, 2014	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2014
U.S. defined benefit pension plans						
Equities	$ 4	$ –	$ –	$ –	$ –	$ 4
Common/collective trust funds	4	–	1	3	–	8
Limited partnerships:						
Hedge funds	718	193	(180)	(662)	8	77
Private equity	1,969	192	173	(126)	–	2,208
Real estate	558	29	36	(90)	–	533
Real assets	271	27	(6)	(90)	–	202
Total limited partnerships	3,516	441	23	(968)	8	3,020
Corporate debt securities	7	(2)	2	4	(2)	9
Mortgage-backed securities	–	–	–	1	–	1
Other	430	–	(93)	–	–	337
Total U.S. defined benefit pension plans	$ 3,961	$ 439	$ (67)	$ (960)	$ 6	$ 3,379
OPEB plans						
COLI	$ 1,749	$ –	$ 154	$ –	$ –	$ 1,903
Total OPEB plans	$ 1,749	$ –	$ 154	$ –	$ –	$ 1,903

Year ended December 31, 2013 (in millions)	Fair value, January 1, 2013	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2013
U.S. defined benefit pension plans						
Equities	$ 4	$ –	$ –	$ –	$ –	$ 4
Common/collective trust funds	199	59	(32)	(222)	–	4
Limited partnerships:						
Hedge funds	1,166	137	14	(593)	(6)	718
Private equity	1,743	108	170	(4)	(48)	1,969
Real estate	467	21	44	26	–	558
Real assets	311	4	12	(98)	42	271
Total limited partnerships	3,687	270	240	(669)	(12)	3,516
Corporate debt securities	1	–	–	–	6	7
Mortgage-backed securities	–	–	–	–	–	–
Other	420	–	10	–	–	430
Total U.S. defined benefit pension plans	$ 4,311	$ 329	$ 218	$ (891)	$ (6)	$ 3,961
OPEB plans						
COLI	$ 1,554	$ –	$ 195	$ –	$ –	$ 1,749
Total OPEB plans	$ 1,554	$ –	$ 195	$ –	$ –	$ 1,749

Year ended December 31, 2012 (in millions)	Fair value, January 1, 2012	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2012
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	$ 1	$ –	$ (1)	$ –	$ 4	$ 4
Common/collective trust funds	202	2	22	(27)	–	199
Limited partnerships:						
Hedge funds	1,039	1	71	55	–	1,166
Private equity	1,367	59	54	263	–	1,743
Real estate	306	16	1	144	–	467
Real assets	264	–	10	37	–	311
Total limited partnerships	2,976	76	136	499	–	3,687
Corporate debt securities	2	–	–	(1)	–	1
Mortgage-backed securities	–	–	–	–	–	–
Other	427	–	(7)	–	–	420
Total U.S. defined benefit pension plans	$ 3,608	$ 78	$ 150	$ 471	$ 4	$ 4,311
OPEB plans						
COLI	$ 1,427	$ –	$ 127	$ –	$ –	$ 1,554
Total OPEB plans	$ 1,427	$ –	$ 127	$ –	$ –	$ 1,554

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2015	$ 712	$ 110	$ 73	$ 1
2016	765	113	71	1
2017	899	118	70	1
2018	926	128	68	1
2019	966	132	66	1
Years 2020–2024	4,357	746	293	5

Note 10 – Employee stock-based incentives

Employee stock-based awards

In 2014, 2013 and 2012, JPMorgan Chase granted long-term stock-based awards to certain employees under its Long-Term Incentive Plan, which was last amended in May 2011 ("LTIP"). Under the terms of the LTIP, as of December 31, 2014, 266 million shares of common stock were available for issuance through May 2015. The LTIP is the only active plan under which the Firm is currently granting stock-based incentive awards. In the following discussion, the LTIP, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans," and such plans constitute the Firm's stock-based incentive plans.

Restricted stock units ("RSUs") are awarded at no cost to the recipient upon their grant. Generally, RSUs are granted annually and vest at a rate of 50% after two years and 50% after three years and are converted into shares of common stock as of the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All RSUs awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding and, as such, are considered participating securities as discussed in Note 24.

Under the LTI Plans, stock options and stock appreciation rights ("SARs") have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm periodically grants employee stock options to individual employees. There were no material grants of stock options or SARs in 2014. Grants of SARs in 2013 and 2012 become exercisable ratably over five years (i.e., 20% per year) and contain clawback provisions similar to RSUs. The 2013 and 2012 grants of SARs contain full-career eligibility provisions. SARs generally expire ten years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2014, 2013 and 2012, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. On July 15, 2014, the Compensation Committee and Board of Directors determined that all requirements for the vesting of the 2 million SAR awards had been met and thus, the awards became exercisable. The SARs, which will expire in January 2018, have an exercise price of $39.83 (the price of JPMorgan Chase common stock on the date of grant). The expense related to this award was dependent on changes in fair value of the SARs through July 15, 2014 (the date when the vested number of SARs were determined), and the cumulative expense was recognized ratably over the service period, which was initially assumed to be five years but, effective in the first quarter of 2013, had been extended to six and one-half years. The Firm recognized $3 million, $14 million and $5 million in compensation expense in 2014, 2013 and 2012, respectively, for this award.

RSUs, employee stock options and SARs activity

Compensation expense for RSUs is measured based on the number of shares granted multiplied by the stock price at the grant date, and for employee stock options and SARs, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorgan Chase's RSUs, employee stock options and SARs activity for 2014.

	RSUs		Options/SARs			
Year ended December 31, 2014 (in thousands, except weighted-average data, and where otherwise stated)	Number of shares	Weighted-average grant date fair value	Number of awards	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	**121,241**	**$ 41.47**	**87,075**	**$ 44.24**		
Granted	**37,817**	**57.88**	**101**	**59.18**		
Exercised or vested	**(54,265)**	**40.67**	**(24,950)**	**36.59**		
Forfeited	**(4,225)**	**47.32**	**(2,059)**	**41.90**		
Canceled	**NA**	**NA**	**(972)**	**200.86**		
Outstanding, December 31	**100,568**	**$ 47.81**	**59,195**	**$ 45.00**	**5.2**	**$ 1,313,939**
Exercisable, December 31	**NA**	**NA**	**37,171**	**46.46**	**4.3**	**862,374**

The total fair value of RSUs that vested during the years ended December 31, 2014, 2013 and 2012, was $3.2 billion, $2.9 billion and $2.8 billion, respectively. There were no material grants of stock options or SARs in 2014. The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2013 and 2012, was $9.58 and $8.89, respectively. The total intrinsic value of options exercised during the years ended December 31, 2014, 2013 and 2012, was $539 million, $507 million and $283 million, respectively.

Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated statements of income.

Year ended December 31, (in millions)	**2014**	2013	2012
Cost of prior grants of RSUs and SARs that are amortized over their applicable vesting periods	**$ 1,371**	$ 1,440	$ 1,810
Accrual of estimated costs of stock-based awards to be granted in future periods including those to full-career eligible employees	**819**	779	735
Total noncash compensation expense related to employee stock-based incentive plans	**$ 2,190**	$ 2,219	$ 2,545

At December 31, 2014, approximately $758 million (pretax) of compensation cost related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.0 year. The Firm does not capitalize any compensation cost related to share-based compensation awards to employees.

Cash flows and tax benefits

Income tax benefits related to stock-based incentive arrangements recognized in the Firm's Consolidated statements of income for the years ended December 31, 2014, 2013 and 2012, were $854 million, $865 million and $1.0 billion, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements, and the actual income tax benefit realized related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	**2014**	2013	2012
Cash received for options exercised	**$ 63**	$ 166	$ 333
Tax benefit realized[(a)]	**104**	42	53

(a) The tax benefit realized from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings are recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards.

Valuation assumptions

The following table presents the assumptions used to value employee stock options and SARs granted during the years ended December 31, 2013 and 2012, under the Black-Scholes valuation model. There were no material grants of stock options or SARs for the year ended December 31, 2014.

Year ended December 31,	2013	2012
Weighted-average annualized valuation assumptions		
Risk-free interest rate	1.18%	1.19%
Expected dividend yield	2.66	3.15
Expected common stock price volatility	28	35
Expected life (in years)	6.6	6.6

The expected dividend yield is determined using forward-looking assumptions. The expected volatility assumption is derived from the implied volatility of JPMorgan Chase's stock options. The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled, and the assumption is based on the Firm's historical experience.

Note 11 – Noninterest expense

The following table presents the components of noninterest expense.

Year ended December 31, (in millions)	2014	2013	2012
Compensation expense	$ 30,160	$ 30,810	$ 30,585
Noncompensation expense:			
Occupancy	3,909	3,693	3,925
Technology, communications and equipment	5,804	5,425	5,224
Professional and outside services	7,705	7,641	7,429
Marketing	2,550	2,500	2,577
Other[(a)(b)]	11,146	20,398	14,989
Total noncompensation expense	31,114	39,657	34,144
Total noninterest expense	$ 61,274	$ 70,467	$ 64,729

(a) Included firmwide legal expense of $2.9 billion, $11.1 billion and $5.0 billion and for the years ended December 31, 2014, 2013 and 2012, respectively.

(b) Included FDIC-related expense of $1.0 billion, $1.5 billion and $1.7 billion for the years ended December 31, 2014, 2013 and 2012, respectively.

Note 12 – Securities

Securities are classified as trading, AFS or held-to-maturity ("HTM"). Securities classified as trading assets are discussed in Note 3. Predominantly all of the Firm's AFS and HTM investment securities (the "investment securities portfolio") are held by CIO in connection with its asset-liability management objectives. At December 31, 2014, the average credit rating of the debt securities comprising the investment securities portfolio was AA+ (based upon external ratings where available, and where not available, based primarily upon internal ratings which correspond to ratings as defined by S&P and Moody's). AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to accumulated other comprehensive income/(loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated statements of income. HTM debt securities, which management has the intent and ability to hold until maturity, are carried at amortized cost on the Consolidated balance sheets. For both AFS and HTM debt securities, purchase discounts or premiums are generally amortized into interest income over the contractual life of the security.

During the first quarter of 2014, the Firm transferred U.S. government agency mortgage-backed securities and obligations of U.S. states and municipalities with a fair value of $19.3 billion from AFS to HTM. These securities were transferred at fair value, and the transfer was a non-cash transaction. AOCI included net pretax unrealized losses of $9 million on the securities at the date of transfer. The transfer reflected the Firm's intent to hold the securities to maturity in order to reduce the impact of price volatility on AOCI and certain capital measures under Basel III.

Other-than-temporary impairment

AFS debt and equity securities and HTM debt securities in unrealized loss positions are analyzed as part of the Firm's ongoing assessment of other-than-temporary impairment ("OTTI"). For most types of debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm considers an OTTI to have occurred when there is an adverse change in expected cash flows. For AFS equity securities, the Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its cost basis.

Potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and the Firm's intent and ability to hold the security until recovery.

For AFS debt securities, the Firm recognizes OTTI losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost basis. In these circumstances the impairment loss is equal to the full difference between the amortized cost basis and the fair value of the securities. For debt securities in an unrealized loss position that the Firm has the intent and ability to hold, the expected cash flows to be received from the securities are evaluated to determine if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI.

The Firm's cash flow evaluations take into account the factors noted above and expectations of relevant market and economic data as of the end of the reporting period. For securities issued in a securitization, the Firm estimates cash flows considering underlying loan-level data and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios.

For equity securities, OTTI losses are recognized in earnings if the Firm intends to sell the security. In other cases the Firm considers the relevant factors noted above, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the cost basis. Any impairment loss on an equity security is equal to the full difference between the cost basis and the fair value of the security.

Realized gains and losses

The following table presents realized gains and losses and credit losses that were recognized in income from AFS securities.

Year ended December 31, (in millions)	**2014**	2013	2012
Realized gains	**$ 314**	$1,302	$2,610
Realized losses	**(233)**	(614)	(457)
Net realized gains	**81**	688	2,153
OTTI losses			
Credit-related	**(2)**	(1)	(28)
Securities the Firm intends to sell[a]	**(2)**	(20)	(15)
Total OTTI losses recognized in income	**(4)**	(21)	(43)
Net securities gains	**$ 77**	$ 667	$2,110

(a) Excludes realized losses on securities sold of $3 million, $12 million and $24 million for the years ended December 31, 2014, 2013 and 2012, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

	2014				2013			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies[a]	**$ 63,089**	**$ 2,302**	**$ 72**	**$ 65,319**	$ 76,428	$ 2,364	$ 977	$ 77,815
Residential:								
Prime and Alt-A	**5,595**	**78**	**29**	**5,644**	2,744	61	27	2,778
Subprime	**677**	**14**	**–**	**691**	908	23	1	930
Non-U.S.	**43,550**	**1,010**	**–**	**44,560**	57,448	1,314	1	58,761
Commercial	**20,687**	**438**	**17**	**21,108**	15,891	560	26	16,425
Total mortgage-backed securities	**133,598**	**3,842**	**118**	**137,322**	153,419	4,322	1,032	156,709
U.S. Treasury and government agencies[a]	**13,603**	**56**	**14**	**13,645**	21,310	385	306	21,389
Obligations of U.S. states and municipalities	**27,841**	**2,243**	**16**	**30,068**	29,741	707	987	29,461
Certificates of deposit	**1,103**	**1**	**1**	**1,103**	1,041	1	1	1,041
Non-U.S. government debt securities	**51,492**	**1,272**	**21**	**52,743**	55,507	863	122	56,248
Corporate debt securities	**18,158**	**398**	**24**	**18,532**	21,043	498	29	21,512
Asset-backed securities:								
Collateralized loan obligations	**30,229**	**147**	**182**	**30,194**	28,130	236	136	28,230
Other	**12,442**	**184**	**11**	**12,615**	12,062	186	3	12,245
Total available-for-sale debt securities	**288,466**	**8,143**	**387**	**296,222**	322,253	7,198	2,616	326,835
Available-for-sale equity securities	**2,513**	**17**	**–**	**2,530**	3,125	17	–	3,142
Total available-for-sale securities	**$ 290,979**	**$ 8,160**	**$ 387**	**$ 298,752**	$ 325,378	$ 7,215	$ 2,616	$ 329,977
Total held-to-maturity securities[b]	**$ 49,252**	**$ 1,902**	**$ –**	**$ 51,154**	$ 24,026	$ 22	$ 317	$ 23,731

(a) Includes total U.S. government-sponsored enterprise obligations with fair values of $59.3 billion and $67.0 billion at December 31, 2014 and 2013, respectively, which were predominantly mortgage-related.

(b) As of December 31, 2014, consists of MBS issued by U.S. government-sponsored enterprises with an amortized cost of $35.3 billion, MBS issued by U.S. government agencies with an amortized cost of $3.7 billion and obligations of U.S. states and municipalities with an amortized cost of $10.2 billion. As of December 31, 2013, consists of MBS issued by U.S. government-sponsored enterprises with an amortized cost of $23.1 billion and obligations of U.S. states and municipalities with an amortized cost of $920 million.

Securities impairment

The following tables present the fair value and gross unrealized losses for the investment securities portfolio by aging category at December 31, 2014 and 2013.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2014 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	**$ 1,118**	**$ 5**	**$ 4,989**	**$ 67**	**$ 6,107**	**$ 72**
Residential:						
Prime and Alt-A	**1,840**	**10**	**405**	**19**	**2,245**	**29**
Subprime	**–**	**–**	**–**	**–**	**–**	**–**
Non-U.S.	**–**	**–**	**–**	**–**	**–**	**–**
Commercial	**4,803**	**15**	**92**	**2**	**4,895**	**17**
Total mortgage-backed securities	**7,761**	**30**	**5,486**	**88**	**13,247**	**118**
U.S. Treasury and government agencies	**8,412**	**14**	**–**	**–**	**8,412**	**14**
Obligations of U.S. states and municipalities	**1,405**	**15**	**130**	**1**	**1,535**	**16**
Certificates of deposit	**1,050**	**1**	**–**	**–**	**1,050**	**1**
Non-U.S. government debt securities	**4,433**	**4**	**906**	**17**	**5,339**	**21**
Corporate debt securities	**2,492**	**22**	**80**	**2**	**2,572**	**24**
Asset-backed securities:						
Collateralized loan obligations	**13,909**	**76**	**9,012**	**106**	**22,921**	**182**
Other	**2,258**	**11**	**–**	**–**	**2,258**	**11**
Total available-for-sale debt securities	**41,720**	**173**	**15,614**	**214**	**57,334**	**387**
Available-for-sale equity securities	**–**	**–**	**–**	**–**	**–**	**–**
Held-to-maturity securities	**–**	**–**	**–**	**–**	**–**	**–**
Total securities with gross unrealized losses	**$ 41,720**	**$ 173**	**$ 15,614**	**$ 214**	**$ 57,334**	**$ 387**

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2013 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 20,293	$ 895	$ 1,150	$ 82	$ 21,443	$ 977
Residential:						
Prime and Alt-A	1,061	27	–	–	1,061	27
Subprime	152	1	–	–	152	1
Non-U.S.	–	–	158	1	158	1
Commercial	3,980	26	–	–	3,980	26
Total mortgage-backed securities	25,486	949	1,308	83	26,794	1,032
U.S. Treasury and government agencies	6,293	250	237	56	6,530	306
Obligations of U.S. states and municipalities	15,387	975	55	12	15,442	987
Certificates of deposit	988	1	–	–	988	1
Non-U.S. government debt securities	11,286	110	821	12	12,107	122
Corporate debt securities	1,580	21	505	8	2,085	29
Asset-backed securities:						
Collateralized loan obligations	18,369	129	393	7	18,762	136
Other	1,114	3	–	–	1,114	3
Total available-for-sale debt securities	80,503	2,438	3,319	178	83,822	2,616
Available-for-sale equity securities	–	–	–	–	–	–
Held-to-maturity securities	20,745	317	–	–	20,745	317
Total securities with gross unrealized losses	$ 101,248	$ 2,755	$ 3,319	$ 178	$ 104,567	$ 2,933

Other-than-temporary impairment

The following table presents OTTI losses that are included in the securities gains and losses table above.

Year ended December 31, (in millions)	2014	2013	2012
Debt securities the Firm does not intend to sell that have credit losses			
Total OTTI[a]	**$ (2)**	$ (1)	$ (113)
Losses recorded in/ (reclassified from) AOCI	**—**	—	85
Total credit losses recognized in income	**(2)**	(1)	(28)
Securities the Firm intends to sell[b]	**(2)**	(20)	(15)
Total OTTI losses recognized in income	**$ (4)**	$ (21)	$ (43)

(a) For initial OTTI, represents the excess of the amortized cost over the fair value of AFS debt securities. For subsequent impairments of the same security, represents additional declines in fair value subsequent to previously recorded OTTI, if applicable.

(b) Excludes realized losses on securities sold of $3 million, $12 million and $24 million for the years ended December 31, 2014, 2013 and 2012, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

Changes in the credit loss component of credit-impaired debt securities

The following table presents a rollforward for the years ended December 31, 2014, 2013 and 2012, of the credit loss component of OTTI losses that have been recognized in income, related to AFS debt securities that the Firm does not intend to sell.

Year ended December 31, (in millions)	2014	2013	2012
Balance, beginning of period	**$ 1**	$ 522	$ 708
Additions:			
Newly credit-impaired securities	**2**	1	21
Losses reclassified from other comprehensive income on previously credit-impaired securities	**—**	—	7
Reductions:			
Sales and redemptions of credit-impaired securities	**—**	(522)	(214)
Balance, end of period	**$ 3**	$ 1	$ 522

Gross unrealized losses

Gross unrealized losses have generally decreased since December 31, 2013. Though losses on securities that have been in an unrealized loss position for 12 months or more have increased, the increase is not material. The Firm has recognized the unrealized losses on securities it intends to sell. As of December 31, 2014, the Firm does not intend to sell any securities with a loss position in AOCI, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities reported in the table above, for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2014.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2014, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity December 31, 2014 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities[a]					
Amortized cost	$ 996	$ 14,132	$ 5,768	$ 112,702	$ 133,598
Fair value	1,003	14,467	5,974	115,878	137,322
Average yield[b]	2.65%	1.85%	3.12%	2.93%	2.82%
U.S. Treasury and government agencies[a]					
Amortized cost	$ 2,209	$ –	$ 10,284	$ 1,110	$ 13,603
Fair value	2,215	–	10,275	1,155	13,645
Average yield[b]	0.80%	–%	0.62%	0.35%	0.63%
Obligations of U.S. states and municipalities					
Amortized cost	$ 65	$ 498	$ 1,432	$ 25,846	$ 27,841
Fair value	66	515	1,508	27,979	30,068
Average yield[b]	2.13%	4.00%	4.93%	6.78%	6.63%
Certificates of deposit					
Amortized cost	$ 1,052	$ 51	$ –	$ –	$ 1,103
Fair value	1,050	53	–	–	1,103
Average yield[b]	0.84%	3.28%	–%	–%	0.95%
Non-U.S. government debt securities					
Amortized cost	$ 13,559	$ 14,276	$ 21,220	$ 2,437	$ 51,492
Fair value	13,588	14,610	21,957	2,588	52,743
Average yield[b]	3.31%	2.04%	1.04%	1.19%	1.90%
Corporate debt securities					
Amortized cost	$ 3,830	$ 9,619	$ 4,523	$ 186	$ 18,158
Fair value	3,845	9,852	4,651	184	18,532
Average yield[b]	2.39%	2.40%	2.56%	3.43%	2.45%
Asset-backed securities					
Amortized cost	$ –	$ 2,240	$ 17,439	$ 22,992	$ 42,671
Fair value	–	2,254	17,541	23,014	42,809
Average yield[b]	–%	1.66%	1.75%	1.73%	1.73%
Total available-for-sale debt securities					
Amortized cost	$ 21,711	$ 40,816	$ 60,666	$ 165,273	$ 288,466
Fair value	21,767	41,751	61,906	170,798	296,222
Average yield[b]	2.74%	2.06%	1.58%	3.32%	2.73%
Available-for-sale equity securities					
Amortized cost	$ –	$ –	$ –	$ 2,513	$ 2,513
Fair value	–	–	–	2,530	2,530
Average yield[b]	–%	–%	–%	0.25%	0.25%
Total available-for-sale securities					
Amortized cost	$ 21,711	$ 40,816	$ 60,666	$ 167,786	$ 290,979
Fair value	21,767	41,751	61,906	173,328	298,752
Average yield[b]	2.74%	2.06%	1.58%	3.28%	2.71%
Total held-to-maturity securities					
Amortized cost	$ –	$ 54	$ 487	$ 48,711	$ 49,252
Fair value	–	54	512	50,588	51,154
Average yield[b]	–%	4.33%	4.81%	3.98%	3.98%

(a) U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2014.

(b) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid.

(c) Includes securities with no stated maturity. Substantially all of the Firm's residential mortgage-backed securities and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated duration, which reflects anticipated future prepayments, is approximately five years for agency residential mortgage-backed securities, three years for agency residential collateralized mortgage obligations and four years for nonagency residential collateralized mortgage obligations.

Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated balance sheets. Resale and repurchase agreements are generally carried at the amounts at which the securities will be subsequently sold or repurchased. Securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. For further discussion of the offsetting of assets and liabilities, see Note 1. Fees received and paid in connection with securities financing agreements are recorded in interest income and interest expense on the Consolidated statements of income.

The Firm has elected the fair value option for certain securities financing agreements. For further information regarding the fair value option, see Note 4. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements; securities loaned or sold under repurchase agreements; and securities borrowed on the Consolidated balance sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

The following table presents as of December 31, 2014 and 2013, the gross and net securities purchased under resale agreements and securities borrowed. Securities purchased under resale agreements have been presented on the Consolidated balance sheets net of securities sold under repurchase agreements where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities purchased under resale agreements are not eligible for netting and are shown separately in the table below. Securities borrowed are presented on a gross basis on the Consolidated balance sheets.

	2014				2013			
December 31, (in millions)	Gross asset balance	Amounts netted on the Consolidated balance sheets	Net asset balance		Gross asset balance	Amounts netted on the Consolidated balance sheets	Net asset balance	
Securities purchased under resale agreements								
Securities purchased under resale agreements with an appropriate legal opinion	**$ 341,989**	**$ (142,719)**	**$ 199,270**		$ 354,814	$ (115,408)	$ 239,406	
Securities purchased under resale agreements where an appropriate legal opinion has not been either sought or obtained	**15,751**		**15,751**		8,279		8,279	
Total securities purchased under resale agreements	**$ 357,740**	**$ (142,719)**	**$ 215,021**	(a)	$ 363,093	$ (115,408)	$ 247,685	(a)
Securities borrowed	**$ 110,435**	**N/A**	**$ 110,435**	(b)(c)	$ 111,465	N/A	$ 111,465	(b)(c)

(a) At December 31, 2014 and 2013, included securities purchased under resale agreements of $28.6 billion and $25.1 billion, respectively, accounted for at fair value.

(b) At December 31, 2014 and 2013, included securities borrowed of $992 million and $3.7 billion, respectively, accounted for at fair value.

(c) Included $28.0 billion and $26.9 billion at December 31, 2014 and 2013, respectively, of securities borrowed where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.

The following table presents information as of December 31, 2014 and 2013, regarding the securities purchased under resale agreements and securities borrowed for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to resale agreements and securities borrowed where such a legal opinion has not been either sought or obtained.

	2014				2013			
		Amounts not nettable on the Consolidated balance sheets[a]				Amounts not nettable on the Consolidated balance sheets[a]		
December 31, (in millions)	Net asset balance	Financial instruments[b]	Cash collateral	Net exposure	Net asset balance	Financial instruments[b]	Cash collateral	Net exposure
Securities purchased under resale agreements with an appropriate legal opinion	**$ 199,270**	**$ (196,136)**	**$ (232)**	**$ 2,902**	$ 239,406	$ (234,495)	$ (98)	$ 4,813
Securities borrowed	**$ 82,464**	**$ (80,267)**	**$ –**	**$ 2,197**	$ 84,531	$ (81,127)	$ –	$ 3,404

(a) For some counterparties, the sum of the financial instruments and cash collateral not nettable on the Consolidated balance sheets may exceed the net asset balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net reverse repurchase agreement or securities borrowed asset with that counterparty. As a result a net exposure amount is reported even though the Firm, on an aggregate basis for its securities purchased under resale agreements and securities borrowed, has received securities collateral with a total fair value that is greater than the funds provided to counterparties.

(b) Includes financial instrument collateral received, repurchase liabilities and securities loaned liabilities with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated balance sheets because other U.S. GAAP netting criteria are not met.

The following table presents as of December 31, 2014 and 2013, the gross and net securities sold under repurchase agreements and securities loaned. Securities sold under repurchase agreements have been presented on the Consolidated balance sheets net of securities purchased under resale agreements where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities sold under repurchase agreements are not eligible for netting and are shown separately in the table below. Securities loaned are presented on a gross basis on the Consolidated balance sheets.

	2014				2013			
December 31, (in millions)	Gross liability balance	Amounts netted on the Consolidated balance sheets	Net liability balance		Gross liability balance	Amounts netted on the Consolidated balance sheets	Net liability balance	
Securities sold under repurchase agreements								
Securities sold under repurchase agreements with an appropriate legal opinion	**$ 289,619**	**$ (142,719)**	**$ 146,900**		$ 257,630 [f]	$ (115,408)	$ 142,222	[f]
Securities sold under repurchase agreements where an appropriate legal opinion has not been either sought or obtained[a]	**22,906**		**22,906**		18,143 [f]		18,143	[f]
Total securities sold under repurchase agreements	**$ 312,525**	**$ (142,719)**	**$ 169,806**	[c]	$ 275,773	$ (115,408)	$ 160,365	[c]
Securities loaned[b]	**$ 25,927**	**N/A**	**$ 25,927**	[d][e]	$ 25,769	N/A	$ 25,769	[d][e]

(a) Includes repurchase agreements that are not subject to a master netting agreement but do provide rights to collateral.

(b) Included securities-for-securities borrow vs. pledge transactions of $4.1 billion and $5.8 billion at December 31, 2014 and 2013, respectively, when acting as lender and as presented within other liabilities in the Consolidated balance sheets.

(c) At December 31, 2014 and 2013, included securities sold under repurchase agreements of $3.0 billion and $4.9 billion, respectively, accounted for at fair value.

(d) At December 31, 2013, included securities loaned of $483 million accounted for at fair value; there were no securities loaned accounted for at fair value at December 31, 2014.

(e) Included $537 million and $397 million at December 31, 2014 and 2013, respectively, of securities loaned where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.

(f) The prior period amounts have been revised with a corresponding impact in the table below. This revision had no impact on the Firm's Consolidated balance sheets or its results of operations.

The following table presents information as of December 31, 2014 and 2013, regarding the securities sold under repurchase agreements and securities loaned for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to repurchase agreements and securities loaned where such a legal opinion has not been either sought or obtained.

	2014				2013			
		Amounts not nettable on the Consolidated balance sheets[a]				Amounts not nettable on the Consolidated balance sheets[a]		
December 31, (in millions)	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]
Securities sold under repurchase agreements with an appropriate legal opinion	**$ 146,900**	**$ (143,985)**	**$ (363)**	**$ 2,552**	$ 142,222 [d]	$ (139,051) [d]	$ (450)	$ 2,721
Securities loaned	**$ 25,390**	**$ (25,040)**	**$ —**	**$ 350**	$ 25,372	$ (25,125)	$ —	$ 247

(a) For some counterparties the sum of the financial instruments and cash collateral not nettable on the Consolidated balance sheets may exceed the net liability balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net repurchase agreement or securities loaned liability with that counterparty.

(b) Includes financial instrument collateral transferred, reverse repurchase assets and securities borrowed assets with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated balance sheets because other U.S. GAAP netting criteria are not met.

(c) Net amount represents exposure of counterparties to the Firm.

(d) The prior period amounts have been revised with a corresponding impact in the table above. This revision had no impact on the Firm's Consolidated balance sheets or its results of operations.

JPMorgan Chase's policy is to take possession, where possible, of securities purchased under resale agreements and of securities borrowed. The Firm monitors the value of the underlying securities (primarily G7 government securities, U.S. agency securities and agency MBS, and equities) that it has received from its counterparties and either requests additional collateral or returns a portion of the collateral when appropriate in light of the market value of the underlying securities. Margin levels are established initially based upon the counterparty and type of collateral and monitored on an ongoing basis to protect against declines in collateral value in the event of default. JPMorgan Chase typically enters into master netting agreements and other collateral arrangements with its resale agreement and securities borrowed counterparties, which provide for the right to liquidate the purchased or borrowed securities in the event of a customer default. As a result of the Firm's credit risk mitigation practices with respect to resale and securities borrowed agreements as described above, the Firm did not hold any reserves for credit impairment with respect to these agreements as of December 31, 2014 and 2013.

For further information regarding assets pledged and collateral received in securities financing agreements, see Note 30.

Transfers not qualifying for sale accounting

In addition, at December 31, 2014 and 2013, the Firm held $13.8 billion and $14.6 billion, respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets, other assets and loans, and the corresponding liabilities are predominantly recorded in other borrowed funds on the Consolidated balance sheets.

Note 14 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained"), other than purchased credit-impaired ("PCI") loans
- Loans held-for-sale
- Loans at fair value
- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories:

Loans held-for-investment (other than PCI loans)

Originated or purchased loans held-for-investment, other than PCI loans, are measured at the principal amount outstanding, net of the following: allowance for loan losses; net charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and net deferred loan fees or costs. Credit card loans also include billed finance charges and fees net of an allowance for uncollectible amounts.

Interest income

Interest income on performing loans held-for-investment, other than PCI loans, is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is in doubt, or when principal and interest has been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. Finally, collateral-dependent loans are typically maintained on nonaccrual status.

On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance for the estimated uncollectible portion of accrued interest and fee income on credit card loans. The allowance is established with a charge to interest income and is reported as an offset to loans.

Allowance for loan losses

The allowance for loan losses represents the estimated probable credit losses inherent in the held-for-investment loan portfolio at the balance sheet date. Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated statements of income. See Note 15 for further information on the Firm's accounting policies for the allowance for loan losses.

Charge-offs

Consumer loans, other than risk-rated business banking, risk-rated auto and PCI loans, are generally charged off or charged down to the net realizable value of the underlying collateral (i.e., fair value less costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the Federal Financial Institutions Examination Council ("FFIEC"). Residential real estate loans, non-modified credit card loans and scored business banking loans are generally charged off at 180 days past due. In the second quarter of 2013, the Firm revised its policy to charge-off modified credit card loans that do not comply with their modified payment terms at 120 days past due rather than 180 days past due. Auto and student loans are charged off no later than 120 days past due.

Certain consumer loans will be charged off earlier than the FFIEC charge-off standards in certain circumstances as follows:

- A charge-off is recognized when a loan is modified in a TDR if the loan is determined to be collateral-dependent. A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.
- Loans to borrowers who have experienced an event (e.g., bankruptcy) that suggests a loss is either known or highly certain are subject to accelerated charge-off standards. Residential real estate and auto loans are charged off when the loan becomes 60 days past due, or sooner if the loan is determined to be collateral-dependent. Credit card and scored business banking loans are charged off within 60 days of receiving notification of the bankruptcy filing or other event. Student loans are generally charged off when the loan becomes 60 days past due after receiving notification of a bankruptcy.
- Auto loans are written down to net realizable value upon repossession of the automobile and after a redemption period (i.e., the period during which a borrower may cure the loan) has passed.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on government-guaranteed loans.

Wholesale loans, risk-rated business banking loans and risk-rated auto loans are charged off when it is highly certain that a loss has been realized, including situations where a loan is determined to be both impaired and collateral-dependent. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the estimated net realizable value, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every six months thereafter. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), generally, either through foreclosure or upon the execution of a deed in lieu of foreclosure transaction with the borrower, the Firm obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared to the estimated values provided by exterior opinions and interior appraisals, considering state- and product-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

Loans held-for-sale

Held-for-sale loans are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or loss recognized at the time of sale.

Held-for-sale loans are subject to the nonaccrual policies described above.

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

Loans at fair value

Loans used in a market-making strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue.

For these loans, the earned current contractual interest payment is recognized in interest income. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's nonaccrual, allowance for loan losses, and charge-off policies do not apply to these loans.

See Note 4 for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 and Note 4 for further information on loans carried at fair value and classified as trading assets.

PCI loans

PCI loans held-for-investment are initially measured at fair value. PCI loans have evidence of credit deterioration since the loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected. Because PCI loans are initially measured at fair value, which includes an estimate of future credit losses, no allowance for loan losses related to PCI loans is recorded at the acquisition date. See page 251 of this Note for information on accounting for PCI loans subsequent to their acquisition.

Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; non-credit related losses such as those due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at the lower of cost or fair value on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 15.

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss, avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, principal forgiveness, or the acceptance of equity or other assets in lieu of payments.

Such modifications are accounted for and reported as troubled debt restructurings ("TDRs"). A loan that has been modified in a TDR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless of whether the borrower performs under the modified terms. In certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring. In such circumstances, and assuming that the loan subsequently performs under its modified terms and the Firm expects to collect all contractual principal and interest cash flows, the loan is disclosed as impaired and as a TDR only during the year of the modification; in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (a) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (b) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, loan-to-value ("LTV") ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

Because loans modified in TDRs are considered to be impaired, these loans are measured for impairment using the Firm's established asset-specific allowance methodology, which considers the expected re-default rates for the modified loans. A loan modified in a TDR remains subject to the asset-specific allowance methodology throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status and/or the loan has been removed from the impaired loans disclosures (i.e., loans restructured at market rates). For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 15.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, and buildings) and commercial and personal property (e.g., automobiles, aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated balance sheets and initially recognized at fair value less costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment, the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class:

Consumer, excluding credit card[a]	Credit card	Wholesale[c]
Residential real estate – excluding PCI • Home equity – senior lien • Home equity – junior lien • Prime mortgage, including option ARMs • Subprime mortgage Other consumer loans • Auto[b] • Business banking[b] • Student and other Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Credit card loans	• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other[d]

(a) Includes loans held in CCB, prime mortgage and home equity loans held in AM and prime mortgage loans held in Corporate.
(b) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included with the other consumer loan classes.
(c) Includes loans held in CIB, CB, AM and Corporate. Excludes prime mortgage and home equity loans held in AM and prime mortgage loans held in Corporate. Classes are internally defined and may not align with regulatory definitions.
(d) Other primarily includes loans to SPEs and loans to private banking clients. See Note 1 for additional information on SPEs.

The following tables summarize the Firm's loan balances by portfolio segment.

December 31, 2014 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	**$ 294,979**	**$ 128,027**	**$ 324,502**	**$ 747,508**	[b]
Held-for-sale	**395**	**3,021**	**3,801**	**7,217**	
At fair value	**–**	**–**	**2,611**	**2,611**	
Total	**$ 295,374**	**$ 131,048**	**$ 330,914**	**$ 757,336**	

December 31, 2013 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	$ 288,449	$ 127,465	$ 308,263	$ 724,177	[b]
Held-for-sale	614	326	11,290	12,230	
At fair value	–	–	2,011	2,011	
Total	$ 289,063	$ 127,791	$ 321,564	$ 738,418	

(a) Includes billed finance charges and fees net of an allowance for uncollectible amounts.

(b) Loans (other than PCI loans and those for which the fair value option has been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs of $1.3 billion and $1.9 billion at December 31, 2014 and 2013, respectively.

The following tables provide information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. These tables exclude loans recorded at fair value. The Firm manages its exposure to credit risk on an ongoing basis. Selling loans is one way that the Firm reduces its credit exposures.

	2014				
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total	
Purchases	**$ 7,434**	**$ –**	**$ 885**	**$ 8,319**	[a][b]
Sales	**6,655**	**291**	**7,381**	**14,327**	
Retained loans reclassified to held-for-sale	**1,190**	**3,039**	**581**	**4,810**	

	2013				
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total	
Purchases	$ 7,616	$ 328	$ 697	$ 8,641	[a][b]
Sales	4,845	–	4,232	9,077	
Retained loans reclassified to held-for-sale	1,261	309	5,641	7,211	

	2012				
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total	
Purchases	$ 6,601	$ –	$ 827	$ 7,428	[a][b]
Sales	1,852	–	3,423	5,275	
Retained loans reclassified to held-for-sale	–	1,043	504	1,547	

(a) Purchases predominantly represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Ginnie Mae guidelines. The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, the Federal Housing Administration ("FHA"), Rural Housing Services ("RHS") and/or the U.S. Department of Veterans Affairs ("VA").

(b) Excluded retained loans purchased from correspondents that were originated in accordance with the Firm's underwriting standards. Such purchases were $15.1 billion, $5.7 billion and $1.4 billion for the years ended December 31, 2014, 2013 and 2012, respectively.

The following table provides information about gains and losses, including lower of cost or fair value adjustments, on loan sales by portfolio segment.

Year ended December 31, (in millions)	**2014**	2013	2012
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]			
Consumer, excluding credit card	**$ 341**	$ 313	$ 122
Credit card	**(241)**	3	(9)
Wholesale	**101**	(76)	180
Total net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)	**$ 201**	$ 240	$ 293

(a) Excludes sales related to loans accounted for at fair value.

Consumer, excluding credit card, loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, business banking loans, and student and other loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period, and certain payment-option loans originated by Washington Mutual that may result in negative amortization.

The table below provides information about retained consumer loans, excluding credit card, by class.

December 31, (in millions)	2014	2013
Residential real estate – excluding PCI		
Home equity:		
Senior lien	**$ 16,367**	$ 17,113
Junior lien	**36,375**	40,750
Mortgages:		
Prime, including option ARMs	**104,921**	87,162
Subprime	**5,056**	7,104
Other consumer loans		
Auto	**54,536**	52,757
Business banking	**20,058**	18,951
Student and other	**10,970**	11,557
Residential real estate – PCI		
Home equity	**17,095**	18,927
Prime mortgage	**10,220**	12,038
Subprime mortgage	**3,673**	4,175
Option ARMs	**15,708**	17,915
Total retained loans	**$ 294,979**	$ 288,449

Delinquency rates are a primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear that the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, including both non-PCI and PCI portfolios, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit-quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (660 or below) is considered to be of higher risk than a loan to a borrower with a high FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For scored auto, scored business banking and student loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.
- Risk-rated business banking and auto loans are similar to wholesale loans in that the primary credit quality indicators are the risk rating that is assigned to the loan and whether the loans are considered to be criticized and/or nonaccrual. Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information about borrowers' ability to fulfill their obligations. For further information about risk-rated wholesale loan credit quality indicators, see page 255 of this Note.

Residential real estate – excluding PCI loans

The following table provides information by class for residential real estate – excluding retained PCI loans in the consumer, excluding credit card, portfolio segment.

The following factors should be considered in analyzing certain credit statistics applicable to the Firm's residential real estate – excluding PCI loans portfolio: (i) junior lien home equity loans may be fully charged off when the loan becomes 180 days past due, and the value of the collateral does not support the repayment of the loan, resulting in relatively high charge-off rates for this product class; and (ii) the lengthening of loss-mitigation timelines may result in higher delinquency rates for loans carried at the net realizable value of the collateral that remain on the Firm's Consolidated balance sheets.

Residential real estate – excluding PCI loans

December 31, (in millions, except ratios)	Home equity				Mortgages					
	Senior lien		Junior lien		Prime, including option ARMs		Subprime		Total residential real estate – excluding PCI	
	2014	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013
Loan delinquency[a]										
Current	**$ 15,730**	$ 16,470	**$ 35,575**	$ 39,864	**$ 93,951**	$ 76,108	**$ 4,296**	$ 5,956	**$ 149,552**	$ 138,398
30–149 days past due	**275**	298	**533**	662	**4,091**	3,155	**489**	646	**5,388**	4,761
150 or more days past due	**362**	345	**267**	224	**6,879**	7,899	**271**	502	**7,779**	8,970
Total retained loans	**$ 16,367**	$ 17,113	**$ 36,375**	$ 40,750	**$ 104,921**	$ 87,162	**$ 5,056**	$ 7,104	**$ 162,719**	$ 152,129
% of 30+ days past due to total retained loans[b]	**3.89%**	3.76%	**2.20%**	2.17%	**1.42%**	2.32%	**15.03%**	16.16%	**2.27%**	3.09%
90 or more days past due and still accruing	**$ –**	$ –	**$ –**	$ –	**$ –**	$ –	**$ –**	$ –	**$ –**	$ –
90 or more days past due and government guaranteed[c]	**–**	–	**–**	–	**7,544**	7,823	**–**	–	**7,544**	7,823
Nonaccrual loans	**938**	932	**1,590**	1,876	**2,190**	2,666	**1,036**	1,390	**5,754**	6,864
Current estimated LTV ratios[d][e][f][g]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 21**	$ 40	**$ 467**	$ 1,101	**$ 120**	$ 236	**$ 10**	$ 52	**$ 618**	$ 1,429
Less than 660	**10**	22	**138**	346	**103**	281	**51**	197	**302**	846
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**134**	212	**3,149**	4,645	**648**	1,210	**118**	249	**4,049**	6,316
Less than 660	**69**	107	**923**	1,407	**340**	679	**298**	597	**1,630**	2,790
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**633**	858	**6,481**	7,995	**3,863**	4,749	**432**	614	**11,409**	14,216
Less than 660	**226**	326	**1,780**	2,128	**1,026**	1,590	**770**	1,141	**3,802**	5,185
Less than 80% and refreshed FICO scores:										
Equal to or greater than 660	**13,048**	13,186	**20,030**	19,732	**81,805**	59,634	**1,586**	1,961	**116,469**	94,513
Less than 660	**2,226**	2,362	**3,407**	3,396	**4,906**	5,071	**1,791**	2,293	**12,330**	13,122
U.S. government-guaranteed	**–**	–	**–**	–	**12,110**	13,712	**–**	–	**12,110**	13,712
Total retained loans	**$ 16,367**	$ 17,113	**$ 36,375**	$ 40,750	**$ 104,921**	$ 87,162	**$ 5,056**	$ 7,104	**$ 162,719**	$ 152,129
Geographic region										
California	**$ 2,232**	$ 2,397	**$ 8,144**	$ 9,240	**$ 28,133**	$ 21,876	**$ 718**	$ 1,069	**$ 39,227**	$ 34,582
New York	**2,805**	2,732	**7,685**	8,429	**16,550**	14,085	**677**	942	**27,717**	26,188
Illinois	**1,306**	1,248	**2,605**	2,815	**6,654**	5,216	**207**	280	**10,772**	9,559
Florida	**861**	847	**1,923**	2,167	**5,106**	4,598	**632**	885	**8,522**	8,497
Texas	**1,845**	2,044	**1,087**	1,199	**4,935**	3,565	**177**	220	**8,044**	7,028
New Jersey	**654**	630	**2,233**	2,442	**3,361**	2,679	**227**	339	**6,475**	6,090
Arizona	**927**	1,019	**1,595**	1,827	**1,805**	1,385	**112**	144	**4,439**	4,375
Washington	**506**	555	**1,216**	1,378	**2,410**	1,951	**109**	150	**4,241**	4,034
Michigan	**736**	799	**848**	976	**1,203**	998	**121**	178	**2,908**	2,951
Ohio	**1,150**	1,298	**778**	907	**615**	466	**112**	161	**2,655**	2,832
All other[h]	**3,345**	3,544	**8,261**	9,370	**34,149**	30,343	**1,964**	2,736	**47,719**	45,993
Total retained loans	**$ 16,367**	$ 17,113	**$ 36,375**	$ 40,750	**$ 104,921**	$ 87,162	**$ 5,056**	$ 7,104	**$ 162,719**	$ 152,129

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included $2.6 billion and $4.7 billion; 30–149 days past due included $3.5 billion and $2.4 billion; and 150 or more days past due included $6.0 billion and $6.6 billion at December 31, 2014 and 2013, respectively.

(b) At December 31, 2014 and 2013, Prime, including option ARMs loans excluded mortgage loans insured by U.S. government agencies of $9.5 billion and $9.0 billion, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

(c) These balances, which are 90 days or more past due but insured by U.S. government agencies, are excluded from nonaccrual loans. In predominantly all cases, 100% of the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting agreed-upon servicing guidelines. These amounts have been excluded from nonaccrual loans based upon the government guarantee. At December 31, 2014 and 2013, these balances included $4.2 billion and $4.7 billion, respectively, of loans that are no longer accruing interest because interest has been curtailed by the U.S. government agencies although, in predominantly all cases, 100% of the principal is still insured. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate.

(d) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates.

(e) Junior lien represents combined LTV, which considers all available lien positions, as well as unused lines, related to the property. All other products are presented without consideration of subordinate liens on the property.

(f) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(g) The prior period prime, including option ARMs have been revised. This revision had no impact on the Firm's Consolidated balance sheets or its results of operations.

(h) At December 31, 2014 and 2013, included mortgage loans insured by U.S. government agencies of $12.1 billion and $13.7 billion, respectively.

The following tables represent the Firm's delinquency statistics for junior lien home equity loans and lines as of December 31, 2014 and 2013.

December 31, 2014 (in millions, except ratios)	Delinquencies				
	30–89 days past due	90–149 days past due	150+ days past due	Total loans	Total 30+ day delinquency rate
HELOCs:[a]					
Within the revolving period[b]	**$ 233**	**$ 69**	**$ 141**	**$ 25,252**	**1.75%**
Beyond the revolving period	**108**	**37**	**107**	**7,979**	**3.16**
HELOANs	**66**	**20**	**19**	**3,144**	**3.34**
Total	**$ 407**	**$ 126**	**$ 267**	**$ 36,375**	**2.20%**

December 31, 2013 (in millions, except ratios)	Delinquencies				
	30–89 days past due	90–149 days past due	150+ days past due	Total loans	Total 30+ day delinquency rate
HELOCs:[a]					
Within the revolving period[b]	$ 341	$ 104	$ 162	$ 31,848	1.91%
Beyond the revolving period	84	21	46	4,980	3.03
HELOANs	86	26	16	3,922	3.26
Total	$ 511	$ 151	$ 224	$ 40,750	2.17%

(a) These HELOCs are predominantly revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period, but also include HELOCs originated by Washington Mutual that require interest-only payments beyond the revolving period.

(b) The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty or when the collateral does not support the loan amount.

Home equity lines of credit ("HELOCs") beyond the revolving period and home equity loans ("HELOANs") have higher delinquency rates than do HELOCs within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the loss estimates produced by the Firm's delinquency roll-rate methodology, which estimates defaults based on the current delinquency status of a portfolio.

Impaired loans

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15.

December 31, (in millions)	Home equity				Mortgages				Total residential real estate – excluding PCI	
	Senior lien		Junior lien		Prime, including option ARMs		Subprime			
	2014	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013
Impaired loans										
With an allowance	**$ 552**	$ 567	**$ 722**	$ 727	**$ 4,949**	$ 5,871	**$ 2,239**	$ 2,989	**$ 8,462**	$ 10,154
Without an allowance[a]	**549**	579	**582**	592	**1,196**	1,133	**639**	709	**2,966**	3,013
Total impaired loans[b][c]	**$ 1,101**	$ 1,146	**$ 1,304**	$ 1,319	**$ 6,145**	$ 7,004	**$ 2,878**	$ 3,698	**$ 11,428**	$ 13,167
Allowance for loan losses related to impaired loans	**$ 84**	$ 94	**$ 147**	$ 162	**$ 127**	$ 144	**$ 64**	$ 94	**$ 422**	$ 494
Unpaid principal balance of impaired loans[d]	**1,451**	1,515	**2,603**	2,625	**7,813**	8,990	**4,200**	5,461	**16,067**	18,591
Impaired loans on nonaccrual status[e]	**628**	641	**632**	666	**1,559**	1,737	**931**	1,127	**3,750**	4,171

(a) Represents collateral-dependent residential mortgage loans that are charged off to the fair value of the underlying collateral less cost to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual TDRs, regardless of their delinquency status. At December 31, 2014, Chapter 7 residential real estate loans included approximately 19% of senior lien home equity, 12% of junior lien home equity, 25% of prime mortgages, including option ARMs, and 18% of subprime mortgages that were 30 days or more past due.

(b) At December 31, 2014 and 2013, $4.9 billion and $7.6 billion, respectively, of loans modified subsequent to repurchase from Government National Mortgage Association ("Ginnie Mae") in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure.

(c) Predominantly all residential real estate impaired loans, excluding PCI loans, are in the U.S.

(d) Represents the contractual amount of principal owed at December 31, 2014 and 2013. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.

(e) As of December 31, 2014 and 2013, nonaccrual loans included $2.9 billion and $3.0 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status refer to the Loan accounting framework on pages 238–240 of this Note.

The following table presents average impaired loans and the related interest income reported by the Firm.

Year ended December 31, (in millions)	Average impaired loans			Interest income on impaired loans[a]			Interest income on impaired loans on a cash basis[a]		
	2014	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Home equity									
Senior lien	**$ 1,122**	$ 1,151	$ 610	**$ 55**	$ 59	$ 27	**$ 37**	$ 40	$ 12
Junior lien	**1,313**	1,297	848	**82**	82	42	**53**	55	16
Mortgages									
Prime, including option ARMs	**6,730**	7,214	5,989	**262**	280	238	**54**	59	28
Subprime	**3,444**	3,798	3,494	**182**	200	183	**51**	55	31
Total residential real estate – excluding PCI	**$ 12,609**	$ 13,460	$ 10,941	**$ 581**	$ 621	$ 490	**$ 195**	$ 209	$ 87

(a) Generally, interest income on loans modified in TDRs is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms.

Loan modifications

The Firm is required to provide borrower relief under the terms of certain Consent Orders and settlements entered into by the Firm related to its mortgage servicing, originations and residential mortgage-backed securities activities. This borrower relief includes reductions of principal and forbearance.

Modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

The following table presents new TDRs reported by the Firm.

Year ended December 31, (in millions)	**2014**	2013	2012
Home equity:			
Senior lien	**$ 110**	$ 210	$ 835
Junior lien	**211**	388	711
Mortgages:			
Prime, including option ARMs	**287**	770	2,918
Subprime	**124**	319	1,043
Total residential real estate – excluding PCI	**$ 732**	$ 1,687	$ 5,507

Nature and extent of modifications

Making Home Affordable ("MHA"), as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following table provides information about how residential real estate loans, excluding PCI loans, were modified under the Firm's loss mitigation programs during the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

	Home equity						Mortgages								
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			Total residential real estate - excluding PCI		
Year ended Dec. 31,	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Number of loans approved for a trial modification	**939**	1,719	1,695	**626**	884	918	**1,052**	2,846	3,895	**2,056**	4,233	4,841	**4,673**	9,682	11,349
Number of loans permanently modified	**1,171**	1,765	4,385	**2,813**	5,040	7,430	**2,507**	4,356	9,043	**3,141**	5,364	9,964	**9,632**	16,525	30,822
Concession granted:[a]															
Interest rate reduction	**53%**	70%	83%	**84%**	88%	88%	**43%**	73%	74%	**47%**	72%	69%	**58%**	77%	77%
Term or payment extension	**67**	76	47	**83**	80	76	**51**	73	57	**53**	56	41	**63**	70	55
Principal and/or interest deferred	**16**	12	6	**23**	24	17	**19**	30	16	**12**	13	7	**18**	21	12
Principal forgiveness	**36**	38	11	**22**	32	23	**51**	38	29	**53**	48	42	**41**	39	29
Other[b]	**–**	–	–	**–**	–	–	**10**	23	29	**10**	14	8	**6**	11	11

(a) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession. A significant portion of trial modifications include interest rate reductions and/or term or payment extensions.

(b) Represents variable interest rate to fixed interest rate modifications.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under the Firm's loss mitigation programs and about redefaults of certain loans modified in TDRs for the periods presented. Because the specific types and amounts of concessions offered to borrowers frequently change between the trial modification and the permanent modification, the following table presents only the financial effects of permanent modifications. This table also excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

Year ended December 31, (in millions, except weighted-average data and number of loans)	Home equity						Mortgages								
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			Total residential real estate – excluding PCI		
	2014	2013	2012	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Weighted-average interest rate of loans with interest rate reductions – before TDR	**6.38%**	6.35%	7.20%	**4.81%**	5.05%	5.45%	**4.82%**	5.28%	6.14%	**7.16%**	7.33%	7.73%	**5.61%**	5.88%	6.57%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**3.03**	3.23	4.61	**2.00**	2.14	1.94	**2.69**	2.77	3.67	**3.37**	3.52	4.14	**2.78**	2.92	3.69
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**17**	19	18	**19**	20	20	**25**	25	25	**24**	24	24	**23**	23	24
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**30**	31	28	**35**	34	32	**37**	37	36	**36**	35	32	**36**	36	34
Charge-offs recognized upon permanent modification	**$ 2**	$ 7	$ 8	**$ 25**	$ 70	$ 65	**$ 9**	$ 16	$ 35	**$ 3**	$ 5	$ 29	**$ 39**	$ 98	$ 137
Principal deferred	**5**	7	4	**11**	24	23	**39**	129	133	**19**	43	43	**74**	203	203
Principal forgiven	**14**	30	20	**21**	51	58	**83**	206	249	**89**	218	324	**207**	505	651
Balance of loans that redefaulted within one year of permanent modification[(a)]	**$ 19**	$ 26	$ 30	**$ 10**	$ 20	$ 46	**$ 121**	$ 164	$ 255	**$ 93**	$ 106	$ 156	**$ 243**	$ 316	$ 487

(a) Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

At December 31, 2014, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 6 years for senior lien home equity, 8 years for junior lien home equity, 9 years for prime mortgages, including option ARMs, and 8 years for subprime mortgage. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

Active and suspended foreclosure

At December 31, 2014 and 2013, the Firm had non-PCI residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $1.5 billion and $2.1 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Other consumer loans

The table below provides information for other consumer retained loan classes, including auto, business banking and student loans.

December 31, (in millions, except ratios)	Auto		Business banking		Student and other		Total other consumer	
	2014	2013	**2014**	2013	**2014**	2013	**2014**	2013
Loan delinquency[a]								
Current	**$53,866**	$52,152	**$19,710**	$ 18,511	**$10,080**	$ 10,529	**$ 83,656**	$ 81,192
30–119 days past due	**663**	599	**208**	280	**576**	660	**1,447**	1,539
120 or more days past due	**7**	6	**140**	160	**314**	368	**461**	534
Total retained loans	**$54,536**	$52,757	**$20,058**	$ 18,951	**$10,970**	$ 11,557	**$ 85,564**	$ 83,265
% of 30+ days past due to total retained loans	**1.23%**	1.15%	**1.73%**	2.32%	**2.15%** [d]	2.52% [d]	**1.47%** [d]	1.60% [d]
90 or more days past due and still accruing [b]	**$ –**	$ –	**$ –**	$ –	**$ 367**	$ 428	**$ 367**	$ 428
Nonaccrual loans	**115**	161	**279**	385	**270**	86	**664**	632
Geographic region								
California	**$ 6,294**	$ 5,615	**$ 3,008**	$ 2,374	**$ 1,143**	$ 1,112	**$ 10,445**	$ 9,101
New York	**3,662**	3,898	**3,187**	3,084	**1,259**	1,218	**8,108**	8,200
Illinois	**3,175**	2,917	**1,373**	1,341	**729**	740	**5,277**	4,998
Florida	**2,301**	2,012	**827**	646	**521**	539	**3,649**	3,197
Texas	**5,608**	5,310	**2,626**	2,646	**868**	878	**9,102**	8,834
New Jersey	**1,945**	2,014	**451**	392	**378**	397	**2,774**	2,803
Arizona	**2,003**	1,855	**1,083**	1,046	**239**	252	**3,325**	3,153
Washington	**1,019**	950	**258**	234	**235**	227	**1,512**	1,411
Michigan	**1,633**	1,902	**1,375**	1,383	**466**	513	**3,474**	3,798
Ohio	**2,157**	2,229	**1,354**	1,316	**629**	708	**4,140**	4,253
All other	**24,739**	24,055	**4,516**	4,489	**4,503**	4,973	**33,758**	33,517
Total retained loans	**$54,536**	$52,757	**$20,058**	$ 18,951	**$10,970**	$ 11,557	**$ 85,564**	$ 83,265
Loans by risk ratings[c]								
Noncriticized	**$ 9,822**	$ 9,968	**$14,619**	$ 13,622	**NA**	NA	**$ 24,441**	$ 23,590
Criticized performing	**35**	54	**708**	711	**NA**	NA	**743**	765
Criticized nonaccrual	**–**	38	**213**	316	**NA**	NA	**213**	354

(a) Individual delinquency classifications included loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") as follows: current included $4.3 billion and $4.9 billion; 30-119 days past due included $364 million and $387 million; and 120 or more days past due included $290 million and $350 million at December 31, 2014 and 2013, respectively.

(b) These amounts represent student loans, which are insured by U.S. government agencies under the FFELP. These amounts were accruing as reimbursement of insured amounts is proceeding normally.

(c) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.

(d) December 31, 2014 and 2013, excluded loans 30 days or more past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $654 million and $737 million, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

Other consumer impaired loans and loan modifications

The table below sets forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

December 31, (in millions)	2014	2013
Impaired loans		
With an allowance	**$ 557**	$ 571
Without an allowance[a]	**35**	47
Total impaired loans[b][c]	**$ 592**	$ 618
Allowance for loan losses related to impaired loans	**$ 117**	$ 107
Unpaid principal balance of impaired loans[d]	**719**	788
Impaired loans on nonaccrual status	**456**	441

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) Predominantly all other consumer impaired loans are in the U.S.
(c) Other consumer average impaired loans were $599 million, $648 million and $733 million for the years ended December 31, 2014, 2013 and 2012, respectively. The related interest income on impaired loans, including those on a cash basis, was not material for the years ended December 31, 2014, 2013 and 2012.
(d) Represents the contractual amount of principal owed at December 31, 2014 and 2013. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the principal balance; net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.

Loan modifications

The following table provides information about the Firm's other consumer loans modified in TDRs. All of these TDRs are reported as impaired loans in the tables above.

December 31, (in millions)	2014	2013
Loans modified in troubled debt restructurings[a][b]	**$ 442**	$ 378
TDRs on nonaccrual status	**306**	201

(a) The impact of these modifications was not material to the Firm for the years ended December 31, 2014 and 2013.
(b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2014 and 2013 were immaterial.

Other consumer new TDRs were $291 million, $156 million, and $249 million for the years ended December 31, 2014, 2013 and 2012, respectively.

Financial effects of modifications and redefaults

For auto loans, TDRs typically occur in connection with the bankruptcy of the borrower. In these cases, the loan is modified with a revised repayment plan that typically incorporates interest rate reductions and, to a lesser extent, principal forgiveness.

For business banking loans, concessions are dependent on individual borrower circumstances and can be of a short-term nature for borrowers who need temporary relief or longer term for borrowers experiencing more fundamental financial difficulties. Concessions are predominantly term or payment extensions, but also may include interest rate reductions.

The balance of business banking loans modified in TDRs that experienced a payment default, and for which the payment default occurred within one year of the modification, was $25 million, $43 million and $42 million, during the years ended December 31, 2014, 2013 and 2012, respectively. The balance of auto loans modified in TDRs that experienced a payment default, and for which the payment default occurred within one year of the modification, was $43 million, $54 million, and $46 million, during the years ended December 31, 2014, 2013, and 2012, respectively. A payment default is deemed to occur as follows: (1) for scored auto and business banking loans, when the loan is two payments past due; and (2) for risk-rated business banking loans and auto loans, when the borrower has not made a loan payment by its scheduled due date after giving effect to the contractual grace period, if any.

In May 2014 the Firm began extending the deferment period for up to 24 months for certain student loans, which resulted in extending the maturity of the loans at their original contractual interest rates. These modified loans are considered TDRs and placed on nonaccrual status.

Purchased credit-impaired loans

PCI loans are initially recorded at fair value at acquisition. PCI loans acquired in the same fiscal quarter may be aggregated into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer PCI loans were aggregated into pools of loans with common risk characteristics.

On a quarterly basis, the Firm estimates the total cash flows (both principal and interest) expected to be collected over the remaining life of each pool. These estimates incorporate assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that reflect then-current market conditions. Probable decreases in expected cash flows (i.e., increased credit losses) trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related foregone interest cash flows, discounted at the pool's effective interest rate. Impairments are recognized through the provision for credit losses and an increase in the allowance for loan losses. Probable and significant increases in expected cash flows (e.g., decreased credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans. The impacts of (i) prepayments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are recognized prospectively as adjustments to interest income.

The Firm continues to modify certain PCI loans. The impact of these modifications is incorporated into the Firm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans. In evaluating the effect of modifications on expected cash flows, the Firm incorporates the effect of any foregone interest and also considers the potential for redefault. The Firm develops product-specific probability of default estimates, which are used to compute expected credit losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment based upon industry-wide data. The Firm also considers its own historical loss experience to-date based on actual redefaulted modified PCI loans.

The excess of cash flows expected to be collected over the carrying value of the underlying loans is referred to as the accretable yield. This amount is not reported on the Firm's Consolidated balance sheets but is accreted into interest income at a level rate of return over the remaining estimated lives of the underlying pools of loans.

If the timing and/or amounts of expected cash flows on PCI loans were determined not to be reasonably estimable, no interest would be accreted and the loans would be reported as nonaccrual loans; however, since the timing and amounts of expected cash flows for the Firm's PCI consumer loans are reasonably estimable, interest is being accreted and the loans are being reported as performing loans.

The liquidation of PCI loans, which may include sales of loans, receipt of payment in full by the borrower, or foreclosure, results in removal of the loans from the underlying PCI pool. When the amount of the liquidation proceeds (e.g., cash, real estate), if any, is less than the unpaid principal balance of the loan, the difference is first applied against the PCI pool's nonaccretable difference for principal losses (i.e., the lifetime credit loss estimate established as a purchase accounting adjustment at the acquisition date). When the nonaccretable difference for a particular loan pool has been fully depleted, any excess of the unpaid principal balance of the loan over the liquidation proceeds is written off against the PCI pool's allowance for loan losses. Beginning in the fourth quarter of 2014, write-offs of PCI loans also include other adjustments, primarily related to interest forgiveness modifications. Because the Firm's PCI loans are accounted for at a pool level, the Firm does not recognize charge-offs of PCI loans when they reach specified stages of delinquency (i.e., unlike non-PCI consumer loans, these loans are not charged off based on FFIEC standards).

The PCI portfolio affects the Firm's results of operations primarily through: (i) contribution to net interest margin; (ii) expense related to defaults and servicing resulting from the liquidation of the loans; and (iii) any provision for loan losses. The PCI loans acquired in the Washington Mutual transaction were funded based on the interest rate characteristics of the loans. For example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with fixed-rate liabilities with a similar maturity profile. A net spread will be earned on the declining balance of the portfolio, which is estimated as of December 31, 2014, to have a remaining weighted-average life of 8 years.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

December 31, (in millions, except ratios)	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
	2014	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013
Carrying value[a]	**$17,095**	$18,927	**$10,220**	$12,038	**$ 3,673**	$ 4,175	**$15,708**	$17,915	**$46,696**	$53,055
Related allowance for loan losses[b]	**1,758**	1,758	**1,193**	1,726	**180**	180	**194**	494	**3,325**	4,158
Loan delinquency (based on unpaid principal balance)										
Current	**$16,295**	$18,135	**$ 8,912**	$10,118	**$ 3,565**	$ 4,012	**$13,814**	$15,501	**$42,586**	$47,766
30–149 days past due	**445**	583	**500**	589	**536**	662	**858**	1,006	**2,339**	2,840
150 or more days past due	**1,000**	1,112	**837**	1,169	**551**	797	**1,824**	2,716	**4,212**	5,794
Total loans	**$17,740**	$19,830	**$10,249**	$11,876	**$ 4,652**	$ 5,471	**$16,496**	$19,223	**$49,137**	$56,400
% of 30+ days past due to total loans	**8.15%**	8.55%	**13.05%**	14.80%	**23.37%**	26.67%	**16.26%**	19.36%	**13.33%**	15.31%
Current estimated LTV ratios (based on unpaid principal balance)[c][d]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 513**	$ 1,168	**$ 45**	$ 240	**$ 34**	$ 115	**$ 89**	$ 301	**$ 681**	$ 1,824
Less than 660	**273**	662	**97**	290	**160**	459	**150**	575	**680**	1,986
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**2,245**	3,248	**456**	1,017	**215**	316	**575**	1,164	**3,491**	5,745
Less than 660	**1,073**	1,541	**402**	884	**509**	919	**771**	1,563	**2,755**	4,907
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**4,171**	4,473	**2,154**	2,787	**519**	544	**2,418**	3,311	**9,262**	11,115
Less than 660	**1,647**	1,782	**1,316**	1,699	**1,006**	1,197	**1,996**	2,769	**5,965**	7,447
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	**5,824**	5,077	**3,663**	2,897	**719**	521	**6,593**	5,671	**16,799**	14,166
Less than 660	**1,994**	1,879	**2,116**	2,062	**1,490**	1,400	**3,904**	3,869	**9,504**	9,210
Total unpaid principal balance	**$17,740**	$19,830	**$10,249**	$11,876	**$ 4,652**	$ 5,471	**$16,496**	$19,223	**$49,137**	$56,400
Geographic region (based on unpaid principal balance)										
California	**$10,671**	$11,937	**$ 5,965**	$ 6,845	**$ 1,138**	$ 1,293	**$ 9,190**	$10,419	**$26,964**	$30,494
New York	**876**	962	**672**	807	**463**	563	**933**	1,196	**2,944**	3,528
Illinois	**405**	451	**301**	353	**229**	283	**397**	481	**1,332**	1,568
Florida	**1,696**	1,865	**689**	826	**432**	526	**1,440**	1,817	**4,257**	5,034
Texas	**273**	327	**92**	106	**281**	328	**85**	100	**731**	861
New Jersey	**348**	381	**279**	334	**165**	213	**553**	701	**1,345**	1,629
Arizona	**323**	361	**167**	187	**85**	95	**227**	264	**802**	907
Washington	**959**	1,072	**225**	266	**95**	112	**395**	463	**1,674**	1,913
Michigan	**53**	62	**166**	189	**130**	145	**182**	206	**531**	602
Ohio	**20**	23	**48**	55	**72**	84	**69**	75	**209**	237
All other	**2,116**	2,389	**1,645**	1,908	**1,562**	1,829	**3,025**	3,501	**8,348**	9,627
Total unpaid principal balance	**$17,740**	$19,830	**$10,249**	$11,876	**$ 4,652**	$ 5,471	**$16,496**	$19,223	**$49,137**	$56,400

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.

(b) Management concluded as part of the Firm's regular assessment of the PCI loan pools that it was probable that higher expected credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.

(d) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

Approximately 20% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following tables set forth delinquency statistics for PCI junior lien home equity loans and lines of credit based on unpaid principal balance as of December 31, 2014 and 2013.

December 31, 2014 (in millions, except ratios)	Delinquencies			Total loans	Total 30+ day delinquency rate
	30–89 days past due	90–149 days past due	150+ days past due		
HELOCs:[a]					
Within the revolving period[b]	**$ 155**	**$ 50**	**$ 371**	**$ 8,972**	**6.42%**
Beyond the revolving period[c]	**76**	**24**	**166**	**4,143**	**6.42**
HELOANs	**20**	**7**	**38**	**736**	**8.83**
Total	**$ 251**	**$ 81**	**$ 575**	**$ 13,851**	**6.55%**

December 31, 2013 (in millions, except ratios)	Delinquencies			Total loans	Total 30+ day delinquency rate
	30–89 days past due	90–149 days past due	150+ days past due		
HELOCs:[a]					
Within the revolving period[b]	$ 243	$ 88	$ 526	$ 12,670	6.76%
Beyond the revolving period[c]	54	21	82	2,336	6.72
HELOANs	24	11	39	908	8.15
Total	$ 321	$ 120	$ 647	$ 15,914	6.84%

(a) In general, these HELOCs are revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.
(b) Substantially all undrawn HELOCs within the revolving period have been closed.
(c) Includes loans modified into fixed-rate amortizing loans.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the years ended December 31, 2014, 2013 and 2012, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. The table excludes the cost to fund the PCI portfolios, and therefore the accretable yield does not represent net interest income expected to be earned on these portfolios.

Year ended December 31, (in millions, except ratios)	Total PCI		
	2014	2013	2012
Beginning balance	**$ 16,167**	$ 18,457	$ 19,072
Accretion into interest income	**(1,934)**	(2,201)	(2,491)
Changes in interest rates on variable-rate loans	**(174)**	(287)	(449)
Other changes in expected cash flows[a]	**533**	198	2,325
Balance at December 31	**$ 14,592**	$ 16,167	$ 18,457
Accretable yield percentage	**4.19%**	4.31%	4.38%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model and periodically updates model assumptions. For the year ended December 31, 2014, other changes in expected cash flows were driven by changes in prepayment assumptions. For the year ended December 31, 2013, other changes in expected cash flows were due to refining the expected interest cash flows on HELOCs with balloon payments, partially offset by changes in prepayment assumptions. For the year ended December 31, 2012, other changes in expected cash flows were principally driven by the impact of modifications, but also related to changes in prepayment assumptions.

The factors that most significantly affect estimates of gross cash flows expected to be collected, and accordingly the accretable yield balance, include: (i) changes in the benchmark interest rate indices for variable-rate products such as option ARM and home equity loans; and (ii) changes in prepayment assumptions.

Since the date of acquisition, the decrease in the accretable yield percentage has been primarily related to a decrease in interest rates on variable-rate loans and, to a lesser extent, extended loan liquidation periods. Certain events, such as extended or shortened loan liquidation periods, affect the timing of expected cash flows and the accretable yield percentage, but not the amount of cash expected to be received (i.e., the accretable yield balance). While extended loan liquidation periods reduce the accretable yield percentage (because the same accretable yield balance is recognized against a higher-than-expected loan balance over a longer-than-expected period of time), shortened loan liquidation periods would have the opposite effect.

Active and suspended foreclosure

At December 31, 2014 and 2013, the Firm had PCI residential real estate loans with an unpaid principal balance of $3.2 billion and $4.8 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30 days past due); information on those borrowers that have been delinquent for a longer period of time (90 days past due) is also considered. In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, the Firm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends to be a lagging indicator. However, the distribution of such scores provides a general indicator of credit quality trends within the portfolio. Refreshed FICO score information, which is obtained at least quarterly, for a statistically significant random sample of the credit card portfolio is indicated in the table below; FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in credit score technology.

The table below sets forth information about the Firm's credit card loans.

As of or for the year ended December 31, (in millions, except ratios)	2014	2013
Net charge-offs	**$ 3,429**	$ 3,879
% of net charge-offs to retained loans	**2.75%**	3.14%
Loan delinquency		
Current and less than 30 days past due and still accruing	**$ 126,189**	$ 125,335
30–89 days past due and still accruing	**943**	1,108
90 or more days past due and still accruing	**895**	1,022
Nonaccrual loans	**–**	–
Total retained credit card loans	**$ 128,027**	$ 127,465
Loan delinquency ratios		
% of 30+ days past due to total retained loans	**1.44%**	1.67%
% of 90+ days past due to total retained loans	**0.70**	0.80
Credit card loans by geographic region		
California	**$ 17,940**	$ 17,194
Texas	**11,088**	10,400
New York	**10,940**	10,497
Illinois	**7,497**	7,412
Florida	**7,398**	7,178
New Jersey	**5,750**	5,554
Ohio	**4,707**	4,881
Pennsylvania	**4,489**	4,462
Michigan	**3,552**	3,618
Virginia	**3,263**	3,239
All other	**51,403**	53,030
Total retained credit card loans	**$ 128,027**	$ 127,465
Percentage of portfolio based on carrying value with estimated refreshed FICO scores		
Equal to or greater than 660	**85.7%**	85.1%
Less than 660	**14.3**	14.9

Credit card impaired loans and loan modifications

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

December 31, (in millions)	2014	2013
Impaired credit card loans with an allowance[a][b]		
Credit card loans with modified payment terms[c]	**$ 1,775**	$ 2,746
Modified credit card loans that have reverted to pre-modification payment terms[d]	**254**	369
Total impaired credit card loans[e]	**$ 2,029**	$ 3,115
Allowance for loan losses related to impaired credit card loans	**$ 500**	$ 971

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
(b) There were no impaired loans without an allowance.
(c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.
(d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At December 31, 2014 and 2013, $159 million and $226 million, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. The remaining $95 million and $143 million at December 31, 2014 and 2013, respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.
(e) Predominantly all impaired credit card loans are in the U.S.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

Year ended December 31, (in millions)	2014	2013	2012
Average impaired credit card loans	**$ 2,503**	$ 3,882	$ 5,893
Interest income on impaired credit card loans	**123**	198	308

Loan modifications

JPMorgan Chase may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. Most of the credit card loans have been modified under long-term programs for borrowers who are experiencing financial difficulties. Modifications under long-term programs involve placing the customer on a fixed payment plan, generally for 60 months. The Firm may also offer short-term programs for borrowers who may be in need of temporary relief; however, none are currently being offered. Modifications under all short- and long-term programs typically include reducing the interest rate on the credit card. Substantially all modifications are considered to be TDRs.

If the cardholder does not comply with the modified payment terms, then the credit card loan agreement reverts back to its pre-modification payment terms. Assuming that the cardholder does not begin to perform in accordance with those payment terms, the loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In addition, if a borrower successfully completes a short-term modification program, then the loan reverts back to its pre-modification payment terms. However, in most cases, the Firm does not reinstate the borrower's line of credit.

New enrollments in these loan modification programs for the years ended December 31, 2014, 2013 and 2012, were $807 million, $1.2 billion and $1.7 billion, respectively.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the periods presented.

Year ended December 31, (in millions, except weighted-average data)	2014	2013	2012
Weighted-average interest rate of loans – before TDR	**14.96%**	15.37%	15.67%
Weighted-average interest rate of loans – after TDR	**4.40**	4.38	5.19
Loans that redefaulted within one year of modification[a]	**$ 119**	$ 167	$ 309

(a) Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default is deemed to have occurred when the loans become two payments past due. A substantial portion of these loans is expected to be charged-off in accordance with the Firm's standard charge-off policy. Based on historical experience, the estimated weighted-average default rate for credit card loans modified was expected to be 27.91%, 30.72% and 38.23% as of December 31, 2014, 2013 and 2012, respectively.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the probability of default ("PD") and the loss given default ("LGD"). The PD is the likelihood that a loan will default and not be fully repaid by the borrower. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. The Firm's definition of criticized aligns with the banking regulatory definition of criticized exposures, which consist of special mention, substandard and doubtful categories. Risk ratings generally represent ratings profiles similar to those defined

by S&P and Moody's. Investment-grade ratings range from "AAA/Aaa" to "BBB-/Baa3." Noninvestment-grade ratings are classified as noncriticized ("BB+/Ba1 and B-/B3") and criticized ("CCC+"/"Caa1 and below"), and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note 5 for further detail on industry concentrations.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

As of or for the year ended December 31, (in millions, except ratios)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other[d]		Total retained loans	
	2014	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013
Loans by risk ratings												
Investment grade	**$ 63,069**	$ 57,690	**$61,006**	$ 52,195	**$27,111**	$26,712	**$8,393**	$ 9,979	**$82,087**	$79,494	**$241,666**	$226,070
Noninvestment grade:												
Noncriticized	**44,117**	43,477	**16,541**	14,381	**7,085**	6,674	**300**	440	**10,075**	10,992	**78,118**	75,964
Criticized performing	**2,251**	2,385	**1,313**	2,229	**316**	272	**3**	42	**236**	480	**4,119**	5,408
Criticized nonaccrual	**188**	294	**253**	346	**18**	25	**–**	1	**140**	155	**599**	821
Total noninvestment grade	**46,556**	46,156	**18,107**	16,956	**7,419**	6,971	**303**	483	**10,451**	11,627	**82,836**	82,193
Total retained loans	**$109,625**	$103,846	**$79,113**	$ 69,151	**$34,530**	$33,683	**$8,696**	$10,462	**$92,538**	$91,121	**$324,502**	$308,263
% of total criticized to total retained loans	**2.22%**	2.58%	**1.98 %**	3.72%	**0.97 %**	0.88 %	**0.03%**	0.41%	**0.41 %**	0.70%	**1.45%**	2.02%
% of nonaccrual loans to total retained loans	**0.17**	0.28	**0.32**	0.50	**0.05**	0.07	**–**	0.01	**0.15**	0.17	**0.18**	0.27
Loans by geographic distribution[a]												
Total non-U.S.	**$ 33,739**	$ 34,440	**$ 2,099**	$ 1,369	**$20,944**	$22,726	**$1,122**	$ 2,146	**$42,961**	$43,376	**$100,865**	$104,057
Total U.S.	**75,886**	69,406	**77,014**	67,782	**13,586**	10,957	**7,574**	8,316	**49,577**	47,745	**223,637**	204,206
Total retained loans	**$109,625**	$103,846	**$79,113**	$ 69,151	**$34,530**	$33,683	**$8,696**	$10,462	**$92,538**	$91,121	**$324,502**	$308,263
Net charge-offs/ (recoveries)	**$ 22**	$ 99	**$ (9)**	$ 6	**$ (12)**	$ (99)	**$ 25**	$ 1	**$ (14)**	$ 9	**$ 12**	$ 16
% of net charge-offs/ (recoveries) to end-of-period retained loans	**0.02%**	0.10%	**(0.01)%**	0.01%	**(0.04)%**	(0.29)%	**0.29%**	0.01%	**(0.02)%**	0.01%	**–%**	0.01%
Loan delinquency[b]												
Current and less than 30 days past due and still accruing	**$108,857**	$103,357	**$78,552**	$ 68,627	**$34,408**	$33,426	**$8,627**	$10,421	**$91,168**	$89,717	**$321,612**	$305,548
30–89 days past due and still accruing	**566**	181	**275**	164	**104**	226	**69**	40	**1,201**	1,233	**2,215**	1,844
90 or more days past due and still accruing[c]	**14**	14	**33**	14	**–**	6	**–**	–	**29**	16	**76**	50
Criticized nonaccrual	**188**	294	**253**	346	**18**	25	**–**	1	**140**	155	**599**	821
Total retained loans	**$109,625**	$103,846	**$79,113**	$ 69,151	**$34,530**	$33,683	**$8,696**	$10,462	**$92,538**	$91,121	**$324,502**	$308,263

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality. For a discussion of more significant risk factors, see pages 255–256 of this Note.
(c) Represents loans that are considered well-collateralized and therefore still accruing interest.
(d) Other primarily includes loans to SPEs and loans to private banking clients. See Note 1 for additional information on SPEs.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio segment for the periods indicated. The real estate class primarily consists of secured commercial loans mainly to borrowers for multi-family and commercial lessor properties. Multifamily lending specifically finances apartment buildings. Commercial lessors receive financing specifically for real estate leased to retail, office and industrial tenants. Commercial construction and development loans represent financing for the construction of apartments, office and professional buildings and malls. Other real estate loans include lodging, real estate investment trusts ("REITs"), single-family, homebuilders and other real estate.

December 31, (in millions, except ratios)	Multifamily		Commercial lessors		Commercial construction and development		Other		Total real estate loans	
	2014	2013	**2014**	2013	**2014**	**2013**	**2014**	**2013**	**2014**	**2013**
Real estate retained loans	**$ 51,049**	$ 44,389	**$ 17,438**	$ 15,949	**$ 4,264**	$ 3,674	**$ 6,362**	$ 5,139	**$ 79,113**	$ 69,151
Criticized	**652**	1,142	**841**	1,323	**42**	81	**31**	29	**1,566**	2,575
% of criticized to total real estate retained loans	**1.28%**	2.57%	**4.82%**	8.30%	**0.98%**	2.20%	**0.49%**	0.56%	**1.98%**	3.72%
Criticized nonaccrual	**$ 126**	$ 191	**$ 110**	$ 143	**$ –**	$ 3	**$ 17**	$ 9	**$ 253**	$ 346
% of criticized nonaccrual to total real estate retained loans	**0.25%**	0.43%	**0.63%**	0.90%	**–%**	0.08%	**0.27%**	0.18%	**0.32%**	0.50%

Wholesale impaired loans and loan modifications

Wholesale impaired loans are comprised of loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15.

The table below sets forth information about the Firm's wholesale impaired loans.

December 31, (in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	2014	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013
Impaired loans												
With an allowance	**$ 174**	$ 236	**$ 193**	$ 258	**$ 15**	$ 17	**$ –**	$ 1	**$ 89**	$ 85	**$ 471**	$ 597
Without an allowance[a]	**24**	58	**87**	109	**3**	8	**–**	–	**52**	73	**166**	248
Total impaired loans	**$ 198**	$ 294	**$ 280**	$ 367	**$ 18**	$ 25	**$ –**	$ 1	**$ 141**	$ 158	**$ 637** [c]	$ 845 [c]
Allowance for loan losses related to impaired loans	**$ 34**	$ 75	**$ 36**	$ 63	**$ 4**	$ 16	**$ –**	$ –	**$ 13**	$ 27	**$ 87**	$ 181
Unpaid principal balance of impaired loans[b]	**266**	448	**345**	454	**22**	24	**–**	1	**202**	241	**835**	1,168

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.
(b) Represents the contractual amount of principal owed at December 31, 2014 and 2013. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.
(c) Based upon the domicile of the borrower, predominantly all wholesale impaired loans are in the U.S.

The following table presents the Firm's average impaired loans for the years ended 2014, 2013 and 2012.

Year ended December 31, (in millions)	**2014**	2013	2012
Commercial and industrial	**$ 243**	$ 412	$ 873
Real estate	**297**	484	784
Financial institutions	**20**	17	17
Government agencies	**–**	–	9
Other	**155**	211	277
Total[a]	**$ 715**	$ 1,124	$ 1,960

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the years ended December 31, 2014, 2013 and 2012.

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above. TDRs were not material as of December 31, 2014 and 2013.

Note 15 – Allowance for credit losses

JPMorgan Chase's allowance for loan losses covers the consumer, including credit card, portfolio segments (primarily scored); and wholesale (risk-rated) portfolio, and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. The allowance for loan losses includes an asset-specific component, a formula-based component and a component related to PCI loans, as described below. Management also estimates an allowance for wholesale and consumer lending-related commitments using methodologies similar to those used to estimate the allowance on the underlying loans. During 2014, the Firm did not make any significant changes to the methodologies or policies used to determine its allowance for credit losses; such policies are described in the following paragraphs.

The asset-specific component of the allowance relates to loans considered to be impaired, which includes loans that have been modified in TDRs as well as risk-rated loans that have been placed on nonaccrual status. To determine the asset-specific component of the allowance, larger loans are evaluated individually, while smaller loans are evaluated as pools using historical loss experience for the respective class of assets. Scored loans (i.e., consumer loans) are pooled by product type, while risk-rated loans (primarily wholesale loans) are segmented by risk rating.

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are reported as an adjustment to the provision for loan losses. In certain cases, the asset-specific allowance is determined using an observable market price, and the allowance is measured as the difference between the recorded investment in the loan and the loan's fair value. Impaired collateral-dependent loans are charged down to the fair value of collateral less costs to sell and therefore may not be subject to an asset-specific reserve as are other impaired loans. See Note 14 for more information about charge-offs and collateral-dependent loans.

The asset-specific component of the allowance for impaired loans that have been modified in TDRs incorporates the effects of foregone interest, if any, in the present value calculation and also incorporates the effect of the modification on the loan's expected cash flows, which considers the potential for redefault. For residential real estate loans modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to date based on actual redefaulted modified loans. For credit card loans modified in TDRs, expected losses incorporate projected redefaults based on the Firm's historical experience by type of modification program. For wholesale loans modified in TDRs, expected losses incorporate redefaults based on management's expectation of the borrower's ability to repay under the modified terms.

The formula-based component is based on a statistical calculation to provide for incurred credit losses in performing risk-rated loans and all consumer loans, except for any loans restructured in TDRs and PCI loans. See Note 14 for more information on PCI loans.

For scored loans, the statistical calculation is performed on pools of loans with similar risk characteristics (e.g., product type) and generally computed by applying loss factors to outstanding principal balances over an estimated loss emergence period. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends.

Loss factors are statistically derived and sensitive to changes in delinquency status, credit scores, collateral values and other risk factors. The Firm uses a number of different forecasting models to estimate both the PD and the loss severity, including delinquency roll rate models and credit loss severity models. In developing PD and loss severity assumptions, the Firm also considers known and anticipated changes in the economic environment, including changes in home prices, unemployment rates and other risk indicators.

A nationally recognized home price index measure is used to estimate both the PD and the loss severity on residential real estate loans at the metropolitan statistical areas ("MSA") level. Loss severity estimates are regularly validated by comparison to actual losses recognized on defaulted loans, market-specific real estate appraisals and property sales activity. The economic impact of potential modifications of residential real estate loans is not included in the statistical calculation because of the uncertainty regarding the type and results of such modifications.

For risk-rated loans, the statistical calculation is the product of an estimated PD and an estimated LGD. These factors are differentiated by risk rating and expected maturity. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm to that loan. PD estimates are based on observable external through-the-cycle data, using credit-rating agency default statistics. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle. Estimates of PD and LGD are subject to periodic refinement based on changes to underlying external and Firm-specific historical data.

Management applies judgment within an established framework to adjust the results of applying the statistical calculation described above. The determination of the appropriate adjustment is based on management's view of loss events that have occurred but that are not yet reflected in the loss factors and that relate to current macroeconomic and political conditions, the quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the portfolio. For the scored loan portfolios, adjustments to the statistical calculation are made in part by analyzing the historical loss experience for each major product segment. Factors related to unemployment, home prices, borrower behavior and lien position, the estimated effects of the mortgage foreclosure-related settlement with federal and state officials and uncertainties regarding the ultimate success of loan modifications are incorporated into the calculation, as appropriate. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. In addition, for the risk-rated portfolios, any adjustments made to the statistical calculation take into consideration model imprecision, deteriorating conditions within an industry, product or portfolio type, geographic location, credit concentration, and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation.

Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing consumer and wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods. At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2014, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses inherent in the portfolio).

Allowance for credit losses and loans and lending-related commitments by impairment methodology

The table below summarizes information about the allowance for loan losses, loans by impairment methodology, the allowance for lending-related commitments and lending-related commitments by impairment methodology.

	2014			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses				
Beginning balance at January 1,	$ 8,456	$ 3,795	$ 4,013	$ 16,264
Gross charge-offs	2,132	3,831	151	6,114
Gross recoveries	(814)	(402)	(139)	(1,355)
Net charge-offs/(recoveries)	1,318	3,429	12	4,759
Write-offs of PCI loans[a]	533	—	—	533
Provision for loan losses	414	3,079	(269)	3,224
Other	31	(6)	(36)	(11)
Ending balance at December 31,	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Allowance for loan losses by impairment methodology				
Asset-specific[b]	$ 539	$ 500 [c]	$ 87	$ 1,126
Formula-based	3,186	2,939	3,609	9,734
PCI	3,325	—	—	3,325
Total allowance for loan losses	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Loans by impairment methodology				
Asset-specific	$ 12,020	$ 2,029	$ 637	$ 14,686
Formula-based	236,263	125,998	323,861	686,122
PCI	46,696	—	4	46,700
Total retained loans	$ 294,979	$ 128,027	$ 324,502	$ 747,508
Impaired collateral-dependent loans				
Net charge-offs	$ 133	$ —	$ 21	$ 154
Loans measured at fair value of collateral less cost to sell	3,025	—	326	3,351
Allowance for lending-related commitments				
Beginning balance at January 1,	$ 8	$ —	$ 697	$ 705
Provision for lending-related commitments	5	—	(90)	(85)
Other	—	—	2	2
Ending balance at December 31,	$ 13	$ —	$ 609	$ 622
Allowance for lending-related commitments by impairment methodology				
Asset-specific	$ —	$ —	$ 60	$ 60
Formula-based	13	—	549	562
Total allowance for lending-related commitments	$ 13	$ —	$ 609	$ 622
Lending-related commitments by impairment methodology				
Asset-specific	$ —	$ —	$ 103	$ 103
Formula-based	58,153	525,963	471,953	1,056,069
Total lending-related commitments	$ 58,153	$ 525,963	$ 472,056	$ 1,056,172

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation). During the fourth quarter of 2014, the Firm recorded a $291 million adjustment to reduce the PCI allowance and the recorded investment in the Firm's PCI loan portfolio, primarily reflecting the cumulative effect of interest forgiveness modifications. This adjustment had no impact to the Firm's Consolidated statements of income.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(table continued from previous page)

2013				2012			
Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
$ 12,292	$ 5,501	$ 4,143	$ 21,936	$ 16,294	$ 6,999	$ 4,316	$ 27,609
2,754	4,472	241	7,467	4,805	5,755	346	10,906
(847)	(593)	(225)	(1,665)	(508)	(811)	(524)	(1,843)
1,907	3,879	16	5,802	4,297	4,944	(178)	9,063
53	–	–	53	–	–	–	–
(1,872)	2,179	(119)	188	302	3,444	(359)	3,387
(4)	(6)	5	(5)	(7)	2	8	3
$ 8,456	$ 3,795	$ 4,013	$ 16,264	$ 12,292	$ 5,501	$ 4,143	$ 21,936
$ 601	$ 971 [c]	$ 181	$ 1,753	$ 729	$ 1,681 [c]	$ 319	$ 2,729
3,697	2,824	3,832	10,353	5,852	3,820	3,824	13,496
4,158	–	–	4,158	5,711	–	–	5,711
$ 8,456	$ 3,795	$ 4,013	$ 16,264	$ 12,292	$ 5,501	$ 4,143	$ 21,936
$ 13,785	$ 3,115	$ 845	$ 17,745	$ 13,938	$ 4,762	$ 1,475	$ 20,175
221,609	124,350	307,412	653,371	218,945	123,231	304,728	646,904
53,055	–	6	53,061	59,737	–	19	59,756
$ 288,449	$ 127,465	$ 308,263	$ 724,177	$ 292,620	$ 127,993	$ 306,222	$ 726,835
$ 235	$ –	$ 37	$ 272	$ 973	$ –	$ 77	$ 1,050
3,105	–	362	3,467	3,272	–	445	3,717
$ 7	$ –	$ 661	$ 668	$ 7	$ –	$ 666	$ 673
1	–	36	37	–	–	(2)	(2)
–	–	–	–	–	–	(3)	(3)
$ 8	$ –	$ 697	$ 705	$ 7	$ –	$ 661	$ 668
$ –	$ –	$ 60	$ 60	$ –	$ –	$ 97	$ 97
8	–	637	645	7	–	564	571
$ 8	$ –	$ 697	$ 705	$ 7	$ –	$ 661	$ 668
$ –	$ –	$ 206	$ 206	$ –	$ –	$ 355	$ 355
56,057	529,383	446,026	1,031,466	60,156	533,018	434,459	1,027,633
$ 56,057	$ 529,383	$ 446,232	$ 1,031,672	$ 60,156	$ 533,018	$ 434,814	$ 1,027,988

Note 16 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the principal beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper conduit.

Line-of-Business	*Transaction Type*	*Activity*	*Annual Report page references*
CCB	Credit card securitization trusts	Securitization of both originated and purchased credit card receivables	262
	Mortgage securitization trusts	Securitization of originated and purchased residential mortgages	263-265
	Other securitization trusts	Securitization of originated student loans	263-265
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, automobile and student loans	263-265
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	265-267
	Investor intermediation activities:		
	Municipal bond vehicles		265-266
	Credit-related note and asset swap vehicles		267

The Firm's other business segments are also involved with VIEs, but to a lesser extent, as follows:

- Asset Management: Sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For fund entities that qualify as VIEs, AM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Commercial Banking: CB makes investments in and provides lending to community development entities that may meet the definition of a VIE. In addition, CB provides financing and lending-related services to certain client-sponsored VIEs. In general, CB does not control the activities of these entities and does not consolidate these entities.
- Corporate: The Private Equity business, within Corporate, may be involved with entities that are deemed VIEs. However, the Firm's private equity business is subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs.

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 268 of this Note.

Significant Firm-sponsored variable interest entities

Credit card securitizations

The Card business securitizes originated and purchased credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.

The Firm is considered to be the primary beneficiary of these Firm-sponsored credit card securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

The underlying securitized credit card receivables and other assets of the securitization trusts are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's other creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (which is generally 4%). As of December 31, 2014 and 2013, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $10.9 billion and $14.3 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 22% and 30% for the years ended December 31, 2014 and 2013, respectively. The Firm also retained $40 million and $130 million of senior securities and $5.3 billion and $5.5 billion of subordinated securities in certain of its credit card securitization trusts as of December 31, 2014 and 2013, respectively. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

Firm-sponsored mortgage and other securitization trusts
The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans (including automobile and student loans) primarily in its CCB and CIB businesses. Depending on the particular transaction, as well as the line of business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

The following table presents the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans; holding senior interests or subordinated interests; recourse or guarantee arrangements; and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. See Securitization activity on page 269 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and pages 269–270 of this Note for information on the Firm's loan sales to U.S. government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]		
December 31, 2014 [a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime/Alt-A and Option ARMs	**$ 96.3**	**$ 2.7**	**$ 78.3**	**$ 0.5**	**$ 0.7**	**$ 1.2**
Subprime	**28.4**	**0.8**	**25.7**	**0.1**	**–**	**0.1**
Commercial and other[b]	**129.6**	**0.2**	**94.4**	**0.4**	**3.5**	**3.9**
Total	**$ 254.3**	**$ 3.7**	**$ 198.4**	**$ 1.0**	**$ 4.2**	**$ 5.2**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]		
December 31, 2013[a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime/Alt-A and Option ARMs	$ 109.2	$ 3.2	$ 90.4	$ 0.5	$ 0.3	$ 0.8
Subprime	32.1	1.3	28.0	0.1	–	0.1
Commercial and other[b]	130.4	–	98.0	0.5	3.5	4.0
Total	$ 271.7	$ 4.5	$ 216.4	$ 1.1	$ 3.8	$ 4.9

(a) Excludes U.S. government agency securitizations. See pages 269–270 of this Note for information on the Firm's loan sales to U.S. government agencies.
(b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties. The Firm generally does not retain a residual interest in its sponsored commercial mortgage securitization transactions.
(c) The table above excludes the following: retained servicing (see Note 17 for a discussion of MSRs); securities retained from loan sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (See Note 6 for further information on derivatives); senior and subordinated securities of $136 million and $34 million, respectively, at December 31, 2014, and $151 million and $30 million, respectively, at December 31, 2013, which the Firm purchased in connection with CIB's secondary market-making activities.
(d) Includes interests held in re-securitization transactions.
(e) As of December 31, 2014 and 2013, 77% and 69%, respectively, of the Firm's retained securitization interests, which are carried at fair value, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of $1.1 billion and $551 million of investment-grade and $185 million and $260 million of noninvestment-grade retained interests at December 31, 2014 and 2013, respectively. The retained interests in commercial and other securitizations trusts consisted of $3.7 billion and $3.9 billion of investment-grade and $194 million and $80 million of noninvestment-grade retained interests at December 31, 2014 and 2013, respectively.

Residential mortgage

The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. CCB generally retains servicing for all residential mortgage loans originated or purchased by CCB, and for certain mortgage loans purchased by CIB. For securitizations serviced by CCB, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. CCB may also retain an interest upon securitization.

In addition, CIB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, CIB at times retains senior and/or subordinated interests (including residual interests) in residential mortgage securitizations upon securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by CIB or held by CCB, when considered together with the servicing arrangements entered into by CCB, the Firm is deemed to be the primary beneficiary of certain securitization trusts. See the table on page 268 of this Note for more information on consolidated residential mortgage securitizations.

The Firm does not consolidate a residential mortgage securitization (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust. At December 31, 2014 and 2013, the Firm did not consolidate the assets of certain Firm-sponsored residential mortgage securitization VIEs, in which the Firm had continuing involvement, primarily due to the fact that the Firm did not hold an interest in these trusts that could potentially be significant to the trusts. See the table on page 268 of this Note for more information on the consolidated residential mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations.

Commercial mortgages and other consumer securitizations

CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. CIB may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). See the table on page 268 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

The Firm retains servicing responsibilities for certain student loan securitizations. The Firm has the power to direct the activities of these VIEs through these servicing responsibilities. See the table on page 268 of this Note for more information on the consolidated student loan securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

Re-securitizations

The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both agency (Fannie Mae, Freddie Mac and Ginnie Mae) and nonagency (private-label) sponsored VIEs, which may be backed by either residential or commercial mortgages. The Firm's consolidation analysis is largely dependent on the Firm's role and interest in the re-securitization trusts. During the years ended December 31, 2014, 2013 and 2012, the Firm transferred $22.7 billion, $25.3 billion and $10.0 billion, respectively, of securities to agency VIEs, and $1.1 billion, $55 million and $286 million, respectively, of securities to private-label VIEs.

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients is seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its clients, considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.

In more limited circumstances, the Firm creates a re-securitization trust independently and not in conjunction with specific clients. In these circumstances, the Firm is deemed to have the unilateral ability to direct the most significant activities of the re-securitization trust because of the decisions made during the establishment and design of the trust; therefore, the Firm consolidates the re-securitization VIE if the Firm holds an interest that could potentially be significant.

Additionally, the Firm may invest in beneficial interests of third-party securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it was not involved in the initial design of the trust, or the Firm is involved with an independent third-party sponsor and demonstrates shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

As of December 31, 2014 and 2013, the Firm did not consolidate any agency re-securitizations. As of December 31, 2014 and 2013, the Firm consolidated assets of $77 million and $86 million, respectively, and liabilities of $21 million and $23 million, respectively, of

private-label re-securitizations. See the table on page 268 of this Note for more information on the consolidated re-securitization transactions.

As of December 31, 2014 and 2013, total assets (including the notional amount of interest-only securities) of nonconsolidated Firm-sponsored private-label re-securitization entities in which the Firm has continuing involvement were $2.9 billion and $2.8 billion, respectively. At December 31, 2014 and 2013, the Firm held approximately $2.4 billion and $1.3 billion, respectively, of interests in nonconsolidated agency re-securitization entities, and $36 million and $6 million, respectively, of senior and subordinated interests in nonconsolidated private-label re-securitization entities. See the table on page 263 of this Note for further information on interests held in nonconsolidated securitizations.

Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, and to provide the conduits with funding to purchase interests in or make loans secured by pools of receivables in the event that the conduits do not obtain funding in the commercial paper market, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required is based upon commercial paper issuance and approximates 10% of the outstanding balance.

The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit enhancement facilities provided to the conduits. See page 268 of this Note for further information on consolidated VIE assets and liabilities.

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $5.7 billion and $4.1 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2014 and 2013, respectively. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. The Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded portion of these commitments was $9.9 billion and $9.1 billion at December 31, 2014 and 2013, respectively, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 29.

VIEs associated with investor intermediation activities

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions with these VIEs, typically using derivatives, to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in on behalf of clients are municipal bond vehicles, credit-related note vehicles and asset swap vehicles.

Municipal bond vehicles

The Firm has created a series of trusts that provide short-term investors with qualifying tax-exempt investments, and that allow investors in tax-exempt securities to finance their investments at short-term tax-exempt rates. In a typical transaction, the vehicle purchases fixed-rate longer-term highly rated municipal bonds and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates and (2) inverse floating-rate residual interests ("residual interests"). The maturity of each of the puttable floating-rate certificates and the residual interests is equal to the life of the vehicle, while the maturity of the underlying municipal bonds is typically longer. Holders of the puttable floating-rate certificates may "put," or tender, the certificates if the remarketing agent cannot successfully remarket the floating-rate certificates to another investor. A liquidity facility conditionally obligates the liquidity provider to fund the purchase of the tendered floating-rate certificates. Upon termination of the vehicle, proceeds from

the sale of the underlying municipal bonds would first repay any funded liquidity facility or outstanding floating-rate certificates and the remaining amount, if any, would be paid to the residual interests. If the proceeds from the sale of the underlying municipal bonds are not sufficient to repay the liquidity facility, in certain transactions the liquidity provider has recourse to the residual interest holders for reimbursement. Certain residual interest holders may be required to post collateral with the Firm, as liquidity provider, to support such reimbursement obligations should the market value of the municipal bonds decline.

JPMorgan Chase Bank, N.A. often serves as the sole liquidity provider, and J.P. Morgan Securities LLC serves as remarketing agent, of the puttable floating-rate certificates. The liquidity provider's obligation to perform is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the Firm's exposure as liquidity provider is further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or in certain transactions, the reimbursement agreements with the residual interest holders.

The long-term credit ratings of the puttable floating rate certificates are directly related to the credit ratings of the underlying municipal bonds, the credit rating of any insurer of the underlying municipal bond, and the Firm's short-term credit rating as liquidity provider. A downgrade in any of these ratings would affect the rating of the puttable floating-rate certificates and could cause demand for these certificates by investors to decline or disappear. However, a downgrade of JPMorgan Chase Bank, N.A.'s short-term rating does not affect the Firm's obligation under the liquidity facility.

As remarketing agent, the Firm may hold puttable floating-rate certificates of the municipal bond vehicles. At December 31, 2014 and 2013, the Firm held $55 million and $262 million, respectively, of these certificates on its Consolidated balance sheets. The largest amount held by the Firm at any end of day during 2014 was $250 million, or 3.0%, of the municipal bond vehicles' aggregate outstanding puttable floating-rate certificates. The Firm did not have and continues not to have any intent to protect any residual interest holder from potential losses on any of the municipal bond holdings.

The Firm consolidates municipal bond vehicles if it owns the residual interest. The residual interest generally allows the owner to make decisions that significantly impact the economic performance of the municipal bond vehicle, primarily by directing the sale of the municipal bonds owned by the vehicle. In addition, the residual interest owners have the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle. The Firm does not consolidate municipal bond vehicles if it does not own the residual interests, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle. See page 268 of this Note for further information on consolidated municipal bond vehicles.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31, 2014 and 2013, including the ratings profile of the VIEs' assets, was as follows.

December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities	Excess/(deficit)[a]	Maximum exposure
Nonconsolidated municipal bond vehicles				
2014	**$ 11.5**	**$ 6.3**	**$ 5.2**	**$ 6.3**
2013	11.8	6.9	4.9	6.9

	Ratings profile of VIE assets[b]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions, except where otherwise noted)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB+ to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
2014	**$ 2.7**	**$ 8.4**	**$ 0.4**	**$ –**	**$ –**	**$ 11.5**	**4.9**
2013	2.7	8.9	0.2	–	–	$ 11.8	7.2

(a) Represents the excess/(deficit) of the fair values of municipal bond assets available to repay the liquidity facilities, if drawn.
(b) The ratings scale is presented on an S&P-equivalent basis.

Credit-related note and asset swap vehicles

Credit-related note vehicles

The Firm structures transactions with credit-related note vehicles in which the VIE purchases highly rated assets (generally investment-grade), such as government bonds, corporate bonds or asset-backed securities, and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit which the VIE otherwise does not hold. The VIE then issues credit-linked notes ("CLNs") to transfer the risk of the referenced credit to the VIE's investors. Clients and investors often prefer using a CLN vehicle since they may be of the view that the CLNs issued by the VIE is of a higher credit quality than equivalent notes issued directly by JPMorgan Chase. The Firm divides its credit-related note structures broadly into two types: static and managed. In a static credit-related note structure, the CLNs and associated credit derivative contract either reference a single credit (e.g., a multi-national corporation), or all or part of a fixed portfolio of credits. In a managed credit-related note structure, the CLNs and associated credit derivative generally reference all or part of an actively managed portfolio of credits.

The Firm's involvement with CLN vehicles is generally limited to being a derivative counterparty and it does not act as a portfolio manager for managed CLN VIEs. The Firm does not provide any additional contractual financial support to the VIE over and above its contractual obligations as derivative counterparty, but may also make a market in the CLNs issued by such VIEs, although it is under no obligation to do so. The Firm has not historically provided any financial support to the CLN vehicles over and above its contractual obligations. As a derivative counterparty the assets held by the VIE serve as collateral for any derivatives receivables. As such the collateral represents the maximum exposure the Firm has to these vehicles, which was $5.9 billion and $8.7 billion as of December 31, 2014 and 2013, respectively. The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies on the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts

Since each CLN is established to the specifications of the investors, the investors have the power over the activities of that VIE that most significantly affect the performance of the CLN. The Firm consolidates credit-related note entities only in limited circumstances where it holds positions in these entities that provided the Firm with control over the entity. The Firm consolidated credit-related note vehicles with collateral fair values of $163 million and $311 million, at December 31, 2014 and 2013, respectively. These consolidated VIEs included some that were structured by the Firm where the Firm provides the credit derivative, and some that have been structured by third parties where the Firm is not the credit derivative provider.

The Firm reports derivatives with unconsolidated CLN vehicles as well as any CLNs that it holds as market-maker on its Consolidated balance sheets at fair value with changes in fair value reported in principal transactions revenue. The Firm's exposure to non-consolidated CLN VIEs as of December 31, 2014 and 2013 was not material.

Asset swap vehicles

The Firm structures transactions with asset swap vehicles on behalf of investors. In such transactions, the VIE purchases a specific asset or assets (substantially all of which are investment-grade) and then enters into a derivative with the Firm in order to tailor the interest rate or foreign exchange currency risk, or both, according to investors' requirements. Investors typically invest in the notes issued by such VIEs in order to obtain exposure to the credit risk of the specific assets, as well as exposure to foreign exchange and interest rate risk that is tailored to their specific needs.

The Firm's involvement with asset swap vehicles is generally limited to being an interest rate or foreign exchange derivative counterparty. The Firm does not provide any additional contractual financial support to the VIE over and above its contractual obligations as derivative counterparty, but may also make a market in the notes issued by such VIEs, although it is under no obligation to do so. The Firm has not historically provided any financial support to asset swap vehicles over and above its contractual obligations. As a derivative counterparty the assets held by the VIE serve as collateral for any derivatives receivables. As such the collateral represents the maximum exposure the Firm has to these vehicles, which was $5.7 billion and $7.7 billion as of December 31, 2014 and 2013, respectively. The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies on the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts

Since each asset swap vehicle is established to the specifications of the investors, the investors have the power over the activities of that VIE that most significantly affect the performance of the entity. Accordingly, the Firm does not generally consolidate these asset swap vehicles and did not consolidate any asset swap vehicles at December 31, 2014 and 2013.

The Firm reports derivatives with unconsolidated asset swap vehicles that it holds as market-maker on its Consolidated balance sheets at fair value with changes in fair value reported in principal transactions revenue. The Firm's exposure to non-consolidated asset swap VIEs as of December 31, 2014 and 2013 was not material.

VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, trustee or custodian. These transactions are conducted at arm's-length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm records and reports these positions on its Consolidated balance sheets similarly to the way it would record and report positions in respect of any other third-party transaction.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2014 and 2013.

	Assets				Liabilities		
December 31, 2014 (in billions)[a]	Trading assets	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	**$ –**	**$ 48.3**	**$ 0.7**	**$ 49.0**	**$ 31.2**	**$ –**	**$ 31.2**
Firm-administered multi-seller conduits	**–**	**17.7**	**0.1**	**17.8**	**12.0**	**–**	**12.0**
Municipal bond vehicles	**5.3**	**–**	**–**	**5.3**	**4.9**	**–**	**4.9**
Mortgage securitization entities[b]	**3.3**	**0.7**	**–**	**4.0**	**2.1**	**0.8**	**2.9**
Student loan securitization entities	**0.2**	**2.2**	**–**	**2.4**	**2.1**	**–**	**2.1**
Other	**0.3**	**–**	**1.0**	**1.3**	**0.1**	**0.1**	**0.2**
Total	**$ 9.1**	**$ 68.9**	**$ 1.8**	**$ 79.8**	**$ 52.4**	**$ 0.9**	**$ 53.3**

	Assets				Liabilities		
December 31, 2013 (in billions)[a]	Trading assets	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	$ –	$ 46.9	$ 1.1	$ 48.0	$ 26.6	$ –	$ 26.6
Firm-administered multi-seller conduits	–	19.0	0.1	19.1	14.9	–	14.9
Municipal bond vehicles	3.4	–	–	3.4	2.9	–	2.9
Mortgage securitization entities[b]	2.3	1.7	–	4.0	2.9	0.9	3.8
Student loan securitization entities	–	2.4	0.1	2.5	2.2	–	2.2
Other	0.7	0.1	0.9	1.7	0.1	0.2	0.3
Total	$ 6.4	$ 70.1	$ 2.2	$ 78.7	$ 49.6	$ 1.1	$ 50.7

(a) Excludes intercompany transactions, which were eliminated in consolidation.
(b) Includes residential and commercial mortgage securitizations as well as re-securitizations.
(c) Includes assets classified as cash, derivative receivables, AFS securities, and other assets within the Consolidated balance sheets.
(d) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.
(e) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated balance sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $35.4 billion and $31.8 billion at December 31, 2014 and 2013, respectively. The maturities of the long-term beneficial interests as of December 31, 2014, were as follows: $10.9 billion under one year, $19.0 billion between one and five years, and $5.5 billion over five years, all respectively.
(f) Includes liabilities classified as accounts payable and other liabilities in the Consolidated balance sheets.

Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgage, credit card, automobile, student and commercial (primarily related to real estate) loans, as well as debt securities. The primary purposes of these securitization transactions were to satisfy investor demand and to generate liquidity for the Firm.

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when the accounting criteria for a sale are met. Those criteria are: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

Securitization activity

The following table provides information related to the Firm's securitization activities for the years ended December 31, 2014, 2013 and 2012, related to assets held in JPMorgan Chase-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved based on the accounting rules in effect at the time of the securitization.

	2014		2013		2012	
Year ended December 31, (in millions, except rates)[a]	Residential mortgage[d][e]	Commercial and other[e][f]	Residential mortgage[d][e]	Commercial and other[e][f]	Residential mortgage[d][e]	Commercial and other[e][f]
Principal securitized	**$ 2,558**	**$ 11,911**	$ 1,404	$ 11,318	$ –	$ 5,421
All cash flows during the period:						
Proceeds from new securitizations[b]	**$ 2,569**	**$ 12,079**	$ 1,410	$ 11,507	$ –	$ 5,705
Servicing fees collected	**557**	**4**	576	5	662	4
Purchases of previously transferred financial assets (or the underlying collateral)[c]	**121**	**–**	294	–	222	–
Cash flows received on interests	**179**	**578**	156	325	185	163

(a) Excludes re-securitization transactions.

(b) Proceeds from residential mortgage securitizations were received in the form of securities. During 2014, $2.4 billion of residential mortgage securitizations were received as securities and classified in level 2, and $185 million were in level 3 of the fair value hierarchy. During 2013, $1.4 billion of residential mortgage securitizations were received as securities and classified in level 2 of the fair value hierarchy. Proceeds from commercial mortgage securitizations were received as securities and cash. During 2014, $11.4 billion of proceeds from commercial mortgage securitizations were received as securities and classified in level 2, and $130 million of proceeds were classified as level 3 of the fair value hierarchy; and $568 million of proceeds from commercial mortgage securitizations were received as cash. During 2013, $11.3 billion of commercial mortgage securitizations were classified in level 2 of the fair value hierarchy, and $207 million of proceeds from commercial mortgage securitizations were received as cash. During 2012, $5.7 billion of commercial mortgage securitizations were classified in level 2 of the fair value hierarchy.

(c) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities – for example, loan repurchases due to representation and warranties and servicer clean-up calls.

(d) Includes prime, Alt-A, subprime, and option ARMs. Excludes certain loan securitization transactions entered into with Ginnie Mae, Fannie Mae and Freddie Mac.

(e) Key assumptions used to measure residential mortgage retained interests originated during the year included weighted-average life (in years) of 5.9 and 3.9 for the years ended December 31, 2014 and 2013, respectively, and weighted-average discount rate of 3.4% and 2.5% for the years ended December 31, 2014 and 2013, respectively. There were no residential mortgage securitizations during 2012. Key assumptions used to measure commercial and other retained interests originated during the year included weighted-average life (in years) of 6.5, 8.3 and 8.8 for the years ended December 31, 2014, 2013, and 2012, respectively, and weighted-average discount rate of 4.8%, 3.2% and 3.6% for the years ended December 31, 2014, 2013 and 2012, respectively.

(f) Includes commercial and student loan securitizations.

Loans and excess MSRs sold to the GSEs, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to Fannie Mae and Freddie Mac (the "GSEs"). These loans and excess MSRs are sold primarily for the purpose of securitization by the GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. See Note 29 for additional information about the Firm's loan sales- and securitization-related indemnifications.

See Note 17 for additional information about the impact of the Firm's sale of certain excess mortgage servicing rights.

The following table summarizes the activities related to loans sold to the GSEs, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities.

Year ended December 31, (in millions)	**2014**	2013	2012
Carrying value of loans sold[a]	**$ 55,802**	$ 166,028	$ 179,008
Proceeds received from loan sales as cash	**$ 260**	$ 782	$ 195
Proceeds from loans sales as securities[b]	**55,117**	163,373	176,592
Total proceeds received from loan sales[c]	**$ 55,377**	$ 164,155	$ 176,787
Gains on loan sales[d]	**$ 316**	$ 302	$ 141

(a) Predominantly to the GSEs and in securitization transactions pursuant to Ginnie Mae guidelines.
(b) Predominantly includes securities from the GSEs and Ginnie Mae that are generally sold shortly after receipt.
(c) Excludes the value of MSRs retained upon the sale of loans. Gains on loans sales include the value of MSRs.
(d) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 29, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability. As of December 31, 2014 and 2013, the Firm had recorded on its Consolidated balance sheets $12.4 billion and $14.3 billion, respectively, of loans that either had been repurchased or for which the Firm had an option to repurchase. Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools. Additionally, real estate owned resulting from voluntary repurchases of loans was $464 million and $2.0 billion as of December 31, 2014 and 2013, respectively. Substantially all of these loans and real estate owned are insured or guaranteed by U.S. government agencies. For additional information, refer to Note 14.

Loan delinquencies and liquidation losses

The table below includes information about components of nonconsolidated securitized financial assets, in which the Firm has continuing involvement, and delinquencies as of December 31, 2014 and 2013.

	Securitized assets		90 days past due		Liquidation losses	
As of or for the year ended December 31, (in millions)	**2014**	2013	**2014**	2013	**2014**	2013
Securitized loans[a]						
Residential mortgage:						
Prime/ Alt-A & Option ARMs	**$ 78,294**	$ 90,381	**$ 11,363**	$ 14,882	**$ 2,166**	$ 4,688
Subprime mortgage	**25,659**	28,008	**6,473**	7,726	**1,931**	2,420
Commercial and other	**94,438**	98,018	**1,522**	2,350	**1,267**	1,003
Total loans securitized[b]	**$ 198,391**	$ 216,407	**$ 19,358**	$ 24,958	**$ 5,364**	$ 8,111

(a) Total assets held in securitization-related SPEs were $254.3 billion and $271.7 billion, respectively, at December 31, 2014 and 2013. The $198.4 billion and $216.4 billion, respectively, of loans securitized at December 31, 2014 and 2013, excludes: $52.2 billion and $50.8 billion, respectively, of securitized loans in which the Firm has no continuing involvement, and $3.7 billion and $4.5 billion, respectively, of loan securitizations consolidated on the Firm's Consolidated balance sheets at December 31, 2014 and 2013.
(b) Includes securitized loans that were previously recorded at fair value and classified as trading assets.

Note 17 – Goodwill and other intangible assets

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	**2014**	2013	2012
Consumer & Community Banking	**$ 30,941**	$ 30,985	$ 31,048
Corporate & Investment Bank	**6,780**	6,888	6,895
Commercial Banking	**2,861**	2,862	2,863
Asset Management	**6,964**	6,969	6,992
Corporate[(a)]	**101**	377	377
Total goodwill	**$ 47,647**	$ 48,081	$ 48,175

(a) The remaining $101 million of Private Equity goodwill was disposed of as part of the Private Equity sale completed in January 2015. For further information on the Private Equity sale, see Note 2.

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	**2014**	2013	2012
Balance at beginning of period	**$ 48,081**	$ 48,175	$ 48,188
Changes during the period from:			
Business combinations	**43**	64	43
Dispositions	**(80)**	(5)	(4)
Other[(a)]	**(397)**	(153)	(52)
Balance at December 31,	**$ 47,647**	$ 48,081	$ 48,175

(a) Includes foreign currency translation adjustments, other tax-related adjustments, and, during 2014, goodwill impairment associated with the Firm's Private Equity business of $276 million.

Impairment testing

During 2014, the Firm recognized impairments of the Private Equity business' goodwill totaling $276 million. The Firm's remaining goodwill was not impaired at December 31, 2014. Further, the Firm's goodwill was not impaired at December 31, 2013 nor was any goodwill written off due to impairment during 2013 or 2012.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The Firm uses the reporting units' allocated equity plus goodwill capital as a proxy for the carrying amounts of equity for the reporting units in the goodwill impairment testing. Reporting unit equity is determined on a similar basis as the allocation of equity to the Firm's lines of business, which takes into consideration the capital the business segment would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III), economic risk measures and capital levels for similarly rated peers. Proposed line of business equity levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors. Allocated equity is further reviewed on a periodic basis and updated as needed.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. The models project cash flows for the forecast period and use the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' earnings forecasts, which include the estimated effects of regulatory and legislative changes (including, but not limited to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act")), and which are reviewed with the senior management of the Firm. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firms' overall estimated cost of equity to ensure reasonableness.

The valuations derived from the discounted cash flow models are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to assess the general reasonableness of the estimated fair

values, although precise conclusions generally cannot be drawn due to the differences that naturally exist between the Firm's businesses and competitor institutions. Management also takes into consideration a comparison between the aggregate fair value of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (a) a control premium that would exist in a market transaction, (b) factors related to the level of execution risk that would exist at the firmwide level that do not exist at the reporting unit level and (c) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

Deterioration in economic market conditions, increased estimates of the effects of regulatory or legislative changes, or additional regulatory or legislative changes may result in declines in projected business performance beyond management's current expectations. For example, in the Firm's Mortgage Banking business, such declines could result from increases in primary mortgage interest rates, lower mortgage origination volume, higher costs to resolve foreclosure-related matters or from deterioration in economic conditions, including decreases in home prices that result in increased credit losses. Declines in business performance, increases in equity capital requirements, or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights

Mortgage servicing rights represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm has elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late charges and other ancillary revenue, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that comprise the MSR asset. Conversely, securities (e.g., mortgage-backed securities), principal-only certificates and certain derivatives (i.e., those for which the Firm receives fixed-rate interest payments) increase in value when interest rates decline. JPMorgan Chase uses combinations of derivatives and securities to manage changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2014, 2013 and 2012.

As of or for the year ended December 31, (in millions, except where otherwise noted)	2014	2013	2012
Fair value at beginning of period	**$ 9,614**	$ 7,614	$ 7,223
MSR activity:			
Originations of MSRs	**757**	2,214	2,376
Purchase of MSRs	**11**	1	457
Disposition of MSRs[a]	**(209)**	(725)	(579)
Net additions	**559**	1,490	2,254
Changes due to collection/realization of expected cash flows[b]	**(911)**	(1,102)	(1,228)
Changes in valuation due to inputs and assumptions:			
Changes due to market interest rates and other[c]	**(1,608)**	2,122	(589)
Changes in valuation due to other inputs and assumptions:			
Projected cash flows (e.g., cost to service)[d]	**133**	109	(452)
Discount rates	**(459)** [h]	(78)	(98)
Prepayment model changes and other[e]	**108**	(541)	504
Total changes in valuation due to other inputs and assumptions	**(218)**	(510)	(46)
Total changes in valuation due to inputs and assumptions[b]	**$ (1,826)**	$ 1,612	$ (635)
Fair value at December 31,[f]	**$ 7,436**	$ 9,614	$ 7,614
Change in unrealized gains/(losses) included in income related to MSRs held at December 31,	**$ (1,826)**	$ 1,612	$ (635)
Contractual service fees, late fees and other ancillary fees included in income	**$ 2,884**	$ 3,309	$ 3,783
Third-party mortgage loans serviced at December 31, (in billions)	**$ 756**	$ 822	$ 867
Servicer advances, net of an allowance for uncollectible amounts, at December 31, (in billions)[g]	**$ 8.5**	$ 9.6	$ 10.9

(a) Predominantly represents excess mortgage servicing rights transferred to agency-sponsored trusts in exchange for stripped mortgage backed securities ("SMBS"). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired and has retained the remaining balance of those SMBS as trading securities. Also includes sales of MSRs in 2013 and 2012.

(b) Included changes related to commercial real estate of $(7) million, $(5) million and $(8) million for the years ended December 31, 2014, 2013 and 2012, respectively.

(c) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(d) For the year ended December 31, 2013, the increase was driven by the inclusion in the MSR valuation model of servicing fees receivable on certain delinquent loans.

(e) Represents changes in prepayments other than those attributable to changes in market interest rates. For the year ended December 31, 2013, the decrease was driven by changes in the inputs and assumptions used to derive prepayment speeds, primarily increases in home prices.

(f) Included $11 million, $18 million and $23 million related to commercial real estate at December 31, 2014, 2013, and 2012, respectively.

(g) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest to a trust, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

(h) For the year ending December 31, 2014, the decrease was primarily related to higher capital allocated to the Mortgage Servicing business, which, in turn, resulted in an increase in the option adjusted spread ("OAS"). The resulting OAS assumption continues to be consistent with capital and return requirements that the Firm believes a market participant would consider, taking into account factors such as the current operating risk environment and regulatory and economic capital requirements.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2014, 2013 and 2012.

Year ended December 31, (in millions)	2014	2013	2012
CCB mortgage fees and related income			
Net production revenue:			
Production revenue	**$ 732**	$ 2,673	$ 5,783
Repurchase (losses)/benefits	**458**	331	(272)
Net production revenue	**1,190**	3,004	5,511
Net mortgage servicing revenue			
Operating revenue:			
Loan servicing revenue	**3,303**	3,552	3,772
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(905)**	(1,094)	(1,222)
Total operating revenue	**2,398**	2,458	2,550
Risk management:			
Changes in MSR asset fair value due to market interest rates and other[(a)]	**(1,606)**	2,119	(587)
Other changes in MSR asset fair value due to other inputs and assumptions in model[(b)]	**(218)**	(511)	(46)
Change in derivative fair value and other	**1,796**	(1,875)	1,252
Total risk management	**(28)**	(267)	619
Total CCB net mortgage servicing revenue	**2,370**	2,191	3,169
All other	**3**	10	7
Mortgage fees and related income	**$ 3,563**	$ 5,205	$ 8,687

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices). For the year ended December 31, 2013, the decrease was driven by changes in the inputs and assumptions used to derive prepayment speeds, primarily increases in home prices.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2014 and 2013, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

December 31, (in millions, except rates)	2014	2013
Weighted-average prepayment speed assumption ("CPR")	9.80%	8.07%
Impact on fair value of 10% adverse change	$ (337)	$ (362)
Impact on fair value of 20% adverse change	(652)	(705)
Weighted-average option adjusted spread	9.43%	7.77%
Impact on fair value of 100 basis points adverse change	$ (300)	$ (389)
Impact on fair value of 200 basis points adverse change	(578)	(750)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

Other intangible assets

Other intangible assets are recorded at their fair value upon completion of a business combination or certain other transactions, and generally represent the value of customer relationships or arrangements. Subsequently, the Firm's intangible assets with finite lives, including core deposit intangibles, purchased credit card relationships, and other intangible assets, are amortized over their useful lives in a manner that best reflects the economic benefits of the intangible asset. The $426 million decrease in other intangible assets during 2014 was predominantly due to $380 million in amortization.

The components of credit card relationships, core deposits and other intangible assets were as follows.

December 31, (in millions)	2014 Gross amount[a]	2014 Accumulated amortization[a]	2014 Net carrying value	2013 Gross amount	2013 Accumulated amortization	2013 Net carrying value
Purchased credit card relationships	**$ 200**	**$ 166**	**$ 34**	$ 3,540	$ 3,409	$ 131
Other credit card-related intangibles	**497**	**378**	**$ 119**	542	369	$ 173
Core deposit intangibles	**814**	**757**	**$ 57**	4,133	3,974	$ 159
Other intangibles[b]	**1,880**	**898**	**$ 982**	2,374	1,219	$ 1,155
Total other intangible assets	**$ 3,391**	**$ 2,199**	**$ 1,192**	**$ 10,589**	**$ 8,971**	**$ 1,618**

(a) The decrease in the gross amount and accumulated amortization from December 31, 2013, was due to the removal of fully amortized assets, predominantly related to intangible assets acquired in the 2004 merger with Bank One Corporation ("Bank One").
(b) Includes intangible assets of approximately $600 million consisting primarily of asset management advisory contracts, which were determined to have an indefinite life and are not amortized.

Amortization expense

The following table presents amortization expense related to credit card relationships, core deposits and other intangible assets.

Year ended December 31, (in millions)	2014	2013	2012
Purchased credit card relationships	**$ 97**	$ 195	$ 309
Other credit card-related intangibles	**51**	58	265
Core deposit intangibles	**102**	196	239
Other intangibles	**130**	188	144
Total amortization expense[a]	**$ 380**	$ 637	$ 957

(a) The decline in amortization expense during 2014 predominantly related to intangible assets acquired in the 2004 merger with Bank One, most of which became fully amortized during the second quarter of 2014.

Future amortization expense

The following table presents estimated future amortization expense related to credit card relationships, core deposits and other intangible assets at December 31, 2014.

Year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	Other intangibles	**Total**
2015	$ 13	$ 38	$ 26	$ 89	$ 166
2016	6	33	14	73	126
2017	5	28	7	70	110
2018	3	20	5	50	78
2019	2	–	3	37	42

Impairment testing

The Firm's intangible assets are tested for impairment annually or more often if events or changes in circumstances indicate that the asset might be impaired.

The impairment test for a finite-lived intangible asset compares the undiscounted cash flows associated with the use or disposition of the intangible asset to its carrying value. If the sum of the undiscounted cash flows exceeds its carrying value, then no impairment charge is recorded. If the sum of the undiscounted cash flows is less than its carrying value, then an impairment charge is recognized in amortization expense to the extent the carrying amount of the asset exceeds its fair value.

The impairment test for indefinite-lived intangible assets compares the fair value of the intangible asset to its carrying amount. If the carrying value exceeds the fair value, then an impairment charge is recognized in amortization expense for the difference.

Note 18 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 19 – Deposits

At December 31, 2014 and 2013, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	2014	2013
U.S. offices		
Noninterest-bearing	**$ 437,558**	$ 389,863
Interest-bearing		
Demand[a]	**90,319**	84,631
Savings[b]	**466,730**	450,405
Time (included **$7,501** and $5,995 at fair value)[c]	**86,301**	91,356
Total interest-bearing deposits	**643,350**	626,392
Total deposits in U.S. offices	**1,080,908**	1,016,255
Non-U.S. offices		
Noninterest-bearing	**19,078**	17,611
Interest-bearing		
Demand	**217,011**	214,391
Savings	**2,673**	1,083
Time (included **$1,306** and $629 at fair value)[c]	**43,757**	38,425
Total interest-bearing deposits	**263,441**	253,899
Total deposits in non-U.S. offices	**282,519**	271,510
Total deposits	**$ 1,363,427**	$ 1,287,765

(a) Includes Negotiable Order of Withdrawal ("NOW") accounts, and certain trust accounts.
(b) Includes Money Market Deposit Accounts ("MMDAs").
(c) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 4.

At December 31, 2014 and 2013, time deposits in denominations of $100,000 or more were as follows.

December 31, (in millions)	2014	2013
U.S. offices	**$ 71,630**	$ 74,804
Non-U.S. offices	**43,743**	38,412
Total	**$115,373**	$113,216

At December 31, 2014, the maturities of interest-bearing time deposits were as follows.

December 31, 2014 (in millions)	U.S.	Non-U.S.	**Total**
2015	$ 70,929	$ 43,031	$ 113,960
2016	6,511	424	6,935
2017	1,480	61	1,541
2018	1,750	75	1,825
2019	1,423	166	1,589
After 5 years	4,208	–	4,208
Total	$ 86,301	$ 43,757	$ 130,058

Note 20 – Accounts payable and other liabilities

Accounts payable and other liabilities consist of payables to customers; payables to brokers, dealers and clearing organizations; payables from security purchases that did not settle; income taxes payables; accrued expense, including interest-bearing liabilities; and all other liabilities, including litigation reserves and obligations to return securities received as collateral.

The following table details the components of accounts payable and other liabilities.

December 31, (in millions)	2014	2013
Brokerage payables[a]	**$ 134,467**	$ 116,391
Accounts payable and other liabilities[b]	**72,487**	78,100
Total	**$ 206,954**	$ 194,491

(a) Includes payables to customers, brokers, dealers and clearing organizations, and payables from security purchases that did not settle.
(b) Includes $36 million and $25 million accounted for at fair value at December 31, 2014 and 2013, respectively.

Note 21 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated statements of income. The following table is a summary of long-term debt carrying values (including unamortized original issue discount, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2014.

By remaining maturity at December 31,		2014				2013
(in millions, except rates)		Under 1 year	1-5 years	After 5 years	**Total**	Total
Parent company						
Senior debt:	Fixed rate	**$ 13,214**	**$ 46,275**	**$ 49,300**	**$ 108,789**	$ 101,074
	Variable rate	**7,196**	**28,482**	**6,572**	**42,250**	41,030
	Interest rates[a]	**0.33-6.75%**	**0.27-7.25%**	**0.18-6.40%**	**0.18-7.25%**	0.19-7.25%
Subordinated debt:	Fixed rate	**$ 2,581**	**$ 2,373**	**$ 11,763**	**$ 16,717**	$ 15,198
	Variable rate	**1,446**	**2,000**	**9**	**3,455**	4,566
	Interest rates[a]	**0.48-5.25%**	**1.06-8.53%**	**3.38-8.00%**	**0.48-8.53%**	0.63-8.53%
	Subtotal	**$ 24,437**	**$ 79,130**	**$ 67,644**	**$ 171,211**	$ 161,868
Subsidiaries						
Federal Home Loan Banks ("FHLB") advances:	Fixed rate	**$ 2,006**	**$ 32**	**$ 166**	**$ 2,204**	$ 3,236
	Variable rate	**7,800**	**53,490**	**1,500**	**62,790**	58,640
	Interest rates[a]	**0.27-2.04%**	**0.11-0.43%**	**0.39%**	**0.11-2.04%**	0.16-2.04%
Senior debt:	Fixed rate	**$ 334**	**$ 1,493**	**$ 3,924**	**$ 5,751**	$ 5,428
	Variable rate	**3,805**	**13,692**	**2,587**	**20,084**	23,458
	Interest rates[a]	**0.36-0.48%**	**0.26-8.00%**	**1.30-7.28%**	**0.26-8.00%**	0.12-8.00%
Subordinated debt:	Fixed rate	**$ –**	**$ 5,289**	**$ 1,647**	**$ 6,936**	$ 7,286
	Variable rate	**–**	**2,364**	**–**	**2,364**	2,528
	Interest rates[a]	**–%**	**0.57-6.00%**	**4.38-8.25%**	**0.57-8.25%**	0.57-8.25%
	Subtotal	**$ 13,945**	**$ 76,360**	**$ 9,824**	**$ 100,129**	$ 100,576
Junior subordinated debt:	Fixed rate	**$ –**	**$ –**	**$ 2,226**	**$ 2,226**	$ 2,176
	Variable rate	**–**	**–**	**3,270**	**3,270**	3,269
	Interest rates[a]	**–%**	**–%**	**0.73-8.75%**	**0.73-8.75%**	0.74-8.75%
	Subtotal	**$ –**	**$ –**	**$ 5,496**	**$ 5,496**	$ 5,445
Total long-term debt[b][c][d]		**$ 38,382**	**$ 155,490**	**$ 82,964**	**$ 276,836** [f][g]	$ 267,889
Long-term beneficial interests:						
	Fixed rate	**$ 4,650**	**$ 7,924**	**$ 1,398**	**$ 13,972**	$ 10,958
	Variable rate	**6,230**	**11,079**	**4,128**	**21,437**	20,872
	Interest rates	**0.18-1.36%**	**0.20-5.23%**	**0.05-15.93%**	**0.05-15.93%**	0.04-15.93%
Total long-term beneficial interests[e]		**$ 10,880**	**$ 19,003**	**$ 5,526**	**$ 35,409**	$ 31,830

(a) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2014, for total long-term debt was (0.10)% to 8.55%, versus the contractual range of 0.11% to 8.75% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.

(b) Included long-term debt of $69.2 billion and $68.4 billion secured by assets totaling $156.7 billion and $131.3 billion at December 31, 2014 and 2013, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.

(c) Included $30.2 billion and $28.9 billion of long-term debt accounted for at fair value at December 31, 2014 and 2013, respectively.

(d) Included $2.9 billion and $2.7 billion of outstanding zero-coupon notes at December 31, 2014 and 2013, respectively. The aggregate principal amount of these notes at their respective maturities is $7.5 billion and $4.5 billion, respectively.

(e) Included on the Consolidated balance sheets in beneficial interests issued by consolidated VIEs. Also included $2.2 billion and $2.0 billion of outstanding structured notes accounted for at fair value at December 31, 2014 and 2013, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $17.0 billion and $17.8 billion at December 31, 2014 and 2013, respectively.

(f) At December 31, 2014, long-term debt in the aggregate of $23.5 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective notes.

(g) The aggregate carrying values of debt that matures in each of the five years subsequent to 2014 is $38.4 billion in 2015, $50.0 billion in 2016, $42.0 billion in 2017, $35.3 billion in 2018 and $28.2 billion in 2019.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 2.43% and 2.56% as of December 31, 2014 and 2013, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 1.50% and 1.54% as of December 31, 2014 and 2013, respectively.

The Parent Company has guaranteed certain long-term debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees rank on parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities were $352 million and $478 million at December 31, 2014 and 2013, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities

On May 8, 2013, the Firm redeemed approximately $5.0 billion, or 100% of the liquidation amount, of the following eight series of guaranteed capital debt securities ("trust preferred securities"): JPMorgan Chase Capital X, XI, XII, XIV, XVI, XIX and XXIV, and BANK ONE Capital VI. Other income for the year ended December 31, 2013, reflected a modest loss related to the redemption of trust preferred securities. On July 12, 2012, the Firm redeemed $9.0 billion, or 100% of the liquidation amount, of the following nine series of trust preferred securities: JPMorgan Chase Capital XV, XVII, XVIII, XX, XXII, XXV, XXVI, XXVII and XXVIII. Other income for the year ended December 31, 2012, reflected $888 million of pretax extinguishment gains related to adjustments applied to the cost basis of the redeemed trust preferred securities during the period they were in a qualified hedge accounting relationship.

At December 31, 2014, the Firm had outstanding nine wholly owned Delaware statutory business trusts ("issuer trusts") that had issued guaranteed capital debt securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $5.5 billion and $5.4 billion at December 31, 2014 and 2013, respectively, were reflected on the Firm's Consolidated balance sheets in long-term debt, and in the table on the preceding page under the caption "Junior subordinated debt" (i.e., trust preferred securities). The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated balance sheets at December 31, 2014 and 2013. Beginning in 2014, the debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, began being phased out from inclusion as Tier 1 capital under Basel III. As of December 31, 2014, $2.7 billion of these debentures qualified as Tier 1 capital, while $2.7 billion qualified as Tier 2 capital. As of December 31, 2013, under Basel I, the entire balance of these debentures qualified as Tier 1 capital.

The following is a summary of the outstanding trust preferred securities, including unamortized original issue discount, issued by each trust, and the junior subordinated deferrable interest debenture issued to each trust, as of December 31, 2014.

December 31, 2014 (in millions)	Amount of trust preferred securities issued by trust[a]	Principal amount of debenture issued to trust[b]	Issue date	Stated maturity of trust preferred securities and debentures	Earliest redemption date	Interest rate of trust preferred securities and debentures	Interest payment/ distribution dates
Bank One Capital III	$ 474	$ 726	2000	2030	Any time	8.75%	Semiannually
Chase Capital II	482	498	1997	2027	Any time	LIBOR + 0.50%	Quarterly
Chase Capital III	296	305	1997	2027	Any time	LIBOR + 0.55%	Quarterly
Chase Capital VI	242	249	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	249	257	1997	2027	Any time	LIBOR + 0.55%	Quarterly
JPMorgan Chase Capital XIII	466	480	2004	2034	Any time	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXI	836	838	2007	2037	Any time	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXIII	643	643	2007	2047	Any time	LIBOR + 1.00%	Quarterly
JPMorgan Chase Capital XXIX	1,500	1,500	2010	2040	2015	6.70%	Quarterly
Total	$ 5,188	$ 5,496					

(a) Represents the amount of trust preferred securities issued to the public by each trust, including unamortized original-issue discount.

(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original-issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated Financial Statements.

Note 22 – Preferred stock

At December 31, 2014 and 2013, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1.00 per share.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock for the payment of dividends and the distribution of assets.

The following is a summary of JPMorgan Chase's non-cumulative preferred stock outstanding as of December 31, 2014 and 2013.

	Shares at December 31, (represented by depositary shares)[a]		Carrying value (in millions) at December 31,			Contractual rate in effect at December 31,		Date at which dividend rate becomes	
	2014	2013	**2014**	2013	Issue date	2014	Earliest redemption date	floating	Floating annual rate of three-month LIBOR plus:
Fixed-rate:									
Series O	**125,750**	125,750	**$ 1,258**	$ 1,258	8/27/2012	**5.500%**	9/1/2017	NA	NA
Series P	**90,000**	90,000	**900**	900	2/5/2013	**5.450**	3/1/2018	NA	NA
Series T	**92,500**	–	**925**	–	1/30/2014	**6.700**	3/1/2019	NA	NA
Series W	**88,000**	–	**880**	–	6/23/2014	**6.300**	9/1/2019	NA	NA
Fixed-to-floating rate:									
Series I	**600,000**	600,000	**6,000**	6,000	4/23/2008	**7.900%**	4/30/2018	4/30/2018	LIBOR + 3.47 %
Series Q	**150,000**	150,000	**1,500**	1,500	4/23/2013	**5.150**	5/1/2023	5/1/2023	LIBOR + 3.25
Series R	**150,000**	150,000	**1,500**	1,500	7/29/2013	**6.000**	8/1/2023	8/1/2023	LIBOR + 3.30
Series S	**200,000**	–	**2,000**	–	1/22/2014	**6.750**	2/1/2024	2/1/2024	LIBOR + 3.78
Series U	**100,000**	–	**1,000**	–	3/10/2014	**6.125**	4/30/2024	4/30/2024	LIBOR + 3.33
Series V	**250,000**	–	**2,500**	–	6/9/2014	**5.000**	7/1/2019	7/1/2019	LIBOR + 3.32
Series X	**160,000**	–	**1,600**	–	9/23/2014	**6.100**	10/1/2024	10/1/2024	LIBOR + 3.33
Total preferred stock	**2,006,250**	1,115,750	**$ 20,063**	$ 11,158					

(a) Represented by depositary shares.

Each series of preferred stock has a liquidation value and redemption price per share of $10,000, plus any accrued but unpaid dividends.

Dividends on fixed-rate preferred stock are payable quarterly. Dividends on fixed-to-floating rate preferred stock are payable semiannually while at a fixed rate, and will become payable quarterly after converting to a floating rate.

On September 1, 2013, the Firm redeemed all of the outstanding shares of its 8.625% Non-Cumulative Preferred Stock, Series J at their stated redemption value.

Redemption rights

Each series of the Firm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date for that series. All outstanding preferred stock series except Series I may also be redeemed following a capital treatment event, as described in the terms of each series. Any redemption of the Firm's preferred stock is subject to non-objection from the Federal Reserve.

Subsequent events

Issuance of preferred stock

On February 12, 2015, the Firm issued $1.4 billion of noncumulative preferred stock.

Note 23 – Common stock

At December 31, 2014 and 2013, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during the years ended December 31, 2014, 2013 and 2012 were as follows.

Year ended December 31, (in millions)	**2014**	2013	2012
Total issued – balance at January 1 and December 31	**4,104.9**	4,104.9	4,104.9
Treasury – balance at January 1	**(348.8)**	(300.9)	(332.2)
Purchase of treasury stock	**(82.3)**	(96.1)	(33.5)
Share repurchases related to employee stock-based awards[a]	**–**	–	(0.2)
Issued from treasury:			
Employee benefits and compensation plans	**39.8**	47.1	63.7
Employee stock purchase plans	**1.2**	1.1	1.3
Total issued from treasury	**41.0**	48.2	65.0
Total treasury – balance at December 31	**(390.1)**	(348.8)	(300.9)
Outstanding	**3,714.8**	3,756.1	3,804.0

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes.

At each of December 31, 2014, 2013, and 2012, respectively, the Firm had 59.8 million warrants outstanding to purchase shares of common stock (the "Warrants"). The Warrants are currently traded on the New York Stock Exchange, and they are exercisable, in whole or in part, at any time and from time to time until October 28, 2018. The original warrant exercise price was $42.42 per share. The number of shares issuable upon the exercise of each warrant and the warrant exercise price is subject to adjustment upon the occurrence of certain events, including, but not limited to, the extent regular quarterly cash dividends exceed $0.38 per share. As a result of the increase in the Firm's quarterly common stock dividend to $0.40 per share commencing with the second quarter of 2014, the exercise price of the Warrants was adjusted each subsequent quarter, and was $42.391 as of December 31, 2014. There has been no change in the number of shares issuable upon exercise.

On March 13, 2012, the Board of Directors authorized a $15.0 billion common equity (i.e., common stock and warrants) repurchase program. As of December 31, 2014, $3.8 billion (on a trade-date basis) of authorized repurchase capacity remained under the program. The amount of equity that may be repurchased by the Firm is also subject to the amount that is set forth in the Firm's annual capital plan that is submitted to the Federal Reserve as part of the Comprehensive Capital Analysis and Review ("CCAR") process.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2014, 2013 and 2012, on a trade-date basis. There were no warrants repurchased during the years ended December 31, 2014, and 2013.

Year ended December 31, (in millions)	**2014**	2013	2012
Total number of shares of common stock repurchased	**83.4**	96.1	30.9
Aggregate purchase price of common stock repurchases	**$ 4,834**	$ 4,789	$ 1,329
Total number of Warrants repurchased	**–**	–	18.5
Aggregate purchase price of Warrant repurchases	**$ –**	$ –	$ 238

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "blackout periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information. For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on pages 18–19.

As of December 31, 2014, approximately 240 million unissued shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the Warrants, as discussed above.

Note 24 – Earnings per share

Earnings per share ("EPS") is calculated under the two-class method under which all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities based on their respective rights to receive dividends. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities. Options issued under employee benefit plans that have an antidilutive effect are excluded from the computation of diluted EPS.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2014, 2013 and 2012.

Year ended December 31, (in millions, except per share amounts)	**2014**	2013	2012
Basic earnings per share			
Net income	**$ 21,762**	$ 17,923	$ 21,284
Less: Preferred stock dividends	**1,125**	805	653
Net income applicable to common equity	**20,637**	17,118	20,631
Less: Dividends and undistributed earnings allocated to participating securities	**544**	525	754
Net income applicable to common stockholders	**$ 20,093**	$ 16,593	$ 19,877
Total weighted-average basic shares outstanding	**3,763.5**	3,782.4	3,809.4
Net income per share	**$ 5.34**	$ 4.39	$ 5.22
Diluted earnings per share			
Net income applicable to common stockholders	**$ 20,093**	$ 16,593	$ 19,877
Total weighted-average basic shares outstanding	**3,763.5**	3,782.4	3,809.4
Add: Employee stock options, SARs and warrants[(a)]	**34.0**	32.5	12.8
Total weighted-average diluted shares outstanding[(b)]	**3,797.5**	3,814.9	3,822.2
Net income per share	**$ 5.29**	$ 4.35	$ 5.20

(a) Excluded from the computation of diluted EPS (due to the antidilutive effect) were certain options issued under employee benefit plans and the Warrants. The aggregate number of shares issuable upon the exercise of such options and Warrants was 1 million, 6 million and 148 million for the years ended December 31, 2014, 2013 and 2012, respectively.

(b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

Note 25 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on investment securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities, and net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

Year ended December 31, (in millions)	Unrealized gains/(losses) on investment securities[a]	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	Accumulated other comprehensive income/(loss)
Balance at December 31, 2011	$ 3,565 [b]	$ (26)	$ 51	$ (2,646)	$ 944
Net change	3,303	(69)	69	(145)	3,158
Balance at December 31, 2012	$ 6,868 [b]	$ (95)	$ 120	$ (2,791)	$ 4,102
Net change	(4,070)	(41)	(259)	1,467	(2,903)
Balance at December 31, 2013	$ 2,798 [b]	$ (136)	$ (139)	$ (1,324)	$ 1,199
Net change	**1,975**	**(11)**	**44**	**(1,018)**	**990**
Balance at December 31, 2014	**$ 4,773 [b]**	**$ (147)**	**$ (95)**	**$ (2,342)**	**$ 2,189**

(a) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS including, as of the date of transfer during the first quarter of 2014, $9 million of net unrealized losses related to AFS securities that were transferred to HTM. Subsequent to transfer, includes any net unamortized unrealized gains and losses related to the transferred securities.

(b) At December 31, 2011, included after-tax non-credit related unrealized losses of $56 million on debt securities for which credit losses have been recognized in income. There were no such losses for the other periods presented.

The following table presents the before- and after-tax changes in the components of other comprehensive income/(loss).

	2014			2013			2012		
Year ended December 31, (in millions)	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax
Unrealized gains/(losses) on investment securities:									
Net unrealized gains/(losses) arising during the period	**$ 3,193**	**$ (1,170)**	**$ 2,023**	$ (5,987)	$ 2,323	$ (3,664)	$ 7,521	$ (2,930)	$ 4,591
Reclassification adjustment for realized (gains)/losses included in net income[a]	**(77)**	**29**	**(48)**	(667)	261	(406)	(2,110)	822	(1,288)
Net change	**3,116**	**(1,141)**	**1,975**	(6,654)	2,584	(4,070)	5,411	(2,108)	3,303
Translation adjustments:									
Translation[b]	**(1,638)**	**588**	**(1,050)**	(807)	295	(512)	(26)	8	(18)
Hedges[b]	**1,698**	**(659)**	**1,039**	773	(302)	471	(82)	31	(51)
Net change	**60**	**(71)**	**(11)**	(34)	(7)	(41)	(108)	39	(69)
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**98**	**(39)**	**59**	(525)	206	(319)	141	(55)	86
Reclassification adjustment for realized (gains)/losses included in net income[c]	**(24)**	**9**	**(15)**	101	(41)	60	(28)	11	(17)
Net change	**74**	**(30)**	**44**	(424)	165	(259)	113	(44)	69
Defined benefit pension and OPEB plans:									
Prior service credits arising during the period	**(53)**	**21**	**(32)**	–	–	–	6	(2)	4
Net gains/(losses) arising during the period	**(1,697)**	**688**	**(1,009)**	2,055	(750)	1,305	(537)	228	(309)
Reclassification adjustments included in net income[d]:									
Amortization of net loss	**72**	**(29)**	**43**	321	(124)	197	324	(126)	198
Prior service costs/(credits)	**(44)**	**17**	**(27)**	(43)	17	(26)	(41)	16	(25)
Foreign exchange and other	**39**	**(32)**	**7**	(14)	5	(9)	(21)	8	(13)
Net change	**(1,683)**	**665**	**(1,018)**	2,319	(852)	1,467	(269)	124	(145)
Total other comprehensive income/(loss)	**$ 1,567**	**$ (577)**	**$ 990**	$ (4,793)	$ 1,890	$ (2,903)	$ 5,147	$ (1,989)	$ 3,158

(a) The pretax amount is reported in securities gains in the Consolidated statements of income.

(b) Reclassifications of pretax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. The amounts were not material for the periods presented.

(c) The pretax amount is reported in the same line as the hedged items, which are predominantly recorded in net interest income in the Consolidated statements of income.

(d) The pretax amount is reported in compensation expense in the Consolidated statements of income.

Note 26 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for each of the years ended December 31, 2014, 2013 and 2012, is presented in the following table.

Effective tax rate

Year ended December 31,	**2014**	2013	2012
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	**2.7**	2.2	1.6
Tax-exempt income	**(3.1)**	(3.1)	(2.9)
Non-U.S. subsidiary earnings[a]	**(2.0)**	(4.9)	(2.4)
Business tax credits	**(5.4)**	(5.4)	(4.2)
Nondeductible legal expense	**2.4**	8.0	(0.2)
Other, net	**(2.6)**	(1.0)	(0.5)
Effective tax rate	**27.0%**	30.8%	26.4%

(a) Predominantly includes earnings of U.K. subsidiaries that are deemed to be reinvested indefinitely.

The components of income tax expense/(benefit) included in the Consolidated statements of income were as follows for each of the years ended December 31, 2014, 2013, and 2012.

Income tax expense/(benefit)

Year ended December 31, (in millions)	**2014**	2013	2012
Current income tax expense/(benefit)			
U.S. federal	**$ 1,610**	$ (1,316)	$ 3,225
Non-U.S.	**1,353**	1,308	1,782
U.S. state and local	**857**	(4)	1,496
Total current income tax expense/ (benefit)	**3,820**	(12)	6,503
Deferred income tax expense/(benefit)			
U.S. federal	**3,738**	7,080	2,238
Non-U.S.	**71**	10	(327)
U.S. state and local	**401**	913	(781)
Total deferred income tax expense/ (benefit)	**4,210**	8,003	1,130
Total income tax expense	**$ 8,030**	$ 7,991	$ 7,633

Total income tax expense includes $451 million, $531 million and $200 million of tax benefits recorded in 2014, 2013, and 2012, respectively, as a result of tax audit resolutions. In 2013, the relationship between current and deferred income tax expense was largely driven by the reversal of significant deferred tax assets as well as prior-year tax adjustments and audit resolutions.

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity and certain tax benefits associated with the Firm's employee stock-based compensation plans. The tax effect of all items recorded directly to stockholders' equity resulted in a decrease of $140 million in 2014, an increase of $2.1 billion in 2013, and a decrease of $1.9 billion in 2012.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Based on JPMorgan Chase's ongoing review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill these requirements and needs, the Firm has determined that the undistributed earnings of certain of its subsidiaries would be indefinitely reinvested to fund current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. For 2014, pretax earnings of $2.6 billion were generated and will be indefinitely reinvested in these subsidiaries. At December 31, 2014, the cumulative amount of undistributed pretax earnings in these subsidiaries were $31.1 billion. If the Firm were to record a deferred tax liability associated with these undistributed earnings, the amount would be $7.0 billion at December 31, 2014.

These undistributed earnings are related to subsidiaries located predominantly in the U.K. where the 2014 statutory tax rate was 21.5%.

Tax expense applicable to securities gains and losses for the years 2014, 2013 and 2012 was $30 million, $261 million, and $822 million, respectively.

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2014 and 2013.

Deferred taxes

December 31, (in millions)	2014	2013
Deferred tax assets		
Allowance for loan losses	**$ 5,756**	$ 6,593
Employee benefits	**3,378**	4,468
Accrued expenses and other	**8,637**	9,179
Non-U.S. operations	**5,106**	5,493
Tax attribute carryforwards	**570**	748
Gross deferred tax assets	**23,447**	26,481
Valuation allowance	**(820)**	(724)
Deferred tax assets, net of valuation allowance	**$ 22,627**	$ 25,757
Deferred tax liabilities		
Depreciation and amortization	**$ 3,073**	$ 3,196
Mortgage servicing rights, net of hedges	**5,533**	5,882
Leasing transactions	**2,495**	2,352
Non-U.S. operations	**4,444**	4,705
Other, net	**4,891**	3,459
Gross deferred tax liabilities	**20,436**	19,594
Net deferred tax assets	**$ 2,191**	$ 6,163

JPMorgan Chase has recorded deferred tax assets of $570 million at December 31, 2014, in connection with U.S. federal net operating loss ("NOL") carryforwards. At December 31, 2014, total U.S. federal NOL carryforwards were approximately $1.6 billion. If not utilized, the U.S. federal NOL carryforwards will expire between 2025 and 2034.

The valuation allowance at December 31, 2014, was due to losses associated with non-U.S. subsidiaries.

At December 31, 2014, 2013 and 2012, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $4.9 billion, $5.5 billion and $7.2 billion, respectively, of which $3.5 billion, $3.7 billion and $4.2 billion, respectively, if recognized, would reduce the annual effective tax rate. Included in the amount of unrecognized tax benefits are certain items that would not affect the effective tax rate if they were recognized in the Consolidated statements of income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income tax deductions, and the portion of gross non-U.S. unrecognized tax benefits that would have offsets in other jurisdictions. JPMorgan Chase is presently under audit by a number of taxing authorities, most notably by the Internal Revenue Service, New York State and City, and the State of California as summarized in the Tax examination status table below. Based upon the status of all of the tax examinations currently in process, it is reasonably possible that over the next 12 months the resolution of these examinations could result in a reduction in the gross balance of unrecognized tax benefits in the range of $0 to approximately $2 billion. Upon settlement of an audit, the gross unrecognized tax benefits would decline either because of tax payments or the recognition of tax benefits.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2014, 2013 and 2012.

Unrecognized tax benefits

Year ended December 31, (in millions)	2014	2013	2012
Balance at January 1,	**$ 5,535**	$ 7,158	$ 7,189
Increases based on tax positions related to the current period	**810**	542	680
Increases based on tax positions related to prior periods	**477**	88	234
Decreases based on tax positions related to prior periods	**(1,902)**	(2,200)	(853)
Decreases related to settlements with taxing authorities	**(9)**	(53)	(50)
Decreases related to a lapse of applicable statute of limitations	**–**	–	(42)
Balance at December 31,	**$ 4,911**	$ 5,535	$ 7,158

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $17 million, $(184) million and $147 million in 2014, 2013 and 2012, respectively.

At both December 31, 2014 and 2013, in addition to the liability for unrecognized tax benefits, the Firm had accrued $1.2 billion for income tax-related interest and penalties.

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many states throughout the U.S. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2014.

Tax examination status

December 31, 2014	Periods under examination	Status
JPMorgan Chase – U.S.	2003 - 2005	Field examination completed; at Appellate level
JPMorgan Chase – U.S.	2006 - 2010	Field examination
JPMorgan Chase – U.K.	2006 – 2012	Field examination of certain select entities
JPMorgan Chase – New York State and City	2005 – 2007	Field examination
JPMorgan Chase – California	2006 – 2010	Field examination

The following table presents the U.S. and non-U.S. components of income before income tax expense for the years ended December 31, 2014, 2013 and 2012.

Income before income tax expense - U.S. and non-U.S.

Year ended December 31, (in millions)	**2014**	2013	2012
U.S.	**$ 22,515**	$ 17,229	$ 24,895
Non-U.S.[(a)]	**7,277**	8,685	4,022
Income before income tax expense	**$ 29,792**	$ 25,914	$ 28,917

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

Note 27 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the OCC. The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC.

The Federal Reserve requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $10.6 billion and $5.3 billion in 2014 and 2013, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company-only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the Office of the Comptroller of the Currency ("OCC") and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2015, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, approximately $31 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2015 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2014 and 2013, cash in the amount of $16.8 billion and $17.2 billion, respectively, and securities with a fair value of $10.1 billion and $1.5 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers. In addition, as of December 31, 2014 and 2013, the Firm had other restricted cash of $3.3 billion and $3.9 billion, respectively, primarily representing cash reserves held at non-U.S. central banks and held for other general purposes.

Note 28 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

Basel III rules under the transitional Standardized and Advanced Approaches ("Basel III Standardized Transitional" and "Basel III Advanced Transitional," respectively) became effective on January 1, 2014; December 31, 2013 data is based on Basel I rules. Basel III establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated mostly consistent across Basel III Standardized and Basel III Advanced, both of which incorporate the requirements set forth in Basel 2.5. For 2014, Basel III Standardized Transitional requires the Firm to calculate its capital ratios using the Basel III definition of capital divided by the Basel I definition of RWA, inclusive of Basel 2.5 for market risk.

Beginning in 2014, there are three categories of risk-based capital under the Basel III Transitional rules: Common Equity Tier 1 capital ("CET1 capital"), as well as Tier 1 capital and Tier 2 capital. CET1 capital predominantly includes common stockholders' equity (including capital for AOCI related to debt and equity securities classified as AFS as well as for defined benefit pension and OPEB plans), less certain deductions for goodwill, MSRs and deferred tax assets that arise from NOL and tax credit carryforwards. Tier 1 capital is predominantly comprised of CET1 capital as well as perpetual preferred stock. Tier 2 capital includes long-term debt qualifying as Tier 2 and qualifying allowance for credit losses. Total capital is Tier 1 capital plus Tier 2 capital.

On February 21, 2014, the Federal Reserve and the OCC informed the Firm and its national bank subsidiaries that they had satisfactorily completed the parallel run requirements and were approved to calculate capital under Basel III Advanced, in addition to Basel III Standardized, as of April 1, 2014. In conjunction with its exit from the parallel run, the capital adequacy of the Firm and its national bank subsidiaries is evaluated against the Basel III approach (Standardized or Advanced) which results, for each quarter beginning with the second quarter of 2014, in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.

The following tables present the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant national bank subsidiaries under both Basel III Standardized Transitional and Basel III Advanced Transitional at December 31, 2014, and under Basel I at December 31, 2013.

	JPMorgan Chase & Co.[d]		
	Basel III Standardized Transitional	Basel III Advanced Transitional	Basel I
(in millions, except ratios)	Dec 31, 2014	Dec 31, 2014	Dec 31, 2013
Regulatory capital			
CET1 capital	$ 164,764	$ 164,764	NA
Tier 1 capital[a]	186,632	186,632	$ 165,663
Total capital	221,563	211,022	199,286
Assets			
Risk-weighted	1,472,602	1,608,240	1,387,863
Adjusted average[b]	2,465,414	2,465,414	2,343,713
Capital ratios[c]			
CET1	11.2%	10.2%	NA
Tier 1[a]	12.7	11.6	11.9%
Total	15.0	13.1	14.4
Tier 1 leverage	7.6	7.6	7.1

	JPMorgan Chase Bank, N.A.[d]		
	Basel III Standardized Transitional	Basel III Advanced Transitional	Basel I
(in millions, except ratios)	Dec 31, 2014	Dec 31, 2014	Dec 31, 2013
Regulatory capital			
CET1 capital	$ 156,898	$ 156,898	NA
Tier 1 capital[a]	157,222	157,222	$ 139,727
Total capital	173,659	166,662	165,496
Assets			
Risk-weighted	1,230,358	1,330,175	1,171,574
Adjusted average[b]	1,968,131	1,968,131	1,900,770
Capital ratios[c]			
CET1	12.8%	11.8%	NA
Tier 1[a]	12.8	11.8	11.9%
Total	14.1	12.5	14.1
Tier 1 leverage	8.0	8.0	7.4

	Chase Bank USA, N.A.[d]		
	Basel III Standardized Transitional	Basel III Advanced Transitional	Basel I
(in millions, except ratios)	Dec 31, 2014	Dec 31, 2014	Dec 31, 2013
Regulatory capital			
CET1 capital	**$ 14,556**	**$ 14,556**	NA
Tier 1 capital[a]	**14,556**	**14,556**	$ 12,956
Total capital	**20,517**	**19,206**	16,389
Assets			
Risk-weighted	**103,468**	**157,565**	100,990
Adjusted average[b]	**128,111**	**128,111**	109,731
Capital ratios[c]			
CET1	**14.1%**	**9.2%**	NA
Tier 1[a]	**14.1**	**9.2**	12.8%
Total	**19.8**	**12.2**	16.2
Tier 1 leverage	**11.4**	**11.4**	11.8

(a) At December 31, 2014, trust preferred securities included in Basel III Tier 1 capital were $2.7 billion and $300 million for JPMorgan Chase and JPMorgan Chase Bank, N.A., respectively. At December 31, 2014, Chase Bank USA, N.A. had no trust preferred securities.

(b) Adjusted average assets, for purposes of calculating the leverage ratio, includes total quarterly average assets adjusted for unrealized gains/(losses) on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries, and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.

(c) For each of the risk-based capital ratios the lower of the Standardized Transitional or Advanced Transitional ratio represents the Collins Floor.

(d) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions; whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both non-taxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from non-taxable business combinations totaling $130 million and $192 million at December 31, 2014, and December 31, 2013, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of $2.7 billion and $2.8 billion at December 31, 2014, and December 31, 2013, respectively.

Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Bank subsidiaries also are subject to these capital requirements by their respective primary regulators. The following table presents the minimum ratios to which the Firm and its national bank subsidiaries are subject as of December 31, 2014.

	Minimum capital ratios[a]	Well-capitalized ratios[a]
Capital ratios		
CET1	4.0%	NA
Tier 1	5.5	6.0%
Total	8.0	10.0
Tier 1 leverage	4.0	5.0 [b]

(a) As defined by the regulations issued by the Federal Reserve, OCC and FDIC. The CET1 capital ratio became a relevant measure of capital under the prompt corrective action requirements on January 1, 2015.

(b) Represents requirements for bank subsidiaries pursuant to regulations issued under the FDIC Improvement Act. There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.

As of December 31, 2014, and 2013, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

Note 29 – Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements.

To provide for probable credit losses inherent in consumer (excluding credit card) and wholesale lending commitments, an allowance for credit losses on lending-related commitments is maintained. See Note 15 for further discussion regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2014 and 2013. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. The Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower. Also, the Firm typically closes credit card lines when the borrower is 60 days or more past due.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity at December 31, (in millions)	Contractual amount						Carrying value[i]	
	2014					2013	2014	2013
	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total		
Lending-related								
Consumer, excluding credit card:								
Home equity - senior lien	**$ 2,166**	**$ 4,389**	**$ 1,841**	**$ 3,411**	**$ 11,807**	$ 13,158	**$ –**	$ –
Home equity - junior lien	**3,469**	**5,920**	**2,141**	**3,329**	**14,859**	17,837	**–**	–
Prime mortgage[a]	**8,579**	**–**	**–**	**–**	**8,579**	4,817	**–**	–
Subprime mortgage	**–**	**–**	**–**	**–**	**–**	–	**–**	–
Auto	**9,302**	**921**	**192**	**47**	**10,462**	8,309	**2**	1
Business banking	**10,557**	**807**	**117**	**413**	**11,894**	11,251	**11**	7
Student and other	**97**	**8**	**–**	**447**	**552**	685	**–**	–
Total consumer, excluding credit card	**34,170**	**12,045**	**4,291**	**7,647**	**58,153**	56,057	**13**	8
Credit card	**525,963**	**–**	**–**	**–**	**525,963**	529,383	**–**	–
Total consumer[b]	**560,133**	**12,045**	**4,291**	**7,647**	**584,116**	585,440	**13**	8
Wholesale:								
Other unfunded commitments to extend credit[c][d]	**68,688**	**83,877**	**112,992**	**7,119**	**272,676**	246,495	**374**	432
Standby letters of credit and other financial guarantees[c][d][e]	**22,584**	**29,753**	**34,982**	**2,555**	**89,874**	92,723	**788**	943
Unused advised lines of credit	**90,816**	**13,702**	**519**	**138**	**105,175**	101,994	**–**	–
Other letters of credit[c]	**3,363**	**877**	**91**	**–**	**4,331**	5,020	**1**	2
Total wholesale[f]	**185,451**	**128,209**	**148,584**	**9,812**	**472,056**	446,232	**1,163**	1,377
Total lending-related	**$ 745,584**	**$ 140,254**	**$ 152,875**	**$ 17,459**	**$ 1,056,172**	$1,031,672	**$ 1,176**	$ 1,385
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[g]	**$ 171,059**	**$ –**	**$ –**	**$ –**	**$ 171,059**	$ 169,709	**$ –**	$ –
Derivatives qualifying as guarantees	**3,009**	**167**	**12,313**	**38,100**	**53,589**	56,274	**80**	72
Unsettled reverse repurchase and securities borrowing agreements	**40,993**	**–**	**–**	**–**	**40,993**	38,211	**–**	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	**NA**	**NA**	**NA**	**NA**	**NA**	NA	**275**	681
Loans sold with recourse	**NA**	**NA**	**NA**	**NA**	**6,063**	7,692	**102**	131
Other guarantees and commitments[h]	**487**	**506**	**3,391**	**1,336**	**5,720**	6,786	**(121)**	(99)

(a) Includes certain commitments to purchase loans from correspondents.
(b) Predominantly all consumer lending-related commitments are in the U.S.
(c) At December 31, 2014 and 2013, reflects the contractual amount net of risk participations totaling $243 million and $476 million, respectively, for other unfunded commitments to extend credit; $13.0 billion and $14.8 billion, respectively, for standby letters of credit and other financial guarantees; and $469 million and $622 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(d) At December 31, 2014 and 2013, included credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other non-profit entities of $14.8 billion and $18.9 billion, respectively, within other unfunded commitments to extend credit; and $13.3 billion and $17.2 billion, respectively, within standby letters of credit and other financial guarantees. Other unfunded commitments to extend credit also include liquidity facilities to nonconsolidated municipal bond VIEs; see Note 16.
(e) At December 31, 2014 and 2013, included unissued standby letters of credit commitments of $45.6 billion and $42.8 billion, respectively.
(f) At December 31, 2014 and 2013, the U.S. portion of the contractual amount of total wholesale lending-related commitments was 65% and 68%, respectively.
(g) At December 31, 2014 and 2013, collateral held by the Firm in support of securities lending indemnification agreements was $177.1 billion and $176.4 billion, respectively. Securities lending collateral comprises primarily cash and securities issued by governments that are members of the Organisation for Economic Co-operation and Development ("OECD") and U.S. government agencies.
(h) At December 31, 2014 and 2013, included unfunded commitments of $147 million and $215 million, respectively, to third-party private equity funds; and $961 million and $1.9 billion, respectively, to other equity investments. These commitments included $150 million and $184 million, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 3. In addition, at both December 31, 2014 and 2013, included letters of credit hedged by derivative transactions and managed on a market risk basis of $4.5 billion.
(i) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value.

Other unfunded commitments to extend credit
Other unfunded commitments to extend credit generally comprise commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations.

Also included in other unfunded commitments to extend credit are commitments to noninvestment-grade counterparties in connection with leveraged finance activities, which were $23.7 billion and $18.3 billion at December 31, 2014 and 2013, respectively. For further information, see Note 3 and Note 4.

The Firm acts as a settlement and custody bank in the U.S. tri-party repurchase transaction market. In its role as settlement and custody bank, the Firm is exposed to the intra-day credit risk of its cash borrower clients, usually broker-dealers. This exposure is secured by collateral and typically extinguished by the end of the day. During 2014, the Firm extended secured clearance advance facilities to its clients (i.e. cash borrowers); these facilities contractually limit the Firm's intra-day credit risk to the facility amount and must be repaid by the end of the day. Through these facilities, the Firm has reduced its intra-day credit risk substantially; the average daily tri-party repo balance was $253 billion during the year ended December 31, 2013, and as of December 31, 2014, the secured clearance advance facility maximum outstanding commitment amount was $12.6 billion.

Guarantees
U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off-balance sheet lending-related arrangements to be guarantees under U.S. GAAP: standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For certain types of guarantees, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. For indemnifications provided in sales agreements, a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires). Any contingent liability that exists as a result of issuing the guarantee or indemnification is recognized when it becomes probable and reasonably estimable. The contingent portion of the liability is not recognized if the estimated amount is less than the carrying amount of the liability recognized at inception (adjusted for any amortization). The recorded amounts of the liabilities related to guarantees and indemnifications at December 31, 2014 and 2013, excluding the allowance for credit losses on lending-related commitments, are discussed below.

Standby letters of credit and other financial guarantees
Standby letters of credit ("SBLC") and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were $789 million and $945 million at December 31, 2014 and 2013, respectively, which were classified in accounts payable and other liabilities on the Consolidated balance sheets; these carrying values included $235 million and $265 million, respectively, for the allowance for lending-related commitments, and $554 million and $680 million, respectively, for the guarantee liability and corresponding asset.

The following table summarizes the types of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's customers, as of December 31, 2014 and 2013.

Standby letters of credit, other financial guarantees and other letters of credit

December 31, (in millions)	2014		2013	
	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade[a]	**$ 66,856**	**$ 3,476**	$ 69,109	$ 3,939
Noninvestment-grade[a]	**23,018**	**855**	23,614	1,081
Total contractual amount	**$ 89,874**	**$ 4,331**	$ 92,723	$ 5,020
Allowance for lending-related commitments	**$ 234**	**$ 1**	$ 263	$ 2
Commitments with collateral	**39,726**	**1,509**	40,410	1,473

(a) The ratings scale is based on the Firm's internal ratings, which generally correspond to ratings as defined by S&P and Moody's.

Advised lines of credit

An advised line of credit is a revolving credit line which specifies the maximum amount the Firm may make available to an obligor, on a nonbinding basis. The borrower receives written or oral advice of this facility. The Firm may cancel this facility at any time by providing the borrower notice or, in some cases, without notice as permitted by law.

Securities lending indemnifications

Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the borrower to return the lent securities. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

Derivatives qualifying as guarantees

In addition to the contracts described above, the Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less. Derivatives deemed to be guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps", are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio and are typically longer-term or may have no stated maturity, but allow the Firm to terminate the contract under certain conditions.

Derivatives deemed to be guarantees are recorded on the Consolidated balance sheets at fair value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was $53.6 billion and $56.3 billion at December 31, 2014 and 2013, respectively. The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees. However, exposure to certain stable value contracts is contractually limited to a substantially lower percentage of the notional amount; the notional amount on these stable value contracts was $27.5 billion and $27.0 billion at December 31, 2014 and 2013, respectively, and the maximum exposure to loss was $2.9 billion and $2.8 billion at both December 31, 2014 and 2013. The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract. The fair value of derivatives that the Firm deems to be guarantees were derivative payables of $102 million and $109 million and derivative receivables of $22 million and $37 million at December 31, 2014 and 2013, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 6.

Unsettled reverse repurchase and securities borrowing agreements

In the normal course of business, the Firm enters into reverse repurchase agreements and securities borrowing agreements that settle at a future date. At settlement, these commitments require that the Firm advance cash to and accept securities from the counterparty. These agreements generally do not meet the definition of a derivative, and

therefore, are not recorded on the Consolidated balance sheets until settlement date. The unsettled reverse repurchase agreements and securities borrowing agreements predominantly consist of agreements with regular-way settlement periods.

Loan sales- and securitization-related indemnifications

Mortgage repurchase liability

In connection with the Firm's mortgage loan sale and securitization activities with the GSEs, as described in Note 16, the Firm has made representations and warranties that the loans sold meet certain requirements. The Firm has been, and may be, required to repurchase loans and/or indemnify the GSEs (e.g., with "make-whole" payments to reimburse the GSEs for their realized losses on liquidated loans). To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the third party. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans that are deemed to have defects that were sold to purchasers (including securitization-related SPEs) plus, in certain circumstances, accrued interest on such loans and certain expense.

The following table summarizes the change in the mortgage repurchase liability for each of the periods presented.

Summary of changes in mortgage repurchase liability[a]

Year ended December 31, (in millions)	**2014**	2013	2012
Repurchase liability at beginning of period	**$ 681**	$ 2,811	$ 3,557
Net realized gains/(losses)[b]	**53**	(1,561)	(1,158)
Reclassification to litigation reserve	**—**	(179)	—
(Benefit)/provision for repurchase[c]	**(459)**	(390)	412
Repurchase liability at end of period	**$ 275**	$ 681	$ 2,811

(a) On October 25, 2013, the Firm announced that it had reached a $1.1 billion agreement with the FHFA to resolve, other than certain limited types of exposures, outstanding and future mortgage repurchase demands associated with loans sold to the GSEs from 2000 to 2008.

(b) Presented net of third-party recoveries and included principal losses and accrued interest on repurchased loans, "make-whole" settlements, settlements with claimants, and certain related expense. Make-whole settlements were $11 million, $414 million and $524 million, for the years ended December 31, 2014, 2013 and 2012, respectively.

(c) Included a provision related to new loan sales of $4 million, $20 million and $112 million, for the years ended December 31, 2014, 2013 and 2012, respectively.

Private label securitizations

The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

On November 15, 2013, the Firm announced that it had reached a $4.5 billion agreement with 21 major institutional investors to make a binding offer to the trustees of 330 residential mortgage-backed securities trusts issued by J.P.Morgan, Chase, and Bear Stearns ("RMBS Trust Settlement") to resolve all representation and warranty claims, as well as all servicing claims, on all trusts issued by J.P. Morgan, Chase, and Bear Stearns between 2005 and 2008. The seven trustees (or separate and successor trustees) for this group of 330 trusts have accepted the RMBS Trust Settlement for 319 trusts in whole or in part and excluded from the settlement 16 trusts in whole or in part. The trustees' acceptance is subject to a judicial approval proceeding initiated by the trustees, which is pending in New York state court.

In addition, from 2005 to 2008, Washington Mutual made certain loan level representations and warranties in connection with approximately $165 billion of residential mortgage loans that were originally sold or deposited into private-label securitizations by Washington Mutual. Of the $165 billion, approximately $78 billion has been repaid. In addition, approximately $49 billion of the principal amount of such loans has liquidated with an average loss severity of 59%. Accordingly, the remaining outstanding principal balance of these loans as of December 31, 2014, was approximately $38 billion, of which $8 billion was 60 days or more past due. The Firm believes that any repurchase obligations related to these loans remain with the FDIC receivership.

For additional information regarding litigation, see Note 31.

Loans sold with recourse

The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2014 and 2013, the unpaid principal balance of loans sold with recourse totaled $6.1 billion and $7.7 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it

will have to perform under its recourse obligations, was $102 million and $131 million at December 31, 2014 and 2013, respectively.

Other off-balance sheet arrangements

Indemnification agreements – general
In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Credit card charge-backs
Chase Paymentech Solutions, Card's merchant services business and a subsidiary of JPMorgan Chase Bank, N.A., is a global leader in payment processing and merchant acquiring.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is primarily liable for the amount of each processed credit card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Chase Paymentech will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Chase Paymentech is unable to collect the amount from the merchant, Chase Paymentech will bear the loss for the amount credited or refunded to the cardmember. Chase Paymentech mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Chase Paymentech does not have sufficient collateral from the merchant to provide customer refunds; and (3) Chase Paymentech does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would recognize the loss.

Chase Paymentech incurred aggregate losses of $10 million, $14 million, and $16 million on $847.9 billion, $750.1 billion, and $655.2 billion of aggregate volume processed for the years ended December 31, 2014, 2013 and 2012, respectively. Incurred losses from merchant charge-backs are charged to other expense, with the offset recorded in a valuation allowance against accrued interest and accounts receivable on the Consolidated balance sheets. The carrying value of the valuation allowance was $4 million and $5 million at December 31, 2014 and 2013, respectively, which the Firm believes, based on historical experience and the collateral held by Chase Paymentech of $174 million and $208 million at December 31, 2014 and 2013, respectively, is representative of the payment or performance risk to the Firm related to charge-backs.

Clearing Services - Client Credit Risk
The Firm provides clearing services for clients entering into securities purchases and sales and derivative transactions, with central counterparties ("CCPs"), including exchange-traded derivatives ("ETDs") such as futures and options, as well as OTC-cleared derivative contracts. As a clearing member, the Firm stands behind the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin. Variation margin is posted on a daily basis based on the value of clients' derivative contracts. Initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

As clearing member, the Firm is exposed to the risk of non-performance by its clients, but is not liable to clients for the performance of the CCPs. Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions. The Firm can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement. In the event of non-performance by a client, the Firm would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as clearing member.

The Firm reflects its exposure to non-performance risk of the client through the recognition of margin payables or receivables to clients and CCPs, but does not reflect the clients' underlying securities or derivative contracts in its Consolidated Financial Statements.

It is difficult to estimate the Firm's maximum possible exposure through its role as clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, and the credit risk mitigants available to the Firm, management believes it is unlikely that the Firm will

have to make any material payments under these arrangements and the risk of loss is expected to be remote.

For information on the derivatives that the Firm executes for its own account and records in its Consolidated Financial Statements, see Note 6.

Exchange & Clearing House Memberships
Through the provision of clearing services, the Firm is a member of several securities and derivative exchanges and clearinghouses, both in the U.S. and other countries. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to the guarantee fund maintained by a clearing house or exchange as part of the resources available to cover any losses in the event of a member default. Alternatively, these obligations may be a full pro-rata share of the residual losses after applying the guarantee fund. Additionally, certain clearinghouses require the Firm as a member to pay a pro rata share of losses resulting from the clearinghouse's investment of guarantee fund contributions and initial margin, unrelated to and independent of the default of another member. Generally a payment would only be required should such losses exceed the resources of the clearing house or exchange that are contractually required to absorb the losses in the first instance. It is difficult to estimate the Firm's maximum possible exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Guarantees of subsidiaries
In the normal course of business, JPMorgan Chase & Co. ("Parent Company") may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated balance sheets or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees are not included in the table on page 288 of this Note. For additional information, see Note 21.

Note 30 – Commitments, pledged assets and collateral

Lease commitments

At December 31, 2014, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2014.

Year ended December 31, (in millions)	
2015	$ 1,722
2016	1,682
2017	1,534
2018	1,281
2019	1,121
After 2019	5,101
Total minimum payments required[a]	12,441
Less: Sublease rentals under noncancelable subleases	(2,238)
Net minimum payment required	$ 10,203

(a) Lease restoration obligations are accrued in accordance with U.S. GAAP, and are not reported as a required minimum lease payment.

Total rental expense was as follows.

Year ended December 31, (in millions)	**2014**	2013	2012
Gross rental expense	**$ 2,255**	$ 2,187	$ 2,212
Sublease rental income	**(383)**	(341)	(288)
Net rental expense	**$ 1,872**	$ 1,846	$ 1,924

Pledged assets

Financial assets are pledged to maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits, and to collateralize repurchase and other securities financing agreements. Certain of these pledged assets may be sold or repledged by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets. At December 31, 2014 and 2013, the Firm had pledged assets of $324.5 billion and $251.3 billion, respectively, at Federal Reserve Banks and FHLBs. In addition, as of December 31, 2014 and 2013, the Firm had pledged to third parties $60.1 billion and $68.4 billion, respectively, of financial instruments it owns that may not be sold or repledged by such secured parties. Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 16 for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities and long-term debt, see Note 13 and Note 21, respectively. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	**2014**	2013
Securities	**$ 118.7**	$ 68.1
Loans	**248.2**	230.3
Trading assets and other	**169.0**	163.3
Total assets pledged	**$ 535.9**	$ 461.7

Collateral

At December 31, 2014 and 2013, the Firm had accepted assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of approximately $761.7 billion and $725.0 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately $596.8 billion and $520.1 billion, respectively, were sold or repledged, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales and to collateralize deposits and derivative agreements.

Certain prior period amounts for both collateral, as well as pledged assets (including the corresponding pledged assets parenthetical disclosure for trading assets on the Consolidated balance sheets) have been revised to conform with the current period presentation.

Note 31 – Litigation

Contingencies

As of December 31, 2014, the Firm and its subsidiaries are defendants or putative defendants in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $5.8 billion at December 31, 2014. This estimated aggregate range of reasonably possible losses is based upon currently available information for those proceedings in which the Firm is involved, taking into account the Firm's best estimate of such losses for those cases for which such estimate can be made. For certain cases, the Firm does not believe that an estimate can currently be made. The Firm's estimate involves significant judgment, given the varying stages of the proceedings (including the fact that many are currently in preliminary stages), the existence in many such proceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings, particularly proceedings that could result from government investigations. Accordingly, the Firm's estimate will change from time to time, and actual losses may vary.

Set forth below are descriptions of the Firm's material legal proceedings.

Auto Dealer Regulatory Matter. The Firm is engaged in discussions with the U.S. Department of Justice ("DOJ") about potential statistical disparities in markups charged to different races and ethnicities by automobile dealers on loans originated by those dealers and purchased by the Firm.

CIO Litigation. The Firm has been sued in a consolidated shareholder putative class action, a consolidated putative class action brought under the Employee Retirement Income Security Act ("ERISA") and seven shareholder derivative actions brought in Delaware state court and in New York federal and state courts relating to 2012 losses in the synthetic credit portfolio managed by the Firm's Chief Investment Office ("CIO"). Four of the shareholder derivative actions have been dismissed, and plaintiffs in three of those actions have appealed those dismissals. Motions to dismiss have also been filed in two other shareholder derivative actions.

Credit Default Swaps Investigations and Litigation. In July 2013, the European Commission (the "EC") filed a Statement of Objections against the Firm (including various subsidiaries) and other industry members in connection with its ongoing investigation into the credit default swaps ("CDS") marketplace. The EC asserts that between 2006 and 2009, a number of investment banks acted collectively through the International Swaps and Derivatives Association ("ISDA") and Markit Group Limited ("Markit") to foreclose exchanges from the potential market for exchange-traded credit derivatives. The Firm submitted a response to the Statement of Objections in January 2014, and the EC held a hearing in May 2014. DOJ also has an ongoing investigation into the CDS marketplace, which was initiated in July 2009.

Separately, the Firm and other industry members are defendants in a consolidated putative class action filed in the United States District Court for the Southern District of New York on behalf of purchasers and sellers of CDS. The complaint refers to the ongoing investigations by the EC and DOJ into the CDS market, and alleges that the defendant investment banks and dealers, including the Firm, as well as Markit and/or ISDA, collectively prevented new entrants into the market for exchange-traded CDS products. Defendants moved to dismiss this action, and in September 2014, the Court granted defendants' motion in part, dismissing claims for damages based on transactions effected before the Autumn of 2008, as well as certain other claims.

Foreign Exchange Investigations and Litigation. In November 2014, JPMorgan Chase Bank, N.A. reached separate settlements with the U.K. Financial Conduct Authority ("FCA"), the U.S. Commodity Futures Trading Commission ("CFTC") and the U.S. Office of the Comptroller of the Currency ("OCC") to resolve the agencies' respective civil enforcement claims relating to the Bank's foreign exchange ("FX") trading business (collectively, the "Settlement Agreements"). Under the Settlement Agreements, JPMorgan Chase Bank, N.A. agreed to take certain remedial measures and paid penalties of £222 million to the FCA, $310 million to the CFTC and $350 million to the OCC.

In December 2014, the Hong Kong Monetary Authority ("HKMA") announced the conclusion of its FX-related investigation regarding JPMorgan Chase Bank, N.A. and several other banks. The HKMA required the banks, including JPMorgan Chase Bank, N.A., to take certain remedial measures.

Other FX-related regulatory investigations of the Firm are ongoing, including a criminal investigation by DOJ. These investigations are focused on the Firm's spot FX trading and sales activities as well as controls applicable to those activities. The Firm continues to cooperate with these investigations. The Firm is also engaged in discussions regarding potential resolution with DOJ.

Since November 2013, a number of class actions have been filed in the United States District Court for the Southern District of New York against a number of foreign exchange dealers, including the Firm, for alleged violations of federal and state antitrust laws and unjust enrichment based on an alleged conspiracy to manipulate foreign exchange rates reported on the WM/Reuters service. In March 2014, plaintiffs filed a consolidated amended U.S. class action complaint; two other class actions were brought by non-U.S.-based plaintiffs. The Court denied defendants' motion to dismiss the U.S. class action and granted the motion to dismiss the two non-U.S. class actions. In January 2015, the Firm settled the U.S. class action, and this settlement is subject to court approval.

General Motors Litigation. JPMorgan Chase Bank, N.A. participated in, and was the Administrative Agent on behalf of a syndicate of lenders on, a $1.5 billion syndicated Term Loan facility ("Term Loan") for General Motors Corporation ("GM"). In July 2009, in connection with the GM bankruptcy proceedings, the Official Committee of Unsecured Creditors of Motors Liquidation Company ("Creditors Committee") filed a lawsuit against JPMorgan Chase Bank, N.A., in its individual capacity and as Administrative Agent for other lenders on the Term Loan, seeking to hold the underlying lien invalid. In March 2013, the Bankruptcy Court granted JPMorgan Chase Bank, N.A.'s motion for summary judgment and dismissed the Creditors Committee's complaint on the grounds that JPMorgan Chase Bank, N.A. did not authorize the filing of the UCC-3 termination statement at issue. The Creditors Committee appealed the Bankruptcy Court's dismissal of its claim to the United States Court of Appeals for the Second Circuit. In January 2015, the Court of Appeals reversed the Bankruptcy Court's dismissal of the Creditors Committee's claim and remanded the case to the Bankruptcy Court with instructions to enter partial summary judgment for the Creditors Committee as to the termination statement. JPMorgan Chase Bank, N.A. has filed a petition requesting that the full Court of Appeals rehear the case en banc. In the event that the request for rehearing is denied, continued proceedings in the Bankruptcy Court are anticipated with respect to, among other things, additional defenses asserted by JPMorgan Chase Bank, N.A. and the value of additional collateral on the Term Loan, which was not the subject of the termination statement.

Interchange Litigation. A group of merchants and retail associations filed a series of class action complaints alleging that Visa and MasterCard, as well as certain banks, conspired to set the price of credit and debit card interchange fees, enacted respective rules in violation of antitrust laws, and engaged in tying/bundling and exclusive dealing. The parties have entered into an agreement to settle the cases for a cash payment of $6.1 billion to the class plaintiffs (of which the Firm's share is approximately 20%) and an amount equal to ten basis points of credit card interchange for a period of eight months to be measured from a date within 60 days of the end of the opt-out period. The agreement also provides for modifications to each credit card network's rules, including those that prohibit surcharging credit card transactions. In December 2013, the Court issued a decision granting final approval of the settlement. A number of merchants have appealed. Certain merchants that opted out of the class settlement have filed actions against Visa and MasterCard, as well as against the Firm and other banks. Defendants' motion to dismiss the actions was denied in July 2014.

Investment Management Litigation. The Firm is defending two pending cases that allege that investment portfolios managed by J.P. Morgan Investment Management ("JPMIM") were inappropriately invested in securities backed by residential real estate collateral. Plaintiffs Assured Guaranty (U.K.) and Ambac Assurance UK Limited claim that JPMIM is liable for losses of more than $1 billion in market value of these securities. Discovery is proceeding.

Lehman Brothers Bankruptcy Proceedings. In May 2010, Lehman Brothers Holdings Inc. ("LBHI") and its Official Committee of Unsecured Creditors (the "Committee") filed a complaint (and later an amended complaint) against JPMorgan Chase Bank, N.A. in the United States Bankruptcy Court for the Southern District of New York that asserts both federal bankruptcy law and state common law claims, and seeks, among other relief, to recover $7.9 billion in collateral that was transferred to JPMorgan Chase Bank, N.A. in the weeks preceding LBHI's bankruptcy. The amended complaint also seeks unspecified damages on the grounds that JPMorgan Chase Bank, N.A.'s collateral requests hastened LBHI's bankruptcy. The Court dismissed the counts of the amended complaint that sought to void the allegedly constructively fraudulent and preferential transfers made to the Firm during the months of August and September 2008. The Firm has filed counterclaims against LBHI alleging that LBHI fraudulently induced the Firm to make large extensions of credit against inappropriate collateral in connection with the Firm's role as the clearing bank for Lehman Brothers Inc. ("LBI"), LBHI's broker-dealer subsidiary. These extensions of credit left the Firm with more than $25 billion in claims against the estate of LBI. The case has been transferred from the Bankruptcy Court to the District Court, and the Firm has moved for summary judgment seeking the dismissal of all of LBHI's claims. LBHI has also moved for summary judgment on certain of its claims and seeking the dismissal of the Firm's counterclaims.

In the Bankruptcy Court proceedings, LBHI and several of its subsidiaries that had been Chapter 11 debtors have filed a separate complaint and objection to derivatives claims asserted by the Firm alleging that the amount of the derivatives claims had been overstated and challenging certain set-offs taken by JPMorgan Chase entities to recover on the claims. The Firm responded to this separate complaint and objection in February 2013. LBHI and the Committee have also filed an objection to the claims asserted by JPMorgan Chase Bank, N.A. against LBHI with respect to clearing advances made to LBI, principally on the grounds that the Firm had not conducted the sale of the securities collateral held for its claims in a commercially reasonable manner. Discovery regarding both objections is

ongoing. In January 2015, LBHI filed additional objections relating to a variety of claims that the Firm had filed in the Bankruptcy Court proceedings. The bankruptcy claims and other claims of the Firm against Lehman entities have been paid in full, subject to potential adjustment depending on the outcome of the objections filed by LBHI and the Committee.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has received subpoenas and requests for documents and, in some cases, interviews, from federal and state agencies and entities, including DOJ, the CFTC, the Securities and Exchange Commission (the "SEC") and various state attorneys general, as well as the EC, the FCA, the Canadian Competition Bureau, the Swiss Competition Commission and other regulatory authorities and banking associations around the world relating primarily to the process by which interest rates were submitted to the British Bankers Association ("BBA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR") for various currencies, principally in 2007 and 2008. Some of the inquiries also relate to similar processes by which information on rates is submitted to the European Banking Federation ("EBF") in connection with the setting of the EBF's Euro Interbank Offered Rates ("EURIBOR") and to the Japanese Bankers' Association for the setting of Tokyo Interbank Offered Rates ("TIBOR") as well as to other processes for the setting of other reference rates in various parts of the world during similar time periods. The Firm is responding to and continuing to cooperate with these inquiries. In December 2013, JPMorgan Chase reached a settlement with the EC regarding its Japanese Yen LIBOR investigation and agreed to pay a fine of €80 million. In January 2014, the Canadian Competition Bureau announced that it has discontinued its investigation related to Yen LIBOR. In May 2014, the EC issued a Statement of Objections outlining its case against the Firm (and others) as to EURIBOR, to which the Firm has filed a response. In October 2014, JPMorgan Chase reached a settlement with the EC regarding the EC's Swiss franc LIBOR investigation and agreed to pay a fine of €72 million. In January 2015, the FCA informed JPMorgan Chase that it has discontinued its investigation of the Firm concerning LIBOR and EURIBOR.

In addition, the Firm has been named as a defendant along with other banks in a series of individual and class actions filed in various United States District Courts, in which plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively manipulated the U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR and/or EURIBOR rates by submitting rates that were artificially low or high. Plaintiffs allege that they transacted in loans, derivatives or other financial instruments whose values are affected by changes in U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR or EURIBOR and assert a variety of claims including antitrust claims seeking treble damages.

The U.S. dollar LIBOR-related putative class actions were consolidated for pre-trial purposes in the United States District Court for the Southern District of New York. The Court stayed all related cases while motions to dismiss the three lead class actions were pending. In March 2013, the Court granted in part and denied in part the defendants' motions to dismiss the claims in the three lead class actions, including dismissal with prejudice of the antitrust claims. In relation to the Firm, the Court has permitted certain claims under the Commodity Exchange Act and common law claims to proceed. In September 2013, class plaintiffs in two of the three lead class actions filed amended complaints, which defendants moved to dismiss. Plaintiffs in the third class action appealed the dismissal of the antitrust claims and the United States Court of Appeals for the Second Circuit dismissed the appeal for lack of jurisdiction. In January 2015, the United States Supreme Court reversed the decision of the Court of Appeals, holding that plaintiffs have the jurisdictional right to appeal and remanding the case to the Court of Appeals for further proceedings. In February 2015, the District Court entered a judgment on certain other plaintiffs' antitrust claims so that those plaintiffs could also participate in the appeal. Motions to dismiss are pending in the remaining previously stayed individual actions and class actions.

The Firm is one of the defendants in a putative class action alleging manipulation of Euroyen TIBOR and Yen LIBOR which was filed in the United States District Court for the Southern District of New York on behalf of plaintiffs who purchased or sold exchange-traded Euroyen futures and options contracts. In March 2014, the Court granted in part and denied in part the defendants' motions to dismiss, including dismissal of plaintiff's antitrust and unjust enrichment claims.

The Firm is one of the defendants in a putative class action filed in the United States District Court for the Southern District of New York relating to the interest rate benchmark EURIBOR. The case is currently stayed.

The Firm is also one of the defendants in a number of putative class actions alleging that defendant banks and ICAP conspired to manipulate the U.S. dollar ISDAFIX rates. Plaintiffs primarily assert claims under the federal antitrust laws and Commodities Exchange Act. In December 2014, defendants filed a motion to dismiss.

Madoff Litigation. Various subsidiaries of the Firm, including J.P. Morgan Securities plc, have been named as defendants in lawsuits filed in Bankruptcy Court in New York arising out of the liquidation proceedings of Fairfield Sentry Limited and Fairfield Sigma Limited, so-called Madoff feeder funds. These actions seek to recover payments made by the funds to defendants totaling approximately $155 million. All but two of these actions have been dismissed.

In addition, a putative class action was brought by investors in certain feeder funds against JPMorgan Chase in the United States District Court for the Southern District of New York, as was a motion by separate potential class plaintiffs to add claims against the Firm and certain subsidiaries to an already pending putative class action in the same court. The allegations in these complaints largely track those

previously raised by the court-appointed trustee for Bernard L. Madoff Investment Securities LLC. The District Court dismissed these complaints and the United States Court of Appeals for the Second Circuit affirmed the District Court's decision. Plaintiffs have petitioned the United States Supreme Court for a writ of certiorari.

The Firm is a defendant in five other Madoff-related individual investor actions pending in New York state court. The allegations in all of these actions are essentially identical, and involve claims against the Firm for, among other things, aiding and abetting breach of fiduciary duty, conversion and unjust enrichment. In August 2014, the Court dismissed all claims against the Firm. Plaintiffs have filed a notice of appeal.

A putative class action has been filed in the United States District Court for the District of New Jersey by investors who were net winners (i.e., Madoff customers who had taken more money out of their accounts than had been invested) in Madoff's Ponzi scheme and were not included in the previous class action settlement. These plaintiffs allege violations of the federal securities law, federal and state racketeering statutes and multiple common law and statutory claims including breach of trust, aiding and abetting embezzlement, unjust enrichment, conversion and commercial bad faith. A similar action has been filed in the United States District Court for the Middle District of Florida, although it is not styled as a class action, and includes a claim pursuant to a Florida statute. The Firm has moved to transfer these cases to the United States District Court for the Southern District of New York.

Three shareholder derivative actions have also been filed in New York federal and state court against the Firm, as nominal defendant, and certain of its current and former Board members, alleging breach of fiduciary duty in connection with the Firm's relationship with Bernard Madoff and the alleged failure to maintain effective internal controls to detect fraudulent transactions. The actions seek declaratory relief and damages. In July 2014, the federal court granted defendants' motions to dismiss two of the actions. One plaintiff chose not to appeal and the other filed a motion for reconsideration which was denied in November 2014. The latter plaintiff has filed an appeal. In the remaining state court action, a hearing on defendants' motion to dismiss was held in October 2014, and the court reserved decision.

MF Global. J.P. Morgan Securities LLC has been named as one of several defendants in a number of putative class actions filed by purchasers of MF Global's publicly traded securities asserting violations of federal securities laws and alleging that the offering documents contained materially false and misleading statements and omissions regarding MF Global. These actions have been settled, subject to final approval by the court. The Firm also has responded to inquiries from the CFTC relating to the Firm's banking and other business relationships with MF Global, including as a depository for MF Global's customer segregated accounts.

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory Investigations. JPMorgan Chase and affiliates (together, "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and certain Washington Mutual affiliates (together, "Washington Mutual") have been named as defendants in a number of cases in their various roles in offerings of mortgage-backed securities ("MBS"). These cases include class action suits on behalf of MBS purchasers, actions by individual MBS purchasers and actions by monoline insurance companies that guaranteed payments of principal and interest for particular tranches of MBS offerings. Following the settlements referred to under "Repurchase Litigation" and "Government Enforcement Investigations and Litigation" below, there are currently pending and tolled investor and monoline insurer claims involving MBS with an original principal balance of approximately $41 billion, of which $38 billion involves JPMC, Bear Stearns or Washington Mutual as issuer and $3 billion involves JPMC, Bear Stearns or Washington Mutual solely as underwriter. The Firm and certain of its current and former officers and Board members have also been sued in shareholder derivative actions relating to the Firm's MBS activities, and trustees have asserted or have threatened to assert claims that loans in securitization trusts should be repurchased.

Issuer Litigation – Class Actions. Two class actions remain pending against JPMC and Bear Stearns as MBS issuers in the United States District Court for the Southern District of New York. In the action concerning JPMC, plaintiffs' motion for class certification has been granted with respect to liability but denied without prejudice as to damages. In the action concerning Bear Stearns, the parties have reached a settlement in principle, which is subject to court approval. The Firm is also defending a class action brought against Bear Stearns in the United States District Court for the District of Massachusetts, in which the court's decision on defendants' motion to dismiss is pending.

Issuer Litigation – Individual Purchaser Actions. In addition to class actions, the Firm is defending individual actions brought against JPMC, Bear Stearns and Washington Mutual as MBS issuers (and, in some cases, also as underwriters of their own MBS offerings). These actions are pending in federal and state courts across the U.S. and are in various stages of litigation.

Monoline Insurer Litigation. The Firm is defending two pending actions relating to the same monoline insurer's guarantees of principal and interest on certain classes of 11 different Bear Stearns MBS offerings. These actions are pending in state court in New York and are in various stages of litigation.

Underwriter Actions. In actions against the Firm solely as an underwriter of other issuers' MBS offerings, the Firm has contractual rights to indemnification from the issuers. However, those indemnity rights may prove effectively unenforceable in various situations, such as where the issuers are now defunct. There are currently actions of this type pending against the Firm in federal and state courts in

various stages of litigation. One such class action has been settled, subject to final approval by the court.

Repurchase Litigation. The Firm is defending a number of actions brought by trustees, securities administrators or master servicers of various MBS trusts and others on behalf of purchasers of securities issued by those trusts. These cases generally allege breaches of various representations and warranties regarding securitized loans and seek repurchase of those loans or equivalent monetary relief, as well as indemnification of attorneys' fees and costs and other remedies. Deutsche Bank National Trust Company, acting as trustee for various MBS trusts, has filed such a suit against JPMorgan Chase Bank, N.A. and the Federal Deposit Insurance Corporation (the "FDIC") in connection with a significant number of MBS issued by Washington Mutual; that case is described in the Washington Mutual Litigations section below. Other repurchase actions, each specific to one or more MBS transactions issued by JPMC and/or Bear Stearns, are in various stages of litigation.

In addition, the Firm and a group of 21 institutional MBS investors made a binding offer to the trustees of MBS issued by JPMC and Bear Stearns providing for the payment of $4.5 billion and the implementation of certain servicing changes by JPMC, to resolve all repurchase and servicing claims that have been asserted or could have been asserted with respect to the 330 MBS trusts issued between 2005 and 2008. The offer does not resolve claims relating to Washington Mutual MBS. The seven trustees (or separate and successor trustees) for this group of 330 trusts has accepted the settlement for 319 trusts in whole or in part and excluded from the settlement 16 trusts in whole or in part. The trustees' acceptance is subject to a judicial approval proceeding initiated by the trustees and pending in New York state court. Certain investors in some of the trusts for which the settlement has been accepted have intervened in the judicial approval proceeding, challenging the trustees' acceptance of the settlement.

Additional actions have been filed against third-party trustees that relate to loan repurchase and servicing claims involving trusts that the Firm sponsored.

Derivative Actions. Shareholder derivative actions relating to the Firm's MBS activities have been filed against the Firm, as nominal defendant, and certain of its current and former officers and members of its Board of Directors, in New York state court and California federal court. Two of the New York actions have been dismissed and one is on appeal. A consolidated action in California federal court has been dismissed without prejudice for lack of personal jurisdiction and plaintiffs are pursuing discovery.

Government Enforcement Investigations and Litigation. The Firm is responding to an ongoing investigation being conducted by the Criminal Division of the United States Attorney's Office for the Eastern District of California relating to MBS offerings securitized and sold by the Firm and its subsidiaries. The Firm has also received subpoenas and informal requests for information from state authorities concerning the issuance and underwriting of MBS-related matters. The Firm continues to respond to these MBS-related regulatory inquiries.

In addition, the Firm continues to cooperate with investigations by DOJ, including the U.S. Attorney's Office for the District of Connecticut, the SEC Division of Enforcement and the Office of the Special Inspector General for the Troubled Asset Relief Program, all of which relate to, among other matters, communications with counterparties in connection with certain secondary market trading in residential and commercial MBS.

The Firm has entered into agreements with a number of entities that purchased MBS that toll applicable limitations periods with respect to their claims, and has settled, and in the future may settle, tolled claims. There is no assurance that the Firm will not be named as a defendant in additional MBS-related litigation.

Mortgage-Related Investigations and Litigation. The Attorney General of Massachusetts filed an action against the Firm, other servicers and a mortgage recording company, asserting claims for various alleged wrongdoings relating to mortgage assignments and use of the industry's electronic mortgage registry. In January 2015, the Firm entered into a settlement resolving this action.

The Firm entered into a settlement resolving a putative class action lawsuit relating to its filing of affidavits or other documents in connection with mortgage foreclosure proceedings, and the court granted final approval of the settlement in January 2015.

One shareholder derivative action has been filed in New York Supreme Court against the Firm's Board of Directors alleging that the Board failed to exercise adequate oversight as to wrongful conduct by the Firm regarding mortgage servicing. In December 2014, the court granted defendants' motion to dismiss the complaint.

The Civil Division of the United States Attorney's Office for the Southern District of New York is conducting an investigation concerning the Firm's compliance with the Fair Housing Act ("FHA") and Equal Credit Opportunity Act ("ECOA") in connection with its mortgage lending practices. In addition, three municipalities and a school district have commenced litigation against the Firm alleging violations of an unfair competition law and of the FHA and ECOA and seeking statutory damages for the unfair competition claim, and, for the FHA and ECOA claims, damages in the form of lost tax revenue and increased municipal costs associated with foreclosed properties. The court denied a motion to dismiss in one of the municipal actions, the school district action was dismissed with prejudice, another municipal action was recently served, and motions to dismiss are pending in the remaining actions.

JPMorgan Chase Bank, N.A. is responding to inquiries by the Executive Office of the U.S. Bankruptcy Trustee and various regional U.S. Bankruptcy Trustees relating to mortgage payment change notices and escrow statements in bankruptcy proceedings.

Municipal Derivatives Litigation. Several civil actions were commenced in New York and Alabama courts against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions. The claims in the civil actions generally alleged that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The County filed for bankruptcy in November 2011. In June 2013, the County filed a Chapter 9 Plan of Adjustment, as amended (the "Plan of Adjustment"), which provided that all the above-described actions against the Firm would be released and dismissed with prejudice. In November 2013, the Bankruptcy Court confirmed the Plan of Adjustment, and in December 2013, certain sewer rate payers filed an appeal challenging the confirmation of the Plan of Adjustment. All conditions to the Plan of Adjustment's effectiveness, including the dismissal of the actions against the Firm, were satisfied or waived and the transactions contemplated by the Plan of Adjustment occurred in December 2013. Accordingly, all the above-described actions against the Firm have been dismissed pursuant to the terms of the Plan of Adjustment. The appeal of the Bankruptcy Court's order confirming the Plan of Adjustment remains pending.

Parmalat. In 2003, following the bankruptcy of the Parmalat group of companies ("Parmalat"), criminal prosecutors in Italy investigated the activities of Parmalat, its directors and the financial institutions that had dealings with them following the collapse of the company. In March 2012, the criminal prosecutor served a notice indicating an intention to pursue criminal proceedings against four former employees of the Firm (but not against the Firm) on charges of conspiracy to cause Parmalat's insolvency by underwriting bonds and continuing derivatives trading when Parmalat's balance sheet was false. A preliminary hearing, in which the judge will determine whether to recommend that the matter go to a full trial, is ongoing. The final hearings have been scheduled for March 2015.

In addition, the administrator of Parmalat commenced five civil actions against JPMorgan Chase entities including: two claw-back actions; a claim relating to bonds issued by Parmalat in which it is alleged that JPMorgan Chase kept Parmalat "artificially" afloat and delayed the declaration of insolvency; and similar allegations in two claims relating to derivatives transactions.

Petters Bankruptcy and Related Matters. JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), have been named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain affiliated entities (collectively, "Petters") and the Polaroid Corporation. The principal actions against JPMorgan Chase and its affiliates have been brought by a court-appointed receiver for Petters and the trustees in bankruptcy proceedings for three Petters entities. These actions generally seek to avoid certain putative transfers in connection with (i) the 2005 acquisition by Petters of Polaroid, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions entered into with Polaroid; and (iii) a credit line and investment accounts held by Petters. The actions collectively seek recovery of approximately $450 million. Defendants have moved to dismiss the complaints in the actions filed by the Petters bankruptcy trustees.

Power Matters. The United States Attorney's Office for the Southern District of New York is investigating matters relating to the bidding activities that were the subject of the July 2013 settlement between J.P. Morgan Ventures Energy Corp. and the Federal Energy Regulatory Commission. The Firm is responding to and cooperating with the investigation.

Referral Hiring Practices Investigations. Various regulators are investigating, among other things, the Firm's compliance with the Foreign Corrupt Practices Act and other laws with respect to the Firm's hiring practices related to candidates referred by clients, potential clients and government officials, and its engagement of consultants in the Asia Pacific region. The Firm is responding to and continuing to cooperate with these investigations.

Sworn Documents, Debt Sales and Collection Litigation Practices. The Firm has been responding to formal and informal inquiries from various state and federal regulators regarding practices involving credit card collections litigation (including with respect to sworn documents), the sale of consumer credit card debt and securities backed by credit card receivables.

Separately, the Consumer Financial Protection Bureau and multiple state Attorneys General are conducting investigations into the Firm's collection and sale of consumer credit card debt. The California and Mississippi Attorneys General have filed separate civil actions against JPMorgan Chase & Co., Chase Bank USA, N.A. and Chase BankCard Services, Inc. alleging violations of law relating to debt collection practices.

Washington Mutual Litigations. Proceedings related to Washington Mutual's failure are pending before the United States District Court for the District of Columbia and include a lawsuit brought by Deutsche Bank National Trust Company, initially against the FDIC and amended to include JPMorgan Chase Bank, N.A. as a defendant, asserting an estimated $6 billion to $10 billion in damages based upon alleged breach of various mortgage securitization agreements and alleged violation of certain representations and warranties given by certain Washington Mutual affiliates in connection with those securitization agreements. The case includes assertions that JPMorgan Chase Bank, N.A. may have assumed liabilities for the alleged breaches of representations and warranties in the mortgage securitization agreements. The Firm and the FDIC have filed opposing motions, each seeking a ruling that the liabilities at issue are borne by the other.

Certain holders of Washington Mutual Bank debt filed an action against JPMorgan Chase which alleged that by

acquiring substantially all of the assets of Washington Mutual Bank from the FDIC, JPMorgan Chase Bank, N.A. caused Washington Mutual Bank to default on its bond obligations. JPMorgan Chase and the FDIC moved to dismiss this action and the District Court dismissed the case except as to the plaintiffs' claim that JPMorgan Chase tortiously interfered with the plaintiffs' bond contracts with Washington Mutual Bank prior to its closure. Discovery is ongoing.

JPMorgan Chase has also filed a complaint in the United States District Court for the District of Columbia against the FDIC in its capacity as receiver for Washington Mutual Bank and in its corporate capacity asserting multiple claims for indemnification under the terms of the Purchase & Assumption Agreement between JPMorgan Chase and the FDIC relating to JPMorgan Chase's purchase of most of the assets and certain liabilities of Washington Mutual Bank.

* * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously in all such matters. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downward, as appropriate, based on management's best judgment after consultation with counsel. During the years ended December 31, 2014, 2013 and 2012, the Firm incurred $2.9 billion, $11.1 billion and $5.0 billion, respectively, of legal expense. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or impact related to those matters. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued; as a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

Note 32 – International operations

The following table presents income statement-related and balance sheet-related information for JPMorgan Chase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 33.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the U.S.

As of or for the year ended December 31, (in millions)	Revenue[b]	Expense[c]	Income before income tax expense	Net income	Total assets	
2014						
Europe/Middle East and Africa	**$ 16,013**	**$ 10,123**	**$ 5,890**	**$ 3,935**	**$ 481,328**	[d]
Asia and Pacific	**6,083**	**4,478**	**1,605**	**1,051**	**147,357**	
Latin America and the Caribbean	**2,047**	**1,626**	**421**	**269**	**44,567**	
Total international	**24,143**	**16,227**	**7,916**	**5,255**	**673,252**	
North America[a]	**70,062**	**48,186**	**21,876**	**16,507**	**1,899,874**	
Total	**$ 94,205**	**$ 64,413**	**$ 29,792**	**$ 21,762**	**$ 2,573,126**	
2013						
Europe/Middle East and Africa	$ 15,585	$ 9,069	$ 6,516	$ 4,842	$ 514,747	[d]
Asia and Pacific	6,168	4,248	1,920	1,254	145,999	
Latin America and the Caribbean	2,251	1,626	625	381	41,473	
Total international	24,004	14,943	9,061	6,477	702,219	
North America[a]	72,602	55,749	16,853	11,446	1,713,470	
Total	$ 96,606	$ 70,692	$ 25,914	$ 17,923	$ 2,415,689	
2012						
Europe/Middle East and Africa	$ 10,522	$ 9,326	$ 1,196	$ 1,508	$ 553,147	[d]
Asia and Pacific	5,605	3,952	1,653	1,048	167,955	
Latin America and the Caribbean	2,328	1,580	748	454	53,984	
Total international	18,455	14,858	3,597	3,010	775,086	
North America[a]	78,576	53,256	25,320	18,274	1,584,055	
Total	$ 97,031	$ 68,114	$ 28,917	$ 21,284	$ 2,359,141	

(a) Substantially reflects the U.S.
(b) Revenue is composed of net interest income and noninterest revenue.
(c) Expense is composed of noninterest expense and the provision for credit losses.
(d) Total assets for the U.K. were approximately $434 billion, $451 billion, and $498 billion at December 31, 2014, 2013 and 2012, respectively.

Note 33 – Business segments

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 77–78. For a further discussion concerning JPMorgan Chase's business segments, see Business Segment Results on pages 79–80.

The following is a description of each of the Firm's business segments, and the products and services they provide to their respective client bases.

Consumer & Community Banking
Consumer & Community Banking ("CCB") serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Merchant Services & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.

Corporate & Investment Bank
The Corporate & Investment Bank ("CIB"), comprised of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which includes custody, fund accounting and administration, and securities lending products sold principally to asset managers, insurance companies and public and private investment funds.

Commercial Banking
Commercial Banking ("CB") delivers extensive industry knowledge, local expertise and dedicated service to U.S. and multinational clients, including corporations, municipalities, financial institutions and non-profit entities with annual revenue generally ranging from $20 million to $2 billion. CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Asset Management
Asset Management ("AM"), with client assets of $2.4 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For Global Wealth Management clients, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Corporate
The Corporate segment comprises Private Equity, Treasury and Chief Investment Office ("CIO"), and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Enterprise Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm's occupancy and pension-related expense that are subject to allocation to the businesses.

Segment results

The following tables provide a summary of the Firm's segment results as of or for the years ended December 31, 2014, 2013 and 2012 on a managed basis. Total net revenue (noninterest revenue and net interest income) for each of the segments is presented on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit).

Business segment capital allocation changes

Effective January 1, 2013, the Firm refined the capital allocation framework to align it with the revised line of business structure that became effective in the fourth quarter of 2012. The change in equity levels for the lines of businesses was largely driven by the evolving regulatory requirements and higher capital targets the Firm had established under the Basel III Advanced Approach.

Segment results and reconciliation

As of or the year ended December 31, (in millions, except ratios)	Consumer & Community Banking			Corporate & Investment Bank			Commercial Banking		
	2014	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Noninterest revenue	**$ 15,937**	$ 17,552	$ 20,813	**$ 23,458**	$ 23,810	$ 23,104	**$ 2,349**	$ 2,298	$ 2,283
Net interest income	**28,431**	28,985	29,465	**11,175**	10,976	11,658	**4,533**	4,794	4,629
Total net revenue	**44,368**	46,537	50,278	**34,633**	34,786	34,762	**6,882**	7,092	6,912
Provision for credit losses	**3,520**	335	3,774	**(161)**	(232)	(479)	**(189)**	85	41
Noninterest expense	**25,609**	27,842	28,827	**23,273**	21,744	21,850	**2,695**	2,610	2,389
Income/(loss) before income tax expense/(benefit)	**15,239**	18,360	17,677	**11,521**	13,274	13,391	**4,376**	4,397	4,482
Income tax expense/(benefit)	**6,054**	7,299	6,886	**4,596**	4,387	4,719	**1,741**	1,749	1,783
Net income/(loss)	**$ 9,185**	$ 11,061	$ 10,791	**$ 6,925**	$ 8,887	$ 8,672	**$ 2,635**	$ 2,648	$ 2,699
Average common equity	**$ 51,000**	$ 46,000	$ 43,000	**$ 61,000**	$ 56,500	$ 47,500	**$ 14,000**	$ 13,500	$ 9,500
Total assets	**455,634**	452,929	467,282	**861,819**	843,577	876,107	**195,267**	190,782	181,502
Return on common equity	**18%**	23%	25%	**10%**	15%	18%	**18%**	19%	28%
Overhead ratio	**58**	60	57	**67**	63	63	**39**	37	35

(a) Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital to its lines of business and updates equity allocations to its lines of business as refinements are implemented.

Preferred stock dividend allocation reporting change
As part of its funds transfer pricing process, the Firm allocates substantially all of the cost of its outstanding preferred stock to its reportable business segments, while retaining the balance of the cost in Corporate. Prior to the fourth quarter of 2014, this cost was allocated to the Firm's reportable business segments as interest expense, with an offset recorded as interest income in Corporate. Effective with the fourth quarter of 2014, this cost is no longer included in interest income and interest expense in the segments, but rather is now included in net income applicable to common equity to be consistent with the presentation of firmwide results. As a result of this reporting change, net interest income and net income in the reportable business segments increases; however, there was no impact to the segments' return on common equity ("ROE"). The Firm's net interest income, net income, Consolidated balance sheets and consolidated results of operations were not impacted by this reporting change, as preferred stock dividends have been and continue to be distributed from retained earnings and, accordingly, were never reported as a component of the Firm's consolidated net interest income or net income. Prior period segment amounts have been revised to conform with the current period presentation.

(table continued from previous page)

Asset Management			Corporate			Reconciling Items[a]			Total		
2014	2013	2012	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
$ 9,588	$ 9,029	$ 7,847	**$ 1,972**	$ 3,093	$ 190	**$ (2,733)**	$ (2,495)	$ (2,116)	**$ 50,571**	$ 53,287	$ 52,121
2,440	2,376	2,163	**(1,960)**	(3,115)	(2,262)	**(985)**	(697)	(743)	**43,634**	43,319	44,910
12,028	11,405	10,010	**12**	(22)	(2,072)	**(3,718)**	(3,192)	(2,859)	**94,205**	96,606	97,031
4	65	86	**(35)**	(28)	(37)	**–**	–	–	**3,139**	225	3,385
8,538	8,016	7,104	**1,159**	10,255	4,559	**–**	–	–	**61,274**	70,467	64,729
3,486	3,324	2,820	**(1,112)**	(10,249)	(6,594)	**(3,718)**	(3,192)	(2,859)	**29,792**	25,914	28,917
1,333	1,241	1,078	**(1,976)**	(3,493)	(3,974)	**(3,718)**	(3,192)	(2,859)	**8,030**	7,991	7,633
$ 2,153	$ 2,083	$ 1,742	**$ 864**	$ (6,756)	$ (2,620)	**$ –**	$ –	$ –	**$ 21,762**	$ 17,923	$ 21,284
$ 9,000	$ 9,000	$ 7,000	**$ 72,400**	$ 71,409	$ 77,352	**$ –**	$ –	$ –	**$ 207,400**	$ 196,409	$ 184,352
128,701	122,414	108,999	**931,705**	805,987	725,251	**NA**	NA	NA	**2,573,126**	2,415,689	2,359,141
23%	23%	24%	**NM**	NM	NM	**NM**	NM	NM	**10%**	9%	11%
71	70	71	**NM**	NM	NM	**NM**	NM	NM	**65**	73	67

Note 34 – Parent company

Parent company – Statements of income and comprehensive income

Year ended December 31, (in millions)	2014	2013	2012
Income			
Dividends from subsidiaries and affiliates:			
Bank and bank holding company	**$ –**	$ 1,175	$ 4,828
Nonbank[a]	**14,716**	876	1,972
Interest income from subsidiaries	**378**	757	1,041
Other interest income	**284**	303	293
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**779**	318	939
Nonbank	**52**	2,065	1,207
Other income/(loss)	**508**	(1,380)	579
Total income	**16,717**	4,114	10,859
Expense			
Interest expense to subsidiaries and affiliates[a]	**169**	309	836
Other interest expense	**3,645**	4,031	4,679
Other noninterest expense	**827**	9,597	2,399
Total expense	**4,641**	13,937	7,914
Income (loss) before income tax benefit and undistributed net income of subsidiaries	**12,076**	(9,823)	2,945
Income tax benefit	**1,430**	4,301	1,665
Equity in undistributed net income of subsidiaries	**8,256**	23,445	16,674
Net income	**$ 21,762**	$ 17,923	$ 21,284
Other comprehensive income, net	**990**	(2,903)	3,158
Comprehensive income	**$ 22,752**	$ 15,020	$ 24,442

Parent company – Balance sheets

December 31, (in millions)	2014	2013
Assets		
Cash and due from banks	**$ 211**	$ 264
Deposits with banking subsidiaries	**95,884**	64,843
Trading assets	**18,222**	13,727
Available-for-sale securities	**3,321**	15,228
Loans	**2,260**	2,829
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**33,810**	21,693
Nonbank	**52,626**	68,788
Investments (at equity) in subsidiaries and affiliates:		
Bank and bank holding company	**216,070**	196,950
Nonbank[a]	**41,173**	50,996
Other assets	**18,645**	18,877
Total assets	**$ 482,222**	$ 454,195
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries and affiliates[a]	**$ 17,442**	$ 14,328
Other borrowed funds, primarily commercial paper	**49,586**	55,454
Other liabilities	**11,918**	11,367
Long-term debt[b][c]	**171,211**	161,868
Total liabilities[c]	**250,157**	243,017
Total stockholders' equity	**232,065**	211,178
Total liabilities and stockholders' equity	**$ 482,222**	$ 454,195

Parent company – Statements of cash flows

Year ended December 31, (in millions)	2014	2013	2012
Operating activities			
Net income	**$ 21,762**	$ 17,923	$ 21,284
Less: Net income of subsidiaries and affiliates[a]	**22,972**	25,496	23,474
Parent company net loss	**(1,210)**	(7,573)	(2,190)
Cash dividends from subsidiaries and affiliates[a]	**14,714**	1,917	6,798
Other operating adjustments	**(1,698)**	3,180	2,376
Net cash provided by/(used in) operating activities	**11,806**	(2,476)	6,984
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**(31,040)**	10,679	16,100
Available-for-sale securities:			
Proceeds from paydowns and maturities	**12,076**	61	621
Purchases	**–**	(12,009)	(364)
Other changes in loans, net	**(319)**	(713)	(350)
Advances to and investments in subsidiaries and affiliates, net	**3,306**	14,469	9,497
All other investing activities, net	**32**	22	25
Net cash provided by/(used in) investing activities	**(15,945)**	12,509	25,529
Financing activities			
Net change in:			
Borrowings from subsidiaries and affiliates[a]	**4,454**	(2,715)	(14,038)
Other borrowed funds	**(5,778)**	(7,297)	3,736
Proceeds from the issuance of long-term debt	**40,284**	31,303	28,172
Payments of long-term debt	**(31,050)**	(21,510)	(44,240)
Excess tax benefits related to stock-based compensation	**407**	137	255
Proceeds from issuance of preferred stock	**8,847**	3,873	1,234
Redemption of preferred stock	**–**	(1,800)	–
Treasury stock and warrants repurchased	**(4,760)**	(4,789)	(1,653)
Dividends paid	**(6,990)**	(6,056)	(5,194)
All other financing activities, net	**(1,328)**	(1,131)	(701)
Net cash provided by/(used in) financing activities	**4,086**	(9,985)	(32,429)
Net increase/(decrease) in cash and due from banks	**(53)**	48	84
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	**264**	216	132
Cash and due from banks at the end of the year, primarily with bank subsidiaries	**$ 211**	$ 264	$ 216
Cash interest paid	**$ 3,921**	$ 4,409	$ 5,690
Cash income taxes paid, net	**200**	2,390	3,080

(a) Affiliates include trusts that issued guaranteed capital debt securities ("issuer trusts"). The Parent received dividends of $2 million, $5 million and $12 million from the issuer trusts in 2014, 2013 and 2012, respectively. For further discussion on these issuer trusts, see Note 21.

(b) At December 31, 2014, long-term debt that contractually matures in 2015 through 2019 totaled $24.4 billion, $25.5 billion, $23.0 billion, $19.3 billion and $11.3 billion, respectively.

(c) For information regarding the Firm's guarantees of its subsidiaries' obligations, see Note 21 and Note 29.

Selected quarterly financial data (unaudited)

(Table continued on next page)

As of or for the period ended	2014				2013			
(in millions, except per share, ratio, headcount data and where otherwise noted)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Total net revenue	**$ 22,512**	**$ 24,246**	**$ 24,454**	**$ 22,993**	$ 23,156	$ 23,117	$ 25,211	$ 25,122
Total noninterest expense	**15,409**	**15,798**	**15,431**	**14,636**	15,552	23,626	15,866	15,423
Pre-provision profit/(loss)	**7,103**	**8,448**	**9,023**	**8,357**	7,604	(509)	9,345	9,699
Provision for credit losses	**840**	**757**	**692**	**850**	104	(543)	47	617
Income before income tax expense	**6,263**	**7,691**	**8,331**	**7,507**	7,500	34	9,298	9,082
Income tax expense	**1,332**	**2,119**	**2,346**	**2,233**	2,222	414	2,802	2,553
Net income/(loss)	**$ 4,931**	**$ 5,572**	**$ 5,985**	**$ 5,274**	$ 5,278	$ (380)	$ 6,496	$ 6,529
Per common share data								
Net income/(loss): Basic	**$ 1.20**	**$ 1.37**	**$ 1.47**	**$ 1.29**	$ 1.31	$ (0.17)	$ 1.61	$ 1.61
Diluted	**1.19**	**1.36**	**1.46**	**1.28**	1.30	(0.17)	1.60	1.59
Average shares: Basic	**3,730.9**	**3,755.4**	**3,780.6**	**3,787.2**	3,762.1	3,767.0	3,782.4	3,818.2
Diluted	**3,765.2**	**3,788.7**	**3,812.5**	**3,823.6**	3,797.1	3,767.0	3,814.3	3,847.0
Market and per common share data								
Market capitalization	**$ 232,472**	**$ 225,188**	**$ 216,725**	**$ 229,770**	$ 219,657	$ 194,312	$ 198,966	$ 179,863
Common shares at period-end	**3,714.8**	**3,738.2**	**3,761.3**	**3,784.7**	3,756.1	3,759.2	3,769.0	3,789.8
Share price[a]:								
High	**$ 63.49**	**$ 61.85**	**$ 61.29**	**$ 61.48**	$ 58.55	$ 56.93	$ 55.90	$ 51.00
Low	**54.26**	**54.96**	**52.97**	**54.20**	50.25	50.06	46.05	44.20
Close	**62.58**	**60.24**	**57.62**	**60.71**	58.48	51.69	52.79	47.46
Book value per share	**57.07**	**56.50**	**55.53**	**54.05**	53.25	52.01	52.48	52.02
Tangible book value per share ("TBVPS")[b]	**44.69**	**44.13**	**43.17**	**41.73**	40.81	39.51	39.97	39.54
Cash dividends declared per share	**0.40**	**0.40**	**0.40**	**0.38**	0.38	0.38	0.38	0.30
Selected ratios and metrics								
Return on common equity ("ROE")	**9%**	**10%**	**11%**	**10%**	10%	(1)%	13%	13%
Return on tangible common equity ("ROTCE")[b]	**11**	**13**	**14**	**13**	14	(2)	17	17
Return on assets ("ROA")	**0.78**	**0.90**	**0.99**	**0.89**	0.87	(0.06)	1.09	1.14
Overhead ratio	**68**	**65**	**63**	**64**	67	102	63	61
Loans-to-deposits ratio	**56**	**56**	**57**	**57**	57	57	60	61
High quality liquid assets ("HQLA")(in billions)[c]	**$ 600**	**$ 572**	**$ 576**	**$ 538**	$ 522	$ 538	$ 454	$ 413
Common equity tier 1 ("CET1") capital ratio[d]	**10.2%**	**10.2%**	**9.8%**	**10.9%**	10.7%	10.5 %	10.4%	10.2%
Tier 1 capital ratio[d]	**11.6**	**11.5**	**11.1**	**12.1**	11.9	11.7	11.6	11.6
Total capital ratio[d]	**13.1**	**12.8**	**12.5**	**14.5**	14.3	14.3	14.1	14.1
Tier 1 leverage ratio	**7.6**	**7.6**	**7.6**	**7.4**	7.1	6.9	7.0	7.3
Selected balance sheet data (period-end)								
Trading assets	$ 398,988	$ 410,657	$ 392,543	$ 375,204	$ 374,664	$ 383,348	$ 401,470	$ 430,991
Securities[e]	348,004	366,358	361,918	351,850	354,003	356,556	354,725	365,744
Loans	757,336	743,257	746,983	730,971	738,418	728,679	725,586	728,886
Total assets	2,573,126	2,527,005	2,520,336	2,476,986	2,415,689	2,463,309	2,439,494	2,389,349
Deposits	1,363,427	1,334,534	1,319,751	1,282,705	1,287,765	1,281,102	1,202,950	1,202,507
Long-term debt[f]	276,836	268,721	269,929	274,512	267,889	263,372	266,212	268,361
Common stockholders' equity	212,002	211,214	208,851	204,572	200,020	195,512	197,781	197,128
Total stockholders' equity	232,065	231,277	227,314	219,655	211,178	206,670	209,239	207,086
Headcount	241,359	242,388	245,192	246,994	251,196	255,041	254,063	255,898

(Table continued from previous page)

As of or for the period ended	2014				2013			
(in millions, except ratio data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Credit quality metrics								
Allowance for credit losses	**$ 14,807**	**$ 15,526**	**$ 15,974**	**$ 16,485**	$ 16,969	$ 18,248	$ 20,137	$ 21,496
Allowance for loan losses to total retained loans	**1.90%**	**2.02%**	**2.08%**	**2.20%**	2.25%	2.43%	2.69%	2.88%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[g]	**1.55**	**1.63**	**1.69**	**1.75**	1.80	1.89	2.06	2.27
Nonperforming assets	**$ 7,967**	**$ 8,390**	**$ 9,017**	**$ 9,473**	$ 9,706	$ 10,380	$ 11,041	$ 11,739
Net charge-offs	**1,218**	**1,114**	**1,158**	**1,269**	1,328	1,346	1,403	1,725
Net charge-off rate	**0.65%**	**0.60%**	**0.64%**	**0.71%**	0.73%	0.74%	0.78%	0.97%

(a) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.

(b) TBVPS and ROTCE are non-GAAP financial measures. TBVPS represents the Firm's tangible common equity divided by common shares at period-end. ROTCE measures the Firm's annualized earnings as a percentage of tangible common equity. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 77–78.

(c) HQLA represents the Firm's estimate of the amount of assets that qualify for inclusion in the liquidity coverage ratio under the final U.S. rule ("U.S. LCR") as of December 31, 2014, and under the Basel III liquidity coverage ratio ("Basel III LCR") for prior periods. For additional information, see HQLA on page 157.

(d) Basel III Transitional rules became effective on January 1, 2014; December 31, 2013 data is based on Basel I rules. As of December 31, 2014, September 30, 2014, and June 30, 2014, the ratios presented are calculated under the Basel III Advanced Transitional Approach. As of March 31, 2014, the ratios presented are calculated under the Basel III Standardized Transitional Approach. CET1 capital under Basel III replaced Tier 1 common capital under Basel I. Prior to Basel III becoming effective on January 1, 2014, Tier 1 common capital under Basel I was a non-GAAP financial measure. See Regulatory capital on pages 146–153 for additional information on Basel III and non-GAAP financial measures of regulatory capital.

(e) Included held-to-maturity securities of $49.3 billion, $48.8 billion, $47.8 billion, $47.3 billion, $24.0 billion and $4.5 billion at December 31, 2014, September 30, 2014, June 30, 2014, March 31, 2014, December 31, 2013 and September 30, 2013, respectively. Held-to-maturity balances for the other periods were not material.

(f) Included unsecured long-term debt of $207.5 billion, $204.7 billion, $205.6 billion, $206.1 billion, $199.4 billion, $199.2 billion, $199.1 billion and $206.1 billion, respectively, for the periods presented.

(g) Excludes the impact of residential real estate PCI loans. For further discussion, see Allowance for credit losses on pages 128–130.

Active foreclosures: Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

Active online customers: Users of all internet browsers and mobile platforms who have logged in within the past 90 days.

Active mobile customers: Users of all mobile platforms, which include: SMS, mobile smartphone and tablet, who have logged in within the past 90 days.

Allowance for loan losses to total loans: Represents period-end allowance for loan losses divided by retained loans.

Alternative assets - The following types of assets constitute alternative investments - hedge funds, currency, real estate, private equity and other investment funds designed to focus on nontraditional strategies.

Assets under management: Represent assets actively managed by AM on behalf of its Private Banking, Institutional and Retail clients. Includes "Committed capital not Called," on which AM earns fees.

Beneficial interests issued by consolidated VIEs: Represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Central counterparty ("CCP"): A CCP is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

Chase Liquid℠ cards: Refers to a prepaid, reloadable card product.

Client advisors: Investment product specialists, including private client advisors, financial advisors, financial advisor associates, senior financial advisors, independent financial advisors and financial advisor associate trainees, who advise clients on investment options, including annuities, mutual funds, stock trading services, etc., sold by the Firm or by third-party vendors through retail branches, Chase Private Client locations and other channels.

Client assets: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Client deposits and other third party liabilities: Deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs.

Client investment managed accounts: Assets actively managed by Chase Wealth Management on behalf of clients. The percentage of managed accounts is calculated by dividing managed account assets by total client investment assets.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again (or vice versa). The duration of a credit cycle can vary from a couple of years to several years.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

CUSIP number: A CUSIP (i.e., Committee on Uniform Securities Identification Procedures) number consists of nine characters (including letters and numbers) that uniquely identify a company or issuer and the type of security and is assigned by the American Bankers Association and operated by Standard & Poor's. This system facilitates the clearing and settlement process of securities. A similar system is used to identify non-U.S. securities (CUSIP International Numbering System).

Deposit margin/deposit spread: Represents net interest income expressed as a percentage of average deposits.

Distributed denial-of-service attack: The use of a large number of remote computer systems to electronically send a high volume of traffic to a target website to create a service outage at the target. This is a form of cyberattack.

Exchange-traded derivatives: Derivative contracts that are executed on an exchange and settled via a central clearing house.

FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

Group of Seven ("G7") nations: Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government bonds: Bonds issued by the government of one of the G7 nations.

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

Home equity - senior lien: Represents loans and commitments where JPMorgan Chase holds the first security interest on the property.

Home equity - junior lien: Represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.

Impaired loan: Impaired loans are loans measured at amortized cost, for which it is probable that the Firm will be unable to collect all amounts due, including principal and interest, according to the contractual terms of the agreement. Impaired loans include the following:

- All wholesale nonaccrual loans
- All TDRs (both wholesale and consumer), including ones that have returned to accrual status

Interchange income: A fee paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

LLC: Limited Liability Company.

Loan-to-value ("LTV") ratio: For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices comprise actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all available lien positions, as well as unused lines, related to the property. Combined LTV ratios are used for junior lien home equity products.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Master netting agreement: An agreement between two counterparties who have multiple contracts with each other that provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

Mortgage origination channels:

Retail - Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Correspondent - Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high combined loan-to-value ("CLTV") ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime

Prime mortgage loans are made to borrowers with good credit records and a monthly income at least three to four times greater than their monthly housing expense (mortgage payments plus taxes and other debt payments). These borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are loans to customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

N/A: Data is not applicable or available for the period presented.

Net charge-off/(recovery) rate: Represents net charge-offs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net production revenue: Includes net gains or losses on originations and sales of mortgage loans, other production-related fees and losses related to the repurchase of previously-sold loans.

Net mortgage servicing revenue includes the following components:

Operating revenue predominantly represents the return on Mortgage Servicing's MSR asset and includes:

- Actual gross income earned from servicing third-party mortgage loans, such as contractually specified servicing fees and ancillary income; and
- The change in the fair value of the MSR asset due to the collection or realization of expected cash flows.

Risk management represents the components of Mortgage Servicing's MSR asset that are subject to ongoing risk management activities, together with derivatives and other instruments used in those risk management activities.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected or when principal and interest has been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.

Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in loan satisfaction, predominantly real estate owned and other commercial and personal property.

Over-the-counter ("OTC") derivatives: Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

Over-the-counter cleared ("OTC-cleared") derivatives: Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Participating securities: Represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its

stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

Personal bankers: Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.

Portfolio activity: Describes changes to the risk profile of existing lending-related exposures and their impact on the allowance for credit losses from changes in customer profiles and inputs used to estimate the allowances.

Pre-provision profit/(loss): Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pretax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is one basis upon which management evaluates the performance of AM against the performance of their respective competitors.

Principal transactions revenue: Principal transactions revenue includes realized and unrealized gains and losses recorded on derivatives, other financial instruments, private equity investments, and physical commodities used in market making and client-driven activities. In addition, Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk management activities including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specified risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives.

Purchased credit-impaired ("PCI") loans: Represents loans that were acquired in the Washington Mutual transaction and deemed to be credit-impaired on the acquisition date in accordance with the guidance of the Financial Accounting Standards Board ("FASB"). The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

Real assets: Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.

Real estate investment trust ("REIT"): A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate related assets by pooling their capital to purchase and manage income property (i.e., equity REIT) and/or mortgage loans (i.e., mortgage REIT). REITs can be publicly- or privately-held and they also qualify for certain favorable tax considerations.

Receivables from customers: Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated balance sheets.

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e. excludes loans held-for-sale and loans at fair value).

Revenue wallet: Proportion of fee revenues based on estimates of investment banking fees generated across the industry (i.e. the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third party provider of investment banking competitive analysis and volume-based league tables for the above noted industry products.

Risk-weighted assets ("RWA"): Risk-weighted assets consist of on- and off-balance sheet assets that are assigned to one of several broad risk categories and weighted by factors representing their risk and potential for default. On-balance sheet assets are risk-weighted based on the perceived credit risk associated with the obligor or counterparty, the nature of any collateral, and the guarantor, if any. Off-balance sheet assets such as lending-related commitments, guarantees, derivatives and other applicable off-balance sheet positions are risk-weighted by multiplying the contractual amount by the appropriate credit conversion factor to determine the on-balance sheet credit equivalent amount, which is then risk-weighted based on the same factors used for on-balance sheet assets. Risk-weighted assets also incorporate a measure for market risk related to applicable trading assets-debt and equity instruments, and foreign exchange and commodity derivatives. The resulting risk-weighted values for each of the risk categories are then aggregated to determine total risk-weighted assets.

Sales specialists: Retail branch office and field personnel, including relationship managers and loan officers, who specialize in marketing and sales of various business

banking products (i.e., business loans, letters of credit, deposit accounts, Chase Paymentech, etc.) and mortgage products to existing and new clients.

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Short sale: A short sale is a sale of real estate in which proceeds from selling the underlying property are less than the amount owed the Firm under the terms of the related mortgage and the related lien is released upon receipt of such proceeds.

Structured notes: Structured notes are predominantly financial instruments containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

Trade-date and settlement-date: For financial instruments, the trade-date is the date that an order to purchase, sell or otherwise acquire an instrument is executed in the market. The trade-date may differ from the settlement-date, which is the date on which the actual transfer of a financial instrument between two parties is executed. The amount of time that passes between the trade-date and the settlement-date differs depending on the financial instrument. For repurchases under the common equity repurchase program, except where the trade-date is specified, the amounts disclosed are presented on a settlement-date basis. In the Capital Management section on pages 146–155, and where otherwise specified, repurchases under the common equity repurchase program are presented on a trade-date basis because the trade-date is used to calculate the Firm's regulatory capital.

Troubled debt restructuring ("TDR"): A TDR is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the U.S.

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury.

Value-at-risk ("VaR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

Warehouse loans: Consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired certain of the assets of the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC.

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2 Compensation & Management Development Committee
3 Corporate Governance & Nominating Committee
4 Public Responsibility Committee
5 Risk Policy Committee

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Peter Scher
Corporate Responsibility

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Sarah M. Youngwood
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Regional Chief Executive Officers

Asia Pacific

Nicolas Aguzin

Europe/Middle East/Africa

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Latin America/Canada

Martin G. Marron

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ASEAN

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Central & Eastern Europe
Walter Schuster

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Carin Bryans

Israel
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Italy
Francesco Rossi Ferrini

Russia/Central Asia
Yan Tavrovsky

Spain/Portugal
Enrique Casanueva Nardiz

Switzerland
Niklaus Bossart

Middle East/Africa/Turkey

Middle East/Africa/Turkey
Sjoerd Leenart

Bahrain/Egypt/Lebanon
Ali Moosa

Nigeria
Tosin T. Adewuyi

Saudi Arabia
Rayan Fayez

Sub-Saharan Africa
Marc Hussey & Brian Smith

Turkey/Azerbaijan
Mustafa Bagriacik

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David Mayhew

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J.P. Morgan International Council

As of March 31, 2015

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Quartet Representative and
Former Prime Minister of Great Britain
and Northern Ireland
London, United Kingdom

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President and Chief Executive Officer
Saudi Aramco
Dhahran, Saudi Arabia

Alberto Baillères
Presidente del Consejo de Administración
Grupo Bal
México D.F., Mexico

Paul Bulcke
Chief Executive Officer
Nestlé S.A.
Vevey, Switzerland

Fernando Henrique Cardoso
Former President of Brazil
São Paulo, Brazil

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Chairman and Chief Executive Officer
JPMorgan Chase & Co.
New York, New York

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Kissinger Associates, Inc.
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Chairman of the Board of Directors
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Gérard Mestrallet
Chairman and Chief Executive Officer
GDF SUEZ
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Akio Mimura
Senior Advisor
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Corporation
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Chairman
Tata Trusts
Mumbai, India

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Officer, Board of Management
Akzo Nobel
Amsterdam, The Netherlands

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JPMorgan Chase & Co.
New York, New York

John S. Watson
Chairman of the Board and
Chief Executive Officer
Chevron Corporation
San Ramon, California

Jaime Augusto Zobel de Ayala
Chairman and Chief Executive Officer
Ayala Corporation
Makati City, Philippines

1 Ex-officio

JPMorgan Chase & Co.

Corporate headquarters

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New York, NY 10017-2070
Telephone: 212-270-6000
jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities LLC
J.P. Morgan Securities plc

Annual Report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the U.S. Securities and Exchange Commission will be made available without charge upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070

Stock listing

New York Stock Exchange
London Stock Exchange

The New York Stock Exchange ticker symbol for the common stock of JPMorgan Chase & Co. is JPM.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations website at jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000

Directors

To contact any of the Board members or committee chairs, the Lead Independent Director or the non-management directors as a group, please mail correspondence to:

JPMorgan Chase & Co.
Attention (Board member(s))
Office of the Secretary
270 Park Avenue
New York, NY 10017-2070

The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct, the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting our website at jpmorganchase.com and clicking on "Governance" under the "About us" tab.

Transfer agent and registrar

Computershare
480 Washington Boulevard
Jersey City, NJ 07310-2053
Telephone: 800-758-4651
computershare.com

Investor Services Program

JPMorgan Chase & Co.'s Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorgan Chase & Co. common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, Computershare, by calling 800-758-4651, by writing to the address indicated above or by visiting its website at www-us.computershare.com/Investor.

Direct deposit of dividends

For information about direct deposit of dividends, please contact Computershare.

Stockholder inquiries

Contact Computershare:

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Within the United States, Canada and Puerto Rico: 800-758-4651 (toll free)

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211 Quality Circle
Suite 210
College Station, TX 77845
United States

Duplicate mailings

If you receive duplicate mailings because you have more than one account listing and you wish to consolidate your accounts, please write to Computershare at the address above.

Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, NY 10017-6204

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As of the beginning of 2009, JPMorgan Chase & Co. has distributed shareholder information under the U.S. Securities and Exchange Commission "Notice and Access" rule. As a result, the firm prints 700,000 fewer Annual Reports and Proxy Statements, which saves on an annual basis approximately 6,400 trees and 800 metric tons of CO_2 emissions.

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jpmorganchase.com

Investor Day: February 24, 2015

Timetable — Investor Day 2015 — Held in 2nd Floor Conference Center

Location: 270 Park Avenue

Presentation	Speaker	Start time	End time	Duration
Registration		7:30AM	8:30AM	1:00
Firmwide Overview	Marianne Lake	8:30AM	9:30AM	1:00
Corporate & Investment Bank	Daniel Pinto	9:30AM	10:40AM	1:10
Break		10:40AM	11:00AM	0:20
Asset Management	Mary Erdoes	11:00AM	11:30AM	0:30
Commercial Banking	Doug Petno	11:30AM	12:00PM	0:30
Break		12:00PM	12:15PM	0:15
Lunch		12:15PM	1:15PM	1:00
Consumer & Community Banking	Gordon Smith	1:15PM	2:30PM	1:15
Closing remarks and Q&A	Jamie Dimon	2:30PM	3:30PM	1:00
Refreshments		3:30PM	4:30PM	1:00

FIRM OVERVIEW

Marianne Lake, Chief Financial Officer

February 24, 2015

JPMorgan Chase & Co.

Strong fundamentals and track record of adapting

JPMorgan Chase overview

1 Building exceptional client franchises

- Four leading client franchises – together delivering significant value
- Client focus and long-term approach – consistently investing and innovating

2 Operating with fortress principles

- Strong foundation – capital, liquidity, balance sheet, risk discipline
- Simplification and de-risking
- Commitment to controls and culture

3 Maximizing long-term shareholder value

- Delivering significant operating leverage – while investing through-the-cycle
- Delivering strong capital returns – while adapting capital and liquidity frameworks

4 Leading to

~15%	~12%	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

2014 results – strong underlying financial performance

JPMorgan Chase overview

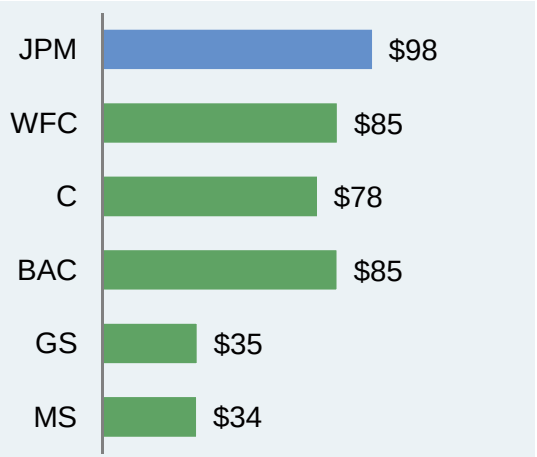
Revenue[1]	$98B	■ Diversification driving stable revenue, despite low rates, mortgage volatility and challenging markets
Adjusted expense[2]	$58B 60%	■ Adjusted expense down by $640mm in 2014 YoY ■ Adjusted overhead ratio[1] of 58-60% over the last 4 years
Net income	$22B $5.29	■ Record net income and EPS despite revenue headwinds and elevated legal expense
CET1[3] Capital return	10.2% $10B	■ Increased CET1 by 70 bps in 2014 while returning $10B net to shareholders ■ Increased CET1 by >300 bps since 2010 while returning $35B net to shareholders
ROTCE[4]	13%	■ 2010-2012 ROTCE of 15% – 2013 at 11% but 15% adjusted

[1] See note 1 on slide 48
[2] See note 2 on slide 48
[3] Advanced Fully Phased-In basis; see note 4 on slide 48
[4] See note 3 on slide 48

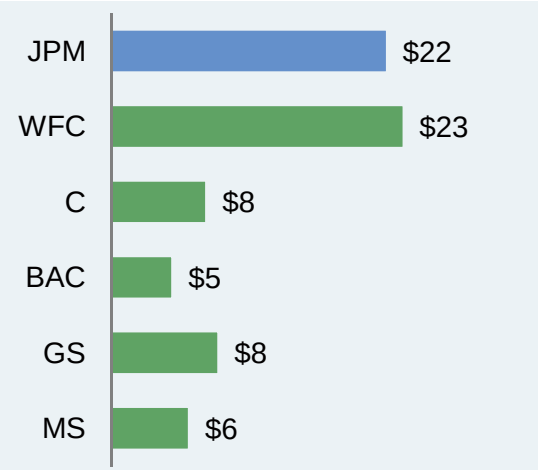
JPM continues to be a leader

JPMorgan Chase overview

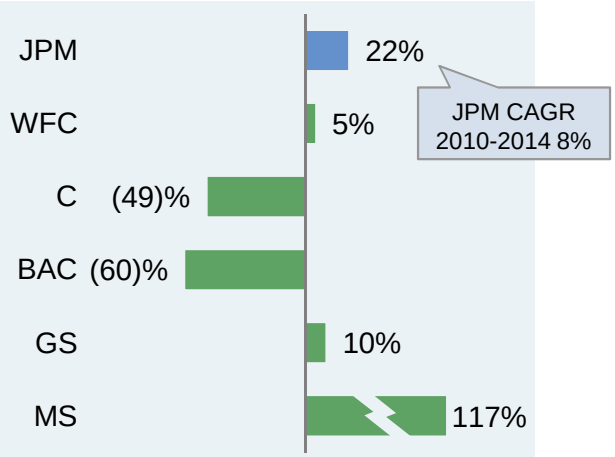
FY2014 Managed revenue[1] ($B)



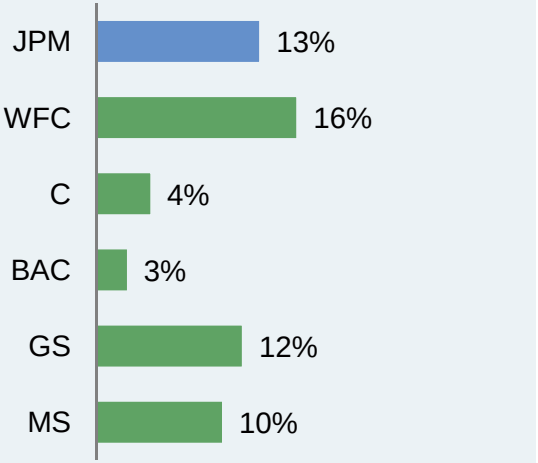
FY2014 Net income ($B)



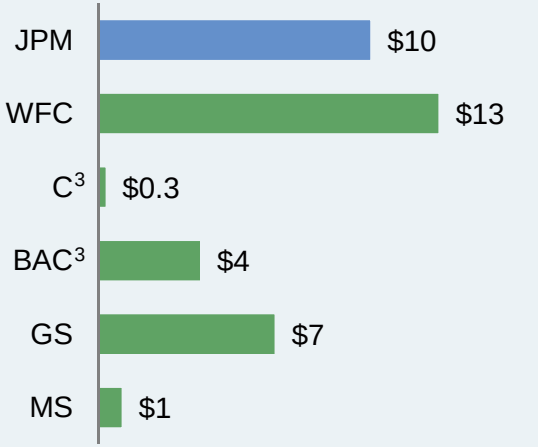
FY2014 EPS YoY growth



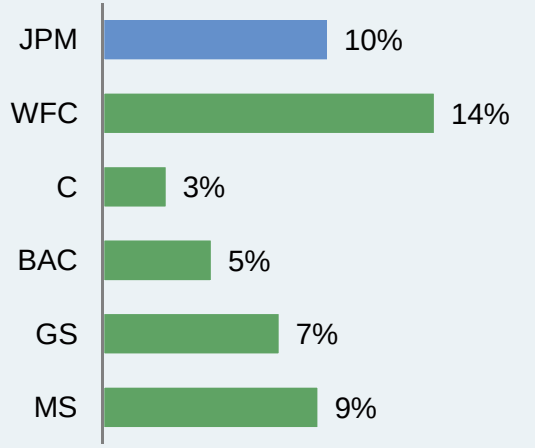
FY2014 ROTCE[2]



FY2014 net capital distribution ($B)



FY2014 TBVPS[2] YoY growth

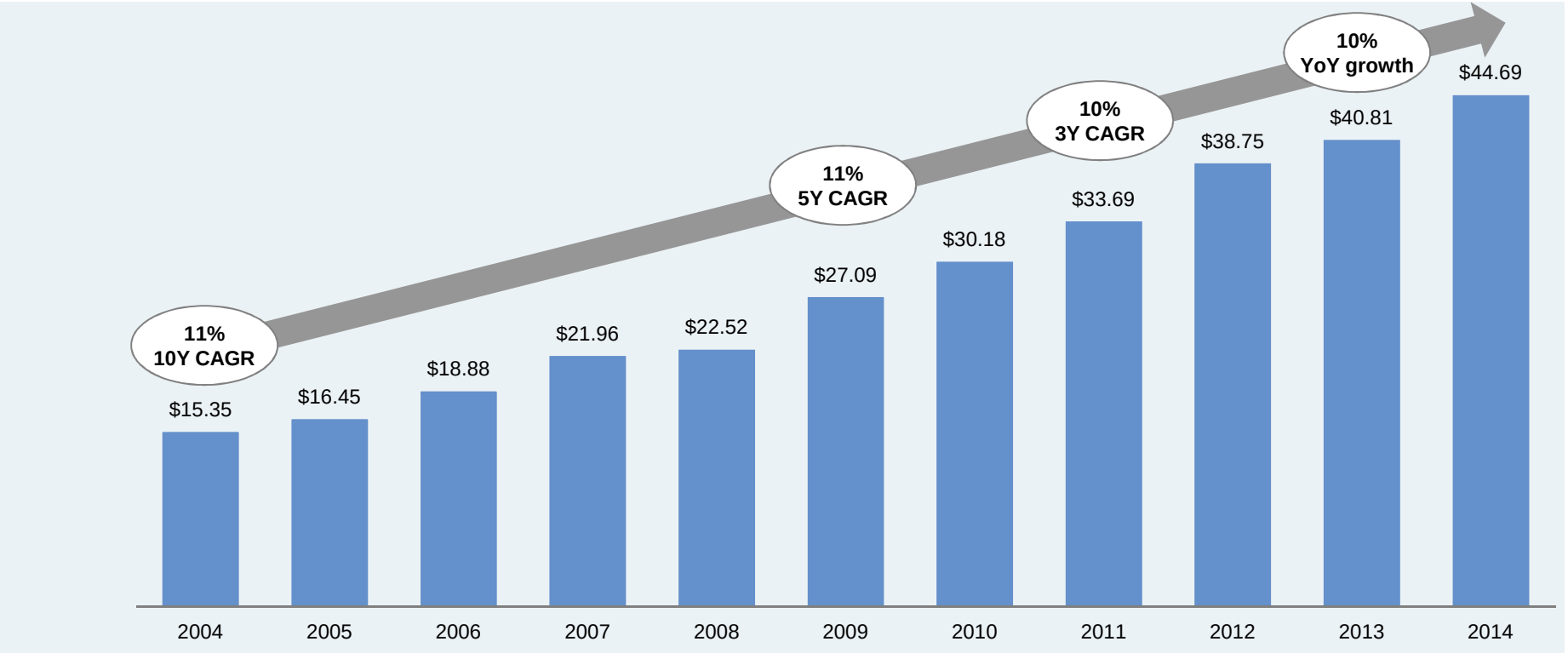


[1] See note 1 in slide 48. For GS and MS, reflects revenue on a reported basis
[2] See note 3 in slide 48
[3] Reflects net capital distribution for the last twelve months (i.e., 4Q13-3Q14)

Sustained tangible book value growth

JPMorgan Chase overview

Tangible book value per share (TBVPS)[1]



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total capital return[2] ($B)	$1	$6	$5	$9	($12)	($6)	$1	$11	$4	$9	$10
CET1 ratio	N/A	N/A	N/A	5.0%	4.7%	6.4%	7.0%	7.9%	8.7%	9.5%	10.2%
Payout ratio[3]	32%	74%	34%	62%	N/M[4]	N/M[4]	7%	60%	22%	54%	47%

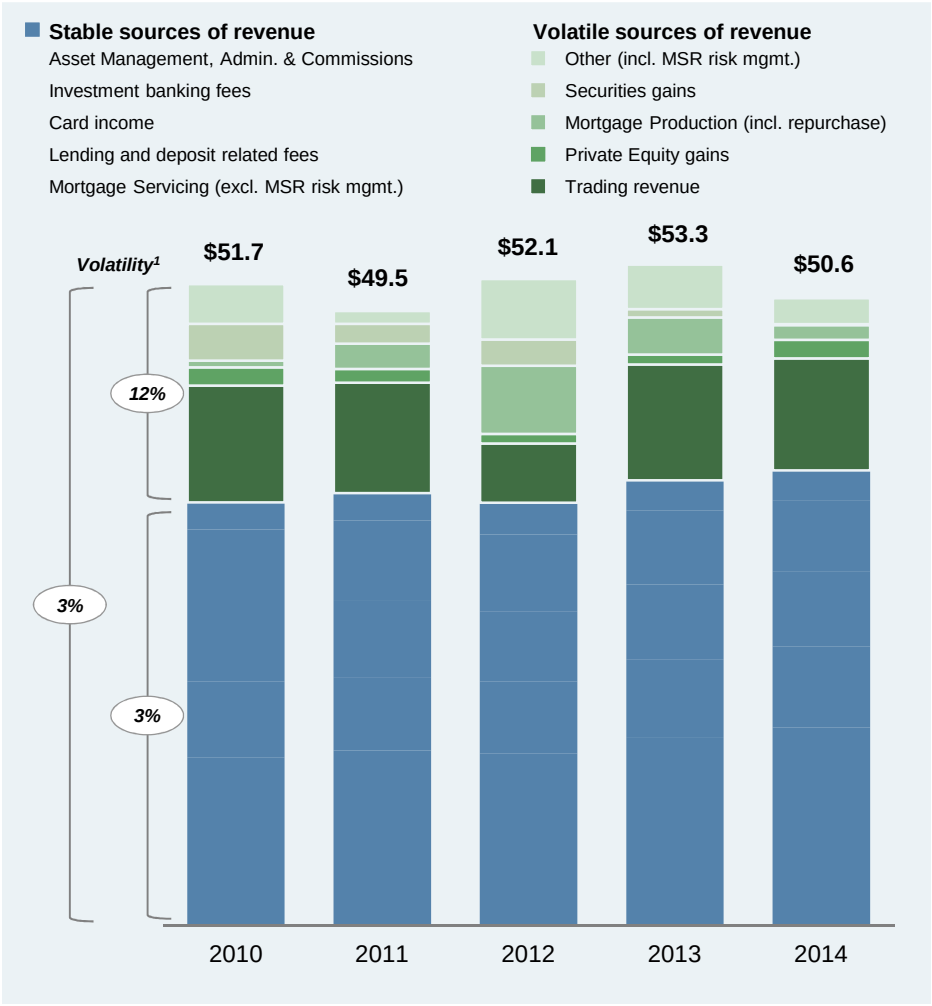
2010 to 2014, JPM's profits were ~$97B, despite ~$22B in after-tax legal expense and ~$13B of regulatory and control costs
And we added ~$59B[5] to capital after net return to shareholders of ~$35B

[1] See note 3 on slide 48
[2] Net of employee issuance
[3] Total net capital return payout ratio
[4] Negative net payout ratio
[5] Represents growth in EOP tangible common equity; see note 3 on slide 48

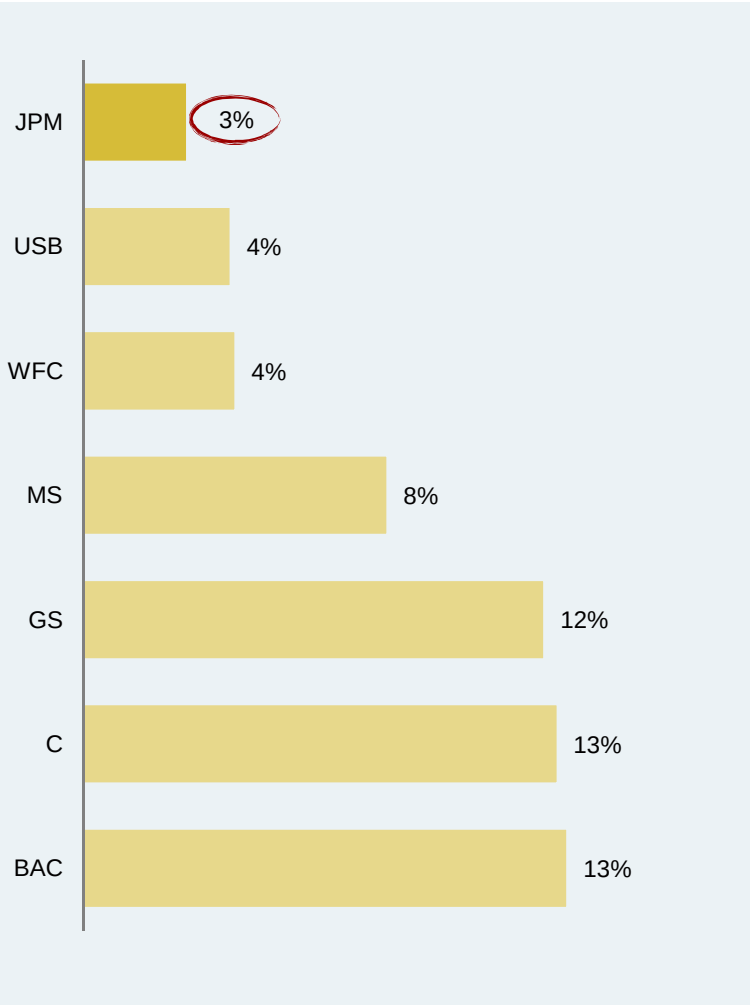
NIR – stability driven by diversification of businesses

JPMorgan Chase overview

Noninterest revenue (NIR) ($B)



Peer NIR volatility[1]



JPM has the least volatile NIR among peers driven by diversification of our businesses
>2/3 of NIR is driven by businesses with stable revenue

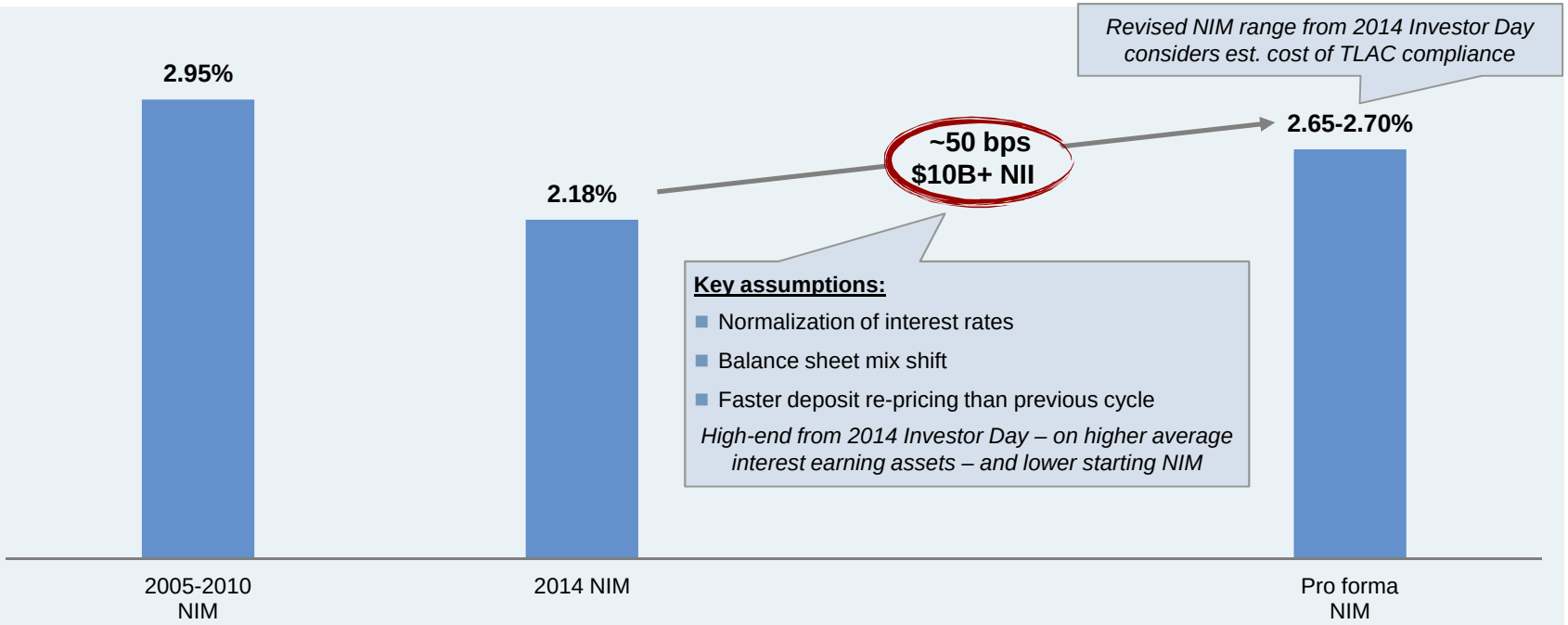
Note: NIR presented on a Reported basis

[1] Standard deviation divided by average over 2010-2014 period

NII – well positioned for rising rates

JPMorgan Chase overview

Firm NIM simulation



EaR and AOCI

- The Firm is positioned to benefit from rising rates
  - EaR of $2.9B for a 100 bps parallel shift[1]
    - Long-end rates only contribute $0.6B – the most meaningful driver is front-end rates
- It will take time to fully recapture the expected NII benefit – the pace of Fed tightening is uncertain
- Potential upfront negative impact to AOCI of ~50 bps of capital on stylized rate shock scenario[2]

Note: Managed basis; refer to note 1 on slide 48

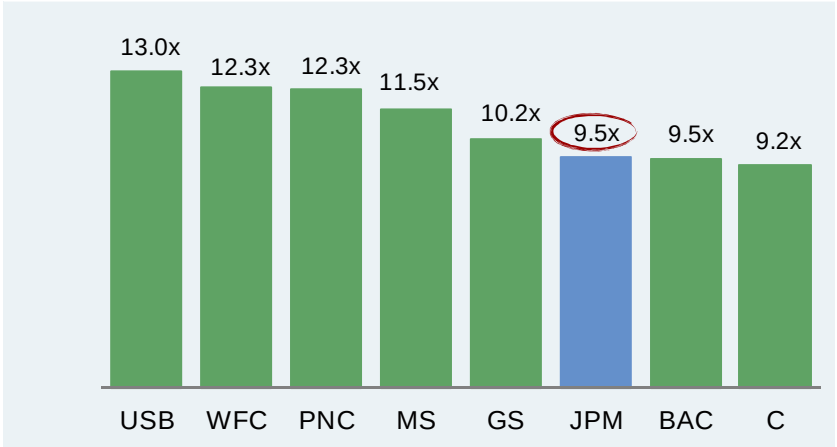
[1] As of December 31, 2014. Reflects sensitivity profile of 12-month pretax NII of the Firm's non-market-based business activities

[2] For the AFS portfolio; instantaneous rate shock reflects ~+200 bps long-end and ~+375 bps front-end on fully phased-in Basel III capital. Tax effected at an incremental tax rate of 38%

Peer valuation – discount versus peers

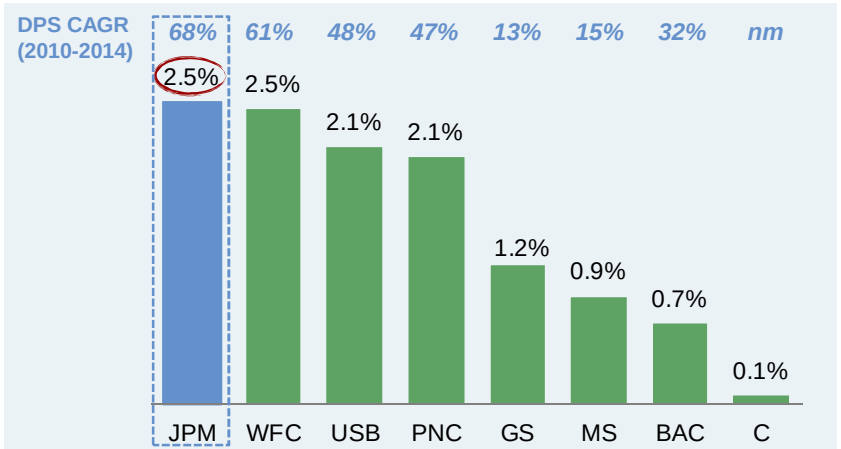
JPMorgan Chase overview

2016 P/E Multiple



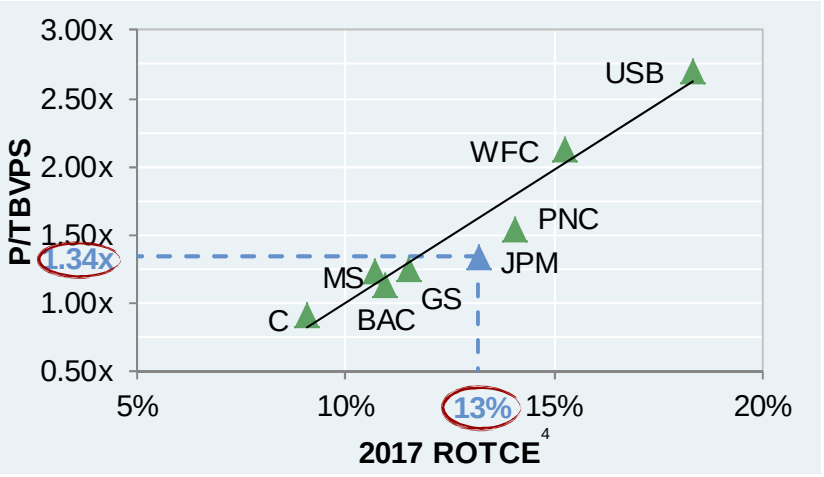
	USB	WFC	PNC	MS	GS	JPM	BAC	C
Pre-crisis[1]	11.9x	12.8x	12.8x	9.2x	10.9x	11.6x	10.5x	11.0x

2014 Dividend yield[2]



	JPM	WFC	USB	PNC	GS	MS	BAC	C
2016 yield	3.2%	2.9%	2.5%	2.4%	1.4%	1.9%	2.3%	1.1%

P/TBVPS vs. ROTCE regression – premium/(discount) over time



	Before Crisis[3]	During Crisis[3]	After Crisis[3]	Current[4]
JPM	10%	23%	(17%)	(18%)
GS	(2%)	(12%)	(7%)	(4%)
BAC	(9%)	(16%)	14%	(4%)
WFC	14%	16%	(3%)	5%
USB	0%	9%	5%	3%
C	(3%)	nm	(3%)	10%
PNC	13%	6%	(0%)	(14%)
MS	(14%)	(23%)	2%	9%

Note: For footnoted information, refer to slide 49

Our businesses generate significant benefits from each other

JPMorgan Chase overview

~$15B revenue synergies	+	~$3B cost synergies	=	**$18B gross $6-7B net income**

Benefits of universal banking model go beyond measured synergies

- Scale and platform enable a portfolio approach for clients – profitability attained through a broad product set and cross-border capabilities
  - Premier Investment Banking platform and international footprint leveraged by CB and AM
  - Robust cross-sell of Treasury Services and Investor Services products
  - Rich referral network between CIB, CB and AM (~2,500 referrals between CIB and AM and 360+ U.S. Private Bank clients from CB referrals over the last 3 years)
- Diversification of businesses allows for significant investments through-the-cycle
- Extensive branch network plays a critical role as a key sales channel utilized by CB and AM
- Depth of product expertise, specialized industry knowledge and access to integrated coverage teams
- Expense synergies from shared corporate infrastructure (e.g., Finance, Risk, shared technology and operations, cybersecurity) and scale benefits enabling us to service clients more efficiently
- Fortress balance sheet provides strategic leverage (e.g., lending growth)
- Ability to attract and develop top talent

Customers, clients and employees choose JPMorgan Chase because of the breadth and quality of the franchise and our two iconic brands

Implications of separation scenario – Chase and J.P. Morgan

JPMorgan Chase overview

	Comments	Conclusion
Revenue and expense	■ While most revenue synergies should remain – modest portion would be lost ■ The ability to invest through-the-cycle and leadership positions could erode ■ Each company would remain at scale – but would need to invest to rebuild ancillary businesses – critical infrastructure – and duplicate Corporate functions – which would impact margins	■ Small negative ■ Negative – not quantified ■ Meaningfully negative
Capital	■ Amount of excess capital available to shareholders would be more modest than implied by G-SIB scores alone – given CCAR would be the binding constraint for Consumer	■ ~$15B+/-
Valuation	■ Valuation range more modest than research has implied ■ Upside driven by multiple expansion	■ Value of synergies lost would be greater than capital freed up
Execution risk	■ Managing transition to standalone organizations ■ Separating and rebuilding systems, technology, controls and risk management processes ■ Retaining management and top talent ■ Protecting client franchise and market leadership position	■ Increased uncertainty

Delivering on our commitments is the highest certainty path to multiple expansion and long-term shareholder value

Agenda

1 Building exceptional client franchises

- Four exceptional client franchises – leaders in their own right
- Build our businesses for the long-term – consistently innovating
- Focus on client experience and lifetime relationships
- Complete platform and diversified operating model – drives client engagement, synergies and stable returns
- Experienced management team with deep talent

2 Operating with fortress principles

3 Maximizing long-term shareholder value

4 Leading to

~15%	~12%	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

1 Leading client franchises

Building exceptional client franchises

We have built our client franchises over time with substantial share gains and opportunity for more

		2006	2014
CCB	Deposits market share	3.6%[1]	7.5%
	# of top 50 Chase markets where we are #1 (top 3) deposits	*11 (25)*	*15 (40)*
	Card sales market share	*16%*[2]	*21%*[2]
	Merchant processing volume	#3[3]	#1[4]
CIB	Global IB fees[5]	#2	#1
	Market share[5]	*8.6%*	*8.1%*
	Total Markets[6,7]	#8	#1
	Market share[6,7]	*7.9%*	*16.2%*
	FICC[6,7]	#7	#1
	Market share[6,7]	*9.1%*	*18.6%*
	Equities[6,7]	#8	#3
	Market share[6,7]	*6.0%*	*11.5%*
CB	# of states with Middle Market banking presence	22	30
	# of states with top 3 Middle Market banking market share[8]	6	10
	Multifamily lending[9]	#28	#1
	Gross Investment Banking revenue ($B)	$0.7	$2.0
	% of North America IB fees	*16%*	*35%*
AM	Global active long-term open-end mutual fund AUM flows[10]	#2	#1
	AUM market share[10]	*1.8%*	*2.5%*
	Overall Global Private Bank (Euromoney)	#5	#1
	Client assets market share[11]	*~1%*	*~2%*
	U.S. Hedge Fund Manager (Absolute Return)[12]	#11[13]	#2
	AUM market share[12]	*1.4%*	*3.4%*

- Relationships with **~50% of U.S. households**
- **#1 customer satisfaction** among the largest U.S. banks for the third consecutive year[14]
- #1 primary banking relationship share in Chase footprint[15]
- #1 U.S. credit card issuer based on loans outstanding[2]
- ~50% of U.S. eCommerce volume[16]

- **>80% of Fortune 500 companies** do business with us
- Top 3 in 15 product categories out of 16[17]
- #1 in both U.S. & EMEA IB fees[18]
- #1 in Global Debt, Equity & Equity-related[18]
- #1 in Global Long-Term Debt & Loan Syndications[18]
- Top 3 Custodian globally with AUC of $20.5T
- #1 USD clearing house with 19.2% share in 2014[19]

- Average loans grew by 13% CAGR 2006-2014[20]
- Industry-leading credit performance TTC – 8 consecutive quarters of net recoveries or single digit NCO rate
- Leveraging the Firm's platform – avg. ~9 products/client

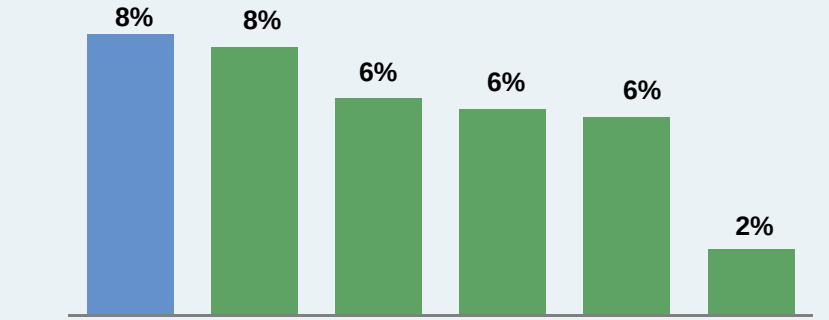
- 84% of 10-year LT mutual fund AUM in top 2 quartiles[21]
- 23 consecutive quarters of positive LT AUM flows
- Rev. growth >70% & LT AUM growth >80% since 2006
- Doubled GWM client assets (2x industry rate) since 2006[22]

Note: For footnoted information, refer to slide 50

1 Proven best-in-class long-term performance

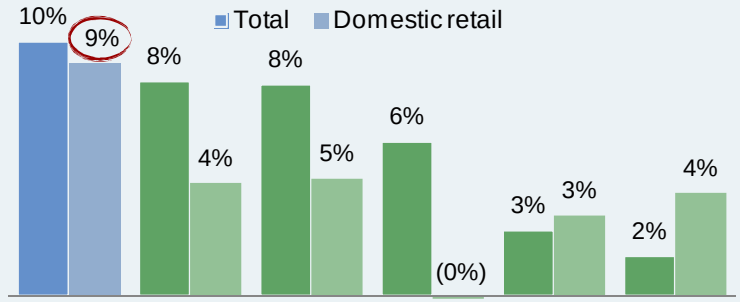
Building exceptional client franchises

EOP core loans: CAGR 2010–14[1]



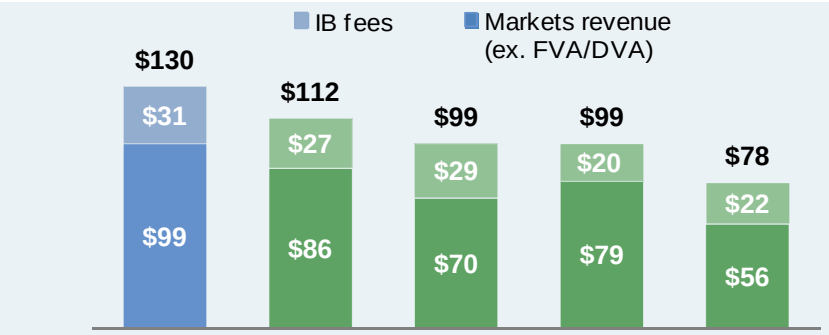
2014 YoY growth	JPM	PNC	WFC	C	USB	BAC
	8%	5%	8%	(0%)	5%	0%

EOP deposits: CAGR 2010–14[2]



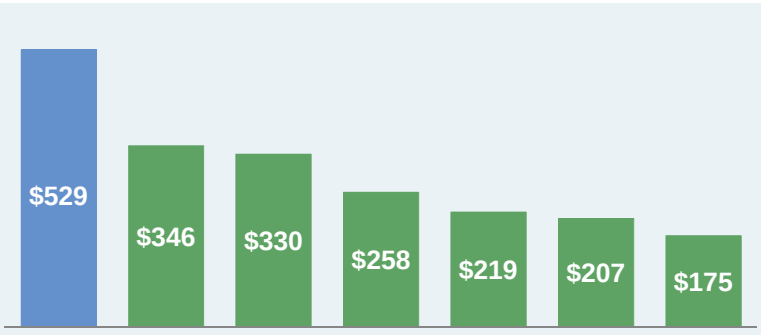
2014 YoY growth	JPM	USB	WFC	PNC	BAC	C
Total	6%	8%	8%	5%	(0%)	(7%)
Dom. retail	9%	2%	4%	4%	5%	4%

Markets revenue & IB fees ($B): Cum. 2010–14



2014 Share	JPM	GS	BAC	C	MS
Markets[3]	16%	13%	11%	13%	9%
IB fees[4]	8%	7%	7%	5%	6%

LT net client asset flows ($B): Cum. 2010–14



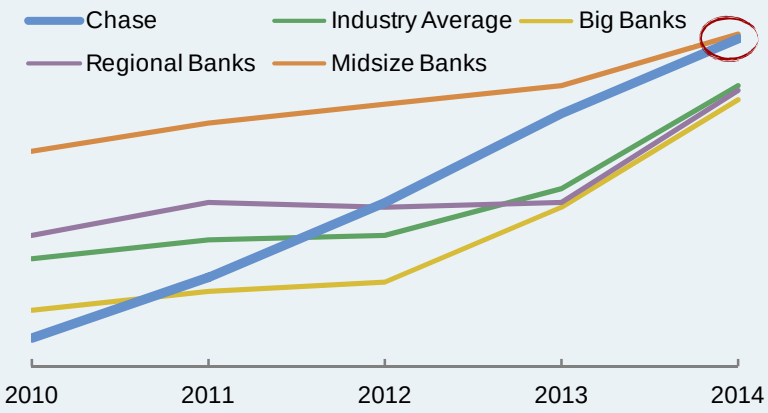
2014 Flows	JPM[5]	BLK[6]	BK	Allianz[7]	MS	UBS	CS[8]
	$108	$181	$48	($161)	$65	$72	$34

Note: For footnoted information, refer to slide 51

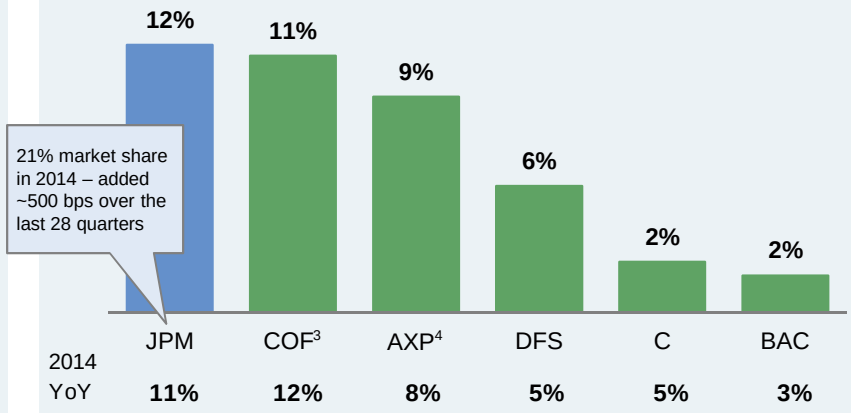
1 Proven best-in-class long-term performance (cont'd)

Building exceptional client franchises

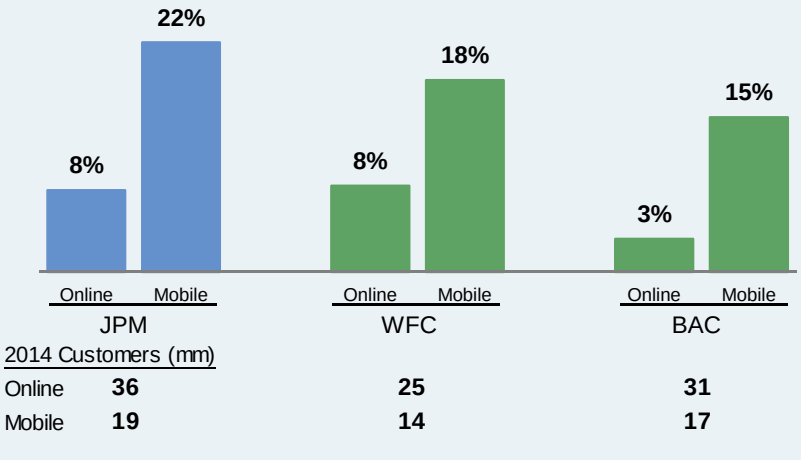
Customer satisfaction score: 2010–14[1]



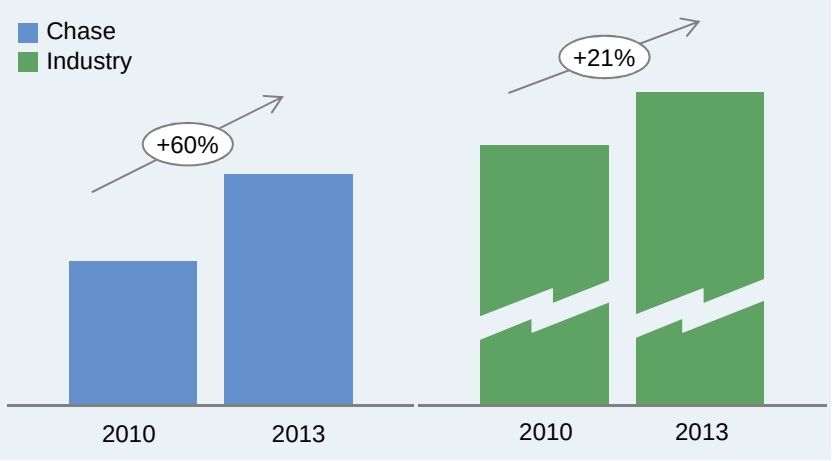
Credit card sales: CAGR 2010–14[2]



Online and Mobile customers: YoY growth



Merchant processing bankcard volumes[5]



Note: For footnoted information, refer to slide 52

1 Consistently innovating

Building exceptional client franchises

CCB

End-to-End Platform

- Strategic partnership with Visa
- Fully integrated platform enables customized network rules and pricing that other acquirers cannot replicate
- Targeted offers platform

Digital Wallets

- ChasePay: Proprietary platform had successful pilot and is now ready for broader launch in 2015
- Apple Pay: Participant in Apple wallet

Self-Service Channels



- New mobile app with customized details & more intuitive navigation
- Chase QuickPay and QuickDeposit improve customer experience
- #1 mobile banking functionality[1]

Physical Footprint





- Next generation ATMs with large screens, user friendly interface, and increased functionality
- Cash recyclers simplify branch activities and improve productivity

CIB

- End-to-end global wholesale FX platform – including merged capabilities with ChaseNet technology
- Creation of JPM Execution Services
  - #2 rank in all FX E-commerce multi-dealer platforms
- Mobile trading order technology with automated messaging and live research – further enabling clients to operate 24/7
  - Support FX execution for institutional clients via the iPhone, Android and iPad
  - Profit and Loss Magazine Digital FX award for best mobile platform in 2014

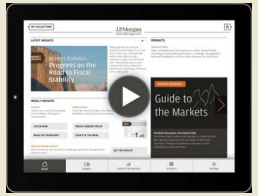
CB

- Innovative approach to client coverage – leveraging CIB's premier industry vertical expertise
- Launched JPMorgan ACCESS® Next Generation
  - Designed by clients to deliver increased functionality, greater efficiency and a better client experience – online, host-to-host & mobile
  - Ranked the #1 cash management portal by Greenwich Associates 2014
  - Migrated 12,000 clients ACCESS over last 2 years

2014 Cash Management Services Benchmark
J.P. Morgan ACCESS®
No.1
GREENWICH ASSOCIATES

AM

- Continue to launch innovative solutions within and across asset classes – 2009-14 GIM multi-asset solutions AUM CAGR of 31%
- Enhanced GWM digital and client experience
  - Introduced digital relationship planning tool in the U.S.
  - Launched Service Knowledge Center to improve client service team response time
- Launched J.P. Morgan Mobile Insights app
  - Star Award & Best of the Best Award in 2014
  - 20 countries, 10 languages, 40,000 users



[1] Based on Forrester Research, U.S. Mobile Banking Functionality Rankings as of May 2014

Agenda

1. Building exceptional client franchises

2. **Operating with fortress principles**

- Strong capital and liquidity position
- Simplification and de-risking
  - Our balance sheet is less complex and of higher quality
  - Demonstrated strong risk discipline through-the-cycle
  - Executed on significant business simplification agenda – simplification continues to be a focus
- Commitment to controls and culture
  - Enhanced control infrastructure and governance – significant investments
  - Culture and conduct – recommit to our business principles

3. Maximizing long-term shareholder value

4 Leading to

~15%	~12%	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

2 Strong capital and liquidity position

Operating with fortress principles

Capital and liquidity position

		Since 2010…	Estimated 4Q14
Capital	Common Equity Tier 1 (CET1) ratio[1]	>300 bps	10.2%
	Bank Supplementary Leverage Ratio (SLR)[2]	>100 bps	5.9%
	Firm SLR[2]		5.6%
	Tier 1 capital ratio[2]	>400 bps	11.4%
Liquidity	Firm Liquidity Coverage Ratio (LCR)	~2x	>100%[3]
	Bank LCR		>100%[3]
	JPM internal stress		>100%[4]
	Net Stable Funding Ratio (NSFR)		>100%[5]
	Total Loss Absorbing Capacity (TLAC)		~15%[6]

Calibration range of 16-20% under Financial Stability Board proposal

Key takeaways

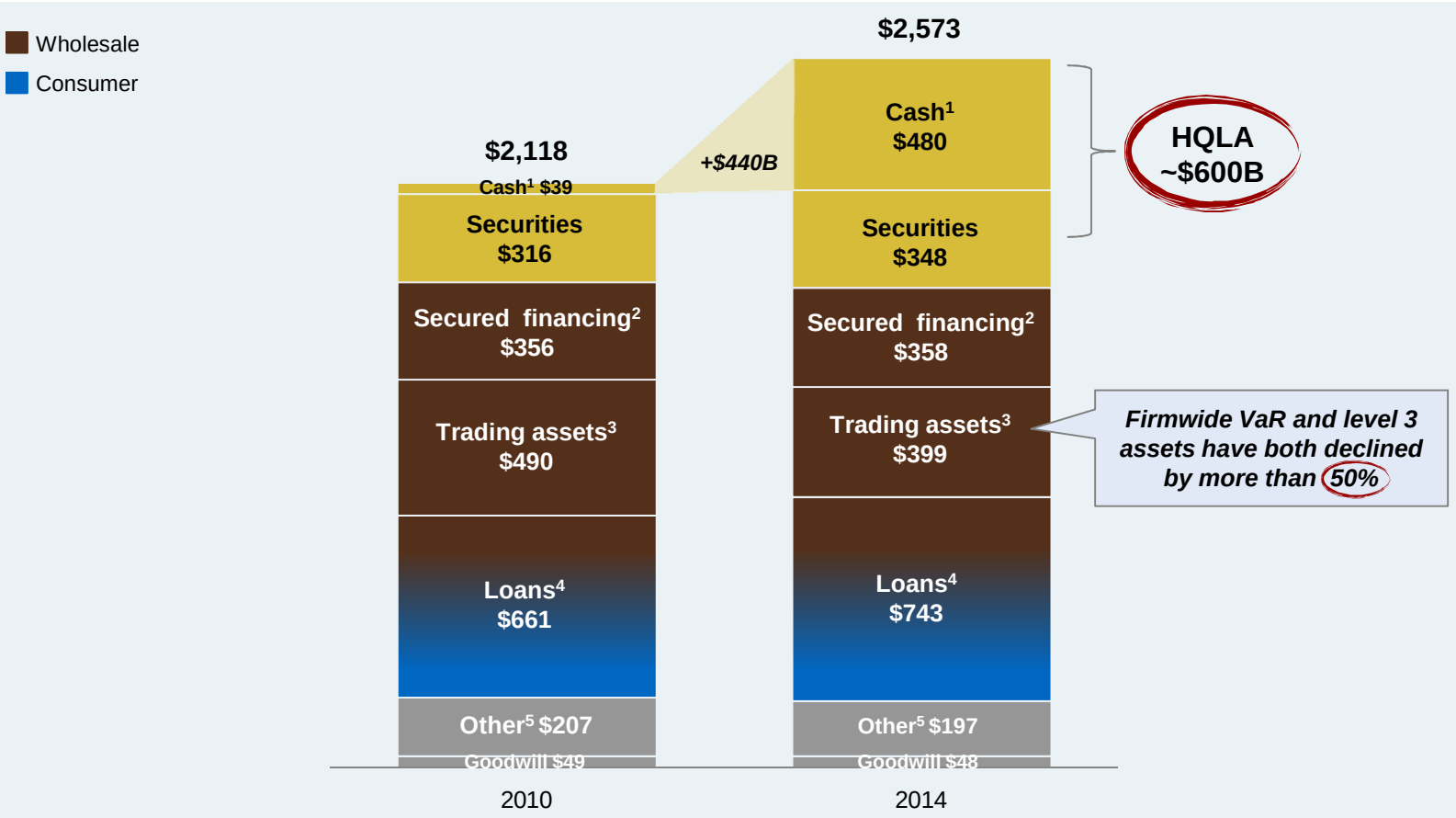
- Management has met all of its capital and liquidity commitments
- JPM holds an appropriate amount of liquidity

Note: For footnoted information, refer to slide 53

2 Fortress balance sheet – assets

Operating with fortress principles

EOP assets ($B)



	2010	2014
Deposits	$930	$1,363

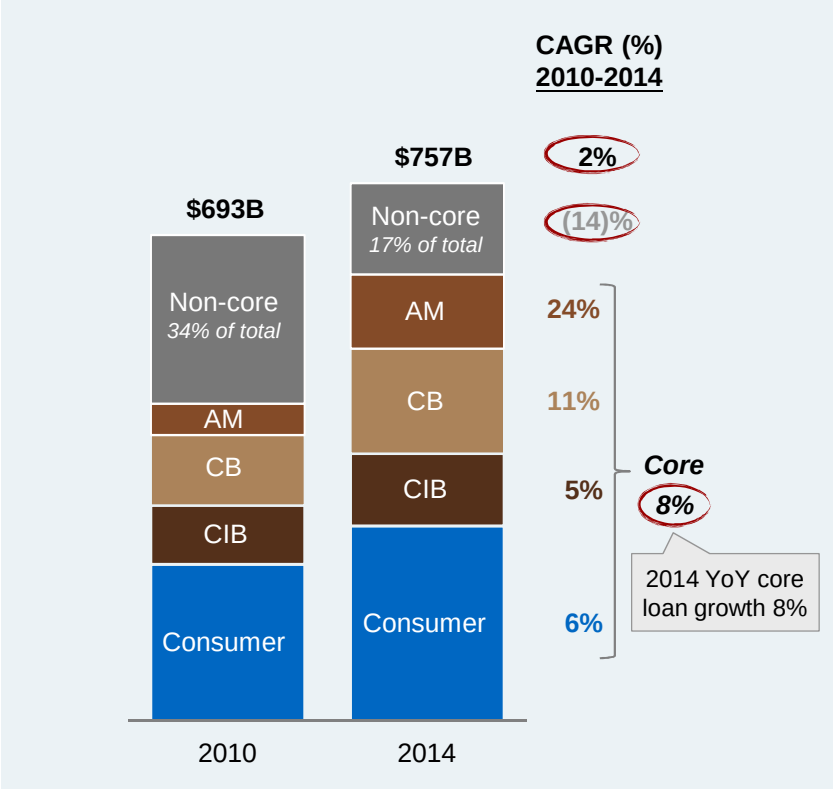
Our balance sheet has grown – but it is less complex

Note: For footnoted information, refer to slide 54

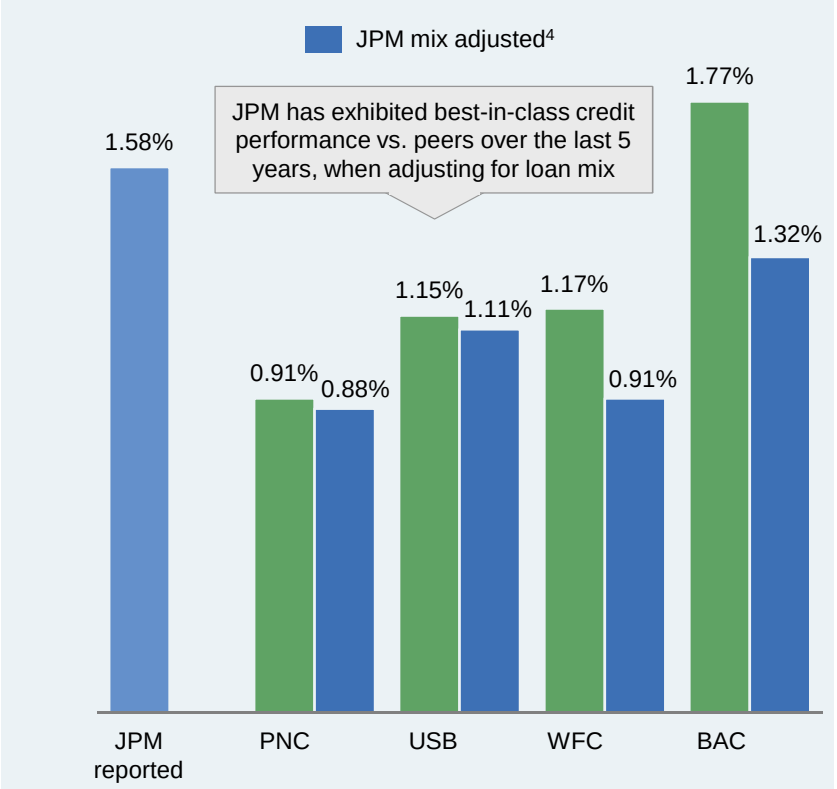
2 Loan portfolio and performance

Operating with fortress principles

EOP loans



Peer NCO rate comparison (avg. 2010-2014)



Consumer

	2010	2014
Avg. FICO score[1]	719	733
Avg. LTV[2]	81%	63%

Wholesale

	2010	2014
Investment grade %[3]	66%	74%
Criticized %[3]	6.4%	1.5%

Firmwide

	2010	2014
Firm NCO rate, excl. PCI loans	3.81%	0.70%

Expect core loan growth of 10%+/- in 2015; expect NCOs to remain low at $4B+ in 2015

Source: Company reports

[1] Consumer businesses, excluding Student, sub-prime, option ARM and PCI portfolios

[2] Residential Real Estate, excluding sub-prime, option ARM and PCI portfolios

[3] Represents investment grade as a percentage of total Wholesale loans and criticized as a percentage of total Wholesale retained loans

[4] "JPM mix adjusted" is calculated by applying JPM NCO rates to peer mix for Card versus all other portfolios

2 Executed significant business simplification agenda

Operating with fortress principles

Business simplification initiatives

- ✓ Completed the spin-out of One Equity Partners and closed on the sale of a portion of our PE portfolio
- ✓ Exited physical commodities business
- ✓ Sold Global Special Opportunities Group (GSOG) portfolio
- ✓ Exit in process of majority of Broker Dealer Services (BDS) business
- ✓ Terminated transaction services for ~500 Foreign Correspondent Banking clients
- ✓ Ceased originating student loans
- ✓ Announced exit of Sears Canada and several smaller non-core card partnerships
- ✓ Announced exit of International Commercial Card
- ✓ Sold interest in Carlson Wagonlit Travel agency
- ✓ Sold Retirement Plan Services unit
- ✓ Exited prepaid card (EFS) and Order to Pay (OTP) businesses
- ✓ Sold health savings account business

Incremental financial impact[1]

	2015	2016 and beyond
Revenue	$1.6B ↓	$0.7B ↓
Expense	$1.6B ↓	$0.6B ↓

[1] Does not include the impact of the One Equity Partners and Private Equity portfolio sales

Other meaningful business actions

- ✓ Simplified Mortgage Banking products from 37 to 18 products as of 2014, with a target of further reducing to 15
- ✓ Rationalized Global Investment Management products: reduced U.S. funds # by net 6%, Asia funds net 4% and Europe funds net 2% in 2014
- ✓ De-risking through client selection – discontinuing certain businesses with select clients:
  - ✓ Exited ~8K clients in Business Banking and Commercial Banking
  - ✓ Exited ~5,500 foreign Politically Exposed Persons relationships
- ✓ Sold significant portion of CIB's trade finance EXIM/ECA portfolio

2 Recommitting to our business principles and reinforcing our culture

Operating with fortress principles

Business Principles

EXCEPTIONAL CLIENT SERVICE	OPERATIONAL EXCELLENCE	A COMMITMENT TO INTEGRITY, FAIRNESS AND RESPONSIBILITY	A GREAT TEAM AND WINNING CULTURE

- In 2014 – rearticulated our business principles and issued the "How We Do Business Report"
  - Sponsored by the Board and Operating Committee – delivered by firmwide management – reinforced at all levels

Building Upon How We Do Business

- **Every business and function – across all geographies – is in the process of implementing a Culture and Conduct program**
  - Assessment of culture and key conduct risks
  - Themes and gaps against what we expect of ourselves will translate into action plans
- **Further strengthened the connection between controls and our compensation and performance management framework**
  - Risk and control issues carefully considered throughout the Firm's performance evaluation and incentive compensation processes
  - Formal reviews and firmwide expectations designed to incentivize appropriate behaviors
  - Clawback policy and review in place for current, departing and former employees

Doing First Class Business in a First Class Way is at the center of everything we do

Agenda

1. Building exceptional client franchises

2. Operating with fortress principles

3. **Maximizing long-term shareholder value**

a) Delivering significant operating leverage – while investing through-the-cycle
- Consistently self-funded growth and investments
- Identified additional expense opportunities – targeting meaningful efficiency improvements

b) Delivering strong capital returns – while adapting capital and liquidity frameworks
- New capital and incentive framework reflects multiple constraints – including G-SIB
- Balancing compliance with capacity for capital distributions

4 Leading to

~15%	~12%	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

3a Competitive efficiency across businesses – with room for improvement

Maximizing long-term shareholder value – operating leverage

JPMorgan Chase managed basis[1]	JPM 2014 overhead ratios	Best-in-class peer: Overhead ratios[2] weighted by JPM revenue mix	Efficiency: JPM overhead ratio (%)	Efficiency: Adjusted expense[3] saves ($)
CCB	58%	55% WFC	~50%	~$2.0B
CIB	67% 62% ex. legal	60% Citi	55-60%	$2.8B
CB	39%	38% PNC	35%	
AM	71%	69% UBS WM & BLK	≤ 70%	
JPM	60% ex. legal	59% ex. legal	55%+/- Managed basis including legal	

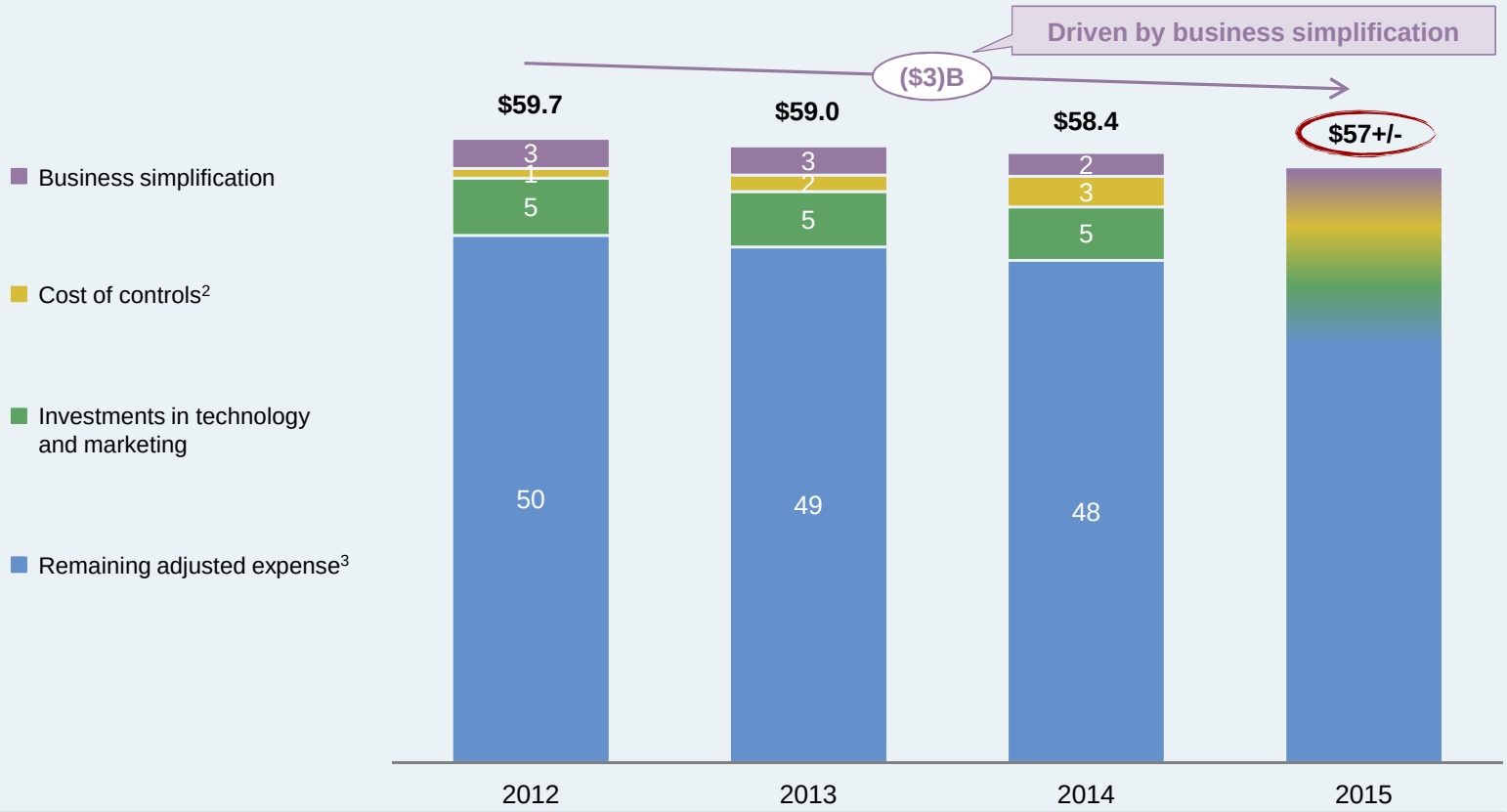
$1.3B Expense reductions
$1.5B Business simplification

Note: For footnoted information, refer to slide 55

3a Adjusted expense trending down despite significant investments

Maximizing long-term shareholder value – operating leverage

Adjusted expense[1] ($B)



	2012	2013	2014	2015
Adjusted overhead ratio[4]	60%	59%	60%	

Core expense efficiencies self-funding growth, investments and cost of controls

[1] See note 2 on slide 48
[2] Cost of controls defined as incremental spend over 2011
[3] Remaining adjusted expense includes compensation, occupancy, other technology & communication, professional & outside services, amortization, minority interest and other expenses
[4] Adjusted overhead ratio defined as adjusted expense divided by total managed revenue. See note 1 on slide 48

Agenda

1. Building exceptional client franchises

2. Operating with fortress principles

3. **Maximizing long-term shareholder value**

a) Delivering significant operating leverage – while investing through-the-cycle
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4 Leading to

~15%	~12%	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

3b Capital and incentive framework

Maximizing long-term shareholder value – capital

Align incentives and business decisions to maximize ROTCE

- Framework considers all potential constraints – including SLR, G-SIB, CCAR, Standardized and Advanced RWA
- JPM to be bound by Standardized RWA – we continue to attribute CET1 based on Advanced RWA – better reflection of risk
  - Balance sheet limits on size and Standardized RWA – will minimize variance between regimes
- LOB allocation will increase over time with Firm's capital glidepath – pricing models today use future capital levels assuming 10% marginal cost of equity
- Introducing G-SIB framework – capital charge based on marginal G-SIB contribution

The Firm is taking immediate actions

3b Capital allocation

Maximizing long-term shareholder value – capital

Key takeaways

- Management expects to reach 11%+/- CET1 by YE2015
- Long-term CET1 target is 12% – or lower – by YE2018
  - Incl. 50 bps buffer and 4.0-4.5% G-SIB
- Expect incremental LOB equity allocations as the Firm moves up its glidepath
  - CIB to reach 12.5% by 2018
  - Future capital levels are considered in current pricing and SVA models

Common equity and performance targets ($B)

	Avg. retained common equity		Target 2015 Advanced CET1
	2014	2015	
Total Consumer & Community Banking	$51.0[1]	$51.0[1]	10.0%
Consumer & Business Banking	*11.0*	*11.5*	*10.0%*
Mortgage Banking	*18.0*	*16.0*	*10.0%*
Card Services	*15.3*	*15.1*	*10.0%*
Auto & Student	*3.7*	*3.4*	*10.0%*
Corporate & Investment Bank	61.0	62.0	11.0%
Commercial Banking	14.0	14.0	10.0%
Asset Management	9.0	9.0	10.0%
Total LOBs	**$135.0**	**$136.0**	
Corporate (A)	26.2	32.0	
Total Firm (excl. Corp. Goodwill)[2]	**$161.2**	**~$168.0**	**~10.6%**
Memo: Corporate Goodwill[3]	*42.0*	*42.0*	***Average***

+50 bps YoY

(A) Includes legacy portfolio, model enhancements and other[4]

YoY increase largely driven by increase of ~$3.5B in retained operational risk capital

[1] Includes legacy mortgage servicing operational risk capital held at CCB level of $3B and $5B in 2014 and 2015, respectively
[2] 2014 is the average of 4 quarter-end spot actual common equity excluding goodwill; 2015 value is an approximation of the same metric based on the average of year end 2014 and 2015 analyst estimates for CET1
[3] Total Firm goodwill of $48B
[4] PE, retained operational risk capital, real estate, BOLI/COLI, DTA and pension

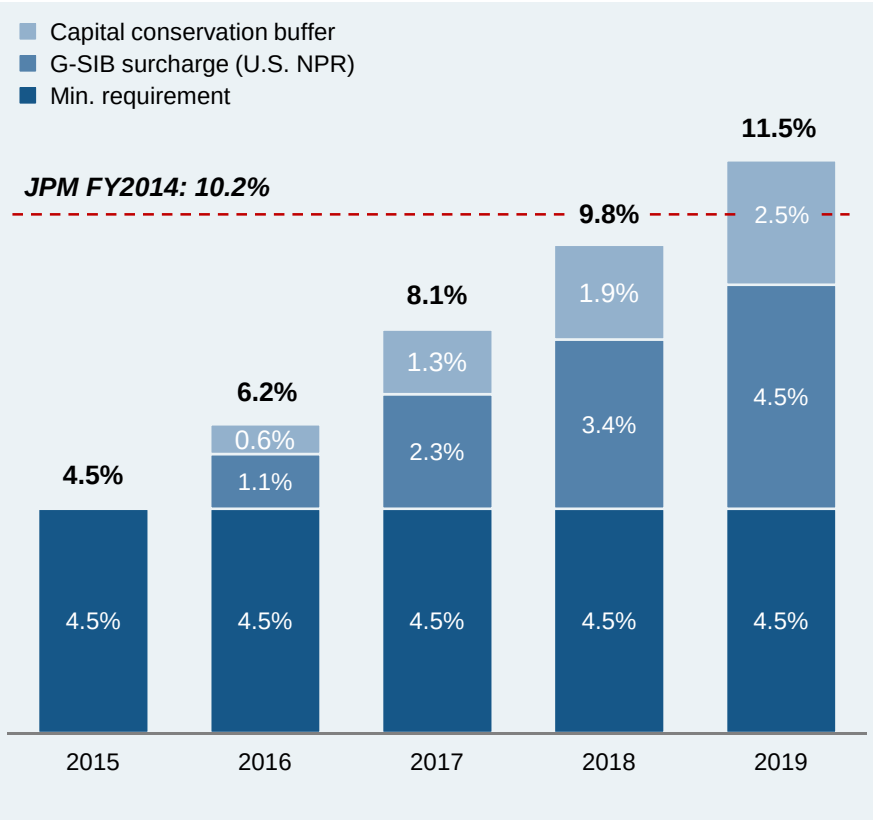
3b Capital glidepath

Maximizing long-term shareholder value – capital

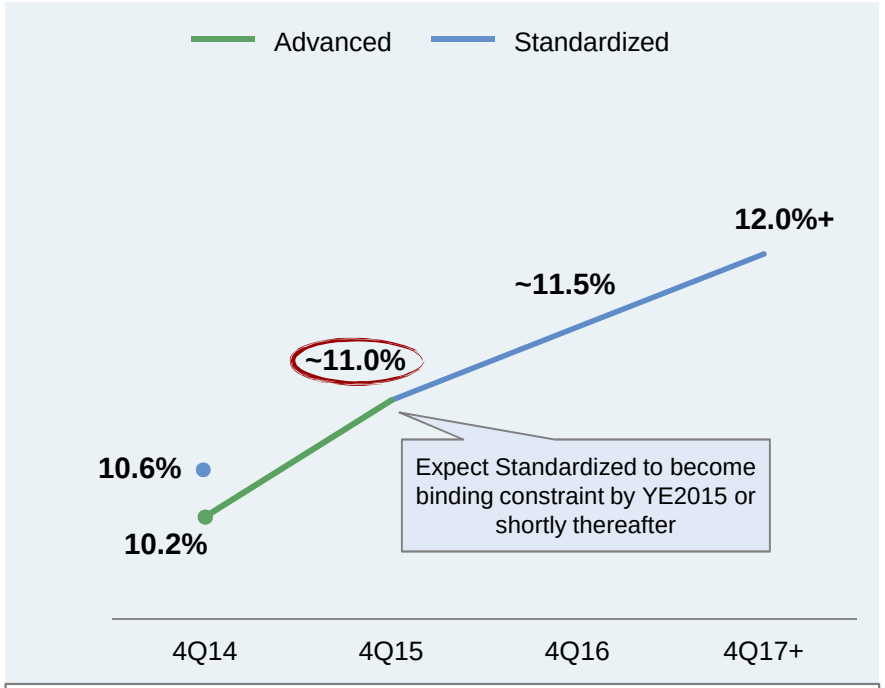
Key takeaways

- At current CET1 – above phased-in minimums through YE2018
- JPM can achieve ~12% CET1 target by YE2018 while providing significant capital return to shareholders and opportunity to increase dividends

Phased-In minimums



Illustrative Fully Phased-In Firm trajectory[1]



	4Q14	4Q15	4Q16	4Q17+
Total net payout[1]	47%	57%	60%	64%

Opportunity to progressively increase dividends

[1] Reflects analyst estimates for earnings of ~$23B in 2015 and ~$27B for average 2016-2017, common dividends of ~$6B in 2015 and ~$7B for average 2016-2017 and net repurchases of ~$6B in 2015 and ~$8B for average 2016-2017. Total net payout reflects the full-year

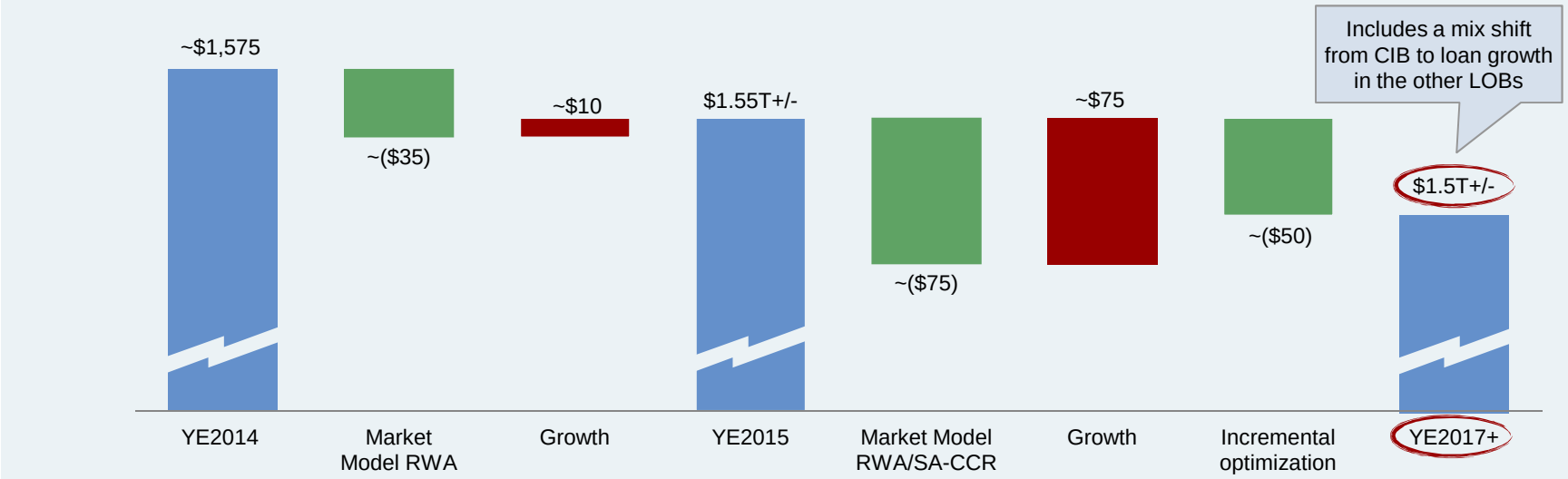
3b Standardized RWA outlook

Maximizing long-term shareholder value – capital

Advanced and Standardized RWA[1]

- Advanced RWA – results in ≥$1.5T at YE2015
  - After which we expect to run at or below this level
- Given the reduction in Advanced RWA – Standardized will become the Firm's binding constraint in the near-term
  - Standardized will be $1.55T+/- by YE2015
- We have room to optimize Standardized, including:
  - Expected market risk model benefits in 2015 and 2016
  - Benefit from implementing SA-CCR[2] in 2017
  - We will create headroom for core loan growth by funding with CIB reductions

Standardized RWA glidepath ($B)



Advanced RWA	~$1,625			≥$1.5T			$1.5T+/-

Combination of model approvals, SA-CCR, G-SIB optimization and balance sheet limits results in convergence between Advanced and Standardized

[1] See note 4 on slide 48
[2] Standardized Approach for Counterparty Credit Risk

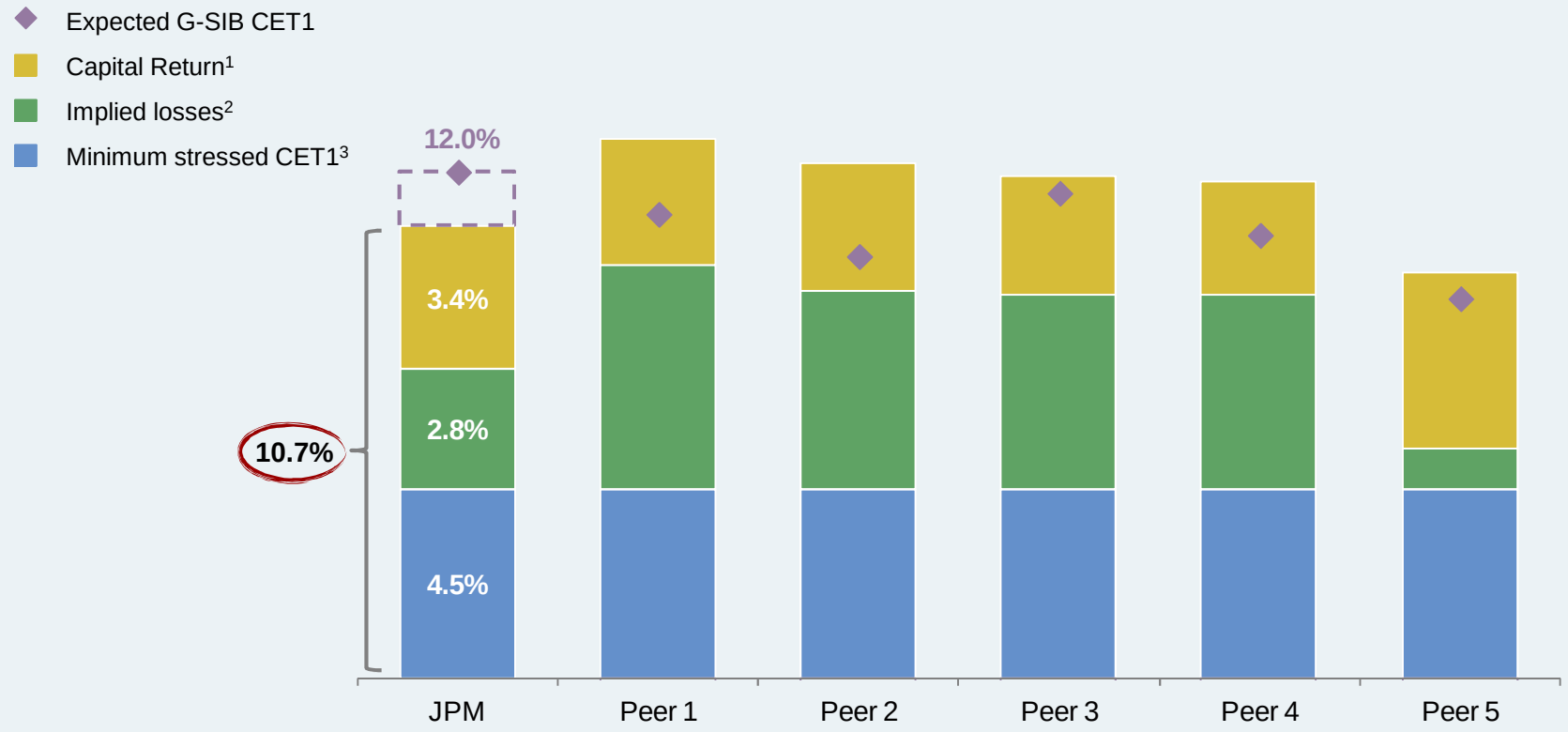
3b Competitive dynamic

Maximizing long-term shareholder value – capital

Key takeaways

- G-SIB surcharge unlikely to be a meaningful competitive disadvantage as CCAR will be binding constraint for U.S. peers
  - JPM CCAR implied loss sensitivity lower than most peers, based on 2014 DFAST
- If G-SIB surcharge is included in CCAR minimum, JPM has ~130 bps headroom before negative impacts

Required steady state CET1 ratios in CCAR – % of beg. RWA



Note: For footnoted information, refer to slide 56

3b G-SIB capital charge

Maximizing long-term shareholder value – capital

Overview

- There are three dimensions to our G-SIB score
  - Absolute exposures – we will aggressively manage
  - Market effects – change in market size and currency impacts
  - Time – have 3 years to optimize for compliance
- Our framework and actions reflect
  - Reshaping our business prospectively
  - Managing G-SIB through 3 lenses: 1 *Product* 2 *Business* 3 *Client*
    - 1 Shrinking existing exposures in key areas – e.g., non-operating deposits, derivative notional compression, Level 3 assets
    - 2 Addressing important strategic questions for certain sub LOBs – e.g., OTC clearing and derivatives intermediation
      - 11 of our sub-LOBs contribute ~70% of our G-SIB score
    - 3 Managing clients over the long-term based on total profitability for the Firm
- We will not overreact to market effects (e.g., FX) – U.S. framework not final
- Commonplace for certain activities to affect G-SIB in multiple categories (e.g., non-operating deposits to international financial clients)

Key components of proposed U.S. G-SIB framework

Size	Cross-jurisdictional	Interconnectedness	Complexity	STWF[2]
Leverage exposure	International activity	Activity with FIs[1], outstanding debt and market cap	OTC derivatives, Level 3 assets and Trading/AFS securities	Includes repo, non-operating deposits, Firm shorts

Market-share based | *Self-reliance measure*

Actions are being taken to reshape our business – we intend to run the Firm in the 4.0 or 4.5% G-SIB bucket

[1] Financial Institutions
[2] Short-Term Wholesale Funding

3b JPM G-SIB score pro forma

Maximizing long-term shareholder value – capital

Score range	Surcharge
1,030-1,129	5.5%
930-1,029	5.0%
830-929	4.5%
730-829	4.0%
630-729	3.5%

Pro forma G-SIB score based on preliminary estimates (bps) – assumes market held constant

Category		Pro forma 4Q14	Deposit actions: $100B non-op[3]	Deposit actions: Revised score
Size		81	(2)	79
Cross-jurisdictional activity		60	(3)	58
Interconnectedness		91	(6)	85
Complexity		139	0	139
Basel G-SIB score		**372**	**(11)**	**361**
STWF[1]		69	(11)	58
U.S. score multiplier		2x	2x	2x
Based on 2013 FX	*U.S. G-SIB score*	**882**	**(44)**	**839**
	U.S. G-SIB surcharge	**4.5%**		**4.5%**
Based on 2014 FX	*U.S. G-SIB surcharge*	**4.5 – 5.0%**		**4.5%**

Down from 404 in 4Q13

Estimated FX impact: ~45-60 bps[2]

Sizing of potential actions in the CIB – over time – 0-100 bps → **4.0 – 4.5% G-SIB surcharge**

In progress
- Balance sheet caps
- Escalation and approvals for new G-SIB intensive business
- OTC notional compression
- Level 3 rationalization
- Trading book inventory reduction
- Loans and commitments review

Decisioning
- Derivatives intermediation
- OTC clearing
- Repo/financing

Note: For footnoted information, refer to slide 57

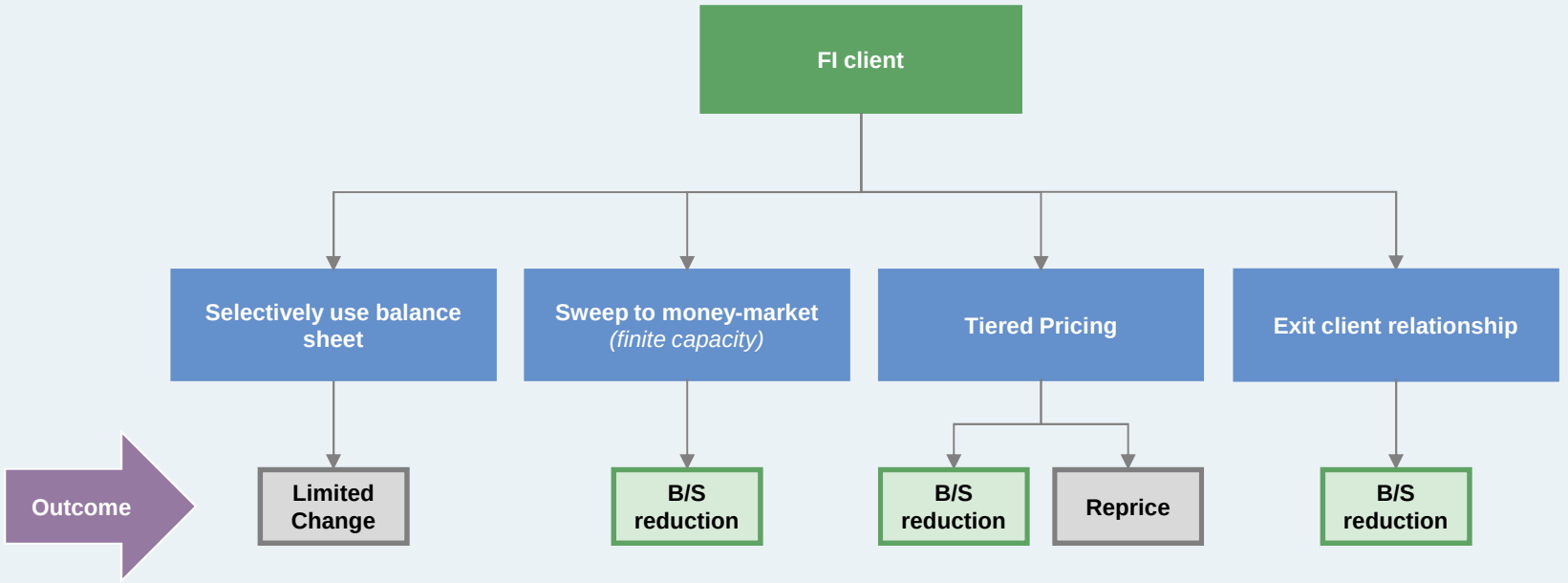
3b Taking immediate action – non-operating deposits

Maximizing long-term shareholder value – capital

Key takeaways

- Opportunities for actions exist – decision tree below
  - Across businesses ~$390B deposits from financial institutions – of which ~$200B is non-operating
- Illustrative FI non-operating deposit economics – cash earns net 10-15 bps
  - Given contribution of FI non-operating deposits on G-SIB – impacts size, interconnectedness, STWF and potentially cross-jurisdictional – exiting these deposit balances is a rational economic decision

Deposit decision tree



Expect reduction of up to $100B of firmwide non-operating deposits by the end of the year

Agenda

1 Building exceptional client franchises

- Four leading client franchises – together delivering significant value
- Client focus and long-term approach – consistently investing and innovating

2 Operating with fortress principles

- Strong foundation – capital, liquidity, balance sheet, risk discipline
- Simplification and de-risking
- Commitment to controls and culture

3 Maximizing long-term shareholder value

- Delivering significant operating leverage – while investing through-the-cycle
- Delivering strong capital returns – while adapting capital and liquidity frameworks

4 Leading to

~15% *ROTCE*	~12% *CET1 ratio*	55%+/- *Overhead ratio*	55-75% *Net payout ratio*

4 Earnings simulation

Leading to strong returns

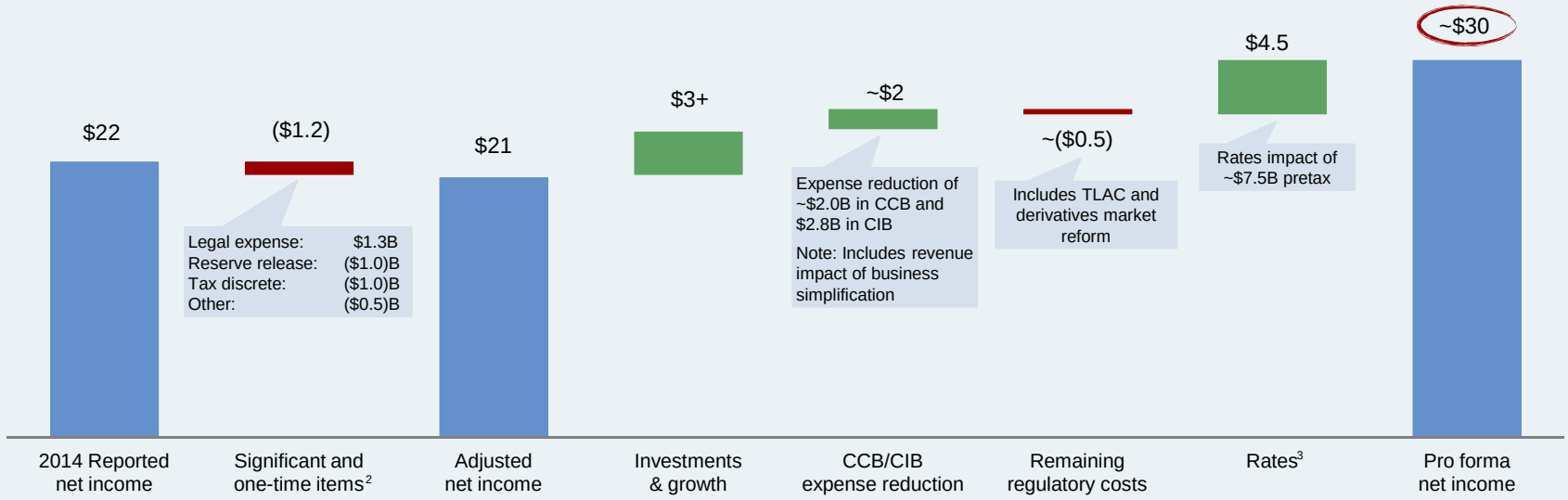
Assumptions – what you need to believe

- Front-end rates rising in 2H15, ~2.25% by 2017
- Core loan growth driving ~65% loans-to-deposits ratio
- $100B shift from non-operating deposits to operating deposits
- NIR CAGR excluding business simplification of ~3% and ~8% excluding CIB and MB
- Expense reduction of ~$2.0B in CCB and $2.8B in CIB – partially offset by growth in AM
- Assumed that credit costs are low for long – for the next 3 years
- Standardized RWA at $1.5T+/- – model approvals/run-off and optimization actions will offset growth

LOB ROE targets

	Proforma 2014 ROE[1]	Target ROE
CCB	18%	20%
CIB	10%	13%
CB	18%	18%
AM	23%	25%+
Firm ROTCE	**13%**	**~15%**

Net income build simulation ($B) – 3 year horizon



~15%	~12%	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

Note: For footnoted information, refer to slide 58

Conclusion

1 Building exceptional client franchises

- Four exceptional client franchises – leaders in their own right
- Build our businesses for the long-term – consistently innovating
- Focus on client experience and lifetime relationships
- Complete platform and diversified operating model – drives client engagement, synergies and stable returns
- Experienced management team with deep talent

2 Operating with fortress principles

- Strong capital and liquidity position
- Simplification and de-risking
  - Our balance sheet is less complex and of higher quality
  - Demonstrated strong risk discipline through-the-cycle
  - Executed on significant business simplification agenda – simplification continues to be a focus
- Commitment to controls and culture
  - Enhanced control infrastructure and governance – significant investments
  - Culture and conduct – recommit to our business principles

3 Maximizing long-term shareholder value

- Delivering significant operating leverage – while investing through-the-cycle
  - Consistently self-funded growth and investments
  - Identified additional expense opportunities – targeting meaningful efficiency improvements
- Delivering strong capital returns – while adapting capital and liquidity frameworks
  - New capital and incentive framework reflects multiple constraints – including G-SIB
  - Balancing compliance with capacity for capital distributions

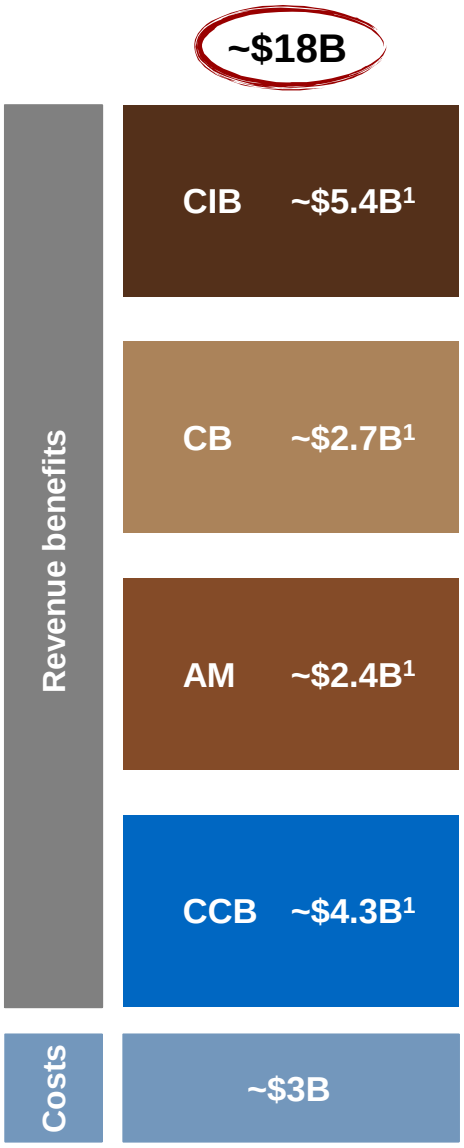
4 Leading to

~15%	~12%	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

Agenda

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Benefits of our operating model



Select examples – 2014

- CB and CIB benefits: ~$4.4B gross revenue
  - ~$2.4B of TS revenue reported in CB (>80% of CB clients use TS products)
  - ~$2.0B gross IB revenue from CB clients (35% of NA IB fees[2])
- AM and CIB benefits: ~$1.1B gross revenue
  - AM is an important client of CIB's global custody and fund services
  - Global Wealth Management (GWM) is a key distribution channel for CIB equity offerings
  - Referrals between CIB and GWM result in incremental IB fees and GWM revenue
- Global Corporate Bank generated incremental revenue of ~$1.8B[3] between 2009 and 2014
- ~$0.4B of gross FX revenue generated by TSS clients
- AM and CCB benefits: ~$0.8B gross revenue – AM solutions purchased by CCB clients in branches (including CPC)
- AM and CB benefits: ~$0.6B gross revenue – CB clients purchasing AM products
- Benefits from investment insights, products and services
- CB and CCB benefits: ~$0.5B gross revenue – Card Services revenue from CB; ~55% of CB clients visit a branch quarterly
- CIB and CCB benefits: ~$0.9B gross revenue – includes $0.2B of TS products sold to CCB clients and $0.4B newly identified Chase Commerce Solutions synergies with CIB[4]
- ~$1.8B of revenue from cards sold through branches and ~$0.7B from mortgage originations through branches
- ~$0.2B of revenue from CBB referrals to Paymentech and ~$0.5B from products sold to Card customers

- Primarily procurement, also includes technology, operations and other

Note: Totals may not sum due to rounding

[1] Includes revenue benefits generated through a partnership across two LOBs and then divided by 2, as well as revenue benefits generated within each LOB

[2] Calculated based on gross domestic IB fees for Syndicated Leverage Finance (SLF), M&A, Equity Underwriting and Bond Underwriting

[3] Methodology revised to exclude overlap with Inter-LOB synergies

[4] Synergies between Chase Commerce Solutions and CIB clients also existed in 2013; Chase Commerce Solutions includes Chase Paymentech, ChaseNet and Chase Offers businesses

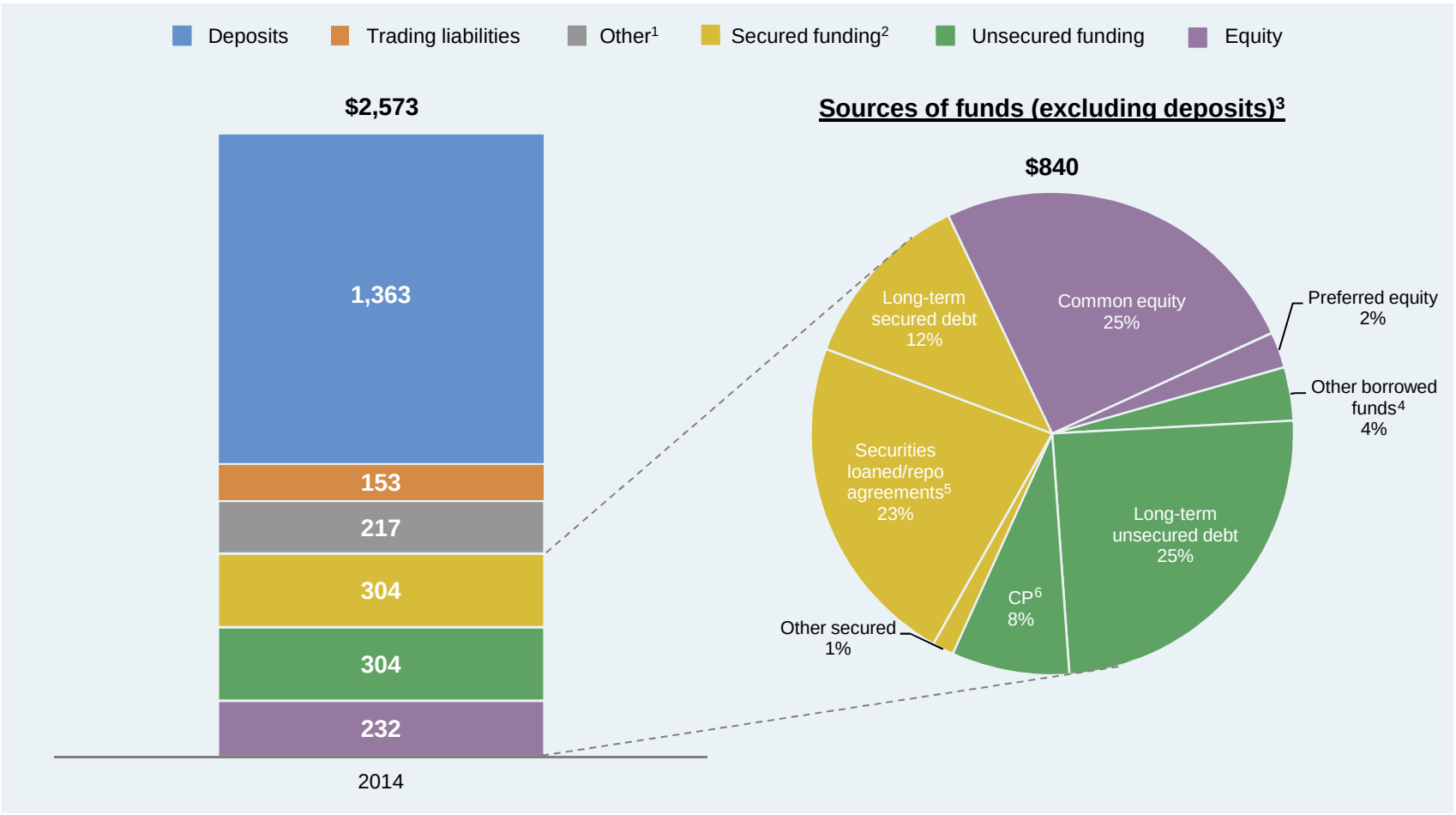
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Overview of funding sources

Diversified funding profile to maximize cost efficiency and manage liquidity risk

Liabilities and stockholders' equity at 12/31/14 ($B)

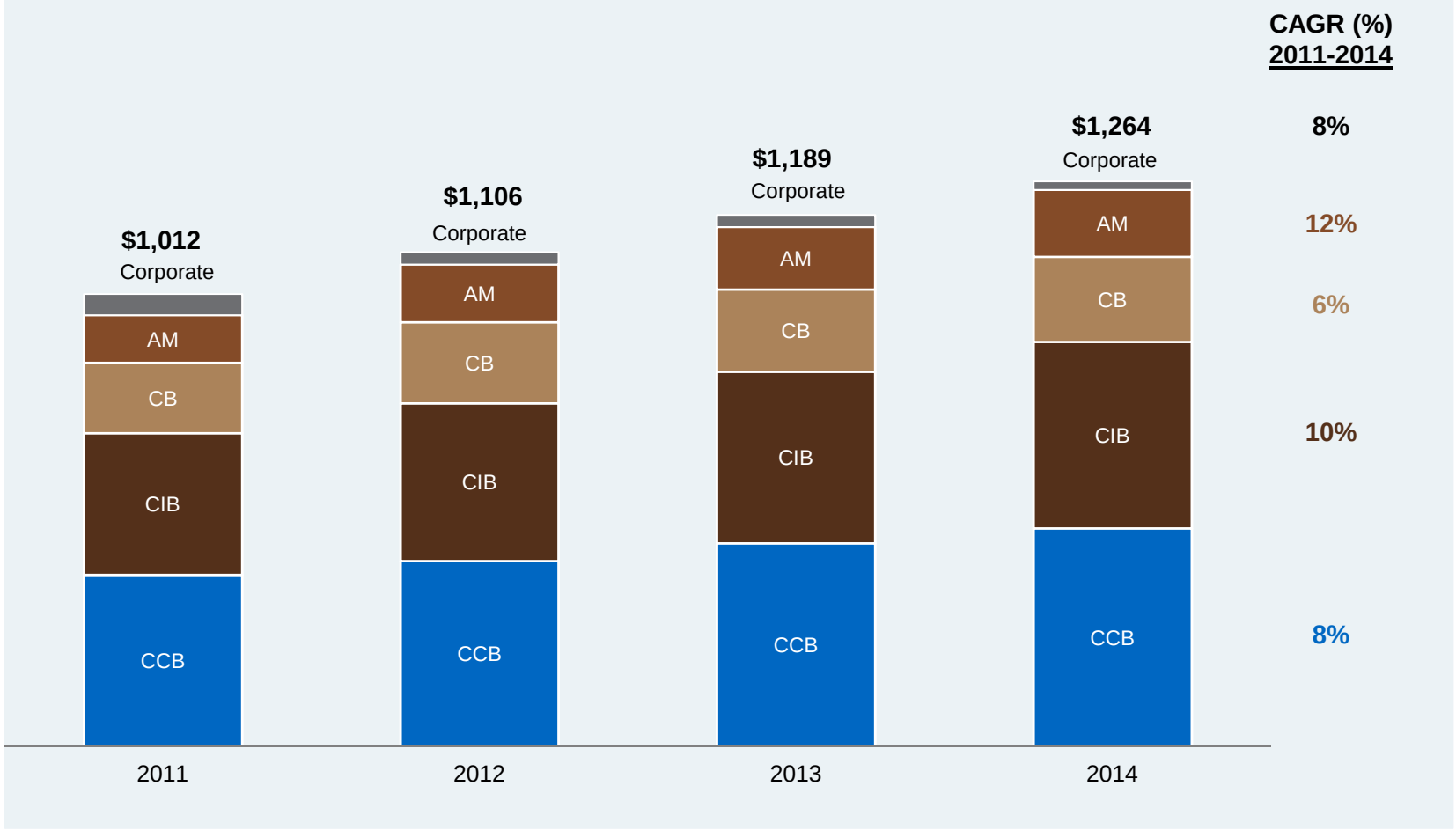


[1] Other includes: accounts payable and other, Federal Funds purchased and a portion of beneficial interests issued by consolidated VIEs not considered secured funding
[2] Secured funding includes credit card securitizations, other securitizations and obligations of the Firm-administered multi-seller conduits which are included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets
[3] Excludes deposits, trading liabilities and other
[4] Includes structured notes and short-term secured and unsecured borrowings with contractual maturities generally one year or less
[5] Excludes federal funds purchased and long-term structured repurchase agreements of $2.7B as of 12/31/2014
[6] As of 12/31/14, 64% of the Firm's total commercial paper liabilities were not sourced from wholesale funding markets, but were originated from deposits that customers choose to sweep into commercial paper liabilities as a cash management program offered to customers of the Firm

Deposits

Strong and diversified deposit growth

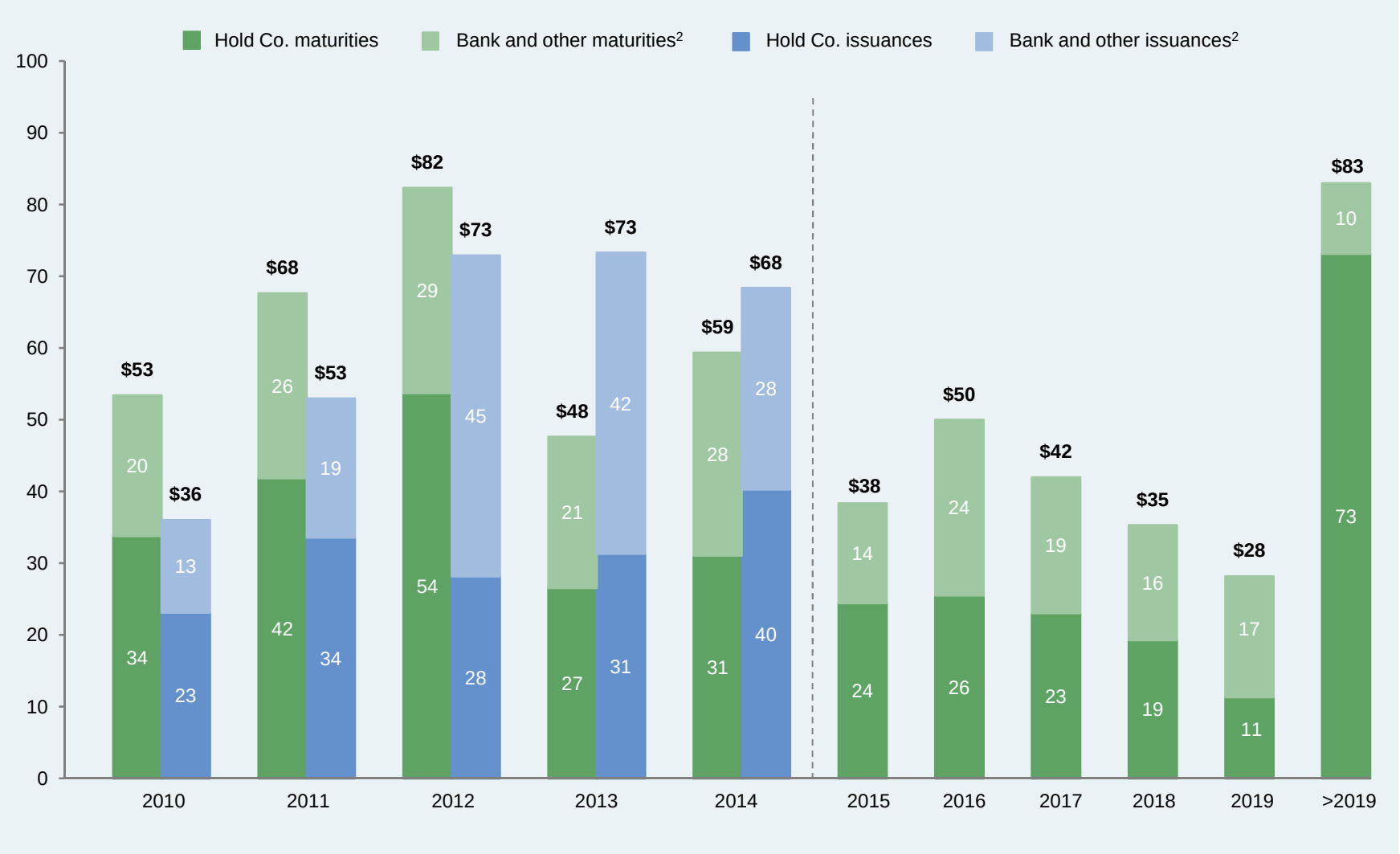
Total average deposits by LOB ($B)



Long-term debt

Appropriate size, tenor and composition of long-term funding

Total long-term secured and unsecured debt issuance and maturities[1] ($B)



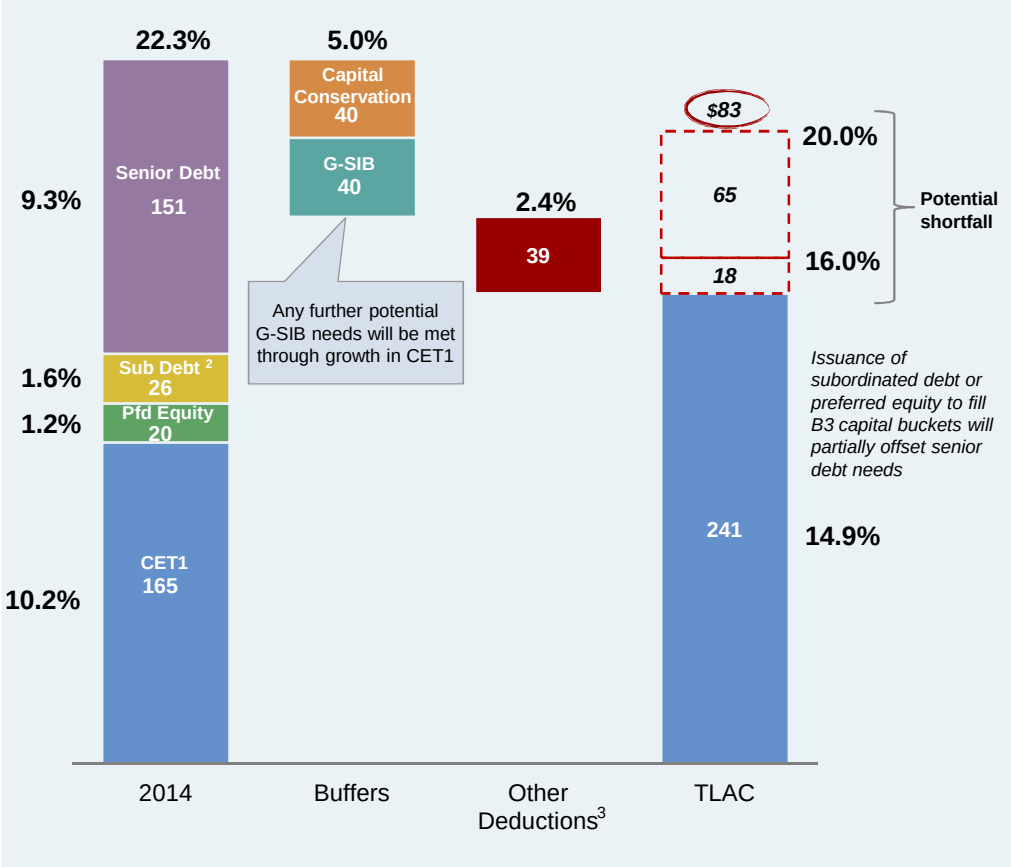
Note: Numbers may not sum due to rounding; Hold Co. is defined as JPMorgan Chase & Co., "Bank" is defined as JPMorgan Chase Bank, N.A.

[1] Maturities from 2010-2014 are based on actual cash flows; 2015-2019+ are based on the carrying value of the Firm's long term debt as of December 31, 2014

[2] Includes maturities and issuance originating from JPMorgan Chase Bank NA, its subsidiaries and other subsidiaries of the Hold Co.

TLAC composition and calibration

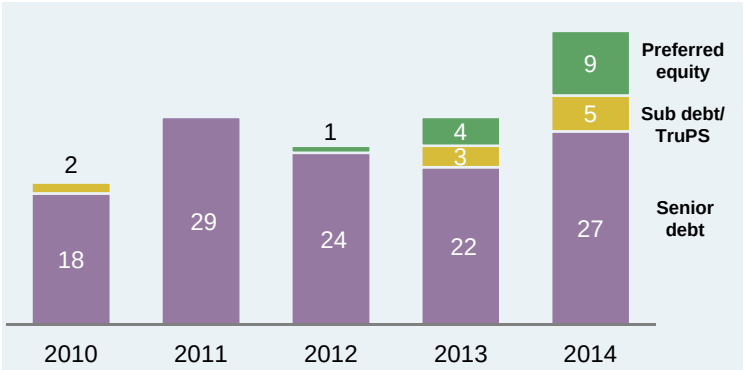
Estimated minimum TLAC ($B)[1]



Hold co. long-term debt maturities ($B)



Issuance of hold co. debt and preferred equity[5] ($B)

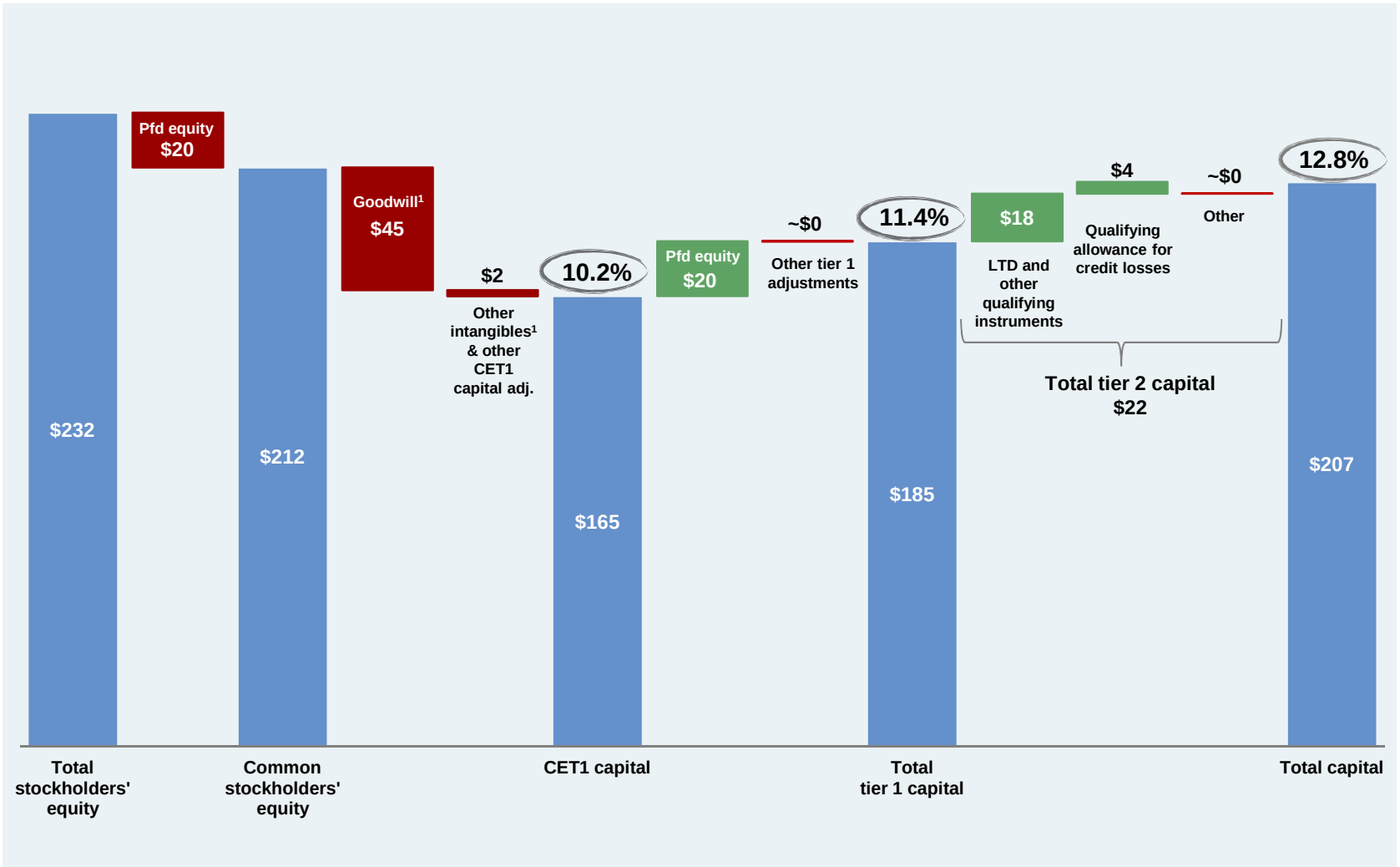


Net income impact of compliance ~($100-500mm) per year[6]

Note: For footnoted information, refer to slide 59

Current capital position

Basel III Advanced Fully Phased-In capital ratios and components at 12/31/14 ($B)



[1] Goodwill and other intangible assets are net of any associated deferred tax liabilities

Liquidity Management and Risk Oversight

Objectives

- Meet contractual and contingent obligations through normal economic cycles and during stress
- Ensure that the Firm's core businesses are able to operate in support of client needs
- Optimize funding mix and maintain sufficient liquidity

Responsibilities

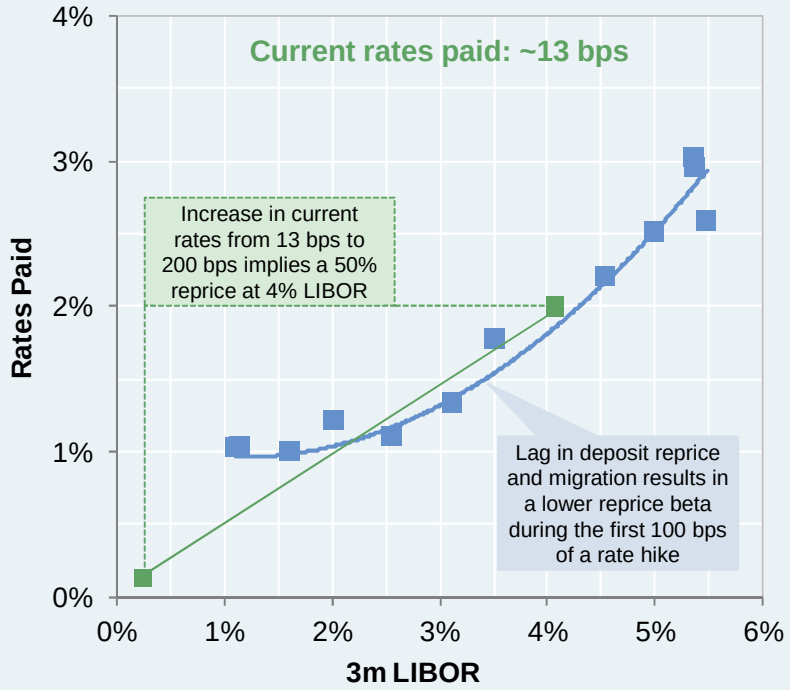
- Analyze liquidity characteristics of assets and liabilities of the Firm, line of business, and legal entity level
- Manage legal, regulatory, and operational restrictions
- Define and monitor firmwide and legal entity liquidity strategies, policies, guidelines, and contingency funding plans
- Manage liquidity within approved liquidity risk appetite tolerances and limits
- Set transfer pricing framework across the Firm

Liquidity risk oversight

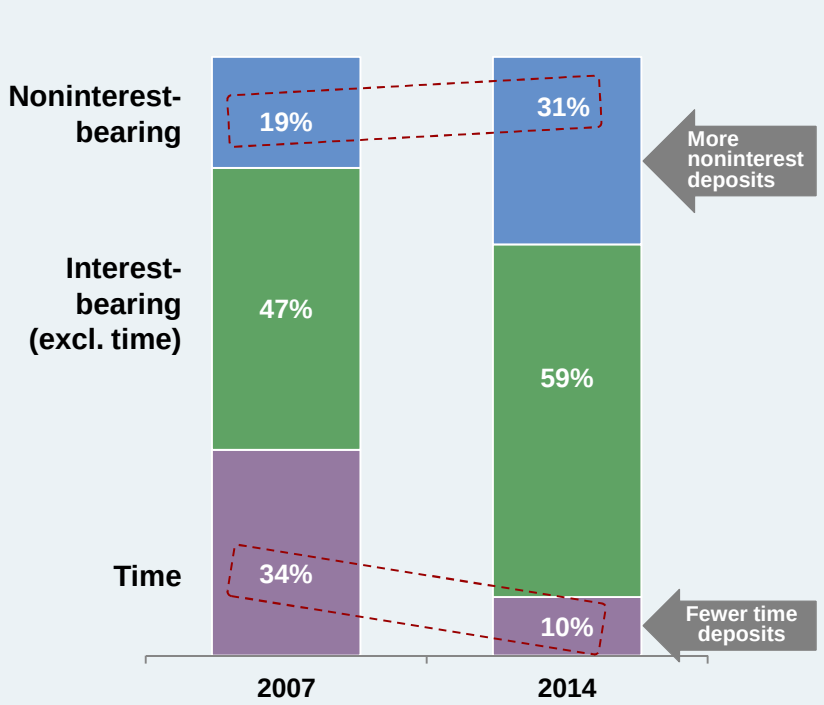
- Independent risk oversight function managed through a dedicated firmwide risk group reporting into the CIO, Treasury and Corporate Chief Risk Officer ("CTC CRO")
- Responsibilities include but are not limited to:
  - Establishing and monitoring limits, indicators, and thresholds, including liquidity appetite tolerances
  - Defining and monitoring internal firmwide and legal entity stress tests and regulatory defined stress testing
  - Reporting and monitoring liquidity positions, balance sheet variances and funding activities
  - Conducting ad hoc analysis to identify potential emerging liquidity risks

Liquidity and interest rate risk management

JPM deposits rates paid – 2004 cycle[1]



JPM deposit mix – % of total Firm average balances

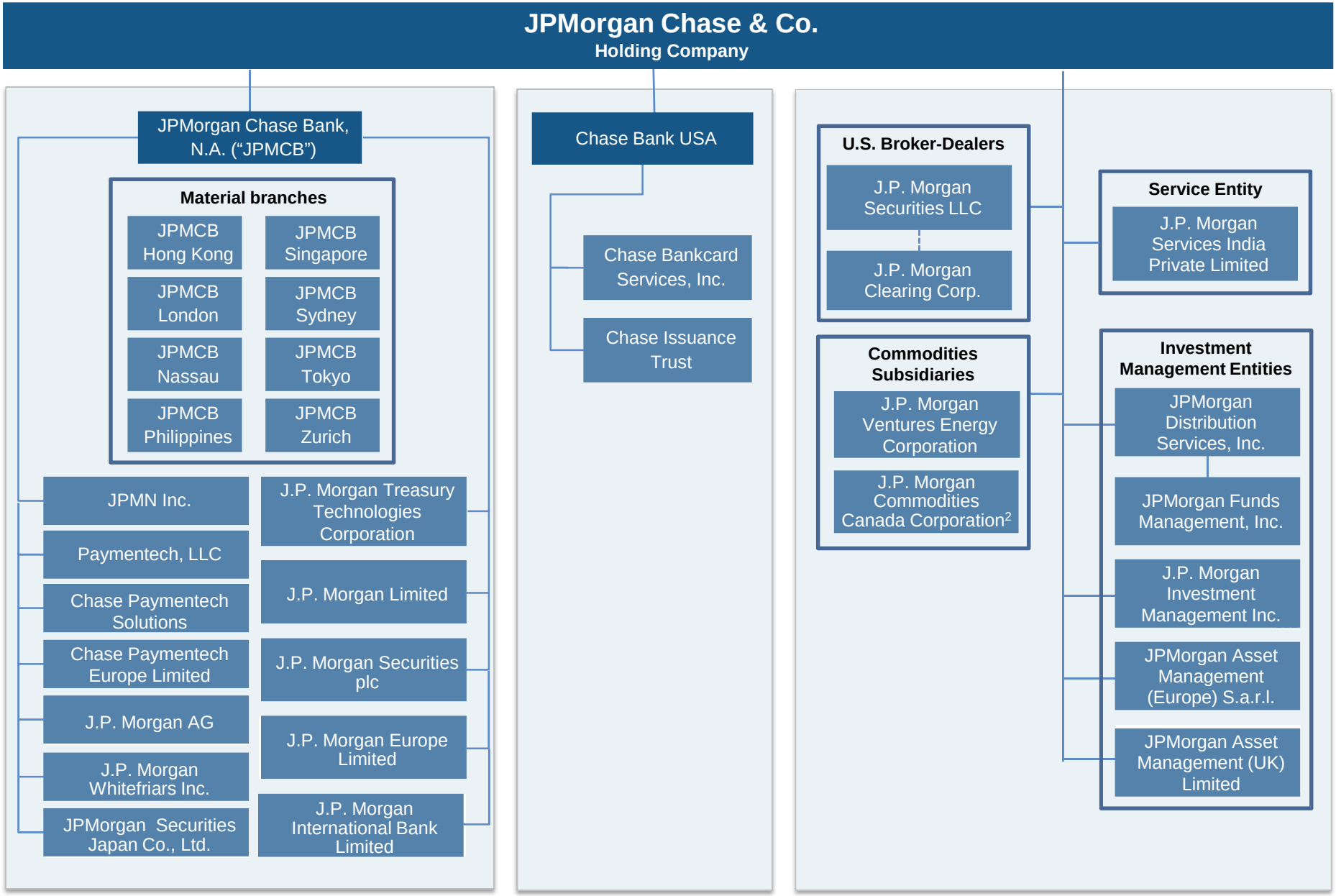


Implications

- As rates normalize, expect potential impacts to JPM's deposit base
  - ~$25-50B[2] in deposit outflows from large scale liquidity drain as Fed unwinds QE
  - Shift in mix of deposits back to interest-bearing accounts similar to 2007 levels (~30% time deposits)
  - Estimate over 50% re-price for total deposits with other factors (LCR, technology) potentially magnifying this effect
  - Potential migration of retail deposits to MMFs may reduce retail deposit growth by ~$40B[2] as rates normalize, decreasing current retail deposit growth
- We fully contemplate these effects in our liquidity and interest rate risk management processes

[1] 2004 cycle dates: 12/03-12/06; quarterly results shown above
[2] Domestic deposit share

Material Entities[1]



[1] Presented on this slide is a list, as of July 1, 2014, of JPM's 35 "material entities" for resolution planning purposes under the Dodd-Frank Act. A material entity means "a subsidiary or foreign office that is significant to the activities of a critical operation or core business line". Material entities reported under the Dodd-Frank Act may differ from the significant legal entity subsidiaries that are reported in the Firm's SEC filings

[2] Commodities Canada was sold as part of the physical commodities transaction which closed in the fourth quarter of 2014

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Notes on non-GAAP financial measures

1. In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

2. Adjusted expense, a non-GAAP financial measure, excludes firmwide legal expense and expense related to foreclosure-related matters ("FRM"). Management believes this information helps investors understand the effect of these items on reported results and provides an alternate presentation of the Firm's performance.

3. Tangible common equity ("TCE"), return on tangible common equity ("ROTCE") and tangible book value per share ("TBVPS"), are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's earnings as a percentage of TCE. TBVPS represents the Firm's tangible common equity divided by period-end common shares. TCE, ROTCE, and TBVPS are meaningful to the Firm, as well as analysts and investors, in assessing the Firm's use of equity and are used in facilitating comparisons of the Firm with competitors.

4. Common equity tier 1 ("CET1") capital, tier 1 capital, total capital, risk-weighted assets ("RWA") and the CET1, tier 1 capital and total capital ratios under the Basel III Advanced and Standardized Fully Phased-In rules, and the supplementary leverage ratio ("SLR") under the U.S. final SLR rule, are each non-GAAP financial measures. These measures are used by management, bank regulators, investors and analysts to assess and monitor the Firm's capital position. For additional information on these measures, see Regulatory capital in the Capital Management section of Management's discussion and analysis within JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2014.

Notes on slide 7: Peer valuation – discount versus peers

Source: FactSet, SNL

1. Pre-crisis P/E multiple represents average next twelve months (NTM) P/E from 1/3/2005-6/29/2007
2. CAGR represents dividend per share (DPS) growth from 2010-2014; FY2014 dividends declared over 12/31/2014 share price; 2016E DPS over 2/20/2015 share price
3. Pre-crisis: 1/3/2005-6/29/2007; crisis: 7/2/2007-12/31/2009; post-crisis: 1/1/2010-2/20/2015; represents averages of premium/(discount) over time
4. Reflects current market data as of 2/20/2015, 2017 ROTCE used and calculated using 2017 EPS estimates and 4Q14 TCE rolled forward with EPS and DPS estimates, repurchases held flat to 2014 CCAR

NOTES

Notes on slide 11: Leading client franchises

1. Excludes WaMu and Bank of New York branch purchases. Source: FDIC Summary of Deposits survey per SNL financial; excludes all branches with $500mm+ in deposits within two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks); includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC
2. Based on disclosures by peers and internal estimates
3. The 2006 figure reflects First Data joint venture; assigned 50% to First Data and 50% to JPM
4. Reflects wholly-owned acquirers. The 2014 figure is as of 2013, which is the latest available data from Nilson
5. Industry revenue pool; wallet rank and share per Dealogic
6. Based on fourth quarter exchange rates across non-USD reporting peers.
7. Revenues of 10 leading competitors, excluding FVA/DVA; includes JPM, GS, MS, C, BAC, CS, BARC, UBS, DB, HSBC; adjusted for certain one-time items; HSBC and BARC reflect results as of last twelve months (LTM) 3Q14
8. Barlow Research
9. Includes acquisition of Commercial Term Lending (CTL) portfolio through WaMu acquisition
10. Strategic Insight
11. Source: Capgemini World Wealth Report. 2014 market share estimate based on 2013 data
12. Source: Absolute Return. Includes only U.S. hedge funds with at least $1B in assets
13. Including Highbridge, which reported separately at the time
14. Based on the yearly American Customer Satisfaction Index as of December 2014
15. TNS 2014 Retail Banking Monitor; based on total U.S. (~5K surveys per quarter) and Chase footprint (~2.8K surveys per quarter); TNS survey question used to determine primary bank: “Most people have one bank they rely on more than any other. Which one of these banks do you consider to be your main or primary bank?”
16. Based on Internet Retailer for 2013 and Nilson data as of 2013
17. Dealogic 2014 wallet rankings for Banking and Coalition 3Q14 YTD rankings for Markets & Investor Services; includes Origination & Advisory, Equities and FICC
18. Dealogic as of January 2, 2015
19. Chips/Fed Volume report
20. Includes impact of WAMU acquisition in 2008, prior periods not restated
21. The “% of 10-year LT mutual fund AUM in top 2 quartiles” analysis represents the proportion of assets in mutual funds that are ranked in the top 2 quartiles of their respective peer category on a 10-year basis as of December 31, 2014. The sources of these percentile rankings, peer category definitions for each fund and the asset values used in the calculations are: Lipper (U.S. and Taiwan-domiciled funds), Morningstar (UK, Luxembourg and Hong Kong-domiciled funds), Nomura (Japan-domiciled funds), and FundDoctor (South Korea-domiciled funds). The analysis includes only retail open-ended mutual funds that are ranked by the aforementioned sources. The analysis is based on percentile rankings at the share class level for U.S. domiciled funds, at the ‘primary share class’ level for Luxembourg, UK, and Hong Kong-domiciled funds and at the aggregate fund level for all other funds. The ‘primary share class’ is defined by Morningstar and denotes the share class considered the best proxy for the fund. Where peer group rankings given for a fund are in more than one 'primary share class' territory both rankings are included to reflect local market competitiveness (applies to ‘Offshore Territories’ and ‘HK SFC Authorized’ funds only). The analysis excludes money market funds, Undiscovered Managers Fund, and Brazil and India-domiciled funds. The asset values were redenominated into USD using exchange rates sources by the aforementioned sources. The analysis pertains to percentage of assets under management, not percentage of funds. Past performance is not indicative of future performance, which may vary.
22. Source: Capgemini World Wealth Report

NOTES

Notes on slide 12: Proven best-in-class long-term performance

Source: Company 10K and 10Q reports and SNL financial

Note: Totals may not sum due to rounding

1. Total loan CAGR for USB and PNC; “Noncore” for each peer defined as “Liquidating” for WFC, “All Other Segment” for BAC and “CitiHoldings” for C
2. Total deposits – from company reports. Retail deposits – all branches with $500mm+ in deposits at any point in the last ten years excluded to adjust for commercial deposits and capture only consumer and small business deposits; includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC; EOP as of June 30th of each year
3. Market share for markets based off Top 10 which includes JPM, BAC, GS, C, MS, DB, UBS, CS, BARC, and HSBC. HSBC and BARC 2014 share reflects 4Q13-3Q14 as 2014 disclosure not yet available at time of print
4. IB fees market share based off wallet data from Dealogic as of January 2, 2015
5. JPM includes Chase Wealth Management net investments
6. BLK includes Barclays Global Investors merger-related outflows in 2010-11
7. Allianz 2010-2014 cumulative reflects 4Q09-3Q14 as 2014 disclosure not yet available at time of print; 2014 flows reflect 4Q13-3Q14. Converted at average exchange rates
8. Converted at average exchange rates

Notes on slide 13: Proven best-in-class long-term performance (cont'd)

Source: Company reports

Note: Totals may not sum due to rounding

1. Source: J.D. Power U.S. Retail banking Satisfaction Study; Big Banks defined as Chase, Bank of America, Wells Fargo, Citibank, U.S. Bank, PNC Bank
2. Excludes Private Label and Commercial Card
3. COF excludes HSBC, Kohl's and other acquisitions
4. AXP is U.S. Card Services only
5. Source: Chase internal data and Nilson data for the industry; U.S. bankcard volumes include Visa and MasterCard credit and signature debit volumes

NOTES

Notes on slide 16: Strong capital and liquidity position

1. Reflects Advanced Fully Phased-In CET1 ratio
2. Refer to footnote 4 on slide 48
3. Based on the Firm's current understanding of the U.S. final LCR rules, which became effective January 1, 2015
4. Reflects 90-day peak; JPM also compliant with the 365-day internal stress test as of 4Q14
5. Estimated based on the Firm's current understanding of the final Basel NSFR rules
6. Represents ~15% of Basel III RWA and the Firm's current understanding of the estimated minimum TLAC based on Financial Stability Board proposal

NOTES

Notes on slide 17: Fortress balance sheet – assets

1. Includes cash and due from banks and deposits with banks (excluding CIB)
2. Includes Fed funds sold and securities purchased under resale agreements, securities borrowed and CIB cash and due from banks
3. Includes firmwide debt, derivative and equity trading assets
4. Net of allowance for loan losses
5. Includes Private Equity and joint venture investments, accrued interest and accounts receivable, premises and equipment and other intangible assets

NOTES

Notes on slide 22: Competitive efficiency across businesses

1. Refer to footnote 1 on slide 48
2. Best-in-class overhead ratio represents implied expenses of comparable peer segments weighted by JPM revenue: Wells Fargo Community Banking, Citi Institutional Clients Group, PNC Corporate and Institutional Banking, UBS Wealth Management and Wealth Management Americas and BlackRock
3. Refer to footnote 2 on slide 48

NOTES

Notes on slide 29: Competitive dynamic

Note: Analysis assumes no RWA growth in baseline, percentages based on Basel III Standardized RWA. Expected G-SIB surcharges include 0.5% management buffer

1. Analyst estimates for 9 quarters net income applicable to common 4Q14-4Q16, assuming 100% payout. Source: FactSet
2. Implied losses based on 2014 DFAST disclosure of largest peers. Dollar amount of losses calculated as change in Basel I Tier 1 Common capital adjusted for constant common dividends
3. Assumes 4.5% minimum CET1 ratio with no management buffer

NOTES

Notes on slide 31: JPM G-SIB score pro forma

Note: Totals may not sum due to rounding

1. Estimate based on current interpretation of U.S. NPR – subject to change
2. Numerator (JPM) is based upon estimated exposures, converted using Basel-provided FX rates, as of December 31, 2014. Denominator (market) is adjusted based upon known banks within the market and assumes that currency exposures are the same as the reporting currency, converted using Basel-provided FX rates, as of December 31, 2014
3. Assumes with financial institutions, 50% international and 50% domestic. 100% weight for STWF purposes

NOTES

Notes on slide 34: Earnings simulation

Note: Numbers may not sum due to rounding for illustrative purposes. Figures are tax effected at an incremental tax rate of 38%, where applicable

1. Reflects 2014 NIAC divided by 2015 allocated equity for the lines of business ROE; Firm ROTCE is as reported
2. Includes 2014 legal expense in excess of $2B assumed run-rate legal expense (amount is for illustrative purposes only, and is not intended to be forward-looking guidance. Actual amounts may vary from assumed amount), 2014 Firm reserve releases, tax discrete items, 2014 Mortgage Banking repurchase benefits, 2014 Corporate & Investment Bank Credit adjustment & Other and Private Equity net income
3. Incremental core net interest income from rate normalization

NOTES

Notes on slide 42: TLAC composition and calibration

Note: Numbers may not sum due to rounding

Note: The estimate of Minimum Total Loss Absorbing Capacity ("TLAC") reflects the Firm's current understanding of how the Financial Stability Board's ("FSB") November 2014 consultative document on "Adequacy of loss-absorbing capacity of global systemically important banks in resolution" will be implemented in the United States. The estimate reflects certain assumptions regarding the inclusion or exclusion of certain liabilities, particularly with respect to items where further guidance is necessary, including but not limited to, the seniority of included and excluded liabilities, notes governed outside of the local law of the resolution entity, holdings of other Global Systemically Important Banks' ("G-SIBs") TLAC and structured notes as defined by the Firm. These assumptions may change as future regulatory guidance is received. In addition, while the current estimate includes a deduction in capital equal to the Firm's 2.5% G-SIB capital surcharge, further deductions of capital equal to the incremental capital surcharges that may be required by the U.S. banking regulators in the future will be deducted; capital that will be deducted is expected to be met through growth in the Firm's CET1 and will be reflected in the calculation accordingly

1. Based on Basel III Advanced Fully Phased-In RWA of $1,619B; as of 12/31/2014
2. Includes approximately $5B Trust Preferred Securities
3. Includes securities with <1 year remaining maturity, structured notes as defined by the Firm, and other deductions
4. Instruments identified as "TLAC eligible" reflect the Firm's current understanding of the FSB's November 2014 proposal
5. Excludes issuance of structured notes as defined by the Firm
6. This is a theoretical analysis for illustrative purposes only. It assumes current market spreads for potential incremental issuance and does not factor in any potential credit spread widening as a result of increased issuance. It also does not consider issuance needs for other purposes, such as changes in balance sheet.

NOTES

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2014, which has been filed with the Securities and Exchange Commission and is available on JPMorgan Chase & Co.'s website (http://investor.shareholder.com/jpmorganchase), and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

NOTES

CORPORATE & INVESTMENT BANK

Daniel Pinto, Chief Executive Officer Corporate & Investment Bank

February 24, 2015

JPMorgan Chase & Co.

Topics for discussion

Financial performance

- Best-in-class returns with low revenue volatility
- Leading market share across all major business lines
- World-class franchise: unique scale, completeness, global reach
- Strong long-term prospects

Strategy by business

- No significant change to 2014 strategy
- Good track record of optimizing business under multiple constraints
  - Now executing on plan for G-SIB optimization

Expense update

- Targeting $2.8B expense reduction to achieve 2017 expenses of $19B and an overhead ratio of 55-60%
- Significant upside from capturing efficiencies in technology and operations

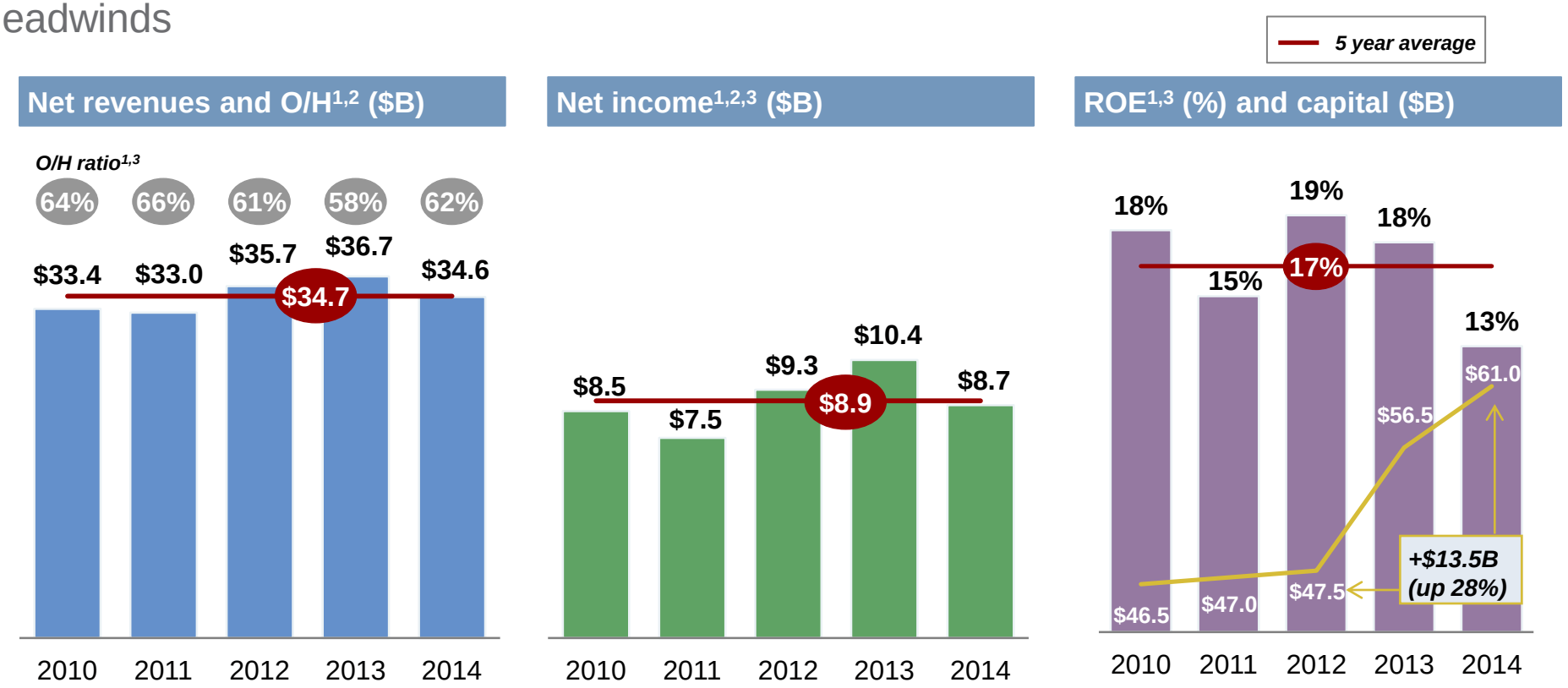
Conclusions

- Updated 13% ROE target at 12.5% CET1
- Additional upside from secular trends and potential market adjustments

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CIB has a proven track record of strong and stable performance despite recent headwinds



Highlights

- Unparalleled client franchise with over 51,000 employees in 60 countries serving 7,200 of the world's most significant corporates and financial institutions, governments and non-profit institutions
- Consistently delivered market leading financial performance – over $34B in net revenue in 2014, largest in the industry
- #1 Global IB franchise, #1 Markets franchise, leading Research platform, and a top tier Transaction Services business

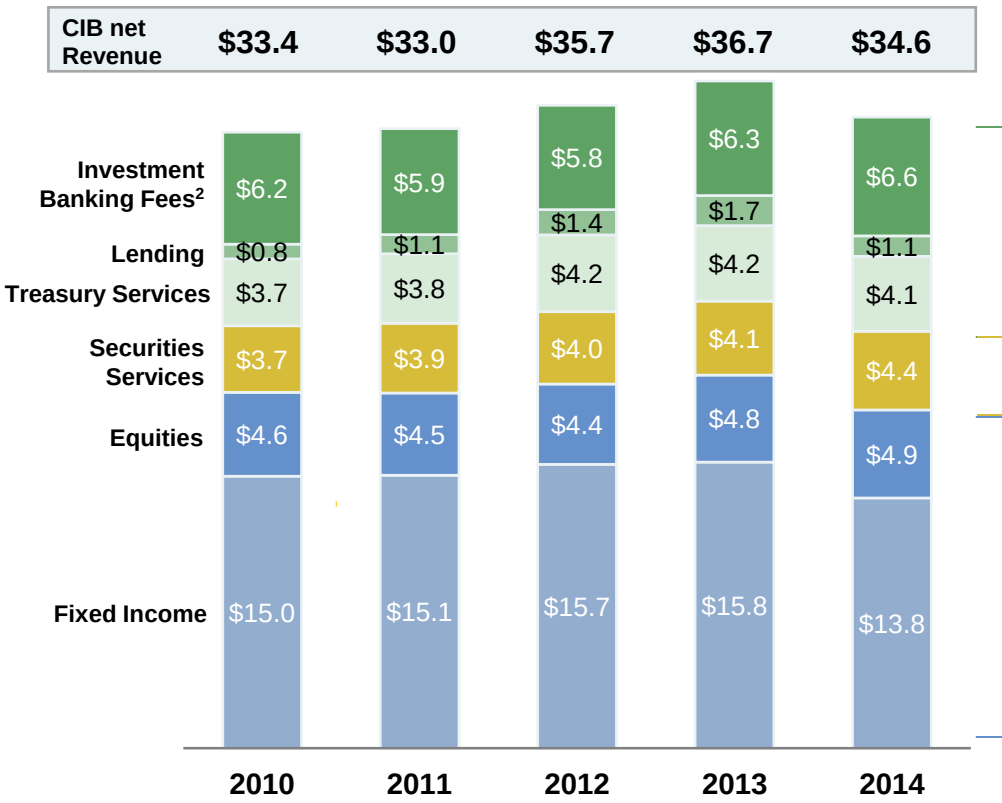
[1] Net revenues, net income, ROE, and overhead ratio excluding FVA (effective 2013) and DVA, are non-GAAP financial measures. Throughout this presentation, CIB provides several non-GAAP financial measures which exclude the impact of FVA (effective 2013) and DVA on: revenues, net income, overhead ratio, comp/revenue ratio, non-comp/revenue ratio and return on equity. These measures are used by management to assess the underlying performance of the business and for comparability with peers. For additional information on non-GAAP measures, please refer to the Notes section of the Firmwide presentation.

[2] All years are restated for preferred dividends.

[3] All years are restated to exclude the impact of legal expense.

Revenue diversification and scale drive stability

CIB Revenue by Line of Business ($B)[1]



- **Banking**[3] averaged 33% of CIB revenue over the past 5 years
- Consistent growth in **Securities Services** (~20% since 2010)
- **Markets** revenue averaged $19.8B per year since 2010
  - More stable than the market

Volatility[4]

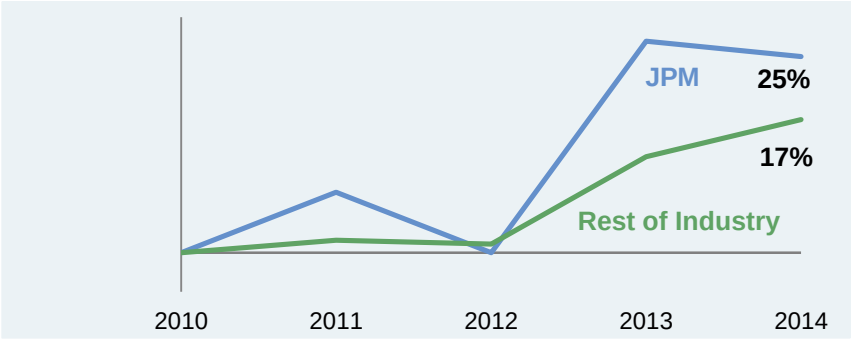
	CIB	Markets	Fixed Income	Equities
JPM	4%	4%	6%	4%
Top-10 Peers	6%	11%	15%	7%

[1] CIB net revenue excludes FVA/DVA for 2013 and prior years; product splits additionally exclude the remaining impact of Credit Adjustments & Other.
[2] Investment Banking fees include fees booked in Markets businesses.
[3] Banking includes Investment Banking fees, Treasury Services, and Lending revenue.
[4] Standard deviation divided by average over 2010-2014 period.

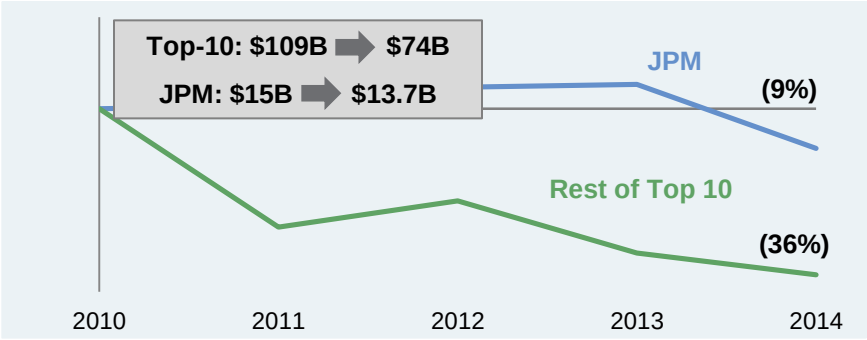
Strong share position and gains over multi-year period

2010 – 2014 Growth in Revenue Pools by Product (charts indexed to 2010)

Global IB Fees – Dealogic[1]



Fixed Income Markets[2]



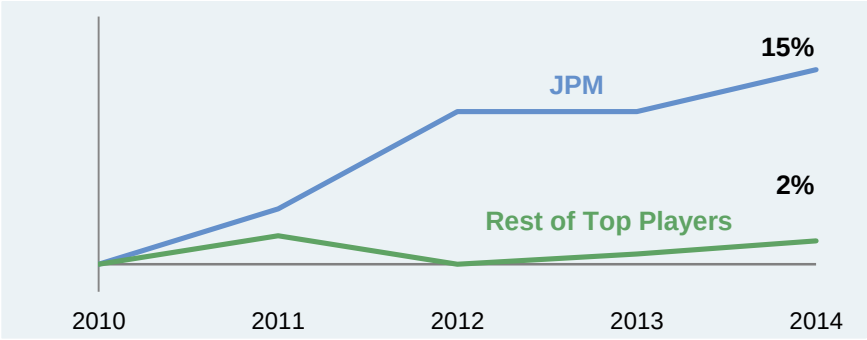
	2010	2011	2012	2013	2014
JPM share	7.6%	8.1%	7.5%	8.5%	8.1%
JPM rank	#1	#1	#1	#1	#1

	2010	2011	2012	2013	2014
JPM share	13.8%	17.8%	17.2%	19.7%	18.6%
JPM rank	#1	#1	#1	#1	#1

Equity Markets[2]



Treasury Services + Securities Services[3,4]



	2010	2011	2012	2013	2014
JPM share	10.3%	11.2%	12.0%	11.0%	11.5%
JPM rank	#5	#4	#4	#4	#3

← Treasury Services: Top 2; Sec. Services: Top 3 →

[1] Industry revenue pool; revenue, wallet rank and share per Dealogic.
[2] Revenues of 10 leading peers (JPM, GS, MS, C, BAC, CS, BARC, UBS, DB, HSBC), excluding FVA/DVA & one-time items and includes JPM preferred restatement; HSBC and BARC as of LTM3Q14; Based on 4Q exchange rates across non-USD reporting peers.
[3] TS: Market includes JPM, Citi, BAC, DB, HSBC, BNP and BoNY; JPM/BAC inclusive of firm-wide TS revenue; SS: Market includes JPM, Citi, HSBC, BoNY, STT, NTRS, Soc Gen and BNP; NTRS FY 2014 derived from 3Q YTD run rate.
[4] FY10 JPM/TS revenue is restated to exclude Commercial Card and Standby Letters of Credit.

We continue to have market-leading positions in most products

Top 3 | 2nd Tier | 3rd Tier

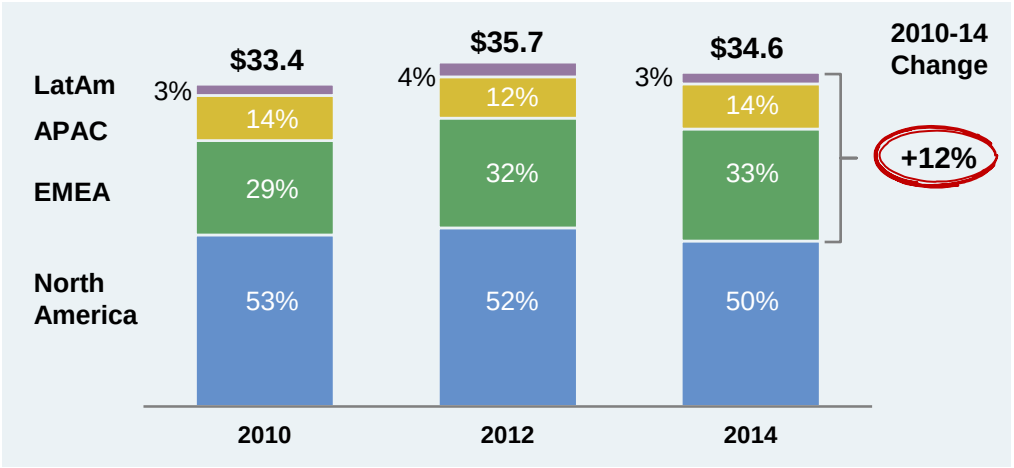
Competitive ranking in 16 product areas

	JPM				Peer 1	Peer 2	Peer 3	Peer 4	Peer 5	Peer 6	Peer 7	Peer 8
	2006	2010	2013	2014	2014							
Total leadership positions	8	12	15	**15**	7	5	5	7	5	2	0	2
BANKING (FY2014)[1]												
Bond underwriting	2	1	1	1								
Loan syndication	1	2	1	1								
ECM	3	2	2	3								
M&A	2	2	2	2								
USD clearing[2]	1	1	1	1	--		--			--		
MARKETS (3Q14YTD)[3]												
Total Fixed Income	7	2	1	1								
G10 rates	2	7	1	1								
Credit	5	1	2	3								
G10 foreign exchange	1	3	2	2								
Securitization	10	1	1	1								
Emerging markets	2	2	3	3								
Commodities	5	4	1	1								
Public finance	5	3	3	3								
Total Equities	8	4	4	3								
Cash equities	8	8	6	6								
Derivatives & converts	5	3	1	1								
INVESTOR SERVICES (3Q14YTD)[3]												
Prime brokerage	9	5	2	2								
Futures & options	9	2	2	2								

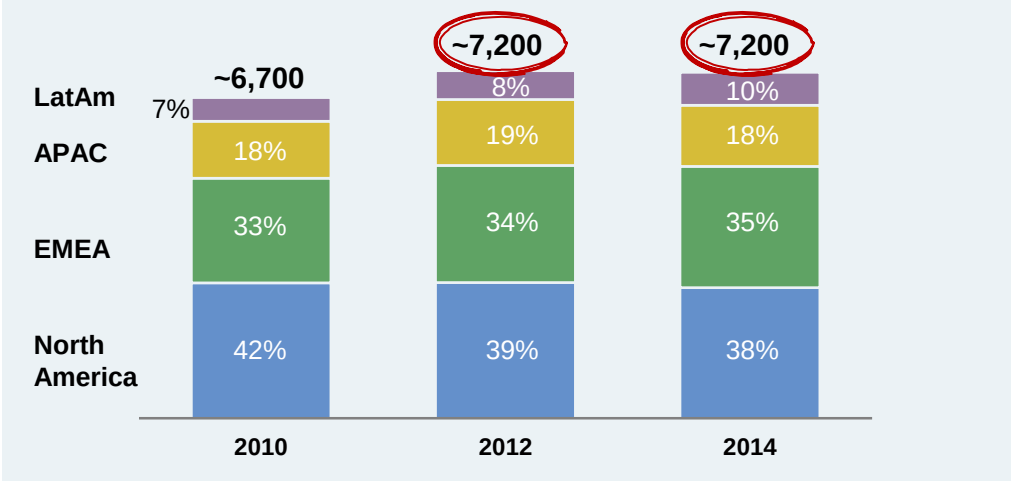
[1] Dealogic wallet rankings.
[2] CHIPS & Fedwire report.
[3] 2006 based on JPM internal estimates and JPM excluding Bear Stearns; 2010, 2013 and 3Q14YTD based on Coalition for Markets and Investor Services; Coalition Top 10 banks include: BAML, BARC, BNPP, CITI, CS, DB, GS, JPM, MS, UBS; Coalition outside-in estimates of JPM and competitor revenues; All competitor and JPM estimates have been provided based on JPM's internal structure.

International business with our core global clients has driven revenue growth

Revenue ($B)



Number of clients[1]



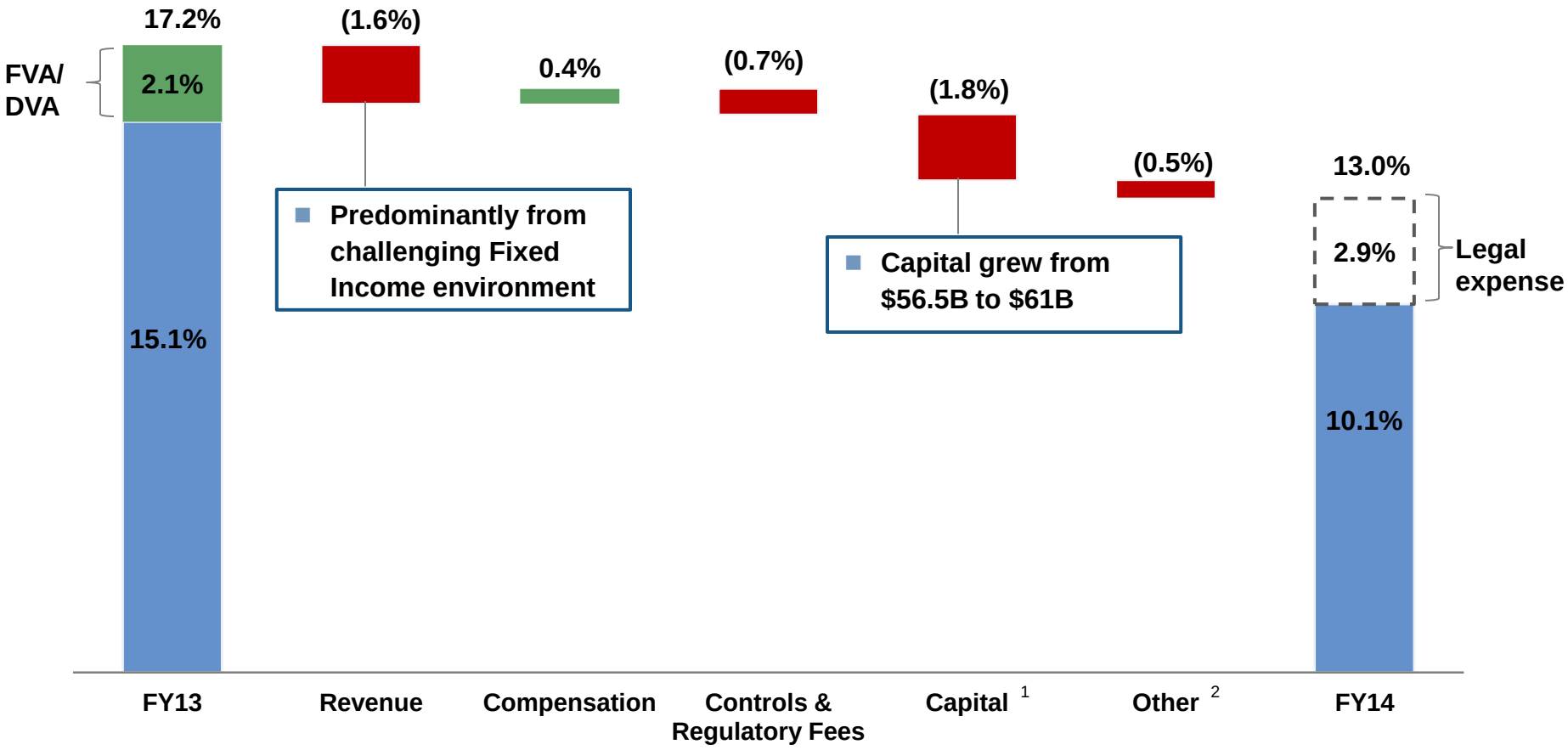
Key international metrics

- International growth largely driven by EMEA market share gains
  - In 2014, improved from #2 to #1 in EMEA IB fees, with 7.5% of market share (up from 6.2% in 2012)
- Cross-border revenues with Corporate clients grew 13% between 2011 and 2014
- Assets under custody grew 36% between 2010 and 2014 from $6.3T to $8.6T
- Focus on cross-sell to existing clients
  - ~50% of international clients use 5+ products[2]
  - Single-product clients declined more than 30% between 2011 and 2014[2]

[1] Clients segmented by region of parent domicile. Only includes clients with $50K+ in revenue.
[2] Products included are: Corporate Finance, Securitized Products, TS-Cash, TS-Liquidity, Trade, Credit, Commodities, FX, Rates, Equities, Credit Markets, IS-Custody, IS-Financing, IS-ACCE, AM, and Card.

ROE decline in 2014 driven by lower revenue, higher capital requirements, and higher controls related / legal expenses

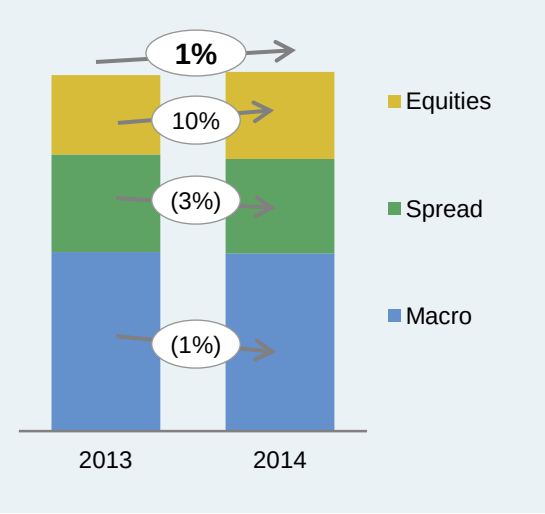
CIB Normalized ROE walk – FY 2013 to 2014



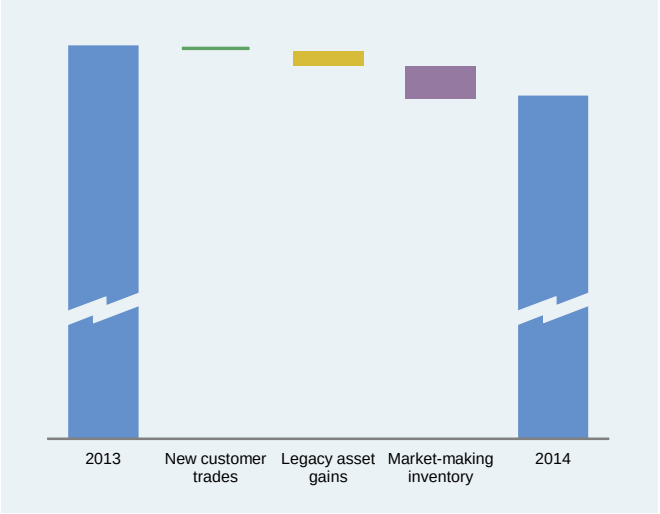
[1] Includes impact of higher preferred stock dividends.
[2] Other includes the net effect of business simplification, credit costs, and other.

Markets franchise client activity remained stable in 2014, but low volatility challenged monetization

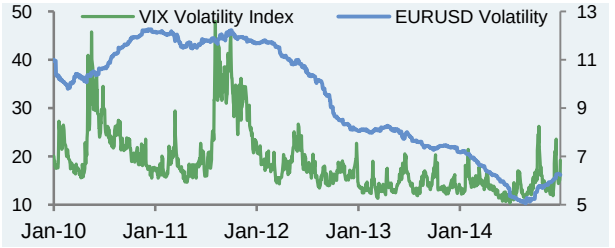
Client volumes were slightly higher, with some volatility across asset classes…



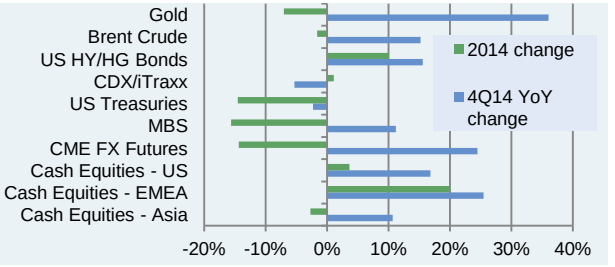
…with overall revenue decline driven primarily by a more challenging market-making environment.



In Q4, volatility finally began to pick up…

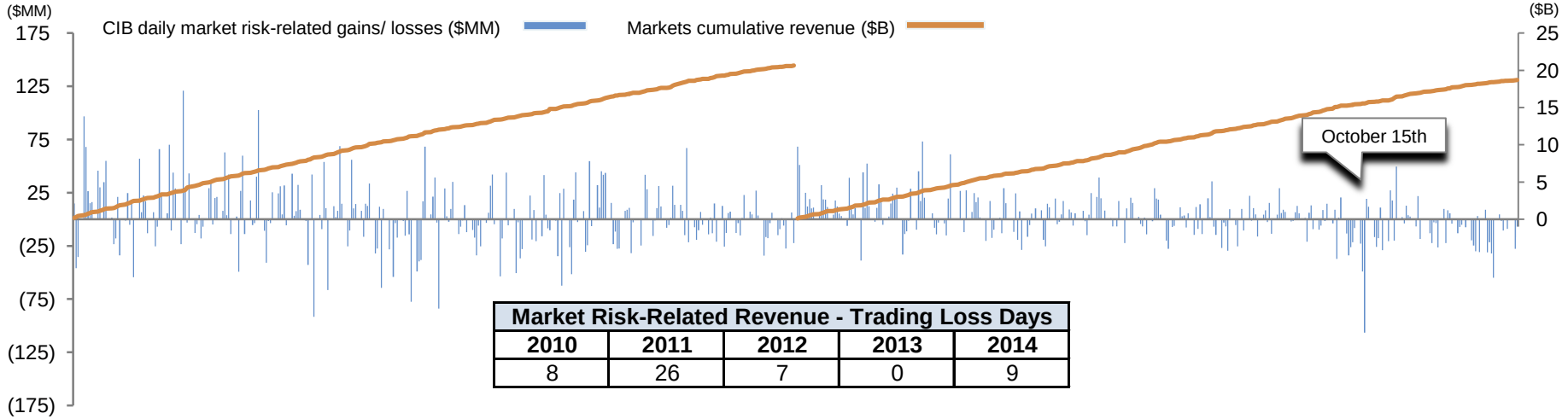


…as did market volumes.



2013 CIB daily market risk-related gains & losses on covered positions and Markets cumulative revenue[1]

2014 CIB daily market risk-related gains & losses on covered positions and Markets cumulative revenue[1]



Market Risk-Related Revenue - Trading Loss Days				
2010	2011	2012	2013	2014
8	26	7	0	9

[1] From "Regulatory Capital Disclosure – Market Risk Pillar 3 Report", December 31, 2013 and December 31, 2014. Market risk-related gains and losses are defined as profits and losses on covered positions, excluding fees, commissions, certain valuation adjustments (e.g., liquidity and DVA), net interest income, and gains and losses arising from intraday trading. 2013 disclosure includes full year net losses on certain market risk hedges of CVA, which are no longer considered covered positions following the final Basel III rules (effective Jan 1, 2014).

We have successfully completed a number of business exits and simplification initiatives

Business exits completed

- ✓ Global Special Opportunities Group (GSOG)
- ✓ Physical Commodities
- Prepaid Cards
  - ✓ HSA Card (Health Savings Accounts)
  - Corporate Prepaid Card *(exit ongoing)*
  - Public Sector Prepaid Card *(exit ongoing)*
- ✓ Commercial Paper Issuing and Paying Agent[1]

Business simplification

Client rationalization

- ✓ Select Foreign Correspondent Banks
- ✓ Tail and inactive accounts
- ✓ Majority of Broker Dealer Services (BDS) business

We are focused on a set of core businesses that are most relevant to our clients

We have exited and will continue to exit businesses and products that are non-core or no longer fit our risk profile

[1] Business within Investor Services that provides operational and payment services associated with 3rd party issuance of commercial paper.

Agenda

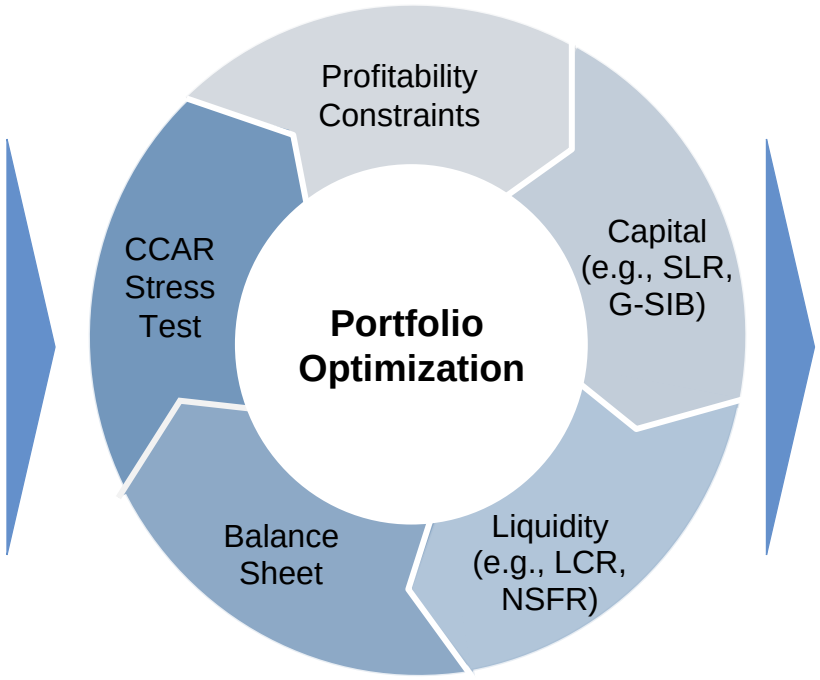
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Strategy by business	**11**
Expense update	23
Conclusion	27

Strategy Overview

Strategy from last year

- CIB **scale**, **completeness** and **global network** facilitates an integrated client coverage model, leading to best-in-class ROEs
- **Optimize** business mix while **investing** in core growth opportunities
- **Adapt** to evolving regulatory landscape and market structure changes
- Maintain **expense discipline** while absorbing increased regulatory and controls costs

New constraints need to be considered



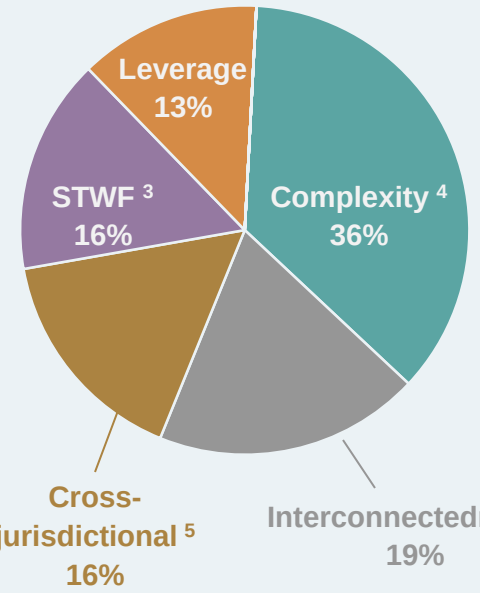
Going forward

- **The core elements of our strategy are still valid**
- **Need to continue to optimize our strategy – including G-SIB**
- **CIB taking action to achieve and maintain firmwide 4.0-4.5% G-SIB target**

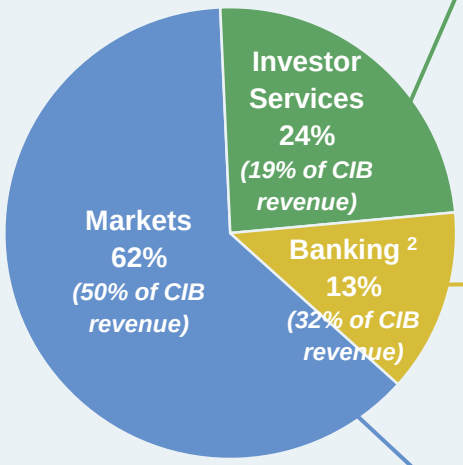
Major drivers of G-SIB impact in the CIB

CIB G-SIB impact

By Contributing Factor



By CIB Business[1]



Key G-SIB activities

- OTC clearing
- Intermediation
- Non-operating deposits
- Prime Brokerage

- Non-operating deposits
- Lending & commitments (incl. Trade Finance)

- OTC derivatives notional
- Level 3 assets
- Trading assets & securities financing

Comments

Banking & Investor Services

- Most products are not meaningfully G-SIB sensitive (e.g., IB Fees)
- Fine-tuning required in select areas (e.g., Prime Brokerage). We believe that can be achieved with limited financial impact
- A few stand-alone businesses as currently operating could be significantly impacted (e.g., OTC client clearing, derivatives intermediation); Non-operating deposits are heavily impacted as well
- Will work with clients to find the best solution in each area

Markets

- Almost all businesses contribute to G-SIB score, but many of the most significant reduction levers are low cost (e.g., OTC notionals)

[1] CIB by business split as per internal hierarchy.
[2] Banking includes Investment Banking fees, Treasury Services, and Lending.
[3] Short-term wholesale funding.
[4] OTC Derivatives; Level 3 assets; Trading book/AFS securities.
[5] Cross-jurisdictional assets and liabilities.
[6] Intra-financial assets and liabilities; Marketable securities.

Impact of implemented and proposed capital rules on the cost of OTC client clearing

JPM OTC Client Clearing strategy prior to G-SIB and SLR

- Focused on building a leadership position to help our clients clear
- Build expenses have preceded revenue; however, we expected attractive returns at scale and maturity
- Our business case was not built on halo revenues or synergies with other business lines

Impact of capital rules on clearing economics

- The cost of OTC clearing has changed for all clearing members that are G-SIB or SLR constrained
  - Illustrative analysis suggests a 10% market share equates to 3–6x of additional capital for a constrained institution

G-SIB Impact	10% of industry	Market share	Weighting	Factor
Size	$10.9B	0.01%	20%	0.5
Cross jurisdictional	$1.3B	0.01%	10%	0.1
Interconnectedness	$8.4B	0.08%	6.7%	1.1
Complexity	$3.6T	0.41%	6.7%	5.4
Total G-SIB factor				7.1
Additional capital		3x – 6x		

SLR Impact	10% of Industry
Segregated cash	$2.5B
PFE add on	$8.4B
Total leverage asset	$10.9B
Additional capital	5x – 6x

Potential outcomes for the industry

- Current market economics are incompatible with capital rules in their current form for many of the leading clearing providers
  - Whether bound by SLR or G-SIB, capital requirements increase by a significant multiple
- Non-bank affiliated clearers unlikely to have the size, scale and liquidity required to support material market share
- Possible outcomes for the OTC derivatives clearing market:
  - Pricing increases to a multiple of its current level
  - Capital rules align more closely to economic risk
  - OTC clearing providers that are G-SIB or SLR constrained exit the market

Our G-SIB strategy will involve optimizing across clients, products, and G-SIB factors

G-SIB activities by select client segments

		Hedge Funds	Long only Asset Managers	Corporates	Banks
Investor Services	OTC clearing	✓	✓		✓
	Intermediation	✓			
	Non-operating deposits	✓	✓		
	Prime Brokerage	✓			
Banking	Non-operating deposits	✓		✓	✓
	Lending & commitments (including trade finance)		✓	✓	✓
Markets	OTC derivatives notional	✓	✓		✓
	Level 3 assets	✓	✓	✓	✓
	Trading assets & secured financing	✓	✓		✓

✓ = Significant client usage

Comments

- We are a client-oriented franchise and must optimize with our clients' needs in mind
- We are taking aggressive action now which will reduce our G-SIB score while minimizing franchise impact
- Prepared to take further action to deliver on firmwide targeted operating range
- Time and regulatory clarity will be key dimensions in our execution

Global Investment Banking

Strategy

- Invest in industries, products and regions (e.g., Emerging Markets) where JPM has gaps, to benefit from cyclical and secular upswings
- Deliver the entire suite of capabilities and capture synergies across CIB
- Continue to penetrate U.S. mid-cap clients with our Commercial Bank

Capital / G-SIB optimization

- Client prioritization and balance sheet usage optimization
- Pricing discipline on commitments and lending

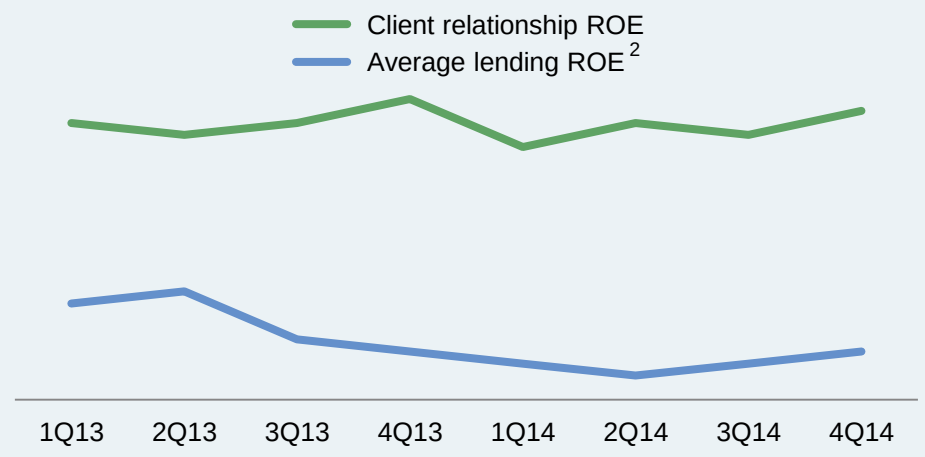
Expenses

- Continue to focus on cost discipline
- Optimize client coverage

Addressing our areas of weakness — Top 3 / 2nd Tier / 3rd Tier

FY2014 rankings[1]	Global	NA	EMEA	LatAm	Asia
M&A	2	2	1	7	8
ECM	3	2	1	3	8
Bond underwriting	1	2	2	4	7
Loan syndication	1	1	2	8	17
Overall IB fees	**1**	**1**	**1**	**5**	**8**
Total wallet	**$80B**	**52%**	**28%**	**2%**	**18%**

Delivering the entire suite of CIB products leads to strong client ROE despite low lending returns

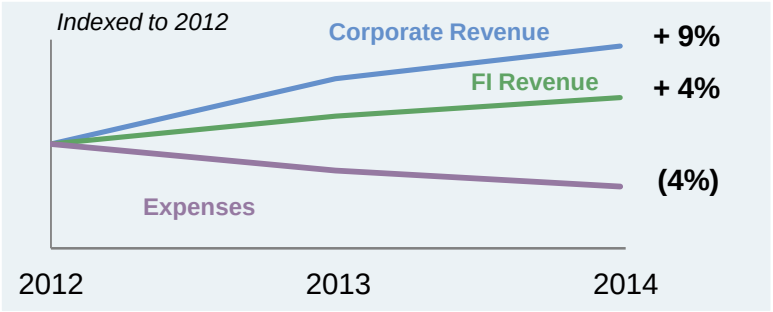


[1] Dealogic wallet rankings and market share.
[2] Average lending ROE normalized for one-off P&L items and credit costs.

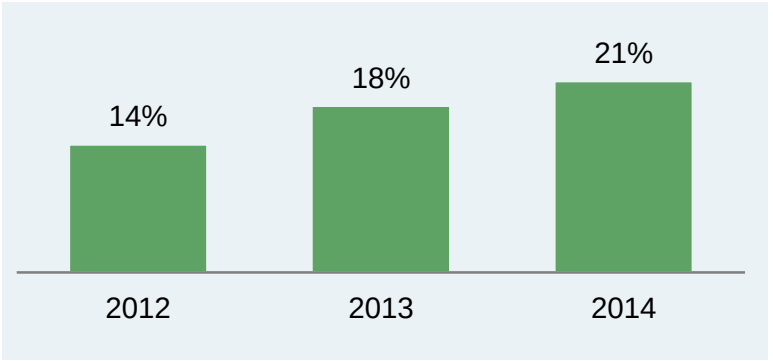
Treasury Services

Strategy	■ Reposition business towards global multinational corporates ■ Capture cross-border payments and FX associated with increasing global trade flows ■ Grow operating deposits – capture liquidity value in a rising rate environment
Capital / G-SIB optimization	■ Reduce non-operating balances ■ Pricing discipline across liquidity and fees
Expenses	■ Migrate clients to electronic solutions ■ Technology platform efficiencies ■ Business simplification

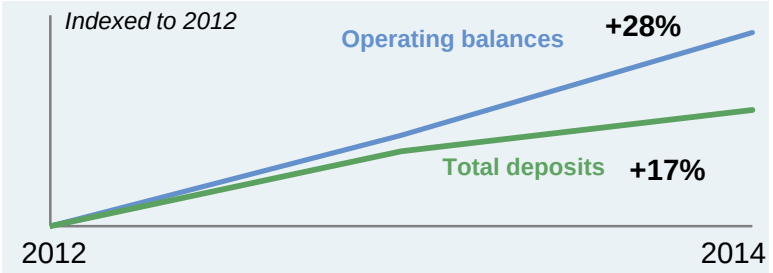
Revenue / Expense Growth Trend (Index)



% of Corporate Clients Using FX



Deposit Balance Trend[1] (Index)



[1] 2014 operating balances based on current definitions. Prior years based on internal estimates.

Markets

Strategy

- Maintain FICC leadership
- Ensure readiness for new market structure – invest in e-trading to prepare for all outcomes
- Close the gap in Cash Equities
  - Growth in low touch
  - Drive further revenue synergies with Prime Brokerage
- Use scale for staying power, cross sell and fixed cost mitigation

Capital / G-SIB optimization

- Aggressive reduction of OTC notionals
- Tight control of Level 3 assets
- Continued balance sheet discipline in repo
- RWA roll-off of legacy derivatives

Expenses

- Complete roll-out of strategic technology
- Compensation expense to reflect high capital and lower ROE environment over time
- Adjust staffing model for market structure

Maintain FICC leadership

2014 rankings[1]	Global	Americas	EMEA	APAC
G10 Rates	1↑	1	3	3
G10 Foreign Exchange	2↑	1	2	3
Emerging Markets	3↓	2	3	2
Commodities	1↑	3	1	1
Credit	3↓	4	2	5
Securitization	1	2	2	N/A
Public Finance	3	3	N/A	N/A

Close the gap in Cash Equities

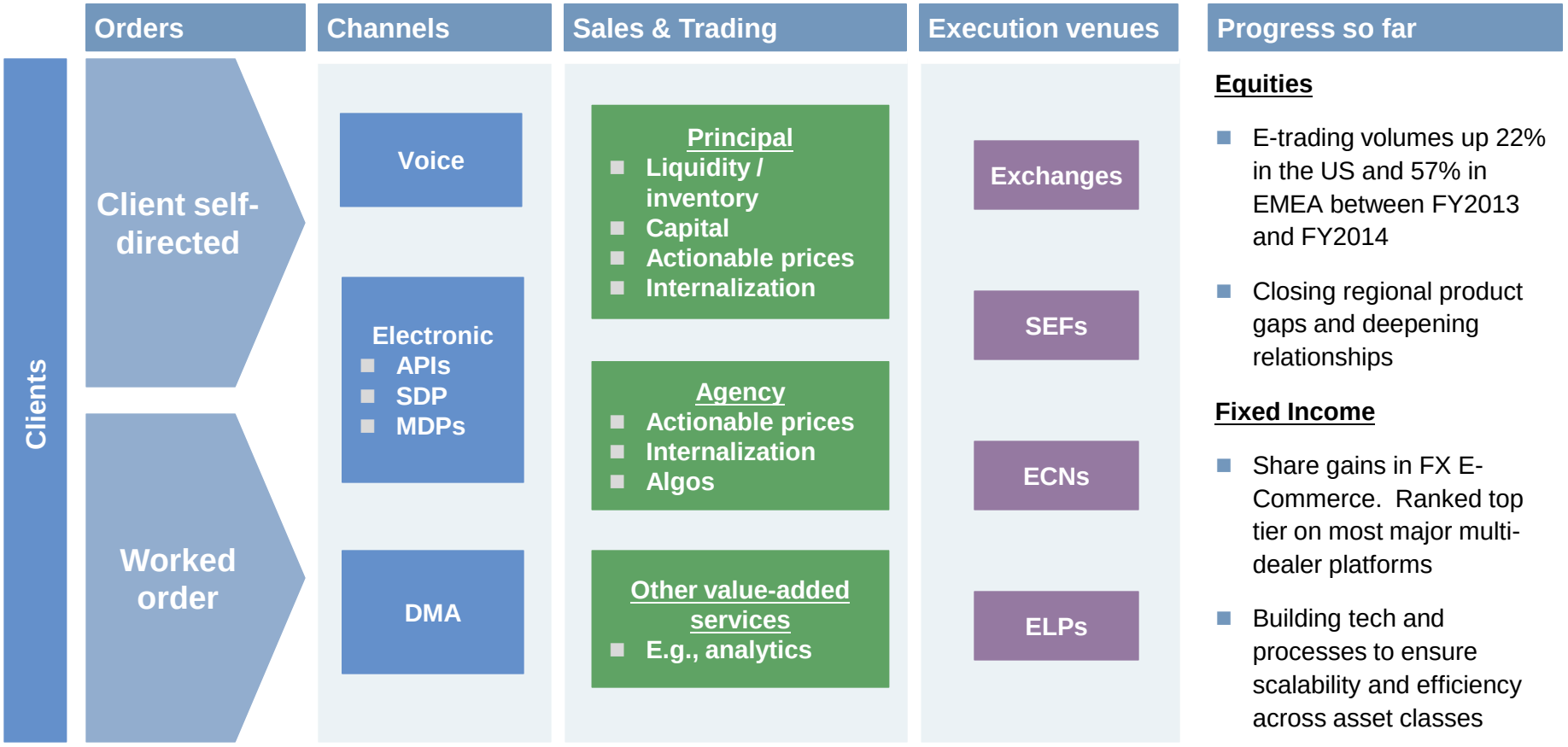
2014 rankings[1]	Global	Americas	EMEA	APAC
Cash Equities	6↑	4	4	8
Equity Derivatives & Converts	1↑	3	2	3
Equity Research	1	1	2	7

Top 3 | 2nd Tier | 3rd Tier

↑↓ Improved / worsened vs. 2010

[1] Global rankings as of 3Q14YTD. Regional rankings as of 1H14. JPM ranks based on Coalition's outside-in view of JPM positioning within Coalition top 10 banks which includes: BAML, BARC, BNPP, CITI, CS, DB, GS, JPM, MS, UBS. Coalition outside-in estimates of JPM and competitor revenues; All competitor and JPM estimates have been provided based on JPM's internal structure Equity Research ranking based on Institutional Investor.

We are preparing for a more complex future in our Markets businesses



Progress so far

Equities

- E-trading volumes up 22% in the US and 57% in EMEA between FY2013 and FY2014
- Closing regional product gaps and deepening relationships

Fixed Income

- Share gains in FX E-Commerce. Ranked top tier on most major multi-dealer platforms
- Building tech and processes to ensure scalability and efficiency across asset classes

- **Fixed Income:** future more complex with uncertain trajectory for market structure evolution
- **Equities:** clients demand increased control over execution in an electronic agency world
- **We will be operationally prepared to capture client flow in whatever form it comes**

Businesses that are currently below ROE targets will generate value for shareholders through the cycle as we become more efficient and markets improve

Example: Through-the-cycle ROE for Rates

Challenging 2014 environment

Below target ROE for Global Rates in 2014

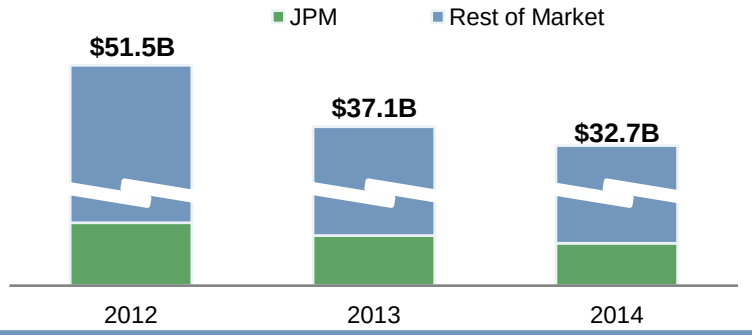
- Lower client volume due to lack of volatility coupled with the low rate environment
- Drag from increased capital cost of legacy uncollateralized transactions
- Despite 2014 revenue headwinds, core business close to TTC ROE target

Through-the-cycle outlook

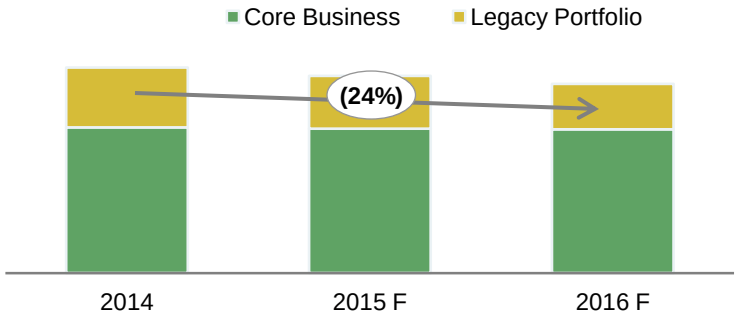
- Normalized absolute level of rates will drive greater volatility
- More harmonized global regulation on trading protocols and capital rules
- Taking actions to address G-SIB implications with manageable revenue implications
- Burden from legacy uncollateralized portfolio to diminish over time from roll off or restructure
- Additional benefit to the rest of the franchise in both revenue and fixed cost synergies

[1] Based on Coalition.

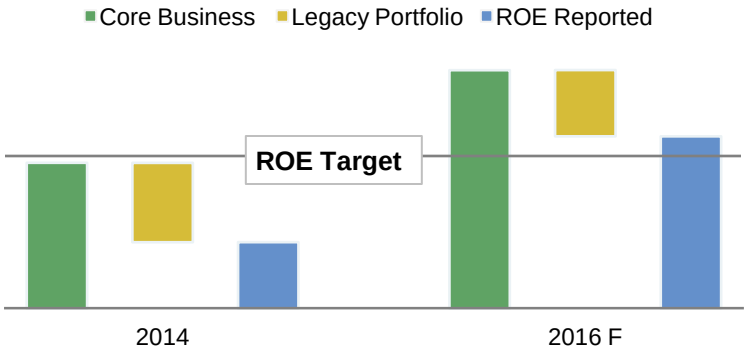
JPM Global G-10 Rates Revenue ranked #1 in 2014[1]



Rates RWA projection



Through-the-cycle ROE for Rates



Custody and Fund Services

Strategy

- Drive scalable solutions for the most complex clients and globalize offering across the client base
- Leverage current cross product client coverage organization and deep market expertise to optimize relationships with large global asset managers and owners

Capital / G-SIB optimization

- Optimize deposit balances
- Invest in functionality and connectivity to leverage alternative cash management products for clients

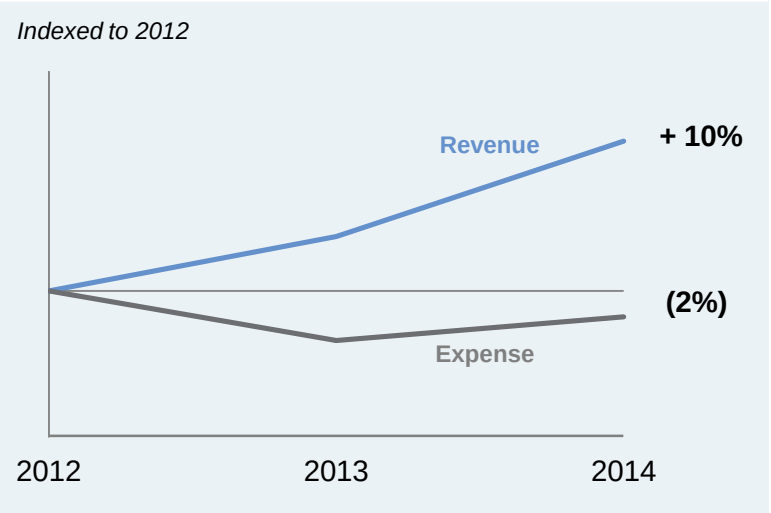
Expenses

- Upgrade core platforms and increase automation
- Standardize global operating models to enhance client experience

Period-end Assets Under Custody ($T)



Revenue / Expense Growth Trend (Index)



Prime Brokerage & Financing

Strategy

- Complete international prime brokerage capabilities with the final pieces of Asia product set
- Continue to partner with Equities to optimize returns across the hedge fund client base
- Financing in the new regulatory framework provides strategic upside as the market rebalances

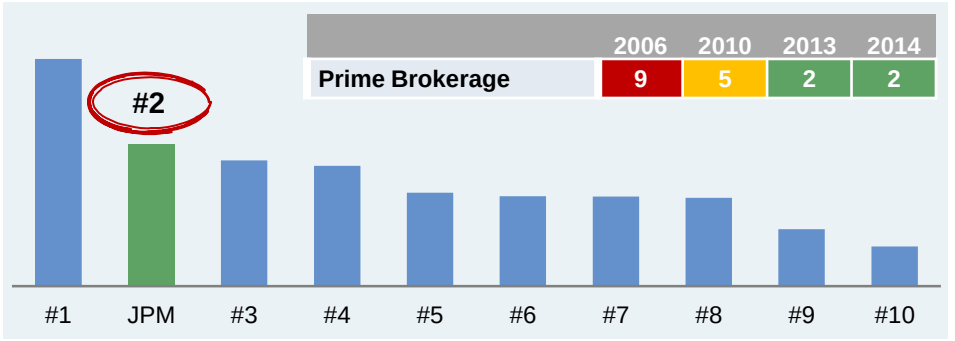
Capital / G-SIB optimization

- Ongoing re-pricing of below-hurdle-rate client activity
- Continued balance sheet discipline under G-SIB, liquidity and leverage constraints

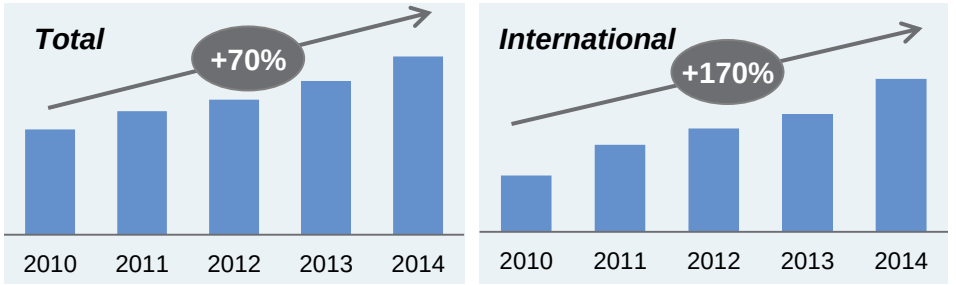
Expenses

- International investment spend declining as international prime brokerage build-out nears completion
- Driving operational scalability and process automation to deliver internal efficiencies

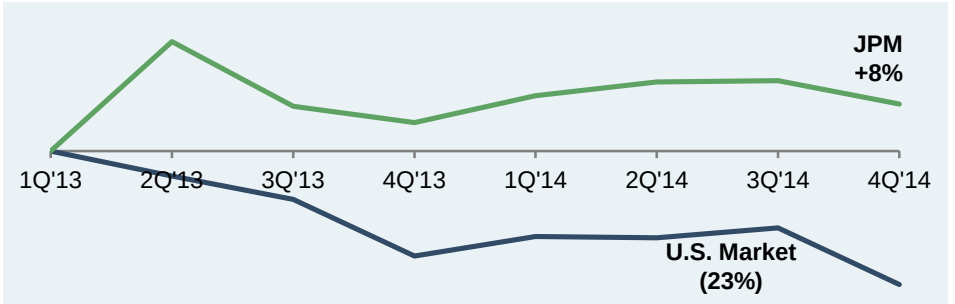
Global Prime Brokerage Ranking[1]



Balance Growth



U.S. Securities Financing Gross Balance Sheet Market Trend[2]



[1] 2006 based on JPM internal estimates and JPM excluding Bear Stearns; 2010, 2013 and 3Q14YTD based on Coalition for Markets and Investor Services; Coalition Top 10 banks include: BAML, BARC, BNPP, CITI, CS, DB, GS, JPM, MS, UBS; Coalition outside-in estimates of JPM and competitor revenues; All competitor and JPM estimates have been provided based on JPM's internal structure. Rankings exclude Broker Dealer Services business for JPM and market competitors.

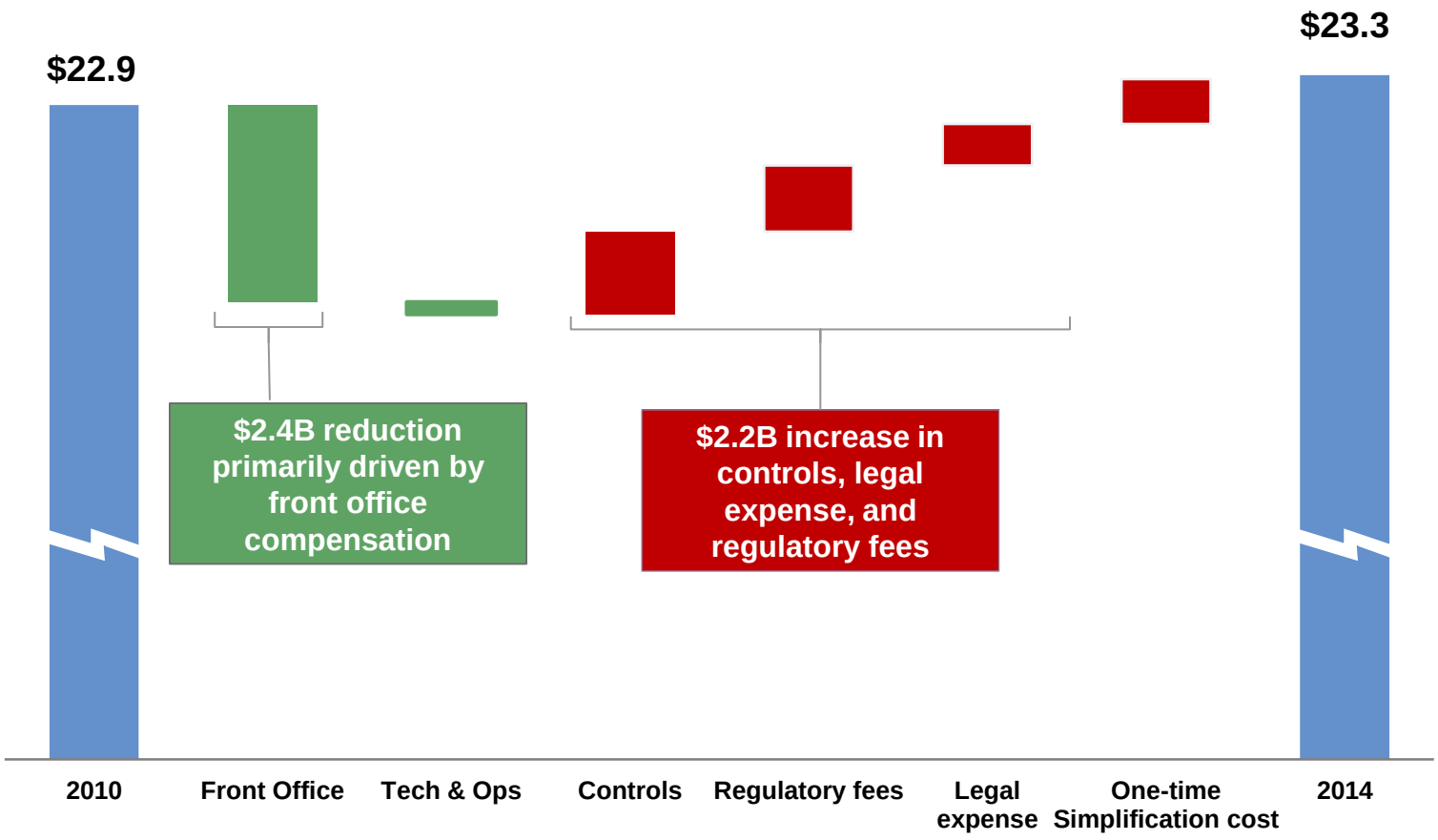
[2] Market data sourced from FRBNY primary dealer reverse repo and repo activity; JPM data based on JPMS LLC gross reverse repo and repo activity.

Agenda

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We have been disciplined in cutting expenses since 2010, primarily in the front office

CIB expense trend – 2010 to 2014 ($B)



Overhead ratio (excl DVA/FVA)	**68%**							**67%**
Comp/Rev	**37%**							**30%**

We have conducted a comprehensive efficiency review and identified several areas of opportunity

Business unit-specific

- Front-to-back efficiency review focused on business levers that impact cost base (e.g., client and front office behavior)
- Optimizing execution channels; driving to low cost electronic channels while enhancing client service
- Optimizing client service functions with the help of analytics and workflow tools

Operating model

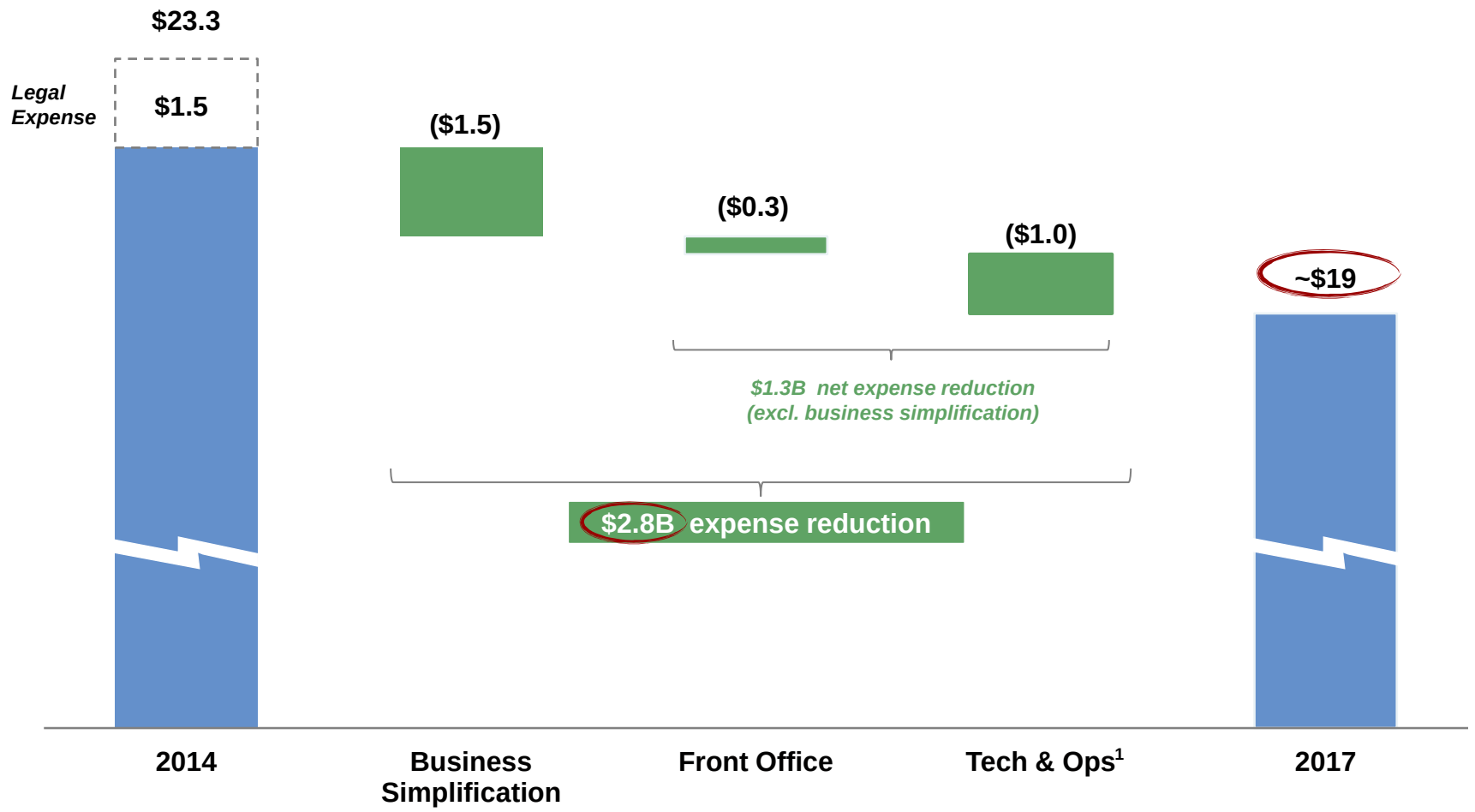
- End-to-end process reengineering to streamline operations and optimize cost per trade
- Simplification of operating model; standardizing and consolidating key activities and functions across business units
- Deepen & enrich industry utilities to perform standard non-proprietary functions at higher scale for the whole industry
- Optimize location footprint and cost

Technology infrastructure

- Optimize infrastructure utilization (e.g., mainframe and server capacity, storage)
- Completion of multi-year investments in strategic technology
- Retirement of legacy systems and killing the long tail of non-strategic applications

We are aggressively pursuing cost opportunities to deliver $2.8B of expense saves

CIB expense trend – 2014 to 2017 ($B)



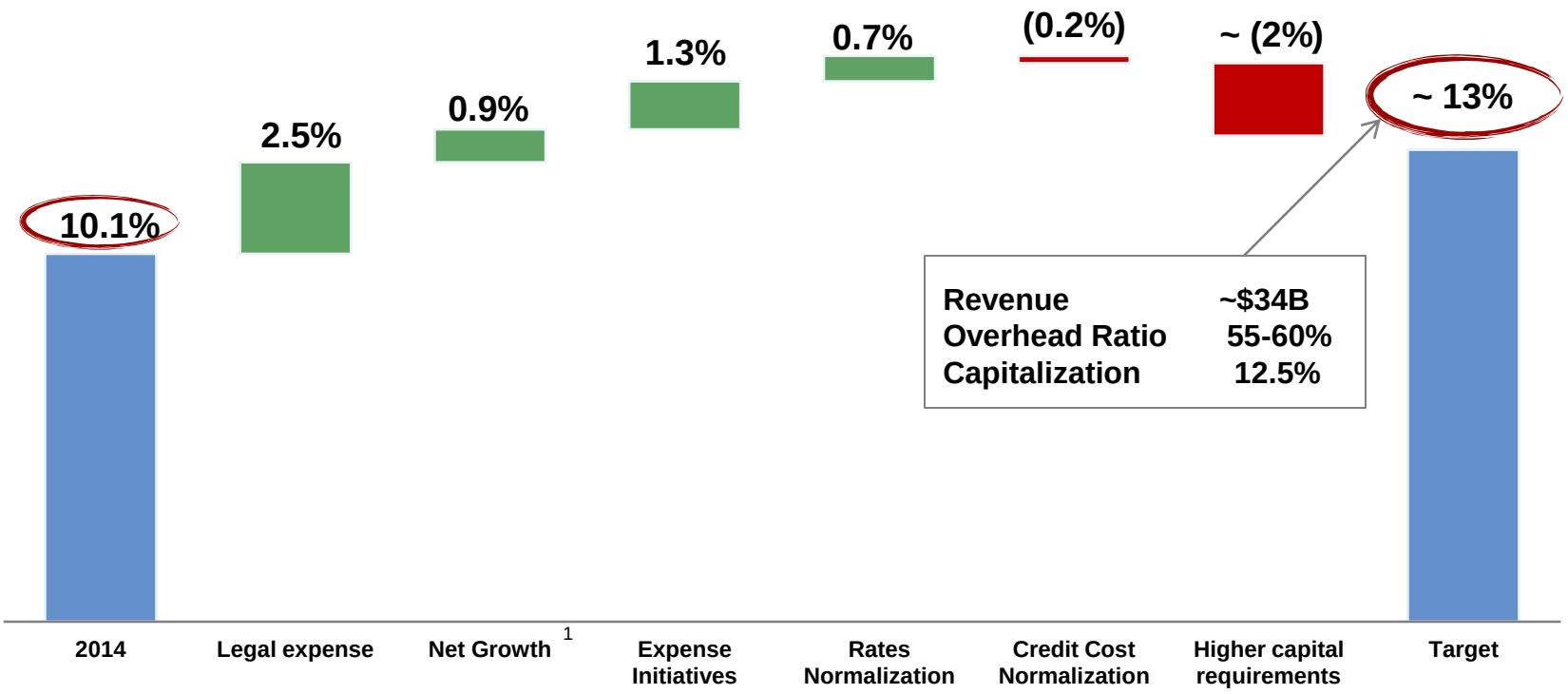
[1] Includes reduction in Tech & Ops and other.

Agenda

	Page
2014 CIB performance	2
Strategy by business	11
Expense update	23
Conclusion	**27**

ROE walk forward

ROE walk (%)



Possible +/-

- Wallet growth/contraction – cyclical and secular (e.g., emerging markets, European capital markets)
- Market re-pricing
- Interest rate moves beyond what is priced in the market
- Competitive dynamics (e.g., market share changes from competitor actions)
- Regulatory uncertainty

[1] Includes revenue and expense impact of business simplification; no meaningful ROE impact.

Conclusion

Reinforcing a culture focused on doing the right thing for our clients and stakeholders and protecting the integrity of the global markets is essential to effectively managing our conduct risk and protecting the Firm

- **Unparalleled global franchise:** unique scale, completeness, global reach
- **Outstanding management team** with stability and low level of attrition
- **Market leaders in product areas** that are important to our clients
- **Embracing change** to adapt to market structure and the regulatory environment
- **Good returns allow us to continue investing in areas of weakness** to better serve our clients and benefit from cyclical and secular upswings
- **Optimizing the size and mix of our businesses** under the expanded set of constraints including G-SIB, with a sense of urgency
- **Relentlessly focusing on making the franchise more efficient** – while continuing to invest for the future
- **Continuing to deliver best-in-class returns**

ASSET MANAGEMENT

Mary Erdoes, Chief Executive Officer Asset Management

February 24, 2015

JPMorgan Chase & Co.

AM: Consistent growth across world-class global client franchise

Strong investment culture

- Client-focused, fiduciary culture
- 84% of 10-year long-term mutual fund AUM in top 2 quartiles[1]
- 23 consecutive quarters of positive long-term AUM flows

Growth engine within JPMC

- Consistency – predictable, low-capital, high-growth business
- Breadth – diversified earnings from multiple products, channels, and regions
- Depth – solid global client-centric franchises, each with significant room to grow

World's best clients

- Serving institutional and individual clients in over 130 countries
- World's most sophisticated clients, including large pensions, sovereigns, central banks
- J.P. Morgan Private Bank unmatched in serving the world's wealthiest

Difficult to replicate

- Serving clients for nearly 200 years
- Combined model: Global Investment Management & Global Wealth Management
- Invaluable benefit of being part of JPMorgan Chase

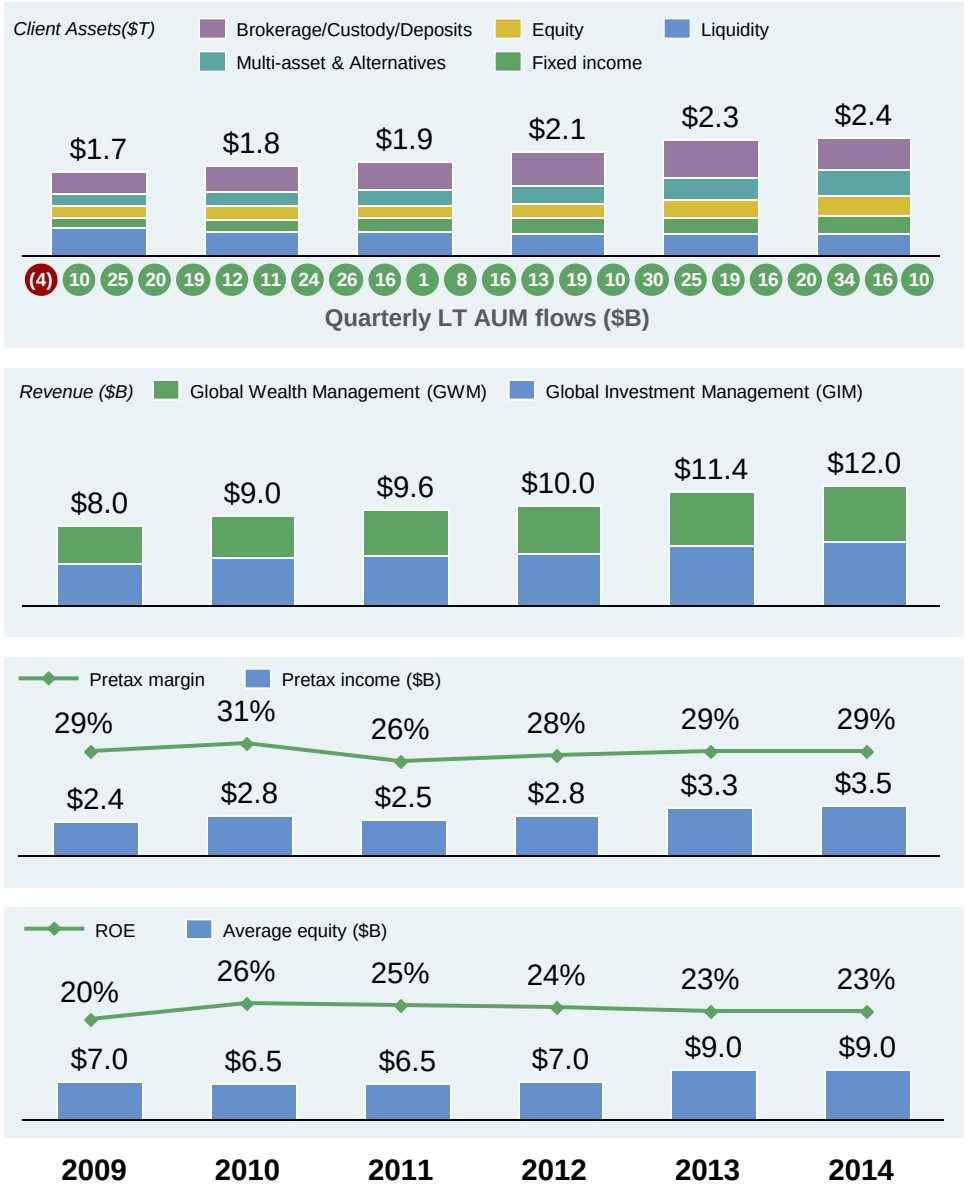
Our strategic priorities

- Continue to deliver top-tier, long-term investment performance
- Continue to invest in people, products, and processes
- Continue to reinforce infrastructure and control environment

For important footnoted information, please refer to notes appendix

Diversified, predictable, capital-efficient growth business

	Target	2014	3-yr avg.
Client assets	***+7-10%***	*+8%[1]*	*+8%*
Revenue	***+7-12%***	*+5%*	*+8%*
Pretax income	***+10-15%***	*+5%*	*+11%*
ROE	***25%+***	*23%*	*23%*



[1] Excludes impact from 2014 sale of RPS assets

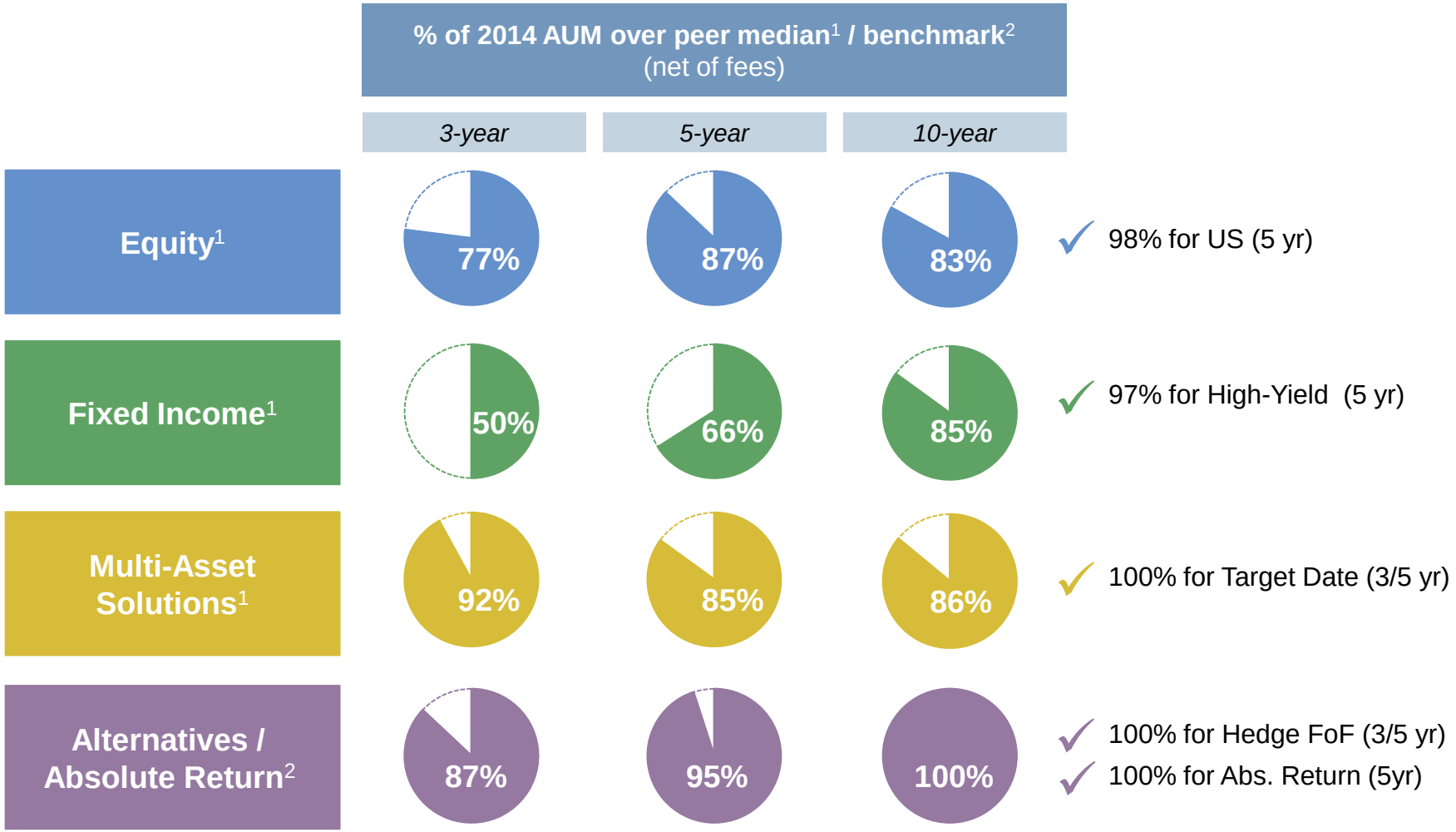
2014 highlights – another record year

Record

		2009	2014	5-yr CAGR
Top investment performance	Assets under management ($T)	$1.2	*$1.7*	*7%*
	Mutual funds with a 4/5 star rating (#)[1]	127	*228*	*12%*
Record growth and results	Client assets ($T)	$1.7	*$2.4*	*7%*
	Long-term AUM flows ($B)	$51	*$80*	*1.6x*
	Deposits ($B)	$80	*$155*	*14%*
	Loans (ex-mortgages) ($B)	$38	*$82*	*17%*
	Mortgages ($B)	$8	*$25*	*25%*
	Revenue ($B)	$8.0	*$12.0*	*8%*
	Net income ($B)	$1.5	*$2.2*	*8%*
World-class salesforce	GWM – PB client advisors (#)	1,867	*2,392*	*5%*
	GWM – PB revenue / client advisor ($mm)	$1.9	*$2.0*	*2%*
	GIM Inst'l – Institutional direct salespeople	97	*114*	*3%*
	GIM Inst'l – Institutional revenue / direct salesperson ($mm)	$10.0	*$14.3*	*7%*
	GIM Retail – Funds senior salespeople	188	*284*	*9%*
	GIM Retail – Funds revenue / senior salesperson ($mm)	$7.1	*$9.5*	*6%*

For important footnoted information, please refer to notes appendix

Franchise built on leading investment performance across asset classes

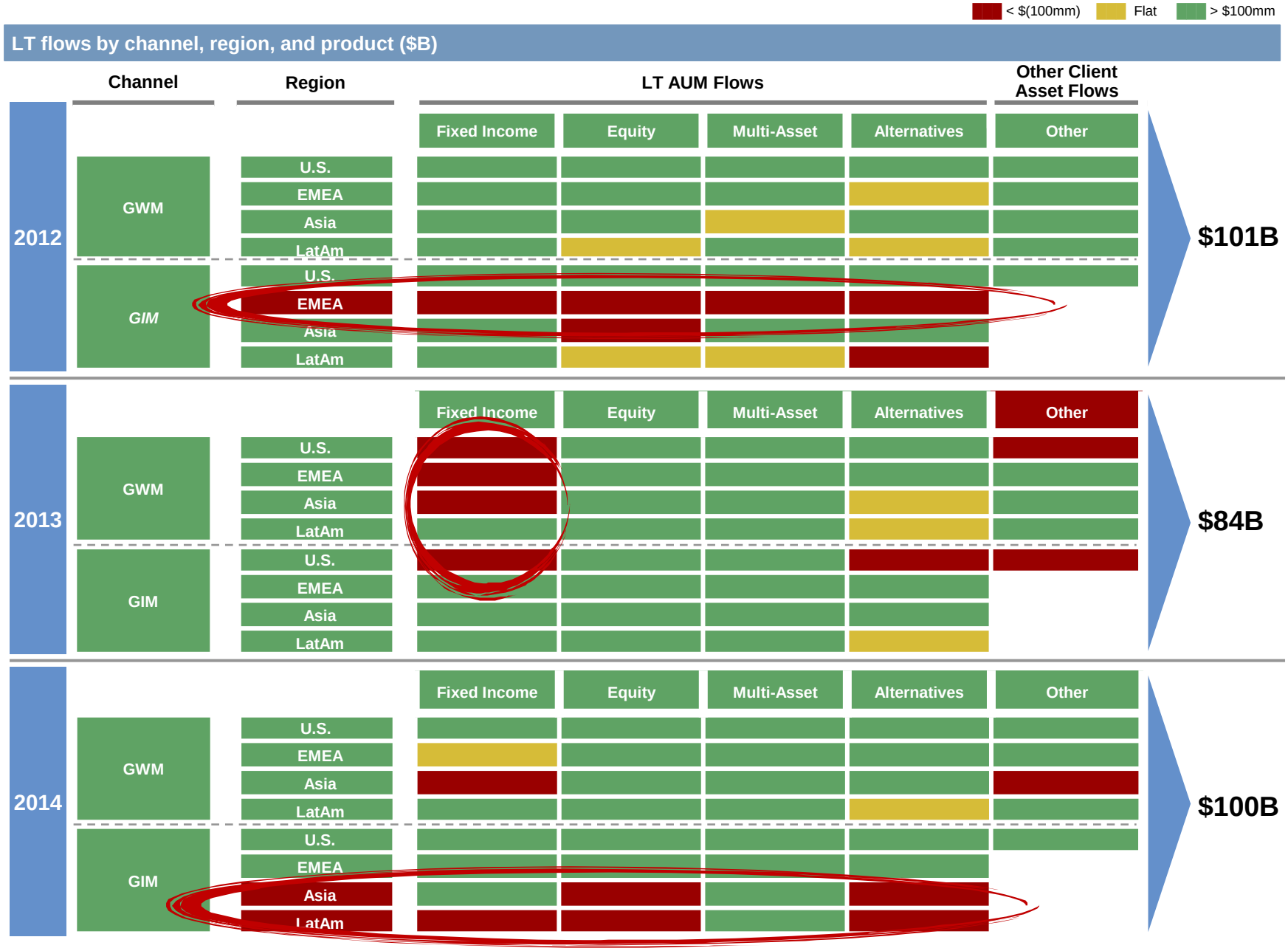


For important footnoted information, please refer to notes appendix

[1] Represents the proportion of retail open-ended mutual fund assets that are ranked above peer category median. See notes appendix for additional details

[2] Represents the proportion of assets in mutual funds, commingled funds and segregated portfolios that are exceeding (net of management fee) their respective official benchmark. Excludes private equity, real assets, and other longer dated or closed-end investment strategies. See notes appendix for additional details

Strength across diverse products, channels, and regions…



…leading to consistently top ranked flows (%)

Ranking of LT client asset flows (as % of beginning of period LT client assets) for key peers

2010	2011	2012	2013	2014	2010-2014 annualized growth	*2010-2014 annualized growth*
Peer 1	Peer 4	Peer 1	Peer 4	Peer 12	JPM	*8%* [1]
Peer 2	JPM 8%	JPM 7%	Peer 7	Peer 5	Peer 4	*7%* [2]
JPM 10%	Peer 5	Peer 4	Peer 5	Peer 7	Peer 5	*7%* [3]
Peer 3	Peer 7	Peer 7	Peer 12	JPM 5%	Peer 7	*5%* [4]
Peer 4	Peer 6	Peer 3	JPM 5%	Peer 9	Peer 1	*4%* [5]
Peer 5	Peer 8	Peer 5	Peer 8	Peer 10	Peer 2	*4%* [2]
Peer 6	Peer 1	Peer 12	Peer 9	Peer 4	Peer 8	*3%* [2]
Peer 7	Peer 3	Peer 2	Peer 6	Peer 6	Peer 6	*3%* [6,7]
Peer 8	Peer 2	Peer 11	Peer 2	Peer 11	Peer 12	*3%* [8]
Peer 9	Peer 11	Peer 8	Peer 11	Peer 8	Peer 3	*3%* [5]
Peer 10	Peer 9	Peer 6	Peer 1	Peer 3	Peer 9	*2%* [2]
Peer 11	Peer 10	Peer 9	Peer 10	Peer 2	Peer 11	*2%* [9]
Peer 12	Peer 12	Peer 10	Peer 3	Peer 1	Peer 10	*0%* [10]

Source: Company filings, J.P. Morgan estimates
Note: Peer group includes peers with publicly reported financials and 2014 client assets of at least $500B: Allianz, BAC, BEN, BK, BLK, CS, DB, GS, IVZ, MS, TROW, UBS
For important footnoted information, please refer to notes appendix

…leading to consistently top ranked flows ($)

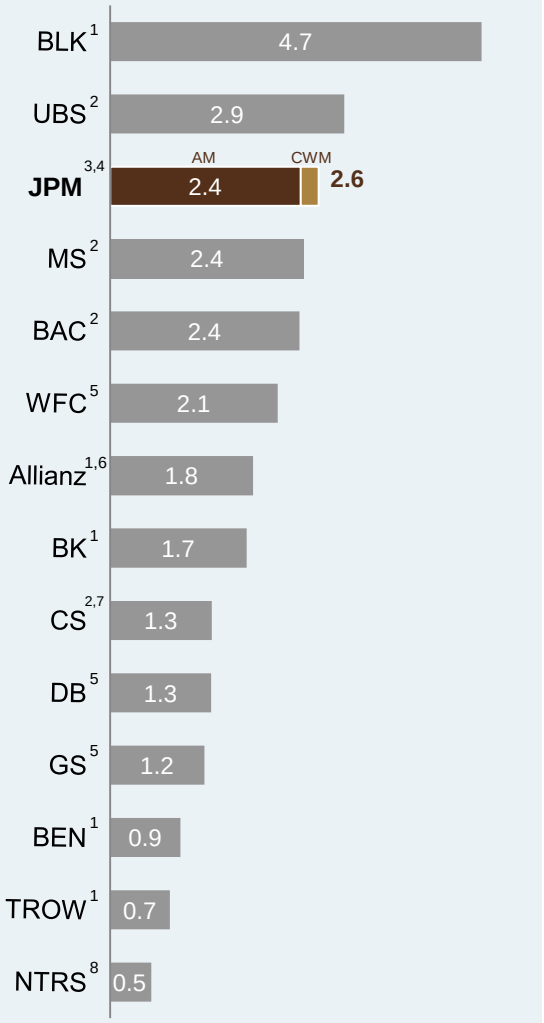
Ranking of LT client asset flows ($B) for key peers

2010	2011	2012	2013	2014	2010-2014 avg. flows ($B)	*2010-2014 avg. flows ($B)*
Peer 1	JPM $103	Peer 1	Peer 8	Peer 8	JPM	*$100* [1]
JPM $114	Peer 4	JPM $101	Peer 4	JPM $100	Peer 8	*$69* [2]
Peer 2	Peer 1	Peer 4	JPM $84	Peer 12	Peer 4	*$66* [2]
Peer 3	Peer 11	Peer 11	Peer 5	Peer 11	Peer 1	*$52* [3]
Peer 4	Peer 5	Peer 7	Peer 11	Peer 5	Peer 5	*$44* [4]
Peer 5	Peer 3	Peer 5	Peer 7	Peer 10	Peer 11	*$41* [5]
Peer 6	Peer 8	Peer 12	Peer 12	Peer 7	Peer 3	*$35* [6,7]
Peer 7	Peer 7	Peer 6	Peer 3	Peer 4	Peer 7	*$33* [2]
Peer 8	Peer 9	Peer 2	Peer 2	Peer 3	Peer 2	*$21* [2]
Peer 9	Peer 2	Peer 3	Peer 9	Peer 9	Peer 12	*$18* [8]
Peer 10	Peer 6	Peer 9	Peer 6	Peer 6	Peer 9	*$13* [2]
Peer 11	Peer 10	Peer 8	Peer 1	Peer 2	Peer 6	*$11* [3]
Peer 12	Peer 12	Peer 10	Peer 10	Peer 1	Peer 10	*$(4)* [9]

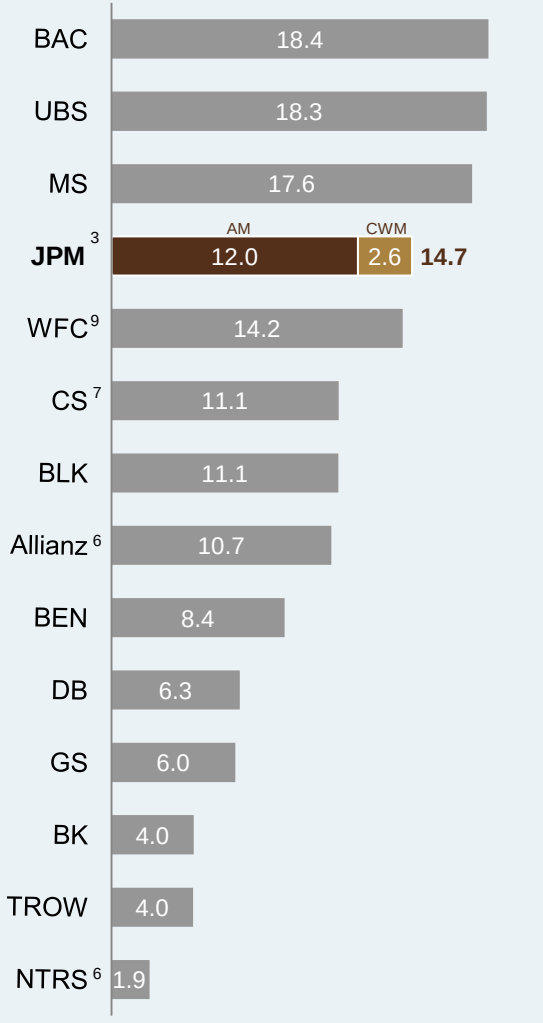
Source: Company filings, J.P. Morgan estimates
Note: Peer group includes peers with publicly reported financials and 2014 client assets of at least $500B: Allianz, BAC, BEN, BK, BLK, CS, DB, GS, IVZ, MS, TROW, UBS
For important footnoted information, please refer to notes appendix

Combined Asset Management and Chase Wealth Management produce strong results

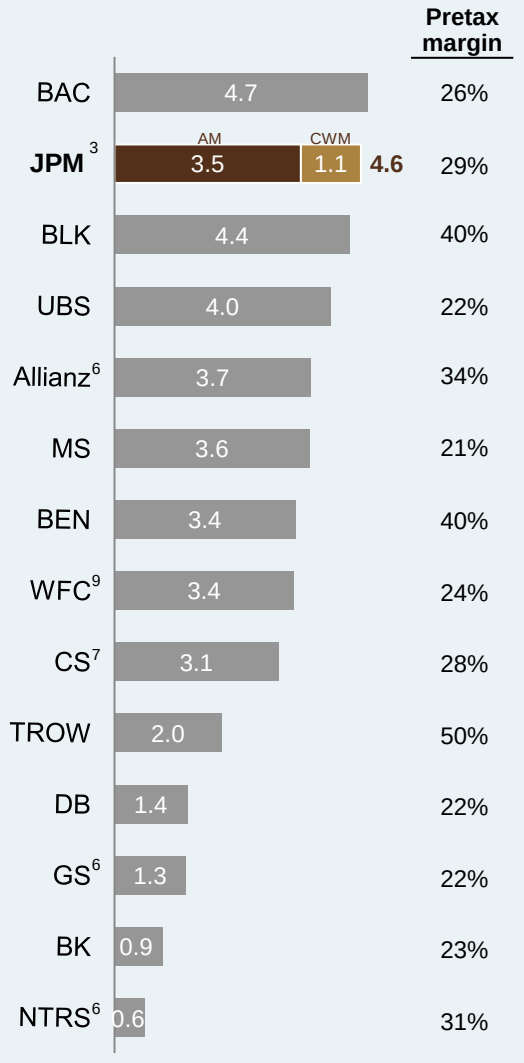
2014 Client assets ($T)



2014 Revenue ($B)



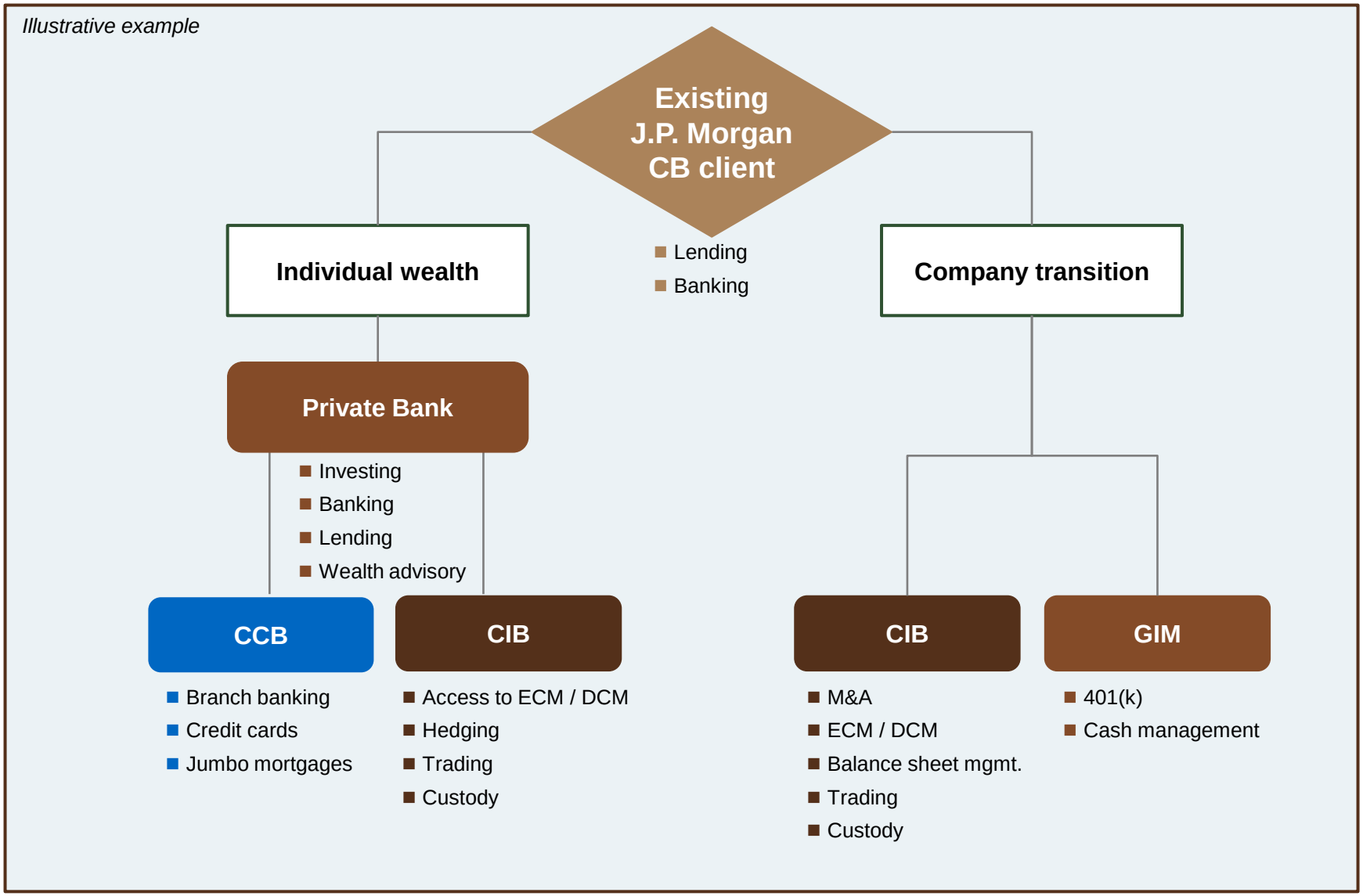
2014 Pretax income ($B)



Source: Company filings, J.P. Morgan estimates
For important footnoted information, please refer to notes appendix

Invaluable benefit of being part of JPMC

Illustrative example



GIM: Built on a foundation of exceptional investment capabilities

Superior client outcomes

- Strong investment performance: 84% of 10-year LT mutual fund AUM in top 2 quartiles[1]
- Serve 60% of world's largest pension funds, sovereign wealth funds, and central banks

Global talent

- Local presence in over 20 countries and 70 cities, with network of 600+ portfolio mgrs.
- Retention rate of 96% for top senior portfolio management talent

Long-term focus

- Nearly doubled AUM since 2006
- Consistently investing in state-of-the-art technology

Insights driven

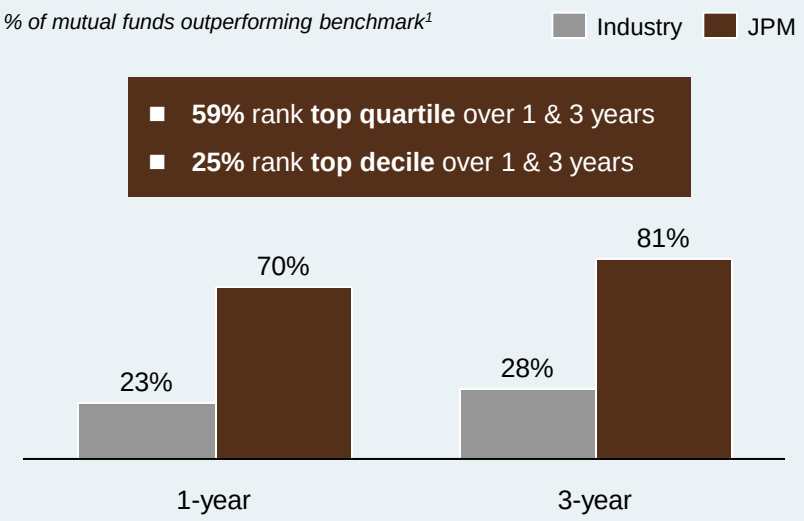
- 250+ research analysts, 30+ market strategists, 5,000+ company visits
- "Guide to the Markets" thought leadership published in 12 languages and 25 countries

For important footnoted information, please refer to notes appendix

Continued strength in traditional asset classes

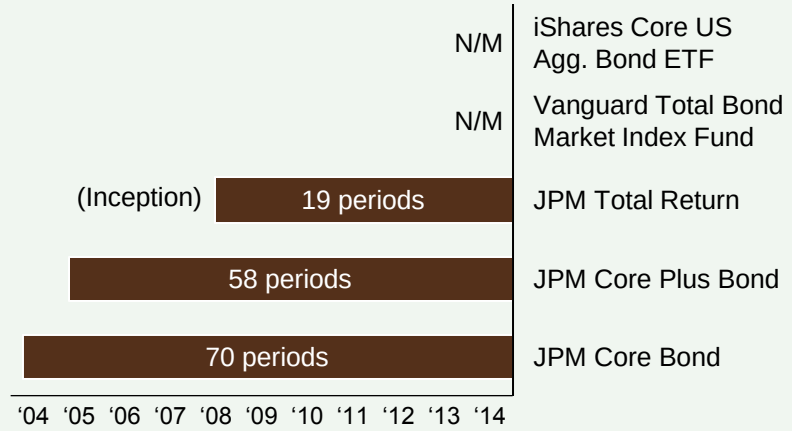
Equity example – US equity 40-Act funds

% of mutual funds outperforming benchmark[1]



Fixed Income example – Core fixed income 40-Act funds

of periods of rolling 5Y outperformance vs. benchmark (observed monthly)[2]



Global Equity rankings

Rank by global active LT AUM[3]

2009	2014
1. American Funds	1. American Funds
2. Fidelity	2. Fidelity
3. Vanguard	3. Vanguard
4. BEN	4. TROW
5. TROW	5. BEN
6. BLK	6. **JPM**
7. IVZ	7. DFA
8. **JPM**	8. IVZ
9. Columbia	9. BLK
10. DB	10. MFS

Rank by flows[3]

Year	Rank
2014	#2
2013	#1
2012	#3
2011	#17
2010	#18
2009	#2

Global Fixed Income rankings

Rank by global active LT AUM[4]

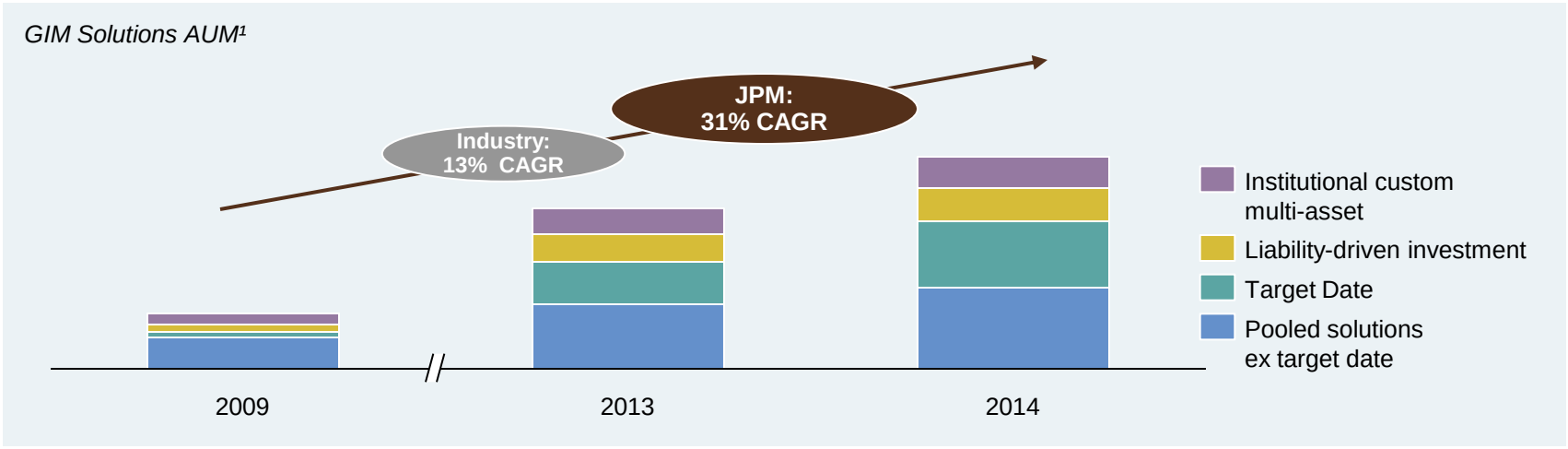
2009	2014
1. PIMCO	1. PIMCO
2. Vanguard	2. Vanguard
3. Fidelity	3. BEN
4. BEN	4. Fidelity
5. American Funds	5. **JPM**
6. Intesa SP	6. BLK
7. **JPM**	7. American Funds
8. UniCredit/Pioneer	8. TROW
9. UBS	9. GS
10. Oppenheimer	10. UniCredit/Pioneer

Rank by flows[4]

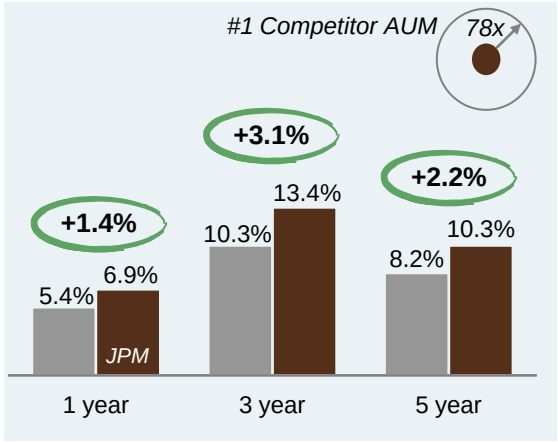
Year	Rank
2014	#4
2013	#3
2012	#2
2011	#4
2010	#4
2009	#4

Source: Strategic Insight, Morningstar
For important footnoted information, please refer to notes appendix

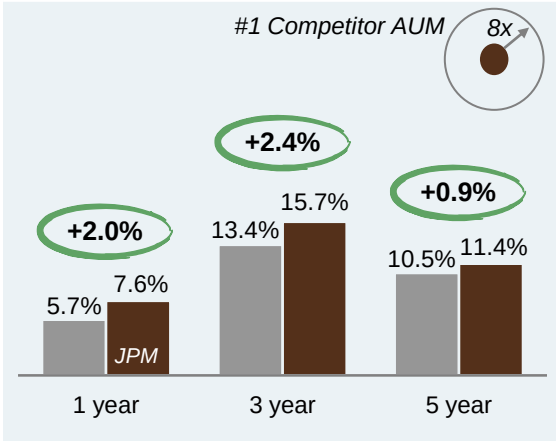
Breadth of platform provides building blocks for leading multi-asset Solutions



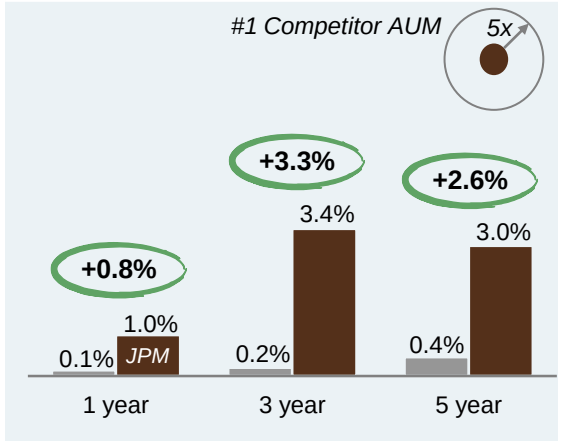
Diversified (60% MSCI World/40% Agg.)[2]



SmartRetirement 2035 (S&P TD 2035)[2]



Systematic Alpha (ICE Libor 1 Month)[2]

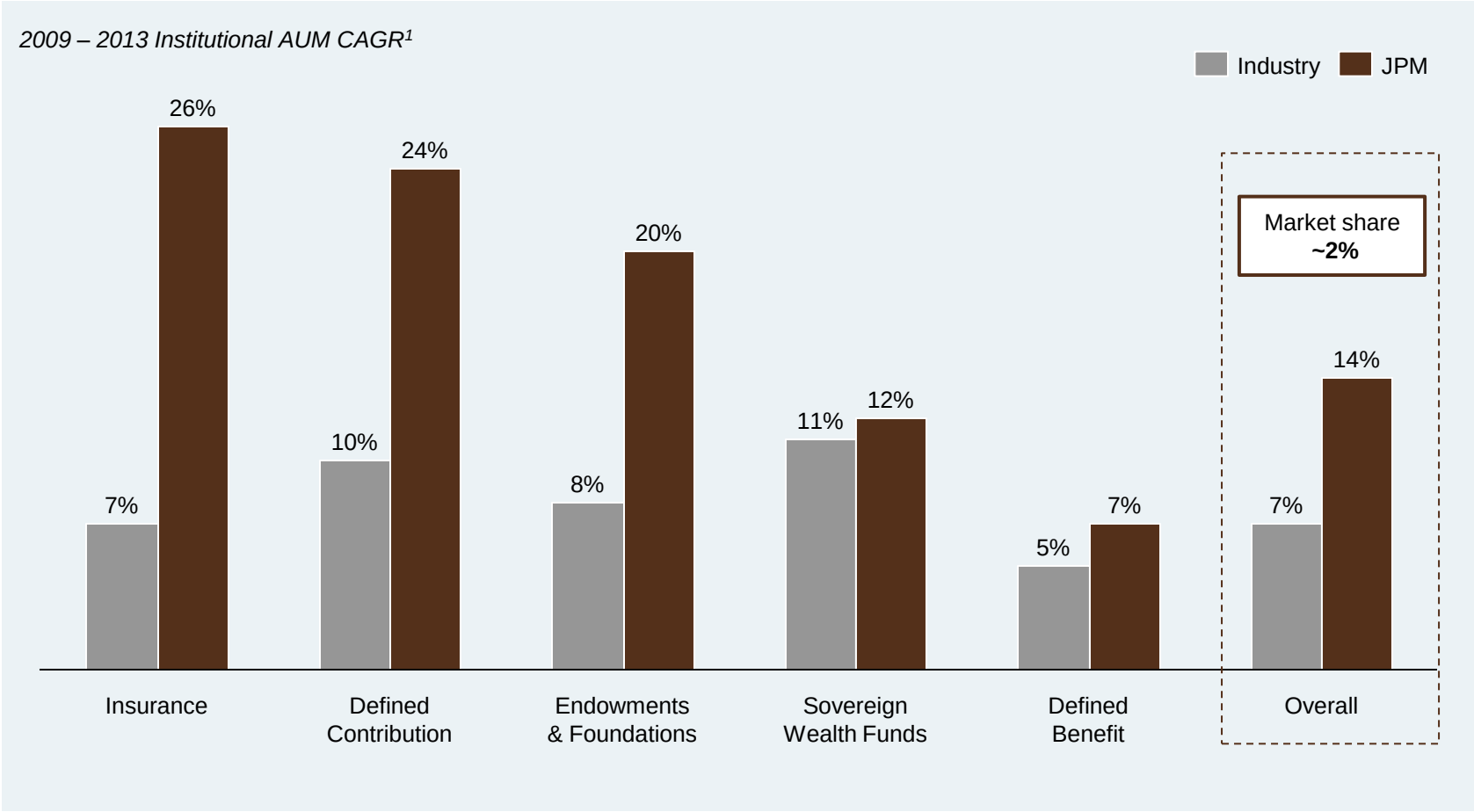


Morningstar "2014 US Allocation Fund Manager of Year"[3]

Morningstar Awards 2014©. Morningstar, Inc. All Rights Reserved.

Source: Morningstar, Strategic Insight, eVestment
For important footnoted information, please refer to notes appendix

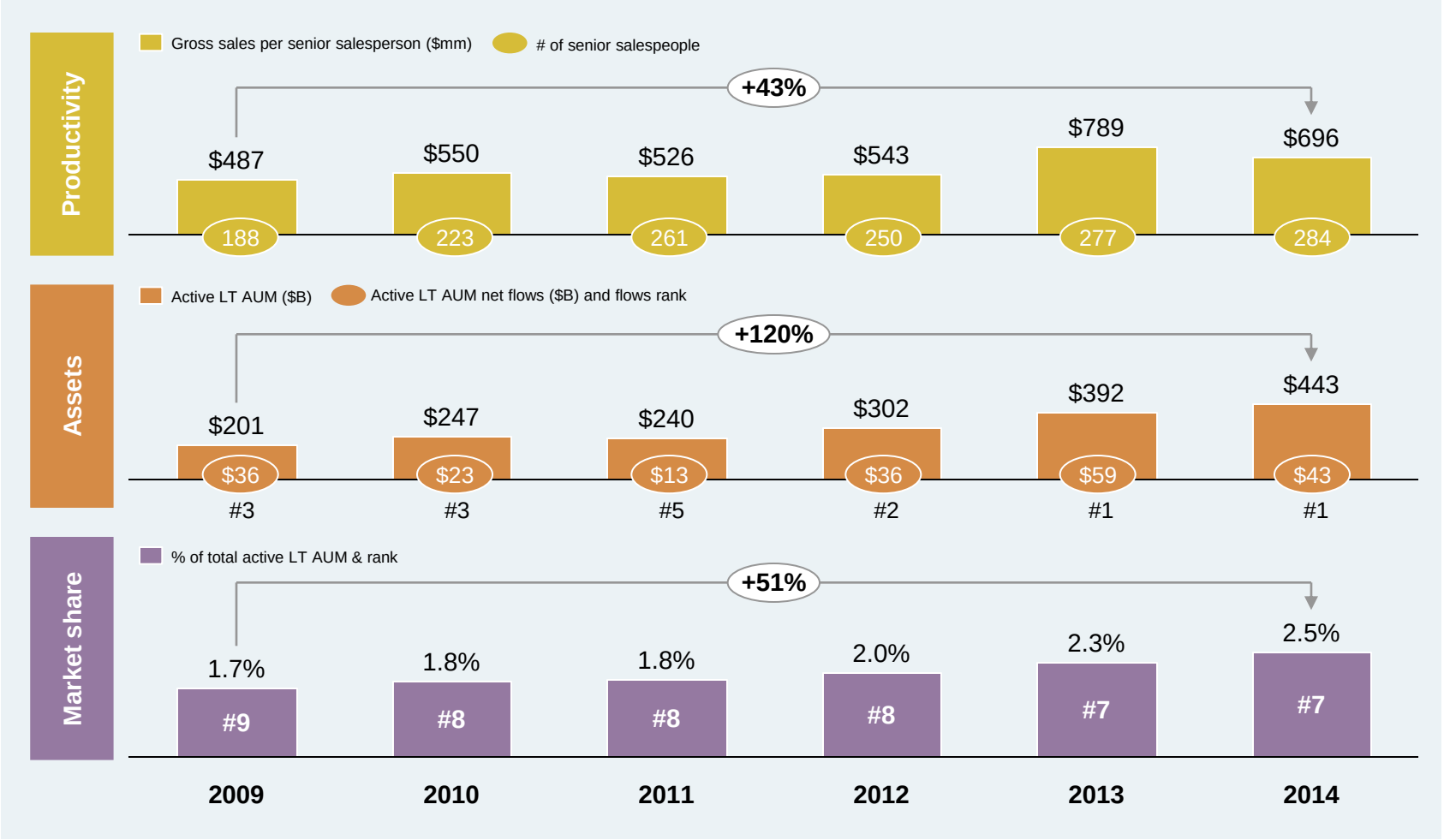
Institutional: Gaining market share in each client segment



Every +10bps market share = +$100mm revenue

Source: McKinsey, Towers Watson, SWF Institute, Reuters / Patpatia, Pensions & Investments, J.P. Morgan estimates
[1] JPM Institutional AUM is long-term only

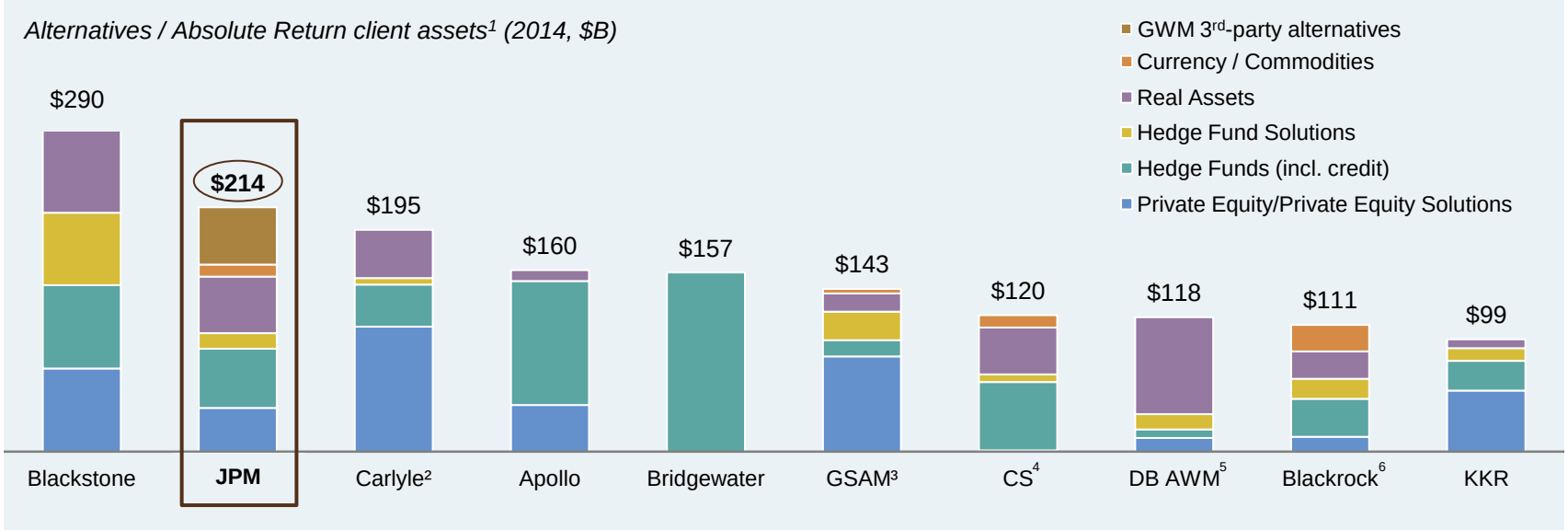
Retail: World's fastest growing active mutual fund manager



Every +10bps market share = +$100mm revenue

Source: Strategic Insight

Leading Alternatives / Absolute Return capabilities across GIM and GWM



Innovating to meet client needs

35 launches in 2014 across themes including:

Private Equity	***Private tech late stage growth equity***
	Emerging markets growth equity
Credit	***Specialty insurance & credit***
Hedge Fund Solutions	***Liquid alternatives***
Real Assets	***Infrastructure platform***

Recent industry recognition

- **Manager of Year:** Large Fund of Hedge Funds
  - Institutional Investor
- **Industry Innovation Award:** Diversified Commercial Property Fund
  - Chief Investment Officer
- **#1 AUM:** US real estate equity, US value add real estate equity, and US infrastructure
  - Pensions & Investments

Source: Company filings, FT Towers Watson Global Alternatives Survey 2014, J.P. Morgan estimates
For important footnoted information, please refer to notes appendix

GWM: Superior franchise serving sophisticated clients globally

Leading financial results

Since 2009…

- Client assets **+60%**
- Revenue **+50%**
- Pretax income **+40%**

Best Global Private Bank



Successful expansion

Since 2009…

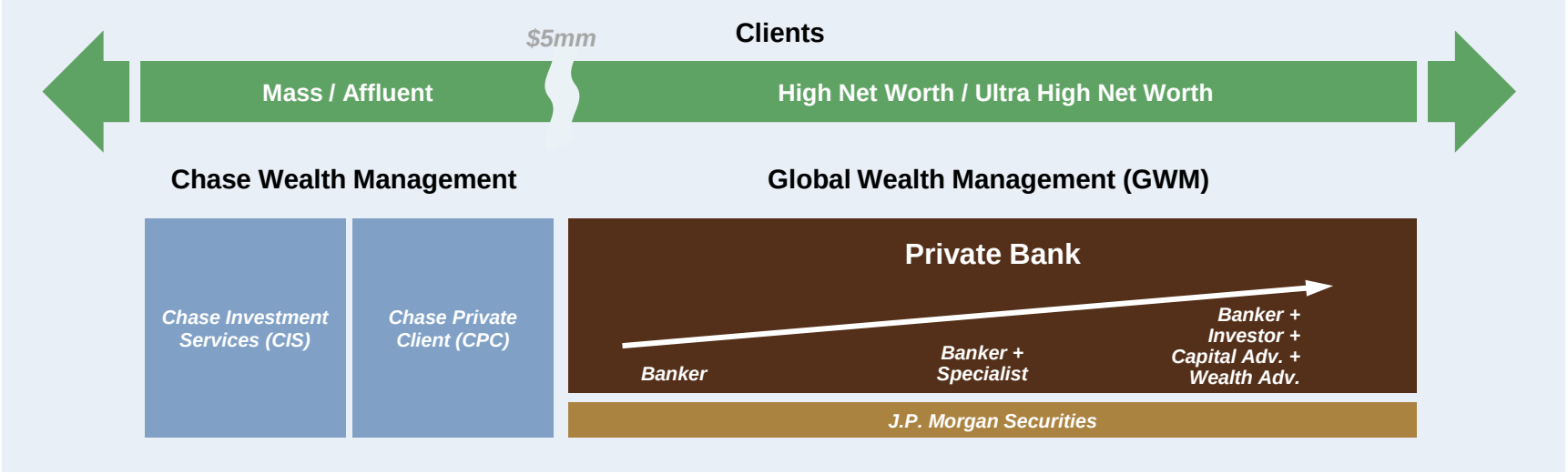
- Client advisors **+25%** (**+75%** internationally)
- More than doubled size of alternatives platform
- Strong growth in HNW globally

World's best private bank

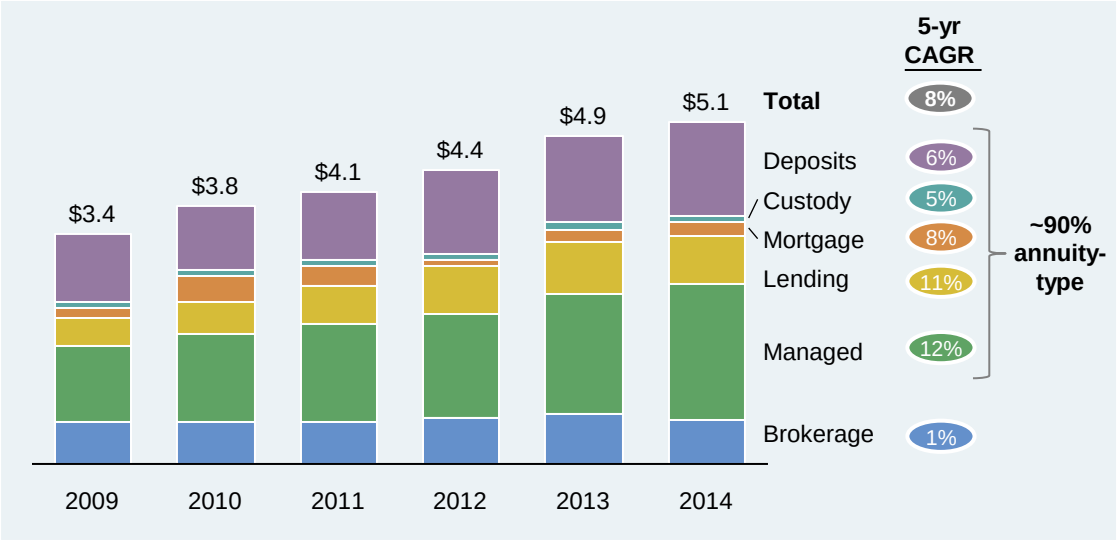
- Revenue per banker **50% >** peers[1]
- Continuous innovation through market cycles and across balance sheet
- **50%** of assets from clients with $100mm+ at JPM

[1] BCG 2014 Global Wealth Report

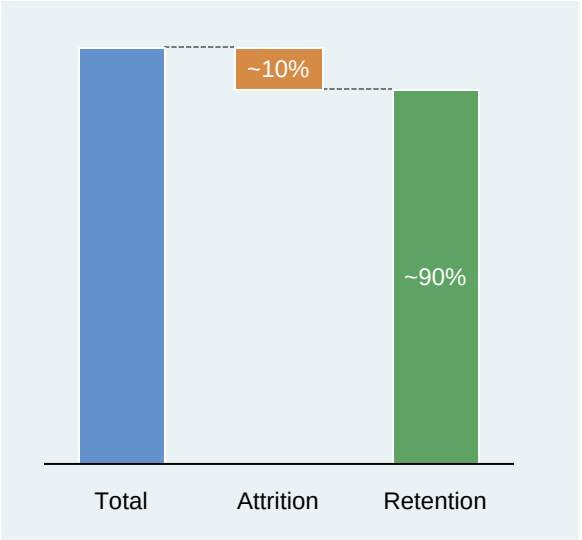
Team-based model delivers JPMC firm-wide solutions to our clients



PB revenue by product ($B)



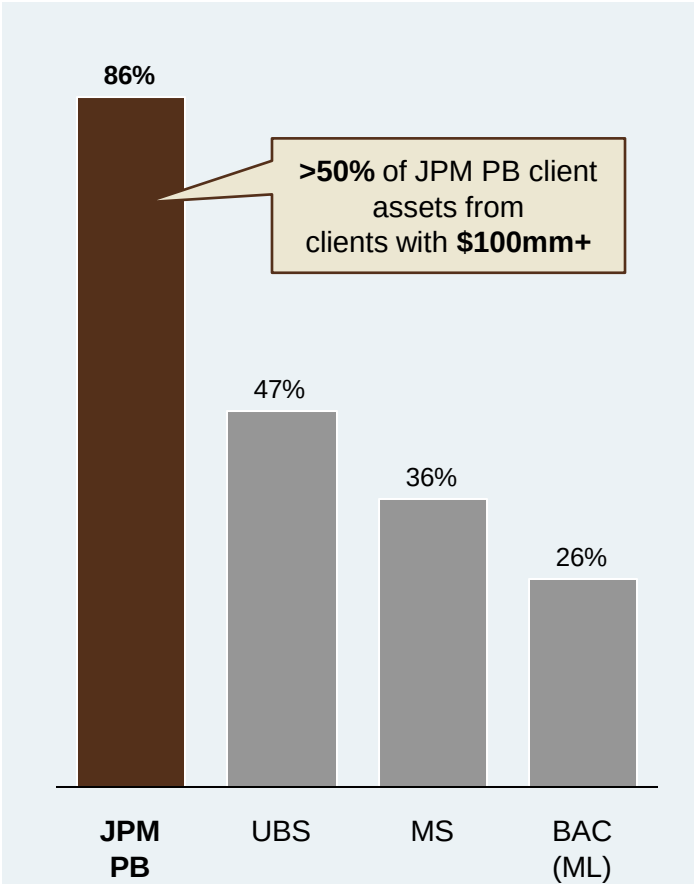
Client retention after advisor departure



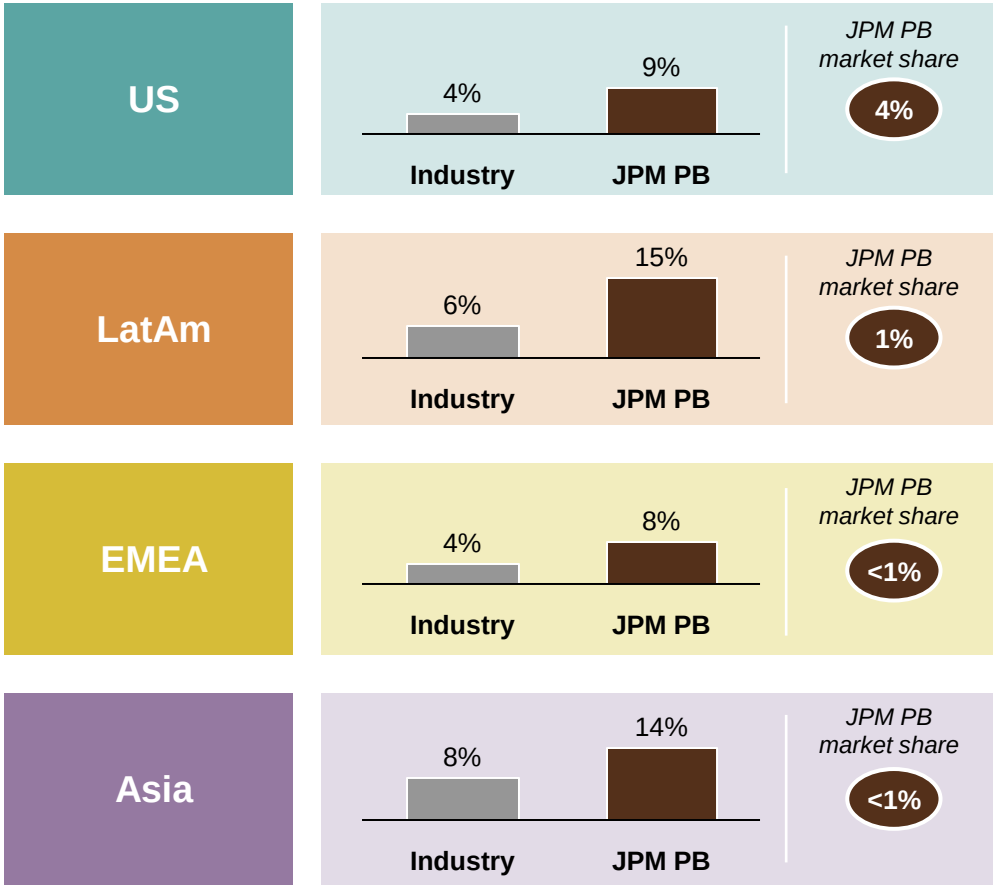
ASSET MANAGEMENT

Trusted advisor to the world's most sophisticated clients

% client assets from clients with $10mm+ (2013)



2006-2013 client asset CAGR[1]

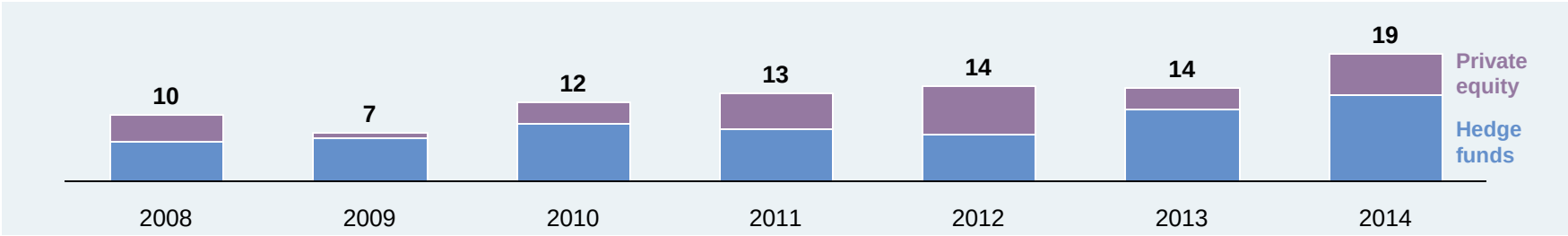


Every +10bps market share internationally = +$150mm revenue

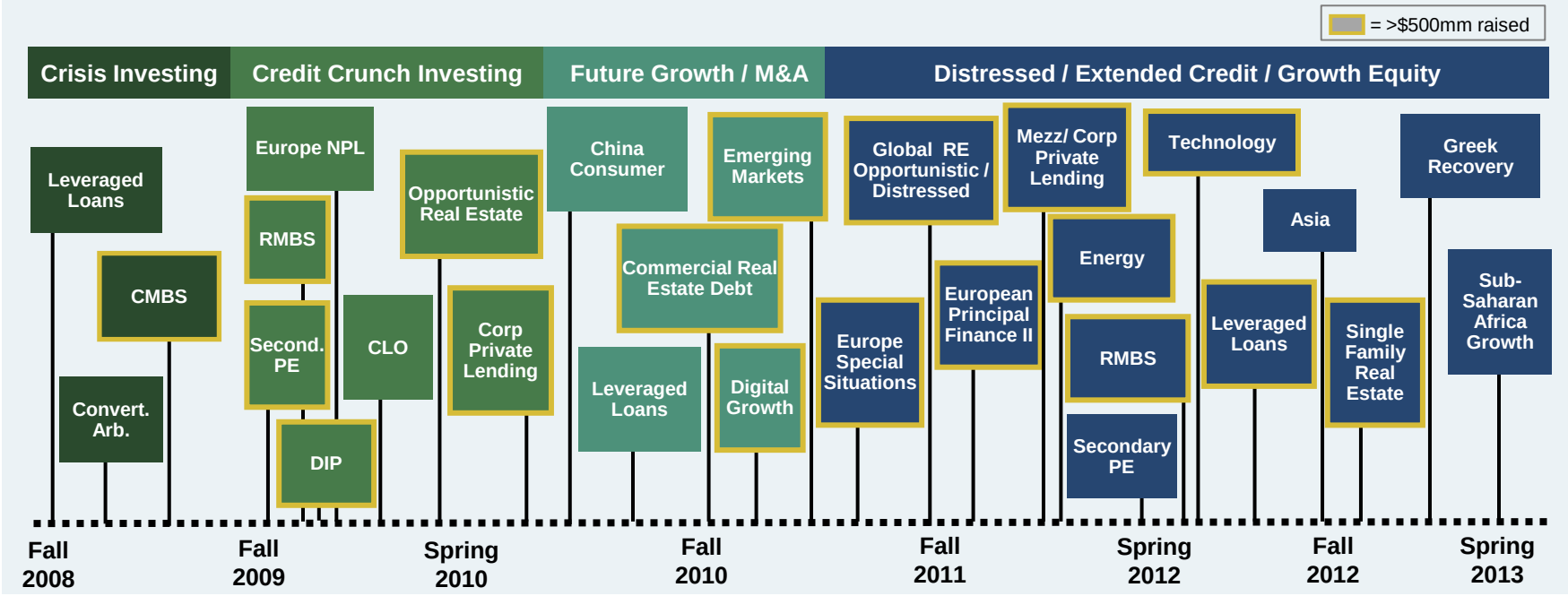
Source: Company filings, Capgemini World Wealth Report 2014

Exclusive, customized, thematic solutions capitalize on market cycles

Alternatives flows: Gross hedge fund inflows and private equity commitments ($B)



Thematic Alternative solutions

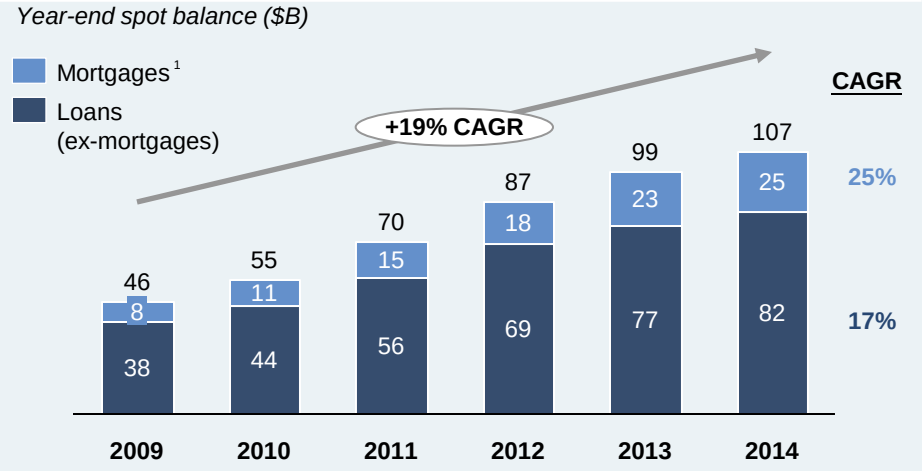


Out of 28 examples:

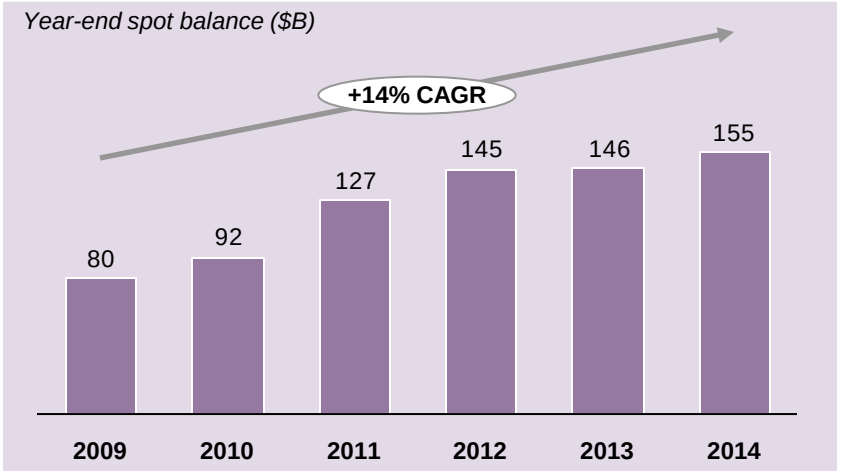
- **13** customized solutions
- **18** >$500mm
- **23** had JPM as the only Private Bank participating

Advising clients on both sides of their balance sheet

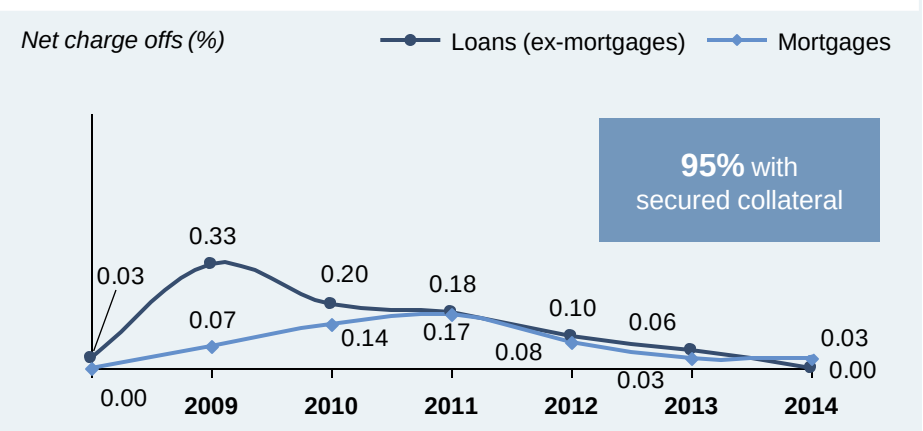
Strong growth in credit book…



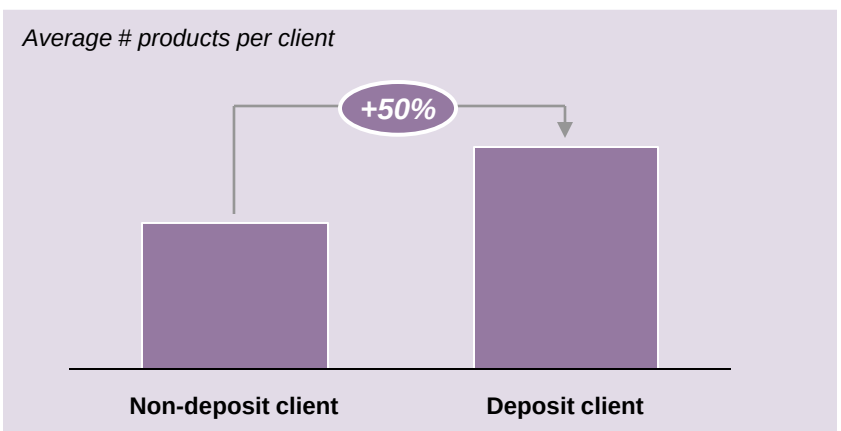
Expanding deposits business…



…with consistently low charge-off rates



…leading to deeper client relationships

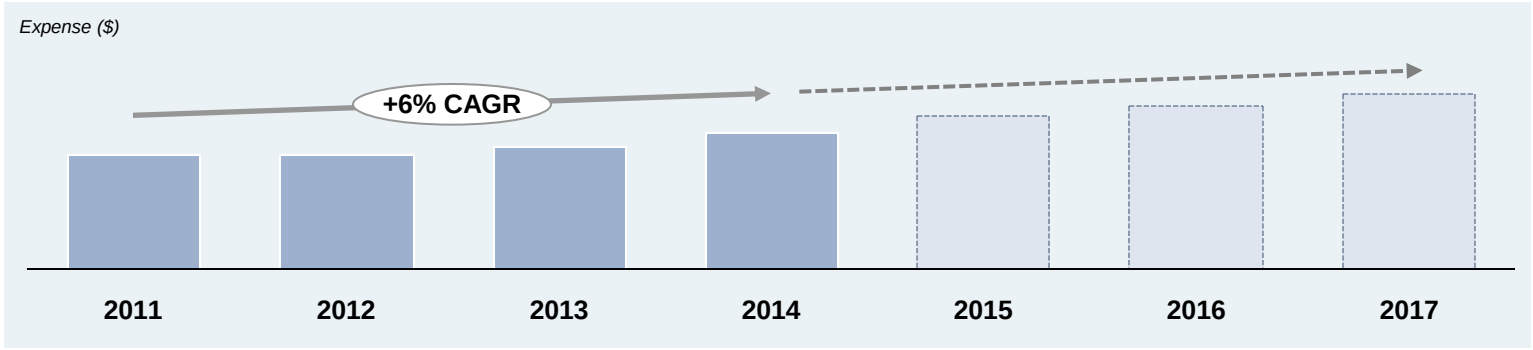


Every +10% loan balances = +$70mm revenue

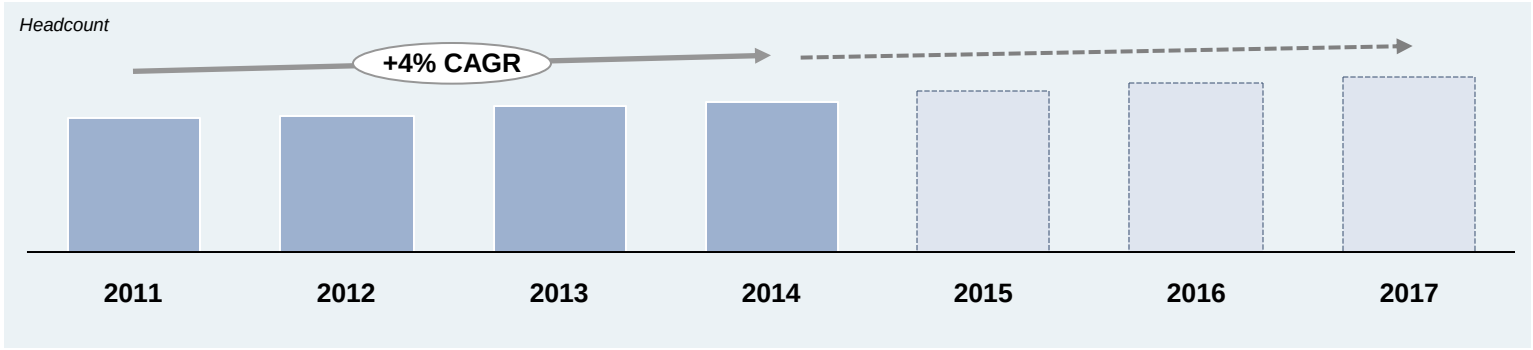
[1] Includes $2.7B of CIO portfolio prime mortgage loans

Continue to invest in tech and talent while control spend levels off

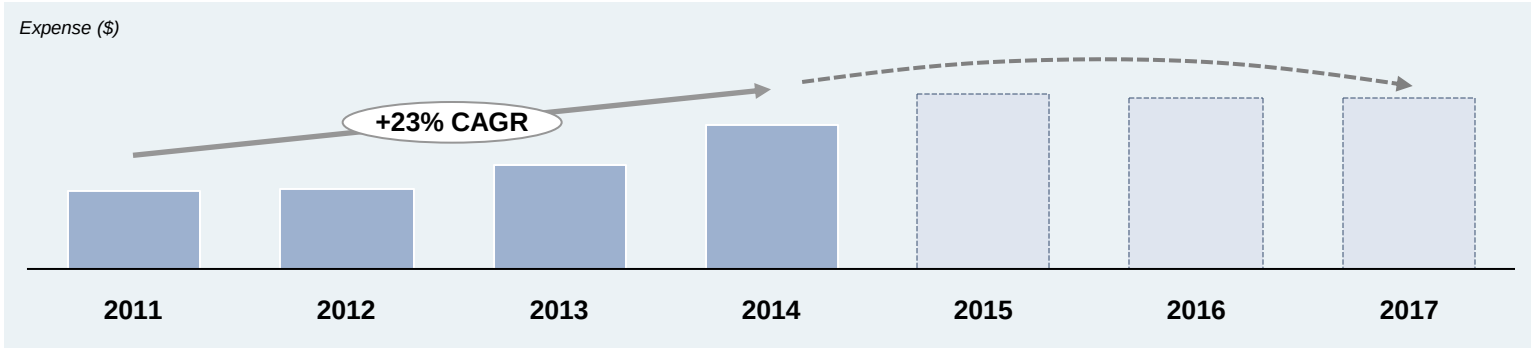
Tech



Front office



Control



Reiterating long-term targets while continuously investing for growth

Key takeaways

- Strong **investment performance** across broad range of products
- Unique franchise, **difficult to replicate**, increasing barriers to entry
- Continuously **investing** in people, products, and processes
- **Predictable** delivery of financial targets and significant synergies with rest of JPMC

	Long-term targets	2014 momentum	2009-2014 CAGR
Client assets	+7-10% p.a.	+8%[1]	+7%
LT AUM	+7-12% p.a.	+12%	+14%
Revenue	+7-12% p.a.	+5%	+8%
Pretax income	+10-15% p.a.	+5%	+8%
Pretax margin	30-35%	29%	29% (avg)
ROE	25%+	23%	24% (avg)

2+ years

Revenue $12B → $15B | **Pretax income $3B → $5B** | **Client assets $2T → $3T**

[1] Excludes impact from 2014 sale of RPS assets

Notes appendix

Page 1

1. The "% of 10-year LT mutual fund AUM in top 2 quartiles" analysis represents the proportion of assets in mutual funds that are ranked in the top 2 quartiles of their respective peer category on a 10-year basis as of December 31, 2014. The sources of these percentile rankings, peer category definitions for each fund and the asset values used in the calculations are: Lipper (US and Taiwan-domiciled funds), Morningstar (UK, Luxembourg and Hong Kong-domiciled funds), Nomura (Japan-domiciled funds), and FundDoctor (South Korea-domiciled funds). The analysis includes only retail open-ended mutual funds that are ranked by the aforementioned sources. The analysis is based on percentile rankings at the share class level for US domiciled funds, at the 'primary share class' level for Luxembourg, UK, and Hong Kong-domiciled funds and at the aggregate fund level for all other funds. The 'primary share class' is defined by Morningstar and denotes the share class considered the best proxy for the fund. Where peer group rankings given for a fund are in more than one 'primary share class' territory both rankings are included to reflect local market competitiveness (applies to 'Offshore Territories' and 'HK SFC Authorized' funds only). The analysis excludes money market funds, Undiscovered Managers Fund, and Brazil and India-domiciled funds. The asset values were redenominated into USD using exchange rates sources by the aforementioned sources. The analysis pertains to percentage of assets under management, not percentage of funds. Past performance is not indicative of future performance, which may vary

Page 3

1. The "mutual funds with a 4/5 star rating" analysis is sourced from Morningstar for all funds with the exception of Japan-domiciled funds; Nomura was used for Japan-domiciled funds. The share class with the highest Morningstar star rating represents its respective fund. The Nomura star rating represents the aggregate fund. Other share classes may have different performance characteristics and may have different ratings; the highest rated share class may not be available to all investors. All star ratings sourced from Morningstar reflect the Morningstar Overall Rating™. For Japan-domiciled funds, the star rating is based on the Nomura 3-year star rating. Funds with fewer than three years of history are not rated by Morningstar nor Nomura and hence excluded from this analysis. Other funds which do not have a rating are also excluded from this analysis. Ratings are based on past performance and are not indicative of future results

Notes appendix

Page 4

1. The "% of AUM over peer median" analysis represents the proportion of assets in mutual funds that are ranked above their respective peer category median on 3, 5, and 10 year basis as of December 31, 2014. The sources of these percentile rankings, peer category definitions for each fund and the asset values used in the calculations are: Lipper (US and Taiwan-domiciled funds), Morningstar (UK, Luxembourg and Hong Kong-domiciled funds), Nomura (Japan-domiciled funds), and FundDoctor (South Korea-domiciled funds). The analysis includes only retail open-ended mutual funds that are ranked by the aforementioned sources. The analysis is based on percentile rankings at the share class level for US domiciled funds, at the 'primary share class' level for Luxembourg, UK, and Hong Kong-domiciled funds and at the aggregate fund level for all other funds. The 'primary share class' is defined by Morningstar and denotes the share class considered the best proxy for the fund. Where peer group rankings given for a fund are in more than one 'primary share class' territory both rankings are included to reflect local market competitiveness (applies to 'Offshore Territories' and 'HK SFC Authorized' funds only). The equity, fixed income and multi-asset solution and all other classifications used in the illustration are based on J.P. Morgan's own categorization. The analysis excludes money market funds, Undiscovered Managers Fund, and Brazil and India-domiciled funds. The asset values were redenominated into USD using exchange rates sources by the aforementioned sources. The analysis pertains to percentage of assets under management, not percentage of funds. Past performance is not indicative of future performance, which may vary

2. The "% of AUM over benchmark" analysis represents the proportion of Alternatives/Absolute Return assets in portfolios that are exceeding their respective benchmark (net of management fee) on a 3, 5 and 10 year basis as of December 31, 2014. The source for all data used is J.P. Morgan. It is calculated on a best efforts basis and is used for illustrative purposes only. It is considered preliminary and unaudited and not meant to represent an official performance composite of the Firm. This analysis includes mutual funds, commingled funds and segregated portfolios that are managed within the following products: US Hedge Funds, Highbridge Hedge Funds, Absolute Return & Opportunistic and Currency. Real Assets and Private Equity portfolios are excluded. The market values used to calculate the assets under management are sourced from J.P. Morgan Asset Management's Finance department. These market values may not be the same as the market values used to calculate the underlying portfolio performance. The source for performance measurement for all portfolios included in this analysis is J.P. Morgan. All portfolios that were terminated prior to December 31, 2014 have been excluded from this analysis. Any revisions or restatements to the underlying portfolio performance or asset figures are not reflected in the historical data points. Portfolios that do not yet have a 3, 5 or 10 year track record also have been excluded from the 3, 5, and 10 year analysis respectively. Portfolios that do not have an assigned benchmark (e.g., private equity, real assets) have been excluded from this analysis. Portfolios where performance or market value data that could not be verified were also excluded from this analysis. The underlying portfolio returns used in the analysis were stated in base currency. All market values were redenominated in USD. The analysis pertains to percentage of assets under management, not percentage of funds. Past performance is not indicative of future performance, which may vary

Notes appendix

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Source: Company filings, J.P. Morgan estimates
Note: Peer group includes peers with publicly reported financials and 2014 client assets of at least $500B: Allianz, BAC, BEN, BK, BLK, CS, DB, GS, IVZ, MS, TROW, UBS. Allianz, CS, DB, and UBS figures converted at average exchange rate. Reflects LTM through 3Q14 where 2014 disclosure not yet available

1. Long-term AUM, administration, brokerage, custody, and deposit
2. Long-term AUM
3. Long-term AUM, fee-generating brokerage, and deposits in fee-generating brokerage accounts
4. Long-term AUM flows vs. total AUM balances. Long-term AUM balances not disclosed
5. Total AUM
6. Includes client asset flows attributable to wealth and asset management units
7. Total AUM and brokerage
8. Long-term AUM and brokerage
9. Long-term AUM, brokerage, and deposit
10. Total AUM, brokerage, and deposit

Page 7

Source: Company filings, J.P. Morgan estimates
Note: Peer group includes peers with publicly reported financials and 2014 client assets of at least $500B: Allianz, BAC, BEN, BK, BLK, CS, DB, GS, IVZ, MS, TROW, UBS. Allianz, CS, DB, and UBS figures converted at average exchange rate. Reflects LTM through 3Q14 where 2014 disclosure not yet available

1. Long-term AUM, administration, brokerage, custody, and deposit
2. Long-term AUM
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4. Long-term AUM, fee-generating brokerage, and deposits in fee-generating brokerage accounts
5. Long-term AUM, brokerage, and deposit
6. Includes client asset flows attributable to wealth and asset management units
7. Total AUM and brokerage
8. Long-term AUM and brokerage
9. Total AUM, brokerage, and deposit

Notes appendix

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Source: Company filings, J.P. Morgan estimates
Note: Allianz, CS, DB, and UBS figures converted at average exchange rate. Balances presented at end of period exchange rate

1. Total AUM; for Allianz reflects total AUM from third-parties
2. Total AUM, brokerage, custody, and deposit; for CS as of 09/30/14 as FY2014 disclosure not yet available
3. Includes GIM and GWM with CWM reflecting dashed extension
4. Total AUM, administration, brokerage, custody, and deposit
5. Total AUM, brokerage, and deposit
6. Reflects LTM through 3Q14 as 2014 disclosure not yet available; Allianz (includes PIMCO) revenue is presented gross of fees and commission expenses to ensure comparability with peers
7. Excludes revenue, pretax income, and client assets attributable to Corporate and Institutional Client unit
8. Wealth Management Assets under Custody
9. Excludes Asset Management Group (AMG) which is reported in Wholesale Banking unit. AMG consists of $496B of AUM

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1. The "% of AUM in top 2 quartiles over 3/5/10 years" analysis represents the proportion of assets in mutual funds that are ranked in the top 2 quartiles of their respective peer category on a 3/5/10-year basis as of December 31, 2014. The sources of these percentile rankings, peer category definitions for each fund and the asset values used in the calculations are: Lipper (US and Taiwan-domiciled funds), Morningstar (UK, Luxembourg and Hong Kong-domiciled funds), Nomura (Japan-domiciled funds), and FundDoctor (South Korea-domiciled funds). The analysis includes only retail open-ended mutual funds that are ranked by the aforementioned sources. The analysis is based on percentile rankings at the share class level for US domiciled funds, at the 'primary share class' level for Luxembourg, UK, and Hong Kong-domiciled funds and at the aggregate fund level for all other funds. The 'primary share class' is defined by Morningstar and denotes the share class considered the best proxy for the fund. Where peer group rankings given for a fund are in more than one 'primary share class' territory both rankings are included to reflect local market competitiveness (applies to 'Offshore Territories' and 'HK SFC Authorized' funds only). The analysis excludes money market funds, Undiscovered Managers Fund, and Brazil and India-domiciled funds. The asset values were redenominated into USD using exchange rates sources by the aforementioned sources. The analysis pertains to percentage of assets under management, not percentage of funds. Past performance is not indicative of future performance, which may vary

Notes appendix

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Source: Strategic Insight, Morningstar

1. 40-Act funds only. Performance for mutual funds was calculated using Morningstar Direct. Select Share Classes were used for all analysis (except JPMorgan Realty Income which does not have a Select share class, so Institutional share class was used instead). Primary Prospectus Benchmarks per Morningstar were used to calculate Excess Returns for JPMorgan Funds. Peer Rankings for JPMorgan Funds are vs. Respective Morningstar Universes. All performance is net of fees. Industry outperformance calculated using Morningstar Direct and is meant to capture fund outperformance for Morningstar categories where JPMorgan has US 40-Act Funds. Oldest Share Classes were used for Industry Analysis and Primary Prospectus Benchmarks were used to calculate excess returns. All performance is net of fees. Past performance is not indicative of future performance, which may vary
2. Through 12/31/2014. All JPMorgan Funds shown are Select Class. All performance data sourced from Morningstar Direct. All Excess Returns calculated, net of fees, vs. Barclays US Agg Bond Total Return USD Index using rolling 5Y monthly periods. Past performance is not indicative of future performance, which may vary
3. Global (US, EMEA, APAC) long-term active equity mutual fund rankings
4. Global (US, EMEA, APAC) long-term active fixed income mutual funds rankings

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Source: Morningstar, Strategic Insight, eVestment

1. Excludes Insurance Solutions/Advisory
2. Fund and index performance as of 12/31/14. Fund performance is net of fees. Diversified and SmartRetirement are US Select shares. Systematic Alpha represents A shares in EUR. S&P Target Date 2035 TR USD represents Total Return Index. #1 Competitor was determined based on Largest Active Competitor in appropriate Morningstar Category. Active Competitors exclude ETF and Index Mutual Funds. For JPM Systematic Alpha, Competitor Universe includes all Morningstar Alternative Categories. Past performance is not indicative of future performance, which may vary
3. Awarded to SmartRetirement team for the management of the JPMorgan SmartRetirement Target-date Series (Institutional Shares)

Notes appendix

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Source: Company filings, FT Towers Watson Global Alternatives Survey 2014, J.P. Morgan estimates

1. Client assets may include non fee-earning client assets (e.g., firm capital invested in its own funds, uncalled capital commitments for funds charging fees on invested capital, and asset appreciation based on changes in the fair value of underlying investments) where available/applicable
2. Carlyle PE/PE Solutions includes ~$2B of real estate fund of funds from the Metropolitan acquisition
3. GSAM mix based on FT Towers Watson Global Alternatives Survey 2014 (July 2014); may not include all alternatives assets in Merchant Banking division
4. CS Hedge Fund Solutions figure based on Hedge Fund Alert newsletter; does not include minority-owned private equity joint ventures
5. Deutsche Bank AWM figures based on DeAWM Press Kit (June 2014) with assets as of June 30, 2014
6. BlackRock asset split based on Investor Day (June 2014), 2013 10-K, and 4Q14 quarterly report

COMMERCIAL BANKING

Doug Petno, Chief Executive Officer Commercial Banking

February 24, 2015

JPMorgan Chase & Co.

Chase Commercial Banking – a proven business model

Client and community focus	■ Coverage segmented and focused on best serving client needs ■ Local delivery and decision making ■ Deep industry expertise ■ Seasoned team with 20 years average experience
Competitive advantages	■ Industry-leading, broad-based capabilities ■ Operating efficiencies as part of JPMorgan Chase
Through-the-cycle discipline	■ Rigorous client selection ■ Strong credit and control culture ■ Expense discipline ■ Long-term, through-the-cycle orientation
Investing for growth	■ Building share in high potential markets ■ Expanding our relationships in targeted industries ■ Selectively growing Commercial Real Estate
Strong financial performance	■ High quality, resilient earnings ■ Excellent returns ■ Steadily investing and adapting to regulatory changes

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Franchise strength	**2**
2014 performance	8
Opportunities	15

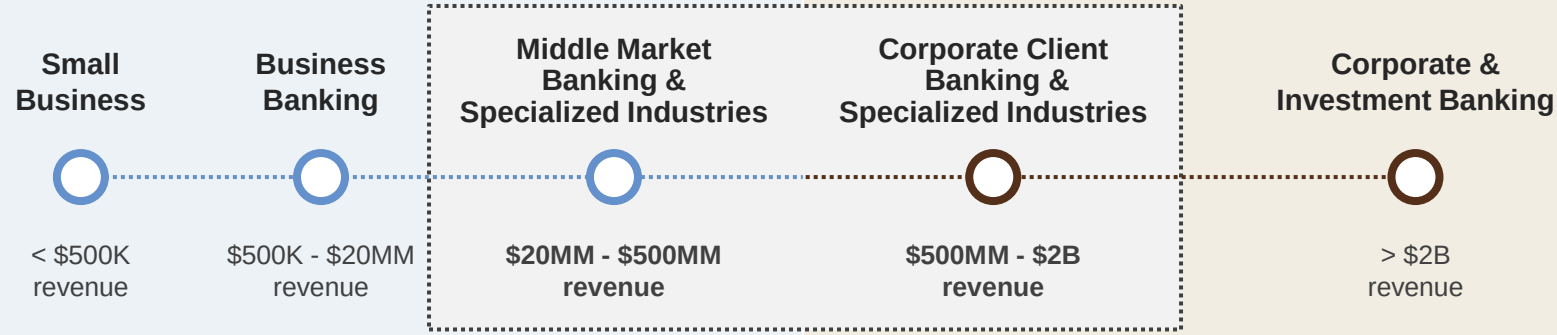
Commercial & Industrial overview

Client focus through dedicated segment and industry coverage

CHASE

J.P.Morgan

Chase Commercial Banking



Middle Market Banking & Specialized Industries (MM)		Corporate Client Banking & Specialized Industries (CCB)
41% CB net revenue	% CB net revenue[1]	28% CB net revenue
~14,600 clients, ~3,000 government clients	Clients	~1,500 corporate clients, ~1,800 FIG clients
~35,000 prospects	Prospects	~1,400 prospects
Mostly private small to mid-sized businesses	Client type	Mostly public companies with complex needs
Local delivery and personalized service	Coverage model	Global coverage and deep expertise

Note: Data as of YE2014 except where noted. CB's Commercial & Industrial (C&I) grouping is internally defined to include certain client segments (MM, which includes Nonprofit clients, and CCB) and will not align with regulatory definitions.

[1] CB revenue excludes 3% categorized as other

Commercial Real Estate overview

	Commercial Term Lending (CTL)	Real Estate Banking (REB)	Community Development Banking (CDB)
			
% CB net revenue[1]	18%	7%	3%
Loans & commitments	$54B in loans	$23B in credit commitments	$4B in credit commitments
Clients	~35,000 investors & owners	~640 clients	~890 clients
Portfolio attributes	Multifamily, stabilized properties	Top tier investors with institutional quality assets	Specialized construction lending for affordable housing

Note: Data as of YE2014 except where noted. CB's Commercial Real Estate (CRE) grouping is internally defined to include certain client segments (Real Estate Banking, Commercial Term Lending and Community Development Banking) and will not align with regulatory definitions

[1] CB revenue excludes 3% categorized as other

We pick the best clients

Our client selection criteria…

Strong management track record	Reputable in local markets	Preferred industries with transparent operations	Shared risk philosophy	Strategic clients with complex needs

...results in higher quality, lower risk...

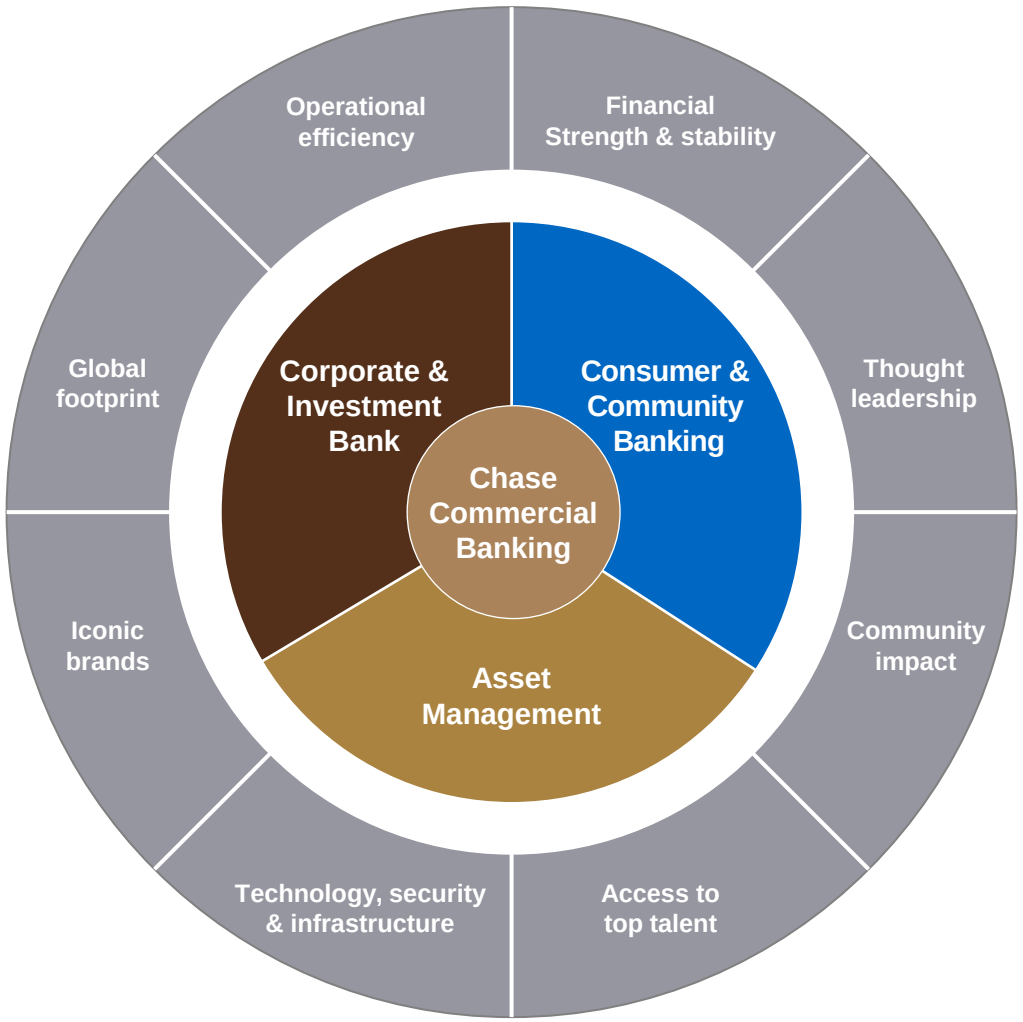
- High growth, broad-based relationships
- Strong management and business fundamentals
- Deeper, long-term relationships – average of ~9 products/client
- Well-diversified portfolio
- Lower credit, operational and reputational risk

...and more valuable clients

- Higher revenue per client
- Lower credit costs through the cycle
- Lower cost-to-serve (e.g. credit, compliance, on-boarding, monitoring)
- Greater earnings resiliency

Client selection leads to superior through-the-cycle returns

Leveraging the entire JPMorgan Chase platform



Corporate & Investment Bank

- International presence in more than 60 countries with capabilities to serve CB clients abroad
- Joint IB coverage provides CB clients access to market-leading investment banking coverage
- CB clients represent 35% of North America IB fees[1]
- Collaboration with Treasury Services to meet the unique needs of CB client segments
- #1 cash management portal in North America[2]

Consumer & Community Banking

- Access to top issuer of U.S. Commercial Cards[3]
- Market-leading payments capabilities for CB clients
- Convenience of ~5,600 branches for CB clients
- Small business partnership with Business Banking

Asset Management

- ~$120B in AUM from CB clients
- Client referrals to and from Private Bank

Note: Data as of YE2014
[1] Calculated based on gross domestic IB revenue for SLF, M&A, Equity Underwriting and Bond Underwriting
[2] Greenwich Associates: Greenwich 2014 Online Survey
[3] 2014 Nilson Report: Ranked by purchase volume in 2013

Delivering our broad-based, global capabilities locally



- Presence in 118 U.S. cities, 46 of the top 50 MSAs and 14 major international cities
- ~1,370 bankers[1]; average 20+ years of industry experience
- Bankers rooted and active in their communities
- De-centralized operating model with local client coverage, underwriting and service

[1] Based on total count of revenue-producing employees

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2014 performance	**8**
Opportunities	15

2014 results – strong underlying business performance

Record

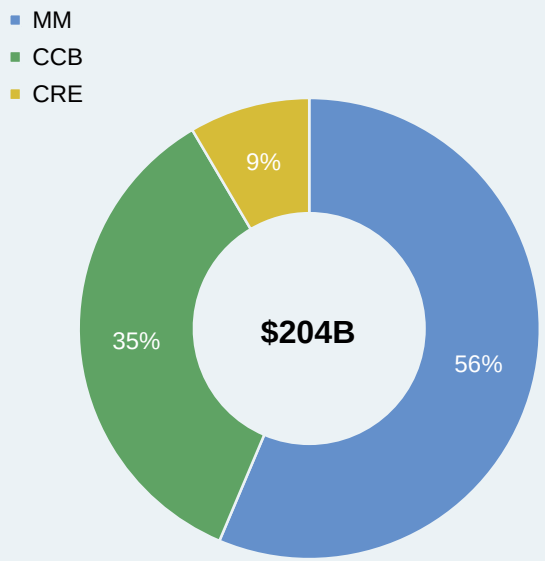
	($B, except where noted)	2013	2014	YoY (%)
Record results	Loan balance (EOP)	137	149	8%
	Client deposits & other third-party liabilities (avg.)	198	204	3%
	Investment Banking revenue[1]	1.7	2.0	18%
	Card Services revenue[1,2] ($MM)	469	490	4%
	International revenue[2,3] ($MM)	264	304	15%
Steady investment	Expansion market revenue ($MM)	297	327	10%
	New offices opened	4	4	
	Headcount	6,848	7,262	6%
Risk discipline	Net charge-offs (%)	0.03%	0.00%	
	Non-performing loans (%)	0.37%	0.22%	
Achieving target returns	Revenue	7.1	6.9	(3%)
	Net income	2.6	2.6	(0%)
	Overhead ratio (%)	37%	39%	
	Allocated capital	13.5	14.0	4%
	Return on equity (%)	**19%**	**18%**	

[1] Investment Banking and Card Services revenue represent gross revenue generated by CB clients. Investment Banking includes Banking and Markets revenue. Card Services includes Commercial Card and Paymentech revenue
[2] Prior year revenue for Card Services and International Revenue were restated to conform to current presentation
[3] Denotes overseas revenue from U.S. multinational clients

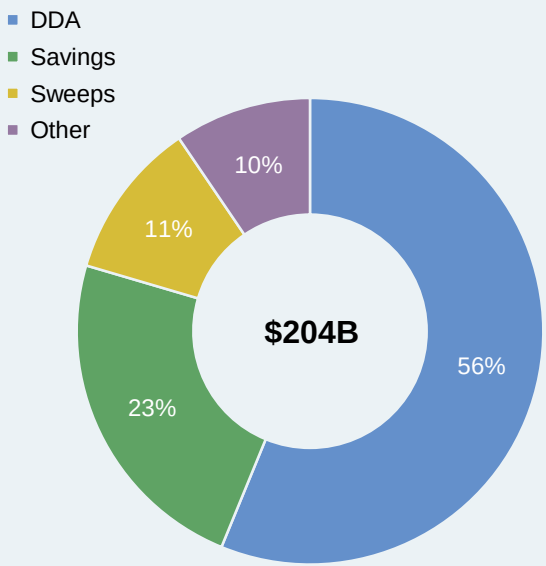
Stable and diversified deposit base

Excellent deposit gathering franchise

Average 2014 deposits by segment[1] ($B)



Average 2014 deposits by type[1] ($B)



Managing deposits closely

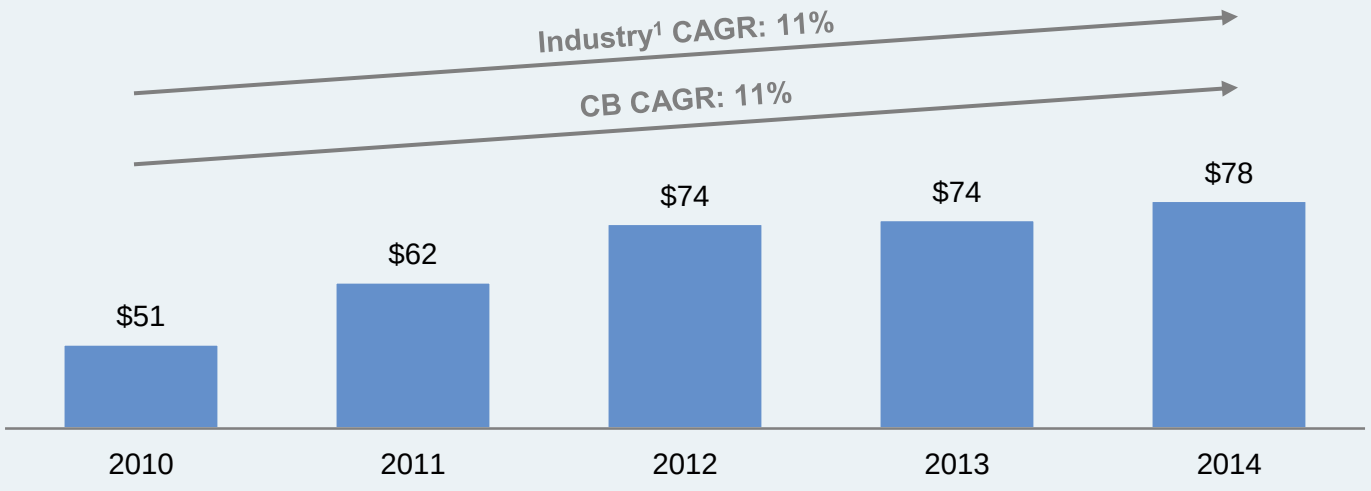
- Deposit base built through selective new client acquisition and deep, broad-based relationships
- Anticipate reduction in deposits over time – clients will deploy cash as economy strengthens
- Despite adjustments and impact of regulation, our portfolio possesses tremendous future value
- Continuing to monitor market in anticipation of changes in rate environment

Commercial Banking is well positioned for rising rates

[1] Deposit balance includes client deposits and other third party liabilities

Commercial & Industrial loan portfolio – steady, disciplined growth

Commercial & Industrial portfolio ($B, EOP)



	2010	2011	2012	2013	2014
Utilization (%)	30%	31%	32%	30%	32%
Total NCOs	0.61%	0.09%	0.00%	0.06%	0.02%

2014 industry observations

- Competition for quality assets continues to be strong
  - Seeing higher hold levels, longer tenors and some covenant light deals
  - Continued loan spread compression
- Loan utilization and early 2015 indicators show soft volume

CB performance summary

- Diversified loan growth across C&I business
  - Fifth consecutive year of EOP loan growth in MM with expansion market loan growth up 7% YoY
  - CCB loans up 8% with increased utilization from industrials, energy, consumer goods & tech clients
  - ABL[2] up 28% YoY with $4B in originations
- Limited exposure to private equity

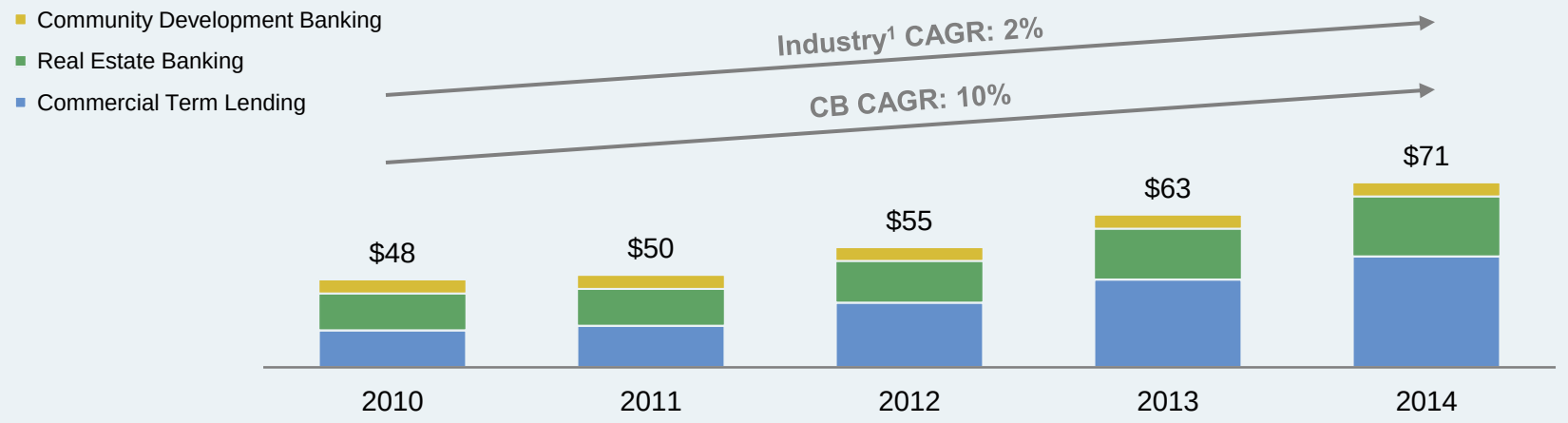
Note: CB's Commercial & Industrial (C&I) grouping is internally defined to include certain client segments (MM, which includes Nonprofit clients, and CCB) and will not align with regulatory definitions.

[1] Industry data sources from FRB H.8 Assets and Liabilities of Commercial Banks in the United States (not seasonally adjusted)

[2] Asset Based Lending

Commercial Real Estate – industry-leading loan growth

CRE loan portfolio ($B, EOP)



	2010	2011	2012	2013	2014
Total Originations ($B)	$3	$14	$21	$22	$23
Total NCOs	1.23%	0.24%	0.04%	0.01%	(0.01%)

2014 industry observations

- Continued strong fundamentals across property types and markets, particularly in multifamily
- Demand for U.S. commercial real estate remains strong
  - Transaction volume continues to increase
  - Equity inflows help maintain LTV and LTC ratios
- Pressure on spreads, but credit structures remain sound
- Expect 2015 to look like 2014

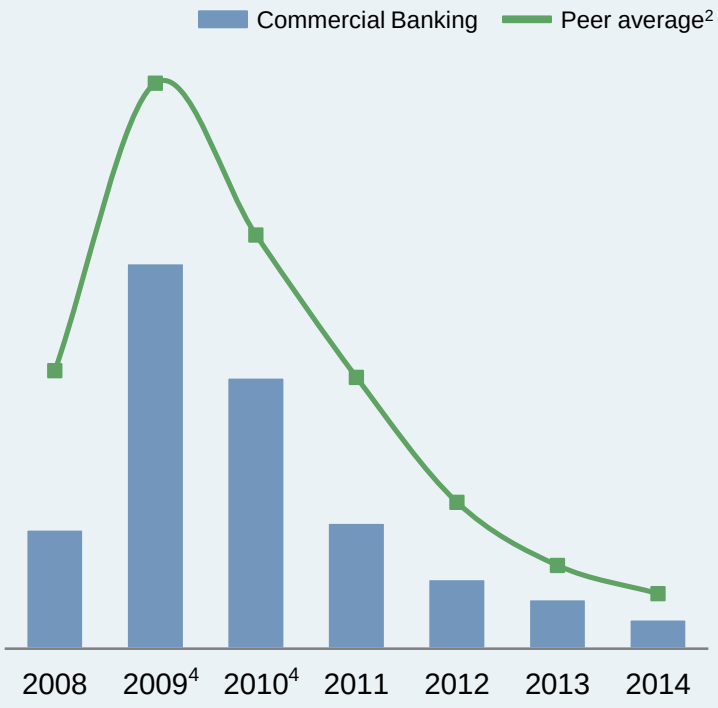
CB performance summary

- Strong, double digit loan growth in CTL and REB
  - CRE loan balances have increased for 28 consecutive months with record originations in 2014
  - New originations' credit metrics in line with portfolio
- CTL portfolio grew $5B with $13B in originations
  - 63% of 2014 CTL originations from new financings
  - Remained the #1 multifamily lender in the U.S.[2]
- REB portfolio grew $2.3B with $10.3B in originations

Note: CB's CRE grouping is internally defined to include certain client segments (REB, CTL and CDB) and will not align with regulatory definitions
[1] Industry data sourced from FRB H.8 Assets and Liabilities of Commercial Banks in the United States (not seasonally adjusted)
[2] SNL Financial based on FDIC data as of 3Q14

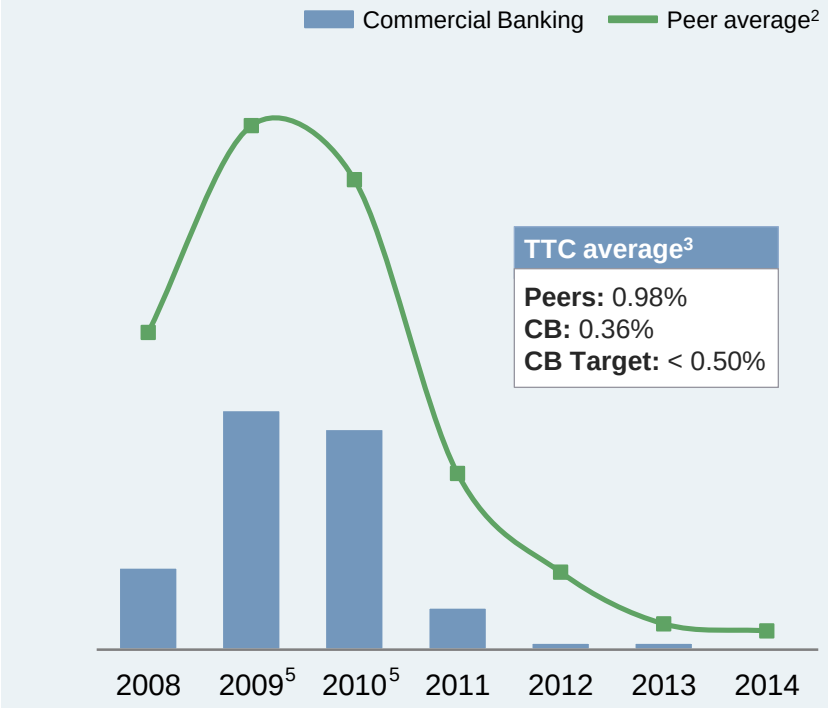
Continued strong credit performance

Non-performing loans[1]



	2008	2009[4]	2010[4]	2011	2012	2013	2014
Peers	2.1%	4.2%	3.1%	2.0%	1.1%	0.6%	0.4%
CB	0.9%	2.9%	2.0%	0.9%	0.5%	0.4%	0.2%

Net charge-offs



	2008	2009[5]	2010[5]	2011	2012	2013	2014
Peers	1.4%	2.2%	2.0%	0.8%	0.3%	0.1%	0.1%
CB	0.4%	1.0%	0.9%	0.2%	0.0%[6]	0.0%[6]	0.0%

Client selection and through-the-cycle discipline drive superior credit performance

[1] Based on end of period loans
[2] Peer averages include CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC
[3] Through-the-cycle, 2008-2014 average
[4] Excluding pre-acquisition WaMu originations, Chase represented 1.67% in 2009 and 1.02% in 2010
[5] Excluding pre-acquisition WaMu originations, Chase represented 0.93% in 2009 and 0.74% in 2010
[6] Commercial Banking net charge-offs for 2012 and 2013 were 0.03%

Closely monitoring market fundamentals

Key watch areas

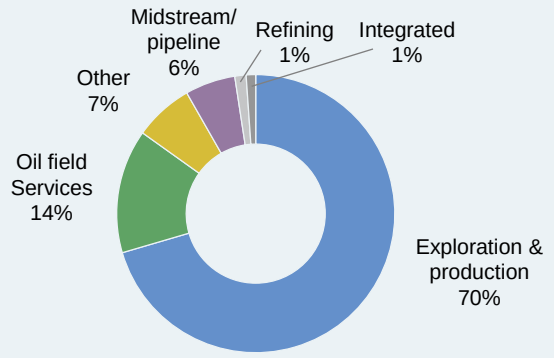
Oil & gas

- Total portfolio of $6.0B in outstandings and $15.0B in exposure
  - 4% of overall CB outstandings
  - 5% of overall CB exposure
- Well structured portfolio with strong asset coverage
  - 94% of E&P outstandings secured by reserves
- Deep industry experience through cycles
  - 24 years average experience[1]
- Limited secondary impact on portfolio
  - Texas economy remains strong
  - Limited real estate exposure

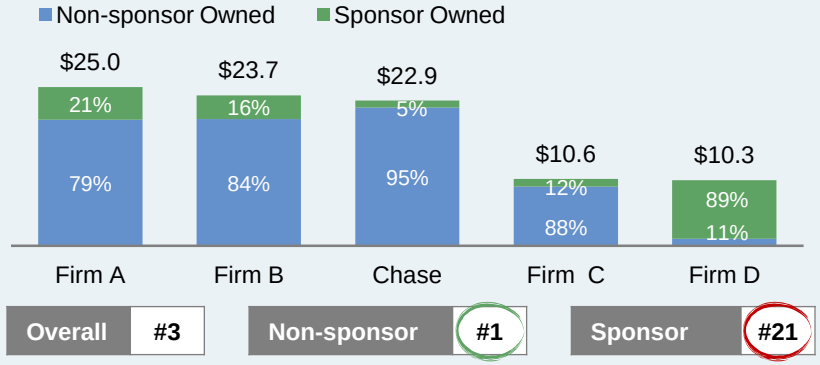
Leveraged lending

- Monitoring regulatory and competitive environment closely
- Limited sponsor-backed exposure representing only 1.3% of CB exposure
- Maintained credit discipline on structure
- Focus on long-term clients
- #1 in non-sponsor owned middle market loan syndications vs. #21 in sponsor owned[2]

CB Oil & gas total outstandings ($6.0B)



2014 Middle Market loan syndication league table[2] ($B)



[1] Average for senior bankers, underwriters, engineers and credit management

[2] Source: Thomson Reuters; Sponsor volume includes deals for sponsor owned borrowers per Thomson Reuters league table data; Middle Market defined as sales size ≤$500MM; Deal size ≤$500MM

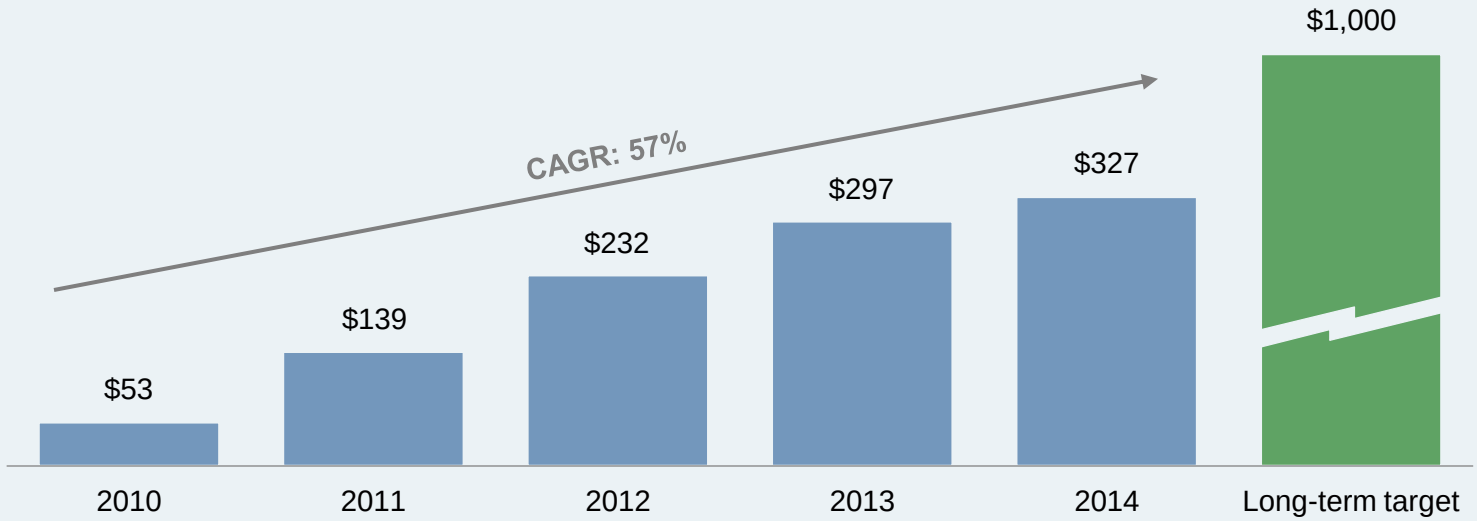
Agenda

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Opportunities	**15**

Extending our proven business model to new, high potential markets

Total expansion market revenue[1] ($MM)

2010 footprint	2014 footprint
19 Expansion cities	**34** Expansion cities



	2010	2011	2012	2013	2014
# Clients	820	1,100	1,350	1,460	1,670
# Bankers[2]	74	103	122	127	152
Loans EOP ($B)	$1.6	$4.4	$6.8	$8.2	$8.8
Avg. deposits[3] ($B)	$1.3	$3.0	$4.7	$5.9	$7.8

Patient, disciplined franchise expansion

[1] Prior year revenue is restated to conform to current presentation
[2] Based on total count of revenue-producing employees
[3] Includes client deposits and other third party liabilities

Industry-focused to better serve our clients and manage risks

Specialized industries

					
Healthcare	Governments	Agribusiness & food	Media & entertainment	Oil & gas	Technology
~7% of GDP	~4% of GDP	~3% of GDP	~4% of GDP	~6% of GDP	~6% of GDP

					
Power & utility	Financial services	Heavy equipment	Beverage	Apparel	Foreign multinational
~2% of GDP	~7% of GDP	~1% of GDP	~1% of GDP	~1% of GDP	N/A

Aligning to client industry needs…

- Clients expect fluency in their industry and the issues/ opportunities they face
- Ability to deliver client-tailored solutions

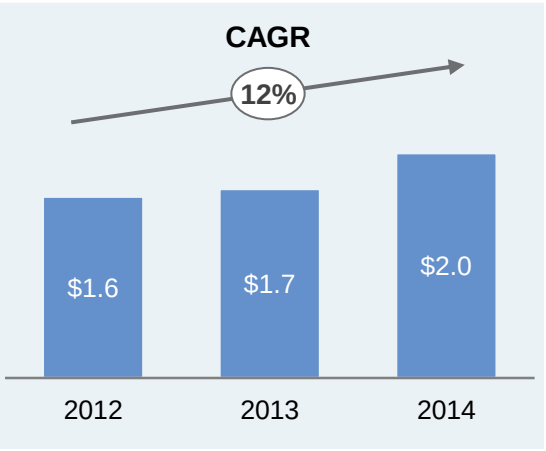
… while best managing industry risks

- Industry-specific risk management parameters
- Credit specialists aligned with industries
- Demonstrate continuity through the industry and company lifecycle

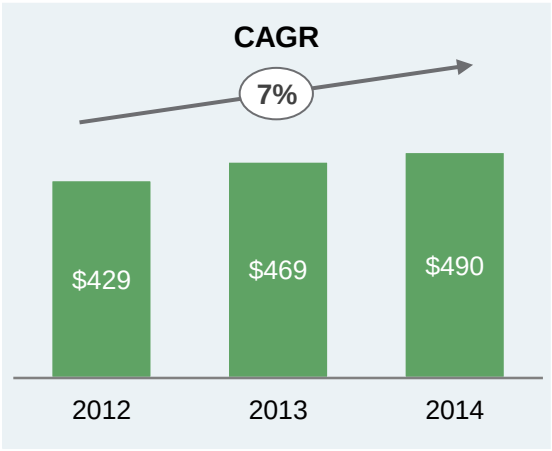
Source: Bureau of Economic Analysis, GDP estimates for full-year 2014 by industry calculated to best mirror scope of each specialized industry

Deepening client relationships through unique capabilities

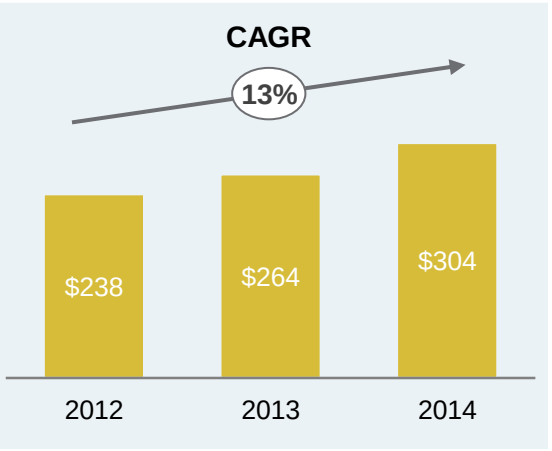
Investment Banking revenue ($B)



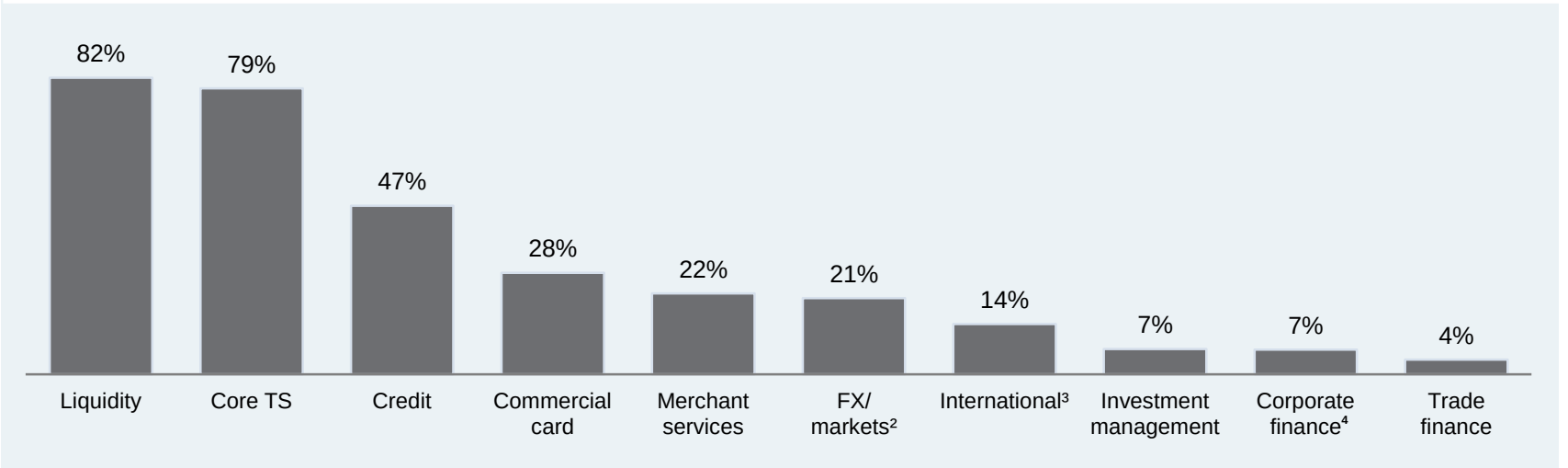
Card Services revenue[1] ($MM)



International revenue[1] ($MM)



CB C&I client usage rates by product[1] (%)



Note: C&I client defined as any active relationship with banker assignment at 12/31/2014

[1] Prior year revenue for Card Services and International Revenue were restated to conform to current presentation

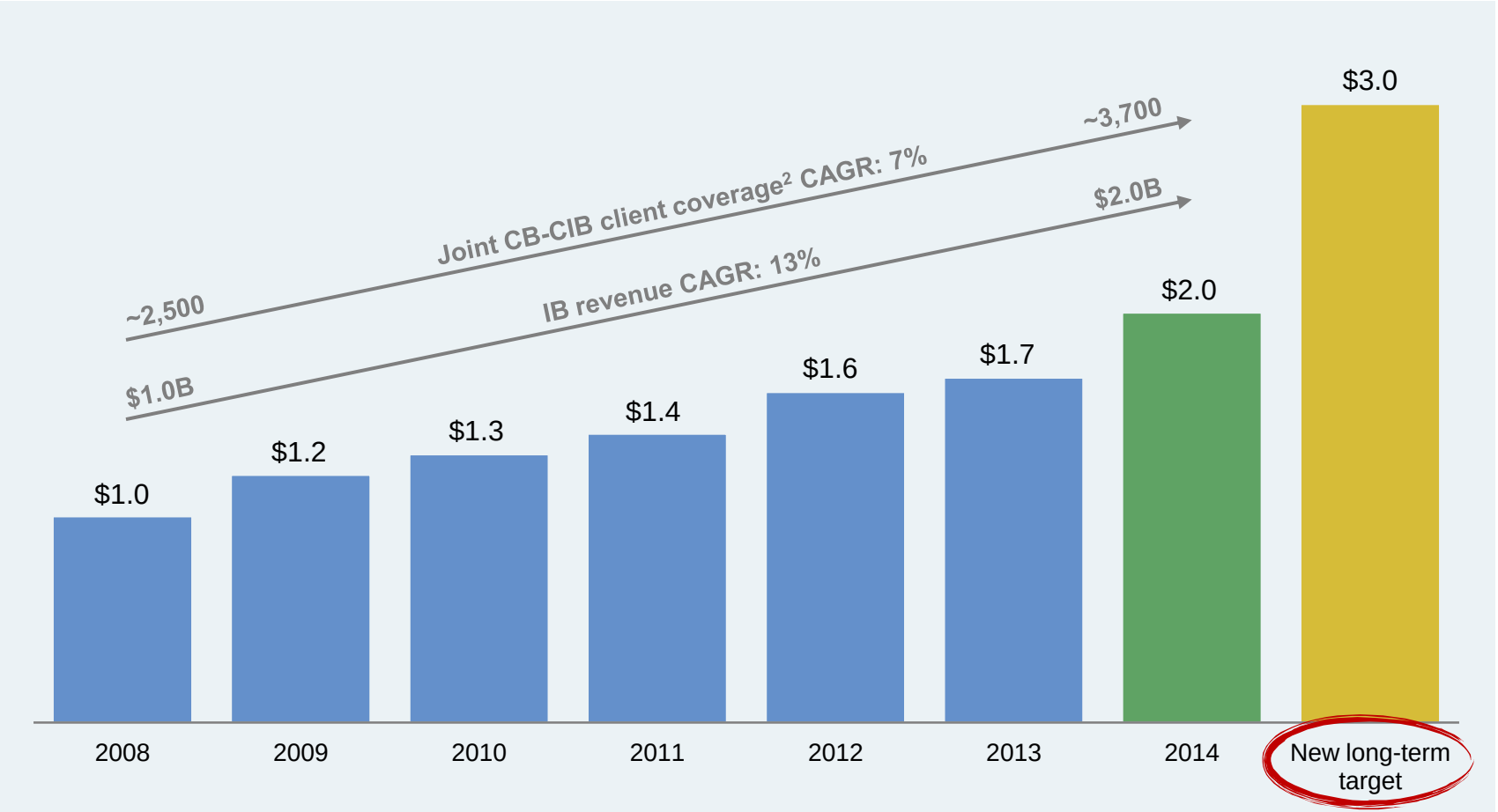
[2] FX/markets represents number of clients with total FX/market related fees paid to JPMC exceeding $10,000 in 2014

[3] International represents total unique holding companies utilizing any international product or service, including liquidity, core TS, credit, FX/markets or trade finance

[4] Corporate finance represents number of clients paying investment banking related fees exceeding $100,000 in any one of the last three years as a ratio to 2014 clients

Continuing build-out of Investment Banking capabilities – new $3B revenue target

Commercial Banking gross investment banking revenue[1] ($B)



CIB partnership has resulted in differentiated client coverage

[1] Represents the total revenue related to investment banking products sold to CB clients
[2] Commercial Banking clients and prospects jointly covered by CIB

Opportunity to continue capturing market share in Commercial Real Estate

Unique value proposition	Focus on fundamentals	Capture market opportunities
Relationship-driven model	**Identify markets & clients**	**Continue taking share**
■ Differentiated platform from bank and non-bank competitors ■ Full product capabilities ■ Service and support throughout life of loan ■ Focus on speed and simplicity at every client touch point ■ Loan process efficiency ■ Certainty of execution ■ Execution of any sized deal	■ Disciplined market selection based on fundamentals ■ Proactively manage originations ■ Avoid volatile asset classes ■ Limit concentration levels ■ Select high quality clients ■ CTL: Long-term investors focused on stable cash flows ■ REB: Leading real estate companies with strong track records	■ Continue investment in business ■ Scalable origination platform ■ Over $1T in near-term maturities to drive future origination volumes[1] ■ Significant opportunity to refinance GSE maturities ■ JPMC attractive for clients looking to diversify financing sources ■ Capital inflows continue to support strong credit metrics

Maintaining close watch on market fundamentals while positioning our CRE franchise for growth

[1] Trepp LLC, data as of 9/30/2014

We remain confident in our ability to produce superior returns through the cycle

Proven business model

▲ **Revenue**	Deeper relationships through unmatched capabilities ■ Premier investment banking ■ Leading treasury services platform ■ Top issuer of commercial cards[1] ■ Proprietary merchant services ■ Foreign exchange ■ Interest rate risk management ■ International banking ■ Investment management
▲ **Deposits**	■ Lower loan-to-deposit ratio vs. peer average[2] (69% vs. 121%) ■ Significant value from deposits ■ Firm-wide funding advantage from being part of JPMorgan Chase
▼ **Expenses**	■ Relentless expense management ■ 600bps lower overhead ratio vs. peer average[3] for 2014 (39% vs. 45%)
▼ **Credit costs**	62bps lower through-the-cycle NCOs vs. peer average[4] (36bps vs. 98bps)
▲ **Superior returns**	Our **proven business model** allows us to **absorb incremental capital** and **continue to invest** while **producing superior results** through the cycle

Note: Data as of YE2014 except where noted through-the-cycle (TTC); TTC represents average of last seven years

[1] 2014 Nilson Report: Ranked by purchase volume in 2013

[2] Loan-to-deposit ratio peer average includes CB-equivalent segments at BAC, CMA, KEY, PNC, USB, WFC

[3] Overhead ratio peer average includes CB-equivalent segments at CMA, FITB, KEY, PNC, USB, WFC

[4] NCO ratio peer average includes CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC

Executing our proven strategy

Financial targets

		Long-term target	2014 actual	2010-2014 growth
Execute growth initiatives	Market expansion	$1.0B	$327MM	57% CAGR
	Investment banking[1]	$3.0B	$2.0B	10% CAGR
	International[2]	$500MM	$304MM	22% CAGR
Maintain expense & credit discipline	TTC overhead ratio	35%	39%	36% avg.
	TTC net charge-offs	< 0.50%	0.00%	0.24% avg.
Optimize returns	TTC return on equity	18% +/-	18%	24% avg.

Note: TTC = through-the-cycle

[1] Investment banking revenue represents gross investment banking revenue generated by CB clients – including Banking and Markets revenue

[2] Denotes overseas revenue from U.S. multinational clients

Delivering for our clients

Chase Commercial Banking priorities

Fortress controls and compliance	■ Safeguard our clients and our business ■ Continue to enhance critical capabilities
Optimize returns	■ Execute our disciplined growth strategy ■ Adapt to new regulatory framework ■ Deploy capital efficiently
Be the easiest bank to do business with	■ Deliver proactive, best-in-class customer service ■ Improve speed to respond
Invest in our team	■ Our people are our competitive advantage ■ Have the best people in our markets
Help our clients succeed	■ Bring to bear capital, advice and ideas ■ Deliver industry insight and solutions ■ Stand by our clients

Our commitment is to build the best commercial bank by helping our clients succeed and making a positive difference in our communities

CONSUMER & COMMUNITY BANKING

Gordon Smith, Chief Executive Officer Consumer & Community Banking

February 24, 2015

JPMorgan Chase & Co.

Agenda

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Our strategic agenda is focused on 6 key areas

- Continue to improve the customer experience and deepen relationships
- Reduce expenses
- Continue to simplify our business
- Maintain strong control environment and automate processes
- Increase digital engagement
- Lead payments innovation

Chase Consumer & Community Banking is a strong franchise with leadership positions across all its businesses

Powerful customer franchise	■ Consumer relationships with almost half of U.S. households ■ #1 in primary bank relationships within Chase footprint[1]
Firmwide capabilities to meet customer needs	■ Chase Private Client integration with J.P. Morgan Private Bank investments platform ■ Business Banking access to Commercial Bank specialty lending
Attractive footprint	■ Branch network concentrated in the highest growth U.S. markets ■ 55% of affluent U.S. households live within 2 miles of a Chase branch or ATM
Leading position in digital banking	■ #1 most visited banking portal in the U.S.[2] ■ #1 mobile banking functionality[3]
World-class payments franchise	■ #1 in total U.S. credit and debit payments volume[4] ■ #1 wholly-owned merchant acquirer[5] with ~50% of U.S. eCommerce volume[5]
National, scale lending businesses	■ #1 credit card issuer in the U.S. based on loans outstanding[6] and #1 U.S. co-brand credit card issuer[7] ■ #2 mortgage originator and servicer[8] ■ #3 non-captive auto lender[9]

Note: For footnoted information, refer to appendix

Performance targets

Consumer & Community Banking

		2014	Target achieved in 2014	Medium term guidance (+/-)	Targets (+/-)
Consumer & Business Banking	ROE	31%	✓	35%	35%
Mortgage Banking	Net charge-off rate[1]	0.41%	X	0.20%	0.15%[5]
	ROE	9%	X	9%	15%[6]
Card Services	Revenue margin	12.0%	✓	12.0%	12.0-12.5%
	Net charge-off rate[2]	2.75%	✓	3.0%	3.75%
	ROE	23%	✓	25%	20%
Auto	Net charge-off rate	0.34%	✓	0.45%	0.75%
	ROE	17%	✓	16%	16%
Consumer & Community Banking	ROE[3]	18%	X	20%	20%
	Overhead ratio	58%	X	~50%[4]	~50%
	Noninterest expense	$25.6B	✓	↓~$2.0B	

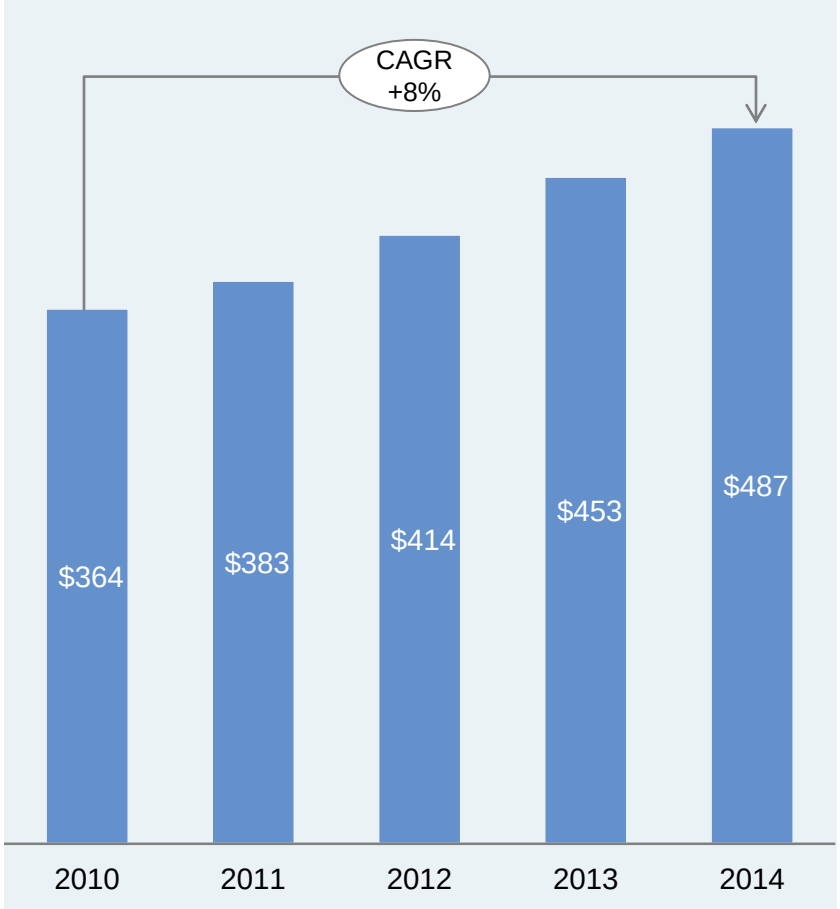
Prior Year target 30% +

Prior Year target 0.25% +/-

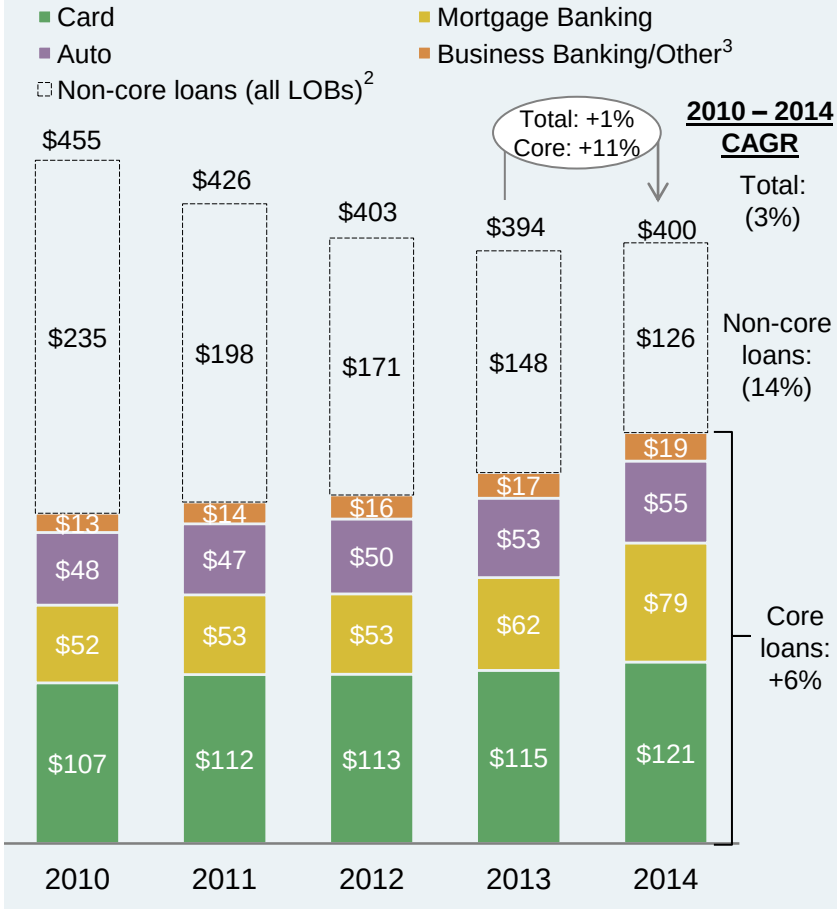
[1] Real Estate Portfolios only, excluding purchased credit-impaired (PCI) loans; 2014 actuals exclude PCI write-offs of $533mm
[2] Excludes held-for-sale loans
[3] Includes legacy mortgage servicing operational risk capital held at CCB level of $3B and $5B in 2014 and 2015, respectively
[4] Assumes front-end rates rising in 2H15, ~2.25% by 2017
[5] Target net charge-off rate of 0.15% +/- will depend on portfolio mix of mortgage and home equity
[6] Target ROE excludes liquidating real estate portfolios

Deposit growth has been strong and core loans show continued growth

Consumer & Community Banking average deposits ($B)



Consumer & Community Banking EOP loans[1] ($B)



Note: numbers may not sum due to rounding

[1] Includes held-for-sale loans

[2] Non-core loans include runoff portfolios, discontinued product/products no longer originated, and/or business simplification efforts, prior period non-core loans have been restated to include newly exited Card portfolios

[3] Other includes securities-based lending of $0.5B in 2013 and $1.1B in 2014

We exceeded our 2014 expense reduction target by $400mm and will enter 2017 with an additional $2B of cost savings

	2014 Investor Day targets	2014 performance
Consumer & Community Banking	■ Expense reduction of ~$1.8B[2] in 2014 ■ ~8K[1] headcount reduction in 2014	✓ Achieved $2.2B[2] expense reduction in 2014 ✓ Achieved ~11.6K[1,3] headcount reduction in 2014
Consumer & Business Banking + Card, Merchant Services & Auto	■ ~1% ($200mm) expense growth in 2014 ■ ~2K[1] headcount reduction in 2014	✓ 0.4% ($85mm) expense growth in 2014 ✓ Achieved ~3.7K[1] headcount reduction in 2014
Mortgage Banking	■ Expense reduction of ~$2B[2] from 2013 to 2014 ■ ~6K[1] headcount reduction in 2014	✓ Achieved $2.3B[2] expense reduction in 2014 ✓ Achieved ~7.9K[1,3] headcount reduction in 2014

Since 2012, we have reduced expense by ~$3.2B

[1] Includes employees and contractors
[2] Includes reductions of ~$0.4B related to litigation and ~$0.3B related to foreclosure-related matters
[3] 2013 headcount adjusted for ~1,250 reduction effective January 1, 2014

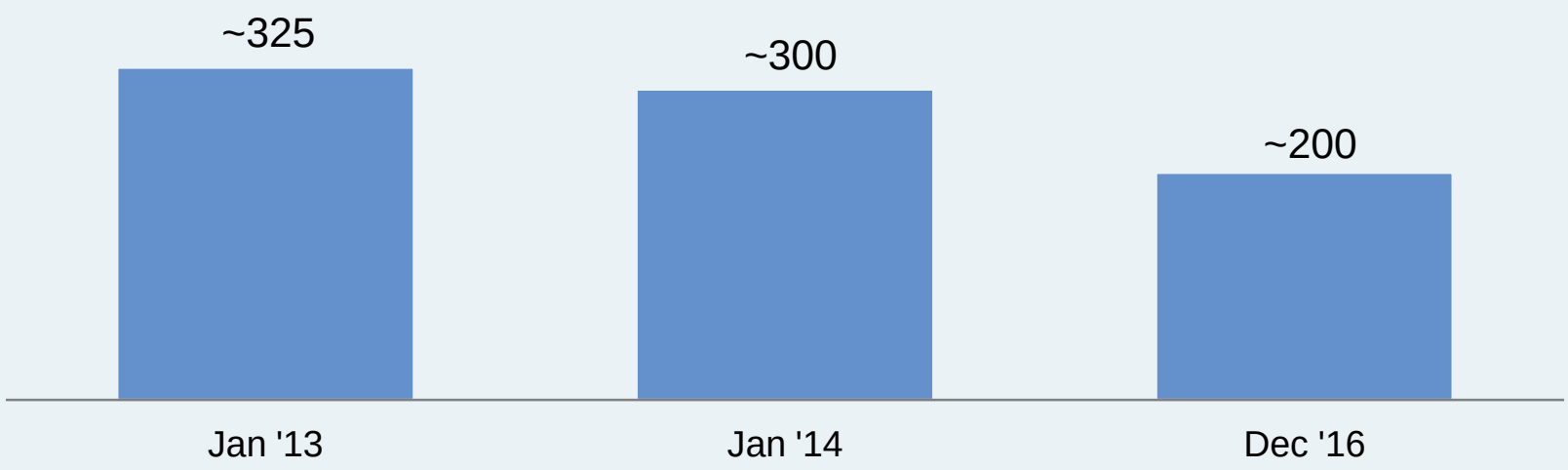
We are executing against our expense reduction initiatives

Key initiatives across Consumer & Community Banking	
Branch staffing model	■ Align banker and specialist staffing in branches with opportunity
Branch automation	■ Increase in-branch digital functionality to facilitate self-service
Digital / self-service	■ Invest in our mobile and online capabilities to enable customers to interact with Chase how and when they want
Controls and process automation	■ Automate manual controls and processes
Real estate / location strategy	■ Consolidate non-branch locations into large strategic hubs
Vendor rationalization	■ Consolidate and rationalize vendors to drive efficiency

We are actively driving down our expense base

Example: Non-branch location strategy

Consumer & Community Banking buildings (excluding branches)

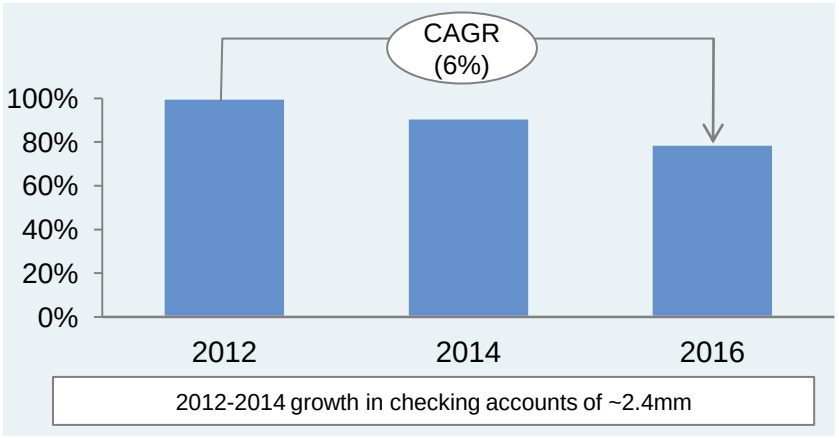


- Comprehensive real estate strategy to consolidate locations into large strategic hubs
- Economies of scale to be achieved through exit of non-core sites
- Cost savings to be achieved across multiple areas
  - Real estate
  - Technology
  - Human resources
  - Vendors

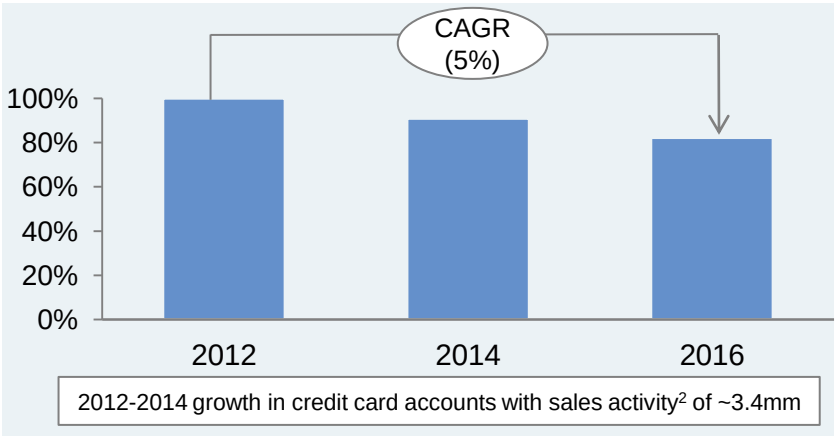
We are actively driving down our expense base while growing our business

Example: Servicing unit costs

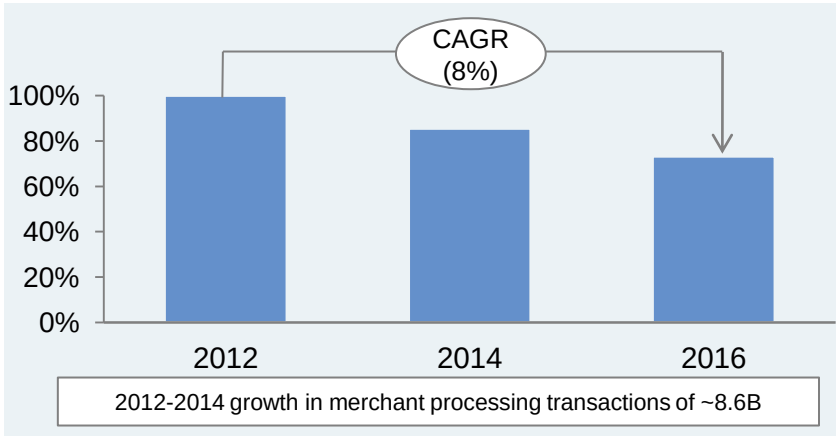
Consumer & Business Banking call center cost per checking account



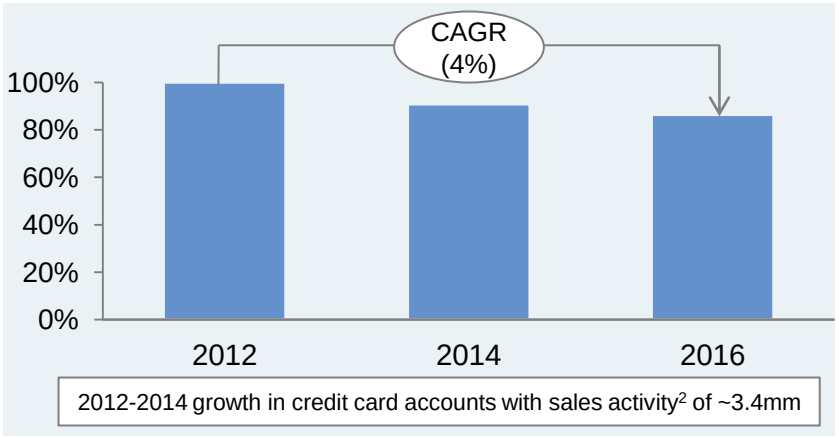
Operating cost per active credit card[1]



Merchant processing cost per transaction



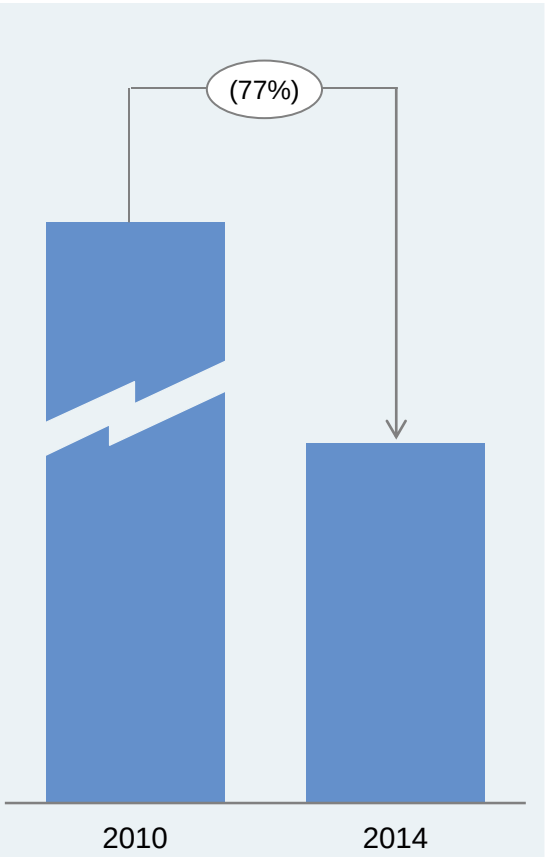
Fraud dispute / claims cost per credit card dispute[1]



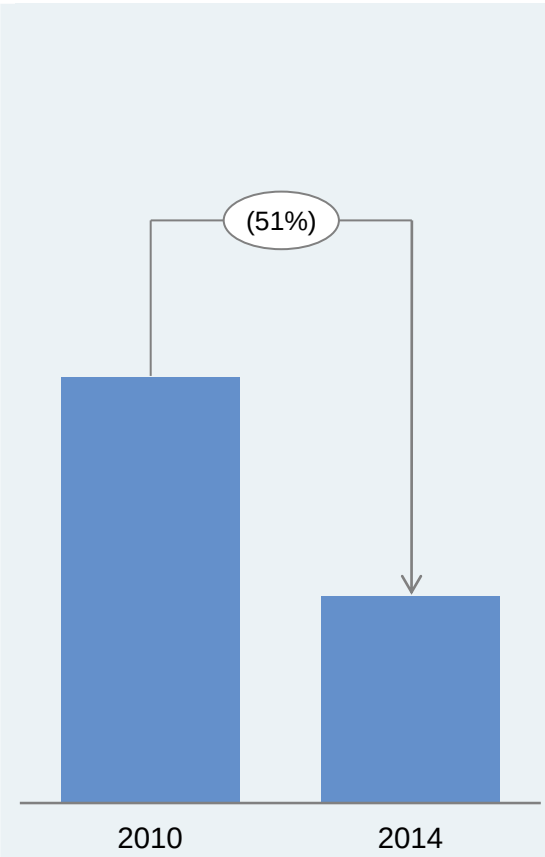
[1] Excludes Commercial Card, Canada and certain terminated partners/products
[2] Excludes Commercial Card

We have simplified our product set to reduce complexity and further de-risk the business

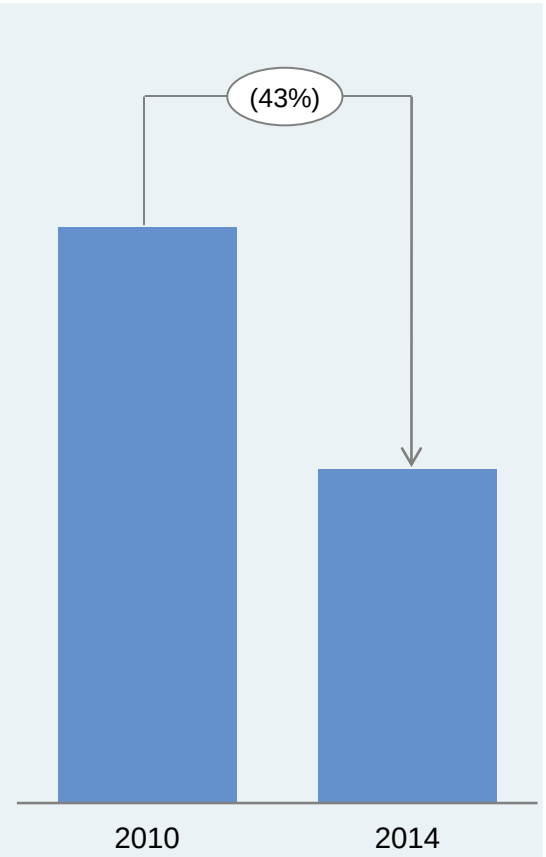
of Card partners



of Mortgage Banking products and programs



of Business Banking deposit products



Revenue impact is already reflected in our 4Q14 run-rate

We have strengthened our controls and continue to simplify and innovate our businesses

Continuing to enhance the control environment…

- **Dedicated resources** to strengthen our controls
- **De-risking** through client selection – discontinuing certain business with select clients
  - Exited 5K+ Foreign Politically Exposed Person relationships
  - Exited 4K+ Business Banking relationships in high risk geographies and industries
  - Closed 100K+ accounts in 2014 through Anti-Money Laundering screening and monitoring processes
  - Prohibited cash deposits by non-account holders in March 2014
- **Automating** processes to mitigate control breaks
- **Simplifying** products and processes

…which will lead to:

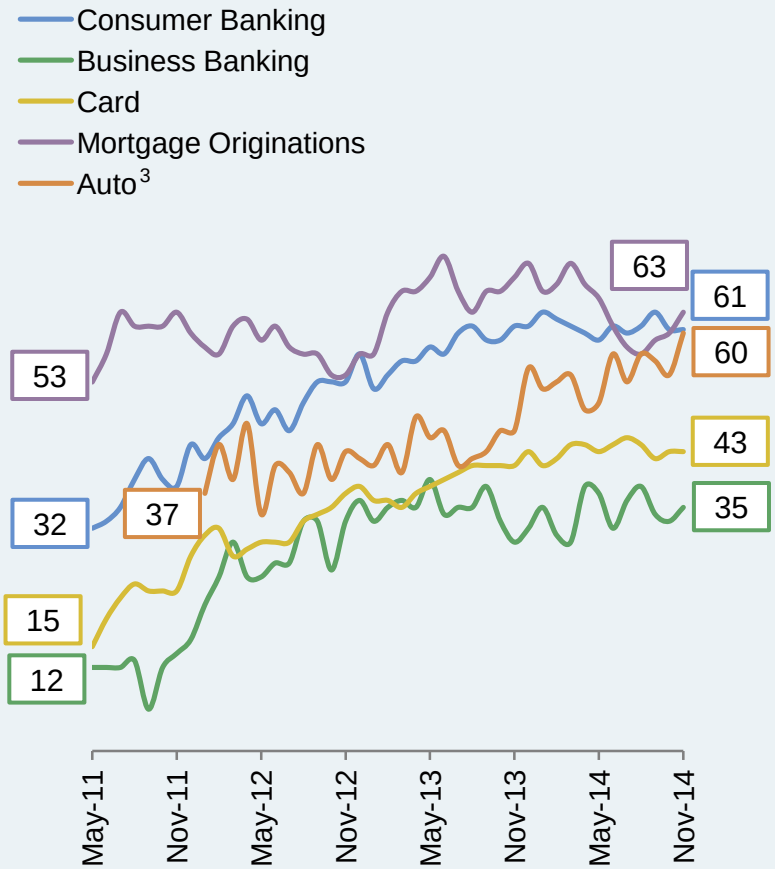
Simpler products and processes

Lower operational complexity and fewer control breaks

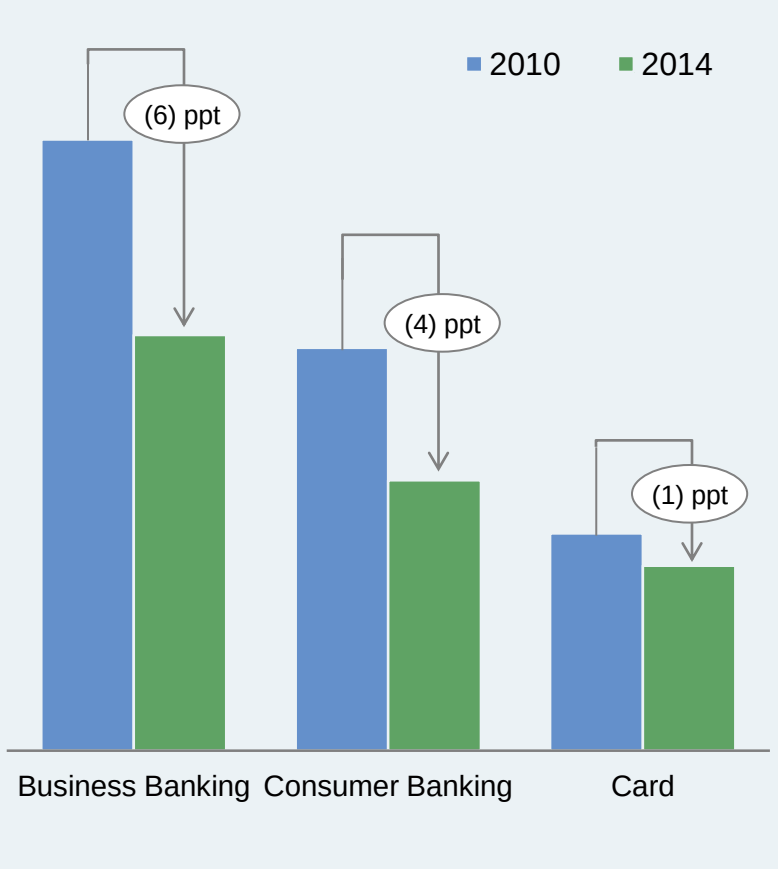
Superior customer experience

Customer experience continues to improve, resulting in lower attrition…

Net promoter scores[1]



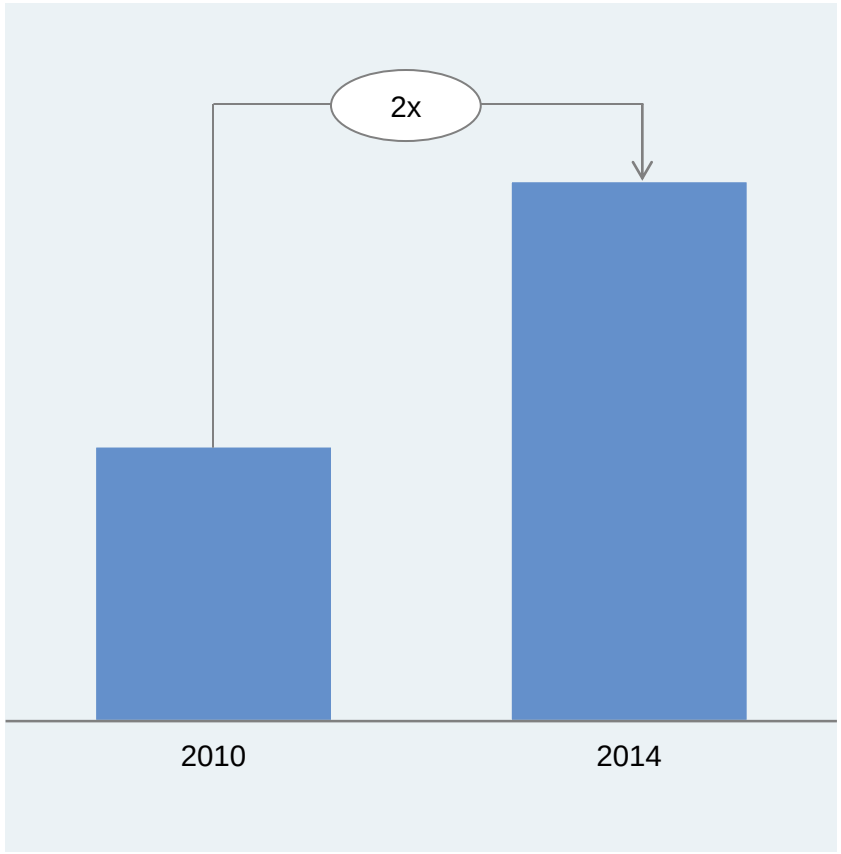
Chase household attrition rates[2]



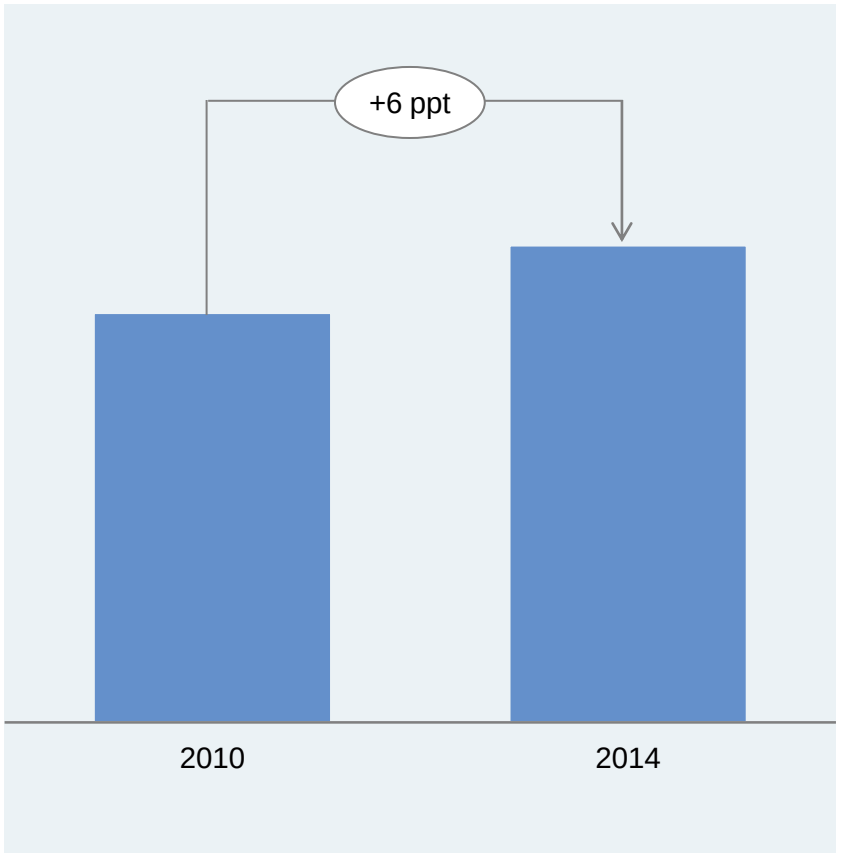
[1] Note: NPS = % promoters minus % detractors
[2] Includes households that close all Chase accounts; average of annualized monthly attrition rates over 12 months for 2010 and 2014
[3] Auto NPS score tracked beginning in January 2012

… and deeper relationships with our customers

Checking balance per new account ($K)[1]



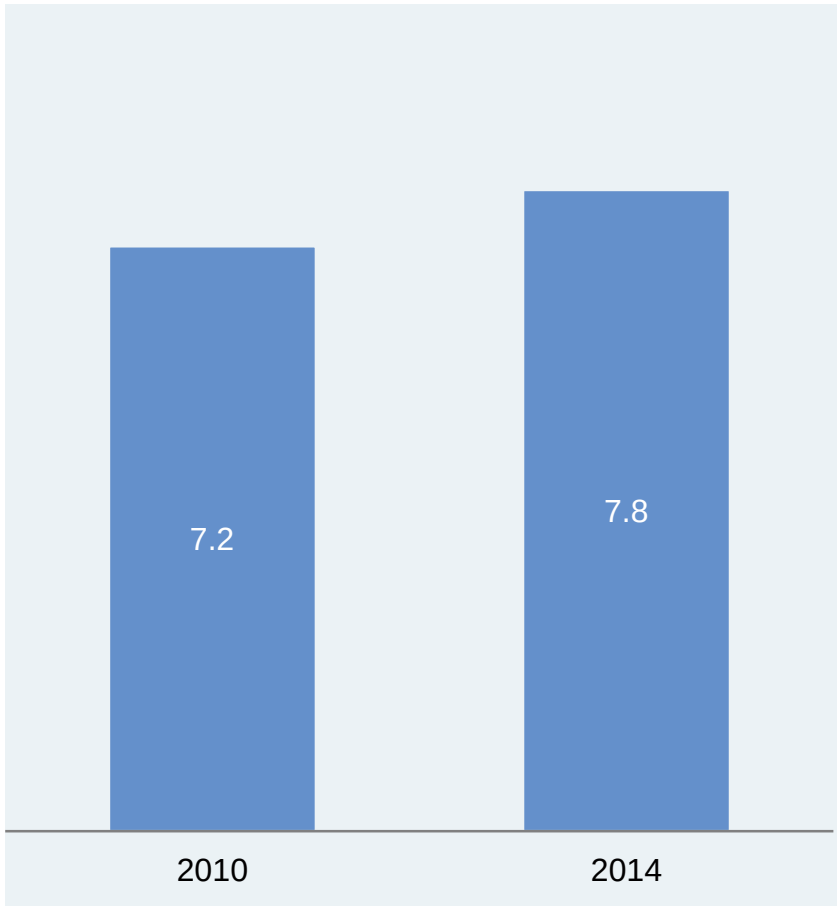
Credit card spend share of wallet[2]



[1] Data represents average checking balance per new checking account on the last day of the month the account was opened
[2] Excludes Business Card, Commercial Card, Canada and certain terminated partner portfolios

We continue to leverage the strength of our franchise across the entire firm which results in deeper relationships

Number of products & services[1] per Consumer Banking household



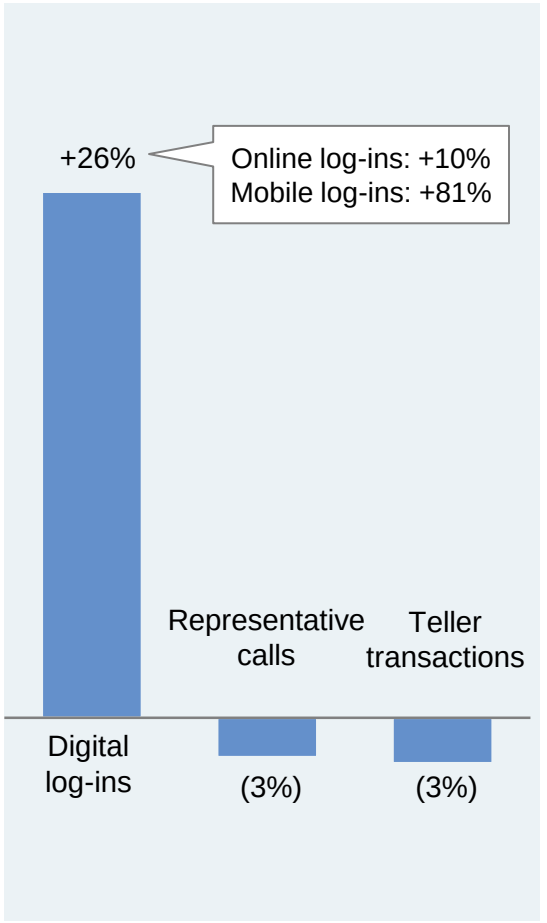
[1] Products and services include deposits (e.g., interest checking, money markets), credit (e.g., mortgages, credit cards), investments, and services (e.g., online banking, mobile banking)

Strength of the franchise

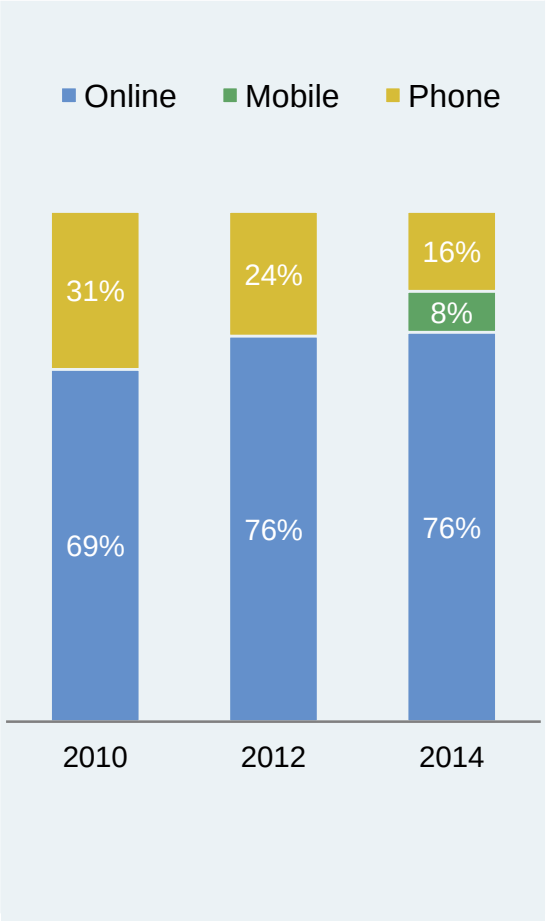
- ~45% of CCB households have more than one Chase product
- ~35% of Chase branded cards sold through branches
- ~70% of Chase Paymentech new sales in the U.S. are sourced from across the bank
- ~80% of Business Banking households have a personal relationship with Chase

Customers are increasingly engaging with us through digital channels which enables us to reduce service costs

Chase servicing interactions per household[1] – 2010-2014 CAGR



Ultimate Rewards redemptions by channel

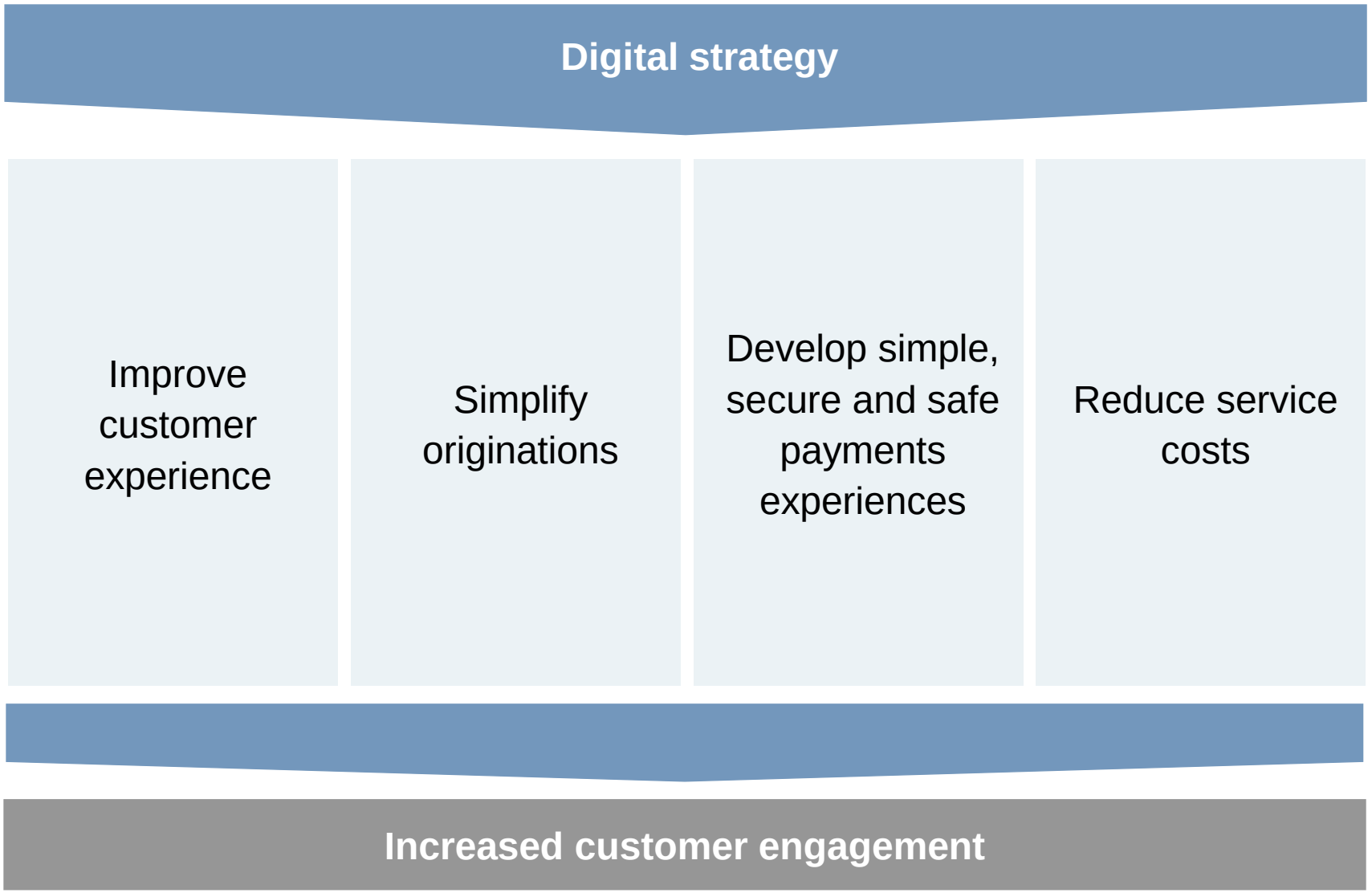


Cost per deposit by channel[2]



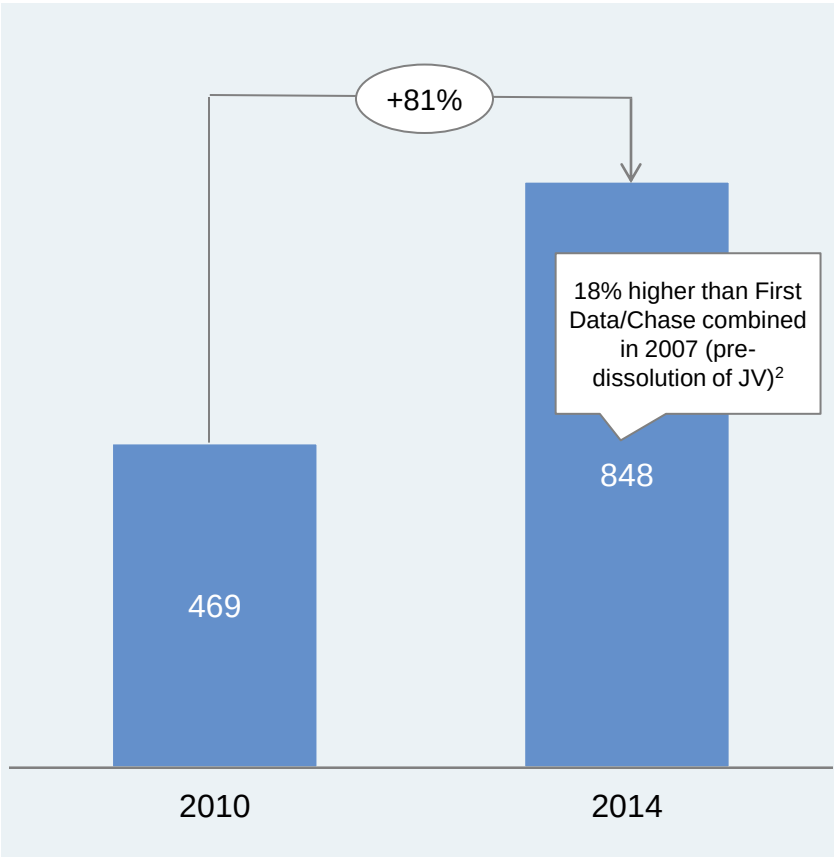
[1] Per household analysis; includes Chase Consumer & Business Banking and Card lines of business
[2] Based on variable cost; teller deposit cost based on average deposit transaction time of ~1minute

Our goal is to give customers a compelling experience in the digital channel



Chase Commerce Solutions has been growing faster than the market

Merchant processing volumes ($B)[1]



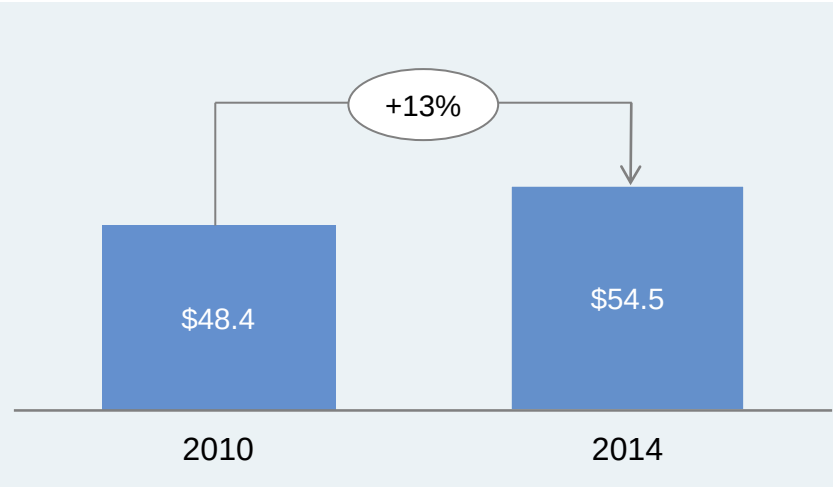
Merchant processing bankcard volumes ($B)[3]



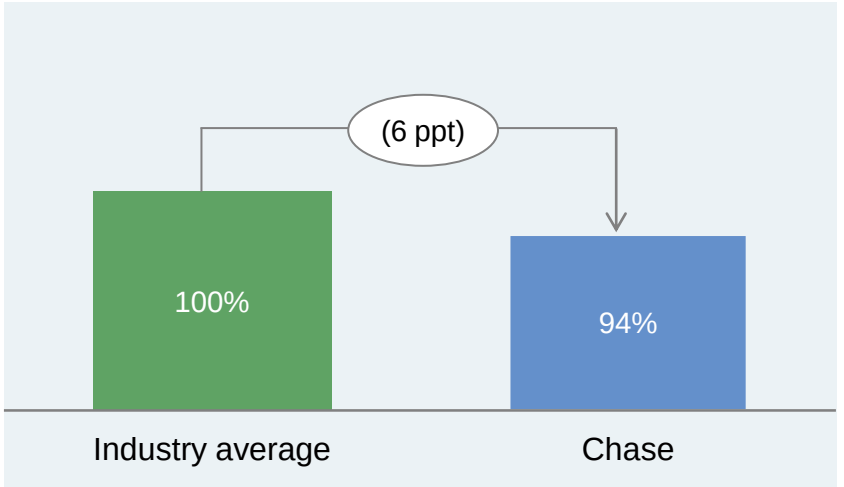
Note: Chase Commerce Solutions, also known as Merchant Services, includes Chase Paymentech, ChaseNet and Chase Offers businesses
[1] Source: Chase internal data; includes bankcard, PIN debit and other payment types (e.g. gift card, electronic payments)
[2] Joint venture between Chase and First Data was dissolved in 4Q08
[3] Source: Chase internal data and Nilson data for the industry; U.S. bankcard volumes include Visa and MasterCard credit and signature debit volumes

We are continuing to grow our Auto business while maintaining credit discipline

Chase EOP Auto loans ($B)



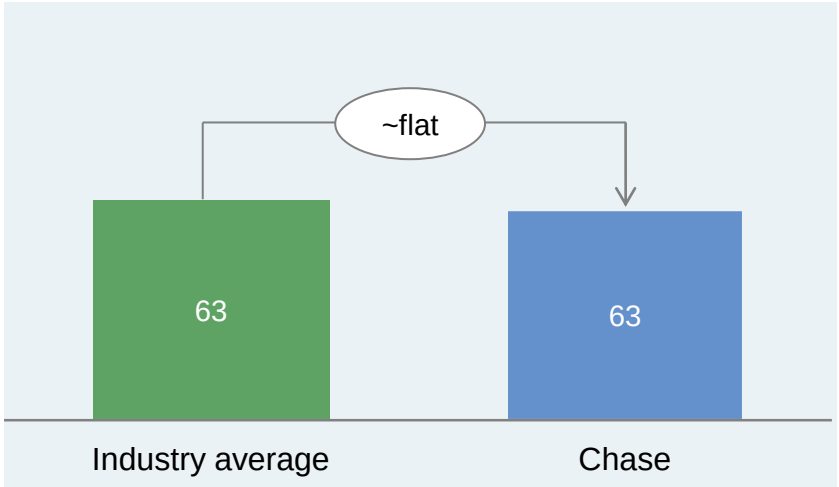
November 2014 YTD originations average LTV[1]



November 2014 YTD originations average FICO[1]



November 2014 YTD originations average term (months)[1]



[1] Chase internal data for all Chase metrics; Experian AutoCount and Power Information Network for industry averages

The underlying performance of the business is strong

Consumer & Community Banking lines of business drivers

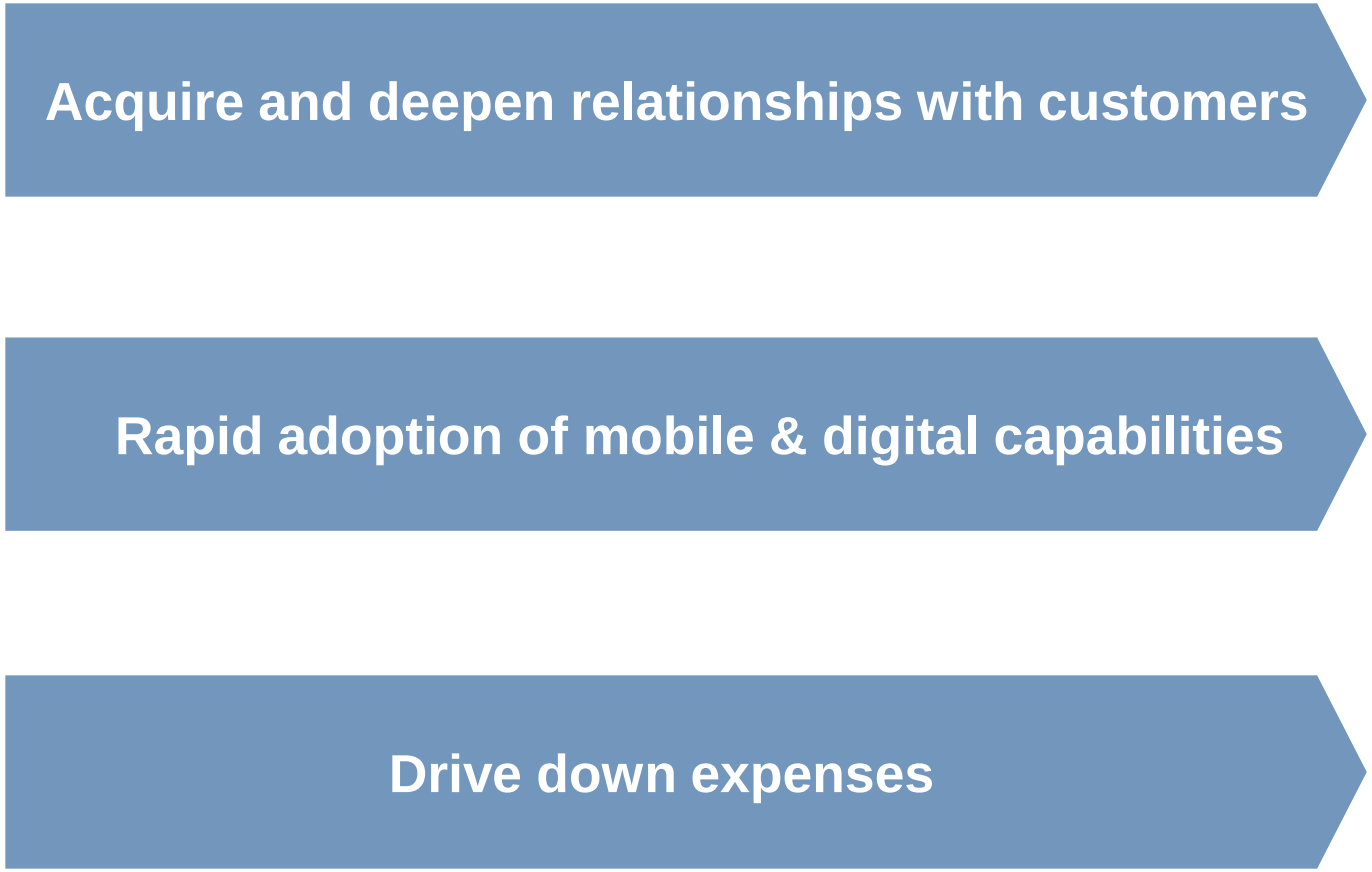
$ in billions, except ratios and where otherwise noted		2014	YoY Δ
Consumer Banking	Households (mm)	22.9	3%
	Deposits (average)	$381	8%
	Client investment assets	$213	13%
Business Banking	Deposits (average)	$91	12%
	Loans (period-end)[1]	$20	6%
	Loan originations	$7	28%
Mortgage Banking	Total mortgage originations	$78	(53%)
	Third-party mortgage loans serviced (period-end)	$752	(8%)
	Real Estate Portfolios net charge-offs[2]	$0.5	(57%)
Card	New accounts opened[3] (mm)	8.8	21%
	Sales volume[3]	$466	11%
	Loans (period-end)	$131	3%
	Net charge-off rate[4]	2.75%	(39) bps
Merchant Services	Merchant processing volume	$848	13%
Auto	Auto originations	$28	5%
	Loans (period-end)	$55	3%

[1] Excludes Small Business Credit Card
[2] Excludes purchased credit-impaired (PCI) loans; 2014 net charge-offs exclude PCI write-offs of $533mm
[3] Excludes Commercial Card
[4] Excludes held-for-sale loans

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Key strategic initiatives and mission



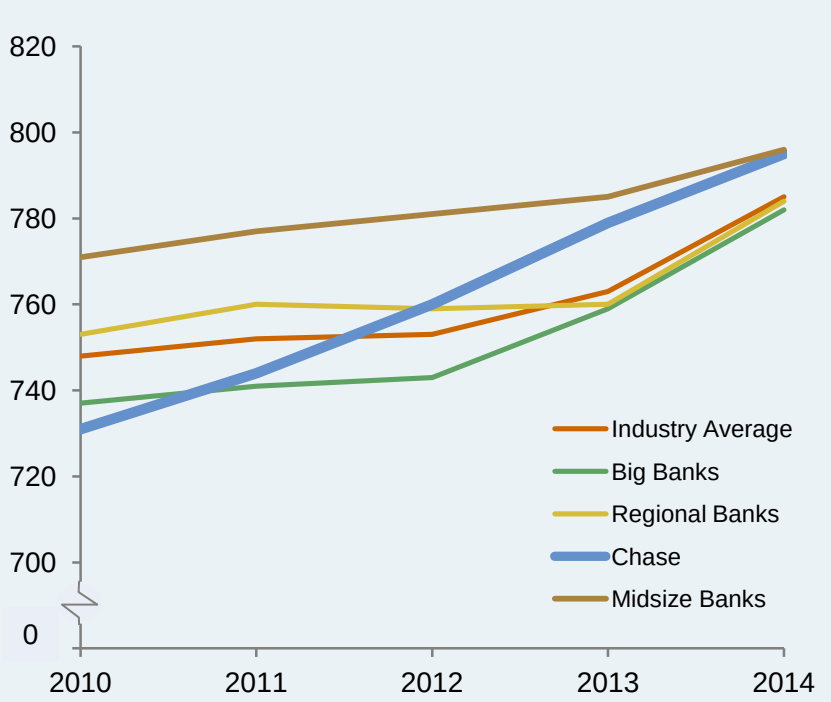
Consumer Banking business drivers

Consumer Banking business drivers		2013	2014	YoY Δ
Relationships	Consumer household relationships (mm)	22.3	22.9	3%
	Consumer household attrition rate[1]	10%	9%	
Deposit & Investment balances ($B)	Average deposit balances[2]	$434.6	$472.3	9%
	Client investment assets (end of period)	189	213	13%
	Net new investments	16.0	16.1	1%
	% managed assets	36%	39%	
Distribution channels	Branches	5,630	5,602	-
	ATMs	20,290	18,056	(11%)
	Active mobile users[2] (mm)	15.6	19.1	22%
	Branch employees[2] (K)	59.3	52.8	(11%)
Performance[2] ($B)	Revenue	$17.4	$18.2	5%
	Net Income	2.9	3.4	17%
	ROE	26%	31%	

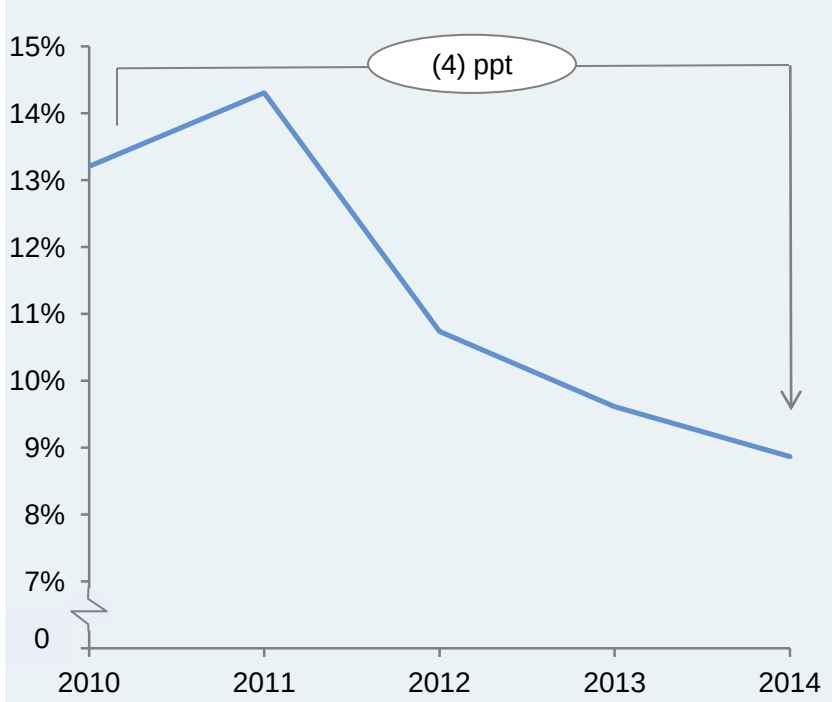
[1] Households and clients that close all Chase account relationships
[2] Includes Consumer and Business Banking

Higher customer satisfaction is driving lower attrition

J.D. Power overall satisfaction index[1]



Consumer Banking household attrition rates[3]



American Customer Satisfaction Index

- #1 in customer satisfaction among the largest U.S. banks for the third consecutive year[2]

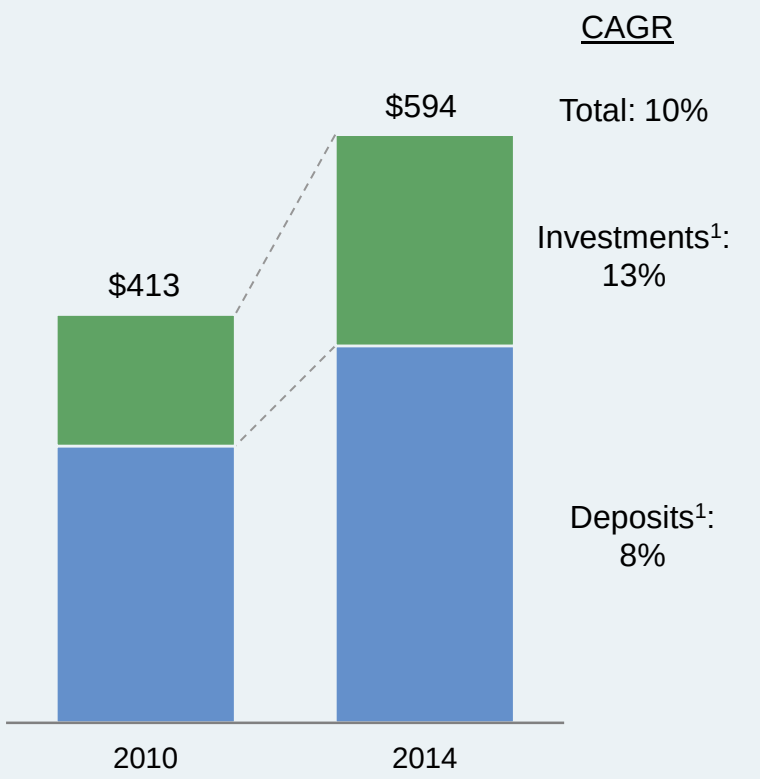
Improved attrition driving strong performance

- A 4% improvement in attrition equates to ~1mm Consumer Banking households and $15B in deposits

[1] Source: J.D. Power U.S. Retail Banking Satisfaction Study; Big Banks defined as top six U.S. banks
[2] Based on the yearly American Customer Satisfaction Index as of December 2014
[3] Includes households that close all Chase accounts; average of annualized monthly attrition rates over 12 months for 2010 - 2014

We have had record deposit and investment growth

Consumer Banking deposit and investment growth ($B)



Key growth drivers

- Acquisition
  - Added ~2mm households since 2010
  - High quality: New account balances up ~100%[2]
  - New builds contributed ~$20B in aggregate deposits
  - Pricing discipline: 2014 core deposit rate of 8 bps
- Deepening
  - Majority of balance growth from existing relationships
  - Increasing primary banking relationships

Core relationships

Stable balances

Chase has outpaced the industry in deposit growth for the third consecutive year[3]

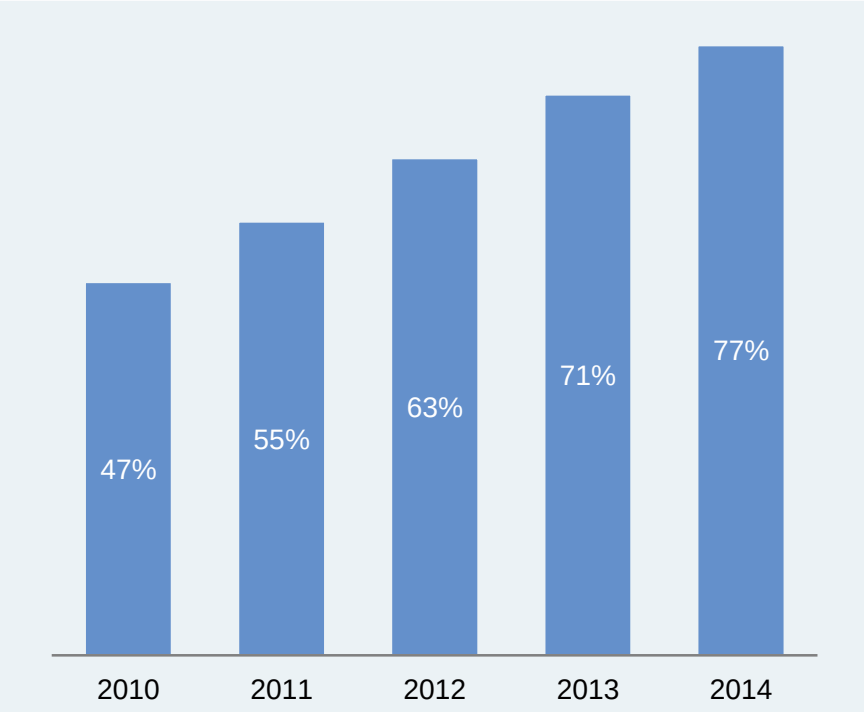
[1] End-of-period investments and average deposit balances
[2] New checking account average balances in 2014 vs. 2010
[3] Source: FDIC 2014 Summary of Deposits survey per SNL Financial; Market growth rate is ~3.2%; excludes all branches with $500mm+ in deposits in either of the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks); includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC

Building core investment relationships with our customers

Building core investment relationships

- ~60% of new investment money is from deposit customers who invest with us for the first time[1]
- ~40% lift in these customers' deposit and investment balances[1]
- Deposit and investment customers have lower attrition rates than deposit only
- ~70% of all investment flows are in managed accounts

% of investment revenue from asset-based fees[2]

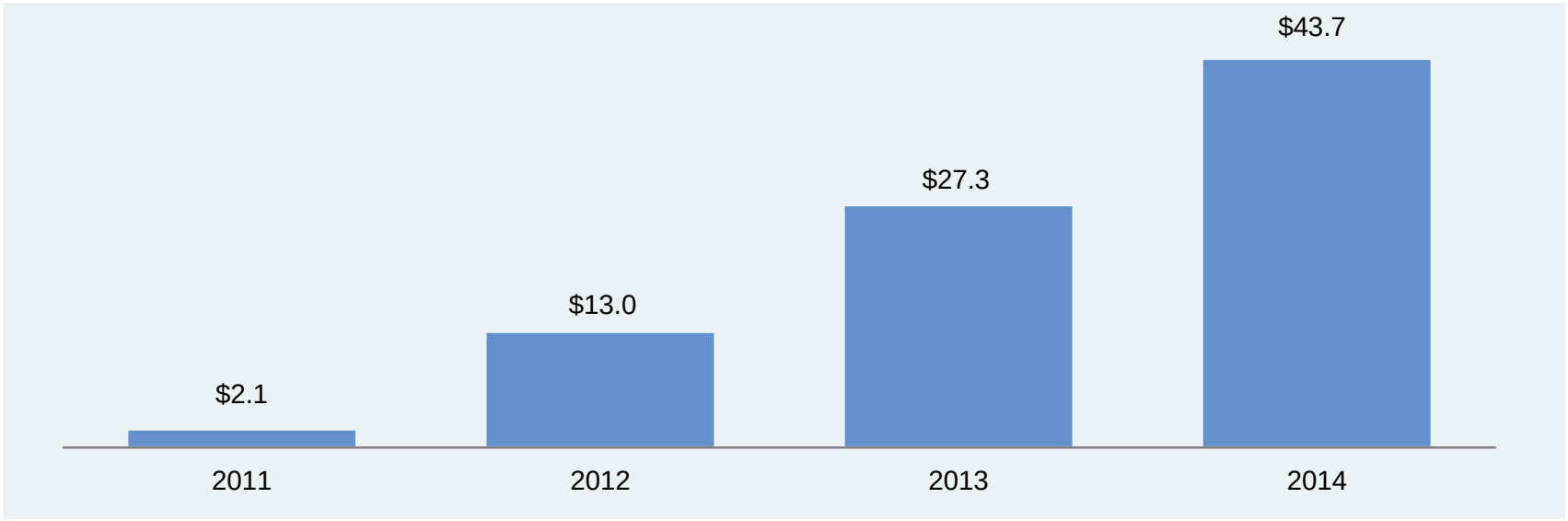


Recurring revenue up 30ppt

Source: Chase internal data
[1] Based on new Chase Private Client customers
[2] Chase Wealth Management asset based fees earned on managed products and recurring mutual fund revenue

Our Chase Private Client platform is deepening relationships with affluent clients

Chase Private Client (CPC) cumulative net new deposits and investments[1] ($B)



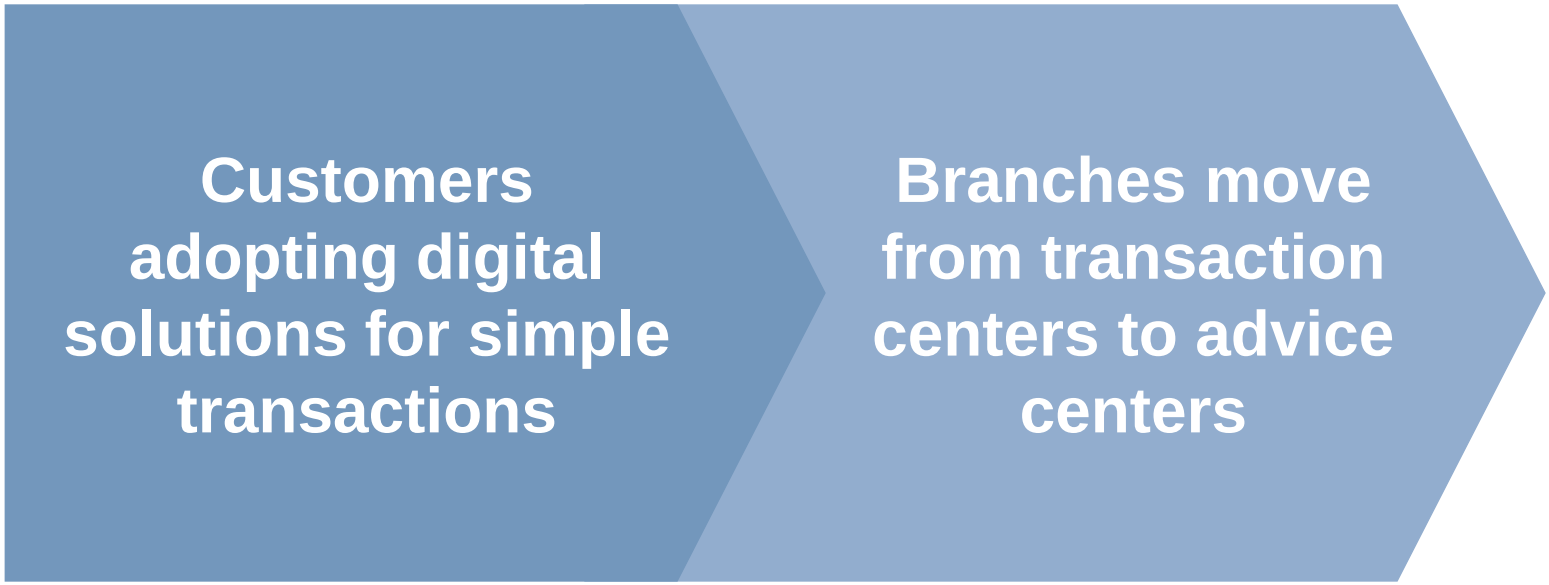
Chase Private Client is deepening relationships

- CPC now offered in ~2,500 branches and covering ~80% of our affluent clients
- Substantial progress towards our $100B net new deposits and investments goal
- Deepening lending relationships: Differentiated mortgage experience and underwriting standards

Large uncaptured opportunity remains

[1] New money prior to CPC launch included in cumulative calculation

The way customers bank is changing



Transactions are migrating to digital channels

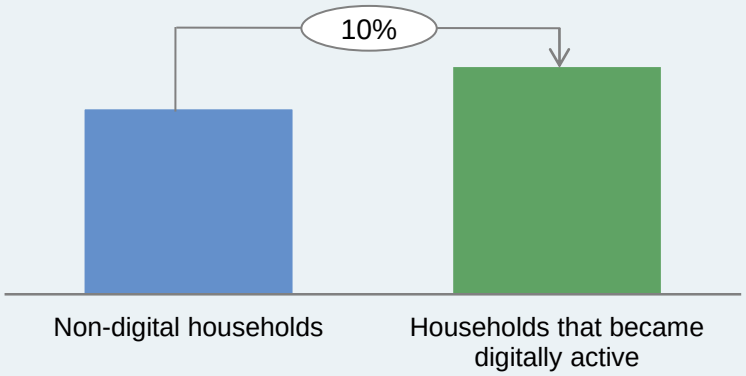
Digital channel[1,2]	YoY growth	2014 transactions
Mobile app users[3]	+20%	19mm users
Mobile QuickDeposit℠	+25%	~45mm
Mobile Chase QuickPay℠	+80%	~30mm
Mobile Bill Pay	+30%	~60mm
ATM deposits	+10%	~200mm

[1] Mobile QuickDeposit, Mobile Chase QuickPay and Mobile Bill Pay are mobile only; exclude online activities
[2] Mobile Chase QuickPay count for completed transactions
[3] 90 day active mobile users as of December 2014

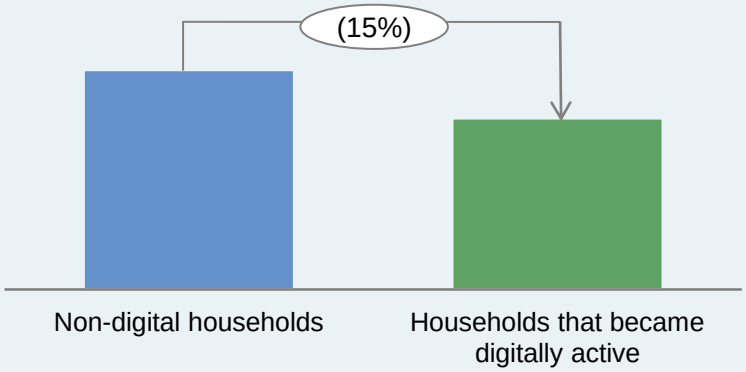
Digital usage results in more engaged customers and lower cost

Results when customers adopt digital solutions[1]

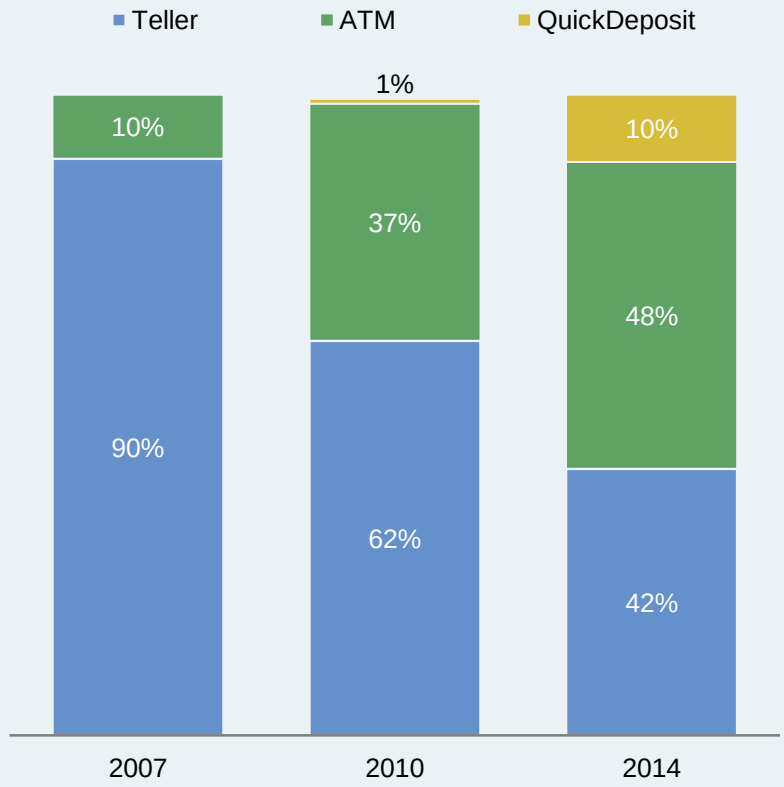
Primary relationships[2]



Attrition rates



Consumer Banking household deposits by channel[3]



~50% lower cost per deposit in 2014 vs. 2007

[1] Based on a sample of households that became digitally active in January 2014 and subsequent trends through November 2014 when compared to a control group of non-digital households; digitally active refers to having a mobile or online login during the time period
[2] Primary relationship based on internal Chase definition
[3] Based on fourth quarter data

We continue to enhance ATM & mobile functionality to support transaction migration

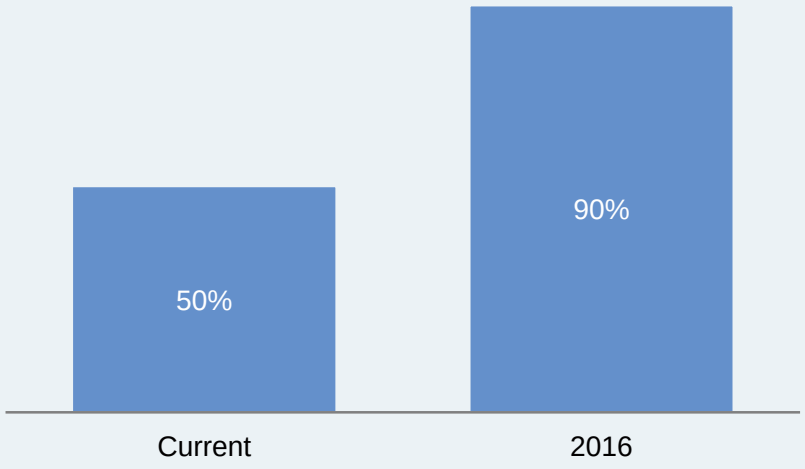
Enhancing ATM functionality

- Increasing ATM capacity in high volume branches
- Increasing withdrawal limits
- Integrating cash recyclers

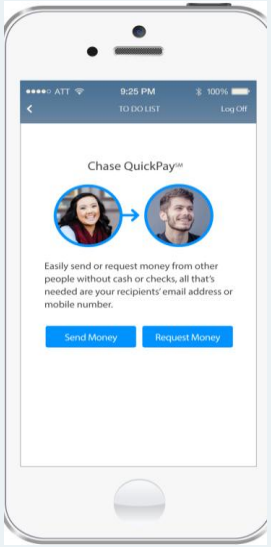
Enhancing mobile functionality

- Simplified mobile onboarding experience
- Increased QuickDeposit℠ functionality and limits
- Enabled paperless statement preview

% of ATM enabled consumer transactions



Future Chase QuickPay℠ improvements



- Streamlined group payments
- Immediate funds access
- Personalized imagery
- Simplified experience

Drive down expenses

As a result of changes in customer behavior, our branch operating model continues to evolve

New branch formats	■ Transactional to advisory
Fewer people	■ New branch staffing model
Less dense network	■ Plan to reduce branch count by ~300 by end of 2016

New branch formats

Changes are driving a shift in our branch operating model from service to sales

Branches remain a critical channel

- ~90% of customers visit a branch each year
- Average customer visits 4x per quarter
- Key channel for building relationships
  - More private offices to facilitate discussions
  - ~60% advisory staff (up 10 ppt since 2010)
- Service channel across lines of business
  - ~70% of Business Banking clients visit a branch each quarter
  - ~55% of Commercial Bank customers visit a branch each quarter
  - ~35% of Private Banking households visit a branch each quarter

Branches evolving to advice centers

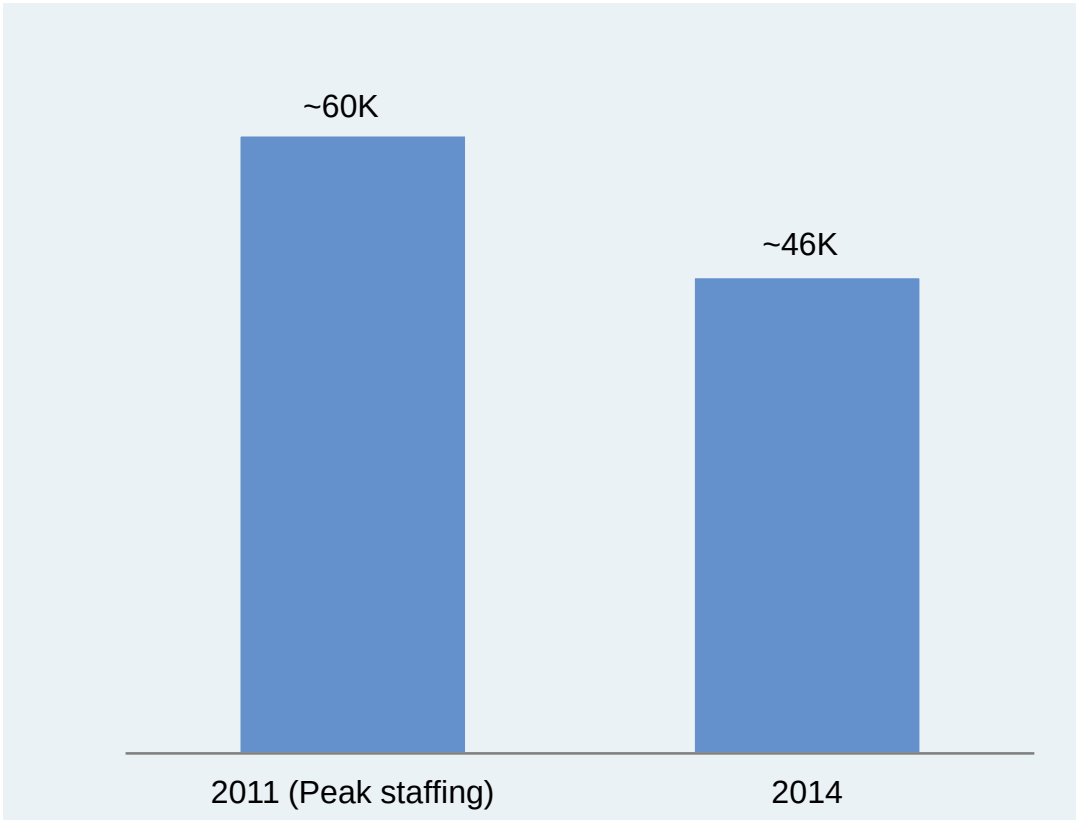


Drive down expenses

Fewer people

New branch staffing model

Branch staff[1]



2/3 of branch expenses are staffing related

- Aligning banker staffing model to sales opportunity and branch volume
- Reducing tellers based on automation of transactions
- Reducing assistant branch managers due to simplified operations
- Expect continued efficiencies as self-service trends continue

Evolution of the staffing model

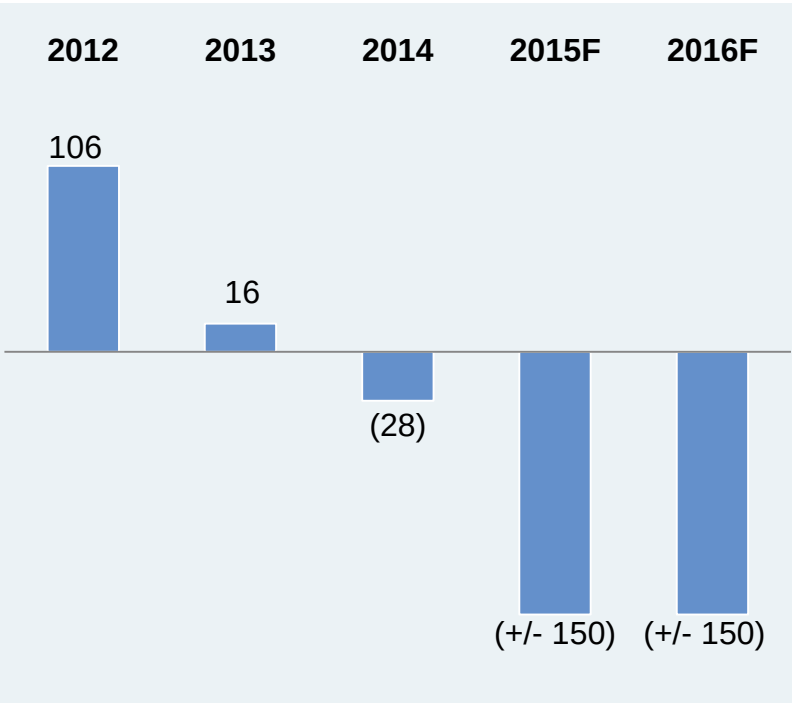
[1] Excludes branch managers

We continue to optimize our branch network

Network activity

	2012	2013	2014
Beginning branch count	5,508	5,614	5,630
New builds[1]	150	132	71
Consolidations[1]	(44)	(116)	(99)
Net branches opened	106	16	(28)
Ending branch count	5,614	5,630	5,602

Net change in branches

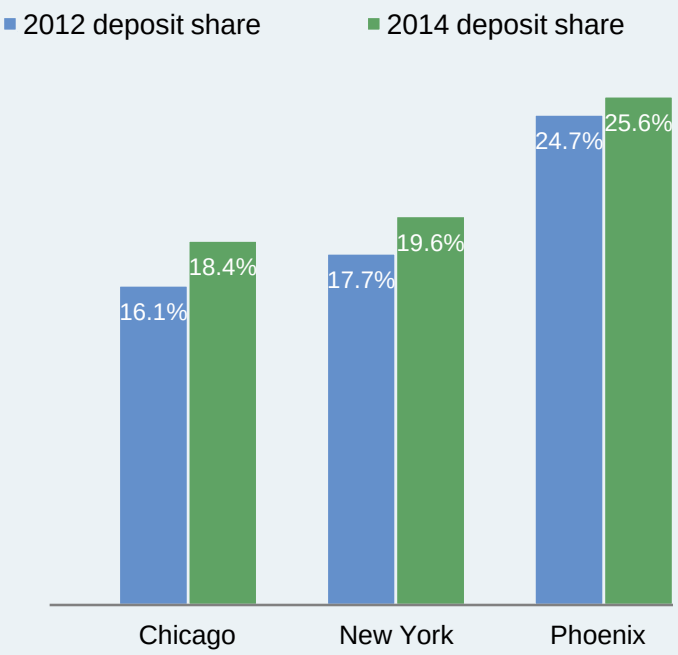


We plan to reduce branch count by ~300 by end of 2016

[1] Excludes relocations

We are consolidating branches with minimal customer impact

Chase deposit share in consolidation markets[1]



	Chicago	New York	Phoenix
Net branch change	(44)	(18)	(17)
Net change in deposits ($B)	$5.5	$15.9	$1.8

Branch consolidation process

Analytics and selection

- Annual review of branch network to identify overlapping distribution and marginal performers
- Assess hundreds of potential lease renewals each year

Execution

- Process in place to limit customer and employee impact
- Rigorously monitor customer attrition and balances

[1] Source: FDIC 2014 Summary of Deposits survey per SNL Financial; excludes all branches with $500mm+ in deposits in either of the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks); includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC

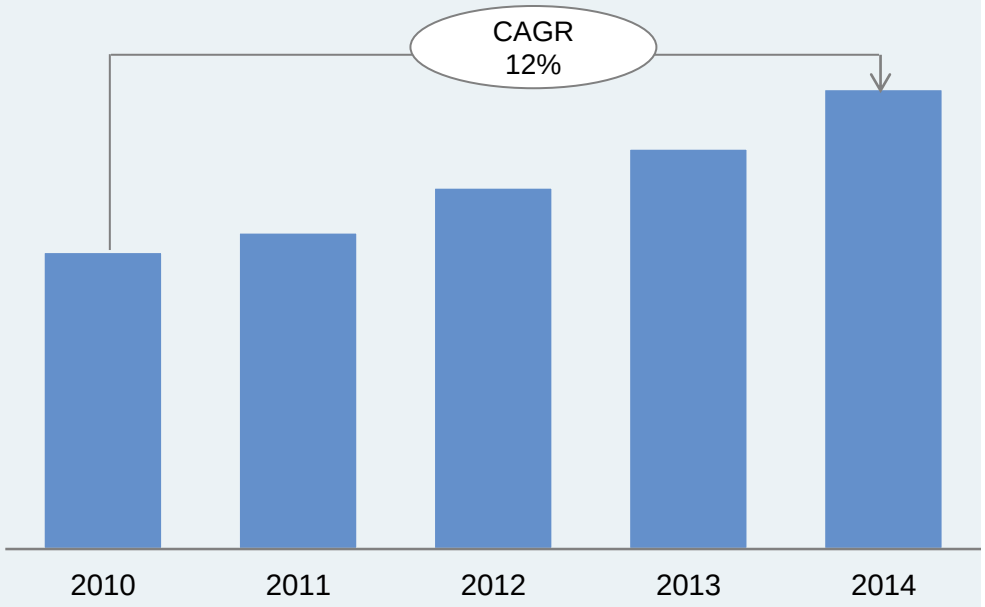
We are selectively adding branches where opportunity exists

New build rationale

- Local real estate expertise in every Chase market
- Constantly looking at improving footprint as leases mature
- Continue to selectively take advantage of new opportunities

New builds are driving growth (example: San Jose, CA)

San Jose deposits[1] ($B)

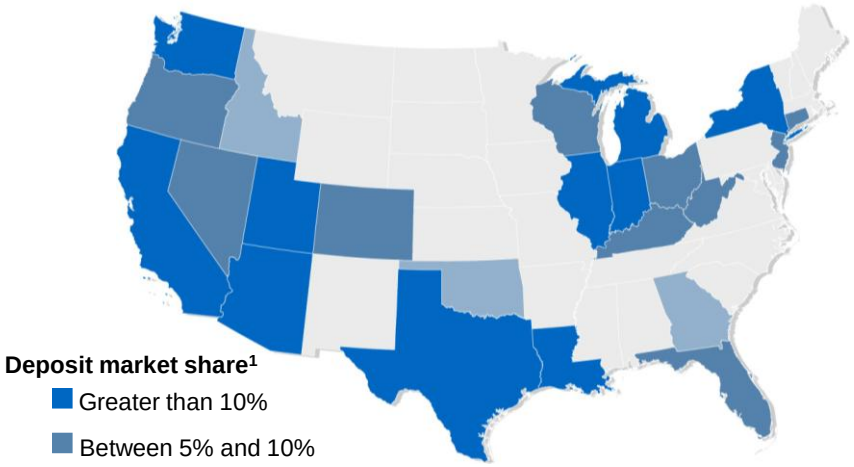


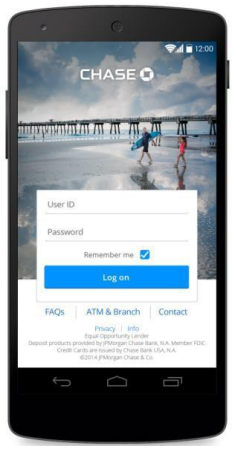
	2010	2011	2012	2013	2014
New builds	+1	+7	+2	+5	+6
Branches	41	48	50	55	61
Deposits per branch ($mm)	$98	$90	$98	$99	$102

[1] Source: FDIC 2014 Summary of Deposits survey per SNL Financial; excludes all branches with $500mm+ in deposits in either of the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks); includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC

As a result, we continue to maintain an industry leading multi-channel platform

Chase advantages







Well positioned footprint

- Top 3 in deposit share in 23 of our 25 largest markets[1]
- ~5% faster projected population growth[1,2]
- ~5% higher wealth per capita[1,2]

Leading position in digital banking

- New mobile app with customized details and more intuitive navigation
- Next generation ATMs with large screens, user friendly interface, and increased functionality
- #1 most visited online banking portal in the U.S.[3]

[1] Source: FDIC 2014 Summary of Deposits survey per SNL Financial; excludes all branches with $500mm+ in deposits in either of the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks); includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC

[2] Weighted by Core Based Statistical Area-level comparing Chase branch locations to U.S. average

[3] Per Compete.com as of December 2014

Summary

- We delivered best in class growth and improved operating efficiency in 2014
- We will continue to focus on our strategic themes
  - Acquire and deepen relationships
  - Rapid adoption of digital capabilities as customers continue to change the way they bank with us
  - Drive down expenses
- We are well positioned for continued growth going forward
- We are capitalizing on customer trends to improve efficiency and deliver on our expense commitments into 2015 and 2016

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We have made significant progress in executing against our strategic objectives

	2014 Investor Day plan	Progress
Deliver a great customer experience	▪ Simplify our product set and invest in new technology to enhance the customer experience	✓ Reduced our product set from 37 to 18 (will reduce to 15 by YE 2015) ✓ New originations platform to launch in 2015
Maximize our share of high quality originations	▪ Leverage our balance sheet ▪ Price to reflect higher servicing risks and expense	✓ Increased loans originated and retained on balance sheet (~30% in 2014, up from ~10% in 2013) ✓ Increased our share of jumbo originations ✓ Further differentiated pricing based on risk
Improve quality of servicing portfolio	▪ Actively manage down our default inventory ▪ Higher quality servicing book	✓ Actively reduced default inventory in 2014; foreclosure inventory down from ~170K in 2013 to ~90K in 2014 ✓ Improvement in delinquency rates within servicing book; 7.6% in 4Q13 to 6.3%[1] in 4Q14
Drive efficiencies	▪ Continue to invest in technology to improve operations	✓ New originations platform to launch in 2015 ✓ Investments to improve efficiency in our core and default servicing business; reduced servicing expense by ~$700mm in 2014

We are building a higher quality and less volatile mortgage business

[1] Based on total mortgage and home equity loans serviced, as reported to Inside Mortgage Finance as of December 2014

In 2014 we delivered solid financial results in a challenging environment

Includes ~$1B of repurchase benefit and gains on excess interest-only securities and Ginnie Mae loan sales – not expected to occur in 2015

Mortgage Banking P&L ($mm)

	2013	2014	YoY Δ
Revenue	$10,236	$7,826	(24%)
Expense	7,602	5,284	(30%)
Net charge-offs[1]	1,119	483	(57%)
Change in allowance	(3,800)	(700)	(82%)
Credit costs	(2,681)	(217)	92%
Net income	3,211	1,668	(48%)
Net income ex. change in allowance[2]	*855*	*1,234*	*44%*

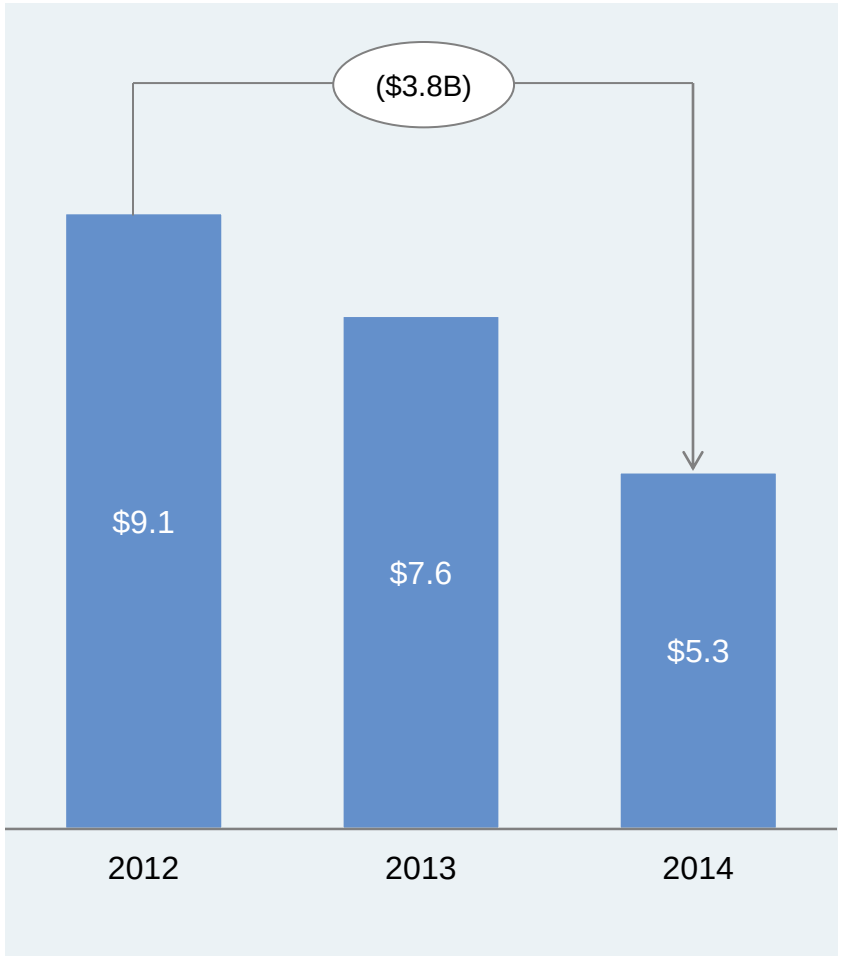
Key drivers ($B, except ratios and where otherwise noted)

	2013	2014	YoY Δ
Total mortgage origination volume	$166	$78	(53%)
Purchase origination volume	63	45	(29%)
Refinance origination volume	103	33	(68%)
Third-party mortgage loans serviced, (period-end)	816	752	(8%)
Foreclosure units (K), (period-end)	167	93	(44%)
Mortgage Banking loans, (period-end)	184	184	-
Real Estate Portfolios net charge-offs ($mm)[3]	1,107	477	(57%)
Real Estate Portfolios net charge-off rate[3]	0.96%	0.41%	

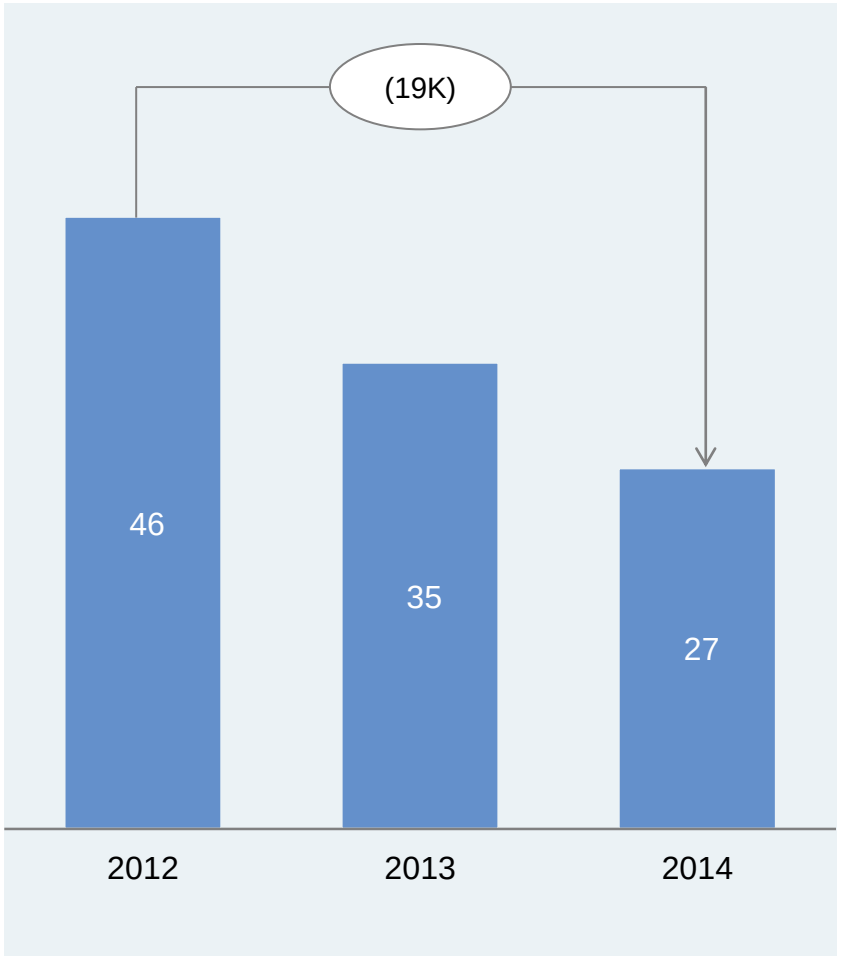
[1] Represents total Mortgage Banking net charge-offs, excluding PCI write-offs
[2] Net income adjusted to exclude change in allowance, assuming a tax rate of 38%
[3] Excludes PCI loans; 2013 and 2014 actuals exclude PCI write-offs of $53mm and $533mm, respectively

We have made progress in rightsizing our business…

Mortgage Banking expense ($B)



Mortgage Banking headcount (K)[1]



[1]Includes employees and contractors; 2013 headcount adjusted for ~1,250 reduction effective January 1, 2014

… while improving customer satisfaction

J.D. Power 2014 Mortgage Origination survey

Provider	2010 Rank	2014 Rank	Change
Quicken Loans	1	1	-
Bank of America	14	2	+12
Chase	12	3	+9
U.S. Bank	4	4	-
BB&T	6	5	+1
Citi	13	6	+7
Fifth Third	6	7	-1
Wells Fargo	8	8	-
SunTrust	5	9	-4
PNC	3	10	-7

Source: J.D. Power 2010 and 2014 U.S. Primary Mortgage Origination Satisfaction Studies

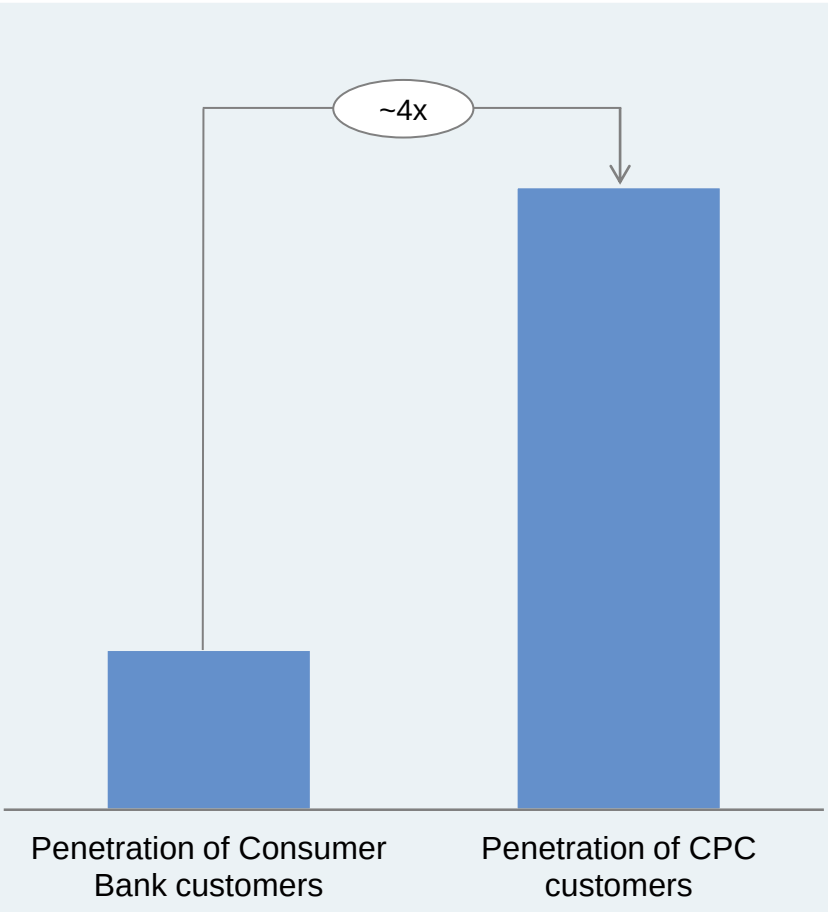
J.D. Power 2014 Mortgage Servicer survey

Provider	2010 Rank	2014 Rank	Change
Quicken Loans	N/A	1	N/A
Chase	13	2	+11
Regions	5	3	+2
Wells Fargo	4	4	-
BB&T	1	5	-4
Flagstar	9	5	+4
SunTrust	2	7	-5
U.S. Bank	3	8	-5
M&T	N/A	9	N/A
PNC	14	10	+4

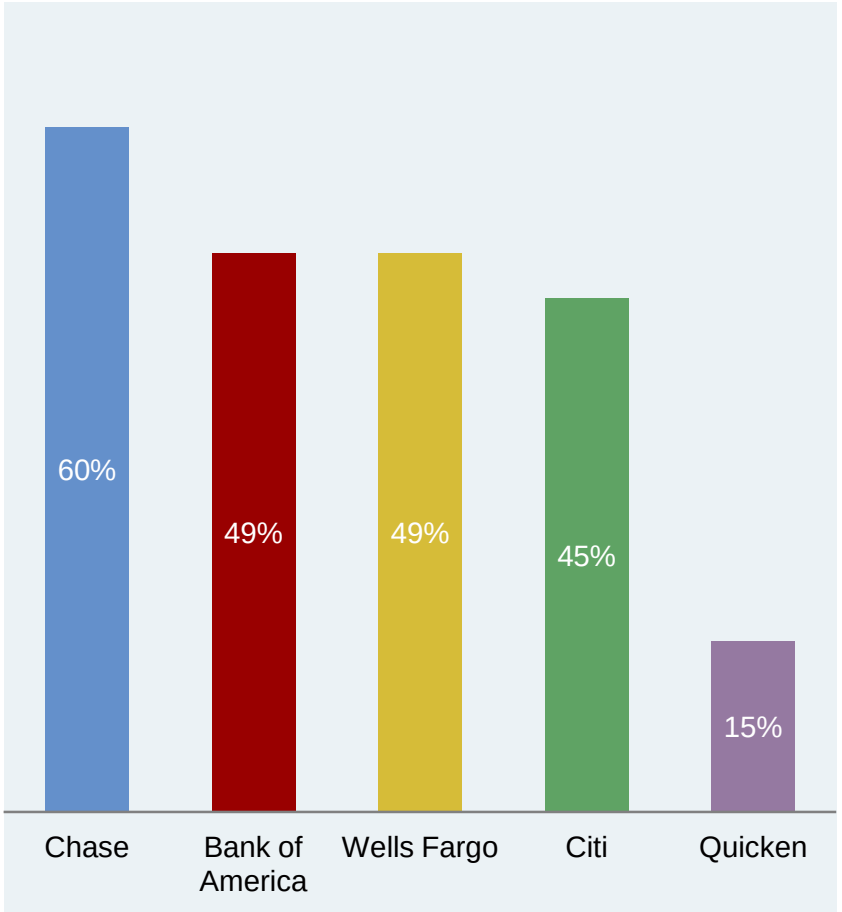
Source: J.D. Power 2010 and 2014 U.S. Primary Mortgage Servicer Satisfaction Studies

We have strong penetration with Chase Private Client households and lead peers in mortgage consideration among affluent consumers

% of households that originated a mortgage with Chase through 3Q14YTD[1]

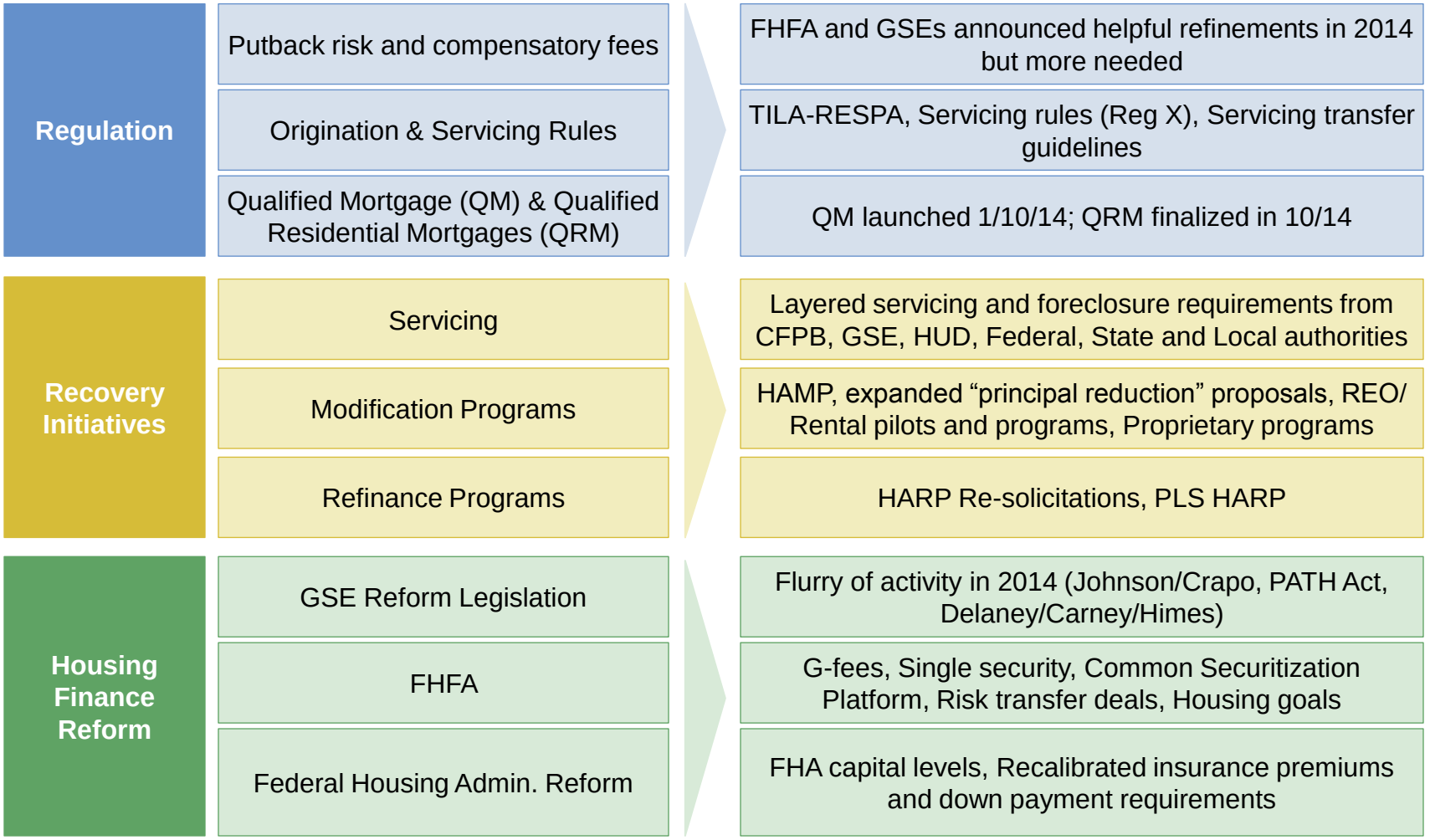


Mortgage consideration among affluent consumers[2,3,4]



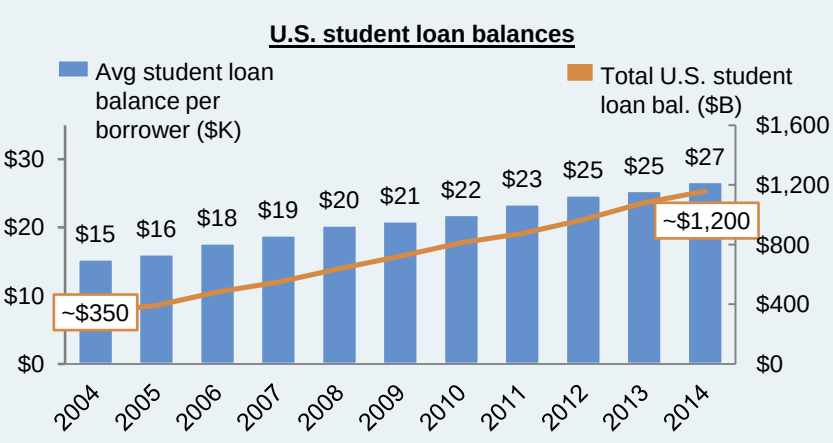
Note: For footnoted information, refer to appendix

Significant regulatory and legal complexity still exists



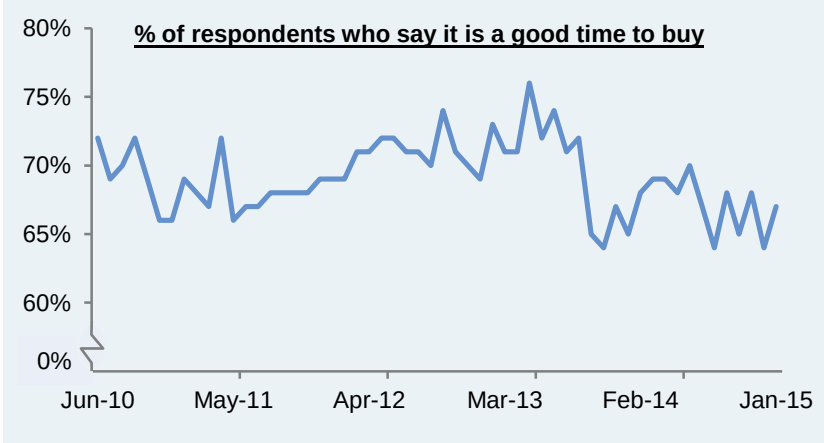
The purchase market is facing numerous headwinds…

High levels of student debt



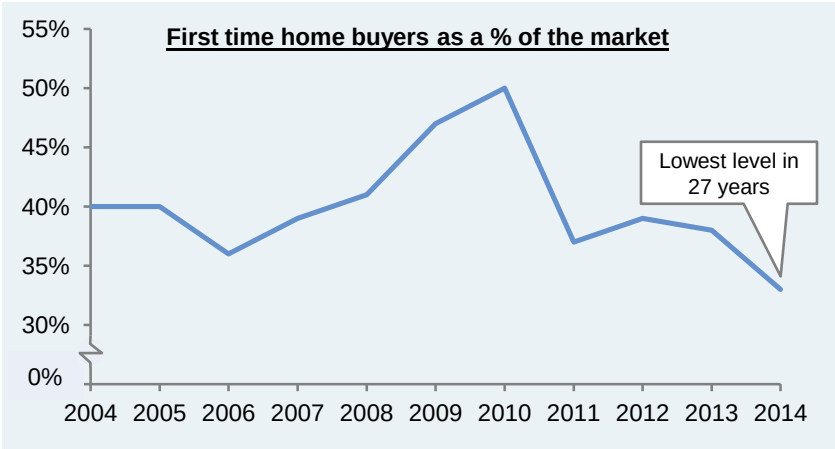
Source: Federal Reserve Bank of New York Consumer Credit Panel/Equifax, February 2015

Changing views towards homeownership



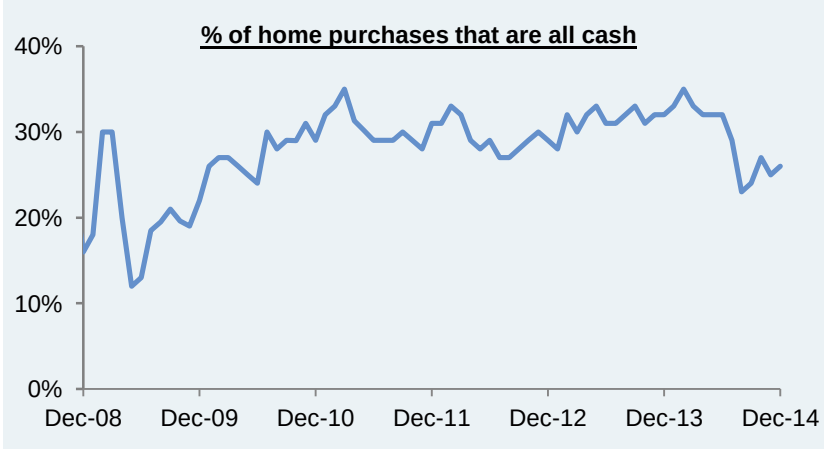
Source: Fannie Mae January 2015 monthly National Housing Survey

The share of first-time home buyers is declining



Source: National Association of Realtors, November 2014

All-cash purchases have been elevated since the financial crisis



Source: National Association of Realtors, December 2014

… and the overall originations market is expected to remain at depressed levels for the foreseeable future

Industry origination market size ($T)

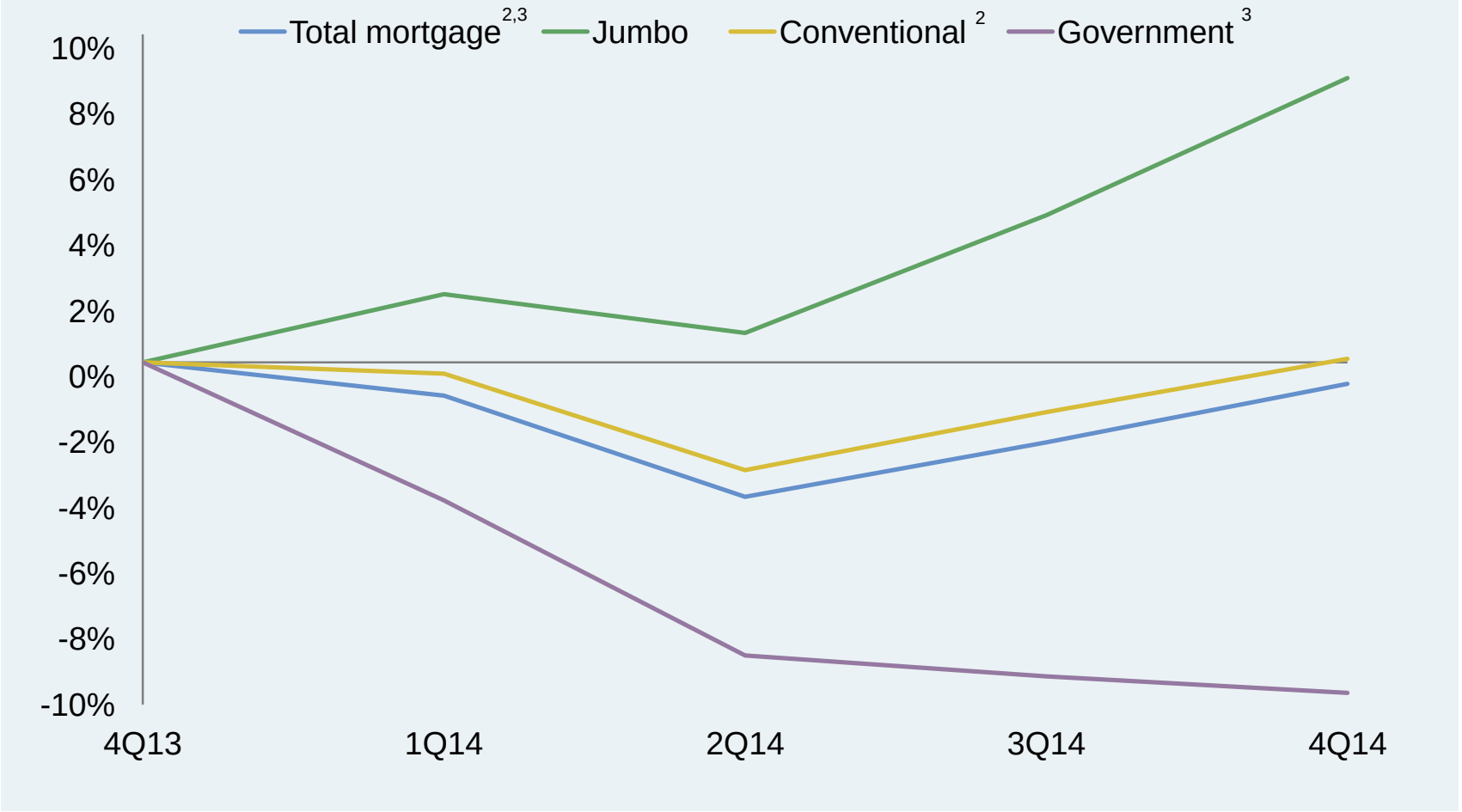


The market will be dominated by purchase as refinance is expected to remain at low levels for a long time

Source: Inside Mortgage Finance (2000-2014), 2015F - 2016F reflects average of Freddie Mac (1/14/15), Fannie Mae (1/12/15), and MBA (1/20/15) estimates

Our strategy is to maximize our share of high-quality originations

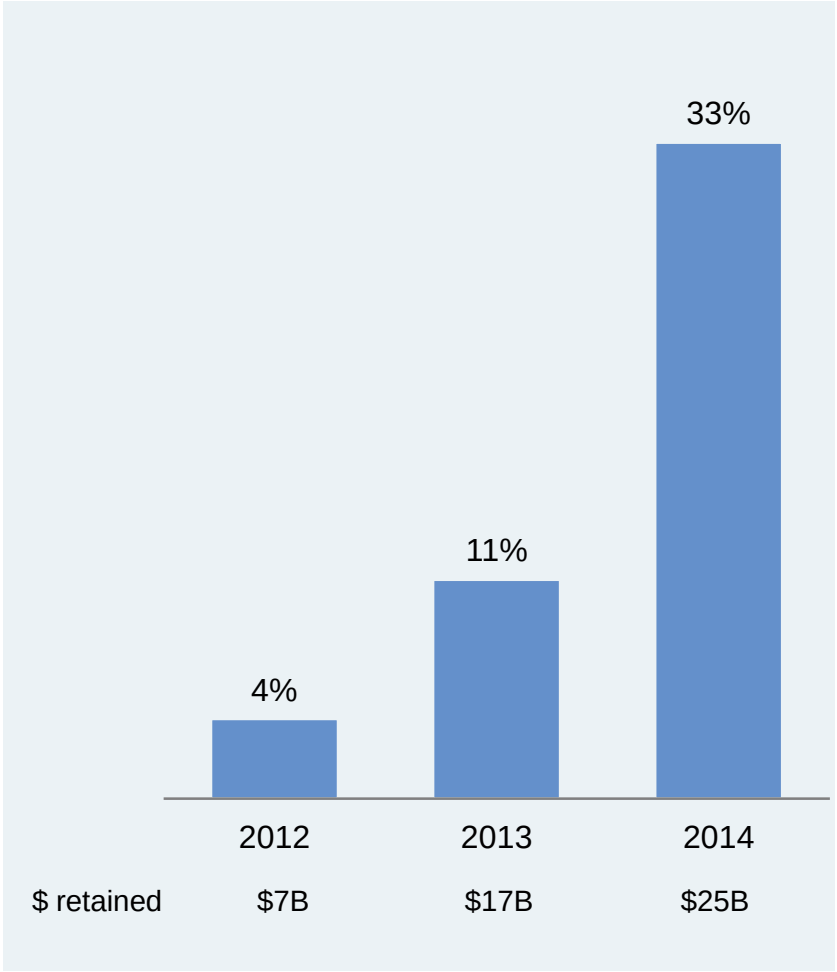
Chase[1] originations market share change



Source: Lendershare and Chase internal data as of December 2014
[1] Mortgage Banking only originations; excludes Private Bank and Home Equity
[2] Conventional excludes FHFA defined HARP and Correspondent bulk transactions
[3] Government excludes USDA

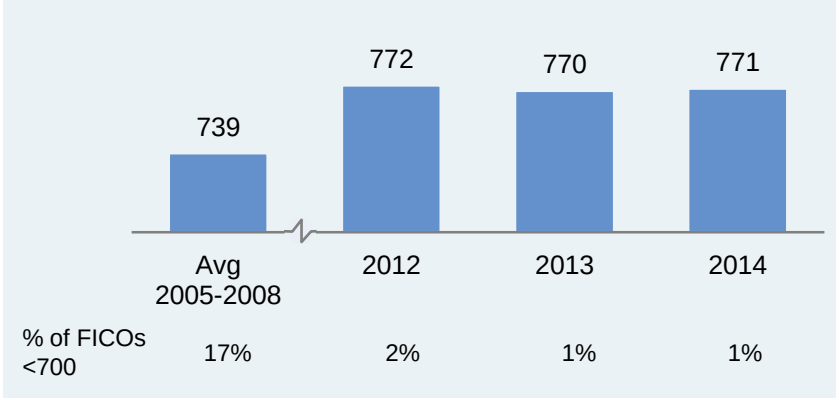
We are leveraging our balance sheet with a focus on high-quality mortgages

% of originations retained on balance sheet[1]



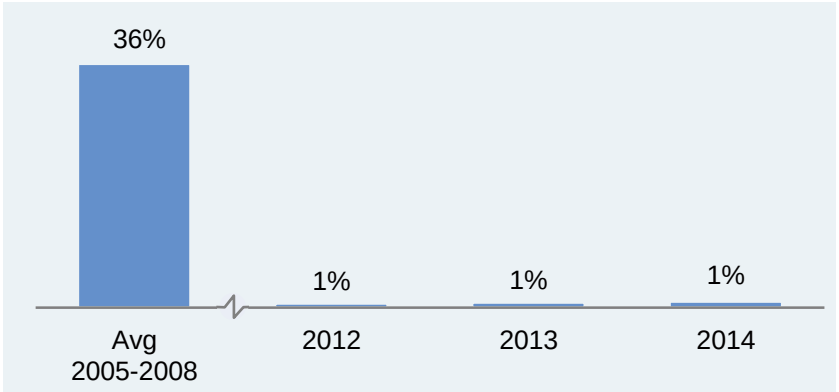
[1] Includes mortgages only; excludes Private Bank mortgages

Average FICO of originations retained on balance sheet[1]



[1] Includes mortgages only; excludes Private Bank mortgages

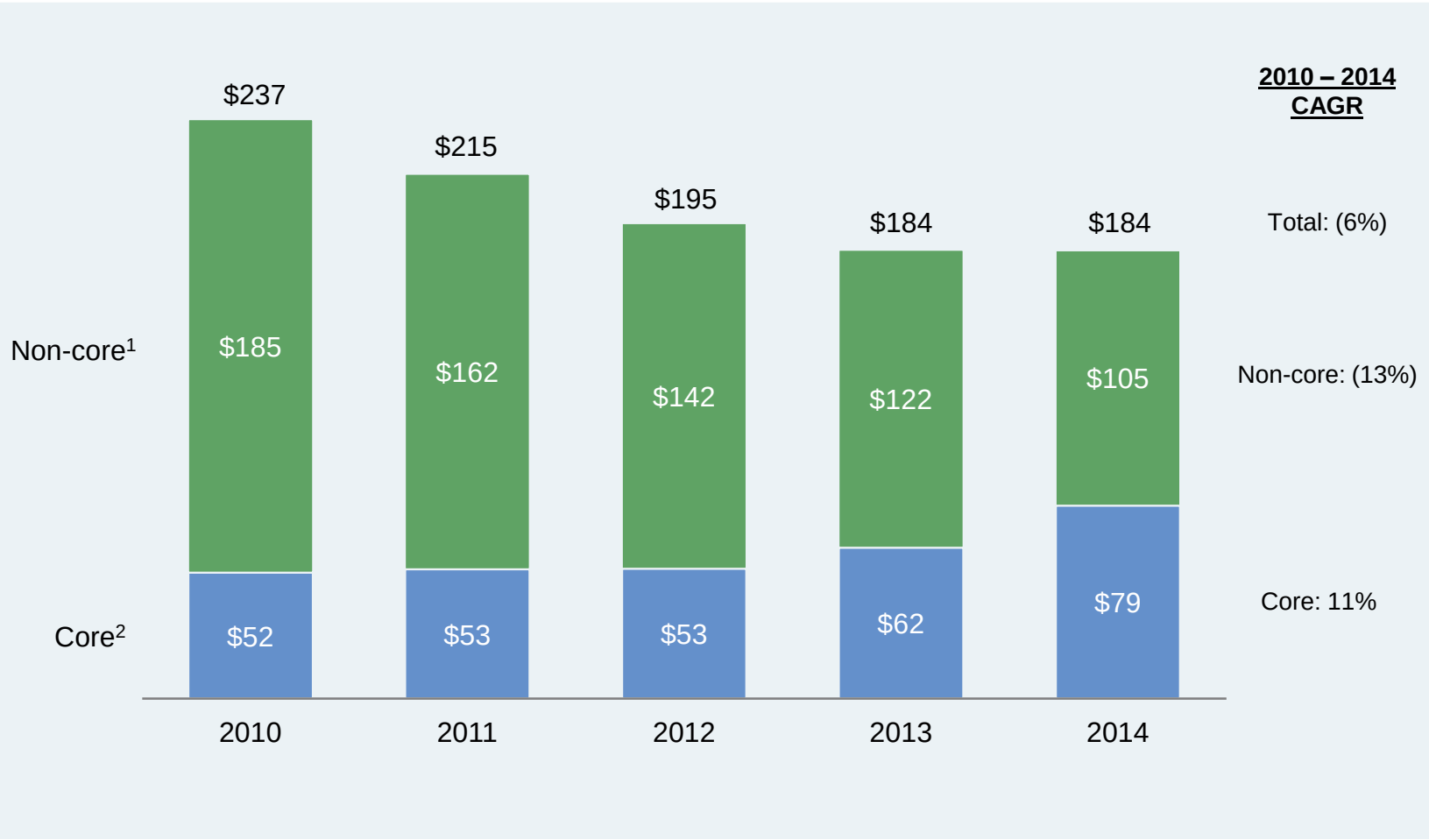
% of originations retained on balance sheet with CLTV > 80%[1]



[1] Includes mortgages only; excludes Private Bank mortgages

Our real estate portfolio has hit an inflection point as we leverage our balance sheet to add high-quality loans

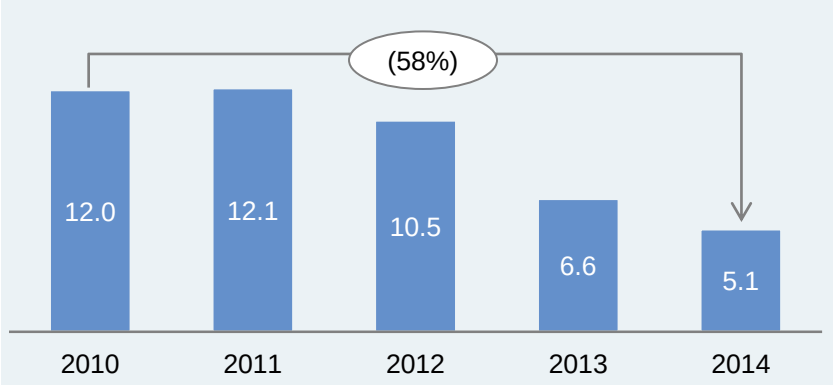
Mortgage Banking loan portfolio EOP ($B)



[1] Non-core loans include runoff portfolios, which are predominantly discontinued products no longer originated and purchase credit-impaired loans
[2] Core loans primarily include loans held in Real Estate Portfolios, as well as loans residing in Production and Servicing, which are predominantly prime mortgage loans repurchased from Government National Mortgage Association ("Ginnie Mae") pools, which are insured by U.S. government agencies

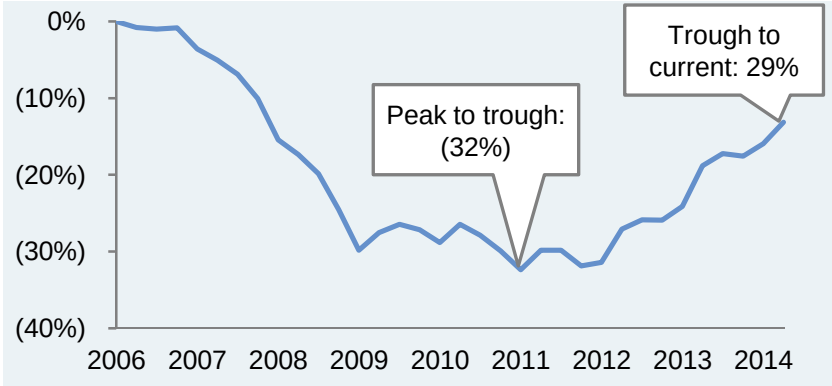
Housing market fundamentals continue to improve…

Number of underwater homes in the U.S. (mm)



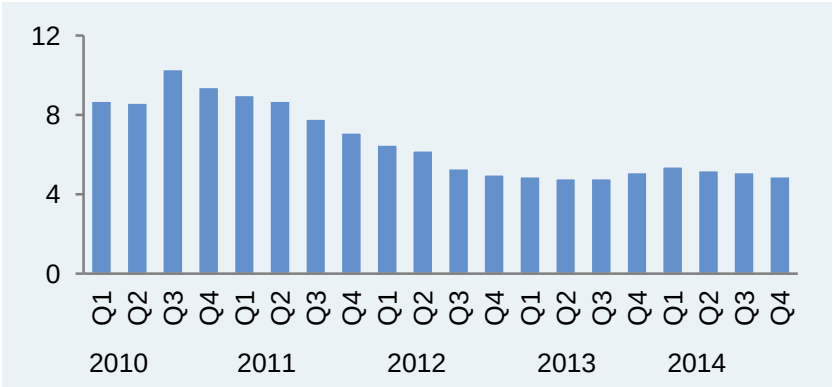
Source: CoreLogic as of 3Q14

Home price index (HPI) – peak to September 2014



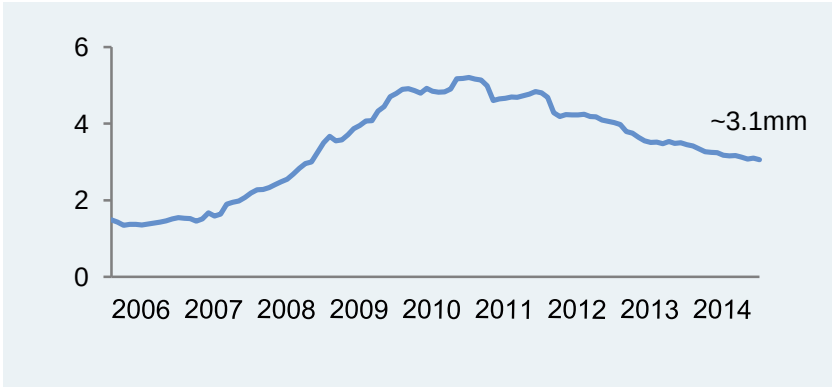
Source: CoreLogic as of 3Q14

Months of inventory



Source: National Association of Realtors (NAR) as of 4Q14

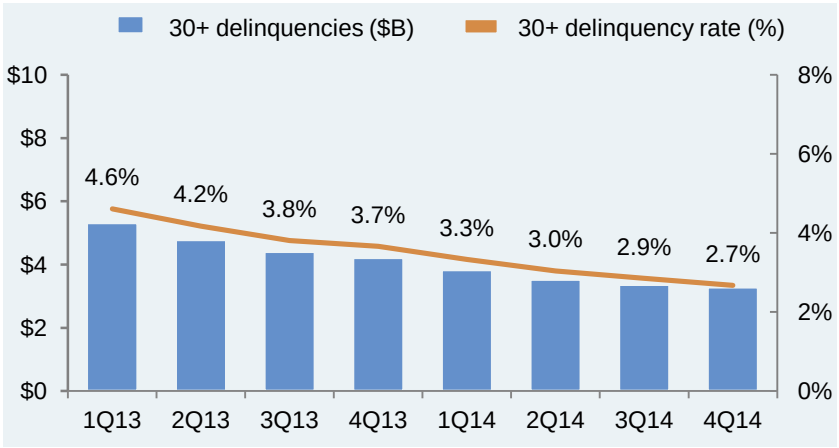
30+ day delinquent units (mm)



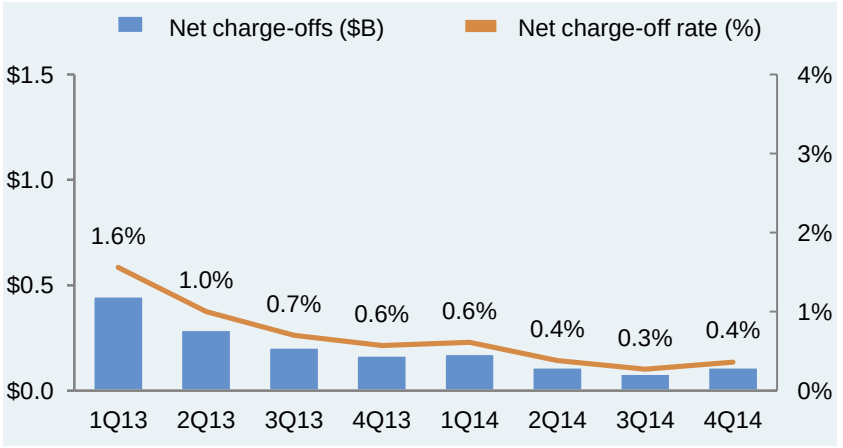
Source: CoreLogic as of December 2014

… which has driven improvement in credit performance in our real estate portfolios

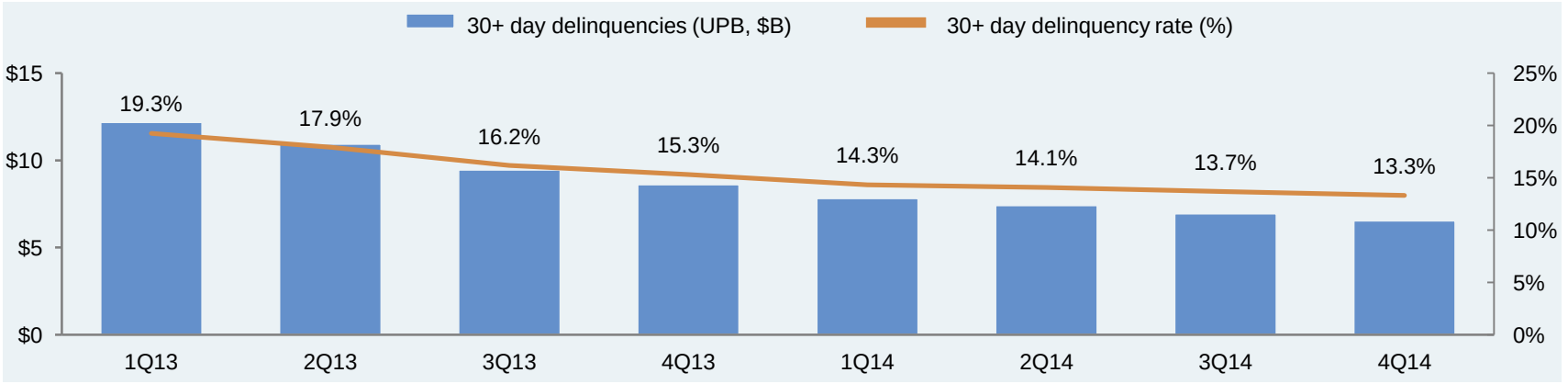
Non-credit impaired 30+ day delinquencies[1]



Non-credit impaired net charge-offs[2]



Purchased credit-impaired 30+ day delinquencies

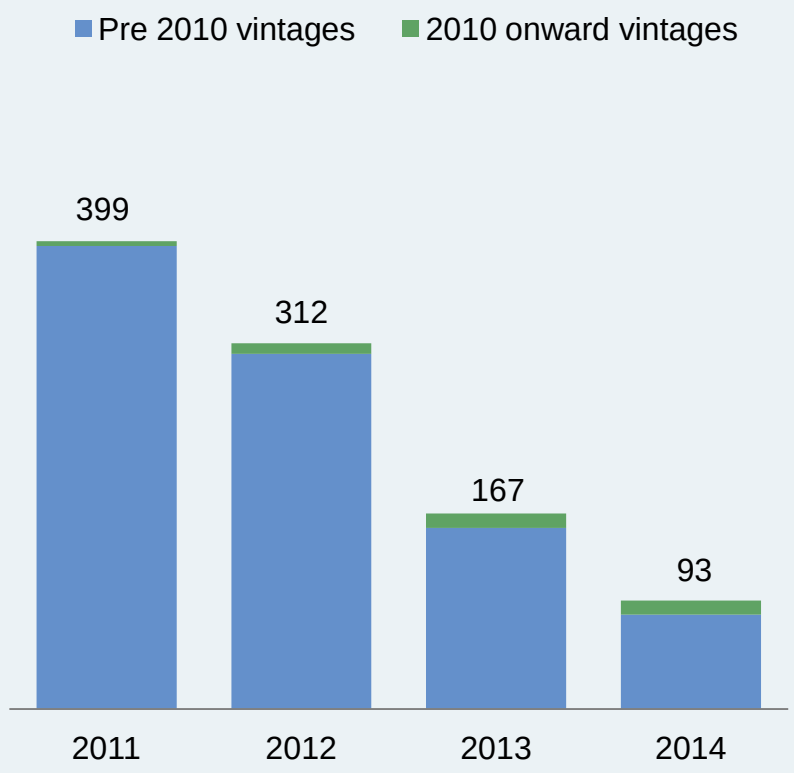


[1] Based on carrying value

[2] Net charge-offs exclude PCI write-offs of $53mm, $61mm, $48mm, $87mm, and $337mm for 4Q13, 1Q14, 2Q14, 3Q14, and 4Q14 respectively

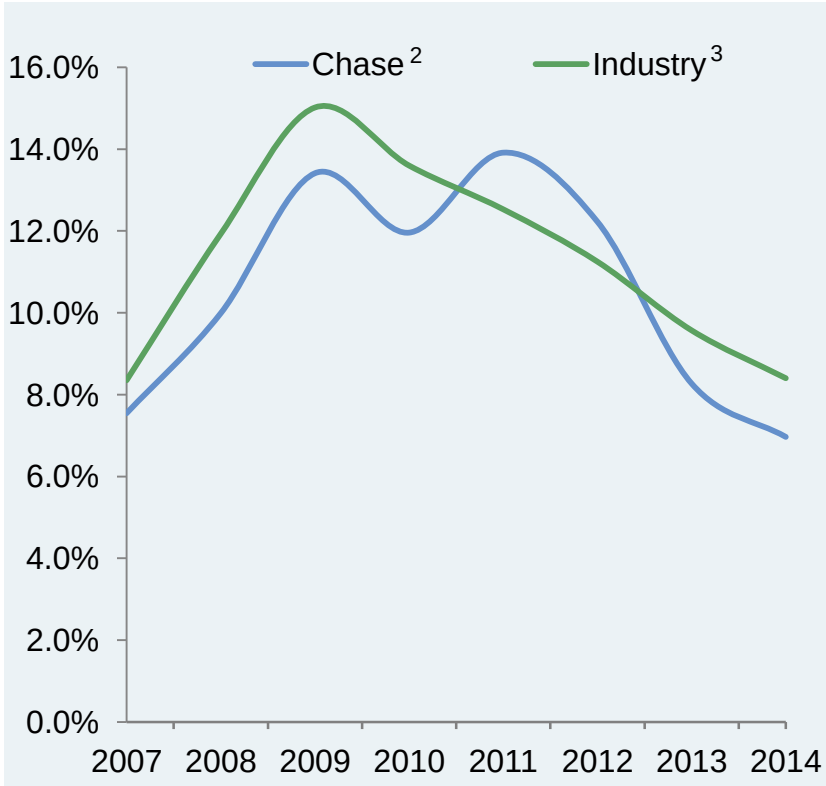
The quality of our servicing book continues to improve as we are actively managing down our default inventory

Foreclosure inventory (K)



- Actively reduced default inventory through servicing sales and subservicing

30+ day delinquency rate (%)[1]

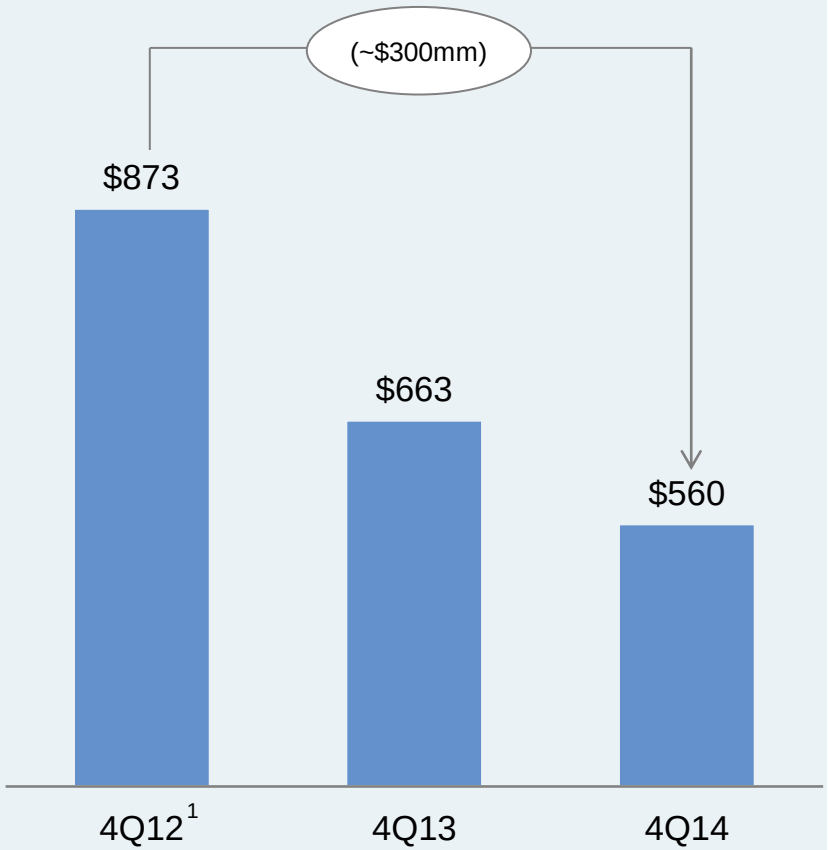


[1] Based on number of loans serviced; includes foreclosures and excludes 2nd Liens and REO inventory; 2007-2013 data as of December 31st and 2014 data as of September 30th
[2] Chase internal data
[3] Source: Mortgage Bankers Association

We continue to reduce servicing expense

Servicing expense has been declining…

Quarterly trend in servicing expense ($mm)



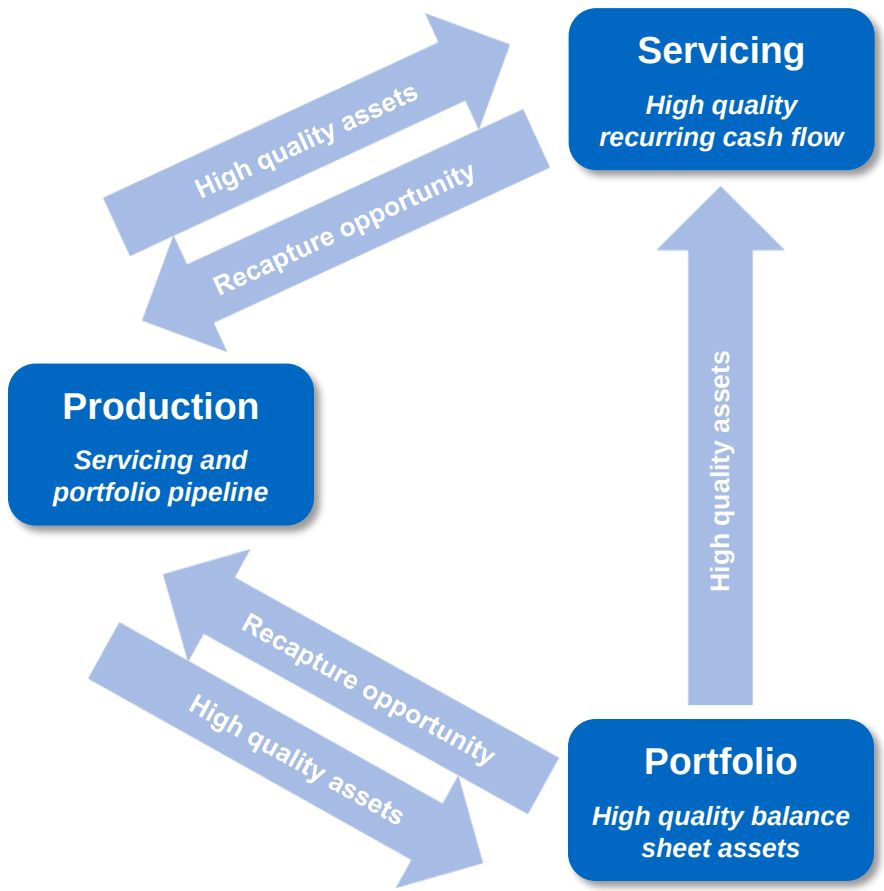
[1] Excludes ~$700mm of expense related to Independent Foreclosure Review settlement

…and will continue to trend downward

- Quality of servicing book continues to improve
- Servicing cost per loan is decreasing
- Investments in control and operational improvements caused delay in achieving $500mm servicing expense target in 4Q14
  - Quarterly servicing expense will decline below $500mm by 2Q15
- Continued investment in technology to improve operating efficiency

We have competitive advantages across the mortgage lifecycle

Our business model



Our competitive advantages

Production

- ✓ Breadth of distribution (retail, including branch network, and correspondent)
- ✓ Quality products
- ✓ Brand
- ✓ Strong customer service

Servicing

- ✓ Low cost of funds
- ✓ MSR risk management expertise
- ✓ High barriers to entry
- ✓ Economies of scale with existing book
- ✓ Strong customer service
- ✓ Attractive counterparty

Portfolio

- ✓ Low cost of funds
- ✓ Risk management expertise
- ✓ Ability to leverage our balance sheet and material balance sheet growth opportunity

We are creating a sustainable, high quality business

The business will continue to face headwinds but we will continue to execute against our strategy and improve returns

Strategic priorities

- Deliver a great customer experience
- Maximize our share of high quality originations
- Improve quality of servicing portfolio
- Drive efficiencies

Agenda

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Consumer & Community Banking	1
Consumer Banking	20
Mortgage Banking	39
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We continue to execute on the core elements of our strategy

	2014 Investor Day plan	Progress
Execute against core business drivers	■ Modest loan growth ■ Strong returns on marketing driving sales and balance growth ■ Maintain strong efficiency ratio ■ Deliver through-the-cycle credit discipline	✓ Grew loan balances by 3% in 2014 ✓ Achieved 40% efficiency ratio[1] in 2014 ✓ Strong credit quality – 2.75% net charge-off rate in 2014
Deliver best-in-class rewards	■ Continue to build and market Ultimate Rewards ■ Invest in strategic co-brand and merchant partnerships	✓ Redesigned Ultimate Rewards with weekly visits up 21% ✓ Continued high growth of long-standing travel and e-commerce co-brand partnerships
Drive digital engagement	■ Continue digital innovation ■ Improve customer experience by providing access through preferred channels ■ Drive cost efficiencies	✓ 56% of acquisitions through digital channels in 2014 ✓ 88% of Ultimate Reward redemptions through digital channels in 2014 ✓ Over $350mm in cost efficiencies by reducing direct mail and paper statements since 2011
Lead payments innovation	■ Leverage ChaseNet to deliver seamless online and mobile payment solutions ■ Deliver innovative payment solutions to both consumers (e.g., enhanced person-to-person) and merchants	✓ ChaseNet roll-out exceeding expectations ✓ Chase Pay℠ in a successful pilot phase in preparation for a broader launch this year

[1] Excludes Commercial Card

Chase Card Services is an exceptional franchise that continues to deliver strong returns

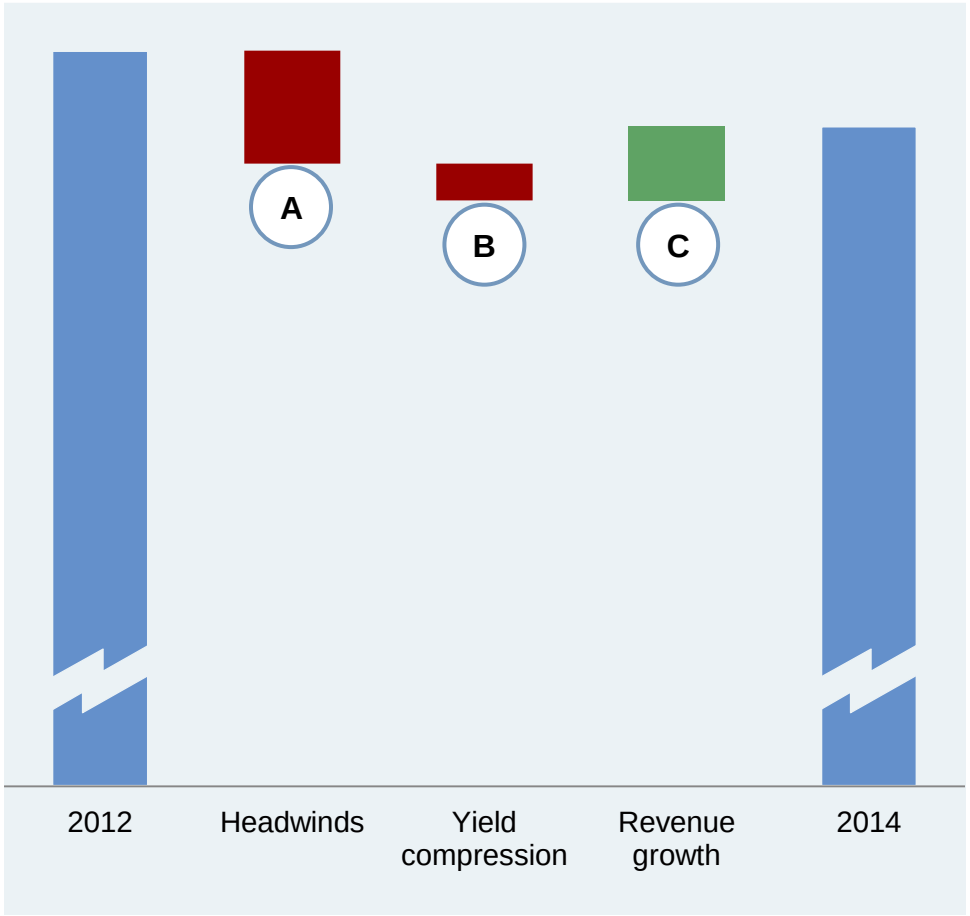
Key metrics and performance targets

$ in millions, except ratios and where otherwise noted		2013	2014	YoY Δ
Performance	Revenue	$15,615	$15,055	(4%)
	Expense	$6,245	$6,152	(1%)
	Net charge-offs	$3,879	$3,429	(12%)
	Pretax pre-LLR	$5,491	$5,474	-
	Revenue margin	12.63%	12.03%	
	ROE[1]	34%	23%	
Key drivers	Average loans outstanding	$123,613	$125,113	1%
	End of period loans outstanding	$127,791	$131,048	3%
	Sales volume ($B)[2]	$419.5	$465.6	11%
	Merchant processing volume ($B)	$750.1	$847.9	13%
	Net charge-off rate[3]	3.14%	2.75%	

[1] Excluding the impact of loan loss reserve release, Card Services ROE would have been 26% in 2013 and 21% in 2014; LLR tax effected at 38% tax rate
[2] Excludes Commercial Card
[3] Excludes held-for-sale loans

Revenue headwinds are subsiding

Distribution of Card Services revenue ($B)



A Revenue drags from 2012–2014 are largely behind us

- Increase in customer acquisition resulted in higher amortization costs[1]; costs are stabilizing
- Exited products
- One-time loss on non-strategic portfolio exits

B Yield compression due to run-off of high rate balances will continue

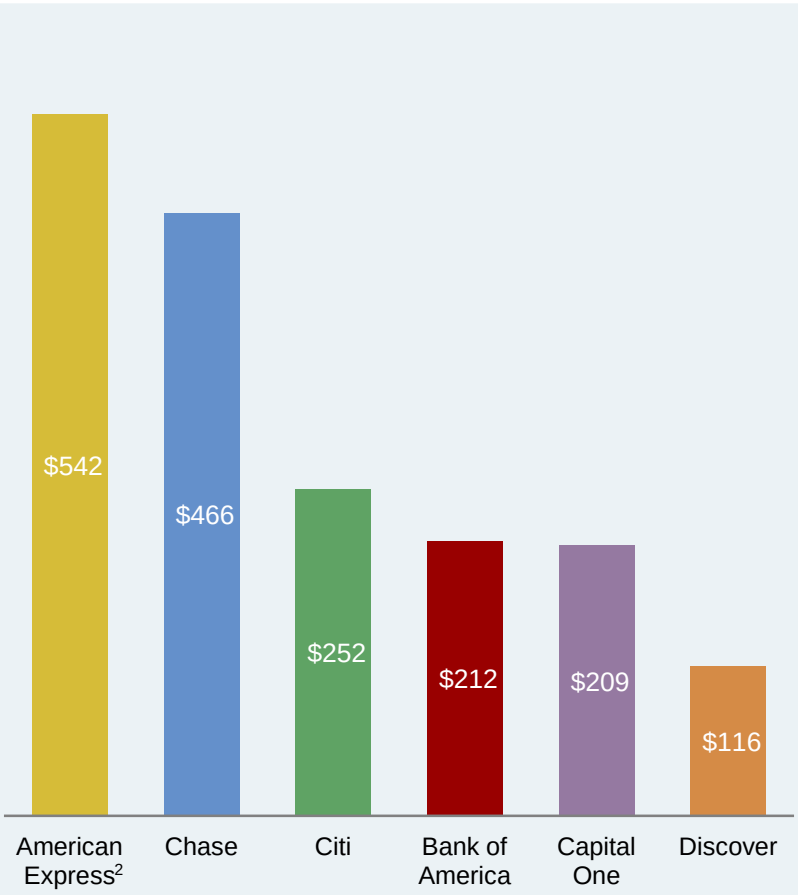
C Strong sales growth and core outstandings growth will drive increased revenue

Our business is well positioned to benefit from our multi-year investment strategy

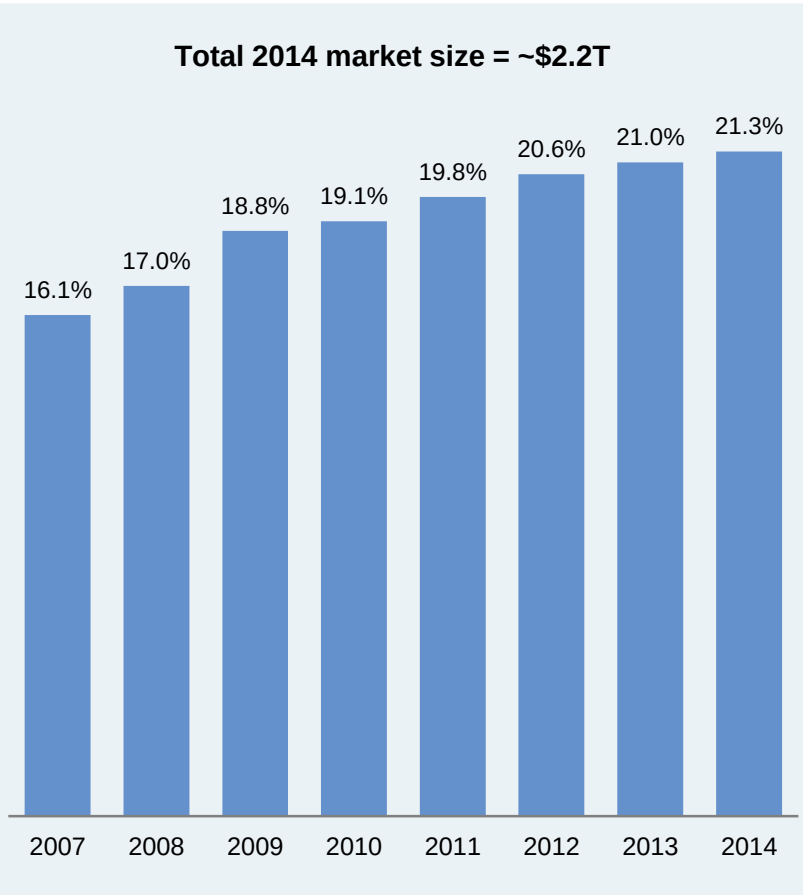
[1] Amortization costs are contra revenue

Our focus on spend engagement continues to deliver results

2014 credit card sales volume ($B)[1]



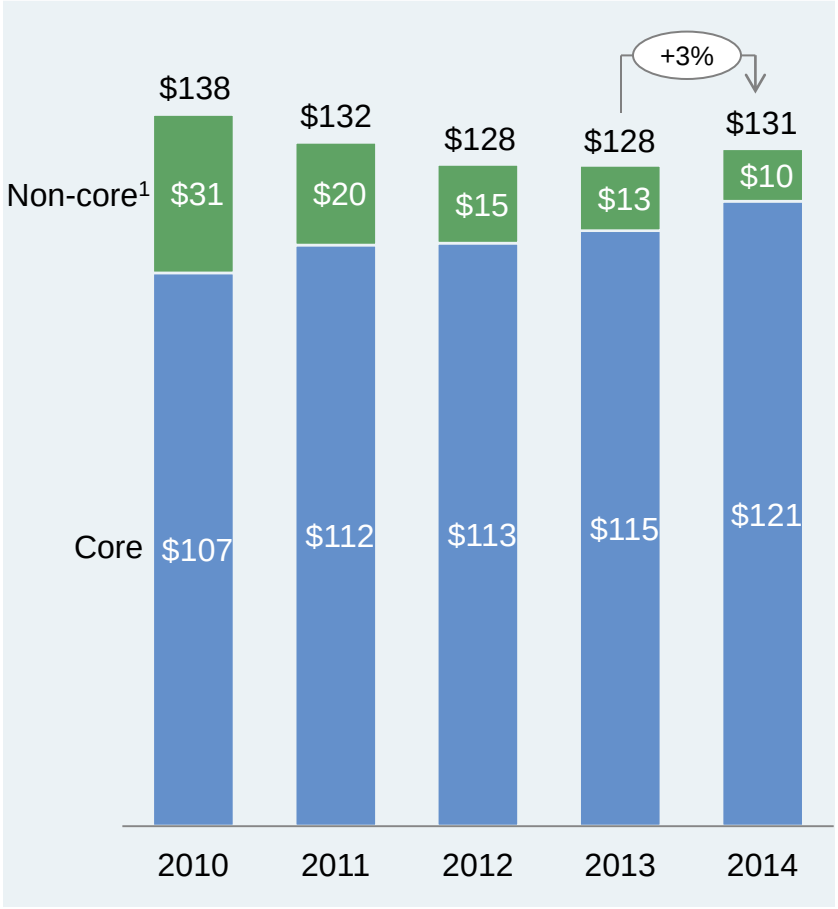
Chase general purpose credit card sales market share



Source: Earnings releases and Chase internal estimates
[1] Excludes Commercial Card
[2] American Express U.S. Card

2014 was the turning point in portfolio growth

Card Services EOP outstandings ($B)



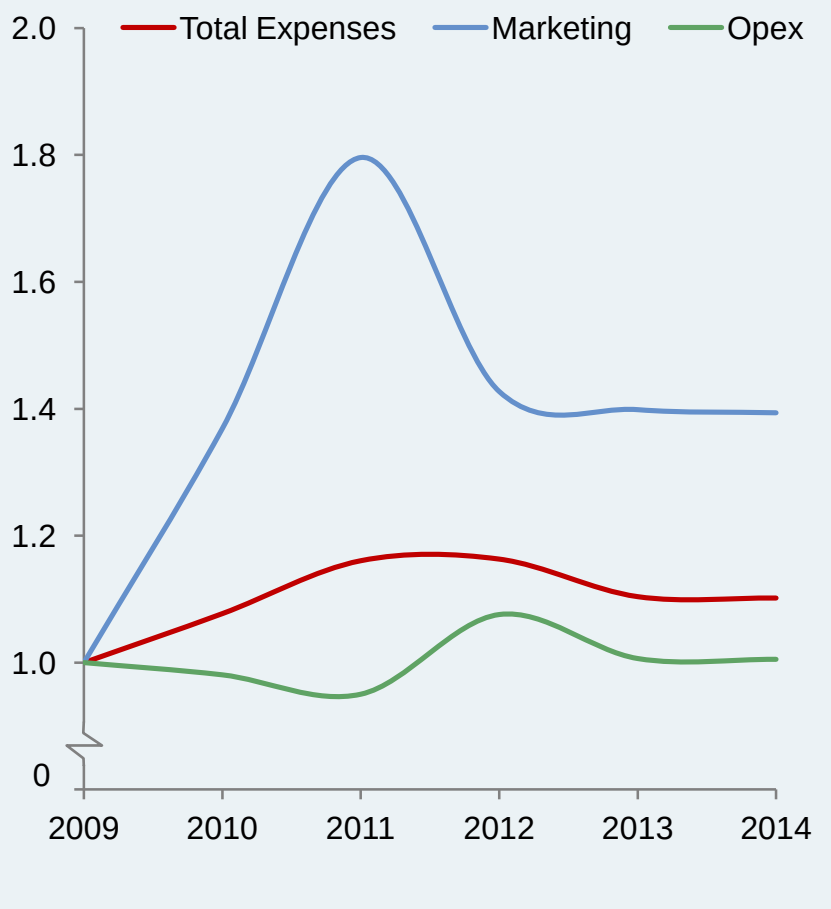
Growth drivers

- Growth in the portfolio is driven by the value proposition in our Chase branded and partner products
- Core balance growth now outpacing the decline in non-core balances
- Included in 2014 in the non-core portfolio are loans held for sale, which we expect to exit in 2015
- With the proforma impact of these exits[2], ~5% of our loan portfolio would be non-core with minimal net income impact and a 70bps improvement in our efficiency ratio

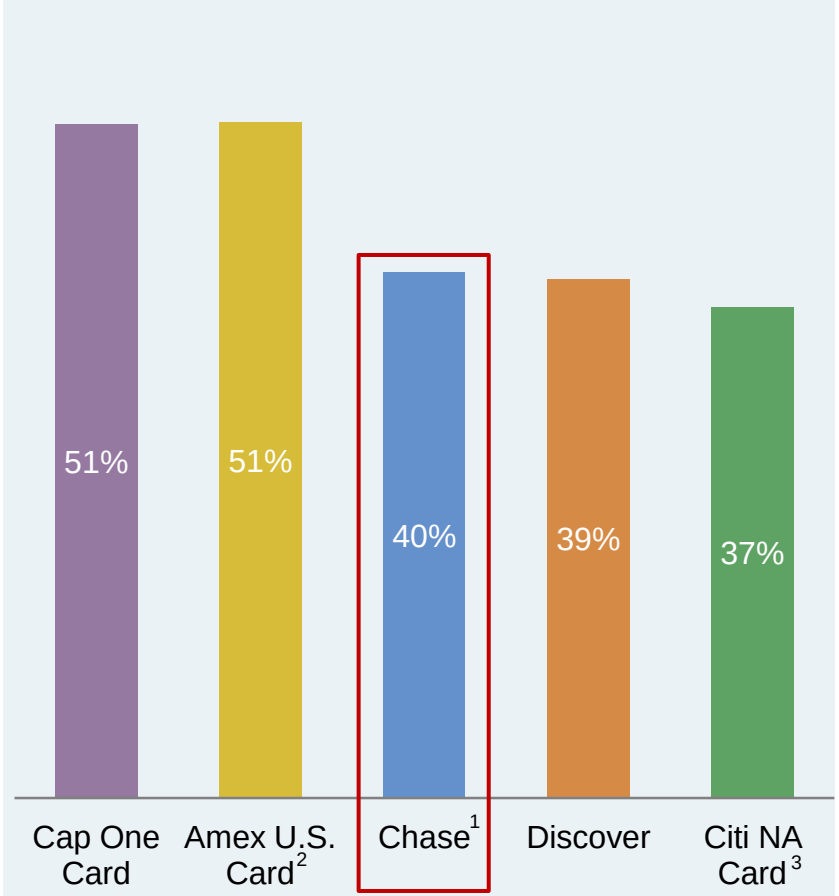
[1] Non-core loans include runoff portfolios, discontinued product/products no longer originated, and/or business simplification efforts, prior period non-core loans have been restated to include newly exited Card portfolios
[2] Proforma impact estimated using 2014 data

We maintain a competitive efficiency ratio despite significant investments in marketing and digital

Chase Consumer and Small Business Card expense (indexed to 2009)[1]



Efficiency ratio vs. competitors (2014) (%)



Expense declined by 1% in 2014 while sales volume increased 11% and outstandings increased 3%

Source: Earnings releases; Chase internal data

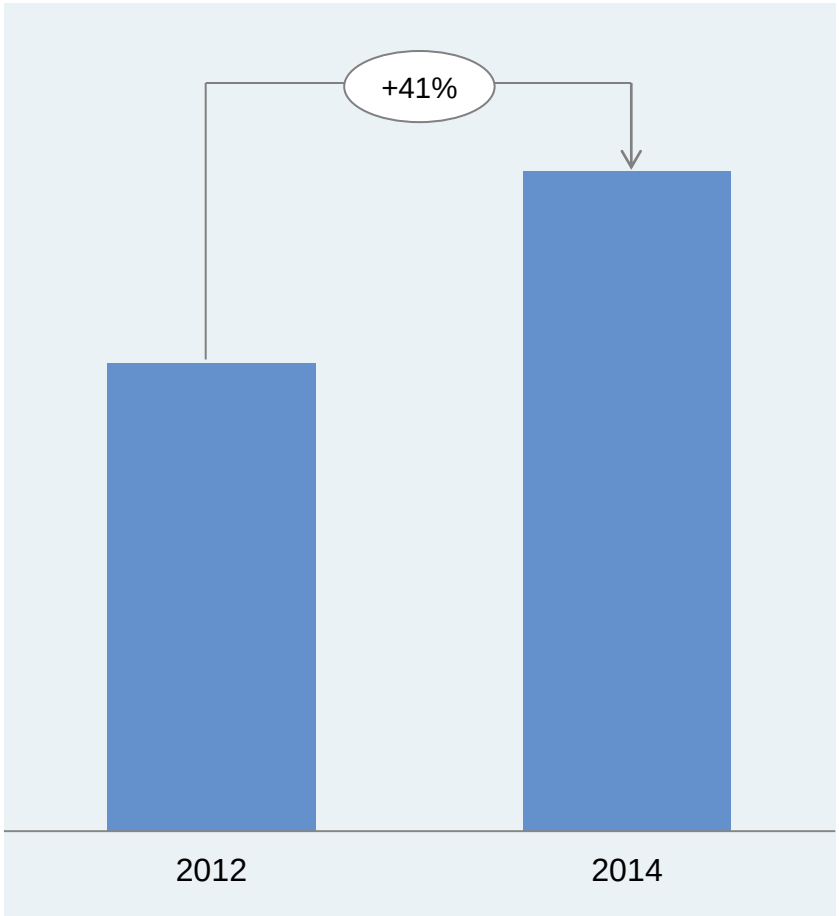
[1] Excludes Commercial Card

[2] AmEx's estimated rewards expense is removed from expense and netted against revenue, consistent with the industry practice

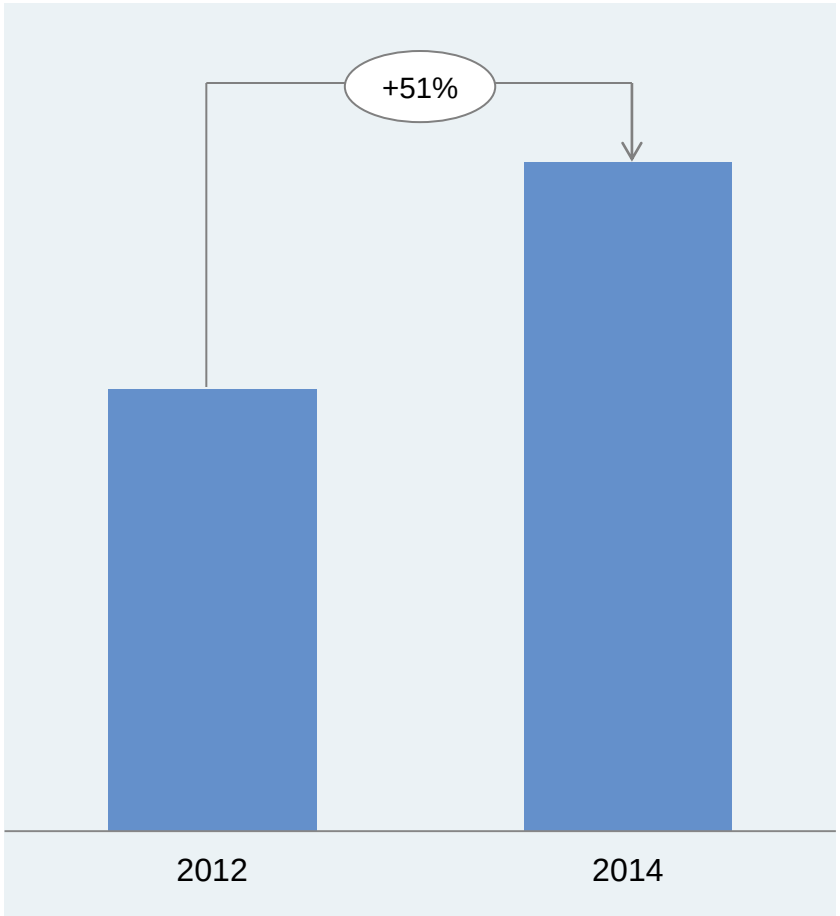
[3] Includes both branded and retail partner cards

Our marketing dollars are generating higher returns

In-year sales by vintage



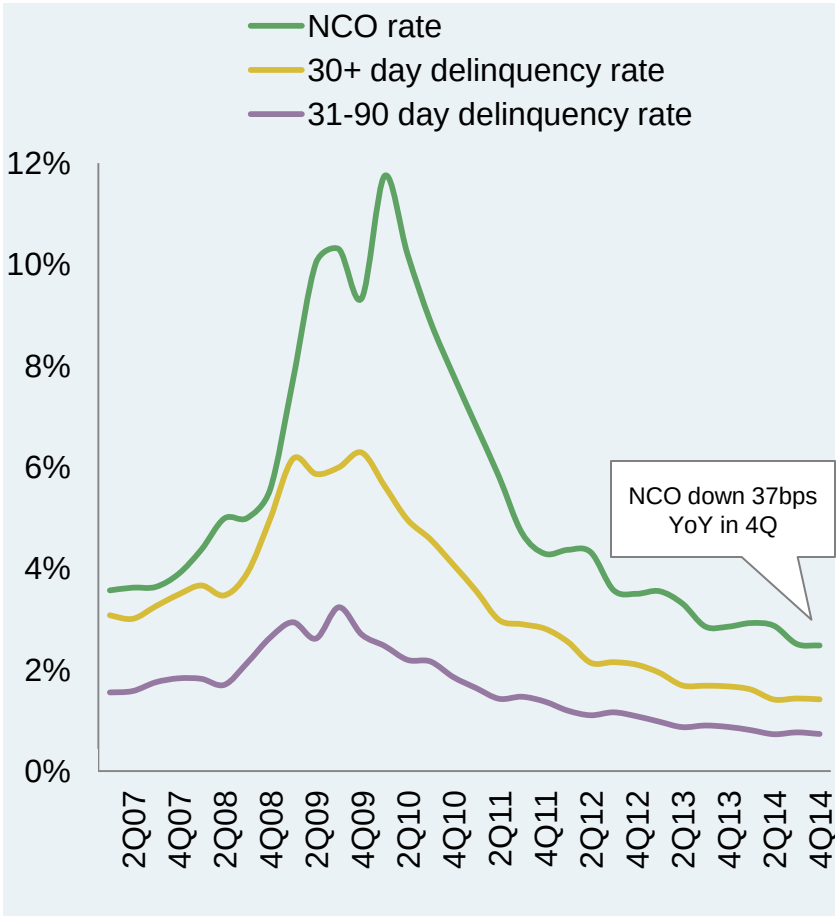
In-year outstandings by vintage



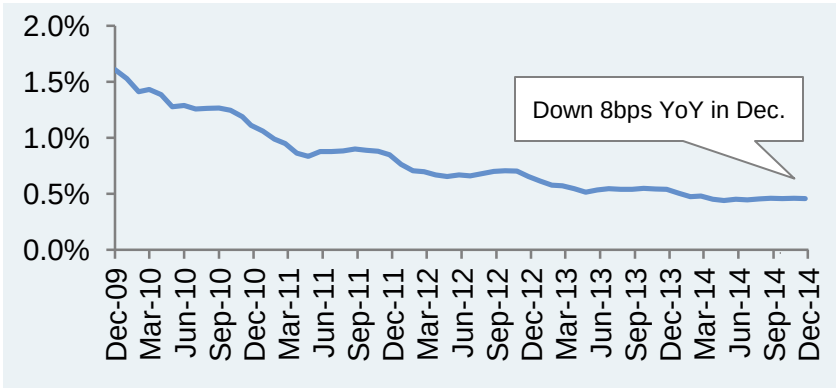
Note: Excludes Commercial Card and certain terminated partner portfolios

Credit trends remain strong...

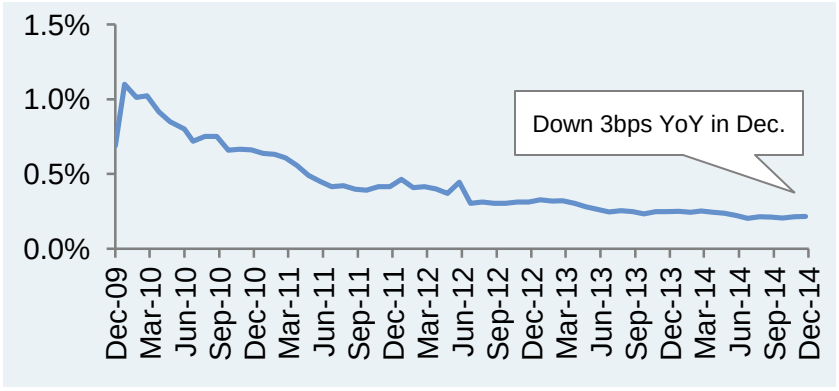
Net charge-off[1] and delinquency rate trends



Delinquency $ roll-rate from current to bucket 2 (0-60 days past due)



Delinquency $ roll-rate from current to charge-off (0-180 days past due)[2]



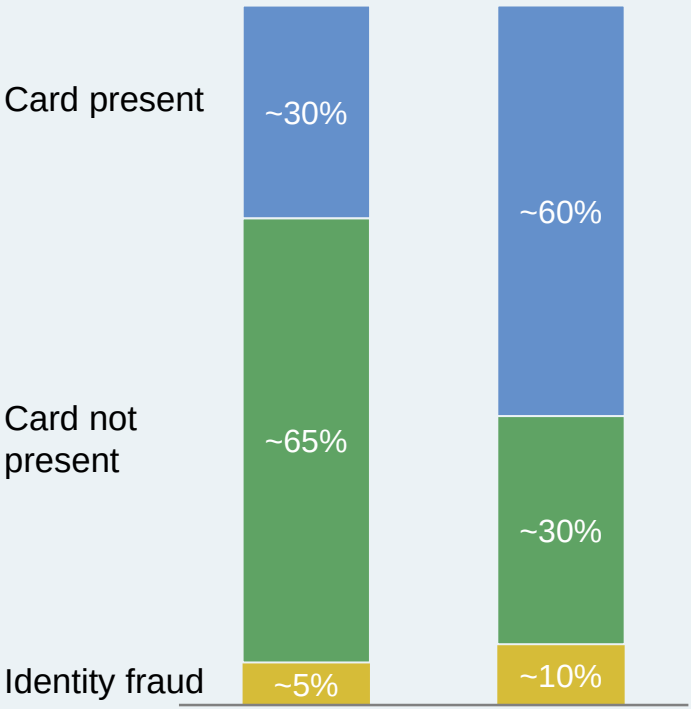
Note: Includes held-for-sale loans

[1] 4Q14 NCO rate of 2.48% is normalized to exclude one-time acceleration of exits; including the impact of these exits the 4Q14 rate is 2.69%

[2] 4Q14 roll-rates normalized to exclude one-time acceleration of exits

… and we are focused on enhancing security for consumers and merchants

Credit card fraud[1] by category



- More than 14mm EMV chip credit cards issued as of January 2015
- We forecast that ~90% of card present spend will be on a chip credit card by October 2015

- Transactions are secured through customer / device information and tokenization
- Will make transactions more secure

- Developing multi-channel authentication capabilities

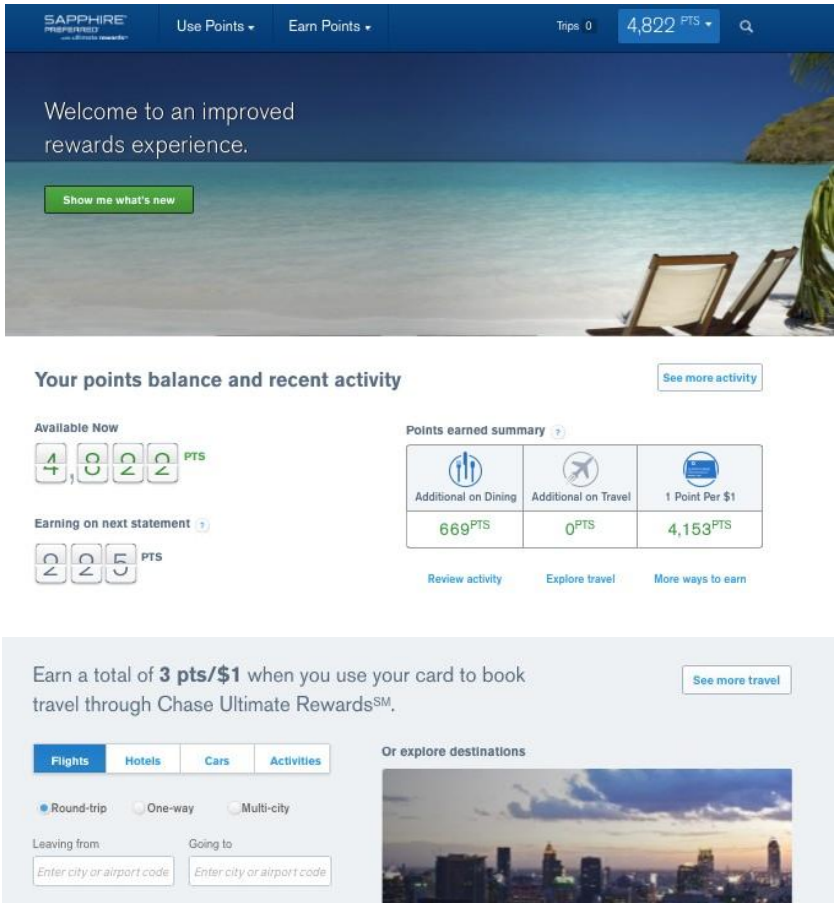
Chase has invested in a proprietary platform for point of sale authorizations and transaction verification

[1] Fraud losses incurred by Chase in 2014 - gross fraud represents initial claims, net fraud represents post-recovery losses

Our recent launch of Ultimate Rewards 2.0 has contributed to our strong engagement metrics for our ~20 million Ultimate Rewards accounts

Updated digital experience

Data driven personalized experience, with simple, transparent information



Key digital engagement metrics

Existing customers are increasing engagement on the platform

- ✓ Weekly visits up 21% YoY since launch
- ✓ Spend wallet share is more than double for a customer who has redeemed multiple times vs. non-redeemers

Strategic focus on travel has resulted in:

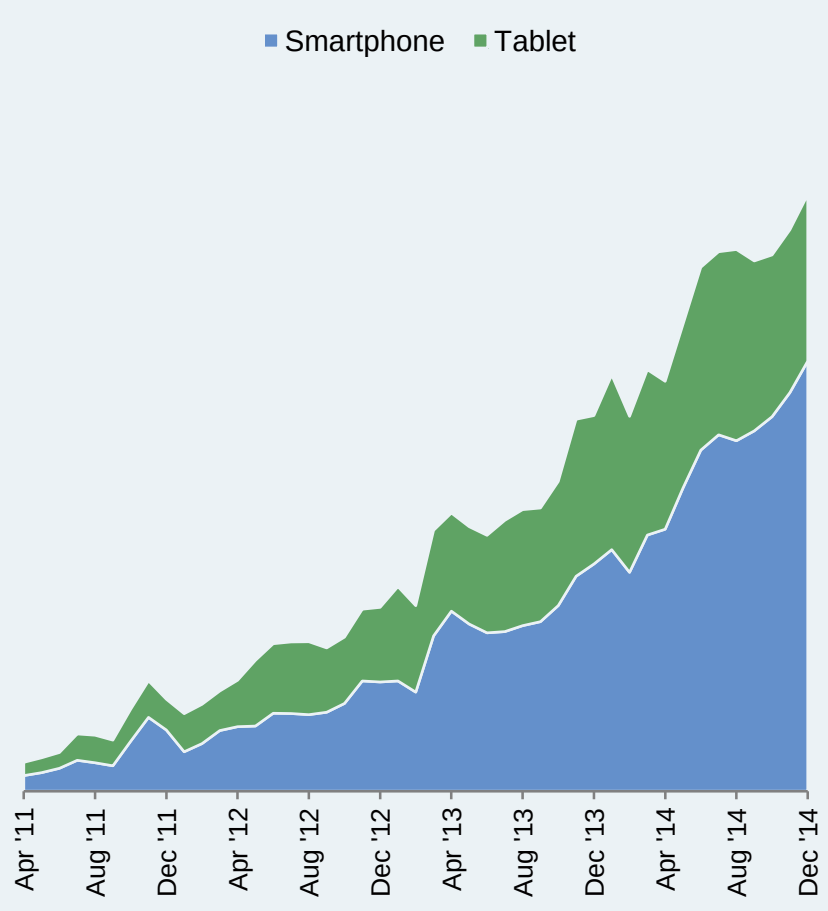
- ✓ Time spent on travel content up 53% since launch
- ✓ Travel conversion improved 45% since launch
- ✓ Travel orders up 47% in 4Q YoY

Digital redemption continues to grow

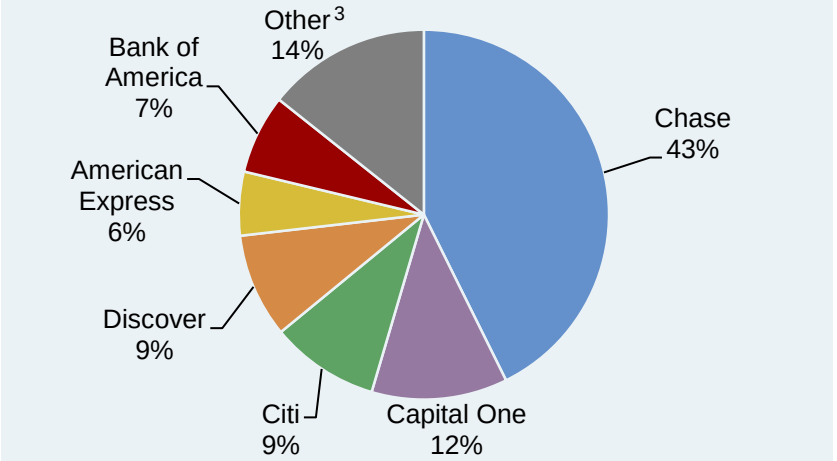
- ✓ 88% of redemptions are digital
- ✓ Mobile redemptions up 185% YoY since launch

Our digital engagement metrics continue to grow rapidly

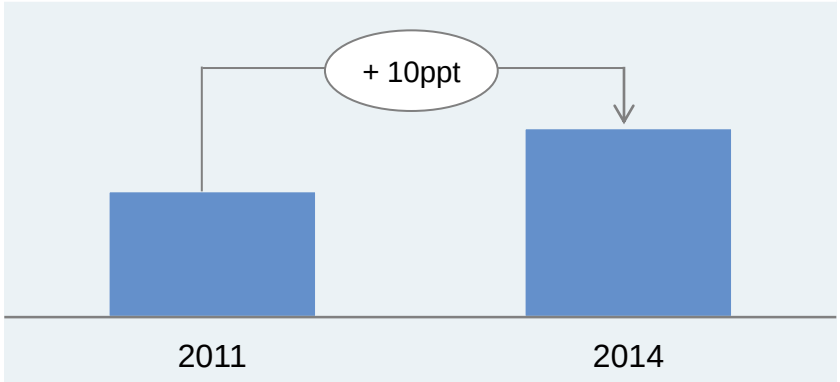
Acquisitions through mobile channels[1]



Prime online credit card applications share[2] (FY 2014)



E-statements penetration[4]



Over $350mm in cost efficiencies by reducing reliance on direct mail and paper statements since 2011[4]

[1] Includes only applications that occurred on Chase.com
[2] Source: Comscore: online prime applications are identified with a >720 FICO
[3] Other includes Wells Fargo, US Bank, and Barclays
[4] Excludes Commercial Card, Canada and certain terminated partners/products

We have a clear consumer payments strategy to address merchant and consumer needs

Payments strategy

Develop ChaseNet solutions

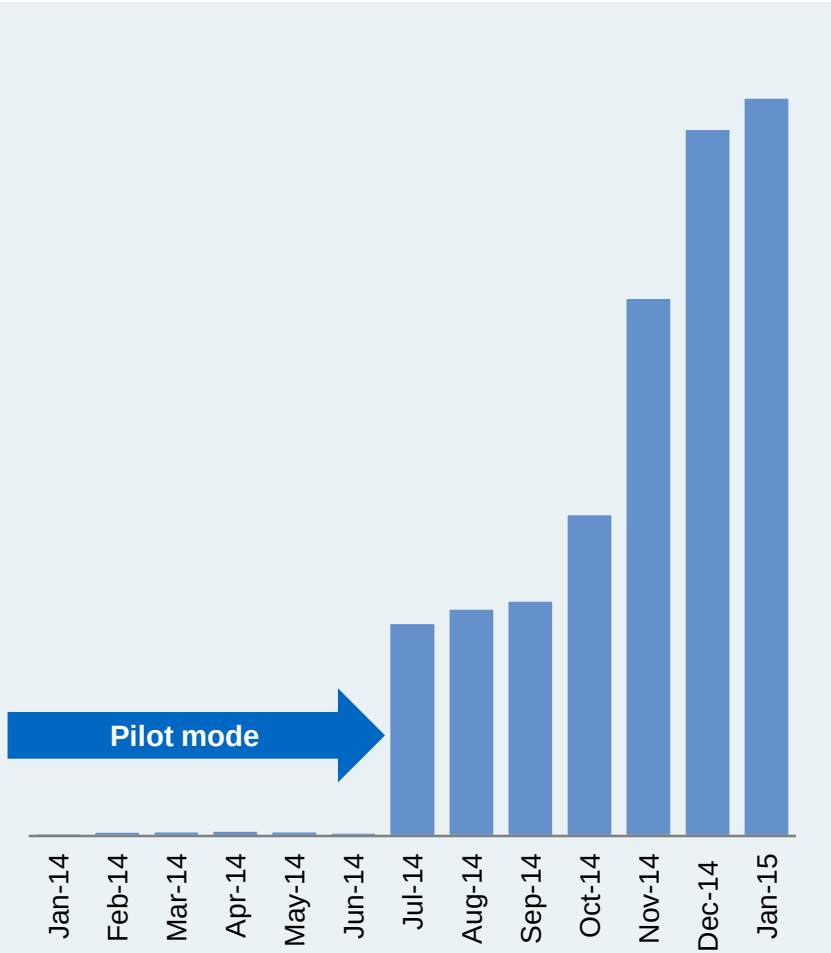
- Streamlined rules
- Simplified pricing structure
- Value-added services

Launch our proprietary online wallet (Chase Pay℠) and pursue first in wallet strategy with leading wallet providers

Build “Next-gen” Chase QuickPay℠ (P2P)

ChaseNet roll-out has exceeded our initial expectations and has enabled our continued market share gains

Volumes running over ChaseNet by month



ChaseNet positioning

- **Streamlined rules** (e.g., removed signature requirement for transactions less than $1K)
- **Simplified pricing structure** delivering improved economics
- **Insights** available from Chase based on the end-to-end customer view

Signed merchants

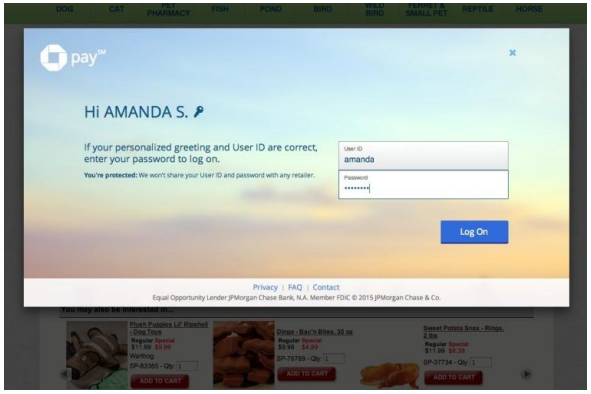
UNITED · Marriott · DIRECTV · Square · Zillow · 1-800 flowers · GROUPON · Barnes&Noble nook

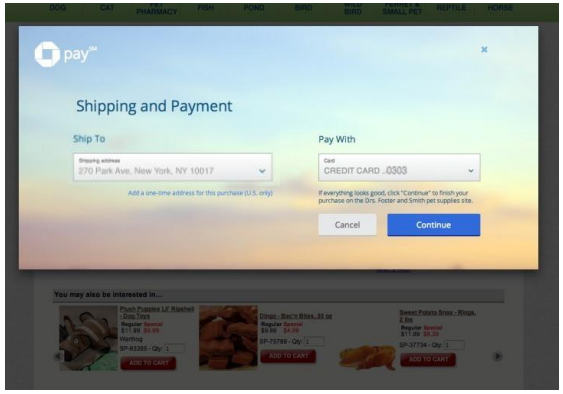
60K+ merchants active, with January 2015 annualized run-rate of ~$16B

Our proprietary platform has enjoyed a successful pilot

Chase Pay℠ customer experience







1. Customer selects Chase Pay checkout option
2. Customer confidently enters their secure Chase credentials to simplify payment and billing input
3. Customer chooses their known shipping address and preferred Chase payment product and checks out

Consumer value proposition

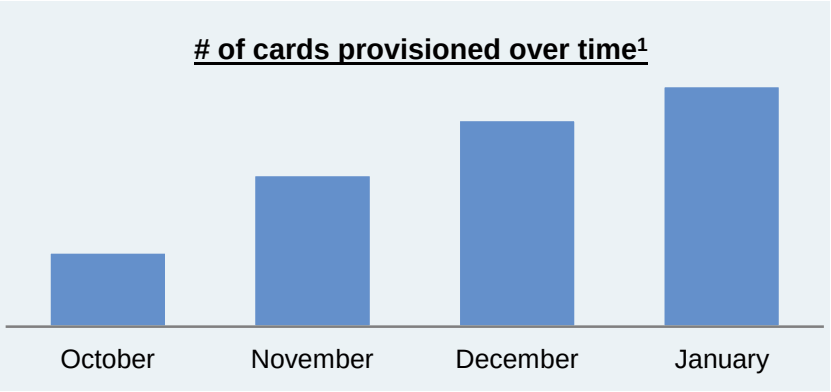
- Quick and easy checkout – no setup required; reissued cards automatically updated
- Retailer never sees or stores card number (tokenization)
- No new username and password to remember
- Same great Chase service and rewards

Merchant value proposition

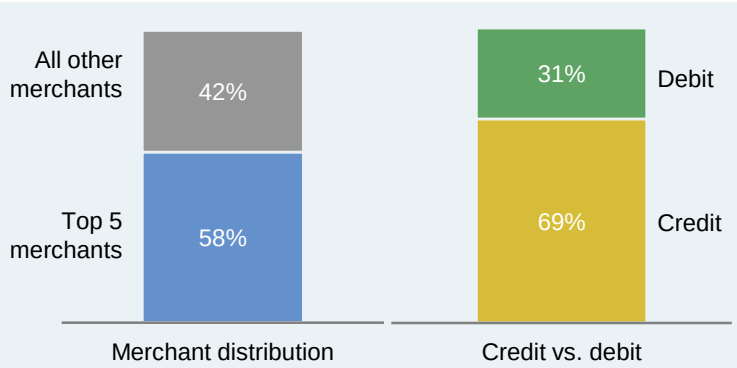
- Fewer abandoned carts mean more sales
- Better security
- Highly streamlined customer experience in merchants' branded environment
- 50mm+ Chase customers ready to use

Early adopters of Apple Pay™ are attractive customers and engaged with Chase

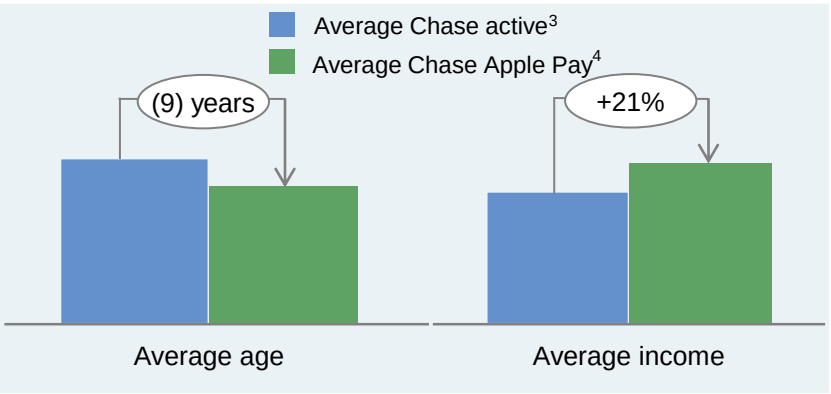
Adoption of Apple Pay in our card base continues to rise



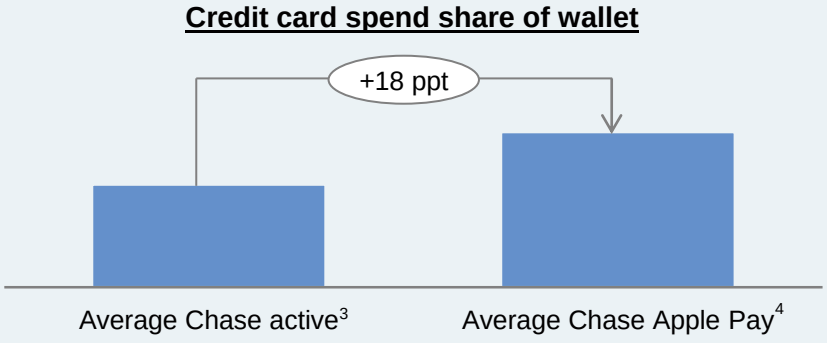
Apple Pay spend distribution[2]



Younger users and higher income



Larger share of credit card spend



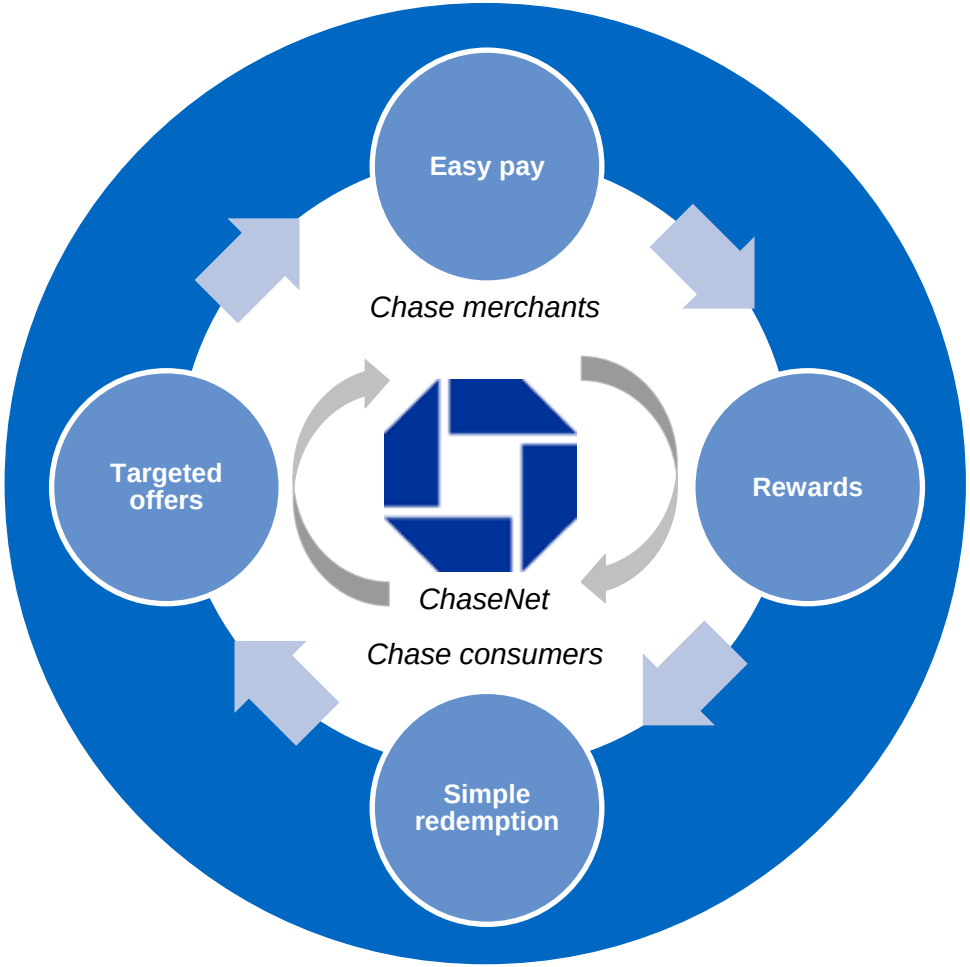
As our customers continue to embrace digital wallets, Chase is well positioned to deliver digital payments experiences to meet our customers' needs

[1] Includes debit and credit; provisioned on or after October 20, 2014 launch date
[2] Spend distributions based on cumulative spend volumes ($) as of January 31, 2015
[3] Average Chase active population defined as having made at least one purchase in 2014
[4] Apple Pay profile is based on the population of open and enrolled accounts

With ChaseNet, we are well positioned to provide consumers with an integrated shopping experience as we build out our digital platform

Integrated experience

Simple digital payment experience; pay anywhere and pay anyone



Targeted and contextual / location specific offers; simplified mobile access

Rewards integration across proprietary and partner/merchant loyalty programs

Simple redemption experience across a broad merchant network

Summary

- Underlying performance drivers are strong, and we continue to gain market share of general purpose credit card sales volume
- Credit quality of our portfolio is excellent; credit trends remain positive
- Tight focus on expense management resulting in a strong efficiency ratio
- Innovation in digital channels continues to enhance the customer experience and lower costs
- Strength of our issuing and acquiring businesses positions us well to innovate in payments

Our strategic agenda is focused on 6 key areas

- Continue to improve the customer experience and deepen relationships
- Reduce expenses
- Continue to simplify our business
- Maintain strong control environment and automate processes
- Increase digital engagement
- Lead payments innovation

Agenda

	Page
Consumer & Community Banking	1
Consumer Banking	20
Mortgage Banking	39
Card Services	57
Appendix	**76**

Notes on slide 3 – Chase Consumer & Community Banking is a strong franchise with leadership positions across all its businesses

1. TNS 2014 Retail Banking Monitor; based on total U.S. (~5K surveys per quarter) and Chase footprint (~2.8K surveys per quarter); TNS survey question used to determine primary bank: “Most people have one bank they rely on more than any other. Which one of these banks do you consider to be your main or primary bank?”
2. Per compete.com as of December 2014
3. Based on Forrester Research, U.S. Mobile Banking Functionality Rankings as of May 2014
4. Based on Nilson data as of 2013
5. Based on Nilson data as of 2013 and Internet Retailer for 2013
6. Based on disclosures by peers and internal estimates as of 4Q14
7. Based on Phoenix Credit Card Monitor for 12-month period ending September 2014; based on card accounts and revolving balance dollars
8. Based on Inside Mortgage Finance as of 4Q14 for Servicer and Originator rankings
9. Per Auto count data for December 2014 YTD

Notes on slide 44 – Our penetration with Chase Private Client households continues to improve and we lead our peers in mortgage consideration among affluent consumers

1. Of those households that originated a mortgage through consumer channels in the period; Consumer Bank represents households with a DDA product
2. Source: Chase Mortgage Banking Brand Tracker; Q4 2014
3. Affluent defined as consumers with $150K+ income or $500K+ assets
4. Company/bank level consideration; survey question = “How likely are you to consider using each of these companies and banks the next time you are in the market for a mortgage or home equity loan and line of credit?”; % of survey respondents that selected one of the top 2 boxes (“Only one” or “one of 2 or 3 I would consider”) on a 5 point scale













ANNUAL REPORT 2015

JPMorgan Chase & Co.



Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio data and headcount)	2015	2014
Reported basis[1]		
Total net revenue	**$ 93,543**	$ 95,112
Total noninterest expense	**59,014**	61,274
Pre-provision profit	**34,529**	33,838
Provision for credit losses	**3,827**	3,139
Net income	**$ 24,442**	$ 21,745
Per common share data		
Net income per share:		
Basic	**$ 6.05**	$ 5.33
Diluted	**6.00**	5.29
Cash dividends declared	**1.72**	1.58
Book value	**60.46**	56.98
Tangible book value[2]	**48.13**	44.60
Selected ratios		
Return on common equity	**11%**	10%
Return on tangible common equity[2]	**13**	13
Common equity Tier 1 ("CET1") capital ratio[3]	**11.6**	10.2
Tier 1 capital ratio[3]	**13.3**	11.4
Total capital ratio[3]	**14.7**	12.7
Selected balance sheet data (period-end)		
Loans	**$ 837,299**	$ 757,336
Total assets	**2,351,698**	2,572,274
Deposits	**1,279,715**	1,363,427
Total stockholders' equity	**247,573**	231,727
Headcount	**234,598**	241,359

Note: 2014 has been revised to reflect the adoption of new accounting guidance related to debt issuance costs and investments in affordable housing projects. For additional information, see Accounting and Reporting Developments and Note 1 on pages 170 and 183, respectively.

1 Results are presented in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP), except where otherwise noted.

2 Non-GAAP financial measure. For further discussion, see "Explanation and Reconciliation of the Firm's Use Of Non-GAAP Financial Measures" on pages 80–82.

3 The ratios presented are calculated under the Basel III Advanced Fully Phased-In Approach, which are non-GAAP financial measures. For further discussion, see "Regulatory capital" on pages 151–155.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $2.4 trillion and operations worldwide. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. A component of the Dow Jones Industrial Average, JPMorgan Chase & Co. serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands.

Information about J.P. Morgan's capabilities can be found at jpmorgan.com and about Chase's capabilities at chase.com. Information about JPMorgan Chase & Co. is available at jpmorganchase.com.



communities

clients

customers

employees

veterans

nonprofits

business owners

schools

hospitals

local governments

JPMorgan Chase & Co.

Dear Fellow Shareholders,



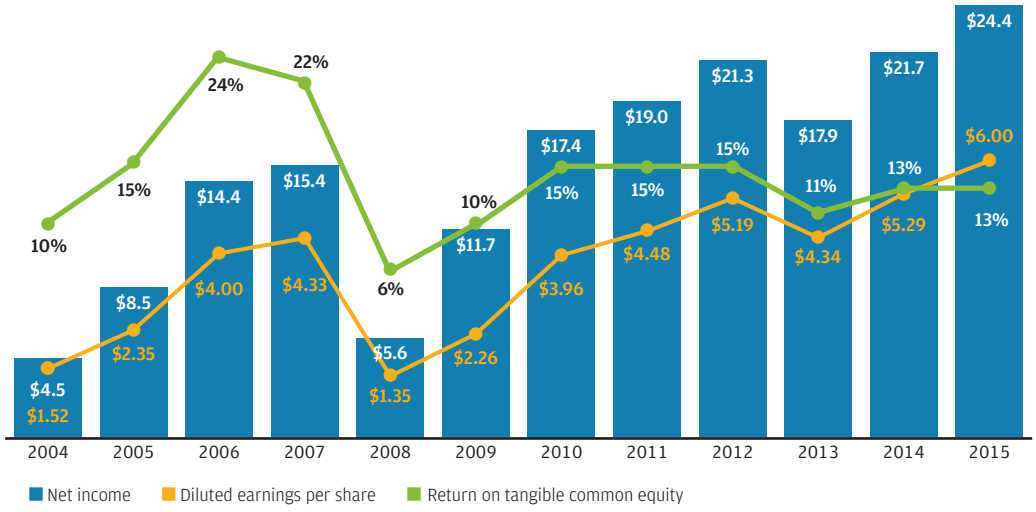
Jamie Dimon,
Chairman and
Chief Executive Officer

Last year – in fact, the last decade – was an extraordinary time for our company. We managed through the financial crisis and its turbulent aftermath while never losing sight of the reason we are here: to serve our clients, our communities and countries across the globe and, of course, to earn a fair profit for our shareholders. All the while, we have been successfully executing our control and regulatory agenda and continuing to invest in technology, infrastructure and talent – critical to the future of the company. And each year, our company has been getting safer and stronger. We continue to see exciting opportunities to invest for the future and to do more for our clients and our communities – as well as continue to support the growth of economies around the world.

I feel enormously blessed to work for this great company and with such talented employees. Our management team and employees have built an exceptional organization that is one of the most trusted and respected financial institutions in the world. It has been their dedication, fortitude and perseverance that made this possible. And it fills me with tremendous pride.

Our company earned a record $24.4 billion in net income on revenue of $96.6 billion in 2015. In fact, we have delivered record results in the last five out of six years, and we hope to continue to deliver in the future. Our financial results reflected strong underlying performance across our businesses, and, importantly, we exceeded all our major financial commitments – balance sheet optimization, capital deployment, global systemically important bank (GSIB) surcharge reduction and expense cuts.

Earnings, Diluted Earnings per Share and Return on Tangible Common Equity
2004–2015
($ in billions, except per share and ratio data)



While we did produce record profits last year, our returns on tangible common equity have been coming down, mostly due to higher capital requirements, higher control costs and low interest rates. Our return on tangible common equity was 13% last year, though we still believe that we will be able to achieve, over time, returns of approximately 15%. We still don't know the final capital rules, which could have additional negative effects, but we do believe that the capital requirements eventually will be offset by optimizing our use of capital and other precious resources, by realizing market share gains due to some competitors leaving certain businesses, and by implementing extensive cost efficiencies created by streamlining and digitizing our processes. I will discuss some of these efforts later on in this letter.

Tangible Book Value per Share
2004–2015



Bank One/JPMorgan Chase & Co. tangible book value per share performance vs. S&P 500

	Bank One (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since becoming CEO of Bank One (3/27/2000–12/31/2015)[1]			
Compounded annual gain	12.5%	5.0%	7.5%
Overall gain	481.4%	107.9%	373.5%

	JPMorgan Chase & Co. (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2015)			
Compounded annual gain	13.7%	7.4%	6.3%
Overall gain	336.9%	127.6%	209.3%

Tangible book value over time captures the company's use of capital, balance sheet and profitability. In this chart, we are looking at heritage Bank One shareholders and JPMorgan Chase & Co. shareholders. The chart shows the increase in tangible book value per share; it is an aftertax number assuming all dividends were retained vs. the Standard & Poor's 500 Index (S&P 500), which is a pre-tax number with dividends reinvested.

[1] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One.

We continued to deliver for our shareholders in 2015. The table above shows the growth in tangible book value per share, which we believe is a conservative measure of value. You can see that our tangible book value per share has grown far more than that of the Standard & Poor's 500 Index (S&P 500) in both time periods. For Bank One shareholders since March 27, 2000, the stock has performed far better than most financial companies and the S&P 500. We are not proud of the fact that our stock performance has only equaled the S&P 500 since the JPMorgan Chase & Co. merger with Bank One on July 1, 2004 and essentially over the last five to 10 years. On a relative basis, though, JPMorgan Chase stock has far outperformed the S&P Financials Index and, in fact, has been one of the best performers of all banks during this difficult period. The details are shown on the table on the following page.

Stock total return analysis

	Bank One	S&P 500	S&P Financials Index
Performance since becoming CEO of Bank One (3/27/2000–12/31/2015)[1]			
Compounded annual gain	10.2%	3.8%	1.9%
Overall gain	364.1%	81.3%	35.3%

	JPMorgan Chase & Co.	S&P 500	S&P Financials Index
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2015)			
Compounded annual gain	7.6%	7.4%	0.7%
Overall gain	131.1%	127.6%	7.8%
Performance for the period ended December 31, 2015:			
Compounded annual gain/(loss)			
One year	8.4%	1.4%	(1.6)%
Five years	12.1%	12.6%	10.4%
Ten years	7.9%	7.3%	(0.7)%

These charts show actual returns of the stock, with dividends included, for heritage shareholders of Bank One and JPMorgan Chase & Co. vs. the Standard & Poor's 500 Index (S&P 500) and the Standard & Poor's Financials Index (S&P Financials Index).

[1] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One.

Many of the legal and regulatory issues that our company and the industry have faced since the Great Recession have been resolved or are receding, which will allow the strength and quality of our underlying business to more fully shine through.

In this letter, I will discuss the issues highlighted below – which describe many of our successes and opportunities, as well as our challenges and responses. The main sections are listed below, and, unlike prior years, we have organized much of this letter around some of the key questions we have received from shareholders and other interested parties.

I. Our franchises are strong — and getting stronger

- How do you compare your franchises with your peers? What makes you believe your businesses are strong? Page 9

II. We must and will protect our company and those we serve

- You say you have a "fortress balance sheet." What does that mean? Can you handle the extreme stress that seems to happen around the world from time to time? Page 11
- Have you completed your major de-risking initiatives? Page 14
- Do you think you now have "fortress controls" in place? Page 14
- To protect the company and to meet standards of safety and soundness, don't you have to earn a fair profit? Many banks say that the cost of all the new rules makes this hard to do. Page 16
- What is all this talk of regulatory optimization, and don't some of these things hurt clients? When will you know the final rules? Page 16
- How do you manage geopolitical and country risks? Page 17
- How do you manage your interest rate exposure? Are you worried about negative interest rates and the growing differences across countries? Page 18
- Are you worried about liquidity in the marketplace? What does it mean for JPMorgan Chase, its clients and the broader economy? Page 19
- Why are you making such a big deal about protecting customers' data in your bank? Page 21

III. We actively develop and support our employees

- How are you ensuring you have the right conduct and culture? Page 22
- How are you doing in your diversity efforts? Page 24
- With all the new rules, committees and centralization, how can you fight bureaucracy and complacency and keep morale high? Page 26
- How are you doing retaining key people? Page 27

IV. We are here to serve our clients

- How do you view innovation, technology and FinTech? And have banks been good innovators? Do you have economies of scale, and how are they benefiting your clients? Page 28
- How do you intend to win in payments, particularly with so many strong competitors — many from Silicon Valley? Page 31
- You always seem to be segmenting your businesses — how and why are you doing this? Page 32
- How and why do you use big data? Page 33
- Why are you investing in sales and trading, as well as in your Investment Bank, when others seem to be cutting back? Page 34
- Why are you still in the mortgage business? Page 35

V. We have always supported our communities

- You seem to be doing more and more to support your communities — how and why? Page 37

VI. A safe, strong banking industry is absolutely critical to a country's success — banks' roles have changed, but they will never be a utility

- Does the United States really need large banks? Page 40
- Why do you say that banks need to be steadfast and always there for their clients — doesn't that always put you in the middle of the storm? Page 43
- Will banks ever regain a position of trust? How will this be done? Page 46
- Are you and your regulators thinking more comprehensively and in a forward-looking way to play a role in helping to accelerate global growth? Page 46

VII. Good public policy is critically important

- Are you worried about bad public policy? Page 48

I. OUR FRANCHISES ARE STRONG – AND GETTING STRONGER

When I travel around the world, and we do business in over 100 countries, our clients – who are big companies to small businesses, investors and individuals, as well as countries and their sovereign institutions – are almost uniformly pleased with us. In fact, most cities, states and countries want more of JPMorgan Chase. They want us to bring more of our resources – our financial capabilities and technology, as well as our human capital and expertise – to their communities. While we do not know what the next few years may bring, we are confident that the needs of our clients around the world will continue to grow and that our consistent strategy of building for the future and being there for our clients in good times and bad has put us in very good stead. Whatever the future brings, we will face it from a position of strength and stability.

Because our business leaders do such a good job describing their businesses (and I strongly urge you to read their letters on pages 52–72 in this Annual Report), it is unnecessary for me to cover each in detail here, other than to answer the following critical questions.

JPMorgan Chase is in Line with Best-in-Class Peers in Both Efficiency and Returns

	Efficiency			Returns		
	JPM 2015 overhead ratios	Best-in-class peer overhead ratios[2]	JPM target overhead ratios	JPM 2015 ROE	Best-in-class peer ROTCE[5]	JPM target ROE
Consumer & Community Banking	57%	54% WFC	~50%	18%	15% WFC	20%
Corporate & Investment Bank	59%[1]	57% Citi	55%-60%	12%[3]	12% Citi	13%
Commercial Banking	42%	40% PNC	35%	15%	14% FITB	16%
Asset Management	73%	68% UBS WM & BLK	≤70%	21%	24% BAC & TROW	25%+
JPMorgan Chase	58%[1]	56%[1]	55%+/-	13%[4]	12%	~15%[4]

[1] Excludes legal expense.
[2] Best-in-class overhead ratio represents implied expenses of comparable peer segments weighted by JPMorgan Chase (JPM) revenue: Wells Fargo Community Banking (WFC), Citi Institutional Clients Group (Citi), PNC Corporate and Institutional Banking (PNC), UBS Wealth Management and Wealth Management Americas (UBS WM) and BlackRock (BLK). JPM overhead ratio represents the sum of the implied expenses of all peers and JPM Corporate segment divided by JPM revenue.
[3] CIB ROE excluding legal expense was 14%.
[4] Represents firmwide ROTCE for JPM. Goodwill is primarily related to the Bank One merger and prior acquisitions and is predominantly retained by Corporate.
[5] Best-in-class ROTCE represents implied net income minus preferred stock dividends (NIAC) for each comparable LOB peer weighted by JPM average tangible common equity: WFC, Citi Institutional Clients Group (Citi), Fifth Third Bank (FITB), Bank of America Global Wealth and Investment Management (BAC), T. Rowe Price (TROW). JPM ROTCE represents the sum of the implied combined NIAC of all peers and JPM Corporate segment divided by JPM average tangible equity.

How do you compare your franchises with your peers? What makes you believe your businesses are strong?

Virtually all of our businesses are close to best in class, in overhead ratios and, more important, in return on equity (ROE), as shown on the chart on page 8. Of even more relevance, we have these strong ratios while making sizable investments for the future (which we have reported on extensively in the past and you can read more about in the CEO letters). It is easy to meet short-term targets by skimping on investments for the future, but that is not our approach for building the business for the long term.

We are deeply aware that our clients choose who they want to do business with each and every day, and we are gratified that we continue to earn our clients' business and their trust. If you are gaining customers and market share, you have to be doing something right. The chart below shows that we have been meeting this goal fairly consistently for 10 years.

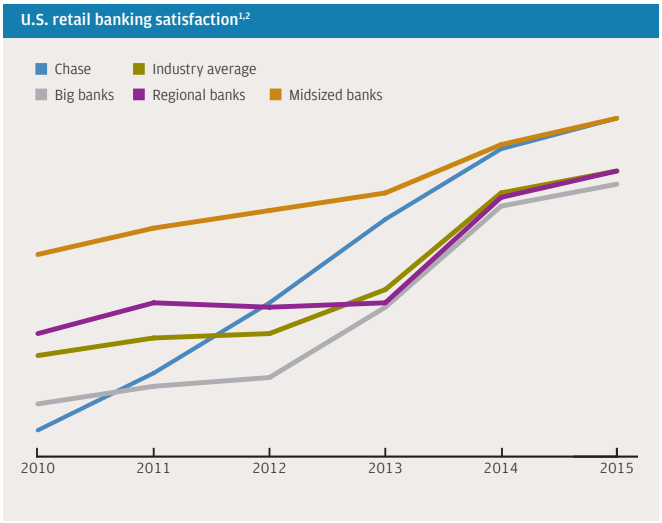
Irreplicable Client Franchises Built Over the Long Term

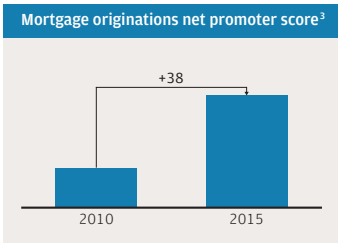
		2006	2014	2015	
Consumer & Community Banking	Deposits market share[1]	3.6%	7.6%	7.9%	■ Relationships with ~50% of U.S. households
	# of top 50 Chase markets where we are #1 (top 3) deposits	11 (25)	13 (40)	12 (40)	■ #1 primary banking relationship share in Chase footprint[11]
	Average deposits growth rate	7.7%	7.4%	9.0%	■ #1 retail bank in the U.S. for acquiring, developing and retaining customers[12]
	Active mobile customers growth rate	NM	22.1%	19.5%	■ #1 U.S. credit card issuer based on loans outstanding[13]
	Card sales market share[2]	16%	21%	21%	■ #1 U.S. co-brand credit card issuer[14]
	Merchant processing volume[3,4]	#3	#1	#1	■ #1 wholly-owned merchant acquirer[15]
Corporate & Investment Bank	Global Investment Banking fees[5]	#2	#1	#1	■ >80% of Fortune 500 companies do business with us
	Market share[5]	8.6%	8.0%	7.9%	■ Top 3 in 16 product areas out of 17[16]
	Total Markets revenue[6]	#8	#1	#1	■ #1 in both N.A. and EMEA Investment Banking fees[17]
	Market share[6]	7.9%	15.5%	15.9%	■ #1 in Global Debt, Equity and Equity-related[17]
	FICC[6]	#7	#1	#1	■ #1 in Global Long-Term Debt and Loan Syndications[17]
	Market share[6]	9.1%	17.5%	18.3%	■ #1 in FICC productivity[18]
	Equities[6]	#8	#3	#3	■ Top 3 Custodian globally with AUC of $19.9 trillion
	Market share[6]	6.0%	11.6%	12.0%	■ #1 USD clearing house with 18.9% share in 2015[19]
Commercial Banking	# of states with Middle Market banking presence	22	30	32	■ #1 in customer satisfaction[20]
	Multifamily lending[7]	#28	#1	#1	■ Leveraging the firm's platform – average ~9 products/client[21]
	Gross Investment Banking revenue ($ in billions)	$0.7	$2.0	$2.2	■ Top 3 in overall Middle Market, large Middle Market and ABL bookrunner
	% of North America Investment Banking fees	16%	35%	36%	■ Industry-leading credit performance – 4th straight year of net recoveries or single digit NCO rate
Asset Management	Mutual funds with a 4/5 star rating[8]	119	226	231	■ 84% of 10-year long-term mutual fund AUM in top 2 quartiles[22]
	Global active long-term open-end mutual fund AUM flows[9]	#2	#1	#2	■ Positive client asset flows every year since 2004
	AUM market share[9]	1.8%	2.5%	2.6%	■ #3 Global Private Bank and #1 LatAm Private Bank[23]
	North America Private Bank *(Euromoney)*	#1	#1	#1	■ Revenue and long-term AUM growth ~80% since 2006
	Client assets market share[10]	~3%	~4%	~4%	■ Doubled GWM client assets (2x industry rate) since 2006[10]

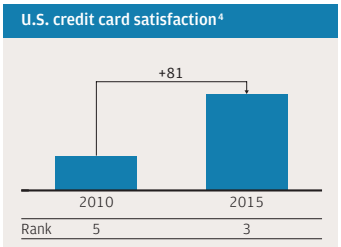
For footnoted information, refer to slide 42 in the 2016 Firm Overview Investor Day presentation, which is available on JPMorgan Chase & Co.'s website at (http://investor.shareholder.com/jpmorganchase/presentations.cfm), under the heading Investor Relations, Investor Presentations, JPMorgan Chase 2016 Investor Day, Firm Overview, and on Form 8-K as furnished to the SEC on February 24, 2016, which is available on the SEC's website (www.sec.gov).

NM = Not meaningful

Improved Consumer Satisfaction: 2010–2015







[1] Source: J.D. Power U.S. Retail Banking Satisfaction Study.
[2] Big banks defined as top six U.S. banks.
[3] Net promoter score = % promoters minus % detractors.
[4] Source: J.D. Power U.S. Credit Card Satisfaction Study (8/19/2010 and 8/20/2015).

Good businesses also deeply care about improving customer satisfaction. As shown above, you can see that our Chase customer satisfaction score continues to rise. In addition, our Commercial Banking satisfaction score is among the highest in the industry in terms of customer loyalty. In Asset Management, where customers vote with their wallet, JPMorgan Funds finished second in long-term net flows among all fund complexes.

Later on in this letter, I will describe our fortress balance sheet and controls, as well as the discipline we have around risk management. I will also talk more about our employees, some exciting new opportunities – mostly driven by innovative technologies – and our ongoing support for our communities and our country. It is critical that we do ***all*** of these things right to maintain the strength of our company.

II. WE MUST AND WILL PROTECT OUR COMPANY AND THOSE WE SERVE

In support of our main mission – to serve our clients and our communities – there is nothing more important than to ***protect*** our company so that we are strong and can continue to be here for all of those who count on us. We have taken many actions that should give our shareholders, clients and regulators comfort and demonstrate that our company is rock solid.

The actions we have taken to strengthen our company.

In this section, we describe the many actions that we have taken to make our company stronger and safer: our fortress balance sheet with enhanced capital and liquidity, our ability to survive extreme stress of multiple types, our extensive de-risking and simplification of the business, and the building of fortress controls in meeting far more stringent regulatory standards. Taken together, these actions have enabled us to make extraordinary progress toward reducing and ultimately eliminating the risk of JPMorgan Chase failing and the cost of any failure being borne by the American taxpayer or the U.S. economy.

You say you have a "fortress balance sheet." What does that mean? Can you handle the extreme stress that seems to happen around the world from time to time?

Nearly every year since the Great Recession, we have improved virtually every measure of financial strength, including many new ones. It's important to note as a starting point that in the worst years of 2008 and 2009, JPMorgan Chase did absolutely fine – we never lost money, we continued to serve our clients, and we had the wherewithal and capability to buy and integrate Bear Stearns and Washington Mutual. That said, we nonetheless recognize that many Americans did not do fine, and the financial crisis exposed weaknesses in the mortgage market and other areas. Later in this letter, I will also describe what we are doing to strengthen JPMorgan Chase and to help support the entire economy.

The chart on page 12 shows many of the measures of our financial strength – both from the year preceding the crisis and our improvement in the last year alone.

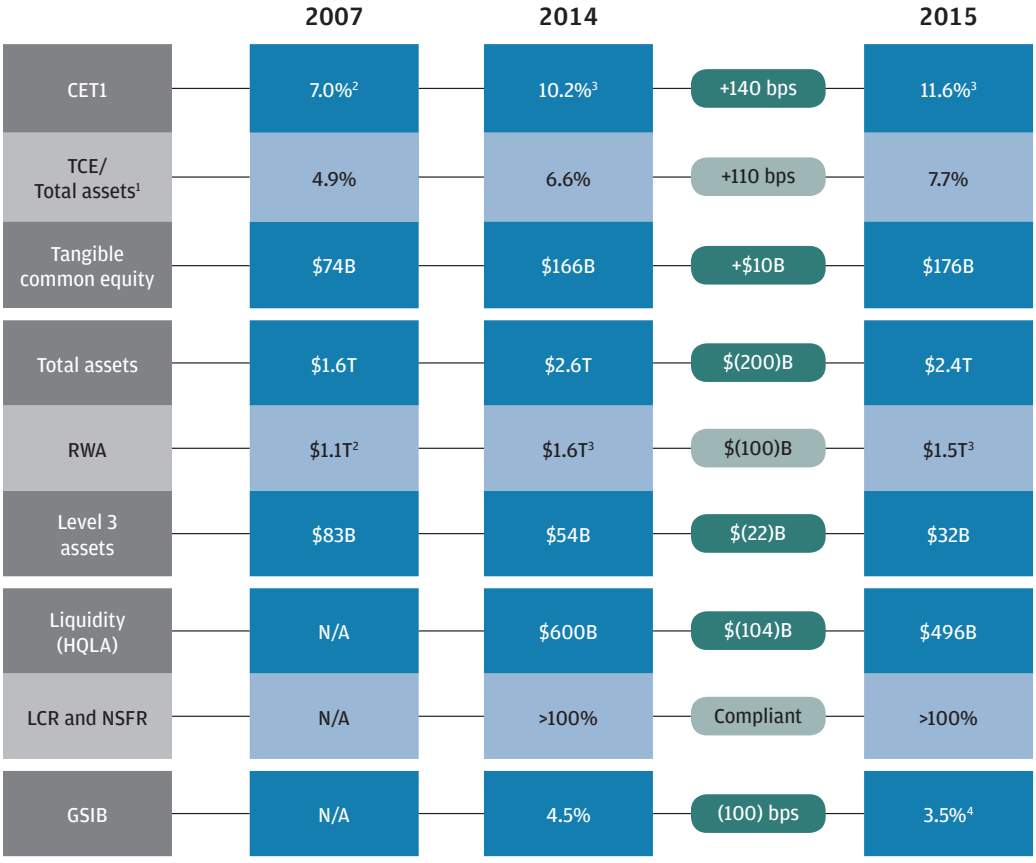
In addition, every year, the Federal Reserve puts all large banks through a very severe and very detailed stress test.

Among other things, last year's stress test assumed that unemployment would go to 10.1%, housing prices would fall 25%, equity markets would decline by nearly 60%, real gross domestic product (GDP) would decline 4.6%, credit spreads would widen dramatically and oil prices would rise to $110 per barrel. The stress test also assumed an instantaneous global market shock, effectively far worse than the one that happened in 2009, causing large trading losses. It also assumed the failure of the largest counterparty (this is meant to capture the failure of the global bank that you have the most extensive derivative relationship with; e.g., a Lehman-type event), which would cause additional losses. The stress test assumed that banks would not stop buying back stock – therefore depleting their capital – and would continue to grow dramatically. (Of course, growing dramatically and buying back stock if your bank were under stress would be irresponsible – and is something we would never do.) Under this assumed stress, the Federal Reserve estimates that JPMorgan Chase would lose

* Footnote: Our Chief Operating Officer Matt Zames talks in his letter on pages 52–55 about many important initiatives to protect our company, including our physical security and cybersecurity, so I will not duplicate any of that information.

Our Fortress Balance Sheet

at December 31,



[1] Excludes goodwill and intangible assets.
[2] Reflects Basel I measure; CET1 reflects Tier 1 common.
[3] Reflects Basel III Advanced Fully Phased-In measure.
[4] Estimated

B = billions
T = trillions
bps = basis points

CET1 = Common equity Tier 1 ratio. CET1 ratios reflect the capital rule the firm was subject to at each reporting period
TCE = Tangible common equity
RWA = Risk-weighted assets
Level 3 assets = Assets whose value is estimated using model inputs that are unobservable and significant to the fair value
HQLA = High quality liquid assets predominantly include cash on deposit at central banks, and unencumbered U.S. agency mortgage-backed securities, U.S. Treasuries and sovereign bonds
LCR and NSFR = Liquidity coverage ratio and net stable funding ratio
GSIB = Global systemically important bank. The GSIB surcharge increases the regulatory minimum capital of large banks based on their size, cross-jurisdiction activity, interconnectedness, complexity and short-term wholesale funding
N/A = Not applicable

$55 billion pre-tax over a nine-quarter period, an amount that we would easily manage because of the strength of our capital base. Remember, the Federal Reserve stress test is not a forecast – it appropriately assumes multiple levels of conservatism and that very little mitigating action can be taken. However, we believe that if the stress scenario actually happened, we would incur minimal losses over a cumulative nine-quarter period because of the extensive mitigating actions that we would take. It bears repeating that in the actual Great Recession, which was not unlike last year's stress test, JPMorgan Chase never lost money in any quarter and was quite profitable over the nine-quarter period.

The stress test is extremely severe on credit.

The 2015 Comprehensive Capital Analysis and Review (CCAR), or stress test, projected credit losses over a nine-quarter period that totaled approximately $50 billion for JPMorgan Chase, or 6.4% of all our loans. This is higher than what the actual cumula-

tive credit losses were for all banks during the Great Recession (they were 5.6%), and our credit book today is materially better than what we had at that time. The 2015 CCAR losses were even with the actual losses for banks during the worst two years of the Great Depression in the 1930s (6.4%).

The stress test is extremely severe on trading and counterparty risk.

Our 2015 CCAR trading and counterparty losses were $24 billion. We have two comparisons that should give comfort that our losses would never be this large.

First, recall what actually happened to us in 2008. In the worst quarter of 2008, we lost $1.7 billion; for the entire year, we made $6.3 billion in trading revenue in the Investment Bank, which included some modest losses on the Lehman default (one of our largest counterparties). The trading books are much more conservative today than they were in 2008, and at that time, we were still paying a considerable cost for assimilating and de-risking Bear Stearns.

Second, we run hundreds of stress tests of our own each week, across our global trading operations, to ensure our ability to withstand and survive many bad and extreme scenarios. These scenarios include events such as what happened in 2008, other historically damaging events and also new situations that might occur. We manage our company so that even under the worst market stress test conditions, we would almost never bear a loss of more than $5 billion (remember, we earn approximately $10 billion pre-tax, pre-provision each quarter). We recognize that on rare occasions, we could experience a negative significant event that could lead to our having a poor quarter. But we will be vigilant and will never take such a high degree of risk that it jeopardizes the health of our company and our ability to continue to serve our clients. This is a bedrock principle. Later in this letter, I will also describe how we think about idiosyncratic geopolitical risk.

And the capital we have to bear losses is enormous.

We have an extraordinary amount of capital to sustain us in the event of losses. It is instructive to compare assumed extreme losses against how much capital we have for this purpose.

You can see in the table below that JPMorgan Chase alone has enough loss absorbing resources to bear ***all the losses, assumed by CCAR, of the 31 largest banks in the United States.*** Because of regulations and higher capital, large banks in the United States are far stronger. And even if any one bank might fail, in my opinion, there is virtually no chance of a domino effect. Our shareholders should understand that while large banks do significant business with each other, they do not directly extend much credit to one other. And when they trade derivatives, they mark-to-market and post collateral to each other every day.

Resilience of JPMorgan Chase through multiple layers of protection

($ in billions)

Total loss absorbing resources December 31, 2015:	
Eligible long-term debt	$125
Preferred equity	26
CET1	173
Total reserves[1]	25
Total resources	**~$350**

JPMorgan Chase quarterly estimated pre-tax, pre-provision earnings	**~$ 10**
CCAR industry losses[2]	
JPMorgan Chase losses	$ 55
Losses of 30 other participating banks	167
Total CCAR losses	**$222**

[1] Includes credit, legal, tax and valuation reserves.

[2] As estimated for the nine quarters ending December 31, 2016, by the Federal Reserve in the 2015 CCAR severely adverse scenario.

Note: Numbers may not sum due to rounding.

Have you completed your major de-risking initiatives?

Yes, we have completed our major de-risking initiatives, and some were pretty draconian. In the chart below, I show just a few of the actions that we were willing to take to reduce various forms of risk:

Executed Significant Business Simplification Agenda

Business simplification initiatives	Other meaningful business actions
✓ Exited Private Equity business ✓ Exited Physical Commodities business ✓ Exited Special Mezzanine Financing business ✓ Exited majority of Broker-Dealer Services business ✓ Exited International Commercial Card ✓ Sold Retirement Plan Services unit[1] ✓ Exited government prepaid card	✓ Simplified Mortgage Banking products from 37 to 15 products ✓ Ceased originating student loans ✓ De-risking by discontinuing certain businesses with high-risk clients in high-risk geographies: — Business Banking closed ~9,000 clients — Commercial Banking closed ~4,600 clients — Private Banking closed ~1,700 clients — Consumer Banking closed ~140,000 clients — CIB closed ~2,900 clients (Includes restricted/exited transaction services for ~500 Foreign Correspondent Banking clients)

[1] 401(k) administration business

However, we are going to be extremely vigilant to do more de-risking if we believe that something creates additional legal, regulatory or political risks. We regularly review all our business activities and try to exceed – not just meet – regulatory demands. We also now ask our Legal Department to be on the search for "emerging legal risks." We try to think differently; for example, we try to look at legal risks not based on how the law is today but based on how the law might be interpreted differently 10 years from now. It is perfectly reasonable for the legal and regulatory agencies to want to improve the quality of the businesses they oversee, particularly around important issues such as customer protection. We also expect this refinement frequently will be achieved through enforcement actions as opposed to the adoption of new rules that raise standards. For many years, regulations generally were viewed as being static. As we do everywhere else, we should be striving for constant improvement to stay ahead of the curve.

Do you think you now have "fortress controls" in place?

We are good and are getting better. The intense efforts over the last few years across our operating businesses – Risk, Finance, Compliance, Legal and Audit – are now yielding real results that will protect the company in the future. We have reinforced a culture of accountability for assuming risk and have come a long way in self-identifying and fixing shortcomings. Many new permanent organizational structures have been put in place to ensure constant review and continuous improvement. For example, we now have a permanent Oversight & Control Group. The group is charged with enhancing the firm's control environment by looking within and across the lines of business and corporate functions to identify and remediate control issues. This function enables us to detect control problems more quickly, escalate issues promptly and engage other stakeholders to understand

common themes across the firm. We have strengthened the Audit Department and risk assessment throughout the firm, enhanced data quality and controls, and also strengthened permanent standing committees that review new clients, new products and all reputational issues.

The effort is enormous.

Since 2011, our total headcount directly associated with Controls has gone from 24,000 people to 43,000 people, and our total annual Controls spend has gone from $6 billion to approximately $9 billion annually over that same time period. We have more work to do, but a strong and permanent foundation is in place. Far more is spent on Controls if you include the time and effort expended by front-office personnel, committees and reviews, as well as certain technology and operations functions.

We have also made a very substantial amount of progress in Anti-Money Laundering/Bank Secrecy Act.

We deployed a new anti-money laundering (AML) system, Mantas, which is a monitoring platform for all global payment transactions. It now is functioning across our company and utilizes sophisticated algorithms that are regularly enhanced based on transactional experience. We review electronically $105 trillion of gross payments each month, and then, on average, 55,000 transactions are reviewed by humans after algorithms identify any single transaction as a potential issue. Following this effort, we stopped doing business with 18,000 customers in 2015. We also are required to file suspicious activity reports (SAR) with the government on any suspicious activity. Last year, we filed 180,000 SARs, and we estimate that the industry as a whole files millions each year. We understand how important this activity is, not just to protect our company but to help protect our country from criminals and terrorists.

We exited or restricted approximately 500 foreign correspondent banking relationships and tens of thousands of client relationships to simplify our business and to reduce our AML risk. The cost of doing proper AML/KYC (Know Your Customer) diligence on a client increased dramatically, making many of these relationships immediately unprofitable. But we did not exit simply due to profitability – we could have maintained unprofitable client relationships to be supportive of countries around the world that are allies to the United States. The real reason we exited was often because of the extraordinary legal risk if we were to make a mistake. In many of these places, it simply is impossible to meet the new requirements, and if you make just one mistake, the regulatory and legal consequences can be severe and disproportionate.

We also remediated 130,000 accounts for KYC – across the Private Bank, Commercial Bank and the Corporate & Investment Bank. This exercise vastly improved our data, gave us far more information on our clients and also led to our exiting a small number of client relationships. We will be vigilant on onboarding and maintaining files on all new clients in order to stay as far away as we can from any client with unreasonable risk.

In all cases, we carefully tried to get the balance right while treating customers fairly.

You can see that we are doing everything in our power to meet and even exceed the spirit and the letter of the law to avoid making mistakes and the high cost – both monetarily and to our reputation – that comes with that. But we also tried to make sure that in our quest to eliminate risk, we did not ask a lot of good clients to exit. We hope that in the future, the regulatory response to any mistakes – if and when they happen, and they will happen – will take into account the extraordinary effort to get it right.

To protect the company and to meet standards of safety and soundness, don't you have to earn a fair profit? Many banks say that the cost of all the new rules makes this hard to do.

Having enough capital and liquidity, and even the most solid fortress controls, doesn't make you completely safe and sound. Delivering proper profit margins and maintaining profitability through a normal credit cycle also are important. A business does this by having the appropriate business mix, making good loans and managing expenses over time.

Clearly, some of the new rules create expenses and burdens on our company. Some of these expenses will eventually be passed on to clients, but we have many ways to manage our expenses. Simplifying our business, streamlining our procedures, and automating and digitizing processes, some of which previously were being done effectively by hand, all will bring relief. For example, many of the processes we implemented for CCAR and AML/KYC had to be done quickly, and many were effectively handled outside our normal processes. Eventually, CCAR will be embedded into our normal forecasting and budgeting systems. And we are trying to build the data collection part of KYC into a utility that the entire industry can use – not just for us and our peer group but, equally important, for the client's benefit (the client would essentially only have to fill out one form, which then could be used by all banks). In addition, throughout the company, continually creating straight-through processing, online client service and other initiatives will both improve the client experience and decrease our costs.

What is all this talk of regulatory optimization, and don't some of these things hurt clients? When will you know the final rules?

In the new world, our company has approximately 20 new or significantly enhanced balance sheet and liquidity-related regulatory requirements – the most critical ones are the GSIB capital surcharge, CCAR, the Liquidity Coverage Ratio, the Supplementary Leverage Ratio and Basel III capital. Banks must necessarily optimize across these constraints to be able to meet all their regulatory requirements and, importantly, earn a profit. Every bank has a different binding constraint, and, over time, that constraint may change. Currently, our overriding constraint is the GSIB capital surcharge. Our shareholders should bear in mind that the U.S. government requires a GSIB capital surcharge that is double that of our international competitors. And this additional charge may ultimately put some U.S. banks at a disadvantage vs. international competitors. This is one reason why we worked so hard to reduce the GSIB capital surcharge – we do not want to be an outlier in the long run because of it.

In the last year, we took some dramatic actions to reduce our GSIB capital surcharge, which we now have successfully reduced from 4.5% to an estimate of 3.5%. These steps included reducing non-operating deposits by approximately $200 billion, level 3 assets by $22 billion and notional derivatives amounts by $15 trillion. We did this faster than we, or anyone, thought we could. We still will be working to further reduce the GSIB surcharge, but any reduction from this point will take a few years.

Like us, most banks are modifying their business models and client relationships to accomplish their regulatory objectives. We are doing this by managing our constraints at the most granular level possible – by product, client or business. Clearly, some of these constraints, including GSIB and CCAR, cannot be fully pushed down to the client. Importantly, we are focused on client-friendly execution – and we recognize that these constraints are of no direct concern to clients.

Unfortunately, some of the final rules around capital are still not fully known at this time.

There are still several new rules coming that also could impact our company – probably the most important to us is how the GSIB capital surcharge is incorporated into the CCAR stress test. To date, we have managed to what we do know. We believe that when the final rules are made and known, we can adjust to them in an appropriate way.

As banks change their business models to adapt to the new world, some are exiting certain products or regions. Market shares will change, and both products and product pricing will change over time. Therefore, we think there will be a lot of adjustments to make and tools to deploy so that we can still serve our clients and earn a fair profit.

How do you manage geopolitical and country risks?

We operate in more than 100 countries across the globe – and we are constantly analyzing the geopolitical and country risks that we face. The reason we operate in all these countries is not simply because they represent new markets where we can sell our products. When we operate in a country, we serve not only local institutions (governments and sovereign institutions, banks and corporations in that country) but also some of those institutions and corporations outside their country, along with multinationals when they enter that country. This creates a huge network effect. In all the countries where we operate, approximately 40% of the business is indigenous, 30% is outbound and 30% is inbound. All these institutions need financing and advice (M&A, equity, debt and loans), risk management (foreign exchange and interest rates) and asset management services (financial planning and investment management), as well as operating services (custody and cash management) in their own countries and globally. It takes decades to build these capabilities and relationships – we cannot go in and out of a country on a whim, based on a short-term feeling about risk in that country. Therefore, we need plans for the long term while carefully managing current risk.

We carefully monitor risks – country by country.

For each country, we take a long-term view of its growth potential across all our lines of business. Each country is different, but, for the most part, emerging and developing markets will grow faster than developed countries. And as they grow, the need for our services grows dramatically. While we have a future growth plan for each country, we obviously can't know with any certainty everything that will happen or the timing of recessions. No matter what the future brings, we make sure that we can easily bear the losses if we are wrong in our assessments. For each material country, we look at what our losses would be under severe stress (not that different from the Fed's CCAR stress test). We manage so that should the extreme situation occur, we might lose money, but we could easily handle the result. Below are a few examples of how we manage risk while continuing to serve clients in specific countries.

China. We believe it likely that, in 20–25 years, China will be a developed nation, probably housing 25% or more of the top 3,000 companies globally. Going forward, we do not expect China to enjoy the smooth, steady growth it has had over the past 20 years. Reforming inefficient state-owned enterprises, developing healthy markets (like we have in the United States) with full transparency and creating a convertible currency where capital can move freely will not be easy. There will be many bumps in the road. We publicly disclose in our Form 10-K that we have approximately $19 billion of country exposure to China. We run China through a severe stress test (essentially, a major recession with massive defaults and trading losses), and we estimate that our losses in this scenario could be approximately $4 billion. We do not expect this situation to

happen, but if it did, we could easily handle it. We manage our growth in China to try to capture the long-term value (and, remember, this will help a lot of our businesses outside of China, too) and in a way that would enable us to handle bad, unexpected outcomes. We don't mind having a bad quarter or two, but we will not risk our company on ***any*** country. This is how we manage in all countries in which we have material activity.

Brazil. Brazil has had a deteriorating economy, shrinking by 3%–4% over the last year. In addition, as I write this letter, Brazil faces political upheaval as its president is being threatened with impeachment and its former president is being indicted. Yet the country has a strong judicial system, many well-run companies, impressive universities, peaceful neighbors and an enormous quantity of natural resources. In Brazil, we have banking relationships with more than 2,000 clients, approximately 450 multinational corporations going into Brazil to do business and approximately 50 Brazilian companies going outbound. Our publicly disclosed exposure to Brazil is approximately $11 billion, but we think that in extreme stress, we might lose $2 billion. In each of the last three years, we actually have made money in Brazil. We are not retreating – because the long-term prospects are probably fine – and for decades to come, Brazilians will appreciate our steadfastness when they most needed it.

Argentina. Argentina is now a country with incredible opportunity. In the 1920s, its GDP per person was larger than that of France, whereas today, it is barely one-third compared with France. Argentina is an example of terrible public policy, often adopted under the auspices of being good for the people, that has resulted in extraordinary damage to the economy. However, the country has a highly educated population, a new president who is making bold and intelligent moves, peaceful neighbors and, like Brazil, an abundance of natural resources. You might be surprised to know that for the past 10 years, in spite of the country's difficulties, JPMorgan Chase has made a modest profit there by consistently serving our clients and the country. This year, we took a little additional risk in Argentina with a special financing to help bring the country some stability and help get it back into the global markets. We are hoping that Argentina can be an example to the world of what can happen when a country has a good leader who adopts good policy.

To give you more comfort, I want to remind you that throughout all the international crises over the last decade, we maintained our businesses in many places that were under stress – such as Spain, Italy, Greece, Egypt, Portugal and Ireland. In almost every case, we did not have any material problems, and we are able to navigate every issue and continue to serve all our clients. Again, we hope this will put us in good stead in these countries for decades. Later in this letter, I will talk about another potentially serious issue – Britain possibly leaving the European Union.

How do you manage your interest rate exposure? Are you worried about negative interest rates and the growing differences across countries?

No, we are not worried about negative interest rates in the United States. For years, this country has had fairly consistent job growth and increasingly strong consumers (home prices are up, and the consumer balance sheet is in the best shape it's ever been in). Housing is in short supply, and household formation is going up, car sales are at record levels, and we see that consumers are spending the gas dividend. Companies are financially sound – while some segments' profits are down, companies have plenty of cash. Nor are we worried about the diverging interest rate policies around the world. While they are a reasonable cause for concern, it

is also natural that countries with different growth rates and varying monetary and fiscal policies will have different interest rates and currency movements.

I am a little more concerned about the opposite: seeing interest rates rise faster than people expect. We hope rates will rise for a good reason; i.e., strong growth in the United States. Deflationary forces are receding – the deflationary effects of a stronger U.S. dollar plus low commodity and oil prices will disappear. Wages appear to be going up, and China seems to be stabilizing. Finally, on a technical basis, the largest buyers of U.S. Treasuries since the Great Recession have been the U.S. Federal Reserve, countries adding to their foreign exchange reserve (such as China) and U.S. commercial banks (in order to meet liquidity requirements). These three buyers of U.S. Treasuries will not be there in the future. If we ever get a little more consumer and business confidence, that would increase the demand for credit, as well as reduce the incentive and desire of certain investors to buy U.S. Treasuries because Treasuries are the "safe haven." If this scenario were to happen with interest rates on 10-year Treasuries on the rise, the result is unlikely to be as smooth as we all might hope for.

Are you worried about liquidity in the marketplace? What does it mean for JPMorgan Chase, its clients and the broader economy?

It is good to have healthy markets – it sounds obvious, but it's worth repeating. There are markets in virtually everything – from corn, soybeans and wheat to eggs, chicken and pork to cotton, commodities and even the weather. For some reason, the debate about having healthy financial markets has become less civil and rational. Healthy financial markets allow investors to buy cheaper and issuers to issue cheaper. It is important to have liquidity in difficult times in the financial markets because investors and corporations often have a greater and unexpected need for cash.

Liquidity has gotten worse and we have seen extreme volatility and distortions in several markets.

In the last year or two, we have seen extreme volatility in the U.S. Treasury market, the G10 foreign exchange markets and the U.S. equity markets. We have also seen more than normal volatility in global credit markets. These violent market swings are usually an indication of poor liquidity. Another peculiar event in the market is technical but important: U.S. Treasuries have been selling at a discount to their maturity-related interest rate swaps.

One of the surprises is that these markets are some of the most actively traded, liquid and standardized in the world. The good news is that the system is resilient enough to handle the volatility. The bad news is that we don't completely understand why this is happening.

There are multiple reasons why this volatility may be happening:

- There are fewer market-makers in many markets.
- Market-makers hold less inventory – probably due to the higher capital and liquidity required to be held against trading assets.
- Smaller sizes of trades being offered. It is true that the bid-ask spreads are still narrow but only if you are buying or selling a small amount of securities.
- Lower availability and higher cost of securities financing (securities financing is very short-term borrowing, fully and safely collateralized by Treasuries and agency securities), which often is used for normal money market operations – movement of collateral, short-term money market investing and legitimate hedging activities. This is clearly due to the higher cost of capital and liquidity under the new capital rules.

- Incomplete and sometimes confusing rules around securitizations and mortgages. We still have not finished all the rules around securitizations and in conjunction with far higher capital costs against certain types of securitizations. We have not had a healthy return to the securitization market.
- The requirement to report all trades. This makes it much more difficult to buy securities in quantity, particularly illiquid securities, because the whole world knows your positions. This has led to a greater discount for almost all off-the-run securities (these are the securities of an issuer that are less regularly traded).
- Possible structural issues; e.g., high-frequency trading. High-frequency trading usually takes place in small increments with most high-frequency traders beginning and ending the day with very little inventory. It appears that traders add liquidity during the day in liquid markets, but they mostly disappear in illiquid markets. (I should point out that many dealers also disappear in illiquid markets.)

All trading positions have capital, liquidity, disclosure and Volcker Rule requirements – and they cause high GSIB capital surcharges and CCAR losses. It is virtually impossible to figure out the cumulative effect of all the requirements or what contributes to what.

In our opinion, lower liquidity and higher volatility are here to stay.

One could reasonably argue that lower liquidity and higher volatility are not necessarily a bad thing. We may have had artificially higher liquidity in the past, and we are experiencing a return closer to normal. You certainly could argue that if this is a cost of a stronger financial system, it is a reasonable tradeoff. Remember, the real cost is that purchasers and issuers of securities will, over time, simply pay more to buy or sell. In any event, lower liquidity and higher volatility are probably here to stay, and everyone will just have to learn to live with them.

We really need to be prepared for the effects of illiquidity when we have bad markets.

In bad markets, liquidity normally dries up a bit – the risk is that it will disappear more quickly. Many of the new rules are even more procyclical than they were in the 2008 financial crisis. In addition, psychologically, the Great Recession is still front and center in people's minds, and the instinct to run for the exit may continue to be strong. The real risk is that high volatility, rapidly dropping prices, and the inability of certain investors and issuers to raise money may not be isolated to the financial markets. These may feed back into the real economy as they did in 2008. The trading markets are adjusting to the new world. There are many non-bank participants that are starting to fill in some of the gaps. Even corporations are holding more cash and liquidity to be more prepared for tough times. So this is something to keep an eye on – but not something to panic about.

In a capitalistic and competitive system, we are completely supportive of competitors trying to fill marketplace needs. One warning, however: Non-bank lenders that borrow from individuals and hedge funds or that rely on asset-backed securities will be unable to get all the funding they need in a crisis. This is not a systemic issue because they are still small in size, but it will affect funding to individuals, small businesses and some middle market companies.

JPMorgan Chase is well-positioned regardless.

It is important for you to know that we are not overly worried about these issues for JPMorgan Chase. We always try to be prepared to handle violent markets. Our actual trading businesses are very strong (and it should give you some comfort to know that in all the trading days over the last three years, we only had losses on fewer than 20 days, which is extraordinary). Sometimes wider spreads actually help market-makers, and some repricing of balance sheet positions, like repo, already have helped the consistency of our results. As usual, we try to be there for our clients – in good times and, more important, in tough times.

Why are you making such a big deal about protecting customers' data in your bank?

We need to protect our customers, their data and our company.

We necessarily have a huge amount of data about our customers because of underwriting, credit card transactions and other activities, and we use some of this data to help serve our customers better (I'll speak more about big data later in this letter). And we do extensive work to protect our customers and their data – think cybersecurity, fraud protection, etc. We always start from the position that we want to be customer friendly. One item that I think warrants special attention is when our customers want to allow outside parties to have access to their bank accounts and their bank account information. Our customers have done this with payment companies, aggregators, financial planners and others. We want to be helpful, but we have a responsibility to each of our customers, and we are extremely concerned. Let me explain why:

- When we all readily click "I agree" online or on our mobile devices, allowing third-party access to our bank accounts and financial information, it is fairly clear that most of us have no idea what we are agreeing to or how that information might be used by a third party. We have analyzed many of the contracts of these third parties and have come to the following conclusions:
  - Far more information is taken than the third party needs in order to do its job.
  - Many third parties sell or trade information in a way customers may not understand, and the third parties, quite often, are doing it for their own economic benefit – not for the customer's benefit.
  - Often this is being done on a daily basis for years after the customer signed up for the services, which they may no longer be using.

We simply are asking third parties to limit themselves to what they need in order to serve the customer and to let the customer know exactly what information is being used and why and how. In the future, instead of giving a third party unlimited access to information in any bank account, we hope to build systems that allow ***us*** to "push" information – and only that information agreed to by the customer – to that third party.

- Pushing specific information has another benefit: Customers do not need to provide their bank passcode. When customers give out their bank passcode, they may not realize that if a rogue employee at an aggregator uses this passcode to steal money from the customer's account, the customer, not the bank, is responsible for any loss. You can rest assured that when the bank is responsible for the loss, the customer will be fully reimbursed. That is not quite clear with many third parties. This lack of clarity and transparency isn't fair or right.

Privacy is of the utmost importance. We need to protect our customers and their data. We are now actively working with all third parties who are willing to work with us to set up data sharing the right way.

III. WE ACTIVELY DEVELOP AND SUPPORT OUR EMPLOYEES

If you were able to travel the world with me, to virtually all major cities and countries, you would see firsthand your company in action and the high quality and character of our people. JPMorgan Chase and all its predecessor companies have prided themselves on doing "only first-class business and in a first-class way." Much of the capability of this company resides in the knowledge, expertise and relationships of our people. And while we always try to bring in fresh talent and new perspectives, we are proud that our senior bankers have an average tenure of 15 years. This is testament to their experience, and it means they know who to call anywhere around the world to bring the full resources of JPMorgan Chase to bear for our clients.

Traveling with me, you would see our senior leadership team's exceptional character, culture and capability. You also would probably notice that 20% of this leadership group, over 250 teammates who manage our businesses worldwide, is ethnically diverse, and more than 30% are women.

Even though we believe that we have excellent people and a strong, positive corporate culture, we are always examining new ways to improve.

How are you ensuring you have the right conduct and culture?

We reinforce our culture every chance we get.

Our Business Principles are at the forefront of everything we do, and we need to make these principles part of every major conversation at the company – from the hiring, onboarding and training of new recruits to town halls and management meetings to how we reward and incentivize our people. To get better at this, last year we met with more than 16,000 employees in 1,400 focus groups around the world to get their feedback on some of our challenges and what we can do to strengthen and improve our culture.

That said, we acknowledge that we, at times, have fallen short of the standards we have set for ourselves. This year, the company pleaded guilty to a single antitrust violation as part of a settlement with the U.S. Department of Justice related to foreign exchange activities. The conduct underlying the antitrust charge is principally attributable to a single trader (who has since been dismissed) and his coordination with traders at other firms. As we said at the time, one lesson is that the conduct of a small group of employees, or of even a single employee, can reflect badly on all of us and can have significant ramifications for the entire firm. That's why we must be ever vigilant in our commitment to fortify our controls and enhance our historically strong culture, continuing to underscore that doing the right thing is the responsibility of every employee at the company. We all have an obligation to treat our customers and clients fairly, to raise our hand when we see something wrong or to speak up about something that we should improve – rather than just complain about it or ignore it.

We have intensified training and development.

We are committed to properly training and developing our people to enable them to grow and succeed throughout their careers. Our intent is to create effective leaders who embody our Business Principles.

WE ARE HELPING OUR EMPLOYEES STAY HEALTHY

For us, having healthy employees is about more than improving the firm's bottom line; it's about improving our employees' lives — and sometimes even saving lives. In 2015, we estimate that our Health & Wellness Centers intervened in more than 100 potentially life-threatening situations (e.g., urgent cardiac or respiratory issues), and many more lives have been positively impacted by our numerous wellness initiatives. We believe that healthy employees are happy employees and that happy employees have more rewarding lives both inside and outside the office.

Our commitment starts with offering comprehensive benefits programs and policies that support our employees and their families. To do this, JPMorgan Chase spent $1.1 billion in 2015 on medical benefits for employees based in the United States, where our medical plan covers more than 190,000 employees, spouses and partners. We tier our insurance subsidies so our higher earners pay more, and our lower earners pay less — making coverage appropriately affordable for all. We also contributed nearly $100 million in 2015 for employees' Medical Reimbursement Accounts. And we have structured the plan in a way that preventative care and screenings are paid for by the company.

Our benefits offering is supported by an extensive Wellness Program, which is designed to empower employees to take charge of their health. This includes health and wellness centers, health assessments and screenings, health advocates, employee assistance and emotional well-being programs, and physical activity events. In the first year, only 36% of employees participated in health assessments and wellness screenings, but in 2015, 74% of our employees enrolled in the medical plan completed an assessment and screening. Last year, our on-site wellness screenings helped almost 14,000 employees detect a health risk or potentially serious condition and directed them to see a physician for follow-up. On another subject, we all know the value of eating lots of vegetables, so we've made it a priority to offer an abundance of healthy meal and snack options in our on-site cafeterias and vending machines.

One of the flagships of our Wellness Program is our Health & Wellness Center network. Twenty-seven of our 29 centers in the United States are staffed with at least one doctor. Nearly half of our employees have access to a local center, and 56% of those with access walked in for a visit last year. These facilities are vitally important to our people. In 2015, these centers handled nearly 800 emergencies — including the 100 potentially life-saving interventions, which I mentioned above.

Maintaining a healthy lifestyle shouldn't be a chore — it should be fun. Last year, we held our second StepUp challenge, a global competition that not only kept our employees active, it supported five charities that feed the hungry. More than 11,000 teams — a total of over 83,000 employees — added up their daily steps to take a virtual walk around the world. They began their journey in New York City and made virtual stops at seven of our office locations before finishing in Sydney. Together, they logged a total of 28.2 billion steps, which resulted in the firm donating more than $2 million to the five designated charities — enough to fund millions of meals around the world.

JPMorgan Chase has 3,000 training programs, but we realized that we lacked a very important one: new manager development. Prior to 2015, when our employees became managers at the firm for the first time, we basically left them on their own to figure out their new responsibilities. In 2015, we launched JPMorgan Chase's Leadership Edge, a firmwide program to train leaders and develop management skills. These training programs inculcate our leadership with our values, teaching from case studies about business issues we have confronted and mistakes we have made. In its inaugural year, more than 4,500 managers attended programs with 156 sessions held at 20+ global locations. During 2016, over 13,000 managers are expected to attend. I personally take part in many of these sessions, which are now being held next to our New York City headquarters at The Pierpont Leadership Center, a state-of-the-art flagship training center that opened in January 2016.

How are you doing in your diversity efforts?

We are proud of our diversity … but we have more to do.

Our women leaders represent more than 30% of our company's senior leadership, and they run major businesses – several units on their own would be among Fortune 1000 companies. In addition to having three women on our Operating Committee – who run Asset Management, Finance and Legal – some of our other businesses and functions headed by women include Auto Finance, Business Banking, U.S. Private Bank, U.S. Mergers & Acquisitions, Global Equity Capital Markets, Global Research, Regulatory Affairs, Global Philanthropy, our U.S. branch network and firmwide Marketing. I believe that we have some of the best women leaders in the corporate world globally.

To encourage diversity and inclusion in the workplace, we have a number of Business Resource Groups (BRG) across the company to bring together members around common interests, as well as foster networking and camaraderie. Groups are defined by shared affinities, including race and cultural heritage, generation, gender, sexual orientation, military status and professional role. For example, some of our largest BRGs are Adelante for Hispanic and Latino employees, Access Ability for employees affected by a disability, AsPIRE for Asian and Pacific Islander employees, NextGen for early career professionals and WIN, which focuses on women and their career development. WIN has more than 20,000 members globally, and we have seen a direct correlation between BRG membership and increased promotion, mobility and retention for those participants. On the facing page, you can read more about some of the interesting new programs we have rolled out for employees in specific situations.

But there is one area where we simply have not met the standards that JPMorgan Chase sets for itself – and that is in increasing African-American talent at the firm. While we think our effort to attract and retain African-American talent is as good as at most other companies, it simply is not good enough. Therefore, we set up a devoted effort – as we did for hiring veterans (we've hired 10,000+ veterans) – to dramatically step up our effort. We have launched Advancing Black Leaders – a separately staffed and managed initiative to better attract and hire more African-American talent while retaining, developing and advancing the African-American talent we already have. We are taking definitive steps to ensure a successful outcome, including an incremental $5 million investment, identifying a full-time senior executive to drive the initiative, tripling the number of scholarships we offer to students in this community, and launching bias-awareness training for all executive directors and managing directors. We hope that, over the years, this concerted action will make a huge difference.

WE HAVE IMPLEMENTED A NUMBER OF POLICIES AND PROGRAMS TO MAKE JPMORGAN CHASE AN EVEN BETTER PLACE TO WORK

We want JPMorgan Chase to be considered the best place to work — period. Below are some meaningful new programs that will help us both attract talent and keep our best people.

Our ReEntry program. Our ReEntry program, now in its third year, has been incredibly successful in helping individuals who have taken a five- to 10-year or longer voluntary break get back into the workforce. These are highly accomplished professionals who have prior financial services experience at or above the vice president level but who may need help re-entering the corporate work environment. We offer participants an 18-week fellowship to refresh their skills and rebuild their network. It is a great way to bring outstanding, experienced workers — who often are women — to JPMorgan Chase to begin the second phase of their career. In three years, 63 fellows have been brought into the program, and 50 of those fellows have been placed in full-time roles.

Maternity mentors. A common reason for taking a prolonged break from work is the birth of a child. Becoming a parent is both joyful and stressful so we want to do everything we can to support our employees through this life-changing event. Last year, we extended primary caregiver parental leave to 16 weeks, up from 12, and, this year, we are introducing a firmwide maternity mentorship program. The program will pair senior employees who have gone through the parental leave process with those who are doing so for the first time. It was piloted last year to overwhelmingly positive feedback, with participants expressing deep appreciation for having a colleague they could turn to for advice on everything from how to balance work with their new home dynamic to nursing room protocol. Importantly, these senior mentors also provide peace of mind around job security and how to manage the entire transition, from preparing to leave, managing motherhood during the leave and returning to work. In addition, this program not only supports the employee going out on maternity leave, but it also helps educate the employee's manager — on how to stay connected with the employee and ensure that the leave is being handled with flexibility and sensitivity in order to give the employee comfort that her role will be there upon her return.

Work-life balance. We speak consistently about the need for our employees to take care of their minds, their bodies and their souls. This is the responsibility of each and every employee, but there are also ways the firm can help. People frequently think work-life balance refers to working parents; however, having an effective balance is important for everyone's well-being, including our junior investment bankers. In the Investment Bank, we have reduced weekend work to only essential execution work for all employees. And the protected weekend program for analysts and associates will remain in place and now is mandatory for all at this level globally.

With all the new rules, committees and centralization, how can you fight bureaucracy and complacency and keep morale high?

In the reality of our new world, centralization of many critical functions is an absolute requirement so that we can maintain common standards across the company. Of course, extreme centralization can lead to stifling bureaucracy, less innovation and, counterintuitively, sometimes a lack of accountability on the part of those who should have it. Our preference is to decentralize when we can, but when we have to centralize, we need to ensure we set up a process that's efficient, works for the customer and respects the internal colleagues who may have lost some local control.

Processes need to be re-engineered to be efficient. So far, our managers have done a great job adjusting to their new roles and, in effect, getting the best of centralization without its shortcomings. When, on occasion, new procedures have slowed down our response rate to the client, we quickly set about re-engineering the process to make it better. While we are going to meet and exceed all rules and requirements, we need to ensure that the process is not duplicative or that rules are not misapplied. For example, adhering to the new KYC rules took us up to 10 days to onboard a client to our Private Bank. But today, after re-engineering the process, we are back down to three days, incorporating enhanced controls. We all need to recognize that good processes generally are faster, cheaper and ***safer*** for all involved, including the client.

People should not just accept bureaucracy — they have the right to question processes and the interpretation of rules. We have given all our people the license to question whether what we are doing is the right thing, including the interpretation of rules and regulations. Very often, in our desire to exceed regulatory requirements and to avoid making a mistake, we have inaccurately interpreted a rule or regulation and created our own excessive bureaucracy. This is no one's fault but our own. Everyone should look to simplify and seek out best practices, including asking our regulators for guidance.

Committees need to be properly run — the chairperson needs to take charge. We have asked all our committees to become more efficient. For example, we should ensure that pre-reading materials are accurate and succinct. The right people need to be in the room and very rarely should the group exceed 12 people. An issue should not be presented to multiple committees when it could be dealt with in just one committee (remember, we have new business initiative approval committees, credit committees, reputational risk committees, capital governance committees, global technology architecture committees and hundreds of others).

We have asked that each chair of every committee take charge – start meetings on time, make sure people arrive prepared and actually have read the pre-read documents, eliminate frivolous conversation, force the right questions to get to a decision, read the riot act to someone behaving badly, maintain a detailed follow-up list specifying who is responsible for what and when, and ensure the committee meets its obligations and time commitments. And last, we encourage each chair to ask the internal customers if he or she is doing a good job for them.

We have maintained high morale. Our people have embraced the new regulations and are working hard to become the gold standard in how we operate. We don't spend any time finger-pointing or scapegoating our own people, looking for someone to blame purely for the sake of doing so when we make a mistake. And importantly, we have maintained a culture that allows for mistakes. Obviously, if someone violates our core principles, that person should not be here. But as you know, there are all types of mistakes.

We don't want to be known as a company that doesn't give people a second chance regardless of the circumstances. I remind all our managers that some of these mistakes will be made by our children, our spouses or our parents. Having a brutal, uncompromising and unforgiving company will create a terrible culture over time – and it will lead to worse conduct not better.

How are you doing retaining key people?

Quite well, thank you. The Board of Directors and I feel we have one of the best management teams we have ever had. Many of our investors who have spent a considerable amount of time with our leaders – not just with my direct reports but with the layer of management below them – will tell you how impressed they are with the depth and breadth of our management team. Of course, we have lost some people, but we wish them well – we are proud of our alumni. One of the negatives of being a good company is that you do become a breeding ground for talent and a recruiting target for competitors. It is the job of our management team to keep our key talent educated, engaged, motivated and happy. Our people are so good that we should say thank you every day.

Our company has stood the test of time because we are building a strong culture and are embedding our principles in everything we do. Nothing is more important. That is the pillar upon which all things rest – and it is the foundation for a successful future.

IV. WE ARE HERE TO SERVE OUR CLIENTS

Many of the new and exciting things we are doing center on technology, including big data and FinTech. We are continually innovating to serve our clients better, faster and cheaper – year after year.

How do you view innovation, technology and FinTech? And have banks been good innovators? Do you have economies of scale, and how are they benefiting your clients?

We have to be innovating all the time to succeed. Investing in the future is critical to our business and crucial for our growth. Every year we ask, "Are we doing enough? And should we be spending more?" We do not cut back on "good spending" to meet budget or earnings targets. We view this type of cost cutting like an airline scaling back on maintenance – it's a bad idea. We spent more than $9 billion last year on technology. Importantly, 30% of this total amount was spent on new investments for the future. Today, we have more than 40,000 technologists, from programmers and analysts to systems engineers and application designers. In addition, our resources include 31 data centers, 67,000 physical servers globally, 27,920 databases and a global network that operates smoothly for all our clients. There are many new technologies that I will not discuss here (think cloud, containerization and virtualization) but which will make every single part of this ecosystem increasingly more efficient over time.

We need to innovate in both big and small ways.

Technology often comes in big waves – such as computerization, the Internet and mobile devices. However, plenty of important innovation involves lots of little things that are additive over time and make a product or a service better or faster; for example, simplifying online applications, improving ATMs to do more (e.g., depositing checks) and speeding up credit underwriting. Many of these improvements were not just the result of technology but the result of teams of people across Legal, Finance, Technology and Client Coverage & Support working together to understand, simplify and automate processes.

One of our growing teams is our digital group, including more than 400 professionals focused on product and platform design and innovation. In addition, the digital technology organization has over 1,200 technologists that deliver digital solutions, including frameworks, development and architecture. This is an exceptional group, but you can judge for yourself when you read about some of the great projects being rolled out.

We have thousands of such projects, but I just want to give you a sample of some of our current initiatives (I will talk extensively later about investments in payments, in big data and in our Investment Bank):

- **Consumer digital.** We are intently focused on delivering differentiated digital experiences across our consumer businesses. For example, we added new functionality to our mobile app with account preview and check viewing, and we redesigned chase.com with simpler navigation and more personalized experiences, making it easier for our customers to bank and interact with us when and how they want – via smartphones, laptops and other mobile devices. We now have nearly 23 million active Chase Mobile customers, a 20% increase over the prior year.

- **Digital and Global Wealth Management.** We will be investing approximately $300 million over the next three years in digital initiatives for Asset Management. In Global Wealth Management, we have modernized the online experience for clients, enabled mobile access, and launched a digital portal for access to our research and analysis across all channels. In addition, we are rolling out a user-friendly and powerful planning tool that our advisors can use with clients in real time. We are also working on some great new initiatives around digital wealth management, which we will disclose later this year.

- **Digital Commercial Banking.** In Commercial Banking, J.P. Morgan ACCESS delivers a platform for clients to manage and pull together all their Treasury activities in a single, secure portal, which was ranked as the #1 cash management portal in North America by Greenwich Associates in 2014. We continue to invest in digital enhancements, releasing in 2015 our proprietary and integrated mobile solution for remote check deposits to help clients further streamline their back-office reconciliations. We are also investing in improving the overall user experience around key items such as entitlements (designating who can make payments) and workflow, bringing to our commercial digital platforms some of the same enhancements we've brought to our Consumer Banking sites.

  While we make a huge effort to protect our own company in terms of cybersecurity, we try to help protect our clients from cyber threats as well. We have extensive fraud and malware detection capabilities that significantly reduce wire fraud on our customers. We've increased our client cybersecurity education and awareness programs, having communicated with more than 11,000 corporate customers on this topic and hosting nearly 50 cybersecurity client events in 2015.

- **Small business digital.** Small businesses are important to Chase and to the communities we serve. Small businesses have a variety of banking needs, with approximately 60% of our customers using our checking accounts or business credit cards. And like our consumer client base, they depend heavily on the technology that already is offered in our Consumer business. But we are very excited about two new initiatives this year:

  – Our new brand "Chase for Business" is not just a brand. Over time, we will simplify forms, speed applications and dramatically improve the customer experience. This year or next, we will roll out an online digital application that allows a Business Banking customer to sign up for the "triple play" with one signature and in one day. "Triple play" stands for a deposit account, a business credit card and Chase merchant processing – all at once. Now that's customer service!

  – Chase Business Quick Capital. Working with a FinTech company called OnDeck, we will be piloting a new working capital product. The process will be entirely digital, with approval and funding generally received within one day vs. the current process that can take up to one month or more. The loans will be Chase branded, retained on our balance sheet, and subject to our pricing and risk parameters.

- **Commercial Term Lending.** In our Commercial Term Lending business, our competitive advantage is our process – we strive to close commercial real estate loans faster and more efficiently than the industry average. That has allowed us to drive $25 billion of loan growth since 2010, representing a five-year compound average growth rate (CAGR) of 11% and outpacing the industry CAGR of 4% while maintaining credit discipline. Technological innovation will continue to improve our process – later in the year, we will be rolling out a proprietary loan

origination system that will set a new industry standard for closure speed and customer service.

Yes, we are always improving our economies of scale (to the ultimate benefit of our clients). And yes, over time, banks have been enormous innovators.

We commonly hear the comment that a bank of our size cannot generate economies of scale that benefit the client. And we often hear people say that banks don't innovate. Neither of these comments is accurate. Below I give a few examples of the large and small innovations that we are working on:

- **Consumer and small business banking accounts.** Many decades ago, bank accounts meant checks and a monthly statement, with few additional benefits provided to customers (other than maybe a toaster). Today, most checking accounts come with many benefits: debit cards, online bill pay, 24-hour access to online account information, fraud alerts, mobile banking, relevant rewards and ATM access.
- **ATMs.** Today, ATMs are ubiquitous (we have almost 18,000 ATMs, and our customers love them). These ATMs have gone from simple cash dispensers to state-of-the-art service centers, allowing customers to receive different denominations of bills, accept deposited checks, pay certain bills and access all their accounts.
- **The cost and ability to raise capital and buy and sell securities.** Thirty years ago, it cost, on average, 15 cents to trade a share of stock, 100 basis points to buy or sell a corporate single-A bond and $200,000 to do a $100 million interest rate swap. Today, it costs, on average, 1.5 cents to trade a share of stock, 10 basis points to buy a corporate single-A bond and $10,000 to do a $100 million interest rate swap. And much can be done electronically, increasingly on a mobile device and with mostly straight-through processing, which reduces error rates and operational costs – for both us and our clients. These capabilities have dramatically reduced costs to investors and issuers for capital raising and securities transactions.
- **Cash management capabilities for corporations.** It is impossible to describe in a few sentences what companies had to do to move money around the world 40 years ago. Today, people can move money globally on mobile devices and immediately convert it into almost any currency they want. They have instant access to information, and the cost is a fraction of what it used to be.

FinTech and innovation have been going on my entire career – it's just faster today.

If you look at the banking business over decades, it has always been a huge user of new technologies. This has been going on my entire career, though it does appear to be accelerating and coming at us from many different angles. While many FinTech firms are good at utilizing new technologies, we should recognize that they are very good at analyzing and fixing business problems and improving the customer experience (i.e., reducing pain points). Sometimes they find a way to provide these services more efficiently and in a less costly manner; for example, cloud services. And sometimes these services are not less expensive but provide a faster and simplified experience that customers value and are willing to pay for. You see this in some FinTech lending and payment services.

It is unquestionable that FinTech will force financial institutions to move more quickly, and banks, regulators and government policy will need to keep pace. Services will be rolled out faster, and more of them will be executed on a mobile device. FinTech has been great at making it easier and often less expensive for customers and will likely lead to many more people, including more lower-income people, joining the banking system in the United States and abroad.

You can rest assured that we continually and vigorously analyze the marketplace, including FinTech companies. We want to stay up to date and be extremely informed, and we are always looking for ways to improve what we do. We are perfectly willing to compete by building capabilities (we have large capabilities in-house) or to collaborate by partnering.

Whether we compete or collaborate, we try to do what is in the best interest of the customer. We also partner with more than 100 FinTech companies – just as we have partnered over the past decade with hundreds of other technology providers. We need to be very technologically competent because we know that some of our competitors will be very good. All businesses have clear weak spots, and those weaknesses will be – and should be – exploited by competitors. This is how competitive markets work. One of the areas we spend a lot of time thinking and worrying about is payments. Part of the payments system is based on archaic, legacy architecture that is often unfriendly to the customer.

How do you intend to win in payments, particularly with so many strong competitors – many from Silicon Valley?

Right now, we are one of the biggest payments companies in the world (across credit and debit cards, merchant payments, global wire transfers, etc.). But that has not lulled us into a false sense of security – and we know we need to continue to innovate aggressively to grow and win in this area. The trifecta of Chase Paymentech, ChaseNet and Chase Pay, supported by significant investment in innovation, has us very excited and gives us a great opportunity to continue to be one of the leading companies in the payments business. Let me explain why.

Chase Paymentech. We already are one of the largest merchant processors in the United States (merchant processors provide those little machines that you swipe your card through at the point of sale in a store or that process online payments). We are quickly signing up large and medium-sized merchants – this year alone, we signed up some names that you all recognize, including Starbucks, Chevron, Marriott, Rite Aid and Cinemark. And I've already described how the partnership with Business Banking makes it easier for small businesses to connect with Chase Paymentech. In all these instances, we have simplified, and, in some cases, offered better pricing, as well as made signup easier – exactly what the merchants want. And very often it comes with ... ChaseNet.

ChaseNet. ChaseNet, through Visa, allows us to offer a merchant different and cheaper pricing, a streamlined contract and rules, and enhanced data sharing, which can facilitate sales and authorization rates. Again, these are all things merchants want. (You can see that we are trying hard to improve the relationship between banks and merchants.) We expect volume in ChaseNet to reach approximately $50 billion in 2016 (up 100% from 2015), as we have signed up and are starting to onboard clients such as Starbucks, Chevron, Marriott and Rite Aid. In conjunction with Chase Paymentech and ChaseNet, both of which allow us to offer merchants great deals, we also can offer ... Chase Pay.

Chase Pay. Chase Pay, our Chase-branded digital wallet, is the digital equivalent to using your debit or credit card. It will allow you to pay online with a "Chase Pay" button or in-store with your mobile phone. We also hope to get the Chase Pay button inside merchant apps. Chase Pay will offer lower cost of payment, loyalty programs and fraud liability protection to merchants, as well as simple checkout, loyalty rewards and account protection to consumers. As one great example, Chase has signed a payments agreement with Starbucks, which, we hope, will drive Chase Pay adoption. Customers will be able to use the Chase Pay mobile app at more

than 7,500 company-operated Starbucks locations in the United States and to reload a Starbucks Card within the Starbucks mobile app and on starbucks.com. Finally, to make Chase Pay even more attractive, we are building … real-time person-to-person (P2P) payments.

Real-time P2P payments. In conjunction with six partner banks, Chase is launching a P2P solution with real-time funds availability. The new P2P solution will securely make real-time funds available through a single consumer-facing brand. Chase and the partner banks represent 60% of all U.S. consumers with mobile banking apps. We intend to keep P2P free for consumers, and the network consortium is open for all banks to join.

We are absolutely convinced that the trifecta – Chase Paymentech, ChaseNet and Chase Pay – will be dramatically better, cheaper and safer for our customers and our merchants. We also are convinced that the investments we are making in Chase Paymentech and ChaseNet will pay off handsomely. The investment in Chase Pay is not as certain. But we think that the investment will be worth it and that it will help drive more merchants wanting to do business with us and more customers wanting to open checking accounts with us and use our credit cards.

I also want to mention one more payment capability, this one for our corporate clients:

Corporate QuickPay. Leveraging tremendous investment in our retail payment capabilities, our wholesale businesses launched Corporate QuickPay in 2015. This mobile and web-based solution provides our clients with a low-cost alternative to expensive paper checks, reducing their expenses by almost two-thirds. In addition, the platform dramatically improves security, increases payment-processing speed, eases reporting and significantly enhances the customer experience.

I hope you can see why we are so excited.

You always seem to be segmenting your businesses – how and why are you doing this?

We will always be segmenting our businesses to become more knowledgeable about and closer to the client. This segmentation allows us to tailor our products and services to better serve their needs. Below are some examples of how and why we do this.

In Consumer Banking, we have the benefit of really knowing our customers. We know about their financial stability, interests, where they live and their families. That data can be a tremendous force in serving them. By understanding customers well beyond a demographic profile, we can better anticipate what they need. Historically, we used demographics and behavior to segment our customers, but we increasingly take attitudes, values and aspirations into consideration to offer each customer more relevant and personalized products, services and rewards. As one important example, we hope to roll out an "Always On Offers" section for our customers on chase.com, where they can access all the products they qualify for at any given time.

In Commercial Banking, we continue to develop and enhance our Specialized Industries coverage, which now serves a total of 15 distinct industries and approximately 9,000 clients across the United States, with eight industries launched in the last five years. Below are a few service examples taken from these new industries:

- **Agricultural industry group.** Not only do we have specialized underwriting for clients within this group, but we also can help our clients navigate commodity price cycles and seasonality, as well as provide industry-specific credit and risk management tools, such as interest rate and commodity hedging.

- **Healthcare industry group.** In addition to delivering access to capital and other financial services, we can help our healthcare clients manage the constantly changing regulatory environment and adjust their businesses to comply with the Patient Protection and Affordable Care Act and other new regulations. In addition, our web-based tools are making it easier for healthcare providers to migrate payments from expensive paper checks to efficient electronic transactions.
- **Technology industry group.** To serve our technology clients, we have expanded our coverage to include 30 bankers in 11 key markets, all highly aligned with our Investment Banking team. With this model, we can provide investment banking services, comprehensive payment capabilities and international products to address the needs of technology clients through every stage of growth.

In Asset Management, we have dedicated groups that cover highly specialized segments. Some of these segments are: Defined Benefit Pension Plans, Defined Contribution Pension Plans, Endowments & Foundations, Family Offices and Insurance Companies.

How and why do you use big data?

We have enormous quantities of data, and we have always been data fanatics, using big data responsibly in loan underwriting, market-making, client selection, credit underwriting and risk management, among other areas. But comparing today's big data with yesterday's old-style data is like the difference between a mobile phone and a rotary phone. Big data truly is powerful and can be used extensively to improve our company.

To best utilize our data assets and spur innovation, we have built our own extraordinary in-house big data capabilities – we think as good as any in Silicon Valley – populated with more than 200 analysts and data scientists, which we call Intelligent Solutions. And we are starting to use these capabilities across all our businesses. I want to give you a sample of what we are doing – and it is just the beginning:

- **Commercial Banking.** We are using big data in many ways in Commercial Banking. One area is responsible prospecting. It always was hard to get a proper list of client prospects (i.e., get the prospect's working telephone number or email address, get an accurate description of the business and maybe get an introduction to the decision maker at the company). Using big data, we have uncovered and qualified twice as many high-quality prospects, and we are significantly more effective in assuring that the best banker is calling on the highest-potential prospects. This has given us confidence in knowing that if we hire more bankers, they can be profitably deployed.
- **Consumer Banking.** Within the Consumer Bank, we use big data to improve underwriting, deliver more targeted marketing and analyze the root causes of customer attrition. This will lead to more accounts, higher marketing efficiencies, reduced costs and happy customers.

- **Operational efficiencies.** In the Corporate & Investment Bank, big data is being used to analyze errors, thereby improving operational efficiencies. In one example, in our Custody business, big data is helping identify and explain the breaks and variances in the calculation of net asset values of funds, thereby reducing the operational burden and improving client service.
- **Operational intelligence.** Our technology infrastructure creates an enormous amount of machine data from which we gain valuable operational intelligence. This information helps support the stability and resiliency of our systems – enabling us to identify little problems before they become big problems.
- **Fraud security and surveillance.** Needless to say, these big data capabilities are being used to decrease fraud, reduce risk in the cyber world, and even monitor internal systems to detect employee fraud and bad behavior.

Why are you investing in sales and trading, as well as in your Investment Bank, when others seem to be cutting back?

Trading is an absolutely critical function in modern society – for investors large and small and for corporations and governments. As the world grows, the absolute need for trading will increase globally as assets under management, trade, corporate clients and economies grow. We disclosed on Investor Day that we continue to make a fair profit in almost all our trading businesses despite the higher costs and what is probably a permanent reduction in volumes. While the business will always be cyclical, we are convinced that our clients will continue to need broad services in all asset classes and that we have the scale to be profitable through the cycle.

Sales and trading educates the world about companies, securities and economies. Clients will always need advice and the ability to transact. This education also makes it easier for corporations to sell their securities so they can invest and grow. Much of the investment we are making in sales and trading is in technology, both to adjust to new regulations and to make access to trading faster, cheaper and safer than it has been in the past. Across electronic trading, we have seen a doubling of users and significant volume increases of 175% across products in just the last year. Below are a few examples:

Foreign exchange (FX). We continue to make significant investments in FX e-trading and our single-dealer platform. More than 95% of our FX spot transactions are now done electronically as the market has increasingly shifted to electronic execution over the years. We were also first to deliver FX trading on mobile devices through our award-winning eXecute application on the J.P. Morgan Markets platform. Our continued investment in the FX business, in which we process an average of nearly 500,000 trades each day, has propelled us to be a leader in the market.

Equities. In the last five years, on the back of our investments in both technology and people, our U.S. electronic cash equity market share has nearly quadrupled. We have also witnessed an increased straight-through processing rate – going from 70% two years ago to 97% today.

Prime Brokerage. Our Prime Brokerage platform, which was once a predominantly U.S. operation, is now a top-tier global business that continues to grow clients and balances. Our international and DMA (direct market access) electronic footprint has expanded rapidly since 2012. Financing balances are at all-time highs, with international balances up more than 60% and synthetic balances up more than 350%, simultaneously reducing balance sheet consumption and enhancing returns.

Rates trading. With the adoption of new regulations, we anticipate that this market will also continue to see increased volumes of e-trading. As a result, we have developed automated pricing systems that can price swaps in a fraction of a second on electronic platforms. Our SEF (swap execution facility) aggregator allows clients to see the best price available to them across the global market of interest rate swaps and "click to trade" via our platform on an agency basis. This helps our clients execute transactions via any channel they desire, on a principal or agent basis. Today, over 50% of our U.S. dollar swaps volume is traded and processed electronically.

Commodities. Leveraging our FX capabilities, we have developed a complete electronic offering in precious and base metals. We are also extending the same capabilities to energy products, where we have executed our first electronic trade in oil. We plan to further extend our e-trading capabilities across the commodities markets, including agricultural products.

Derivatives processing. The implementation of our strategic over-the-counter derivatives processing platform has promoted a 30% increase in portfolio volume and a more than 50% decrease in cost per trade in four years. The platform now settles $2.2 trillion of derivative notionals each day and has been instrumental in improving operational delivery, control and client service, as demonstrated by a more than 60% reduction in cash settlement breaks and a 50% increase in straight-through processing of equity derivatives confirmations.

In all these cases, greater operational efficiencies and higher straight-through processing drive lower costs and lead to happy clients.

We also continue to make investments in research and the coverage of clients. A couple of examples will suffice:

Research platform. We continue our research investments both in the quality of our people and in the number of companies and sectors we cover. In 2015, we expanded our global equity research coverage to more than 3,700 companies, the broadest equity company coverage platform among our competitors. With material increases in the United States – we expanded sector coverage in energy, banks, insurance and industrials – and in China, we doubled our A-share coverage.

Increased Investment Banking coverage. We are actively recruiting and hiring senior bankers in areas where we were either underpenetrated or where there has been incremental secular growth, such as energy, technology, healthcare and Greater China.

Why are you still in the mortgage business?

That is a valid question. The mortgage business can be volatile and has experienced increasingly lower returns as new regulations add both sizable costs and higher capital requirements. In addition, it is not just the cost of the new rules in origination and servicing, it is the enormous complexity of those new requirements that can lead to problems and errors. It is now virtually impossible not to make some mistakes – and as you know, the price for making an error is very high. So why do we want to stay in this business? Here's why:

- **Mortgages are important to our customers.** For most of our customers, their home is the single largest purchase they will make in their lifetime. More than that, it is an emotional purchase – it is where they are getting their start, raising a family or maybe spending their retirement years. As a bank that wants to build lifelong relationships with its customers, we want to be there for them at life's most critical junctures. Mortgages are important to our customers, and we still believe that we have the brand and scale to build a higher-quality and less volatile mortgage business.

- **Originations.** We reduced our product set from 37 to 15, we will complete the rollout of a new originations system, and we will continue to leverage digital channels to make the application process easier for our customers and more efficient for us. In addition, we have dramatically reduced Federal Housing Administration (FHA) originations. Currently, it simply is too costly and too risky to originate these kinds of mortgages. Part of the risk comes from the penalties that the government charges if you make a mistake – and part of the risk is because these types of mortgages default frequently. And in the new world, the cost of default servicing is extraordinarily high.
- **Servicing.** If we had our druthers, we would never service a defaulted mortgage again. We do not want to be in the business of foreclosure because it is exceedingly painful for our customers, and it is difficult, costly and painful to us and our reputation. In part, by making fewer FHA loans, we have helped reduce our foreclosure inventory by more than 80%, and we are negotiating arrangements with Fannie Mae and Freddie Mac to have any delinquent mortgages insured by them be serviced by them.
- **Community Reinvestment Act and Fair Lending.** Finally, while making fewer FHA loans can make it more difficult to meet our Community Reinvestment Act and Fair Lending obligations, we believe we have solutions in place to responsibly meet these obligations – both the more subjective requirements and the quantitative components – without unduly jeopardizing our company.

V. WE HAVE ALWAYS SUPPORTED OUR COMMUNITIES

Most large companies are outstanding corporate citizens – and they have been for a long time. They compensate their people fairly, they provide critical medical and retirement plans, and they're in the forefront of social policy; for example, in staffing a diverse workforce, hiring veterans and effectively training people for jobs. They, like all institutions, are not perfect, but they try their best to obey the spirit and the letter of the laws of the land in which they operate.

You seem to be doing more and more to support your communities – how and why?

Since our founding in New York more than 200 years ago, JPMorgan Chase and its predecessor banks have been leaders in their communities. This is nothing new. For example, in April 1906, J.P. Morgan & Co. made Wall Street's largest contribution – $25,000 – to, as *The New York Times* described it at the time, "extend practical sympathy to the stricken people of San Francisco." This was two days after the earthquake that destroyed 80% of the city and killed 3,000 people. In February 2016, we played much the same role when the firm and our employees contributed hundreds of thousands of dollars to pay for medical services for children exposed to lead in the Flint, Michigan, water crisis. And over the last several years, we have given more than $20 million to help in the aftermath of natural disasters, from tsunamis in Asia to Superstorm Sandy in the northeast United States (and it was gratifying to see how employees rallied with their time and with the full resources of the firm to help).

In addition to our annual philanthropic giving – which now totals over $200 million a year – we are putting our resources, the expertise of our business leaders, our data, relationships and knowledge of global markets into significant efforts aimed at boosting economic growth and expanding opportunity for those being left behind in today's economy. We have made ***long-term global commitments*** to workforce readiness, getting small businesses the capital and support they need to grow, improving consumer financial health and supporting strong urban economies. You can read more detail about these programs on pages 71-72. And in the sidebars in this section, you can hear directly from some of our partners about our efforts. We think these initiatives will make a significant contribution to creating more economic opportunity for more people around the world.

In particular, I want to tell you about an exciting new community service program we have developed that is capitalizing on our most important resource – the talent of our people. The Service Corps program recruits top-performing employees from around the world to put their skills and expertise to work on behalf of nonprofit partners that are helping to build stronger communities. This program, combining leadership development with philanthropic purpose, started small in Brazil, grew into the Detroit Service Corps as part of our investment there, and has now spread across the globe, with projects in Africa, Asia, and North and South

America. Service Corps employees work on-site with nonprofits on projects that last three weeks. In total, 64 people have been involved in 22 projects. And this program will continue to grow in the coming years to other domestic and international locations. While supporting our nonprofit partners to deliver on their mission, our employees also gain enormous satisfaction and sense of purpose from the opportunity to help. In addition, as they travel across the globe and interact with their peers, they develop a great, permanent camaraderie that helps unite our employees from around the world in a commitment to make a difference in our communities.

PARTNERSHIP IN DETROIT
by Mayor Mike Duggan

Detroit is coming back. After years of challenges, we are seeing signs of real progress in our neighborhoods and business districts.

Two years into our administration, we've brought back fiscal discipline and have balanced the city's budget for the first time in more than a decade. We've installed 61,000 new LED streetlights in our neighborhoods. Buses are running on schedule for the first time in 20 years and are serving 100,000 more riders each week. We've taken down nearly 8,000 blighted homes and, as a result, are seeing double-digit property value increases across the majority of the city. Perhaps most important, 8,000 more Detroiters are working today than two years ago, thanks to efforts to attract new investment and develop our workforce.

None of these positive steps would have been possible without the partnerships we've established in Washington, D.C., in our state capital of Lansing, with the Detroit City Council, and especially with our residents and partners in the business and philanthropic communities.

When our friends at JPMorgan Chase started thinking about making a $100 million investment in Detroit, they started off by asking about our priorities for the city's recovery — not just mine but those of our community and philanthropic leaders as well. Today, we can see the impact of JPMorgan Chase's commitment to Detroit in many places — in the opening of a new grocery store in the Westside's Harmony Village neighborhood, in the minority-led small businesses that are getting much-needed capital from the new Entrepreneurs of Color Fund and in the map of Detroit's workforce system that is helping us prepare Detroiters for the new jobs coming to the city. JPMorgan Chase is bringing its data, expertise and talent to this town in so many ways — assets that are just as important as money in boosting our recovery.

The partnerships JPMorgan Chase saw at work in Detroit helped give the firm confidence to invest so significantly in our city. And because we have this fine company at the table, we now have other companies coming to our city looking to contribute and invest in Detroit and its residents.

We still have a long way to go. But with great partners like JPMorgan Chase, we are creating a turnaround that is benefiting all Detroiters and can be a model for other large cities facing similar challenges.

COMMITMENT TO OUR VETS
by Stan McChrystal, Retired General, U.S. Army

In early 2011, two employees of JPMorgan Chase came to wintry New Haven, Connecticut, to talk about veterans. Specifically, they told me that Jamie Dimon felt the bank could, and should, do more to help the many veterans returning from service — many who were in Iraq and Afghanistan — take their rightful place in civilian society. Since 9/11, the military had enjoyed tremendous support from the American people, but seemingly intractable problems of reintegration, particularly challenges with meaningful employment, haunted an embarrassingly large number of former warriors and their families.

I listened with interest and no small amount of cautious skepticism. I was aware of countless programs initiated with the best of intentions that soon became more talk than action and was worried this might be the same. The JPMorgan Chase people asked if I thought the bank should create a program to help veterans find employment and if the bank did start such a program, would I join the advisory council for it.

I thought for a moment and then responded: "If Jamie is seriously willing to commit the bank to the effort," I replied, "it's the right thing to do, and I'm in. If not, there are other, far less ambitious ways to offer the bank's help for veterans." As we talked further, they convinced me that Jamie, and the full energy that JPMorgan Chase could bring, would be behind the effort.

That was almost five years ago, and JPMorgan Chase has surpassed my every hope and expectation. By committing full-time talent and including the personal involvement of senior leadership, **the firm has been the strongest force in veterans' employment in America**. The Veteran Jobs Mission program has not only implemented truly cutting-edge programs inside the bank to recruit, train, mentor and develop veterans — resulting in an increase of more than 10,000 veterans within the bank since 2011 — but the program also has demonstrated the power of commitment. An impressive number of American businesses have set and met employment goals (to date, over 300,000 veterans have been hired collectively, with a goal of hiring 1 million) that would have been considered unattainable at the start.

CREATING CAREER-FOCUSED EDUCATION
by Freeman A. Hrabowski III, President of the University of Maryland, Baltimore County

Too many people are left out of work or are stuck in low-wage, low-skill jobs without a path to meaningful employment and the chance to get ahead. Among young people, this truly is a national tragedy: More than 5 million young Americans, including one in five African-American and one in six Latino youths, are neither attending school nor working. JPMorgan Chase's New Skills for Youth initiative is an important example of educators and business leaders partnering to equip young people with the skills and experience to be career ready.

The social and economic hurdles faced by young people of color and those who come from low-income families have been exacerbated by the growing crisis of high inner city unemployment and low high school graduation rates. With too many young people marginalized, economic growth slows, and social challenges increase. The public and private sectors must work together to change this.

Educators need to emphasize both college and career readiness. They need to recognize that there is growing demand for technically trained, middle-skill workers — from robotics technicians to licensed practical nurses — and better align what they teach with the talent needs of employers. At the same time, business leaders need to support the education system as it strives to teach today's skills and help students develop into critical thinkers.

A bachelor's degree is as important as ever, and universities must do more to support students of all backgrounds who arrive on our campuses. However, we need to recognize that not all college and career pathways include pursuing a four-year degree immediately, and we need to eliminate the stigma attached to alternate paths. High-quality, rigorous career and technical education programs can connect people to high-skill, well-paying jobs — and they don't preclude earning a four-year degree down the road. Classes dedicated to robotics, medical science, mechanics and coding build skills that employers desperately need. They also prepare students to land great jobs.

Recent education reforms are making progress, but we still need greater focus on preparing young people, from all income levels, with the skills and experiences to be college and career ready. The public and private sectors need to forge deeper relationships and make greater investments in developing and expanding effective models of career-focused education that are aligned with the needs of emerging industries. This is an investment not only in growing our economy but also in providing more of our young people with a tangible path out of poverty and a real chance at economic success.

VI. A SAFE, STRONG BANKING INDUSTRY IS ABSOLUTELY CRITICAL TO A COUNTRY'S SUCCESS – BANKS' ROLES HAVE CHANGED, BUT THEY WILL NEVER BE A UTILITY

For the people of a country to thrive, you need a successful economy and markets. For an economy to be successful, it is an absolute necessity to have a healthy and successful banking system. The United States has a large, vibrant financial system, from asset managers and private equity sponsors to hedge funds, non-banks, venture capitalists, public and private market participants, small to large investors and banks. Banks are at the core of the system. They educate the world about companies and markets, they syndicate credit and market risk, they hold and move money and assets, and they necessarily create discipline among borrowers and transparency in the market. To do this well, America needs all different kinds of financial institutions and all different kinds of banks – large and small.

Does the United States really need large banks?

There is a great need for the services of all banks, from large global banks to smaller regional and community banks. That said, our large, global Corporate & Investment Bank does things that regional and community banks simply cannot do. We offer unique capabilities to large corporations, large investors and governments, including federal institutions, states and cities.

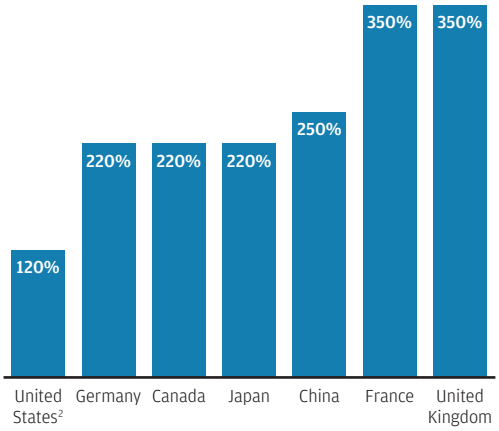
Only large banks can bank large institutions.

Of the 26 million businesses in the United States, only 4,000 are public companies. While accounting for less than 0.02% of all firms, these companies represent one-third of private sector employment and almost half of the total $2.3 trillion of business capital expenditures. And most are multinationals doing business in many countries around the world. In addition to corporations, governments and government institutions – such as central banks and sovereign wealth funds – need financial services. The financial needs of all these institutions are extraordinary. We provide many of the services they require. For example, we essentially maintain checking accounts for these institutions in many countries and currencies. We provide extensive credit lines or raise capital for these clients, often in multiple jurisdictions and in multiple currencies. On an average day, JPMorgan Chase moves approximately $5 trillion for these types of institutions, raises or lends $6 billion of capital for these institutions, and buys or sells approximately $1.5 trillion of securities to serve investors and issuers. We do all this efficiently and safely for our clients. In addition, as a firm, we spend approximately $700 million a year on research so that we can educate investors, institutions and governments about economies, markets and companies. For countries, we raised $60 billion of capital in 2015. We help these nations develop their capital markets, get ratings from ratings agencies and, in general, expand their knowledge. The fact is that almost everything we do is because clients want and need our various services.

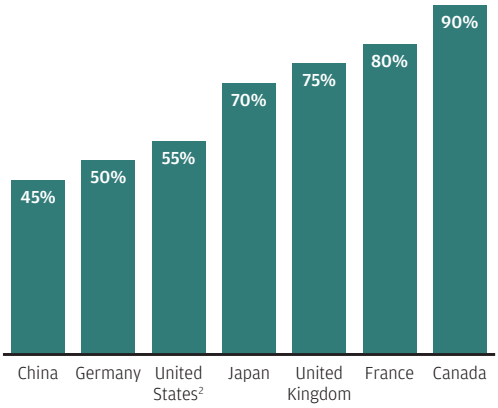
Put "large" in context.

While we are a large bank, it might surprise you to know two facts: (1) The assets of all banks in the United States are a much smaller part of the country's economy, relatively, than in most other large, developed countries; and (2) America's top five banks by assets are smaller, relatively, to total banking assets in America than in most other large, developed countries. As shown in the following charts, this framework means banks in the United States are less consolidated.

Total Bank Assets as a % of GDP by Country[1]



Top 5 Bank Assets as a % of Total Bank Assets by Country[1]



[1] Approximate percentages based on 2014 data.

[2] Excludes the estimated impact of certain derivatives netting.

Our size and our diversification make us stronger.

Our large and diversified earnings streams and good margins create a strong base of earnings that can withstand many different crises. Stock analysts have pointed out that ***JPMorgan Chase has among the lowest earnings volatility and revenue volatility among all banks.*** This strength is what allows us to invest in countries to support our clients and to have the staying power to survive tough times. We are a port of safety in almost any storm.

Finally, our size gives us the ability to make large and innovative investments that are often needed to create new products and services or to improve our efficiency. The ultimate beneficiary of all this is our clients.

Community banks are critical to the country — large banks provide essential services to them. (I prepared this section initially as an op-ed article, but I'd like you to see it in total.)

Not long ago, I read some commentary excoriating big banks written by the CEO of a regional bank. The grievances weren't new or surprising – in the current climate, one doesn't have to look far to find someone attacking large financial institutions. But I recognized this particular bank as a client of ours. So I did some digging. It turns out that our firms have a relationship that goes back many years and spans a broad range of services. And it struck me how powerful the incentive is, in today's heated public dialogue, to frame issues as a winner-take-all fight between opposing interests: big vs. small. Main Street vs. Wall Street. It is a simple narrative, and while banks of all sizes make mistakes, certainly a key lesson of the crisis is that mistakes at the largest institutions can impact the broader financial system.

But, as is often the case, reality tells a deeper story, and the U.S. financial services industry does not conform to simple narratives. It is a complex ecosystem that depends on diverse business models co-existing because there is no other way to effectively serve America's vast array of customers and clients. A healthy banking system depends on institutions of all sizes to drive innovation, build and support our financial infrastructure, and provide the essential services that support the U.S. economy and allow it to thrive.

In our system, smaller regional and community banks play an indispensable role. These institutions sit close to the communities they serve. Their highest-ranking corporate officers live in the same neighborhoods as their clients. They are able to forge deep and long-standing relationships and bring a keen knowledge of the local economy and culture. They frequently are able to provide high-touch and specialized banking services, given their unique connection to their communities.

Large banks such as JPMorgan Chase also have a strong local presence. We are proud to have branches and offices all across the country and to have the privilege of being woven into communities large and small. But we respect the fact that for some customers, there is no substitute for a locally based bank and that in some markets, a locally based lender is the best fit for the needs of the community.

Having said that, these very same regional and community banks depend on large banks such as ours to make their service offerings possible. First, large banks offer vital correspondent banking services for smaller institutions. These services include distributing and collecting physical cash, processing checks and clearing international payments. JPMorgan Chase alone extends such services to 339 small banks and 10 corporate credit unions across the country. Last year, we provided these institutions with $4.7 billion in intraday credit to facilitate cash management activities and processed $7.6 trillion in payments/receivables.

Large banks also enable community banks to provide traditional mortgages by purchasing the mortgages that smaller banks originate, selling the loans to the agencies (e.g., Fannie Mae) or capital markets and continuing to service the borrower. In 2015, JPMorgan Chase purchased $10.4 billion in such residential loans from 165 banks nationwide.

In addition to these correspondent banking services, large banks deliver mission-critical investment banking services. This includes helping smaller banks access debt and equity capital, supporting them through strategic combinations, enabling them to manage their securities portfolios, providing valuable risk management tools (such as interest rate swaps and foreign exchange), creating syndicated credit facilities that smaller banks' clients can participate in and offering direct financing. JPMorgan Chase has raised $16.2 billion in growth equity capital for smaller banks since 2014; advised on strategic combinations among regional and community banks valued at $52 billion; and, last year, provided $5.3 billion in secured repo financing, extended $1.4 billion in trading line financing and provided $7 billion in other unsecured financing to hundreds of banks nationwide.

This is a story of symbiosis among our banks rather than a binary choice between big and small. Yes, all banks are competitors in the marketplace. But marketplace competition is not zero-sum. In banking, your competitor can also be your customer. Large banks ultimately would be diminished if regional and community banks were weakened, and, just as surely, those smaller institutions would lose out if America's large banks were hobbled. We require a system that serves the needs of all Americans, from customers getting their first mortgage to farmers and small business owners to our largest multinational companies.

America faces enough real challenges without inventing conflict where none need exist. Rather, banks of all sizes do themselves and their stakeholders better service by acknowledging the specific value different types of institutions offer. Then we all can get on with the business of serving our distinctive roles in strengthening the economy, our communities and our country.

Banks cannot be utilities.

Utilities are monopolies; i.e., generally only one company is operating in a market. And because of that, prices and returns are regulated. Banks do not have the same relationship with their clients as most other companies do. When a customer walks into a store and wants to buy an item, the store sells it. By contrast, very often a bank needs to turn a customer down; for example, in connection with a credit card or a loan. Responsible lending is good, but irresponsible lending is bad for the economy and for the client (we clearly experienced this in the Great Recession). Banks are more like partners with their clients – and they are often active participants in their clients' financial affairs. They frequently are in the position where they have to insist that clients operate with discipline – by asking for collateral, putting

covenants in place or forcing the sale of assets. This does not always create friends, but it is critical for appropriate lending and the proper functioning of markets. Banks have to continuously make judgments on risk, and appropriately price for it, and they have to do this while competing for a client's business. There is nothing about banking that remotely resembles a utility.

America's financial system is the finest the world has ever seen – let's ensure it stays that way.

The position of America's leading banks is like many other U.S. industries – they are among the global leaders. If we are not allowed to compete, we will become less diversified and less efficient. I do not want any American to look back in 20 years and try to figure out how and why America's banks lost the leadership position in financial services. If not us, it will be someone else and likely a Chinese bank. Today, many Chinese banks already are larger than we are, and they continue to grow rapidly. They are ambitious, they are supported by their government and they have a competitive reason to go global – the Chinese banks are following and supporting their Chinese companies with the financial services that are required to expand abroad.

Not only are America's largest banks global leaders, but they help set global standards for financial markets, companies, and even countries and controls (such as anti-money laundering). Finally, banks bring huge resources – financial and knowledge – to America's major flagship companies and investors, thereby helping them maintain their global leadership positions.

Why do you say that banks need to be steadfast and always there for their clients – doesn't that always put you in the middle of the storm?

Yes, to an extent. When an economy weakens, banks will see it in lower business volumes and higher credit losses. Of course, we want to manage this carefully, but it is part of the cost of doing business. Building a banking business takes decades of training bankers, nurturing relationships, opening branches and developing the proper technology. It is not like buying or selling a stock. Clients, from consumers to countries, expect you to be there in both good times and the toughest of times. Banks and their services are often the essential lifeblood to their clients. Therefore, it is part of the cost of doing business to ***manage*** through the cycles.

JPMorgan Chase consistently supports consumers, businesses and communities in both good times and the toughest of times. In 2015, the firm provided $22 billion of credit to U.S. small businesses, which allowed them to develop new products, expand operations and hire more workers; $168 billion of credit to Commercial and Middle Market clients; $233 billion of credit to consumers; more than $68 billion of credit or capital raised for nonprofit and government entities, including states, municipalities, hospitals and universities; and $1.4 trillion of credit or capital raised for corporations. In total, we extended credit and raised capital of more than $2 trillion for our clients.

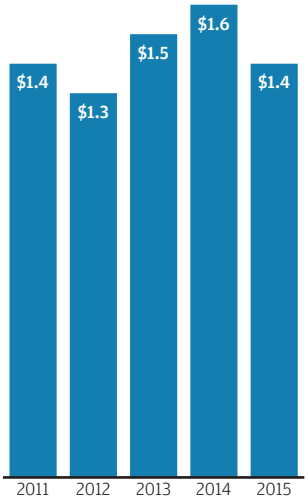
Banks were there for their clients, particularly when the capital markets were not – we need this to continue.

The public markets, even though they are populated with a lot of very bright and talented people, are surprisingly fickle. The psychology and wisdom of crowds are not always rational, and they are very impersonal. People who buy and sell securities do not have a moral obligation to provide credit to clients. This is when banks' long-term relationships and fairly consistent

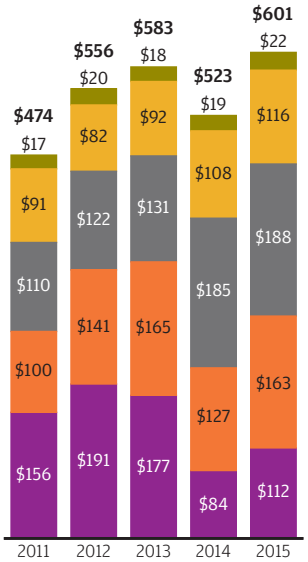
New and Renewed Credit and Capital for Our Clients

at December 31,

Corporate clients
($ in trillions)



Consumer and Commercial Banking
($ in billions)

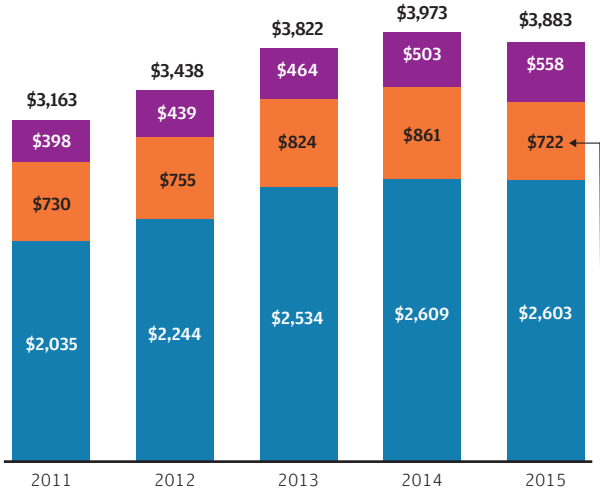


	Year-over-year change			
	'11 to '12	'12 to '13	'13 to '14	'14 to '15
Corporate clients	(9)%	20%	7%	(11)%
Small business	18%	(8)%	5%	11%
Card & Auto	(10)%	12%	18%	7%
Commercial/ Middle market	11%	8%	41%	1%
Asset management	41%	17%	(23)%	29%
Mortgage/ Home equity	22%	(7)%	(53)%	34%
Total Consumer and Commercial Banking	17%	5%	(10)%	15%

Assets Entrusted to Us by Our Clients

at December 31,

Deposits and client assets
($ in billions)



	Year-over-year change			
	'11 to '12	'12 to '13	'13 to '14	'14 to '15
Deposits				
Consumer	10%	6%	8%	11%
Wholesale	3%	9%	4%	(16)%
Client assets[1]	10%	13%	3%	– %

Including non-operating deposits reduction of ~ $200 billion

Assets under custody[2]
($ in billions)

$16,870	$18,835	$20,485	$20,549	$19,943

[1] Represents assets under management, as well as custody, brokerage, administration and deposit accounts.

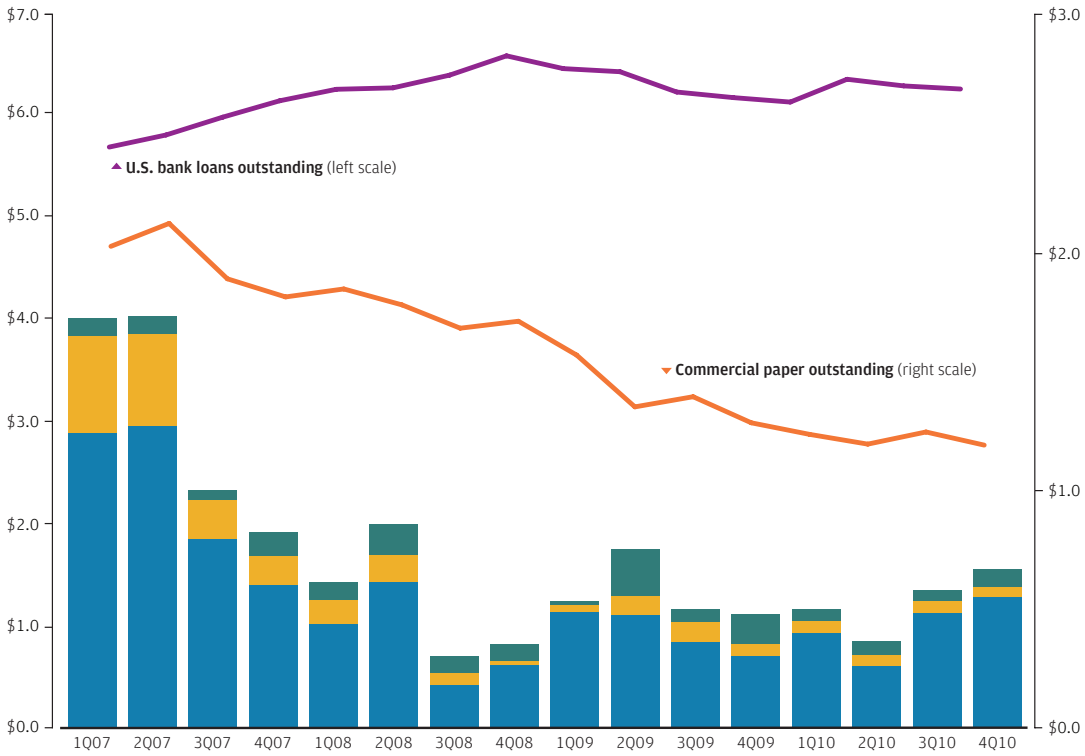
[2] Represents activities associated with the safekeeping and servicing of assets.

pricing and credit offerings are needed the most. The chart below shows how banks continued to be there for their clients as the markets were not.

Corporations get the vital credit they need by issuing securities, including commercial paper, or by borrowing from banks. You can see in the chart below the dramatic drop in the issuance of securities and commercial paper once the financial crisis hit. Commercial paper outstanding alone dropped by $1 trillion, starving companies in desperate need of cash. You can see that bank loans outstanding, for the most part, were steady and consistent. This means that banks continued to renew or roll over credit to their clients – small, medium and large – when it was needed the most.

This will be a little bit harder to do in the future because capital, liquidity and accounting rules are essentially more procyclical than they were in the past. We estimate that if we were to enter a very difficult market, such as 2008, our capital needs could increase by 10%. Despite the market need for credit, banks would be in a position where, all things being equal, they would ***need to reduce*** the credit extended to maintain their own strong capital positions.

Quarterly Capital Markets Issuances and U.S. Bank Loans Outstanding 2007–2010
($ in trillions)



	1Q07	2Q07	3Q07	4Q07	1Q08	2Q08	3Q08	4Q08	1Q09	2Q09	3Q09	4Q09	1Q10	2Q10	3Q10	4Q10
Commercial paper outstanding	$2.0	$2.1	$1.9	$1.8	$1.8	$1.7	$1.6	$1.7	$1.5	$1.2	$1.3	$1.1	$1.1	$1.0	$1.1	$1.0
Total capital markets issuances	$4.0	$4.0	$2.3	$1.9	$1.4	$2.0	$0.7	$0.8	$1.2	$1.8	$1.2	$1.1	$1.2	$0.8	$1.3	$1.5

$(3.3)

Capital markets issuances (left scale)
Corporate bonds[1] ABS[2] Equity[3]

[1] Includes high-yield and investment-grade bonds.
[2] Includes collateralized loan obligations and excludes mortgage-backed issuances.
[3] Includes initial public offerings (IPOs) and secondary market offerings.

Will banks ever regain a position of trust? How will this be done?

Most banks actually are trusted by their clients, but generically, they are not. This dichotomy also is true with politicians, lawyers and the media – people trust the individuals they know, but when it comes to whether people trust them as a group, they do not. We believe that the only way to be restored to a position of trust is to earn it every day in every community and with every client.

The reality is that banks, because of the disciplined role they sometimes have to play and the need to say no in some instances, will not always be the best of friends with some of their clients. But banks still need to discharge that responsibility while continuing to regain a position of trust in society. There is no easy, simple answer other than:

- Maintain steadfast, consistent and transparent behavior wherever they operate.
- Communicate honestly, clearly and consistently.
- Deliver great products and services.
- Admitting to mistakes is good, fixing them is better and learning from them is essential.
- Make it easy for customers to deal with you – particularly when they have problems.
- Work with customers who are struggling – both individuals and companies.
- Focus on the customer and treat all clients the way you would want to be treated.
- Be great citizens in the community. Establish strong relationships with governments and civic society.
- Treat regulators like full partners – and accept that you will not always agree. When they make a change in regulations, even ones you don't like, accept them and move on.
- As an industry, make fewer mistakes and behave better – the bad behavior of one individual reverberates and affects the entire industry.

Finally, strong regulators and stronger standards for banks must ultimately mean that banks are meeting more rigorous standards. Every bank is doing everything in its power to meet regulatory standards. It has been eight years since the financial crisis and six years since Dodd-Frank. Regulators should take more credit for the extraordinary amount that has been accomplished and should state this clearly to the American public. This should help improve consumer confidence in the banking system – and in the economy in general. Consumer and business confidence is the secret sauce for a healthy economy. It is free, and it would be good to sprinkle a bit more of it around.

Are you and your regulators thinking more comprehensively and in a forward-looking way to play a role in helping to accelerate global growth?

By any reasonable measure, the financial system is unquestionably stronger, and regulators deserve a lot of credit for this. But it also is true that thousands of rules, regulations and requirements were made – and needed to be made – quickly. The political and regulatory side wanted it done swiftly to ensure that events that happened in the Great Recession would never happen again.

But now is the time when we can and should look at everything more deliberately and assess whether recent reforms have generated unintended consequences that merit attention.

Some people speak of regulation like it is a simple, binary tradeoff – a stronger system or slower growth or vice versa. We believe that many times you can come up with regulations that do both – create a stronger system and enhance growth.

There will be a time to comprehensively review, coordinate and modify regulations to ensure maximum safety, create more efficiency and accelerate economic growth.

Every major piece of legislation in the United States that was large and complex has been revisited at some point with the intention of making it better. The political time for this is not now, but we should do so for banking regulations someday. We are not looking to rewrite or to start over at all – just some modifications that make sense. Here are a few specific examples:

- **Liquidity.** Regulators could give themselves more tools for adjusting liquidity to accommodate market needs. This could be done with modest changes that could actually ameliorate the procyclical nature of the current rules and, in my opinion, enhance safety and soundness and improve the economy.
- **Mortgages.** Finishing and simplifying mortgage rules around origination, servicing, capital requirements and securitizations would help create a more active mortgage market at a lower cost to customers and, again, at no risk to safety and soundness if done right. This, too, would be a plus to consumers and the economy.
- **Capital rules.** Without reducing total capital levels, capital rules could be modified to be less procyclical, which could serve to both dampen a bubble and soften a bust. This alone could boost the economy and reduce overall economic risk. There are also some rules – for example, requiring that capital be held against a deposit at the Federal Reserve – that distort the normal functioning of the market. These could be eliminated with no risk to safety and soundness unless you think the Fed is a risky investment. Finally, finishing the capital rules for banks will remove one additional drag on the banks and allow for more consistent capital planning. This would also help to improve confidence in the banks and, by extension, investor confidence.
- **Increased coordination among regulators.** Having five, six or seven regulators involved in every issue does make things more complicated, expensive and inefficient, not just for banks but for regulators, too. This slows policymaking and rulemaking and is one reason why many of the rules still have not been completed. One of the lessons we have all learned is that policymakers need to move quickly in a crisis. While everyone has worked hard to be more coordinated, far more can be done.
- **Be more forward looking.** This is already happening. As banks are catching up on regulatory demands, the pace of change, while still rapid, is slowing. This sets the stage for both banks and regulators to be able to devote more resources to increasingly critical issues, including cybersecurity, digital services, data protection, FinTech and emerging risks.

As the financial system reaches the level of strength that regulations require, we hope banks can begin to expand slightly more rapidly (and, of course, responsibly) – both geographically and in terms of products and services – with the support and confidence of their regulators. This will also foster healthy economic growth, which we all so desperately want.

VII. GOOD PUBLIC POLICY IS CRITICALLY IMPORTANT

Are you worried about bad public policy?

Yes, bad public policy, and I'm not looking at this in a partisan way, creates risk for the economies of the world and the living standards of the people on this planet – and, therefore, for the future of JPMorgan Chase – more so than credit or market risks. We have many real-life examples that demonstrate how essential good public policy is to the health and welfare of a country.

East Germany vs. West Germany. After World War II, East Germany and West Germany were in equal positions, both having been devastated by the war. After the war, West Germany flourished, creating a vibrant and healthy country for its citizens. East Germany (and, in fact, most of Eastern Europe), operating under different governance and policies, was a complete disaster. This did not have to be the case. East Germany could have been just as successful as West Germany. This is a perfect example of how important policy is and also of how economics is not a zero-sum game.

Argentina, Venezuela, Cuba, North Korea vs. Singapore, South Korea, Mexico. These countries also provide us with some pretty strong contrasts. The first four countries mentioned above have performed poorly economically. The last three mentioned above have done rather well in the last several decades. You cannot credit this failure or success to the existence of great natural resources because, on both sides, some had these resources, and some did not. It would take too long to articulate it fully here, but strong public policy – fiscal, monetary, social, etc. – made all the difference. The countries that did not perform well had many reasons to be successful, but, they were not. In almost all these cases, their government took ineffective actions in the name of the people.

Detroit. Detroit is an example of failure at the city level. In the last 20 years, most American cities had a renaissance – Detroit did not. Detroit was a train wreck in slow motion for 20 years. The city had unsustainable finances, corrupt government and a declining population that went from 2 million residents to just over 750,000. It is tragic that this catastrophe had to happen before government started to rectify the situation.

We have reported that we are making a huge investment in Detroit, and we are doing this because the leadership – the Democratic mayor and the Republican governor, working with business and nonprofit organizations – is taking rational and practical action in Detroit to fix the city's problems. These leaders talk about strengthening the police, improving schools, bringing jobs back, creating affordable housing, fixing streetlights and rehabilitating neighborhoods – real things that actually matter and will help the people of Detroit. They do not couch their agenda in sanctimonious ideology.

Fannie Mae and Freddie Mac. These are examples of poor policy at the industry and company level. Under government auspices and with federal government urging, Fannie and Freddie became the largest, most leveraged and most speculative vehicles that the world had ever seen. And when they finally collapsed, they cost the U.S. government $189 billion. Their actions were a critical part of the failure of the mortgage market, which was at the heart of the Great Recession. Many people spent time trying to figure out who was to blame more – the banks and mortgage brokers involved or Fannie and Freddie. Here is a better course – each should have acknowledged its mistakes and determined what could have been done better.

So yes, public policy is critical to a healthy and functioning economy. Now I'd like to turn my attention to a more forward-looking view of some of the potential risks out there today that are driven by public policy:

Our current inability to work together in addressing important, long-term issues. We have spoken many times about the extraordinarily positive and resilient American economy. Today, it is growing stronger, and it is far better than you hear in the current political discourse. But we have serious issues that we need to address – even the United States does not have a divine right to success. I won't go into a lot of detail but will list only some key concerns: the long-term fiscal and tax issues (driven mostly by healthcare and Social Security costs, as well as complex and poorly designed corporate and individual taxes), immigration, education (especially in inner city schools) and the need for good, long-term infrastructure plans. I am not pointing fingers at the government in particular for our inability to act because it is all of us, as U.S. citizens, who need to face these problems.

I do not believe that these issues will cause a crisis in the next five to 10 years, and, unfortunately, this may lull us into a false sense of security. But after 10 years, it will become clear that action will need to be taken. The problem is not that the U.S. economy won't be able to take care of its citizens – it is that taking away benefits, creating intergenerational warfare and scapegoating will make for very difficult and bad politics. This is a tragedy that we can see coming. Early action would be relatively painless.

The potential exit of Britain from the European Union (Brexit). One can reasonably argue that Britain is better untethered to the bureaucratic and sometimes dysfunctional European Union. This may be true in the long run, but let's analyze the risks. We mostly know what it looks like if Britain stays in the European Union – effectively, a continuation of a more predictable environment. But the range of outcomes of a Brexit is large and potentially unknown. The best case is that Britain can quickly renegotiate hundreds of trade and other contracts with countries around the world including the European Union. Even this scenario will result in years of uncertainty, and this uncertainty will hurt the economies of both Britain and the European Union. In a bad scenario, and this is not the worst-case scenario, trade retaliation against Britain by countries in the European Union is possible, even though this would not be in their own self-interest. Retaliation would make things even worse for the British and European economies. And it is hard to determine if the long-run impact would strengthen the European Union or cause it to break apart. The European Union began with a collective resolve to establish a political union and peace after centuries of devastating wars and to create a common market that would result in a better economy and greater prosperity for its citizens. These two goals still exist, and they are still worth striving for.

We need a proper public policy response to technology, trade and globalization. Technology and globalization are the best things that ever happened to mankind, but we need to help those left behind. Technology is what has driven progress for all mankind. Without it, we all would be living in tents, hunting buffalo and hoping to live to age 40. From printing, which resulted in the dissemination of information, to agriculture and to today's computers and healthcare – it's an astounding phenomenon – and the next 100 years will be just as astounding.

The world and most people benefit enormously from innovative ideas; however, some people, some communities and some sectors in our economy do not. As we embrace progress, we need to recognize that technology and globalization can impact labor markets negatively, create job displacement, and contribute to the pay disparity between the skilled and unskilled. Political and business leaders have fallen short in not only acknowledging these challenges but in dealing with them head on. We need to support solutions that address the displacement of workers and communities through better job training, relocation support and income assistance. Some have suggested that dramatically expanding the earned income tax credit (effectively, paying people to work) may create a healthy and more egalitarian society. Also, we must address an education system that fails millions of young people who live in poor communities throughout the United States.

The answer to these challenges is not to hold back progress and the magic of technology; the answer is to deal with the facts and ensure that public policy and public and private enterprise contribute to a healthy, functioning and inclusive economy.

At JPMorgan Chase, we are trying to contribute to the debate on public policy. One new way we are doing this is through the development of our JPMorgan Chase Institute, which aims to support sounder economic and public policy through better facts, timely data and thoughtful analysis. Our work at the Institute, whether analyzing income and consumption volatility, small businesses, local spending by consumers or the impact of low gas prices, aims to inform policymakers, businesses and nonprofit leaders and help them make smarter decisions to advance global prosperity.

What works and what doesn't work.

In my job, I am fortunate to be able to travel around the world and to meet presidents, prime ministers, chief executive officers, nonprofit directors and other influential civic leaders. All of them want a better future for their country and their people. What I have learned from them is that while politics is hard (in my view, much harder than business), breeding mistrust and misunderstanding makes the political environment far worse. Nearly always, collaboration, rational thinking and analysis make the situation better. Solutions are not always easy to find, but they almost always are there.

What doesn't work:

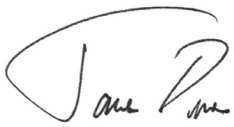
- Treating every decision like it is binary – my way or your way. Most decisions are not binary, and there are usually better answers waiting to be found if you do the analysis and involve the right people.
- Drawing straw men or creating scapegoats. These generally are subtle attempts to oversimplify someone's position in order to attack it, resulting in anger, misunderstanding and mistrust.
- Denigrating a whole class of people or society. This is always wrong and just another form of prejudice. One of the greatest men in America's history, President Abraham Lincoln, never drew straw men, never scapegoated and never denigrated any class of society – even though he probably had more reason to do so than many. In the same breath, some of our politicians can extol his virtues while violating them.
- Equating perception with reality. This is a tough one because you have to deal with both perceptions and reality. However, perceptions that are real are completely different from perceptions that are false. And how you deal with each of them probably should differ.
- Treating someone's comments as if they were complaints. When someone's response to an issue raised is "here they go complaining again," that reaction diminishes the point of view and also diminishes the person. When a person complains, you need to ask the question: "Are they right or are they wrong?" (If you don't like the person's attitude, that is a different matter.)

What does work:

- Collaborating and compromising. They are a ***necessity*** in a democracy. Also, you can compromise without violating your principles, but it is nearly impossible to compromise when you turn principles into ideology.
- Listening carefully to each other. Make an effort to understand when someone is right and acknowledge it. Each of us should read and listen to great thinkers who have an alternative point of view.
- Constantly, openly and thoroughly reviewing institutions, programs and policies. Analyze what is working and what is not working, and then figure out – together – how we can make it better.

IN CLOSING

I am honored to work at this company and with its outstanding people. What they have accomplished during these often difficult circumstances has been extraordinary. I know that if you could see our people up close in action, you would join me in expressing deep gratitude to them. I am proud to be their partner.



Jamie Dimon
Chairman and Chief Executive Officer

April 6, 2016

Investing in Our Future



Matt Zames

As one of the largest, most systemically important financial institutions in the world, we are not only a benchmark for safety and soundness, we have a responsibility to play a leadership role in advancing the industry and its business practices. To meet the evolving needs of our customers and clients, as well as the global financial system more broadly, we are committed to continually developing new solutions while maintaining a robust and secure infrastructure.

As the firm's Chief Operating Officer, I am responsible for many critical functions across the firm, including Treasury, the Chief Investment Office, Global Technology, Operations, Corporate Strategy, Global Real Estate, Oversight & Control, Compliance, Global Security & Military Affairs and Regulatory Affairs, among others. The Chief Operating Office (COO) drives progress on initiatives that are vital to the firm's long-term success.

Creating new tools to manage our balance sheet, liquidity and interest rate risk

Treasury and the Chief Investment Office are central to managing the firm's balance sheet. Together with our lines of business, we achieved a tremendous amount in 2015; most notably, we overdelivered on our strategic efforts to decrease non-operating deposits and meaningfully reduce the firm's GSIB capital surcharge from 4.5% to an estimated 3.5% – with no material impact to our firm or our clients and, importantly, securing a new grounding point for the firm.

We devoted significant attention to studying our current business mix to respond strategically to evolving regulatory requirements and to maximize shareholder value. We introduced a comprehensive firmwide balance sheet framework designed to objectively analyze and consider our business activities relative to some 20 constraints, ranging from liquidity and regulatory capital to GSIB and CCAR. This framework now is being leveraged in strategic review and planning sessions across the firm.

2015 featured the first rate hike by the Federal Reserve in nearly a decade, an event for which we have been preparing; and, while the future is never certain, we are increasingly smarter and better prepared to manage against whatever scenario plays out. We expanded our capacity to run interest rate scenarios and further industrialized our processes and risk engines, securing the foundation of our risk management practices. In a continuing effort to evolve our deposit pricing framework, we completed a series of granular reviews of our deposit models and recalibrated to better capture interest rate sensitivities and potential migration outcomes as rates normalize.

In 2015, we implemented our firmwide intraday liquidity framework, a program that was launched last year. We have substantially improved our ability to manage real-time liquidity risk and reduced the amount of intraday liquidity facilities by nearly $1 trillion. We can now, quite literally with the click of a button, view, monitor and manage in real time cash payments coming in or leaving the firm. More broadly, we remain compliant with all regulatory required and internally measured liquidity risk scenarios, with appropriately conservative liquidity buffers.

We are a technology company

Technology is the lifeblood of our organization, and it drives the delivery of the secure products, platforms and services our customers and clients value and trust. We serve nearly 40 million digital customers and process $1 trillion in merchant transactions annually. Each day, we process $5 trillion of payments, as well as trade and settle $1.5 trillion of securities. We see technology as an essential core competency and a key differentiator to drive future growth in all of our businesses.

Last year, I outlined our major technology investment areas in support of the firm's strategy; since then, these strategic priorities have become even more embedded into our technology DNA and are the focus of our investment spend. In 2015, approximately 30% of the firm's more than $9 billion technology budget went toward new investment. As we continue to drive efficiency and prioritize innovation, we intend to shift even more dollars from "run the bank" operational activities to "change the bank" investments.

Protecting the firm

In the first eight months of 2015, the Federal Bureau of Investigation reported a 270% increase in fraudulent wire transfers as a result of targeted business email compromise scams. At JPMorgan Chase, we typically identify over 200 million malicious emails each month. To defend against these and other types of attacks, we continue to make significant investments in building a world-class cybersecurity operation. Globally, thousands of employees are focused on cybersecurity – working across the firm and with many partners to maintain our defenses and enhance our resilience to threats. We continue to uplift standards and controls for our third-party providers, as well as for systems access across the firm. Three global Security Operations Centers monitor our systems 24 hours a day, seven days a week, in a true "follow the sun" model. We are embracing a proactive, intelligence-driven approach to detecting and preventing malicious activity as early as possible, ideally before the firm is even targeted. We also are taking a prominent role in the industry by leading a set of simulated cybersecurity exercises with our peer banks and other payment platforms – to ensure that we, and the broader industry, are increasingly prepared for new cyberattack scenarios.

Innovation successes

We strive to be at the forefront of our industry and invest tremendous resources in new technologies. Here are a few examples of the impact of innovation in our major technology investment areas:

DIGITAL LEADERSHIP

Digital payments

We are leading the future of payments. Chase QuickPay® offers convenient and nimble person-to-person payment solutions for consumers. In addition, this year, we will launch Chase Pay℠ to create a new digital wallet and mobile payment experience in partnership with many of the largest retail merchants in the country. For corporate clients, J.P. Morgan ACCESS® now provides the ability to execute international payments in more than 120 currencies any time of the day through multiple channels.

Digital platforms

We are in the process of rolling out a brand new chase.com platform that will enable us to increase the pace of innovation and deliver simple, personalized customer experiences. We continue to improve our industry-leading Chase Mobile® app with new features and functionality to allow our customers to bank with us anytime and from anywhere. We have continued to enhance our award-winning J.P. Morgan Markets® platform to differentiate our Corporate & Investment Bank – for example, trading volume on the eXecute foreign exchange (FX) trading app increased by more than 80% last year, helping the firm grow its share of the electronic FX market.

Digitally enabled branches

Our new Chase ATMs will be able to perform roughly 90% of teller transactions and are being rolled out across our branch network. They will include innovations such as cardless authentication at an ATM using the Chase Mobile app – that means more transaction flexibility and simpler customer experiences that work seamlessly with our other digital channels.

DATA AND ANALYTICS

Our customers, clients and communities – as well as the firm – significantly benefit from big data technologies and improved data management practices across our businesses.

Enabling customers and clients

Last year, in our Custody and Fund Services business, we introduced NAV-Explain, an industry-first solution that puts key insights about underlying fund activity and asset holdings at the fingertips of fund accountants. This solution reduces errors and expense, improves productivity and provides a far superior client experience.

Identifying new business opportunities

Innovative analytics capabilities are helping us uncover new business opportunities. For example, we are analyzing broad sets of publicly available and proprietary data to better predict the financing needs of our clients. In Commercial Banking, our sales teams have begun using a new data-driven tool to more effectively engage prospective clients – we expect this tool to identify more than 10,000 new prospects in the United States.

Expert insights for the public good

Our unique proprietary data, expertise and market access position the firm to help solve issues in the broader economy. The JPMorgan Chase Institute offers decision makers across the public and private sectors access to the firm's real-time data and analytics to tackle economic problems, from the effect of income and consumer spending volatility on individual Americans to the impact of local consumer trends on neighborhoods.

CLOUD INFRASTRUCTURE

Over the last few years, we have built an efficient private cloud environment within our data centers to run the firm's diverse portfolio of applications. Today, approximately 90% of new infrastructure demand is hosted within our cloud environment – streamlining support, improving utilization and accelerating delivery. To further drive value for our businesses, we conducted an initial public cloud pilot and identified several target use cases to complement our private cloud. One use case addresses business-driven fluctuations in computing demand with a virtually limitless supply of infrastructure made available when we need it, reducing long-term capital investments. To lower storage costs, we are evaluating the potential to store infrequently accessed data securely in the cloud. Our strategic vision is to embrace a hybrid cloud model in which internal and external resources are made available on demand. We are partnering with leading providers to create a world-class environment without compromising our standards for security.

UNIFIED COMMUNICATIONS

We are bringing the look, feel and experience of consumer technology into the enterprise environment to transform the way our 235,000 employees work. More than 100,000 employees now use their personal mobile devices to securely access business applications, offering them the freedom and flexibility to be productive on the go. In addition, investments in real-time collaboration tools allow teams to communicate seamlessly across the globe. For example, this year, we engaged in more than 90 million minutes of video conferencing across 125,000 video-enabled endpoints – making JPMorgan Chase one of the largest users of enterprise video collaboration in the world.

DEVELOPER PRODUCTIVITY

Providing the optimal environment for our developers to concentrate on creating new products and solutions is a priority. We are defining best-in-class development practices for the thousands of men and women writing code at the firm – to accelerate delivery, improve quality and drive efficiency. We also have equipped our high-performance development environments with industry-leading capabilities, including continuous integration, automated deployment and security scanning. The vitality of our developer community has never been so important to ensuring our future.

How we innovate

We are firmly committed to developing our 40,000 technologists around the world. In 2015, our technology workforce consumed more than 1 million hours of training to further advance their technical, management, leadership and business skills. We recognize that sustained technology leadership comes from a robust, diverse talent pipeline. To build this pipeline, we engage extensively with high school and college students through on-campus visits, as well as by hosting coding and design challenges at our sites. In 2015, we selected 650 technology analysts to join our two-year program from an applicant pool of more than 7,000. The program starts with a six-week boot camp, with nearly 250 hours of training, and is augmented with 65 additional hours over the next two years.

We also partner with some of the brightest minds in the industry on developing solutions. In 2015, we engaged with more than 300 technology startups and piloted over 100 technologies, 50% of which now are in production. Many potential solutions will fail, but we recognize the value of experimentation and know that even if only a handful are successful, we can dramatically change the way we do business for the better. These relationships often develop into strategic partnerships, and, where we think it makes sense, we are making capital investments in these companies to drive our mutual success. An example of this is our recent investment in a new blockchain startup, where we are partnering to explore opportunities for distributed ledger technology. We are developing solutions for multiple blockchain use cases, including single-name credit default swap settlement and internal network payments. We are founding members of the open source Hyperledger Project, collaborating across the industry to enhance distributed ledger capabilities globally.

We continue to do business in smarter ways

In 2015, we realized savings by effectively leveraging, streamlining and optimizing our platforms, resources and real estate assets. Doing business in smarter ways often means simplifying the environment so that we can focus our attention and spending on new investments.

Some of our key initiatives to increase efficiencies and reduce costs include:

- Location strategy: We are driving the co-location of our technology professionals into 13 strategic hubs to optimize our real estate footprint and reduce costs. The hubs are adopting cutting-edge, open workspaces that resemble Silicon Valley, equipped with state-of-the-art technology to promote collaboration and creativity, resulting in our firm being rated among the top employers of choice for technology talent in financial services.
- Vendor rationalization: We are progressing our preferred vendor program across technology – last year, we reduced the number of vendors we use for core technology project services by 40%.

- Legacy applications: We simplified our technology environment and decreased operational risk through our Kill the Tail initiative to reduce applications across the firm. In 2015, we decommissioned 13% of our legacy applications and expect to decrease this population by a total of 25% by the end of 2018.
- Stability: In 2015, we continued to achieve more resilient and stable applications, resulting in a 65% reduction of technology production incidents over the last two years.

Our control environment remains paramount

Our businesses function independently but with greater connectivity, transparency and consistency than ever before. The significant improvements to our control environment over the past three years have become part of our everyday operating model. By the end of April, we will have completed work on all 19 enterprise-wide programs established to tackle our top control issues and integrated them into standard business operations. We are working hard to deliver on milestones to get more of our outstanding consent orders lifted by our regulators.

The Risk & Control Self-Assessment (RCSA) program, a key component of the firm's Operational Risk Management Framework, is completing its third cycle and has become fundamental to how our businesses identify and manage operational risks and assess the adequacy of their controls. This year, we integrated conduct risk measures into the RCSA, taking a disciplined approach to how we build and evaluate controls around employee conduct. During 2016, we will begin to replace the current platform used to support operational risk management with a new system called FORCE. FORCE will increase operational efficiency by driving a simpler and more effective user experience, as well as introducing a more agile technology infrastructure.

In Compliance, we enhanced our surveillance to detect potential employee, client or counterparty market misconduct by implementing e-communications surveillance in seven languages across 39 communications channels. We also extended our transaction surveillance across all asset classes in our Markets businesses. We broadened our strategic Anti-Money Laundering transaction monitoring platform to transactions in cash, checks, wires, ACH and prepaid cards across 35 booking locations globally, enabling us to decommission 12 legacy monitoring tools and systems.

We will continue to invest in our people and our culture

The COO drove the global initiative to establish a Culture and Conduct program to reinforce the firm's Business Principles across all businesses and functions. We put it front and center on the agenda and met with more than 16,000 employees to hear firsthand what drives their behavior and to better understand how to motivate people to do the right thing. We implemented a comprehensive governance structure and reporting that will allow us to monitor progress against action plans. Our efforts are reviewed at all levels of the organization, up to our Board of Directors' Compensation & Management Development Committee, and will incorporate the development of additional metrics, which will reflect, over time and in aggregate, trends in the state of our firm's culture.

We are deeply focused on recruiting top talent and training our next generation of leaders across the firm. In addition to our efforts to source tomorrow's technologists, our veterans' recruitment program continues to bring servicemen and women with unique leadership skills and experience – for example, in cybersecurity – to the private sector. The more than 10,000 veterans hired by the firm have made a demonstrable impact on our culture. Our Business Principles laid the foundation for the firm's new Leadership Edge training program to develop outstanding leaders and managers. This year, senior leaders across the COO organization were major participants and will be going forward. We will continue to reinforce a strong sense of personal accountability and ownership for everything we do among all employees in all locations and at all levels.

Looking ahead

We are at the forefront of change in the industry, and we continue to grow our core and strategic capabilities to sustain our competitiveness. Our sophisticated interest rate and liquidity risk management frameworks prepare us for a range of market scenarios and ongoing regulatory changes. Our focus on technology, be it developing innovative solutions, capitalizing on big data or investing in cyber defenses, underscores the firm's commitment to leadership and excellence and to being the most effective provider of financial services across all categories. We continue to invest in our most important asset, our people. We look forward to serving the needs of the next as well as the current generation of customers, clients and employees. We will continue to advance and protect the firm's position as a world-class financial institution – in a culture rooted in both ingenuity and integrity.



Matt Zames
Chief Operating Officer

Consumer & Community Banking



Gordon Smith

2015 financial results

Consumer & Community Banking (CCB) had another strong year in 2015. For the full year, we achieved a return on equity of 18% on net income of $9.8 billion and revenue of $43.8 billion.

All of our CCB businesses performed well. We continued our strategy of delivering an outstanding customer experience and developing stronger relationships with customers. In 2015, we added approximately 600,000 households to Chase; and today, we have consumer relationships with nearly 50% of U.S. households and over 90 million credit, debit and prepaid accounts.

In 2015, we also stepped up our focus on growing engaged customers – people who choose Chase as their primary bank and have a Chase debit or credit card at the top of their wallet. In doing so, we grew our CCB average deposits 9% to more than $530 billion and are #1 in primary bank relationships within our Chase footprint. And we remain the #1 credit card issuer in the United States based on loans outstanding.

When I look back over the last three years, the people in CCB have made remarkable progress. It felt like only a short time ago when we were faced with considerable headwinds – several regulatory actions, inconsistent customer experiences across Chase and an expense base growing faster than revenue. And all this was happening during a period of formidable economic headwinds – an extremely challenged Mortgage Banking market and flat interest rates compressed our net interest income in Consumer Banking.

We worked through that rough economic period by relentlessly focusing on three priorities: 1) strengthening our controls, 2) delivering a great customer experience and 3) reducing expenses. These three priorities have become a core part of our DNA and how we run the business.

We had to make some very tough decisions around simplifying our business, reducing the number of people and prioritizing investments to focus on our strategy. We had to stop doing things we liked and discontinue some products that just weren't core to how we serve customers. And we are very glad we did. We will not lose our intense focus on those priorities, but with several key milestones behind us, we now can accelerate the pace of innovation at Chase. We are excited about what's coming in 2016 – new product launches, digital features, technology and innovative marketing investments.

Scale matters

In my nine years at Chase, I've never been more optimistic about where we are and where we are headed. In short, I wouldn't trade our hand for anyone else's. We have a set of businesses with leadership positions that would be very difficult to replicate. In 2015, Chase was #1 in total U.S. credit and debit payments volume, the #1 wholly owned merchant acquirer, the #2 mortgage originator and servicer, and the #3 bank auto lender. We also grew our deposit volumes at nearly twice the industry growth rate. And we continue to deepen relationships across Chase.

We also continue to lead the industry in digital adoption. Chase.com is the #1 most visited banking portal in the United States, with nearly 40 million active online customers. Our Chase Mobile® app has nearly 23 million active mobile customers, up 20% since 2014, the highest mobile growth rate among large banks.

In short, scale matters. Scale matters to our shareholders because it allows us to use our strong operating leverage to invest and grow in good times and bad. And scale matters to our customers because we can provide them with leading products that meet all of their financial needs at every stage of their lives. But we know customers don't care about scale unless it's relevant to them.

2015 Performance Highlights

Key business drivers			
$ in billions, except ratios and where otherwise noted; all balances are average		2015	YoY
Consumer & Community Banking	Households (in millions)	57.8	1%
	Active mobile users (in millions)	22.8	**20%**
Credit Card	New accounts opened[1] (in millions)	8.7	(1%)
	Sales volume[1]	$496	**7%**
	Loans	$126	1%
	Net charge-off rate[2]	2.51%	(24 bps)
Commerce Solutions	Merchant processing volume	$949	**12%**
Auto Finance	Loan and lease originations	$32	**18%**
	Loan and lease portfolio	$64	9%
Mortgage Banking	Total mortgage originations	$106	**36%**
	Third-party mortgage loans serviced	$715	(9%)
	Loans	$204	**11%**
	Mortgage Banking net charge-offs[3]	$0.3	**(41%)**
Business Banking	Deposits	$101	**11%**
	Loans	$20	6%
	Loan originations	$7	3%
Consumer Banking	Deposits	$414	**9%**
	Client investment assets (end of period)	$219	2%

[1] Excludes Commercial Card
[2] Excludes held-for-sale loans
[3] Excludes write-offs of purchased credit-impaired loans
bps = basis points

Scale does not mean acting like a "big bank." Today's customers expect a great customer experience everywhere they do business, and banking is no exception. We have been intensely focused on delivering an outstanding customer experience – customer by customer across every interaction – branches, call centers, chase.com and mobile banking.

We measure customers' satisfaction in many ways. One key source is J.D. Power, where Chase has made significant progress since 2010. Our Credit Card business now is #3, up from #5 in 2010, and our score jumped 81 points over the same time frame. In addition, Chase has been recognized nationally as having the strongest performance in attracting new customers, satisfying and retaining customers, and winning a larger share of its customers' total retail banking business by TNS for the third year in a row.

Similarly, our Net Promotor Score (NPS), which tracks how many customers would refer a friend to Chase minus those who would not, has increased across most businesses – most notably in Mortgage Banking originations, where NPS has gone up by 38 points since 2010. Finally, our Chase Mobile app is the #1 rated mobile banking app. However, we will never declare "victory" in providing a great customer experience. There always will be work to do and areas where we aren't getting it totally right. But we feel extremely proud of the significant progress we've made and our upward momentum.

Digital

Digital is a core part of our customer experience. We know digitally centric customers are happier with Chase and stay with us longer. Since 2012, nearly 100 million transactions that used to be done in branches are increasingly migrating to faster and easier digital channels. Of the 3.7 million new checking accounts we acquired in 2015, almost 60% of these were for millennial customers, who often choose Chase because of our digital capabilities. While millennials clearly are a digital-first generation, research shows that approximately 60% of all consumers rate mobile banking as an important or extremely important factor when switching banks. In fact, for new customers of Consumer Banking, 65% actively use mobile banking after six months, up from 53% in 2014.

Today's ATMs have come a long way since they were first installed in 1969 – they now are another important digital option for customers. Nearly 90% of transactions that historically were performed in branches by a teller soon will be possible at our new ATMs. That's a huge convenience for our customers who want to self-serve – we have nearly 18,000 ATMs around the country. Digital also is a significantly less expensive way to serve customers – it costs us about half as much to serve a digitally centric customer than all other primary relationships. As an example, the cost to deposit a check with a teller is about 65 cents, whereas a check deposited with mobile QuickDeposit℠ costs pennies. And in 2016, our customers will be able to withdraw cash using a PIN from their phone rather than a debit card.

We've also made it easier than ever for customers who prefer electronic statements to receive them. Customers now can easily access their statements online on their desktops, on their phones or other mobile devices at their convenience. Today, more than 60% of new checking accounts

are paperless within 30 days of opening an account, up dramatically from roughly 25% two years ago. Many customers prefer the convenience, and it's a more efficient option for the bank. Sending a customer an electronic statement costs about a penny vs. approximately 50 cents for a paper one. Even more important, we save a lot of trees in the process.

Credit — the best of times

We are experiencing one of the most benign credit environments we have ever seen. While low interest rates have been a headwind for Consumer Banking, low credit losses have been a significant tailwind. Net charge-off rates are very low across CCB at 0.99%. We know it won't last forever. We have seen these cycles turn quickly, and we won't forget the hard-fought lessons of 2008. We are very focused on maintaining our highly disciplined approach to credit and running a high-quality lending business that should have relative stability throughout the economic cycle.

Nowhere has this been more true than in our Mortgage Banking business. We've evolved into a higher-quality, less volatile business with fewer products. We continue to improve the quality of our servicing portfolio both by managing down our defaulted units and increasing the quality of our new originations. We've also continued to simplify by eliminating complex products that few of our customers were using. And we are seeing results. Our net charge-off rates in Mortgage Banking are down from a high of 4.31% in 2009. And approximately 90% of our Mortgage Banking losses from 2008 to 2015 were from products we no longer offer today.

In Auto, we've seen certain competitors get more aggressive in lending to customers with riskier credit, but we've maintained our discipline by focusing on customers with high credit scores and responsible loan-to-value ratios.

Our disciplined strategy may result in lower revenue growth in the short term compared with some of our competitors, but we believe our approach builds a more stable business for the long term. We want to establish sustainable credit for our customers in good times and bad and ensure that our company and our shareholders are protected from a bubble mentality that may come back to haunt us later.

Expense discipline

Along with credit discipline, we have been very disciplined with expenses. Since 2012, we've made significant progress in reducing our noninterest expense by nearly $4 billion. We did this by making tough decisions across the firm to cut structural expenses.

However, it's important to distinguish what expenses need to be cut and which investments can generate value for our customers and future revenue for our shareholders. There are two key areas where we have been steadfast in funding: technology and marketing. We've invested to upgrade our systems, making them more automated and easier to use for customers and employees. And we know continued investment in marketing provides proven returns.

For example, a $100 million investment in Credit Card marketing typically generates on average ~400,000 new accounts, ~$3 billion in annual customer spend and ~$600 million in outstanding balances. And the same investment in Consumer Banking marketing will generate on average ~300,000 new households and ~$2.6 billion in deposits. These investments not only drive revenue and deposits but represent new households that we can deepen relationships with over time. That said, if the market turns or we see a change in how these investments perform, we can pull them back quickly.

Payments

Payments is another significant area of opportunity. We're unique in the market because we are a complete payments system with an unmatched combination of scale and reach. Chase customers make approximately 36 million credit and debit card payments every day on more than 90 million credit, debit and prepaid card accounts. Our Commerce Solutions business processed almost $1 trillion of payments volume in 2015 alone. And our ChaseNet℠ proprietary closed-loop network allows us to complete the entire payments transaction between cardholder and merchant. With that combination, we've built a world-class payments franchise, and it's become a significant differentiator for us.

Last fall, we announced Chase Pay℠, our proprietary digital payment solution that will connect merchants and consumers through a simple, secure payment experience. It will address both the merchant experience and consumer-to-business payments.

We also are participating in other consumer-to-business payments options, including Apple Pay™ and Samsung Pay™, to give our customers choices in their payments – and to encourage them to make their Chase card their first choice. In addition, we issued more than 80 million chip-enabled credit and debit cards to keep payments safe and secure.

Partnerships

Over the past year, we announced or renewed several significant partnerships. In our Credit Card business, we renewed three key co-brand partners – Amazon, United Airlines and Southwest Airlines. All have been longtime partners, and our customers continue to highly value these cards.

The economics on most partner relationships in the industry are compressing, but they still are significant revenue generators for us and are a strong component of our growth. Co-brand new account volumes increased almost 40% from 2012 to 2015. In Auto Finance, we renewed a core partnership with Mazda North American Operations, the U.S. sales arm for Mazda vehicles, where we have been its finance partner since 2008. We also began a multi-year relationship with Enterprise Car Sales to finance consumers purchasing rental-fleet vehicles, as well as other vehicles, from more than 130 U.S.-based locations around the country.

Build, partner or buy

Competition is changing. We not only have to compete with the large and formidable competitors we always have but also with new market entrants both big and small. Large technology companies, like Apple and Google, are getting into the payments space, and every day, new companies are emerging to compete with subsegments of our businesses. Many of these disruptors are tapping into an exceptional experience or user interface that customers like. Across industries, whether retail, transportation or banking, companies have excelled at removing customer pain points with simple experiences. The experience itself has created loyalty.

Our strategy is to take that customer insight to heart and strive to create simple, largely digital experiences. Last year alone, we introduced several innovations. We were one of the first U.S. banks to introduce touch ID log-in for customers using the Chase Mobile app on their iPhone. We posted credit score information online for our Slate® customers and created a mobile app for our popular Chase Freedom® rewards card. We began to move customers to a new chase.com site, which is easier and faster for customers to use, and we started using a digital token instead of a customer's account number to more securely authorize transactions.

In addition, we explored partnerships and have found that many of these new companies are excited to work with us. Often there is a great fit for both sides – we can quickly apply their technology to benefit our customers, and these companies strengthen and grow from working with Chase. As an example, we announced a collaboration with an online business lender to help us create a new small business solution for quick access to working capital. This new, entirely digital offering, Chase Business Quick Capital℠, will provide real-time approvals for small dollar loans. Once approved, our business customers will get next-day – or, in many cases, same-day – funding to run and grow their businesses. We'll still apply our same strong credit standards but will give our customers a disruptively easy experience and working capital product they have been asking for.

We always are evaluating other potential partners, and where it makes sense to collaborate, white label or directly acquire, we will do so if we think it gives our customers a better experience and makes Chase stronger for the future. We can't get complacent for a minute, but with our loyal customer base of nearly 58 million households and the ability to invest, partner and innovate, we will be very hard to truly disrupt.

Conclusion

Across CCB, we feel very well-positioned for the future. The CCB leadership team and I are so proud to serve our customers and shareholders and to lead this exceptional business. Thank you for your investment in our company.



Gordon Smith
CEO, Consumer & Community Banking

2015 HIGHLIGHTS AND ACCOMPLISHMENTS

- Consumer relationships with almost half of U.S. households
- #1 in primary bank relationships in our Chase footprint
- Deposit volume growing at nearly twice the industry rate
- #1 most visited banking portal in the U.S. – chase.com
- #1 rated mobile banking app
- #1 credit card issuer in the U.S. based on loans outstanding
- #1 U.S. co-brand credit card issuer
- #1 in total U.S. credit and debit payments volume
- #1 wholly owned merchant acquirer
- #2 mortgage originator and servicer
- #3 bank auto lender

Corporate & Investment Bank



Daniel Pinto

With a solid foundation built on scale, completeness and the reach of a global network, the Corporate & Investment Bank (CIB) is well-situated to sustain its leadership in 2016.

Among the steps we've taken to secure our position, we have committed to being at the forefront of the technology evolution. We are embracing the innovations that will raise the level of our client service and are identifying ways to increase productivity in our own operations.

Our clients – major corporations with operations around the world – turn to J.P. Morgan for the integrated services and financial capabilities of an investment bank that can help them implement strategic solutions. Whether it's to raise capital, advise on a merger or acquisition, provide hedging or liquidity solutions, or help with payments across borders and currencies, the CIB has the complete range of services to fulfill client needs.

The CIB's business model continues to deliver for its clients, demonstrating its worth and resilience. We strengthened our market-leading positions across products and geographies, but we know that our top rankings cannot be taken for granted and must be continually earned through our work and our dedication to doing right by our clients. Our firm's leadership is due to several factors, but, above all, our success is a testament to our employees based in 60 countries and their focus on client service.

2015 accomplishments

We delivered solid results in 2015 and made progress on multiple priorities. The CIB reported net income of $8.1 billion on net revenue of $33.5 billion with a reported return on equity (ROE) of 12%. Excluding legal expense and business simplification, the CIB earned $9.2 billion with an ROE of 14%. This reflects an increase of 110 basis points, compared with 2014, on capital of $62 billion.

Our strong performance was achieved despite external concerns over:

- Slower emerging markets growth, particularly in natural resource-driven economies.
- Persistently low global interest rates, weakening credit markets and liquidity challenges.
- A slowdown in China's gross domestic product growth rate and currency volatility.
- Geopolitical challenges.
- The Fed's long-awaited move to tighten interest rates.

Our ability to maintain expense discipline, while absorbing increased regulatory and control costs, was demonstrated by our success this year in achieving a reduction of $1.6 billion in expenses toward our previously stated $2.8 billion target by 2017.

Throughout the year, we identified ways to redeploy resources in order to maximize shareholder returns. For example, we reduced non-operating deposits, level 3 assets and over-the-counter derivative notionals, all while minimizing the impact to clients. These actions helped to lower the firm's estimated global systemically important bank (GSIB) capital surcharge from 4.5% to an estimated 3.5%. This was a significant undertaking and demonstrated our ability to adapt nimbly to the changing regulatory landscape.

While making these business adjustments, we never lost our client focus. Once again, J.P. Morgan ranked #1 in Global Investment Banking fees, according to Dealogic, with a 7.9% market share. In addition, the CIB ranked in top-tier positions in 16 out of 17 product areas, according to Coalition, another industry analytics firm. For example, Equity Capital Markets ranked #1, up from #2 in 2014. In Fixed Income Markets, Securitization and Foreign Exchange also moved up, garnering top-tier positions last year. In Equity Markets, we are making progress in Cash Equities, having gained 90 basis points in market share compared with 2014. Our consistently high rankings and progress are a result of the trust our clients place in us year after year.

During 2015, we helped clients raise $1.4 trillion of capital. Of that amount, $55 billion was for nonprofits and government entities, such as state and local agencies and institutions.

Technology and innovation are embedded in all of our businesses

The CIB accounts for a significant portion of the firm's more than $9 billion technology budget.

Our clients count on us to deliver immediate access to strategic advice, markets and solutions using the most efficient means possible. To meet their expectations, we are embracing structural market changes and developing state-of-the-art electronic trading capabilities across a broad range of products.

Our technology commitment is unwavering and is aimed at decreasing costs, which makes our operations more efficient and improves our clients' experience. Technology is enabling us to shorten client onboarding times, speed transaction execution and reduce trading errors. Clients are using J.P. Morgan Markets to access research, analytics and reports on their mobile devices.

In addition, we are embedding technologists within our product groups and strengthening our partnerships with in-house teams to explore ways to broaden our use of newer technologies, such as distributed ledgers, machine learning, big data and cloud infrastructure. We are also building Financial Technology Innovation Centers, as well as launching a residency program and inviting startup firms to work with us on breakthrough, scalable technologies.

Technology already is benefiting our businesses: In Rates, electronic client revenue was up 47% year-over-year; in Equities, the gain was 27%. And the cost per trade has shrunk between 30% and 50% since 2011, depending upon the asset class.

We launched a technology platform for chief financial officers and corporate treasurers, J.P. Morgan Corporate Finance Dashboard, to provide mobile access to customizable market information and live desk commentary through J.P. Morgan Markets. In addition, we have introduced a version of J.P. Morgan QuickPay to speed electronic payment capabilities for corporate clients.

Treasury Services: An integral contributor to the CIB's growth

Global multinational companies require an international bank, particularly as the growth in cross-border trade requires a sophisticated roster of services. J.P. Morgan's Treasury Services business ranks #2 globally and supports about 80% of the global Fortune 500, including the world's top 25 banks.

In all, Treasury Services has about 14,000 wholesale clients, including Commercial Banking's roster, and handles $5 trillion in payments per day. Treasury Services also ranks #1 in global U.S. dollar wire transfers.

The business landscape, fragmented by multiple players, creates an opportunity for the consolidation of market share as clients look for global solutions.

According to consulting firms and our internal analysis, the Treasury Services revenue pool is expected to grow from $144 billion as of 2014 to around $280 billion by about 2024. The cross-border business has grown 13% in the past three years and, while we have a strong existing franchise, significant opportunities still remain. As global commerce becomes increasingly interconnected, multinational clients will extend their operations across more borders. Our ability to scale our services to their needs for efficient payment systems, additional hedging solutions and foreign exchange products will help drive solid growth in our Treasury Services business.

A noteworthy success last year was our rigorous effort to reduce non-operating deposits by $75 billion out of the CIB's overall $130 billion reduction.

Treasury Services has a platform that is difficult to replicate and offers holistic client coverage. Our unique capabilities in advisory and account structuring position J.P. Morgan well to serve the growing number of global multinationals that have complex needs across regions, countries and currencies.

Investing in Custody and Fund Services to build on strong market position

The Custody and Fund Services business provides custody, fund accounting and post-trade services. The long-term prospects for the business are strong, driven by growth in institutional assets under management, globalization of asset flows, desire for higher efficiencies and innovation across the value chain.

With nearly $20 trillion in assets under custody, Custody and Fund Services is strategically important to the CIB. According to consulting firms and our internal analysis, the Custody and Fund Services revenue pool is expected to grow from $38 billion as of 2014 to $54 billion by about 2020. The business generates significant, sustainable revenue; produces a through-the-cycle operating margin of more than 25%; and provides about $100 billion in operating deposits, which supports the firm's liquidity and balance sheet positions.

As clients expand their product ranges, asset classes and distribution channels, we will be able to drive future growth through investments in high-growth areas, such as exchange-traded funds, alternatives and derivatives. We will continue to build on our world-class capabilities in Emerging Markets, which already encompasses more than 75 emerging and frontier markets worldwide. Additionally, we are focused on driving process automation and standardization across the operating model while investing in analytical tools and capabilities to meet increasing demands for data transparency and integration across products.

2016 strategies

We are in a competitive business. We must be willing to adapt to changing environments and not be content to rest on the laurels earned in previous years. We intend to target sectors and countries where we see expansion opportunities.

We will continue to invest strategically in talent to cover key growth sectors, such as technology, media and telecommunications, and healthcare. In addition, we are investing in countries, such as Germany, the United Kingdom and China, building a talent base where we see the greatest long-term opportunities. Another focus will be to effectively deploy capital by undertaking a comprehensive view of our clients, taking into account capital and liquidity utilization, pricing terms and overall profitability.

Sustaining our strength in Global Investment Banking has enabled us to deliver the entire firm. J.P. Morgan has distinguished itself with its clients by integrating our product and coverage teams to deliver seamless solutions. In just one example, the CIB and Commercial Banking have continued to collaborate so that midsized firms can benefit from the differentiated services offered within the Investment Bank. As a result of that collaboration with Commercial Banking, between 2008 and 2014, we grew Investment Banking revenue from $1 billion to $2 billion, and last year, we gained another 10%, generating $2.2 billion.

Merger and acquisition activity, a highlight in 2015, is expected to remain strong. Despite the challenging year for Fixed Income, we were able to increase our market share by 170 basis points, according to Coalition.

We intend to strengthen our #1 position in Fixed Income by closing the few regional and product gaps that exist. We're sometimes asked: "Why not reduce the Fixed Income business?" The answer: The business delivers a solid 15% return to shareholders. Additionally, our ability to serve the needs of our Fixed Income clients helps ensure a broad-based relationship that earns business across products.

The Equities business was strong in 2015 despite increased competition. According to Coalition, our revenue growth of 13.5% last year and 28.4% since 2011 exceeded the overall market's growth in both periods. Over the past five years, our Equities business has outperformed the #1 competitor in revenue growth, according to Coalition. To accelerate this progress, we strengthened the relationship between the Prime Brokerage and Equities businesses, integrating the leadership and its offerings. Equities also is making a great deal of progress on the optimization front by investing in a client profitability engine and other analytical tools that improve our ability to monitor and utilize the CIB's balance sheet.

The CIB's scale, completeness and global network have enabled J.P. Morgan to be our clients' safe haven, whether in times of volatility or stability. While this is an important and essential role, our culture also demands we serve our clients with integrity and provide the best advice, talent and appropriate portfolio of products. To that end, we discuss our culture openly in various forums and regularly ask employees for feedback to understand what we do well and ways we can do better. Thousands of employees have participated in focus groups, and we conduct training to ensure we consistently instill best practices and stay true to our principles in all of our dealings.

A forward-looking approach

Looking ahead, we have been investing in the technology and infrastructure that will ensure we retain, expand and improve on our client relationships by being attuned to the various ways they want to work with us.

Building on our capital strength, the CIB is focused on optimizing capital across multiple regulatory constraints in order to deploy our resources profitably. We have a proven track record of being able to execute on capital optimization but in ways that carefully consider the impact on clients. Long term, the approach is to identify ways to maximize returns while adhering to the risk, liquidity and leverage standards governing the CIB.

The CIB has maintained its strength while adjusting to the inevitable market shifts and by remaining true to its overriding model. We were able to withstand the headwinds of 2015 on the strength of a business model that takes advantage of scale, completeness and the reach of a global network. Last year's challenges – consisting of market volatility, geopolitical events, uncertain moves in commodity prices and a slowdown in emerging markets, among others – have carried over into 2016.

We are confident that our business model will continue to be successful in the coming year and beyond. We are committed to remaining a global investment bank with a complete range of products. And by embracing technology, we intend to mine the efficiencies of digital capabilities while improving the services we can provide to clients.

Above all, we know that our leadership is only one way to measure how well we serve our clients. As was the case last year, our top priority is to help our clients achieve their objectives backed by the best products and services we can provide. In the end, our clients' success is the true measure of ours.



Daniel Pinto
CEO, Corporate & Investment Bank

2015 HIGHLIGHTS AND ACCOMPLISHMENTS

- Ranked #1 in Global Investment Banking fees with a 7.9% market share, according to Dealogic, and ranked in top-tier positions in 16 out of 17 product areas across the CIB, according to Coalition.
- The CIB has embarked on a major effort to embrace technology in order to offer clients a broader array of trading platforms in which to transact with J.P. Morgan.
- Raised $1.4 trillion of capital for clients. Of that amount, $55 billion was on behalf of nonprofits and government entities, such as state and local agencies and institutions.
- The CIB's leadership and role as a trusted partner to our clients helped drive the firm's total merger and acquisition volume to $1.5 trillion.
- Reduced non-operating deposits, level 3 assets and over-the-counter derivative notionals, which helped reduce our estimated GSIB capital surcharge from 4.5% to 3.5%.
- The Treasury Services business supports approximately 80% of the global Fortune 500, including the world's top 25 banks.
- Treasury Services handles $5 trillion in payments per day.
- Custody and Fund Services has nearly $20 trillion in assets under custody.

Commercial Banking



Douglas Petno

Danny Meyer's vision to update the classic burger and milk shake stand began in 2001 with a humble hot dog cart built to raise funds for a public park in New York City. In 2009, amidst a turbulent market and an uncertain economy, Meyer needed a partner to help grow Shake Shack, his fine-casual dining concept. Recognizing their team's passion, track record and management talent, our bankers supported CEO Randy Garutti and the growing company with a loan at a critical time. Marking another important milestone, Shake Shack selected our firm to lead its successful initial public offering on the New York Stock Exchange in January 2015. Today Meyer, Garutti and the entire Shake Shack team are bringing this community-gathering experience to devoted fans across the globe. We are incredibly proud of our client's success and deeply appreciate the trust and confidence they placed in us.

Building the best commercial bank has one principle at its core: standing by all of our clients, like Shake Shack, and providing unwavering support even in difficult times. While we have addressed significant changes in our industry, we remained focused on our clients and worked hard to bring value to our relationships. This continues to guide our strategy and how we do business, and I'm excited to share our 2015 results and our plans for 2016.

2015 performance

For the year, Commercial Banking (CB) produced strong results, with $6.9 billion of revenue, $2.2 billion of net income and a return on equity of 15%. Loan growth across the business was robust, ending 2015 with record loan balances of $168 billion, up $19 billion from the prior year. Our Middle Market business grew loans for the sixth consecutive year, and our Commercial Real Estate businesses continued to deliver record results.

With our disciplined underwriting and proven credit model, CB's credit performance remained exceptional in 2015, marking the fourth straight year of net charge-offs less than 10 basis points. While certain areas of the economy are facing challenges, such as the energy and commodities sectors, CB's overall loan portfolio remains in excellent shape, and we feel very well-positioned as we closely monitor market conditions.

To set the standard in the industry, we continued to enhance our regulatory and control capabilities. While we have more to do, we are quite proud of the tremendous progress we have made in further safeguarding our clients and our business. Our fortress risk and compliance principles serve to guide us every day.

Franchise strength

Being a part of JPMorgan Chase gives us unmatched capabilities to serve our clients. No other commercial bank has both our strong client franchise and the ability to offer the number one investment bank, a leading asset management franchise, comprehensive payments solutions and an extensive branch network. Bringing these robust services to all of our clients, as we did with Shake Shack, provides us with unique competitive advantages and the opportunity to build deep, enduring relationships.

Our partnership with the Corporate & Investment Bank (CIB) is a fantastic example of where our broad-based capabilities differentiate us with our clients. With dedicated investment banking (IB) coverage, we've deepened our client relationships by providing important strategic advice and capital market access. This successful partnership has consistently delivered record IB revenue for CB clients, growing to $2.2 billion in 2015. Notably, we achieved this even while overall industry IB revenue contracted last year.

Executing our disciplined growth strategy

Across CB, we continue to make great progress in executing our long-term growth strategy. We are building with patience and discipline, hiring great bankers, picking the best clients and selectively expanding our loan portfolios.

Commercial & Industrial

To bring clients deeper sector expertise and to better manage our risk, we've expanded our specialized industry model. Today, we have 15 key dedicated industry teams working with more than 9,000 clients and covering 12,000 prospects. Our clients clearly benefit from our sector-specific knowledge and focused coverage. As a result, we've seen meaningful gains in market share across these important segments.

2015 marked the sixth year of our Middle Market expansion strategy. Through this effort, we've added nearly 2,000 clients, and in 2015, we generated record revenue of $351 million across our expansion markets. In these new regions, we are building organically – banker by banker, client by client – essentially creating a nice-sized bank from scratch, ending 2015 with nearly $11 billion of loans and over $8 billion in deposits. Last year, we opened new offices in Fresno, California; Greenville, South Carolina; Hartford, Connecticut; and Wilmington, Delaware. We expect to further expand our footprint in 2016.

Commercial Real Estate

With continued focus and discipline, we believe we're building a commercial real estate business that is differentiated from our competitors. Our franchise consists of three well-coordinated businesses: Commercial Term Lending, Real Estate Banking and Community Development Banking. Together, our real estate teams originated $32 billion in loans in 2015, up 28% from the prior year.

As the industry moves through the real estate cycle, we believe we can continue to grow our portfolio safely by adding high-quality clients in large, established markets. In the next three years, there will be over $1 trillion of commercial real estate maturities that will drive future originations. We see real opportunities to capture additional market share in targeted geographic areas while maintaining our credit and pricing discipline.

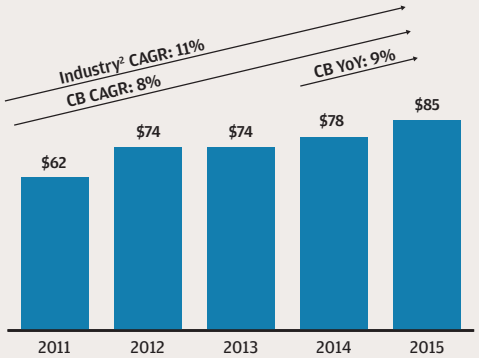
A real source of pride across our company is our Community Development Banking (CDB) business. In 2015, the CDB team financed nearly 100 projects that created more than 10,000 units of affordable housing. One in particular, the Alice Griffith Community, located on Candlestick Point in San Francisco, started its fourth phase of construction that will bring much-needed affordable housing and amenities to the area. The effort not only replaces a troubled public housing complex but also creates new affordable units that will be linked with services, schools and access to jobs.

Investing in our future

While our business model is proven, we are in no way standing still. We are driving our business forward through investments in technology and innovation. We see real opportunity to enhance our business processes, improve our customer experience, and increase the speed and security of our clients' transactions.

Commercial & Industrial Loan Portfolio – Disciplined C&I Growth[1]

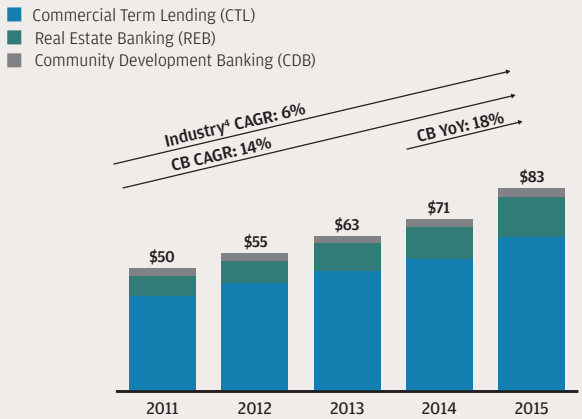
C&I loans outstanding ($ in billions, EOP)



	2011	2012	2013	2014	2015
Utilization (%)	31%	32%	30%	32%	32%

Commercial Real Estate Loan Portfolio – Executing Prudent Growth Strategy[3]

CRE loans outstanding ($ in billions, EOP)



	2011	2012	2013	2014	2015
Originations ($B)[5]	$15	$22	$24	$25	$32

[1] CB's C&I grouping is internally defined to include certain client segments (Middle Market, which includes nonprofit clients, and Corporate Client Banking) and will not align with regulatory definitions.
[2] Industry data from FRB H.8 Assets and Liabilities of Commercial Banks in the United States – Commercial and industrial loans; includes all commercial banks, not seasonally adjusted.
[3] CB's Commercial Real Estate (CRE) grouping is internally defined to include certain client segments (REB, CTL, CDB) and will not align with regulatory definitions.
[4] Industry data from FRB H.8 Assets and Liabilities of Commercial Banks in the United States – Real estate loans: Commercial real estate loans; includes all commercial banks, not seasonally adjusted.
[5] Prior years' originations have been revised to conform to current presentation.
CAGR = Compound annual growth rate YoY = Year-over-year EOP = End of period

One exciting example is the work we're doing alongside Consumer & Community Banking to upgrade our digital and online platforms. Our enhanced capabilities will expand functionality and allow clients to execute transactions more quickly and easily. In addition, we recently partnered with the CIB to launch a new corporate QuickPay capability, which will help our clients migrate business-to-business payments from expensive paper checks to simple email transactions.

Lastly, with expanded data and analytical capabilities, we are focusing on transforming information into intelligence and insights to help us manage risk and shape product development. We've also been developing analytical tools to help our bankers better identify and target new clients in markets across the United States.

Looking forward

Our business takes great pride in the outstanding clients we serve, and we are grateful every day for the confidence they place in us. I want to thank our extremely talented team for making that confidence possible and building true partnerships with our clients. Our success depends on our people, and your Commercial Banking team shows unwavering dedication to the clients and communities they serve.

Looking forward, I'm incredibly optimistic about the future of Commercial Banking. We are maintaining our long-term focus and making the right strategic investments to build upon our enduring business. I'm confident our team will seize the opportunities in front of us and continue to deliver for our clients and shareholders.



Douglas Petno
CEO, Commercial Banking

2015 HIGHLIGHTS AND ACCOMPLISHMENTS

Performance highlights

- Delivered revenue of $6.9 billion
- Grew end-of-period loans 13%; 22 consecutive quarters of loan growth
- Generated return on equity of 15% on $14 billion of allocated capital
- Continued superior credit quality – net charge-off ratio of 0.01%

Leadership positions

- #1 U.S. multifamily lender[1]
- #1 Customer Satisfaction, *CFO* Magazine Commercial Banking Survey, 2015
- Top 3 in overall Middle Market, large Middle Market and Asset Based Lending bookrunner[2]
- Recognized in 2015 by Greenwich Associates as a Best Brand for Middle Market Banking overall and in loans or lines of credit, cash management, trade finance and investment banking

Business segment highlights

- Middle Market Banking – Added more than 600 new clients
- Corporate Client Banking – Record gross investment banking revenue[3]
- Commercial Term Lending – Record originations of over $19 billion
- Real Estate Banking – Completed its best year ever with record originations over $11 billion
- Community Development Banking – Originated over $1 billion in new construction loans, building more than 10,000 units of affordable housing in over 70 cities

Firmwide contribution

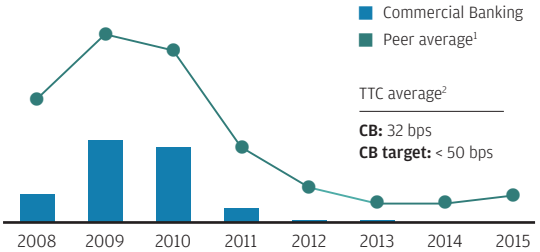
- Commercial Banking clients accounted for 36% of total North American investment banking fees[4]
- Over $120 billion in assets under management from Commercial Banking clients, generating more than $445 million in Investment Management revenue
- $469 million in Card Services revenue[3]
- $2.6 billion in Treasury Services revenue

Progress in key growth areas

- Middle Market expansion – Record revenue of $351 million; 46% CAGR[5] since 2010
- Investment banking – Record gross revenue of $2.2 billion; 10% CAGR[5] since 2010
- International banking – Revenue[6] of $288 million; 16% CAGR[5] since 2010

[1] SNL Financial based on Federal Deposit Insurance Corporation data as of 3Q 2015
[2] Thomson Reuters as of year-end 2015
[3] Investment banking and Card Services revenue represents gross revenue generated by CB clients
[4] Calculated based on gross domestic investment banking revenue for syndicated and leveraged finance, M&A, equity underwriting and bond underwriting
[5] Compound annual growth rate
[6] Overseas revenue from U.S. multinational clients

Net charge-offs



	2008	2009	2010	2011	2012	2013	2014	2015
Peers	1.35%	2.23%	2.00%	0.75%	0.33%	0.11%	0.08%	0.15%
CB	0.35%	1.02%	0.94%	0.18%	0.03%	0.03%	0.00%	0.01%

[1] Peer averages include CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC.
[2] Through-the-cycle (TTC), 2008–2015 average.
bps = basis points

Asset Management



Mary Callahan Erdoes

Success as an asset manager begins with two characteristics: longevity and consistency. Clients want to know that you are committed to the business for the long term, and they expect a proven track record for outperformance.

At J.P. Morgan Asset Management, we have been building a client-first, fiduciary culture for more than 180 years, working with an increasingly diverse group of institutions and individuals in more than 130 countries to help them manage their money.

Our longevity has helped us earn a level of client trust and a depth of investment experience and expertise that are difficult to replicate. Our advisors have stood side by side with clients during their most promising and most trying times. That's why the relationships we have built endure. In fact, in 2016, we have 260 families celebrating their 75th or greater anniversary of working with us.

In addition to long-standing clients, we have many long-tenured employees: More than 3,300 of our Asset Management colleagues have been with the firm for at least 15 years, including nearly 1,000 who have been with the firm for 25 years or more. We also have had tremendous consistency among our top senior portfolio management talent, with a retention rate greater than 95%.

These portfolio managers have managed through market peaks and valleys – and all the volatility that comes in between. They understand what it means to invest for the long term and are able to look past market noise to make smart investment decisions that are grounded in deep research and local insights and that generate alpha for our clients.

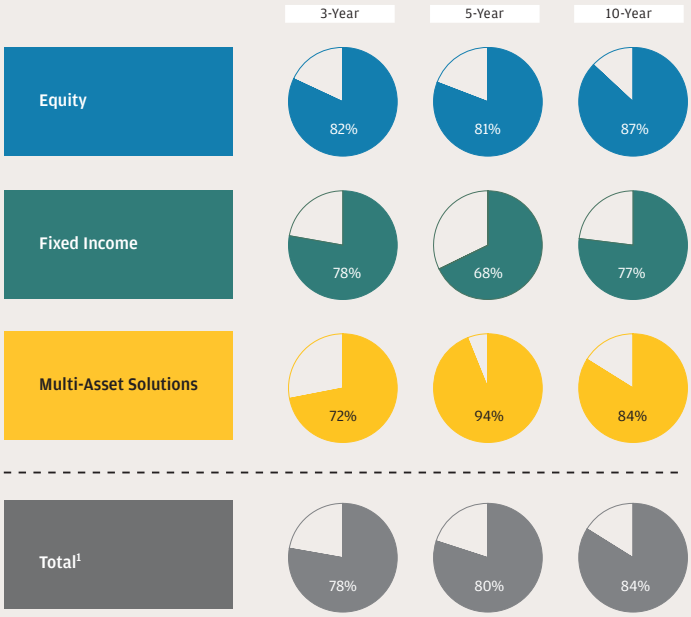
Superior investment performance driving strong financial results

A global team with a proven track record and commitment to innovation

Our more than 600 portfolio managers work closely with our 250 research analysts and 30 market strategists in Global Investment Management (GIM) to form the foundation of our investments platform. Each of them wakes up every day thinking

% of 2015 AUM Over Peer Median[1]

(net of fees)



[1] For footnoted information, refer to slide 25 in the 2016 Asset Management Investor Day presentation, which is available on JPMorgan Chase & Co.'s website at https://www.jpmorganchase.com/corporate/investor-relations/event-calendar.htm, under the heading JPMorgan Chase 2016 Investor Day, Asset Management, and on Form 8-K as furnished to the SEC on February 24, 2016, which is available on the SEC's website at www.sec.gov.

about how to capitalize on market opportunities for our clients – a group that includes 60% of the world's largest pension funds, sovereign wealth funds and central banks.

At the end of 2015, 84% of our 10-year, long-term mutual fund assets under management (AUM) ranked in the top two quartiles. That collective performance is complemented by equally strong asset class performance in Equity (87%), Fixed Income (77%) and Multi-Asset Solutions (84%), resulting in a record 231 of our mutual funds earning a four- or five-star rating and positive client asset flows every year since 2004.

In addition to our existing suite of mutual funds, we remain focused on product innovation. In 2015, we introduced 40 new funds. At the same time, we closed down or merged 37 to help ensure that we are offering an optimized portfolio of products to our clients and that they are benefiting from our best performance.

Strong financial performance

Our consistently strong investment performance is one of the primary reasons we have been able to continue to produce strong financial results for shareholders. In 2015, Asset Management generated record revenue of $12.1 billion in a challenging environment.

It also is the reason we have been able to grow our AUM and client assets consistently. Since 2010, our assets under management have increased by an annual rate of 6% to $1.7 trillion, and our client assets have grown 5% annually to $2.4 trillion.

The credit side of our business continues to be an important driver of our growth, with both loan balances (excluding mortgages) and mortgage balances reaching record levels of $84 billion and $27 billion, respectively, in 2015.

Investing in talent and technology

Talent and technology continue to be at the center of our success, both today and in the future. We need to have the best people on the ground and ready to work with clients wherever they need our solutions and expertise. And those people need to be armed with technology tools that enable them to serve clients efficiently and effectively.

Training top advisors

As a business, we are constantly educating our advisors to ensure that they are at the forefront of industry trends and important compliance and controls issues. Last year, over 850,000 hours of training were completed across more than 750 Asset Management programs. This comprehensive curriculum covers topics ranging from markets and economy to product innovation to understanding cybersecurity to regulatory changes and additional advisory skills.

Improving the client experience

Technology is playing a critical role in improving the client experience. For example, Global Wealth Management (GWM) is developing a digital strategy that will enable clients to engage with us how and when they want, using the channels they want. Our goal is to complement the advice and solutions our people offer with tools for clients that want to interact or consume our thought leadership in new ways.

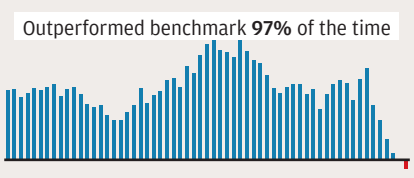
Increasing efficiency

Technology also enables us to be more efficient across our business,

Investment Process Has Led to Strong Results vs. Benchmark and Peers

Disciplined Equity Fund

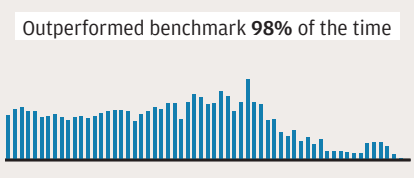
10-year average alpha 40 bps (11th percentile)



2010–2015 rolling 5-year periods ▸

Core Bond Fund

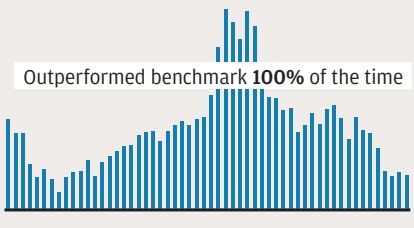
10-year average alpha 27 bps (28th percentile)



2010–2015 rolling 5-year periods ▸

SmartRetirement 2030 Fund

Average alpha 83 bps since inception (1st percentile)



2011–2015 rolling 5-year periods ▸

Data as of 12/31/15. Percentage outperformance vs. benchmark based on rolling 5-year monthly periods going back 10 years (or since fund inception in 2006 for SmartRetirement 2030). All excess returns calculated vs. primary prospectus benchmarks. Category percentile ranks are calculated vs. respective Morningstar categories. Institutional share classes used for Disciplined Equity and SmartRetirement 2030. Select share class used for Core Bond. All performance is net of fees.

For additional important information, please refer to the Investor Day presentation's notes appendix beginning on slide 23.

from sales support to controls. In GIM, we continue to enhance our application toolset for our sales teams, which helps our advisors access information and materials on our entire product range, investment capabilities and market insights and more quickly respond to client requests. On the controls side, we continue to introduce new technology tools that automate previously manual processes, such as our client onboarding processes, which creates a more seamless client experience and improves the integrity of our data and how we capture the information.

Maximizing analytics

Big data is one of the tools that is dramatically improving our analytics. Using big data and our innovative visualization tools, our portfolio managers can take historical data and combine it with predictive analytics to inform how to model their next moves. Big data also helps us identify areas where we can collaborate across the firm to serve clients that would benefit from Asset Management's offerings and vice versa.

Value of being part of JPMorgan Chase

The ability to partner across the broader 235,000-person JPMorgan Chase global franchise is one of our business's truly unique characteristics. It gives us the opportunity to help clients with more of their financial needs and enables us to benefit from a world-class global platform and infrastructure.

Working together across businesses

Asset Management is uniquely positioned as a hub that connects the different businesses of JPMorgan Chase. Consumer & Community Banking intersects with GWM on credit cards, banking and mortgages. GWM provides the solutions for Chase Wealth Management's investments offering. And the Corporate & Investment Bank works with both GIM and GWM on custody services, as well as when clients have transition events and need cash management or individual wealth management.

Benefiting from shared infrastructure

The JPMorgan Chase platform offers a significant competitive advantage for us. We are able to leverage many core infrastructure capabilities – from cybersecurity to digital capabilities to shared real estate – rather than having to build our own from scratch. Consider this: Forty percent of our GWM clients also use Chase retail branches on a monthly basis. We both benefit from and contribute to the strength of the JPMorgan Chase brand.

Well-positioned for the future

We are proud of the performance we have delivered to our clients and shareholders and are excited about the opportunities that are in front of us. And we know that if we remain focused on doing first-class business in a first-class way and continue to deliver strong investment performance and product innovation, supported by robust controls, our success will follow.



Mary Callahan Erdoes
CEO, Asset Management

2015 HIGHLIGHTS AND ACCOMPLISHMENTS

Business highlights

- Fiduciary mindset ingrained since mid-1800s
- Positive client asset flows every year since 2004
- $2.4 trillion in client assets
- Record revenue of $12.1 billion
- Record loan balances of $84 billion
- Record mortgage balances of $27 billion
- #1 cumulative long-term active mutual fund flows (2010–2015)
- #3 cumulative long-term active + passive mutual fund/ETF flows (2010–2015)
- Retention rate of over 95% for top senior portfolio management talent
- 250 research analysts, 30+ market strategists, 5,000+ annual company visits
- #2 global money market fund

Leadership positions

- #1 Institutional Money Market Fund Manager Worldwide (*iMoneyNet*, September 2015)
- #1 Private Bank in the World (*Global Finance*, October 2015)
- #1 Private Bank Overall in North America (*Euromoney*, February 2016)
- #1 Private Bank Overall in Latin America (*Euromoney*, February 2016)
- #1 U.S. Private Equity Money Manager (*Pensions & Investments*, May 2015)
- Top Pan-European Fund Management Firm (Thomson Reuters Extel, June 2015)
- Best Asset Management Company for Asia (*The Asset*, May 2015)
- #2 Hedge Fund Manager (*Absolute Return*, September 2015)

Corporate Responsibility



Peter Scher

In today's economy, too many people – particularly too many young people – are being left behind. More than 5 million young Americans are out of school and out of work, including more than one in five young black adults. Reliable pathways to the middle class have dissolved. Lower-income families, already struggling to make ends meet, are falling even further behind.

This is not sustainable. Creating more opportunity for more people to participate in and share the rewards of economic growth is a moral and an economic imperative.

But government cannot solve this challenge – certainly not on its own. The private sector needs to step up and be part of the solution.

JPMorgan Chase & Co. is leveraging the assets of our firm – our people, expertise and technology – to help address these trends. Each year, we deploy more than $200 million in philanthropic capital toward programs aimed at expanding access to opportunity and advancing economic mobility around the world.

We are applying the same rigor and analysis to these efforts as we do to other aspects of our business. Unlike traditional models of corporate philanthropy, our strategic investments are driven by robust data and research. We are supporting innovative research from our proprietary data on the finances of nearly 50 million U.S. households to real-time labor market dynamics in countries throughout Europe and Asia.

Putting our firm's capabilities to work

Our efforts are focused on areas where we can best put our firm's capabilities to work and where we can most effectively drive change. Millions of jobs in the United States and Europe are being created that require a high school degree but not a four-year college degree. Through our New Skills at Work initiative, we are connecting job seekers to tangible opportunities by helping them gain the right skills for today's high-quality jobs. We are expanding on this work with an ambitious new program, New Skills for Youth, to arm young people – particularly those most at risk of winding up out of school, unemployed or stuck in low-wage jobs – with the skills and training needed to get on the road to a well-paying, long-term career.

Through Small Business Forward, we are opening the doors that have too often been shut to minority and community-based small business owners by creating programs and investments that provide the capital and support these entrepreneurs need in order to succeed. Through the JPMorgan Chase Institute and the Financial Solutions Lab, we are applying our unrivaled data and insights into consumers' finances and deep technological expertise to help low- and moderate-income households become more financially secure. The Global Cities Initiative continues to help cities around the world generate the economic growth that will fuel greater opportunity. And through Invested in Detroit, we are bringing all these pieces together to support and accelerate the turnaround of one of America's iconic cities.

All of these efforts are driven by the conviction that creating more widely shared prosperity – and giving more people the opportunity to move up the economic ladder – is not only good for our communities, it's good for our company. We are very proud of what we have accomplished in 2015 and look forward to continuing and expanding this important work in the year ahead.



Peter Scher
Head of Corporate Responsibility

Investing $100 million in Detroit's future

JPMorgan Chase's roots in Detroit date back to an early and successful public-private partnership: the creation of the National Bank of Detroit in the 1930s as part of the government's plan to restart the nation's banking system. Building on our record of commitment to the city – and once again collaborating with the public, nonprofit and private sectors – we are in the second year of our $100 million, five-year program to accelerate Detroit's recovery:

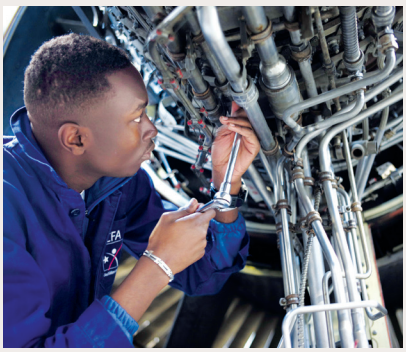
- Financed more than $35 million in aggregate loans to finance housing and mixed-use real estate projects and to help small businesses in the city expand and create new jobs through the $50 million in two new funds we seeded with our community development lending partners.
- Provided critical financial support to the Detroit Land Bank as it expanded its capacity to address blight in the city's neighborhoods.



- Developed first-of-its-kind research that provides a comprehensive picture of Detroit's workforce system – the demographics and skills of residents, labor market data on job opportunities in the city and the existing infrastructure of training providers – equipping the city's workforce leaders with critical insights to inform their new vision and strategy for Detroit's businesses and workers.
- Grew Focus: HOPE's nationally recognized training program to prepare more than 250 Detroit residents for jobs in manufacturing and information technology over four years.
- Expanded access to capital for Detroit's minority-owned small businesses by creating the $6.5 million Entrepreneurs of Color Fund along with the W.K. Kellogg Foundation. Managed by the Detroit Development Fund, the fund will provide loans and technical assistance, with a unique focus on the small contractors that are critical to meeting the demand for home renovation in the city.
- Boosted the growth of 10 Detroit-area start-ups to stimulate economic development and job growth through the $2.7 million Innovation Fund launched by JPMorgan Chase and Macomb Community College in 2014.
- Sent 36 JPMorgan Chase employees from around the world to work intensively with 11 Detroit nonprofits to help them solve specific operational challenges and plan for future sustainability since 2014.

New Skills at Work

While unemployment rates are falling in many communities around the world, they remain stubbornly high among young people, people of color and those with multiple barriers to employment. The reasons for this are complex and so are the solutions. Our $250 million New Skills at Work initiative supports data-driven approaches to creating pathways to middle-skill jobs, helping employers who are struggling to fill openings and job seekers looking for the education and training opportunities needed in the 21st century economy. The data-driven approach to this challenge is compelling because it is achievable. In 2015, we released reports analyzing labor market data and trends in the United Kingdom, France, Spain, Germany and in seven U.S. cities. These reports provide the intelligence that employers, training programs, policymakers and job seekers need in order to assess supply and demand accurately and to create workforce programs that develop a pipeline of skilled talent. In addition, we approved our first program-related investment, a $5 million, 10-year low-interest loan to Vital Healthcare Capital to finance healthcare services and quality front-line healthcare jobs in low-income communities in the United States.



In early 2016, we announced New Skills for Youth, a $75 million global commitment to improve career readiness for young people by investing in career readiness programs that align with the needs of local industries.

By fostering effective partnerships, utilizing data to drive better outcomes and providing workers with the skills needed to land middle-skill jobs connected to career pathways, we are supporting some of the most powerful strategies available to expand opportunity.

JPMorgan Chase Institute

In 2015, we launched the JPMorgan Chase Institute, a global think tank dedicated to delivering data-rich analyses for the public good. The Institute utilizes our proprietary data, augmented by firmwide expertise and market access, to provide insights on the global economy and offer innovative analyses to advance economic prosperity.

The Institute released three reports in 2015 that shed new light on the behavior of U.S. consumers:

- The inaugural report analyzed anonymized transaction-level consumer data, focusing on fluctuations in income and consumption. The Institute's study revealed that while U.S. households across the income spectrum experience financial volatility, most lack an appropriate financial buffer to weather these shocks.
- The Institute then analyzed consumer behavior in response to the dramatic decline in gas prices. Although prior research suggested American consumers saved more than half of their additional discretionary income resulting from the gas price decrease, the Institute research revealed that, in reality, consumers spent roughly 80% of this extra income, primarily on goods and services.
- In December, the Institute offered unprecedented insight into consumer commercial spending within local communities, enabling researchers to identify spending patterns by consumer age, income and residence or by the size and type of merchant.

Harnessing the unique assets of the firm and the power of big data, the Institute is explaining the global economy in a way that provides decision makers with the necessary information to frame and address critical issues.

2015 HIGHLIGHTS AND ACCOMPLISHMENTS

Developing local economies and communities

- Provided $3.1 billion to low- and moderate-income communities through community development lending and equity investments.
- Awarded $48 million since 2014 to networks of community development financial institutions (CDFI), providing capital to small businesses and community projects unable to qualify for traditional loans. The initial $33 million investment with 42 CDFIs leveraged an additional $226 million of capital to preserve affordable housing and support small business growth in low-income communities.



- Provided $3 million to support the launch of a $30 million National African American Small Business Loan Fund managed by the Valley Economic Development Centers to provide entrepreneurs in Chicago, Los Angeles and New York with flexible capital to grow their businesses.
- Committed nearly $6 million since 2014 to support skills-based summer employment opportunities for young people, including more than 3,200 jobs and work-related opportunities in 2015.
- Provided $2.2 million to support implementation of global engagement strategies in cities across the United States and released profiles on the economic competitiveness of Stockholm and Johannesburg through the Global Cities Initiative, a joint project of the Brookings Institution and JPMorgan Chase that promotes sustainable economic growth.

Increasing financial capability

- Committed $45 million since 2014 to nonprofits, helping more than 1 million low-income individuals in 11 countries acquire the knowledge and tools needed to promote their financial health.
- Launched the Catalyst Fund with the Bill & Melinda Gates Foundation to provide $2 million in funding and mentorship to social entrepreneurs in emerging markets focused on breakthrough technology innovations for consumers globally.
- Announced nine winners of the Financial Solutions Lab competition to identify financial technology products that help U.S. households manage cash flow challenges. Winners received $3 million in capital, technical assistance and mentorship to accelerate their development. The Lab is a $30 million program launched with the Center for Financial Services Innovation to identify and scale promising innovations to improve consumer financial health.
- Committed $7.5 million to the Accion Frontier Inclusion Fund to promote innovations in financial services in emerging markets. JPMorgan Chase has deployed $68 million to impact investments that have helped improve the livelihoods of more than 58 million people.
- Supported the new BankOn 2.0 national account standards to provide "safe" accounts for consumers just entering the banking mainstream. Chase Liquid® has been identified as a model account that meets these important new standards.

Supporting service members, veterans and their families

- Announced the evolution of the 100,000 Jobs Mission — an employer coalition founded by JPMorgan Chase and 10 other companies in 2011 to hire veterans. The newly named Veteran Jobs Mission reflects the coalition's growth to 220 employers committed to hiring 1 million veterans. Since 2011, members have hired more than 314,000 veterans — over 10,000 of those hires were made by JPMorgan Chase.
- Donated more than $7.5 million in the second year of a $20 million commitment to the Philanthropy-Joining Forces Impact Pledge in support of veterans and their families.
- Renewed support to Syracuse University's Institute for Veterans and Military Families through a $14 million contribution through 2020. In addition to other projects, this contribution will continue to wholly fund the Veterans Career Transition Program through which more than 3,400 post-9/11 veterans and military spouses have earned 4,600 certificates since 2011.
- Supported military families in need by donating more than 800 mortgage-free homes, valued at nearly $150 million, through the firm's nonprofit partners.

Engaging local communities

- Engaged more than 47,000 employees in volunteer service and sent 32 top managers to Detroit and Mumbai to apply their expertise full time to help our nonprofit partners expand their capacity to serve local communities.
- Provided more than 31,000 hours of skilled volunteerism through Technology for Social Good, a program that harnesses the technical experience of our employees to develop innovative technology solutions for nonprofits. Technology for Social Good delivered $3.3 million in social value to over 100 nonprofits globally.
- Completed the first year of the expansion of The Fellowship Initiative, a JPMorgan Chase program that prepares 120 young men of color to succeed in high school, college and beyond. Fellows participated in more than 30 days of extracurricular academic and leadership programs, including an All Star Code technology development workshop.



Promoting innovation in sustainable investment

- Continued support for NatureVest, which structured the first-ever climate adaptation debt swap to protect 30% of the marine territories of the Seychelles. In 2014, JPMorgan Chase was the founding sponsor of NatureVest, The Nature Conservancy's conservation finance unit.
- Underwrote more than $4 billion in green and sustainability-themed bonds and committed and arranged approximately $2 billion of capital for renewable energy projects in the United States.
- Launched the Dementia Discovery Fund in partnership with the U.K. government, which has attracted more than $100 million from leading pharmaceutical companies for investments into new treatments for dementia.

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FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

(unaudited)
As of or for the year ended December 31,

(in millions, except per share, ratio, headcount data and where otherwise noted)	2015	2014	2013	2012	2011
Selected income statement data					
Total net revenue	**$ 93,543**	$ 95,112	$ 97,367	$ 97,680	$ 97,843
Total noninterest expense	**59,014**	61,274	70,467	64,729	62,911
Pre-provision profit	**34,529**	33,838	26,900	32,951	34,932
Provision for credit losses	**3,827**	3,139	225	3,385	7,574
Income before income tax expense	**30,702**	30,699	26,675	29,566	27,358
Income tax expense	**6,260**	8,954	8,789	8,307	8,402
Net income	**$ 24,442**	$ 21,745	$ 17,886	$ 21,259	$ 18,956
Earnings per share data					
Net income: Basic	**$ 6.05**	$ 5.33	$ 4.38	$ 5.21	$ 4.50
Diluted	**6.00**	5.29	4.34	5.19	4.48
Average shares: Basic	**3,700.4**	3,763.5	3,782.4	3,809.4	3,900.4
Diluted	**3,732.8**	3,797.5	3,814.9	3,822.2	3,920.3
Market and per common share data					
Market capitalization	**$ 241,899**	$ 232,472	$ 219,657	$ 167,260	$ 125,442
Common shares at period-end	**3,663.5**	3,714.8	3,756.1	3,804.0	3,772.7
Share price[a]					
High	**$ 70.61**	$ 63.49	$ 58.55	$ 46.49	$ 48.36
Low	**50.07**	52.97	44.20	30.83	27.85
Close	**66.03**	62.58	58.48	43.97	33.25
Book value per share	**60.46**	56.98	53.17	51.19	46.52
Tangible book value per share ("TBVPS")[b]	**48.13**	44.60	40.72	38.68	33.62
Cash dividends declared per share	**1.72**	1.58	1.44	1.20	1.00
Selected ratios and metrics					
Return on common equity ("ROE")	**11%**	10%	9%	11%	11%
Return on tangible common equity ("ROTCE")[b]	**13**	13	11	15	15
Return on assets ("ROA")	**0.99**	0.89	0.75	0.94	0.86
Overhead ratio	**63**	64	72	66	64
Loans-to-deposits ratio	**65**	56	57	61	64
High quality liquid assets ("HQLA") (in billions)[c]	**$ 496**	$ 600	$ 522	341	NA
Common equity tier 1 ("CET1") capital ratio[d]	**11.8%**	10.2%	10.7%	11.0%	10.0%
Tier 1 capital ratio[d]	**13.5**	11.6	11.9	12.6	12.3
Total capital ratio[d]	**15.1**	13.1	14.3	15.2	15.3
Tier 1 leverage ratio[d]	**8.5**	7.6	7.1	7.1	6.8
Selected balance sheet data (period-end)					
Trading assets	**$ 343,839**	$ 398,988	$ 374,664	$ 450,028	$ 443,963
Securities	**290,827**	348,004	354,003	371,152	364,793
Loans	**837,299**	757,336	738,418	733,796	723,720
Core Loans	**732,093**	628,785	583,751	555,351	518,095
Total assets	**2,351,698**	2,572,274	2,414,879	2,358,323	2,264,976
Deposits	**1,279,715**	1,363,427	1,287,765	1,193,593	1,127,806
Long-term debt[e]	**288,651**	276,379	267,446	248,521	255,962
Common stockholders' equity	**221,505**	211,664	199,699	194,727	175,514
Total stockholders' equity	**247,573**	231,727	210,857	203,785	183,314
Headcount	**234,598**	241,359	251,196	258,753	259,940
Credit quality metrics					
Allowance for credit losses	**$ 14,341**	$ 14,807	$ 16,969	$ 22,604	$ 28,282
Allowance for loan losses to total retained loans	**1.63%**	1.90%	2.25%	3.02%	3.84%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[f]	**1.37**	1.55	1.80	2.43	3.35
Nonperforming assets	**$ 7,034**	$ 7,967	$ 9,706	$ 11,906	$ 11,315
Net charge-offs	**4,086**	4,759	5,802	9,063	12,237
Net charge-off rate	**0.52%**	0.65%	0.81%	1.26%	1.78%

Note: Effective October 1, 2015, and January 1, 2015, JPMorgan Chase & Co. adopted new accounting guidance, retrospectively, related to (1) the presentation of debt issuance costs, and (2) investments in affordable housing projects that qualify for the low-income housing tax credit, respectively. For additional information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82, Accounting and Reporting Developments on page 170, and Note 1.

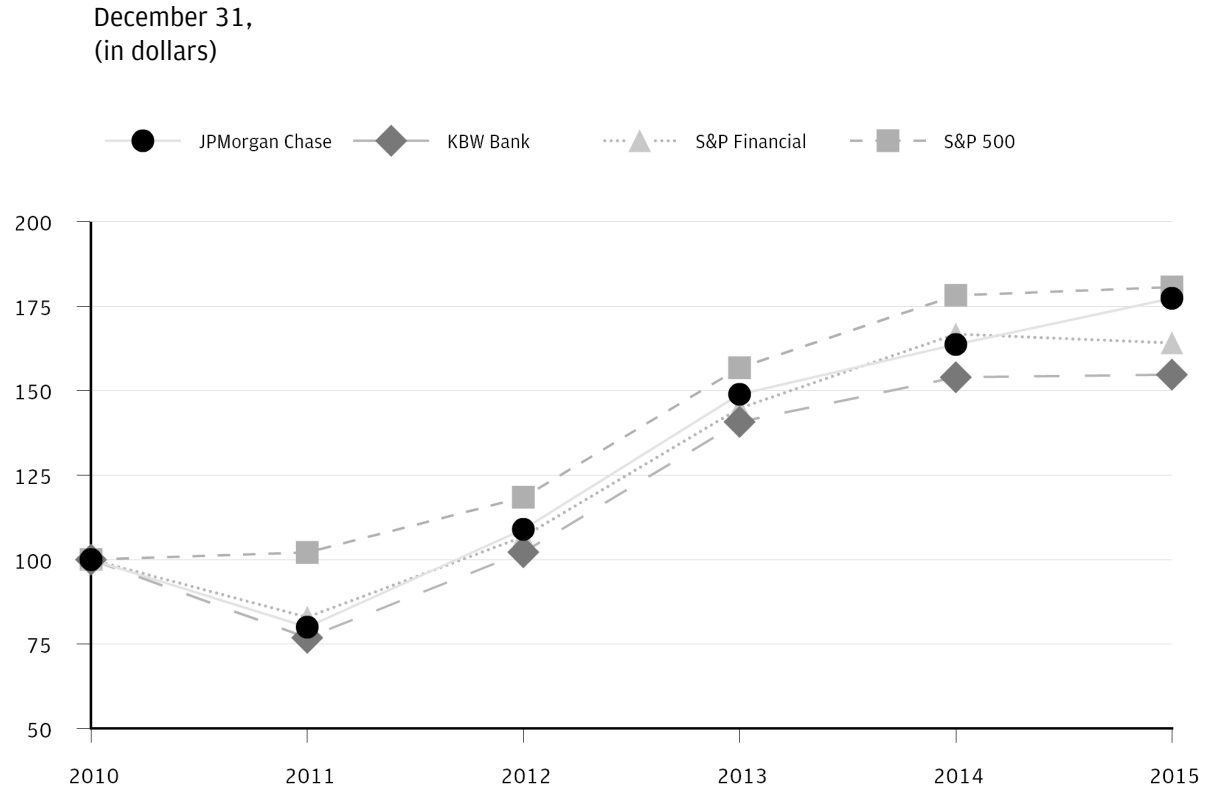
(a) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange.
(b) TBVPS and ROTCE are non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82.
(c) HQLA represents the amount of assets that qualify for inclusion in the liquidity coverage ratio under the final U.S. rule ("U.S. LCR") for December 31, 2015 and the Firm's estimated amount for December 31, 2014 prior to the effective date of the final rule, and under the Basel III liquidity coverage ratio ("Basel III LCR") for prior periods. The Firm did not begin estimating HQLA until December 31, 2012. For additional information, see HQLA on page 160.
(d) Basel III Transitional rules became effective on January 1, 2014; prior period data is based on Basel I rules. As of December 31, 2014 the ratios presented are calculated under the Basel III Advanced Transitional Approach. CET1 capital under Basel III replaced Tier 1 common capital under Basel I. Prior to Basel III becoming effective on January 1, 2014, Tier 1 common capital under Basel I was a non-GAAP financial measure. See Capital Management on pages 149–158 for additional information on Basel III and non-GAAP financial measures of regulatory capital.
(e) Included unsecured long-term debt of $211.8 billion, $207.0 billion, $198.9 billion, $200.1 billion and $230.5 billion respectively, as of December 31, of each year presented.
(f) Excluded the impact of residential real estate purchased credit-impaired ("PCI") loans, a non-GAAP financial measure. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82. For further discussion, see Allowance for credit losses on pages 130–132.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Index, the KBW Bank Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced United States of America ("U.S.") equity benchmark consisting of leading companies from different economic sectors. The KBW Bank Index seeks to reflect the performance of banks and thrifts that are publicly traded in the U.S. and is composed of 24 leading national money center and regional banks and thrifts. The S&P Financial Index is an index of 87 financial companies, all of which are components of the S&P 500. The Firm is a component of all three industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2010, in JPMorgan Chase common stock and in each of the above indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2010	2011	2012	2013	2014	**2015**
JPMorgan Chase	$ 100.00	$ 80.03	$ 108.98	$ 148.98	$ 163.71	**$ 177.40**
KBW Bank Index	100.00	76.82	102.19	140.77	153.96	**154.71**
S&P Financial Index	100.00	82.94	106.78	144.79	166.76	**164.15**
S&P 500 Index	100.00	102.11	118.44	156.78	178.22	**180.67**



This section of JPMorgan Chase's Annual Report for the year ended December 31, 2015 ("Annual Report"), provides Management's discussion and analysis of the financial condition and results of operations ("MD&A") of JPMorgan Chase. See the Glossary of Terms on pages 311–315 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 173) and in JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2015 ("2015 Form 10-K"), in Part I, Item 1A: Risk factors; reference is hereby made to both.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the U.S., with operations worldwide; the Firm had $2.4 trillion in assets and $247.6 billion in stockholders' equity as of December 31, 2015. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national banking association that is the Firm's credit card-issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), the Firm's U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm's principal operating subsidiaries in the United Kingdom ("U.K.") is J.P. Morgan Securities plc, a subsidiary of JPMorgan Chase Bank, N.A.

For management reporting purposes, the Firm's activities are organized into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business is the Consumer & Community Banking ("CCB") segment. The Firm's wholesale business segments are Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset Management ("AM"). For a description of the Firm's business segments, and the products and services they provide to their respective client bases, refer to Business Segment Results on pages 83–106, and Note 33.

This executive overview of the MD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	2015	2014	Change
Selected income statement data			
Total net revenue	**$ 93,543**	$ 95,112	(2)%
Total noninterest expense	**59,014**	61,274	(4)
Pre-provision profit	**34,529**	33,838	2
Provision for credit losses	**3,827**	3,139	22
Net income	**24,442**	21,745	12
Diluted earnings per share	**6.00**	5.29	13
Return on common equity	**11%**	10%	
Capital ratios[(a)]			
CET1	**11.8**	10.2	
Tier 1 capital	**13.5**	11.6	

(a) Ratios presented are calculated under the transitional Basel III rules and represent the Collins Floor. See Capital Management on pages 149–158 for additional information on Basel III.

Summary of 2015 Results

JPMorgan Chase reported record full-year 2015 net income of $24.4 billion, and record earnings per share of $6.00, on net revenue of $93.5 billion. Net income increased by $2.7 billion compared with net income of $21.7 billion in 2014. ROE for the year was 11%, up from 10% in the prior year.

The increase in net income in 2015 was driven by lower taxes and lower noninterest expense, partially offset by lower net revenue and a higher provision for credit losses. The decline in net revenue was predominantly driven by lower Corporate private equity gains, lower CIB revenue reflecting the impact of business simplification, and lower CCB Mortgage Banking revenue. These decreases were partially offset by a benefit from a legal settlement in Corporate and higher operating lease income, predominantly in CCB.

The decrease in noninterest expense was driven by lower CIB expense, reflecting the impact of business simplification, and lower CCB expense as a result of efficiencies, predominantly reflecting declines in headcount-related expense and lower professional fees, partially offset by investments in the business. As a result of these changes, the Firm's overhead ratio in 2015 was lower compared with the prior year.

The provision for credit losses increased from the prior year as a result of an increase in the wholesale provision, reflecting the impact of downgrades, including in the Oil & Gas portfolio. The consumer provision declined, reflecting lower net charge-offs due to continued discipline in credit underwriting, as well as improvement in the economy driven by increasing home prices and lower unemployment levels. This was partially offset by a lower reduction in the allowance for loan losses.

Total firmwide allowance for credit losses in 2015 was $14.3 billion, resulting in a loan loss coverage ratio of 1.37%, excluding the PCI portfolio, compared with 1.55% in the prior year. The Firm's allowance for loan losses to retained nonaccrual loans, excluding the PCI portfolio and credit card, was 117% compared with 106% in 2014. Firmwide, net charge-offs were $4.1 billion for the year, down $673 million from 2014. Nonperforming assets at year-end were $7.0 billion, down $933 million.

The Firm's results reflected solid underlying performance across its four major reportable business segments, with continued strong lending and consumer deposit growth. Firmwide average core loans increased by 12% compared with the prior year. Within CCB, Consumer & Business Banking average deposits increased 9% over the prior year. The Firm had nearly 23 million active mobile customers at year end, an increase of 20% over the prior year. Credit card sales volume (excluding Commercial Card) was up 7% for the year and merchant processing volume was up 12%. The CIB maintained its #1 ranking in Global Investment Banking Fees according to Dealogic. CB had record average loans, with an 11% increase compared with the prior year. CB also had record gross investment banking revenue of $2.2 billion, up 10% from the prior year. AM had positive net long-term

client inflows and continued to deliver strong investment performance with 80% of mutual fund assets under management ("AUM") ranked in the 1st or 2nd quartiles over the past five years. AM also increased average loan balances by 8% in 2015.

In 2015, the Firm continued to adapt its strategy and financial architecture toward meeting regulatory and capital requirements and the changing banking landscape, while serving its clients and customers, investing in its businesses, and delivering strong returns to its shareholders. Importantly, the Firm exceeded all of its 2015 financial targets including those related to balance sheet optimization and managing its capital, its GSIB surcharge and expense. On capital, the Firm exceeded its capital target of reaching Basel III Fully Phased-In Advanced and Standardized CET1 ratios of approximately 11%, ending the year with estimated Basel III Advanced Fully Phased-in CET1 capital and ratio of $173.2 billion and 11.6%, respectively. The Firm also exceeded its target of reducing its GSIB capital surcharge, ending the year at an estimated 3.5% GSIB surcharge, achieved through a combination of reducing wholesale non-operating deposits, level 3 assets and derivative notionals.

The Firm's fully phased-in supplementary leverage ratio ("SLR") was 6.5% and JPMorgan Chase Bank, N.A.'s fully phased-in SLR was 6.6%. The Firm was also compliant with the fully phased-in U.S. liquidity coverage ratio ("LCR") and had $496 billion of HQLA as of year-end 2015.

The Firm's tangible book value per share was $48.13, an increase of 8% from the prior year. Total stockholders' equity was $247.6 billion at December 31, 2015.

Tangible book value per share and each of these Basel III Advanced Fully Phased-In measures are non-GAAP financial measures; they are used by management, bank regulators, investors and analysts to assess and monitor the Firm's capital position and liquidity. For further discussion of Basel III Advanced Fully Phased-in measures and the SLR under the U.S. final SLR rule, see Capital Management on pages 149–158, and for further discussion of LCR and HQLA, see Liquidity Risk Management on pages 159–164.

The Firm provided credit to and raised capital of $2.0 trillion for its clients during 2015. This included $705 billion of credit to corporations, $233 billion of credit to consumers, and $22 billion to U.S. small businesses. During 2015, the Firm also raised $1.0 trillion of capital for clients. Additionally, $68 billion of credit was provided to, and capital was raised for, nonprofit and government entities, including states, municipalities, hospitals and universities.

The Firm has substantially completed its business simplification agenda, exiting businesses, products or clients that were non-core, not at scale or not returning the appropriate level of return in order to focus on core activities for its core clients and reduce risk to the Firm. While the business simplification initiative impacted revenue growth in 2015, it did not have a meaningful impact on the Firm's profitability. The Firm continues to focus on streamlining, simplifying and centralizing operational functions and processes in order to attain more consistencies and efficiencies across the Firm. To that end, the Firm continues to make progress on simplifying its legal entity structure, streamlining its Global Technology function, rationalizing its use of vendors, and optimizing its real estate location strategy.

Business outlook

These current expectations are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking Statements on page 173 and the Risk Factors section on pages 8–18.

Business Outlook

JPMorgan Chase's outlook for the full-year 2016 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these inter-related factors will affect the performance of the Firm and its lines of business. The Firm expects it will continue to make appropriate adjustments to its businesses and operations in response to ongoing developments in the legal and regulatory, as well as business and economic, environment in which it operates.

In the first quarter of 2016, management expects net interest income and net interest margin to be relatively flat when compared with the fourth quarter of 2015. During 2016, if there are no changes in interest rates, management expects net interest income could be approximately $2 billion higher than in 2015, reflecting the Federal Reserve's rate increase in December 2015 and loan growth.

Management expects core loan growth of approximately 10%-15% in 2016 as well as continued growth in retail deposits which are anticipated to lead to the Firm's balance sheet growing to approximately $2.45 trillion in 2016.

Management also expects managed noninterest revenue of approximately $50 billion in 2016, a decrease from 2015, primarily driven by lower Card revenue reflecting renegotiated co-brand partnership agreements and lower revenue in Mortgage Banking.

The Firm continues to experience charge-offs at levels lower than its through-the-cycle expectations reflecting favorable credit trends across the consumer and wholesale portfolios, excluding Oil & Gas. Management expects total net charge-offs of up to approximately $4.75 billion in 2016. Based on the changes in market expectations for oil prices since year-end 2015, management believes reserves during the first quarter of 2016 could increase by approximately $500 million for Oil & Gas, and by approximately $100 million for Metals & Mining.

The Firm continues to take a disciplined approach to managing its expenses, while investing in growth and innovation. The Firm intends to leverage its scale and improve its operating efficiencies, in order to reinvest its expense savings in additional technology and marketing investments and fund other growth initiatives. As a result, Firmwide adjusted expense in 2016 is expected to be approximately $56 billion (excluding Firmwide legal expense).

Additionally, the Firm will continue to adapt its capital assessment framework to review businesses and client relationships against multiple binding constraints, including GSIB and other applicable capital requirements, imposing internal limits on business activities to align or optimize the Firm's balance sheet and risk-weighted assets ("RWA") with regulatory requirements in order to ensure that business activities generate appropriate levels of shareholder value.

During 2016, the Firm expects the CET1 capital ratio calculated under the Basel III Standardized Approach to become its binding constraint. As a result of the anticipated growth in the balance sheet, management anticipates that the Firm will have, over time, $1.55 trillion in Standardized risk weighted assets, and is expecting that, over the next several years, its Basel III CET1 capital ratio will be between 11% and 12.5%. In the longer term, management expects to maintain a minimum Basel III CET1 ratio of 11%. It is the Firm's current intention that the Firm's capital ratios continue to exceed regulatory minimums as they are fully implemented in 2019 and thereafter. Likewise, the Firm will be evolving its funding framework to ensure it meets the current and proposed more stringent regulatory liquidity rules, including those relating to the availability of adequate Total Loss Absorbing Capacity ("TLAC").

In Mortgage Banking within CCB, management expects noninterest revenue to decline by approximately $700 million in 2016 as servicing balances continue to decline from year-end 2015 levels. The Card net charge-off rate is expected to be approximately 2.5% in 2016.

In CIB, management expects Investment Banking revenue in the first quarter of 2016 to be approximately 25% lower than the prior year first quarter, driven by current market conditions in the underwriting businesses. In addition, Markets revenue to date in the first quarter of 2016 is down approximately 20%, when compared to a particularly strong period in the prior year and reflecting the current challenging market conditions. Prior year Markets revenue was positively impacted by macroeconomic events, including the Swiss franc decoupling from the Euro. Actual Markets revenue results for the first quarter will continue to be affected by market conditions, which can be volatile. In Securities Services, management expects revenue of approximately $875 million in the first quarter of 2016.

CONSOLIDATED RESULTS OF OPERATIONS

The following section of the MD&A provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2015. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 165–169.

Revenue

Year ended December 31, (in millions)	2015	2014	2013
Investment banking fees	**$ 6,751**	$ 6,542	$ 6,354
Principal transactions	**10,408**	10,531	10,141
Lending- and deposit-related fees	**5,694**	5,801	5,945
Asset management, administration and commissions	**15,509**	15,931	15,106
Securities gains	**202**	77	667
Mortgage fees and related income	**2,513**	3,563	5,205
Card income	**5,924**	6,020	6,022
Other income[(a)]	**3,032**	3,013	4,608
Noninterest revenue	**50,033**	51,478	54,048
Net interest income	**43,510**	43,634	43,319
Total net revenue	**$ 93,543**	$ 95,112	$ 97,367

(a) Included operating lease income of $2.1 billion, $1.7 billion and $1.5 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

2015 compared with 2014

Total net revenue for 2015 was down by 2% compared with the prior year, predominantly driven by lower Corporate private equity gains, lower CIB revenue reflecting the impact of business simplification initiatives, and lower CCB Mortgage Banking revenue. These decreases were partially offset by a benefit from a legal settlement in Corporate, and higher operating lease income, predominantly in CCB.

Investment banking fees increased from the prior year, reflecting higher advisory fees, partially offset by lower equity and debt underwriting fees. The increase in advisory fees was driven by a greater share of fees for completed transactions as well as growth in industry-wide fee levels. The decrease in equity underwriting fees resulted from lower industry-wide issuance, and the decrease in debt underwriting fees resulted primarily from lower loan syndication and bond underwriting fees on lower industry-wide fee levels. For additional information on investment banking fees, see CIB segment results on pages 94–98 and Note 7.

Principal transactions revenue decreased from the prior year, reflecting lower private equity gains in Corporate driven by lower valuation gains and lower net gains on sales as the Firm exits this non-core business. The decrease was partially offset by higher client-driven market-making revenue, particularly in foreign exchange, interest rate and equity-related products in CIB, as well as a gain of approximately $160 million on CCB's investment in Square, Inc. upon its initial public offering. For additional information, see CIB and Corporate segment results on pages 94–98 and pages 105–106, respectively, and Note 7.

Asset management, administration and commissions revenue decreased compared with the prior year, largely as a result of lower fees in CIB and lower performance fees in AM. The decrease was partially offset by higher asset management fees as a result of net client inflows into assets under management and the impact of higher average market levels in AM and CCB. For additional information, see the segment discussions of CIB and AM on pages 94–98 and pages 102–104, respectively, and Note 7.

Mortgage fees and related income decreased compared with the prior year, reflecting lower servicing revenue largely as a result of lower average third-party loans serviced, and lower net production revenue reflecting a lower repurchase benefit. For further information on mortgage fees and related income, see the segment discussion of CCB on pages 85–93 and Notes 7 and 17.

For information on lending- and deposit-related fees, see the segment results for CCB on pages 85–93, CIB on pages 94–98, and CB on pages 99–101 and Note 7; securities gains, see the Corporate segment discussion on pages 105–106; and card income, see CCB segment results on pages 85–93.

Other income was relatively flat compared with the prior year, reflecting a $514 million benefit from a legal settlement in Corporate, higher operating lease income as a result of growth in auto operating lease assets in CCB, and the absence of losses related to the exit of non-core portfolios in Card. These increases were offset by the impact of business simplification in CIB; the absence of a benefit recognized in 2014 from a franchise tax settlement; and losses related to the accelerated amortization of cash flow hedges associated with the exit of certain non-operating deposits.

Net interest income was relatively flat compared with the prior year, as lower loan yields, lower investment securities net interest income, and lower trading asset balance and yields were offset by higher average loan balances and lower interest expense on deposits. The Firm's average interest-earning assets were $2.1 trillion in 2015, and the net interest yield on these assets, on a fully taxable-equivalent ("FTE") basis, was 2.14%, a decrease of 4 basis points from the prior year.

2014 compared with 2013

Total net revenue for 2014 was down by 2% compared with the prior year, predominantly due to lower mortgage fees and related income and lower other income. The decrease was partially offset by higher asset management, administration and commissions revenue.

Investment banking fees increased compared with the prior year, due to higher advisory and equity underwriting fees, largely offset by lower debt underwriting fees. The increase

in advisory fees was driven by the combined impact of a greater share of fees for completed transactions, and growth in industry-wide fees. The increase in equity underwriting fees was driven by higher industry-wide issuance. The decrease in debt underwriting fees was primarily related to lower bond underwriting fees compared with the prior year, and lower loan syndication fees on lower industry-wide fees.

Principal transactions revenue increased as the prior year included a $1.5 billion loss related to the implementation of the funding valuation adjustment ("FVA") framework for over-the-counter ("OTC") derivatives and structured notes. Private equity gains increased as a result of higher net gains on sales. These increases were partially offset by lower fixed income markets revenue in CIB, primarily driven by credit-related and rates products, as well as the impact of business simplification initiatives.

Lending- and deposit-related fees decreased compared with the prior year, reflecting the impact of business simplification initiatives and lower trade finance revenue in CIB.

Asset management, administration and commissions revenue increased compared with the prior year, reflecting higher asset management fees driven by net client inflows and higher market levels in AM and CCB. The increase was offset partially by lower commissions and other fee revenue in CCB as a result of the exit of a non-core product in 2013.

Securities gains decreased compared with the prior year, reflecting lower repositioning activity related to the Firm's investment securities portfolio.

Mortgage fees and related income decreased compared with the prior year, predominantly due to lower net production revenue driven by lower volumes due to higher mortgage interest rates, and tighter margins. The decline in net production revenue was partially offset by a lower loss on the risk management of mortgage servicing rights ("MSRs").

Card income was relatively flat compared with the prior year, but included higher net interchange income due to growth in credit and debit card sales volume, offset by higher amortization of new account origination costs.

Other income decreased from the prior year, predominantly from the absence of two significant items recorded in Corporate in 2013: gains of $1.3 billion and $493 million from sales of Visa shares and One Chase Manhattan Plaza, respectively. Lower valuations of seed capital investments in AM and losses related to the exit of non-core portfolios in Card also contributed to the decrease. These items were partially offset by higher auto lease income as a result of growth in auto lease volume, and a benefit from a tax settlement.

Net interest income increased slightly from the prior year, predominantly reflecting higher yields on investment securities, the impact of lower interest expense from lower rates, and higher average loan balances. The increase was partially offset by lower yields on loans due to the run-off of higher-yielding loans and new originations of lower-yielding loans, and lower average interest-earning trading asset balances. The Firm's average interest-earning assets were $2.0 trillion, and the net interest yield on these assets, on a FTE basis, was 2.18%, a decrease of 5 basis points from the prior year.

Provision for credit losses

Year ended December 31, (in millions)	2015	2014	2013
Consumer, excluding credit card	**$ (81)**	$ 419	$ (1,871)
Credit card	**3,122**	3,079	2,179
Total consumer	**3,041**	3,498	308
Wholesale	**786**	(359)	(83)
Total provision for credit losses	**$ 3,827**	$ 3,139	$ 225

2015 compared with 2014

The provision for credit losses increased from the prior year as a result of an increase in the wholesale provision, largely reflecting the impact of downgrades in the Oil & Gas portfolio. The increase was partially offset by a decrease in the consumer provision, reflecting lower net charge-offs due to continued discipline in credit underwriting, as well as improvement in the economy driven by increasing home prices and lower unemployment levels. The increase was partially offset by a lower reduction in the allowance for loan losses. For a more detailed discussion of the credit portfolio and the allowance for credit losses, see the segment discussions of CCB on pages 85–93, CB on pages 99–101, and the Allowance For Credit Losses on pages 130–132.

2014 compared with 2013

The provision for credit losses increased by $2.9 billion from the prior year as result of a lower benefit from reductions in the consumer allowance for loan losses, partially offset by lower net charge-offs. The consumer allowance reduction in 2014 was primarily related to the consumer, excluding credit card, portfolio and reflected the continued improvement in home prices and delinquencies in the residential real estate portfolio. The wholesale provision reflected a continued favorable credit environment.

Noninterest expense

Year ended December 31, (in millions)	2015	2014	2013
Compensation expense	**$29,750**	$30,160	$30,810
Noncompensation expense:			
Occupancy	**3,768**	3,909	3,693
Technology, communications and equipment	**6,193**	5,804	5,425
Professional and outside services	**7,002**	7,705	7,641
Marketing	**2,708**	2,550	2,500
Other[(a)(b)]	**9,593**	11,146	20,398
Total noncompensation expense	**29,264**	31,114	39,657
Total noninterest expense	**$59,014**	$61,274	$70,467

(a) Included legal expense of $3.0 billion, $2.9 billion and $11.1 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

(b) Included Federal Deposit Insurance Corporation ("FDIC")-related expense of $1.2 billion, $1.0 billion and $1.5 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

2015 compared with 2014

Total noninterest expense decreased by 4% from the prior year, as a result of lower CIB expense, predominantly reflecting the impact of business simplification; and lower CCB expense resulting from efficiencies related to declines in headcount-related expense and lower professional fees. These decreases were partially offset by investment in the businesses, including for infrastructure and controls.

Compensation expense decreased compared with the prior year, predominantly driven by lower performance-based incentives and reduced headcount, partially offset by higher postretirement benefit costs and investment in the businesses, including for infrastructure and controls.

Noncompensation expense decreased from the prior year, reflecting benefits from business simplification in CIB; lower professional and outside services expense, reflecting lower legal services expense and a reduced number of contractors in the businesses; lower amortization of intangibles; and the absence of a goodwill impairment in Corporate. These factors were partially offset by higher depreciation expense, largely associated with higher auto operating lease assets in CCB; higher marketing expense in CCB; and higher FDIC-related assessments. Legal expense was relatively flat compared with the prior year. For a further discussion of legal expense, see Note 31.

2014 compared with 2013

Total noninterest expense decreased by $9.2 billion, or 13%, from the prior year, as a result of lower other expense (in particular, legal expense) and lower compensation expense.

Compensation expense decreased compared with the prior year, predominantly driven by lower headcount in CCB Mortgage Banking, lower performance-based compensation expense in CIB, and lower postretirement benefit costs. The decrease was partially offset by investments in the businesses, including headcount for controls.

Noncompensation expense decreased compared with the prior year, due to lower other expense, predominantly reflecting lower legal expense. Lower expense for foreclosure-related matters and production and servicing-related expense in CCB Mortgage Banking, lower FDIC-related assessments, and lower amortization due to certain fully amortized intangibles, also contributed to the decline. The decrease was offset partially by investments in the businesses, including for controls, and costs related to business simplification initiatives across the Firm.

Income tax expense

Year ended December 31, (in millions, except rate)	2015	2014	2013
Income before income tax expense	**$30,702**	$30,699	$26,675
Income tax expense	**6,260**	8,954	8,789
Effective tax rate	**20.4%**	29.2%	32.9%

2015 compared with 2014

The effective tax rate decreased compared with the prior year, predominantly due to the recognition in 2015 of tax benefits of $2.9 billion and other changes in the mix of income and expense subject to U.S. federal, state and local income taxes, partially offset by prior-year tax adjustments. The recognition of tax benefits in 2015 was due to the resolution of various tax audits, as well as the release of U.S. deferred taxes associated with the restructuring of certain non-U.S. entities. For further information see Note 26.

2014 compared with 2013

The decrease in the effective tax rate from the prior year was largely attributable to the effect of the lower level of nondeductible legal-related penalties, partially offset by higher 2014 pretax income in combination with changes in the mix of income and expense subject to U.S. federal, state and local income taxes, and lower tax benefits associated with tax adjustments and the settlement of tax audits.

Selected Consolidated balance sheets data

December 31, (in millions)	2015	2014	Change
Assets			
Cash and due from banks	**$ 20,490**	$ 27,831	(26)%
Deposits with banks	**340,015**	484,477	(30)
Federal funds sold and securities purchased under resale agreements	**212,575**	215,803	(1)
Securities borrowed	**98,721**	110,435	(11)
Trading assets:			
Debt and equity instruments	**284,162**	320,013	(11)
Derivative receivables	**59,677**	78,975	(24)
Securities	**290,827**	348,004	(16)
Loans	**837,299**	757,336	11
Allowance for loan losses	**(13,555)**	(14,185)	(4)
Loans, net of allowance for loan losses	**823,744**	743,151	11
Accrued interest and accounts receivable	**46,605**	70,079	(33)
Premises and equipment	**14,362**	15,133	(5)
Goodwill	**47,325**	47,647	(1)
Mortgage servicing rights	**6,608**	7,436	(11)
Other intangible assets	**1,015**	1,192	(15)
Other assets	**105,572**	102,098	3
Total assets	**$ 2,351,698**	$ 2,572,274	(9)%
Liabilities			
Deposits	**$ 1,279,715**	$ 1,363,427	(6)
Federal funds purchased and securities loaned or sold under repurchase agreements	**152,678**	192,101	(21)
Commercial paper	**15,562**	66,344	(77)
Other borrowed funds	**21,105**	30,222	(30)
Trading liabilities:			
Debt and equity instruments	**74,107**	81,699	(9)
Derivative payables	**52,790**	71,116	(26)
Accounts payable and other liabilities	**177,638**	206,939	(14)
Beneficial interests issued by consolidated variable interest entities ("VIEs")	**41,879**	52,320	(20)
Long-term debt	**288,651**	276,379	4
Total liabilities	**2,104,125**	2,340,547	(10)
Stockholders' equity	**247,573**	231,727	7
Total liabilities and stockholders' equity	**$ 2,351,698**	$ 2,572,274	(9)%

The following is a discussion of the significant changes between December 31, 2015 and 2014.

Cash and due from banks and deposits with banks
The Firm's excess cash is placed with various central banks, predominantly Federal Reserve Banks. The net decrease in cash and due from banks and deposits with banks was primarily due to the Firm's actions to reduce wholesale non-operating deposits.

Securities borrowed
The decrease was largely driven by a lower demand for securities to cover short positions in CIB. For additional information, refer to Notes 3 and 13.

Trading assets–debt and equity instruments
The decrease was predominantly related to client-driven market-making activities in CIB, which resulted in lower levels of both debt and equity instruments. For additional information, refer to Note 3.

Trading assets and liabilities–derivative receivables and payables
The decrease in both receivables and payables was predominantly driven by declines in interest rate derivatives, commodity derivatives, foreign exchange derivatives and equity derivatives due to market movements, maturities and settlements related to client-driven market-making activities in CIB. For additional information, refer to Derivative contracts on pages 127–129, and Notes 3 and 6.

Securities
The decrease was largely due to paydowns and sales of non-U.S. residential mortgage-backed securities, non-U.S. government debt securities, and non-U.S. corporate debt securities reflecting a shift to loans. For additional information related to securities, refer to the discussion in the Corporate segment on pages 105–106, and Notes 3 and 12.

Loans and allowance for loan losses
The increase in loans was attributable to an increase in consumer loans due to higher originations and retention of prime mortgages in Mortgage Banking ("MB") and AM, and higher originations of auto loans in CCB, as well as an increase in wholesale loans driven by increased client activity, notably in commercial real estate.

The decrease in the allowance for loan losses was attributable to a lower consumer, excluding credit card, allowance for loan losses, driven by a reduction in the residential real estate portfolio allowance as a result of continued improvement in home prices and delinquencies and increased granularity in the impairment estimates. The wholesale allowance increased, largely reflecting the impact of downgrades in the Oil & Gas portfolio. For a more detailed discussion of loans and the allowance for loan losses, refer to Credit Risk Management on pages 112–132, and Notes 3, 4, 14 and 15.

Accrued interest and accounts receivable
The decrease was due to lower customer receivables related to client activity in CIB, and a reduction in unsettled securities transactions.

Mortgage servicing rights
For information on MSRs, see Note 17.

Other assets
Other assets increased modestly as a result of an increase in income tax receivables, largely associated with the resolution of certain tax audits, and higher auto operating lease assets from growth in business volume. These factors were mostly offset by lower private equity investments driven by the sale of a portion of the Private Equity business and other portfolio sales.

Deposits
The decrease was attributable to lower wholesale deposits, partially offset by higher consumer deposits. The decrease in wholesale deposits reflected the impact of the Firm's actions to reduce non-operating deposits. The increase in consumer deposits reflected continuing positive growth from strong customer retention. For more information, refer to the Liquidity Risk Management discussion on pages 159–164; and Notes 3 and 19.

Federal funds purchased and securities loaned or sold under repurchase agreements
The decrease was due to a decline in secured financing of trading assets-debt and equity instruments in CIB and of investment securities in the Chief Investment Office ("CIO"). For additional information on the Firm's Liquidity Risk Management, see pages 159–164.

Commercial paper
The decrease was associated with the discontinuation of a cash management product that offered customers the option of sweeping their deposits into commercial paper ("customer sweeps"), and lower issuances in the wholesale markets, consistent with Treasury's short-term funding plans. For additional information, see Liquidity Risk Management on pages 159–164.

Accounts payable and other liabilities
The decrease was due to lower brokerage customer payables related to client activity in CIB.

Beneficial interests issued by consolidated VIEs
The decrease was predominantly due to a reduction in commercial paper issued by conduits to third parties and to maturities of certain municipal bond vehicles in CIB, as well as net maturities of credit card securitizations. For further information on Firm-sponsored VIEs and loan securitization trusts, see Off-Balance Sheet Arrangements on pages 77–78 and Note 16.

Long-term debt
The increase was due to net issuances, consistent with Treasury's long-term funding plans. For additional information on the Firm's long-term debt activities, see Liquidity Risk Management on pages 159–164 and Note 21.

Stockholders' equity
The increase was due to net income and preferred stock issuances, partially offset by the declaration of cash dividends on common and preferred stock, and repurchases of common stock. For additional information on accumulated other comprehensive income/(loss) ("AOCI"), see Note 25; for the Firm's capital actions, see Capital Management on page 157 and Notes 22, 23 and 25.

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are off-balance sheet under accounting principles generally accepted in the U.S ("U.S. GAAP"). The Firm is involved with several types of off-balance sheet arrangements, including through nonconsolidated special-purpose entities ("SPEs"), which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important part of the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits, investor intermediation activities, and loan securitizations. See Note 16 for further information on these types of SPEs.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, JPMorgan Chase Bank, N.A. could be required to provide funding if its short-term credit rating were downgraded below specific levels, primarily "P-1", "A-1" and "F1" for Moody's Investors Service ("Moody's"), Standard & Poor's and Fitch, respectively. These liquidity commitments support the issuance of asset-backed commercial paper by Firm-administered consolidated SPEs. In the event of a short-term credit rating downgrade, JPMorgan Chase Bank, N.A., absent other solutions, would be required to provide funding to the SPE if the commercial paper could not be reissued as it matured. The aggregate amounts of commercial paper outstanding held by third parties as of December 31, 2015 and 2014, was $8.7 billion and $12.1 billion, respectively. The aggregate amounts of commercial paper issued by these SPEs could increase in future periods should clients of the Firm-administered consolidated SPEs draw down on certain unfunded lending-related commitments. These unfunded lending-related commitments were $5.6 billion and $9.9 billion at December 31, 2015 and 2014, respectively. The Firm could facilitate the refinancing of some of the clients' assets in order to reduce the funding obligation. For further information, see the discussion of Firm-administered multi-seller conduits in Note 16.

The Firm also acts as liquidity provider for certain municipal bond vehicles. The Firm's obligation to perform as liquidity provider is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer and any credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. See Note 16 for additional information.

Off–balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. For further discussion of lending-related financial instruments, guarantees and other commitments, and the Firm's accounting for them, see Lending-related commitments on page 127 and Note 29. For a discussion of liabilities associated with loan sales and securitization-related indemnifications, see Note 29.

Contractual cash obligations

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's significant contractual cash obligations at December 31, 2015. The contractual cash obligations included in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the below table are certain liabilities with variable cash flows and/or no obligation to return a stated amount of principal at maturity.

The carrying amount of on-balance sheet obligations on the Consolidated balance sheets may differ from the minimum contractual amount of the obligations reported below. For a discussion of mortgage repurchase liabilities and other obligations, see Note 29.

Contractual cash obligations

By remaining maturity at December 31, (in millions)	2015					2014
	2016	2017-2018	2019-2020	After 2020	**Total**	Total
On-balance sheet obligations						
Deposits[a]	**$ 1,262,865**	**$ 5,166**	**$ 3,553**	**$ 4,555**	**$ 1,276,139**	$ 1,361,597
Federal funds purchased and securities loaned or sold under repurchase agreements	**151,433**	**811**	**3**	**491**	**152,738**	192,128
Commercial paper	**15,562**	**–**	**–**	**–**	**15,562**	66,344
Other borrowed funds[a]	**11,331**	**–**	**–**	**–**	**11,331**	15,734
Beneficial interests issued by consolidated VIEs	**16,389**	**18,480**	**3,093**	**3,130**	**41,092**	50,200
Long-term debt[a]	**45,972**	**82,293**	**59,669**	**92,272**	**280,206**	262,888
Other[b]	**3,659**	**1,201**	**1,024**	**2,488**	**8,372**	8,355
Total on-balance sheet obligations	**1,507,211**	**107,951**	**67,342**	**102,936**	**1,785,440**	1,957,246
Off-balance sheet obligations						
Unsettled reverse repurchase and securities borrowing agreements[c]	**42,482**	**–**	**–**	**–**	**42,482**	40,993
Contractual interest payments[d]	**8,787**	**9,461**	**6,693**	**21,208**	**46,149**	48,038
Operating leases[e]	**1,668**	**3,094**	**2,388**	**4,679**	**11,829**	12,441
Equity investment commitments[f]	**387**	**–**	**75**	**459**	**921**	1,108
Contractual purchases and capital expenditures	**1,266**	**886**	**276**	**170**	**2,598**	2,832
Obligations under affinity and co-brand programs	**98**	**275**	**80**	**43**	**496**	2,303
Total off-balance sheet obligations	**54,688**	**13,716**	**9,512**	**26,559**	**104,475**	107,715
Total contractual cash obligations	**$ 1,561,899**	**$ 121,667**	**$ 76,854**	**$ 129,495**	**$ 1,889,915**	$ 2,064,961

(a) Excludes structured notes on which the Firm is not obligated to return a stated amount of principal at the maturity of the notes, but is obligated to return an amount based on the performance of the structured notes.
(b) Primarily includes dividends declared on preferred and common stock, deferred annuity contracts, pension and postretirement obligations and insurance liabilities.
(c) For further information, refer to unsettled reverse repurchase and securities borrowing agreements in Note 29.
(d) Includes accrued interest and future contractual interest obligations. Excludes interest related to structured notes for which the Firm's payment obligation is based on the performance of certain benchmarks.
(e) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of $1.9 billion and $2.2 billion at December 31, 2015 and 2014, respectively.
(f) At December 31, 2015 and 2014, included unfunded commitments of $50 million and $147 million, respectively, to third-party private equity funds, and $871 million and $961 million of unfunded commitments, respectively, to other equity investments.

(in millions)	Year ended December 31, 2015	2014	2013
Net cash provided by/(used in)			
Operating activities	**$ 73,466**	$ 36,593	$ 107,953
Investing activities	**106,980**	(165,636)	(150,501)
Financing activities	**(187,511)**	118,228	28,324
Effect of exchange rate changes on cash	**(276)**	(1,125)	272
Net decrease in cash and due from banks	**$ (7,341)**	$ (11,940)	$ (13,952)

Operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's lending and capital markets activities, including the origination or purchase of loans initially designated as held-for-sale. Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities and market conditions. The Firm believes cash flows from operations, available cash balances and its capacity to generate cash through secured and unsecured sources are sufficient to meet the Firm's operating liquidity needs.

Cash provided by operating activities in 2015 resulted from a decrease in trading assets, predominantly due to client-driven market-making activities in CIB, resulting in lower levels of debt and equity securities. Additionally, cash was provided by a decrease in accounts receivable due to lower client receivables and higher net proceeds from loan sales activities. This was partially offset by cash used due to a decrease in accounts payable and other liabilities, resulting from lower brokerage customer payables related to client activity in CIB. In 2014 cash provided reflected higher net proceeds from loan securitizations and sales activities when compared with 2013. In 2013 cash provided reflected a decrease in trading assets from client-driven market-making activities in CIB, resulting in lower levels of debt securities, partially offset by net cash used in connection with loans originated or purchased for sale. Cash provided by operating activities for all periods also reflected net income after noncash operating adjustments.

Investing activities

The Firm's investing activities predominantly include loans originated to be held for investment, the investment securities portfolio and other short-term interest-earning assets. Cash provided by investing activities during 2015 predominantly resulted from lower deposits with banks due to the Firm's actions to reduce wholesale non-operating deposits; and net proceeds from paydowns, maturities, sales and purchases of investment securities. Partially offsetting these net inflows was cash used for net originations of consumer and wholesale loans, a portion of which reflected a shift from investment securities. Cash used in investing activities during 2014 and 2013 resulted from increases in deposits with banks, attributable to higher levels of excess funds; cash was also used for growth in wholesale and consumer loans in 2014, while in 2013 cash used reflected growth only in wholesale loans. Partially offsetting these cash outflows in 2014 and 2013 was a net decline in securities purchased under resale agreements due to a shift in the deployment of the Firm's excess cash by Treasury, and a net decline in consumer loans in 2013 resulting from paydowns and portfolio runoff or liquidation of delinquent loans. Investing activities in 2014 and 2013 also reflected net proceeds from paydowns, maturities, sales and purchases of investment securities.

Financing activities

The Firm's financing activities includes cash related to customer deposits, long-term debt, and preferred and common stock. Cash used in financing activities in 2015 resulted from lower wholesale deposits partially offset by higher consumer deposits. Additionally, in 2015 cash outflows were attributable to lower levels of commercial paper due to the discontinuation of a cash management product that offered customers the option of sweeping their deposits into commercial paper; lower commercial paper issuances in the wholesale markets; and a decrease in securities loaned or sold under repurchase agreements due to a decline in secured financings. Cash provided by financing activities in 2014 and 2013 predominantly resulted from higher consumer and wholesale deposits; partially offset in 2013 by a decrease in securities loaned or sold under repurchase agreements, predominantly due to changes in the mix of the Firm's funding sources. For all periods, cash was provided by net proceeds from long-term borrowings and issuances of preferred stock; and cash was used for repurchases of common stock and cash dividends on common and preferred stock.

* * *

For a further discussion of the activities affecting the Firm's cash flows, see Consolidated Balance Sheets Analysis on pages 75–76, Capital Management on pages 149–158, and Liquidity Risk Management on pages 159–164.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its Consolidated Financial Statements using U.S. GAAP; these financial statements appear on pages 176–180. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results, including the overhead ratio, and the results of the lines of business, on a "managed" basis, which are non-GAAP financial measures. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on an FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Effective January 1, 2015, the Firm adopted new accounting guidance for investments in affordable housing projects that qualify for the low-income housing tax credit, which impacted the CIB. As a result of the adoption of this new guidance, the Firm made an accounting policy election to amortize the initial cost of qualifying investments in proportion to the tax credits and other benefits received, and to present the amortization as a component of income tax expense; previously such amounts were predominantly presented in other income. The guidance was required to be applied retrospectively and, accordingly, certain prior period amounts have been revised to conform with the current period presentation. The adoption of the guidance did not materially change the Firm's results of operations on a managed basis as the Firm had previously presented and will continue to present the revenue from such investments on an FTE basis in other income for the purposes of managed basis reporting.

Management also uses certain non-GAAP financial measures at the business-segment level, because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and, therefore, facilitate a comparison of the business segment with the performance of its competitors. Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

	2015			2014			2013		
Year ended December 31, (in millions, except ratios)	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis
Other income	**$ 3,032**	**$ 1,980**	**$ 5,012**	$ 3,013	$ 1,788	$ 4,801	$4,608	$1,660	$6,268
Total noninterest revenue	**50,033**	**1,980**	**52,013**	51,478	1,788	53,266	54,048	1,660	55,708
Net interest income	**43,510**	**1,110**	**44,620**	43,634	985	44,619	43,319	697	44,016
Total net revenue	**93,543**	**3,090**	**96,633**	95,112	2,773	97,885	97,367	2,357	99,724
Pre-provision profit	**34,529**	**3,090**	**37,619**	33,838	2,773	36,611	26,900	2,357	29,257
Income before income tax expense	**30,702**	**3,090**	**33,792**	30,699	2,773	33,472	26,675	2,357	29,032
Income tax expense	**6,260**	**3,090**	**9,350**	8,954	2,773	11,727	8,789	2,357	11,146
Overhead ratio	**63%**	**NM**	**61%**	64%	NM	63%	72%	NM	71%

(a) Predominantly recognized in CIB and CB business segments and Corporate

Calculation of certain U.S. GAAP and non-GAAP financial measures

Certain U.S. GAAP and non-GAAP financial measures are calculated as follows:

Book value per share ("BVPS")
Common stockholders' equity at period-end / Common shares at period-end

Overhead ratio
Total noninterest expense / Total net revenue

Return on assets ("ROA")
Reported net income / Total average assets

Return on common equity ("ROE")
Net income* / Average common stockholders' equity

Return on tangible common equity ("ROTCE")
Net income* / Average tangible common equity

Tangible book value per share ("TBVPS")
Tangible common equity at period-end / Common shares at period-end

* Represents net income applicable to common equity

Tangible common equity ("TCE"), ROTCE and TBVPS are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's earnings as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. TCE, ROTCE, and TBVPS are meaningful to the Firm, as well as investors and analysts, in assessing the Firm's use of equity.

Additionally, certain credit and capital metrics and ratios disclosed by the Firm are non-GAAP measures. For additional information on these non-GAAP measures, see Credit Risk Management on pages 112–132, and Capital Management on pages 149–158.

Tangible common equity

	Period-end		Average		
			Year ended December 31,		
(in millions, except per share and ratio data)	**Dec 31, 2015**	Dec 31, 2014	**2015**	2014	2013
Common stockholders' equity	**$ 221,505**	$ 211,664	**$ 215,690**	$ 207,400	$ 196,409
Less: Goodwill	**47,325**	47,647	**47,445**	48,029	48,102
Less: Certain identifiable intangible assets	**1,015**	1,192	**1,092**	1,378	1,950
Add: Deferred tax liabilities[(a)]	**3,148**	2,853	**2,964**	2,950	2,885
Tangible common equity	**$ 176,313**	$ 165,678	**$ 170,117**	$ 160,943	$ 149,242
Return on tangible common equity	**NA**	NA	**13%**	13%	11%
Tangible book value per share	**$ 48.13**	$ 44.60	**NA**	NA	N/A

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Net interest income excluding markets-based activities (formerly core net interest income)

In addition to reviewing net interest income on a managed basis, management also reviews net interest income excluding CIB's markets-based activities to assess the performance of the Firm's lending, investing (including asset-liability management) and deposit-raising activities. The data presented below are non-GAAP financial measures due to the exclusion of CIB's markets-based net interest income and related assets. Management believes this exclusion provides investors and analysts with another measure by which to analyze the non-markets-related business trends of the Firm and provides a comparable measure to other financial institutions that are primarily focused on lending, investing and deposit-raising activities.

Net interest income excluding CIB markets-based activities data

Year ended December 31, (in millions, except rates)	2015	2014	2013
Net interest income – managed basis[a][b]	**$ 44,620**	$ 44,619	$ 44,016
Less: Markets-based net interest income	**4,813**	5,552	5,492
Net interest income excluding markets[a]	**$ 39,807**	$ 39,067	$ 38,524
Average interest-earning assets	**$2,088,242**	$2,049,093	$1,970,231
Less: Average markets-based interest-earning assets	**493,225**	510,261	504,218
Average interest-earning assets excluding markets	**$1,595,017**	$1,538,832	$1,466,013
Net interest yield on average interest-earning assets – managed basis	**2.14%**	2.18%	2.23%
Net interest yield on average markets-based interest-earning assets	**0.97**	1.09	1.09
Net interest yield on average interest-earning assets excluding markets	**2.50%**	2.54%	2.63%

(a) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.

(b) For a reconciliation of net interest income on a reported and managed basis, see reconciliation from the Firm's reported U.S. GAAP results to managed basis on page 80.

2015 compared with 2014

Net interest income excluding CIB's markets-based activities increased by $740 million in 2015 to $39.8 billion, and average interest-earning assets increased by $56.2 billion to $1.6 trillion. The increase in net interest income in 2015 predominantly reflected higher average loan balances and lower interest expense on deposits. The increase was partially offset by lower loan yields and lower investment securities net interest income. The increase in average interest-earning assets largely reflected the impact of higher average deposits with banks. These changes in net interest income and interest-earning assets resulted in the net interest yield decreasing by 4 basis points to 2.50% for 2015.

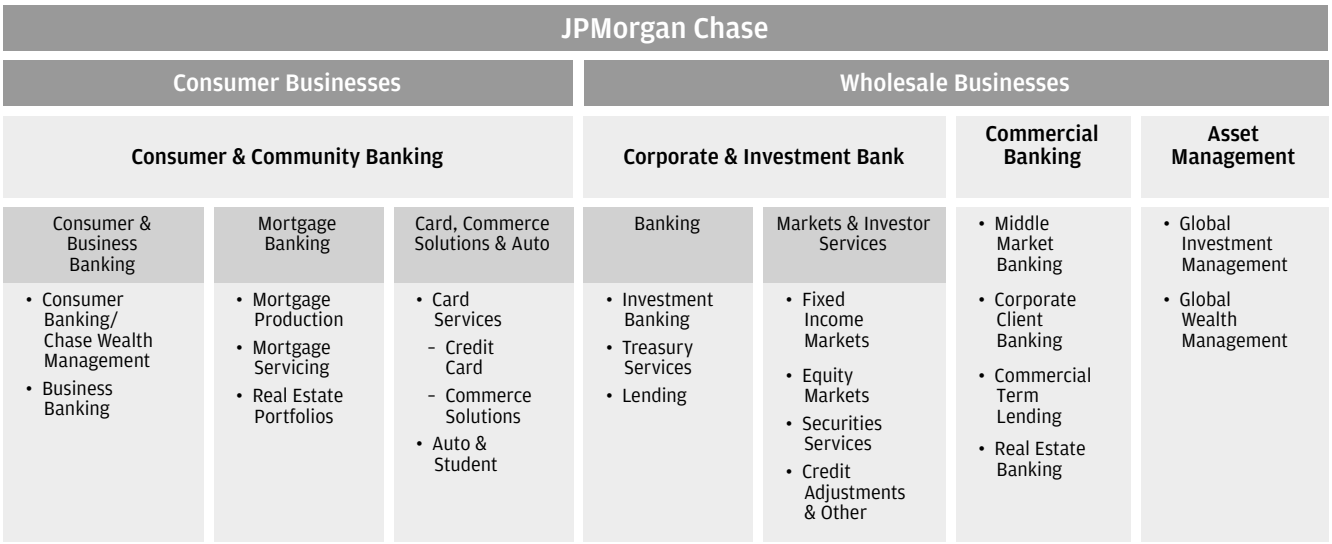
2014 compared with 2013

Net interest income excluding CIB's markets-based activities increased by $543 million in 2014 to $39.1 billion, and average interest-earning assets increased by $72.8 billion to $1.5 trillion. The increase in net interest income in 2014 predominantly reflected higher yields on investment securities, the impact of lower interest expense, and higher average loan balances. The increase was partially offset by lower yields on loans due to the run-off of higher-yielding loans and new originations of lower-yielding loans. The increase in average interest-earning assets largely reflected the impact of higher average balance of deposits with banks. These changes in net interest income and interest-earning assets resulted in the net interest yield decreasing by 9 basis points to 2.54% for 2014.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of Non-GAAP Financial Measures, on pages 80–82.



Description of business segment reporting methodology
Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies. The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing
When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing
Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Treasury group within Corporate. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment as if it were operating independently, and as compared with its stand-alone peers. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO").

Preferred stock dividend allocation
As part of its funds transfer pricing process, the Firm allocates substantially all of the cost of its outstanding preferred stock to its reportable business segments, while retaining the balance of the cost in Corporate. This cost is included as a reduction to net income applicable to common equity in order to be consistent with the presentation of firmwide results.

Business segment capital allocation changes
On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital to its lines of business and updates the equity allocations to its lines of business as refinements are implemented. Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In rules) and economic risk. The amount of capital assigned to each business is referred to as equity. For further information about line of business capital, see Line of business equity on page 156.

Expense allocation
Where business segments use services provided by corporate support units, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally allocated based on actual cost and use of services provided. In contrast, certain other costs related to corporate support

units, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Expense retained in Corporate generally includes parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align corporate support units; and other items not aligned with a particular business segment.

Segment Results – Managed Basis

The following tables summarize the business segment results for the periods indicated.

Year ended December 31,	Total net revenue			Total noninterest expense			Pre-provision profit/(loss)		
(in millions)	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Consumer & Community Banking	**$ 43,820**	$ 44,368	$ 46,537	**$ 24,909**	$ 25,609	$ 27,842	**$ 18,911**	$ 18,759	$ 18,695
Corporate & Investment Bank	**33,542**	34,595	34,712	**21,361**	23,273	21,744	**12,181**	11,322	12,968
Commercial Banking	**6,885**	6,882	7,092	**2,881**	2,695	2,610	**4,004**	4,187	4,482
Asset Management	**12,119**	12,028	11,405	**8,886**	8,538	8,016	**3,233**	3,490	3,389
Corporate	**267**	12	(22)	**977**	1,159	10,255	**(710)**	(1,147)	(10,277)
Total	**$ 96,633**	$ 97,885	$ 99,724	**$ 59,014**	$ 61,274	$ 70,467	**$ 37,619**	$ 36,611	$ 29,257

Year ended December 31,	Provision for credit losses			Net income/(loss)			Return on equity		
(in millions, except ratios)	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Consumer & Community Banking	**$ 3,059**	$ 3,520	$ 335	**$ 9,789**	$ 9,185	$ 11,061	**18%**	18%	23%
Corporate & Investment Bank	**332**	(161)	(232)	**8,090**	6,908	8,850	**12**	10	15
Commercial Banking	**442**	(189)	85	**2,191**	2,635	2,648	**15**	18	19
Asset Management	**4**	4	65	**1,935**	2,153	2,083	**21**	23	23
Corporate	**(10)**	(35)	(28)	**2,437**	864	(6,756)	**NM**	NM	NM
Total	**$ 3,827**	$ 3,139	$ 225	**$ 24,442**	$ 21,745	$ 17,886	**11%**	10%	9%

Consumer & Community Banking serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking (including Consumer Banking/Chase Wealth Management and Business Banking), Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Commerce Solutions & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card issues credit cards to consumers and small businesses, offers payment processing services to merchants, and provides auto loans and leases and student loan services.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue			
Lending- and deposit-related fees	**$ 3,137**	$ 3,039	$ 2,983
Asset management, administration and commissions	**2,172**	2,096	2,116
Mortgage fees and related income	**2,511**	3,560	5,195
Card income	**5,491**	5,779	5,785
All other income	**2,281**	1,463	1,473
Noninterest revenue	**15,592**	15,937	17,552
Net interest income	**28,228**	28,431	28,985
Total net revenue	**43,820**	44,368	46,537
Provision for credit losses	**3,059**	3,520	335
Noninterest expense			
Compensation expense	**9,770**	10,538	11,686
Noncompensation expense	**15,139**	15,071	16,156
Total noninterest expense	**24,909**	25,609	27,842
Income before income tax expense	**15,852**	15,239	18,360
Income tax expense	**6,063**	6,054	7,299
Net income	**$ 9,789**	$ 9,185	$ 11,061
Financial ratios			
Return on common equity	**18%**	18%	23%
Overhead ratio	**57**	58	60

Note: In the discussion and the tables which follow, CCB presents certain financial measures which exclude the impact of PCI loans; these are non-GAAP financial measures. For additional information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures.

2015 compared with 2014

Consumer & Community Banking net income was $9.8 billion, an increase of 7% compared with the prior year, driven by lower noninterest expense and lower provision for credit losses, largely offset by lower net revenue.

Net revenue was $43.8 billion, a decrease of 1% compared with the prior year. Net interest income was $28.2 billion, down 1%, driven by spread compression, predominantly offset by higher deposit and loan balances, and improved credit quality including lower reversals of interest and fees due to lower net charge-offs in Credit Card. Noninterest revenue was $15.6 billion, down 2%, driven by lower mortgage fees and related income, predominantly offset by higher auto lease and card sales volume, and the impact of non-core portfolio exits in Card in the prior year.

The provision for credit losses was $3.1 billion, a decrease of 13% from the prior year, reflecting lower net charge-offs, partially offset by a lower reduction in the allowance for loan losses. The current-year provision reflected a $1.0 billion reduction in the allowance for loan losses, compared with a $1.3 billion reduction in the prior year.

Noninterest expense was $24.9 billion, a decrease of 3% from the prior year, driven by lower Mortgage Banking expense.

2014 compared with 2013

Consumer & Community Banking net income was $9.2 billion, a decrease of 17% compared with the prior year, due to higher provision for credit losses and lower net revenue, partially offset by lower noninterest expense.

Net revenue was $44.4 billion, a decrease of 5% compared with the prior year. Net interest income was $28.4 billion, down 2%, driven by spread compression and lower mortgage warehouse balances, largely offset by higher deposit balances in Consumer & Business Banking and higher loan balances in Credit Card. Noninterest revenue was $16.0 billion, a decrease of 9%, driven by lower mortgage fees and related income.

The provision for credit losses was $3.5 billion, compared with $335 million in the prior year. The current-year provision reflected a $1.3 billion reduction in the allowance for loan losses and total net charge-offs of $4.8 billion. The prior-year provision reflected a $5.5 billion reduction in the allowance for loan losses and total net charge-offs of $5.8 billion.

Noninterest expense was $25.6 billion, a decrease of 8% from the prior year, driven by lower Mortgage Banking expense.

Selected metrics

As of or for the year ended December 31,

(in millions, except headcount)	2015	2014	2013
Selected balance sheet data (period-end)			
Total assets	**$ 502,652**	$ 455,634	$ 452,929
Trading assets - loans[a]	**5,953**	8,423	6,832
Loans:			
Loans retained	**445,316**	396,288	393,351
Loans held-for-sale[b]	**542**	3,416	940
Total loans	**445,858**	399,704	394,291
Core loans	**341,881**	273,494	246,751
Deposits	**557,645**	502,520	464,412
Equity[c]	**51,000**	51,000	46,000
Selected balance sheet data (average)			
Total assets	**$ 472,972**	$ 447,750	$ 456,468
Trading assets - loans[a]	**7,484**	8,040	15,603
Loans:			
Loans retained	**414,518**	389,967	392,797
Loans held-for-sale [d]	**2,062**	917	209
Total loans	**$ 416,580**	$ 390,884	$ 393,006
Core loans	**301,700**	253,803	234,135
Deposits	**530,938**	486,919	453,304
Equity[c]	**51,000**	51,000	46,000
Headcount	**127,094**	137,186	151,333

(a) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value.
(b) Included period-end credit card loans held-for-sale of $76 million, $3.0 billion and $326 million at December 31, 2015, 2014 and 2013, respectively. These amounts were excluded when calculating delinquency rates and the allowance for loan losses to period-end loans.
(c) Equity is allocated to the sub-business segments with $5.0 billion and $3.0 billion of capital in 2015 and 2014, respectively, held at the CCB level related to legacy mortgage servicing matters.
(d) Included average credit card loans held-for-sale of $1.6 billion, $509 million and $95 million for the years ended December 31, 2015, 2014 and 2013, respectively. These amounts are excluded when calculating the net charge-off rate.

Selected metrics

As of or for the year ended December 31,

(in millions, except ratios and where otherwise noted)	2015	2014	2013
Credit data and quality statistics			
Net charge-offs[a]	**$ 4,084**	$ 4,773	$ 5,826
Nonaccrual loans[b][c]	**5,313**	6,401	7,455
Nonperforming assets[b][c]	**5,635**	6,872	8,109
Allowance for loan losses[a]	**9,165**	10,404	12,201
Net charge-off rate[a]	**0.99%**	1.22%	1.48%
Net charge-off rate, excluding PCI loans	**1.10**	1.40	1.73
Allowance for loan losses to period-end loans retained	**2.06**	2.63	3.10
Allowance for loan losses to period-end loans retained, excluding PCI loans[d]	**1.59**	2.02	2.36
Allowance for loan losses to nonaccrual loans retained, excluding credit card[b][d]	**57**	58	57
Nonaccrual loans to total period-end loans, excluding credit card	**1.69**	2.38	2.80
Nonaccrual loans to total period-end loans, excluding credit card and PCI loans[b]	**1.94**	2.88	3.49
Business metrics			
Number of:			
Branches	**5,413**	5,602	5,630
ATMs	**17,777**	18,056	20,290
Active online customers (in thousands)[e]	**39,242**	36,396	33,742
Active mobile customers (in thousands)	**22,810**	19,084	15,629
CCB households (in millions)	**57.8**	57.2	56.7

(a) Net charge-offs and the net charge-off rates excluded $208 million, $533 million, and $53 million of write-offs in the PCI portfolio for the years ended December 31, 2015, 2014 and 2013, respectively. These write-offs decreased the allowance for loan losses for PCI loans. For further information on PCI write-offs, see Allowance for Credit Losses on pages 130–132.
(b) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as all of the pools are performing.
(c) At December 31, 2015, 2014 and 2013, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $6.3 billion, $7.8 billion and $8.4 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") of $290 million, $367 million and $428 million respectively, that are 90 or more days past due; (3) real estate owned ("REO") insured by U.S. government agencies of $343 million, $462 million and $2.0 billion, respectively. These amounts have been excluded based upon the government guarantee.
(d) The allowance for loan losses for PCI loans of $2.7 billion, $3.3 billion and $4.2 billion at December 31, 2015, 2014, and 2013, respectively; these amounts were also excluded from the applicable ratios.
(e) Users of all internet browsers and mobile platforms (mobile smartphone, tablet and SMS) who have logged in within the past 90 days.

Consumer & Business Banking

Selected income statement data

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue			
Lending- and deposit-related fees	**$ 3,112**	$ 3,010	$ 2,942
Asset management, administration and commissions	**2,097**	2,025	1,815
Card income	**1,721**	1,605	1,495
All other income	**611**	534	492
Noninterest revenue	**7,541**	7,174	6,744
Net interest income	**10,442**	11,052	10,668
Total net revenue	**17,983**	18,226	17,412
Provision for credit losses	**254**	305	347
Noninterest expense	**11,916**	12,149	12,162
Income before income tax expense	**5,813**	5,772	4,903
Net income	**$ 3,581**	$ 3,443	$ 2,943
Return on common equity	**30%**	31%	26%
Overhead ratio	**66**	67	70
Equity (period-end and average)	**$ 11,500**	$ 11,000	$ 11,000

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Business metrics			
Business banking origination volume	**$ 6,775**	$ 6,599	$ 5,148
Period-end loans	**22,730**	21,200	19,416
Period-end deposits:			
Checking	**246,448**	213,049	187,182
Savings	**279,897**	255,148	238,223
Time and other	**18,063**	21,349	26,022
Total period-end deposits	**544,408**	489,546	451,427
Average loans	**21,894**	20,152	18,844
Average deposits:			
Checking	**226,713**	198,996	176,005
Savings	**269,057**	249,281	229,341
Time and other	**19,452**	24,057	29,227
Total average deposits	**515,222**	472,334	434,573
Deposit margin	**1.90%**	2.21%	2.32%
Average assets	**$ 41,457**	$ 38,298	$ 37,174
Credit data and quality statistics			
Net charge-offs	**$ 253**	$ 305	$ 337
Net charge-off rate	**1.16%**	1.51%	1.79%
Allowance for loan losses	**$ 703**	$ 703	$ 707
Nonperforming assets	**270**	286	391
Retail branch business metrics			
Net new investment assets	**$ 11,852**	$ 16,088	$ 16,006
Client investment assets	**218,551**	213,459	188,840
% managed accounts	**41%**	39%	36%
Number of:			
Chase Private Client locations	**2,764**	2,514	2,149
Personal bankers	**18,041**	21,039	23,588
Sales specialists	**3,539**	3,994	5,740
Client advisors	**2,931**	3,090	3,044
Chase Private Clients	**441,369**	325,653	215,888
Accounts (in thousands)[(a)]	**31,342**	30,481	29,437

(a) Includes checking accounts and Chase Liquid® cards.

2015 compared with 2014

Consumer & Business Banking net income was $3.6 billion, an increase of 4% compared with the prior year.

Net revenue was $18.0 billion, down 1% compared with the prior year. Net interest income was $10.4 billion, down 6% due to deposit spread compression, largely offset by higher deposit balances. Noninterest revenue was $7.5 billion, up 5%, driven by higher debit card revenue, reflecting an increase in transaction volume, higher deposit-related fees as a result of an increase in customer accounts and a gain on the sale of a branch.

Noninterest expense was $11.9 billion, a decrease of 2% from the prior year, driven by lower headcount-related expense due to branch efficiencies, partially offset by higher legal expense.

2014 compared with 2013

Consumer & Business Banking net income was $3.4 billion, an increase of 17%, compared with the prior year, due to higher net revenue.

Net revenue was $18.2 billion, up 5% compared with the prior year. Net interest income was $11.1 billion, up 4% compared with the prior year, driven by higher deposit balances, largely offset by deposit spread compression. Noninterest revenue was $7.2 billion, up 6%, driven by higher investment revenue, reflecting an increase in client investment assets, higher debit card revenue, reflecting an increase in transaction volume, and higher deposit-related fees as a result of an increase in customer accounts.

Mortgage Banking

Selected Financial statement data

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue			
Mortgage fees and related income[a]	**$ 2,511**	$ 3,560	$ 5,195
All other income	**(65)**	37	283
Noninterest revenue	**2,446**	3,597	5,478
Net interest income	**4,371**	4,229	4,758
Total net revenue	**6,817**	7,826	10,236
Provision for credit losses	**(690)**	(217)	(2,681)
Noninterest expense	**4,607**	5,284	7,602
Income before income tax expense	**2,900**	2,759	5,315
Net income	**$ 1,778**	$ 1,668	$ 3,211
Return on common equity	**10%**	9%	16%
Overhead ratio	**68**	68	74
Equity (period-end and average)	**$ 16,000**	$ 18,000	$ 19,500

(a) For further information on mortgage fees and related income, see Note 17.

2015 compared with 2014

Mortgage Banking net income was $1.8 billion, an increase of 7% from the prior year, driven by lower noninterest expense and a higher benefit from the provision for credit losses, predominantly offset by lower net revenue.

Net revenue was $6.8 billion, a decrease of 13% compared with the prior year. Net interest income was $4.4 billion, an increase of 3% from the prior year, due to higher loan balances resulting from originations of high-quality loans that have been retained, partially offset by spread compression. Noninterest revenue was $2.4 billion, a decrease of 32% from the prior year. This decrease was driven by lower servicing revenue, largely as a result of lower average third-party loans serviced and lower net production revenue, reflecting a lower repurchase benefit.

The provision for credit losses was a benefit of $690 million, compared to a benefit of $217 million in the prior year, reflecting a larger reduction in the allowance for loan losses and lower net charge-offs. The current-year provision reflected a $600 million reduction in the non credit-impaired allowance for loan losses and a $375 million reduction in the purchased credit-impaired allowance for loan losses; the prior-year provision included a $400 million reduction in the non credit-impaired allowance for loan losses and a $300 million reduction in the purchased credit-impaired allowance for loan losses. These reductions were due to continued improvement in home prices and delinquencies in both periods, as well as increased granularity in the impairment estimates in the current year.

Noninterest expense was $4.6 billion, a decrease of 13% from the prior year, reflecting lower headcount-related expense and lower professional fees.

2014 compared with 2013

Mortgage Banking net income was $1.7 billion, a decrease of 48%, from the prior year, driven by a lower benefit from the provision for credit losses and lower net revenue, partially offset by lower noninterest expense.

Net revenue was $7.8 billion, a decrease of 24%, compared with the prior year. Net interest income was $4.2 billion, a decrease of 11%, driven by spread compression and lower loan balances due to portfolio runoff and lower warehouse balances. Noninterest revenue was $3.6 billion, a decrease of 34%, driven by lower net production revenue, largely reflecting lower volumes, lower servicing revenue, largely as a result of lower average third-party loans serviced, and lower revenue from an exited non-core product, largely offset by higher MSR risk management income and lower MSR asset amortization expense as a result of lower MSR asset value. See Note 17 for further information regarding changes in value of the MSR asset and related hedges, and mortgage fees and related income.

The provision for credit losses was a benefit of $217 million, compared to a benefit of $2.7 billion in the prior year, reflecting a smaller reduction in the allowance for loan losses, partially offset by lower net charge-offs. The current-year provision reflected a $400 million reduction in the non credit-impaired allowance for loan losses and $300 million reduction in the purchased credit-impaired allowance for loan losses; the prior-year provision included a $2.3 billion reduction in the non credit-impaired allowance for loan losses and a $1.5 billion reduction in the purchased credit-impaired allowance for loan losses. These reductions were due to continued improvement in home prices and delinquencies.

Noninterest expense was $5.3 billion, a decrease of 30%, from the prior year, reflecting lower headcount-related expense, the absence of non-mortgage-backed securities ("MBS") related legal expense, lower expense on foreclosure-related matters, and lower FDIC-related expense.

Supplemental information

For the year ended December 31, (in millions)	2015	2014	2013
Net interest income:			
Mortgage Production and Mortgage Servicing	**$ 575**	$ 736	$ 887
Real Estate Portfolios	**3,796**	3,493	3,871
Total net interest income	**$ 4,371**	$ 4,229	$ 4,758
Noninterest expense:			
Mortgage Production	**$ 1,491**	$ 1,644	3,083
Mortgage Servicing	**2,041**	2,267	2,966
Real Estate Portfolios	**1,075**	1,373	1,553
Total noninterest expense	**$ 4,607**	$ 5,284	$ 7,602

Selected balance sheet data

As of or for the year ended December 31, (in millions)	2015	2014	2013
Trading assets – loans (period-end)[a]	**$ 5,953**	$ 8,423	$ 6,832
Trading assets – loans (average)[a]	**7,484**	8,040	15,603
Loans, excluding PCI loans			
Period-end loans owned			
Home equity	**43,745**	50,899	57,863
Prime mortgage, including option adjustable rate mortgages ("ARMs")	**134,361**	80,414	65,213
Subprime mortgage	**3,732**	5,083	7,104
Other	**398**	477	551
Total period-end loans owned	**182,236**	136,873	130,731
Average loans owned			
Home equity	**47,216**	54,410	62,369
Prime mortgage, including option ARMs	**107,723**	71,491	61,597
Subprime mortgage	**4,434**	6,257	7,687
Other	**436**	511	588
Total average loans owned	**159,809**	132,669	132,241
PCI loans			
Period-end loans owned			
Home equity	**14,989**	17,095	18,927
Prime mortgage	**8,893**	10,220	12,038
Subprime mortgage	**3,263**	3,673	4,175
Option ARMs	**13,853**	15,708	17,915
Total period-end loans owned	**40,998**	46,696	53,055
Average loans owned			
Home equity	**16,045**	18,030	19,950
Prime mortgage	**9,548**	11,257	12,909
Subprime mortgage	**3,442**	3,921	4,416
Option ARMs	**14,711**	16,794	19,236
Total average loans owned	**43,746**	50,002	56,511
Total Mortgage Banking			
Period-end loans owned			
Home equity	**58,734**	67,994	76,790
Prime mortgage, including option ARMs	**157,107**	106,342	95,166
Subprime mortgage	**6,995**	8,756	11,279
Other	**398**	477	551
Total period-end loans owned	**223,234**	183,569	183,786
Average loans owned			
Home equity	**63,261**	72,440	82,319
Prime mortgage, including option ARMs	**131,982**	99,542	93,742
Subprime mortgage	**7,876**	10,178	12,103
Other	**436**	511	588
Total average loans owned	**203,555**	182,671	188,752

(a) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value.

Credit data and quality statistics

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Net charge-offs/(recoveries), excluding PCI loans[a]			
Home equity	**$ 283**	$ 473	$ 966
Prime mortgage, including option ARMs	**48**	28	53
Subprime mortgage	**(53)**	(27)	90
Other	**7**	9	10
Total net charge-offs/ (recoveries), excluding PCI loans	**285**	483	1,119
Net charge-off/(recovery) rate, excluding PCI loans			
Home equity	**0.60%**	0.87%	1.55%
Prime mortgage, including option ARMs	**0.04**	0.04	0.09
Subprime mortgage	**(1.22)**	(0.43)	1.17
Other	**1.61**	1.76	1.70
Total net charge-off/ (recovery) rate, excluding PCI loans	**0.18**	0.37	0.85
Net charge-off/(recovery) rate – reported[a]			
Home equity	**0.45**	0.65	1.17
Prime mortgage, including option ARMs	**0.04**	0.03	0.06
Subprime mortgage	**(0.68)**	(0.27)	0.74
Other	**1.61**	1.76	1.70
Total net charge-off/ (recovery) rate – reported	**0.14**	0.27	0.59
30+ day delinquency rate, excluding PCI loans[b][c]	**1.57**	2.61	3.55
Allowance for loan losses, excluding PCI loans	**$ 1,588**	$ 2,188	$ 2,588
Allowance for PCI loans[a]	**2,742**	3,325	4,158
Allowance for loan losses	**4,330**	5,513	6,746
Nonperforming assets[d][e]	**4,971**	6,175	7,438
Allowance for loan losses to period-end loans retained	**1.94%**	3.01%	3.68%
Allowance for loan losses to period-end loans retained, excluding PCI loans	**0.87**	1.60	1.99

(a) Net charge-offs and the net charge-off rates excluded $208 million, $533 million and $53 million of write-offs in the PCI portfolio for the years ended December 31, 2015, 2014 and 2013, respectively. These write-offs decreased the allowance for loan losses for PCI loans. For further information on PCI write-offs, see Allowance for Credit Losses on pages 130–132.

(b) At December 31, 2015, 2014 and 2013, excluded mortgage loans insured by U.S. government agencies of $8.4 billion $9.7 billion and $9.6 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee. For further discussion, see Note 14 which summarizes loan delinquency information.

(c) The 30+ day delinquency rate for PCI loans was 11.21%, 13.33% and 15.31% at December 31, 2015, 2014 and 2013, respectively.

(d) At December 31, 2015, 2014 and 2013, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $6.3 billion, $7.8 billion and $8.4 billion, respectively, that are 90 or more days past due and (2) REO insured by U.S. government agencies of $343 million, $462 million and $2.0 billion, respectively. These amounts have been excluded based upon the government guarantee.

(e) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as all of the pools are performing.

Business metrics

As of or for the year ended December 31, (in billions, except ratios)	2015	2014	2013
Mortgage origination volume by channel			
Retail	**$ 36.1**	$ 29.5	$ 77.0
Correspondent	**70.3**	48.5	88.5
Total mortgage origination volume[a]	**106.4**	78.0	165.5
Total loans serviced (period-end)	**910.1**	948.8	1,017.2
Third-party mortgage loans serviced (period-end)	**674.0**	751.5	815.5
Third-party mortgage loans serviced (average)	**715.4**	784.6	837.3
MSR carrying value (period-end)	**6.6**	7.4	9.6
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	**0.98%**	0.98%	1.18%
Ratio of annualized loan servicing-related revenue to third-party mortgage loans serviced (average)	**0.35**	0.36	0.40
MSR revenue multiple[b]	**2.80x**	2.72x	2.95x

(a) Firmwide mortgage origination volume was $115.2 billion, $83.3 billion and $176.4. billion for the years ended December 31, 2015, 2014 and 2013, respectively.

(b) Represents the ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end) divided by the ratio of loan servicing-related revenue to third-party mortgage loans serviced (average).

Mortgage servicing-related matters

The financial crisis resulted in unprecedented levels of delinquencies and defaults of 1–4 family residential real estate loans. Such loans required varying degrees of loss mitigation activities. Foreclosure is usually a last resort, and accordingly, the Firm has made, and continues to make, significant efforts to help borrowers remain in their homes.

The Firm entered into various Consent Orders and settlements with federal and state governmental agencies and private parties related to mortgage servicing, origination, and residential mortgage-backed securities activities. The requirements of these Consent Orders and settlements vary, but in the aggregate, include cash compensatory payments (in addition to fines) and/or "borrower relief," which may include principal reduction, refinancing, short sale assistance, and other specified types of borrower relief. Other obligations required under certain Consent Orders and settlements, as well as under new regulatory requirements, include enhanced mortgage servicing and foreclosure standards and processes.

On June 11, 2015, the Firm signed the Second Amended Mortgage Banking Consent Order (the "Amended OCC Consent Order") with the Office of the Comptroller of the Currency ("OCC"), which focused on ten remaining open items from the original mortgage-servicing Consent Order entered into with the OCC in April 2011 and imposed certain business restrictions on the Firm's mortgage banking activities. The Firm completed its work on those items, and on January 4, 2016, the OCC terminated the Amended OCC Consent Order and lifted the mortgage business restrictions. The Firm remains under the mortgage-servicing Consent Order entered into with the Board of Governors of the Federal Reserve System ("Federal Reserve") on April 13, 2011, as amended on February 28, 2013 (the "Federal Reserve Consent Order"). The Audit Committee of the Board of Directors will provide governance and oversight of the Federal Reserve Consent Order in 2016.

The Federal Reserve Consent Order and certain other mortgage-related settlements are the subject of ongoing reporting to various regulators and independent overseers. The Firm's compliance with certain of these settlements is detailed in periodic reports published by the independent overseers. The Firm is committed to fulfilling all of these commitments with appropriate due diligence and oversight.

Card, Commerce Solutions & Auto

Selected income statement data

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue			
Card income	**$ 3,769**	$ 4,173	$ 4,289
All other income	**1,836**	993	1,041
Noninterest revenue	**5,605**	5,166	5,330
Net interest income	**13,415**	13,150	13,559
Total net revenue	**19,020**	18,316	18,889
Provision for credit losses	**3,495**	3,432	2,669
Noninterest expense[(a)]	**8,386**	8,176	8,078
Income before income tax expense	**7,139**	6,708	8,142
Net income	**$ 4,430**	$ 4,074	$ 4,907
Return on common equity	**23%**	21%	31%
Overhead ratio	**44**	45	43
Equity (period-end and average)	**$ 18,500**	$ 19,000	$ 15,500

Note: Chase Commerce Solutions, formerly known as Merchant Services, includes Chase Paymentech, ChaseNet and Chase Offers businesses.

(a) Included operating lease depreciation expense of $1.4 billion, $1.2 billion and $972 million for the years ended December 31, 2015, 2014 and 2013, respectively.

2015 compared with 2014

Card net income was $4.4 billion, an increase of 9% compared with the prior year, driven by higher net revenue, partially offset by higher noninterest expense.

Net revenue was $19.0 billion, an increase of 4% compared with the prior year. Net interest income was $13.4 billion, up 2% from the prior year, driven by higher loan balances and improved credit quality including lower reversals of interest and fees due to lower net charge-offs in Credit Card and a reduction in the reserve for uncollectible interest and fees, partially offset by spread compression. Noninterest revenue was $5.6 billion, up 8% compared with the prior year, driven by higher auto lease and card sales volumes, the impact of non-core portfolio exits in the prior year and a gain on the investment in Square, Inc. upon its initial public offering, largely offset by the impact of renegotiated co-brand partnership agreements and higher amortization of new account origination costs.

The provision for credit losses was $3.5 billion, an increase of 2% compared with the prior year, reflecting a lower reduction in the allowance for loan losses, predominantly offset by lower net charge-offs. The current-year provision reflected a $51 million reduction in the allowance for loan losses, primarily due to runoff in the student loan portfolio. The prior-year provision included a $554 million reduction in the allowance for loan losses, primarily related to a decrease in the asset-specific allowance resulting from increased granularity of the impairment estimates and lower balances related to credit card loans modified in troubled debt restructurings ("TDRs"), runoff in the student loan portfolio and lower estimated losses in auto loans.

Noninterest expense was $8.4 billion, up 3% from the prior year, driven by higher auto lease depreciation and higher marketing expense, partially offset by lower legal expense.

2014 compared with 2013

Card net income was $4.1 billion, a decrease of 17%, compared with the prior year, predominantly driven by higher provision for credit losses and lower net revenue.

Net revenue was $18.3 billion, down 3% compared with the prior year. Net interest income was $13.2 billion, a decrease of 3% from the prior year, primarily driven by spread compression in Credit Card and Auto, partially offset by higher average loan balances. Noninterest revenue was $5.2 billion, down 3% from the prior year. The decrease was primarily driven by higher amortization of new account origination costs and the impact of non-core portfolio exits, largely offset by higher auto lease income and net interchange income from higher sales volume.

The provision for credit losses was $3.4 billion, compared with $2.7 billion in the prior year. The current-year provision reflected lower net charge-offs and a $554 million reduction in the allowance for loan losses. The reduction in the allowance for loan losses was primarily related to a decrease in the asset-specific allowance resulting from increased granularity of the impairment estimates and lower balances related to credit card loans modified in TDRs, runoff in the student loan portfolio, and lower estimated losses in auto loans. The prior-year provision included a $1.7 billion reduction in the allowance for loan losses.

Noninterest expense was $8.2 billion, up 1% from the prior year, primarily driven by higher auto lease depreciation expense and higher investment in controls, predominantly offset by lower intangible amortization and lower remediation costs.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2015	2014	2013
Selected balance sheet data (period-end)			
Loans:			
Credit Card	**$ 131,463**	$ 131,048	$ 127,791
Auto	**60,255**	54,536	52,757
Student	**8,176**	9,351	10,541
Total loans	**$ 199,894**	$ 194,935	$ 191,089
Auto operating lease assets	**9,182**	6,690	5,512
Selected balance sheet data (average)			
Total assets	**$ 206,765**	$ 202,609	$ 198,265
Loans:			
Credit Card	**125,881**	125,113	123,613
Auto	**56,487**	52,961	50,748
Student	**8,763**	9,987	11,049
Total loans	**$ 191,131**	$ 188,061	$ 185,410
Auto operating lease assets	**7,807**	6,106	5,102
Business metrics			
Credit Card, excluding Commercial Card			
Sales volume (in billions)	**$ 495.9**	$ 465.6	$ 419.5
New accounts opened	**8.7**	8.8	7.3
Open accounts	**59.3**	64.6	65.3
Accounts with sales activity	**33.8**	34.0	32.3
% of accounts acquired online	**67%**	56%	55%
Commerce Solutions			
Merchant processing volume (in billions)	**$ 949.3**	$ 847.9	$ 750.1
Total transactions (in billions)	**42.0**	38.1	35.6
Auto			
Loan and lease origination volume (in billions)	**32.4**	27.5	26.1

The following are brief descriptions of selected business metrics within Card, Commerce Solutions & Auto.

Card Services includes the Credit Card and Commerce Solutions businesses.

Commerce Solutions is a business that primarily processes transactions for merchants.

Total transactions – Number of transactions and authorizations processed for merchants.

Sales volume – Dollar amount of cardmember purchases, net of returns.

Open accounts – Cardmember accounts with charging privileges.

Accounts with sales activity – represents the number of cardmember accounts with a sales transaction within the past month.

Auto origination volume – Dollar amount of auto loans and leases originated.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Credit data and quality statistics			
Net charge-offs:			
Credit Card	**$ 3,122**	$ 3,429	$ 3,879
Auto	**214**	181	158
Student	**210**	375	333
Total net charge-offs	**$ 3,546**	$ 3,985	$ 4,370
Net charge-off rate:			
Credit Card[a]	**2.51%**	2.75%	3.14%
Auto	**0.38**	0.34	0.31
Student	**2.40**	3.75	3.01
Total net charge-off rate	**1.87**	2.12	2.36
Delinquency rates			
30+ day delinquency rate:			
Credit Card[b]	**1.43**	1.44	1.67
Auto	**1.35**	1.23	1.15
Student[c]	**1.81**	2.35	2.56
Total 30+ day delinquency rate	**1.42**	1.42	1.58
90+ day delinquency rate - Credit Card[b]	**0.72**	0.70	0.80
Nonperforming assets[d]	**$ 394**	$ 411	$ 280
Allowance for loan losses:			
Credit Card	**$ 3,434**	$ 3,439	$ 3,795
Auto & Student	**698**	749	953
Total allowance for loan losses	**$ 4,132**	$ 4,188	$ 4,748
Allowance for loan losses to period-end loans:			
Credit Card[b]	**2.61%**	2.69%	2.98%
Auto & Student	**1.02**	1.17	1.51
Total allowance for loan losses to period-end loans	**2.07**	2.18	2.49

(a) Average credit card loans included loans held-for-sale of $1.6 billion, $509 million and $95 million for the years ended December 31, 2015, 2014 and 2013, respectively. These amounts are excluded when calculating the net charge-off rate.

(b) Period-end credit card loans included loans held-for-sale of $76 million, $3.0 billion and $326 million at December 31, 2015, 2014 and 2013, respectively. These amounts were excluded when calculating delinquency rates and the allowance for loan losses to period-end loans.

(c) Excluded student loans insured by U.S. government agencies under the FFELP of $526 million, $654 million and $737 million at December 31, 2015, 2014 and 2013, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

(d) Nonperforming assets excluded student loans insured by U.S. government agencies under the FFELP of $290 million, $367 million and $428 million at December 31, 2015, 2014 and 2013, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

Card Services supplemental information

Year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue			
Noninterest revenue	**$ 3,673**	$ 3,593	$ 3,977
Net interest income	**11,845**	11,462	11,638
Total net revenue	**15,518**	15,055	15,615
Provision for credit losses	**3,122**	3,079	2,179
Noninterest expense	**6,065**	6,152	6,245
Income before income tax expense	**6,331**	5,824	7,191
Net income	**$ 3,930**	$ 3,547	$ 4,340
Percentage of average loans:			
Noninterest revenue	**2.92%**	2.87%	3.22%
Net interest income	**9.41**	9.16	9.41
Total net revenue	**12.33**	12.03	12.63

CORPORATE & INVESTMENT BANK

The Corporate & Investment Bank, which consists of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Treasury Services, which provides transaction services, consisting of cash management and liquidity solutions. Markets & Investor Services is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes Securities Services, a leading global custodian which provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

Selected income statement data

Year ended December 31, (in millions)	2015	2014	2013
Revenue			
Investment banking fees	**$ 6,736**	$ 6,570	$ 6,331
Principal transactions[a]	**9,905**	8,947	9,289
Lending- and deposit-related fees	**1,573**	1,742	1,884
Asset management, administration and commissions	**4,467**	4,687	4,713
All other income	**1,012**	1,474	1,519
Noninterest revenue	**23,693**	23,420	23,736
Net interest income	**9,849**	11,175	10,976
Total net revenue[b]	**33,542**	34,595	34,712
Provision for credit losses	**332**	(161)	(232)
Noninterest expense			
Compensation expense	**9,973**	10,449	10,835
Noncompensation expense	**11,388**	12,824	10,909
Total noninterest expense	**21,361**	23,273	21,744
Income before income tax expense	**11,849**	11,483	13,200
Income tax expense	**3,759**	4,575	4,350
Net income	**$ 8,090**	$ 6,908	$ 8,850

(a) Included FVA and debt valuation adjustment ("DVA") on OTC derivatives and structured notes, measured at fair value. FVA and DVA gains/(losses) were $687 million and $468 million and $(1.9) billion for the years ended December 31, 2015, 2014 and 2013, respectively.

(b) Included tax-equivalent adjustments, predominantly due to income tax credits related to alternative energy investments; income tax credits and amortization of the cost of investments in affordable housing projects; as well as tax-exempt income from municipal bond investments of $1.7 billion, $1.6 billion and $1.5 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2015	2014	2013
Financial ratios			
Return on common equity	**12%**	10%	15%
Overhead ratio	**64**	67	63
Compensation expense as percentage of total net revenue	**30**	30	31
Revenue by business			
Investment banking[a]	**$ 6,376**	$ 6,122	$ 5,922
Treasury Services[b]	**3,631**	3,728	3,693
Lending[b]	**1,461**	1,547	2,147
Total Banking[a]	**11,468**	11,397	11,762
Fixed Income Markets[a]	**12,592**	14,075	15,976
Equity Markets[a]	**5,694**	5,044	4,994
Securities Services	**3,777**	4,351	4,100
Credit Adjustments & Other[c]	**11**	(272)	(2,120)
Total Markets & Investor Service[a]	**22,074**	23,198	22,950
Total net revenue	**$ 33,542**	$ 34,595	$ 34,712

(a) Effective in 2015, Investment banking revenue (formerly Investment banking fees) incorporates all revenue associated with investment banking activities, and is reported net of investment banking revenue shared with other lines of business; previously such shared revenue had been reported in Fixed Income Markets and Equity Markets. Prior period amounts have been revised to conform with the current period presentation.

(b) Effective in 2015, Trade Finance revenue was transferred from Treasury Services to Lending. Prior period amounts have been revised to conform with the current period presentation.

(c) Consists primarily of credit valuation adjustments ("CVA") managed by the credit portfolio group, and FVA and DVA on OTC derivatives and structured notes. Results are presented net of associated hedging activities and net of CVA and FVA amounts allocated to Fixed Income Markets and Equity Markets.

2015 compared with 2014

Net income was $8.1 billion, up 17% compared with $6.9 billion in the prior year. The increase primarily reflected lower income tax expenses largely reflecting the release in 2015 of U.S. deferred taxes associated with the restructuring of certain non-U.S. entities and lower noninterest expense partially offset by lower net revenue, both driven by business simplification, as well as higher provisions for credit losses.

Banking revenue was $11.5 billion, up 1% versus the prior year. Investment banking revenue was $6.4 billion, up 4% from the prior year, driven by higher advisory fees, partially offset by lower debt and equity underwriting fees. Advisory fees were $2.1 billion, up 31% on a greater share of fees for completed transactions as well as growth in the industry-wide fee levels. The Firm maintained its #2 ranking for M&A, according to Dealogic. Debt underwriting fees were $3.2 billion, down 6%, primarily related to lower bond underwriting and loan syndication fees on lower industry-wide fee levels. The Firm ranked #1 globally in fee share across high grade, high yield and loan products. Equity underwriting fees were $1.4 billion, down 9%, driven by lower industry-wide fee levels. The Firm was #1 in equity underwriting fees in 2015, up from #3 in 2014. Treasury Services revenue was $3.6 billion, down 3% compared with the prior year, primarily driven by lower net interest income. Lending revenue was $1.5 billion, down 6% from the prior year, driven by lower trade finance revenue on lower loan balances.

Markets & Investor Services revenue was $22.1 billion, down 5% from the prior year. Fixed Income Markets revenue was $12.6 billion, down 11% from the prior year, primarily driven by the impact of business simplification as well as lower revenue in credit-related products on an industry-wide slowdown, partially offset by increased revenue in Rates and Currencies & Emerging Markets on higher client activity. The lower Fixed Income revenue also reflected higher interest costs on higher long-term debt. Equity Markets revenue was $5.7 billion, up 13%, primarily driven by higher equity derivatives revenue across all regions. Securities Services revenue was $3.8 billion, down 13% from the prior year, driven by lower fees as well as lower net interest income.

The provision for credit losses was $332 million, compared to a benefit of $161 million in the prior year, reflecting a higher allowance for credit losses, including the impact of select downgrades within the Oil & Gas portfolio.

Noninterest expense was $21.4 billion, down 8% compared with the prior year, driven by the impact of business simplification as well as lower legal and compensation expenses.

2014 compared with 2013

Net income was $6.9 billion, down 22% compared with $8.9 billion in the prior year. These results primarily reflected higher noninterest expense. Net revenue was $34.6 billion, flat compared with the prior year.

Banking revenue was $11.4 billion, down 3% from the prior year. Investment banking revenue was $6.1 billion, up 3% from the prior year. The increase was driven by higher advisory and equity underwriting fees, partially offset by lower debt underwriting fees. Advisory fees were $1.6 billion, up 24% on stronger share of fees for completed transactions as well as growth in the industry-wide fee levels, according to Dealogic. Equity underwriting fees were $1.6 billion, up 5%, driven by higher industry-wide issuance. Debt underwriting fees were $3.4 billion, down 4%, primarily related to lower loan syndication fees on lower industry-wide fee levels and lower bond underwriting fees. The Firm also ranked #1 globally in fees and volumes share across high grade, high yield and loan products. The Firm maintained its #2 ranking for M&A, and improved share of fees both globally and in the U.S. compared with the prior year. Treasury Services revenue was $3.7 billion, up 1% compared with the prior year, primarily driven by higher net interest income from increased deposits, largely offset by business simplification initiatives. Lending revenue was $1.5 billion, down from $2.1 billion in the prior year, driven by losses, compared with gains in the prior periods, on securities received from restructured loans, as well as lower net interest income and lower trade finance revenue.

Markets & Investor Services revenue was $23.2 billion, up 1% from the prior year. Fixed Income Markets revenue was $14.1 billion, down 12% from the prior year, driven by lower revenues in Fixed Income primarily from credit-related and rates products as well as the impact of business simplification. Equity Markets revenue was $5.0 billion, up 1% as higher prime services revenue was partially offset by lower equity derivatives revenue. Securities Services revenue was $4.4 billion, up 6% from the prior year, primarily driven by higher net interest income on increased deposits and higher fees and commissions. Credit Adjustments & Other revenue was a loss of $272 million, driven by net CVA losses partially offset by gains, net of hedges, related to FVA/DVA. The prior year was a loss of $2.1 billion (including the FVA implementation loss of $1.5 billion and DVA losses of $452 million).

Noninterest expense was $23.3 billion, up 7% compared with the prior year as a result of higher legal expense and investment in controls. This was partially offset by lower performance-based compensation expense as well as the impact of business simplification.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2015	2014	2013
Selected balance sheet data (period-end)			
Assets	**$ 748,691**	$ 861,466	$ 843,248
Loans:			
Loans retained[a]	**106,908**	96,409	95,627
Loans held-for-sale and loans at fair value	**3,698**	5,567	11,913
Total loans	**110,606**	101,976	107,540
Core Loans	**110,084**	100,772	101,376
Equity	**62,000**	61,000	56,500
Selected balance sheet data (average)			
Assets	**$ 824,208**	$ 854,712	$ 859,071
Trading assets-debt and equity instruments	**302,514**	317,535	321,585
Trading assets-derivative receivables	**67,263**	64,833	70,353
Loans:			
Loans retained[a]	**98,331**	95,764	104,864
Loans held-for-sale and loans at fair value	**4,572**	7,599	5,158
Total loans	**$ 102,903**	$ 103,363	$ 110,022
Core Loans	**99,231**	102,604	108,199
Equity	**62,000**	61,000	56,500
Headcount[b]	**49,067**	50,965	52,082

(a) Loans retained includes credit portfolio loans, loans held by consolidated Firm-administered multi-seller conduits, trade finance loans, other held-for-investment loans and overdrafts.

(b) Effective in 2015, certain technology staff were transferred from CIB to CB; previously-reported headcount has been revised to conform with the current period presentation. As the related expense for these staff is not material, prior period expenses have not been revised. Prior to 2015, compensation expense related to this headcount was recorded in the CIB, with an allocation to CB (reported in noncompensation expense); commencing with 2015, such expense is recorded as compensation expense in CB and accordingly total noninterest expense related to this headcount in both CB and CIB remains unchanged.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Credit data and quality statistics			
Net charge-offs/ (recoveries)	**$ (19)**	$ (12)	$ (78)
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**428**	110	163
Nonaccrual loans held-for-sale and loans at fair value	**10**	11	180
Total nonaccrual loans	**438**	121	343
Derivative receivables	**204**	275	415
Assets acquired in loan satisfactions	**62**	67	80
Total nonperforming assets	**704**	463	838
Allowance for credit losses:			
Allowance for loan losses	**1,258**	1,034	1,096
Allowance for lending-related commitments	**569**	439	525
Total allowance for credit losses	**1,827**	1,473	1,621
Net charge-off/(recovery) rate	**(0.02)%**	(0.01)%	0.07%
Allowance for loan losses to period-end loans retained	**1.18**	1.07	1.15
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits[b]	**1.88**	1.82	2.02
Allowance for loan losses to nonaccrual loans retained[a]	**294**	940	672
Nonaccrual loans to total period-end loans	**0.40**	0.12	0.32

(a) Allowance for loan losses of $177 million, $18 million and $51 million were held against these nonaccrual loans at December 31, 2015, 2014 and 2013, respectively.

(b) Management uses allowance for loan losses to period-end loans retained, excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio.

Business metrics

	Year ended December 31,		
(in millions)	2015	2014	2013
Advisory	**$ 2,133**	$ 1,627	$ 1,315
Equity underwriting	**1,434**	1,571	1,499
Debt underwriting	**3,169**	3,372	3,517
Total investment banking fees	**$ 6,736**	$ 6,570	$ 6,331

League table results – wallet share

Year ended December 31,	2015 Fee Share	2015 Rankings	2014 Fee Share	2014 Rankings	2013 Fee Share	2013 Rankings
Based on fees[a]						
Debt, equity and equity-related						
Global	**7.7%**	**#1**	7.6%	#1	8.3%	#1
U.S.	**11.6**	**1**	10.7	1	11.4	1
Long-term debt[b]						
Global	**8.3**	**1**	8.0	1	8.2	1
U.S.	**11.9**	**1**	11.7	1	11.5	2
Equity and equity-related						
Global[c]	**7.0**	**1**	7.1	3	8.4	2
U.S.	**11.1**	**1**	9.6	3	11.2	2
M&A[d]						
Global	**8.5**	**2**	8.0	2	7.5	2
U.S.	**10.0**	**2**	9.7	2	8.7	2
Loan syndications						
Global	**7.6**	**1**	9.3	1	9.9	1
U.S.	**10.7**	**2**	13.1	1	13.8	1
Global Investment Banking fees[a][e]	**7.9%**	**#1**	8.0%	#1	8.5%	#1

League table results – volumes

Year ended December 31,	2015 Market Share	2015 Rankings	2014 Market Share	2014 Rankings	2013 Market Share	2013 Rankings
Based on volume[f]						
Debt, equity and equity-related						
Global	**6.8%**	**#1**	6.8%	#1	7.3%	#1
U.S.	**11.3**	**1**	11.8	1	11.9	1
Long-term debt[b]						
Global	**6.8**	**1**	6.7	1	7.2	1
U.S.	**10.8**	**1**	11.3	1	11.8	1
Equity and equity-related						
Global[c]	**7.2**	**3**	7.5	3	8.2	2
U.S.	**12.4**	**1**	11.0	2	12.1	2
M&A announced[d]						
Global	**30.1**	**3**	20.5	2	24.1	2
U.S.	**36.7**	**2**	25.2	3	36.9	1
Loan syndications						
Global	**10.5**	**1**	12.3	1	11.6	1
U.S.	**16.8**	**#1**	19.0	#1	17.8	#1

(a) Source: Dealogic. Reflects the ranking of revenue wallet and market share.
(b) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and MBS; and exclude money market, short-term debt, and U.S. municipal securities.
(c) Global equity and equity-related rankings include rights offerings and Chinese A-Shares.
(d) M&A and Announced M&A rankings reflect the removal of any withdrawn transactions. U.S. M&A revenue wallet represents wallet from client parents based in the U.S. U.S. announced M&A volumes represents any U.S. involvement ranking.
(e) Global investment banking fees per Dealogic exclude money market, short-term debt and shelf deals.
(f) Source: Dealogic. Reflects transaction volume and market share. Global announced M&A is based on transaction value at announcement; because of joint M&A assignments, M&A market share of all participants will add up to more than 100%. All other transaction volume-based rankings are based on proceeds, with full credit to each book manager/equal if joint.

Business metrics

As of or for the year ended December 31, (in millions, except where otherwise noted)	2015	2014	2013
Market risk-related revenue – trading loss days[a]	**9**	9	0
Assets under custody ("AUC") by asset class (period-end) in billions:			
Fixed Income	**$ 12,042**	$ 12,328	$ 11,903
Equity	**6,194**	6,524	6,913
Other[b]	**1,707**	1,697	1,669
Total AUC	**$ 19,943**	$ 20,549	$ 20,485
Client deposits and other third party liabilities (average)[c]	**$ 395,297**	$ 417,369	$ 383,667
Trade finance loans (period-end)	**19,255**	25,713	30,752

(a) Market risk-related revenue is defined as the change in value of: principal transactions revenue; trading-related net interest income; brokerage commissions, underwriting fees or other revenue; and revenue from syndicated lending facilities that the Firm intends to distribute; gains and losses from DVA and FVA are excluded. Market risk-related revenue–trading loss days represent the number of days for which the CIB posted losses under this measure. The loss days determined under this measure differ from the loss days that are determined based on the disclosure of market risk-related gains and losses for the Firm in the value-at-risk ("VaR") back-testing discussion on pages 135–137.
(b) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.
(c) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses.

International metrics

Year ended December 31, (in millions)	2015	2014	2013
Total net revenue[a]			
Europe/Middle East/Africa	**$ 10,894**	$ 11,598	$ 10,689
Asia/Pacific	**4,901**	4,698	4,736
Latin America/Caribbean	**1,096**	1,179	1,340
Total international net revenue	**16,891**	17,475	16,765
North America	**16,651**	17,120	17,947
Total net revenue	**$ 33,542**	$ 34,595	$ 34,712
Loans (period-end)[a]			
Europe/Middle East/Africa	**$ 24,622**	$ 27,155	$ 29,392
Asia/Pacific	**17,108**	19,992	22,151
Latin America/Caribbean	**8,609**	8,950	8,362
Total international loans	**50,339**	56,097	59,905
North America	**56,569**	40,312	35,722
Total loans	**$ 106,908**	$ 96,409	$ 95,627
Client deposits and other third-party liabilities (average)[a]			
Europe/Middle East/Africa	**$ 141,062**	$ 152,712	$ 143,807
Asia/Pacific	**67,111**	66,933	54,428
Latin America/Caribbean	**23,070**	22,360	15,301
Total international	**$ 231,243**	$ 242,005	$ 213,536
North America	**164,054**	175,364	170,131
Total client deposits and other third-party liabilities	**$ 395,297**	$ 417,369	$ 383,667
AUC (period-end) (in billions)[a]			
North America	**$ 12,034**	$ 11,987	$ 11,299
All other regions	**7,909**	8,562	9,186
Total AUC	**$ 19,943**	$ 20,549	$ 20,485

(a) Total net revenue is based predominantly on the domicile of the client or location of the trading desk, as applicable. Loans outstanding (excluding loans held-for-sale and loans at fair value), client deposits and other third-party liabilities, and AUC are based predominantly on the domicile of the client.

Commercial Banking delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. In addition, CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Selected income statement data

Year ended December 31, (in millions)	2015	2014	2013
Revenue			
Lending- and deposit-related fees	**$ 944**	$ 978	$ 1,033
Asset management, administration and commissions	**88**	92	116
All other income[a]	**1,333**	1,279	1,149
Noninterest revenue	**2,365**	2,349	2,298
Net interest income	**4,520**	4,533	4,794
Total net revenue[b]	**6,885**	6,882	7,092
Provision for credit losses	**442**	(189)	85
Noninterest expense			
Compensation expense	**1,238**	1,203	1,115
Noncompensation expense	**1,643**	1,492	1,495
Total noninterest expense	**2,881**	2,695	2,610
Income before income tax expense	**3,562**	4,376	4,397
Income tax expense	**1,371**	1,741	1,749
Net income	**$ 2,191**	$ 2,635	$ 2,648

(a) Includes revenue from investment banking products and commercial card transactions.

(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities, as well as tax-exempt income from municipal bond activities of $493 million, $462 million and $407 million for the years ended December 31, 2015, 2014 and 2013, respectively.

2015 compared with 2014

Net income was $2.2 billion, a decrease of 17% compared with the prior year, driven by a higher provision for credit losses and higher noninterest expense.

Net revenue was $6.9 billion, flat compared with the prior year. Net interest income was $4.5 billion, flat compared with the prior year, with interest income from higher loan balances offset by spread compression. Noninterest revenue was $2.4 billion, flat compared with the prior year, with higher investment banking revenue offset by lower lending-related fees.

Noninterest expense was $2.9 billion, an increase of 7% compared with the prior year, reflecting investment in controls.

The provision for credit losses was $442 million, reflecting an increase in the allowance for credit losses for Oil & Gas exposure and other select downgrades. The prior year was a benefit of $189 million.

2014 compared with 2013

Net income was $2.6 billion, flat compared with the prior year, reflecting lower net revenue and higher noninterest expense, predominantly offset by a lower provision for credit losses.

Net revenue was $6.9 billion, a decrease of 3% compared with the prior year. Net interest income was $4.5 billion, a decrease of 5%, reflecting spread compression, the absence of proceeds received in the prior year from a lending-related workout, and lower purchase discounts recognized on loan repayments, partially offset by higher loan balances. Noninterest revenue was $2.3 billion, up 2%, reflecting higher investment banking revenue, largely offset by business simplification and lower lending fees.

Noninterest expense was $2.7 billion, an increase of 3% from the prior year, largely reflecting investments in controls.

CB product revenue consists of the following:

Lending includes a variety of financing alternatives, which are primarily provided on a secured basis; collateral includes receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, and standby letters of credit.

Treasury services includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

Investment banking includes revenue from a range of products providing CB clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from Fixed Income and Equity Markets products used by CB clients is also included. Investment banking revenue, gross, represents total revenue related to investment banking products sold to CB clients.

Other product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activities and certain income derived from principal transactions.

CB is divided into four primary client segments: Middle Market Banking, Corporate Client Banking, Commercial Term Lending, and Real Estate Banking.

Middle Market Banking covers corporate, municipal and nonprofit clients, with annual revenue generally ranging between $20 million and $500 million.

Corporate Client Banking covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs.

Commercial Term Lending primarily provides term financing to real estate investors/owners for multifamily properties as well as office, retail and industrial properties.

Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate investment properties.

Other primarily includes lending and investment-related activities within the Community Development Banking business.

Selected metrics

Year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue by product			
Lending[a]	**$ 3,429**	$ 3,358	$ 3,730
Treasury services[a]	**2,581**	2,681	2,649
Investment banking	**730**	684	575
Other[a]	**145**	159	138
Total Commercial Banking net revenue	**$ 6,885**	$ 6,882	$ 7,092
Investment banking revenue, gross	**$ 2,179**	$ 1,986	$ 1,676
Revenue by client segment			
Middle Market Banking[b]	**$ 2,742**	$ 2,791	$ 3,015
Corporate Client Banking[b]	**2,012**	1,982	1,911
Commercial Term Lending	**1,275**	1,252	1,239
Real Estate Banking	**494**	495	561
Other	**362**	362	366
Total Commercial Banking net revenue	**$ 6,885**	$ 6,882	$ 7,092
Financial ratios			
Return on common equity	**15%**	18%	19%
Overhead ratio	**42**	39	37

(a) Effective in 2015, Commercial Card and Chase Commerce Solutions product revenue was transferred from Lending and Other, respectively, to Treasury Services. Prior period amounts were revised to conform with the current period presentation.

(b) Effective in 2015, mortgage warehouse lending clients were transferred from Middle Market Banking to Corporate Client Banking. Prior period revenue, period-end loans, and average loans by client segment were revised to conform with the current period presentation.

Selected metrics (continued)

As of or for the year ended December 31, (in millions, except headcount)	2015	2014	2013
Selected balance sheet data (period-end)			
Total assets	**$ 200,700**	$ 195,267	$ 190,782
Loans:			
Loans retained	**167,374**	147,661	135,750
Loans held-for-sale and loans at fair value	**267**	845	1,388
Total loans	**$ 167,641**	$ 148,506	$ 137,138
Core loans	**166,939**	147,392	135,583
Equity	**14,000**	14,000	13,500
Period-end loans by client segment			
Middle Market Banking[a]	**$ 51,362**	$ 51,009	$ 50,702
Corporate Client Banking[a]	**31,871**	25,321	22,512
Commercial Term Lending	**62,860**	54,038	48,925
Real Estate Banking	**16,211**	13,298	11,024
Other	**5,337**	4,840	3,975
Total Commercial Banking loans	**$ 167,641**	$ 148,506	$ 137,138
Selected balance sheet data (average)			
Total assets	**$ 198,076**	$ 191,857	$ 185,776
Loans:			
Loans retained	**157,389**	140,982	131,100
Loans held-for-sale and loans at fair value	**492**	782	930
Total loans	**$ 157,881**	$ 141,764	$ 132,030
Core loans	**156,975**	140,390	130,141
Client deposits and other third-party liabilities	**191,529**	204,017	198,356
Equity	**14,000**	14,000	13,500
Average loans by client segment			
Middle Market Banking[a]	**$ 51,303**	$ 50,939	$ 50,236
Corporate Client Banking[a]	**29,125**	23,113	22,512
Commercial Term Lending	**58,138**	51,120	45,989
Real Estate Banking	**14,320**	12,080	9,582
Other	**4,995**	4,512	3,711
Total Commercial Banking loans	**$ 157,881**	$ 141,764	$ 132,030
Headcount[b]	**7,845**	7,426	7,016

(a) Effective in 2015, mortgage warehouse lending clients were transferred from Middle Market Banking to Corporate Client Banking. Prior period revenue, period-end loans, and average loans by client segment were revised to conform with the current period presentation.

(b) Effective in 2015, certain technology staff were transferred from CIB to CB; previously-reported headcount has been revised to conform with the current period presentation. As the related expense for these staff is not material, prior period expenses have not been revised. Prior to 2015, compensation expense related to this headcount was recorded in the CIB, with an allocation to CB (reported in noncompensation expense); commencing with 2015, such expense is recorded as compensation expense in CB and accordingly total noninterest expense related to this headcount in both CB and CIB remains unchanged.

Selected metrics (continued)

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ 21**	$ (7)	$ 43
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**375**	317	471
Nonaccrual loans held-for-sale and loans at fair value	**18**	14	43
Total nonaccrual loans	**393**	331	514
Assets acquired in loan satisfactions	**8**	10	15
Total nonperforming assets	**401**	341	529
Allowance for credit losses:			
Allowance for loan losses	**2,855**	2,466	2,669
Allowance for lending-related commitments	**198**	165	142
Total allowance for credit losses	**3,053**	2,631	2,811
Net charge-off/(recovery) rate[b]	**0.01%**	–%	0.03%
Allowance for loan losses to period-end loans retained	**1.71**	1.67	1.97
Allowance for loan losses to nonaccrual loans retained[a]	**761**	778	567
Nonaccrual loans to period-end total loans	**0.23**	0.22	0.37

(a) An allowance for loan losses of $64 million, $45 million and $81 million was held against nonaccrual loans retained at December 31, 2015, 2014 and 2013, respectively.

(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.

ASSET MANAGEMENT

Asset Management, with client assets of $2.4 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in many major markets throughout the world. AM offers investment management across most major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For Global Wealth Management clients, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios and headcount)	2015	2014	2013
Revenue			
Asset management, administration and commissions	**$ 9,175**	$ 9,024	$ 8,232
All other income	**388**	564	797
Noninterest revenue	**9,563**	9,588	9,029
Net interest income	**2,556**	2,440	2,376
Total net revenue	**12,119**	12,028	11,405
Provision for credit losses	**4**	4	65
Noninterest expense			
Compensation expense	**5,113**	5,082	4,875
Noncompensation expense	**3,773**	3,456	3,141
Total noninterest expense	**8,886**	8,538	8,016
Income before income tax expense	**3,229**	3,486	3,324
Income tax expense	**1,294**	1,333	1,241
Net income	**$ 1,935**	$ 2,153	$ 2,083
Revenue by line of business			
Global Investment Management	**$ 6,301**	$ 6,327	$ 5,951
Global Wealth Management	**5,818**	5,701	5,454
Total net revenue	**$12,119**	$12,028	$11,405
Financial ratios			
Return on common equity	**21%**	23%	23%
Overhead ratio	**73**	71	70
Pretax margin ratio:			
Global Investment Management	**31**	31	32
Global Wealth Management	**22**	27	26
Asset Management	**27**	29	29
Headcount	**20,975**	19,735	20,048
Number of client advisors	**2,778**	2,836	2,962

2015 compared with 2014

Net income was $1.9 billion, a decrease of 10% compared with the prior year, reflecting higher noninterest expense, partially offset by higher net revenue.

Net revenue was $12.1 billion, an increase of 1%. Net interest income was $2.6 billion, up 5%, driven by higher loan balances and spreads. Noninterest revenue was $9.6 billion, flat from last year, as net client inflows into assets under management and the impact of higher average market levels were predominantly offset by lower performance fees and the sale of Retirement Plan Services ("RPS") in 2014.

Revenue from Global Investment Management was $6.3 billion, flat from the prior year as the sale of RPS in 2014 and lower performance fees were largely offset by net client inflows. Revenue from Global Wealth Management was $5.8 billion, up 2% from the prior year due to higher net interest income from higher loan balances and spreads and net client inflows, partially offset by lower brokerage revenue.

Noninterest expense was $8.9 billion, an increase of 4%, predominantly due to higher legal expense and investment in both infrastructure and controls.

2014 compared with 2013

Net income was $2.2 billion, an increase of 3% from the prior year, reflecting higher net revenue and lower provision for credit losses, predominantly offset by higher noninterest expense.

Net revenue was $12.0 billion, an increase of 5% from the prior year. Noninterest revenue was $9.6 billion, up 6% from the prior year due to net client inflows and the effect of higher market levels, partially offset by lower valuations of seed capital investments. Net interest income was $2.4 billion, up 3% from the prior year due to higher loan and deposit balances, largely offset by spread compression.

Revenue from Global Investment Management was $6.3 billion, up 6% due to net client inflows and the effect of higher market levels, partially offset by lower valuations of seed capital investments. Revenue from Global Wealth Management was $5.7 billion, up 5% from the prior year due to higher net interest income from loan and deposit balances and net client inflows, partially offset by spread compression and lower brokerage revenue.

Noninterest expense was $8.5 billion, an increase of 7% from the prior year as the business continues to invest in both infrastructure and controls.

AM's lines of business consist of the following:

Global Investment Management provides comprehensive global investment services, including asset management, pension analytics, asset-liability management and active risk-budgeting strategies.

Global Wealth Management offers investment advice and wealth management, including investment management, capital markets and risk management, tax and estate planning, banking, lending and specialty-wealth advisory services.

AM's client segments consist of the following:

Private Banking clients include high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide.

Institutional clients include both corporate and public institutions, endowments, foundations, nonprofit organizations and governments worldwide.

Retail clients include financial intermediaries and individual investors.

J.P. Morgan Asset Management has two high-level measures of its overall fund performance.

- **Percentage of mutual fund assets under management in funds rated 4- or 5-star:** Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best rating and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22.5% of industry-wide ranked funds. A 3-star rating represents the next 35% of industry-wide ranked funds. A 2-star rating represents the next 22.5% of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom 10% of industry-wide ranked funds. The "overall Morningstar rating" is derived from a weighted average of the performance associated with a fund's three-, five- and ten-year (if applicable) Morningstar Rating metrics. For U.S. domiciled funds, separate star ratings are given at the individual share class level. The Nomura "star rating" is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and hence excluded from this analysis. All ratings, the assigned peer categories and the asset values used to derive this analysis are sourced from these fund rating providers mentioned in footnote (a). The data providers re-denominate the asset values into U.S. dollars. This % of AUM is based on star ratings at the share class level for U.S. domiciled funds, and at a "primary share class" level to represent the star rating of all other funds except for Japan where Nomura provides ratings at the fund level. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results.
- **Percentage of mutual fund assets under management in funds ranked in the 1st or 2nd quartile (one, three and five years):** All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from the fund ranking providers mentioned in footnote (b). Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers re-denominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results.

Selected metrics

As of or for the year ended December 31, (in millions, except ranking data and ratios)	2015	2014	2013
% of JPM mutual fund assets rated as 4- or 5-star[a]	**53%**	52%	49%
% of JPM mutual fund assets ranked in 1st or 2nd quartile:[b]			
1 year	**62**	72	68
3 years	**78**	72	68
5 years	**80**	76	69
Selected balance sheet data (period-end)			
Total assets	**$ 131,451**	$ 128,701	$ 122,414
Loans[c]	**111,007**	104,279	95,445
Core loans	**111,007**	104,279	95,445
Deposits	**146,766**	155,247	146,183
Equity	**9,000**	9,000	9,000
Selected balance sheet data (average)			
Total assets	**$ 129,743**	$ 126,440	$ 113,198
Loans	**107,418**	99,805	86,066
Core loans	**107,418**	99,805	86,066
Deposits	**149,525**	150,121	139,707
Equity	**9,000**	9,000	9,000
Credit data and quality statistics			
Net charge-offs	**$ 12**	$ 6	$ 40
Nonaccrual loans	**218**	218	167
Allowance for credit losses:			
Allowance for loan losses	**266**	271	278
Allowance for lending-related commitments	**5**	5	5
Total allowance for credit losses	**271**	276	283
Net charge-off rate	**0.01%**	0.01%	0.05%
Allowance for loan losses to period-end loans	**0.24**	0.26	0.29
Allowance for loan losses to nonaccrual loans	**122**	124	166
Nonaccrual loans to period-end loans	**0.20**	0.21	0.17

(a) Represents the "overall star rating" derived from Morningstar for the U.S., the U.K., Luxembourg, Hong Kong and Taiwan domiciled funds; and Nomura "star rating" for Japan domiciled funds. Includes only Global Investment Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds.

(b) Quartile ranking sourced from: Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Global Investment Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds.

(c) Included $26.6 billion, $22.1 billion and $18.9 billion of prime mortgage loans reported in the Consumer, excluding credit card, loan portfolio at December 31, 2015, 2014 and 2013, respectively.

Client assets

2015 compared with 2014

Client assets were $2.4 trillion, a decrease of 2% compared with the prior year. Assets under management were $1.7 trillion, a decrease of 1% from the prior year due to the effect of lower market levels partially offset by net inflows to long-term products.

2014 compared with 2013

Client assets were $2.4 trillion, an increase of 2% compared with the prior year. Excluding the sale of Retirement Plan Services, client assets were up 8% compared with the prior year. Assets under management were $1.7 trillion, an increase of 9% from the prior year due to net inflows to long-term products and the effect of higher market levels.

Client assets

December 31, (in billions)	2015	2014	2013
Assets by asset class			
Liquidity	**$ 464**	$ 461	$ 451
Fixed income	**342**	359	330
Equity	**353**	375	370
Multi-asset and alternatives	**564**	549	447
Total assets under management	**1,723**	1,744	1,598
Custody/brokerage/ administration/deposits	**627**	643	745
Total client assets	**$ 2,350**	$ 2,387	$ 2,343
Memo:			
Alternatives client assets[a]	**172**	166	158
Assets by client segment			
Private Banking	**$ 437**	$ 428	$ 361
Institutional	**816**	827	777
Retail	**470**	489	460
Total assets under management	**$ 1,723**	$ 1,744	$ 1,598
Private Banking	**$ 1,050**	$ 1,057	$ 977
Institutional	**824**	835	777
Retail	**476**	495	589
Total client assets	**$ 2,350**	$ 2,387	$ 2,343

(a) Represents assets under management, as well as client balances in brokerage accounts.

Client assets (continued)

Year ended December 31, (in billions)	2015	2014	2013
Assets under management rollforward			
Beginning balance	**$ 1,744**	$ 1,598	$ 1,426
Net asset flows:			
Liquidity	**(1)**	18	(4)
Fixed income	**(7)**	33	8
Equity	**1**	5	34
Multi-asset and alternatives	**22**	42	48
Market/performance/other impacts	**(36)**	48	86
Ending balance, December 31	**$ 1,723**	$ 1,744	$ 1,598
Client assets rollforward			
Beginning balance	**$ 2,387**	$ 2,343	$ 2,095
Net asset flows	**27**	118	80
Market/performance/other impacts	**(64)**	(74)	168
Ending balance, December 31	**$ 2,350**	$ 2,387	$ 2,343

International metrics

Year ended December 31, (in billions, except where otherwise noted)	2015	2014	2013
Total net revenue (in millions)[a]			
Europe/Middle East/Africa	**$ 1,946**	$ 2,080	$ 1,881
Asia/Pacific	**1,130**	1,199	1,133
Latin America/Caribbean	**795**	841	879
Total international net revenue	**3,871**	4,120	3,893
North America	**8,248**	7,908	7,512
Total net revenue	**$ 12,119**	$ 12,028	$ 11,405
Assets under management			
Europe/Middle East/Africa	**$ 302**	$ 329	$ 305
Asia/Pacific	**123**	126	132
Latin America/Caribbean	**45**	46	47
Total international assets under management	**470**	501	484
North America	**1,253**	1,243	1,114
Total assets under management	**$ 1,723**	$ 1,744	$ 1,598
Client assets			
Europe/Middle East/Africa	**$ 351**	$ 391	$ 367
Asia/Pacific	**173**	174	180
Latin America/Caribbean	**110**	115	117
Total international client assets	**634**	680	664
North America	**1,716**	1,707	1,679
Total client assets	**$ 2,350**	$ 2,387	$ 2,343

(a) Regional revenue is based on the domicile of the client.

The Corporate segment consists of Treasury and Chief Investment Office ("CIO") and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Enterprise Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm's occupancy and pension-related expenses that are subject to allocation to the businesses.

Selected income statement data

Year ended December 31, (in millions, except headcount)	2015	2014	2013
Revenue			
Principal transactions	**$ 41**	$ 1,197	$ 563
Securities gains	**190**	71	666
All other income	**569**	704	1,864
Noninterest revenue	**800**	1,972	3,093
Net interest income[a]	**(533)**	(1,960)	(3,115)
Total net revenue	**267**	12	(22)
Provision for credit losses	**(10)**	(35)	(28)
Noninterest expense[b]	**977**	1,159	10,255
Loss before income tax benefit	**(700)**	(1,112)	(10,249)
Income tax benefit	**(3,137)**	(1,976)	(3,493)
Net income/(loss)	**$ 2,437**	$ 864	$ (6,756)
Total net revenue			
Treasury and CIO	**(493)**	(1,317)	(2,068)
Other Corporate [c]	**760**	1,329	2,046
Total net revenue	**$ 267**	$ 12	$ (22)
Net income/(loss)			
Treasury and CIO	**(235)**	(1,165)	(1,454)
Other Corporate [c]	**2,672**	2,029	(5,302)
Total net income/(loss)	**$ 2,437**	$ 864	$ (6,756)
Selected balance sheet data (period-end)			
Total assets (period-end)	**$768,204**	$ 931,206	$ 805,506
Loans	**2,187**	2,871	4,004
Core loans[d]	**2,182**	2,848	3,958
Headcount	**29,617**	26,047	20,717

(a) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $839 million, $730 million and $480 million for the years ended December 31, 2015, 2014 and 2013, respectively.

(b) Included legal expense of $832 million, $821 million and $10.2 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

(c) Effective in 2015, the Firm began including the results of Private Equity in the Other Corporate line within the Corporate segment. Prior period amounts have been revised to conform with the current period presentation. The Corporate segment's balance sheets and results of operations were not impacted by this reporting change.

(d) Average core loans were $2.5 billion, $3.3 billion and $5.2 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

2015 compared with 2014

Net income was $2.4 billion, compared with net income of $864 million in the prior year.

Net revenue was $267 million, compared with $12 million in the prior year. The current year included a $514 million benefit from a legal settlement. Treasury and CIO included a benefit of approximately $178 million associated with recognizing the unamortized discount on certain debt securities which were called at par and a $173 million pretax loss primarily related to accelerated amortization of cash flow hedges associated with the exit of certain non-operating deposits. Private Equity gains were $1.2 billion lower compared with the prior year, reflecting lower valuation gains and lower net gains on sales as the Firm exits this non-core business.

Noninterest expense was $977 million, a decrease of $182 million from the prior year which had included a $276 million goodwill impairment related to the sale of a portion of the Private Equity business.

The current year reflected tax benefits of $2.6 billion predominantly from the resolution of various tax audits compared with tax benefits of $1.1 billion in the prior year.

2014 compared with 2013

Net income was $864 million, compared to a net loss of $6.8 billion in the prior year.

Net revenue was $12 million compared to a net loss of $22 million in the prior year. Current year net interest income was a loss of $2 billion compared to a loss of $3.1 billion in the prior year, primarily reflecting higher yields on investment securities. Securities gains were $71 million, compared with $659 million in the prior year, reflecting lower repositioning activity of the investment securities portfolio in the current period.

Private Equity gains were $540 million higher compared with the prior year reflecting higher net gains on sales. Prior year net revenue also included gains of $1.3 billion and $493 million on the sales of Visa shares and One Chase Manhattan Plaza, respectively.

Noninterest expense was $1.2 billion, a decrease of $9.1 billion due to a decrease in reserves for litigation and regulatory proceedings in the prior year partially offset by the impact of a $276 million goodwill impairment related to the sale of a portion of the Private Equity business.

Treasury and CIO overview

Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's four major reportable business segments to serve their respective client bases, which generate both on- and off-balance sheet assets and liabilities.

Treasury and CIO achieve the Firm's asset-liability management objectives generally by investing in high-quality securities that are managed for the longer-term as part of the Firm's investment securities portfolio. Treasury and CIO also use derivatives to meet the Firm's asset-liability management objectives. For further information on derivatives, see Note 6. The investment securities portfolio primarily consists of U.S. and non-U.S. government securities, agency and nonagency mortgage-backed securities, other asset-backed securities, corporate debt securities and obligations of U.S. states and municipalities. At December 31, 2015, the investment securities portfolio was $287.8 billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available and where not available, based primarily upon internal ratings that correspond to ratings as defined by S&P and Moody's). See Note 12 for further information on the details of the Firm's investment securities portfolio.

For further information on liquidity and funding risk, see Liquidity Risk Management on pages 159–164. For information on interest rate, foreign exchange and other risks, Treasury and CIO VaR and the Firm's earnings-at-risk, see Market Risk Management on pages 133–139.

Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	2015	2014	2013
Securities gains	**$ 190**	$ 71	$ 659
Investment securities portfolio (average) [a]	**314,802**	349,285	353,712
Investment securities portfolio (period-end)[b]	**287,777**	343,146	347,562
Mortgage loans (average)	**2,501**	3,308	5,145
Mortgage loans (period-end)	**2,136**	2,834	3,779

(a) Average investment securities included held-to-maturity balances of $50.0 billion and $47.2 billion for the years ended December 31, 2015 and 2014 respectively. The held-to-maturity balance for full year 2013 was not material.

(b) Period-end investment securities included held-to-maturity securities of $49.1 billion, $49.3 billion, $24.0 billion at December 31, 2015, 2014 and 2013, respectively.

Private equity portfolio information[a]

December 31, (in millions)	2015	2014	2013
Carrying value	**$ 2,103**	$ 5,866	$ 7,868
Cost	**3,798**	6,281	8,491

(a) For more information on the Firm's methodologies regarding the valuation of the Private Equity portfolio, see Note 3. For information on the sale of a portion of the Private Equity business completed on January 9, 2015, see Note 2.

2015 compared with 2014

The carrying value of the private equity portfolio at December 31, 2015 was $2.1 billion, down from $5.9 billion at December 31, 2014, driven by the sale of a portion of the Private Equity business.

2014 compared with 2013

The carrying value of the private equity portfolio at December 31, 2014 was $5.9 billion, down from $7.9 billion at December 31, 2013. The decrease in the portfolio was predominantly driven by sales of investments, partially offset by unrealized gains.

ENTERPRISE-WIDE RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase's business activities. When the Firm extends a consumer or wholesale loan, advises customers on their investment decisions, makes markets in securities, or offers other products or services, the Firm takes on some degree of risk. The Firm's overall objective is to manage its businesses, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors and protects the safety and soundness of the Firm.

Firmwide Risk Management is overseen and managed on an enterprise-wide basis. The Firm's approach to risk management covers a broad spectrum of risk areas, such as credit, market, liquidity, model, structural interest rate, principal, country, operational, compliance, legal, capital and reputation risk, with controls and governance established for each area, as appropriate.

The Firm believes that effective risk management requires:

- Acceptance of responsibility, including identification and escalation of risk issues, by all individuals within the Firm;
- Ownership of risk management within each of the lines of business and corporate functions; and
- Firmwide structures for risk governance.

The Firm's Operating Committee, which consists of the Firm's Chief Executive Officer ("CEO"), Chief Risk Officer ("CRO") and other senior executives, is responsible for developing and executing the Firm's risk management framework. The framework is intended to provide controls and ongoing management of key risks inherent in the Firm's business activities and create a culture of transparency, awareness and personal responsibility through reporting, collaboration, discussion, escalation and sharing of information. The Operating Committee is responsible and accountable to the Firm's Board of Directors.

The Firm strives for continual improvement through ongoing employee training and development, as well as talent retention. The Firm follows a disciplined and balanced compensation framework with strong internal governance and independent Board oversight. The impact of risk and control issues are carefully considered in the Firm's performance evaluation and incentive compensation processes. The Firm is also engaged in a number of activities focused on conduct risk and in regularly evaluating its culture with respect to its business principles.

The following sections outline the key risks that are inherent in the Firm's business activities.

Risk	Definition	Select risk management metrics	Page references
Capital risk	The risk the Firm has an insufficient level and composition of capital to support the Firm's business activities and associated risks during normal economic environments and stressed conditions.	Risk-based capital ratios; supplementary leverage ratio; stress	149–158
Compliance risk	The risk of failure to comply with applicable laws, rules, and regulations.	Various metrics related to market conduct, Bank Secrecy Act/Anti-Money Laundering ("BSA/AML"), employee compliance, fiduciary, privacy and information risk	147
Country risk	The risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers or adversely affects markets related to a particular country.	Default exposure at 0% recovery; stress; risk ratings; ratings based capital limits	140–141
Credit risk	The risk of loss arising from the default of a customer, client or counterparty.	Total exposure; industry, geographic and customer concentrations; risk ratings; delinquencies; loss experience; stress	112–132
Legal risk	The risk of loss or imposition of damages, fines, penalties or other liability arising from failure to comply with a contractual obligation or to comply with laws or regulations to which the Firm is subject.	Not applicable	146
Liquidity risk	The risk that the Firm will be unable to meet its contractual and contingent obligations or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets.	LCR; stress	159–164
Market risk	The risk of loss arising from potential adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.	VaR, stress, sensitivities	133–139
Model risk	The risk of the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports.	Model status, model tier	142
Non-U.S. dollar foreign exchange ("FX") risk	The risk that changes in foreign exchange rates affect the value of the Firm's assets or liabilities or future results.	FX net open position ("NOP")	139
Operational risk	The risk of loss resulting from inadequate or failed processes or systems, human factors, or due to external events that are neither market nor credit-related.	Firm-specific loss experience; industry loss experience; business environment and internal control factors ("BEICF"); key risk indicators; key control indicators; operating metrics	144–146
Principal risk	The risk of an adverse change in the value of privately-held financial assets and instruments, typically representing an ownership or junior capital position that have unique risks due to their illiquidity or for which there is less observable market or valuation data.	Carrying value, stress	143
Reputation risk	The risk that an action, transaction, investment or event will reduce trust in the Firm's integrity or competence by our various constituents, including clients, counterparties, investors, regulators, employees and the broader public.	Not applicable	148
Structural interest rate risk	The risk resulting from the Firm's traditional banking activities (both on- and off-balance sheet positions) arising from the extension of loans and credit facilities, taking deposits and issuing debt (collectively referred to as "non-trading activities"), and also the impact from the CIO investment securities portfolio and other related CIO and Treasury activities.	Earnings-at-risk	138-139

Risk appetite and governance

The Firm's overall tolerance for risk is governed by a "Risk Appetite" framework for measuring and monitoring risk. The framework measures the Firm's capacity to take risk against stated quantitative tolerances and qualitative factors at each of the line of business ("LOB") levels, as well as at the Firmwide level. The framework and tolerances are set and approved by the Firm's CEO, Chief Financial Officer ("CFO"), CRO and Chief Operating Officer ("COO"). LOB-level Risk Appetite parameters and tolerances are set by the respective LOB CEO, CFO and CRO and are approved by the Firm's CEO, CFO, CRO and COO. Quantitative risk tolerances are expressed in terms of tolerance levels for stressed net income, market risk, credit risk, liquidity risk, structural interest rate risk, operational risk and capital. Risk Appetite results are reported quarterly to the Risk Policy Committee of the Board of Directors ("DRPC").

The Firm's CRO is responsible for the overall direction of the Firm's Risk Management functions and is head of the Risk Management Organization, reporting to the Firm's CEO and DRPC. The Risk Management Organization operates independently from the revenue-generating businesses, which enables it to provide credible challenge to the businesses. The leadership team of the Risk Management Organization is aligned to the various LOBs and corporate functions as well as across the Firm for firmwide risk categories (e.g. firmwide market risk, firmwide model risk, firmwide reputation risk, etc.) producing a matrix structure with specific subject matter expertise to manage risks both within the businesses and across the Firm.

The Firm places key reliance on each of the LOBs as the first line of defense in risk governance. The LOBs are accountable for identifying and addressing the risks in their

respective businesses and for operating within a sound control environment.

In addition to the Risk Management Organization, the Firm's control environment also includes firmwide functions like Oversight and Control, Compliance and Internal Audit.

The Firmwide Oversight and Control Group consists of dedicated control officers within each of the lines of business and corporate functions, as well as a central oversight function. The group is charged with enhancing the Firm's control environment by looking within and across the lines of business and corporate functions to identify and remediate control issues. The group enables the Firm to detect control problems more quickly, escalate issues promptly and engage other stakeholders to understand common themes and interdependencies among the various parts of the Firm.

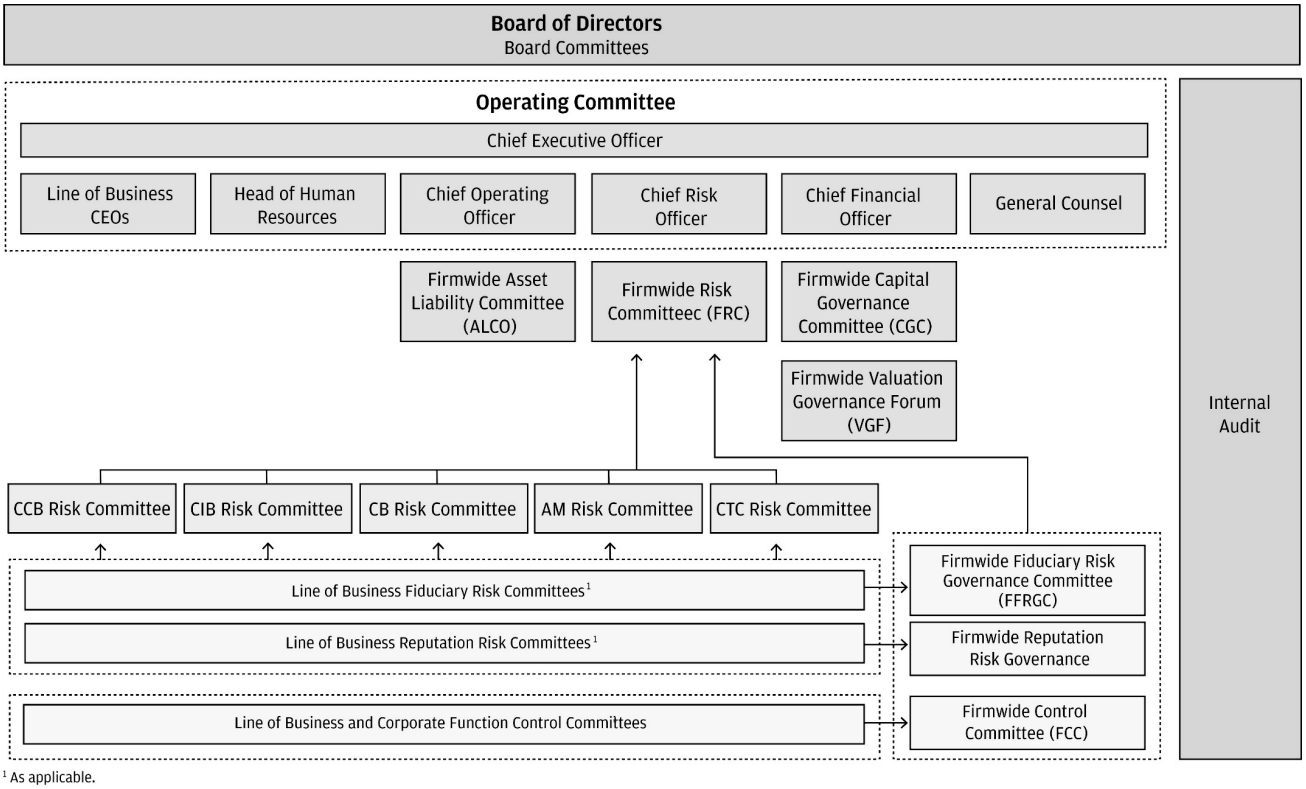
Each line of business is accountable for managing its compliance risk. The Firm's Compliance Organization ("Compliance"), which is independent of the lines of business, works closely with the Operating Committee and management to provide independent review, monitoring and oversight of business operations with a focus on compliance with the legal and regulatory obligations applicable to the offering of the Firm's products and services to clients and customers.

Internal Audit, a function independent of the businesses, Compliance and the Risk Management Organization, tests and evaluates the Firm's risk governance and management, as well as its internal control processes. This function brings a systematic and disciplined approach to evaluating and improving the effectiveness of the Firm's governance, risk management and internal control processes.

Risk governance structure

The independent status of the Risk Management Organization is supported by a governance structure that provides for escalation of risk issues up to senior management and the Board of Directors.

The chart below illustrates the key senior management level committees in the Firm's risk governance structure. Other committees and forums are in place that are responsible for management and oversight of risk, although they are not shown in the chart below.



[1] As applicable.

The Board of Directors provides oversight of risk principally through the DRPC, Audit Committee and, with respect to compensation and other management-related matters, Compensation & Management Development Committee. Each committee of the Board oversees reputation risk issues within its scope of responsibility.

The Risk Policy Committee of the Board oversees the Firm's global risk management framework and approves the primary risk-management policies of the Firm. The Committee's responsibilities include oversight of management's exercise of its responsibility to assess and manage risks of the Firm, as well as its capital and liquidity planning and analysis. Breaches in risk appetite tolerances, liquidity issues that may have a material adverse impact on the Firm and other significant risk-related matters are escalated to the Committee.

The Audit Committee of the Board assists the Board in its oversight of management's responsibilities to assure that there is an effective system of controls reasonably designed to safeguard the assets and income of the Firm, assure the integrity of the Firm's financial statements and maintain compliance with the Firm's ethical standards, policies, plans and procedures, and with laws and regulations. In addition, the Audit Committee assists the Board in its oversight of the Firm's independent registered public accounting firm's qualifications and independence. The Independent Internal Audit Function at the Firm is headed by the General Auditor, who reports to the Audit Committee.

The Compensation & Management Development Committee assists the Board in its oversight of the Firm's compensation programs and reviews and approves the Firm's overall compensation philosophy, incentive compensation pools, and compensation practices consistent with key business objectives and safety and soundness. The Committee reviews Operating Committee members' performance against their goals, and approves their compensation awards. The Committee also periodically reviews the Firm's diversity programs and management development and succession planning, and provides oversight of the Firm's culture and conduct programs.

Among the Firm's senior management-level committees that are primarily responsible for key risk-related functions are:

The Firmwide Risk Committee ("FRC") is the Firm's highest management-level risk committee. It provides oversight of the risks inherent in the Firm's businesses. The Committee is co-chaired by the Firm's CEO and CRO. Members of the Committee include the Firm's COO, CFO, Treasurer & Chief Investment Officer, and General Counsel, as well as LOB CEOs and CROs, and other senior managers from risk and control functions. This Committee serves as an escalation point for risk topics and issues raised by its members, the Line of Business Risk Committees, Firmwide Control Committee, Firmwide Fiduciary Risk Governance Committee, Firmwide Reputation Risk Governance and regional Risk Committees. The Committee escalates significant issues to the Board of Directors, as appropriate.

The Firmwide Control Committee ("FCC") is a forum for senior management to discuss firmwide operational risks including existing and emerging issues, to monitor operational risk metrics, and to review the execution of the Operational Risk Management Framework ("ORMF"). The FCC is co-chaired by the Chief Control Officer and the Firmwide Risk Executive for Operational Risk Governance. It serves as an escalation point for the line of business, corporate functions and regional Control Committees and escalates significant issues to the FRC, as appropriate.

The Firmwide Fiduciary Risk Governance Committee ("FFRGC") is a forum for risk matters related to the Firm's fiduciary activities. The Committee oversees the firmwide fiduciary risk governance framework, which supports the consistent identification and escalation of fiduciary risk matters by the relevant lines of business or corporate functions responsible for managing fiduciary activities. The Committee escalates significant issues to the FRC and any other committee, as appropriate.

The Firmwide Reputation Risk Governance Group seeks to promote consistent management of reputation risk across the Firm. Its objectives are to increase visibility of reputation risk governance; promote and maintain a globally consistent governance model for reputation risk across lines of business; promote early self-identification of potential reputation risks to the Firm; and provide thought leadership on cross-line-of-business reputation risk issues. Each line of business has a separate reputation risk governance structure which includes, in most cases, one or more dedicated reputation risk committees.

Line of Business and Regional Risk Committees review the ways in which the particular line of business or the business operating in a particular region could be exposed to adverse outcomes with a focus on identifying, accepting, escalating and/or requiring remediation of matters brought to these committees. These committees may escalate to the FRC, as appropriate.

Line of Business, Corporate Function and Regional Control Committees oversee the control environment in the particular line of business or corporate function or the business operating in a particular region. They are responsible for reviewing the data indicating the quality and stability of the processes in a business or function, focusing on those processes with shortcomings and overseeing process remediation. These committees escalate to the FCC, as appropriate.

The Asset Liability Committee ("ALCO"), chaired by the Firm's Treasurer under the direction of the COO, monitors the Firm's balance sheet, liquidity risk and structural interest rate risk. ALCO reviews the Firm's overall structural interest rate risk position, funding requirements and strategy, and securitization programs (and any required liquidity support by the Firm of such programs). ALCO is responsible for reviewing and approving the Firm's Funds Transfer Pricing Policy (through which lines of business "transfer" interest rate risk to Treasury) and the Firm's Intercompany Funding and Liquidity Policy. ALCO is also responsible for reviewing the Firm's Contingency Funding Plan.

The Capital Governance Committee, chaired by the Head of the Regulatory Capital Management Office (under the direction of the Firm's CFO) is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution. The Committee is also responsible for governing the capital adequacy assessment process, including overall design, assumptions and risk streams, and for ensuring that capital stress test programs are designed to adequately capture the idiosyncratic risks across the Firm's businesses.

The Firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the firmwide head of the Valuation Control function (under the direction of the Firm's CFO), and includes sub-forums covering the Corporate & Investment Bank, Consumer & Community Banking, Commercial Banking, Asset Management and certain corporate functions, including Treasury and Chief Investment Office.

In addition, the JPMorgan Chase Bank, N.A. Board of Directors is responsible for the oversight of management of the Bank. The JPMorgan Chase Bank, N.A. Board accomplishes this function acting directly and through the principal standing committees of the Firm's Board of Directors. Risk oversight on behalf of JPMorgan Chase Bank N.A. is primarily the responsibility of the DRPC and Audit Committee of the Firm's Board of Directors and, with respect to compensation and other management-related matters, the Compensation & Management Development Committee of the Firm's Board of Directors.

Risk measurement

The Firm has a broad spectrum of risk management metrics, as appropriate for each risk category (refer to the table on key risks included on page 108). Additionally, the Firm is exposed to certain potential low-probability, but plausible and material, idiosyncratic risks that are not well-captured by its other existing risk analysis and reporting for credit, market, and other risks. These idiosyncratic risks may arise in a number of ways, such as changes in legislation, an unusual combination of market events, or specific counterparty events. The Firm has a process intended to identify these risks in order to allow the Firm to monitor vulnerabilities that are not adequately covered by its other standard risk measurements.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss arising from the default of a customer, client or counterparty. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk primarily through its residential real estate, credit card, auto, business banking and student lending businesses. Originated mortgage loans are retained in the mortgage portfolio, securitized or sold to U.S. government agencies and U.S. government-sponsored enterprises; other types of consumer loans are typically retained on the balance sheet. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through its operating services activities (such as cash management and clearing activities), securities financing activities, investment securities portfolio, and cash placed with banks. A portion of the loans originated or acquired by the Firm's wholesale businesses are generally retained on the balance sheet; the Firm's syndicated loan business distributes a significant percentage of originations into the market and is an important component of portfolio management.

Credit risk management

Credit risk management is an independent risk management function that identifies and monitors credit risk throughout the Firm and defines credit risk policies and procedures. The credit risk function reports to the Firm's CRO. The Firm's credit risk management governance includes the following activities:

- Establishing a comprehensive credit risk policy framework
- Monitoring and managing credit risk across all portfolio segments, including transaction and exposure approval
- Setting industry concentration limits and establishing underwriting guidelines
- Assigning and managing credit authorities in connection with the approval of all credit exposure
- Managing criticized exposures and delinquent loans
- Determining the allowance for credit losses and ensuring appropriate credit risk-based capital management

Risk identification and measurement

The Credit Risk Management function identifies, measures, limits, manages and monitors credit risk across the Firm's businesses. To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the probability of default of an obligor or counterparty, the loss severity given a default event and the exposure at default.

Based on these factors and related market-based inputs, the Firm estimates credit losses for its exposures. Probable credit losses inherent in the consumer and wholesale loan portfolios are reflected in the allowance for loan losses, and probable credit losses inherent in lending-related commitments are reflected in the allowance for lending-related commitments. These losses are estimated using statistical analyses and other factors as described in Note 15. In addition, potential and unexpected credit losses are reflected in the allocation of credit risk capital and represent the potential volatility of actual losses relative to the established allowances for loan losses and lending-related commitments. The analyses for these losses include stress testing considering alternative economic scenarios as described in the Stress testing section below. For further information, see Critical Accounting Estimates used by the Firm on pages 165–169.

The methodologies used to estimate credit losses depend on the characteristics of the credit exposure, as described below.

Scored exposure

The scored portfolio is generally held in CCB and predominantly includes residential real estate loans, credit card loans, certain auto and business banking loans, and student loans. For the scored portfolio, credit loss estimates are based on statistical analysis of credit losses over discrete periods of time. The statistical analysis uses portfolio modeling, credit scoring, and decision-support tools, which consider loan-level factors such as delinquency status, credit scores, collateral values, and other risk factors. Credit loss analyses also consider, as appropriate, uncertainties and other factors, including those related to current macroeconomic and political conditions, the quality of underwriting standards, and other internal and external factors. The factors and analysis are updated on a quarterly basis or more frequently as market conditions dictate.

Risk-rated exposure

Risk-rated portfolios are generally held in CIB, CB and AM, but also include certain business banking and auto dealer loans held in CCB that are risk-rated because they have characteristics similar to commercial loans. For the risk-rated portfolio, credit loss estimates are based on estimates of the probability of default ("PD") and loss severity given a default. The estimation process begins with risk ratings that are assigned to each loan facility to differentiate risk within the portfolio. These risk ratings are reviewed regularly by Credit Risk Management and revised as needed to reflect the borrower's current financial position, risk profile and related collateral. The probability of default is the likelihood that a loan will default and not be fully repaid by the borrower. The loss given default ("LGD") is the estimated loss on the loan that would be realized upon the default of

the borrower and takes into consideration collateral and structural support for each credit facility. The probability of default is estimated for each borrower, and a loss given default is estimated for each credit facility. The calculations and assumptions are based on historic experience and management judgment and are reviewed regularly.

Stress testing

Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios, and the parameters underlying those scenarios, are defined centrally, are articulated in terms of macroeconomic factors, and applied across the businesses. The stress test results may indicate credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, including industry and country-specific stress scenarios, as necessary. The Firm uses stress testing to inform decisions on setting risk appetite both at a Firm and LOB level, as well as to assess the impact of stress on individual counterparties.

Risk monitoring and management

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

For consumer credit risk, delinquency and other trends, including any concentrations at the portfolio level, are monitored, as certain of these trends can be modified through changes in underwriting policies and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Historical and forecasted trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio. For further discussion of consumer loans, see Note 14.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry, and individual client and counterparty level with established concentration limits that are reviewed and revised as deemed appropriate by management, typically on an annual basis. Industry and counterparty limits, as measured in terms of exposure and economic risk appetite, are subject to stress-based loss constraints. In addition, wrong-way risk — the risk that exposure to a counterparty is positively correlated with the impact of a default by the same counterparty, which could cause exposure to increase at the same time as the counterparty's capacity to meet its obligations is decreasing — is actively monitored as this risk could result in greater exposure at default compared with a transaction with another counterparty that does not have this risk.

Management of the Firm's wholesale credit risk exposure is accomplished through a number of means, including:

- Loan underwriting and credit approval process
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Master netting agreements
- Collateral and other risk-reduction techniques

In addition to Credit Risk Management, Internal Audit performs periodic exams, as well as continuous reviews, where appropriate, of the Firm's consumer and wholesale portfolios. For risk-rated portfolios, a Credit Review group within Internal Audit is responsible for:

- Independently assessing and validating the changing risk grades assigned to exposures; and
- Evaluating the effectiveness of business units' risk ratings, including the accuracy and consistency of risk grades, the timeliness of risk grade changes and the justification of risk grades in credit memoranda.

Risk reporting

To enable monitoring of credit risk and effective decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior members of Credit Risk Management. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, risk committees, senior management and the Board of Directors as appropriate.

CREDIT PORTFOLIO

In the following tables, reported loans include loans retained (i.e., held-for-investment); loans held-for-sale (which are carried at the lower of cost or fair value, with valuation changes recorded in noninterest revenue); and certain loans accounted for at fair value. In addition, the Firm records certain loans accounted for at fair value in trading assets. For further information regarding these loans, see Note 3 and Note 4. For additional information on the Firm's loans and derivative receivables, including the Firm's accounting policies, see Note 14 and Note 6, respectively. For further information regarding the credit risk inherent in the Firm's cash placed with banks, investment securities portfolio, and securities financing portfolio, see Note 5, Note 12, and Note 13, respectively.

Effective January 1, 2015, the Firm no longer includes within its disclosure of wholesale lending-related commitments the unused amount of advised uncommitted lines of credit as it is within the Firm's discretion whether or not to make a loan under these lines, and the Firm's approval is generally required prior to funding. Prior period amounts have been revised to conform with the current period presentation.

For discussion of the consumer credit environment and consumer loans, see Consumer Credit Portfolio on pages 115–121 and Note 14. For discussion of wholesale credit environment and wholesale loans, see Wholesale Credit Portfolio on pages 122–129 and Note 14.

Total credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming[b][c]	
	2015	2014	**2015**	2014
Loans retained	**$ 832,792**	$ 747,508	**$ 6,303**	$ 7,017
Loans held-for-sale	**1,646**	7,217	**101**	95
Loans at fair value	**2,861**	2,611	**25**	21
Total loans – reported	**837,299**	757,336	**6,429**	7,133
Derivative receivables	**59,677**	78,975	**204**	275
Receivables from customers and other	**13,497**	29,080	**–**	–
Total credit-related assets	**910,473**	865,391	**6,633**	7,408
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**347**	515
Other	**NA**	NA	**54**	44
Total assets acquired in loan satisfactions	**NA**	NA	**401**	559
Total assets	**910,473**	865,391	**7,034**	7,967
Lending-related commitments	**940,395**	950,997	**193**	103
Total credit portfolio	**$1,850,868**	$1,816,388	**$ 7,227**	$ 8,070
Credit derivatives used in credit portfolio management activities[a]	**$ (20,681)**	$ (26,703)	**$ (9)**	$ –
Liquid securities and other cash collateral held against derivatives	**(16,580)**	(19,604)	**NA**	NA

Year ended December 31, (in millions, except ratios)	**2015**	2014
Net charge-offs	**$ 4,086**	$ 4,759
Average retained loans		
Loans – reported	**780,293**	729,876
Loans – reported, excluding residential real estate PCI loans	**736,543**	679,869
Net charge-off rates		
Loans – reported	**0.52%**	0.65%
Loans – reported, excluding PCI	**0.55**	0.70

(a) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on page 129 and Note 6.

(b) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.

(c) At December 31, 2015 and 2014, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $6.3 billion and $7.8 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of $290 million and $367 million, respectively, that are 90 or more days past due; and (3) REO insured by U.S. government agencies of $343 million and $462 million, respectively. These amounts have been excluded based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council ("FFIEC").

CONSUMER CREDIT PORTFOLIO

The Firm's consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, business banking loans, and student loans. The Firm's focus is on serving the prime segment of the consumer credit market. The credit performance of the consumer portfolio continues to benefit from discipline in credit underwriting as well as improvement in the economy driven by increasing home prices and lower unemployment. Both early-stage delinquencies (30–89 days delinquent) and late-stage delinquencies (150+ days delinquent) for residential real estate, excluding government guaranteed loans, declined from December 31, 2014 levels. The Credit Card 30+ day delinquency rate and the net charge-off rate remain near historic lows. For further information on consumer loans, see Note 14.

The following table presents consumer credit-related information with respect to the credit portfolio held by CCB, prime mortgage and home equity loans held by AM, and prime mortgage loans held by Corporate. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 14.

Consumer credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonaccrual loans[g][h]		Net charge-offs/ (recoveries)[i]		Average annual net charge-off/(recovery) rate[i][j]	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014
Consumer, excluding credit card								
Loans, excluding PCI loans and loans held-for-sale								
Home equity – senior lien	**$ 14,848**	$ 16,367	**$ 867**	$ 938	**$ 69**	$ 82	**0.43%**	0.50%
Home equity – junior lien	**30,711**	36,375	**1,324**	1,590	**222**	391	**0.67**	1.03
Prime mortgage, including option ARMs	**162,549**	104,921	**1,752**	2,190	**49**	39	**0.04**	0.04
Subprime mortgage	**3,690**	5,056	**751**	1,036	**(53)**	(27)	**(1.22)**	(0.43)
Auto[a]	**60,255**	54,536	**116**	115	**214**	181	**0.38**	0.34
Business banking	**21,208**	20,058	**263**	279	**253**	305	**1.23**	1.58
Student and other	**10,096**	10,970	**242**	270	**200**	347	**1.89**	3.07
Total loans, excluding PCI loans and loans held-for-sale	**303,357**	248,283	**5,315**	6,418	**954**	1,318	**0.35**	0.55
Loans – PCI								
Home equity	**14,989**	17,095	**–**	NA	**–**	NA	**–**	NA
Prime mortgage	**8,893**	10,220	**–**	NA	**–**	NA	**–**	NA
Subprime mortgage	**3,263**	3,673	**–**	NA	**–**	NA	**–**	NA
Option ARMs[b]	**13,853**	15,708	**–**	NA	**–**	NA	**–**	NA
Total loans – PCI	**40,998**	46,696	**–**	NA	**–**	NA	**–**	NA
Total loans – retained	**344,355**	294,979	**5,315**	6,418	**954**	1,318	**0.30**	0.46
Loans held-for-sale	**466** [f]	395 [f]	**98**	91	**–**	–	**–**	–
Total consumer, excluding credit card loans	**344,821**	295,374	**5,413**	6,509	**954**	1,318	**0.30**	0.46
Lending-related commitments[c]	**58,478**	58,153						
Receivables from customers[d]	**125**	108						
Total consumer exposure, excluding credit card	**403,424**	353,635						
Credit Card								
Loans retained[e]	**131,387**	128,027	**–**	–	**3,122**	3,429	**2.51**	2.75
Loans held-for-sale	**76**	3,021	**–**	–	**–**	–	**–**	–
Total credit card loans	**131,463**	131,048	**–**	–	**3,122**	3,429	**2.51**	2.75
Lending-related commitments[c]	**515,518**	525,963						
Total credit card exposure	**646,981**	657,011						
Total consumer credit portfolio	**$ 1,050,405**	$ 1,010,646	**$ 5,413**	$ 6,509	**$ 4,076**	$ 4,747	**0.92%**	1.15%
Memo: Total consumer credit portfolio, excluding PCI	**$ 1,009,407**	$ 963,950	**$ 5,413**	$ 6,509	**$ 4,076**	$ 4,747	**1.02%**	1.30%

(a) At December 31, 2015 and 2014, excluded operating lease assets of $9.2 billion and $6.7 billion, respectively.
(b) At December 31, 2015 and 2014, approximately 64% and 57% of the PCI option ARMs portfolio has been modified into fixed-rate, fully amortizing loans, respectively.
(c) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice.
(d) Receivables from customers represent margin loans to retail brokerage customers, and are included in Accrued interest and accounts receivable on the Consolidated balance sheets.
(e) Includes accrued interest and fees net of an allowance for the uncollectible portion of accrued interest and fee income.
(f) Predominantly represents prime mortgage loans held-for-sale.

(g) At December 31, 2015 and 2014, nonaccrual loans excluded: (1) mortgage loans insured by U.S. government agencies of $6.3 billion and $7.8 billion, respectively, that are 90 or more days past due; and (2) student loans insured by U.S. government agencies under the FFELP of $290 million and $367 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, credit card loans are generally exempt from being placed on nonaccrual status, as permitted by regulatory guidance.
(h) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.
(i) Net charge-offs and net charge-off rates excluded $208 million and $533 million of write-offs of prime mortgages in the PCI portfolio for the years ended December 31, 2015 and 2014. These write-offs decreased the allowance for loan losses for PCI loans. See Allowance for Credit Losses on pages 130–132 for further details.
(j) Average consumer loans held-for-sale were $2.1 billion and $917 million, respectively, for the years ended December 31, 2015 and 2014. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances increased during the year ended December 31, 2015, predominantly due to originations of high-quality prime mortgage loans that have been retained, partially offset by paydowns and the charge-off or liquidation of delinquent loans. Credit performance has continued to improve across most portfolios as the economy strengthened and home prices increased.

PCI loans are excluded from the following discussions of individual loan products and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, see Note 14.

Home equity: The home equity portfolio declined from December 31, 2014 primarily reflecting loan paydowns and charge-offs. Both early-stage and late-stage delinquencies declined from December 31, 2014. Net charge-offs for both senior and junior lien home equity loans at December 31, 2015, declined when compared with the prior year as a result of improvement in home prices and delinquencies, but charge-offs remain elevated compared with pre-recessionary levels.

At December 31, 2015, approximately 15% of the Firm's home equity portfolio consists of home equity loans ("HELOANs") and the remainder consists of home equity lines of credit ("HELOCs"). HELOANs are generally fixed-rate, closed-end, amortizing loans, with terms ranging from 3–30 years. Approximately 60% of the HELOANs are senior lien loans and the remainder are junior lien loans. In general, HELOCs originated by the Firm are revolving loans for a 10-year period, after which time the HELOC recasts into a loan with a 20-year amortization period. At the time of origination, the borrower typically selects one of two minimum payment options that will generally remain in effect during the revolving period: a monthly payment of 1% of the outstanding balance, or interest-only payments based on a variable index (typically Prime). HELOCs originated by Washington Mutual were generally revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.

The unpaid principal balance of HELOCs outstanding was $41 billion at December 31, 2015. Since January 1, 2014, approximately $8 billion of HELOCs have recast from interest-only to fully amortizing payments; based upon contractual terms, approximately $19 billion is scheduled to recast in the future, consisting of $7 billion in 2016, $6 billion in 2017 and $6 billion in 2018 and beyond. However, of the total $19 billion scheduled to recast in the future, $13 billion is expected to actually recast; and the remaining $6 billion represents loans to borrowers who are expected to pre-pay or loans that are likely to charge-off prior to recast. The Firm has considered this payment recast risk in its allowance for loan losses based upon the estimated amount of payment shock (i.e., the excess of the fully-amortizing payment over the interest-only payment in effect prior to recast) expected to occur at the payment recast date, along with the corresponding estimated probability of default and loss severity assumptions. Certain factors, such as future developments in both unemployment rates and home prices, could have a significant impact on the performance of these loans.

The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile. The Firm will continue to evaluate both the near-term and longer-term repricing and recast risks inherent in its HELOC portfolio to ensure that changes in the Firm's estimate of incurred losses are appropriately considered in the allowance for loan losses and that the Firm's account management practices are appropriate given the portfolio's risk profile.

High-risk seconds are junior lien loans where the borrower has a senior lien loan that is either delinquent or has been modified. Such loans are considered to pose a higher risk of default than junior lien loans for which the senior lien loan is neither delinquent nor modified. The Firm estimates the balance of its total exposure to high-risk seconds on a quarterly basis using internal data and loan level credit bureau data (which typically provides the delinquency status of the senior lien loan). The estimated balance of these high-risk seconds may vary from quarter to quarter for reasons such as the movement of related senior lien loans into and out of the 30+ day delinquency bucket.

Current high-risk seconds

December 31, (in billions)	2015	2014
Junior liens subordinate to:		
Modified current senior lien	**$ 0.6**	$ 0.7
Senior lien 30 – 89 days delinquent	**0.4**	0.5
Senior lien 90 days or more delinquent[(a)]	**0.4**	0.6
Total current high-risk seconds	**$ 1.4**	$ 1.8

(a) Junior liens subordinate to senior liens that are 90 days or more past due are classified as nonaccrual loans. At December 31, 2015 and 2014, excluded approximately $25 million and $50 million, respectively, of junior liens that are performing but not current, which were placed on nonaccrual in accordance with the regulatory guidance.

Of the estimated $1.4 billion of current high-risk junior liens at December 31, 2015, the Firm owns approximately 10% and services approximately 25% of the related senior lien loans to the same borrowers. The increased probability of default associated with these higher-risk junior lien loans was considered in estimating the allowance for loan losses.

Mortgage: Prime mortgages, including option ARMs and loans held-for-sale, increased from December 31, 2014 due to originations of high-quality prime mortgage loans that have been retained partially offset by paydowns, the run-off of option ARM loans and the charge-off or liquidation of delinquent loans. High-quality loan originations for the year ending December 31, 2015 included both jumbo and conforming loans, primarily consisting of fixed interest rate loans. Excluding loans insured by U.S. government agencies, both early-stage and late-stage delinquencies declined from December 31, 2014. Nonaccrual loans decreased from the prior year but remain elevated primarily as a result of loss mitigation activities. Net charge-offs remain low, reflecting continued improvement in home prices and delinquencies.

At December 31, 2015 and 2014, the Firm's prime mortgage portfolio included $11.1 billion and $12.4 billion, respectively, of mortgage loans insured and/or guaranteed by U.S. government agencies, of which $8.4 billion and $9.7 billion, respectively, were 30 days or more past due (of these past due loans, $6.3 billion and $7.8 billion, respectively, were 90 days or more past due). In 2014, the Firm entered into a settlement regarding loans insured under federal mortgage insurance programs overseen by the Federal Housing Administration ("FHA"), the U.S. Department of Housing and Urban Development ("HUD"), and the U.S. Department of Veterans Affairs ("VA"); the Firm will continue to monitor exposure on future claim payments for government insured loans, but any financial impact related to exposure on future claims is not expected to be significant and was considered in estimating the allowance for loan losses.

At December 31, 2015 and 2014, the Firm's prime mortgage portfolio included $17.7 billion and $16.3 billion, respectively, of interest-only loans, which represented 11% and 15%, respectively, of the prime mortgage portfolio. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment period to maturity and are typically originated as higher-balance loans to higher-income borrowers. To date, losses on this portfolio generally have been consistent with the broader prime mortgage portfolio and the Firm's expectations. The Firm continues to monitor the risks associated with these loans.

Subprime mortgages continued to decrease due to portfolio runoff. Early-stage and late-stage delinquencies have improved from December 31, 2014. Net charge-offs continued to improve as a result of improvement in home prices and delinquencies.

Auto: Auto loans increased from December 31, 2014, as new originations outpaced paydowns and payoffs. Nonaccrual loans were stable compared with December 31, 2014. Net charge-offs for the year ended December 31, 2015 increased compared with the prior year, as a result of higher loan balances and a moderate increase in loss severity. The auto loan portfolio predominantly consists of prime-quality credits.

Business banking: Business banking loans increased from December 31, 2014 due to an increase in loan originations. Nonaccrual loans declined from December 31, 2014 and net charge-offs for the year ended December 31, 2015 decreased from the prior year due to continued discipline in credit underwriting.

Student and other: Student and other loans decreased from December 31, 2014 due primarily to the run-off of the student loan portfolio as the Firm ceased originations of student loans during the fourth quarter of 2013. Nonaccrual loans and net charge-offs also declined as a result of the run-off of the student loan portfolio.

Purchased credit-impaired loans: PCI loans acquired in the Washington Mutual transaction decreased as the portfolio continues to run off.

As of December 31, 2015, approximately 14% of the option ARM PCI loans were delinquent and approximately 64% of the portfolio has been modified into fixed-rate, fully amortizing loans. Substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing. This latter group of loans is subject to the risk of payment shock due to future payment recast. Default rates generally increase on option ARM loans when payment recast results in a payment increase. The expected increase in default rates is considered in the Firm's quarterly impairment assessment.

The following table provides a summary of lifetime principal loss estimates included in either the nonaccretable difference or the allowance for loan losses.

Summary of lifetime principal loss estimates

December 31, (in billions)	Lifetime loss estimates[a]		LTD liquidation losses[b]	
	2015	2014	**2015**	2014
Home equity	**$ 14.5**	$ 14.6	**$ 12.7**	$ 12.4
Prime mortgage	**4.0**	3.8	**3.7**	3.5
Subprime mortgage	**3.3**	3.3	**3.0**	2.8
Option ARMs	**10.0**	9.9	**9.5**	9.3
Total	**$ 31.8**	$ 31.6	**$ 28.9**	$ 28.0

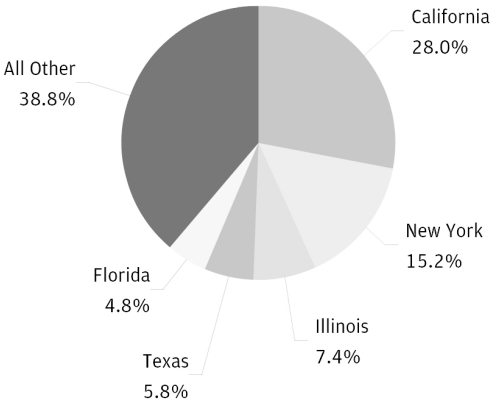
(a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses was $1.5 billion and $2.3 billion at December 31, 2015 and 2014, respectively.
(b) Life-to-date ("LTD") liquidation losses represent both realization of loss upon loan resolution and any principal forgiven upon modification.

For further information on the Firm's PCI loans, including write-offs, see Note 14.

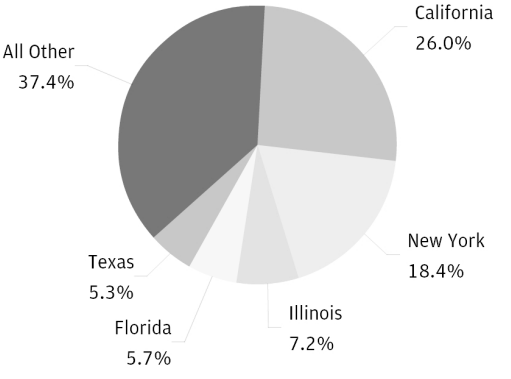
Geographic composition of residential real estate loans

At December 31, 2015, $123.0 billion, or 61% of total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans, were concentrated in California, New York, Illinois, Texas and Florida, compared with $94.3 billion, or 63%, at December 31, 2014. California had the greatest concentration of retained residential loans with 28% at December 31, 2015, compared with 26% at December 31, 2014. The unpaid principal balance of PCI loans concentrated in these five states represented 74% of total PCI loans at both December 31, 2015, and December 31, 2014. For further information on the geographic composition of the Firm's residential real estate loans, see Note 14.

Top 5 States - Residential Real Estate (at December 31, 2015)



Top 5 States - Residential Real Estate (at December 31, 2014)



Current estimated loan-to-values ("LTVs") of residential real estate loans

The current estimated average LTV ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 59% at both December 31, 2015 and 2014.

Although home prices continue to recover, the decline in home prices since 2007 has had a significant impact on the collateral values underlying the Firm's residential real estate loan portfolio. In general, the delinquency rate for loans with high LTV ratios is greater than the delinquency rate for loans in which the borrower has greater equity in the collateral. While a large portion of the loans with current estimated LTV ratios greater than 100% continue to pay and are current, the continued willingness and ability of these borrowers to pay remains a risk.

The following table presents the current estimated LTV ratios for PCI loans, as well as the ratios of the carrying value of the underlying loans to the current estimated collateral value. Because such loans were initially measured at fair value, the ratios of the carrying value to the current estimated collateral value will be lower than the current estimated LTV ratios, which are based on the unpaid principal balances. The estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting ratios are necessarily imprecise and should therefore be viewed as estimates.

LTV ratios and ratios of carrying values to current estimated collateral values – PCI loans

	2015				2014			
December 31, (in millions, except ratios)	Unpaid principal balance	Current estimated LTV ratio[a][b]	Net carrying value[d]	Ratio of net carrying value to current estimated collateral value[b][d]	Unpaid principal balance	Current estimated LTV ratio[a][b]	Net carrying value[d]	Ratio of net carrying value to current estimated collateral value[b][d]
Home equity	**$ 15,342**	**73%** [c]	**$ 13,281**	**68%** [e]	$ 17,740	78% [c]	$ 15,337	73% [e]
Prime mortgage	**8,919**	**66**	**7,908**	**58**	10,249	71	9,027	63
Subprime mortgage	**4,051**	**73**	**3,263**	**59**	4,652	79	3,493	59
Option ARMs	**14,353**	**64**	**13,804**	**62**	16,496	69	15,514	65

(a) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated at least quarterly based on home valuation models that utilize nationally recognized home price index valuation estimates; such models incorporate actual data to the extent available and forecasted data where actual data is not available.

(b) Effective December 31, 2015, the current estimated LTV ratios and the ratios of net carrying value to current estimated collateral value reflect updates to the nationally recognized home price index valuation estimates incorporated into the Firm's home valuation models. The prior period ratios have been revised to conform with these updates in the home price index.

(c) Represents current estimated combined LTV for junior home equity liens, which considers all available lien positions, as well as unused lines, related to the property. All other products are presented without consideration of subordinate liens on the property.

(d) Net carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition and is also net of the allowance for loan losses at December 31, 2015 and 2014 of $985 million and $1.2 billion for prime mortgage, $49 million and $194 million for option ARMs, $1.7 billion and $1.8 billion for home equity, respectively, and $180 million for subprime mortgage at December 31, 2014. There was no allowance for loan losses for subprime mortgage at December 31, 2015.

(e) The current period ratio has been updated to include the effect of any outstanding senior lien related to a property for which the Firm holds the junior home equity lien. The prior period ratio has been revised to conform with the current presentation.

The current estimated average LTV ratios were 65% and 78% for California and Florida PCI loans, respectively, at December 31, 2015, compared with 71% and 85%, respectively, at December 31, 2014. Average LTV ratios have declined consistent with recent improvements in home prices as well as a result of loan pay downs. Although home prices have improved, home prices in most areas of California and Florida are still lower than at the peak of the housing market; this continues to negatively affect current estimated average LTV ratios and the ratio of net carrying value to current estimated collateral value for loans in the PCI portfolio. Of the total PCI portfolio, 6% of the loans had a current estimated LTV ratio greater than 100%, and 1% had a current LTV ratio of greater than 125% at December 31, 2015, compared with 10% and 2%, respectively, at December 31, 2014.

While the current estimated collateral value is greater than the net carrying value of PCI loans, the ultimate performance of this portfolio is highly dependent on borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity, as well as on the cost of alternative housing.

For further information on current estimated LTVs of residential real estate loans, see Note 14.

Loan modification activities – residential real estate loans

The performance of modified loans generally differs by product type due to differences in both the credit quality and the types of modifications provided. Performance metrics for modifications to the residential real estate portfolio, excluding PCI loans, that have been seasoned more than six months show weighted-average redefault rates of 20% for senior lien home equity, 22% for junior lien home equity, 17% for prime mortgages including option ARMs, and 29% for subprime mortgages. The cumulative performance metrics for modifications to the PCI residential real estate portfolio that have been seasoned more than six months show weighted average redefault rates of 20% for home equity, 19% for prime mortgages, 16% for option ARMs and 33% for subprime mortgages. The favorable performance of the PCI option ARM modifications is the result of a targeted proactive program which fixed the borrower's payment to the amount at the point of modification. The cumulative redefault rates reflect the performance of modifications completed under both the U.S. Government's Home Affordable Modification Program ("HAMP") and the Firm's proprietary modification programs (primarily the Firm's modification program that was modeled after HAMP) from October 1, 2009, through December 31, 2015.

Certain loans that were modified under HAMP and the Firm's proprietary modification programs have interest rate reset provisions ("step-rate modifications"). Interest rates on these loans generally began to increase in 2014 by 1% per year and will continue to do so, until the rate reaches a specified cap, typically at a prevailing market interest rate for a fixed-rate loan as of the modification date. The

carrying value of non-PCI loans modified in step-rate modifications was $4 billion at December 31, 2015, with $447 million that experienced the initial interest rate increase in 2015 and $1 billion that is scheduled to experience the initial interest rate increase in each of 2016 and 2017. The unpaid principal balance of PCI loans modified in step-rate modifications was $10 billion at December 31, 2015, with $1 billion that experienced the initial interest rate increase in 2015, and $3 billion and $2 billion scheduled to experience the initial interest rate increase in 2016 and 2017, respectively. The Firm continues to monitor this risk exposure to ensure that it is appropriately considered in the allowance for loan losses.

The following table presents information as of December 31, 2015 and 2014, relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. Modifications of PCI loans continue to be accounted for and reported as PCI loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of estimated future cash flows. Modifications of consumer loans other than PCI loans are generally accounted for and reported as TDRs. For further information on modifications for the years ended December 31, 2015 and 2014, see Note 14.

Modified residential real estate loans

	2015		2014	
December 31, (in millions)	Retained loans	Nonaccrual retained loans[d]	Retained loans	Nonaccrual retained loans[d]
Modified residential real estate loans, excluding PCI loans[a][b]				
Home equity – senior lien	**$ 1,048**	**$ 581**	$ 1,101	$ 628
Home equity – junior lien	**1,310**	**639**	1,304	632
Prime mortgage, including option ARMs	**4,826**	**1,287**	6,145	1,559
Subprime mortgage	**1,864**	**670**	2,878	931
Total modified residential real estate loans, excluding PCI loans	**$ 9,048**	**$ 3,177**	$ 11,428	$ 3,750
Modified PCI loans[c]				
Home equity	**$ 2,526**	**NA**	$ 2,580	NA
Prime mortgage	**5,686**	**NA**	6,309	NA
Subprime mortgage	**3,242**	**NA**	3,647	NA
Option ARMs	**10,427**	**NA**	11,711	NA
Total modified PCI loans	**$ 21,881**	**NA**	$ 24,247	NA

(a) Amounts represent the carrying value of modified residential real estate loans.
(b) At December 31, 2015 and 2014, $3.8 billion and $4.9 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. For additional information about sales of loans in securitization transactions with Ginnie Mae, see Note 16.
(c) Amounts represent the unpaid principal balance of modified PCI loans.
(d) As of December 31, 2015 and 2014, nonaccrual loans included $2.5 billion and $2.9 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status, see Note 14.

Nonperforming assets

The following table presents information as of December 31, 2015 and 2014, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[a]

December 31, (in millions)	2015	2014
Nonaccrual loans[b]		
Residential real estate	**$ 4,792**	$ 5,845
Other consumer	**621**	664
Total nonaccrual loans	**5,413**	6,509
Assets acquired in loan satisfactions		
Real estate owned	**277**	437
Other	**48**	36
Total assets acquired in loan satisfactions	**325**	473
Total nonperforming assets	**$ 5,738**	$ 6,982

(a) At December 31, 2015 and 2014, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $6.3 billion and $7.8 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of $290 million and $367 million, respectively, that are 90 or more days past due; and (3) real estate owned insured by U.S. government agencies of $343 million and $462 million, respectively. These amounts have been excluded based upon the government guarantee.
(b) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, each pool is considered to be performing.

Nonaccrual loans in the residential real estate portfolio totaled $4.8 billion and $5.8 billion at December 31, 2015, and 2014, respectively, of which 31% and 32%, respectively, were greater than 150 days past due. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 44% and 50% to the estimated net realizable value of the collateral at December 31, 2015 and 2014, respectively.

Active and suspended foreclosure: For information on loans that were in the process of active or suspended foreclosure, see Note 14.

Nonaccrual loans: The following table presents changes in the consumer, excluding credit card, nonaccrual loans for the years ended December 31, 2015 and 2014.

Nonaccrual loans

Year ended December 31, (in millions)	2015	2014
Beginning balance	**$ 6,509**	$ 7,496
Additions	**3,662**	4,905
Reductions:		
Principal payments and other[a]	**1,668**	1,859
Charge-offs	**800**	1,306
Returned to performing status	**1,725**	2,083
Foreclosures and other liquidations	**565**	644
Total reductions	**4,758**	5,892
Net additions/(reductions)	**(1,096)**	(987)
Ending balance	**$ 5,413**	$ 6,509

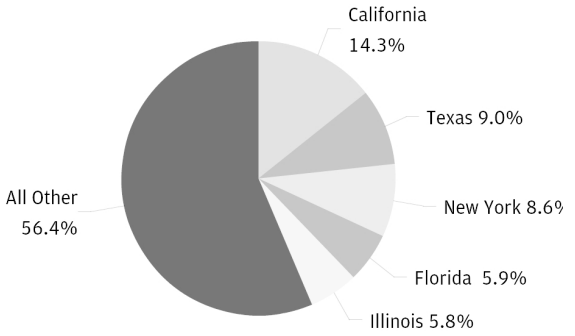
(a) Other reductions includes loan sales.

Credit Card

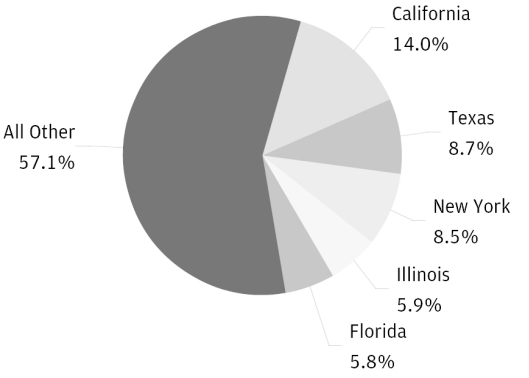
Total credit card loans increased from December 31, 2014 due to higher new account originations and increased credit card sales volume partially offset by sales of non-core loans and the transfer of commercial card loans to the CIB. The 30+ day delinquency rate decreased to 1.43% at December 31, 2015, from 1.44% at December 31, 2014. For the years ended December 31, 2015 and 2014, the net charge-off rates were 2.51% and 2.75%, respectively. The Credit Card 30+ day delinquency rate and net charge-off rate remain near historic lows. Charge-offs have improved compared to a year ago due to continued discipline in credit underwriting as well as improvement in the economy driven by lower unemployment. The credit card portfolio continues to reflect a well-seasoned, largely rewards-based portfolio that has good U.S. geographic diversification.

Loans outstanding in the top five states of California, Texas, New York, Florida and Illinois consisted of $57.5 billion in receivables, or 44% of the retained loan portfolio, at December 31, 2015, compared with $54.9 billion, or 43%, at December 31, 2014. The greatest geographic concentration of credit card retained loans is in California, which represented 14% of total retained loans at both December 31, 2015 and 2014, respectively. For further information on the geographic composition of the Firm's credit card loans, see Note 14.

Top 5 States Credit Card - Retained (at December 31, 2015)



Top 5 States Credit Card - Retained (at December 31, 2014)



Modifications of credit card loans

At December 31, 2015 and 2014, the Firm had $1.5 billion and $2.0 billion, respectively, of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms. The decrease in modified credit card loans outstanding from December 31, 2014, was attributable to a reduction in new modifications as well as ongoing payments and charge-offs on previously modified credit card loans.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged off. However, the Firm establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued interest and fee income.

For additional information about loan modification programs to borrowers, see Note 14.

WHOLESALE CREDIT PORTFOLIO

The Firm's wholesale businesses are exposed to credit risk through underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through various operating services such as cash management and clearing activities. A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk.

The wholesale credit portfolio, excluding Oil & Gas, continued to be generally stable throughout 2015, characterized by low levels of criticized exposure, nonaccrual loans and charge-offs. Growth in loans retained was driven by increased client activity, notably in commercial real estate. Discipline in underwriting across all areas of lending continues to remain a key point of focus. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of client credit quality and transaction structure, inclusive of collateral where applicable; and of industry, product and client concentrations.

Wholesale credit portfolio

December 31,	Credit exposure		Nonperforming[c]	
(in millions)	**2015**	2014	**2015**	2014
Loans retained	**$357,050**	$324,502	**$ 988**	$ 599
Loans held-for-sale	**1,104**	3,801	**3**	4
Loans at fair value	**2,861**	2,611	**25**	21
Loans – reported	**361,015**	330,914	**1,016**	624
Derivative receivables	**59,677**	78,975	**204**	275
Receivables from customers and other[a]	**13,372**	28,972	**–**	–
Total wholesale credit-related assets	**434,064**	438,861	**1,220**	899
Lending-related commitments	**366,399**	366,881	**193**	103
Total wholesale credit exposure	**$800,463**	$805,742	**$ 1,413**	$ 1,002
Credit derivatives used in credit portfolio management activities[b]	**$ (20,681)**	$ (26,703)	**$ (9)**	$ –
Liquid securities and other cash collateral held against derivatives	**(16,580)**	(19,604)	**NA**	NA

(a) Receivables from customers and other include $13.3 billion and $28.8 billion of margin loans at December 31, 2015 and 2014, respectively, to prime and retail brokerage customers; these are classified in accrued interest and accounts receivable on the Consolidated balance sheets.

(b) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on page 129, and Note 6.

(c) Excludes assets acquired in loan satisfactions.

The following tables present the maturity and ratings profiles of the wholesale credit portfolio as of December 31, 2015 and 2014. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings as defined by S&P and Moody's. For additional information on wholesale loan portfolio risk ratings, see Note 14.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[e]				Ratings profile			
					Investment-grade	Noninvestment-grade		
December 31, 2015 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	**Total**	Total % of IG
Loans retained	**$ 110,348**	**$ 155,902**	**$ 90,800**	**$ 357,050**	**$ 267,736**	**$ 89,314**	**$ 357,050**	**75%**
Derivative receivables				**59,677**			**59,677**	
Less: Liquid securities and other cash collateral held against derivatives				**(16,580)**			**(16,580)**	
Total derivative receivables, net of all collateral	**11,399**	**12,836**	**18,862**	**43,097**	**34,773**	**8,324**	**43,097**	**81**
Lending-related commitments	**105,514**	**251,042**	**9,843**	**366,399**	**267,922**	**98,477**	**366,399**	**73**
Subtotal	**227,261**	**419,780**	**119,505**	**766,546**	**570,431**	**196,115**	**766,546**	**74**
Loans held-for-sale and loans at fair value[a]				**3,965**			**3,965**	
Receivables from customers and other				**13,372**			**13,372**	
Total exposure – net of liquid securities and other cash collateral held against derivatives				**$ 783,883**			**$ 783,883**	
Credit derivatives used in credit portfolio management activities by reference entity ratings profile[b][c][d]	**$ (808)**	**$ (14,427)**	**$ (5,446)**	**$ (20,681)**	**$ (17,754)**	**$ (2,927)**	**$ (20,681)**	**86%**

	Maturity profile[e]				Ratings profile			
					Investment-grade	Noninvestment-grade		
December 31, 2014 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	Total	Total % of IG
Loans retained	$ 112,411	$ 134,277	$ 77,814	$ 324,502	$ 241,666	$ 82,836	$ 324,502	74%
Derivative receivables				78,975			78,975	
Less: Liquid securities and other cash collateral held against derivatives				(19,604)			(19,604)	
Total derivative receivables, net of all collateral	20,032	16,130	23,209	59,371	50,815 [f]	8,556 [f]	59,371	86
Lending-related commitments	94,635	262,572	9,674	366,881	284,288	82,593	366,881	77
Subtotal	227,078	412,979	110,697	750,754	576,769	173,985	750,754	77
Loans held-for-sale and loans at fair value[a]				6,412			6,412	
Receivables from customers and other				28,972			28,972	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 786,138			$ 786,138	
Credit derivatives used in credit portfolio management activities by reference entity ratings profile[b][c][d]	$ (2,050)	$ (18,653)	$ (6,000)	$ (26,703)	$ (23,571)	$ (3,132)	$ (26,703)	88%

(a) Represents loans held-for-sale, primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
(b) These derivatives do not quality for hedge accounting under U.S. GAAP.
(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased.
(d) Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection, including Credit derivatives used in credit portfolio management activities, are executed with investment grade counterparties.
(e) The maturity profile of retained loans, lending-related commitments and derivative receivables is based on remaining contractual maturity. Derivative contracts that are in a receivable position at December 31, 2015, may become a payable prior to maturity based on their cash flow profile or changes in market conditions.
(f) Prior period amounts have been revised to conform with current period presentation.

Wholesale credit exposure – industry exposures

The Firm focuses on the management and diversification of its industry exposures, paying particular attention to industries with actual or potential credit concerns. Exposures deemed criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, was $14.6 billion at December 31, 2015, compared with $10.1 billion at December 31, 2014, driven by downgrades within the Oil & Gas portfolio.

Effective in the fourth quarter 2015, the Firm realigned its wholesale industry divisions in order to better monitor and manage industry concentrations. Included in this realignment is the combination of certain previous stand-alone industries (e.g. Consumer & Retail) as well as the creation of a new industry division, Financial Market Infrastructure, consisting of clearing houses, exchanges and related depositories. In the tables below, the prior period information has been revised to conform with the current period presentation.

Below are summaries of the Firm's exposures as of December 31, 2015 and 2014. For additional information on industry concentrations, see Note 5.

Wholesale credit exposure – industries[a]

						Selected metrics			
			Noninvestment-grade						
As of or for the year ended **December 31, 2015** (in millions)	Credit exposure[d]	Investment-grade	Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[e]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 116,857	$ 88,076	$ 27,087	$ 1,463	$ 231	$ 208	$ (14)	$ (54)	$ (47)
Consumer & Retail	85,460	53,647	29,659	1,947	207	18	13	(288)	(94)
Technology, Media & Telecommunications	57,382	29,205	26,925	1,208	44	5	(1)	(806)	(21)
Industrials	54,386	36,519	16,663	1,164	40	59	8	(386)	(39)
Healthcare	46,053	37,858	7,755	394	46	129	(7)	(24)	(245)
Banks & Finance Cos	43,398	35,071	7,654	610	63	17	(5)	(974)	(5,509)
Oil & Gas	42,077	24,379	13,158	4,263	277	22	13	(530)	(37)
Utilities	30,853	24,983	5,655	168	47	3	–	(190)	(289)
State & Municipal Govt[b]	29,114	28,307	745	7	55	55	(8)	(146)	(81)
Asset Managers	23,815	20,214	3,570	31	–	18	–	(6)	(4,453)
Transportation	19,227	13,258	5,801	167	1	15	3	(51)	(243)
Central Govt	17,968	17,871	97	–	–	7	–	(9,359)	(2,393)
Chemicals & Plastics	15,232	10,910	4,017	274	31	9	–	(17)	–
Metals & Mining	14,049	6,522	6,434	1,008	85	1	–	(449)	(4)
Automotive	13,864	9,182	4,580	101	1	4	(2)	(487)	(1)
Insurance	11,889	9,812	1,958	26	93	23	–	(157)	(1,410)
Financial Markets Infrastructure	7,973	7,304	669	–	–	–	–	–	(167)
Securities Firms	4,412	1,505	2,907	–	–	3	–	(102)	(256)
All other[c]	149,117	130,488	18,095	370	164	1,015	10	(6,655)	(1,291)
Subtotal	$ 783,126	$ 585,111	$ 183,429	$ 13,201	$ 1,385	$ 1,611	$ 10	$ (20,681)	$ (16,580)
Loans held-for-sale and loans at fair value	3,965								
Receivables from customers and interests in purchased receivables	13,372								
Total	$ 800,463								

As of or for the year ended December 31, 2014 (in millions)	Credit exposure[e]	Investment-grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[f]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 105,975	$ 78,996	$ 25,370	$ 1,356	$ 253	$ 309	$ (9)	$ (36)	$ (27)
Consumer & Retail	83,663	52,872	28,289	2,315	187	92	9	(81)	(26)
Technology, Media & Telecommunications	46,655	29,792	15,358	1,446	59	25	(5)	(1,107)	(13)
Industrials	47,859	29,246	17,483	1,117	13	58	(1)	(338)	(24)
Healthcare	56,516	48,402	7,584	488	42	193	16	(94)	(244)
Banks & Finance Cos	55,098	45,962	8,611	508	17	46	(4)	(1,232)	(9,369)
Oil & Gas	43,148	29,260	13,831	56	1	15	2	(144)	(161)
Utilities	27,441	23,533	3,653	255	–	198	(3)	(155)	(193)
State & Municipal Govt[b]	31,068	30,147	819	102	–	69	24	(148)	(130)
Asset Managers	27,488	24,054	3,376	57	1	38	(12)	(9)	(4,545)
Transportation	20,619	13,751	6,703	165	–	5	(12)	(42)	(279)
Central Govt	19,881	19,647	176	58	–	–	–	(11,342)	(1,161)
Chemicals & Plastics	12,612	9,256	3,327	29	–	1	(2)	(14)	–
Metals & Mining	14,969	8,304	6,161	504	–	–	18	(377)	(19)
Automotive	12,754	8,071	4,522	161	–	1	(1)	(140)	–
Insurance	13,350	10,550	2,558	80	162	–	–	(52)	(2,372)
Financial Markets Infrastructure	11,986	11,487	499	–	–	–	–	–	(4)
Securities Firms	4,801	2,491	2,245	10	55	20	4	(102)	(212)
All other[c]	134,475	118,639	15,214	435	187	1,231	(12)	(11,290)	(825)
Subtotal	$ 770,358	$ 594,460	$ 165,779	$ 9,142	$ 977	$ 2,301	$ 12	$ (26,703)	$ (19,604)
Loans held-for-sale and loans at fair value	6,412								
Receivables from customers and interests in purchased receivables	28,972								
Total[d]	$ 805,742								

(a) The industry rankings presented in the table as of December 31, 2014, are based on the industry rankings of the corresponding exposures at December 31, 2015, not actual rankings of such exposures at December 31, 2014.

(b) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2015 and 2014, noted above, the Firm held: $7.6 billion and $10.6 billion, respectively, of trading securities; $33.6 billion and $30.1 billion, respectively, of available-for-sale ("AFS") securities; and $12.8 billion and $10.2 billion, respectively, of held-to-maturity ("HTM") securities, issued by U.S. state and municipal governments. For further information, see Note 3 and Note 12.

(c) All other includes: individuals; SPEs; holding companies; and private education and civic organizations, representing approximately 54%, 37%, 5% and 4%, respectively, at December 31, 2015, and 55%, 33%, 6% and 6%, respectively, at December 31, 2014.

(d) Excludes cash placed with banks of $351.0 billion and $501.5 billion, at December 31, 2015 and 2014, respectively, placed with various central banks, predominantly Federal Reserve Banks.

(e) Credit exposure is net of risk participations and excludes the benefit of "Credit derivatives used in credit portfolio management activities" held against derivative receivables or loans and "Liquid securities and other cash collateral held against derivative receivables".

(f) Represents the net notional amounts of protection purchased and sold through credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The All other category includes purchased credit protection on certain credit indices.

Presented below is a discussion of certain industries to which the Firm has significant exposure and/or present actual or potential credit concerns. For additional information, refer to the tables on the previous pages.

- **Real Estate:** Exposure to this industry increased by $10.9 billion, or 10%, in 2015 to $116.9 billion. The increase was largely driven by growth in multifamily exposure in Commercial Banking. The credit quality of this industry remained stable as the investment-grade portion of the exposures was 75% for 2015 and 2014. The ratio of nonaccrual retained loans to total retained loans decreased to 0.25% at December 31, 2015 from 0.32% at December 31, 2014. For further information on commercial real estate loans, see Note 14.
- **Oil & Gas:** Exposure to the Oil & Gas industry was approximately 5.3% and 5.4% of the Firm's total wholesale exposure as of December 31, 2015 and 2014, respectively. Exposure to this industry decreased by $1.1 billion in 2015 to $42.1 billion; of the $42.1 billion, $13.3 billion was drawn at year-end. As of December 31, 2015, approximately $24 billion of the exposure was investment-grade, of which $4 billion was drawn, and approximately $18 billion of the exposure was high yield, of which $9 billion was drawn. As of December 31, 2015, $23.5 billion of the portfolio was concentrated in the Exploration & Production and Oilfield Services sub-sectors, 36% of which exposure was drawn. Exposure to other sub-sectors, including Integrated oil and gas firms, Midstream/Oil Pipeline companies, and Refineries, is predominantly investment-grade. As of December 31, 2015, secured lending, which largely consists of reserve-based lending to the Oil & Gas industry, was $12.3 billion, 44% of which exposure was drawn.

  In addition to $42.1 billion in exposure classified as Oil & Gas, the Firm had $4.3 billion in exposure to Natural Gas Pipelines and related Distribution businesses, of which $893 million was drawn at year end and 63% was investment-grade, and $4.1 billion in exposure to commercial real estate in geographies sensitive to the Oil & Gas industry.

  The Firm continues to actively monitor and manage its exposure to the Oil & Gas industry in light of market conditions, and is also actively monitoring potential contagion effects on other related or dependent industries.
- **Metals & Mining:** Exposure to the Metals & Mining industry was approximately 1.8% and 1.9% of the Firm's total wholesale exposure as of December 31, 2015 and 2014, respectively. Exposure to the Metals & Mining industry decreased by $920 million in 2015 to $14.0 billion, of which $4.6 billion was drawn. The portfolio largely consists of exposure in North America, and 59% is concentrated in the Steel and Diversified Mining sub-sectors. Approximately 46% of the exposure in the Metals & Mining portfolio was investment-grade as of December 31, 2015, a decrease from 55% as of December 31, 2014, due to downgrades.

Loans

In the normal course of its wholesale business, the Firm provides loans to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals. The Firm actively manages its wholesale credit exposure. One way of managing credit risk is through secondary market sales of loans and lending-related commitments. For further discussion on loans, including information on credit quality indicators and sales of loans, see Note 14.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2015 and 2014.

Wholesale nonaccrual loan activity

Year ended December 31, (in millions)	2015	2014
Beginning balance	**$ 624**	$ 1,044
Additions	**1,307**	882
Reductions:		
Paydowns and other	**534**	756
Gross charge-offs	**87**	148
Returned to performing status	**286**	303
Sales	**8**	95
Total reductions	**915**	1,302
Net changes	**392**	(420)
Ending balance	**$ 1,016**	$ 624

The following table presents net charge-offs, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2015 and 2014. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

Wholesale net charge-offs

Year ended December 31, (in millions, except ratios)	2015	2014
Loans – reported		
Average loans retained	**$ 337,407**	$ 316,060
Gross charge-offs	**95**	151
Gross recoveries	**(85)**	(139)
Net charge-offs	**10**	12
Net charge-off rate	**–%**	–%

Receivables from customers

Receivables from customers primarily represent margin loans to prime and retail brokerage clients that are collateralized through a pledge of assets maintained in clients' brokerage accounts which are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's position may be liquidated by the Firm to meet the minimum collateral requirements.

Lending-related commitments

The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to meet the financing needs of its customers. The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligations under these guarantees, and the counterparties subsequently fail to perform according to the terms of these contracts.

In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's likely actual future credit exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these commitments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn upon in an event of a default by an obligor. The loan-equivalent amount of the Firm's lending-related commitments was $212.4 billion and $216.5 billion as of December 31, 2015 and 2014, respectively.

Clearing services

The Firm provides clearing services for clients entering into securities and derivative transactions. Through the provision of these services the Firm is exposed to the risk of non-performance by its clients and may be required to share in losses incurred by central counterparties ("CCPs"). Where possible, the Firm seeks to mitigate its credit risk to its clients through the collection of adequate margin at inception and throughout the life of the transactions and can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement. For further discussion of Clearing services, see Note 29.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activities. Derivatives enable customers to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its own credit and other market risk exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For OTC derivatives the Firm is exposed to the credit risk of the derivative counterparty. For exchange-traded derivatives ("ETD"), such as futures and options and "cleared" over-the-counter ("OTC-cleared") derivatives, the Firm is generally exposed to the credit risk of the relevant CCP. Where possible, the Firm seeks to mitigate its credit risk exposures arising from derivative transactions through the use of legally enforceable master netting arrangements and collateral agreements. For further discussion of derivative contracts, counterparties and settlement types, see Note 6.

The following table summarizes the net derivative receivables for the periods presented.

Derivative receivables

December 31, (in millions)	2015	2014
Interest rate	**$ 26,363**	$ 33,725
Credit derivatives	**1,423**	1,838
Foreign exchange	**17,177**	21,253
Equity	**5,529**	8,177
Commodity	**9,185**	13,982
Total, net of cash collateral	**59,677**	78,975
Liquid securities and other cash collateral held against derivative receivables	**(16,580)**	(19,604)
Total, net of all collateral	**$ 43,097**	$ 59,371

Derivative receivables reported on the Consolidated balance sheets were $59.7 billion and $79.0 billion at December 31, 2015 and 2014, respectively. These amounts represent the fair value of the derivative contracts, after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. However, in management's view, the appropriate measure of current credit risk should also take into consideration additional liquid securities (primarily U.S. government and agency securities and other group of seven nations ("G7") government bonds) and other cash collateral held by the Firm aggregating $16.6 billion and $19.6 billion at December 31, 2015 and 2014, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor. The decrease in derivative receivables was predominantly driven by declines in interest rate derivatives, commodity derivatives, foreign exchange derivatives and equity derivatives due to market movements, maturities and settlements related to client-driven market-making activities in CIB.

In addition to the collateral described in the preceding paragraph, the Firm also holds additional collateral (primarily cash; G7 government securities; other liquid government-agency and guaranteed securities; and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Although this collateral does not reduce the balances and is not included in the table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative transactions move in the Firm's favor. As of December 31, 2015 and 2014, the Firm held $43.7 billion and $48.6 billion, respectively, of this additional collateral. The derivative receivables fair value, net of all collateral, also does not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of collateral agreements, see Note 6.

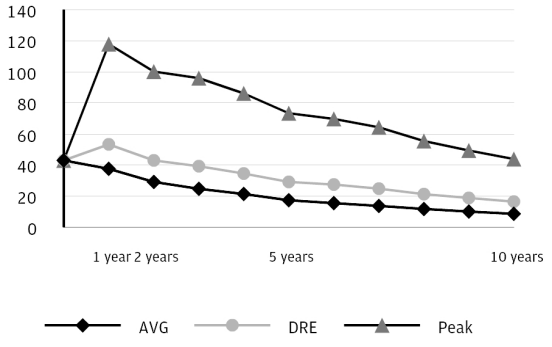
While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak represents a conservative measure of potential exposure to a counterparty calculated in a manner that is broadly equivalent to a 97.5% confidence level. Peak is the primary measure used by the Firm for setting of credit limits for derivative transactions, senior management reporting and derivatives exposure management. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. DRE is a less extreme measure of potential credit loss than Peak and is used for aggregating derivative credit risk exposures with loans and other credit risk. Finally, AVG is a measure of the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the CVA, as further described below. The three year AVG exposure was $32.4 billion and $37.5 billion at December 31, 2015 and 2014, respectively, compared with derivative receivables, net of all collateral, of $43.1 billion and $59.4 billion at December 31, 2015 and 2014, respectively.

The fair value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk management process takes into consideration the potential impact of wrong-way risk, which is broadly defined as the potential for increased correlation between the Firm's exposure to a counterparty (AVG) and the counterparty's credit quality. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with that counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to the Firm's current derivatives portfolio over the next 10 years as calculated by the Peak, DRE and AVG metrics. The three measures generally show that exposure will decline after the first year, if no new trades are added to the portfolio.

Exposure profile of derivatives measures
December 31, 2015
(in billions)



The following table summarizes the ratings profile by derivative counterparty of the Firm's derivative receivables, including credit derivatives, net of other liquid securities collateral, at the dates indicated. The ratings scale is based on the Firm's internal ratings, which generally correspond to the ratings as defined by S&P and Moody's.

Ratings profile of derivative receivables

Rating equivalent	2015		2014[a]	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 10,371**	**24%**	$ 18,713	32%
A+/A1 to A-/A3	**10,595**	**25**	13,508	23
BBB+/Baa1 to BBB-/Baa3	**13,807**	**32**	18,594	31
BB+/Ba1 to B-/B3	**7,500**	**17**	7,735	13
CCC+/Caa1 and below	**824**	**2**	821	1
Total	**$ 43,097**	**100%**	$ 59,371	100%

(a) Prior period amounts have been revised to conform with current period presentation.

As previously noted, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's derivatives transactions subject to collateral agreements – excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity – was 87% as of December 31, 2015, largely unchanged compared with 88% as of December 31, 2014.

Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker, and second, as an end-user to manage the Firm's own credit risk associated with various exposures. For a detailed description of credit derivatives, see Credit derivatives in Note 6.

Credit portfolio management activities

Included in the Firm's end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management" activities). Information on credit portfolio management activities is provided in the table below. For further information on derivatives used in credit portfolio management activities, see Credit derivatives in Note 6.

The Firm also uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain securities held in the Firm's market-making businesses. These credit derivatives are not included in credit portfolio management activities; for further information on these credit derivatives as well as credit derivatives used in the Firm's capacity as a market-maker in credit derivatives, see Credit derivatives in Note 6.

Credit derivatives used in credit portfolio management activities

	Notional amount of protection purchased [a]	
December 31, (in millions)	**2015**	2014
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 2,289**	$ 2,047
Derivative receivables	**18,392**	24,656
Credit derivatives used in credit portfolio management activities	**$ 20,681**	$ 26,703

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

The credit derivatives used in credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure.

The effectiveness of the Firm's credit default swap ("CDS") protection as a hedge of the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS); the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm); and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers both the consumer (primarily scored) portfolio and wholesale (risk-rated) portfolio. The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also determines an allowance for wholesale and certain consumer lending-related commitments.

For a further discussion of the components of the allowance for credit losses and related management judgments, see Critical Accounting Estimates Used by the Firm on pages 165–169 and Note 15.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the DRPC and Audit Committee of the Firm's Board of Directors. As of December 31, 2015, JPMorgan Chase deemed the allowance for credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio.

The consumer, excluding credit card, allowance for loan losses decreased from December 31, 2014, due to a reduction in the residential real estate portfolio allowance, reflecting continued improvement in home prices and delinquencies and increased granularity in the impairment estimates. For additional information about delinquencies and nonaccrual loans in the consumer, excluding credit card, loan portfolio, see Consumer Credit Portfolio on pages 115–121 and Note 14.

The credit card allowance for loan losses was relatively unchanged from December 31, 2014, reflecting stable credit quality trends. For additional information about delinquencies in the credit card loan portfolio, see Consumer Credit Portfolio on pages 115–121 and Note 14.

The wholesale allowance for credit losses increased from December 31, 2014, reflecting the impact of downgrades in the Oil & Gas portfolio. Excluding Oil and Gas, the wholesale portfolio continued to experience generally stable credit quality trends and low charge-off rates.

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2015 Consumer, excluding credit card	2015 Credit card	2015 Wholesale	2015 Total	2014 Consumer, excluding credit card	2014 Credit card	2014 Wholesale	2014 Total
Allowance for loan losses								
Beginning balance at January 1,	**$ 7,050**	**$ 3,439**	**$ 3,696**	**$ 14,185**	$ 8,456	$ 3,795	$ 4,013	$ 16,264
Gross charge-offs	**1,658**	**3,488**	**95**	**5,241**	2,132	3,831	151	6,114
Gross recoveries	**(704)**	**(366)**	**(85)**	**(1,155)**	(814)	(402)	(139)	(1,355)
Net charge-offs	**954**	**3,122**	**10**	**4,086**	1,318	3,429	12	4,759
Write-offs of PCI loans[a]	**208**	**–**	**–**	**208**	533	–	–	533
Provision for loan losses	**(82)**	**3,122**	**623**	**3,663**	414	3,079	(269)	3,224
Other	**–**	**(5)**	**6**	**1**	31	(6)	(36)	(11)
Ending balance at December 31,	**$ 5,806**	**$ 3,434**	**$ 4,315**	**$ 13,555**	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Impairment methodology								
Asset-specific[b]	**$ 364**	**$ 460**	**$ 274**	**$ 1,098**	$ 539	$ 500	$ 87	$ 1,126
Formula-based	**2,700**	**2,974**	**4,041**	**9,715**	3,186	2,939	3,609	9,734
PCI	**2,742**	**–**	**–**	**2,742**	3,325	–	–	3,325
Total allowance for loan losses	**$ 5,806**	**$ 3,434**	**$ 4,315**	**$ 13,555**	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 13**	**$ –**	**$ 609**	**$ 622**	$ 8	$ –	$ 697	$ 705
Provision for lending-related commitments	**1**	**–**	**163**	**164**	5	–	(90)	(85)
Other	**–**	**–**	**–**	**–**	–	–	2	2
Ending balance at December 31,	**$ 14**	**$ –**	**$ 772**	**$ 786**	$ 13	$ –	$ 609	$ 622
Impairment methodology								
Asset-specific	**$ –**	**$ –**	**$ 73**	**$ 73**	$ –	$ –	$ 60	$ 60
Formula-based	**14**	**–**	**699**	**713**	13	–	549	562
Total allowance for lending-related commitments[c]	**$ 14**	**$ –**	**$ 772**	**$ 786**	$ 13	$ –	$ 609	$ 622
Total allowance for credit losses	**$ 5,820**	**$ 3,434**	**$ 5,087**	**$ 14,341**	$ 7,063	$ 3,439	$ 4,305	$ 14,807
Memo:								
Retained loans, end of period	**$ 344,355**	**$ 131,387**	**$ 357,050**	**$ 832,792**	$ 294,979	$ 128,027	$ 324,502	$ 747,508
Retained loans, average	**318,612**	**124,274**	**337,407**	**780,293**	289,212	124,604	316,060	729,876
PCI loans, end of period	**40,998**	**–**	**4**	**41,002**	46,696	–	4	46,700
Credit ratios								
Allowance for loan losses to retained loans	**1.69%**	**2.61%**	**1.21%**	**1.63%**	2.39%	2.69%	1.14%	1.90%
Allowance for loan losses to retained nonaccrual loans[d]	**109**	**NM**	**437**	**215**	110	NM	617	202
Allowance for loan losses to retained nonaccrual loans excluding credit card	**109**	**NM**	**437**	**161**	110	NM	617	153
Net charge-off rates	**0.30**	**2.51**	**–**	**0.52**	0.46	2.75	–	0.65
Credit ratios, excluding residential real estate PCI loans								
Allowance for loan losses to retained loans	**1.01**	**2.61**	**1.21**	**1.37**	1.50	2.69	1.14	1.55
Allowance for loan losses to retained nonaccrual loans[d]	**58**	**NM**	**437**	**172**	58	NM	617	155
Allowance for loan losses to retained nonaccrual loans excluding credit card	**58**	**NM**	**437**	**117**	58	NM	617	106
Net charge-off rates	**0.35%**	**2.51%**	**–%**	**0.55%**	0.55%	2.75%	–%	0.70%

Note: In the table above, the financial measures which exclude the impact of PCI loans are non-GAAP financial measures. For additional information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82.

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation). During the fourth quarter of 2014, the Firm recorded a $291 million adjustment to reduce the PCI allowance and the recorded investment in the Firm's PCI loan portfolio, primarily reflecting the cumulative effect of interest forgiveness modifications. This adjustment had no impact to the Firm's Consolidated statements of income.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR. The asset-specific credit card allowance for loan losses modified in a TDR is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(c) The allowance for lending-related commitments is reported in other liabilities on the Consolidated balance sheets.

(d) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

Provision for credit losses

For the year ended December 31, 2015, the provision for credit losses was $3.8 billion, compared with $3.1 billion for the year ended December 31, 2014.

The total consumer provision for credit losses for the year ended December 31, 2015 reflected lower net charge-offs due to continued discipline in credit underwriting as well as improvement in the economy driven by increasing home prices and lower unemployment, partially offset by a lower reduction in the allowance for loan loss compared with December 31, 2014.

The wholesale provision for credit losses for the year ended December 31, 2015 reflected the impact of downgrades in the Oil & Gas portfolio.

Year ended December 31,	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
(in millions)	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Consumer, excluding credit card	**$ (82)**	$ 414	$ (1,872)	**$ 1**	$ 5	$ 1	**$ (81)**	$ 419	$ (1,871)
Credit card	**3,122**	3,079	2,179	**–**	–	–	**3,122**	3,079	2,179
Total consumer	**3,040**	3,493	307	**1**	5	1	**3,041**	3,498	308
Wholesale	**623**	(269)	(119)	**163**	(90)	36	**786**	(359)	(83)
Total	**$ 3,663**	$ 3,224	$ 188	**$ 164**	$ (85)	$ 37	**$ 3,827**	$ 3,139	$ 225

Market risk is the potential for adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.

Market risk management
Market Risk management, part of the independent risk management function, is responsible for identifying and monitoring market risks throughout the Firm and defines market risk policies and procedures. The Market Risk function reports to the Firm's CRO.

Market Risk seeks to control risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk identification and classification
Each line of business is responsible for the management of the market risks within its units. The independent risk management group responsible for overseeing each line of business is charged with ensuring that all material market risks are appropriately identified, measured, monitored and managed in accordance with the risk policy framework set out by Market Risk.

Risk measurement

Tools used to measure risk
Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- VaR
- Economic-value stress testing
- Nonstatistical risk measures
- Loss advisories
- Profit and loss drawdowns
- Earnings-at-risk

Risk monitoring and control
Market risk is controlled primarily through a series of limits set in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity and accommodation of client business and management experience. The Firm maintains different levels of limits. Corporate level limits include VaR and stress limits. Similarly, line of business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns. Limits may also be set within the lines of business, as well at the portfolio or legal entity level.

Limits are set by Market Risk and are regularly reviewed and updated as appropriate, with any changes approved by line of business management and Market Risk. Senior management, including the Firm's CEO and CRO, are responsible for reviewing and approving certain of these risk limits on an ongoing basis. All limits that have not been reviewed within specified time periods by Market Risk are escalated to senior management. The lines of business are responsible for adhering to established limits against which exposures are monitored and reported.

Limit breaches are required to be reported in a timely manner to limit approvers, Market Risk and senior management. In the event of a breach, Market Risk consults with Firm senior management and the line of business senior management to determine the appropriate course of action required to return to compliance, which may include a reduction in risk in order to remedy the breach. Certain Firm or line of business-level limits that have been breached for three business days or longer, or by more than 30%, are escalated to senior management and the Firmwide Risk Committee.

The following table summarizes by LOB the predominant business activities that give rise to market risk, and the market risk management tools utilized to manage those risks; CB is not presented in the table below as it does not give rise to significant market risk.

Risk identification and classification for business activities

LOB	Predominant business activities and related market risks	Positions included in Risk Management VaR	Positions included in other risk measures *(Not included in Risk Management VaR)*
CIB	• Makes markets and services clients across fixed income, foreign exchange, equities and commodities • Market risk arising from changes in market prices (e.g. rates and credit spreads) resulting in a potential decline in net income	• Market risk[(a)] related to: • Trading assets/liabilities – debt and equity instruments, and derivatives, including hedges of the retained loan portfolio • Certain securities purchased under resale agreements and securities borrowed • Certain securities loaned or sold under repurchase agreements • Structured notes • Derivative CVA and associated hedges	• Principal investing activities • Retained loan portfolio • Deposits • DVA and FVA on derivatives and structured notes
CCB	• Originates and services mortgage loans • Complex, non-linear interest rate and basis risk • Non-linear risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing • Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates	*Mortgage Banking* • Mortgage pipeline loans, classified as derivatives • Warehouse loans, classified as trading assets – debt instruments • MSRs • Hedges of pipeline loans, warehouse loans and MSRs, classified as derivatives. • Interest-only securities, classified as trading assets, and related hedges, classified as derivatives	• Retained loan portfolio • Deposits • Principal investing activities
Corporate	• Manages the Firm's liquidity, funding, structural interest rate and foreign exchange risks arising from activities undertaken by the Firm's four major reportable business segments	*Treasury and CIO* • Primarily derivative positions measured at fair value through earnings, classified as derivatives	• Principal investing activities • Investment securities portfolio and related hedges • Deposits • Long-term debt and related hedges
AM	• Market risk arising from the Firm's initial capital investments in products, such as mutual funds, managed by AM	• Initial seed capital investments and related hedges, classified as derivatives	• Capital invested alongside third-party investors, typically in privately distributed collective vehicles managed by AM (i.e., co-investments) • Retained loan portfolio • Deposits

(a) Market risk measurement for derivatives generally incorporates the impact of DVA and FVA; market risk measurement for structured notes generally excludes the impact of FVA and DVA.

Value-at-risk

JPMorgan Chase utilizes VaR, a statistical risk measure, to estimate the potential loss from adverse market moves in a normal market environment. The Firm has a single VaR framework used as a basis for calculating Risk Management VaR and Regulatory VaR.

The framework is employed across the Firm using historical simulation based on data for the previous 12 months. The framework's approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. The Firm believes the use of Risk Management VaR provides a stable measure of VaR that closely aligns to the day-to-day risk management decisions made by the lines of business, and provides the necessary and appropriate information needed to respond to risk events on a daily basis.

Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks across businesses and monitoring limits. These VaR results are reported to senior management, the Board of Directors and regulators.

Under the Firm's Risk Management VaR methodology, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR "band breaks," defined as losses greater than that predicted by VaR estimates, not more than five times every 100 trading days. The number of VaR band breaks observed can differ from the statistically expected number of band breaks if the current level of market volatility is materially different from the level of market volatility during the 12 months of historical data used in the VaR calculation.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual products and/or risk factors. To capture material market risks as part of the Firm's risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period; inputs are selected based on the risk profile of each portfolio as sensitivities and historical time series used to generate daily market values may be different across product types or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

For certain products, specific risk parameters are not captured in VaR due to the lack of inherent liquidity and availability of appropriate historical data for these products. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented.

In addition, data sources used in VaR models may not be the same as those used for financial statement valuations. In cases where market prices are not observable, or where proxies are used in VaR historical time series, the sources may differ. The daily market data used in VaR models may be different than the independent third-party data collected for VCG price testing in VCG's monthly valuation process (see Valuation process in Note 3 for further information on the Firm's valuation process). VaR model calculations require daily data and a consistent source for valuation and therefore it is not practical to use the data collected in the VCG monthly valuation process.

Since VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses, and it is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions. The Firm therefore considers other measures in addition to VaR, such as stress testing, to capture and manage its market risk positions.

The Firm's VaR model calculations are periodically evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and other factors. Such changes may also affect historical comparisons of VaR results. Model changes undergo a review and approval process by the Model Review Group prior to implementation into the operating environment. For further information, see Model risk on page 142.

The Firm calculates separately a daily aggregated VaR in accordance with regulatory rules ("Regulatory VaR"), which is used to derive the Firm's regulatory VaR-based capital requirements under Basel III. This Regulatory VaR model framework currently assumes a ten business-day holding period and an expected tail loss methodology which approximates a 99% confidence level. Regulatory VaR is applied to "covered" positions as defined by Basel III, which may be different than the positions included in the Firm's Risk Management VaR. For example, credit derivative hedges of accrual loans are included in the Firm's Risk Management VaR, while Regulatory VaR excludes these credit derivative hedges. In addition, in contrast to the Firm's Risk Management VaR, Regulatory VaR currently excludes the diversification benefit for certain VaR models.

For additional information on Regulatory VaR and the other components of market risk regulatory capital (e.g. VaR-based measure, stressed VaR-based measure and the respective backtesting) for the Firm, see JPMorgan Chase's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (http://investor.shareholder.com/jpmorganchase/basel.cfm).

The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level.

Total VaR

As of or for the year ended December 31,	2015			2014			At December 31,	
(in millions)	Avg.	Min	Max	Avg.	Min	Max	2015	2014
CIB trading VaR by risk type								
Fixed income	**$ 42**	**$ 31**	**$ 60**	$ 34	$ 23	$ 45	**$ 37**	$ 34
Foreign exchange	**9**	**6**	**16**	8	4	25	**6**	8
Equities	**18**	**11**	**26**	15	10	23	**21**	22
Commodities and other	**10**	**6**	**14**	8	5	14	**10**	6
Diversification benefit to CIB trading VaR	**(35)** [a]	**NM** [b]	**NM** [b]	(30) [a]	NM [b]	NM [b]	**(28)** [a]	(32) [a]
CIB trading VaR	**44**	**27**	**68**	35	24	49	**46**	38
Credit portfolio VaR	**14**	**10**	**20**	13	8	18	**10**	16
Diversification benefit to CIB VaR	**(9)** [a]	**NM** [b]	**NM** [b]	(8) [a]	NM [b]	NM [b]	**(10)** [a]	(9) [a]
CIB VaR	**49**	**34**	**71**	40	29	56	**46**	45
Mortgage Banking VaR	**4**	**2**	**8**	7	2	28	**4**	3
Treasury and CIO VaR	**4**	**3**	**7**	4	3	6	**5**	4
Asset Management VaR	**3**	**2**	**4**	3	2	4	**3**	2
Diversification benefit to other VaR	**(3)** [a]	**NM** [b]	**NM** [b]	(4) [a]	NM [b]	NM [b]	**(4)** [a]	(3) [a]
Other VaR	**8**	**5**	**12**	10	5	27	**8**	6
Diversification benefit to CIB and other VaR	**(10)** [a]	**NM** [b]	**NM** [b]	(7) [a]	NM [b]	NM [b]	**(9)** [a]	(5) [a]
Total VaR	**$ 47**	**$ 34**	**$ 67**	$ 43	$ 30	$ 70	**$ 45**	$ 46

(a) Average portfolio VaR and period-end portfolio VaR were less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects the fact that risks are not perfectly correlated.

(b) Designated as not meaningful ("NM"), because the minimum and maximum may occur on different days for distinct risk components, and hence it is not meaningful to compute a portfolio-diversification effect.

As presented in the table above, average Total VaR and average CIB VaR increased during 2015 when compared with 2014. The increase in Total VaR was primarily due to higher volatility in the CIB in the historical one-year look-back period during 2015 versus 2014.

Average CIB trading VaR increased during 2015 primarily due to higher VaR in the Fixed Income and Equities risk factors reflecting a combination of higher market volatility and increased exposure.

Average Mortgage Banking VaR decreased from the prior year. Average Mortgage Banking VaR was elevated late in the second quarter of 2014 due to a change in the MSR hedge position made in advance of an anticipated update to certain MSR model assumptions; when such updates were implemented, the MSR VaR decreased to levels more consistent with prior periods.

The Firm continues to enhance the VaR model calculations and time series inputs related to certain asset-backed products.

The Firm's average Total VaR diversification benefit was $10 million or 21% of the sum for 2015, compared with $7 million or 16% of the sum for 2014. In general, over the course of the year, VaR exposure can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

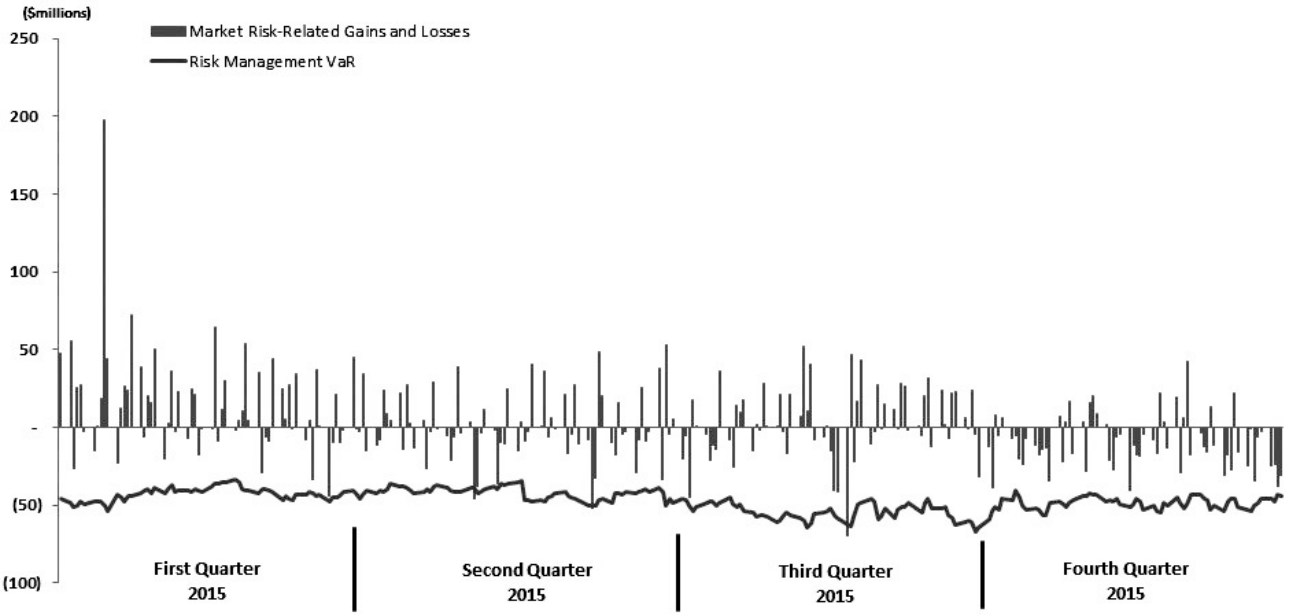
VaR back-testing

The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses recognized on market-risk related revenue.

The Firm's definition of market risk-related gains and losses is consistent with the definition used by the banking regulators under Basel III. Under this definition market risk-related gains and losses are defined as: gains and losses on the positions included in the Firm's Risk Management VaR, excluding fees, commissions, certain valuation adjustments (e.g., liquidity and DVA), net interest income, and gains and losses arising from intraday trading.

The following chart compares the daily market risk-related gains and losses with the Firm's Risk Management VaR for the year ended December 31, 2015. As the chart presents market risk-related gains and losses related to those positions included in the Firm's Risk Management VaR, the results in the table below differ from the results of back-testing disclosed in the Market Risk section of the Firm's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are based on Regulatory VaR applied to covered positions. The chart shows that for the year ended December 31, 2015, the Firm observed three VaR band breaks and posted Market risk-related gains on 117 of the 260 days in this period.

Daily Market Risk-Related Gains and Losses vs. Risk Management VaR (1-day, 95% Confidence level)
Twelve months ended December 31, 2015



Other risk measures

Economic-value stress testing

Along with VaR, stress testing is an important tool in measuring and controlling risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing is intended to capture the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates or commodity prices.

The Firm uses a number of standard scenarios that capture different risk factors across asset classes including geographical factors, specific idiosyncratic factors and extreme tail events. The stress framework calculates multiple magnitudes of potential stress for both market rallies and market sell-offs for each risk factor and combines them in multiple ways to capture different market scenarios. For example, certain scenarios assess the potential loss arising from current exposures held by the Firm due to a broad sell off in bond markets or an extreme widening in corporate credit spreads. The flexibility of the stress testing framework allows risk managers to construct new, specific scenarios that can be used to form decisions about future possible stress events.

Stress testing complements VaR by allowing risk managers to shock current market prices to more extreme levels relative to those historically realized, and to stress test the relationships between market prices under extreme scenarios.

Stress-test results, trends and qualitative explanations based on current market risk positions are reported to the respective LOB's and the Firm's senior management to allow them to better understand the sensitivity of positions to certain defined events and to enable them to manage their risks with more transparency. In addition, results are reported to the Board of Directors.

Stress scenarios are defined and reviewed by Market Risk, and significant changes are reviewed by the relevant LOB Risk Committees and may be redefined on a periodic basis to reflect current market conditions.

The Firm's stress testing framework is utilized in calculating results under scenarios mandated by the Federal Reserve's Comprehensive Capital Analysis and Review ("CCAR") and

Internal Capital Adequacy Assessment Process ("ICAAP") processes. In addition, the results are incorporated into the quarterly assessment of the Firm's Risk Appetite Framework and are also presented to the DRPC.

Nonstatistical risk measures

Nonstatistical risk measures include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line of business and by risk type, and are also used for monitoring internal market risk limits.

Loss advisories and profit and loss drawdowns

Loss advisories and profit and loss drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Profit and loss drawdowns are defined as the decline in net profit and loss since the year-to-date peak revenue level.

Earnings-at-risk

The VaR and stress-test measures described above illustrate the economic sensitivity of the Firm's Consolidated balance sheets to changes in market variables. The effect of interest rate exposure on the Firm's reported net income is also important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits and issuing debt. The Firm evaluates its structural interest rate risk exposure through earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's net interest income and interest rate-sensitive fees. Earnings-at-risk excludes the impact of CIB's markets-based activities and MSRs, as these sensitivities are captured under VaR.

The CIO, Treasury and Corporate ("CTC") Risk Committee establishes the Firm's structural interest rate risk policies and market risk limits, which are subject to approval by the DRPC. The CIO, working in partnership with the lines of business, calculates the Firm's structural interest rate risk profile and reviews it with senior management including the CTC Risk Committee and the Firm's ALCO. In addition, oversight of structural interest rate risk is managed through a dedicated risk function reporting to the CTC CRO. This risk function is responsible for providing independent oversight and governance around assumptions and establishing and monitoring limits for structural interest rate risk. The Firm manages structural interest rate risk generally through its investment securities portfolio and interest rate derivatives.

Structural interest rate risk can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve)
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, firmwide basis. Business units transfer their interest rate risk to Treasury and CIO through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm generates a net interest income baseline, and then conducts simulations of changes for interest rate-sensitive assets and liabilities denominated in U.S. dollar and other currencies ("non-U.S. dollar" currencies). Earnings-at-risk scenarios estimate the potential change in this net interest income baseline, excluding CIB's markets-based activities and MSRs, over the following 12 months, utilizing multiple assumptions. These scenarios may consider the impact on exposures as a result of changes in interest rates from baseline rates, as well as pricing sensitivities of deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, as well as modeled prepayment and reinvestment behavior, but do not include assumptions about actions which could be taken by the Firm in response to any such instantaneous rate changes. For example, mortgage prepayment assumptions are based on current interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience. The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors.

Effective January 1, 2015, the Firm conducts earnings-at-risk simulations for assets and liabilities denominated in U.S. dollars separately from assets and liabilities denominated in non-U.S. dollar currencies in order to enhance the Firm's ability to monitor structural interest rate risk from non-U.S. dollar exposures.

The Firm's U.S. dollar sensitivity is presented in the table below. The result of the non-U.S. dollar sensitivity scenarios were not material to the Firm's earnings-at-risk at December 31, 2015.

JPMorgan Chase's 12-month pretax net interest income sensitivity profiles

(Excludes the impact of CIB's markets-based activities and MSRs)

(in billions)	Instantaneous change in rates			
December 31, 2015	+200 bps	+100 bps	-100 bps	-200 bps
U.S. dollar	**$ 5.2**	**$ 3.1**	**NM** [(a)]	**NM** [(a)]

(a) Downward 100- and 200-basis-points parallel shocks result in a federal funds target rate of zero and negative three- and six-month U.S. Treasury rates. The earnings-at-risk results of such a low probability scenario are not meaningful.

The Firm's benefit to rising rates on U.S. dollar assets and liabilities is largely a result of reinvesting at higher yields and assets repricing at a faster pace than deposits. The Firm's net U.S. dollar sensitivity profile at December 31, 2015 was not materially different than December 31, 2014.

Separately, another U.S. dollar interest rate scenario used by the Firm — involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels — results in a 12-month pretax benefit to net interest income, excluding CIB's markets-based activities and MSRs, of approximately $700 million. The increase in net interest income under this scenario reflects the Firm reinvesting at the higher long-term rates, with funding costs remaining unchanged. The result of the comparable non-U.S. dollar scenario was not material to the Firm.

Non-U.S. dollar FX Risk

Non-U.S. dollar FX risk is the risk that changes in foreign exchange rates affect the value of the Firm's assets or liabilities or future results. The Firm has structural non-U.S. dollar FX exposures arising from capital investments, forecasted expense and revenue, the investment securities portfolio and issuing debt in denominations other than the U.S. dollar. Treasury and CIO, working in partnership with the lines of business, primarily manage these risks on behalf of the Firm. Treasury and CIO may hedge certain of these risks using derivatives within risk limits governed by the CTC Risk Committee.

COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers or adversely affects markets related to a particular country. The Firm has a comprehensive country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring direct country exposures in the Firm. The Country Risk Management group is responsible for developing guidelines and policies for managing country risk in both emerging and developed countries. The Country Risk Management group actively monitors the various portfolios giving rise to country risk to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

Country risk organization
The Country Risk Management group, part of the independent risk management function, works in close partnership with other risk functions to identify and monitor country risk within the Firm. The Firmwide Risk Executive for Country Risk reports to the Firm's CRO.

Country Risk Management is responsible for the following functions:

- Developing guidelines and policies consistent with a comprehensive country risk framework
- Assigning sovereign ratings and assessing country risks
- Measuring and monitoring country risk exposure and stress across the Firm
- Managing country limits and reporting trends and limit breaches to senior management
- Developing surveillance tools for early identification of potential country risk concerns
- Providing country risk scenario analysis

Country risk identification and measurement
The Firm is exposed to country risk through its lending, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country. Under the Firm's internal country risk management approach, country exposure is reported based on the country where the majority of the assets of the obligor, counterparty, issuer or guarantor are located or where the majority of its revenue is derived, which may be different than the domicile (legal residence) or country of incorporation of the obligor, counterparty, issuer or guarantor. Country exposures are generally measured by considering the Firm's risk to an immediate default of the counterparty or obligor, with zero recovery. Assumptions are sometimes required in determining the measurement and allocation of country exposure, particularly in the case of certain tranched credit derivatives. Different measurement approaches or assumptions would affect the amount of reported country exposure.

Under the Firm's internal country risk measurement framework:

- Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and cash and marketable securities collateral received
- Securities financing exposures are measured at their receivable balance, net of collateral received
- Debt and equity securities are measured at the fair value of all positions, including both long and short positions
- Counterparty exposure on derivative receivables is measured at the derivative's fair value, net of the fair value of the related collateral. Counterparty exposure on derivatives can change significantly because of market movements
- Credit derivatives protection purchased and sold is reported based on the underlying reference entity and is measured at the notional amount of protection purchased or sold, net of the fair value of the recognized derivative receivable or payable. Credit derivatives protection purchased and sold in the Firm's market-making activities is measured on a net basis, as such activities often result in selling and purchasing protection related to the same underlying reference entity; this reflects the manner in which the Firm manages these exposures

The Firm also has indirect exposures to country risk (for example, related to the collateral received on securities financing receivables or related to client clearing activities). These indirect exposures are managed in the normal course of business through the Firm's credit, market, and operational risk governance, rather than through Country Risk Management.

The Firm's internal country risk reporting differs from the reporting provided under the FFIEC bank regulatory requirements. For further information on the FFIEC's reporting methodology, see Cross-border outstandings on page 327.

Country risk stress testing

The country risk stress framework aims to identify potential losses arising from a country crisis by capturing the impact of large asset price movements in a country based on market shocks combined with counterparty specific assumptions. Country Risk Management periodically defines and runs ad hoc stress scenarios for individual countries in response to specific market events and sector performance concerns.

Country risk monitoring and control

The Country Risk Management group establishes guidelines for sovereign ratings reviews and limit management. Country stress and nominal exposures are measured under a comprehensive country limit framework. Country ratings and limits are actively monitored and reported on a regular basis. Country limit requirements are reviewed and approved by senior management as often as necessary, but at least annually. In addition, the Country Risk Management group uses surveillance tools, such as signaling models and ratings indicators, for early identification of potential country risk concerns.

Country risk reporting

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of December 31, 2015. The selection of countries is based solely on the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions. Country exposures may fluctuate from period to period due to normal client activity and market flows.

Top 20 country exposures

	December 31, 2015			
(in billions)	Lending[a]	Trading and investing[b][c]	Other[d]	Total exposure
United Kingdom	$ 23.8	$ 21.8	$ 1.1	$ 46.7
Germany	13.8	16.7	0.2	30.7
France	14.2	11.9	0.1	26.2
Japan	12.9	7.8	0.4	21.1
China	10.3	7.2	1.0	18.5
Canada	13.9	2.9	0.3	17.1
Australia	7.7	5.9	–	13.6
Netherlands	5.0	6.0	1.4	12.4
India	6.1	5.6	0.4	12.1
Brazil	6.2	4.9	–	11.1
Switzerland	6.7	0.9	1.9	9.5
Korea	4.3	3.3	0.1	7.7
Hong Kong	2.8	2.6	1.4	6.8
Italy	2.8	3.8	0.2	6.8
Luxembourg	6.4	0.1	–	6.5
Spain	3.2	2.1	0.1	5.4
Singapore	2.4	1.3	0.7	4.4
Sweden	1.7	2.5	–	4.2
Mexico	2.9	1.3	–	4.2
Belgium	1.7	2.3	–	4.0

(a) Lending includes loans and accrued interest receivable (net of collateral and the allowance for loan losses), deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and unused commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities.

(b) Includes market-making inventory, AFS securities, counterparty exposure on derivative and securities financings net of collateral and hedging.

(c) Includes single reference entity ("single-name"), index and tranched credit derivatives for which one or more of the underlying reference entities is in a country listed in the above table.

(d) Includes capital invested in local entities and physical commodity inventory.

Model risk

Model risk is the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports.

The Firm uses models for many purposes including the valuation of positions and the measurement of risk. Valuation models are employed by the Firm to value certain financial instruments for which quoted prices may not be readily available. Valuation models may be employed as inputs into risk measurement models including VaR, regulatory capital, estimation of stress loss and the allowance for credit losses.

Models are owned by various functions within the Firm based on the specific purposes of such models. For example, VaR models and certain regulatory capital models are owned by the line of business-aligned risk management functions. Owners of models are responsible for the development, implementation and testing of their models, as well as referral of models to the Model Risk function for review and approval. Once models have been approved, model owners are responsible for the maintenance of a robust operating environment and must monitor and evaluate the performance of the models on an ongoing basis. Model owners may seek to enhance models in response to changes in the portfolios and in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities.

The Model Risk review and governance functions review and approve a wide range of models, including risk management, valuation, and regulatory capital models used by the Firm. Independent of the model owners, the Model Risk review and governance functions are part of the Firm's Model Risk unit, and the Firmwide Model Risk Executive reports to the Firm's CRO.

Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on the model. This tiering is subject to the approval of the Model Risk function. A model review conducted by the Model Risk function considers the model's suitability for the specific uses to which it will be put. The factors considered in reviewing a model include whether the model accurately reflects the characteristics of the product and its significant risks, the selection and reliability of model inputs, consistency with models for similar products, the appropriateness of any model-related adjustments, and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes. Model reviews are approved by the appropriate level of management within the Model Risk function based on the relevant tier of the model.

Under the Firm's Model Risk Policy, the Model Risk function reviews and approves new models, as well as material changes to existing models, prior to implementation in the operating environment. In certain circumstances, the head of the Model Risk function may grant exceptions to the Firm's model risk policy to allow a model to be used prior to review or approval. The Model Risk function may also require the owner to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity.

For a summary of valuations based on models, see Critical Accounting Estimates Used by the Firm and Note 3.

Principal investments are predominantly privately-held financial assets and instruments, typically representing an ownership or junior capital position, that have unique risks due to their illiquidity or for which there is less observable market or valuation data. Such investing activities are typically intended to be held over extended investment periods and, accordingly, the Firm has no expectation for short-term gain with respect to these investments. Principal investments cover multiple asset classes and are made either in stand-alone investing businesses or as part of a broader business platform. Asset classes include tax-oriented investments (e.g., affordable housing and alternative energy investments), private equity and various debt investments.

The Firm's principal investments are managed under various lines of business and are captured within the respective LOB's financial results. The Firm's approach to managing principal risk is consistent with the Firm's general risk governance structure. A Firmwide risk policy framework exists for all principal investing activities. All investments are approved by investment committees that include executives who are independent from the investing businesses. The Firm's independent control functions are responsible for reviewing the appropriateness of the carrying value of principal investments in accordance with relevant policies. Approved levels for such investments are established for each relevant business in order to manage the overall size of the portfolios. Industry, geographic, and position level concentration limits are in place and are intended to ensure diversification of the portfolios. The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves and/or other risk events.

OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or due to external events that are neither market- nor credit-related. Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business interruptions, inappropriate behavior of employees, failure to comply with applicable laws and regulations or failure of vendors to perform in accordance with their arrangements. These events could result in financial losses, litigation and regulatory fines, as well as other damage to the Firm. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject.

Overview

To monitor and control operational risk, the Firm maintains an Operational Risk Management Framework ("ORMF") designed to enable the Firm to maintain a sound and well-controlled operational environment. The four main components of the ORMF include: governance, risk identification and assessment, monitoring and reporting, and measurement.

Risk Management is responsible for prescribing the ORMF to the lines of business and corporate functions and for providing independent oversight of its implementation. The lines of business and corporate functions are responsible for implementing the ORMF. The Firmwide Oversight and Control Group ("O&C"), which consists of dedicated control officers within each of the lines of business and corporate functional areas, as well as a central oversight team, is responsible for day to day execution of the ORMF.

Operational risk management framework

The components of the Operational Risk Management Framework are:

Governance

The Firm's operational risk governance function reports to the Firm's CRO and is responsible for defining the ORMF and establishing the firmwide operational risk management governance structure, policies and standards. The Firmwide Risk Executive for Operational Risk Governance, a direct report of the CRO, works with the line of business CROs to provide independent oversight of the implementation of the ORMF across the Firm. Operational Risk Officers ("OROs"), who report to the LOB Chief Risk Officers or to the Firmwide Risk Executive for Operational Risk Governance, are independent of the lines of business and corporate functions, and O&C. The OROs provide oversight of the implementation of the ORMF within in each line of business and corporate function.

Line of business, corporate function and regional control committees oversee the operational risk and control environments of their respective businesses, functions or regions. These committees escalate operational risk issues to the FCC, as appropriate. For additional information on the Firmwide Control Committee, see Enterprise Risk Management on pages 107–111.

Risk Identification and Self-Assessment

In order to evaluate and monitor operational risk, the lines of business and corporate functions utilize several processes to identify, assess, mitigate and manage operational risk. Firmwide standards are in place for each of these processes and set the minimum requirements for how they must be applied.

The Firm's risk and control self-assessment ("RCSA") process and supporting architecture requires management to identify material inherent operational risks, assess the design and operating effectiveness of relevant controls in place to mitigate such risks, and evaluate residual risk. Action plans are developed for control issues that are identified, and businesses are held accountable for tracking and resolving issues on a timely basis. Risk Management performs an independent challenge of the RCSA program including residual risk results.

The Firm also tracks and monitors operational risk events which are analyzed by the responsible businesses and corporate functions. This enables identification of the root causes of the operational risk events and evaluation of the associated controls.

Furthermore, lines of business and corporate functions establish key risk indicators to manage and monitor operational risk and the control environment. These assist in the early detection and timely escalation of issues or events.

Risk monitoring and reporting

Operational risk management and control reports provide information, including actual operational loss levels, self-assessment results and the status of issue resolution to the lines of business and senior management. In addition, key control indicators and operating metrics are monitored against targets and thresholds. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and functions.

Measurement
Two standard forms of operational risk measurement include operational risk capital and operational risk losses under baseline and stressed conditions.

The Firm's operational risk capital methodology incorporates the four required elements of the Advanced Measurement Approach under the Basel III framework:

- Internal losses,
- External losses,
- Scenario analysis, and
- Business environment and internal control factors.

The primary component of the operational risk capital estimate is the result of a statistical model, the Loss Distribution Approach ("LDA"), which simulates the frequency and severity of future operational risk losses based on historical data. The LDA model is used to estimate an aggregate operational risk loss over a one-year time horizon, at a 99.9% confidence level. The LDA model incorporates actual internal operational risk losses in the quarter following the period in which those losses were realized, and the calculation generally continues to reflect such losses even after the issues or business activities giving rise to the losses have been remediated or reduced.

The calculation is supplemented by external loss data as needed, as well as both management's view of plausible tail risk, which is captured as part of the Scenario Analysis process, and evaluation of key LOB internal control metrics (BEICF). The Firm may further supplement such analysis to incorporate feedback from its bank regulators.

The Firm considers the impact of stressed economic conditions on operational risk losses and a forward looking view of material operational risk events that may occur in a stressed environment. The Firm's operational risk stress testing framework is utilized in calculating results for the Firm's CCAR, ICAAP and Risk Appetite processes.

For information related to operational risk RWA, CCAR or ICAAP, see Capital Management section, pages 149–158.

Insurance
One of the ways operational loss may be mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations (e.g., workers compensation), as well as to serve other needs (e.g., property loss and public liability). Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

Cybersecurity
The Firm devotes significant resources maintaining and regularly updating its systems and processes that are designed to protect the security of the Firm's computer systems, software, networks and other technology assets against attempts by unauthorized parties to obtain access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage. Third parties with which the Firm does business or that facilitate the Firm's business activities (e.g., vendors, exchanges, clearing houses, central depositories, and financial intermediaries) could also be sources of cybersecurity risk to the Firm, including with respect to breakdowns or failures of their systems, misconduct by the employees of such parties, or cyberattacks which could affect their ability to deliver a product or service to the Firm or result in lost or compromised information of the Firm or its clients. In addition, customers with which or whom the Firm does business can also be sources of cybersecurity risk to the Firm, particularly when their activities and systems are beyond the Firm's own security and control systems. Customers will generally be responsible for losses incurred due to their own failure to maintain the security of their own systems and processes.

The Firm and several other U.S. financial institutions have experienced significant distributed denial-of-service attacks from technically sophisticated and well-resourced unauthorized parties which are intended to disrupt online banking services. The Firm and its clients are also regularly targeted by unauthorized parties using malicious code and viruses. On September 10, 2014, the Firm disclosed that a cyberattack against the Firm had occurred. The cyberattacks experienced to date have not resulted in any material disruption to the Firm's operations nor have they had a material adverse effect on the Firm's results of operations. The Firm's Board of Directors and the Audit Committee are regularly apprised regarding the cybersecurity policies and practices of the Firm as well as the Firm's efforts regarding significant cybersecurity events.

Cybersecurity attacks, like the one experienced by the Firm, highlight the need for continued and increased cooperation among businesses and the government, and the Firm continues to work to strengthen its partnerships with the appropriate government and law enforcement agencies and other businesses, including the Firm's third-party service providers, in order to understand the full spectrum of cybersecurity risks in the environment, enhance defenses and improve resiliency against cybersecurity threats.

The Firm has established, and continues to establish, defenses to mitigate other possible future attacks. To enhance its defense capabilities, the Firm increased cybersecurity spending from approximately $250 million in 2014, to approximately $500 million in 2015, and expects the spending to increase to more than $600 million in 2016. Enhancements include more robust testing, advanced analytics, improved technology coverage, strengthened access management and controls and a program to increase employee awareness about cybersecurity risks and best practices.

Business and technology resiliency
JPMorgan Chase's global resiliency and crisis management program is intended to ensure that the Firm has the ability to recover its critical business functions and supporting assets (i.e., staff, technology and facilities) in the event of a

business interruption, and to remain in compliance with global laws and regulations as they relate to resiliency risk. The program includes corporate governance, awareness and training, as well as strategic and tactical initiatives aimed to ensure that risks are properly identified, assessed, and managed.

The Firm has established comprehensive tracking and reporting of resiliency plans in order to proactively anticipate and manage various potential disruptive circumstances such as severe weather and flooding, technology and communications outages, cyber incidents, mass transit shutdowns and terrorist threats, among others. The resiliency measures utilized by the Firm include backup infrastructure for data centers, a geographically distributed workforce, dedicated recovery facilities, providing technological capabilities to support remote work capacity for displaced staff and accommodation of employees at alternate locations. JPMorgan Chase continues to coordinate its global resiliency program across the Firm and mitigate business continuity risks by reviewing and testing recovery procedures. The strength and proficiency of the Firm's global resiliency program has played an integral role in maintaining the Firm's business operations during and quickly after various events in 2015 that have resulted in business interruptions, such as severe winter weather and flooding in the U.S. and various global protest-related activities.

LEGAL RISK MANAGEMENT

Legal risk is the risk of loss or imposition of damages, fines, penalties or other liability arising from failure to comply with a contractual obligation or to comply with laws or regulations to which the Firm is subject.

Overview

In addition to providing legal services and advice to the Firm, and communicating and helping the lines of business adjust to the legal and regulatory changes they face, including the heightened scrutiny and expectations of the Firm's regulators, the global Legal function is responsible for working with the businesses and corporate functions to fully understand and assess their adherence to laws and regulations. In particular, Legal assists Oversight & Control, Risk, Finance, Compliance and Internal Audit in their efforts to ensure compliance with all applicable laws and regulations and the Firm's corporate standards for doing business. The Firm's lawyers also advise the Firm on potential legal exposures on key litigation and transactional matters, and perform a significant defense and advocacy role by defending the Firm against claims and potential claims and, when needed, pursuing claims against others.

Governance and oversight

The Firm's General Counsel reports to the CEO and is a member of the Operating Committee, the Firmwide Risk Committee and the Firmwide Control Committee. The General Counsel's leadership team includes a General Counsel for each line of business, the heads of the Litigation and Corporate & Regulatory practices, as well as the Firm's Corporate Secretary. Each region (e.g., Latin America, Asia Pacific) has a General Counsel who is responsible for managing legal risk across all lines of business and functions in the region.

Legal works with various committees (including new business initiative and reputation risk committees) and the Firm's businesses to protect the Firm's reputation beyond any particular legal requirements. In addition, it advises the Firm's Conflicts Office which reviews the Firm's wholesale transactions that may have the potential to create conflicts of interest for the Firm.

COMPLIANCE RISK MANAGEMENT

Compliance risk is the risk of failure to comply with applicable laws, rules, and regulations.

Overview

Each line of business is accountable for managing its compliance risk. The Firm's Compliance Organization ("Compliance"), which is independent of the lines of business, works closely with the Operating Committee and management to provide independent review, monitoring and oversight of business operations with a focus on compliance with the legal and regulatory obligations applicable to the offering of the Firm's products and services to clients and customers.

These compliance risks relate to a wide variety of legal and regulatory obligations, depending on the line of business and the jurisdiction, and include those related to products and services, relationships and interactions with clients and customers, and employee activities.

For example, one compliance risk, fiduciary risk, is the failure to exercise the applicable high standard of care, to act in the best interests of clients or to treat clients fairly, as required under applicable law or regulation. Other specific compliance risks include those associated with anti-money laundering compliance, trading activities, market conduct, and complying with the rules and regulations related to the offering of products and services across jurisdictional borders, among others.

Compliance implements various practices designed to identify and mitigate compliance risk by implementing policies, testing and monitoring, training and providing guidance.

In recent years, the Firm has experienced heightened scrutiny by its regulators of its compliance with regulations, and with respect to its controls and operational processes. In certain instances, the Firm has entered into Consent Orders with its regulators requiring the Firm to take certain specified actions to remediate compliance with regulations and improve its controls. The Firm expects that such regulatory scrutiny will continue.

Governance and oversight

Compliance is led by the Firms' Chief Compliance Officer ("CCO") who reports directly to the Firm's COO. The Firm maintains oversight and coordination in its Compliance Risk Management practices globally through the Firm's CCO, lines of business CCOs and regional CCOs to implement the Compliance program across the lines of business and regions. The Firm's CCO is a member of the Firmwide Control Committee and the Firmwide Risk Committee. The Firm's CCO also provides regular updates to the Audit Committee and DRPC. In addition, from time to time, special committees of the Board have been established to oversee the Firm's compliance with regulatory Consent Orders.

The Firm has in place a Code of Conduct (the "Code"), and each employee is given annual training in respect of the Code and is required annually to affirm his or her compliance with the Code. The Code sets forth the Firm's core principles and fundamental values, including that no employee should ever sacrifice integrity - or give the impression that he or she has. The Code requires prompt reporting of any known or suspected violation of the Code, any internal Firm policy, or any law or regulation applicable to the Firm's business. It also requires the reporting of any illegal conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's employees, customers, suppliers, contract workers, business partners, or agents. Specified employees are specially trained and designated as "code specialists" who act as a resource to employees on Code of Conduct matters. In addition, concerns may be reported anonymously and the Firm prohibits retaliation against employees for the good faith reporting of any actual or suspected violations of the Code. The Code and the associated employee compliance program are focused on the regular assessment of certain key aspects of the Firm's culture and conduct initiatives.

REPUTATION RISK MANAGEMENT

Reputation risk is the risk that an action, transaction, investment or event will reduce trust in the Firm's integrity or competence by our various constituents, including clients, counterparties, investors, regulators, employees and the broader public. Maintaining the Firm's reputation is the responsibility of each individual employee of the Firm. The Firm's Reputation Risk Governance policy explicitly vests each employee with the responsibility to consider the reputation of the Firm when engaging in any activity. Since the types of events that could harm the Firm's reputation are so varied across the Firm's lines of business, each line of business has a separate reputation risk governance infrastructure in place, which consists of three key elements: clear, documented escalation criteria appropriate to the business; a designated primary discussion forum — in most cases, one or more dedicated reputation risk committees; and a list of designated contacts, to whom questions relating to reputation risk should be referred. Line of business reputation risk governance is overseen by a Firmwide Reputation Risk Governance function, which provides oversight of the governance infrastructure and process to support the consistent identification, escalation, management and reporting of reputation risk issues firmwide.

Capital risk is the risk the Firm has an insufficient level and composition of capital to support the Firm's business activities and associated risks during normal economic environments and stressed conditions.

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables the Firm to build and invest in market-leading businesses, even in a highly stressed environment. Prior to making any decisions on future business activities, senior management considers the implications on the Firm's capital. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to preserving the Firm's capital strength. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative by the Firm's Board of Directors, CEO and Operating Committee. The Firm's balance sheet philosophy focuses on risk-adjusted returns, strong capital and reserves, and robust liquidity.

The Firm's capital management objectives are to hold capital sufficient to:

- Cover all material risks underlying the Firm's business activities;
- Maintain "well-capitalized" status and meet regulatory capital requirements;
- Retain flexibility to take advantage of future investment opportunities;
- Maintain sufficient capital in order to continue to build and invest in its businesses through the cycle and in stressed environments; and
- Distribute excess capital to shareholders while balancing the other objectives stated above.

These objectives are achieved through ongoing monitoring and management of the Firm's capital position, regular stress testing, and a capital governance framework. Capital management is intended to be flexible in order to react to a range of potential events. JPMorgan Chase has firmwide and LOB processes for ongoing monitoring and active management of its capital position.

The following tables present the Firm's Transitional and Fully Phased-In risk-based and leverage-based capital metrics under both Basel III Standardized and Advanced approaches. The Firm's Basel III CET1 ratio exceeds the regulatory minimum as of December 31, 2015. For further discussion of these capital metrics and the Standardized and Advanced approaches refer to Monitoring and management of capital on pages 151–155.

	Transitional			Fully Phased-In		
December 31, 2015 (in millions, except ratios)	Standardized	Advanced	Minimum capital ratios [c]	Standardized	Advanced	Minimum capital ratios [d]
Risk-based capital metrics:						
CET1 capital	**$ 175,398**	**$ 175,398**		**$ 173,189**	**$ 173,189**	
Tier 1 capital	**200,482**	**200,482**		**199,047**	**199,047**	
Total capital	**234,413**	**224,616**		**229,976**	**220,179**	
Risk-weighted assets	**1,465,262** [b]	**1,485,336**		**1,474,870**	**1,495,520**	
CET1 capital ratio	**12.0%**	**11.8%**	4.5%	**11.7%**	**11.6%**	10.5%
Tier 1 capital ratio	**13.7**	**13.5**	6.0	**13.5**	**13.3**	12.0
Total capital ratio	**16.0**	**15.1**	8.0	**15.6**	**14.7**	14.0
Leverage-based capital metrics:						
Adjusted average assets	**2,361,177**	**2,361,177**		**2,360,499**	**2,360,499**	
Tier 1 leverage ratio[a]	**8.5%**	**8.5%**	4.0	**8.4%**	**8.4%**	4.0
SLR leverage exposure	**NA**	**$ 3,079,797**		**NA**	**$ 3,079,119**	
SLR	**NA**	**6.5%**	NA	**NA**	**6.5%**	5.0 [e]

	Transitional			Fully Phased-In		
December 31, 2014 (in millions, except ratios)	Standardized	Advanced	Minimum capital ratios [c]	Standardized	Advanced	Minimum capital ratios [d]
Risk-based capital metrics:						
CET1 capital	$ 164,426	$ 164,426		$ 164,514	$ 164,514	
Tier 1 capital	186,263	186,263		184,572	184,572	
Total capital	221,117	210,576		216,719	206,179	
Risk-weighted assets	1,472,602 [b]	1,608,240		1,561,145	1,619,287	
CET1 capital ratio	11.2%	10.2%	4.5%	10.5%	10.2%	9.5%
Tier 1 capital ratio	12.6	11.6	6.0	11.8	11.4	11.0
Total capital ratio	15.0	13.1	8.0	13.9	12.7	13.0
Leverage-based capital metrics:						
Adjusted average assets	2,464,915	2,464,915		2,463,902	2,463,902	
Tier 1 leverage ratio[a]	7.6%	7.6%	4.0	7.5%	7.5%	4.0
SLR leverage exposure	NA	NA		NA	$ 3,320,404	
SLR	NA	NA	NA	NA	5.6%	5.0 [e]

Note: As of December 31, 2015 and 2014, the lower of the Standardized or Advanced capital ratios under each of the transitional and fully phased in approaches in the table above represents the Firm's Collins Floor, as discussed in Monitoring and management of Capital on page 151.

(a) The Tier 1 leverage ratio is not a risk-based measure of capital. This ratio is calculated by dividing Tier 1 capital by adjusted average assets.
(b) Effective January 1, 2015, the Basel III Standardized RWA is calculated under the Basel III definition of the Standardized approach. Prior periods were based on Basel I (inclusive of Basel 2.5).
(c) Represents the transitional minimum capital ratios applicable to the Firm under Basel III as of December 31, 2015 and 2014.
(d) Represents the minimum capital ratios applicable to the Firm on a fully phased-in Basel III basis. At December 31, 2015, the ratios include the Firm's estimate of its Fully Phased-In U.S. GSIB surcharge of 3.5%, based on the final U.S. GSIB rule published by the Federal Reserve on July 20, 2015. At December 31, 2014, the ratios included the Firm's GSIB surcharge of 2.5% which was published in November 2014 by the Financial Stability Board and calculated under the Basel Committee on Banking Supervisions Final GSIB rule. The minimum capital ratios will be fully phased-in effective January 1, 2019. For additional information on the GSIB surcharge, see page 152.
(e) In the case of the SLR, the fully phased-in minimum ratio is effective beginning January 1, 2018.

Strategy and governance

The Firm's CEO, in conjunction with the Board of Directors, establishes principles and guidelines for capital planning, issuance, usage and distributions, and establishes capital targets for the level and composition of capital in both business-as-usual and highly stressed environments.

The Firm's senior management recognizes the importance of a capital management function that supports strategic decision-making. The Capital Governance Committee and the Regulatory Capital Management Office ("RCMO") are key components in support of this objective. The Capital Governance Committee is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution alternatives. The Committee is also responsible for governing the capital adequacy assessment process, including overall design, assumptions and risk streams, and ensuring that capital stress test programs are designed to adequately capture the idiosyncratic risks across the Firm's businesses. RCMO, which reports to the Firm's CFO, is responsible for reviewing, approving and monitoring the implementation of the Firm's capital policies and strategies, as well as its capital adequacy assessment process. The review assesses the effectiveness of the capital adequacy process, the appropriateness of the risk tolerance levels, and the strength of the control infrastructure. The DRPC oversees the Firm's capital adequacy process and its components. The Basel Independent Review function ("BIR"), which reports to the RCMO and the Capital Governance Committee, conducts independent assessments of the Firm's regulatory capital framework to ensure compliance with the applicable U.S. Basel rules in support of the DRPC's and senior management's oversight of the Firm's capital processes. For additional discussion on the DRPC, see Enterprise-wide Risk Management on pages 107–111.

Monitoring and management of capital

In its monitoring and management of capital, the Firm takes into consideration an assessment of economic risk and all regulatory capital requirements to determine the level of capital needed to meet and maintain the objectives discussed above, as well as to support the framework for allocating capital to its business segments. While economic risk is considered prior to making decisions on future business activities, in most cases, the Firm considers risk-based regulatory capital to be a proxy for economic risk capital.

Regulatory capital

The Federal Reserve establishes capital requirements, including well capitalized standards, for the consolidated financial holding company. The OCC establishes similar minimum capital requirements for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

The U.S. capital requirements generally follow the Capital Accord of the Basel Committee, as amended from time to time. Prior to January 1, 2014, the Firm and its banking subsidiaries were subject to the capital requirements of Basel I and Basel 2.5. Effective January 1, 2014, the Firm became subject to Basel III (which incorporates Basel 2.5).

Basel III overview

Basel III capital rules, for large and internationally active U.S. bank holding companies and banks, including the Firm and its insured depository institution ("IDI") subsidiaries, revised, among other things, the definition of capital and introduced a new CET1 capital requirement. Basel III presents two comprehensive methodologies for calculating RWA, a general (Standardized) approach, which replaced Basel I RWA effective January 1, 2015 ("Basel III Standardized") and an advanced approach, which replaced Basel II RWA ("Basel III Advanced"); and sets out minimum capital ratios and overall capital adequacy standards. Certain of the requirements of Basel III are subject to phase-in periods that began on January 1, 2014 and continue through the end of 2018 ("transitional period").

The capital adequacy of the Firm and its national bank subsidiaries is evaluated against the Basel III approach (Standardized or Advanced) which results in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.

Basel III establishes capital requirements for calculating credit risk and market risk RWA, and in the case of Basel III Advanced, operational risk RWA. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced, both of which incorporate the requirements set forth in Basel 2.5. In addition to the RWA calculated under these methodologies, the Firm may supplement such amounts to incorporate management judgment and feedback from its bank regulators.

Basel III also includes a requirement for Advanced Approach banking organizations, including the Firm, to calculate a Supplementary Leverage Ratio ("SLR"). For additional information on SLR, see page 155.

Basel III Fully Phased-In

Basel III capital rules will become fully phased-in on January 1, 2019, at which point the Firm will continue to calculate its capital ratios under both the Basel III Standardized and Advanced Approaches. While the Firm has imposed Basel III Standardized Fully Phased-In RWA limits on its lines of business, the Firm continues to manage each of the businesses (including line of business equity allocations), as well as the corporate functions, primarily on a Basel III Advanced Fully Phased-In basis.

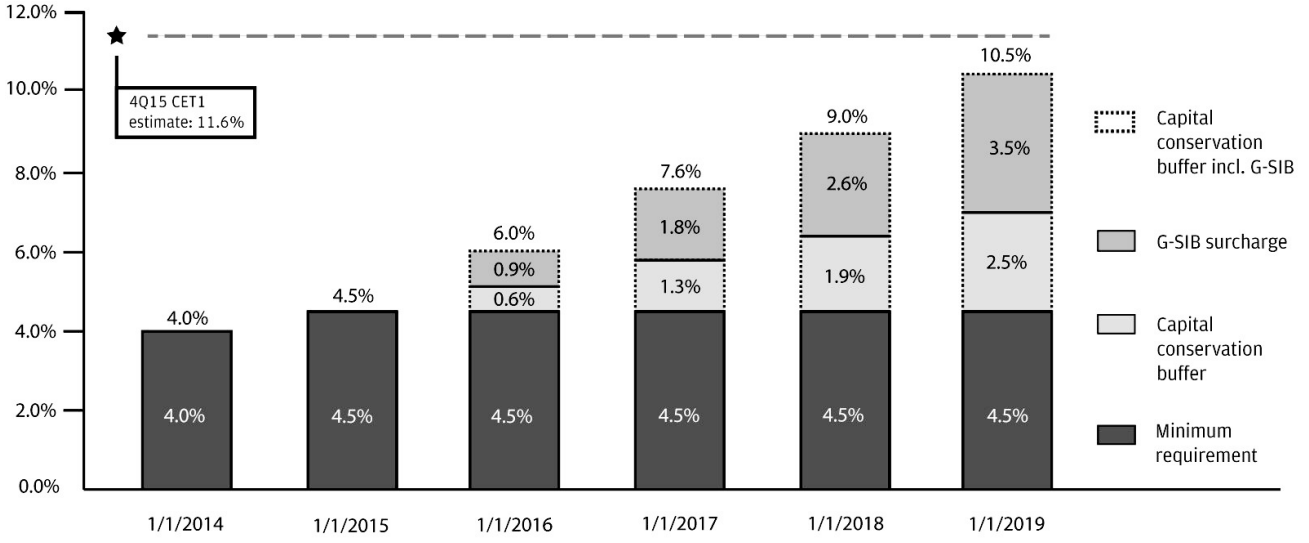
The Firm's capital, RWA and capital ratios that are presented under Basel III Standardized and Advanced Fully Phased-In rules and the Firm's and JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s SLRs calculated under the Basel III Advanced Fully Phased-In rules are non-GAAP financial measures. However, such measures are used by banking regulators, investors and analysts to assess the

Firm's capital position and to compare the Firm's capital to that of other financial services companies.

The Firm's estimates of its Basel III Standardized and Advanced Fully Phased-In capital, RWA and capital ratios and of the Firm's, JPMorgan Chase Bank, N.A.'s, and Chase Bank USA, N.A.'s SLRs reflect management's current understanding of the U.S. Basel III rules based on the current published rules and on the application of such rules to the Firm's businesses as currently conducted. The actual impact on the Firm's capital ratios and SLR as of the effective date of the rules may differ from the Firm's current estimates depending on changes the Firm may make to its businesses in the future, further implementation guidance from the regulators, and regulatory approval of certain of the Firm's internal risk models (or, alternatively, regulatory disapproval of the Firm's internal risk models that have previously been conditionally approved).

Risk-based capital regulatory minimums

The following chart presents the Basel III minimum CET1 capital ratio during the transitional periods and on a fully phased-in basis under the Basel III rules currently in effect.



At December 31, 2015 and 2014, JPMorgan Chase maintained Basel III Standardized Transitional and Basel III Advanced Transitional capital ratios in excess of the well-capitalized standards established by the Federal Reserve. Additional information regarding the Firm's capital ratios, as well as the U.S. federal regulatory capital standards to which the Firm is subject, is presented in Note 28. For further information on the Firm's Basel III measures, see the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (http://investor.shareholder.com/jpmorganchase/basel.cfm).

All banking institutions are currently required to have a minimum capital ratio of 4.5% of CET1 capital. Certain banking organizations, including the Firm, will be required to hold additional amounts of capital to serve as a "capital conservation buffer." The capital conservation buffer is intended to be used to absorb potential losses in times of financial or economic stress. If not maintained, the Firm could be limited in the amount of capital that may be distributed, including dividends and common equity repurchases. The capital conservation buffer is to be phased-in over time, beginning January 1, 2016 through January 1, 2019.

When fully phased-in, the capital conservation buffer requires an additional 2.5% of CET1 capital, as well as additional levels of capital in the form of a GSIB surcharge and the recently implemented countercyclical capital buffer. On July 20, 2015, the Federal Reserve issued a final rule requiring GSIBs to calculate their GSIB surcharge, on an annual basis, under two separately prescribed methods, and to be subject to the higher of the two. The first method ("Method 1") reflects the GSIB surcharge as prescribed by Basel rules, and is calculated across five criteria: size, cross-jurisdictional activity, interconnectedness, complexity and substitutability. The second method ("Method 2") modifies the requirements to include a measure of short-term wholesale funding in place of substitutability, and introduces a GSIB score "multiplication factor." Based upon data as of December 31, 2015, the Firm estimates its fully phased-in GSIB surcharge would be 2% of CET1 capital under Method 1 and 3.5% under Method 2. On July 20, 2015, the date of the last published estimate, the Federal Reserve had estimated the Firm's GSIB surcharge to be 2.5% under Method 1 and 4.5% under Method 2 as of December 31, 2014.

The countercyclical capital buffer is a potential expansion of the capital conservation buffer that takes into account the macro financial environment in which large, internationally active banks function. As of December 31, 2015 the Federal Reserve reaffirmed setting the U.S. countercyclical capital buffer at 0%, and stated that it will review the amount at least annually. The countercyclical capital buffer can be increased if the Federal Reserve, FDIC and OCC determine that credit growth in the economy has become excessive and can be set at up to an additional 2.5% of RWA. On December 21, 2015, the Federal Reserve, in conjunction with the FDIC and OCC, requested public comment, due March 21, 2016, on a proposed policy statement detailing the framework that would be followed in setting the U.S. Basel III countercyclical capital buffer.

Based on the Firm's most recent estimate of its GSIB surcharge and the current countercyclical buffer being set at 0%, the Firm estimates its fully phased-in capital conservation buffer would be 6%.

As well as meeting the capital ratio requirements of Basel III, the Firm must, in order to be "well-capitalized", maintain a minimum 6% Tier 1 and a 10% Total capital requirement. Each of the Firm's IDI subsidiaries must maintain a minimum 5% Tier 1 leverage, 6.5% CET1, 8% Tier 1 and 10% Total capital standard to meet the definition of "well-capitalized" under the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA") for IDI subsidiaries. The PCA standards for IDI subsidiaries were effective January 1, 2015.

A reconciliation of total stockholders' equity to Basel III Standardized and Advanced Fully Phased-In CET1 capital, Tier 1 capital and Total capital is presented in the table below. Beginning July 21, 2015, the Volcker Rule provisions regarding the prohibitions against proprietary trading and holding ownership interests in or sponsoring "covered funds" became effective. The deduction from Basel III Tier 1 capital associated with the permissible holdings of covered funds acquired after December 31, 2013 was not material as of December 31, 2015. For additional information on the components of regulatory capital, see Note 28.

Capital components

(in millions)	December 31, 2015
Total stockholders' equity	**$ 247,573**
Less: Preferred stock	26,068
Common stockholders' equity	**221,505**
Less:	
Goodwill	47,325
Other intangible assets	1,015
Add:	
Deferred tax liabilities[(a)]	3,148
Less: Other CET1 capital adjustments	3,124
Standardized/Advanced CET1 capital	**173,189**
Preferred stock	26,068
Less:	
Other Tier 1 adjustments	210
Standardized/Advanced Tier 1 capital	**$ 199,047**
Long-term debt and other instruments qualifying as Tier 2 capital	$ 16,679
Qualifying allowance for credit losses	14,341
Other	(91)
Standardized Fully Phased-In Tier 2 capital	**$ 30,929**
Standardized Fully Phased-in Total capital	**$ 229,976**
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital	(9,797)
Advanced Fully Phased-In Tier 2 capital	**$ 21,132**
Advanced Fully Phased-In Total capital	**$ 220,179**

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

The following table presents a reconciliation of the Firm's Basel III Transitional CET1 capital to the Firm's estimated Basel III Fully Phased-In CET1 capital as of December 31, 2015.

(in millions)	December 31, 2015
Transitional CET1 capital	**$ 175,398**
AOCI phase-in[(a)]	427
CET1 capital deduction phase-in[(b)]	(2,005)
Intangible assets deduction phase-in[(c)]	(546)
Other adjustments to CET1 capital[(d)]	(85)
Fully Phased-In CET1 capital	**$ 173,189**

(a) Includes the remaining balance of AOCI related to AFS debt securities and defined benefit pension and other postretirement employee benefit ("OPEB") plans that will qualify as Basel III CET1 capital upon full phase-in.
(b) Predominantly includes regulatory adjustments related to changes in FVA/DVA, as well as CET1 deductions for defined benefit pension plan assets and deferred tax assets related to net operating loss and tax credit carryforwards.
(c) Relates to intangible assets, other than goodwill and MSRs, that are required to be deducted from CET1 capital upon full phase-in.
(d) Includes minority interest and the Firm's investments in its own CET1 capital instruments.

Capital rollforward

The following table presents the changes in Basel III Fully Phased-In CET1 capital, Tier 1 capital and Tier 2 capital for the year ended December 31, 2015.

Year Ended December 31, (in millions)	2015
Standardized/Advanced CET1 capital at December 31, 2014	$ 164,514
Net income applicable to common equity	22,927
Dividends declared on common stock	(6,484)
Net purchase of treasury stock	(3,835)
Changes in additional paid-in capital	(770)
Changes related to AOCI	(2,116)
Adjustment related to FVA/DVA	(454)
Other	(593)
Increase in Standardized/Advanced CET1 capital	8,675
Standardized/Advanced CET1 capital at December 31, 2015	**$ 173,189**
Standardized/Advanced Tier 1 capital at December 31, 2014	$ 184,572
Change in CET1 capital	8,675
Net issuance of noncumulative perpetual preferred stock	6,005
Other	(205)
Increase in Standardized/Advanced Tier 1 capital	14,475
Standardized/Advanced Tier 1 capital at December 31, 2015	**$ 199,047**
Standardized Tier 2 capital at December 31, 2014	$ 32,147
Change in long-term debt and other instruments qualifying as Tier 2	(748)
Change in qualifying allowance for credit losses	(466)
Other	(4)
Increase in Standardized Tier 2 capital	(1,218)
Standardized Tier 2 capital at December 31, 2015	**$ 30,929**
Standardized Total capital at December 31, 2015	**$ 229,976**
Advanced Tier 2 capital at December 31, 2014	$ 21,607
Change in long-term debt and other instruments qualifying as Tier 2	(748)
Change in qualifying allowance for credit losses	277
Other	(4)
Increase in Advanced Tier 2 capital	(475)
Advanced Tier 2 capital at December 31, 2015	**$ 21,132**
Advanced Total capital at December 31, 2015	**$ 220,179**

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced Fully Phased-In for the year ended December 31, 2015. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

	Standardized			Advanced			
Year ended December 31, 2015 (in billions)	Credit risk RWA	Market risk RWA	Total RWA	Credit risk RWA	Market risk RWA	Operational risk RWA	Total RWA
December 31, 2014	$ 1,381	$ 180	**$ 1,561**	$ 1,040	$ 179	$ 400	**$ 1,619**
Model & data changes[a]	(17)	(15)	**(32)**	(38)	(15)	–	**(53)**
Portfolio runoff[b]	(13)	(8)	**(21)**	(21)	(8)	–	**(29)**
Movement in portfolio levels[c]	(18)	(15)	**(33)**	(27)	(14)	–	**(41)**
Changes in RWA	(48)	(38)	**(86)**	(86)	(37)	–	**(123)**
December 31, 2015	**$ 1,333**	**$ 142**	**$ 1,475**	**$ 954**	**$ 142**	**$ 400**	**$ 1,496**

(a) Model & data changes refer to movements in levels of RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).

(b) Portfolio runoff for credit risk RWA reflects reduced risk from position rolloffs in legacy portfolios in Mortgage Banking, (primarily under the Advanced framework) and Broker Dealer Services (primarily under the Standardized framework); and for market risk RWA reflects reduced risk from position rolloffs in legacy portfolios in the wholesale businesses.

(c) Movement in portfolio levels for credit risk RWA refers to changes in book size, composition, credit quality, and market movements; and for market risk RWA refers to changes in position and market movements.

Supplementary leverage ratio

The SLR is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. Total leverage exposure is calculated by taking the Firm's total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-balance sheet exposures, such as undrawn commitments and derivatives potential future exposure.

On September 3, 2014, the U.S. banking regulators adopted a final rule for the calculation of the SLR. The U.S. final rule requires public disclosure of the SLR beginning with the first quarter of 2015, and also requires U.S. bank holding companies, including the Firm, to have a minimum SLR of 5% and IDI subsidiaries, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., to have a minimum SLR of 6%, both beginning January 1, 2018. As of December 31, 2015, the Firm estimates that JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s Fully Phased-In SLRs are approximately 6.6% and 8.3%, respectively.

The following table presents the components of the Firm's Fully Phased-In SLR, a non-GAAP financial measure, as of December 31, 2015.

(in millions, except ratio)	December 31, 2015
Fully Phased-in Tier 1 Capital	**$ 199,047**
Total average assets	2,408,253
Less: amounts deducted from Tier 1 capital	47,754
Total adjusted average assets[a]	2,360,499
Off-balance sheet exposures[b]	718,620
SLR leverage exposure	**$ 3,079,119**
SLR	**6.5%**

(a) Adjusted average assets, for purposes of calculating the SLR, includes total quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill and other intangible assets.

(b) Off-balance sheet exposures are calculated as the average of the three month-end spot balances in the reporting quarter.

Planning and stress testing

Comprehensive Capital Analysis and Review

The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. The Federal Reserve uses the CCAR and Dodd-Frank Act stress test processes to ensure that large bank holding companies have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each bank holding company's ("BHC") unique risks to enable them to have the ability to absorb losses under certain stress scenarios. Through the CCAR, the Federal Reserve evaluates each BHC's capital adequacy and internal capital adequacy assessment processes, as well as its plans to make capital distributions, such as dividend payments or stock repurchases.

On March 11, 2015, the Federal Reserve informed the Firm that it did not object, on either a quantitative or qualitative basis, to the Firm's 2015 capital plan. For information on actions taken by the Firm's Board of Directors following the 2015 CCAR results, see Capital actions on page 157.

For 2016, the Federal Reserve revised the capital plan cycle for the CCAR process. Under the revised time line, the Firm is required to submit its 2016 capital plan to the Federal Reserve by April 5, 2016. The Federal Reserve has indicated that it expects to respond to the capital plan submissions of bank holding companies by June 30, 2016.

The Firm's CCAR process is integrated into and employs the same methodologies utilized in the Firm's ICAAP process, as discussed below.

Internal Capital Adequacy Assessment Process
Semiannually, the Firm completes the ICAAP, which provides management with a view of the impact of severe and unexpected events on earnings, balance sheet positions, reserves and capital. The Firm's ICAAP integrates stress testing protocols with capital planning.

The process assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. However, when defining a broad range of scenarios, realized events can always be worse. Accordingly, management considers additional stresses outside these scenarios, as necessary. ICAAP results are reviewed by management and the Board of Directors.

Line of business equity

The Firm's framework for allocating capital to its business segments (line of business equity) is based on the following objectives:

- Integrate firmwide and line of business capital management activities;
- Measure performance consistently across all lines of business; and
- Provide comparability with peer firms for each of the lines of business.

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In) and economic risk. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Line of business equity Year ended December 31, (in billions)	Yearly average		
	2015	2014	2013
Consumer & Community Banking	**$ 51.0**	$ 51.0	$ 46.0
Corporate & Investment Bank	**62.0**	61.0	56.5
Commercial Banking	**14.0**	14.0	13.5
Asset Management	**9.0**	9.0	9.0
Corporate	**79.7**	72.4	71.4
Total common stockholders' equity	**$ 215.7**	$ 207.4	$ 196.4

On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. The line of business equity allocations are updated as refinements are implemented. The table below reflects the Firm's assessed level of capital required for each line of business as of the dates indicated.

Line of business equity (in billions)	January 1, 2016	December 31, 2015	December 31, 2014
Consumer & Community Banking	**$ 51.0**	$ 51.0	$ 51.0
Corporate & Investment Bank	**64.0**	62.0	61.0
Commercial Banking	**16.0**	14.0	14.0
Asset Management	**9.0**	9.0	9.0
Corporate	**81.5**	85.5	76.7
Total common stockholders' equity	**$ 221.5**	$ 221.5	$ 211.7

Other capital requirements

Minimum Total Loss Absorbing Capacity
In November 2015, the Financial Stability Board ("FSB") finalized the TLAC standard for GSIBs, which establishes the criteria for TLAC eligible debt and capital instruments and defines the minimum requirements for amounts of loss absorbing and recapitalization capacity. This amount and type of debt and capital instruments is intended to effectively absorb losses, as necessary, upon the failure of a GSIB, without imposing such losses on taxpayers of the relevant jurisdiction or causing severe systemic disruptions, and thereby ensuring the continuity of the GSIB's critical functions. The final standard will require GSIBs to meet a common minimum TLAC requirement of 16% of the financial institution's RWA, effective January 1, 2019, and at least 18% effective January 1, 2022. The minimum TLAC must also be at least 6% of a financial institution's Basel III leverage ratio denominator, effective January 1, 2019, and at least 6.75% effective January 1, 2022.

On October 30, 2015, the Federal Reserve issued proposed rules that would require the top-tier holding companies of eight U.S. global systemically important bank holding companies, including the Firm, among other things, to maintain minimum levels of eligible TLAC and long-term debt satisfying certain eligibility criteria ("eligible LTD") commencing January 1, 2019. Under the proposal, these eight U.S GSIBs would be required to maintain minimum TLAC of no less than 18% of the financial institution's RWA or 9.5% of its leverage exposure (as defined by the rules), plus in the case of the RWA-based measure, a TLAC buffer that is equal to 2.5% of the financial institution's CET1, any applicable countercyclical buffer and the financial institution's GSIB surcharge as calculated under method 1. The minimum level of eligible LTD that would be required to be maintained by these eight U.S. GSIBs would be equal to the greater of (A) 6% of the financial institution's RWA, plus the higher of the method 1 or method 2 GSIB surcharge applicable to the institution and (B) 4.5% of its leverage exposure (as defined by the rules). These proposed TLAC Rules would disqualify from eligible LTD, among other instruments, senior debt securities that permit acceleration for reasons other than insolvency or payment default, as well as structured notes and debt securities not governed by U.S. law. The Firm is currently evaluating the impact of the proposal.

Capital actions

Dividends

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratio, capital objectives, and alternative investment opportunities. Following receipt on March 11, 2015, of the Federal Reserve's non-objection to the Firm's 2015 capital plan submitted under its CCAR, the Firm announced that its Board of Directors increased the quarterly common stock dividend to $0.44 per share, effective with the dividend paid on July 31, 2015. The Firm's dividends are subject to the Board of Directors' approval at the customary times those dividends are declared.

For information regarding dividend restrictions, see Note 22 and Note 27.

The following table shows the common dividend payout ratio based on reported net income.

Year ended December 31,	**2015**	2014	2013
Common dividend payout ratio	28%	29%	33%

Common equity

During the year ended December 31, 2015, warrant holders exercised their right to purchase 12.4 million shares of the Firm's common stock. The Firm issued 4.7 million shares of its common stock as a result of these exercises. As of December 31, 2015, 47.4 million warrants remained outstanding, compared with 59.8 million outstanding as of December 31, 2014.

On March 11, 2015, in conjunction with the Federal Reserve's release of its 2015 CCAR results, the Firm's Board of Directors authorized a $6.4 billion common equity (i.e., common stock and warrants) repurchase program. As of December 31, 2015, $2.7 billion (on a settlement-date basis) of authorized repurchase capacity remained under the program. This authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plans.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2015, 2014 and 2013, on a settlement-date basis. There were no warrants repurchased during the years ended December 31, 2015, 2014, and 2013.

Year ended December 31, (in millions)	**2015**	2014	2013
Total number of shares of common stock repurchased	**89.8**	82.3	96.1
Aggregate purchase price of common stock repurchases	**$ 5,616**	$ 4,760	$ 4,789

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "blackout periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilize Rule 10b5-1 programs; and may be suspended at any time.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities on page 20.

Preferred stock

During the year ended December 31, 2015, the Firm issued $6.0 billion of noncumulative preferred stock. Preferred stock dividends declared were $1.5 billion for the year ended December 31, 2015. Assuming all preferred stock issuances were outstanding for the entire year and quarterly dividends were declared on such issuances, preferred stock dividends would have been $1.6 billion for the year ended December 31, 2015. For additional information on the Firm's preferred stock, see Note 22.

Redemption of outstanding trust preferred securities

On April 2, 2015, the Firm redeemed $1.5 billion, or 100% of the liquidation amount, of JPMorgan Chase Capital XXIX trust preferred securities. On May 8, 2013, the Firm redeemed approximately $5.0 billion, or 100% of the liquidation amount, of the following eight series of trust preferred securities: JPMorgan Chase Capital X, XI, XII, XIV, XVI, XIX, XXIV, and BANK ONE Capital VI. For a further discussion of trust preferred securities, see Note 21.

Broker-dealer regulatory capital

JPMorgan Chase's principal U.S. broker-dealer subsidiaries are JPMorgan Securities and J.P. Morgan Clearing Corp. ("JPMorgan Clearing"). JPMorgan Clearing is a subsidiary of JPMorgan Securities and provides clearing and settlement services. JPMorgan Securities and JPMorgan Clearing are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities and JPMorgan Clearing are also each registered as futures commission merchants and subject to Rule 1.17 of the Commodity Futures Trading Commission ("CFTC").

JPMorgan Securities and JPMorgan Clearing have elected to compute their minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule. At December 31, 2015, JPMorgan Securities' net capital, as defined by the Net Capital Rule, was $14.2 billion, exceeding the minimum requirement by $11.9 billion, and JPMorgan Clearing's net capital was $7.7 billion, exceeding the minimum requirement by $6.2 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of $1.0 billion and is also required to notify the Securities and Exchange Commission ("SEC") in the event that tentative net capital is less than $5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2015, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

J.P. Morgan Securities plc is a wholly owned subsidiary of JPMorgan Chase Bank, N.A. and is the Firm's principal operating subsidiary in the U.K. It has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities plc is jointly regulated by the U.K. Prudential Regulation Authority ("PRA") and Financial Conduct Authority ("FCA"). Commencing January 1, 2014, J.P. Morgan Securities plc became subject to the U.K. Basel III capital rules.

At December 31, 2015, J.P. Morgan Securities plc had estimated total capital of $33.9 billion; its estimated CET1 capital ratio was 15.4% and its estimated Total capital ratio was 19.6%. Both capital ratios exceeded the minimum standards of 4.5% and 8.0%, respectively, under the transitional requirements of the European Union's ("EU") Basel III Capital Requirements Directive and Regulation, as well as the additional capital requirements specified by the PRA.

Liquidity risk is the risk that the Firm will be unable to meet its contractual and contingent obligations or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets.

Liquidity risk oversight

The Firm has a liquidity risk oversight function whose primary objective is to provide assessment, measurement, monitoring, and control of liquidity risk across the Firm. Liquidity risk oversight is managed through a dedicated firmwide Liquidity Risk Oversight group. The CTC CRO, as part of the independent risk management function, has responsibility for firmwide Liquidity Risk Oversight. Liquidity Risk Oversight's responsibilities include but are not limited to:

- Establishing and monitoring limits, indicators, and thresholds, including liquidity appetite tolerances;
- Defining, monitoring, and reporting internal firmwide and legal entity stress tests, and monitoring and reporting regulatory defined stress testing;
- Monitoring and reporting liquidity positions, balance sheet variances and funding activities;
- Conducting ad hoc analysis to identify potential emerging liquidity risks.

Risk governance and measurement

Specific committees responsible for liquidity governance include firmwide ALCO as well as line of business and regional ALCOs, and the CTC Risk Committee. For further discussion of the risk and risk-related committees, see Enterprise-wide Risk Management on pages 107–111.

Internal Stress testing

Liquidity stress tests are intended to ensure sufficient liquidity for the Firm under a variety of adverse scenarios. Results of stress tests are therefore considered in the formulation of the Firm's funding plan and assessment of its liquidity position. Liquidity outflow assumptions are modeled across a range of time horizons and contemplate both market and idiosyncratic stress. Standard stress tests are performed on a regular basis and ad hoc stress tests are performed in response to specific market events or concerns. Stress scenarios are produced for JPMorgan Chase & Co. ("Parent Company") and the Firm's major subsidiaries.

Liquidity stress tests assume all of the Firm's contractual obligations are met and then take into consideration varying levels of access to unsecured and secured funding markets. Additionally, assumptions with respect to potential non-contractual and contingent outflows are contemplated.

Liquidity management

Treasury is responsible for liquidity management. The primary objectives of effective liquidity management are to ensure that the Firm's core businesses are able to operate in support of client needs, meet contractual and contingent obligations through normal economic cycles as well as during stress events, and to manage optimal funding mix, and availability of liquidity sources. The Firm manages liquidity and funding using a centralized, global approach in order to optimize liquidity sources and uses.

In the context of the Firm's liquidity management, Treasury is responsible for:

- Analyzing and understanding the liquidity characteristics of the Firm, lines of business and legal entities' assets and liabilities, taking into account legal, regulatory, and operational restrictions;
- Defining and monitoring firmwide and legal entity liquidity strategies, policies, guidelines, and contingency funding plans;
- Managing liquidity within approved liquidity risk appetite tolerances and limits;
- Setting transfer pricing in accordance with underlying liquidity characteristics of balance sheet assets and liabilities as well as certain off-balance sheet items.

Contingency funding plan

The Firm's contingency funding plan ("CFP"), which is reviewed by ALCO and approved by the DRPC, is a compilation of procedures and action plans for managing liquidity through stress events. The CFP incorporates the limits and indicators set by the Liquidity Risk Oversight group. These limits and indicators are reviewed regularly to identify the emergence of risks or vulnerabilities in the Firm's liquidity position. The CFP identifies the alternative contingent liquidity resources available to the Firm in a stress event.

Parent Company and subsidiary funding

The Parent Company acts as a source of funding to its subsidiaries. The Firm's liquidity management is intended to maintain liquidity at the Parent Company, in addition to funding and liquidity raised at the subsidiary operating level, at levels sufficient to fund the operations of the Parent Company and its subsidiaries for an extended period of time in a stress environment where access to normal funding sources is disrupted. The Parent Company currently holds sufficient liquidity to withstand peak outflows over a one year liquidity stress horizon, assuming no access to wholesale funding markets.

LCR and NSFR

The Firm must comply with the U.S. LCR rule, which is intended to measure the amount of HQLA held by the Firm in relation to estimated net cash outflows within a 30-day period during an acute stress event. The LCR is required to be 80% at January 1, 2015, increasing by 10% each year until reaching the 100% minimum by January 1, 2017. At December 31, 2015, the Firm was compliant with the fully phased-in U.S. LCR.

On October 31, 2014, the Basel Committee issued the final standard for the net stable funding ratio ("NSFR") — which is intended to measure the "available" amount of stable funding relative to the "required" amount of stable funding over a one-year horizon. NSFR will become a minimum standard by January 1, 2018 and requires that this ratio be equal to at least 100% on an ongoing basis. At December 31, 2015, the Firm was compliant with the NSFR based on its current understanding of the final Basel rule. The U.S. banking regulators are expected to issue an NPR that would outline requirements specific to U.S. banks.

HQLA

HQLA is the amount of assets that qualify for inclusion in the U.S. LCR. HQLA primarily consists of cash and certain unencumbered high quality liquid assets as defined in the final rule.

As of December 31, 2015, the Firm's HQLA was $496 billion, compared with $600 billion as of December 31, 2014. The decrease in HQLA was due to lower cash balances largely driven by lower non-operating deposit balances; however, the Firm remains LCR-compliant given the corresponding reduction in estimated net cash outflows associated with those deposits. HQLA may fluctuate from period to period primarily due to normal flows from client activity.

The following table presents the estimated HQLA included in the LCR broken out by HQLA-eligible cash and securities as of December 31, 2015.

(in billions)	December 31, 2015
HQLA	
Eligible cash[(a)]	$ 304
Eligible securities[(b)]	192
Total HQLA	$ 496

(a) Cash on deposit at central banks.

(b) Predominantly includes U.S. agency mortgage-backed securities, U.S. Treasuries, and sovereign bonds net of applicable haircuts under U.S. LCR rules.

In addition to HQLA, as of December 31, 2015, the Firm has approximately $249 billion of unencumbered marketable securities, such as equity securities and fixed income debt securities, available to raise liquidity, if required. Furthermore, the Firm maintains borrowing capacity at various Federal Home Loan Banks ("FHLBs"), the Federal Reserve Bank discount window and various other central banks as a result of collateral pledged by the Firm to such banks. Although available, the Firm does not view the borrowing capacity at the Federal Reserve Bank discount window and the various other central banks as a primary source of liquidity. As of December 31, 2015, the Firm's remaining borrowing capacity at various FHLBs and the Federal Reserve Bank discount window was approximately $183 billion. This remaining borrowing capacity excludes the benefit of securities included above in HQLA or other unencumbered securities currently held at the Federal Reserve Bank discount window for which the Firm has not drawn liquidity.

Funding

Sources of funds

Management believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations.

The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio ($837.3 billion at December 31, 2015), is funded with a portion of the Firm's deposits ($1,279.7 billion at December 31, 2015) and through securitizations and, with respect to a portion of the Firm's real estate-related loans, with secured borrowings from the FHLBs. Deposits in excess of the amount utilized to fund loans are primarily invested in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity risk characteristics. Securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments are primarily funded by the Firm's securities loaned or sold under agreements to repurchase, trading liabilities-debt and equity instruments, and a portion of the Firm's long-term debt and stockholders' equity. In addition to funding securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments, proceeds from the Firm's debt and equity issuances are used to fund certain loans and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio. See the discussion below for additional information relating to Deposits, Short-term funding, and Long-term funding and issuance.

Deposits

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. As of December 31, 2015, the Firm's loans-to-deposits ratio was 65%, compared with 56% at December 31, 2014.

As of December 31, 2015, total deposits for the Firm were $1,279.7 billion, compared with $1,363.4 billion at December 31, 2014 (61% and 58% of total liabilities at December 31, 2015 and 2014, respectively). The decrease was attributable to lower wholesale non-operating deposits, partially offset by higher consumer deposits. For further information, see Consolidated Balance Sheet Analysis on pages 75–76.

The Firm has typically experienced higher customer deposit inflows at quarter-ends. Therefore, the Firm believes average deposit balances are generally more representative of deposit trends. The table below summarizes, by line of business, the period-end and average deposit balances as of and for the years ended December 31, 2015 and 2014.

Deposits			Year ended December 31,	
As of or for the period ended December 31,			Average	
(in millions)	**2015**	2014	**2015**	2014
Consumer & Community Banking	**$ 557,645**	$ 502,520	**$ 530,938**	$ 486,919
Corporate & Investment Bank	**395,228**	468,423	**414,064**	417,517
Commercial Banking	**172,470**	213,682	**184,132**	190,425
Asset Management	**146,766**	155,247	**149,525**	150,121
Corporate	**7,606**	23,555	**17,129**	19,319
Total Firm	**$ 1,279,715**	$ 1,363,427	**$ 1,295,788**	$ 1,264,301

A significant portion of the Firm's deposits are consumer deposits, which are considered a stable source of liquidity. Additionally, the majority of the Firm's wholesale operating deposits are also considered to be stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm. Wholesale non-operating deposits, including a portion of balances previously reported as commercial paper sweep liabilities, decreased by approximately $200 billion from December 31, 2014 to December 31, 2015, predominantly driven by the Firm's actions to reduce such deposits. The reduction has not had a significant impact on the Firm's liquidity position as discussed under LCR and HQLA above. For further discussions of deposit and liability balance trends, see the discussion of the Firm's business segments results and the Consolidated Balance Sheet Analysis on pages 83–106 and pages 75–76, respectively.

The following table summarizes short-term and long-term funding, excluding deposits, as of December 31, 2015 and 2014, and average balances for the years ended December 31, 2015 and 2014. For additional information, see the Consolidated Balance Sheet Analysis on pages 75–76 and Note 21.

Sources of funds (excluding deposits)

As of or for the year ended December 31, (in millions)	2015	2014	Average 2015	Average 2014
Commercial paper:				
Wholesale funding	**$ 15,562**	$ 24,052	**$ 19,340**	$ 19,442
Client cash management	**–**	42,292	**18,800**	40,474
Total commercial paper	**$ 15,562**	$ 66,344	**$ 38,140**	$ 59,916
Obligations of Firm-administered multi-seller conduits[a]	**$ 8,724**	$ 12,047	**$ 11,961**	$ 10,427
Other borrowed funds	**$ 21,105**	$ 30,222	**$ 28,816**	$ 31,721
Securities loaned or sold under agreements to repurchase:				
Securities sold under agreements to repurchase	**$ 129,598**	$ 167,077	**$ 168,163**	$ 181,186
Securities loaned	**18,174**	21,798	**19,493**	22,586
Total securities loaned or sold under agreements to repurchase[b][c][d]	**$ 147,772**	$ 188,875	**$ 187,656**	$ 203,772
Senior notes	**$ 149,964**	$ 142,169	**$ 147,498**	$ 139,388
Trust preferred securities	**3,969**	5,435	**4,341**	5,408
Subordinated debt	**25,027**	29,387	**27,310**	29,009
Structured notes	**32,813**	30,021	**31,309**	30,311
Total long-term unsecured funding	**$ 211,773**	$ 207,012	**$ 210,458**	$ 204,116
Credit card securitization[a]	**27,906**	31,197	**30,382**	28,892
Other securitizations[e]	**1,760**	2,008	**1,909**	2,734
FHLB advances	**71,581**	64,994	**70,150**	60,667
Other long-term secured funding[f]	**5,297**	4,373	**4,332**	5,031
Total long-term secured funding	**$ 106,544**	$ 102,572	**$ 106,773**	$ 97,324
Preferred stock[g]	**$ 26,068**	$ 20,063	**24,040**	$ 17,018
Common stockholders' equity[g]	**$ 221,505**	$ 211,664	**215,690**	$ 207,400

(a) Included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.
(b) Excludes federal funds purchased.
(c) Excluded long-term structured repurchase agreements of $4.2 billion and $2.7 billion as of December 31, 2015 and 2014, respectively, and average balances of $3.9 billion and $4.2 billion for the years ended December 31, 2015 and 2014, respectively.
(d) Excluded average long-term securities loaned of $24 million as of December 31, 2014. There was no balance for the other periods presented.
(e) Other securitizations includes securitizations of residential mortgages and student loans. The Firm's wholesale businesses also securitize loans for client-driven transactions, which are not considered to be a source of funding for the Firm and are not included in the table.
(f) Includes long-term structured notes which are secured.
(g) For additional information on preferred stock and common stockholders' equity see Capital Management on pages 149–158, Consolidated statements of changes in stockholders' equity, Note 22 and Note 23.

Short-term funding

During the third quarter of 2015 the Firm completed the discontinuation of its commercial paper customer sweep cash management program. This change has not had a significant impact on the Firm's liquidity as the majority of these customer funds remain as deposits at the Firm.

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. Securities loaned or sold under agreements to repurchase are secured predominantly by high-quality securities collateral, including government-issued debt and agency MBS, and constitute a significant portion of the federal funds purchased and securities loaned or sold under repurchase agreements on the Consolidated balance sheets. The decrease in securities loaned or sold under agreements to repurchase at December 31, 2015, compared with the balance at December 31, 2014 (as well as the average balances for the full year 2015, compared with the prior year) was due to a decline in secured financing of trading assets-debt and equity instruments in CIB. The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment securities and market-making portfolios); and other market and portfolio factors.

Long-term funding and issuance

Long-term funding provides additional sources of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven by expected client activity, liquidity considerations, and regulatory requirements. Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding costs, as well as maintaining a certain level of liquidity at the Parent Company. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

The significant majority of the Firm's long-term unsecured funding is issued by the Parent Company to provide maximum flexibility in support of both bank and nonbank subsidiary funding. The following table summarizes long-term unsecured issuance and maturities or redemptions for the years ended December 31, 2015 and 2014. For additional information, see Note 21.

Long-term unsecured funding

Year ended December 31, (in millions)	**2015**	2014
Issuance		
Senior notes issued in the U.S. market	**$ 19,212**	$ 16,322
Senior notes issued in non-U.S. markets	**10,188**	11,193
Total senior notes	**29,400**	27,515
Subordinated debt	**3,210**	4,956
Structured notes	**22,165**	19,806
Total long-term unsecured funding – issuance	**$ 54,775**	$ 52,277
Maturities/redemptions		
Senior notes	**$ 18,454**	$ 21,169
Trust preferred securities	**1,500**	–
Subordinated debt	**6,908**	4,487
Structured notes	**18,099**	18,554
Total long-term unsecured funding – maturities/redemptions	**$ 44,961**	$ 44,210

The Firm raises secured long-term funding through securitization of consumer credit card loans and advances from the FHLBs.

The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemption for the years ended December 31, 2015 and 2014.

Long-term secured funding

Year ended December 31,	Issuance		Maturities/Redemptions	
(in millions)	**2015**	2014	**2015**	2014
Credit card securitization	**$ 6,807**	$ 8,327	**$ 10,130**	$ 3,774
Other securitizations[(a)]	**–**	–	**248**	309
FHLB advances	**16,550**	15,200	**9,960**	12,079
Other long-term secured funding	**1,105**	802	**383**	3,076
Total long-term secured funding	**$ 24,462**	$ 24,329	**$ 20,721**	$ 19,238

(a) Other securitizations includes securitizations of residential mortgages and student loans.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. For further description of the client-driven loan securitizations, see Note 16.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on page 77, and credit risk, liquidity risk and credit-related contingent features in Note 6.

The credit ratings of the Parent Company and the Firm's principal bank and nonbank subsidiaries as of December 31, 2015, were as follows.

	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A. Chase Bank USA, N.A.			J.P. Morgan Securities LLC		
December 31, 2015	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investors Service	A3	P-2	Stable	Aa3	P-1	Stable	Aa3	P-1	Stable
Standard & Poor's	A-	A-2	Stable	A+	A-1	Stable	A+	A-1	Stable
Fitch Ratings	A+	F1	Stable	AA-	F1+	Stable	AA-	F1+	Stable

Downgrades of the Firm's long-term ratings by one or two notches could result in an increase in its cost of funds, and access to certain funding markets could be reduced as noted above. The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral factors (which the Firm believes are incorporated in its liquidity risk and stress testing metrics). The Firm believes that it maintains sufficient liquidity to withstand a potential decrease in funding capacity due to ratings downgrades.

JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices, and litigation matters, as well as their broader ratings methodologies. Changes in any of these factors could lead to changes in the Firm's credit ratings.

In May 2015, Moody's published its new bank rating methodology. As part of this action, the Firm's preferred stock, deposits and bank subordinated debt ratings were upgraded by one notch. Additionally in May 2015, Fitch changed its bank ratings methodology, implementing ratings differentiation between bank holding companies and their bank subsidiaries. This resulted in a one notch upgrade to the issuer ratings, senior debt ratings and long-term deposit ratings of JPMorgan Chase Bank, N.A., and certain other subsidiaries. In December 2015, S&P removed from its ratings for U.S. GSIBs the uplift assumption due to extraordinary government support. As a result, the Firm's short-term and long-term senior unsecured debt ratings and its subordinated unsecured debt ratings were lowered by one notch.

Although the Firm closely monitors and endeavors to manage, to the extent it is able, factors influencing its credit ratings, there is no assurance that its credit ratings will not be changed in the future.

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and the related business and risk management strategies, which may vary across the Firm's businesses and portfolios. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the carrying value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's wholesale and certain consumer lending-related commitments. The allowance for loan losses is intended to adjust the carrying value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date.

The allowance for loan losses includes an asset-specific component, a formula-based component, and a component related to PCI loans. The determination of each of these components involves significant judgment on a number of matters, as discussed below. For further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Note 15.

Asset-specific component

The asset-specific allowance for loan losses for each of the Firm's portfolio segments is generally measured as the difference between the recorded investment in the impaired loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections rely upon estimates such as redefault rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are, in turn, dependent on factors such as the level of future home prices, the duration of current overall economic conditions, and other macroeconomic and portfolio-specific factors. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Formula-based component — Consumer loans and lending-related commitments, excluding PCI loans

The formula-based allowance for credit losses for the consumer portfolio, including credit card, is calculated by applying statistical credit loss factors to outstanding principal balances over an estimated loss emergence period to arrive at an estimate of incurred credit losses in the portfolio. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends. In addition, management applies judgment to the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate the total incurred credit losses in the portfolio. Management uses additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate.

The statistical calculation is then adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation; these adjustments are accomplished in part by analyzing the historical loss experience for each major product segment. However, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment in making this adjustment, taking into account uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, borrower behavior, the potential impact of payment recasts within the HELOC portfolio, and other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties. For example, the performance of a HELOC that experiences a payment recast may be affected by both the quality of underwriting standards applied in originating the loan and the general economic conditions in effect at the time of the payment recast. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. The application of different inputs into the statistical calculation, and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for loan losses for the consumer credit portfolio.

Overall, the allowance for credit losses for the consumer portfolio, including credit card, is sensitive to changes in the economic environment (e.g., unemployment rates), delinquency rates, the realizable value of collateral (e.g., housing prices), FICO scores, borrower behavior and other risk factors. While all of these factors are important determinants of overall allowance levels, changes in the various factors may not occur at the same time or at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across all geographies or product types. Finally, it is difficult to predict the extent to which changes in these factors would ultimately affect the frequency of losses, the severity of losses or both.

PCI loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain PCI loans, which are accounted for as described in Note 14. The allowance for loan losses for the PCI portfolio is based on quarterly estimates of the amount of principal and interest cash flows expected to be collected over the estimated remaining lives of the loans.

These cash flow projections are based on estimates regarding default rates (including redefault rates on modified loans), loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are dependent on assumptions regarding the level of future home price declines, and the duration of current overall economic conditions, among other factors. These estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Formula-based component — Wholesale loans and lending-related commitments

The Firm's methodology for determining the allowance for loan losses and the allowance for lending-related commitments involves the early identification of credits that are deteriorating. The formula-based component of the allowance calculation for wholesale loans and lending-related components is the product of an estimated PD and estimated LGD. These factors are determined based on the credit quality and specific attributes of the Firm's loans and lending-related commitments to each obligor.

The Firm assesses the credit quality of its borrower or counterparty and assigns a risk rating. Risk ratings are assigned at origination or acquisition, and if necessary, adjusted for changes in credit quality over the life of the exposure. In assessing the risk rating of a particular loan or lending-related commitment, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Determining risk ratings involves significant judgment; emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm.

PD estimates are based on observable external through-the-cycle data, using credit rating agency default statistics. A LGD estimate is assigned to each loan or lending-related commitment. The estimate represents the amount of economic loss if the obligor were to default. The type of obligor, quality of collateral, and the seniority of the Firm's lending exposure in the obligor's capital structure affect LGD. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle. Changes to the time period used for PD and LGD estimates (for example, point-in-time loss versus longer views of the credit cycle) could also affect the allowance for credit losses.

The Firm applies judgment in estimating PD and LGD used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances, but differences in characteristics between the Firm's specific loans or lending-related commitments and those reflected in external and Firm-specific historical data could affect loss estimates. Estimates of PD and LGD are subject to periodic refinement based on any changes to underlying external and Firm-specific historical data. The use of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the modeled loss estimates, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both LGD and PD are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

Allowance for credit losses sensitivity

As noted above, the Firm's allowance for credit losses is sensitive to numerous factors, which may differ depending on the portfolio. Changes in economic conditions or in the Firm's assumptions and estimates could affect its estimate of probable credit losses inherent in the portfolio at the balance sheet date. The Firm uses its best judgment to assess these economic conditions and loss data in estimating the allowance for credit losses and these estimates are subject to periodic refinement based on any changes to underlying external and Firm-specific historical data. In many cases, the use of alternate estimates (for example, the effect of home prices and unemployment rates

on consumer delinquency, or the calibration between the Firm's wholesale loan risk ratings and external credit ratings) or data sources (for example, external PD and LGD factors that incorporate industry-wide information, versus Firm-specific history) would result in a different estimated allowance for credit losses. To illustrate the potential magnitude of certain alternate judgments, the Firm estimates that changes in the following inputs would have the following effects on the Firm's modeled loss estimates as of December 31, 2015, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- For PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment rates from current levels could imply an increase to modeled credit loss estimates of approximately $700 million.
- For the residential real estate portfolio, excluding PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment rates from current levels could imply an increase to modeled annual loss estimates of approximately $125 million.
- A 50 basis point deterioration in forecasted credit card loss rates could imply an increase to modeled annualized credit card loan loss estimates of approximately $600 million.
- An increase in PD factors consistent with a one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately $2.1 billion.
- A 100 basis point increase in estimated LGD for the Firm's entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately $175 million.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors. In addition, these analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then-current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the overall allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm follows and the judgments made in evaluating the risk factors related to its loss estimates, management believes that its current estimate of the allowance for credit losses is appropriate.

Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy. For further information, see Note 3.

December 31, 2015 (in billions, except ratio data)	Total assets at fair value	Total level 3 assets
Trading debt and equity instruments	$ 284.1	$ 11.9
Derivative receivables[a]	59.7	7.9
Trading assets	343.8	19.8
AFS securities	241.8	0.8
Loans	2.9	1.5
MSRs	6.6	6.6
Private equity investments[b]	1.9	1.7
Other	28.0	0.8
Total assets measured at fair value on a recurring basis	625.0	31.2
Total assets measured at fair value on a nonrecurring basis	1.7	1.0
Total assets measured at fair value	$ 626.7	$ 32.2
Total Firm assets	$ 2,351.7	
Level 3 assets as a percentage of total Firm assets[a]		1.4%
Level 3 assets as a percentage of total Firm assets at fair value[a]		5.1%

Note: Effective April 1, 2015, the Firm adopted new accounting guidance for certain investments where the Firm measures fair value using the net asset value per share (or its equivalent) as a practical expedient and has excluded these investments from the fair value hierarchy. For further information, see Note 3.

(a) For purposes of table above, the derivative receivables total reflects the impact of netting adjustments; however, the $7.9 billion of derivative receivables classified as level 3 does not reflect the netting adjustment as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivables balance would be $546 million at December 31, 2015; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.

(b) Private equity instruments represent investments within the Corporate line of business.

Valuation

Details of the Firm's processes for determining fair value are set out in Note 3. Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the valuation hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 3.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's credit-worthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. For further discussion of valuation adjustments applied by the Firm see Note 3.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, see Note 3.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 17.

Management applies significant judgment when estimating the fair value of its reporting units. Estimates of fair value are dependent upon estimates of (a) the future earnings potential of the Firm's reporting units, including the estimated effects of regulatory and legislative changes, such as the Dodd-Frank Act, (b) long-term growth rates and (c) the relevant cost of equity. Imprecision in estimating these factors can affect the estimated fair value of the reporting units.

Based upon the updated valuations for all of its reporting units, the Firm concluded that the goodwill allocated to its reporting units was not impaired at December 31, 2015. The fair values of these reporting units exceeded their carrying values by approximately 10% - 180% for all reporting units and did not indicate a significant risk of goodwill impairment based on current projections and valuations.

The goodwill of $101 million remaining as of December 31, 2014 associated with the Private Equity business was disposed of as part of the Private Equity sale completed in January 2015. For further information on the Private Equity sale, see Note 2.

The projections for all of the Firm's reporting units are consistent with management's short-term business outlook assumptions, and in the longer term, incorporate a set of macroeconomic assumptions and the Firm's best estimates of long-term growth and returns on equity of its businesses. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.

Declines in business performance, increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, adverse estimates of regulatory or legislative changes or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

For additional information on goodwill, see Note 17.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations and tax planning strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. The Firm has also recognized deferred tax assets in connection with certain net operating losses ("NOLs") and tax credits. The Firm performs regular reviews to ascertain whether its deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize NOLs before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2015, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

JPMorgan Chase does not record U.S. federal income taxes on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Changes to the income tax rates applicable to these non-U.S. subsidiaries may have a material impact on the effective tax rate in a future period if such changes were to occur.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective income tax rate in the period in which the reassessment occurs.

For additional information on income taxes, see Note 26.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 31.

ACCOUNTING AND REPORTING DEVELOPMENTS

Financial Accounting Standards Board ("FASB") Standards Adopted during 2015

Standard	Summary of guidance	Effects on financial statements
Simplifying the presentation of debt issuance costs	• Requires that unamortized debt issuance costs be presented as a reduction of the applicable liability rather than as an asset. • Does not impact the amortization method for these costs.	• Adopted October 1, 2015. • There was no material impact on the Firm's Consolidated balance sheets, and no impact on the Firm's Consolidated results of operations. • For further information, see Note 1.[(a)]
Disclosures for investments in certain entities that calculate net asset value per share (or its equivalent)	• Removes the requirement to categorize investments measured under the net asset value ("NAV") practical expedient from the fair value hierarchy. • Limits disclosures required for investments that are eligible to be measured using the NAV practical expedient to investments for which the entity has elected the practical expedient.	• Adopted April 1, 2015. • The application of this guidance only affected the disclosures related to these investments and had no impact on the Firm's Consolidated balance sheets or results of operations. • For further information, see Note 3.[(a)]
Repurchase agreements and similar transactions	• Amends the accounting for certain secured financing transactions. • Requires enhanced disclosures with respect to transactions recognized as sales in which exposure to the derecognized assets is retained through a separate agreement with the counterparty. • Requires enhanced disclosures with respect to the types of financial assets pledged in secured financing transactions and the remaining contractual maturity of the secured financing transactions.	• Accounting amendments adopted January 1, 2015. • Disclosure enhancements adopted April 1, 2015. • There was no material impact on the Firm's Consolidated Financial Statements. • For further information, see Note 6 and Note 13.
Reporting discontinued operations and disclosures of disposals of components of an entity	• Changes the criteria for determining whether a disposition qualifies for discontinued operations presentation. • Requires enhanced disclosures about discontinued operations and significant dispositions that do not qualify to be presented as discontinued operations.	• Adopted January 1, 2015. • There was no material impact on the Firm's Consolidated Financial Statements.
Investments in qualified affordable housing projects	• Applies to accounting for investments in affordable housing projects that qualify for the low-income housing tax credit. • Replaces the effective yield method and allows companies to make an accounting policy election to amortize the initial cost of its investments in proportion to the tax credits and other benefits received if certain criteria are met, and to present the amortization as a component of income tax expense.	• Adopted January 1, 2015. • For further information, see Note 1.[(a)]

(a) The guidance was required to be applied retrospectively and accordingly, certain prior period amounts have been revised to conform with the current period presentation.

FASB Standards Issued but not yet Adopted

Standard	Summary of guidance	Effects on financial statements
Amendments to the consolidation analysis *Issued February 2015*	• Eliminates the deferral issued by the FASB in February 2010 of certain VIE-related accounting requirements for certain investment funds, including mutual funds, private equity funds and hedge funds. • Amends the evaluation of fees paid to a decision maker or a service provider, and exempts certain money market funds from consolidation.	• Required effective date January 1, 2016. • Will not have a material impact on the Firm's Consolidated Financial Statements.
Measuring the financial assets and financial liabilities of a consolidated collateralized financing entity *Issued August 2014*	• Provides an alternative for consolidated financing VIEs to elect: (1) to measure their financial assets and liabilities separately under existing U.S. GAAP for fair value measurement with any differences in such fair values reflected in earnings; or (2) to measure both their financial assets and liabilities using the more observable of the fair value of the financial assets or the fair value of the financial liabilities.	• Required effective date January 1, 2016. • Will not have a material impact on the Firm's Consolidated Financial Statements.
Revenue recognition – revenue from contracts with customers *Issued May 2014*	• Requires that revenue from contracts with customers be recognized upon transfer of control of a good or service in the amount of consideration expected to be received. • Changes the accounting for certain contract costs, including whether they may be offset against revenue in the statements of income, and requires additional disclosures about revenue and contract costs. • May be adopted using a full retrospective approach or a modified, cumulative effect-type approach wherein the guidance is applied only to existing contracts as of the date of initial application, and to new contracts transacted after that date.	• Required effective date January 1, 2018.[(a)] • Because the guidance does not apply to revenue associated with financial instruments, including loans and securities that are accounted for under other U.S. GAAP, the Firm does not expect the new revenue recognition guidance to have a material impact on the elements of its statements of income most closely associated with financial instruments, including Securities Gains, Interest Income and Interest Expense. • The Firm plans to adopt the revenue recognition guidance in the first quarter of 2018 and is currently evaluating the potential impact on the Consolidated Financial statements and its selection of transition method.
Recognition and measurement of financial assets and financial liabilities *Issued January 2016*	• Requires that certain equity instruments be measured at fair value, with changes in fair value recognized in earnings. • For financial liabilities where the fair value option has been elected, the portion of the total change in fair value caused by changes in Firm's own credit risk is required to be presented separately in Other comprehensive income ("OCI"). • Generally requires a cumulative-effective adjustment to its retained earnings as of the beginning of the reporting period of adoption.	• Required effective date January 1, 2018.[(b)] • Adoption of the DVA guidance as of January 1, 2016, would result in a reclassification from retained earnings to AOCI, reflecting the cumulative change in value to change in the Firm's credit spread subsequent to the issuance of each liability. The amount of this reclassification would be immaterial as of January 1, 2016. • The Firm is evaluating the potential impact of the remaining guidance on the Consolidated Financial Statements.

(a) Early adoption is permitted.
(b) Early adoption is permitted for the requirement to report changes in fair value due to the Firm's own credit risk in OCI, and the Firm is planning to early adopt this guidance during 2016.

NONEXCHANGE-TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based on internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2015.

Year ended December 31, 2015 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2015	$ 9,826	$ 13,926
Effect of legally enforceable master netting agreements	14,327	13,211
Gross fair value of contracts outstanding at January 1, 2015	24,153	27,137
Contracts realized or otherwise settled	(13,419)	(12,583)
Fair value of new contracts	3,704	5,027
Changes in fair values attributable to changes in valuation techniques and assumptions	–	–
Other changes in fair value	1,428	(1,300)
Gross fair value of contracts outstanding at December 31, 2015	15,866	18,281
Effect of legally enforceable master netting agreements	(6,772)	(6,256)
Net fair value of contracts outstanding at December 31, 2015	$ 9,094	$ 12,025

The following table indicates the maturities of nonexchange-traded commodity derivative contracts at December 31, 2015.

December 31, 2015 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 8,487	$ 9,242
Maturity 1–3 years	5,636	6,148
Maturity 4–5 years	1,122	1,931
Maturity in excess of 5 years	621	960
Gross fair value of contracts outstanding at December 31, 2015	15,866	18,281
Effect of legally enforceable master netting agreements	(6,772)	(6,256)
Net fair value of contracts outstanding at December 31, 2015	$ 9,094	$ 12,025

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the Securities and Exchange Commission. In addition, the Firm's senior management may make forward-looking statements orally to investors, analysts, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and global business, economic and political conditions and geopolitical events;
- Changes in laws and regulatory requirements, including capital and liquidity requirements;
- Changes in trade, monetary and fiscal policies and laws;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity, including approval of its capital plans by banking regulators;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- Technology changes instituted by the Firm, its counterparties or competitors;
- The success of the Firm's business simplification initiatives and the effectiveness of its control agenda;
- Ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Ability of the Firm to address enhanced regulatory requirements affecting its businesses;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to innovate and to increase market share;
- Ability of the Firm to attract and retain qualified employees;
- Ability of the Firm to control expense;
- Competitive pressures;
- Changes in the credit quality of the Firm's customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities or conflicts and the Firm's ability to deal effectively with disruptions caused by the foregoing;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operating systems and facilities; and
- Ability of the Firm to effectively defend itself against cyberattacks and other attempts by unauthorized parties to access information of the Firm or its customers or to disrupt the Firm's systems; and
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2015.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

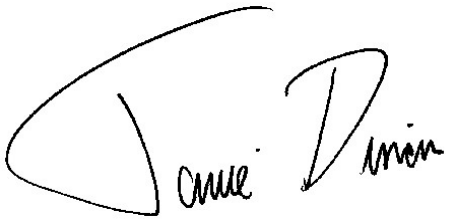
Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2015. In making the assessment, management used the "Internal Control – Integrated Framework" ("COSO 2013") promulgated by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

Based upon the assessment performed, management concluded that as of December 31, 2015, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO 2013 framework. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2015.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2015, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Marianne Lake
Executive Vice President and Chief Financial Officer

February 23, 2016

Report of independent registered public accounting firm



To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2015 and 2014 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting". Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



February 23, 2016

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2015	2014	2013
Revenue			
Investment banking fees	**$ 6,751**	$ 6,542	$ 6,354
Principal transactions	**10,408**	10,531	10,141
Lending- and deposit-related fees	**5,694**	5,801	5,945
Asset management, administration and commissions	**15,509**	15,931	15,106
Securities gains[(a)]	**202**	77	667
Mortgage fees and related income	**2,513**	3,563	5,205
Card income	**5,924**	6,020	6,022
Other income	**3,032**	3,013	4,608
Noninterest revenue	**50,033**	51,478	54,048
Interest income	**50,973**	51,531	52,669
Interest expense	**7,463**	7,897	9,350
Net interest income	**43,510**	43,634	43,319
Total net revenue	**93,543**	95,112	97,367
Provision for credit losses	**3,827**	3,139	225
Noninterest expense			
Compensation expense	**29,750**	30,160	30,810
Occupancy expense	**3,768**	3,909	3,693
Technology, communications and equipment expense	**6,193**	5,804	5,425
Professional and outside services	**7,002**	7,705	7,641
Marketing	**2,708**	2,550	2,500
Other expense	**9,593**	11,146	20,398
Total noninterest expense	**59,014**	61,274	70,467
Income before income tax expense	**30,702**	30,699	26,675
Income tax expense	**6,260**	8,954	8,789
Net income	**$ 24,442**	$ 21,745	$ 17,886
Net income applicable to common stockholders	**$ 22,406**	$ 20,077	$ 16,557
Net income per common share data			
Basic earnings per share	**$ 6.05**	$ 5.33	$ 4.38
Diluted earnings per share	**6.00**	5.29	4.34
Weighted-average basic shares	**3,700.4**	3,763.5	3,782.4
Weighted-average diluted shares	**3,732.8**	3,797.5	3,814.9
Cash dividends declared per common share	**$ 1.72**	$ 1.58	$ 1.44

(a) The Firm recognized other-than-temporary impairment ("OTTI") losses of $22 million, $4 million, and $21 million for the years ended December 31, 2015, 2014 and 2013, respectively.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of comprehensive income

Year ended December 31, (in millions)	2015	2014	2013
Net income	**$ 24,442**	$ 21,745	$ 17,886
Other comprehensive income/(loss), after-tax			
Unrealized gains/(losses) on investment securities	**(2,144)**	1,975	(4,070)
Translation adjustments, net of hedges	**(15)**	(11)	(41)
Cash flow hedges	**51**	44	(259)
Defined benefit pension and OPEB plans	**111**	(1,018)	1,467
Total other comprehensive income/(loss), after-tax	**(1,997)**	990	(2,903)
Comprehensive income	**$ 22,445**	$ 22,735	$ 14,983

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2015	2014
Assets		
Cash and due from banks	**$ 20,490**	$ 27,831
Deposits with banks	**340,015**	484,477
Federal funds sold and securities purchased under resale agreements (included **$23,141** and $28,585 at fair value)	**212,575**	215,803
Securities borrowed (included **$395** and $992 at fair value)	**98,721**	110,435
Trading assets (included assets pledged of **$115,284** and $125,034)	**343,839**	398,988
Securities (included **$241,754** and $298,752 at fair value and assets pledged of **$14,883** and $24,912)	**290,827**	348,004
Loans (included **$2,861** and $2,611 at fair value)	**837,299**	757,336
Allowance for loan losses	**(13,555)**	(14,185)
Loans, net of allowance for loan losses	**823,744**	743,151
Accrued interest and accounts receivable	**46,605**	70,079
Premises and equipment	**14,362**	15,133
Goodwill	**47,325**	47,647
Mortgage servicing rights	**6,608**	7,436
Other intangible assets	**1,015**	1,192
Other assets (included **$7,604** and $11,909 at fair value and assets pledged of **$1,286** and $1,399)	**105,572**	102,098
Total assets[a]	**$ 2,351,698**	$ 2,572,274
Liabilities		
Deposits (included **$12,516** and $8,807 at fair value)	**$ 1,279,715**	$ 1,363,427
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$3,526** and $2,979 at fair value)	**152,678**	192,101
Commercial paper	**15,562**	66,344
Other borrowed funds (included **$9,911** and $14,739 at fair value)	**21,105**	30,222
Trading liabilities	**126,897**	152,815
Accounts payable and other liabilities (included **$4,401** and $4,155 at fair value)	**177,638**	206,939
Beneficial interests issued by consolidated variable interest entities (included **$787** and $2,162 at fair value)	**41,879**	52,320
Long-term debt (included **$33,065** and $30,226 at fair value)	**288,651**	276,379
Total liabilities[a]	**2,104,125**	2,340,547
Commitments and contingencies (see Notes 29, 30 and 31)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares: issued **2,606,750** and 2,006,250 shares)	**26,068**	20,063
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Additional paid-in capital	**92,500**	93,270
Retained earnings	**146,420**	129,977
Accumulated other comprehensive income	**192**	2,189
Shares held in restricted stock units ("RSU") trust, at cost (**472,953** shares)	**(21)**	(21)
Treasury stock, at cost (**441,459,392** and 390,144,630 shares)	**(21,691)**	(17,856)
Total stockholders' equity	**247,573**	231,727
Total liabilities and stockholders' equity	**$ 2,351,698**	$ 2,572,274

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2015 and 2014. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which were eliminated in consolidation.

December 31, (in millions)	2015	2014
Assets		
Trading assets	**$ 3,736**	$ 9,090
Loans	**75,104**	68,880
All other assets	**2,765**	1,815
Total assets	**$ 81,605**	$ 79,785
Liabilities		
Beneficial interests issued by consolidated variable interest entities	**$ 41,879**	$ 52,320
All other liabilities	**809**	949
Total liabilities	**$ 42,688**	$ 53,269

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. At both December 31, 2015 and 2014, the Firm provided limited program-wide credit enhancement of $2.0 billion, related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 16.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity

Year ended December 31, (in millions, except per share data)	2015	2014	2013
Preferred stock			
Balance at January 1	**$ 20,063**	$ 11,158	$ 9,058
Issuance of preferred stock	**6,005**	8,905	3,900
Redemption of preferred stock	**–**	–	(1,800)
Balance at December 31	**26,068**	20,063	11,158
Common stock			
Balance at January 1 and December 31	**4,105**	4,105	4,105
Additional paid-in capital			
Balance at January 1	**93,270**	93,828	94,604
Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects	**(436)**	(508)	(752)
Other	**(334)**	(50)	(24)
Balance at December 31	**92,500**	93,270	93,828
Retained earnings			
Balance at January 1	**129,977**	115,435	104,223
Cumulative effect of change in accounting principle	**–**	–	(284)
Balance at beginning of year, adjusted	**129,977**	115,435	103,939
Net income	**24,442**	21,745	17,886
Dividends declared:			
Preferred stock	**(1,515)**	(1,125)	(805)
Common stock (**$1.72**, $1.58 and $1.44 per share for 2015, 2014 and 2013, respectively)	**(6,484)**	(6,078)	(5,585)
Balance at December 31	**146,420**	129,977	115,435
Accumulated other comprehensive income			
Balance at January 1	**2,189**	1,199	4,102
Other comprehensive income/(loss)	**(1,997)**	990	(2,903)
Balance at December 31	**192**	2,189	1,199
Shares held in RSU Trust, at cost			
Balance at January 1 and December 31	**(21)**	(21)	(21)
Treasury stock, at cost			
Balance at January 1	**(17,856)**	(14,847)	(12,002)
Purchase of treasury stock	**(5,616)**	(4,760)	(4,789)
Reissuance from treasury stock	**1,781**	1,751	1,944
Balance at December 31	**(21,691)**	(17,856)	(14,847)
Total stockholders' equity	**$ 247,573**	$ 231,727	$ 210,857

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2015	2014	2013
Operating activities			
Net income	**$ 24,442**	$ 21,745	$ 17,886
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Provision for credit losses	**3,827**	3,139	225
Depreciation and amortization	**4,940**	4,759	5,306
Deferred tax expense	**1,333**	4,362	8,139
Other	**1,785**	2,113	1,552
Originations and purchases of loans held-for-sale	**(48,109)**	(67,525)	(75,928)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**49,363**	71,407	73,566
Net change in:			
Trading assets	**62,212**	(24,814)	89,110
Securities borrowed	**12,165**	1,020	7,562
Accrued interest and accounts receivable	**22,664**	(3,637)	(2,340)
Other assets	**(3,701)**	(9,166)	526
Trading liabilities	**(28,972)**	26,818	(9,772)
Accounts payable and other liabilities	**(23,361)**	6,058	(5,750)
Other operating adjustments	**(5,122)**	314	(2,129)
Net cash provided by operating activities	**73,466**	36,593	107,953
Investing activities			
Net change in:			
Deposits with banks	**144,462**	(168,426)	(194,363)
Federal funds sold and securities purchased under resale agreements	**3,190**	30,848	47,726
Held-to-maturity securities:			
Proceeds from paydowns and maturities	**6,099**	4,169	189
Purchases	**(6,204)**	(10,345)	(24,214)
Available-for-sale securities:			
Proceeds from paydowns and maturities	**76,448**	90,664	89,631
Proceeds from sales	**40,444**	38,411	73,312
Purchases	**(70,804)**	(121,504)	(130,266)
Proceeds from sales and securitizations of loans held-for-investment	**18,604**	20,115	12,033
Other changes in loans, net	**(108,962)**	(51,749)	(23,721)
All other investing activities, net	**3,703**	2,181	(828)
Net cash provided by/(used in) investing activities	**106,980**	(165,636)	(150,501)
Financing activities			
Net change in:			
Deposits	**(88,678)**	89,346	81,476
Federal funds purchased and securities loaned or sold under repurchase agreements	**(39,415)**	10,905	(58,867)
Commercial paper and other borrowed funds	**(57,828)**	9,242	2,784
Beneficial interests issued by consolidated variable interest entities	**(5,632)**	(834)	(10,433)
Proceeds from long-term borrowings	**79,611**	78,515	83,546
Payments of long-term borrowings	**(67,247)**	(65,275)	(60,497)
Proceeds from issuance of preferred stock	**5,893**	8,847	3,873
Redemption of preferred stock	**–**	–	(1,800)
Treasury stock and warrants repurchased	**(5,616)**	(4,760)	(4,789)
Dividends paid	**(7,873)**	(6,990)	(6,056)
All other financing activities, net	**(726)**	(768)	(913)
Net cash provided by/(used in) financing activities	**(187,511)**	118,228	28,324
Effect of exchange rate changes on cash and due from banks	**(276)**	(1,125)	272
Net decrease in cash and due from banks	**(7,341)**	(11,940)	(13,952)
Cash and due from banks at the beginning of the period	**27,831**	39,771	53,723
Cash and due from banks at the end of the period	**$ 20,490**	$ 27,831	$ 39,771
Cash interest paid	**$ 7,220**	$ 8,194	$ 9,573
Cash income taxes paid, net	**9,423**	1,392	3,502

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small business, commercial banking, financial transaction processing and asset management. For a discussion of the Firm's business segments, see Note 33.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the U.S. ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Certain amounts reported in prior periods have been reclassified to conform with the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated balance sheets.

The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity ("VIE").

Voting Interest Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Firm to recognize its proportionate share of the entity's net earnings), or (ii) at fair value if the fair value option was elected. These investments are generally included in other assets, with income or loss included in other income.

Certain Firm-sponsored asset management funds are structured as limited partnerships or limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these funds. In the limited cases where the nonaffiliated partners or members do not have substantive kick-out or participating rights, the Firm consolidates the funds.

The Firm's investment companies have investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated balance sheets at fair value, and are recorded in other assets.

Variable Interest Entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is a special purpose entity ("SPE"). SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those

activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivatives or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

In February 2010, the Financial Accounting Standards Board ("FASB") issued an amendment which deferred the requirements of the accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds. For the funds to which the deferral applies, the Firm continues to apply other existing authoritative accounting guidance to determine whether such funds should be consolidated.

Use of estimates in the preparation of consolidated financial statements

The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in other comprehensive income/(loss) ("OCI") within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated statements of income.

Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the Consolidated balance sheets when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities sold and purchased under repurchase agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances when the specified conditions are met.

The Firm uses master netting agreements to mitigate counterparty credit risk in certain transactions, including derivatives transactions, repurchase and reverse repurchase agreements, and securities borrowed and loaned agreements. A master netting agreement is a single contract with a counterparty that permits multiple transactions governed by that contract to be terminated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due after expiration of any grace period). Upon the exercise of termination rights by the non-defaulting party (i) all transactions are terminated, (ii) all transactions are valued and the positive value or "in the money" transactions are netted against the negative value or "out of the money" transactions and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount. Upon exercise of repurchase agreement and securities loan default rights in general (i) all transactions are terminated and accelerated, (ii) all values of securities or cash held or to be delivered are calculated, and all such sums are netted against each other and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount.

Typical master netting agreements for these types of transactions also often contain a collateral/margin agreement that provides for a security interest in, or title transfer of, securities or cash collateral/margin to the party that has the right to demand margin (the "demanding party"). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount of the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold. The collateral/margin agreement grants to the demanding party, upon default by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin. It also grants to the demanding party the right to liquidate collateral/margin and to apply the proceeds to an amount payable by the counterparty.

For further discussion of the Firm's derivative instruments, see Note 6. For further discussion of the Firm's repurchase and reverse repurchase agreements, and securities borrowing and lending agreements, see Note 13.

Simplifying the presentation of debt issuance costs
Effective October 1, 2015, the Firm early adopted new accounting guidance that simplifies the presentation of debt issuance costs, by requiring that unamortized debt issuance costs be presented as a reduction of the applicable liability rather than as an asset. The adoption of this guidance had no material impact on the Firm's Consolidated balance sheets, and no impact on the Firm's consolidated results of operations. The guidance was required to be applied retrospectively, and accordingly, certain prior period amounts have been revised to conform with the current period presentation.

Investments in qualified affordable housing projects
Effective January 1, 2015, the Firm adopted new accounting guidance for investments in affordable housing projects that qualify for the low-income housing tax credit, which impacted the Corporate & Investment Bank ("CIB"). As a result of the adoption of this new guidance, the Firm made an accounting policy election to amortize the initial cost of its qualifying investments in proportion to the tax credits and other benefits received, and to present the amortization as a component of income tax expense; previously such amounts were predominantly presented in other income. The guidance was required to be applied retrospectively, and accordingly, certain prior period amounts have been revised to conform with the current period presentation. The cumulative effect on retained earnings was a reduction of $284 million as of January 1, 2013. The adoption of this accounting guidance resulted in an increase of $907 million and $924 million in other income and income tax expense, respectively, for the year ended December 31, 2014 and $761 million and $798 million, respectively, for the year ended December 2013, which led to an increase of approximately 2% in the effective tax rate for the year ended December 31, 2014 and 2013. The impact on net income and earnings per share in the periods affected was not material. For further information, see Note 26.

Statements of cash flows
For JPMorgan Chase's Consolidated statements of cash flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies
The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Fair value measurement	Note 3	Page 184
Fair value option	Note 4	Page 203
Derivative instruments	Note 6	Page 208
Noninterest revenue	Note 7	Page 221
Interest income and interest expense	Note 8	Page 223
Pension and other postretirement employee benefit plans	Note 9	Page 223
Employee stock-based incentives	Note 10	Page 231
Securities	Note 12	Page 233
Securities financing activities	Note 13	Page 238
Loans	Note 14	Page 242
Allowance for credit losses	Note 15	Page 262
Variable interest entities	Note 16	Page 266
Goodwill and other intangible assets	Note 17	Page 274
Premises and equipment	Note 18	Page 278
Long-term debt	Note 21	Page 279
Income taxes	Note 26	Page 285
Off-balance sheet lending-related financial instruments, guarantees and other commitments	Note 29	Page 290
Litigation	Note 31	Page 297

Note 2 – Business changes and developments

Private Equity sale
As part of the Firm's business simplification agenda, the sale of a portion of the Private Equity Business ("Private Equity sale") was completed on January 9, 2015. Concurrent with the sale, a new independent management company was formed by the former One Equity Partners investment professionals. The new management company provides investment management services to the acquirer of the investments sold in the Private Equity sale and to the Firm for the portion of the private equity investments that were retained by the Firm. The sale of the investments did not have a material impact on the Firm's Consolidated balance sheets or its results of operations.

Note 3 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Firm's Consolidated balance sheets). Certain assets (e.g., certain mortgage, home equity and other loans where the carrying value is based on the fair value of the underlying collateral), liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment).

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on models that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below.

The level of precision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions by other market participants compared with those used by the Firm could result in a different estimate of fair value at the reporting date.

Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated balance sheets at fair value. The Firm's valuation control function, which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value. In addition, the firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the Firmwide head of the valuation control function (under the direction of the Firm's Chief Financial Officer ("CFO")), and includes sub-forums covering the Corporate & Investment Bank, Consumer & Community Banking ("CCB"), Commercial Banking, Asset Management and certain corporate functions including Treasury and Chief Investment Office ("CIO").

The valuation control function verifies fair value estimates provided by the risk-taking functions by leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, additional review is performed by the valuation control function to ensure the reasonableness of the estimates. The review may include evaluating the limited market activity including client unwinds, benchmarking of valuation inputs to those for similar instruments, decomposing the valuation of structured instruments into individual components, comparing expected to actual cash flows, reviewing profit and loss trends, and reviewing trends in collateral valuation. There are also additional levels of management review for more significant or complex positions.

The valuation control function determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments are applied to the quoted market price for instruments classified within level 1 of the fair value hierarchy (see below for further information on the fair value hierarchy). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

- Liquidity valuation adjustments are considered where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity. Liquidity valuation adjustments are applied and determined based on current market conditions. Factors that may be considered in determining the liquidity adjustment include analysis of: (1) the estimated bid-offer spread for the instrument being traded; (2) alternative pricing points for similar instruments in active markets; and (3) the range of reasonable values that the price or parameter could take.
- The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by U.S. GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that a relevant market participant would consider in the transfer of the net open risk position, including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.

- Unobservable parameter valuation adjustments may be made when positions are valued using prices or input parameters to valuation models that are unobservable due to a lack of market activity or because they cannot be implied from observable market data. Such prices or parameters must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the resulting valuation estimate.

Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality, the Firm's own creditworthiness and the impact of funding, utilizing a consistent framework across the Firm. For more information on such adjustments see Credit and funding adjustments on page 200 of this Note.

Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs to those models.

The Model Risk function is independent of the model owners. It reviews and approves a wide range of models, including risk management, valuation and regulatory capital models used by the Firm. The Model Risk review and governance functions are part of the Firm's Model Risk unit, and the Firmwide Model Risk Executive reports to the Firm's Chief Risk Officer ("CRO"). When reviewing a model, the Model Risk function analyzes and challenges the model methodology, and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes.

New valuation models, as well as material changes to existing valuation models, are reviewed and approved prior to implementation except where specified conditions are met, including the approval of an exception granted by the head of the Model Risk function. The Model Risk function performs an annual status assessment that considers developments in the product or market to determine whether valuation models which have already been reviewed need to be, on a full or partial basis, reviewed and approved again.

Valuation hierarchy

A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following table describes the valuation methodologies generally used by the Firm to measure its significant products/ instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology	Classifications in the valuation hierarchy
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features: for further information refer to the discussion of derivatives below. • Market rates for the respective maturity • Collateral	Level 2
Loans and lending-related commitments – wholesale		
Trading portfolio	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are infrequent) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Credit spreads derived from the cost of credit default swaps ("CDS"); or benchmark credit curves developed by the Firm, by industry and credit rating • Prepayment speed	Level 2 or 3
Loans held for investment and associated lending-related commitments	Valuations are based on discounted cash flows, which consider: • Credit spreads, derived from the cost of CDS; or benchmark credit curves developed by the Firm, by industry and credit rating • Prepayment speed Lending-related commitments are valued similar to loans and reflect the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become funded prior to an obligor default For information regarding the valuation of loans measured at collateral value, see Note 14.	Predominantly level 3
Loans – consumer		
Held for investment consumer loans, excluding credit card	Valuations are based on discounted cash flows, which consider: • Expected lifetime credit losses -considering expected and current default rates, and loss severity • Prepayment speed • Discount rates • Servicing costs For information regarding the valuation of loans measured at collateral value, see Note 14.	Predominantly level 3
Held for investment credit card receivables	Valuations are based on discounted cash flows, which consider: • Credit costs – allowance for loan losses is considered a reasonable proxy for the credit cost • Projected interest income, late-fee revenue and loan repayment rates • Discount rates • Servicing costs	Level 3
Trading loans – conforming residential mortgage loans expected to be sold	Fair value is based upon observable prices for mortgage-backed securities with similar collateral and incorporates adjustments to these prices to account for differences between the securities and the value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity.	Predominantly level 2

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Investment and trading securities	Quoted market prices are used where available.	Level 1
	In the absence of quoted market prices, securities are valued based on: • Observable market prices for similar securities • Relevant broker quotes • Discounted cash flows In addition, the following inputs to discounted cash flows are used for the following products: *Mortgage- and asset-backed securities specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity *Collateralized loan obligations ("CLOs"), specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Expected prepayment speed, conditional default rates, loss severity • Credit spreads • Credit rating data	Level 2 or 3
Physical commodities	Valued using observable market prices or data	Predominantly Level 1 and 2
Derivatives	Exchange-traded derivatives that are actively traded and valued using the exchange price.	Level 1
	Derivatives that are valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models, that use observable or unobservable valuation inputs (e.g., plain vanilla options and interest rate and credit default swaps). Inputs include: • Contractual terms including the period to maturity • Readily observable parameters including interest rates and volatility • Credit quality of the counterparty and of the Firm • Market funding levels • Correlation levels In addition, the following specific inputs are used for the following derivatives that are valued based on models with significant unobservable inputs: *Structured credit derivatives specific inputs include:* • CDS spreads and recovery rates • Credit correlation between the underlying debt instruments (levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices) • Actual transactions, where available, are used to regularly recalibrate unobservable parameters *Certain long-dated equity option specific inputs include:* • Long-dated equity volatilities *Certain interest rate and foreign exchange ("FX") exotic options specific inputs include:* • Interest rate correlation • Interest rate spread volatility • Foreign exchange correlation • Correlation between interest rates and foreign exchange rates • Parameters describing the evolution of underlying interest rates *Certain commodity derivatives specific inputs include:* • Commodity volatility • Forward commodity price Additionally, adjustments are made to reflect counterparty credit quality (credit valuation adjustments or "CVA"), the Firm's own creditworthiness (debit valuation adjustments or "DVA"), and funding valuation adjustment ("FVA") to incorporate the impact of funding. See page 200 of this Note.	Level 2 or 3

Product/instrument	Valuation methodology, inputs and assumptions	Classification in the valuation hierarchy
Mortgage servicing rights ("MSRs")	See Mortgage servicing rights in Note 17.	Level 3
Private equity direct investments	*Private equity direct investments* Fair value is estimated using all available information and considering the range of potential inputs, including: • Transaction prices • Trading multiples of comparable public companies • Operating performance of the underlying portfolio company • Additional available inputs relevant to the investment • Adjustments as required, since comparable public companies are not identical to the company being valued, and for company-specific issues and lack of liquidity	Level 2 or 3
	Public investments held in the Private Equity portfolio • Valued using observable market prices less adjustments for relevant restrictions, where applicable	Level 1 or 2
Fund investments (i.e., mutual/collective investment funds, private equity funds, hedge funds, and real estate funds)	Net asset value ("NAV") • NAV is validated by sufficient level of observable activity (i.e., purchases and sales) • Adjustments to the NAV as required, for restrictions on redemption (e.g., lock up periods or withdrawal limitations) or where observable activity is limited	Level 1 Level 2 or 3[(a)]
Beneficial interests issued by consolidated VIEs	Valued using observable market information, where available In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE	Level 2 or 3
Long-term debt, not carried at fair value	Valuations are based on discounted cash flows, which consider: • Market rates for respective maturity • The Firm's own creditworthiness (DVA). See page 200 of this Note.	Predominantly level 2
Structured notes (included in deposits, other borrowed funds and long-term debt)	• Valuations are based on discounted cash flow analyses that consider the embedded derivative and the terms and payment structure of the note. • The embedded derivative features are considered using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that use observable or unobservable valuation inputs, depending on the embedded derivative. The specific inputs used vary according to the nature of the embedded derivative features, as described in the discussion above regarding derivative valuation. Adjustments are then made to this base valuation to reflect the Firm's own creditworthiness (DVA) and to incorporate the impact of funding (FVA). See page 200 of this Note.	Level 2 or 3

(a) Excludes certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient.

The following table presents the asset and liabilities reported at fair value as of December 31, 2015 and 2014, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2015 (in millions)	Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 23,141	$ –	$ –	$ 23,141
Securities borrowed	–	395	–	–	395
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	6	31,815	715	–	32,536
Residential – nonagency	–	1,299	194	–	1,493
Commercial – nonagency	–	1,080	115	–	1,195
Total mortgage-backed securities	6	34,194	1,024	–	35,224
U.S. Treasury and government agencies[a]	12,036	6,985	–	–	19,021
Obligations of U.S. states and municipalities	–	6,986	651	–	7,637
Certificates of deposit, bankers' acceptances and commercial paper	–	1,042	–	–	1,042
Non-U.S. government debt securities	27,974	25,064	74	–	53,112
Corporate debt securities	–	22,807	736	–	23,543
Loans[b]	–	22,211	6,604	–	28,815
Asset-backed securities	–	2,392	1,832	–	4,224
Total debt instruments	40,016	121,681	10,921	–	172,618
Equity securities	94,059	606	265	–	94,930
Physical commodities[c]	3,593	1,064	–	–	4,657
Other	–	11,152	744	–	11,896
Total debt and equity instruments[d]	137,668	134,503	11,930	–	284,101
Derivative receivables:					
Interest rate	354	666,491	2,766	(643,248)	26,363
Credit	–	48,850	2,618	(50,045)	1,423
Foreign exchange	734	177,525	1,616	(162,698)	17,177
Equity	–	35,150	709	(30,330)	5,529
Commodity	108	24,720	237	(15,880)	9,185
Total derivative receivables[e]	1,196	952,736	7,946	(902,201)	59,677
Total trading assets	138,864	1,087,239	19,876	(902,201)	343,778
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	55,066	–	–	55,066
Residential – nonagency	–	27,618	1	–	27,619
Commercial – nonagency	–	22,897	–	–	22,897
Total mortgage-backed securities	–	105,581	1	–	105,582
U.S. Treasury and government agencies[a]	10,998	38	–	–	11,036
Obligations of U.S. states and municipalities	–	33,550	–	–	33,550
Certificates of deposit	–	283	–	–	283
Non-U.S. government debt securities	23,199	13,477	–	–	36,676
Corporate debt securities	–	12,436	–	–	12,436
Asset-backed securities:					
Collateralized loan obligations	–	30,248	759	–	31,007
Other	–	9,033	64	–	9,097
Equity securities	2,087	–	–	–	2,087
Total available-for-sale securities	36,284	204,646	824	–	241,754
Loans	–	1,343	1,518	–	2,861
Mortgage servicing rights	–	–	6,608	–	6,608
Other assets:					
Private equity investments[f]	102	101	1,657	–	1,860
All other	3,815	28	744	–	4,587
Total other assets	3,917	129	2,401	–	6,447
Total assets measured at fair value on a recurring basis	$ 179,065	$ 1,316,893[g]	$ 31,227[g]	$ (902,201)	$ 624,984
Deposits	$ –	$ 9,566	$ 2,950	$ –	$ 12,516
Federal funds purchased and securities loaned or sold under repurchase agreements	–	3,526	–	–	3,526
Other borrowed funds	–	9,272	639	–	9,911
Trading liabilities:					
Debt and equity instruments[d]	53,845	20,199	63	–	74,107
Derivative payables:					
Interest rate	216	633,060	1,890	(624,945)	10,221
Credit	–	48,460	2,069	(48,988)	1,541
Foreign exchange	669	187,890	2,341	(171,131)	19,769
Equity	–	36,440	2,223	(29,480)	9,183
Commodity	52	26,430	1,172	(15,578)	12,076
Total derivative payables[e]	937	932,280	9,695	(890,122)	52,790
Total trading liabilities	54,782	952,479	9,758	(890,122)	126,897
Accounts payable and other liabilities	4,382	–	19	–	4,401
Beneficial interests issued by consolidated VIEs	–	238	549	–	787
Long-term debt	–	21,452	11,613	–	33,065
Total liabilities measured at fair value on a recurring basis	$ 59,164	$ 996,533	$ 25,528	$ (890,122)	$ 191,103

	Fair value hierarchy				
December 31, 2014 (in millions)	Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 28,585	$ –	$ –	$ 28,585
Securities borrowed	–	992	–	–	992
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	14	31,904	922	–	32,840
Residential – nonagency	–	1,381	663	–	2,044
Commercial – nonagency	–	927	306	–	1,233
Total mortgage-backed securities	14	34,212	1,891	–	36,117
U.S. Treasury and government agencies[a]	17,816	8,460	–	–	26,276
Obligations of U.S. states and municipalities	–	9,298	1,273	–	10,571
Certificates of deposit, bankers' acceptances and commercial paper	–	1,429	–	–	1,429
Non-U.S. government debt securities	25,854	27,294	302	–	53,450
Corporate debt securities	–	28,099	2,989	–	31,088
Loans[b]	–	23,080	13,287	–	36,367
Asset-backed securities	–	3,088	1,264	–	4,352
Total debt instruments	43,684	134,960	21,006	–	199,650
Equity securities	104,890	624	431	–	105,945
Physical commodities[c]	2,739	1,741	2	–	4,482
Other	–	8,762	1,050	–	9,812
Total debt and equity instruments[d]	151,313	146,087	22,489	–	319,889
Derivative receivables:					
Interest rate	473	945,635 [g]	4,149	(916,532) [g]	33,725
Credit	–	73,853	2,989	(75,004)	1,838
Foreign exchange	758	212,153 [g]	2,276	(193,934) [g]	21,253
Equity	–	39,937 [g]	2,552	(34,312) [g]	8,177
Commodity	247	42,807	599	(29,671)	13,982
Total derivative receivables[e]	1,478	1,314,385 [g]	12,565	(1,249,453) [g]	78,975
Total trading assets	152,791	1,460,472 [g]	35,054	(1,249,453) [g]	398,864
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	65,319	–	–	65,319
Residential – nonagency	–	50,865	30	–	50,895
Commercial – nonagency	–	21,009	99	–	21,108
Total mortgage-backed securities	–	137,193	129	–	137,322
U.S. Treasury and government agencies[a]	13,591	54	–	–	13,645
Obligations of U.S. states and municipalities	–	30,068	–	–	30,068
Certificates of deposit	–	1,103	–	–	1,103
Non-U.S. government debt securities	24,074	28,669	–	–	52,743
Corporate debt securities	–	18,532	–	–	18,532
Asset-backed securities:					
Collateralized loan obligations	–	29,402	792	–	30,194
Other	–	12,499	116	–	12,615
Equity securities	2,530	–	–	–	2,530
Total available-for-sale securities	40,195	257,520	1,037	–	298,752
Loans	–	70	2,541	–	2,611
Mortgage servicing rights	–	–	7,436	–	7,436
Other assets:					
Private equity investments[f]	648	2,624	2,225	–	5,497
All other	4,018	17	959	–	4,994
Total other assets	4,666	2,641	3,184	–	10,491
Total assets measured at fair value on a recurring basis	$ 197,652	$ 1,750,280 [g]	$ 49,252	$ (1,249,453) [g]	$ 747,731
Deposits	$ –	$ 5,948	$ 2,859	$ –	$ 8,807
Federal funds purchased and securities loaned or sold under repurchase agreements	–	2,979	–	–	2,979
Other borrowed funds	–	13,286	1,453	–	14,739
Trading liabilities:					
Debt and equity instruments[d]	62,914	18,713	72	–	81,699
Derivative payables:					
Interest rate	499	914,357 [g]	3,523	(900,634) [g]	17,745
Credit	–	73,095	2,800	(74,302)	1,593
Foreign exchange	746	221,066 [g]	2,802	(201,644) [g]	22,970
Equity	–	41,925 [g]	4,337	(34,522) [g]	11,740
Commodity	141	44,318	1,164	(28,555)	17,068
Total derivative payables[e]	1,386	1,294,761 [g]	14,626	(1,239,657) [g]	71,116
Total trading liabilities	64,300	1,313,474 [g]	14,698	(1,239,657) [g]	152,815
Accounts payable and other liabilities [g]	4,129	–	26	–	4,155
Beneficial interests issued by consolidated VIEs	–	1,016	1,146	–	2,162
Long-term debt	–	18,349	11,877	–	30,226
Total liabilities measured at fair value on a recurring basis	$ 68,429	$ 1,355,052 [g]	$ 32,059	$ (1,239,657) [g]	$ 215,883

Note: Effective April 1, 2015, the Firm adopted new accounting guidance for investments in certain entities that calculate net asset value per share (or its equivalent). As a result of the adoption of this new guidance, certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy. At December 31, 2015 and 2014, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were $1.2 billion and $1.5 billion, respectively, of which $337 million and $1.2 billion had been previously classified in level 2 and level 3, respectively, at December 31, 2014. Included on the Firm's balance sheet at December 31, 2015 and 2014, were trading assets of $61 million and $124 million, respectively, and other assets of $1.2 billion and $1.4 billion, respectively. The guidance was required to be applied retrospectively, and accordingly, prior period amounts have been revised to conform with the current period presentation.

(a) At December 31, 2015 and 2014, included total U.S. government-sponsored enterprise obligations of $67.0 billion and $84.1 billion, respectively, which were predominantly mortgage-related.
(b) At December 31, 2015 and 2014, included within trading loans were $11.8 billion and $17.0 billion, respectively, of residential first-lien mortgages, and $4.3 billion and $5.8 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $5.3 billion and $7.7 billion, respectively, and reverse mortgages of $2.5 billion and $3.4 billion, respectively.
(c) Physical commodities inventories are generally accounted for at the lower of cost or market. "Market" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, market approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when market is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. For a further discussion of the Firm's hedge accounting relationships, see Note 6. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.
(d) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).
(e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivables and payables balances would be $546 million and $2.5 billion at December 31, 2015 and 2014, respectively; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.
(f) Private equity instruments represent investments within the Corporate line of business. The cost basis of the private equity investment portfolio totaled $3.5 billion and $6.0 billion at December 31, 2015 and 2014, respectively.
(g) Certain prior period amounts (including the corresponding fair value parenthetical disclosure for accounts payable and other liabilities on the Consolidated balance sheets) were revised to conform with the current period presentation.

Transfers between levels for instruments carried at fair value on a recurring basis

For the years ended December 31, 2015 and 2014, there were no significant transfers between levels 1 and 2.

During the year ended December 31, 2015, transfers from level 3 to level 2 and from level 2 to level 3 included the following:

- $3.1 billion of long-term debt and $1.0 billion of deposits driven by an increase in observability on certain structured notes with embedded interest rate and FX derivatives and a reduction of the significance in the unobservable inputs for certain structured notes with embedded equity derivatives
- $2.1 billion of gross equity derivatives for both receivables and payables as a result of an increase in observability and a decrease in the significance in unobservable inputs; partially offset by transfers into level 3 resulting in net transfers of approximately $1.2 billion for both receivables and payables
- $2.8 billion of trading loans driven by an increase in observability of certain collateralized financing transactions; and $2.4 billion of corporate debt driven by a decrease in the significance in the unobservable inputs and an increase in observability for certain structured products

During the year ended December 31, 2014, transfers from level 3 to level 2 included the following:

- $4.3 billion and $4.4 billion of gross equity derivative receivables and payables, respectively, due to increased observability of certain equity option valuation inputs
- $2.7 billion of trading loans, $2.6 billion of margin loans, $2.3 billion of private equity investments, $2.0 billion of corporate debt, and $1.3 billion of long-term debt, based on increased liquidity and price transparency

Transfers from level 2 into level 3 included $1.1 billion of other borrowed funds, $1.1 billion of trading loans and $1.0 billion of long-term debt, based on a decrease in observability of valuation inputs and price transparency.

During the year ended December 31, 2013, transfers from level 3 to level 2 included the following:

- Certain highly rated CLOs, including $27.4 billion held in the Firm's available-for-sale ("AFS") securities portfolio and $1.4 billion held in the trading portfolio, based on increased liquidity and price transparency;
- $1.3 billion of long-term debt, largely driven by an increase in observability of certain equity structured notes.

Transfers from level 2 to level 3 included $1.4 billion of corporate debt securities in the trading portfolio largely driven by a decrease in observability for certain credit instruments.

All transfers are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 valuations

The Firm has established well-documented processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3). For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, see pages 185–188 of this Note.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs including, but not limited to, transaction details, yield

curves, interest rates, prepayment speed, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and, for certain instruments, the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

In the Firm's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted average values will therefore vary from period-to-period and parameter-to-parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

For the Firm's derivatives and structured notes positions classified within level 3 at December 31, 2015, interest rate correlation inputs used in estimating fair value were concentrated towards the upper end of the range presented; equities correlation inputs were concentrated at the lower end of the range; the credit correlation inputs were distributed across the range presented; and the foreign exchange correlation inputs were concentrated at the top end of the range presented. In addition, the interest rate volatility inputs and the foreign exchange correlation inputs used in estimating fair value were each concentrated at the upper end of the range presented. The equity volatilities are concentrated in the lower half end of the range. The forward commodity prices used in estimating the fair value of commodity derivatives were concentrated within the lower end of the range presented.

Level 3 inputs[a]

December 31, 2015 (in millions, except for ratios and basis points)

Product/Instrument	Fair value	Principal valuation technique	Unobservable inputs	Range of input values	Weighted average
Residential mortgage-backed securities and loans	$ 5,212	Discounted cash flows	Yield	3% - 26%	6%
			Prepayment speed	0% - 20%	6%
			Conditional default rate	0% - 33%	2%
			Loss severity	0% - 100%	28%
Commercial mortgage-backed securities and loans[b]	2,844	Discounted cash flows	Yield	1% - 25%	6%
			Conditional default rate	0% - 91%	29%
			Loss severity	40%	40%
Corporate debt securities, obligations of U.S. states and municipalities, and other[c]	3,277	Discounted cash flows	Credit spread	60 bps - 225 bps	146 bps
			Yield	1% - 20%	5%
	2,740	Market comparables	Price	$ – - $168	$89
Net interest rate derivatives	876	Option pricing	Interest rate correlation	(52)% - 99%	
			Interest rate spread volatility	3% - 38%	
Net credit derivatives[b][c]	549	Discounted cash flows	Credit correlation	35% - 90%	
Net foreign exchange derivatives	(725)	Option pricing	Foreign exchange correlation	0% - 60%	
Net equity derivatives	(1,514)	Option pricing	Equity volatility	20% - 65%	
Net commodity derivatives	(935)	Discounted cash flows	Forward commodity price	$ 22 - $46 per barrel	
Collateralized loan obligations	759	Discounted cash flows	Credit spread	354 bps - 550 bps	396 bps
			Prepayment speed	20%	20%
			Conditional default rate	2%	2%
			Loss severity	40%	40%
	180	Market comparables	Price	$ – - $99	$69
Mortgage servicing rights	6,608	Discounted cash flows	Refer to Note 17		
Private equity investments	1,657	Market comparables	EBITDA multiple	7.2x - 10.4x	8.5x
			Liquidity adjustment	0% - 13%	8%
Long-term debt, other borrowed funds, and deposits[d]	14,707	Option pricing	Interest rate correlation	(52)% - 99%	
			Interest rate spread volatility	3% - 38%	
			Foreign exchange correlation	0% - 60%	
			Equity correlation	(50)% - 80%	
	495	Discounted cash flows	Credit correlation	35% - 90%	
Beneficial interests issued by consolidated VIEs[e]	549	Discounted cash flows	Yield	4% - 28%	4%
			Prepayment Speed	1% - 12%	6%
			Conditional default rate	2% - 15%	2%
			Loss severity	30% - 100%	31%

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated balance sheets.

(b) The unobservable inputs and associated input ranges for approximately $349 million of credit derivative receivables and $310 million of credit derivative payables with underlying commercial mortgage risk have been included in the inputs and ranges provided for commercial mortgage-backed securities and loans.

(c) The unobservable inputs and associated input ranges for approximately $434 million of credit derivative receivables and $401 million of credit derivative payables with underlying asset-backed securities risk have been included in the inputs and ranges provided for corporate debt securities, obligations of U.S. states and municipalities and other.

(d) Long-term debt, other borrowed funds and deposits include structured notes issued by the Firm that are predominantly financial instruments containing embedded derivatives. The estimation of the fair value of structured notes is predominantly based on the derivative features embedded within the instruments. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.

(e) The parameters are related to residential mortgage-backed securities.

Changes in and ranges of unobservable inputs
The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent as a change in one unobservable input may give rise to a change in another unobservable input; where relationships exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline); such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

In addition, the following discussion provides a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.

Yield – The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

Credit spread – The credit spread is the amount of additional annualized return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

The yield and the credit spread of a particular mortgage-backed security primarily reflect the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield and credit spreads reflects the range of risk inherent in various instruments owned by the Firm. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, loan-to-value ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages. For corporate debt securities, obligations of U.S. states and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.

Prepayment speed – The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool to collateral pool, and are driven by the type and location of the underlying borrower, the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

Conditional default rate – The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral has high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement. Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Firm's market-making portfolios, conditional default rates are most typically at the lower end of the range presented.

Loss severity – The loss severity (the inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

The loss severity applied in valuing a mortgage-backed security investment depends on factors relating to the underlying mortgages, including the loan-to-value ratio, the nature of the lender's lien on the property and other instrument-specific factors.

Correlation – Correlation is a measure of the relationship between the movements of two variables (e.g., how the change in one variable influences the change in the other). Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity and foreign exchange) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement. The range of correlation inputs between risks within the same asset class are generally narrower than those between underlying risks across asset classes. In addition, the ranges of credit correlation inputs tend to be narrower than those affecting other asset classes.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input as the relationship between the underlying risks may be different over different time periods. Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

Volatility – Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options, commodity options, and interest rate options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option (e.g., the volatility of a particular equity security may be significantly different from that of a particular commodity index), the tenor of the derivative as well as the strike price of the option.

EBITDA multiple – EBITDA multiples refer to the input (often derived from the value of a comparable company) that is multiplied by the historic and/or expected earnings before interest, taxes, depreciation and amortization ("EBITDA") of a company in order to estimate the company's value. An increase in the EBITDA multiple, in isolation, net of adjustments, would result in an increase in a fair value measurement.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2015, 2014 and 2013. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2015 (in millions)	Fair value at January 1, 2015	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2015	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2015
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 922	$ (28)	$ 327	$ (303)	$ (132)	$ (71)	$ 715	$ (27)
Residential – nonagency	663	130	253	(611)	(23)	(218)	194	4
Commercial – nonagency	306	(14)	246	(262)	(22)	(139)	115	(5)
Total mortgage-backed securities	1,891	88	826	(1,176)	(177)	(428)	1,024	(28)
Obligations of U.S. states and municipalities	1,273	14	352	(133)	(27)	(828)	651	(1)
Non-U.S. government debt securities	302	9	205	(123)	(64)	(255)	74	(16)
Corporate debt securities	2,989	(77)	1,171	(1,038)	(125)	(2,184)	736	2
Loans	13,287	(174)	3,532	(4,661)	(3,112)	(2,268)	6,604	(181)
Asset-backed securities	1,264	(41)	1,920	(1,229)	(35)	(47)	1,832	(32)
Total debt instruments	21,006	(181)	8,006	(8,360)	(3,540)	(6,010)	10,921	(256)
Equity securities	431	96	89	(193)	(26)	(132)	265	82
Physical commodities	2	(2)	–	–	–	–	–	–
Other	1,050	119	1,581	(1,313)	192	(885)	744	85
Total trading assets – debt and equity instruments	22,489	32 [c]	9,676	(9,866)	(3,374)	(7,027)	11,930	(89) [c]
Net derivative receivables:[a]								
Interest rate	626	962	513	(173)	(732)	(320)	876	263
Credit	189	118	129	(136)	165	84	549	260
Foreign exchange	(526)	657	19	(149)	(296)	(430)	(725)	49
Equity	(1,785)	731	890	(1,262)	(158)	70	(1,514)	5
Commodity	(565)	(856)	1	(24)	512	(3)	(935)	(41)
Total net derivative receivables	(2,061)	1,612 [c]	1,552	(1,744)	(509)	(599)	(1,749)	536 [c]
Available-for-sale securities:								
Asset-backed securities	908	(32)	51	(43)	(61)	–	823	(28)
Other	129	–	–	–	(29)	(99)	1	–
Total available-for-sale securities	1,037	(32) [d]	51	(43)	(90)	(99)	824	(28) [d]
Loans	2,541	(133) [c]	1,290	(92)	(1,241)	(847)	1,518	(32) [c]
Mortgage servicing rights	7,436	(405) [e]	985	(486)	(922)	–	6,608	(405) [e]
Other assets:								
Private equity investments	2,225	(120) [c]	281	(362)	(187)	(180)	1,657	(304) [c]
All other	959	91 [f]	65	(147)	(224)	–	744	15 [f]

Year ended December 31, 2015 (in millions)	Fair value at January 1, 2015	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2015	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2015
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 2,859	$ (39) [c]	$ –	$ –	$ 1,993	$ (850)	$ (1,013)	$ 2,950	$ (29) [c]
Other borrowed funds	1,453	(697) [c]	–	–	3,334	(2,963)	(488)	639	(57) [c]
Trading liabilities – debt and equity instruments	72	15 [c]	(163)	160	–	(17)	(4)	63	(4) [c]
Accounts payable and other liabilities	26	–	–	–	–	(7)	–	19	–
Beneficial interests issued by consolidated VIEs	1,146	(82) [c]	–	–	286	(574)	(227)	549	(63) [c]
Long-term debt	11,877	(480) [c]	(58)	–	9,359	(6,299)	(2,786)	11,613	385 [c]

Year ended December 31, 2014 (in millions)	Fair value at January 1, 2014	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2014	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2014
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 1,005	$ (97)	$ 351	$ (186)	$ (121)	$ (30)	$ 922	$ (92)
Residential – nonagency	726	66	827	(761)	(41)	(154)	663	(15)
Commercial – nonagency	432	17	980	(914)	(60)	(149)	306	(12)
Total mortgage-backed securities	2,163	(14)	2,158	(1,861)	(222)	(333)	1,891	(119)
Obligations of U.S. states and municipalities	1,382	90	298	(358)	(139)	–	1,273	(27)
Non-U.S. government debt securities	143	24	719	(617)	(3)	36	302	10
Corporate debt securities	5,920	210	5,854	(3,372)	(4,531)	(1,092)	2,989	379
Loans	13,455	387	13,551	(7,917)	(4,623)	(1,566)	13,287	123
Asset-backed securities	1,272	19	2,240	(2,126)	(283)	142	1,264	(30)
Total debt instruments	24,335	716	24,820	(16,251)	(9,801)	(2,813)	21,006	336
Equity securities	867	113	248	(259)	(286)	(252)	431	46
Physical commodities	4	(1)	–	–	(1)	–	2	–
Other	2,000	239	1,426	(276)	(201)	(2,138)	1,050	329
Total trading assets – debt and equity instruments	27,206	1,067 [c]	26,494	(16,786)	(10,289)	(5,203)	22,489	711 [c]
Net derivative receivables:[a]								
Interest rate	2,379	184	198	(256)	(1,771)	(108)	626	(853)
Credit	95	(149)	272	(47)	92	(74)	189	(107)
Foreign exchange	(1,200)	(137)	139	(27)	668	31	(526)	(62)
Equity	(1,063)	154	2,044	(2,863)	10	(67)	(1,785)	583
Commodity	115	(465)	1	(113)	(109)	6	(565)	(186)
Total net derivative receivables	326	(413) [c]	2,654	(3,306)	(1,110)	(212)	(2,061)	(625) [c]
Available-for-sale securities:								
Asset-backed securities	1,088	(41)	275	(2)	(101)	(311)	908	(40)
Other	1,234	(19)	122	–	(223)	(985)	129	(2)
Total available-for-sale securities	2,322	(60) [d]	397	(2)	(324)	(1,296)	1,037	(42) [d]
Loans	1,931	(254) [c]	3,258	(845)	(1,549)	–	2,541	(234) [c]
Mortgage servicing rights	9,614	(1,826) [e]	768	(209)	(911)	–	7,436	(1,826) [e]
Other assets:								
Private equity investments	5,816	400 [c]	145	(1,967)	(197)	(1,972)	2,225	33 [c]
All other	1,382	83 [f]	10	(357)	(159)	–	959	59 [f]

Year ended December 31, 2014 (in millions)	Fair value at January 1, 2014	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2014	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2014
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 2,255	$ 149 [c]	$ –	$ –	$ 1,578	$ (197)	$ (926)	$ 2,859	$ 130 [c]
Other borrowed funds	2,074	(596) [c]	–	–	5,377	(6,127)	725	1,453	(415) [c]
Trading liabilities – debt and equity instruments	113	(5) [c]	(305)	323	–	(5)	(49)	72	2 [c]
Accounts payable and other liabilities	–	27 [c]	–	–	–	(1)	–	26	–
Beneficial interests issued by consolidated VIEs	1,240	(4) [c]	–	–	775	(763)	(102)	1,146	(22) [c]
Long-term debt	10,008	(40) [c]	–	–	7,421	(5,231)	(281)	11,877	(9) [c]

Year ended December 31, 2013 (in millions)	Fair value at January 1, 2013	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2013	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2013
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 498	$ 169	$ 819	$ (381)	$ (100)	$ –	$ 1,005	$ 200
Residential – nonagency	663	407	780	(1,028)	(91)	(5)	726	205
Commercial – nonagency	1,207	114	841	(1,522)	(208)	–	432	(4)
Total mortgage-backed securities	2,368	690	2,440	(2,931)	(399)	(5)	2,163	401
Obligations of U.S. states and municipalities	1,436	71	472	(251)	(346)	–	1,382	18
Non-U.S. government debt securities	67	4	1,449	(1,479)	(8)	110	143	(1)
Corporate debt securities	5,308	103	7,602	(5,975)	(1,882)	764	5,920	466
Loans	10,787	665	10,411	(7,431)	(685)	(292)	13,455	315
Asset-backed securities	3,696	191	1,912	(2,379)	(292)	(1,856)	1,272	105
Total debt instruments	23,662	1,724	24,286	(20,446)	(3,612)	(1,279)	24,335	1,304
Equity securities	1,092	(37)	328	(266)	(135)	(115)	867	46
Physical commodities	–	(4)	–	(8)	–	16	4	(4)
Other	863	558	659	(95)	(120)	135	2,000	1,074
Total trading assets – debt and equity instruments	25,617	2,241 [c]	25,273	(20,815)	(3,867)	(1,243)	27,206	2,420 [c]
Net derivative receivables:[a]								
Interest rate	3,322	1,358	344	(220)	(2,391)	(34)	2,379	107
Credit	1,873	(1,697)	115	(12)	(357)	173	95	(1,449)
Foreign exchange	(1,750)	(101)	3	(4)	683	(31)	(1,200)	(110)
Equity	(1,806)	2,528	1,305	(2,111)	(1,353)	374	(1,063)	872
Commodity	254	816	105	(3)	(1,107)	50	115	410
Total net derivative receivables	1,893	2,904 [c]	1,872	(2,350)	(4,525)	532	326	(170) [c]
Available-for-sale securities:								
Asset-backed securities	28,024	4	579	(57)	(57)	(27,405)	1,088	4
Other	892	26	508	(216)	(6)	30	1,234	25
Total available-for-sale securities	28,916	30 [d]	1,087	(273)	(63)	(27,375)	2,322	29 [d]
Loans	2,282	81 [c]	1,065	(191)	(1,306)	–	1,931	(21) [c]
Mortgage servicing rights	7,614	1,612 [e]	2,215	(725)	(1,102)	–	9,614	1,612 [e]
Other assets:								
Private equity investments	5,590	824 [c]	537	(1,080)	140	(195)	5,816	42 [c]
All other	2,122	(17) [f]	49	(427)	(345)	–	1,382	(64) [f]

Year ended December 31, 2013 (in millions)	Fair value at January 1, 2013	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2013	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2013
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 1,983	$ (82) [c]	$ –	$ –	$ 1,248	$ (222)	$ (672)	$ 2,255	$ (88) [c]
Other borrowed funds	1,619	(177) [c]	–	–	7,108	(6,845)	369	2,074	291 [c]
Trading liabilities – debt and equity instruments	205	(83) [c]	(2,418)	2,594	–	(54)	(131)	113	(100) [c]
Accounts payable and other liabilities	–	–	–	–	–	–	–	–	–
Beneficial interests issued by consolidated VIEs	925	174 [c]	–	–	353	(212)	–	1,240	167 [c]
Long-term debt	8,476	(435) [c]	–	–	6,830	(4,362)	(501)	10,008	(85) [c]

Note: Effective April 1, 2015, the Firm adopted new accounting guidance for certain investments where the Firm measures fair value using the net asset value per share (or its equivalent) as a practical expedient and excluded such investments from the fair value hierarchy. The guidance was required to be applied retrospectively, and accordingly, prior period amounts have been revised to conform with the current period presentation. For further information, see page 190.

(a) All level 3 derivatives are presented on a net basis, irrespective of underlying counterparty.
(b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 13%, 15% and 18% at December 31, 2015, 2014 and 2013, respectively.
(c) Predominantly reported in principal transactions revenue, except for changes in fair value for CCB mortgage loans, lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.
(d) Realized gains/(losses) on AFS securities, as well as other-than-temporary impairment losses that are recorded in earnings, are reported in securities gains. Unrealized gains/(losses) are reported in OCI. Realized gains/(losses) and foreign exchange remeasurement adjustments recorded in income on AFS securities were $(7) million, $(43) million, and $17 million for the years ended December 31, 2015, 2014 and 2013, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were $(25) million, $(16) million and $13 million for the years ended December 31, 2015, 2014 and 2013, respectively.
(e) Changes in fair value for CCB MSRs are reported in mortgage fees and related income.
(f) Predominantly reported in other income.
(g) Loan originations are included in purchases.
(h) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, and deconsolidations associated with beneficial interests in VIEs.
(i) All transfers into and/or out of level 3 are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 analysis

Consolidated balance sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 1.4% of total Firm assets at December 31, 2015. The following describes significant changes to level 3 assets since December 31, 2014, for those items measured at fair value on a recurring basis. For further information on changes impacting items measured at fair value on a nonrecurring basis, see Assets and liabilities measured at fair value on a nonrecurring basis on pages 200–201.

For the year ended December 31, 2015

Level 3 assets were $31.2 billion at December 31, 2015, reflecting a decrease of $18.0 billion from December 31, 2014. This decrease was driven by settlements (including repayments and restructurings) and transfers to Level 2 due to an increase in observability and a decrease in the significance of unobservable inputs. In particular:

- $10.6 billion decrease in trading assets – debt and equity instruments was driven by a decrease of $6.7 billion in trading loans due to sales, maturities and transfers from level 3 to level 2 as a result of an increase in observability of certain valuation inputs and a $2.3 billion decrease in corporate debt securities due to transfers from level 3 to level 2 as a result of an increase in observability of certain valuation inputs
- $4.6 billion decrease in gross derivative receivables was driven by a $3.9 billion decrease in equity, interest rate and foreign exchange derivative receivables due to market movements and transfers from level 3 to level 2 as a result of an increase in observability of certain valuation inputs

Gains and losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the years ended December 31, 2015, 2014 and 2013. For further information on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 195–199.

2015

- $1.6 billion of net gains in interest rate, foreign exchange and equity derivative receivables largely due to market movements; partially offset by loss in commodity derivatives due to market movements
- $1.3 billion of net gains in liabilities due to market movements

2014

- $1.8 billion of losses on MSRs. For further discussion of the change, refer to Note 17
- $1.1 billion of net gains on trading assets – debt and equity instruments, largely driven by market movements and client-driven financing transactions

2013

- $2.9 billion of net gains on derivatives, largely driven by $2.5 billion of gains on equity derivatives, primarily related to client-driven market-making activity and a rise in equity markets; and $1.4 billion of gains, predominantly on interest rate lock and mortgage loan purchase commitments; partially offset by $1.7 billion of losses on credit derivatives from the impact of tightening reference entity credit spreads
- $2.2 billion of net gains on trading assets – debt and equity instruments, largely driven by market making and credit spread tightening in nonagency mortgage-backed securities and trading loans, and the impact of market movements on client-driven financing transactions
- $1.6 billion of net gains on MSRs. For further discussion of the change, refer to Note 17

Credit and funding adjustments

When determining the fair value of an instrument, it may be necessary to record adjustments to the Firm's estimates of fair value in order to reflect counterparty credit quality, the Firm's own creditworthiness, and the impact of funding:

- CVA is taken to reflect the credit quality of a counterparty in the valuation of derivatives. Derivatives are generally valued using models that use as their basis observable market parameters. These market parameters may not consider counterparty non-performance risk. Therefore, an adjustment may be necessary to reflect the credit quality of each derivative counterparty to arrive at fair value.

  The Firm estimates derivatives CVA using a scenario analysis to estimate the expected credit exposure across all of the Firm's positions with each counterparty, and then estimates losses as a result of a counterparty credit event. The key inputs to this methodology are (i) the expected positive exposure to each counterparty based on a simulation that assumes the current population of existing derivatives with each counterparty remains unchanged and considers contractual factors designed to mitigate the Firm's credit exposure, such as collateral and legal rights of offset; (ii) the probability of a default event occurring for each counterparty, as derived from observed or estimated CDS spreads; and (iii) estimated recovery rates implied by CDS, adjusted to consider the differences in recovery rates as a derivative creditor relative to those reflected in CDS spreads, which generally reflect senior unsecured creditor risk. As such, the Firm estimates derivatives CVA relative to the relevant benchmark interest rate.

- DVA is taken to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. The DVA calculation methodology is generally consistent with the CVA methodology described above and incorporates JPMorgan Chase's credit spreads as observed through the CDS market to estimate the probability of default and loss given default as a result of a systemic event affecting the Firm. Structured notes DVA is estimated using the current fair value of the structured note as the exposure amount, and is otherwise consistent with the derivative DVA methodology.

- FVA is taken to incorporate the impact of funding in the Firm's valuation estimates where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. For collateralized derivatives, the fair value is estimated by discounting expected future cash flows at the relevant overnight indexed swap ("OIS") rate given the underlying collateral agreement with the counterparty. For uncollateralized (including partially collateralized) over-the-counter ("OTC") derivatives and structured notes, effective in 2013, the Firm implemented a FVA framework to incorporate the impact of funding into its valuation estimates. The Firm's FVA framework leverages its existing CVA and DVA calculation methodologies, and considers the fact that the Firm's own credit risk is a significant component of funding costs. The key inputs to FVA are: (i) the expected funding requirements arising from the Firm's positions with each counterparty and collateral arrangements; (ii) for assets, the estimated market funding cost in the principal market; and (iii) for liabilities, the hypothetical market funding cost for a transfer to a market participant with a similar credit standing as the Firm.

Upon the implementation of the FVA framework in 2013, the Firm recorded a one-time $1.5 billion loss in principal transactions revenue that was recorded in the CIB. While the FVA framework applies to both assets and liabilities, the loss on implementation largely related to uncollateralized derivative receivables given that the impact of the Firm's own credit risk, which is a significant component of funding costs, was already incorporated in the valuation of liabilities through the application of DVA.

The following table provides the impact of credit and funding adjustments on principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities. The DVA and FVA reported below include the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality over time.

Year ended December 31, (in millions)	**2015**	2014	2013
Credit adjustments:			
Derivatives CVA	**$ 620**	$ (322)	$ 1,886
Derivatives DVA and FVA[(a)]	**73**	(58)	(1,152)
Structured notes DVA and FVA[(b)]	**754**	200	(760)

(a) Included derivatives DVA of $(6) million, $(1) million and $(115) million for the years ended December 31, 2015, 2014 and 2013, respectively.

(b) Included structured notes DVA of $171 million, $20 million and $(337) million for the years ended December 31, 2015, 2014 and 2013, respectively.

Assets and liabilities measured at fair value on a nonrecurring basis

At December 31, 2015 and 2014, assets measured at fair value on a nonrecurring basis were $1.7 billion and $4.5 billion, respectively, consisting predominantly of loans that had fair value adjustments for the years ended December 31, 2015 and 2014. At December 31, 2015, $696 million and $959 million of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. At December 31, 2014, $1.3 billion and $3.2 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. Liabilities measured at fair value on a nonrecurring basis were not significant at December 31, 2015 and 2014. For the years ended December 31, 2015, 2014 and 2013, there were no significant transfers between levels 1, 2 and 3 related to assets held at the balance sheet date.

Of the $959 million in level 3 assets measured at fair value on a nonrecurring basis as of December 31, 2015:

- $556 million related to residential real estate loans carried at the net realizable value of the underlying collateral (i.e., collateral-dependent loans and other loans charged off in accordance with regulatory guidance). These amounts are classified as level 3, as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values. These discounts to the broker price opinions ranged from 4% to 59%, with a weighted average of 22%.

The total change in the recorded value of assets and liabilities for which a fair value adjustment has been included in the Consolidated statements of income for the years ended December 31, 2015, 2014 and 2013, related to financial instruments held at those dates, were losses of $294 million, $992 million and $789 million, respectively; these reductions were predominantly associated with loans.

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), see Note 14.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance sheets at fair value

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table. However, certain financial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements. Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of JPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated balance sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks, deposits with banks, federal funds sold, securities purchased under resale agreements and securities borrowed, short-term receivables and accrued interest receivable, commercial paper, federal funds purchased, securities loaned and sold under repurchase agreements, other borrowed funds, accounts payable, and accrued liabilities. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents by fair value hierarchy classification the carrying values and estimated fair values at December 31, 2015 and 2014, of financial assets and liabilities, excluding financial instruments which are carried at fair value on a recurring basis. For additional information regarding the financial instruments within the scope of this disclosure, and the methods and significant assumptions used to estimate their fair value, see pages 185–188 of this Note.

	December 31, 2015					December 31, 2014				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value
Financial assets										
Cash and due from banks	**$ 20.5**	**$ 20.5**	**$ –**	**$ –**	**$ 20.5**	$ 27.8	$ 27.8	$ –	$ –	$ 27.8
Deposits with banks	**340.0**	**335.9**	**4.1**	**–**	**340.0**	484.5	480.4	4.1	–	484.5
Accrued interest and accounts receivable	**46.6**	**–**	**46.4**	**0.2**	**46.6**	70.1	–	70.0	0.1	70.1
Federal funds sold and securities purchased under resale agreements	**189.5**	**–**	**189.5**	**–**	**189.5**	187.2	–	187.2	–	187.2
Securities borrowed	**98.3**	**–**	**98.3**	**–**	**98.3**	109.4	–	109.4	–	109.4
Securities, held-to-maturity[a]	**49.1**	**–**	**50.6**	**–**	**50.6**	49.3	–	51.2	–	51.2
Loans, net of allowance for loan losses[b]	**820.8**	**–**	**25.4**	**802.7**	**828.1**	740.5	–	21.8	723.1	744.9
Other	**66.0**	**0.1**	**56.3**	**14.3**	**70.7**	64.7	–	55.7	13.3	69.0
Financial liabilities										
Deposits	**$ 1,267.2**	**$ –**	**$ 1,266.1**	**$ 1.2**	**$ 1,267.3**	$ 1,354.6	$ –	$ 1,353.6	$ 1.2	$ 1,354.8
Federal funds purchased and securities loaned or sold under repurchase agreements	**149.2**	**–**	**149.2**	**–**	**149.2**	189.1	–	189.1	–	189.1
Commercial paper	**15.6**	**–**	**15.6**	**–**	**15.6**	66.3	–	66.3	–	66.3
Other borrowed funds	**11.2**	**–**	**11.2**	**–**	**11.2**	15.5		15.5	–	15.5
Accounts payable and other liabilities[c]	**144.6**	**–**	**141.7**	**2.8**	**144.5**	172.6	–	169.6	2.9	172.5
Beneficial interests issued by consolidated VIEs[d]	**41.1**	**–**	**40.2**	**0.9**	**41.1**	50.2	–	48.2	2.0	50.2
Long-term debt and junior subordinated deferrable interest debentures[e]	**255.6**	**–**	**257.4**	**4.3**	**261.7**	246.2	–	251.2	3.8	255.0

(a) Carrying value reflects unamortized discount or premium.

(b) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in the allowance for loan loss calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in the allowance for loan losses. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see Valuation hierarchy on pages 185–188.

(c) Certain prior period amounts have been revised to conform with the current presentation.

(d) Carrying value reflects unamortized issuance costs.

(e) Carrying value reflects unamortized premiums and discounts, issuance costs, and other valuation adjustments.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets, nor are they actively traded. The carrying value of the allowance and the estimated fair value of the Firm's wholesale lending-related commitments were as follows for the periods indicated.

	December 31, 2015					December 31, 2014				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value
Wholesale lending-related commitments	**$ 0.8**	**$ –**	**$ –**	**$ 3.0**	**$ 3.0**	$ 0.6	$ –	$ –	$ 1.6	$ 1.6

(a) Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which are recognized at fair value at the inception of guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases as permitted by law, without notice. For a further discussion of the valuation of lending-related commitments, see page 186 of this Note.

Note 4 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments.

The Firm has elected to measure certain instruments at fair value in order to:

- Mitigate income statement volatility caused by the differences in the measurement basis of elected instruments (e.g. certain instruments elected were previously accounted for on an accrual basis) while the associated risk management arrangements are accounted for on a fair value basis;
- Eliminate the complexities of applying certain accounting models (e.g., hedge accounting or bifurcation accounting for hybrid instruments); and/or
- Better reflect those instruments that are managed on a fair value basis.

The Firm's election of fair value includes the following instruments:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis.
- Certain securities financing arrangements with an embedded derivative and/or a maturity of greater than one year.
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument.
- Certain investments that receive tax credits and other equity investments acquired as part of the Washington Mutual transaction.
- Structured notes issued as part of CIB's client-driven activities. (Structured notes are predominantly financial instruments that contain embedded derivatives.)
- Certain long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value.

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated statements of income for the years ended December 31, 2015, 2014 and 2013, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2015			2014			2013		
December 31, (in millions)	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	**$ (38)**	**$ –**	**$ (38)**	$ (15)	$ –	$ (15)	$ (454)	$ –	$ (454)
Securities borrowed	**(6)**	**–**	**(6)**	(10)	–	(10)	10	–	10
Trading assets:									
Debt and equity instruments, excluding loans	**756**	**(10)** [(d)]	**746**	639	–	639	582	7 [(c)]	589
Loans reported as trading assets:									
Changes in instrument-specific credit risk	**138**	**41** [(c)]	**179**	885	29 [(c)]	914	1,161	23 [(c)]	1,184
Other changes in fair value	**232**	**818** [(c)]	**1,050**	352	1,353 [(c)]	1,705	(133)	1,833 [(c)]	1,700
Loans:									
Changes in instrument-specific credit risk	**35**	**–**	**35**	40	–	40	36	–	36
Other changes in fair value	**4**	**–**	**4**	34	–	34	17	–	17
Other assets	**79**	**(1)** [(d)]	**78**	24	6 [(d)]	30	32	86 [(d)]	118
Deposits[(a)]	**93**	**–**	**93**	(287)	–	(287)	260	–	260
Federal funds purchased and securities loaned or sold under repurchase agreements	**8**	**–**	**8**	(33)	–	(33)	73	–	73
Other borrowed funds[(a)]	**1,996**	**–**	**1,996**	(891)	–	(891)	(399)	–	(399)
Trading liabilities	**(20)**	**–**	**(20)**	(17)	–	(17)	(46)	–	(46)
Beneficial interests issued by consolidated VIEs	**49**	**–**	**49**	(233)	–	(233)	(278)	–	(278)
Other liabilities	**–**	**–**	**–**	(27)	–	(27)	–	–	–
Long-term debt:									
Changes in instrument-specific credit risk[(a)]	**300**	**–**	**300**	101	–	101	(271)	–	(271)
Other changes in fair value[(b)]	**1,088**	**–**	**1,088**	(615)	–	(615)	1,280	–	1,280

(a) Total changes in instrument-specific credit risk (DVA) related to structured notes were $171 million, $20 million and $(337) million for the years ended December 31, 2015, 2014 and 2013, respectively. These totals include such changes for structured notes classified within deposits and other borrowed funds, as well as long-term debt.

(b) Structured notes are predominantly financial instruments containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings that are attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2015 and 2014, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2015			2014		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding
Loans[a]						
Nonaccrual loans						
Loans reported as trading assets	**$ 3,484**	**$ 631**	**$ (2,853)**	$ 3,847	$ 905	$ (2,942)
Loans	**7**	**7**	**—**	7	7	—
Subtotal	**3,491**	**638**	**(2,853)**	3,854	912	(2,942)
All other performing loans						
Loans reported as trading assets	**30,780**	**28,184**	**(2,596)**	37,608	35,462	(2,146)
Loans	**2,771**	**2,752**	**(19)**	2,397	2,389	(8)
Total loans	**$ 37,042**	**$ 31,574**	**$ (5,468)**	$ 43,859	$ 38,763	$ (5,096)
Long-term debt						
Principal-protected debt	**$ 17,910** [c]	**$ 16,611**	**$ (1,299)**	$ 14,660 [c]	$ 15,484	$ 824
Nonprincipal-protected debt[b]	**NA**	**16,454**	**NA**	NA	14,742	NA
Total long-term debt	**NA**	**$ 33,065**	**NA**	NA	$ 30,226	NA
Long-term beneficial interests						
Nonprincipal-protected debt	**NA**	**$ 787**	**NA**	NA	$ 2,162	NA
Total long-term beneficial interests	**NA**	**$ 787**	**NA**	NA	$ 2,162	NA

(a) There were no performing loans that were ninety days or more past due as of December 31, 2015 and 2014, respectively.

(b) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal protected notes.

(c) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Firm's next call date.

At December 31, 2015 and 2014, the contractual amount of letters of credit for which the fair value option was elected was $4.6 billion and $4.5 billion, respectively, with a corresponding fair value of $(94) million and $(147) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29.

Structured note products by balance sheet classification and risk component

The table below presents the fair value of the structured notes issued by the Firm, by balance sheet classification and the primary risk to which the structured notes' embedded derivative relates.

	December 31, 2015				December 31, 2014			
(in millions)	Long-term debt	Other borrowed funds	Deposits	Total	Long-term debt	Other borrowed funds	Deposits	Total
Risk exposure								
Interest rate	**$ 12,531**	**$ 58**	**$ 3,340**	**$ 15,929**	$ 10,858	$ 460	$ 2,119	$ 13,437
Credit	**3,195**	**547**	**–**	**3,742**	4,023	450	–	4,473
Foreign exchange	**1,765**	**77**	**11**	**1,853**	2,150	211	17	2,378
Equity	**14,293**	**8,447**	**4,993**	**27,733**	12,348	12,412	4,415	29,175
Commodity	**640**	**50**	**1,981**	**2,671**	710	644	2,012	3,366
Total structured notes	**$ 32,424**	**$ 9,179**	**$ 10,325**	**$ 51,928**	$ 30,089	$ 14,177	$ 8,563	$ 52,829

Note 5 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential credit risk concentrations and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. In the wholesale portfolio, credit risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis. The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, and collateral and other risk-reduction techniques. For additional information on loans, see Note 14.

The Firm does not believe that its exposure to any particular loan product (e.g., option adjustable rate mortgages ("ARMs")), or industry segment (e.g., commercial real estate), or its exposure to residential real estate loans with high loan-to-value ratios, results in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale-related credit exposure by the Firm's three credit portfolio segments as of December 31, 2015 and 2014.

	2015				2014			
	Credit exposure	On-balance sheet		Off-balance sheet[f]	Credit exposure	On-balance sheet		Off-balance sheet[f][g]
December 31, (in millions)		Loans	Derivatives			Loans	Derivatives	
Total consumer, excluding credit card	**$ 403,424**	**$ 344,821**	**$ –**	**$ 58,478**	$ 353,635	$ 295,374	$ –	$ 58,153
Total credit card	**646,981**	**131,463**	**–**	**515,518**	657,011	131,048	–	525,963
Total consumer	**1,050,405**	**476,284**	**–**	**573,996**	1,010,646	426,422	–	584,116
Wholesale-related[a]								
Real Estate	**116,857**	**92,820**	**312**	**23,725**	105,975	79,113	327	26,535
Consumer & Retail	**85,460**	**27,175**	**1,573**	**56,712**	83,663	25,094	1,845	56,724
Technology, Media & Telecommunications	**57,382**	**11,079**	**1,032**	**45,271**	46,655	11,362	2,190	33,103
Industrials	**54,386**	**16,791**	**1,428**	**36,167**	47,859	16,040	1,303	30,516
Healthcare	**46,053**	**16,965**	**2,751**	**26,337**	56,516	13,794	4,542	38,180
Banks & Finance Cos	**43,398**	**20,401**	**10,218**	**12,779**	55,098	23,367	15,706	16,025
Oil & Gas	**42,077**	**13,343**	**1,902**	**26,832**	43,148	15,616	1,836	25,696
Utilities	**30,853**	**5,294**	**1,689**	**23,870**	27,441	4,844	2,272	20,325
State & Municipal Govt	**29,114**	**9,626**	**3,287**	**16,201**	31,068	7,593	4,002	19,473
Asset Managers	**23,815**	**6,703**	**7,733**	**9,379**	27,488	8,043	9,386	10,059
Transportation	**19,227**	**9,157**	**1,575**	**8,495**	20,619	10,381	2,247	7,991
Central Govt	**17,968**	**2,000**	**13,240**	**2,728**	19,881	1,103	15,527	3,251
Chemicals & Plastics	**15,232**	**4,033**	**369**	**10,830**	12,612	3,087	410	9,115
Metals & Mining	**14,049**	**4,622**	**607**	**8,820**	14,969	5,628	589	8,752
Automotive	**13,864**	**4,473**	**1,350**	**8,041**	12,754	3,779	766	8,209
Insurance	**11,889**	**1,094**	**1,992**	**8,803**	13,350	1,175	3,474	8,701
Financial Markets Infrastructure	**7,973**	**724**	**2,602**	**4,647**	11,986	928	6,789	4,269
Securities Firms	**4,412**	**861**	**1,424**	**2,127**	4,801	1,025	1,351	2,425
All other[b]	**149,117**	**109,889**	**4,593**	**34,635**	134,475	92,530	4,413	37,532
Subtotal	**783,126**	**357,050**	**59,677**	**366,399**	770,358	324,502	78,975	366,881
Loans held-for-sale and loans at fair value	**3,965**	**3,965**	**–**	**–**	6,412	6,412	–	–
Receivables from customers and other[c]	**13,372**	**–**	**–**	**–**	28,972	–	–	–
Total wholesale-related	**800,463**	**361,015**	**59,677**	**366,399**	805,742	330,914	78,975	366,881
Total exposure[d][e]	**$ 1,850,868**	**$ 837,299**	**$ 59,677**	**$ 940,395**	$ 1,816,388	$ 757,336	$ 78,975	$ 950,997

(a) Effective in the fourth quarter 2015, the Firm realigned its wholesale industry divisions in order to better monitor and manage industry concentrations. Prior period amounts have been revised to conform with current period presentation. For additional information, see Wholesale credit portfolio on pages 122–129.

(b) All other includes: individuals; SPEs; holding companies; and private education and civic organizations. For more information on exposures to SPEs, see Note 16.

(c) Primarily consists of margin loans to prime brokerage customers that are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily minimum collateral requirements. As a result of the Firm's credit risk mitigation practices, the Firm did not hold any reserves for credit impairment on these receivables.

(d) For further information regarding on-balance sheet credit concentrations by major product and/or geography, see Note 6 and Note 14. For information regarding concentrations of off-balance sheet lending-related financial instruments by major product, see Note 29.

(e) Excludes cash placed with banks of $351.0 billion and $501.5 billion, at December 31, 2015 and 2014, respectively, placed with various central banks, predominantly Federal Reserve Banks.

(f) Represents lending-related financial instruments.

(g) Effective January 1, 2015, the Firm no longer includes within its disclosure of wholesale lending-related commitments the unused amount of advised uncommitted lines of credit as it is within the Firm's discretion whether or not to make a loan under these lines, and the Firm's approval is generally required prior to funding. Prior period amounts have been revised to conform with the current period presentation.

Note 6 – Derivative instruments

Derivative instruments enable end-users to modify or mitigate exposure to credit or market risks. Counterparties to a derivative contract seek to obtain risks and rewards similar to those that could be obtained from purchasing or selling a related cash instrument without having to exchange upfront the full purchase or sales price. JPMorgan Chase makes markets in derivatives for clients and also uses derivatives to hedge or manage its own risk exposures. Predominantly all of the Firm's derivatives are entered into for market-making or risk management purposes.

Market-making derivatives
The majority of the Firm's derivatives are entered into for market-making purposes. Clients use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives. The Firm also seeks to earn a spread between the client derivatives and offsetting positions, and from the remaining open risk positions.

Risk management derivatives
The Firm manages its market risk exposures using various derivative instruments.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increases or decreases as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar-equivalent values of the foreign currency-denominated assets and liabilities or the forecasted revenues or expenses increase or decrease. Gains or losses on the derivative instruments related to these foreign currency-denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities contracts are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset the depreciation or appreciation of the related inventory.

Credit derivatives are used to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of credit default swaps. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 218–220 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 218 of this Note, and the hedge accounting gains and losses tables on pages 216–218 of this Note.

Derivative counterparties and settlement types
The Firm enters into OTC derivatives, which are negotiated and settled bilaterally with the derivative counterparty. The Firm also enters into, as principal, certain exchange-traded derivatives ("ETD") such as futures and options, and "cleared" over-the-counter ("OTC-cleared") derivative contracts with central counterparties ("CCPs"). ETD contracts are generally standardized contracts traded on an exchange and cleared by the CCP, which is the counterparty from the inception of the transactions. OTC-cleared derivatives are traded on a bilateral basis and then novated to the CCP for clearing.

Derivative Clearing Services
The Firm provides clearing services for clients where the Firm acts as a clearing member with respect to certain derivative exchanges and clearing houses. The Firm does not reflect the clients' derivative contracts in its Consolidated Financial Statements. For further information on the Firm's clearing services, see Note 29.

Accounting for derivatives

All free-standing derivatives that the Firm executes for its own account are required to be recorded on the Consolidated balance sheets at fair value.

As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. For further discussion of the offsetting of assets and liabilities, see Note 1. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The tabular disclosures on pages 212–218 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 3 and 4.

Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and commodity derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased credit default swaps used to manage the credit risk of loans and lending-related commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate, foreign exchange, and commodity derivatives used for risk management purposes.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the change in the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item, and for benchmark interest rate hedges is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges primarily to hedge the exposure to variability in forecasted cash flows from floating-rate assets and liabilities and foreign currency-denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in OCI and recognized in the Consolidated statements of income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in accumulated other comprehensive income/(loss) ("AOCI") is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses foreign currency hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For foreign currency qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	Page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
◦ Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate	216
◦ Interest rate	Hedge floating-rate assets and liabilities	Cash flow hedge	Corporate	217
◦ Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	216
◦ Foreign exchange	Hedge forecasted revenue and expense	Cash flow hedge	Corporate	217
◦ Foreign exchange	Hedge the value of the Firm's investments in non-U.S. subsidiaries	Net investment hedge	Corporate	218
◦ Commodity	Hedge commodity inventory	Fair value hedge	CIB	216
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
◦ Interest rate	Manage the risk of the mortgage pipeline, warehouse loans and MSRs	Specified risk management	CCB	218
◦ Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	218
◦ Commodity	Manage the risk of certain commodities-related contracts and investments	Specified risk management	CIB	218
◦ Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate	218
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	218
• Various	Other derivatives	Market-making and other	CIB, Corporate	218

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2015 and 2014.

	Notional amounts[b]	
December 31, (in billions)	**2015**	2014
Interest rate contracts		
Swaps	**$ 24,162**	$ 29,734
Futures and forwards	**5,167**	10,189
Written options	**3,506**	3,903
Purchased options	**3,896**	4,259
Total interest rate contracts	**36,731**	48,085
Credit derivatives[a]	**2,900**	4,249
Foreign exchange contracts		
Cross-currency swaps	**3,199**	3,346
Spot, futures and forwards	**5,028**	4,669
Written options	**690**	790
Purchased options	**706**	780
Total foreign exchange contracts	**9,623**	9,585
Equity contracts		
Swaps	**232**	206
Futures and forwards	**43**	50
Written options	**395**	432
Purchased options	**326**	375
Total equity contracts	**996**	1,063
Commodity contracts		
Swaps	**83**	126
Spot, futures and forwards	**99**	193
Written options	**115**	181
Purchased options	**112**	180
Total commodity contracts	**409**	680
Total derivative notional amounts	**$ 50,659**	$ 63,662

(a) For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 218–220 of this Note.

(b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.

Impact of derivatives on the Consolidated balance sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated balance sheets as of December 31, 2015 and 2014, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables[a]

	Gross derivative receivables				Gross derivative payables			
December 31, 2015 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[b]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[b]
Trading assets and liabilities								
Interest rate	**$ 665,531**	**$ 4,080**	**$ 669,611**	**$ 26,363**	**$ 632,928**	**$ 2,238**	**$ 635,166**	**$ 10,221**
Credit	**51,468**	**–**	**51,468**	**1,423**	**50,529**	**–**	**50,529**	**1,541**
Foreign exchange	**179,072**	**803**	**179,875**	**17,177**	**189,397**	**1,503**	**190,900**	**19,769**
Equity	**35,859**	**–**	**35,859**	**5,529**	**38,663**	**–**	**38,663**	**9,183**
Commodity	**23,713**	**1,352**	**25,065**	**9,185**	**27,653**	**1**	**27,654**	**12,076**
Total fair value of trading assets and liabilities	**$ 955,643**	**$ 6,235**	**$ 961,878**	**$ 59,677**	**$ 939,170**	**$ 3,742**	**$ 942,912**	**$ 52,790**

	Gross derivative receivables				Gross derivative payables			
December 31, 2014 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[b]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[b]
Trading assets and liabilities								
Interest rate	$ 944,885 [c]	$ 5,372	$ 950,257 [c]	$ 33,725	$ 915,368 [c]	$ 3,011	$ 918,379 [c]	$ 17,745
Credit	76,842	–	76,842	1,838	75,895	–	75,895	1,593
Foreign exchange	211,537 [c]	3,650	215,187 [c]	21,253	223,988 [c]	626	224,614 [c]	22,970
Equity	42,489 [c]	–	42,489 [c]	8,177	46,262 [c]	–	46,262 [c]	11,740
Commodity	43,151	502	43,653	13,982	45,455	168	45,623	17,068
Total fair value of trading assets and liabilities	$1,318,904 [c]	$ 9,524	$1,328,428 [c]	$ 78,975	$1,306,968 [c]	$ 3,805	$1,310,773 [c]	$ 71,116

(a) Balances exclude structured notes for which the fair value option has been elected. See Note 4 for further information.
(b) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.
(c) The prior period amounts have been revised to conform with the current period presentation. These revisions had no impact on Firm's Consolidated balance sheets or its results of operations.

The following table presents, as of December 31, 2015 and 2014, the gross and net derivative receivables by contract and settlement type. Derivative receivables have been netted on the Consolidated balance sheets against derivative payables and cash collateral payables to the same counterparty with respect to derivative contracts for which the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the receivables are not eligible under U.S. GAAP for netting on the Consolidated balance sheets, and are shown separately in the table below.

	2015			2014		
December 31, (in millions)	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables
U.S. GAAP nettable derivative receivables						
Interest rate contracts:						
OTC	**$ 417,386**	**$ (396,506)**	**$ 20,880**	$ 542,107 [c]	$ (514,914) [c]	$ 27,193
OTC-cleared	**246,750**	**(246,742)**	**8**	401,656	(401,618)	38
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total interest rate contracts	**664,136**	**(643,248)**	**20,888**	943,763 [c]	(916,532) [c]	27,231
Credit contracts:						
OTC	**44,082**	**(43,182)**	**900**	66,636	(65,720)	916
OTC-cleared	**6,866**	**(6,863)**	**3**	9,320	(9,284)	36
Total credit contracts	**50,948**	**(50,045)**	**903**	75,956	(75,004)	952
Foreign exchange contracts:						
OTC	**175,060**	**(162,377)**	**12,683**	208,803 [c]	(193,900) [c]	14,903
OTC-cleared	**323**	**(321)**	**2**	36	(34)	2
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total foreign exchange contracts	**175,383**	**(162,698)**	**12,685**	208,839 [c]	(193,934) [c]	14,905
Equity contracts:						
OTC	**20,690**	**(20,439)**	**251**	23,258	(22,826)	432
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**12,285**	**(9,891)**	**2,394**	13,840 [c]	(11,486) [c]	2,354
Total equity contracts	**32,975**	**(30,330)**	**2,645**	37,098 [c]	(34,312) [c]	2,786
Commodity contracts:						
OTC	**15,001**	**(6,772)**	**8,229**	22,555	(14,327)	8,228
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**9,199**	**(9,108)**	**91**	19,500	(15,344)	4,156
Total commodity contracts	**24,200**	**(15,880)**	**8,320**	42,055	(29,671)	12,384
Derivative receivables with appropriate legal opinion	**$ 947,642**	**$ (902,201)** [b]	**$ 45,441**	$ 1,307,711 [c]	$(1,249,453) [b][c]	$ 58,258
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	**14,236**		**14,236**	20,717		20,717
Total derivative receivables recognized on the Consolidated balance sheets	**$ 961,878**		**$ 59,677**	$ 1,328,428 [c]		$ 78,975

(a) Exchange-traded derivative amounts that relate to futures contracts are settled daily.
(b) Included cash collateral netted of $73.7 billion and $74.0 billion at December 31, 2015, and 2014, respectively.
(c) The prior period amounts have been revised to conform with the current period presentation. These revisions had no impact on Firm's Consolidated balance sheets or its results of operations.

The following table presents, as of December 31, 2015 and 2014, the gross and net derivative payables by contract and settlement type. Derivative payables have been netted on the Consolidated balance sheets against derivative receivables and cash collateral receivables from the same counterparty with respect to derivative contracts for which the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the payables are not eligible under U.S. GAAP for netting on the Consolidated balance sheets, and are shown separately in the table below.

	2015			2014		
December 31, (in millions)	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC	**$ 393,709**	**$ (384,576)**	**$ 9,133**	$ 515,904 [c]	$ (503,384) [c]	$ 12,520
OTC-cleared	**240,398**	**(240,369)**	**29**	398,518	(397,250)	1,268
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total interest rate contracts	**634,107**	**(624,945)**	**9,162**	914,422 [c]	(900,634) [c]	13,788
Credit contracts:						
OTC	**44,379**	**(43,019)**	**1,360**	65,432	(64,904)	528
OTC-cleared	**5,969**	**(5,969)**	**–**	9,398	(9,398)	–
Total credit contracts	**50,348**	**(48,988)**	**1,360**	74,830	(74,302)	528
Foreign exchange contracts:						
OTC	**185,178**	**(170,830)**	**14,348**	217,998 [c]	(201,578) [c]	16,420
OTC-cleared	**301**	**(301)**	**–**	66	(66)	–
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total foreign exchange contracts	**185,479**	**(171,131)**	**14,348**	218,064 [c]	(201,644) [c]	16,420
Equity contracts:						
OTC	**23,458**	**(19,589)**	**3,869**	27,908	(23,036)	4,872
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**10,998**	**(9,891)**	**1,107**	12,864 [c]	(11,486) [c]	1,378
Total equity contracts	**34,456**	**(29,480)**	**4,976**	40,772 [c]	(34,522) [c]	6,250
Commodity contracts:						
OTC	**16,953**	**(6,256)**	**10,697**	25,129	(13,211)	11,918
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**9,374**	**(9,322)**	**52**	18,486	(15,344)	3,142
Total commodity contracts	**26,327**	**(15,578)**	**10,749**	43,615	(28,555)	15,060
Derivative payables with appropriate legal opinions	**$ 930,717**	**$ (890,122)** [b]	**$ 40,595**	$ 1,291,703 [c]	$(1,239,657) [b][c]	$ 52,046
Derivative payables where an appropriate legal opinion has not been either sought or obtained	**12,195**		**12,195**	19,070		19,070
Total derivative payables recognized on the Consolidated balance sheets	**$ 942,912**		**$ 52,790**	$ 1,310,773 [c]		$ 71,116

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.
(b) Included cash collateral netted of $61.6 billion and $64.2 billion related to OTC and OTC-cleared derivatives at December 31, 2015, and 2014, respectively.
(c) The prior period amounts have been revised to conform with the current period presentation. These revisions had no impact on Firm's Consolidated balance sheets or its results of operations.

In addition to the cash collateral received and transferred that is presented on a net basis with net derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments but are not eligible for net presentation, because (a) the collateral consists of non-cash financial instruments (generally U.S. government and agency securities and other Group of Seven Nations ("G7") government bonds), (b) the amount of collateral held or transferred exceeds the fair value exposure, at the individual counterparty level, as of the date presented, or (c) the collateral relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained.

The following tables present information regarding certain financial instrument collateral received and transferred as of December 31, 2015 and 2014, that is not eligible for net presentation under U.S. GAAP. The collateral included in these tables relates only to the derivative instruments for which appropriate legal opinions have been obtained; excluded are (i) additional collateral that exceeds the fair value exposure and (ii) all collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

Derivative receivable collateral

	2015			2014		
December 31, (in millions)	Net derivative receivables	Collateral not nettable on the Consolidated balance sheets	Net exposure	Net derivative receivables	Collateral not nettable on the Consolidated balance sheets	Net exposure
Derivative receivables with appropriate legal opinions	**$ 45,441**	**$ (13,543)** [(a)]	**$ 31,898**	$ 58,258	$ (16,194) [(a)]	$ 42,064

Derivative payable collateral[(b)]

	2015			2014		
December 31, (in millions)	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount[(c)]	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount[(c)]
Derivative payables with appropriate legal opinions	**$ 40,595**	**$ (7,957)** [(a)]	**$ 32,638**	$ 52,046	$ (10,505) [(a)]	$ 41,541

(a) Represents liquid security collateral as well as cash collateral held at third party custodians. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.

(b) Derivative payables collateral relates only to OTC and OTC-cleared derivative instruments. Amounts exclude collateral transferred related to exchange-traded derivative instruments.

(c) Net amount represents exposure of counterparties to the Firm.

Liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk – the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to actively pursue, where possible, the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated balance sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at December 31, 2015 and 2014.

OTC and OTC-cleared derivative payables containing downgrade triggers

December 31, (in millions)	2015	2014
Aggregate fair value of net derivative payables	**$ 22,328**	$ 32,303
Collateral posted	**18,942**	27,585

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), at December 31, 2015 and 2014, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral (except in certain instances in which additional initial margin may be required upon a ratings downgrade), nor in termination payments requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating by the rating agencies referred to in the derivative contract.

Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

December 31, (in millions)	2015 Single-notch downgrade	2015 Two-notch downgrade	2014 Single-notch downgrade	2014 Two-notch downgrade
Amount of additional collateral to be posted upon downgrade[a]	**$ 807**	**$ 3,028**	$ 1,046	$ 3,331
Amount required to settle contracts with termination triggers upon downgrade[b]	**271**	**1,093**	366	1,388

(a) Includes the additional collateral to be posted for initial margin.
(b) Amounts represent fair values of derivative payables, and do not reflect collateral posted.

Derivatives executed in contemplation of a sale of the underlying financial asset

In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 13, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. The amount of such transfers accounted for as a sale where the associated derivative was outstanding at December 31, 2015 was not material.

Impact of derivatives on the Consolidated statements of income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pretax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2015, 2014 and 2013, respectively. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated statements of income.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2015 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[d]	Excluded components[e]
Contract type					
Interest rate[a]	**$ 38**	**$ 911**	**$ 949**	**$ 3**	**$ 946**
Foreign exchange[b]	**6,030**	**(6,006)**	**24**	**–**	**24**
Commodity[c]	**1,153**	**(1,142)**	**11**	**(13)**	**24**
Total	**$ 7,221**	**$ (6,237)**	**$ 984**	**$ (10)**	**$ 994**

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2014 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[d]	Excluded components[e]
Contract type					
Interest rate[a]	$ 2,106	$ (801)	$ 1,305	$ 131	$ 1,174
Foreign exchange[b]	8,279	(8,532)	(253)	–	(253)
Commodity[c]	49	145	194	42	152
Total	$ 10,434	$ (9,188)	$ 1,246	$ 173	$ 1,073

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2013 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[d]	Excluded components[e]
Contract type					
Interest rate[a]	$ (3,469)	$ 4,851	$ 1,382	$ (132)	$ 1,514
Foreign exchange[b]	(1,096)	864	(232)	–	(232)
Commodity[c]	485	(1,304)	(819)	38	(857)
Total	$ (4,080)	$ 4,411	$ 331	$ (94)	$ 425

(a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.
(b) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in foreign currency rates, were recorded primarily in principal transactions revenue and net interest income.

(c) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value). Gains and losses were recorded in principal transactions revenue.
(d) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.
(e) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts and time values.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives, for the years ended December 31, 2015, 2014 and 2013, respectively. The Firm includes the gain/(loss) on the hedging derivative and the change in cash flows on the hedged item in the same line item in the Consolidated statements of income.

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
Year ended December 31, 2015 (in millions)	Derivatives - effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[(c)]	Total income statement impact	Derivatives - effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[(a)]	**$ (99)**	**$ –**	**$ (99)**	**$ (44)**	**$ 55**
Foreign exchange[(b)]	**(81)**	**–**	**(81)**	**(53)**	**28**
Total	**$ (180)**	**$ –**	**$ (180)**	**$ (97)**	**$ 83**

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
Year ended December 31, 2014 (in millions)	Derivatives - effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[(c)]	Total income statement impact	Derivatives - effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[(a)]	$ (54)	$ –	$ (54)	$ 189	$ 243
Foreign exchange[(b)]	78	–	78	(91)	(169)
Total	$ 24	$ –	$ 24	$ 98	$ 74

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
Year ended December 31, 2013 (in millions)	Derivatives - effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[(c)]	Total income statement impact	Derivatives - effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[(a)]	$ (108)	$ –	$ (108)	$ (565)	$ (457)
Foreign exchange[(b)]	7	–	7	40	33
Total	$ (101)	$ –	$ (101)	$ (525)	$ (424)

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income, and for the forecasted transactions that the Firm determined during the year ended December 31, 2015, were probable of not occurring, in other income.
(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item - primarily noninterest revenue and compensation expense.
(c) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

In 2015, the Firm reclassified approximately $150 million of net losses from AOCI to other income because the Firm determined that it was probable that the forecasted interest payment cash flows would not occur as a result of the planned reduction in wholesale non-operating deposits. The Firm did not experience any forecasted transactions that failed to occur for the years ended December 31, 2014 or 2013.

Over the next 12 months, the Firm expects that approximately $95 million (after-tax) of net losses recorded in AOCI at December 31, 2015, related to cash flow hedges, will be recognized in income. For terminated cash flow hedges, the maximum length of time over which forecasted transactions are remaining is approximately 7 years. For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately 2 years. The Firm's longer-dated forecasted transactions relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pretax gains/(losses) recorded on such instruments for the years ended December 31, 2015, 2014 and 2013.

	Gains/(losses) recorded in income and other comprehensive income/(loss)					
	2015		2014		2013	
Year ended December 31, (in millions)	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI
Foreign exchange derivatives	**$(379)**	**$1,885**	$(448)	$1,698	$(383)	$773

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in other income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates and, therefore, there was no significant ineffectiveness for net investment hedge accounting relationships during 2015, 2014 and 2013.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pretax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from the mortgage pipeline, warehouse loans, MSRs, wholesale lending exposures, AFS securities, foreign currency-denominated assets and liabilities, and commodities-related contracts and investments.

	Derivatives gains/(losses) recorded in income		
Year ended December 31, (in millions)	**2015**	2014	2013
Contract type			
Interest rate[a]	**$ 853**	$ 2,308	$ 617
Credit[b]	**70**	(58)	(142)
Foreign exchange[c]	**25**	(7)	1
Commodity[d]	**(12)**	156	178
Total	**$ 936**	$ 2,399	$ 654

(a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in the mortgage pipeline, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.

(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.

(c) Primarily relates to hedges of the foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

(d) Primarily relates to commodity derivatives used to mitigate energy price risk associated with energy-related contracts and investments. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from the Firm's market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. See Note 7 for information on principal transactions revenue.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker, the Firm actively manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. Second, as an end-user, the Firm uses credit derivatives to manage credit risk associated with lending exposures (loans and unfunded commitments) and derivatives counterparty exposures in the Firm's wholesale businesses, and to manage the credit risk arising from certain financial instruments in the Firm's market-making businesses. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name CDS and index CDS contracts are either OTC or OTC-cleared derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index consists of a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-related notes

A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a reference entity or an index. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity (or one of the entities that makes up a reference index) experiences a specified credit event. If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity.

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2015 and 2014. Upon a credit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased through credit-related notes.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

	Maximum payout/Notional amount			
December 31, 2015 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	**$ (1,386,071)**	**$ 1,402,201**	**$ 16,130**	**$ 12,011**
Other credit derivatives[a]	**(42,738)**	**38,158**	**(4,580)**	**18,792**
Total credit derivatives	**(1,428,809)**	**1,440,359**	**11,550**	**30,803**
Credit-related notes	**(30)**	**–**	**(30)**	**4,715**
Total	**$ (1,428,839)**	**$ 1,440,359**	**$ 11,520**	**$ 35,518**

	Maximum payout/Notional amount			
December 31, 2014 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (2,056,982)	$ 2,078,096	$ 21,114	$ 18,631
Other credit derivatives[a]	(43,281)	32,048	(11,233)	19,475
Total credit derivatives	(2,100,263)	2,110,144	9,881	38,106
Credit-related notes	(40)	–	(40)	3,704
Total	$ (2,100,303)	$ 2,110,144	$ 9,841	$ 41,810

(a) Other credit derivatives predominantly consists of credit swap options.
(b) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(d) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional amounts by the ratings and maturity profile, and the total fair value, of credit derivatives and credit-related notes as of December 31, 2015 and 2014, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings[a]/maturity profile

December 31, 2015 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	**$ (307,211)**	**$ (699,227)**	**$ (46,970)**	**$ (1,053,408)**	**$ 13,539**	**$ (6,836)**	**$ 6,703**
Noninvestment-grade	**(109,195)**	**(245,151)**	**(21,085)**	**(375,431)**	**10,823**	**(18,891)**	**(8,068)**
Total	**$ (416,406)**	**$ (944,378)**	**$ (68,055)**	**$ (1,428,839)**	**$ 24,362**	**$ (25,727)**	**$ (1,365)**

December 31, 2014 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (323,398)	$ (1,118,293)	$ (79,486)	$ (1,521,177)	$ 25,767	$ (6,314)	$ 19,453
Noninvestment-grade	(157,281)	(396,798)	(25,047)	(579,126)	20,677	(22,455)	(1,778)
Total	$ (480,679)	$ (1,515,091)	$ (104,533)	$ (2,100,303)	$ 46,444	$ (28,769)	$ 17,675

(a) The ratings scale is primarily based on external credit ratings defined by S&P and Moody's Investors Service ("Moody's").
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

Note 7 – Noninterest revenue

Investment banking fees

This revenue category includes equity and debt underwriting and advisory fees. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee. Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria. Advisory fees are recognized as revenue when the related services have been performed and the fee has been earned.

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	2015	2014	2013
Underwriting			
Equity	**$ 1,408**	$ 1,571	$ 1,499
Debt	**3,232**	3,340	3,537
Total underwriting	**4,640**	4,911	5,036
Advisory	**2,111**	1,631	1,318
Total investment banking fees	**$ 6,751**	$ 6,542	$ 6,354

Principal transactions

Principal transactions revenue consists of realized and unrealized gains and losses on derivatives and other instruments (including those accounted for under the fair value option) primarily used in client-driven market-making activities and on private equity investments. In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities).

Principal transactions revenue also includes realized and unrealized gains and losses related to hedge accounting and specified risk-management activities, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives. For further information on the income statement classification of gains and losses from derivatives activities, see Note 6.

In the financial commodity markets, the Firm transacts in OTC derivatives (e.g., swaps, forwards, options) and exchange-traded derivatives that reference a wide range of underlying commodities. In the physical commodity markets, the Firm primarily purchases and sells precious and base metals and may hold other commodities inventories under financing and other arrangements with clients. Prior to the 2014 sale of certain parts of its physical commodity business, the Firm also engaged in the purchase, sale, transport and storage of power, gas, liquefied natural gas, coal, crude oil and refined products.

Physical commodities inventories are generally carried at the lower of cost or market (market approximates fair value) subject to any applicable fair value hedge accounting adjustments, with realized gains and losses and unrealized losses recorded in principal transactions revenue.

The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven market-making activities. See Note 8 for further information on interest income and interest expense. Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual line of business.

Year ended December 31, (in millions)	2015	2014	2013
Trading revenue by instrument type			
Interest rate	**$ 1,933**	$ 1,362	$ 284
Credit	**1,735**	1,880	2,654
Foreign exchange	**2,557**	1,556	1,801
Equity	**2,990**	2,563	2,517
Commodity[a]	**842**	1,663	2,083
Total trading revenue	**10,057**	9,024	9,339
Private equity gains[b]	**351**	1,507	802
Principal transactions	**$ 10,408**	$ 10,531	$ 10,141

(a) Commodity derivatives are frequently used to manage the Firm's risk exposure to its physical commodities inventories. For gains/(losses) related to commodity fair value hedges, see Note 6.

(b) Includes revenue on private equity investments held in the Private Equity business within Corporate, as well as those held in other business segments.

Lending- and deposit-related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan-servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions, and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met. The Firm has contractual arrangements with third parties to provide certain services in connection with its asset management activities. Amounts paid to third-

party service providers are predominantly expensed, such that asset management fees are recorded gross of payments made to third parties.

The following table presents Firmwide asset management, administration and commissions.

Year ended December 31, (in millions)	2015	2014	2013
Asset management fees			
Investment management fees[a]	**$ 9,403**	$ 9,169	$ 8,044
All other asset management fees[b]	**352**	477	505
Total asset management fees	**9,755**	9,646	8,549
Total administration fees[c]	**2,015**	2,179	2,101
Commissions and other fees			
Brokerage commissions	**2,304**	2,270	2,321
All other commissions and fees	**1,435**	1,836	2,135
Total commissions and fees	**3,739**	4,106	4,456
Total asset management, administration and commissions	**$ 15,509**	$ 15,931	$ 15,106

(a) Represents fees earned from managing assets on behalf of the Firm's clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts.
(b) Represents fees for services that are ancillary to investment management services, such as commissions earned on the sales or distribution of mutual funds to clients.
(c) Predominantly includes fees for custody, securities lending, funds services and securities clearance.

Mortgage fees and related income

This revenue category primarily reflects CCB's Mortgage Banking production and servicing revenue, including fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously sold loans; the impact of risk-management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. Changes in the fair value of CCB MSRs are reported in mortgage fees and related income. Net interest income from mortgage loans is recorded in interest income. For a further discussion of MSRs, see Note 17.

Card income

This revenue category includes interchange income from credit and debit cards and net fees earned from processing credit card transactions for merchants. Card income is recognized as earned. Cost related to rewards programs is recorded when the rewards are earned by the customer and presented as a reduction to interchange income. Annual fees and direct loan origination costs are deferred and recognized on a straight-line basis over a 12-month period.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous co-brand partners and affinity organizations (collectively, "partners"), which grant the Firm exclusive rights to market to the customers or members of such partners. These partners endorse the credit card programs and provide their customer and member lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to ten years.

The Firm typically makes incentive payments to the partners based on new account originations, sales volumes and the cost of the partners' marketing activities and awards. Payments based on new account originations are accounted for as direct loan origination costs. Payments to partners based on sales volumes are deducted from interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as noninterest expense.

Other income

Other income on the Firm's Consolidated statements of income included the following:

Year ended December 31, (in millions)	2015	2014	2013
Operating lease income	**$ 2,081**	$ 1,699	$ 1,472
Gain from sale of Visa B shares	**–**	–	1,310

Note 8 – Interest income and Interest expense

Interest income and interest expense are recorded in the Consolidated statements of income and classified based on the nature of the underlying asset or liability. Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP absent the fair value option election; for those instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable.

Details of interest income and interest expense were as follows.

Year ended December 31, (in millions)	2015	2014	2013
Interest Income			
Loans	**$ 33,134**	$ 32,218	$ 33,489
Taxable securities	**6,550**	7,617	6,916
Non taxable securities[a]	**1,706**	1,423	896
Total securities	**8,256**	9,040	7,812
Trading assets	**6,621**	7,312	8,099
Federal funds sold and securities purchased under resale agreements	**1,592**	1,642	1,940
Securities borrowed[b]	**(532)**	(501)	(127)
Deposits with banks	**1,250**	1,157	918
Other assets[c]	**652**	663	538
Total interest income	**$ 50,973**	$ 51,531	$ 52,669
Interest expense			
Interest bearing deposits	**$ 1,252**	$ 1,633	$ 2,067
Federal funds purchased and securities loaned or sold under repurchase agreements	**609**	604	582
Commercial paper	**110**	134	112
Trading liabilities - debt, short-term and other liabilities	**622**	712	1,104
Long-term debt	**4,435**	4,409	5,007
Beneficial interest issued by consolidated VIEs	**435**	405	478
Total interest expense	**$ 7,463**	$ 7,897	$ 9,350
Net interest income	**$ 43,510**	$ 43,634	$ 43,319
Provision for credit losses	**3,827**	3,139	225
Net interest income after provision for credit losses	**$ 39,683**	$ 40,495	$ 43,094

(a) Represents securities which are tax exempt for U.S. federal income tax purposes.
(b) Negative interest income for the years ended December 31, 2015, 2014 and 2013, is a result of increased client-driven demand for certain securities combined with the impact of low interest rates; this is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense.
(c) Largely margin loans.
(d) Includes brokerage customer payables.

Note 9 – Pension and other postretirement employee benefit plans

The Firm has various defined benefit pension plans and other postretirement employee benefit ("OPEB") plans that provide benefits to its employees. These plans are discussed below.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based on years of service and eligible compensation (generally base salary/ regular pay and variable incentive compensation capped at $100,000 annually). Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after three years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws. The Firm does not anticipate at this time any contribution to the U.S. defined benefit pension plan in 2016. The 2016 contributions to the non-U.S. defined benefit pension plans are expected to be $47 million of which $31 million are contractually required.

JPMorgan Chase also has a number of defined benefit pension plans that are not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees previously earned pay credits on compensation amounts above the maximum stipulated by law under a qualified plan; no further pay credits are allocated under this plan. The Excess Retirement Plan had an unfunded projected benefit obligation ("PBO") in the amount of $237 million and $257 million, at December 31, 2015 and 2014, respectively.

Defined contribution plans

JPMorgan Chase currently provides two qualified defined contribution plans in the U.S. and other similar arrangements in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is the JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. Employees can contribute to the 401(k) Savings Plan on a pretax and/or Roth 401(k) after-tax basis. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan.

The Firm matches eligible employee contributions up to 5% of eligible compensation (generally base salary/regular pay and variable incentive compensation) on an annual basis.

Employees begin to receive matching contributions after completing a one-year-of-service requirement. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. Matching contributions vest after three years of service. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with the length of service and the date of hire and provide for limits on the Firm's share of covered medical benefits. The medical and life insurance benefits are both contributory. Effective January 1, 2015, there was a transition of certain Medicare eligible retirees from JPMC group sponsored coverage to Medicare exchanges. As a result of this change, eligible retirees will receive a Healthcare Reimbursement Account amount each year if they enroll through the Medicare exchange. The impact of this change was not material. Postretirement medical benefits also are offered to qualifying United Kingdom ("U.K.") employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations, plan assets and funded status amounts reported on the Consolidated balance sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

As of or for the year ended December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans[d]	
(in millions)	**2015**	2014	**2015**	2014	**2015**	2014
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (12,536)**	$(10,776)	**$ (3,640)**	$ (3,433)	**$ (842)**	$ (826)
Benefits earned during the year	**(340)**	(281)	**(37)**	(33)	**(1)**	–
Interest cost on benefit obligations	**(498)**	(534)	**(112)**	(137)	**(31)**	(38)
Plan amendments	**–**	(53)	**–**	–	**–**	–
Special termination benefits	**–**	–	**(1)**	(1)	**–**	–
Curtailments	**–**	–	**–**	–	**–**	(3)
Employee contributions	**NA**	NA	**(7)**	(7)	**(25)**	(62)
Net gain/(loss)	**702**	(1,669)	**146**	(408)	**71**	(58)
Benefits paid	**760**	777	**120**	119	**88**	145
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(6)**	(2)
Foreign exchange impact and other	**–**	–	**184**	260	**2**	2
Benefit obligation, end of year	**$ (11,912)**	$(12,536)	**$ (3,347)**	$ (3,640)	**$ (744)**	$ (842)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 14,623**	$ 14,354	**$ 3,718**	$ 3,532	**$ 1,903**	$ 1,757
Actual return on plan assets	**231**	1,010	**52**	518	**13**	159
Firm contributions	**31**	36	**45**	46	**2**	3
Employee contributions	**–**	–	**7**	7	**–**	–
Benefits paid	**(760)**	(777)	**(120)**	(119)	**(63)**	(16)
Foreign exchange impact and other	**–**	–	**(191)**	(266)	**–**	–
Fair value of plan assets, end of year	**$ 14,125**	$ 14,623 [b][c]	**$ 3,511**	$ 3,718	**$ 1,855**	$ 1,903
Net funded status[a]	**$ 2,213**	$ 2,087	**$ 164**	$ 78	**$ 1,111**	$ 1,061
Accumulated benefit obligation, end of year	**$ (11,774)**	$(12,375)	**$ (3,322)**	$ (3,615)	**NA**	NA

(a) Represents plans with an aggregate overfunded balance of $4.1 billion and $3.9 billion at December 31, 2015 and 2014, respectively, and plans with an aggregate underfunded balance of $636 million and $708 million at December 31, 2015 and 2014, respectively.

(b) At December 31, 2015 and 2014, approximately $533 million and $336 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.

(c) At December 31, 2015 and 2014, defined benefit pension plan amounts not measured at fair value included $74 million and $106 million, respectively, of accrued receivables, and $123 million and $257 million, respectively, of accrued liabilities, for U.S. plans.

(d) Includes an unfunded accumulated postretirement benefit obligation of $32 million and $37 million at December 31, 2015 and 2014, respectively, for the U.K. plan.

Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the PBO or the fair value of the plan assets. Any excess is amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently seven years and for the non-U.S. defined benefit pension plans is the period appropriate for the affected plan. In addition, prior service costs are amortized over the average remaining service period of active employees expected to receive benefits under the plan when the prior service cost is first recognized. The average remaining amortization period for the U.S. defined benefit pension plan for current prior service costs is four years.

For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. This value is referred to as the market related value of assets. Amortization of net gains and losses, adjusted for gains and losses not yet recognized, is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market related value of assets. Any excess net gain or loss is amortized over the average expected lifetime of retired participants, which is currently thirteen years; however, prior service costs resulting from plan changes are amortized over the average years of service remaining to full eligibility age, which is currently two years.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

	Defined benefit pension plans					
December 31,	U.S.		Non-U.S.		OPEB plans	
(in millions)	**2015**	2014	**2015**	2014	**2015**	2014
Net gain/(loss)	**$ (3,096)**	$ (3,346)	**$ (513)**	$ (628)	**$ 109**	$ 130
Prior service credit/(cost)	**68**	102	**9**	11	**–**	–
Accumulated other comprehensive income/(loss), pretax, end of year	**$ (3,028)**	$ (3,244)	**$ (504)**	$ (617)	**$ 109**	$ 130

The following table presents the components of net periodic benefit costs reported in the Consolidated statements of income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension, defined contribution and OPEB plans.

	Pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Components of net periodic benefit cost									
Benefits earned during the year	**$ 340**	$ 281	$ 314	**$ 37**	$ 33	$ 34	**$ 1**	$ –	$ 1
Interest cost on benefit obligations	**498**	534	447	**112**	137	125	**31**	38	35
Expected return on plan assets	**(929)**	(985)	(956)	**(150)**	(172)	(142)	**(106)**	(101)	(92)
Amortization:									
Net (gain)/loss	**247**	25	271	**35**	47	49	**–**	–	1
Prior service cost/(credit)	**(34)**	(41)	(41)	**(2)**	(2)	(2)	**–**	(1)	–
Special termination benefits	**–**	–	–	**1**	–	–	**–**	–	–
Net periodic defined benefit cost	**122**	(186)	35	**33**	43	64	**(74)**	(64)	(55)
Other defined benefit pension plans[a]	**14**	14	15	**10**	6	14	**NA**	NA	NA
Total defined benefit plans	**136**	(172)	50	**43**	49	78	**(74)**	(64)	(55)
Total defined contribution plans	**449**	438	447	**320**	329	321	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 585**	$ 266	$ 497	**$ 363**	$ 378	$ 399	**$ (74)**	$ (64)	$ (55)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	**$ (3)**	$ 1,645	$ (1,817)	**$ (47)**	$ 57	$ 19	**$ 21**	$ (5)	$ (257)
Prior service credit arising during the year	**–**	53	–	**–**	–	–	**–**	–	–
Amortization of net loss	**(247)**	(25)	(271)	**(35)**	(47)	(49)	**–**	–	(1)
Amortization of prior service (cost)/credit	**34**	41	41	**2**	2	2	**–**	1	–
Foreign exchange impact and other	**–**	–	–	**(33)** [a]	(39) [a]	14 [a]	**–**	–	–
Total recognized in other comprehensive income	**$ (216)**	$ 1,714	$ (2,047)	**$ (113)**	$ (27)	$ (14)	**$ 21**	$ (4)	$ (258)
Total recognized in net periodic benefit cost and other comprehensive income	**$ (94)**	$ 1,528	$ (2,012)	**$ (80)**	$ 16	$ 50	**$ (53)**	$ (68)	$ (313)

(a) Includes various defined benefit pension plans which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2016 are as follows.

	Defined benefit pension plans		OPEB plans	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss/(gain)	$ 231	$ 23	$ –	$ –
Prior service cost/(credit)	(34)	(2)	–	–
Total	$ 197	$ 21	$ –	$ –

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
Year ended December 31,	**2015**	2014	2013	**2015**	2014	2013
Actual rate of return:						
Defined benefit pension plans	**0.88%**	7.29%	15.95%	**(0.48) - 4.92%**	5.62 - 17.69%	3.74 - 23.80%
OPEB plans	**1.16**	9.84	13.88	**NA**	NA	NA

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration is also given to current market conditions and the short-term portfolio mix of each plan.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The expected return on "AA" rated long-term corporate bonds is based on an implied yield for similar bonds.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was provided by our actuaries. This rate was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension plan represents a rate of appropriate duration from the analysis of yield curves provided by our actuaries.

In 2014, the Society of Actuaries ("SOA") completed a comprehensive review of mortality experience of uninsured private retirement plans in the U.S. In October 2014, the SOA published new mortality tables and a new mortality improvement scale that reflects improved life expectancies and an expectation that this trend will continue. In 2014, the Firm adopted the SOA's tables and projection scale, resulting in an estimated increase in PBO of $533 million. In 2015, the SOA updated the projection scale to reflect two additional years of historical data. The Firm has adopted the updated projection scale resulting in an estimated decrease in PBO in 2015 of $112 million.

At December 31, 2015, the Firm increased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will result in a decrease in expense of approximately $63 million for 2016. The 2016 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 6.50% and 5.75%, respectively. For 2016, the initial health care benefit obligation trend assumption has been set at 5.50%, and the ultimate health care trend assumption and the year to reach the ultimate rate remains at 5.00% and 2017, respectively, unchanged from 2015. As of December 31, 2015, the interest crediting rate assumption and the assumed rate of compensation increase remained at 5.00% and 3.50%, respectively.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's significant U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S.	
December 31,	**2015**	2014	**2015**	2014
Discount rate:				
Defined benefit pension plans	**4.50%**	4.00%	**0.80 - 3.70%**	1.00 - 3.60%
OPEB plans	**4.40**	4.10	**–**	–
Rate of compensation increase	**3.50**	3.50	**2.25 - 4.30**	2.75 - 4.20
Health care cost trend rate:				
Assumed for next year	**5.50**	6.00	**–**	–
Ultimate	**5.00**	5.00	**–**	–
Year when rate will reach ultimate	**2017**	2017	**–**	–

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2015**	2014	2013	**2015**	2014	2013
Discount rate:						
Defined benefit pension plans	**4.00%**	5.00%	3.90%	**1.00 - 3.60%**	1.10 - 4.40%	1.40 - 4.40%
OPEB plans	**4.10**	4.90	3.90	**–**	–	–
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**6.50**	7.00	7.50	**0.90 - 4.80**	1.20 - 5.30	2.40 - 4.90
OPEB plans	**6.00**	6.25	6.25	**NA**	NA	NA
Rate of compensation increase	**3.50**	3.50	4.00	**2.75 - 4.20**	2.75 - 4.60	2.75 - 4.10
Health care cost trend rate:						
Assumed for next year	**6.00**	6.50	7.00	**–**	–	–
Ultimate	**5.00**	5.00	5.00	**–**	–	–
Year when rate will reach ultimate	**2017**	2017	2017	**–**	–	–

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's accumulated postretirement benefit obligation. As of December 31, 2015, there was no material effect on total service and interest cost.

Year ended December 31, 2015 (in millions)	1-Percentage point increase	1-Percentage point decrease
Effect on accumulated postretirement benefit obligation	$ 8	$ (7)

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an aggregate increase of approximately $39 million in 2016 U.S. defined benefit pension and OPEB plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2016 U.S. defined benefit pension and OPEB plan expense of approximately an aggregate $31 million and an increase in the related benefit obligations of approximately an aggregate $296 million. A 25-basis point decrease in the interest crediting rate for the U.S. defined benefit pension plan would result in a decrease in 2016 U.S. defined benefit pension expense of approximately $35 million and a decrease in the related PBO of approximately $145 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2016 non-U.S. defined benefit pension plan expense of approximately $17 million.

Investment strategy and asset allocation

The Firm's U.S. defined benefit pension plan assets are held in trust and are invested in a well-diversified portfolio of equity and fixed income securities, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity, real estate and real assets). Non-U.S. defined benefit pension plan assets are held in various trusts and are also invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to partially fund the U.S. OPEB plan, are held in separate accounts of an insurance company and are allocated to investments intended to replicate equity and fixed income indices.

The investment policy for the Firm's U.S. defined benefit pension plan assets is to optimize the risk-return relationship as appropriate to the needs and goals of the plan using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Assets are managed by a combination of internal and external investment managers. Periodically the Firm performs a comprehensive analysis on the U.S. defined benefit pension plan asset allocations, incorporating projected asset and liability data, which focuses on the short- and long-term impact of the asset allocation on cumulative pension expense, economic cost, present value of contributions and funded status. As the U.S. defined benefit pension plan is overfunded, the investment strategy for this plan was adjusted in 2013 to provide for greater liquidity. Currently, approved asset allocation ranges are: U.S. equity 0% to 45%, international equity 0% to 40%, debt securities 0% to 80%, hedge funds 0% to 5%, real estate 0% to 10%, real assets 0% to 10% and private equity 0% to 20%. Asset allocations are not managed to a specific target but seek to shift asset class allocations within these stated ranges. Investment strategies incorporate the economic outlook and the anticipated implications of the macroeconomic environment on the various asset classes while maintaining an appropriate level of liquidity for the plan. The Firm regularly reviews the asset allocations and asset managers, as well as other factors that impact the portfolio, which is rebalanced when deemed necessary.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, the assets are invested to maximize returns subject to an appropriate level of risk relative to the plans' liabilities. In order to reduce the volatility in returns relative to the plans' liability profiles, the U.K. defined benefit pension plans' largest asset allocations are to debt securities of appropriate durations. Other assets, mainly equity securities, are then invested for capital appreciation, to provide long-term investment growth. Similar to the U.S. defined benefit pension plan, asset allocations and asset managers for the U.K. plans are reviewed regularly and the portfolios are rebalanced when deemed necessary.

Investments held by the Plans include financial instruments which are exposed to various risks such as interest rate, market and credit risks. Exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments. As of December 31, 2015, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except through indirect exposures through investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $3.2 billion and $3.7 billion for U.S. plans and $1.2 billion and $1.4 billion for non-U.S. plans, as of December 31, 2015 and 2014, respectively.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[c]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2015**	2014	Allocation	**2015**	2014	Allocation	**2015**	2014
Asset category									
Debt securities[a]	0-80%	**32%**	31%	59%	**60%**	61%	30-70%	**50%**	50%
Equity securities	0-85	**48**	46	40	**38**	38	30-70	**50**	50
Real estate	0-10	**4**	4	–	**1**	–	–	**–**	–
Alternatives[b]	0-35	**16**	19	1	**1**	1	–	**–**	–
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Debt securities primarily include corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.
(b) Alternatives primarily include limited partnerships.
(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

Fair value measurement of the plans' assets and liabilities

For information on fair value measurements, including descriptions of level 1, 2, and 3 of the fair value hierarchy and the valuation methods employed by the Firm, see Note 3.

Pension and OPEB plan assets and liabilities measured at fair value

December 31, 2015 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans[g]		
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	$ 112	$ –	$ –	$ 112	$ 114	$ 1	$ 115
Equity securities	4,826	5	2	4,833	1,002	157	1,159
Common/collective trust funds[a]	339	–	–	339	135	–	135
Limited partnerships[b]	53	–	–	53	–	–	–
Corporate debt securities[c]	–	1,619	2	1,621	–	758	758
U.S. federal, state, local and non-U.S. government debt securities	580	108	–	688	212	504	716
Mortgage-backed securities	–	67	1	68	2	26	28
Derivative receivables	–	104	–	104	–	209	209
Other[d]	1,760	27	534	2,321	257	53	310
Total assets measured at fair value	$ 7,670	$ 1,930	$ 539	$ 10,139 [e]	$ 1,722	$ 1,708	$ 3,430
Derivative payables	$ –	$ (35)	$ –	$ (35)	$ –	$ (153)	$ (153)
Total liabilities measured at fair value	$ –	$ (35)	$ –	$ (35) [f]	$ –	$ (153)	$ (153)

December 31, 2014 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans[g]		
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	$ 87	$ –	$ –	$ 87	$ 128	$ 1	$ 129
Equity securities	5,286	20	4	5,310	1,019	169	1,188
Common/collective trust funds[a]	345	–	–	345	112	–	112
Limited partnerships[b]	70	–	–	70	–	–	–
Corporate debt securities[c]	–	1,454	9	1,463	–	724	724
U.S. federal, state, local and non-U.S. government debt securities	446	161	–	607	235	540	775
Mortgage-backed securities	1	73	1	75	2	77	79
Derivative receivables	–	114	–	114	–	258	258
Other[d]	2,031	27	337	2,395	283	58	341
Total assets measured at fair value	$ 8,266	$ 1,849	$ 351	$ 10,466 [e]	$ 1,779	$ 1,827	$ 3,606
Derivative payables	$ –	$ (23)	$ –	$ (23)	$ –	$ (139)	$ (139)
Total liabilities measured at fair value	$ –	$ (23)	$ –	$ (23) [f]	$ –	$ (139)	$ (139)

Note: Effective April 1, 2015, the Firm adopted new accounting guidance for certain investments where the Firm measures fair value using the net asset value per share (or its equivalent) as a practical expedient and excluded them from the fair value hierarchy. Accordingly, such investments are not included within these tables. At December 31, 2015 and 2014, the fair values of these investments, which include certain limited partnerships and common/collective trust funds, were $4.1 billion and $4.3 billion, respectively, of U.S. defined benefit pension plan investments, and $234 million and $251 million, respectively, of non-U.S. defined benefit pension plan investments. Of these investments $1.3 billion and $3.0 billion, respectively, of U.S. defined benefit pension plan investments had been previously classified in level 2 and level 3, respectively, and $251 million of non-U.S. defined benefit pension plan investments had been previously classified in level 2 at December 31, 2014. The guidance was required to be applied retrospectively, and accordingly, prior period amounts have been revised to conform with the current period presentation.

(a) At December 31, 2015 and 2014, common/collective trust funds primarily included a mix of short-term investment funds, domestic and international equity investments (including index) and real estate funds.
(b) Unfunded commitments to purchase limited partnership investments for the plans were $895 million and $1.2 billion for 2015 and 2014, respectively.
(c) Corporate debt securities include debt securities of U.S. and non-U.S. corporations.
(d) Other consists of money markets funds, exchange-traded funds and participating and non-participating annuity contracts. Money markets funds and exchange-traded funds are primarily classified within level 1 of the fair value hierarchy given they are valued using market observable prices. Participating and non-participating annuity contracts are classified within level 3 of the fair value hierarchy due to lack of market mechanisms for transferring each policy and surrender restrictions.
(e) At December 31, 2015 and 2014, excluded U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $74 million and $106 million, respectively.
(f) At December 31, 2015 and 2014, excluded $106 million and $241 million, respectively, of U.S. defined benefit pension plan payables for investments purchased; and $17 million and $16 million, respectively, of other liabilities.
(g) There were zero assets or liabilities classified as level 3 for the non-U.S. defined benefit pension plans as of December 31, 2015 and 2014.

The Firm's U.S. OPEB plan was partially funded with COLI policies of $1.9 billion at both December 31, 2015 and 2014, which were classified in level 3 of the valuation hierarchy.

Changes in level 3 fair value measurements using significant unobservable inputs

Year ended December 31, 2015 (in millions)	Fair value, January 1, 2015	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2015
U.S. defined benefit pension plans						
Equities	**$ 4**	**$ –**	**$ (2)**	**$ –**	**$ –**	**$ 2**
Corporate debt securities	**9**	**–**	**–**	**(7)**	**–**	**2**
Mortgage-backed securities	**1**	**–**	**–**	**–**	**–**	**1**
Other	**337**	**–**	**197**	**–**	**–**	**534**
Total U.S. defined benefit pension plans	**$ 351**	**$ –**	**$ 195**	**$ (7)**	**$ –**	**$ 539**
OPEB plans						
COLI	**$ 1,903**	**$ –**	**$ (48)**	**$ –**	**$ –**	**$ 1,855**
Total OPEB plans	**$ 1,903**	**$ –**	**$ (48)**	**$ –**	**$ –**	**$ 1,855**

Year ended December 31, 2014 (in millions)	Fair value, January 1, 2014	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2014
U.S. defined benefit pension plans						
Equities	$ 4	$ –	$ –	$ –	$ –	$ 4
Corporate debt securities	7	(2)	2	4	(2)	9
Mortgage-backed securities	–	–	–	1	–	1
Other	430	–	(93)	–	–	337
Total U.S. defined benefit pension plans	$ 441	$ (2)	$ (91)	$ 5	$ (2)	$ 351
OPEB plans						
COLI	$ 1,749	$ –	$ 154	$ –	$ –	$ 1,903
Total OPEB plans	$ 1,749	$ –	$ 154	$ –	$ –	$ 1,903

Year ended December 31, 2013 (in millions)	Fair value, January 1, 2013	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2013
U.S. defined benefit pension plans						
Equities	$ 4	$ –	$ –	$ –	$ –	$ 4
Corporate debt securities	1	–	–	–	6	7
Mortgage-backed securities	–	–	–	–	–	–
Other	420	–	10	–	–	430
Total U.S. defined benefit pension plans	$ 425	$ –	$ 10	$ –	$ 6	$ 441
OPEB plans						
COLI	$ 1,554	$ –	$ 195	$ –	$ –	$ 1,749
Total OPEB plans	$ 1,554	$ –	$ 195	$ –	$ –	$ 1,749

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2016	$ 762	$ 107	$ 68	$ 1
2017	798	110	66	1
2018	927	119	63	1
2019	966	123	61	1
2020	1,009	129	59	1
Years 2021–2025	4,409	722	259	4

Note 10 – Employee stock-based incentives

Employee stock-based awards

In 2015, 2014 and 2013, JPMorgan Chase granted long-term stock-based awards to certain employees under its Long-Term Incentive Plan, as amended and restated effective May 19, 2015 ("LTIP"). Under the terms of the LTIP, as of December 31, 2015, 93 million shares of common stock were available for issuance through May 2019. The LTIP is the only active plan under which the Firm is currently granting stock-based incentive awards. In the following discussion, the LTIP, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans," and such plans constitute the Firm's stock-based incentive plans.

Restricted stock units ("RSUs") are awarded at no cost to the recipient upon their grant. Generally, RSUs are granted annually and vest at a rate of 50% after two years and 50% after three years and are converted into shares of common stock as of the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All RSUs awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding and, as such, are considered participating securities as discussed in Note 24.

Under the LTI Plans, stock options and stock appreciation rights ("SARs") have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm periodically grants employee stock options to individual employees. There were no material grants of stock options or SARs in 2015 and 2014. Grants of SARs in 2013 become exercisable ratably over five years (i.e., 20% per year) and contain clawback provisions similar to RSUs. The 2013 grants of SARs contain full-career eligibility provisions. SARs generally expire ten years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2015, 2014 and 2013, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. On July 15, 2014, the Compensation & Management Development Committee and Board of Directors determined that all requirements for the vesting of the 2 million SAR awards had been met and thus, the awards became exercisable. The SARs, which will expire in January 2018, have an exercise price of $39.83 (the price of JPMorgan Chase common stock on the date of grant). The expense related to this award was dependent on changes in fair value of the SARs through July 15, 2014 (the date when the vested number of SARs were determined), and the cumulative expense was recognized ratably over the service period, which was initially assumed to be five years but, effective in the first quarter of 2013, had been extended to six and one-half years. The Firm recognized $3 million and $14 million in compensation expense in 2014 and 2013, respectively, for this award.

RSUs, employee stock options and SARs activity

Compensation expense for RSUs is measured based on the number of shares granted multiplied by the stock price at the grant date, and for employee stock options and SARs, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorgan Chase's RSUs, employee stock options and SARs activity for 2015.

	RSUs		Options/SARs			
Year ended December 31, 2015 (in thousands, except weighted-average data, and where otherwise stated)	Number of shares	Weighted-average grant date fair value	Number of awards	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	**100,568**	**$ 47.81**	**59,195**	**$ 45.00**		
Granted	**36,096**	**56.31**	**107**	**64.41**		
Exercised or vested	**(47,709)**	**41.64**	**(14,313)**	**40.44**		
Forfeited	**(3,648)**	**54.17**	**(943)**	**43.04**		
Canceled	**NA**	**NA**	**(580)**	**278.93**		
Outstanding, December 31	**85,307**	**$ 54.60**	**43,466**	**$ 43.51**	**4.6**	**$ 1,109,411**
Exercisable, December 31	**NA**	**NA**	**31,853**	**43.85**	**4.0**	**832,929**

The total fair value of RSUs that vested during the years ended December 31, 2015, 2014 and 2013, was $2.8 billion, $3.2 billion and $2.9 billion, respectively. The weighted-average grant date per share fair value of stock options and SARs granted during the year ended December 31, 2013, was $9.58. The total intrinsic value of options exercised during the years ended December 31, 2015, 2014 and 2013, was $335 million, $539 million and $507 million, respectively.

Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated statements of income.

Year ended December 31, (in millions)	**2015**	2014	2013
Cost of prior grants of RSUs and SARs that are amortized over their applicable vesting periods	**$ 1,109**	$ 1,371	$ 1,440
Accrual of estimated costs of stock-based awards to be granted in future periods including those to full-career eligible employees	**878**	819	779
Total noncash compensation expense related to employee stock-based incentive plans	**$ 1,987**	$ 2,190	$ 2,219

At December 31, 2015, approximately $688 million (pretax) of compensation expense related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 0.9 years. The Firm does not capitalize any compensation expense related to share-based compensation awards to employees.

Cash flows and tax benefits

Income tax benefits related to stock-based incentive arrangements recognized in the Firm's Consolidated statements of income for the years ended December 31, 2015, 2014 and 2013, were $746 million, $854 million and $865 million, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements, and the actual income tax benefit realized related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	**2015**	2014	2013
Cash received for options exercised	**$ 20**	$ 63	$ 166
Tax benefit realized[(a)]	**64**	104	42

(a) The tax benefit realized from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings are recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards.

Valuation assumptions

The following table presents the assumptions used to value employee stock options and SARs granted during the year ended December 31, 2013, under the Black-Scholes valuation model. There were no material grants of stock options or SARs for the years ended December 31, 2015 and 2014.

Year ended December 31,	2013
Weighted-average annualized valuation assumptions	
Risk-free interest rate	1.18%
Expected dividend yield	2.66
Expected common stock price volatility	28
Expected life (in years)	6.6

The expected dividend yield is determined using forward-looking assumptions. The expected volatility assumption is derived from the implied volatility of JPMorgan Chase's stock options. The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled, and the assumption is based on the Firm's historical experience.

Note 11 – Noninterest expense

For details on noninterest expense, see Consolidated statements of income on page 176. Included within other expense is the following:

Year ended December 31, (in millions)	2015	2014	2013
Legal expense	**$ 2,969**	$ 2,883	$ 11,143
Federal Deposit Insurance Corporation-related ("FDIC") expense	**1,227**	1,037	1,496

Note 12 – Securities

Securities are classified as trading, AFS or held-to-maturity ("HTM"). Securities classified as trading assets are discussed in Note 3. Predominantly all of the Firm's AFS and HTM investment securities (the "investment securities portfolio") are held by Treasury and CIO in connection with its asset-liability management objectives. At December 31, 2015, the investment securities portfolio consisted of debt securities with an average credit rating of AA+ (based upon external ratings where available, and where not available, based primarily upon internal ratings which correspond to ratings as defined by S&P and Moody's). AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to accumulated other comprehensive income/(loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated statements of income. HTM debt securities, which management has the intent and ability to hold until maturity, are carried at amortized cost on the Consolidated balance sheets. For both AFS and HTM debt securities, purchase discounts or premiums are generally amortized into interest income over the contractual life of the security.

During 2014, the Firm transferred U.S. government agency mortgage-backed securities and obligations of U.S. states and municipalities with a fair value of $19.3 billion from AFS to HTM. These securities were transferred at fair value, and the transfer was a non-cash transaction. AOCI included net pretax unrealized losses of $9 million on the securities at the date of transfer. The transfer reflected the Firm's intent to hold the securities to maturity in order to reduce the impact of price volatility on AOCI and certain capital measures under Basel III.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

	2015				2014			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies[a]	**$ 53,689**	**$ 1,483**	**$ 106**	**$ 55,066**	$ 63,089	$ 2,302	$ 72	$ 65,319
Residential:								
Prime and Alt-A	**7,462**	**40**	**57**	**7,445**	5,595	78	29	5,644
Subprime	**210**	**7**	**–**	**217**	677	14	–	691
Non-U.S.	**19,629**	**341**	**13**	**19,957**	43,550	1,010	–	44,560
Commercial	**22,990**	**150**	**243**	**22,897**	20,687	438	17	21,108
Total mortgage-backed securities	**103,980**	**2,021**	**419**	**105,582**	133,598	3,842	118	137,322
U.S. Treasury and government agencies[a]	**11,202**	**–**	**166**	**11,036**	13,603	56	14	13,645
Obligations of U.S. states and municipalities	**31,328**	**2,245**	**23**	**33,550**	27,841	2,243	16	30,068
Certificates of deposit	**282**	**1**	**–**	**283**	1,103	1	1	1,103
Non-U.S. government debt securities	**35,864**	**853**	**41**	**36,676**	51,492	1,272	21	52,743
Corporate debt securities	**12,464**	**142**	**170**	**12,436**	18,158	398	24	18,532
Asset-backed securities:								
Collateralized loan obligations	**31,146**	**52**	**191**	**31,007**	30,229	147	182	30,194
Other	**9,125**	**72**	**100**	**9,097**	12,442	184	11	12,615
Total available-for-sale debt securities	**235,391**	**5,386**	**1,110**	**239,667**	288,466	8,143	387	296,222
Available-for-sale equity securities	**2,067**	**20**	**–**	**2,087**	2,513	17	–	2,530
Total available-for-sale securities	**237,458**	**5,406**	**1,110**	**241,754**	290,979	8,160	387	298,752
Total held-to-maturity securities[b]	**$ 49,073**	**$ 1,560**	**$ 46**	**$ 50,587**	$ 49,252	$ 1,902	$ –	$ 51,154

(a) Includes total U.S. government-sponsored enterprise obligations with fair values of $42.3 billion and $59.3 billion at December 31, 2015 and 2014, respectively, which were predominantly mortgage-related.

(b) As of December 31, 2015, consists of mortgage backed securities ("MBS") issued by U.S. government-sponsored enterprises with an amortized cost of $30.8 billion, MBS issued by U.S. government agencies with an amortized cost of $5.5 billion and obligations of U.S. states and municipalities with an amortized cost of $12.8 billion. As of December 31, 2014, consists of MBS issued by U.S. government-sponsored enterprises with an amortized cost of $35.3 billion, MBS issued by U.S. government agencies with an amortized cost of $3.7 billion and obligations of U.S. states and municipalities with an amortized cost of $10.2 billion.

Securities impairment

The following tables present the fair value and gross unrealized losses for the investment securities portfolio by aging category at December 31, 2015 and 2014.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2015 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	**$ 13,002**	**$ 95**	**$ 697**	**$ 11**	**$ 13,699**	**$ 106**
Residential:						
Prime and Alt-A	**5,147**	**51**	**238**	**6**	**5,385**	**57**
Subprime	**–**	**–**	**–**	**–**	**–**	**–**
Non-U.S.	**2,021**	**12**	**167**	**1**	**2,188**	**13**
Commercial	**13,779**	**239**	**658**	**4**	**14,437**	**243**
Total mortgage-backed securities	**33,949**	**397**	**1,760**	**22**	**35,709**	**419**
U.S. Treasury and government agencies	**10,998**	**166**	**–**	**–**	**10,998**	**166**
Obligations of U.S. states and municipalities	**1,676**	**18**	**205**	**5**	**1,881**	**23**
Certificates of deposit	**–**	**–**	**–**	**–**	**–**	**–**
Non-U.S. government debt securities	**3,267**	**26**	**367**	**15**	**3,634**	**41**
Corporate debt securities	**3,198**	**125**	**848**	**45**	**4,046**	**170**
Asset-backed securities:						
Collateralized loan obligations	**15,340**	**67**	**10,692**	**124**	**26,032**	**191**
Other	**4,284**	**60**	**1,005**	**40**	**5,289**	**100**
Total available-for-sale debt securities	**72,712**	**859**	**14,877**	**251**	**87,589**	**1,110**
Available-for-sale equity securities	**–**	**–**	**–**	**–**	**–**	**–**
Held-to-maturity securities	**3,763**	**46**	**–**	**–**	**3,763**	**46**
Total securities with gross unrealized losses	**$ 76,475**	**$ 905**	**$ 14,877**	**$ 251**	**$ 91,352**	**$ 1,156**

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2014 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 1,118	$ 5	$ 4,989	$ 67	$ 6,107	$ 72
Residential:						
Prime and Alt-A	1,840	10	405	19	2,245	29
Subprime	–	–	–	–	–	–
Non-U.S.	–	–	–	–	–	–
Commercial	4,803	15	92	2	4,895	17
Total mortgage-backed securities	7,761	30	5,486	88	13,247	118
U.S. Treasury and government agencies	8,412	14	–	–	8,412	14
Obligations of U.S. states and municipalities	1,405	15	130	1	1,535	16
Certificates of deposit	1,050	1	–	–	1,050	1
Non-U.S. government debt securities	4,433	4	906	17	5,339	21
Corporate debt securities	2,492	22	80	2	2,572	24
Asset-backed securities:						
Collateralized loan obligations	13,909	76	9,012	106	22,921	182
Other	2,258	11	–	–	2,258	11
Total available-for-sale debt securities	41,720	173	15,614	214	57,334	387
Available-for-sale equity securities	–	–	–	–	–	–
Held-to-maturity securities	–	–	–	–	–	–
Total securities with gross unrealized losses	$ 41,720	$ 173	$ 15,614	$ 214	$ 57,334	$ 387

Gross unrealized losses

The Firm has recognized the unrealized losses on securities it intends to sell. As of December 31, 2015, the Firm does not intend to sell any securities with a loss position in AOCI, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2015.

Other-than-temporary impairment

AFS debt and equity securities and HTM debt securities in unrealized loss positions are analyzed as part of the Firm's ongoing assessment of other-than-temporary impairment ("OTTI"). For most types of debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm considers an impairment to be other than temporary when there is an adverse change in expected cash flows. For AFS equity securities, the Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its cost basis.

Potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and the Firm's intent and ability to hold the security until recovery.

For AFS debt securities, the Firm recognizes OTTI losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost basis. In these circumstances the impairment loss is equal to the full difference between the amortized cost basis and the fair value of the securities. For debt securities in an unrealized loss position that the Firm has the intent and ability to hold, the expected cash flows to be received from the securities are evaluated to determine if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI.

The Firm's cash flow evaluations take into account the factors noted above and expectations of relevant market and economic data as of the end of the reporting period. For securities issued in a securitization, the Firm estimates cash flows considering underlying loan-level data and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios.

For equity securities, OTTI losses are recognized in earnings if the Firm intends to sell the security. In other cases the Firm considers the relevant factors noted above, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the cost basis. Any impairment loss on an equity security is equal to the full difference between the cost basis and the fair value of the security.

Securities gains and losses

The following table presents realized gains and losses and OTTI from AFS securities that were recognized in income.

Year ended December 31, (in millions)	2015	2014	2013
Realized gains	$ 351	$ 314	$ 1,302
Realized losses	(127)	(233)	(614)
OTTI losses	(22)	(4)	(21)
Net securities gains	202	77	667
OTTI losses			
Credit losses recognized in income	(1)	(2)	(1)
Securities the Firm intends to sell[(a)]	(21)	(2)	(20)
Total OTTI losses recognized in income	$ (22)	$ (4)	$ (21)

(a) Excludes realized losses on securities sold of $5 million, $3 million and $12 million for the years ended December 31, 2015, 2014 and 2013, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

Changes in the credit loss component of credit-impaired debt securities

The following table presents a rollforward for the years ended December 31, 2015, 2014 and 2013, of the credit loss component of OTTI losses that have been recognized in income, related to AFS debt securities that the Firm does not intend to sell.

Year ended December 31, (in millions)	2015	2014	2013
Balance, beginning of period	$ 3	$ 1	$ 522
Additions:			
Newly credit-impaired securities	1	2	1
Losses reclassified from other comprehensive income on previously credit-impaired securities	—	—	—
Reductions:			
Sales and redemptions of credit-impaired securities	—	—	(522)
Balance, end of period	$ 4	$ 3	$ 1

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2015, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity December 31, 2015 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities[a]					
Amortized cost	$ 2,415	$ 9,728	$ 6,562	$ 85,275	$ 103,980
Fair value	2,421	9,886	6,756	86,519	105,582
Average yield[b]	1.48%	1.86%	3.15%	3.08%	2.93%
U.S. Treasury and government agencies[a]					
Amortized cost	$ –	$ –	$ 10,069	$ 1,133	$ 11,202
Fair value	–	–	9,932	1,104	11,036
Average yield[b]	–%	–%	0.31%	0.48%	0.33%
Obligations of U.S. states and municipalities					
Amortized cost	$ 184	$ 754	$ 1,520	$ 28,870	$ 31,328
Fair value	187	774	1,600	30,989	33,550
Average yield[b]	5.21%	3.50%	5.57%	6.68%	6.54%
Certificates of deposit					
Amortized cost	$ 230	$ 52	$ –	$ –	$ 282
Fair value	231	52	–	–	283
Average yield[b]	8.66%	3.28%	–%	–%	7.68%
Non-U.S. government debt securities					
Amortized cost	$ 6,126	$ 11,177	$ 16,575	$ 1,986	$ 35,864
Fair value	6,422	11,429	16,747	2,078	36,676
Average yield[b]	3.11%	1.84%	1.06%	0.67%	1.63%
Corporate debt securities					
Amortized cost	$ 2,761	$ 7,175	$ 2,385	$ 143	$ 12,464
Fair value	2,776	7,179	2,347	134	12,436
Average yield[b]	2.87%	2.32%	3.09%	4.46%	2.61%
Asset-backed securities					
Amortized cost	$ 39	$ 442	$ 20,501	$ 19,289	$ 40,271
Fair value	40	449	20,421	19,194	40,104
Average yield[b]	0.71%	1.72%	1.79%	1.84%	1.81%
Total available-for-sale debt securities					
Amortized cost	$ 11,755	$ 29,328	$ 57,612	$ 136,696	$ 235,391
Fair value	12,077	29,769	57,803	140,018	239,667
Average yield[b]	2.85%	2.00%	1.63%	3.61%	2.89%
Available-for-sale equity securities					
Amortized cost	$ –	$ –	$ –	$ 2,067	$ 2,067
Fair value	–	–	–	2,087	2,087
Average yield[b]	–%	–%	–%	0.30%	0.30%
Total available-for-sale securities					
Amortized cost	$ 11,755	$ 29,328	$ 57,612	$ 138,763	$ 237,458
Fair value	12,077	29,769	57,803	142,105	241,754
Average yield[b]	2.85%	2.00%	1.63%	3.56%	2.87%
Total held-to-maturity securities					
Amortized cost	$ 51	$ –	$ 931	$ 48,091	$ 49,073
Fair value	50	–	976	49,561	50,587
Average yield[b]	4.42%	–%	5.01%	3.98%	4.00%

(a) U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2015.

(b) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid.

(c) Includes securities with no stated maturity. Substantially all of the Firm's residential mortgage-backed securities and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated weighted-average life, which reflects anticipated future prepayments, is approximately five years for agency residential mortgage-backed securities, two years for agency residential collateralized mortgage obligations and four years for nonagency residential collateralized mortgage obligations.

Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated balance sheets. Resale and repurchase agreements are generally carried at the amounts at which the securities will be subsequently sold or repurchased. Securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. For further discussion of the offsetting of assets and liabilities, see Note 1. Fees received and paid in connection with securities financing agreements are recorded in interest income and interest expense on the Consolidated statements of income.

The Firm has elected the fair value option for certain securities financing agreements. For further information regarding the fair value option, see Note 4. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements, securities loaned or sold under repurchase agreements, and securities borrowed on the Consolidated balance sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

Secured financing transactions expose the Firm to credit and liquidity risk. To manage these risks, the Firm monitors the value of the underlying securities (predominantly high-quality securities collateral, including government-issued debt and agency MBS) that it has received from or provided to its counterparties compared to the value of cash proceeds and exchanged collateral, and either requests additional collateral or returns securities or collateral when appropriate. Margin levels are initially established based upon the counterparty, the type of underlying securities, and the permissible collateral, and are monitored on an ongoing basis.

In resale agreements and securities borrowed transactions, the Firm is exposed to credit risk to the extent that the value of the securities received is less than initial cash principal advanced and any collateral amounts exchanged. In repurchase agreements and securities loaned transactions, credit risk exposure arises to the extent that the value of underlying securities exceeds the value of the initial cash principal advanced, and any collateral amounts exchanged.

Additionally, the Firm typically enters into master netting agreements and other similar arrangements with its counterparties, which provide for the right to liquidate the underlying securities and any collateral amounts exchanged in the event of a counterparty default. It is also the Firm's policy to take possession, where possible, of the securities underlying resale agreements and securities borrowed transactions. For further information regarding assets pledged and collateral received in securities financing agreements, see Note 30.

As a result of the Firm's credit risk mitigation practices with respect to resale and securities borrowed agreements as described above, the Firm did not hold any reserves for credit impairment with respect to these agreements as of December 31, 2015 and 2014.

Certain prior period amounts for securities purchased under resale agreements and securities borrowed, as well as securities sold under repurchase agreements and securities loaned, have been revised to conform with the current period presentation. These revisions had no impact on the Firm's Consolidated balance sheets or its results of operations.

The following table presents as of December 31, 2015 and 2014, the gross and net securities purchased under resale agreements and securities borrowed. Securities purchased under resale agreements have been presented on the Consolidated balance sheets net of securities sold under repurchase agreements where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities purchased under resale agreements are not eligible for netting and are shown separately in the table below. Securities borrowed are presented on a gross basis on the Consolidated balance sheets.

	2015			2014		
December 31, (in millions)	Gross asset balance	Amounts netted on the Consolidated balance sheets	Net asset balance	Gross asset balance	Amounts netted on the Consolidated balance sheets	Net asset balance
Securities purchased under resale agreements						
Securities purchased under resale agreements with an appropriate legal opinion	**$ 365,805**	**$ (156,258)**	**$ 209,547**	$ 347,142	$ (142,719)	$ 204,423
Securities purchased under resale agreements where an appropriate legal opinion has not been either sought or obtained	**2,343**		**2,343**	10,598		10,598
Total securities purchased under resale agreements	**$ 368,148**	**$ (156,258)**	**$ 211,890** [(a)]	$ 357,740	$ (142,719)	$ 215,021 [(a)]
Securities borrowed	**$ 98,721**	**NA**	**$ 98,721** [(b)(c)]	$ 110,435	NA	$ 110,435 [(b)(c)]

(a) At December 31, 2015 and 2014, included securities purchased under resale agreements of $23.1 billion and $28.6 billion, respectively, accounted for at fair value.
(b) At December 31, 2015 and 2014, included securities borrowed of $395 million and $992 million, respectively, accounted for at fair value.
(c) Included $31.3 billion and $35.3 billion at December 31, 2015 and 2014, respectively, of securities borrowed where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.

The following table presents information as of December 31, 2015 and 2014, regarding the securities purchased under resale agreements and securities borrowed for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to resale agreements and securities borrowed where such a legal opinion has not been either sought or obtained.

	2015				2014			
		Amounts not nettable on the Consolidated balance sheets[(a)]				Amounts not nettable on the Consolidated balance sheets[(a)]		
December 31, (in millions)	Net asset balance	Financial instruments[(b)]	Cash collateral	Net exposure	Net asset balance	Financial instruments[(b)]	Cash collateral	Net exposure
Securities purchased under resale agreements with an appropriate legal opinion	**$ 209,547**	**$ (206,423)**	**$ (351)**	**$ 2,773**	$ 204,423	$ (201,375)	$ (246)	$ 2,802
Securities borrowed	**$ 67,453**	**$ (65,081)**	**$ —**	**$ 2,372**	$ 75,113	$ (72,730)	$ —	$ 2,383

(a) For some counterparties, the sum of the financial instruments and cash collateral not nettable on the Consolidated balance sheets may exceed the net asset balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net reverse repurchase agreement or securities borrowed asset with that counterparty. As a result a net exposure amount is reported even though the Firm, on an aggregate basis for its securities purchased under resale agreements and securities borrowed, has received securities collateral with a total fair value that is greater than the funds provided to counterparties.
(b) Includes financial instrument collateral received, repurchase liabilities and securities loaned liabilities with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated balance sheets because other U.S. GAAP netting criteria are not met.

The following table presents as of December 31, 2015 and 2014, the gross and net securities sold under repurchase agreements and securities loaned. Securities sold under repurchase agreements have been presented on the Consolidated balance sheets net of securities purchased under resale agreements where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities sold under repurchase agreements are not eligible for netting and are shown separately in the table below. Securities loaned are presented on a gross basis on the Consolidated balance sheets.

	2015				2014			
December 31, (in millions)	Gross liability balance	Amounts netted on the Consolidated balance sheets	Net liability balance		Gross liability balance	Amounts netted on the Consolidated balance sheets	Net liability balance	
Securities sold under repurchase agreements								
Securities sold under repurchase agreements with an appropriate legal opinion	**$ 277,415**	**$ (156,258)**	**$ 121,157**		$ 290,529	$ (142,719)	$ 147,810	
Securities sold under repurchase agreements where an appropriate legal opinion has not been either sought or obtained[a]	**12,629**		**12,629**		21,996		21,996	
Total securities sold under repurchase agreements	**$ 290,044**	**$ (156,258)**	**$ 133,786**	[c]	$ 312,525	$ (142,719)	$ 169,806	[c]
Securities loaned[b]	**$ 22,556**	**NA**	**$ 22,556**	[d][e]	$ 25,927	NA	$ 25,927	[d][e]

(a) Includes repurchase agreements that are not subject to a master netting agreement but do provide rights to collateral.
(b) Included securities-for-securities lending transactions of $4.4 billion and $4.1 billion at December 31, 2015 and 2014, respectively, accounted for at fair value, where the Firm is acting as lender. These amounts are presented within other liabilities in the Consolidated balance sheets.
(c) At December 31, 2015 and 2014, included securities sold under repurchase agreements of $3.5 billion and $3.0 billion, respectively, accounted for at fair value.
(d) There were no securities loaned accounted for at fair value at December 31, 2015 and 2014, respectively.
(e) Included $45 million and $271 million at December 31, 2015 and 2014, respectively, of securities loaned where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.

The following table presents information as of December 31, 2015 and 2014, regarding the securities sold under repurchase agreements and securities loaned for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to repurchase agreements and securities loaned where such a legal opinion has not been either sought or obtained.

	2015				2014			
		Amounts not nettable on the Consolidated balance sheets[a]				Amounts not nettable on the Consolidated balance sheets[a]		
December 31, (in millions)	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]
Securities sold under repurchase agreements with an appropriate legal opinion	**$ 121,157**	**$ (117,825)**	**$ (1,007)**	**$ 2,325**	$ 147,810	$ (145,732)	$ (497)	$ 1,581
Securities loaned	**$ 22,511**	**$ (22,245)**	**$ –**	**$ 266**	$ 25,656	$ (25,287)	$ –	$ 369

(a) For some counterparties the sum of the financial instruments and cash collateral not nettable on the Consolidated balance sheets may exceed the net liability balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net repurchase agreement or securities loaned liability with that counterparty.
(b) Includes financial instrument collateral transferred, reverse repurchase assets and securities borrowed assets with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated balance sheets because other U.S. GAAP netting criteria are not met.
(c) Net amount represents exposure of counterparties to the Firm.

Effective April 1, 2015, the Firm adopted new accounting guidance, which requires enhanced disclosures with respect to the types of financial assets pledged in secured financing transactions and the remaining contractual maturity of the secured financing transactions; the following tables present this information as of December 31, 2015.

	Gross liability balance	
December 31, 2015 (in millions)	Securities sold under repurchase agreements	Securities loaned
Mortgage-backed securities	$ 12,790	$ –
U.S. Treasury and government agencies	154,377	5
Obligations of U.S. states and municipalities	1,316	–
Non-U.S. government debt	80,162	4,426
Corporate debt securities	21,286	78
Asset-backed securities	4,394	–
Equity securities	15,719	18,047
Total	$ 290,044	$ 22,556

	Remaining contractual maturity of the agreements				
December 31, 2015 (in millions)	Overnight and continuous	Up to 30 days	30 – 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	$ 114,595	$ 100,082	$ 29,955	$ 45,412	$ 290,044
Total securities loaned	8,320	708	793	12,735	22,556

Transfers not qualifying for sale accounting

At December 31, 2015 and 2014, the Firm held $7.5 billion and $13.8 billion, respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets and loans, and the corresponding liabilities are predominantly recorded in other borrowed funds on the Consolidated balance sheets.

Note 14 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained"), other than purchased credit-impaired ("PCI") loans
- Loans held-for-sale
- Loans at fair value
- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories:

Loans held-for-investment (other than PCI loans)

Originated or purchased loans held-for-investment, other than PCI loans, are measured at the principal amount outstanding, net of the following: allowance for loan losses; charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and net deferred loan fees or costs. Credit card loans also include billed finance charges and fees net of an allowance for uncollectible amounts.

Interest income

Interest income on performing loans held-for-investment, other than PCI loans, is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is in doubt, or when principal and interest has been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. Finally, collateral-dependent loans are typically maintained on nonaccrual status.

On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance for the estimated uncollectible portion of accrued interest and fee income on credit card loans. The allowance is established with a charge to interest income and is reported as an offset to loans.

Allowance for loan losses

The allowance for loan losses represents the estimated probable credit losses inherent in the held-for-investment loan portfolio at the balance sheet date. Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated statements of income. See Note 15 for further information on the Firm's accounting policies for the allowance for loan losses.

Charge-offs

Consumer loans, other than risk-rated business banking, risk-rated auto and PCI loans, are generally charged off or charged down to the net realizable value of the underlying collateral (i.e., fair value less costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the Federal Financial Institutions Examination Council ("FFIEC"). Residential real estate loans, non-modified credit card loans and scored business banking loans are generally charged off at 180 days past due. Auto and student loans are charged off no later than 120 days past due, and modified credit card loans are charged off at 120 days past due.

Certain consumer loans will be charged off earlier than the FFIEC charge-off standards in certain circumstances as follows:

- A charge-off is recognized when a loan is modified in a troubled debt restructuring ("TDR") if the loan is determined to be collateral-dependent. A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.
- Loans to borrowers who have experienced an event (e.g., bankruptcy) that suggests a loss is either known or highly certain are subject to accelerated charge-off standards. Residential real estate and auto loans are charged off when the loan becomes 60 days past due, or sooner if the loan is determined to be collateral-

dependent. Credit card and scored business banking loans are charged off within 60 days of receiving notification of the bankruptcy filing or other event. Student loans are generally charged off when the loan becomes 60 days past due after receiving notification of a bankruptcy.

- Auto loans are written down to net realizable value upon repossession of the automobile and after a redemption period (i.e., the period during which a borrower may cure the loan) has passed.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on government-guaranteed loans.

Wholesale loans, risk-rated business banking loans and risk-rated auto loans are charged off when it is highly certain that a loss has been realized, including situations where a loan is determined to be both impaired and collateral-dependent. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the estimated net realizable value, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every six months thereafter. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), generally, either through foreclosure or upon the execution of a deed in lieu of foreclosure transaction with the borrower, the Firm obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared with the estimated values provided by exterior opinions and interior appraisals, considering state- and product-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

Loans held-for-sale

Held-for-sale loans are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or loss recognized at the time of sale.

Held-for-sale loans are subject to the nonaccrual policies described above.

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

Loans at fair value

Loans used in a market-making strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue.

For these loans, the earned current contractual interest payment is recognized in interest income. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

See Note 4 for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 and Note 4 for further information on loans carried at fair value and classified as trading assets.

PCI loans

PCI loans held-for-investment are initially measured at fair value. PCI loans have evidence of credit deterioration since the loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected. Because PCI loans are initially measured at fair value, which includes an estimate of future credit losses, no allowance for loan losses related to PCI loans is recorded at the acquisition date. See page 255 of this Note for information on accounting for PCI loans subsequent to their acquisition.

Loan classification changes
Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; non-credit related losses such as those due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at the lower of cost or fair value on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 15.

Loan modifications
The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss, avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, principal forgiveness, or the acceptance of equity or other assets in lieu of payments.

Such modifications are accounted for and reported as TDRs. A loan that has been modified in a TDR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless of whether the borrower performs under the modified terms. In certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring. In such circumstances, and assuming that the loan subsequently performs under its modified terms and the Firm expects to collect all contractual principal and interest cash flows, the loan is disclosed as impaired and as a TDR only during the year of the modification; in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (a) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (b) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, loan-to-value ("LTV") ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

Because loans modified in TDRs are considered to be impaired, these loans are measured for impairment using the Firm's established asset-specific allowance methodology, which considers the expected re-default rates for the modified loans. A loan modified in a TDR generally remains subject to the asset-specific allowance methodology throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status and/or the loan has been removed from the impaired loans disclosures (i.e., loans restructured at market rates). For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 15.

Foreclosed property
The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, and buildings) and commercial and personal property (e.g., automobiles, aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated balance sheets and initially recognized at fair value less costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment, the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class:

Consumer, excluding credit card[a]	Credit card	Wholesale[c]
Residential real estate – excluding PCI • Home equity – senior lien • Home equity – junior lien • Prime mortgage, including option ARMs • Subprime mortgage Other consumer loans • Auto[b] • Business banking[b] • Student and other Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Credit card loans	• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other[d]

(a) Includes loans held in CCB, prime mortgage and home equity loans held in AM and prime mortgage loans held in Corporate.
(b) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included with the other consumer loan classes.
(c) Includes loans held in CIB, CB, AM and Corporate. Excludes prime mortgage and home equity loans held in AM and prime mortgage loans held in Corporate. Classes are internally defined and may not align with regulatory definitions.
(d) Includes loans to: individuals; SPEs; holding companies; and private education and civic organizations. For more information on exposures to SPEs, see Note 16.

The following tables summarize the Firm's loan balances by portfolio segment.

December 31, 2015 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	**$ 344,355**	**$ 131,387**	**$ 357,050**	**$ 832,792**	[b]
Held-for-sale	**466**	**76**	**1,104**	**1,646**	
At fair value	**–**	**–**	**2,861**	**2,861**	
Total	**$ 344,821**	**$ 131,463**	**$ 361,015**	**$ 837,299**	

December 31, 2014 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	$ 294,979	$ 128,027	$ 324,502	$ 747,508	[b]
Held-for-sale	395	3,021	3,801	7,217	
At fair value	–	–	2,611	2,611	
Total	$ 295,374	$ 131,048	$ 330,914	$ 757,336	

(a) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(b) Loans (other than PCI loans and those for which the fair value option has been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs. These amounts were not material as of December 31, 2015 and 2014.

The following tables provide information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. These tables exclude loans recorded at fair value. The Firm manages its exposure to credit risk on an ongoing basis. Selling loans is one way that the Firm reduces its credit exposures.

	2015			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 5,279** [a][b]	**$ –**	**$ 2,154**	**$ 7,433**
Sales	**5,099**	**–**	**9,188**	**14,287**
Retained loans reclassified to held-for-sale	**1,514**	**79**	**642**	**2,235**

	2014			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 7,434 [a][b]	$ –	$ 885	$ 8,319
Sales	6,655	– [c]	7,381	14,036
Retained loans reclassified to held-for-sale	1,190	3,039	581	4,810

	2013			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 7,616 [a][b]	$ 328	$ 697	$ 8,641
Sales	4,845	–	4,232	9,077
Retained loans reclassified to held-for-sale	1,261	309	5,641	7,211

(a) Purchases predominantly represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Ginnie Mae guidelines. The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, the Federal Housing Administration ("FHA"), Rural Housing Services ("RHS") and/or the U.S. Department of Veterans Affairs ("VA").

(b) Excludes purchases of retained loans sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards. Such purchases were $50.3 billion, $15.1 billion and $5.7 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

(c) Prior period amounts have been revised to conform with current period presentation.

The following table provides information about gains and losses, including lower of cost or fair value adjustments, on loan sales by portfolio segment.

Year ended December 31, (in millions)	**2015**	2014	2013
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]			
Consumer, excluding credit card	**$ 305**	$ 341	$ 313
Credit card	**1**	(241)	3
Wholesale	**34**	101	(76)
Total net gains on sales of loans (including lower of cost or fair value adjustments)	**$ 340**	$ 201	$ 240

(a) Excludes sales related to loans accounted for at fair value.

Consumer, excluding credit card, loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, business banking loans, and student and other loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period, and certain payment-option loans originated by Washington Mutual that may result in negative amortization.

The table below provides information about retained consumer loans, excluding credit card, by class.

December 31, (in millions)	2015	2014
Residential real estate – excluding PCI		
Home equity:		
Senior lien	**$ 14,848**	$ 16,367
Junior lien	**30,711**	36,375
Mortgages:		
Prime, including option ARMs	**162,549**	104,921
Subprime	**3,690**	5,056
Other consumer loans		
Auto	**60,255**	54,536
Business banking	**21,208**	20,058
Student and other	**10,096**	10,970
Residential real estate – PCI		
Home equity	**14,989**	17,095
Prime mortgage	**8,893**	10,220
Subprime mortgage	**3,263**	3,673
Option ARMs	**13,853**	15,708
Total retained loans	**$ 344,355**	$ 294,979

Delinquency rates are a primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear that the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, including both non-PCI and PCI portfolios, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit-quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (660 or below) is considered to be of higher risk than a loan to a borrower with a high FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For scored auto, scored business banking and student loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.
- Risk-rated business banking and auto loans are similar to wholesale loans in that the primary credit quality indicators are the risk rating that is assigned to the loan and whether the loans are considered to be criticized and/or nonaccrual. Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information about borrowers' ability to fulfill their obligations. For further information about risk-rated wholesale loan credit quality indicators, see pages 259–260 of this Note.

Residential real estate — excluding PCI loans

The following table provides information by class for residential real estate — excluding retained PCI loans in the consumer, excluding credit card, portfolio segment.

The following factors should be considered in analyzing certain credit statistics applicable to the Firm's residential real estate — excluding PCI loans portfolio: (i) junior lien home equity loans may be fully charged off when the loan becomes 180 days past due, and the value of the collateral does not support the repayment of the loan, resulting in relatively high charge-off rates for this product class; and (ii) the lengthening of loss-mitigation timelines may result in higher delinquency rates for loans carried at the net realizable value of the collateral that remain on the Firm's Consolidated balance sheets.

Residential real estate – excluding PCI loans

December 31, (in millions, except ratios)	Home equity[i]				Mortgages					
	Senior lien		Junior lien		Prime, including option ARMs[i]		Subprime		Total residential real estate – excluding PCI	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Loan delinquency[a]										
Current	**$ 14,278**	$ 15,730	**$ 30,021**	$ 35,575	**$ 153,323**	$ 93,951	**$ 3,140**	$ 4,296	**$ 200,762**	$ 149,552
30–149 days past due	**238**	275	**470**	533	**3,666**	4,091	**376**	489	**4,750**	5,388
150 or more days past due	**332**	362	**220**	267	**5,560**	6,879	**174**	271	**6,286**	7,779
Total retained loans	**$ 14,848**	$ 16,367	**$ 30,711**	$ 36,375	**$ 162,549**	$104,921	**$ 3,690**	$ 5,056	**$ 211,798**	$ 162,719
% of 30+ days past due to total retained loans[b]	**3.84%**	3.89%	**2.25%**	2.20%	**0.71%**	1.42%	**14.91%**	15.03%	**1.40%**	2.27%
90 or more days past due and government guaranteed[c]	**–**	–	**–**	–	**6,056**	7,544	**–**	–	**6,056**	7,544
Nonaccrual loans	**867**	938	**1,324**	1,590	**1,752**	2,190	**751**	1,036	**4,694**	5,754
Current estimated LTV ratios[d][e][f][g]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 42**	$ 37	**$ 123**	$ 252	**$ 56**	$ 97	**$ 2**	$ 4	**$ 223**	$ 390
Less than 660	**3**	6	**29**	65	**65**	72	**12**	28	**109**	171
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**50**	83	**1,294**	2,105	**249**	478	**25**	76	**1,618**	2,742
Less than 660	**23**	40	**411**	651	**190**	282	**101**	207	**725**	1,180
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**311**	466	**4,226**	5,849	**3,013**	2,686	**146**	382	**7,696**	9,383
Less than 660	**142**	206	**1,267**	1,647	**597**	838	**399**	703	**2,405**	3,394
Less than 80% and refreshed FICO scores:										
Equal to or greater than 660	**11,721**	12,588	**17,927**	19,435	**140,942**	82,350	**1,299**	1,624	**171,889**	115,997
Less than 660	**1,942**	2,184	**2,992**	3,326	**5,280**	4,872	**1,517**	1,795	**11,731**	12,177
No FICO/LTV available	**614**	757	**2,442**	3,045	**1,469**	1,136	**189**	237	**4,714**	5,175
U.S. government-guaranteed	**–**	–	**–**	–	**10,688**	12,110	**–**	–	**10,688**	12,110
Total retained loans	**$ 14,848**	$ 16,367	**$ 30,711**	$ 36,375	**$ 162,549**	$104,921	**$ 3,690**	$ 5,056	**$ 211,798**	$ 162,719
Geographic region										
California	**$ 2,072**	$ 2,232	**$ 6,873**	$ 8,144	**$ 46,745**	$ 28,133	**$ 518**	$ 718	**$ 56,208**	$ 39,227
New York	**2,583**	2,805	**6,564**	7,685	**20,941**	16,550	**521**	677	**30,609**	27,717
Illinois	**1,189**	1,306	**2,231**	2,605	**11,379**	6,654	**145**	207	**14,944**	10,772
Texas	**1,581**	1,845	**951**	1,087	**8,986**	4,935	**142**	177	**11,660**	8,044
Florida	**797**	861	**1,612**	1,923	**6,763**	5,106	**414**	632	**9,586**	8,522
New Jersey	**647**	654	**1,943**	2,233	**5,395**	3,361	**172**	227	**8,157**	6,475
Washington	**442**	506	**1,009**	1,216	**4,097**	2,410	**79**	109	**5,627**	4,241
Arizona	**815**	927	**1,328**	1,595	**3,081**	1,805	**74**	112	**5,298**	4,439
Michigan	**650**	736	**700**	848	**1,866**	1,203	**79**	121	**3,295**	2,908
Ohio	**1,014**	1,150	**638**	778	**1,166**	615	**81**	112	**2,899**	2,655
All other[h]	**3,058**	3,345	**6,862**	8,261	**52,130**	34,149	**1,465**	1,964	**63,515**	47,719
Total retained loans	**$ 14,848**	$ 16,367	**$ 30,711**	$ 36,375	**$ 162,549**	$104,921	**$ 3,690**	$ 5,056	**$ 211,798**	$ 162,719

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included $2.6 billion and $2.6 billion; 30–149 days past due included $3.2 billion and $3.5 billion; and 150 or more days past due included $4.9 billion and $6.0 billion at December 31, 2015 and 2014, respectively.

(b) At December 31, 2015 and 2014, Prime, including option ARMs loans excluded mortgage loans insured by U.S. government agencies of $8.1 billion and $9.5 billion, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

(c) These balances, which are 90 days or more past due, were excluded from nonaccrual loans as the loans are guaranteed by U.S government agencies. Typically the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting agreed-upon servicing guidelines. At December 31, 2015 and 2014, these balances included $3.4 billion and $4.2 billion, respectively, of loans that are no longer accruing interest based on the agreed-upon servicing guidelines. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate. There were no loans not guaranteed by U.S. government agencies that are 90 or more days past due and still accruing at December 31, 2015 and 2014.

(d) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Effective December 31, 2015, the current estimated LTV ratios reflect updates to the nationally recognized home price index valuation estimates incorporated into the Firm's home valuation models. The prior period ratios have been revised to conform with these updates in the home price index.

(e) Junior lien represents combined LTV, which considers all available lien positions, as well as unused lines, related to the property. All other products are presented without consideration of subordinate liens on the property.

(f) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(g) The current period current estimated LTV ratios disclosures have been updated to reflect where either the FICO score or estimated property value is unavailable. The prior period amounts have been revised to conform with the current presentation.

(h) At December 31, 2015 and 2014, included mortgage loans insured by U.S. government agencies of $10.7 billion and $12.1 billion, respectively.

(i) Includes residential real estate loans to private banking clients in AM, for which the primary credit quality indicators are the borrower's financial position and LTV.

The following table represent the Firm's delinquency statistics for junior lien home equity loans and lines as of December 31, 2015 and 2014.

	Total loans		Total 30+ day delinquency rate	
December 31,				
(in millions, except ratios)	**2015**	2014	**2015**	2014
HELOCs:[a]				
Within the revolving period[b]	**$ 17,050**	**$ 25,252**	**1.57%**	**1.75%**
Beyond the revolving period	**11,252**	**7,979**	**3.10**	**3.16**
HELOANs	**2,409**	**3,144**	**3.03**	**3.34**
Total	**$ 30,711**	**$ 36,375**	**2.25%**	**2.20%**

(a) These HELOCs are predominantly revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period, but also include HELOCs originated by Washington Mutual that allow interest-only payments beyond the revolving period.

(b) The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty or when the collateral does not support the loan amount.

Home equity lines of credit ("HELOCs") beyond the revolving period and home equity loans ("HELOANs") have higher delinquency rates than do HELOCs within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the loss estimates produced by the Firm's delinquency roll-rate methodology, which estimates defaults based on the current delinquency status of a portfolio.

Impaired loans

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15.

	Home equity				Mortgages				Total residential real estate - excluding PCI	
	Senior lien		Junior lien		Prime, including option ARMs		Subprime			
December 31, (in millions)	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Impaired loans										
With an allowance	**$ 557**	$ 552	**$ 736**	$ 722	**$ 3,850**	$ 4,949	**$ 1,393**	$ 2,239	**$ 6,536**	$ 8,462
Without an allowance[a]	**491**	549	**574**	582	**976**	1,196	**471**	639	**2,512**	2,966
Total impaired loans[b][c]	**$ 1,048**	$ 1,101	**$ 1,310**	$ 1,304	**$ 4,826**	$ 6,145	**$ 1,864**	$ 2,878	**$ 9,048**	$ 11,428
Allowance for loan losses related to impaired loans	**$ 53**	$ 84	**$ 85**	$ 147	**$ 93**	$ 127	**$ 15**	$ 64	**$ 246**	$ 422
Unpaid principal balance of impaired loans[d]	**1,370**	1,451	**2,590**	2,603	**6,225**	7,813	**2,857**	4,200	**13,042**	16,067
Impaired loans on nonaccrual status[e]	**581**	628	**639**	632	**1,287**	1,559	**670**	931	**3,177**	3,750

(a) Represents collateral-dependent residential mortgage loans that are charged off to the fair value of the underlying collateral less cost to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual TDRs, regardless of their delinquency status. At December 31, 2015, Chapter 7 residential real estate loans included approximately 17% of senior lien home equity, 9% of junior lien home equity, 18% of prime mortgages, including option ARMs, and 15% of subprime mortgages that were 30 days or more past due.

(b) At December 31, 2015 and 2014, $3.8 billion and $4.9 billion, respectively, of loans modified subsequent to repurchase from Government National Mortgage Association ("Ginnie Mae") in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure.

(c) Predominantly all residential real estate impaired loans, excluding PCI loans, are in the U.S.

(d) Represents the contractual amount of principal owed at December 31, 2015 and 2014. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.

(e) As of December 31, 2015 and 2014, nonaccrual loans included $2.5 billion and $2.9 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status refer to the Loan accounting framework on pages 242–244 of this Note.

The following table presents average impaired loans and the related interest income reported by the Firm.

Year ended December 31,	Average impaired loans			Interest income on impaired loans[a]			Interest income on impaired loans on a cash basis[a]		
(in millions)	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Home equity									
Senior lien	**$ 1,077**	$ 1,122	$ 1,151	**$ 51**	$ 55	$ 59	**$ 35**	$ 37	$ 40
Junior lien	**1,292**	1,313	1,297	**77**	82	82	**50**	53	55
Mortgages									
Prime, including option ARMs	**5,397**	6,730	7,214	**217**	262	280	**46**	54	59
Subprime	**2,300**	3,444	3,798	**131**	182	200	**41**	51	55
Total residential real estate – excluding PCI	**$ 10,066**	$ 12,609	$ 13,460	**$ 476**	$ 581	$ 621	**$ 172**	$ 195	$ 209

(a) Generally, interest income on loans modified in TDRs is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms.

Loan modifications

Modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

The following table presents new TDRs reported by the Firm.

Year ended December 31, (in millions)	**2015**	2014	2013
Home equity:			
Senior lien	**$ 108**	$ 110	$ 210
Junior lien	**293**	211	388
Mortgages:			
Prime, including option ARMs	**209**	287	770
Subprime	**58**	124	319
Total residential real estate – excluding PCI	**$ 668**	$ 732	$ 1,687

Nature and extent of modifications

The U.S. Treasury's Making Home Affordable ("MHA") programs, as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following table provides information about how residential real estate loans, excluding PCI loans, were modified under the Firm's loss mitigation programs during the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

	Home equity						Mortgages								
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			Total residential real estate – excluding PCI		
Year ended Dec. 31,	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Number of loans approved for a trial modification	**1,345**	939	1,719	**2,588**	626	884	**1,103**	1,052	2,846	**1,608**	2,056	4,233	**6,644**	4,673	9,682
Number of loans permanently modified	**1,096**	1,171	1,765	**3,200**	2,813	5,040	**1,495**	2,507	4,356	**1,650**	3,141	5,364	**7,441**	9,632	16,525
Concession granted:[(a)]															
Interest rate reduction	**75%**	53%	70%	**63%**	84%	88%	**72%**	43%	73%	**71%**	47%	72%	**68%**	58%	77%
Term or payment extension	**86**	67	76	**90**	83	80	**80**	51	73	**82**	53	56	**86**	63	70
Principal and/or interest deferred	**32**	16	12	**19**	23	24	**34**	19	30	**21**	12	13	**24**	18	21
Principal forgiveness	**4**	36	38	**8**	22	32	**24**	51	38	**31**	53	48	**16**	41	39
Other[(b)]	**–**	–	–	**–**	–	–	**9**	10	23	**13**	10	14	**5**	6	11

(a) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession. A significant portion of trial modifications include interest rate reductions and/or term or payment extensions.

(b) Represents variable interest rate to fixed interest rate modifications.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under the Firm's loss mitigation programs and about redefaults of certain loans modified in TDRs for the periods presented. Because the specific types and amounts of concessions offered to borrowers frequently change between the trial modification and the permanent modification, the following table presents only the financial effects of permanent modifications. This table also excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

Year ended December 31, (in millions, except weighted-average data and number of loans)	Home equity						Mortgages								
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			Total residential real estate – excluding PCI		
	2015	2014	2013	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Weighted-average interest rate of loans with interest rate reductions – before TDR	**5.69%**	6.38%	6.35%	**4.93%**	4.81%	5.05%	**5.03%**	4.82%	5.28%	**6.67%**	7.16%	7.33%	**5.51%**	5.61%	5.88%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**2.70**	3.03	3.23	**2.17**	2.00	2.14	**2.55**	2.69	2.77	**3.15**	3.37	3.52	**2.64**	2.78	2.92
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**17**	17	19	**18**	19	20	**25**	25	25	**24**	24	24	**22**	23	23
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**32**	30	31	**36**	35	34	**37**	37	37	**36**	36	35	**36**	36	36
Charge-offs recognized upon permanent modification	**$ 1**	$ 2	$ 7	**$ 3**	$ 25	$ 70	**$ 9**	$ 9	$ 16	**$ 2**	$ 3	$ 5	**$ 15**	$ 39	$ 98
Principal deferred	**13**	5	7	**14**	11	24	**41**	39	129	**17**	19	43	**85**	74	203
Principal forgiven	**2**	14	30	**4**	21	51	**34**	83	206	**32**	89	218	**72**	207	505
Balance of loans that redefaulted within one year of permanent modification[(a)]	**$ 14**	$ 19	$ 26	**$ 7**	$ 10	$ 20	**$ 75**	$ 121	$ 164	**$ 58**	$ 93	$ 106	**$ 154**	$ 243	$ 316

(a) Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

At December 31, 2015, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 10 years for senior lien home equity, 9 years for junior lien home equity, 10 years for prime mortgages, including option ARMs, and 8 years for subprime mortgage. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

Active and suspended foreclosure

At December 31, 2015 and 2014, the Firm had non-PCI residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $1.2 billion and $1.5 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Other consumer loans

The table below provides information for other consumer retained loan classes, including auto, business banking and student loans.

December 31, (in millions, except ratios)	Auto		Business banking		Student and other		Total other consumer	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014
Loan delinquency[a]								
Current	**$59,442**	$53,866	**$20,887**	$19,710	**$ 9,405**	$10,080	**$ 89,734**	$83,656
30–119 days past due	**804**	663	**215**	208	**445**	576	**1,464**	1,447
120 or more days past due	**9**	7	**106**	140	**246**	314	**361**	461
Total retained loans	**$60,255**	$54,536	**$21,208**	$20,058	**$10,096**	$10,970	**$ 91,559**	$85,564
% of 30+ days past due to total retained loans	**1.35%**	1.23%	**1.51%**	1.73%	**1.63%** [d]	2.15% [d]	**1.42%** [d]	1.47% [d]
90 or more days past due and still accruing [b]	**$ –**	$ –	**$ –**	$ –	**$ 290**	$ 367	**$ 290**	$ 367
Nonaccrual loans	**116**	115	**263**	279	**242**	270	**621**	664
Geographic region								
California	**$ 7,186**	$ 6,294	**$ 3,530**	$ 3,008	**$ 1,051**	$ 1,143	**$ 11,767**	$10,445
New York	**3,874**	3,662	**3,359**	3,187	**1,224**	1,259	**8,457**	8,108
Illinois	**3,678**	3,175	**1,459**	1,373	**679**	729	**5,816**	5,277
Texas	**6,457**	5,608	**2,622**	2,626	**839**	868	**9,918**	9,102
Florida	**2,843**	2,301	**941**	827	**516**	521	**4,300**	3,649
New Jersey	**1,998**	1,945	**500**	451	**366**	378	**2,864**	2,774
Washington	**1,135**	1,019	**264**	258	**212**	235	**1,611**	1,512
Arizona	**2,033**	2,003	**1,205**	1,083	**236**	239	**3,474**	3,325
Michigan	**1,550**	1,633	**1,361**	1,375	**415**	466	**3,326**	3,474
Ohio	**2,340**	2,157	**1,363**	1,354	**559**	629	**4,262**	4,140
All other	**27,161**	24,739	**4,604**	4,516	**3,999**	4,503	**35,764**	33,758
Total retained loans	**$60,255**	$54,536	**$21,208**	$20,058	**$10,096**	$10,970	**$ 91,559**	$85,564
Loans by risk ratings[c]								
Noncriticized	**$11,277**	$ 9,822	**$15,505**	$14,619	**NA**	NA	**$ 26,782**	$24,441
Criticized performing	**76**	35	**815**	708	**NA**	NA	**891**	743
Criticized nonaccrual	**–**	–	**210**	213	**NA**	NA	**210**	213

(a) Student loan delinquency classifications included loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") as follows: current included $3.8 billion and $4.3 billion; 30-119 days past due included $299 million and $364 million; and 120 or more days past due included $227 million and $290 million at December 31, 2015 and 2014, respectively.

(b) These amounts represent student loans, which are insured by U.S. government agencies under the FFELP. These amounts were accruing as reimbursement of insured amounts is proceeding normally.

(c) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.

(d) December 31, 2015 and 2014, excluded loans 30 days or more past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $526 million and $654 million, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

Other consumer impaired loans and loan modifications

The table below sets forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

December 31, (in millions)	2015	2014
Impaired loans		
With an allowance	**$ 527**	$ 557
Without an allowance[a]	**31**	35
Total impaired loans[b][c]	**$ 558**	$ 592
Allowance for loan losses related to impaired loans	**$ 118**	$ 117
Unpaid principal balance of impaired loans[d]	**668**	719
Impaired loans on nonaccrual status	**449**	456

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) Predominantly all other consumer impaired loans are in the U.S.
(c) Other consumer average impaired loans were $566 million, $599 million and $648 million for the years ended December 31, 2015, 2014 and 2013, respectively. The related interest income on impaired loans, including those on a cash basis, was not material for the years ended December 31, 2015, 2014 and 2013.
(d) Represents the contractual amount of principal owed at December 31, 2015 and 2014. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the principal balance; net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.

Loan modifications

Certain other consumer loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All of these TDRs are reported as impaired loans in the table above.

The following table provides information about the Firm's other consumer loans modified in TDRs. New TDRs were not material for the years ended December 31, 2015 and 2014.

December 31, (in millions)	2015	2014
Loans modified in TDRs[a][b]	**$ 384**	$ 442
TDRs on nonaccrual status	**275**	306

(a) The impact of these modifications was not material to the Firm for the years ended December 31, 2015 and 2014.
(b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2015 and 2014 were immaterial.

Purchased credit-impaired loans

PCI loans are initially recorded at fair value at acquisition. PCI loans acquired in the same fiscal quarter may be aggregated into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer PCI loans were aggregated into pools of loans with common risk characteristics.

On a quarterly basis, the Firm estimates the total cash flows (both principal and interest) expected to be collected over the remaining life of each pool. These estimates incorporate assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that reflect then-current market conditions. Probable decreases in expected cash flows (i.e., increased credit losses) trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related foregone interest cash flows, discounted at the pool's effective interest rate. Impairments are recognized through the provision for credit losses and an increase in the allowance for loan losses. Probable and significant increases in expected cash flows (e.g., decreased credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans. The impacts of (i) prepayments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are recognized prospectively as adjustments to interest income.

The Firm continues to modify certain PCI loans. The impact of these modifications is incorporated into the Firm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans. In evaluating the effect of modifications on expected cash flows, the Firm incorporates the effect of any foregone interest and also considers the potential for redefault. The Firm develops product-specific probability of default estimates, which are used to compute expected credit losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment based upon industry-wide data. The Firm also considers its own historical loss experience to-date based on actual redefaulted modified PCI loans.

The excess of cash flows expected to be collected over the carrying value of the underlying loans is referred to as the accretable yield. This amount is not reported on the Firm's Consolidated balance sheets but is accreted into interest income at a level rate of return over the remaining estimated lives of the underlying pools of loans.

If the timing and/or amounts of expected cash flows on PCI loans were determined not to be reasonably estimable, no interest would be accreted and the loans would be reported as nonaccrual loans; however, since the timing and amounts of expected cash flows for the Firm's PCI consumer loans are reasonably estimable, interest is being accreted and the loans are being reported as performing loans.

The liquidation of PCI loans, which may include sales of loans, receipt of payment in full from the borrower, or foreclosure, results in removal of the loans from the underlying PCI pool. When the amount of the liquidation proceeds (e.g., cash, real estate), if any, is less than the unpaid principal balance of the loan, the difference is first applied against the PCI pool's nonaccretable difference for principal losses (i.e., the lifetime credit loss estimate established as a purchase accounting adjustment at the acquisition date). When the nonaccretable difference for a particular loan pool has been fully depleted, any excess of the unpaid principal balance of the loan over the liquidation proceeds is written off against the PCI pool's allowance for loan losses. Beginning in 2014, write-offs of PCI loans also include other adjustments, primarily related to interest forgiveness modifications. Because the Firm's PCI loans are accounted for at a pool level, the Firm does not recognize charge-offs of PCI loans when they reach specified stages of delinquency (i.e., unlike non-PCI consumer loans, these loans are not charged off based on FFIEC standards).

The PCI portfolio affects the Firm's results of operations primarily through: (i) contribution to net interest margin; (ii) expense related to defaults and servicing resulting from the liquidation of the loans; and (iii) any provision for loan losses. The PCI loans acquired in the Washington Mutual transaction were funded based on the interest rate characteristics of the loans. For example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with fixed-rate liabilities with a similar maturity profile. A net spread will be earned on the declining balance of the portfolio, which is estimated as of December 31, 2015, to have a remaining weighted-average life of 9 years.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

December 31, (in millions, except ratios)	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Carrying value[a]	**$14,989**	$17,095	**$ 8,893**	$10,220	**$ 3,263**	$ 3,673	**$13,853**	$15,708	**$40,998**	$46,696
Related allowance for loan losses[b]	**1,708**	1,758	**985**	1,193	**–**	180	**49**	194	**2,742**	3,325
Loan delinquency (based on unpaid principal balance)										
Current	**$14,387**	$16,295	**$ 7,894**	$ 8,912	**$ 3,232**	$ 3,565	**$12,370**	$13,814	**$37,883**	$42,586
30–149 days past due	**322**	445	**424**	500	**439**	536	**711**	858	**1,896**	2,339
150 or more days past due	**633**	1,000	**601**	837	**380**	551	**1,272**	1,824	**2,886**	4,212
Total loans	**$15,342**	$17,740	**$ 8,919**	$10,249	**$ 4,051**	$ 4,652	**$14,353**	$16,496	**$42,665**	$49,137
% of 30+ days past due to total loans	**6.22%**	8.15%	**11.49%**	13.05%	**20.22%**	23.37%	**13.82%**	16.26%	**11.21%**	13.33%
Current estimated LTV ratios (based on unpaid principal balance)[c][d][e]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 153**	$ 301	**$ 10**	$ 22	**$ 10**	$ 22	**$ 19**	$ 50	**$ 192**	$ 395
Less than 660	**80**	159	**28**	52	**55**	106	**36**	84	**199**	401
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**942**	1,448	**120**	268	**77**	144	**166**	330	**1,305**	2,190
Less than 660	**444**	728	**152**	284	**220**	390	**239**	448	**1,055**	1,850
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**2,709**	3,591	**816**	1,405	**331**	451	**977**	1,695	**4,833**	7,142
Less than 660	**1,136**	1,485	**614**	969	**643**	911	**1,050**	1,610	**3,443**	4,975
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	**6,724**	6,626	**4,243**	4,211	**863**	787	**7,073**	7,053	**18,903**	18,677
Less than 660	**2,265**	2,308	**2,438**	2,427	**1,642**	1,585	**4,065**	4,291	**10,410**	10,611
No FICO/LTV available	**889**	1,094	**498**	611	**210**	256	**728**	935	**2,325**	2,896
Total unpaid principal balance	**$15,342**	$17,740	**$ 8,919**	$10,249	**$ 4,051**	$ 4,652	**$14,353**	$16,496	**$42,665**	$49,137
Geographic region (based on unpaid principal balance)										
California	**$ 9,205**	$10,671	**$ 5,172**	$ 5,965	**$ 1,005**	$ 1,138	**$ 8,108**	$ 9,190	**$23,490**	$26,964
New York	**788**	876	**580**	672	**400**	463	**813**	933	**2,581**	2,944
Illinois	**358**	405	**263**	301	**196**	229	**333**	397	**1,150**	1,332
Texas	**224**	273	**94**	92	**243**	281	**75**	85	**636**	731
Florida	**1,479**	1,696	**586**	689	**373**	432	**1,183**	1,440	**3,621**	4,257
New Jersey	**310**	348	**238**	279	**139**	165	**470**	553	**1,157**	1,345
Washington	**819**	959	**194**	225	**81**	95	**339**	395	**1,433**	1,674
Arizona	**281**	323	**143**	167	**76**	85	**203**	227	**703**	802
Michigan	**44**	53	**141**	166	**113**	130	**150**	182	**448**	531
Ohio	**17**	20	**45**	48	**62**	72	**61**	69	**185**	209
All other	**1,817**	2,116	**1,463**	1,645	**1,363**	1,562	**2,618**	3,025	**7,261**	8,348
Total unpaid principal balance	**$15,342**	$17,740	**$ 8,919**	$10,249	**$ 4,051**	$ 4,652	**$14,353**	$16,496	**$42,665**	$49,137

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.

(b) Management concluded as part of the Firm's regular assessment of the PCI loan pools that it was probable that higher expected credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property. Effective December 31, 2015, the current estimated LTV ratios reflect updates to the nationally recognized home price index valuation estimates incorporated into the Firm's home valuation models. The prior period ratios have been revised to conform with these updates in the home price index.

(d) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(e) The current period current estimated LTV ratios disclosures have been updated to reflect where either the FICO score or estimated property value is unavailable. The prior period amounts have been revised to conform with the current presentation.

Approximately 23% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following table sets forth delinquency statistics for PCI junior lien home equity loans and lines of credit based on the unpaid principal balance as of December 31, 2015 and 2014.

	Total loans		Total 30+ day delinquency rate	
December 31, (in millions, except ratios)	**2015**	2014	**2015**	2014
HELOCs:[a]				
Within the revolving period[b]	**$ 5,000**	$ 8,972	**4.10%**	6.42%
Beyond the revolving period[c]	**6,252**	4,143	**4.46**	6.42
HELOANs	**582**	736	**5.33**	8.83
Total	**$ 11,834**	$ 13,851	**4.35%**	6.55%

(a) In general, these HELOCs are revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.
(b) Substantially all undrawn HELOCs within the revolving period have been closed.
(c) Includes loans modified into fixed-rate amortizing loans.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the years ended December 31, 2015, 2014 and 2013, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. The table excludes the cost to fund the PCI portfolios, and therefore the accretable yield does not represent net interest income expected to be earned on these portfolios.

Year ended December 31, (in millions, except ratios)	Total PCI		
	2015	2014	2013
Beginning balance	**$ 14,592**	$ 16,167	$ 18,457
Accretion into interest income	**(1,700)**	(1,934)	(2,201)
Changes in interest rates on variable-rate loans	**279**	(174)	(287)
Other changes in expected cash flows[a]	**230**	533	198
Reclassification from nonaccretable difference[b]	**90**	–	–
Balance at December 31	**$ 13,491**	$ 14,592	$ 16,167
Accretable yield percentage	**4.20%**	4.19%	4.31%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model and periodically updates model assumptions. For the years ended December 31, 2015 and December 31, 2014, other changes in expected cash flows were driven by changes in prepayment assumptions. For the year ended December 31, 2013, other changes in expected cash flows were due to refining the expected interest cash flows on HELOCs with balloon payments, partially offset by changes in prepayment assumptions.
(b) Reclassifications from the nonaccretable difference in the year ended December 31, 2015 were driven by continued improvement in home prices and delinquencies, as well as increased granularity in the impairment estimates.

The factors that most significantly affect estimates of gross cash flows expected to be collected, and accordingly the accretable yield balance, include: (i) changes in the benchmark interest rate indices for variable-rate products such as option ARM and home equity loans; and (ii) changes in prepayment assumptions.

Active and suspended foreclosure

At December 31, 2015 and 2014, the Firm had PCI residential real estate loans with an unpaid principal balance of $2.3 billion and $3.2 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30 days past due); information on those borrowers that have been delinquent for a longer period of time (90 days past due) is also considered. In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, the Firm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends to be a lagging indicator. However, the distribution of such scores provides a general indicator of credit quality trends within the portfolio. Refreshed FICO score information, which is obtained at least quarterly, for a statistically significant random sample of the credit card portfolio is indicated in the table below; FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in credit score technology.

The table below sets forth information about the Firm's credit card loans.

As of or for the year ended December 31, (in millions, except ratios)	2015	2014
Net charge-offs	**$ 3,122**	$ 3,429
% of net charge-offs to retained loans	**2.51%**	2.75%
Loan delinquency		
Current and less than 30 days past due and still accruing	**$ 129,502**	$ 126,189
30–89 days past due and still accruing	**941**	943
90 or more days past due and still accruing	**944**	895
Total retained credit card loans	**$ 131,387**	$ 128,027
Loan delinquency ratios		
% of 30+ days past due to total retained loans	**1.43%**	1.44%
% of 90+ days past due to total retained loans	**0.72**	0.70
Credit card loans by geographic region		
California	**$ 18,802**	$ 17,940
Texas	**11,847**	11,088
New York	**11,360**	10,940
Florida	**7,806**	7,398
Illinois	**7,655**	7,497
New Jersey	**5,879**	5,750
Ohio	**4,700**	4,707
Pennsylvania	**4,533**	4,489
Michigan	**3,562**	3,552
Colorado	**3,399**	3,226
All other	**51,844**	51,440
Total retained credit card loans	**$ 131,387**	$ 128,027
Percentage of portfolio based on carrying value with estimated refreshed FICO scores		
Equal to or greater than 660	**84.4%**	85.7%
Less than 660	**15.6**	14.3

Credit card impaired loans and loan modifications

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

December 31, (in millions)	2015	2014
Impaired credit card loans with an allowance[a][b]		
Credit card loans with modified payment terms[c]	**$ 1,286**	$ 1,775
Modified credit card loans that have reverted to pre-modification payment terms[d]	**179**	254
Total impaired credit card loans[e]	**$ 1,465**	$ 2,029
Allowance for loan losses related to impaired credit card loans	**$ 460**	$ 500

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
(b) There were no impaired loans without an allowance.
(c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.
(d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At December 31, 2015 and 2014, $113 million and $159 million, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. The remaining $66 million and $95 million at December 31, 2015 and 2014, respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.
(e) Predominantly all impaired credit card loans are in the U.S.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

Year ended December 31, (in millions)	2015	2014	2013
Average impaired credit card loans	**$ 1,710**	$ 2,503	$ 3,882
Interest income on impaired credit card loans	**82**	123	198

Loan modifications

JPMorgan Chase may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. Most of the credit card loans have been modified under long-term programs for borrowers who are experiencing financial difficulties. Modifications under long-term programs involve placing the customer on a fixed payment plan, generally for 60 months. The Firm may also offer short-term programs for borrowers who may be in need of temporary relief; however, none are currently being offered. Modifications under all short- and long-term programs typically include reducing the interest rate on the credit card. Substantially all modifications are considered to be TDRs.

If the cardholder does not comply with the modified payment terms, then the credit card loan agreement reverts back to its pre-modification payment terms. Assuming that the cardholder does not begin to perform in accordance with those payment terms, the loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In addition, if a borrower successfully completes a short-term modification program, then the loan reverts back to its pre-modification payment terms. However, in most cases, the Firm does not reinstate the borrower's line of credit.

New enrollments in these loan modification programs for the years ended December 31, 2015, 2014 and 2013, were $638 million, $807 million and $1.2 billion, respectively.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the periods presented.

Year ended December 31, (in millions, except weighted-average data)	2015	2014	2013
Weighted-average interest rate of loans – before TDR	**15.08%**	14.96%	15.37%
Weighted-average interest rate of loans – after TDR	**4.40**	4.40	4.38
Loans that redefaulted within one year of modification[a]	**$ 85**	$ 119	$ 167

(a) Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default is deemed to have occurred when the loans become two payments past due. A substantial portion of these loans is expected to be charged-off in accordance with the Firm's standard charge-off policy. Based on historical experience, the estimated weighted-average default rate for credit card loans modified was expected to be 25.61%, 27.91% and 30.72% as of December 31, 2015, 2014 and 2013, respectively.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the probability of default ("PD") and the loss given default ("LGD"). The PD is the likelihood that a loan will default and not be fully repaid by the borrower. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. The Firm's definition of criticized aligns with the banking regulatory definition of criticized exposures, which consist of special mention, substandard and doubtful categories. Risk ratings generally represent ratings profiles similar to those defined by S&P and Moody's. Investment-grade ratings range from "AAA/Aaa" to "BBB-/Baa3." Noninvestment-grade ratings

are classified as noncriticized ("BB+/Ba1 and B-/B3") and criticized ("CCC+"/"Caa1 and below"), and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note 5 for further detail on industry concentrations.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

As of or for the year ended December 31, (in millions, except ratios)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other[e]		Total retained loans	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Loans by risk ratings												
Investment grade	**$ 62,150**	$ 63,069	**$74,330**	$61,006	**$21,786**	$ 27,111	**$11,363**	$8,393	**$ 98,107**	$ 82,087	**$267,736**	$241,666
Noninvestment grade:												
Noncriticized	**45,632**	44,117	**17,008**	16,541	**7,667**	7,093 [d]	**256**	300	**11,390**	10,067 [d]	**81,953**	78,118
Criticized performing	**4,542**	2,251	**1,251**	1,313	**320**	316	**7**	3	**253**	236	**6,373**	4,119
Criticized nonaccrual	**608**	188	**231**	253	**10**	18	**–**	–	**139**	140	**988**	599
Total noninvestment grade	**50,782**	46,556	**18,490**	18,107	**7,997**	7,427 [d]	**263**	303	**11,782**	10,443 [d]	**89,314**	82,836
Total retained loans	**$112,932**	$109,625	**$92,820**	$79,113	**$29,783**	$ 34,538 [d]	**$11,626**	$8,696	**$109,889**	$ 92,530 [d]	**$357,050**	$324,502
% of total criticized to total retained loans	**4.56%**	2.22%	**1.60 %**	1.98 %	**1.11 %**	0.97 %	**0.06 %**	0.03%	**0.36%**	0.41 %	**2.06%**	1.45%
% of nonaccrual loans to total retained loans	**0.54**	0.17	**0.25**	0.32	**0.03**	0.05	**–**	–	**0.13**	0.15	**0.28**	0.18
Loans by geographic distribution[a]												
Total non-U.S.	**$ 30,063**	$ 33,739	**$ 3,003**	$ 2,099	**$17,166**	$ 20,944	**$ 1,788**	$1,122	**$ 42,031**	$ 42,961	**$ 94,051**	$100,865
Total U.S.	**82,869**	75,886	**89,817**	77,014	**12,617**	13,594 [d]	**9,838**	7,574	**67,858**	49,569 [d]	**262,999**	223,637
Total retained loans	**$112,932**	$109,625	**$92,820**	$79,113	**$29,783**	$ 34,538 [d]	**$11,626**	$8,696	**$109,889**	$ 92,530 [d]	**$357,050**	$324,502
Net charge-offs/ (recoveries)	**$ 26**	$ 22	**$ (14)**	$ (9)	**$ (5)**	$ (12)	**$ (8)**	$ 25	**$ 11**	$ (14)	**$ 10**	$ 12
% of net charge-offs/ (recoveries) to end-of-period retained loans	**0.02%**	0.02%	**(0.02)%**	(0.01)%	**(0.02)%**	(0.04) %	**(0.07)%**	0.29%	**0.01%**	(0.02) %	**–%**	–%
Loan delinquency[b]												
Current and less than 30 days past due and still accruing	**$112,058**	$108,857	**$92,381**	$78,552	**$29,713**	$ 34,416 [d]	**$11,565**	$8,627	**$108,734**	$ 91,160 [d]	**$354,451**	$321,612
30–89 days past due and still accruing	**259**	566	**193**	275	**49**	104	**55**	69	**988**	1,201	**1,544**	2,215
90 or more days past due and still accruing[c]	**7**	14	**15**	33	**11**	–	**6**	–	**28**	29	**67**	76
Criticized nonaccrual	**608**	188	**231**	253	**10**	18	**–**	–	**139**	140	**988**	599
Total retained loans	**$112,932**	$109,625	**$92,820**	$79,113	**$29,783**	$ 34,538 [d]	**$11,626**	$8,696	**$109,889**	$ 92,530 [d]	**$357,050**	$324,502

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality.
(c) Represents loans that are considered well-collateralized and therefore still accruing interest.
(d) Effective in the fourth quarter 2015, the Firm realigned its wholesale industry divisions in order to better monitor and manage industry concentrations. Prior period amounts have been revised to conform with current period presentation. For additional information, see Wholesale credit portfolio on pages 122–129.
(e) Other includes: individuals; SPEs; holding companies; and private education and civic organizations. For more information on exposures to SPEs, see Note 16.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio segment for the periods indicated. The real estate class primarily consists of secured commercial loans mainly to borrowers for multi-family and commercial lessor properties. Multifamily lending specifically finances apartment buildings. Commercial lessors receive financing specifically for real estate leased to retail, office and industrial tenants. Commercial construction and development loans represent financing for the construction of apartments, office and professional buildings and malls. Other real estate loans include lodging, real estate investment trusts ("REITs"), single-family, homebuilders and other real estate.

December 31, (in millions, except ratios)	Multifamily		Commercial lessors		Commercial construction and development		Other		Total real estate loans	
	2015	2014	**2015**	2014	**2015**	**2014**	**2015**	**2014**	**2015**	**2014**
Real estate retained loans	**$ 60,290**	$ 51,049	**$ 20,062**	$ 17,438	**$ 4,920**	$ 4,264	**$ 7,548**	$ 6,362	**$ 92,820**	$ 79,113
Criticized	**520**	652	**844**	841	**43**	42	**75**	31	**1,482**	1,566
% of criticized to total real estate retained loans	**0.86%**	1.28%	**4.21%**	4.82%	**0.87%**	0.98%	**0.99%**	0.49%	**1.60%**	1.98%
Criticized nonaccrual	**$ 85**	$ 126	**$ 100**	$ 110	**$ 1**	$ –	**$ 45**	$ 17	**$ 231**	$ 253
% of criticized nonaccrual to total real estate retained loans	**0.14%**	0.25%	**0.50%**	0.63%	**0.02%**	–%	**0.60%**	0.27%	**0.25%**	0.32%

Wholesale impaired loans and loan modifications

Wholesale impaired loans consist of loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15.

The table below sets forth information about the Firm's wholesale impaired loans.

December 31, (in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Impaired loans												
With an allowance	**$ 522**	$ 174	**$ 148**	$ 193	**$ 10**	$ 15	**$ –**	$ –	**$ 46**	$ 89	**$ 726**	$ 471
Without an allowance[a]	**98**	24	**106**	87	**–**	3	**–**	–	**94**	52	**298**	166
Total impaired loans	**$ 620**	$ 198	**$ 254**	$ 280	**$ 10**	$ 18	**$ –**	$ –	**$ 140**	$ 141	**$ 1,024** [c]	$ 637 [c]
Allowance for loan losses related to impaired loans	**$ 220**	$ 34	**$ 27**	$ 36	**$ 3**	$ 4	**$ –**	$ –	**$ 24**	$ 13	**$ 274**	$ 87
Unpaid principal balance of impaired loans[b]	**669**	266	**363**	345	**13**	22	**–**	–	**164**	202	**1,209**	835

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.

(b) Represents the contractual amount of principal owed at December 31, 2015 and 2014. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.

(c) Based upon the domicile of the borrower, largely consists of loans in the U.S.

The following table presents the Firm's average impaired loans for the years ended 2015, 2014 and 2013.

Year ended December 31, (in millions)	**2015**	2014	2013
Commercial and industrial	**$ 453**	$ 243	$ 412
Real estate	**250**	297	484
Financial institutions	**13**	20	17
Government agencies	**–**	–	–
Other	**129**	155	211
Total[a]	**$ 845**	$ 715	$ 1,124

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the years ended December 31, 2015, 2014 and 2013.

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above. TDRs were not material as of December 31, 2015 and 2014.

Note 15 – Allowance for credit losses

JPMorgan Chase's allowance for loan losses covers the consumer, including credit card, portfolio segments (primarily scored); and wholesale (risk-rated) portfolio, and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. The allowance for loan losses includes an asset-specific component, a formula-based component and a component related to PCI loans, as described below. Management also estimates an allowance for wholesale and consumer lending-related commitments using methodologies similar to those used to estimate the allowance on the underlying loans. During 2015, the Firm did not make any significant changes to the methodologies or policies used to determine its allowance for credit losses; such policies are described in the following paragraphs.

The asset-specific component of the allowance relates to loans considered to be impaired, which includes loans that have been modified in TDRs as well as risk-rated loans that have been placed on nonaccrual status. To determine the asset-specific component of the allowance, larger loans are evaluated individually, while smaller loans are evaluated as pools using historical loss experience for the respective class of assets. Scored loans (i.e., consumer loans) are pooled by product type, while risk-rated loans (primarily wholesale loans) are segmented by risk rating.

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are reported as an adjustment to the provision for loan losses. In certain cases, the asset-specific allowance is determined using an observable market price, and the allowance is measured as the difference between the recorded investment in the loan and the loan's fair value. Impaired collateral-dependent loans are charged down to the fair value of collateral less costs to sell and therefore may not be subject to an asset-specific reserve as are other impaired loans. See Note 14 for more information about charge-offs and collateral-dependent loans.

The asset-specific component of the allowance for impaired loans that have been modified in TDRs incorporates the effects of foregone interest, if any, in the present value calculation and also incorporates the effect of the modification on the loan's expected cash flows, which considers the potential for redefault. For residential real estate loans modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to date based on actual redefaulted modified loans. For credit card loans modified in TDRs, expected losses incorporate projected redefaults based on the Firm's historical experience by type of modification program. For wholesale loans modified in TDRs, expected losses incorporate redefaults based on management's expectation of the borrower's ability to repay under the modified terms.

The formula-based component is based on a statistical calculation to provide for incurred credit losses in performing risk-rated loans and all consumer loans, except for any loans restructured in TDRs and PCI loans. See Note 14 for more information on PCI loans.

For scored loans, the statistical calculation is performed on pools of loans with similar risk characteristics (e.g., product type) and generally computed by applying loss factors to outstanding principal balances over an estimated loss emergence period. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends.

Loss factors are statistically derived and sensitive to changes in delinquency status, credit scores, collateral values and other risk factors. The Firm uses a number of different forecasting models to estimate both the PD and the loss severity, including delinquency roll rate models and credit loss severity models. In developing PD and loss severity assumptions, the Firm also considers known and anticipated changes in the economic environment, including changes in home prices, unemployment rates and other risk indicators.

A nationally recognized home price index measure is used to estimate both the PD and the loss severity on residential real estate loans at the metropolitan statistical areas ("MSA") level. Loss severity estimates are regularly validated by comparison to actual losses recognized on defaulted loans, market-specific real estate appraisals and property sales activity. The economic impact of potential modifications of residential real estate loans is not included in the statistical calculation because of the uncertainty regarding the type and results of such modifications.

For risk-rated loans, the statistical calculation is the product of an estimated PD and an estimated LGD. These factors are determined based on the credit quality and specific attributes of the Firm's loans and lending-related commitments to each obligor. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm. PD estimates are based on observable external through-the-cycle data, using credit-rating agency default statistics. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle. Estimates of PD and LGD are subject to periodic refinement based on changes to underlying external and Firm-specific historical data.

Management applies judgment within an established framework to adjust the results of applying the statistical calculation described above. The determination of the appropriate adjustment is based on management's view of loss events that have occurred but that are not yet reflected in the loss factors and that relate to current macroeconomic and political conditions, the quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the portfolio. For the scored loan portfolios, adjustments to the statistical calculation are made in part by analyzing the historical loss experience for each major product segment. Factors related to unemployment, home prices, borrower behavior and lien position, the estimated effects of the mortgage foreclosure-related settlement with federal and state officials and uncertainties regarding the ultimate success of loan modifications are incorporated into the calculation, as appropriate. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. In addition, for the risk-rated portfolios, any adjustments made to the statistical calculation take into consideration model imprecision, deteriorating conditions within an industry, product or portfolio type, geographic location, credit concentration, and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation.

Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing consumer and wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods. At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2015, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses inherent in the portfolio).

Allowance for credit losses and related information

The table below summarizes information about the allowances for loan losses, and lending-relating commitments, and includes a breakdown of loans and lending-related commitments by impairment methodology.

	2015			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses				
Beginning balance at January 1,	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Gross charge-offs	1,658	3,488	95	5,241
Gross recoveries	(704)	(366)	(85)	(1,155)
Net charge-offs/(recoveries)	954	3,122	10	4,086
Write-offs of PCI loans[a]	208	–	–	208
Provision for loan losses	(82)	3,122	623	3,663
Other	–	(5)	6	1
Ending balance at December 31,	$ 5,806	$ 3,434	$ 4,315	$ 13,555
Allowance for loan losses by impairment methodology				
Asset-specific[b]	$ 364	$ 460 [c]	$ 274	$ 1,098
Formula-based	2,700	2,974	4,041	9,715
PCI	2,742	–	–	2,742
Total allowance for loan losses	$ 5,806	$ 3,434	$ 4,315	$ 13,555
Loans by impairment methodology				
Asset-specific	$ 9,606	$ 1,465	$ 1,024	$ 12,095
Formula-based	293,751	129,922	356,022	779,695
PCI	40,998	–	4	41,002
Total retained loans	$ 344,355	$ 131,387	$ 357,050	$ 832,792
Impaired collateral-dependent loans				
Net charge-offs	$ 104	$ –	$ 16	$ 120
Loans measured at fair value of collateral less cost to sell	2,566	–	283	2,849
Allowance for lending-related commitments				
Beginning balance at January 1,	$ 13	$ –	$ 609	$ 622
Provision for lending-related commitments	1	–	163	164
Other	–	–	–	–
Ending balance at December 31,	$ 14	$ –	$ 772	$ 786
Allowance for lending-related commitments by impairment methodology				
Asset-specific	$ –	$ –	$ 73	$ 73
Formula-based	14	–	699	713
Total allowance for lending-related commitments	$ 14	$ –	$ 772	$ 786
Lending-related commitments by impairment methodology				
Asset-specific	$ –	$ –	$ 193	$ 193
Formula-based	58,478	515,518	366,206	940,202
Total lending-related commitments	$ 58,478	$ 515,518	$ 366,399	$ 940,395

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation). During the fourth quarter of 2014, the Firm recorded a $291 million adjustment to reduce the PCI allowance and the recorded investment in the Firm's PCI loan portfolio, primarily reflecting the cumulative effect of interest forgiveness modifications. This adjustment had no impact to the Firm's Consolidated statements of income.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(d) Effective January 1, 2015, the Firm no longer includes within its disclosure of wholesale lending-related commitments the unused amount of advised uncommitted lines of credit as it is within the Firm's discretion whether or not to make a loan under these lines, and the Firm's approval is generally required prior to funding. Prior period amounts have been revised to conform with the current period presentation.

(table continued from previous page)

	2014				2013			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
	$ 8,456	$ 3,795	$ 4,013	$ 16,264	$ 12,292	$ 5,501	$ 4,143	$ 21,936
	2,132	3,831	151	6,114	2,754	4,472	241	7,467
	(814)	(402)	(139)	(1,355)	(847)	(593)	(225)	(1,665)
	1,318	3,429	12	4,759	1,907	3,879	16	5,802
	533	–	–	533	53	–	–	53
	414	3,079	(269)	3,224	(1,872)	2,179	(119)	188
	31	(6)	(36)	(11)	(4)	(6)	5	(5)
	$ 7,050	$ 3,439	$ 3,696	$ 14,185	$ 8,456	$ 3,795	$ 4,013	$ 16,264
	$ 539	$ 500 [c]	$ 87	$ 1,126	$ 601	$ 971 [c]	$ 181	$ 1,753
	3,186	2,939	3,609	9,734	3,697	2,824	3,832	10,353
	3,325	–	–	3,325	4,158	–	–	4,158
	$ 7,050	$ 3,439	$ 3,696	$ 14,185	$ 8,456	$ 3,795	$ 4,013	$ 16,264
	$ 12,020	$ 2,029	$ 637	$ 14,686	$ 13,785	$ 3,115	$ 845	$ 17,745
	236,263	125,998	323,861	686,122	221,609	124,350	307,412	653,371
	46,696	–	4	46,700	53,055	–	6	53,061
	$ 294,979	$ 128,027	$ 324,502	$ 747,508	$ 288,449	$ 127,465	$ 308,263	$ 724,177
	$ 133	$ –	$ 21	$ 154	$ 235	$ –	$ 37	$ 272
	3,025	–	326	3,351	3,105	–	362	3,467
	$ 8	$ –	$ 697	$ 705	$ 7	$ –	$ 661	$ 668
	5	–	(90)	(85)	1	–	36	37
	–	–	2	2	–	–	–	–
	$ 13	$ –	$ 609	$ 622	$ 8	$ –	$ 697	$ 705
	$ –	$ –	$ 60	$ 60	$ –	$ –	$ 60	$ 60
	13	–	549	562	8	–	637	645
	$ 13	$ –	$ 609	$ 622	$ 8	$ –	$ 697	$ 705
	$ –	$ –	$ 103	$ 103	$ –	$ –	$ 206	$ 206
	58,153	525,963	366,778 [d]	950,894	56,057	529,383	344,032 [d]	929,472
	$ 58,153	$ 525,963	$ 366,881	$ 950,997	$ 56,057	$ 529,383	$ 344,238	$ 929,678

Note 16 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the primary beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper conduit.

Line-of-Business	*Transaction Type*	*Activity*	*Annual Report page references*
CCB	Credit card securitization trusts	Securitization of both originated and purchased credit card receivables	266
	Mortgage securitization trusts	Servicing and securitization of both originated and purchased residential mortgages	267–269
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages and student loans	267–269
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	269–271
	Investor intermediation activities:		
	Municipal bond vehicles		269–270

The Firm's other business segments are also involved with VIEs, but to a lesser extent, as follows:

- Asset Management: AM sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For fund entities that qualify as VIEs, AM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Commercial Banking: CB makes investments in and provides lending to community development entities that may meet the definition of a VIE. In addition, CB provides financing and lending-related services to certain client-sponsored VIEs. In general, CB does not control the activities of these entities and does not consolidate these entities.
- Corporate: The Private Equity business, within Corporate, is involved with entities that may meet the definition of VIEs. However, the Firm's Private Equity business is generally subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs.

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 271 of this Note.

Significant Firm-sponsored variable interest entities

Credit card securitizations

The Card business securitizes both originated and purchased credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.

The Firm is considered to be the primary beneficiary of these Firm-sponsored credit card securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

The underlying securitized credit card receivables and other assets of the securitization trusts are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's other creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (which is generally 4%). As of December 31, 2015 and 2014, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $13.6 billion and $10.9 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 22% for both the years ended December 31, 2015 and 2014. As of December 31, 2015 and 2014, the Firm also retained $0 million and $40 million of senior securities, and as of both December 31, 2015 and 2014, retained $5.3 billion of subordinated securities in certain of its credit card securitization trusts. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

Firm-sponsored mortgage and other securitization trusts
The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans (including student loans) primarily in its CCB and CIB businesses.

Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

The following table presents the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans; holding senior interests or subordinated interests; recourse or guarantee arrangements; and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. See Securitization activity on page 272 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and pages 272–273 of this Note for information on the Firm's loan sales to U.S. government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]		
December 31, 2015 [a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime/Alt-A and option ARMs	**$ 85.7**	**$ 1.4**	**$ 66.7**	**$ 0.4**	**$ 1.6**	**$ 2.0**
Subprime	**24.4**	**0.1**	**22.6**	**0.1**	**–**	**0.1**
Commercial and other[b]	**123.5**	**0.1**	**80.3**	**0.4**	**3.5**	**3.9**
Total	**$ 233.6**	**$ 1.6**	**$ 169.6**	**$ 0.9**	**$ 5.1**	**$ 6.0**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]		
December 31, 2014[a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime/Alt-A and option ARMs	$ 96.3	$ 2.7	$ 78.3	$ 0.5	$ 0.7	$ 1.2
Subprime	28.4	0.8	25.7	0.1	–	0.1
Commercial and other[b]	129.6	0.2	94.4	0.4	3.5	3.9
Total	$ 254.3	$ 3.7	$ 198.4	$ 1.0	$ 4.2	$ 5.2

(a) Excludes U.S. government agency securitizations. See pages 272–273 of this Note for information on the Firm's loan sales to U.S. government agencies.
(b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties. The Firm generally does not retain a residual interest in its sponsored commercial mortgage securitization transactions.
(c) The table above excludes the following: retained servicing (see Note 17 for a discussion of MSRs); securities retained from loan sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (See Note 6 for further information on derivatives); senior and subordinated securities of $163 million and $73 million, respectively, at December 31, 2015, and $136 million and $34 million, respectively, at December 31, 2014, which the Firm purchased in connection with CIB's secondary market-making activities.
(d) Includes interests held in re-securitization transactions.
(e) As of December 31, 2015 and 2014, 76% and 77%, respectively, of the Firm's retained securitization interests, which are carried at fair value, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of $1.9 billion and $1.1 billion of investment-grade and $93 million and $185 million of noninvestment-grade retained interests at December 31, 2015 and 2014, respectively. The retained interests in commercial and other securitizations trusts consisted of $3.7 billion and $3.7 billion of investment-grade and $198 million and $194 million of noninvestment-grade retained interests at December 31, 2015 and 2014, respectively.

Residential mortgage
The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. CCB generally retains servicing for all residential mortgage loans originated or purchased by CCB, and for certain mortgage loans purchased by CIB. For securitizations holding loans serviced by CCB, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. CCB may also retain an interest upon securitization.

In addition, CIB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, CIB at times retains senior and/or subordinated interests (including residual interests) in residential mortgage securitizations at the time of securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by CIB or held by CCB, when considered together with the servicing arrangements entered into by CCB, the Firm is deemed to be the primary beneficiary of certain securitization trusts. See the table on page 271 of this Note for more information on consolidated residential mortgage securitizations.

The Firm does not consolidate a residential mortgage securitization (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust. At December 31, 2015 and 2014, the Firm did not consolidate the assets of certain Firm-sponsored residential mortgage securitization VIEs, in which the Firm had continuing involvement, primarily due to the fact that the Firm did not hold an interest in these trusts that could potentially be significant to the trusts. See the table on page 271 of this Note for more information on the consolidated residential mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations.

Commercial mortgages and other consumer securitizations
CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. CIB may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). See the table on page 271 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

The Firm retains servicing responsibilities for certain student loan securitizations. The Firm has the power to direct the activities of these VIEs through these servicing responsibilities. See the table on page 271 of this Note for more information on the consolidated student loan securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

Re-securitizations
The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both agency (Federal National Mortgage Association ("Fannie Mae"), Federal Home Loan Mortgage Company ("Freddie Mac") and Ginnie Mae) and nonagency (private-label) sponsored VIEs, which may be backed by either residential or commercial mortgages. The Firm's consolidation analysis is largely dependent on the Firm's role and interest in the re-securitization trusts. During the years ended December 31, 2015, 2014 and 2013, the Firm transferred $21.9 billion, $22.7 billion and $25.3 billion, respectively, of securities to agency VIEs, and $777 million, $1.1 billion and $55 million, respectively, of securities to private-label VIEs.

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients is seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its clients, considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.

In more limited circumstances, the Firm creates a re-securitization trust independently and not in conjunction with specific clients. In these circumstances, the Firm is deemed to have the unilateral ability to direct the most significant activities of the re-securitization trust because of the decisions made during the establishment and design of the trust; therefore, the Firm consolidates the re-securitization VIE if the Firm holds an interest that could potentially be significant.

Additionally, the Firm may invest in beneficial interests of third-party re-securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it was not involved in the initial design of the trust, or the Firm is involved with an independent third-party sponsor and demonstrates shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

As of December 31, 2015 and 2014, total assets (including the notional amount of interest-only securities) of nonconsolidated Firm-sponsored private-label re-securitization entities in which the Firm has continuing involvement were $2.2 billion and $2.9 billion, respectively. At December 31, 2015 and 2014, the Firm held $4.6 billion and $2.4 billion, respectively, of interests in nonconsolidated agency re-securitization entities. The Firm's exposure to non-consolidated private-label re-securitization entities as of December 31, 2015 and 2014 was not material. As of December 31, 2015 and 2014, the Firm did not consolidate any agency re-securitizations. As of December 31, 2015 and 2014, the Firm consolidated an insignificant amount of assets and liabilities of Firm-sponsored private-label re-securitizations.

Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that provide secured financing, collateralized by pools of receivables and other financial assets, to customers of the Firm. The conduits fund their financing facilities through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, and to provide the conduits with funding to provide financing to customers in the event that the conduits do not obtain funding in the commercial paper market, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required is based upon commercial paper issuance and approximates 10% of the outstanding balance.

The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit enhancement facilities provided to the conduits. See page 271 of this Note for further information on consolidated VIE assets and liabilities.

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $15.7 billion and $5.7 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2015 and 2014, respectively. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. The Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded portion of these commitments was $5.6 billion and $9.9 billion at December 31, 2015 and 2014, respectively, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 29.

VIEs associated with investor intermediation activities

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions with these VIEs, typically using derivatives, to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in on behalf of clients are municipal bond vehicles.

Municipal bond vehicles

Municipal bond vehicles or tender option bond ("TOB") trusts allow investors to finance their municipal bond investments at short-term rates. In a typical TOB transaction, the trust purchases highly rated municipal bond(s) of a single issuer and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates ("Floaters") and (2) inverse floating-rate residual interests ("Residuals"). The Floaters are typically purchased by money market funds or other short-term investors and may be tendered, with requisite notice, to the TOB trust. The Residuals are retained by the investor seeking to finance its municipal bond investment. TOB transactions where the Residual is held by a third party investor are typically known as Customer TOB trusts, and Non-Customer TOB trusts are transactions where the Residual is retained by the Firm. The Firm serves as sponsor for all Non-Customer TOB transactions and certain Customer TOB transactions established prior to 2014. The Firm may provide various services to a TOB trust, including remarketing agent, liquidity or tender option provider, and/or sponsor.

J.P. Morgan Securities LLC may serve as a remarketing agent on the Floaters for TOB trusts. The remarketing agent is responsible for establishing the periodic variable rate on the Floaters, conducting the initial placement and remarketing tendered Floaters. The remarketing agent may, but is not obligated to make markets in Floaters. At December 31, 2015 and 2014, the Firm held an insignificant amount of these Floaters on its Consolidated balance sheets and did not hold any significant amounts during 2015.

JPMorgan Chase Bank, N.A. or J.P. Morgan Securities LLC often serves as the sole liquidity or tender option provider for the TOB trusts. The liquidity provider's obligation to perform is conditional and is limited by certain events ("Termination Events"), which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the liquidity provider's exposure is typically further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or, in certain transactions, the reimbursement agreements with the Residual holders.

Holders of the Floaters may "put," or tender, their Floaters to the TOB trust. If the remarketing agent cannot successfully remarket the Floaters to another investor, the liquidity provider either provides a loan to the TOB trust for the purchase of or directly purchases the tendered Floaters. In certain Customer TOB transactions, the Firm, as liquidity provider, has entered into a reimbursement agreement with the Residual holder. In those transactions, upon the termination of the vehicle, if the proceeds from the sale of the underlying municipal bonds are not sufficient to repay amounts owed to the Firm, as liquidity or tender option provider, the Firm has recourse to the third party Residual holders for any shortfall. Residual holders with reimbursement agreements are required to post collateral with the Firm to support such reimbursement obligations should the market value of the underlying municipal bonds decline. The Firm does not have any intent to protect Residual holders from potential losses on any of the underlying municipal bonds.

TOB trusts are considered to be variable interest entities. The Firm consolidates Non-Customer TOB trusts because as the Residual holder, the Firm has the right to make decisions that significantly impact the economic performance of the municipal bond vehicle, and have the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle. The Firm does not consolidate Customer TOB trusts, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle. Certain non-consolidated Customer TOB trusts are sponsored by a third party, and not the Firm. See page 271 of this Note for further information on consolidated municipal bond vehicles.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31, 2015 and 2014, including the ratings profile of the VIEs' assets, was as follows.

December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities	Excess[a]	Maximum exposure
Nonconsolidated municipal bond vehicles				
2015	**$ 6.9**	**$ 3.8**	**$ 3.1**	**$ 3.8**
2014	11.5	6.3	5.2	6.3

	Ratings profile of VIE assets[b]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions, except where otherwise noted)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB+ to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
2015	**$ 1.7**	**$ 4.6**	**$ 0.5**	**$ –**	**$ 0.1**	**$ 6.9**	**4.0**
2014	2.7	8.4	0.4	–	–	$ 11.5	4.9

(a) Represents the excess of the fair values of municipal bond assets available to repay the liquidity facilities, if drawn.
(b) The ratings scale is presented on an S&P-equivalent basis.

VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, remarketing agent, trustee or custodian. These transactions are conducted at arm's-length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm records and reports these positions on its Consolidated balance sheets similarly to the way it would record and report positions in respect of any other third-party transaction.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2015 and 2014.

	Assets				Liabilities		
December 31, 2015 (in billions)[a]	Trading assets	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	**$ –**	**$ 47.4**	**$ 0.7**	**$ 48.1**	**$ 27.9**	**$ –**	**$ 27.9**
Firm-administered multi-seller conduits	**–**	**24.4**	**–**	**24.4**	**8.7**	**–**	**8.7**
Municipal bond vehicles	**2.7**	**–**	**–**	**2.7**	**2.6**	**–**	**2.6**
Mortgage securitization entities[b]	**0.8**	**1.4**	**–**	**2.2**	**0.8**	**0.7**	**1.5**
Student loan securitization entities	**–**	**1.9**	**0.1**	**2.0**	**1.8**	**–**	**1.8**
Other	**0.2**	**–**	**2.0**	**2.2**	**0.1**	**0.1**	**0.2**
Total	**$ 3.7**	**$ 75.1**	**$ 2.8**	**$ 81.6**	**$ 41.9**	**$ 0.8**	**$ 42.7**

	Assets				Liabilities		
December 31, 2014 (in billions)[a]	Trading assets	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	$ –	$ 48.3	$ 0.7	$ 49.0	$ 31.2	$ –	$ 31.2
Firm-administered multi-seller conduits	–	17.7	0.1	17.8	12.0	–	12.0
Municipal bond vehicles	5.3	–	–	5.3	4.9	–	4.9
Mortgage securitization entities[b]	3.3	0.7	–	4.0	2.1	0.8	2.9
Student loan securitization entities	0.2	2.2	–	2.4	2.1	–	2.1
Other	0.3	–	1.0	1.3	–	0.2	0.2
Total	$ 9.1	$ 68.9	$ 1.8	$ 79.8	$ 52.3	$ 1.0	$ 53.3

(a) Excludes intercompany transactions, which were eliminated in consolidation.
(b) Includes residential and commercial mortgage securitizations as well as re-securitizations.
(c) Includes assets classified as cash, AFS securities, and other assets within the Consolidated balance sheets.
(d) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.
(e) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated balance sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $30.6 billion and $35.4 billion at December 31, 2015 and 2014, respectively. The maturities of the long-term beneficial interests as of December 31, 2015, were as follows: $5.1 billion under one year, $21.6 billion between one and five years, and $3.9 billion over five years, all respectively.
(f) Includes liabilities classified as accounts payable and other liabilities in the Consolidated balance sheets.

Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgage, credit card, student and commercial (primarily related to real estate) loans, as well as debt securities. The purposes of these securitization transactions were to satisfy investor demand and to generate liquidity for the Firm.

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when all of the following accounting criteria for a sale are met: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

Securitization activity

The following table provides information related to the Firm's securitization activities for the years ended December 31, 2015, 2014 and 2013, related to assets held in JPMorgan Chase-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved based on the accounting rules in effect at the time of the securitization.

	2015		2014		2013	
Year ended December 31, (in millions, except rates)[a]	Residential mortgage[d][e]	Commercial and other[e][f]	Residential mortgage[d][e]	Commercial and other[e][f]	Residential mortgage[d][e]	Commercial and other[e][f]
Principal securitized	**$ 3,008**	**$ 11,933**	$ 2,558	$ 11,911	$ 1,404	$ 11,318
All cash flows during the period:						
Proceeds from new securitizations[b]	**$ 3,022**	**$ 12,011**	$ 2,569	$ 12,079	$ 1,410	$ 11,507
Servicing fees collected	**528**	**3**	557	4	576	5
Purchases of previously transferred financial assets (or the underlying collateral)[c]	**3**	**–**	121	–	294	–
Cash flows received on interests	**407**	**597**	179	578	156	325

(a) Excludes re-securitization transactions.

(b) Proceeds from residential mortgage securitizations were received in the form of securities. During 2015, $3.0 billion of residential mortgage securitizations were received as securities and classified in level 2, and $59 million were classified in level 3 of the fair value hierarchy. During 2014, $2.4 billion of residential mortgage securitizations were received as securities and classified in level 2, and $185 million were classified in level 3 of the fair value hierarchy. During 2013, $1.4 billion of residential mortgage securitizations were received as securities and classified in level 2. Proceeds from commercial mortgage securitizations were received as securities and cash. During 2015, $12.0 billion of proceeds from commercial mortgage securitizations were received as securities and classified in level 2, and $43 million of proceeds were classified in level 3 of the fair value hierarchy; and zero of proceeds from commercial mortgage securitizations were received as cash. During 2014, $11.4 billion of proceeds from commercial mortgage securitizations were received as securities and classified in level 2, and $130 million of proceeds were classified in level 3 of the fair value hierarchy: and $568 million of proceeds from commercial mortgage securitizations were received as cash. During 2013, $11.3 billion of commercial mortgage securitizations were classified in level 2 of the fair value hierarchy, and $207 million of proceeds from commercial mortgage securitizations were received as cash.

(c) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities – for example, loan repurchases due to representation and warranties and servicer clean-up calls.

(d) Includes prime, Alt-A, subprime, and option ARMs. Excludes certain loan securitization transactions entered into with Ginnie Mae, Fannie Mae and Freddie Mac.

(e) Key assumptions used to measure residential mortgage retained interests originated during the year included weighted-average life (in years) of 4.2, 5.9 and 3.9 for the years ended December 31, 2015, 2014 and 2013, respectively, and weighted-average discount rate of 2.9%, 3.4% and 2.5% for the years ended December 31, 2015, 2014 and 2013, respectively. Key assumptions used to measure commercial and other retained interests originated during the year included weighted-average life (in years) of 6.2, 6.5 and 8.3 for the years ended December 31, 2015, 2014, and 2013, respectively, and weighted-average discount rate of 4.1%, 4.8% and 3.2% for the years ended December 31, 2015, 2014 and 2013, respectively.

(f) Includes commercial and student loan securitizations.

Loans and excess MSRs sold to U.S. government-sponsored enterprises ("U.S. GSEs"), loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. GSEs. These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans

with the purchaser. See Note 29 for additional information about the Firm's loan sales- and securitization-related indemnifications.

See Note 17 for additional information about the impact of the Firm's sale of certain excess MSRs.

The following table summarizes the activities related to loans sold to the U.S. GSEs, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities.

Year ended December 31, (in millions)	**2015**	2014	2013
Carrying value of loans sold	**$ 42,161**	$ 55,802	$ 166,028
Proceeds received from loan sales as cash	**$ 313**	$ 260	$ 782
Proceeds from loans sales as securities[a]	**41,615**	55,117	163,373
Total proceeds received from loan sales[b]	**$ 41,928**	$ 55,377	$ 164,155
Gains on loan sales[c]	**$ 299**	$ 316	$ 302

(a) Predominantly includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt.
(b) Excludes the value of MSRs retained upon the sale of loans. Gains on loan sales include the value of MSRs.
(c) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 29, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability. As of December 31, 2015 and 2014, the Firm had recorded on its Consolidated balance sheets $11.1 billion and $12.4 billion, respectively, of loans that either had been repurchased or for which the Firm had an option to repurchase. Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools. Additionally, real estate owned resulting from voluntary repurchases of loans was $343 million and $464 million as of December 31, 2015 and 2014, respectively. Substantially all of these loans and real estate owned are insured or guaranteed by U.S. government agencies. For additional information, refer to Note 14.

Loan delinquencies and liquidation losses

The table below includes information about components of nonconsolidated securitized financial assets, in which the Firm has continuing involvement, and delinquencies as of December 31, 2015 and 2014.

	Securitized assets		90 days past due		Liquidation losses	
As of or for the year ended December 31, (in millions)	**2015**	2014	**2015**	2014	**2015**	2014
Securitized loans[a]						
Residential mortgage:						
Prime/ Alt-A & option ARMs	**$ 66,708**	$ 78,294	**$ 8,325**	$ 11,363	**$ 1,946**	$ 2,166
Subprime	**22,549**	25,659	**5,448**	6,473	**1,431**	1,931
Commercial and other	**80,319**	94,438	**1,808**	1,522	**375**	1,267
Total loans securitized[b]	**$ 169,576**	$ 198,391	**$ 15,581**	$ 19,358	**$ 3,752**	$ 5,364

(a) Total assets held in securitization-related SPEs were $233.6 billion and $254.3 billion, respectively, at December 31, 2015 and 2014. The $169.6 billion and $198.4 billion, respectively, of loans securitized at December 31, 2015 and 2014, excludes: $62.4 billion and $52.2 billion, respectively, of securitized loans in which the Firm has no continuing involvement, and $1.6 billion and $3.7 billion, respectively, of loan securitizations consolidated on the Firm's Consolidated balance sheets at December 31, 2015 and 2014.
(b) Includes securitized loans that were previously recorded at fair value and classified as trading assets.

Note 17 – Goodwill and other intangible assets

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	2015	2014	2013
Consumer & Community Banking	**$ 30,769**	$ 30,941	$ 30,985
Corporate & Investment Bank	**6,772**	6,780	6,888
Commercial Banking	**2,861**	2,861	2,862
Asset Management	**6,923**	6,964	6,969
Corporate	**–**	101	377
Total goodwill	**$ 47,325**	$ 47,647	$ 48,081

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	2015	2014	2013
Balance at beginning of period	**$ 47,647**	$ 48,081	$ 48,175
Changes during the period from:			
Business combinations	**28**	43	64
Dispositions	**(160)** [(b)]	(80)	(5)
Other[(a)]	**(190)**	(397)	(153)
Balance at December 31,	**$ 47,325**	$ 47,647	$ 48,081

(a) Includes foreign currency translation adjustments, other tax-related adjustments, and, during 2014, goodwill impairment associated with the Firm's Private Equity business of $276 million.

(b) Includes $101 million of Private Equity goodwill, which was disposed of as part of the Private Equity sale completed in January 2015.

Impairment testing

The Firm's goodwill was not impaired at December 31, 2015. Further, except for the goodwill related to its Private Equity business, the Firm's goodwill was not impaired at December 31, 2014. $276 million of goodwill was written off during 2014 related to the goodwill impairment associated with the Firm's Private Equity business. No goodwill was written off due to impairment during 2013.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The Firm uses the reporting units' allocated equity plus goodwill capital as a proxy for the carrying amounts of equity for the reporting units in the goodwill impairment testing. Reporting unit equity is determined on a similar basis as the allocation of equity to the Firm's lines of business, which takes into consideration the capital the business segment would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III), economic risk measures and capital levels for similarly rated peers. Proposed line of business equity levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors. Allocated equity is further reviewed on a periodic basis and updated as needed.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. The models project cash flows for the forecast period and use the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' earnings forecasts, which include the estimated effects of regulatory and legislative changes (including, but not limited to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act")), and which are reviewed with the senior management of the Firm. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firms' overall estimated cost of equity to ensure reasonableness.

The valuations derived from the discounted cash flow models are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to

assess the general reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that naturally exist between the Firm's businesses and competitor institutions. Management also takes into consideration a comparison between the aggregate fair value of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (a) a control premium that would exist in a market transaction, (b) factors related to the level of execution risk that would exist at the firmwide level that do not exist at the reporting unit level and (c) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

Declines in business performance, increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, adverse estimates of regulatory or legislative changes or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights

Mortgage servicing rights represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm has elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late charges and other ancillary revenue, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that consist of the MSR asset. Conversely, securities (e.g., mortgage-backed securities), principal-only certificates and certain derivatives (i.e., those for which the Firm receives fixed-rate interest payments) increase in value when interest rates decline. JPMorgan Chase uses combinations of derivatives and securities to manage changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2015, 2014 and 2013.

As of or for the year ended December 31, (in millions, except where otherwise noted)	2015	2014	2013
Fair value at beginning of period	**$ 7,436**	$ 9,614	$ 7,614
MSR activity:			
Originations of MSRs	**550**	757	2,214
Purchase of MSRs	**435**	11	1
Disposition of MSRs[a]	**(486)**	(209)	(725)
Net additions	**499**	559	1,490
Changes due to collection/realization of expected cash flows	**(922)**	(911)	(1,102)
Changes in valuation due to inputs and assumptions:			
Changes due to market interest rates and other[b]	**(160)**	(1,608)	2,122
Changes in valuation due to other inputs and assumptions:			
Projected cash flows (e.g., cost to service)	**(112)**	133	109
Discount rates	**(10)**	(459) [e]	(78)
Prepayment model changes and other[c]	**(123)**	108	(541)
Total changes in valuation due to other inputs and assumptions	**(245)**	(218)	(510)
Total changes in valuation due to inputs and assumptions	**$ (405)**	$ (1,826)	$ 1,612
Fair value at December 31,	**$ 6,608**	$ 7,436	$ 9,614
Change in unrealized gains/(losses) included in income related to MSRs held at December 31,	**$ (405)**	$ (1,826)	$ 1,612
Contractual service fees, late fees and other ancillary fees included in income	**$ 2,533**	$ 2,884	$ 3,309
Third-party mortgage loans serviced at December 31, (in billions)	**$ 677**	$ 756	$ 822
Servicer advances, net of an allowance for uncollectible amounts, at December 31, (in billions)[d]	**$ 6.5**	$ 8.5	$ 9.6

(a) For 2014 and 2013, predominantly represents excess MSRs transferred to agency-sponsored trusts in exchange for stripped mortgage backed securities ("SMBS"). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired and has retained the remaining balance of those SMBS as trading securities. Also includes sales of MSRs.

(b) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(c) Represents changes in prepayments other than those attributable to changes in market interest rates.

(d) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these servicer advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

(e) For the year ending December 31, 2014, the negative impact was primarily related to higher capital allocated to the Mortgage Servicing business, which, in turn, resulted in an increase in the OAS. The resulting OAS assumption was consistent with capital and return requirements the Firm believed a market participant would consider, taking into account factors such as the operating risk environment and regulatory and economic capital requirements.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2015, 2014 and 2013.

Year ended December 31, (in millions)	2015	2014	2013
CCB mortgage fees and related income			
Net production revenue	**$ 769**	$ 1,190	$ 3,004
Net mortgage servicing revenue:			
Operating revenue:			
Loan servicing revenue	**2,776**	3,303	3,552
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(917)**	(905)	(1,094)
Total operating revenue	**1,859**	2,398	2,458
Risk management:			
Changes in MSR asset fair value due to market interest rates and other[(a)]	**(160)**	(1,606)	2,119
Other changes in MSR asset fair value due to other inputs and assumptions in model[(b)]	**(245)**	(218)	(511)
Change in derivative fair value and other	**288**	1,796	(1,875)
Total risk management	**(117)**	(28)	(267)
Total net mortgage servicing revenue	**1,742**	2,370	2,191
Total CCB mortgage fees and related income	**2,511**	3,560	5,195
All other	**2**	3	10
Mortgage fees and related income	**$ 2,513**	$ 3,563	$ 5,205

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices).

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2015 and 2014, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

December 31, (in millions, except rates)	2015	2014
Weighted-average prepayment speed assumption ("CPR")	**9.81%**	9.80%
Impact on fair value of 10% adverse change	**$ (275)**	$ (337)
Impact on fair value of 20% adverse change	**(529)**	(652)
Weighted-average option adjusted spread	**9.02%**	9.43%
Impact on fair value of 100 basis points adverse change	**$ (258)**	$ (300)
Impact on fair value of 200 basis points adverse change	**(498)**	(578)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

Note 18 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 19 – Deposits

At December 31, 2015 and 2014, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	**2015**	2014
U.S. offices		
Noninterest-bearing	**$ 392,721**	$ 437,558
Interest-bearing		
Demand[a]	**84,088**	90,319
Savings[b]	**486,043**	466,730
Time (included **$10,916** and $7,501 at fair value)[c]	**92,873**	86,301
Total interest-bearing deposits	**663,004**	643,350
Total deposits in U.S. offices	**1,055,725**	1,080,908
Non-U.S. offices		
Noninterest-bearing	**18,921**	19,078
Interest-bearing		
Demand	**154,773**	217,011
Savings	**2,157**	2,673
Time (included **$1,600** and $1,306 at fair value)[c]	**48,139**	43,757
Total interest-bearing deposits	**205,069**	263,441
Total deposits in non-U.S. offices	**223,990**	282,519
Total deposits	**$1,279,715**	$1,363,427

(a) Includes Negotiable Order of Withdrawal ("NOW") accounts, and certain trust accounts.
(b) Includes Money Market Deposit Accounts ("MMDAs").
(c) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 4.

At December 31, 2015 and 2014, time deposits in denominations of $250,000 or more were as follows.

December 31, (in millions)	**2015**	2014
U.S. offices	$ 64,519	$ 56,983
Non-U.S. offices	48,091	43,719
Total	$112,610	$ 100,702

At December 31, 2015, the maturities of interest-bearing time deposits were as follows.

December 31, 2015 (in millions)	U.S.	Non-U.S.	**Total**
2016	78,246	47,791	126,037
2017	2,940	145	3,085
2018	2,172	39	2,211
2019	1,564	47	1,611
2020	1,615	117	1,732
After 5 years	6,336	–	6,336
Total	$ 92,873	$ 48,139	$ 141,012

Note 20 – Accounts payable and other liabilities

Accounts payable and other liabilities consist of payables to customers; payables to brokers, dealers and clearing organizations; payables from security purchases that did not settle; income taxes payables; accrued expense, including interest-bearing liabilities; and all other liabilities, including litigation reserves and obligations to return securities received as collateral.

The following table details the components of accounts payable and other liabilities.

December 31, (in millions)	2015	2014
Brokerage payables[a]	**$ 107,632**	$ 134,467
Accounts payable and other liabilities	**70,006**	72,472
Total	**$ 177,638**	$ 206,939

(a) Includes payables to customers, brokers, dealers and clearing organizations, and payables from security purchases that did not settle.

Note 21 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated statements of income. The following table is a summary of long-term debt carrying values (including unamortized premiums and discounts, issuance costs, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2015.

By remaining maturity at December 31,		2015				2014
(in millions, except rates)		Under 1 year	1-5 years	After 5 years	**Total**	Total
Parent company						
Senior debt:	Fixed rate	**$ 12,014**	**$ 54,200**	**$ 51,544**	**$ 117,758**	$ 108,529
	Variable rate	**15,158**	**23,254**	**5,766**	**44,178**	42,201
	Interest rates[a]	**0.16-7.00%**	**0.24-7.25%**	**0.31-6.40%**	**0.16-7.25%**	0.18-7.25%
Subordinated debt:	Fixed rate	**$ –**	**$ 2,292**	**$ 13,958**	**$ 16,250**	$ 16,645
	Variable rate	**–**	**1,038**	**9**	**1,047**	3,452
	Interest rates[a]	**–%**	**1.06-8.53%**	**3.38-8.00%**	**1.06-8.53%**	0.48-8.53%
	Subtotal	**$ 27,172**	**$ 80,784**	**$ 71,277**	**$ 179,233**	$ 170,827
Subsidiaries						
Federal Home Loan Banks ("FHLB") advances:	Fixed rate	**$ 5**	**$ 30**	**$ 156**	**$ 191**	$ 2,204
	Variable rate	**9,700**	**56,690**	**5,000**	**71,390**	62,790
	Interest rates[a]	**0.37-0.65%**	**0.17-0.72%**	**0.50-0.70%**	**0.17-0.72%**	0.11-2.04%
Senior debt:	Fixed rate	**$ 631**	**$ 1,288**	**$ 3,631**	**$ 5,550**	$ 5,751
	Variable rate	**10,493**	**7,456**	**2,639**	**20,588**	20,082
	Interest rates[a]	**0.47-1.00%**	**0.53-4.61%**	**1.30-7.28%**	**0.47-7.28%**	0.26-8.00%
Subordinated debt:	Fixed rate	**$ 1,472**	**$ 3,647**	**$ 1,461**	**$ 6,580**	$ 6,928
	Variable rate	**1,150**	**–**	**–**	**1,150**	2,362
	Interest rates[a]	**0.83-5.88%**	**6.00%**	**4.38-8.25%**	**0.83-8.25%**	0.57-8.25%
	Subtotal	**$ 23,451**	**$ 69,111**	**$ 12,887**	**$ 105,449**	$ 100,117
Junior subordinated debt:	Fixed rate	**$ –**	**$ –**	**$ 717**	**$ 717**	$ 2,185
	Variable rate	**–**	**–**	**3,252**	**3,252**	3,250
	Interest rates[a]	**–%**	**–%**	**0.83-8.75%**	**0.83-8.75%**	0.73-8.75%
	Subtotal	**$ –**	**$ –**	**$ 3,969**	**$ 3,969**	$ 5,435
Total long-term debt[b][c][d]		**$ 50,623**	**$ 149,895**	**$ 88,133**	**$ 288,651** [f][g]	$ 276,379
Long-term beneficial interests:						
	Fixed rate	**$ 1,674**	**$ 10,931**	**$ 1,594**	**$ 14,199**	$ 13,949
	Variable rate	**3,393**	**10,642**	**2,323**	**16,358**	21,418
	Interest rates	**0.45-5.16%**	**0.37-5.23%**	**0.00-15.94%**	**0.00-15.94%**	0.05-15.93%
Total long-term beneficial interests[e]		**$ 5,067**	**$ 21,573**	**$ 3,917**	**$ 30,557**	$ 35,367

(a) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2015, for total long-term debt was (0.19)% to 8.88%, versus the contractual range of 0.16% to 8.75% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.

(b) Included long-term debt of $76.6 billion and $69.2 billion secured by assets totaling $171.6 billion and $156.7 billion at December 31, 2015 and 2014, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.

(c) Included $33.1 billion and $30.2 billion of long-term debt accounted for at fair value at December 31, 2015 and 2014, respectively.
(d) Included $5.5 billion and $2.9 billion of outstanding zero-coupon notes at December 31, 2015 and 2014, respectively. The aggregate principal amount of these notes at their respective maturities is $16.2 billion and $7.5 billion, respectively. The aggregate principal amount reflects the contractual principal payment at maturity, which may exceed the contractual principal payment at the Firm's next call date, if applicable.
(e) Included on the Consolidated balance sheets in beneficial interests issued by consolidated VIEs. Also included $787 million and $2.2 billion accounted for at fair value at December 31, 2015 and 2014, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $11.3 billion and $17.0 billion at December 31, 2015 and 2014, respectively.
(f) At December 31, 2015, long-term debt in the aggregate of $39.1 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective instruments.
(g) The aggregate carrying values of debt that matures in each of the five years subsequent to 2015 is $50.6 billion in 2016, $49.5 billion in 2017, $39.2 billion in 2018, $30.4 billion in 2019 and $30.7 billion in 2020.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 2.34% and 2.42% as of December 31, 2015 and 2014, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 1.64% and 1.50% as of December 31, 2015 and 2014, respectively.

JPMorgan Chase & Co. has guaranteed certain long-term debt of its subsidiaries, including both long-term debt and structured notes. These guarantees rank on parity with the Firm's other unsecured and unsubordinated indebtedness. The amount of such guaranteed long-term debt was $152 million and $352 million at December 31, 2015 and 2014, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities
At December 31, 2015, the Firm had outstanding eight wholly owned Delaware statutory business trusts ("issuer trusts") that had issued trust preferred securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $4.0 billion and $5.4 billion at December 31, 2015 and 2014, respectively, were reflected on the Firm's Consolidated balance sheets in long-term debt, and in the table on the preceding page under the caption "Junior subordinated debt." The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated balance sheets at December 31, 2015 and 2014. Beginning in 2014, the debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, began being phased out from inclusion as Tier 1 capital under Basel III. As of December 31, 2015 and 2014, $992 million and $2.7 billion of these debentures qualified as Tier 1 capital, while $3.0 billion and $2.7 billion qualified as Tier 2 capital.

The following is a summary of the outstanding trust preferred securities, including unamortized original issue discount, issued by each trust, and the junior subordinated deferrable interest debenture issued to each trust, as of December 31, 2015.

December 31, 2015 (in millions)	Amount of trust preferred securities issued by trust[a]	Principal amount of debenture issued to trust[b]	Issue date	Stated maturity of trust preferred securities and debentures	Earliest redemption date	Interest rate of trust preferred securities and debentures	Interest payment/ distribution dates
BANK ONE Capital III	$ 474	$ 717	2000	2030	Any time	8.75%	Semiannually
Chase Capital II	483	496	1997	2027	Any time	LIBOR + 0.50%	Quarterly
Chase Capital III	296	304	1997	2027	Any time	LIBOR + 0.55%	Quarterly
Chase Capital VI	242	248	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	249	256	1997	2027	Any time	LIBOR + 0.55%	Quarterly
J.P. Morgan Chase Capital XIII	466	477	2004	2034	Any time	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXI	836	832	2007	2037	Any time	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXIII	644	639	2007	2047	Any time	LIBOR + 1.00%	Quarterly
Total	$ 3,690	$ 3,969					

(a) Represents the amount of trust preferred securities issued to the public by each trust, including unamortized original-issue discount.
(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original-issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated Financial Statements.

On April 2, 2015, the Firm redeemed $1.5 billion, or 100% of the liquidation amount, of the guaranteed capital debt securities ("trust preferred securities") of JPMorgan Chase Capital XXIX trust preferred securities. On May 8, 2013, the Firm redeemed approximately $5.0 billion, or 100% of the liquidation amount, of the following eight series of trust preferred securities: JPMorgan Chase Capital X, XI, XII, XIV, XVI, XIX and XXIV, and BANK ONE Capital VI. Other income for the year ended December 31, 2013, reflected a modest loss related to the redemption of trust preferred securities.

Note 22 – Preferred stock

At December 31, 2015 and 2014, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock for the payment of dividends and the distribution of assets.

The following is a summary of JPMorgan Chase's non-cumulative preferred stock outstanding as of December 31, 2015 and 2014.

	Shares at December 31,[a]		Carrying value (in millions) at December 31,			Contractual rate in effect at December 31,		Date at which dividend rate becomes	
	2015	2014	**2015**	2014	Issue date	2015	Earliest redemption date	floating	Floating annual rate of three-month LIBOR plus:
Fixed-rate:									
Series O	**125,750**	125,750	**$ 1,258**	$ 1,258	8/27/2012	**5.500%**	9/1/2017	NA	NA
Series P	**90,000**	90,000	**900**	900	2/5/2013	**5.450**	3/1/2018	NA	NA
Series T	**92,500**	92,500	**925**	925	1/30/2014	**6.700**	3/1/2019	NA	NA
Series W	**88,000**	88,000	**880**	880	6/23/2014	**6.300**	9/1/2019	NA	NA
Series Y	**143,000**	–	**1,430**	–	2/12/2015	**6.125**	3/1/2020	NA	NA
Series AA	**142,500**	–	**1,425**	–	6/4/2015	**6.100**	9/1/2020	NA	NA
Series BB	**115,000**	–	**1,150**	–	7/29/2015	**6.150**	9/1/2020	NA	NA
Fixed-to-floating-rate:									
Series I	**600,000**	600,000	**6,000**	6,000	4/23/2008	**7.900%**	4/30/2018	4/30/2018	LIBOR + 3.47 %
Series Q	**150,000**	150,000	**1,500**	1,500	4/23/2013	**5.150**	5/1/2023	5/1/2023	LIBOR + 3.25
Series R	**150,000**	150,000	**1,500**	1,500	7/29/2013	**6.000**	8/1/2023	8/1/2023	LIBOR + 3.30
Series S	**200,000**	200,000	**2,000**	2,000	1/22/2014	**6.750**	2/1/2024	2/1/2024	LIBOR + 3.78
Series U	**100,000**	100,000	**1,000**	1,000	3/10/2014	**6.125**	4/30/2024	4/30/2024	LIBOR + 3.33
Series V	**250,000**	250,000	**2,500**	2,500	6/9/2014	**5.000**	7/1/2019	7/1/2019	LIBOR + 3.32
Series X	**160,000**	160,000	**1,600**	1,600	9/23/2014	**6.100**	10/1/2024	10/1/2024	LIBOR + 3.33
Series Z	**200,000**	–	**2,000**	–	4/21/2015	**5.300**	5/1/2020	5/1/2020	LIBOR + 3.80
Total preferred stock	**2,606,750**	2,006,250	**$ 26,068**	$ 20,063					

(a) Represented by depositary shares.

Each series of preferred stock has a liquidation value and redemption price per share of $10,000, plus any accrued but unpaid dividends.

Dividends on fixed-rate preferred stock are payable quarterly. Dividends on fixed-to-floating-rate preferred stock are payable semiannually while at a fixed rate, and will become payable quarterly after converting to a floating rate.

On September 1, 2013, the Firm redeemed all of the outstanding shares of its 8.625% Non-Cumulative Preferred Stock, Series J at their stated redemption value.

Redemption rights

Each series of the Firm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date for that series. All outstanding preferred stock series except Series I may also be redeemed following a "capital treatment event", as described in the terms of each series. Any redemption of the Firm's preferred stock is subject to non-objection from the Board of Governors of the Federal Reserve System (the "Federal Reserve").

Note 23 – Common stock

At December 31, 2015 and 2014, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during the years ended December 31, 2015, 2014 and 2013 were as follows.

Year ended December 31, (in millions)	**2015**	2014	2013
Total issued – balance at January 1 and December 31	**4,104.9**	4,104.9	4,104.9
Treasury – balance at January 1	**(390.1)**	(348.8)	(300.9)
Purchase of treasury stock	**(89.8)**	(82.3)	(96.1)
Issued from treasury:			
Employee benefits and compensation plans	**32.8**	39.8	47.1
Issuance of shares for warrant exercise	**4.7**	–	–
Employee stock purchase plans	**1.0**	1.2	1.1
Total issued from treasury	**38.5**	41.0	48.2
Total treasury – balance at December 31	**(441.4)**	(390.1)	(348.8)
Outstanding at December 31	**3,663.5**	3,714.8	3,756.1

At December 31, 2015, 2014, and 2013, respectively, the Firm had 47.4 million, 59.8 million and 59.8 million warrants outstanding to purchase shares of common stock (the "Warrants"). The Warrants are currently traded on the New York Stock Exchange, and they are exercisable, in whole or in part, at any time and from time to time until October 28, 2018. The original warrant exercise price was $42.42 per share. The number of shares issuable upon the exercise of each warrant and the warrant exercise price is subject to adjustment upon the occurrence of certain events, including, but not limited to, the extent to which regular quarterly cash dividends exceed $0.38 per share. As a result of the Firm's quarterly common stock dividend exceeding $0.38 per share commencing with the second quarter of 2014, the exercise price of the Warrants has been adjusted each subsequent quarter, and was $42.284 as of December 31, 2015. There has been no change in the number of shares issuable upon exercise.

On March 11, 2015, in conjunction with the Federal Reserve's release of its 2015 Comprehensive Capital Analysis and Review ("CCAR") results, the Firm's Board of Directors has authorized a $6.4 billion common equity (i.e., common stock and warrants) repurchase program. As of December 31, 2015, $2.7 billion (on a settlement-date basis) of authorized repurchase capacity remained under the program. This authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plans.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2015, 2014 and 2013, on a settlement-date basis. There were no warrants repurchased during the years ended December 31, 2015, 2014 and 2013.

Year ended December 31, (in millions)	**2015**	2014	2013
Total number of shares of common stock repurchased	**89.8**	82.3	96.1
Aggregate purchase price of common stock repurchases	**$ 5,616**	$ 4,760	$ 4,789

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "blackout periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information. For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on page 20.

As of December 31, 2015, approximately 195 million unissued shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the Warrants, as discussed above.

Note 24 – Earnings per share

Earnings per share ("EPS") is calculated under the two-class method under which all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities based on their respective rights to receive dividends. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities. Options issued under employee benefit plans that have an antidilutive effect are excluded from the computation of diluted EPS.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2015, 2014 and 2013.

Year ended December 31, (in millions, except per share amounts)	**2015**	2014	2013
Basic earnings per share			
Net income	**$ 24,442**	$ 21,745	$ 17,886
Less: Preferred stock dividends	**1,515**	1,125	805
Net income applicable to common equity	**22,927**	20,620	17,081
Less: Dividends and undistributed earnings allocated to participating securities	**521**	543	524
Net income applicable to common stockholders	**$ 22,406**	$ 20,077	$ 16,557
Total weighted-average basic shares outstanding	**3,700.4**	3,763.5	3,782.4
Net income per share	**$ 6.05**	$ 5.33	$ 4.38
Diluted earnings per share			
Net income applicable to common stockholders	**$ 22,406**	$ 20,077	$ 16,557
Total weighted-average basic shares outstanding	**3,700.4**	3,763.5	3,782.4
Add: Employee stock options, SARs and warrants[a]	**32.4**	34.0	32.5
Total weighted-average diluted shares outstanding[b]	**3,732.8**	3,797.5	3,814.9
Net income per share	**$ 6.00**	$ 5.29	$ 4.34

(a) Excluded from the computation of diluted EPS (due to the antidilutive effect) were certain options issued under employee benefit plans. The aggregate number of shares issuable upon the exercise of such options was not material for the year ended December 31, 2015, and 1 million and 6 million for the years ended December 31, 2014 and 2013, respectively.

(b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

Note 25 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on investment securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities, and net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

Year ended December 31, (in millions)	Unrealized gains/(losses) on investment securities[a]	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	Accumulated other comprehensive income/(loss)
Balance at December 31, 2012	$ 6,868	$ (95)	$ 120	$ (2,791)	$ 4,102
Net change	(4,070)	(41)	(259)	1,467	(2,903)
Balance at December 31, 2013	$ 2,798	$ (136)	$ (139)	$ (1,324)	$ 1,199
Net change	1,975	(11)	44	(1,018)	990
Balance at December 31, 2014	$ 4,773	$ (147)	$ (95)	$ (2,342)	$ 2,189
Net change	**(2,144)**	**(15)**	**51**	**111**	**(1,997)**
Balance at December 31, 2015	**$ 2,629**	**$ (162)**	**$ (44)**	**$ (2,231)**	**$ 192**

(a) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS including, as of the date of transfer during 2014, $9 million of net unrealized losses related to AFS securities that were transferred to HTM. Subsequent to transfer, includes any net unamortized unrealized gains and losses related to the transferred securities.

The following table presents the before- and after-tax changes in the components of other comprehensive income/(loss).

	2015			2014			2013		
Year ended December 31, (in millions)	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax
Unrealized gains/(losses) on investment securities:									
Net unrealized gains/(losses) arising during the period	**$(3,315)**	**$ 1,297**	**$(2,018)**	$ 3,193	$(1,170)	$ 2,023	$(5,987)	$ 2,323	$(3,664)
Reclassification adjustment for realized (gains)/losses included in net income[a]	**(202)**	**76**	**(126)**	(77)	29	(48)	(667)	261	(406)
Net change	**(3,517)**	**1,373**	**(2,144)**	3,116	(1,141)	1,975	(6,654)	2,584	(4,070)
Translation adjustments:									
Translation[b]	**(1,876)**	**682**	**(1,194)**	(1,638)	588	(1,050)	(807)	295	(512)
Hedges[b]	**1,885**	**(706)**	**1,179**	1,698	(659)	1,039	773	(302)	471
Net change	**9**	**(24)**	**(15)**	60	(71)	(11)	(34)	(7)	(41)
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**(97)**	**35**	**(62)**	98	(39)	59	(525)	206	(319)
Reclassification adjustment for realized (gains)/losses included in net income[c][e]	**180**	**(67)**	**113**	(24)	9	(15)	101	(41)	60
Net change	**83**	**(32)**	**51**	74	(30)	44	(424)	165	(259)
Defined benefit pension and OPEB plans:									
Prior service credits arising during the period	**–**	**–**	**–**	(53)	21	(32)	–	–	–
Net gains/(losses) arising during the period	**29**	**(47)**	**(18)**	(1,697)	688	(1,009)	2,055	(750)	1,305
Reclassification adjustments included in net income[d]:									
Amortization of net loss	**282**	**(106)**	**176**	72	(29)	43	321	(124)	197
Prior service costs/(credits)	**(36)**	**14**	**(22)**	(44)	17	(27)	(43)	17	(26)
Foreign exchange and other	**33**	**(58)**	**(25)**	39	(32)	7	(14)	5	(9)
Net change	**308**	**(197)**	**111**	(1,683)	665	(1,018)	2,319	(852)	1,467
Total other comprehensive income/(loss)	**$(3,117)**	**$ 1,120**	**$(1,997)**	$ 1,567	$ (577)	$ 990	$(4,793)	$ 1,890	$(2,903)

(a) The pretax amount is reported in securities gains in the Consolidated statements of income.
(b) Reclassifications of pretax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. The amounts were not material for the periods presented.
(c) The pretax amounts are predominantly recorded in net interest income in the Consolidated statements of income.
(d) The pretax amount is reported in compensation expense in the Consolidated statements of income.
(e) In 2015, the Firm reclassified approximately $150 million of net losses from AOCI to other income because the Firm determined that it is probable that the forecasted interest payment cash flows will not occur. For additional information, see Note 6.

Note 26 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

Effective tax rate and expense

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for each of the years ended December 31, 2015, 2014 and 2013, is presented in the following table.

Effective tax rate

Year ended December 31,	2015	2014	2013
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	**1.5**	2.7	2.2
Tax-exempt income	**(3.3)**	(3.1)	(3.0)
Non-U.S. subsidiary earnings[a]	**(3.9)**	(2.0)	(4.8)
Business tax credits	**(3.7)**	(3.3)	(3.4)
Nondeductible legal expense	**0.8**	2.3	7.8
Tax audit resolutions	**(5.7)**	(1.4)	(0.6)
Other, net	**(0.3)**	(1.0)	(0.3)
Effective tax rate	**20.4%**	29.2%	32.9%

(a) Predominantly includes earnings of U.K. subsidiaries that are deemed to be reinvested indefinitely.

The components of income tax expense/(benefit) included in the Consolidated statements of income were as follows for each of the years ended December 31, 2015, 2014, and 2013.

Income tax expense/(benefit)

Year ended December 31, (in millions)	2015	2014	2013
Current income tax expense/(benefit)			
U.S. federal	**$ 3,160**	$ 2,382	$ (654)
Non-U.S.	**1,220**	1,353	1,308
U.S. state and local	**547**	857	(4)
Total current income tax expense/ (benefit)	**4,927**	4,592	650
Deferred income tax expense/(benefit)			
U.S. federal	**1,213**	3,890	7,216
Non-U.S.	**(95)**	71	10
U.S. state and local	**215**	401	913
Total deferred income tax expense/(benefit)	**1,333**	4,362	8,139
Total income tax expense	**$ 6,260**	$ 8,954	$ 8,789

Total income tax expense includes $2.4 billion, $451 million and $531 million of tax benefits recorded in 2015, 2014, and 2013, respectively, as a result of tax audit resolutions. In 2013, the relationship between current and deferred income tax expense was largely driven by the reversal of significant deferred tax assets as well as prior-year tax adjustments and audit resolutions.

Tax effect of items recorded in stockholders' equity

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity and certain tax benefits associated with the Firm's employee stock-based compensation plans. The tax effect of all items recorded directly to stockholders' equity resulted in a increase of $1.5 billion in 2015, a decrease of $140 million in 2014, and an increase of $2.1 billion in 2013.

Results from Non-U.S. earnings

The following table presents the U.S. and non-U.S. components of income before income tax expense for the years ended December 31, 2015, 2014 and 2013.

Year ended December 31, (in millions)	2015	2014	2013
U.S.	**$ 23,191**	$ 23,422	$ 17,990
Non-U.S.[a]	**7,511**	7,277	8,685
Income before income tax expense	**$ 30,702**	$ 30,699	$ 26,675

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Based on JPMorgan Chase's ongoing review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill

these requirements and needs, the Firm has determined that the undistributed earnings of certain of its subsidiaries would be indefinitely reinvested to fund current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. For 2015, pretax earnings of $3.5 billion were generated and will be indefinitely reinvested in these subsidiaries. At December 31, 2015, the cumulative amount of undistributed pretax earnings in these subsidiaries were $34.6 billion. If the Firm were to record a deferred tax liability associated with these undistributed earnings, the amount would be $8.2 billion at December 31, 2015.

These undistributed earnings are related to subsidiaries located predominantly in the U.K. where the 2015 statutory tax rate was 20.25%.

Affordable housing tax credits

The Firm recognized $1.6 billion, $1.6 billion and $1.5 billion of tax credits and other tax benefits associated with investments in affordable housing projects within income tax expense for the years 2015, 2014 and 2013, respectively. The amount of amortization of such investments reported in income tax expense under the current period presentation during these years was $1.1 billion, $1.1 billion and $989 million, respectively. The carrying value of these investments, which are reported in other assets on the Firm's Consolidated balance sheets, was $7.7 billion and $7.3 billion at December 31, 2015 and 2014, respectively. The amount of commitments related to these investments, which are reported in accounts payable and other liabilities on the Firm's Consolidated balance sheets, was $2.0 billion and $1.8 billion at December 31, 2015 and 2014, respectively.

Deferred taxes

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2015 and 2014.

December 31, (in millions)		2015		2014
Deferred tax assets				
Allowance for loan losses	**$**	**5,343**	$	5,756
Employee benefits		**2,972**		3,378
Accrued expenses and other		**7,299**		8,637
Non-U.S. operations		**5,365**		5,106
Tax attribute carryforwards		**2,602**		570
Gross deferred tax assets		**23,581**		23,447
Valuation allowance		**(735)**		(820)
Deferred tax assets, net of valuation allowance	**$**	**22,846**	$	22,627
Deferred tax liabilities				
Depreciation and amortization	**$**	**3,167**	$	3,073
Mortgage servicing rights, net of hedges		**4,968**		5,533
Leasing transactions		**3,042**		2,495
Non-U.S. operations		**4,285**		4,444
Other, net		**4,419**		5,392
Gross deferred tax liabilities		**19,881**		20,937
Net deferred tax assets	**$**	**2,965**	$	1,690

JPMorgan Chase has recorded deferred tax assets of $2.6 billion at December 31, 2015, in connection with U.S. federal, state and local, and non-U.S. net operating loss ("NOL") carryforwards and foreign tax credit carryforwards. At December 31, 2015, total U.S. federal NOL carryforwards were approximately $5.2 billion, state and local NOL carryforwards were $509 million, and non-U.S. NOL carryforwards were $288 million. If not utilized, the U.S. federal NOLs will expire between 2025 and 2034 and the state and local and non-U.S. NOL carryforwards will expire between 2016 and 2017. Non-U.S. tax credit carryforwards were $704 million and will expire by 2023.

The valuation allowance at December 31, 2015, was due to losses associated with non-U.S. subsidiaries.

Unrecognized tax benefits

At December 31, 2015, 2014 and 2013, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $3.5 billion, $4.9 billion and $5.5 billion, respectively, of which $2.1 billion, $3.5 billion and $3.7 billion, respectively, if recognized, would reduce the annual effective tax rate. Included in the amount of unrecognized tax benefits are certain items that would not affect the effective tax rate if they were recognized in the Consolidated statements of income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income tax deductions, and the portion of gross non-U.S. unrecognized tax benefits that would have offsets in other jurisdictions. JPMorgan Chase is presently under audit by a number of taxing authorities, most notably by the Internal Revenue Service as summarized in the Tax examination status table below. As JPMorgan Chase is presently under audit by a number of taxing authorities, it is reasonably possible that over the next 12 months the resolution of these examinations may increase or decrease the gross balance of unrecognized tax benefits by as much as approximately $800 million. Upon settlement of an audit, the change in the unrecognized tax benefit balance would result from payment or income statement recognition.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2015, 2014 and 2013.

Year ended December 31, (in millions)	**2015**	2014	2013
Balance at January 1,	**$ 4,911**	$ 5,535	$ 7,158
Increases based on tax positions related to the current period	**408**	810	542
Increases based on tax positions related to prior periods	**1,028**	477	88
Decreases based on tax positions related to prior periods	**(2,646)**	(1,902)	(2,200)
Decreases related to cash settlements with taxing authorities	**(204)**	(9)	(53)
Balance at December 31,	**$ 3,497**	$ 4,911	$ 5,535

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $(156) million, $17 million and $(184) million in 2015, 2014 and 2013, respectively.

At December 31, 2015 and 2014, in addition to the liability for unrecognized tax benefits, the Firm had accrued $578 million and $1.2 billion, respectively, for income tax-related interest and penalties.

Tax examination status

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many states throughout the U.S. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2015.

December 31, 2015	Periods under examination	Status
JPMorgan Chase - U.S.	2003 - 2005	Field examination completed; at Appellate level
JPMorgan Chase - U.S.	2006 - 2010	Field examination completed, JPMorgan Chase filed amended returns and intends to appeal
JPMorgan Chase - U.S.	2011 - 2013	Field Examination
JPMorgan Chase - New York State	2008 - 2011	Field Examination
JPMorgan Chase - California	2011 - 2012	Field Examination
JPMorgan Chase - U.K.	2006 - 2012	Field examination of certain select entities

Note 27 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the Office of the Comptroller of the Currency. The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC.

The Federal Reserve requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average required amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $14.4 billion and $10.6 billion in 2015 and 2014, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase & Co. ("Parent Company") and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans provided by any banking subsidiary to the Parent Company or to any particular affiliate, together with certain other transactions with such affiliate, (collectively referred to as "covered transactions"), are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of covered transactions between any banking subsidiary and all of its affiliates is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company-only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the Office of the Comptroller of the Currency ("OCC") and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2016, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, approximately $25 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2016 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2015 and 2014, cash in the amount of $12.6 billion and $16.8 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers. Also, as of December 31, 2015 and 2014, the Firm had receivables within other assets of $16.2 billion and $14.9 billion, respectively, consisting of cash deposited with clearing organizations for the benefit of customers. Securities with a fair value of $20.0 billion and $10.1 billion, respectively, were also restricted in relation to customer activity. In addition, as of December 31, 2015 and 2014, the Firm had other restricted cash of $3.7 billion and $3.3 billion, respectively, primarily representing cash reserves held at non-U.S. central banks and held for other general purposes.

Note 28 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

Basel III capital rules, for large and internationally active U.S. bank holding companies and banks, including the Firm and its insured depository institution ("IDI") subsidiaries, revised, among other things, the definition of capital and introduced a new common equity tier 1 capital ("CET1 capital") requirement. Basel III presents two comprehensive methodologies for calculating risk-weighted assets ("RWA"), a general (Standardized) approach, which replaced Basel I RWA effective January 1, 2015 ("Basel III Standardized") and an advanced approach, which replaced Basel II RWA ("Basel III Advanced"); and sets out minimum capital ratios and overall capital adequacy standards. Certain of the requirements of Basel III are subject to phase-in periods that began on January 1, 2014 and continue through the end of 2018 ("transitional period").

There are three categories of risk-based capital under the Basel III Transitional rules: CET1 capital, as well as Tier 1 capital and Tier 2 capital. CET1 capital predominantly includes common stockholders' equity (including capital for AOCI related to debt and equity securities classified as AFS as well as for defined benefit pension and OPEB plans), less certain deductions for goodwill, MSRs and deferred tax assets that arise from NOL and tax credit carryforwards. Tier 1 capital predominantly consists of CET1 capital as well as perpetual preferred stock. Tier 2 capital includes long-term debt qualifying as Tier 2 and qualifying allowance for credit losses. Total capital is Tier 1 capital plus Tier 2 capital.

The following tables present the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant national bank subsidiaries under both Basel III Standardized Transitional and Basel III Advanced Transitional at December 31, 2015 and 2014.

	JPMorgan Chase & Co.[f]			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2015**	Dec 31, 2014	**Dec 31, 2015**	Dec 31, 2014
Regulatory capital				
CET1 capital	**$ 175,398**	$ 164,426	**$ 175,398**	$ 164,426
Tier 1 capital[a]	**200,482**	186,263	**200,482**	186,263
Total capital	**234,413**	221,117	**224,616**	210,576
Assets				
Risk-weighted[b]	**1,465,262**	1,472,602	**1,485,336**	1,608,240
Adjusted average[c]	**2,361,177**	2,464,915	**2,361,177**	2,464,915
Capital ratios[d]				
CET1	**12.0%**	11.2%	**11.8%**	10.2%
Tier 1[a]	**13.7**	12.6	**13.5**	11.6
Total	**16.0**	15.0	**15.1**	13.1
Tier 1 leverage[e]	**8.5**	7.6	**8.5**	7.6

	JPMorgan Chase Bank, N.A.[f]			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2015**	Dec 31, 2014	**Dec 31, 2015**	Dec 31, 2014
Regulatory capital				
CET1 capital	**$ 168,857**	$ 156,567	**$ 168,857**	$ 156,567
Tier 1 capital[a]	**169,222**	156,891	**169,222**	156,891
Total capital	**183,262**	173,322	**176,423**	166,326
Assets				
Risk-weighted[b]	**1,264,056**	1,230,358	**1,249,607**	1,330,175
Adjusted average[c]	**1,913,448**	1,968,131	**1,913,448**	1,968,131
Capital ratios[d]				
CET1	**13.4%**	12.7%	**13.5%**	11.8%
Tier 1[a]	**13.4**	12.8	**13.5**	11.8
Total	**14.5**	14.1	**14.1**	12.5
Tier 1 leverage[e]	**8.8**	8.0	**8.8**	8.0

	Chase Bank USA, N.A.[f]			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2015**	Dec 31, 2014	**Dec 31, 2015**	Dec 31, 2014
Regulatory capital				
CET1 capital	$ 15,419	$ 14,556	$ 15,419	$ 14,556
Tier 1 capital[a]	15,419	14,556	15,419	14,556
Total capital	21,418	20,517	20,069	19,206
Assets				
Risk-weighted[b]	105,807	103,468	181,775	157,565
Adjusted average[c]	134,152	128,111	134,152	128,111
Capital ratios[d]				
CET1	14.6%	14.1%	8.5%	9.2%
Tier 1[a]	14.6	14.1	8.5	9.2
Total	20.2	19.8	11.0	12.2
Tier 1 leverage[e]	11.5	11.4	11.5	11.4

(a) At December 31, 2015, trust preferred securities included in Basel III Tier 1 capital were $992 million and $420 million for JPMorgan Chase and JPMorgan Chase Bank, N.A., respectively. At December 31, 2015 Chase Bank USA, N.A. had no trust preferred securities.

(b) Effective January 1, 2015, the Basel III Standardized RWA is calculated under the Basel III definition of the Standardized approach. Prior periods were based on Basel I (inclusive of Basel 2.5).

(c) Adjusted average assets, for purposes of calculating the Tier 1 leverage ratio, includes total quarterly average assets adjusted for unrealized gains/(losses) on securities, less deductions for goodwill and other intangible assets, defined benefit pension plan assets, and deferred tax assets related to net operating loss carryforwards.

(d) For each of the risk-based capital ratios, the capital adequacy of the Firm and its national bank subsidiaries are evaluated against the Basel III approach, Standardized or Advanced, resulting in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.

(e) The Tier 1 leverage ratio is not a risk-based measure of capital. This ratio is calculated by dividing Tier 1 capital by adjusted average assets.

(f) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions; whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both non-taxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from non-taxable business combinations of $105 million and $130 million at December 31, 2015, and 2014, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of $3.0 billion and $2.7 billion at December 31, 2015, and 2014, respectively.

Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of CET1, Tier 1 and Total capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Bank subsidiaries also are subject to these capital requirements by their respective primary regulators. The following table presents the minimum ratios to which the Firm and its national bank subsidiaries are subject as of December 31, 2015.

	Minimum capital ratios[a]	Well-capitalized ratios	
		BHC[b]	IDI[c]
Capital ratios			
CET1	4.5%	–%	6.5%
Tier 1	6.0	6.0	8.0
Total	8.0	10.0	10.0
Tier 1 leverage	4.0	–	5.0

(a) As defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its national bank subsidiaries are subject.
(b) Represents requirements for bank holding companies pursuant to regulations issued by the Federal Reserve.
(c) Represents requirements for bank subsidiaries pursuant to regulations issued under the FDIC Improvement Act.

As of December 31, 2015 and 2014, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

Note 29 – Off–balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements.

To provide for probable credit losses inherent in wholesale and certain consumer lending-commitments, an allowance for credit losses on lending-related commitments is maintained. See Note 15 for further information regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2015 and 2014. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. In addition, the Firm typically closes credit card lines when the borrower is 60 days or more past due. The Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity at December 31, (in millions)	Contractual amount						Carrying value[j]	
	2015					2014	2015	2014
	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total		
Lending-related								
Consumer, excluding credit card:								
Home equity - senior lien	**$ 1,546**	**$ 3,817**	**$ 726**	**$ 4,743**	**$ 10,832**	$ 11,807	**$ –**	$ –
Home equity - junior lien	**2,375**	**4,354**	**657**	**4,538**	**11,924**	14,859	**–**	–
Prime mortgage[a]	**12,992**	**–**	**–**	**–**	**12,992**	8,579	**–**	–
Subprime mortgage	**–**	**–**	**–**	**–**	**–**	–	**–**	–
Auto	**8,907**	**1,160**	**80**	**90**	**10,237**	10,462	**2**	2
Business banking	**11,085**	**699**	**92**	**475**	**12,351**	11,894	**12**	11
Student and other	**4**	**3**	**–**	**135**	**142**	552	**–**	–
Total consumer, excluding credit card	**36,909**	**10,033**	**1,555**	**9,981**	**58,478**	58,153	**14**	13
Credit card	**515,518**	**–**	**–**	**–**	**515,518**	525,963	**–**	–
Total consumer[b]	**552,427**	**10,033**	**1,555**	**9,981**	**573,996**	584,116	**14**	13
Wholesale:								
Other unfunded commitments to extend credit[c][d][e]	**85,861**	**89,925**	**140,640**	**6,899**	**323,325**	318,278	**649**	491
Standby letters of credit and other financial guarantees[c][d][e]	**16,083**	**14,287**	**5,819**	**2,944**	**39,133**	44,272	**548**	671
Other letters of credit[c]	**3,570**	**304**	**67**	**–**	**3,941**	4,331	**2**	1
Total wholesale[f][g]	**105,514**	**104,516**	**146,526**	**9,843**	**366,399**	366,881	**1,199**	1,163
Total lending-related	**$ 657,941**	**$ 114,549**	**$ 148,081**	**$ 19,824**	**$ 940,395**	$ 950,997	**$ 1,213**	$ 1,176
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[h]	**$ 183,329**	**$ –**	**$ –**	**$ –**	**$ 183,329**	$ 171,059	**$ –**	$ –
Derivatives qualifying as guarantees	**3,194**	**285**	**11,160**	**39,145**	**53,784**	53,589	**222**	80
Unsettled reverse repurchase and securities borrowing agreements	**42,482**	**–**	**–**	**–**	**42,482**	40,993	**–**	–
Unsettled repurchase and securities lending agreements	**21,798**	–	–	–	**21,798**	42,578	**–**	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	**NA**	**NA**	**NA**	**NA**	**NA**	NA	**148**	275
Loans sold with recourse	**NA**	**NA**	**NA**	**NA**	**4,274**	6,063	**82**	102
Other guarantees and commitments[i]	**369**	**2,603**	**1,075**	**1,533**	**5,580**	5,720	**(94)**	(121)

(a) Includes certain commitments to purchase loans from correspondents.

(b) Predominantly all consumer lending-related commitments are in the U.S.

(c) At December 31, 2015 and 2014, reflects the contractual amount net of risk participations totaling $385 million and $243 million, respectively, for other unfunded commitments to extend credit; $11.2 billion and $13.0 billion, respectively, for standby letters of credit and other financial guarantees; and $341 million and $469 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.

(d) At December 31, 2015 and 2014, included credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other nonprofit entities of $12.3 billion and $14.8 billion, respectively, within other unfunded commitments to extend credit; and $9.6 billion and $13.3 billion, respectively, within standby letters of credit and other financial guarantees. Other unfunded commitments to extend credit also include liquidity facilities to nonconsolidated municipal bond VIEs; see Note 16.

(e) Effective in 2015, commitments to issue standby letters of credit, including those that could be issued under multipurpose facilities, are presented as other unfunded commitments to extend credit. Previously, such commitments were presented as standby letters of credit and other financial guarantees. At December 31, 2014, these commitments were $45.6 billion. Prior period amounts have been revised to conform with current period presentation.

(f) At December 31, 2015 and 2014, the U.S. portion of the contractual amount of total wholesale lending-related commitments was 77% and 73%, respectively.

(g) Effective January 1, 2015, the Firm no longer includes within its disclosure of wholesale lending-related commitments the unused amount of advised uncommitted lines of credit as it is within the Firm's discretion whether or not to make a loan under these lines, and the Firm's approval is generally required prior to funding. Prior period amounts have been revised to conform with the current period presentation.

(h) At December 31, 2015 and 2014, collateral held by the Firm in support of securities lending indemnification agreements was $190.6 billion and $177.1 billion, respectively. Securities lending collateral consist of primarily cash and securities issued by governments that are members of the Organisation for Economic Co-operation and Development ("OECD") and U.S. government agencies.

(i) At December 31, 2015 and 2014, included unfunded commitments of $50 million and $147 million, respectively, to third-party private equity funds; and $871 million and $961 million, respectively, to other equity investments. These commitments included $73 million and $150 million, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 3. In addition, at December 31, 2015 and 2014, included letters of credit hedged by derivative transactions and managed on a market risk basis of $4.6 billion and $4.5 billion, respectively.

(j) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value.

Other unfunded commitments to extend credit
Other unfunded commitments to extend credit generally consist of commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

Also included in other unfunded commitments to extend credit are commitments to noninvestment-grade counterparties in connection with leveraged finance activities, which were $32.1 billion and $23.4 billion at December 31, 2015 and 2014, respectively. For further information, see Note 3 and Note 4.

The Firm acts as a settlement and custody bank in the U.S. tri-party repurchase transaction market. In its role as settlement and custody bank, the Firm is exposed to the intra-day credit risk of its cash borrower clients, usually broker-dealers. This exposure arises under secured clearance advance facilities that the Firm extends to its clients (i.e. cash borrowers); these facilities contractually limit the Firm's intra-day credit risk to the facility amount and must be repaid by the end of the day. As of December 31, 2015 and 2014, the secured clearance advance facility maximum outstanding commitment amount was $2.9 billion and $12.6 billion, respectively.

Guarantees
U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off-balance sheet lending-related arrangements to be guarantees under U.S. GAAP: standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For certain types of guarantees, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. For indemnifications provided in sales agreements, a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires). Any contingent liability that exists as a result of issuing the guarantee or indemnification is recognized when it becomes probable and reasonably estimable. The contingent portion of the liability is not recognized if the estimated amount is less than the carrying amount of the liability recognized at inception (adjusted for any amortization). The recorded amounts of the liabilities related to guarantees and indemnifications at December 31, 2015 and 2014, excluding the allowance for credit losses on lending-related commitments, are discussed below.

Standby letters of credit and other financial guarantees
Standby letters of credit ("SBLC") and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were $550 million and $672 million at December 31, 2015 and 2014, respectively, which were classified in accounts payable and other liabilities on the Consolidated balance sheets; these carrying values included $123 million and $118 million, respectively, for the allowance for lending-related commitments, and $427 million and $554 million, respectively, for the guarantee liability and corresponding asset.

The following table summarizes the types of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's customers, as of December 31, 2015 and 2014.

Standby letters of credit, other financial guarantees and other letters of credit

	2015		2014	
December 31, (in millions)	Standby letters of credit and other financial guarantees[b]	Other letters of credit	Standby letters of credit and other financial guarantees[b]	Other letters of credit
Investment-grade[a]	**$ 31,751**	**$ 3,290**	$ 37,709	$ 3,476
Noninvestment-grade[a]	**7,382**	**651**	6,563	855
Total contractual amount	**$ 39,133**	**$ 3,941**	$ 44,272	$ 4,331
Allowance for lending-related commitments	**$ 121**	**$ 2**	$ 117	$ 1
Commitments with collateral	**18,825**	**996**	20,750	1,509

(a) The ratings scale is based on the Firm's internal ratings, which generally correspond to ratings as defined by S&P and Moody's.
(b) Effective in 2015, commitments to issue standby letters of credit, including those that could be issued under multipurpose facilities, are presented as other unfunded commitments to extend credit. Previously, such commitments were presented as standby letters of credit and other financial guarantees. At December 31, 2014, these commitments were $45.6 billion. Prior period amounts have been revised to conform with current period presentation.

Securities lending indemnifications
Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the borrower to return the lent securities. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

Derivatives qualifying as guarantees
In addition to the contracts described above, the Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less. Derivatives deemed to be guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps", are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio and are typically longer-term or may have no stated maturity, but allow the Firm to terminate the contract under certain conditions.

Derivatives deemed to be guarantees are recorded on the Consolidated balance sheets at fair value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was $53.8 billion and $53.6 billion at December 31, 2015 and 2014, respectively. The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees. However, exposure to certain stable value contracts is contractually limited to a substantially lower percentage of the notional amount; the notional amount on these stable value contracts was $28.4 billion and $27.5 billion at December 31, 2015 and 2014, respectively, and the maximum exposure to loss was $3.0 billion and $2.9 billion at December 31, 2015 and 2014, respectively. The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract. The fair value of derivatives that the Firm deems to be guarantees were derivative payables of $236 million and $102 million and derivative receivables of $14 million and $22 million at December 31, 2015 and 2014, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 6.

Unsettled reverse repurchase and securities borrowing agreements, and unsettled repurchase and securities lending agreements
In the normal course of business, the Firm enters into reverse repurchase agreements and securities borrowing agreements, which are secured financing agreements. Such agreements settle at a future date. At settlement, these commitments result in the Firm advancing cash to and receiving securities collateral from the counterparty. The Firm also enters into repurchase agreements and securities lending agreements. At settlement, these commitments result in the Firm receiving cash from and providing securities collateral to the counterparty. These agreements generally do not meet the definition of a derivative, and therefore, are not recorded on the Consolidated balance sheets until settlement date. These agreements predominantly consist of agreements with regular-way settlement periods. For a further discussion of securities purchased under resale agreements and securities borrowed, and securities sold under repurchase agreements and securities loaned, see Note 13.

Loan sales- and securitization-related indemnifications

Mortgage repurchase liability
In connection with the Firm's mortgage loan sale and securitization activities with U.S. GSEs, as described in Note 16, the Firm has made representations and warranties that the loans sold meet certain requirements. The Firm has been, and may be, required to repurchase loans and/or indemnify U.S. GSEs (e.g., with "make-whole" payments to reimburse U.S. GSEs for their realized losses on liquidated loans). To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the third party. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans that are deemed to have defects that were sold to purchasers (including securitization-related SPEs) plus, in certain circumstances, accrued interest on such loans and certain expense. The carrying values of the repurchase liabilities were $148 million and $275 million at December 31, 2015 and 2014, respectively.

Private label securitizations
The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

On November 15, 2013, the Firm announced that it had reached a $4.5 billion agreement with 21 major institutional investors to make a binding offer to the trustees of 330 residential mortgage-backed securities trusts issued by J.P.Morgan, Chase, and Bear Stearns ("RMBS Trust Settlement") to resolve all representation and warranty claims, as well as all servicing claims, on all trusts issued by J.P. Morgan, Chase, and Bear Stearns between 2005 and 2008. For further information see Note 31.

In addition, from 2005 to 2008, Washington Mutual made certain loan level representations and warranties in connection with approximately $165 billion of residential mortgage loans that were originally sold or deposited into private-label securitizations by Washington Mutual. Of the $165 billion, approximately $81 billion has been repaid. In addition, approximately $50 billion of the principal amount of such loans has liquidated with an average loss severity of 59%. Accordingly, the remaining outstanding principal balance of these loans as of December 31, 2015, was approximately $33 billion, of which $6 billion was 60 days or more past due. The Firm believes that any repurchase obligations related to these loans remain with the FDIC receivership.

For additional information regarding litigation, see Note 31.

Loans sold with recourse
The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2015 and 2014, the unpaid principal balance of loans sold with recourse totaled $4.3 billion and $6.1 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it will have to perform under its recourse obligations, was $82 million and $102 million at December 31, 2015 and 2014, respectively.

Other off-balance sheet arrangements

Indemnification agreements – general
In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Card charge-backs
Commerce Solutions, Card's merchant services business, is a global leader in payment processing and merchant acquiring.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is primarily liable for the amount of each processed card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Commerce Solutions will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Commerce Solutions is unable to collect the amount from the merchant, Commerce Solutions will bear the loss for the amount credited or refunded to the cardmember. Commerce Solutions mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Commerce Solutions does not have sufficient collateral from the merchant to provide customer refunds; and (3) Commerce Solutions does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would recognize the loss.

Commerce Solutions incurred aggregate losses of $12 million, $10 million, and $14 million on $949.3 billion, $847.9 billion, and $750.1 billion of aggregate volume processed for the years ended December 31, 2015, 2014 and 2013, respectively. Incurred losses from merchant charge-backs are charged to other expense, with the offset recorded in a valuation allowance against accrued interest and accounts receivable on the Consolidated balance sheets. The carrying value of the valuation allowance was $20 million and $4 million at December 31, 2015 and 2014, respectively, which the Firm believes, based on historical experience and the collateral held by Commerce Solutions of $136 million and $174 million at December 31, 2015 and 2014, respectively, is representative of the payment or performance risk to the Firm related to charge-backs.

Clearing Services – Client Credit Risk
The Firm provides clearing services for clients by entering into securities purchases and sales and derivative transactions, with CCPs, including ETDs such as futures and options, as well as OTC-cleared derivative contracts. As a clearing member, the Firm stands behind the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin. Variation margin is posted on a daily basis based on the value of clients' derivative contracts. Initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

As clearing member, the Firm is exposed to the risk of nonperformance by its clients, but is not liable to clients for the performance of the CCPs. Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions. The Firm can also cease providing clearing services if clients do not adhere to their obligations under the clearing agreement. In the event of non-performance by a client, the Firm would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as a clearing member.

The Firm reflects its exposure to nonperformance risk of the client through the recognition of margin payables or receivables to clients and CCPs, but does not reflect the clients' underlying securities or derivative contracts on its Consolidated Financial Statements.

It is difficult to estimate the Firm's maximum possible exposure through its role as a clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, and the credit risk mitigants available to the Firm, management believes it is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

For information on the derivatives that the Firm executes for its own account and records in its Consolidated Financial Statements, see Note 6.

Exchange & Clearing House Memberships
The Firm is a member of several securities and derivative exchanges and clearing houses, both in the U.S. and other countries, and it provides clearing services. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to the guarantee fund maintained by a clearing house or exchange as part of the resources available to cover any losses in the event of a member default. Alternatively, these obligations may be a full pro-rata share of the residual losses after applying the guarantee fund. Additionally, certain clearing houses require the Firm as a member to pay a pro rata share of losses resulting from the clearing house's investment of guarantee fund contributions and initial margin, unrelated to and independent of the default of another member. Generally a payment would only be required should such losses exceed the resources of the clearing house or exchange that are contractually required to absorb the losses in the first instance. It is difficult to estimate the Firm's maximum possible exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Guarantees of subsidiaries
In the normal course of business, JPMorgan Chase & Co. ("Parent Company") may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated balance sheets or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes. These guarantees are not included in the table on page 291 of this Note. For additional information, see Note 21.

JPMorgan Chase Financial Company LLC ("JPMFC"), a direct, 100%-owned finance subsidiary of the Parent Company, was formed on September 30, 2015, for the purpose of issuing debt and other securities in offerings to investors. Any securities issued by JPMFC will be fully and unconditionally guaranteed by the Parent Company, and these guarantees will rank on a parity with the Firm's unsecured and unsubordinated indebtedness. As of December 31, 2015, no securities had been issued by JPMFC.

Note 30 – Commitments, pledged assets and collateral

Lease commitments

At December 31, 2015, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2015.

Year ended December 31, (in millions)	
2016	$ 1,668
2017	1,647
2018	1,447
2019	1,263
2020	1,125
After 2020	4,679
Total minimum payments required	11,829
Less: Sublease rentals under noncancelable subleases	(1,889)
Net minimum payment required	$ 9,940

Total rental expense was as follows.

Year ended December 31, (in millions)	**2015**	2014	2013
Gross rental expense	**$ 2,015**	$ 2,255	$ 2,187
Sublease rental income	**(411)**	(383)	(341)
Net rental expense	**$ 1,604**	$ 1,872	$ 1,846

Pledged assets

The Firm may pledge financial assets that it owns to maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits, and to collateralize repurchase and other securities financing agreements. Certain of these pledged assets may be sold or repledged by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets. At December 31, 2015 and 2014, the Firm had pledged assets of $385.6 billion and $324.5 billion, respectively, at Federal Reserve Banks and FHLBs. In addition, as of December 31, 2015 and 2014, the Firm had pledged $50.7 billion and $60.1 billion, respectively, of financial assets that may not be sold or repledged by the secured parties. Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 16 for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities and long-term debt, see Note 13 and Note 21, respectively. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	**2015**	2014
Securities	**$ 124.3**	$ 118.7
Loans	**298.6**	248.2
Trading assets and other	**144.9**	169.0
Total assets pledged	**$ 567.8**	$ 535.9

Collateral

At December 31, 2015 and 2014, the Firm had accepted assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of approximately $748.5 billion and $761.7 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately $580.9 billion and $596.8 billion, respectively, were sold or repledged, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales and to collateralize deposits and derivative agreements.

Note 31 – Litigation

Contingencies

As of December 31, 2015, the Firm and its subsidiaries and affiliates are defendants or putative defendants in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $3.6 billion at December 31, 2015. This estimated aggregate range of reasonably possible losses is based upon currently available information for those proceedings in which the Firm believes that an estimate of reasonably possible loss can be made. For certain matters, the Firm does not believe that such an estimate can be made. The Firm's estimate of the aggregate range of reasonably possible losses involves significant judgment, given the number, variety and varying stages of the proceedings (including the fact that many are in preliminary stages), the existence in many such proceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings, particularly proceedings that could result from government investigations. Accordingly, the Firm's estimate will change from time to time, and actual losses may vary significantly.

Set forth below are descriptions of the Firm's material legal proceedings.

Auto Dealer Regulatory Matter. The U.S. Department of Justice ("DOJ") is investigating potential statistical disparities in markups charged to borrowers of different races and ethnicities by automobile dealers on loans originated by those dealers and purchased by the Firm.

CIO Litigation. The Firm has been sued in a consolidated shareholder class action, a consolidated putative class action brought under the Employee Retirement Income Security Act ("ERISA") and seven shareholder derivative actions brought in Delaware state court and in New York federal and state courts relating to 2012 losses in the synthetic credit portfolio managed by the Firm's Chief Investment Office ("CIO"). A settlement of the shareholder class action, under which the Firm will pay $150 million, has been preliminarily approved by the court. The putative ERISA class action has been dismissed, and plaintiffs have filed a notice of appeal. Six of the seven shareholder derivative actions have been dismissed.

Credit Default Swaps Investigations and Litigation. In July 2013, the European Commission (the "EC") filed a Statement of Objections against the Firm (including various subsidiaries) and other industry members in connection with its ongoing investigation into the credit default swaps ("CDS") marketplace. The EC asserted that between 2006 and 2009, a number of investment banks acted collectively through the International Swaps and Derivatives Association ("ISDA") and Markit Group Limited ("Markit") to foreclose exchanges from the potential market for exchange-traded credit derivatives. In December 2015, the EC announced the closure of its investigation as to the Firm and other investment banks.

Separately, the Firm and other defendants have entered separate agreements to settle a consolidated putative class action filed in the United States District Court for the Southern District of New York on behalf of purchasers and sellers of CDS. The complaint in this action had alleged that the defendant investment banks and dealers, including the Firm, as well as Markit and/or ISDA, collectively prevented new entrants into the market for exchange-traded CDS products. These settlements are subject to Court approval.

Custody Assets Investigation. The U.K. Financial Conduct Authority ("FCA") has closed its previously-reported investigation concerning compliance by JPMorgan Chase Bank, N.A., London branch and J.P. Morgan Europe Limited with the FCA's rules regarding the provision of custody services relating to the administration of client assets.

Foreign Exchange Investigations and Litigation. The Firm previously reported settlements with certain government authorities relating to its foreign exchange ("FX") sales and trading activities and controls related to those activities. FX-related investigations and inquiries by other, non-U.S. government authorities, including competition authorities, remain ongoing, and the Firm is cooperating with those matters.

The Firm is also one of a number of foreign exchange dealers defending a class action filed in the United States District Court for the Southern District of New York by U.S.-based plaintiffs, principally alleging violations of federal antitrust laws based on an alleged conspiracy to manipulate foreign exchange rates (the "U.S. class action"). In January 2015, the Firm entered into a settlement agreement in the U.S. class action. Following this settlement, a number of additional putative class actions were filed seeking damages for persons who transacted FX futures and options on futures (the "exchanged-based actions"), consumers who purchased foreign currencies at allegedly inflated rates (the "consumer actions"), and participants or beneficiaries of qualified ERISA plans (the "ERISA actions"). In July 2015, the plaintiffs in the U.S. class action filed an amended complaint, and the Court consolidated the exchange-based

actions into the U.S. class action. The Firm has entered into a revised settlement agreement to resolve the consolidated U.S. class action, including the exchange-based actions, and that agreement is subject to Court approval. The consumer actions and ERISA actions remain pending.

In September 2015, two class actions were filed in Canada against the Firm as well as a number of other FX dealers, principally for alleged violations of the Canadian Competition Act based on an alleged conspiracy to fix the prices of currency purchased in the FX market. The first action was filed in the province of Ontario, and seeks to represent all persons in Canada who transacted any FX instrument. The second action seeks to represent only those persons in Quebec who engaged in FX transactions.

General Motors Litigation. JPMorgan Chase Bank, N.A. participated in, and was the Administrative Agent on behalf of a syndicate of lenders on, a $1.5 billion syndicated Term Loan facility ("Term Loan") for General Motors Corporation ("GM"). In July 2009, in connection with the GM bankruptcy proceedings, the Official Committee of Unsecured Creditors of Motors Liquidation Company ("Creditors Committee") filed a lawsuit against JPMorgan Chase Bank, N.A., in its individual capacity and as Administrative Agent for other lenders on the Term Loan, seeking to hold the underlying lien invalid based on the filing of a UCC-3 termination statement relating to the Term Loan. In March 2013, the Bankruptcy Court granted JPMorgan Chase Bank, N.A.'s motion for summary judgment and dismissed the Creditors Committee's complaint on the grounds that JPMorgan Chase Bank, N.A. did not authorize the filing of the UCC-3 termination statement at issue. The Creditors Committee appealed the Bankruptcy Court's dismissal of its claim to the United States Court of Appeals for the Second Circuit. In January 2015, the Court of Appeals reversed the Bankruptcy Court's dismissal of the Creditors Committee's claim and remanded the case to the Bankruptcy Court with instructions to enter partial summary judgment for the Creditors Committee as to the termination statement. The proceedings in the Bankruptcy Court continue with respect to, among other things, additional defenses asserted by JPMorgan Chase Bank, N.A. and the value of additional collateral on the Term Loan that was unaffected by the filing of the termination statement at issue. In addition, certain Term Loan lenders filed cross-claims against JPMorgan Chase Bank, N.A. in the Bankruptcy Court seeking indemnification and asserting various claims.

Interchange Litigation. A group of merchants and retail associations filed a series of class action complaints alleging that Visa and MasterCard, as well as certain banks, conspired to set the price of credit and debit card interchange fees, enacted respective rules in violation of antitrust laws, and engaged in tying/bundling and exclusive dealing. The parties have entered into an agreement to settle the cases for a cash payment of $6.1 billion to the class plaintiffs (of which the Firm's share is approximately 20%) and an amount equal to ten basis points of credit card interchange for a period of eight months to be measured from a date within 60 days of the end of the opt-out period. The agreement also provides for modifications to each credit card network's rules, including those that prohibit surcharging credit card transactions. In December 2013, the Court issued a decision granting final approval of the settlement. A number of merchants appealed, and oral argument was held in September 2015. Certain merchants and trade associations have also filed a motion with the District Court seeking to set aside the approval of the class settlement on the basis of alleged improper communications between one of MasterCard's former outside counsel and one of plaintiffs' outside counsel. That motion remains pending. Certain merchants that opted out of the class settlement have filed actions against Visa and MasterCard, as well as against the Firm and other banks. Defendants' motion to dismiss those actions was denied in July 2014.

Investment Management Litigation. The Firm is defending two pending cases that are being coordinated for pre-trial purposes, alleging that investment portfolios managed by J.P. Morgan Investment Management ("JPMIM") were inappropriately invested in securities backed by residential real estate collateral. Plaintiffs Assured Guaranty (U.K.) and Ambac Assurance UK Limited claim that JPMIM is liable for total losses of more than $1 billion in market value of these securities. Discovery has been completed. In January 2016, plaintiffs filed a joint partial motion for summary judgment in the coordinated actions.

Lehman Brothers Bankruptcy Proceedings. In May 2010, Lehman Brothers Holdings Inc. ("LBHI") and its Official Committee of Unsecured Creditors (the "Committee") filed a complaint (and later an amended complaint) against JPMorgan Chase Bank, N.A. in the United States Bankruptcy Court for the Southern District of New York that asserted both federal bankruptcy law and state common law claims, and sought, among other relief, to recover $7.9 billion in collateral (after deducting $700 million of returned collateral) that was transferred to JPMorgan Chase Bank, N.A. in the weeks preceding LBHI's bankruptcy. The amended complaint also sought unspecified damages on the grounds that JPMorgan Chase Bank, N.A.'s collateral requests hastened LBHI's bankruptcy. The Bankruptcy Court dismissed the claims in the amended complaint that sought to void the allegedly constructively fraudulent and preferential transfers made to the Firm during September 2008, but did not dismiss the other claims, including claims for duress and fraud. The Firm filed counterclaims against LBHI, including alleging that LBHI fraudulently induced the Firm to make large extensions of credit against inappropriate collateral in connection with the Firm's role as the clearing bank for Lehman Brothers Inc. ("LBI"), LBHI's broker-dealer subsidiary. These extensions of credit left the Firm with more than $25 billion in claims against the estate of LBI, which was repaid principally through collateral posted by LBHI and LBI. In September 2015, the District Court, to which the case had been transferred from the Bankruptcy Court, granted summary judgment in favor

of JPMorgan Chase Bank, N.A. on most of the claims against it that the Bankruptcy Court had not previously dismissed, including the claims for duress and fraud. The District Court also denied LBHI's motion for summary judgment on certain of its claims and for dismissal of the Firm's counterclaims. The claims that remained following the District Court's ruling challenged the propriety of the Firm's post-petition payment, from collateral posted by LBHI, of approximately $1.9 billion of derivatives, repo and securities lending claims.

In the Bankruptcy Court proceedings, LBHI and several of its subsidiaries that had been Chapter 11 debtors had filed a separate complaint and objection to derivatives claims asserted by the Firm alleging that the amount of the derivatives claims had been overstated and challenging certain set-offs taken by JPMorgan Chase entities to recover on the claims. In January 2015, LBHI filed claims objections with respect to guaranty claims asserted by the Firm arising from close-outs of derivatives transactions with LBI and one of its affiliates, and a claim objection with respect to derivatives close-out claims acquired by the Firm in the Washington Mutual transaction.

In January 2016, the parties reached an agreement, approved by the Bankruptcy Court, under which the Firm will pay $1.42 billion to settle all of the claims, counterclaims and claims objections, including all appeal rights, except for the claims specified in the following paragraph. One *pro se* objector is seeking to appeal the settlement.

The settlement did not resolve the following remaining matters: In the Bankruptcy Court proceedings, LBHI and the Committee filed an objection to the claims asserted by JPMorgan Chase Bank, N.A. against LBHI with respect to clearing advances made to LBI, principally on the grounds that the Firm had not conducted the sale of the securities collateral held for its claims in a commercially reasonable manner. In January 2015, LBHI brought two claims objections relating to securities lending claims and a group of other smaller claims. Discovery with respect to these objections is ongoing.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has received subpoenas and requests for documents and, in some cases, interviews, from federal and state agencies and entities, including the DOJ, the U.S. Commodity Futures Trading Commission ("CFTC"), the U.S. Securities and Exchange Commission ("SEC") and various state attorneys general, as well as the EC, the FCA, the Canadian Competition Bureau, the Swiss Competition Commission and other regulatory authorities and banking associations around the world relating primarily to the process by which interest rates were submitted to the British Bankers Association ("BBA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR") for various currencies, principally in 2007 and 2008. Some of the inquiries also relate to similar processes by which information on rates is submitted to the European Banking Federation ("EBF") in connection with the setting of the EBF's Euro Interbank Offered Rates ("EURIBOR") and to the Japanese Bankers' Association for the setting of Tokyo Interbank Offered Rates ("TIBOR"), as well as processes for the setting of U.S. dollar ISDAFIX rates and other reference rates in various parts of the world during similar time periods. The Firm is responding to and continuing to cooperate with these inquiries. As previously reported, the Firm has resolved EC inquiries relating to Yen LIBOR and Swiss Franc LIBOR. In May 2014, the EC issued a Statement of Objections outlining its case against the Firm (and others) as to EURIBOR, to which the Firm has filed a response and made oral representations. Other inquiries have been discontinued without any action against JPMorgan Chase, including by the FCA and the Canadian Competition Bureau.

In addition, the Firm has been named as a defendant along with other banks in a series of individual and putative class actions filed in various United States District Courts, in which plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively manipulated the U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR and/or EURIBOR rates by submitting rates that were artificially low or high. Plaintiffs allege that they transacted in loans, derivatives or other financial instruments whose values are affected by changes in U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR or EURIBOR and assert a variety of claims including antitrust claims seeking treble damages. These matters are in various stages of litigation.

The U.S. dollar LIBOR-related putative class actions and most U.S. dollar LIBOR-related individual actions were consolidated for pre-trial purposes in the United States District Court for the Southern District of New York. The Court dismissed certain claims, including the antitrust claims, and permitted other claims under the Commodity Exchange Act and common law to proceed. Certain plaintiffs appealed the dismissal of the antitrust claims, and the United States Court of Appeals for the Second Circuit dismissed the appeal for lack of jurisdiction. In January 2015, the United States Supreme Court reversed the decision of the Court of Appeals, holding that plaintiffs have the jurisdictional right to appeal, and remanded the case to the Court of Appeals for further proceedings. The Court of Appeals heard oral argument on remand in November 2015.

The Firm is one of the defendants in a number of putative class actions alleging that defendant banks and ICAP conspired to manipulate the U.S. dollar ISDAFIX rates. Plaintiffs primarily assert claims under the federal antitrust laws and Commodities Exchange Act.

Madoff Litigation. Various subsidiaries of the Firm, including J.P. Morgan Securities plc, have been named as defendants in lawsuits filed in Bankruptcy Court in New York arising out of the liquidation proceedings of Fairfield Sentry Limited and Fairfield Sigma Limited, so-called Madoff feeder funds.

These actions seek to recover payments made by the funds to defendants totaling approximately $155 million. All but two of these actions have been dismissed.

In addition, a putative class action was brought by investors in certain feeder funds against JPMorgan Chase in the United States District Court for the Southern District of New York, as was a motion by separate potential class plaintiffs to add claims against the Firm and certain subsidiaries to an already pending putative class action in the same court. The allegations in these complaints largely track those previously raised -- and resolved as to the Firm -- by the court-appointed trustee for Bernard L. Madoff Investment Securities LLC. The District Court dismissed these complaints and the United States Court of Appeals for the Second Circuit affirmed the District Court's decision. The United States Supreme Court denied plaintiffs' petition for a writ of certiorari in March 2015. Plaintiffs subsequently served a motion in the Court of Appeals seeking to have the Court reconsider its prior decision in light of another recent appellate decision. That motion was denied in June 2015.

The Firm is a defendant in five other Madoff-related individual investor actions pending in New York state court. The allegations in all of these actions are essentially identical, and involve claims against the Firm for, among other things, aiding and abetting breach of fiduciary duty, conversion and unjust enrichment. In August 2014, the Court dismissed all claims against the Firm. In January 2016, the Appellate Court affirmed the dismissal.

A putative class action was filed in the United States District Court for the District of New Jersey by investors who were net winners (i.e., Madoff customers who had taken more money out of their accounts than had been invested) in Madoff's Ponzi scheme and were not included in a prior class action settlement. These plaintiffs allege violations of the federal securities law, federal and state racketeering statutes and multiple common law and statutory claims including breach of trust, aiding and abetting embezzlement, unjust enrichment, conversion and commercial bad faith. A similar action was filed in the United States District Court for the Middle District of Florida, although it was not styled as a class action, and included claims pursuant to Florida statutes. The Firm moved to transfer both the Florida and New Jersey actions to the United States District Court for the Southern District of New York. The Florida court denied the transfer motion, but subsequently granted the Firm's motion to dismiss the case in September 2015. Plaintiffs have filed a notice of appeal, which is pending. In addition, the same plaintiffs have re-filed their dismissed state claims in Florida state court. The New Jersey court granted the transfer motion to the Southern District of New York, and the Firm has moved to dismiss the case pending in New York.

Three shareholder derivative actions have also been filed in New York federal and state court against the Firm, as nominal defendant, and certain of its current and former Board members, alleging breach of fiduciary duty in connection with the Firm's relationship with Bernard Madoff and the alleged failure to maintain effective internal controls to detect fraudulent transactions. The actions seek declaratory relief and damages. All three actions have been dismissed. The plaintiff in one action did not appeal, the dismissal has been affirmed on appeal in another action, and one appeal remains pending.

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory Investigations. The Firm and affiliates (together, "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and certain Washington Mutual affiliates (together, "Washington Mutual") have been named as defendants in a number of cases in their various roles in offerings of mortgage-backed securities ("MBS"). These cases include actions by individual MBS purchasers and actions by monoline insurance companies that guaranteed payments of principal and interest for particular tranches of MBS offerings. Following the settlements referred to below, there are currently pending and tolled investor claims involving MBS with an original principal balance of approximately $4.2 billion, of which $2.6 billion involves JPMC, Bear Stearns or Washington Mutual as issuer and $1.6 billion involves JPMC, Bear Stearns or Washington Mutual solely as underwriter. The Firm and certain of its current and former officers and Board members have also been sued in shareholder derivative actions relating to the Firm's MBS activities, and trustees have asserted or have threatened to assert claims that loans in securitization trusts should be repurchased.

Issuer Litigation – Class Actions. JPMC has fully resolved all pending putative class actions on behalf of purchasers of MBS.

Issuer Litigation – Individual Purchaser Actions. The Firm is defending individual actions brought against JPMC, Bear Stearns and Washington Mutual as MBS issuers (and, in some cases, also as underwriters of their own MBS offerings). The Firm has settled a number of these actions. Several actions remain pending in federal and state courts across the U.S. and are in various stages of litigation.

Monoline Insurer Litigation. The Firm has settled two pending actions relating to a monoline insurer's guarantees of principal and interest on certain classes of 11 different Bear Stearns MBS offerings. This settlement fully resolves all pending actions by monoline insurers against the Firm relating to RMBS issued and/or sponsored by the Firm.

Underwriter Actions. In actions against the Firm involving offerings where the Firm was solely an underwriter of other issuers' MBS offerings, the Firm has contractual rights to indemnification from the issuers. However, those indemnity rights may prove effectively unenforceable in various situations, such as where the issuers are now defunct. Currently there is one such action pending against the Firm relating to a single offering of another issuer.

Repurchase Litigation. The Firm is defending a number of actions brought by trustees, securities administrators or

master servicers of various MBS trusts on behalf of purchasers of securities issued by those trusts. These cases generally allege breaches of various representations and warranties regarding securitized loans and seek repurchase of those loans or equivalent monetary relief, as well as indemnification of attorneys' fees and costs and other remedies. Deutsche Bank National Trust Company, acting as trustee for various MBS trusts, has filed such a suit against JPMorgan Chase Bank, N.A. and the Federal Deposit Insurance Corporation (the "FDIC") in connection with a significant number of MBS issued by Washington Mutual; that case is described in the Washington Mutual Litigations section below. Other repurchase actions, each specific to one or more MBS transactions issued by JPMC and/or Bear Stearns, are in various stages of litigation.

In addition, the Firm and a group of 21 institutional MBS investors made a binding offer to the trustees of MBS issued by JPMC and Bear Stearns providing for the payment of $4.5 billion and the implementation of certain servicing changes by JPMC, to resolve all repurchase and servicing claims that have been asserted or could have been asserted with respect to 330 MBS trusts created between 2005 and 2008. The offer does not resolve claims relating to Washington Mutual MBS. The trustees (or separate and successor trustees) for this group of 330 trusts have accepted the settlement for 319 trusts in whole or in part and excluded from the settlement 16 trusts in whole or in part. The trustees' acceptance is subject to a judicial approval proceeding initiated by the trustees and pending in New York state court. The judicial approval hearing was held in January 2016, and the parties are awaiting a decision. An investor in some of the trusts for which the settlement has been accepted has intervened in the judicial approval proceeding to challenge the trustees' allocation of the settlement among the trusts. Separately, in October 2015, JPMC reached agreements to resolve repurchase and servicing claims for four trusts among the 16 that were previously excluded from the trustee settlement. In December 2015, the court approved the trustees' decision to accept these separate settlements. The trustees are seeking to obtain certain remaining approvals necessary to effectuate these settlements.

Additional actions have been filed against third-party trustees that relate to loan repurchase and servicing claims involving trusts sponsored by JPMC, Bear Stearns and Washington Mutual.

Derivative Actions. Shareholder derivative actions relating to the Firm's MBS activities have been filed against the Firm, as nominal defendant, and certain of its current and former officers and members of its Board of Directors, in New York state court and California federal court. Two of the New York actions have been dismissed, one of which is on appeal. A consolidated action in California federal court has been dismissed without prejudice for lack of personal jurisdiction and plaintiffs are pursuing discovery relating to jurisdiction.

Government Enforcement Investigations and Litigation. The Firm is responding to an ongoing investigation being conducted by the DOJ's Criminal Division and two United States Attorney's Offices relating to MBS offerings securitized and sold by the Firm and its subsidiaries. The Firm has also received subpoenas and informal requests for information from state authorities concerning the issuance and underwriting of MBS-related matters. The Firm continues to respond to these MBS-related regulatory inquiries.

In addition, the Firm continues to cooperate with investigations by the DOJ, including the United States Attorney's Office for the District of Connecticut, and by the SEC Division of Enforcement and the Office of the Special Inspector General for the Troubled Asset Relief Program, all of which relate to, among other matters, communications with counterparties in connection with certain secondary market trading in residential and commercial MBS.

The Firm has entered into agreements with a number of entities that purchased MBS that toll applicable limitations periods with respect to their claims, and has settled, and in the future may settle, tolled claims. There is no assurance that the Firm will not be named as a defendant in additional MBS-related litigation.

Mortgage-Related Investigations and Litigation. One shareholder derivative action has been filed in New York Supreme Court against the Firm's Board of Directors alleging that the Board failed to exercise adequate oversight as to wrongful conduct by the Firm regarding mortgage servicing. In December 2014, the court granted defendants' motion to dismiss the complaint and in January 2016, the dismissal was affirmed on appeal.

The Civil Division of the United States Attorney's Office for the Southern District of New York is conducting an investigation concerning the Firm's compliance with the Fair Housing Act and Equal Credit Opportunity Act in connection with its mortgage lending practices. In addition, three municipalities have commenced litigation against the Firm alleging violations of an unfair competition law or the Fair Housing Act. The municipalities seek, among other things, civil penalties for the unfair competition claim, and, for the Fair Housing Act claims, damages resulting from lost tax revenue and increased municipal costs associated with foreclosed properties. Two of the municipal actions are stayed, and a motion to dismiss is pending in the remaining action.

In March 2015, JPMorgan Chase Bank, N.A entered into a settlement agreement with the Executive Office for United States Bankruptcy Trustees and the United States Trustee Program (collectively, the "Bankruptcy Trustee") to resolve issues relating to mortgage payment change notices and escrow statements in bankruptcy proceedings. In January 2016, the OCC determined that, among other things, the mortgage payment change notices issues that were the subject of the settlement with the Bankruptcy Trustee violated the 2011 mortgage servicing-related consent order

entered into by JPMorgan Chase Bank, N.A. and the OCC (as amended in 2013 and 2015), and assessed a $48 million civil money penalty. The OCC concurrently terminated that consent order.

Municipal Derivatives Litigation. Several civil actions were commenced in New York and Alabama courts against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions. The claims in the civil actions generally alleged that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The County filed for bankruptcy in November 2011. In June 2013, the County filed a Chapter 9 Plan of Adjustment, as amended (the "Plan of Adjustment"), which provided that all the above-described actions against the Firm would be released and dismissed with prejudice. In November 2013, the Bankruptcy Court confirmed the Plan of Adjustment, and in December 2013, certain sewer rate payers filed an appeal challenging the confirmation of the Plan of Adjustment. All conditions to the Plan of Adjustment's effectiveness, including the dismissal of the actions against the Firm, were satisfied or waived and the transactions contemplated by the Plan of Adjustment occurred in December 2013. Accordingly, all the above-described actions against the Firm have been dismissed pursuant to the terms of the Plan of Adjustment. The appeal of the Bankruptcy Court's order confirming the Plan of Adjustment remains pending.

Petters Bankruptcy and Related Matters. JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), have been named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain affiliated entities (collectively, "Petters") and the Polaroid Corporation. The principal actions against JPMorgan Chase and its affiliates have been brought by a court-appointed receiver for Petters and the trustees in bankruptcy proceedings for three Petters entities. These actions generally seek to avoid certain putative transfers in connection with (i) the 2005 acquisition by Petters of Polaroid, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions entered into with Polaroid; and (iii) a credit line and investment accounts held by Petters. The actions collectively seek recovery of approximately $450 million. Defendants have moved to dismiss the complaints in the actions filed by the Petters bankruptcy trustees.

Proprietary Products Investigations and Litigation. In December 2015, JPMorgan Chase Bank, N.A. and J.P. Morgan Securities LLC agreed to a settlement with the SEC, and JPMorgan Chase Bank, N.A. agreed to a settlement with the CFTC, regarding disclosures to clients concerning conflicts associated with the Firm's sale and use of proprietary products, such as J.P. Morgan mutual funds, in the Firm's wealth management businesses, and the U.S. Private Bank's disclosures concerning the use of hedge funds that pay placement agent fees to JPMorgan Chase broker-dealer affiliates. As part of the settlements, JPMorgan Chase Bank, N.A. and J.P. Morgan Securities LLC paid penalties, disgorgement and interest totaling approximately $307 million. The Firm continues to cooperate with inquiries from other government authorities concerning disclosure of conflicts associated with the Firm's sale and use of proprietary products. A putative class action filed in the United States District Court for the Northern District of Illinois on behalf of financial advisory clients from 2007 to the present whose funds were invested in proprietary funds and who were charged investment management fees, was dismissed by the Court. Plaintiffs' appeal of the dismissal is pending.

Referral Hiring Practices Investigations. Various regulators are investigating, among other things, the Firm's compliance with the Foreign Corrupt Practices Act and other laws with respect to the Firm's hiring practices related to candidates referred by clients, potential clients and government officials, and its engagement of consultants in the Asia Pacific region. The Firm is responding to and cooperating with these investigations.

Washington Mutual Litigations. Proceedings related to Washington Mutual's failure are pending before the United States District Court for the District of Columbia and include a lawsuit brought by Deutsche Bank National Trust Company, initially against the FDIC and amended to include JPMorgan Chase Bank, N.A. as a defendant, asserting an estimated $6 billion to $10 billion in damages based upon alleged breaches of certain representations and warranties given by certain Washington Mutual affiliates in connection with mortgage securitization agreements. The case includes assertions that JPMorgan Chase Bank, N.A. may have assumed liabilities for the alleged breaches of representations and warranties in the mortgage securitization agreements. In June 2015, the court ruled in favor of JPMorgan Chase Bank, N.A. on the question of whether the Firm or the FDIC bears responsibility for Washington Mutual Bank's repurchase obligations, holding that JPMorgan Chase Bank, N.A. assumed only those liabilities that were reflected on Washington Mutual Bank's financial accounting records as of September 25, 2008, and only up to the amount of the book value reflected therein. The FDIC is appealing that ruling and the case has otherwise been stayed pending the outcome of that appeal.

Certain holders of Washington Mutual Bank debt filed an action against JPMorgan Chase which alleged that by acquiring substantially all of the assets of Washington Mutual Bank from the FDIC, JPMorgan Chase Bank, N.A. caused Washington Mutual Bank to default on its bond obligations. JPMorgan Chase and the FDIC moved to dismiss this action and the District Court dismissed the case except as to the plaintiffs' claim that JPMorgan Chase tortiously interfered with the plaintiffs' bond contracts with Washington Mutual Bank prior to its closure. The action has

been stayed pending a decision on JPMorgan Chase's motion to dismiss the plaintiffs' remaining claim.

JPMorgan Chase has also filed complaints in the United States District Court for the District of Columbia against the FDIC, in its corporate capacity as well as in its capacity as receiver for Washington Mutual Bank, asserting multiple claims for indemnification under the terms of the Purchase & Assumption Agreement between JPMorgan Chase and the FDIC relating to JPMorgan Chase's purchase of most of the assets and certain liabilities of Washington Mutual Bank.

Wendel. Since 2012, the French criminal authorities have been investigating a series of transactions entered into by senior managers of Wendel Investissement ("Wendel") during the period from 2004 through 2007 to restructure their shareholdings in Wendel. JPMorgan Chase Bank, N.A., Paris branch provided financing for the transactions to a number of managers of Wendel in 2007. In April 2015, JPMorgan Chase Bank, N.A. was notified that the authorities were formally investigating the role of its Paris branch in the transactions, including alleged criminal tax abuse. JPMorgan Chase is responding to and cooperating with the investigation. In addition, civil proceedings have been commenced against JPMorgan Chase Bank, N.A. by a number of the managers. The claims are separate, involve different allegations and are at various stages of proceedings.

* * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings and inquiries. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and inquiries, and it intends to defend itself vigorously in all such matters. Additional legal proceedings and inquiries may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downward, as appropriate, based on management's best judgment after consultation with counsel. During the years ended December 31, 2015, 2014 and 2013, the Firm incurred legal expense of $3.0 billion, $2.9 billion and $11.1 billion, respectively. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or impact related to those matters. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued; as a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

Note 32 – International operations

The following table presents income statement- and balance sheet-related information for JPMorgan Chase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 33.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the U.S.

As of or for the year ended December 31, (in millions)	Revenue[b]	Expense[c]	Income before income tax expense	Net income	Total assets	
2015						
Europe/Middle East and Africa	**$ 14,206**	**$ 8,871**	**$ 5,335**	**$ 4,158**	**$ 347,647**	[d]
Asia and Pacific	**6,151**	**4,241**	**1,910**	**1,285**	**138,747**	
Latin America and the Caribbean	**1,923**	**1,508**	**415**	**253**	**48,185**	
Total international	**22,280**	**14,620**	**7,660**	**5,696**	**534,579**	
North America[a]	**71,263**	**48,221**	**23,042**	**18,746**	**1,817,119**	
Total	**$ 93,543**	**$ 62,841**	**$ 30,702**	**$ 24,442**	**$ 2,351,698**	
2014						
Europe/Middle East and Africa	$ 16,013	$ 10,123	$ 5,890	$ 3,935	$ 481,328	[d]
Asia and Pacific	6,083	4,478	1,605	1,051	147,357	
Latin America and the Caribbean	2,047	1,626	421	269	44,567	
Total international	24,143	16,227	7,916	5,255	673,252	
North America[a]	70,969	48,186	22,783	16,490	1,899,022	
Total	$ 95,112	$ 64,413	$ 30,699	$ 21,745	$ 2,572,274	
2013						
Europe/Middle East and Africa	$ 15,585	$ 9,069	$ 6,516	$ 4,842	$ 514,747	[d]
Asia and Pacific	6,168	4,248	1,920	1,254	145,999	
Latin America and the Caribbean	2,251	1,626	625	381	41,473	
Total international	24,004	14,943	9,061	6,477	702,219	
North America[a]	73,363	55,749	17,614	11,409	1,712,660	
Total	$ 97,367	$ 70,692	$ 26,675	$ 17,886	$ 2,414,879	

(a) Substantially reflects the U.S.
(b) Revenue is composed of net interest income and noninterest revenue.
(c) Expense is composed of noninterest expense and the provision for credit losses.
(d) Total assets for the U.K. were approximately $306 billion, $434 billion, and $451 billion at December 31, 2015, 2014 and 2013, respectively.

Note 33 – Business segments

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 80–82. For a further discussion concerning JPMorgan Chase's business segments, see Business Segment Results on pages 83–84.

The following is a description of each of the Firm's business segments, and the products and services they provide to their respective client bases.

Consumer & Community Banking
Consumer & Community Banking ("CCB") serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking (including Consumer Banking/Chase Wealth Management and Business Banking), Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Commerce Solutions & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card issues credit cards to consumers and small businesses, offers payment processing services to merchants, and provides auto loans and leases and student loan services.

Corporate & Investment Bank
The Corporate & Investment Bank ("CIB"), which consists of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Treasury Services, which provides transaction services, consisting of cash management and liquidity solutions. Markets & Investor Services is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes Securities Services, a leading global custodian which provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

Commercial Banking
Commercial Banking ("CB") delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. In addition, CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Asset Management
Asset Management ("AM"), with client assets of $2.4 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in many major markets throughout the world. AM offers investment management across most major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For Global Wealth Management clients, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Corporate
The Corporate segment consists of Treasury and Chief Investment Office ("CIO") and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Enterprise Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm's occupancy and pension-related expenses that are subject to allocation to the businesses.

Segment results

The following tables provide a summary of the Firm's segment results as of or for the years ended December 31, 2015, 2014 and 2013 on a managed basis. Total net revenue (noninterest revenue and net interest income) for each of the segments is presented on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit).

Preferred stock dividend allocation

As part of its funds transfer pricing process, the Firm allocates substantially all of the cost of its outstanding preferred stock to its reportable business segments, while retaining the balance of the cost in Corporate. This cost is included as a reduction to net income applicable to common equity to be consistent with the presentation of firmwide results.

Business segment capital allocation changes

On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital to its lines of business, and updates the equity allocations to its lines of business as refinements are implemented. Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In rules) and economic risk. The amount of capital assigned to each business is referred to as equity.

Segment results and reconciliation

As of or for the year ended December 31, (in millions, except ratios)	Consumer & Community Banking			Corporate & Investment Bank			Commercial Banking		
	2015	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Noninterest revenue	**$ 15,592**	$ 15,937	$ 17,552	**$ 23,693**	$ 23,420	$ 23,736	**$ 2,365**	$ 2,349	$ 2,298
Net interest income	**28,228**	28,431	28,985	**9,849**	11,175	10,976	**4,520**	4,533	4,794
Total net revenue	**43,820**	44,368	46,537	**33,542**	34,595	34,712	**6,885**	6,882	7,092
Provision for credit losses	**3,059**	3,520	335	**332**	(161)	(232)	**442**	(189)	85
Noninterest expense	**24,909**	25,609	27,842	**21,361**	23,273	21,744	**2,881**	2,695	2,610
Income/(loss) before income tax expense/(benefit)	**15,852**	15,239	18,360	**11,849**	11,483	13,200	**3,562**	4,376	4,397
Income tax expense/(benefit)	**6,063**	6,054	7,299	**3,759**	4,575	4,350	**1,371**	1,741	1,749
Net income/(loss)	**$ 9,789**	$ 9,185	$ 11,061	**$ 8,090**	$ 6,908	$ 8,850	**$ 2,191**	$ 2,635	$ 2,648
Average common equity	**$ 51,000**	$ 51,000	$ 46,000	**$ 62,000**	$ 61,000	$ 56,500	**$ 14,000**	$ 14,000	$ 13,500
Total assets	**502,652**	455,634	452,929	**748,691**	861,466	843,248	**200,700**	195,267	190,782
Return on common equity	**18%**	18%	23%	**12%**	10%	15%	**15%**	18%	19%
Overhead ratio	**57**	58	60	**64**	67	63	**42**	39	37

(a) Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

(table continued from previous page)

Asset Management			Corporate			Reconciling Items[a]			Total		
2015	2014	2013	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
$ 9,563	$ 9,588	$ 9,029	**$ 800**	$ 1,972	$ 3,093	**$ (1,980)**	$ (1,788)	$ (1,660)	**$ 50,033**	$ 51,478	$ 54,048
2,556	2,440	2,376	**(533)**	(1,960)	(3,115)	**(1,110)**	(985)	(697)	**43,510**	43,634	43,319
12,119	12,028	11,405	**267**	12	(22)	**(3,090)**	(2,773)	(2,357)	**93,543**	95,112	97,367
4	4	65	**(10)**	(35)	(28)	**–**	–	–	**3,827**	3,139	225
8,886	8,538	8,016	**977**	1,159	10,255	**–**	–	–	**59,014**	61,274	70,467
3,229	3,486	3,324	**(700)**	(1,112)	(10,249)	**(3,090)**	(2,773)	(2,357)	**30,702**	30,699	26,675
1,294	1,333	1,241	**(3,137)**	(1,976)	(3,493)	**(3,090)**	(2,773)	(2,357)	**6,260**	8,954	8,789
$ 1,935	$ 2,153	$ 2,083	**$ 2,437**	$ 864	$ (6,756)	**$ –**	$ –	$ –	**$ 24,442**	$ 21,745	$ 17,886
$ 9,000	$ 9,000	$ 9,000	**$ 79,690**	$ 72,400	$ 71,409	**$ –**	$ –	$ –	**$ 215,690**	$ 207,400	$ 196,409
131,451	128,701	122,414	**768,204**	931,206	805,506	**NA**	NA	NA	**2,351,698**	2,572,274	2,414,879
21%	23%	23%	**NM**	NM	NM	**NM**	NM	NM	**11%**	10%	9%
73	71	70	**NM**	NM	NM	**NM**	NM	NM	**63**	64	72

Note 34 – Parent company

Parent company – Statements of income and comprehensive income

Year ended December 31, (in millions)	2015	2014	2013
Income			
Dividends from subsidiaries and affiliates:			
Bank and bank holding company	**$ 10,653**	$ –	$ 1,175
Nonbank[a]	**8,172**	14,716	876
Interest income from subsidiaries	**443**	378	757
Other interest income	**234**	284	303
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**1,438**	779	318
Nonbank	**(2,945)**	52	2,065
Other income/(loss)	**3,316**	508	(1,380)
Total income	**21,311**	16,717	4,114
Expense			
Interest expense to subsidiaries and affiliates[a]	**98**	169	309
Other interest expense	**3,720**	3,645	4,031
Other noninterest expense	**2,611**	827	9,597
Total expense	**6,429**	4,641	13,937
Income (loss) before income tax benefit and undistributed net income of subsidiaries	**14,882**	12,076	(9,823)
Income tax benefit	**1,640**	1,430	4,301
Equity in undistributed net income of subsidiaries	**7,920**	8,239	23,408
Net income	**$ 24,442**	$ 21,745	$ 17,886
Other comprehensive income, net	**(1,997)**	990	(2,903)
Comprehensive income	**$ 22,445**	$ 22,735	$ 14,983

Parent company – Balance sheets

December 31, (in millions)	2015	2014
Assets		
Cash and due from banks	**$ 74**	$ 211
Deposits with banking subsidiaries	**65,799**	95,884
Trading assets	**13,830**	18,222
Available-for-sale securities	**3,154**	3,321
Loans	**1,887**	2,260
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**32,454**	33,810
Nonbank	**58,674**	52,626
Investments (at equity) in subsidiaries and affiliates:		
Bank and bank holding company	**225,613**	215,732
Nonbank[a]	**34,205**	41,173
Other assets	**18,088**	18,200
Total assets	**$ 453,778**	$ 481,439
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries and affiliates[a]	**$ 11,310**	$ 17,381
Other borrowed funds, primarily commercial paper	**3,722**	49,586
Other liabilities	**11,940**	11,918
Long-term debt[b][c]	**179,233**	170,827
Total liabilities[c]	**206,205**	249,712
Total stockholders' equity	**247,573**	231,727
Total liabilities and stockholders' equity	**$ 453,778**	$ 481,439

Parent company – Statements of cash flows

Year ended December 31, (in millions)	2015	2014	2013
Operating activities			
Net income	**$ 24,442**	$ 21,745	$ 17,886
Less: Net income of subsidiaries and affiliates[a]	**26,745**	22,972	25,496
Parent company net loss	**(2,303)**	(1,227)	(7,610)
Cash dividends from subsidiaries and affiliates[a]	**17,023**	14,714	1,917
Other operating adjustments	**2,483**	(1,681)	3,217
Net cash provided by/(used in) operating activities	**17,203**	11,806	(2,476)
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**30,085**	(31,040)	10,679
Available-for-sale securities:			
Proceeds from paydowns and maturities	**120**	12,076	61
Purchases	**–**	–	(12,009)
Other changes in loans, net	**321**	(319)	(713)
Advances to and investments in subsidiaries and affiliates, net	**(81)**	3,306	14,469
All other investing activities, net	**153**	32	22
Net cash provided by/(used in) investing activities	**30,598**	(15,945)	12,509
Financing activities			
Net change in:			
Borrowings from subsidiaries and affiliates[a]	**(4,062)**	4,454	(2,715)
Other borrowed funds	**(47,483)**	(5,778)	(7,297)
Proceeds from the issuance of long-term debt	**42,121**	40,284	31,303
Payments of long-term debt	**(30,077)**	(31,050)	(21,510)
Proceeds from issuance of preferred stock	**5,893**	8,847	3,873
Redemption of preferred stock	**–**	–	(1,800)
Treasury stock and warrants repurchased	**(5,616)**	(4,760)	(4,789)
Dividends paid	**(7,873)**	(6,990)	(6,056)
All other financing activities, net	**(840)**	(921)	(994)
Net cash provided by/(used in) financing activities	**(47,937)**	4,086	(9,985)
Net increase/(decrease) in cash and due from banks	**(137)**	(53)	48
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	**211**	264	216
Cash and due from banks at the end of the year, primarily with bank subsidiaries	**$ 74**	$ 211	$ 264
Cash interest paid	**$ 3,873**	$ 3,921	$ 4,409
Cash income taxes paid, net	**8,251**	200	2,390

(a) Affiliates include trusts that issued guaranteed capital debt securities ("issuer trusts"). The Parent received dividends of $2 million, $2 million and $5 million from the issuer trusts in 2015, 2014 and 2013, respectively. For further discussion on these issuer trusts, see Note 21.

(b) At December 31, 2015, long-term debt that contractually matures in 2016 through 2020 totaled $27.2 billion, $26.0 billion, $21.1 billion, $11.5 billion and $22.2 billion, respectively.

(c) For information regarding the Parent's guarantees of its subsidiaries' obligations, see Notes 21 and 29.

Supplementary information

Selected quarterly financial data (unaudited)

(Table continued on next page)

As of or for the period ended	2015				2014			
(in millions, except per share, ratio, headcount data and where otherwise noted)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Total net revenue	**$ 22,885**	**$ 22,780**	**$ 23,812**	**$ 24,066**	$ 22,750	$ 24,469	$ 24,678	$ 23,215
Total noninterest expense	**14,263**	**15,368**	**14,500**	**14,883**	15,409	15,798	15,431	14,636
Pre-provision profit	**8,622**	**7,412**	**9,312**	**9,183**	7,341	8,671	9,247	8,579
Provision for credit losses	**1,251**	**682**	**935**	**959**	840	757	692	850
Income before income tax expense	**7,371**	**6,730**	**8,377**	**8,224**	6,501	7,914	8,555	7,729
Income tax expense	**1,937**	**(74)**	**2,087**	**2,310**	1,570	2,349	2,575	2,460
Net income	**$ 5,434**	**$ 6,804**	**$ 6,290**	**$ 5,914**	$ 4,931	$ 5,565	$ 5,980	$ 5,269
Per common share data								
Net income: Basic	**$ 1.34**	**$ 1.70**	**$ 1.56**	**$ 1.46**	$ 1.20	$ 1.37	$ 1.47	$ 1.29
Diluted	**1.32**	**1.68**	**1.54**	**1.45**	1.19	1.35	1.46	1.28
Average shares: Basic	**3,674.2**	**3,694.4**	**3,707.8**	**3,725.3**	3,730.9	3,755.4	3,780.6	3,787.2
Diluted	**3,704.6**	**3,725.6**	**3,743.6**	**3,757.5**	3,765.2	3,788.7	3,812.5	3,823.6
Market and per common share data								
Market capitalization	**$ 241,899**	**$ 224,438**	**$ 250,581**	**$ 224,818**	$ 232,472	$ 225,188	$ 216,725	$ 229,770
Common shares at period-end	**3,663.5**	**3,681.1**	**3,698.1**	**3,711.1**	3,714.8	3,738.2	3,761.3	3,784.7
Share price[a]:								
High	**$ 69.03**	**$ 70.61**	**$ 69.82**	**$ 62.96**	$ 63.49	$ 61.85	$ 61.29	$ 61.48
Low	**58.53**	**50.07**	**59.65**	**54.27**	54.26	54.96	52.97	54.20
Close	**66.03**	**60.97**	**67.76**	**60.58**	62.58	60.24	57.62	60.71
Book value per share	**60.46**	**59.67**	**58.49**	**57.77**	56.98	56.41	55.44	53.97
Tangible book value per share ("TBVPS")[b]	**48.13**	**47.36**	**46.13**	**45.45**	44.60	44.04	43.08	41.65
Cash dividends declared per share	**0.44**	**0.44**	**0.44**	**0.40**	0.40	0.40	0.40	0.38
Selected ratios and metrics								
Return on common equity ("ROE")	**9%**	**12%**	**11%**	**11%**	9%	10%	11%	10%
Return on tangible common equity ("ROTCE")[b]	**11**	**15**	**14**	**14**	11	13	14	13
Return on assets ("ROA")	**0.90**	**1.11**	**1.01**	**0.94**	0.78	0.90	0.99	0.89
Overhead ratio	**62**	**67**	**61**	**62**	68	65	63	63
Loans-to-deposits ratio	**65**	**64**	**61**	**56**	56	56	57	57
HQLA (in billions)[c]	**$ 496**	**$ 505**	**$ 532**	**$ 614**	$ 600	$ 572	$ 576	$ 538
CET1 capital ratio[d]	**11.8%**	**11.5%**	**11.2%**	**10.7%**	10.2%	10.2%	9.8%	10.9%
Tier 1 capital ratio[d]	**13.5**	**13.3**	**12.8**	**12.1**	11.6	11.5	11.0	12.0
Total capital ratio[d]	**15.1**	**14.9**	**14.4**	**13.6**	13.1	12.8	12.5	14.5
Tier 1 leverage ratio	**8.5**	**8.4**	**8.0**	**7.5**	7.6	7.6	7.6	7.3
Selected balance sheet data (period-end)								
Trading assets	**$ 343,839**	**$ 361,708**	**$ 377,870**	**$ 398,981**	$ 398,988	$ 410,657	$ 392,543	$ 375,204
Securities	**290,827**	**306,660**	**317,795**	**331,136**	348,004	366,358	361,918	351,850
Loans	**837,299**	**809,457**	**791,247**	**764,185**	757,336	743,257	746,983	730,971
Core Loans	**732,093**	**698,988**	**674,767**	**641,285**	628,785	607,617	603,440	582,206
Total assets	**2,351,698**	**2,416,635**	**2,449,098**	**2,576,619**	2,572,274	2,526,158	2,519,494	2,476,152
Deposits	**1,279,715**	**1,273,106**	**1,287,332**	**1,367,887**	1,363,427	1,334,534	1,319,751	1,282,705
Long-term debt[e]	**288,651**	**292,503**	**286,240**	**280,123**	276,379	268,265	269,472	274,053
Common stockholders' equity	**221,505**	**219,660**	**216,287**	**214,371**	211,664	210,876	208,520	204,246
Total stockholders' equity	**247,573**	**245,728**	**241,205**	**235,864**	231,727	230,939	226,983	219,329
Headcount	**234,598**	**235,678**	**237,459**	**241,145**	241,359	242,388	245,192	246,994

(Table continued from previous page)

As of or for the period ended	2015				2014			
(in millions, except ratio data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Credit quality metrics								
Allowance for credit losses	**$ 14,341**	**$ 14,201**	**$ 14,535**	**$ 14,658**	$ 14,807	$ 15,526	$ 15,974	$ 16,485
Allowance for loan losses to total retained loans	**1.63%**	**1.67%**	**1.78%**	**1.86%**	1.90%	2.02%	2.08%	2.20%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[f]	**1.37**	**1.40**	**1.45**	**1.52**	1.55	1.63	1.69	1.75
Nonperforming assets	**$ 7,034**	**$ 7,294**	**$ 7,588**	**$ 7,714**	$ 7,967	$ 8,390	$ 9,017	$ 9,473
Net charge-offs	**1,064**	**963**	**1,007**	**1,052**	1,218	1,114	1,158	1,269
Net charge-off rate	**0.52%**	**0.49%**	**0.53%**	**0.57%**	0.65%	0.60%	0.64%	0.71%

Note: Effective October 1, 2015, and January 1, 2015, JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") adopted new accounting guidance, retrospectively, related to (1) the presentation of debt issuance costs, and (2) investments in affordable housing projects that qualify for the low-income housing tax credit, respectively. For additional information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82 , Accounting and Reporting Developments on page 170, and Note 1.

(a) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange.
(b) TBVPS and ROTCE are non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82.
(c) HQLA represents the amount of assets that qualify for inclusion in the liquidity coverage ratio under the final U.S. rule ("U.S. LCR") for 4Q15, 3Q15, 2Q15 and 1Q15 and the estimated amounts for 4Q14 and 3Q14 prior to the effective date of the final rule and under the Basel III liquidity coverage ratio ("Basel III LCR") for 2Q14 and 1Q14. For additional information, see HQLA on page 160.
(d) As of December 31, 2015, September 30, 2015, June 30, 2015, March 31, 2015, December 31, 2014, September 30, 2014, and June 30, 2014, the ratios presented are calculated under the U.S. Basel III transitional rules. As of March 31, 2015 the ratio presented is calculated under Basel III Standardized Transitional rules. All periods shown represent the Collins Floor. See Capital Management on pages 149–158 for additional information on Basel III and non-GAAP financial measures of regulatory capital.
(e) Included unsecured long-term debt of $211.8 billion, $214.6 billion, $209.1 billion, $209.0 billion, $207.0 billion, $204.2 billion, $205.1 billion and $205.6 respectively, for the periods presented.
(f) Excludes the impact of residential real estate PCI loans, a non-GAAP financial measure. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82. For further discussion, see Allowance for credit losses on pages 130–132.

Active foreclosures: Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

Allowance for loan losses to total loans: Represents period-end allowance for loan losses divided by retained loans.

Alternative assets: The following types of assets constitute alternative investments – hedge funds, currency, real estate, private equity and other investment funds designed to focus on nontraditional strategies.

Assets under management: Represent assets actively managed by AM on behalf of its Private Banking, Institutional and Retail clients. Includes "Committed capital not Called," on which AM earns fees.

Beneficial interests issued by consolidated VIEs: Represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Central counterparty ("CCP"): A CCP is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

Chase Liquid℠ cards: Refers to a prepaid, reloadable card product.

Client advisors: Investment product specialists, including private client advisors, financial advisors, financial advisor associates, senior financial advisors, independent financial advisors and financial advisor associate trainees, who advise clients on investment options, including annuities, mutual funds, stock trading services, etc., sold by the Firm or by third-party vendors through retail branches, Chase Private Client locations and other channels.

Client assets: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Client deposits and other third party liabilities: Deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs. During the third quarter 2015 the Firm completed the discontinuation of its commercial paper customer sweep cash management program.

Client investment managed accounts: Assets actively managed by Chase Wealth Management on behalf of clients. The percentage of managed accounts is calculated by dividing managed account assets by total client investment assets.

Commercial Card provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

Core loans: Loans considered central to the Firm's ongoing businesses; core loans exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again (or vice versa). The duration of a credit cycle can vary from a couple of years to several years.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

Deposit margin/deposit spread: Represents net interest income expressed as a percentage of average deposits.

Distributed denial-of-service attack: The use of a large number of remote computer systems to electronically send a high volume of traffic to a target website to create a service outage at the target. This is a form of cyberattack.

Exchange-traded derivatives: Derivative contracts that are executed on an exchange and settled via a central clearing house.

Fee share: Proportion of fee revenue based on estimates of investment banking fees generated across the industry from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third party provider of investment banking fee competitive analysis and volume-based league tables for the above noted industry products.

FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

Group of Seven ("G7") nations: Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government bonds: Bonds issued by the government of one of the G7 nations.

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

Home equity – senior lien: Represents loans and commitments where JPMorgan Chase holds the first security interest on the property.

Home equity – junior lien: Represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.

Impaired loan: Impaired loans are loans measured at amortized cost, for which it is probable that the Firm will be unable to collect all amounts due, including principal and interest, according to the contractual terms of the agreement. Impaired loans include the following:

- All wholesale nonaccrual loans
- All TDRs (both wholesale and consumer), including ones that have returned to accrual status

Interchange income: A fee paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

LLC: Limited Liability Company.

Loan-to-value ("LTV") ratio: For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices consist of actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all available lien positions, as well as unused lines, related to the property. Combined LTV ratios are used for junior lien home equity products.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Master netting agreement: An agreement between two counterparties who have multiple contracts with each other that provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

Mortgage origination channels:

Retail – Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high combined loan-to-value ("CLTV") ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is

deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime

Prime mortgage loans are made to borrowers with good credit records who meet specific underwriting requirements, including prescriptive requirements related to income and overall debt levels. New prime mortgage borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are loans that, prior to mid-2008, were offered to certain customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

N/A: Data is not applicable or available for the period presented.

Net charge-off/(recovery) rate: Represents net charge-offs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net production revenue: Includes net gains or losses on originations and sales of mortgage loans, other production-related fees and losses related to the repurchase of previously-sold loans.

Net mortgage servicing revenue includes the following components:

Operating revenue predominantly represents the return on Mortgage Servicing's MSR asset and includes:

- Actual gross income earned from servicing third-party mortgage loans, such as contractually specified servicing fees and ancillary income; and
- The change in the fair value of the MSR asset due to the collection or realization of expected cash flows.

Risk management represents the components of Mortgage Servicing's MSR asset that are subject to ongoing risk management activities, together with derivatives and other instruments used in those risk management activities.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected or when principal and interest has been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.

Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in loan satisfaction, predominantly real estate owned and other commercial and personal property.

Over-the-counter ("OTC") derivatives: Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

Over-the-counter cleared ("OTC-cleared") derivatives: Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Participating securities: Represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

Personal bankers: Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.

Pre-provision profit/(loss): Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pretax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is one basis upon which management evaluates the performance of AM against the performance of their respective competitors.

Principal transactions revenue: Principal transactions revenue includes realized and unrealized gains and losses recorded on derivatives, other financial instruments, private equity investments, and physical commodities used in market making and client-driven activities. In addition, Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk management activities including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specified risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives.

Purchased credit-impaired ("PCI") loans: Represents loans that were acquired in the Washington Mutual transaction and deemed to be credit-impaired on the acquisition date in accordance with the guidance of the Financial Accounting Standards Board ("FASB"). The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

Real assets: Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.

Real estate investment trust ("REIT"): A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate related assets by pooling their capital to purchase and manage income property (i.e., equity REIT) and/or mortgage loans (i.e., mortgage REIT). REITs can be publicly- or privately-held and they also qualify for certain favorable tax considerations.

Receivables from customers: Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated balance sheets.

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e., excludes loans held-for-sale and loans at fair value).

Revenue wallet: Proportion of fee revenue based on estimates of investment banking fees generated across the industry (i.e., the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third party provider of investment banking competitive analysis and volume-based league tables for the above noted industry products.

Risk-weighted assets ("RWA"): Basel III establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced, both of which incorporate the requirements set forth in Basel 2.5.

Sales specialists: Retail branch office and field personnel, including relationship managers and loan officers, who specialize in marketing and sales of various business banking products (i.e., business loans, letters of credit, deposit accounts, Commerce Solutions, etc.) and mortgage products to existing and new clients.

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Short sale: A short sale is a sale of real estate in which proceeds from selling the underlying property are less than the amount owed the Firm under the terms of the related mortgage and the related lien is released upon receipt of such proceeds.

Structural interest rate risk: Represents interest rate risk of the non-trading assets and liabilities of the Firm.

Structured notes: Structured notes are predominantly financial instruments containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

Troubled debt restructuring ("TDR"): A TDR is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the U.S.

U.S. government-sponsored enterprises ("U.S. GSEs") and U.S. GSE obligations: In the U.S., GSEs are quasi-governmental, privately-held entities established by Congress to improve the flow of credit to specific sectors of the economy and provide certain essential services to the public. U.S. GSEs include Fannie Mae and Freddie Mac, but do not include Ginnie Mae, which is directly owned by the U.S. Department of Housing and Urban Development. U.S. GSE obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury.

Value-at-risk ("VaR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

Warehouse loans: Consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired certain of the assets of the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC.

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As of January 31, 2016

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3 Corporate Governance & Nominating Committee

4 Public Responsibility Committee

5 Directors' Risk Policy Committee

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Chief Executive Officer

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David Mayhew

Emilio Saracho

Peter L. Scher

JPMorgan Chase & Co.

Corporate headquarters

270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000
jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities LLC
J.P. Morgan Securities plc

Annual Report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the U.S. Securities and Exchange Commission will be made available without charge upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070

Stock listing

New York Stock Exchange
London Stock Exchange

The New York Stock Exchange ticker symbol for the common stock of JPMorgan Chase & Co. is JPM.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations website at jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000

Directors

To contact any of the Board members or committee chairs, the Lead Independent Director or the non-management directors as a group, please mail correspondence to:

JPMorgan Chase & Co.
Attention (Board member(s))
Office of the Secretary
270 Park Avenue
New York, NY 10017-2070

The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct, the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting our website at jpmorganchase.com and clicking on "Governance" under the "About us" tab.

Transfer agent and registrar

Computershare
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Investor Services Program

JPMorgan Chase & Co.'s Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorgan Chase & Co. common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, Computershare, by calling 800-758-4651, by writing to the address indicated above or by visiting its website at www-us.computershare.com/Investor.

Direct deposit of dividends

For information about direct deposit of dividends, please contact Computershare.

Stockholder inquiries

Contact Computershare:

By telephone:

Within the United States, Canada and Puerto Rico: 800-758-4651 (toll free)

From all other locations: 201-680-6862 (collect)

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College Station, TX 77842
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Suite 210
College Station, TX 77845
United States

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If you receive duplicate mailings because you have more than one account listing and you wish to consolidate your accounts, please write to Computershare at the address above.

Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, NY 10017-6204

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As of 2009, JPMorgan Chase & Co. has distributed shareholder information under the U.S. Securities and Exchange Commission "Notice and Access" rule. As a result, the firm prints 700,000 fewer Annual Reports and Proxy Statements, which saves on an annual basis approximately 6,400 trees and 800 metric tons of CO_2 emissions.

This Annual Report is printed on paper made from well-managed forests and other controlled sources. The paper is independently certified by BVQI to the Forest Stewardship Council® (FSC®) standards. The paper contains a minimum of 20% post-consumer waste recycled fibers.



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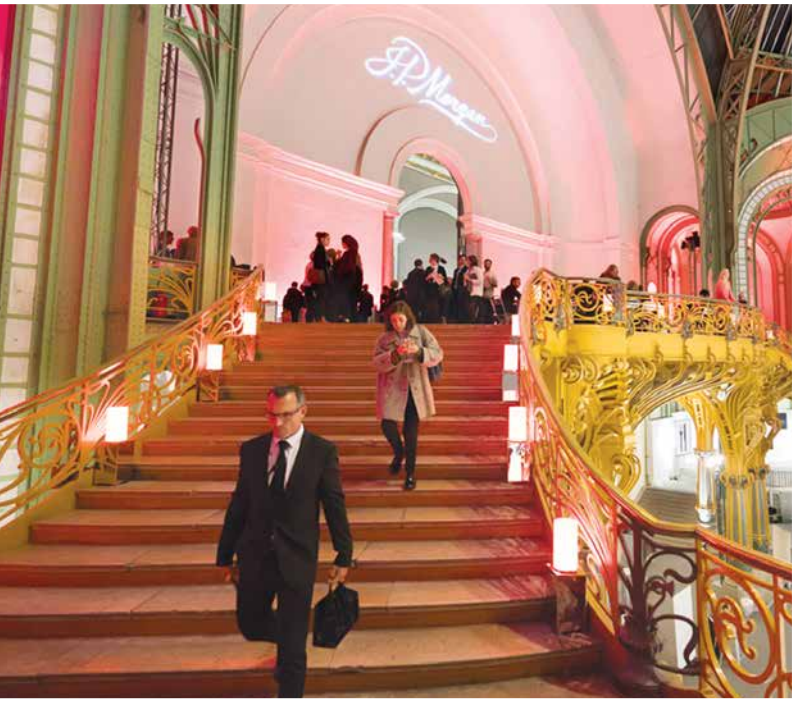


















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Investor Day: February 23, 2016

Timetable – Investor Day 2016 – Held in 2nd Floor Conference Center
Location: 270 Park Avenue

Presentation	Speaker	Start Time	End Time	Duration
Registration		7:30AM	8:30AM	1:00
Opening remarks	Jamie Dimon	8:30AM	8:45AM	0:15
Firmwide Overview	Marianne Lake	8:45AM	9:45AM	1:00
Consumer & Community Banking	Gordon Smith	9:45AM	11:00AM	1:15
Break		11:00AM	11:15AM	0:15
Asset Management	Mary Erdoes	11:15AM	11:45AM	0:30
Commercial Banking	Doug Petno	11:45AM	12:15PM	0:30
Break		12:15PM	12:30PM	0:15
Lunch		12:30PM	1:30PM	1:00
Corporate & Investment Bank	Daniel Pinto	1:30PM	2:40PM	1:10
Closing remarks and Q&A	Jamie Dimon	2:40PM	3:30PM	0:50
Refreshments		3:30PM	4:30PM	1:00

FIRM OVERVIEW

Marianne Lake, Chief Financial Officer

February 23, 2016

JPMorgan Chase & Co.

Strong fundamentals and track record of adapting

JPMorgan Chase overview

1 Building exceptional client franchises

- Four leading client franchises – together delivering significant value
- Client focus and long-term approach – consistently investing and innovating

2 Operating with fortress principles

- Strong foundation – capital, liquidity, balance sheet, risk discipline
- Better, faster, simpler
- Commitment to controls and culture

3 Maximizing long-term shareholder value

- Delivering strong capital returns – while adapting capital and liquidity frameworks
- Delivering significant operating leverage – while investing through-the-cycle

4 Leading to

~15%	11%+	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

2015 results – strong financial performance on an absolute basis…

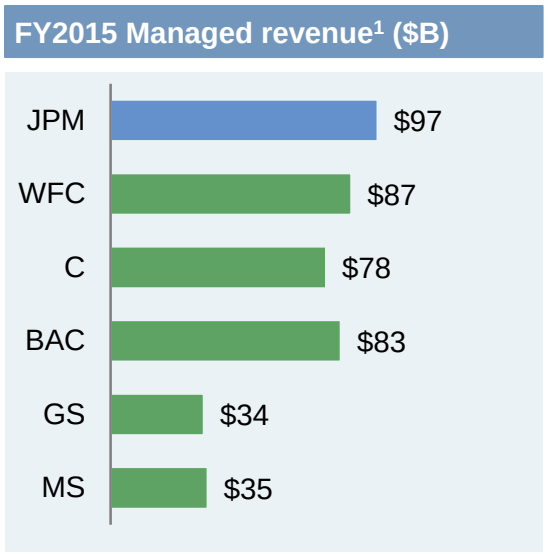
JPMorgan Chase overview

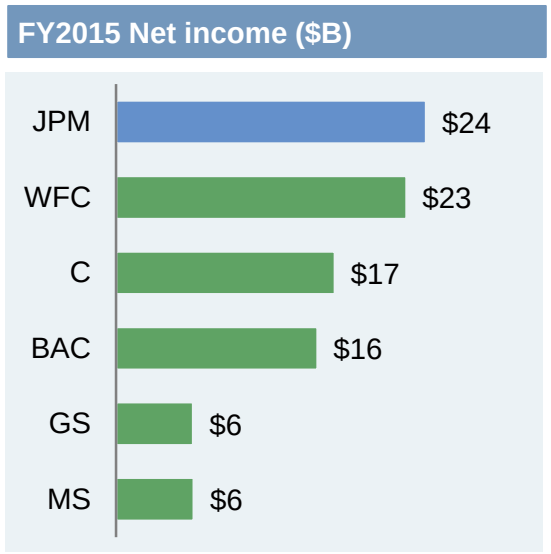
Revenue[1]	$97B	■ Diversification supporting revenue, despite low rates and macro volatility ■ Net interest income of $45B and noninterest revenue of $52B
Adjusted expense[2]	$56B 58%[2]	■ 2 percentage point decrease in the adjusted overhead ratio ■ Legal expense of $3.0B – reasonably possible losses decreased by $2.2B
Net income	$24.4B $6.00	■ Record net income and record EPS
CET1[3] Capital return	11.6% $11B	■ Increased CET1 by 140bps while returning $11B net to shareholders
ROTCE[4]	13%	■ 2010-2012 ROTCE of 15% – 2013 at 11%, but 15% adjusted – 2014 and 2015 at 13%

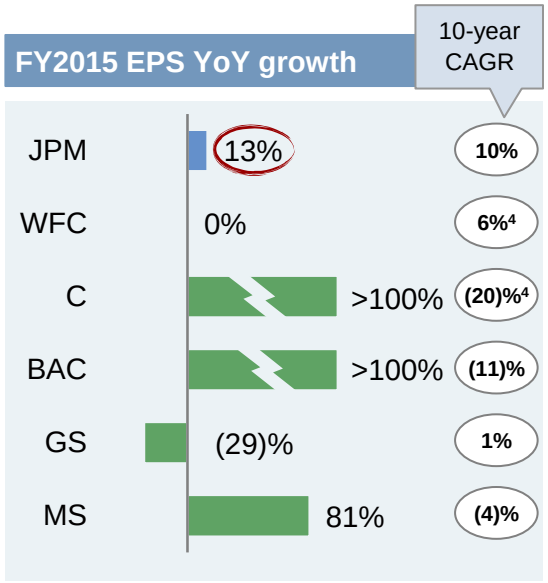
Note: For footnoted information, refer to slide 40

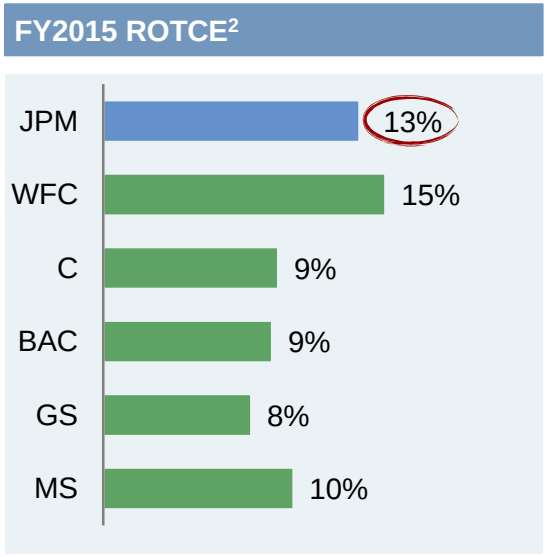
… and on a relative basis – JPM continues to be a leader

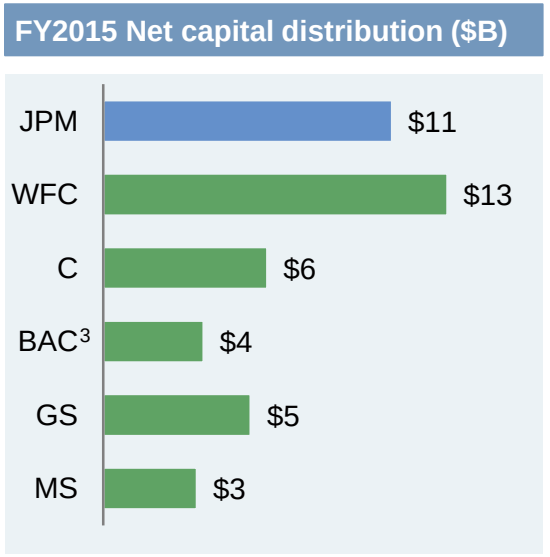
JPMorgan Chase overview

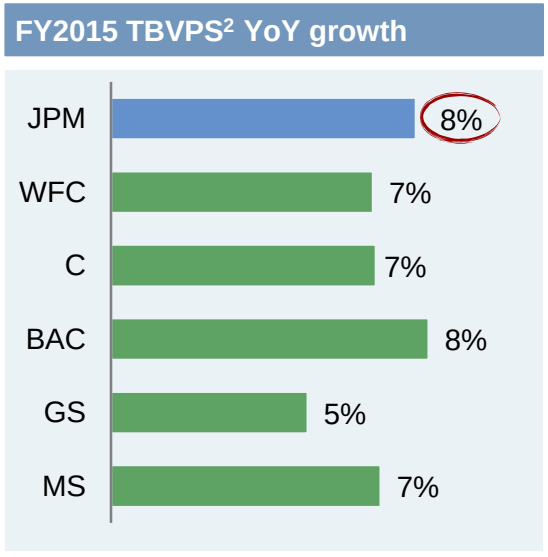










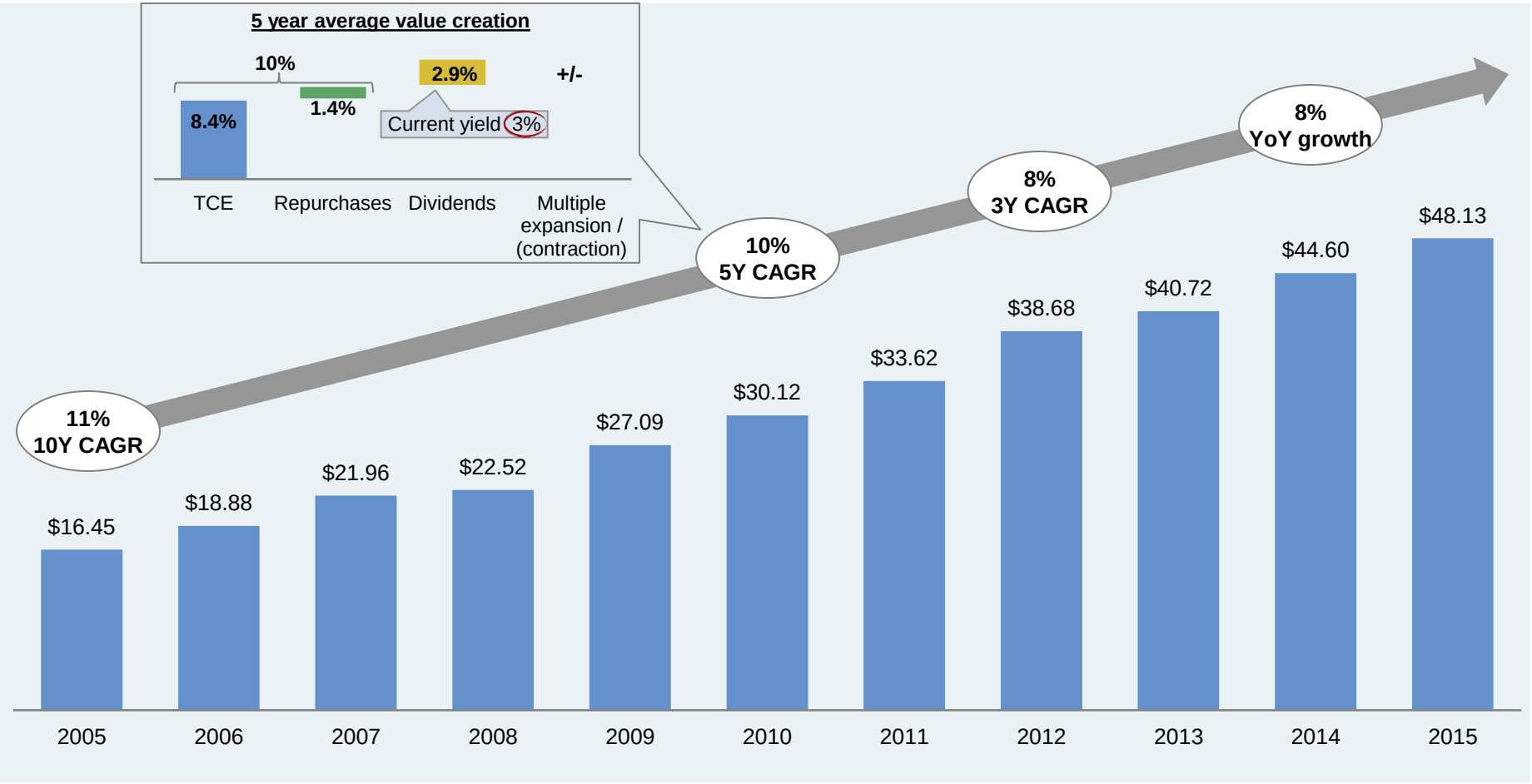


Note: For footnoted information, refer to slide 41

Sustained tangible book value growth

JPMorgan Chase overview

Tangible book value per share (TBVPS)[1,2]



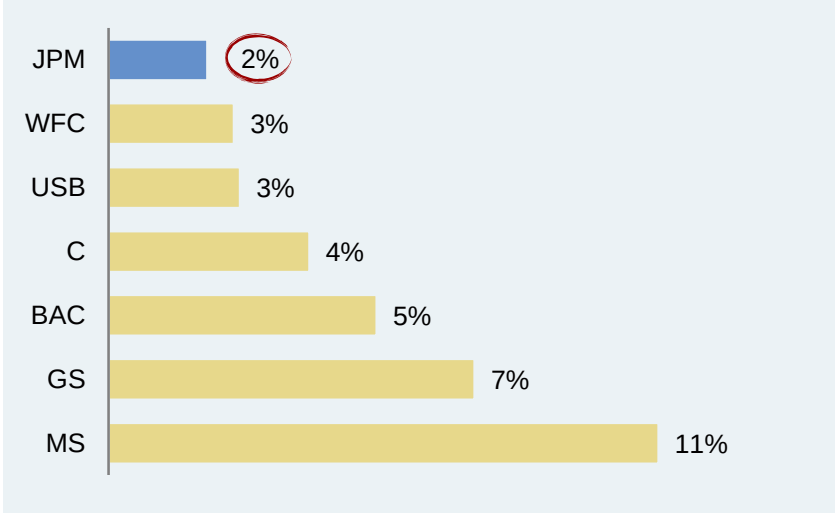
TBVPS and dividends are building blocks of value creation

[1] Refer to note 4 on slide 40
[2] 2010-2014 has been revised to reflect the adoption of new accounting guidance for investments in affordable housing projects

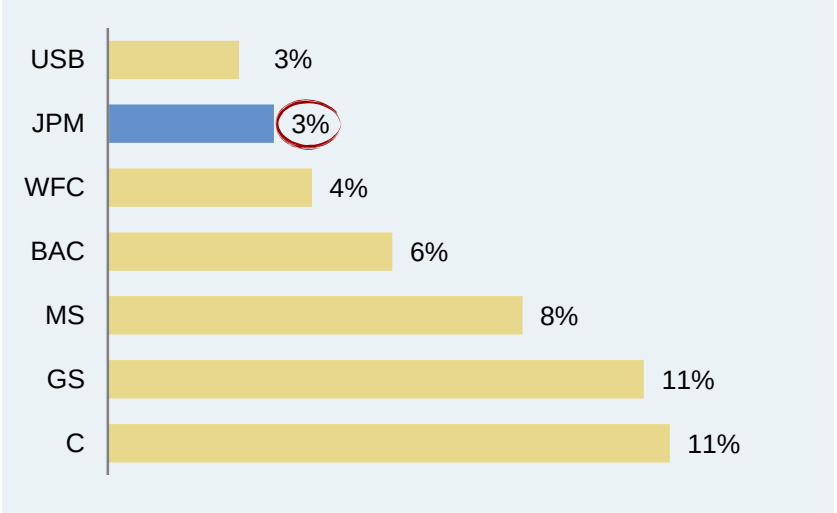
Diversification drives stability amidst significant macro volatility

JPMorgan Chase overview

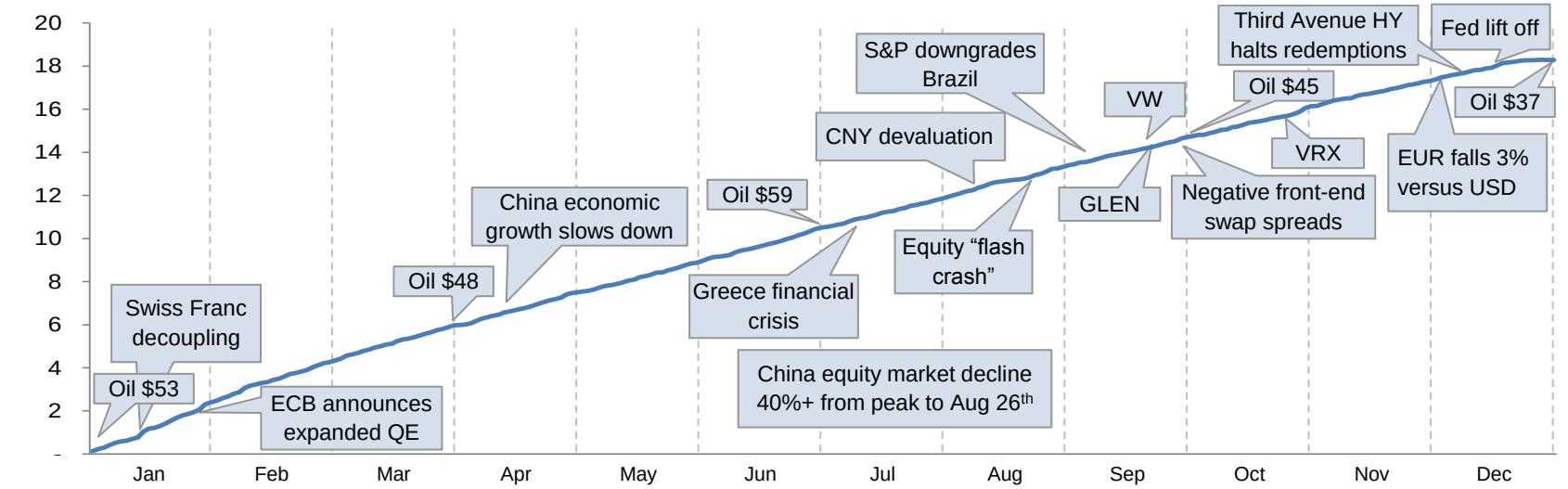
Peer total revenue volatility[1]



Peer NIR volatility[1,2]



2015 Markets cumulative revenue ($B)



[1] Standard deviation divided by average over 2011-2015 period
[2] NIR presented on a reported basis

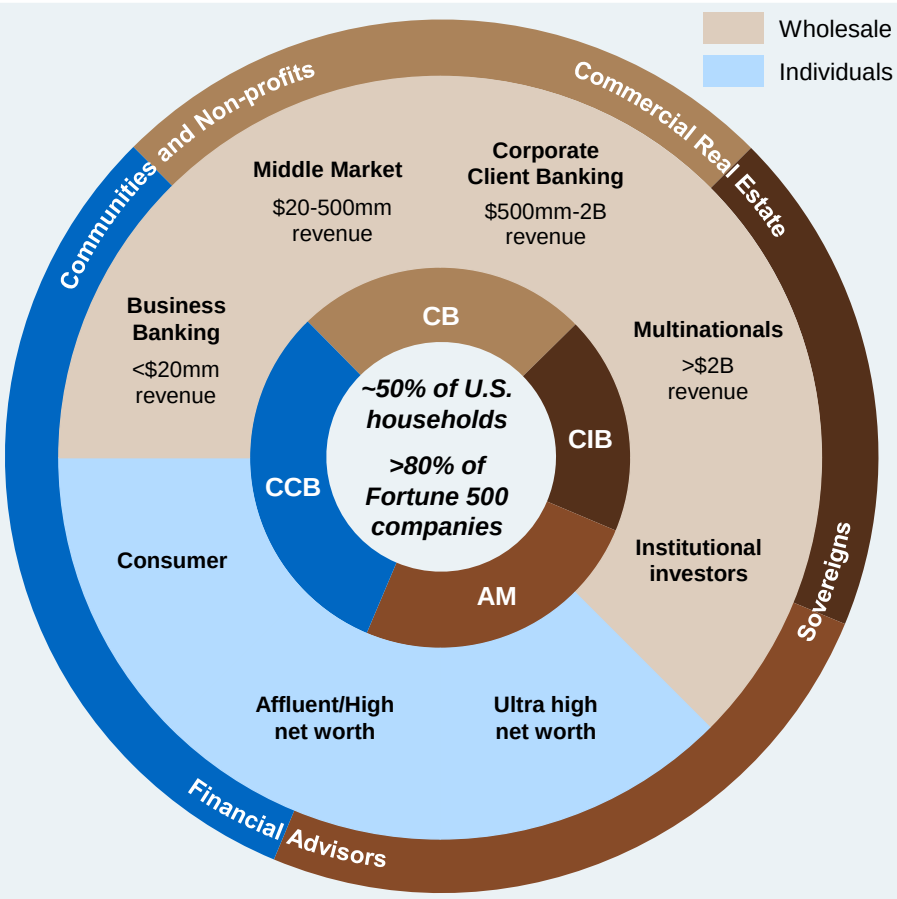
Our operating model is centered around our clients

JPMorgan Chase overview

Operating model



Client segmentation



Cannot be replicated – complete, global, diversified and at scale – built over decades

Agenda

1. **Building exceptional client franchises**
2. **Operating with fortress principles**
3. **Maximizing long-term shareholder value**

Key Principles

- Four exceptional client franchises – leaders in their own right
- Build our businesses for the long-term – consistently innovating
- Focus on client experience and lifetime relationships
- Complete platform and diversified operating model – drives client engagement, synergies and stable returns
- Experienced management team with deep talent

2016 Priorities

- Invest in innovation and technology – to improve customer/client experiences, efficiencies and risk management
- Own the future of wholesale and retail payments
- International and regional expansion
- Leverage scale and completeness of platform
- Attract and retain talent

4 Leading to

~15%	11%+	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

1 Leading client franchises

Building exceptional client franchises



Deepening client relationships

Share gains and leadership positions

Irreplicable client franchise built over the long-term

		2006	2014	2015	
CCB	Deposits market share[1]	3.6%	7.6%	7.9%	■ Relationships with **~50% of U.S. households**
	# of top 50 Chase markets where we are #1 (top 3)	*11 (25)*	*13 (40)*	*12 (40)*	■ #1 primary bank relationships within Chase footprint[11]
	Average deposits growth rate	7.7%	7.4%	9.0%	■ #1 retail bank in the U.S. for acquiring, developing and retaining customers[12]
	Active mobile customers growth rate	N.M.	22.1%	19.5%	■ #1 U.S. credit card issuer based on loans outstanding[13]
	Credit card sales market share[2]	16%	21%	21%	■ #1 U.S. co-brand credit card issuer[14]
	Merchant processing volume[3,4]	#3	#1	#1	■ #1 wholly-owned merchant acquirer[15]
CIB	Global IB fees[5]	#2	#1	#1	■ **>80% of Fortune 500 companies** do business with us
	Market share[5]	*8.6%*	*8.0%*	*7.9%*	■ Top 3 in 16 product areas out of 17[16]
	Total Markets revenue[6]	#8	#1	#1	■ #1 in both N.A. & EMEA IB fees[17]
	Market share[6]	*7.9%*	*15.5%*	*15.9%*	■ #1 in Global Debt, Equity & Equity-related[17]
	FICC[6]	#7	#1	#1	■ #1 in Global Long-Term Debt & Loan Syndications[17]
	Market share[6]	*9.1%*	*17.5%*	*18.3%*	■ #1 FICC productivity[18]
	Equities[6]	#8	#3	#3	■ Top 3 Custodian globally with AUC of $19.9T
	Market share[6]	*6.0%*	*11.6%*	*12.0%*	■ #1 USD clearing house with 18.9% share in 2015[19]
CB	# of states with Middle Market banking presence	22	30	32	■ #1 in customer satisfaction[20]
	Multifamily lending[7]	#28	#1	#1	■ Leveraging the Firm's platform – avg. ~9 products/client[21]
	Gross investment banking revenue ($B)	$0.7	$2.0	$2.2	■ Top 3 in overall middle market, large middle market and ABL bookrunner
	% of North America IB fees	*16%*	*35%*	*36%*	■ Industry-leading credit performance – 4th straight year of net recoveries or single digit NCO rate
AM	Mutual funds with a 4/5 star rating[8]	119	226	231	■ 84% of 10-year LT mutual fund AUM in top 2 quartiles[22]
	Global active long-term open-end mutual fund AUM flows[9]	#2	#1	#2	■ Positive client asset flows every year since 2004
	AUM market share[9]	*1.8%*	*2.5%*	*2.6%*	■ #3 Global Private Bank and #1 LatAm Private Bank[23]
	North America Private Bank (Euromoney)	#1	#1	#1	■ Revenue and LT AUM growth ~80% since 2006
	Client assets market share[10]	*~3%*	*~4%*	*~4%*	■ Doubled GWM client assets (2x industry rate) since 2006[10]

Note: For footnoted information, refer to slide 42

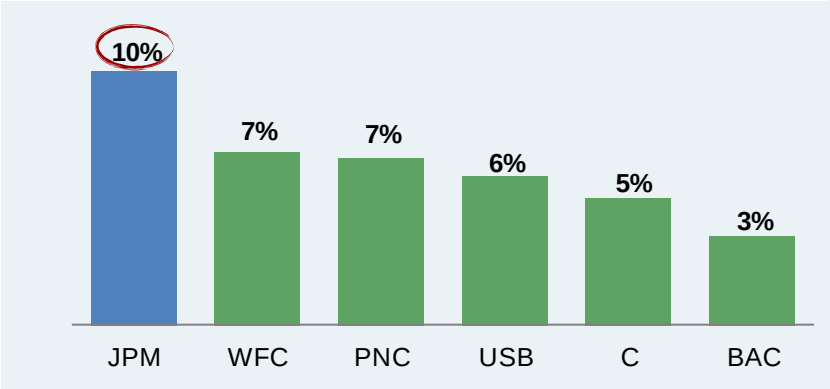
1 Proven best-in-class long-term performance

Building exceptional client franchises

Deepening client relationships

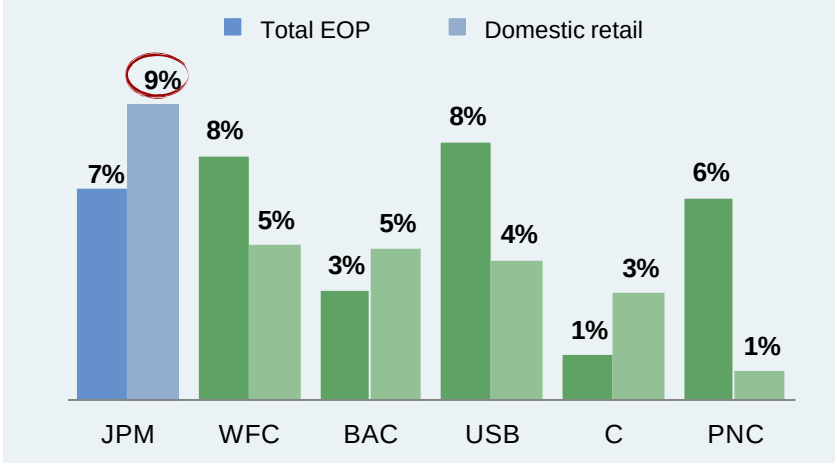
Share gains and leadership positions

EOP core loans: 5-year CAGR[1]

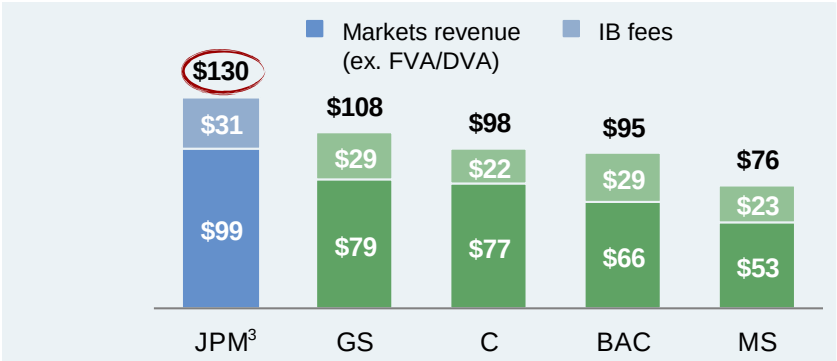


2015 YoY growth						
Total	16%	8%	1%	5%	1%	10%

Deposits: 5-year CAGR[2]

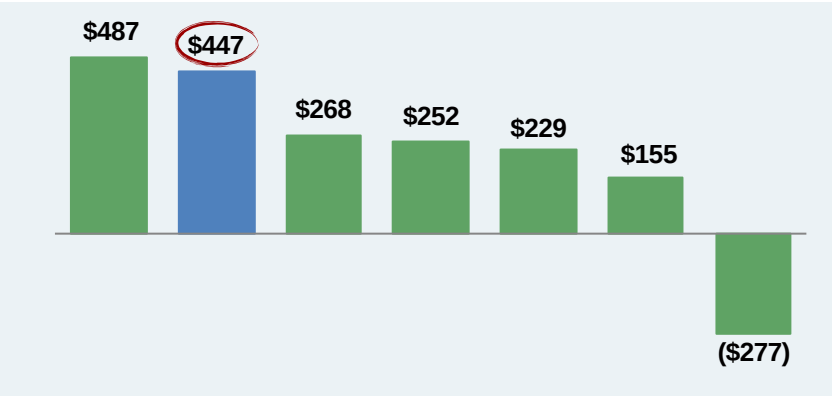


Markets revenue & IB fees ($B): Cumulative 5 years



2015 Share					
Markets revenue[4]	16%	13%	13%	11%	10%
IB fees[5]	8%	7%	5%	6%	6%

LT net client asset flows ($B): Cumulative 5 years



	BLK[6]	JPM[7]	BK	UBS[8]	MS	CS[8]	Allianz[8,9]
2015	$152	$33	($17)	$35	$33	$44	($162)

Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 43

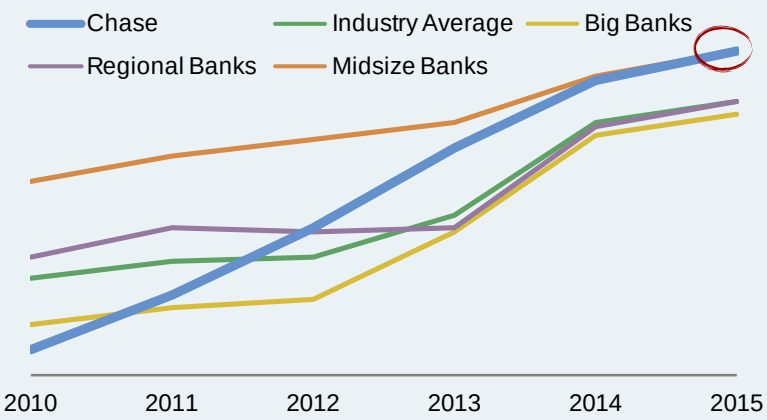
1 Proven best-in-class long-term performance (cont'd)

Building exceptional client franchises

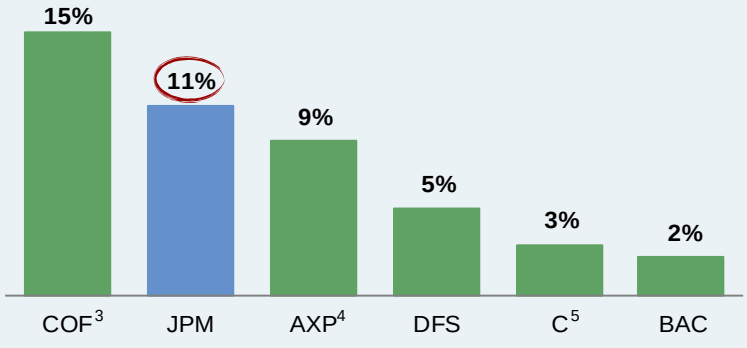
Deepening client relationships

Share gains and leadership positions

J.D. Power customer satisfaction score: 2010–2015[1]

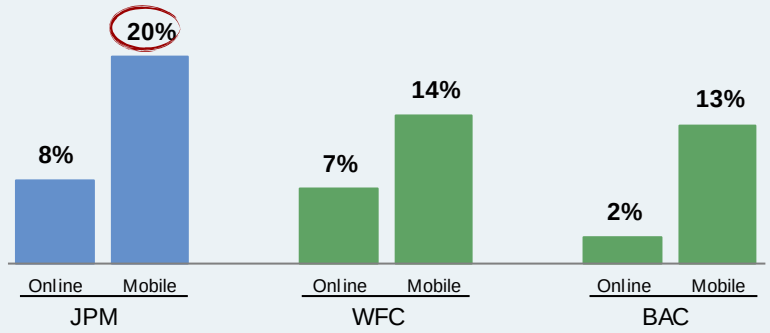


Credit card sales: 5-year CAGR[2]



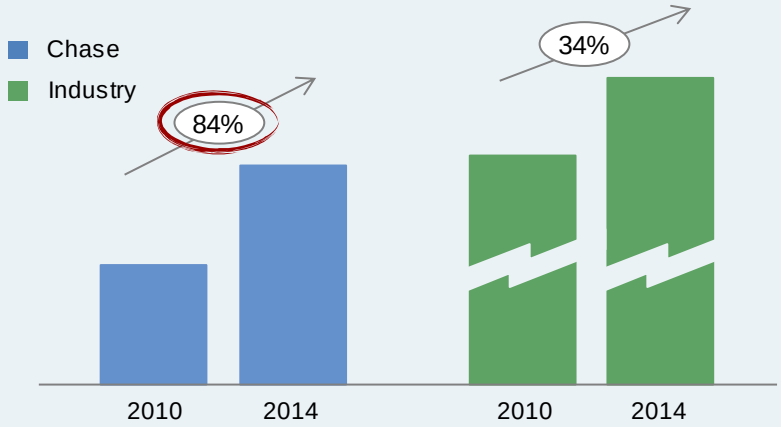
2015						
Sales	$196	$495	$572	$118	$183	$221
Share	8%	21%	24%	5%	8%	9%

Online and Mobile customers 2015 YoY growth



2015 Customers (mm)			
Online	39	26	32
Mobile	23	16	19

Merchant processing bankcard volumes growth[6]



Note: For footnoted information, refer to slide 44

1 Technology and innovation

Building exceptional client franchises



Deepening client relationships
Scale and efficiency
Fortress principles

Built to innovate

Scale

J.P.Morgan

Conduct business in 100+ countries
$5T daily payments processed
$1.5T+ of securities traded & settled daily

CHASE

Relationships with ~50% of U.S. households
~$1T in merchant processing volume per year
5K+ branches; ~18K ATMs

Robust Tech Foundation

40K+ Technologists

- ~18K developers creating intellectual property

$9B+ Total Tech Budget

- ~1/3 of spend on investments

~$2B on Security/Controls

- $600mm+ on Cyber: Investing in proactive defense risk measures

13 Global Technology Hubs

- Accessing talent through centers of excellence in strategic locations

Innovating Across Businesses

Digital

Customer Experiences / Payments Platforms

J.P.Morgan ACCESS

Pay

Data & Analytics

Leveraging Insights

J.P.Morgan Asset Management

J.P.Morgan

Security & Controls

Protecting the Firm

Three 24/7 global Security Operations Centers

Cloud / Development

Streamlined Delivery

Elastic, on-demand infrastructure and automation of the software development process

Embracing the Innovation Economy

Collaborating with leading tech start-ups

- Engage with 300+ early stage technology companies to innovate in FinTech, Data & Analytics, Security and other domains
- Piloted over 100 technology solutions last year

Investing in strategic opportunities

- 30+ investments in the last 2 years to drive deeper, more innovative partnerships through capital investments

motif

Digital Asset Holdings

Menlo Security

Agenda

1 Building exceptional client franchises

2 **Operating with fortress principles**

3 Maximizing long-term shareholder value

Key principles

- Strong capital and liquidity position
- Better, faster, simpler
  - Our balance sheet is less complex and of higher quality
  - Demonstrated strong risk discipline through-the-cycle
  - Executed on significant business simplification agenda
- Commitment to controls and culture
  - Enhanced control infrastructure and governance – significant investments
  - Culture and conduct – reinforce our business principles

2016 Priorities

- Embrace change to adapt to customer/clients evolving needs and market structure changes
- Defend the Firm, its customers, assets and information from cyber attacks
- Continue to build and maintain a control environment that is effective and efficient
- Maintain underwriting discipline through-the-cycle
- Streamline, simplify and standardize support functions

4 Leading to

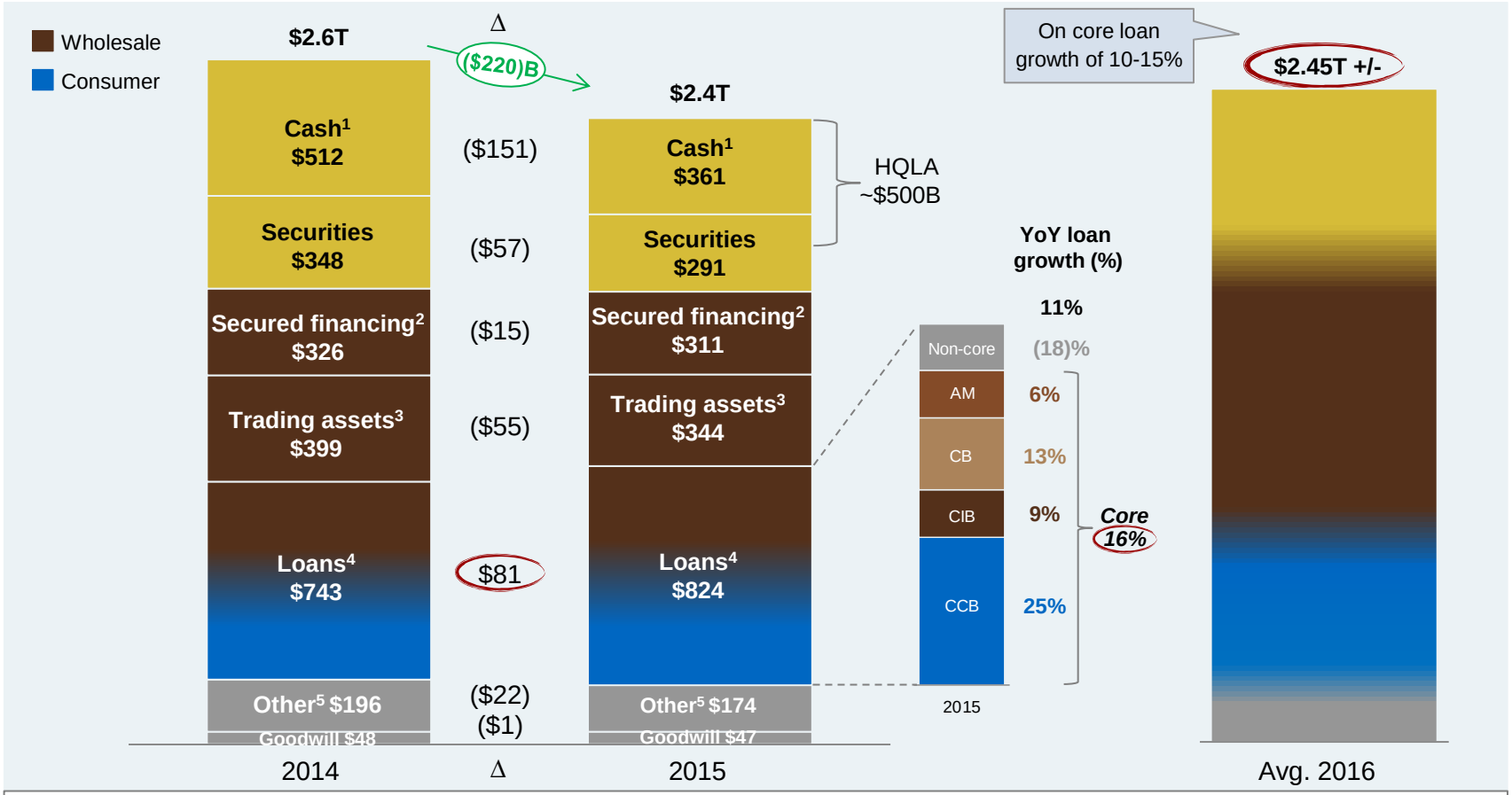
~15%	11%+	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

2 Fortress balance sheet

Operating with fortress principles

Fortress principles
Diversified businesses

EOP assets ($B)



Total deposits	$1,363	($83)	$1,280
Loans-to-deposits ratio[6]	56%	9%	65%

Including non-operating deposits reduction of ~$200B[7]

We have made significant progress changing the mix of our balance sheet

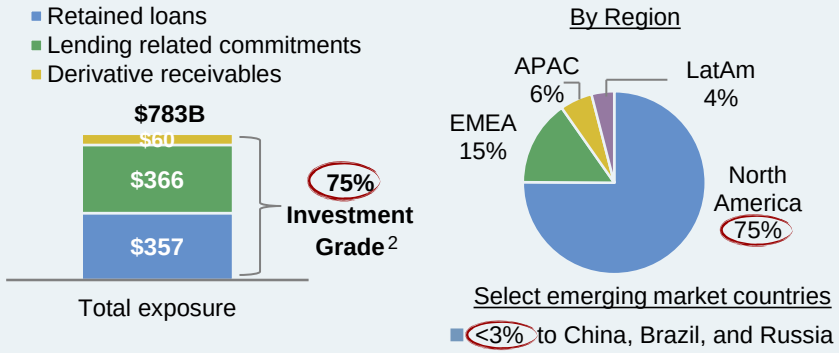
Note: For footnoted information, refer to slide 45

2 Wholesale credit risk

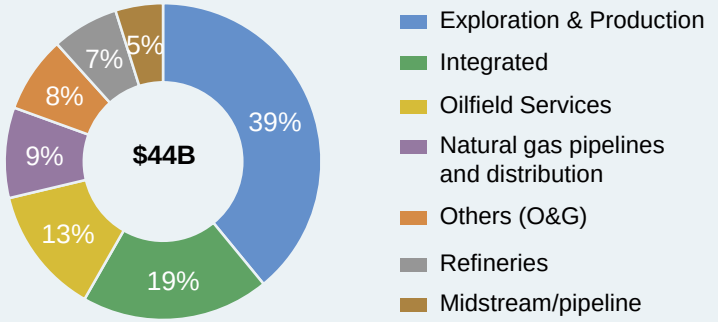
Operating with fortress principles

Fortress principles
Diversified businesses

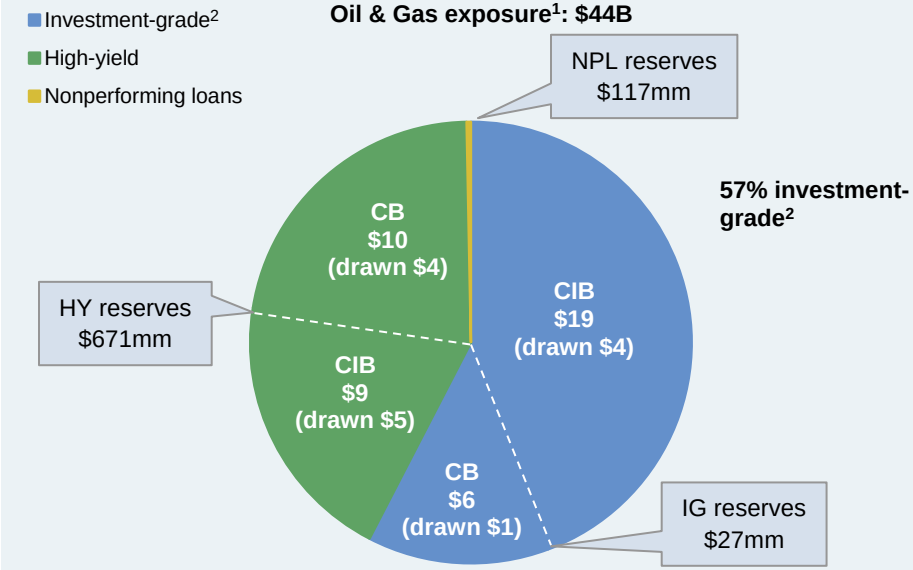
Wholesale credit exposure as of 12/31/15 ($B)



Oil & Gas lending exposure[1] as of 12/31/15



Oil & Gas lending exposure[1] as of 12/31/15 ($B)



Reserves outlook ($mm)

	Oil & Gas	Metals & Mining
Reserves as of 12/31/15	$815	$240
1Q16 build	500 +/-	100 +/-
Expected reserves as of 3/31/16	$1,300 +/-	$350 +/-

Stress scenario with oil price at ~$25 for ~18 months[3] could require incremental reserve build of ~$1.5B

Oil & Gas related exposure

We continue to monitor closely, no significant contagion observed

- CRE: $4.1B of exposure in sensitive geographies[4]
- Business Banking and C&I suppliers to O&G industry: $2.7B of overall exposure
- Other CRE, Residential and C&I portfolio exposures in energy-related geographies are performing well

Note: For footnoted information, refer to slide 46

2 Credit – net charge-offs

Operating with fortress principles

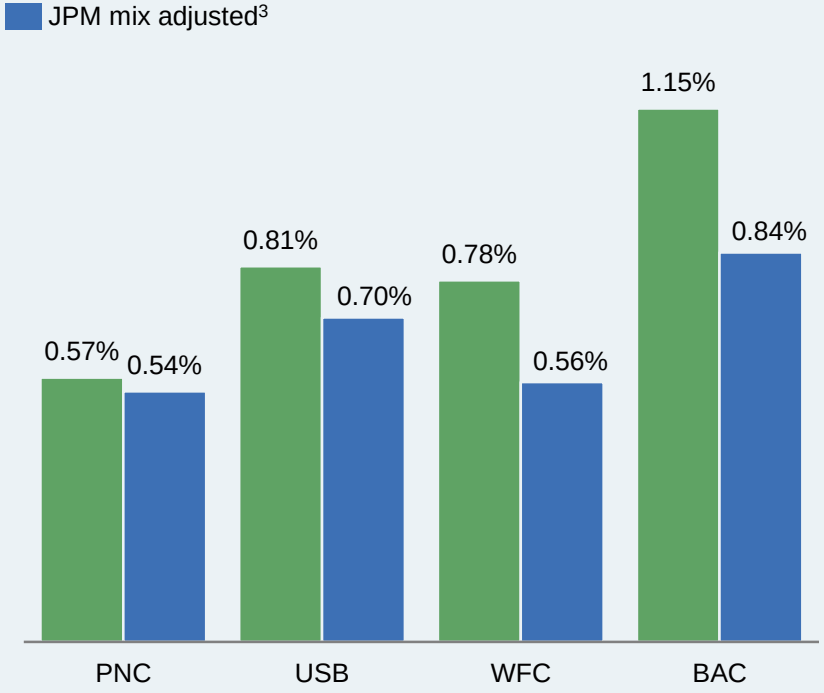
Fortress principles
Diversified businesses

NCO rates at a cyclical low ($B)

		2015 Avg retained loans	2016 NCOs +/-
CCB	Mortgage – NCI[1]	$159	0.15%
	Card	124	2.50%
	Auto	56	0.45%
	Business Banking	20	0.70%
	Total CCB	415[2]	
CIB	**Total CIB**	98	0.15%
CB	**Total CB**	157	0.15%
AM	**Total AM**	107	< 0.10%
Firmwide		$780[2]	**≤ $4.75**

2015 NCOs of $4.1B and NCO rate of 55bps[1]

Peer NCO rate comparison (avg. 2011-2015)



[1] Excludes purchased credit-impaired balances
[2] Includes purchased credit-impaired balances
[3] "JPM mix adjusted" is calculated by applying JPM NCO rates to peer mix for Card versus all other portfolios

Agenda

1. Building exceptional client franchises
2. Operating with fortress principles
3. **Maximizing long-term shareholder value**

Key principles

- Delivering strong capital returns – while adapting capital and liquidity frameworks
  - Capital and incentive framework considers multiple constraints
  - Balancing compliance with capacity for capital distributions
- Delivering significant operating leverage – while investing through-the-cycle
  - Continue to deliver core efficiencies
  - Consistently self-funding growth and investments

2016 Priorities

- Continue to optimize our balance sheet and business mix
- Deliver strong capital return to shareholders while meeting all regulatory requirements
- Generate sustainable revenue growth over time
- Improve expense discipline and flexibility while continuing to invest for the future

4 Leading to

~15%	11%+	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

3 We have adapted…starting 2016 from a position of strength

Maximizing long-term shareholder value



Fortress principles

Optimization against constraints

	2014		2015
CET1[1]	10.2%	~140bps	11.6%
Firm SLR[1,2]	5.6%	~90bps	6.5%
Total Assets	$2.6T	~$(200)B	$2.4T
RWA[1,2] Std. / Adv.	$1.6T	~$(100)B	$1.5T
GSIB[3]	4.5%	(100)bps	3.5%
LCR and NSFR	>100%	Compliant	>100%

[1] Reflects Advanced Fully Phased-In measure
[2] Refer to footnote 3 on slide 40
[3] GSIB represents global systemically important banks

3 GSIB walk

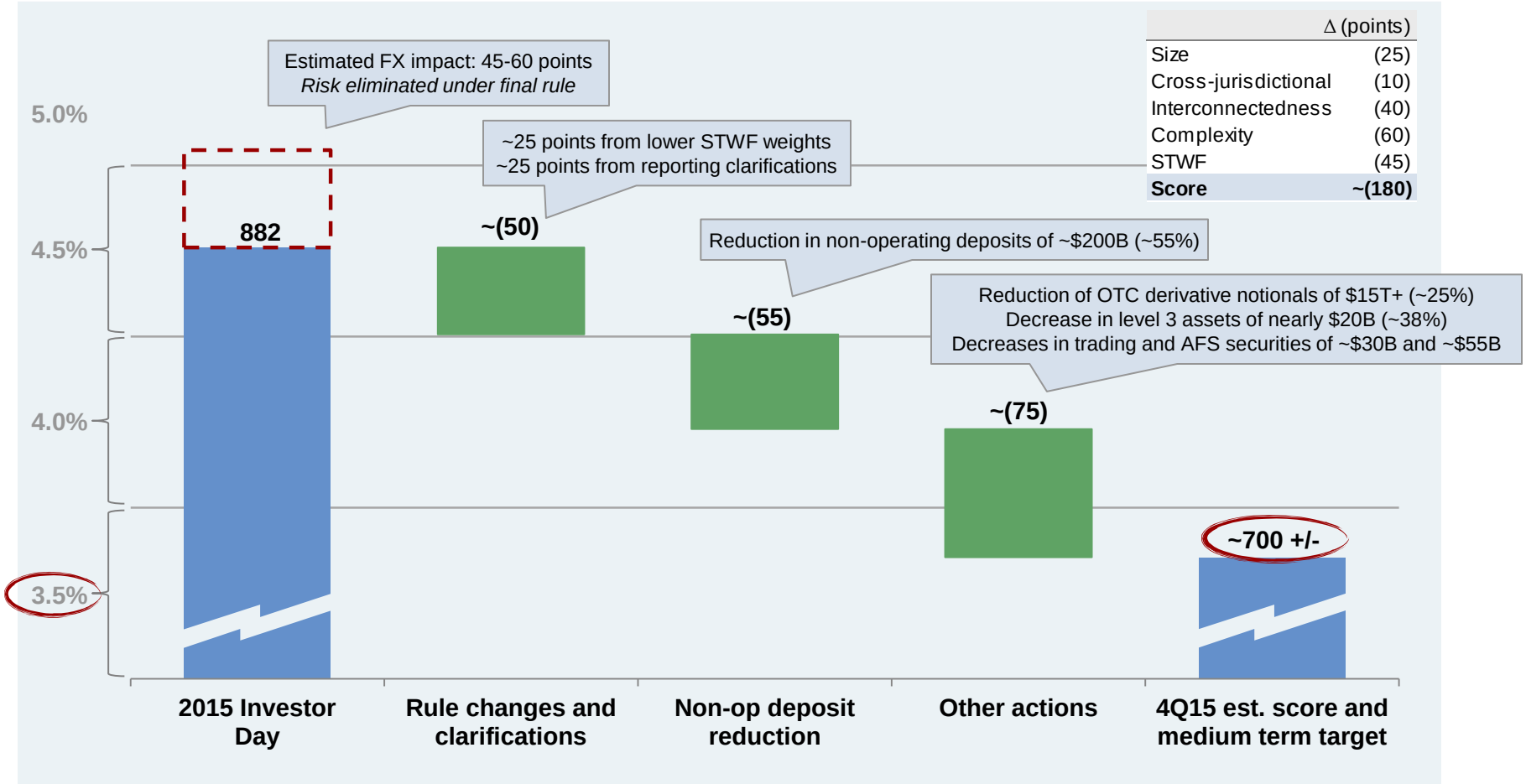
Maximizing long-term shareholder value – capital

US (Method 2) Framework	
Score (points)	**Surcharge**
930-1,029	5.0%
830-929	4.5%
730-829	4.0%
630-729	3.5%
530-629	3.0%

Fortress principles

Optimization against constraints

Estimated JPM method 2 GSIB score



Estimated current surcharge of 3.5% – down 100bps in 2015

3 Capital management framework

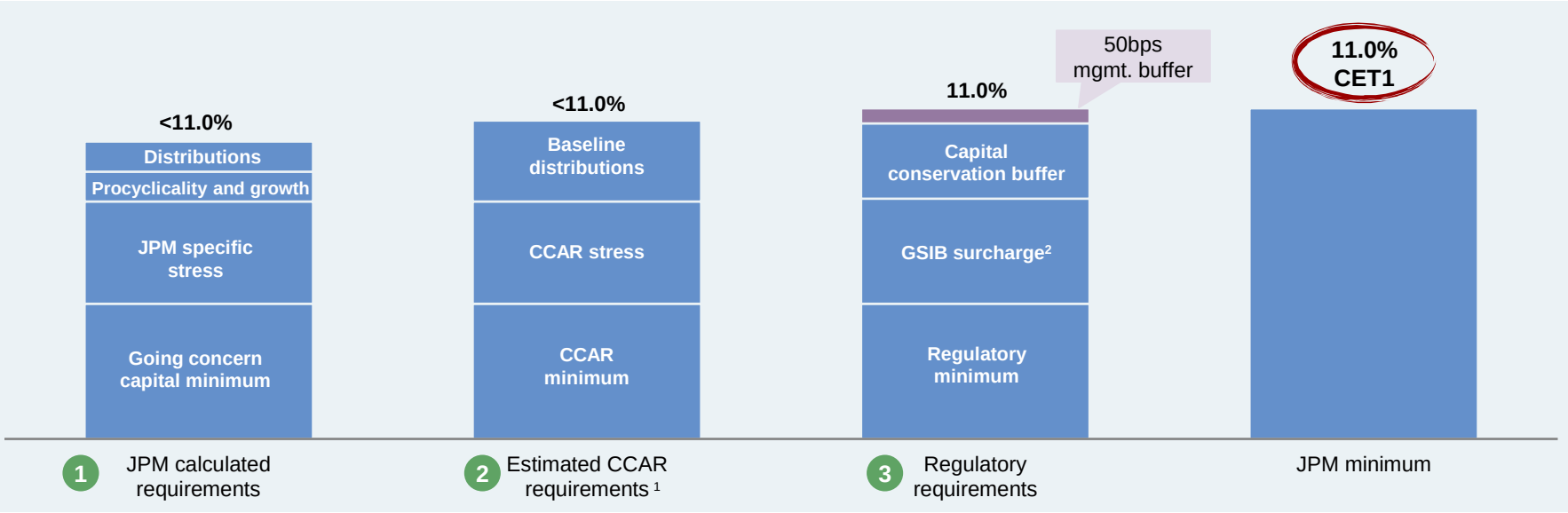
Maximizing long-term shareholder value – capital



Fortress principles

Optimization against constraints

Approach to capital management



Capital management framework

CET1 minimum level is calibrated to the highest of three measures

1. Internally-developed minimum levels of capital
2. Regulatory-driven (CCAR) stress testing
3. Minimum regulatory requirements

50bps management buffer

- **Objective: Preserve the common dividend in an <u>adverse</u> environment**
- **Calibrated based on the Board approved Risk Appetite policy**
  - Measures the capacity to take risk against quantitative tolerances and qualitative factors

[1] Stress based on FRB 2015 CCAR results and baseline distributions of 75% of analyst estimates
[2] JPM estimated GSIB surcharge as of 12/31/15

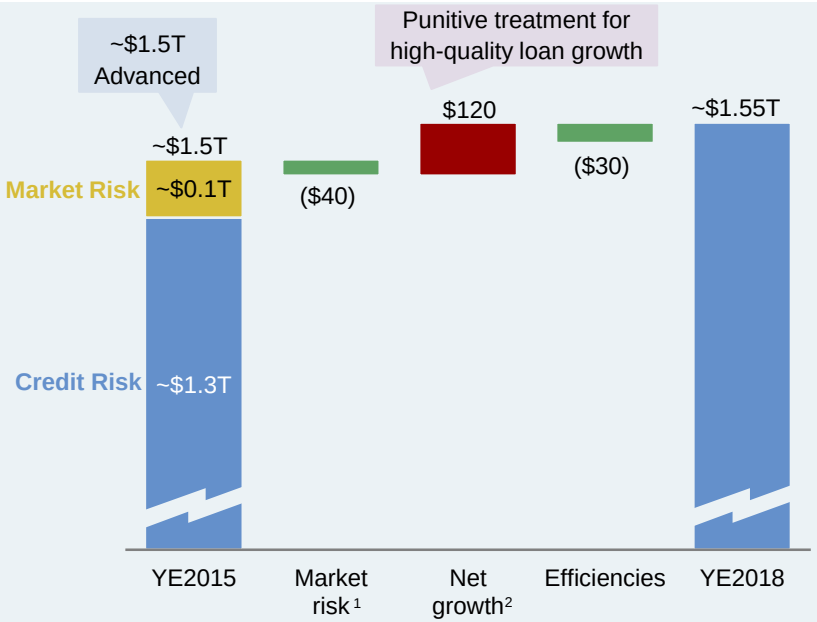
3 Capital glidepath

Maximizing long-term shareholder value – capital

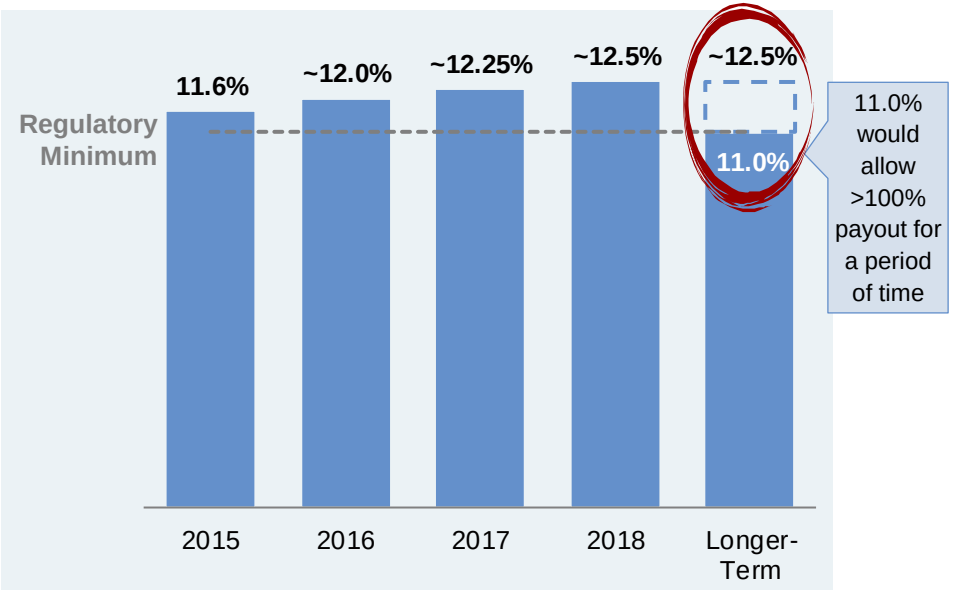
Fortress principles

Optimization against constraints

Standardized RWA glidepath ($B)



Illustrative fully phased-in Firm CET1 trajectory[3]



Total net payout					
	48%	~60%	~75%	~75%	55-75%

Incremental rules still to come

- 2017 CCAR scenario and effective minima
- Revisions to Basel Standardized framework
  - FRTB – modest and manageable impact for the Firm
  - Credit and operational risk rules
  - Uncertain U.S. implementation of Basel rule revisions and calibration of new Basel floor vs. Collins Floor requirement

[1] Expected market risk model benefits
[2] Primarily loan growth net of run-off
[3] Reflects JPM actuals for 2015, and analyst estimates for earnings in 2016-2018; assumed payout ratio of 75%. Total net payout reflects the full-year

3 Benefits of operating model – capital allocation and optimization

Maximizing long-term shareholder value – capital



Optimization against constraints

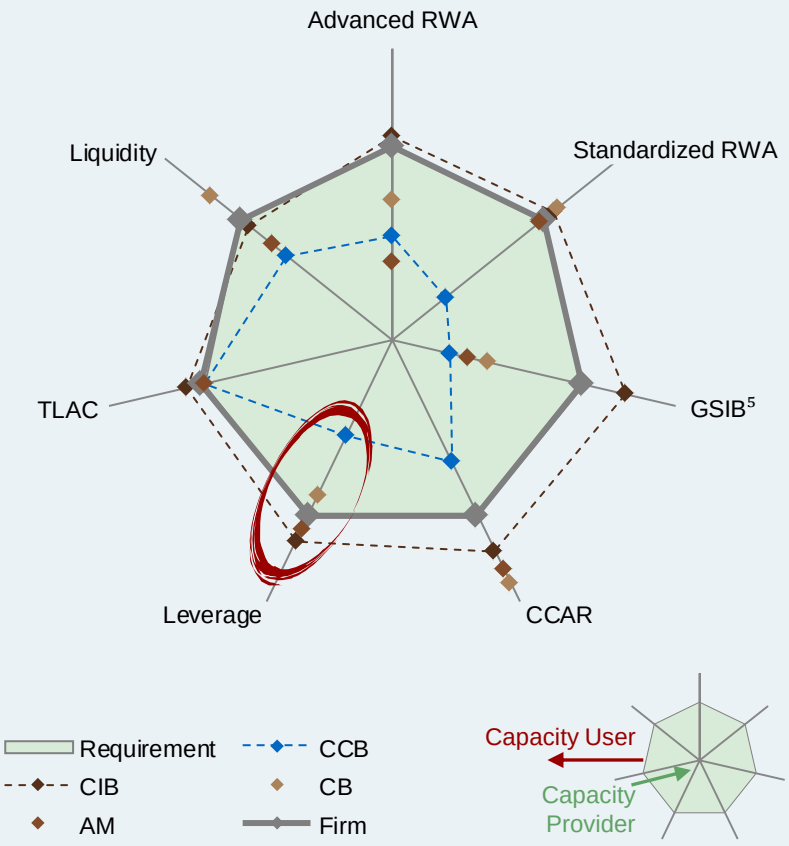
Capital allocation

	Common equity 2015	Common equity 2016	2016 CET1	Medium term	ROE target
Consumer & Community Banking	$51.0	$51.0	10.5%	11.0%	20%
Corporate & Investment Bank	62.0	64.0	11.5%	12.5%	13%
Commercial Banking	14.0	16.0	10.5%	11.0%	16%
Asset Management	9.0	9.0	10.5%	11.0%	25%
Total LOBs	**$136.0**	**$140.0**			
Corporate[1]	37.9	40.0			
Firm (excl. Corp. Goodwill)[2]	**$173.9**	**~$180.0**		**11-12.5%**	**~15%**
Memo: Corporate Goodwill[3]	*41.8*	*41.6*			

Key takeaways

- Continue to allocate LOB equity on Advanced RWA
- Broader incentive framework considers ~20 capital and liquidity constraints
- Operating model provides degrees of freedom
  - LOBs are not bound to their binding constraints but rather the Firm as a whole
- Strategic priorities created with client focus, brand and risk appetite as core components

Select constraints – illustrative[4]



Sharing excess capacity among our LOBs creates value for the Firm

Note: For footnoted information, refer to slide 47

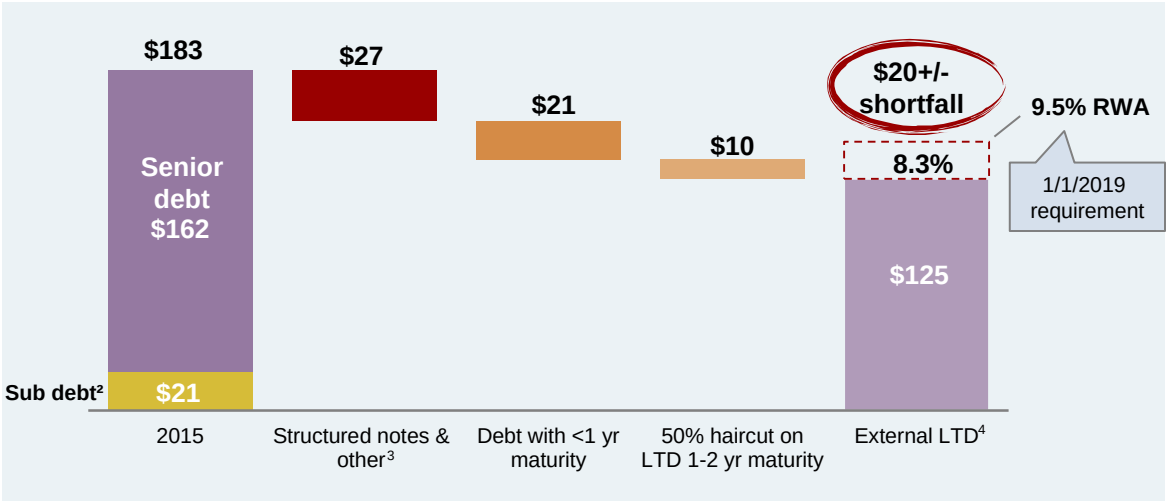
3 Composition and calibration of TLAC

Maximizing long-term shareholder value – loss absorbing capacity

Fortress principles

Optimization against constraints

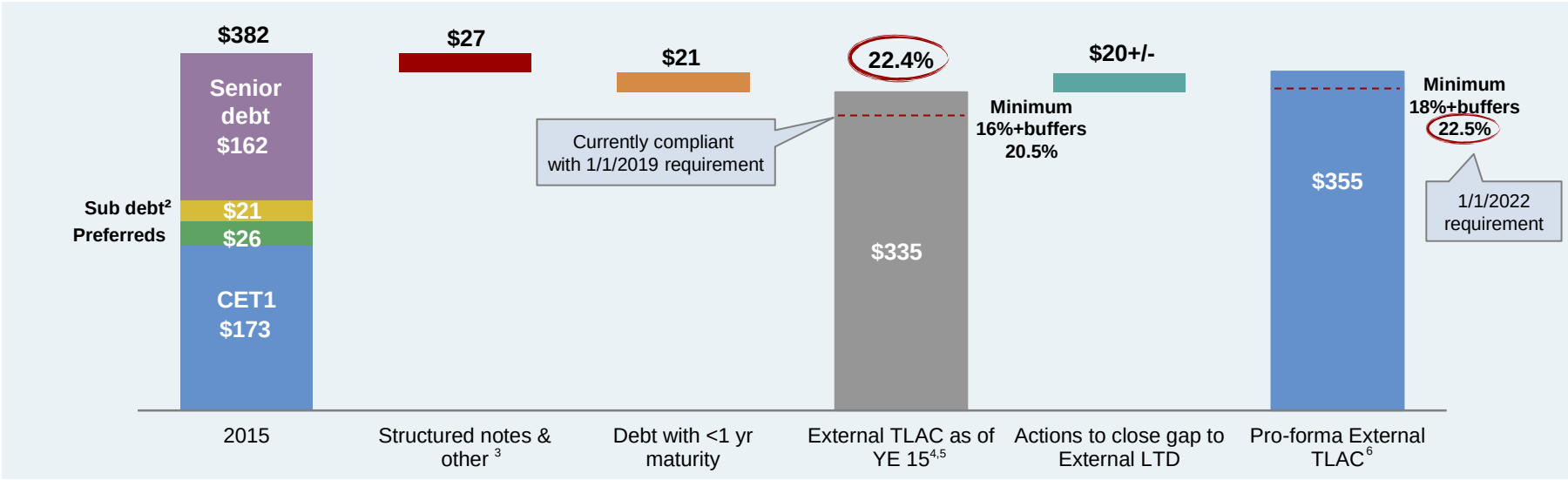
JPMorgan Chase & Co. – estimated External LTD requirement ($B)[1]



Commentary

- External LTD shortfall modest and manageable
- Currently compliant with External TLAC 2019 requirement
- Net issuance needs can be reduced by
  - Modifications to terms of certain existing LTD securities
  - Refinancing of maturing debt in TLAC compliant format

JPMorgan Chase & Co. – estimated External TLAC requirement ($B)[1]



We will continue to optimize the liability side of the balance sheet

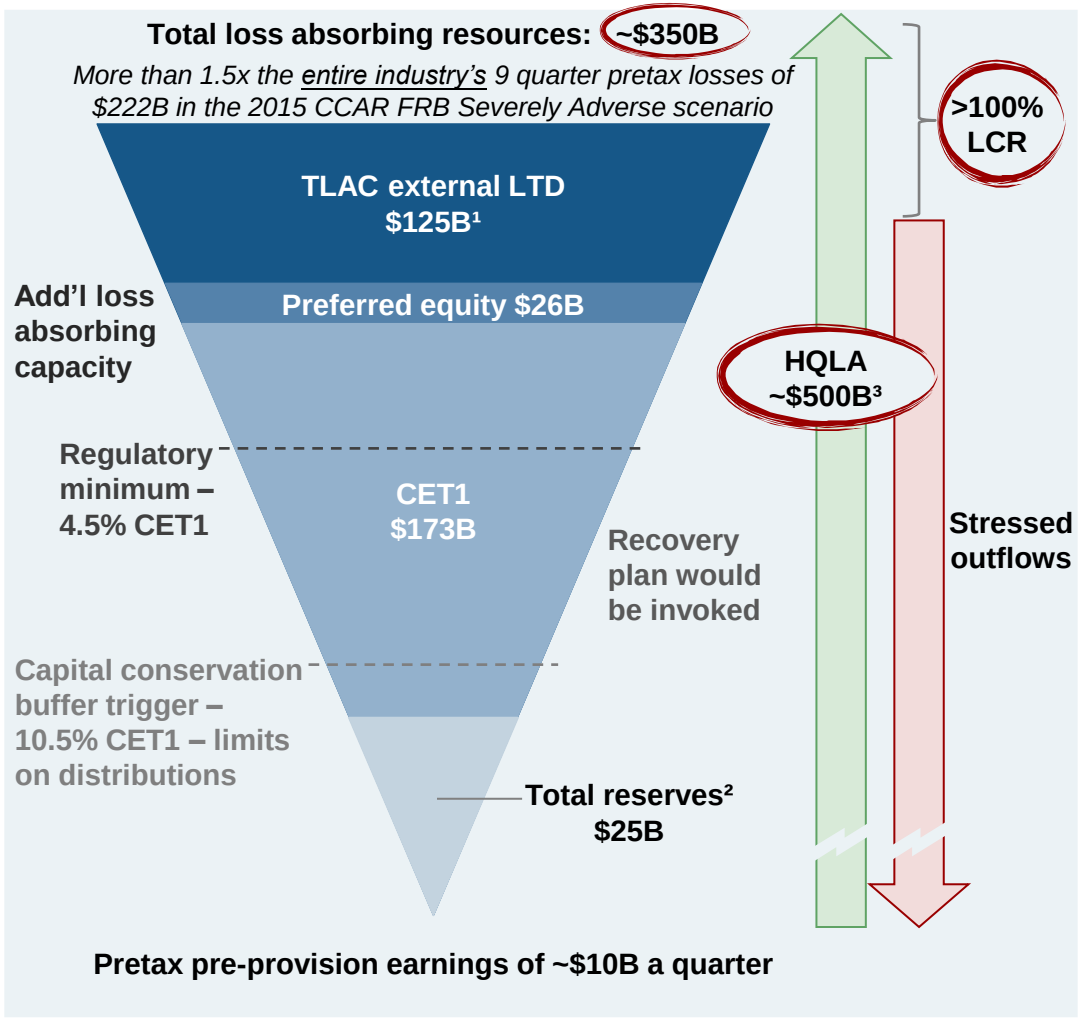
Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 48

3 Resilience of JPM through multiple layers of protection

Maximizing long-term shareholder value – loss absorbing capacity

Fortress principles

Capital and liquidity resources (4Q15)



Overview

- Capital, liquidity and market structure changes have reduced systemic risks
- **Total loss absorbing resources of ~$350B**
  - JPM can absorb ~$100B CET1 depletion **(~$170B pretax loss)** prior to reaching the 4.5% regulatory minimum
  - A recovery plan would have to be triggered and fail before resolution occurs
  - **$125B TLAC external LTD** (bail-in-able) to replenish CET1 – adequate to recapitalize to 11%+ CET1 in Title II
- **HQLA of ~$500B** more than covers peak short-term cash outflows, and additional stable sources of funding reduce liquidity risk over a one year horizon
- Measures are supported by stringent internal and regulatory stress testing and Recovery & Resolution planning

JPM is significantly more resilient to capital loss and liquidity stress post crisis

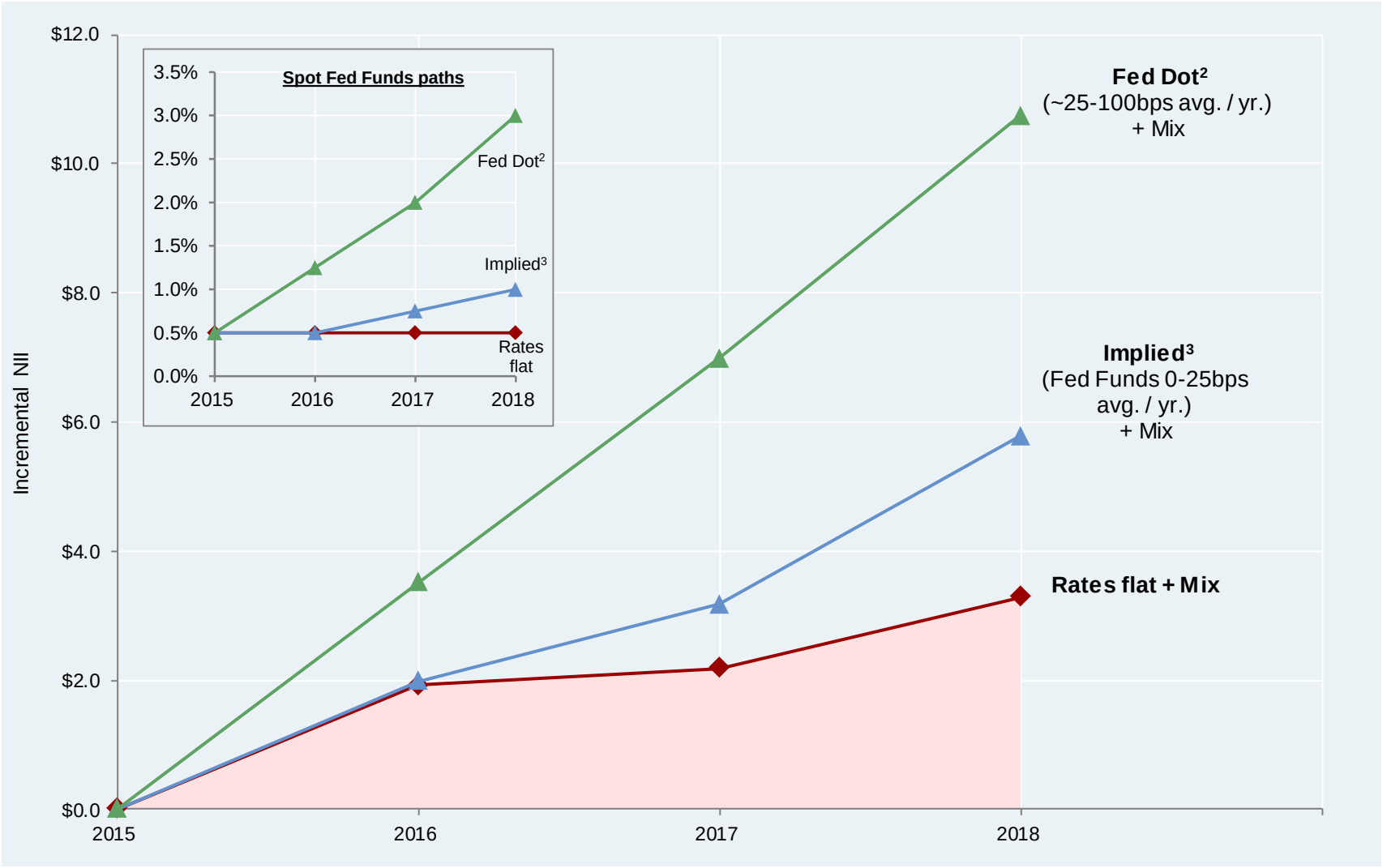
¹ Position as of 12/31/15; will grow by $20B +/- upon compliance
² Includes credit, legal, tax and valuation reserves
³ Estimated

3 NII – well positioned for rising rates

Maximizing long-term shareholder value – operating leverage

Diversified businesses

NII simulation[1] ($B)



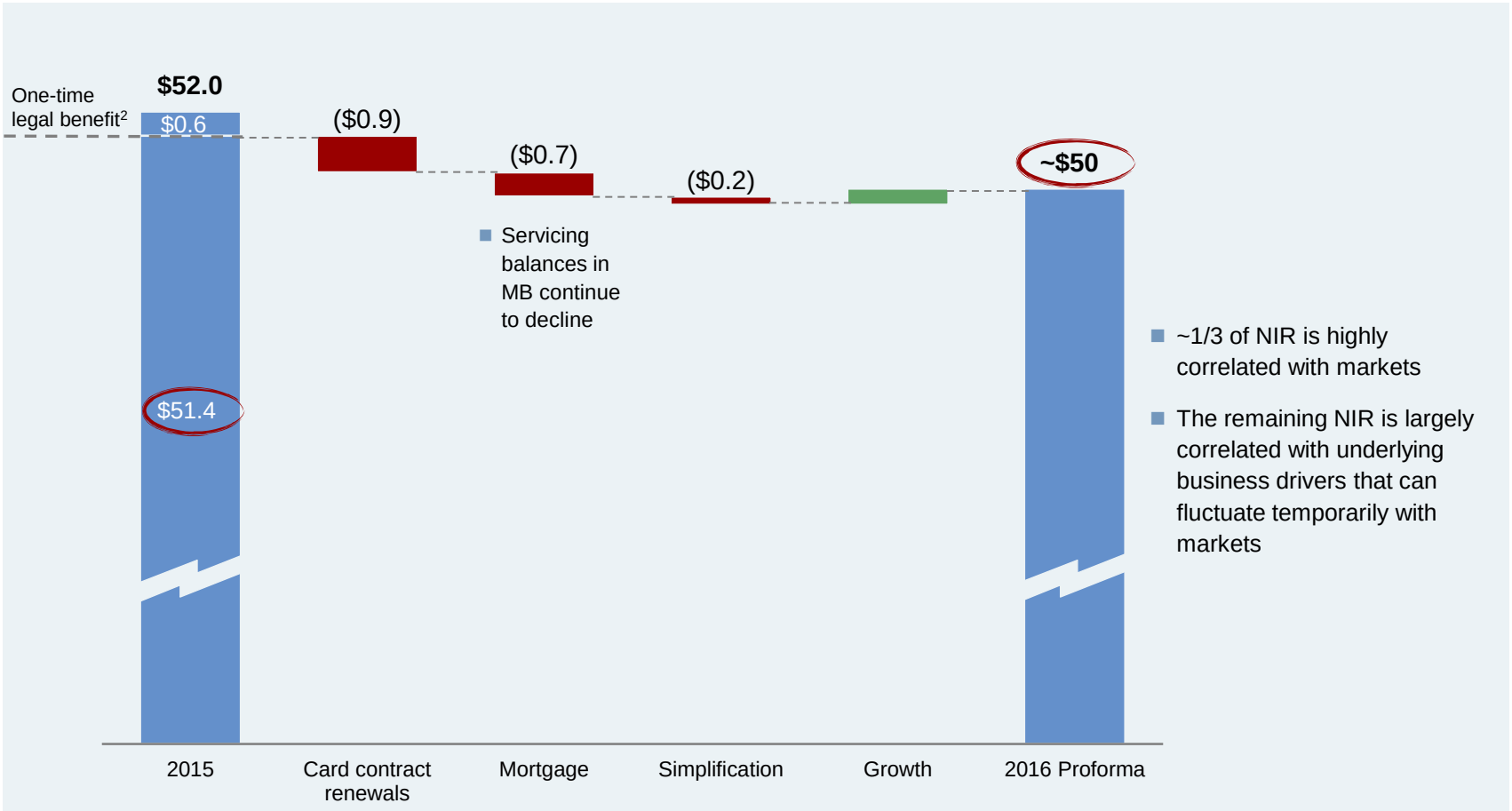
Long term NII impact unchanged at $10B+

[1] See note 1 on slide 40
[2] Fed Dot represents dot #5 from the FOMC December 2015 meeting
[3] Market-implied as of 2/18/2016

3 Noninterest revenue

Maximizing long-term shareholder value – operating leverage

NIR walk[1] ($B)



Expect 3%+/- NIR growth beyond 2016 with strong underlying drivers

CIB and MB ~ flat – CCB ex MB, CB and AM ~8%

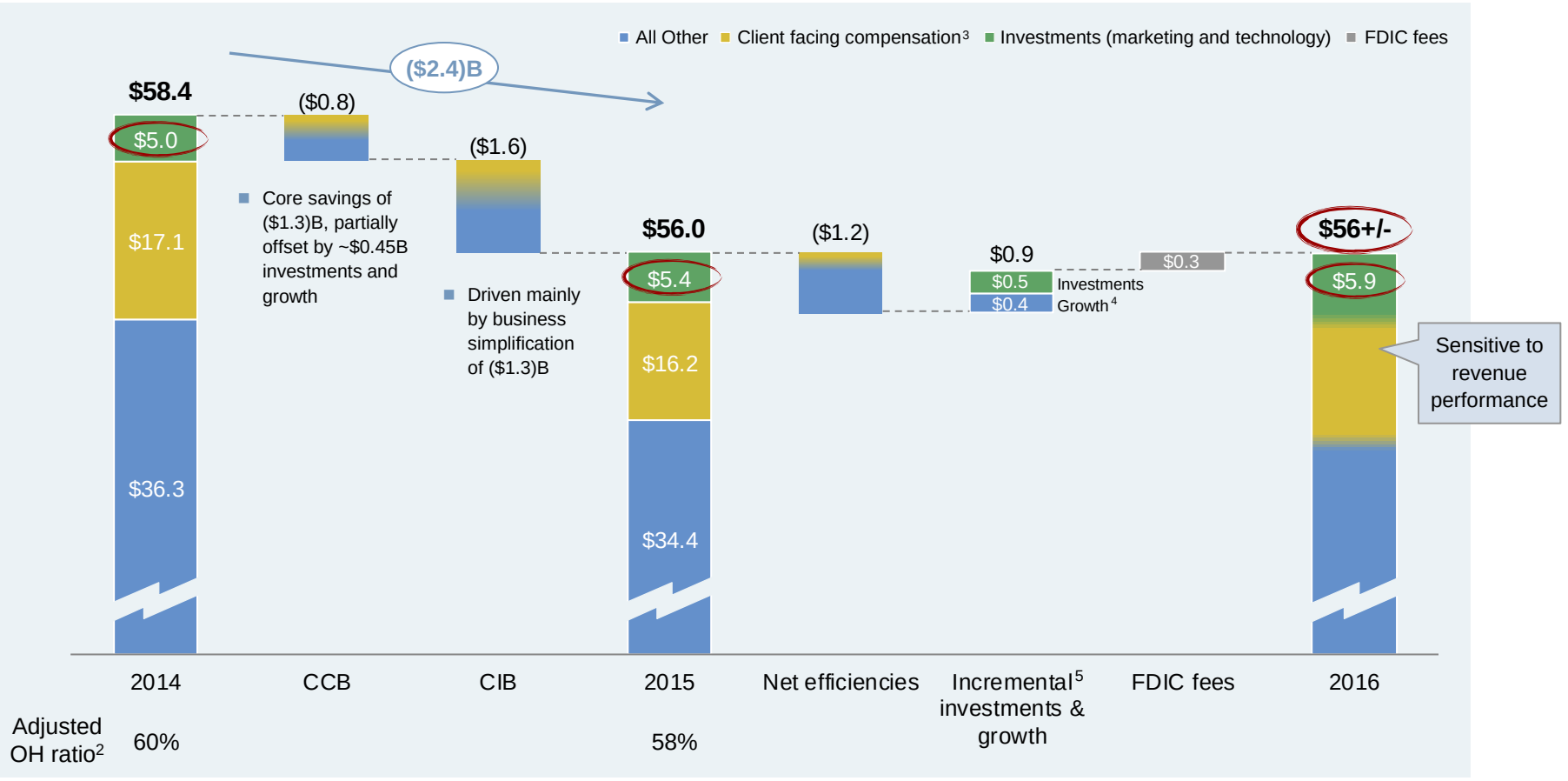
[1] See note 1 on slide 40
[2] Primarily legal benefit and also includes CVA & Other and Private Equity

3 Adjusted expense flat despite significant investments

Maximizing long-term shareholder value – operating leverage

Scale and efficiency

Adjusted expense[1] ($B)

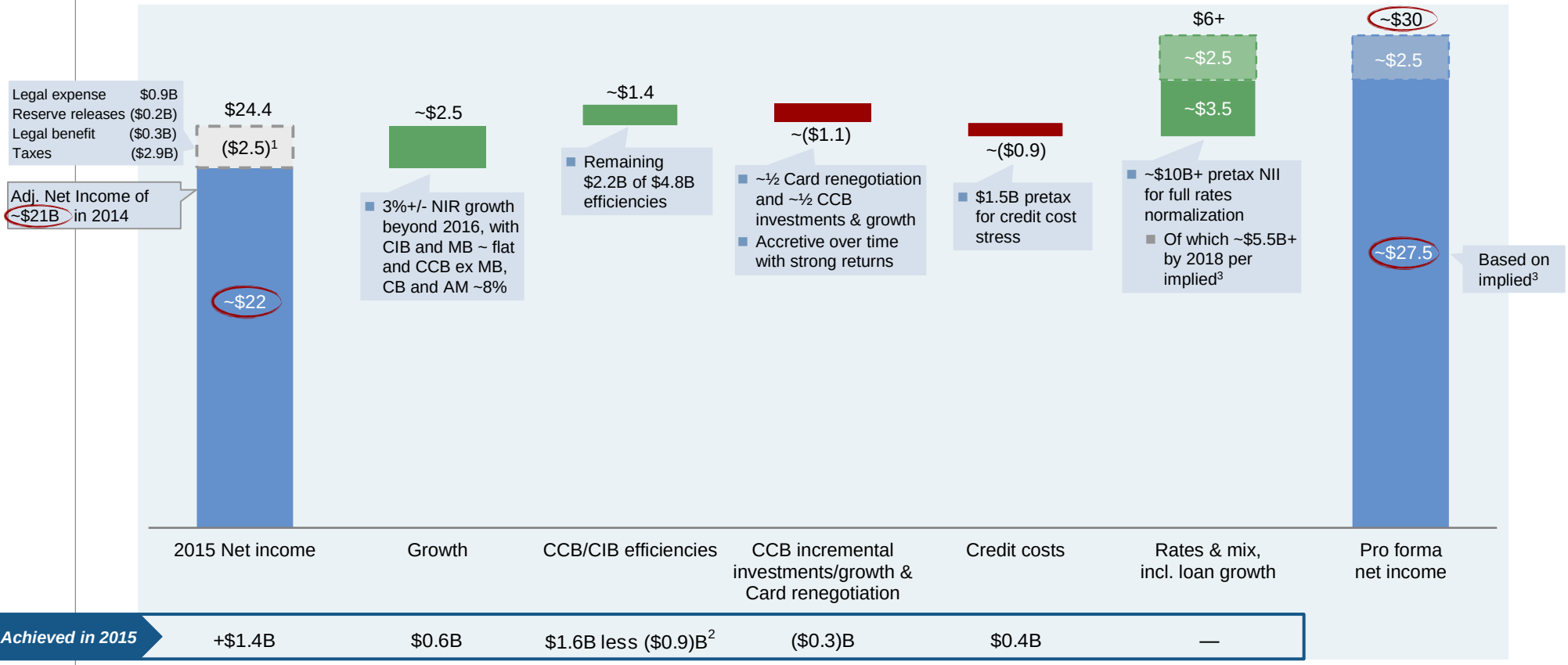


Core expense efficiencies self-funding growth and investments

Note: For footnoted information, refer to slide 49

4 Earnings simulation

Net income walk – 3 years ($B)



Achieved in 2015	+$1.4B	$0.6B	$1.6B less ($0.9)B[2]	($0.3)B	$0.4B	—

Note: For footnoted information, refer to slide 50

ROTCE of 14-15%+ assuming ~$1.55T RWA and 11.0-12.5% CET1 ratio

~15%	**11%+**	**55%+/-**	**55-75%**
ROTCE	***CET1 ratio***	***Overhead ratio***	***Net payout ratio***

Conclusion

1 Building exceptional client franchises

- Four leading client franchises – together delivering significant value
- Client focus and long-term approach – consistently investing and innovating

2 Operating with fortress principles

- Strong foundation – capital, liquidity, balance sheet, risk discipline
- Better, faster, simpler
- Commitment to controls and culture

3 Maximizing long-term shareholder value

- Delivering strong capital returns – while adapting capital and liquidity frameworks
- Delivering significant operating leverage – while investing through-the-cycle

4 Leading to

~15%	11%+	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

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Firmwide strategic priorities

Consumer & Community Banking

- **Deepen relationships** with our customers, simplify and improve **customer experience**
- Execute **expense reduction** initiatives and rationalize cost structure
- Maintain **strong control environment** and **automate** processes
- Ensure highest level of **information security** standards
- Increase **digital** engagement by delivering differentiated experiences
- **Lead payments innovation** by delivering solutions that address **merchant** and **consumer** needs

Corporate & Investment Bank

- Leverage our **scale**, **completeness**, and **global network** to facilitate an integrated client coverage model, leading to best-in-class ROEs
- Relentlessly **optimize** business mix while **investing** in core growth opportunities
- **Continue to adapt** to evolving industry landscape and market structure changes by harnessing technology and innovation – embrace change
- Maintain **expense discipline and deliver efficiencies** across all businesses while absorbing increased regulatory and control costs

Commercial Banking

- Execute **disciplined growth strategy** through geographic expansion, industry specialization, deeper client relationships and prudent growth across CRE
- Drive **business innovation** through investments in digital, payments and big data capabilities
- Continue to **invest in our team** to have the best talent across our businesses
- Maintain **fortress controls** to safeguard our clients and business while improving client experience

Asset Management

- Continue to deliver top-tier, long-term **investment performance**
- Continue to drive efficiencies while reinforcing **infrastructure and control environment**
- Continue to **innovate**, and **invest** in people, products, and processes

- Focus on the **client/customer**
- Maintain discipline around **controls**, **expenses** and **credit**
- Invest in **innovation** – particularly in digital and payments
- Continue to adapt and **optimize** balance sheet and business mix
- **Defend the Firm**, its customers, assets and information from cyber attacks
- Attract, develop and retain the best **talent**

Exceptional Client Service | **Operational Excellence** | **A Commitment to Integrity, Fairness and Responsibility** | **A Great Team and Winning Culture**

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Liquidity management and risk oversight

Objectives

- Meet contractual and contingent obligations through normal economic cycles and during stress
- Ensure that the Firm's core businesses are able to operate in support of client needs
- Optimize funding mix and maintain sufficient liquidity

Responsibilities

- Analyze liquidity characteristics of assets and liabilities at the Firm, line of business, and legal entity level
- Manage legal, regulatory, and operational restrictions
- Define and monitor firmwide and legal entity liquidity strategies, policies, guidelines, and contingency funding plans
- Manage liquidity within approved liquidity risk appetite tolerances and limits
- Set transfer pricing framework across the organization

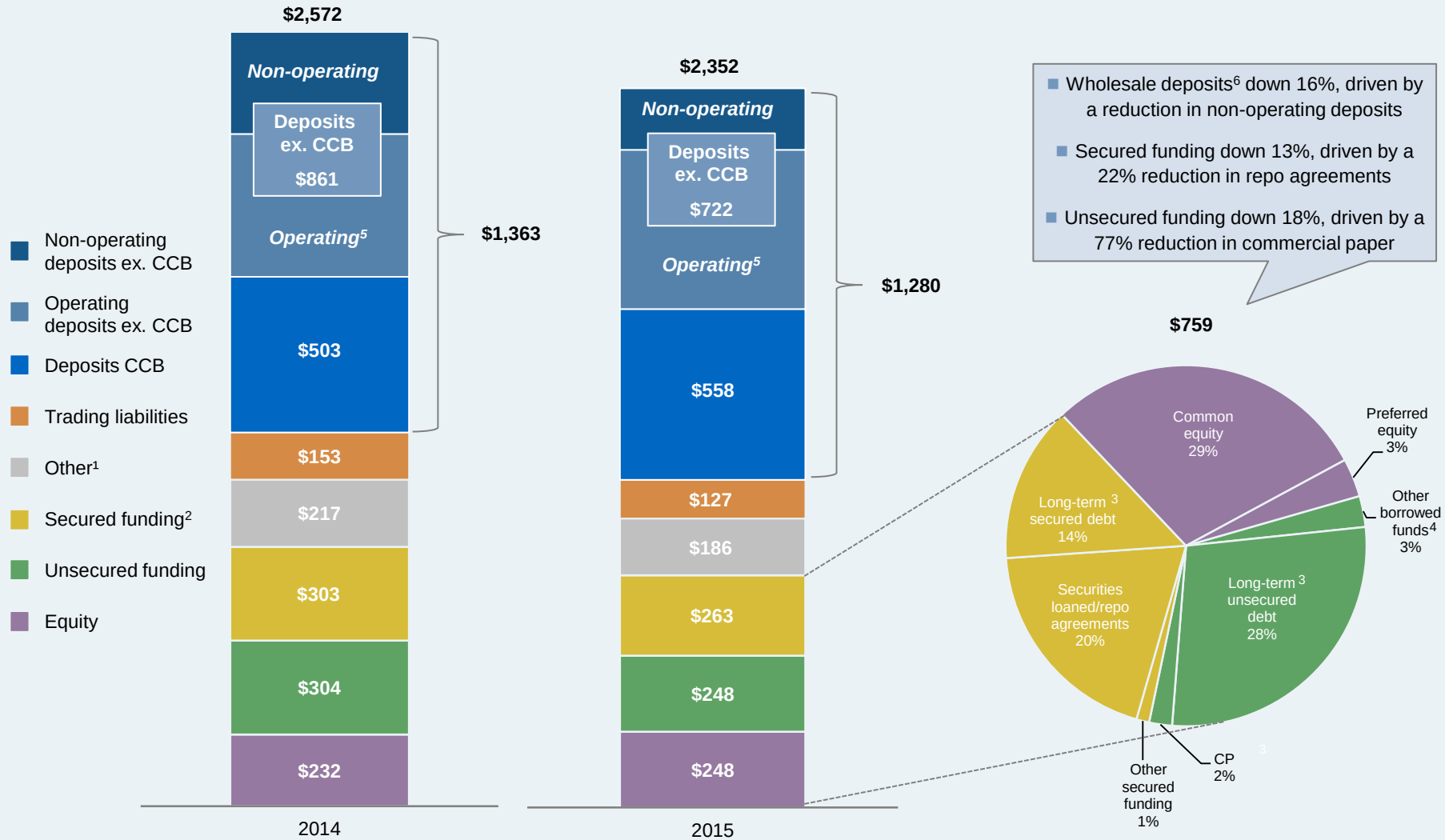
Liquidity risk oversight

- Independent risk oversight function managed through a dedicated firmwide risk group reporting into the CIO, Treasury and Corporate Chief Risk Officer ("CTC CRO")
- Responsibilities include but are not limited to
  - Establishing and monitoring limits, indicators, and thresholds, including liquidity appetite tolerances
  - Defining and monitoring internal firmwide and legal entity stress tests and regulatory defined stress testing
  - Reporting and monitoring liquidity positions, balance sheet variances and funding activities
  - Conducting ad hoc analysis to identify potential emerging liquidity risks

Overview of funding sources

Continue to maintain diversified funding profile while reducing non-operating deposits

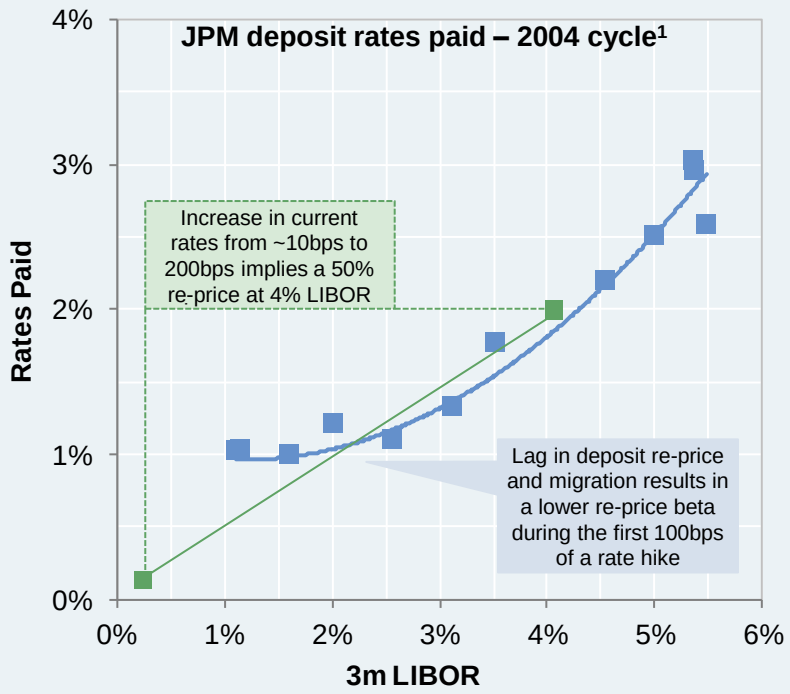
EOP liabilities and stockholders' equity at 12/31/15 ($B)



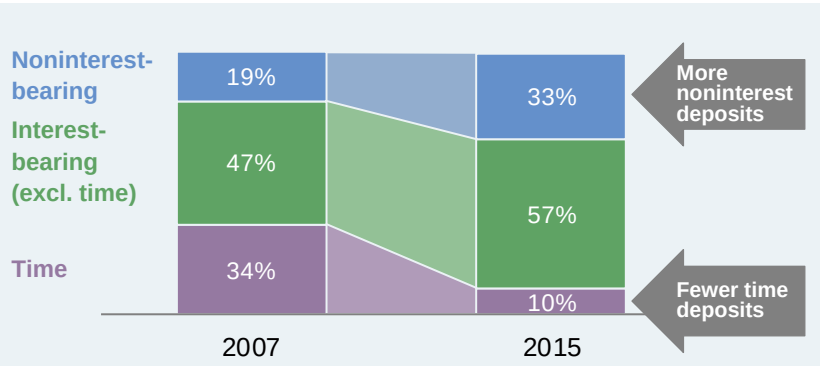
Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 51

Deposit beta uncertainty and impact on NII

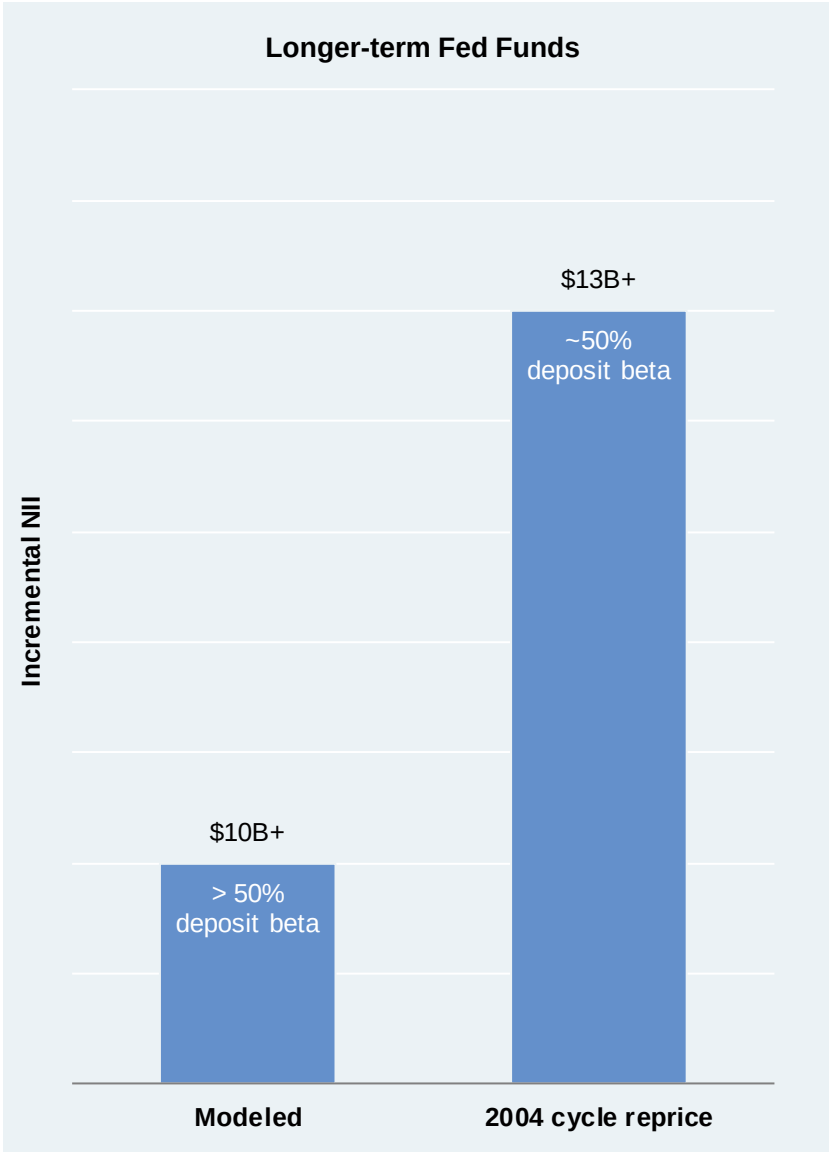
Expect deposit beta to be higher than the 2004 cycle…



JPM deposit mix – % of total Firm average balances



…however, there is uncertainty around deposit repricing

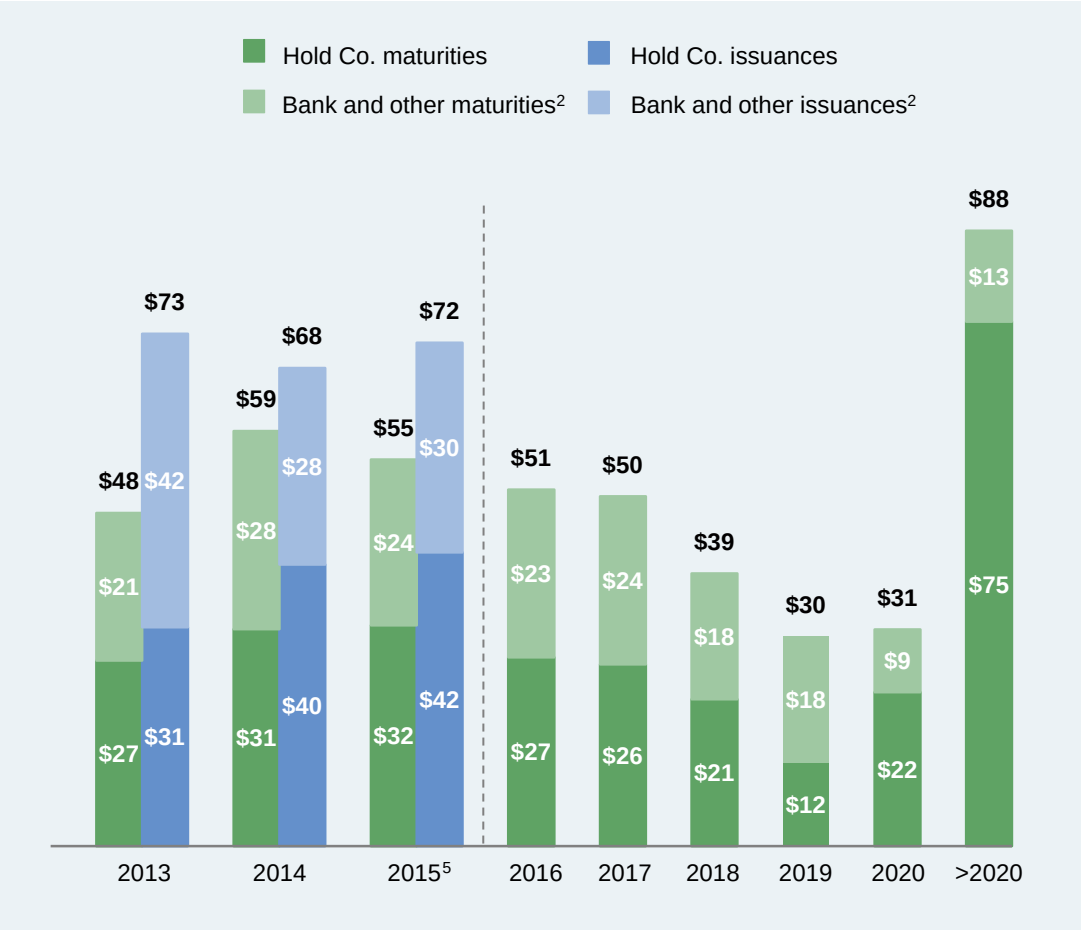


[1] 2004 cycle dates: 12/03-12/06; quarterly results shown above

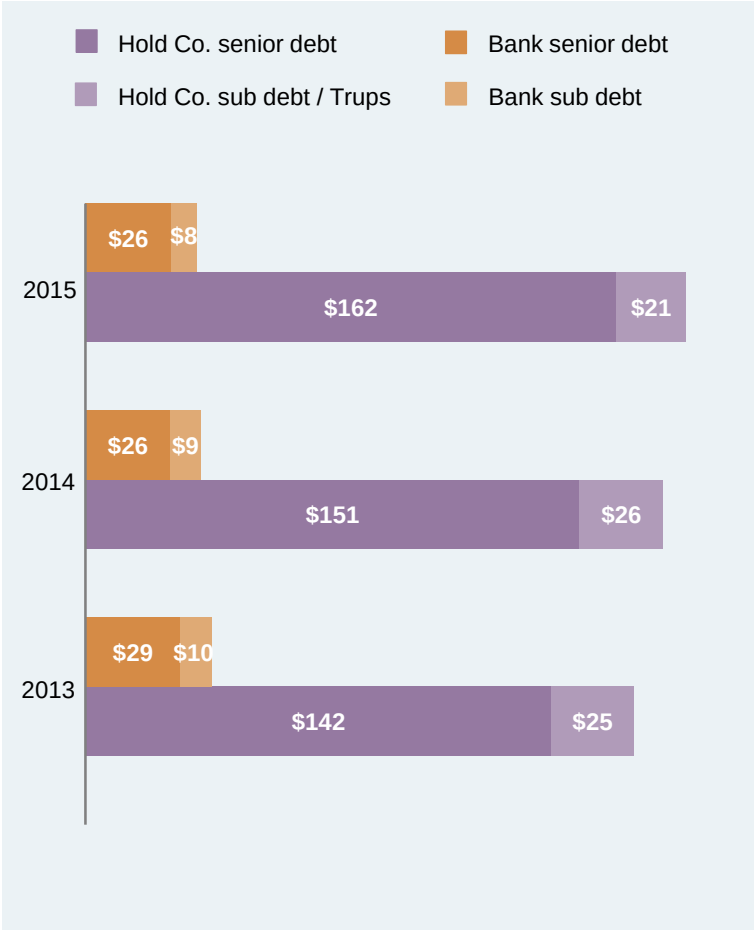
Total firmwide long-term debt

Diversified mix and maturity profile

Total long-term secured and unsecured debt issuance and maturities[1] ($B)



Total long-term debt outstanding[3,4] ($B)



Note: Numbers may not sum due to rounding; "Hold Co." is defined as JPMorgan Chase & Co., "Bank" is defined as JPMorgan Chase Bank, N.A.

[1] Maturities from 2013-2015 are based on actual cash flows; 2016-2020+ are based on the carrying value of the Firm's long-term debt as of December 31, 2015

[2] Includes maturities and issuance originating from JPMorgan Chase Bank N.A., its subsidiaries and other subsidiaries of the Hold Co.

[3] Carrying value

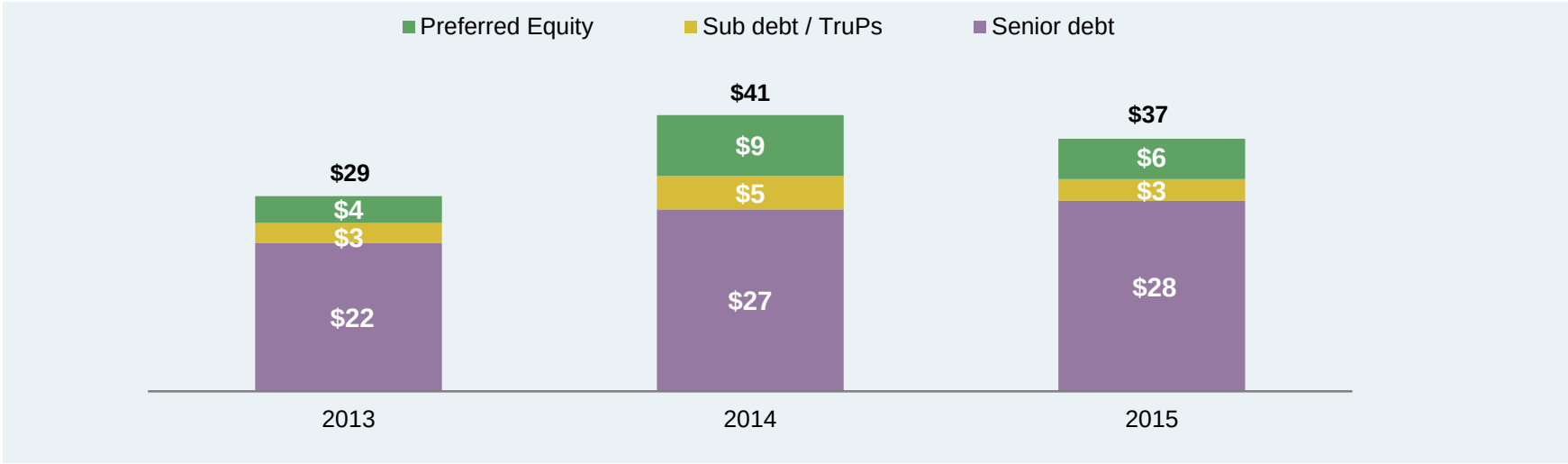
[4] Excludes Bank Federal Home Loan Banks (FHLB) advances

[5] 2015 maturities include early redemptions of long-term debt

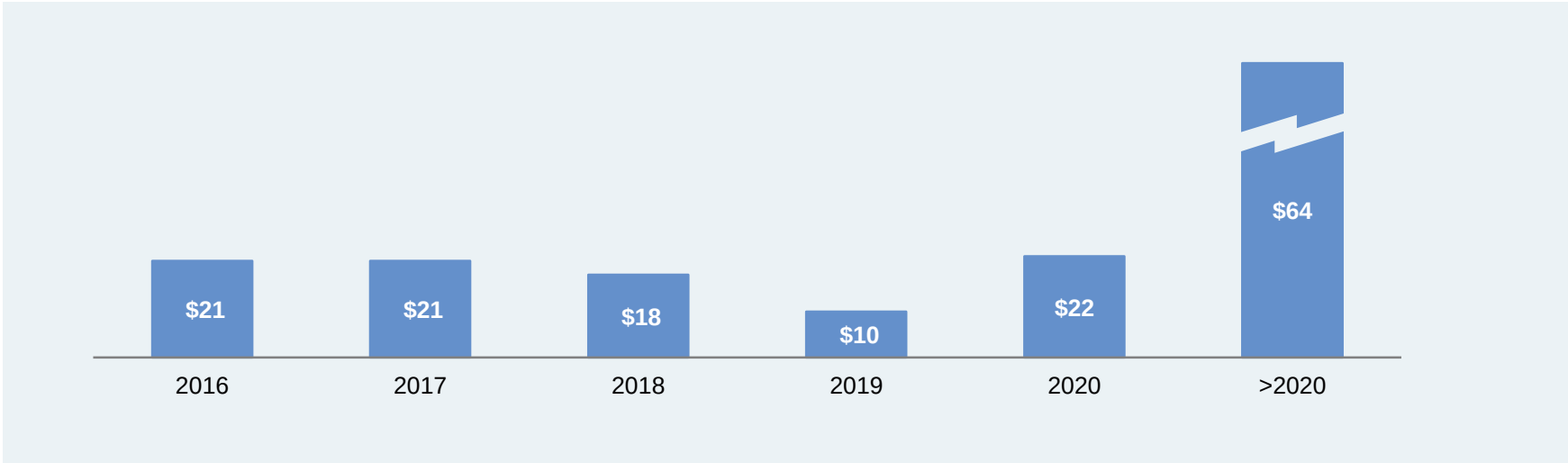
Hold Co. long-term debt and preferred equity

Managing TLAC composition and maturity profile

Issuance of unsecured Hold Co. benchmark long-term debt and preferred equity ($B)



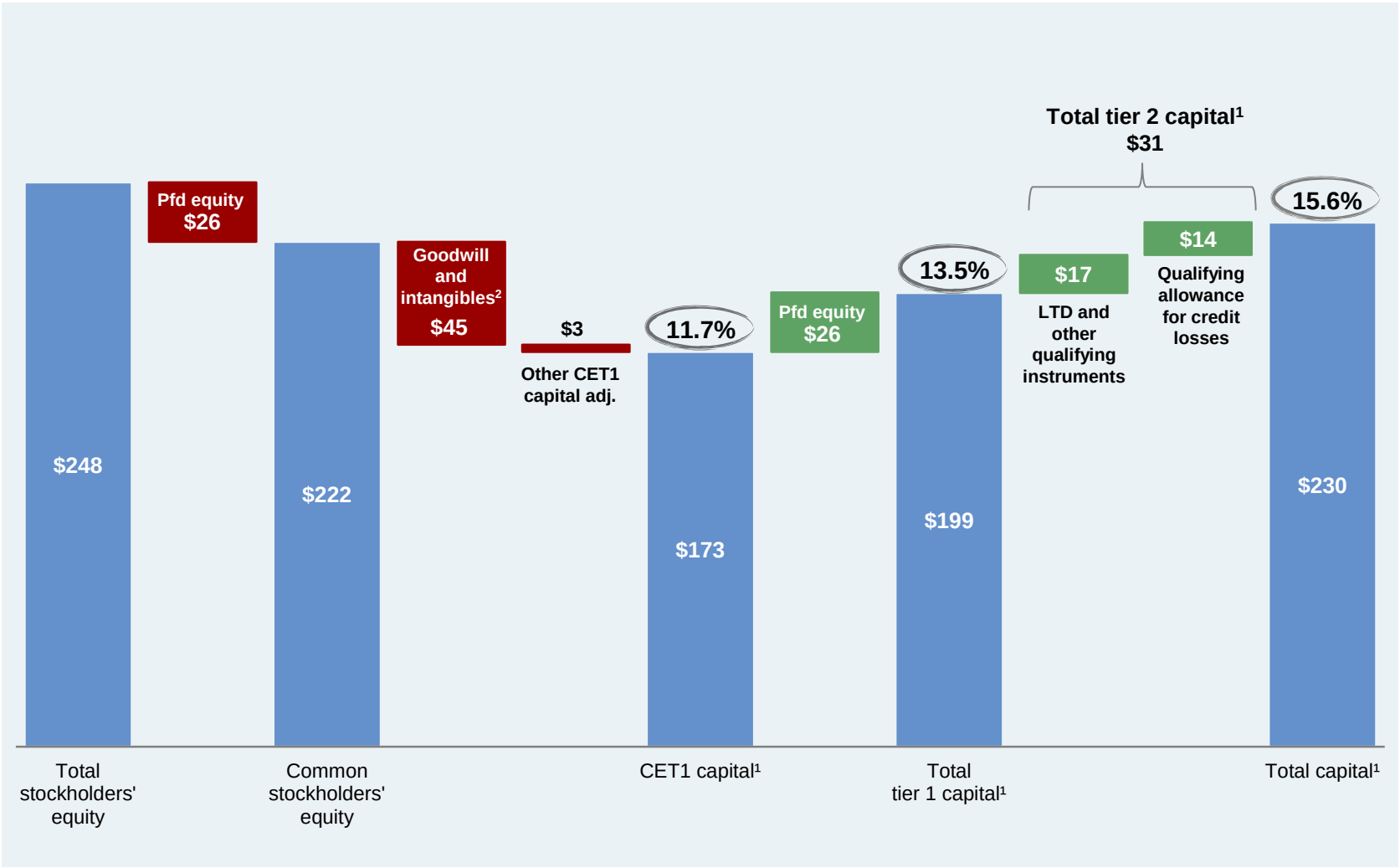
Total Hold Co. unsecured long-term debt maturities – TLAC eligible instruments[1] ($B)



[1] Instruments identified as "TLAC eligible" based on the Firm's interpretation of the Fed's NPR as of October 30, 2015

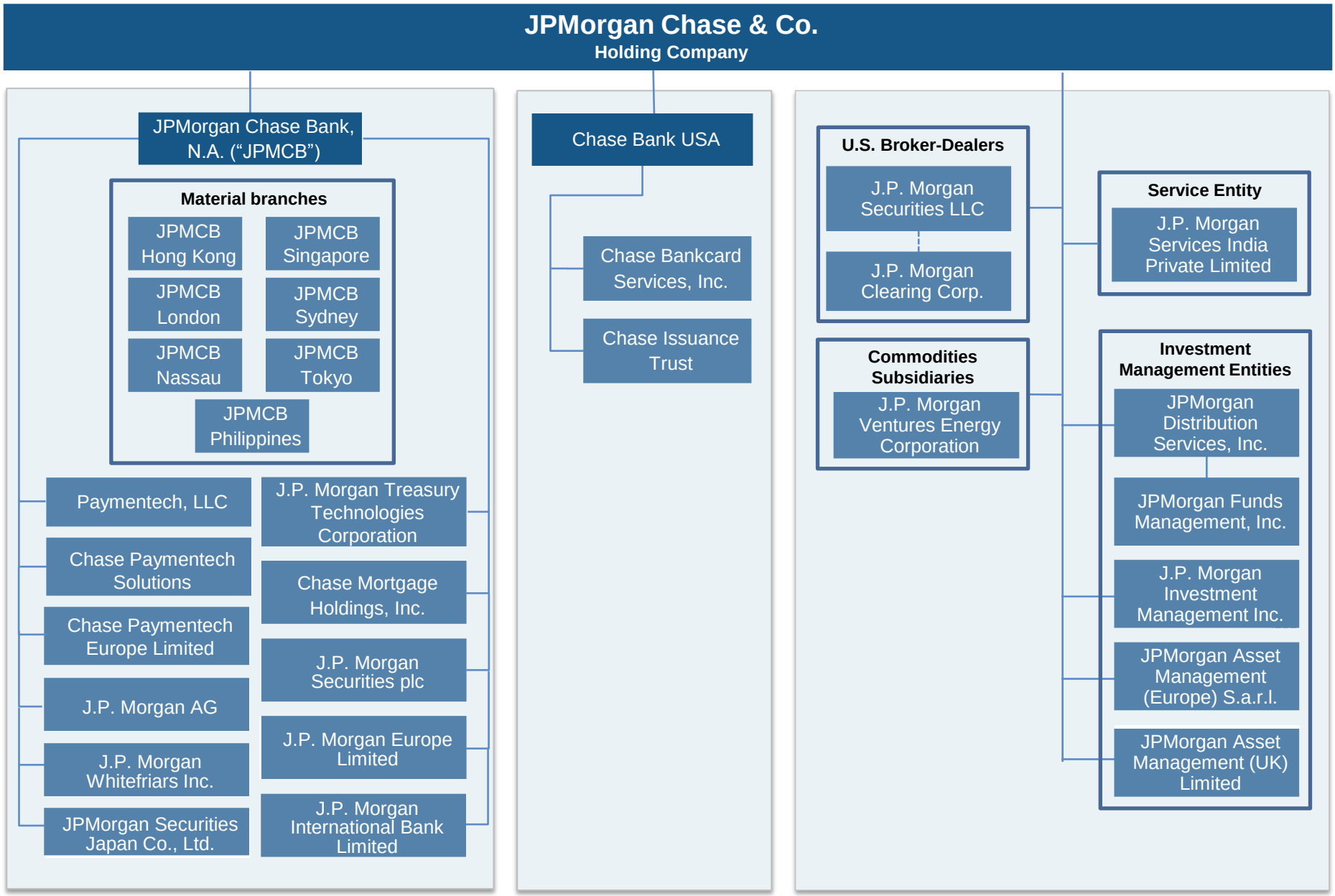
Current capital position

Basel III Standardized Fully Phased-In capital ratios and components at 12/31/15 ($B)



[1] See note 3 on slide 40
[2] Goodwill and other intangible assets are net of any associated deferred tax liabilities

Material entities[1]



[1] Presented on this slide is a list of JPM's 32 "material entities" for resolution planning purposes under the Dodd-Frank Act, after giving effect to the dissolution of JPMN, Inc. A material entity means "a subsidiary or foreign office that is significant to the activities of a critical operation or core business line". Material entities reported under the Dodd-Frank Act may differ from the significant legal entity subsidiaries that are reported in JPM's SEC filings

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Notes on non-GAAP financial measures

1. In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable securities and investments. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business
2. Adjusted expense and adjusted overhead ratio are each non-GAAP financial measures, and exclude firmwide legal expense. Management believes this information helps investors understand the effect of these items on reported results and provides an alternate presentation of the Firm's performance
3. Common equity Tier 1 ("CET1") capital, Tier 1 capital, Tier 2 capital, Total capital, risk-weighted assets ("RWA") and the CET1, Tier 1 capital and total capital ratios and the supplementary leverage ratio ("SLR") under the Basel III Fully Phased-In capital rules to which the Firm will be subject as of January 1, 2019, are each non-GAAP financial measures. These measures are used by management, bank regulators, investors and analysts to assess and monitor the Firm's capital position. For additional information on these measures, see Regulatory capital in the Capital Management section of Management's discussion and analysis within JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2015
4. Tangible common equity ("TCE"), return on tangible common equity ("ROTCE") and tangible book value per share ("TBVPS"), are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's earnings as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. TCE, ROTCE, and TBVPS are meaningful to the Firm, as well as investors and analysts, in assessing the Firm's use of equity

Notes on slide 3: … on a relative basis – JPM continues to be a leader

1. See note 1 in slide 40. For GS and MS, reflects revenue on a reported basis
2. See note 4 in slide 40
3. Reflects net capital distribution for 4Q14-3Q15
4. WFC adjusted for 2 for 1 stock split in 2006 and C adjusted for 1 for 10 reverse stock split in 2011

NOTES

Notes on slide 8: Leading client franchises

1. Source for market share: FDIC Summary of Deposits survey per SNL financial; excludes all branches with $500mm+ in deposits within two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks); includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC. 2006 excludes WaMu and Bank of New York branch purchases
2. Represents share of general purpose credit card (GPCC) spend which excludes private label and commercial card; based on earnings releases and Chase internal estimates
3. Of wholly-owned acquirers
4. The 2006 figure reflects First Data joint venture; the 2015 figure is as of 2014, which is the latest available data from Nilson
5. IB fees market share based on wallet data from Dealogic as of January 4, 2016
6. Market share for Markets based on Top 10 which includes JPM, BAC, GS, C, MS, DB, UBS, CS, BARC and HSBC; JPM excludes business simplification; Peers exclude FVA/DVA and one-time items; BARC and HSBC 2015 share reflects 3Q15 LTM as 2015 disclosures not available at time of print; Based on fourth quarter exchange rates across non-USD reporting peers
7. Includes acquisition of commercial term lending portfolio through WaMu acquisition
8. The "mutual funds with a 4/5 star rating" analysis is sourced from Morningstar for all funds with the exception of Japan-domiciled funds; Nomura was used for Japan-domiciled funds. The analysis includes both Global Investment Management and Global Wealth Management open-ended funds that are rated by the aforementioned sources. The share class with the highest Morningstar star rating represents its respective fund. The Nomura star rating represents the aggregate fund. Other share classes may have different performance characteristics and may have different ratings; the highest rated share class may not be available to all investors. All star ratings sourced from Morningstar reflect the Morningstar Overall RatingTM. For Japan-domiciled funds, the star rating is based on the Nomura 3-year star rating. Funds with fewer than three years of history are not rated by Morningstar nor Nomura and hence excluded from this analysis. Other funds which do not have a rating are also excluded from this analysis. Ratings are based on past performance and are not indicative of future results
9. Strategic Insight
10. Source: Capgemini World Wealth Report. 2015 market share estimated based on 2014 data (latest available)
11. TNS 3Q15 Retail Banking Monitor; based on total U.S. (~5K surveys per quarter) and Chase footprint (~2.8K surveys per quarter); TNS survey questions used to determine the primary bank: "With which banks do you currently do business? Which do you consider to be your main or primary bank?"
12. 2015 TNS Choice Awards
13. Based on disclosures by peers (Citi, Bank of America, Capital One, American Express, Discover)
14. Based on Phoenix Credit Card Monitor for 12-month period ending September 2015; based on card accounts and revolving balance dollars
15. Based on Nilson data for full year 2014
16. Dealogic 2015 wallet rankings for Banking and Coalition FY15 rankings for Markets & Investor Services; includes Origination & Advisory, Equities and FICC
17. Dealogic as of January 4, 2016
18. 3Q15YTD revenues divided by 1H15 FTE – Source: Coalition
19. Chips/Fed Volume report
20. CFO Magazine's Commercial Banking Survey 2015
21. Product per Commercial and Industrial client
22. The "% of 10-year LT mutual fund AUM in top 2 quartiles" analysis represents the proportion of assets in mutual funds that are ranked in the top 2 quartiles of their respective peer category on a 10-year basis as of December 31, 2015. The sources of these percentile rankings, peer category definitions for each fund and the asset values used in the calculations are: Lipper (U.S. and Taiwan-domiciled funds), Morningstar (UK, Luxembourg and Hong Kong-domiciled funds), Nomura (Japan-domiciled funds), and FundDoctor (South Korea-domiciled funds). The analysis includes only Global Investment Management retail open-ended mutual funds that are ranked by the aforementioned sources. The analysis is based on percentile rankings at the share class level for U.S. domiciled funds, at the 'primary share class' level for Luxembourg, UK, and Hong Kong-domiciled funds and at the aggregate fund level for all other funds. The 'primary share class' is defined by Morningstar and denotes the share class considered the best proxy for the fund. Where peer group rankings given for a fund are in more than one 'primary share class' territory both rankings are included to reflect local market competitiveness (applies to 'Offshore Territories' and 'HK SFC Authorized' funds only). The analysis excludes money market funds, Undiscovered Managers Fund, and Brazil and India-domiciled funds. The asset values were redenominated into U.S. dollars using exchange rates from the aforementioned sources. The analysis pertains to percentage of assets under management, not percentage of funds. The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future performance, which may vary
23. Euromoney

NOTES

Notes on slide 9: Proven best-in-class long-term performance

Source: Company disclosures and SNL financial, unless otherwise noted

1. Core loans calculated as Total EOP Loans less Total EOP Noncore Loans; Total loan CAGR for USB and PNC; “Noncore” defined as “Liquidating” for WFC, “All Other Segment” for BAC and “CitiHoldings” for C
2. Total deposits – from company reports. Retail deposits – all branches with $500mm+ in deposits at any point in the last ten years excluded to adjust for commercial deposits and capture only consumer and small business deposits; includes all commercial banks, credit unions, savings banks and savings institutions as defined by the FDIC; EOP as of June 30th of each year
3. JPM as reported
4. Market share for Markets based on Top 10 which includes JPM, BAC, GS, C, MS, DB, UBS, CS, BARC and HSBC; JPM excludes business simplification; Peers exclude FVA/DVA and one-time items; BARC and HSBC 2015 share reflects 3Q15 LTM as 2015 disclosures not available at time of print; Based on fourth quarter exchange rates across non-USD reporting peers
5. IB fees market share based on wallet data from Dealogic as of January 4, 2016
6. BLK includes Barclays Global Investors merger-related outflows in 2011
7. JPM includes Chase Wealth Management
8. Converted at average 2011-2015 daily exchange rates
9. Allianz flows include 3rd party AUM flows only; 2015 figures exclude re-invested dividends (including capital gains) from existing clients which were previously recognized as market return

Notes on slide 10: Proven best-in-class long-term performance (cont'd)

1. Source: J.D. Power U.S. Retail Banking Satisfaction Survey; Big Banks defined as top six U.S. banks
2. Represents GPCC spend which excludes private label and commercial card; based on earnings releases and Chase internal estimates
3. COF excludes HSBC, Kohl's and other acquisitions; 2011-2015 data is normalized
4. AXP is U.S. Card Services only
5. Citi excludes Citi Retail Services as it includes private label portfolios
6. Source: Chase internal data and Nilson data for the industry; U.S. bankcard volumes include Visa and MasterCard credit and signature debit volumes

NOTES

Notes on slide 13: Fortress balance sheet

1. Includes cash and due from banks and deposits with banks
2. Includes Fed funds sold and securities purchased under resale agreements and securities borrowed
3. Includes firmwide debt, derivative and equity trading assets
4. Net of allowance for loan losses
5. Includes accrued interest and accounts receivable, premises and equipment, mortgage servicing rights, other intangible assets and other assets
6. Loans-to-deposits ratio calculated using gross loans
7. Reduction in non-operating deposits also includes balances previously reported in commercial paper sweep accounts

NOTES

Notes on slide 14: Wholesale credit risk

1. O&G lending exposure includes ~$4B of exposure in Natural Gas & Pipelines outside of wholesale industry segment definition of Oil & Gas, and excludes $2B of O&G derivative receivables; M&M lending exposure excludes ~$1B of M&M derivatives receivables
2. Based on JPMC's internal risk assessment system. "Investment-grade" generally represents a risk profile of a "BBB-"/"Baa3" or better, as defined by independent rating agencies
3. Stress scenario represents a simulation of potential allowance build based on a flat WTI price of $25 for 18 months, which results in incremental borrowings, and increases in loss given defaults
4. Houston, Dallas, Denver and Bakersfield

NOTES

Notes on slide 21: Benefits of operating model – capital allocation and optimization

1. Private Equity, retained operational risk capital, real estate, BOLI/COLI, DTA and pension
2. 2015 reflects the Firm's 10-K reported average excluding Corporate goodwill. 2016 reflects approximations based on average analyst estimated CET1 balances and ratios
3. Total Firm goodwill of $47B
4. Estimated net capacity provider or user for each constraint, expressed in ratio form
5. GSIB points divided by leverage assets by LOB

NOTES

Notes on slide 22: Composition and calibration of TLAC

Note: The Firm's estimate of minimum total loss absorbing capacity ("TLAC") is based on the Federal Reserve's ("Fed") October 30, 2015 proposed rule establishing total loss-absorbing capacity, long-term debt, and clean holding company requirements for U.S. global systemically important bank holding companies. The estimate reflects certain assumptions regarding the inclusion or exclusion of certain liabilities, including but not limited to: notes governed by law that is different from the local law of the relevant resolution entity, notes with acceleration clauses for reasons other than insolvency or payment default, holdings of other global systemically important banks' TLAC, and structured notes as defined by the Firm. These assumptions may change as future regulatory guidance is received. In addition, while the Firm's current estimate assumes a 2.0% Method 1 GSIB surcharge (based on 2014 market for denominators) and 3.5% Method 2 GSIB surcharge, these surcharges may change in the future, which may impact the Firm's TLAC and eligible debt requirements under the proposed TLAC rules

1. Based on Basel III Advanced Fully Phased-In RWA of $1,496B and Leverage Assets of $3,079B as of 12/31/2015
2. Includes approximately $4B trust preferred securities
3. Other includes debt governed under non-U.S. law and accounting adjustment from carrying value to notional value
4. Total TLAC and External LTD reported on a notional basis
5. Includes senior, benchmark long-term debt (excluding structured notes, as defined by the Firm) which is assumed to be TLAC eligible in the final rule
6. Method 1 GSIB surcharge of 2% assumes market is held flat to 2014

NOTES

Notes on slide 26: Adjusted expense flat despite significant investments

1. Adjusted expense defined as total expense excluding firmwide legal expense; see note 2 on slide 40
2. Adjusted overhead ratio defined as adjusted expense divided by total revenue; see note 2 on slide 40
3. Client facing compensation includes sales support and other front office support
4. Includes Auto lease depreciation
5. Incremental vs. 2015

NOTES

Notes on slide 27: Earnings simulation

Note: Numbers may not sum due to rounding for illustrative purposes. Amounts are aftertax and reflect an incremental tax rate of 38%, where applicable

1. Includes:
   - 2015 legal expense in excess of $2B assumed run-rate for legal expense. Amount is for illustrative purposes only, and is not intended to be forward-looking guidance. Actual amounts may vary from assumed amount
   - 2015 Firm reserve releases
   - 2015 tax discrete items
   - Legal benefit of $514mm pretax recognized in 4Q15 in Corporate
2. Includes $2.6B pretax efficiencies in CCB and CIB ($1.6B after tax), net of ($1.4)B revenue loss from business simplification in CCB and CIB (($0.9)B after tax)
3. Based on market-implied curve as of 2/18/2016

NOTES

Notes on slide 33: Overview of funding sources

1. Other includes: accounts payable and other, Federal Funds purchased and a portion of beneficial interests issued by consolidated variable interest entities (“VIEs”) that are not considered to be secured funding
2. Secured funding includes credit card securitizations, other securitizations and obligations of the Firm administered multi-seller conduits which are included in beneficial interests issued by consolidated VIEs on the Firm’s Consolidated balance sheets
3. Includes the current portion of long-term debt
4. Includes structured notes and short-term secured and unsecured borrowings with contractual maturities generally one year or less
5. Includes operating deposits and also includes retail/small-to-medium enterprises (“SME”) balances in AM, collateralized deposits, CIB initial margin and certain time deposits
6. Wholesale deposits include deposits ex. CCB and include retail/SME balances in AM

NOTES

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2015, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

NOTES

CONSUMER & COMMUNITY BANKING

Gordon Smith, Chief Executive Officer Consumer & Community Banking

February 23, 2016

JPMorgan Chase & Co.

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We remain focused on a consistent set of strategic priorities

- Deepen relationships with our customers, simplify and improve customer experience
- Execute expense reduction initiatives and rationalize cost structure
- Maintain strong control environment and automate processes
- Ensure highest level of information security standards
- Increase digital engagement by delivering differentiated experiences
- Lead payments innovation by delivering solutions that address merchant and consumer needs

Performance targets

Consumer & Community Banking targets

		2014	2015	Medium term guidance (+/-)	2015 Investor Day Medium term guidance (+/-)
Consumer & Community Banking (CCB)	Card net charge-off rate[1]	2.75%	2.51%	2.50%	3.00%
	Card Services revenue margin	12.03%	12.33%	11.25%	12.00%
	Auto net charge-off rate	0.34%	0.38%	0.45%	0.45%
	Mortgage Banking net charge-off rate[1,2]	0.37%	0.18%	0.15%	0.20%
	Business Banking net charge-off rate	0.94%	0.66%	0.70%	N/A
	CCB ROE	18%	18%	20%	20%

CCB	2015 ($B)	% of JPMC
Net revenue	$43.8	45%
Net income	$9.8	40%

[1] Excludes held-for-sale loans
[2] Excludes the impact of purchased credit-impaired (PCI) loans

We have continued momentum across key business drivers

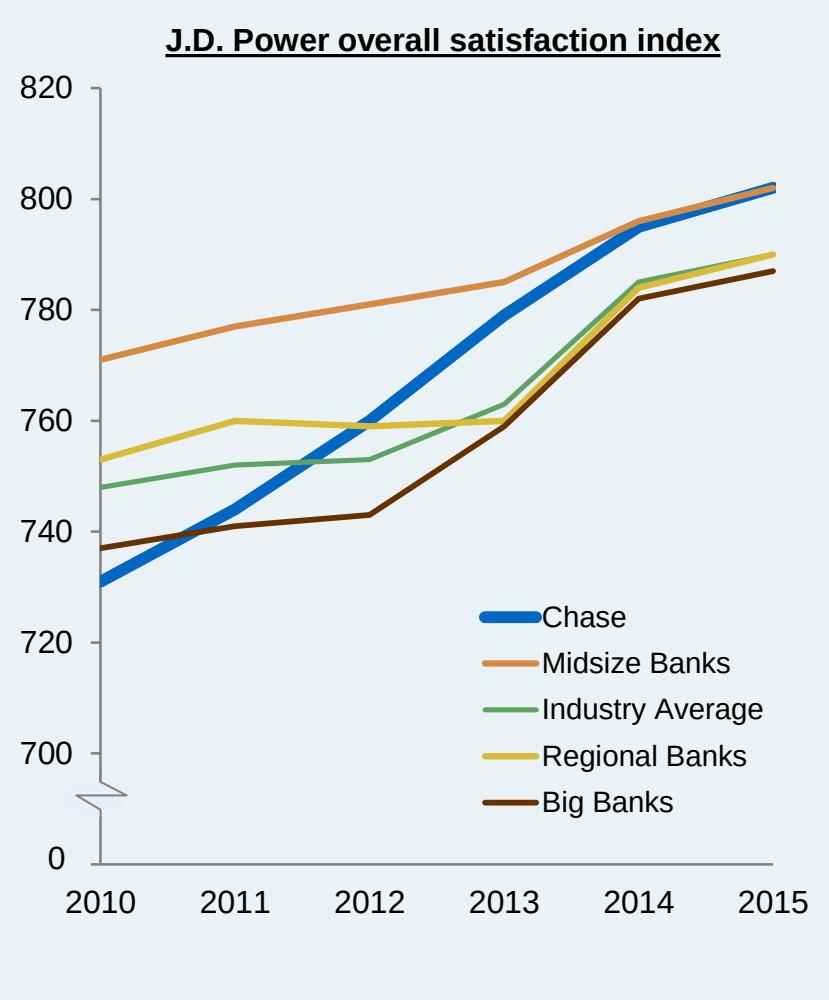
Key business drivers

$ in billions, except ratios and where otherwise noted, all balances are average		2015	YoY Δ
Consumer & Community Banking	Households (mm)	57.8	1%
	Active mobile users (mm)	22.8	20%
Credit Card	New accounts opened[1] (mm)	8.7	(1%)
	Sales volume[1]	$496	7%
	Loans	$126	1%
	Net charge-off rate[2]	2.51%	(24bps)
Commerce Solutions	Merchant processing volume	$949	12%
Auto Finance	Loan and lease originations	$32	18%
	Loan and lease portfolio	$64	9%
Mortgage Banking	Total mortgage originations	$106	36%
	Third-party mortgage loans serviced	$715	(9%)
	Loans	$204	11%
	Mortgage Banking net charge-offs[3]	$0.3	(41%)
Business Banking	Deposits	$101	11%
	Loans	$20	6%
	Loan originations	$7	3%
Consumer Banking	Deposits	$414	9%
	Client investment assets (end of period)	$219	2%

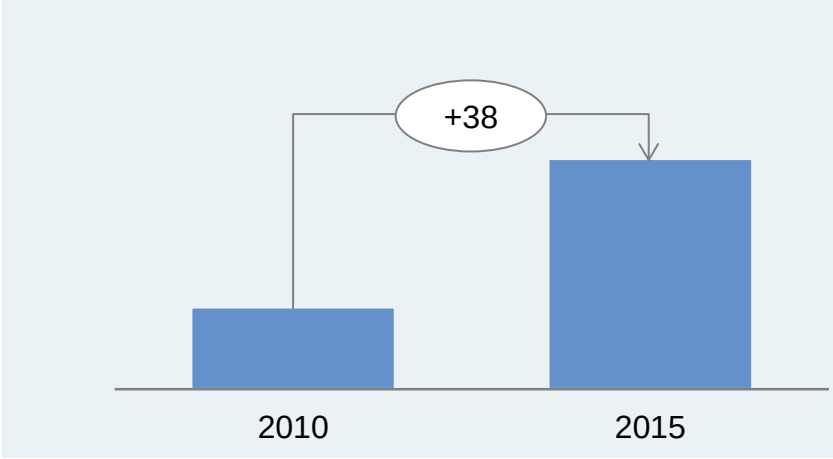
[1] Excludes Commercial Card
[2] Excludes held-for-sale loans
[3] Excludes write-offs of purchased credit-impaired (PCI) loans

We continue to improve our customer experience

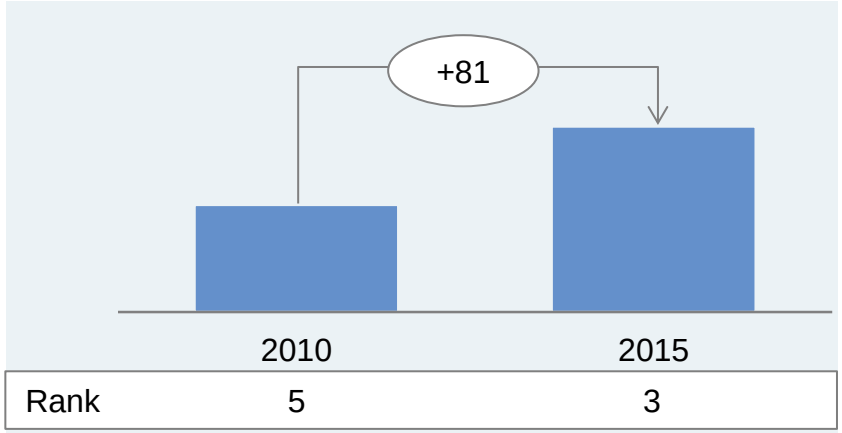
J.D. Power U.S. retail banking satisfaction[1,2]



Mortgage originations net promoter score[3]



J.D. Power U.S. credit card satisfaction[4]

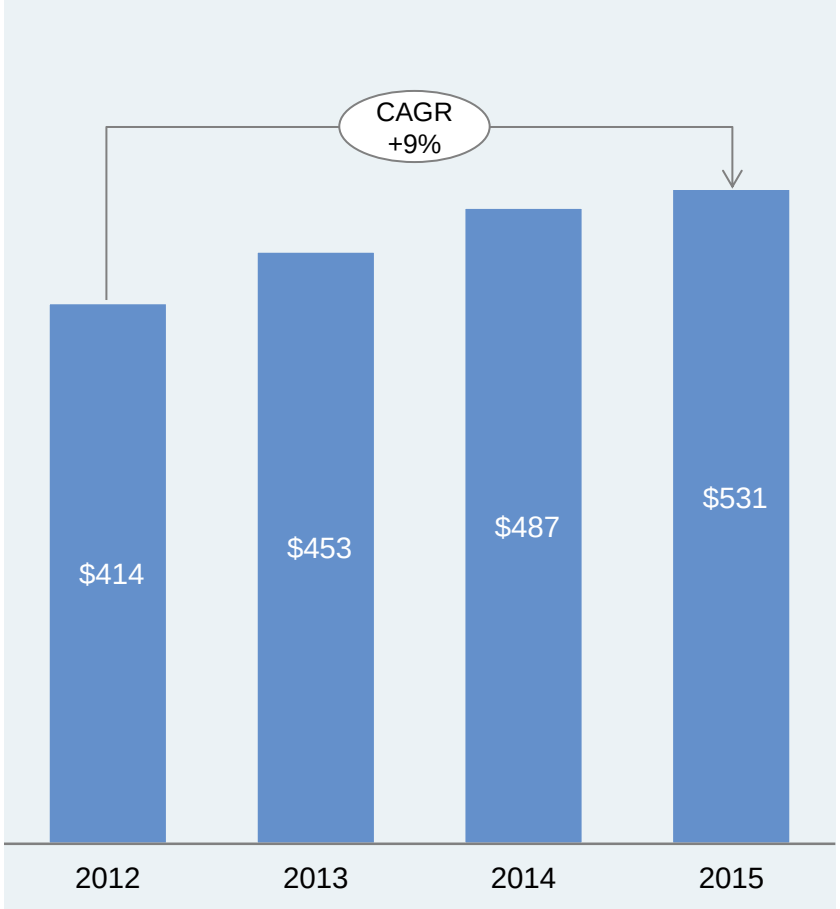


Rank	5	3

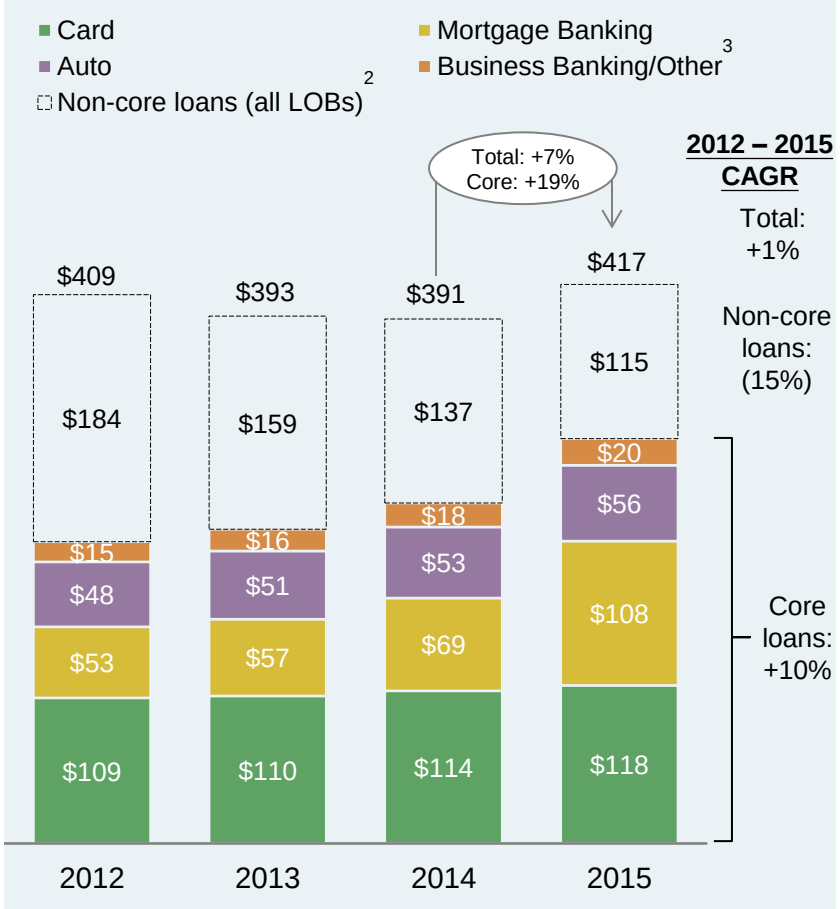
[1] Source: J.D. Power U.S. Retail Banking Satisfaction Study
[2] Big Banks defined as top six U.S. banks
[3] Note: Net promoter score = % promoters minus % detractors
[4] Source: J.D. Power U.S. Credit Card Satisfaction Study 8/20/2015 and 8/19/2010

We see strong growth in deposits and core loans

Consumer & Community Banking average deposits ($B)



Consumer & Community Banking average loans[1] ($B)

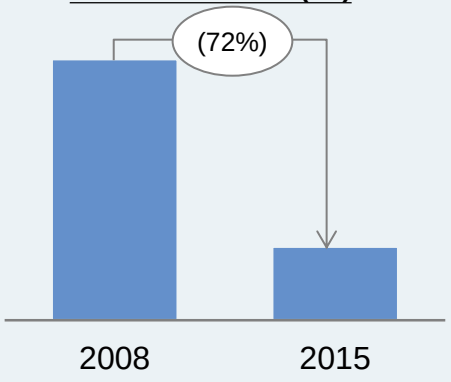


Note: Numbers may not sum due to rounding
[1] Includes held-for-sale loans
[2] Non-core loans include runoff portfolios, discontinued product/products no longer originated, and/or business simplification efforts
[3] Other includes securities-based lending of $0.2B in 2013, $0.8B in 2014 and $1.4B in 2015

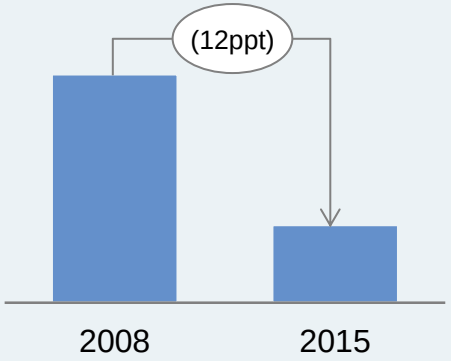
We have built high-quality lending portfolios that will be resilient through-the-cycle

Credit Card[1]

Balance transfers ($B)

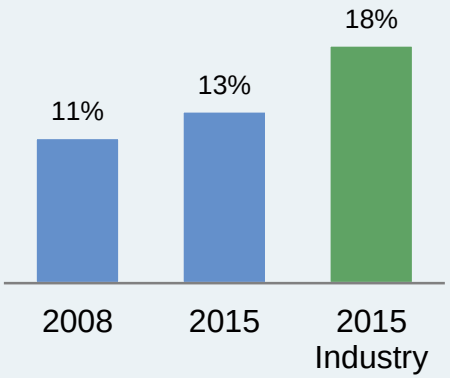


Average bank card debt / income

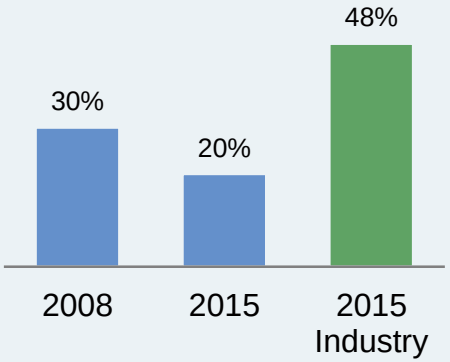


Auto Finance[2]

% of originations with LTV >120%

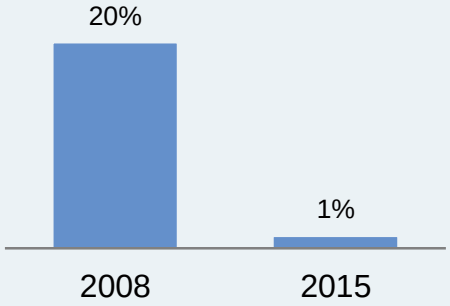


% of originations with FICO <680

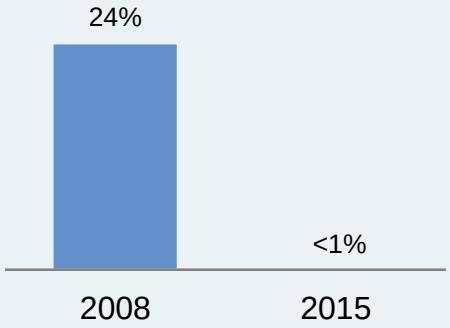


Mortgage Banking[3]

% of originations retained with LTV >80%



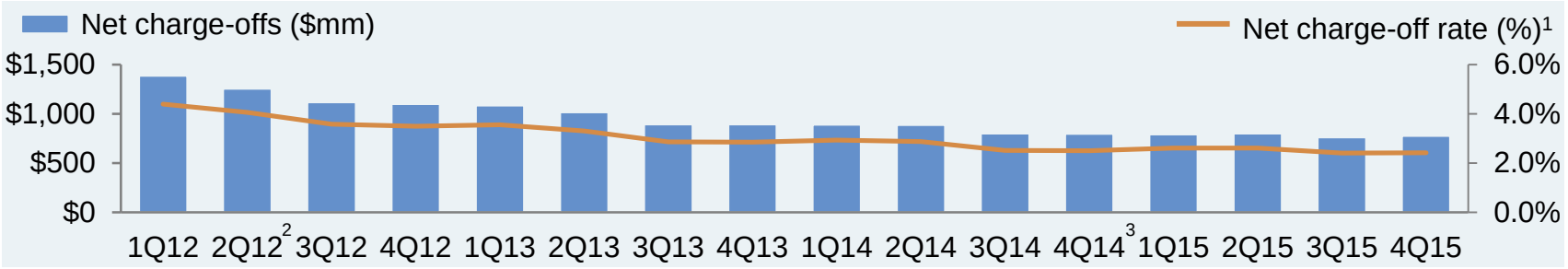
% of originations retained with FICO <680



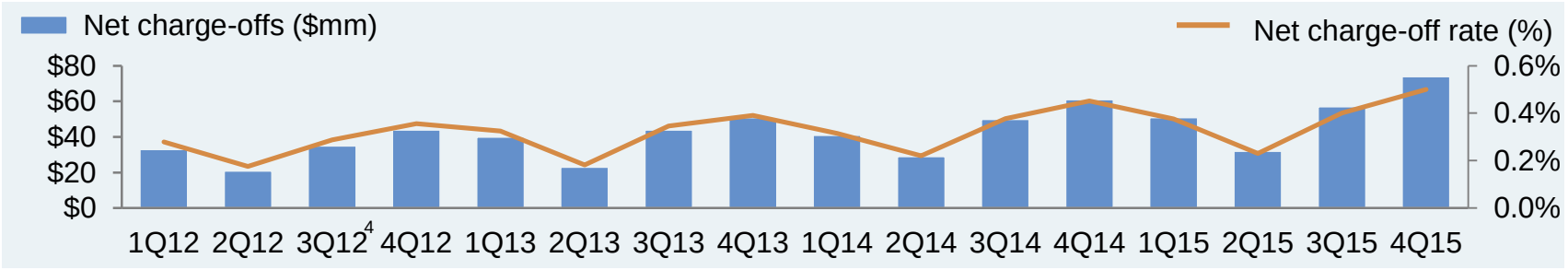
[1] Balance transfers include cash advances. Average bank card debt / self-reported income is for new accounts booked in 2008 and 2015
[2] Excludes operating leases. Industry LTV data per J.D. Power PIN. Industry FICO data per Experian AutoCount
[3] Reflects first-lien originations retained on balance sheet. Excludes Home Equity and Private Bank loans

Credit losses are at low levels, but we rigorously monitor for signs of stress

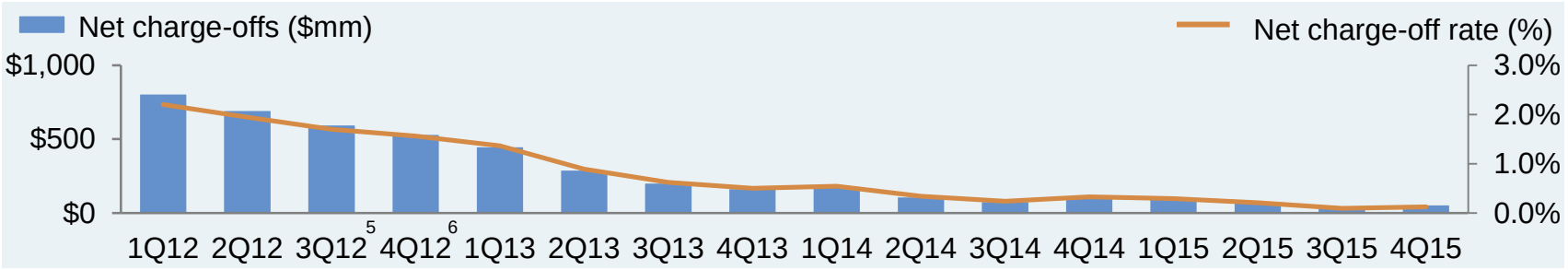
Credit Card net charge-offs



Auto Finance net charge-offs



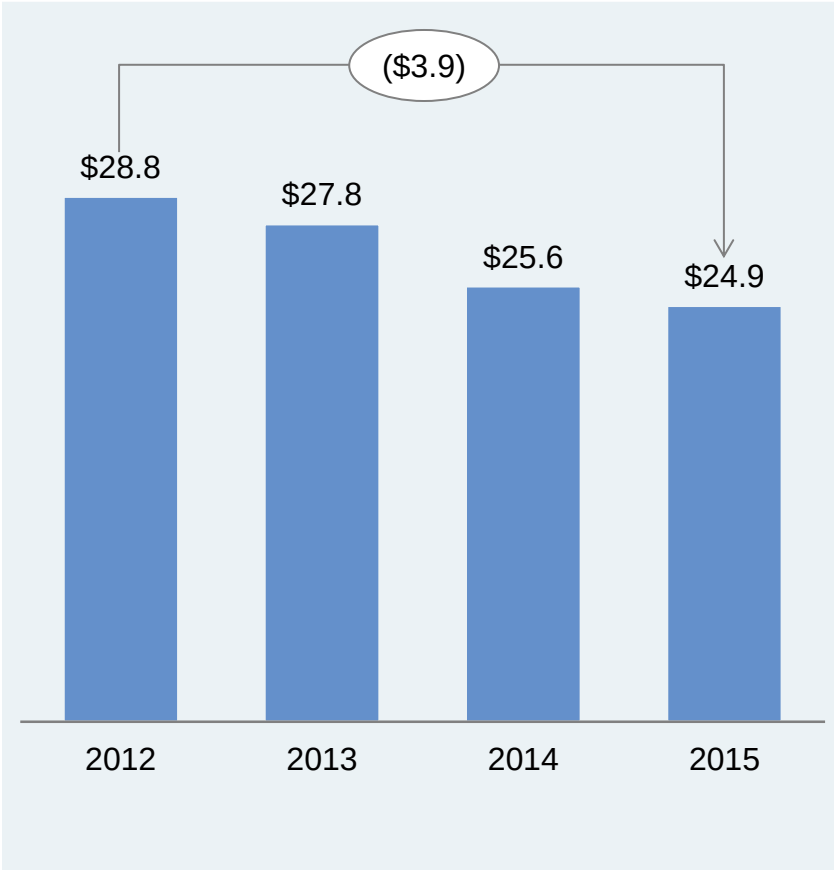
Mortgage Banking non-credit impaired net charge-offs



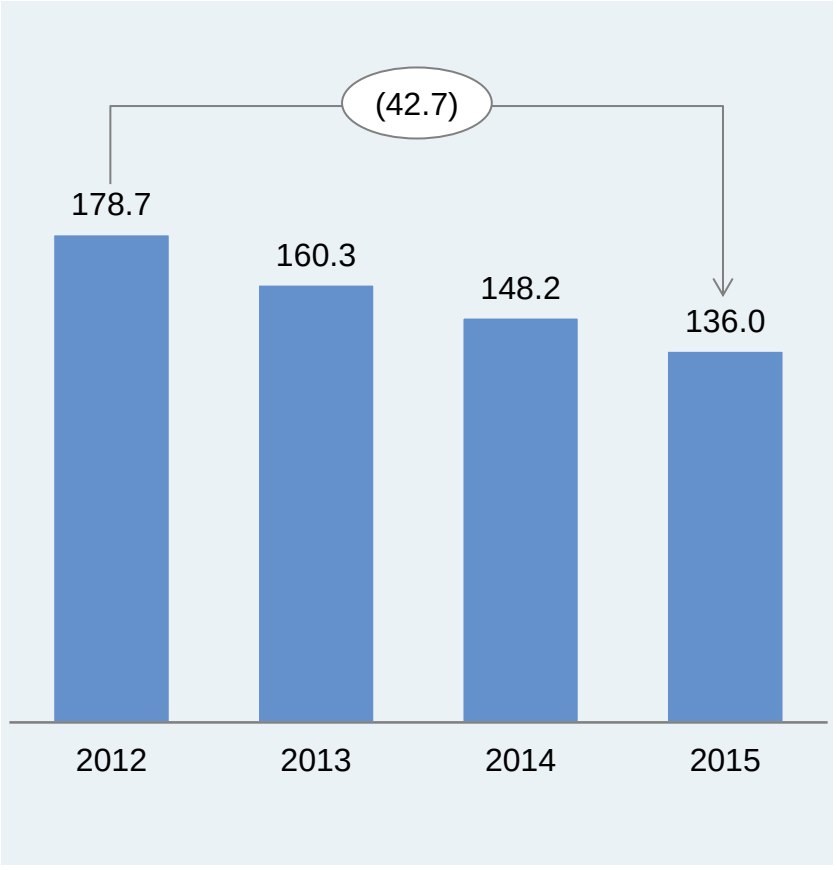
Note: For footnoted information, refer to appendix

We have reduced expense by ~$4B and headcount by ~43K since 2012

CCB expense ($B)



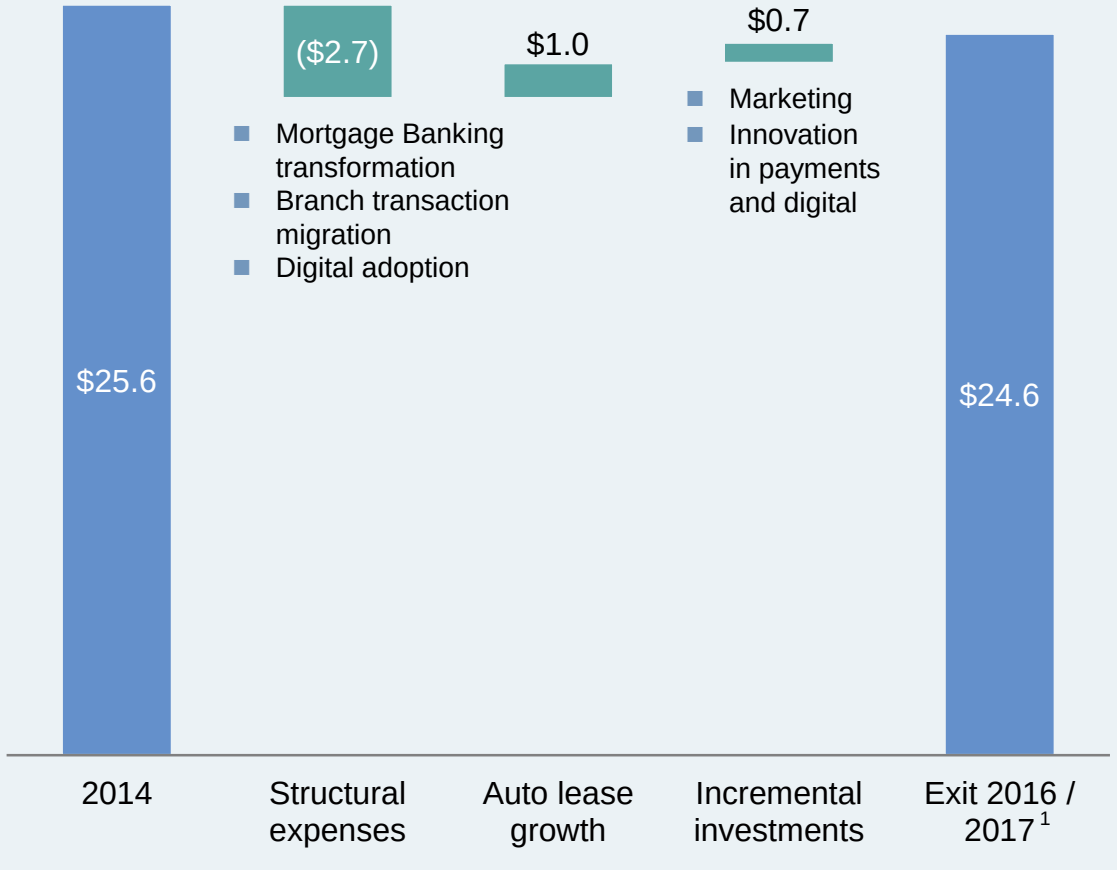
CCB headcount (K)[1]



[1] Includes employees and contractors; 2013 headcount adjusted for ~1,250 reduction effective January 1, 2014. The prior period headcount figures have been revised to conform with the current presentation

Our expense reduction initiatives are on track and we are making additional investments in opportunities that will generate strong returns

CCB expense ($B)

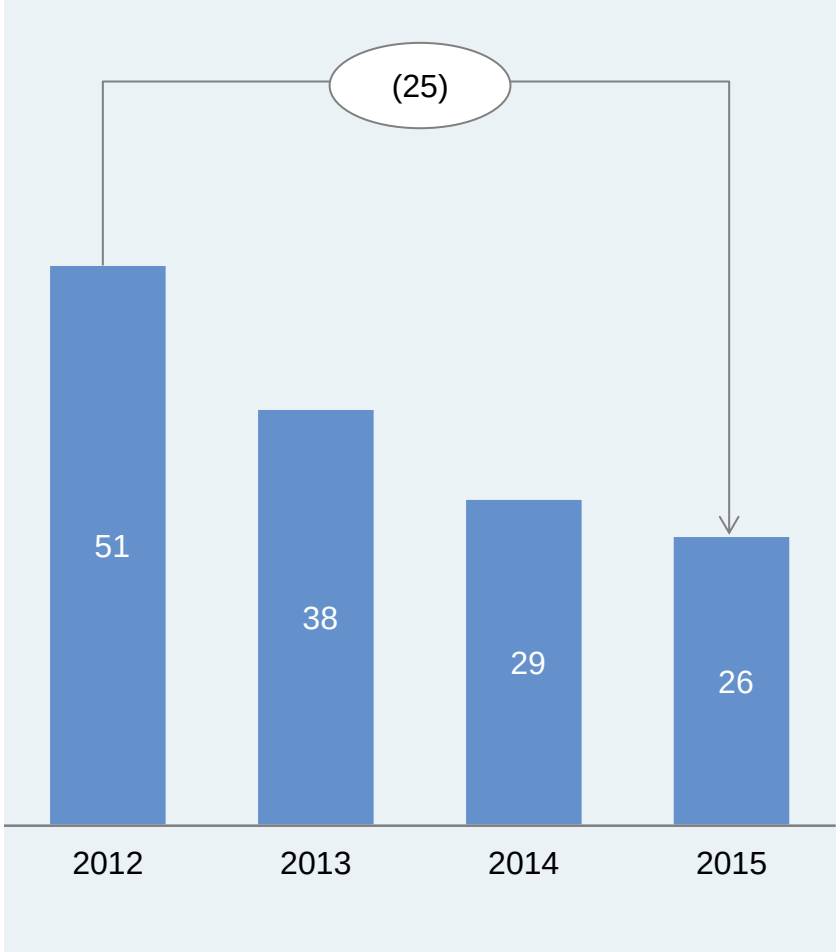


- On track to reduce structural expenses by $2.7B
- Strong auto lease growth driving $1B of incremental lease depreciation
- Incremental investment of $0.7B in marketing and innovation in payments and digital
- As a result, CCB expense will be down $1B from 2014 to exit 2016 / 2017

[1] Excludes one-time FDIC charge of ~$200mm

Mortgage Banking transformation

Mortgage Banking headcount (K)[1]



Mortgage Banking transformation progress

- Continue to right-size the business
- Improve quality of servicing portfolio by actively managing down default inventory
- Continued investment in technology to enhance the customer experience and strengthen controls
- Continued simplification of the business

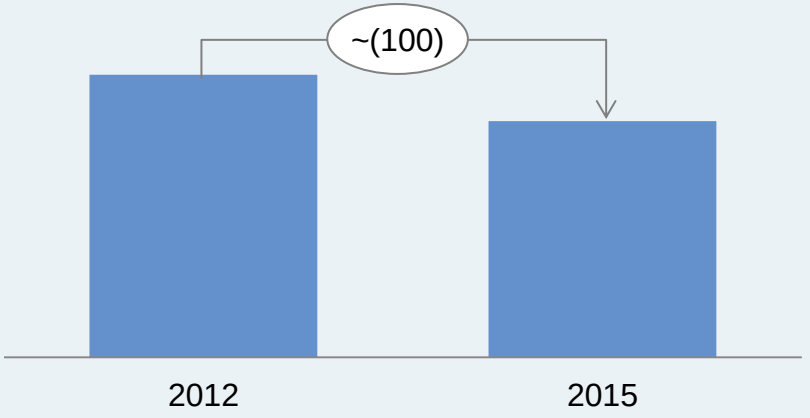
[1] Includes employees and contractors; 2013 headcount adjusted for ~1,250 reduction effective January 1, 2014. The prior period headcount figures have been revised to conform with the current presentation

Branch transaction migration

We are making it easier for customers to self-serve

- Enabling more ATM and mobile transactions
  - New mobile and online functionality launched in 2015
  - ~90% of all teller transactions will be ATM-enabled (up from ~50% historically)
  - Higher funds availability and withdrawal limits at the ATM, higher Chase QuickDeposit[SM] limits
- Driving digital adoption at account opening
  - Digital account set up now part of account opening process
  - 65% of new Consumer Banking customers are mobile active after 6 months, up from 53% in 2014[1]

Annual teller transactions (mm)[2]



Transactional staff (K)[3]



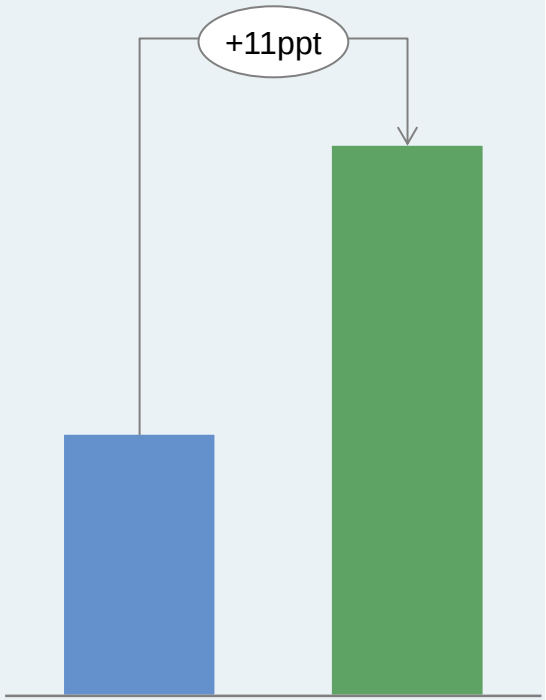
[1] 90-day mobile active activity based on 6 months after account opening in respective vintage
[2] Teller transactions include all open households that transact in the branch for that respective year
[3] Transactional staff includes Tellers, Sales and Service Associates and Assistant Branch Managers

Customer preference for our digital assets enables us to lower cost to serve

Consumer Bank primary bank customers – impact of digitally-centric behavior[1]

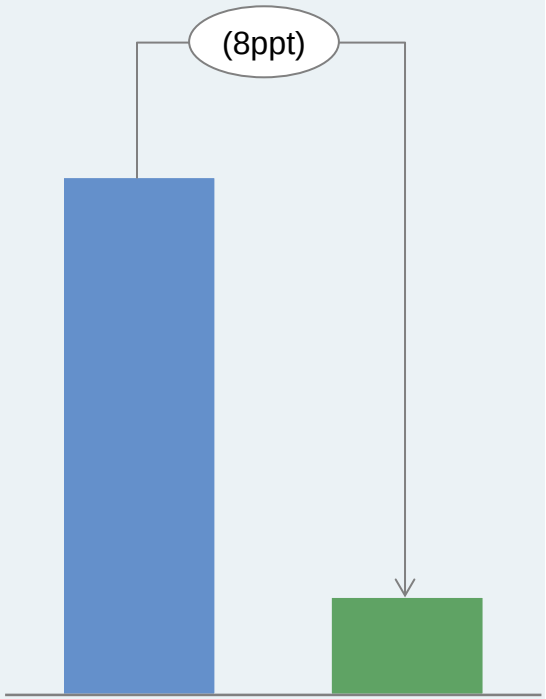
Digitally-centric is growing

% of primary bank customers who are digitally-centric



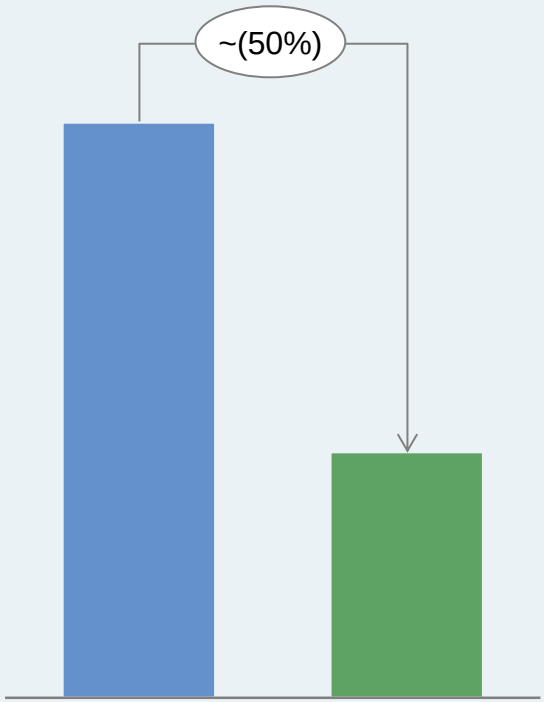
Retention rates are higher

Attrition[2]



Cost to serve is lower

Average annual service cost[3]



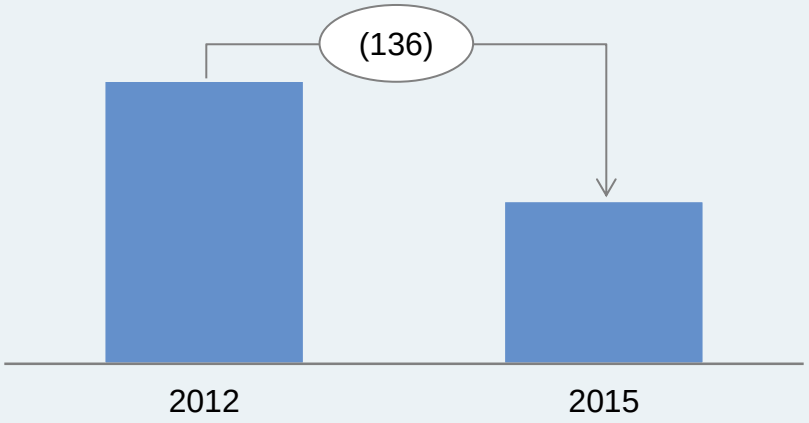
Note: For footnoted information, refer to appendix

Paperless adoption

Driving paperless adoption

- Paper statement delivery costs ~$0.50, while electronic statement delivery costs ~$0.01[1]
- To drive paperless adoption, we are focused on:
  - Simplifying the paperless enrollment process for customers
  - Increasing types of documents eligible for paperless delivery
- Over 60% of new checking accounts are paperless within 30 days, up from ~25% two years ago

Paper statements (mm)



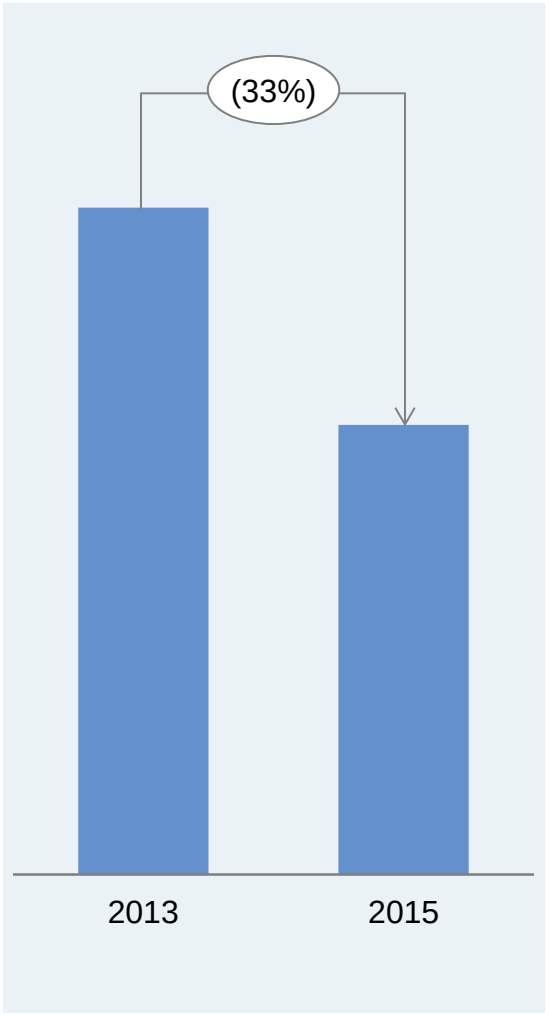
Paperless account enrollments (mm)



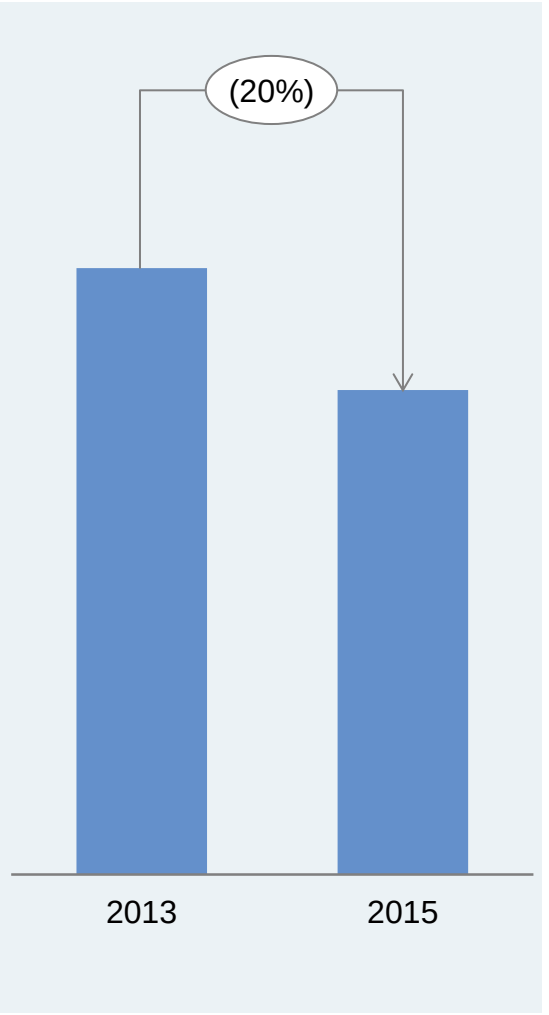
[1] Cost represents average delivery costs across CCB

Travel & Entertainment, vendor rationalization and real estate strategy

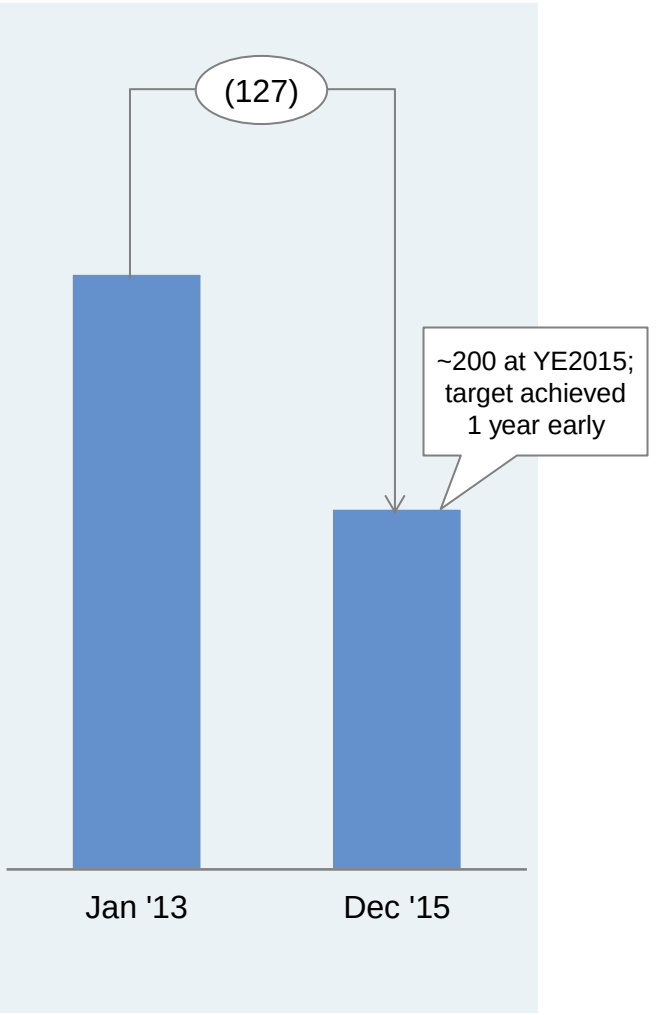
Travel & Entertainment spend



Number of vendors

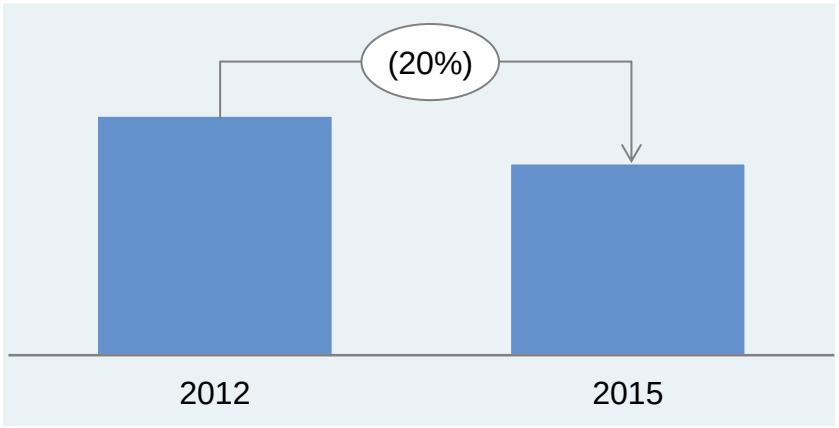


Non-branch buildings

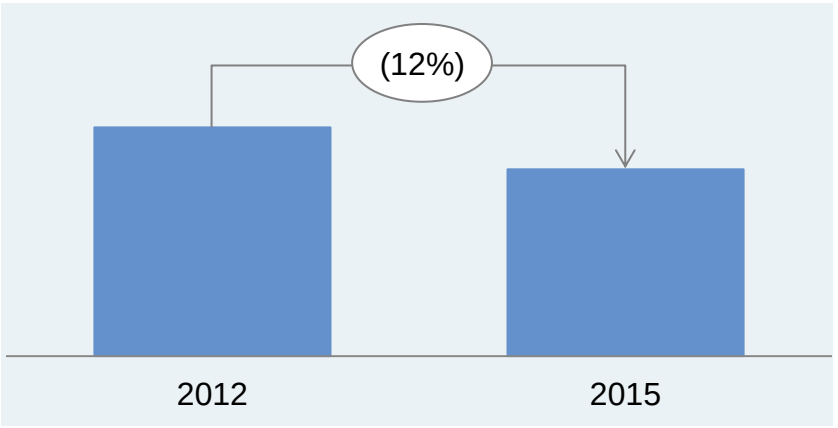


Servicing unit costs

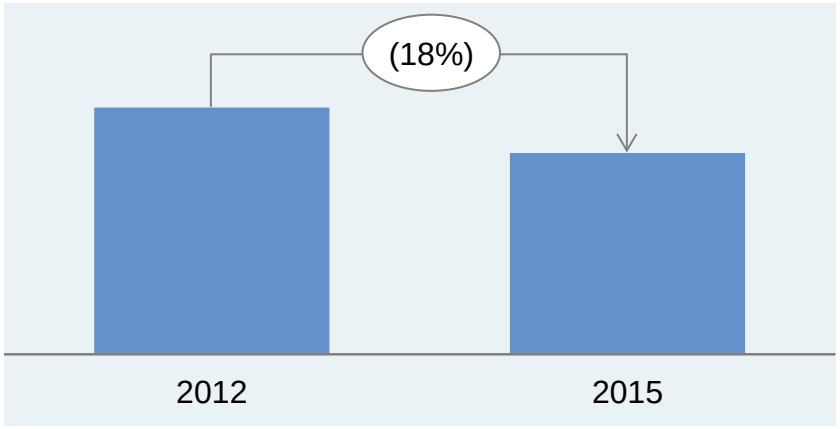
Call center cost per checking account[1]



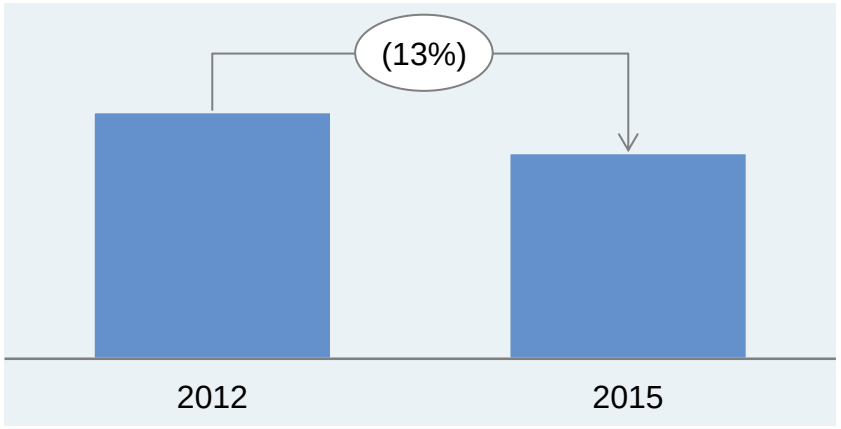
Operating cost per active credit card[2]



Collections cost per average delinquent credit card account[2]



Merchant processing cost per transaction[3]

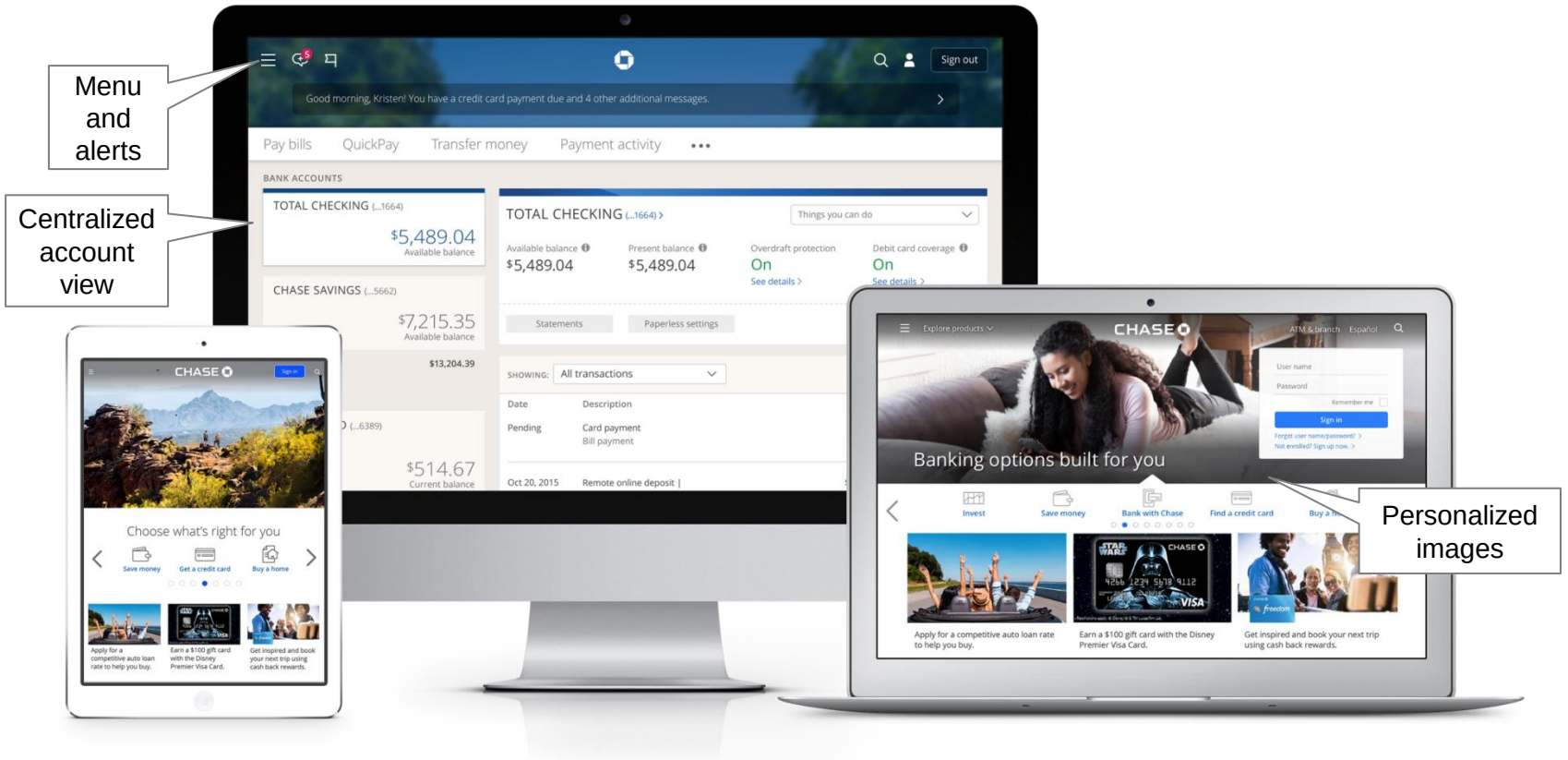


[1] Represents Consumer & Business Banking
[2] Excludes Commercial Card, Canada and certain terminated partners/products
[3] Excludes network licensing fees for ChaseNet

We are accelerating our investment in marketing to take advantage of attractive market opportunities

	ROE > 20%	$100mm investment generates on average…
Credit Card marketing	✓	■ ~400K new accounts ■ ~$3B annual spend ■ ~$600mm outstandings
Consumer Banking marketing	✓	■ ~300K new households ■ $2.6B deposits

The new Chase.com delivers a simplified and personalized experience for our customers

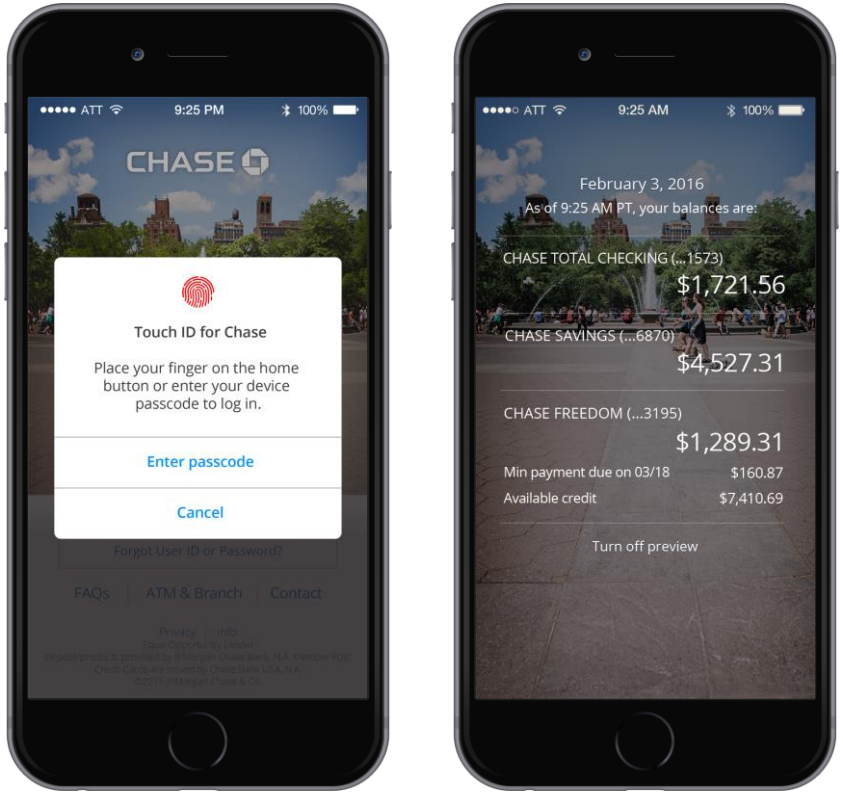


Chase.com enhancements

- Significant simplification including single dashboard, consolidated profile and simpler navigation
- Consistent experience across digital interfaces (website, tablet, smartphone)
- More personalized experience for customers

We continue to enhance our industry-leading mobile app[1]

Chase Mobile® app



Mobile banking preferences and enhancements

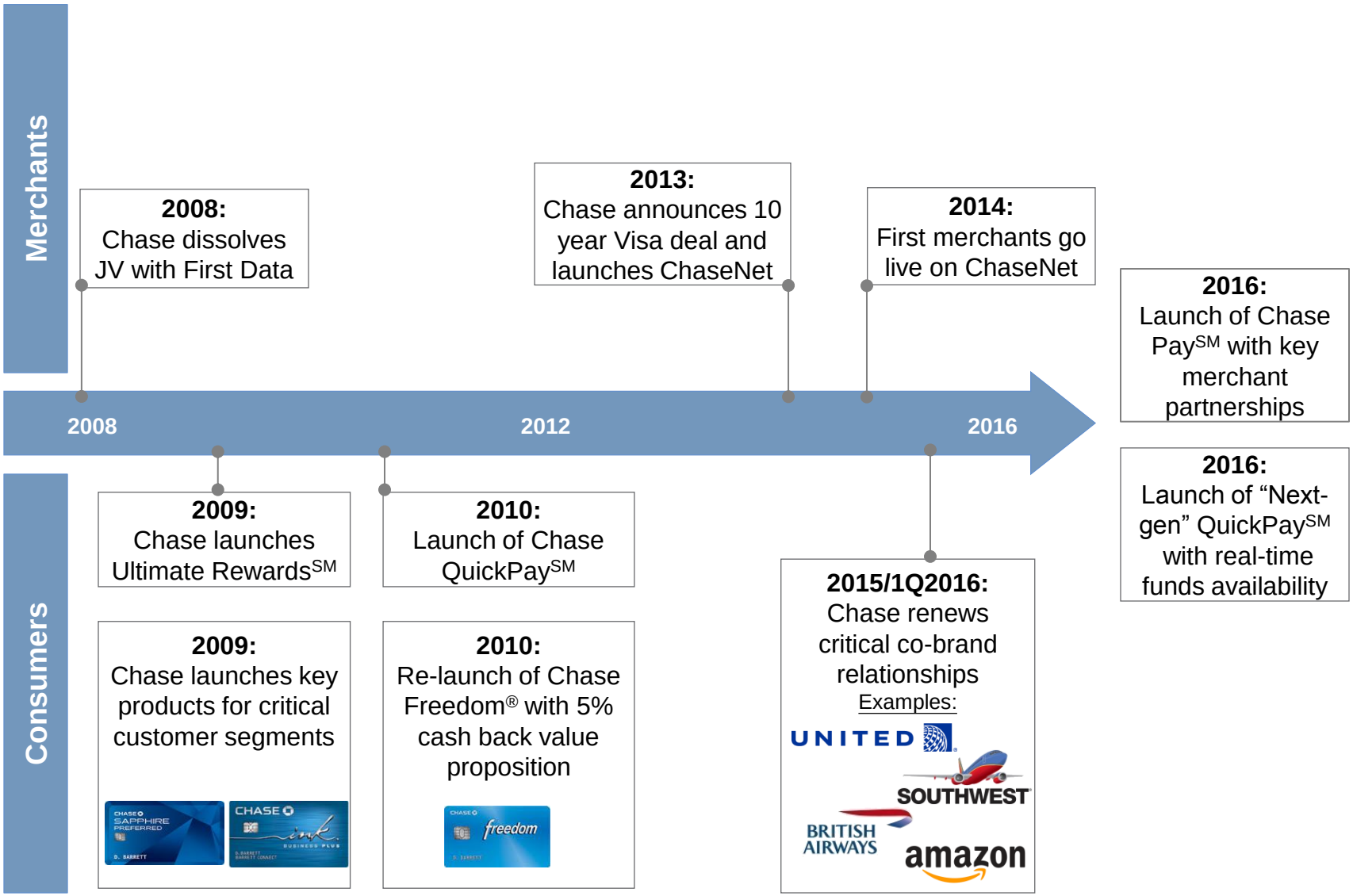
- Mobile users have ~80% more logins per week on average than online users
- ~60% of consumers rate mobile banking as an important or extremely important factor when switching banks[2]
- Mobile app enhancements
  - Touch ID login for iPhone® mobile device[3]
  - Account preview
  - View checks
  - Paperless enrollment

[1] Rated #1 mobile banking app among large banks; Javelin Research, January 2015
[2] Alix Partners, July 2015. Data represents 4Q15 results of AlixPartners' Mobile Financial Services Tracking Study. Participants were asked "How would you describe the role mobile banking services played in your decision to change primary banks?" Results include any respondents who are tablet/smartphone users and switched primary banks within the last 12 months
[3] iPhone is a registered trademark of Apple Inc.

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We have made strategic decisions and investments over the past 8 years that have led to the creation of a world-class payments franchise



Our payments strategy is designed to address consumer and merchant pain points and needs

Payments strategy

Integrated Merchant Experience

- ChaseNet closed loop system
- Integrated merchant loyalty

Digital Payments – Consumer to Business

- Ensure Chase cards can be used everywhere our customers shop

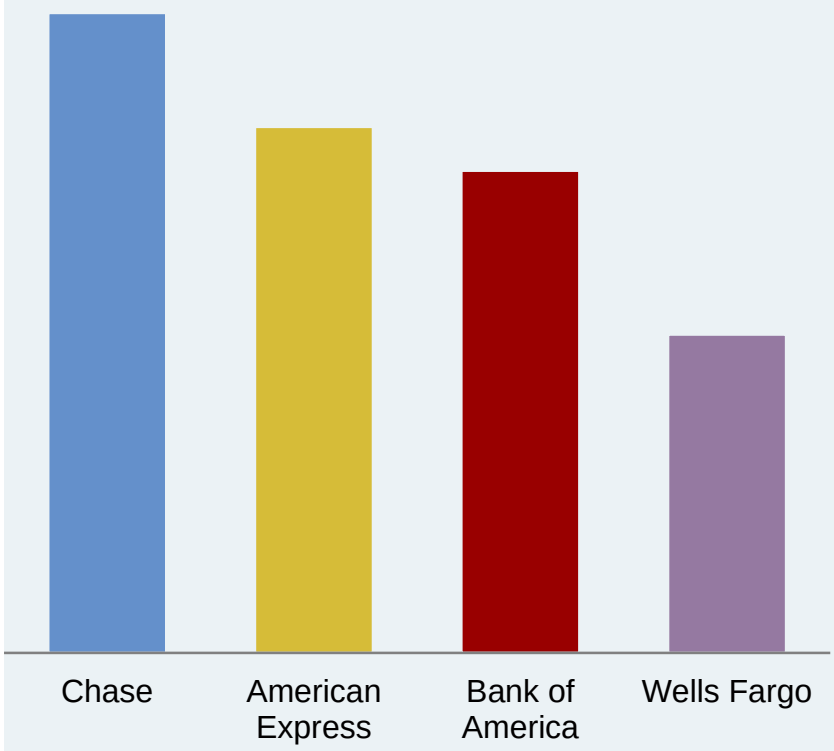
Digital Payments – Person to Person

- Build simplified, real-time person-to-person (P2P) payment solution

We bring scale to each component of the payments ecosystem

Chase leads the industry in combined debit and credit volume

2014 debit and credit purchase volume[1]



- Debit and credit make up **~80%** of consumer electronic and card-based payment volume[2]

Chase's scale across merchants and consumers is unmatched

Consumer reach

- Over **90mm** credit, debit and pre-paid card accounts[3]
- **16mm** digital and mobile logins each day

Payments scale

- **$754B** in total Chase credit and debit sales in 2015[3]
- **36mm** credit and debit card payments each day[3]

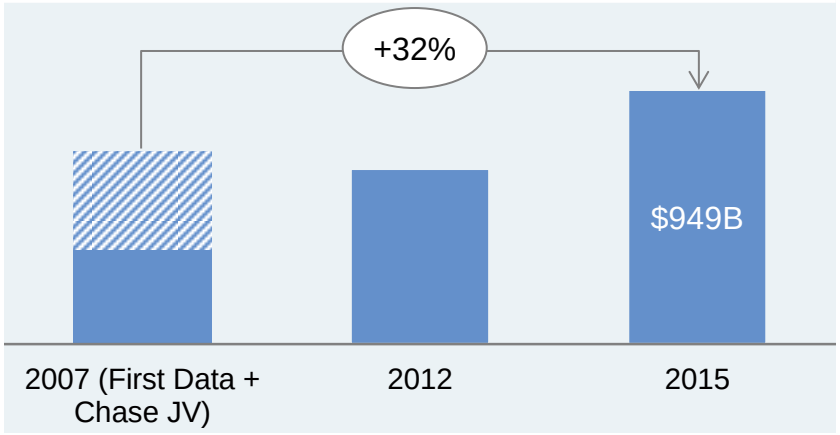
Merchant reach

- **$949B** processed in 2015
- Over **525K** active global merchant outlets

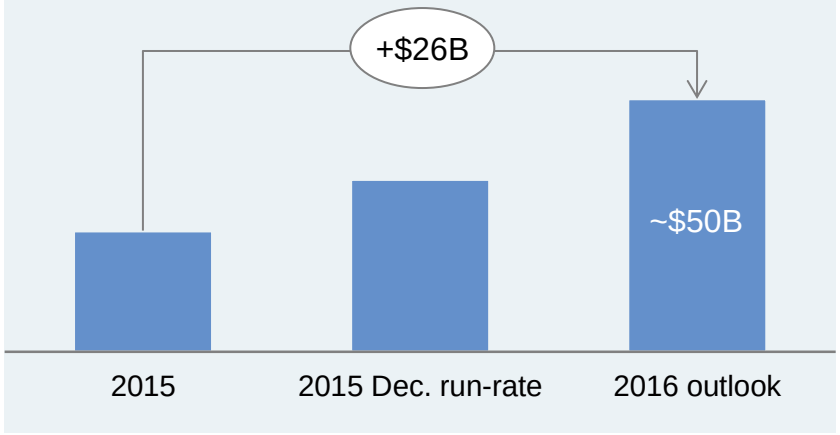
[1] Source: Company filings for credit purchase volume. Chase excludes Commercial Card. American Express includes U.S. card only. Nilson data for full year 2014 for debit purchase volume. Debit purchase volume includes Signature, PIN and prepaid
[2] Source: Nilson, based on volume data for U.S. consumer electronic and card-based methods of payment for the full year 2014. Debit includes prepaid
[3] Excludes Commercial Card

ChaseNet, our proprietary network, continues to expand

Commerce Solutions total processing volume



ChaseNet volumes



ChaseNet's unique value proposition

- **Streamlined rules** (e.g., removed signature requirement for transactions less than $1K)
- **Simplified pricing structure** delivering improved economics
- **Enhance** data sharing to improve authorization rates and reduce fraud

Sample ChaseNet merchants

Marriott
UNITED
RITE AID
Chevron

Chase Pay, our proprietary digital payment solution, connects merchants and consumers and drives value for both

Pay

Merchants

- Lower cost of payment
- Enable loyalty programs
- Fraud liability protection

Consumers

- Simple checkout
- Loyalty rewards
- Protects my information

MCX's digital wallet pilot in Columbus, Ohio is providing customer learnings related to digital wallet usage across merchant verticals

MCX merchants in CurrentC pilot

CVS pharmacy
EXXON
GIANT EAGLE
MARKET DISTRICT
kmart
Mobil
Sam's CLUB
sears
Walmart
Wendy's

We have signed a payments agreement with Starbucks which will drive Chase Pay adoption

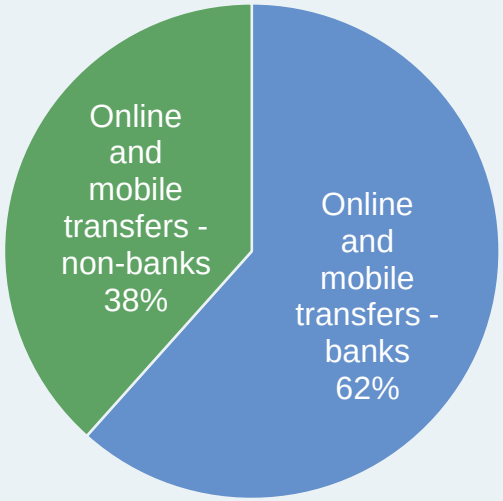
Starbucks has high frequency, habitual customer spend to help drive Chase Pay adoption

- Chase Pay mobile app can be used at more than 7,500 company operated Starbucks locations in the U.S.
- Chase Pay can also be used to reload a Starbucks Card within the Starbucks mobile app and on Starbucks.com

In conjunction with six partner banks, we are launching a P2P solution with real-time funds availability

Banks have majority share of the ~$200B online and mobile P2P market[1]

U.S. online and mobile P2P market[1]



Market size: ~$200B

New bank P2P solution

- ✓ Secure
- ✓ Real-time funds availability
- ✓ Single consumer-facing brand

- Partner banks represent **60% of all U.S. consumers with mobile banking apps[2]**

[1] Source: Javelin Strategy & Research, *P2P Payments in 2015: Market Sizing and Evaluation of P2P, 2015*. Excludes wire transfers via banks and money transfer services
[2] Source: Nilson, December 2015. Represents U.S. consumers with mobile banking apps

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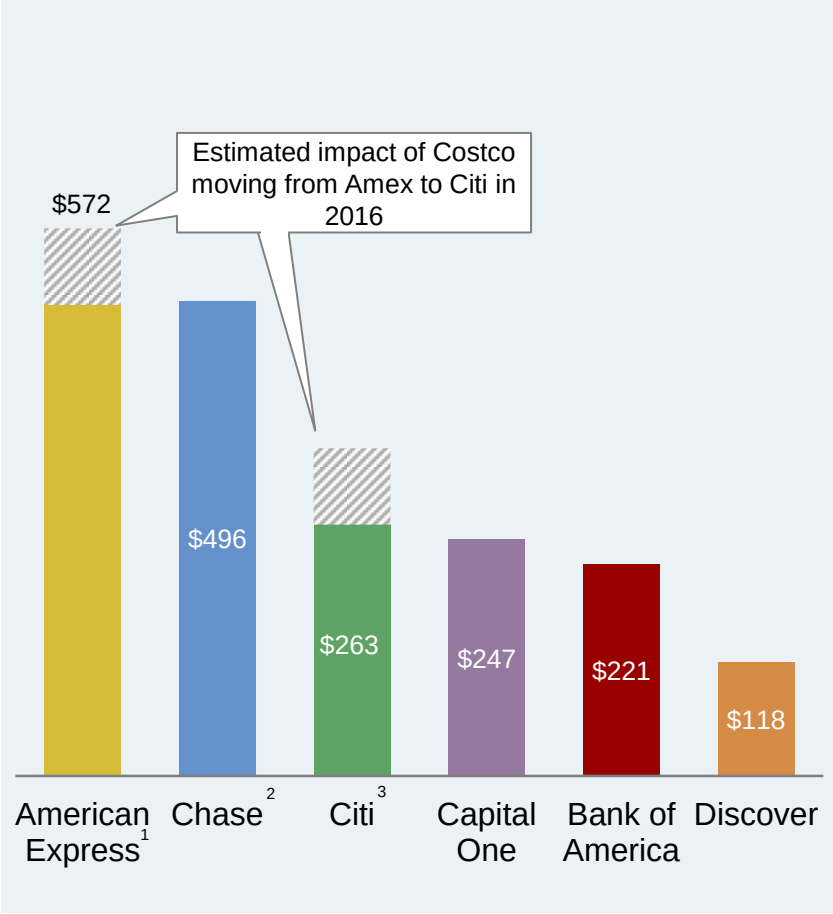
At the foundation of our payments platform is a strong credit card issuing business

Our unique assets	
Scale	■ 21% of credit card sales market share[1]
Distribution	■ Wide branch network and strong partnerships
Products	■ Broad range of offerings relevant to multiple customer segments
Engaged consumers	■ Investments in customer experience and digital
Efficiency	■ Competitive overhead ratio (39%) to enable investment

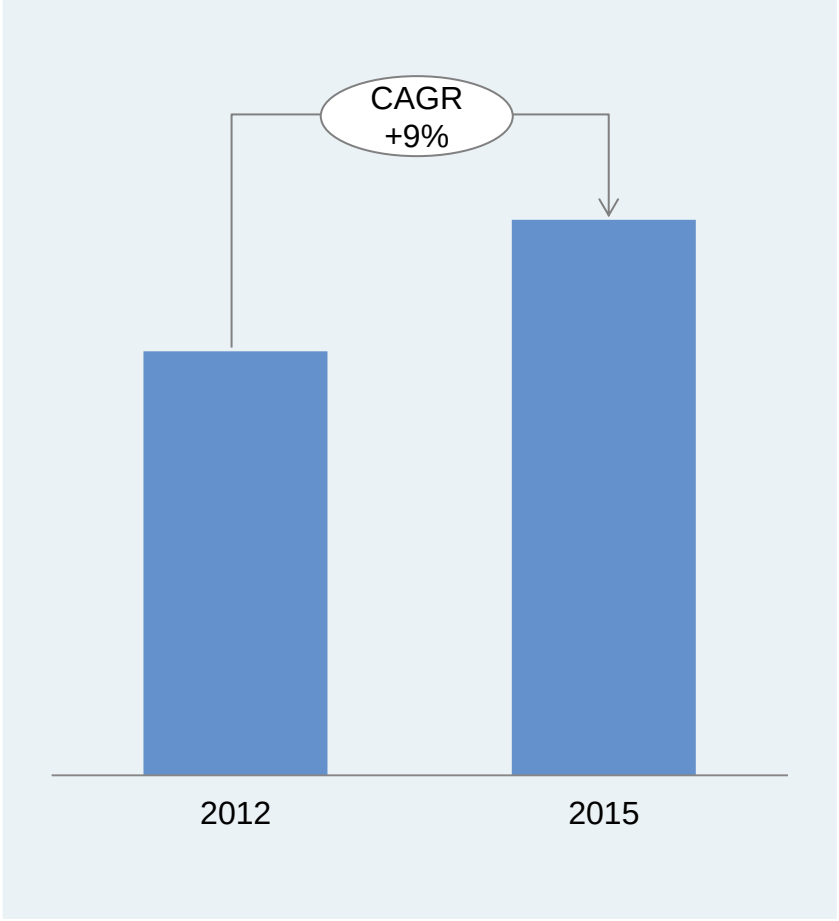
[1] Represents share of General Purpose Credit Card (GPCC) spend which excludes private label and commercial card; based on earnings releases and Chase internal estimates

Our industry-leading card issuing business continues to experience robust growth

2015 credit card sales volume ($B)



Chase credit card sales volume ($B)[4]

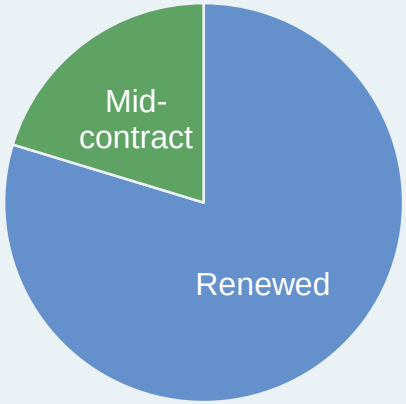


Source: Earnings releases and Chase internal estimates
[1] American Express U.S. Card
[2] Excludes Commercial Card
[3] Includes both branded and retail partner cards
[4] Represents General Purpose Credit Card (GPCC) which excludes private label and commercial card

Successful renewal of key co-brand partnerships will reduce revenue margin to 11.25%+/- in the medium term

We renewed much of our co-brand business[1]

2015 co-brand sales volume



- Incremental year over year revenue impact in 2016 of ($0.9B) from co-brand renewals

Recent renewal examples

UNITED

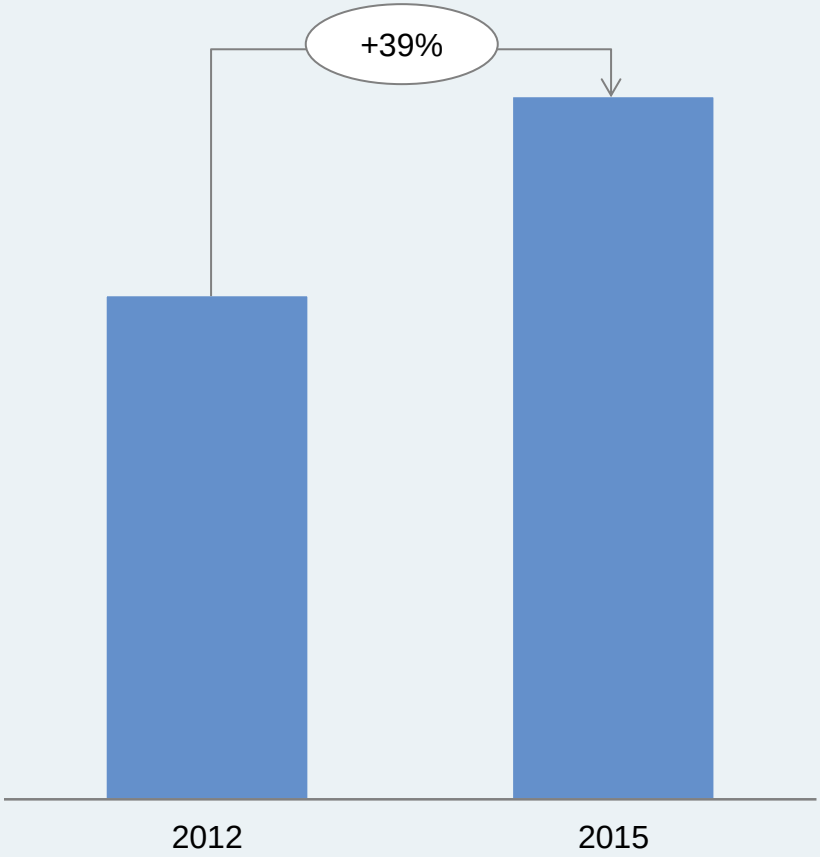
amazon

SOUTHWEST

BRITISH AIRWAYS

Co-brand acquisitions continue to grow[1]

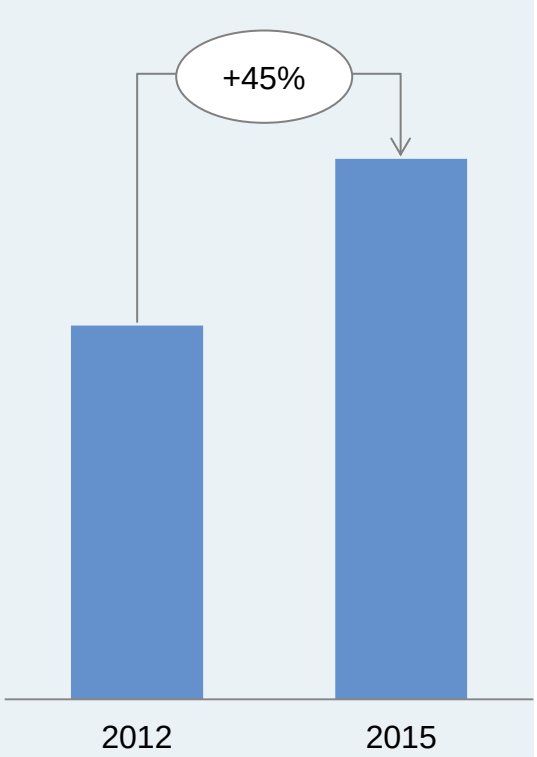
Co-brand new accounts



[1] Excludes certain runoff and terminated partner portfolios

We have a strong branded card business and are continuing to enhance our value propositions to remain competitive

Chase-branded in-year sales by vintage



Our branded products fill key positions in our overall portfolio

Consumer branded products



- Product recently refreshed; strong engagement and growth



- Leading cash back portfolio



- Award-winning travel card

Business branded products



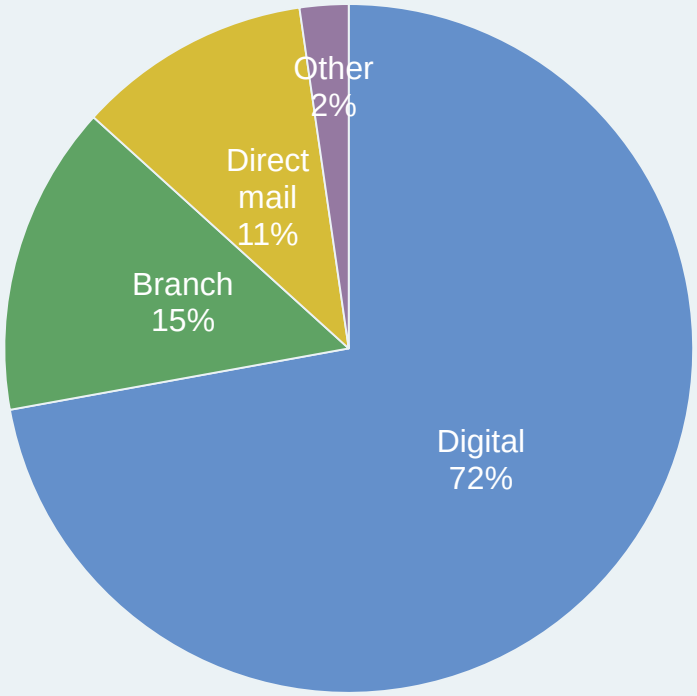
- Benefits and capabilities designed for small businesses

Our Ultimate Rewards loyalty program provides value for our branded, rewards products

We are leveraging diverse acquisition channels and driving digital engagement with our customers

Acquisitions are moving to lower cost channels

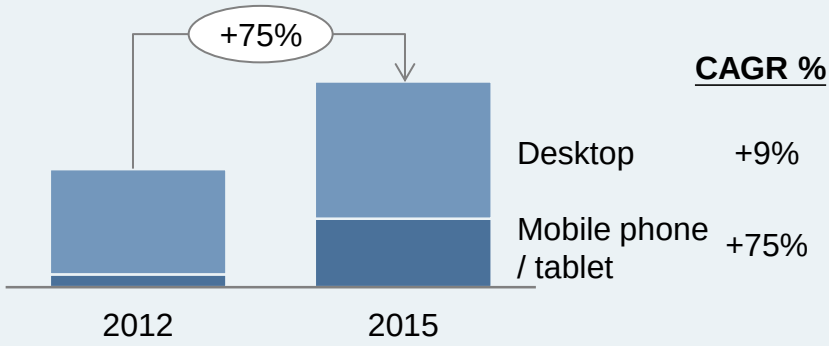
Distribution of 2015 new credit card accounts by channel[1]



33% of 2015 acquisitions had an existing Consumer Banking relationship at booking

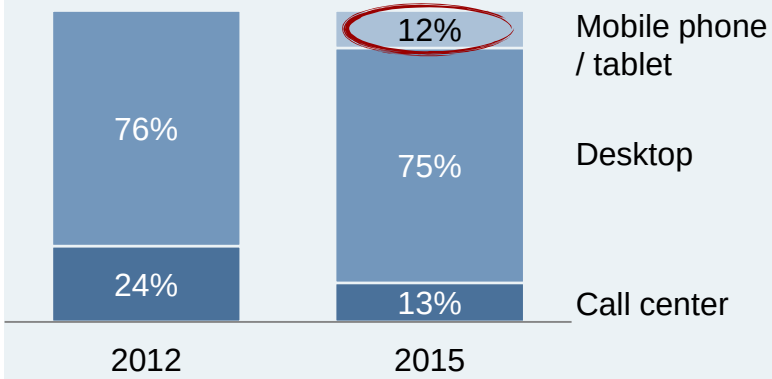
Increased digital acquisitions across devices

New credit card applications sourced through digital channels[2]



Digital engagement

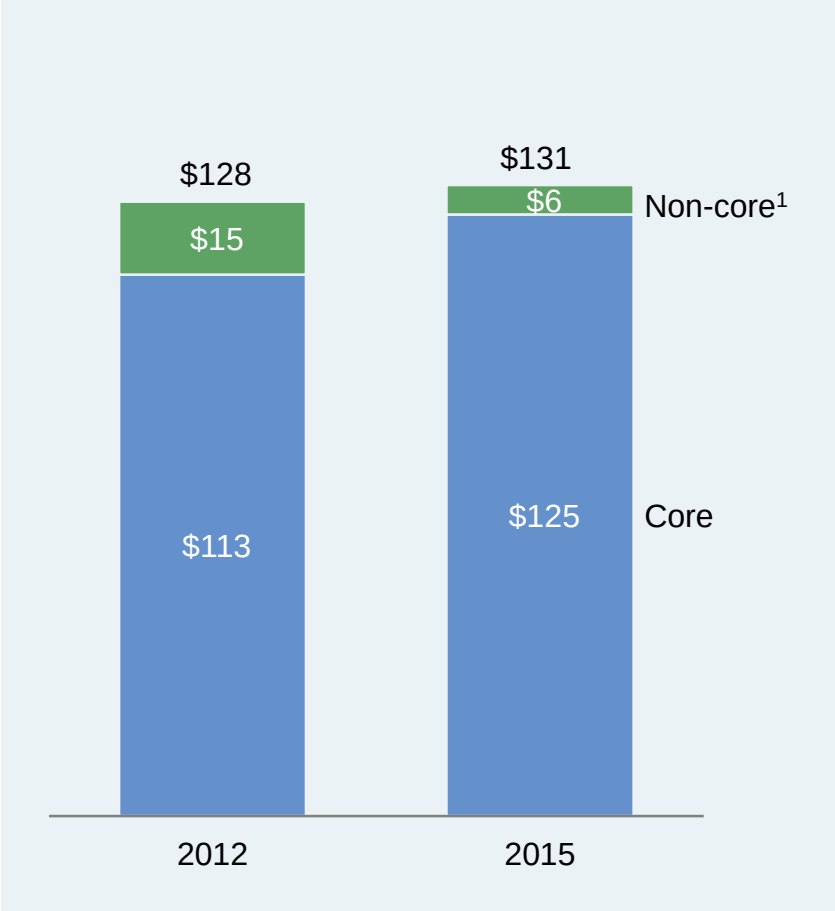
Rewards redemption (Ultimate Rewards) by channel



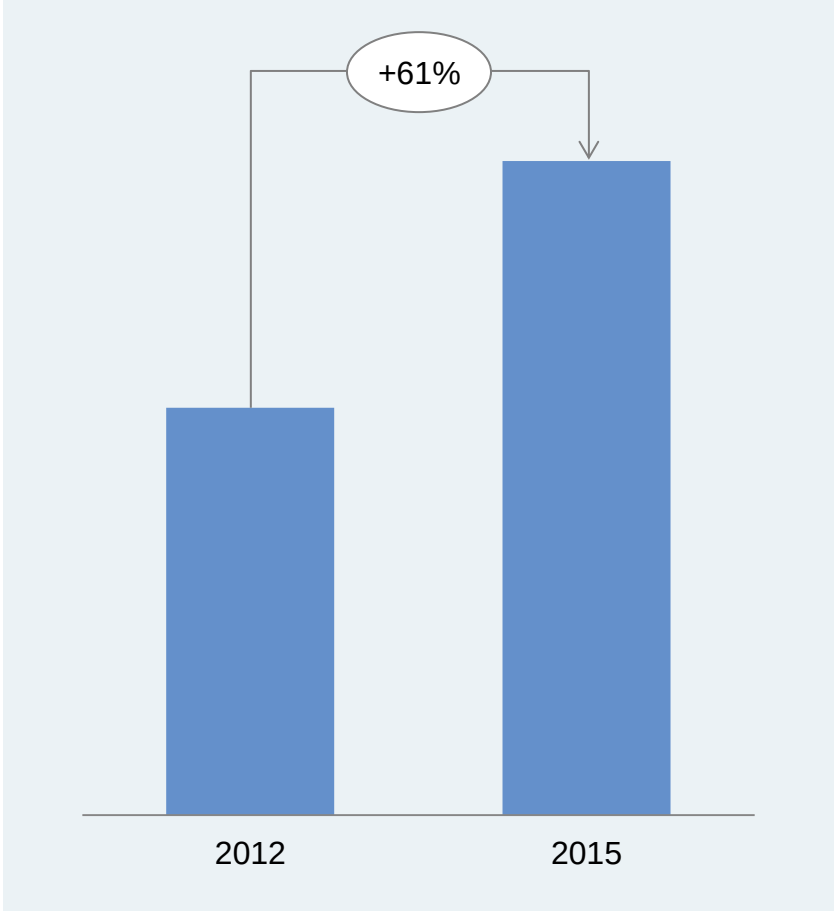
[1] Excludes Canada
[2] Represents applications from Chase hosted digital channels, excludes applications hosted on partner sites

We have grown core outstandings by 11% since 2012

Credit card EOP outstandings ($B)



In-year outstandings by vintage[2]



[1] Non-core loans include runoff portfolios, discontinued product(s) no longer originated, and/or business simplification efforts
[2] Excludes Commercial Card and certain terminated partner portfolios

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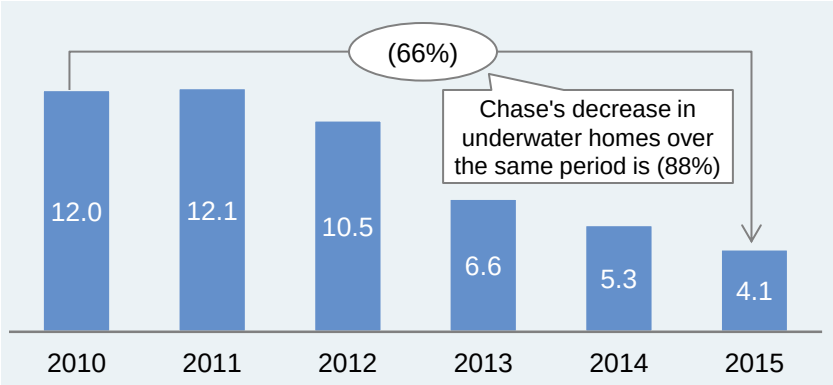
We continue to build a higher quality and less volatile mortgage business

	2014 / 2015 Investor Day plans	Progress
Deliver a great customer experience	■ Simplify our product set and invest in new technology	✓ Reduced our product set from 37 to 15 ✓ New originations platform launched in 2015
Maximize our share of high-quality originations	■ Leverage our balance sheet ■ Price to reflect higher servicing risks and expense	✓ Increased loans originated and retained on balance sheet (~65% in 2015, up from ~10% in 2013) ✓ Increased our share of jumbo originations from ~6% in 3Q13 to 12% in 3Q15 ✓ Further differentiated pricing based on risk
Improve quality of servicing portfolio	■ Actively manage down our default inventory ■ Maintain higher quality servicing book	✓ Foreclosure inventory down from ~170K in 2013 to ~75K in 2015 ✓ Improvement in delinquency rates: from 7.6% in 4Q13 to 5.4%[1] in 4Q15
Drive efficiencies	■ Continue to invest in technology to improve operations	✓ Investments to improve efficiency in production and servicing ✓ Reduced headcount by ~25K since 2012[2]

[1] Based on total mortgage and home equity loans serviced, as reported to Inside Mortgage Finance as of December 2015
[2] Includes employees and contractors; 2013 headcount adjusted for ~1,250 reduction effective January 1, 2014. The prior period headcount figures have been revised to conform with the current presentation

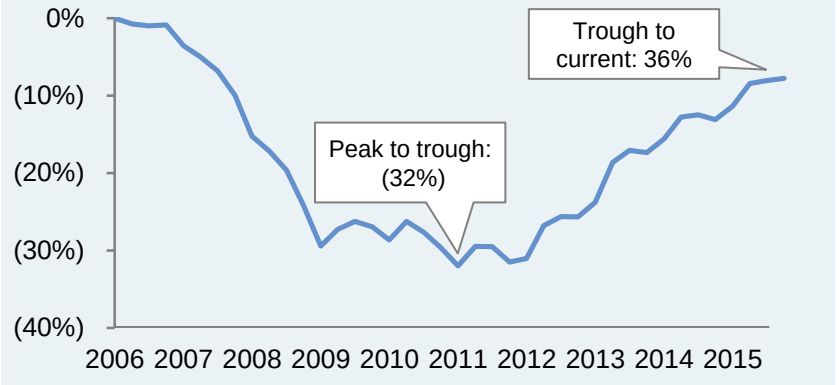
Housing market fundamentals continue to improve

Number of underwater homes in the U.S. (mm)



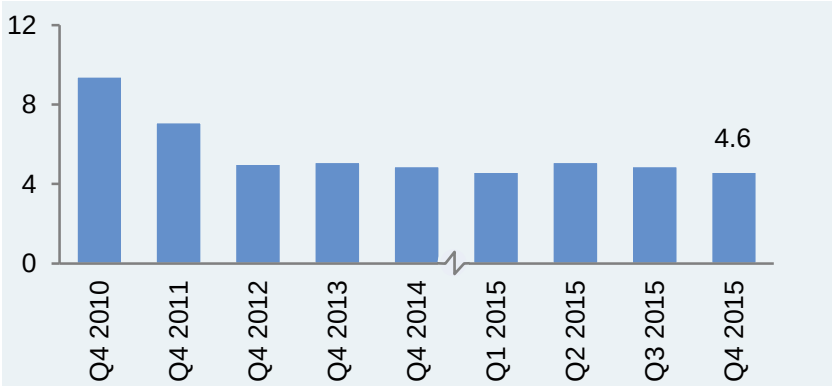
Source: CoreLogic as of 3Q15

Home price index (HPI) – peak to November 2015



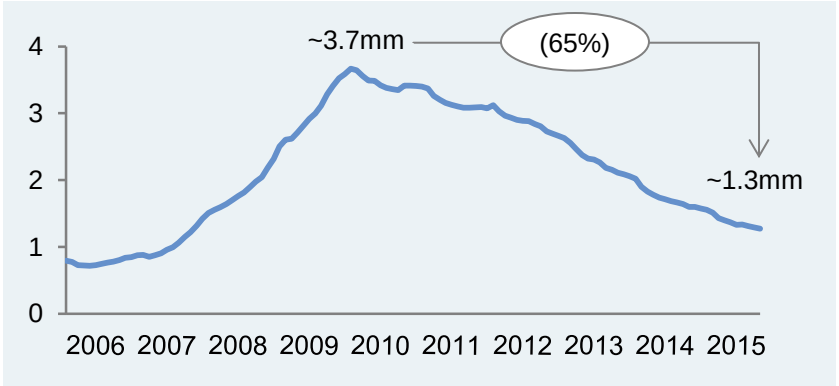
Source: CoreLogic as of November 2015

Months of inventory



Source: National Association of Realtors (NAR) as of 4Q15

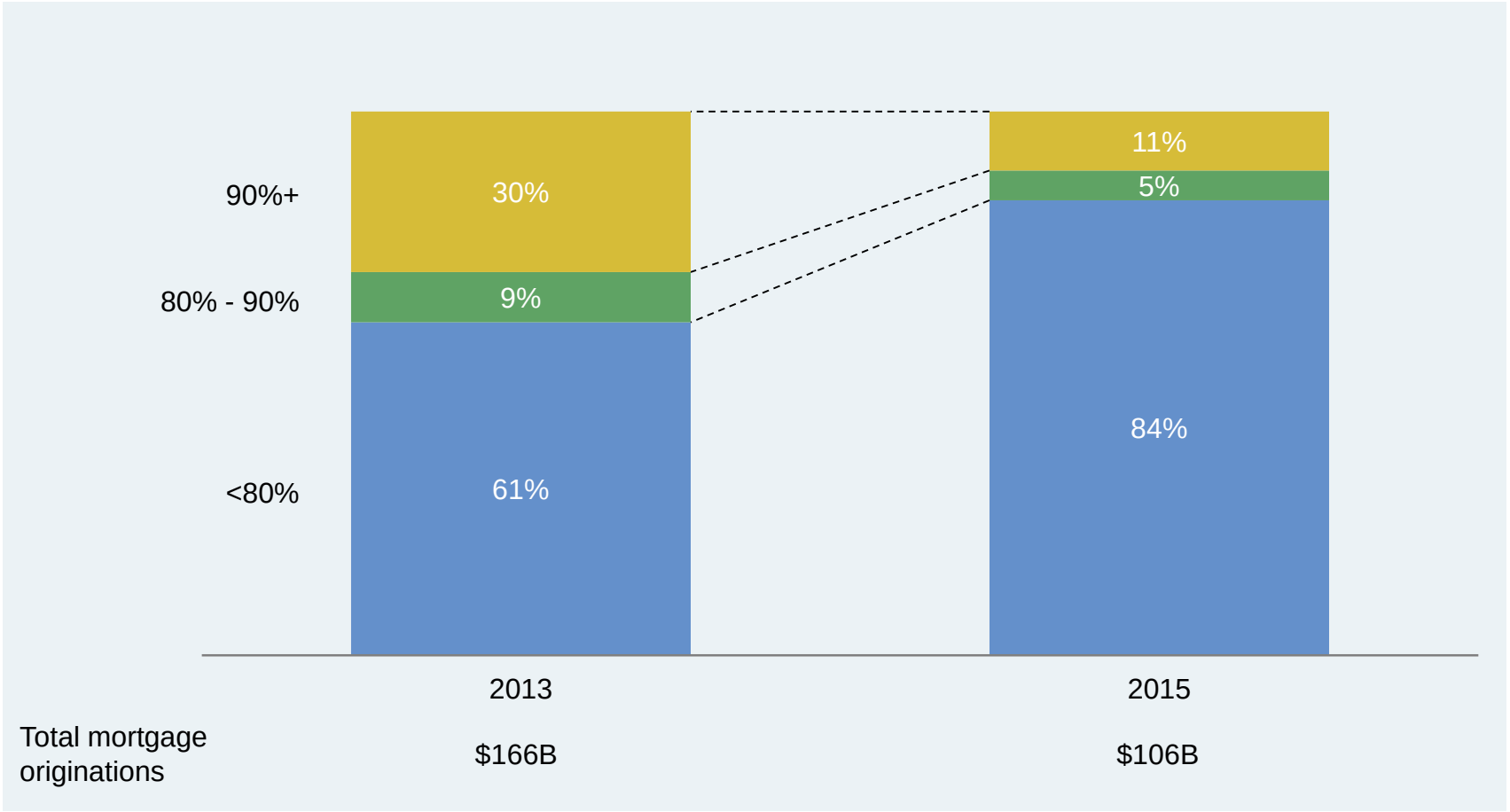
90+ day delinquent units (mm)



Source: CoreLogic as of October 2015

We have repositioned our Mortgage business to focus on high-quality new originations

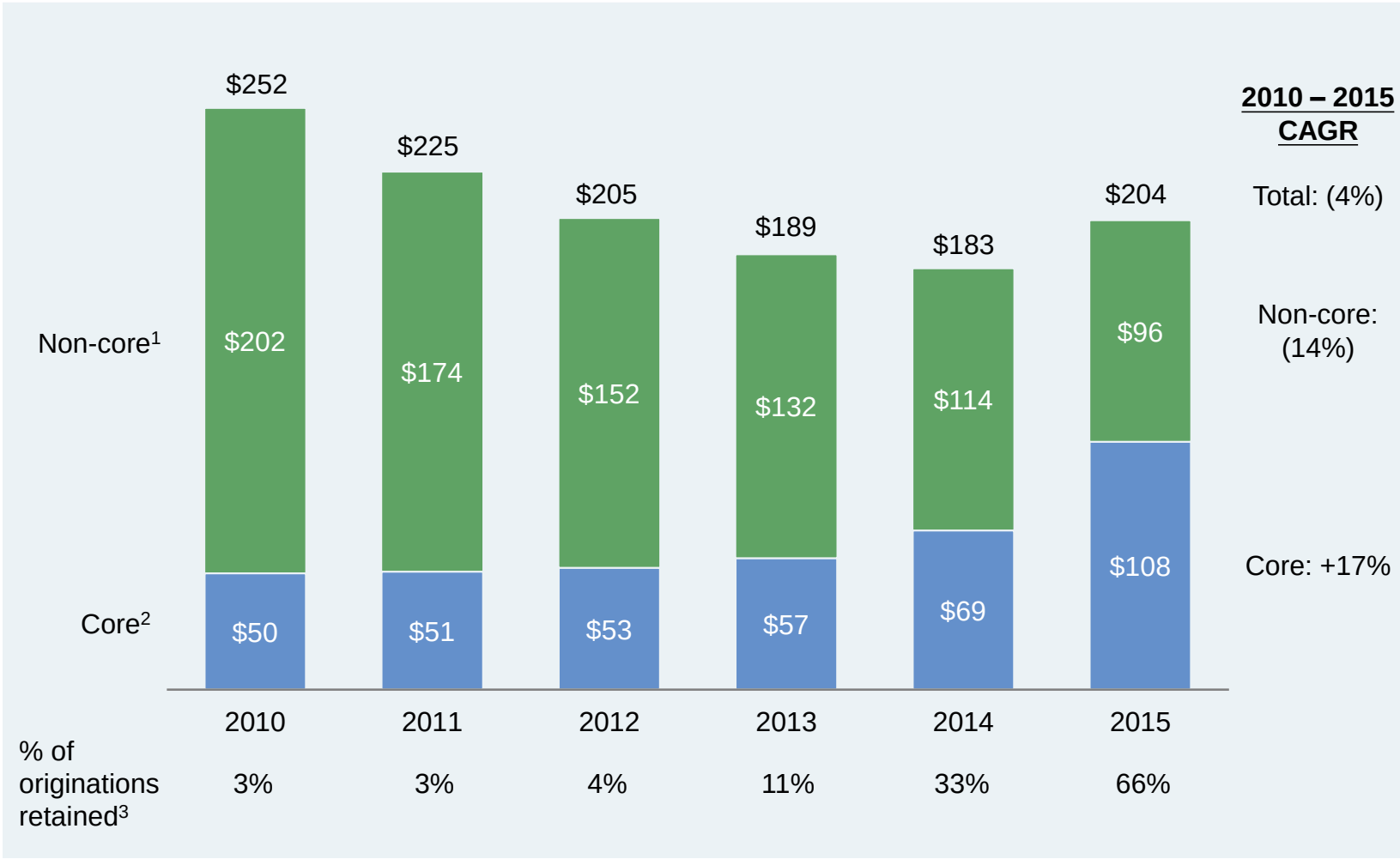
Chase LTV distribution of originations[1]



[1] Based on dollars; Excludes Correspondent Negotiated Transactions (CNTs), Private Bank and Home Equity

We are seeing strong core loan growth

Mortgage Banking average loan balances ($B)



[1] Non-core loans include runoff portfolios, which are predominantly discontinued products no longer originated and purchase credit-impaired loans
[2] Core loans primarily include loans held in Real Estate Portfolios, as well as loans residing in Production and Servicing, which are predominantly prime mortgage loans repurchased from Government National Mortgage Association ("Ginnie Mae") pools, which are insured by U.S. government agencies
[3] Excludes Home Equity and Private Bank loans

We are actively repositioning the servicing book via high-quality new originations, acquired servicing and sales of low-quality units

2015 Chase servicing book activity

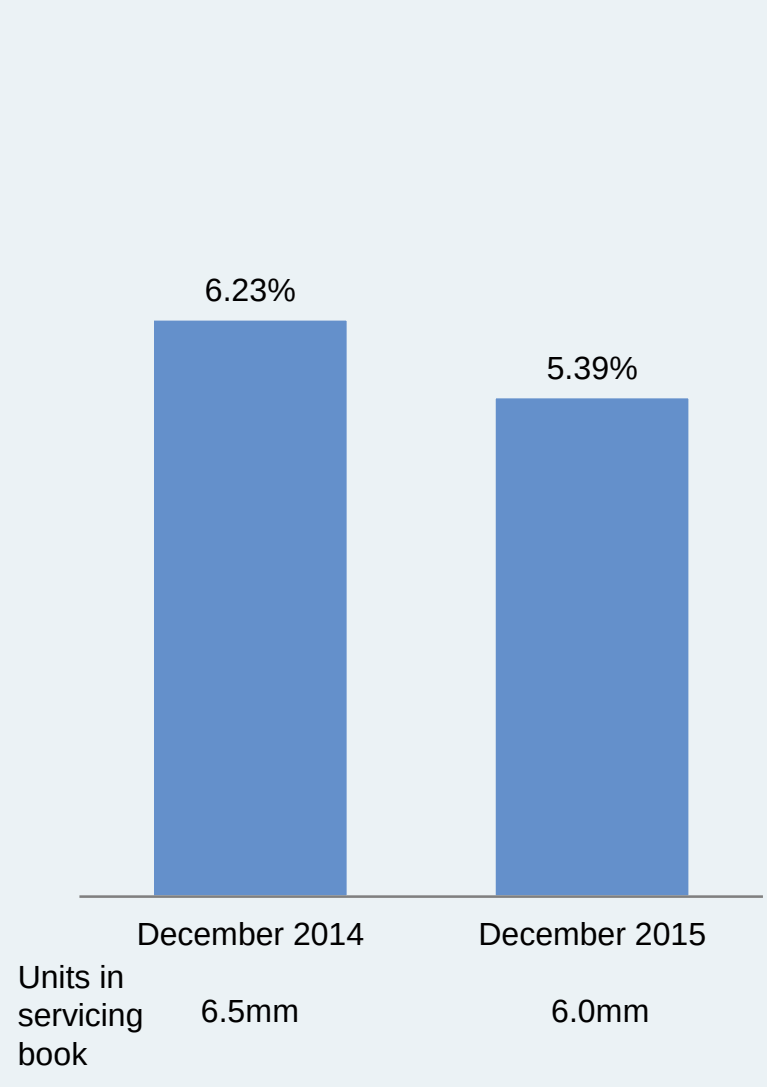
"Coming In" in 2015

	Units	30+ delinquency rate
New originations	~385K	0.01%
Acquired servicing	~235K	0.27%
Total "inflows"	~620K	0.11%

"Going Out" in 2015

	Units	30+ delinquency rate
Run-off	~860K	8.66%
Sales	~240K	18.10%
Total "outflows"	~1,100K	10.71%

30+ delinquency rate[1] for Chase servicing book

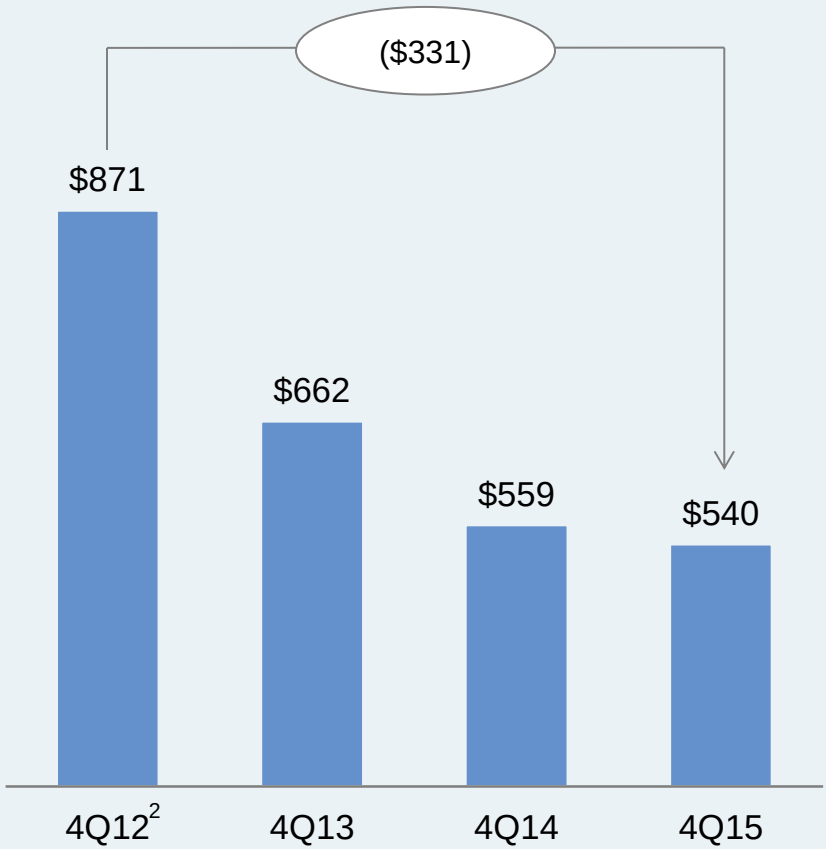


[1] Based on number of loans serviced; includes foreclosures and 2nd Liens and excludes REO inventory

We continue to reduce servicing expense

Servicing expense has been declining…

Quarterly trend in servicing expense[1] ($mm)



…and will continue to trend downward

- Quality of servicing book continues to improve
- Servicing cost per loan is decreasing
- Continuing to invest in technology to improve operating efficiency

[1] Credit costs excluded from all time periods
[2] Excludes ~$700mm of expense related to Independent Foreclosure Review settlement

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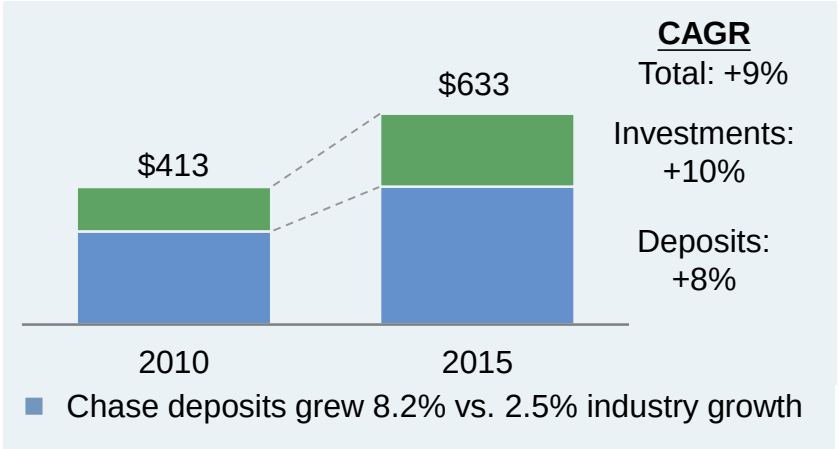
Consumer Banking strategic priorities

	Strategic priorities	Progress
Acquire and deepen relationships	■ Acquire high-quality relationships and become our customers' primary bank ■ Improve the customer experience and deepen relationships	✓ Grew deposits & investments at 9% CAGR since 2010 ✓ Acquired 3.7mm new checking accounts in 2015 ✓ Primary bank for 70%+ of our deposit customers
Enable digital engagement	■ Develop new innovative capabilities to enhance our leading digital platform ■ Leverage frequent touch points with customers to drive deeper engagement	✓ Began rolling out next generation of ATMs and new software to further enhance ATM functionality ✓ Increased ATM withdrawal and Chase QuickDeposit limits ✓ Nearly doubled mobile users since 2012[1]
Drive down expenses	■ Capture efficiencies as transactions migrate to digital ■ Optimize our branch footprint to support evolving customer needs	✓ Reduced teller transactions by ~100mm since 2012 ✓ Decreased transactional staff by ~12K since 2012

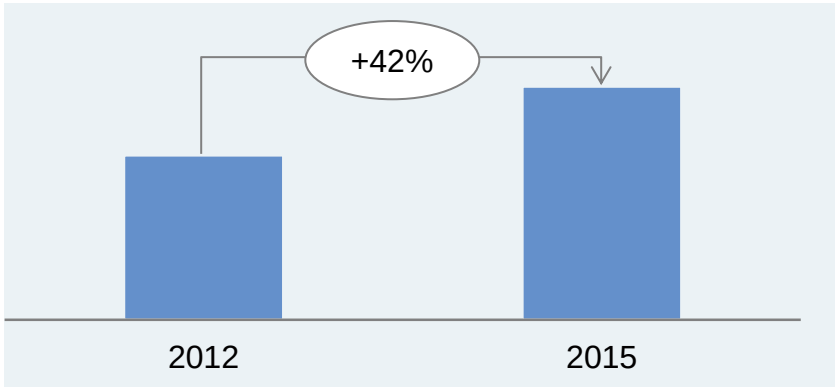
[1] Users defined as those that had at least one mobile log in in a given year

We lead the industry in balance growth while Chase Private Client[SM] continues to deepen relationships with affluent clients

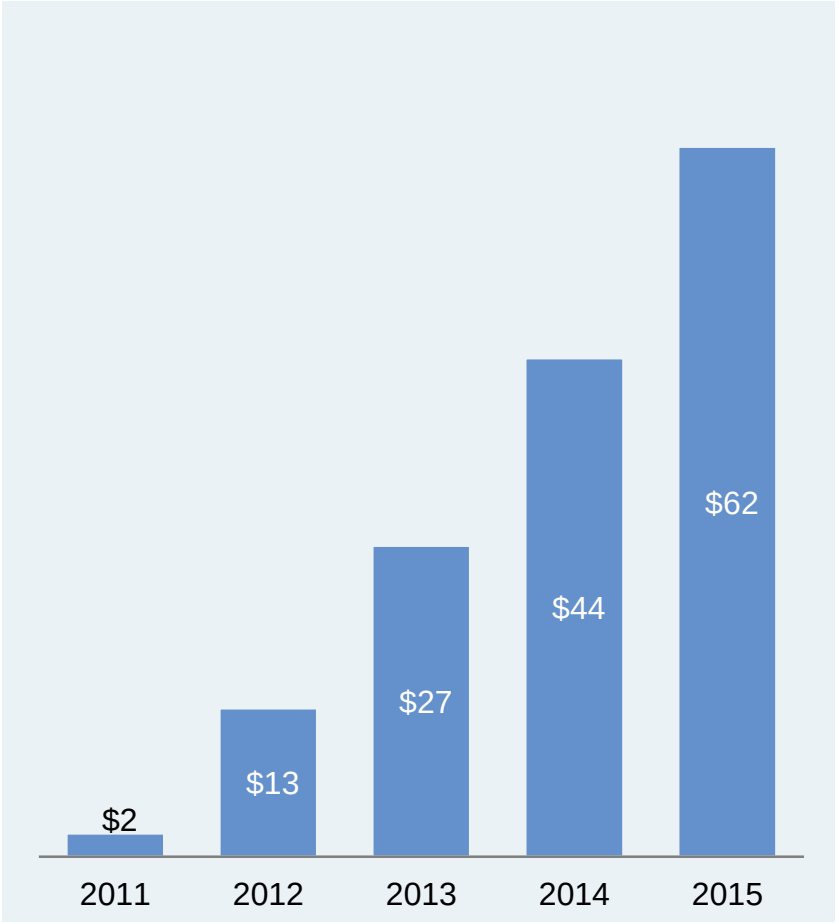
Consumer Banking deposits and investments ($B)[1]



Checking balances per new checking account[2]



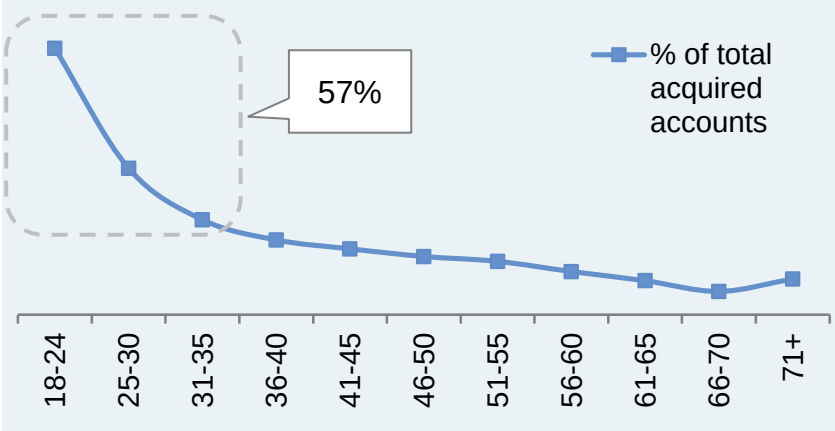
Chase Private Client net new money ($B)[3]



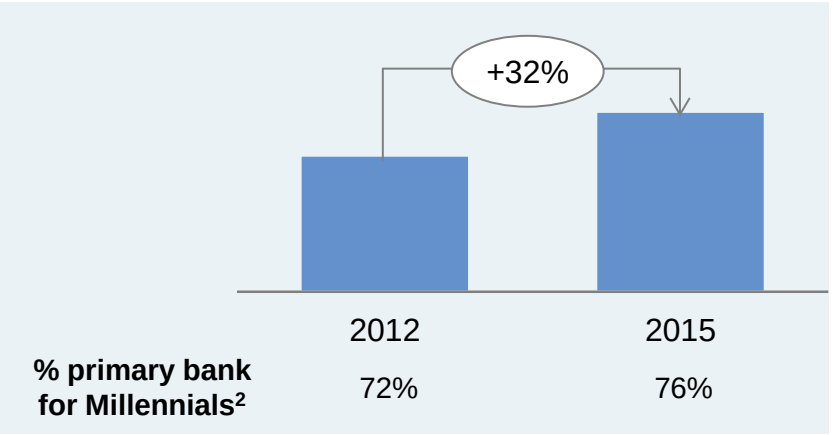
[1] Average deposits and end-of-period investments balances
[2] Data represents average checking balance per new checking account on the last day of the month the account was opened
[3] Represents cumulative new deposits and investments. New money prior to Chase Private Client launch included in cumulative calculation

We are also deepening relationships with Millennials, who make up the majority of our new customers

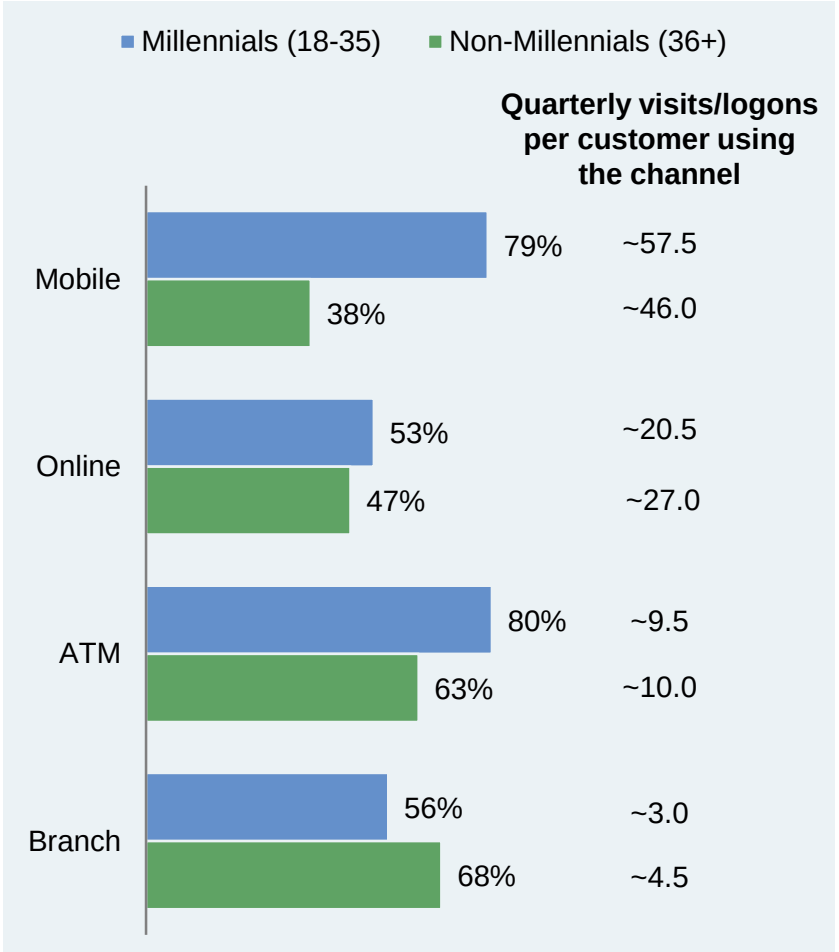
Checking account acquisitions by age[1]



Deposits & Investments per Millennial household



% of Consumer Banking customers using each channel 4Q15[3]



[1] Includes new to bank and existing customer checking account openings in 2015; excludes accounts of customers under 18 years of age
[2] Primary relationship based on internal Chase definition
[3] Based on Consumer Banking customers that use the channel in 4Q15

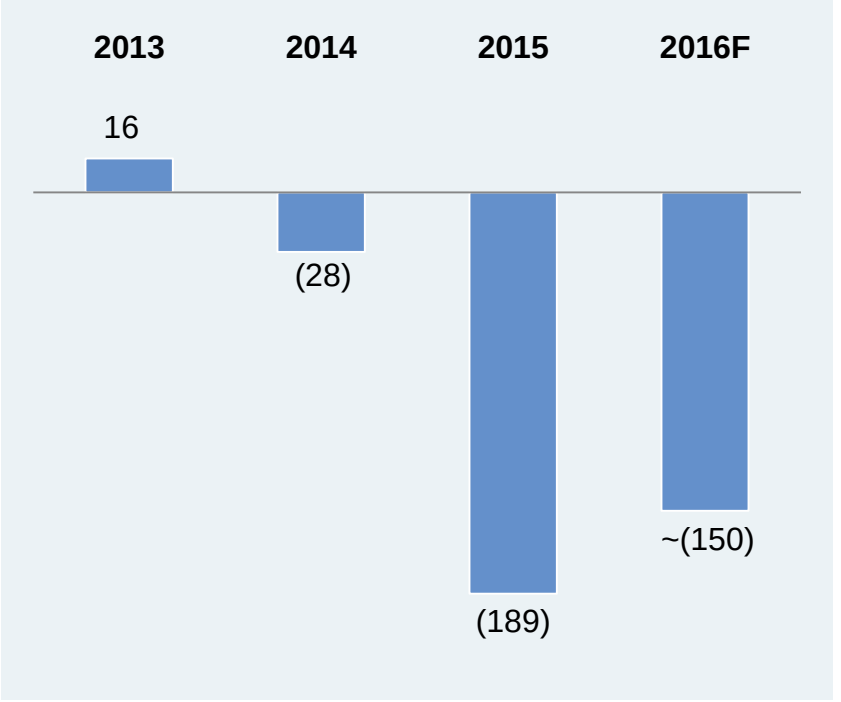
We will continue to optimize the size of our branch network to meet the needs of our customers

Network activity

	2013	2014	2015
Beginning branch count	5,614	5,630	5,602
New builds[1]	132	71	20
Consolidations[1]	(116)	(99)	(209)
Net change in branches	16	(28)	(189)
Ending branch count	5,630	5,602	5,413

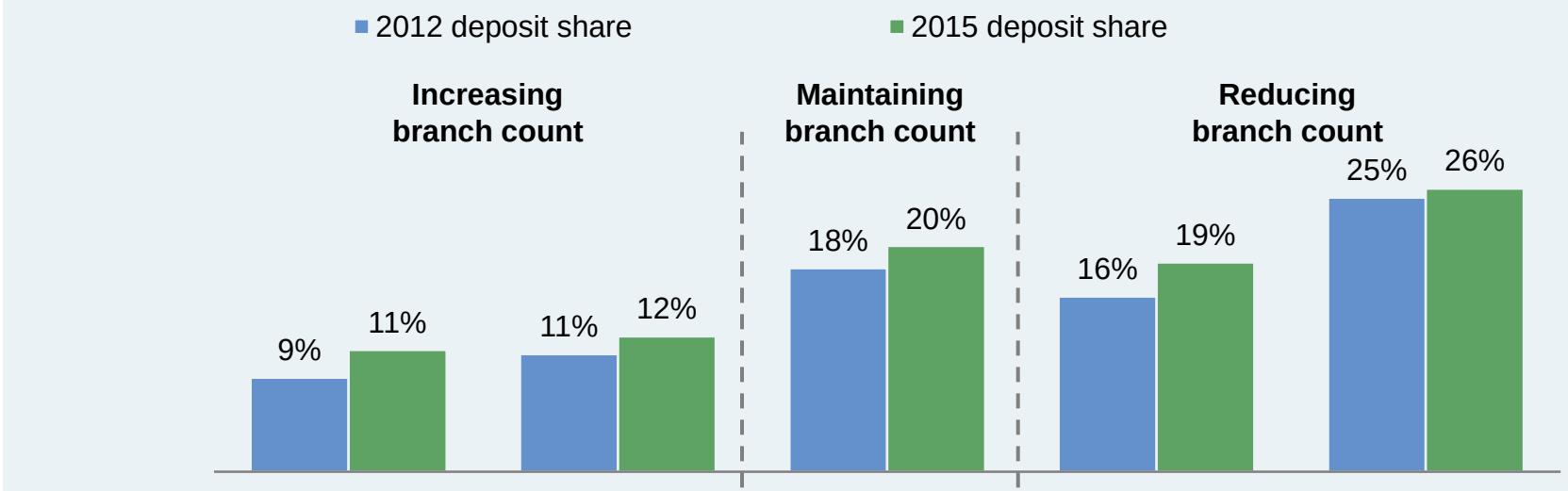
[1] Excludes relocations

Net change in branches



We are optimizing our branch network to support evolving customer needs while growing market share faster than the industry

Chase deposit share[1]

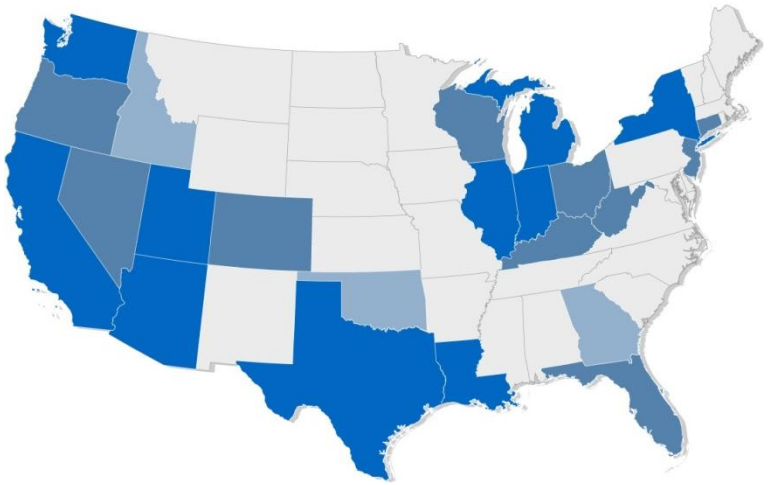


	Miami	San Francisco	Houston	Chicago	Phoenix
Net branch change	26	15	1	(49)	(31)
Net change in deposits ($B)	$4.9	$4.0	$5.5	$7.9	$2.8
Chase % change in deposits	48%	35%	31%	27%	24%
Industry % change in deposits	14%	18%	18%	6%	20%

[1] Source: FDIC 2015 Summary of Deposit survey per SNL Financial; excludes all branches with $500mm+ in deposits in the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks); includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC

We have an attractive footprint with strong positioning across the U.S.

Chase footprint advantages



Deposit Market Share

- Greater than 10% *(AZ, CA, IL, IN, LA, MI, NY, TX, UT, WA)*
- Between 5% and 10% *(CO, CT, FL, KY, NJ, NV, OH, OR, WI, WV)*
- All others *(GA, ID, OK)*

	Top 10 Chase deposit markets	Chase deposit rank[1]	Chase branch rank[1]
1	New York, NY	1	1
2	Los Angeles, CA	2	1
3	Chicago, IL	1	1
4	Houston, TX	1	1
5	Dallas-Fort Worth, TX	1	1
6	Miami, FL	3	3
7	San Francisco, CA	3	2
8	Phoenix, AZ	1	1
9	Detroit, MI	2	2
10	San Diego, CA	2	2

Branches serve all JPMC lines of business

[1] Source: FDIC 2015 Summary of Deposit survey per SNL Financial; excludes all branches with $500mm+ in deposits in the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks); includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC

Chase Consumer & Community Banking is a strong franchise with leadership positions across its businesses

Powerful customer franchise	■ Consumer relationships with almost half of U.S. households ■ #1 in primary bank relationships within Chase footprint[1]
Firmwide capabilities to meet customer needs	■ Access to J.P. Morgan investment expertise, advice, and market perspectives ■ Business Banking access to Treasury Services cash management solutions
Attractive footprint	■ Branch network concentrated in the highest growth U.S. markets[2] ■ Over 50% of affluent U.S. households live within 2 miles of a Chase branch or ATM
Leading position in digital banking	■ #1 most visited banking portal in the U.S.[3] ■ #1 rated mobile banking app[4]
World-class payments franchise	■ #1 in total U.S. credit and debit payments volume[5] ■ #1 wholly-owned merchant acquirer[5]
National, scale lending businesses	■ #1 credit card issuer in the U.S. based on loans outstanding[6] and #1 U.S. co-brand credit card issuer[7] ■ #2 mortgage originator and servicer[8] ■ #3 bank auto lender[9]

Note: For footnoted information, refer to appendix

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Notes on slide 8 – Credit losses are at low levels, but we rigorously monitor for signs of stress

1. Credit card net charge-off rate excludes held-for-sale loans
2. 2Q12 adjusted net charge-offs for Card Services were $1,254mm or 4.05%; excluding the effect of a change in charge-off policy for troubled debt restructurings, 2Q12 reported net charge-offs were $1,345mm or 4.35%
3. 4Q14 adjusted net charge-offs for Card Services were $797mm or 2.48% excluding losses from portfolio exits; 4Q14 reported net charge-offs were $858mm or 2.69%
4. 3Q12 adjusted net charge-offs for Auto Finance exclude the effect of an incremental $55mm of net charge-offs based on regulatory guidance
5. 3Q12 adjusted net charge-offs for Mortgage Banking exclude the effect of an incremental $825mm of net charge-offs based on regulatory guidance
6. 4Q12 adjusted net charge-offs for Mortgage Banking reflects a full quarter of normalized Chapter 7 Bankruptcy discharge activity, which exclude one-time adjustments related to the adoption of Chapter 7 Bankruptcy discharge regulatory guidance

Notes on slide 13 – Customer preference for our digital assets enables us to lower cost to serve

1. Primary bank digitally-centric is defined as primary bank households conducting at least three digital transactions (excluding logins, including Chase QuickDeposit, transfers, Bill Pays, wires, etc.) per quarter and visiting the branch or speaking to a live rep no more than once per quarter.
2. Attrition includes households that close all Chase accounts; average of annualized monthly attrition rates over 12 months for 2015
3. Average annual service cost includes transaction expense (e.g., teller visits, personal banker visits, ATM transactions, etc.), account expenses (e.g., check ordering, debit re-issue, etc.) and overdraft losses

Notes on slide 50 – Chase Consumer & Community Banking is a strong franchise with leadership positions across all its businesses

1. TNS 3Q15 Retail Banking Monitor; based on total U.S. (~5K surveys per quarter) and Chase footprint (~2.8K surveys per quarter); TNS survey questions used to determine primary bank: “With which banks do you currently do business? Which do you consider to be your main or primary bank?”
2. Highest growth U.S. markets refers to top 30 core based statistical areas by deposit balance growth from 2011 to 2015, per SNL Financial
3. Per compete.com as of January 2016
4. Based on Javelin Research mobile banking app ratings as of January 2015; ranking is among large banks
5. Nilson data for full year 2014
6. Based on disclosures by peers (Citi, Bank of America, Capital One, American Express, Discover)
7. Based on Phoenix Credit Card Monitor for 12-month period ending September 2015; based on card accounts and revolving balance dollars
8. Based on Inside Mortgage Finance as of 4Q15 for Servicer and Originator rankings
9. Per Experian AutoCount data for December 2015 YTD; bank auto lenders are non-captive auto lenders

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2015, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

ASSET MANAGEMENT

Mary Erdoes, Chief Executive Officer Asset Management

February 23, 2016

JPMorgan Chase & Co.

Consistent growth across a world-class franchise

Strong investment culture

- Client-focused, fiduciary culture
- 84% of 10-year long-term mutual fund AUM in top 2 quartiles[1]
- Positive client asset flows every year since 2004

Growth engine within JPMC

- Consistency – high margin, high ROE, predictable growth
- Breadth – diversified earnings from multiple products, channels, and regions
- Depth – strong global client-centric franchises, each with significant room to grow

World's best clients

- Serving institutional and individual clients in over 130 countries
- World's most sophisticated clients, including large pensions, sovereigns, central banks
- J.P. Morgan Private Bank unmatched in serving the world's wealthiest

Difficult to replicate

- Fiduciary mindset ingrained since mid-1800s
- Countless learnings with client relationships spanning centuries
- Invaluable benefit of being part of JPMC

Our strategic priorities

- Continue to deliver top-tier, long-term investment performance
- Continue to drive efficiencies while reinforcing infrastructure and control environment
- Continue to innovate, and invest in people, products, and processes

For important footnoted information, please refer to notes appendix

2015 highlights – Continued growth of revenue, credit balances, and top-rated funds, and increasing productivity

Record

			2010	2015	5-yr CAGR
Leads with investment performance		Mutual funds with a 4/5 star rating (#)[1]	157	*231*	*+74*
		Assets under management ($T)	$1.3	*$1.7*	*6%*
		Client assets ($T)	$1.8	*$2.4*	*5%*
Record growth and results		Revenue ($B)	$9.0	*$12.1*	*6%*
		Deposits ($B)	$92	*$147*	*10%*
		Loans (ex-mortgages) ($B)	$44	*$84*	*14%*
		Mortgages ($B)	$11	*$29*	*22%*
World-class salesforce	GWM	PB client advisors (#)	2,247	*2,328*	*1%*
		PB revenue / client advisor ($mm)	$1.7	*$2.2*	*6%*
	GIM Inst'l	Institutional salespeople	112	*121*	*2%*
		Institutional revenue / salesperson ($mm)	$9.7	*$13.4*	*7%*
	GIM Retail	Funds senior salespeople	218	*283*	*5%*
		Funds revenue / senior salesperson ($mm)	$7.3	*$9.3*	*5%*

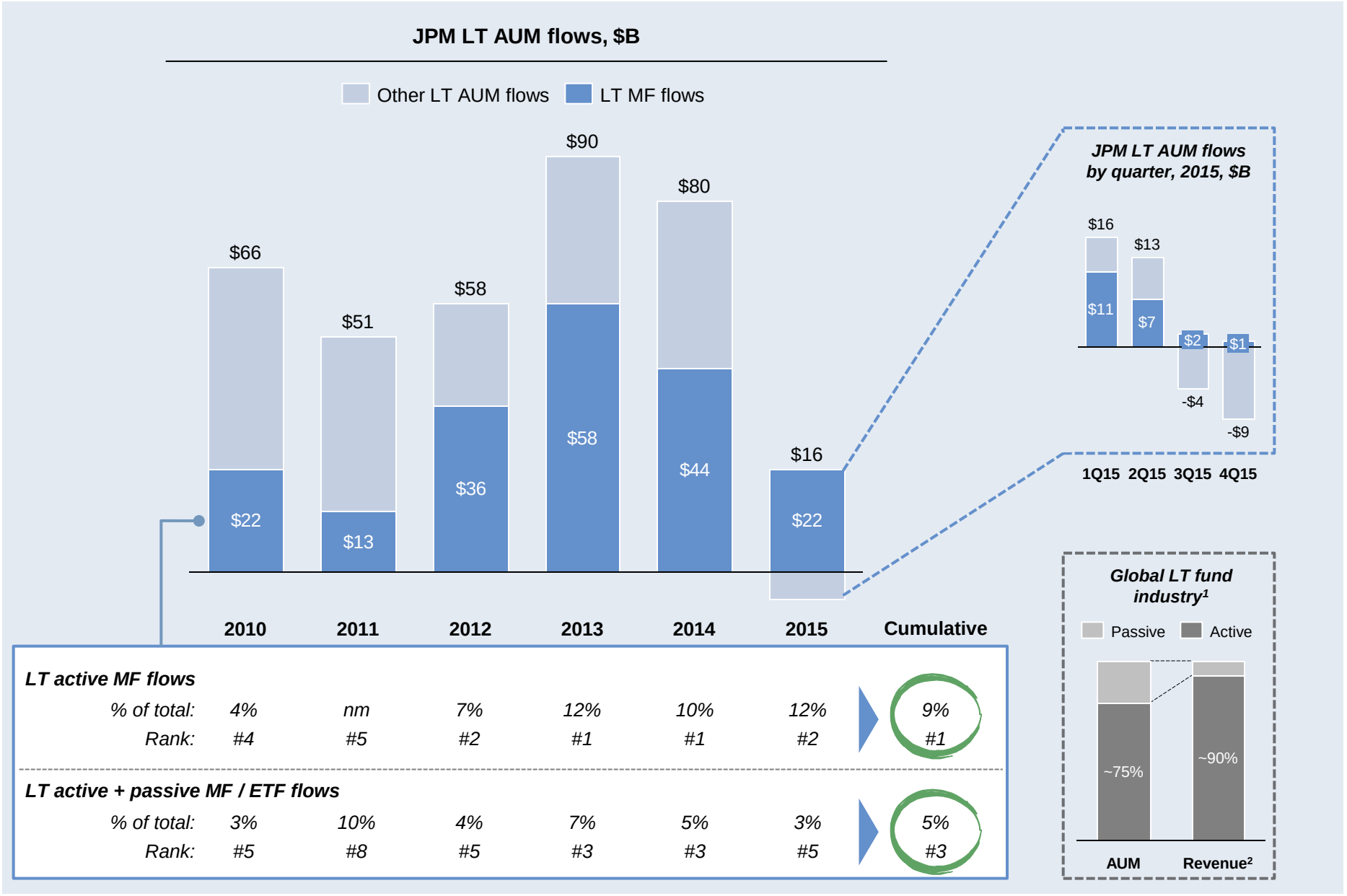
ASSET MANAGEMENT

For important footnoted information, please refer to notes appendix

Diversified, predictable, capital-efficient business



2015 flows positive but below historical levels



LT active MF flows							
% of total:	*4%*	*nm*	*7%*	*12%*	*10%*	*12%*	*9%*
Rank:	*#4*	*#5*	*#2*	*#1*	*#1*	*#2*	*#1*
LT active + passive MF / ETF flows							
% of total:	*3%*	*10%*	*4%*	*7%*	*5%*	*3%*	*5%*
Rank:	*#5*	*#8*	*#5*	*#3*	*#3*	*#5*	*#3*

Source: Company filings, Strategic Insight Simfund

[1] Industry represents open-end long-term registered products; excludes Fund of Funds

[2] Revenue based on management fees only

Flows across diverse channels, regions, and products

< $(100mm) Flat > $100mm

LT flows by channel, region, and product ($B)



Overall LT client asset flows of publicly traded companies

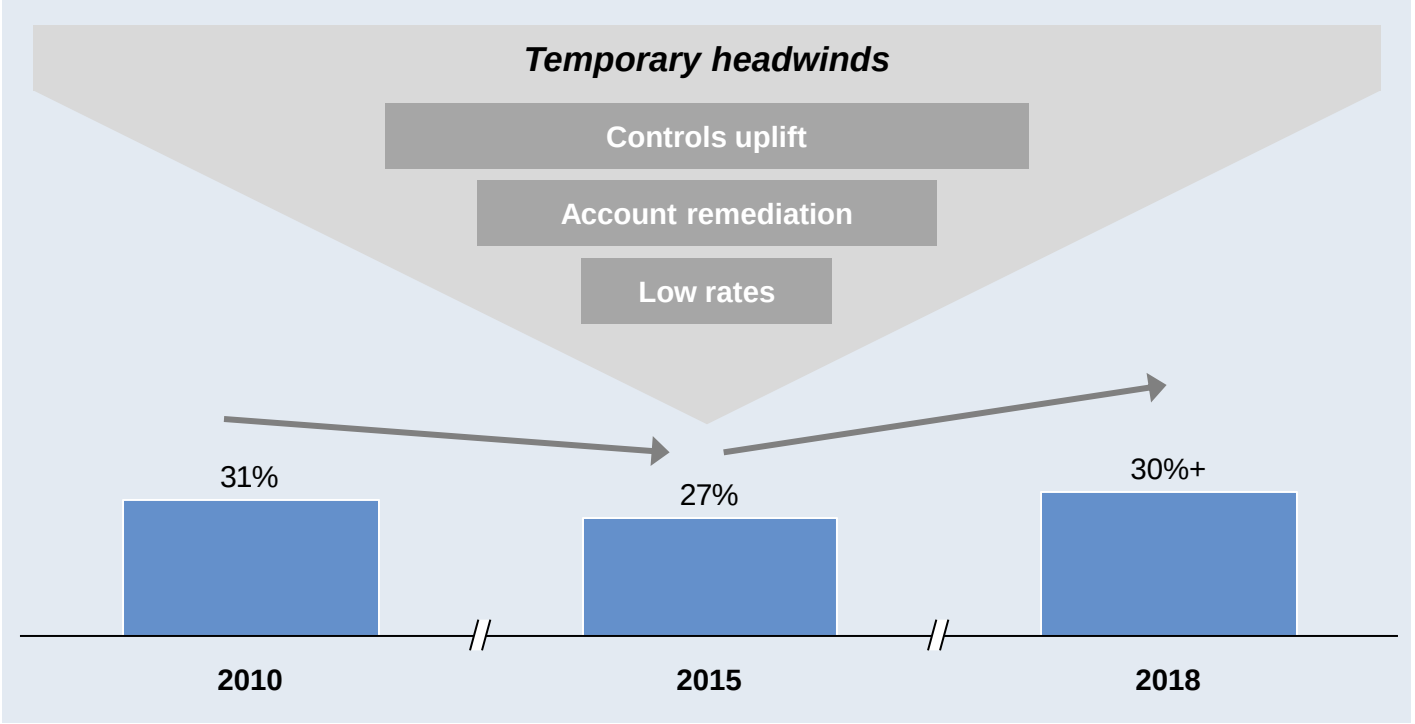
Ranking of LT client asset flows ($B) for key peers

2011	2012	2013	2014	2015	2011-2015 avg. flows ($B)	*2011-2015 avg. flows ($B)*
JPM $103	Peer 3	Peer 5	Peer 5	Peer 5	Peer 5	*$97[1]*
Peer 1	JPM $101	Peer 1	JPM $100	Peer 11	JPM	***$83[2]***
Peer 2	Peer 1	JPM $84	Peer 11	Peer 6	Peer 1	*$54[1]*
Peer 3	Peer 4	Peer 4	Peer 4	Peer 12	Peer 4	*$50[3]*
Peer 4	Peer 7	Peer 2	Peer 2	Peer 4	Peer 2	*$46[4]*
Peer 5	Peer 2	Peer 7	Peer 12	Peer 7	Peer 11	*$38[5]*
Peer 6	Peer 11	Peer 11	Peer 7	Peer 2	Peer 7	*$37[1]*
Peer 7	Peer 10	Peer 6	Peer 1	JPM $28	Peer 6	*$31[6,7]*
Peer 8	Peer 9	Peer 9	Peer 6	Peer 8	Peer 8	*$15[1]*
Peer 9	Peer 8	Peer 8	Peer 8	Peer 10	Peer 10	*$5[8]*
Peer 10	Peer 6	Peer 10	Peer 10	Peer 1	Peer 12	*$3[6]*
Peer 11	Peer 5	Peer 12	Peer 9	Peer 9	Peer 9	*$(4)[1]*
Peer 12	Peer 12	Peer 3	Peer 3	Peer 3	Peer 3	*$(55)[9]*

Source: Company filings, J.P. Morgan estimates
Note: Includes competitors in peer group with publicly reported financials and 2015 client assets of at least $500B: Allianz, BAC, BEN, BK, BLK, CS, DB, GS, IVZ, MS, TROW, UBS
For important footnoted information, please refer to notes appendix

Continuing to invest in people and technology through temporary headwinds

Pretax margin



Expenses leveling off

Controls	+ ~130%	Flat
Operations	+ ~30%	Flat
Tech production	+ ~10%	Down

Continued investment in growth

Tech initiatives	+ ~30%	+ ~70%
Front office headcount	+ ~500 people	+ ~250 people

Invaluable benefit from being part of JPMorgan Chase

	JPMC	Asset Management
Brand / Marketing	▪ #20 *Fortune* most admired company ▪ ~$3B marketing spend	▪ ~$100mm marketing spend
Talent	▪ 250,000 employees[1] ▪ Recruited 2% of applicants for 31K jobs	▪ 1,400 employees to/from AM/Firm
Products / Distribution	▪ 5K+ branches ▪ ~18K ATMs	▪ ~40% GWM clients use branch
Real Estate	▪ 75mm square feet of property ▪ ~6,000 locations globally	▪ Shared client centers around world ▪ Landmark locations
Technology	▪ $9B+ tech spend ▪ $600mm+ cybersecurity	▪ ~$700mm+ tech spend ▪ ~$50mm+ cybersecurity
Community Engagement	▪ $200mm+ of giving per year	▪ Serves ~4,000 endowments and foundations

[1] Includes employees and contractors

GIM: Built on a foundation of exceptional investment capabilities



Superior client outcomes

- Strong investment performance: 84% of 10-year LT mutual fund AUM in top 2 quartiles[1]
- Serve 60% of world's largest pension funds, sovereign wealth funds, and central banks

Global talent

- Local presence in over 20 countries and 70 cities, with 600+ portfolio managers
- Retention rate of >95% for top senior portfolio management talent

Long-term focus

- Continued product innovation: 40 fund launches in 2015
- ETFs: strategic beta focus, constant evaluation of passive solutions

Insights driven

- 250+ research analysts, 30+ market strategists, 5,000+ company visits
- "Guide to the Markets" thought leadership published in 12 languages and 25 countries

For important footnoted information, please refer to notes appendix

Leading mutual fund performance across asset classes globally

	% of 2015 MF AUM over peer median[1] (net of fees)			Example funds (3-yr performance percentile)[2]	Global active LT MF AUM rank[3]	
	3-year	*5-year*	*10-year*		*2010*	*2015*
Equity	82%	81%	87%	■ Growth Advantage (3%)[4] ■ Europe Equity Plus (3%)[5]	#7	#5
Fixed Income	78%	68%	77%	■ Core Plus Bond (9%)[6] ■ Global Bond Opps (8%)[4]	#6	#5
Multi-Asset Solutions	72%	94%	84%	■ SmartRetirement 2030 (13%)[7] ■ Global Allocation (7%)[4]	#17 (US)	#6 (US)
Total[8]	78%	80%	84%			
				LT active MFs	**#8**	**#6**
				LT active + passive MFs / ETFs	**#9**	**#7**

For important footnoted information, please refer to notes appendix

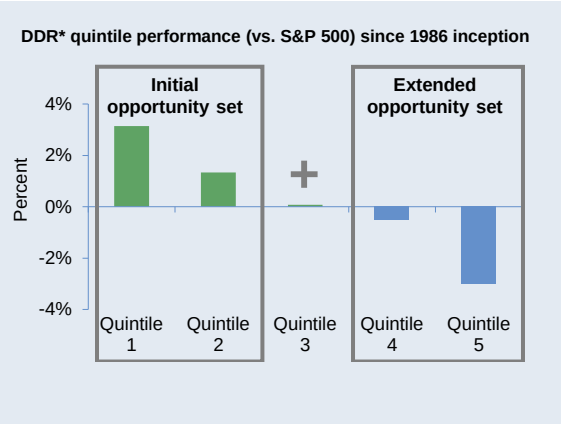
[1] Represents the proportion of retail open-ended mutual fund assets that are ranked above peer category median. See notes appendix for additional details

30-year proven process in US Core equities

Information Advantage

- 27 U.S. career analysts
- 17 years average experience
- Leverage team of 225 int'l analysts

Systematic Valuation



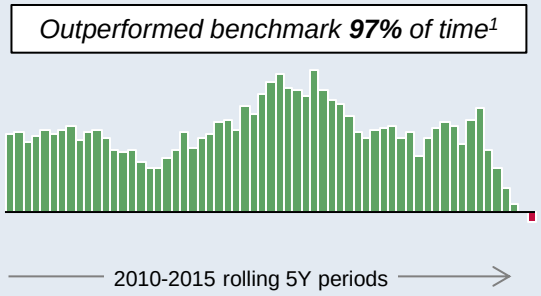
Portfolio Construction

- Starts with analyst DDR rankings
- 9 portfolio managers, 11 traders
- Shorting stocks since early 90's

Investment process has led to strong results vs. benchmark and peers

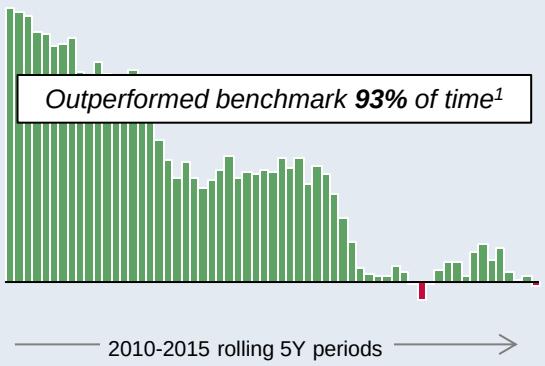
Disciplined Equity Fund

10Y avg. alpha **40bps (11th %ile)**



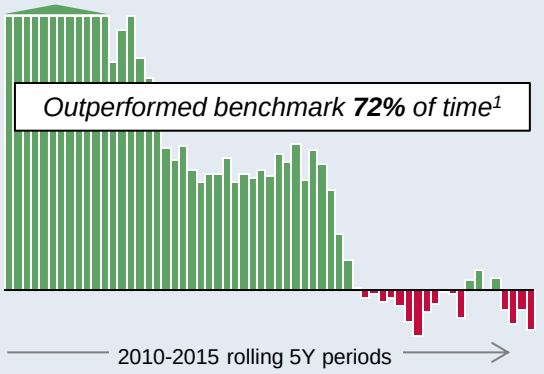
US Equity Fund

10Y avg. alpha **153bps (4th %ile)**



US Large Cap Core Plus Fund

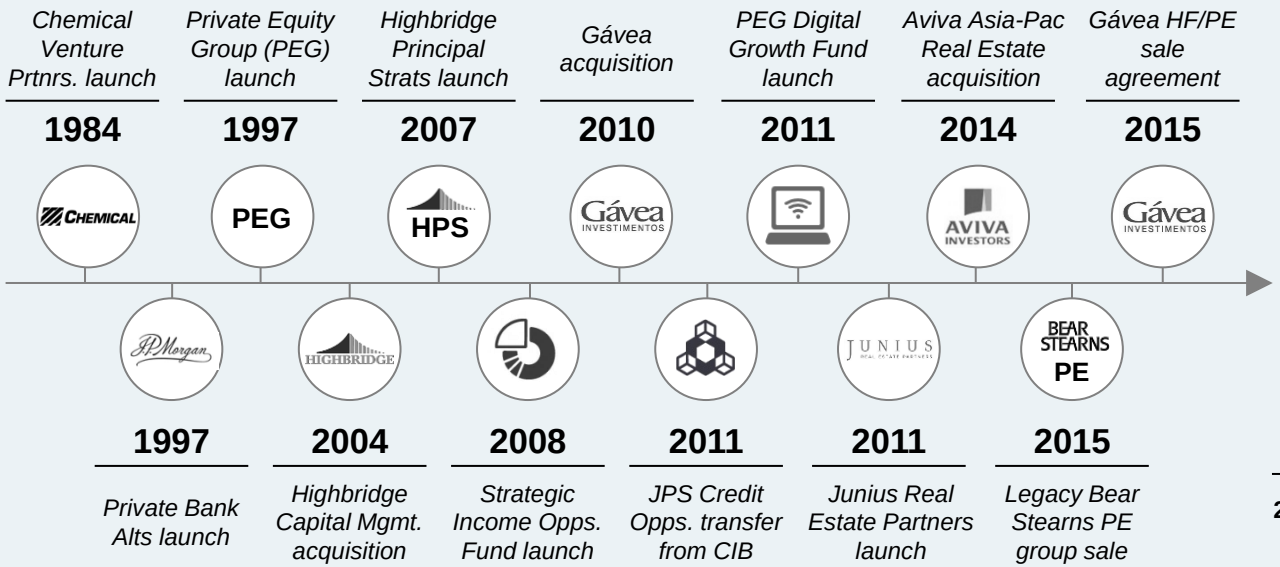
10Y avg. alpha **231bps (2nd %ile)**

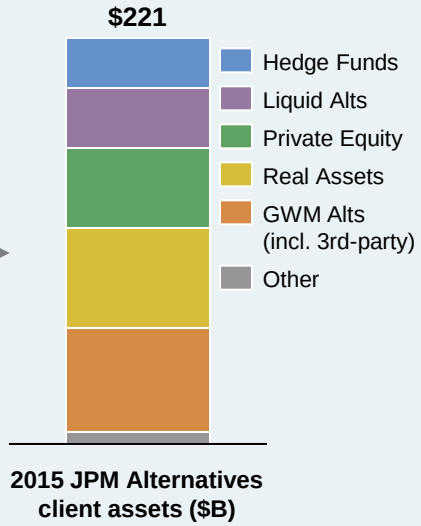


Source: J.P. Morgan Asset Management, Morningstar. Data are as of 12/31/15.
For important footnoted information, please refer to notes appendix

Over three decades of alternative investment innovation

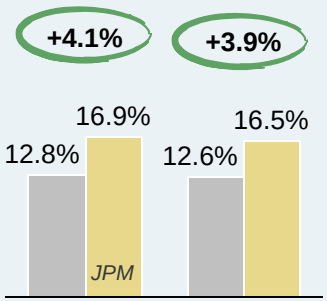
Strengthening and evolving alternatives platform



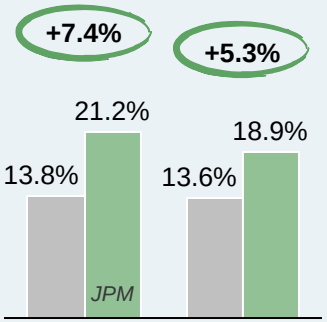


Strong performance across our Alternative strategies[1]

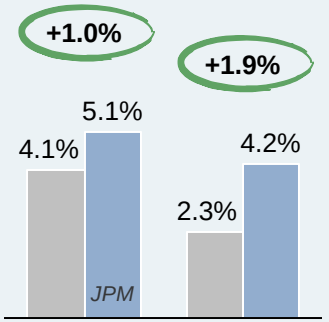
U.S. Value-Add Real Estate (NFI-ODCE)



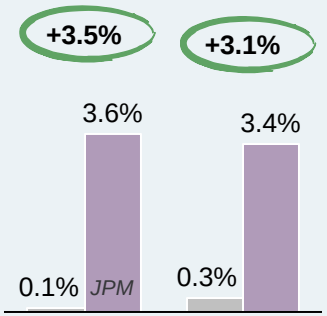
Private Equity (Cambridge Global PE & VC)



Diversified Hedge Fund (HFRI FoF Diversified)



Alternative Beta (LIBOR 1 Month EUR)

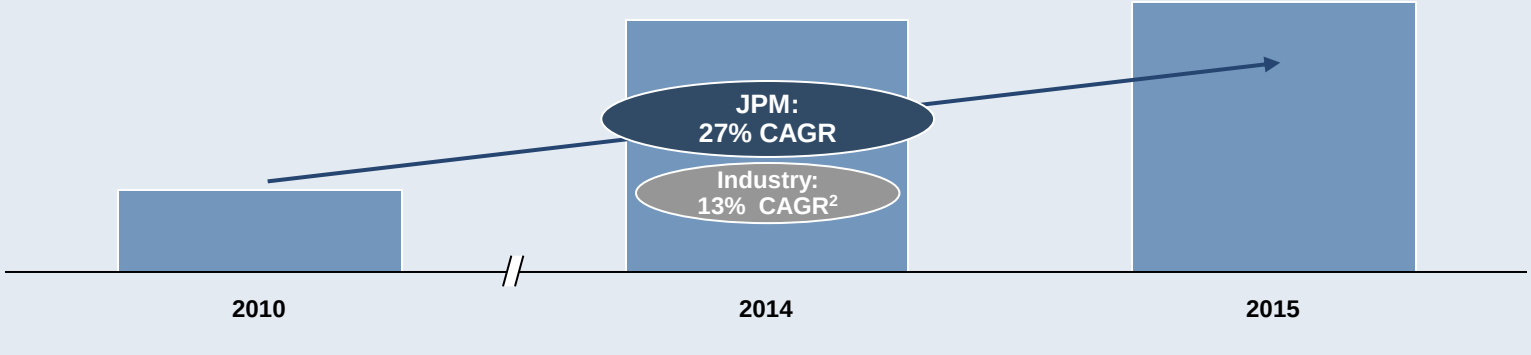


ASSET MANAGEMENT

For important footnoted information, please refer to notes appendix

Strong Solutions business leveraging underlying product platforms

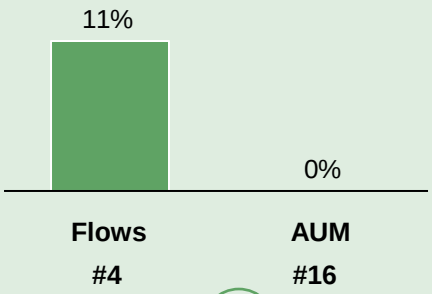
GIM Global Solutions AUM[1]



World Allocation[3]

JPM Global Allocation

2015 share %

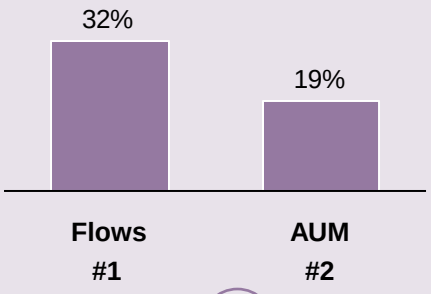


*Performance **7th** percentile in category (3-yr)[6]*

EUR Moderate Allocation – Global[4]

JPM Global Income

2015 share %

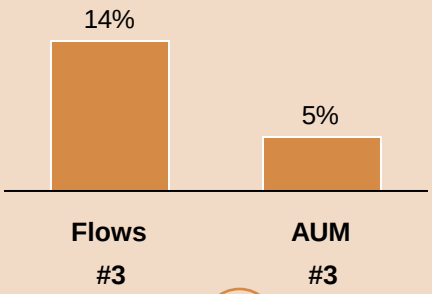


*Performance **22nd** percentile in category (5-yr)*

Target Date Fund[5]

JPM Target Date suite

2015 share %

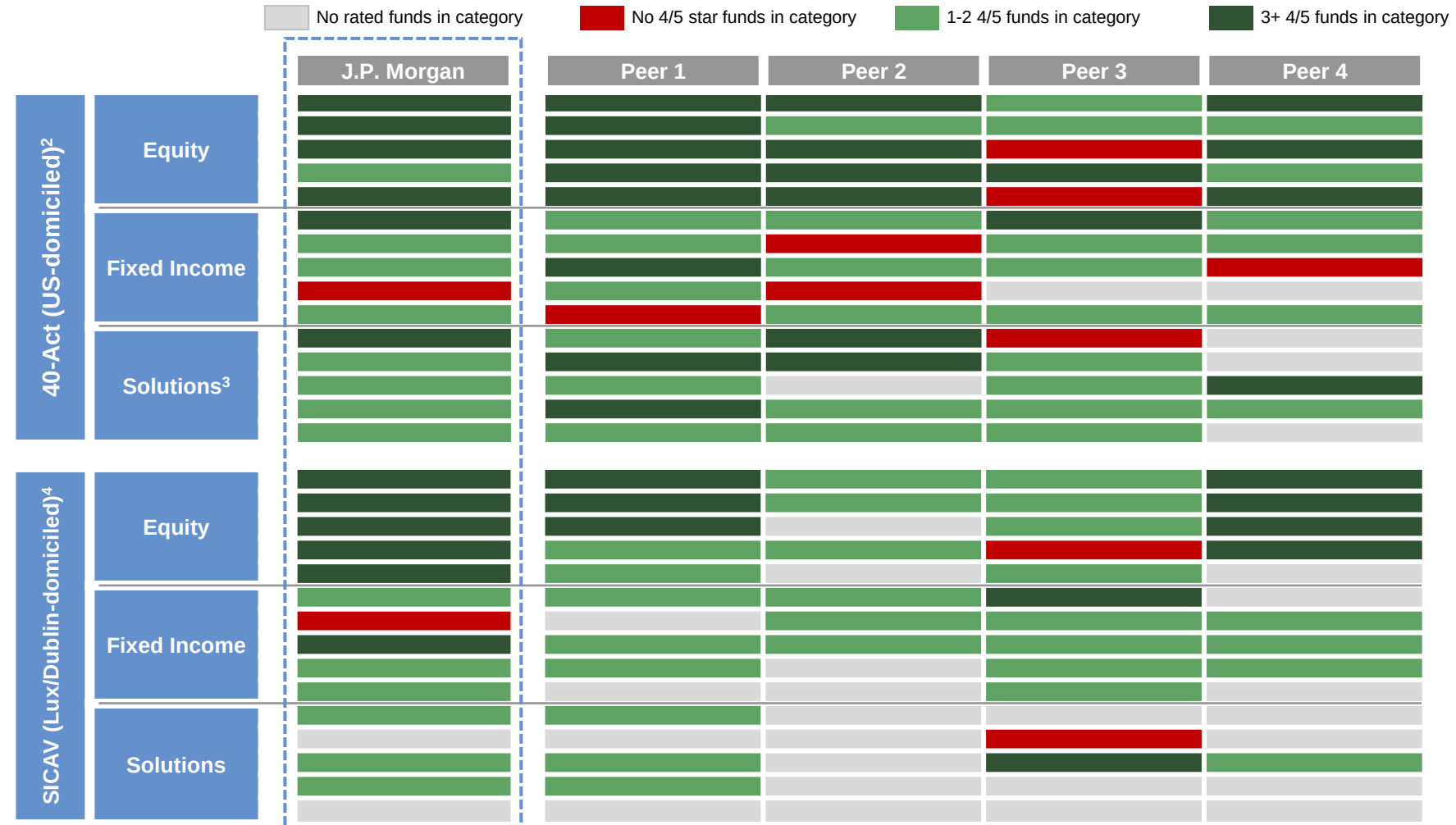


*Performance **13th** percentile in category (5-yr)[7]*

Source: Morningstar, Strategic Insight Simfund, eVestment
For important footnoted information, please refer to notes appendix

GIM's success is driven by the breadth, depth, and quality of our product offering

4/5-star mutual funds in largest LT active categories by AUM (top 5 managers by 4/5-star fund count in these categories)[1]

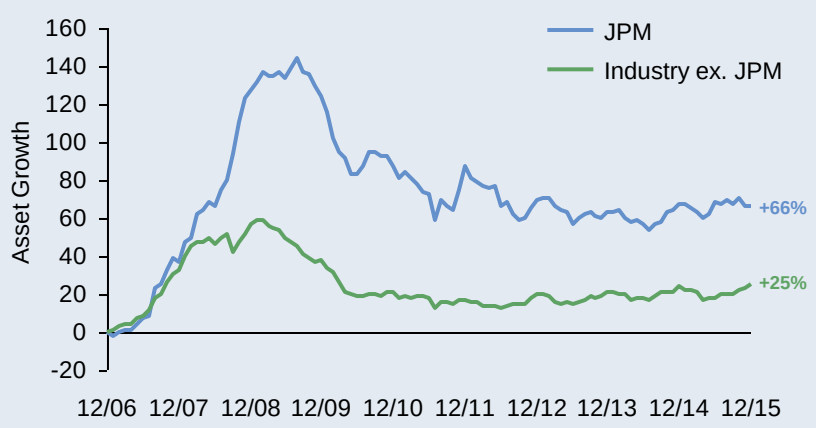


	J.P. Morgan	Peer 1	Peer 2	Peer 3	Peer 4
Total 4/5-star funds in					
Largest categories (above):	**78**	**72**	**46**	**38**	**38**
All categories[5]:	**231**	**412**	**106**	**183**	**100**

Source: Strategic Insight Simfund, Morningstar – as of December 31, 2015
Note: Peer group includes BLK, Fidelity, GS, TROW
For important footnoted information, please refer to notes appendix

Market leading Liquidity platform

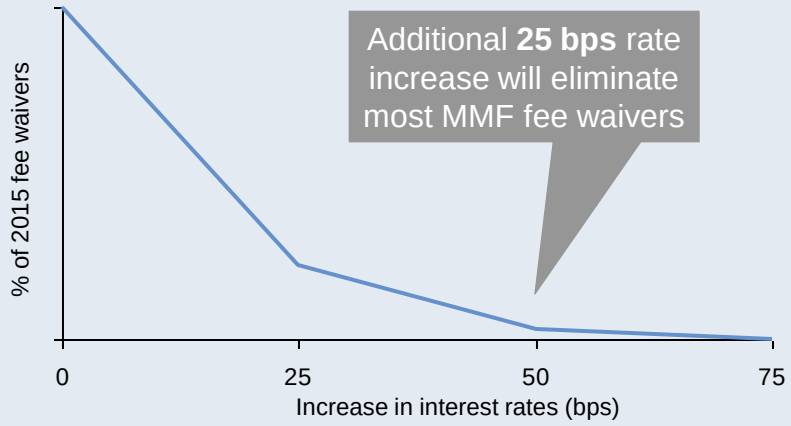
Global Money Market asset growth (USD and EUR)



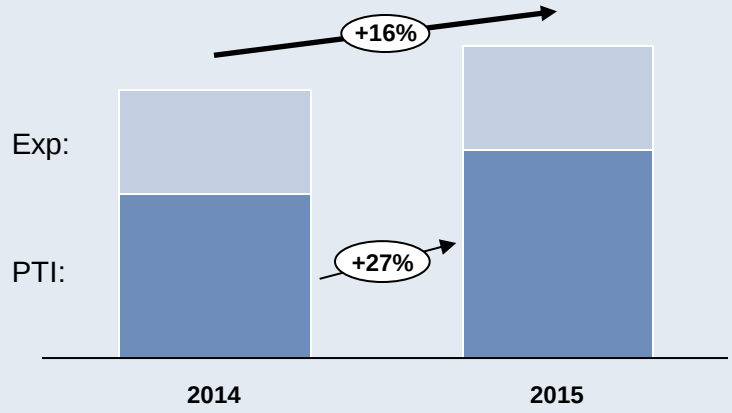
Consistent global MMF rankings

2006	Firm	AUM ($B)	2015	Firm	AUM ($B)
1	Fidelity	$271	1	Fidelity	$458
2	**J.P. Morgan**	**246**	**2**	**J.P. Morgan**	**384**
3	BlackRock	183	3	BlackRock	328
4	Federated	155	4	Goldman Sachs	262
5	Vanguard	147	5	Federated	221
6	BofA Global Capital	138	6	Dreyfus/BK	189
7	Schwab	136	7	Vanguard	180
8	Goldman Sachs	120	8	Schwab	166
9	Legg Mason	108	9	State Street	154
10	Dreyfus/BK	106	10	Morgan Stanley	153

Impact of rate environment



Growing revenue and PTI



Source: iMoneyNet

GWM: Superior global franchise across wealth segments

Leading with advice

- Advice-driven wealth management based on unique integrated team model
- Experienced talent across functions and regions: average MD tenure of 15+ years

Innovation

- Expanding product breadth & depth: >20 new alts offerings, 6 thematic strategies in 2015
- Enhancing digital client experience, including delivery of intellectual capital

Client reach

- Trusted advisor to clients across the wealth spectrum, including integration with CWM
- Continued investment in global footprint, serving clients in ~100 countries, even as competitors retrench

Holistic balance sheet approach

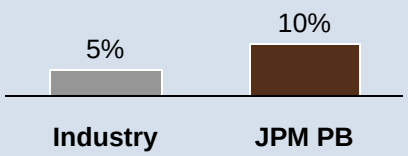
- Global, multi-currency deposit institution: ~$150B balances
- Leading lender to world's major families: ~$110B balances

Market share gains and productivity increases in changing industry landscape

Continued global growth as competitors retrench

N. America

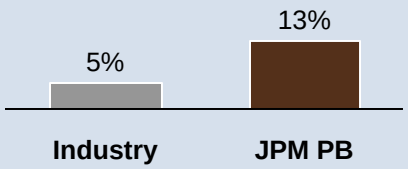
2006-14 client asset CAGR



JPM PB market share

4%

LatAm



JPM PB market share

1%

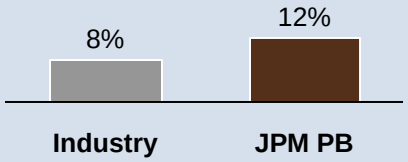
EMEA



JPM PB market share

<1%

Asia

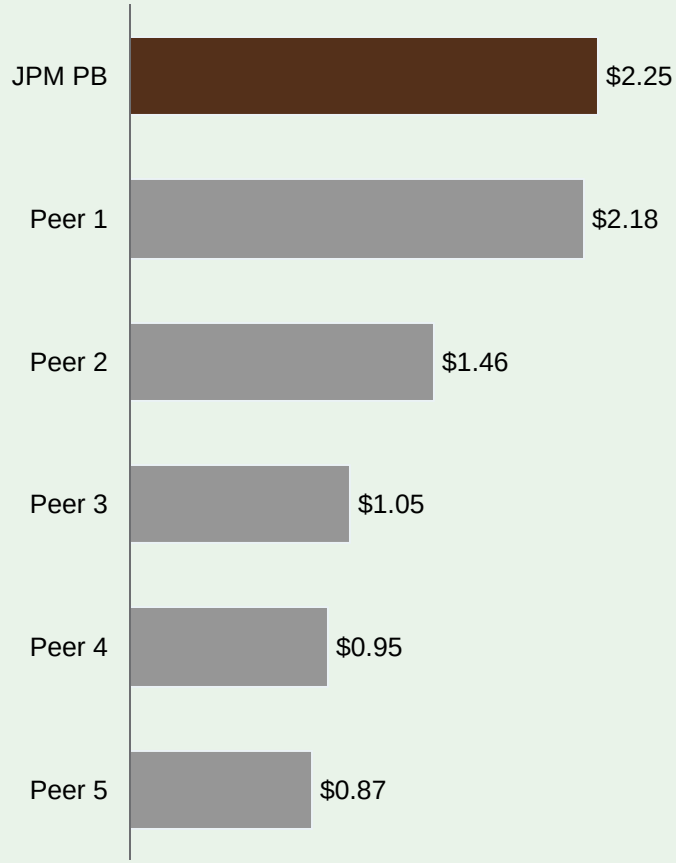


JPM PB market share

<1%

Industry-leading productivity

2015 revenue / client advisor ($mm)

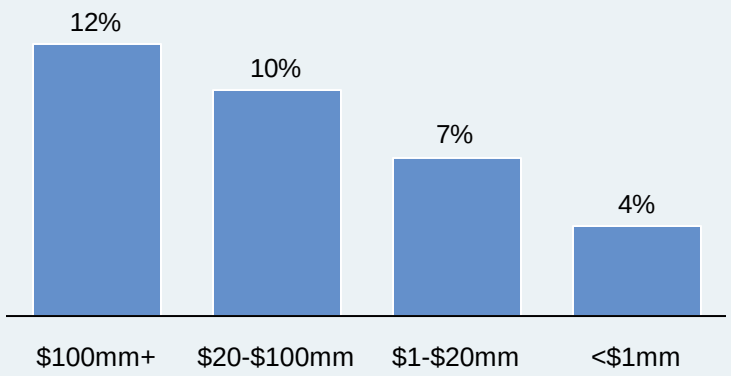


Source: Capgemini World Wealth Report 2015
Note: Includes competitors in peer group: BAC, CS, MS, UBS, WFC

Uniquely positioned with UHNW clients and continuing to innovate

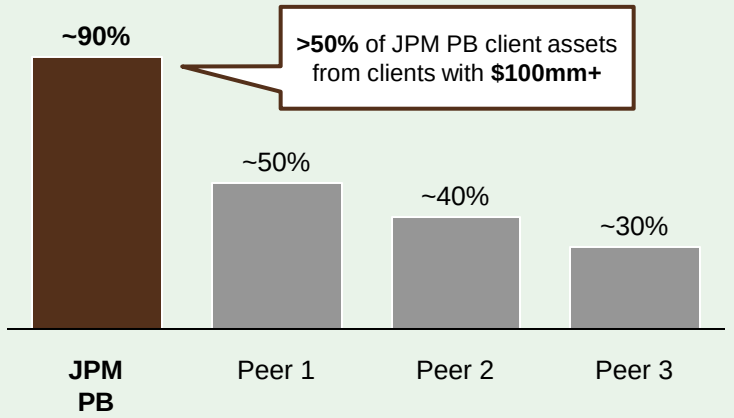
UHNW segments growing fastest

Projected 2014-2019 CAGR of industry private wealth



JPM PB uniquely positioned among UHNW clients

% client assets from clients with $10mm+



Delivering continuous innovation to the world's most sophisticated clients

Client Needs	JPM capabilities	JPM AM	Other LOBs
Customized investments and trading	Institutional discretionary coverage	✓	
	Institutional markets access and execution	✓	✓
Access to direct investments and M&A opportunities	Direct investments	✓	✓
	Investment banking services	✓	✓
Advice on family governance, wealth planning, and philanthropy	Family and capital advisory services	✓	✓
	Philanthropic advisory	✓	✓

Source: BCG Global Wealth Report 2015, company filings
Note: Includes competitors in peer group who publicly report statistic: BAC, MS, UBS

Innovative managed solutions extend our thematic conversations with clients

= >$500mm raised

Thematic managed investment solutions

Equity income

- Focused Dividend Growth
- Focused Equity Income
- International High Dividend
- Select Equity Opps.
- US SMID Cap Dividend Growth
- Preferred Securities
- Emerging Market Growth & Income
- MLPs
- Focused Global Dividends
- Dividend Leaders Strategy
- Small Cap Dividend Growth
- MLP & Energy
- Index Oriented Equity

Cyclical sectors

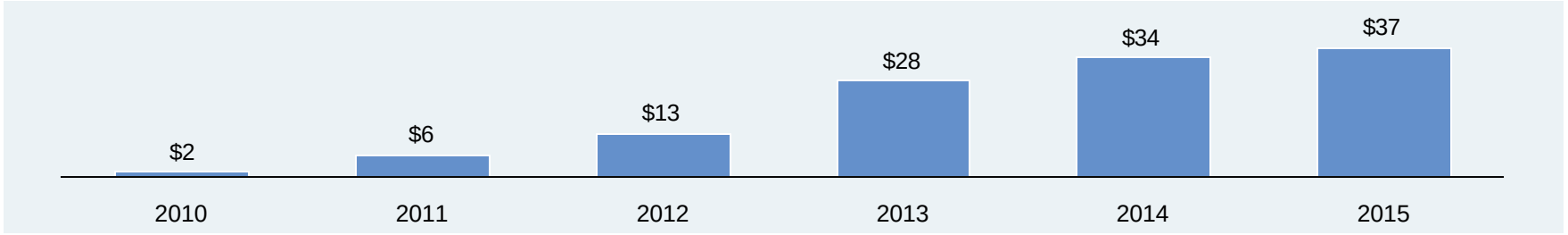
- US Tech Leaders
- Focused Tactical Equity
- Global Opportunistic Equity
- Global Healthcare
- Consumer Recovery
- Housing Recovery
- US Energy & Industrial
- Global Bank Opportunity
- Digital Evolution

Other themes

- Changing interest rate environment
  - Dynamic Yield
  - Multi Asset Real Return
  - Absolute Return Fixed Income
- European recovery
  - Focused Euro Multinational
  - European Opps.
- Alternatives
  - Managed Alternatives
- Asia growth
  - Emerging Asia
  - Japan Active Growth

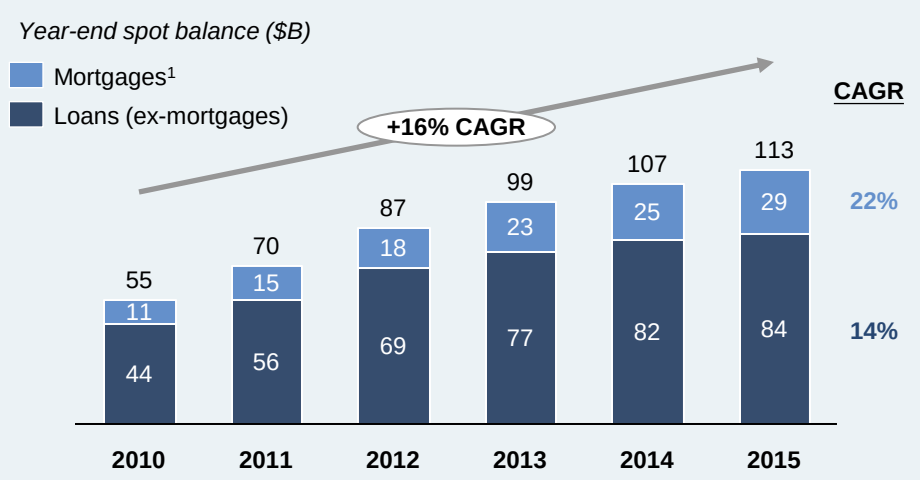
2010 2011 2012 2013 2014 2015

Thematic managed solutions AUM ($B)

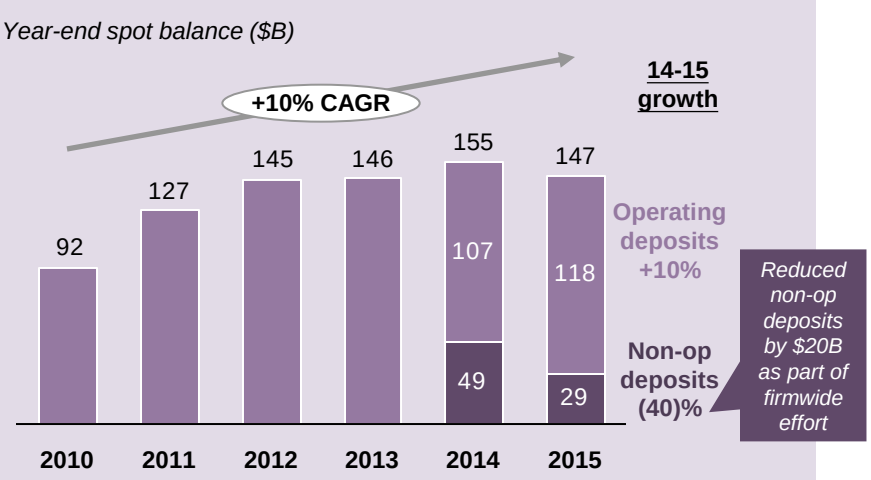


Continuing to advise clients on both sides of their balance sheet

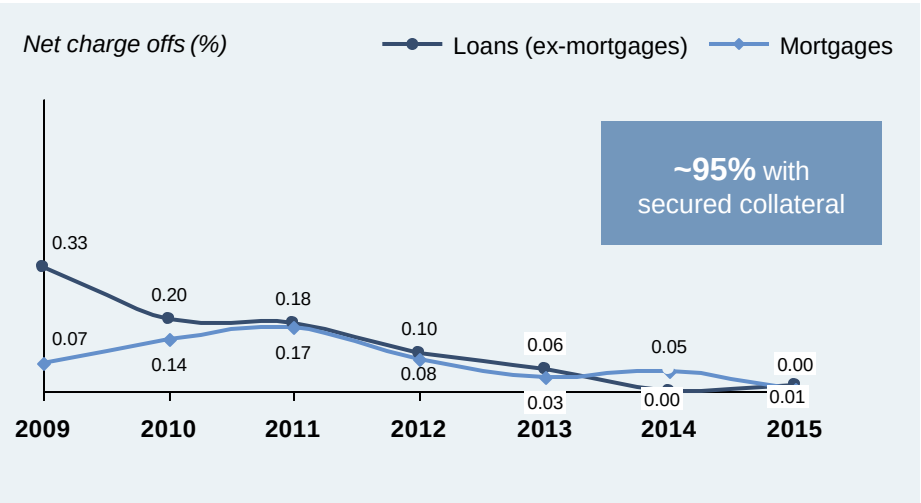
Strong growth in credit book…



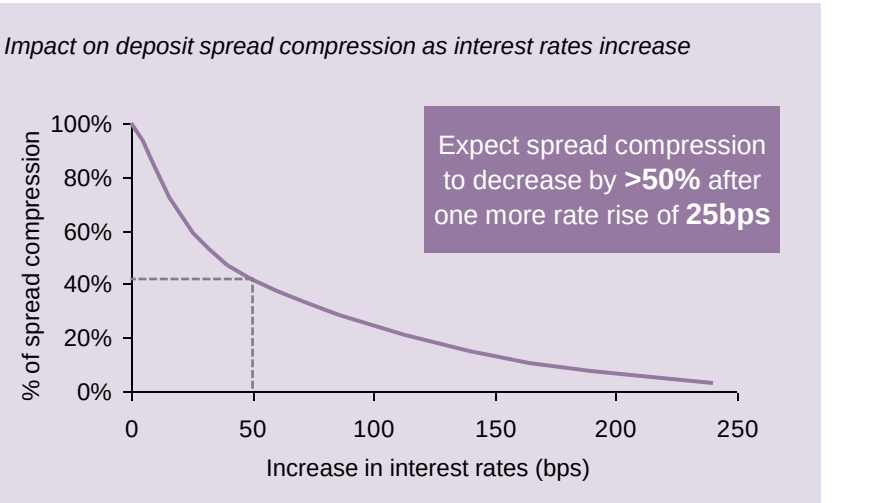
Optimizing deposits business…



…with consistently low charge-off rates



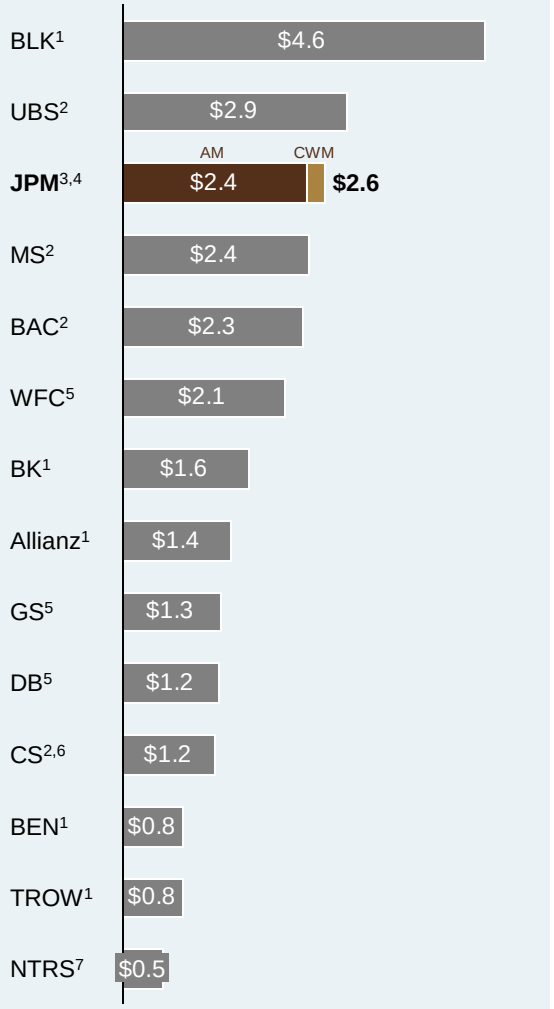
…and benefiting from expanding spreads as rates rise



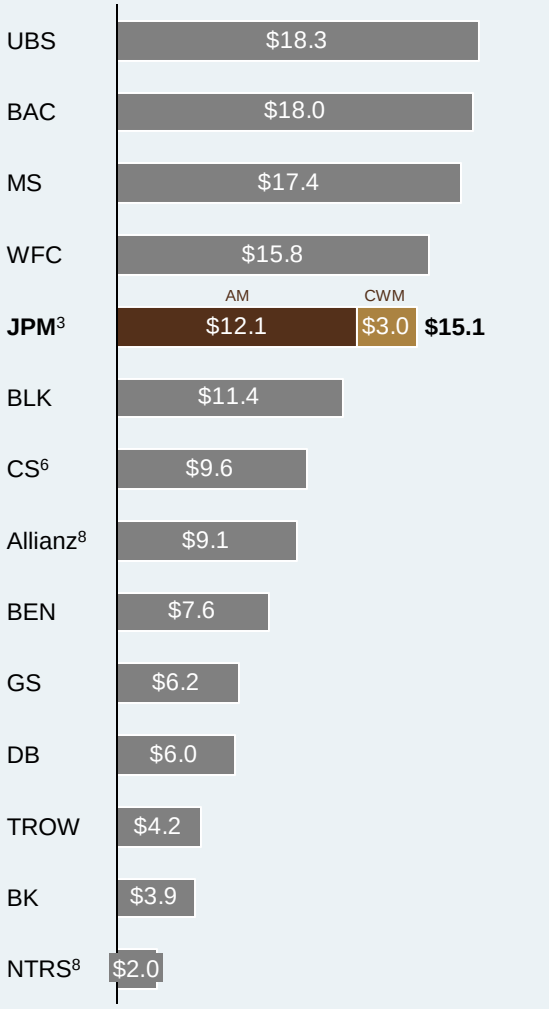
[1] Includes $2.1B of CIO portfolio prime mortgage loans

Combined Asset Management and Chase Wealth Management produce strong results

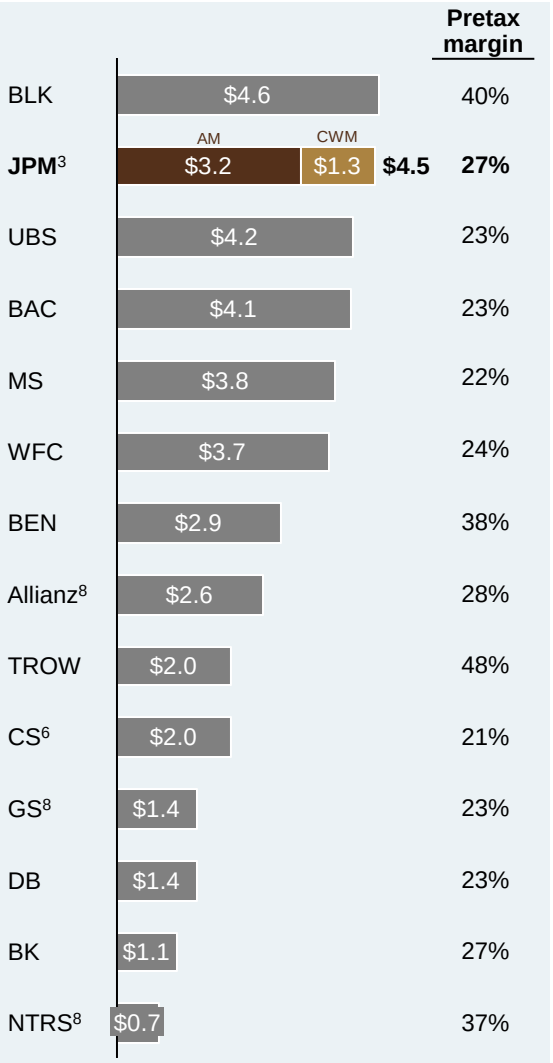
2015 Client assets ($T)



2015 Revenue ($B)



2015 Pretax income ($B)



Source: Company filings, J.P. Morgan estimates
For important footnoted information, please refer to notes appendix

We are uniquely positioned in the industry and poised for continued growth

Top investment performance

- **Unmatched** number of 4/5-star funds in largest US and international categories
- **>95% retention** rate for senior PM talent

Breadth and depth of offering

- **Uniquely diverse** presence across asset classes and client channels around the world
- **Continually evolving** offering, including 40 new MF products and >20 new GWM alts offerings

J.P.Morgan Asset Management

Diverse global client base

- 60% of **world's largest** pension funds, sovereign wealth funds, and central banks
- Serve **entire wealth spectrum**, from retail investors to multi-billionaires

JPMC franchise

- **Premier brand** and deep talent bench
- Revenue and expense **synergies** with Corporate and other LOBs

Growth targets	Revenue	Pretax income	Pretax margin	ROE	LT AUM flows
	+5-10% p.a	+10-15% p.a.	30%+	25%+	+4-6%

Medium-term guidance

Revenue $12B → $15B	Pretax income $3B → $5B	Client assets $2T → $3T

Notes appendix

Page 1

1. The "% of 10-year LT mutual fund AUM in top 2 quartiles" analysis represents the proportion of assets in mutual funds that are ranked in the top 2 quartiles of their respective peer category on a 10-year basis as of December 31, 2015. The sources of these percentile rankings, peer category definitions for each fund and the asset values used in the calculations are: Lipper (U.S. and Taiwan-domiciled funds), Morningstar (UK, Luxembourg and Hong Kong-domiciled funds), Nomura (Japan-domiciled funds), and FundDoctor (South Korea-domiciled funds). The analysis includes only Global Investment Management retail open-ended mutual funds that are ranked by the aforementioned sources. The analysis is based on percentile rankings at the share class level for U.S. domiciled funds, at the 'primary share class' level for Luxembourg, UK, and Hong Kong-domiciled funds and at the aggregate fund level for all other funds. The 'primary share class' is defined by Morningstar and denotes the share class considered the best proxy for the fund. Where peer group rankings given for a fund are in more than one 'primary share class' territory both rankings are included to reflect local market competitiveness (applies to 'Offshore Territories' and 'HK SFC Authorized' funds only). The analysis excludes money market funds, Undiscovered Managers Fund, and Brazil and India-domiciled funds. The asset values were redenominated into U.S. dollars using exchange rates from the aforementioned sources. The analysis pertains to percentage of assets under management, not percentage of funds. The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future performance, which may vary

Page 2

1. The "mutual funds with a 4/5 star rating" analysis is sourced from Morningstar for all funds with the exception of Japan-domiciled funds; Nomura was used for Japan-domiciled funds. The analysis includes both Global Investment Management and Global Wealth Management open-ended funds that are rated by the aforementioned sources. The share class with the highest Morningstar star rating represents its respective fund. The Nomura star rating represents the aggregate fund. Other share classes may have different performance characteristics and may have different ratings; the highest rated share class may not be available to all investors. All star ratings sourced from Morningstar reflect the Morningstar Overall Rating™. For Japan-domiciled funds, the star rating is based on the Nomura 3-year star rating. Funds with fewer than three years of history are not rated by Morningstar nor Nomura and hence excluded from this analysis. Other funds which do not have a rating are also excluded from this analysis. Ratings are based on past performance and are not indicative of future results

Notes appendix

Page 6

Source: Company filings, J.P. Morgan estimates
Note: Allianz, CS, DB, and UBS figures converted at average exchange rate.

1. Long-term AUM
2. Long-term AUM, administration, brokerage, custody, and deposit
3. Long-term AUM, brokerage, and deposit
4. Long-term AUM, fee-generating brokerage, and deposits in fee-generating brokerage accounts
5. Long-term AUM and brokerage
6. Total AUM, Brokerage, and Deposit
7. Includes client asset flows attributable to wealth and asset management units
8. Total AUM
9. Includes 3rd party AUM flows only. 2015 figures exclude re-invested dividends (including capital gains) from existing clients

Page 9

1. The "% of 10-year LT mutual fund AUM in top 2 quartiles" analysis represents the proportion of assets in mutual funds that are ranked in the top 2 quartiles of their respective peer category on a 10-year basis as of December 31, 2015. The sources of these percentile rankings, peer category definitions for each fund and the asset values used in the calculations are: Lipper (U.S. and Taiwan-domiciled funds), Morningstar (UK, Luxembourg and Hong Kong-domiciled funds), Nomura (Japan-domiciled funds), and FundDoctor (South Korea-domiciled funds). The analysis includes only Global Investment Management retail open-ended mutual funds that are ranked by the aforementioned sources. The analysis is based on percentile rankings at the share class level for U.S. domiciled funds, at the 'primary share class' level for Luxembourg, UK, and Hong Kong-domiciled funds and at the aggregate fund level for all other funds. The 'primary share class' is defined by Morningstar and denotes the share class considered the best proxy for the fund. Where peer group rankings given for a fund are in more than one 'primary share class' territory both rankings are included to reflect local market competitiveness (applies to 'Offshore Territories' and 'HK SFC Authorized' funds only). The analysis excludes money market funds, Undiscovered Managers Fund, and Brazil and India-domiciled funds. The asset values were redenominated into U.S. dollars using exchange rates from the aforementioned sources. The analysis pertains to percentage of assets under management, not percentage of funds. The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future performance, which may vary

Notes appendix

Page 10

1. The "% of AUM over peer median" analysis represents the proportion of assets in mutual funds that are ranked above their respective peer category median on 3, 5, and 10 year basis as of December 31, 2015. The sources of these percentile rankings, peer category definitions for each fund and the asset values used in the calculations are: Lipper (U.S. and Taiwan-domiciled funds), Morningstar (UK, Luxembourg and Hong Kong-domiciled funds), Nomura (Japan-domiciled funds), and FundDoctor (South Korea-domiciled funds). The analysis includes only Global Investment Management retail open-ended mutual funds that are ranked by the aforementioned sources. The analysis is based on percentile rankings at the share class level for U.S. domiciled funds, at the 'primary share class' level for Luxembourg, UK, and Hong Kong-domiciled funds and at the aggregate fund level for all other funds. The 'primary share class' is defined by Morningstar and denotes the share class considered the best proxy for the fund. Where peer group rankings given for a fund are in more than one 'primary share class' territory both rankings are included to reflect local market competitiveness (applies to 'Offshore Territories' and 'HK SFC Authorized' funds only). The equity, fixed income and multi-asset solutions and all other classifications used in the illustration are based on J.P. Morgan's own categorization. The analysis excludes money market funds, Undiscovered Managers Fund, and Brazil and India-domiciled funds. The asset values were redenominated into U.S. dollars using exchange rates from the aforementioned sources. The analysis pertains to percentage of assets under management, not percentage of funds. The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future performance, which may vary
2. Fund performance vs each fund's respective Morningstar Category as of 12/31/15. Fund performance is net of fees. Past performance is not indicative of future performance, which may vary
3. Source: Strategic Insight Simfund
4. Select share class (40-Act fund)
5. A share class (SICAV)
6. Institutional share class (40-Act fund)
7. SmartRetirement 2030 Institutional class (40-Act fund)
8. Includes the 3 ranked Alternatives retail open-ended mutual fund assets not included in above asset class split (Highbridge US STEEP, Highbridge Europe STEEP, and Security Capital US Real Estate Securities)

Notes appendix

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(Top Middle) Chart shows performance of quintiles (as determined by J.P. Morgan Investment Management U.S. Equity research universe) versus the S&P 500 Index, with quintiles rebalanced monthly. Quintile performance represents the annualized returns of quintiles vs. the annualized return of the S&P 500 over the full time period. Quintile performance results have certain inherent limitations. Unlike an actual performance record, quintile results do not represent actual trading, liquidity constraints, fee schedules and transaction costs. No representation is being made that any portfolio will or is likely to achieve profits or losses similar to those shown. Past performance is not indicative of future results. (Bottom) * As of December 31, 2015, the Large Cap Core Plus Fund (S-share) was ranked in the Morningstar Large Blend category for the following time periods: 761 out of 1,644 funds for the trailing one year period, 102 out of 1,521 funds for the three year period, 331 out of 1,414 funds for the five year period and 20 out of 1,233 funds for the ten year period for returns. As of December 31, 2015, the US Equity Fund (I Shares) was ranked 509 out of 1,644 funds for the trailing one-year period, 118 out of 1,521 funds for the trailing three-year period, 184 out of 1,414 funds for the trailing five-year period, and 50 out of 1,223 funds for the trailing ten-year period for fund returns in the Morningstar Large Cap Blend category. As of December 31, 2015, the Disciplined Equity (I Shares) was ranked 1,104 out of 1,644 funds for the trailing one-year period, 324 out of 1,521 funds for the trailing three-year period, 196 out of 1,414 funds for the trailing five-year period, and 137 out of 1,223 funds for the trailing ten-year period for fund returns in the Morningstar Large Cap Blend category. Different share classes will have different rankings. Past performance is not indicative of future returns.

1. Based on five-year rolling excess performance (one month shifts) versus the S&P 500 TR USD over the trailing ten year period.. Fund and index performance as of 12/31/15. Fund performance is net of fees. Past performance is not indicative of future performance, which may vary

Page 12

1. US Value-add Real Estate and benchmark returns are net, as of December 31, 2015; Private Equity performance represents IRR (Internal Rate of Return) over the time periods shown and includes all investments for all funds, separate accounts and employee account, as of September 30, 2015, net of underlying investment fees and expenses, gross of advisor fees. Diversified Hedge Fund and benchmark returns are net, as of December 31, 2015. Alternative Beta and benchmark returns are net (in EUR), as of December 31, 2015; fund run in seed starting July 2009 and opened for investment in 2011

Notes appendix

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1. Excludes Advisory
2. Data for industry CAGR available for 2010-2014 only
3. Active only; excludes Fund of Funds; AUM / flows grouped at Portfolio Level (inclusive of all share classes); excludes Global Macro Opps fund, as it is considered internally as Liquid Alternative and not applicable in broader category
4. International / Offshore only; UCITS only; active only; excludes Fund of Funds; AUM / flows group at Portfolio Level (inclusive of all share classes)
5. US only; target date asset allocation active only; underlying holdings can be passive; AUM / flows group at Manager Level (inclusive of all funds and share classes)
6. JPM Global Allocation Fund does not have a 5-year track record, so 3-year performance percentile rank shown
7. Percentile reflects performance of SmartRetirement 2030 Institutional class fund

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1. Only includes categories that have Morningstar star ratings
2. Represents United States-domiciled long-term open-end mutual funds. Excludes index mutual funds, exchange traded funds, closed-end funds and money market funds. Funds without tickers are not included.
3. Top US Solutions category (Target Date) is amalgamation of all Target Date year categories
4. Represents funds long-term open-end funds domiciled in Luxembourg or Ireland, which comprise approximately 96 percent of total fund assets in international/offshore domiciles (per Strategic Insight as of 12/31/15) and generally can be cross-border marketed in the EU under the UCITS directive. Excludes index mutual funds, exchange traded funds, closed-end funds and money markets funds.
5. Fund count includes non-40-Act/SICAV vehicles. This analysis is sourced from Morningstar for all funds with the exception of Japan-domiciled funds; Nomura was used for Japan-domiciled funds. For JPM, the analysis includes both Global Investment Management and Global Wealth Management open-ended funds that are rated by the aforementioned sources. The share class with the highest Morningstar star rating represents its respective fund. The Nomura star rating represents the aggregate fund. Other share classes may have different performance characteristics and may have different ratings; the highest rated share class may not be available to all investors. All star ratings sourced from Morningstar reflect the Morningstar Overall Rating™. For Japan-domiciled funds, the star rating is based on the Nomura 3-year star rating. Funds with fewer than three years of history are not rated by Morningstar nor Nomura and hence excluded from this analysis. Other funds which do not have a rating are also excluded from this analysis. Ratings are based on past performance and are not indicative of future results

Notes appendix

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Note: Allianz, CS, DB, and UBS figures converted at average exchange rate. Balances presented at end of period exchange rate.

1. Total AUM; for Allianz reflects total AUM from third-parties
2. Total AUM, brokerage, custody, and deposit; for CS as of 09/30/15 as FY2015 disclosure not yet available
3. Includes GIM and GWM with CWM reflecting extended segment (includes CPC and CIS clients)
4. Total AUM, administration, brokerage, custody, and deposit
5. Total AUM, brokerage, and deposit
6. Excludes revenue, pretax income, and client assets attributable to Corporate and Institutional Banking
7. Wealth Management Assets under Custody
8. Reflects LTM through 3Q15 as 2015 full disclosure not yet available; Allianz (includes PIMCO) revenue is presented gross of fee and commission expenses to ensure comparability with peers

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2015, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

COMMERCIAL BANKING

Doug Petno, Chief Executive Officer of Commercial Banking

February 23, 2016

JPMorgan Chase & Co.

Commercial Banking – a proven business model

Client and community focus	■ Coverage **segmented** and **focused** to best serve client needs ■ **Local** delivery and decision making ■ **Deep** industry expertise ■ **Seasoned team** with 20+ years average experience
Competitive advantages	■ **Industry-leading**, broad-based capabilities ■ **Unique value proposition** for clients ■ **Operating efficiencies** and **scale advantage** as part of JPMorgan Chase
Fortress principles	■ **Rigorous** client selection with a long-term, **through-the-cycle orientation** ■ Strong credit and control culture ■ Expense and capital discipline
Investing for growth	■ **Adding** bankers and **investing** in key capabilities ■ **Expanding** our relationships in targeted industries and new geographies ■ **Enhancing** client experience through **technology** and **product innovation**
Strong financial performance	■ **High quality** and **diversified** revenue ■ **Resilient** earnings ■ Strong returns **while investing for long-term growth**

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Commercial & Industrial overview

Client focus through dedicated segment and industry coverage

CHASE

J.P.Morgan

Commercial Banking



Middle Market Banking & Specialized Industries (MM)		Corporate Client Banking & Specialized Industries (CCB)
~16,000	Clients	~3,000
~42,000	Prospects	~1,200
~670	Bankers[1]	~140
~9	Products per client[2]	~10
14	Specialized industry teams	5

Note: Data in presentation is as of YE2015, except for income statement data which is for FY2015, or as otherwise noted. CB's Commercial & Industrial (C&I) grouping used herein is internally defined to include certain client segments (MM, which includes non-profit clients, and CCB) and will not align with regulatory definitions

[1] Based on total count of revenue-producing employees

[2] Average products per client and revenue per relationship herein based on actively targeted client relationships

Industry-focused to better serve our clients and manage risks

Commercial Banking - Specialized Industries


Agribusiness and Food


Apparel and Footwear


Beverage


Financial Institutions


Healthcare


Heavy Equipment


Higher Education


Life Sciences


Media and Entertainment


Multinational Corporations


Non-profit


Oil & Gas


Power and Utility


State and Local Government


Technology

Specialized capabilities to serve clients

- Focusing resources to grow market share in these industries
- Industry-tailored products and custom client solutions
- Specialized credit expertise
- Alignment with CIB
- Clients value industry content and thought leadership
- Bankers in regions

Highlights

- ~9,000 clients
- ~12,000 prospects
- ~260 bankers
- 8 new specialized industries over the last 5 years

Commercial Real Estate overview

	Commercial Term Lending (CTL)	Real Estate Banking (REB)	Community Development Banking (CDB)
			
Clients	~35,000 owners and investors	~1,300 clients	~900 clients
Loans	$63B *(+16% YoY)*	$16B *(+22% YoY)*	$2B[1] *(+7% YoY)*
Average loan	~$2mm	~$15mm	~$2mm
% Construction[2]	0%	14%	46%
Portfolio attributes	Multifamily and commercial stabilized properties	Top-tier investors with institutional quality assets	Financing construction or rehabilitation of low income communities
Highlights	#1 multifamily lender in U.S.[3]	12 consecutive quarters of loan growth	Financed ~10,500 units of affordable housing in 2015

Note: CB's Commercial Real Estate (CRE) grouping used herein is internally defined to include certain client segments (REB, CTL, CDB) and will not align with regulatory definitions

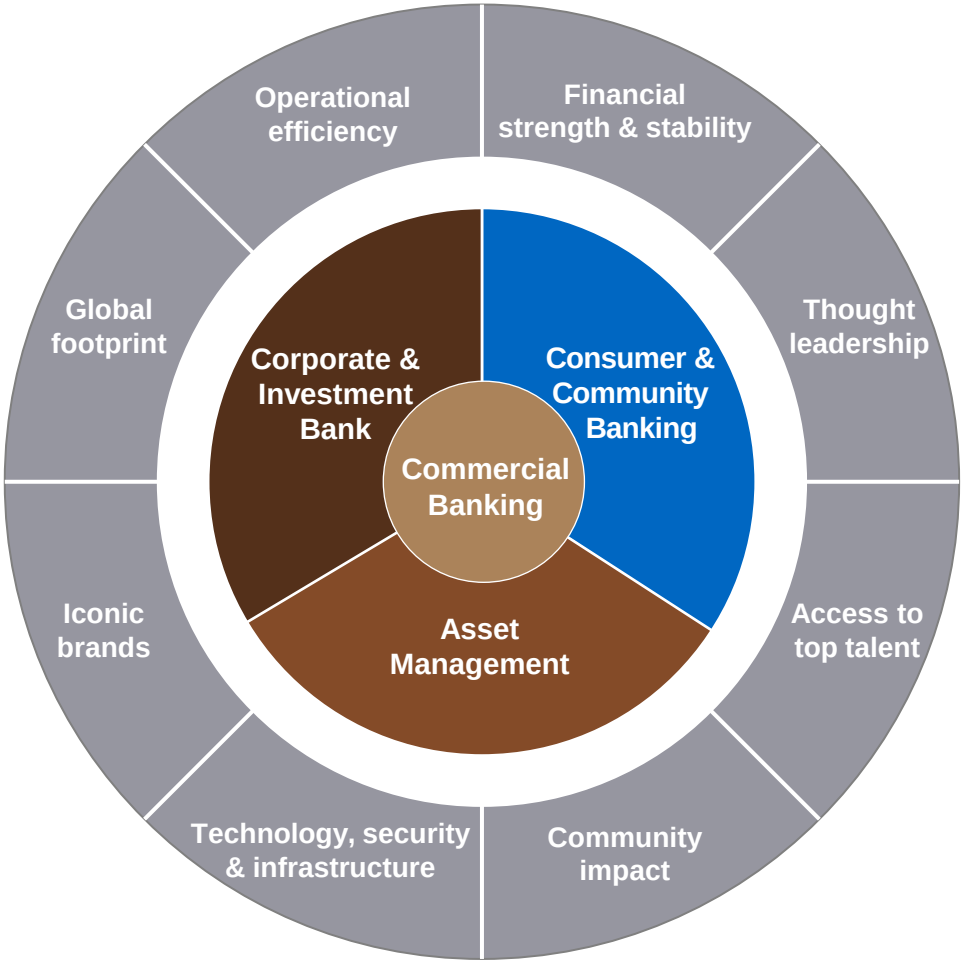
[1] Excludes loans related to new market tax credits

[2] Construction used herein is internally defined and will not align with regulatory definition

[3] SNL Financial based on FDIC data as of 3Q15

JPMorgan Chase platform drives real competitive advantage

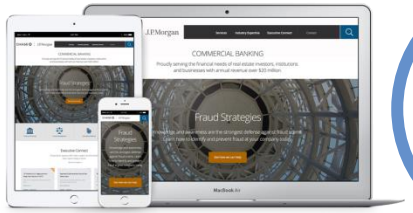
Unmatched value proposition for our clients



Differentiated capabilities	■ #1 rank in N.A. IB fees[1] ■ Broad-based Treasury Services and payments solutions ■ International footprint and product offering ■ Extensive branch network ■ Leading Asset Management business
Cross-LOB collaboration	■ Common technology investments ■ Talent development / mobility ■ Content / data excellence ■ Client referrals
Real benefits from scale	■ Operational efficiencies through shared utilities ■ Shared access to critical resources

[1] Dealogic based on total North American fees for FY2015

Business innovation is a key priority



Client experience

- Upgrading digital and online platforms
- Advancing mobile banking and transaction capabilities
- Improving client interface and onboarding process
- Enhancing transaction speed and security



Product R&D

- Investing in new B2C and B2B payments capabilities
- Streamlining cross-border payments
- Delivering innovative solutions for industries with specialized payments needs (e.g., healthcare and government)



Business processes

- Applying technology to streamline sales, credit underwriting and KYC processes
- Implementing new origination system in CTL to enhance controls, further improve efficiency and deliver industry-leading processing speed to clients



Big Data

- Transforming data into business intelligence and insights to better manage risk and shape product development
- Applying big data analytics to target prospects and staff markets more effectively

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2015 results – executing our proven strategy

Record

		2015
Exceptional underlying performance	Total loan balance (EOP, $B)	168
	Deposits[1] ($B)	179
	Investment banking revenue[2] ($B)	2.2
	Middle Market expansion revenue ($mm)	351
	Revenue ($B)	6.9
	Net income ($B)	2.2
	Return on equity (%)	15%
Continued investment	Bankers[3]	~1,470
	Offices opened in new cities	4
	Increase in technology investment (YoY, %)	+10%
Maintaining risk and expense discipline	Non-performing loans (%)	0.23%
	Net charge-off rate (%)	0.01%
	Overhead ratio (%)	42%

Highlights

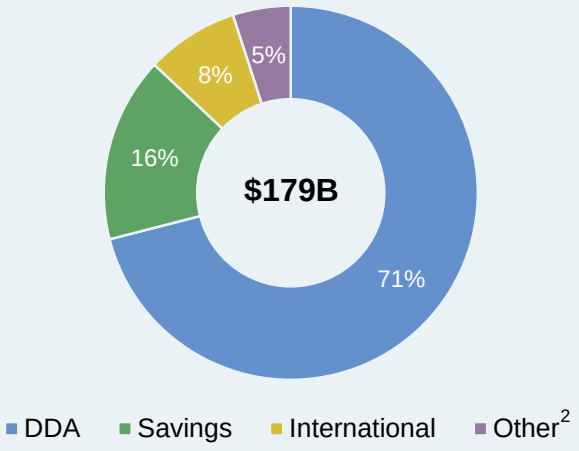
- Stable and valuable deposit base
- Loans up $19B, +13% YoY
- 11th consecutive year of IB revenue growth[2]
- 46% five-year CAGR in expansion market revenue
- Added offices in 26 new U.S. cities over last five years
- Increased calling activity 13% YoY
- 650+ new clients in 2015
- 4th straight year <10 bps NCO
- OH ratio 6% below peer avg[4]

[1] Deposits reflect 4Q15 average balance: includes client deposits and other third-party liabilities
[2] Investment Banking revenue represents total gross revenue related to investment banking products sold to CB clients
[3] Based on total count of revenue-producing employees
[4] Peer averages include CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC

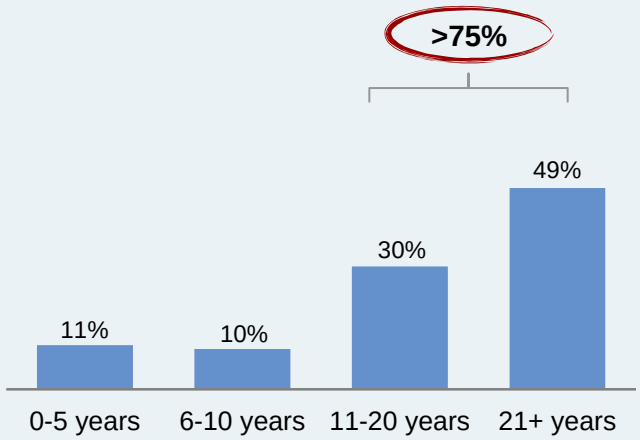
Deep client relationships generate stable deposits

Stable and diversified deposit base[1]

4Q15 average deposits by type



4Q15 average deposits by client tenure[3]



Industry leading cash management capabilities

- #1 Cash management portal in North America[4]
- #1 in Same-Day Transfers[5]
- CB clients executed more than 900 million ACH transactions representing $3T in value in 2015

Optimizing deposit values

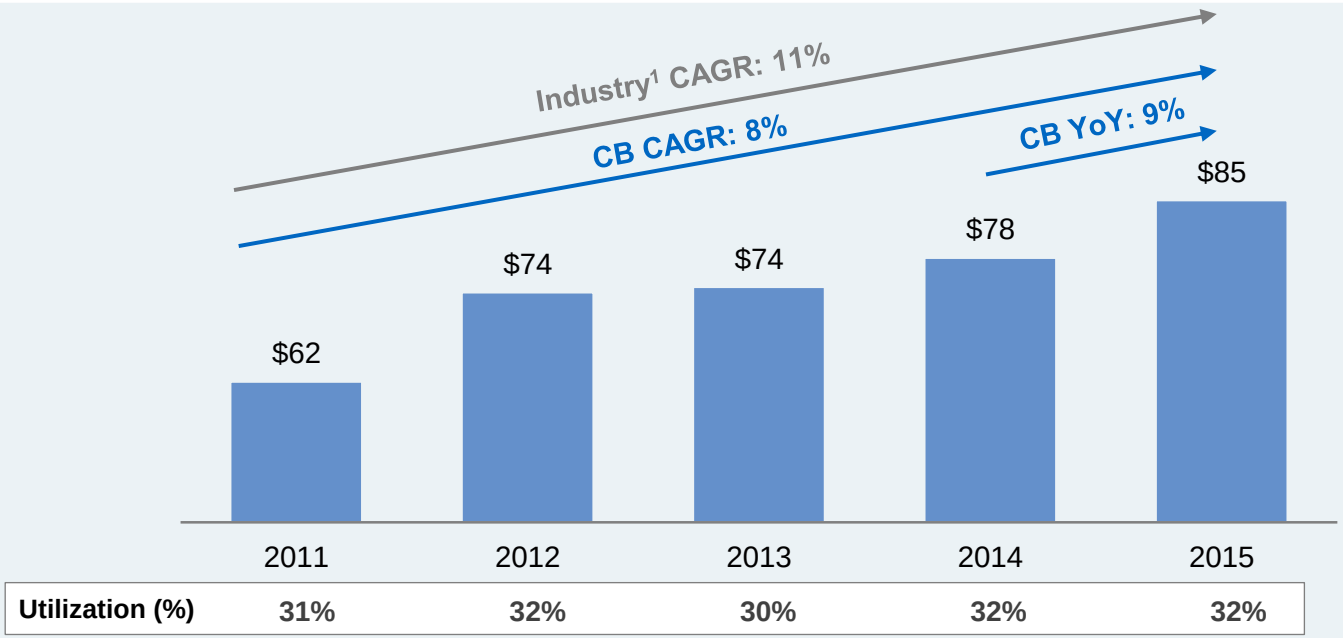
- Reduction in non-operating deposits substantially complete
- Current balances possess significant future value as rates rise
- Moderate outflows anticipated in a rising rate environment

1 Deposit balance includes client deposits and other third-party liabilities
2 Majority of other is composed of sweeps
3 Commercial Banking internal deposit life study
4 Greenwich Associates Online Services Benchmarking Study, 2014
5 Ernst & Young Cash Management Survey, 2015

Commercial & Industrial loan portfolio

Disciplined C&I growth

C&I loans outstanding ($B, EOP)



Utilization (%)	31%	32%	30%	32%	32%

Increased activity across segments

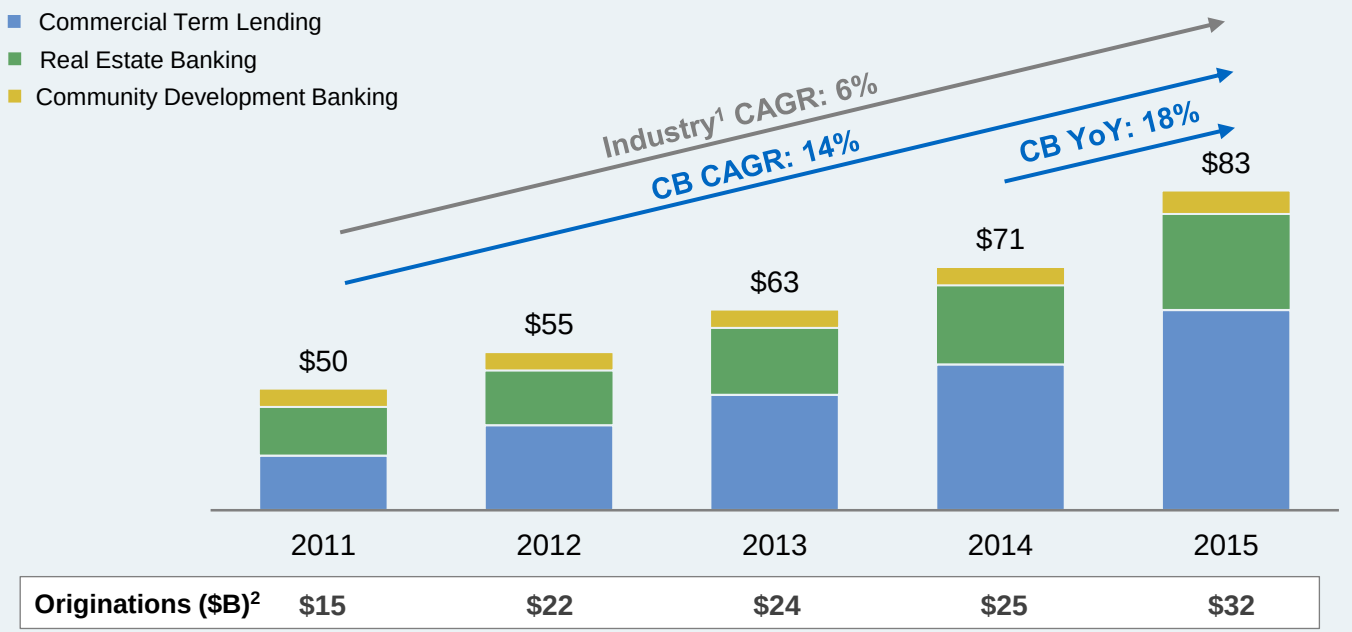
- C&I environment continues to be highly competitive
- Strong loan growth driven by
  - CCB up 26% YoY, primarily from large cap M&A activity
  - Increased activity in healthcare, technology and mortgage finance industries
  - MM expansion markets up 22% YoY
  - Asset-Based Lending up 32% YoY with record originations of $6B

[1] Industry data from FRB H.8 Assets and Liabilities of Commercial Banks in the United States – Commercial and Industrial loans; includes all commercial banks, not seasonally adjusted

Commercial Real Estate loan portfolio

Executing prudent growth strategy

CRE loans outstanding ($B, EOP)



Originations ($B)[2]	$15	$22	$24	$25	$32

Market outlook

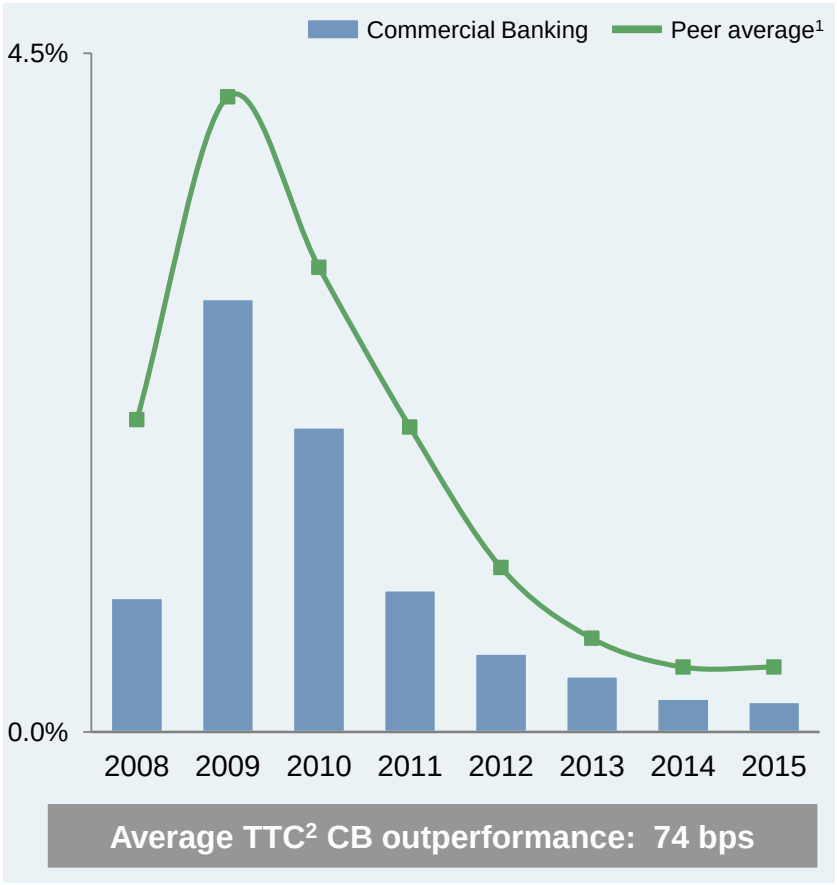
- Continue to see excellent opportunities to grow our CRE portfolio
- Market terms and conditions remain constructive
- Achieving strong growth while maintaining risk discipline and geographic focus
- Continued success increasing wallet share with existing customers
- Investments to improve our CTL origination process have driven customer acquisition

[1] Industry data from FRB H.8 Assets and Liabilities of Commercial Banks in the United States – Real estate loans: Commercial real estate loans; includes all commercial banks, not seasonally adjusted

[2] Prior years' originations have been revised to conform to current presentation

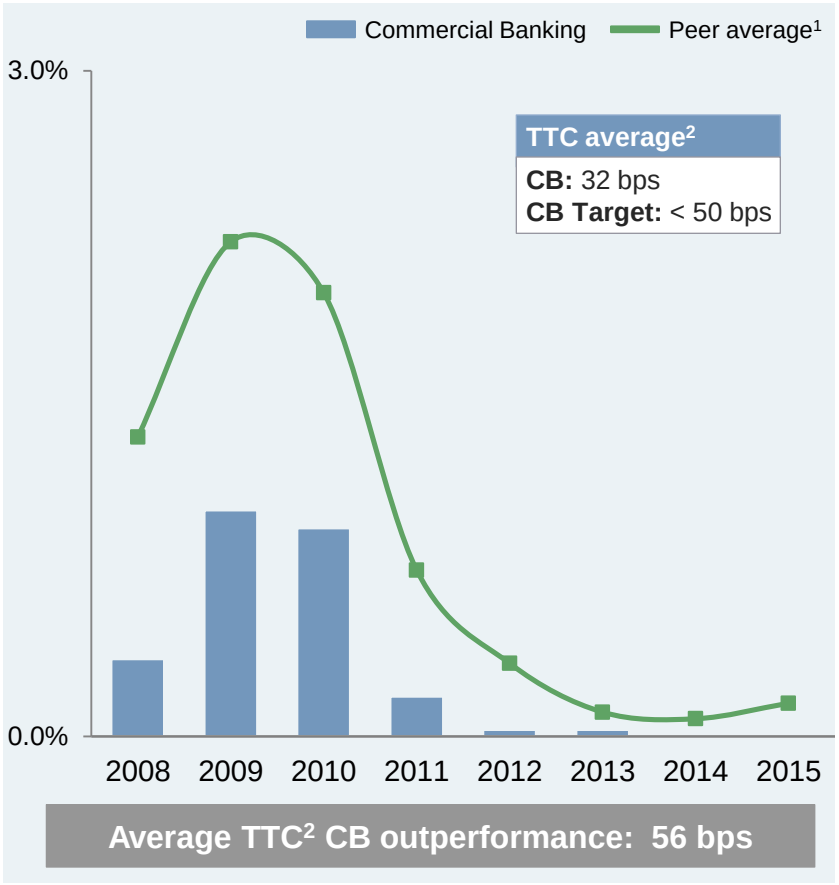
Strong credit performance through-the-cycle

Non-performing loan ratio (EOP)



Average TTC[2] CB outperformance: 74 bps

Net charge-off rate



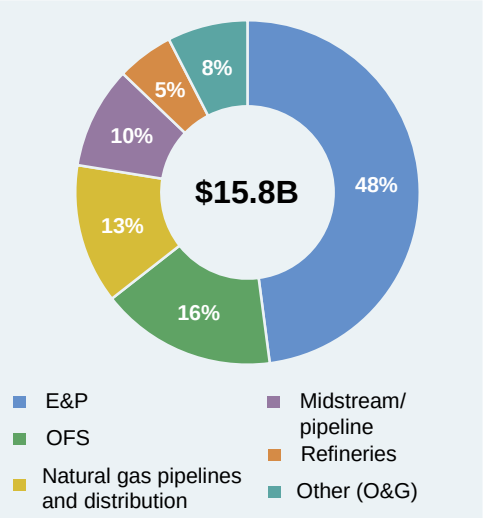
Average TTC[2] CB outperformance: 56 bps

~50% of NCOs in 2009-2010 related to segments where we have significantly limited exposure[3]

[1] Peer averages include CB-equivalent segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC
[2] Through-the-cycle, 2008-2015 average
[3] Exposures related to non-core CTL, homebuilders, non-core REB geographies, financial holding companies and certain parts of entertainment

Closely monitoring credit fundamentals across Oil & Gas[1]

O&G exposure (EOP)



Key portfolio statistics

Total O&G	YE2015
Outstandings	$5.5B
% Total CB loans	3%
Allowance for credit loss[2]	$376mm
Allowance for loan loss (% O&G loans)	6%
NPLs	$125mm
NCOs (FY2015)	$8mm

Strong underwriting standards and client selection

- 30+ years of dedicated industry coverage
  - Seasoned team with 24 years' average experience
  - 14 petroleum engineering staff embedded in underwriting process
- Long-standing, deep relationships
- Diversified clients with experienced management teams

Exploration & Production

- **$7.6B in commitments / $3.5B outstandings**
- Well-structured portfolio with 83% of exposure under Reserve Based Loan structure
  - Senior, secured borrowing-base transactions
  - Borrowing base determined by proven reserves and updated semi-annually to reflect current price outlook
- Over 99% of secured exposure is first lien – less than $40mm second lien exposure

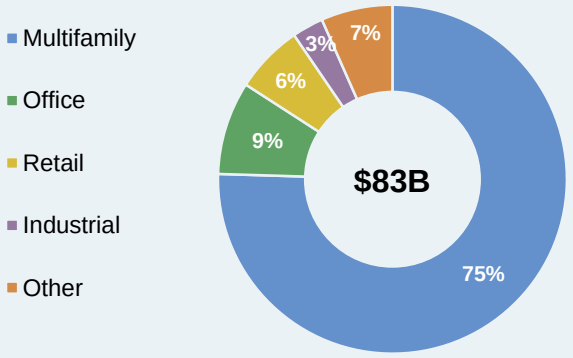
Oilfield Services

- **$2.6B in commitments / $0.8B outstandings**
- 39% of exposure is investment grade
- 82% of non-investment grade exposure is secured

[1] Oil & Gas classification based on Oil & Gas NAICS code classification plus natural gas pipelines and related distribution businesses
[2] Includes allowance for lending-related commitments and allowance for loan loss

Maintaining discipline across Commercial Real Estate franchise

CRE loans outstanding by asset class (EOP)



Strong fundamentals and credit quality

CRE portfolio credit metrics	2013	2014	2015
Portfolio size ($B)	$63	$71	$83
NPLs (EOP)	53bps	33bps	22bps
NCOs	0bps	(3bps)	(1bps)

CTL multifamily annual originations			
Weighted avg. LTV	61%	59%	57%
Weighted avg. DSC	1.56x	1.51x	1.51x

Multifamily portfolio built to withstand CRE cycle

- Vast majority of multifamily portfolio consists of smaller loans secured by existing, stabilized properties
  - Diversified portfolio with average loan size ~$2mm
  - Concentrated in densely-populated, renter-by-necessity markets (e.g., New York, Los Angeles, Chicago)
  - CTL portfolio rents typically below market averages
  - Limited construction risk, less than 5% of outstanding CRE loans
- Maintaining credit discipline – average annual CTL multifamily originations consistent over the last 5 years
  - Loan-to-value ratios of ~60%
  - Debt service coverage ratio of ~1.50x

Closely monitoring CRE market fundamentals

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Executing our proven strategy in new markets

Top 20 MSA's and Commercial Banking Middle Market share rank[1]

	City		Years in market	Top 10
1.	New York		215	1
2.	Los Angeles		6	
3.	Chicago		150	1
4.	Dallas		100	1
5.	Houston		150	1
6.	Philadelphia		5	✓
7.	DC		4	✓
8.	Miami		6	✓
9.	Atlanta		6	✓
10.	Boston		5	✓

	City		Years in market	Top 10
11.	San Francisco		6	✓
12.	Phoenix		115	2
13.	Riverside/ San Bern.		6	
14.	Detroit		80	2
15.	Seattle		6	✓
16.	Minneapolis		10	✓
17.	San Diego		4	✓
18.	Tampa		6	✓
19.	St. Louis		10	✓
20.	Baltimore		1	

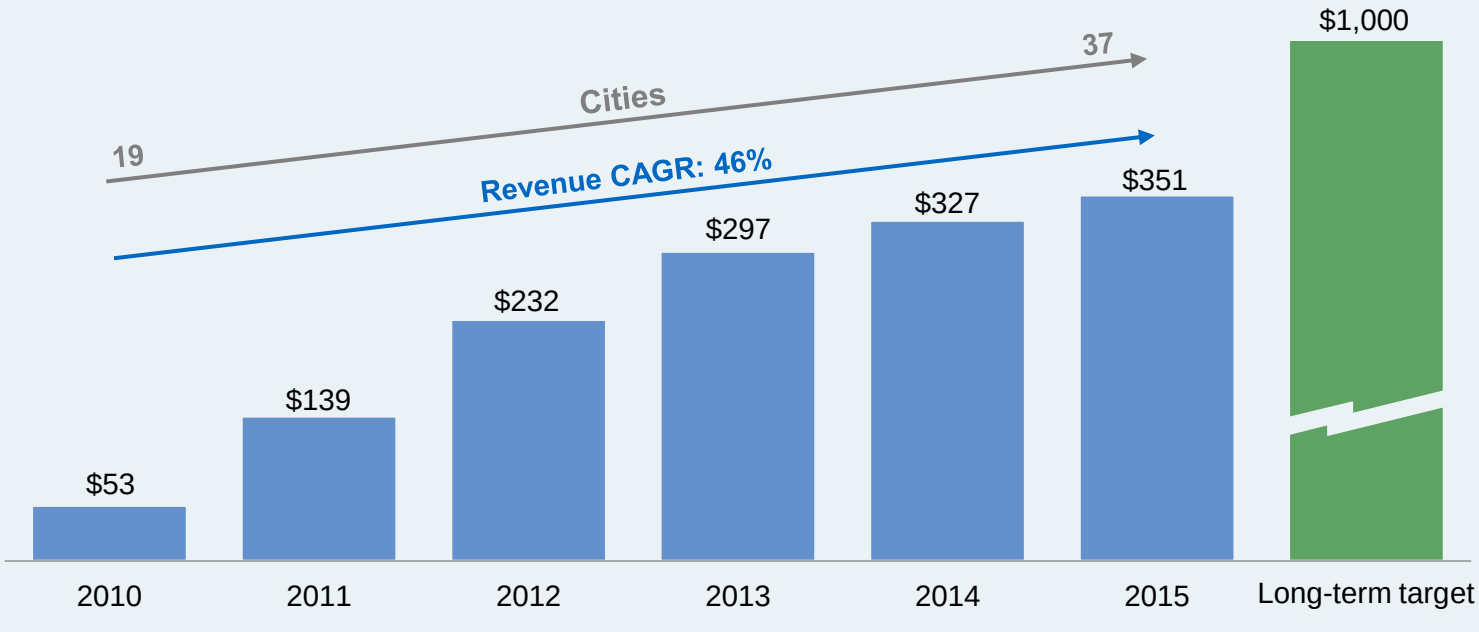
Tremendous long-term growth potential

Note: Top 20 ranked by total population as of 2014

[1] Rank based on % of 2015 Greenwich Associates Middle Market Banking study respondents in each market who identified Chase as their most important/lead bank; ties not indicated in Rank

Patient, disciplined Middle Market franchise expansion

Total expansion market revenue ($mm)



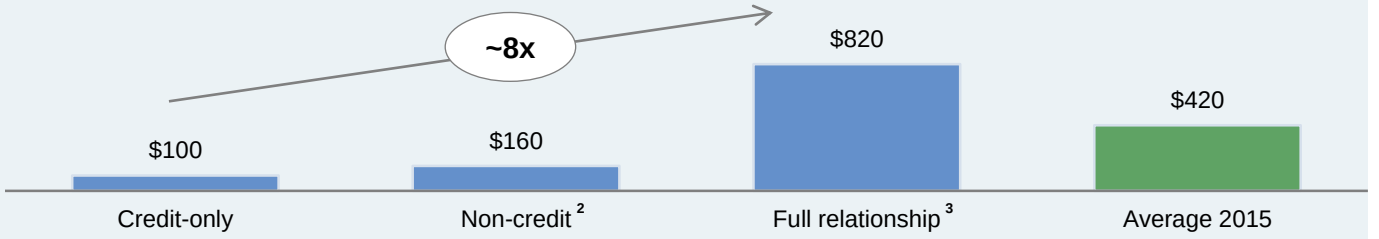
	2010	2011	2012	2013	2014	2015	5-yr CAGR
# Clients	820	1,100	1,350	1,460	1,670	1,970	19%
Loans EOP ($B)	$1.6	$4.4	$6.8	$8.2	$8.8	$10.7	46%
Deposits[1] ($B)	$1.3	$3.0	$4.7	$5.9	$7.8	$8.1	45%

Record expansion market revenue and loan balances

[1] Average deposits; includes client deposits and other third-party liabilities

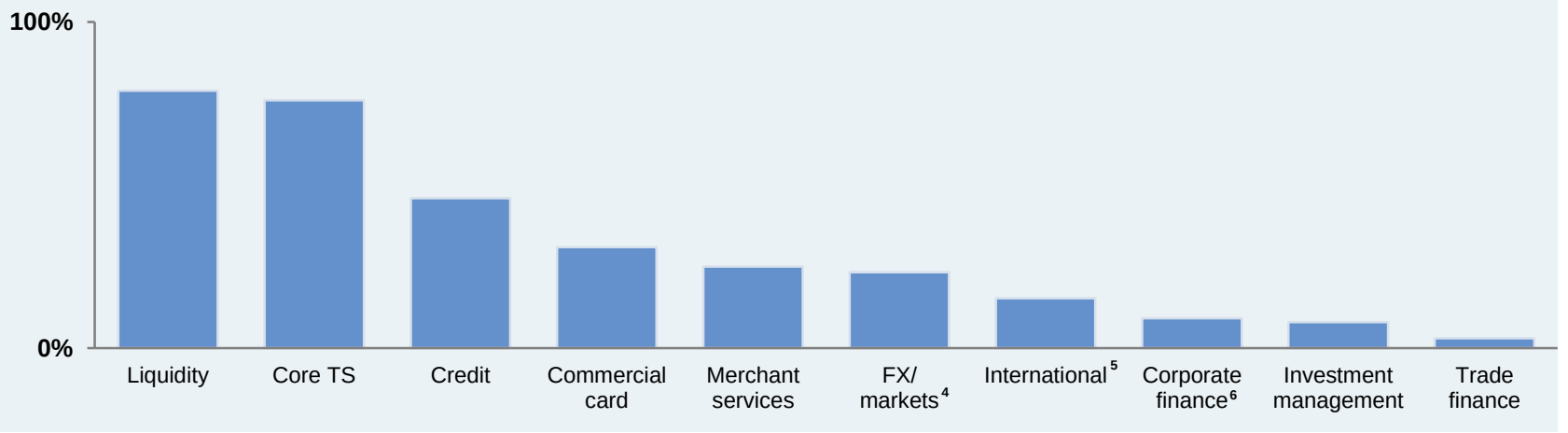
Deepening client relationships through unique capabilities to drive revenue

CB C&I illustrative revenue per relationship[1] ($000)



Avg. products per client	**~2**	**~7**	**~13**	**~9**
% of C&I clients	**6%**	**54%**	**40%**	**100%**

CB C&I client usage rates by product (%)



Note: Data as of FY2015 unless otherwise noted

[1] Revenue numbers rounded to nearest $10K; revenue represents full JPMC relationship and does not incorporate any revenue sharing agreements

[2] No credit relationship; uses one or more non-credit products

[3] Uses credit and one or more non-credit products

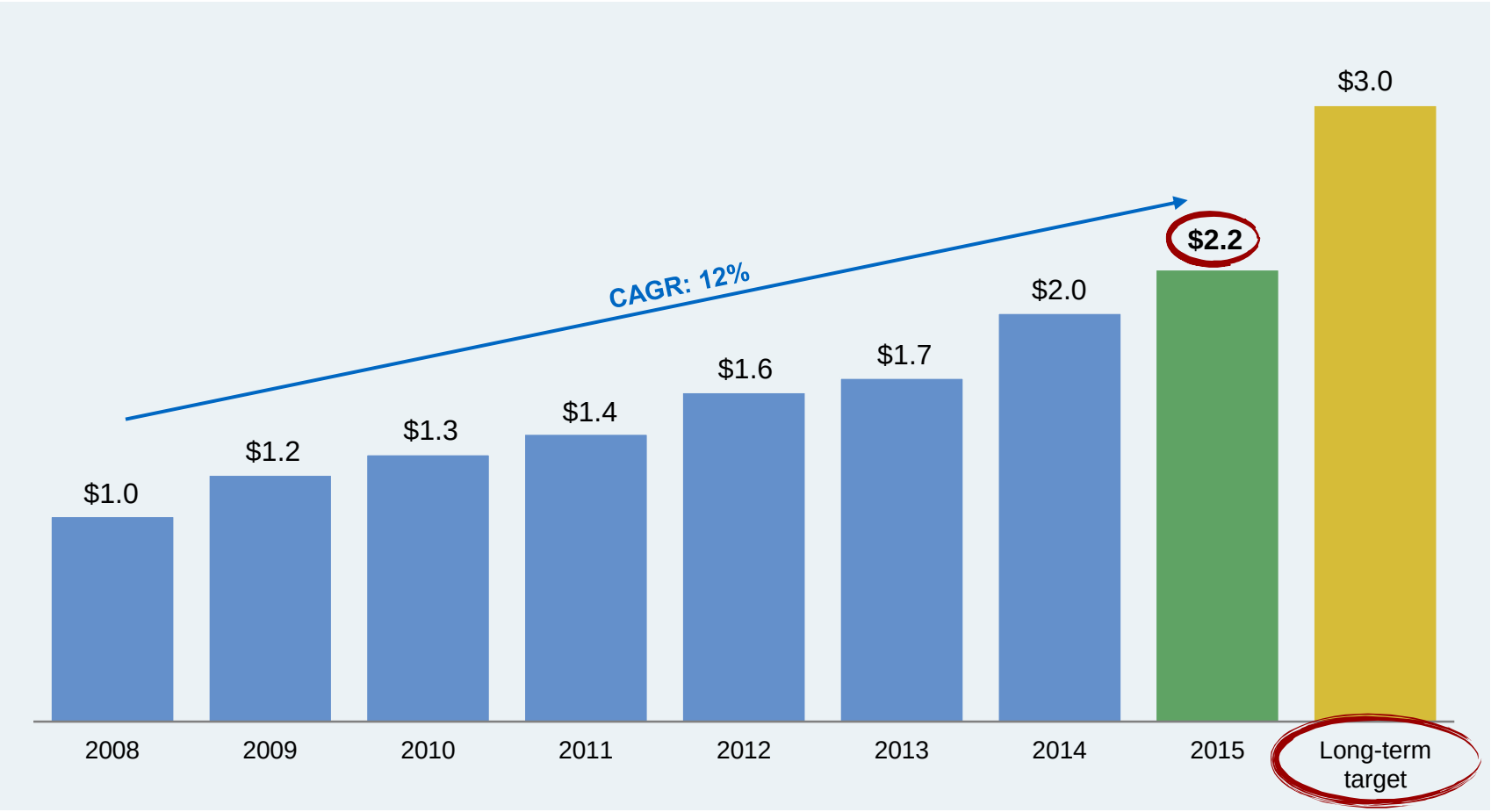
[4] FX/markets represents number of clients with total FX/market related fees paid to JPMC exceeding $10,000 in 2015

[5] International represents total unique holding companies utilizing any international product or service, including liquidity, core TS, credit, FX/markets or trade finance

[6] Corporate finance represents number of clients paying investment banking related fees exceeding $100,000 in any one of the last three years as a ratio to 2015 clients

Continued success in delivering IB solutions to CB clients

Commercial Banking gross investment banking revenue[1] ($B)



CIB partnership has resulted in deeper client coverage

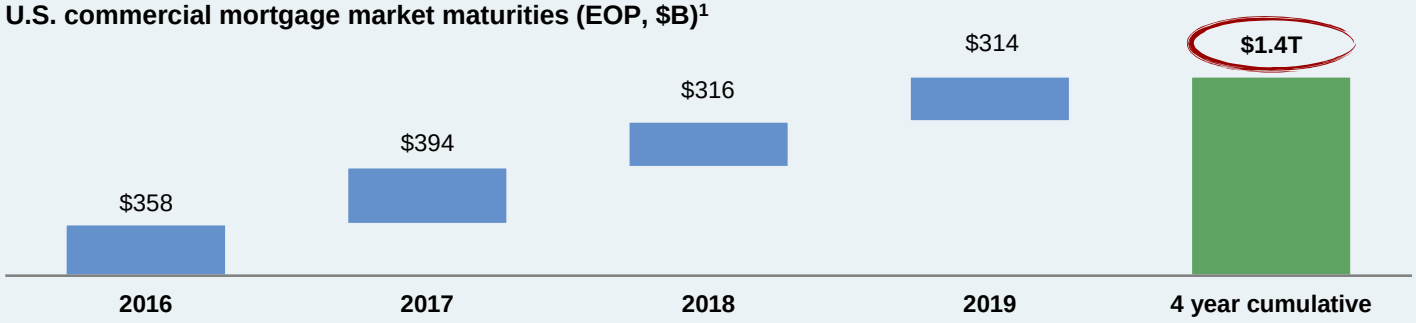
[1] Represents the total gross revenue related to investment banking products sold to CB clients

Opportunity to capture high-quality market share in commercial real estate

Prudently executing our Commercial Real Estate strategy

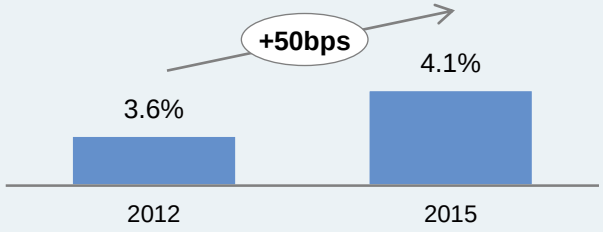
Over $1T in near-term maturities to drive future originations

U.S. commercial mortgage market maturities (EOP, $B)[1]



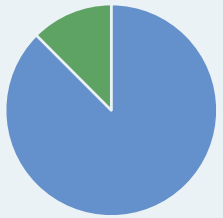
Significant opportunity to gain share in largest CTL markets

Estimated New York City multifamily market share[2]



~4% market share

Average mature market[3]



~15% market share[2]

- Focus on high-quality clients in large, established markets while maintaining structure and pricing discipline
  - Add bankers in underpenetrated markets
  - Leverage full capabilities of JPMC platform to deepen relationships over time
- Differentiate from bank and non-bank competitors by concentrating on speed, simplicity and certainty of execution
  - Continue investing in automation and efficiency
  - Maintain cost advantage to peers

[1] Trepp LLC, Commercial Mortgage Maturities, data as of 3Q15
[2] Historical market share estimates based on units at year end; Market units per CoStar Group; CB CTL units per loan data
[3] Representative of CTL composite market share in mature markets

We remain confident in our ability to produce superior returns through the cycle

Despite increased capital, CB business model allows us to continue to generate superior returns

▲ **Higher capital**	■ $16B in managed capital in 2016 (up $2B from 2015) ■ 10.5% Basel III advanced ratio – moving to 11% by 2017
▲ **Revenue**	**CB clients with full relationship[1] generate ~8x the revenue of the average credit-only client**
▲ **Deposits**	**Lower loan-to-deposit ratio vs. peer average (82% vs. 116%)**
▼ **Expenses**	**600bps lower overhead ratio vs. peer average for 2015 (42% vs. 48%)**
▼ **Credit costs**	**56bps lower through-the-cycle NCOs vs. peer average (32bps vs. 88bps)**
▲ **Superior returns**	Our **proven business model** allows us to **absorb incremental capital** and **continue to invest** while **producing superior results** through the cycle ■ <50% of C&I clients utilize credit

Note: Data as of YE2015, except where noted through-the-cycle (TTC), representing 2008-2015 average; peer averages include CB-equivalent segments at BAC, CMA, FITB, KEY, PNC, USB, WFC

[1] Clients who use credit and one or more non-credit products

Executing our proven strategy

Financial targets

		Targets[1]	2015 actual	2010-2015
Execute growth initiatives to add clients and deepen relationships (long-term revenue targets)	MM expansion	**$1.0B**	**$351mm**	**46% CAGR**
	Investment banking[2]	**$3.0B**	**$2.2B**	**10% CAGR**
	International[3]	**$500mm**	**$288mm**	**16% CAGR**
Maintain expense & credit discipline	Overhead ratio	**35%**	**42%**	**37% avg.**
	Net charge-off rate	**< 0.50%**	**0.01%**	**0.20% avg.**
Optimize returns	Return on equity	**16%**	**15%**	**23% avg.[4]**

[1] Targets for overhead ratio, net charge-off rate and return on equity refer to through-the-cycle average
[2] Investment banking revenue represents gross total investment banking revenue related to investment banking products sold to CB clients
[3] Denotes non-U.S. revenue from U.S. multinational clients
[4] CB ROE from 2010-2015 would have averaged the equivalent of ~17% if managed capital had been equivalent to 2016/2017 target levels (11% of B3 RWA)

Our strategic priorities are focused on delivering for our clients

- Execute **disciplined growth strategy** through geographic expansion, industry specialization, deeper client relationships and prudent Commercial Real Estate growth
- Drive **business innovation** through investments in digital, payments and big data capabilities
- Continue to **invest in our team** to have the best talent across our businesses
- Maintain **fortress controls** to safeguard our clients and business while improving the client experience

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2015, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

CORPORATE & INVESTMENT BANK

Daniel Pinto, Chief Executive Officer Corporate & Investment Bank

February 23, 2016

JPMorgan Chase & Co.

Topics for discussion

2015 Financial performance & benchmarking

- Best-in-class returns in 2015
- Strong revenue growth despite headwinds
- Market leading positions across most products
- Made progress in 2015 on expense reduction target

2016 Business updates

- Update on 5 areas
  - Technology and innovation
  - Treasury Services
  - Custody and Fund Services
  - Markets
  - Global Investment Banking

Financial targets

- Delivered on GSIB targets
- Identified additional opportunities to optimize capital usage
- On track to achieve 13% ROE target

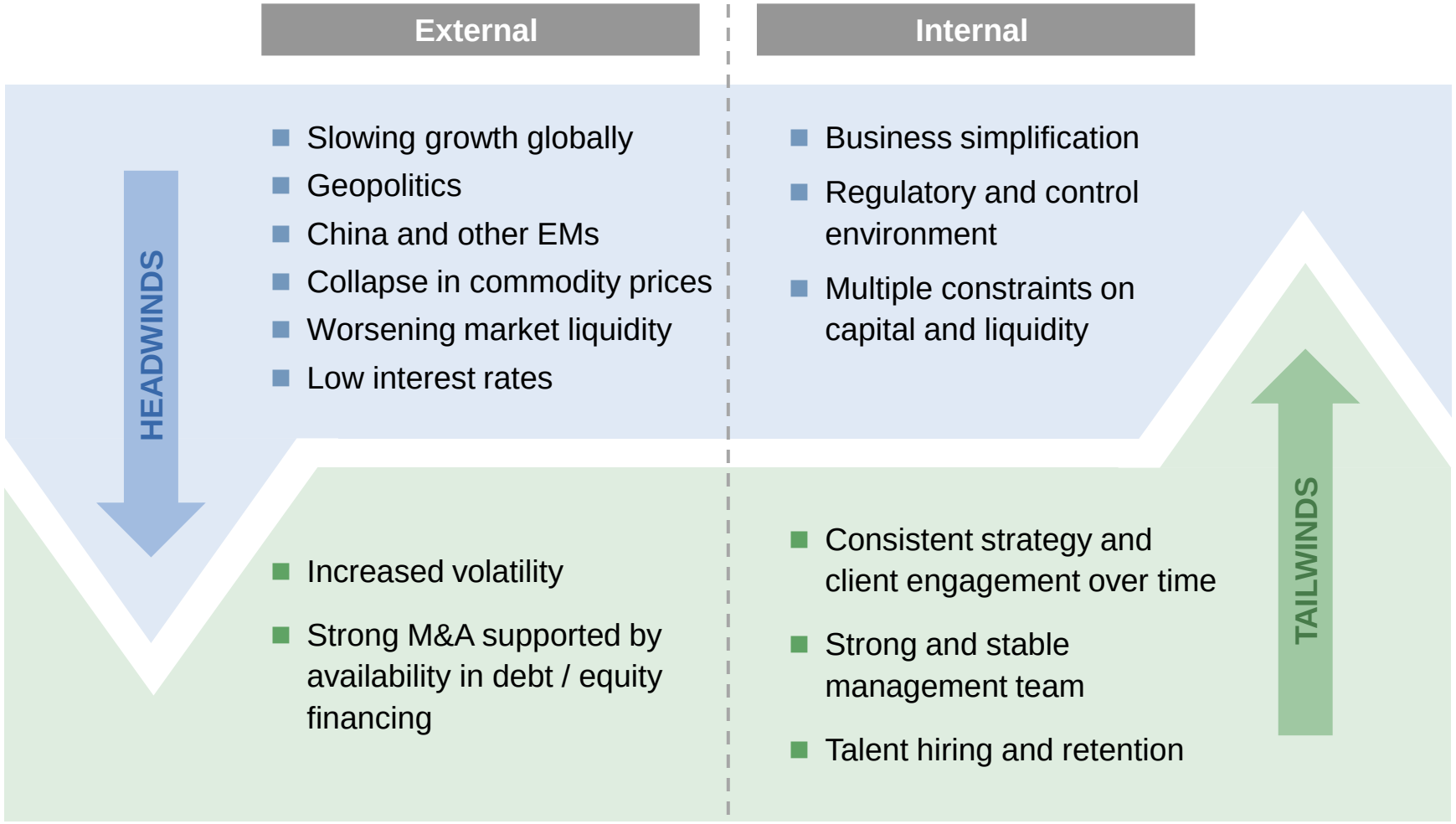
No significant change to overall CIB strategy

- Leverage our **scale**, **completeness**, and **global network** to facilitate an integrated client coverage model, leading to best-in-class ROEs
- Relentlessly **optimize** business mix while **investing** in core growth opportunities
- **Continue to adapt** to evolving industry landscape and market structure changes by harnessing technology and innovation – embrace change
- Maintain **expense discipline and deliver efficiencies** across all businesses while absorbing increased regulatory and control costs

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Our performance in 2015 was influenced by a challenging external environment and internal headwinds



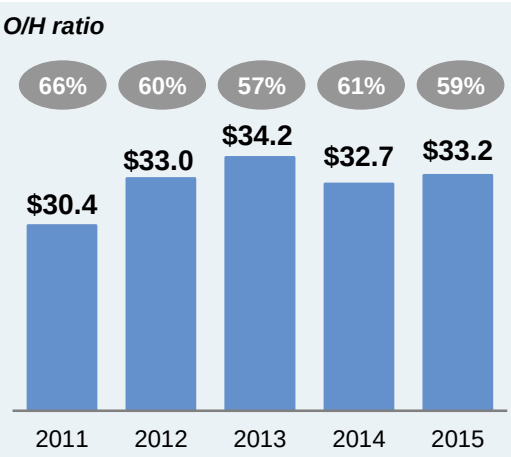
Summary update from priorities set last year

What we said in 2015…	Progress so far…
Optimize business mix across multiple **capital** constraints	■ Reduced GSIB score to help bring overall Firm down to 3.5% bucket – without significant client or revenue impact ■ Continue to embed cost of multiple binding constraints in the way business is conducted and evaluated
Invest in industries / products and regions with gaps in **Global Investment Banking**	■ Maintained #1 position ■ Successfully executed against all aspects of our strategy, including talent, delivering the full Firm to our clients and optimizing cost and capital
Reposition our **Treasury Services** business towards global multinationals	■ Continued growth in cross-border business with corporates ■ Completed significant multi-year platform investments
Maintain **FICC** leadership and close the gap in **Cash Equities**	■ Maintained #1 position in FICC with 17.8%[1] share ■ Increased Cash Equities market share by 90bps[1] YoY and continued to improve position with key client segments
Ensure readiness for **new market structure** and maintain **optionality** for how clients want to transact	■ Leadership position in most multi-dealer platforms ■ Significant improvement in e-capabilities
Reduce expenses to achieve target 13% ROE	■ Overall CIB expenses ~$1.6B lower vs. 2014 and achieved 14% ROE (ex legal)

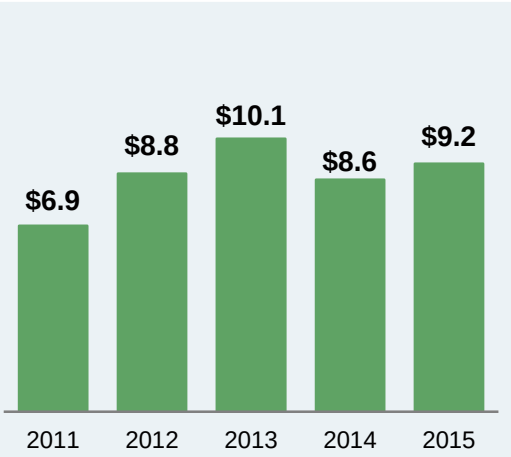
[1] Source: Coalition

In 2015, we delivered great results and continued to outperform the competition

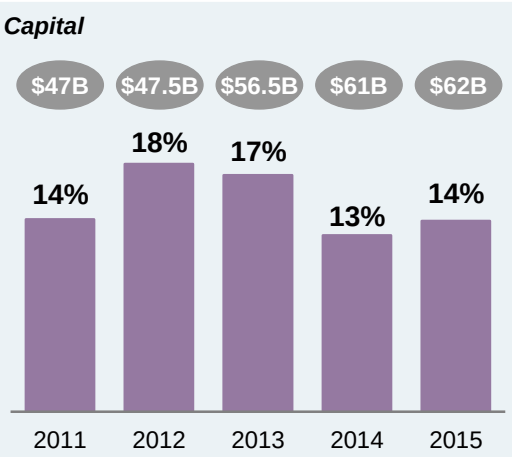
Net revenues and O/H[1,2] ($B)



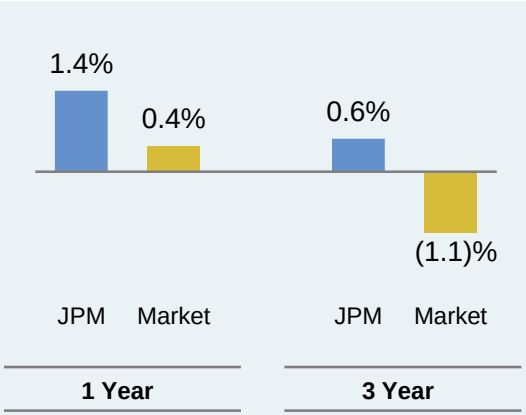
Net income[1,2] ($B)



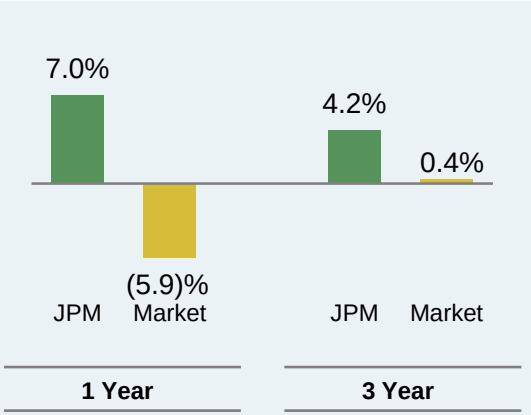
ROE[1,2] (%) and capital ($B)



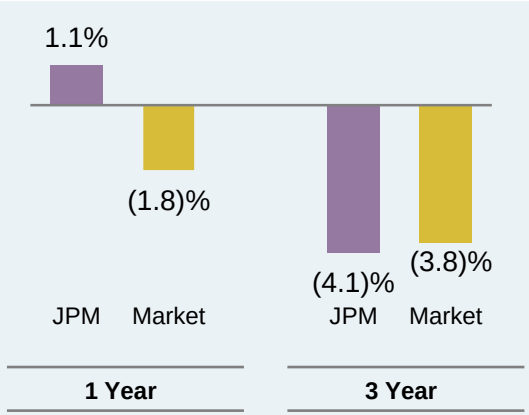
Revenue growth[1,2,3,4]



Net income growth[1,2,3,4]



Change in ROE[1,2,3,4]



[1] JPM CIB financials exclude FVA/DVA for 2013 and prior years; and revisions related to preferred dividends, revenue share, and the adoption of new accounting guidance for investments in affordable housing projects for all years

[2] JPM CIB financials exclude the impact of legal expense and business simplification for all years

[3] Per JPM internal analysis. Market includes financials for comparable segments of following peers: Citigroup, Bank of America, Morgan Stanley, Goldman Sachs, Deutsche Bank, Credit Suisse, Barclays and UBS; Market excludes disclosed FVA/DVA/CVA, legal expense and significant one time items. 3Q15 last twelve months data used for competitors where FY15 results are not available

[4] For Non USD reporting peers, financials were converted to USD using the static FX rate for all years to enable like for like comparison

Note: Throughout this presentation, CIB provides several non-GAAP financial measures. These measures are used by management to assess the underlying performance of the business and for comparability with peers. For additional information on non-GAAP measures, please refer to the Notes section of the Firmwide presentation

We are consistently gaining market share across most product areas



[1] 2010, 2014 and preliminary 2015 revenues based on Coalition for Global IB Fees & Markets; Coalition Top 10 banks include: Bank of America, Barclays, BNP Paribas, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, JPMorgan, Morgan Stanley, UBS; All competitor and JPM ranks are based on JPM's internal structure, Market excludes JPM

[2] Dealogic Global IB Fees: Rank #1, 7.9% share for FY2015, -0.1% YoY

[3] 2014 and preliminary 2015 revenues based on Coalition for Treasury Services, excluding Trade Finance; Coalition Market includes: Bank of America, BNP Paribas, Citigroup, Deutsche Bank, HSBC, JPMorgan, Société Générale, Standard Chartered Bank and Wells Fargo; Per JPM Internal Analysis, 2014 and 2015 Assets under Custody for Securities Services; Market includes: BNY Mellon, State Street, Citigroup (3Q15), BNP Paribas, Northern Trust, Société Générale

We continue to have market-leading positions in most products

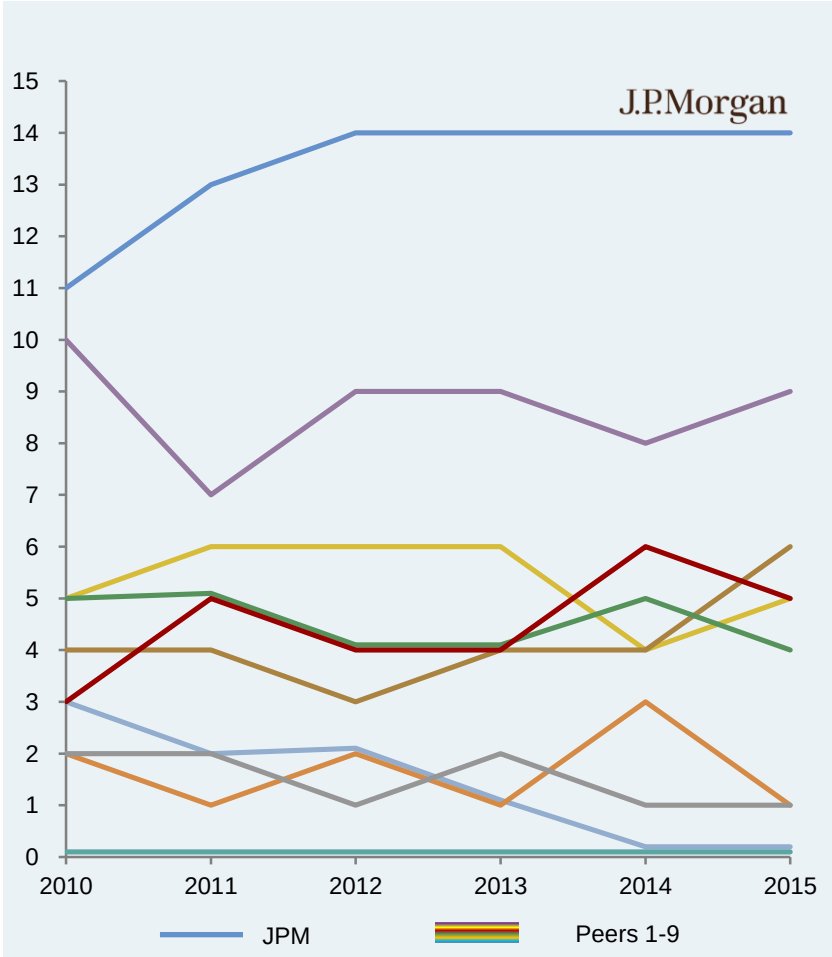
Top 3 | 2nd Tier | 3rd Tier

Competitive ranking in 17 product areas

	JPM		
	2010[1]	2014	2015
Total leadership positions	11	16	16
BANKING[2]			
Bond underwriting	1	1	1
Loan syndication	1	1	1
ECM	1	2	1
M&A	2	2	2
Treasury Services[3]	--	2	2
MARKETS[2]			
Total Fixed Income	1	1	1
G10 rates	4	1	1
Credit	2	3	3
G10 foreign exchange	1	2	1
Securitization	2	2	1
Emerging markets	3	2	2
Commodities	5	2	2
Public finance	3	3	3
Total Equities	6	4	3
Cash equities	8	6	6
Derivatives & converts	4	1	2
INVESTOR SERVICES[2]			
Prime Brokerage	3	3	3
Futures & options[4]	2	2	2
Securities Services[3]	--	3	3

Total leadership positions[1,2]

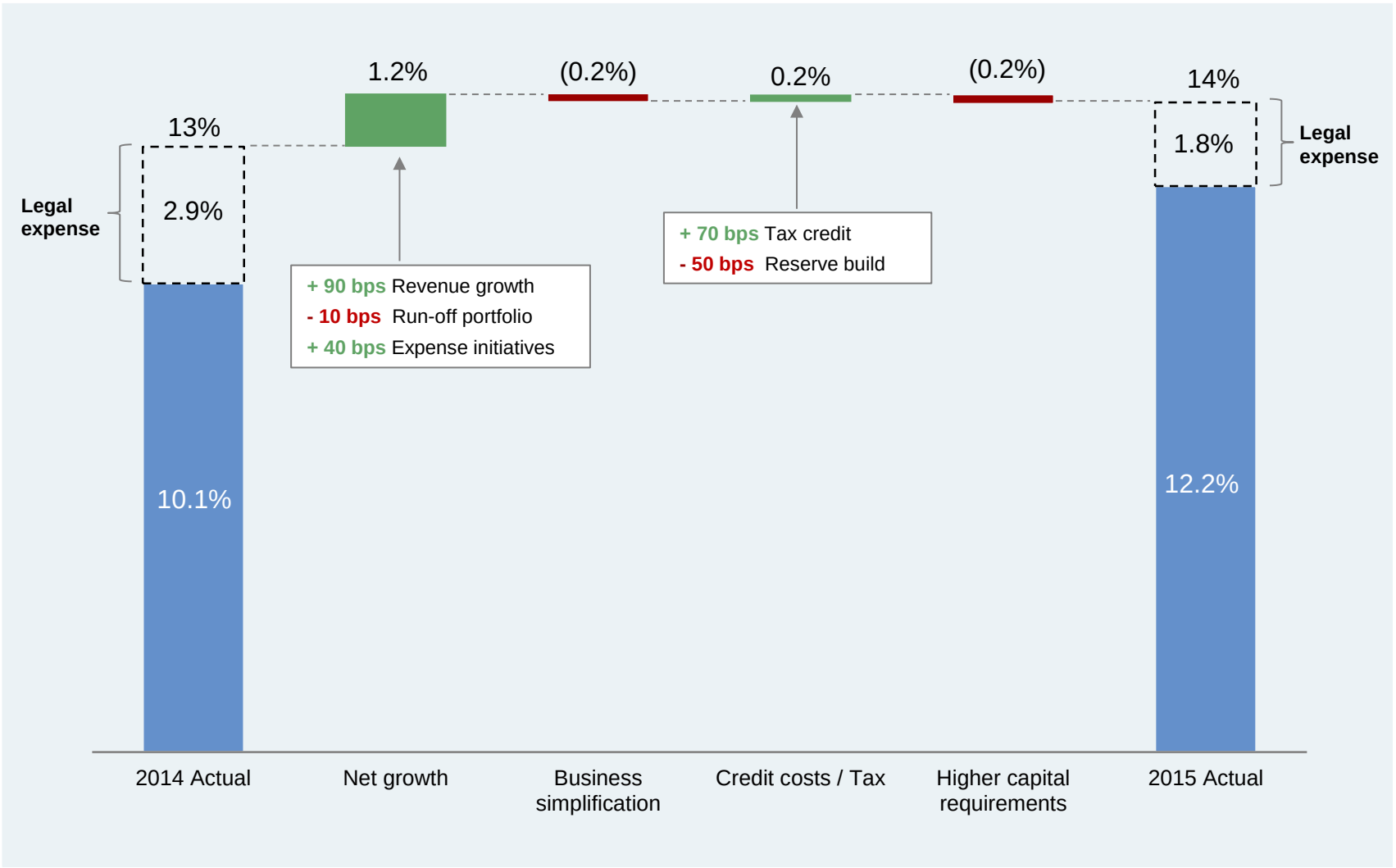
excludes TS & SS



[1] Based on 15 product areas (does not include Treasury Services & Securities Services due to lack of competitor data). [2] 2010, 2014 and preliminary 2015 revenues based on Coalition for Banking, Markets & Investor Services; Coalition Top 10 banks include: Bank of America, Barclays, BNP Paribas, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, JPMorgan, Morgan Stanley, UBS; All competitor and JPMorgan ranks are based on JPMorgan's internal structure. Credit is inclusive of G10 and EM Credit and excludes ABS CDOs [3] 2014 and preliminary 2015 revenues based on Coalition for Treasury Services (excluding Trade Finance) and Securities Services; Coalition Market for Treasury Services includes: Bank of America, BNP Paribas, Citigroup, Deutsche Bank, HSBC, JPMorgan, Société Générale, Standard Chartered Bank and Wells Fargo; Coalition Market for Securities Services includes: BNP Paribas, Citigroup, Deutsche Bank, HSBC, JPMorgan, Société Générale, Standard Chartered Bank, BNY Mellon, State Street and Northern Trust [4] Futures & options include OTC Clearing

ROE walk forward

CIB normalized ROE walk – FY 2014 to 2015

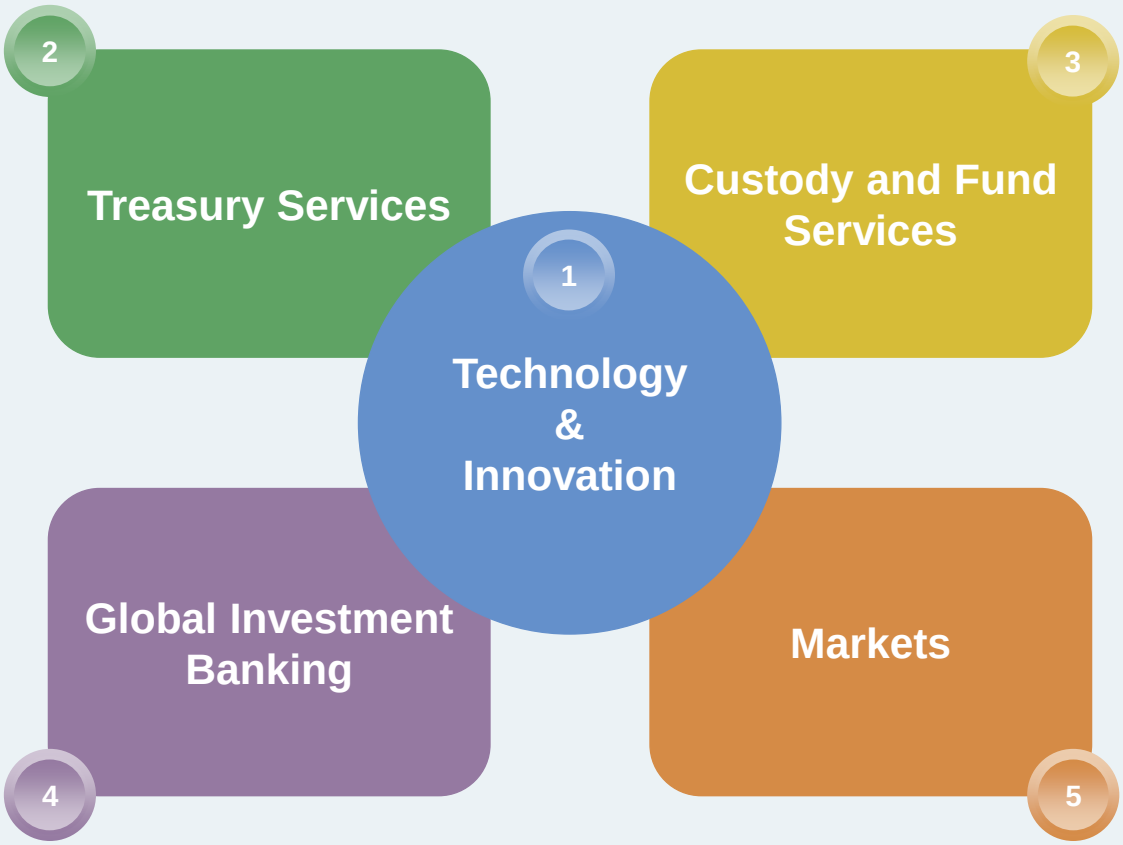


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Our businesses continue to optimize their use of resources, innovate, and embrace market structure evolution

Topics covered in this section



We continue to invest aggressively in a comprehensive technology strategy

Multi-year strategy to simplify architecture, build scalable platforms, and create a flexible environment for rapid prototyping and deployment of technology to drive sustained improvements in client and employee experience, risk management and operating efficiency

Key principles:

- Consistent levels of **investment**, while driving sustained **productivity improvements**
- Leveraging full range of build, buy and partnership options to **develop and integrate new technologies**
- Complete **business ownership of technology agenda**, driving acceleration of initiatives

Operating model to explore and adopt emerging technologies

- High performance computing
- Big data
- Cloud infrastructure
- Mobile solutions
- Machine learning / predictive analytics
- Distributed ledger

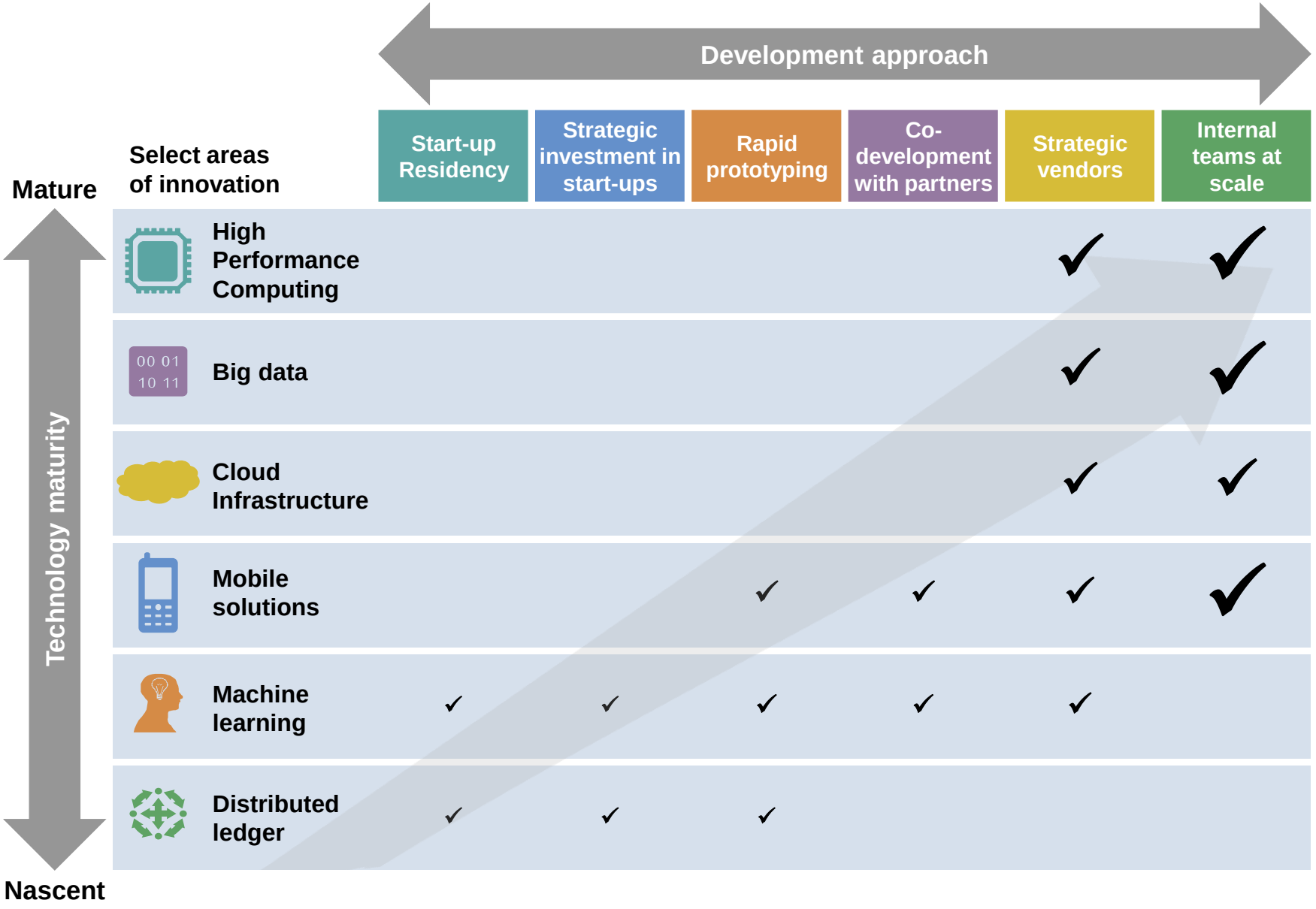
Continued investments in the best talent

This is having a significant impact on all our businesses and our operating model

Client experience	■ **Self-service multi-channel tools** for research, analytics and reporting ■ Flexible integration and reporting **via APIs**[1] ■ Continuous improvement in **onboarding turnaround times** ■ **Electronic solutions** for traditionally paper-intensive processes
Risk management	■ Real-time **cash management** and **intraday liquidity** monitoring ■ Fraud detection and cybersecurity **controls on client-facing platforms** ■ **Globally consolidated** pricing and market risk technology
Operating efficiency	■ Improving **operating leverage and flexibility across all products**, including payments, trading, clearing and settlement ■ Achieving **systematic reductions** in cost-per-trade (30-50% over 5 years) ■ Ability to **consistently scale infrastructure** as volumes spike

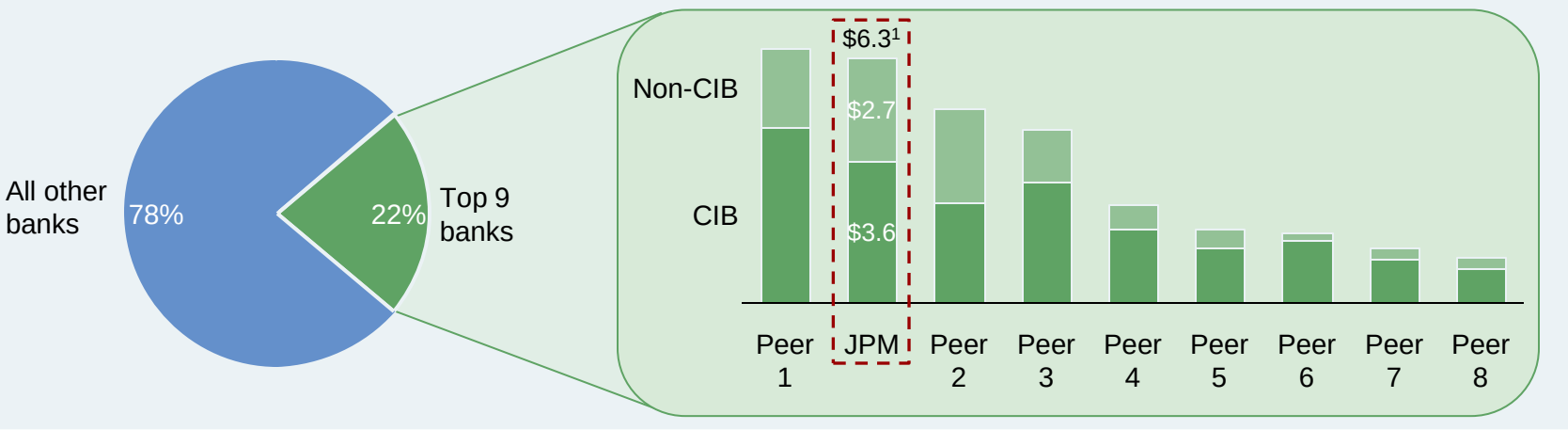
[1] Application Programming Interfaces

We have a balanced approach to exploring and adopting emerging technologies



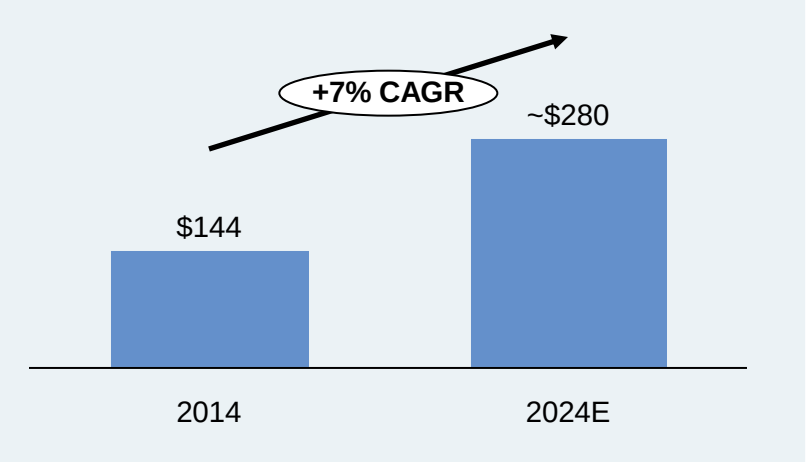
Transaction banking is a large market with attractive underlying growth prospects

FY2015 Global TS revenue ($B)



Source: Coalition, internal JPM analysis
[1] Represents firmwide TS revenue

Global TS revenue pool ($B)



Note: Revenue pool includes Payments/Payables, Collections/Receivables, General/Liquidity and Balances
Source: Coalition, BCG Global Payments Report 2015, internal JPM analysis

Drivers of industry growth and evolution

- Increasing global and intra-regional trade flows
- Normalized interest rates
- Growing multinationals in developed and emerging markets
- Innovation across the payments value chain

Treasury Services has a broad and difficult-to-replicate platform that serves clients across the entire Firm

Business model

Client franchise

- ~80% of global Fortune 500, world's top 25 banks
- Servicing ~14,000 clients across the CIB and the CB

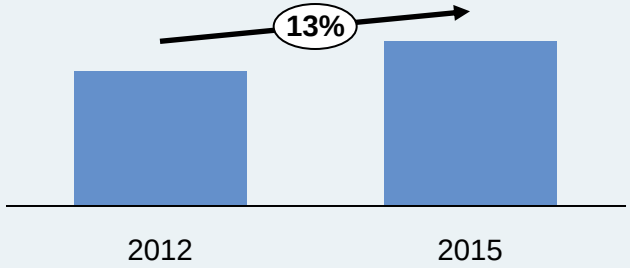
Global scale

- $5T in payments per day
- Clients in 120 countries
- #1 in global USD wires, #2 in USD ACH

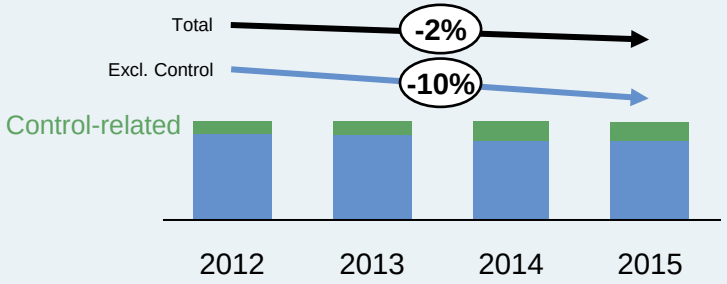
Product strength

- Leading liquidity offering
- Advisory for complex account structures
- FX in 135 currencies

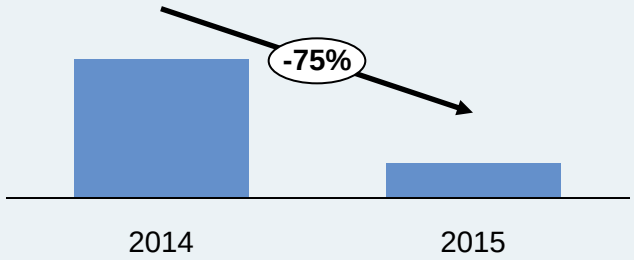
TS cross-border revenue



Non-interest expenses



Non-operating deposits



We are investing across our Corporate and Financial Institution franchises to capture the growing global wallet

Starting point

- Strong relationships across JPM to leverage for growth
- Holistic client coverage
- Global footprint
- Largely complete product suite
- Best-in-class control environment (including cyber)

Strategic drivers

Further penetrate strong firm relationships

Meet complex cash and currency management needs as clients expand globally

Improve the client experience

Treasury Services roadmap

- Continue growing business with **existing clients of the CIB and CB**
- Overtime, grow customer base with **multinational clients in key international markets**

- **Differentiate by selling integrated solutions** across leading global payments, FX, and cash management capabilities
- Expand leadership in **cross-border pooling and liquidity structuring** products and FX
- Leverage USD leadership to **expand share of bank payments** in global trade currencies
- Deepen capabilities in **key international markets**

- Provide **advisory services** for cash and risk management
- **Invest in tools** for holistic client service and faster, seamless implementations

Technology will be a transformational driver of competitive differentiation as the industry and our clients' needs change

Current state

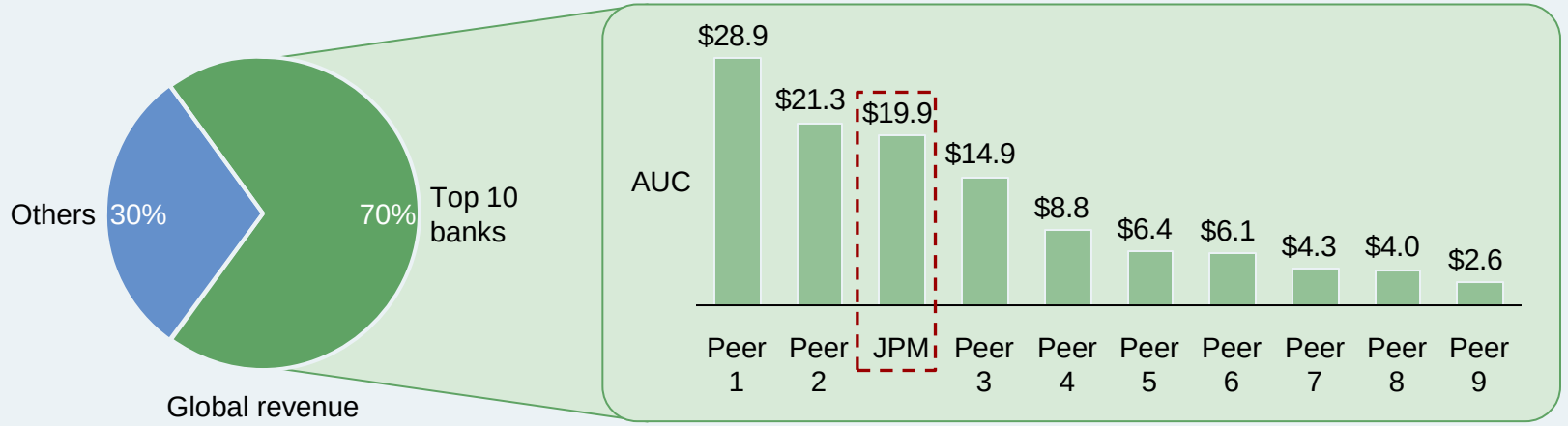
- **Stable platform** with high volume processing capacity and market-leading straight-through rates
- **Market-leading controls** for sanctions screening, fraud checks, and cybersecurity
- **Global payment warehouse** so all payment information is stored in one place
- Consolidating of payments systems to **improve the client experience and reduce cost**

	Faster payments	Real time analytics	Client interface	Global execution
TS strategy	■ Fast, straight-through 24x7 payment processing to meet real time payment market changes	■ Real-time, interactive dashboards and metrics ■ Centralized transaction data in a unified data model	■ "Open Roads" interface using APIs[1] so clients can choose how they interact with their data	■ Horizontal payment processing across geographies for a consistent offering of global products to clients
Client benefit	■ Working capital efficiencies with reduced need for excess cash ■ Reduced settlement costs	■ Optimization of client payment processing, e.g., netting ■ Transparency to better manage exposures	■ Flexibility when integrating between JPM and client systems ■ Reduced onboarding and implementation costs	■ Increased global visibility ■ Payment tracking ■ Streamlined client experience

[1] Application Programming Interfaces

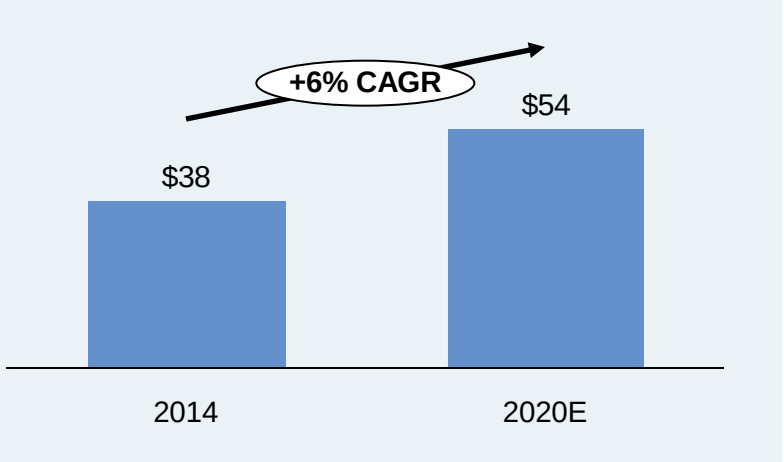
Our Custody & Fund Services business has a strong market position in a large, concentrated and growing industry

Distribution of global CFS revenue and AUC ($T)



Source: Coalition, internal JPM analysis, company reports; Note Peer 1 and Peer 9 report combined AUC and AUA

Global CFS revenue pool ($B)



Source: Coalition, PWC's Asset Management: A Brave New World 2020, internal JPM analysis

Drivers of industry growth and evolution

- **Secular growth in institutional AUM**
- **Globalization of asset flows**
- **Cost pressures**
- **Innovation across the value chain**

Custody & Fund Services is a critical component of the CIB franchise

Strategic importance to the CIB

Global scale

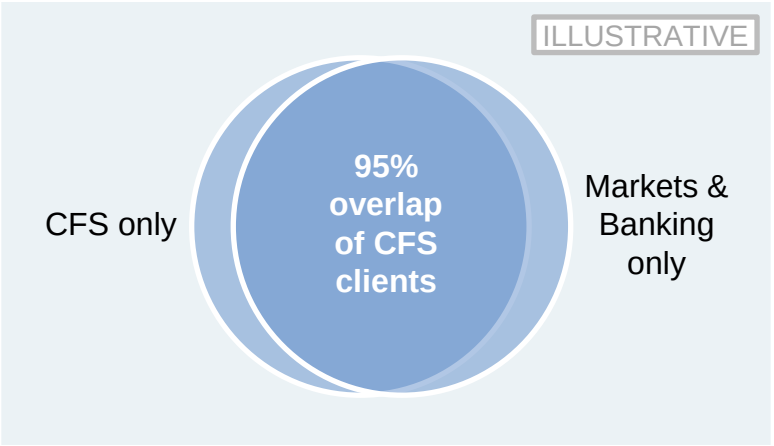
- **Core business** with $3.5B in revenue
- Servicing the **largest and most strategic clients** of the CIB
- Accessing **100+ markets worldwide**, with **75+ emerging and frontier** markets

Resilient economics

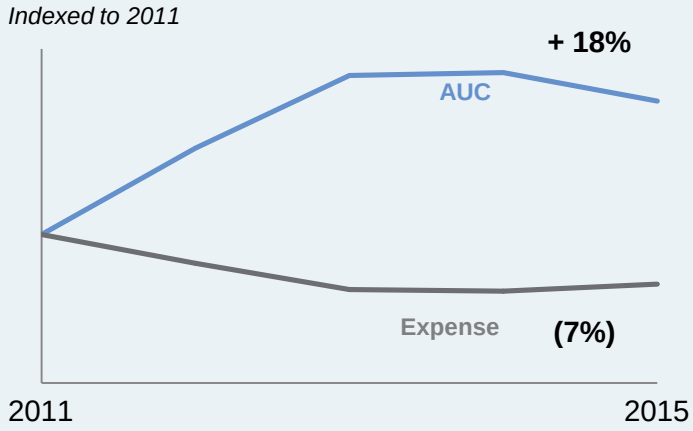
- Significant **recurring, fee based revenue**
- Provider of **~$100B of operating deposits**
- **25%+ Average Operating Margin**[1]

[1] 2013-2015 average

Highly complementary client base



CFS AUC / expense growth trend (index)



We are investing to meet the evolving needs of our clients and drive future growth

Starting point

- **Only custodian to**:
  - Service all investor client segments

    AND
  - Provide the full range of Markets and Banking capabilities
- **High asset safety for clients from**:
  - Proprietary sub-custody network covering 2/3 of clients' AUC
  - Capital strength of J.P. Morgan

Evolving client needs	Investment focus area
Product expansion	■ Expansion of **ETF capabilities** ■ Continued investment in our **Alts platform** ■ Comprehensive **derivative coverage** ■ Global **middle office** offering ■ Developing **innovative workstation** tools
Globalization	■ Continued investment in our **market leading EM capabilities** ■ Expanded **FX and currency hedging** capabilities
Drive for efficiency	■ Integrate, automate and standardize the operating platform to **increase its scalability** ■ Targeted workflow **re-engineering**
Increasing demand for data	■ **Investing** in: ▪ Data standards & governance ▪ Data integration & visualization ■ **Analytics** driven insights

In our Investment Banking business, we are making investments in areas of opportunity while delivering the Firm for our clients

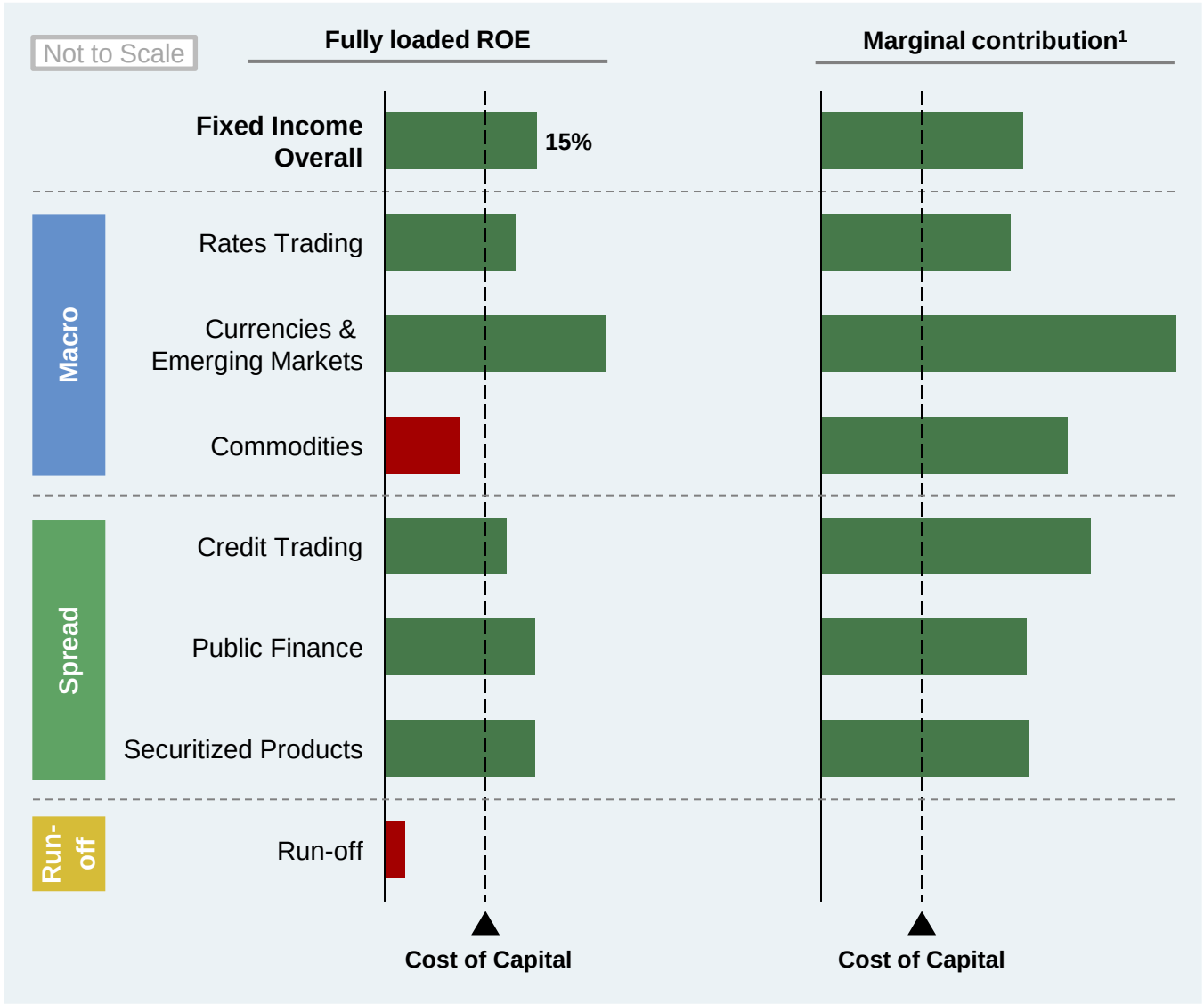
Strategic priorities	Investment focus areas
Talent	■ Completed majority of **senior banker hires** in targeted key areas to improve strategic dialogue at the CEO and Board level ■ Continuing to **invest for the long-term**, including geographies such as APAC
Delivering the Firm	■ **Maintain leadership** across all Investment Banking products ■ **Partnering within CIB and across the Firm** to seamlessly provide world-class offerings to clients ■ **Broad growth** across asset classes in **Corporate Derivatives** ■ Build on regional strategy to target **Middle Market CB clients** ■ **Partnership with Private Bank** to better serve **Family Offices**
Resource optimization	■ Taking a **comprehensive view of the client**, including capital and liquidity utilization, pricing terms, and **overall profitability** to **strategically deploy capital** ■ Investing in client relationships with a **through-the-cycle view** ■ **Integrating client coverage across Banking** to optimize our capabilities and resources to best serve our clients ■ Using efficiency gains to continue **selective investments**

We maintain our leadership in Fixed Income and continue to optimize our business under multiple constraints

Strategic priorities	Investment focus areas
Leverage scale for staying power	■ Strengthen our **#1 position** by closing the few regional and product gaps ■ Maintain **size and focus** to meet **current as well as future client needs** ■ Improve **wallet penetration** with most important clients
New market structure readiness	■ Continue **building products that can adapt to a changing market structure** (e.g., principal vs. agency trading) ■ Investments in **enhanced data-driven risk management**
Mitigate fixed costs through efficiencies	■ **Adjust headcount** to represent our assessment of current and future business potential ■ **Reduce fixed costs** in every line of business to ensure competitiveness and flexibility under various future scenarios
Optimize capital and balance sheet	■ Continue to **dynamically optimize the allocation of capital** ■ Leverage client profitability tools to optimize **client franchise**

Scale, diversification, and leading positions drive high and resilient ROE for our FICC franchise

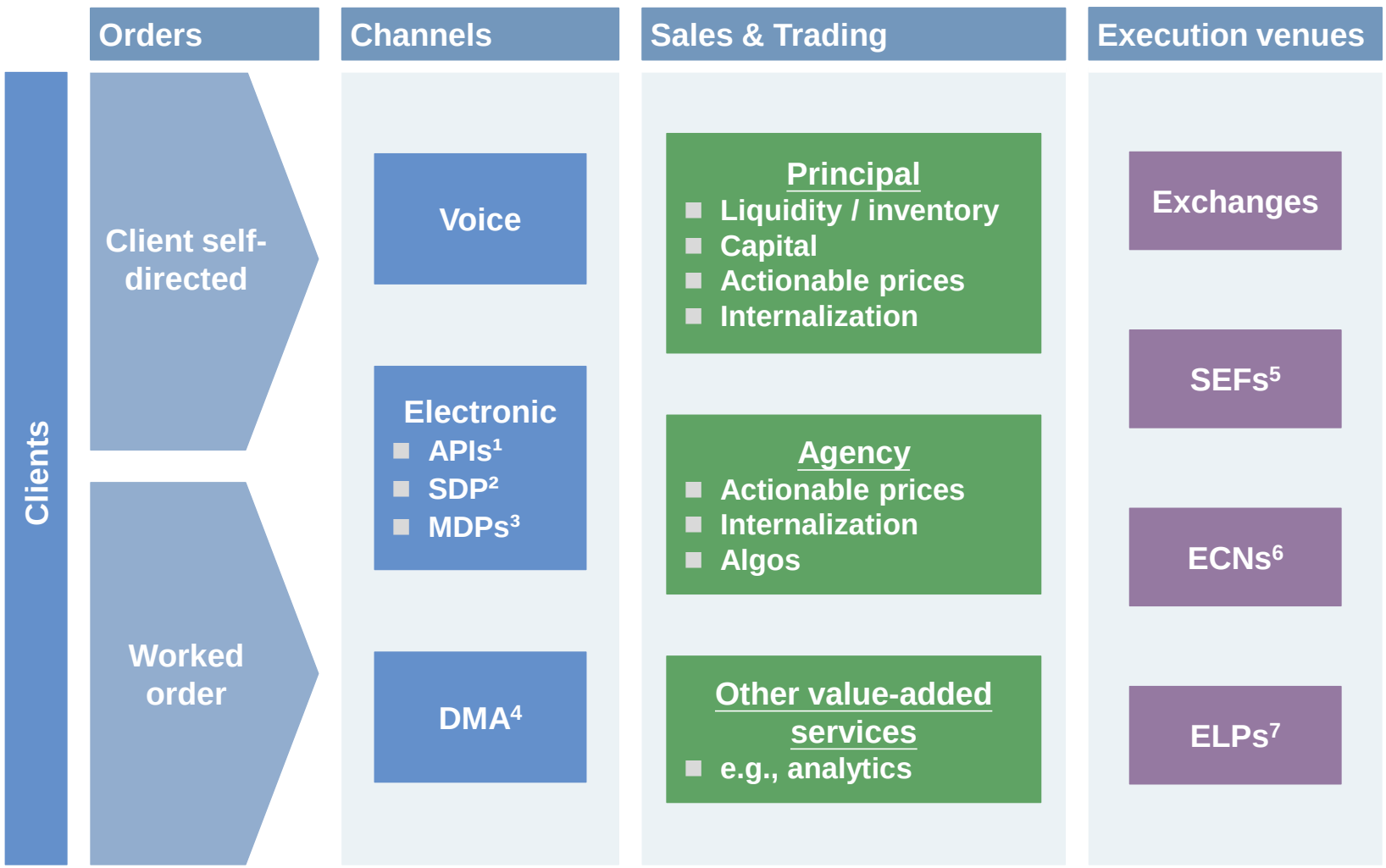
Return on equity of Fixed Income



- Market-leading positions and scale contributing to high and resilient ROE – creating staying power
- High marginal contribution across all products given fixed costs and capital
- Well positioned to take advantage of future market growth

[1] Marginal contribution is the ROE calculated excluding certain fixed costs and capital. Given shared infrastructure and diversification benefits, fixed components of cost and capital are higher for individual businesses than for fixed income overall. The marginal contribution for each business is equivalent to the ROE lost on the capital that would be freed over time if we exited that business.

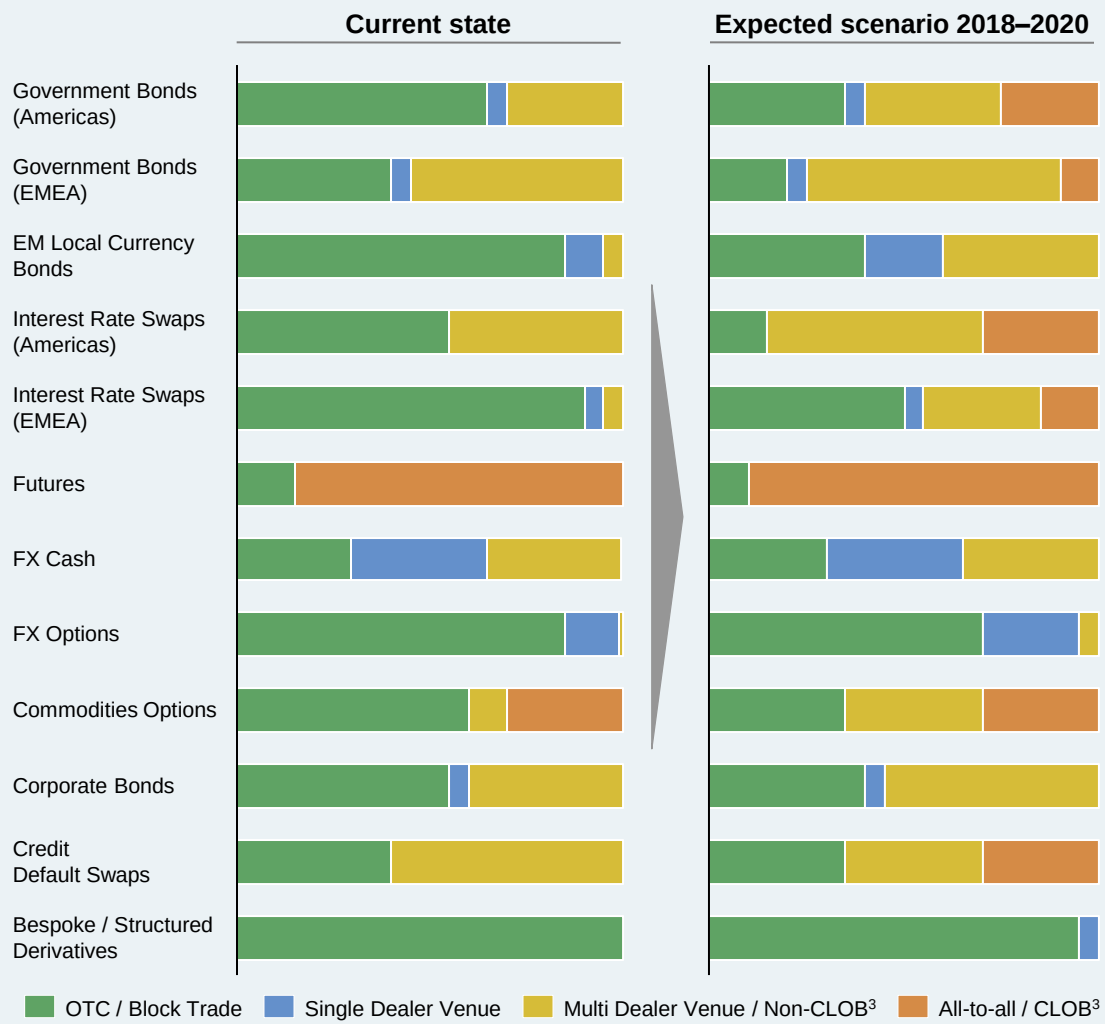
We strive to adapt to the changing market structure and serve clients in any way that they want



[1] Application Programming Interfaces; [2] Single-Dealer Platform; [3] Multi-Dealer Platforms; [4] Direct Market Access; [5] Swap Execution Facilities; [6] Electronic Communication Networks; [7] Electronic Liquidity Providers

The continued investment in capabilities to serve clients in any way that they want had tangible successes in 2015

Fixed Income client trading volume by trading model



Tangible successes in 2015

FX

- Electronic average daily volume **up 40% YoY**, FX Spot on JPMM up **86% YoY**
- **Algorithmic execution** tools for FX on JPMM[1]
- **JPMM[1] Mobile** execution launched for FX Spot

Rates

- Electronic client revenues up **47% YoY**
- Interest rate swaps **SEF[2] aggregator**

Commodities

- Electronic client revenues up **75% YoY**
- First **electronic trades** for Energy on JPMM[1]

Spread

- **Electronic axe distribution** to clients for Spread products
- **Algorithmic quoting** rolled out across liquid spread product
- Pre-trade information distribution direct to clients **via API**[4] established

[1] J.P. Morgan Markets; [2] Swap Execution Facility; [3] Central Limit Order Book; [4] Application Programming Interface
Source: J.P. Morgan internal estimates; estimated global averages unless regional product specified

Improved Equities rank and market share while undergoing significant transformation in the business, globally and across products

Strategic priorities	Investment focus areas
Close the gap in Cash Equities	■ Significant **market share growth** in e-trading leveraging our top tier platform – **more to do here** ■ Progress and focus in **growing our share with hedge funds clients**
Partnership with Prime Brokerage	■ Strong growth in **synthetic revenue** and **financing balances** ■ Rapid revenue growth with **quantitative clients** – via customized DMA[1] and algorithmic trading solutions
Mitigate fixed costs through efficiencies	■ Leverage technology to drive operational **scalability and automation** ■ Drive efficiencies **while maintaining strong control environment** ■ **New leadership** in core opportunities – delivering improved connectivity across the businesses
Optimize capital and balance sheet	■ **Leverage of our investment in analytical tools:** client profitability & analytics engine ■ **Optimize allocation** and **maximize returns** on constrained resources (e.g., capital, balance sheet, liquidity)

[1] Direct Market Access

Agenda

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Financial performance	3
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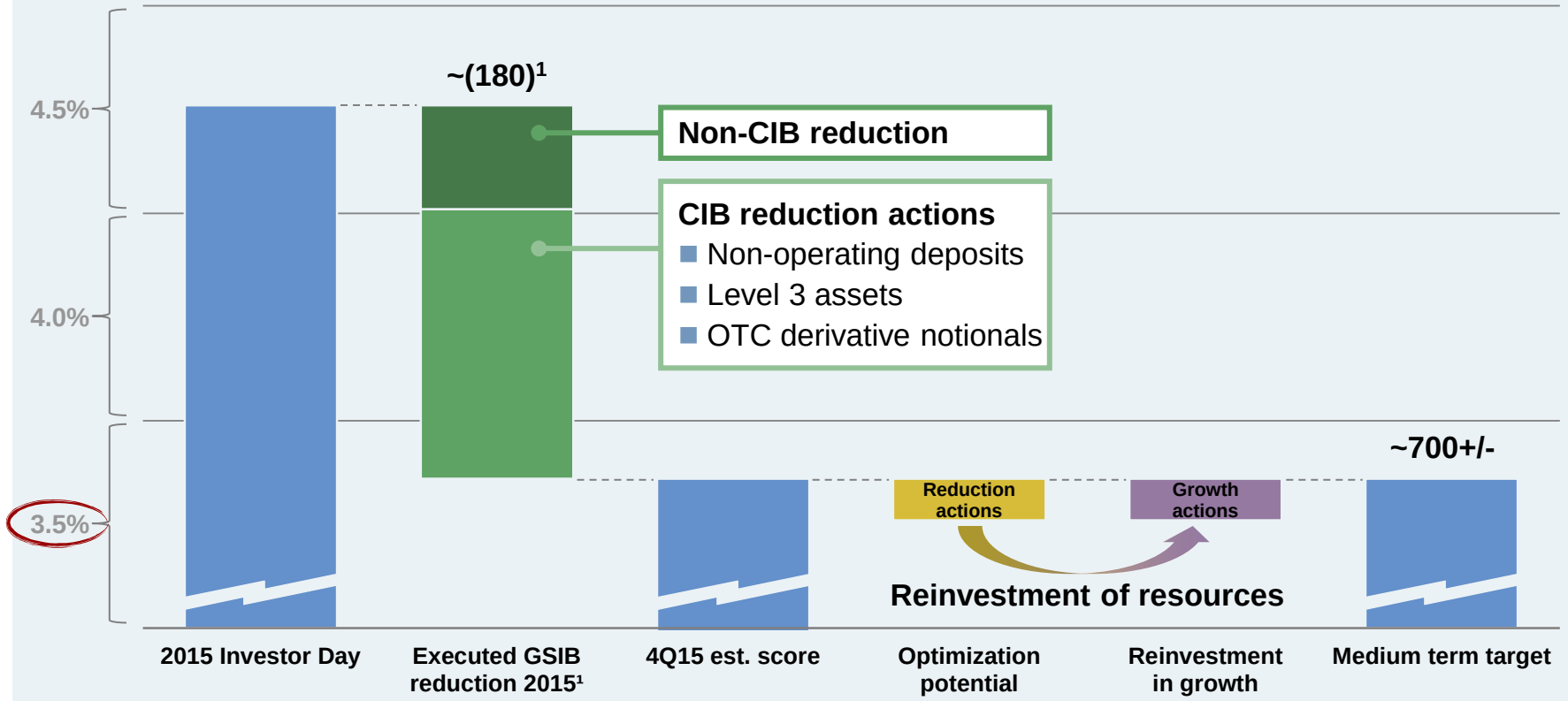
Capital optimization allowed us to reduce our estimated GSIB surcharge to 3.5%; we identified additional opportunities to maximize returns by redeployment of resources

JPM Method 2 GSIB score based on preliminary estimates

Return-maximizing redeployment of resources in the CIB over time

- 100+ granular growth and reduction actions identified
- Drive significant revenue increase without incremental balance sheet resources
- Started execution in 2015, more to be done in 2016/17

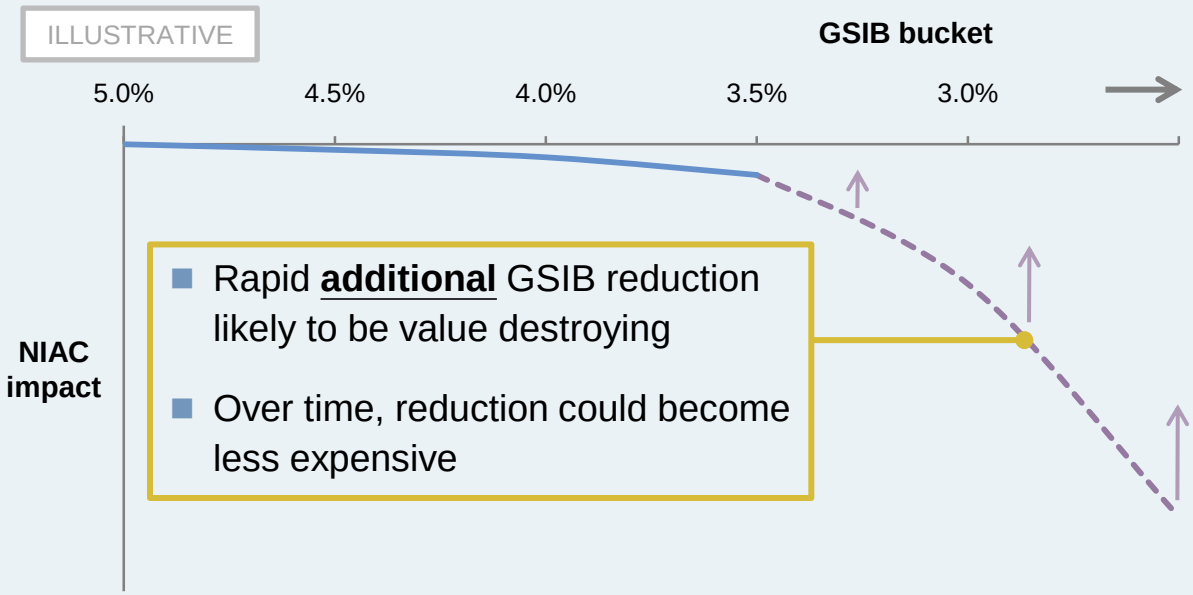
US (Method 2) Framework	
Score (points)	**Surcharge**
930-1,029	5.0%
830-929	4.5%
730-829	4.0%
630-729	3.5%
530-629	3.0%



¹ Includes ~50bps of rule changes and clarifications

Additional reductions in GSIB bucket will be challenging; actions will be guided by impact on strategy, clients, and bottom line

Further GSIB reduction becomes dilutive and other constraints become more binding



Select constraints[1]

- Advanced Risk based (including GSIB)
- Standardized Risk based (including GSIB)
- SLR
- CCAR Risk based
- CCAR Leverage
- LT Debt
- Liquidity

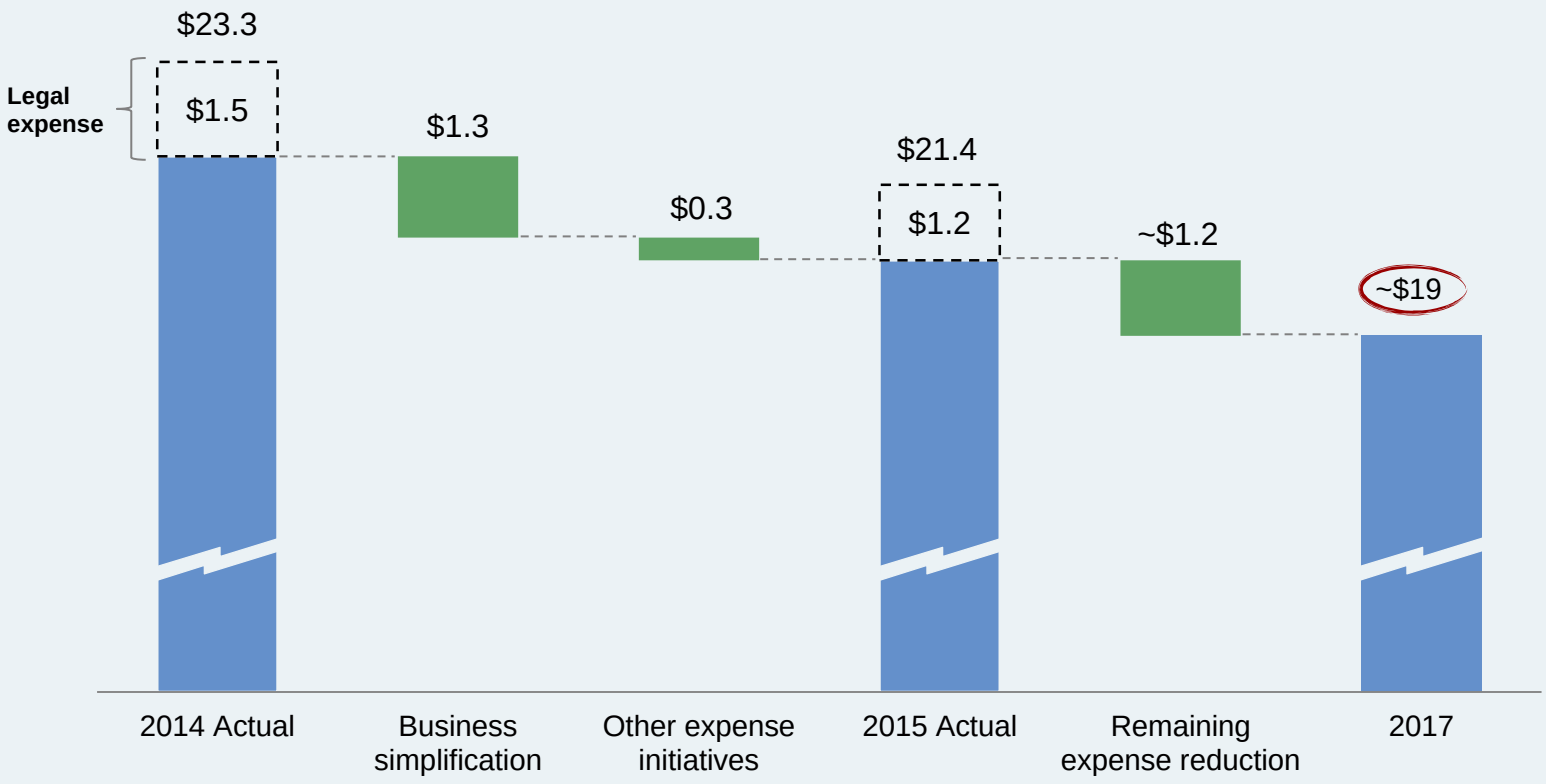
Capital allocation and pricing is evolving in the CIB to reflect multiple constraints

- GSIB is one of several constraints and we manage various other constraints at the CIB and Firmwide
- We are gradually introducing the cost of other constraints (beyond Advanced RWA)
  - Sensitize businesses to new constraints
  - Allow lowest cost optimization opportunities to surface bottom-up, with minimum impact on strategy
- Proven track record of executing optimization actions

[1] Partial list of ~20 capital and liquidity constraints

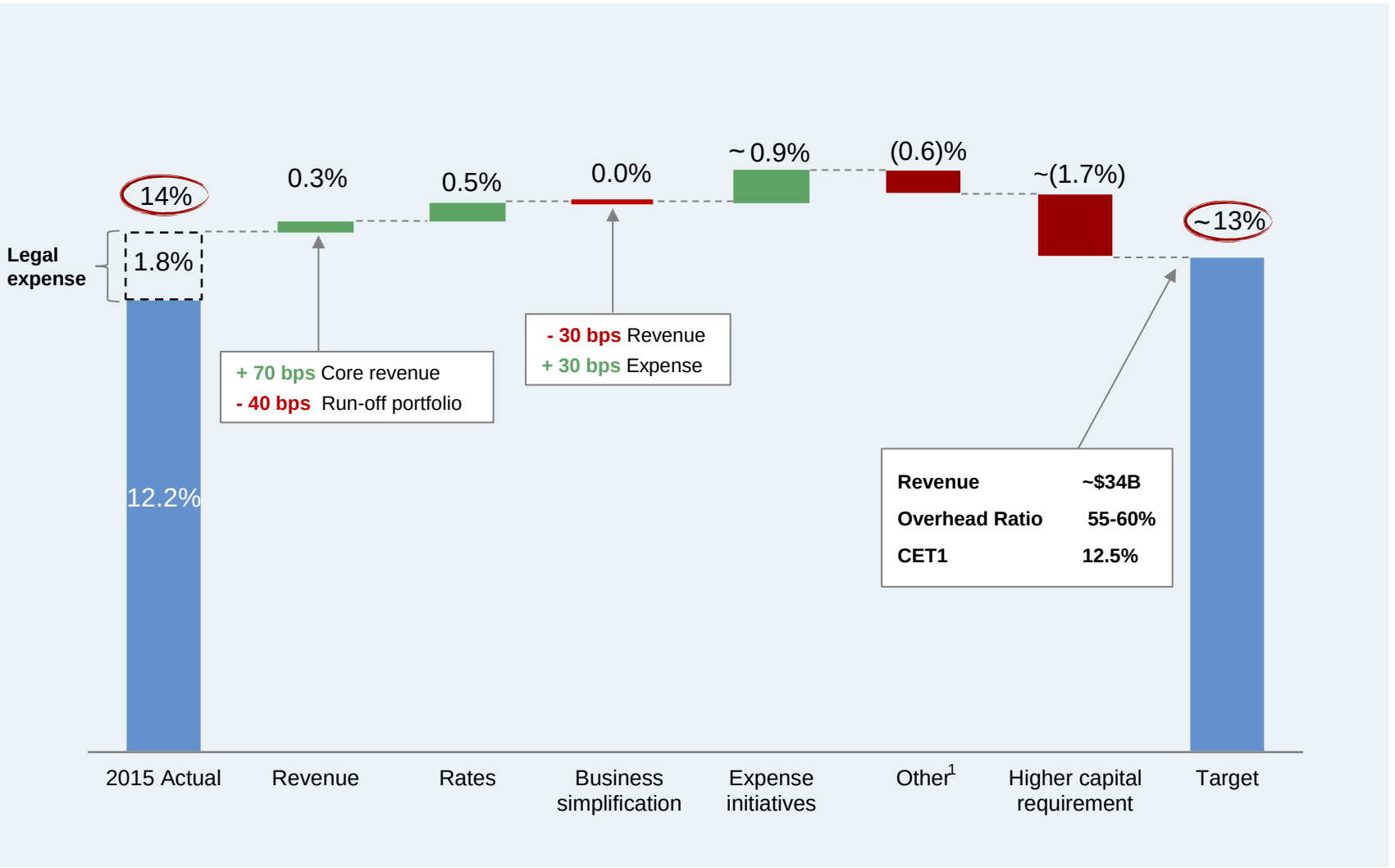
We continue to aggressively pursue identified cost opportunities to achieve our target reduction of $2.8B

CIB expense trend – 2014 to 2017 ($B)



ROE walk forward

CIB normalized ROE walk – FY 2015 to target



[1] Includes impact of normalized tax rate and credit costs

Concluding thoughts

- **Strong results – on all fronts –** against targets over multiple years
- **Market leaders in product areas** that are important to our clients
- **Embracing change and leveraging technology** across all lines of business
- **Leading transactional businesses** with significant growth potential
- **Well positioned to** benefit from cyclical and secular upswings
- **Optimizing under multiple constraints** while maintaining client focus and preserving our proven business model
- **Strict expense discipline and laser-focus on efficiencies** across all businesses while reinvesting for growth
- Reinforcing a culture focused on doing the right thing for our clients and stakeholders

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2015, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

















ANNUAL REPORT 2016

JPMorgan Chase & Co.



Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio data and headcount)	2016	2015	2014
Reported basis[a]			
Total net revenue	**$ 95,668**	$ 93,543	$ 95,112
Total noninterest expense	**55,771**	59,014	61,274
Pre-provision profit	**39,897**	34,529	33,838
Provision for credit losses	**5,361**	3,827	3,139
Net income	**$ 24,733**	$ 24,442	$ 21,745
Per common share data			
Net income per share:			
Basic	**$ 6.24**	$ 6.05	$ 5.33
Diluted	**6.19**	6.00	5.29
Cash dividends declared	**1.88**	1.72	1.58
Book value	**64.06**	60.46	56.98
Tangible book value (TBVPS)[b]	**51.44**	48.13	44.60
Selected ratios			
Return on common equity	**10%**	11%	10%
Return on tangible common equity (ROTCE)[b]	**13**	13	13
Common equity Tier 1 capital ratio[c]	**12.2**	11.6	10.2
Tier 1 capital ratio[c]	**14.0**	13.3	11.4
Total capital ratio[c]	**15.2**	14.7	12.7
Selected balance sheet data (period-end)			
Loans	**$ 894,765**	$ 837,299	$ 757,336
Total assets	**2,490,972**	2,351,698	2,572,274
Deposits	**1,375,179**	1,279,715	1,363,427
Common stockholders' equity	**228,122**	221,505	211,664
Total stockholders' equity	**254,190**	247,573	231,727
Market data			
Closing share price	**$ 86.29**	$ 66.03	$ 62.58
Market capitalization	**307,295**	241,899	232,472
Common shares at period-end	**3,561.2**	3,663.5	3,714.8
Headcount	**243,355**	234,598	241,359

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America, except where otherwise noted.

(b) TBVPS and ROTCE are each non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Financial Performance Measures on pages 48–50.

(c) The ratios presented are calculated under the Basel III Advanced Fully Phased-In Approach, and they are key regulatory capital measures. For further discussion, see "Capital Risk Management" on pages 76-85.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $2.5 trillion and operations worldwide. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, and asset management. A component of the Dow Jones Industrial Average, JPMorgan Chase & Co. serves millions of consumers in the United States and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands.

Information about J.P. Morgan's capabilities can be found at jpmorgan.com and about Chase's capabilities at chase.com. Information about JPMorgan Chase & Co. is available at jpmorganchase.com.




Here's to You
Here's to You
Here's to You

Dear Fellow Shareholders,



Jamie Dimon,
Chairman and
Chief Executive Officer

I begin this letter with a sense of gratitude and pride about JPMorgan Chase that has only grown stronger over the course of the last decade. Ours is an exceptional company with an extraordinary heritage and a promising future.

Throughout a period of profound political and economic change around the world, our company has been steadfast in our dedication to the clients, communities and countries we serve while earning a fair return for our shareholders.

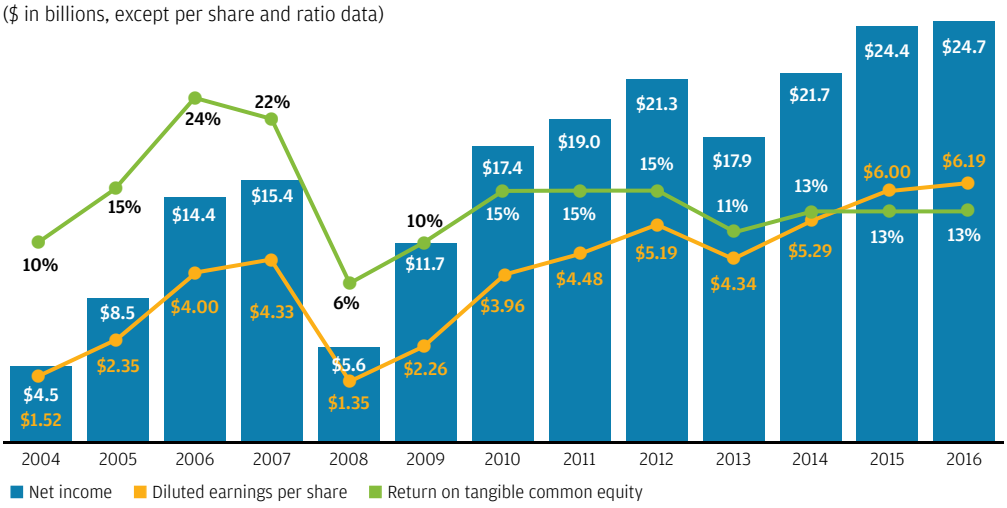
2016 was another breakthrough year for our company. We earned a record $24.7 billion in net income on revenue[1] of $99.1 billion, reflecting strong underlying performance across our businesses. We have delivered record results in six out of the last seven years, and we hope to continue to deliver in the future.

Our stock price is a measure of the progress we have made over the years. This progress is a function of continually making important investments, in good times and not so good times, to build our capabilities – people, systems and products. These

[1] Represents managed revenue

Earnings, Diluted Earnings per Share and Return on Tangible Common Equity 2004–2016

($ in billions, except per share and ratio data)



investments drive the future prospects of our company and position it to grow and prosper for decades. Whether looking back over five years, 10 years or since the Bank One/JPMorgan Chase merger (approximately 12 years ago), our stock has significantly outperformed the Standard & Poor's (S&P) 500 and the S&P Financials Index. And this is during a time of unprecedented challenges for banks – both the Great Recession and

Stock total return analysis

	Bank One	S&P 500	S&P Financials Index
Performance since becoming CEO of Bank One (3/27/2000–12/31/2016)[1]			
Compounded annual gain	11.5%	4.3%	3.1%
Overall gain	524.6%	103.0%	65.9%
	JPMorgan Chase & Co.	**S&P 500**	**S&P Financials Index**
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2016)			
Compounded annual gain	9.5%	7.8%	2.3%
Overall gain	211.0%	154.8%	32.3%
Performance for the period ended December 31, 2016			
Compounded annual gain/(loss)			
One year	34.6%	12.0%	22.7%
Five years	24.4%	14.7%	19.4%
Ten years	8.6%	6.9%	(0.4)%

These charts show actual returns of the stock, with dividends included, for heritage shareholders of Bank One and JPMorgan Chase & Co. vs. the Standard & Poor's 500 Index (S&P 500) and the Standard & Poor's Financials Index (S&P Financials Index).

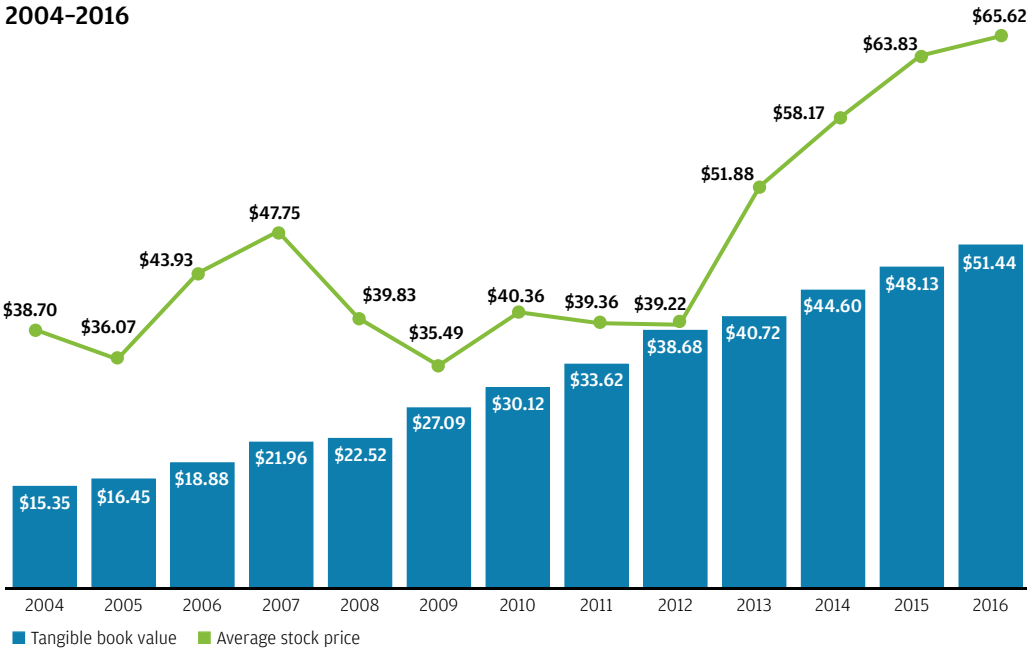
[1] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One.

the extraordinarily difficult legal, regulatory and political environments that followed. We have long contended that these factors explained why bank stock price/earnings ratios were appropriately depressed. And we believe the anticipated reversal of many negatives and the expectation of a more business-friendly environment, coupled with our sustained, strong business results, are among the reasons our stock price has done so well this past year.

As you know, we believe tangible book value per share is a good measure of the value we have created for our shareholders. If we believe our asset and liability values are appropriate – and we do – and if we believe we can continue to deploy this capital at an approximate 15% return on tangible equity, which we do, then our company should ultimately be worth considerably more than tangible book value. If you look at the chart below, you'll see that tangible book value "anchors" the stock price.

In the last five years, we have bought back $25.7 billion in stock. In prior years, I have explained why buying back our stock at tangible book value per share was a no-brainer. While the first and most important use of capital is to invest in growth, buying back stock should also be considered when you are generating excess capital. We do

Tangible Book Value and Average Stock Price per Share
2004–2016



Bank One/JPMorgan Chase & Co. tangible book value per share performance vs. S&P 500

	Bank One (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since becoming CEO of Bank One (3/27/2000–12/31/2016)[1]			
Compounded annual gain	12.2%	4.3%	7.9%
Overall gain	528.1%	103.0%	425.1%

	JPMorgan Chase & Co. (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2016)			
Compounded annual gain	13.2%	7.8%	5.4%
Overall gain	373.6%	154.8%	218.8%

Tangible book value over time captures the company's use of capital, balance sheet and profitability. In this chart, we are looking at heritage Bank One shareholders and JPMorgan Chase & Co. shareholders. The chart shows the increase in tangible book value per share; it is an after-tax number assuming all dividends were retained vs. the Standard & Poor's 500 Index (S&P 500), which is a pre-tax number with dividends reinvested.

[1] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One.

currently have excess capital. Five years ago, we offered the example of our buying back stock at tangible book value and having earnings per share and tangible book value per share substantially higher than they otherwise would have been just four years later. While we prefer buying our stock at tangible book value, we think it makes sense to do so at or around two times tangible book value for reasons similar to those we've expressed in the past. If we buy back a big block of stock this year (using analyst earnings estimates for the next five years), we would expect earnings per share in five years to be 3%–4% higher, and tangible book value would be virtually unchanged.

In this letter, I discuss the issues highlighted on the next page – which describe many of our successes and opportunities, as well as our challenges and responses. Like last year's letter, we have organized much of the content around some of the key questions we have received from shareholders and other interested parties.

I. The JPMorgan Chase franchise Page 7

1. Why do we consider our four major business franchises strong and market leading? Page 7
2. Why are we optimistic about our future growth opportunities? Page 9
3. What are some technology and fintech initiatives that you're most excited about? Page 9
4. How do we protect customers and their sensitive information while enabling them to share data? Page 10
5. What are your biggest geopolitical risks? Page 11
6. Although banks and other large companies remain unpopular with some people, you often say how proud you are of JPMorgan Chase. Why? Page 12

II. Regulatory reform Page 17

1. Talk about the strength and safety of the financial system and whether Too Big to Fail has been solved. Page 18
2. How and why should capital rules be changed? Page 20
3. How do certain regulatory policies impact money markets? Page 23
4. How has regulation affected monetary policy, the flow of bank credit and the growth of the economy? Page 24
5. How can we reform mortgage markets to give qualified borrowers access to the credit they need? Page 25
6. How can we reduce complexity and create a more coherent regulatory system? Page 30
7. How can we harmonize regulations across the globe? Page 31

III. Public policy Page 32

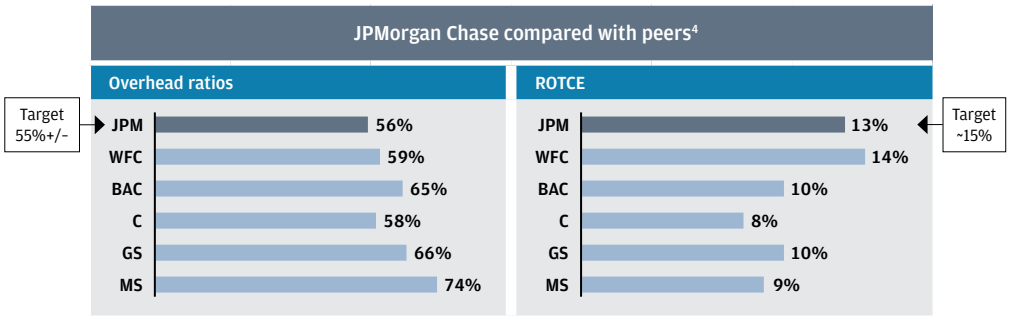
1. The United States of America is truly an exceptional country. Page 32
2. But it is clear that something is wrong — and it's holding us back. Page 32
3. How can we start investing in our people to help them be more productive and share in the opportunities and rewards of our economy? Page 39
4. What should our country be doing to invest in its infrastructure? How does the lack of a plan and investment hurt our economy? Page 40
5. How should the U.S. legal and regulatory systems be reformed to incentivize investment and job creation? Page 41
6. What price are we paying for the lack of understanding about business and free enterprise? Page 42
7. Strong collaboration is needed between business and government. Page 45

1. Why do we consider our four major business franchises strong and market leading?

The chart below and those on page 8 speak for themselves. Looking closely at the actual numbers, it's clear that every business is among the top performers financially – whether you look at efficiency (overhead ratios) or return on equity (ROE) vs. the best in that business. More important, customer satisfaction is at the center of everything we do. Each business has gained market share – which is possible only when you are improving customer satisfaction and your products and services relative to the competition. And each business continues to innovate, from customer-facing apps, to straight-through processing, to digitized trading services or payment systems. Our business leaders do a great job describing their businesses, and I strongly encourage you to read their letters following this year's Letter to Shareholders. Each will give you a feel for why we are optimistic about our future.

JPMorgan Chase Is in Line with Best-in-Class Peers in Both Efficiency and Returns

	Efficiency			Returns		
	JPM 2016 overhead ratios	Best-in-class peer overhead ratios[1]	JPM target overhead ratios	JPM 2016 ROE[2]	Best-in-class peer ROTCE[3]	JPM target ROTCE[2] (+/-)
Consumer & Community Banking	55%	56% WFC-CB	~50%	18%	14% WFC	20%
Corporate & Investment Bank	54%	54% BAC-GB & BAC-GM	55%+/-	16%	13% BAC-GB & BAC-GM	14%
Commercial Banking	39%	39% PNC	35%	16%	12% FITB	15%
Asset & Wealth Management	70%	65% CS-PB & BLK	70%	24%	24% BAC-GWIM & TROW	25%



[1] Best-in-class overhead ratio represents comparable JPMorgan Chase (JPM) peer segments: Wells Fargo Community Banking (WFC-CB), Bank of America Global Banking and Global Markets (BAC-GB & BAC-GM), PNC Corporate and Institutional Banking (PNC), Credit Suisse Private Banking (CS-PB) and BlackRock (BLK).

[2] JPM 2016 ROE reflects allocation of common equity to each business. JPM target ROTCE reflects the 2017 change in capital allocation methodology from common equity to tangible common equity, resulting in LOB equity being more in line with peers.

[3] Best-in-class ROTCE is based on net income minus preferred stock dividends of comparable JPM peers and peer segments when available: Wells Fargo & Company (WFC), BAC-GB & BAC-GM, Fifth Third Bank (FITB), Bank of America Global Wealth and Investment Management (BAC-GWIM) and T. Rowe Price (TROW).

[4] WFC, Bank of America Corporation (BAC), Citigroup Inc. (C), Goldman Sachs Group, Inc. (GS), Morgan Stanley (MS).

ROTCE = Return on tangible common equity

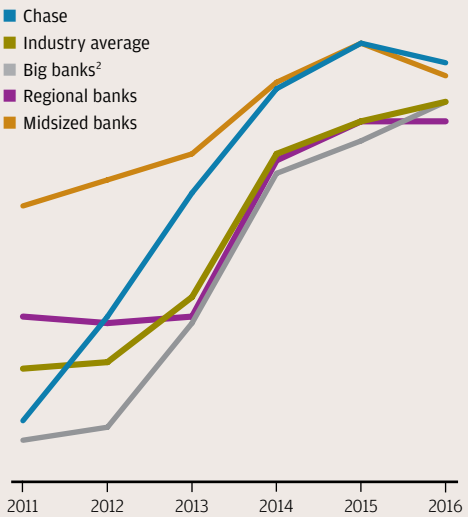
Client Franchises Built Over the Long Term

		2006	2015	2016	
Consumer & Community Banking	Deposits market share[1]	3.6%	7.9%	8.3%	■ Relationships with ~50% of U.S. households
	# of top 50 Chase markets where we are #1 (top 3)	11 (25)	12 (40)	14 (38)	■ Industry leading deposit growth[12]
	Average deposits growth rate	8.0%	9.0%	10.0%	■ #1 U.S. credit card issuer[13]
	Active mobile customers growth rate	NM	20.0%	16.0%	■ #1 U.S. co-brand credit card issuer[14]
	Credit card sales market share[2]	15.9%	21.1%	21.5%	■ #1 rated mobile banking app[15]
	Merchant processing volume[3] ($ in billions)	$661	$949	$1,063	■ #1 U.S. credit and debit payments volume[16] ■ #2 merchant acquirer[17]
Corporate & Investment Bank	Global Investment Banking fees[4]	#2	#1	#1	■ >80% of Fortune 500 companies do business with us
	Market share[4]	8.7%	7.9%	8.1%	■ #1 in both N.A. and EMEA Investment Banking fees[18]
	Total Markets revenue[5]	#8	#1	#1	■ #1 in Global Debt, Equity and Equity-related[18]
	Market share[5]	6.3%	9.7%	11.4%	■ #1 in Global Long-Term Debt and Loan Syndications[18]
	FICC[5]	#7	#1	#1	■ #1 in FICC productivity[19]
	Market share[5]	7.0%	10.3%	12.0%	■ Top 3 Custodian globally with AUC of $20.5 trillion[20]
	Equities[5]	#8	#3	#2	■ #1 in USD clearing volumes with 19.0% share in 2016[21]
	Market share[5]	5.0%	8.8%	10.1%	
Commercial Banking	# of Metropolitan Statistical Areas with Middle Market banking presence[6]	26	45	47	■ Unparalleled platform capabilities – competitive advantage
	Multifamily lending[7]	#28	#1	#1	■ #1 in perceived customer satisfaction[22]
	Gross Investment Banking revenue ($ in billions)	$0.7	$2.2	$2.3	■ Top 3 in overall Middle Market, large Middle Market and Asset Based Lending Bookrunner[23]
	% of North America Investment Banking fees	16%	36%	40%	■ Industry-leading credit performance – 5th straight year of net recoveries or single digit NCO rate
Asset & Wealth Management	Mutual funds with a 4/5 star rating[8]	119	214	220	■ 83% of 10-year long-term mutual fund AUM in top 2 quartiles[24]
	Ranking of long-term client asset flows[9]	NA	#4	#2	■ Positive client asset flows every year since 2004
	Active AUM market share[10]	1.8%	2.6%	2.5%	■ #2 Global Private Bank and #1 LatAm Private Bank[25]
	North America Private Bank *(Euromoney)*	#1	#1	#1	■ Revenue and long-term AUM growth ~80% since 2006
	Client assets market share[11]	3.0%	4.4%	4.4%	■ Doubled WM client assets (1.6x industry rate) since 2006[10]

For footnoted information, refer to slide 39 in the 2017 Firm Overview Investor Day presentation, which is available on JPMorgan Chase & Co.'s website (http://investor.shareholder.com/jpmorganchase/presentations.cfm), under the heading Investor Relations, Events & Presentations, JPMorgan Chase 2017 Investor Day, Firm Overview, and on Form 8-K as furnished to the SEC on February 28, 2017, which is available on the SEC's website (www.sec.gov).
NM = Not meaningful
NA = Not available

Increasing Customer Satisfaction

U.S. retail banking satisfaction[1]



Other important metrics

Increasing market share is a sign of increasing customer satisfaction

- Chase grew its Business Banking primary bank market share from ~6% in 2012 to ~9% in 2016
- Chase improved its performance in the J.D. Power Primary Mortgage Origination and Servicer Satisfaction Studies – ranking #5 in originations and #6 in servicing. Chase originations and servicing rankings went up by 2 and 4 spots, respectively, compared to the 2015 rankings
- In Total Markets, J.P. Morgan ranked #1; in Fixed Income, #1, continuously since 2010; and in Equities, #2, having increased its share to 10.1% from 8.8% last year[3]
- *Institutional Investor* magazine surveys large investors every year. In 2016, J.P. Morgan Research team rankings were: #1 for All-America Equity; #1 for All-America Fixed Income; and #1 for All-Europe Fixed Income. With the future focus on emerging markets, J.P. Morgan Research ranked #2 in the survey for Emerging Markets EMEA Research
- Overall client satisfaction for CB clients has increased from 87% to 91% from 2010 to 2016, according to our proprietary client survey
- J.P. Morgan ranks as the #1 private bank in the U.S. for eight consecutive years and #1 in Latin America for four consecutive years[4]
- J.P. Morgan ranks as the Leading Pan-European Fund Management Firm for seven consecutive years[5]

[1] Source: J.D. Power U.S. Retail Banking Satisfaction Study
[2] Big banks defined as top six U.S. banks.
[3] Market share and rank is based on Coalition FY 16 results and reflects J.P. Morgan's share of Coalition's Global Industry Revenue Pool. Total industry pool is based on J.P. Morgan's internal business structure.
[4] Source: *Euromoney,* 2017
[5] Source: Thomson Reuters Extel, 2016

2. Why are we optimistic about our future growth opportunities?

We believe we have substantial opportunities in the decades ahead to drive organic growth in our company. We have confidence in the underlying growth in the U.S. and global economies, which will fuel the growth in our customer base – consumer deposits, assets under management and small to large clients globally. This growth will obviously be faster in emerging markets than in developed markets – and we are well-positioned to serve both. In addition, we believe we can continue to gain share in many markets and, over time, add new, relevant products. This can drive organic growth for years. Capturing this growth is very basic:

- Selectively adding investment bankers and private bankers around the world
- Bringing consumer and commercial banking branches and capabilities to more places in the United States
- Adding wholesale branches overseas and carefully expanding into new countries
- Adding wholesale and Private Bank clients as they grow into our target space

Equally important is using technology and fintech to do a better job serving clients and to grow our businesses – with better products and services. You can read more about our big data, machine learning, payment systems, cybersecurity and electronic trading on pages 47–68 described by our senior executives. But I do want to highlight a few items in the next question that pertain to these topics.

3. What are some technology and fintech initiatives that you're most excited about?

One of the reasons we're performing well as a company is we never stopped investing in technology – this should never change. In 2016, we spent more than $9.5 billion in technology firmwide, of which approximately $3 billion is dedicated toward new initiatives. Of that amount, approximately $600 million is spent on emerging fintech solutions – which include building and improving digital and mobile services and partnering with fintech companies. The reasons we invest so much in technology (whether it's digital, big data or machine learning) are simple: to benefit customers with better, faster and often cheaper products and services, to reduce errors and to make the firm more efficient.

We are developing great new products.

We are currently developing some exciting new products and services, which we will be adding to our suite and rolling out later this year, including:

- End-to-end digital banking – The ability to open an account and complete the majority of transactions on a mobile phone.
- Investment advice and self-directed investing – Online vehicles for both individual retirement and non-retirement accounts, providing easy-to-use (and inexpensive) automated advice, as well as enabling our customers to buy and sell stocks and bonds, etc. (again inexpensively).
- Electronic trading and other online services (e.g., cash management) in our Corporate & Investment Bank and Asset & Wealth Management businesses – Offering our clients a more robust digital platform.

We are investing in data and technology to improve the financial health of low-income households.

Over the last two years, the JPMorgan Chase Institute has helped identify some of the most pressing financial challenges facing American households, such as their difficulty managing income and expense volatility. We are using that data to select and support innovative fintech companies and nonprofits that are designing solutions to address these challenges. One example of these efforts is JPMorgan Chase's Financial Solutions Lab, which, in partnership with the Center for Financial Services Innovation, seeks to facilitate the next generation of fintech products to help consumers manage their daily finances and meet their long-term goals. Highlights of the initiative include:

- To date, the Lab has helped support more than 18 fintech companies working to improve the financial health of more than 1 million Americans. One example is Digit, an automated savings tool that identifies small amounts of money that can be moved into savings based on spending and income. To date, it has helped Americans save more than $350 million.
- Lab winners have raised more than $100 million in follow-on capital.
- In 2017, we launched a new competition seeking innovative fintech solutions to promote the financial health of populations often overlooked, such as people of color, individuals with disabilities and low-income women.

We are successfully collaborating with other companies to deliver fintech solutions.

Whether it is consumer payment systems (Zelle), mortgages (Roostify), auto finance (TrueCar), small business lending (OnDeck Capital) or communications systems (Symphony), we are successfully collaborating with some excellent fintech companies to dramatically improve our digital and other customer offerings. I'd like to highlight just two new exciting areas:

- Developer Services API store – By providing direct interfaces with our applications (fully controlled, of course), we are enabling entrepreneurs, partners, fintech companies and clients to build new products or services dedicated to specific needs.
- Bill payment and business services – While I can't reveal much at the moment, suffice it to say there are some interesting developments coming as we integrate our capabilities with those of other companies.

4. How do we protect customers and their sensitive information while enabling them to share data?

For years, we have been describing the risks – to banks and customers – that arise when customers freely give away their bank passcodes to third-party services, allowing virtually unlimited access to their data. Customers often do not know the liability this may create for them, if their passcode is misused, and, in many cases, they do not realize how their data are being used. For example, access to the data may continue for years after customers have stopped using the third-party services.

We recently completed a new arrangement with Intuit, which we think represents an important step forward. In addition to protecting the bank, the customers and even the third party (in this case, Intuit), it allows customers to share data – how and when they want. Under this arrangement, customers can choose whatever they would like to share and opting to turn these selections on or off as they see fit. The data will be "pushed" to Intuit, eliminating the need for sharing bank passcodes, which protects the bank and our customers and reduces potential liabilities on Intuit's part as well. We are hoping this sets a new standard for data-sharing relationships.

5. What are your biggest geopolitical risks?

Banks have to manage a lot of risks – from credit and trading risks to technological, operational, conduct and cybersecurity risks. But in addition to those, we have exposures around the world, which are subject to normal cyclical and recession risks, as well as to complex geopolitical risks.

There are always geopolitical risks, and you can rest assured we are continuously reviewing, analyzing and stress testing them to ensure that our company can endure them. We always try to make certain that we can handle the worst of all cases – importantly, without disrupting the effective operation of the company and its service to our clients. We think these geopolitical risks currently are in a heightened state – that is, beyond what we might consider normal. There are two specific risks I want to point out:

Brexit and the increasing risk to the European Union (EU).

Regarding Brexit, a key concern is to make sure our company is prepared to support our clients on day one – the first day after the actual Brexit occurs, approximately two years from now. We are confident we will be able to develop and expand the capabilities that our EU subsidiaries and branches will need to serve our clients properly in Europe under EU law. This will require acquiring regulatory approvals, transferring certain technologies and moving some people. On day one, we need to perform all of our critical functions at our standards. For example, underwriting debt and equity, moving money and accepting deposits, and safeguarding the custody assets for all of our European clients, including many sovereigns themselves. We must be prepared to do this assuming a hard exit by the United Kingdom – it would be irresponsible to presume otherwise. While this does not entail moving many people in the next two years, we do suspect that following Brexit, there will be constant pressure by the EU not to "outsource" services to the United Kingdom but to continue to move people and capabilities into EU subsidiaries.

We hope that the advent of Brexit would lead the EU to focus on fixing its issues – immigration, bureaucracy, the ongoing loss of sovereign rights and labor inflexibility – and thereby pulling the EU and the monetary union closer together. Our fear, however, is that it could instead result in political unrest that would force the EU to split apart. The unraveling of the EU and the monetary union ***could*** have devastating economic and political effects. While we are not predicting this will happen, the probabilities have certainly gone up – and we will keep a close eye on the situation in Europe over the next several years.

De-globalization, Mexico and China.

Anti-globalization sentiment is growing in parts of the world today, usually expressing itself in anti-trade and anti-immigration positions. (I'm not going to write about immigration in this letter – we have always supported proper immigration – it is a vital part of the strength of America, and, properly done, it enhances the economy and the vitality of the country.) We do not believe globalization will reverse course – we believe trade has been absolutely critical for growth around the world and has benefited billions of people. While there are some issues with our trade policies that need to be fixed, poorly conceived anti-trade policies could be quite disruptive, particularly with two of our key trading partners: Mexico and China.

The trade deal with Mexico through NAFTA is simpler than the one with China. (In full disclosure, JPMorgan Chase is a major international bank in Mexico, with revenue of more than $400 million, serving Mexican, American and international clients who do business there.) Mexico is a long-standing peaceful neighbor, and it is wholly in our country's interest that Mexico be a prosperous nation. This actually reduces immigration issues (there are now more Mexicans

going back to Mexico than coming into the United States). Our trade agreement with Mexico helps ensure that the young democracy in Mexico is not hijacked by populist and anti-American leaders (like Chavez did in Venezuela). While there are some clear, identifiable problems with NAFTA, I believe they will be worked out in a way that is fair and beneficial for both sides. The logic to do so is completely compelling.

China is far more complex. (Again, in full disclosure, we have a major international presence in China, with revenue of approximately $700 million, serving Chinese, American and international clients who do business in that country.) The United States has some serious trade issues with China, which have grown over the years – from cybersecurity and the protection of intellectual property to tariffs, non-tariff trade barriers and non-fulfillment of World Trade Organization obligations. However, there is no inevitable or compelling reason that China and America have to clash – in fact, improving political and economic relationships can be good for both parties. So while the issues here are not easy, I am hopeful they can be resolved in a way that is fair and constructive for the two countries.

6. Although banks and other large companies remain unpopular with some people, you often say how proud you are of JPMorgan Chase. Why?

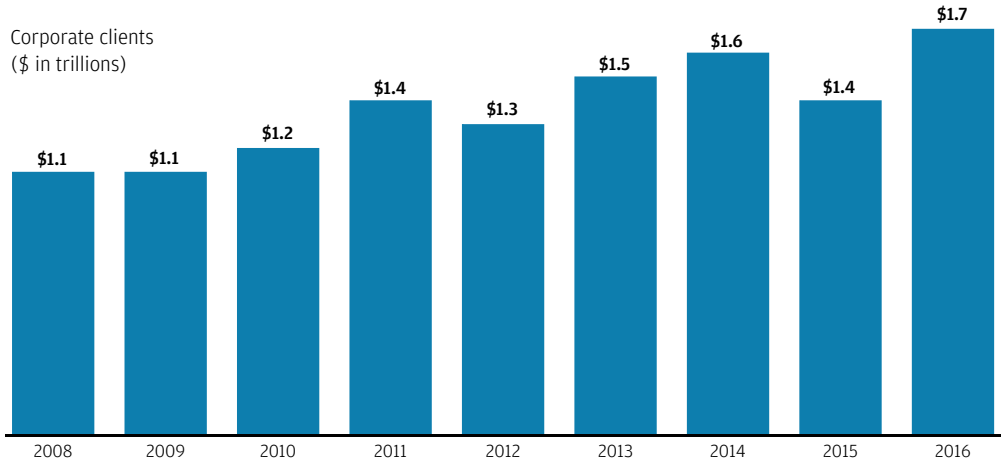
I firmly believe the qualities embedded in JPMorgan Chase today – the knowledge and cohesiveness of our people, our deep client relationships, our technology, our strategic thinking and our global presence – cannot be replicated. While we take nothing for granted, as long as we continue to do our jobs well and continue to drive our company forward, we think we can be a leader for our industry and the communities we serve for decades to come. There are times when I am bursting with pride with what we have accomplished for our clients, communities and countries around the world – let me count (some of) the ways:

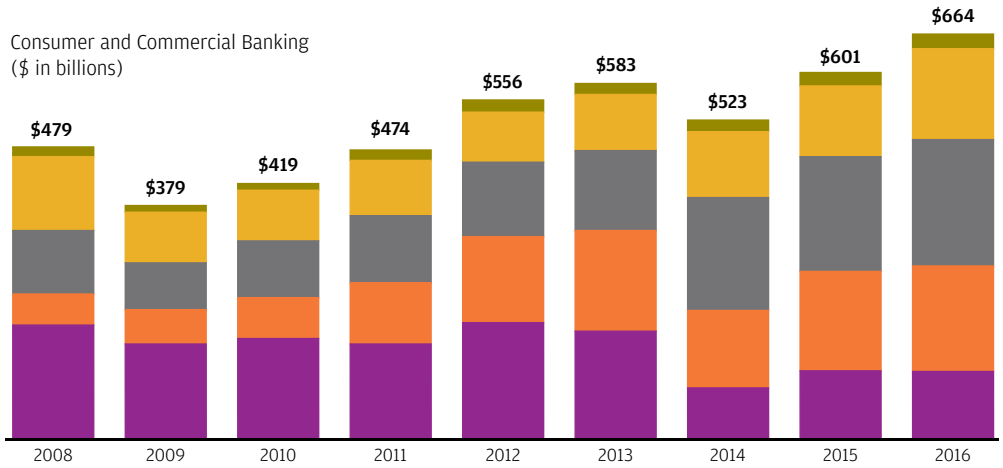
We are strong and steadfast and are there for our clients in good times and bad.

In the toughest of times, we maintained a healthy and vibrant company that was able to do its job – we did not need government support and, in fact, we consistently provided credit and capital to our clients and assistance to our government throughout the crisis. I want to remind our shareholders that we continued to lend not at the much higher prevailing market rates at that time but at existing bank rates. These were far below market rates because our clients relied on us – we were their lender of last resort. JPMorgan Chase was and will be a Rock of Gibraltar in the best and worst of times for our clients around the world.

New and Renewed Credit and Capital for Our Clients

at December 31,





Small business	$ 16	$ 7	$ 11	$ 17	$ 20	$ 18	$ 19	$ 22	$ 24
Card & Auto	121	83	83	91	82	92	108	116	149
Commercial/Middle market	104	77	93	110	122	131	185	188	207
Asset management	51	56	67	100	141	165	127	163	173
Mortgage/Home equity	187	156	165	156	191	177	84	112	111

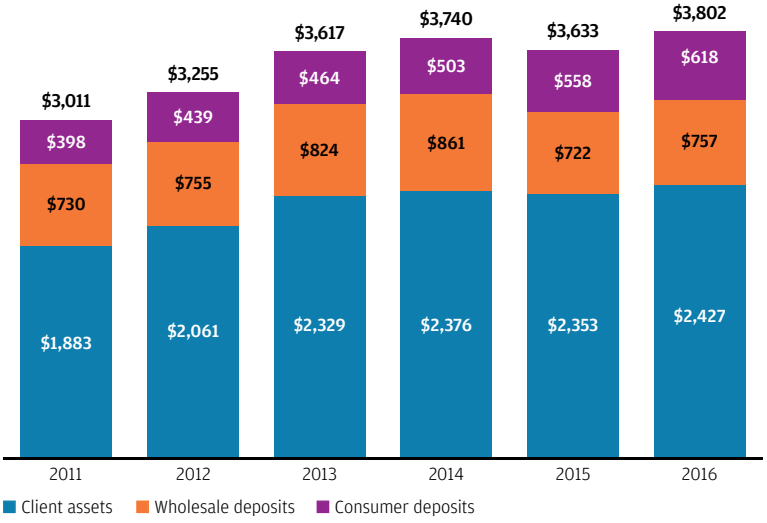
We have extraordinary capabilities – both our people and our technology.

Ultimately, our people are our most important assets – and they are exceptional. Their knowledge, their capabilities and their relationships are what drive everything else, including our technology and our innovation. They partner well with each other around the world, and they are deeply trusted by our clients and within our communities. We all owe them an enormous debt. They are the ones accomplishing all the things you are reading about in this Annual Report.

Our fortress balance sheet and the strength of our people were never more vividly evident than during the darkest hours of the financial crisis. I was in awe of the tremendous effort our people made (thousands of people, seven days a week for months)

Assets Entrusted to Us by Our Clients
at December 31,
($ in billions)

Deposits and client assets[1]



Assets under custody[2]

2011	2012	2013	2014	2015	2016
$16,870	$18,835	$20,485	$20,549	$19,943	$20,520

[1] Represents assets under management, as well as custody, brokerage, administration and deposit accounts.
[2] Represents activities associated with the safekeeping and servicing of assets.

to acquire and assimilate Bear Stearns and Washington Mutual – thereby saving 30,000 jobs and avoiding the devastation of communities that would have happened if those companies had been allowed to fail. Our company went above and beyond the call of duty during the height of the crisis, including lending $87 billion to a bankrupt Lehman to facilitate, as much as possible, an orderly unwind of its assets. In those dark days, we were the only bank willing to commit to lending $4 billion to the state of California, $2 billion to the state of New Jersey and $1 billion to the state of Illinois to keep those states strong. None of these actions had to be taken, and they were made at some risk to JPMorgan Chase. We simply were acting to do our part to try to stop the crisis from getting worse.

We try to be outstanding corporate citizens.

We believe in being great corporate citizens – in how we treat our employees and care for our clients and communities. Let me give some examples to illustrate this point:

- **We compensate our employees fairly and provide extraordinary benefits and training.** We value our employees at JPMorgan Chase, and we are committed to helping them succeed. This past year, we announced that we will increase our minimum wages – mostly for entry-level bank tellers and customer service representatives – to between $12.00 and $16.50 an hour (depending on where these employees live). This will increase wages for approximately 18,000 employees. We believe this pay increase is the right thing to do, and, above all, it enables more people to begin to share in the rewards

of our success. Remember, many of these employees soon move on to even higher paying jobs.

We will also continue to invest in employee benefits and training opportunities so that our workers can continue to increase their skills and advance their careers. Our comprehensive benefits package, including healthcare and retirement savings, on average, is valued at $11,000 per year. Our total investment in training and development is approximately $325 million a year. Together, these efforts help our employees support their families, advance their careers and promote economic growth in our communities.

- **We have a diverse workforce.** We have more than 243,000 employees globally with over 167,000 in the United States. Women represent 50% of our employees. Recently, Oliver Wyman, a leading global management consulting firm, issued a report stating that it would be 30 years before women reach 30% Executive Committee representation within global financial services. So you might be surprised to find out that women already represent 30% of my direct reports and approximately 30% of our company's senior leadership globally. They run major businesses – several units on their own would be among Fortune 1000 companies. In addition to having three women on our Operating Committee – who run Asset & Wealth Management, Finance and Legal – some of our other businesses and functions headed by women include Consumer Banking, Credit Card, U.S. Private Bank, U.S. Mergers & Acquisitions, Global Equity Capital Markets, Global Research, Regulatory Affairs, Global Philanthropy, our U.S. branch network, our Controller and firmwide Marketing. I believe we have some of the best women leaders in the corporate world globally. In addition to gender diversity, 48% of our firm's population is ethnically diverse in the United States, and we are in more than 60 countries around the world. Diversity means running a company where people are respected, trusted and given equal opportunity to contribute and raise their ideas and voices.

  But there is one area in particular where we simply have not met the standards JPMorgan Chase has set for itself – and that is in increasing African-American talent at the firm. While we think our effort to attract and retain black talent is as good as at most other companies, it simply is not good enough. Therefore, in 2016, we introduced a new firmwide initiative called ***Advancing Black Leaders***. This initiative is dedicated to helping us better attract and recruit external black talent while retaining and developing the talent within the company. And we are proud of our efforts this past year – we increased the number of black employees at the officer level (through both internal promotions and external new hires), we focused on the pipeline of junior talent, and we increased the number at the senior officer and vice president level. We plan to continue to make progress on this front in the years to come.

- **We are proud of how we are helping veterans.** We want to continue to update you on how JPMorgan Chase has helped position military members, veterans and their families. Our program is centered on facilitating success in their post-service lives primarily through employment and retention. In 2011, JPMorgan Chase and 10 other companies launched the 100,000 Jobs Mission, setting a goal of collectively hiring 100,000 veterans. The initiative now includes more than 200 companies, has collectively hired nearly 400,000 veterans, and is focused on collectively hiring 1 million people. JPMorgan Chase alone has hired more than 11,000 veterans since 2011. We hope you feel as good about this initiative as we do.

- **We have accomplished an extraordinary amount in our Corporate Responsibility efforts.** We take this responsibility very seriously, and, over the last decade, not only have we more than doubled our philanthropic giving from approximately

$100 million to approximately $250 million in 2016, but we have dramatically increased our support with human capital, collaboration, data and management expertise. Our head of Corporate Responsibility talks about our significant measures in more detail in his letter, but I will highlight two initiatives below:

– We provide tremendous support to cities and communities – especially those left behind – and the best example is our work in Detroit. JPMorgan Chase has been doing business in Detroit for more than 80 years, and we watched as this iconic American city was engulfed in economic turmoil after years of decline. Just as Detroit was declaring bankruptcy, our company redoubled its efforts to help and, in 2014, announced our most comprehensive initiative to date – a $100 million investment in Detroit to help accelerate the city's recovery.

  We are making strategic, coordinated investments focused on creating economically inclusive and revitalized neighborhoods, preparing people with the skills needed for today's high-quality jobs and providing small businesses with the capital they need to grow and succeed. This includes our investment in the Strategic Neighborhoods Fund, which brings together community developers and dedicated resources to create and maintain affordable housing and deliver services to targeted communities. We also seeded the city's first nonprofit real estate development firm focused exclusively on creating and preserving affordable housing in Detroit's neighborhoods. In 2015, we helped create the $6.5 million Entrepreneurs of Color Fund with the Kellogg Foundation and Detroit Development Fund to bring critical financing and technical assistance to underserved minority- and community-based small businesses. In its first year, the Fund deployed almost $3 million in capital through more than 30 loans. We are also putting our talented employees to work in Detroit through the Detroit Service Corps. Since 2014, 68 JPMorgan Chase employees from 10 countries dedicated three intensive weeks to 16 Detroit nonprofits, helping them analyze challenges, solve problems and improve their chances for success. Detroit is making incredible progress as a result of the unprecedented spirit of engagement and cooperation among the city's leaders, business community and nonprofit sectors. JPMorgan Chase is proud to be part of Detroit's resurgence, and we believe a thriving Detroit economy will become a shining example of American resilience and ingenuity at work.

– And more broadly, we created solutions for one of our country's biggest challenges – training the world's workforce in the skills needed to compete in today's economy. Through several targeted initiatives, JPMorgan Chase is investing over $325 million in demand-driven workforce development initiatives around the world. Our programs build stronger labor markets that create economic opportunity, focusing on middle-skill jobs – positions that require a high school education, and often specialized training or certifications, but not a college degree. These jobs – surgical technologists, diesel mechanics, help desk technicians and more – offer good wages and the chance to move up the economic ladder. Our goal is to increase the number of workers who have access to career pathways, whether they are adults looking to develop new skills or younger workers starting to prepare for careers during high school and ending with postsecondary degrees or credentials aligned with good-paying, high-demand jobs. We are very proud that we can be a bridge between businesses and job seekers to support an economy that creates opportunity for everyone.

II. REGULATORY REFORM

We had a severe financial crisis followed by needed reform, and our financial system is now stronger and more resilient as a result. During and since the crisis, we've always supported thoughtful, effective regulation, not simply more or less. But it is an understatement to say improvements could be made. The regulatory environment is unnecessarily complex, costly and sometimes confusing. No rational person could think that everything that was done was good, fair, sensible and effective, or coherent and consistent in creating a safer and stronger system. We believe (and many studies show) that poorly conceived and uncoordinated regulations have damaged our economy, inhibiting growth and jobs – and this has hurt the average American. We are not looking to throw out the entirety of Dodd-Frank or other rules (many of which were not specifically prescribed in Dodd-Frank). It is, however, appropriate to open up the rulebook in the light of day and rework the rules and regulations that don't work well or are unnecessary. Rest assured, we will be responsibly and reasonably engaged on this front. We believe changes can and should be made that preserve the safety and soundness of the financial system ***and*** lead to a more healthy and vibrant economy for the benefit of all.

There are some basic principles that should guide responsible regulation:

- Coherence of rules to be coordinated both within and across regulatory agencies
- Global harmonization of regulation to enhance fair trade and competition while helping eliminate any weak links in the global system
- Simplified and proper risk-based capital standards
- Consistent and transparent capital and liquidity rules
- Regular and rigorous regulatory review, including consideration of costs vs. benefits, efficiencies, competitiveness, reduction of redundant costs and assessment of impact on economic growth

Adhering to these principles will maximize safety and soundness, increase competition and improve economic health.

Since the financial crisis, thousands of new rules and regulations have been put into place by multiple regulators in the United States and around the world. An already complex system of financial oversight and supervision has grown even more complex – and this complexity can sometimes create even more risk. Many of these rules and regulations should be examined and possibly modified, but I will focus on the few that are critical in response to some of the questions and topics that follow.

1. Talk about the strength and safety of the financial system and whether Too Big to Fail has been solved.

There is no question that the system is safer and stronger today, and this is mostly due to the following factors:

- Dramatically higher capital for almost all banks (we'll talk later about how much capital is the appropriate amount)
- Far higher liquidity for almost all banks (again, we'll provide more details later in this section)
- More disclosure and transparency – both to investors and regulators
- More coordinated oversight within the United States and abroad
- Far stronger compliance and control systems
- Laws that allow regulators to step in to unwind not only failing banks but investment banks (this did not exist for investment banks prior to the financial crisis)
- The creation of "bail-inable" unsecured debt – this converts debt into equity at the time of failure, immediately recapitalizing the failed bank
- New rules that prohibit derivatives contracts from being voided at bankruptcy – this allows derivatives contracts to stay in place, creating an orderly transition to bankruptcy
- Stress testing that monitors banks' balance sheets and capital ratios under severely adverse scenarios (more on this below)
- Requirements for banks and investment banks to prepare corporate recovery plans in the event of a crisis to prevent bankruptcy (these plans did not exist before the financial crisis)

These changes taken together not only largely eliminate the chance of a major bank failing today but also prevent such failure from having a threatening domino effect on other banks and the economy as a whole. And if a major bank does fail, regulators have the necessary tools to manage it in an orderly way. Moreover, the banking industry itself has an inherent interest in the safety and soundness of the financial system because if there is a failure, ***the entire industry will be liable*** for that cost (more on that below).

Essentially, Too Big to Fail has been solved — taxpayers will not pay if a bank fails.

The American public has the right to demand that if a major bank fails, they, as taxpayers, would not have to pay for it, and the failure wouldn't unduly harm the U.S. economy. In my view, these demands have now both been met.

On the first count, if a bank fails, taxpayers do not pay. Shareholders and debtholders, now due to total loss absorbing capacity (TLAC) rules, are at risk for all losses. To add belts and suspenders, if all that capital is not enough, the next and final line of defense is the industry itself, which is legally liable to pay any excess losses. (Notably, since 2007, JPMorgan Chase alone has contributed $11.7 billion to the industry deposit fund.)

On the second count, a regulatory takeover of a major bank would be orderly because regulators have the tools to manage it in the right way.

It is instructive to look at what would happen if Lehman were to fail in today's regulatory regime. First of all, it is highly unlikely the firm would fail because the new requirements would mean that instead of Lehman's equity capital being $23 billion, which it was in 2007, it would be approximately $45 billion under today's capital rules. In addition, Lehman would have far stronger

liquidity and "bail-inable" debt. And finally, the firm would be forced to raise capital much earlier in the process.

If Lehman failed anyway, regulators would now have the legal authority to put the firm in receivership (they did not have that ability back in 2007–2008). The moment that happened, unsecured debt of approximately $120 billion would be immediately converted to equity. Derivatives contracts would not be triggered, and cash would continue to move through the pipes of the financial system. In other words, due to the living wills, Too Big to Fail was solved before any additional rules were put in place. (I'm not going to go into detail on the living wills but will say that while they have some positive elements, they have become unnecessarily complex and costly, and they need to be simplified.)

Last, there is a new push for Chapter 14 bankruptcy for banks, which we at JPMorgan Chase support.

This would provide specialized rules to quickly handle bankruptcy for banks. Whether a failed bank goes through Chapter 14, called "bankruptcy," or Title II, called "resolution" – these are essentially the same thing – we should make the following point perfectly clear to the American people: A failed bank means the bank's board and management are discharged, its equity is worthless, compensation is clawed back to the extent of the law and the bank's name will forever be buried in the Hall of Shame. In addition, we should change the term "resolution" – as it sounds as if we are bailing out a failing bank (which couldn't be further from the truth). Whatever the term is called, it should be made clear that the process is the same as bankruptcy in any other industry. One lesson from the prior crisis is that the American public will not be satisfied without "Old Testament Justice."

But market panic will never disappear entirely, and regulations must be flexible enough to allow banks to act as a bulwark against it rather than forcing financial institutions into a defensive crouch that will only make things worse.

There will be market panic again, and it won't affect just banks – it will affect the entire financial marketplace. Remember, banks were consistent providers of credit at existing prices into the crisis – the market was not. During the crisis, many companies could not raise money in the public markets, many securities did not trade, securities issuances dropped dramatically and many asset prices fell to valuation levels that virtually anticipated a Great Depression. Last time around, banks – in particular (and I say with pride) our bank – stood by their customers to provide capital and liquidity that helped them survive. However, today's capital and liquidity rules have created rigidity that will actually hurt banks' ability to stand against the tide as they did during the Great Recession. This will mean that banks will survive the next market panic with plenty of cushion that could have been – but may not have been – used to help customers, companies and communities.

It is in this environment that regulators need certain authorities to stop the situation from getting worse. One important point: Under both Chapter 14 and Title II, there might be a short-term need for the Federal Deposit Insurance Corporation or the Fed to lend money, in the short run with proper collateral, to a failing or failed institution. This is because panic can cause a run on the bank, and it is far less painful to the economy if that bank's assets are not sold in fire sales. This lending is effectively fully secured, and no loss should ever be incurred. Again, any loss that did occur would be charged back to all the banks. This also gives banks an enormous incentive to be in favor of a properly designed, safe and sound system.

Going back to the principles above, putting safety and soundness first is clearly correct, but regulators also need the ability to take into consideration the costs and impact on our economy in various scenarios.

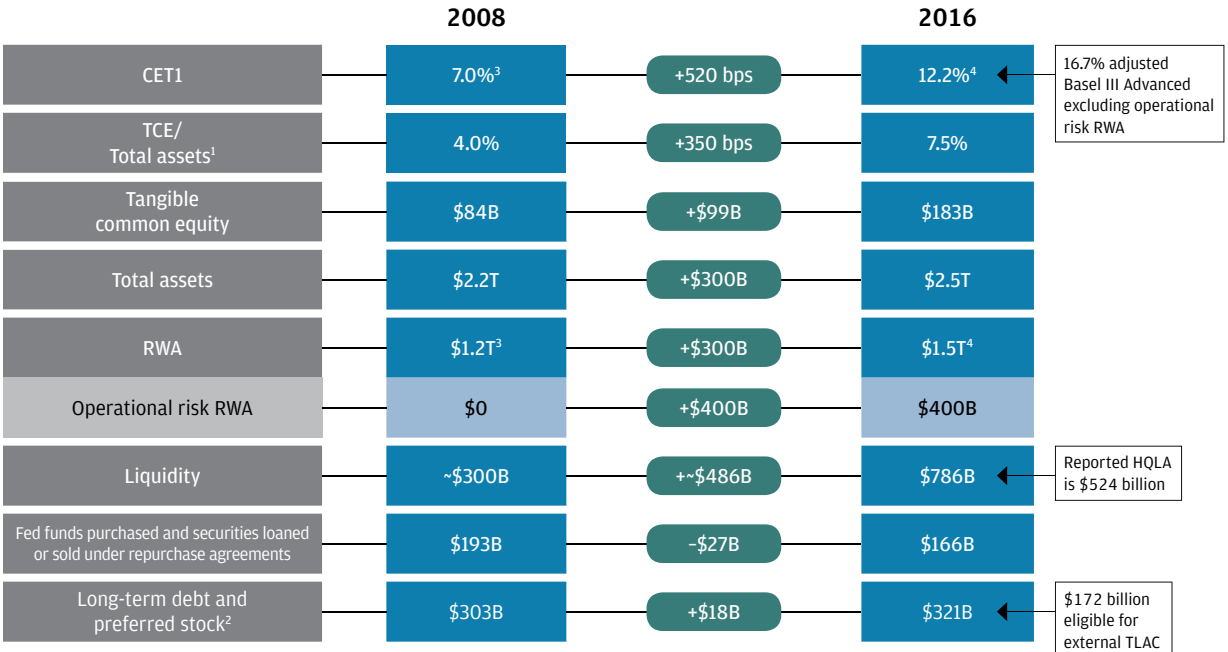
2. How and why should capital rules be changed?

We need consistent, transparent, simplified and more risk-based capital standards.

A healthy banking system needs consistent and transparent capital and liquidity rules that are based on simplified and proper risk-based standards. This allows banks to use capital intelligently and to properly plan capital levels over the years. Any rules that are capricious or that cause an arbitrary reduction in the value of a bank's capital – and the value of the bank overall – can cause improper or inefficient risk taking. Finally, proper capital rules will allow a bank to do its job: to consistently finance the economy, in good times and, importantly, in bad times.

There are more than 20 different major capital and liquidity requirements – and they often are inconsistent. For example, certain liquidity rules force a bank to hold an increasing amount of cash, essentially deposited at the Fed, but other rules require the bank to hold capital against this risk-free cash. An extraordinary number of calculations need to be made as companies try to manage to avoid inadvertently violating one of the standards – a violation that rarely affects safety and soundness. To protect themselves, banks build enormous buffers – and buffers on top of buffers – or otherwise take unnecessary actions to ensure that they don't step over the line. And finally, if we

Our Fortress Balance Sheet
at December 31,



[1] Excludes goodwill and intangible assets.
[2] Includes trust preferred securities.
[3] Reflects Basel I measure; CET1 reflects Tier 1 common.
[4] Reflects Basel III Advanced Fully Phased-in measure.

B = billions
T = trillions
bps = basis points

CET1 = Common equity Tier 1 ratio. CET1 ratios reflect the capital rule the firm was subject to at each reporting period
TCE = Tangible common equity
RWA = Risk-weighted assets
HQLA = High quality liquid assets predominantly includes cash on deposit at central banks and unencumbered U.S. agency mortgage-backed securities, U.S. Treasuries and sovereign bonds
Liquidity = HQLA plus unencumbered marketable securities and trapped liquidity not included in HQLA
TLAC = Total loss absorbing capacity

enter another Great Recession, the need for these buffers ***increases***, which inevitably will force a bank to reduce its lending.

We have a fortress balance sheet – far more than the numbers imply.

The chart on page 20 shows the dramatic improvement in our capital and liquidity numbers since 2008. Remember, we had enough capital and liquidity in 2008 to easily handle the crisis that ensued.

The numbers are even better than they look on the chart for the following reasons:

- In 2008, there was no such thing as operational risk capital (not to say there wasn't operational risk but just that capital was not applied to it). If you measured our capital ratio on the same basis as in 2008 (that is, on an apples to apples basis), we wouldn't have just 12.2% today vs. 7% in 2008 – we would have 16.7% today vs. 7% in 2008.
- Since 2008, the regulatory definition of liquidity has been prescribed. Now, only deposits at a central bank, Treasuries and government-guaranteed mortgage-backed securities (plus a limited amount of sovereign and corporate bonds) count as liquidity. Many securities are not allowed to count as liquidity today – on the theory that they can sustain losses and occasionally become illiquid. While maybe not all 100% of the current value of these securities should apply toward liquidity requirements, they should count for something. If you did combine all of these categories as liquidity, our liquidity at JPMorgan Chase would have gone from $300 billion in 2008 to $786 billion today. And remember, our deposits – theoretically subject to "run on the bank" risk – total $1.4 trillion. Even in the Great Recession, the worst case for a bank was only a 30% loss of its deposits.
- Finally, when you include long-term debt and preferred stock as loss absorbing capital, our total capital[2] is approximately $500 billion vs. true risk-weighted assets of $1.1 trillion.[3] Essentially, since 2008, our total capital has gone from $387 billion to $500 billion, while actual risk-weighted assets have declined to $1.1 trillion.

In addition to our fortress balance sheet, we are well-diversified, and we have healthy margins and strong controls. These are all factors that dramatically improve safety and soundness, but they are not included in any measures. As you will see below, we can handle almost any stress.

We believe in stress testing, but it could be improved and simplified.

As you know, the Fed puts our company through one "severely adverse" stress test annually, which determines how we can use our capital, pay dividends, buy back stock and expand. We are great believers in stress testing but would like to make the following points:

- Our shareholders should know that we don't rely on one stress test a year – we conduct more than 200 each week across all of our riskiest exposures. We meet weekly; we analyze each exposure in multiple ways; we are extremely risk conscious.
- The Federal Reserve's Comprehensive Capital Analysis and Review (CCAR) stress test estimates what our losses would be through a severely adverse event lasting over nine quarters, which approximates the severity and time of the Great Recession; e.g., high unemployment, counterparty failures, etc. The Fed estimates that in such a scenario, we would lose $31 billion over the ensuing nine quarters, which is easily manageable by JPMorgan Chase's capital base. My own view is that we would make money in almost every quarter in that type of environment, and this is supported by our having earned approximately $30 billion pre-tax over the course of the nine quarters during the real financial crisis.

[2] Tangible common equity, long-term debt and preferred stock.

[3] RWA less operational risk RWA.

We don't completely understand the Fed's assumptions and models – the Fed does not share them with us (we hope there will be more transparency and clarity in the future). But we do understand that the Fed's stress test shows results far worse than our own test because the Fed's stress test is not a forecast of what you actually think will happen. Instead, it appropriately makes additional assumptions about a company's likelihood to fail – that its trading losses will be far worse than expected, etc. The Fed wants to make sure the bank has enough capital if just about everything goes wrong.

Finally, while we firmly believe banks should have a proper assessment of their qualitative abilities, this should not be part of a once-a-year stress test. Instead, it should be part of the Fed's regular exam process. The Fed and the banks should work together to continuously improve the quality of their processes while creating a consistent, safe and economy-growing use of capital.

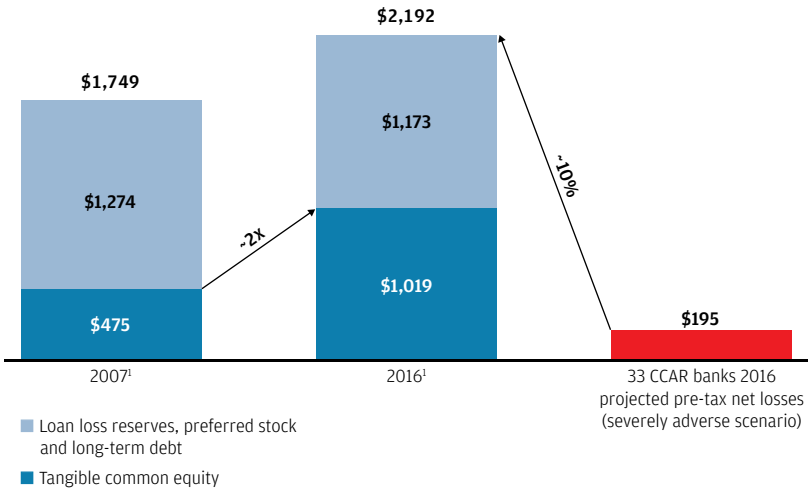
It is clear that the banks have too much capital.

Here is another critical point: The Fed's stress test of the 33 major banks estimates what each bank would lose assuming it were the worst bank in the crisis, which, of course, will not be true in the real world. But even if that happened, the chart below shows that if you combine all the banks' extreme losses, the total losses add up to less than 10% of the banks' combined capital. This definitively proves that there is excess capital in the system.

And more of that capital can be safely used to finance the economy.

Proper calibration of capital is critical to ensure not only that the system is safe and sound but that banks can use their capital to finance the economy. And we think it's clear that banks can use more of their capital to finance the economy without sacrificing safety and soundness. Had they been less afraid of potential CCAR stress losses, banks probably would have been more aggressive in making some small business loans, lower rated middle market loans and near-prime mortgages.

Loss Absorbing Resources of U.S. SIFI Banks Combined
($ in billions)



[1] Includes 2013's 18 participating CCAR banks as well as Bear Stearns, Countrywide, Merrill Lynch, National City, Wachovia and Washington Mutual.
SIFI = Systemically Important Financial Institution
CCAR = Comprehensive Capital Analysis and Review

Source: SNL Financial; Federal Reserve Bank

The global systemically important bank (GSIB) and supplementary leverage ratio (SLR) rules need to be modified.

The GSIB capital surcharge forces large banks to add even more capital, based on some very complex calculations that are highly flawed and not risk based. In fact, the rules often penalize fairly risk-free activity, such as deposits held at the Fed and short-term secured financing. Likewise, the SLR rules force capital to be held on deposit at the Fed in Treasury securities and in other liquid securities. Neither calculation gives credit for operating margins, diversification or annuity streams of business. These calculations should, at a minimum, be significantly modified and balanced to promote lending and other policy goals, including maintaining deep and liquid capital markets, clearing derivatives and directing more private capital in the mortgage market.

Operational risk capital should be significantly modified, if not eliminated.

No one could credibly argue that there is no such thing as operational risk, separate and distinct from credit and market risk. All businesses have operational risk (trucks crash, computers fail, lawsuits happen, etc.), but almost all businesses successfully manage it through their operating earnings and general resources. Basel standards required banks to hold capital for operational risk, and the United States "gold plated" this calculation. Banks in the United States in total now hold approximately $200 billion in operational risk capital. For us, we hold excess operational risk capital which is not being utilized to support our economy. It was an unnecessarily large add-on. If you are going to have operational risk capital, it should be forward looking, fairly calculated, coordinated with other capital rules and consistent with reality. (Currently, if you exit a business that created operational risk capital, you are still, most likely, required to hold the operational risk capital.)

Finally, America should eliminate its "gold plating" of international standards.

American regulators took the new Basel standards across a wide variety of calculations and asked for more. If JPMorgan Chase could use the same international standards as other international banks, it would free up a material amount of capital. The removal of the GSIB surcharge "gold plating" alone would free up $15 billion of equity capital – an amount that could support almost $190 billion of loans. In addition, America gold plated operational risk capital, liquidity rules, SLR rules and TLAC rules. Later in this letter, we will discuss international standards.

Properly done and improved, modifying many of these regulatory standards could help finance the growth of the American economy without damaging the safety and soundness of the system.

3. How do certain regulatory policies impact money markets?

Different from most banks, money center banks help large institutions – including governments, investors and large money market funds – move short-term funds around the system to where those funds are needed most. The recipients of these funds include financial institutions (including non-money center banks) and corporations that can have large daily needs to invest or borrow. The products that money center banks offer large institutions are predominantly deposits, securities, money market funds and short-term overnight investments called repurchase agreements. These involve enormous flows of funds, which money center banks handle easily, carefully and securely. They are generally match-funded[4], almost no credit risk is taken, and most lending is done wholly and properly secured by Treasuries or government-guaranteed securities. These transactions represent a large part of JPMorgan Chase's balance sheet. Because of new rules, capital in many cases must be held on these short-term, virtually riskless activities, and we believe this has caused distortions in the marketplace. For example:

[4]Match-funding ensures that the risk characteristics – e.g., interest rate, maturity – of the asset (e.g., loan) are offset by the liability (e.g., deposit) funding it.

- Swap spreads, for the first time in history, turned negative, which means that corporations need to pay a lot more to hedge their interest rate exposure.
- Reduction in broker-dealer inventories has impacted liquidity.
- Many banks reject certain types of large deposits from some of their large institutional clients. In a peculiar twist of fate – and something difficult for our clients to understand – through 2016, JPMorgan Chase turned away 3,200 large clients and $200 billion of their deposits even though we could have taken them without incurring any risk whatsoever (we simply would have deposited the $200 billion at the central bank).

The charts below shows some of the reduction in banks' market-making abilities.

We need to work closely with regulators to assess the impact of the new rules on specific markets, the cost and volatility of liquidity, and the potential cost of credit. We should be able to make some modest changes that in no way impact safety and soundness but improve markets.

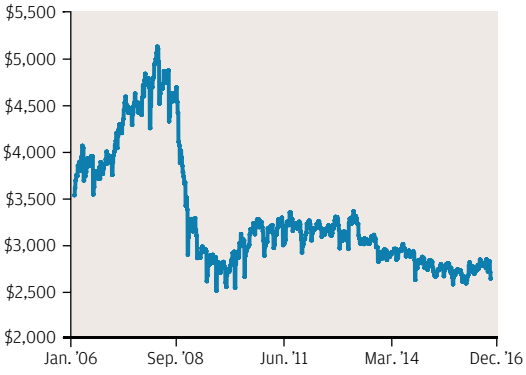
Dealer Positions across Treasuries, Agencies, MBS[1] and Corporates 2006–2016

($ in billions)



Total Repurchase Agreements Outstanding 2006–2016

($ in billions)



[1] Mortgage-backed securities (MBS)

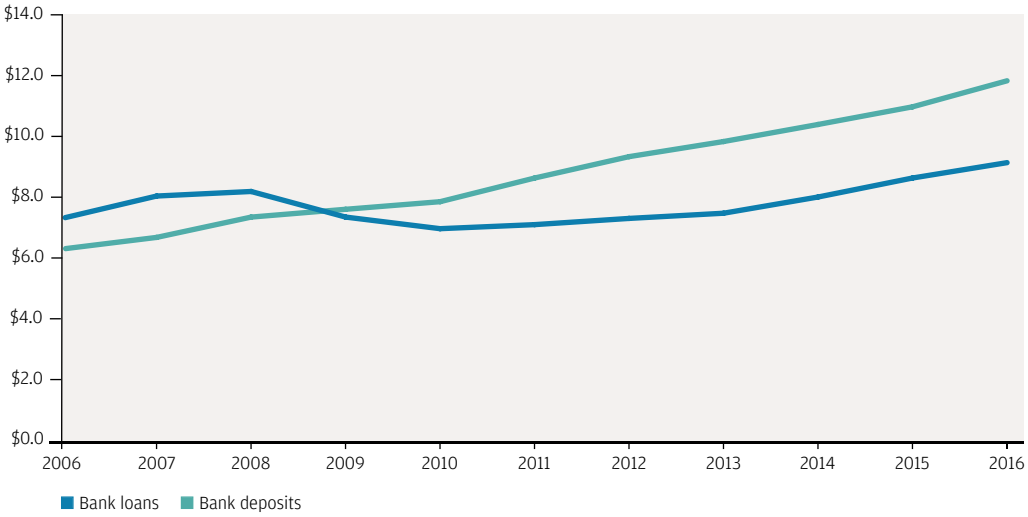
Source: Haver; Federal Reserve Bank of New York

4. How has regulation affected monetary policy, the flow of bank credit and the growth of the economy?

It is extremely important that we analyze how new capital and liquidity rules affect the creation of credit; i.e., lending. We have yet to see thorough, thoughtful analysis on this subject by economists – because in this case, it is very hard to calculate what might have been counterfactual. However, it seems clear that if banks had been able to use more of their capital and liquidity, they would have been more aggressive in terms of expanding: Think of additional bankers, bank branches and geographies, which likely would have led to additional lending. (On the following pages, we make it clear that this would have been the case in mortgage lending.)

I would like to focus on how liquidity policies may have impacted the effectiveness of monetary policy and lending. The chart on page 25 shows bank loans vs. bank deposits from 2006 to 2016. During the last several decades, deposits and loans were mostly balanced. You can see that stopped being true after the start of the Great Recession. Today, loans are approximately $2 trillion less than deposits.

Bank Loans and Bank Deposits
2006–2016
($ in trillions)



Source: Haver; Federal Reserve Bank

Many factors may influence this scenario, but there are two arguments at the bookends about why this happened:

- There was simply not enough loan demand due to a slow-growing economy.
- The new liquidity rules require banks to hold approximately $2 trillion at the Federal Reserve, whether or not there is loan demand.

It is evident that banks reduced certain types of lending legitimately – think of some of the inappropriate subprime mortgage lending – but banks cut back on other types of lending as well because of the new rules; for example, small business lending due to CCAR and cross-border lending because of GSIB. The ensuing discussion shows how other regulatory rules dramatically decreased mortgage lending, again slowing down the economy.

It is clear that the transmission of monetary policy is different today from what it was in the past because of new capital and liquidity rules. What is not clear is how much these rules reduced lending. Again, working together, we should be able to figure it out and make appropriate improvements that enhance economic growth without damaging the safety of the system.

5. How can we reform mortgage markets to give qualified borrowers access to the credit they need?

Much of what we consider good in America – a good job, stability and community involvement – is represented in the achievement of homeownership. Owning a home is still the embodiment of the American Dream, and it is commonly the most important asset that most families have.

So it is no surprise the financial crisis, which was caused in part by poor mortgage lending practices and which caused so much pain for American families and businesses, led to new regulations and enhanced supervision. We needed to create a safer and better functioning mortgage industry. However, our

housing sector has been unusually slow to recover, and that may be partly due to restrictions in mortgage credit.

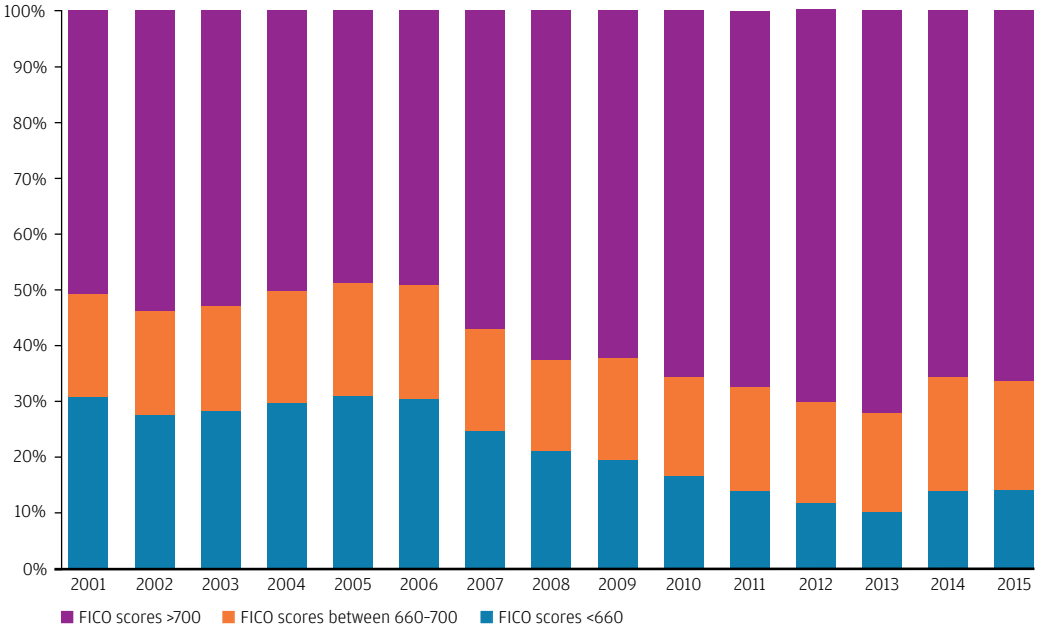
Seven major federal regulators and a long list of state and local regulators have overlapping jurisdiction on mortgage laws and wrote a plethora of new rules and regulations appropriately focused on educating and protecting customers. While some of the rules are beneficial, many were hastily developed and layered upon existing rules without coordination or calibration as to the potential effects.

The result is a complex, highly risky and unpredictable operating environment that exposes lenders and servicers to disproportionate legal liability and materially increases operational risks and costs. These actions resulted in:

- Mortgages that cost the consumer more
- A tightening credit box; i.e., mortgage lenders are less likely to extend credit to borrowers without a strong credit history
- An inhibition of the return of private capital to the housing industry
- The crowding out of resources to improve technology and the customer experience

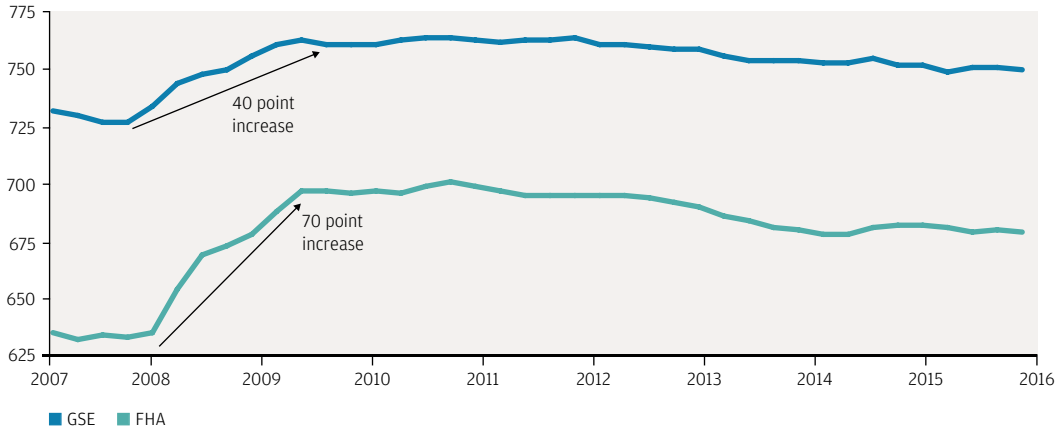
The chart below and the top chart on page 27 show the decline in lending to individuals with lower credit scores. The bottom chart on page 27 shows what is likely a related decline in the sales of new but lower priced homes.

Share of Borrowers with Strong Credit Has Increased Dramatically



Source: Urban Institute Housing Finance Policy Center

Average FICO of Newly Originated 30-Year Purchase Loans, for the GSEs and FHA

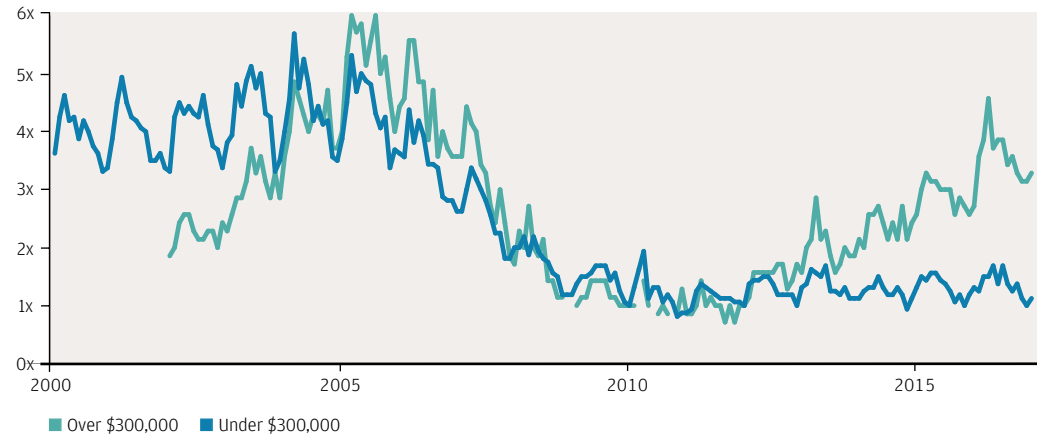


GSE = Government-sponsored enterprise
FHA = Federal Housing Administration

Source: Freddie Mac, The Federal Housing Administration

Comparison of New Home Sales by Price Range

Benchmark (1x = January 2010 sales levels)



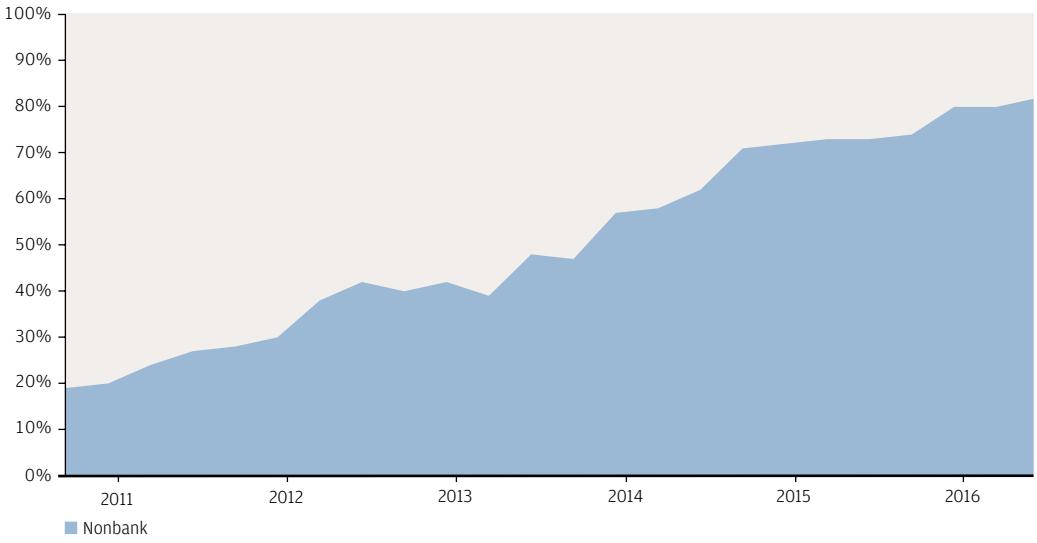
Source: Haver; U.S. Census Bureau

There are significant opportunities to make simple changes that can have a dramatic impact on improving the current state of the home lending industry – this will make access to good and affordable mortgages much more achievable for far more Americans. And it's noteworthy that those who lost access to mortgage credit are the very ones who so many people profess to want to help – e.g., lower income buyers, first-time homebuyers, the self-employed and individuals with prior defaults who deserve another chance.

Federal Housing Administration (FHA) reform can bring banks back and expand access to credit.

The FHA plays a significant role in providing credit for first-time, low- to moderate-income and minority homebuyers. However, aggressive use of the False Claims Act (FCA) (a Civil War act passed to protect the government from intentional fraud) and overly complex regulations have made FHA lending risky and cost prohibitive for many banks. In fact, FCA settlements wiped out a decade of FHA profitability, and subsequent losses

Nonbank Share of New 30-Year FHA Originations



Source: Ginnie Mae

have kept returns on capital solidly below our target. This has led us to scale back our participation in the FHA lending program in favor of less burdensome lending programs that serve the same consumer base – and we are not alone. The chart above shows that nonbanks have gone from 20% to 80% of FHA originations.

A first step to increasing participation in the FHA program could be the communication of support for only using the FCA, as originally intended, to penalize intentional fraud rather than immaterial or unintentional errors. Other changes that would help would be:

- Improve and fully implement the Housing and Urban Development's (HUD) proposed defect taxonomy, clarifying liability for fraudulent activity.
- Revise certification requirements to make them more commercially reasonable.
- Simplify loss mitigation by allowing streamlined programs and aligning with industry standards.
- Eliminate costly, unnecessary and outdated requirements that make the cost of servicing an FHA loan significantly more expensive than a conventional loan.

Mortgage servicing is too complex: National servicing standards would help.

Mortgage servicing is a particularly complex business in which the cumulative impact of regulations has dramatically increased operational and compliance risk and costs (remember that costs are usually passed on to the customer). Mortgage servicing starts immediately after loan origination (loan origination also has become significantly more expensive and complex as a result of regulatory changes) and involves a continuing and dynamic relationship among a servicer, customer and investor or guarantor, such as Fannie Mae, Freddie Mac or FHA, to name a few.

New mortgage rules and regulations total more than 14,000 pages and stand about six feet tall. In servicing alone, there are thousands of pages of federal and state servicing rules now – clearly driving up complexity and cost. The Mortgage Bankers Association estimated the fully loaded annual cost of industry servicing, as of 2015, to be $181 for a performing mortgage and $2,386 for a mortgage in default. The cost of servicing a defaulted loan is so high that many servicers avoid underwriting loans that have even a modest probability of default. This is another

reason why mortgage companies avoid underwriting certain types of mortgages today than they would have underwritten in the past.

The most promising opportunity in mortgage servicing is to adopt uniform national servicing standards across guarantors, federal and state regulators, and investors. Importantly, there is no need for legislation to implement the necessary coordination to get this done. In particular, the U.S. Treasury is well-positioned to lead key players in the mortgage industry (the Consumer Financial Protection Bureau, Fannie Mae, Freddie Mac, the Federal Housing Finance Agency, HUD, the FHA, the Veterans Administration, Ginnie Mae and the U.S. Department of Agriculture) to establish national service standards that would simplify mortgage origination and servicing. Treasury played a similarly pivotal leadership role during the crisis when it helped develop the various mortgage assistance initiatives, such as the loan modification and streamlined refinance programs that allowed many Americans to stay in their homes and communities.

Private capital needs to return in order to make the market less taxpayer dependent — we need to complete the securitization standards.

Private capital in the mortgage industry, particularly in the form of securitizations, dried up as a result of the financial crisis. Eight years later, we still have not opened up a healthy securitization market because of our inability to finalize the rules. Not only does this reduce the share of private capital in the U.S. housing sector (an action that would significantly reduce taxpayer exposure), it also significantly increases the cost to the customer. Taking a few actions would fix this, including:

- Rationalize capital requirements on securitizations to effectively transfer risk to the market while leaving "skin in the game" with the originator.
- Reduce the complexity of data delivery requirements.
- Clarify and define materiality standards associated with compliance with laws and regulations, as well as underwriting standards, to allow for reasonable protections from litigation and to enable standardized due diligence practices.

If we do this right, we believe the mortgage market could add more than $300 billion a year in new purchased loans.

If we take the actions mentioned above, we believe that the cost to a customer would be 20 basis points lower and that mortgage underwriters would be willing to take more – but appropriate – risk on loans (again, this would be for first-time, young and lower income buyers, those with prior delinquencies but who are now in good financial standing and those who are self-employed).

Taken in total, we believe the issues identified above have reduced mortgage lending by more than $300 billion purchased mortgages annually (our analysis deliberately excludes underwriting the subprime and Alt-A mortgages that caused so many problems in the Great Recession). Had we been able to fix these issues five years ago (i.e., three years after the crisis), our analysis shows that, conservatively, more than $1 trillion in mortgage loans might have been made.

If this is true, it may explain why our housing sector has been unusually slow to recover: $1 trillion of new mortgage loans is approximately 3 million loans. Of these, typically more than 20% would go to purchase new homes that would need to be built. By any estimate, this could have had a significant impact on the growth of jobs and gross domestic product (GDP). ***Our economists think that $1 trillion of loans could have increased GDP, in each of those five years, by 0.5%.*** In the next section, we will talk about how this is just one of the many things we did to damage our nation's economy.

6. How can we reduce complexity and create a more coherent regulatory system?

We created a massively complex system in which multiple regulators have overlapping responsibilities on virtually every issue, including rulemaking, examination, auditing and enforcement. This is extremely taxing, complex and overly burdensome for banks, customers of banks and regulators.

Dodd-Frank appropriately established the Financial Services Oversight Committee (FSOC) and assigned to it the responsibility of general oversight across the entire financial system. Unfortunately, the FSOC was not given the ability to adjudicate issues or assign responsibility. Therefore, the FSOC is unable to fully resolve some of the problems that we have detailed in this letter. Finally, another flaw is that some of the laws were written in a way that left them open to broad interpretation and novel enforcement.

There is too much complexity in the system — it could be fixed, and that would make the system stronger.

Nearly everyone agrees there is too much complexity in the current construct of the financial system. A few examples will suffice:

- There are multiple calculations of capital, living wills, the Volcker Rule, etc.
- There are multiple regulators involved independently in rulemaking – just two examples: Seven regulators are involved in setting mortgage regulations, and five regulators oversee the Volcker Rule. This leads to slow rulemaking (e.g., as noted above, we still have not finished the mortgage rules eight years after the crisis), excessive reporting and varied interpretations on what the actual rules are.
- Each agency makes separate audit and reporting demands and can independently take enforcement action on the same subject.

This is clearly a dysfunctional structure. The fix is simple – though getting it done may not be:

- The system should be simplified. There should be one primary regulator on any issue, and we should always strive to make things as simple as possible.
- The primary regulator should establish the rules, the reporting requirements, the audit plans and the enforcement action. Other regulators should get involved only if they believe the primary person did a particularly poor job.
- Everything in the regulatory landscape should be reviewed in the context of safety and soundness, cost-benefit analysis and economic growth.

The FSOC is a good idea but needs to be modified to be more effective.

It makes sense for regulators to be continuously reviewing the entire financial system in an effort to make it as safe and sound as possible (think of this as a well-functioning risk committee of a major bank). But the FSOC should be given some authority to assign responsibility, adjudicate disagreements, set deadlines and force the resolution of critical issues. The FSOC could also enforce due consideration of regulations' costs vs. benefits and the impact on economic growth.

We have great sympathy for, and agree with, the complaints of the community banks. They are struggling to deal with the complexity and cost of meeting these requirements – and we agree these smaller banks should be relieved of many of the requirements.

Enhancing the functionality of the FSOC and providing regulatory relief where appropriate should not be a political issue. The administration is currently conducting a review of the rules and regulations, which are burdensome and duplicative and which may impede economic growth. That process should be as de-politicized as possible. Everyone stands to gain when growth is enabled in a safe and sound manner.

7. How can we harmonize regulations across the globe?

Currently, American regulators have been pushing the Basel Committee – the international forum that is supposed to set international financial regulatory guidelines – to meet the even higher American standards around capital requirements, derivatives rules, risk-weight calculations, stress testing and other requirements. Many other countries around the world are telling Basel that it has gone too far and that it's time to let the banks focus on healthy lending and growth of the economy. Following are a few principles that we think should guide global regulations and international coordination to increase safety and soundness and foster global growth:

- International regulations should be coherent and generally harmonized around the world – but they don't need to be exactly the same.
- We should recognize where there are legitimate reasons to do something different. For example, certain types of loans legitimately could draw different risk weighting in various countries based on historical performance, collateral and bankruptcy laws or even culture.
- Cross-border financial rules need to be part of trade negotiations like any other product or service. We know we will be increasingly competing with Chinese banks, and, eventually, we need the U.S. government to make that part of our trade agreement.
- We can acknowledge that the state of affairs in different countries, including in their banks and their economies, may differ and that these differences might warrant idiosyncratic regulatory responses. For example, European banks for eight years have consistently been put in the position of having to raise more and more capital and liquidity or having to reduce their lending capacity. While their capital standards may have been low compared with American standards (particularly in how they calculate risk-weighted assets), this deleveraging has to have hurt the growth of European economies and opportunities for their people. These banks started from a different position (which had been sanctioned by both their regulators and governments years ago), and we agree that these banks should be allowed to do their job. Most of these banks have plenty of total capital. While it might be true that one day they should have more, the moral imperative now is to help their economies grow and to help the people of those countries.

We are completely convinced that if we can rationally change and coordinate many of these rules, banks can do ***even more*** to help the economy thrive.

III. PUBLIC POLICY

Before we address some of the critical issues confronting our country, it would be good to count our blessings. Let's start with a serious assessment of our strengths.

1. The United States of America is truly an exceptional country.

America today is probably stronger than ever before. For example:

- The United States has the world's strongest military, and this will be the case for decades. We are fortunate to be at peace with our neighbors and to have the protection of the Atlantic and Pacific oceans.
- As a nation, we have essentially all the food, water and energy we need.
- The United States has among the world's best universities and hospitals.
- The United States has a generally reliable rule of law and low corruption.
- The government of the United States is the world's longest surviving democracy, which has been steadfast, resilient and enduring through some very difficult times.
- The people of the United States have a great work ethic and can-do attitude.
- Americans are among the most entrepreneurial and innovative people in the world – from those who work on the factory floors to geniuses like the late Steve Jobs. Improving "things" and increasing productivity are American pastimes. And America still fosters an entrepreneurial culture, which allows risk taking – and acknowledges that it can result in success or failure.
- The United States is home to many of the best, most vibrant businesses on the planet – from small and midsized companies to large, global multinationals.
- The United States has the widest, deepest, most transparent and best financial markets in the world. And I'm not talking about just Wall Street and banks – I include the whole mosaic: venture capital, private equity, asset managers, individual and corporate investors, and public and private capital markets. Our financial markets have been an essential part of the great American business machine.

Very few countries, if any, are as blessed as we are.

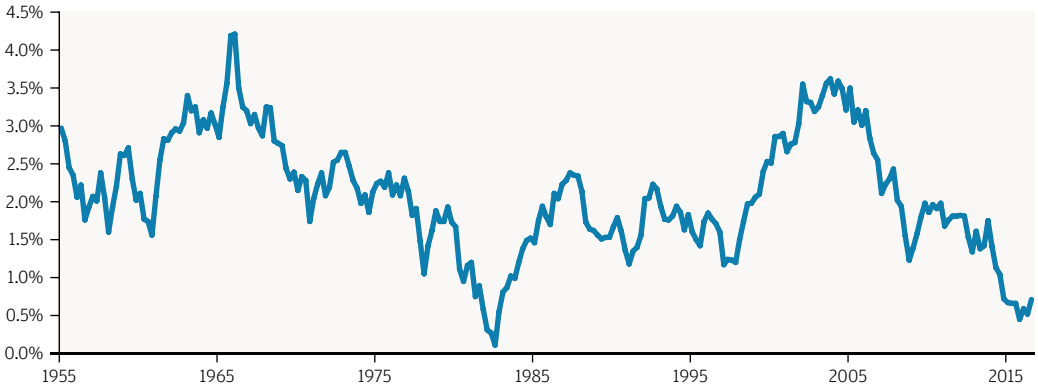
2. But it is clear that something is wrong – and it's holding us back.

Our economy has been growing much more slowly in the last decade or two than in the 50 years before then. From 1948 to 2000, real per capita GDP grew 2.3%; from 2000 to 2016, it grew 1%. Had it grown at 2.3% instead of 1% in those 17 years, our GDP per capita would be 24%, or more than $12,500 per person higher than it is. U.S. productivity growth tells much the same story, as shown in the chart on page 33.

Our nation's lower growth has been accompanied by – and may be one of the reasons why – real median household incomes in 2015 were actually 2.5% lower than they were in 1999. In addition, the percentage of middle class households has actually shrunk over time. In 1971, 61% of households were considered middle class, but that percentage was only 50% in 2015. And for those in the bottom 20% of earners – mainly lower skilled workers – the story may be even

U.S. Productivity Growth

5-year % change, annualized



Source: Haver; Bureau of Labor Statistics

worse. For this group, real incomes declined by more than 8% between 1999 and 2015. In 1984, 60% of families could afford a modestly priced home. By 2009, that figure fell to about 50%. This drop occurred even though the percentage of U.S. citizens with a high school degree or higher increased from 30% to 50% from 1980 to 2013. Low-skilled labor just doesn't earn what it used to, which understandably is a source of real frustration for a very meaningful group of people. The income gap between lower skilled and skilled workers has been growing and may be the inevitable consequence of an increasingly sophisticated economy.

Regarding reduced social mobility, researchers have found that the likelihood of workers moving to the top-earning decile from starting positions in the middle of the earnings distribution has declined by approximately 20% since the early 1980s.

Many economists believe we are now permanently relegated to slower growth and lower productivity (they say that secular stagnation is the new normal), but I strongly disagree.

We will describe in the rest of this section many factors that are rarely considered in economic models although they can have an enormous effect on growth and productivity. Making this list was an upsetting exercise, especially since many of our problems have been self-inflicted. That said, it was also a good reminder of how much of this is in our control and how critical it is that we focus on all the levers that could be pulled to help the U.S. economy. We must do this because it will help ***all*** Americans.

Many other, often non-economic, factors impact growth and productivity.

Following is a list of some non-economic items that must have had a significant impact on America's growth:

- Over the last 16 years, we have spent trillions of dollars on wars when we could have been investing that money productively. (I'm not saying that money didn't need to be spent; but every dollar spent on battle is a dollar that can't be put to use elsewhere.)
- Since 2010, when the government took over student lending, direct government lending to students has gone from approximately $200 billion to more than $900 billion – creating dramatically increased student defaults and a population that is rightfully angry about how much money they owe, particularly since it reduces their ability to get other credit.

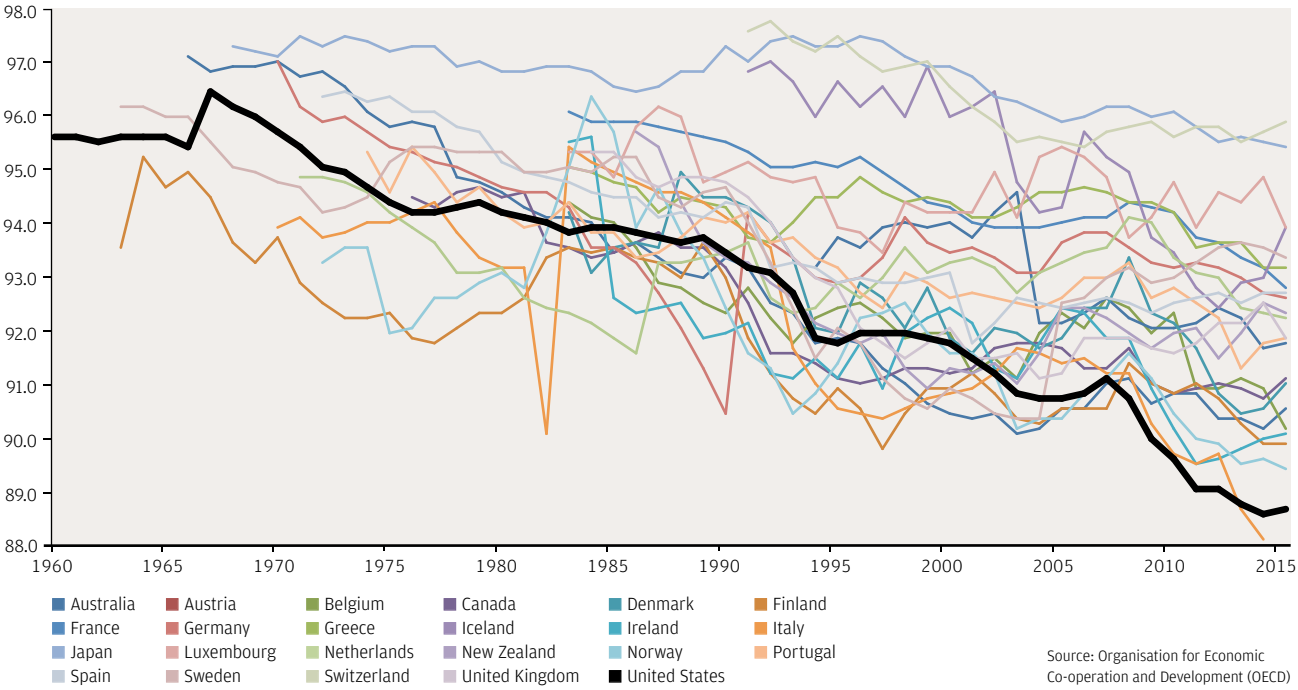
- Our nation's healthcare costs are essentially twice as much per person vs. most other developed nations.
- It is alarming that approximately 40% (this is an astounding 300,000 students each year) of those who receive advanced degrees in science, technology, engineering and math at American universities are foreign nationals with no legal way of staying here even when many would choose to do so. We are forcing great talent overseas by not allowing these young people to build their dreams here.
- Felony convictions for even minor offenses have led, in part, to 20 million American citizens having a criminal record – and this means they often have a hard time getting a job. (There are six times more felons in the United States than in Canada.)
- The inability to reform mortgage markets has dramatically reduced mortgage availability. We estimate that mortgages alone would have been more than $1 trillion higher had we had healthier mortgage markets. Greater mortgage access would have led to more homebuilding and additional jobs and investments, which also would have driven additional growth.

Any one of these non-economic factors is fairly material in damaging America's effort to achieve healthy growth. Let's dig a little bit deeper into six additional unsettling issues that have also limited our growth rate.

Labor force participation is too low.

Labor force participation in the United States has gone from 66% to 63% between 2008 and today. Some of the reasons for this decline are understandable and aren't too worrisome – for example, an aging population. But if you examine the data more closely and focus just on labor force participation for one key segment; i.e., men ages 25-54, you'll see that we have a serious problem. The chart below shows that in America, the participation rate for that cohort has gone from 96% in 1968 to a little over 88% today. This is way below labor force participation in almost every other developed nation.

Labor Force Participation Rates for Men Ages 25–54: U.S. vs. 22 Original OECD Member States, 1960–2015



Source: Organisation for Economic Co-operation and Development (OECD)

If the work participation rate for this group went back to just 93% – the current average for the other developed nations – approximately 10 million more people would be working in the United States. Some other highly disturbing facts include: Fifty-seven percent of these non-working males are on disability, and fully 71% of today's youth (ages 17–24) are ineligible for the military due to a lack of proper education (basic reading or writing skills) or health issues (often obesity or diabetes).

Education is leaving too many behind.

Many high schools and vocational schools do not provide the education our students need – the goal should be to graduate and get a decent job. We should be ringing the national alarm bell that inner city schools are failing our children – often minorities and children from lower income households. In many inner city schools, ***fewer than 60%*** of students graduate, and many of those who do graduate are not prepared for employment. We are creating generations of citizens who will never have a chance in this land of dreams and opportunity. Unfortunately, it's self-perpetuating, and we all pay the price. The subpar academic outcomes of America's minority and low-income children resulted in yearly GDP losses of trillions of dollars, according to McKinsey & Company.

Infrastructure needs planning and investment.

In the early 1960s, America was considered by most to have the best infrastructure (highways, ports, water supply, electrical grid, airports, tunnels, etc.). The World Economic Forum now ranks the United States #27 on its Basic Requirements index, reflecting infrastructure along with other criteria, among 138 countries. On infrastructure, the United States is behind most major developed countries, including the United Kingdom, France and Korea. The American Society of Civil Engineers releases a report every four years examining current infrastructure conditions and needs – the 2017 report card gave us a grade of D+. Another interesting and distressing fact: The United States has not built a major airport in more than 20 years. China, on the other hand, has built 75 new civilian airports in the last 10 years alone.

Our corporate tax system is driving capital and brains overseas.

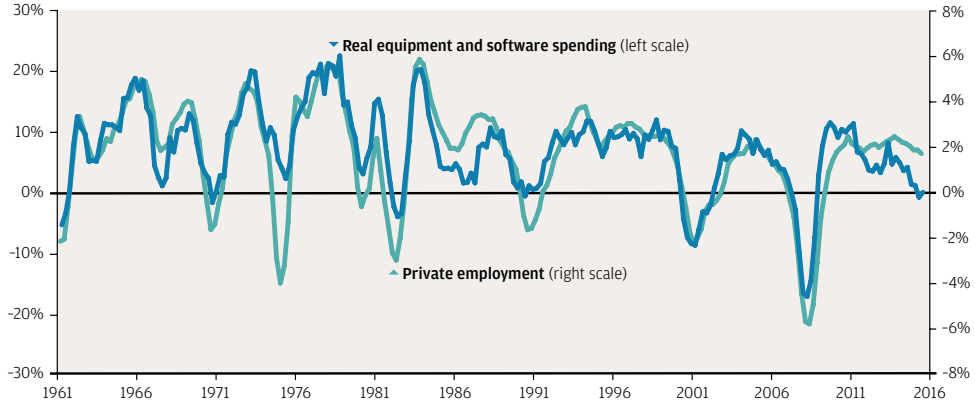
America now has the highest corporate tax rates among developed nations. Most other developed nations have reduced their tax rates substantially over the past 10 years (and this is true whether looking at statutory or effective tax rates). This is causing considerable damage. American corporations are generally better off investing their capital overseas, where they can earn a higher return because of lower taxes. In addition, foreign companies are advantaged when they buy American companies – often they are able to reduce the overall tax rate of the combined company. Because of this, American companies have been making substantial investments in human capital, as well as in plants, facilities, research and development (R&D) and acquisitions overseas. Also, American corporations hold more than $2 trillion in cash abroad to avoid the additional taxes. The only question is how much damage will be done before we fix this.

Reducing corporate taxes would incent business investment and job creation. The charts on page 36 show the following:

- That job growth is highly correlated to business investment (this also makes intuitive sense).
- That fixed investments by businesses and capital formation have gone down substantially and are far below what we would consider normal.

Jobs Growth Clearly Linked to Business Investment

Year-over-year % change

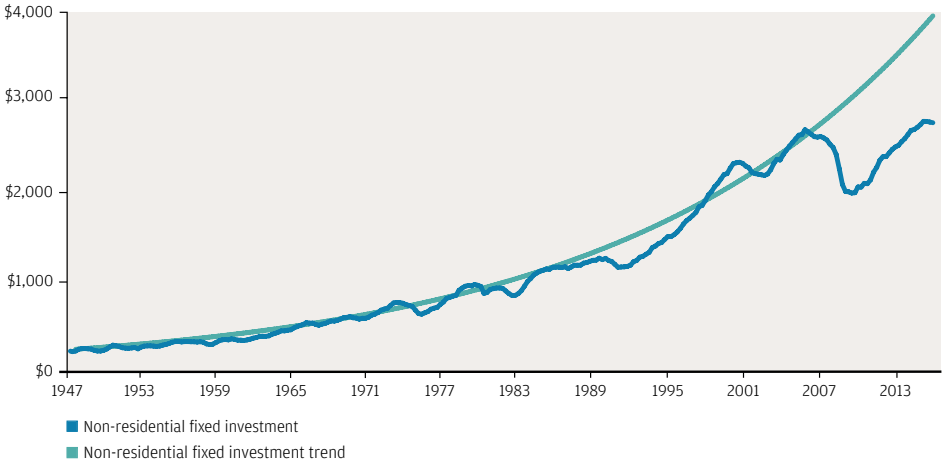


Source: Bureau of Economic Analysis; Bureau of Labor Statistics

Business Fixed Investment below Trend

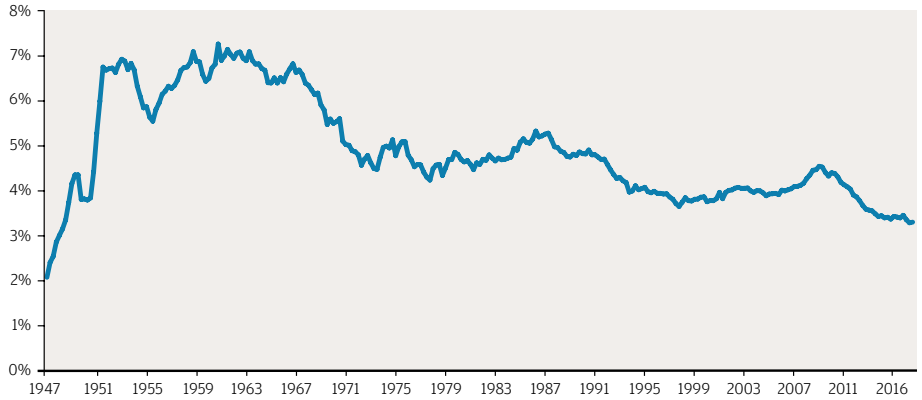
Quarterly data from 1947 to 3rd quarter 2016

($ in billions)



Source: Haver; Bureau of Economic Analysis

U.S. Public Gross Fixed Capital Formation as % of GDP



Source: Haver; Bureau of Economic Analysis

And counterintuitively, reducing corporate taxes would also ***improve*** wages. One of the unintended consequences of high corporate taxes is that they actually depress wages in the United States. A 2007 Treasury Department review finds that labor "may bear a substantial portion of the burden from the corporate income tax." A study by Kevin Hassett from the American Enterprise Institute finds that each $1 increase in U.S. corporate income tax collections leads to a $2 decrease in wages in the short run and a $4 decrease in aggregate wages in the long run. And analysis of the U.S. corporate income tax by the Congressional Budget Office finds that labor bears more than 70% of the burden of the corporate income tax, with the remaining 30% borne by domestic savers through a reduced return on their savings. We must fix this for the benefit of American competitiveness and all Americans.

Excessive regulations reduce growth and business formation.

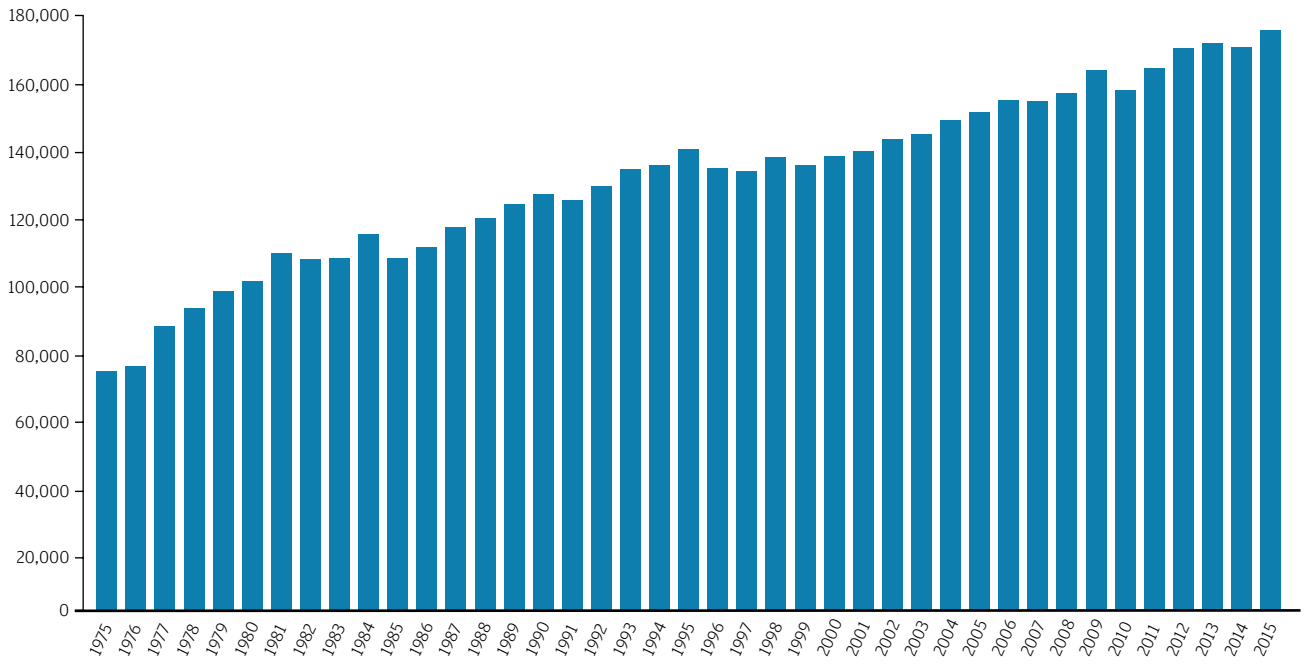
Everyone agrees we should have proper regulation – and, of course, good regulations have many positive effects. But anyone in business understands the damaging effects of overcomplicated and inefficient regulations. There are many ways to look at regulations, and the chart below and the two on page 38 provide some insight. The one below shows the total pages of federal regulations, which is a simple way to illustrate additional reporting and compliance requirements. The second records how we compare with the rest of the world on the ease of starting a new business – we used to be among the best, and now we are not. The bottom chart on page 38 shows that small businesses now report that one of their largest problems is regulations.

By some estimates, approximately $2 trillion is spent on regulations annually (which is approximately $15,000 per U.S. household annually).[5] And even if this number is exag-

[5] Crews, Clyde Wayne, Jr. (2016). *Ten Thousand Commandments – An Annual Snapshot of the Federal Regulatory State.*

Code of Federal Regulation 1975–2015

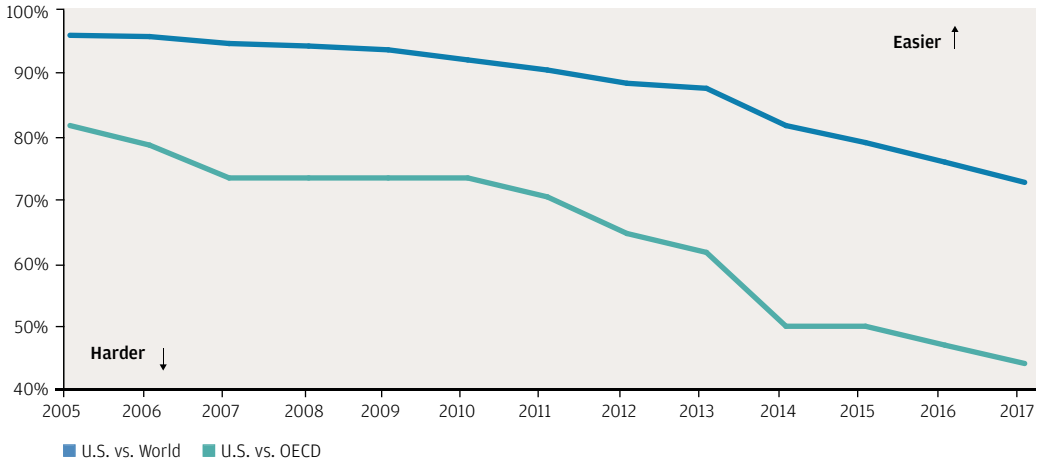
Number of pages



Source: The National Archives

"Ease of Starting a New Business": In the U.S., Getting Less Easy

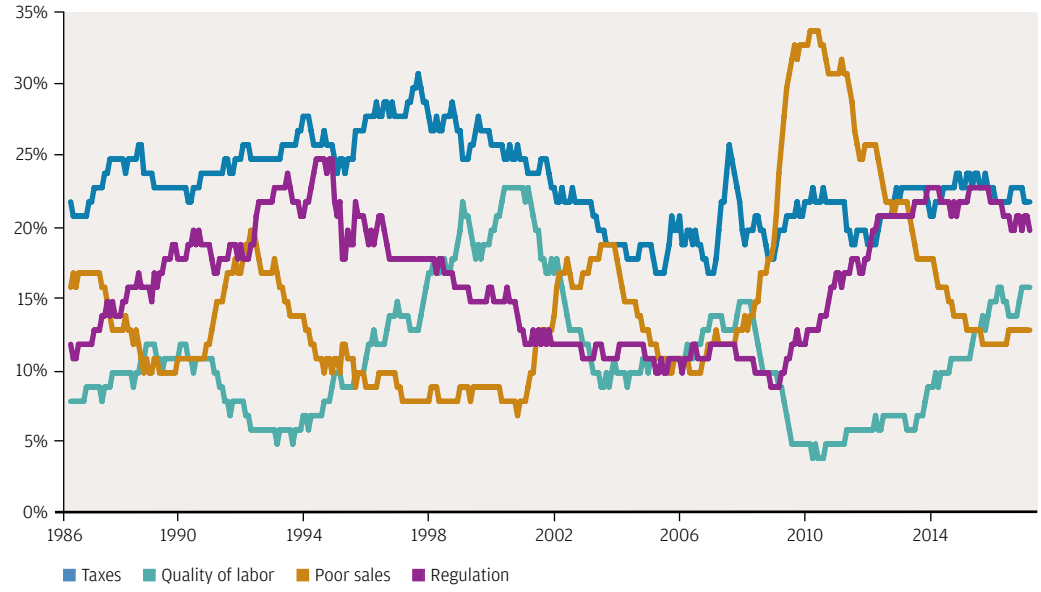
U.S. percentile rank relative to world and OECD



Source: World Bank Doing Business; J.P. Morgan Asset Management, October 2016. N = 189

What's the Largest Problem Facing Small Businesses?

% of respondents, 6-month average



Source: Haver; National Federation of Independent Business

gerated, it highlights a disturbing problem. Particularly troubling is that this may be one of the reasons why small business creation has slowed alarmingly in recent years. According to the U.S. Chamber of Commerce, the rising burdens of federal regulations alone may be a main reason for a falling pace in new business formation. In 1980, Americans were creating some 450,000 new companies a year. In 2013, they formed 400,000 new businesses despite a 40% increase in population from 1980 to 2013. Our three-decade slump in company formation fell to its lowest point with the onset of the Great Recession; even with more businesses being established today, America's startup activity remains below pre-recession levels.

While some regulations quite clearly create a common good (e.g., clean air and water), it is clear that excessive regulation does not help productivity, growth of the economy or job creation. And even regulations that once may have made sense may no longer be fit for the purpose. I am not going to outline specific recommendations about non-financial regulatory reform here, other than to say that we should have a permanent and systematic review of the costs and benefits of regulations, including their intended vs. unintended consequences.

The lack of economic growth and opportunity has led to deep and understandable frustration among so many Americans.

Low job growth, a lack of opportunity for many, declining wages, students and low-wage workers being left behind, economic and job uncertainty, high healthcare costs and growing income inequality all have created deep frustration. It is understandable why so many are angry at the leaders of America's institutions, including businesses, schools and governments – they are right to expect us to do a better job. Collectively, we are the ones responsible. Additionally, this can understandably lead to disenchantment with trade, globalization and even our free enterprise system, which for so many people seems not to have worked.

Our problems are significant, and they are not the singular purview of either political party. We need coherent, consistent, comprehensive and coordinated policies that help fix these problems. The solutions are not binary – they are not either/or, and they are not about Democrats or Republicans. They are about facts, analysis, ideas and best practices (including what we can learn from others around the world).

3. How can we start investing in our people to help them be more productive and share in the opportunities and rewards of our economy?

We need to work together to improve work skills.

I cannot in this letter tackle the complex set of issues confronting our inner city schools, but I do know that if we don't ***acknowledge*** these problems, we will never fix them. Whether they graduate from high school, vocational or training school or go on to college, our students can and should be adequately prepared for good, decent-paying jobs. And whether a student graduates from high school, vocational school or training school, the graduate should have a sense of pride and accomplishment – and meaningful employment opportunities, without forgoing the chance to go to college later on. Career and technical education specifically can give young people the skills they need for decent-paying roles in hundreds of fields, including aviation, robotics, medical science, welding, accounting and coding – all jobs that are in demand today.

In New York City, not far from where I grew up in Jackson Heights, Queens, there's a school called Aviation High School. Students travel from all over the city to go to the school (with a 97% student attendance rate), where they are trained in many facets of aviation, from how to maintain an aircraft to the details of the plane's electronics, hydraulics and electrical systems. And when the students graduate (93% graduated in the normal four years), they get a job, often earning an annual starting salary of approximately $60,000. It's a great example of what we should be promoting in our educational system.

Businesses must be involved in this process. They need to partner with schools to let them know what skills are needed, help develop the appropriate curricula, help train teachers and be prepared to hire the students. In addition, this has to be done locally because that is where the actual jobs are. Germany does this well. Germany has

one of the strongest education and training systems in the world, with about 1.5 million young people every year participating in apprenticeship programs that are paid opportunities to gain in-demand skills along with an education. The vocational schools and apprenticeship programs work directly with local businesses to ensure the students are connected to available jobs upon graduation. As a result of this market-driven vocational training, Germany's youth unemployment rate is also one of the lowest in the world. There is nothing wrong with learning from other countries.

Proper skills training also can be used to continuously re-educate American workers. Many people are afraid that automation is taking away jobs. Let's be clear. Technology is the best thing that ever happened to mankind, and it is the reason the world is getting progressively better. But we should acknowledge that though technology helps everyone generally, it does cause some job loss, dislocation and disruption in specific areas. Retraining is the best way to help those disrupted by advancements in technology.

We need to help lower skilled workers earn a living wage while helping small businesses. Business should support an expanded EITC.

There is a tax credit in the United States called the Earned Income Tax Credit (EITC), which supplements low-paid workers' incomes. For example, a single mother with two children earning $9 an hour (approximately $20,000 a year) could get a tax credit of more than $5,000 at the end of the year. A single man without children could get a tax credit under this program of only about $500. This program has flaws (which we believe could be fixed), but it has lifted an estimated 9 million people above the poverty line. (The federal poverty guideline is determined by household size. For a four-person household, the poverty level is $24,600 or approximately $11 an hour.) Last year, the EITC program cost the United States about $67 billion, and there were 27 million individuals who received the credit.

Approximately 20.6 million American workers earn between $7.25 an hour (the prevailing federal minimum wage) and $10.10 an hour. Approximately 42% of American workers make less than $15 an hour. I believe we should dramatically expand the EITC to help more low-paid individuals, with and without children, earn a living wage. I have no doubt that this will entice more workers back into the workforce. Jobs bring dignity. That first job is often the first rung on the ladder. And studies show that once people start working, they continue working. In addition, living wages lead to less crime, more household formation and, it is hoped, better social outcomes, including more marriages and children and better health and overall well-being.

It is important to note that large companies generally pay well above the minimum wage and provide health insurance and retirement benefits to all their employees. They also extensively train their employees and help them move along in their careers. While this would help small businesses far more than big businesses, large companies should support the expansion of this program because it would foster growth and be great for lower paid American workers.

4. What should our country be doing to invest in its infrastructure? How does the lack of a plan and investment hurt our economy?

Infrastructure in America is a very broad and complex subject. However, we do have a few suggestions on how to make it better.

Similar to companies planning for capacity needs, it is quite clear that cities, states and the federal government can also plan around their somewhat predictable needs for maintenance, new roads and bridges, increasing electrical requirements and other necessities to serve a growing population. Infrastructure should not be a stop-start process but an ongoing endeavor whereby intelligent invest-

ments are made continuously. And the plan could also be sped up if necessary to help a weakening economy.

Infrastructure, which could have a life of five to 50 years, should not be expensed as a government debt but should be accounted for as an investment that could be financed separately. Borrowing money for consumption is completely different from borrowing for something that has value for a long period of time.

It's important to streamline the approval process, and approvals should run simultaneously and not sequentially.

Last, we need to assure that we have good infrastructure and not bridges to nowhere. Good infrastructure serving real needs is not only conducive to jobs in the short run but to growth in the long run. Projects should be specifically identified, with budgets and calendars and with responsible parties named.

5. How should the U.S. legal and regulatory systems be reformed to incentivize investment and job creation?

There are many reasons to be proud of our system of government. The U.S. Constitution is the bedrock of the greatest democracy in the world. The checks and balances put in place by the framers are still powerful limits on each branch's powers. And this year, we witnessed one of the hallmarks of our great nation – the peaceful transition of power following a democratic election.

Our legal system, including our nation's commitment to the rule of law, has long been a particular source of strength for our economy. When people, communities and companies are confident in the stability and fairness of a country's legal system, they want to do business in that country and invest there (and come from overseas to do so). Knowing that you will have access to courts for a fair and timely hearing on matters and that there are checks against abuses of power is important. As the discussion about areas for potential reform continues, it is critical that these long-term U.S. advantages are kept in mind and preserved.

In regulation, for example, I worry that the distribution of power has shifted. Congress, through the Administrative Procedures Act (APA), set out how regulators should publish draft rules. The APA allows for comments on draft rules, including comments on how a proposed rule will impact lending, jobs and the economy. Today, however, agencies often regulate through supervisory guidance that isn't subject to the same commentary or checks. The function of interpretive guidance is to clarify or explain existing law and should not be used to impose new, substantive requirements. Now is a good time to discuss how to reset this balance.

There also is an opportunity to have a similar conversation around enforcement and litigation. On the civil side, we should look closely at whether statutory damages provisions work as intended. I read recently about a settlement under the Fair and Accurate Credit Transactions Act in which plaintiffs received in excess of $30 million from a business that printed credit card receipts with the customer's card expiration date. Is that fair and proportionate – or is the result driven by a statutory damages framework that should be reconsidered?

And simply because the company agreed to the settlement does not mean it was the right result. Here is the fact: The current dynamics make it very hard for companies to get their day in court – as the consequences of a loss at trial can be disproportionately severe. This is particularly true in a government-initiated case. The collateral consequences of standing up to a regulator or losing at trial can be disproportionately negative when compared with the underlying issue or proposed settlement, and it can lead to the decision not to fight at all, no matter what the merits of the case may be. The Institute for Legal Reform, for the Chamber of Commerce has framed this issue as follows:

"The so-called 'trial penalty' has virtually annihilated the constitutional right to a trial. What are the consequences of a system in which the government is only rarely required to prove its case? What are the implications of this on businesses, both large and small? Ultimately, what are the long-term prospects for entrepreneurship in an environment where even the most minor, unintentional misstep may result in criminal investigation, prosecution and loss of liberty?"

When you combine this with the fact that businesses have no "penalty-free" way to challenge a new interpretation of the law, the net-net result is a system that fosters legislation by enforcement actions and settlements. Said differently, rather than Congress expanding a law or a court testing a novel interpretation, regulators and prosecutors make those decisions and companies acquiesce.

The impact of these issues is further exacerbated by a system that allows for "multiple jeopardy," where federal, state, prudential and foreign agencies can "pile on" to any matter, each seeking its own penalty without any mechanism to ensure that the multiple punishments are proportionate and fair. It would be like getting pulled over by a local police officer and getting fined by your local town, then by your county, then by your state, then by the federal government and then having the U.N. weigh in since the car was made overseas.

To be clear, we need regulators focused on the safety and soundness of all institutions. We need enforcement bodies focused on compliance with the law. But we also need to preserve the system of checks and balances – when you cannot get your day in court on some really important issues, we all suffer.

We need to improve and reform our legal system because it is having a chilling impact on business formation, risk taking and entrepreneurship.

6. What price are we paying for the lack of understanding about business and free enterprise?

The United States needs to ensure that we maintain a healthy and vibrant economy. This is what fuels job creation, raises the standard of living for those who are hurting, and positions us to invest in education, technology and infrastructure in a programmatic and sustainable way to build a better and safer future for our country and its people. America's military will be the best in the world ***only*** as long as we have the best economy in the world.

Business plays a critical role as an engine of economic growth, particularly our largest, globally competitive American businesses. As an example, the thousand largest companies in America (out of approximately 29 million) employ nearly 30 million people in the United States, and almost all of their employees get full medical and retirement benefits and extensive training. In addition, these companies account for more than 30% of the roughly $2.3 trillion spent annually on capital expenditures. Capital expenditures and R&D spending drive productivity and innovation, which ultimately drive job creation across the entire economy.

To support this, we need a pro-growth policy environment from the government that provides a degree of certainty around long-standing issues that have proved frustratingly elusive to solve. The most pressing areas in which government, business and other stakeholders can find common ground should include tax reform, infrastructure investment, education reform, more favorable trade agreements and a sensible immigration policy, among others.

When you read that small businesses and big businesses are pitted against each other or are not good for each other, don't believe it.

Why are America's public equity markets so important? How do we sustain them and strengthen corporate governance?

For more than two centuries, the American free enterprise system has led to enormous prosperity for our country: the creation of jobs, increases in wages and savings, and the emergence and growth of dynamic companies. Because well-managed and well-governed businesses are the engines of our economy, good corporate governance must be more than just a catchphrase or fad. It's an imperative — especially when it comes to our publicly owned companies.

The chart on the right should be a cause for concern. It notes that the number of public companies in the United States has declined 45% since 1996.

There may very well be some logical and good explanations for why this is so; e.g., companies can get capital more easily in the private markets, and the private markets can be more efficient than they used to be.

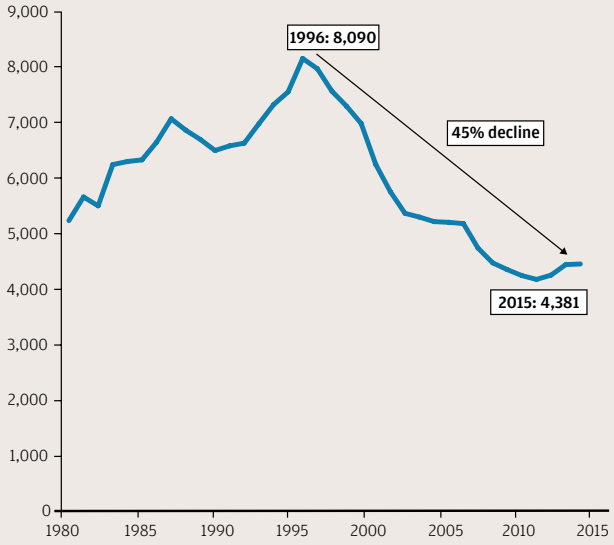
I suspect there are other less-constructive reasons, which could be greatly expanded upon, but I will merely list them below:

- Excessive litigation, including shareholder class action lawsuits
- Excessive and expensive reporting requirements
- Self-serving shareholder activity and proposals not intended to benefit the company
- Shareholder meetings that are hijacked by special interest groups and become a complete farce
- Too much short-termism; i.e., quarterly earnings, at the expense of making good, long-term investments
- Constant and frequent negative media scrutiny — some deserved and some not
- Boards spending more and more time on check-the-box legal and regulatory demands as opposed to the most important role of boards — management, strategy, major risks, etc.

Many private equity companies often stress that it is better to be owned by them because they operate with commonsense corporate governance; i.e., less check-the-box corporate governance — whether addressing board membership, how a board spends its time, management compensation or long-term results vs. just quarterly earnings. The following page exhibits a letter drafted by a diverse group of financial leaders that outlines recommendations for commonsense corporate governance principles that would foster the health of our public companies.

It is hard to estimate the cause and effect of all these factors, but they are reasons for concern. America's public markets have been a key to America's success, and I suspect that years from now, we may regret the damage we have done to them.

Public Companies Disappearing



Source: World Bank; World Federation of Exchanges database

COMMONSENSE CORPORATE GOVERNANCE PRINCIPLES

The health of America's public corporations and financial markets – and public trust in both – is critical to economic growth and a better financial future for American workers, retirees and investors.

Millions of American families depend on these companies for work – our nearly 5,000 public companies account for a third of the nation's private sector jobs. And these same families and millions more also rely on public companies to help improve their financial future – they are heavily invested in these companies through mutual funds, 401(k) and pension plans, college savings plans and other accounts to buy a home, send their children to college and save for retirement.

Our future depends on these companies being managed effectively for long-term prosperity, which is why the governance of American companies is so important to every American. Corporate governance in recent years has often been an area of intense debate among investors, corporate leaders and other stakeholders. Yet, too often, that debate has generated more heat than light.

We represent some of America's largest corporations, as well as investment managers, that, as fiduciaries, represent millions of individual savers and pension beneficiaries. We include corporate CEOs, the head of the Canadian public pension fund and an activist investor, and the heads of a number of institutional investors who manage money on behalf of a broad range of Americans.

This diverse group certainly holds varied opinions on corporate governance. But we share the view that constructive dialogue requires finding common ground – a starting point to foster the economic growth that benefits shareholders, employees and the economy as a whole. To that end, we have worked to find commonsense principles. We offer these principles, which can be found at www.governanceprinciples.org, in the hope that they will promote further conversation on corporate governance. These principles include the following, among others:

- Truly independent corporate boards are vital to effective governance, so no board should be beholden to the CEO or management. Every board should meet regularly without the CEO present, and every board should have active and direct engagement with executives below the CEO level;
- Diverse boards make better decisions, so every board should have members with complementary and diverse skills, backgrounds and experiences. It's also important to balance wisdom and judgment that accompany experience and tenure with the need for fresh thinking and perspectives of new board members;
- Every board needs a strong leader who is independent of management. The board's independent directors usually are in the best position to evaluate whether the roles of chairman and CEO should be separate or combined; and if the board decides on a combined role, it is essential that the board have a strong lead independent director with clearly defined authorities and responsibilities;
- Our financial markets have become too obsessed with quarterly earnings forecasts. Companies should not feel obligated to provide earnings guidance – and should do so only if they believe that providing such guidance is beneficial to shareholders;
- A common accounting standard is critical for corporate transparency, so while companies may use non-Generally Accepted Accounting Principles ("GAAP") to explain and clarify their results, they never should do so in such a way as to obscure GAAP-reported results; and in particular, since stock- or options-based compensation is plainly a cost of doing business, it always should be reflected in non-GAAP measurements of earnings; and
- Effective governance requires constructive engagement between a company and its shareholders. So the company's institutional investors making decisions on proxy issues important to long-term value creation should have access to the company, its management and, in some circumstances, the board; similarly, a company, its management and board should have access to institutional investors' ultimate decision makers on those issues.

These recommendations are not meant to be absolute. We know that there is significant variation among our public companies and that their approach to corporate governance will inevitably (and appropriately) reflect those differences. But we do hope our effort will be the beginning of a continuing dialogue that will benefit millions of Americans by promoting trust in our nation's public companies.

We encourage others to join in that dialogue. Our country, our economy and the future of our citizens depend on getting corporate governance right.

Tim Armour
Capital Group

Mary Barra
General Motors Company

Warren Buffett
Berkshire Hathaway Inc.

Jamie Dimon
JPMorgan Chase

Mary Erdoes
J.P. Morgan Asset Management

Larry Fink
BlackRock

Jeff Immelt
GE

Mark Machin
CPP Investment Board

Lowell McAdam
Verizon

Bill McNabb
Vanguard

Ronald O'Hanley
State Street Global Advisors

Brian Rogers
T. Rowe Price

Jeff Ubben
ValueAct Capital

www.governanceprinciples.org

Small businesses and large businesses are symbiotic – they are substantial customers of each other, and they help drive each other's growth – and are integral to our large business ecosystem. At JPMorgan Chase, for example, we support more than 4 million small business clients, 15,000 middle market companies, and approximately 7,000 corporations and investor clients. We also rely on services from nearly 30,000 vendors, many of which are small and midsized companies. Business, taken as a whole, is the source of almost all job creation.

Approximately 150 million people work in the United States; 130 million work in private enterprise. We hold in high regard the 20 million people who work in government – teachers, policemen, firemen and others. But we could not pay for those jobs if the other 130 million were not actively producing the GDP of America.

Something has gone awry in the public's understanding of business and free enterprise. Whether it is the current environment or the deficiency of education in general, the lack of understanding around free enterprise is astounding. When businesses or individuals in business do something wrong (problems that all institutions have, including schools, churches, governments, small businesses, etc.), they should be appropriately punished – but not demonized. We need trust and confidence in our institutions – confidence is the "secret sauce" that, without spending any money, helps the economy grow. A strong and vibrant private sector (including big companies) is good for the average American. Entrepreneurship and free enterprise, with strong ethics and high standards, are worth rooting for, not attacking.

7. Strong collaboration is needed between business and government.

We all can agree that a general dissatisfaction with the lack of true collaboration and willingness to address our most pressing policy issues has contributed to the existing divisive and polarized environment. Certainly there is plenty of blame to go around on this front. However, rather than looking back, it is now more important than ever for the business community and government to come together and collaborate to find meaningful solutions and develop thoughtful policies that create economic growth and opportunity for all. This cannot be done by government alone or by business alone. We all must work together in ways that put aside our "business-as-usual" approaches. The lack of economic opportunity is a moral and economic crisis that affects everyone. There are too many people who are not getting a fair chance to get ahead and move up the economic ladder. This runs contrary to the fundamental idea that America is a country where everyone has an opportunity to improve their lives and that future generations of Americans know they can be just as successful as those who came before them.

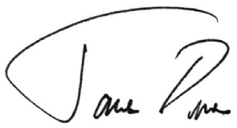
By working together and applying some good old American can-do ingenuity, there is nothing that we can't accomplish. By working together, the business community, government and the nonprofit sector can ensure and maintain a healthy and vibrant economy today and into the future, creating jobs, fostering economic mobility and maintaining sustainable economic growth. Ultimately, this translates to an improved quality of life and greater financial security for those who are struggling to make ends meet. It also would be a significant step in restoring public faith in two of our greatest democratic institutions – U.S. business and government – and would allow us to move forward toward a prosperous future for all Americans.

IN CLOSING

We know we have to earn the trust and respect of our shareholders, employees, customers and the communities we serve every single day. You can rest assured that we are devoted to doing this.

I want to thank our management team. If you could see them in action like I do, you would know that they have remarkable capabilities, character, culture, experience and wisdom.

In closing, I can't emphasize enough how honored I am to work at this company and with its people. What they have accomplished during these turbulent times has been extraordinary. On behalf of JPMorgan Chase and its management, I want to express my deepest gratitude to our people – I am proud to be their partner.



Jamie Dimon
Chairman and Chief Executive Officer

April 4, 2017

Redefining the Financial Services Industry



Matt Zames

As the firm's Chief Operating Officer, I manage a diverse group of critical firmwide operations and functions, as well as certain markets-intensive activities that are integral to our success. These include Global Technology, the Intelligent Solutions group (which drives innovation across the firm by leveraging big data and advanced analytics such as machine learning), Treasury and the Chief Investment Office, Mortgage Banking Capital Markets, Oversight & Control, Regulatory Affairs and the Chief Administrative Office, which includes Real Estate, Procurement, Military & Veteran Affairs, Compliance Operations and Strategy & Process Improvement, among others.

The Chief Operating Office (COO) has a broad and deep mandate, but this year, I want to highlight (i) our investment in technology; (ii) our approach to managing a $2.5 trillion balance sheet; and (iii) our ongoing commitment to a best-in-class culture.

Technology continues to fuel everything we do

Technology is at the core of what we do. Advances in technology make us faster and safer and drive a more engaging customer experience, differentiating our businesses today and for the future. The pace of technology change is always increasing, and we challenge ourselves to think, innovate and deliver like a technology company.

Our more than $9.5 billion technology budget demonstrates our significant, ongoing commitment to technology investment. The scale and diversity of our businesses enable us to invest wherever we see opportunity or competitive advantage to do so effectively. We will continue to grow the share of our technology budget allocated to new investment and innovation by optimizing our existing technology environment. We will also maintain a relentless focus and significant spend on cybersecurity, protecting the firm and enabling the secure introduction of new capabilities.

Optimize to innovate

2016 was a year of mobilizing a portfolio of optimization programs that increased the pace and quality of technology delivery while decreasing cost. Improving software development productivity and adopting cloud infrastructure are core elements of that strategy. We continued to improve developer productivity by enabling an agile technology workforce and automating the software development life cycle. We are also defining design standards to provide a common technical framework for development of applications of a particular type, for example, big data analytics. This will significantly reduce rework and duplication in the software development life cycle where, previously, application developers have had to create their own one-off frameworks. We anticipate that these steps ultimately will lead to a 20% efficiency gain in the development process.

Historically, we have followed a traditional "waterfall" approach to software development, with separate teams and processes for development, testing and operations. The agile approach, by contrast, is characterized by multifunctional and collaborative teams and allows frequent readjustment to project plans in response to changing requirements. Adopting this approach vastly improves software quality through its iterative nature and accelerates our ability to deliver incremental value. To put that into perspective, we are moving from software release cycles measured in quarters to cycles measured in days.

We have also made great progress toward fully automating development life cycle processes and standardizing developer toolkits. In 2016, automated code scanning and deployment tools resulted in savings of nearly 120,000 developer hours –

and, over the next few years, we expect to be able to deliver more than 90% of our software through end-to-end automation.

Attracting, retaining and developing top technology talent is paramount, and we cast a net far and wide to find the best and the brightest. In 2016, 32% of our senior hires in technology came from non-financial services firms. We had a 10:1 applicant-to-position ratio for our Technology Analyst Program, which targets graduates of global universities that have strong technology programs. Our employee training programs cover new skill sets, such as cloud and agile development. We also reinforce a strong innovation culture and atmosphere to spark new solutions through open source projects and "hackathons" in which technologists collaboratively code to solve business problems. In 2016, we hosted a firmwide global hackathon across 20 cities with over 2,500 developer participants. This led to 400 new product ideas, of which 130 were potential opportunities for patents.

We continued to pursue a hybrid cloud strategy – leveraging a next-generation internal, private cloud, as well as external, public cloud services – to further enable our developers through on-demand availability, pay-for-use and elastic scalability. In 2016, we launched a new private cloud platform called Gaia, designed to provide developers with rapid agility – so that they spend more time developing and less time provisioning infrastructure and application services. Over 5,000 developers already have begun to use Gaia. By the end of 2017, we expect to more than double the number of applications hosted on the platform.

Over the last year, we established a new Cloud Services function within Global Technology to accelerate our hybrid cloud strategy, which includes running our first applications in the public cloud in 2017. Working collaboratively with public cloud providers, we have made significant progress developing a set of solutions that meets our rigorous risk and security standards. The public cloud reduces our peak infrastructure requirements by providing compute services during temporary fluctuations in demand. The public cloud also helps reduce long-term storage costs and accelerates developer access to new cloud services.

In 2016, we invested in a new global data center strategy to consolidate our existing facilities into fewer, larger, more modular sites. In early 2017, we opened our first new state-of-the-art data center, which is the strategic model for all future builds globally. The new data centers will house our next-generation optimized infrastructure, enabling significant cost benefits. For example, hardware commoditization already has reduced our server costs by 25%. We also have introduced innovative storage offerings, decreasing the price of our lowest tier storage by 75%. We are driving additional efficiency by reducing waste and becoming smarter around technology consumption – for example, reducing over-provisioned storage and automating manual operational tasks.

Our applications are also changing. We are designing and developing applications to take full advantage of the cloud's benefits. In addition, there is growing internal and external demand for simple, self-service interfaces to our data and applications. To meet this demand, we are leveraging application programming interfaces (API) and launched an internal API store to provide access to a marketplace of secure application services to developers throughout the firm. The old world of developing and writing unique code is rapidly being replaced by reusable component pieces ("microservices") that can communicate seamlessly, dramatically reducing integration development time and driving developer efficiency. We also are expanding the APIs we offer externally to enable direct client integration and secure solutions by third-party developers – for example, the partnership with Intuit that we recently announced. By the end of 2017, we estimate our applications will generate more than 100 million internal and external API calls each day.

Advancing innovation and partnerships

As a firm, innovation is our top strategic priority. We take pride in our ability to differentiate ourselves through the development of new solutions and the adoption of emerging technology at scale.

Demand for digital-centric experiences is transforming our businesses faster than ever. Most of our digital solutions will continue to be built in-house due to competitive and strategic importance. However, we have realized the complementary benefit of partnering with fintech companies to enhance select digital products and services. As a result, our strategy is a combination of build, buy and partner in order to continue delivering the best digital products and services at scale.

We have formalized a firmwide fintech strategy and ecosystem engagement model to identify and leverage partner relationships across all of our business areas. In their letters, each of our CEOs highlights examples of how technological innovation is delivering value to their business.

Our relationships with the external technology ecosystem helped drive value across our technology focus areas, including next-generation data

and analytics platforms, such as Hadoop and Spark. To maximize the impact of these new data platforms, we have doubled our big data infrastructure consistently year-over-year. We now can access and analyze data in ways that we could not have done before. For example, last year, we re-engineered our Market Risk platform, one of the largest in-memory risk analytics platforms in the world. The platform now manages over 1 billion risk sensitivities and provides visibility 17 times faster than the prior system while delivering a more granular and holistic view of the firm's risk exposure.

Within our global payments strategy, we have developed a new payments platform based on similar cutting-edge technologies. It will replace nine monolithic platforms and enhance client value through real-time cross-border payment execution and end-to-end payment status transparency. In addition, the platform will enable us to bring new products to market more quickly and offer a more configurable, flexible client experience through reusable APIs and microservices for event processing.

As we look forward, two emerging areas of innovation – robotics and machine learning – offer promising opportunities to drive new value through automation and insight.

Robotics

Robotic process automation is software that automates routine, repetitive activity that otherwise would be performed manually. Virtual "bots" are available 24/7 to efficiently execute simple processes without the risk of human error. In 2016, we established an internal center of excellence to drive best practices around a growing pipeline of robotic process automation, including systems access administration, for which we expect to automate 1.7 million requests in 2017. We have line of sight into more than $30 million run rate saves from robotic process automation in 2017, a savings that, coupled with other optimization efforts, will continue to increase substantially in the years to come. This technology has the opportunity to deliver immediate benefit in several areas across the firm, helping us to position our workforce around higher value tasks and functions.

Machine learning

Machine learning offers another exciting opportunity to drive new capabilities for the firm and our customers and clients. Machine learning technology provides insights about data without needing to pre-program algorithms. Machine learning technology actively learns from data with the goal of predicting outcomes. The more these learning algorithms are engaged, the more effective they become at identifying patterns and relationships. In 2016, we established a center of excellence within Intelligent Solutions to explore and implement a growing number of use cases for machine learning applications across the firm.

As an example, we recently introduced COiN, a contract intelligence platform that uses unsupervised machine learning to analyze legal documents and to extract important data points and clauses. In an initial implementation of this technology, we can extract 150 relevant attributes from 12,000 annual commercial credit agreements in seconds compared with as many as 360,000 hours per year under manual review. This capability has far-reaching implications considering that approximately 80% of loan servicing errors today are due to contract interpretation errors.

We also use machine learning to drive predictive recommendations for Investment Banking. Last year, we introduced the Emerging Opportunities Engine, which helps identify clients best positioned for follow-on equity offerings through automated analysis of current financial positions, market conditions and historical data. Given the initial success of the Emerging Opportunities Engine in Equity Capital Markets, we are expanding it to other areas, like Debt Capital Markets, similarly basing predictions on client financial data, issuance history and market activity.

We are initiating pilots for a broad range of machine learning use cases – from detecting anomalies for fraud and cybersecurity, to generating targeted trading strategies to share with clients, to optimizing our client-servicing channels. We are only at the very beginning of tapping the potential capabilities of machine learning and its benefits to our business.

We also are excited about the prospects of cognitive automation, which combines both robotics and machine learning technologies to mimic human judgment. Cognitive automation has the potential to automate more complex, human-like processes, such as perceiving, hypothesizing and reasoning. In 2016, we successfully piloted a virtual assistant technology to respond to employee technology service desk requests through a natural language interface. We are rolling out this technology in 2017 to help us initially triage over 120,000 service tickets, with plans to expand the capability to address even more of the 1.7 million annual employee requests.

Securing a changing landscape

Our cybersecurity strategy is focused on securely enabling new technology and business initiatives while maintaining a relentless focus on protecting the firm from cybersecurity

threats. Our defensive philosophy follows a "kill chain" approach – layers of controls aligned to the multiple stages of the cyber threat life cycle (from early warning, to inbound/outbound prevention and detection, to response and recovery). We have aligned our security technology and processes to this life cycle, with a focus on a "shift left" approach – increasing our effectiveness in detecting and preventing malicious activity at the earliest points in the life cycle.

The firm continues to make significant investments in cybersecurity to enhance these defensive controls and our resilience to threats. For example, we have deployed web browser isolation technology to reduce the risk of employee compromise through phishing. Investments in security analytics, data science and automation technology will enable analysts within our Security Operations Centers to efficiently detect and respond to anomalous activity. We have adopted and continue to evolve leading-edge technology to prevent client fraud across lines of business, including risk-decisioning engines that help distinguish between good and bad activity in real time.

Through robust employee awareness and readiness programs, we continue to reinforce the idea that cybersecurity is everyone's job. We also educate our customers and clients on how to protect their assets and business from cyber threats. We broadly distribute awareness communications and conduct both in-person and web-based training in which more than 7,000 clients in Asset & Wealth Management, more than 3,000 Commercial Banking clients and over 1,900 Corporate & Investment Bank clients participated in 2016 alone. As one of the largest global financial institutions, we embrace our cybersecurity leadership responsibility to the industry. In 2016, we led the creation of the Financial Systemic Analysis & Resilience Center (FSARC) in partnership with seven of our peer banks and the U.S. government. FSARC's mission is to proactively identify, analyze, assess and coordinate activities to mitigate systemic risk to the U.S. financial system from cybersecurity threats through focused operations and enhanced collaboration.

Increasingly, our customers and clients view our cyber posture, like our fortress balance sheet, as a source of strength. We will continue to work tirelessly to identify opportunities in which the firm can leverage our cybersecurity expertise to strengthen our controls, protect our client relationships and improve the posture of the broader industry.

Liquidity and interest rate risk

The firm's Treasury and Chief Investment Office are integral to delivering on our strategic objectives, playing a primary role in overseeing our $2.5 trillion balance sheet and providing both governance and risk management expertise around interest rate and liquidity risk. We meet our objectives through our nearly $300 billion high-quality investment securities portfolio, as well as the $300+ billion of funding and liquidity sources directed by Treasury.

Most notable in 2016 was our work related to liquidity and funding in response to U.S. regulator feedback on our 2015 Resolution Plan. We introduced a comprehensive new liquidity framework to estimate available resources and liquidity needs during a resolution event – and, as part of this work, rolled out two enhanced liquidity models across our material legal entities. We further strengthened the firm's liquidity position, raising more than $50 billion of liquidity to meet the requirements of the new framework. While deposit growth in excess of loan growth drove some of this improvement, the liquidity benefit came mainly from a reduction in non-high quality liquid assets in our investment securities portfolio and an increase in Treasury-originated short- and long-term secured funding.

Our focus on optimizing the firm's balance sheet continued with rigor through 2016. We extended our optimization framework to analyze the maturity structure of our long-term debt, and we introduced the industry's first total loss absorbing capacity (TLAC) efficient callable debt structure, resulting in a larger proportion of our outstanding long-term debt being TLAC eligible. More broadly, our optimization framework helped to inform our new multi-factor equity allocation approach to better align incentives with the broader set of constraints we face. Our firmwide Asset Strategy group together with our Deposit Strategy group provide strategic cross-business focus on our deposit, lending and investment activities. These forums have and will continue to evolve our analytical frameworks and monitoring capabilities, as well as continually assess market opportunities and associated resources and risks.

2016 also saw a move higher in U.S. dollar interest rates and featured a second rate hike by the Fed in December. During the second half of 2016, three-month LIBOR increased 35 basis points to 1%, while 10-year Treasury yields increased nearly 100 basis points to 2.43%. Staying true to our disciplined risk management framework, we opportunistically added duration through our investment securities portfolio as long-end rates rose.

Market expectations have shifted as well. At the end of the second quarter of 2016, the market was expecting the Fed's interest rate on reserves to remain below 1% through the end of 2019. With recent and anticipated Fed interest rate hikes, industry expectations are now for the rate on reserves to reach 2% during 2019. And, as indicated by our $2.4 billion of "earnings-at-risk," our firm benefits greatly when rates rise, particularly short rates, which allow us to capture the full value of our significant deposit franchise.

We continue to build on the great work started in 2015 on our intraday liquidity program, with technology at the core of our advancements. We are able to monitor, in real time, the liquidity impact of over $6 trillion of transactions daily and the credit exposure across tens of thousands of intraday credit facilities, consuming up to 5,500 updates per second. This year, we introduced big data analytics, which has substantially improved our predictive capabilities around intraday drivers. We store 90 million data points covering in excess of 18 months of daily history, adding over 500,000 data points per day. We are now realizing the benefits of harnessing this vast amount of data, informing decisions internally and improving the quality of our dialogue with clients. Additionally, we are leveraging technology to further optimize approximately $1 trillion of collateral the firm has received, as well as the firm's own collateral, to provide a more integrated and dynamic operating model for collateral firmwide.

A culture of accountability

Having fortress controls remains a critical priority, but controls alone are not sufficient without the right culture. The COO will continue its leadership to reinforce our Business Principles and cultural values throughout the firm and maintain an appropriate governance framework to effectively manage our approach to conduct risk. Confirming we are getting it right requires a comprehensive set of metrics, and, over the past year, we have introduced a series of conduct measures to do just that.

Culture and Conduct Risk was reaffirmed as a strategic priority at our Operating Committee annual strategy off-site meeting in July. We recently appointed a Chief Culture and Conduct Officer for the firm to reinforce ownership of conduct risk and a consistent firmwide approach in the first line of defense. We also established a separate risk stripe for Conduct Risk so that we have disciplined and consistent oversight and a clear conduct risk management framework.

We use increasingly sophisticated detective controls to help us identify broad, as well as individual, trends in employee conduct. For example, we now have in production a Front Office Supervisory monthly report across our markets businesses globally. This tool consolidates key sales and trading metrics, such as number of canceled and amended trades and credit and market risk limit breaches, with compliance metrics, such as an employee's compliance with mandatory training and consecutive leave requirements, to give supervisors a view of their employees' behavior. We also surveil certain electronic communications and trades to identify potential misconduct, and we have implemented controls designed to prevent and detect abuses related to collusion, market misconduct or manipulation and corruption, among others.

We continue to develop our Culture and Conduct Risk Dashboard, which is reviewed with our Board of Directors and senior management. The Dashboard is a qualitative and quantitative assessment that includes key metrics and commentary related to how well-controlled we are and how well we manage risk, compliance results for our businesses and employees, Code of Conduct matters, employee survey results, and customer and client feedback/complaints for each of our businesses.

In 2017, we will continue to connect key programs, metrics and policies across the firm to identify additional opportunities – and our Board of Directors will continue to hold us accountable for this important work. Our approach is iterative, driven by our commitment to our firmwide values and ongoing communication of our standards to our employees. We engage in ongoing dialogue with our regulators, industry peers and other experts to identify and adopt best practices.

Looking ahead

I have never been more excited about the opportunities ahead. Our focus on innovation and aggressive optimization to meet new challenges will continue to result in dynamic changes to our operating model as we best position our businesses for the future. In so doing, we will maintain a relentless commitment to the highest standards of conduct and safety and soundness to protect the integrity and security of the markets in which we operate and the assets of our customers and clients.



Matt Zames
Chief Operating Officer

Consumer & Community Banking



Gordon Smith

2016 financial results

2016 was another strong year for Consumer & Community Banking (CCB). All our businesses performed well and delivered very strong results. We gained market share in each of our six business units. For the full year, we achieved a return on equity of 18% on net income of $9.7 billion and revenue of $44.9 billion.

We made meaningful progress on our 2016 priorities – a strategy we have been following consistently since we unified our Consumer businesses in 2012 under CCB:

- Deepen relationships with our customers and simplify and improve the customer experience
- Lead payments innovation by delivering solutions that address merchant and consumer needs
- Increase digital engagement by delivering differentiated experiences
- Protect the firm and its clients/customers, investors and employees from cyberattacks, as well as protect the privacy of their data and transactions
- Continue our unwavering commitment to build and maintain an effective and efficient control environment
- Execute structural expense management strategies while continuing to invest for the future
- Attract, train, develop and retain the best talent and strengthen our diversity

Simply put, our commitment to customers is at the heart of everything we do. It's what drives our work and our strong results. We know that happy customers will do more business with us and stick with us throughout their lives. For us, our goal is not only to acquire customers – it's to acquire customers who view Chase as their primary bank or credit card. We want to be our customers' first call when they are seeking financial advice.

Today, we have a relationship with almost half of all households in the U.S. We grew our customer base in 2016 by 4% to 60 million U.S. households. We are the primary bank for more than 70% of our consumer households and nearly 50% of our small businesses. Our household attrition is at record lows. And according to our 2016 Brand Health Survey, the Chase brand is at the strongest levels we have seen, ranking #1 in key categories, including consideration, which measures if survey participants would consider doing business with Chase and have a positive perception of Chase.

While we are extremely pleased with where we are, we know we have plenty of work to do. There is tremendous opportunity literally on our own doorstep. More than 80% of Chase households with a mortgage got it somewhere else. Only one-third of our customers are engaged with more than one product across Chase. And only 10% of our small business customers who have a Chase banker use us for business banking, credit card and merchant services, while 43% of small businesses need all three. We can continue to grow simply by serving our existing customers exceptionally well and earning their trust to do more business with us.

Building a strong business for the future

We have been fortunate to be in an extended, historically benign credit environment. Despite that, we have not forgotten the painful lessons of 2008 and have maintained an extremely disciplined approach to credit throughout the cycle.

In Mortgage Banking, we've increased our loan balances while improving the quality of our servicing portfolio. Today, our delinquency rate is approaching its lowest level in

2016 Performance Highlights

Key business drivers			
$ in billions, except ratios and where otherwise noted		2016	YoY△
Consumer & Community Banking	Households[1] (millions)	60.0	4%
	Active mobile customers (millions)	26.5	**16%**
Consumer Banking	Average deposits	$461	**11%**
	Client investment assets (end of period)	$235	7%
Business Banking	Average deposits	$110	**9%**
	Average loans[2]	$22	7%
	Loan originations	$7	8%
	Net charge-off rate	0.61%	(5) bps
Mortgage Banking	Total mortgage origination volume	$104	(3)%
	Foreclosure units (thousands, end of period)	47	**(36)%**
	Average loans	$232	**14%**
	Net charge-off rate[3]	0.10%	(8) bps
Credit Card	New accounts opened[4] (millions)	10.4	**20%**
	Sales volume[4]	$545	**10%**
	Average loans	$131	4%
	Net charge-off rate	2.63%	12 bps
Commerce Solutions	Merchant processing volume	$1,063	**12%**
Auto Finance	Loan and lease originations	$35	9%
	Average loan and leased assets	$75	**16%**
	Net charge-off rate	0.45%	7 bps

[1] Reflects data as of November 2016
[2] Includes predominantly Business Banking loans as well as deposit overdrafts
[3] Excludes the impact of purchased credit-impaired loans
[4] Excludes Commercial Card

YoY = year-over-year bps = basis points

a decade, and our foreclosure inventory is down 85% since 2012. That's important because a nonperforming loan is 25 to 30 times more expensive for us to service than one that is performing. We are continuing to evolve Mortgage Banking into a less volatile and more profitable business. In our Card business, we have been very consistent in terms of our modest exposure to the less than 660 FICO segment. And when you look at the mid-prime space, characterized as FICO scores between 640 and 720, we have the lowest share among the players in the industry. Our credit card losses remain at very low levels.

Along with credit discipline, we remain fiercely devoted to expense discipline. We reversed a trend of rising expenses with relatively flat revenue. Since 2014, we achieved $2.4 billion in structural expense reductions and improved our overhead ratio from 58% in 2014 to 55% in 2016. Importantly, during that same time period, we continued to prudently invest in our core businesses to deliver value for the long term. In particular, we've invested heavily in technology and marketing associated with new product launches, digital and payments innovation, and cybersecurity. Our investments have also improved our control environment, leading to more automated processes and better customer and employee experiences. Expense discipline is part of how we do business every day, and the work to reduce our structural expenses will continue.

Payments innovation

Payments are at the very core of what our business does for customers. We are one of the few companies that can deliver the full payment chain from merchant to consumer. The payments industry is one that is evolving rapidly with innovation and new entrants. Our strategy has been consistent:

- Build our own proprietary wallet with Chase Pay℠
- Be top of wallet in other wallets, whether that is Apple Pay™, Android Pay™, Samsung Pay™, or other embedded payment systems such as Amazon or Uber
- Have the best person-to-person (P2P) payments experience anywhere
- Create card products that our customers love, with rich reward offerings to make them top of the physical and digital wallet

The future here is still unknown as customers adopt new capabilities. But we know payments are core to what we do, and we are investing across multiple fronts to create the best payments experience for our consumer and merchant customers as technology evolves. In 2016, we achieved some key milestones in payments:

Commerce Solutions – Our Chase Commerce Solutions business has earned double-digit growth since 2012 and in 2016 surpassed a staggering *$1 trillion* in processing volume.

Chase Pay – We introduced Chase Pay, our payment solution that provides benefits to both customers and merchants. Chase Pay has unique features other payment methods don't and has the Chase brand and security behind it. Several large retailers,

including WalMart, Starbucks and Best Buy, have partnered with us to offer Chase Pay to their customers. It's early, but we're already seeing promising results and expect 2017 to show continued strong momentum.

Person-to-person payments – Chase QuickPay℠ has been an industry leader with 94 million transactions in 2016. The number of households using QuickPay has gone up 30% in just the past year. As strong as it is, we took an important step to make it even better. We worked with 20+ other financial institutions on a solution called Zelle that speeds up P2P real-time payments between banks.

Sapphire Reserve℠ – This past year, our team noticed an important insight from our customers: People are traveling differently. They want to feel more like locals than tourists, and the shared economy has revolutionized the travel industry. When choosing a credit card, customers want a card that rewards them more for doing what they love to do and helps them discover the future of travel. We created Sapphire Reserve with one of the strongest point programs in the industry. And while we knew we had designed a superb card, frankly, even we were surprised by the sensation it became. We exceeded our annual target of customers in less than two weeks.

Sapphire Reserve has introduced Chase to an exciting and passionate customer base with average FICO scores above 785 and an average deposit and investment wallet of over $800,000. Even more exciting, the majority of our new Sapphire Reserve customers are millennials. That is significant because millennials make up the majority of our new deposit accounts today, and their wealth is expected to grow at the fastest rate of all generations over the next 15 years. Since we are more than a credit card company and given our new customers' strong satisfaction and engagement with their Sapphire Reserve cards, we are confident they will also choose Chase to do more of their banking, investments and loans.

New card launches – While receiving less hype than Sapphire Reserve, we've also introduced several other popular cards. Chase Freedom Unlimited℠ simplified our cash-back proposition by offering customers 1.5% cash back on everything they buy. And not to be outdone, Ink Business Preferred℠ and our Amazon Prime℠ card also earned a very strong customer reception. Together, these cards have contributed to our momentum. In 2016, we saw new accounts up 20%, card sales volume up 10% and outstandings up 8%.

Digital

We think we can confidently say that Chase is the digital leader in the industry. We have the #1 rated mobile banking app, #1 ATM network and #1 most visited banking portal in the U.S. This is important because, increasingly, digital is a critical driver in why customers choose to do business with Chase. Banking no longer is a sometimes activity – customers engage with us every day. More than 26 million customers are active on our mobile app today. Digital also drives tremendous loyalty. Households that use our digital channels have credit and debit spend levels over 90% higher than those that don't. Customers who are digitally engaged have higher satisfaction and retention rates, spend more and have far lower transaction costs.

Advancing our digital and technology capabilities is job #1, but we are also paying close attention to the emerging technologies in our industry. Many new fintech companies are mastering ways to simplify the customer experience. Those we meet with have huge respect for the Chase brand, and they envy our scale and distribution. In cases where we think their solutions will improve the customer experience quickly, we partner with them. A few of those 2016 partnerships have worked out very well:

- **Chase Business Quick Capital**® – A partnership with OnDeck to provide fast funding to small businesses using Chase underwriting standards
- **Chase Digital Mortgage**℠ – A partnership with Roostify that helps our customers manage the mortgage process online or on mobile
- **Chase Auto Direct**℠ – A partnership with TrueCar that allows customers to shop for and finance the specific car they want online and simply pick it up at the dealership

We continue to study and meet with new players to evaluate which partnerships could benefit our customers.

Chase in the community

Chase's 5,258 branches are the face of our firm to local communities. Roughly two-thirds of our customers visit a Chase branch four times a quarter on average. Our branches are located in the fastest growing markets in the country, and we are outpacing our competitors wherever we compete.

If you visit our branches regularly, you will see how they have changed. There are fewer teller lines and more

options for customers who choose to self-serve. There are more private spaces and conference rooms for customers to meet with a banker and privately discuss transactions. And the branches just look better. Most branches are refreshed roughly every six to seven years to update the technology and brand experience.

We know one thing that will drive a customer crazy is a long teller line. Since 2014, we've reduced total teller transactions by ~130 million and increased self-service/digital transactions by ~180 million. That's great progress, but we still can do more. In 2016, 70% of our 400 million teller transactions could have been performed through a self-service channel. We continue to work with our customers to help them understand how to complete transactions on their own if they so choose.

And as transaction volumes come down, we will rationalize our branch footprint. We have been opening branches in higher growth areas and consolidating those with less foot traffic. As a result, we reduced our net branches by about 150 in the past year. However, by being smart about where we open branches, even in markets where we consolidated, we still grew share.

Our branches also are advice centers for many of our 4 million small businesses. There are few things more gratifying than watching a small business owner turn an idea into a sale and then sales into a business. Since 2012, our share of business customers who use Chase as their primary bank grew from 6% to 9%. We improved our Net Promoter Score by 38%. And since 2014, average deposits are up by 21% and loans by 13%.

At Chase, we take very seriously the role our business plays in helping customers make the most of their money. Our goal is to offer products, advice and tools to help them make the best choices. It's such a privilege to be in the business of banking and payments. We are honored to be part of our customers' lives in a way that few businesses are.

On behalf of the more than 130,000 employees in Consumer & Community Banking, thank you for your investment in us.



Gordon Smith
CEO, Consumer & Community Banking

2016 HIGHLIGHTS AND ACCOMPLISHMENTS

- Consumer relationship with almost half of U.S. households
- #1 in primary bank relationships within our Chase footprint
- Consumer deposit volume has grown at more than twice the industry average since 2012
- #1 most visited banking portal in the U.S. – chase.com
- #1 rated mobile banking app
- #1 ATM network in the U.S.
- #1 credit card issuer in the U.S.
- #1 U.S. co-brand credit card issuer
- #1 in total U.S. credit and debit payments volume
- #2 merchant acquirer
- #2 mortgage originator and servicer
- #3 bank auto lender



2016 West Coast Bus Tour

Every summer, we go out on the road to meet with our employees and ask for their feedback. They tell us what they are hearing from our customers and give us ideas on how we can make our Chase customer experience even better. We've made many customer improvements as a result of our bus tours, and we have a lot of fun along the way.

Corporate & Investment Bank



Daniel Pinto

During a year of significant volatility, the Corporate & Investment Bank (CIB) consistently delivered for its clients. Throughout 2016, we increased or maintained our leading positions by avoiding complacency, reinforcing our culture of meeting the highest standards and attracting the best talent in the industry.

By adhering to those principles, the CIB achieved impressive results in 2016. Record earnings of $10.8 billion were up 34% compared with 2015, and our $35.2 billion in total revenue reflects a gain of 5% over the previous year. That performance produced a superior return on equity (ROE) of 16% on a capital base of $64 billion.

Providing clients with capital and liquidity during volatile market conditions has become even more essential in recent years. As some competitors retrenched and signs of decreasing liquidity emerged, we remained supportive and accessible. Our global scale, complete product set and the strength of our balance sheet, underpinned by our sound risk management practices, enabled us to consistently serve clients, a factor in driving wallet share increases across our already top-ranked businesses.

We don't take our leadership for granted, though. Despite our leading franchises, we continue to look beneath the surface of our businesses, ask the critical questions and make improvements where necessary. We are committed to staying ahead of the curve and embracing the technological changes affecting our industry in the face of competitors, both new and traditional.

By investing in scalable platforms and innovative trading tools and improving the overall experience, we are serving clients better, faster and more efficiently than ever before. More important, while we drove annual expenses down to $19 billion by staying disciplined, we still kept investing for the future. The market share gains we experienced in 2016 were supported by the CIB's profitability and our willingness to make strategic investments in innovation that will bolster our growth for years to come.

The past year demonstrated once again that there will always be unpredictable global events. One unknown is the ultimate outcome of negotiations between the U.K. and the EU. We are fortunate to have options in terms of locations and legal entities that will allow us to serve clients seamlessly during the transition. We will need to make adjustments, but our commitment to clients in the U.K. and the EU is as strong as ever.

By continually improving, adapting and being prepared, we are better able to respond. That's what our clients have come to expect, and we know that their success is the foundation for ours.

Strengthening investment banking leadership

Investment banking has always been about deep, long-standing relationships and solutions. Clients want consistent coverage, good ideas and global capabilities. We have an exceptional Investment Banking franchise that consistently ranks #1 globally. That success continued in 2016 with an 8.1% share of the global fee wallet.

We take immense pride in our people and the talent at J.P. Morgan, and our #1 standing is mainly due to the fact that we have the industry's best bankers. Still, there are sectors and geographies in which we can always improve. Since 2014, we have hired approximately 60 investment bankers, about 40 of whom were managing directors, who brought experience and relationships that will help bring J.P. Morgan's full suite of solutions to even more clients.

Our bankers represent a franchise that has a full range of global capabilities. Our Debt Capital Markets team retained its hold at the top of the global debt league tables. Its expertise and the firm's ability to deliver capital in scale for complex financings set us apart.

One standout deal of the year was evident in J.P. Morgan's role as the lead financial advisor to Dell Inc. and Silver Lake Partners on Dell's $67 billion acquisition of EMC Corporation, the largest technology transaction in history. In addition, J.P. Morgan served as global financing coordinator on Dell's $49.5 billion of committed financing associated with this transaction.

We also remain a leading source of debt capital for U.S. nonprofit and governmental entities, specifically states, municipalities, hospitals and universities. Last year, J.P. Morgan raised $90 billion of credit and capital for these important clients.

In 2016, we also were the top equity underwriter. Despite a difficult environment for initial public offerings (IPO) and a significantly smaller industry wallet, J.P. Morgan was the only global bank to gain share last year. Our bankers led 343 deals, more than any other bank. J.P. Morgan was a global coordinator and sponsor on the Postal Savings Bank of China's $7.6 billion IPO, the largest equity deal of the year and the largest IPO since the 2014 deal for Alibaba, in which J.P. Morgan acted as global coordinator. That 2016 deal underscored once again our ability to execute large transactions around the world by connecting regional issuers with global investors.

In order to grow, clients have often searched for merger and acquisition (M&A) opportunities to transform their companies. They look to trusted advisors who understand their companies and sectors and can provide the strategic insights to help them expand.

Our global team of M&A bankers works together to coordinate quickly and often, enabling J.P. Morgan to identify timely trends and opportunities across industries and borders. After record M&A volume in 2015, overall activity was down in 2016, but J.P. Morgan advised on more deals than any other bank and ranked #2 in wallet share globally. The firm's North America M&A wallet share grew by 60 basis points since the end of 2015.

Having top franchises across M&A, debt and equity gives us real-time, global market insights. Windows of opportunity in both M&A and capital markets can open and close quickly. Having expertise across product areas allows us to be timely and provide our clients with the best solutions to further their growth strategies. That's how we build trust.

Our Investment Banking franchise also enjoys a strong partnership with Commercial Banking (CB) that sets us apart from all other competitors. Its Commercial and Industrial franchise is a leading bank to nearly 18,000 clients. As those businesses grow and flourish, many need capital and advisory services from the Corporate & Investment Bank.

In 2016, the CIB led more than 800 capital markets transactions for CB clients and generated a record $2.3 billion of gross investment banking revenue. Despite that already impressive pipeline of shared client business, we think the potential magnitude over time could reach $3 billion.

Another developing partnership for the CIB is the potential to work with J.P. Morgan Asset & Wealth Management and its client base of family offices. We think there is more opportunity to offer these large investors participation in CIB transactions relevant to their investment goals.

Investments and scale in the global markets

We believe that having global scale, a complete platform and operational excellence are essential to having a best-in-class, profitable franchise. In 2016, our Markets business (Fixed Income and Equities) finished the year with a combined $21.0 billion in revenue, a year-over-year increase of 15%.

We have always believed that providing clients with a global and diverse Markets business leads to a higher and more resilient ROE. In 2016, each one of our major Fixed Income businesses produced a ROE above the cost of capital. More important, the marginal contribution that each business provides to the larger Fixed Income franchise is much greater. The costs to run our Markets business are mostly fixed so operating leverage gives us upside when market growth occurs, which is what we saw last year. Even Commodities, which didn't meet its cost of capital in 2015, in part because of ongoing simplification efforts, produced a good return in 2016.

Since 2010, the Fixed Income industry revenue pool has contracted from $157 billion to $114 billion. However, because of our scale, continuous investments and risk discipline, we were able to increase our market share over the seven-year period from 8.6% to 12.0%.

Our Equities and Prime Services businesses, major areas of focus for us, also gained share during that seven-year period. Our market share increased from 6.9% to 10.1%, and we are now ranked #2, even as the global wallet declined by $6 billion during that stretch. We had record revenue and balances in prime brokerage last year. It's an area where we committed to invest in order to complete our platform, and the progress is evident across all segments. In fact, since 2014, we have grown synthetic revenue by 48% and cash revenue by 12% within our prime brokerage business, bringing the two segments more into balance. Our

leading equity derivatives franchise grew revenue by 26% even while the industry revenue pool shrunk by 5%.

We've also made great strides in cash equities. No doubt about it, we were late to the game when it came to investing in low-touch, electronic trading about a decade ago. But by taking advantage of our profitability and committing ourselves to significant, ongoing technology investments, we now are a leading equities franchise and are driving the changes of tomorrow. Between 2014 and 2016, the overall cash equities industry revenue pool fell by 18%, yet our revenue decreased by only 4%, helped by a 31% jump in low-touch revenue. The technology investments we made helped preserve our share in a declining market and positioned us for growth as we continue to onboard clients faster and build best-in-class electronic trading tools.

We are proud to be a perennial leader in Fixed Income and pleased with the progress we've made in Equities, but there is still more to do. Across the Markets businesses, we track 31 subproduct and geographic categories. In 2012, we held a top three leadership position in 61% of those categories. In 2016, we improved our standing by having a top three leadership position in 77% of those same categories. The bulk of those leadership improvements came from investments we made in Asia, where we have completed or enhanced some pieces of our global platform.

We feel very good about our Markets business. Global scale and a complete platform have never been more critical. We have many competitive advantages in Markets, but it is essential we continue to invest and proactively think about disruption on our own terms.

Adapting to the new market structure

Technology is rapidly reshaping the Markets landscape, positively altering how our clients trade and how we communicate with them. As the technology advances, we have the resources and the will to embrace behavioral shifts and build offerings around them. We fundamentally believe that clients should have the ability to choose how they want to trade with us rather than be constrained by the technologies we, or they, happen to have. Our Markets Execution group is dedicated to making sure clients can seamlessly and confidently engage with us anytime, anywhere, now and in the future.

Whether it was the U.K.'s referendum to exit the EU, the results of the U.S. presidential election or the uncertainty of China's growth rate, the CIB's technology, our scale and operational excellence enabled clients to trade through turbulent markets. In the case of the U.K. referendum, as results were tallied, J.P. Morgan smoothly handled record volume in currency trading, at one point processing 1,000 tickets per second as investors scrambled and adjusted their positions around the world.

While impressive, years of technology investments and proper risk discipline prepared us for an event such as the U.K. referendum. Our profitable Markets business, which generated an overall ROE of 17% last year, enables us to invest in innovation and the client experience. Eighty-three percent of notional FX trading is now done electronically. We have seen a $100 million trade done on a mobile phone, and on peak days in 2016, $200 billion in FX was traded through our electronic channels, including our own J.P. Morgan Markets platform, which provides a range of services from research to pre- and post-trade reporting.

The electronic evolution is advancing, and the investments we've made, and will continue to make, already are proving their merit to our clients.

Transforming transaction banking

Our commitment to technological advancement also has helped us make significant progress in Treasury Services (TS) and Custody & Fund Services (CFS). As businesses that provide vital services to clients, both have benefited from the extensive resources we've allocated to them.

To give a sense of the scale and importance of these two franchises, we hold and protect more than $20 trillion in assets under custody and securely process $5 trillion in payments every day.

Global companies know how vital these functions are in terms of safeguarding their financial operations and enabling their businesses to run smoothly.

Clients of both Treasury Services and Custody & Fund Services increasingly demand real-time access to their balances, intraday liquidity and ever faster processing capabilities. They are turning to us to deliver innovative products, alert them to fraudulent transactions, and track their finances across multiple currencies and countries. The goal is to give clients real-time information on their complex, global portfolios with easy-to-use, seamless technology.

Clients look to these critical services to be faster and more accessible than ever before, which is why we have invested so heavily in these businesses.

There's more to do, but our efforts haven't gone unnoticed. Greenwich Associates recently named

J.P. Morgan's ACCESS Online℠ the top-ranking cash management portal globally, as well as in North America.

Our commitment to technology and delivery of innovative solutions were also important factors behind BlackRock's decision to award us a CFS mandate with $1.3 trillion in assets under management last year, the biggest custody transaction in history. Clients are rewarding us with new and incremental business; the bank has increased business with existing custody clients by 10% in 2016, and the forward pipeline is strong. Overall, the bank serves about 2,500 custody clients in more than 100 markets. The faith that clients have in our capabilities is a validation of our investments and reflects our ability to collaborate across areas, such as Sales, Products, Technology and Operations.

By 2017, TS is expected to increase its technology budget by 12% vs. 2014 with investments that include automating and streamlining the account opening process, digitizing document exchanges and expanding virtual branches. We're also continually investing in cybersecurity capabilities to guard against fraud, malevolent attacks on our operations and other intrusions. We believe that by 2017, these improvements will help reduce operating expenses by 13% vs. 2014, while client operating balances jumped by 15% in just the last two years.

Similarly, Custody & Fund Services will increase its technology budget by 30% vs. 2014 while driving down operating expenses by 12%. Using technology-driven solutions, CFS is enhancing its stability and enabling the business to grow in a more scalable way.

After a few years of tightening controls and upgrading systems, we are now winning more business and attracting talented bankers and technologists who are excited about our willingness to invest in and build new technologies.

Building for the future

We view last year as a transitional period in the financial markets. If the global economy continues improving, that should have a positive impact on client activity and gross domestic product (GDP) growth in the U.S. and in many of the developed and emerging market economies. Estimates are that emerging markets ultimately will account for 70% of future GDP growth compared with its present share of worldwide GDP of 40%. If and when that shift occurs, J.P. Morgan will be prepared to serve the next generation of multinationals and to foster their development through the financing capabilities that we are uniquely able to offer.

We will continue to build new products and make it easier for clients to work with us, from onboarding to day-to-day trading and through the simplification of our processes. We have great assets, and no other bank is better positioned to deliver them to the global corporations of today or the ones sure to come into being in the next decades. But whether they're long-established multinationals or startups looking to gain their own foothold in the global markets, we will never forget that they are at the center of what we do.



Daniel Pinto
CEO, Corporate & Investment Bank

2016 HIGHLIGHTS AND ACCOMPLISHMENTS

- The CIB had record earnings of $10.8 billion on $35.2 billion of revenue, producing an ROE of 16% on a capital base of $64 billion.
- We retained our #1 ranking in global Investment Banking fees with an 8.1% market share, according to Dealogic.
- The CIB had $19 billion of expenses, down $2.8 billion since 2014.
- The CIB continued investing to embrace technology in order to offer clients a broader array of trading platforms in which to transact with J.P. Morgan.
- The CIB's leadership and role as a trusted partner to our clients helped drive the firm's total merger and acquisition share to 8.6%, up from 6.4% in 2012, a gain of more than 200 basis points.
- In our Markets business, despite a significantly smaller industry revenue pool compared with 2010, the CIB's Fixed Income market share rose to 12.0% in 2016, up from 8.6% during the same time frame.
- The Treasury Services business supports approximately 80% of the global Fortune 500, including the world's top 25 banks, and handles $5 trillion in payments per day.
- Custody & Fund Services has more than $20 trillion in assets under custody; during the past year, it increased business with existing clients by 10%.

Commercial Banking



Doug Petno

Across our company, our clients are at the center of everything we do. In 2016, this meant supporting our energy clients as they weathered one of the worst sector downturns in 30 years. With oil prices down almost 75%, the industry has felt tremendous stress. During this time, we stood by our clients and have provided meaningful advice and much-needed capital. As many banks stepped away, we continued to demonstrate leadership in the industry, adding over 30 clients to our energy portfolio and extending more than $1 billion in new loan commitments last year.

It was our disciplined client selection and deep sector expertise that gave us the confidence and resolve to provide unwavering support during this significant downturn. I'm incredibly proud of our entire energy team for their relentless focus, leadership and hard work. We believe it is this enduring client commitment and our long-term view that set us apart in the industry.

2016 was a terrific year for Commercial Banking (CB) in so many ways, and our performance highlighted the strength and potential of our franchise. I'm excited to share our 2016 results, the investments we are making and our expectations for the future.

2016 performance

For the year, Commercial Banking delivered strong financial results, with record revenue of $7.5 billion, $2.7 billion of net income and a return on equity of 16%. Notably, we absorbed incrementally higher capital and substantial investments in our platform and capabilities while maintaining strong returns and operating efficiency in the business.

Our partnership with the Corporate & Investment Bank (CIB) continues to thrive and is a key differentiator for our business. Being able to provide strategic insights and leading capital markets and advisory capabilities distinguishes us from every other commercial bank. In 2016, we delivered record gross investment banking revenue of $2.3 billion, up 5% from the prior year. This outstanding partnership accounted for 40% of the firm's North American investment banking fees, and we believe there is tremendous opportunity to grow.

Loan growth across our business was also outstanding, ending the year with record loan balances of $189 billion, up $21 billion from the prior year. Loans in our Commercial & Industrial franchise reached a new record, up 9% from the prior year, and loans in our Commercial Real Estate businesses completed another fantastic year, with record originations of $37 billion.

Staying true to our proven underwriting standards, we have remained highly selective in growing our loan portfolio. Despite pressures in the energy and commodities sectors, 2016 marked the fifth straight year of net charge-offs of less than 10 basis points. As we begin 2017, credit fundamentals across CB are quite strong, but we remain disciplined and focused. We are monitoring all new activity carefully and know that this will serve us well over time.

What's not in our financial results also tells a great story. We have made significant investments to build a fortress risk and compliance framework for our business. Moreover, we have executed a significant portion of our regulatory and control priorities and are committed to set the standard in the industry. This progress has allowed us to focus on improving our processes to deliver a better client experience. It is an ongoing priority, and we will continue to invest in safeguarding our clients and our business.

Investing in our franchise to better serve our clients

As strong as our business is, we are certainly not standing still. We are executing a multi-year transformation across CB, with a clear focus on bringing greater value to our clients.

Last year, we invested more than we ever have on technology, data and our key product capabilities. Looking forward, we will direct even more resources in 2017 to enhance our wholesale payments platforms, build upon our market-leading digital capabilities, use data to better manage risks, and drive improvements across critical processes like credit delivery and client onboarding. This is an effort with no finish line – through continuous innovation, we will seek better ways to serve our clients and extend our competitive advantages.

Improving the client experience through enhanced digital delivery

Given the rapidly increasing consumer and wholesale client expectations, we are focused on leading the industry in our digital and mobile capabilities. Our mission is to deliver greater speed, convenience, simplification, transparency and mobile access. We are working hand in hand with our partners in Consumer & Community Banking (CCB) and CIB to leverage their experience and technology investment in this area.

In 2016, we joined CCB to launch a new digital platform that is specifically tailored to meet the needs of small and midsized companies. It works across desktops, tablets and mobile devices to provide an integrated experience across all of our products and services. We are excited that this new platform will help us bring innovative functionality to our clients.

Expanding our footprint to reach more clients

Expanding our client base and building deeper client relationships remain top priorities for CB. During 2016, we made significant progress in executing our long-term growth strategy – opening offices in eight new markets and hiring over 100 bankers across our business. These long-term investments are bringing us much closer to our clients. We made 20,000 more client calls last year than we did in 2015, and this focus will continue to drive opportunity for us in the coming years.

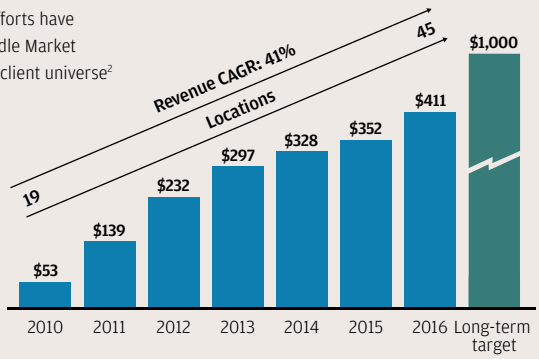
Our Middle Market business in California is a great example of the progress we've made so far and the tremendous potential we see in our expansion markets. It's an extremely exciting market for us as it represents the sixth largest global economy. Our team entered California following the Washington Mutual acquisition in 2008, and we now have 13 offices across the state. We are delighted with our progress as we have added more than 450 clients, and we are growing with discipline, maintaining fantastic credit performance with essentially zero net charge-offs.

Since 2010, our Middle Market team has opened 45 offices in major markets, including Los Angeles, San

Total Expansion Market Revenue[1]

$ in millions

Expansion efforts have doubled Middle Market addressable client universe[2]

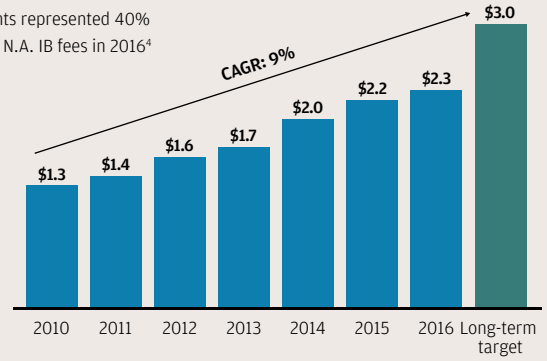


	2010	2011	2012	2013	2014	2015	2016	2010–2016 CAGR
Clients (#)	820	1,100	1,360	1,470	1,670	1,970	2,220	18%
Loans EOP ($B)	$1.6	$4.4	$6.8	$8.2	$8.8	$10.7	$12.6	41%
Deposits ($B)	$1.3	$3.0	$4.7	$6.0	$7.8	$8.2	$8.2	36%

Commercial Banking Gross Investment Banking Revenue[3]

$ in billions

CB clients represented 40% of CIB's N.A. IB fees in 2016[4]



[1] Prior years' financials have been revised to conform to current presentation

[2] Analysis based on Dun & Bradstreet data for companies headquartered in Metropolitan Statistical Areas with revenue between $20 million and $500 million; excludes high-risk industries and industries not aligned to Middle Market

[3] Represents total firm revenue from investment banking products provided to CB clients

[4] Does not include fees from Fixed Income and Equity Markets products, which are included in Commercial Banking gross investment banking revenue

CAGR = Compound annual growth rate EOP = End of period N.A. IB = North America Investment Banking

Francisco, Boston, Miami and Washington, D.C. We are in 48 of the top 50 markets in the U.S., and by the end of 2017, we will be in all 50. Through these efforts, we have organically built a nice-sized bank with over 2,200 clients, $13 billion of loans and $8 billion of deposits. Our Middle Market expansion strategy is a significant growth opportunity – one in which we believe will reach $1 billion in revenue over time.

Our opportunity

As we look forward, our strategic priorities are clear. We are going to continue to drive innovation and strengthen our business processes to improve the client experience, operate with fortress principles and have the best team in all of our markets to serve our clients. We remain committed to growing with discipline and will continue to take a long-term view with our business and our clients, investing for their success and ours.

With these priorities guiding us, I'm excited by the future and the potential of our business. We see enormous opportunity across our franchise as the investments we have made over the last several years have set a solid foundation. Expanding our footprint and adding new bankers puts us in front of a tremendous number of potential clients. Moreover, the enhancements we are making in our platform and capabilities give us confidence in our ability to compete and add differential value to our clients.

Our success depends completely on our people. They are knowledgeable, dedicated and deeply embedded in the communities they serve. I'm excited by the enthusiasm they show every day and am proud to work with such an incredible team. As always, we are optimistic about the U.S. economy and our clients' role in driving growth and opportunity for CB. If we stay true to our proven strategy, we believe this team will continue to deliver strong results for our shareholders.



Douglas Petno
CEO, Commercial Banking

2016 HIGHLIGHTS AND ACCOMPLISHMENTS

Performance highlights

- Delivered record revenue of $7.5 billion
- Grew end-of-period loans 13%; 26 consecutive quarters of loan growth
- Generated return on equity of 16% on $16 billion of allocated capital
- Continued superior credit quality – net charge-off ratio of 0.09%

Leadership positions

- #1 U.S. multifamily lender[1]
- #1 in Perceived Customer Satisfaction, *CFO* magazine's Commercial Banking Survey, 2016
- Top 3 in Overall Middle Market, Large Middle Market and Asset Based Lending Bookrunner[2]
- Winner of Greenwich Associates' Best Brand Awards in Middle Market Banking – overall, loans or lines of credit, cash management, trade finance and investment banking, 2016
- Recognized in 2016 by Greenwich Associates as #1 cash management overall satisfaction and #1 cash management market penetration in the $20 million-$500 million footprint

Business segment highlights

- Middle Market Banking – Added more than 700 new clients
- Corporate Client Banking – Record gross investment banking revenue[3]
- Commercial Term Lending – Record originations of more than $20 billion
- Real Estate Banking – Completed its best year ever with record originations over $10 billion
- Community Development Banking – Originated over $1 billion in new construction commitments, financing more than 10,000 units of affordable housing in 90+ cities

Firmwide contribution

- Commercial Banking clients accounted for 40% of total North American investment banking fees[4]
- Over $130 billion in assets under management from Commercial Banking clients, generating more than $460 million in Investment Management revenue
- $475 million in Card Services revenue[3]
- $2.8 billion in Treasury Services revenue

Progress in key growth areas

- Middle Market expansion – Record revenue of $411 million; 24% CAGR since 2011
- Investment banking – Record gross revenue of $2.3 billion; 10% CAGR since 2011
- International Banking – Revenue[5] of $285 million; 8% CAGR since 2011

[1] SNL Financial based on Federal Deposit Insurance Corporation data as of 12/31/16
[2] Thomson Reuters as of year-end 2016
[3] Investment banking and Card Services revenue represents gross revenue generated by CB clients
[4] Calculated based on gross domestic investment banking revenue for syndicated and leveraged finance, M&A, equity underwriting and bond underwriting
[5] Overseas revenue from U.S. multinational clients

CAGR = Compound annual growth rate

Asset & Wealth Management



Mary Callahan Erdoes

The major geopolitical events of 2016, namely the U.S. presidential election and Brexit, surprised many as the outcome of these two major votes had been deemed improbable. As such, market reactions were volatile and unsettling to many.

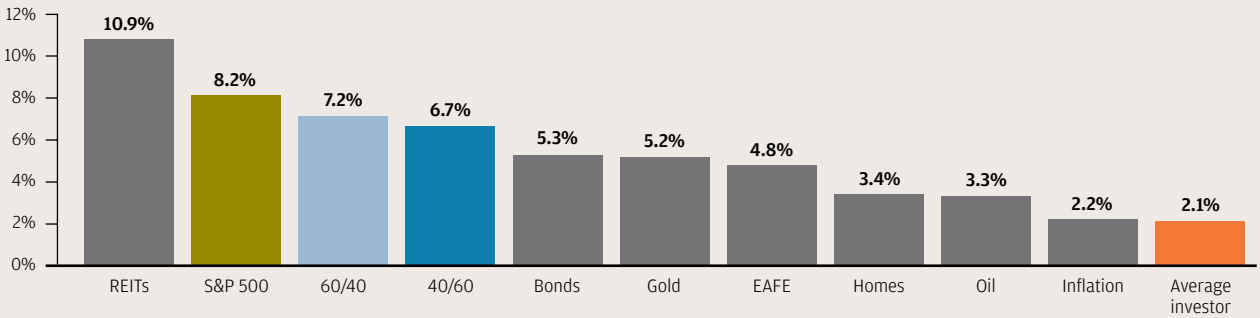
The emotional response to such events often makes it difficult to objectively reassess and position portfolios. For 180 years – through countless political challenges and conflicts – J.P. Morgan Asset & Wealth Management (AWM) has brought its fiduciary mindset to help clients navigate portfolios. Over these many decades, we have institutionalized our insights and passed on the cumulative wisdom and knowledge of those before us to incoming generations.

Perhaps the two most important investment lessons passed on through these centuries are around long-term focus and diversification. Diversification across and within asset classes helps clients avoid overexposure to a particular region or asset class, protecting their portfolios from significant drawdowns and enabling them to be nimble and take advantage of market opportunities when they arise. When investors make emotional decisions related to current events, the benefits of long-term investing and properly diversified portfolios can be eroded.

Instead of focusing on proper long-term, diversified investment portfolios, today's debate is centered more on how to invest. Questions relating to "active vs. passive" investing and "humans vs. computers" have taken over the headlines.

We believe proper portfolio construction should include both active and passive strategies, depending on a client's time horizon and risk profile. We also believe advisors and technology need to work together. Clients want to choose how, when and from where they interact with us – whether it's through online platforms, on the phone or face to face. The person-to-person interaction becomes even more important as our clients' lives grow more complex and they require more comprehensive advice.

20-Year Annualized Returns by Asset Class (1996–2015)



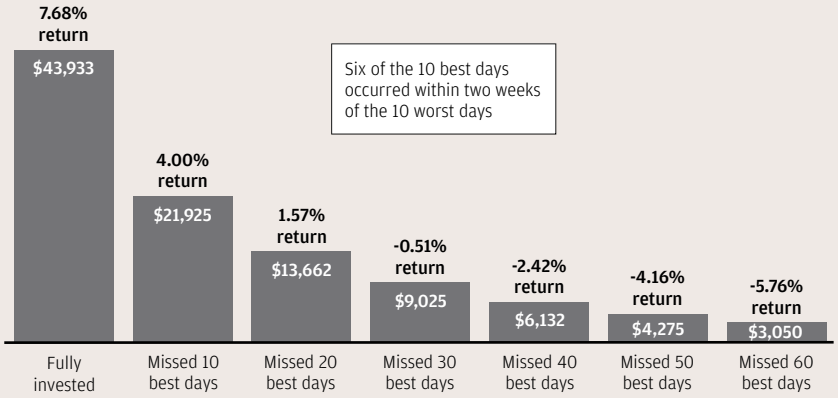
Source: J.P. Morgan Asset Management; Dalbar Inc.

Indexes used are as follows: REITs: NAREIT Equity REIT Index; EAFE: MSCI EAFE; Oil: WTI Index; Bonds: Barclays U.S. Aggregate Index; Homes: median sale price of existing single-family homes; Gold: USD/troy oz; Inflation: CPI; 60/40: A balanced portfolio with 60% invested in S&P 500 Index and 40% invested in high-quality U.S. fixed income, represented by the Barclays U.S. Aggregate Index. The portfolio is rebalanced annually. Average asset allocation investor return is based on an analysis by Dalbar Inc., which utilizes the net of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior. Returns are annualized (and total return where applicable) and represent the 20-year period ending 12/31/15 to match Dalbar's most recent analysis.

Source: "Guide to the Markets" – U.S. data are as of December 31, 2016

Returns of S&P 500

Performance of a $10,000 investment between January 2, 1997 and December 31, 2016



Source: Prepared by J.P. Morgan Asset Management using data from Morningstar Direct. Returns based on the S&P 500 Total Return Index. For illustrative purposes only. Past performance is not indicative of future returns

As stewards of our clients' wealth, our mission at J.P. Morgan is to help clients of all types get, and stay, properly invested. Our clients span the entire spectrum – from retail investors working with our Chase branch network, to wealthy individuals or families working with our Private Bank, to sophisticated institutional investors working with our Asset Management business.

We have direct relationships with 60% of the world's largest pension funds, sovereign wealth funds and central banks and 50% of the world's wealthiest individuals and families. We also deliver our insights and advice to more than 1 million U.S. families through Chase Wealth Management.

These clients can choose to work with any firm they wish. They turn to J.P. Morgan because they know we will be there for them when they need us most and that we will always put their interests first.

World-class investment performance

While trust is the primary reason clients choose J.P. Morgan, our superior investment performance is also critically important to the compounding of clients' wealth. In 2016, 83% of our 10-year, long-term mutual fund assets under management (AUM) ranked in the top two quartiles.

Our market-leading performance spans asset classes – 90% of assets for multi-asset solutions and alternatives, 84% for equity and 77% for fixed income ranked in the top two quartiles over the 10-year period. This outstanding track record has resulted in 140 of our equity strategies and 41 of our fixed income strategies receiving a four- or five-star ranking from Morningstar.

This consistent performance also has led to clients entrusting J.P. Morgan with more of their assets. Over the past five years, we ranked #2 in total inflows among our large public peers, with an average of $82 billion annually and $408 billion cumulatively.

A diverse and balanced business mix driving strong financial performance

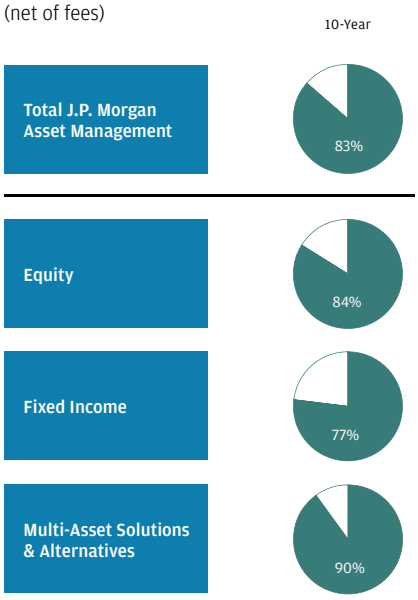
Much like the portfolios we manage, our business is diversified across asset classes, regions and client types. That diversity, coupled with our proven track record, has led to strong financial performance for AWM.

In 2016, we delivered $12 billion in revenue and record pre-tax income of $3.5 billion. We also reached a record $2.5 trillion in total client assets. These numbers have consistently grown over the past five years, with a 5% compound annual growth rate (CAGR) for revenue and client assets and a 7% rate for pre-tax income.

In addition, clients are increasingly using us for their primary banking services. Wealth Management deposits grew to $290 billion in 2016 and recorded an impressive 19% CAGR over the past decade. In credit, our $121 billion in loan balances, including mortgages, represent a 15% CAGR over the past 10 years. Our focus on strong risk management has helped us do that while maintaining charge-off rates that are among the lowest in the industry.

% of 2016 J.P. Morgan Asset Management AUM Over Peer Median[1]

(net of fees)



[1] For footnoted information, refer to slide 17 in the 2017 Asset & Wealth Management Investor Day presentation, which is available on JPMorgan Chase & Co.'s website at jpmorganchase.com/corporate/investor-relations/event-calendar.htm, under the heading JPMorgan Chase 2017 Investor Day, Asset & Wealth Management, and on Form 8-K as furnished to the SEC on February 28, 2017, which is available on the SEC's website at www.sec.gov

Never stop investing in people and technology

We work hard to make J.P. Morgan a place where our people can have long and successful careers. We have a history of investing in our people at every level, from the thousands of training sessions and leadership development courses to our continuous work on talent mobility.

Over the past five years, we've increased our front-office spend by 14% to ensure we have the right people with the right skills in the right roles. As a result of this commitment to developing our talent, we proudly maintained a top talent retention rate of over 95%.

One of the best ways we can invest in our people is by also investing in our technology. Our emphasis is on having a technology platform that allows us to automate and improve processes while, at the same time, helps our advisors to serve clients more quickly and efficiently, as well as focus on the value-added client work.

We have successfully reduced our legacy technology footprint and error rates and significantly increased our spend on forward-looking initiatives. These efforts include building out an enhanced digital wealth management platform that will launch later this year and introducing new client management systems for our advisors.

Asset & Wealth Management – difficult to replicate

One of the keys to our success has been our ability to bring to the table a unique combination of a two-century heritage and a focus on continuous investment, innovation and improvement. That means clients can have confidence that we will be there for them over the long term and also know that we have the foresight to adapt and innovate to help them through whatever the future brings.

The long-term focus of this business is part of what makes AWM so difficult to replicate. A franchise with a 10-year investment performance track record, a 50-year relationship with a state pension fund and a 100-year relationship with a multi-generational family cannot be built overnight. The culture of our firm – both what we do and how we do it – is equally special and one of our greatest competitive advantages.

When you combine our AWM capabilities with the world's leading investment, consumer and commercial banks, our story is even more powerful and enables us to bring the best the firm has to offer to help solve our clients' most important issues.

I am so proud to be part of this great firm and our AWM business. Our commitment to you, our shareholders, is that we will continue to do first-class business in a first-class way so that we can create even more value for you and for our clients.



Mary Callahan Erdoes
CEO, Asset & Wealth Management

2016 HIGHLIGHTS AND ACCOMPLISHMENTS

Business highlights

- Fiduciary mindset ingrained since mid-1800s
- Positive client asset flows every year since 2004
- Revenue of $12 billion
- Record $2.5 trillion in client assets
- Record pre-tax income of $3.5 billion
- Record average loan balances of $113 billion
- Record average mortgage balances of $29 billion
- Retention rate of over 95% for top senior portfolio management talent

Leadership positions

- #1 Global Asset Management (*Euromoney*, February 2017)
- #1 Institutional Money Market Fund Manager Worldwide (iMoneyNet, December 2016)
- #1 Private Bank Overall in North America (*Euromoney*, February 2017)
- #1 Private Bank Overall in Latin America (*Euromoney*, February 2017)
- Best Asset Management Company for Asia (*The Asset*, May 2016)
- Best Infrastructure Manager of the Year (*Institutional Investor*, May 2016)
- Top Pan-European Fund Management Firm (Thomson Reuters Extel, June 2016)
- Best Large-Cap Core Equity Manager of the Year (*Institutional Investor*, May 2016)
- #3 Hedge Fund Manager (*Absolute Return*, September 2016)

Corporate Responsibility



Peter Scher

At JPMorgan Chase, we understand that the success of our firm is directly linked to the success of our communities. For us, corporate responsibility is a strategic imperative. By giving more people the opportunity to share in the rewards of a growing economy, we help build the foundation for more prosperous communities – and, in the process, help secure our firm's long-term future.

The importance of corporate responsibility is reflected in its integration throughout our operations. Our long-term initiatives and programs – backed by significant human and financial capital and informed by our firm's expertise – are among the most externally visible indicators of the seriousness of our intent. So, too, are the ways in which we actively leverage our core business in service to our communities, deploying the capital and the credit that fuel economic growth.

Bolstering these investments is the tremendous dedication of our people to serve our communities, including the hundreds of employees who applied to the JPMorgan Chase Service Corps, our highly selective program that embeds top-performing employees with many of our nonprofit partners. That so many of our people eagerly throw their hats in the ring to leave their jobs, families and, in some cases, their countries for three weeks to lend their skills to our communities speaks volumes about who we are as a firm.

Underpinning this ethos is a conviction that firms like ours have not only a responsibility and a vested interest in helping solve the challenges facing our communities but also a vital contribution to make. The private sector's capabilities, ingenuity and assets have time and again demonstrated their capacity to drive transformative change.

JPMorgan Chase has answered this call by reimagining our approach to corporate responsibility. Based on our experience around the world, we have developed and refined a model that is informed by data and based on evidence about what's most effective at driving inclusive growth. Our conclusion: Arm people with the skills needed for today's high-quality jobs; provide small businesses – particularly minority-owned and community-based ones – with capital and resources; invest in community development that revitalizes not only urban cores but also surrounding neighborhoods; and give households the tools and resources to manage their financial health. Taken together, these are four fundamental pillars of opportunity – and the focus of our efforts.

Our model also reflects what we have learned are the essential ingredients for creating lasting impact. Critically, it must include a deliberate focus on strengthening the underlying organizations and systems that are needed to empower communities to deliver on – and sustain – change. Equally, it depends on forging meaningful partnerships across the public, private and nonprofit sectors – and then actively leveraging our unique capabilities.

Of course, every company has different assets and experiences to contribute – from Google's initiatives that harness its employees' passion for technology to give back to their communities to IBM's pioneering skilled volunteerism program that demonstrates what can be achieved when firms lend their people's expertise. Regardless of what we bring to the table, all of us can – and must – embrace the obligation to be a positive force for progress and opportunity in our communities.



Peter Scher
Head of Corporate Responsibility
and Chairman of the
Greater Washington Region

A MODEL FOR IMPACT

Driving inclusive growth

More people must have access to opportunity and the chance to move up the economic ladder, particularly in the world's cities, where the benefits of revitalization are not reaching everyone. To achieve this mission, we have reimagined our approach to corporate responsibility. We are leveraging our firm's data, global scale, talent and resources to invest in key drivers of inclusive growth: financial health, jobs and skills, neighborhood revitalization and small business expansion.

We continually test, learn and iterate in order to create more widely shared prosperity and to strengthen the underlying systems needed to deliver sustainable change.

A MODEL IN ACTION

Jobs and skills

Helping people get the skills they need to compete in today's labor market is critical for expanding access to opportunity and promoting economic mobility. Yet even as the global economy improves, people around the world are being left behind.

To help address this challenge, JPMorgan Chase is investing $325 million over five years to provide adults and young people around the world with critical support, education and training to build in-demand skills while providing employers with the workforce they need to grow and compete in today's economy. As part of these efforts, JPMorgan Chase launched New Skills for Youth in 2016, a $75 million global initiative to expand high-quality, career-focused education programs that lead to well-paying jobs and long-term careers.

New Skills for Youth is expanding opportunity for young people through two approaches: a multimillion dollar competition, in collaboration with the Council of Chief State School Officers, which seeks to incentivize U.S. states to grow and strengthen their career and technical education systems; and, through global innovation sites, the development of career-focused education programs in cities and school districts around the world.



Communities engaged in 2016:

- Forty-three states and the District of Columbia submitted proposals to participate in the first phase of the competitive program. Of these 44 submissions, we selected 24 states and the District of Columbia and then committed a total of $2.5 million to help them plan and implement long-term career-readiness programs. These states represent half of all K-12 enrollments in the U.S.
- In the second phase of the program in January 2017, we selected 10 states and committed a total of $20 million to help them execute the career-readiness plans they developed during phase one of the initiative. Through ongoing engagement by JPMorgan Chase, these 10 states will have the opportunity to collaborate and learn from each other, receive targeted technical assistance to address their specific challenges, and access lessons, best practices and other research drawn from the initiative.
- Additionally, we have committed a total of $10.5 million to Denver, Detroit and New Orleans to develop and expand innovative apprenticeship models and career-focused programs that equip high school students with the skills and education they need to pursue well-paying, long-term careers.

Neighborhood revitalization

Our community development efforts focus on creating vibrant communities and neighborhoods that offer residents access to opportunity through partnerships, innovative financing and data to address the key drivers of inequality.

Launched in 2016, PRO Neighborhoods, our $125 million, five-year initiative, seeks to identify and support solutions for creating economic opportunity in disadvantaged neighborhoods around the country. PRO Neighborhoods promotes collaboration across sectors and community-based innovators to ensure that economic growth does not stop at commercial corridors but extends into a city's neighborhoods.

This initiative focuses on three key areas: convening and supporting Community Development Financial Institution (CDFI) collaboratives to work together to address specific community development challenges; providing seed capital that enables partners to develop and preserve affordable housing; and funding research on land use, housing trends and shifting demographics to identify data-driven neighborhood solutions.

In October 2016, JPMorgan Chase announced $20 million for five community development organizations working to create economic opportunity in five U.S. cities: Atlanta, Chicago, Detroit, Miami and New York.

Small business expansion

Small businesses are vital engines of job growth and economic stability in the neighborhoods they serve.

They also have the potential to play a major role in lowering unemployment rates in distressed neighborhoods. Yet many low- and moderate-income small businesses lack access to vital resources needed for success.



Through our efforts in Detroit, we have learned that supporting underserved entrepreneurs is essential to the city's transformation. These insights led us to refine and sharpen our focus on helping underserved entrepreneurs connect with capital to drive sustainable, widespread and inclusive growth.

In October 2016, JPMorgan Chase more than doubled the size of the global Small Business Forward program, committing $75 million over the next three years to connect underserved small businesses with capital, targeted technical assistance and support networks to help them grow faster, create jobs and strengthen local economies.

As part of these efforts, JPMorgan Chase partnered with LiftFund and committed $4.6 million to support the launch of LiftUP, a new web-based small business lending program to increase access to capital for underserved minority- and women-owned small businesses in the southern U.S. LiftUP will provide small businesses faster access to affordable small business loans, reducing lending approval time from an average of five weeks to four days.

Additionally, JPMorgan Chase partnered with the Association for Enterprise Opportunity and committed $1.9 million to support the advancement of a new technology-enabled platform that will serve as an industry utility connecting small businesses with CDFI lenders when the owners are unable to qualify for traditional loans.

Data and analysis

Almost two years ago, we established the JPMorgan Chase Institute: a global economic think tank dedicated to delivering data-rich analyses for the public good. The Institute utilizes our proprietary data, augmented by firmwide expertise and market access, to provide insights on the global economy and offer innovative analyses to advance economic prosperity.

In 2016, the Institute uncovered fresh insights on:

- Household income volatility, particularly in the wake of extraordinary payments;
- The impact of the online platform economy as a way for consumers to manage this volatility and the slowing participation growth within the online platform economy;
- Consumers' response to the sustained drop in the price of fuel;
- Small business cash flow and cash reserves ("cash buffer days") they have on hand to weather financial volatility;
- The economic impact of Daylight Savings Time;
- The role of unemployment insurance and the financial decisions households make after receiving it;
- Nearly a full year of the Local Consumer Commerce Index, measuring consumer spending growth in 15 U.S. cities and in aggregate.

2016 HIGHLIGHTS AND ACCOMPLISHMENTS

JPMorgan Chase received *Euromoney*'s 2016 **World's Best Bank for Corporate Social Responsibility** award for our commitment and innovative approach to addressing economic opportunity around the world.

- JPMorgan Chase's $100 million commitment to Detroit announced in 2014, half of which we are investing in two CDFIs – to fund and catalyze further investment in housing, commercial and manufacturing – has supported more than $270 million in such projects, created or preserved over 800 units of housing and created nearly 800 jobs.
- Announced nine financial services innovators as winners of the second competition of the Financial Solutions Lab aimed at identifying solutions that help consumers prepare for, and weather, financial shocks. Each winner received $250,000 in capital to enhance and scale the availability of their products and services. More than 70 of our employees leveraged their expertise and networks to help the Lab winners improve their products and increase their reach. To date, the Financial Solutions Lab has supported 18 fintech companies offering innovative financial products to help more than 1 million Americans improve their financial health.
- Engaged over 1,800 young people in summer jobs and other work-related experiences in 21 cities across the U.S.
- Underwrote more than $5 billion in green, social and sustainability themed bonds and facilitated over $1.9 billion of capital for renewable energy projects in the U.S.
- Committed to strengthening apprenticeship systems around the world through a $9 million investment by supporting the development of innovative apprenticeship models in high-growth fields; expanding existing high-quality programs to serve young people from disadvantaged backgrounds; and bolstering the case for private investment in apprenticeship through first-of-its-kind research measuring the employer return on investment for apprenticeship programs.
- The talent and expertise of our people are key components of our model for impact and are central to all of our efforts. In 2016, 50,000 of our employees volunteered more than 325,000 hours of their time. And through the JPMorgan Chase Service Corps, 64 employees applied their skills and expertise to help our nonprofit partners expand their capacity, contributing more than 9,600 hours with an approximate market value of $1.4 million.



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Note:

The following pages from JPMorgan Chase & Co.'s 2016 Form 10-K are not included herein: 1-32, 286-298

FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

(unaudited) As of or for the year ended December 31, (in millions, except per share, ratio, headcount data and where otherwise noted)	2016	2015	2014	2013	2012
Selected income statement data					
Total net revenue	**$ 95,668**	$ 93,543	$ 95,112	$ 97,367	$ 97,680
Total noninterest expense	**55,771**	59,014	61,274	70,467	64,729
Pre-provision profit	**39,897**	34,529	33,838	26,900	32,951
Provision for credit losses	**5,361**	3,827	3,139	225	3,385
Income before income tax expense	**34,536**	30,702	30,699	26,675	29,566
Income tax expense	**9,803**	6,260	8,954	8,789	8,307
Net income	**$ 24,733**	$ 24,442	$ 21,745	$ 17,886	$ 21,259
Earnings per share data					
Net income: Basic	**$ 6.24**	$ 6.05	$ 5.33	$ 4.38	$ 5.21
Diluted	**6.19**	6.00	5.29	4.34	5.19
Average shares: Basic	**3,618.5**	3,700.4	3,763.5	3,782.4	3,809.4
Diluted	**3,649.8**	3,732.8	3,797.5	3,814.9	3,822.2
Market and per common share data					
Market capitalization	**$ 307,295**	$ 241,899	$ 232,472	$ 219,657	$ 167,260
Common shares at period-end	**3,561.2**	3,663.5	3,714.8	3,756.1	3,804.0
Share price:[a]					
High	**$ 87.39**	$ 70.61	$ 63.49	$ 58.55	$ 46.49
Low	**52.50**	50.07	52.97	44.20	30.83
Close	**86.29**	66.03	62.58	58.48	43.97
Book value per share	**64.06**	60.46	56.98	53.17	51.19
Tangible book value per share ("TBVPS")[b]	**51.44**	48.13	44.60	40.72	38.68
Cash dividends declared per share	**1.88**	1.72	1.58	1.44	1.20
Selected ratios and metrics					
Return on common equity ("ROE")	**10%**	11%	10%	9%	11%
Return on tangible common equity ("ROTCE")[b]	**13**	13	13	11	15
Return on assets ("ROA")	**1.00**	0.99	0.89	0.75	0.94
Overhead ratio	**58**	63	64	72	66
Loans-to-deposits ratio	**65**	65	56	57	61
High quality liquid assets ("HQLA") (in billions)[c]	**$ 524**	$ 496	$ 600	$ 522	$ 341
Common equity tier 1 ("CET1") capital ratio[d]	**12.4%**	11.8%	10.2%	10.7%	11.0%
Tier 1 capital ratio[d]	**14.1**	13.5	11.6	11.9	12.6
Total capital ratio[d]	**15.5**	15.1	13.1	14.3	15.2
Tier 1 leverage ratio[d]	**8.4**	8.5	7.6	7.1	7.1
Selected balance sheet data (period-end)					
Trading assets	**$ 372,130**	$ 343,839	$ 398,988	$ 374,664	$ 450,028
Securities	**289,059**	290,827	348,004	354,003	371,152
Loans	**894,765**	837,299	757,336	738,418	733,796
Core Loans	**806,152**	732,093	628,785	583,751	555,351
Average core loans	**769,385**	670,757	596,823	563,809	534,615
Total assets	**2,490,972**	2,351,698	2,572,274	2,414,879	2,358,323
Deposits	**1,375,179**	1,279,715	1,363,427	1,287,765	1,193,593
Long-term debt[e]	**295,245**	288,651	276,379	267,446	248,521
Common stockholders' equity	**228,122**	221,505	211,664	199,699	194,727
Total stockholders' equity	**254,190**	247,573	231,727	210,857	203,785
Headcount	**243,355**	234,598	241,359	251,196	258,753
Credit quality metrics					
Allowance for credit losses	**$ 14,854**	$ 14,341	$ 14,807	$ 16,969	$ 22,604
Allowance for loan losses to total retained loans	**1.55%**	1.63%	1.90%	2.25%	3.02%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[f]	**1.34**	1.37	1.55	1.80	2.43
Nonperforming assets	**$ 7,535**	$ 7,034	$ 7,967	$ 9,706	$ 11,906
Net charge-offs	**4,692**	4,086	4,759	5,802	9,063
Net charge-off rate	**0.54%**	0.52%	0.65%	0.81%	1.26%

Note: Effective January 1, 2016, the Firm adopted new accounting guidance related to (1) the recognition and measurement of debit valuation adjustments ("DVA") on financial liabilities where the fair value option has been elected, and (2) the accounting for employee stock-based incentive payments. For additional information, see Accounting and Reporting Developments on pages 135–137 and Notes 3, 4 and 25.

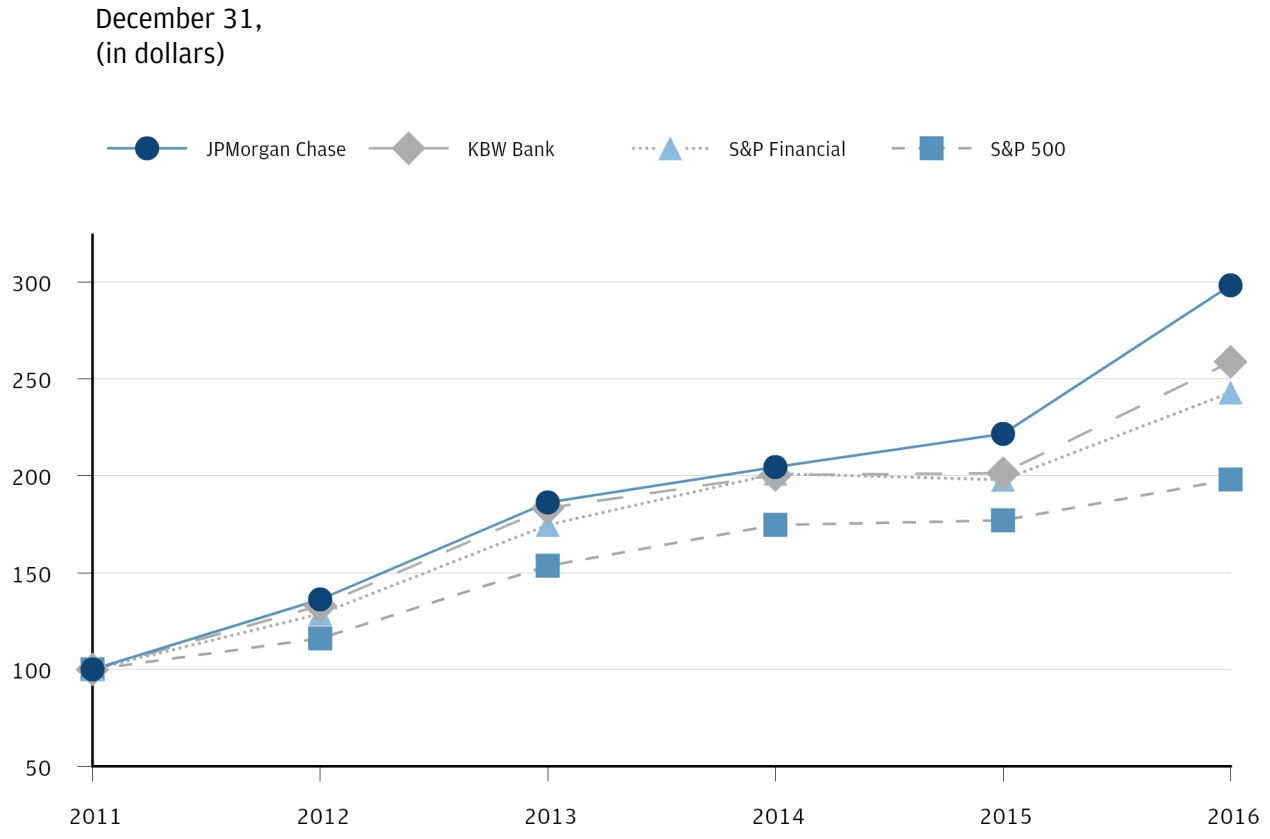
(a) Share prices are from the New York Stock Exchange.
(b) TBVPS and ROTCE are non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Financial Performance Measures on pages 48–50.
(c) HQLA represents the amount of assets that qualify for inclusion in the liquidity coverage ratio under the final U.S. rule ("U.S. LCR") for December 31, 2016 and 2015, and the Firm's estimated amount for December 31, 2014 prior to the effective date of the final rule, and under the Basel III liquidity coverage ratio ("Basel III LCR") for prior periods. For additional information, see HQLA on page 111.
(d) Ratios presented are calculated under the Basel III Transitional rules, which became effective on January 1, 2014, and for the capital ratios, represent the Collins Floor. Prior to 2014, the ratios were calculated under the Basel I rules. See Capital Risk Management on pages 76–85 for additional information on Basel III.
(e) Included unsecured long-term debt of $212.6 billion, $211.8 billion, $207.0 billion, $198.9 billion and $200.1 billion respectively, as of December 31, of each year presented.
(f) Excluded the impact of residential real estate purchased credit-impaired ("PCI") loans, a non-GAAP financial measure. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 48–50. For further discussion, see Allowance for credit losses on pages 105–107.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Index, the KBW Bank Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced United States of America ("U.S.") equity benchmark consisting of leading companies from different economic sectors. The KBW Bank Index seeks to reflect the performance of banks and thrifts that are publicly traded in the U.S. and is composed of leading national money center and regional banks and thrifts. The S&P Financial Index is an index of financial companies, all of which are components of the S&P 500. The Firm is a component of all three industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2011, in JPMorgan Chase common stock and in each of the above indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2011	2012	2013	2014	2015	**2016**
JPMorgan Chase	$ 100.00	$ 136.18	$ 186.17	$ 204.57	$ 221.68	**$ 298.31**
KBW Bank Index	100.00	133.03	183.26	200.42	201.40	**258.82**
S&P Financial Index	100.00	128.75	174.57	201.06	197.92	**242.94**
S&P 500 Index	100.00	115.99	153.55	174.55	176.95	**198.10**



This section of JPMorgan Chase's Annual Report for the year ended December 31, 2016 ("Annual Report"), provides Management's discussion and analysis of the financial condition and results of operations ("MD&A") of JPMorgan Chase. See the Glossary of Terms and Acronyms on pages 279-285 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 138) and in JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2016 ("2016 Form 10-K"), in Part I, Item 1A: Risk factors; reference is hereby made to both.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide; the Firm had $2.5 trillion in assets and $254.2 billion in stockholders' equity as of December 31, 2016. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national banking association that is the Firm's credit card-issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), the Firm's U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm's principal operating subsidiaries in the U.K. is J.P. Morgan Securities plc, a subsidiary of JPMorgan Chase Bank, N.A.

For management reporting purposes, the Firm's activities are organized into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business is the Consumer & Community Banking ("CCB") segment. The Firm's wholesale business segments are Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset & Wealth Management ("AWM") (formerly Asset Management or "AM"). For a description of the Firm's business segments, and the products and services they provide to their respective client bases, refer to Business Segment Results on pages 51–70, and Note 33.

This executive overview of the MD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	2016	2015	Change
Selected income statement data			
Total net revenue	**$ 95,668**	$ 93,543	2%
Total noninterest expense	**55,771**	59,014	(5)
Pre-provision profit	**39,897**	34,529	16
Provision for credit losses	**5,361**	3,827	40
Net income	**24,733**	24,442	1
Diluted earnings per share	**6.19**	6.00	3
Selected ratios and metrics			
Return on common equity	**10%**	11%	
Return on tangible common equity	**13**	13	
Book value per share	**$ 64.06**	$ 60.46	6
Tangible book value per share	**51.44**	48.13	7
Capital ratios[(a)]			
CET1	**12.4%**	11.8%	
Tier 1 capital	**14.1**	13.5	
Total capital	**15.5**	15.1	

(a) Ratios presented are calculated under the Basel III Transitional rules and represent the Collins Floor. See Capital Risk Management on pages 76–85 for additional information on Basel III.

Summary of 2016 results

JPMorgan Chase reported strong results for full year 2016 with net income of $24.7 billion, or $6.19 per share, on net revenue of $95.7 billion. The Firm reported ROE of 10% and ROTCE of 13%.

Net income increased 1% compared with the prior year driven by lower noninterest expense and higher net revenue, predominantly offset by higher income tax expense and provision for credit losses.

Total net revenue increased by 2% primarily reflecting higher net interest income across all the Firm's business segments and higher Markets noninterest revenue in CIB, partially offset by lower card income in CCB and lower asset management fees in AWM.

Noninterest expense was $55.8 billion, down 5% compared with the prior year, driven by lower legal expense.

The provision for credit losses was $5.4 billion, an increase of $1.5 billion, reflecting an increase in the total consumer provision related to additions in the allowance for loan losses and higher net charge-offs in the credit card portfolio, and a lower benefit in the residential real estate portfolio driven by a lower reduction in the allowance for loan losses compared with the prior year. The wholesale provision had a modest increase, largely driven by the impact of downgrades in the Oil & Gas and Natural Gas Pipelines portfolios.

The total allowance for credit losses was $14.9 billion at December 31, 2016, and the Firm had a loan loss coverage ratio, excluding the PCI portfolio, of 1.34%, compared with 1.37% in the prior year. The Firm's nonperforming assets totaled $7.5 billion, an increase from the prior-year level of $7.0 billion.

Firmwide average core loans increased 15% compared with the prior year.

Within CCB, average core loans increased 20% from the prior year. CCB had record growth in average deposits, with a 10% increase from the prior year. Credit card sales volume increased 10%, and merchant processing volume increased 12%, from the prior year. CCB had nearly 27 million active mobile customers at year-end 2016, an increase of 16% from the prior year.

CIB maintained its #1 ranking for Global Investment Banking fees with a 8.1% wallet share for the full-year ended December 31, 2016. Within CB, record average loans increased 14% from the prior year as loans in the commercial and industrial client segment increased 9% and loans in the wholesale commercial real estate client segment increased 18%. AWM had record average loans, an increase of 5% over the prior year, and 79% of AWM's mutual fund assets under management ranked in the 1st or 2nd quartiles over the past 5 years.

For a detailed discussion of results by line of business ("LOB"), refer to the Business Segment Results on pages 51–52.

The Firm added to its capital, ending the full-year of 2016 with a TBVPS of $51.44, up 7% over the prior year. The Firm's estimated Basel III Advanced Fully Phased-In CET1 capital and ratio were $182 billion and 12.2%, respectively. The Fully Phased-In supplementary leverage ratio ("SLR") for the Firm and for JPMorgan Chase Bank, N.A. was 6.5% and 6.6%, respectively, at December 31, 2016. The Firm also was compliant with the Fully Phased-In U.S. LCR and had $524 billion of HQLA as of December 31, 2016. For further discussion of the LCR and HQLA, see Liquidity Risk Management on pages 110–115.

ROTCE and TBVPS are non-GAAP financial measures. Core loans are considered a key performance measure. Each of the Fully Phased-In capital and leverage measures is considered a key regulatory capital measure. For a further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 48–50, and Capital Risk Management on pages 76–85.

JPMorgan Chase continues to support consumers, businesses and communities around the globe. The Firm provided credit and raised capital of $2.4 trillion for commercial and consumer clients during the full-year of 2016:

- $265 billion of credit for consumers
- $24 billion of credit for U.S. small businesses
- $772 billion of credit for corporations
- $1.2 trillion of capital raised for corporate clients and non-U.S. government entities
- $90 billion of credit and capital raised for nonprofit and U.S. government entities, including states, municipalities, hospitals and universities

On October 1, 2016, the Firm filed with the Federal Reserve and the FDIC its submission (the "2016 Resolution Submission") describing how the Firm remediated certain deficiencies, and providing a status report on its actions to address certain shortcomings, that had been identified by the Federal Reserve and the FDIC in April 2016 when those agencies provided feedback to the Firm as well as to seven other systemically important domestic banking institutions on their respective 2015 Resolution Plans.

Among the steps taken by the Firm to address the identified deficiencies and shortcomings were: (i) establishing a new subsidiary that has become an "intermediate holding company" and to which JPMorgan Chase & Co. has contributed the stock of substantially all of its direct subsidiaries (other than JPMorgan Chase Bank, N.A.), as well as other assets and intercompany indebtedness owing to JPMorgan Chase & Co.; (ii) increasing the Firm's liquidity reserves and pre-positioning significant amounts of capital and liquidity at the Firm's "material legal entities" (as defined in the 2016 Resolution Submission); (iii) refining the Firm's liquidity and capital governance frameworks, including establishing a Firmwide "trigger framework" that identifies key actions and escalations that would need to be taken, as well as decisions that would need to be made, at critical points in time if certain defined liquidity and/or capital metrics were to fall below defined thresholds; (iv) establishing clear, actionable legal entity rationalization criteria and related governance procedures; and (v) improving divestiture readiness, including determining and analyzing divestiture options in a crisis. On December 13, 2016, the Federal Reserve and the FDIC informed the Firm that they had determined that the Firm's 2016 Resolution Submission adequately remediated the identified deficiencies in the Firm's 2015 Resolution Plan. For more information, see the Federal Reserve and FDIC websites, and the Firm's website for the public portion of the 2016 Resolution Submission.

Business outlook

These current expectations are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking Statements on page 138 and the Risk Factors section on pages 8–21.

Business outlook

JPMorgan Chase's outlook for the full-year 2017 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these inter-related factors will affect the performance of the Firm and its lines of business. The Firm expects it will continue to make appropriate adjustments to its businesses and operations in response to ongoing developments in the legal and regulatory, as well as business and economic, environment in which it operates.

In the first quarter of 2017, management expects net interest income to increase modestly compared with the fourth quarter of 2016. During 2017, assuming no change in interest rates since December 31, 2016, management expects net interest income could be approximately $3 billion higher than in 2016, reflecting the Federal Reserve's rate increase in December 2016 and expected loan growth. Management expects average core loan growth of approximately 10% in 2017.

The Firm continues to experience charge-off rates at or near historically low levels, reflecting favorable credit trends across the consumer and wholesale portfolios. Management expects total net charge-offs of approximately $5 billion in 2017. In Card, management expects the portfolio average net charge-off rate to increase in 2017, but remain below 3.00%, reflecting continued loan growth and the seasoning of newer vintages, with quarterly net-charge offs reflecting normal seasonal trends.

Management believes that the consumer allowance for credit losses could increase by approximately $300 million in 2017, reflecting growth across businesses, offset by reductions in the allowance for the residential real estate portfolio. Excluding the allowance related to the Oil & Gas and Natural Gas Pipelines and Metals & Mining portfolios, management expects that the wholesale allowance for credit losses could increase modestly in 2017 reflecting growth across businesses. Continued stability in the energy sector could result in a reduction in the allowance for credit losses in future periods. As management continually looks to enhance its credit loss estimation methodologies, the outlook for the allowance for credit losses does not take into consideration any such potential refinements.

The Firm continues to take a disciplined approach to managing its expenses, while investing in growth and innovation. As a result, Firmwide adjusted expense in 2017 is expected to be approximately $58 billion (excluding Firmwide legal expense).

In CCB, management expects Mortgage noninterest revenue to decrease approximately $700 million in 2017, driven by margin compression in a smaller mortgage market and continued run-off of the Servicing portfolio, as well as approximately $200 million of MSR gains in 2016 which are not expected to recur in 2017. Management expects Card Services noninterest revenue to decrease approximately $600 million in 2017, reflecting the amortization of premiums on strong new product originations and the absence in 2017 of a gain on the sale of Visa Europe interests in 2016, although total Card Services revenue is expected to increase due to strong growth in net interest income.

In the first quarter of 2017, management expects CCB expense to increase by approximately $150 million, compared to the prior quarter.

In CIB, Investment Banking revenue in the first quarter of 2017 is expected to be approximately in line with the fourth quarter of 2016, dependent on the timing of the closing of a number of transactions. Treasury Services revenue is expected to be approximately $950 million in the first quarter of 2017. In addition, management currently expects Markets revenue in the first quarter of 2017 to increase modestly compared to the prior year quarter, with results sensitive to market conditions in March in light of particularly strong revenue in March 2016. In Securities Services, management expects revenue of approximately $900 million in the first quarter of 2017.

In CB, management expects expense of approximately $775 million in the first quarter of 2017.

In AWM, management expects revenue to be approximately $3 billion in the first quarter of 2017.

CONSOLIDATED RESULTS OF OPERATIONS

This section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2016, unless otherwise specified. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 132–134.

Revenue

Year ended December 31, (in millions)	2016	2015	2014
Investment banking fees	$ 6,448	$ 6,751	$ 6,542
Principal transactions[a]	11,566	10,408	10,531
Lending- and deposit-related fees	5,774	5,694	5,801
Asset management, administration and commissions	14,591	15,509	15,931
Securities gains	141	202	77
Mortgage fees and related income	2,491	2,513	3,563
Card income	4,779	5,924	6,020
Other income[b]	3,795	3,032	3,013
Noninterest revenue	49,585	50,033	51,478
Net interest income	46,083	43,510	43,634
Total net revenue	$ 95,668	$ 93,543	$ 95,112

(a) Effective January 1, 2016, changes in DVA on fair value option elected liabilities previously recorded in principal transactions revenue are recorded in other comprehensive income ("OCI"). For additional information, see the segment results of CIB and Accounting and Reporting Developments on pages 58–62 and page 135, respectively.

(b) Included operating lease income of $2.7 billion, $2.1 billion and $1.7 billion for the years ended December 31, 2016, 2015 and 2014, respectively.

2016 compared with 2015

Total net revenue increased by 2% primarily reflecting higher net interest income across all the Firm's business segments and higher Markets noninterest revenue in CIB, partially offset by lower card income in CCB and lower asset management fees in AWM.

Investment banking fees decreased predominantly due to lower equity underwriting fees driven by declines in industry-wide fee levels. For additional information on investment banking fees, see CIB segment results on pages 58–62 and Note 7.

Principal transactions revenue increased reflecting broad-based strength across products in CIB's Fixed Income Markets business. Rates performance was strong, with increased client activity driven by high issuance-based flows, global political developments, and central bank actions. Credit revenue improved driven by higher market-making revenue from the secondary market as clients' appetite for risk recovered. For additional information, see CIB and Corporate segment results on pages 58–62 and pages 69–70, respectively, and Note 7.

Asset management, administration and commissions revenue decreased reflecting lower asset management fees in AWM driven by a reduction in revenue related to the disposal of assets at the beginning of 2016, the impact of lower average equity market levels and lower performance fees, as well as due to lower brokerage commissions and other fees in CIB and AWM. For additional information, see the segment discussions of CIB and AWM on pages 58–62 and pages 66–68, respectively, and Note 7.

For information on lending- and deposit-related fees, see the segment results for CCB on pages 53–57, CIB on pages 58–62, and CB on pages 63–65 and Note 7; on securities gains, see the Corporate segment discussion on pages 69–70.

Mortgage fees and related income were relatively flat, as lower mortgage servicing revenue related to lower average third-party loans serviced was predominantly offset by higher MSR risk management results. For further information on mortgage fees and related income, see the segment discussion of CCB on pages 53–57 and Notes 7 and 17.

Card income decreased predominantly driven by higher new account origination costs and the impact of renegotiated co-brand partnership agreements, partially offset by higher card sales volume and other card-related fees. For further information, see CCB segment results on pages 53–57 and Note 7.

Other income increased primarily reflecting:

- higher operating lease income from growth in auto operating lease assets in CCB
- a gain on the sale of Visa Europe interests in CCB
- a gain related to the redemption of guaranteed capital debt securities ("trust preferred securities")
- the absence of losses recognized in 2015 related to the accelerated amortization of cash flow hedges associated with the exit of certain non-operating deposits
- a gain on disposal of an asset in AWM at the beginning of 2016

partially offset by

- a $514 million benefit recorded in the prior year from a legal settlement in Corporate.

For further information on other income, see Note 7.

Net interest income increased primarily driven by loan growth across the businesses and the net impact of higher rates, partially offset by lower investment securities balances and higher interest expense on long-term debt. The Firm's average interest-earning assets were $2.1 trillion in 2016, and the net interest yield on these assets, on a fully taxable equivalent ("FTE") basis, was 2.25%, an increase of 11 basis points from the prior year.

2015 compared with 2014

Total net revenue for 2015 was down by 2%, predominantly driven by lower Corporate private equity gains, lower CIB revenue reflecting the impact of business simplification initiatives, and lower CCB Mortgage Banking revenue. These decreases were partially offset by a benefit from a legal settlement in Corporate, and higher operating lease income, predominantly in CCB.

Investment banking fees increased reflecting higher advisory fees, partially offset by lower equity and debt underwriting fees. The increase in advisory fees was driven by a greater share of fees for completed transactions as well as growth in industry-wide fee levels. The decrease in equity underwriting fees resulted from lower industry-wide issuance, and the decrease in debt underwriting fees resulted primarily from lower loan syndication and bond underwriting fees on lower industry-wide fee levels.

Principal transactions revenue decreased reflecting lower private equity gains in Corporate driven by lower valuation gains and lower net gains on sales as the Firm exits this non-core business. The decrease was partially offset by higher client-driven market-making revenue, particularly in foreign exchange, interest rate and equity-related products in CIB, as well as a gain of approximately $160 million on CCB's investment in Square, Inc. upon its initial public offering.

Asset management, administration and commissions revenue decreased largely as a result of lower fees in CIB and lower performance fees in AWM. The decrease was partially offset by higher asset management fees as a result of net client inflows into assets under management and the impact of higher average market levels in AWM and CCB.

Mortgage fees and related income decreased reflecting lower servicing revenue, largely as a result of lower average third-party loans serviced, and lower net production revenue reflecting a lower repurchase benefit.

For information on lending- and deposit-related fees, see the segment results for CCB on pages 53–57, CIB on pages 58–62, and CB on pages 63–65 and Note 7; on securities gains, see the Corporate segment discussion on pages 69–70; and card income, see CCB segment results on pages 53–57.

Other income was relatively flat reflecting a $514 million benefit from a legal settlement in Corporate, higher operating lease income as a result of growth in auto operating lease assets in CCB, and the absence of losses related to the exit of non-core portfolios in Card. These increases were offset by the impact of business simplification in CIB; the absence of a benefit recognized in 2014 from a franchise tax settlement; and losses related to the accelerated amortization of cash flow hedges associated with the exit of certain non-operating deposits.

Net interest income was relatively flat as lower loan yields, lower investment securities net interest income, and lower trading asset balance and yields were offset by higher average loan balances and lower interest expense on deposits. The Firm's average interest-earning assets were $2.1 trillion in 2015, and the net interest yield on these assets, on a FTE basis, was 2.14%, a decrease of 4 basis points from the prior year.

Provision for credit losses

Year ended December 31, (in millions)	2016	2015	2014
Consumer, excluding credit card	**$ 467**	$ (81)	$ 419
Credit card	**4,042**	3,122	3,079
Total consumer	**4,509**	3,041	3,498
Wholesale	**852**	786	(359)
Total provision for credit losses	**$ 5,361**	$ 3,827	$ 3,139

2016 compared with 2015

The provision for credit losses reflected an increase in the total consumer provision and, to a lesser extent, the wholesale provision. The increase in the total consumer provision was predominantly driven by:

- a $920 million increase related to the credit card portfolio, due to a $600 million addition in the allowance for loan losses, as well as $320 million of higher net charge-offs, driven by loan growth (including growth in newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio), and
- a $470 million lower benefit related to the residential real estate portfolio, as the current year reduction in the allowance for loan losses was lower than the prior year. The reduction in both periods reflected continued improvements in home prices and lower delinquencies.

The increase in the wholesale provision was largely driven by the impact of downgrades in the Oil & Gas and Natural Gas Pipelines portfolios. For a more detailed discussion of the credit portfolio and the allowance for credit losses, see the segment discussions of CCB on pages 53–57, CIB on pages 58–62 , CB on pages 63–65, the Allowance For Credit Losses on pages 105–107 and Note 15.

2015 compared with 2014

The provision for credit losses increased as a result of an increase in the wholesale provision, largely reflecting the impact of downgrades in the Oil & Gas portfolio. The increase was partially offset by a decrease in the consumer provision, reflecting lower net charge-offs due to continued discipline in credit underwriting, as well as improvement in the economy driven by increasing home prices and lower unemployment levels. The decrease in the consumer provision was partially offset by a lower reduction in the allowance for loan losses.

Noninterest expense

Year ended December 31, (in millions)	2016	2015	2014
Compensation expense	**$29,979**	$29,750	$30,160
Noncompensation expense:			
Occupancy	**3,638**	3,768	3,909
Technology, communications and equipment	**6,846**	6,193	5,804
Professional and outside services	**6,655**	7,002	7,705
Marketing	**2,897**	2,708	2,550
Other[a][b]	**5,756**	9,593	11,146
Total noncompensation expense	**25,792**	29,264	31,114
Total noninterest expense	**$55,771**	$59,014	$61,274

(a) Included legal (benefit)/expense of $(317) million, $3.0 billion and $2.9 billion for the years ended December 31, 2016, 2015 and 2014, respectively.
(b) Included FDIC-related expense of $1.3 billion, $1.2 billion and $1.0 billion for the years ended December 31, 2016, 2015 and 2014, respectively.

2016 compared with 2015

Total noninterest expense decreased by 5% driven by lower legal expense.

Compensation expense was relatively flat predominantly driven by higher performance-based compensation expense and investments in several businesses, offset by the impact of continued expense reduction initiatives, including lower headcount in certain businesses.

Noncompensation expense decreased as a result of lower legal expense (including lower legal professional services expense), the impact of efficiencies, and reduced non-U.S. tax surcharges. These factors were partially offset by higher depreciation expense from growth in auto operating lease assets and higher investments in marketing. For a further discussion of legal expense, see Note 31.

2015 compared with 2014

Total noninterest expense decreased by 4% as a result of lower CIB expense, predominantly reflecting the impact of business simplification; and lower CCB expense resulting from efficiencies related to declines in headcount-related expense and lower professional fees. These decreases were partially offset by investment in the businesses, including for infrastructure and controls.

Compensation expense decreased predominantly driven by lower performance-based incentives and reduced headcount, partially offset by higher postretirement benefit costs and investment in the businesses, including for infrastructure and controls.

Noncompensation expense decreased reflecting benefits from business simplification in CIB; lower professional and outside services expense, reflecting lower legal services expense and a reduced number of contractors in the businesses; lower amortization of intangibles; and the absence of a goodwill impairment in Corporate. These factors were partially offset by higher depreciation expense, largely associated with higher auto operating lease assets in CCB; higher marketing expense in CCB; and higher FDIC-related assessments. Legal expense was relatively flat compared with the prior year.

Income tax expense

Year ended December 31, (in millions, except rate)	2016	2015	2014
Income before income tax expense	**$34,536**	$30,702	$30,699
Income tax expense	**9,803**	6,260	8,954
Effective tax rate	**28.4%**	20.4%	29.2%

2016 compared with 2015

The effective tax rate in 2016 was affected by changes in the mix of income and expense subject to U.S. federal and state and local taxes, tax benefits related to the utilization of certain deferred tax assets, as well as the adoption of new accounting guidance related to employee stock-based incentive payments. These tax benefits were partially offset by higher income tax expense from tax audits. The lower effective tax rate in 2015 was predominantly driven by $2.9 billion of tax benefits, which reduced the Firm's effective tax rate by 9.4 percentage points. The recognition of tax benefits in 2015 resulted from the resolution of various tax audits, as well as the release of U.S. deferred taxes associated with the restructuring of certain non-U.S. entities. For additional details on the impact of the new accounting guidance, see Accounting and Reporting Developments on page 135 and for further information see Note 26.

2015 compared with 2014

The effective tax rate decreased predominantly due to the recognition in 2015 of tax benefits of $2.9 billion and other changes in the mix of income and expense subject to U.S. federal, state and local income taxes, partially offset by prior-year tax adjustments. See above for details on the $2.9 billion of tax benefits.

CONSOLIDATED BALANCE SHEETS ANALYSIS

The following is a discussion of the significant changes between December 31, 2016 and 2015.

Selected Consolidated balance sheets data

December 31, (in millions)	2016	2015	Change
Assets			
Cash and due from banks	**$ 23,873**	$ 20,490	17%
Deposits with banks	**365,762**	340,015	8
Federal funds sold and securities purchased under resale agreements	**229,967**	212,575	8
Securities borrowed	**96,409**	98,721	(2)
Trading assets:			
Debt and equity instruments	**308,052**	284,162	8
Derivative receivables	**64,078**	59,677	7
Securities	**289,059**	290,827	(1)
Loans	**894,765**	837,299	7
Allowance for loan losses	**(13,776)**	(13,555)	2
Loans, net of allowance for loan losses	**880,989**	823,744	7
Accrued interest and accounts receivable	**52,330**	46,605	12
Premises and equipment	**14,131**	14,362	(2)
Goodwill	**47,288**	47,325	–
Mortgage servicing rights	**6,096**	6,608	(8)
Other intangible assets	**862**	1,015	(15)
Other assets	**112,076**	105,572	6
Total assets	**$ 2,490,972**	$ 2,351,698	6%

Cash and due from banks and deposits with banks

The increase was primarily driven by deposit growth in excess of loan growth. The Firm's excess cash is placed with various central banks, predominantly Federal Reserve Banks.

Federal funds sold and securities purchased under resale agreements

The increase was due to higher demand for securities to cover short positions related to client-driven market-making activities in CIB, and the deployment of excess cash by Treasury and Chief Investment Office ("CIO"). For additional information on the Firm's Liquidity Risk Management, see pages 110–115.

Trading assets and liabilities–debt and equity instruments

The increase in trading assets and liabilities was predominantly related to client-driven market-making activities in CIB. The increase in trading assets reflected higher debt and, to a lesser extent, equity instrument inventory levels to facilitate client demand. The increase in trading liabilities reflected higher levels of client-driven short positions in both debt and equity instruments. For additional information, refer to Note 3.

Trading assets and liabilities–derivative receivables and payables

The change in derivative receivables and payables was predominantly related to client-driven market-making activities in CIB. The increase in derivative receivables reflected the impact of market movements, which increased foreign exchange receivables, partially offset by reduced commodity derivative receivables. The decrease in derivative payables reflected the impact of market movements, which reduced commodity payables. For additional information, refer to Derivative contracts on pages 102–103, and Notes 3 and 6.

Securities

The decrease was predominantly due to net sales, maturities and paydowns during the year of non-agency mortgage-backed securities ("MBS"), corporate debt securities and asset-backed securities ("ABS"), offset by purchases of U.S. Treasuries. For additional information, see Notes 3 and 12.

Loans and allowance for loan losses

The increase in loans was driven by higher consumer and wholesale loans. The increase in consumer loans was due to retention of originated high-quality prime mortgages in CCB and AWM, and growth in credit card and auto loans in CCB. The increase in wholesale loans was predominantly driven by originations of commercial real estate loans in CB and commercial and industrial loans across multiple industries in CB and CIB.

The increase in the allowance for loan losses was attributable to additions to the wholesale allowance driven by downgrades in the Oil & Gas and Natural Gas Pipelines portfolios. The consumer allowance was flat from the prior year and reflected reductions in the allowance for loan losses in the residential real estate portfolio reflecting continued improvement in home prices and delinquencies, and due to runoff in the student loan portfolio; these factors were offset by additions to the allowance reflecting the impact of loan growth in the credit card portfolio (including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio), as well as due

to loan growth in the auto and business banking loan portfolios. For a more detailed discussion of loans and the allowance for loan losses, refer to Credit Risk Management on pages 86–107, and Notes 3, 4, 14 and 15.

Accrued interest and accounts receivable

The increase reflected higher receivables from merchants in CCB and higher client receivables related to client-driven activity in CIB.

Mortgage servicing rights

For additional information on MSRs, see Note 17.

Other assets

The increase reflected higher auto operating lease assets from growth in business volume in CCB and higher cash collateral pledged in CIB.

Selected Consolidated balance sheets data

December 31, (in millions)	2016	2015	Change
Liabilities			
Deposits	**$ 1,375,179**	$ 1,279,715	7
Federal funds purchased and securities loaned or sold under repurchase agreements	**165,666**	152,678	9
Commercial paper	**11,738**	15,562	(25)
Other borrowed funds	**22,705**	21,105	8
Trading liabilities:			
Debt and equity instruments	**87,428**	74,107	18
Derivative payables	**49,231**	52,790	(7)
Accounts payable and other liabilities	**190,543**	177,638	7
Beneficial interests issued by consolidated variable interest entities ("VIEs")	**39,047**	41,879	(7)
Long-term debt	**295,245**	288,651	2
Total liabilities	**2,236,782**	2,104,125	6
Stockholders' equity	**254,190**	247,573	3
Total liabilities and stockholders' equity	**$ 2,490,972**	$ 2,351,698	6%

Deposits

The increase was attributable to higher consumer and wholesale deposits. The consumer increase reflected continuing strong growth from existing and new customers, and the impact of low attrition rates. The wholesale increase was driven by growth in operating deposits related to client activity in CIB's Treasury Services business, and inflows in AWM primarily from business growth and the impact of new rules governing money market funds. For more information on deposits, refer to the Liquidity Risk Management discussion on pages 110–115; and Notes 3 and 19.

Federal funds purchased and securities loaned or sold under repurchase agreements

The increase was predominantly due to higher client-driven market-making activities in CIB. For additional information on the Firm's Liquidity Risk Management, see pages 110–115.

Commercial paper

The decrease reflected lower issuance in the wholesale markets consistent with Treasury and CIO's short-term funding plans. For additional information, see Liquidity Risk Management on pages 110–115.

Accounts payable and other liabilities

The increase was largely driven by higher client-driven activity in CIB.

Beneficial interests issued by consolidated VIEs

The decrease was predominantly due to a reduction in commercial paper issued by conduits to third parties, partially offset by net new credit card securitizations. For further information on Firm-sponsored VIEs and loan securitization trusts, see Off-Balance Sheet Arrangements on pages 45–46 and Note 16.

Long-term debt

The increase was due to net issuance of structured notes driven by client demand in CIB, and other net issuance consistent with Treasury and CIO's long-term funding plans, including liquidity actions related to the 2016 Resolution Submission. For additional information on the Firm's long-term debt activities, see Liquidity Risk Management on pages 110–115 and Note 21.

Stockholders' equity

The increase was due to net income offset partially by cash dividends on common and preferred stock, and repurchases of common stock. For additional information on changes in stockholders' equity, see page 144, and on the Firm's capital actions, see Capital actions on page 84.

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are off-balance sheet under accounting principles generally accepted in the U.S. ("U.S. GAAP"). The Firm is involved with several types of off-balance sheet arrangements, including through nonconsolidated SPEs, which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important part of the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits, investor intermediation activities, and loan securitizations. See Note 16 for further information on these types of SPEs.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, JPMorgan Chase Bank, N.A. could be required to provide funding if its short-term credit rating were downgraded below specific levels, primarily "P-1", "A-1" and "F1" for Moody's Investors Service ("Moody's"), Standard & Poor's and Fitch, respectively. These liquidity commitments support the issuance of asset-backed commercial paper by Firm-administered consolidated SPEs. In the event of a short-term credit rating downgrade, JPMorgan Chase Bank, N.A., absent other solutions, would be required to provide funding to the SPE if the commercial paper could not be reissued as it matured. The aggregate amounts of commercial paper outstanding held by third parties as of December 31, 2016 and 2015, was $2.7 billion and $8.7 billion, respectively. The aggregate amounts of commercial paper issued by these SPEs could increase in future periods should clients of the Firm-administered consolidated SPEs draw down on certain unfunded lending-related commitments. These unfunded lending-related commitments were $7.4 billion and $5.6 billion at December 31, 2016 and 2015, respectively. The Firm could facilitate the refinancing of some of the clients' assets in order to reduce the funding obligation. For further information, see the discussion of Firm-administered multi-seller conduits in Note 16.

The Firm also acts as liquidity provider for certain municipal bond vehicles. The Firm's obligation to perform as liquidity provider is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer and any credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. See Note 16 for additional information.

Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees are refinanced, extended, cancelled, or expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. For further discussion of lending-related financial instruments, guarantees and other commitments, and the Firm's accounting for them, see Lending-related commitments on page 101 and Note 29. For a discussion of liabilities associated with loan sales and securitization-related indemnifications, see Note 29.

Contractual cash obligations

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's significant contractual cash obligations at December 31, 2016. The contractual cash obligations included in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the below table are certain liabilities with variable cash flows and/or no obligation to return a stated amount of principal at maturity.

The carrying amount of on-balance sheet obligations on the Consolidated balance sheets may differ from the minimum contractual amount of the obligations reported below. For a discussion of mortgage repurchase liabilities and other obligations, see Note 29.

Contractual cash obligations

By remaining maturity at December 31, (in millions)	2016					2015
	2017	2018-2019	2020-2021	After 2021	**Total**	Total
On-balance sheet obligations						
Deposits[a]	**$ 1,356,641**	**$ 5,512**	**$ 3,542**	**$ 3,171**	**$ 1,368,866**	$ 1,276,139
Federal funds purchased and securities loaned or sold under repurchase agreements	**163,978**	**1,307**	**2**	**379**	**165,666**	152,738
Commercial paper	**11,738**	**–**	**–**	**–**	**11,738**	15,562
Other borrowed funds[a]	**14,759**	**–**	**–**	**–**	**14,759**	11,331
Beneficial interests issued by consolidated VIEs	**17,290**	**16,240**	**2,767**	**2,630**	**38,927**	41,092
Long-term debt[a]	**44,380**	**78,676**	**61,772**	**103,487**	**288,315**	280,206
Other[b]	**4,172**	**1,328**	**984**	**2,496**	**8,980**	8,372
Total on-balance sheet obligations	**1,612,958**	**103,063**	**69,067**	**112,163**	**1,897,251**	1,785,440
Off-balance sheet obligations						
Unsettled reverse repurchase and securities borrowing agreements[c]	**50,722**	**–**	**–**	**–**	**50,722**	42,482
Contractual interest payments[d]	**9,640**	**10,317**	**7,638**	**21,267**	**48,862**	46,149
Operating leases[e]	**1,598**	**2,780**	**2,036**	**3,701**	**10,115**	11,829
Equity investment commitments[f]	**356**	**103**	**30**	**579**	**1,068**	921
Contractual purchases and capital expenditures	**1,382**	**723**	**236**	**225**	**2,566**	2,598
Obligations under co-brand programs	**187**	**233**	**201**	**247**	**868**	496
Total off-balance sheet obligations	**63,885**	**14,156**	**10,141**	**26,019**	**114,201**	104,475
Total contractual cash obligations	**$ 1,676,843**	**$ 117,219**	**$ 79,208**	**$ 138,182**	**$ 2,011,452**	$ 1,889,915

(a) Excludes structured notes on which the Firm is not obligated to return a stated amount of principal at the maturity of the notes, but is obligated to return an amount based on the performance of the structured notes.
(b) Primarily includes dividends declared on preferred and common stock, deferred annuity contracts, pension and other postretirement employee benefit obligations and insurance liabilities.
(c) For further information, refer to unsettled reverse repurchase and securities borrowing agreements in Note 29.
(d) Includes accrued interest and future contractual interest obligations. Excludes interest related to structured notes for which the Firm's payment obligation is based on the performance of certain benchmarks.
(e) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of $1.4 billion and $1.9 billion at December 31, 2016 and 2015, respectively. See Note 30 for more information on lease commitments.
(f) At December 31, 2016 and 2015, included unfunded commitments of $48 million and $50 million, respectively, to third-party private equity funds, and $1.0 billion and $871 million of unfunded commitments, respectively, to other equity investments.

(in millions)	Year ended December 31, 2016	2015	2014
Net cash provided by/(used in)			
Operating activities	**$ 20,196**	$ 73,466	$ 36,593
Investing activities	**(114,949)**	106,980	(165,636)
Financing activities	**98,271**	(187,511)	118,228
Effect of exchange rate changes on cash	**(135)**	(276)	(1,125)
Net increase/(decrease) in cash and due from banks	**$ 3,383**	$ (7,341)	$ (11,940)

Operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's lending and capital markets activities, including the origination or purchase of loans initially designated as held-for-sale. Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities and market conditions. The Firm believes cash flows from operations, available cash balances and its capacity to generate cash through secured and unsecured sources are sufficient to meet the Firm's operating liquidity needs.

Cash provided by operating activities in 2016, 2015 and 2014 reflected net income after noncash operating adjustments. Additionally, in 2016 cash provided reflected increases in accounts payable and trading liabilities related to client-driven market-making activities in CIB. The increase in trading liabilities reflected higher levels of client-driven short positions in both debt and equity instruments. Cash used in 2016 reflected an increase in trading assets, an increase in accounts receivable from merchants in CCB and higher client receivables related to client-driven activities in CIB; and higher net originations and purchases from loan held-for-sale activities. The increase in trading assets reflected higher debt and, to a lesser extent, equity instrument inventory levels to facilitate client demand. Cash provided in 2015 resulted from a decrease in trading assets, predominantly due to client-driven market-making activities in CIB, resulting in lower levels of debt and equity securities. Additionally, cash provided reflected a decrease in accounts receivable due to lower client receivables and higher net proceeds from loan sales activities. This was partially offset by cash used due to a decrease in accounts payable and other liabilities, resulting from lower brokerage customer payables related to client activity in CIB. In 2014, cash provided reflected higher net proceeds from loan securitizations and sales activities.

Investing activities

The Firm's investing activities predominantly include originating loans for investment, depositing cash at banks, and investing in the securities portfolio and other short-term interest-earning assets. Cash used in investing activities in 2016 resulted from net originations of consumer and wholesale loans. The increase in consumer loans was due to retention of originated high-quality prime mortgages in CCB and AWM, and growth of credit card and auto loans in CCB. The increase in wholesale loans was predominantly driven by originations of commercial real estate loans in CB and commercial and industrial loans across multiple industries in CB and CIB. Additionally, in 2016, cash outflows reflected an increase in deposits with banks primarily due to growth in deposits in excess of growth in loans; an increase in securities purchased under resale agreements due to higher demand for securities to cover short positions related to client-driven market-making activities in CIB and the deployment of excess cash by Treasury and CIO. Cash provided by investing activities during 2015 predominantly resulted from lower deposits with banks due to the Firm's actions to reduce wholesale non-operating deposits; and net proceeds from paydowns, maturities, sales and purchases of investment securities. Partially offsetting these net inflows was cash used for net originations of consumer and wholesale loans, a portion of which reflected a shift from investment securities. Cash used in investing activities during 2014 resulted from increases in deposits with banks attributable to higher levels of excess funds; cash was also used for growth in wholesale and consumer loans in 2014. Partially offsetting these cash outflows in 2014 was a net decline in securities purchased under resale agreements due to a shift in the deployment of the Firm's excess cash by Treasury and CIO. Investing activities in 2014 also reflected net proceeds from paydowns, maturities, sales and purchases of investment securities.

Financing activities

The Firm's financing activities includes acquiring customer deposits, issuing long-term debt, as well as preferred and common stock. Cash provided by financing activities in 2016 resulted from higher consumer and wholesale deposits, and an increase in securities loaned or sold under repurchase agreements, predominantly due to higher client-driven market-making activities in CIB. Cash used in financing activities in 2015 resulted from lower wholesale deposits partially offset by higher consumer deposits. Additionally, in 2015 cash outflows were attributable to lower levels of commercial paper due to the discontinuation of a cash management product that offered customers the option of sweeping their deposits into commercial paper; lower commercial paper issuances in the wholesale markets; and a decrease in securities loaned or sold under repurchase agreements due to a decline in secured financings. Cash provided by financing activities in 2014 predominantly resulted from higher consumer and wholesale deposits. For all periods, cash was provided by net proceeds from long-term borrowings; and cash was used for repurchases of common stock and cash dividends on common and preferred stock.

* * *

For a further discussion of the activities affecting the Firm's cash flows, see Consolidated Balance Sheets Analysis on pages 43–44, Capital Risk Management on pages 76–85, and Liquidity Risk Management on pages 110–115.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES AND KEY PERFORMANCE MEASURES

Non-GAAP financial measures

The Firm prepares its Consolidated Financial Statements using U.S. GAAP; these financial statements appear on pages 141–145. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results, including the overhead ratio, and the results of the lines of business, on a "managed" basis, which are non-GAAP financial measures. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on an FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. These non-GAAP financial measures allow management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Management also uses certain non-GAAP financial measures at the Firm and business-segment level, because these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the Firm or of the particular business segment, as the case may be, and, therefore, facilitate a comparison of the Firm or the business segment with the performance of its relevant competitors. For additional information on these non-GAAP measures, see Business Segment Results on pages 51–70.

Additionally, certain credit metrics and ratios disclosed by the Firm exclude PCI loans, and are therefore non-GAAP measures. For additional information on these non-GAAP measures, see Credit Risk Management on pages 86–107.

Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

Year ended December 31, (in millions, except ratios)	2016			2015			2014		
	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis
Other income	**$ 3,795**	**$ 2,265**	**$ 6,060**	$ 3,032	$ 1,980	$ 5,012	$ 3,013	$ 1,788	$ 4,801
Total noninterest revenue	**49,585**	**2,265**	**51,850**	50,033	1,980	52,013	51,478	1,788	53,266
Net interest income	**46,083**	**1,209**	**47,292**	43,510	1,110	44,620	43,634	985	44,619
Total net revenue	**95,668**	**3,474**	**99,142**	93,543	3,090	96,633	95,112	2,773	97,885
Pre-provision profit	**39,897**	**3,474**	**43,371**	34,529	3,090	37,619	33,838	2,773	36,611
Income before income tax expense	**34,536**	**3,474**	**38,010**	30,702	3,090	33,792	30,699	2,773	33,472
Income tax expense	**9,803**	**3,474**	**13,277**	6,260	3,090	9,350	8,954	2,773	11,727
Overhead ratio	**58%**	**NM**	**56%**	63%	NM	61%	64%	NM	63%

(a) Predominantly recognized in CIB and CB business segments and Corporate.

Net interest income excluding CIB's Markets businesses

In addition to reviewing net interest income on a managed basis, management also reviews net interest income excluding net interest income arising from CIB's Markets businesses to assess the performance of the Firm's lending, investing (including asset-liability management) and deposit-raising activities. CIB's Markets businesses represent both Fixed Income Markets and Equity Markets. The data presented below are non-GAAP financial measures due to the exclusion of net interest income from CIB's Markets businesses ("CIB Markets").

Management believes this exclusion provides investors and analysts with another measure by which to analyze the non-markets-related business trends of the Firm and provides a comparable measure to other financial institutions that are primarily focused on lending, investing and deposit-raising activities.

Year ended December 31, (in millions, except rates)	2016	2015	2014
Net interest income – managed basis[a][b]	**$ 47,292**	$ 44,620	$ 44,619
Less: CIB Markets net interest income[c]	**6,334**	5,298	6,032
Net interest income excluding CIB Markets[a]	**$ 40,958**	$ 39,322	$ 38,587
Average interest-earning assets	**$ 2,101,604**	$ 2,088,242	$ 2,049,093
Less: Average CIB Markets interest-earning assets[c]	**520,307**	510,292	522,989
Average interest-earning assets excluding CIB Markets	**$ 1,581,297**	$ 1,577,950	$ 1,526,104
Net interest yield on average interest-earning assets – managed basis	2.25%	2.14%	2.18%
Net interest yield on average CIB Markets interest-earning assets[c]	1.22	1.04	1.15
Net interest yield on average interest-earning assets excluding CIB Markets	2.59%	2.49%	2.53%

(a) Interest includes the effect of related hedges. Taxable-equivalent amounts are used where applicable.
(b) For a reconciliation of net interest income on a reported and managed basis, see reconciliation from the Firm's reported U.S. GAAP results to managed basis on page 48.
(c) Prior period amounts were revised to align with CIB's Markets businesses. For further information on CIB's Markets businesses, see page 61.

Calculation of certain U.S. GAAP and non-GAAP financial measures

Certain U.S. GAAP and non-GAAP financial measures are calculated as follows:

Book value per share ("BVPS")
Common stockholders' equity at period-end / Common shares at period-end

Overhead ratio
Total noninterest expense / Total net revenue

Return on assets ("ROA")
Reported net income / Total average assets

Return on common equity ("ROE")
Net income* / Average common stockholders' equity

Return on tangible common equity ("ROTCE")
Net income* / Average tangible common equity

Tangible book value per share ("TBVPS")
Tangible common equity at period-end / Common shares at period-end

* Represents net income applicable to common equity

Tangible common equity, ROTCE and TBVPS

Tangible common equity ("TCE"), ROTCE and TBVPS are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's net income applicable to common equity as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. TCE, ROTCE, and TBVPS are utilized by the Firm, as well as investors and analysts, in assessing the Firm's use of equity. The following summary table provides a reconciliation from the Firm's common stockholders' equity to TCE.

	Period-end		Average		
			Year ended December 31,		
(in millions, except per share and ratio data)	**Dec 31, 2016**	Dec 31, 2015	**2016**	2015	2014
Common stockholders' equity	**$ 228,122**	$ 221,505	**$ 224,631**	$ 215,690	$ 207,400
Less: Goodwill	**47,288**	47,325	**47,310**	47,445	48,029
Less: Certain identifiable intangible assets	**862**	1,015	**922**	1,092	1,378
Add: Deferred tax liabilities[(a)]	**3,230**	3,148	**3,212**	2,964	2,950
Tangible common equity	**$ 183,202**	$ 176,313	**$ 179,611**	$ 170,117	$ 160,943
Return on tangible common equity	**NA**	NA	**13%**	13%	13%
Tangible book value per share	**$ 51.44**	$ 48.13	**NA**	NA	NA

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Key performance measures

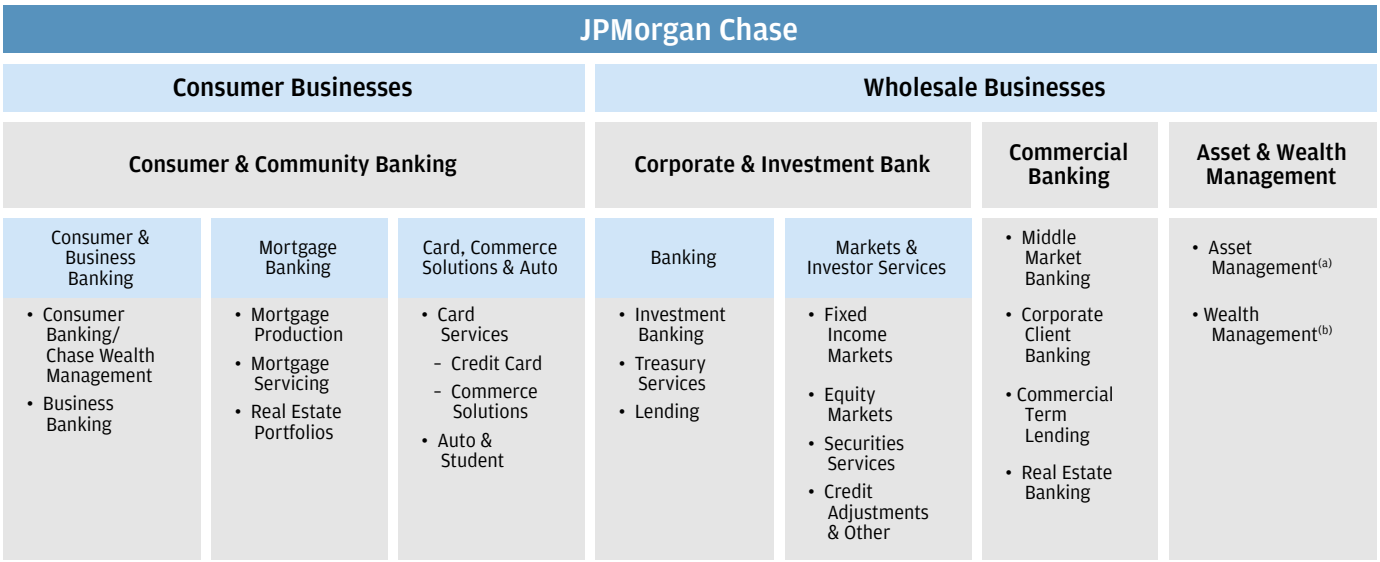
The Firm's capital, RWA, and capital and leverage ratios that are presented under Basel III Standardized and Advanced Fully Phased-In rules and the Firm's, JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s SLRs calculated under the Basel III Advanced Fully Phased-In rules are considered key regulatory capital measures. Such measures are used by banking regulators, investors and analysts to assess the Firm's regulatory capital position and to compare the Firm's regulatory capital to that of other financial services companies.

For additional information on these measures, see Capital Risk Management on pages 76–85.

Core loans are also considered a key performance measure. Core loans represent loans considered central to the Firm's ongoing businesses; and exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit. Core loans are utilized by the Firm and its investors and analysts in assessing actual growth in the loan portfolio.

The Firm is managed on a line of business basis. There are four major reportable business segments - Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset & Wealth Management (formerly Asset Management). In addition, there is a Corporate segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of Non-GAAP Financial Measures, on pages 48-50.



(a) Formerly Global Investment Management
(b) Formerly Global Wealth Management

Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results includes the allocation of certain income and expense items described in more detail below. The Firm also assesses the level of capital required for each line of business on at least an annual basis. For further information about line of business capital, see Line of business equity on page 83.

The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing

Funds transfer pricing is used to allocate interest income and expense to each business segment and to transfer the primary interest rate risk and liquidity risk exposures to Treasury and CIO within Corporate. The funds transfer pricing process considers the interest rate risk, liquidity risk and regulatory requirements of a business segment as if it were operating independently. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO").

Debt expense and preferred stock dividend allocation

As part of the funds transfer pricing process, largely all of the cost of the credit spread component of outstanding unsecured long-term debt and preferred stock dividends is allocated to the reportable business segments, while the balance of the cost is retained in Corporate. The methodology to allocate the cost of unsecured long-term debt and preferred stock dividend to the business segments is aligned with the Firm's process to allocate capital. The allocated cost of unsecured long-term debt is included in a business segment's net interest income, and net income is reduced by preferred stock dividends to arrive at a business segment's net income applicable to common equity.

Business segment capital allocation changes

The amount of capital assigned to each business is referred to as common equity. On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. Through the end of 2016, capital was allocated to the lines of business based on a single measure, Basel III Advanced Fully Phased-In RWA. Effective January 1, 2017, the Firm's methodology used to allocate capital to the Firm's business segments was updated. The new methodology incorporates Basel III Standardized Fully Phased-In RWA (as well as Basel III Advanced Fully Phased-In RWA), leverage, the GSIB surcharge, and a simulation of

capital in a severe stress environment. The methodology will continue to be weighted towards Basel III Advanced Fully Phased-In RWA because the Firm believes it to be the best proxy for economic risk. The Firm will consider further changes to its capital allocation methodology as the regulatory framework evolves. In addition, under the new methodology, capital is no longer allocated to each line of business for goodwill and other intangibles associated with acquisitions effected by the line of business.

Expense allocation

Where business segments use services provided by corporate support units, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally allocated based on actual cost and use of services provided. In contrast, certain other costs related to corporate support units, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Expense retained in Corporate generally includes parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align corporate support units; and other items not aligned with a particular business segment.

The following provides a comparative discussion of business segment results as of or for the years ended December 31, 2016, 2015 and 2014.

Segment Results – Managed Basis

The following tables summarize the business segment results for the periods indicated.

Year ended December 31,	Total net revenue			Total noninterest expense			Pre-provision profit/(loss)		
(in millions)	**2016**	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Consumer & Community Banking	**$ 44,915**	$ 43,820	$ 44,368	**$ 24,905**	$ 24,909	$ 25,609	**$ 20,010**	$ 18,911	$ 18,759
Corporate & Investment Bank	**35,216**	33,542	34,595	**18,992**	21,361	23,273	**16,224**	12,181	11,322
Commercial Banking	**7,453**	6,885	6,882	**2,934**	2,881	2,695	**4,519**	4,004	4,187
Asset & Wealth Management	**12,045**	12,119	12,028	**8,478**	8,886	8,538	**3,567**	3,233	3,490
Corporate	**(487)**	267	12	**462**	977	1,159	**(949)**	(710)	(1,147)
Total	**$ 99,142**	$ 96,633	$ 97,885	**$ 55,771**	$ 59,014	$ 61,274	**$ 43,371**	$ 37,619	$ 36,611

Year ended December 31,	Provision for credit losses			Net income/(loss)			Return on common equity		
(in millions, except ratios)	**2016**	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Consumer & Community Banking	**$ 4,494**	$ 3,059	$ 3,520	**$ 9,714**	$ 9,789	$ 9,185	**18%**	18%	18%
Corporate & Investment Bank	**563**	332	(161)	**10,815**	8,090	6,908	**16**	12	10
Commercial Banking	**282**	442	(189)	**2,657**	2,191	2,635	**16**	15	18
Asset & Wealth Management	**26**	4	4	**2,251**	1,935	2,153	**24**	21	23
Corporate	**(4)**	(10)	(35)	**(704)**	2,437	864	**NM**	NM	NM
Total	**$ 5,361**	$ 3,827	$ 3,139	**$ 24,733**	$ 24,442	$ 21,745	**10%**	11%	10%

Consumer & Community Banking offers services to consumers and businesses through bank branches, ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking (including Consumer Banking/Chase Wealth Management and Business Banking), Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Commerce Solutions & Auto. Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card, Commerce Solutions & Auto issues credit cards to consumers and small businesses, offers payment processing services to merchants, originates and services auto loans and leases, and services student loans.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2016	2015	2014
Revenue			
Lending- and deposit-related fees	**$ 3,231**	$ 3,137	$ 3,039
Asset management, administration and commissions	**2,093**	2,172	2,096
Mortgage fees and related income	**2,490**	2,511	3,560
Card income	**4,364**	5,491	5,779
All other income	**3,077**	2,281	1,463
Noninterest revenue	**15,255**	15,592	15,937
Net interest income	**29,660**	28,228	28,431
Total net revenue	**44,915**	43,820	44,368
Provision for credit losses	**4,494**	3,059	3,520
Noninterest expense			
Compensation expense	**9,723**	9,770	10,538
Noncompensation expense[(a)]	**15,182**	15,139	15,071
Total noninterest expense	**24,905**	24,909	25,609
Income before income tax expense	**15,516**	15,852	15,239
Income tax expense	**5,802**	6,063	6,054
Net income	**$ 9,714**	$ 9,789	$ 9,185
Revenue by line of business			
Consumer & Business Banking	**$18,659**	$17,983	$18,226
Mortgage Banking	**7,361**	6,817	7,826
Card, Commerce Solutions & Auto	**18,895**	19,020	18,316
Mortgage fees and related income details:			
Net production revenue	**853**	769	1,190
Net mortgage servicing revenue[(b)]	**1,637**	1,742	2,370
Mortgage fees and related income	**$ 2,490**	$ 2,511	$ 3,560
Financial ratios			
Return on common equity	**18%**	18%	18%
Overhead ratio	**55**	57	58

Note: In the discussion and the tables which follow, CCB presents certain financial measures which exclude the impact of PCI loans; these are non-GAAP financial measures.

(a) Included operating lease depreciation expense of $1.9 billion, $1.4 billion and $1.2 billion for the years ended December 31, 2016, 2015 and 2014, respectively.

(b) Included MSR risk management of $217 million, $(117) million and $(28) million for the years ended December 31, 2016, 2015 and 2014, respectively.

2016 compared with 2015

Consumer & Community Banking net income was $9.7 billion, a decrease of 1% compared with the prior year, driven by higher provision for credit losses predominantly offset by higher net revenue.

Net revenue was $44.9 billion, an increase of 2% compared with the prior year. Net interest income was $29.7 billion, up 5%, driven by higher deposit balances and higher loan balances, partially offset by deposit spread compression and an increase in the reserve for uncollectible interest and fees in Credit Card. Noninterest revenue was $15.3 billion, down 2%, driven by higher new account origination costs and the impact of renegotiated co-brand partnership agreements in Credit Card and lower mortgage servicing revenue predominantly as a result of a lower level of third-party loans serviced; these factors were predominantly offset by higher auto lease and card sales volume, higher card- and deposit-related fees, higher MSR risk management results and a gain on the sale of Visa Europe interests. See Note 17 for further information regarding changes in value of the MSR asset and related hedges, and mortgage fees and related income.

The provision for credit losses was $4.5 billion, an increase of 47% from the prior year. The increase in the provision was driven by:

- a $920 million increase related to the credit card portfolio, due to a $600 million addition in the allowance for loan losses, as well as $320 million of higher net charge-offs, driven by loan growth, including growth in newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio,
- a $450 million lower benefit related to the residential real estate portfolio, as the current year reduction in the allowance for loan losses was lower than the prior year. The reduction in both periods reflected continued improvements in home prices and lower delinquencies and
- a $150 million increase related to the auto and business banking portfolio, due to additions to the allowance for loan losses and higher net charge-offs, reflecting loan growth in the portfolios.

Noninterest expense of $24.9 billion was flat compared with the prior year, driven by lower legal expense and branch efficiencies offset by higher auto lease depreciation and higher investment in marketing.

2015 compared with 2014

Consumer & Community Banking net income was $9.8 billion, an increase of 7% compared with the prior year, driven by lower noninterest expense and lower provision for credit losses, partially offset by lower net revenue.

Net revenue was $43.8 billion, a decrease of 1% compared with the prior year. Net interest income was $28.2 billion, down 1%, driven by spread compression, predominantly offset by higher deposit balances, higher loan balances largely resulting from originations of high-quality mortgage loans that have been retained, and improved credit quality including lower reversals of interest and fees due to lower net charge-offs in Credit Card. Noninterest revenue was $15.6 billion, down 2%, driven by lower mortgage servicing revenue largely as a result of lower average third-party loans serviced, lower net mortgage production revenue reflecting a lower repurchase benefit and the impact of renegotiated co-brand partnership agreements in Credit Card, largely offset by higher auto lease and card sales volume, the impact of non-core portfolio exits in Credit Card in the prior year, and a gain on the investment in Square, Inc. upon its initial public offering.

The provision for credit losses was $3.1 billion, a decrease of 13% from the prior year, reflecting lower net charge-offs, partially offset by a lower reduction in the allowance for loan losses. The current-year provision reflected a $1.0 billion reduction in the allowance for loan losses due to continued improvement in home prices and lower delinquencies as well as increased granularity in the impairment estimates in the residential real estate portfolio and runoff in the student loan portfolio. The prior-year provision reflected a $1.3 billion reduction in the allowance for loan losses due to continued improvement in home prices and lower delinquencies in the residential real estate portfolio, a decrease in the Credit Card asset-specific allowance resulting from increased granularity of the impairment estimates and lower balances related to credit card loans modified in troubled debt restructurings ("TDRs"), runoff in the student loan portfolio and lower estimated losses in auto loans.

Noninterest expense was $24.9 billion, a decrease of 3% from the prior year, driven by lower headcount-related expense and lower professional fees, partially offset by higher auto lease depreciation.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2016	2015	2014
Selected balance sheet data (period-end)			
Total assets	**$535,310**	$502,652	$455,634
Loans:			
Consumer & Business Banking	**24,307**	22,730	21,200
Home equity	**50,296**	58,734	67,994
Residential mortgage and other	**181,196**	164,500	115,575
Mortgage Banking	**231,492**	223,234	183,569
Credit Card	**141,816**	131,463	131,048
Auto	**65,814**	60,255	54,536
Student	**7,057**	8,176	9,351
Total loans	**470,486**	445,858	399,704
Core loans	**382,608**	341,881	273,494
Deposits	**618,337**	557,645	502,520
Common equity	**51,000**	51,000	51,000
Selected balance sheet data (average)			
Total assets	**$516,354**	$472,972	$447,750
Loans:			
Consumer & Business Banking	**23,431**	21,894	20,152
Home equity	**54,545**	63,261	72,440
Residential mortgage and other	**177,010**	140,294	110,231
Mortgage Banking	**231,555**	203,555	182,671
Credit Card	**131,165**	125,881	125,113
Auto	**63,573**	56,487	52,961
Student	**7,623**	8,763	9,987
Total loans	**457,347**	416,580	390,884
Core loans	**361,316**	301,700	253,803
Deposits	**586,637**	530,938	486,919
Common equity	**51,000**	51,000	51,000
Headcount	**132,802**	127,094	137,186

Selected metrics

As of or for the year ended December 31, (in millions, except ratio data)	2016	2015	2014
Credit data and quality statistics			
Nonaccrual loans[a][b]	**$ 4,708**	$ 5,313	$ 6,401
Net charge-offs[c]			
Consumer & Business Banking	**257**	253	305
Home equity	**184**	283	473
Residential mortgage and other	**14**	2	10
Mortgage Banking	**198**	285	483
Credit Card	**3,442**	3,122	3,429
Auto	**285**	214	181
Student	**162**	210	375
Total net charge-offs	**$ 4,344**	$ 4,084	$ 4,773
Net charge-off rate[c]			
Consumer & Business Banking	**1.10%**	1.16%	1.51%
Home equity[d]	**0.45**	0.60	0.87
Residential mortgage and other[d]	**0.01**	–	0.01
Mortgage Banking[d]	**0.10**	0.18	0.37
Credit Card[e]	**2.63**	2.51	2.75
Auto	**0.45**	0.38	0.34
Student	**2.13**	2.40	3.75
Total net charge-offs rate[d]	**1.04**	1.10	1.40
30+ day delinquency rate			
Mortgage Banking[f][g]	**1.23%**	1.57%	2.61%
Credit Card[h]	**1.61**	1.43	1.44
Auto	**1.19**	1.35	1.23
Student[i]	**1.60**	1.81	2.35
90+ day delinquency rate - Credit Card[h]	**0.81**	0.72	0.70
Allowance for loan losses			
Consumer & Business Banking	**$ 753**	$ 703	$ 703
Mortgage Banking, excluding PCI loans	**1,328**	1,588	2,188
Mortgage Banking – PCI loans[c]	**2,311**	2,742	3,325
Credit Card	**4,034**	3,434	3,439
Auto	**474**	399	350
Student	**249**	299	399
Total allowance for loan losses[c]	**$ 9,149**	$ 9,165	$10,404

(a) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.

(b) At December 31, 2016, 2015 and 2014, nonaccrual loans excluded loans 90 or more days past due as follows: (1) mortgage loans insured by U.S. government agencies of $5.0 billion, $6.3 billion and $7.8 billion respectively; and (2) student loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") of $263 million, $290 million and $367 million, respectively. These amounts have been excluded based upon the government guarantee.

(c) Net charge-offs and the net charge-off rates for the years ended December 31, 2016, 2015 and 2014, excluded $156 million, $208 million, and $533 million, respectively, of write-offs in the PCI portfolio. These write-offs decreased the allowance for loan losses for PCI loans. For further information on PCI write-offs, see summary of changes in the allowance on page 106.

(d) Excludes the impact of PCI loans. For the years ended December 31, 2016, 2015 and 2014, the net charge-off rates including the impact of PCI loans were as follows: (1) home equity of 0.34%, 0.45% and 0.65%, respectively; (2) residential mortgage and other of 0.01%, -% and 0.01%, respectively; (3) Mortgage Banking of 0.09%, 0.14% and 0.27%, respectively; and (4) total CCB of 0.95%, 0.99% and 1.22%, respectively.
(e) Average credit card loans included loans held-for-sale of $84 million, $1.6 billion and $509 million for the years ended December 31, 2016, 2015 and 2014, respectively. These amounts are excluded when calculating the net charge-off rate.
(f) At December 31, 2016, 2015 and 2014, excluded mortgage loans insured by U.S. government agencies of $7.0 billion, $8.4 billion and $9.7 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.
(g) Excludes PCI loans. The 30+ day delinquency rate for PCI loans was 9.82%, 11.21% and 13.33% at December 31, 2016, 2015 and 2014, respectively.
(h) Period-end credit card loans included loans held-for-sale of $105 million, $76 million and $3.0 billion at December 31, 2016, 2015 and 2014, respectively. These amounts are excluded when calculating delinquency rates.
(i) Excluded student loans insured by U.S. government agencies under FFELP of $468 million, $526 million and $654 million at December 31, 2016, 2015 and 2014, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

Selected metrics

As of or for the year ended December 31, (in billions, except ratios and where otherwise noted)	2016	2015	2014
Business Metrics			
CCB households (in millions)	**60.0**	57.8	57.2
Number of branches	**5,258**	5,413	5,602
Active digital customers (in thousands)[a]	**43,836**	39,242	36,396
Active mobile customers (in thousands)[b]	**26,536**	22,810	19,084
Debit and credit card sales volume	**$ 817.9**	$ 753.8	$ 707.0
Consumer & Business Banking			
Average deposits	**$ 570.8**	$ 515.2	$ 472.3
Deposit margin	**1.81%**	1.90%	2.21%
Business banking origination volume	**$ 7.3**	$ 6.8	$ 6.6
Client investment assets	**234.5**	218.6	213.5
Mortgage Banking			
Mortgage origination volume by channel			
Retail	**$ 44.3**	$ 36.1	$ 29.5
Correspondent	**59.3**	70.3	48.5
Total mortgage origination volume[c]	**$ 103.6**	$ 106.4	$ 78.0
Total loans serviced (period-end)	**$ 846.6**	$ 910.1	$ 948.8
Third-party mortgage loans serviced (period-end)	**591.5**	674.0	751.5
MSR carrying value (period-end)	**6.1**	6.6	7.4
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	**1.03%**	0.98%	0.98%
MSR revenue multiple[d]	**2.94x**	2.80x	2.72x
Credit Card, excluding Commercial Card			
Credit card sales volume	**$ 545.4**	$ 495.9	$ 465.6
New accounts opened (in millions)	**10.4**	8.7	8.8
Card Services			
Net revenue rate	**11.29%**	12.33%	12.03%
Commerce Solutions			
Merchant processing volume	**$1,063.4**	$ 949.3	$ 847.9
Auto			
Loan and lease origination volume	**$ 35.4**	$ 32.4	$ 27.5
Average Auto operating lease assets	**11.0**	7.8	6.1

(a) Users of all web and/or mobile platforms who have logged in within the past 90 days.
(b) Users of all mobile platforms who have logged in within the past 90 days.
(c) Firmwide mortgage origination volume was $117.4 billion, $115.2 billion and $83.3 billion for the years ended December 31, 2016, 2015 and 2014, respectively.
(d) Represents the ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end) divided by the ratio of loan servicing-related revenue to third-party mortgage loans serviced (average).

Mortgage servicing-related matters

The Firm has resolved the majority of the consent orders and settlements into which it entered with federal and state governmental agencies and private parties related to mortgage servicing, origination, and residential mortgage-backed securities activities. However, among those obligations, the mortgage servicing-related Consent Order entered into with the Federal Reserve on April 13, 2011, as amended on February 28, 2013, and certain other settlements remain outstanding. The Audit Committee of the Board of Directors provides governance and oversight of the Federal Reserve Consent Order.

The Federal Reserve Consent Order and other obligations under certain mortgage-related settlements are the subject of ongoing reporting to various regulators and independent overseers. The Firm's compliance with certain of these settlements is detailed in periodic reports published by the independent overseers. The Firm is committed to fulfilling its commitments with appropriate diligence.

CORPORATE & INVESTMENT BANK

The Corporate & Investment Bank, which consists of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Treasury Services, which provides transaction services, consisting of cash management and liquidity solutions. Markets & Investor Services is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes Securities Services, a leading global custodian which provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

Selected income statement data

Year ended December 31, (in millions)	2016	2015	2014
Revenue			
Investment banking fees	**$ 6,424**	$ 6,736	$ 6,570
Principal transactions	**11,089**	9,905	8,947
Lending- and deposit-related fees	**1,581**	1,573	1,742
Asset management, administration and commissions	**4,062**	4,467	4,687
All other income[a]	**1,169**	1,012	1,474
Noninterest revenue	**24,325**	23,693	23,420
Net interest income[a]	**10,891**	9,849	11,175
Total net revenue	**35,216**	33,542	34,595
Provision for credit losses	**563**	332	(161)
Noninterest expense			
Compensation expense	**9,546**	9,973	10,449
Noncompensation expense	**9,446**	11,388	12,824
Total noninterest expense	**18,992**	21,361	23,273
Income before income tax expense	**15,661**	11,849	11,483
Income tax expense	**4,846**	3,759	4,575
Net income	**$ 10,815**	$ 8,090	$ 6,908

(a) Included tax-equivalent adjustments, predominantly due to income tax credits related to alternative energy investments; income tax credits and amortization of the cost of investments in affordable housing projects; and tax-exempt income from municipal bonds of $2.0 billion, $1.7 billion and $1.6 billion for the years ended December 31, 2016, 2015 and 2014, respectively.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2016	2015	2014
Financial ratios			
Return on common equity	**16%**	12%	10%
Overhead ratio	**54**	64	67
Compensation expense as percentage of total net revenue	**27**	30	30
Revenue by business			
Investment Banking	**$ 5,950**	$ 6,376	$ 6,122
Treasury Services	**3,643**	3,631	3,728
Lending	**1,208**	1,461	1,547
Total Banking	**10,801**	11,468	11,397
Fixed Income Markets	**15,259**	12,592	14,075
Equity Markets	**5,740**	5,694	5,044
Securities Services	**3,591**	3,777	4,351
Credit Adjustments & Other[a]	**(175)**	11	(272)
Total Markets & Investor Service	**24,415**	22,074	23,198
Total net revenue	**$35,216**	$33,542	$34,595

(a) Effective January 1, 2016, consists primarily of credit valuation adjustments ("CVA") managed by the Credit Portfolio Group, Funding valuation adjustment ("FVA") and DVA on derivatives. Results are primarily reported in Principal transactions. Prior periods also include DVA on fair value option elected liabilities. Results are presented net of associated hedging activities and net of CVA and FVA amounts allocated to Fixed Income Markets and Equity Markets. Effective January 1, 2016, changes in DVA on fair value option elected liabilities is recognized in OCI. For additional information, see Accounting and Reporting Developments on page 135 and Notes 3, 4 and 25.

2016 compared with 2015

Net income was $10.8 billion, up 34% compared with the prior year, driven by lower noninterest expense and higher net revenue, partially offset by a higher provision for credit losses.

Banking revenue was $10.8 billion, down 6% compared with the prior year. Investment banking revenue was $6.0 billion, down 7% from the prior year, largely driven by lower equity underwriting fees. The Firm maintained its #1 ranking for Global Investment Banking fees, according to Dealogic. Equity underwriting fees were $1.2 billion, down 19% driven by lower industry-wide fee levels; however, the Firm improved its market share and maintained its #1 ranking in equity underwriting fees globally as well as in both North America and Europe and its #1 ranking by volumes across all products, according to Dealogic. Advisory fees were $2.1 billion, down 1%; the Firm maintained its #2 ranking for M&A, according to Dealogic. Debt underwriting fees were $3.2 billion; the Firm maintained its #1 ranking globally in fees across high grade, high yield, and loan products, according to Dealogic. Treasury Services revenue was $3.6 billion. Lending revenue was $1.2 billion, down 17% from the prior year, reflecting fair value losses on hedges of accrual loans.

Markets & Investor Services revenue was $24.4 billion, up 11% from the prior year. Fixed Income Markets revenue was $15.3 billion, up 21% from the prior year, driven by broad strength across products. Rates performance was strong, with increased client activity driven by high issuance-based flows, global political developments, and central bank actions. Credit and Securitized Products revenue improved driven by higher market-making revenue from the secondary market as clients' risk appetite recovered, and due to increased financing activity. Equity Markets revenue was $5.7 billion, up 1%, compared to a strong prior-year. Securities Services revenue was $3.6 billion, down 5% from the prior year, largely driven by lower fees and commissions. Credit Adjustments and Other was a loss of $175 million driven by valuation adjustments, compared with an $11 million gain in prior-year, which included funding spread gains on fair value option elected liabilities.

The provision for credit losses was $563 million, compared to $332 million in the prior year, reflecting a higher allowance for credit losses, including the impact of select downgrades within the Oil & Gas portfolio.

Noninterest expense was $19.0 billion, down 11% compared with the prior year, driven by lower legal and compensation expenses.

2015 compared with 2014

Net income was $8.1 billion, up 17% compared with $6.9 billion in the prior year. The increase primarily reflected lower income tax expenses largely reflecting the release in 2015 of U.S. deferred taxes associated with the restructuring of certain non-U.S. entities and lower noninterest expense partially offset by lower net revenue, both driven by business simplification, as well as higher provisions for credit losses.

Banking revenue was $11.5 billion, up 1% versus the prior year. Investment banking revenue was $6.4 billion, up 4% from the prior year, driven by higher advisory fees, partially offset by lower debt and equity underwriting fees. Advisory fees were $2.1 billion, up 31% on a greater share of fees for completed transactions as well as growth in the industry-wide fee levels. The Firm maintained its #2 ranking for M&A, according to Dealogic. Debt underwriting fees were $3.2 billion, down 6%, primarily related to lower bond underwriting and loan syndication fees on lower industry-wide fee levels. The Firm ranked #1 globally in fee share across high grade, high yield and loan products. Equity underwriting fees were $1.4 billion, down 9%, driven by lower industry-wide fee levels. The Firm was #1 in equity underwriting fees in 2015, up from #3 in 2014. Treasury Services revenue was $3.6 billion, down 3% compared with the prior year, primarily driven by lower net interest income. Lending revenue was $1.5 billion, down 6% from the prior year, driven by lower trade finance revenue on lower loan balances.

Markets & Investor Services revenue was $22.1 billion, down 5% from the prior year. Fixed Income Markets revenue was $12.6 billion, down 11% from the prior year, primarily driven by the impact of business simplification as well as lower revenue in credit-related products on an industry-wide slowdown, partially offset by increased revenue in Rates and Currencies & Emerging Markets on higher client activity. The lower Fixed Income revenue also reflected higher interest costs on higher long-term debt. Equity Markets revenue was $5.7 billion, up 13%, primarily driven by higher equity derivatives revenue across all regions. Securities Services revenue was $3.8 billion, down 13% from the prior year, driven by lower fees as well as lower net interest income.

The provision for credit losses was $332 million, compared to a benefit of $161 million in the prior year, reflecting a higher allowance for credit losses, including the impact of select downgrades within the Oil & Gas portfolio.

Noninterest expense was $21.4 billion, down 8% compared with the prior year, driven by the impact of business simplification as well as lower legal and compensation expenses.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2016	2015	2014
Selected balance sheet data (period-end)			
Assets	**$ 803,511**	$ 748,691	$ 861,466
Loans:			
Loans retained[a]	**111,872**	106,908	96,409
Loans held-for-sale and loans at fair value	**3,781**	3,698	5,567
Total loans	**115,653**	110,606	101,976
Core Loans	**115,243**	110,084	100,772
Common equity	**64,000**	62,000	61,000
Selected balance sheet data (average)			
Assets	**$ 815,321**	$ 824,208	$ 854,712
Trading assets-debt and equity instruments	**300,606**	302,514	317,535
Trading assets-derivative receivables	**63,387**	67,263	64,833
Loans:			
Loans retained[a]	**111,082**	98,331	95,764
Loans held-for-sale and loans at fair value	**3,812**	4,572	7,599
Total loans	**114,894**	102,903	103,363
Core Loans[b]	**114,455**	102,142	99,500
Common equity	**64,000**	62,000	61,000
Headcount	**48,748**	49,067	50,965

(a) Loans retained includes credit portfolio loans, loans held by consolidated Firm-administered multi-seller conduits, trade finance loans, other held-for-investment loans and overdrafts.
(b) Prior period amounts were revised to conform with current period presentation.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2016	2015	2014
Credit data and quality statistics			
Net charge-offs/ (recoveries)	**$ 168**	$ (19)	$ (12)
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**467**	428	110
Nonaccrual loans held-for-sale and loans at fair value	**109**	10	11
Total nonaccrual loans	**576**	438	121
Derivative receivables	**223**	204	275
Assets acquired in loan satisfactions	**79**	62	67
Total nonperforming assets	**878**	704	463
Allowance for credit losses:			
Allowance for loan losses	**1,420**	1,258	1,034
Allowance for lending-related commitments	**801**	569	439
Total allowance for credit losses	**2,221**	1,827	1,473
Net charge-off/(recovery) rate	**0.15%**	(0.02)%	(0.01)%
Allowance for loan losses to period-end loans retained	**1.27**	1.18	1.07
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits[b]	**1.86**	1.88	1.82
Allowance for loan losses to nonaccrual loans retained[a]	**304**	294	940
Nonaccrual loans to total period-end loans	**0.50**	0.40	0.12

(a) Allowance for loan losses of $113 million, $177 million and $18 million were held against these nonaccrual loans at December 31, 2016, 2015 and 2014, respectively.
(b) Management uses allowance for loan losses to period-end loans retained, excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio.

Investment banking fees

	Year ended December 31,		
(in millions)	**2016**	2015	2014
Advisory	**$ 2,110**	$ 2,133	$ 1,627
Equity underwriting	**1,159**	1,434	1,571
Debt underwriting[a]	**3,155**	3,169	3,372
Total investment banking fees	**$ 6,424**	$ 6,736	$ 6,570

(a) Includes loans syndication

League table results – wallet share

Year ended December 31,	2016 Share	2016 Rank	2015 Share	2015 Rank	2014 Share	2014 Rank
Based on fees[a]						
Debt, equity and equity-related						
Global	**7.2%**	**#1**	7.7%	#1	7.6%	#1
U.S.	**11.9**	**1**	11.7	1	10.7	1
Long-term debt[b]						
Global	**6.9**	**1**	8.3	1	7.9	1
U.S.	**11.1**	**2**	11.9	1	11.7	1
Equity and equity-related						
Global[c]	**7.6**	**1**	7.0	1	7.2	3
U.S.	**13.4**	**1**	11.4	1	9.6	3
M&A[d]						
Global	**8.6**	**2**	8.4	2	8.0	2
U.S.	**10.1**	**2**	9.9	2	9.7	2
Loan syndications						
Global	**9.4**	**1**	7.5	1	9.3	1
U.S.	**11.9**	**2**	10.8	2	13.0	1
Global investment banking fees[e]	**8.1%**	**#1**	7.9%	#1	8.0%	#1

(a) Source: Dealogic as of January 3, 2017. Reflects the ranking of revenue wallet and market share.
(b) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, ABS and MBS; and exclude money market, short-term debt, and U.S. municipal securities.
(c) Global equity and equity-related ranking includes rights offerings and Chinese A-Shares.
(d) Global M&A reflect the removal of any withdrawn transactions. U.S. M&A revenue wallet represents wallet from client parents based in the U.S.
(e) Global investment banking fees exclude money market, short-term debt and shelf deals.

Markets Revenue

The following table summarizes select income statement data for the Markets businesses. Markets includes both Fixed Income Markets and Equity Markets. Markets revenue comprises principal transactions, fees, commissions and other income, as well as net interest income. For a description of the composition of these income statement line items, see Notes 7 and 8.

Principal transactions reflects revenue on financial instruments and commodities transactions that arise from client-driven market making activity. Principal transactions revenue includes amounts recognized upon executing new transactions with market participants, as well as "inventory-related revenue", which is revenue recognized from gains and losses on derivatives and other instruments that the Firm has been holding in anticipation of, or in response to, client demand, and changes in the fair value of instruments used by the Firm to actively manage the risk exposure arising from such inventory. Principal transactions revenue recognized upon executing new transactions with market participants is driven by many factors including the level of client activity, the bid-offer spread (which is the difference between the price at which a market participant is willing to sell an instrument to the Firm and the price at which another market participant is willing to buy it from the Firm, and vice versa), market liquidity and volatility. These factors are interrelated and sensitive to the same factors that drive inventory-related revenue, which include general market conditions, such as interest rates, foreign exchange rates, credit spreads, and equity and commodity prices, as well as other macroeconomic conditions.

For the periods presented below, the predominant source of principal transactions revenue was the amounts recognized upon executing new transactions.

Year ended December 31, (in millions, except where otherwise noted)	2016 Fixed Income Markets	2016 Equity Markets	2016 Total Markets	2015 Fixed Income Markets	2015 Equity Markets	2015 Total Markets	2014 Fixed Income Markets	2014 Equity Markets	2014 Total Markets
Principal transactions	**$ 8,347**	**$ 3,130**	**$ 11,477**	$ 6,899	$ 3,038	$ 9,937	$ 7,014	$ 2,362	$ 9,376
Lending- and deposit-related fees	**220**	**2**	**222**	194	–	194	222	2	224
Asset management, administration and commissions	**388**	**1,551**	**1,939**	383	1,704	2,087	345	1,684	2,029
All other income	**1,014**	**13**	**1,027**	854	(84)	770	1,399	59	1,458
Noninterest revenue	**9,969**	**4,696**	**14,665**	8,330	4,658	12,988	8,980	4,107	13,087
Net interest income	**5,290**	**1,044**	**6,334**	4,262	1,036	5,298	5,095	937	6,032
Total net revenue	**$ 15,259**	**$ 5,740**	**$ 20,999**	$ 12,592	$ 5,694	$ 18,286	$ 14,075	$ 5,044	$ 19,119
Loss days[a]			**0**			2			0

(a) Loss days represent the number of days for which Markets posted losses. The loss days determined under this measure differ from the loss days that are determined based on the disclosure of market risk-related gains and losses for the Firm in the value-at-risk ("VaR") back-testing discussion on pages 118-120.

Selected metrics

As of or for the year ended December 31, (in millions, except where otherwise noted)	2016	2015	2014
Assets under custody ("AUC") by asset class (period-end) (in billions):			
Fixed Income	**$ 12,166**	$ 12,042	$ 12,328
Equity	**6,428**	6,194	6,524
Other[a]	**1,926**	1,707	1,697
Total AUC	**$ 20,520**	$ 19,943	$ 20,549
Client deposits and other third party liabilities (average)[b]	**$ 376,287**	$ 395,297	$ 417,369
Trade finance loans (period-end)	**15,923**	19,255	25,713

(a) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.
(b) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses.

International metrics

Year ended December 31, (in millions, except where otherwise noted)	2016	2015	2014
Total net revenue[a]			
Europe/Middle East/Africa	**$ 10,786**	$ 10,894	$ 11,598
Asia/Pacific	**4,915**	4,901	4,698
Latin America/Caribbean	**1,225**	1,096	1,179
Total international net revenue	**16,926**	16,891	17,475
North America	**18,290**	16,651	17,120
Total net revenue	**$ 35,216**	$ 33,542	$ 34,595
Loans retained (period-end)[a]			
Europe/Middle East/Africa	**$ 26,696**	$ 24,622	$ 27,155
Asia/Pacific	**14,508**	17,108	19,992
Latin America/Caribbean	**7,607**	8,609	8,950
Total international loans	**48,811**	50,339	56,097
North America	**63,061**	56,569	40,312
Total loans retained	**$111,872**	$106,908	$ 96,409
Client deposits and other third-party liabilities (average)[a][b]			
Europe/Middle East/Africa	**$135,979**	$141,062	$ 152,712
Asia/Pacific	**68,110**	67,111	66,933
Latin America/Caribbean	**22,914**	23,070	22,360
Total international	**$227,003**	$231,243	$ 242,005
North America	**149,284**	164,054	175,364
Total client deposits and other third-party liabilities	**$376,287**	$395,297	$ 417,369
AUC (period-end) (in billions)[a]			
North America	**$ 12,290**	$ 12,034	$ 11,987
All other regions	**8,230**	7,909	8,562
Total AUC	**$ 20,520**	$ 19,943	$ 20,549

(a) Total net revenue is based predominantly on the domicile of the client or location of the trading desk, as applicable. Loans outstanding (excluding loans held-for-sale and loans at fair value), client deposits and other third-party liabilities, and AUC are based predominantly on the domicile of the client.
(b) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses.

Commercial Banking delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. In addition, CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Selected income statement data

Year ended December 31, (in millions)	2016	2015	2014
Revenue			
Lending- and deposit-related fees	**$ 917**	$ 944	$ 978
Asset management, administration and commissions	**69**	88	92
All other income[a]	**1,334**	1,333	1,279
Noninterest revenue	**2,320**	2,365	2,349
Net interest income	**5,133**	4,520	4,533
Total net revenue[b]	**7,453**	6,885	6,882
Provision for credit losses	**282**	442	(189)
Noninterest expense			
Compensation expense	**1,332**	1,238	1,203
Noncompensation expense	**1,602**	1,643	1,492
Total noninterest expense	**2,934**	2,881	2,695
Income before income tax expense	**4,237**	3,562	4,376
Income tax expense	**1,580**	1,371	1,741
Net income	**$ 2,657**	$ 2,191	$ 2,635

(a) Includes revenue from investment banking products and commercial card transactions.

(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities, as well as tax-exempt income related to municipal financing activities of $505 million, $493 million and $462 million for the years ended December 31, 2016, 2015 and 2014, respectively.

2016 compared with 2015

Net income was $2.7 billion, an increase of 21% compared with the prior year, driven by higher net revenue and a lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was $7.5 billion, an increase of 8% compared with the prior year. Net interest income was $5.1 billion, an increase of 14% compared with the prior year, driven by higher loan balances and deposit spreads. Noninterest revenue was $2.3 billion, a decrease of 2% compared with the prior year, largely driven by lower lending-and-deposit-related fees and other revenue, partially offset by higher investment banking revenue.

Noninterest expense was $2.9 billion, an increase of 2% compared with the prior year, reflecting increased hiring of bankers and business-related support staff and investments in technology.

The provision for credit losses was $282 million and $442 million for 2016 and 2015, respectively, with both periods driven by downgrades in the Oil & Gas portfolio and select client downgrades in other industries.

2015 compared with 2014

Net income was $2.2 billion, a decrease of 17% compared with the prior year, driven by a higher provision for credit losses and higher noninterest expense.

Net revenue was $6.9 billion, flat compared with the prior year. Net interest income was $4.5 billion, flat compared with the prior year, with interest income from higher loan balances offset by spread compression. Noninterest revenue was $2.4 billion, flat compared with the prior year, with higher investment banking revenue offset by lower lending-related fees.

Noninterest expense was $2.9 billion, an increase of 7% compared with the prior year, reflecting investment in controls.

The provision for credit losses was $442 million, reflecting an increase in the allowance for credit losses for Oil & Gas exposure and select client downgrades in other industries. The prior year was a benefit of $189 million.

CB product revenue consists of the following:

Lending includes a variety of financing alternatives, which are primarily provided on a secured basis; collateral includes receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, and standby letters of credit.

Treasury services includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

Investment banking includes revenue from a range of products providing CB clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from Fixed Income and Equity Markets products used by CB clients is also included. Investment banking revenue, gross, represents total revenue related to investment banking products sold to CB clients.

Other product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activities and certain income derived from principal transactions.

CB is divided into four primary client segments: Middle Market Banking, Corporate Client Banking, Commercial Term Lending, and Real Estate Banking.

Middle Market Banking covers corporate, municipal and nonprofit clients, with annual revenue generally ranging between $20 million and $500 million.

Corporate Client Banking covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs.

Commercial Term Lending primarily provides term financing to real estate investors/owners for multifamily properties as well as office, retail and industrial properties.

Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate investment properties.

Other primarily includes lending and investment-related activities within the Community Development Banking business.

Selected income statement data (continued)

Year ended December 31, (in millions, except ratios)	2016	2015	2014
Revenue by product			
Lending	**$ 3,795**	$ 3,429	$ 3,358
Treasury services	**2,797**	2,581	2,681
Investment banking[a]	**785**	730	684
Other	**76**	145	159
Total Commercial Banking net revenue	**$ 7,453**	$ 6,885	$ 6,882
Investment banking revenue, gross[b]	**$ 2,286**	$ 2,179	$ 1,986
Revenue by client segment[c]			
Middle Market Banking	**$ 2,885**	$ 2,706	$ 2,765
Corporate Client Banking	**2,392**	2,184	2,134
Commercial Term Lending	**1,408**	1,275	1,252
Real Estate Banking	**456**	358	369
Other	**312**	362	362
Total Commercial Banking net revenue	**$ 7,453**	$ 6,885	$ 6,882
Financial ratios			
Return on common equity	**16%**	15%	18%
Overhead ratio	**39**	42	39

(a) Includes total Firm revenue from investment banking products sold to CB clients, net of revenue sharing with the CIB.
(b) Represents total Firm revenue from investment banking products sold to CB clients.
(c) Certain clients were transferred from Middle Market Banking to Corporate Client Banking and from Real Estate Banking to Corporate Client Banking during 2016. Prior period client segment amounts were revised to conform with the current period presentation.

Selected metrics (continued)

As of or for the year ended December 31, (in millions, except headcount)	2016	2015	2014
Selected balance sheet data (period-end)			
Total assets	**$ 214,341**	$ 200,700	$ 195,267
Loans:			
Loans retained	**188,261**	167,374	147,661
Loans held-for-sale and loans at fair value	**734**	267	845
Total loans	**$ 188,995**	$ 167,641	$ 148,506
Core loans	**188,673**	166,939	147,392
Common equity	**16,000**	14,000	14,000
Period-end loans by client segment[a]			
Middle Market Banking	**$ 53,931**	$ 50,502	$ 50,040
Corporate Client Banking	**43,025**	37,708	30,564
Commercial Term Lending	**71,249**	62,860	54,038
Real Estate Banking	**14,722**	11,234	9,024
Other	**6,068**	5,337	4,840
Total Commercial Banking loans	**$ 188,995**	$ 167,641	$ 148,506
Selected balance sheet data (average)			
Total assets	**$ 207,532**	$ 198,076	$ 191,857
Loans:			
Loans retained	**178,670**	157,389	140,982
Loans held-for-sale and loans at fair value	**723**	492	782
Total loans	**$ 179,393**	$ 157,881	$ 141,764
Core loans	**178,875**	156,975	140,390
Client deposits and other third-party liabilities	**174,396**	191,529	204,017
Common equity	**16,000**	14,000	14,000
Average loans by client segment[a]			
Middle Market Banking	**$ 52,244**	$ 50,336	$ 50,076
Corporate Client Banking	**41,754**	34,495	27,732
Commercial Term Lending	**66,700**	58,138	51,120
Real Estate Banking	**13,063**	9,917	8,324
Other	**5,632**	4,995	4,512
Total Commercial Banking loans	**$ 179,393**	$ 157,881	$ 141,764
Headcount	**8,365**	7,845	7,426

(a) Certain clients were transferred from Middle Market Banking to Corporate Client Banking and from Real Estate Banking to Corporate Client Banking during 2016. Prior period client segment amounts were revised to conform with the current period presentation.

Selected metrics (continued)

As of or for the year ended December 31, (in millions, except ratios)	2016	2015	2014
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ 163**	$ 21	$ (7)
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**1,149**	375	317
Nonaccrual loans held-for-sale and loans at fair value	**–**	18	14
Total nonaccrual loans	**1,149**	393	331
Assets acquired in loan satisfactions	**1**	8	10
Total nonperforming assets	**1,150**	401	341
Allowance for credit losses:			
Allowance for loan losses	**2,925**	2,855	2,466
Allowance for lending-related commitments	**248**	198	165
Total allowance for credit losses	**3,173**	3,053	2,631
Net charge-off/(recovery) rate[b]	**0.09%**	0.01%	–%
Allowance for loan losses to period-end loans retained	**1.55**	1.71	1.67
Allowance for loan losses to nonaccrual loans retained[a]	**255**	761	778
Nonaccrual loans to period-end total loans	**0.61**	0.23	0.22

(a) An allowance for loan losses of $155 million, $64 million and $45 million was held against nonaccrual loans retained at December 31, 2016, 2015 and 2014, respectively.

(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.

ASSET & WEALTH MANAGEMENT

Asset & Wealth Management, with client assets of $2.5 trillion, is a global leader in investment and wealth management. AWM clients include institutions, high-net-worth individuals and retail investors in many major markets throughout the world. AWM offers investment management across most major asset classes including equities, fixed income, alternatives and money market funds. AWM also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For Wealth Management clients, AWM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AWM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios and headcount)	2016	2015	2014
Revenue			
Asset management, administration and commissions	**$ 8,414**	$ 9,175	$ 9,024
All other income	**598**	388	564
Noninterest revenue	**9,012**	9,563	9,588
Net interest income	**3,033**	2,556	2,440
Total net revenue	**12,045**	12,119	12,028
Provision for credit losses	**26**	4	4
Noninterest expense			
Compensation expense	**5,065**	5,113	5,082
Noncompensation expense	**3,413**	3,773	3,456
Total noninterest expense	**8,478**	8,886	8,538
Income before income tax expense	**3,541**	3,229	3,486
Income tax expense	**1,290**	1,294	1,333
Net income	**$ 2,251**	$ 1,935	$ 2,153
Revenue by line of business			
Asset Management	**$ 5,970**	$ 6,301	$ 6,327
Wealth Management	**6,075**	5,818	5,701
Total net revenue	**$12,045**	$12,119	$12,028
Financial ratios			
Return on common equity	**24%**	21%	23%
Overhead ratio	**70**	73	71
Pre-tax margin ratio:			
Asset Management	**31**	31	31
Wealth Management	**28**	22	27
Asset & Wealth Management	**29**	27	29
Headcount	**21,082**	20,975	19,735
Number of client advisors	**2,504**	2,778	2,836

2016 compared with 2015

Net income was $2.3 billion, an increase of 16% compared with the prior year, reflecting lower noninterest expense, partially offset by lower net revenue.

Net revenue was $12.0 billion, a decrease of 1%. Net interest income was $3.0 billion, up 19%, driven by higher deposit and loan spreads and loan growth. Noninterest revenue was $9.0 billion, a decrease of 6%, reflecting the impact of lower average equity market levels, a reduction in revenue related to the disposal of assets at the beginning of 2016, and lower performance fees and placement fees.

Revenue from Asset Management was $6.0 billion, down 5% from the prior year, driven by a reduction in revenue related to the disposal of assets at the beginning of 2016, the impact of lower average equity market levels and lower performance fees. Revenue from Wealth Management was $6.1 billion, up 4% from the prior year, reflecting higher net interest income from higher deposit and loan spreads and continued loan growth, partially offset by the impact of lower average equity market levels and lower placement fees.

Noninterest expense was $8.5 billion, a decrease of 5%, predominantly due to a reduction in expense related to the disposal of assets at the beginning of 2016 and lower legal expense.

2015 compared with 2014

Net income was $1.9 billion, a decrease of 10% compared with the prior year, reflecting higher noninterest expense, predominantly offset by higher net revenue.

Net revenue was $12.1 billion, an increase of 1%. Net interest income was $2.6 billion, up 5%, driven by higher loan balances and spreads. Noninterest revenue was $9.6 billion, flat from last year, as net client inflows into assets under management and the impact of higher average market levels were predominantly offset by lower performance fees and the sale of Retirement Plan Services ("RPS") in 2014.

Revenue from Asset Management was $6.3 billion, flat from the prior year as the sale of RPS in 2014 and lower performance fees were largely offset by net client inflows. Revenue from Wealth Management was $5.8 billion, up 2% from the prior year due to higher net interest income from higher loan balances and spreads and net client inflows, partially offset by lower brokerage revenue.

Noninterest expense was $8.9 billion, an increase of 4%, predominantly due to higher legal expense and investment in both infrastructure and controls.

AWM's lines of business consist of the following:

Asset Management provides comprehensive global investment services, including asset management, pension analytics, asset-liability management and active risk-budgeting strategies.

Wealth Management offers investment advice and wealth management, including investment management, capital markets and risk management, tax and estate planning, banking, lending and specialty-wealth advisory services.

AWM's client segments consist of the following:

Private Banking clients include high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide.

Institutional clients include both corporate and public institutions, endowments, foundations, nonprofit organizations and governments worldwide.

Retail clients include financial intermediaries and individual investors.

Asset Management has two high-level measures of its overall fund performance.

- **Percentage of mutual fund assets under management in funds rated 4- or 5-star:** Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best rating and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22.5% of industry-wide ranked funds. A 3-star rating represents the next 35% of industry-wide ranked funds. A 2-star rating represents the next 22.5% of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom 10% of industry-wide ranked funds. The "overall Morningstar rating" is derived from a weighted average of the performance associated with a fund's three-, five- and ten-year (if applicable) Morningstar Rating metrics. For U.S. domiciled funds, separate star ratings are given at the individual share class level. The Nomura "star rating" is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and hence excluded from this analysis. All ratings, the assigned peer categories and the asset values used to derive this analysis are sourced from these fund rating providers mentioned in footnote (a). The data providers re-denominate the asset values into U.S. dollars. This % of AUM is based on star ratings at the share class level for U.S. domiciled funds, and at a "primary share class" level to represent the star rating of all other funds except for Japan where Nomura provides ratings at the fund level. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results.
- **Percentage of mutual fund assets under management in funds ranked in the 1st or 2nd quartile (one, three and five years):** All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from the fund ranking providers mentioned in footnote (b). Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers re-denominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results.

Selected metrics

As of or for the year ended December 31, (in millions, except ranking data and ratios)	2016	2015	2014
% of JPM mutual fund assets rated as 4- or 5-star[a][b]	**63%**	52%	51%
% of JPM mutual fund assets ranked in 1st or 2nd quartile:[c]			
1 year	**54**	62	72
3 years	**72**	78	72
5 years[b]	**79**	79	76
Selected balance sheet data (period-end)			
Total assets	**$ 138,384**	$ 131,451	$ 128,701
Loans[d]	**118,039**	111,007	104,279
Core loans	**118,039**	111,007	104,279
Deposits	**161,577**	146,766	155,247
Common equity	**9,000**	9,000	9,000
Selected balance sheet data (average)			
Total assets	**$ 132,875**	$ 129,743	$ 126,440
Loans	**112,876**	107,418	99,805
Core loans	**112,876**	107,418	99,805
Deposits	**153,334**	149,525	150,121
Common equity	**9,000**	9,000	9,000
Credit data and quality statistics			
Net charge-offs	**$ 16**	$ 12	$ 6
Nonaccrual loans	**390**	218	218
Allowance for credit losses:			
Allowance for loan losses	**274**	266	271
Allowance for lending-related commitments	**4**	5	5
Total allowance for credit losses	**278**	271	276
Net charge-off rate	**0.01%**	0.01%	0.01%
Allowance for loan losses to period-end loans	**0.23**	0.24	0.26
Allowance for loan losses to nonaccrual loans	**70**	122	124
Nonaccrual loans to period-end loans	**0.33**	0.20	0.21

(a) Represents the "overall star rating" derived from Morningstar for the U.S., the U.K., Luxembourg, Hong Kong and Taiwan domiciled funds; and Nomura "star rating" for Japan domiciled funds. Includes only Asset Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds.

(b) Prior period amounts were revised to conform with current period presentation.

(c) Quartile ranking sourced from: Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds.

(d) Included $32.8 billion, $26.6 billion and $22.1 billion of prime mortgage loans reported in the Consumer, excluding credit card, loan portfolio at December 31, 2016, 2015 and 2014, respectively.

Client assets

2016 compared with 2015

Client assets were $2.5 trillion, an increase of 4% compared with the prior year. Assets under management were $1.8 trillion, an increase of 3% from the prior year reflecting inflows into both liquidity and long-term products and the effect of higher market levels, partially offset by asset sales at the beginning of 2016.

2015 compared with 2014

Client assets were $2.4 trillion, a decrease of 2% compared with the prior year. Assets under management were $1.7 trillion, a decrease of 1% from the prior year reflecting the effect of lower market levels, partially offset by net inflows to long-term products.

Client assets

December 31, (in billions)	2016	2015	2014
Assets by asset class			
Liquidity[a]	**$ 436**	$ 430	$ 425
Fixed income[a]	**420**	376	395
Equity	**351**	353	375
Multi-asset and alternatives	**564**	564	549
Total assets under management	**1,771**	1,723	1,744
Custody/brokerage/ administration/deposits	**682**	627	643
Total client assets	**$ 2,453**	$ 2,350	$ 2,387
Memo:			
Alternatives client assets[b]	**$ 154**	$ 172	$ 166
Assets by client segment			
Private Banking	**$ 435**	$ 437	$ 428
Institutional	**869**	816	827
Retail	**467**	470	489
Total assets under management	**$ 1,771**	$ 1,723	$ 1,744
Private Banking	**$ 1,098**	$ 1,050	$ 1,057
Institutional	**886**	824	835
Retail	**469**	476	495
Total client assets	**$ 2,453**	$ 2,350	$ 2,387

(a) Prior period amounts were revised to conform with current period presentation.
(b) Represents assets under management, as well as client balances in brokerage accounts.

Client assets (continued)

Year ended December 31, (in billions)	2016	2015	2014
Assets under management rollforward			
Beginning balance	**$ 1,723**	$ 1,744	$ 1,598
Net asset flows:			
Liquidity[a]	**24**	–	14
Fixed income[a]	**30**	(8)	37
Equity	**(29)**	1	5
Multi-asset and alternatives	**22**	22	42
Market/performance/other impacts	**1**	(36)	48
Ending balance, December 31	**$ 1,771**	$ 1,723	$ 1,744
Client assets rollforward			
Beginning balance	**$ 2,350**	$ 2,387	$ 2,343
Net asset flows	**63**	27	118
Market/performance/other impacts	**40**	(64)	(74)
Ending balance, December 31	**$ 2,453**	$ 2,350	$ 2,387

(a) Prior period amounts were revised to conform with current period presentation.

International metrics

Year ended December 31, (in billions, except where otherwise noted)	2016	2015	2014
Total net revenue (in millions)[a]			
Europe/Middle East/Africa	**$ 1,849**	$ 1,946	$ 2,080
Asia/Pacific	**1,077**	1,130	1,199
Latin America/Caribbean	**726**	795	841
Total international net revenue	**3,652**	3,871	4,120
North America	**8,393**	8,248	7,908
Total net revenue	**$ 12,045**	$ 12,119	$ 12,028
Assets under management			
Europe/Middle East/Africa	**$ 309**	$ 302	$ 329
Asia/Pacific	**123**	123	126
Latin America/Caribbean	**45**	45	46
Total international assets under management	**477**	470	501
North America	**1,294**	1,253	1,243
Total assets under management	**$ 1,771**	$ 1,723	$ 1,744
Client assets			
Europe/Middle East/Africa	**$ 359**	$ 351	$ 391
Asia/Pacific	**177**	173	174
Latin America/Caribbean	**114**	110	115
Total international client assets	**650**	634	680
North America	**1,803**	1,716	1,707
Total client assets	**$ 2,453**	$ 2,350	$ 2,387

(a) Regional revenue is based on the domicile of the client.

The Corporate segment consists of Treasury and Chief Investment Office and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Enterprise Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups.

Selected income statement data

Year ended December 31, (in millions, except headcount)	2016	2015	2014
Revenue			
Principal transactions	**$ 210**	$ 41	$ 1,197
Securities gains	**140**	190	71
All other income	**588**	569	704
Noninterest revenue	**938**	800	1,972
Net interest income	**(1,425)**	(533)	(1,960)
Total net revenue[a]	**(487)**	267	12
Provision for credit losses	**(4)**	(10)	(35)
Noninterest expense[b]	**462**	977	1,159
Loss before income tax benefit	**(945)**	(700)	(1,112)
Income tax benefit	**(241)**	(3,137)	(1,976)
Net income/(loss)	**$ (704)**	$ 2,437	$ 864
Total net revenue			
Treasury and CIO	**(787)**	(493)	(1,317)
Other Corporate	**300**	760	1,329
Total net revenue	**$ (487)**	$ 267	$ 12
Net income/(loss)			
Treasury and CIO	**(715)**	(235)	(1,165)
Other Corporate	**11**	2,672	2,029
Total net income/(loss)	**$ (704)**	$ 2,437	$ 864
Selected balance sheet data (period-end)			
Total assets (period-end)	**$799,426**	$ 768,204	$ 931,206
Loans	**1,592**	2,187	2,871
Core loans[c]	**1,589**	2,182	2,848
Headcount	**32,358**	29,617	26,047

(a) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $885 million, $839 million and $730 million for the years ended December 31, 2016, 2015 and 2014, respectively.

(b) Included legal expense/(benefit) of $(385) million, $832 million and $821 million for the years ended December 31, 2016, 2015 and 2014, respectively.

(c) Average core loans were $1.9 billion, $2.5 billion and $3.3 billion for the years ended December 31, 2016, 2015 and 2014, respectively.

2016 compared with 2015

Net loss was $704 million, compared with net income of $2.4 billion in the prior year.

Net revenue was a loss of $487 million, compared with a gain of $267 million in the prior year. The prior year included a $514 million benefit from a legal settlement.

Net interest income was a loss of $1.4 billion, compared with a loss of $533 million in the prior year. The loss in the current year was primarily driven by higher interest expense on long-term debt and lower investment securities balances during the year, partially offset by higher interest income on deposits with banks and securities purchased under resale agreements as a result of higher rates.

Noninterest expense was $462 million, a decrease of $515 million from the prior year driven by lower legal expense, partially offset by higher compensation expense.

The prior year reflected tax benefits of $2.6 billion predominantly from the resolution of various tax audits.

2015 compared with 2014

Net income was $2.4 billion, compared with net income of $864 million in the prior year.

Net revenue was $267 million, compared with $12 million in the prior year. The current year included a $514 million benefit from a legal settlement. Treasury and CIO included a benefit of approximately $178 million associated with recognizing the unamortized discount on certain debt securities which were called at par and a $173 million pretax loss primarily related to accelerated amortization of cash flow hedges associated with the exit of certain non-operating deposits. Private Equity gains were $1.2 billion lower compared with the prior year, reflecting lower valuation gains and lower net gains on sales as the Firm exits this non-core business.

Noninterest expense was $977 million, a decrease of $182 million from the prior year which had included a $276 million goodwill impairment related to the sale of a portion of the Private Equity business.

The current year reflected tax benefits of $2.6 billion predominantly from the resolution of various tax audits compared with tax benefits of $1.1 billion in the prior year.

Treasury and CIO overview

Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's four major reportable business segments to serve their respective client bases, which generate both on- and off-balance sheet assets and liabilities.

Treasury and CIO achieve the Firm's asset-liability management objectives generally by investing in high-quality securities that are managed for the longer-term as part of the Firm's investment securities portfolio. Treasury and CIO also use derivatives to meet the Firm's asset-liability management objectives. For further information on derivatives, see Note 6. The investment securities portfolio primarily consists of U.S. and non-U.S. government securities, agency and nonagency mortgage-backed securities, other ABS, corporate debt securities and obligations of U.S. states and municipalities. At December 31, 2016, the investment securities portfolio was $286.8 billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available and where not available, based primarily upon internal ratings that correspond to ratings as defined by S&P and Moody's). During 2016, the Firm transferred commercial mortgage-backed securities and obligations of U.S. states and municipalities with a fair value of $7.5 billion from available-for-sale ("AFS") to held-to maturity ("HTM"). These securities were transferred at fair value. The transfers reflect the Firm's intent to hold the securities to maturity in order to reduce the impact of price volatility on accumulated other comprehensive income ("AOCI").
See Note 12 for further information on the details of the Firm's investment securities portfolio.

For further information on liquidity and funding risk, see Liquidity Risk Management on pages 110–115. For information on interest rate, foreign exchange and other risks, Treasury and CIO VaR and the Firm's earnings-at-risk, see Market Risk Management on pages 116–123.

Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	2016	2015	2014
Securities gains	**$ 132**	$ 190	$ 71
Investment securities portfolio (average) [a]	**278,250**	314,802	349,285
Investment securities portfolio (period-end)[b]	**286,838**	287,777	343,146
Mortgage loans (average)	**1,790**	2,501	3,308
Mortgage loans (period-end)	**1,513**	2,136	2,834

(a) Average investment securities included HTM balances of $51.4 billion, $50.0 billion and $47.2 billion for the years ended December 31, 2016, 2015 and 2014, respectively.
(b) Period-end investment securities included HTM securities of $50.2 billion, $49.1 billion, $49.3 billion at December 31, 2016, 2015 and 2014, respectively.

Private equity portfolio information[a]

December 31, (in millions)	2016	2015	2014
Carrying value	**$ 1,797**	$ 2,103	$ 5,866
Cost	**2,649**	3,798	6,281

(a) For more information on the Firm's methodologies regarding the valuation of the Private Equity portfolio, see Note 3.

2016 compared with 2015

The carrying value of the private equity portfolio at December 31, 2016 was $1.8 billion, down from $2.1 billion at December 31, 2015, driven by portfolio sales.

2015 compared with 2014

The carrying value of the private equity portfolio at December 31, 2015 was $2.1 billion, down from $5.9 billion at December 31, 2014, driven by the sale of a portion of the Private Equity business and porfolio sales.

Risk is an inherent part of JPMorgan Chase's business activities. When the Firm extends a consumer or wholesale loan, advises customers on their investment decisions, makes markets in securities, or offers other products or services, the Firm takes on some degree of risk. The Firm's overall objective is to manage its businesses, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors and protects the safety and soundness of the Firm.

Firmwide Risk Management is overseen and managed on an enterprise-wide basis. The Firm's approach to risk management covers a broad spectrum of economic and other core risk areas, such as credit, market, liquidity, model, principal, country, operational, compliance, conduct, legal, capital and reputation risk, with controls and governance established for each area, as appropriate.

The Firm believes that effective risk management requires:

- Acceptance of responsibility, including identification and escalation of risk issues, by all individuals within the Firm;
- Ownership of risk identification, assessment, data and management within each of the lines of business and corporate functions; and
- Firmwide structures for risk governance.

The Firm's Operating Committee, which consists of the Firm's Chief Executive Officer ("CEO"), Chief Risk Officer ("CRO"), Chief Operating Officer ("COO"), Chief Financial Officer ("CFO") and other senior executives, is the ultimate management escalation point in the Firm, and may refer matters to the Firm's Board of Directors. The Operating Committee is responsible and accountable to the Firm's Board of Directors.

The Firm strives for continual improvement through efforts to enhance controls, ongoing employee training and development, talent retention, and other measures. The Firm follows a disciplined and balanced compensation framework with strong internal governance and independent Board oversight. The impact of risk and control issues are carefully considered in the Firm's performance evaluation and incentive compensation processes.

The following sections outline the key risks that are inherent in the Firm's business activities:

Risk	Definition	Select risk management metrics	Page references
I. Economic risks			
(i) Capital risk	The risk that the Firm has an insufficient level and composition of capital to support its business activities and associated risks during both normal economic environments and under stressed conditions.	Risk-based capital ratios and leverage ratios; stress	76–85
(ii) Consumer Credit risk	The risk of loss arising from the default of a customer.	Total exposure; geographic and customer concentrations; delinquencies; loss experience; stressed credit performance	89–95
(iii) Wholesale Credit risk	The risk of loss arising from the default of a client or counterparty.	Total exposure; industry, geographic and client concentrations; risk ratings; loss experience; stressed credit performance	96–104
(iv) Country risk	The risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers, or adversely affects markets related to a particular country.	Default exposure at 0% recovery; stress; risk ratings; ratings based capital limits	108–109
(v) Liquidity risk	The risk that the Firm will be unable to meet its contractual and contingent obligations or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets and liabilities.	LCR; stress by material legal entity	110–115
(vi) Market risk	The risk of loss arising from potential adverse changes in the value of the Firm's assets and liabilities or future results, resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads; this includes the structural interest rate and foreign exchange risks managed on a firmwide basis in Treasury and CIO.	VaR; P&L drawdown; economic stress testing; sensitivities; earnings-at-risk; and foreign exchange ("FX") net open position	116–123
(vii) Principal risk	The risk of an adverse change in the value of privately-held financial assets and instruments, typically representing an ownership or junior capital positions that have unique risks due to their illiquidity or for which there is less observable market or valuation data.	Carrying value, stress	124
II. Other core risks			
(i) Compliance risk	The risk of failure to comply with applicable laws, rules, and regulations.	Risk based monitoring and testing for timely compliance with financial obligations	125
(ii) Conduct risk	The risk that an employee's action or inaction causes undue harm to the Firm's clients, damages market integrity, undermines the Firm's reputation, or negatively impacts the Firm's culture.	Relevant risk and control self-assessment results, employee compliance information, code of conduct case information	126
(iii) Legal risk	The risk of loss or imposition of damages, fines, penalties or other liability arising from the failure to comply with a contractual obligation or to comply with laws, rules or regulations to which the Firm is subject.	Not applicable	127
(iv) Model risk	The risk of the potential for adverse consequences from decisions based on incorrect or misused model outputs.	Model status, model tier	128
(v) Operational risk	The risk of loss resulting from inadequate or failed processes or systems, human factors, or due to external events that are neither market- nor credit-related such as cyber and technology related events.	Risk and control self-assessment results, firm-specific loss experience; industry loss experience; business environment and internal control factors; key risk indicators; key control indicators; operating metrics	129–130
(vi) Reputation risk	The risk that an action, transaction, investment or event will reduce trust in the Firm's integrity or competence by its various constituents, including clients, counterparties, investors, regulators, employees and the broader public.	Not applicable	131

Governance and oversight

The Firm's overall appetite for risk is governed by a "Risk Appetite" framework. The framework and the Firm's risk appetite are set and approved by the Firm's CEO, CFO, CRO and COO. LOB-level risk appetite is set by the respective LOB CEO, CFO and CRO and is approved by the Firm's CEO, CFO, CRO and COO. Quantitative parameters and qualitative factors are used to monitor and measure the Firm's capacity to take risk against stated risk appetite. Quantitative parameters have been established to assess stressed net income, capital, credit risk, market risk, structural interest rate risk and liquidity risk. Qualitative factors have been established for select risks. Risk Appetite results are reported quarterly to the Board of Directors' Risk Policy Committee ("DRPC").

The Firm's CRO is the head of the Independent Risk Management ("IRM") function and reports to the CEO and the DRPC. The CEO appoints the CRO to create the Risk Management Framework subject to approval by the DRPC in the form of the Primary Risk Policies. The Chief Compliance Officer ("CCO"), who reports to the CRO, is also responsible for reporting to the Audit Committee for the Global Compliance Program. The Firm's Global Compliance Program focuses on overseeing compliance with laws, rules and regulations applicable to the Firm's products and services to clients and counterparties.

The IRM function, comprised of Risk Management and Compliance Organizations, is independent of the businesses. The IRM function sets various standards for the risk management governance framework, including risk policy, identification, measurement, assessment, testing, limit setting (e.g., risk appetite, thresholds, etc.), monitoring and reporting. Various groups within the IRM function are aligned to the LOBs and to corporate functions, regions and core areas of risk such as credit, market, country and liquidity risks, as well as operational, model and reputational risk governance.

The Firm places key reliance on each of its LOBs and other functional areas giving rise to risk. Each LOB or other functional area giving rise to risk is expected to operate its activities within the parameters identified by the IRM function, and within their own management-identified risk and control standards. Because these LOBs and functional areas are accountable for identifying and addressing the risks in their respective businesses and for operating within a sound control environment, they are considered the "first line of defense" within the Firm's risk governance framework.

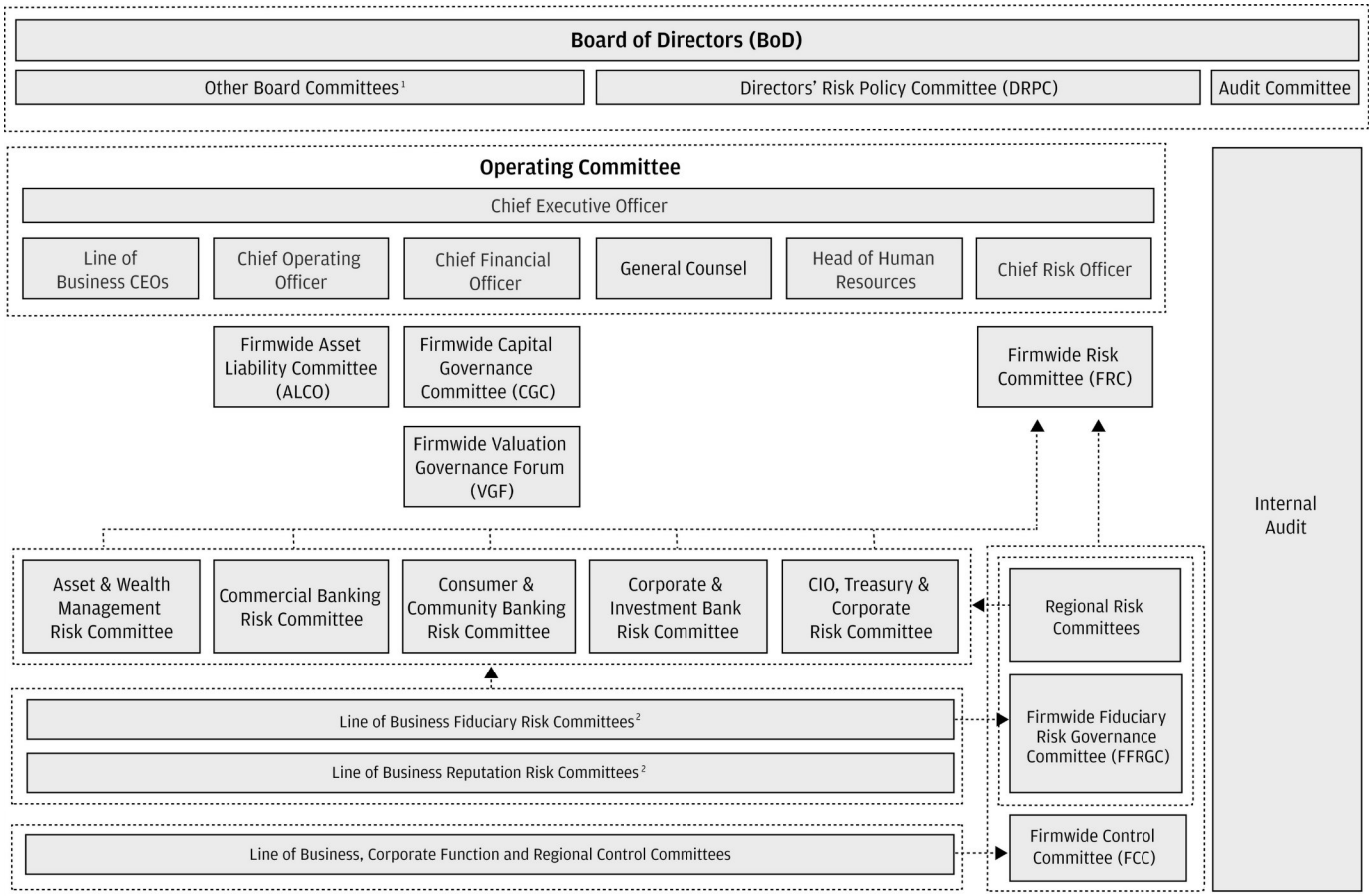
The Firmwide Oversight and Control Group consists of dedicated control officers within each of the lines of business and corporate functions, as well as having a central oversight function. The group is charged with enhancing the Firm's control environment by looking within and across the lines of business and corporate functions to help identify and remediate control issues. The group enables the Firm to detect control problems more quickly, escalate issues promptly and engage other stakeholders to understand common themes and interdependencies among the various parts of the Firm.

As the "second line of defense", the IRM function provides oversight and independent challenge, consistent with its policies and framework, to the risk-creating LOBs and functional areas.

Internal Audit, a function independent of the businesses and the IRM function, tests and evaluates the Firm's risk governance and management, as well as its internal control processes. This function, the "third line of defense" in the risk governance framework, brings a systematic and disciplined approach to evaluating and improving the effectiveness of the Firm's governance, risk management and internal control processes. The Internal Audit Function is headed by the General Auditor, who reports to the Audit Committee.

The independent status of the IRM function is supported by a governance structure that provides for escalation of risk issues to senior management, the Firmwide Risk Committee, or the Board of Directors.

The chart below illustrates the key senior management level committees in the Firm's risk governance structure. Other committees, forums and paths of escalation are in place that are responsible for management and oversight of risk, although they are not shown in the chart below.



1 Other Board Committees include the Compensation & Management Development Committee, Corporate Governance & Nominating Committee and Public Responsibility Committee.
2 As applicable.

The Board of Directors provides oversight of risk principally through the DRPC, Audit Committee and, with respect to compensation and other management-related matters, the Compensation & Management Development Committee. Each committee of the Board oversees reputation risk issues within its scope of responsibility.

The Directors' Risk Policy Committee of the Board oversees the Firm's global risk management framework and approves the primary risk management policies of the Firm. The Committee's responsibilities include oversight of management's exercise of its responsibility to assess and manage the Firm's risks, and its capital and liquidity planning and analysis. Breaches in risk appetite, liquidity issues that may have a material adverse impact on the Firm and other significant risk-related matters are escalated to the Committee.

The Audit Committee of the Board assists the Board in its oversight of management's responsibilities to assure that there is an effective system of controls reasonably designed to safeguard the assets and income of the Firm, assure the integrity of the Firm's financial statements and maintain compliance with the Firm's ethical standards, policies, plans and procedures, and with laws and regulations. In addition, the Audit Committee assists the Board in its oversight of the Firm's independent registered public accounting firm's qualifications, independence and performance, and of the performance of the Firm's Internal Audit function.

The Compensation & Management Development Committee ("CMDC") assists the Board in its oversight of the Firm's compensation programs and reviews and approves the Firm's overall compensation philosophy, incentive compensation pools, and compensation practices consistent with key business objectives and safety and soundness. The Committee reviews Operating Committee members' performance against their goals, and approves their compensation awards. The Committee also periodically reviews the Firm's diversity programs and management development and succession planning, and provides oversight of the Firm's culture and conduct programs.

Among the Firm's senior management-level committees that are primarily responsible for key risk-related functions are:

The Firmwide Risk Committee ("FRC") is the Firm's highest management-level risk committee. It provides oversight of the risks inherent in the Firm's businesses. The Committee is co-chaired by the Firm's CEO and CRO. This Committee serves as an escalation point for risk topics and issues raised by its members, the Line of Business Risk

Committees, Firmwide Control Committee, Firmwide Fiduciary Risk Governance Committee, and regional Risk Committees, as appropriate. The Committee escalates significant issues to the DRPC, as appropriate.

The Firmwide Control Committee ("FCC") provides a forum for senior management to review and discuss firmwide operational risks including existing and emerging issues, and operational risk metrics, and to review operational risk management execution in the context of the Operational Risk Management Framework ("ORMF") which provides the framework for the governance, assessment, measurement, and monitoring and reporting of operational risk. The FCC is co-chaired by the Chief Control Officer and the Firmwide Risk Executive for Operational Risk Governance. The committee relies upon the prompt escalation of issues from businesses and functions as the primary owners of the operational risk. Operational risk issues may be escalated by business or function control committees to the FCC, which may, in turn, escalate to the FRC, as appropriate.

The Firmwide Fiduciary Risk Governance Committee is a forum for risk matters related to the Firm's fiduciary activities. The Committee oversees the firmwide fiduciary risk governance framework, which supports the consistent identification and escalation of fiduciary risk issues by the relevant lines of business; establishes policies and best practices to effectuate the Committee's oversight responsibility; and creates metrics reporting to track fiduciary activity and issue resolution Firmwide. The Committee escalates significant fiduciary issues to the FRC, the DRPC and the Audit Committee, as appropriate.

Line of Business and Regional Risk Committees review the ways in which the particular line of business or the business operating in a particular region could be exposed to adverse outcomes with a focus on identifying, accepting, escalating and/or requiring remediation of matters brought to these committees. These committees may escalate to the FRC, as appropriate. LOB risk committees are co-chaired by the LOB CEO and the LOB CRO. Each LOB risk committee may create sub-committees with requirements for escalation. The regional committees are established similarly, as appropriate, for the region.

In addition, each line of business and function is required to have a Control Committee. These control committees oversee the control environment of their respective business or function. As part of that mandate, they are responsible for reviewing data which indicates the quality and stability of the processes in a business or function, reviewing key operational risk issues and focusing on processes with shortcomings and overseeing process remediation. These committees escalate to the FCC, as appropriate.

The Firmwide Asset Liability Committee ("ALCO"), chaired by the Firm's Treasurer and Chief Investment Officer under the direction of the COO, monitors the Firm's balance sheet, liquidity risk and structural interest rate risk. ALCO reviews the Firm's overall structural interest rate risk position, funding requirements and strategy, and securitization programs (and any required liquidity support by the Firm of such programs). ALCO is responsible for reviewing and approving the Firm's Funds Transfer Pricing Policy (through which lines of business "transfer" interest rate risk to Treasury and CIO) and the Firm's Intercompany Funding and Liquidity Policy. ALCO is also responsible for reviewing the Firm's Contingency Funding Plan.

The Firmwide Capital Governance Committee, chaired by the Head of the Regulatory Capital Management Office is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution alternatives and decisions. The Committee oversees the capital adequacy assessment process, including the overall design, scenario development and macro assumptions and ensures that capital stress test programs are designed to adequately capture the risks specific to the Firm's businesses.

The Firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the firmwide head of the Valuation Control Group ("VCG") (under the direction of the Firm's Controller), and includes sub-forums covering the Corporate & Investment Bank, Consumer & Community Banking, Commercial Banking, Asset & Wealth Management and certain corporate functions, including Treasury and CIO.

In addition, the JPMorgan Chase Bank, N.A. Board of Directors is responsible for the oversight of management of the Bank. The JPMorgan Chase Bank, N.A. Board accomplishes this function acting directly and through the principal standing committees of the Firm's Board of Directors. Risk oversight on behalf of JPMorgan Chase Bank N.A. is primarily the responsibility of the DRPC and Audit Committee of the Firm's Board of Directors and, with respect to compensation and other management-related matters, the Compensation & Management Development Committee of the Firm's Board of Directors.

Risk measurement

The Firm has a broad spectrum of risk management metrics, as appropriate for each risk category. For further information on risk management metrics, see table on key risks on page 72. Additionally, the Firm is exposed to certain potential low-probability, but plausible and material, idiosyncratic risks that are not well-captured by its other existing risk analysis and reporting metrics. These idiosyncratic risks may arise in a number of ways, such as changes in legislation, an unusual combination of market events, or specific counterparty events. The Firm has a process intended to identify these risks in order to allow the Firm to monitor vulnerabilities that are not adequately covered by its other standard risk measurements.

CAPITAL RISK MANAGEMENT

Capital risk is the risk the Firm has an insufficient level and composition of capital to support its business activities and associated risks during both normal economic environments and under stressed conditions.

A strong capital position is essential to the Firm's business strategy and competitive position. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative of the Firm's Board of Directors, CEO and Operating Committee. The Firm's balance sheet philosophy focuses on risk-adjusted returns, strong capital and robust liquidity. The Firm's capital management strategy focuses on maintaining long-term stability to enable it to build and invest in market-leading businesses, even in a highly stressed environment. Prior to making any decisions on future business activities, senior management considers the implications on the Firm's capital. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to preserving the Firm's capital strength.

The Firm's capital management objectives are to hold capital sufficient to:

- Maintain "well-capitalized" status for the Firm and its principal bank subsidiaries;
- Support risks underlying business activities;
- Maintain sufficient capital in order to continue to build and invest in its businesses through the cycle and in stressed environments;
- Retain flexibility to take advantage of future investment opportunities;
- Serve as a source of strength to its subsidiaries;
- Meet capital distribution objectives; and
- Maintain sufficient capital resources to operate throughout a resolution period in accordance with the Firm's preferred resolution strategy.

These objectives are achieved through the establishment of minimum capital targets and a strong capital governance framework. Capital management is intended to be flexible in order to react to a range of potential events. The Firm's minimum capital targets are based on the most binding of three pillars: an internal assessment of the Firm's capital needs; an estimate of required capital under the CCAR and Dodd-Frank Act stress testing requirements; and Basel III Fully Phased-In regulatory minimums. Where necessary, each pillar may include a management-established buffer. The capital governance framework requires regular monitoring of the Firm's capital positions, stress testing and defining escalation protocols, both at the Firm and material legal entity levels.

The following tables present the Firm's Transitional and Fully Phased-In risk-based and leverage-based capital metrics under both the Basel III Standardized and Advanced Approaches. The Firm's Basel III ratios exceed both the current and Fully Phased-In regulatory minimums as of December 31, 2016 and 2015. For further discussion of these capital metrics and the Standardized and Advanced approaches, refer to Monitoring and management of capital on pages 78–82.

December 31, 2016 (in millions, except ratios)	Transitional			Fully Phased-In		
	Standardized	Advanced	Minimum capital ratios [c]	Standardized	Advanced	Minimum capital ratios [d]
Risk-based capital metrics:						
CET1 capital	**$ 182,967**	**$ 182,967**		**$ 181,734**	**$ 181,734**	
Tier 1 capital	**208,112**	**208,112**		**207,474**	**207,474**	
Total capital	**239,553**	**228,592**		**237,487**	**226,526**	
Risk-weighted assets	**1,464,981**	**1,476,915**		**1,474,665**	**1,487,180**	
CET1 capital ratio	**12.5%**	**12.4%**	6.25%	**12.3%**	**12.2%**	10.5%
Tier 1 capital ratio	**14.2**	**14.1**	7.75	**14.1**	**14.0**	12.0
Total capital ratio	**16.4**	**15.5**	9.75	**16.1**	**15.2**	14.0
Leverage-based capital metrics:						
Adjusted average assets	**2,484,631**	**2,484,631**		**2,485,480**	**2,485,480**	
Tier 1 leverage ratio[a]	**8.4%**	**8.4%**	4.0	**8.3%**	**8.3%**	4.0
SLR leverage exposure	**NA**	**$ 3,191,990**		**NA**	**$ 3,192,839**	
SLR[b]	**NA**	**6.5%**	NA	**NA**	**6.5%**	5.0 [e]

December 31, 2015 (in millions, except ratios)	Transitional			Fully Phased-In		
	Standardized	Advanced	Minimum capital ratios [c]	Standardized	Advanced	Minimum capital ratios [d]
Risk-based capital metrics:						
CET1 capital	$ 175,398	$ 175,398		$ 173,189	$ 173,189	
Tier 1 capital	200,482	200,482		199,047	199,047	
Total capital	234,413	224,616		229,976	220,179	
Risk-weighted assets	1,465,262	1,485,336		1,474,870	1,495,520	
CET1 capital ratio	12.0%	11.8%	4.5%	11.7%	11.6%	10.5%
Tier 1 capital ratio	13.7	13.5	6.0	13.5	13.3	12.0
Total capital ratio	16.0	15.1	8.0	15.6	14.7	14.0
Leverage-based capital metrics:						
Adjusted average assets	2,358,471	2,358,471		2,360,499	2,360,499	
Tier 1 leverage ratio[a]	8.5%	8.5%	4.0	8.4%	8.4%	4.0
SLR leverage exposure	NA	3,079,797		NA	$ 3,079,119	
SLR[b]	NA	6.5%	NA	NA	6.5%	5.0 [e]

Note: As of December 31, 2016 and 2015, the lower of the Standardized or Advanced capital ratios under each of the Transitional and Fully Phased-In approaches in the table above represents the Firm's Collins Floor, as discussed in Monitoring and management of Capital on page 78.

(a) The Tier 1 leverage ratio is calculated by dividing Tier 1 capital by adjusted average assets.
(b) The SLR leverage ratio is calculated by dividing Tier 1 capital by SLR leverage exposure.
(c) Represents the Transitional minimum capital ratios applicable to the Firm under Basel III as of December 31, 2016 and 2015. At December 31, 2016, the CET1 minimum capital ratio includes 0.625% resulting from the phase-in of the Firm's 2.5% capital conservation buffer and 1.125%, resulting from the phase-in of the Firm's 4.5% global systemically important banks ("GSIB") surcharge.
(d) Represents the minimum capital ratios applicable to the Firm on a Fully Phased-In Basel III basis. At December 31, 2016, the ratios include the Firm's estimate of its Fully Phased-In U.S. GSIB surcharge of 3.5%. The minimum capital ratios will be fully phased-in effective January 1, 2019. For additional information on the GSIB surcharge, see page 79.
(e) In the case of the SLR, the Fully Phased-In minimum ratio is effective beginning January 1, 2018.

Strategy and governance

The Firm's CEO, in conjunction with the Board of Directors, establishes principles and guidelines for capital planning, issuance, usage and distributions, and minimum capital targets for the level and composition of capital in both business-as-usual and highly stressed environments. The DRPC assesses and approves the capital management and governance processes of the Firm. The Firm's Audit Committee is responsible for reviewing and approving the capital stress testing end-to-end control framework.

The Capital Governance Committee and the Regulatory Capital Management Office ("RCMO") support the Firm's strategic capital decision-making. The Capital Governance Committee oversees the capital adequacy assessment process, including the overall design, scenario development and macro assumptions and ensures that capital stress test programs are designed to adequately capture the risks specific to the Firm's businesses. RCMO, which reports to the Firm's CFO, is responsible for designing and monitoring the Firm's execution of its capital policies and strategies once approved by the Board, as well as reviewing and monitoring the execution of its capital adequacy assessment process. The Basel Independent Review function ("BIR"), which reports to the RCMO and has direct access to both the DRPC and Capital Governance Committee, conducts independent assessments of the Firm's regulatory capital framework to ensure compliance with the applicable U.S. Basel rules in support of senior management's responsibility for assessing and managing capital and for the DRPC's oversight of management in executing that responsibility. For additional discussion on the DRPC, see Enterprise-wide Risk Management on pages 71–75.

Monitoring and management of capital

In its monitoring and management of capital, the Firm takes into consideration an assessment of economic risk and all regulatory capital requirements to determine the level of capital needed to meet and maintain the objectives discussed above, as well as to support the framework for allocating capital to its business segments. While economic risk is considered prior to making decisions on future business activities, in most cases, the Firm considers risk-based regulatory capital to be a proxy for economic risk capital.

Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar minimum capital requirements for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. The U.S. capital requirements generally follow the Capital Accord of the Basel Committee, as amended from time to time.

Basel III overview

Capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. bank holding companies and banks, including the Firm and its insured depository institution ("IDI") subsidiaries. Basel III presents two comprehensive methodologies for calculating RWA: a general (standardized) approach ("Basel III Standardized"), and an advanced approach ("Basel III Advanced"). Certain of the requirements of Basel III are subject to phase-in periods that began on January 1, 2014 and continue through the end of 2018 ("transitional period").

Basel III establishes capital requirements for calculating credit risk and market risk RWA, and in the case of Basel III Advanced, operational risk RWA. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced. In addition to the RWA calculated under these methodologies, the Firm may supplement such amounts to incorporate management judgment and feedback from its bank regulators.

Basel III also includes a requirement for Advanced Approach banking organizations, including the Firm, to calculate SLR. For additional information on SLR, see page 82.

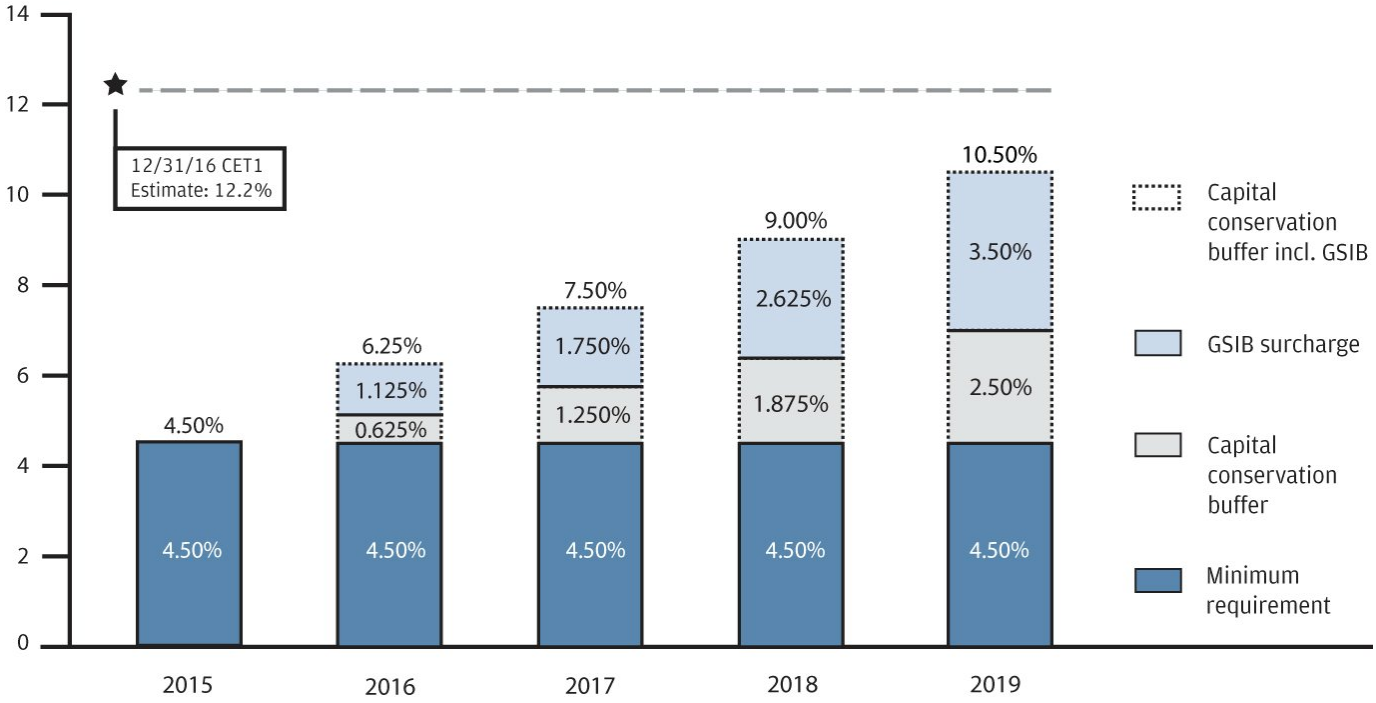
Basel III Fully Phased-In

Basel III capital rules will become fully phased-in on January 1, 2019, at which point the Firm will continue to calculate its capital ratios under both the Basel III Standardized and Advanced Approaches. The Firm manages each of the businesses, as well as the corporate functions, primarily on a Basel III Fully Phased-In basis. For additional information on the Firm, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.'s capital, RWA and capital ratios under Basel III Standardized and Advanced Fully Phased-In rules and SLRs calculated under the Basel III Advanced Fully Phased-In rules, all of which are considered key regulatory capital measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 48–50.

The Firm's estimates of its Basel III Standardized and Advanced Fully Phased-In capital, RWA and capital ratios and SLRs for the Firm, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. are based on the current published U.S. Basel III rules and on the application of such rules to the Firm's businesses as currently conducted. The actual impact on the Firm's capital ratios and SLR as of the effective date of the rules may differ from the Firm's current estimates depending on changes the Firm may make to its businesses in the future, further implementation guidance from the regulators, and regulatory approval of certain of the Firm's internal risk models (or, alternatively, regulatory disapproval of the Firm's internal risk models that have previously been conditionally approved).

Risk-based capital regulatory minimums

The following chart presents the Basel III minimum CET1 capital ratio during the transitional periods and on a fully phased-in basis under the Basel III rules currently in effect.



The Basel III rules include minimum capital ratio requirements that are subject to phase-in periods through the end of 2018. The capital adequacy of the Firm and its national bank subsidiaries, both during the transitional period and upon full-phase in, is evaluated against the Basel III approach (Standardized or Advanced) which results for each quarter in the lower ratio as required by the Collins Amendment of the Dodd-Frank Act (the "Collins Floor"). Additional information regarding the Firm's capital ratios, as well as the U.S. federal regulatory capital standards to which the Firm is subject, is presented in Note 28. For further information on the Firm's Basel III measures, see the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (http://investor.shareholder.com/jpmorganchase/basel.cfm).

All banking institutions are currently required to have a minimum capital ratio of 4.5% of CET1 capital. Certain banking organizations, including the Firm, are required to hold additional amounts of capital to serve as a "capital conservation buffer". The capital conservation buffer is intended to be used to absorb potential losses in times of financial or economic stress. If not maintained, the Firm could be limited in the amount of capital that may be distributed, including dividends and common equity repurchases. The capital conservation buffer is subject to a phase-in period that began January 1, 2016 and continues through the end of 2018.

As an expansion of the capital conservation buffer, the Firm is also required to hold additional levels of capital in the form of a GSIB surcharge and a countercyclical capital buffer.

Under the Federal Reserve's final rule, GSIBs, including the Firm, are required to calculate their GSIB surcharge on an annual basis under two separately prescribed methods, and are subject to the higher of the two. The first ("Method 1"), reflects the GSIB surcharge as prescribed by the Basel Committee's assessment methodology, and is calculated across five criteria: size, cross-jurisdictional activity, interconnectedness, complexity and substitutability. The second ("Method 2"), modifies the Method 1 requirements to include a measure of short-term wholesale funding in place of substitutability, and introduces a GSIB score "multiplication factor".

The Firm's Fully Phased-In GSIB surcharge for 2016 was calculated to be 2.5% under Method 1 and 4.5% under Method 2. Accordingly, the Firm's minimum capital ratios applicable in 2016 include a GSIB surcharge of 1.125%, resulting from the application of the transition provisions to the 4.5% fully phased-in GSIB surcharge. For 2017, the Firm has calculated its Fully Phased-In GSIB surcharge to be 2.5% under Method 1 and 3.5% under Method 2 resulting in the inclusion of a GSIB surcharge of 1.75% in the Firm's minimum capital ratios after application of the transition provisions.

The countercyclical capital buffer takes into account the macro financial environment in which large, internationally active banks function. On September 8, 2016 the Federal Reserve published the framework that will apply to the setting of the countercyclical capital buffer. As of October 24, 2016 the Federal Reserve reaffirmed setting the U.S. countercyclical capital buffer at 0%, and stated that it will review the amount at least annually. The countercyclical capital buffer can be increased if the Federal Reserve, FDIC and OCC determine that credit growth in the economy has become excessive and can be set at up to an additional 2.5% of RWA subject to a 12-month implementation period.

Based on the Firm's most recent estimate of its GSIB surcharge and the current countercyclical buffer being set at 0%, the Firm estimates its Fully Phased-In CET1 capital requirement, at January 1, 2019, would be 10.5% (reflecting the 4.5% CET1 capital requirement, the Fully Phased-In 2.5% capital conservation buffer and the GSIB surcharge of 3.5%). As well as meeting the capital ratio requirements of Basel III, the Firm must, in order to be "well-capitalized", maintain a minimum 6% Tier 1 capital and a 10% Total capital requirement. At December 31, 2016 and 2015, JPMorgan Chase maintained Basel III Standardized Transitional and Basel III Advanced Transitional ratios in excess of the well-capitalized standards established by the Federal Reserve.

The Firm continues to believe that over the next several years, it will operate with a Basel III CET1 capital ratio between 11% and 12.5%. It is the Firm's intention that the Firm's capital ratios continue to meet regulatory minimums as they are fully implemented in 2019 and thereafter.

Each of the Firm's IDI subsidiaries must maintain a minimum 6.5% CET1, 8% Tier 1 capital, 10% Total capital and 5% Tier 1 leverage requirement to meet the definition of "well-capitalized" under the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA") for IDI subsidiaries.

Capital

A reconciliation of total stockholders' equity to Basel III Fully Phased-In CET1 capital, Tier 1 capital and Basel III Advanced and Standardized Fully Phased-In Total capital is presented in the table below. For additional information on the components of regulatory capital, see Note 28.

Capital components

(in millions)	December 31, 2016
Total stockholders' equity	**$ 254,190**
Less: Preferred stock	26,068
Common stockholders' equity	**228,122**
Less:	
Goodwill	47,288
Other intangible assets	862
Add:	
Deferred tax liabilities[a]	3,230
Less: Other CET1 capital adjustments	1,468
Standardized/Advanced CET1 capital	**181,734**
Preferred stock	26,068
Less:	
Other Tier 1 adjustments[b]	328
Standardized/Advanced Tier 1 capital	**$ 207,474**
Long-term debt and other instruments qualifying as Tier 2 capital	$ 15,253
Qualifying allowance for credit losses	14,854
Other	(94)
Standardized Fully Phased-In Tier 2 capital	**$ 30,013**
Standardized Fully Phased-in Total capital	**$ 237,487**
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital	(10,961)
Advanced Fully Phased-In Tier 2 capital	**$ 19,052**
Advanced Fully Phased-In Total capital	**$ 226,526**

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

(b) Includes the deduction associated with the permissible holdings of covered funds (as defined by the Volcker Rule) acquired after December 31, 2013. The deduction was not material as of December 31, 2016.

The following table presents a reconciliation of the Firm's Basel III Transitional CET1 capital to the Firm's estimated Basel III Fully Phased-In CET1 capital as of December 31, 2016.

(in millions)	December 31, 2016
Transitional CET1 capital	**$ 182,967**
AOCI phase-in[(a)]	(156)
CET1 capital deduction phase-in[(b)]	(695)
Intangible assets deduction phase-in[(c)]	(312)
Other adjustments to CET1 capital[(d)]	(70)
Fully Phased-In CET1 capital	**$ 181,734**

(a) Includes the remaining balance of AOCI related to AFS debt securities and defined benefit pension and other postretirement employee benefit ("OPEB") plans that will qualify as Basel III CET1 capital upon full phase-in.
(b) Predominantly includes regulatory adjustments related to changes in DVA, as well as CET1 deductions for defined benefit pension plan assets and deferred tax assets related to net operating loss ("NOL") and tax credit carryforwards.
(c) Relates to intangible assets, other than goodwill and MSRs, that are required to be deducted from CET1 capital upon full phase-in.
(d) Includes minority interest and the Firm's investments in its own CET1 capital instruments.

Capital rollforward

The following table presents the changes in Basel III Fully Phased-In CET1 capital, Tier 1 capital and Tier 2 capital for the year ended December 31, 2016.

Year Ended December 31, (in millions)	2016
Standardized/Advanced CET1 capital at December 31, 2015	$ 173,189
Net income applicable to common equity	23,086
Dividends declared on common stock	(6,912)
Net purchase of treasury stock	(7,163)
Changes in additional paid-in capital	(873)
Changes related to AOCI[(a)]	(1,280)
Adjustment related to DVA[(a)]	954
Other	733
Increase in Standardized/Advanced CET1 capital	8,545
Standardized/Advanced CET1 capital at December 31, 2016	**$ 181,734**
Standardized/Advanced Tier 1 capital at December 31, 2015	$ 199,047
Change in CET1 capital	8,545
Net issuance of noncumulative perpetual preferred stock	–
Other	(118)
Increase in Standardized/Advanced Tier 1 capital	8,427
Standardized/Advanced Tier 1 capital at December 31, 2016	**$ 207,474**
Standardized Tier 2 capital at December 31, 2015	$ 30,929
Change in long-term debt and other instruments qualifying as Tier 2	(1,426)
Change in qualifying allowance for credit losses	513
Other	(3)
Increase in Standardized Tier 2 capital	(916)
Standardized Tier 2 capital at December 31, 2016	**$ 30,013**
Standardized Total capital at December 31, 2016	**$ 237,487**
Advanced Tier 2 capital at December 31, 2015	$ 21,132
Change in long-term debt and other instruments qualifying as Tier 2	(1,426)
Change in qualifying allowance for credit losses	(651)
Other	(3)
Increase in Advanced Tier 2 capital	(2,080)
Advanced Tier 2 capital at December 31, 2016	**$ 19,052**
Advanced Total capital at December 31, 2016	**$ 226,526**

(a) Effective January 1, 2016, the adjustment reflects the impact of the adoption of DVA through OCI. For further discussion of the accounting change refer to Note 25.

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced Fully Phased-In for the year ended December 31, 2016. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

	Standardized			Advanced			
Year ended December 31, 2016 (in billions)	Credit risk RWA	Market risk RWA	Total RWA	Credit risk RWA	Market risk RWA	Operational risk RWA	Total RWA
December 31, 2015	$ 1,333	$ 142	**$ 1,475**	$ 954	$ 142	$ 400	**$ 1,496**
Model & data changes[a]	–	(14)	**(14)**	2	(14)	–	**(12)**
Portfolio runoff[b]	(13)	(2)	**(15)**	(15)	(2)	–	**(17)**
Movement in portfolio levels[c]	27	2	**29**	18	2	–	**20**
Changes in RWA	14	(14)	**–**	5	(14)	–	**(9)**
December 31, 2016	**$ 1,347**	**$ 128**	**$ 1,475**	**$ 959**	**$ 128**	**$ 400**	**$ 1,487**

(a) Model & data changes refer to movements in levels of RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).

(b) Portfolio runoff for credit risk RWA reflects reduced risk from position rolloffs in legacy portfolios in Mortgage Banking (under both the Standardized and Advanced framework), and for market risk RWA reflects reduced risk from position rolloffs in legacy portfolios in the wholesale businesses.

(c) Movement in portfolio levels for credit risk RWA refers to changes in book size, composition, credit quality, and market movements; and for market risk RWA refers to changes in position and market movements.

Supplementary leverage ratio

The SLR is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. Total leverage exposure is calculated by taking the Firm's total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-balance sheet exposures, such as undrawn commitments and derivatives potential future exposure.

U.S. bank holding companies, including the Firm, are required to have a minimum SLR of 5% and IDI subsidiaries, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., are required to have a minimum SLR of 6%, both beginning January 1, 2018. As of December 31, 2016, the Firm estimates that JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s Fully Phased-In SLRs are approximately 6.6% and 9.6%, respectively.

The following table presents the components of the Firm's Fully Phased-In SLR as of December 31, 2016.

(in millions, except ratio)	December 31, 2016
Fully Phased-in Tier 1 Capital	**$ 207,474**
Total average assets	2,532,457
Less: amounts deducted from Tier 1 capital	46,977
Total adjusted average assets[a]	2,485,480
Off-balance sheet exposures[b]	707,359
SLR leverage exposure	**$ 3,192,839**
SLR	**6.5%**

(a) Adjusted average assets, for purposes of calculating the SLR, includes total quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill and other intangible assets.

(b) Off-balance sheet exposures are calculated as the average of the three month-end spot balances in the reporting quarter.

Line of business equity

The Firm's framework for allocating capital to its business segments (line of business equity) is based on the following objectives:

- Integrate firmwide and line of business capital management activities;
- Measure performance consistently across all lines of business; and
- Provide comparability with peer firms for each of the lines of business.

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons and regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In). For 2016, capital was allocated to each business segment for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Line of business common equity

Year ended December 31, (in billions)	Yearly average		
	2016	2015	2014
Consumer & Community Banking	**$ 51.0**	$ 51.0	$ 51.0
Corporate & Investment Bank	**64.0**	62.0	61.0
Commercial Banking	**16.0**	14.0	14.0
Asset & Wealth Management	**9.0**	9.0	9.0
Corporate	**84.6**	79.7	72.4
Total common stockholders' equity	**$ 224.6**	$ 215.7	$ 207.4

On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. Through the end of 2016, capital was allocated to the lines of business based on a single measure, Basel III Advanced Fully Phased-In RWA. Effective January 1, 2017, the Firm's methodology used to allocate capital to the Firm's business segments was updated. The new methodology incorporates Basel III Standardized Fully Phased-In RWA (as well as Basel III Advanced Fully Phased-In RWA), leverage, the GSIB surcharge, and a simulation of capital in a severe stress environment. The methodology will continue to be weighted towards Basel III Advanced Fully Phased-In RWA because the Firm believes it to be the best proxy for economic risk. The Firm will consider further changes to its capital allocation methodology as the regulatory framework evolves. In addition, under the new methodology, capital is no longer allocated to each line of business for goodwill and other intangibles associated with acquisitions effected by the line of business. The Firm will continue to establish internal ROE targets for its business segments, against which they will be measured, as a key performance indicator.

The table below reflects the Firm's assessed level of capital required for each line of business as of the dates indicated.

Line of business common equity

(in billions)	**January 1, 2017**	December 31, 2016	December 31, 2015
Consumer & Community Banking	**$ 51.0**	$ 51.0	$ 51.0
Corporate & Investment Bank	**70.0**	64.0	62.0
Commercial Banking	**20.0**	16.0	14.0
Asset & Wealth Management	**9.0**	9.0	9.0
Corporate	**78.1**	88.1	85.5
Total common stockholders' equity	**$ 228.1**	$ 228.1	$ 221.5

Planning and stress testing

Comprehensive Capital Analysis and Review

The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. The Federal Reserve uses the CCAR and Dodd-Frank Act stress test processes to ensure that large BHCs have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each BHC's unique risks to enable them to absorb losses under certain stress scenarios. Through the CCAR, the Federal Reserve evaluates each BHC's capital adequacy and internal capital adequacy assessment processes ("ICAAP"), as well as its plans to make capital distributions, such as dividend payments or stock repurchases.

On June 29, 2016, the Federal Reserve informed the Firm that it did not object, on either a quantitative or qualitative basis, to the Firm's 2016 capital plan. For information on actions taken by the Firm's Board of Directors following the 2016 CCAR results, see Capital actions on page 84.

The Firm's CCAR process is integrated into and employs the same methodologies utilized in the Firm's ICAAP process, as discussed below.

Internal Capital Adequacy Assessment Process

Semiannually, the Firm completes the ICAAP, which provides management with a view of the impact of severe and unexpected events on earnings, balance sheet positions, reserves and capital. The Firm's ICAAP integrates stress testing protocols with capital planning.

The process assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. However, when defining a broad range of scenarios, realized events can always be worse. Accordingly,

management considers additional stresses outside these scenarios, as necessary. ICAAP results are reviewed by management and the Board of Directors.

Capital actions

Dividends

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratio, capital objectives, and alternative investment opportunities. On May 17, 2016, the Firm announced that its Board of Directors increased the quarterly common stock dividend to $0.48 per share, effective with the dividend paid on July 31, 2016. The Firm's dividends are subject to the Board of Directors' approval at the customary times those dividends are to be declared.

For information regarding dividend restrictions, see Note 22 and Note 27.

The following table shows the common dividend payout ratio based on net income applicable to common equity.

Year ended December 31,	**2016**	2015	2014
Common dividend payout ratio	**30%**	28%	29%

Common equity

During the year ended December 31, 2016, warrant holders exercised their right to purchase 22.5 million shares of the Firm's common stock. The Firm issued from treasury stock 11.1 million shares of its common stock as a result of these exercises. As of December 31, 2016, 24.9 million warrants remained outstanding, compared with 47.4 million outstanding as of December 31, 2015.

On March 17, 2016, the Firm announced that its Board of Directors had authorized the repurchase of up to an additional $1.9 billion of common equity (common stock and warrants) through June 30, 2016 under its equity repurchase program. This amount is in addition to the $6.4 billion of common equity that was previously authorized for repurchase between April 1, 2015 and June 30, 2016.

Following receipt in June 2016 of the Federal Reserve's non-objection to the Firm's 2016 capital plan, the Firm's Board of Directors authorized the repurchase of up to $10.6 billion of common equity (common stock and warrants) between July 1, 2016 and June 30, 2017.

This authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plans.

As of December 31, 2016, $6.1 billion of authorized repurchase capacity remained under the program.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2016, 2015 and 2014. There were no warrants repurchased during the years ended December 31, 2016, 2015 and 2014.

Year ended December 31, (in millions)	**2016**	2015	2014
Total number of shares of common stock repurchased	**140.4**	89.8	82.3
Aggregate purchase price of common stock repurchases	**$ 9,082**	$ 5,616	$ 4,760

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading blackout periods. All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilize Rule 10b5-1 programs; and may be suspended at any time.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities on page 22.

Preferred stock

Preferred stock dividends declared were $1.6 billion for the year ended December 31, 2016. For additional information on the Firm's preferred stock, see Note 22.

Redemption of outstanding trust preferred securities

The Firm redeemed $1.6 billion and $1.5 billion of trust preferred securities in the years ended December 31, 2016 and 2015, respectively.

Other capital requirements

TLAC

On December 15, 2016, the Federal Reserve issued its final TLAC rule which requires the top-tier holding companies of eight U.S. global systemically important bank holding companies, including the Firm, among other things, to maintain minimum levels of external TLAC and external long-term debt that satisfies certain eligibility criteria ("eligible LTD") by January 1, 2019. The minimum external TLAC requirement is the greater of (A) 18% of the financial institution's RWA plus applicable buffers, including its GSIB surcharge as calculated under Method 1 and (B) 7.5% of its total leverage exposure plus a buffer equal to 2.0%. The required minimum level of eligible long-term debt is equal to the greater of (A) 6% of the financial institution's RWA, plus its U.S. Method 2 GSIB surcharge and (B) 4.5% of the Firm's total leverage exposure. The final rule permanently grandfathered all long-term debt issued before December 31, 2016, to the extent these securities would be ineligible only due to containing impermissible acceleration rights or being governed by foreign law. While the Firm may have to raise long-term debt to be in full compliance with the rule, management estimates the net amount to be raised is not material and the timing for raising such funds is manageable.

Broker-dealer regulatory capital

JPMorgan Chase's principal U.S. broker-dealer subsidiary is JPMorgan Securities. Prior to October 1, 2016 the Firm had two principal U.S. broker-dealer subsidiaries. Effective October 1, 2016 JPMorgan Clearing merged with JPMorgan Securities. JPMorgan Securities is the surviving entity in the merger and its name remain unchanged.

JPMorgan Securities is subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities is also registered as futures commission merchants and subject to Rule 1.17 of the CFTC.

JPMorgan Securities has elected to compute its minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule. At December 31, 2016, JPMorgan Securities' net capital, as defined by the Net Capital Rule, was $14.7 billion, exceeding the minimum requirement by $11.9 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of $1.0 billion and is also required to notify the SEC in the event that tentative net capital is less than $5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2016, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

J.P. Morgan Securities plc is a wholly owned subsidiary of JPMorgan Chase Bank, N.A. and is the Firm's principal operating subsidiary in the U.K. It has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities plc is jointly regulated by the U.K. PRA and the FCA. J.P. Morgan Securities plc is subject to the European Union Capital Requirements Regulation and the U.K. PRA capital rules, under which it has implemented Basel III.

At December 31, 2016, J.P. Morgan Securities plc had estimated total capital of $34.5 billion, its estimated CET1 capital ratio was 13.8% and its estimated total capital ratio was 17.4%. Both ratios exceeded the minimum standards of 4.5% and 8.0%, respectively, under the transitional requirements of the European Union's ("EU") Basel III Capital Requirements Directive and Regulation, as well as the additional capital requirements specified by the PRA.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss arising from the default of a customer, client or counterparty. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk primarily through its mortgage banking, credit card, auto, business banking and student lending businesses. Originated mortgage loans are retained in the mortgage portfolio, securitized or sold to U.S. government agencies and U.S. government-sponsored enterprises; other types of consumer loans are typically retained on the balance sheet. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through its operating services activities (such as cash management and clearing activities), securities financing activities, investment securities portfolio, and cash placed with banks. A portion of the loans originated or acquired by the Firm's wholesale businesses are generally retained on the balance sheet; the Firm's syndicated loan business distributes a significant percentage of originations into the market and is an important component of portfolio management.

Credit risk management

Credit risk management is an independent risk management function that monitors and measures credit risk throughout the Firm and defines credit risk policies and procedures. The credit risk function reports to the Firm's CRO. The Firm's credit risk management governance includes the following activities:

- Establishing a comprehensive credit risk policy framework
- Monitoring and managing credit risk across all portfolio segments, including transaction and exposure approval
- Setting industry concentration limits and establishing underwriting guidelines
- Assigning and managing credit authorities in connection with the approval of all credit exposure
- Managing criticized exposures and delinquent loans
- Estimating credit losses and ensuring appropriate credit risk-based capital management

Risk identification and measurement

The Credit Risk Management function measures, limits, manages and monitors credit risk across the Firm's businesses. To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the probability of default of an obligor or counterparty, the loss severity given a default event and the exposure at default.

Based on these factors and related market-based inputs, the Firm estimates credit losses for its exposures. Probable credit losses inherent in the consumer and wholesale held-for-investment loan portfolios are reflected in the allowance for loan losses, and probable credit losses inherent in lending-related commitments are reflected in the allowance for lending-related commitments. These losses are estimated using statistical analyses and other factors as described in Note 15. In addition, potential and unexpected credit losses are reflected in the allocation of credit risk capital and represent the potential volatility of actual losses relative to the established allowances for loan losses and lending-related commitments. The analyses for these losses include stress testing that considers alternative economic scenarios as described in the Stress testing section below. For further information, see Critical Accounting Estimates used by the Firm on pages 132–134.

The methodologies used to estimate credit losses depend on the characteristics of the credit exposure, as described below.

Scored exposure

The scored portfolio is generally held in CCB and predominantly includes residential real estate loans, credit card loans, certain auto and business banking loans, and student loans. For the scored portfolio, credit loss estimates are based on statistical analysis of credit losses over discrete periods of time. The statistical analysis uses portfolio modeling, credit scoring, and decision-support tools, which consider loan-level factors such as delinquency status, credit scores, collateral values, and other risk factors. Credit loss analyses also consider, as appropriate, uncertainties and other factors, including those related to current macroeconomic and political conditions, the quality of underwriting standards, and other internal and external factors. The factors and analysis are updated on a quarterly basis or more frequently as market conditions dictate.

Risk-rated exposure

Risk-rated portfolios are generally held in CIB, CB and AWM, but also include certain business banking and auto dealer loans held in CCB that are risk-rated because they have characteristics similar to commercial loans. For the risk-rated portfolio, credit loss estimates are based on estimates of the probability of default ("PD") and loss severity given a default. The probability of default is the likelihood that a borrower will default on its obligation; the loss given default ("LGD") is the estimated loss on the loan that would be realized upon the default and takes into consideration collateral and structural support for each credit facility. The estimation process includes assigning risk ratings to each borrower and credit facility to differentiate risk within the portfolio. These risk ratings are reviewed regularly by Credit Risk Management and revised as needed to reflect the

borrower's current financial position, risk profile and related collateral. The calculations and assumptions are based on both internal and external historical experience and management judgment and are reviewed regularly.

Stress testing

Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios and the underlying parameters are defined centrally, articulated in terms of macroeconomic factors and applied across the businesses. The stress test results may indicate credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, including industry and country-specific stress scenarios, as necessary. The Firm uses stress testing to inform decisions on setting risk appetite both at a Firm and LOB level, as well as to assess the impact of stress on individual counterparties.

Risk monitoring and management

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

Consumer credit risk is monitored for delinquency and other trends, including any concentrations at the portfolio level, as certain of these trends can be modified through changes in underwriting policies and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Historical and forecasted trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry, and individual client and counterparty level with established concentration limits that are reviewed and revised as deemed appropriate by management, typically on an annual basis. Industry and counterparty limits, as measured in terms of exposure and economic risk appetite, are subject to stress-based loss constraints. In addition, wrong-way risk — the risk that exposure to a counterparty is positively correlated with the impact of a default by the same counterparty, which could cause exposure to increase at the same time as the counterparty's capacity to meet its obligations is decreasing — is actively monitored as this risk could result in greater exposure at default compared with a transaction with another counterparty that does not have this risk.

Management of the Firm's wholesale credit risk exposure is accomplished through a number of means, including:

- Loan underwriting and credit approval process
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Master netting agreements
- Collateral and other risk-reduction techniques

In addition to Credit Risk Management, an independent Credit Review function, is responsible for:

- Independently validating or changing the risk grades assigned to exposures in the Firm's wholesale and commercial-oriented retail credit portfolios, and assessing the timeliness of risk grade changes initiated by responsible business units; and
- Evaluating the effectiveness of business units' credit management processes, including the adequacy of credit analyses and risk grading/LGD rationales, proper monitoring and management of credit exposures, and compliance with applicable grading policies and underwriting guidelines.

For further discussion of consumer and wholesale loans, see Note 14.

Risk reporting

To enable monitoring of credit risk and effective decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior members of Credit Risk Management. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, risk committees, senior management and the Board of Directors as appropriate.

CREDIT PORTFOLIO

In the following tables, reported loans include loans retained (i.e., held-for-investment); loans held-for-sale; and certain loans accounted for at fair value. In addition, the Firm records certain loans accounted for at fair value in trading assets. For further information regarding these loans, see Note 3 and Note 4. For additional information on the Firm's loans, lending-related commitments, and derivative receivables, including the Firm's accounting policies, see Note 14, Note 29, and Note 6, respectively. For further information regarding the credit risk inherent in the Firm's cash placed with banks, investment securities portfolio, and securities financing portfolio, see Note 5, Note 12, and Note 13, respectively.

For discussion of the consumer credit environment and consumer loans, see Consumer Credit Portfolio on pages 89–95 and Note 14. For discussion of wholesale credit environment and wholesale loans, see Wholesale Credit Portfolio on pages 96–104 and Note 14.

Total credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming[b][c]	
	2016	2015	**2016**	2015
Loans retained	**$ 889,907**	$ 832,792	**$ 6,721**	$ 6,303
Loans held-for-sale	**2,628**	1,646	**162**	101
Loans at fair value	**2,230**	2,861	**–**	25
Total loans – reported	**894,765**	837,299	**6,883**	6,429
Derivative receivables	**64,078**	59,677	**223**	204
Receivables from customers and other	**17,560**	13,497	**–**	–
Total credit-related assets	**976,403**	910,473	**7,106**	6,633
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**370**	347
Other	**NA**	NA	**59**	54
Total assets acquired in loan satisfactions	**NA**	NA	**429**	401
Total assets	**976,403**	910,473	**7,535**	7,034
Lending-related commitments	**976,702**	940,395	**506**	193
Total credit portfolio	**$1,953,105**	$1,850,868	**$ 8,041**	$ 7,227
Credit derivatives used in credit portfolio management activities[a]	**$ (22,114)**	$ (20,681)	**$ –**	$ (9)
Liquid securities and other cash collateral held against derivatives	**(22,705)**	(16,580)	**NA**	NA

Year ended December 31, (in millions, except ratios)	**2016**	2015
Net charge-offs	**$ 4,692**	$ 4,086
Average retained loans		
Loans – reported	**861,345**	780,293
Loans – reported, excluding residential real estate PCI loans	**822,973**	736,543
Net charge-off rates		
Loans – reported	**0.54%**	0.52%
Loans – reported, excluding PCI	**0.57**	0.55

(a) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on pages 103–104 and Note 6.

(b) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.

(c) At December 31, 2016 and 2015, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $5.0 billion and $6.3 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of $263 million and $290 million, respectively, that are 90 or more days past due; and (3) Real estate owned ("REO") insured by U.S. government agencies of $142 million and $343 million, respectively. These amounts have been excluded based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council ("FFIEC").

CONSUMER CREDIT PORTFOLIO

The Firm's consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, business banking loans and student loans, and associated lending-related commitments. The Firm's focus is on serving primarily the prime segment of the consumer credit market. The credit performance of the consumer portfolio continues to benefit from discipline in credit underwriting as well as improvement in the economy driven by increasing home prices and lower unemployment. Both early-stage delinquencies (30–89 days delinquent) and late-stage delinquencies (150+ days delinquent) for residential real estate, excluding government guaranteed loans, declined from December 31, 2015 levels. The Credit Card 30+ day delinquency rate and the net charge-off rate increased from the prior year but remain near record lows. For further information on consumer loans, see Note 14.

The following table presents consumer credit-related information with respect to the credit portfolio held by CCB, prime mortgage and home equity loans held by AWM, and prime mortgage loans held by Corporate. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 14.

Consumer credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonaccrual loans[h][i]		Net charge-offs/ (recoveries)[i]		Average annual net charge-off rate[i][k]	
	2016	2015	**2016**	2015	**2016**	2015	**2016**	2015
Consumer, excluding credit card								
Loans, excluding PCI loans and loans held-for-sale								
Home equity	**$ 39,063**	$ 45,559	**$ 1,845**	$ 2,191	**$ 189**	$ 291	**0.45%**	0.59%
Residential mortgage	**192,163**	166,239	**2,247**	2,503	**12**	(4)	**0.01**	–
Auto[a]	**65,814**	60,255	**214**	116	**285**	214	**0.45**	0.38
Business banking[b]	**22,698**	21,208	**286**	263	**257**	253	**1.17**	1.23
Student and other	**8,989**	10,096	**175**	242	**166**	200	**1.74**	1.89
Total loans, excluding PCI loans and loans held-for-sale	**328,727**	303,357	**4,767**	5,315	**909**	954	**0.28**	0.35
Loans – PCI								
Home equity	**12,902**	14,989	**NA**	NA	**NA**	NA	**NA**	NA
Prime mortgage	**7,602**	8,893	**NA**	NA	**NA**	NA	**NA**	NA
Subprime mortgage	**2,941**	3,263	**NA**	NA	**NA**	NA	**NA**	NA
Option ARMs[c]	**12,234**	13,853	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – PCI	**35,679**	40,998	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – retained	**364,406**	344,355	**4,767**	5,315	**909**	954	**0.25**	0.30
Loans held-for-sale	**238** [g]	466 [g]	**53**	98	**–**	–	**–**	–
Total consumer, excluding credit card loans	**364,644**	344,821	**4,820**	5,413	**909**	954	**0.25**	0.30
Lending-related commitments[d]	**54,797**	58,478						
Receivables from customers[e]	**120**	125						
Total consumer exposure, excluding credit card	**419,561**	403,424						
Credit Card								
Loans retained[f]	**141,711**	131,387	**–**	–	**3,442**	3,122	**2.63**	2.51
Loans held-for-sale	**105**	76	**–**	–	**–**	–	**–**	–
Total credit card loans	**141,816**	131,463	**–**	–	**3,442**	3,122	**2.63**	2.51
Lending-related commitments[d]	**553,891**	515,518						
Total credit card exposure	**695,707**	646,981						
Total consumer credit portfolio	**$ 1,115,268**	$ 1,050,405	**$ 4,820**	$ 5,413	**$ 4,351**	$ 4,076	**0.89%**	0.92%
Memo: Total consumer credit portfolio, excluding PCI	**$ 1,079,589**	$ 1,009,407	**$ 4,820**	$ 5,413	**$ 4,351**	$ 4,076	**0.96%**	1.02%

(a) At December 31, 2016 and 2015, excluded operating lease assets of $13.2 billion and $9.2 billion, respectively.
(b) Predominantly includes Business Banking loans as well as deposit overdrafts.
(c) At December 31, 2016 and 2015, approximately 66% and 64%, respectively, of the PCI option adjustable rate mortgages ("ARMs") portfolio has been modified into fixed-rate, fully amortizing loans.
(d) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice.
(e) Receivables from customers represent margin loans to brokerage customers that are collateralized through assets maintained in the clients' brokerage accounts, as such no allowance is held against these receivables. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.
(f) Includes billed interest and fees net of an allowance for uncollectible interest and fees.
(g) Predominantly represents prime mortgage loans held-for-sale.
(h) At December 31, 2016 and 2015, nonaccrual loans excluded loans 90 or more days past due as follows: (1) mortgage loans insured by U.S. government agencies of $5.0 billion and $6.3 billion, respectively; and (2) student loans insured by U.S. government agencies under the FFELP of $263 million and $290 million, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status, as permitted by regulatory guidance issued by the FFIEC.
(i) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.

(j) Net charge-offs and net charge-off rates excluded write-offs in the PCI portfolio of $156 million and $208 million for the years ended December 31, 2016 and 2015. These write-offs decreased the allowance for loan losses for PCI loans. See Allowance for Credit Losses on pages 105–107 for further details.
(k) Average consumer loans held-for-sale were $496 million and $2.1 billion for the years ended December 31, 2016 and 2015, respectively. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances increased during the year ended December 31, 2016, predominantly due to originations of high-quality prime mortgage and auto loans that have been retained on the balance sheet, partially offset by paydowns and the charge-off or liquidation of delinquent loans. The credit environment remained favorable as the economy strengthened and home prices increased.

PCI loans are excluded from the following discussions of individual loan products and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, see Note 14.

Home equity: The home equity portfolio declined from December 31, 2015 primarily reflecting loan paydowns and charge-offs. Both early-stage and late-stage delinquencies declined from December 31, 2015. Nonaccrual loans improved from December 31, 2015 primarily as a result of loss mitigation activities. Net charge-offs for the year ended December 31, 2016, declined when compared with the prior year as a result of improvement in home prices and delinquencies.

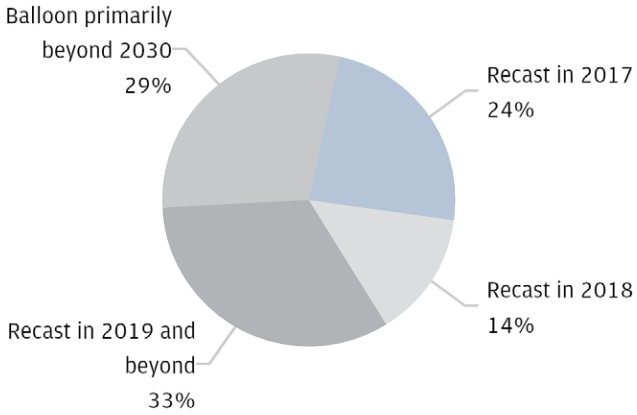
At December 31, 2016, approximately 90% of the Firm's home equity portfolio consists of home equity lines of credit ("HELOCs") and the remainder consists of home equity loans ("HELOANs"). HELOANs are generally fixed-rate, closed-end, amortizing loans, with terms ranging from 3–30 years. In general, HELOCs originated by the Firm are revolving loans for a 10-year period, after which time the HELOC recasts into a loan with a 20-year amortization period. At the time of origination, the borrower typically selects one of two minimum payment options that will generally remain in effect during the revolving period: a monthly payment of 1% of the outstanding balance, or interest-only payments based on a variable index (typically Prime). HELOCs originated by Washington Mutual were generally revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.

The carrying value of HELOCs outstanding was $34 billion at December 31, 2016. Of such amounts, approximately:

- $13 billion have recast from interest-only to fully amortizing payments or have been modified,
- $15 billion are scheduled to recast from interest-only to fully amortizing payments in future periods, and
- $6 billion are interest-only balloon HELOCs, which primarily mature after 2030.

The following chart illustrates the payment recast composition of the approximately $21 billion of HELOCs scheduled to recast in the future, based upon their current contractual terms.

HELOCs scheduled to recast (at December 31, 2016)



The Firm has considered this payment recast risk in its allowance for loan losses based upon the estimated amount of payment shock (i.e., the excess of the fully-amortizing payment over the interest-only payment in effect prior to recast) expected to occur at the payment recast date, along with the corresponding estimated PD and loss severity assumptions. As part of its allowance estimate, the Firm also expects, based on observed activity in recent years, that approximately 30% of the carrying value of HELOCs scheduled to recast will voluntarily prepay prior to or after the recast. The HELOCs that have previously recast to fully amortizing payments generally have higher delinquency rates than the HELOCs within the revolving period, primarily as a result of the payment shock at the time of recast. Certain other factors, such as future developments in both unemployment rates and home prices, could also have a significant impact on the performance of these loans.

The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile. The Firm will continue to evaluate both the near-term and longer-term recast risks inherent in its HELOC portfolio to ensure that changes in the Firm's estimate of incurred losses are appropriately considered in the allowance for loan losses and that the Firm's account management practices are appropriate given the portfolio's risk profile.

Junior lien loans where the borrower has a senior lien loan that is either delinquent or has been modified are considered high-risk seconds. Such loans are considered to pose a higher risk of default than junior lien loans for which the senior lien loan is neither delinquent nor modified. At December 31, 2016, the Firm estimated that the carrying value of its home equity portfolio contained approximately $1.1 billion of current junior lien loans that were considered high risk seconds, compared with $1.4 billion at December 31, 2015. The Firm estimates the balance of its total exposure to high-risk seconds on a quarterly basis using internal data and loan level credit bureau data (which typically provides the delinquency status of the senior lien loan). The Firm considers the increased PD associated with these high-risk seconds in estimating the allowance for loan losses and classifies those loans that are subordinated to a first lien loan that is more than 90 days delinquent as nonaccrual loans. The estimated balance of these high-risk seconds may vary from quarter to quarter for reasons such as the movement of related senior lien loans into and out of the 30+ day delinquency bucket. The Firm continues to monitor the risks associated with these loans. For further information, see Note 14.

Residential mortgage: The residential mortgage portfolio predominantly consists of high-quality prime mortgage loans with a small component (approximately 2%) of the residential mortgage portfolio in subprime mortgage loans. These subprime mortgage loans continue to run-off and are performing in line with expectations. The residential mortgage portfolio, including loans held-for-sale, increased from December 31, 2015 due to retained originations of primarily high-quality fixed rate prime mortgage loans partially offset by paydowns. Both early-stage and late-stage delinquencies showed improvement from December 31, 2015. Nonaccrual loans decreased from the prior year primarily as a result of loss mitigation activities. Net charge-offs for the year ended December 31, 2016 remain low, reflecting continued improvement in home prices and delinquencies.

At December 31, 2016 and 2015, the Firm's residential mortgage portfolio, including loans held-for-sale, included $9.5 billion and $11.1 billion, respectively, of mortgage loans insured and/or guaranteed by U.S. government agencies, of which $7.0 billion and $8.4 billion, respectively, were 30 days or more past due (of these past due loans, $5.0 billion and $6.3 billion, respectively, were 90 days or more past due). The Firm monitors its exposure to certain potential unrecoverable claim payments related to government insured loans and considers this exposure in estimating the allowance for loan losses.

At December 31, 2016 and 2015, the Firm's residential mortgage portfolio included $19.1 billion and $17.8 billion, respectively, of interest-only loans. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment period to maturity and are typically originated as higher-balance loans to higher-income borrowers. To date, losses on this portfolio generally have been consistent with the broader residential mortgage portfolio and the Firm's expectations. The Firm continues to monitor the risks associated with these loans.

Auto: Auto loans increased from December 31, 2015, as a result of growth in new originations. Nonaccrual loans increased compared with December 31, 2015, primarily due to downgrades of select auto dealer risk-rated loans. Net charge-offs for the year ended December 31, 2016 increased compared with the prior year, as a result of higher retail auto loan balances and a moderate increase in loss severity. The auto portfolio predominantly consists of prime-quality loans.

Business banking: Business banking loans increased compared with December 31, 2015 as a result of growth in loan originations. Nonaccrual loans at December 31, 2016 and net charge-offs for the year ended December 31, 2016 increased from the prior year as a result of growth in the portfolio.

Student and other: Student and other loans decreased from December 31, 2015 primarily as a result of the run-off of the student loan portfolio as the Firm ceased originations of student loans during the fourth quarter of 2013. Nonaccrual loans and net charge-offs also declined as a result of the run-off of the student loan portfolio.

Purchased credit-impaired loans: PCI loans decreased as the portfolio continues to run off. As of December 31, 2016, approximately 12% of the option ARM PCI loans were delinquent and approximately 66% of the portfolio had been modified into fixed-rate, fully amortizing loans. Substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing. This latter group of loans is subject to the risk of payment shock due to future payment recast. Default rates generally increase on option ARM loans when payment recast results in a payment increase. The expected increase in default rates is considered in the Firm's quarterly impairment assessment.

The following table provides a summary of lifetime principal loss estimates included in either the nonaccretable difference or the allowance for loan losses.

Summary of PCI loans lifetime principal loss estimates

	Lifetime loss estimates[a]		Life-to-date liquidation losses[b]	
December 31, (in billions)	**2016**	2015	**2016**	2015
Home equity	**$ 14.4**	$ 14.5	**$ 12.8**	$ 12.7
Prime mortgage	**4.0**	4.0	**3.7**	3.7
Subprime mortgage	**3.2**	3.3	**3.1**	3.0
Option ARMs	**10.0**	10.0	**9.7**	9.5
Total	**$ 31.6**	$ 31.8	**$ 29.3**	$ 28.9

(a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses was $1.1 billion and $1.5 billion at December 31, 2016 and 2015, respectively.

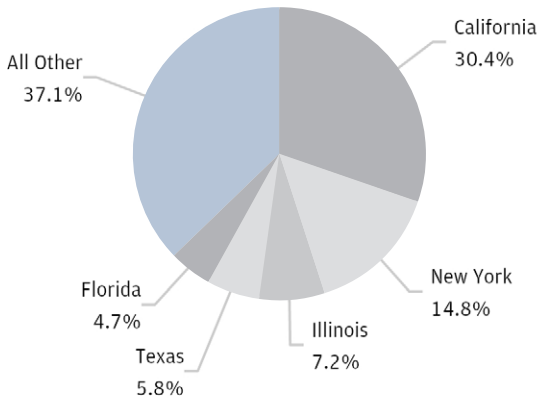
(b) Life-to-date liquidation losses represent both realization of loss upon loan resolution and any principal forgiven upon modification.

For further information on the Firm's PCI loans, including write-offs, see Note 14.

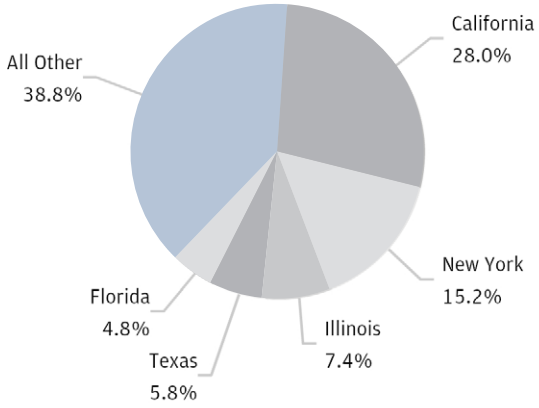
Geographic composition of residential real estate loans

At December 31, 2016, $139.7 billion, or 63% of total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans, were concentrated in California, New York, Illinois, Texas and Florida, compared with $123.0 billion, or 61%, at December 31, 2015. California had the greatest concentration of retained residential loans with 30% at December 31, 2016, compared with 28% at December 31, 2015. The unpaid principal balance of PCI loans concentrated in California represented 55% of total PCI loans at both December 31, 2016 and 2015. The following charts illustrate the percentages of the total retained residential real estate portfolio held in the top 5 states, excluding mortgage loans insured by U.S. government agencies and PCI loans. For further information on the geographic composition of the Firm's residential real estate loans, see Note 14.

Top 5 States - Residential real estate, excluding PCI loans (at December 31, 2016)



Top 5 States - Residential real estate, excluding PCI loans (at December 31, 2015)



Current estimated loan-to-values of residential real estate loans

The current estimated average loan-to-value ("LTV") ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 58% at December 31, 2016 compared with 59% at December 31, 2015.

Although the delinquency rate for loans with high LTV ratios is generally greater than the delinquency rate for loans in which the borrower has greater equity in the collateral, the average LTV ratios have declined consistent with improvements in home prices, reducing the number of loans with a current estimated LTV ratio greater than 100%.

The current estimated average LTV ratio for residential real estate PCI loans, based on the unpaid principal balances, was 64% at December 31, 2016, compared with 69% at December 31, 2015. Of the total PCI portfolio, 4% of the loans had a current estimated LTV ratio greater than 100%, and 1% had a current LTV ratio greater than 125% at December 31, 2016, compared with 6% and 1%, respectively, at December 31, 2015.

While the current estimated collateral value is greater than the net carrying value of PCI loans, the ultimate performance of this portfolio is highly dependent on borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity, as well as on the cost of alternative housing.

For further information on current estimated LTVs of residential real estate loans, see Note 14.

Loan modification activities – residential real estate loans

The performance of modified loans generally differs by product type due to differences in both the credit quality and the types of modifications provided. Performance metrics for modifications to the residential real estate portfolio, excluding PCI loans, that have been seasoned more than six months show weighted-average redefault rates of 21% for home equity and 22% for residential mortgages. The cumulative performance metrics for modifications to the PCI residential real estate portfolio that have been seasoned more than six months show weighted average redefault rates of 20% for home equity, 19% for prime mortgages, 16% for option ARMs and 32% for subprime mortgages. The cumulative redefault rates reflect the performance of modifications completed under both the U.S. Government's Home Affordable Modification Program ("HAMP") and the Firm's proprietary modification programs (primarily the Firm's modification program that was modeled after HAMP) from October 1, 2009, through December 31, 2016.

Certain loans that were modified under HAMP and the Firm's proprietary modification programs have interest rate reset provisions ("step-rate modifications"). Interest rates on these loans generally began to increase commencing in 2014 by 1% per year, and continue to do so, until the rate reaches a specified cap, typically at a prevailing market interest rate for a fixed-rate loan as of the modification date. At December 31, 2016, the carrying value of non-PCI loans and the unpaid principal balance of PCI loans modified in active step-rate modifications were $3 billion and $9 billion, respectively. The Firm continues to monitor this risk exposure and the impact of these potential interest rate increases is considered in the Firm's allowance for loan losses.

The following table presents information as of December 31, 2016 and 2015, relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. Modifications of PCI loans continue to be accounted for and reported as PCI loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of estimated future cash flows. Modifications of consumer loans other than PCI loans are generally accounted for and reported as TDRs. For further information on modifications for the years ended December 31, 2016 and 2015, see Note 14.

Modified residential real estate loans

	2016		2015	
December 31, (in millions)	Retained loans	Nonaccrual retained loans[d]	Retained loans	Nonaccrual retained loans[d]
Modified residential real estate loans, excluding PCI loans[a][b]				
Home equity	**$ 2,264**	**$ 1,116**	$ 2,358	$ 1,220
Residential mortgage	**6,032**	**1,755**	6,690	1,957
Total modified residential real estate loans, excluding PCI loans	**$ 8,296**	**$ 2,871**	$ 9,048	$ 3,177
Modified PCI loans[c]				
Home equity	**$ 2,447**	**NA**	$ 2,526	NA
Prime mortgage	**5,052**	**NA**	5,686	NA
Subprime mortgage	**2,951**	**NA**	3,242	NA
Option ARMs	**9,295**	**NA**	10,427	NA
Total modified PCI loans	**$19,745**	**NA**	$21,881	NA

(a) Amounts represent the carrying value of modified residential real estate loans.
(b) At December 31, 2016 and 2015, $3.4 billion and $3.8 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., Federal Housing Administration ("FHA"), U.S. Department of Veterans Affairs ("VA"), Rural Housing Service of the U.S. Department of Agriculture ("RHS")) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. For additional information about sales of loans in securitization transactions with Ginnie Mae, see Note 16.
(c) Amounts represent the unpaid principal balance of modified PCI loans.
(d) As of December 31, 2016 and 2015, nonaccrual loans included $2.3 billion and $2.5 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status, see Note 14.

Nonperforming assets

The following table presents information as of December 31, 2016 and 2015, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[a]

December 31, (in millions)	2016	2015
Nonaccrual loans[b]		
Residential real estate	**$ 4,145**	$ 4,792
Other consumer	**675**	621
Total nonaccrual loans	**4,820**	5,413
Assets acquired in loan satisfactions		
Real estate owned	**292**	277
Other	**57**	48
Total assets acquired in loan satisfactions	**349**	325
Total nonperforming assets	**$ 5,169**	$ 5,738

(a) At December 31, 2016 and 2015, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $5.0 billion and $6.3 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of $263 million and $290 million, respectively, that are 90 or more days past due; and (3) real estate owned insured by U.S. government agencies of $142 million and $343 million, respectively. These amounts have been excluded based upon the government guarantee.

(b) Excludes PCI loans which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. The Firm is recognizing interest income on each pool of loans as they are all performing.

Nonaccrual loans in the residential real estate portfolio decreased to $4.1 billion from $4.8 billion at December 31, 2016, and 2015, respectively, of which 29% and 31% were greater than 150 days past due, respectively. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 43% and 44% to the estimated net realizable value of the collateral at December 31, 2016 and 2015, respectively.

Active and suspended foreclosure: For information on loans that were in the process of active or suspended foreclosure, see Note 14.

Nonaccrual loans: The following table presents changes in the consumer, excluding credit card, nonaccrual loans for the years ended December 31, 2016 and 2015.

Nonaccrual loans

Year ended December 31, (in millions)	2016	2015
Beginning balance	**$ 5,413**	$ 6,509
Additions	**3,858**	3,662
Reductions:		
Principal payments and other[a]	**1,437**	1,668
Charge-offs	**843**	800
Returned to performing status	**1,589**	1,725
Foreclosures and other liquidations	**582**	565
Total reductions	**4,451**	4,758
Net changes	**(593)**	(1,096)
Ending balance	**$ 4,820**	$ 5,413

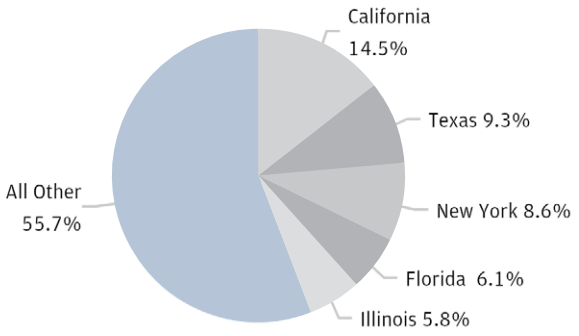
(a) Other reductions includes loan sales.

Credit card

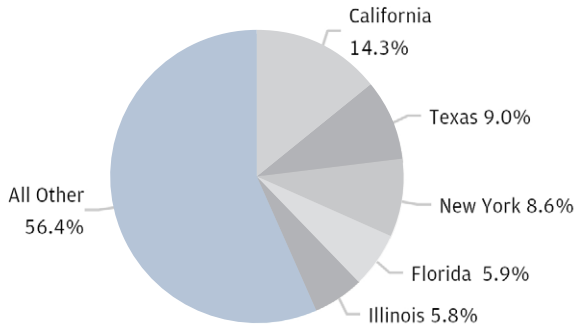
Total credit card loans increased from December 31, 2015 due to strong new account growth and higher sales volume. The December 31, 2016 30+ day delinquency rate increased to 1.61% from 1.43% at December 31, 2015. For the years ended December 31, 2016 and 2015, the net charge-off rates were 2.63% and 2.51%, respectively. The credit card portfolio continues to reflect a largely well-seasoned, rewards-based portfolio that has good U.S. geographic diversification. New originations continue to grow as a percentage of the total portfolio, in line with the Firm's credit parameters; these originations have generated higher loss rates, as anticipated, than the more seasoned portion of the portfolio, given the higher mix of near-prime accounts being originated. These near-prime accounts have net revenue rates and returns on equity that are higher than the portfolio average.

Loans outstanding in the top five states of California, Texas, New York, Florida and Illinois consisted of $62.8 billion in receivables, or 44% of the retained loan portfolio, at December 31, 2016, compared with $57.5 billion, or 44%, at December 31, 2015. The greatest geographic concentration of credit card retained loans is in California, which represented 15% and 14% of total retained loans at December 31, 2016 and 2015, respectively. For further information on the geographic and FICO composition of the Firm's credit card loans, see Note 14.

Top 5 States Credit Card - Retained (at December 31, 2016)



Top 5 States Credit Card - Retained (at December 31, 2015)



Modifications of credit card loans

At December 31, 2016 and 2015, the Firm had $1.2 billion and $1.5 billion, respectively, of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms. The decrease in modified credit card loans outstanding from December 31, 2015, was attributable to a reduction in new modifications as well as ongoing payments and charge-offs on previously modified credit card loans.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged off. However, the Firm establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued and billed interest and fee income.

For additional information about loan modification programs to borrowers, see Note 14.

WHOLESALE CREDIT PORTFOLIO

The Firm's wholesale businesses are exposed to credit risk through underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through various operating services such as cash management and clearing activities. A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk.

The wholesale credit portfolio, excluding the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios, continued to be generally stable for the year ended December 31, 2016, characterized by low levels of criticized exposure, nonaccrual loans and charge-offs. See industry discussion on pages 97–101 for further information. Growth in retained loans was predominantly driven within the commercial real estate portfolio in Commercial Banking, and across multiple commercial and industrial industries in Commercial Banking and the Corporate & Investment Bank. Discipline in underwriting across all areas of lending continues to remain a key point of focus. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of client credit quality and transaction structure, inclusive of collateral where applicable; and of industry, product and client concentrations.

Wholesale credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming[c]	
	2016	2015	**2016**	2015
Loans retained	**$383,790**	$357,050	**$ 1,954**	$ 988
Loans held-for-sale	**2,285**	1,104	**109**	3
Loans at fair value	**2,230**	2,861	**–**	25
Loans – reported	**388,305**	361,015	**2,063**	1,016
Derivative receivables	**64,078**	59,677	**223**	204
Receivables from customers and other[a]	**17,440**	13,372	**–**	–
Total wholesale credit-related assets	**469,823**	434,064	**2,286**	1,220
Lending-related commitments	**368,014**	366,399	**506**	193
Total wholesale credit exposure	**$837,837**	$800,463	**$ 2,792**	$ 1,413
Credit derivatives used in credit portfolio management activities[b]	**$ (22,114)**	$ (20,681)	**$ –**	$ (9)
Liquid securities and other cash collateral held against derivatives	**(22,705)**	(16,580)	**NA**	NA

(a) Receivables from customers and other include $17.3 billion and $13.3 billion of margin loans at December 31, 2016 and 2015, respectively, to prime brokerage customers; these are classified in accrued interest and accounts receivable on the Consolidated balance sheets.

(b) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on pages 103–104, and Note 6.

(c) Excludes assets acquired in loan satisfactions.

The following tables present the maturity and ratings profiles of the wholesale credit portfolio as of December 31, 2016 and 2015. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings defined by S&P and Moody's. For additional information on wholesale loan portfolio risk ratings, see Note 14.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[d]				Ratings profile			
					Investment-grade	Noninvestment-grade		
December 31, 2016 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	**Total**	Total % of IG
Loans retained	**$ 117,238**	**$ 167,235**	**$ 99,317**	**$ 383,790**	**$ 289,923**	**$ 93,867**	**$ 383,790**	**76%**
Derivative receivables				**64,078**			**64,078**	
Less: Liquid securities and other cash collateral held against derivatives				**(22,705)**			**(22,705)**	
Total derivative receivables, net of all collateral	**14,019**	**8,510**	**18,844**	**41,373**	**33,081**	**8,292**	**41,373**	**80**
Lending-related commitments	**88,399**	**271,825**	**7,790**	**368,014**	**269,820**	**98,194**	**368,014**	**73**
Subtotal	**219,656**	**447,570**	**125,951**	**793,177**	**592,824**	**200,353**	**793,177**	**75**
Loans held-for-sale and loans at fair value[a]				**4,515**			**4,515**	
Receivables from customers and other				**17,440**			**17,440**	
Total exposure – net of liquid securities and other cash collateral held against derivatives				**$ 815,132**			**$ 815,132**	
Credit derivatives used in credit portfolio management activities[b][c]	**$ (1,354)**	**$ (16,537)**	**$ (4,223)**	**$ (22,114)**	**$ (18,710)**	**$ (3,404)**	**$ (22,114)**	**85%**

	Maturity profile[d]				Ratings profile			
					Investment-grade	Noninvestment-grade		
December 31, 2015 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	Total	Total % of IG
Loans retained	$ 110,348	$ 155,902	$ 90,800	$ 357,050	$ 267,736	$ 89,314	$ 357,050	75%
Derivative receivables				59,677			59,677	
Less: Liquid securities and other cash collateral held against derivatives				(16,580)			(16,580)	
Total derivative receivables, net of all collateral	11,399	12,836	18,862	43,097	34,773	8,324	43,097	81
Lending-related commitments	105,514	251,042	9,843	366,399	267,922	98,477	366,399	73
Subtotal	227,261	419,780	119,505	766,546	570,431	196,115	766,546	74
Loans held-for-sale and loans at fair value[a]				3,965			3,965	
Receivables from customers and other				13,372			13,372	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 783,883			$ 783,883	
Credit derivatives used in credit portfolio management activities [b][c]	$ (808)	$ (14,427)	$ (5,446)	$ (20,681)	$ (17,754)	$ (2,927)	$ (20,681)	86%

(a) Represents loans held-for-sale, primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
(b) These derivatives do not qualify for hedge accounting under U.S. GAAP.
(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased. Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection for credit portfolio management activities are executed with investment-grade counterparties.
(d) The maturity profile of retained loans, lending-related commitments and derivative receivables is based on remaining contractual maturity. Derivative contracts that are in a receivable position at December 31, 2016, may become a payable prior to maturity based on their cash flow profile or changes in market conditions.

Wholesale credit exposure – industry exposures

The Firm focuses on the management and diversification of its industry exposures, paying particular attention to industries with actual or potential credit concerns. Exposures deemed criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, was $19.8 billion at December 31, 2016, compared with $14.6 billion at December 31, 2015, driven by downgrades, including within the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios.

Below are summaries of the Firm's exposures as of December 31, 2016 and 2015. For additional information on industry concentrations, see Note 5.

Wholesale credit exposure – industries[a]

As of or for the year ended **December 31, 2016** (in millions)	Credit exposure[e]	Investment-grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[f]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 135,041	$ 104,575	$ 29,295	$ 971	$ 200	$ 157	$ (7)	$ (54)	$ (27)
Consumer & Retail	85,435	55,495	28,146	1,554	240	75	24	(424)	(69)
Technology, Media & Telecommunications	62,950	39,756	21,619	1,559	16	9	2	(589)	(30)
Industrials	55,449	36,597	17,690	1,026	136	128	3	(434)	(40)
Healthcare	47,866	37,852	9,092	882	40	86	37	(286)	(246)
Banks & Finance Cos	44,614	35,308	8,892	404	10	21	(2)	(1,336)	(7,319)
Oil & Gas	40,099	18,497	12,138	8,069	1,395	31	222	(1,532)	(18)
Asset Managers	31,886	27,378	4,507	1	–	14	–	–	(5,737)
Utilities	29,622	24,184	4,960	392	86	8	–	(306)	39
State & Municipal Govt[b]	28,263	27,603	624	6	30	107	(1)	(130)	398
Central Govt	20,408	20,123	276	9	–	4	–	(11,691)	(4,183)
Transportation	19,029	12,170	6,362	444	53	9	10	(93)	(188)
Automotive	16,635	9,229	7,204	201	1	7	–	(401)	(14)
Chemicals & Plastics	14,988	10,365	4,451	142	30	3	–	(35)	(3)
Metals & Mining	13,419	5,523	6,744	1,133	19	–	36	(621)	(62)
Insurance	13,151	10,766	2,252	–	133	9	–	(275)	(2,538)
Financial Markets Infrastructure	8,732	7,980	752	–	–	–	–	–	(390)
Securities Firms	3,867	1,543	2,324	–	–	–	–	(273)	(491)
All other[c]	144,428	128,456	15,305	373	294	650	17	(3,634)	(1,787)
Subtotal	$ 815,882	$ 613,400	$ 182,633	$ 17,166	$ 2,683	$ 1,318	$ 341	$ (22,114)	$ (22,705)
Loans held-for-sale and loans at fair value	4,515								
Receivables from customers and other	17,440								
Total[d]	$ 837,837								

As of or for the year ended December 31, 2015 (in millions)	Credit exposure[e]	Investment-grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[f]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 116,857	$ 88,076	$ 27,087	$ 1,463	$ 231	$ 208	$ (14)	$ (54)	$ (47)
Consumer & Retail	85,460	53,647	29,659	1,947	207	18	13	(288)	(94)
Technology, Media & Telecommunications	57,382	29,205	26,925	1,208	44	5	(1)	(806)	(21)
Industrials	54,386	36,519	16,663	1,164	40	59	8	(386)	(39)
Healthcare	46,053	37,858	7,755	394	46	129	(7)	(24)	(245)
Banks & Finance Cos	43,398	35,071	7,654	610	63	17	(5)	(974)	(5,509)
Oil & Gas	42,077	24,379	13,158	4,263	277	22	13	(530)	(37)
Asset Managers	23,815	20,214	3,570	31	–	18	–	(6)	(4,453)
Utilities	30,853	24,983	5,655	168	47	3	–	(190)	(289)
State & Municipal Govt[b]	29,114	28,307	745	7	55	55	(8)	(146)	(81)
Central Govt	17,968	17,871	97	–	–	7	–	(9,359)	(2,393)
Transportation	19,227	13,258	5,801	167	1	15	3	(51)	(243)
Automotive	13,864	9,182	4,580	101	1	4	(2)	(487)	(1)
Chemicals & Plastics	15,232	10,910	4,017	274	31	9	–	(17)	–
Metals & Mining	14,049	6,522	6,434	1,008	85	1	–	(449)	(4)
Insurance	11,889	9,812	1,958	26	93	23	–	(157)	(1,410)
Financial Markets Infrastructure	7,973	7,304	669	–	–	–	–	–	(167)
Securities Firms	4,412	1,505	2,907	–	–	3	–	(102)	(256)
All other[c]	149,117	130,488	18,095	370	164	1,015	10	(6,655)	(1,291)
Subtotal	$ 783,126	$ 585,111	$ 183,429	$ 13,201	$ 1,385	$ 1,611	$ 10	$ (20,681)	$ (16,580)
Loans held-for-sale and loans at fair value	3,965								
Receivables from customers and other	13,372								
Total[d]	$ 800,463								

(a) The industry rankings presented in the table as of December 31, 2015, are based on the industry rankings of the corresponding exposures at December 31, 2016, not actual rankings of such exposures at December 31, 2015.

(b) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2016 and 2015, noted above, the Firm held: $9.1 billion and $7.6 billion, respectively, of trading securities; $31.6 billion and $33.6 billion, respectively, of AFS securities; and $14.5 billion and $12.8 billion, respectively, of HTM securities, issued by U.S. state and municipal governments. For further information, see Note 3 and Note 12.

(c) All other includes: individuals; SPEs; holding companies; and private education and civic organizations, representing approximately 56%, 36%, 4% and 4%, respectively, at December 31, 2016, and 54%, 37%, 5% and 4%, respectively, at December 31, 2015.

(d) Excludes cash placed with banks of $380.2 billion and$351.0 billion, at December 31, 2016 and 2015, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.

(e) Credit exposure is net of risk participations and excludes the benefit of credit derivatives used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.

(f) Represents the net notional amounts of protection purchased and sold through credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The All other category includes purchased credit protection on certain credit indices.

Presented below is a discussion of certain industries to which the Firm has significant exposures and/or which present actual or potential credit concerns.

Real Estate

Exposure to the Real Estate industry was approximately 16.1% and 14.6% of the Firm's total wholesale exposure as of December 31, 2016 and 2015, respectively. Exposure to this industry increased by $18.2 billion, or 16%, in 2016 to $135.0 billion primarily driven by Commercial Banking. The investment-grade percentage of the portfolio increased to 77% in 2016, up from 75% in 2015. As of December 31, 2016, $106.3 billion of the exposure was drawn, of which 83% was investment-grade, and 83% of the $135.0 billion exposure was secured. As of December 31, 2016, $80.1 billion of the $135.0 billion was multifamily, largely in California; of the $80.1 billion, 82% was investment-grade and 98% was secured. For further information on commercial real estate loans, see Note 14.

Oil & Gas and Natural Gas Pipelines

The following table presents Oil & Gas and Natural Gas Pipeline exposures as of December 31, 2016, and December 31, 2015.

	December 31, 2016				
(in millions, except ratios)	**Loans and Lending-related Commitments**	**Derivative Receivables**	**Credit exposure**	**% Investment-grade**	**% Drawn**
Exploration & Production ("E&P") and Oilfield Services[a]	**$ 20,829**	**$ 1,256**	**$ 22,085**	**26%**	**34%**
Other Oil & Gas[b]	**17,392**	**622**	**18,014**	**71**	**30**
Total Oil & Gas	**38,221**	**1,878**	**40,099**	**46**	**33**
Natural Gas Pipelines[c]	**4,253**	**106**	**4,359**	**66**	**30**
Total Oil & Gas and Natural Gas Pipelines	**$ 42,474**	**$ 1,984**	**$ 44,458**	**48**	**32**

	December 31, 2015				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn
E&P and Oilfield Services[a]	$ 23,055	$ 400	$ 23,455	44%	36%
Other Oil & Gas[b]	17,120	1,502	18,622	76	27
Total Oil & Gas	40,175	1,902	42,077	58	32
Natural Gas Pipelines[c]	4,093	158	4,251	64	21
Total Oil & Gas and Natural Gas Pipelines	$ 44,268	$ 2,060	$ 46,328	59	31

(a) Noninvestment-grade exposure to E&P and Oilfield Services is largely secured.
(b) Other Oil & Gas includes Integrated Oil & Gas companies, Midstream/Oil Pipeline companies and refineries.
(c) Natural Gas Pipelines is reported within the Utilities Industry.

Exposure to the Oil & Gas and Natural Gas Pipelines portfolios was approximately 5.3% and 5.8% of the Firm's total wholesale exposure as of December 31, 2016 and 2015, respectively. Exposure to these industries decreased by $1.9 billion in 2016 to $44.5 billion; of the $44.5 billion, $14.4 billion was drawn at year-end. As of December 31, 2016, approximately $21.4 billion of the exposure was investment-grade, of which approximately $5.3 billion was drawn, and approximately $23.1 billion of the exposure was noninvestment grade, of which approximately $9.0 billion was drawn; 21% of the total exposure to the Oil & Gas and Natural Gas Pipelines industries was criticized. Secured lending, of which approximately half is reserve-based lending to the Exploration & Production sub-sector of the Oil & Gas industry, was $14.3 billion as of December 31, 2016; 44% of the secured lending exposure was drawn. Exposure to commercial real estate, which is reported within the Real Estate industry, in certain areas of Texas, California and Colorado that are deemed sensitive to the Oil & Gas industry, was $4.5 billion as of December 31, 2016. While the overall trends and sentiment have been stabilizing, the Firm continues to actively monitor and manage its exposure to these portfolios.

Metals & Mining

Exposure to the Metals & Mining industry was approximately 1.6% and 1.8% of the Firm's total wholesale exposure as of December 31, 2016 and 2015, respectively. Exposure to the Metals & Mining industry decreased by $630 million in 2016 to $13.4 billion, of which $4.4 billion was drawn. The portfolio largely consisted of exposure in North America, and was concentrated in the Steel and Diversified Mining sub-sectors. Approximately 41% and 46% of the exposure in the Metals & Mining portfolio was investment-grade as of December 31, 2016 and December 31, 2015, respectively. While the overall trends and sentiment have been stabilizing, the Firm continues to actively monitor and manage its exposure to this industry.

Loans

In the normal course of its wholesale business, the Firm provides loans to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals. For further discussion on loans, including information on credit quality indicators and sales of loans, see Note 14.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2016 and 2015. Wholesale nonaccrual loans increased primarily driven by downgrades in the Oil & Gas portfolio.

Wholesale nonaccrual loan activity[(a)]

Year ended December 31, (in millions)	2016	2015
Beginning balance	**$ 1,016**	$ 624
Additions	**2,981**	1,307
Reductions:		
Paydowns and other	**1,148**	534
Gross charge-offs	**385**	87
Returned to performing status	**242**	286
Sales	**159**	8
Total reductions	**1,934**	915
Net changes	**1,047**	392
Ending balance	**$ 2,063**	$ 1,016

(a) Loans are placed on nonaccrual status when management believes full payment of principal or interest is not expected, regardless of delinquency status, or when principal or interest have been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection.

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2016 and 2015. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

Wholesale net charge-offs/(recoveries)

Year ended December 31, (in millions, except ratios)	2016	2015
Loans – reported		
Average loans retained	**$ 371,778**	$ 337,407
Gross charge-offs	**398**	95
Gross recoveries	**(57)**	(85)
Net charge-offs	**341**	10
Net charge-off rate	**0.09%**	–%

Lending-related commitments

The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to meet the financing needs of its customers. The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfill its obligations under these guarantees, and the counterparties subsequently fail to perform according to the terms of these contracts.

In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's future credit exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, the Firm has estimated a loan-equivalent amount for each commitment. The loan-equivalent amount of the Firm's lending-related commitments was $204.6 billion and $212.4 billion as of December 31, 2016 and 2015, respectively.

Clearing services

The Firm provides clearing services for clients entering into securities and derivative transactions. Through the provision of these services the Firm is exposed to the risk of non-performance by its clients and may be required to share in losses incurred by central counterparties. Where possible, the Firm seeks to mitigate its credit risk to its clients through the collection of adequate margin at inception and throughout the life of the transactions and can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement. For further discussion of clearing services, see Note 29.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activities. Derivatives enable customers to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its own credit and other market risk exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For OTC derivatives the Firm is exposed to the credit risk of the derivative counterparty. For exchange-traded derivatives ("ETD"), such as futures and options and "cleared" over-the-counter ("OTC-cleared") derivatives, the Firm is generally exposed to the credit risk of the relevant CCP. Where possible, the Firm seeks to mitigate its credit risk exposures arising from derivative transactions through the use of legally enforceable master netting arrangements and collateral agreements. For further discussion of derivative contracts, counterparties and settlement types, see Note 6.

The following table summarizes the net derivative receivables for the periods presented.

Derivative receivables

December 31, (in millions)	2016	2015
Interest rate	$ 28,302	$ 26,363
Credit derivatives	1,294	1,423
Foreign exchange	23,271	17,177
Equity	4,939	5,529
Commodity	6,272	9,185
Total, net of cash collateral	64,078	59,677
Liquid securities and other cash collateral held against derivative receivables[(a)]	(22,705)	(16,580)
Total, net of all collateral	$ 41,373	$ 43,097

(a) Includes collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

Derivative receivables reported on the Consolidated balance sheets were $64.1 billion and $59.7 billion at December 31, 2016 and 2015, respectively. These amounts represent the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. However, in management's view, the appropriate measure of current credit risk should also take into consideration additional liquid securities (primarily U.S. government and agency securities and other group of seven nations ("G7") government bonds) and other cash collateral held by the Firm aggregating $22.7 billion and $16.6 billion at December 31, 2016 and 2015, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor. The change in derivative receivables was predominantly related to client-driven market-making activities in CIB. The increase in derivative receivables reflected the impact of market movements, which increased foreign exchange receivables, partially offset by reduced commodity derivative receivables.

In addition to the collateral described in the preceding paragraph, the Firm also holds additional collateral (primarily cash, G7 government securities, other liquid government-agency and guaranteed securities, and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Although this collateral does not reduce the balances and is not included in the table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative transactions move in the Firm's favor. The derivative receivables fair value, net of all collateral, also does not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of collateral agreements, see Note 6.

While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak represents a conservative measure of potential exposure to a counterparty calculated in a manner that is broadly equivalent to a 97.5% confidence level over the life of the transaction. Peak is the primary measure used by the Firm for setting of credit limits for derivative transactions, senior management reporting and derivatives exposure management. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. DRE is a less extreme measure of potential credit loss than Peak and is used for aggregating derivative credit risk exposures with loans and other credit risk.

Finally, AVG is a measure of the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the CVA, as further described below. The three year AVG exposure was $31.1 billion and $32.4 billion at December 31, 2016 and 2015, respectively, compared with derivative receivables, net of all collateral, of $41.4 billion and $43.1 billion at December 31, 2016 and 2015, respectively.

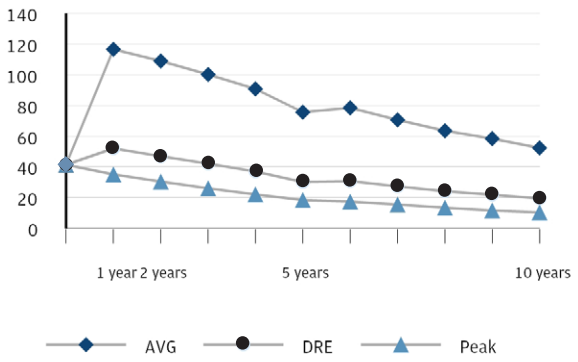
The fair value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit

risk in the derivatives portfolio. In addition, the Firm's risk management process takes into consideration the potential impact of wrong-way risk, which is broadly defined as the potential for increased correlation between the Firm's exposure to a counterparty (AVG) and the counterparty's credit quality. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with that counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to the Firm's current derivatives portfolio over the next 10 years as calculated by the Peak, DRE and AVG metrics. The three measures generally show that exposure will decline after the first year, if no new trades are added to the portfolio.

Exposure profile of derivatives measures

December 31, 2016
(in billions)



The following table summarizes the ratings profile by derivative counterparty of the Firm's derivative receivables, including credit derivatives, net of all collateral, at the dates indicated. The ratings scale is based on the Firm's internal ratings, which generally correspond to the ratings as defined by S&P and Moody's.

Ratings profile of derivative receivables

Rating equivalent	2016		2015[a]	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 11,449**	**28%**	$ 10,371	24%
A+/A1 to A-/A3	**8,505**	**20**	10,595	25
BBB+/Baa1 to BBB-/Baa3	**13,127**	**32**	13,807	32
BB+/Ba1 to B-/B3	**7,308**	**18**	7,500	17
CCC+/Caa1 and below	**984**	**2**	824	2
Total	**$ 41,373**	**100%**	$ 43,097	100%

(a) Prior period amounts have been revised to conform with the current period presentation.

As previously noted, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's derivatives transactions subject to collateral agreements – excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity – was 90% as of December 31, 2016, largely unchanged compared with 87% as of December 31, 2015.

Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker, and second, as an end-user to manage the Firm's own credit risk associated with various exposures. For a detailed description of credit derivatives, see Credit derivatives in Note 6.

Credit portfolio management activities

Included in the Firm's end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management" activities). Information on credit portfolio management activities is provided in the table below. For further information on derivatives used in credit portfolio management activities, see Credit derivatives in Note 6.

The Firm also uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain securities held in the Firm's market-making businesses. These credit derivatives are not included in credit portfolio management activities; for further information on these credit derivatives as well as credit derivatives used in the Firm's capacity as a market-maker in credit derivatives, see Credit derivatives in Note 6.

Credit derivatives used in credit portfolio management activities

December 31, (in millions)	Notional amount of protection purchased [(a)] 2016	2015
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 2,430**	$ 2,289
Derivative receivables	**19,684**	18,392
Credit derivatives used in credit portfolio management activities	**$ 22,114**	$ 20,681

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

The credit derivatives used in credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure.

The effectiveness of credit default swaps ("CDS") as a hedge against the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS); the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm); and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers both the consumer (primarily scored) portfolio and wholesale (risk-rated) portfolio. The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also determines an allowance for wholesale and certain consumer lending-related commitments.

For a further discussion of the components of the allowance for credit losses and related management judgments, see Critical Accounting Estimates Used by the Firm on pages 132–134 and Note 15.

At least quarterly, the allowance for credit losses is reviewed by the CRO, the CFO and the Controller of the Firm, and discussed with the DRPC and the Audit Committee. As of December 31, 2016, JPMorgan Chase deemed the allowance for credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio.

The consumer allowance for loan losses remained relatively unchanged from December 31, 2015. Changes to the allowance for loan losses included reductions in the residential real estate portfolio, reflecting continued improvements in home prices and lower delinquencies, as well as runoff in the student loan portfolio. These reductions were offset by increases in the allowance for loan losses reflecting loan growth in the credit card portfolio (including newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio), as well as loan growth in the auto and business banking loan portfolios. For additional information about delinquencies and nonaccrual loans in the consumer, excluding credit card, loan portfolio, see Consumer Credit Portfolio on pages 89–95 and Note 14.

The wholesale allowance for credit losses increased from December 31, 2015, reflecting the impact of downgrades in the Oil & Gas and Natural Gas Pipelines portfolios. For additional information on the wholesale portfolio, see Wholesale Credit Portfolio on pages 96–104 and Note 14.

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2016 Consumer, excluding credit card	2016 Credit card	2016 Wholesale	2016 Total	2015 Consumer, excluding credit card	2015 Credit card	2015 Wholesale	2015 Total
Allowance for loan losses								
Beginning balance at January 1,	$ 5,806	$ 3,434	$ 4,315	$ 13,555	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Gross charge-offs	1,500	3,799	398	5,697	1,658	3,488	95	5,241
Gross recoveries	(591)	(357)	(57)	(1,005)	(704)	(366)	(85)	(1,155)
Net charge-offs	909	3,442	341	4,692	954	3,122	10	4,086
Write-offs of PCI loans[a]	156	–	–	156	208	–	–	208
Provision for loan losses	467	4,042	571	5,080	(82)	3,122	623	3,663
Other	(10)	–	(1)	(11)	–	(5)	6	1
Ending balance at December 31,	$ 5,198	$ 4,034	$ 4,544	$ 13,776	$ 5,806	$ 3,434	$ 4,315	$ 13,555
Impairment methodology								
Asset-specific[b]	$ 308	$ 358	$ 342	$ 1,008	$ 364	$ 460	$ 274	$ 1,098
Formula-based	2,579	3,676	4,202	10,457	2,700	2,974	4,041	9,715
PCI	2,311	–	–	2,311	2,742	–	–	2,742
Total allowance for loan losses	$ 5,198	$ 4,034	$ 4,544	$ 13,776	$ 5,806	$ 3,434	$ 4,315	$ 13,555
Allowance for lending-related commitments								
Beginning balance at January 1,	$ 14	$ –	$ 772	$ 786	$ 13	$ –	$ 609	$ 622
Provision for lending-related commitments	–	–	281	281	1	–	163	164
Other	12	–	(1)	11	–	–	–	–
Ending balance at December 31,	$ 26	$ –	$ 1,052	$ 1,078	$ 14	$ –	$ 772	$ 786
Impairment methodology								
Asset-specific	$ –	$ –	$ 169	$ 169	$ –	$ –	$ 73	$ 73
Formula-based	26	–	883	909	14	–	699	713
Total allowance for lending-related commitments[c]	$ 26	$ –	$ 1,052	$ 1,078	$ 14	$ –	$ 772	$ 786
Total allowance for credit losses	$ 5,224	$ 4,034	$ 5,596	$ 14,854	$ 5,820	$ 3,434	$ 5,087	$ 14,341
Memo:								
Retained loans, end of period	$ 364,406	$ 141,711	$ 383,790	$ 889,907	$ 344,355	$ 131,387	$ 357,050	$ 832,792
Retained loans, average	358,486	131,081	371,778	861,345	318,612	124,274	337,407	780,293
PCI loans, end of period	35,679	–	3	35,682	40,998	–	4	41,002
Credit ratios								
Allowance for loan losses to retained loans	1.43%	2.85%	1.18%	1.55%	1.69%	2.61%	1.21%	1.63%
Allowance for loan losses to retained nonaccrual loans[d]	109	NM	233	205	109	NM	437	215
Allowance for loan losses to retained nonaccrual loans excluding credit card	109	NM	233	145	109	NM	437	161
Net charge-off rates	0.25	2.63	0.09	0.54	0.30	2.51	–	0.52
Credit ratios, excluding residential real estate PCI loans								
Allowance for loan losses to retained loans	0.88	2.85	1.18	1.34	1.01	2.61	1.21	1.37
Allowance for loan losses to retained nonaccrual loans[d]	61	NM	233	171	58	NM	437	172
Allowance for loan losses to retained nonaccrual loans excluding credit card	61	NM	233	111	58	NM	437	117
Net charge-off rates	0.28%	2.63%	0.09%	0.57%	0.35%	2.51%	–%	0.55%

Note: In the table above, the financial measures which exclude the impact of PCI loans are non-GAAP financial measures.

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation).

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR. The asset-specific credit card allowance for loan losses modified in a TDR is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(c) The allowance for lending-related commitments is reported in accounts payable and other liabilities on the Consolidated balance sheets.

(d) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

Provision for credit losses

For the year ended December 31, 2016, the provision for credit losses was $5.4 billion, compared with $3.8 billion for the year ended December 31, 2015.

The total consumer provision for credit losses increased for the year ended December 31, 2016 when compared with the prior year. The increase in the provision was driven by:

- a $920 million increase related to the credit card portfolio, due to a $600 million addition in the allowance for loan losses, as well as $320 million of higher net charge-offs, driven by loan growth, including growth in newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio,
- a $450 million lower benefit related to the residential real estate portfolio, as the current year reduction in the allowance for loan losses was lower than the prior year. The reduction in both periods reflected continued improvements in home prices and lower delinquencies and
- a $150 million increase related to the auto and business banking portfolio, due to additions to the allowance for loan losses and higher net charge-offs, reflecting loan growth in the portfolios.

The wholesale provision for credit losses increased for the year ended December 31, 2016 reflecting the impact of downgrades in the Oil & Gas and Natural Gas Pipelines portfolios.

Year ended December 31, (in millions)	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
	2016	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Consumer, excluding credit card	**$ 467**	$ (82)	$ 414	**$ –**	$ 1	$ 5	**$ 467**	$ (81)	$ 419
Credit card	**4,042**	3,122	3,079	**–**	–	–	**4,042**	3,122	3,079
Total consumer	**4,509**	3,040	3,493	**–**	1	5	**4,509**	3,041	3,498
Wholesale	**571**	623	(269)	**281**	163	(90)	**852**	786	(359)
Total	**$ 5,080**	$ 3,663	$ 3,224	**$ 281**	$ 164	$ (85)	**$ 5,361**	$ 3,827	$ 3,139

COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers or adversely affects markets related to a particular country. The Firm has a comprehensive country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring direct country exposures in the Firm. The Country Risk Management group is responsible for developing guidelines and policies for managing country risk in both emerging and developed countries. The Country Risk Management group actively monitors the various portfolios giving rise to country risk to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

Country risk organization

The Country Risk Management group, part of the independent risk management function, works in close partnership with other risk functions to assess and monitor country risk within the Firm. The Firmwide Risk Executive for Country Risk reports to the Firm's CRO.

Country Risk Management is responsible for the following functions:

- Developing guidelines and policies consistent with a comprehensive country risk framework
- Assigning sovereign ratings and assessing country risks
- Measuring and monitoring country risk exposure and stress across the Firm
- Managing country limits and reporting trends and limit breaches to senior management
- Developing surveillance tools for early identification of potential country risk concerns
- Providing country risk scenario analysis

Country risk identification and measurement

The Firm is exposed to country risk through its lending and deposits, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country. Under the Firm's internal country risk management approach, country exposure is reported based on the country where the majority of the assets of the obligor, counterparty, issuer or guarantor are located or where the majority of its revenue is derived, which may be different than the domicile (legal residence) or country of incorporation of the obligor, counterparty, issuer or guarantor. Country exposures are generally measured by considering the Firm's risk to an immediate default of the counterparty or obligor, with zero recovery. Assumptions are sometimes required in determining the measurement and allocation of country exposure, particularly in the case of certain tranched credit derivatives. Different measurement approaches or assumptions would affect the amount of reported country exposure.

Under the Firm's internal country risk measurement framework:

- Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and cash and marketable securities collateral received
- Deposits are measured as the cash balances placed with central and commercial banks
- Securities financing exposures are measured at their receivable balance, net of collateral received
- Debt and equity securities are measured at the fair value of all positions, including both long and short positions
- Counterparty exposure on derivative receivables is measured at the derivative's fair value, net of the fair value of the related collateral. Counterparty exposure on derivatives can change significantly because of market movements
- Credit derivatives protection purchased and sold is reported based on the underlying reference entity and is measured at the notional amount of protection purchased or sold, net of the fair value of the recognized derivative receivable or payable. Credit derivatives protection purchased and sold in the Firm's market-making activities is measured on a net basis, as such activities often result in selling and purchasing protection related to the same underlying reference entity; this reflects the manner in which the Firm manages these exposures

Some activities may create contingent or indirect exposure related to a country (for example, providing clearing services or secondary exposure to collateral on securities financing receivables). These exposures are managed in the normal course of business through the Firm's credit, market, and operational risk governance, rather than through Country Risk Management.

The Firm's internal country risk reporting differs from the reporting provided under the FFIEC bank regulatory requirements. For further information on the FFIEC's reporting methodology, see Cross-border outstandings on page 292.

Country risk stress testing

The country risk stress framework aims to estimate losses arising from a country crisis by capturing the impact of large asset price movements in a country based on market shocks combined with counterparty specific assumptions. Country Risk Management periodically defines and runs ad hoc stress scenarios for individual countries in response to specific market events and sector performance concerns.

Country risk monitoring and control

The Country Risk Management group establishes guidelines for sovereign ratings reviews and limit management. Country stress and nominal exposures are measured under a comprehensive country limit framework. Country ratings and limits are actively monitored and reported on a regular basis. Country limit requirements are reviewed and approved by senior management as often as necessary, but at least annually. In addition, the Country Risk Management group uses surveillance tools, such as signaling models and ratings indicators, for early identification of potential country risk concerns.

Country risk reporting

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of December 31, 2016. The selection of countries is based solely on the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions. Country exposures may fluctuate from period to period due to client activity and market flows.

The increase in exposure to Germany, Japan and Luxembourg since December 31, 2015 largely reflects higher Euro and Yen balances, predominantly placed on deposit at the central banks of these countries, driven by changing client positions and prevailing market and liquidity conditions.

Top 20 country exposures

	December 31, 2016			
(in billions)	Lending and deposits[a]	Trading and investing[b][c]	Other[d]	Total exposure
Germany	$ 46.9	$ 15.2	$ –	$ 62.1
United Kingdom	25.0	15.8	0.6	41.4
Japan	33.9	4.0	0.1	38.0
France	13.0	12.0	0.2	25.2
China	9.8	6.5	0.8	17.1
Canada	10.9	2.6	0.1	13.6
Australia	6.8	5.6	–	12.4
Netherlands	6.3	3.1	1.1	10.5
Luxembourg	10.0	0.2	–	10.2
Brazil	5.0	5.0	–	10.0
Switzerland	7.5	0.6	1.6	9.7
India	3.8	4.5	0.4	8.7
Italy	3.3	3.7	–	7.0
Korea	3.9	2.3	0.8	7.0
Hong Kong	2.1	1.4	1.9	5.4
Singapore	2.5	1.3	1.2	5.0
Mexico	3.1	1.4	–	4.5
Saudi Arabia	3.5	0.8	–	4.3
United Arab Emirates	3.2	1.1	–	4.3
Ireland	1.6	0.3	2.3	4.2

(a) Lending and deposits includes loans and accrued interest receivable (net of collateral and the allowance for loan losses), deposits with banks (including central banks), acceptances, other monetary assets, issued letters of credit net of participations, and unused commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities.

(b) Includes market-making inventory, AFS securities, counterparty exposure on derivative and securities financings net of collateral and hedging.

(c) Includes single reference entity ("single-name"), index and tranched credit derivatives for which one or more of the underlying reference entities is in a country listed in the above table.

(d) Includes capital invested in local entities and physical commodity inventory.

LIQUIDITY RISK MANAGEMENT

Liquidity risk is the risk that the Firm will be unable to meet its contractual and contingent obligations or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets and liabilities.

Liquidity risk oversight

The Firm has a liquidity risk oversight function whose primary objective is to provide assessment, measurement, monitoring, and control of liquidity risk across the Firm. Liquidity risk oversight is managed through a dedicated firmwide Liquidity Risk Oversight group. The CIO, Treasury and Corporate ("CTC") CRO, who reports to the CRO, as part of the independent risk management function, has responsibility for firmwide Liquidity Risk Oversight. Liquidity Risk Oversight's responsibilities include but are not limited to:

- Establishing and monitoring limits, indicators, and thresholds, including liquidity appetite tolerances;
- Defining, monitoring, and reporting internal firmwide and material legal entity liquidity stress tests, and monitoring and reporting regulatory defined liquidity stress testing;
- Monitoring and reporting liquidity positions, balance sheet variances and funding activities;
- Conducting ad hoc analysis to identify potential emerging liquidity risks.

Risk governance and measurement

Specific committees responsible for liquidity governance include firmwide ALCO as well as line of business and regional ALCOs, and the CTC Risk Committee. In addition, the DRPC reviews and recommends to the Board of Directors, for formal approval, the Firm's liquidity risk tolerances, liquidity strategy, and liquidity policy at least annually. For further discussion of ALCO and other risk-related committees, see Enterprise-wide Risk Management on pages 71–75.

Internal Stress testing

Liquidity stress tests are intended to ensure the Firm has sufficient liquidity under a variety of adverse scenarios, including scenarios analyzed as part of the Firm's resolution and recovery planning. Stress scenarios are produced for JPMorgan Chase & Co. ("Parent Company") and the Firm's material legal entities on a regular basis and ad hoc stress tests are performed, as needed, in response to specific market events or concerns. Liquidity stress tests assume all of the Firm's contractual obligations are met and take into consideration varying levels of access to unsecured and secured funding markets, estimated non-contractual and contingent outflows and potential impediments to the availability and transferability of liquidity between jurisdictions and material legal entities such as regulatory, legal or other restrictions. Liquidity outflow assumptions are modeled across a range of time horizons and contemplate both market and idiosyncratic stress.

Results of stress tests are considered in the formulation of the Firm's funding plan and assessment of its liquidity position. The Parent Company acts as a source of funding for the Firm through stock and long-term debt issuances, and the IHC provides funding support to the ongoing operations of the Parent Company and its subsidiaries, as necessary. The Firm maintains liquidity at the Parent Company and the IHC, in addition to liquidity held at the operating subsidiaries, at levels sufficient to comply with liquidity risk tolerances and minimum liquidity requirements, to manage through periods of stress where access to normal funding sources is disrupted.

Liquidity management

Treasury and CIO is responsible for liquidity management. The primary objectives of effective liquidity management are to ensure that the Firm's core businesses and material legal entities are able to operate in support of client needs, meet contractual and contingent obligations through normal economic cycles as well as during stress events, and to manage an optimal funding mix, and availability of liquidity sources. The Firm manages liquidity and funding using a centralized, global approach across its entities, taking into consideration both their current liquidity profile and any potential changes over time, in order to optimize liquidity sources and uses.

In the context of the Firm's liquidity management, Treasury and CIO is responsible for:

- Analyzing and understanding the liquidity characteristics of the Firm, lines of business and legal entities' assets and liabilities, taking into account legal, regulatory, and operational restrictions;
- Defining and monitoring firmwide and legal entity-specific liquidity strategies, policies, guidelines, and contingency funding plans;
- Managing liquidity within approved liquidity risk appetite tolerances and limits;
- Setting transfer pricing in accordance with underlying liquidity characteristics of balance sheet assets and liabilities as well as certain off-balance sheet items.

Contingency funding plan

The Firm's contingency funding plan ("CFP"), which is reviewed by ALCO and approved by the DRPC, is a compilation of procedures and action plans for managing liquidity through stress events. The CFP incorporates the limits and indicators set by the Liquidity Risk Oversight group. These limits and indicators are reviewed regularly to identify the emergence of risks or vulnerabilities in the Firm's liquidity position. The CFP identifies the alternative contingent liquidity resources available to the Firm in a stress event.

LCR and NSFR

The U.S. LCR rule requires the Firm to measure the amount of HQLA held by the Firm in relation to estimated net cash outflows within a 30-day period during an acute stress event. The LCR was required to be 90% at January 1, 2016, increased to a minimum of 100% commencing January 1, 2017. At December 31, 2016, the Firm was compliant with the Fully Phased-In U.S. LCR.

On December 19, 2016 the Federal Reserve published final U.S. LCR public disclosure requirements for certain bank holding companies and nonbank financial companies. Starting with the second quarter of 2017, the Firm will be required to disclose quarterly its consolidated LCR pursuant to the U.S. LCR rule, including the Firm's average LCR for the quarter and the key quantitative components of the average LCR in a standardized template, along with a qualitative discussion of material drivers of the ratio, changes over time, and causes of such changes.

The Basel Committee final standard for the net stable funding ratio ("Basel NSFR") is intended to measure the adequacy of "available" and "required" amounts of stable funding over a one-year horizon. Basel NSFR will become a minimum standard by January 1, 2018 and requires that this ratio be equal to at least 100% on an ongoing basis.

On April 26, 2016, the U.S. NSFR proposal was released for large banks and bank holding companies and was largely consistent with Basel NSFR. The proposed requirement would apply beginning on January 1, 2018, consistent with the Basel NSFR timeline.

The Firm estimates it was compliant with the proposed U.S. NSFR as of December 31, 2016 based on its current understanding of the proposed rule.

HQLA

HQLA is the amount of assets that qualify for inclusion in the U.S. LCR. HQLA primarily consists of cash and certain unencumbered high quality liquid assets as defined in the final rule.

As of December 31, 2016, the Firm's HQLA was $524 billion, compared with $496 billion as of December 31, 2015. The increase in HQLA primarily reflects the impact of sales, maturities and paydowns in non-HQLA-eligible securities, as well as deposit growth in excess of loan growth. Certain of these actions resulted in increased excess liquidity at JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. which is excluded from the Firm's HQLA as required under the U.S. LCR rules. The Firm's HQLA may fluctuate from period to period primarily due to normal flows from client activity.

The following table presents the Firm's estimated HQLA included in the U.S. LCR broken out by HQLA-eligible cash and securities as of December 31, 2016.

December 31, (in billions)		2016
HQLA		
Eligible cash[(a)]	$	323
Eligible securities[(b)]		201
Total HQLA[(c)]	$	524

(a) Cash on deposit at central banks.
(b) Predominantly includes U.S. agency MBS, U.S. Treasuries, and sovereign bonds net of applicable haircuts under U.S. LCR rules.
(c) Excludes excess HQLA at JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

As of December 31, 2016, in addition to HQLA reported above, the Firm had approximately $262 billion of unencumbered marketable securities, such as equity securities and fixed income debt securities, available to raise liquidity, if required. This includes HQLA-eligible securities included as part of the excess liquidity at JPMorgan Chase Bank, N.A. The Firm also maintains borrowing capacity at various Federal Home Loan Banks ("FHLBs"), the Federal Reserve Bank discount window and various other central banks as a result of collateral pledged by the Firm to such banks. Although available, the Firm does not view the borrowing capacity at the Federal Reserve Bank discount window and the various other central banks as a primary source of liquidity. As of December 31, 2016, the Firm's remaining borrowing capacity at various FHLBs and the Federal Reserve Bank discount window was approximately $221 billion. This remaining borrowing capacity excludes the benefit of securities included in HQLA or other unencumbered securities that are currently held at the Federal Reserve Bank discount window, but for which the Firm has not drawn liquidity.

Funding

Sources of funds

Management believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations.

The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio ($894.8 billion at December 31, 2016), is funded with a portion of the Firm's deposits ($1,375.2 billion at December 31, 2016) and through securitizations and, with respect to a portion of the Firm's real estate-related loans, with secured borrowings from the FHLBs. Deposits in excess of the amount utilized to fund loans are primarily invested in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity risk characteristics. Securities borrowed or purchased under resale agreements and trading assets-

debt and equity instruments are primarily funded by the Firm's securities loaned or sold under agreements to repurchase, trading liabilities–debt and equity instruments, and a portion of the Firm's long-term debt and stockholders' equity. In addition to funding securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments, proceeds from the Firm's debt and equity issuances are used to fund certain loans and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio. See the discussion below for additional information relating to Deposits, Short-term funding, and Long-term funding and issuance.

Deposits

The table below summarizes, by line of business, the period-end and average deposit balances as of and for the years ended December 31, 2016 and 2015.

Deposits			Year ended December 31,	
As of or for the year ended December 31,			Average	
(in millions)	2016	2015	2016	2015
Consumer & Community Banking	**$ 618,337**	$ 557,645	**$ 586,637**	$ 530,938
Corporate & Investment Bank	**412,434**	395,228	**409,680**	414,064
Commercial Banking	**179,532**	172,470	**172,835**	184,132
Asset & Wealth Management	**161,577**	146,766	**153,334**	149,525
Corporate	**3,299**	7,606	**5,482**	17,129
Total Firm	**$ 1,375,179**	$ 1,279,715	**$ 1,327,968**	$ 1,295,788

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. A significant portion of the Firm's deposits are consumer deposits, which are considered a stable source of liquidity. Additionally, the majority of the Firm's wholesale operating deposits are also considered to be stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm.

The Firm's loans-to-deposits ratio was 65% at both December 31, 2016 and 2015.

As of December 31, 2016, total deposits for the Firm were $1,375.2 billion, compared with $1,279.7 billion at December 31, 2015 (61% of total liabilities at each of December 31, 2016 and 2015). The increase was attributable to higher consumer and wholesale deposits. The increase in consumer deposits reflected continuing strong growth from existing and new customers, and the impact of low attrition rates. The wholesale increase was driven by growth in operating deposits related to client activity in CIB's Treasury Services business, and inflows in AWM primarily from business growth and the impact of new rules governing money market funds.

The Firm believes average deposit balances are generally more representative of deposit trends. The increase in average deposits for the year ended December 31, 2016 compared with the year ended December 31, 2015, was predominantly driven by an increase in consumer deposits, partially offset by a reduction in wholesale non-operating deposits, driven by the Firm's actions in 2015 to reduce such deposits. For further discussions of deposit and liability balance trends, see the discussion of the Firm's business segments results and the Consolidated Balance Sheet Analysis on pages 51–70 and pages 43–44, respectively.

The following table summarizes short-term and long-term funding, excluding deposits, as of December 31, 2016 and 2015, and average balances for the years ended December 31, 2016 and 2015. For additional information, see the Consolidated Balance Sheet Analysis on pages 43–44 and Note 21.

Sources of funds (excluding deposits)

As of or for the year ended December 31, (in millions)	2016	2015	Average 2016	Average 2015	
Commercial paper:					
Wholesale funding	**$ 11,738**	$ 15,562	**$ 15,001**	$ 19,340	
Client cash management	**–**	–	**–**	18,800	(i)
Total commercial paper	**$ 11,738**	$ 15,562	**$ 15,001**	$ 38,140	
Obligations of Firm-administered multi-seller conduits[a]	**$ 2,719**	$ 8,724	**$ 5,153**	$ 11,961	
Other borrowed funds	**$ 22,705**	$ 21,105	**$ 21,139**	$ 28,816	
Securities loaned or sold under agreements to repurchase:					
Securities sold under agreements to repurchase	**$ 149,826**	$ 129,598	**$ 160,458**	$ 168,163	
Securities loaned[b]	**12,137**	16,877	**13,195**	18,633	
Total securities loaned or sold under agreements to repurchase[b][c][d][e]	**$ 161,963**	$ 146,475	**$ 173,653**	$ 186,796	
Senior notes	**$ 151,042**	$ 149,964	**$ 153,768**	$ 147,498	
Trust preferred securities	**2,345**	3,969	**3,724**	4,341	
Subordinated debt	**21,940**	25,027	**24,224**	27,310	
Structured notes	**37,292**	32,813	**35,978**	31,309	
Total long-term unsecured funding	**$ 212,619**	$ 211,773	**$ 217,694**	$ 210,458	
Credit card securitization[a]	**31,181**	27,906	**29,428**	30,382	
Other securitizations[(a)(f)]	**1,527**	1,760	**1,669**	1,909	
FHLB advances	**79,519**	71,581	**73,260**	70,150	
Other long-term secured funding[g]	**3,107**	5,297	**4,619**	4,332	
Total long-term secured funding	**$ 115,334**	$ 106,544	**$ 108,976**	$ 106,773	
Preferred stock[h]	**$ 26,068**	$ 26,068	**26,068**	$ 24,040	
Common stockholders' equity[h]	**$ 228,122**	$ 221,505	**224,631**	$ 215,690	

(a) Included in beneficial interest issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.

(b) Prior period amounts have been revised to conform with current period presentation.

(c) Excludes federal funds purchased.

(d) Excludes long-term structured repurchase agreements of $1.8 billion and $4.2 billion as of December 31, 2016 and 2015, respectively, and average balances of $2.9 billion and $3.9 billion for the years ended December 31, 2016 and 2015, respectively.

(e) Excludes long-term securities loaned of $1.2 billion and $1.3 billion as of December 31, 2016, and December 31, 2015, respectively, and average balances of $1.3 billion and $0.9 billion for the years ended December 31, 2016 and 2015, respectively.

(f) Other securitizations includes securitizations of student loans. The Firm's wholesale businesses also securitize loans for client-driven transactions, which are not considered to be a source of funding for the Firm and are not included in the table.

(g) Includes long-term structured notes which are secured.

(h) For additional information on preferred stock and common stockholders' equity see Capital Risk Management on pages 76–85, Consolidated statements of changes in stockholders' equity, Note 22 and Note 23.

(i) During 2015 the Firm discontinued its commercial paper customer sweep cash management program.

Short-term funding

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. Securities loaned or sold under agreements to repurchase are secured predominantly by high-quality securities collateral, including government-issued debt and agency MBS, and constitute a significant portion of the federal funds purchased and securities loaned or sold under repurchase agreements on the Consolidated balance sheets. The decrease in the average balance of securities loaned or sold under agreements to repurchase for the year ended December 31, 2016, compared with the balance at December 31, 2015, was largely due to lower secured financing of trading assets-debt and equity instruments in the CIB related to client-driven market-making activities. The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment securities and market-making portfolios); and other market and portfolio factors.

Long-term funding and issuance

Long-term funding provides additional sources of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven by expected client activity, liquidity considerations, and regulatory requirements, including TLAC requirements. Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding costs. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

The significant majority of the Firm's long-term unsecured funding is issued by the Parent Company to provide maximum flexibility in support of both bank and nonbank subsidiary funding needs. The Parent Company advances substantially all net funding proceeds to the IHC. The IHC does not issue debt to external counterparties. The following table summarizes long-term unsecured issuance and maturities or redemptions for the years ended December 31, 2016 and 2015. For additional information, see Note 21.

Long-term unsecured funding

Year ended December 31, (in millions)	2016	2015
Issuance		
Senior notes issued in the U.S. market	**$ 25,639**	$ 19,212
Senior notes issued in non-U.S. markets	**7,063**	10,188
Total senior notes	**32,702**	29,400
Subordinated debt	**1,093**	3,210
Structured notes	**22,865**	22,165
Total long-term unsecured funding – issuance	**$ 56,660**	$ 54,775
Maturities/redemptions		
Senior notes	**$ 29,989**	$ 18,454
Trust preferred securities	**1,630**	1,500
Subordinated debt	**3,596**	6,908
Structured notes	**15,925**	18,099
Total long-term unsecured funding – maturities/redemptions	**$ 51,140**	$ 44,961

The Firm raises secured long-term funding through securitization of consumer credit card loans and advances from the FHLBs.

The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemption for the years ended December 31, 2016 and 2015.

Long-term secured funding

Year ended December 31,	Issuance		Maturities/Redemptions	
(in millions)	2016	2015	2016	2015
Credit card securitization	**$ 8,277**	$ 6,807	**$ 5,025**	$ 10,130
Other securitizations[a]	**–**	–	**233**	248
FHLB advances	**17,150**	16,550	**9,209**	9,960
Other long-term secured funding[b]	**455**	1,105	**2,645**	383
Total long-term secured funding	**$ 25,882**	$ 24,462	**$ 17,112**	$ 20,721

(a) Other securitizations includes securitizations of student loans.
(b) Includes long-term structured notes which are secured.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. For further description of the client-driven loan securitizations, see Note 16.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see SPEs on page 45, and credit risk, liquidity risk and credit-related contingent features in Note 6 on page 181.

The credit ratings of the Parent Company and the Firm's principal bank and nonbank subsidiaries as of December 31, 2016, were as follows.

	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A. Chase Bank USA, N.A.			J.P. Morgan Securities LLC		
December 31, 2016	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investors Service	A3	P-2	Stable	Aa3	P-1	Stable	Aa3[(a)]	P-1	Stable
Standard & Poor's	A-	A-2	Stable	A+	A-1	Stable	A+	A-1	Stable
Fitch Ratings	A+	F1	Stable	AA-	F1+	Stable	AA-	F1+	Stable

(a) On February 22, 2017, Moody's published its updated rating methodologies for securities firms. Subsequently, as a result of this action, J.P. Morgan Securities LLC's long-term issuer rating was downgraded by one notch from Aa3 to A1. The short-term issuer rating was unchanged and the outlook remained stable.

Downgrades of the Firm's long-term ratings by one or two notches could result in an increase in its cost of funds, and access to certain funding markets could be reduced as noted above. The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral factors (which the Firm believes are incorporated in its liquidity risk and stress testing metrics). The Firm believes that it maintains sufficient liquidity to withstand a potential decrease in funding capacity due to ratings downgrades.

JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices, and litigation matters, as well as their broader ratings methodologies. Changes in any of these factors could lead to changes in the Firm's credit ratings.

Although the Firm closely monitors and endeavors to manage, to the extent it is able, factors influencing its credit ratings, there is no assurance that its credit ratings will not be changed in the future.

MARKET RISK MANAGEMENT

Market risk is the risk of loss arising from potential adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.

Market Risk Management

Market Risk Management monitors market risks throughout the Firm and defines market risk policies and procedures. The Market Risk Management function reports to the Firm's CRO.

Market Risk Management seeks to manage risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk Management is responsible for the following functions:

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk measurement

Tools used to measure risk

Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, to assess risk including:

- VaR
- Economic-value stress testing
- Nonstatistical risk measures
- Loss advisories
- Profit and loss drawdowns
- Earnings-at-risk
- Other sensitivities

Risk monitoring and control

Market risk exposure is managed primarily through a series of limits set in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity and accommodation of client business and management experience. The Firm maintains different levels of limits. Corporate level limits include VaR and stress limits. Similarly, line of business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns. Limits may also be set within the lines of business, as well at the portfolio or legal entity level.

Market Risk Management sets limits and regularly reviews and updates them as appropriate, with any changes approved by line of business management and Market Risk Management. Senior management, including the Firm's CEO and CRO, are responsible for reviewing and approving certain of these risk limits on an ongoing basis. All limits that have not been reviewed within specified time periods by Market Risk Management are escalated to senior management. The lines of business are responsible for adhering to established limits against which exposures are monitored and reported.

Limit breaches are required to be reported in a timely manner to limit approvers, Market Risk Management and senior management. In the event of a breach, Market Risk Management consults with Firm senior management and the line of business senior management to determine the appropriate course of action required to return to compliance, which may include a reduction in risk in order to remedy the breach. Certain Firm or line of business-level limits that have been breached for three business days or longer, or by more than 30%, are escalated to senior management and the Firmwide Risk Committee.

The following table summarizes by line of business the predominant business activities that give rise to market risk, and the primary market risk management tools utilized to manage those risks.

Risk identification and classification by line of business

Line of Business	Predominant business activities and related market risks	Positions included in Risk Management VaR	Positions included in earnings-at-risk	Positions included in other sensitivity-based measurements
CCB	• Services mortgage loans which give rise to complex, non-linear interest rate and basis risk • Non-linear risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing • Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates • Originates loans and takes deposits	• Mortgage pipeline loans, classified as derivatives • Warehouse loans, classified as trading assets – debt instruments • MSRs • Hedges of pipeline loans, warehouse loans and MSRs, classified as derivatives • Interest-only securities, classified as trading assets - debt instruments, and related hedges, classified as derivatives • Marketable equity investments measured at fair value through earnings	• Retained loan portfolio • Deposits	
CIB	• Makes markets and services clients across fixed income, foreign exchange, equities and commodities • Market risk arises from changes in market prices (e.g., rates and credit spreads) resulting in a potential decline in net income	• Trading assets/liabilities – debt and marketable equity instruments, and derivatives, including hedges of the retained loan portfolio • Certain securities purchased, loaned or sold under resale agreements and securities borrowed • Fair value option elected liabilities • Derivative CVA and associated hedges	• Retained loan portfolio • Deposits	• Private-equity investments measured at fair value • Derivatives DVA/FVA and fair value option elected liabilities DVA
CB	• Engages in traditional wholesale banking activities which include extensions of loans and credit facilities and taking deposits • Risk arises from changes in interest rates and prepayment risk with potential for adverse impact on net interest income and interest-rate sensitive fees		• Retained loan portfolio • Deposits	
AWM	• Provides initial capital investments in products such as mutual funds, which give rise to market risk arising from changes in market prices in such products	• Debt securities held in advance of distribution to clients, classified as trading assets - debt and equity instruments	• Retained loan portfolio • Deposits	• Initial seed capital investments and related hedges, classified as derivatives • Capital invested alongside third-party investors, typically in privately distributed collective vehicles managed by AWM (i.e., co-investments)
Corporate	• Manages the Firm's liquidity, funding, structural interest rate and foreign exchange risks arising from activities undertaken by the Firm's four major reportable business segments	• Derivative positions measured at fair value through noninterest revenue in earnings • Marketable equity investments measured at fair value through earnings	• Investment securities portfolio and related interest rate hedges • Deposits • Long-term debt and related interest rate hedges	• Private equity investments measured at fair value • Foreign exchange exposure related to Firm-issued non-USD long-term debt ("LTD") and related hedges

As part of the Firm's evaluation and periodic enhancement of its market risk measures, during the third quarter of 2016 the Firm refined the scope of positions included in risk management VaR. In particular, certain private equity positions in the CIB, exposure arising from non-U.S. dollar denominated funding activities in Corporate, as well as seed capital investments in AWM were removed from the VaR calculation. Commencing with the third quarter of 2016, exposure arising from these positions is captured using other sensitivity-based measures, such as a 10% decline in market value or a 1 basis point parallel shift in spreads, as appropriate. For more information, see Other sensitivity-based measures at page 123. The Firm believes this refinement to its reported VaR measures more appropriately captures the risk of its market risk sensitive instruments. This change did not impact Regulatory VaR as these positions are not included in the calculation of Regulatory VaR. Regulatory VaR is used to derive the Firm's regulatory VaR-based capital requirements under Basel III.

Value-at-risk

JPMorgan Chase utilizes VaR, a statistical risk measure, to estimate the potential loss from adverse market moves in a normal market environment. The Firm has a single VaR framework used as a basis for calculating Risk Management VaR and Regulatory VaR.

The framework is employed across the Firm using historical simulation based on data for the previous 12 months. The framework's approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. The Firm believes the use of Risk Management VaR provides a stable measure of VaR that is closely aligned to the day-to-day risk management decisions made by the lines of business, and provides the appropriate information needed to respond to risk events on a daily basis.

The Firm's Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. Risk Management VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks and monitoring limits across businesses. Those VaR results are reported to senior management, the Board of Directors and regulators.

Under the Firm's Risk Management VaR methodology, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR "back-testing exceptions," defined as losses greater than that predicted by VaR estimates, on average five times every 100 trading days. The number of VaR back-testing exceptions observed can differ from the statistically expected number of back-testing exceptions if the current level of market volatility is materially different from the level of market volatility during the 12 months of historical data used in the VaR calculation.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual products and/or risk factors. To capture material market risks as part of the Firm's risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period; inputs are selected based on the risk profile of each portfolio, as sensitivities and historical time series used to generate daily market values may be different across product types or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

Since VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses, and it is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions.

For certain products, specific risk parameters are not captured in VaR due to the lack of inherent liquidity and availability of appropriate historical data. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. The Firm therefore considers other measures such as stress testing, in addition to VaR, to capture and manage its market risk positions.

The daily market data used in VaR models may be different than the independent third-party data collected for VCG price testing in its monthly valuation process. For example, in cases where market prices are not observable, or where proxies are used in VaR historical time series, the data sources may differ (see Valuation process in Note 3 for further information on the Firm's valuation process). Because VaR model calculations require daily data and a consistent source for valuation, it may not be practical to use the data collected in the VCG monthly valuation process for VaR model calculations.

The Firm's VaR model calculations are periodically evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and measurements, and other factors. Such changes may affect historical comparisons of VaR results. For information regarding model reviews and approvals, see Model Risk Management on page 128.

The Firm calculates separately a daily aggregated VaR in accordance with regulatory rules ("Regulatory VaR"), which is used to derive the Firm's regulatory VaR-based capital requirements under Basel III. This Regulatory VaR model framework currently assumes a ten business-day holding period and an expected tail loss methodology which approximates a 99% confidence level. Regulatory VaR is applied to "covered" positions as defined by Basel III, which may be different than the positions included in the Firm's Risk Management VaR. For example, credit derivative hedges of accrual loans are included in the Firm's Risk Management VaR, while Regulatory VaR excludes these credit derivative hedges. In addition, in contrast to the Firm's Risk Management VaR, Regulatory VaR currently excludes the diversification benefit for certain VaR models.

For additional information on Regulatory VaR and the other components of market risk regulatory capital for the Firm (e.g. VaR-based measure, stressed VaR-based measure and the respective backtesting), see JPMorgan Chase's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website at: (http://investor.shareholder.com/jpmorganchase/basel.cfm).

The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level.

Total VaR

As of or for the year ended December 31,	2016			2015			At December 31,	
(in millions)	Avg.	Min	Max	Avg.	Min	Max	**2016**	2015
CIB trading VaR by risk type								
Fixed income	**$ 45**	**$ 33**	**$ 65**	$ 42	$ 31	$ 60	**$ 37**	$ 37
Foreign exchange	**12**	**7**	**27**	9	6	16	**14**	6
Equities	**13**	**5**	**32**	18	11	26	**12**	21
Commodities and other	**9**	**7**	**11**	10	6	14	**9**	10
Diversification benefit to CIB trading VaR	**(36)** [a]	**NM** [b]	**NM** [b]	(35) [a]	NM [b]	NM [b]	**(38)** [a]	(28) [a]
CIB trading VaR	**43**	**28**	**79**	44	27	68	**34**	46
Credit portfolio VaR	**12**	**10**	**16**	14	10	20	**11**	10
Diversification benefit to CIB VaR	**(10)** [a]	**NM** [b]	**NM** [b]	(9) [a]	NM [b]	NM [b]	**(7)** [a]	(10) [a]
CIB VaR	**45**	**32**	**81**	49	34	71	**38**	46
Consumer & Community Banking VaR	**3**	**1**	**6**	4	2	8	**3**	4
Corporate VaR	**6**	**3**	**13**	4	3	7	**3**	5
Asset & Wealth Management VaR	**2**	**–**	**4**	3	2	4	**–**	3
Diversification benefit to other VaR	**(3)** [a]	**NM** [b]	**NM** [b]	(3) [a]	NM [b]	NM [b]	**(2)** [a]	(4) [a]
Other VaR	**8**	**4**	**16**	8	5	12	**4**	8
Diversification benefit to CIB and other VaR	**(8)** [a]	**NM** [b]	**NM** [b]	(10) [a]	NM [b]	NM [b]	**(4)** [a]	(9) [a]
Total VaR	**$ 45**	**$ 33**	**$ 78**	$ 47	$ 34	$ 67	**$ 38**	$ 45

(a) Average portfolio VaR and period-end portfolio VaR were less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects the fact that risks are not perfectly correlated.

(b) Designated as NM, because the minimum and maximum may occur on different days for distinct risk components, and hence it is not meaningful to compute a portfolio-diversification effect.

As discussed on page 117, during the third quarter of 2016 the Firm refined the scope of positions included in Risk Management VaR. In the absence of these refinements, the average VaR, without diversification, for each of the following reported components would have been higher by the following amounts for the full year 2016: CIB Equities VaR by $3 million; CIB trading VaR by $2 million; CIB VaR by $3 million; Corporate VaR by $4 million; AWM VaR by $2 million; Other VaR by $4 million; and Total VaR by $3 million. Additionally, the Total VaR at December 31, 2016 would have been higher by $7 million in the absence of these refinements.

Average Total VaR decreased $2 million for the full year ending December 31, 2016 as compared with the respective prior year period. The reduction in average Total VaR is due to the aforementioned scope changes as well as a lower risk profile in the Equities risk type. This was offset by changes in the risk profiles of the Foreign exchange and Fixed Income risk types. Additionally, average Credit portfolio VaR declined as a result of lower exposures arising from select positions.

The Firm's average Total VaR diversification benefit was $8 million or 18% of the sum for 2016, compared with $10 million or 21% of the sum for 2015.

The Firm continues to enhance its VaR model calculations and the time series inputs related to certain asset-backed products.

VaR can vary significantly as positions change, market volatility fluctuates, and diversification benefits change.

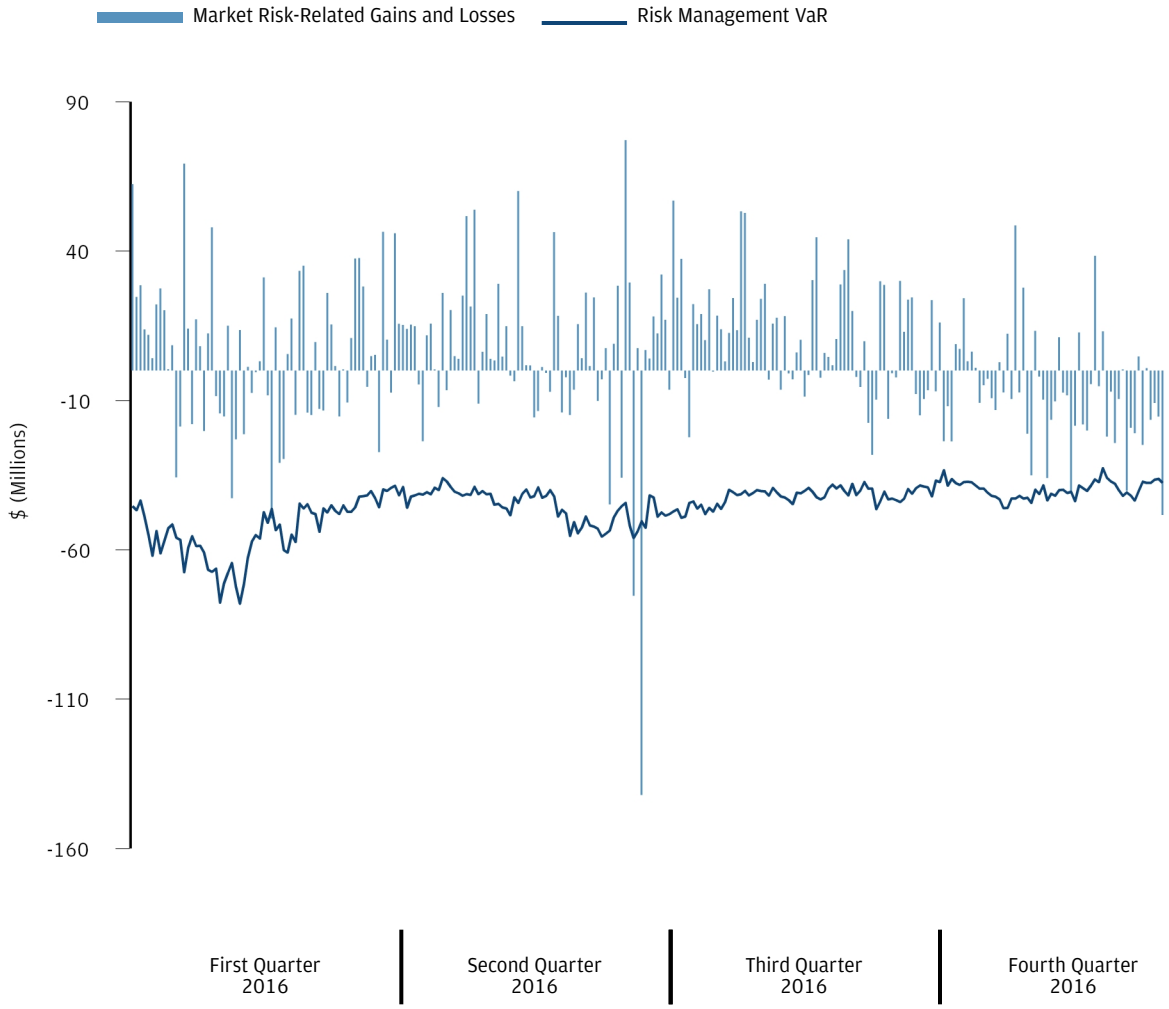
VaR back-testing

The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses recognized on market-risk related revenue.

The Firm's definition of market risk-related gains and losses is consistent with the definition used by the banking regulators under Basel III. Under this definition market risk-related gains and losses are defined as: gains and losses on the positions included in the Firm's Risk Management VaR, excluding fees, commissions, certain valuation adjustments (e.g., liquidity and DVA), net interest income, and gains and losses arising from intraday trading.

The following chart compares the daily market risk-related gains and losses with the Firm's Risk Management VaR for the year ended December 31, 2016. As the chart presents market risk-related gains and losses related to those positions included in the Firm's Risk Management VaR, the results in the table below differ from the results of back-testing disclosed in the Market Risk section of the Firm's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are based on Regulatory VaR applied to covered positions. The chart shows that for the year ended December 31, 2016 the Firm observed 5 VaR back-testing exceptions and posted Market-risk related gains on 151 of the 260 days in this period.

Daily Market Risk-Related Gains and Losses
vs. Risk Management VaR (1-day, 95% Confidence level)
Year ended December 31, 2016



For the year ended December 31, 2016, there were 5 back-testing exceptions. The two exceptions that occurred towards the end of June 2016, subsequent to the U.K. referendum on membership in the European Union, reflect the elevated market volatility observed across multiple asset classes following the outcome of the vote.

Other risk measures

Economic-value stress testing

Along with VaR, stress testing is an important tool in measuring and controlling risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing is intended to capture the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates and commodity prices.

The Firm uses a number of standard scenarios that capture different risk factors across asset classes including geographical factors, specific idiosyncratic factors and extreme tail events. The stress framework calculates multiple magnitudes of potential stress for both market rallies and market sell-offs for each risk factor and combines them in multiple ways to capture different market scenarios. For example, certain scenarios assess the potential loss arising from current exposures held by the Firm due to a broad sell off in bond markets or an extreme widening in corporate credit spreads. The flexibility of the stress testing framework allows risk managers to construct new, specific scenarios that can be used to form decisions about future possible stress events.

Stress testing complements VaR by allowing risk managers to shock current market prices to more extreme levels relative to those historically realized, and to stress test the relationships between market prices under extreme scenarios. Stress scenarios are defined and reviewed by Market Risk Management, and significant changes are reviewed by the relevant LOB Risk Committees and may be redefined on a periodic basis to reflect current market conditions.

Stress-test results, trends and qualitative explanations based on current market risk positions are reported to the respective LOBs and the Firm's senior management to allow them to better understand the sensitivity of positions to certain defined events and to enable them to manage their risks with more transparency. Results are also reported to the Board of Directors.

The Firm's stress testing framework is utilized in calculating results under scenarios mandated by the Federal Reserve's CCAR and ICAAP processes. In addition, the results are incorporated into the quarterly assessment of the Firm's Risk Appetite Framework and are also presented to the DRPC.

Nonstatistical risk measures

Nonstatistical risk measures include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line of business and by risk type, and are also used for monitoring internal market risk limits.

Loss advisories and profit and loss drawdowns

Loss advisories and profit and loss drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Profit and loss drawdowns are defined as the decline in net profit and loss since the year-to-date peak revenue level.

Earnings-at-risk

The VaR and sensitivity measures described above illustrate the economic sensitivity of the Firm's Consolidated balance sheets to changes in market variables. The effect of interest rate exposure on the Firm's reported net income is also important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits and issuing debt. The Firm evaluates its structural interest rate risk exposure through earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's net interest income and certain interest rate-sensitive fees. For a summary by line of business, identifying positions included in earnings-at-risk, see the table on page 117.

The CTC Risk Committee establishes the Firm's structural interest rate risk policies and market risk limits, which are subject to approval by the DRPC. Treasury and CIO, working in partnership with the lines of business, calculates the Firm's structural interest rate risk profile and reviews it with senior management including the CTC Risk Committee and the Firm's ALCO. In addition, oversight of structural interest rate risk is managed through a dedicated risk function reporting to the CTC CRO. This risk function is responsible for providing independent oversight and governance around assumptions and establishing and monitoring limits for structural interest rate risk. The Firm manages structural interest rate risk generally through its investment securities portfolio and interest rate derivatives.

Structural interest rate risk can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve)
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, firmwide basis. Business units transfer their interest rate risk to Treasury and CIO through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm generates a baseline for net interest income and certain interest rate sensitive fees, and then conducts simulations of changes for interest rate-sensitive assets and liabilities denominated in U.S. dollar and other currencies ("non-U.S. dollar" currencies). Earnings-at-risk scenarios estimate the potential change in this baseline, over the following 12 months utilizing multiple assumptions. These scenarios consider the impact on exposures as a result of changes in interest rates from baseline rates, as well as pricing sensitivities of deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, as well as modeled prepayment and reinvestment behavior, but do not include assumptions about actions that could be taken by the Firm in response to any such instantaneous rate changes. Mortgage prepayment assumptions are based on scenario interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience. The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors.

The Firm's U.S. dollar sensitivities are presented in the table below. The non-U.S. dollar sensitivity scenarios are not material to the Firm's earnings-at-risk at December 31, 2016 and 2015.

JPMorgan Chase's 12-month earnings-at-risk sensitivity profiles

U.S. dollar	Instantaneous change in rates			
(in billions)	+200 bps	+100 bps	-100 bps	-200 bps
December 31, 2016	**$ 4.0**	**$ 2.4**	**NM** [(a)]	**NM** [(a)]
December 31, 2015	$ 5.2	$ 3.1	NM [(a)]	NM [(a)]

(a) Given the current level of market interest rates, downward parallel 100 and 200 basis point earnings-at-risk scenarios are not considered to be meaningful.

The Firm's benefit to rising rates on U.S. dollar assets and liabilities is largely a result of reinvesting at higher yields and assets repricing at a faster pace than deposits.

The Firm's net U.S. dollar sensitivity to a 200 bps and 100 bps instantaneous increase in rates decreased by approximately $1.2 billion and $700 million, respectively, when compared to December 31, 2015. The primary driver of that decrease was the updating of the Firm's baseline to reflect higher interest rates. As higher interest rates are reflected in the Firm's baselines, the magnitude of the sensitivity to further increases in rates would be expected to be less significant. The net change in mix in the Firm's spot and forecasted balance sheet also contributed to a decrease in the net U.S. dollar sensitivity when compared to December 31, 2015.

Separately, another U.S. dollar interest rate scenario used by the Firm — involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels — results in a 12-month benefit to net interest income of approximately $800 million. The increase under this scenario reflects the Firm reinvesting at the higher long-term rates, with funding costs remaining unchanged. The result of the comparable non-U.S. dollar scenario was not material to the Firm.

Non-U.S. dollar foreign exchange risk

Non-U.S. dollar FX risk is the risk that changes in foreign exchange rates affect the value of the Firm's assets or liabilities or future results. The Firm has structural non-U.S. dollar FX exposures arising from capital investments, forecasted expense and revenue, the investment securities portfolio and non-U.S. dollar-denominated debt issuance. Treasury and CIO, working in partnership with the lines of business, primarily manage these risks on behalf of the Firm. Treasury and CIO may hedge certain of these risks using derivatives within risk limits governed by the CTC Risk Committee.

Other sensitivity-based measures

The Firm quantifies the market risk of certain investment and funding activities by assessing the potential impact on net revenue and OCI due to changes in relevant market variables. For additional information on the positions captured in other sensitivity-based measures, please refer to the Risk identification and classification table on page 117.

The table below represents the potential impact to net revenue or OCI for market risk sensitive instruments that are not included in VaR or earnings-at-risk. Where appropriate, instruments used for hedging purposes are reported along with the positions being hedged. The sensitivities disclosed in the table below may not be representative of the actual gain or loss that would have been realized at December 31, 2016, as the movement in market parameters across maturities may vary and are not intended to imply management's expectation of future deterioration in these sensitivities.

(in millions) December 31, 2016				
Activity	**Description**	**Sensitivity measure**	**Gain/(Loss)**	
Investment Activities				
Investment management activities	Consists of seed capital and related hedges; and fund co-investments	10% decline in market value	$	(166)
Other investments	Consists of private equity and other investments held at fair value	10% decline in market value	$	(358)
Funding Activities				
Non-USD LTD Cross-currency basis	Represents the basis risk on derivatives used to hedge the foreign exchange risk on the non-USD LTD	1 basis point parallel tightening of cross currency basis	$	(7)
Non-USD LTD hedges FX exposure	Primarily represents the foreign exchange revaluation on the fair value of the derivative hedges	10% depreciation of currency	$	(23)
Funding Spread Risk - Derivatives	Impact of changes in the spread related to derivatives DVA/FVA	1 basis point parallel increase in spread	$	(4)
Funding Spread Risk - Fair value option elected liabilities[(a)]	Impact of changes in the spread related to fair value option elected liabilities DVA	1 basis point parallel increase in spread	$	17

(a) Impact recognized through OCI.

PRINCIPAL RISK MANAGEMENT

Principal investments are predominantly privately-held financial assets and instruments, typically representing ownership or junior capital positions, that have unique risks due to their illiquidity or for which there is less observable market or valuation data. Such positions are typically intended to be held over extended investment periods and, accordingly, the Firm has no expectation for short-term gain with respect to these investments. Principal investments cover multiple asset classes and are made either in stand-alone investing businesses or as part of a broader business platform. Asset classes include tax-oriented investments (e.g., affordable housing and alternative energy investments), private equity and various debt investments. Increasingly, new principal investment activity seeks to enhance or accelerate line of business strategic business initiatives.

The Firm's principal investments are managed under various lines of business and are reflected within the respective LOBs financial results. The Firm's approach to managing principal risk is consistent with the Firm's general risk governance structure. A Firmwide risk policy framework exists for all principal investing activities. All investments are approved by investment committees that include executives who are independent from the investing businesses. The Firm's independent control functions are responsible for reviewing the appropriateness of the carrying value of principal investments in accordance with relevant policies. Approved levels for such investments are established for each relevant business in order to manage the overall size of the portfolios. Industry, geographic and position level concentration limits are in place and are intended to ensure diversification of the portfolios. The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves and/or other risk events.

Compliance risk is the risk of failure to comply with applicable laws, rules and regulations.

Overview

Each line of business is accountable for managing its compliance risk. The Firm's Compliance Organization ("Compliance"), which is independent of the lines of business, works closely with senior management to provide independent review, monitoring and oversight of business operations with a focus on compliance with the legal and regulatory obligations applicable to the offering of the Firm's products and services to clients and customers.

These compliance risks relate to a wide variety of legal and regulatory obligations, depending on the line of business and the jurisdiction, and include those related to products and services, relationships and interactions with clients and customers, and employee activities. For example, compliance risks include those associated with anti-money laundering compliance, trading activities, market conduct, and complying with the rules and regulations related to the offering of products and services across jurisdictional borders, among others.

Other Functions such as Finance (including Tax), Technology and Human Resources provide oversight of significant regulatory obligations that are specific to their respective areas of responsibility.

Compliance implements various practices designed to identify and mitigate compliance risk by establishing policies, testing, monitoring, training and providing guidance.

In recent years, the Firm has experienced heightened scrutiny by its regulators of its compliance with regulations, and with respect to its controls and operational processes. In certain instances, the Firm has entered into Consent Orders with its regulators requiring the Firm to take certain specified actions to remediate compliance with regulations and improve its controls. The Firm expects that such regulatory scrutiny will continue.

Governance and oversight

Compliance is led by the Firms' CCO who reports, effective September 2016, to the Firm's CRO.

The Firm maintains oversight and coordination of its Compliance Risk Management practices through the Firm's CCO, lines of business CCOs and regional CCOs to implement the Compliance program globally across the lines of business and regions. The Firm's CCO is a member of the FCC and the FRC. The Firm's CCO also provides regular updates to the Audit Committee and DRPC. In addition, from time to time, special committees of the Board have been established to oversee the Firm's compliance with regulatory Consent Orders.

The Firm has in place a Code of Conduct (the "Code"), and each employee is given annual training in respect of the Code and is required annually to affirm his or her compliance with the Code. The Code sets forth the Firm's core principles and fundamental values, including that no employee should ever sacrifice integrity - or give the impression that he or she has. The Code requires prompt reporting of any known or suspected violation of the Code, any internal Firm policy, or any law or regulation applicable to the Firm's business. It also requires the reporting of any illegal conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's employees, customers, suppliers, contract workers, business partners, or agents. Specified employees are specially trained and designated as "code specialists" who act as a resource to employees on Code matters. In addition, concerns may be reported anonymously and the Firm prohibits retaliation against employees for the good faith reporting of any actual or suspected violations of the Code. The Code and the associated employee compliance program are focused on the regular assessment of certain key aspects of the Firm's culture and conduct initiatives.

CONDUCT RISK MANAGEMENT

Conduct risk is the risk that an employee's action or inaction causes undue harm to the Firm's clients and customers, damages market integrity, undermines the Firm's reputation, or negatively impacts the Firm's culture.

Overview

Each line of business or function is accountable for identifying and managing its conduct risk to provide appropriate engagement, ownership and sustainability of a culture consistent with the Firm's How We Do Business Principles ("Principles"). The Principles serve as a guide for how employees are expected to conduct themselves. With the Principles serving as a guide, the Firm's Code sets out the Firm's expectations for each employee and provides certain information and the resources to help employees conduct business ethically and in compliance with the law everywhere the Firm operates. For further discussion of the Code, see Compliance Risk Management on page 125.

Governance and oversight

The CMDC is the primary Board-level Committee that oversees the Firm's culture and conduct programs. The Audit Committee has responsibility to review the program established by management that monitors compliance with the Code. Additionally, the DRPC reviews, at least annually, the Firm's qualitative factors included in the Risk Appetite Framework, including conduct risk. The DRPC also meets annually with the CMDC to review and discuss aspects of the Firm's compensation practices.

Conduct risk management is incorporated into various aspects of people management practices throughout the employee life cycle, including recruiting, onboarding, training and development, performance management, promotion and compensation processes. Businesses undertake annual Risk and Control Self-Assessment ("RCSA") assessments; and, as part of these RCSA reviews, they identify their respective key inherent operational risks (including conduct risks), evaluate the design and effectiveness of their controls, identify control gaps and develop associated action plans. The Firm's Know Your Employee framework generally addresses how the Firm manages, oversees and responds to workforce conduct related matters that may otherwise expose the Firm to financial, reputational, compliance and other operating risks. The Firm also has a HR Control Forum, the primary purpose of which is to discuss conduct and accountability for more significant risk and control issues and review, when appropriate, employee actions including but not limited to promotion and compensation actions.

Legal risk is the risk of loss or imposition of damages, fines, penalties or other liability arising from the failure to comply with a contractual obligation or to comply with laws, rules or regulations to which the Firm is subject.

Overview

In addition to providing legal services and advice to the Firm, and communicating and helping the lines of business adjust to the legal and regulatory changes they face, including the heightened scrutiny and expectations of the Firm's regulators, the global Legal function is responsible for working with the businesses and corporate functions to fully understand and assess their adherence to laws, rules and regulations. In particular, Legal assists Oversight & Control, Risk, Finance, Compliance and Internal Audit in their efforts to ensure compliance with all applicable laws and regulations and the Firm's corporate standards for doing business. The Firm's lawyers also advise the Firm on potential legal exposures on key litigation and transactional matters, and perform a significant defense and advocacy role by defending the Firm against claims and potential claims and, when needed, pursuing claims against others. In addition, they advise the Firm's Conflicts Office which reviews the Firm's wholesale transactions that may have the potential to create conflicts of interest for the Firm.

Governance and oversight

The Firm's General Counsel reports to the CEO and is a member of the Operating Committee, the Firmwide Risk Committee and the FCC. The General Counsel's leadership team includes a General Counsel for each line of business, the heads of the Litigation and Corporate & Regulatory practices, as well as the Firm's Corporate Secretary. Each region (e.g., Latin America, Asia Pacific) has a General Counsel who is responsible for managing legal risk across all lines of business and functions in the region.

Legal works with various committees (including new business initiative and reputation risk committees) and the Firm's businesses to protect the Firm's reputation beyond any particular legal requirements.

MODEL RISK MANAGEMENT

Model risk is the potential for adverse consequences from decisions based on incorrect or misused model outputs.

The Firm uses models across various businesses and functions. The models are of varying levels of sophistication and are used for many purposes including, for example, the valuation of positions and the measurement of risk, such as assessing regulatory capital requirements, conducting stress testing, and making business decisions.

Model risks are owned by the users of the models within the various businesses and functions in the Firm based on the specific purposes of such models. Users and developers of models are responsible for developing, implementing and testing their models, as well as referring models to the Model Risk function for review and approval. Once models have been approved, model users and developers are responsible for maintaining a robust operating environment, and must monitor and evaluate the performance of the models on an ongoing basis. Model users and developers may seek to enhance models in response to changes in the portfolios and in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities.

The Model Risk function reviews and approves a wide range of models, including risk management, valuation and regulatory capital models used by the Firm. The Model Risk function is independent of model users and developers. The Firmwide Model Risk Executive reports to the Firm's CRO.

Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on the model. This tiering is subject to the approval of the Model Risk function. A model review conducted by the Model Risk function considers the model's suitability for the specific uses to which it will be put. The factors considered in reviewing a model include whether the model accurately reflects the characteristics of the product and its significant risks, the selection and reliability of model inputs, consistency with models for similar products, the appropriateness of any model-related adjustments, and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes. Model reviews are approved by the appropriate level of management within the Model Risk function based on the relevant model tier.

Under the Firm's Model Risk Policy, the Model Risk function reviews and approves new models, as well as material changes to existing models, prior to implementation in the operating environment. In certain circumstances, the head of the Model Risk function may grant exceptions to the Firm's model risk policy to allow a model to be used prior to review or approval. The Model Risk function may also require the user to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity.

For a summary of valuations based on models, see Critical Accounting Estimates Used by the Firm on pages 132–134 and Note 3.

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or due to external events that are neither market- nor credit-related. Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business interruptions, inappropriate employee behavior, failure to comply with applicable laws and regulations or failure of vendors to perform in accordance with their arrangements. These events could result in financial losses, litigation and regulatory fines, as well as other damages to the Firm. The goal is to keep operational risk at appropriate levels in light of the Firm's financial strength, the characteristics of its businesses, and the markets and regulatory environments in which it operates.

Operational Risk Management Framework

To monitor and control operational risk, the Firm has an Operational Risk Management Framework which is designed to enable the Firm to maintain a sound and well-controlled operational environment. The ORMF is comprised of four main components: Governance, Risk Assessment, Measurement, and Monitoring and Reporting.

Governance

The lines of business and corporate functions are responsible for owning and managing their operational risks. The Firmwide Oversight and Control Group, which consists of control officers within each line of business and corporate function, is responsible for the day-to-day execution of the ORMF.

Line of business and corporate function control committees oversee the operational risk and control environments of their respective businesses and functions. These committees escalate operational risk issues to the FCC, as appropriate. For additional information on the FCC, see Enterprise Risk Management on pages 71–75.

The Firmwide Risk Executive for Operational Risk Governance ("ORG"), a direct report to the CRO, is responsible for defining the ORMF and establishing minimum standards for its execution. Operational Risk Officers report to both the line of business CROs and to the Firmwide Risk Executive for ORG, and are independent of the respective businesses or corporate functions they oversee.

The Firm's Operational Risk Appetite Policy is approved by the DRPC. This policy establishes the Operational Risk Management Framework for the Firm. The assessments of operational risk using this framework are reviewed with the DRPC.

Risk assessment

The Firm utilizes several tools to identify, assess, mitigate and manage its operational risk. One such tool is the RCSA program which is executed by LOBs and corporate functions in accordance with the minimum standards established by ORG. As part of the RCSA program, lines of business and corporate functions identify key operational risks inherent in their activities, evaluate the effectiveness of relevant controls in place to mitigate identified risks, and define actions to reduce residual risk. Action plans are developed for identified control issues and businesses are held accountable for tracking and resolving issues in a timely manner. Operational Risk Officers independently challenge the execution of the RCSA program and evaluate the appropriateness of the residual risk results.

In addition to the RCSA program, the Firm tracks and monitors events that have or could lead to actual operational risk losses, including litigation-related events. Responsible businesses and corporate functions analyze their losses to evaluate the efficacy of their control environment to assess where controls have failed, and to determine where targeted remediation efforts may be required. ORG provides oversight of these activities and may also perform independent assessments of significant operational risk events and areas of concentrated or emerging risk.

Measurement

In addition to the level of actual operational risk losses, operational risk measurement includes operational risk-based capital and operational risk losses under both baseline and stressed conditions.

The primary component of the operational risk capital estimate is the Loss Distribution Approach ("LDA") statistical model, which simulates the frequency and severity of future operational risk loss projections based on historical data. The LDA model is used to estimate an aggregate operational risk loss over a one-year time horizon, at a 99.9% confidence level. The LDA model incorporates actual internal operational risk losses in the quarter following the period in which those losses were realized, and the calculation generally continues to reflect such losses even after the issues or business activities giving rise to the losses have been remediated or reduced.

As required under the Basel III capital framework, the Firm's operational risk-based capital methodology, which uses the Advanced Measurement Approach, incorporates internal and external losses as well as management's view of tail risk captured through operational risk scenario analysis, and evaluation of key business environment and internal control metrics.

The Firm considers the impact of stressed economic conditions on operational risk losses and develops a forward looking view of material operational risk events that may occur in a stressed environment. The Firm's operational risk stress testing framework is utilized in calculating results for the Firm's CCAR and ICAAP processes.

For information related to operational risk RWA, CCAR or ICAAP, see Capital Risk Management section, pages 76–85.

Monitoring and reporting
ORG has established standards for consistent operational risk reporting. The standards also reinforce escalation protocols to senior management and to the Board of Directors. Operational risk reports are produced on a firmwide basis as well as by line of business and corporate function.

Other operational risks

As mentioned previously, operational risk can manifest itself in various ways. Risks such as Compliance risk, Conduct risk, Legal risk and Model risk as well as other operational risks, can lead to losses which are captured through the Firm's operational risk measurement processes. More information on Compliance risk, Conduct risk, Legal risk and Model risk are discussed on pages 125, 126, 127 and 128, respectively. Details on other select operational risks are provided below.

Cybersecurity risk
The Firm devotes significant resources to protect the security of the Firm's computer systems, software, networks and other technology assets. The Firm's security efforts are intended to protect against cybersecurity attacks by unauthorized parties to obtain access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage. The Firm continues to make significant investments in enhancing its cyber defense capabilities and to strengthen its partnerships with the appropriate government and law enforcement agencies and other businesses in order to understand the full spectrum of cybersecurity risks in the environment, enhance defenses and improve resiliency against cybersecurity threats. Third parties with which the Firm does business or that facilitate the Firm's business activities (e.g., vendors, exchanges, clearing houses, central depositories, and financial intermediaries) could also be sources of cybersecurity risk to the Firm. Third party cybersecurity incidents such as system breakdowns or failures, misconduct by the employees of such parties, or cyberattacks could affect their ability to deliver a product or service to the Firm or result in lost or compromised information of the Firm or its clients. Clients can also be sources of cybersecurity risk to the Firm, particularly when their activities and systems are beyond the Firm's own security and control systems. However, where cybersecurity incidents are due to client failure to maintain the security of their own systems and processes, clients will generally be responsible for losses incurred.

To protect the confidentiality, integrity and availability of the Firm's infrastructure, resources and information, the Firm leverages the ORMF to ensure risks are identified and managed within defined corporate tolerances. The Firm's Board of Directors and the Audit Committee are regularly briefed on the Firm's cybersecurity policies and practices as well as its efforts regarding significant cybersecurity events.

Payment fraud risk
Payment fraud risk is the risk of external and internal parties unlawfully obtaining personal benefit at the expense of the Firm. Over the past year, the risk of payment fraud has increased across the industry, with the number of attempts hitting record highs. The complexities of these attacks along with perpetrators' strategies continue to evolve. A Payments Control Program has been established that includes Cybersecurity, Operations, Technology, Risk and the lines of business to manage the risk, implement controls and provide client education and awareness training. The program monitors and measures payment fraud activity, evaluates the Firm's cybersecurity defenses, limits access to sensitive data, and provides training to both employees and clients.

Third-party outsourcing risk
To identify and manage the operational risk inherent in its outsourcing activities, the Firm has a Third-Party Oversight ("TPO") framework to assist lines of business and corporate functions in selecting, documenting, onboarding, monitoring and managing their supplier relationships. The objective of the TPO framework is to hold third parties to the same high level of operational performance as is expected of the Firm's internal operations. The Third-Party Oversight group is responsible for Firmwide TPO training, monitoring, reporting and standards.

Business and technology resilience risk
Business disruptions can occur due to forces beyond the Firm's control such as severe weather, power or telecommunications loss, flooding, transit strikes, terrorist threats or infectious disease. The safety of the Firm's employees and customers is of the highest priority. The Firm's global resiliency program is intended to ensure that the Firm has the ability to recover its critical business functions and supporting assets (i.e., staff, technology and facilities) in the event of a business interruption. The program includes corporate governance, awareness and training, as well as strategic and tactical initiatives to identify, assess, and manage business interruption and public safety risks.

The strength and proficiency of the Firm's global resiliency program has played an integral role in maintaining the Firm's business operations during and quickly after various events.

Insurance

One of the ways operational loss may be mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations (e.g., workers compensation), as well as to serve other needs (e.g., property loss and public liability). Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

REPUTATION RISK MANAGEMENT

Reputation risk is the risk that an action, transaction, investment or event will reduce trust in the Firm's integrity or competence by its various constituents, including clients, counterparties, investors, regulators, employees and the broader public. Maintaining the Firm's reputation is the responsibility of each individual employee of the Firm. The Firm's Reputation Risk Governance policy explicitly vests each employee with the responsibility to consider the reputation of the Firm when engaging in any activity. Since the types of events that could harm the Firm's reputation are so varied across the Firm's lines of business, each line of business has a separate reputation risk governance infrastructure in place, which consists of three key elements: clear, documented escalation criteria appropriate to the business; a designated primary discussion forum — in most cases, one or more dedicated reputation risk committees; and a list of designated contacts, to whom questions relating to reputation risk should be referred. Line of business reputation risk governance is overseen by a Firmwide Reputation Risk Governance function which provides oversight of the governance infrastructure and process to support the consistent identification, escalation, management and monitoring of reputation risk issues firmwide.

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and the related business and risk management strategies, which may vary across the Firm's businesses and portfolios. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the carrying value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's wholesale and certain consumer lending-related commitments. The allowance for loan losses is intended to adjust the carrying value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date.

The allowance for credit losses includes a formula-based component, an asset-specific component, and a component related to PCI loans. The determination of each of these components involves significant judgment on a number of matters. For further discussion of these components, areas of judgment and methodologies used in establishing the Firm's allowance for credit losses, see Note 15.

Allowance for credit losses sensitivity

The Firm's allowance for credit losses is sensitive to numerous factors, which may differ depending on the portfolio. Changes in economic conditions or in the Firm's assumptions and estimates could affect its estimate of probable credit losses inherent in the portfolio at the balance sheet date. The Firm uses its best judgment to assess these economic conditions and loss data in estimating the allowance for credit losses and these estimates are subject to periodic refinement based on changes to underlying external or Firm-specific historical data. The use of alternate estimates, data sources, adjustments to modeled loss estimates for model imprecision and other factors would result in a different estimated allowance for credit losses.

To illustrate the potential magnitude of certain alternate judgments, the Firm estimates that changes in the following inputs would have the following effects on the Firm's modeled credit loss estimates as of December 31, 2016, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- For PCI loans, a combined 5% decline in housing prices and a 100 basis point increase in unemployment rates from current levels could imply an increase to modeled credit loss estimates of approximately $600 million.
- For the residential real estate portfolio, excluding PCI loans, a combined 5% decline in housing prices and a 100 basis point increase in unemployment rates from current levels could imply an increase to modeled annual loss estimates of approximately $125 million.
- For credit card loans, a 100 basis point increase in unemployment rates from current levels could imply an increase to modeled annual loss estimates of approximately $900 million.
- An increase in PD factors consistent with a one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately $2.3 billion.
- A 100 basis point increase in estimated LGD for the Firm's entire wholesale loan portfolio could imply an increase in the Firm's modeled credit loss estimates of approximately $175 million.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors. In addition, these analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then-current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the overall allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm

follows and the judgments made in evaluating the risk factors related to its loss estimates, management believes that its current estimate of the allowance for credit losses is appropriate.

Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy. For further information, see Note 3.

December 31, 2016 (in billions, except ratio data)	Total assets at fair value	Total level 3 assets
Trading debt and equity instruments	$ 308.0	$ 7.9
Derivative receivables[a]	64.1	5.8
Trading assets	372.1	13.7
AFS securities	238.9	0.7
Loans	2.2	0.6
MSRs	6.1	6.1
Private equity investments[b]	1.7	1.6
Other	26.4	0.5
Total assets measured at fair value on a recurring basis	647.4	23.2
Total assets measured at fair value on a nonrecurring basis	1.6	0.8
Total assets measured at fair value	$ 649.0	$ 24.0
Total Firm assets	$ 2,491.0	
Level 3 assets as a percentage of total Firm assets[a]		1.0%
Level 3 assets as a percentage of total Firm assets at fair value[a]		3.7%

(a) For purposes of table above, the derivative receivables total reflects the impact of netting adjustments; however, the $5.8 billion of derivative receivables classified as level 3 does not reflect the netting adjustment as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

(b) Private equity instruments represent investments within Corporate.

Valuation

Details of the Firm's processes for determining fair value are set out in Note 3. Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the valuation hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 3.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. For further discussion of valuation adjustments applied by the Firm see Note 3.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, see Note 3.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 17.

Management applies significant judgment when estimating the fair value of its reporting units. Estimates of fair value are dependent upon estimates of (a) the future earnings potential of the Firm's reporting units, including the estimated effects of regulatory and legislative changes, (b) long-term growth rates and (c) the estimated market cost of equity. Imprecision in estimating these factors can affect the estimated fair value of the reporting units.

Based upon the updated valuations for all of its reporting units, the Firm concluded that the goodwill allocated to its reporting units was not impaired at December 31, 2016. The fair values of these reporting units exceeded their carrying values by approximately 10% - 130% for all

reporting units and did not indicate a significant risk of goodwill impairment based on current projections and valuations.

The projections for all of the Firm's reporting units are consistent with management's current short-term business outlook assumptions, and in the longer term, incorporate a set of macroeconomic assumptions and the Firm's best estimates of long-term growth and returns on equity of its businesses. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.

Declines in business performance, increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, adverse estimates of regulatory or legislative changes or increases in the estimated market cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

For additional information on goodwill, see Note 17.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local, and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations, and business strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. The Firm has also recognized deferred tax assets in connection with certain NOLs and tax credits. The Firm performs regular reviews to ascertain whether its deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize NOLs before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2016, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

JPMorgan Chase does not record U.S. federal income taxes on the undistributed earnings of certain non-U.S. subsidiaries, to the extent management has determined such earnings have been reinvested abroad for an indefinite period of time. Changes to the income tax rates applicable to these non-U.S. subsidiaries may have a material impact on the effective tax rate in a future period if such changes were to occur.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective income tax rate in the period in which the reassessment occurs.

For additional information on income taxes, see Note 26.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 31.

Financial Accounting Standards Board ("FASB") Standards adopted during 2016

Standard	Summary of guidance	Effects on financial statements
Amendments to the consolidation analysis	• Eliminates the deferral issued by the FASB in February 2010 of VIE-related accounting requirements for certain investment funds, including mutual funds, private equity funds and hedge funds. • Amends the evaluation of fees paid to a decision-maker or a service provider, and exempts certain money market funds from consolidation.	• Adopted January 1, 2016. • There was no material impact on the Firm's Consolidated Financial Statements. • For further information, see Note 1.
Improvements to employee share-based payment accounting	• Requires that all excess tax benefits and tax deficiencies that pertain to employee stock-based incentive payments be recognized within income tax expense in the Consolidated statements of income, rather than within additional paid-in capital.	• Adopted January 1, 2016. • There was no material impact on the Firm's Consolidated Financial Statements.
Measuring the financial assets and financial liabilities of a consolidated collateralized financing entity	• Provides an alternative for consolidated financing VIEs to elect: (1) to measure their financial assets and liabilities separately under existing U.S. GAAP for fair value measurement with any differences in such fair values reflected in earnings; or (2) to measure both their financial assets and liabilities using the more observable of the fair value of the financial assets or the fair value of the financial liabilities.	• Adopted January 1, 2016. • There was no material impact on the Firm's Consolidated Financial Statements as the Firm has historically measured the financial assets and liabilities using the more observable fair value.
Recognition and measurement of financial assets and financial liabilities - DVA to OCI	• For financial liabilities where the fair value option has been elected, the portion of the total change in fair value caused by changes in the Firm's own credit risk (i.e., DVA) is required to be presented separately in OCI. • Requires a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption.	• Adopted January 1, 2016. • There was no material impact on the Firm's Consolidated Financial Statements. • For additional information about the impact of the adoption of the new accounting guidance, see Notes 3, 4 and 25.

FASB Standards issued but not yet adopted

Standard	Summary of guidance	Effects on financial statements
Revenue recognition – revenue from contracts with customers *Issued May 2014*	• Requires that revenue from contracts with customers be recognized upon transfer of control of a good or service in the amount of consideration expected to be received. • Changes the accounting for certain contract costs, including whether they may be offset against revenue in the Consolidated statements of income, and requires additional disclosures about revenue and contract costs. • May be adopted using a full retrospective approach or a modified, cumulative effect approach wherein the guidance is applied only to existing contracts as of the date of initial application, and to new contracts transacted after that date.	• Required effective date: January 1, 2018.[a] • Because the guidance does not apply to revenue associated with financial instruments, including loans and securities that are accounted for under other U.S. GAAP, the Firm does not expect the new revenue recognition guidance to have a material impact on the elements of its Consolidated statements of income most closely associated with financial instruments, including securities gains, interest income and interest expense. • The Firm plans to adopt the revenue recognition guidance in the first quarter of 2018. The Firm's implementation efforts include the identification of revenue within the scope of the guidance, as well as the evaluation of revenue contracts and related accounting policies. While the Firm has not yet identified any material changes in the timing of revenue recognition, the Firm's review is ongoing, and it continues to evaluate the presentation of certain contract costs (whether presented gross or offset against noninterest revenue).
Recognition and measurement of financial assets and financial liabilities *Issued January 2016*	• Requires that certain equity instruments be measured at fair value, with changes in fair value recognized in earnings. • Generally requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption.	• Required effective date: January 1, 2018. • The Firm is currently evaluating the potential impact on the Consolidated Financial Statements. The Firm's implementation efforts include the identification of securities within the scope of the guidance, the evaluation of the measurement alternative available for equity securities without a readily determinable fair value, and the related impact to accounting policies, presentation, and disclosures.
Leases *Issued February 2016*	• Requires lessees to recognize all leases longer than twelve months on the Consolidated balance sheets as lease liabilities with corresponding right-of-use assets. • Requires lessees and lessors to classify most leases using principles similar to existing lease accounting, but eliminates the "bright line" classification tests. • Expands qualitative and quantitative disclosures regarding leasing arrangements. • Requires adoption using a modified cumulative effect approach wherein the guidance is applied to all periods presented.	• Required effective date: January 1, 2019.[a] • The Firm is currently evaluating the potential impact on the Consolidated Financial Statements by reviewing its existing lease contracts and service contracts that may include embedded leases. The Firm expects to recognize lease liabilities and corresponding right-of-use assets (at their present value) related to predominantly all of the $10 billion of future minimum payments required under operating leases as disclosed in Note 30. However, the population of contracts subject to balance sheet recognition and their initial measurement remains under evaluation. The Firm does not expect material changes to the recognition of operating lease expense in its Consolidated statements of income.

FASB Standards issued but not yet adopted (continued)

Standard	Summary of guidance	Effects on financial statements
Financial instruments - credit losses *Issued June 2016*	• Replaces existing incurred loss impairment guidance and establishes a single allowance framework for financial assets carried at amortized cost (including HTM securities), which will reflect management's estimate of credit losses over the full remaining expected life of the financial assets. • Eliminates existing guidance for PCI loans, and requires recognition of an allowance for expected credit losses on financial assets purchased with more than insignificant credit deterioration since origination. • Amends existing impairment guidance for AFS securities to incorporate an allowance, which will allow for reversals of impairment losses in the event that the credit of an issuer improves. • Requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption.	• Required effective date: January 1, 2020.[(b)] • The Firm has begun its implementation efforts by establishing a firmwide, cross-discipline governance structure. The Firm is currently identifying key interpretive issues, and is assessing existing credit loss forecasting models and processes against the new guidance to determine what modifications may be required. • The Firm expects that the new guidance will result in an increase in its allowance for credit losses due to several factors, including: 1. The allowance related to the Firm's loans and commitments will increase to cover credit losses over the full remaining expected life of the portfolio, and will consider expected future changes in macroeconomic conditions 2. The nonaccretable difference on PCI loans will be recognized as an allowance, offset by an increase in the carrying value of the related loans 3. An allowance will be established for estimated credit losses on HTM securities • The extent of the increase is under evaluation, but will depend upon the nature and characteristics of the Firm's portfolio at the adoption date, and the macroeconomic conditions and forecasts at that date.
Classification of certain cash receipts and cash payments in the statement of cash flows *Issued August 2016*	• Provides targeted amendments to the classification of certain cash flows, including treatment of cash payments for settlement of zero-coupon debt instruments and distributions received from equity method investments. • Requires retrospective application to all periods presented.	• Required effective date: January 1, 2018.[(a)] • The Firm is currently evaluating the potential impact on the Consolidated Financial Statements.
Treatment of restricted cash on the statement of cash flows *Issued November 2016*	• Requires inclusion of restricted cash in the cash and cash equivalents balances in the Consolidated statements of cash flows. • Requires additional disclosures to supplement the Consolidated statements of cash flows. • Requires retrospective application to all periods presented.	• Required effective date: January 1, 2018.[(a)] • The Firm is currently evaluating the potential impact on the Consolidated Financial Statements.
Definition of a business *Issued January 2017*	• Narrows the definition of a business and clarifies that, to be considered a business, the fair value of the gross assets acquired (or disposed of) may not be substantially all concentrated in a single identifiable asset or a group of similar assets. • In addition, in order to be considered a business, a set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs.	• Required effective date: January 1, 2018.[(a)] • No material impact is expected because the guidance is to be applied prospectively, although it is anticipated that after adoption, fewer transactions will be treated as acquisitions or dispositions of a business.
Goodwill *Issued January 2017*	• Requires an impairment loss to be recognized when the estimated fair value of a reporting unit falls below its carrying value. • Eliminates the second condition in the current guidance that requires an impairment loss to be recognized only if the estimated implied fair value of the goodwill is below its carrying value.	• Required effective date: January 1, 2020.[(a)] • Based on current impairment test results, the Firm does not expect a material effect on the Consolidated Financial Statements. • After adoption, the guidance may result in more frequent goodwill impairment losses due to the removal of the second condition.

(a) Early adoption is permitted.
(b) Early adoption is permitted on January 1, 2019.

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the SEC. In addition, the Firm's senior management may make forward-looking statements orally to investors, analysts, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and global business, economic and political conditions and geopolitical events;
- Changes in laws and regulatory requirements, including capital and liquidity requirements affecting the Firm's businesses, and the ability of the Firm to address those requirements;
- Heightened regulatory and governmental oversight and scrutiny of JPMorgan Chase's business practices, including dealings with retail customers;
- Changes in trade, monetary and fiscal policies and laws;
- Changes in income tax laws and regulations;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity, including approval of its capital plans by banking regulators;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- Technology changes instituted by the Firm, its counterparties or competitors;
- The success of the Firm's business simplification initiatives and the effectiveness of its control agenda;
- Ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to innovate and to increase market share;
- Ability of the Firm to attract and retain qualified employees;
- Ability of the Firm to control expense;
- Competitive pressures;
- Changes in the credit quality of the Firm's customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies, including the introduction of new accounting standards;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities or conflicts and the Firm's ability to deal effectively with disruptions caused by the foregoing;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operational systems and facilities;
- Ability of the Firm to effectively defend itself against cyberattacks and other attempts by unauthorized parties to access information of the Firm or its customers or to disrupt the Firm's systems; and
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2016.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

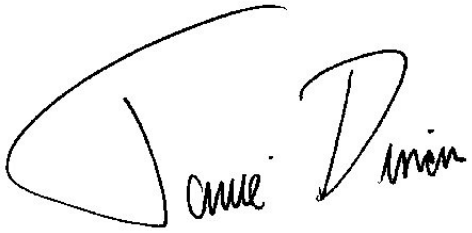
Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2016. In making the assessment, management used the "Internal Control – Integrated Framework" ("COSO 2013") promulgated by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

Based upon the assessment performed, management concluded that as of December 31, 2016, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO 2013 framework. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2016.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2016, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Marianne Lake
Executive Vice President and Chief Financial Officer

February 28, 2017



To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2016 and 2015 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016 based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting". Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PricewaterhouseCoopers LLP

February 28, 2017

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2016	2015	2014
Revenue			
Investment banking fees	**$ 6,448**	$ 6,751	$ 6,542
Principal transactions	**11,566**	10,408	10,531
Lending- and deposit-related fees	**5,774**	5,694	5,801
Asset management, administration and commissions	**14,591**	15,509	15,931
Securities gains	**141**	202	77
Mortgage fees and related income	**2,491**	2,513	3,563
Card income	**4,779**	5,924	6,020
Other income	**3,795**	3,032	3,013
Noninterest revenue	**49,585**	50,033	51,478
Interest income	**55,901**	50,973	51,531
Interest expense	**9,818**	7,463	7,897
Net interest income	**46,083**	43,510	43,634
Total net revenue	**95,668**	93,543	95,112
Provision for credit losses	**5,361**	3,827	3,139
Noninterest expense			
Compensation expense	**29,979**	29,750	30,160
Occupancy expense	**3,638**	3,768	3,909
Technology, communications and equipment expense	**6,846**	6,193	5,804
Professional and outside services	**6,655**	7,002	7,705
Marketing	**2,897**	2,708	2,550
Other expense	**5,756**	9,593	11,146
Total noninterest expense	**55,771**	59,014	61,274
Income before income tax expense	**34,536**	30,702	30,699
Income tax expense	**9,803**	6,260	8,954
Net income	**$ 24,733**	$ 24,442	$ 21,745
Net income applicable to common stockholders	**$ 22,583**	$ 22,406	$ 20,077
Net income per common share data			
Basic earnings per share	**$ 6.24**	$ 6.05	$ 5.33
Diluted earnings per share	**6.19**	6.00	5.29
Weighted-average basic shares	**3,618.5**	3,700.4	3,763.5
Weighted-average diluted shares	**3,649.8**	3,732.8	3,797.5
Cash dividends declared per common share	**$ 1.88**	$ 1.72	$ 1.58

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of comprehensive income

Year ended December 31, (in millions)	2016	2015	2014
Net income	**$ 24,733**	$ 24,442	$ 21,745
Other comprehensive income/(loss), after-tax			
Unrealized gains/(losses) on investment securities	**(1,105)**	(2,144)	1,975
Translation adjustments, net of hedges	**(2)**	(15)	(11)
Cash flow hedges	**(56)**	51	44
Defined benefit pension and OPEB plans	**(28)**	111	(1,018)
DVA on fair value option elected liabilities	**(330)**	–	–
Total other comprehensive income/(loss), after-tax	**(1,521)**	(1,997)	990
Comprehensive income	**$ 23,212**	$ 22,445	$ 22,735

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2016	2015
Assets		
Cash and due from banks	**$ 23,873**	$ 20,490
Deposits with banks	**365,762**	340,015
Federal funds sold and securities purchased under resale agreements (included **$21,506** and $23,141 at fair value)	**229,967**	212,575
Securities borrowed (included **$0** and $395 at fair value)	**96,409**	98,721
Trading assets (included assets pledged of **$115,847** and $115,284)	**372,130**	343,839
Securities (included **$238,891** and $241,754 at fair value and assets pledged of **$16,115** and $14,883)	**289,059**	290,827
Loans (included **$2,230** and $2,861 at fair value)	**894,765**	837,299
Allowance for loan losses	**(13,776)**	(13,555)
Loans, net of allowance for loan losses	**880,989**	823,744
Accrued interest and accounts receivable	**52,330**	46,605
Premises and equipment	**14,131**	14,362
Goodwill	**47,288**	47,325
Mortgage servicing rights	**6,096**	6,608
Other intangible assets	**862**	1,015
Other assets (included **$7,557** and $7,604 at fair value and assets pledged of **$1,603** and $1,286)	**112,076**	105,572
Total assets[a]	**$ 2,490,972**	$ 2,351,698
Liabilities		
Deposits (included **$13,912** and $12,516 at fair value)	**$ 1,375,179**	$ 1,279,715
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$687** and $3,526 at fair value)	**165,666**	152,678
Commercial paper	**11,738**	15,562
Other borrowed funds (included **$9,105** and $9,911 at fair value)	**22,705**	21,105
Trading liabilities	**136,659**	126,897
Accounts payable and other liabilities (included **$9,120** and $4,401 at fair value)	**190,543**	177,638
Beneficial interests issued by consolidated VIEs (included **$120** and $787 at fair value)	**39,047**	41,879
Long-term debt (included **$37,686** and $33,065 at fair value)	**295,245**	288,651
Total liabilities[a]	**2,236,782**	2,104,125
Commitments and contingencies (see Notes 29, 30 and 31)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares: issued **2,606,750** shares)	**26,068**	26,068
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Additional paid-in capital	**91,627**	92,500
Retained earnings	**162,440**	146,420
Accumulated other comprehensive income	**(1,175)**	192
Shares held in restricted stock units ("RSU") trust, at cost (**472,953** shares)	**(21)**	(21)
Treasury stock, at cost (**543,744,003** and 441,459,392 shares)	**(28,854)**	(21,691)
Total stockholders' equity	**254,190**	247,573
Total liabilities and stockholders' equity	**$ 2,490,972**	$ 2,351,698

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2016 and 2015. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which were eliminated in consolidation.

December 31, (in millions)	2016	2015
Assets		
Trading assets	**$ 3,185**	$ 3,736
Loans	**75,614**	75,104
All other assets	**3,321**	2,765
Total assets	**$ 82,120**	$ 81,605
Liabilities		
Beneficial interests issued by consolidated VIEs	**$ 39,047**	$ 41,879
All other liabilities	**490**	809
Total liabilities	**$ 39,537**	$ 42,688

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. At December 31, 2016 and 2015, the Firm provided limited program-wide credit enhancement of $2.4 billion and $2.0 billion, respectively, related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 16.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity

Year ended December 31, (in millions, except per share data)	2016	2015	2014
Preferred stock			
Balance at January 1	**$ 26,068**	$ 20,063	$ 11,158
Issuance of preferred stock	**–**	6,005	8,905
Balance at December 31	**26,068**	26,068	20,063
Common stock			
Balance at January 1 and December 31	**4,105**	4,105	4,105
Additional paid-in capital			
Balance at January 1	**92,500**	93,270	93,828
Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects	**(334)**	(436)	(508)
Other	**(539)**	(334)	(50)
Balance at December 31	**91,627**	92,500	93,270
Retained earnings			
Balance at January 1	**146,420**	129,977	115,435
Cumulative effect of change in accounting principle	**(154)**	–	–
Net income	**24,733**	24,442	21,745
Dividends declared:			
Preferred stock	**(1,647)**	(1,515)	(1,125)
Common stock (**$1.88**, $1.72 and $1.58 per share for 2016, 2015 and 2014, respectively)	**(6,912)**	(6,484)	(6,078)
Balance at December 31	**162,440**	146,420	129,977
Accumulated other comprehensive income			
Balance at January 1	**192**	2,189	1,199
Cumulative effect of change in accounting principle	**154**	–	–
Other comprehensive income/(loss)	**(1,521)**	(1,997)	990
Balance at December 31	**(1,175)**	192	2,189
Shares held in RSU Trust, at cost			
Balance at January 1 and December 31	**(21)**	(21)	(21)
Treasury stock, at cost			
Balance at January 1	**(21,691)**	(17,856)	(14,847)
Purchase of treasury stock	**(9,082)**	(5,616)	(4,760)
Reissuance from treasury stock	**1,919**	1,781	1,751
Balance at December 31	**(28,854)**	(21,691)	(17,856)
Total stockholders' equity	**$ 254,190**	$ 247,573	$ 231,727

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2016	2015	2014
Operating activities			
Net income	**$ 24,733**	$ 24,442	$ 21,745
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Provision for credit losses	**5,361**	3,827	3,139
Depreciation and amortization	**5,478**	4,940	4,759
Deferred tax expense	**4,651**	1,333	4,362
Other	**1,799**	1,785	2,113
Originations and purchases of loans held-for-sale	**(61,107)**	(48,109)	(67,525)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**60,196**	49,363	71,407
Net change in:			
Trading assets	**(20,007)**	62,212	(24,814)
Securities borrowed	**2,313**	12,165	1,020
Accrued interest and accounts receivable	**(5,815)**	22,664	(3,637)
Other assets	**(4,517)**	(3,701)	(9,166)
Trading liabilities	**5,198**	(28,972)	26,818
Accounts payable and other liabilities	**3,740**	(23,361)	6,058
Other operating adjustments	**(1,827)**	(5,122)	314
Net cash provided by operating activities	**20,196**	73,466	36,593
Investing activities			
Net change in:			
Deposits with banks	**(25,747)**	144,462	(168,426)
Federal funds sold and securities purchased under resale agreements	**(17,468)**	3,190	30,848
Held-to-maturity securities:			
Proceeds from paydowns and maturities	**6,218**	6,099	4,169
Purchases	**(143)**	(6,204)	(10,345)
Available-for-sale securities:			
Proceeds from paydowns and maturities	**65,950**	76,448	90,664
Proceeds from sales	**48,592**	40,444	38,411
Purchases	**(123,959)**	(70,804)	(121,504)
Proceeds from sales and securitizations of loans held-for-investment	**15,429**	18,604	20,115
Other changes in loans, net	**(80,996)**	(108,962)	(51,749)
All other investing activities, net	**(2,825)**	3,703	2,181
Net cash provided by/(used in) investing activities	**(114,949)**	106,980	(165,636)
Financing activities			
Net change in:			
Deposits	**97,336**	(88,678)	89,346
Federal funds purchased and securities loaned or sold under repurchase agreements	**13,007**	(39,415)	10,905
Commercial paper and other borrowed funds	**(2,461)**	(57,828)	9,242
Beneficial interests issued by consolidated VIEs	**(5,707)**	(5,632)	(834)
Proceeds from long-term borrowings	**83,070**	79,611	78,515
Payments of long-term borrowings	**(68,949)**	(67,247)	(65,275)
Proceeds from issuance of preferred stock	**–**	5,893	8,847
Treasury stock and warrants repurchased	**(9,082)**	(5,616)	(4,760)
Dividends paid	**(8,476)**	(7,873)	(6,990)
All other financing activities, net	**(467)**	(726)	(768)
Net cash provided by/(used in) financing activities	**98,271**	(187,511)	118,228
Effect of exchange rate changes on cash and due from banks	**(135)**	(276)	(1,125)
Net increase/(decrease) in cash and due from banks	**3,383**	(7,341)	(11,940)
Cash and due from banks at the beginning of the period	**20,490**	27,831	39,771
Cash and due from banks at the end of the period	**$ 23,873**	$ 20,490	$ 27,831
Cash interest paid	**$ 9,508**	$ 7,220	$ 8,194
Cash income taxes paid, net	**2,405**	9,423	1,392

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the U.S., with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small business, commercial banking, financial transaction processing and asset management. For a discussion of the Firm's business segments, see Note 33.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to U.S. GAAP. Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Certain amounts reported in prior periods have been reclassified to conform with the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated balance sheets.

The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity.

Effective January 1, 2016, the Firm adopted new accounting guidance related to the consolidation of legal entities such as limited partnerships, limited liability corporations, and securitization structures. The guidance eliminated the deferral issued by the FASB in February 2010 of the accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds. In addition, the guidance amends the evaluation of fees paid to a decision-maker or a service provider, and exempts certain money market funds from consolidation. Furthermore, asset management funds structured as limited partnerships or certain limited liability companies are now evaluated for consolidation as voting interest entities if the non-managing partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights) based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these voting interest entities. However, in the limited cases where the non-managing partners or members do not have substantive kick-out or participating rights, the Firm evaluates the funds as VIEs and consolidates if it is the general partner or managing member and has a potentially significant variable interest. There was no material impact on the Firm's Consolidated Financial Statements upon adoption of this accounting guidance.

Voting Interest Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Firm to recognize its proportionate share of the entity's net earnings), or (ii) at fair value if the fair value option was elected. These investments are generally included in other assets, with income or loss included in other income.

Certain Firm-sponsored asset management funds are structured as limited partnerships or limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these funds. In the limited cases where the nonaffiliated partners or members do not have substantive kick-out or participating rights, the Firm consolidates the funds.

The Firm's investment companies have investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated balance sheets at fair value, and are recorded in other assets.

Variable Interest Entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivatives or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

Use of estimates in the preparation of consolidated financial statements

The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in OCI within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated statements of income.

Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the Consolidated balance sheets when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities sold and purchased under repurchase agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances when the specified conditions are met.

The Firm uses master netting agreements to mitigate counterparty credit risk in certain transactions, including derivatives transactions, repurchase and reverse repurchase agreements, and securities borrowed and loaned agreements. A master netting agreement is a single contract with a counterparty that permits multiple transactions governed by that contract to be terminated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due after expiration of any grace period). Upon the exercise of termination rights by the non-defaulting party (i) all transactions are terminated, (ii) all transactions are valued and the positive value or "in the money" transactions are netted against the negative value or "out of the money" transactions and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount. Upon exercise of repurchase agreement and securities loan default rights in general (i) all transactions are terminated and accelerated, (ii) all values of securities or cash held or to be delivered are calculated, and all such sums are netted against each other and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount.

Typical master netting agreements for these types of transactions also often contain a collateral/margin agreement that provides for a security interest in, or title transfer of, securities or cash collateral/margin to the party that has the right to demand margin (the "demanding party"). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount of the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold. The collateral/margin agreement grants to the demanding party, upon default by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin. It also grants to the demanding party the right to liquidate collateral/margin and to apply the proceeds to an amount payable by the counterparty.

For further discussion of the Firm's derivative instruments, see Note 6. For further discussion of the Firm's repurchase and reverse repurchase agreements, and securities borrowing and lending agreements, see Note 13.

Statements of cash flows

For JPMorgan Chase's Consolidated statements of cash flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Fair value measurement	Note 3	Page 149
Fair value option	Note 4	Page 168
Derivative instruments	Note 6	Page 174
Noninterest revenue	Note 7	Page 187
Interest income and interest expense	Note 8	Page 189
Pension and other postretirement employee benefit plans	Note 9	Page 189
Employee stock-based incentives	Note 10	Page 197
Securities	Note 12	Page 199
Securities financing activities	Note 13	Page 205
Loans	Note 14	Page 208
Allowance for credit losses	Note 15	Page 227
Variable interest entities	Note 16	Page 232
Goodwill and Mortgage servicing rights	Note 17	Page 240
Premises and equipment	Note 18	Page 244
Long-term debt	Note 21	Page 245
Income taxes	Note 26	Page 250
Off–balance sheet lending-related financial instruments, guarantees and other commitments	Note 29	Page 255
Litigation	Note 31	Page 262

Note 2 – Business changes and developments

None

Note 3 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Firm's Consolidated balance sheets). Certain assets (e.g., certain mortgage, home equity and other loans where the carrying value is based on the fair value of the underlying collateral), liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment).

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices or inputs, where available. If prices or quotes are not available, fair value is based on models that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below.

The level of precision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions by other market participants compared with those used by the Firm could result in a different estimate of fair value at the reporting date.

Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated balance sheets at fair value. The Firm's VCG, which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value. The VGF is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the Firmwide head of the VCG (under the direction of the Firm's Controller), and includes sub-forums covering the CIB, CCB, CB, AWM and certain corporate functions including Treasury and CIO.

Price verification process

The VCG verifies fair value estimates provided by the risk-taking functions by leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, the VCG performs additional review to ensure the reasonableness of the estimates. The additional review may include evaluating the limited market activity including client unwinds, benchmarking valuation inputs to those used for similar instruments, decomposing the valuation of structured instruments into individual components, comparing expected to actual cash flows, reviewing profit and loss trends, and reviewing trends in collateral valuation. There are also additional levels of management review for more significant or complex positions.

The VCG determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments are applied for instruments classified within level 1 of the fair value hierarchy (see below for further information on the fair value hierarchy). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

- Liquidity valuation adjustments are considered where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity. Liquidity valuation adjustments are applied and determined based on current market conditions. Factors that may be considered in determining the liquidity adjustment include analysis of: (1) the estimated bid-offer spread for the instrument being traded; (2) alternative pricing points for similar instruments in active markets; and (3) the range of reasonable values that the price or parameter could take.
- The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by U.S. GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that a relevant market participant would consider in the transfer of the net open risk position, including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.
- Unobservable parameter valuation adjustments may be made when positions are valued using prices or input parameters to valuation models that are unobservable due to a lack of market activity or because they cannot

be implied from observable market data. Such prices or parameters must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the resulting valuation estimate.

- Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality (CVA), the Firm's own creditworthiness (DVA) and the impact of funding (FVA), using a consistent framework across the Firm. For more information on such adjustments see Credit and funding adjustments on page 164 of this Note.

Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs to those models.

The Model Risk function reviews and approves a wide range of models, including risk management, valuation, and regulatory capital models used by the Firm. The Model Risk function is independent of model users and developers. The Firmwide Model Risk Executive reports to the Firm's CRO. When reviewing a model, the Model Risk function analyzes and challenges the model methodology, and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes.

The Model Risk function reviews and approves new models, as well as material changes to existing models, prior to implementation in the operating environment. In certain circumstances, the head of the Model Risk function may grant exceptions to the Firm's model risk policy to allow a model to be used prior to review or approval. The Model Risk function may also require the user to take appropriate actions to mitigate the model risk if it is to be used in the interim.

Valuation hierarchy

A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following table describes the valuation methodologies generally used by the Firm to measure its significant products/instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology	Classifications in the valuation hierarchy
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features: for further information refer to the discussion of derivatives below. • Market rates for the respective maturity • Collateral	Predominantly level 2
Loans and lending-related commitments – wholesale		
Loans carried at fair value (e.g. trading loans and non-trading loans)	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are infrequent) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Credit spreads derived from the cost of CDS; or benchmark credit curves developed by the Firm, by industry and credit rating • Prepayment speed	Level 2 or 3
Loans held for investment and associated lending-related commitments	Valuations are based on discounted cash flows, which consider: • Credit spreads, derived from the cost of CDS; or benchmark credit curves developed by the Firm, by industry and credit rating • Prepayment speed Lending-related commitments are valued similar to loans and reflect the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become funded prior to an obligor default For information regarding the valuation of loans measured at collateral value, see Note 14.	Predominantly level 3
Loans – consumer		
Held for investment consumer loans, excluding credit card	Valuations are based on discounted cash flows, which consider: • Credit losses - which consider expected and current default rates, and loss severity • Prepayment speed • Discount rates • Servicing costs For information regarding the valuation of loans measured at collateral value, see Note 14.	Predominantly level 3
Held for investment credit card receivables	Valuations are based on discounted cash flows, which consider: • Credit costs - the allowance for loan losses is considered a reasonable proxy for the credit cost • Projected interest income, late-fee revenue and loan repayment rates • Discount rates • Servicing costs	Level 3
Trading loans – conforming residential mortgage loans expected to be sold	Fair value is based on observable prices for mortgage-backed securities with similar collateral and incorporates adjustments to these prices to account for differences between the securities and the value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity.	Predominantly level 2

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Investment and trading securities	Quoted market prices are used where available.	Level 1
	In the absence of quoted market prices, securities are valued based on: • Observable market prices for similar securities • Relevant broker quotes • Discounted cash flows In addition, the following inputs to discounted cash flows are used for the following products: *Mortgage- and asset-backed securities specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity *Collateralized loan obligations ("CLOs") specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Expected prepayment speed, conditional default rates, loss severity • Credit spreads • Credit rating data	Level 2 or 3
Physical commodities	Valued using observable market prices or data	Predominantly level 1 and 2
Derivatives	Exchange-traded derivatives that are actively traded and valued using the exchange price.	Level 1
	Derivatives that are valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models, that use observable or unobservable valuation inputs (e.g., plain vanilla options and interest rate and CDS). Inputs include: • Contractual terms including the period to maturity • Readily observable parameters including interest rates and volatility • Credit quality of the counterparty and of the Firm • Market funding levels • Correlation levels In addition, specific inputs used for derivatives that are valued based on models with significant unobservable inputs are as follows: *Structured credit derivatives specific inputs include:* • CDS spreads and recovery rates • Credit correlation between the underlying debt instruments (levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices) • Actual transactions, where available, are used to regularly recalibrate unobservable parameters *Certain long-dated equity option specific inputs include:* • Long-dated equity volatilities *Certain interest rate and FX exotic options specific inputs include:* • Interest rate correlation • Interest rate spread volatility • Foreign exchange correlation • Correlation between interest rates and foreign exchange rates • Parameters describing the evolution of underlying interest rates *Certain commodity derivatives specific inputs include:* • Commodity volatility • Forward commodity price Additionally, adjustments are made to reflect counterparty credit quality (CVA), the Firm's own creditworthiness (DVA), and the impact of funding (FVA). See pages 164-165 of this Note.	Level 2 or 3

Product/instrument	Valuation methodology, inputs and assumptions	Classification in the valuation hierarchy
Mortgage servicing rights	See Mortgage servicing rights in Note 17.	Level 3
Private equity direct investments	*Private equity direct investments* Fair value is estimated using all available information; the range of potential inputs include: • Transaction prices • Trading multiples of comparable public companies • Operating performance of the underlying portfolio company • Adjustments as required, since comparable public companies are not identical to the company being valued, and for company-specific issues and lack of liquidity • Additional available inputs relevant to the investment	Level 2 or 3
Fund investments (e.g. mutual/ collective investment funds, private equity funds, hedge funds, and real estate funds)	Net asset value • NAV is supported by the ability to redeem and purchase at the NAV level. • Adjustments to the NAV as required, for restrictions on redemption (e.g., lock-up periods or withdrawal limitations) or where observable activity is limited	Level 1 Level 2 or 3[(a)]
Beneficial interests issued by consolidated VIEs	Valued using observable market information, where available In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE	Level 2 or 3
Long-term debt, not carried at fair value	Valuations are based on discounted cash flows, which consider: • Market rates for respective maturity	Predominantly level 2
Structured notes (included in deposits, other borrowed funds and long-term debt)	• Valuations are based on discounted cash flow analyses that consider the embedded derivative and the terms and payment structure of the note. • The embedded derivative features are considered using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that use observable or unobservable valuation inputs, depending on the embedded derivative. The specific inputs used vary according to the nature of the embedded derivative features, as described in the discussion above regarding derivatives valuation. Adjustments are then made to this base valuation to reflect the Firm's own creditworthiness (DVA) and to incorporate the impact of funding (FVA). See pages 164-165 of this Note.	Level 2 or 3

(a) Excludes certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient.

The following table presents the assets and liabilities reported at fair value as of December 31, 2016 and 2015, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2016 (in millions)	Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 21,506	$ –	$ –	$ 21,506
Securities borrowed	–	–	–	–	–
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	13	40,586	392	–	40,991
Residential – nonagency	–	1,552	83	–	1,635
Commercial – nonagency	–	1,321	17	–	1,338
Total mortgage-backed securities	13	43,459	492	–	43,964
U.S. Treasury and government agencies[a]	19,554	5,201	–	–	24,755
Obligations of U.S. states and municipalities	–	8,403	649	–	9,052
Certificates of deposit, bankers' acceptances and commercial paper	–	1,649	–	–	1,649
Non-U.S. government debt securities	28,443	23,076	46	–	51,565
Corporate debt securities	–	22,751	576	–	23,327
Loans[b]	–	28,965	4,837	–	33,802
Asset-backed securities	–	5,250	302	–	5,552
Total debt instruments	48,010	138,754	6,902	–	193,666
Equity securities	96,759	281	231	–	97,271
Physical commodities[c]	5,341	1,620	–	–	6,961
Other	–	9,341	761	–	10,102
Total debt and equity instruments[d]	150,110	149,996	7,894	–	308,000
Derivative receivables:					
Interest rate	715	602,747	2,501	(577,661)	28,302
Credit	–	28,256	1,389	(28,351)	1,294
Foreign exchange	812	231,743	870	(210,154)	23,271
Equity	–	34,032	908	(30,001)	4,939
Commodity	158	18,360	125	(12,371)	6,272
Total derivative receivables[e]	1,685	915,138	5,793	(858,538)	64,078
Total trading assets[f]	151,795	1,065,134	13,687	(858,538)	372,078
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	64,005	–	–	64,005
Residential – nonagency	–	14,442	1	–	14,443
Commercial – nonagency	–	9,104	–	–	9,104
Total mortgage-backed securities	–	87,551	1	–	87,552
U.S. Treasury and government agencies[a]	44,072	29	–	–	44,101
Obligations of U.S. states and municipalities	–	31,592	–	–	31,592
Certificates of deposit	–	106	–	–	106
Non-U.S. government debt securities	22,793	12,495	–	–	35,288
Corporate debt securities	–	4,958	–	–	4,958
Asset-backed securities:					
Collateralized loan obligations	–	26,738	663	–	27,401
Other	–	6,967	–	–	6,967
Equity securities	926	–	–	–	926
Total available-for-sale securities	67,791	170,436	664	–	238,891
Loans	–	1,660	570	–	2,230
Mortgage servicing rights	–	–	6,096	–	6,096
Other assets:					
Private equity investments[g]	68	–	1,606	–	1,674
All other	4,289	–	617	–	4,906
Total other assets[f]	4,357	–	2,223	–	6,580
Total assets measured at fair value on a recurring basis	$ 223,943	$ 1,258,736 [g]	$ 23,240 [g]	$ (858,538)	$ 647,381
Deposits	$ –	$ 11,795	$ 2,117	$ –	$ 13,912
Federal funds purchased and securities loaned or sold under repurchase agreements	–	687	–	–	687
Other borrowed funds	–	7,971	1,134	–	9,105
Trading liabilities:					
Debt and equity instruments[d]	68,304	19,081	43	–	87,428
Derivative payables:					
Interest rate	539	569,001	1,238	(559,963)	10,815
Credit	–	27,375	1,291	(27,255)	1,411
Foreign exchange	902	231,815	2,254	(214,463)	20,508
Equity	–	35,202	3,160	(30,222)	8,140
Commodity	173	20,079	210	(12,105)	8,357
Total derivative payables[e]	1,614	883,472	8,153	(844,008)	49,231
Total trading liabilities	69,918	902,553	8,196	(844,008)	136,659
Accounts payable and other liabilities	9,107	–	13	–	9,120
Beneficial interests issued by consolidated VIEs	–	72	48	–	120
Long-term debt	–	23,792	13,894	–	37,686
Total liabilities measured at fair value on a recurring basis	$ 79,025	$ 946,870	$ 25,402	$ (844,008)	$ 207,289

December 31, 2015 (in millions)	Fair value hierarchy				
	Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 23,141	$ –	$ –	$ 23,141
Securities borrowed	–	395	–	–	395
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	6	31,815	715	–	32,536
Residential – nonagency	–	1,299	194	–	1,493
Commercial – nonagency	–	1,080	115	–	1,195
Total mortgage-backed securities	6	34,194	1,024	–	35,224
U.S. Treasury and government agencies[a]	12,036	6,985	–	–	19,021
Obligations of U.S. states and municipalities	–	6,986	651	–	7,637
Certificates of deposit, bankers' acceptances and commercial paper	–	1,042	–	–	1,042
Non-U.S. government debt securities	27,974	25,064	74	–	53,112
Corporate debt securities	–	22,807	736	–	23,543
Loans[b]	–	22,211	6,604	–	28,815
Asset-backed securities	–	2,392	1,832	–	4,224
Total debt instruments	40,016	121,681	10,921	–	172,618
Equity securities	94,059	606	265	–	94,930
Physical commodities[c]	3,593	1,064	–	–	4,657
Other	–	11,152	744	–	11,896
Total debt and equity instruments[d]	137,668	134,503	11,930	–	284,101
Derivative receivables:					
Interest rate	354	666,491	2,766	(643,248)	26,363
Credit	–	48,850	2,618	(50,045)	1,423
Foreign exchange	734	177,525	1,616	(162,698)	17,177
Equity	–	35,150	709	(30,330)	5,529
Commodity	108	24,720	237	(15,880)	9,185
Total derivative receivables[e]	1,196	952,736	7,946	(902,201)	59,677
Total trading assets[f]	138,864	1,087,239	19,876	(902,201)	343,778
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	55,066	–	–	55,066
Residential – nonagency	–	27,618	1	–	27,619
Commercial – nonagency	–	22,897	–	–	22,897
Total mortgage-backed securities	–	105,581	1	–	105,582
U.S. Treasury and government agencies[a]	10,998	38	–	–	11,036
Obligations of U.S. states and municipalities	–	33,550	–	–	33,550
Certificates of deposit	–	283	–	–	283
Non-U.S. government debt securities	23,199	13,477	–	–	36,676
Corporate debt securities	–	12,436	–	–	12,436
Asset-backed securities:					
Collateralized loan obligations	–	30,248	759	–	31,007
Other	–	9,033	64	–	9,097
Equity securities	2,087	–	–	–	2,087
Total available-for-sale securities	36,284	204,646	824	–	241,754
Loans	–	1,343	1,518	–	2,861
Mortgage servicing rights	–	–	6,608	–	6,608
Other assets:					
Private equity investments[g]	102	101	1,657	–	1,860
All other	3,815	28	744	–	4,587
Total other assets[f]	3,917	129	2,401	–	6,447
Total assets measured at fair value on a recurring basis	$ 179,065	$ 1,316,893	$ 31,227	$ (902,201)	$ 624,984
Deposits	$ –	$ 9,566	$ 2,950	$ –	$ 12,516
Federal funds purchased and securities loaned or sold under repurchase agreements	–	3,526	–	–	3,526
Other borrowed funds	–	9,272	639	–	9,911
Trading liabilities:					
Debt and equity instruments[d]	53,845	20,199	63	–	74,107
Derivative payables:					
Interest rate	216	633,060	1,890	(624,945)	10,221
Credit	–	48,460	2,069	(48,988)	1,541
Foreign exchange	669	187,890	2,341	(171,131)	19,769
Equity	–	36,440	2,223	(29,480)	9,183
Commodity	52	26,430	1,172	(15,578)	12,076
Total derivative payables[e]	937	932,280	9,695	(890,122)	52,790
Total trading liabilities	54,782	952,479	9,758	(890,122)	126,897
Accounts payable and other liabilities	4,382	–	19	–	4,401
Beneficial interests issued by consolidated VIEs	–	238	549	–	787
Long-term debt	–	21,452	11,613	–	33,065
Total liabilities measured at fair value on a recurring basis	$ 59,164	$ 996,533	$ 25,528	$ (890,122)	$ 191,103

(a) At December 31, 2016 and 2015, included total U.S. government-sponsored enterprise obligations of $80.6 billion and $67.0 billion, respectively, which were predominantly mortgage-related.
(b) At December 31, 2016 and 2015, included within trading loans were $16.5 billion and $11.8 billion, respectively, of residential first-lien mortgages, and $3.3 billion and $4.3 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $11.0 billion and $5.3 billion, respectively, and reverse mortgages of $2.0 billion and $2.5 billion, respectively.
(c) Physical commodities inventories are generally accounted for at the lower of cost or market. "Market" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, market approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when market is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. For a further discussion of the Firm's hedge accounting relationships, see Note 6. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.
(d) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).
(e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.
(f) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy. At December 31, 2016 and 2015, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were $1.0 billion and $1.2 billion, respectively. Included in the balances at December 31, 2016 and 2015, were trading assets of $52 million and $61 million, respectively, and other assets of $1.0 billion and $1.2 billion, respectively.
(g) Private equity instruments represent investments within Corporate. The portion of the private equity investment portfolio carried at fair value on a recurring basis had a cost basis of $2.5 billion and $3.5 billion at December 31, 2016 and 2015, respectively.

Transfers between levels for instruments carried at fair value on a recurring basis

For the years ended December 31, 2016 and 2015, there were no significant transfers between levels 1 and 2.

During the year ended December 31, 2016, transfers from level 3 to level 2 included the following:

- $1.4 billion of long-term debt driven by an increase in observability and a reduction of the significance in the unobservable inputs for certain structured notes.

During the year ended December 31, 2016, transfers from level 2 to level 3 included the following:

- $1.1 billion of gross equity derivative receivables and $1.0 billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance in unobservable inputs.
- $1.0 billion of trading loans driven by a decrease in observability.

During the year ended December 31, 2015, transfers from level 3 to level 2 included the following:

- $3.1 billion of long-term debt and $1.0 billion of deposits driven by an increase in observability on certain structured notes with embedded interest rate and FX derivatives and a reduction of the significance in the unobservable inputs for certain structured notes with embedded equity derivatives.
- $2.1 billion of gross equity derivatives for both receivables and payables as a result of an increase in observability and a decrease in the significance in unobservable inputs; partially offset by transfers into level 3 resulting in net transfers of approximately $1.2 billion for both receivables and payables.
- $2.8 billion of trading loans driven by an increase in observability of certain collateralized financing transactions.

During the year ended December 31, 2015, transfers from level 2 to level 3 included the following:

- $2.4 billion of corporate debt driven by a decrease in the significance in the unobservable inputs and an increase in observability for certain structured products

During the year ended December 31, 2014, transfers from level 3 to level 2 included the following:

- $4.3 billion and $4.4 billion of gross equity derivative receivables and payables, respectively, due to increased observability of certain equity option valuation inputs
- $2.7 billion of trading loans, $2.6 billion of margin loans, $2.3 billion of private equity investments, $2.0 billion of corporate debt, and $1.3 billion of long-term debt, based on increased liquidity and price transparency
- Transfers from level 2 into level 3 included $1.1 billion of other borrowed funds, $1.1 billion of trading loans and $1.0 billion of long-term debt, based on a decrease in observability of valuation inputs and price transparency.

All transfers are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 valuations

The Firm has established well-structured processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3). For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, see pages 150–153 of this Note.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs including, but not limited to, transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and, for certain instruments, the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

In the Firm's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted average values will therefore vary from period-to-period and parameter-to-parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

For the Firm's derivatives and structured notes positions classified within level 3 at December 31, 2016, interest rate correlation inputs used in estimating fair value were concentrated towards the upper end of the range presented; equity correlation inputs were concentrated at the upper end of the range; the credit correlation inputs were distributed across the range presented; and the foreign exchange correlation inputs were concentrated at the upper end of the range presented. In addition, the interest rate volatility inputs used in estimating fair value were distributed across the range presented; equity volatilities were concentrated in the lower half end of the range; and forward commodity prices used in estimating the fair value of commodity derivatives were concentrated in the middle of the range presented.

Level 3 inputs[a]

December 31, 2016 (in millions, except for ratios and basis points)					
Product/Instrument	**Fair value**	**Principal valuation technique**	**Unobservable inputs**	**Range of input values**	**Weighted average**
Residential mortgage-backed securities and loans	$ 2,861	Discounted cash flows	Yield	4% - 18%	5%
			Prepayment speed	0% - 20%	8%
			Conditional default rate	0% - 34%	15%
			Loss severity	0% - 90%	37%
Commercial mortgage-backed securities and loans[b]	1,555	Discounted cash flows	Yield	1% - 32%	8%
			Conditional default rate	0% - 100%	69%
			Loss severity	40%	40%
Corporate debt securities, obligations of U.S. states and municipalities, and other[c]	764	Discounted cash flows	Credit spread	40bps - 375bps	96bps
			Yield	1% - 17%	9%
	3,744	Market comparables	Price	$ 0 - $121	$91
Net interest rate derivatives	1,263	Option pricing	Interest rate correlation	(30)% - 100%	
			Interest rate spread volatility	3% - 38%	
Net credit derivatives[b][c]	98	Discounted cash flows	Credit correlation	30% - 85%	
Net foreign exchange derivatives	(1,384)	Option pricing	Foreign exchange correlation	(30)% - 65%	
Net equity derivatives	(2,252)	Option pricing	Equity volatility	20% - 60%	
Net commodity derivatives	(85)	Discounted cash flows	Forward commodity price	$ 46 - $59 per barrel	
Collateralized loan obligations	663	Discounted cash flows	Credit spread	303bps - 475bps	339bps
			Prepayment speed	20%	20%
			Conditional default rate	2%	2%
			Loss severity	30%	30%
	158	Market comparables	Price	$ 0 - $111	$73
MSRs	6,096	Discounted cash flows	Refer to Note 17		
Private equity investments	1,606	Market comparables	EBITDA multiple	6.4x - 11.5x	7.9x
Long-term debt, other borrowed funds, and deposits[d]	16,669	Option pricing	Interest rate correlation	(30)% - 100%	
			Interest rate spread volatility	3% - 38%	
			Foreign exchange correlation	(30)% - 65%	
			Equity correlation	(50)% - 80%	
	476	Discounted cash flows	Credit correlation	30% - 85%	

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated balance sheets. Furthermore, the inputs presented for each valuation technique in the table are, in some cases, not applicable to every instrument valued using the technique as the characteristics of the instruments can differ.

(b) The unobservable inputs and associated input ranges for approximately $394 million of credit derivative receivables and $226 million of credit derivative payables with underlying commercial mortgage risk have been included in the inputs and ranges provided for commercial mortgage-backed securities and loans.

(c) The unobservable inputs and associated input ranges for approximately $362 million of credit derivative receivables and $333 million of credit derivative payables with underlying ABS risk have been included in the inputs and ranges provided for corporate debt securities, obligations of U.S. states and municipalities and other.

(d) Long-term debt, other borrowed funds and deposits include structured notes issued by the Firm that are predominantly financial instruments containing embedded derivatives. The estimation of the fair value of structured notes includes the derivative features embedded within the instrument. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.

Changes in and ranges of unobservable inputs

The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent, as a change in one unobservable input may give rise to a change in another unobservable input. Where relationships do exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline); such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

The following discussion also provides a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.

Yield – The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

Credit spread – The credit spread is the amount of additional annualized return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

The yield and the credit spread of a particular mortgage-backed security primarily reflect the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield and credit spreads reflects the range of risk inherent in various instruments owned by the Firm. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, LTV ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages. For corporate debt securities, obligations of U.S. states and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.

Prepayment speed – The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool to collateral pool, and are driven by the type and location of the underlying borrower, and the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

Conditional default rate – The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral has high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement. Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Firm's market-making portfolios, conditional default rates are most typically at the lower end of the range presented.

Loss severity – The loss severity (the inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

The loss severity applied in valuing a mortgage-backed security investment depends on factors relating to the underlying mortgages, including the LTV ratio, the nature of the lender's lien on the property and other instrument-specific factors.

Correlation – Correlation is a measure of the relationship between the movements of two variables (e.g., how the change in one variable influences the change in the other). Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity and foreign exchange) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement. The range of correlation inputs between risks within the same asset class are generally narrower than those between underlying risks across asset classes. In addition, the ranges of credit correlation inputs tend to be narrower than those affecting other asset classes.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input, as the relationship between the underlying risks may be different over different time periods. Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

Volatility – Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options, commodity options, and interest rate options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option (e.g., the volatility of a particular equity security may be significantly different from that of a particular commodity index), the tenor of the derivative as well as the strike price of the option.

EBITDA multiple – EBITDA multiples refer to the input (often derived from the value of a comparable company) that is multiplied by the historic and/or expected earnings before interest, taxes, depreciation and amortization ("EBITDA") of a company in order to estimate the company's value. An increase in the EBITDA multiple, in isolation, net of adjustments, would result in an increase in a fair value measurement.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2016, 2015 and 2014. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2016 (in millions)	Fair value measurements using significant unobservable inputs							Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2016
	Fair value at January 1, 2016	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2016	
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 715	$ (20)	$ 135	$ (295)	$ (115)	$ (28)	$ 392	$ (36)
Residential – nonagency	194	4	252	(319)	(20)	(28)	83	5
Commercial – nonagency	115	(11)	69	(29)	(3)	(124)	17	3
Total mortgage-backed securities	1,024	(27)	456	(643)	(138)	(180)	492	(28)
Obligations of U.S. states and municipalities	651	19	149	(132)	(38)	–	649	–
Non-U.S. government debt securities	74	(4)	91	(97)	(7)	(11)	46	(7)
Corporate debt securities	736	2	445	(359)	(189)	(59)	576	(22)
Loans	6,604	(343)	2,228	(2,598)	(1,311)	257	4,837	(169)
Asset-backed securities	1,832	39	655	(712)	(968)	(544)	302	19
Total debt instruments	10,921	(314)	4,024	(4,541)	(2,651)	(537)	6,902	(207)
Equity securities	265	–	90	(108)	(40)	24	231	7
Other	744	79	649	(287)	(360)	(64)	761	28
Total trading assets – debt and equity instruments	11,930	(235)[c]	4,763	(4,936)	(3,051)	(577)	7,894	(172)[c]
Net derivative receivables:[a]								
Interest rate	876	756	193	(57)	(713)	208	1,263	(144)
Credit	549	(742)	10	(2)	211	72	98	(622)
Foreign exchange	(725)	67	64	(124)	(649)	(17)	(1,384)	(350)
Equity	(1,514)	(145)	277	(852)	213	(231)	(2,252)	(86)
Commodity	(935)	194	1	10	645	–	(85)	(36)
Total net derivative receivables	(1,749)	130[c]	545	(1,025)	(293)	32	(2,360)	(1,238)[c]
Available-for-sale securities:								
Asset-backed securities	823	1	–	–	(119)	(42)	663	1
Other	1	–	–	–	–	–	1	–
Total available-for-sale securities	824	1[d]	–	–	(119)	(42)	664	1[d]
Loans	1,518	(49)[c]	259	(7)	(838)	(313)	570	–[c]
Mortgage servicing rights	6,608	(163)[e]	679	(109)	(919)	–	6,096	(163)[e]
Other assets:								
Private equity investments	1,657	80[c]	457	(485)	(103)	–	1,606	1[c]
All other	744	50[f]	30	(11)	(196)	–	617	47[f]

Year ended December 31, 2016 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2016
	Fair value at January 1, 2016	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2016	
Liabilities:[b]									
Deposits	$ 2,950	$ (56)[c]	$ –	$ –	$ 1,375	$ (1,283)	$ (869)	$ 2,117	$ 23[c]
Federal funds purchased and securities loaned or sold under repurchase agreements	–	–	–	–	–	(2)	2	–	–
Other borrowed funds	639	(230)[c]	–	–	1,876	(1,210)	59	1,134	(70)[c]
Trading liabilities – debt and equity instruments	63	(12)[c]	(15)	23	–	(22)	6	43	(18)[c]
Accounts payable and other liabilities	19	–	–	–	–	(6)	–	13	–
Beneficial interests issued by consolidated VIEs	549	(31)[c]	–	–	143	(613)	–	48	6[c]
Long-term debt	11,613	216[c]	–	–	8,949	(5,810)	(1,074)	13,894	540[c]

Year ended December 31, 2015 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at January 1, 2015	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2015	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2015
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 922	$ (28)	$ 327	$ (303)	$ (132)	$ (71)	$ 715	$ (27)
Residential – nonagency	663	130	253	(611)	(23)	(218)	194	4
Commercial – nonagency	306	(14)	246	(262)	(22)	(139)	115	(5)
Total mortgage-backed securities	1,891	88	826	(1,176)	(177)	(428)	1,024	(28)
Obligations of U.S. states and municipalities	1,273	14	352	(133)	(27)	(828)	651	(1)
Non-U.S. government debt securities	302	9	205	(123)	(64)	(255)	74	(16)
Corporate debt securities	2,989	(77)	1,171	(1,038)	(125)	(2,184)	736	2
Loans	13,287	(174)	3,532	(4,661)	(3,112)	(2,268)	6,604	(181)
Asset-backed securities	1,264	(41)	1,920	(1,229)	(35)	(47)	1,832	(32)
Total debt instruments	21,006	(181)	8,006	(8,360)	(3,540)	(6,010)	10,921	(256)
Equity securities	431	96	89	(193)	(26)	(132)	265	82
Physical commodities	2	(2)	–	–	–	–	–	–
Other	1,050	119	1,581	(1,313)	192	(885)	744	85
Total trading assets – debt and equity instruments	22,489	32 [c]	9,676	(9,866)	(3,374)	(7,027)	11,930	(89) [c]
Net derivative receivables:[a]								
Interest rate	626	962	513	(173)	(732)	(320)	876	263
Credit	189	118	129	(136)	165	84	549	260
Foreign exchange	(526)	657	19	(149)	(296)	(430)	(725)	49
Equity	(1,785)	731	890	(1,262)	(158)	70	(1,514)	5
Commodity	(565)	(856)	1	(24)	512	(3)	(935)	(41)
Total net derivative receivables	(2,061)	1,612 [c]	1,552	(1,744)	(509)	(599)	(1,749)	536 [c]
Available-for-sale securities:								
Asset-backed securities	908	(32)	51	(43)	(61)	–	823	(28)
Other	129	–	–	–	(29)	(99)	1	–
Total available-for-sale securities	1,037	(32) [d]	51	(43)	(90)	(99)	824	(28) [d]
Loans	2,541	(133) [c]	1,290	(92)	(1,241)	(847)	1,518	(32) [c]
Mortgage servicing rights	7,436	(405) [e]	985	(486)	(922)	–	6,608	(405) [e]
Other assets:								
Private equity investments	2,225	(120) [c]	281	(362)	(187)	(180)	1,657	(304) [c]
All other	959	91 [f]	65	(147)	(224)	–	744	15 [f]

Year ended December 31, 2015 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at January 1, 2015	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2015	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2015
Liabilities:[b]									
Deposits	$ 2,859	$ (39) [c]	$ –	$ –	$ 1,993	$ (850)	$ (1,013)	$ 2,950	$ (29) [c]
Other borrowed funds	1,453	(697) [c]	–	–	3,334	(2,963)	(488)	639	(57) [c]
Trading liabilities – debt and equity instruments	72	15 [c]	(163)	160	–	(17)	(4)	63	(4) [c]
Accounts payable and other liabilities	26	–	–	–	–	(7)	–	19	–
Beneficial interests issued by consolidated VIEs	1,146	(82) [c]	–	–	286	(574)	(227)	549	(63) [c]
Long-term debt	11,877	(480) [c]	(58)	–	9,359	(6,299)	(2,786)	11,613	385 [c]

Year ended December 31, 2014 (in millions)	Fair value measurements using significant unobservable inputs							Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2014
	Fair value at January 1, 2014	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2014	
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 1,005	$ (97)	$ 351	$ (186)	$ (121)	$ (30)	$ 922	$ (92)
Residential – nonagency	726	66	827	(761)	(41)	(154)	663	(15)
Commercial – nonagency	432	17	980	(914)	(60)	(149)	306	(12)
Total mortgage-backed securities	2,163	(14)	2,158	(1,861)	(222)	(333)	1,891	(119)
Obligations of U.S. states and municipalities	1,382	90	298	(358)	(139)	–	1,273	(27)
Non-U.S. government debt securities	143	24	719	(617)	(3)	36	302	10
Corporate debt securities	5,920	210	5,854	(3,372)	(4,531)	(1,092)	2,989	379
Loans	13,455	387	13,551	(7,917)	(4,623)	(1,566)	13,287	123
Asset-backed securities	1,272	19	2,240	(2,126)	(283)	142	1,264	(30)
Total debt instruments	24,335	716	24,820	(16,251)	(9,801)	(2,813)	21,006	336
Equity securities	867	113	248	(259)	(286)	(252)	431	46
Physical commodities	4	(1)	–	–	(1)	–	2	–
Other	2,000	239	1,426	(276)	(201)	(2,138)	1,050	329
Total trading assets – debt and equity instruments	27,206	1,067 [c]	26,494	(16,786)	(10,289)	(5,203)	22,489	711 [c]
Net derivative receivables:[a]								
Interest rate	2,379	184	198	(256)	(1,771)	(108)	626	(853)
Credit	95	(149)	272	(47)	92	(74)	189	(107)
Foreign exchange	(1,200)	(137)	139	(27)	668	31	(526)	(62)
Equity	(1,063)	154	2,044	(2,863)	10	(67)	(1,785)	583
Commodity	115	(465)	1	(113)	(109)	6	(565)	(186)
Total net derivative receivables	326	(413) [c]	2,654	(3,306)	(1,110)	(212)	(2,061)	(625) [c]
Available-for-sale securities:								
Asset-backed securities	1,088	(41)	275	(2)	(101)	(311)	908	(40)
Other	1,234	(19)	122	–	(223)	(985)	129	(2)
Total available-for-sale securities	2,322	(60) [d]	397	(2)	(324)	(1,296)	1,037	(42) [d]
Loans	1,931	(254) [c]	3,258	(845)	(1,549)	–	2,541	(234) [c]
Mortgage servicing rights	9,614	(1,826) [e]	768	(209)	(911)	–	7,436	(1,826) [e]
Other assets:								
Private equity investments	5,816	400 [c]	145	(1,967)	(197)	(1,972)	2,225	33 [c]
All other	1,382	83 [f]	10	(357)	(159)	–	959	59 [f]

Year ended December 31, 2014 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2014
	Fair value at January 1, 2014	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2014	
Liabilities:[b]									
Deposits	$ 2,255	$ 149 [c]	$ –	$ –	$ 1,578	$ (197)	$ (926)	$ 2,859	$ 130 [c]
Other borrowed funds	2,074	(596) [c]	–	–	5,377	(6,127)	725	1,453	(415) [c]
Trading liabilities – debt and equity instruments	113	(5) [c]	(305)	323	–	(5)	(49)	72	2 [c]
Accounts payable and other liabilities	–	27 [c]	–	–	–	(1)	–	26	–
Beneficial interests issued by consolidated VIEs	1,240	(4) [c]	–	–	775	(763)	(102)	1,146	(22) [c]
Long-term debt	10,008	(40) [c]	–	–	7,421	(5,231)	(281)	11,877	(9) [c]

(a) All level 3 derivatives are presented on a net basis, irrespective of underlying counterparty.
(b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 12%, 13% and 15% at December 31, 2016, 2015 and 2014, respectively.

(c) Predominantly reported in principal transactions revenue, except for changes in fair value for CCB mortgage loans, and lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.
(d) Realized gains/(losses) on AFS securities, as well as other-than-temporary impairment ("OTTI") losses that are recorded in earnings, are reported in securities gains. Unrealized gains/(losses) are reported in OCI. Realized gains/(losses) and foreign exchange hedge accounting adjustments recorded in income on AFS securities were zero, $(7) million, and $(43) million for the years ended December 31, 2016, 2015 and 2014, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were $1 million, $(25) million and $(16) million for the years ended December 31, 2016, 2015 and 2014, respectively.
(e) Changes in fair value for CCB MSRs are reported in mortgage fees and related income.
(f) Predominantly reported in other income.
(g) Loan originations are included in purchases.
(h) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, and deconsolidation associated with beneficial interests in VIEs.
(i) All transfers into and/or out of level 3 are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 analysis

Consolidated balance sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 1.0% of total Firm assets at December 31, 2016. The following describes significant changes to level 3 assets since December 31, 2015, for those items measured at fair value on a recurring basis. For further information on changes impacting items measured at fair value on a nonrecurring basis, see Assets and liabilities measured at fair value on a nonrecurring basis on page 165.

For the year ended December 31, 2016

Level 3 assets were $23.2 billion at December 31, 2016, reflecting a decrease of $8.0 billion from December 31, 2015. This decrease was driven by settlements (including repayments and restructurings) and transfers to Level 2 due to an increase in observability and a decrease in the significance of unobservable inputs. In particular:

- $4.0 billion decrease in trading assets – debt and equity instruments was predominantly driven by a decrease of $1.8 billion in trading loans largely due to settlements, and a $1.5 billion decrease in asset-backed securities due to settlements and transfers from level 3 to level 2 as a result of increased observability of certain valuation inputs
- $2.1 billion decrease in gross derivative receivables was driven by a decrease in credit and foreign exchange derivative receivables due to market movements and transfers from level 3 to level 2 as a result of increased observability of certain valuation inputs

Gains and losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the years ended December 31, 2016, 2015 and 2014. For further information on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 160–164.

2016

- There were no individually significant movements for the year ended December 31, 2016.

2015

- $1.6 billion of net gains in interest rate, foreign exchange and equity derivative receivables largely due to market movements; partially offset by losses on commodity derivatives due to market movements
- $1.3 billion of net gains in liabilities due to market movements

2014

- $1.8 billion of losses on MSRs. For further discussion of the change, refer to Note 17
- $1.1 billion of net gains on trading assets – debt and equity instruments, largely driven by market movements and client-driven financing transactions

Credit and funding adjustments – derivatives

Derivatives are generally valued using models that use as their basis observable market parameters. These market parameters generally do not consider factors such as counterparty nonperformance risk, the Firm's own credit quality, and funding costs. Therefore, it is generally necessary to make adjustments to the base estimate of fair value to reflect these factors.

CVA represents the adjustment, relative to the relevant benchmark interest rate, necessary to reflect counterparty nonperformance risk. The Firm estimates CVA using a scenario analysis to estimate the expected credit exposure across all of the Firm's positions with each counterparty, and then estimates losses as a result of a counterparty credit event. The key inputs to this methodology are (i) the expected positive exposure to each counterparty based on a simulation that assumes the current population of existing derivatives with each counterparty remains unchanged and considers contractual factors designed to mitigate the Firm's credit exposure, such as collateral and legal rights of offset; (ii) the probability of a default event occurring for each counterparty, as derived from observed or estimated CDS spreads; and (iii) estimated recovery rates implied by CDS spreads, adjusted to consider the differences in recovery rates as a derivative creditor relative to those reflected in CDS spreads, which generally reflect senior unsecured creditor risk.

DVA represents the adjustment, relative to the relevant benchmark interest rate, necessary to reflect the credit quality of the Firm. The derivative DVA calculation methodology is generally consistent with the CVA methodology described above and incorporates JPMorgan Chase's credit spread as observed through the CDS market to estimate the PD and LGD as a result of a systemic event affecting the Firm.

FVA represents the adjustment to reflect the impact of funding and is recognized where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. The Firm's FVA framework, applied to uncollateralized (including partially collateralized) OTC derivatives, leverages its existing CVA and DVA calculation methodologies, and considers the fact that the Firm's own credit risk is a significant component of funding costs.

The key inputs to FVA are: (i) the expected funding requirements arising from the Firm's positions with each counterparty and collateral arrangements; (ii) for assets, the estimated market funding cost in the principal market; and (iii) for liabilities, the hypothetical market funding cost for a transfer to a market participant with a similar credit standing as the Firm. For collateralized derivatives, the fair value is estimated by discounting expected future cash flows at the relevant overnight indexed swap rate given the underlying collateral agreement with the counterparty, and therefore a separate FVA is not necessary.

The following table provides the impact of credit and funding adjustments on principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities. The DVA and FVA reported below include the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality over time.

Year ended December 31, (in millions)	**2016**	2015	2014
Credit adjustments:			
Derivatives CVA	**$ (84)**	$ 620	$ (322)
Derivatives DVA and FVA	**7**	73	(58)

Valuation adjustments on fair value option elected liabilities

The valuation of the Firm's liabilities for which the fair value option has been elected requires consideration of the Firm's own credit risk. DVA on fair value option elected liabilities is measured using (i) the current fair value of the liability and (ii) changes (subsequent to the issuance of the liability) in the Firm's probability of default and LGD, which are estimated based on changes in the Firm's credit spread observed in the bond market. Effective January 1, 2016, the effect of DVA on fair value option elected liabilities is recognized in OCI. See Note 25 for further information.

Assets and liabilities measured at fair value on a nonrecurring basis

At December 31, 2016 and 2015, assets measured at fair value on a nonrecurring basis were $1.6 billion and $1.7 billion, respectively, consisting predominantly of loans that had fair value adjustments for the years ended December 31, 2016 and 2015. At December 31, 2016, $735 million and $822 million of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. At December 31, 2015, $696 million and $959 million of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. Liabilities measured at fair value on a nonrecurring basis were not significant at December 31, 2016 and 2015. For the years ended December 31, 2016, 2015 and 2014, there were no significant transfers between levels 1, 2 and 3 related to assets held at the balance sheet date.

Of the $822 million in level 3 assets measured at fair value on a nonrecurring basis as of December 31, 2016:

- $462 million related to residential real estate loans carried at the net realizable value of the underlying collateral (i.e., collateral-dependent loans and other loans charged off in accordance with regulatory guidance). These amounts are classified as level 3, as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values. These discounts to the broker price opinions ranged from 12% to 47%, with a weighted average of 25%.

The total change in the recorded value of assets and liabilities for which a fair value adjustment has been included in the Consolidated statements of income for the years ended December 31, 2016, 2015 and 2014, related to financial instruments held at those dates, were losses of $172 million, $294 million and $992 million respectively; these reductions were predominantly associated with loans.

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), see Note 14.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance sheets at fair value

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table. However, certain financial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements. Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of JPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated balance sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks, deposits with banks, federal funds sold, securities purchased under resale agreements and securities borrowed, short-term receivables and accrued interest receivable, commercial paper, federal funds purchased, securities loaned and sold under repurchase agreements, other borrowed funds, accounts payable, and accrued liabilities. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents by fair value hierarchy classification the carrying values and estimated fair values at December 31, 2016 and 2015, of financial assets and liabilities, excluding financial instruments that are carried at fair value on a recurring basis, and their classification within the fair value hierarchy. For additional information regarding the financial instruments within the scope of this disclosure, and the methods and significant assumptions used to estimate their fair value, see pages 150–153 of this Note.

	December 31, 2016					December 31, 2015				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value
Financial assets										
Cash and due from banks	**$ 23.9**	**$ 23.9**	**$ –**	**$ –**	**$ 23.9**	$ 20.5	$ 20.5	$ –	$ –	$ 20.5
Deposits with banks	**365.8**	**362.0**	**3.8**	**–**	**365.8**	340.0	335.9	4.1	–	340.0
Accrued interest and accounts receivable	**52.3**	**–**	**52.2**	**0.1**	**52.3**	46.6	–	46.4	0.2	46.6
Federal funds sold and securities purchased under resale agreements	**208.5**	**–**	**208.3**	**0.2**	**208.5**	189.5	–	189.5	–	189.5
Securities borrowed	**96.4**	**–**	**96.4**	**–**	**96.4**	98.3	–	98.3	–	98.3
Securities, held-to-maturity	**50.2**	**–**	**50.9**	**–**	**50.9**	49.1	–	50.6	–	50.6
Loans, net of allowance for loan losses[(a)]	**878.8**	**–**	**24.1**	**851.0**	**875.1**	820.8	–	25.4	802.7	828.1
Other	**71.4**	**0.1**	**60.8**	**14.3**	**75.2**	66.0	0.1	56.3	14.3	70.7
Financial liabilities										
Deposits	**$ 1,361.3**	**$ –**	**$ 1,361.3**	**$ –**	**$ 1,361.3**	$ 1,267.2	$ –	$ 1,266.1	$ 1.2	$ 1,267.3
Federal funds purchased and securities loaned or sold under repurchase agreements	**165.0**	**–**	**165.0**	**–**	**165.0**	149.2	–	149.2	–	149.2
Commercial paper	**11.7**	**–**	**11.7**	**–**	**11.7**	15.6	–	15.6	–	15.6
Other borrowed funds	**13.6**	**–**	**13.6**	**–**	**13.6**	11.2	–	11.2	–	11.2
Accounts payable and other liabilities	**148.0**	**–**	**144.8**	**3.4**	**148.2**	144.6	–	141.7	2.8	144.5
Beneficial interests issued by consolidated VIEs	**38.9**	**–**	**38.9**	**–**	**38.9**	41.1	–	40.2	0.9	41.1
Long-term debt and junior subordinated deferrable interest debentures	**257.5**	**–**	**260.0**	**2.0**	**262.0**	255.6	–	257.4	4.3	261.7

(a) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in the allowance for loan loss calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in the allowance for loan losses. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see Valuation hierarchy on pages 150–153.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets, nor are they actively traded. The carrying value of the wholesale allowance for lending-related commitments and the estimated fair value of these wholesale lending-related commitments were as follows for the periods indicated.

	December 31, 2016					December 31, 2015				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value
Wholesale lending-related commitments	**$ 1.1**	**$ –**	**$ –**	**$ 2.1**	**$ 2.1**	$ 0.8	$ –	$ –	$ 3.0	$ 3.0

(a) Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which is recognized at fair value at the inception of the guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases as permitted by law, without notice. For a further discussion of the valuation of lending-related commitments, see page 151 of this Note.

Note 4 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments.

The Firm has elected to measure certain instruments at fair value for several reasons including to mitigate income statement volatility caused by the differences between the measurement basis of elected instruments (e.g. certain instruments elected were previously accounted for on an accrual basis) and the associated risk management arrangements that are accounted for on a fair value basis, as well as to better reflect those instruments that are managed on a fair value basis.

The Firm's election of fair value includes the following instruments:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis
- Certain securities financing arrangements with an embedded derivative and/or a maturity of greater than one year
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument
- Structured notes, which are predominantly financial instruments that contain embedded derivatives, that are issued as part of CIB's client-driven activities
- Certain long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated statements of income for the years ended December 31, 2016, 2015 and 2014, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2016			2015			2014		
December 31, (in millions)	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	**$ (76)**	**$ –**	**$ (76)**	$ (38)	$ –	$ (38)	$ (15)	$ –	$ (15)
Securities borrowed	**1**	**–**	**1**	(6)	–	(6)	(10)	–	(10)
Trading assets:									
Debt and equity instruments, excluding loans	**120**	**(1)** [c]	**119**	756	(10) [c]	746	639	–	639
Loans reported as trading assets:									
Changes in instrument-specific credit risk	**461**	**43** [c]	**504**	138	41 [c]	179	885	29 [c]	914
Other changes in fair value	**79**	**684** [c]	**763**	232	818 [c]	1,050	352	1,353 [c]	1,705
Loans:									
Changes in instrument-specific credit risk	**13**	**–**	**13**	35	–	35	40	–	40
Other changes in fair value	**(7)**	**–**	**(7)**	4	–	4	34	–	34
Other assets	**20**	**62** [d]	**82**	79	(1) [d]	78	24	6 [d]	30
Deposits[a]	**(134)**	**–**	**(134)**	93	–	93	(287)	–	(287)
Federal funds purchased and securities loaned or sold under repurchase agreements[a]	**19**	**–**	**19**	8	–	8	(33)	–	(33)
Other borrowed funds[a]	**(236)**	**–**	**(236)**	1,996	–	1,996	(891)	–	(891)
Trading liabilities	**6**	**–**	**6**	(20)	–	(20)	(17)	–	(17)
Beneficial interests issued by consolidated VIEs	**23**	**–**	**23**	49	–	49	(233)	–	(233)
Other liabilities	**–**	**–**	**–**	–	–	–	(27)	–	(27)
Long-term debt:									
DVA on fair value option elected liabilities [a]	**–**	**–**	**–**	300	–	300	101	–	101
Other changes in fair value[b]	**(773)**	**–**	**(773)**	1,088	–	1,088	(615)	–	(615)

(a) Effective January 1, 2016, unrealized gains/(losses) due to instrument-specific credit risk (DVA) for liabilities for which the fair value option has been elected is recorded in OCI, while realized gains/(losses) are recorded in principal transactions revenue. DVA for 2015 and 2014 was included in principal transactions revenue, and includes the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality subsequent to issuance. See Notes 3 and 25 for further information.

(b) Long-term debt measured at fair value predominantly relates to structured notes containing embedded derivatives. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses that are attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2016 and 2015, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2016			2015		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding
Loans[a]						
Nonaccrual loans						
Loans reported as trading assets	**$ 3,338**	**$ 748**	**$ (2,590)**	$ 3,484	$ 631	$ (2,853)
Loans	**–**	**–**	**–**	7	7	–
Subtotal	**3,338**	**748**	**(2,590)**	3,491	638	(2,853)
All other performing loans						
Loans reported as trading assets	**35,477**	**33,054**	**(2,423)**	30,780	28,184	(2,596)
Loans	**2,259**	**2,228**	**(31)**	2,771	2,752	(19)
Total loans	**$ 41,074**	**$ 36,030**	**$ (5,044)**	$ 37,042	$ 31,574	$ (5,468)
Long-term debt						
Principal-protected debt	**$ 21,602** [c]	**$ 19,195**	**$ (2,407)**	$ 17,910 [c]	$ 16,611	$ (1,299)
Nonprincipal-protected debt[b]	**NA**	**18,491**	**NA**	NA	16,454	NA
Total long-term debt	**NA**	**$ 37,686**	**NA**	NA	$ 33,065	NA
Long-term beneficial interests						
Nonprincipal-protected debt	**NA**	**$ 120**	**NA**	NA	$ 787	NA
Total long-term beneficial interests	**NA**	**$ 120**	**NA**	NA	$ 787	NA

(a) There were no performing loans that were ninety days or more past due as of December 31, 2016 and 2015, respectively.
(b) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal protected notes.
(c) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Firm's next call date.

At December 31, 2016 and 2015, the contractual amount of lending-related commitments for which the fair value option was elected was $4.6 billion for both years, with a corresponding fair value of $(118) million and $(94) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29.

Structured note products by balance sheet classification and risk component

The table below presents the fair value of the structured notes issued by the Firm, by balance sheet classification and the primary risk type.

(in millions)	December 31, 2016				December 31, 2015			
	Long-term debt	Other borrowed funds	Deposits	Total	Long-term debt	Other borrowed funds	Deposits	Total
Risk exposure								
Interest rate	**$ 16,296**	**$ 184**	**$ 4,296**	**$ 20,776**	$ 12,531	$ 58	$ 3,340	$ 15,929
Credit	**3,267**	**225**	**–**	**3,492**	3,195	547	–	3,742
Foreign exchange	**2,365**	**135**	**6**	**2,506**	1,765	77	11	1,853
Equity	**14,831**	**8,234**	**5,481**	**28,546**	14,293	8,447	4,993	27,733
Commodity	**488**	**37**	**1,811**	**2,336**	640	50	1,981	2,671
Total structured notes	**$ 37,247**	**$ 8,815**	**$ 11,594**	**$ 57,656**	$ 32,424	$ 9,179	$ 10,325	$ 51,928

Note 5 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential credit risk concentrations and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. In the wholesale portfolio, credit risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis. The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, and collateral and other risk-reduction techniques. For additional information on loans, see Note 14.

The Firm does not believe that its exposure to any particular loan product (e.g., option ARMs), or industry segment (e.g., commercial real estate), or its exposure to residential real estate loans with high LTV ratios, results in a significant concentration of credit risk.

Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale-related credit exposure by the Firm's three credit portfolio segments as of December 31, 2016 and 2015.

	2016				2015			
		On-balance sheet				On-balance sheet		
December 31, (in millions)	Credit exposure	Loans	Derivatives	Off-balance sheet[g]	Credit exposure	Loans	Derivatives	Off-balance sheet[g]
Consumer, excluding credit card	**$ 419,441**	**$ 364,644**	**$ –**	**$ 54,797**	$ 403,299	$ 344,821	$ –	$ 58,478
Receivables from customers[a]	**120**	**–**	**–**	**–**	125	–	–	–
Total Consumer, excluding credit card	**419,561**	**364,644**	**–**	**54,797**	403,424	344,821	–	58,478
Credit Card	**695,707**	**141,816**	**–**	**553,891**	646,981	131,463	–	515,518
Total consumer-related	**1,115,268**	**506,460**	**–**	**608,688**	1,050,405	476,284	–	573,996
Wholesale-related[b]								
Real Estate	**135,041**	**106,315**	**222**	**28,504**	116,857	92,820	312	23,725
Consumer & Retail	**85,435**	**29,842**	**1,082**	**54,511**	85,460	27,175	1,573	56,712
Technology, Media & Telecommunications	**62,950**	**13,845**	**1,227**	**47,878**	57,382	11,079	1,032	45,271
Industrials	**55,449**	**17,150**	**1,615**	**36,684**	54,386	16,791	1,428	36,167
Healthcare	**47,866**	**15,120**	**2,277**	**30,469**	46,053	16,965	2,751	26,337
Banks & Finance Cos	**44,614**	**19,460**	**12,232**	**12,922**	43,398	20,401	10,218	12,779
Oil & Gas	**40,099**	**13,079**	**1,878**	**25,142**	42,077	13,343	1,902	26,832
Asset Managers	**31,886**	**10,539**	**10,819**	**10,528**	23,815	6,703	7,733	9,379
Utilities	**29,622**	**7,183**	**883**	**21,556**	30,853	5,294	1,689	23,870
State & Municipal Govt[c]	**28,263**	**12,416**	**2,096**	**13,751**	29,114	9,626	3,287	16,201
Central Govt	**20,408**	**3,964**	**14,235**	**2,209**	17,968	2,000	13,240	2,728
Transportation	**19,029**	**8,942**	**751**	**9,336**	19,227	9,157	1,575	8,495
Automotive	**16,635**	**4,943**	**1,190**	**10,502**	13,864	4,473	1,350	8,041
Chemicals & Plastics	**14,988**	**5,287**	**271**	**9,430**	15,232	4,033	369	10,830
Metals & Mining	**13,419**	**4,350**	**439**	**8,630**	14,049	4,622	607	8,820
Insurance	**13,151**	**947**	**3,382**	**8,822**	11,889	1,094	1,992	8,803
Financial Markets Infrastructure	**8,732**	**347**	**3,884**	**4,501**	7,973	724	2,602	4,647
Securities Firms	**3,867**	**794**	**1,913**	**1,160**	4,412	861	1,424	2,127
All other[d]	**144,428**	**109,267**	**3,682**	**31,479**	149,117	109,889	4,593	34,635
Subtotal	**815,882**	**383,790**	**64,078**	**368,014**	783,126	357,050	59,677	366,399
Loans held-for-sale and loans at fair value	**4,515**	**4,515**	**–**	**–**	3,965	3,965	–	–
Receivables from customers and other[a]	**17,440**	**–**	**–**	**–**	13,372	–	–	–
Total wholesale-related	**837,837**	**388,305**	**64,078**	**368,014**	800,463	361,015	59,677	366,399
Total exposure[e][f]	**$1,953,105**	**$ 894,765**	**$ 64,078**	**$ 976,702**	$1,850,868	$ 837,299	$ 59,677	$ 940,395

(a) Receivables from customers primarily represent margin loans to brokerage customers that are collateralized through assets maintained in the clients' brokerage accounts, as such no allowance is held against these receivables. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.

(b) The industry rankings presented in the table as of December 31, 2015, are based on the industry rankings of the corresponding exposures at December 31, 2016, not actual rankings of such exposures at December 31, 2015.

(c) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2016 and 2015, noted above, the Firm held: $9.1 billion and 7.6 billion, respectively, of trading securities; $31.6 billion and $33.6 billion, respectively, of AFS securities; and $14.5 billion and $12.8 billion, respectively, of HTM securities, issued by U.S. state and municipal governments. For further information, see Note 3 and Note 12.

(d) All other includes: individuals; SPEs; holding companies; and private education and civic organizations. For more information on exposures to SPEs, see Note 16.

(e) For further information regarding on-balance sheet credit concentrations by major product and/or geography, see Note 6 and Note 14. For information regarding concentrations of off-balance sheet lending-related financial instruments by major product, see Note 29.

(f) Excludes cash placed with banks of $380.2 billion and $351.0 billion, at December 31, 2016 and 2015, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks

(g) Represents lending-related financial instruments.

Note 6 – Derivative instruments

Derivative contracts derive their value from underlying asset prices, indices, reference rates, other inputs or a combination of these factors and may expose counterparties to risks and rewards of an underlying asset or liability without having to initially invest in, own or exchange the asset or liability. JPMorgan Chase makes markets in derivatives for clients and also uses derivatives to hedge or manage its own risk exposures. Predominantly all of the Firm's derivatives are entered into for market-making or risk management purposes.

Market-making derivatives
The majority of the Firm's derivatives are entered into for market-making purposes. Clients use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives.

Risk management derivatives
The Firm manages certain market and credit risk exposures using derivative instruments, including derivatives in hedge accounting relationships and other derivatives that are used to manage risks associated with specified assets and liabilities.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increases or decreases as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar-equivalent values of the foreign currency-denominated assets and liabilities or the forecasted revenues or expenses increase or decrease. Gains or losses on the derivative instruments related to these foreign currency-denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities contracts are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset the depreciation or appreciation of the related inventory.

Credit derivatives are used to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of CDS. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 184-186 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 184 of this Note, and the hedge accounting gains and losses tables on pages 182–184 of this Note.

Derivative counterparties and settlement types
The Firm enters into OTC derivatives, which are negotiated and settled bilaterally with the derivative counterparty. The Firm also enters into, as principal, certain ETD such as futures and options, and OTC-cleared derivative contracts with CCPs. ETD contracts are generally standardized contracts traded on an exchange and cleared by the CCP, which is the Firm's counterparty from the inception of the transactions. OTC-cleared derivatives are traded on a bilateral basis and then novated to the CCP for clearing.

Derivative clearing services
The Firm provides clearing services for clients where the Firm acts as a clearing member with respect to certain derivative exchanges and clearing houses. The Firm does not reflect the clients' derivative contracts in its Consolidated Financial Statements. For further information on the Firm's clearing services, see Note 29.

Accounting for derivatives

All free-standing derivatives that the Firm executes for its own account are required to be recorded on the Consolidated balance sheets at fair value.

As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. For further discussion of the offsetting of assets and liabilities, see Note 1. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The tabular disclosures on pages 178–184 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 3 and 4.

Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and commodity derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased CDS used to manage the credit risk of loans and lending-related commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate, foreign exchange, and commodity derivatives used for risk management purposes.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the change in the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item, and for benchmark interest rate hedges, is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges primarily to hedge the exposure to variability in forecasted cash flows from floating-rate assets and liabilities and foreign currency-denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in OCI and recognized in the Consolidated statements of income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in AOCI is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses net investment hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For foreign currency qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	Page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
◦ Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate	182
◦ Interest rate	Hedge floating-rate assets and liabilities	Cash flow hedge	Corporate	183
◦ Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	182
◦ Foreign exchange	Hedge forecasted revenue and expense	Cash flow hedge	Corporate	183
◦ Foreign exchange	Hedge the value of the Firm's investments in non-U.S. dollar functional currency entities	Net investment hedge	Corporate	184
◦ Commodity	Hedge commodity inventory	Fair value hedge	CIB	182
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
◦ Interest rate	Manage the risk of the mortgage pipeline, warehouse loans and MSRs	Specified risk management	CCB	184
◦ Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	184
◦ Commodity	Manage the risk of certain commodities-related contracts and investments	Specified risk management	CIB	184
◦ Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate	184
Market-making derivatives and other activities:				
◦ Various	Market-making and related risk management	Market-making and other	CIB	184
◦ Various	Other derivatives	Market-making and other	CIB, Corporate	184

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2016 and 2015.

	Notional amounts[b]	
December 31, (in billions)	**2016**	2015
Interest rate contracts		
Swaps	**$ 22,000**	$ 24,162
Futures and forwards	**5,289**	5,167
Written options	**3,091**	3,506
Purchased options	**3,482**	3,896
Total interest rate contracts	**33,862**	36,731
Credit derivatives[a]	**2,032**	2,900
Foreign exchange contracts		
Cross-currency swaps	**3,359**	3,199
Spot, futures and forwards	**5,341**	5,028
Written options	**734**	690
Purchased options	**721**	706
Total foreign exchange contracts	**10,155**	9,623
Equity contracts		
Swaps	**258**	232
Futures and forwards	**59**	43
Written options	**417**	395
Purchased options	**345**	326
Total equity contracts	**1,079**	996
Commodity contracts		
Swaps	**102**	83
Spot, futures and forwards	**130**	99
Written options	**83**	115
Purchased options	**94**	112
Total commodity contracts	**409**	409
Total derivative notional amounts	**$ 47,537**	$ 50,659

(a) For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 184-186.
(b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.

Impact of derivatives on the Consolidated balance sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated balance sheets as of December 31, 2016 and 2015, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables[a]

	Gross derivative receivables				Gross derivative payables			
December 31, 2016 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[b]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[b]
Trading assets and liabilities								
Interest rate	**$ 601,557**	**$ 4,406**	**$ 605,963**	**$ 28,302**	**$ 567,894**	**$ 2,884**	**$ 570,778**	**$ 10,815**
Credit	**29,645**	**–**	**29,645**	**1,294**	**28,666**	**–**	**28,666**	**1,411**
Foreign exchange	**232,137**	**1,289**	**233,426**	**23,271**	**233,823**	**1,148**	**234,971**	**20,508**
Equity	**34,940**	**–**	**34,940**	**4,939**	**38,362**	**–**	**38,362**	**8,140**
Commodity	**18,505**	**137**	**18,642**	**6,272**	**20,283**	**179**	**20,462**	**8,357**
Total fair value of trading assets and liabilities	**$ 916,784**	**$ 5,832**	**$ 922,616**	**$ 64,078**	**$ 889,028**	**$ 4,211**	**$ 893,239**	**$ 49,231**

	Gross derivative receivables				Gross derivative payables			
December 31, 2015 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[b]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[b]
Trading assets and liabilities								
Interest rate	$ 665,531	$ 4,080	$ 669,611	$ 26,363	$ 632,928	$ 2,238	$ 635,166	$ 10,221
Credit	51,468	–	51,468	1,423	50,529	–	50,529	1,541
Foreign exchange	179,072	803	179,875	17,177	189,397	1,503	190,900	19,769
Equity	35,859	–	35,859	5,529	38,663	–	38,663	9,183
Commodity	23,713	1,352	25,065	9,185	27,653	1	27,654	12,076
Total fair value of trading assets and liabilities	$ 955,643	$ 6,235	$ 961,878	$ 59,677	$ 939,170	$ 3,742	$ 942,912	$ 52,790

(a) Balances exclude structured notes for which the fair value option has been elected. See Note 4 for further information.
(b) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

Derivatives netting

The following tables present, as of December 31, 2016 and 2015, gross and net derivative receivables and payables by contract and settlement type. Derivative receivables and payables, as well as the related cash collateral from the same counterparty, have been netted on the Consolidated balance sheets where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, amounts are not eligible for netting on the Consolidated balance sheets, and those derivative receivables and payables are shown separately in the tables below.

In addition to the cash collateral received and transferred that is presented on a net basis with derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments, but are not eligible for net presentation:

- collateral that consists of non-cash financial instruments (generally U.S. government and agency securities and other G7 government bonds) and cash collateral held at third party custodians, which are shown separately as "Collateral not nettable on the Consolidated balance sheets" in the tables below, up to the fair value exposure amount.
- the amount of collateral held or transferred that exceeds the fair value exposure at the individual counterparty level, as of the date presented, which is excluded from the tables below; and
- collateral held or transferred that relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement, which is excluded from the tables below.

	2016			2015		
December 31, (in millions)	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables
U.S. GAAP nettable derivative receivables						
Interest rate contracts:						
OTC	**$ 365,227**	**$ (342,173)**	**$ 23,054**	$ 417,386	$ (396,506)	$ 20,880
OTC-cleared	**235,399**	**(235,261)**	**138**	246,750	(246,742)	8
Exchange-traded[a]	**241**	**(227)**	**14**	–	–	–
Total interest rate contracts	**600,867**	**(577,661)**	**23,206**	664,136	(643,248)	20,888
Credit contracts:						
OTC	**23,130**	**(22,612)**	**518**	44,082	(43,182)	900
OTC-cleared	**5,746**	**(5,739)**	**7**	6,866	(6,863)	3
Total credit contracts	**28,876**	**(28,351)**	**525**	50,948	(50,045)	903
Foreign exchange contracts:						
OTC	**226,271**	**(208,962)**	**17,309**	175,060	(162,377)	12,683
OTC-cleared	**1,238**	**(1,165)**	**73**	323	(321)	2
Exchange-traded[a]	**104**	**(27)**	**77**	–	–	–
Total foreign exchange contracts	**227,613**	**(210,154)**	**17,459**	175,383	(162,698)	12,685
Equity contracts:						
OTC	**20,868**	**(20,570)**	**298**	20,690	(20,439)	251
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**11,439**	**(9,431)**	**2,008**	12,285	(9,891)	2,394
Total equity contracts	**32,307**	**(30,001)**	**2,306**	32,975	(30,330)	2,645
Commodity contracts:						
OTC	**11,571**	**(5,605)**	**5,966**	15,001	(6,772)	8,229
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**6,794**	**(6,766)**	**28**	9,199	(9,108)	91
Total commodity contracts	**18,365**	**(12,371)**	**5,994**	24,200	(15,880)	8,320
Derivative receivables with appropriate legal opinions	**908,028**	**(858,538)** [b]	**49,490**	947,642	(902,201) [b]	45,441
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	**14,588**		**14,588**	14,236		14,236
Total derivative receivables recognized on the Consolidated balance sheets	**$ 922,616**		**$ 64,078**	$ 961,878		$ 59,677
Collateral not nettable on the Consolidated balance sheets[c][d]			**(18,638)**			(13,543)
Net amounts			**$ 45,440**			$ 46,134

December 31, (in millions)	2016 Gross derivative payables	2016 Amounts netted on the Consolidated balance sheets	2016 Net derivative payables	2015 Gross derivative payables	2015 Amounts netted on the Consolidated balance sheets	2015 Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC	**$ 338,502**	**$ (329,325)**	**$ 9,177**	$ 393,709	$ (384,576)	$ 9,133
OTC-cleared	**230,464**	**(230,463)**	**1**	240,398	(240,369)	29
Exchange-traded[a]	**196**	**(175)**	**21**	–	–	–
Total interest rate contracts	**569,162**	**(559,963)**	**9,199**	634,107	(624,945)	9,162
Credit contracts:						
OTC	**22,366**	**(21,614)**	**752**	44,379	(43,019)	1,360
OTC-cleared	**5,641**	**(5,641)**	**–**	5,969	(5,969)	–
Total credit contracts	**28,007**	**(27,255)**	**752**	50,348	(48,988)	1,360
Foreign exchange contracts:						
OTC	**228,300**	**(213,296)**	**15,004**	185,178	(170,830)	14,348
OTC-cleared	**1,158**	**(1,158)**	**–**	301	(301)	–
Exchange-traded[a]	**328**	**(9)**	**319**	–	–	–
Total foreign exchange contracts	**229,786**	**(214,463)**	**15,323**	185,479	(171,131)	14,348
Equity contracts:						
OTC	**24,688**	**(20,808)**	**3,880**	23,458	(19,589)	3,869
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**10,004**	**(9,414)**	**590**	10,998	(9,891)	1,107
Total equity contracts	**34,692**	**(30,222)**	**4,470**	34,456	(29,480)	4,976
Commodity contracts:						
OTC	**12,885**	**(5,252)**	**7,633**	16,953	(6,256)	10,697
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**7,099**	**(6,853)**	**246**	9,374	(9,322)	52
Total commodity contracts	**19,984**	**(12,105)**	**7,879**	26,327	(15,578)	10,749
Derivative payables with appropriate legal opinions	**881,631**	**(844,008)** [b]	**37,623**	930,717	(890,122) [b]	40,595
Derivative payables where an appropriate legal opinion has not been either sought or obtained	**11,608**		**11,608**	12,195		12,195
Total derivative payables recognized on the Consolidated balance sheets	**$ 893,239**		**$ 49,231**	$ 942,912		$ 52,790
Collateral not nettable on the Consolidated balance sheets[c][d][e]			**(8,925)**			(7,957)
Net amounts			**$ 40,306**			$ 44,833

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.

(b) Net derivatives receivable included cash collateral netted of $71.9 billion and $73.7 billion at December 31, 2016 and 2015, respectively. Net derivatives payable included cash collateral netted of $57.3 billion and $61.6 billion related to OTC and OTC-cleared derivatives at December 31, 2016 and 2015, respectively.

(c) Excludes all collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

(d) Represents liquid security collateral as well as cash collateral held at third-party custodians related to derivative instruments where an appropriate legal opinion has been obtained. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.

(e) Derivative payables collateral relates only to OTC and OTC-cleared derivative instruments. Amounts exclude collateral transferred related to exchange-traded derivative instruments.

Liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk – the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to actively pursue, where possible, the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated balance sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at December 31, 2016 and 2015.

OTC and OTC-cleared derivative payables containing downgrade triggers

December 31, (in millions)	**2016**	2015
Aggregate fair value of net derivative payables	**$ 21,550**	$ 22,328
Collateral posted	**19,383**	18,942

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), at December 31, 2016 and 2015, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral (except in certain instances in which additional initial margin may be required upon a ratings downgrade), nor in termination payments requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating of the rating agencies referred to in the derivative contract.

Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

	2016		2015	
December 31, (in millions)	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted upon downgrade[(a)]	**$ 560**	**$ 2,497**	$ 807	$ 3,028
Amount required to settle contracts with termination triggers upon downgrade[(b)]	**606**	**1,049**	271	1,093

(a) Includes the additional collateral to be posted for initial margin.
(b) Amounts represent fair values of derivative payables, and do not reflect collateral posted.

Derivatives executed in contemplation of a sale of the underlying financial asset

In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 13, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. The amount of such transfers accounted for as a sale where the associated derivative was outstanding at December 31, 2016 was not material.

Impact of derivatives on the Consolidated statements of income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pre-tax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2016, 2015 and 2014, respectively. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated statements of income.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2016 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a][b]	**$ (482)**	**$ 1,338**	**$ 856**	**$ 6**	**$ 850**
Foreign exchange[c]	**2,435**	**(2,261)**	**174**	**–**	**174**
Commodity[d]	**(536)**	**586**	**50**	**(9)**	**59**
Total	**$ 1,417**	**$ (337)**	**$ 1,080**	**$ (3)**	**$ 1,083**

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2015 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a][b]	$ 38	$ 911	$ 949	$ 3	$ 946
Foreign exchange[c]	6,030	(6,006)	24	–	24
Commodity[d]	1,153	(1,142)	11	(13)	24
Total	$ 7,221	$ (6,237)	$ 984	$ (10)	$ 994

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2014 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a][b]	$ 2,106	$ (801)	$ 1,305	$ 131	$ 1,174
Foreign exchange[c]	8,279	(8,532)	(253)	–	(253)
Commodity[d]	49	145	194	42	152
Total	$ 10,434	$ (9,188)	$ 1,246	$ 173	$ 1,073

(a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.

(b) Excludes the amortization expense associated with the inception hedge accounting adjustment applied to the hedged item. This expense is recorded in net interest income and substantially offsets the income statement impact of the excluded components.

(c) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in foreign currency rates, were recorded primarily in principal transactions revenue and net interest income.

(d) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value). Gains and losses were recorded in principal transactions revenue.

(e) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.

(f) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts and time values.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pre-tax gains/(losses) recorded on such derivatives, for the years ended December 31, 2016, 2015 and 2014, respectively. The Firm includes the gain/(loss) on the hedging derivative and the change in cash flows on the hedged item in the same line item in the Consolidated statements of income.

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
Year ended December 31, 2016 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[c]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	**$ (74)**	**$ –**	**$ (74)**	**$ (55)**	**$ 19**
Foreign exchange[b]	**(286)**	**–**	**(286)**	**(395)**	**(109)**
Total	**$ (360)**	**$ –**	**$ (360)**	**$ (450)**	**$ (90)**

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
Year ended December 31, 2015 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[c]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (99)	$ –	$ (99)	$ (44)	$ 55
Foreign exchange[b]	(81)	–	(81)	(53)	28
Total	$ (180)	$ –	$ (180)	$ (97)	$ 83

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
Year ended December 31, 2014 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[c]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (54)	$ –	$ (54)	$ 189	$ 243
Foreign exchange[b]	78	–	78	(91)	(169)
Total	$ 24	$ –	$ 24	$ 98	$ 74

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income, and for the forecasted transactions that the Firm determined during the year ended December 31, 2015, were probable of not occurring, in other income.

(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily noninterest revenue and compensation expense.

(c) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

The Firm did not experience any forecasted transactions that failed to occur for the years ended 2016 and 2014. In 2015, the Firm reclassified approximately $150 million of net losses from AOCI to other income because the Firm determined that it was probable that the forecasted interest payment cash flows would not occur as a result of the planned reduction in wholesale non-operating deposits.

Over the next 12 months, the Firm expects that approximately $151 million (after-tax) of net losses recorded in AOCI at December 31, 2016, related to cash flow hedges will be recognized in income. For terminated cash flow hedges, the maximum length of time over which forecasted transactions are remaining is approximately six years. For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately one year. The Firm's longer-dated forecasted transactions relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pre-tax gains/(losses) recorded on such instruments for the years ended December 31, 2016, 2015 and 2014.

	Gains/(losses) recorded in income and other comprehensive income/(loss)					
	2016		2015		2014	
Year ended December 31, (in millions)	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI
Foreign exchange derivatives	**$(282)**	**$262**	$(379)	$1,885	$(448)	$1,698

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in other income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates and, therefore, there was no significant ineffectiveness for net investment hedge accounting relationships during 2016, 2015 and 2014.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pre-tax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from the mortgage pipeline, warehouse loans, MSRs, wholesale lending exposures, foreign currency denominated assets and liabilities, and commodities-related contracts and investments.

	Derivatives gains/(losses) recorded in income		
Year ended December 31, (in millions)	**2016**	2015	2014
Contract type			
Interest rate[a]	**$ 1,174**	$ 853	$ 2,308
Credit[b]	**(282)**	70	(58)
Foreign exchange[c]	**27**	25	(7)
Commodity[d]	**—**	(12)	156
Total	**$ 919**	$ 936	$ 2,399

(a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in the mortgage pipeline, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.

(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.

(c) Primarily relates to derivatives used to mitigate foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

(d) Primarily relates to commodity derivatives used to mitigate energy price risk associated with energy-related contracts and investments. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. See Note 7 for information on principal transactions revenue.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker, the Firm actively manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. Second, as an end-user, the Firm uses credit derivatives to manage credit risk associated with lending exposures (loans and unfunded commitments) and derivatives counterparty exposures in the Firm's wholesale businesses, and to manage the credit risk arising from certain financial instruments in the Firm's market-making businesses. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name CDS and index CDS contracts are either OTC or OTC-cleared derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index consists of a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-related notes

A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a reference entity or an index. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity (or one of the entities that makes up a reference index) experiences a specified credit event. If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity.

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2016 and 2015. Upon a credit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased through credit-related notes.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

	Maximum payout/Notional amount			
December 31, 2016 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	**$ (961,003)**	**$ 974,252**	**$ 13,249**	**$ 7,935**
Other credit derivatives[a]	**(36,829)**	**31,859**	**(4,970)**	**19,991**
Total credit derivatives	**(997,832)**	**1,006,111**	**8,279**	**27,926**
Credit-related notes	**(41)**	**–**	**(41)**	**4,505**
Total	**$ (997,873)**	**$ 1,006,111**	**$ 8,238**	**$ 32,431**

	Maximum payout/Notional amount			
December 31, 2015 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (1,386,071)	$ 1,402,201	$ 16,130	$ 12,011
Other credit derivatives[a]	(42,738)	38,158	(4,580)	18,792
Total credit derivatives	(1,428,809)	1,440,359	11,550	30,803
Credit-related notes	(30)	–	(30)	4,715
Total	$ (1,428,839)	$ 1,440,359	$ 11,520	$ 35,518

(a) Other credit derivatives largely consists of credit swap options.
(b) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(d) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional amounts by the ratings, maturity profile, and total fair value, of credit derivatives and credit-related notes as of December 31, 2016 and 2015, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings[a]/maturity profile

December 31, 2016 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	**$ (273,688)**	**$ (383,586)**	**$ (39,281)**	**$ (696,555)**	**$ 7,841**	**$ (3,055)**	**$ 4,786**
Noninvestment-grade	**(107,955)**	**(170,046)**	**(23,317)**	**(301,318)**	**8,184**	**(8,570)**	**(386)**
Total	**$ (381,643)**	**$ (553,632)**	**$ (62,598)**	**$ (997,873)**	**$ 16,025**	**$ (11,625)**	**$ 4,400**

December 31, 2015 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (307,211)	$ (699,227)	$ (46,970)	$ (1,053,408)	$ 13,539	$ (6,836)	$ 6,703
Noninvestment-grade	(109,195)	(245,151)	(21,085)	(375,431)	10,823	(18,891)	(8,068)
Total	$ (416,406)	$ (944,378)	$ (68,055)	$ (1,428,839)	$ 24,362	$ (25,727)	$ (1,365)

(a) The ratings scale is primarily based on external credit ratings defined by S&P and Moody's.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

Note 7 – Noninterest revenue

Investment banking fees

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	2016	2015	2014
Underwriting			
Equity	**$ 1,146**	$ 1,408	$ 1,571
Debt	**3,207**	3,232	3,340
Total underwriting	**4,353**	4,640	4,911
Advisory	**2,095**	2,111	1,631
Total investment banking fees	**$ 6,448**	$ 6,751	$ 6,542

Underwriting fees are recognized as revenue when the Firm has rendered all services to, and is entitled to collect the fee from, the issuer, and there are no other contingencies associated with the fee. Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria. Advisory fees are recognized as revenue when the related services have been performed and the fee has been earned.

Principal transactions

Principal transactions revenue is driven by many factors, including the bid-offer spread, which is the difference between the price at which the Firm is willing to buy a financial or other instrument and the price at which the Firm is willing to sell that instrument. It also consists of the realized (as a result of closing out or termination of transactions, or interim cash payments) and unrealized (as a result of changes in valuation) gains and losses on financial and other instruments (including those accounted for under the fair value option) primarily used in client-driven market-making activities and on private equity investments. In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities).

Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk-management activities, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives. For further information on the income statement classification of gains and losses from derivatives activities, see Note 6.

In the financial commodity markets, the Firm transacts in OTC derivatives (e.g., swaps, forwards, options) and ETD that reference a wide range of underlying commodities. In the physical commodity markets, the Firm primarily purchases and sells precious and base metals and may hold other commodities inventories under financing and other arrangements with clients.

The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven market-making activities. See Note 8 for further information on interest income and interest expense. Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual line of business.

Year ended December 31, (in millions)	2016	2015	2014
Trading revenue by instrument type			
Interest rate	**$ 2,325**	$ 1,933	$ 1,362
Credit	**2,096**	1,735	1,880
Foreign exchange	**2,827**	2,557	1,556
Equity	**2,994**	2,990	2,563
Commodity	**1,067**	842	1,663
Total trading revenue	**11,309**	10,057	9,024
Private equity gains[(a)]	**257**	351	1,507
Principal transactions	**$ 11,566**	$ 10,408	$ 10,531

(a) Includes revenue on private equity investments held in the Private Equity business within Corporate, as well as those held in other business segments.

Lending- and deposit-related fees

The following table presents the components of lending- and deposit-related fees.

Year ended December 31, (in millions)	2016	2015	2014
Lending-related fees	**$ 1,114**	$ 1,148	$ 1,307
Deposit-related fees	**4,660**	4,546	4,494
Total lending- and deposit-related fees	**$ 5,774**	$ 5,694	$ 5,801

Lending-related fees include fees earned from loan commitments, standby letters of credit, financial guarantees, and other loan-servicing activities. Deposit-related fees include fees earned in lieu of compensating balances, and fees earned from performing cash management activities and other deposit account services. Lending- and deposit-related fees in this revenue category are recognized over the period in which the related service is provided.

Asset management, administration and commissions

The following table presents Firmwide asset management, administration and commissions income:

Year ended December 31, (in millions)	2016	2015	2014
Asset management fees			
Investment management fees[a]	**$ 8,865**	$ 9,403	$ 9,169
All other asset management fees[b]	**336**	352	477
Total asset management fees	**9,201**	9,755	9,646
Total administration fees[c]	**1,915**	2,015	2,179
Commissions and other fees			
Brokerage commissions	**2,151**	2,304	2,270
All other commissions and fees	**1,324**	1,435	1,836
Total commissions and fees	**3,475**	3,739	4,106
Total asset management, administration and commissions	**$ 14,591**	$ 15,509	$ 15,931

(a) Represents fees earned from managing assets on behalf of the Firm's clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts.
(b) Represents fees for services that are ancillary to investment management services, such as commissions earned on the sales or distribution of mutual funds to clients.
(c) Predominantly includes fees for custody, securities lending, funds services and securities clearance.

This revenue category includes fees from investment management and related services, custody and brokerage services, insurance premiums and commissions, and fees from other products and services. These fees are recognized over the period in which the related product or service is provided. Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met. The Firm has contractual arrangements with third parties to provide certain services in connection with its asset management activities. Amounts paid to third-party service providers are predominantly expensed, such that asset management fees are recorded gross of payments made to third parties.

Mortgage fees and related income

This revenue category primarily reflects CCB's Mortgage Banking production and servicing revenue, including fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously sold loans; the impact of risk-management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. Changes in the fair value of MSRs are reported in mortgage fees and related income. For a further discussion of MSRs, see Note 17. Net interest income from mortgage loans is recorded in interest income.

Card income

This revenue category includes interchange income from credit and debit cards and net fees earned from processing card transactions for merchants. Card income is recognized as earned. Costs related to rewards programs are recorded when the rewards are earned by the customer and presented as a reduction to interchange income. Annual fees and direct loan origination costs are deferred and recognized on a straight-line basis over a 12-month period.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous co-brand partners which grant the Firm exclusive rights to market to the customers or members of such partners. These partners endorse the credit card programs and provide their customer or member lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from five to ten years.

The Firm typically makes incentive payments to the partners based on new account originations, sales volumes and the cost of the partners' marketing activities and awards. Payments based on new account originations are accounted for as direct loan origination costs. Payments to partners based on sales volumes are deducted from interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as noninterest expense.

Other income

Other income on the Firm's Consolidated statements of income included the following:

Year ended December 31, (in millions)	2016	2015	2014
Operating lease income	**$ 2,724**	$ 2,081	$ 1,699

Operating lease income is recognized on a straight-line basis over the lease term.

Note 8 – Interest income and Interest expense

Interest income and interest expense are recorded in the Consolidated statements of income and classified based on the nature of the underlying asset or liability.

The following table presents the components of interest income and interest expense:

Year ended December 31, (in millions)	2016	2015	2014
Interest Income			
Loans[a]	**$ 36,634**	$ 33,134	$ 32,218
Taxable securities	**5,538**	6,550	7,617
Non taxable securities[b]	**1,766**	1,706	1,423
Total securities	**7,304**	8,256	9,040
Trading assets	**7,292**	6,621	7,312
Federal funds sold and securities purchased under resale agreements	**2,265**	1,592	1,642
Securities borrowed[c]	**(332)**	(532)	(501)
Deposits with banks	**1,863**	1,250	1,157
Other assets[d]	**875**	652	663
Total interest income	**$ 55,901**	$ 50,973	$ 51,531
Interest expense			
Interest bearing deposits	**$ 1,356**	$ 1,252	$ 1,633
Federal funds purchased and securities loaned or sold under repurchase agreements	**1,089**	609	604
Commercial paper	**135**	110	134
Trading liabilities - debt, short-term and other liabilities[e]	**1,170**	622	712
Long-term debt	**5,564**	4,435	4,409
Beneficial interest issued by consolidated VIEs	**504**	435	405
Total interest expense	**$ 9,818**	$ 7,463	$ 7,897
Net interest income	**$ 46,083**	$ 43,510	$ 43,634
Provision for credit losses	**5,361**	3,827	3,139
Net interest income after provision for credit losses	**$ 40,722**	$ 39,683	$ 40,495

(a) Includes the amortization of purchase price discounts or premiums, as well as net deferred loan fees or costs.
(b) Represents securities that are tax exempt for U.S. federal income tax purposes.
(c) Securities borrowed's negative interest income, for the years ended December 31, 2016, 2015 and 2014, is a result of client-driven demand for certain securities combined with the impact of low interest rates; this is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense.
(d) Largely margin loans.
(e) Includes brokerage customer payables.

Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for derivatives and financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP, absent the fair value option election; for those instruments, all changes in fair value including any interest elements, are reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable.

Note 9 – Pension and other postretirement employee benefit plans

The Firm has various defined benefit pension plans and OPEB plans that provide benefits to its employees. These plans are discussed below.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based on years of service and eligible compensation (generally base salary/regular pay and variable cash incentive compensation capped at $100,000 annually). Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after three years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws. The Firm does not anticipate at this time any contribution to the U.S. defined benefit pension plan in 2017. The 2017 contributions to the non-U.S. defined benefit pension plans are expected to be $44 million of which $28 million are contractually required.

JPMorgan Chase also has a number of defined benefit pension plans that are not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees previously earned pay credits on compensation amounts above the maximum stipulated by law under a qualified plan; no further pay credits are allocated under this plan. The Excess Retirement Plan had an unfunded projected benefit obligation ("PBO") in the amount of $215 million and $237 million, at December 31, 2016 and 2015, respectively.

Defined contribution plans

JPMorgan Chase currently provides two qualified defined contribution plans in the U.S. and other similar arrangements in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is the JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. Employees can contribute to the 401(k) Savings Plan on a pretax and/or Roth 401(k) after-tax basis. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan.

The Firm matches eligible employee contributions up to 5% of eligible compensation (generally base salary/regular pay and variable cash incentive compensation) on an annual basis. Employees begin to receive matching contributions

after completing a one-year-of-service requirement. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. Matching contributions vest after three years of service. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with the length of service and the date of hire and provide for limits on the Firm's share of covered medical benefits. The medical and life insurance benefits are both contributory. Effective January 1, 2015, there was a transition of certain Medicare eligible retirees from JPMorgan Chase group sponsored coverage to Medicare exchanges. As a result of this change, eligible retirees will receive a Healthcare Reimbursement Account amount each year if they enroll through the Medicare exchange. The impact of this change was not material. Postretirement medical benefits also are offered to qualifying U.K. employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations, plan assets and funded status amounts reported on the Consolidated balance sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

As of or for the year ended December 31,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans[d]	
(in millions)	**2016**	2015	**2016**	2015	**2016**	2015
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (11,912)**	$(12,536)	**$ (3,347)**	$ (3,640)	**$ (744)**	$ (842)
Benefits earned during the year	**(296)**	(340)	**(36)**	(37)	**–**	(1)
Interest cost on benefit obligations	**(530)**	(498)	**(99)**	(112)	**(31)**	(31)
Special termination benefits	**–**	–	**–**	(1)	**–**	–
Employee contributions	**NA**	NA	**(7)**	(7)	**(19)**	(25)
Net gain/(loss)	**(203)**	702	**(540)**	146	**4**	71
Benefits paid	**725**	760	**126**	120	**76**	88
Plan settlements	**–**	–	**21**	–	**–**	–
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**–**	(6)
Foreign exchange impact and other	**–**	–	**504**	184	**6**	2
Benefit obligation, end of year	**$ (12,216)**	$(11,912)	**$ (3,378)**	$ (3,347)	**$ (708)**	$ (744)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 14,125**	$ 14,623	**$ 3,511**	$ 3,718	**$ 1,855**	$ 1,903
Actual return on plan assets	**838**	231	**537**	52	**131**	13
Firm contributions	**34**	31	**52**	45	**2**	2
Employee contributions	**–**	–	**7**	7	**–**	–
Benefits paid	**(725)**	(760)	**(126)**	(120)	**(32)**	(63)
Plan settlements	**–**	–	**(21)**	–	**–**	–
Foreign exchange impact and other	**–**	–	**(529)**	(191)	**–**	–
Fair value of plan assets, end of year	**$ 14,272**	$ 14,125 [b][c]	**$ 3,431**	$ 3,511	**$ 1,956**	$ 1,855
Net funded status[a]	**$ 2,056**	$ 2,213	**$ 53**	$ 164	**$ 1,248**	$ 1,111
Accumulated benefit obligation, end of year	**$ (12,062)**	$(11,774)	**$ (3,359)**	$ (3,322)	**NA**	NA

(a) Represents plans with an aggregate overfunded balance of $4.0 billion and $4.1 billion at December 31, 2016 and 2015, respectively, and plans with an aggregate underfunded balance of $639 million and $636 million at December 31, 2016 and 2015, respectively.
(b) At December 31, 2016 and 2015, approximately $390 million and $533 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.
(c) At December 31, 2016 and 2015, defined benefit pension plan amounts that were not measured at fair value included $130 million and $74 million, respectively, of accrued receivables, and $224 million and $123 million, respectively, of accrued liabilities, for U.S. plans.
(d) Includes an unfunded accumulated postretirement benefit obligation of $35 million and $32 million at December 31, 2016 and 2015, respectively, for the U.K. plan.

Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the PBO or the fair value of the plan assets. Any excess is amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently seven years and for the non-U.S. defined benefit pension plans is the period appropriate for the affected plan. In addition, prior service costs are amortized over the average remaining service period of active employees expected to receive benefits under the plan when the prior service cost is first recognized. The average remaining amortization period for the U.S. defined benefit pension plan for current prior service costs is three years.

For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. This value is referred to as the market related value of assets. Amortization of net gains and losses, adjusted for gains and losses not yet recognized, is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market related value of assets. Any excess net gain or loss is amortized over the average expected lifetime of retired participants, which is currently twelve years; however, prior service costs resulting from plan changes are amortized over the average years of service remaining to full eligibility age, which is currently two years.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

	Defined benefit pension plans					
December 31,	U.S.		Non-U.S.		OPEB plans	
(in millions)	**2016**	2015	**2016**	2015	**2016**	2015
Net gain/(loss)	**$ (3,116)**	$ (3,096)	**$ (551)**	$ (513)	**$ 138**	$ 109
Prior service credit/(cost)	**34**	68	**8**	9	**–**	–
Accumulated other comprehensive income/(loss), pretax, end of year	**$ (3,082)**	$ (3,028)	**$ (543)**	$ (504)	**$ 138**	$ 109

The following table presents the components of net periodic benefit costs reported in the Consolidated statements of income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension, defined contribution and OPEB plans.

	Pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2016**	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Components of net periodic benefit cost									
Benefits earned during the year	**$ 296**	$ 340	$ 281	**$ 36**	$ 37	$ 33	**$ –**	$ 1	$ –
Interest cost on benefit obligations	**530**	498	534	**99**	112	137	**31**	31	38
Expected return on plan assets	**(891)**	(929)	(985)	**(139)**	(150)	(172)	**(105)**	(106)	(101)
Amortization:									
Net (gain)/loss	**235**	247	25	**22**	35	47	**–**	–	–
Prior service cost/(credit)	**(34)**	(34)	(41)	**(2)**	(2)	(2)	**–**	–	(1)
Special termination benefits	**–**	–	–	**–**	1	–	**–**	–	–
Settlement loss	**–**	–	–	**4**	–	–	**–**	–	–
Net periodic defined benefit cost	**136**	122	(186)	**20**	33	43	**(74)**	(74)	(64)
Other defined benefit pension plans[a]	**14**	14	14	**11**	10	6	**NA**	NA	NA
Total defined benefit plans	**150**	136	(172)	**31**	43	49	**(74)**	(74)	(64)
Total defined contribution plans	**473**	449	438	**316**	320	329	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 623**	$ 585	$ 266	**$ 347**	$ 363	$ 378	**$ (74)**	$ (74)	$ (64)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	**$ 255**	$ (3)	$ 1,645	**$ 140**	$ (47)	$ 57	**$ (29)**	$ 21	$ (5)
Prior service credit arising during the year	**–**	–	53	**–**	–	–	**–**	–	–
Amortization of net loss	**(235)**	(247)	(25)	**(22)**	(35)	(47)	**–**	–	–
Amortization of prior service (cost)/credit	**34**	34	41	**2**	2	2	**–**	–	1
Settlement loss	**–**	–	–	**(4)**	–	–	**–**	–	–
Foreign exchange impact and other	**–**	–	–	**(77)** [a]	(33) [a]	(39) [a]	**–**	–	–
Total recognized in other comprehensive income	**$ 54**	$ (216)	$ 1,714	**$ 39**	$ (113)	$ (27)	**$ (29)**	$ 21	$ (4)
Total recognized in net periodic benefit cost and other comprehensive income	**$ 190**	$ (94)	$ 1,528	**$ 59**	$ (80)	$ 16	**$ (103)**	$ (53)	$ (68)

(a) Includes various defined benefit pension plans which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2017 are as follows.

	Defined benefit pension plans		OPEB plans	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss/(gain)	$ 216	$ 28	$ –	$ –
Prior service cost/(credit)	(34)	(2)	–	–
Total	$ 182	$ 26	$ –	$ –

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
Year ended December 31,	**2016**	2015	2014	**2016**	2015	2014
Actual rate of return:						
Defined benefit pension plans	**6.12%**	0.88%	7.29%	**1.07 - 20.60%**	(0.48) - 4.92%	5.62 - 17.69%
OPEB plans	**7.29**	1.16	9.84	**NA**	NA	NA

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 or more years) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration is also given to current market conditions and the short-term portfolio mix of each plan.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The expected return on "AA" rated long-term corporate bonds is based on an implied yield for similar bonds.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was provided by the Firm's actuaries. This rate was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Mercer Yield Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension plan represents a rate of appropriate duration from the analysis of yield curves provided by the Firm's actuaries.

At December 31, 2016, the Firm decreased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will increase expense by approximately $45 million in 2017. The 2017 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 6.00% and 5.00%, respectively. For 2017, the initial health care benefit obligation trend assumption has been set at 5.00%, while the ultimate health care trend assumption and the year to reach the ultimate rate remain at 5.00% and 2017, respectively, unchanged from 2016. As of December 31, 2016, the interest crediting rate assumption remained at 5.00% and the assumed rate of compensation increase was reduced to 2.30%.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's significant U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S.	
December 31,	**2016**	2015	**2016**	2015
Discount rate:				
Defined benefit pension plans	**4.30%**	4.50%	**0.60 - 2.60%**	0.80 - 3.70%
OPEB plans	**4.20**	4.40	**–**	–
Rate of compensation increase	**2.30**	3.50	**2.25 - 3.00**	2.25 - 4.30
Health care cost trend rate:				
Assumed for next year	**5.00**	5.50	**–**	–
Ultimate	**5.00**	5.00	**–**	–
Year when rate will reach ultimate	**2017**	2017	**–**	–

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2016**	2015	2014	**2016**	2015	2014
Discount rate:						
Defined benefit pension plans	**4.50%**	4.00%	5.00%	**0.90 - 3.70%**	1.00 - 3.60%	1.10 - 4.40%
OPEB plans	**4.40**	4.10	4.90	**–**	–	–
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**6.50**	6.50	7.00	**0.80 - 4.60**	0.90 - 4.80	1.20 - 5.30
OPEB plans	**5.75**	6.00	6.25	**NA**	NA	NA
Rate of compensation increase	**3.50**	3.50	3.50	**2.25 - 4.30**	2.75 - 4.20	2.75 - 4.60
Health care cost trend rate:						
Assumed for next year	**5.50**	6.00	6.50	**–**	–	–
Ultimate	**5.00**	5.00	5.00	**–**	–	–
Year when rate will reach ultimate	**2017**	2017	2017	**–**	–	–

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's accumulated postretirement benefit obligation. As of December 31, 2016, there was no material effect on total service and interest cost.

Year ended December 31, 2016 (in millions)	1-Percentage point increase	1-Percentage point decrease
Effect on accumulated postretirement benefit obligation	$ 8	$ (7)

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an aggregate increase of approximately $40 million in 2017 U.S. defined benefit pension and OPEB plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2017 U.S. defined benefit pension and OPEB plan expense of approximately an aggregate $31 million and an increase in the related benefit obligations of approximately an aggregate $316 million. A 25-basis point decrease in the interest crediting rate for the U.S. defined benefit pension plan would result in a decrease in 2017 U.S. defined benefit pension expense of approximately $36 million and a decrease in the related PBO of approximately $160 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2017 non-U.S. defined benefit pension plan expense of approximately $12 million.

Investment strategy and asset allocation

The Firm's U.S. defined benefit pension plan assets are held in trust and are invested in a well-diversified portfolio of equity and fixed income securities, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity, real estate and real assets). Non-U.S. defined benefit pension plan assets are held in various trusts and are also invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to partially fund the U.S. OPEB plan, are held in separate accounts of an insurance company and are allocated to investments intended to replicate equity and fixed income indices.

The investment policy for the Firm's U.S. defined benefit pension plan assets is to optimize the risk-return relationship as appropriate to the needs and goals of the plan using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Assets are managed by a combination of internal and external investment managers. Periodically the Firm performs a comprehensive analysis on the U.S. defined benefit pension plan asset allocations, incorporating projected asset and liability data, which focuses on the short- and long-term impact of the asset allocation on cumulative pension expense, economic cost, present value of contributions and funded status. Currently, approved asset allocation ranges are: U.S. equity 0% to 45%, international equity 0% to 40%, debt securities 0% to 80%, hedge funds 0% to 5%, real estate 0% to 10%, real assets 0% to 10% and private equity 0% to 20%. Asset allocations are not managed to a specific target but seek to shift asset class allocations within these stated ranges. Investment strategies incorporate the economic outlook and the anticipated implications of the macroeconomic environment on the various asset classes while maintaining an appropriate level of liquidity for the plan. The Firm regularly reviews the asset allocations and asset managers, as well as other factors that impact the portfolio, which is rebalanced when deemed necessary.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, the assets are invested to maximize returns subject to an appropriate level of risk relative to the plans' liabilities. To reduce the volatility in returns relative to the plans' liability profiles, the U.K. defined benefit pension plans' largest asset allocations are to debt securities of appropriate durations. Other assets, mainly equity securities, are then invested for capital appreciation, to provide long-term investment growth. Similar to the U.S. defined benefit pension plan, asset allocations and asset managers for the U.K. plans are reviewed regularly and the portfolios are rebalanced when deemed necessary.

Investments held by the U.S. and non-U.S. defined benefit pension and OPEB plans include financial instruments that are exposed to various risks such as market, credit, liquidity and country risks. Exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments. As of December 31, 2016, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except through indirect exposures through investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $3.4 billion and $3.2 billion for U.S. plans and $1.2 billion and $1.2 billion for non-U.S. plans, as of December 31, 2016 and 2015, respectively.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[c]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2016**	2015	Allocation	**2016**	2015	Allocation	**2016**	2015
Asset category									
Debt securities[a]	0-80%	**35%**	32%	59%	**60%**	60%	30-70%	**50%**	50%
Equity securities	0-85	**47**	48	40	**39**	38	30-70	**50**	50
Real estate	0-10	**4**	4	–	**–**	1	–	**–**	–
Alternatives[b]	0-35	**14**	16	1	**1**	1	–	**–**	–
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Debt securities primarily include corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.
(b) Alternatives primarily include limited partnerships.
(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

Fair value measurement of the plans' assets and liabilities

For information on fair value measurements, including descriptions of level 1, 2, and 3 of the fair value hierarchy and the valuation methods employed by the Firm, see Note 3.

Pension and OPEB plan assets and liabilities measured at fair value

December 31, 2016 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans[h]		
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	$ 74	$ –	$ –	$ 74	$ 122	$ 2	$ 124
Equity securities	5,178	12	2	5,192	980	154	1,134
Common/collective trust funds[a]	266	–	–	266	118	–	118
Limited partnerships[b]	62	–	–	62	–	–	–
Corporate debt securities[c]	–	1,791	4	1,795	–	715	715
U.S. federal, state, local and non-U.S. government debt securities	926	234	–	1,160	213	570	783
Mortgage-backed securities	39	65	–	104	3	10	13
Derivative receivables	–	24	–	24	–	219	219
Other[d]	1,274	–	390	1,664	223	53	276
Total assets measured at fair value[e]	$ 7,819	$ 2,126	$ 396	$ 10,341 [f]	$ 1,659	$ 1,723	$ 3,382
Derivative payables	$ –	$ (14)	$ –	$ (14)	$ –	$ (194)	$ (194)
Total liabilities measured at fair value	$ –	$ (14)	$ –	$ (14) [g]	$ –	$ (194)	$ (194)

December 31, 2015 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans[h]		
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	$ 112	$ –	$ –	$ 112	$ 114	$ 1	$ 115
Equity securities	4,826	5	2	4,833	1,002	157	1,159
Common/collective trust funds[a]	339	–	–	339	135	–	135
Limited partnerships[b]	53	–	–	53	–	–	–
Corporate debt securities[c]	–	1,619	2	1,621	–	758	758
U.S. federal, state, local and non-U.S. government debt securities	580	108	–	688	212	504	716
Mortgage-backed securities	–	67	1	68	2	26	28
Derivative receivables	–	104	–	104	–	209	209
Other[d]	1,760	27	534	2,321	257	53	310
Total assets measured at fair value[e]	$ 7,670	$ 1,930	$ 539	$ 10,139 [f]	$ 1,722	$ 1,708	$ 3,430
Derivative payables	$ –	$ (35)	$ –	$ (35)	$ –	$ (153)	$ (153)
Total liabilities measured at fair value	$ –	$ (35)	$ –	$ (35) [g]	$ –	$ (153)	$ (153)

(a) At December 31, 2016 and 2015, common/collective trust funds primarily included a mix of short-term investment funds, domestic and international equity investments (including index) and real estate funds.
(b) Unfunded commitments to purchase limited partnership investments for the plans were $735 million and $895 million for 2016 and 2015, respectively.
(c) Corporate debt securities include debt securities of U.S. and non-U.S. corporations.
(d) Other consists primarily of money market funds and participating and non-participating annuity contracts. Money market funds are primarily classified within level 1 of the fair value hierarchy given they are valued using market observable prices. Participating and non-participating annuity contracts are classified within level 3 of the fair value hierarchy due to a lack of market mechanisms for transferring each policy and surrender restrictions.
(e) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy. At December 31, 2016 and 2015, the fair values of these investments, which include certain limited partnerships and common/collective trust funds, were $4.0 billion and $4.1 billion, respectively, of U.S. defined benefit pension plan investments, and $243 million and $234 million, respectively, of non-U.S. defined benefit pension plan investments.
(f) At December 31, 2016 and 2015, excluded U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $130 million and $74 million, respectively.
(g) At December 31, 2016 and 2015, excluded $203 million and $106 million, respectively, of U.S. defined benefit pension plan payables for investments purchased; and $21 million and $17 million, respectively, of other liabilities.
(h) There were zero assets or liabilities classified as level 3 for the non-U.S. defined benefit pension plans as of December 31, 2016 and 2015.

The Firm's U.S. OPEB plan was partially funded with COLI policies of $2.0 billion and $1.9 billion at December 31, 2016 and 2015, which were classified in level 3 of the valuation hierarchy.

Changes in level 3 fair value measurements using significant unobservable inputs

Year ended December 31, 2016 (in millions)	Fair value, January 1, 2016	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2016
U.S. defined benefit pension plans						
Equity securities	$ 2	$ –	$ –	$ –	$ –	$ 2
Corporate debt securities	2	–	–	1	1	4
Mortgage-backed securities	1	–	–	(1)	–	–
Other	534	–	(157)	–	13	390
Total U.S. defined benefit pension plans	$ 539	$ –	$ (157)	$ –	$ 14	$ 396
OPEB plans						
COLI	$ 1,855	$ –	$ 102	$ –	$ –	$ 1,957
Total OPEB plans	$ 1,855	$ –	$ 102	$ –	$ –	$ 1,957

Year ended December 31, 2015 (in millions)	Fair value, January 1, 2015	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2015
U.S. defined benefit pension plans						
Equity securities	$ 4	$ –	$ (2)	$ –	$ –	$ 2
Corporate debt securities	9	–	–	(7)	–	2
Mortgage-backed securities	1	–	–	–	–	1
Other	337	–	197	–	–	534
Total U.S. defined benefit pension plans	$ 351	$ –	$ 195	$ (7)	$ –	$ 539
OPEB plans						
COLI	$ 1,903	$ –	$ (48)	$ –	$ –	$ 1,855
Total OPEB plans	$ 1,903	$ –	$ (48)	$ –	$ –	$ 1,855

Year ended December 31, 2014 (in millions)	Fair value, January 1, 2014	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2014
U.S. defined benefit pension plans						
Equity securities	$ 4	$ –	$ –	$ –	$ –	$ 4
Corporate debt securities	7	(2)	2	4	(2)	9
Mortgage-backed securities	–	–	–	1	–	1
Other	430	–	(93)	–	–	337
Total U.S. defined benefit pension plans	$ 441	$ (2)	$ (91)	$ 5	$ (2)	$ 351
OPEB plans						
COLI	$ 1,749	$ –	$ 154	$ –	$ –	$ 1,903
Total OPEB plans	$ 1,749	$ –	$ 154	$ –	$ –	$ 1,903

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2017	$ 766	$ 103	$ 68	$ 1
2018	768	104	65	1
2019	758	107	63	1
2020	765	113	60	1
2021	775	117	58	1
Years 2022–2026	3,961	646	250	2

Note 10 – Employee stock-based incentives

Employee stock-based awards

In 2016, 2015 and 2014, JPMorgan Chase granted long-term stock-based awards to certain employees under its LTIP, as amended and restated effective May 19, 2015. Under the terms of the LTIP, as of December 31, 2016, 78 million shares of common stock were available for issuance through May 2019. The LTIP is the only active plan under which the Firm is currently granting stock-based incentive awards. In the following discussion, the LTIP, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans," and such plans constitute the Firm's stock-based incentive plans.

RSUs are awarded at no cost to the recipient upon their grant. Generally, RSUs are granted annually and vest at a rate of 50% after two years and 50% after three years and are converted into shares of common stock as of the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All RSU awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding and, as such, are considered participating securities as discussed in Note 24.

In January 2016, the Firm's Board of Directors approved the grant of performance share units ("PSUs") to members of the Firm's Operating Committee under the variable compensation program for performance year 2015. PSUs are subject to the Firm's achievement of specified performance criteria over a three-year period. The number of awards that vest can range from zero to 150% of the grant amount. The awards vest and are converted into shares of common stock in the quarter after the end of the three-year performance period. In addition, dividends are notionally reinvested in the Firm's common stock and will be delivered only in respect of any earned shares.

Once the PSUs have vested, the shares of common stock that are delivered, after applicable tax withholding, must be held for an additional two-year period, for a total combined vesting and holding period of five years from the grant date.

Under the LTI Plans, stock options and stock appreciation rights ("SARs") have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm periodically grants employee stock options to individual employees. There were no material grants of stock options or SARs in 2016, 2015 and 2014. SARs generally expire ten years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award, net of estimated forfeitures, as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2016, 2015 and 2014, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. On July 15, 2014, the Compensation & Management Development Committee and Board of Directors determined that all requirements for the vesting of the 2 million SAR awards had been met and thus, the awards became exercisable. The SARs, which will expire in January 2018, have an exercise price of $39.83 (the price of JPMorgan Chase common stock on the date of grant). The expense related to this award was dependent on changes in fair value of the SARs through July 15, 2014 (the date when the vested number of SARs were determined), and the cumulative expense was recognized ratably over the service period, which was initially assumed to be five years but, effective in the first quarter of 2013, was extended to six and one-half years. The Firm recognized $3 million in compensation expense in 2014 for this award.

RSUs, PSUs, employee stock options and SARs activity

Compensation expense for RSUs and PSUs is measured based on the number of units granted multiplied by the stock price at the grant date, and for employee stock options and SARs, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorgan Chase's RSUs, PSUs, employee stock options and SARs activity for 2016.

Year ended December 31, 2016 (in thousands, except weighted-average data, and where otherwise stated)	RSUs/PSUs		Options/SARs			
	Number of units	Weighted-average grant date fair value	Number of awards	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	**85,307**	**$ 54.60**	**43,466**	**$ 43.51**		
Granted	**36,775**	**57.80**	**77**	**72.63**		
Exercised or vested	**(37,121)**	**52.09**	**(12,836)**	**41.55**		
Forfeited	**(3,254)**	**56.45**	**(240)**	**44.28**		
Canceled	**NA**	**NA**	**(200)**	**612.18**		
Outstanding, December 31	**81,707**	**$ 57.15**	**30,267**	**$ 40.65**	**3.9**	**$ 1,378,254**
Exercisable, December 31	**NA**	**NA**	**24,815**	**40.08**	**3.6**	**1,144,937**

The total fair value of RSUs that vested during the years ended December 31, 2016, 2015 and 2014, was $2.2 billion, $2.8 billion and $3.2 billion, respectively. The total intrinsic value of options exercised during the years ended December 31, 2016, 2015 and 2014, was $338 million, $335 million and $539 million, respectively.

Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated statements of income.

Year ended December 31, (in millions)	**2016**	2015	2014
Cost of prior grants of RSUs, PSUs and SARs that are amortized over their applicable vesting periods	**$ 1,046**	$ 1,109	$ 1,371
Accrual of estimated costs of stock-based awards to be granted in future periods including those to full-career eligible employees	**894**	878	819
Total noncash compensation expense related to employee stock-based incentive plans	**$ 1,940**	$ 1,987	$ 2,190

At December 31, 2016, approximately $700 million (pretax) of compensation expense related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.0 year. The Firm does not capitalize any compensation expense related to share-based compensation awards to employees.

Cash flows and tax benefits

Effective January 1, 2016, the Firm adopted new accounting guidance related to employee share-based payments. As a result of the adoption of this new guidance, all excess tax benefits (including tax benefits from dividends or dividend equivalents) on share-based payment awards are recognized within income tax expense in the Consolidated statements of income. In prior years these tax benefits were recorded as increases to additional paid-in capital. Income tax benefits related to stock-based incentive arrangements recognized in the Firm's Consolidated statements of income for the years ended December 31, 2016, 2015 and 2014, were $916 million, $746 million and $854 million, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements, and the actual income tax benefit related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	**2016**	2015	2014
Cash received for options exercised	**$ 26**	$ 20	$ 63
Tax benefit	**70**	64	104

Note 11 – Noninterest expense

For details on noninterest expense, see Consolidated statements of income on page 141. Included within other expense are the following:

Year ended December 31, (in millions)	2016	2015	2014
Legal (benefit)/expense	**$ (317)**	$ 2,969	$ 2,883
FDIC-related expense	**1,296**	1,227	1,037

Note 12 – Securities

Securities are classified as trading, AFS or HTM. Securities classified as trading assets are discussed in Note 3. Predominantly all of the Firm's AFS and HTM investment securities (the "investment securities portfolio") are held by Treasury and CIO in connection with its asset-liability management objectives. At December 31, 2016, the investment securities portfolio consisted of debt securities with an average credit rating of AA+ (based upon external ratings where available, and where not available, based primarily upon internal ratings which correspond to ratings as defined by S&P and Moody's). AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to AOCI. The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated statements of income. HTM debt securities, which management has the intent and ability to hold until maturity, are carried at amortized cost on the Consolidated balance sheets. For both AFS and HTM debt securities, purchase discounts or premiums are generally amortized into interest income over the contractual life of the security.

During 2016, the Firm transferred commercial MBS and obligations of U.S. states and municipalities with a fair value of $7.5 billion from AFS to HTM. These securities were transferred at fair value. AOCI included net pretax unrealized gains of $78 million on the securities at the date of transfer. The transfers reflect the Firm's intent to hold the securities to maturity in order to reduce the impact of price volatility on AOCI. This transfer was a non-cash transaction.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

	2016				2015			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies[a]	**$ 63,367**	**$ 1,112**	**$ 474**	**$ 64,005**	$ 53,689	$ 1,483	$ 106	$ 55,066
Residential:								
Prime and Alt-A[b]	**4,256**	**38**	**22**	**4,272**	6,594	38	49	6,583
Subprime[b]	**3,915**	**62**	**6**	**3,971**	1,078	9	8	1,079
Non-U.S.	**6,049**	**158**	**7**	**6,200**	19,629	341	13	19,957
Commercial	**9,002**	**122**	**20**	**9,104**	22,990	150	243	22,897
Total mortgage-backed securities	**86,589**	**1,492**	**529**	**87,552**	103,980	2,021	419	105,582
U.S. Treasury and government agencies[a]	**44,822**	**75**	**796**	**44,101**	11,202	–	166	11,036
Obligations of U.S. states and municipalities	**30,284**	**1,492**	**184**	**31,592**	31,328	2,245	23	33,550
Certificates of deposit	**106**	**–**	**–**	**106**	282	1	–	283
Non-U.S. government debt securities	**34,497**	**836**	**45**	**35,288**	35,864	853	41	36,676
Corporate debt securities	**4,916**	**64**	**22**	**4,958**	12,464	142	170	12,436
Asset-backed securities:								
Collateralized loan obligations	**27,352**	**75**	**26**	**27,401**	31,146	52	191	31,007
Other	**6,950**	**62**	**45**	**6,967**	9,125	72	100	9,097
Total available-for-sale debt securities	**235,516**	**4,096**	**1,647**	**237,965**	235,391	5,386	1,110	239,667
Available-for-sale equity securities	**914**	**12**	**–**	**926**	2,067	20	–	2,087
Total available-for-sale securities	**236,430**	**4,108**	**1,647**	**238,891**	237,458	5,406	1,110	241,754
Held-to-maturity debt securities								
Mortgage-backed securities								
U.S. government agencies[c]	**29,910**	**638**	**37**	**30,511**	36,271	852	42	37,081
Commercial	**5,783**	**–**	**129**	**5,654**	–	–	–	–
Total mortgage-backed securities	**35,693**	**638**	**166**	**36,165**	**36,271**	**852**	**42**	**37,081**
Obligations of U.S. states and municipalities	**14,475**	**374**	**125**	**14,724**	12,802	708	4	13,506
Total held-to-maturity debt securities	**50,168**	**1,012**	**291**	**50,889**	**49,073**	**1,560**	**46**	**50,587**
Total securities	**$ 286,598**	**$ 5,120**	**$ 1,938**	**$ 289,780**	**$ 286,531**	**$ 6,966**	**$ 1,156**	**$ 292,341**

(a) Includes total U.S. government-sponsored enterprise obligations with fair values of $45.8 billion and $42.3 billion at December 31, 2016 and 2015, respectively, which were predominantly mortgage-related.

(b) Prior period amounts have been revised to conform with current period presentation.

(c) Included total U.S. government-sponsored enterprise obligations with amortized cost of $25.6 billion and $30.8 billion at December 31, 2016 and 2015, respectively, which were mortgage-related.

Securities impairment

The following tables present the fair value and gross unrealized losses for the investment securities portfolio by aging category at December 31, 2016 and 2015.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2016 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 29,856	$ 463	$ 506	$ 11	$ 30,362	$ 474
Residential:						
Prime and Alt-A	977	2	1,018	20	1,995	22
Subprime	396	4	55	2	451	6
Non-U.S.	–	–	886	7	886	7
Commercial	2,328	17	1,078	3	3,406	20
Total mortgage-backed securities	33,557	486	3,543	43	37,100	529
U.S. Treasury and government agencies	23,543	796	–	–	23,543	796
Obligations of U.S. states and municipalities	7,215	181	55	3	7,270	184
Certificates of deposit	–	–	–	–	–	–
Non-U.S. government debt securities	4,436	36	421	9	4,857	45
Corporate debt securities	797	2	829	20	1,626	22
Asset-backed securities:						
Collateralized loan obligations	766	2	5,263	24	6,029	26
Other	739	6	1,992	39	2,731	45
Total available-for-sale debt securities	71,053	1,509	12,103	138	83,156	1,647
Available-for-sale equity securities	–	–	–	–	–	–
Held-to-maturity securities						
Mortgage-backed securities						
U.S. government securities	3,129	37	–	–	3,129	37
Commercial	5,163	114	441	15	5,604	129
Total mortgage-backed securities	8,292	151	441	15	8,733	166
Obligations of U.S. states and municipalities	4,702	125	–	–	4,702	125
Total held-to-maturity securities	12,994	276	441	15	13,435	291
Total securities with gross unrealized losses	$ 84,047	$ 1,785	$ 12,544	$ 153	$ 96,591	$ 1,938

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2015 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 13,002	$ 95	$ 697	$ 11	$ 13,699	$ 106
Residential:						
Prime and Alt-A[(a)]	4,455	43	238	6	4,693	49
Subprime[(a)]	692	8	–	–	692	8
Non-U.S.	2,021	12	167	1	2,188	13
Commercial	13,779	239	658	4	14,437	243
Total mortgage-backed securities	33,949	397	1,760	22	35,709	419
U.S. Treasury and government agencies	10,998	166	–	–	10,998	166
Obligations of U.S. states and municipalities	1,676	18	205	5	1,881	23
Certificates of deposit	–	–	–	–	–	–
Non-U.S. government debt securities	3,267	26	367	15	3,634	41
Corporate debt securities	3,198	125	848	45	4,046	170
Asset-backed securities:						
Collateralized loan obligations	15,340	67	10,692	124	26,032	191
Other	4,284	60	1,005	40	5,289	100
Total available-for-sale debt securities	72,712	859	14,877	251	87,589	1,110
Available-for-sale equity securities	–	–	–	–	–	–
Held-to-maturity debt securities						
Mortgage-backed securities						
U.S. government agencies	3,294	42	–	–	3,294	42
Commercial	–	–	–	–	–	–
Total mortgage-backed securities	3,294	42	–	–	3,294	42
Obligations of U.S. states and municipalities	469	4	–	–	469	4
Total held-to-maturity securities	3,763	46	–	–	3,763	46
Total securities with gross unrealized losses	$ 76,475	$ 905	$ 14,877	$ 251	$ 91,352	$ 1,156

(a) Prior period amounts have been revised to conform with current period presentation.

Gross unrealized losses

The Firm has recognized unrealized losses on securities it intends to sell as OTTI. The Firm does not intend to sell any of the remaining securities with an unrealized loss in AOCI as of December 31, 2016, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2016.

Other-than-temporary impairment

AFS debt and equity securities and HTM debt securities in unrealized loss positions are analyzed as part of the Firm's ongoing assessment of OTTI. For most types of debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm considers an impairment to be other-than-temporary when there is an adverse change in expected cash flows. For AFS equity securities, the Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its cost basis.

Potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and the Firm's intent and ability to hold the security until recovery.

For AFS debt securities, the Firm recognizes OTTI losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost basis. In these circumstances the impairment loss is equal to the full difference between the amortized cost basis and the fair value of the securities. For debt securities in an unrealized loss position that the Firm has the intent and ability to hold, the expected cash flows to be received from the securities are evaluated to determine if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI.

The Firm's cash flow evaluations take into account the factors noted above and expectations of relevant market and economic data as of the end of the reporting period. For securities issued in a securitization, the Firm estimates cash flows considering underlying loan-level data and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios.

For equity securities, OTTI losses are recognized in earnings if the Firm intends to sell the security. In other cases the Firm considers the relevant factors noted above, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the cost basis. Any impairment loss on an equity security is equal to the full difference between the cost basis and the fair value of the security.

Securities gains and losses

The following table presents realized gains and losses and OTTI from AFS securities that were recognized in income.

Year ended December 31, (in millions)	2016	2015	2014
Realized gains	$ 401	$ 351	$ 314
Realized losses	(232)	(127)	(233)
OTTI losses	(28)	(22)	(4)
Net securities gains	141	202	77
OTTI losses			
Credit losses recognized in income	(1)	(1)	(2)
Securities the Firm intends to sell[(a)]	(27)	(21)	(2)
Total OTTI losses recognized in income	$ (28)	$ (22)	$ (4)

(a) Excludes realized losses on securities sold of $24 million, $5 million and $3 million for the years ended December 31, 2016, 2015 and 2014, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

Changes in the credit loss component of credit-impaired debt securities

The cumulative credit loss component, including any changes therein, of OTTI losses that have been recognized in income related to AFS debt securities was not material as of and during the years ended December 31, 2016, 2015 and 2014.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2016, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity December 31, 2016 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities[a]					
Amortized cost	$ 2,012	$ 2,393	$ 7,574	$ 74,610	$ 86,589
Fair value	2,022	2,449	7,756	75,325	87,552
Average yield[b]	2.04%	2.36%	3.03%	3.26%	3.19%
U.S. Treasury and government agencies[a]					
Amortized cost	$ 132	$ 4,573	$ 38,976	$ 1,141	$ 44,822
Fair value	132	4,561	38,317	1,091	44,101
Average yield[b]	0.42%	0.86%	1.27%	1.13%	1.22%
Obligations of U.S. states and municipalities					
Amortized cost	$ 134	$ 752	$ 1,096	$ 28,302	$ 30,284
Fair value	135	767	1,148	29,542	31,592
Average yield[b]	5.85%	3.58%	6.29%	6.63%	6.54%
Certificates of deposit					
Amortized cost	$ 106	$ –	$ –	$ –	$ 106
Fair value	106	–	–	–	106
Average yield[b]	1.78%	–%	–%	–%	1.78%
Non-U.S. government debt securities					
Amortized cost	$ 5,831	$ 14,109	$ 13,503	$ 1,054	$ 34,497
Fair value	5,838	14,444	13,944	1,062	35,288
Average yield[b]	2.92%	1.55%	0.93%	0.58%	1.51%
Corporate debt securities					
Amortized cost	$ 2,059	$ 1,312	$ 1,424	$ 121	$ 4,916
Fair value	2,070	1,332	1,433	123	4,958
Average yield[b]	2.88%	3.11%	3.24%	3.52%	3.06%
Asset-backed securities					
Amortized cost	$ –	$ 444	$ 21,551	$ 12,307	$ 34,302
Fair value	–	446	21,577	12,345	34,368
Average yield[b]	–%	0.49%	2.33%	2.21%	2.26%
Total available-for-sale debt securities					
Amortized cost	$ 10,274	$ 23,583	$ 84,124	$ 117,535	$ 235,516
Fair value	10,303	23,999	84,175	119,488	237,965
Average yield[b]	2.73%	1.63%	1.74%	3.92%	2.86%
Available-for-sale equity securities					
Amortized cost	$ –	$ –	$ –	$ 914	$ 914
Fair value	–	–	–	926	926
Average yield[b]	–%	–%	–%	0.58%	0.58%
Total available-for-sale securities					
Amortized cost	$ 10,274	$ 23,583	$ 84,124	$ 118,449	$ 236,430
Fair value	10,303	23,999	84,175	120,414	238,891
Average yield[b]	2.73%	1.63%	1.74%	3.89%	2.85%
Held-to-maturity debt securities					
Mortgage-backed securities[a]					
Amortized Cost	$ –	$ –	$ –	$ 35,693	$ 35,693
Fair value	–	–	–	36,165	36,165
Average yield[b]	–%	–%	–%	3.30%	3.30%
Obligations of U.S. states and municipalities					
Amortized cost	$ –	$ 29	$ 1,439	$ 13,007	$ 14,475
Fair value	–	29	1,467	13,228	14,724
Average yield[b]	–%	6.61%	5.11%	5.68%	5.63%
Total held-to-maturity securities					
Amortized cost	$ –	$ 29	$ 1,439	$ 48,700	$ 50,168
Fair value	–	29	1,467	49,393	50,889
Average yield[b]	–%	6.61%	5.11%	3.94%	3.97%

(a) U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2016.
(b) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used

where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid.

(c) Includes securities with no stated maturity. Substantially all of the Firm's residential MBS and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated weighted-average life, which reflects anticipated future prepayments, is approximately seven years for agency residential MBS, three years for agency residential collateralized mortgage obligations and three years for nonagency residential collateralized mortgage obligations.

Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated balance sheets. Resale and repurchase agreements are generally carried at the amounts at which the securities will be subsequently sold or repurchased. Securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. For further discussion of the offsetting of assets and liabilities, see Note 1. Fees received and paid in connection with securities financing agreements are recorded in interest income and interest expense on the Consolidated statements of income.

The Firm has elected the fair value option for certain securities financing agreements. For further information regarding the fair value option, see Note 4. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements, securities loaned or sold under repurchase agreements, and securities borrowed on the Consolidated balance sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

Securities financing transactions expose the Firm to credit and liquidity risk. To manage these risks, the Firm monitors the value of the underlying securities (predominantly high-quality securities collateral, including government-issued debt and agency MBS) that it has received from or provided to its counterparties compared to the value of cash proceeds and exchanged collateral, and either requests additional collateral or returns securities or collateral when appropriate. Margin levels are initially established based upon the counterparty, the type of underlying securities, and the permissible collateral, and are monitored on an ongoing basis.

In resale agreements and securities borrowed transactions, the Firm is exposed to credit risk to the extent that the value of the securities received is less than initial cash principal advanced and any collateral amounts exchanged. In repurchase agreements and securities loaned transactions, credit risk exposure arises to the extent that the value of underlying securities exceeds the value of the initial cash principal advanced, and any collateral amounts exchanged.

Additionally, the Firm typically enters into master netting agreements and other similar arrangements with its counterparties, which provide for the right to liquidate the underlying securities and any collateral amounts exchanged in the event of a counterparty default. It is also the Firm's policy to take possession, where possible, of the securities underlying resale agreements and securities borrowed transactions. For further information regarding assets pledged and collateral received in securities financing agreements, see Note 30.

As a result of the Firm's credit risk mitigation practices with respect to resale and securities borrowed agreements as described above, the Firm did not hold any reserves for credit impairment with respect to these agreements as of December 31, 2016 and 2015.

The table below summarizes the gross and net amounts of the Firm's securities financing agreements, as of December 31, 2016, and 2015. When the Firm has obtained an appropriate legal opinion with respect to the master netting agreement with a counterparty and where other relevant netting criteria under U.S. GAAP are met, the Firm nets, on the Consolidated balance sheets, the balances outstanding under its securities financing agreements with the same counterparty. In addition, the Firm exchanges securities and/or cash collateral with its counterparties; this collateral also reduces, in the Firm's view, the economic exposure with the counterparty. Such collateral, along with securities financing balances that do not meet all these relevant netting criteria under U.S. GAAP, is presented as "Amounts not nettable on the Consolidated balance sheets," and reduces the "Net amounts" presented below, if the Firm has an appropriate legal opinion with respect to the master netting agreement with the counterparty. Where a legal opinion has not been either sought or obtained, the securities financing balances are presented gross in the "Net amounts" below, and related collateral does not reduce the amounts presented.

	2016				
December 31, (in millions)	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets[b]	Amounts not nettable on the Consolidated balance sheets[c]	Net amounts[d]
Assets					
Securities purchased under resale agreements	**$ 480,735**	**$ (250,832)**	**$ 229,903**	**$ (222,413)**	**$ 7,490**
Securities borrowed	**96,409**	**—**	**96,409**	**(66,822)**	**29,587**
Liabilities					
Securities sold under repurchase agreements	**$ 402,465**	**$ (250,832)**	**$ 151,633**	**$ (133,300)**	**$ 18,333**
Securities loaned and other[a]	**22,451**	**—**	**22,451**	**(22,177)**	**274**

	2015				
December 31, (in millions)	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets[b]	Amounts not nettable on the Consolidated balance sheets[c]	Net amounts[d]
Assets					
Securities purchased under resale agreements	$ 368,148	$ (156,258)	$ 211,890	$ (207,958)	$ 3,932 [e]
Securities borrowed	98,721	—	98,721	(65,081)	33,640
Liabilities					
Securities sold under repurchase agreements	$ 290,044	$ (156,258)	$ 133,786	$ (119,332)	$ 14,454 [e]
Securities loaned and other[a]	22,556	—	22,556	(22,245)	311

(a) Includes securities-for-securities lending transactions of $9.1 billion and $4.4 billion at December 31, 2016 and 2015, respectively, accounted for at fair value, where the Firm is acting as lender. These amounts are presented within other liabilities in the Consolidated balance sheets.

(b) Includes securities financing agreements accounted for at fair value. At December 31, 2016 and 2015, included securities purchased under resale agreements of $21.5 billion and $23.1 billion, respectively, and securities sold under agreements to repurchase of $687 million and $3.5 billion, respectively. There were no securities borrowed at December 31, 2016 and $395 million at December 31, 2015. There were no securities loaned accounted for at fair value in either period.

(c) In some cases, collateral exchanged with a counterparty exceeds the net asset or liability balance with that counterparty. In such cases, the amounts reported in this column are limited to the related asset or liability with that counterparty.

(d) Includes securities financing agreements that provide collateral rights, but where an appropriate legal opinion with respect to the master netting agreement has not been either sought or obtained. At December 31, 2016 and 2015, included $4.8 billion and $2.3 billion, respectively, of securities purchased under resale agreements; $27.1 billion and $31.3 billion, respectively, of securities borrowed; $15.9 billion and $12.6 billion, respectively, of securities sold under agreements to repurchase; and $90 million and $45 million, respectively, of securities loaned and other.

(e) Prior period amounts have been revised to conform with the current presentation.

The tables below present as of December 31, 2016 and 2015 the types of financial assets pledged in securities financing agreements and the remaining contractual maturity of the securities financing agreements.

	Gross liability balance			
	2016		2015	
December 31, (in millions)	Securities sold under repurchase agreements	Securities loaned and other[a]	Securities sold under repurchase agreements	Securities loaned and other[a]
Mortgage-backed securities	**$ 10,546**	**$ –**	$ 12,790	**$ –**
U.S. Treasury and government agencies	**199,030**	**–**	154,377	5
Obligations of U.S. states and municipalities	**2,491**	**–**	1,316	–
Non-U.S. government debt	**149,008**	**1,279**	80,162	4,426
Corporate debt securities	**18,140**	**108**	21,286	78
Asset-backed securities	**7,721**	**–**	4,394	–
Equity securities	**15,529**	**21,064**	15,719	18,047
Total	**$ 402,465**	**$ 22,451**	$ 290,044	$ 22,556

	Remaining contractual maturity of the agreements				
2016 (in millions)	Overnight and continuous	Up to 30 days	30 – 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	**$ 140,318**	**$ 157,860**	**$ 55,621**	**$ 48,666**	**$ 402,465**
Total securities loaned and other[a]	**13,586**	**1,371**	**2,877**	**4,617**	**22,451**

	Remaining contractual maturity of the agreements				
2015 (in millions)	Overnight and continuous	Up to 30 days	30 – 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	$ 114,595	$ 100,082	$ 29,955	$ 45,412	$ 290,044
Total securities loaned and other[a]	8,320	708	793	12,735	22,556

(a) Includes securities-for-securities lending transactions of $9.1 billion and $4.4 billion at December 31, 2016 and 2015, respectively, accounted for at fair value, where the Firm is acting as lender. These amounts are presented within other liabilities on the Consolidated balance sheets.

Transfers not qualifying for sale accounting

At December 31, 2016 and 2015, the Firm held $5.9 billion and $7.5 billion, respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets and loans, and the corresponding liabilities are recorded predominantly in other borrowed funds on the Consolidated balance sheets.

Note 14 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained"), other than PCI loans
- Loans held-for-sale
- Loans at fair value
- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories:

Loans held-for-investment (other than PCI loans)

Originated or purchased loans held-for-investment, other than PCI loans, are recorded at the principal amount outstanding, net of the following: charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and net deferred loan fees or costs. Credit card loans also include billed finance charges and fees net of an allowance for uncollectible amounts.

Interest income

Interest income on performing loans held-for-investment, other than PCI loans, is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the contractual life of the loan to produce a level rate of return.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest has been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. Finally, collateral-dependent loans are typically maintained on nonaccrual status.

On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued and billed interest and fee income on credit card loans. The allowance is established with a charge to interest income and is reported as an offset to loans.

Allowance for loan losses

The allowance for loan losses represents the estimated probable credit losses inherent in the held-for-investment loan portfolio at the balance sheet date and is recognized on the balance sheet as a contra asset, which brings the recorded investment to the net carrying value. Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated statements of income. See Note 15 for further information on the Firm's accounting policies for the allowance for loan losses.

Charge-offs

Consumer loans, other than risk-rated business banking, risk-rated auto and PCI loans, are generally charged off or charged down to the net realizable value of the underlying collateral (i.e., fair value less costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the FFIEC. Residential real estate loans, non-modified credit card loans and scored business banking loans are generally charged off no later than 180 days past due. Auto, student and modified credit card loans are charged off no later than 120 days past due.

Certain consumer loans will be charged off earlier than the FFIEC charge-off standards in certain circumstances as follows:

- A charge-off is recognized when a loan is modified in a TDR if the loan is determined to be collateral-dependent.
- Loans to borrowers who have experienced an event (e.g., bankruptcy) that suggests a loss is either known or highly certain are subject to accelerated charge-off standards. Residential real estate and auto loans are charged off when the loan becomes 60 days past due, or sooner if the loan is determined to be collateral-dependent. Credit card, student and scored business banking loans are charged off within 60 days of

receiving notification of the bankruptcy filing or other event.

- Auto loans are written down to net realizable value upon repossession of the automobile and after a redemption period (i.e., the period during which a borrower may cure the loan) has passed.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on government-guaranteed loans.

Wholesale loans, risk-rated business banking loans and risk-rated auto loans are charged off when it is highly certain that a loss has been realized, including situations where a loan is determined to be both impaired and collateral-dependent. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the estimated net realizable value, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every six months thereafter. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), generally, either through foreclosure or upon the execution of a deed in lieu of foreclosure transaction with the borrower, the Firm obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared with the estimated values provided by exterior opinions and interior appraisals, considering state- and product-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

Loans held-for-sale

Held-for-sale loans are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or loss recognized at the time of sale.

Held-for-sale loans are subject to the nonaccrual policies described above.

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

Loans at fair value

Loans used in a market-making strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue.

Interest income on loans is accrued and recognized based on the contractual rate of interest. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

See Note 4 for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 and Note 4 for further information on loans carried at fair value and classified as trading assets.

PCI loans

PCI loans held-for-investment are initially measured at fair value. PCI loans have evidence of credit deterioration since the loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected. Because PCI loans are initially measured at fair value, which includes an estimate of future credit losses, no allowance for loan losses related to PCI loans is recorded at the acquisition date. See page 219 of this Note for information on accounting for PCI loans subsequent to their acquisition.

Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; non-credit related losses such as those due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at the lower of cost or fair value on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 15.

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss, avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, principal forgiveness, or the acceptance of equity or other assets in lieu of payments.

Such modifications are accounted for and reported as TDRs. A loan that has been modified in a TDR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless of whether the borrower performs under the modified terms. In certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring. In such circumstances, and assuming that the loan subsequently performs under its modified terms and the Firm expects to collect all contractual principal and interest cash flows, the loan is disclosed as impaired and as a TDR only during the year of the modification; in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (i) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (ii) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, LTV ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

Because loans modified in TDRs are considered to be impaired, these loans are measured for impairment using the Firm's established asset-specific allowance methodology, which considers the expected re-default rates for the modified loans. A loan modified in a TDR generally remains subject to the asset-specific allowance methodology throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status and/or the loan has been removed from the impaired loans disclosures (i.e., loans restructured at market rates). For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 15.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, and buildings) and commercial and personal property (e.g., automobiles, aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated balance sheets and initially recognized at fair value less costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class.

Consumer, excluding credit card[a]	Credit card	Wholesale[f]
Residential real estate – excluding PCI • Home equity[b] • Residential mortgage[c] Other consumer loans • Auto[d] • Business banking[d][e] • Student and other Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Credit card loans	• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other[g]

(a) Includes loans held in CCB, prime mortgage and home equity loans held in AWM and prime mortgage loans held in Corporate.
(b) Includes senior and junior lien home equity loans.
(c) Includes prime (including option ARMs) and subprime loans.
(d) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included with the other consumer loan classes.
(e) Predominantly includes Business Banking loans as well as deposit overdrafts.
(f) Includes loans held in CIB, CB, AWM and Corporate. Excludes prime mortgage and home equity loans held in AWM and prime mortgage loans held in Corporate. Classes are internally defined and may not align with regulatory definitions.
(g) Includes loans to: individuals; SPEs; holding companies; and private education and civic organizations. For more information on exposures to SPEs, see Note 16.

The following tables summarize the Firm's loan balances by portfolio segment.

December 31, 2016 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	**$ 364,406**	**$ 141,711**	**$ 383,790**	**$ 889,907**	[b]
Held-for-sale	**238**	**105**	**2,285**	**2,628**	
At fair value	**–**	**–**	**2,230**	**2,230**	
Total	**$ 364,644**	**$ 141,816**	**$ 388,305**	**$ 894,765**	

December 31, 2015 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	$ 344,355	$ 131,387	$ 357,050	$ 832,792	[b]
Held-for-sale	466	76	1,104	1,646	
At fair value	–	–	2,861	2,861	
Total	$ 344,821	$ 131,463	$ 361,015	$ 837,299	

(a) Includes billed interest and fees net of an allowance for uncollectible interest and fees.
(b) Loans (other than PCI loans and those for which the fair value option has been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs. These amounts were not material as of December 31, 2016 and 2015.

The following tables provide information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. These tables exclude loans recorded at fair value. The Firm manages its exposure to credit risk on an ongoing basis. Selling loans is one way that the Firm reduces its credit exposures.

Year ended December 31, (in millions)	2016			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 4,116** [a][b]	**$ –**	**$ 1,448**	**$ 5,564**
Sales	**6,368**	**–**	**8,739**	**15,107**
Retained loans reclassified to held-for-sale	**321**	**–**	**2,381**	**2,702**

Year ended December 31, (in millions)	2015			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 5,279 [a][b]	$ –	$ 2,154	$ 7,433
Sales	5,099	–	9,188	14,287
Retained loans reclassified to held-for-sale	1,514	79	642	2,235

Year ended December 31, (in millions)	2014			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 7,434 [a][b]	$ –	$ 885	$ 8,319
Sales	6,655	–	7,381	14,036
Retained loans reclassified to held-for-sale	1,190	3,039	581	4,810

(a) Purchases predominantly represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Government National Mortgage Association ("Ginnie Mae") guidelines. The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, FHA, RHS, and/or VA.

(b) Excludes purchases of retained loans sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards. Such purchases were $30.4 billion, $50.3 billion and $15.1 billion for the years ended December 31, 2016, 2015 and 2014, respectively.

The following table provides information about gains and losses, including lower of cost or fair value adjustments, on loan sales by portfolio segment.

Year ended December 31, (in millions)	**2016**	2015	2014
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]			
Consumer, excluding credit card	**$ 231**	$ 305	$ 341
Credit card	**(12)**	1	(241)
Wholesale	**26**	34	101
Total net gains on sales of loans (including lower of cost or fair value adjustments)	**$ 245**	$ 340	$ 201

(a) Excludes sales related to loans accounted for at fair value.

Consumer, excluding credit card, loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, business banking loans, and student and other loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period, and certain payment-option loans that may result in negative amortization.

The table below provides information about retained consumer loans, excluding credit card, by class.

December 31, (in millions)	2016	2015
Residential real estate – excluding PCI		
Home equity	**$ 39,063**	$ 45,559
Residential mortgage	**192,163**	166,239
Other consumer loans		
Auto	**65,814**	60,255
Business banking	**22,698**	21,208
Student and other	**8,989**	10,096
Residential real estate – PCI		
Home equity	**12,902**	14,989
Prime mortgage	**7,602**	8,893
Subprime mortgage	**2,941**	3,263
Option ARMs	**12,234**	13,853
Total retained loans	**$ 364,406**	$ 344,355

Delinquency rates are a primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear that the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, including both non-PCI and PCI portfolios, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV ratios can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit-quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (660 or below) is considered to be of higher risk than a loan to a borrower with a high FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For scored auto, scored business banking and student loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.
- Risk-rated business banking and auto loans are similar to wholesale loans in that the primary credit quality indicators are the risk rating that is assigned to the loan and whether the loans are considered to be criticized and/or nonaccrual. Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information about borrowers' ability to fulfill their obligations. For further information about risk-rated wholesale loan credit quality indicators, see pages 224–225 of this Note.

Residential real estate – excluding PCI loans

The following table provides information by class for residential real estate – excluding retained PCI loans in the consumer, excluding credit card, portfolio segment.

The following factors should be considered in analyzing certain credit statistics applicable to the Firm's residential real estate – excluding PCI loans portfolio: (i) junior lien home equity loans may be fully charged off when the loan becomes 180 days past due, and the value of the collateral does not support the repayment of the loan, resulting in relatively high charge-off rates for this product class; and (ii) the lengthening of loss-mitigation timelines may result in higher delinquency rates for loans carried at the net realizable value of the collateral that remain on the Firm's Consolidated balance sheets.

Residential real estate – excluding PCI loans

December 31, (in millions, except ratios)	Home equity[g]		Residential mortgage[g]		Total residential real estate – excluding PCI	
	2016	2015	**2016**	2015	**2016**	2015
Loan delinquency[a]						
Current	**$ 37,941**	$ 44,299	**$ 183,819**	$ 156,463	**$ 221,760**	$ 200,762
30–149 days past due	**646**	708	**3,824**	4,042	**4,470**	4,750
150 or more days past due	**476**	552	**4,520**	5,734	**4,996**	6,286
Total retained loans	**$ 39,063**	$ 45,559	**$ 192,163**	$ 166,239	**$ 231,226**	$ 211,798
% of 30+ days past due to total retained loans[b]	**2.87%**	2.77%	**0.75%**	1.03%	**1.11%**	1.40%
90 or more days past due and government guaranteed[c]	**$ –**	$ –	**$ 4,858**	$ 6,056	**$ 4,858**	$ 6,056
Nonaccrual loans	**1,845**	2,191	**2,247**	2,503	**4,092**	4,694
Current estimated LTV ratios[d][e]						
Greater than 125% and refreshed FICO scores:						
Equal to or greater than 660	**$ 70**	$ 165	**$ 30**	$ 58	**$ 100**	$ 223
Less than 660	**15**	32	**48**	77	**63**	109
101% to 125% and refreshed FICO scores:						
Equal to or greater than 660	**668**	1,344	**135**	274	**803**	1,618
Less than 660	**221**	434	**177**	291	**398**	725
80% to 100% and refreshed FICO scores:						
Equal to or greater than 660	**2,961**	4,537	**4,026**	3,159	**6,987**	7,696
Less than 660	**945**	1,409	**718**	996	**1,663**	2,405
Less than 80% and refreshed FICO scores:						
Equal to or greater than 660	**27,317**	29,648	**169,579**	142,241	**196,896**	171,889
Less than 660	**4,380**	4,934	**6,759**	6,797	**11,139**	11,731
No FICO/LTV available	**2,486**	3,056	**1,327**	1,658	**3,813**	4,714
U.S. government-guaranteed	**–**	–	**9,364**	10,688	**9,364**	10,688
Total retained loans	**$ 39,063**	$ 45,559	**$ 192,163**	$ 166,239	**$ 231,226**	$ 211,798
Geographic region						
California	**$ 7,644**	$ 8,945	**$ 59,785**	$ 47,263	**$ 67,429**	$ 56,208
New York	**7,978**	9,147	**24,813**	21,462	**32,791**	30,609
Illinois	**2,947**	3,420	**13,115**	11,524	**16,062**	14,944
Texas	**2,225**	2,532	**10,717**	9,128	**12,942**	11,660
Florida	**2,133**	2,409	**8,387**	7,177	**10,520**	9,586
New Jersey	**2,253**	2,590	**6,371**	5,567	**8,624**	8,157
Colorado	**677**	807	**6,304**	5,409	**6,981**	6,216
Washington	**1,229**	1,451	**5,443**	4,176	**6,672**	5,627
Massachusetts	**371**	459	**5,833**	5,340	**6,204**	5,799
Arizona	**1,772**	2,143	**3,577**	3,155	**5,349**	5,298
All other[f]	**9,834**	11,656	**47,818**	46,038	**57,652**	57,694
Total retained loans	**$ 39,063**	$ 45,559	**$ 192,163**	$ 166,239	**$ 231,226**	$ 211,798

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included $2.5 billion and $2.6 billion; 30–149 days past due included $3.1 billion and $3.2 billion; and 150 or more days past due included $3.8 billion and $4.9 billion at December 31, 2016 and 2015, respectively.

(b) At December 31, 2016 and 2015, residential mortgage loans excluded mortgage loans insured by U.S. government agencies of $6.9 billion and $8.1 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

(c) These balances, which are 90 days or more past due, were excluded from nonaccrual loans as the loans are guaranteed by U.S government agencies. Typically the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting agreed-upon servicing guidelines. At December 31, 2016 and 2015, these balances included $2.2 billion and $3.4 billion, respectively, of loans that are no longer accruing interest based on the agreed-upon servicing guidelines. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate. There were no loans that were not guaranteed by U.S. government agencies that are 90 or more days past due and still accruing interest at December 31, 2016 and 2015.

(d) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.

(e) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(f) At December 31, 2016 and 2015, included mortgage loans insured by U.S. government agencies of $9.4 billion and $10.7 billion, respectively.

(g) Includes residential real estate loans to private banking clients in AWM, for which the primary credit quality indicators are the borrower's financial position and LTV.

The following table represents the Firm's delinquency statistics for junior lien home equity loans and lines as of December 31, 2016 and 2015.

December 31, (in millions except ratios)	Total loans		Total 30+ day delinquency rate	
	2016	2015	**2016**	2015
HELOCs:[a]				
Within the revolving period[b]	**$ 10,304**	$ 17,050	**1.27%**	1.57%
Beyond the revolving period	**13,272**	11,252	**3.05**	3.10
HELOANs	**1,861**	2,409	**2.85**	3.03
Total	**$ 25,437**	$ 30,711	**2.32%**	2.25%

(a) These HELOCs are predominantly revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period, but also include HELOCs that allow interest-only payments beyond the revolving period.
(b) The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty or when the collateral does not support the loan amount.

HELOCs beyond the revolving period and HELOANs have higher delinquency rates than HELOCs within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the Firm's allowance for loan losses.

Impaired loans

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15.

December 31, (in millions)	Home equity		Residential mortgage		Total residential real estate – excluding PCI	
	2016	2015	**2016**	2015	**2016**	2015
Impaired loans						
With an allowance	**$ 1,266**	$ 1,293	**$ 4,689**	$ 5,243	**$ 5,955**	$ 6,536
Without an allowance[a]	**998**	1,065	**1,343**	1,447	**2,341**	2,512
Total impaired loans[b][c]	**$ 2,264**	$ 2,358	**$ 6,032**	$ 6,690	**$ 8,296**	$ 9,048
Allowance for loan losses related to impaired loans	**$ 121**	$ 138	**$ 68**	$ 108	**$ 189**	$ 246
Unpaid principal balance of impaired loans[d]	**3,847**	3,960	**8,285**	9,082	**12,132**	13,042
Impaired loans on nonaccrual status[e]	**1,116**	1,220	**1,755**	1,957	**2,871**	3,177

(a) Represents collateral-dependent residential real estate loans that are charged off to the fair value of the underlying collateral less cost to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual TDRs, regardless of their delinquency status. At December 31, 2016, Chapter 7 residential real estate loans included approximately 12% home equity and 16% of residential mortgages that were 30 days or more past due.
(b) At December 31, 2016 and 2015, $3.4 billion and $3.8 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure.
(c) Predominantly all residential real estate impaired loans, excluding PCI loans, are in the U.S.
(d) Represents the contractual amount of principal owed at December 31, 2016 and 2015. The unpaid principal balance differs from the impaired loan balances due to various factors including charge-offs, net deferred loan fees or costs, and unamortized discounts or premiums on purchased loans.
(e) As of December 31, 2016 and 2015, nonaccrual loans included $2.3 billion and $2.5 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status refer, to the Loan accounting framework on pages 208–210 of this Note.

The following table presents average impaired loans and the related interest income reported by the Firm.

Year ended December 31,	Average impaired loans			Interest income on impaired loans[a]			Interest income on impaired loans on a cash basis[a]		
(in millions)	**2016**	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Home equity	**$ 2,311**	$ 2,369	$ 2,435	**$ 125**	$ 128	$ 137	**$ 80**	$ 85	$ 90
Residential mortgage	**6,376**	7,697	10,174	**305**	348	444	**77**	87	105
Total residential real estate – excluding PCI	**$ 8,687**	$ 10,066	$ 12,609	**$ 430**	$ 476	$ 581	**$ 157**	$ 172	$ 195

(a) Generally, interest income on loans modified in TDRs is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms, unless the loan is deemed to be collateral-dependent.

Loan modifications

Modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

The following table presents new TDRs reported by the Firm.

Year ended December 31, (in millions)	**2016**	2015	2014
Home equity	**$ 385**	$ 401	$ 321
Residential mortgage	**254**	267	411
Total residential real estate – excluding PCI	**$ 639**	$ 668	$ 732

Nature and extent of modifications

The U.S. Treasury's Making Home Affordable programs, as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following table provides information about how residential real estate loans, excluding PCI loans, were modified under the Firm's loss mitigation programs described above during the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

	Home equity			Residential mortgage			Total residential real estate – excluding PCI		
Year ended December 31,	**2016**	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Number of loans approved for a trial modification	**3,760**	3,933	1,565	**1,945**	2,711	3,108	**5,705**	6,644	4,673
Number of loans permanently modified	**4,824**	4,296	3,984	**3,338**	3,145	5,648	**8,162**	7,441	9,632
Concession granted:[a]									
Interest rate reduction	**75%**	66%	75%	**76%**	71%	45%	**76%**	68%	58%
Term or payment extension	**83**	89	78	**90**	81	52	**86**	86	63
Principal and/or interest deferred	**19**	23	21	**16**	27	15	**18**	24	18
Principal forgiveness	**9**	7	26	**26**	28	52	**16**	16	41
Other[b]	**6**	–	–	**25**	11	10	**14**	5	6

(a) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession. A significant portion of trial modifications include interest rate reductions and/or term or payment extensions.

(b) Represents variable interest rate to fixed interest rate modifications.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under the loss mitigation programs described above and about redefaults of certain loans modified in TDRs for the periods presented. Because the specific types and amounts of concessions offered to borrowers frequently change between the trial modification and the permanent modification, the following table presents only the financial effects of permanent modifications. This table also excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

Year ended December 31, (in millions, except weighted-average data and number of loans)	Home equity			Residential mortgage			Total residential real estate – excluding PCI		
	2016	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Weighted-average interest rate of loans with interest rate reductions – before TDR	**4.99%**	5.20%	5.27%	**5.59%**	5.67%	5.74%	**5.36%**	5.51%	5.61%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**2.34**	2.35	2.30	**2.93**	2.79	2.96	**2.70**	2.64	2.78
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**18**	18	19	**24**	25	24	**22**	22	23
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**38**	35	33	**38**	37	36	**38**	36	36
Charge-offs recognized upon permanent modification	**$ 1**	$ 4	$ 27	**$ 4**	$ 11	$ 12	**$ 5**	$ 15	$ 39
Principal deferred	**23**	27	16	**30**	58	58	**53**	85	74
Principal forgiven	**7**	6	35	**44**	66	172	**51**	72	207
Balance of loans that redefaulted within one year of permanent modification[(a)]	**$ 40**	$ 21	$ 29	**$ 98**	$ 133	$ 214	**$ 138**	$ 154	$ 243

(a) Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

At December 31, 2016, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 9 years for home equity and 10 years for residential mortgage. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

Active and suspended foreclosure

At December 31, 2016 and 2015, the Firm had non-PCI residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $932 million and $1.2 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Other consumer loans

The table below provides information for other consumer retained loan classes, including auto, business banking and student loans.

December 31, (in millions, except ratios)	Auto		Business banking		Student and other		Total other consumer	
	2016	2015	**2016**	2015	**2016**	2015	**2016**	2015
Loan delinquency[a]								
Current	**$65,029**	$ 59,442	**$ 22,312**	$ 20,887	**$ 8,397**	$ 9,405	**$95,738**	$ 89,734
30–119 days past due	**773**	804	**247**	215	**374**	445	**1,394**	1,464
120 or more days past due	**12**	9	**139**	106	**218**	246	**369**	361
Total retained loans	**$65,814**	$ 60,255	**$ 22,698**	$ 21,208	**$ 8,989**	$ 10,096	**$97,501**	$ 91,559
% of 30+ days past due to total retained loans	**1.19%**	1.35%	**1.70%**	1.51%	**1.38%** [d]	1.63% [d]	**1.33%** [d]	1.42% [d]
90 or more days past due and still accruing [b]	**$ –**	$ –	**$ –**	$ –	**$ 263**	$ 290	**$ 263**	$ 290
Nonaccrual loans	**214**	116	**286**	263	**175**	242	**675**	621
Geographic region								
California	**$ 7,975**	$ 7,186	**$ 4,158**	$ 3,530	**$ 935**	$ 1,051	**$13,068**	$ 11,767
Texas	**7,041**	6,457	**2,769**	2,622	**739**	839	**10,549**	9,918
New York	**4,078**	3,874	**3,510**	3,359	**1,187**	1,224	**8,775**	8,457
Illinois	**3,984**	3,678	**1,627**	1,459	**582**	679	**6,193**	5,816
Florida	**3,374**	2,843	**1,068**	941	**475**	516	**4,917**	4,300
Ohio	**2,194**	2,340	**1,366**	1,363	**490**	559	**4,050**	4,262
Arizona	**2,209**	2,033	**1,270**	1,205	**202**	236	**3,681**	3,474
Michigan	**1,567**	1,550	**1,308**	1,361	**355**	415	**3,230**	3,326
New Jersey	**2,031**	1,998	**546**	500	**320**	366	**2,897**	2,864
Louisiana	**1,814**	1,713	**961**	997	**120**	134	**2,895**	2,844
All other	**29,547**	26,583	**4,115**	3,871	**3,584**	4,077	**37,246**	34,531
Total retained loans	**$65,814**	$ 60,255	**$ 22,698**	$ 21,208	**$ 8,989**	$ 10,096	**$97,501**	$ 91,559
Loans by risk ratings[c]								
Noncriticized	**$13,899**	$ 11,277	**$ 16,858**	$ 15,505	**NA**	NA	**$30,757**	$ 26,782
Criticized performing	**201**	76	**816**	815	**NA**	NA	**1,017**	891
Criticized nonaccrual	**94**	–	**217**	210	**NA**	NA	**311**	210

(a) Student loan delinquency classifications included loans insured by U.S. government agencies under the FFELP as follows: current included $3.3 billion and $3.8 billion; 30-119 days past due included $257 million and $299 million; and 120 or more days past due included $211 million and $227 million at December 31, 2016 and 2015, respectively.

(b) These amounts represent student loans, insured by U.S. government agencies under the FFELP. These amounts were accruing as reimbursement of insured amounts is proceeding normally.

(c) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.

(d) December 31, 2016 and 2015, excluded loans 30 days or more past due and still accruing, that are insured by U.S. government agencies under the FFELP, of $468 million and $526 million, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

Other consumer impaired loans and loan modifications

The following table sets forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

December 31, (in millions)	**2016**	2015
Impaired loans		
With an allowance	**$ 614**	$ 527
Without an allowance[a]	**30**	31
Total impaired loans[b][c]	**$ 644**	$ 558
Allowance for loan losses related to impaired loans	**$ 119**	$ 118
Unpaid principal balance of impaired loans[d]	**753**	668
Impaired loans on nonaccrual status	**508**	449

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.

(b) Predominantly all other consumer impaired loans are in the U.S.

(c) Other consumer average impaired loans were $635 million, $566 million and $599 million for the years ended December 31, 2016, 2015 and 2014, respectively. The related interest income on impaired loans, including those on a cash basis, was not material for the years ended December 31, 2016, 2015 and 2014.

(d) Represents the contractual amount of principal owed at December 31, 2016 and 2015. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, interest payments received and applied to the principal balance, net deferred loan fees or costs and unamortized discounts or premiums on purchased loans.

Loan modifications

Certain other consumer loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All of these TDRs are reported as impaired loans in the table above.The following table provides information about the Firm's other consumer loans modified in TDRs. New TDRs were not material for the years ended December 31, 2016 and 2015.

December 31, (in millions)	2016	2015
Loans modified in TDRs[(a)(b)]	$ 362	$ 384
TDRs on nonaccrual status	226	275

(a) The impact of these modifications was not material to the Firm for the years ended December 31, 2016 and 2015.

(b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2016 and 2015 were immaterial.

Purchased credit-impaired loans

PCI loans are initially recorded at fair value at acquisition. PCI loans acquired in the same fiscal quarter may be aggregated into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer PCI loans were aggregated into pools of loans with common risk characteristics.

On a quarterly basis, the Firm estimates the total cash flows (both principal and interest) expected to be collected over the remaining life of each pool. These estimates incorporate assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that reflect then-current market conditions. Probable decreases in expected cash flows (i.e., increased credit losses) trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related forgone interest cash flows, discounted at the pool's effective interest rate. Impairments are recognized through the provision for credit losses and an increase in the allowance for loan losses. Probable and significant increases in expected cash flows (e.g., decreased credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans. The impacts of (i) prepayments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are recognized prospectively as adjustments to interest income.

The Firm continues to modify certain PCI loans. The impact of these modifications is incorporated into the Firm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans. In evaluating the effect of modifications on expected cash flows, the Firm incorporates the effect of any forgone interest and also considers the potential for redefault. The Firm develops product-specific probability of default estimates, which are used to compute expected credit losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment based upon industry-wide data. The Firm also considers its own historical loss experience to-date based on actual redefaulted modified PCI loans.

The excess of cash flows expected to be collected over the carrying value of the underlying loans is referred to as the accretable yield. This amount is not reported on the Firm's Consolidated balance sheets but is accreted into interest income at a level rate of return over the remaining estimated lives of the underlying pools of loans.

If the timing and/or amounts of expected cash flows on PCI loan pools were determined not to be reasonably estimable, no interest would be accreted and the loan pools would be reported as nonaccrual loans; however, since the timing and amounts of expected cash flows for the Firm's PCI consumer loan pools are reasonably estimable, interest is being accreted and the loan pools are being reported as performing loans.

The liquidation of PCI loans, which may include sales of loans, receipt of payment in full from the borrower, or foreclosure, results in removal of the loans from the underlying PCI pool. When the amount of the liquidation proceeds (e.g., cash, real estate), if any, is less than the unpaid principal balance of the loan, the difference is first applied against the PCI pool's nonaccretable difference for principal losses (i.e., the lifetime credit loss estimate established as a purchase accounting adjustment at the acquisition date). When the nonaccretable difference for a particular loan pool has been fully depleted, any excess of the unpaid principal balance of the loan over the liquidation proceeds is written off against the PCI pool's allowance for loan losses. Beginning in 2014, write-offs of PCI loans also include other adjustments, primarily related to interest forgiveness modifications. Because the Firm's PCI loans are accounted for at a pool level, the Firm does not recognize charge-offs of PCI loans when they reach specified stages of delinquency (i.e., unlike non-PCI consumer loans, these loans are not charged off based on FFIEC standards).

The PCI portfolio affects the Firm's results of operations primarily through: (i) contribution to net interest margin; (ii) expense related to defaults and servicing resulting from the liquidation of the loans; and (iii) any provision for loan losses. The PCI loans acquired in the Washington Mutual transaction were funded based on the interest rate characteristics of the loans. For example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with fixed-rate liabilities with a similar maturity profile. A net spread will be earned on the declining balance of the portfolio, which is estimated as of December 31, 2016, to have a remaining weighted-average life of 8 years.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

December 31, (in millions, except ratios)	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
	2016	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015
Carrying value[a]	**$12,902**	$14,989	**$ 7,602**	$ 8,893	**$ 2,941**	$ 3,263	**$12,234**	$13,853	**$35,679**	$40,998
Related allowance for loan losses[b]	**1,433**	1,708	**829**	985	**–**	–	**49**	49	**2,311**	2,742
Loan delinquency (based on unpaid principal balance)										
Current	**$12,423**	$14,387	**$ 6,840**	$ 7,894	**$ 3,005**	$ 3,232	**$11,074**	$12,370	**$33,342**	$37,883
30–149 days past due	**291**	322	**336**	424	**361**	439	**555**	711	**1,543**	1,896
150 or more days past due	**478**	633	**451**	601	**240**	380	**917**	1,272	**2,086**	2,886
Total loans	**$13,192**	$15,342	**$ 7,627**	$ 8,919	**$ 3,606**	$ 4,051	**$12,546**	$14,353	**$36,971**	$42,665
% of 30+ days past due to total loans	**5.83%**	6.22%	**10.32%**	11.49%	**16.67%**	20.22%	**11.73%**	13.82%	**9.82%**	11.21%
Current estimated LTV ratios (based on unpaid principal balance)[c][d]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 69**	$ 153	**$ 6**	$ 10	**$ 7**	$ 10	**$ 12**	$ 19	**$ 94**	$ 192
Less than 660	**39**	80	**17**	28	**31**	55	**18**	36	**105**	199
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**555**	942	**52**	120	**39**	77	**83**	166	**729**	1,305
Less than 660	**256**	444	**84**	152	**135**	220	**144**	239	**619**	1,055
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**1,860**	2,709	**442**	816	**214**	331	**558**	977	**3,074**	4,833
Less than 660	**804**	1,136	**381**	614	**439**	643	**609**	1,050	**2,233**	3,443
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	**6,676**	6,724	**3,967**	4,243	**919**	863	**6,754**	7,073	**18,316**	18,903
Less than 660	**2,183**	2,265	**2,287**	2,438	**1,645**	1,642	**3,783**	4,065	**9,898**	10,410
No FICO/LTV available	**750**	889	**391**	498	**177**	210	**585**	728	**1,903**	2,325
Total unpaid principal balance	**$13,192**	$15,342	**$ 7,627**	$ 8,919	**$ 3,606**	$ 4,051	**$12,546**	$14,353	**$36,971**	$42,665
Geographic region (based on unpaid principal balance)										
California	**$ 7,899**	$ 9,205	**$ 4,396**	$ 5,172	**$ 899**	$ 1,005	**$ 7,128**	$ 8,108	**$20,322**	$23,490
Florida	**1,306**	1,479	**501**	586	**332**	373	**1,026**	1,183	**3,165**	3,621
New York	**697**	788	**515**	580	**363**	400	**711**	813	**2,286**	2,581
Washington	**673**	819	**167**	194	**68**	81	**290**	339	**1,198**	1,433
New Jersey	**280**	310	**210**	238	**125**	139	**401**	470	**1,016**	1,157
Illinois	**314**	358	**226**	263	**178**	196	**282**	333	**1,000**	1,150
Massachusetts	**94**	112	**173**	199	**110**	125	**346**	398	**723**	834
Maryland	**64**	73	**144**	159	**145**	161	**267**	297	**620**	690
Arizona	**241**	281	**124**	143	**68**	76	**181**	203	**614**	703
Virginia	**77**	88	**142**	170	**56**	62	**314**	354	**589**	674
All other	**1,547**	1,829	**1,029**	1,215	**1,262**	1,433	**1,600**	1,855	**5,438**	6,332
Total unpaid principal balance	**$13,192**	$15,342	**$ 7,627**	$ 8,919	**$ 3,606**	$ 4,051	**$12,546**	$14,353	**$36,971**	$42,665

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.

(b) Management concluded as part of the Firm's regular assessment of the PCI loan pools that it was probable that higher expected credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.

(d) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

Approximately 24% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following table sets forth delinquency statistics for PCI junior lien home equity loans and lines of credit based on the unpaid principal balance as of December 31, 2016 and 2015.

	Total loans		Total 30+ day delinquency rate	
December 31,	**2016**	2015	**2016**	2015
(in millions, except ratios)				
HELOCs:[a]				
Within the revolving period[b]	**$ 2,126**	$ 5,000	**3.67%**	4.10%
Beyond the revolving period[c]	**7,452**	6,252	**4.03**	4.46
HELOANs	**465**	582	**5.38**	5.33
Total	**$ 10,043**	$ 11,834	**4.01%**	4.35%

(a) In general, these HELOCs are revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.
(b) Substantially all undrawn HELOCs within the revolving period have been closed.
(c) Includes loans modified into fixed rate amortizing loans.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the years ended December 31, 2016, 2015 and 2014, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. The table excludes the cost to fund the PCI portfolios, and therefore the accretable yield does not represent net interest income expected to be earned on these portfolios.

Year ended December 31, (in millions, except ratios)	Total PCI		
	2016	2015	2014
Beginning balance	**$ 13,491**	$ 14,592	$ 16,167
Accretion into interest income	**(1,555)**	(1,700)	(1,934)
Changes in interest rates on variable-rate loans	**260**	279	(174)
Other changes in expected cash flows[a]	**(428)**	230	533
Reclassification from nonaccretable difference[b]	**–**	90	–
Balance at December 31	**$ 11,768**	$ 13,491	$ 14,592
Accretable yield percentage	**4.35%**	4.20%	4.19%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model, for example cash flows expected to be collected due to the impact of modifications and changes in prepayment assumptions.
(b) Reclassifications from the nonaccretable difference in the year ended December 31, 2015 were driven by continued improvement in home prices and delinquencies, as well as increased granularity in the impairment estimates.

Active and suspended foreclosure

At December 31, 2016 and 2015, the Firm had PCI residential real estate loans with an unpaid principal balance of $1.7 billion and $2.3 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30 days past due); information on those borrowers that have been delinquent for a longer period of time (90 days past due) is also considered. In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, the Firm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends to be a lagging indicator. However, the distribution of such scores provides a general indicator of credit quality trends within the portfolio. Refreshed FICO score information, which is obtained at least quarterly, for a statistically significant random sample of the credit card portfolio is indicated in the following table; FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in credit score technology.

The table below sets forth information about the Firm's credit card loans.

As of or for the year ended December 31, (in millions, except ratios)	2016	2015
Net charge-offs	**$ 3,442**	$ 3,122
% of net charge-offs to retained loans	**2.63%**	2.51%
Loan delinquency		
Current and less than 30 days past due and still accruing	**$ 139,434**	$ 129,502
30–89 days past due and still accruing	**1,134**	941
90 or more days past due and still accruing	**1,143**	944
Total retained credit card loans	**$ 141,711**	$ 131,387
Loan delinquency ratios		
% of 30+ days past due to total retained loans	**1.61%**	1.43%
% of 90+ days past due to total retained loans	**0.81**	0.72
Credit card loans by geographic region		
California	**$ 20,571**	$ 18,802
Texas	**13,220**	11,847
New York	**12,249**	11,360
Florida	**8,585**	7,806
Illinois	**8,189**	7,655
New Jersey	**6,271**	5,879
Ohio	**4,906**	4,700
Pennsylvania	**4,787**	4,533
Michigan	**3,741**	3,562
Colorado	**3,699**	3,399
All other	**55,493**	51,844
Total retained credit card loans	**$ 141,711**	$ 131,387
Percentage of portfolio based on carrying value with estimated refreshed FICO scores[(a)]		
Equal to or greater than 660	**84.4%**	84.4%
Less than 660	**14.2**	13.1
No FICO available	**1.4**	2.5

(a) The current period percentage of portfolio based on carrying value with estimated refreshed FICO scores disclosures have been updated to reflect where the FICO score is unavailable. The prior period amounts have been revised to conform with the current presentation.

Credit card impaired loans and loan modifications

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

December 31, (in millions)	2016	2015
Impaired credit card loans with an allowance[a][b]		
Credit card loans with modified payment terms[c]	**$ 1,098**	$ 1,286
Modified credit card loans that have reverted to pre-modification payment terms[d]	**142**	179
Total impaired credit card loans[e]	**$ 1,240**	$ 1,465
Allowance for loan losses related to impaired credit card loans	**$ 358**	$ 460

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
(b) There were no impaired loans without an allowance.
(c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.
(d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At December 31, 2016 and 2015, $94 million and $113 million, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. The remaining $48 million and $66 million at December 31, 2016 and 2015, respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.
(e) Predominantly all impaired credit card loans are in the U.S.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

Year ended December 31, (in millions)	2016	2015	2014
Average impaired credit card loans	**$ 1,325**	$ 1,710	$ 2,503
Interest income on impaired credit card loans	**63**	82	123

Loan modifications

JPMorgan Chase may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. Most of the credit card loans have been modified under long-term programs for borrowers who are experiencing financial difficulties. Modifications under long-term programs involve placing the customer on a fixed payment plan, generally for 60 months. The Firm may also offer short-term programs for borrowers who may be in need of temporary relief; however, none are currently being offered. Modifications under all short- and long-term programs typically include reducing the interest rate on the credit card. Substantially all modifications are considered to be TDRs.

If the cardholder does not comply with the modified payment terms, then the credit card loan agreement reverts back to its pre-modification payment terms. Assuming that the cardholder does not begin to perform in accordance with those payment terms, the loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In addition, if a borrower successfully completes a short-term modification program, then the loan reverts back to its pre-modification payment terms. However, in most cases, the Firm does not reinstate the borrower's line of credit.

New enrollments in these loan modification programs for the years ended December 31, 2016, 2015 and 2014, were $636 million, $638 million and $807 million, respectively.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the periods presented.

Year ended December 31, (in millions, except weighted-average data)	2016	2015	2014
Weighted-average interest rate of loans – before TDR	**15.56%**	15.08%	14.96%
Weighted-average interest rate of loans – after TDR	**4.76**	4.40	4.40
Loans that redefaulted within one year of modification[a]	**$ 79**	$ 85	$ 119

(a) Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default is deemed to have occurred when the loans become two payments past due. A substantial portion of these loans is expected to be charged-off in accordance with the Firm's standard charge-off policy. Based on historical experience, the estimated weighted-average default rate for modified credit card loans was expected to be 28.87%, 25.61% and 27.91% as of December 31, 2016, 2015 and 2014, respectively.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned to each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the PD and the LGD. The PD is the likelihood that a loan will default. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. The Firm's definition of criticized aligns with the banking regulatory definition of criticized exposures, which consist of special mention, substandard and doubtful categories. Risk ratings generally represent ratings profiles similar to those defined by S&P and Moody's. Investment-grade ratings range from "AAA/Aaa" to "BBB-/Baa3." Noninvestment-grade ratings are classified as noncriticized ("BB+/Ba1 and B-/B3") and criticized ("CCC+"/"Caa1 and below"), and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note 5 for further detail on industry concentrations.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

As of or for the year ended December 31, (in millions, except ratios)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other[d]		Total retained loans	
	2016	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015
Loans by risk ratings												
Investment grade	**$ 64,949**	$ 62,150	**$ 88,434**	$ 74,330	**$ 23,562**	$21,786	**$15,935**	$ 11,363	**$ 97,043**	$ 98,107	**$ 289,923**	$ 267,736
Noninvestment grade:												
Noncriticized	**47,149**	45,632	**16,883**	17,008	**8,317**	7,667	**439**	256	**11,772**	11,390	**84,560**	81,953
Criticized performing	**6,161**	4,542	**798**	1,251	**200**	320	**6**	7	**188**	253	**7,353**	6,373
Criticized nonaccrual	**1,482**	608	**200**	231	**9**	10	**–**	–	**263**	139	**1,954**	988
Total noninvestment grade	**54,792**	50,782	**17,881**	18,490	**8,526**	7,997	**445**	263	**12,223**	11,782	**93,867**	89,314
Total retained loans	**$119,741**	$112,932	**$106,315**	$ 92,820	**$ 32,088**	$29,783	**$16,380**	$ 11,626	**$109,266**	$109,889	**$ 383,790**	$ 357,050
% of total criticized to total retained loans	**6.38%**	4.56%	**0.94%**	1.60%	**0.65%**	1.11%	**0.04%**	0.06%	**0.41%**	0.36%	**2.43%**	2.06%
% of nonaccrual loans to total retained loans	**1.24**	0.54	**0.19**	0.25	**0.03**	0.03	**–**	–	**0.24**	0.13	**0.51**	0.28
Loans by geographic distribution[a]												
Total non-U.S.	**$ 30,259**	$ 30,063	**$ 3,292**	$ 3,003	**$ 14,741**	$17,166	**$ 3,726**	$ 1,788	**$ 39,496**	$ 42,031	**$ 91,514**	$ 94,051
Total U.S.	**89,482**	82,869	**103,023**	89,817	**17,347**	12,617	**12,654**	9,838	**69,770**	67,858	**292,276**	262,999
Total retained loans	**$119,741**	$112,932	**$106,315**	$ 92,820	**$ 32,088**	$29,783	**$16,380**	$ 11,626	**$109,266**	$109,889	**$ 383,790**	$ 357,050
Net charge-offs/ (recoveries)	**$ 335**	$ 26	**$ (7)**	$ (14)	**$ (2)**	$ (5)	**$ (1)**	$ (8)	**$ 16**	$ 11	**$ 341**	$ 10
% of net charge-offs/ (recoveries) to end-of-period retained loans	**0.28%**	0.02%	**(0.01)%**	(0.02)%	**(0.01)%**	(0.02)%	**(0.01)%**	(0.07)%	**0.01%**	0.01%	**0.09%**	–%
Loan delinquency[b]												
Current and less than 30 days past due and still accruing	**$117,905**	$112,058	**$105,958**	$ 92,381	**$ 32,036**	$29,713	**$16,269**	$ 11,565	**$108,350**	$108,734	**$ 380,518**	$ 354,451
30–89 days past due and still accruing	**268**	259	**155**	193	**22**	49	**107**	55	**634**	988	**1,186**	1,544
90 or more days past due and still accruing[c]	**86**	7	**2**	15	**21**	11	**4**	6	**19**	28	**132**	67
Criticized nonaccrual	**1,482**	608	**200**	231	**9**	10	**–**	–	**263**	139	**1,954**	988
Total retained loans	**$119,741**	$112,932	**$106,315**	$ 92,820	**$ 32,088**	$29,783	**$16,380**	$ 11,626	**$109,266**	$109,889	**$ 383,790**	$ 357,050

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality.
(c) Represents loans that are considered well-collateralized and therefore still accruing interest.
(d) Other includes individuals, SPEs, holding companies, and private education and civic organizations. For more information on exposures to SPEs, see Note 16.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio for the periods indicated. Exposure consists primarily of secured commercial loans, of which multifamily is the largest segment. Multifamily lending finances acquisition, leasing and construction of apartment buildings, and includes exposure to real estate investment trusts ("REITs"). Other commercial lending largely includes financing for acquisition, leasing and construction, largely for office, retail and industrial real estate, and includes exposure to REITs. Included in real estate loans is $9.2 billion and $7.3 billion as of December 31, 2016 and 2015, respectively, of construction and development exposure consisting of loans originally purposed for construction and development, general purpose loans for builders, as well as loans for land subdivision and pre-development.

December 31, (in millions, except ratios)	Multifamily		Other Commercial		Total real estate loans	
	2016	2015	**2016**	2015	**2016**	**2015**
Real estate retained loans	**$ 71,978**	$ 64,271	**$ 34,337**	$ 28,549	**$ 106,315**	$ 92,820
Criticized	**539**	562	**459**	920	**998**	1,482
% of criticized to total real estate retained loans	**0.75%**	0.87%	**1.34%**	3.22%	**0.94%**	1.60%
Criticized nonaccrual	**$ 57**	$ 85	**$ 143**	$ 146	**$ 200**	$ 231
% of criticized nonaccrual to total real estate retained loans	**0.08%**	0.13%	**0.42%**	0.51%	**0.19%**	0.25%

Wholesale impaired loans and loan modifications

Wholesale impaired loans consist of loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15.

The table below sets forth information about the Firm's wholesale impaired loans.

December 31, (in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	2016	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015
Impaired loans												
With an allowance	**$ 1,119**	$ 522	**$ 125**	$ 148	**$ 9**	$ 10	**$ –**	$ –	**$ 187**	$ 46	**$ 1,440**	$ 726
Without an allowance[a]	**414**	98	**87**	106	**–**	–	**–**	–	**76**	94	**577**	298
Total impaired loans	**$ 1,533**	$ 620	**$ 212**	$ 254	**$ 9**	$ 10	**$ –**	$ –	**$ 263**	$ 140	**$ 2,017** [c]	$ 1,024 [c]
Allowance for loan losses related to impaired loans	**$ 258**	$ 220	**$ 18**	$ 27	**$ 3**	$ 3	**$ –**	$ –	**$ 63**	$ 24	**$ 342**	$ 274
Unpaid principal balance of impaired loans[b]	**1,754**	669	**295**	363	**12**	13	**–**	–	**284**	164	**2,345**	1,209

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.

(b) Represents the contractual amount of principal owed at December 31, 2016 and 2015. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.

(c) Based upon the domicile of the borrower, largely consists of loans in the U.S.

The following table presents the Firm's average impaired loans for the years ended 2016, 2015 and 2014.

Year ended December 31, (in millions)	**2016**	2015	2014
Commercial and industrial	**$ 1,480**	$ 453	$ 243
Real estate	**217**	250	297
Financial institutions	**13**	13	20
Government agencies	**–**	–	–
Other	**213**	129	155
Total[a]	**$ 1,923**	$ 845	$ 715

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the years ended December 31, 2016, 2015 and 2014.

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above. TDRs were $733 million and $208 million as of December 31, 2016 and 2015.

Note 15 – Allowance for credit losses

JPMorgan Chase's allowance for loan losses covers the consumer, including credit card, portfolio segments (primarily scored) and wholesale (risk-rated) portfolio, and represents management's estimate of probable credit losses inherent in the Firm's retained loan portfolio. The allowance for loan losses includes a formula-based component, an asset-specific component, and a component related to PCI loans, as described below. Management also estimates an allowance for wholesale and certain consumer lending-related commitments using methodologies similar to those used to estimate the allowance on the underlying loans. During 2016, the Firm did not make any significant changes to the methodologies or policies used to determine its allowance for credit losses; such policies are described in the following paragraphs.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods. At least quarterly, the allowance for credit losses is reviewed by the CRO, the CFO and the Controller of the Firm and discussed with the DRPC and the Audit Committee. As of December 31, 2016, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses inherent in the portfolio).

Formula-based component

The formula-based component is based on a statistical calculation to provide for incurred credit losses in all consumer loans and performing risk-rated loans, except for any loans restructured in TDRs and PCI loans, which are calculated as a part of the asset-specific and PCI components, respectively, and are discussed later in this Note. See Note 14 for more information on TDRs and PCI loans.

Formula-based component - Consumer loans and certain lending-related commitments

The formula-based allowance for credit losses for the consumer portfolio segments is calculated by applying statistical credit loss factors (estimated PD and loss severities) to the recorded investment balances or loan-equivalent amounts of pools of loan exposures with similar risk characteristics over a loss emergence period to arrive at an estimate of incurred credit losses. Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends. In addition, management applies judgment to the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate the total incurred credit losses in the portfolio. Management uses additional statistical methods and considers actual portfolio performance, including actual losses recognized on defaulted loans and collateral valuation trends, to review the appropriateness of the primary statistical loss estimate. The economic impact of potential modifications of residential real estate loans is not included in the statistical calculation because of the uncertainty regarding the type and results of such modifications.

The statistical calculation is then adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation; these adjustments are accomplished in part by analyzing the historical loss experience for each major product segment. However, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment in making this adjustment, taking into account uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, borrower behavior, the potential impact of payment recasts within the HELOC portfolio, and other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties. For example, the performance of a HELOC that experiences a payment recast may be affected by both the quality of underwriting standards applied in originating the loan and the general economic conditions in effect at the time of the payment recast. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. The application of different inputs into the statistical calculation, and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for credit losses for the consumer credit portfolio.

Overall, the allowance for credit losses for the consumer portfolio, including credit card, is sensitive to changes in the economic environment (e.g., unemployment rates), delinquency rates, the realizable value of collateral (e.g., housing prices), FICO scores, borrower behavior and other risk factors. While all of these factors are important determinants of overall allowance levels, changes in the various factors may not occur at the same time or at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across all geographies or product types. Finally, it is difficult to predict the extent to which changes in these factors would ultimately affect the frequency of losses, the severity of losses or both.

Formula-based component - Wholesale loans and lending-related commitments

The Firm's methodology for determining the allowance for loan losses and the allowance for lending-related commitments involves the early identification of credits that are deteriorating. The formula-based component of the allowance for wholesale loans and lending-related commitments is calculated by applying statistical credit loss factors (estimated PD and LGD) to the recorded investment balances or loan-equivalent amount over a loss emergence period to arrive at an estimate of incurred credit losses.

The Firm assesses the credit quality of its borrower or counterparty and assigns a risk rating. Risk ratings are assigned at origination or acquisition, and if necessary, adjusted for changes in credit quality over the life of the exposure. In assessing the risk rating of a particular loan or lending-related commitment, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Determining risk ratings involves significant judgment; emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm.

PD estimates are based on observable external through-the-cycle data, using credit rating agency default statistics.

An LGD estimate is assigned to each loan or lending-related commitment. The estimate represents the amount of economic loss if the obligor were to default. The type of obligor, quality of collateral, and the seniority of the Firm's lending exposure in the obligor's capital structure affect LGD. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle. Changes to the time period used for PD and LGD estimates (for example, point-in-time loss versus longer-term views of the credit cycle) could also affect the allowance for credit losses.

The Firm applies judgment in estimating PD, LGD, loss emergence period and loan-equivalent amounts used in calculating the allowance for credit losses. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances, but differences in characteristics between the Firm's specific loans or lending-related commitments and those reflected in external and Firm-specific historical data could affect loss estimates. Estimates of PD, LGD, loss emergence period and loan-equivalent used are subject to periodic refinement based on any changes to underlying external or Firm-specific historical data. The use of different inputs, estimates or methodologies could change the amount of the allowance for credit losses determined appropriate by the Firm.

In addition to the modeled loss estimates applied to wholesale loans and lending-related commitments, management applies its judgment to adjust the modeled loss estimates for wholesale loans, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both LGD and PD are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

Asset-specific component

The asset-specific component of the allowance relates to loans considered to be impaired, which includes loans that have been modified in TDRs as well as risk-rated loans that have been placed on nonaccrual status. To determine the asset-specific component of the allowance, larger loans are evaluated individually, while smaller loans are evaluated as pools using historical loss experience for the respective class of assets. Scored loans (i.e., consumer loans) are pooled by product type, while risk-rated loans (primarily wholesale loans) are segmented by risk rating.

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are reported as an adjustment to the allowance for loan losses. In certain cases, the asset-specific allowance is determined using an observable market price, and the allowance is measured as the difference between the recorded investment in the loan and the loan's fair value. Impaired collateral-dependent loans are charged down to the fair value of collateral less costs to sell. For any of these impaired loans, the amount of the asset-specific allowance required to be recorded, if any, is dependent upon the recorded investment in the loan (including prior charge-offs), expected cash flows and/or fair value of assets. See Note 14 for more information about charge-offs and collateral-dependent loans.

The asset-specific component of the allowance for impaired loans that have been modified in TDRs incorporates the effects of forgone interest, if any, in the present value calculation and also incorporates the effect of the modification on the loan's expected cash flows, which considers the potential for redefault. For residential real estate loans modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to date based on actual redefaulted modified loans. For credit

card loans modified in TDRs, expected losses incorporate projected redefaults based on the Firm's historical experience by type of modification program. For wholesale loans modified in TDRs, expected losses incorporate management's expectation of the borrower's ability to repay under the modified terms.

Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections rely upon estimates such as loss severities, asset valuations, default rates (including redefault rates on modified loans), the amounts and timing of interest or principal payments (including any expected prepayments) or other factors that are reflective of current and expected market conditions. These estimates are, in turn, dependent on factors such as the duration of current overall economic conditions, industry-, portfolio-, or borrower-specific factors, the expected outcome of insolvency proceedings as well as, in certain circumstances, other economic factors, including the level of future home prices. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

PCI loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain PCI loans, which are accounted for as described in Note 14. The allowance for loan losses for the PCI portfolio is based on quarterly estimates of the amount of principal and interest cash flows expected to be collected over the estimated remaining lives of the loans.

These cash flow projections are based on estimates regarding default rates (including redefault rates on modified loans), loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are dependent on assumptions regarding the level of future home prices, and the duration of current overall economic conditions, among other factors. These estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Allowance for credit losses and related information

The table below summarizes information about the allowances for loan losses, and lending-relating commitments, and includes a breakdown of loans and lending-related commitments by impairment methodology.

Year ended December 31, (in millions)	2016			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses				
Beginning balance at January 1,	$ 5,806	$ 3,434	$ 4,315	$ 13,555
Gross charge-offs	1,500	3,799	398	5,697
Gross recoveries	(591)	(357)	(57)	(1,005)
Net charge-offs/(recoveries)	909	3,442	341	4,692
Write-offs of PCI loans[a]	156	–	–	156
Provision for loan losses	467	4,042	571	5,080
Other	(10)	–	(1)	(11)
Ending balance at December 31,	$ 5,198	$ 4,034	$ 4,544	$ 13,776
Allowance for loan losses by impairment methodology				
Asset-specific[b]	$ 308	$ 358 [c]	$ 342	$ 1,008
Formula-based	2,579	3,676	4,202	10,457
PCI	2,311	–	–	2,311
Total allowance for loan losses	$ 5,198	$ 4,034	$ 4,544	$ 13,776
Loans by impairment methodology				
Asset-specific	$ 8,940	$ 1,240	$ 2,017	$ 12,197
Formula-based	319,787	140,471	381,770	842,028
PCI	35,679	–	3	35,682
Total retained loans	$ 364,406	$ 141,711	$ 383,790	$ 889,907
Impaired collateral-dependent loans				
Net charge-offs	$ 98	$ –	$ 7	$ 105
Loans measured at fair value of collateral less cost to sell	2,391	–	300	2,691
Allowance for lending-related commitments				
Beginning balance at January 1,	$ 14	$ –	$ 772	$ 786
Provision for lending-related commitments	–	–	281	281
Other	12	–	(1)	11
Ending balance at December 31,	$ 26	$ –	$ 1,052	$ 1,078
Allowance for lending-related commitments by impairment methodology				
Asset-specific	$ –	$ –	$ 169	$ 169
Formula-based	26	–	883	909
Total allowance for lending-related commitments	$ 26	$ –	$ 1,052	$ 1,078
Lending-related commitments by impairment methodology				
Asset-specific	$ –	$ –	$ 506	$ 506
Formula-based	54,797	553,891	367,508	976,196
Total lending-related commitments	$ 54,797	$ 553,891	$ 368,014	$ 976,702

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation). During the fourth quarter of 2014, the Firm recorded a $291 million adjustment to reduce the PCI allowance and the recorded investment in the Firm's PCI loan portfolio, primarily reflecting the cumulative effect of interest forgiveness modifications. This adjustment had no impact to the Firm's Consolidated statements of income.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(d) Effective January 1, 2015, the Firm no longer includes within its disclosure of wholesale lending-related commitments the unused amount of advised uncommitted lines of credit as it is within the Firm's discretion whether or not to make a loan under these lines, and the Firm's approval is generally required prior to funding. Prior period amounts have been revised to conform with the current period presentation.

(table continued from previous page)

2015				2014			
Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
$ 7,050	$ 3,439	$ 3,696	$ 14,185	$ 8,456	$ 3,795	$ 4,013	$ 16,264
1,658	3,488	95	5,241	2,132	3,831	151	6,114
(704)	(366)	(85)	(1,155)	(814)	(402)	(139)	(1,355)
954	3,122	10	4,086	1,318	3,429	12	4,759
208	–	–	208	533	–	–	533
(82)	3,122	623	3,663	414	3,079	(269)	3,224
–	(5)	6	1	31	(6)	(36)	(11)
$ 5,806	$ 3,434	$ 4,315	$ 13,555	$ 7,050	$ 3,439	$ 3,696	$ 14,185
$ 364	$ 460 [c]	$ 274	$ 1,098	$ 539	$ 500 [c]	$ 87	$ 1,126
2,700	2,974	4,041	9,715	3,186	2,939	3,609	9,734
2,742	–	–	2,742	3,325	–	–	3,325
$ 5,806	$ 3,434	$ 4,315	$ 13,555	$ 7,050	$ 3,439	$ 3,696	$ 14,185
$ 9,606	$ 1,465	$ 1,024	$ 12,095	$ 12,020	$ 2,029	$ 637	$ 14,686
293,751	129,922	356,022	779,695	236,263	125,998	323,861	686,122
40,998	–	4	41,002	46,696	–	4	46,700
$ 344,355	$ 131,387	$ 357,050	$ 832,792	$ 294,979	$ 128,027	$ 324,502	$ 747,508
$ 104	$ –	$ 16	$ 120	$ 133	$ –	$ 21	$ 154
2,566	–	283	2,849	3,025	–	326	3,351
$ 13	$ –	$ 609	$ 622	$ 8	$ –	$ 697	$ 705
1	–	163	164	5	–	(90)	(85)
–	–	–	–	–	–	2	2
$ 14	$ –	$ 772	$ 786	$ 13	$ –	$ 609	$ 622
$ –	$ –	$ 73	$ 73	$ –	$ –	$ 60	$ 60
14	–	699	713	13	–	549	562
$ 14	$ –	$ 772	$ 786	$ 13	$ –	$ 609	$ 622
$ –	$ –	$ 193	$ 193	$ –	$ –	$ 103	$ 103
58,478	515,518	366,206 [d]	940,202	58,153	525,963	366,778 [d]	950,894
$ 58,478	$ 515,518	$ 366,399	$ 940,395	$ 58,153	$ 525,963	$ 366,881	$ 950,997

Note 16 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the primary beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper conduit.

Line of Business	*Transaction Type*	*Activity*	*Annual Report page references*
CCB	Credit card securitization trusts	Securitization of both originated and purchased credit card receivables	232
	Mortgage securitization trusts	Servicing and securitization of both originated and purchased residential mortgages	233–235
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages and student loans	233–235
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	235–237
	Investor intermediation activities:		
	Municipal bond vehicles		235–236

The Firm's other business segments are also involved with VIEs, but to a lesser extent, as follows:

- Asset & Wealth Management: AWM sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AWM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For fund entities that qualify as VIEs, AWM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Commercial Banking: CB makes investments in and provides lending to community development entities that may meet the definition of a VIE. In addition, CB provides financing and lending-related services to certain client-sponsored VIEs. In general, CB does not control the activities of these entities and does not consolidate these entities.
- Corporate: Corporate is involved with entities that may meet the definition of VIEs; however these entities are generally subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs.

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 237 of this Note.

Significant Firm-sponsored variable interest entities

Credit card securitizations

The Card business securitizes both originated and purchased credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.

The Firm is considered to be the primary beneficiary of these Firm-sponsored credit card securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

The underlying securitized credit card receivables and other assets of the securitization trusts are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (generally 5%). As of December 31, 2016 and 2015, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $8.9 billion and $13.6 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 16% and 22% for the years ended December 31, 2016 and 2015. As of both December 31, 2016 and 2015, the Firm did not retain any senior securities and retained $5.3 billion of subordinated securities in certain of its credit card securitization trusts. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

Firm-sponsored mortgage and other securitization trusts
The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans (including student loans) primarily in its CCB and CIB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

The following table presents the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests, recourse or guarantee arrangements, and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. See Securitization activity on page 238 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and pages 238-239 of this Note for information on the Firm's loan sales to U.S. government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]		
December 31, 2016 (in millions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related[a]						
Residential mortgage:						
Prime/Alt-A and option ARMs	**$ 76,789**	**$ 4,209**	**$ 57,543**	**$ 226**	**$ 1,334**	**$ 1,560**
Subprime	**21,542**	**–**	**19,903**	**76**	**–**	**76**
Commercial and other[b]	**101,265**	**107**	**71,464**	**509**	**2,064**	**2,573**
Total	**$ 199,596**	**$ 4,316**	**$ 148,910**	**$ 811**	**$ 3,398**	**$ 4,209**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]		
December 31, 2015 (in millions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related[a]						
Residential mortgage:						
Prime/Alt-A and option ARMs	$ 85,687	$ 1,400	$ 66,708	$ 394	$ 1,619	$ 2,013
Subprime	24,389	64	22,549	109	–	109
Commercial and other[b]	123,474	107	80,319	447	3,451	3,898
Total	$ 233,550	$ 1,571	$ 169,576	$ 950	$ 5,070	$ 6,020

(a) Excludes U.S. government agency securitizations and re-securitizations, which are not Firm-sponsored. See pages 238-239 of this Note for information on the Firm's loan sales to U.S. government agencies.
(b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties.
(c) Excludes the following: retained servicing (see Note 17 for a discussion of MSRs); securities retained from loan sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (See Note 6 for further information on derivatives); senior and subordinated securities of $180 million and $49 million, respectively, at December 31, 2016, and $163 million and $73 million, respectively, at December 31, 2015, which the Firm purchased in connection with CIB's secondary market-making activities.
(d) Includes interests held in re-securitization transactions.
(e) As of December 31, 2016 and 2015, 61% and 76%, respectively, of the Firm's retained securitization interests, which are carried at fair value, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of $1.5 billion and $1.9 billion of investment-grade and $77 million and $93 million of noninvestment-grade retained interests at December 31, 2016 and 2015, respectively. The retained interests in commercial and other securitizations trusts consisted of $2.4 billion and $3.7 billion of investment-grade and $210 million and $198 million of noninvestment-grade retained interests at December 31, 2016 and 2015, respectively.

Residential mortgage
The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. CCB generally retains servicing for all residential mortgage loans it originated or purchased, and for certain mortgage loans purchased by CIB. For securitizations of loans serviced by CCB, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. CCB may also retain an interest upon securitization.

In addition, CIB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, CIB at times retains senior and/or subordinated interests (including residual interests) in residential mortgage securitizations at the time of securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by CIB or held by CCB, when considered together with the servicing arrangements entered into by CCB, the Firm is deemed to be the primary beneficiary of certain securitization trusts. See the table on page 237 of this Note for more information on consolidated residential mortgage securitizations.

The Firm does not consolidate a residential mortgage securitization (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust. At December 31, 2016 and 2015, the Firm did not consolidate the assets of certain Firm-sponsored residential mortgage securitization VIEs, in which the Firm had continuing involvement, primarily due to the fact that the Firm did not hold an interest in these trusts that could potentially be significant to the trusts. See the table on page 237 of this Note for more information on the consolidated residential mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations.

Commercial mortgages and other consumer securitizations
CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. CIB may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). The Firm generally does not retain an interest in the controlling class in its sponsored commercial mortgage securitization transactions. See the table on page 237 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

The Firm retains servicing responsibilities for certain student loan securitizations. The Firm has the power to direct the activities of these VIEs through these servicing responsibilities. See the table on page 237 of this Note for more information on the consolidated student loan securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

Re-securitizations
The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both agency (Federal National Mortgage Association ("Fannie Mae"), Federal Home Loan Mortgage Corporation ("Freddie Mac") and Government National Mortgage Association ("Ginnie Mae")) and nonagency (private-label) sponsored VIEs, which may be backed by either residential or commercial mortgages. The Firm's consolidation analysis is largely dependent on the Firm's role and interest in the re-securitization trusts. During the years ended December 31, 2016, 2015 and 2014, the Firm transferred $11.2 billion, $21.9 billion and $22.7 billion, respectively, of securities to agency VIEs, and $647 million, $777 million and $1.1 billion, respectively, of securities to private-label VIEs.

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients is seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its clients, considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.

In more limited circumstances, the Firm creates a nonagency re-securitization trust independently and not in conjunction with specific clients. In these circumstances, the Firm is deemed to have the unilateral ability to direct the most significant activities of the re-securitization trust because of the decisions made during the establishment and design of the trust; therefore, the Firm consolidates the re-securitization VIE if the Firm holds an interest that could potentially be significant.

Additionally, the Firm may invest in beneficial interests of third-party re-securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it was not involved in the initial design of the trust, or the Firm is involved with an independent third-party sponsor and demonstrates shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

As of December 31, 2016 and 2015, total assets (including the notional amount of interest-only securities) of nonconsolidated Firm-sponsored private-label re-securitization entities in which the Firm has continuing involvement were $875 million and $2.2 billion, respectively. At December 31, 2016 and 2015, the Firm held $2.0 billion and $4.6 billion, respectively, of interests in nonconsolidated agency re-securitization entities. The Firm's exposure to non-consolidated private-label re-securitization entities as of December 31, 2016 and 2015 was not material. As of December 31, 2016 and 2015, the Firm did not consolidate any agency re-securitizations. As of December 31, 2016 and 2015, the Firm consolidated an insignificant amount of assets and liabilities of Firm-sponsored private-label re-securitizations.

Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that provide secured financing, collateralized by pools of receivables and other financial assets, to customers of the Firm. The conduits fund their financing facilities through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, and to provide the conduits with funding to provide financing to customers in the event that the conduits do not obtain funding in the commercial paper market, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required is based upon commercial paper issuance and approximates 10% of the outstanding balance of commercial paper.

The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit enhancement facilities provided to the conduits. See page 237 of this Note for further information on consolidated VIE assets and liabilities.

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $21.2 billion and $15.7 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2016 and 2015, respectively. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. The Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded commitments were $7.4 billion and $5.6 billion at December 31, 2016 and 2015, respectively, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 29.

VIEs associated with investor intermediation activities

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions with these VIEs, typically using derivatives, to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in on behalf of clients are municipal bond vehicles.

Municipal bond vehicles

Municipal bond vehicles or tender option bond ("TOB") trusts allow investors to finance their municipal bond investments at short-term rates. In a typical TOB transaction, the trust purchases highly rated municipal bond(s) of a single issuer and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates ("Floaters") and (2) inverse floating-rate residual interests ("Residuals"). The Floaters are typically purchased by money market funds or other short-term investors and may be tendered, with requisite notice, to the TOB trust. The Residuals are retained by the investor seeking to finance its municipal bond investment. TOB transactions where the Residual is held by a third party investor are typically known as Customer TOB trusts, and Non-Customer TOB trusts are transactions where the Residual is retained by the Firm. The Firm serves as sponsor for all Non-Customer TOB transactions and certain Customer TOB transactions established prior to 2014. The Firm may provide various services to a TOB trust, including remarketing agent, liquidity or tender option provider, and/or sponsor.

J.P. Morgan Securities LLC may serve as a remarketing agent on the Floaters for TOB trusts. The remarketing agent is responsible for establishing the periodic variable rate on the Floaters, conducting the initial placement and remarketing tendered Floaters. The remarketing agent may, but is not obligated to, make markets in Floaters. At December 31, 2016 and 2015, the Firm held an insignificant amount of Floaters on its Consolidated balance sheets and did not hold any significant amounts during 2016 and 2015.

JPMorgan Chase Bank, N.A. or J.P. Morgan Securities LLC often serves as the sole liquidity or tender option provider for the TOB trusts. The liquidity provider's obligation to perform is conditional and is limited by certain events ("Termination Events"), which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the liquidity provider's exposure is typically further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or, in certain transactions, the reimbursement agreements with the Residual holders.

Holders of the Floaters may "put," or tender, their Floaters to the TOB trust. If the remarketing agent cannot successfully remarket the Floaters to another investor, the liquidity provider either provides a loan to the TOB trust for the TOB trust's purchase of the Floaters, or it directly purchases the tendered Floaters. In certain Customer TOB transactions, the Firm, as liquidity provider, has entered into a reimbursement agreement with the Residual holder. In those transactions, upon the termination of the vehicle, if the proceeds from the sale of the underlying municipal bonds are not sufficient to repay amounts owed to the Firm, as liquidity or tender option provider, the Firm has recourse to the third party Residual holders for any shortfall. Residual holders with reimbursement agreements are required to post collateral with the Firm to support such reimbursement obligations should the market value of the underlying municipal bonds decline. The Firm does not have any intent to protect Residual holders from potential losses on any of the underlying municipal bonds.

TOB trusts are considered to be variable interest entities. The Firm consolidates Non-Customer TOB trusts because as the Residual holder, the Firm has the right to make decisions that significantly impact the economic performance of the municipal bond vehicle, and it has the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle. The Firm does not consolidate Customer TOB trusts, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle. Certain non-consolidated Customer TOB trusts are sponsored by a third party, and not the Firm. See page 237 of this Note for further information on consolidated municipal bond vehicles.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31, 2016 and 2015, including the ratings profile of the VIEs' assets, was as follows.

December 31, (in millions)	Fair value of assets held by VIEs	Liquidity facilities	Excess/(deficit)[a]	Maximum exposure
Nonconsolidated municipal bond vehicles				
2016	**$ 1,096**	**$ 662**	**$ 434**	**$ 662**
2015	6,937	3,794	3,143	3,794

	Ratings profile of VIE assets[b]						
	Investment-grade						
December 31, (in millions, except where otherwise noted)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB+ to BBB-	Unrated[c]	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
2016	**$ 264**	**$ 700**	**$ 43**	**$ 24**	**$ 65**	**$ 1,096**	**1.6**
2015	1,743	4,631	448	24	91	$ 6,937	4.0

(a) Represents the excess/(deficit) of the fair values of municipal bond assets available to repay the liquidity facilities, if drawn.
(b) The ratings scale is presented on an S&P-equivalent basis.
(c) These security positions have been defeased by the municipality and no longer carry credit ratings, but are backed by high-quality assets such as U.S. treasuries and cash.

VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, remarketing agent, trustee or custodian. These transactions are conducted at arm's-length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm records and reports these positions on its Consolidated balance sheets in the same manner it would record and report positions in respect of any other third-party transaction.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2016 and 2015.

	Assets				Liabilities		
December 31, 2016 (in millions)	Trading assets	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type[a]							
Firm-sponsored credit card trusts	**$ –**	**$ 45,919**	**$ 790**	**$ 46,709**	**$ 31,181**	**$ 18**	**$ 31,199**
Firm-administered multi-seller conduits	**–**	**23,760**	**43**	**23,803**	**2,719**	**33**	**2,752**
Municipal bond vehicles	**2,897**	**–**	**8**	**2,905**	**2,969**	**2**	**2,971**
Mortgage securitization entities[b]	**143**	**4,246**	**103**	**4,492**	**468**	**313**	**781**
Student loan securitization entities	**–**	**1,689**	**59**	**1,748**	**1,527**	**4**	**1,531**
Other	**145**	**–**	**2,318**	**2,463**	**183**	**120**	**303**
Total	**$ 3,185**	**$ 75,614**	**$ 3,321**	**$ 82,120**	**$ 39,047**	**$ 490**	**$ 39,537**

	Assets				Liabilities		
December 31, 2015 (in millions)	Trading assets	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type[a]							
Firm-sponsored credit card trusts	$ –	$ 47,358	$ 718	$ 48,076	$ 27,906	$ 15	$ 27,921
Firm-administered multi-seller conduits	–	24,388	37	24,425	8,724	19	8,743
Municipal bond vehicles	2,686	–	5	2,691	2,597	1	2,598
Mortgage securitization entities[b]	840	1,433	27	2,300	777	643	1,420
Student loan securitization entities	–	1,925	62	1,987	1,760	5	1,765
Other	210	–	1,916	2,126	115	126	241
Total	$ 3,736	$ 75,104	$ 2,765	$ 81,605	$ 41,879	$ 809	$ 42,688

(a) Excludes intercompany transactions, which are eliminated in consolidation.
(b) Includes residential and commercial mortgage securitizations as well as re-securitizations.
(c) Includes assets classified as cash, AFS securities, and other assets on the Consolidated balance sheets.
(d) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.
(e) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated balance sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $33.4 billion and $30.6 billion at December 31, 2016 and 2015, respectively. The maturities of the long-term beneficial interests as of December 31, 2016, were as follows: $11.6 billion under one year, $19.1 billion between one and five years, and $2.7 billion over five years.
(f) Includes liabilities classified as accounts payable and other liabilities on the Consolidated balance sheets.

Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgage, credit card, student and commercial (primarily related to real estate) loans, as well as debt securities. The purposes of these securitization transactions were to satisfy investor demand and to generate liquidity for the Firm.

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when all of the following accounting criteria for a sale are met: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

Securitization activity

The following table provides information related to the Firm's securitization activities for the years ended December 31, 2016, 2015 and 2014, related to assets held in Firm-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved based on the accounting rules in effect at the time of the securitization.

	2016		2015		2014	
Year ended December 31, (in millions, except rates)	Residential mortgage[c][d]	Commercial and other[d][e]	Residential mortgage[c][d]	Commercial and other[d][e]	Residential mortgage[c][d]	Commercial and other[d][e]
Principal securitized	**$ 1,817**	**$ 8,964**	$ 3,008	$ 11,933	$ 2,558	$ 11,911
All cash flows during the period:[a]						
Proceeds received from loan sales as cash	**$ –**	**$ –**	$ –	$ –	$ –	$ 568
Proceeds received from loan sales as securities						
Level 2	**1,831**	**9,092**	2,963	11,968	2,384	11,381
Level 3	**–**	**2**	59	43	185	130
Total proceeds received from loan sales	**$ 1,831**	**$ 9,094**	$ 3,022	$ 12,011	$ 2,569	$ 12,079
Servicing fees collected	**477**	**3**	528	3	557	4
Purchases of previously transferred financial assets (or the underlying collateral)[b]	**37**	**–**	3	–	121	–
Cash flows received on interests	**482**	**1,441**	407	597	179	578

(a) Excludes re-securitization transactions.
(b) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities - for example, loan repurchases due to representation and warranties and servicer "clean-up" calls.
(c) Includes prime/Alt-A, subprime, and option ARMs. Excludes certain loan securitization transactions entered into with Ginnie Mae, Fannie Mae and Freddie Mac.
(d) Key assumptions used to measure residential mortgage retained interests originated during the year included weighted-average life (in years) of 4.5, 4.2 and 5.9 for the years ended December 31, 2016, 2015 and 2014, respectively, and weighted-average discount rate of 4.2%, 2.9% and 3.4% for the years ended December 31, 2016, 2015 and 2014, respectively. Key assumptions used to measure commercial and other retained interests originated during the year included weighted-average life (in years) of 6.2, 6.2 and 6.5 for the years ended December 31, 2016, 2015 and 2014, respectively, and weighted-average discount rate of 5.8%, 4.1% and 4.8% for the years ended December 31, 2016, 2015 and 2014, respectively.
(e) Includes commercial mortgage and student loan securitizations.

Loans and excess MSRs sold to U.S. government-sponsored enterprises, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. government sponsored enterprises ("U.S. GSEs"). These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. See Note 29 for additional information about the Firm's loan sales- and securitization-related indemnifications.

See Note 17 for additional information about the impact of the Firm's sale of certain excess MSRs.

The following table summarizes the activities related to loans sold to the U.S. GSEs, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities.

Year ended December 31, (in millions)	2016	2015	2014
Carrying value of loans sold	**$ 52,869**	$ 42,161	$ 55,802
Proceeds received from loan sales as cash	**$ 592**	$ 313	$ 260
Proceeds from loans sales as securities[a]	**51,852**	41,615	55,117
Total proceeds received from loan sales[b]	**$ 52,444**	$ 41,928	$ 55,377
Gains on loan sales[c][d]	**$ 222**	$ 299	$ 316

(a) Predominantly includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt.
(b) Excludes the value of MSRs retained upon the sale of loans.
(c) Gains on loan sales include the value of MSRs.
(d) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 29, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability. As of December 31, 2016 and 2015, the Firm had recorded on its Consolidated balance sheets $9.6 billion and $11.1 billion, respectively, of loans that either had been repurchased or for which the Firm had an option to repurchase. Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools. Additionally, at December 31, 2016 and 2015, the Firm had real estate owned of $142 million and $343 million, respectively, and certain foreclosed government-guaranteed residential mortgage loans included in accrued interest and accounts receivable of $1.0 billion and $1.1 billion, respectively, resulting from voluntary repurchases of loans. Substantially all of these loans and real estate are insured or guaranteed by U.S. government agencies. For additional information, refer to Note 14.

Loan delinquencies and liquidation losses

The table below includes information about components of nonconsolidated securitized financial assets held in Firm-sponsored private-label securitization entities, in which the Firm has continuing involvement, and delinquencies as of December 31, 2016 and 2015.

	Securitized assets		90 days past due		Liquidation losses	
As of or for the year ended December 31, (in millions)	**2016**	2015	**2016**	2015	**2016**	2015
Securitized loans[a]						
Residential mortgage:						
Prime/ Alt-A & option ARMs	**$ 57,543**	$ 66,708	**$ 6,169**	$ 8,325	**$ 1,160**	$ 1,946
Subprime	**19,903**	22,549	**4,186**	5,448	**1,087**	1,431
Commercial and other	**71,464**	80,319	**1,755**	1,808	**643**	375
Total loans securitized	**$ 148,910**	$ 169,576	**$ 12,110**	$ 15,581	**$ 2,890**	$ 3,752

(a) Total assets held in securitization-related SPEs were $199.6 billion and $233.6 billion, respectively, at December 31, 2016 and 2015. The $148.9 billion and $169.6 billion, respectively, of loans securitized at December 31, 2016 and 2015, excludes: $46.4 billion and $62.4 billion, respectively, of securitized loans in which the Firm has no continuing involvement, and $4.3 billion and $1.6 billion, respectively, of loan securitizations consolidated on the Firm's Consolidated balance sheets at December 31, 2016 and 2015.

Note 17 – Goodwill and Mortgage servicing rights

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	2016	2015	2014
Consumer & Community Banking	**$ 30,797**	$ 30,769	$ 30,941
Corporate & Investment Bank	**6,772**	6,772	6,780
Commercial Banking	**2,861**	2,861	2,861
Asset & Wealth Management	**6,858**	6,923	6,964
Corporate	**–**	–	101
Total goodwill	**$ 47,288**	$ 47,325	$ 47,647

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	2016	2015	2014
Balance at beginning of period	**$ 47,325**	$ 47,647	$ 48,081
Changes during the period from:			
Business combinations	**–**	28	43
Dispositions[(a)]	**(72)**	(160)	(80)
Other[(b)]	**35**	(190)	(397)
Balance at December 31,	**$ 47,288**	$ 47,325	$ 47,647

(a) For 2016, represents AWM goodwill, which was disposed of as part of AWM sales completed in March 2016. For 2015 includes $101 million of Private Equity goodwill, which was disposed of as part of the Private Equity sale completed in January 2015.

(b) Includes foreign currency translation adjustments, other tax-related adjustments, and, for 2014, goodwill impairment associated with the Firm's Private Equity business of $276 million.

Impairment testing

The Firm's goodwill was not impaired at December 31, 2016 and 2015. Further, except for goodwill related to its heritage Private Equity business of $276 million, the Firm's goodwill was not impaired at December 31, 2014.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The Firm uses the reporting units' allocated equity plus goodwill capital as a proxy for the carrying amounts of equity for the reporting units in the goodwill impairment testing. Reporting unit equity is determined on a similar basis as the allocation of equity to the Firm's lines of business, which takes into consideration the capital the business segment would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III) and capital levels for similarly rated peers. Proposed line of business equity levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors. Allocated equity is further reviewed on a periodic basis and updated as needed.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. This approach projects cash flows for the forecast period and uses the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' earnings forecasts, which include the estimated effects of regulatory and legislative changes, and which are reviewed with the senior management of the Firm. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firms' overall estimated cost of equity to ensure reasonableness.

The valuations derived from the discounted cash flow analysis are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to assess the general reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that naturally exist between the Firm's businesses and competitor institutions. Management also takes into consideration a comparison between the aggregate fair values of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (i) a control premium that would exist in a market transaction, (ii) factors related to the level of execution risk that would exist at the firmwide level that do not exist at the reporting unit level and (iii) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

Declines in business performance, increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, estimates of adverse regulatory or legislative changes or increases in the estimated market cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights

MSRs represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm has elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late charges and other ancillary revenue, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that comprise the MSR asset. Conversely, securities (e.g., mortgage-backed securities), principal-only certificates and certain derivatives (i.e., those for which the Firm receives fixed-rate interest payments) increase in value when interest rates decline. JPMorgan Chase uses combinations of derivatives and securities to manage the risk of changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2016, 2015 and 2014.

As of or for the year ended December 31, (in millions, except where otherwise noted)	2016	2015	2014	
Fair value at beginning of period	**$ 6,608**	$ 7,436	$ 9,614	
MSR activity:				
Originations of MSRs	**679**	550	757	
Purchase of MSRs	**–**	435	11	
Disposition of MSRs[a]	**(109)**	(486)	(209)	
Net additions	**570**	499	559	
Changes due to collection/realization of expected cash flows	**(919)**	(922)	(911)	
Changes in valuation due to inputs and assumptions:				
Changes due to market interest rates and other[b]	**(72)**	(160)	(1,608)	
Changes in valuation due to other inputs and assumptions:				
Projected cash flows (e.g., cost to service)	**(35)**	(112)	133	
Discount rates	**7**	(10)	(459)	[e]
Prepayment model changes and other[c]	**(63)**	(123)	108	
Total changes in valuation due to other inputs and assumptions	**(91)**	(245)	(218)	
Total changes in valuation due to inputs and assumptions	**(163)**	(405)	(1,826)	
Fair value at December 31,	**$ 6,096**	$ 6,608	$ 7,436	
Change in unrealized gains/(losses) included in income related to MSRs held at December 31,	**$ (163)**	$ (405)	$ (1,826)	
Contractual service fees, late fees and other ancillary fees included in income	**2,124**	2,533	2,884	
Third-party mortgage loans serviced at December 31, (in billions)	**593.3**	677.0	756.1	
Servicer advances, net of an allowance for uncollectible amounts, at December 31, (in billions)[d]	**4.7**	6.5	8.5	

(a) Includes excess MSRs transferred to agency-sponsored trusts in exchange for stripped mortgage backed securities ("SMBS"). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired the remaining balance of those SMBS as trading securities.

(b) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(c) Represents changes in prepayments other than those attributable to changes in market interest rates.

(d) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these servicer advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

(e) For the year ending December 31, 2014, the negative impact was primarily related to higher capital allocated to the Mortgage Servicing business, which, in turn, resulted in an increase in the OAS. The resulting OAS assumption was consistent with capital and return requirements the Firm believed a market participant would consider, taking into account factors such as the operating risk environment and regulatory and economic capital requirements.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2016, 2015 and 2014.

Year ended December 31, (in millions)	2016	2015	2014
CCB mortgage fees and related income			
Net production revenue	**$ 853**	$ 769	$1,190
Net mortgage servicing revenue:			
Operating revenue:			
Loan servicing revenue	**2,336**	2,776	3,303
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(916)**	(917)	(905)
Total operating revenue	**1,420**	1,859	2,398
Risk management:			
Changes in MSR asset fair value due to market interest rates and other[(a)]	**(72)**	(160)	(1,606)
Other changes in MSR asset fair value due to other inputs and assumptions in model[(b)]	**(91)**	(245)	(218)
Change in derivative fair value and other	**380**	288	1,796
Total risk management	**217**	(117)	(28)
Total net mortgage servicing revenue	**1,637**	1,742	2,370
Total CCB mortgage fees and related income	**2,490**	2,511	3,560
All other	**1**	2	3
Mortgage fees and related income	**$2,491**	$ 2,513	$3,563

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices).

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2016 and 2015, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

December 31, (in millions, except rates)	2016	2015
Weighted-average prepayment speed assumption ("CPR")	**9.41%**	9.81%
Impact on fair value of 10% adverse change	**$ (231)**	$ (275)
Impact on fair value of 20% adverse change	**(445)**	(529)
Weighted-average option adjusted spread	**8.55%**	9.54%
Impact on fair value of 100 basis points adverse change	**$ (248)**	$ (258)
Impact on fair value of 200 basis points adverse change	**(477)**	(498)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

Note 18 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 19 – Deposits

At December 31, 2016 and 2015, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	2016	2015	
U.S. offices			
Noninterest-bearing	**$ 400,831**	$ 392,721	
Interest-bearing (included **$12,245** and $10,916 at fair value)[a]	**737,949**	663,004	
Total deposits in U.S. offices	**1,138,780**	1,055,725	
Non-U.S. offices			
Noninterest-bearing	**14,764**	14,489	[b]
Interest-bearing (included **$1,667** and $1,600 at fair value)[a]	**221,635**	209,501	[b]
Total deposits in non-U.S. offices	**236,399**	223,990	
Total deposits	**$ 1,375,179**	$1,279,715	

(a) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 4.
(b) Prior periods have been revised to conform with current period presentation.

At December 31, 2016 and 2015, time deposits in denominations of $250,000 or more were as follows.

December 31, (in millions)	2016	2015
U.S. offices	**$ 26,180**	$ 64,519
Non-U.S. offices	**55,249**	48,091
Total	**$ 81,429**	$ 112,610

At December 31, 2016, the maturities of interest-bearing time deposits were as follows.

December 31, 2016 (in millions)	U.S.	Non-U.S.	**Total**
2017	$ 31,531	$ 54,846	$ 86,377
2018	4,433	176	4,609
2019	2,066	68	2,134
2020	2,005	39	2,044
2021	3,988	188	4,176
After 5 years	3,889	–	3,889
Total	$ 47,912	$ 55,317	$ 103,229

Note 20 – Accounts payable and other liabilities

Accounts payable and other liabilities consist of brokerage payables, which includes payables to customers, dealers and clearing organizations, and payables from security purchases that did not settle; income taxes payables; accrued expense, including interest-bearing liabilities; and all other liabilities, including litigation reserves and obligations to return securities received as collateral.

The following table details the components of accounts payable and other liabilities.

December 31, (in millions)	2016	2015
Brokerage payables	**$ 109,842**	$ 107,632
Accounts payable and other liabilities	**80,701**	70,006
Total	**$ 190,543**	$ 177,638

Note 21 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated statements of income. The following table is a summary of long-term debt carrying values (including unamortized premiums and discounts, issuance costs, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2016.

By remaining maturity at December 31, (in millions, except rates)		2016				2015
		Under 1 year	1-5 years	After 5 years	**Total**	Total
Parent company						
Senior debt:	Fixed rate	**$ 12,109**	**$ 57,938**	**$ 58,920**	**$ 128,967**	$ 117,758
	Variable rate	**11,870**	**15,497**	**7,399**	**34,766**	44,178
	Interest rates[a]	**0.09-6.40%**	**0.17-7.25%**	**0.45-6.40%**	**0.09-7.25%**	0.16-7.25%
Subordinated debt:	Fixed rate	**$ 2,096**	**$ 152**	**$ 14,563**	**$ 16,811**	$ 16,250
	Variable rate	**864**	**372**	**9**	**1,245**	1,047
	Interest rates[a]	**0.82-6.13%**	**1.93-8.53%**	**3.38-8.00%**	**0.82-8.53%**	1.06-8.53%
	Subtotal	**$ 26,939**	**$ 73,959**	**$ 80,891**	**$ 181,789**	$ 179,233
Subsidiaries						
Federal Home Loan Banks advances:	Fixed rate	**$ 5**	**$ 31**	**$ 143**	**$ 179**	$ 191
	Variable rate	**11,340**	**57,000**	**11,000**	**79,340**	71,390
	Interest rates[a]	**0.84-1.01%**	**0.83-1.21%**	**0.41-0.67%**	**0.41-1.21%**	0.17-0.72%
Senior debt:	Fixed rate	**$ 339**	**$ 3,100**	**$ 4,890**	**$ 8,329**	$ 5,550
	Variable rate	**4,520**	**11,860**	**2,999**	**19,379**	20,588
	Interest rates[a]	**1.29-1.49%**	**0.00-7.50%**	**1.30-7.50%**	**0.00-7.50%**	0.47-7.28%
Subordinated debt:	Fixed rate	**$ 3,562**	**$ –**	**$ 322**	**$ 3,884**	$ 6,580
	Variable rate	**–**	**–**	**–**	**–**	1,150
	Interest rates[a]	**6.00%**	**–%**	**8.25%**	**6.00-8.25%**	0.83-8.25%
	Subtotal	**$ 19,766**	**$ 71,991**	**$ 19,354**	**$ 111,111**	$ 105,449
Junior subordinated debt:	Fixed rate	**$ –**	**$ –**	**$ 706**	**$ 706**	$ 717
	Variable rate	**–**	**–**	**1,639**	**1,639**	3,252
	Interest rates[a]	**–%**	**–%**	**1.39-8.75%**	**1.39-8.75%**	0.83-8.75%
	Subtotal	**$ –**	**$ –**	**$ 2,345**	**$ 2,345**	$ 3,969
Total long-term debt[b][c][d]		**$ 46,705**	**$ 145,950**	**$ 102,590**	**$ 295,245** [f][g]	$ 288,651
Long-term beneficial interests:	Fixed rate	**$ 5,164**	**$ 12,766**	**$ 748**	**$ 18,678**	$ 14,199
	Variable rate	**6,438**	**6,281**	**1,962**	**14,681**	16,358
	Interest rates	**0.74-5.23%**	**0.98-7.87%**	**0.39-5.94%**	**0.39-7.87%**	0.00-15.94%
Total long-term beneficial interests[e]		**$ 11,602**	**$ 19,047**	**$ 2,710**	**$ 33,359**	$ 30,557

(a) The interest rates shown are the range of contractual rates in effect at December 31, 2016 and 2015, respectively, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2016, for total long-term debt was (0.18)% to 8.88%, versus the contractual range of 0.00% to 8.75% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.

(b) Included long-term debt of $82.2 billion and $76.6 billion secured by assets totaling $205.6 billion and $171.6 billion at December 31, 2016 and 2015, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.

(c) Included $37.7 billion and $33.1 billion of long-term debt accounted for at fair value at December 31, 2016 and 2015, respectively.

(d) Included $7.5 billion and $5.5 billion of outstanding zero-coupon notes at December 31, 2016 and 2015, respectively. The aggregate principal amount of these notes at their respective maturities is $25.1 billion and $16.2 billion, respectively. The aggregate principal amount reflects the contractual principal payment at maturity, which may exceed the contractual principal payment at the Firm's next call date, if applicable.

(e) Included on the Consolidated balance sheets in beneficial interests issued by consolidated VIEs. Also included $120 million and $787 million accounted for at fair value at December 31, 2016 and 2015, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $5.7 billion and $11.3 billion at December 31, 2016 and 2015, respectively.

(f) At December 31, 2016, long-term debt in the aggregate of $81.8 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective instruments.

(g) The aggregate carrying values of debt that matures in each of the five years subsequent to 2016 is $46.7 billion in 2017, $49.4 billion in 2018, $32.2 billion in 2019, $33.8 billion in 2020 and $30.6 billion in 2021.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 2.49% and 2.34% as of December 31, 2016 and 2015, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 2.01% and 1.64% as of December 31, 2016 and 2015, respectively.

JPMorgan Chase & Co. has guaranteed certain long-term debt of its subsidiaries, including both long-term debt and structured notes. These guarantees rank on parity with the Firm's other unsecured and unsubordinated indebtedness. The amount of such guaranteed long-term debt and structured notes was $3.9 billion and $152 million at December 31, 2016 and 2015, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities

At December 31, 2016, the Firm had outstanding eight wholly-owned Delaware statutory business trusts ("issuer trusts") that had issued trust preferred securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $2.3 billion and $4.0 billion at December 31, 2016 and 2015, respectively, were reflected on the Firm's Consolidated balance sheets in long-term debt, and in the table on the preceding page under the caption "Junior subordinated debt." The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated balance sheets at December 31, 2016 and 2015. Beginning in 2014, the debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, began being phased out from inclusion as Tier 1 capital under Basel III and they were fully phased out as of December 31, 2016. As of December 31, 2015, $992 million of these debentures qualified as Tier 1 capital. As of December 31, 2016 and 2015, $1.4 billion and $3.0 billion, respectively, qualified as Tier 2 capital.

The Firm redeemed $1.6 billion and $1.5 billion of trust preferred securities in the years ended December 31, 2016 and 2015, respectively.

Note 22 – Preferred stock

At December 31, 2016 and 2015, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock with respect to the payment of dividends and the distribution of assets.

The following is a summary of JPMorgan Chase's non-cumulative preferred stock outstanding as of December 31, 2016 and 2015.

	Shares at December 31, 2016 and 2015[a]	Carrying value at December 31, 2016 and 2015 (in millions)	Issue date	Contractual rate in effect at December 31, 2016	Earliest redemption date	Date at which dividend rate becomes floating	Floating annual rate of three-month LIBOR plus:
Fixed-rate:							
Series O	**125,750**	**$ 1,258**	8/27/2012	**5.500%**	9/1/2017	NA	NA
Series P	**90,000**	**900**	2/5/2013	**5.450**	3/1/2018	NA	NA
Series T	**92,500**	**925**	1/30/2014	**6.700**	3/1/2019	NA	NA
Series W	**88,000**	**880**	6/23/2014	**6.300**	9/1/2019	NA	NA
Series Y	**143,000**	**1,430**	2/12/2015	**6.125**	3/1/2020	NA	NA
Series AA	**142,500**	**1,425**	6/4/2015	**6.100**	9/1/2020	NA	NA
Series BB	**115,000**	**1,150**	7/29/2015	**6.150**	9/1/2020	NA	NA
Fixed-to-floating-rate:							
Series I	**600,000**	**6,000**	4/23/2008	**7.900%**	4/30/2018	4/30/2018	LIBOR + 3.47%
Series Q	**150,000**	**1,500**	4/23/2013	**5.150**	5/1/2023	5/1/2023	LIBOR + 3.25
Series R	**150,000**	**1,500**	7/29/2013	**6.000**	8/1/2023	8/1/2023	LIBOR + 3.30
Series S	**200,000**	**2,000**	1/22/2014	**6.750**	2/1/2024	2/1/2024	LIBOR + 3.78
Series U	**100,000**	**1,000**	3/10/2014	**6.125**	4/30/2024	4/30/2024	LIBOR + 3.33
Series V	**250,000**	**2,500**	6/9/2014	**5.000**	7/1/2019	7/1/2019	LIBOR + 3.32
Series X	**160,000**	**1,600**	9/23/2014	**6.100**	10/1/2024	10/1/2024	LIBOR + 3.33
Series Z	**200,000**	**2,000**	4/21/2015	**5.300**	5/1/2020	5/1/2020	LIBOR + 3.80
Total preferred stock	**2,606,750**	**$ 26,068**					

(a) Represented by depositary shares.

Each series of preferred stock has a liquidation value and redemption price per share of $10,000, plus accrued but unpaid dividends.

Dividends on fixed-rate preferred stock are payable quarterly. Dividends on fixed-to-floating-rate preferred stock are payable semiannually while at a fixed rate, and become payable quarterly after converting to a floating rate.

Redemption rights

Each series of the Firm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date for that series. All outstanding preferred stock series except Series I may also be redeemed following a "capital treatment event", as described in the terms of each series. Any redemption of the Firm's preferred stock is subject to non-objection from the Board of Governors of the Federal Reserve System (the "Federal Reserve").

Note 23 – Common stock

At December 31, 2016 and 2015, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during the years ended December 31, 2016, 2015 and 2014 were as follows.

Year ended December 31, (in millions)	**2016**	2015	2014
Total issued – balance at January 1	**4,104.9**	4,104.9	4,104.9
Treasury – balance at January 1	**(441.4)**	(390.1)	(348.8)
Purchase of treasury stock	**(140.4)**	(89.8)	(82.3)
Issued from treasury:			
Employee benefits and compensation plans	**26.0**	32.8	39.8
Warrant exercise	**11.1**	4.7	–
Employee stock purchase plans	**1.0**	1.0	1.2
Total issued from treasury	**38.1**	38.5	41.0
Total treasury – balance at December 31	**(543.7)**	(441.4)	(390.1)
Outstanding at December 31	**3,561.2**	3,663.5	3,714.8

At December 31, 2016, 2015, and 2014, respectively, the Firm had 24.9 million, 47.4 million and 59.8 million warrants outstanding to purchase shares of common stock (the "Warrants"). The Warrants are currently traded on the New York Stock Exchange, and they are exercisable, in whole or in part, at any time and from time to time until October 28, 2018. The original warrant exercise price was $42.42 per share. The number of shares issuable upon the exercise of each warrant and the warrant exercise price is subject to adjustment upon the occurrence of certain events, including, but not limited to, the extent to which regular quarterly cash dividends exceed $0.38 per share. As a result of the Firm's quarterly common stock dividend exceeding $0.38 per share commencing with the second quarter of 2014, the exercise price of the Warrants has been adjusted each subsequent quarter. As of December 31, 2016 the exercise price was $42.073 and the Warrant share number was 1.01.

On June 29, 2016, in conjunction with the Federal Reserve's release of its 2016 CCAR results, the Firm's Board of Directors authorized a $10.6 billion common equity (i.e., common stock and warrants) repurchase program. As of December 31, 2016, $6.1 billion (on a settlement-date basis) of authorized repurchase capacity remained under the program. This authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plans.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2016, 2015 and 2014, on a settlement-date basis. There were no warrants repurchased during the years ended December 31, 2016, 2015 and 2014.

Year ended December 31, (in millions)	2016	2015	2014
Total number of shares of common stock repurchased	**140.4**	89.8	82.3
Aggregate purchase price of common stock repurchases	**$ 9,082**	$ 5,616	$ 4,760

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "blackout periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information. For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on page 22.

As of December 31, 2016, approximately 154 million shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the Warrants.

Note 24 – Earnings per share

Earnings per share ("EPS") is calculated under the two-class method under which all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities based on their respective rights to receive dividends. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2016, 2015 and 2014.

Year ended December 31, (in millions, except per share amounts)	2016	2015	2014
Basic earnings per share			
Net income	**$ 24,733**	$ 24,442	$ 21,745
Less: Preferred stock dividends	**1,647**	1,515	1,125
Net income applicable to common equity	**23,086**	22,927	20,620
Less: Dividends and undistributed earnings allocated to participating securities	**503**	521	543
Net income applicable to common stockholders	**$ 22,583**	$ 22,406	$ 20,077
Total weighted-average basic shares outstanding	**3,618.5**	3,700.4	3,763.5
Net income per share	**$ 6.24**	$ 6.05	$ 5.33
Diluted earnings per share			
Net income applicable to common stockholders	**$ 22,583**	$ 22,406	$ 20,077
Total weighted-average basic shares outstanding	**3,618.5**	3,700.4	3,763.5
Add: Employee stock options, SARs, warrants and PSUs[(a)]	**31.3**	32.4	34.0
Total weighted-average diluted shares outstanding[(b)]	**3,649.8**	3,732.8	3,797.5
Net income per share	**$ 6.19**	$ 6.00	$ 5.29

(a) Excluded from the computation of diluted EPS (due to the antidilutive effect) were certain options issued under employee benefit plans. The aggregate number of shares issuable upon the exercise of such options was not material for the years ended December 31, 2016 and 2015 and were 1 million for the year ended December 31, 2014.

(b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

Note 25 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on investment securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities, and net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

Effective January 1, 2016, the Firm adopted new accounting guidance related to the recognition and measurement of financial liabilities where the fair value option has been elected. This guidance requires the portion of the total change in fair value caused by changes in the Firm's own credit risk ("DVA") to be presented separately in OCI; previously these amounts were recognized in net income. The guidance was required to be applied as of the beginning of the fiscal year of adoption by means of a cumulative effect adjustment to the Consolidated balance sheets, which resulted in a reclassification from retained earnings to AOCI.

Year ended December 31, (in millions)	Unrealized gains/(losses) on investment securities[a]	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	DVA on fair value option elected liabilities	Accumulated other comprehensive income/(loss)
Balance at December 31, 2013	$ 2,798	$ (136)	$ (139)	$ (1,324)	NA	$ 1,199
Net change	1,975	(11)	44	(1,018)	NA	990
Balance at December 31, 2014	$ 4,773	$ (147)	$ (95)	$ (2,342)	NA	$ 2,189
Net change	(2,144)	(15)	51	111	NA	(1,997)
Balance at December 31, 2015	$ 2,629	$ (162)	$ (44)	$ (2,231)	NA	$ 192
Cumulative effect of change in accounting principle	–	–	–	–	**154**	**154**
Net change	**(1,105)**	**(2)**	**(56)**	**(28)**	**(330)**	**(1,521)**
Balance at December 31, 2016	**$ 1,524**	**$ (164)**	**$ (100)**	**$ (2,259)**	**(176)**	**$ (1,175)**

(a) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS, including net unamortized unrealized gains and losses related to AFS securities transferred to HTM.

The following table presents the pre-tax and after-tax changes in the components of OCI.

	2016			2015			2014		
Year ended December 31, (in millions)	Pre-tax	Tax effect	After-tax	Pre-tax	Tax effect	After-tax	Pre-tax	Tax effect	After-tax
Unrealized gains/(losses) on investment securities:									
Net unrealized gains/(losses) arising during the period	**$ (1,628)**	**$ 611**	**$ (1,017)**	$ (3,315)	$ 1,297	$ (2,018)	$ 3,193	$ (1,170)	$ 2,023
Reclassification adjustment for realized (gains)/losses included in net income[a]	**(141)**	**53**	**(88)**	(202)	76	(126)	(77)	29	(48)
Net change	**(1,769)**	**664**	**(1,105)**	(3,517)	1,373	(2,144)	3,116	(1,141)	1,975
Translation adjustments:									
Translation[b]	**(261)**	**99**	**(162)**	(1,876)	682	(1,194)	(1,638)	588	(1,050)
Hedges[b]	**262**	**(102)**	**160**	1,885	(706)	1,179	1,698	(659)	1,039
Net change	**1**	**(3)**	**(2)**	9	(24)	(15)	60	(71)	(11)
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**(450)**	**168**	**(282)**	(97)	35	(62)	98	(39)	59
Reclassification adjustment for realized (gains)/losses included in net income[c][d]	**360**	**(134)**	**226**	180	(67)	113	(24)	9	(15)
Net change	**(90)**	**34**	**(56)**	83	(32)	51	74	(30)	44
Defined benefit pension and OPEB plans:									
Prior service credits arising during the period	**–**	**–**	**–**	–	–	–	(53)	21	(32)
Net gains/(losses) arising during the period	**(366)**	**145**	**(221)**	29	(47)	(18)	(1,697)	688	(1,009)
Reclassification adjustments included in net income[e]:									
Amortization of net loss	**257**	**(97)**	**160**	282	(106)	176	72	(29)	43
Prior service costs/(credits)	**(36)**	**14**	**(22)**	(36)	14	(22)	(44)	17	(27)
Settlement loss/(gain)	**4**	**(1)**	**3**	–	–	–	–	–	–
Foreign exchange and other	**77**	**(25)**	**52**	33	(58)	(25)	39	(32)	7
Net change	**(64)**	**36**	**(28)**	308	(197)	111	(1,683)	665	(1,018)
DVA on fair value option elected liabilities, net change:	**$ (529)**	**$ 199**	**$ (330)**	$ –	$ –	$ –	$ –	$ –	$ –
Total other comprehensive income/(loss)	**$ (2,451)**	**$ 930**	**$ (1,521)**	$ (3,117)	$ 1,120	$ (1,997)	$ 1,567	$ (577)	$ 990

(a) The pre-tax amount is reported in securities gains in the Consolidated statements of income.
(b) Reclassifications of pre-tax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. The amounts were not material for the periods presented.
(c) The pre-tax amounts are predominantly recorded in net interest income in the Consolidated statements of income.
(d) In 2015, the Firm reclassified approximately $150 million of net losses from AOCI to other income because the Firm determined that it is probable that the forecasted interest payment cash flows will not occur. For additional information, see Note 6.
(e) The pre-tax amount is reported in compensation expense in the Consolidated statements of income.

Note 26 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

Effective tax rate and expense

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for each of the years ended December 31, 2016, 2015 and 2014, is presented in the following table.

Effective tax rate

Year ended December 31,	2016	2015	2014
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	**2.4**	1.5	2.7
Tax-exempt income	**(3.1)**	(3.3)	(3.1)
Non-U.S. subsidiary earnings[a]	**(1.7)**	(3.9)	(2.0)
Business tax credits	**(3.9)**	(3.7)	(3.3)
Nondeductible legal expense	**0.3**	0.8	2.3
Tax audit resolutions	**–**	(5.7)	(1.4)
Other, net	**(0.6)**	(0.3)	(1.0)
Effective tax rate	**28.4%**	20.4%	29.2%

(a) Predominantly includes earnings of U.K. subsidiaries that are deemed to be reinvested indefinitely.

The components of income tax expense/(benefit) included in the Consolidated statements of income were as follows for each of the years ended December 31, 2016, 2015, and 2014.

Income tax expense/(benefit)

Year ended December 31, (in millions)	2016	2015	2014
Current income tax expense/(benefit)			
U.S. federal	**$ 2,488**	$ 3,160	$ 2,382
Non-U.S.	**1,760**	1,220	1,353
U.S. state and local	**904**	547	857
Total current income tax expense/ (benefit)	**5,152**	4,927	4,592
Deferred income tax expense/(benefit)			
U.S. federal	**4,364**	1,213	3,890
Non-U.S.	**(73)**	(95)	71
U.S. state and local	**360**	215	401
Total deferred income tax expense/(benefit)	**4,651**	1,333	4,362
Total income tax expense	**$ 9,803**	$ 6,260	$ 8,954

Total income tax expense includes $55 million, $2.4 billion and $451 million of tax benefits recorded in 2016, 2015, and 2014, respectively, as a result of tax audit resolutions.

Tax effect of items recorded in stockholders' equity

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity. The tax effect of all items recorded directly to stockholders' equity resulted in an increase of $925 million in 2016, an increase of $1.5 billion in 2015, and a decrease of $140 million in 2014. Effective January 1, 2016, the Firm adopted new accounting guidance related to employee share-based payments. As a result of the adoption of this new guidance, all excess tax benefits (including tax benefits from dividends or dividend equivalents) on share-based payment awards are recognized within income tax expense in the Consolidated statements of income. In prior years these tax benefits were recorded as increases to additional paid-in capital.

Results from Non-U.S. earnings

The following table presents the U.S. and non-U.S. components of income before income tax expense for the years ended December 31, 2016, 2015 and 2014.

Year ended December 31, (in millions)	2016	2015	2014
U.S.	**$ 26,651**	$ 23,191	$ 23,422
Non-U.S.[a]	**7,885**	7,511	7,277
Income before income tax expense	**$ 34,536**	$ 30,702	$ 30,699

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Based on JPMorgan Chase's

ongoing review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill these requirements and needs, the Firm has determined that the undistributed earnings of certain of its subsidiaries would be indefinitely reinvested to fund current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. For 2016, pretax earnings of $3.8 billion were generated and will be indefinitely reinvested in these subsidiaries. At December 31, 2016, the cumulative amount of undistributed pretax earnings in these subsidiaries were $38.4 billion. If the Firm were to record a deferred tax liability associated with these undistributed earnings, the amount would be $8.8 billion at December 31, 2016.

These undistributed earnings are related to subsidiaries located predominantly in the U.K. where the 2016 tax rate was 28%.

Affordable housing tax credits

The Firm recognized $1.7 billion, $1.6 billion and $1.6 billion of tax credits and other tax benefits associated with investments in affordable housing projects within income tax expense for the years 2016, 2015 and 2014, respectively. The amount of amortization of such investments reported in income tax expense under the current period presentation during these years was $1.2 billion, $1.1 billion and $1.1 billion, respectively. The carrying value of these investments, which are reported in other assets on the Firm's Consolidated balance sheets, was $8.8 billion and $7.7 billion at December 31, 2016 and 2015, respectively. The amount of commitments related to these investments, which are reported in accounts payable and other liabilities on the Firm's Consolidated balance sheets, was $2.8 billion and $2.0 billion at December 31, 2016 and 2015, respectively.

Deferred taxes

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2016 and 2015.

December 31, (in millions)	2016	2015
Deferred tax assets		
Allowance for loan losses	**$ 5,534**	$ 5,343
Employee benefits	**2,911**	2,972
Accrued expenses and other	**6,831**	7,299
Non-U.S. operations	**5,368**	5,365
Tax attribute carryforwards	**2,155**	2,602
Gross deferred tax assets	**22,799**	23,581
Valuation allowance	**(785)**	(735)
Deferred tax assets, net of valuation allowance	**$ 22,014**	$ 22,846
Deferred tax liabilities		
Depreciation and amortization	**$ 3,294**	$ 3,167
Mortgage servicing rights, net of hedges	**4,807**	4,968
Leasing transactions	**4,053**	3,042
Non-U.S. operations	**4,572**	4,285
Other, net	**5,493**	4,419
Gross deferred tax liabilities	**22,219**	19,881
Net deferred tax (liabilities)/assets	**$ (205)**	$ 2,965

JPMorgan Chase has recorded deferred tax assets of $2.2 billion at December 31, 2016, in connection with U.S. federal and non-U.S. NOL carryforwards and foreign tax credit carryforwards. At December 31, 2016, total U.S. federal NOL carryforwards were approximately $3.8 billion and non-U.S. NOL carryforwards were $142 million. If not utilized, the U.S. federal NOL carryforwards will expire between 2025 and 2036 and the non-U.S. NOL carryforwards will expire in 2017. Foreign tax credit carryforwards were $776 million and will expire between 2022 and 2026.

The valuation allowance at December 31, 2016, was due to losses associated with non-U.S. subsidiaries.

Unrecognized tax benefits

At December 31, 2016, 2015 and 2014, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $3.5 billion, $3.5 billion and $4.9 billion, respectively, of which $2.6 billion, $2.1 billion and $3.5 billion, respectively, if recognized, would reduce the annual effective tax rate. Included in the amount of unrecognized tax benefits are certain items that would not affect the effective tax rate if they were recognized in the Consolidated statements of income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income tax deductions, and the portion of gross non-U.S. unrecognized tax benefits that would have offsets in other jurisdictions. JPMorgan Chase is presently under audit by a number of taxing authorities, most notably by the Internal Revenue Service as summarized in the Tax examination status table below. As JPMorgan Chase is presently under audit by a number of taxing authorities, it is reasonably possible that over the next 12 months the resolution of these examinations may increase or decrease the gross balance of unrecognized tax benefits by as much as $800 million. Upon settlement of an audit, the change in the unrecognized tax benefit would result from payment or income statement recognition.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2016, 2015 and 2014.

Year ended December 31, (in millions)	**2016**	2015	2014
Balance at January 1,	**$ 3,497**	$ 4,911	$ 5,535
Increases based on tax positions related to the current period	**262**	408	810
Increases based on tax positions related to prior periods	**583**	1,028	477
Decreases based on tax positions related to prior periods	**(785)**	(2,646)	(1,902)
Decreases related to cash settlements with taxing authorities	**(56)**	(204)	(9)
Decreases related to a lapse of applicable statute of limitations	**(51)**	–	–
Balance at December 31,	**$ 3,450**	$ 3,497	$ 4,911

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $86 million, $(156) million and $17 million in 2016, 2015 and 2014, respectively.

At December 31, 2016 and 2015, in addition to the liability for unrecognized tax benefits, the Firm had accrued $687 million and $578 million, respectively, for income tax-related interest and penalties.

Tax examination status

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many state and local jurisdictions throughout the U.S. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2016.

December 31, 2016	Periods under examination	Status
JPMorgan Chase – U.S.	2003 - 2005	At Appellate level
JPMorgan Chase – U.S.	2006 - 2010	Field examination of amended returns; certain matters at Appellate level
JPMorgan Chase – U.S.	2011 - 2013	Field Examination
JPMorgan Chase – New York State	2008 - 2011	Field Examination
JPMorgan Chase – New York City	2008 - 2011	Field Examination
JPMorgan Chase – California	2011 - 2012	Field Examination
JPMorgan Chase – U.K.	2006 - 2014	Field examination of certain select entities

Note 27 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the OCC. The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC, subject to applicable limits.

The Federal Reserve requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average required amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $19.3 billion and $14.4 billion in 2016 and 2015, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase & Co. ("Parent Company") and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans provided by any banking subsidiary to the Parent Company or to any particular affiliate, together with certain other transactions with such affiliate, (collectively referred to as "covered transactions"), are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of covered transactions between any banking subsidiary and all of its affiliates is limited to 20% of the banking subsidiary's total capital.

Prior to the establishment of the IHC in the fourth quarter of 2016, the principal sources of the Parent Company's income were dividends and interest from the various bank and non-bank subsidiaries of the Firm; the principal source of the Parent Company's income, commencing with the fourth quarter, will be dividends from the IHC and JPMorgan Chase Bank, N.A., the two principal subsidiaries of the Parent Company. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2017, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, approximately $20 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2017 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2016 and 2015, cash in the amount of $13.4 billion and $13.2 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers. Also, as of December 31, 2016 and 2015, the Firm had receivables within other assets of $16.1 billion and $15.6 billion, respectively, consisting of cash deposited with clearing organizations for the benefit of customers. Securities with a fair value of $19.3 billion and $20.0 billion, respectively, were also restricted in relation to customer activity. In addition, as of December 31, 2016 and 2015, the Firm had other restricted cash of $3.6 billion and $3.1 billion, respectively, primarily representing cash reserves held at non-U.S. central banks and held for other general purposes. Prior period amounts for segregated cash, receivables within other assets, and other restricted cash have been revised to conform with the current period presentation.

Note 28 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar minimum capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

Capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. bank holding companies and banks, including the Firm and its IDI subsidiaries. Basel III presents two comprehensive methodologies for calculating RWA: a general (standardized) approach ("Basel III Standardized") and an advanced approach ("Basel III Advanced"). Certain of the requirements of Basel III are subject to phase-in periods that began on January 1, 2014 and continue through the end of 2018 ("transitional period").

There are three categories of risk-based capital under the Basel III Transitional rules: CET1 capital, as well as Tier 1 capital and Tier 2 capital. CET1 capital predominantly includes common stockholders' equity (including capital for AOCI related to debt and equity securities classified as AFS as well as for defined-benefit pension and OPEB plans), less certain deductions for goodwill, MSRs and deferred tax assets that arise from NOL and tax credit carryforwards. Tier 1 capital predominantly consists of CET1 capital as well as perpetual preferred stock. Tier 2 capital includes long-term debt qualifying as Tier 2 and qualifying allowance for credit losses. Total capital is Tier 1 capital plus Tier 2 capital.

The following tables present the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant national bank subsidiaries under both Basel III Standardized Transitional and Basel III Advanced Transitional at December 31, 2016 and 2015.

	JPMorgan Chase & Co.			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2016**	Dec 31, 2015	**Dec 31, 2016**	Dec 31, 2015
Regulatory capital				
CET1 capital	**$ 182,967**	$ 175,398	**$ 182,967**	$ 175,398
Tier 1 capital[a]	**208,112**	200,482	**208,112**	200,482
Total capital	**239,553**	234,413	**228,592**	224,616
Assets				
Risk-weighted	**1,464,981**	1,465,262	**1,476,915**	1,485,336
Adjusted average[b]	**2,484,631**	2,358,471	**2,484,631**	2,358,471
Capital ratios[c]				
CET1	**12.5%**	12.0%	**12.4%**	11.8%
Tier 1[a]	**14.2**	13.7	**14.1**	13.5
Total	**16.4**	16.0	**15.5**	15.1
Tier 1 leverage[d]	**8.4**	8.5	**8.4**	8.5

	JPMorgan Chase Bank, N.A.			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2016**	Dec 31, 2015	**Dec 31, 2016**	Dec 31, 2015
Regulatory capital				
CET1 capital	**$ 179,319**	$ 168,857	**$ 179,319**	$ 168,857
Tier 1 capital[a]	**179,341**	169,222	**179,341**	169,222
Total capital	**191,662**	183,262	**184,637**	176,423
Assets				
Risk-weighted	**1,293,203**	1,264,056	**1,262,613**	1,249,607
Adjusted average[b]	**2,088,851**	1,910,934	**2,088,851**	1,910,934
Capital ratios[c]				
CET1	**13.9%**	13.4%	**14.2%**	13.5%
Tier 1[a]	**13.9**	13.4	**14.2**	13.5
Total	**14.8**	14.5	**14.6**	14.1
Tier 1 leverage[d]	**8.6**	8.9	**8.6**	8.9

	Chase Bank USA, N.A.			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2016**	Dec 31, 2015	**Dec 31, 2016**	Dec 31, 2015
Regulatory capital				
CET1 capital	$ 16,784	$ 15,419	$ 16,784	$ 15,419
Tier 1 capital[a]	16,784	15,419	16,784	15,419
Total capital	22,862	21,418	21,434	20,069
Assets				
Risk-weighted	112,297	105,807	186,378	181,775
Adjusted average[b]	120,304	134,152	120,304	134,152
Capital ratios[c]				
CET1	14.9%	14.6%	9.0%	8.5%
Tier 1[a]	14.9	14.6	9.0	8.5
Total	20.4	20.2	11.5	11.0
Tier 1 leverage[d]	14.0	11.5	14.0	11.5

(a) Includes the deduction associated with the permissible holdings of covered funds (as defined by the Volcker Rule) acquired after December 31, 2013. The deduction was not material as of December 31, 2016.

(b) Adjusted average assets, for purposes of calculating the Tier 1 leverage ratio, includes total quarterly average assets adjusted for unrealized gains/(losses) on AFS securities, less deductions for goodwill and other intangible assets, defined benefit pension plan assets, and deferred tax assets related to NOL and tax credit carryforwards.

(c) For each of the risk-based capital ratios, the capital adequacy of the Firm and its national bank subsidiaries are evaluated against the Basel III approach, Standardized or Advanced, resulting in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.

(d) The Tier 1 leverage ratio is not a risk-based measure of capital. This ratio is calculated by dividing Tier 1 capital by adjusted average assets.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both non-taxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from non-taxable business combinations of $83 million and $105 million at December 31, 2016, and 2015, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of $3.1 billion and $3.0 billion at December 31, 2016, and 2015, respectively.

Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of CET1, Tier 1 and Total capital to RWA, as well as a minimum leverage ratio (which is defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. National bank subsidiaries also are subject to these capital requirements by their respective primary regulators.

The following table presents the minimum ratios to which the Firm and its national bank subsidiaries are subject as of December 31, 2016.

	Minimum capital ratios		Well-capitalized ratios	
	BHC[a]	IDI[b]	BHC[c]	IDI[d]
Capital ratios				
CET1	6.25%	5.125%	—%	6.5%
Tier 1	7.75	6.625	6.0	8.0
Total	9.75	8.625	10.0	10.0
Tier 1 leverage	4.0	4.0	—	5.0

Note: The ratios presented in the table above are as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its national bank subsidiaries are subject.

(a) Represents the transitional minimum capital ratios applicable to the Firm under Basel III at December 31, 2016. Commencing in the first quarter of 2016, the CET1 minimum capital ratio includes 0.625% resulting from the phase in of the Firm's 2.5% capital conservation buffer, and 1.125% resulting from the phase in of the Firm's 4.5% GSIB surcharge.

(b) Represents requirements for JPMorgan Chase's banking subsidiaries. The CET1 minimum capital ratio includes 0.625% resulting from the phase in of the 2.5% capital conservation buffer that is applicable to the banking subsidiaries. The banking subsidiaries are not subject to the GSIB surcharge.

(c) Represents requirements for bank holding companies pursuant to regulations issued by the Federal Reserve.

(d) Represents requirements for bank subsidiaries pursuant to regulations issued under the FDIC Improvement Act.

As of December 31, 2016 and 2015, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

Note 29 – Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees are refinanced, extended, cancelled, or expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements.

To provide for probable credit losses inherent in wholesale and certain consumer lending-commitments, an allowance for credit losses on lending-related commitments is maintained. See Note 15 for further information regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2016 and 2015. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. In addition, the Firm typically closes credit card lines when the borrower is 60 days or more past due. The Firm may reduce or close HELOCs when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower.

Off–balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity at December 31, (in millions)	Contractual amount						Carrying value[g]	
	2016					2015	2016	2015
	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total		
Lending-related								
Consumer, excluding credit card:								
Home equity	$ 4,247	$ 3,578	$ 1,035	$ 12,854	$ 21,714	$ 22,756	$ 12	$ –
Residential mortgage[a]	11,745	–	–	–	11,745	12,992	–	–
Auto	7,807	461	173	27	8,468	10,237	2	2
Business banking	11,485	673	122	453	12,733	12,351	12	12
Student and other	107	1	–	29	137	142	–	–
Total consumer, excluding credit card	35,391	4,713	1,330	13,363	54,797	58,478	26	14
Credit card	553,891	–	–	–	553,891	515,518	–	–
Total consumer[b]	589,282	4,713	1,330	13,363	608,688	573,996	26	14
Wholesale:								
Other unfunded commitments to extend credit[c]	69,307	116,716	135,663	6,811	328,497	323,325	905	649
Standby letters of credit and other financial guarantees[c]	15,738	12,654	6,577	978	35,947	39,133	586	548
Other letters of credit[c]	3,354	86	129	1	3,570	3,941	2	2
Total wholesale[d]	88,399	129,456	142,369	7,790	368,014	366,399	1,493	1,199
Total lending-related	$ 677,681	$ 134,169	$ 143,699	$ 21,153	$ 976,702	$ 940,395	$ 1,519	$ 1,213
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[e]	$ 137,209	$ –	$ –	$ –	$ 137,209	$ 183,329	$ –	$ –
Derivatives qualifying as guarantees	1,061	450	10,930	39,525	51,966	53,784	80	222
Unsettled reverse repurchase and securities borrowing agreements	50,722	–	–	–	50,722	42,482	–	–
Unsettled repurchase and securities lending agreements	26,948	–	–	–	26,948	21,798	–	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	NA	NA	NA	NA	NA	NA	133	148
Loans sold with recourse	NA	NA	NA	NA	2,730	4,274	64	82
Other guarantees and commitments[f]	383	2,662	1,017	1,653	5,715	5,580	(118)	(94)

(a) Includes certain commitments to purchase loans from correspondents.
(b) Predominantly all consumer lending-related commitments are in the U.S.
(c) At December 31, 2016 and 2015, reflected the contractual amount net of risk participations totaling $328 million and $385 million, respectively, for other unfunded commitments to extend credit; $11.1 billion and $11.2 billion, respectively, for standby letters of credit and other financial guarantees; and $265 million and $341 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(d) At December 31, 2016 and 2015, the U.S. portion of the contractual amount of total wholesale lending-related commitments was 79% and 77%, respectively.
(e) At December 31, 2016 and 2015, collateral held by the Firm in support of securities lending indemnification agreements was $143.2 billion and $190.6 billion, respectively. Securities lending collateral consist of primarily cash and securities issued by governments that are members of the Organisation for Economic Co-operation and Development ("OECD") and U.S. government agencies.
(f) At December 31, 2016 and 2015, included unfunded commitments of $48 million and $50 million, respectively, to third-party private equity funds; and $1.0 billion and $871 million, respectively, to other equity investments. These commitments included $34 million and $73 million, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 3. In addition, at December 31, 2016 and 2015, included letters of credit hedged by derivative transactions and managed on a market risk basis of $4.6 billion and $4.6 billion, respectively.
(g) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value.

Other unfunded commitments to extend credit

Other unfunded commitments to extend credit generally consist of commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

The Firm acts as a settlement and custody bank in the U.S. tri-party repurchase transaction market. In its role as settlement and custody bank, the Firm is exposed to the intra-day credit risk of its cash borrower clients, usually broker-dealers. This exposure arises under secured clearance advance facilities that the Firm extends to its clients (i.e. cash borrowers); these facilities contractually limit the Firm's intra-day credit risk to the facility amount and must be repaid by the end of the day. As of December 31, 2016 and 2015, the secured clearance advance facility maximum outstanding commitment amount was $2.4 billion and $2.9 billion, respectively.

Guarantees

U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off-balance sheet lending-related arrangements to be guarantees under U.S. GAAP: standby letters of credit and other financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For certain types of guarantees, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. For indemnifications provided in sales agreements, a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires). Any contingent liability that exists as a result of issuing the guarantee or indemnification is recognized when it becomes probable and reasonably estimable. The contingent portion of the liability is not recognized if the estimated amount is less than the carrying amount of the liability recognized at inception (adjusted for any amortization). The recorded amounts of the liabilities related to guarantees and indemnifications at December 31, 2016 and 2015, excluding the allowance for credit losses on lending-related commitments, are discussed below.

Standby letters of credit and other financial guarantees

Standby letters of credit and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were $588 million and $550 million at December 31, 2016 and 2015, respectively, which were classified in accounts payable and other liabilities on the Consolidated balance sheets; these carrying values included $147 million and $123 million, respectively, for the allowance for lending-related commitments, and $441 million and $427 million, respectively, for the guarantee liability and corresponding asset.

The following table summarizes the types of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's customers, as of December 31, 2016 and 2015.

Standby letters of credit, other financial guarantees and other letters of credit

	2016		2015	
December 31, (in millions)	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade[a]	**$ 28,245**	**$ 2,781**	$ 31,751	$ 3,290
Noninvestment-grade[a]	**7,702**	**789**	7,382	651
Total contractual amount	**$ 35,947**	**$ 3,570**	$ 39,133	$ 3,941
Allowance for lending-related commitments	**$ 145**	**$ 2**	$ 121	$ 2
Guarantee liability	**441**	**–**	427	–
Total carrying value	**$ 586**	**$ 2**	$ 548	$ 2
Commitments with collateral	**$ 19,346**	**$ 940**	$ 18,825	$ 996

(a) The ratings scale is based on the Firm's internal ratings, which generally correspond to ratings as defined by S&P and Moody's.

Securities lending indemnifications
Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the borrower to return the lent securities. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

Derivatives qualifying as guarantees
The Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less. Derivatives deemed to be guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps," are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio and are typically longer-term or may have no stated maturity, but allow the Firm to elect to terminate the contract under certain conditions.

Derivatives deemed to be guarantees are recorded on the Consolidated balance sheets at fair value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was $52.0 billion and $53.8 billion at December 31, 2016 and 2015, respectively. The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees. However, exposure to certain stable value contracts is contractually limited to a substantially lower percentage of the notional amount; the notional amount on these stable value contracts was $28.7 billion and $28.4 billion at December 31, 2016 and 2015, respectively, and the maximum exposure to loss was $3.0 billion at both December 31, 2016 and 2015. The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract. The fair value related to derivatives that the Firm deems to be guarantees were derivative payables of $96 million and $236 million and derivative receivables of $16 million and $14 million at December 31, 2016 and 2015, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 6.

Unsettled reverse repurchase and securities borrowing agreements, and unsettled repurchase and securities lending agreements

In the normal course of business, the Firm enters into reverse repurchase agreements and securities borrowing agreements, which are secured financing agreements. Such agreements settle at a future date. At settlement, these commitments result in the Firm advancing cash to and receiving securities collateral from the counterparty. The Firm also enters into repurchase agreements and securities lending agreements. At settlement, these commitments result in the Firm receiving cash from and providing securities collateral to the counterparty. These agreements generally do not meet the definition of a derivative, and therefore, are not recorded on the Consolidated balance sheets until settlement date. These agreements predominantly consist of agreements with regular-way settlement periods. For a further discussion of securities purchased under resale agreements and securities borrowed, and securities sold under repurchase agreements and securities loaned, see Note 13.

Loan sales- and securitization-related indemnifications

Mortgage repurchase liability
In connection with the Firm's mortgage loan sale and securitization activities with GSEs, as described in Note 16, the Firm has made representations and warranties that the loans sold meet certain requirements that may require the Firm to repurchase mortgage loans and/or indemnify the loan purchaser. Further, although the Firm's securitizations are predominantly nonrecourse, the Firm does provide recourse servicing in certain limited cases where it agrees to share credit risk with the owner of the mortgage loans. To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the third party. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans that are deemed to have defects that were sold to purchasers (including securitization-related SPEs) plus, in certain circumstances, accrued interest on such loans and certain expense.

Private label securitizations
The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

For additional information regarding litigation, see Note 31.

Loans sold with recourse
The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2016 and 2015, the unpaid principal balance of loans sold with recourse totaled $2.7 billion and $4.3 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it will have to perform under its recourse obligations, was $64 million and $82 million at December 31, 2016 and 2015, respectively.

Other off-balance sheet arrangements

Indemnification agreements – general
In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Card charge-backs
Commerce Solutions, Card's merchant services business, is a global leader in payment processing and merchant acquiring.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is primarily liable for the amount of each processed card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Commerce Solutions will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Commerce Solutions is unable to collect the amount from the merchant, Commerce Solutions will bear the loss for the amount credited or refunded to the cardmember. Commerce Solutions mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Commerce Solutions does not have sufficient collateral from the merchant to provide customer refunds; and (3) Commerce Solutions does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would recognize the loss.

Commerce Solutions incurred aggregate losses of $85 million, $12 million, and $10 million on $1,063.4 billion, $949.3 billion, and $847.9 billion of aggregate volume processed for the years ended December 31, 2016, 2015 and 2014, respectively. Incurred losses from merchant charge-backs are charged to other expense, with the offset recorded in a valuation allowance against accrued interest and accounts receivable on the Consolidated balance sheets. The carrying value of the valuation allowance was $45 million and $20 million at December 31, 2016 and 2015, respectively, which the Firm believes, based on historical experience and the collateral held by Commerce Solutions of $125 million and $136 million at December 31, 2016 and 2015, respectively, is representative of the payment or performance risk to the Firm related to charge-backs.

Clearing Services – Client Credit Risk
The Firm provides clearing services for clients by entering into securities purchases and sales and derivative transactions with CCPs, including ETDs such as futures and options, as well as OTC-cleared derivative contracts. As a clearing member, the Firm stands behind the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin: variation margin is posted on a daily basis based on the value of clients' derivative contracts and initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

As clearing member, the Firm is exposed to the risk of nonperformance by its clients, but is not liable to clients for the performance of the CCPs. Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions. The Firm can also cease providing clearing services if clients do not adhere to their obligations under the clearing agreement. In the event of nonperformance by a client, the Firm would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as a clearing member.

The Firm reflects its exposure to nonperformance risk of the client through the recognition of margin payables or receivables to clients and CCPs; the clients' underlying securities or derivative contracts are not reflected in the Firm's Consolidated Financial Statements.

It is difficult to estimate the Firm's maximum possible exposure through its role as a clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, and the credit risk mitigants available to the Firm, management believes it is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

For information on the derivatives that the Firm executes for its own account and records in its Consolidated Financial Statements, see Note 6.

Exchange & Clearing House Memberships
The Firm is a member of several securities and derivative exchanges and clearing houses, both in the U.S. and other countries, and it provides clearing services. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to the guarantee fund maintained by a clearing house or exchange as part of the resources available to cover any losses in the event of a member default. Alternatively, these obligations may include a pro rata share of the residual losses after applying the guarantee fund. Additionally, certain clearing houses require the Firm as a member to pay a pro rata share of losses that may result from the clearing house's investment of guarantee fund contributions and initial margin, unrelated to and independent of the default of another member. Generally a payment would only be required should such losses exceed the resources of the clearing house or exchange that are contractually required to absorb the losses in the first instance. It is difficult to estimate the Firm's maximum possible exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Guarantees of subsidiaries
In the normal course of business, JPMorgan Chase & Co. ("Parent Company") may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated balance sheets or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain long-term debt and structured notes of its subsidiaries, including JPMorgan Chase Financial Company LLC ("JPMFC"), a 100%-owned finance subsidiary. All securities issued by JPMFC are fully and unconditionally guaranteed by the Parent Company. These guarantees, which rank on a parity with the Firm's unsecured and unsubordinated indebtedness, are not included in the table on page 256 of this Note. For additional information, see Note 21.

Note 30 – Commitments, pledged assets and collateral

Lease commitments

At December 31, 2016, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2016.

Year ended December 31, (in millions)	
2017	$ 1,598
2018	1,479
2019	1,301
2020	1,151
2021	885
After 2021	3,701
Total minimum payments required	10,115
Less: Sublease rentals under noncancelable subleases	(1,379)
Net minimum payment required	$ 8,736

Total rental expense was as follows.

Year ended December 31, (in millions)	**2016**	2015	2014
Gross rental expense	**$ 1,860**	$ 2,015	$ 2,255
Sublease rental income	**(241)**	(411)	(383)
Net rental expense	**$ 1,619**	$ 1,604	$ 1,872

Pledged assets

The Firm may pledge financial assets that it owns to maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits, and to collateralize repurchase and other securities financing agreements, and to cover customer short sales. Certain of these pledged assets may be sold or repledged or otherwise used by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets. At December 31, 2016 and 2015, the Firm had pledged assets of $441.9 billion and $385.6 billion, respectively, at Federal Reserve banks and FHLBs. In addition, as of December 31, 2016 and 2015, the Firm had pledged $53.5 billion and $50.7 billion, respectively, of financial assets that may not be sold or repledged or otherwise used by the secured parties. Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 16 for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities and long-term debt, see Note 13 and Note 21, respectively. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	**2016**	2015
Securities	**$ 101.1**	$ 124.3
Loans	**374.9**	298.6
Trading assets and other	**153.0**	144.9
Total assets pledged	**$ 629.0**	$ 567.8

Collateral

At December 31, 2016 and 2015, the Firm had accepted financial assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of approximately $914.1 billion and $748.5 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately $746.6 billion and $580.9 billion, respectively, were sold, repledged, delivered or otherwise used. Collateral was generally used under repurchase agreements, securities lending agreements or to cover customer short sales and to collateralize deposits and derivative agreements.

Note 31 – Litigation

Contingencies

As of December 31, 2016, the Firm and its subsidiaries and affiliates are defendants or putative defendants in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $3.0 billion at December 31, 2016. This estimated aggregate range of reasonably possible losses was based upon currently available information for those proceedings in which the Firm believes that an estimate of reasonably possible loss can be made. For certain matters, the Firm does not believe that such an estimate can be made, as of that date. The Firm's estimate of the aggregate range of reasonably possible losses involves significant judgment, given the number, variety and varying stages of the proceedings (including the fact that many are in preliminary stages), the existence in many such proceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings, including where the Firm has made assumptions concerning future rulings by the court or other adjudicator, or about the behavior or incentives of adverse parties or regulatory authorities, and those assumptions prove to be incorrect. In addition, the outcome of a particular proceeding may be a result which the Firm did not take into account in its estimate because the Firm had deemed the likelihood of that outcome to be remote. Accordingly, the Firm's estimate of the aggregate range of reasonably possible losses will change from time to time, and actual losses may vary significantly.

Set forth below are descriptions of the Firm's material legal proceedings.

CIO Litigation. The Firm has been sued in a consolidated shareholder class action, and in a consolidated putative class action brought under the Employee Retirement Income Security Act ("ERISA"), relating to 2012 losses in the synthetic credit portfolio formerly managed by the Firm's Chief Investment Office ("CIO"). A settlement of the shareholder class action, under which the Firm paid $150 million, has received full and final approval from the Court. The putative ERISA class action has been dismissed. That dismissal was affirmed by the appellate court, and a request by the plaintiffs for rehearing by the full appellate court was denied.

Foreign Exchange Investigations and Litigation. The Firm previously reported settlements with certain government authorities relating to its foreign exchange ("FX") sales and trading activities and controls related to those activities. FX-related investigations and inquiries by government authorities, including competition authorities, are ongoing, and the Firm is cooperating with those matters. In May 2015, the Firm pleaded guilty to a single violation of federal antitrust law, and in January 2017, the Firm was sentenced, with judgment entered shortly thereafter. The Department of Labor granted the Firm a temporary one-year waiver, which was effective upon entry of judgment, to allow the Firm and its affiliates to continue to qualify for the Qualified Professional Asset Manager exemption under ERISA. The Firm's application for a lengthier exemption is pending. Separately, in February 2017 the South Africa Competition Commission announced that it had referred its FX investigation of the Firm and other banks to the South Africa Competition Tribunal to commence civil proceedings.

The Firm is also one of a number of foreign exchange dealers defending a class action filed in the United States District Court for the Southern District of New York by U.S.-based plaintiffs, principally alleging violations of federal antitrust laws based on an alleged conspiracy to manipulate foreign exchange rates (the "U.S. class action"). In January 2015, the Firm entered into a settlement agreement in the U.S. class action. Following this settlement, a number of additional putative class actions were filed seeking damages for persons who transacted FX futures and options on futures (the "exchanged-based actions"), consumers who purchased foreign currencies at allegedly inflated rates (the "consumer action"), participants or beneficiaries of qualified ERISA plans (the "ERISA actions"), and purported indirect purchasers of FX instruments (the "indirect purchaser action"). Since then, the Firm has entered into a revised settlement agreement to resolve the consolidated U.S. class action, including the exchange-based actions, and that agreement has been preliminarily approved by the Court. The District Court has dismissed one of the ERISA actions, and the plaintiffs have filed an appeal. The consumer action, a second ERISA action and the indirect purchaser action remain pending in the District Court.

In September 2015, two class actions were filed in Canada against the Firm as well as a number of other FX dealers, principally for alleged violations of the Canadian Competition Act based on an alleged conspiracy to fix the prices of currency purchased in the FX market. The first action was filed in the province of Ontario, and seeks to represent all persons in Canada who transacted any FX

instrument. The second action was filed in the province of Quebec, and seeks authorization to represent only those persons in Quebec who engaged in FX transactions. In late 2016, the Firm settled the Canadian class actions; those settlements are subject to Court approval.

General Motors Litigation. JPMorgan Chase Bank, N.A. participated in, and was the Administrative Agent on behalf of a syndicate of lenders on, a $1.5 billion syndicated Term Loan facility ("Term Loan") for General Motors Corporation ("GM"). In July 2009, in connection with the GM bankruptcy proceedings, the Official Committee of Unsecured Creditors of Motors Liquidation Company ("Creditors Committee") filed a lawsuit against JPMorgan Chase Bank, N.A., in its individual capacity and as Administrative Agent for other lenders on the Term Loan, seeking to hold the underlying lien invalid based on the filing of a UCC-3 termination statement relating to the Term Loan. In January 2015, following several court proceedings, the United States Court of Appeals for the Second Circuit reversed the Bankruptcy Court's dismissal of the Creditors Committee's claim and remanded the case to the Bankruptcy Court with instructions to enter partial summary judgment for the Creditors Committee as to the termination statement. The proceedings in the Bankruptcy Court continue with respect to, among other things, additional defenses asserted by JPMorgan Chase Bank, N.A. and the value of additional collateral on the Term Loan that was unaffected by the filing of the termination statement at issue. In addition, certain Term Loan lenders filed cross-claims against JPMorgan Chase Bank, N.A. in the Bankruptcy Court seeking indemnification and asserting various claims.

Interchange Litigation. A group of merchants and retail associations filed a series of class action complaints alleging that Visa and MasterCard, as well as certain banks, conspired to set the price of credit and debit card interchange fees, enacted respective rules in violation of antitrust laws, and engaged in tying/bundling and exclusive dealing. The parties entered into an agreement to settle the cases for a cash payment of $6.1 billion to the class plaintiffs (of which the Firm's share is approximately 20%) and an amount equal to ten basis points of credit card interchange for a period of eight months to be measured from a date within 60 days of the end of the opt-out period. The agreement also provided for modifications to each credit card network's rules, including those that prohibit surcharging credit card transactions. In December 2013, the District Court granted final approval of the settlement.

A number of merchants appealed to the United States Court of Appeals for the Second Circuit, which, in June 2016, vacated the District Court's certification of the class action and reversed the approval of the class settlement. The case has been remanded to the District Court for further proceedings consistent with the appellate decision. Both the plaintiffs and the defendants have filed petitions seeking review by the U.S. Supreme Court of the Second Circuit's decision.

In addition, certain merchants have filed individual actions against Visa and MasterCard, as well as against the Firm and other banks, and those actions are proceeding.

Investment Management Litigation. The Firm is defending two pending cases that are coordinated for pre-trial and trial purposes, alleging that investment portfolios managed by J.P. Morgan Investment Management ("JPMIM") were inappropriately invested in securities backed by residential real estate collateral. Plaintiffs Assured Guaranty (U.K.) and Ambac Assurance UK Limited claim that JPMIM is liable for total losses of more than $1 billion in market value of these securities. Discovery has been completed. In January 2016, plaintiffs filed a joint partial motion for summary judgment in the coordinated actions. In February 2017, the Court ruled in plaintiffs' favor as to the interpretation of an applicable statutory provision and the rejection of a certain defense, but otherwise preserved for trial the determination of whether JPMIM breached the governing contract and is liable for plaintiffs' claimed losses under the standard of gross negligence. The trial is scheduled to begin in March 2017.

Lehman Brothers Bankruptcy Proceedings. In January 2016, JPMorgan Chase Bank, N.A. and Lehman Brothers Holdings Inc. ("LBHI") and several of LBHI's subsidiaries reached an agreement, approved by the Bankruptcy Court, resolving several disputes between the parties. The January 2016 settlement did not resolve the following remaining matters: In the Bankruptcy Court proceedings, LBHI and its Official Committee of Unsecured Creditors filed an objection to the claims asserted by JPMorgan Chase Bank, N.A. against LBHI with respect to clearing advances made to Lehman Brothers Inc., principally on the grounds that the Firm had not conducted the sale of the securities collateral held for its claims in a commercially reasonable manner. LBHI also brought two claims objections relating to securities lending claims and a group of other smaller claims. In January 2017, the Firm entered into an agreement to settle all of these remaining claims, and this settlement has been approved by the Bankruptcy Court.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has received subpoenas and requests for documents and, in some cases, interviews, from federal and state agencies and entities, including the U.S. Department of Justice ("DOJ"), the U.S. Commodity Futures Trading Commission ("CFTC"), the U.S. Securities and Exchange Commission ("SEC") and various state attorneys general, as well as the European Commission ("EC"), the U.K. Financial Conduct Authority ("FCA"), the Canadian Competition Bureau, the Swiss Competition Commission ("ComCo") and other regulatory authorities and banking associations around the world relating primarily to the process by which interest rates were submitted to the British Bankers Association ("BBA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR") for various currencies, principally in 2007 and 2008. Some of the inquiries also relate to similar processes by which information on rates is submitted to the European

Banking Federation ("EBF") in connection with the setting of the EBF's Euro Interbank Offered Rates ("EURIBOR") and to the Japanese Bankers' Association for the setting of Tokyo Interbank Offered Rates ("TIBOR"), as well as processes for the setting of U.S. dollar ISDAFIX rates and other reference rates in various parts of the world during similar time periods. The Firm is responding to and continuing to cooperate with these inquiries. As previously reported, the Firm has resolved EC inquiries relating to Yen LIBOR and Swiss Franc LIBOR. In December 2016, the Firm resolved ComCo inquiries relating to these same rates. ComCo's investigation relating to EURIBOR, to which the Firm and other banks are subject, continues. In December 2016, the EC issued a decision against the Firm and other banks finding an infringement of European antitrust rules relating to EURIBOR. The Firm has filed an appeal with the European General Court. In June 2016, the DOJ informed the Firm that the DOJ had closed its inquiry into LIBOR and other benchmark rates with respect to the Firm without taking action. Other inquiries have been discontinued without any action against JPMorgan Chase, including by the SEC, FCA and the Canadian Competition Bureau.

In addition, the Firm has been named as a defendant along with other banks in a series of individual and putative class actions filed in various United States District Courts. These actions have been filed, or consolidated for pre-trial purposes, in the United States District Court for the Southern District of New York. In these actions, plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively manipulated the U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR, EURIBOR, Singapore Interbank Offered Rate ("SIBOR"), Singapore Swap Offer Rate ("SOR") and/or the Bank Bill Swap Reference Rate ("BBSW") by submitting rates that were artificially low or high. Plaintiffs allege that they transacted in loans, derivatives or other financial instruments whose values are affected by changes in U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR, EURIBOR, SIBOR, SOR or BBSW and assert a variety of claims including antitrust claims seeking treble damages. These matters are in various stages of litigation.

In the U.S. dollar LIBOR-related actions, the District Court dismissed certain claims, including the antitrust claims, and permitted other claims under the Commodity Exchange Act and common law to proceed. In May 2016, the United States Court of Appeals for the Second Circuit vacated the dismissal of the antitrust claims and remanded the case to the District Court to consider, among other things, whether the plaintiffs have standing to assert antitrust claims. In July 2016, JPMorgan Chase and other defendants again moved in the District Court to dismiss the antitrust claims, and in December 2016, the District Court granted in part and denied in part defendants' motion, finding that certain plaintiffs lacked standing to assert antitrust claims. Separately, in October 2016, JPMorgan Chase and other defendants filed a petition to the U.S. Supreme Court seeking review of the Second Circuit's decision that vacated the dismissal of plaintiffs' antitrust claims. That petition was denied.

The Firm is one of the defendants in a number of putative class actions alleging that defendant banks and ICAP conspired to manipulate the U.S. dollar ISDAFIX rates. Plaintiffs primarily assert claims under the federal antitrust laws and Commodity Exchange Act. In April 2016, the Firm settled the ISDAFIX litigation, along with certain other banks. Those settlements have been preliminarily approved by the Court.

Madoff Litigation. A putative class action was filed in the United States District Court for the District of New Jersey by investors who were net winners (i.e., Madoff customers who had taken more money out of their accounts than had been invested) in Madoff's Ponzi scheme and were not included in a prior class action settlement. These plaintiffs allege violations of the federal securities law, as well as other state and federal claims. A similar action was filed in the United States District Court for the Middle District of Florida, although it was not styled as a class action, and included claims pursuant to Florida statutes. The Florida court granted the Firm's motion to dismiss the case, and in August 2016, the United States Court of Appeals for the Eleventh Circuit affirmed the dismissal. The plaintiffs have filed a petition for writ of certiorari with the United States Supreme Court. In addition, the same plaintiffs have re-filed their dismissed state claims in Florida state court, where the Firm's motion to dismiss is pending. The New Jersey court granted a transfer motion to the United States District Court for the Southern District of New York, which granted the Firm's motion to dismiss, and the plaintiffs have filed an appeal of that dismissal.

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory Investigations. The Firm and affiliates (together, "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and certain Washington Mutual affiliates (together, "Washington Mutual") have been named as defendants in a number of cases in their various roles in offerings of mortgage-backed securities ("MBS"). Following the settlements referred to below, the remaining civil cases include one investor action, one action by a monoline insurer relating to Bear Stearns' role solely as underwriter, and actions for repurchase of mortgage loans. The Firm and certain of its current and former officers and Board members have also been sued in shareholder derivative actions relating to the Firm's MBS activities, and one action remains pending.

Issuer Litigation - Individual Purchaser Actions. With the exception of one remaining action, the Firm has settled all of the individual actions brought against JPMC, Bear Stearns and Washington Mutual as MBS issuers (and, in some cases, also as underwriters of their own MBS offerings).

Underwriter Actions. The Firm is defending one remaining action by a monoline insurer relating to Bear Stearns' role solely as underwriter for another issuer's MBS offering. The issuer is defunct.

Repurchase Litigation. The Firm is defending a number of actions brought by trustees, securities administrators and/or master servicers of various MBS trusts on behalf of purchasers of securities issued by those trusts. These cases generally allege breaches of various representations and warranties regarding securitized loans and seek repurchase of those loans or equivalent monetary relief, as well as indemnification of attorneys' fees and costs and other remedies. The Firm has reached a settlement with Deutsche Bank National Trust Company, acting as trustee for various MBS trusts, and the Federal Deposit Insurance Corporation (the "FDIC") in connection with the litigation related to a significant number of MBS issued by Washington Mutual; that case is described in the Washington Mutual Litigations section below. Other repurchase actions, each specific to one or more MBS transactions issued by JPMC and/or Bear Stearns, are in various stages of litigation.

In addition, the Firm and a group of 21 institutional MBS investors made a binding offer to the trustees of MBS issued by JPMC and Bear Stearns providing for the payment of $4.5 billion and the implementation of certain servicing changes by JPMC, to resolve all repurchase and servicing claims that have been asserted or could have been asserted with respect to 330 MBS trusts created between 2005 and 2008. The offer does not resolve claims relating to Washington Mutual MBS. The trustees (or separate and successor trustees) for this group of 330 trusts have accepted the settlement for 319 trusts in whole or in part and excluded from the settlement 16 trusts in whole or in part. The trustees' acceptance has received final approval from the court.

Additional actions have been filed against third-party trustees that relate to loan repurchase and servicing claims involving trusts sponsored by JPMC, Bear Stearns and Washington Mutual.

The Firm has entered into agreements with a number of MBS trustees or entities that purchased MBS that toll applicable statute of limitations periods with respect to their claims, and has settled, and in the future may settle, tolled claims. There is no assurance that the Firm will not be named as a defendant in additional MBS-related litigation.

Derivative Actions. A shareholder derivative action against the Firm, as nominal defendant, and certain of its current and former officers and members of its Board of Directors relating to the Firm's MBS activities is pending in California federal court. Defendants have filed a motion to dismiss the action.

Government Enforcement Investigations and Litigation. The Firm is responding to an ongoing investigation being conducted by the DOJ's Criminal Division and two United States Attorney's Offices relating to MBS offerings securitized and sold by the Firm and its subsidiaries.

Mortgage-Related Investigations and Litigation. In January 2017, a Consent Judgment was entered by the United States District Court for the Southern District of New York resolving allegations by the Civil Division of the United States Attorney's Office for the Southern District of New York that the Firm violated the Fair Housing Act and Equal Credit Opportunity Act by giving pricing discretion to independent mortgage brokers in its wholesale lending distribution channel which, according to the government's model, may have charged higher fees and interest rates to African-American and Hispanic borrowers than non-Hispanic White borrowers during the period between 2006 and 2009. The Firm denied liability but agreed to pay a total of approximately $55 million to resolve this matter. In addition, three municipalities have commenced litigation against the Firm alleging violations of an unfair competition law or the Fair Housing Act. The municipalities seek, among other things, civil penalties for the unfair competition claim, and, for the Fair Housing Act claims, damages resulting from lost tax revenue and increased municipal costs associated with foreclosed properties. The municipal actions are stayed pending an appeal by the City of Los Angeles to the United States Court of Appeals for the Ninth Circuit, as well as the United States Supreme Court's review of decisions of the United States Court of Appeals for the Eleventh Circuit which held, among other things, that the City of Miami has standing under the Fair Housing Act to pursue similar claims against other banks.

Municipal Derivatives Litigation. Several civil actions were commenced in New York and Alabama courts against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions. The claims in the civil actions generally alleged that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The County filed for bankruptcy in November 2011. In June 2013, the County filed a Chapter 9 Plan of Adjustment, as amended (the "Plan of Adjustment"), which provided that all the above-described actions against the Firm would be released and dismissed with prejudice. In November 2013, the Bankruptcy Court confirmed the Plan of Adjustment, and in December 2013, certain sewer rate payers filed an appeal challenging the confirmation of the Plan of Adjustment. All conditions to the Plan of Adjustment's effectiveness, including the dismissal of the actions against the Firm, were satisfied or waived and the transactions contemplated by the Plan of Adjustment occurred in December 2013. Accordingly, all the above-described actions against the Firm have been dismissed pursuant to the terms of the Plan of Adjustment. The appeal of the Bankruptcy Court's order confirming the Plan of Adjustment remains pending.

Petters Bankruptcy and Related Matters. JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), have been named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain affiliated entities (collectively, "Petters") and the Polaroid

Corporation. The principal actions against JPMorgan Chase and its affiliates have been brought by a court-appointed receiver for Petters and the trustees in bankruptcy proceedings for three Petters entities. These actions generally seek to avoid certain putative transfers in connection with (i) the 2005 acquisition by Petters of Polaroid, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions entered into with Polaroid; and (iii) a credit line and investment accounts held by Petters. In January 2017, the Court denied the defendants' motion to dismiss an amended complaint filed by the plaintiffs.

Proprietary Products Investigations and Litigation. In December 2015, JPMorgan Chase Bank, N.A. and J.P. Morgan Securities LLC agreed to a settlement with the SEC, and JPMorgan Chase Bank, N.A. agreed to a settlement with the CFTC, regarding disclosures to clients concerning conflicts associated with the Firm's sale and use of proprietary products, such as J.P. Morgan mutual funds, in the Firm's CCB and AWM wealth management businesses, and the U.S. Private Bank's disclosures concerning the use of hedge funds that pay placement agent fees to JPMorgan Chase broker-dealer affiliates. The Firm settled with an additional government authority in July 2016, and continues to cooperate with inquiries from other government authorities concerning disclosure of conflicts associated with the Firm's sale and use of proprietary products. A putative class action, which was filed in the United States District Court for the Northern District of Illinois on behalf of financial advisory clients from 2007 to the present whose funds were invested in proprietary funds and who were charged investment management fees, was dismissed by the Court. The dismissal has been affirmed on appeal.

Referral Hiring Practices Investigations. In November 2016, the Firm entered into settlements with DOJ, the SEC and the Board of Governors of the Federal Reserve System (the "Federal Reserve") to resolve those agencies' respective investigations relating to a former hiring program for candidates referred by clients, potential clients and government officials in the Asia Pacific region. Other related investigations are ongoing, and the Firm continues to cooperate with these investigations.

Washington Mutual Litigations. Proceedings related to Washington Mutual's failure are pending before the United States District Court for the District of Columbia and include a lawsuit brought by Deutsche Bank National Trust Company, initially against the FDIC and amended to include JPMorgan Chase Bank, N.A. as a defendant, asserting an estimated $6 billion to $10 billion in damages based upon alleged breaches of certain representations and warranties given by certain Washington Mutual affiliates in connection with mortgage securitization agreements. The case includes assertions that JPMorgan Chase Bank, N.A. may have assumed liabilities for the alleged breaches of representations and warranties in the mortgage securitization agreements. In June 2015, the court ruled in favor of JPMorgan Chase Bank, N.A. on the question of whether the Firm or the FDIC bears responsibility for Washington Mutual Bank's repurchase obligations, holding that JPMorgan Chase Bank, N.A. assumed only those liabilities that were reflected on Washington Mutual Bank's financial accounting records as of September 25, 2008, and only up to the amount of the book value reflected therein. The FDIC has appealed that ruling.

JPMorgan Chase has also filed complaints in the United States District Court for the District of Columbia against the FDIC, in its corporate capacity as well as in its capacity as receiver for Washington Mutual Bank, asserting multiple claims for indemnification under the terms of the Purchase & Assumption Agreement between JPMorgan Chase Bank, N.A. and the FDIC relating to JPMorgan Chase Bank, N.A.'s purchase of substantially all of the assets and certain liabilities of Washington Mutual Bank (the "Purchase & Assumption Agreement").

The Firm, Deutsche Bank National Trust Company and the FDIC have signed a settlement agreement to resolve (i) pending litigation brought by Deutsche Bank National Trust Company against the FDIC and JPMorgan Chase Bank, N.A., as defendants, relating to alleged breaches of certain representations and warranties given by certain Washington Mutual affiliates in connection with mortgage securitization agreements and (ii) JPMorgan Chase Bank, N.A.'s outstanding indemnification claims pursuant to the terms of the Purchase & Assumption Agreement. The settlement is subject to certain judicial approval procedures, and both matters are stayed pending approval of the settlement.

Wendel. Since 2012, the French criminal authorities have been investigating a series of transactions entered into by senior managers of Wendel Investissement ("Wendel") during the period from 2004 through 2007 to restructure their shareholdings in Wendel. JPMorgan Chase Bank, N.A., Paris branch provided financing for the transactions to a number of managers of Wendel in 2007. JPMorgan Chase has cooperated with the investigation. The investigating judges issued an *ordonnance de renvoi* on November 30, 2016, referring JPMorgan Chase Bank, N.A. to the French *tribunal correctionnel* for alleged complicity in tax fraud. No date for trial has been set by the court. The Firm has been successful in legal challenges made to the Court of Cassation, France's highest court, which have been referred back to and remain pending before the Paris Court of Appeal. In addition, civil proceedings have been commenced against JPMorgan Chase Bank, N.A. by a number of the managers. The claims are separate, involve different allegations and are at various stages of proceedings.

* * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to

defend itself vigorously in all such matters. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downward, as appropriate, based on management's best judgment after consultation with counsel. During the years ended December 31, 2016, 2015 and 2014, the Firm's legal expense was a benefit of $(317) million and an expense of $3.0 billion and $2.9 billion, respectively. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or impact related to those matters. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance that the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued or that a matter will not have material reputational consequences. As a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

Note 32 – International operations

The following table presents income statement- and balance sheet-related information for JPMorgan Chase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 33.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the U.S.

As of or for the year ended December 31, (in millions)	Revenue[b]	Expense[c]	Income before income tax expense	Net income	Total assets	
2016						
Europe/Middle East and Africa	**$ 13,842**	**$ 8,550**	**$ 5,292**	**$ 3,783**	**$ 394,134**	[d]
Asia and Pacific	**6,112**	**4,213**	**1,899**	**1,212**	**156,946**	
Latin America and the Caribbean	**1,959**	**1,632**	**327**	**208**	**42,971**	
Total international	**21,913**	**14,395**	**7,518**	**5,203**	**594,051**	
North America[a]	**73,755**	**46,737**	**27,018**	**19,530**	**1,896,921**	
Total	**$ 95,668**	**$ 61,132**	**$ 34,536**	**$ 24,733**	**$ 2,490,972**	
2015						
Europe/Middle East and Africa	$ 14,206	$ 8,871	$ 5,335	$ 4,158	$ 347,647	[d]
Asia and Pacific	6,151	4,241	1,910	1,285	138,747	
Latin America and the Caribbean	1,923	1,508	415	253	48,185	
Total international	22,280	14,620	7,660	5,696	534,579	
North America[a]	71,263	48,221	23,042	18,746	1,817,119	
Total	$ 93,543	$ 62,841	$ 30,702	$ 24,442	$ 2,351,698	
2014						
Europe/Middle East and Africa	$ 16,013	$ 10,123	$ 5,890	$ 3,935	$ 481,328	[d]
Asia and Pacific	6,083	4,478	1,605	1,051	147,357	
Latin America and the Caribbean	2,047	1,626	421	269	44,567	
Total international	24,143	16,227	7,916	5,255	673,252	
North America[a]	70,969	48,186	22,783	16,490	1,899,022	
Total	$ 95,112	$ 64,413	$ 30,699	$ 21,745	$ 2,572,274	

(a) Substantially reflects the U.S.
(b) Revenue is composed of net interest income and noninterest revenue.
(c) Expense is composed of noninterest expense and the provision for credit losses.
(d) Total assets for the U.K. were approximately $310 billion, $306 billion, and $434 billion at December 31, 2016, 2015 and 2014, respectively.

Note 33 – Business segments

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset & Wealth Management. In addition, there is a Corporate segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a further discussion concerning JPMorgan Chase's business segments, see Segment results of this footnote.

The following is a description of each of the Firm's business segments, and the products and services they provide to their respective client bases.

Consumer & Community Banking

CCB offers services to consumers and businesses through bank branches, ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking (including Consumer Banking/Chase Wealth Management and Business Banking), Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Commerce Solutions & Auto. Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card, Commerce Solutions & Auto issues credit cards to consumers and small businesses, offers payment processing services to merchants, originates and services auto loans and leases, and services student loans.

Corporate & Investment Bank

The CIB, which consists of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Treasury Services, which provides transaction services, consisting of cash management and liquidity solutions. Markets & Investor Services is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes Securities Services, a leading global custodian that provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

Commercial Banking

CB delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. In addition, CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Asset & Wealth Management

AWM, with client assets of $2.5 trillion, is a global leader in investment and wealth management. AWM clients include institutions, high-net-worth individuals and retail investors in many major markets throughout the world. AWM offers investment management across most major asset classes including equities, fixed income, alternatives and money market funds. AWM also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For Wealth Management clients, AWM also provides retirement products and services, brokerage and banking services, including trusts and estates, loans, mortgages and deposits. The majority of AWM's client assets are in actively managed portfolios.

Corporate

The Corporate segment consists of Treasury and CIO and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Enterprise Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups.

Segment results

The following tables provide a summary of the Firm's segment results as of or for the years ended December 31, 2016, 2015 and 2014 on a managed basis. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue (noninterest revenue and net interest income) for each of the reportable business segments on a FTE basis. Accordingly, revenue from investments receiving tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This allows management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit).

Segment results and reconciliation

As of or for the year ended December 31, (in millions, except ratios)	Consumer & Community Banking			Corporate & Investment Bank			Commercial Banking			Asset & Wealth Management		
	2016	2015	2014	**2016**	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Noninterest revenue	**$ 15,255**	$ 15,592	$ 15,937	**$ 24,325**	$ 23,693	$ 23,420	**$ 2,320**	$ 2,365	$ 2,349	**$ 9,012**	$ 9,563	$ 9,588
Net interest income	**29,660**	28,228	28,431	**10,891**	9,849	11,175	**5,133**	4,520	4,533	**3,033**	2,556	2,440
Total net revenue	**44,915**	43,820	44,368	**35,216**	33,542	34,595	**7,453**	6,885	6,882	**12,045**	12,119	12,028
Provision for credit losses	**4,494**	3,059	3,520	**563**	332	(161)	**282**	442	(189)	**26**	4	4
Noninterest expense	**24,905**	24,909	25,609	**18,992**	21,361	23,273	**2,934**	2,881	2,695	**8,478**	8,886	8,538
Income/(loss) before income tax expense/(benefit)	**15,516**	15,852	15,239	**15,661**	11,849	11,483	**4,237**	3,562	4,376	**3,541**	3,229	3,486
Income tax expense/(benefit)	**5,802**	6,063	6,054	**4,846**	3,759	4,575	**1,580**	1,371	1,741	**1,290**	1,294	1,333
Net income/(loss)	**$ 9,714**	$ 9,789	$ 9,185	**$ 10,815**	$ 8,090	$ 6,908	**$ 2,657**	$ 2,191	$ 2,635	**$ 2,251**	$ 1,935	$ 2,153
Average common equity	**$ 51,000**	$ 51,000	$ 51,000	**$ 64,000**	$ 62,000	$ 61,000	**$ 16,000**	$ 14,000	$ 14,000	**$ 9,000**	$ 9,000	$ 9,000
Total assets	**535,310**	502,652	455,634	**803,511**	748,691	861,466	**214,341**	200,700	195,267	**138,384**	131,451	128,701
Return on common equity	**18%**	18%	18%	**16%**	12%	10%	**16%**	15%	18%	**24%**	21%	23%
Overhead ratio	**55**	57	58	**54**	64	67	**39**	42	39	**70**	73	71

(table continued from above)

As of or for the year ended December 31, (in millions, except ratios)	Corporate			Reconciling Items[a]			Total		
	2016	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Noninterest revenue	**$ 938**	$ 800	$ 1,972	**$ (2,265)**	$ (1,980)	$ (1,788)	**$ 49,585**	$ 50,033	$ 51,478
Net interest income	**(1,425)**	(533)	(1,960)	**(1,209)**	(1,110)	(985)	**46,083**	43,510	43,634
Total net revenue	**(487)**	267	12	**(3,474)**	(3,090)	(2,773)	**95,668**	93,543	95,112
Provision for credit losses	**(4)**	(10)	(35)	**–**	–	–	**5,361**	3,827	3,139
Noninterest expense	**462**	977	1,159	**–**	–	–	**55,771**	59,014	61,274
Income/(loss) before income tax expense/(benefit)	**(945)**	(700)	(1,112)	**(3,474)**	(3,090)	(2,773)	**34,536**	30,702	30,699
Income tax expense/(benefit)	**(241)**	(3,137)	(1,976)	**(3,474)**	(3,090)	(2,773)	**9,803**	6,260	8,954
Net income/(loss)	**$ (704)**	$ 2,437	$ 864	**$ –**	$ –	$ –	**$ 24,733**	$ 24,442	$ 21,745
Average common equity	**$ 84,631**	$ 79,690	$ 72,400	**$ –**	$ –	$ –	**$ 224,631**	$ 215,690	$ 207,400
Total assets	**799,426**	768,204	931,206	**NA**	NA	NA	**2,490,972**	2,351,698	2,572,274
Return on common equity	**NM**	NM	NM	**NM**	NM	NM	**10%**	11%	10%
Overhead ratio	**NM**	NM	NM	**NM**	NM	NM	**58**	63	64

(a) Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

Note 34 – Parent Company

The following tables present Parent Company-only financial statements.

Statements of income and comprehensive income[a]

Year ended December 31, (in millions)	2016	2015	2014
Income			
Dividends from subsidiaries and affiliates:			
Bank and bank holding company	**$ 10,000**	$ 10,653	$ –
Nonbank[b]	**3,873**	8,172	14,716
Interest income from subsidiaries	**794**	443	378
Other interest income	**207**	234	284
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**852**	1,438	779
Nonbank	**1,165**	(1,402)	52
Other income	**(846)**	1,773	508
Total income	**16,045**	21,311	16,717
Expense			
Interest expense to subsidiaries and affiliates[b]	**105**	98	169
Other interest expense	**4,413**	3,720	3,645
Noninterest expense	**1,643**	2,611	827
Total expense	**6,161**	6,429	4,641
Income before income tax benefit and undistributed net income of subsidiaries	**9,884**	14,882	12,076
Income tax benefit	**876**	1,640	1,430
Equity in undistributed net income of subsidiaries	**13,973**	7,920	8,239
Net income	**$ 24,733**	$ 24,442	$ 21,745
Other comprehensive income, net	**(1,521)**	(1,997)	990
Comprehensive income	**$ 23,212**	$ 22,445	$ 22,735

Balance sheets[a]

December 31, (in millions)	2016	2015
Assets		
Cash and due from banks	**$ 113**	$ 74
Deposits with banking subsidiaries	**5,450**	65,799
Trading assets	**10,326**	13,830
Available-for-sale securities	**2,694**	3,154
Loans	**77**	1,887
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**524**	32,454
Nonbank	**46**	58,674
Investments (at equity) in subsidiaries and affiliates:		
Bank and bank holding company	**422,028**	225,613
Nonbank[b]	**13,103**	34,205
Other assets	**10,257**	18,088
Total assets	**$ 464,618**	$ 453,778
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries and affiliates[b]	**$ 13,584**	$ 11,310
Other borrowed funds	**3,831**	3,722
Other liabilities	**11,224**	11,940
Long-term debt[c][d]	**181,789**	179,233
Total liabilities[d]	**210,428**	206,205
Total stockholders' equity	**254,190**	247,573
Total liabilities and stockholders' equity	**$ 464,618**	$ 453,778

Statements of cash flows[a]

Year ended December 31, (in millions)	2016	2015	2014
Operating activities			
Net income	**$ 24,733**	$ 24,442	$ 21,745
Less: Net income of subsidiaries and affiliates[b]	**27,846**	26,745	22,972
Parent company net loss	**(3,113)**	(2,303)	(1,227)
Cash dividends from subsidiaries and affiliates[b]	**13,873**	17,023	14,714
Other operating adjustments	**(18,166)**	2,483	(1,681)
Net cash provided by operating activities	**(7,406)**	17,203	11,806
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**60,349**	30,085	(31,040)
Available-for-sale securities:			
Proceeds from paydowns and maturities	**353**	120	12,076
Other changes in loans, net	**1,793**	321	(319)
Advances to and investments in subsidiaries and affiliates, net	**(51,967)**	(81)	3,306
All other investing activities, net	**114**	153	32
Net cash provided by/(used in) investing activities	**10,642**	30,598	(15,945)
Financing activities			
Net change in:			
Borrowings from subsidiaries and affiliates[b]	**2,957**	(4,062)	4,454
Other borrowed funds	**109**	(47,483)	(5,778)
Proceeds from the issuance of long-term debt	**41,498**	42,121	40,284
Payments of long-term debt	**(29,298)**	(30,077)	(31,050)
Proceeds from issuance of preferred stock	**–**	5,893	8,847
Treasury stock and warrants repurchased	**(9,082)**	(5,616)	(4,760)
Dividends paid	**(8,476)**	(7,873)	(6,990)
All other financing activities, net	**(905)**	(840)	(921)
Net cash provided by/(used in) financing activities	**(3,197)**	(47,937)	4,086
Net increase/(decrease) in cash and due from banks	**39**	(137)	(53)
Cash and due from banks at the beginning of the year	**74**	211	264
Cash and due from banks at the end of the year	**$ 113**	$ 74	$ 211
Cash interest paid	**$ 4,550**	$ 3,873	$ 3,921
Cash income taxes paid, net	**1,053**	8,251	200

(a) On September 1, 2016, in connection with the Firm's 2016 Resolution Submission, the Parent Company established the IHC, and during the fourth quarter of 2016 contributed substantially all of its direct subsidiaries, other than JPMorgan Chase Bank, N.A. (totaling $55.4 billion), as well as most of its other assets (totaling $160.5 billion) and intercompany indebtedness to the IHC. Total noncash assets contributed were $62.3 billion.

(b) Affiliates include trusts that issued guaranteed capital debt securities ("issuer trusts"). For further discussion on these issuer trusts, see Note 21.

(c) At December 31, 2016, long-term debt that contractually matures in 2017 through 2021 totaled $26.9 billion, $21.2 billion, $13.0 billion, $21.9 billion and $17.9 billion, respectively.

(d) For information regarding the Parent Company's guarantees of its subsidiaries' obligations, see Notes 21 and 29.

Selected quarterly financial data (unaudited)

(Table continued on next page)

As of or for the period ended	2016				2015			
(in millions, except per share, ratio, headcount data and where otherwise noted)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Total net revenue	$ 23,376	$ 24,673	$ 24,380	$ 23,239	$ 22,885	$ 22,780	$ 23,812	$ 24,066
Total noninterest expense	13,833	14,463	13,638	13,837	14,263	15,368	14,500	14,883
Pre-provision profit	9,543	10,210	10,742	9,402	8,622	7,412	9,312	9,183
Provision for credit losses	864	1,271	1,402	1,824	1,251	682	935	959
Income before income tax expense	8,679	8,939	9,340	7,578	7,371	6,730	8,377	8,224
Income tax expense	1,952	2,653	3,140	2,058	1,937	(74)	2,087	2,310
Net income	$ 6,727	$ 6,286	$ 6,200	$ 5,520	$ 5,434	$ 6,804	$ 6,290	$ 5,914
Per common share data								
Net income: Basic	$ 1.73	$ 1.60	$ 1.56	$ 1.36	$ 1.34	$ 1.70	$ 1.56	$ 1.46
Diluted	1.71	1.58	1.55	1.35	1.32	1.68	1.54	1.45
Average shares: Basic	3,570.7	3,597.4	3,635.8	3,669.9	3,674.2	3,694.4	3,707.8	3,725.3
Diluted	3,606.0	3,629.6	3,666.5	3,696.9	3,704.6	3,725.6	3,743.6	3,757.5
Market and per common share data								
Market capitalization	$ 307,295	$ 238,277	$ 224,449	$ 216,547	$ 241,899	$ 224,438	$ 250,581	$ 224,818
Common shares at period-end	3,561.2	3,578.3	3,612.0	3,656.7	3,663.5	3,681.1	3,698.1	3,711.1
Share price:[a]								
High	$ 87.39	$ 67.90	$ 66.20	$ 64.13	$ 69.03	$ 70.61	$ 69.82	$ 62.96
Low	66.10	58.76	57.05	52.50	58.53	50.07	59.65	54.27
Close	86.29	66.59	62.14	59.22	66.03	60.97	67.76	60.58
Book value per share	64.06	63.79	62.67	61.28	60.46	59.67	58.49	57.77
Tangible book value per share ("TBVPS")[b]	51.44	51.23	50.21	48.96	48.13	47.36	46.13	45.45
Cash dividends declared per share	0.48	0.48	0.48	0.44	0.44	0.44	0.44	0.40
Selected ratios and metrics								
Return on common equity ("ROE")	11%	10%	10%	9%	9%	12%	11%	11%
Return on tangible common equity ("ROTCE")[b]	14	13	13	12	11	15	14	14
Return on assets ("ROA")	1.06	1.01	1.02	0.93	0.90	1.11	1.01	0.94
Overhead ratio	59	59	56	60	62	67	61	62
Loans-to-deposits ratio	65	65	66	64	65	64	61	56
HQLA (in billions)[c]	$ 524	$ 539	$ 516	$ 505	$ 496	$ 505	$ 532	$ 614
CET1 capital ratio[d]	12.4%	12.0%	12.0%	11.9%	11.8%	11.5%	11.2%	10.7%
Tier 1 capital ratio[d]	14.1	13.6	13.6	13.5	13.5	13.3	12.8	12.1
Total capital ratio[d]	15.5	15.1	15.2	15.1	15.1	14.9	14.4	13.6
Tier 1 leverage ratio	8.4	8.5	8.5	8.6	8.5	8.4	8.0	7.5
Selected balance sheet data (period-end)								
Trading assets	$ 372,130	$ 374,837	$ 380,793	$ 366,153	$ 343,839	$ 361,708	$ 377,870	$ 398,981
Securities	289,059	272,401	278,610	285,323	290,827	306,660	317,795	331,136
Loans	894,765	888,054	872,804	847,313	837,299	809,457	791,247	764,185
Core loans	806,152	795,077	775,813	746,196	732,093	698,988	674,767	641,285
Average core loans	799,698	779,383	760,721	737,297	715,282	680,224	654,551	631,955
Total assets	2,490,972	2,521,029	2,466,096	2,423,808	2,351,698	2,416,635	2,449,098	2,576,619
Deposits	1,375,179	1,376,138	1,330,958	1,321,816	1,279,715	1,273,106	1,287,332	1,367,887
Long-term debt[e]	295,245	309,418	295,627	290,754	288,651	292,503	286,240	280,123
Common stockholders' equity	228,122	228,263	226,355	224,089	221,505	219,660	216,287	214,371
Total stockholders' equity	254,190	254,331	252,423	250,157	247,573	245,728	241,205	235,864
Headcount	243,355	242,315	240,046	237,420	234,598	235,678	237,459	241,145

(Table continued from previous page)

As of or for the period ended	2016				2015			
(in millions, except ratio data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Credit quality metrics								
Allowance for credit losses	**$ 14,854**	**$ 15,304**	**$ 15,187**	**$ 15,008**	$ 14,341	$ 14,201	$ 14,535	$ 14,658
Allowance for loan losses to total retained loans	**1.55%**	**1.61%**	**1.64%**	**1.66%**	1.63%	1.67%	1.78%	1.86%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[f]	**1.34**	**1.37**	**1.40**	**1.40**	1.37	1.40	1.45	1.52
Nonperforming assets	**$ 7,535**	**$ 7,779**	**$ 7,757**	**$ 8,023**	$ 7,034	$ 7,294	$ 7,588	$ 7,714
Net charge-offs	**1,280**	**1,121**	**1,181**	**1,110**	1,064	963	1,007	1,052
Net charge-off rate	**0.58%**	**0.51%**	**0.56%**	**0.53%**	0.52%	0.49%	0.53%	0.57%

Note: Effective January 1, 2016, the Firm adopted new accounting guidance related to (1) the recognition and measurement of DVA on financial liabilities where the fair value option has been elected, and (2) the accounting for employee stock-based incentive payments. For additional information, see Accounting and Reporting Developments on pages 135–137 and Notes 3, 4, and 25.

(a) Share prices are from the New York Stock Exchange.
(b) TBVPS and ROTCE are non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Financial Performance Measures on pages 48–50.
(c) HQLA represents the amount of assets that qualify for inclusion in the liquidity coverage ratio under the U.S. rule ("U.S. LCR"). For additional information, see HQLA on page 111.
(d) Ratios presented are calculated under the Basel III Transitional rules and for the capital ratios represent the Collins Floor. See Capital Risk Management on pages 76–85 for additional information on Basel III.
(e) Included unsecured long-term debt of $212.6 billion, $226.8 billion, $220.6 billion, $216.1 billion, $211.8 billion, $214.6 billion, $209.1 billion, $209.0 billion respectively, for the periods presented.
(f) Excludes the impact of residential real estate PCI loans, a non-GAAP financial measure. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 48–50. For further discussion, see Allowance for credit losses on pages 105–107.

Consolidated average balance sheet, interest and rates

Provided below is a summary of JPMorgan Chase's consolidated average balances, interest rates and interest differentials on a taxable-equivalent basis for the years 2014 through 2016. Income computed on a taxable-equivalent basis is the income reported in the Consolidated statements of income, adjusted to present interest income and average rates earned on assets exempt from income taxes (primarily federal taxes) on a basis comparable with other taxable investments. The incremental tax rate used for calculating the taxable-equivalent adjustment was approximately 38% in 2016, 2015 and 2014.

(Table continued on next page)

Year ended December 31, (Taxable-equivalent interest and rates; in millions, except rates)	2016		
	Average balance	Interest[e]	Average rate
Assets			
Deposits with banks	$ 392,160	$ 1,863	0.48%
Federal funds sold and securities purchased under resale agreements	205,368	2,265	1.10
Securities borrowed	102,964	(332) [f]	(0.32)
Trading assets	215,565	7,373	3.42
Taxable securities	235,211	5,538	2.35
Non-taxable securities[a]	44,176	2,662	6.03
Total securities	279,387	8,200	2.94 [h]
Loans	866,378	36,866 [g]	4.26
Other assets[b]	39,782	875	2.20
Total interest-earning assets	2,101,604	57,110	2.72
Allowance for loan losses	(13,965)		
Cash and due from banks	18,660		
Trading assets – equity instruments	95,528		
Trading assets – derivative receivables	70,897		
Goodwill	47,310		
Mortgage servicing rights	5,520		
Other intangible assets:			
Purchased credit card relationships	17		
Other intangibles	905		
Other assets	135,143		
Total assets	$ 2,461,619		
Liabilities			
Interest-bearing deposits	$ 925,270	$ 1,356	0.15%
Federal funds purchased and securities loaned or sold under repurchase agreements	178,720	1,089	0.61
Commercial paper	15,001	135	0.90
Trading liabilities – debt, short-term and other liabilities[c]	198,904	1,170	0.59
Beneficial interests issued by consolidated VIEs	40,180	504	1.25
Long-term debt	295,573	5,564	1.88
Total interest-bearing liabilities	1,653,648	9,818	0.59
Noninterest-bearing deposits	402,698		
Trading liabilities – equity instruments	20,737		
Trading liabilities – derivative payables	55,927		
All other liabilities, including the allowance for lending-related commitments	77,910		
Total liabilities	2,210,920		
Stockholders' equity			
Preferred stock	26,068		
Common stockholders' equity	224,631		
Total stockholders' equity	250,699 [d]		
Total liabilities and stockholders' equity	$ 2,461,619		
Interest rate spread			2.13%
Net interest income and net yield on interest-earning assets		$ 47,292	2.25

(a) Represents securities that are tax exempt for U.S. Federal income tax purposes.
(b) Includes margin loans.
(c) Includes brokerage customer payables.
(d) The ratio of average stockholders' equity to average assets was 10.2% for 2016, 9.7% for 2015, and 9.2% for 2014. The return on average stockholders' equity, based on net income, was 9.9% for 2016, 10.2% for 2015, and 9.7% for 2014.
(e) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(f) Securities borrowed's negative interest income and yield, for the years ended December 31, 2016, 2015 and 2014, are a result of client-driven demand for certain securities combined with the impact of low interest rates; the offset of this stock borrow activity is reflected as lower net interest expense reported within short-term and other liabilities.
(g) Fees and commissions on loans included in loan interest amounted to $808 million in 2016, $936 million in 2015, and $1.1 billion in 2014.
(h) The annualized rate for securities based on amortized cost was 2.99% in 2016, 2.94% in 2015, and 2.82% in 2014, and does not give effect to changes in fair value that are reflected in AOCI.
(i) Reflects a benefit from the favorable market environments for dollar-roll financings.

Within the Consolidated average balance sheets, interest and rates summary, the principal amounts of nonaccrual loans have been included in the average loan balances used to determine the average interest rate earned on loans. For additional information on nonaccrual loans, including interest accrued, see Note 14.

(Table continued from previous page)

	2015			2014		
	Average balance	Interest[e]	Average rate	Average balance	Interest[e]	Average rate
	$ 427,963	$ 1,250	0.29%	$ 358,072	$ 1,157	0.32%
	206,637	1,592	0.77	230,489	1,642	0.71
	105,273	(532) [f]	(0.50)	116,540	(501) [f]	(0.43)
	206,385	6,694	3.24	210,609	7,386	3.51
	273,730	6,550	2.39	318,970	7,617	2.39
	42,125	2,556	6.07	34,359	2,158	6.28
	315,855	9,106	2.88 [h]	353,329	9,775	2.77 [h]
	787,318	33,321 [g]	4.23	739,175	32,394 [g]	4.38
	38,811	652	1.68	40,879	663	1.62
	2,088,242	52,083	2.49	2,049,093	52,516	2.56
	(13,885)			(15,418)		
	22,042			25,650		
	105,489			116,650		
	73,290			67,123		
	47,445			48,029		
	6,902			8,387		
	25			62		
	1,067			1,316		
	138,792			146,343		
	$ 2,469,409			$ 2,447,235		
	$ 876,840	$ 1,252	0.14%	$ 872,893	$ 1,633	0.19%
	192,510	609	0.32	208,560	604 [i]	0.29 [i]
	38,140	110	0.29	59,916	134	0.22
	207,810	622	0.30	220,137	712	0.32
	49,200	435	0.88	47,974	405	0.84
	284,940	4,435	1.56	269,814	4,409	1.63
	1,649,440	7,463	0.45	1,679,294	7,897	0.47
	418,948			391,408		
	17,282			16,246		
	64,716			54,758		
	79,293			81,111		
	2,229,679			2,222,817		
	24,040			17,018		
	215,690			207,400		
	239,730 [d]			224,418 [d]		
	$ 2,469,409			$ 2,447,235		
			2.04%			2.09%
		$ 44,620	2.14		$ 44,619	2.18

Interest rates and interest differential analysis of net interest income – U.S. and non-U.S.

Presented below is a summary of interest rates and interest differentials segregated between U.S. and non-U.S. operations for the years 2014 through 2016. The segregation of U.S. and non-U.S. components is based on the location of the office recording the transaction. Intercompany funding generally consists of dollar-denominated deposits originated in various locations that are centrally managed by Treasury and CIO.

(Table continued on next page)

Year ended December 31, (Taxable-equivalent interest and rates; in millions, except rates)	2016		
	Average balance	Interest	Average rate
Interest-earning assets			
Deposits with banks:			
U.S.	$ 328,831	$ 1,708	0.52%
Non-U.S.	63,329	155	0.25
Federal funds sold and securities purchased under resale agreements:			
U.S.	112,902	1,166	1.03
Non-U.S.	92,466	1,099	1.19
Securities borrowed:			
U.S.	73,297	(341) [c]	(0.46)
Non-U.S.	29,667	9	0.03
Trading assets – debt instruments:			
U.S.	116,211	3,825	3.29
Non-U.S.	99,354	3,548	3.57
Securities:			
U.S.	216,726	6,971	3.22
Non-U.S.	62,661	1,229	1.97
Loans:			
U.S.	788,213	35,110	4.45
Non-U.S.	78,165	1,756	2.25
Other assets, predominantly U.S.	39,782	875	2.20
Total interest-earning assets	2,101,604	57,110	2.72
Interest-bearing liabilities			
Interest-bearing deposits:			
U.S.	703,738	1,029	0.15
Non-U.S.	221,532	327	0.15
Federal funds purchased and securities loaned or sold under repurchase agreements:			
U.S.	121,945	773	0.63
Non-U.S.	56,775	316	0.56
Trading liabilities – debt, short-term and other liabilities:[a]			
U.S.	133,788	86 [c]	0.06
Non-U.S.	80,117	1,219	1.52
Beneficial interests issued by consolidated VIEs, predominantly U.S.	40,180	504	1.25
Long-term debt:			
U.S.	283,169	5,533	1.95
Non-U.S.	12,404	31	0.25
Intercompany funding:			
U.S.	(20,405)	10	–
Non-U.S.	20,405	(10)	–
Total interest-bearing liabilities	1,653,648	9,818	0.59
Noninterest-bearing liabilities[b]	447,956		
Total investable funds	$ 2,101,604	$ 9,818	0.47%
Net interest income and net yield:		$ 47,292	2.25%
U.S.		40,705	2.49
Non-U.S.		6,587	1.42
Percentage of total assets and liabilities attributable to non-U.S. operations:			
Assets			23.1
Liabilities			20.7

(a) Includes commercial paper.
(b) Represents the amount of noninterest-bearing liabilities funding interest-earning assets.
(c) Securities borrowed's negative interest income and yield, for the years ended December 31, 2016, 2015 and 2014, are a result of client-driven demand for certain securities combined with the impact of low interest rates; the offset of this stock borrow activity is reflected as lower net interest expense reported within trading liabilities – debt, short-term and other liabilities.
(d) Reflects a benefit from the favorable market environments for dollar-roll financings.

For further information, see the “Net interest income” discussion in Consolidated Results of Operations on pages 40–42.

(Table continued from previous page)

2015			2014		
Average balance	Interest	Average rate	Average balance	Interest	Average rate
$ 388,833	$ 1,021	0.26%	$ 328,145	$ 825	0.25%
39,130	229	0.59	29,927	332	1.11
118,945	900	0.76	125,812	719	0.57
87,692	692	0.79	104,677	923	0.88
78,815	(562) [c]	(0.71)	77,228	(573) [c]	(0.74)
26,458	30	0.11	39,312	72	0.18
106,465	3,572	3.35	109,678	4,045	3.69
99,920	3,122	3.12	100,931	3,341	3.31
200,240	6,676	3.33	193,856	6,586	3.40
115,615	2,430	2.10	159,473	3,189	2.00
699,664	31,468	4.50	635,846	30,165	4.74
87,654	1,853	2.11	103,329	2,229	2.16
38,811	652	1.68	40,879	663	1.62
2,088,242	52,083	2.49	2,049,093	52,516	2.56
638,756	761	0.12	620,708	813	0.13
238,084	491	0.21	252,185	820	0.33
140,609	366	0.26	146,025	130 [d]	0.09 [d]
51,901	243	0.47	62,535	474	0.76
166,838	(394) [c]	(0.24)	194,771	(284) [c]	(0.15)
79,112	1,126	1.42	85,282	1,130	1.33
49,200	435	0.88	47,974	405	0.84
273,033	4,386	1.61	256,726	4,366	1.70
11,907	49	0.41	13,088	43	0.33
(50,517)	7	–	(122,467)	(176)	–
50,517	(7)	–	122,467	176	–
1,649,440	7,463	0.45	1,679,294	7,897	0.47
438,802			369,799		
$ 2,088,242	$ 7,463	0.36%	$ 2,049,093	$ 7,897	0.39%
	$ 44,620	2.14%		$ 44,619	2.18%
	38,033	2.34		37,018	2.46
	6,587	1.42		7,601	1.39
		24.7			28.9
		21.1			22.6

Changes in net interest income, volume and rate analysis

The table below presents an analysis of the effect on net interest income from volume and rate changes for the periods 2016 versus 2015 and 2015 versus 2014. In this analysis, when the change cannot be isolated to either volume or rate, it has been allocated to volume.

Year ended December 31, (On a taxable-equivalent basis; in millions)	2016 versus 2015			2015 versus 2014		
	Increase/(decrease) due to change in:			Increase/(decrease) due to change in:		
	Volume	Rate	Net change	Volume	Rate	Net change
Interest-earning assets						
Deposits with banks:						
U.S.	**$ (324)**	**$ 1,011**	**$ 687**	$ 163	$ 33	$ 196
Non-U.S.	**59**	**(133)**	**(74)**	53	(156)	(103)
Federal funds sold and securities purchased under resale agreements:						
U.S.	**(55)**	**321**	**266**	(58)	239	181
Non-U.S.	**56**	**351**	**407**	(137)	(94)	(231)
Securities borrowed:						
U.S.	**24**	**197**	**221**	(12)	23	11
Non-U.S.	**–**	**(21)**	**(21)**	(14)	(28)	(42)
Trading assets – debt instruments:						
U.S.	**317**	**(64)**	**253**	(100)	(373)	(473)
Non-U.S.	**(24)**	**450**	**426**	(27)	(192)	(219)
Securities:						
U.S.	**515**	**(220)**	**295**	226	(136)	90
Non-U.S.	**(1,051)**	**(150)**	**(1,201)**	(918)	159	(759)
Loans:						
U.S.	**3,992**	**(350)**	**3,642**	2,829	(1,526)	1,303
Non-U.S.	**(220)**	**123**	**(97)**	(324)	(52)	(376)
Other assets, predominantly U.S.	**21**	**202**	**223**	(36)	25	(11)
Change in interest income	**3,310**	**1,717**	**5,027**	1,645	(2,078)	(433)
Interest-bearing liabilities						
Interest-bearing deposits:						
U.S.	**76**	**192**	**268**	10	(62)	(52)
Non-U.S.	**(21)**	**(143)**	**(164)**	(26)	(303)	(329)
Federal funds purchased and securities loaned or sold under repurchase agreements:						
U.S.	**(113)**	**520**	**407**	(12)	248	236
Non-U.S.	**26**	**47**	**73**	(50)	(181)	(231)
Trading liabilities – debt, short-term and other liabilities: [(a)]						
U.S.	**(24)**	**504**	**480**	66	(176)	(110)
Non-U.S.	**14**	**79**	**93**	(81)	77	(4)
Beneficial interests issued by consolidated VIEs, predominantly U.S.	**(113)**	**182**	**69**	11	19	30
Long-term debt:						
U.S.	**219**	**928**	**1,147**	251	(231)	20
Non-U.S.	**1**	**(19)**	**(18)**	(4)	10	6
Intercompany funding:						
U.S.	**(17)**	**20**	**3**	(1)	184	183
Non-U.S.	**17**	**(20)**	**(3)**	1	(184)	(183)
Change in interest expense	**65**	**2,290**	**2,355**	165	(599)	(434)
Change in net interest income	**$ 3,245**	**$ (573)**	**$ 2,672**	$ 1,480	$ (1,479)	$ 1

(a) Includes commercial paper.

2016 Annual Report or 2016 Form 10-K: Annual report on Form 10-K for year ended December 31, 2016, filed with the U.S. Securities and Exchange Commission.

ABS: Asset-backed securities

Active foreclosures: Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

AFS: Available-for-sale

ALCO: Asset Liability Committee

Allowance for loan losses to total loans: Represents period-end allowance for loan losses divided by retained loans.

Alternative assets: The following types of assets constitute alternative investments – hedge funds, currency, real estate, private equity and other investment funds designed to focus on nontraditional strategies.

AWM: Asset & Wealth Management

AOCI: Accumulated other comprehensive income/(loss)

ARM: Adjustable rate mortgage(s)

AUC: Assets under custody

AUM: "Assets under management": Represent assets managed by AWM on behalf of its Private Banking, Institutional and Retail clients. Includes "Committed capital not Called," on which AWM earns fees.

Auto loan and lease origination volume: Dollar amount of auto loans and leases originated.

Beneficial interests issued by consolidated VIEs: Represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

BHC: Bank holding company

Card Services includes the Credit Card and Commerce Solutions businesses.

CB: Commercial Banking

CBB: Consumer & Business Banking

CCAR: Comprehensive Capital Analysis and Review

CCB: Consumer & Community Banking

CCO: Chief Compliance Officer

CCP: "Central counterparty" is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

CDS: Credit default swaps

CEO: Chief Executive Officer

CET1 Capital: Common Equity Tier 1 Capital

CFTC: Commodity Futures Trading Commission

CFO: Chief Financial Officer

Chase Bank USA, N.A.: Chase Bank USA, National Association

CIB: Corporate & Investment Bank

CIO: Chief Investment Office

Client assets: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Client deposits and other third-party liabilities: Deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs. During the third quarter 2015 the Firm completed the discontinuation of its commercial paper customer sweep cash management program.

CLO: Collateralized loan obligations

CLTV: Combined loan-to-value

Collateral-dependent: A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.

Commerce Solutions is a business that primarily processes transactions for merchants.

Commercial Card: provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

COO: Chief Operating Officer

Core loans: Represents loans considered central to the Firm's ongoing businesses; core loans exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again (or vice versa). The duration of a credit cycle can vary from a couple of years to several years.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to

another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

Criticized: Criticized loans, lending-related commitments and derivative receivables that are classified as special mention, substandard and doubtful categories for regulatory purposes and are generally consistent with a rating of CCC+/Caa1 and below, as defined by S&P and Moody's.

CRO: Chief Risk Officer

CTC: CIO, Treasury and Corporate

CVA: Credit valuation adjustments

Debit and credit card sales volume: Dollar amount of card member purchases, net of returns.

Deposit margin/deposit spread: Represents net interest income expressed as a percentage of average deposits.

Distributed denial-of-service attack: The use of a large number of remote computer systems to electronically send a high volume of traffic to a target website to create a service outage at the target. This is a form of cyberattack.

DFAST: Dodd-Frank Act Stress Test

Dodd-Frank Act: Wall Street Reform and Consumer Protection Act

DOJ: U.S. Department of Justice

DOL: U.S. Department of Labor

DRPC: Directors' Risk Policy Committee

DVA: Debit valuation adjustment

E&P: Exploration & Production

EC: European Commission

Eligible LTD: Long-term debt satisfying certain eligibility criteria

Embedded derivatives: are implicit or explicit terms or features of a financial instrument that affect some or all of the cash flows or the value of the instrument in a manner similar to a derivative. An instrument containing such terms or features is referred to as a "hybrid." The component of the hybrid that is the non-derivative instrument is referred to as the "host." For example, callable debt is a hybrid instrument that contains a plain vanilla debt instrument (i.e., the host) and an embedded option that allows the issuer to redeem the debt issue at a specified date for a specified amount (i.e., the embedded derivative). However, a floating rate instrument is not a hybrid composed of a fixed-rate instrument and an interest rate swap.

ERISA: Employee Retirement Income Security Act of 1974

EPS: Earnings per share

ETD: "Exchange-traded derivatives": Derivative contracts that are executed on an exchange and settled via a central clearing house.

EU: European Union

Fannie Mae: Federal National Mortgage Association

FASB: Financial Accounting Standards Board

FCA: Financial Conduct Authority

FCC: Firmwide Control Committee

FDIA: Federal Depository Insurance Act

FDIC: Federal Deposit Insurance Corporation

Federal Reserve: The Board of the Governors of the Federal Reserve System

Fee share: Proportion of fee revenue based on estimates of investment banking fees generated across the industry from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third-party provider of investment banking fee competitive analysis and volume-based league tables for the above noted industry products.

FFELP: Federal Family Education Loan Program

FFIEC: Federal Financial Institutions Examination Council

FHA: Federal Housing Administration

FHLB: Federal Home Loan Bank

FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

Firm: JPMorgan Chase & Co.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

FRC: Firmwide Risk Committee

Free standing derivatives: a derivative contract entered into either separate and apart from any of the Firms other financial instruments or equity transactions. Or, in conjunction with some other transaction and is legally detachable and separately exercisable.

FSB: Financial Stability Board

FTE: Fully taxable equivalent

FVA: Funding valuation adjustment

FX: Foreign exchange

G7: Group of Seven nations: Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government bonds: Bonds issued by the government of one of the G7 nations.

Ginnie Mae: Government National Mortgage Association

GSE: Fannie Mae and Freddie Mac

GSIB: Global systemically important banks

HAMP: Home affordable modification program

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

HELOAN: Home equity loan

HELOC: Home equity line of credit

Home equity – senior lien: Represents loans and commitments where JPMorgan Chase holds the first security interest on the property.

Home equity – junior lien: Represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.

Households: A household is a collection of individuals or entities aggregated together by name, address, tax identifier and phone. Reported on a one-month lag.

HQLA: High quality liquid assets

HTM: Held-to-maturity

ICAAP: Internal capital adequacy assessment process

IDI: Insured depository institutions

IHC: JPMorgan Chase Holdings LLC, an intermediate holding company

Impaired loan: Impaired loans are loans measured at amortized cost, for which it is probable that the Firm will be unable to collect all amounts due, including principal and interest, according to the contractual terms of the agreement. Impaired loans include the following:

- All wholesale nonaccrual loans
- All TDRs (both wholesale and consumer), including ones that have returned to accrual status

Interchange income: A fee paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

ISDA: International Swaps and Derivatives Association

JPMorgan Chase: JPMorgan Chase & Co.

JPMorgan Chase Bank, N.A.: JPMorgan Chase Bank, National Association

JPMorgan Clearing: J.P. Morgan Clearing Corp.

JPMorgan Securities: J.P. Morgan Securities LLC

Loan-equivalent: Represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn prior to an event of a default by an obligor.

LCR: Liquidity coverage ratio

LDA: Loss Distribution Approach

LGD: Loss given default

LIBOR: London Interbank Offered Rate

LLC: Limited Liability Company

LOB: Line of business

Loss emergence period: Represents the time period between the date at which the loss is estimated to have been incurred and the realization of that loss.

LTIP: Long-term incentive plan

LTV: "Loan-to-value": For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices consist of actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all available lien positions, as well as unused lines, related to the property. Combined LTV ratios are used for junior lien home equity products.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level, because it

believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Master netting agreement: An agreement between two counterparties who have multiple contracts with each other that provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

MBS: Mortgage-backed securities

MD&A: Management's discussion and analysis

MMDA: Money Market Deposit Accounts

Moody's: Moody's Investor Services

Mortgage origination channels:

Retail – Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high CLTV ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime

Prime mortgage loans are made to borrowers with good credit records who meet specific underwriting requirements, including prescriptive requirements related to income and overall debt levels. New prime mortgage borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are loans that, prior to mid-2008, were offered to certain customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

MSA: Metropolitan statistical areas

MSR: Mortgage servicing rights

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

NA: Data is not applicable or available for the period presented.

NAV: Net Asset Value

Net Capital Rule: Rule 15c3-1 under the Securities Exchange Act of 1934.

Net charge-off/(recovery) rate: Represents net charge-offs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net mortgage servicing revenue includes the following components:

Operating revenue predominantly represents the return on Mortgage Servicing's MSR asset and includes:

- Actual gross income earned from servicing third-party mortgage loans, such as contractually specified servicing fees and ancillary income; and
- The change in the fair value of the MSR asset due to the collection or realization of expected cash flows.

Risk management represents the components of

Mortgage Servicing's MSR asset that are subject to ongoing risk management activities, together with derivatives and other instruments used in those risk management activities.

Net production revenue: Includes net gains or losses on originations and sales of mortgage loans, other production-related fees and losses related to the repurchase of previously sold loans.

Net revenue rate: Represents Card Services net revenue (annualized) expressed as a percentage of average loans for the period.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful

NOL: Net operating loss

Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest have been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.

Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in loan satisfaction, predominantly real estate owned and other commercial and personal property.

NOW: Negotiable Order of Withdrawal

NSFR: Net stable funding ratio

OAS: Option-adjusted spread

OCC: Office of the Comptroller of the Currency

OCI: Other comprehensive income/(loss)

OEP: One Equity Partners

OIS: Overnight index swap

OPEB: Other postretirement employee benefit

ORMF: Operational Risk Management Framework

OTTI: Other-than-temporary impairment

Over-the-counter ("OTC") derivatives: Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

Over-the-counter cleared ("OTC-cleared") derivatives: Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Parent Company: JPMorgan Chase & Co.

Participating securities: Represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

PCA: Prompt corrective action

PCI: "Purchased credit-impaired" loans represents loans that were acquired in the Washington Mutual transaction and deemed to be credit-impaired on the acquisition date in accordance with the guidance of the FASB. The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

PD: Probability of default

PRA: Prudential Regulatory Authority

Pre-provision profit/(loss): Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pretax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is one basis upon which management evaluates the performance of AWM against the performance of their respective competitors.

Principal transactions revenue: Principal transactions revenue is driven by many factors, including the bid-offer spread, which is the difference between the price at which the Firm is willing to buy a financial or other instrument and the price at which the Firm is willing to sell that instrument. It also consists of realized (as a result of closing out or termination of transactions, or interim cash payments) and unrealized (as a result of changes in valuation) gains and losses on financial and other instruments (including those accounted for under the fair value option) primarily used in client-driven market-making activities and on private equity investments. In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities).

Principal transactions revenue also includes certain realized

and unrealized gains and losses related to hedge accounting and specified risk-management activities, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives.

PSU(s): Performance share units

RCSA: Risk and Control Self-Assessment

Real assets: Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.

REIT: "Real estate investment trust": A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate related assets by pooling their capital to purchase and manage income property (i.e., equity REIT) and/or mortgage loans (i.e., mortgage REIT). REITs can be publicly or privately held and they also qualify for certain favorable tax considerations.

Receivables from customers: Primarily represents margin loans to brokerage customers that are collateralized through assets maintained in the clients' brokerage accounts, as such no allowance is held against these receivables. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.

Regulatory VaR: Daily aggregated VaR calculated in accordance with regulatory rules.

REO: Real estate owned

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e., excludes loans held-for-sale and loans at fair value).

Revenue wallet: Proportion of fee revenue based on estimates of investment banking fees generated across the industry (i.e., the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third-party provider of investment banking competitive analysis and volume-based league tables for the above noted industry products.

RHS: Rural Housing Service of the U.S. Department of Agriculture

ROA: Return on assets

ROE: Return on equity

ROTCE: Return on tangible common equity

RSU(s): Restricted stock units

RWA: "Risk-weighted assets": Basel III establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced, both of which incorporate the requirements set forth in Basel 2.5.

S&P: Standard and Poor's 500 Index

SAR(s): Stock appreciation rights

SCCL: single-counterparty credit limits

SEC: Securities and Exchange Commission

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Short sale: A short sale is a sale of real estate in which proceeds from selling the underlying property are less than the amount owed the Firm under the terms of the related mortgage, and the related lien is released upon receipt of such proceeds.

Single-name: Single reference-entities

SLR: Supplementary leverage ratio

SMBS: Stripped mortgage-backed securities

SOA: Society of Actuaries

SPEs: Special purpose entities

Structural interest rate risk: Represents interest rate risk of the non-trading assets and liabilities of the Firm.

Structured notes: Structured notes are predominantly financial instruments containing embedded derivatives.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities; the

corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

TBVPS: Tangible book value per share

TCE: Tangible common equity

TDR: "Troubled debt restructuring" is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

TLAC: Total Loss Absorbing Capacity

U.K.: United Kingdom

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S.: United States of America

U.S. GAAP: Accounting principles generally accepted in the U.S.

U.S. government-sponsored enterprises ("U.S. GSEs") and U.S. GSE obligations: In the U.S., GSEs are quasi-governmental, privately held entities established by Congress to improve the flow of credit to specific sectors of the economy and provide certain essential services to the public. U.S. GSEs include Fannie Mae and Freddie Mac, but do not include Ginnie Mae, which is directly owned by the U.S. Department of Housing and Urban Development. U.S. GSE obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. LCR: Liquidity coverage ratio under the final U.S. rule.

U.S. Treasury: U.S. Department of the Treasury

VA: U.S. Department of Veterans Affairs

VaR: "Value-at-risk" is a measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

VCG: Valuation Control Group

VGF: Valuation Governance Forum

VIEs: Variable interest entities

Warehouse loans: Consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired certain of the assets of the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC.

Board of Directors

Linda B. Bammann [5]
Retired Deputy Head of Risk Management
JPMorgan Chase & Co.
(Financial services)

James A. Bell [1]
Retired Executive Vice President
The Boeing Company
(Aerospace)

Crandall C. Bowles [1, 4]
Chairman Emeritus
The Springs Company
(Diversified investments)

Stephen B. Burke [2, 3]
Chief Executive Officer
NBCUniversal, LLC
(Television and entertainment)

Todd A. Combs [4, 5]
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(Conglomerate)

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President
Henry Crown and Company
(Diversified investments)

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Chairman and
Chief Executive Officer
JPMorgan Chase & Co.

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Retired Chairman and
Chief Executive Officer
KPMG
(Professional services)

Laban P. Jackson, Jr. [1]
Chairman and Chief Executive Officer
Clear Creek Properties, Inc.
(Real estate development)

Michael A. Neal [5]
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General Electric Company
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Chief Executive Officer
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Chief Executive Officer

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Chief Risk Officer

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Mary Callahan Erdoes
CEO, Asset & Wealth Management

Stacey Friedman
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Marianne Lake
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Douglas B. Petno
CEO, Commercial Banking

Daniel E. Pinto
CEO, Corporate & Investment Bank
and CEO, EMEA

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CEO, Consumer & Community Banking

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Makati City, Philippines

* Ex-officio

JPMorgan Chase & Co.

Corporate headquarters

270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000
jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
J.P. Morgan Securities LLC
J.P. Morgan Securities plc

Annual Report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the U.S. Securities and Exchange Commission will be made available without charge upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070

Stock listing

New York Stock Exchange
London Stock Exchange

The New York Stock Exchange ticker symbol for the common stock of JPMorgan Chase & Co. is JPM.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations website at jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000

Directors

To contact any of the Board members or committee chairs, the Lead Independent Director or the non-management directors as a group, please mail correspondence to:

JPMorgan Chase & Co.
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Office of the Secretary
270 Park Avenue
New York, NY 10017-2070

The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct, the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting our website at jpmorganchase.com and clicking on "Governance" under the "About us" tab.

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Computershare
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Jersey City, NJ 07310-2053
Telephone: 800-758-4651
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Investor Services Program

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Stockholder inquiries

Contact Computershare:

By telephone:

Within the United States, Canada and Puerto Rico: 800-758-4651 (toll free)

From all other locations: 201-680-6862 (collect)

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All other locations: 201-680-6610 (collect)

By regular mail:

Computershare
P.O. Box 30170
College Station, TX 77842
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Computershare
211 Quality Circle
Suite 210
College Station, TX 77845
United States

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Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, NY 10017-6204

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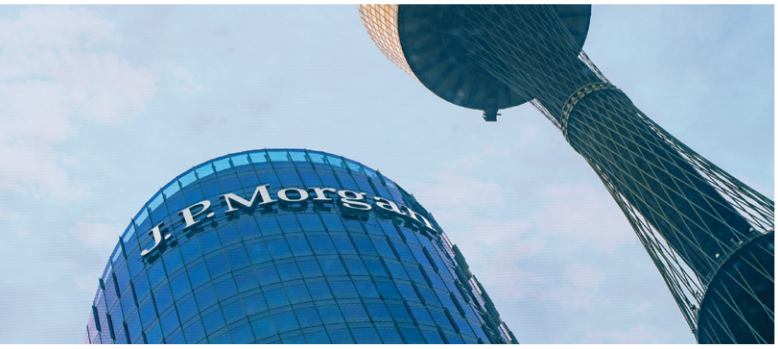














jpmorganchase.com

Investor Day: February 28, 2017

Timetable – Investor Day 2017 – Held in 2nd Floor Conference Center
Location: 270 Park Avenue

Presentation	Speaker	Start Time	End Time	Duration
Registration		7:30AM	8:30AM	1:00
Firm Overview	Marianne Lake	8:30AM	9:30AM	1:00
Commercial Banking	Doug Petno	9:30AM	10:00AM	0:30
Break		10:00AM	10:30AM	0:30
Corporate & Investment Bank	Daniel Pinto	10:30AM	11:15AM	0:45
Asset & Wealth Management	Mary Erdoes	11:15AM	11:45AM	0:30
Break		11:45AM	12:15PM	0:30
Lunch		12:15PM	1:15PM	1:00
Consumer & Community Banking	Gordon Smith	1:15PM	2:30PM	1:15
Closing remarks and Q&A	Jamie Dimon	2:30PM	3:30PM	1:00
Refreshments		3:30PM	4:30PM	1:00

FIRM OVERVIEW

Marianne Lake, Chief Financial Officer

February 28, 2017

JPMorgan Chase & Co.

Strong fundamentals and execution

JPMorgan Chase overview

1 Building exceptional client franchises

- Four leading client franchises – together delivering significant value
- Client focus and long-term approach – consistently investing and innovating

2 Operating with fortress principles

- Strong foundation – capital, liquidity, balance sheet, risk discipline
- Better, faster, simpler
- Commitment to controls and culture

3 Maximizing long-term shareholder value

- Delivering strong capital returns – while adapting capital and liquidity frameworks
- Delivering significant operating leverage – while investing through-the-cycle

Leading to

~15% *ROTCE*	11%+ *CET1 ratio*	55%+/- *Overhead ratio*	55-75% *Net payout ratio*

2016 results – strong financial performance on an absolute basis…

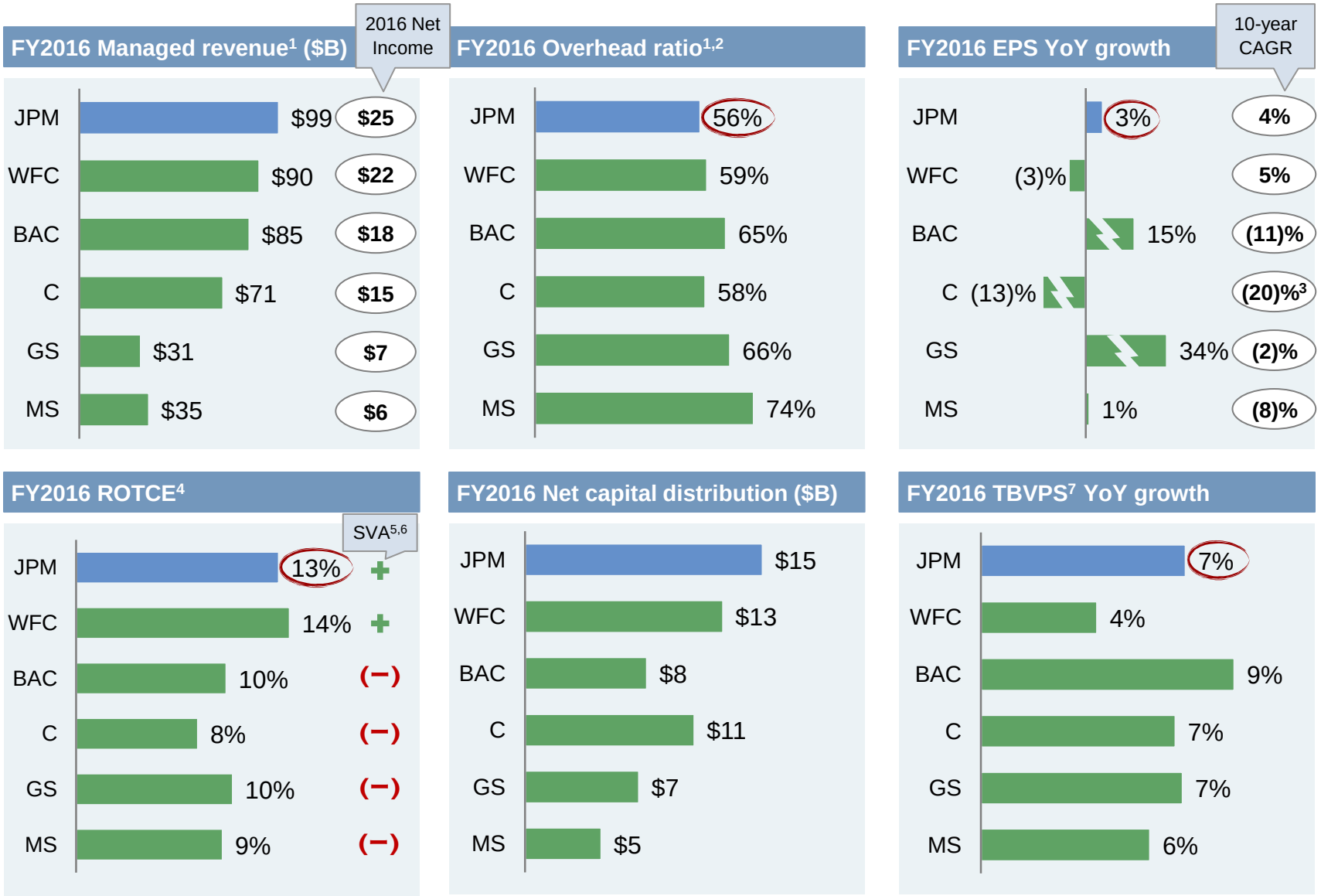
JPMorgan Chase overview

Revenue[1]	**$99B**	■ Diversification supporting revenue, despite low rates and macro volatility ■ Net interest income of $47B and noninterest revenue of $52B
Adjusted expense[2]	**$56.1B** **57%**	■ 1% decrease in the adjusted overhead ratio ▪ Modest legal benefit
Net income	**$24.7B** **$6.19**	■ Record net income and record EPS – record 6 out of the past 7 years
CET1[5] **Capital return**	**12.2%** **$15B**	■ Increased CET1 by 60bps while returning $15B of net capital to shareholders ▪ 65% net payout ratio in 2016
ROTCE[3]	**13%**	■ Significant shareholder value added – among best in class returns

Note: For footnoted information, refer to slide 37

… and on a relative basis – JPM continues to be a leader

JPMorgan Chase overview

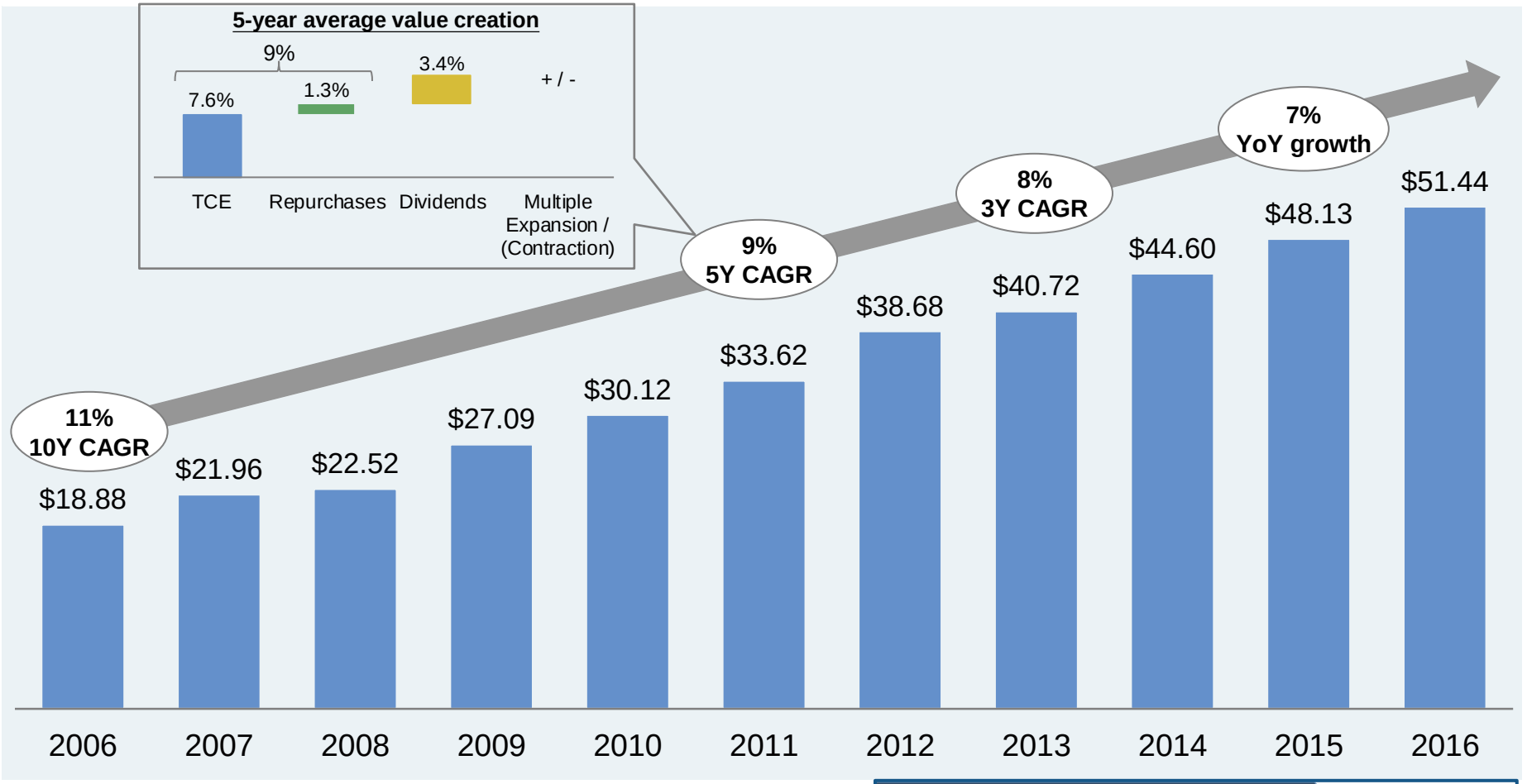


Note: For footnoted information, refer to slide 38

Sustained tangible book value growth

JPMorgan Chase overview

Tangible book value per share ("TBVPS")[1,2]



Cumulative net capital return ($B) 2006-2016 **$57B**

TBVPS and dividends are building blocks of value creation

[1] Refer to note 3 on slide 37

[2] 2010-2014 has been revised to reflect the adoption of new accounting guidance for investments in affordable housing projects

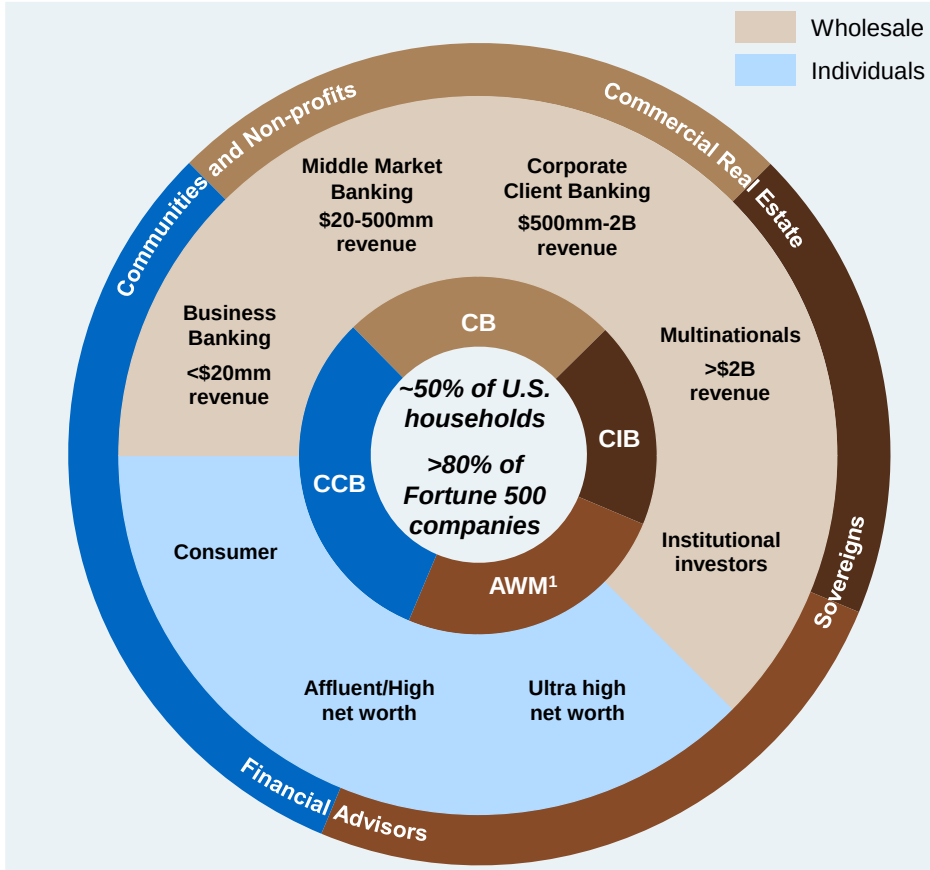
Our operating model is centered around our clients

JPMorgan Chase overview

Operating model



Client segmentation



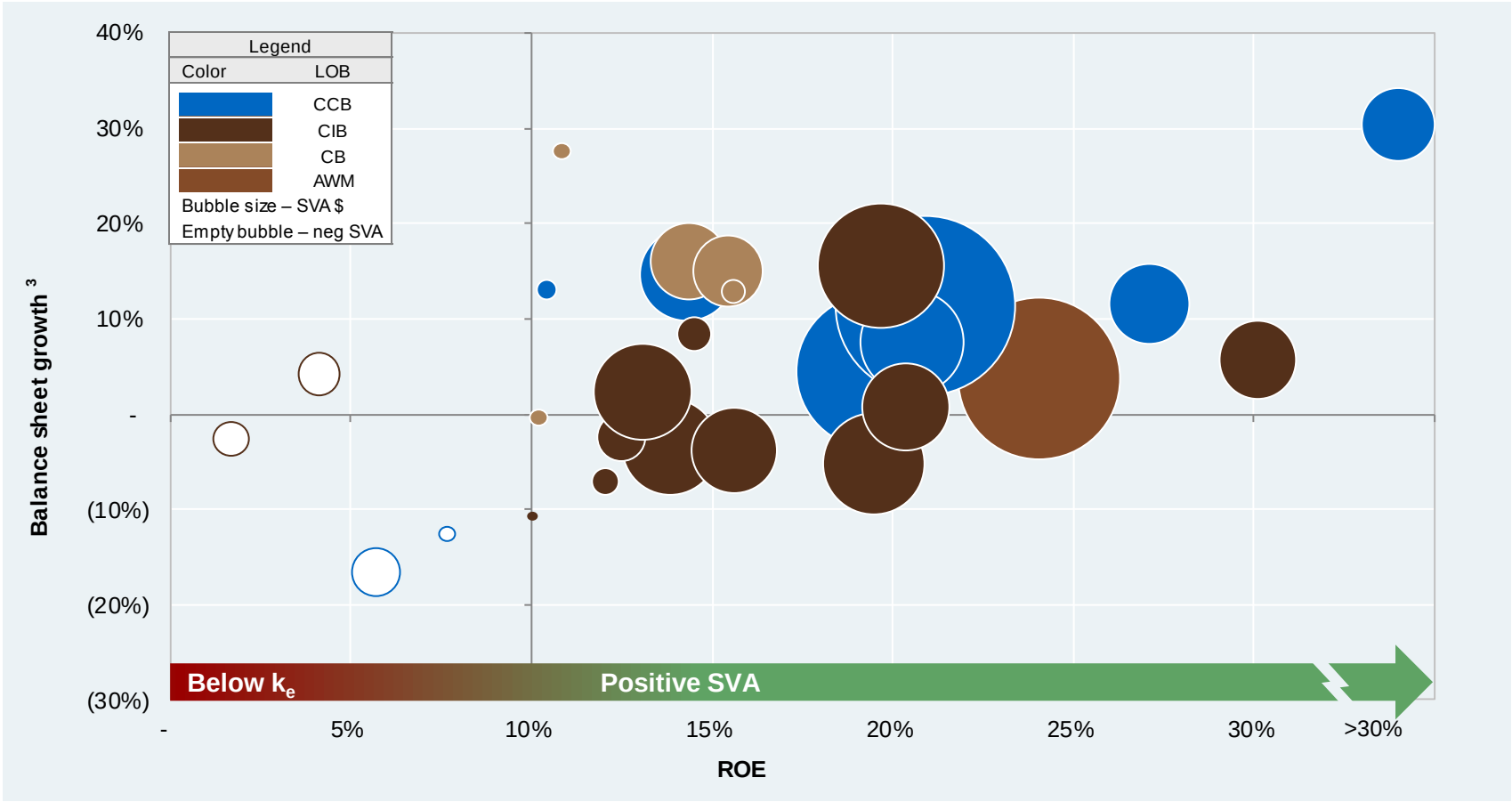
Cannot be replicated – complete, global, diversified and at scale – built over decades

[1] Asset & Wealth Management (formerly Asset Management or "AM")

Disciplined resource allocation and granular performance measurement

JPMorgan Chase overview

Sub-LOB pro-forma ROE (2016 NIAC[1], 2017 equity) and shareholder value add dollars[2]

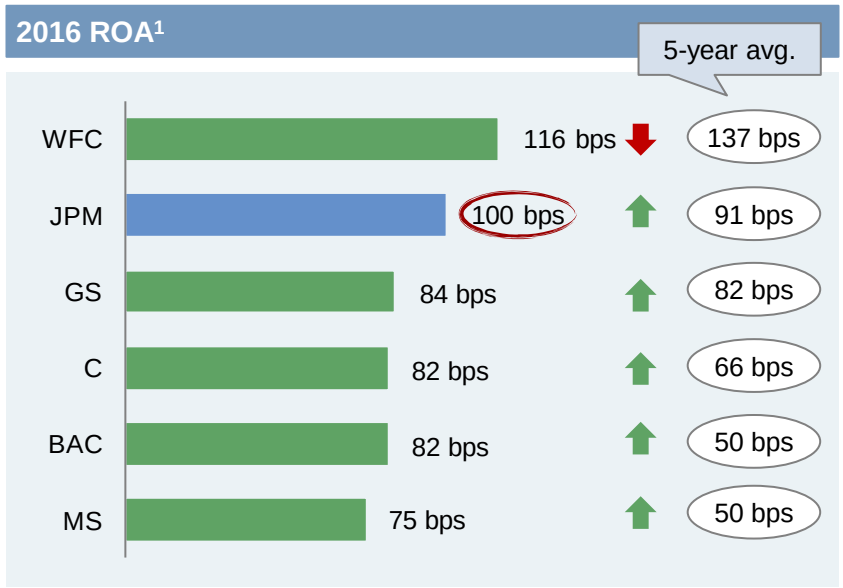


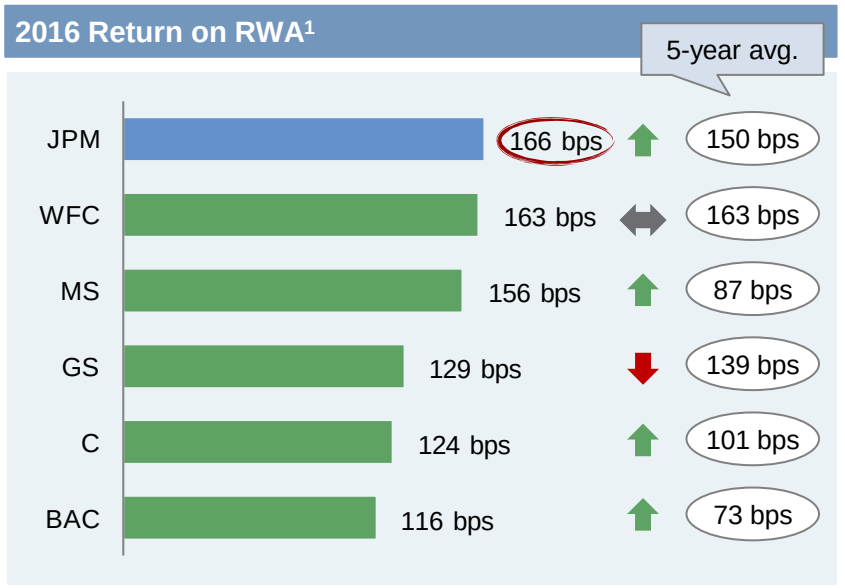
Majority of our sub-LOBs clear their cost of equity

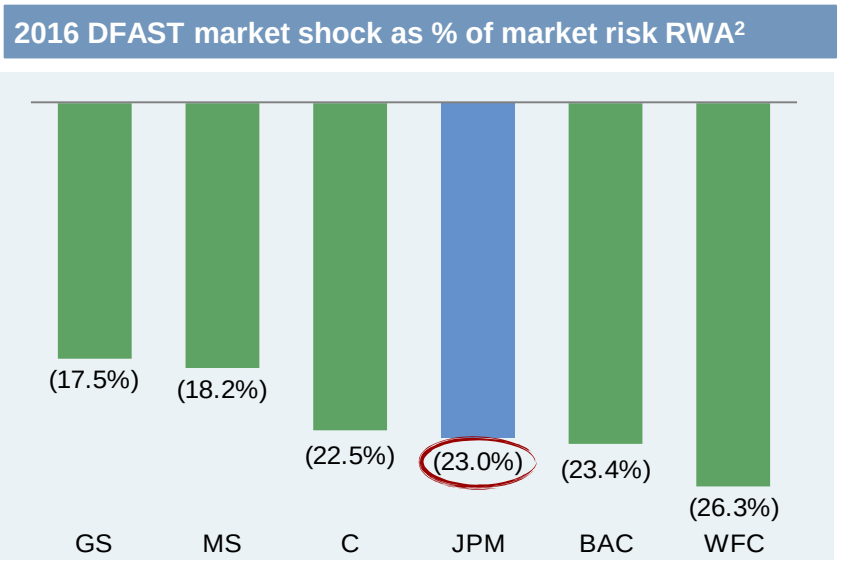
[1] Net income applicable to common equity ("NIAC")
[2] Excludes Corporate
[3] Annualized asset growth from 4Q14-4Q16 with the exception of Consumer Banking which is deposit growth

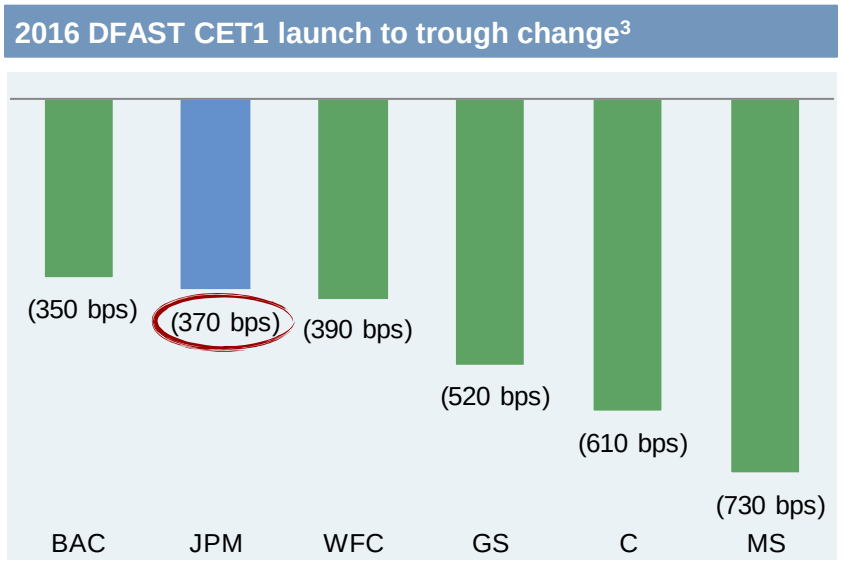
Benefits of a diversified platform on returns and in stress

JPMorgan Chase overview









FIRM OVERVIEW

[1] Source: Peer disclosures in SEC filings and SNL Financial; Based on fully phased-in risk-weighted assets ("RWA"), where available, subject to Collins Floor

[2] Source: FRB 2016 DFAST disclosure, Pillar 3 Report – 4Q15 market RWA

[3] Source: FRB 2016 DFAST disclosure – represents launch to trough CET1 depletion from FRB-provided results; does not represent estimates of the stress capital buffer ("SCB")

Agenda

1. **Building exceptional client franchises**
2. Operating with fortress principles
3. Maximizing long-term shareholder value
   - Capital and liquidity
   - Operating leverage and financial simulation

Leading to

~15%	11%+	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

1 Leading client franchises

Building exceptional client franchises

Client franchises built over the long-term

		2006	2015	2016
CCB	Deposits market share[1]	3.6%	7.9%	8.3%
	# of top 50 Chase markets where we are #1 (top 3)	*11 (25)*	*12 (40)*	*14 (38)*
	Average deposits growth rate	8%	9%	10%
	Active mobile customers growth rate	n/m	20%	16%
	Credit card sales market share[2]	15.9%	21.1%	21.5%
	Merchant processing volume[3] ($B)	$661	$949	$1,063
CIB	Global IB fees[4]	#2	#1	#1
	Market share[4]	*8.7%*	*7.9%*	*8.1%*
	Total Markets revenue[5]	#8	#1	#1
	Market share[5]	*6.3%*	*9.7%*	*11.4%*
	FICC[5]	#7	#1	#1
	Market share[5]	*7.0%*	*10.3%*	*12.0%*
	Equities[5]	#8	#3	#2
	Market share[5]	*5.0%*	*8.8%*	*10.1%*
CB	# of MSAs with Middle Market banking presence[6]	26	45	47
	Multifamily lending[7]	#28	#1	#1
	Gross investment banking revenue ($B)	$0.7	$2.2	$2.3
	% of North America IB fees	*16%*	*36%*	*40%*
AWM	Mutual funds with a 4/5 star rating[8]	119	214	220
	Ranking of LT client asset flows[9]	n/a	#4	#2
	Active AUM market share[10]	*1.8%*	*2.6%*	*2.5%*
	North America Private Bank (Euromoney)	#1	#1	#1
	Client assets market share[11]	*3.0%*	*4.4%*	*4.4%*

- Relationships with **~50% of U.S. households**
- Industry leading deposit growth[12]
- #1 U.S. credit card issuer[13]
- #1 U.S. co-brand credit card issuer[14]
- #1 rated mobile banking app[15]
- #1 U.S. credit and debit payments volume[16]
- #2 merchant acquirer[17]

- **>80% of Fortune 500 companies** do business with us
- #1 in both North America & EMEA IB fees[18]
- #1 in Global Debt, Equity & Equity-related[18]
- #1 in Global Long-Term Debt & Loan Syndications[18]
- #1 FICC productivity[19]
- Top 3 Custodian globally with AUC of $20.5T[20]
- #1 in USD clearing volumes with 19% share in 2016[21]

- Unparalleled platform capabilities – competitive advantage
- #1 in perceived customer satisfaction[22]
- Top 3 in overall middle market, large middle market and asset-based lending bookrunner[23]
- Industry-leading credit performance – 5th straight year of net recoveries or single digit NCO rate

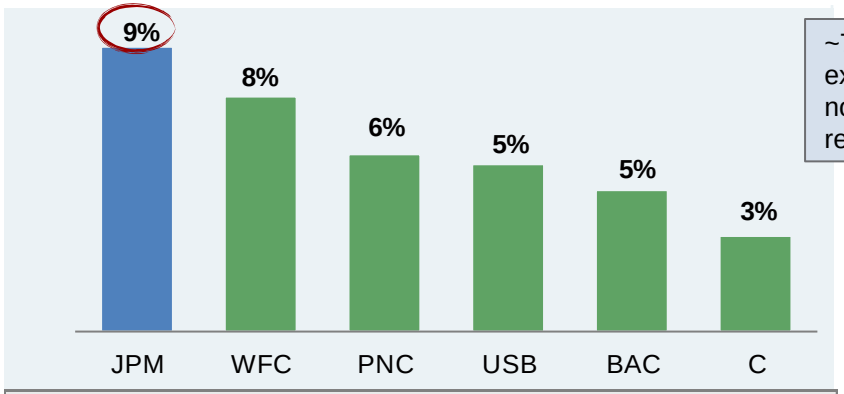
- 83% of 10-year LT mutual fund AUM in top 2 quartiles[24]
- Positive client asset flows every year since 2004
- #2 Global Private Bank & #1 LatAm Private Bank[25]
- Revenue and LT AUM growth ~80% since 2006
- Doubled WM client assets (1.6x industry rate) since 2006[10]

Note: For footnoted information, refer to slide 39

1 Proven best-in-class long-term performance

Building exceptional client franchises

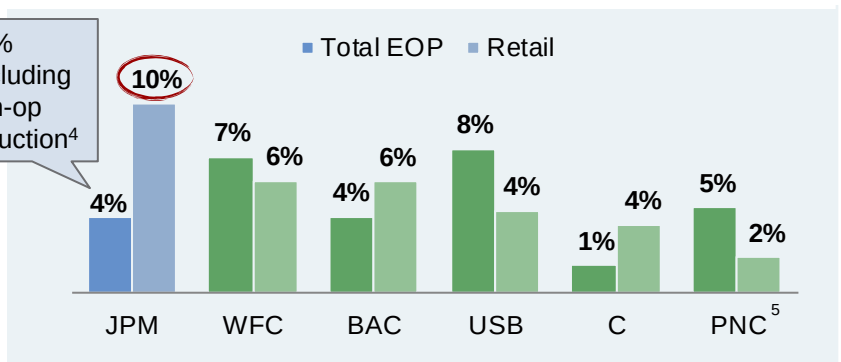
EOP core loans[1]: 5-year CAGR[2]



2016 YoY growth						
	10%	10%	2%	5%	6%	4%

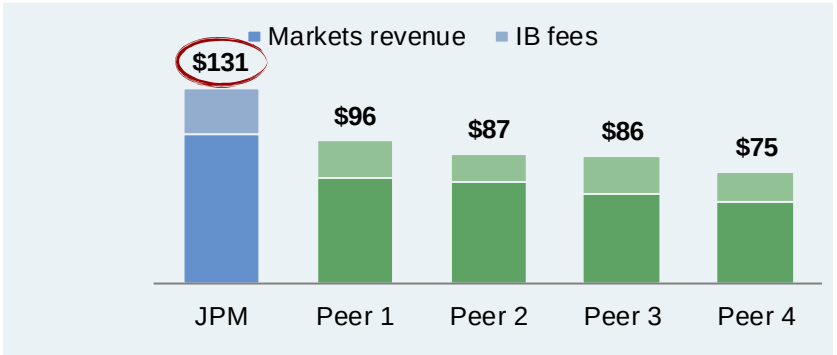
15% avg.

Deposits: 5-year CAGR[3]



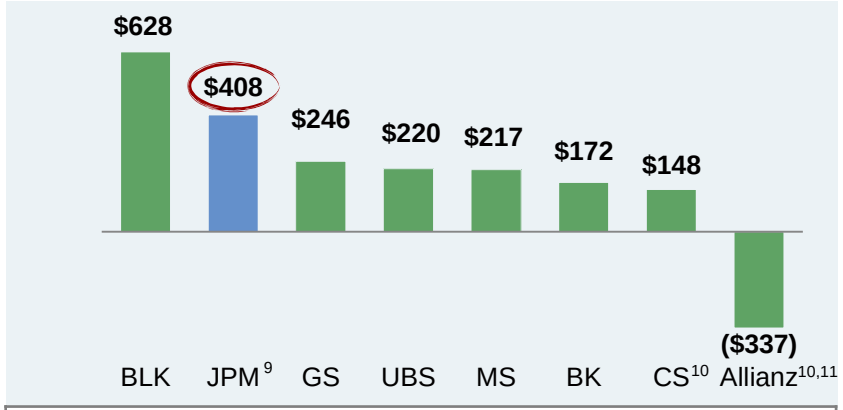
2016 YoY growth						
Total	7%	7%	5%	11%	2%	3%
Retail	11%	7%	8%	5%	2%	4%

Markets revenue & IB fees ($B): Cumulative 5-years[6]



2016 Share					
Markets[7]	11%	8%	8%	7%	7%
IB Fees[8]	8%	7%	5%	6%	6%

LT net client asset flows ($B): Cumulative 5-years



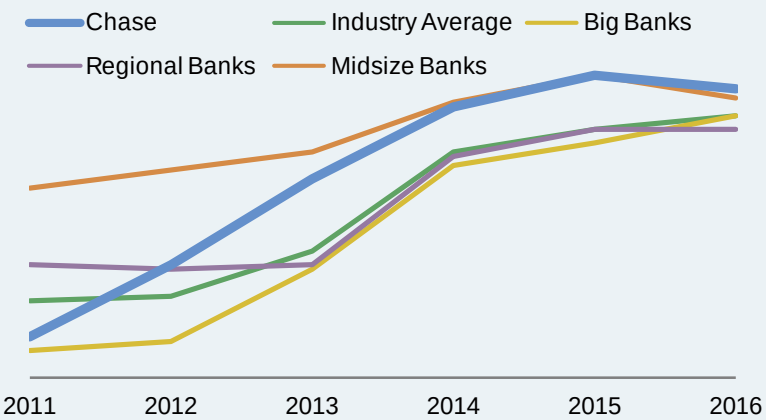
2016	$181	$52	$42	$20	$41	($14)	$34	($25)

Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 40

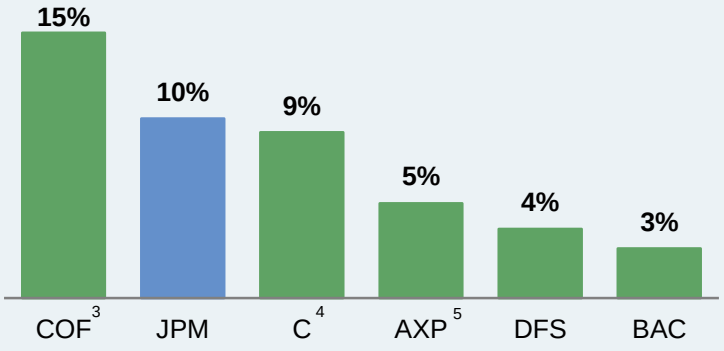
1 Proven best-in-class long-term performance (cont'd)

Building exceptional client franchises

J.D. Power customer satisfaction score: 2011–2016[1]

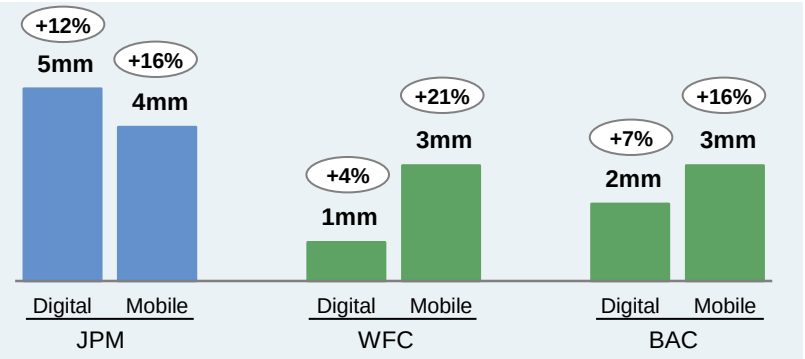


Credit card sales: 5-year CAGR[2]



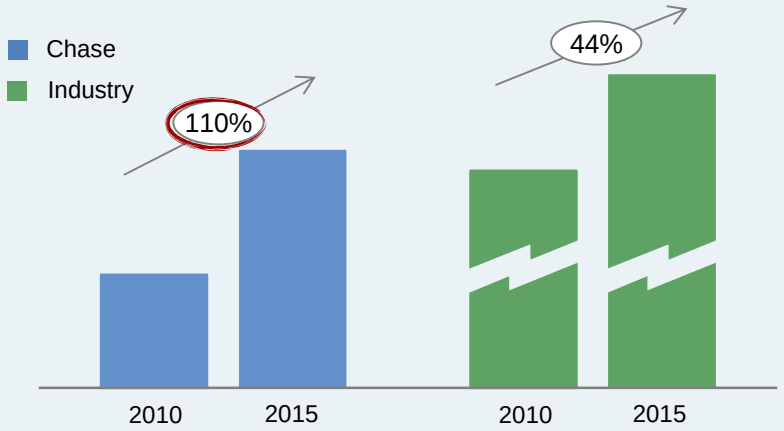
2016 ($B)						
Sales	$230	$545	$251	$550	$121	$226
4Q16 YoY[6]	10%	14%	6%	9%	3%	4%

Digital and mobile customer growth – 2016 YoY[7]



2016 Customers (mm)			
Digital	44	27	34
Mobile	27	20	22

Merchant processing bankcard volumes growth[8]



FIRM OVERVIEW

Note: For footnoted information, refer to slide 41

Agenda

1. Building exceptional client franchises
2. **Operating with fortress principles**
3. Maximizing long-term shareholder value
   - Capital and liquidity
   - Operating leverage and financial simulation

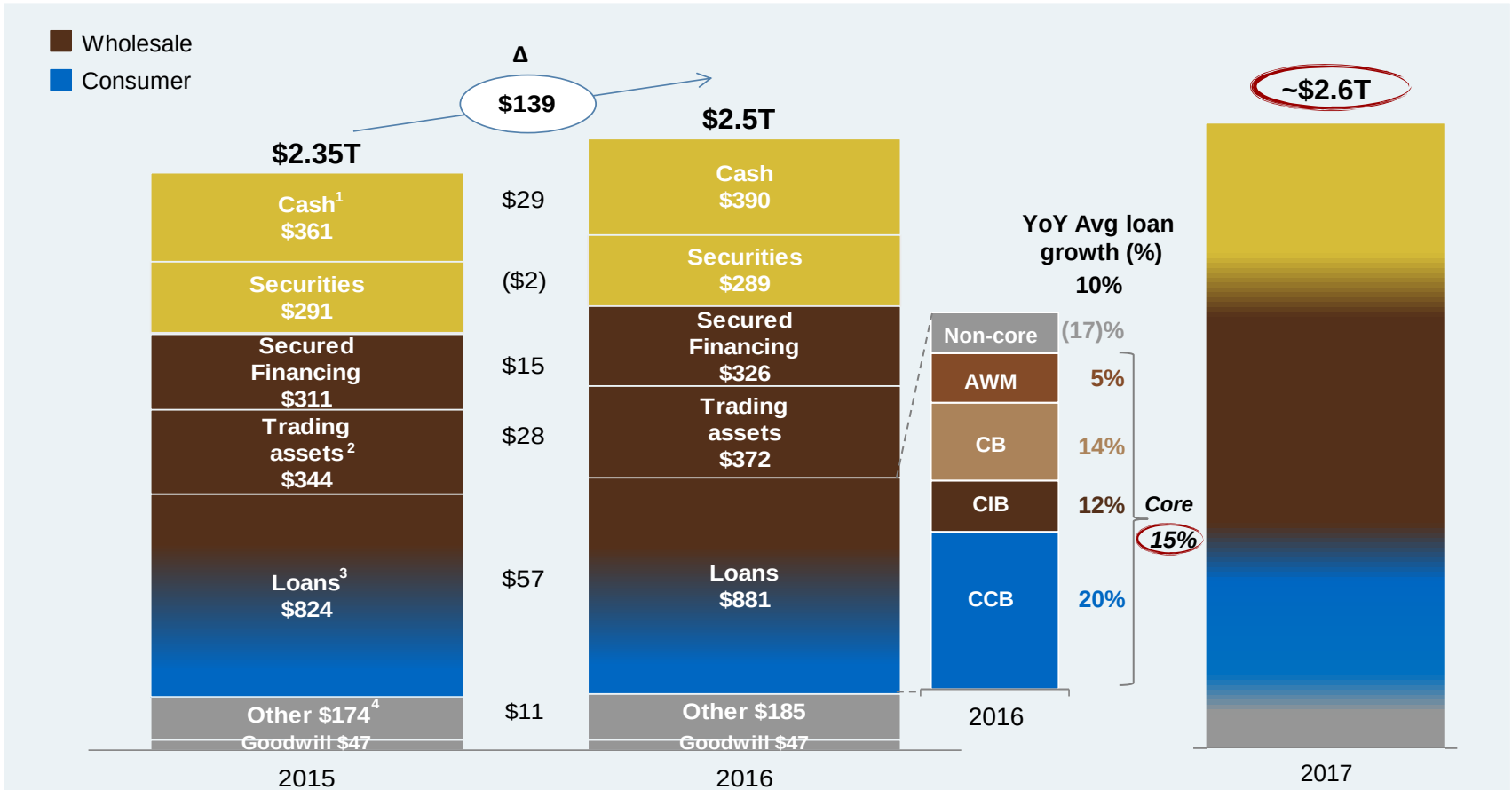
Leading to

~15%	11%+	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

2 Fortress balance sheet

Operating with fortress principles

EOP assets ($B), except where noted



	2015		2016	2017
EOP total deposits	$1,280	$95	$1,375	~$1.5T
Loans-to-deposits[5]	65%		65%	~65%

Continue to grow the balance sheet on strong loan growth funded by deposits
Expect 2017 YoY average core loan growth of ~10%

Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 42

2 Credit – net charge-offs

Operating with fortress principles

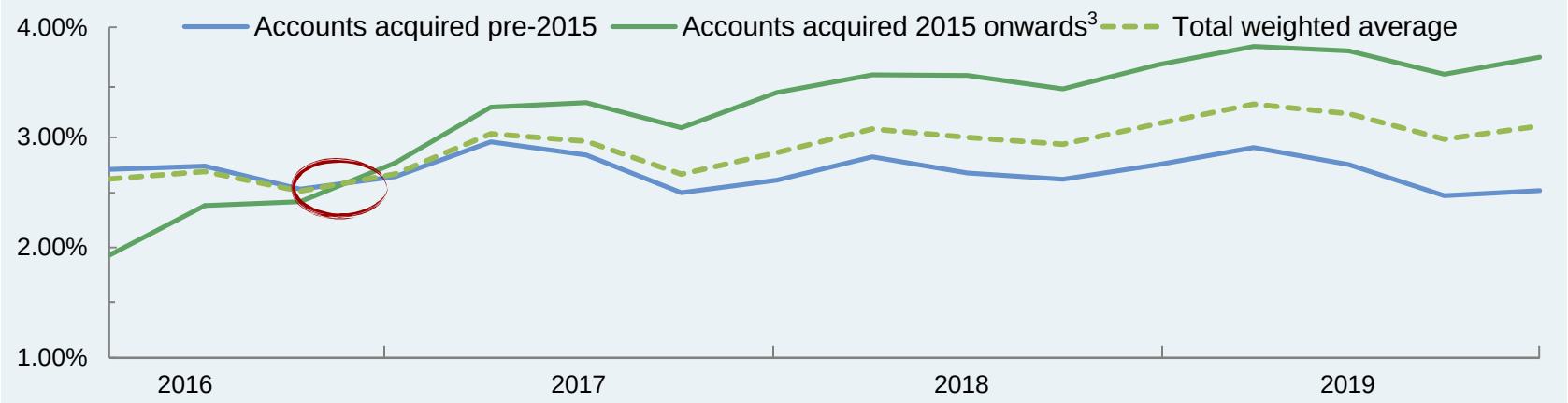
NCO rates at cyclical lows ($B)

		2016 Investor Day[1] NCOs +/-	2016 Actual NCOs	2017 NCOs	Medium-term guidance NCOs +/-
CCB	Mortgage Banking[2]	0.15%	0.10%	⟷	0.10%
	Card	2.50%	2.63%	< 3.00%	3-3.25%
	Auto	0.45%	0.45%	⟷	0.50%
	Business Banking	0.70%	0.61%	⟷	0.60%
CIB	Total CIB	0.15%	0.15%	↓	< 0.10%
CB	Total CB	0.15%	0.09%	⟷	0.15%
AWM	Total AWM	< 0.10%	0.01%	⟷	< 0.10%
Firmwide		**≤ $4.75**	**$4.7**	**$5 +/-**	

Commentary

- Expect 2017 and medium-term NCO rates to remain relatively flat across businesses with the exception of Card and CIB
  - Card – seasoning of newer origination vintages will drive loss rates modestly higher, but at higher risk adjusted margins
  - CIB – down due to absence of energy related charge-offs
- 2017 Firmwide NCOs of $5B +/- driven by loan growth

Historical and expected Card NCO rates and average loans by acquisition vintage



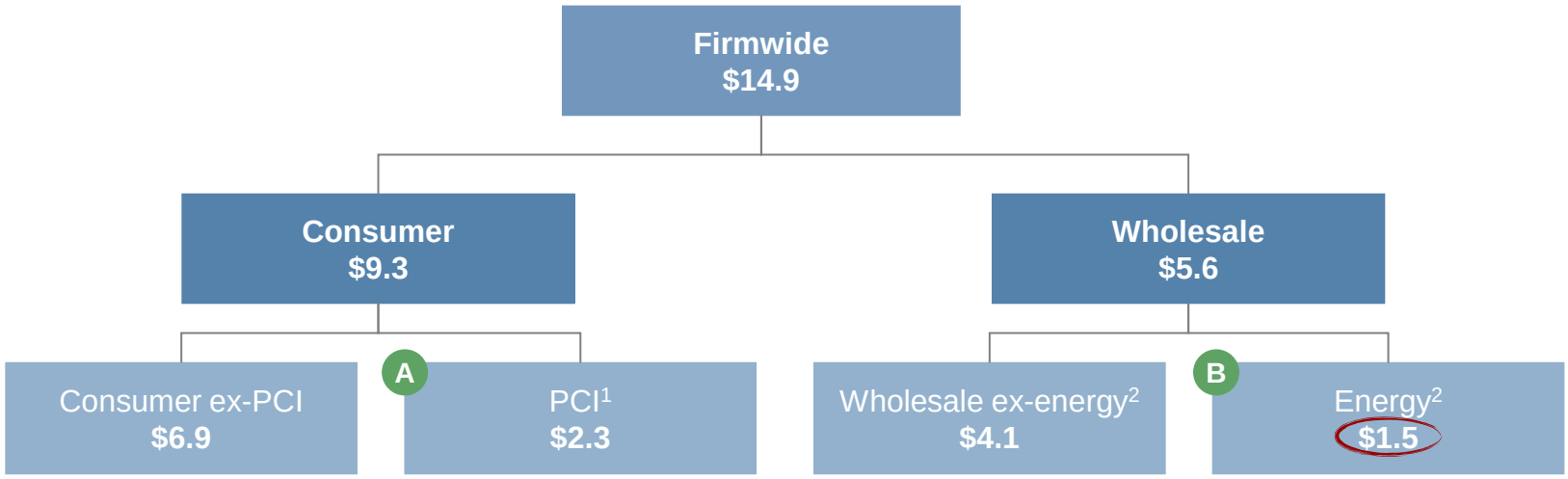
% of average loans for 2015 onwards vintages			
~15%	**~30%**	**~40%**	**~45%**

[1] Disclosed at 2016 Investor Day
[2] Excludes the impact of purchased credit-impaired ("PCI") loans. Refer to note 4 on slide 37
[3] A portion of these vintages are still maturing

2 Credit – reserves

Operating with fortress principles

2016 Credit reserves ($B)



Commentary

A PCI[1]
- Potential for further modest reserve release

B Energy[2]
- Stable with no broad based deterioration expected
- Expect modest NCO (name specific)
- Potential reserve releases in 2H17-2019

2017 Outlook

- Consumer
  - Expect reserve build of ~$300mm – growth across businesses offset by mortgage release
- Wholesale
  - Expect modest reserve build across wholesale ex-energy[2]

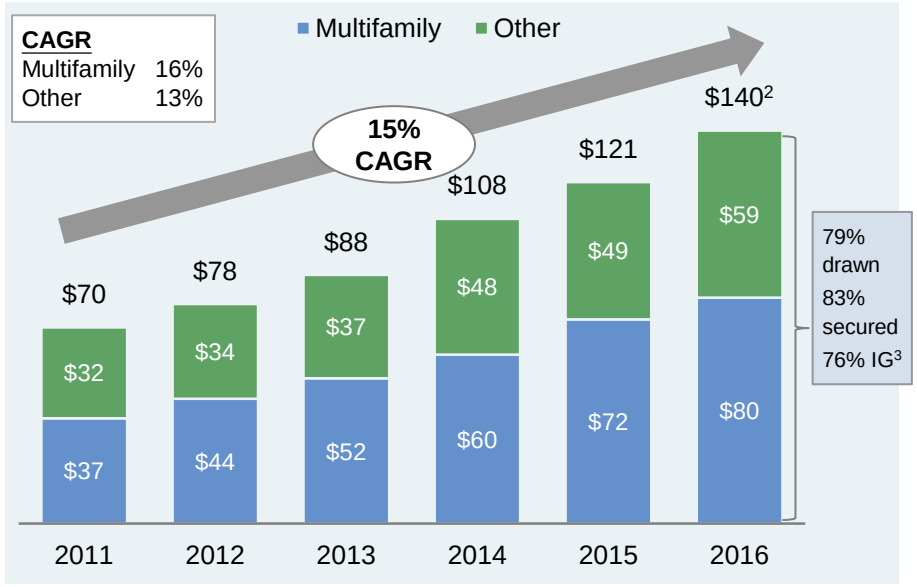
Credit fundamentals remain strong across businesses and medium-term outlook remains relatively benign

Note: Numbers may not sum due to rounding
[1] Purchased credit-impaired
[2] Energy includes Oil & Gas, Natural Gas Pipelines, and Metals & Mining

2 Credit – Commercial Real Estate ("CRE") and Auto

Operating with fortress principles

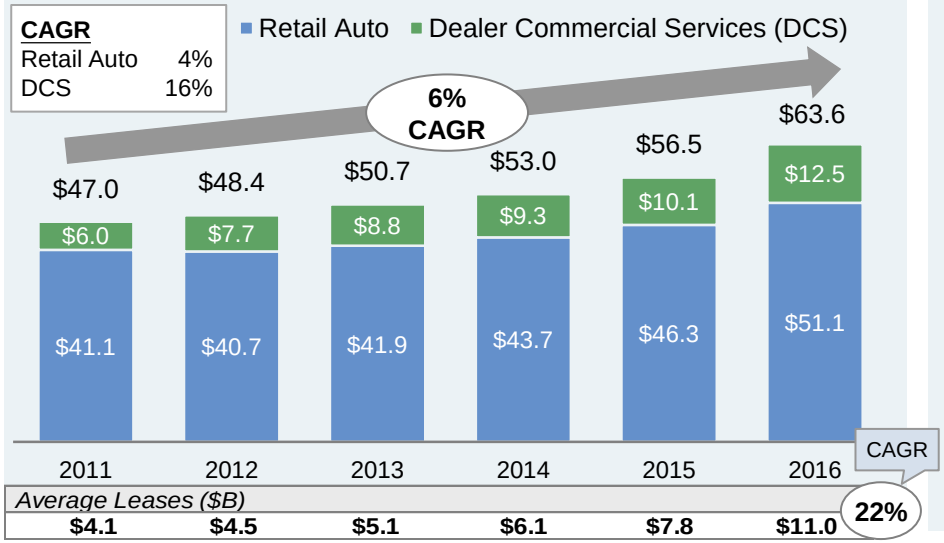
CRE credit exposure[1] growth ($B)



Commentary

- **Multifamily $80B**
  - 98% secured; 82% IG[3]
  - Largest and fastest growing part of the portfolio
  - Predominantly to class B/C properties in supply-constrained markets
  - 61% concentration in California
- **Other CRE $59B**
  - 63% secured; 67% IG[3]
  - Office (~30%), retail (~20%), lodging and industrial (~15%)
  - Unsecured exposure – primarily structured with availability restrictions based on advance rates against unencumbered assets
- Reduced exposure to sectors and markets that contributed significantly to charge-offs during the last cycle

Auto portfolio average loan balances[4] ($B)



Commentary

- Business focus on profit over growth
- Leases – only offered for our manufacturing partners
  - Risk sharing arrangements with partners – conservatively reserved
- 30+ Delinquency rates – well below the industry
  - 4Q16: Chase – 1.49%[5] vs. Industry – 3.50%
- High quality loan originations[6] with limited layered risk[7]
  - Average term: Chase – 65 months vs. Industry – 68 months
  - Average FICO: Chase – 754 vs. Industry – 719
  - Average LTV: Chase – 94% vs. Industry – 103%
  - Negative equity: Chase – 18% vs. Industry – 33%
  - Layered risk: Chase – 1% vs. Industry – 5%

Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 43

Agenda

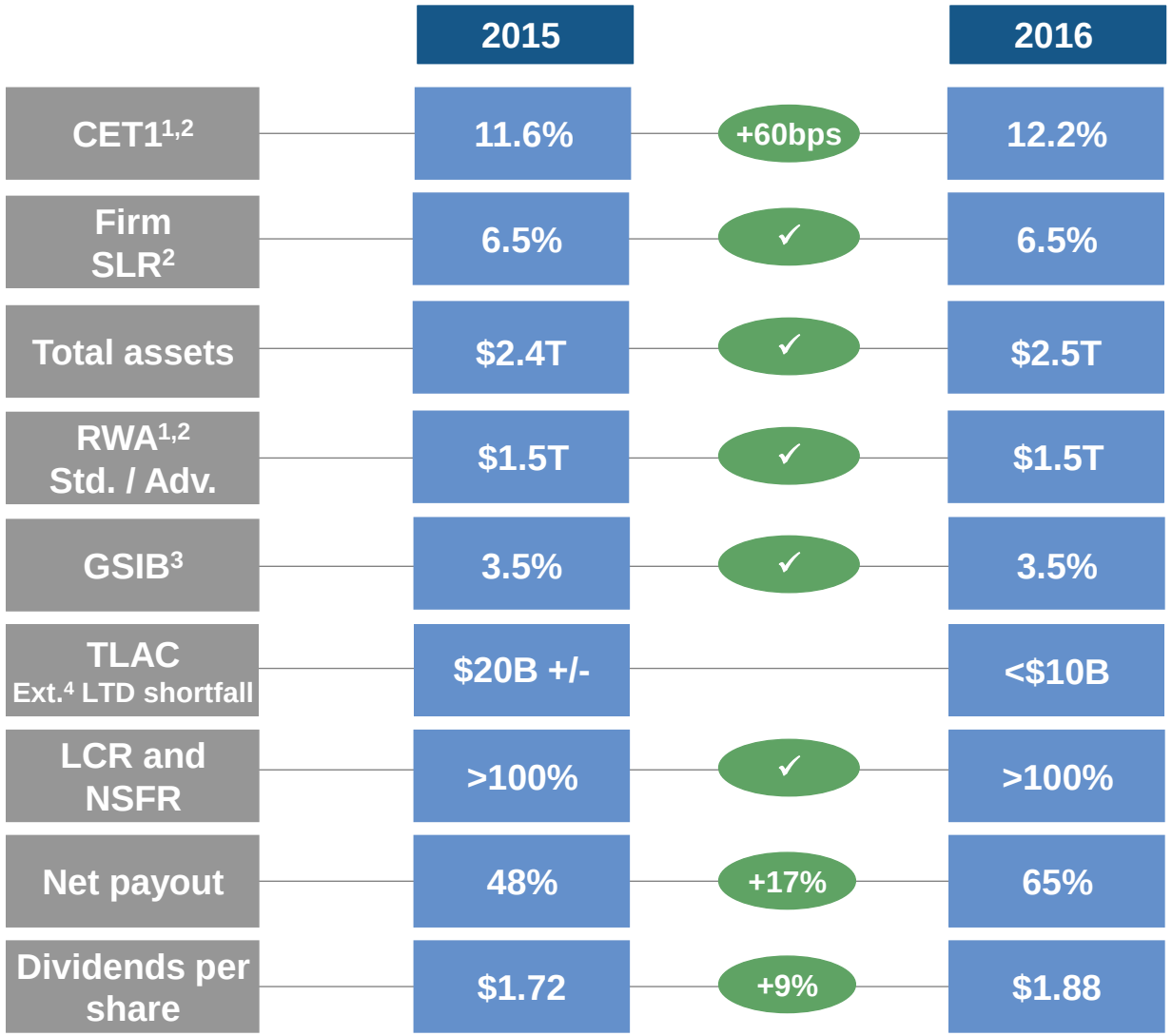
1. Building exceptional client franchises
2. Operating with fortress principles
3. **Maximizing long-term shareholder value**
   - Capital and liquidity
   - Operating leverage and financial simulation

Leading to

~15%	11%+	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

3 Continue to operate from a position of strength

Maximizing long-term shareholder value



Note: For footnoted information, refer to slide 44

3 Capital allocation

Maximizing long-term shareholder value – capital

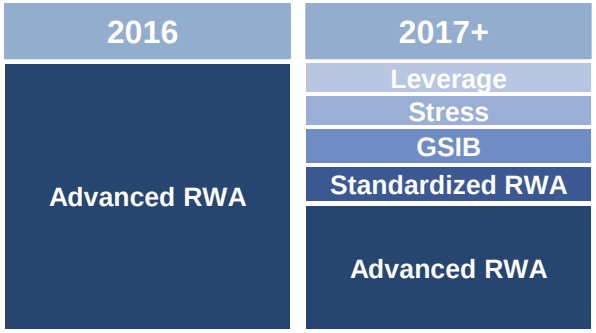
Capital allocation ($B)

	Average retained equity[1]		Medium-term ROTCE target (+/-)
	2016	2017	
Consumer & Community Banking	$51.0	$51.0	20%
Corporate & Investment Bank	64.0	70.0	14%
Commercial Banking	16.0	20.0	15%
Asset & Wealth Management	9.0	9.0	25%
Total LOBs	**$140.0**	**$150.0**	
Corporate[2]	40.0	35.0	
Total Firm[3]	**~ $180.0**	**~ $185.0**	**15%**
Corporate goodwill[4]	*42.0*	*47.0*	

Overview

- Moved to multi-variable framework reflecting size and stress-related constraints
- Consistent with existing optimization process
- All businesses held to 11% target against new framework

Allocation methodology[5]



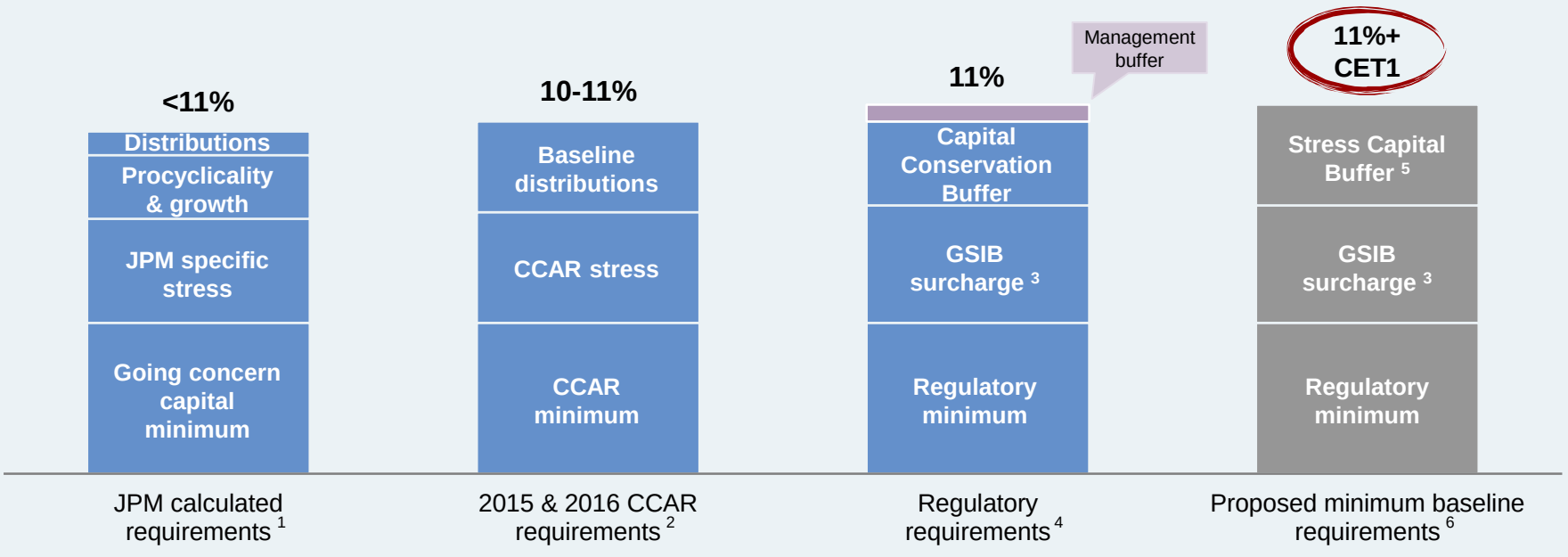
Capital allocations and methodology enhanced to further reflect multiple constraints of the Firm

Note: For footnoted information, refer to slide 45

3 Capital management framework

Maximizing long-term shareholder value – capital

Approach to capital management



Capital management framework

- In 2016, enhanced framework to include more granular and dynamic capital triggers
- Proposed minimum baseline requirements – only a speech at this stage
  - No specific clarification if there would also be a change to any post-stress minimum

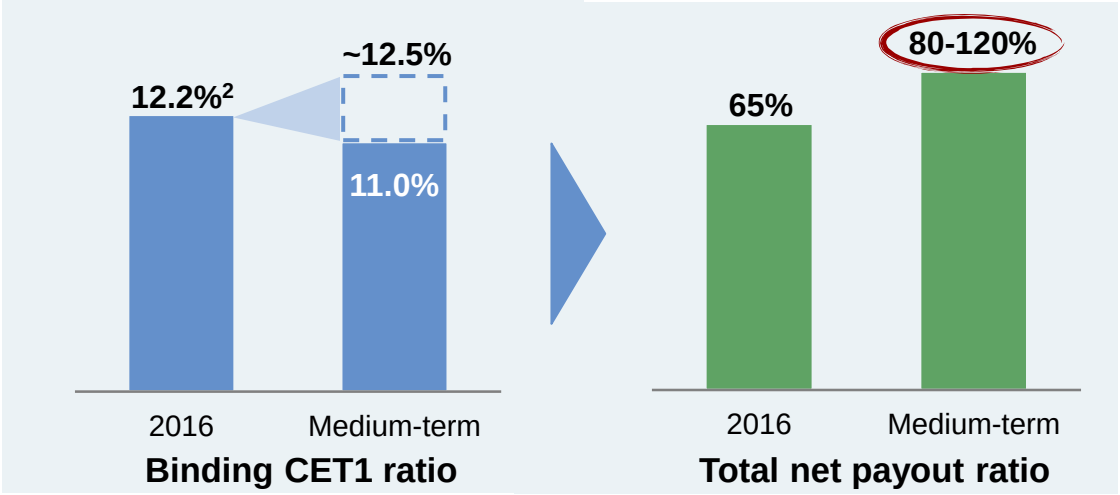
All current capital constraints point to the lower end of the Firm's 11-12.5% corridor over time

Note: For footnoted information, refer to slide 46

3 Medium-term capital and payout simulation

Maximizing long-term shareholder value – capital

Illustrative fully phased-in Firm CET1 and payout trajectories[1]



Key takeaways

- 12.2%[2] CET1 ratio at 2016 year-end
- Aim to remain within 11-12.5% corridor in the medium-term
  - Implies payouts between 80-120% using analyst estimates for the next two years

In-flight new regulations

- Basel IV – not expected to be binding
  - Credit risk – modestly up
  - Fundamental review of the trading book ("FRTB") – manageable impact for the Firm
  - Operational risk – expected reduction in requirement – U.S. implementation uncertain
  - Basel floor – most important factor; calibration and implementation are key
- CCAR
  - Notice of proposed rulemaking ("NPR") on updated capital framework detailing the stress capital buffer ("SCB") approach

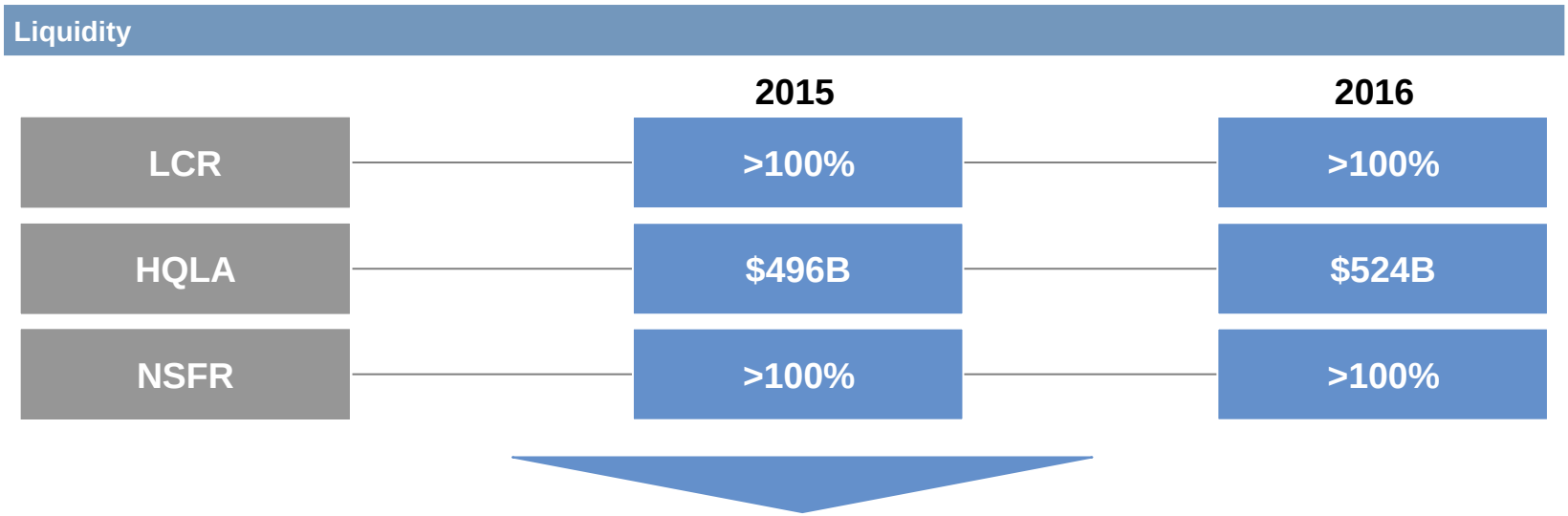
Capital plan must consider other factors including qualitative tests

[1] Source: FRB CCAR disclosures; medium-term payout ratio is based on analyst estimates

[2] Basel III Advanced Fully Phased-In. Represents the capital rules the Firm will be subject to commencing January 1, 2019. Refer to note 5 on slide 37

3 Significant resources to address liquidity needs

Maximizing long-term shareholder value – liquidity



- ~$50B increase in liquidity year-over-year
- Firm addressed deficiencies identified by the regulatory agencies in Firm's 2015 Resolution plan
- Reported HQLA understates liquidity position – excludes excess liquidity held at the bank subsidiaries

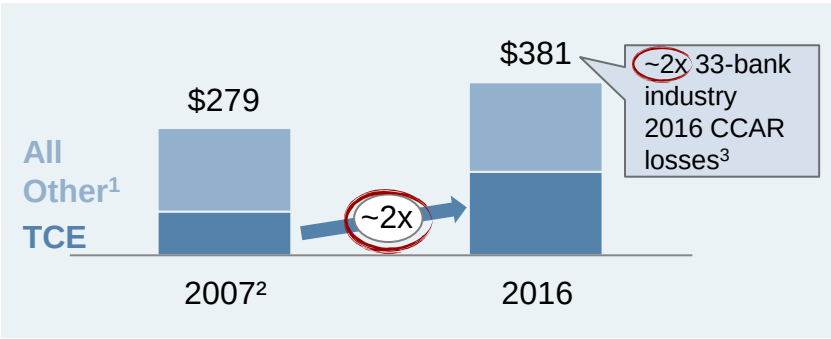
Significant excess liquidity primarily driven by Resolution

3 Banking industry resilience

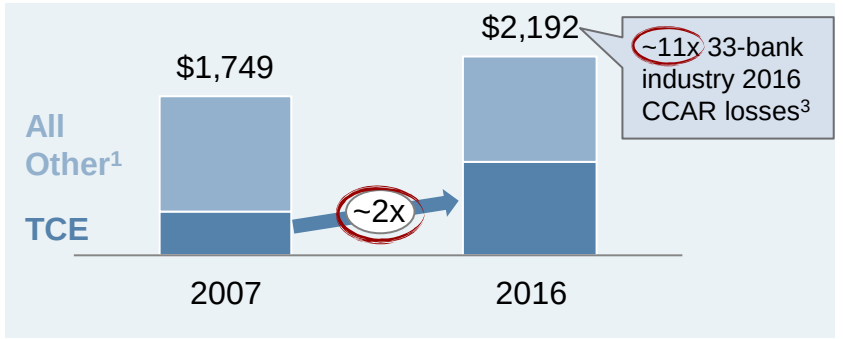
Maximizing long-term shareholder value – loss absorbing capacity

Loss absorbing resources (EOP, $B)

JPM

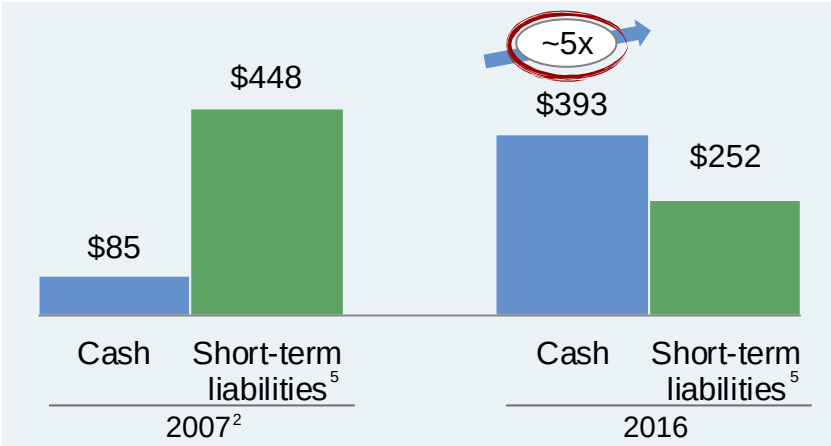


Industry[4]

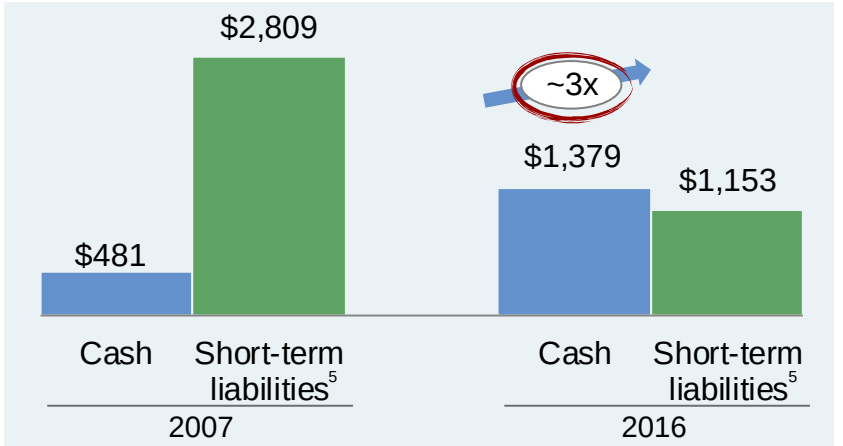


Short-term liquidity sources and uses (EOP, $B)

JPM



Industry[4]



JPM and the industry are significantly more resilient to capital loss and liquidity stress post crisis

Note: For footnoted information, refer to slide 47

3 Opportunity for evolution of the regulatory environment

Maximizing long-term shareholder value – adapting to the environment

Principles for responsible regulation

Coherence of rules – coordinated across regulatory agencies

Globally harmonized – fair across jurisdictions

Simplified, more risk-based standards

Consistent and transparent capital and liquidity rules

Review regulatory landscape in context of cost-benefit and economic growth

Safety and soundness first, but with due consideration of cost-benefit and the health of the economy

Agenda

1. Building exceptional client franchises
2. Operating with fortress principles
3. **Maximizing long-term shareholder value**
   - Capital and liquidity
   - **Operating leverage and financial simulation**

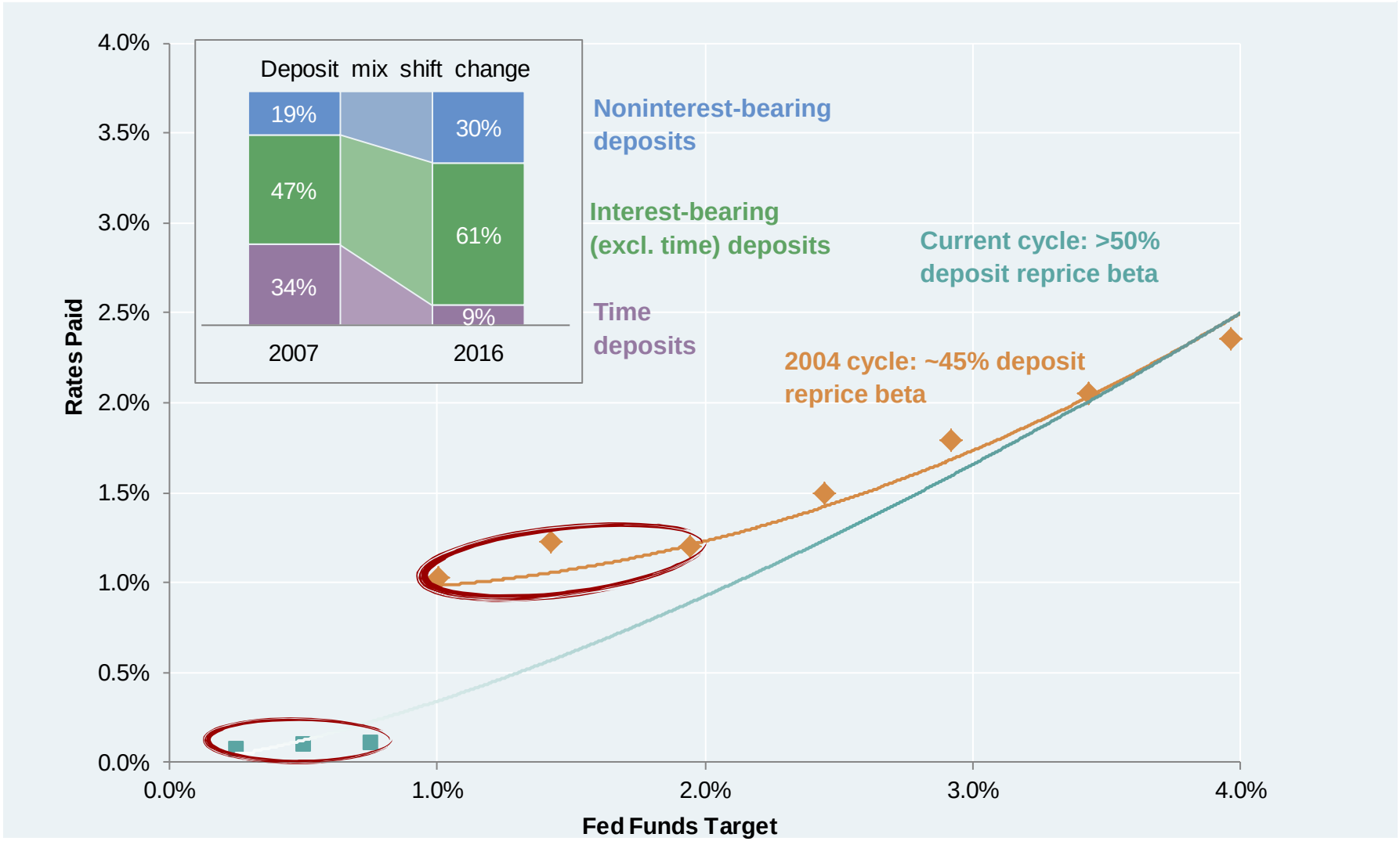
Leading to

~15%	11%+	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

3 Deposit re-pricing: current cycle vs. 2004 cycle

Maximizing long-term shareholder value

Deposit repricing (2004 cycle vs. current cycle)[1]



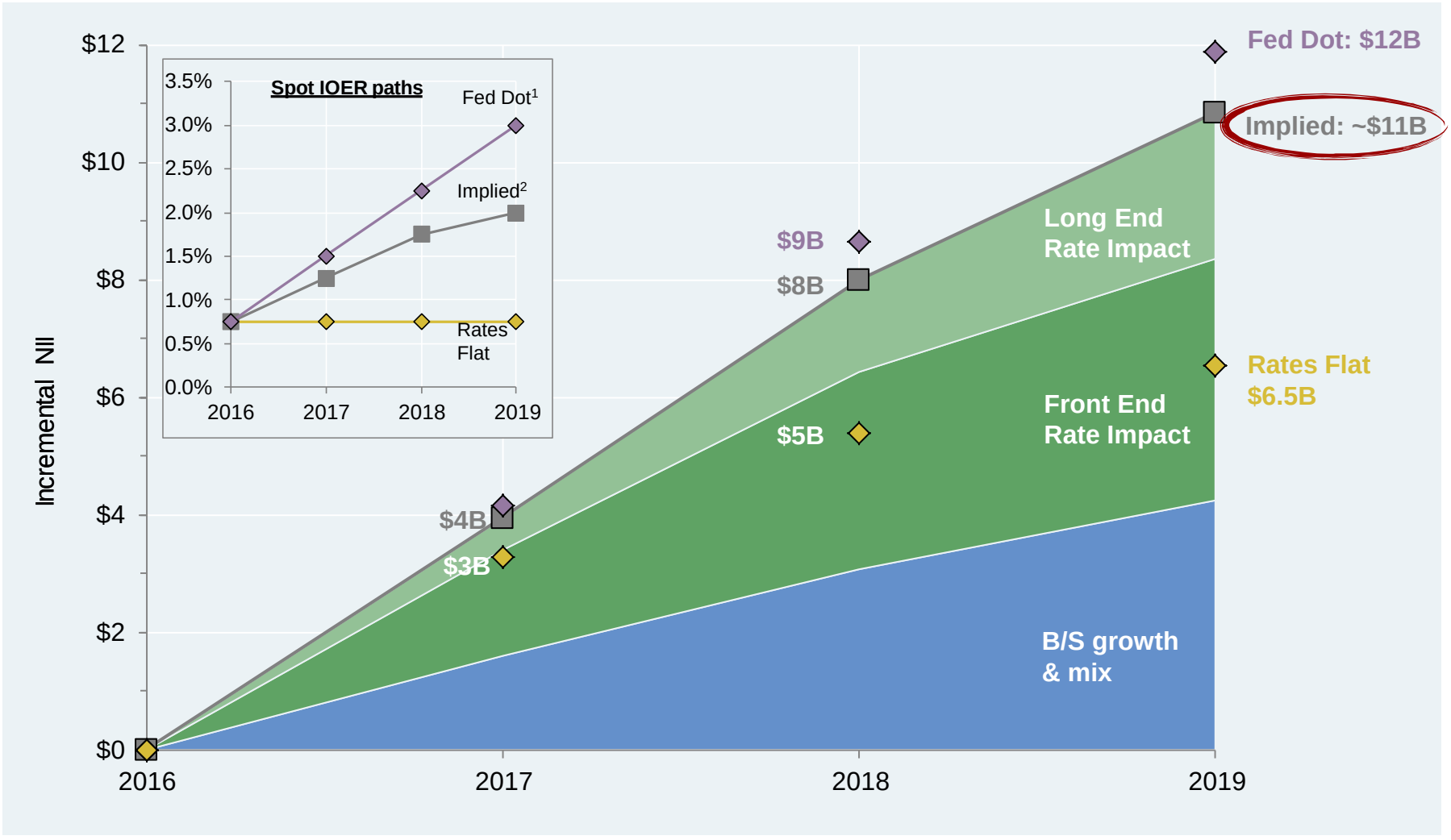
Expect deposit beta in the current cycle to be higher than the 2004 cycle

[1] 2004 cycle dates: 06/04-06/06; quarterly results shown above. Excludes ECR impact

3 NII – well positioned for rising rates

Maximizing long-term shareholder value – operating leverage

NII simulation under implied rates ($B)



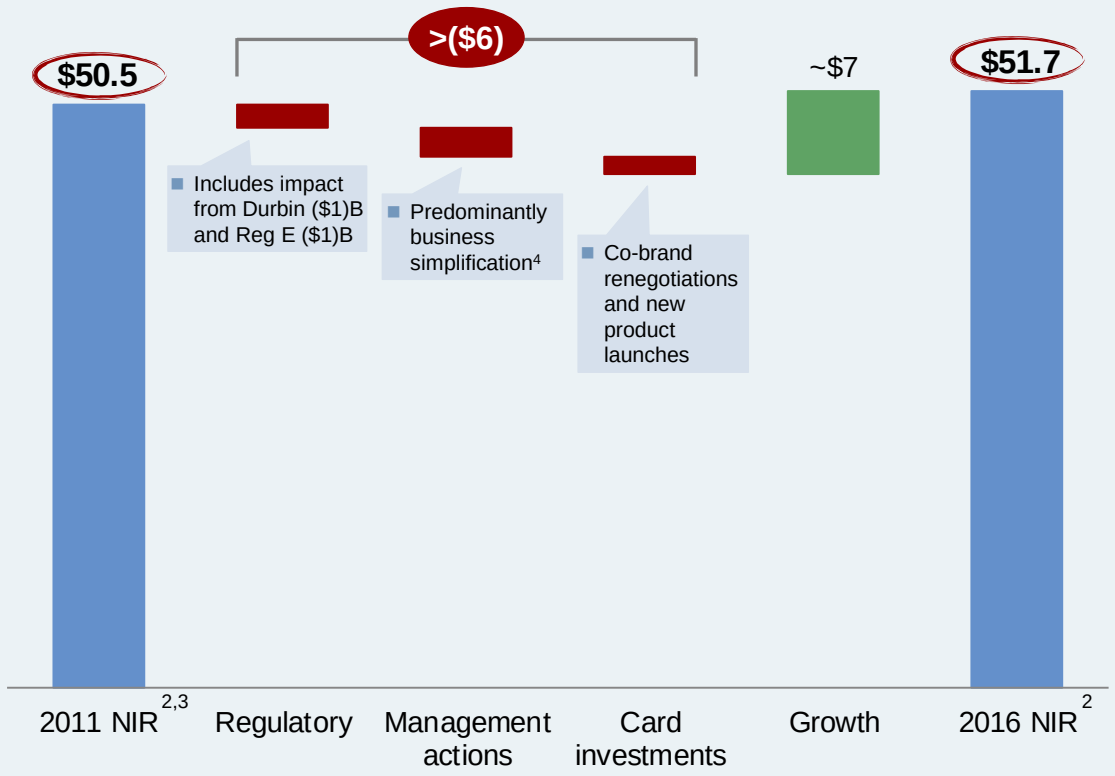
Firm positioning, rising rates and strong growth drive ~$11B of incremental NII

[1] Fed Dot represents dot #5 from the FOMC December 2016 meeting
[2] Market implied as of 2/22/17

3 Noninterest revenue growth over time

Maximizing long-term shareholder value – operating leverage

NIR walk[1] ($B)



1Q17 Outlook

- **Investment Banking** – IB revenue in 1Q17 in-line with 4Q16, dependent on timing of deals closing
- **Markets** – total revenue in 1Q17 to increase modestly YoY with results sensitive to market conditions

FY17 Outlook

- **Mortgage** – NIR down ~($700)mm for the year on higher rates and continued run-off of servicing portfolio as well as the absence of $200mm+ MSR gains in 2016
- **Card Services** – NIR down ~($600)mm for the year primarily on account acquisition costs

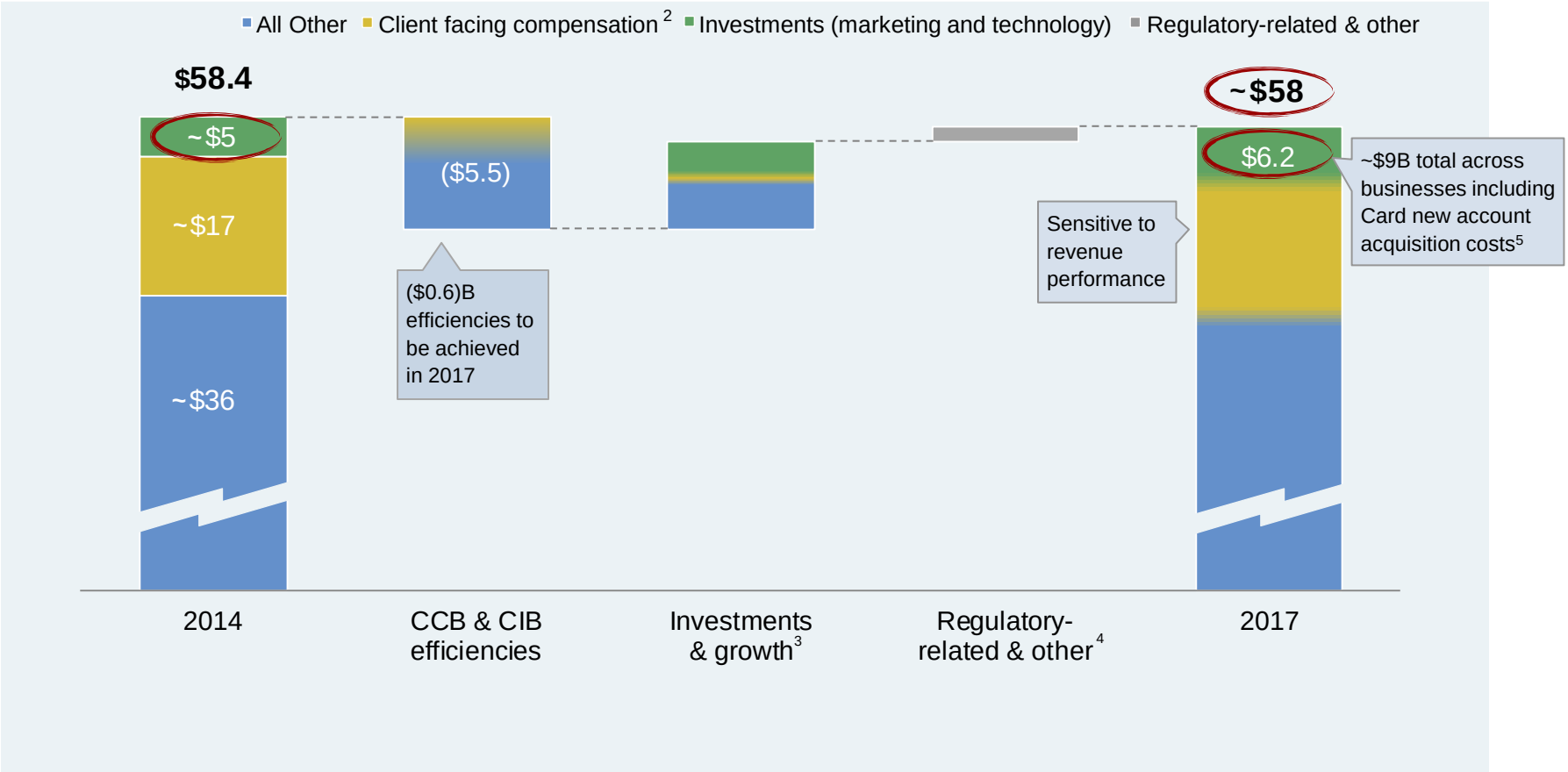
~3% annual NIR growth since 2011 excluding headwinds

Note: For footnoted information, refer to slide 48

3 Adjusted expense – creating capacity to self-fund investments and growth

Maximizing long-term shareholder value – operating leverage

Adjusted expense[1] ($B)



Creating capacity to self-fund investments and growth

Note: For footnoted information, refer to slide 49

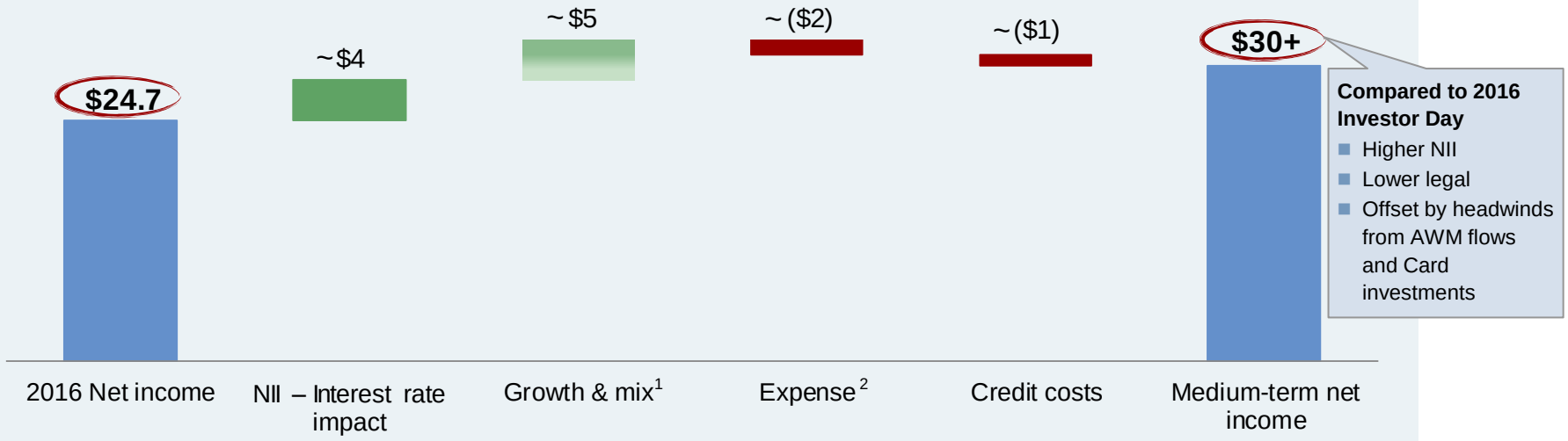
Earnings simulation

Maximizing long-term shareholder value

Simulation assumptions

- $7B after-tax NII uplift including impact of rates and growth
- High single digit core loan growth
- Assumes Markets and Mortgage revenue flat
- NIR CAGR of ~4% excluding Markets and Mortgage
- Expense includes continued investment in technology and growth in Auto leases
- Credit costs are largely driven by loan growth and seasoning of newer vintages in Card
- ROTCE of 14-15%+ assuming ~$1.6T RWA and 11.0-12.5% CET1 ratio

Medium-term net income walk ($B)



Net Income of $30B+ and ROTCE of 14-15%+

~15%	11%+	55%+/-	55-75%
ROTCE	*CET1 ratio*	*Overhead ratio*	*Net payout ratio*

[1] Includes NII and NIR
[2] Assumes $500mm of pre-tax legal expense

Conclusion

1 Building exceptional client franchises

- Four leading client franchises – together delivering significant value
- Client focus and long-term approach – consistently investing and innovating

2 Operating with fortress principles

- Strong foundation – capital, liquidity, balance sheet, risk discipline
- Better, faster, simpler
- Commitment to controls and culture

3 Maximizing long-term shareholder value

- Delivering strong capital returns – while adapting capital and liquidity frameworks
- Delivering significant operating leverage – while investing through-the-cycle

Leading to

~15% *ROTCE*	11%+ *CET1 ratio*	55%+/- *Overhead ratio*	55-75% *Net payout ratio*

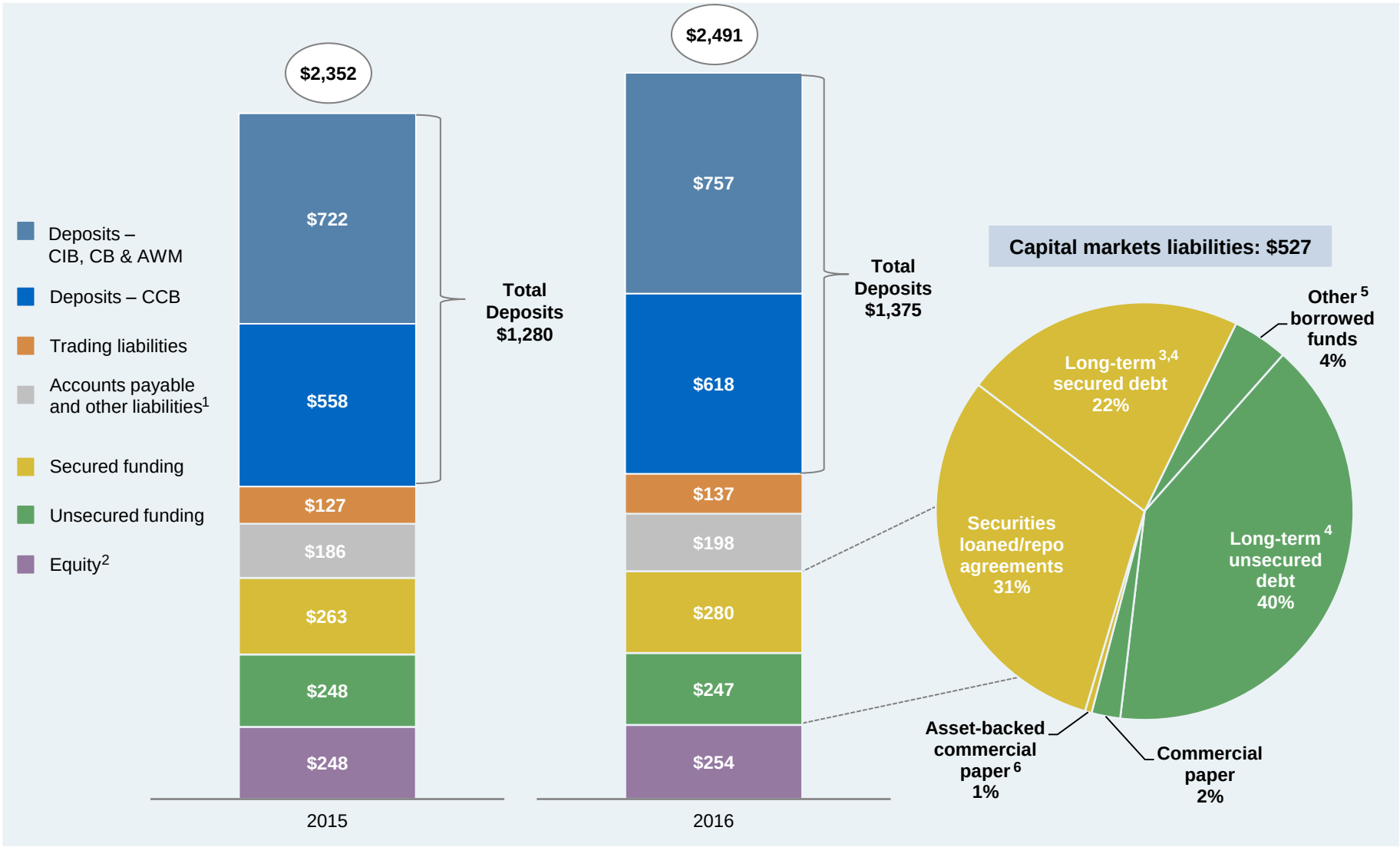
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Overview of funding sources

Managing to an optimized funding mix

Liabilities and stockholders' equity at 12/31/16 ($B)

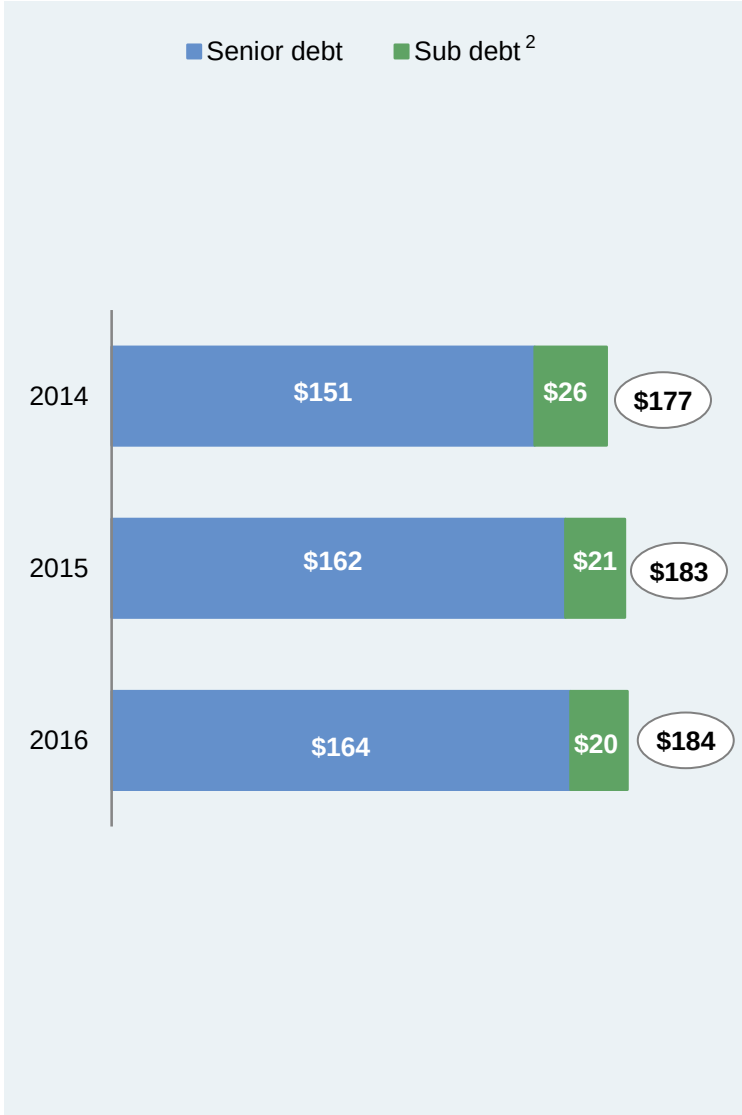


Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 50

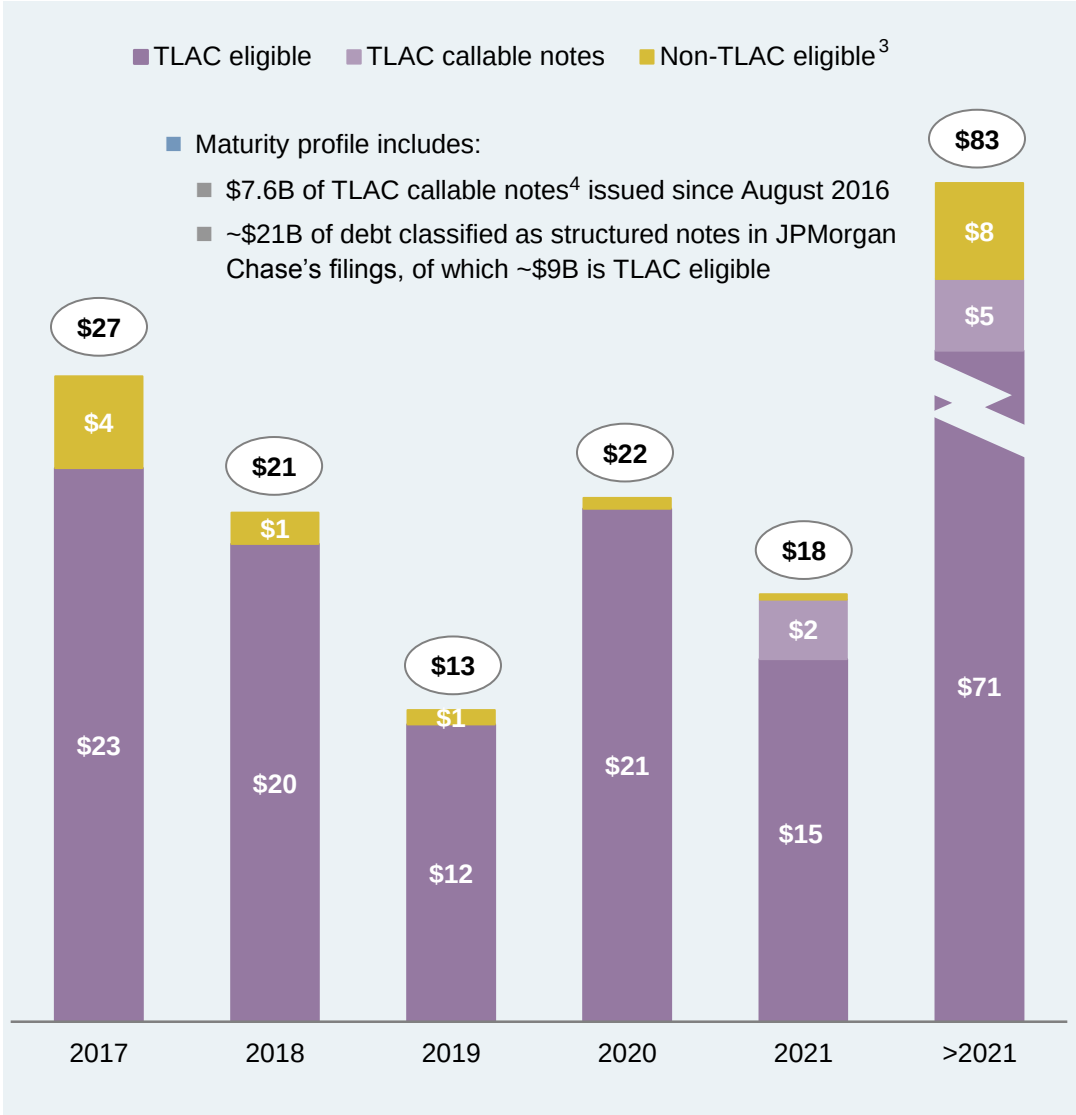
JPMorgan Chase & Co. (Holding Company) unsecured long-term debt

Optimizing portfolio with efficient callable structures

Holding Company unsecured long-term debt outstanding[1] ($B)



Holding Company unsecured long-term debt maturity profile ($B)

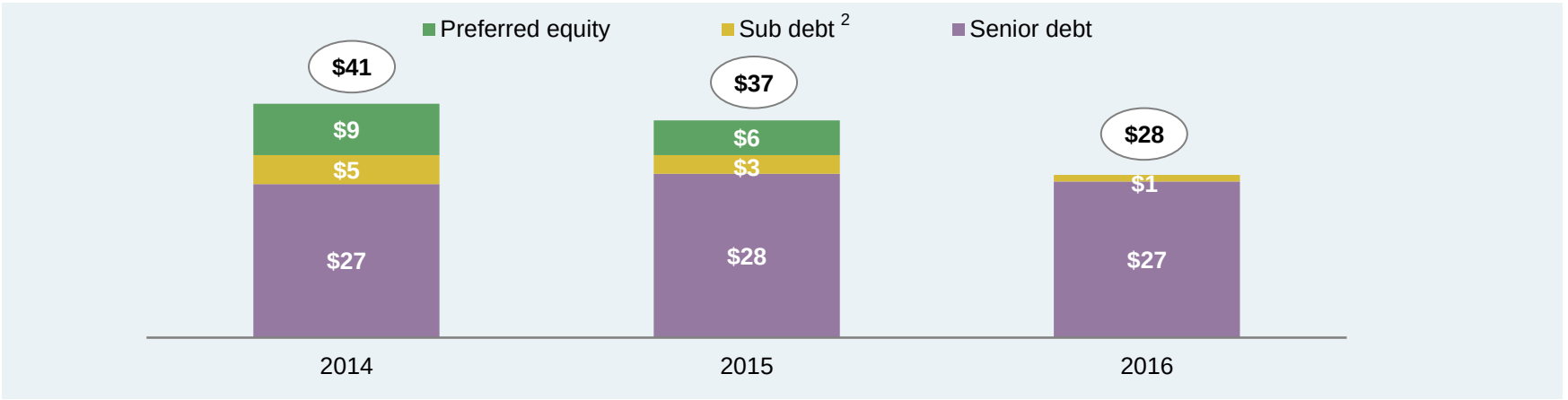


Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 51

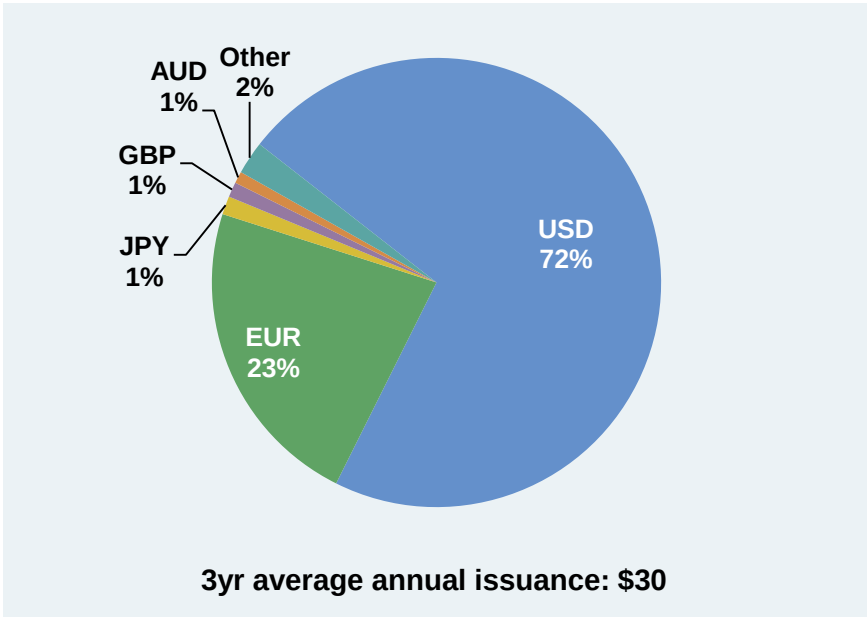
Holding Company unsecured benchmark long-term debt[1] and preferred equity

Diversified portfolio across products, currencies & tenors

Issuance by security type 2014-2016 ($B)

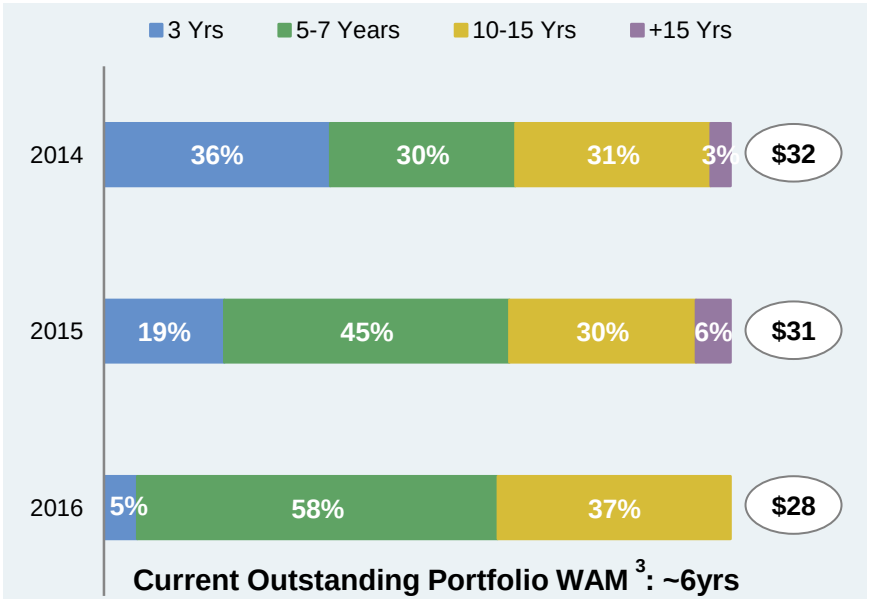


Unsecured debt issued by currency 2014-2016 ($B)



3yr average annual issuance: $30

Unsecured debt issued by tenor 2014-2016 ($B)



Current Outstanding Portfolio WAM [3]: ~6yrs

Note: Numbers may not sum due to rounding

[1] Excludes ~$21B of debt classified as structured notes in JPMorgan Chase's filings

[2] Includes trust preferred securities

[3] Weighted average maturity ("WAM") is calculated to final maturity

Composition and calibration of TLAC

Modest and manageable external long-term debt shortfall

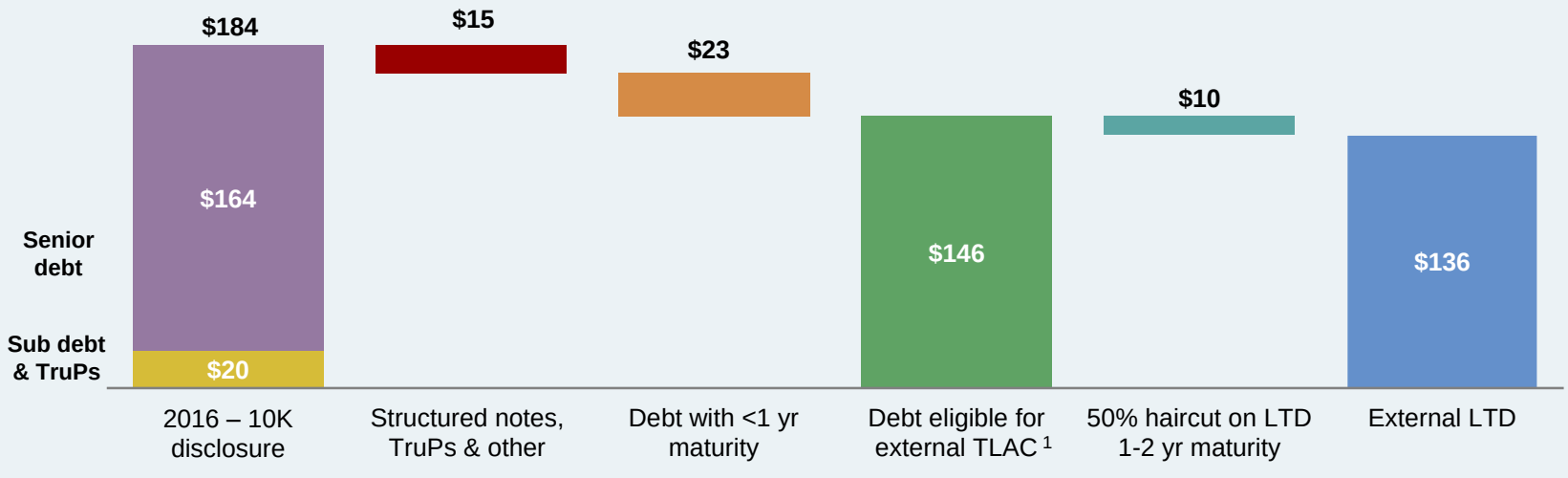
Commentary

- Currently compliant with external TLAC requirement
- External long-term debt ("LTD") requirement remains the binding constraint
- Callable debt enhances efficiency and allows for smaller debt footprint over time
- Intend to hold appropriate management buffer
  - Considerations include FX volatility, temporary issuance limitations and changes in RWA/leverage assets

TLAC Requirements

Key Metrics ($B) (at 12/31/2016)	External TLAC	External long-term debt
Eligible long-term debt	$146	$136
Preferred equity	26	--
Common Equity Tier 1	182	--
Total	**$354**	**$136**
%RWA	**23.8%**	**9.1%**
Requirement	*23.0%*	*9.5%*
(Shortfall)/Surplus	***$12***	***($5)***
%Leverage Assets	**11.1%**	**4.3%**
Requirement	*9.5%*	*4.5%*
(Shortfall)/Surplus	***$50***	***($8)***

Holding Company – Eligible long-term debt at 12/31/2016 ($B)

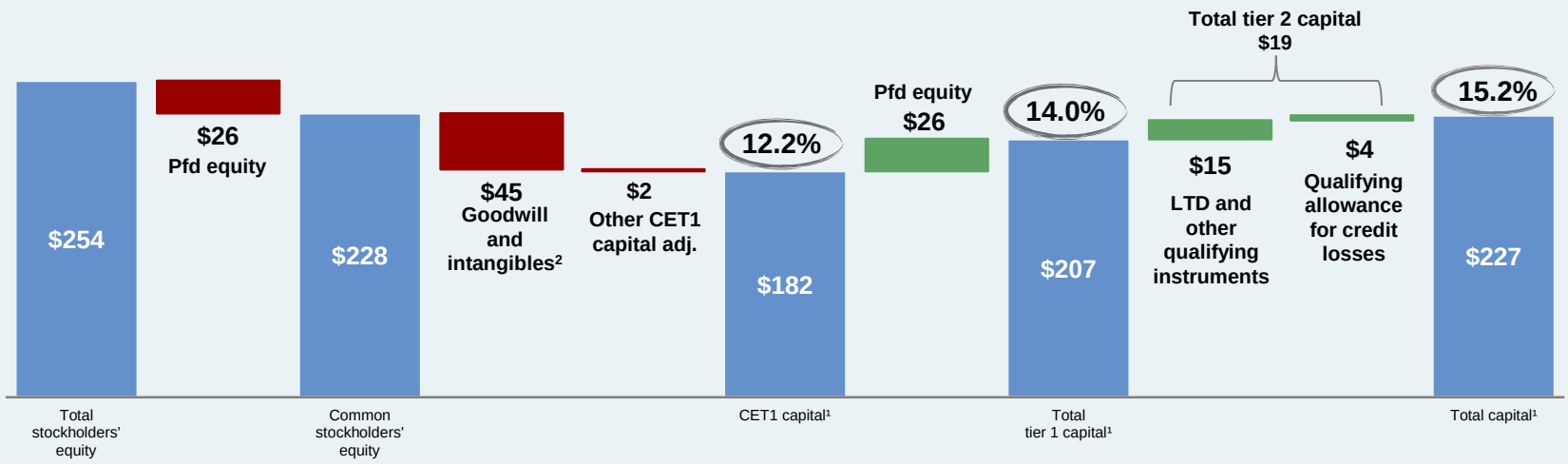


Note: Numbers may not sum due to rounding

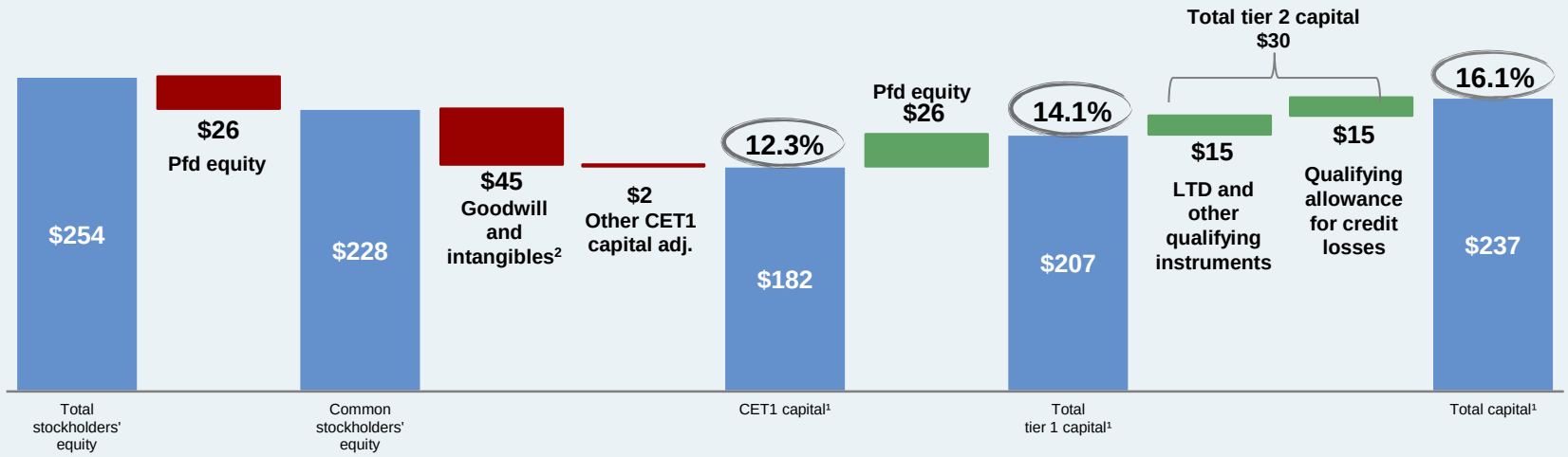
[1] Includes ~$9B of debt classified as structured notes in JPMorgan Chase's filings

Current capital position

Basel III advanced fully phased-in capital ratios and components at 12/31/16 ($B)



Basel III standardized fully phased-in capital ratios and components at 12/31/16 ($B)



Note: Numbers may not sum due to rounding

[1] See note 5 on slide 37

[2] Goodwill and other intangible assets are net of any associated deferred tax liabilities

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Notes on non-GAAP financial measures and key performance measures

Notes on non-GAAP financial measures

1. In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results, including the overhead ratio and the results of the lines of business, on a "managed" basis, which are non-GAAP financial measures. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. These non-GAAP financial measures allow management to assess the comparability of revenue year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business. For a reconciliation of the Firm's results from a reported to managed basis, see page 48 of the Firm's Annual Report on Form 10-K for the year ended December 31, 2016 ("2016 Form 10-K").

2. Adjusted expense and adjusted overhead ratio are non-GAAP financial measures. Adjusted expense excludes Firmwide legal expense/(benefit) of $(317) million and $3.0 billion for the years ended December 31, 2016 and 2015, respectively. The adjusted overhead ratio measures the Firm's adjusted expense as a percentage of managed revenues. Management believes this information helps investors understand the effect of these items on reported results and provides an alternate presentation of the Firm's performance.

3. Tangible common equity ("TCE"), return on tangible common equity ("ROTCE") and tangible book value per share ("TBVPS"), are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. For a reconciliation from common stockholders' equity to TCE, see page 50 of the Firm's 2016 Form 10-K. ROTCE measures the Firm's net income applicable to common equity as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. Book value per share was $64.06 and $60.46 at December 31, 2016 and 2015, respectively. TCE, ROTCE, and TBVPS are utilized by the Firm, as well as investors and analysts, in assessing the Firm's use of equity.

4. Net charge-off ("NCO") rates exclude purchased credit-impaired ("PCI") loans; this is a non-GAAP financial measure. For a reconciliation of the NCO rates, including the impact of PCI loans, see page 55-56 of the 2016 Form 10-K.

Notes on key performance measures

5. Common equity Tier 1 ("CET1") capital, Tier 1 capital, Total capital, risk-weighted assets ("RWA") and the CET1, Tier 1 capital and Total capital ratios and the supplementary leverage ratio ("SLR") under the Basel III Fully Phased-In capital rules, to which the Firm will be subject commencing January 1, 2019, are considered key regulatory capital measures. In the case of the SLR, the Fully Phased-In minimum ratio is effective beginning January 1, 2018. These measures are used by management, bank regulators, investors and analysts to assess and monitor the Firm's capital position. For additional information on these measures, see Capital Risk Management on pages 76-85 of the 2016 Form 10-K.

6. Core loans are also considered a key performance measure. Core loans represent loans considered central to the Firm's ongoing businesses; and exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit. Core loans are utilized by the Firm and its investors and analysts in assessing actual growth in the loan portfolio.

Notes on slide 3: … on a relative basis – JPM continues to be a leader

1. See note 1 on slide 37
2. Managed overhead ratio = total noninterest expense / managed revenue
3. Citigroup (“C”) adjusted for 1 for 10 reverse stock split in 2011
4. ROTCE for firms based on company filings with the U.S. Securities and Exchange Commission (“SEC filings” or “company filings”)
5. Shareholder value added (“SVA”) = ROTCE - estimated cost of equity
6. The cost of equity is = the risk-free rate (as of 1/13/2017) + (Barra historical beta (as of year-end 2016) x equity risk premium (as of 1/13/2017))
7. See note 3 on slide 37

NOTES

Notes on slide 9: Leading client franchises

1. FDIC 2016 Summary of Deposits survey per SNL Financial. Excludes all branches with $500mm+ in deposits within the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC. 2006 excludes WaMu and Bank of New York branch purchases
2. Represents share of general purpose credit card ("GPCC") spend, which excludes private label and Commercial Card; based on company filings and internal JPMorgan Chase estimates
3. The 2006 figure reflects First Data joint venture
4. IB fees market share for all periods presented based on wallet data from Dealogic as of January 3, 2017
5. Source: Coalition's 2015 and preliminary 2016 Market Share & Rank analysis based on JPMorgan Chase's internal business structure. Market share reflects JPMorgan Chase's share of the global Industry revenue pool. 2006 Rank analysis is based on Internal JPMorgan Chase's analysis
6. Metropolitan Statistical Areas ("MSA"); Out of the Top 50 MSAs not total
7. Includes the commercial term lending portfolio acquired in the 2008 WaMu transaction. SNL Financial based on FDIC data as of 3Q16
8. 2016 figures as of December 2016
9. Source: Company filings and JPMorgan Chase estimates. Rankings reflect competitors in the peer group with publicly reported financials and 2016 client assets of at least $500B as follows: Allianz, BAC, BEN, BK, BLK, CS, GS, IVZ, MS, TROW, UBS. JPMorgan Chase's ranking reflects AWM long-term AUM, administration, brokerage, custody, and deposits, Chase Wealth Management client assets, and Chase Private Client deposits; 2015 was revised to conform with the current period presentation
10. Source: Strategic Insight
11. Capgemini World Wealth Report 2016. Market share estimated based on 2015 data (latest available)
12. FDIC 2016 Summary of Deposits survey per SNL Financial. Excludes all branches with $500mm+ in deposits within two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC
13. Based on 4Q16 sales volume and loans outstanding disclosures by peers (C, BAC, COF, AXP, DFS) and internal JPMorgan Chase estimates. Sales volume excludes private label and Commercial Card. AXP reflects the U.S. Consumer segment and internal JPMorgan Chase estimates for AXP's U.S. small business sales. Loans outstanding exclude private label, AXP Charge Card, and Citi Retail Cards
14. "Credit Card Monitor 2016: Cobrand Market Shares by Issuer," Phoenix, for 12-month period ending October 2016. Based on card accounts, revolving balance dollars and spending dollars
15. "2016 Mobile Banking Financial Institution Scorecard," Javelin Strategy & Research, May 2016. Ranking is among large banks
16. The Nilson Report, Issue 1086, May 2016. Data as of 2015
17. The Nilson Report, Issue 1082, March 2016. Data as of 2015. Chase is the #1 wholly-owned merchant acquirer in the U.S. When volume from joint ventures and revenue sharing arrangements are included in First Data's volume, First Data holds #1 share position in the U.S.
18. Dealogic as of January 3, 2017
19. FY16 revenues divided by FY16 Front-Office full-time equivalents – Source: Coalition as of FY16
20. Source: Company filings
21. Chips/Fed Volume report as of December YTD
22. CFO Magazine's Commercial Banking Survey 2016
23. Thomson Reuters as of FY16
24. As of December 2016
25. Euromoney, 2016 results released February 2017

NOTES

Notes on slide 10: Proven best-in-class long-term performance

Source: Company filings and SNL Financial, unless otherwise noted

1. See note 6 on slide 37
2. Core loans calculated as total end-of-period ("EOP") loans less total EOP noncore loans; total loan CAGR for USB and PNC; "noncore" defined as "purchased credit-impaired" for WFC in 2016 and "non-strategic/liquidating" in 2011, "All Other Segment" for BAC and "CitiHoldings" for C
3. Total deposits from company reports. Retail deposits from SNL Financial; exclude all branches with $500mm+ in deposits at any point in the last ten years to adjust for commercial deposits and capture only consumer and small business deposits; includes all commercial banks, credit unions, savings banks and savings institutions as defined by the FDIC; EOP as of June 30th of each year
4. "Non-op" represents non-operating deposits
5. 2011 total and retail deposits adjusted for RBC Bank (USA) acquisition
6. JPMorgan Chase results are the publicly disclosed revenues. All peer firm results are based upon the Preliminary Coalition revenue analysis adjusted to align the peer firms' businesses with JPMorgan Chase's Corporate & Investment Bank businesses. Per Coalition, on a comparable basis, JPMorgan Chase's adjusted revenue is ~13% lower
7. Coalition's preliminary 2016 Market Share analysis is based on JPMorgan Chase's internal business structure. Market share reflects JPMorgan Chase's share of the global Industry revenue pool
8. IB fees market share is based on wallet data from Dealogic as of January 3, 2017
9. Reflects AWM net flows, Chase Wealth Management investments net flows, and new to firm Chase Private Client deposits
10. Converted at average 1/1/12-12/31/16 daily exchange rates
11. Allianz 2016 net flows contain re-invested dividends (including capital gains) from existing clients. Historical periods exclude those figures

Notes on slide 11: Proven best-in-class long-term performance (cont'd)

1. Source: J.D. Power U.S. Retail Banking Satisfaction Survey; Big Banks defined as top six U.S. banks
2. Represents GPCC spend, which excludes private label and Commercial Card; based on company filings and internal JPMorgan Chase estimates
3. COF excludes HSBC, Kohl's and other acquisitions; 2011-2016 data is normalized
4. Citi excludes Citi Retail Services as it includes private label portfolios
5. AXP reflects the U.S. consumer segment and internal JPMorgan Chase estimates for AXP's U.S. small business sales
6. 4Q16 YoY sales excludes the impact of Costco
7. Based on disclosures by peers as of 4Q16
8. Source: Nilson data for the industry; U.S. bankcard volumes include Visa and MasterCard credit and signature debit volumes

NOTES

Notes on slide 13: Fortress balance sheet

1. Includes cash and due from banks and deposits with banks
2. Includes debt, derivative receivables and equity trading assets
3. Net of allowance for loan losses
4. Includes accrued interest and accounts receivable, premises and equipment, mortgage servicing rights and other assets
5. Ratio reported on gross loans / deposits – based on EOP balances

NOTES

Notes on slide 16: Credit – Commercial Real Estate (“CRE”) and Auto

1. Excludes available-for-sale and held-to-maturity commercial mortgage-backed securities positions, Securitized Products Group (“SPG”) trading assets, and exposure secured by real estate to clients outside of the real estate industry
2. Exposure includes Wholesale retained exposure of $135.0B, Wholesale loans held-for-sale and loans at fair value exposure of $2.4B, and Business Banking and Auto Dealer Commercial Services (“DCS”) exposure of $2.1B
3. Investment-grade (“IG”); investment-grade is based on the Firm’s internal risk ratings, which generally correspond to “BBB-/Baa3” or better, as defined by independent rating agencies
4. Excludes additional consumer auto exposure (includes commitments of $19.7B) in CIB in bankruptcy-remote, non-recourse private securitizations
5. Excludes DCS and operating lease assets
6. Data as of FY16
7. Layered risk = FICO<620 and LTV>120%

NOTES

Notes on slide 18: Continue to operate from a position of strength

1. Reflects Basel III Advanced Fully Phased-In measure
2. See note 5 on slide 37
3. Global Systemically Important Banks (“GSIB”)
4. External

NOTES

Notes on slide 19: Capital allocation

1. 2017 Allocations changed from common equity to tangible common equity, resulting in LOB equity being more in line with peers
2. Primarily reflects equity held for property, premises and equipment (“PP&E”) and retained operational risk as well as unallocated equity
3. 2016 reflects data shown at 2016 Investor Day based on analyst estimates of TCE; 2017 reflects an average of analyst estimates
4. Corporate goodwill excludes related deferred tax liabilities; $5B increase from reallocation of goodwill out of the LOBs to Corporate
5. Tabular presentation not representative of the scale

NOTES

Notes on slide 20: Capital management framework

1. Represents an illustration of internally-calculated requirements based on confidential, non-public information
2. Stress based on FRB 2015 and 2016 CCAR results and baseline distributions of 75% of analyst estimates
3. JPMorgan Chase estimated fully phased-in GSIB surcharge as of 12/31/15
4. Reflects fully phased-in requirements and includes a management buffer of 50 bps
5. SCB is the greater of 2016 Federal Reserve implied stress losses or 2.5% SCB floor – uses Federal Reserve minimum CET1 ratio to determine SCB; assumes 4 quarters of dividends based on 2017 analyst estimates
6. Proposed minimum baseline requirements reflect the SCB approach described in Federal Reserve Governor Daniel Tarullo's speech, "Next Steps in the Evolution of Stress Testing"; this will be updated when the notice of proposed rulemaking is issued

NOTES

Notes on slide 23: Banking industry resilience

Source: FR-Y9C, FR-Y9LP, company filings, FRB 2016 DFAST results, SNL Financial

1. All Other includes loan loss reserve, preferred equity and long-term debt
2. JPMorgan Chase includes Washington Mutual and Bear Stearns
3. CCAR pretax losses reported in the Federal Reserve's 2016 DFAST disclosure were $195 billion
4. Includes 18 CCAR banks as of 2013; 2007 includes 18 CCAR banks as of 2013 as well as Bear Stearns, Countrywide, Merrill Lynch, National City, Wachovia and Washington Mutual
5. Short-term liabilities includes federal funds purchased, repurchase agreements, securities loaned, commercial paper and other borrowed funds (including the current portion of long-term debt) with <1 year maturity

NOTES

Notes on slide 28: Noninterest revenue growth over time

1. See note 1 on slide 37
2. Excludes noninterest revenue (“NIR”) in the Private Equity (“PE”) business ($1B in 2011 and $0.2B in 2016)
3. 2011 has been revised to reflect the adoption of new accounting guidance for investments in affordable housing projects
4. Business simplification excludes PE

NOTES

Notes on slide 29: Adjusted expense – creating capacity to self-fund investments and growth

1. See note 2 on slide 37
2. Includes sales support and other front office support
3. Includes marketing and technology spend, cybersecurity spend, auto lease depreciation and growth initiatives
4. Includes impact of regulatory assessments and other corporate items
5. Represents marketing investment spend driven by Card “SFAS 91” acquisition costs, which are recognized as contra revenue

NOTES

Notes on slide 32: Overview of funding sources

1. Accounts payable and other liabilities include federal funds purchased, long-term securities loaned and structured repurchase agreements; and client-driven loan securitizations which are included in “beneficial interests issued by consolidated variable interest entities (“VIEs”)” on the Firm’s Consolidated balance sheets, totaling approximately $8B and $7B in 2015 and 2016, respectively
2. Includes preferred equity of $26.1B in 2015 and 2016
3. Long-term secured debt includes Federal Home Loan Bank (“FHLB”) advances and other long-term secured funding which are included in “long-term debt” on the Firm’s Consolidated balance sheets. It also includes credit card securitizations and other securitizations which are included in “beneficial interests issued by consolidated VIEs” on the Firm’s Consolidated balance sheets
4. Includes the current portion of long-term debt
5. Includes structured notes and short-term secured and unsecured borrowings with original contractual maturities of generally one year or less, or with investor redemption rights of one year or less
6. Includes commercial paper issued by Firm-administered multi-seller conduits which are included in “beneficial interests issued by consolidated VIEs” on the Firm’s Consolidated balance sheets

NOTES

Notes on slide 33: JPMorgan Chase & Co. (Holding Company) unsecured long-term debt

1. Long-term debt ("LTD") maturing in <1 year is not TLAC eligible; 50% of the LTD that matures in 1-2 years is TLAC eligible
2. Includes trust preferred securities ("TruPs")
3. Non-TLAC eligible debt is approximately $0.45B for 2020 and $0.22B for 2021
4. Callable notes with an option to redeem 1 year prior to maturity

NOTES

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

NOTES

COMMERCIAL BANKING

Doug Petno, Chief Executive Officer of Commercial Banking

February 28, 2017

JPMorgan Chase & Co.

Commercial Banking – a proven business model

Client and community focus

- **Clients at the center** of everything we do
- **Coverage strategically segmented** and **focused** to best serve client needs
- **Local delivery** and decision making, with **deep industry expertise**

Competing from a position of strength

- **Industry-leading**, broad-based capabilities
- **Unique value proposition** for clients
- **Operating efficiencies** and **scale advantage** as part of JPMorgan Chase

Investing to better serve clients

- **Adding talented bankers** and **opening new offices**
- **Expanding** our relationships in targeted industries and geographies
- Investing to enhance **client experience** and drive **product innovation**

Fortress principles

- **Rigorous client selection** with a long-term, through-the-cycle orientation
- **Strong credit and control culture**, focusing on markets and sectors we know best
- Expense and capital **discipline**

Strong financial performance

- **High quality, resilient** and **diversified** revenue
- **Delivering on growth targets**
- **Strong returns** while **investing for long-term growth**

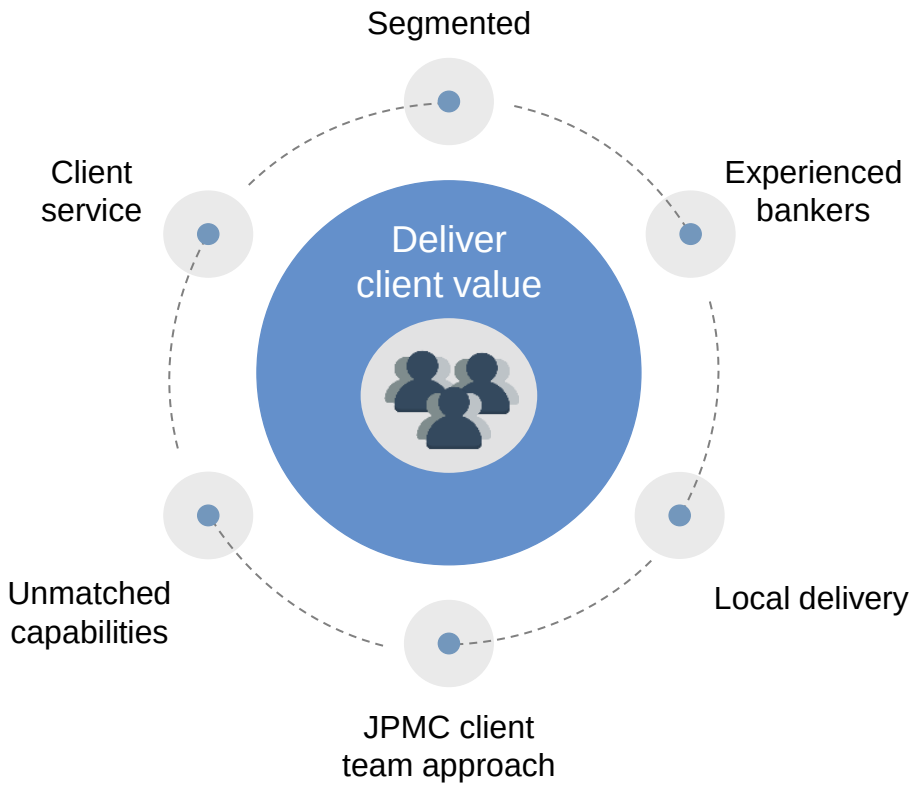
Agenda

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Disciplined long-term growth	10
Business innovation	14
Financial targets	18
Notes	21

Clients are at the center of everything we do

Core principles of CB model

Coverage aligned to client needs	■ Well-defined segmentation ■ Local teams ■ International expertise ■ Industry specialization
Differentiated product capabilities	■ Tailored by industry ■ Digitally enabled ■ Continuous innovation ■ Integrated solutions
Superior client experience	■ Long-term capital support ■ Simplicity ■ Speed of delivery ■ Transparency



FRANCHISE STRENGTH

Well-defined segmentation offers focused client coverage

Client coverage structure

C&I

CHASE

J.P.Morgan

Commercial Banking

Business Banking	Middle Market Banking (MMBSI)	Corporate Client Banking (CCBSI)	Corporate & Investment Banking
<$20mm revenue	$20mm-$500mm revenue	$500mm-$2B revenue	>$2B revenue

CRE

Community Development Banking (CDB)



Affordable housing

Commercial Term Lending (CTL)



Multifamily and commercial stabilized properties

Real Estate Banking (REB)

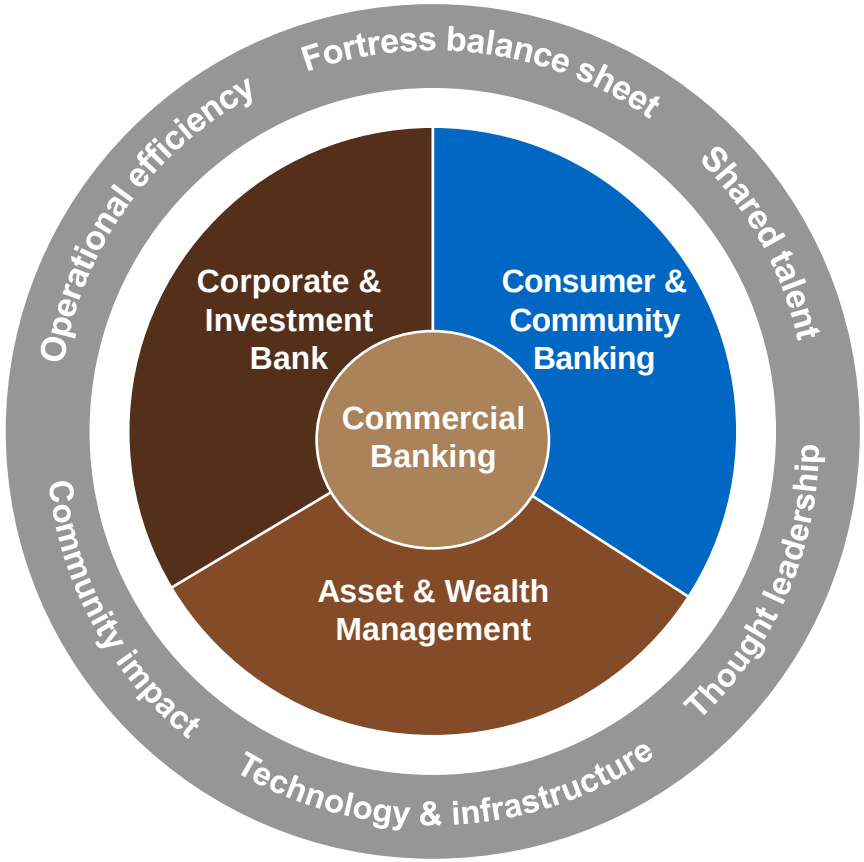


Top-tiered institutional investors

Note: CB's Commercial and Industrial (C&I) and Commercial Real Estate (CRE) groupings used herein are generally based on client segments and do not align with regulatory definitions; revenue size is a proxy for segmentation, not ultimate determination of coverage

Leveraging the JPMorgan Chase platform creates a real competitive advantage

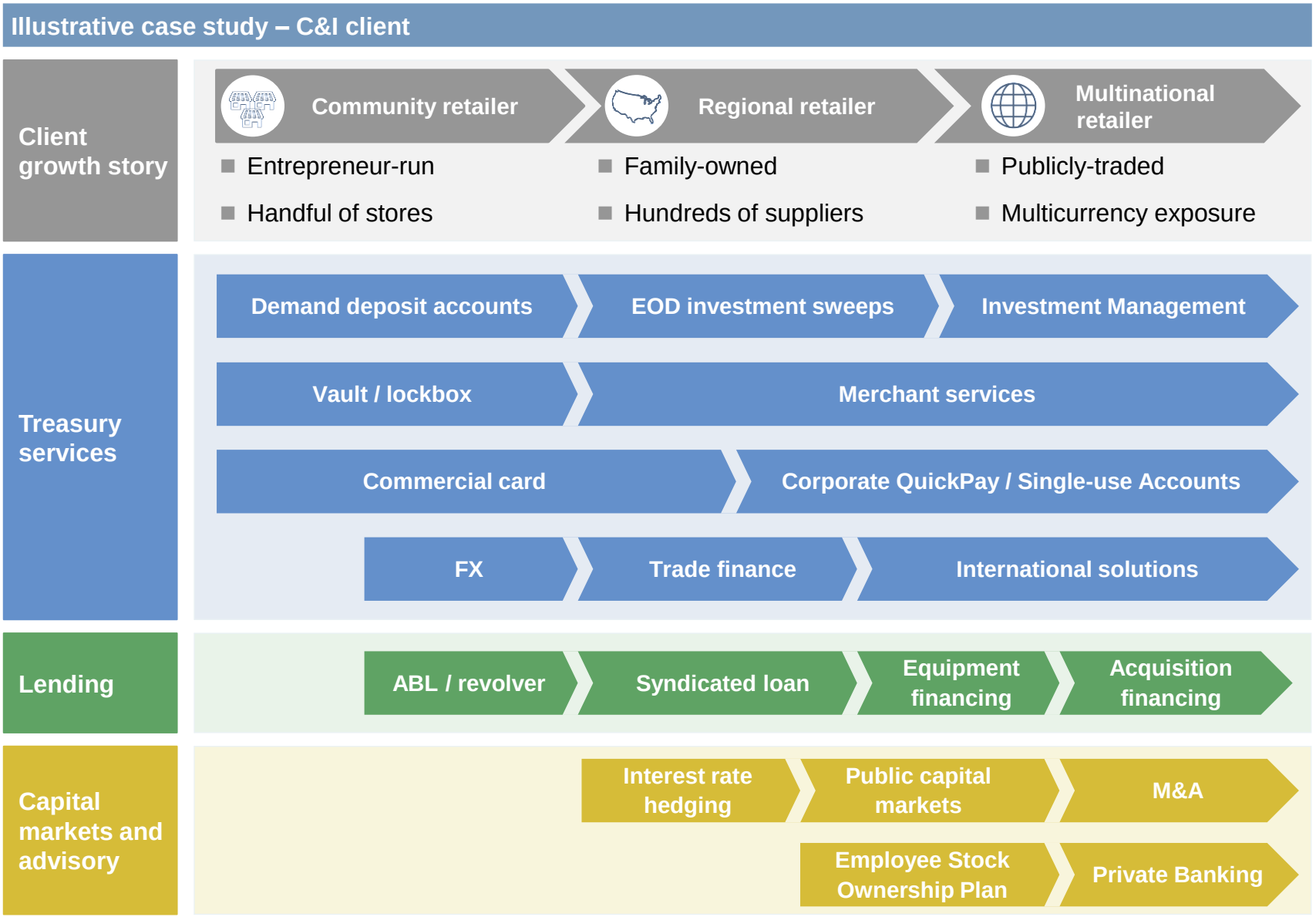
Unmatched value proposition for CB clients



Global footprint	■ ~5,300 U.S. branches ■ Conduct business in 100+ countries
Broad-based treasury solutions	■ Robust wholesale payments platform ■ Industry-specific capabilities
Innovative digital platforms	■ New Chase for Business Online ■ J.P. Morgan ACCESS™ – #1 N.A. cash management portal[1]
Best-in-class Investment Bank	■ Successful partnership aligned with regional and industry coverage ■ 40% of N.A. IB fees[2] from CB clients
Leading Asset & Wealth Management business	■ #1 N.A. Private Bank[3] ■ ~$130B in AUM from CB clients

[1] 2016 Greenwich Associates Digital Banking Benchmarking Study
[2] Does not include fees from Fixed Income and Equity Markets products which is included in Commercial Banking gross investment banking revenue
[3] 2016 Euromoney rankings

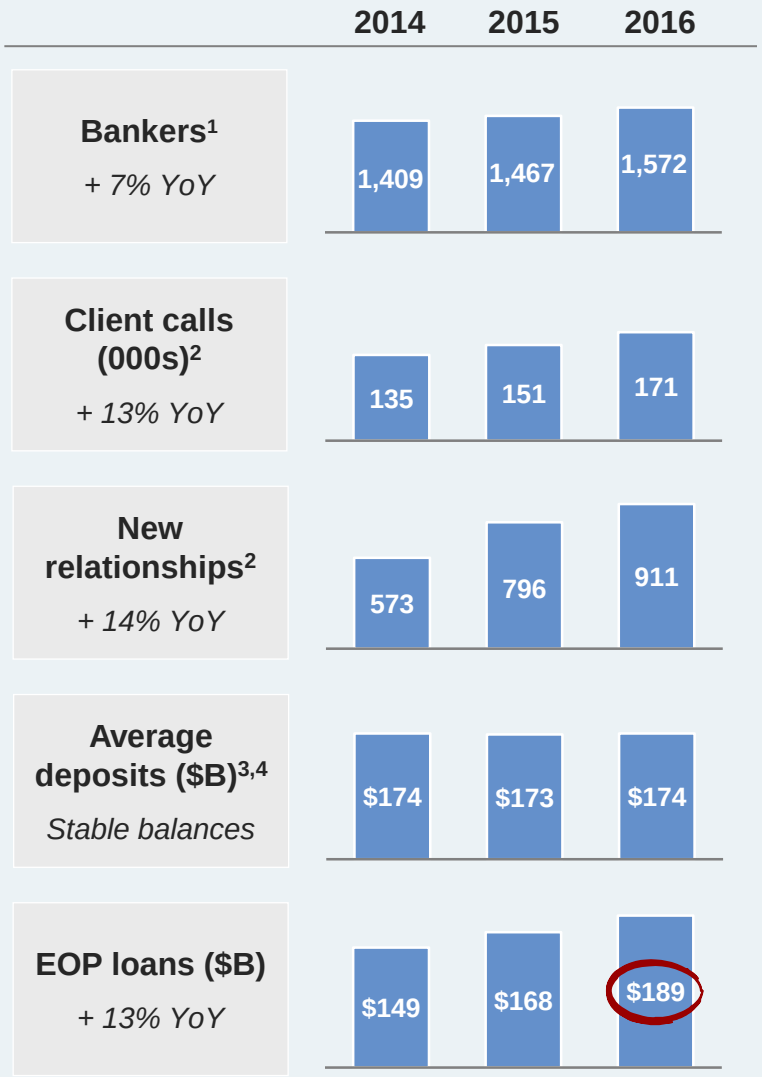
Uniquely positioned to serve clients' evolving needs



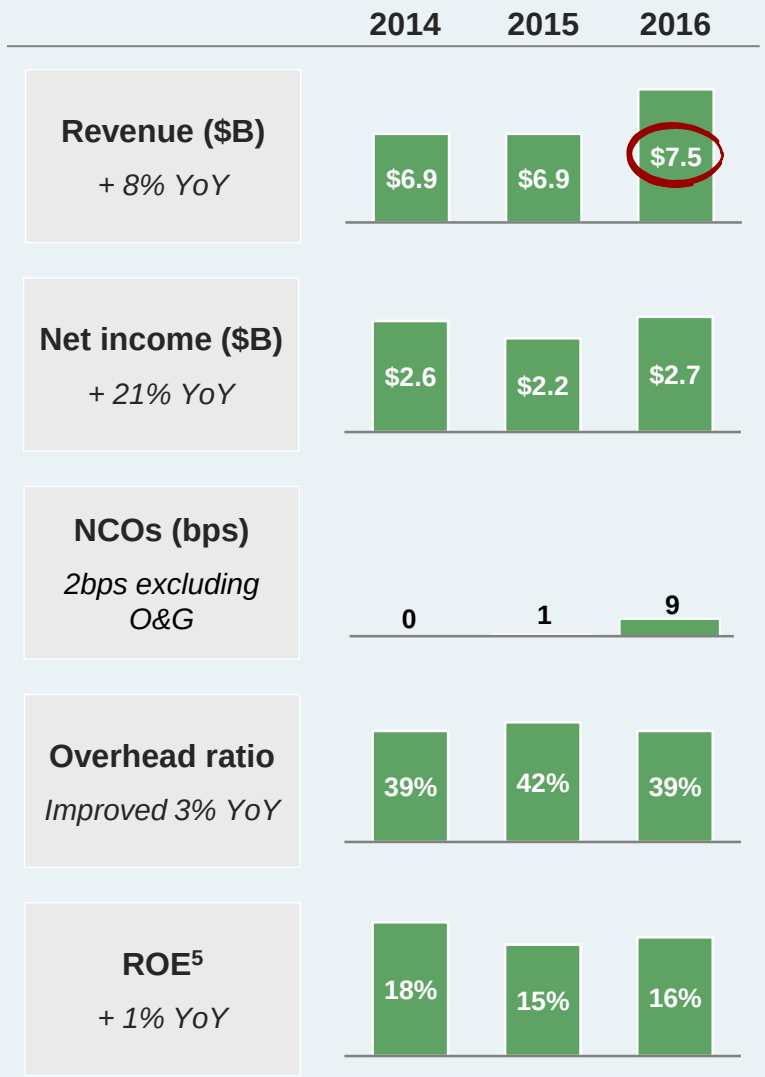
Executed our proven strategy in 2016

Record

Franchise strength



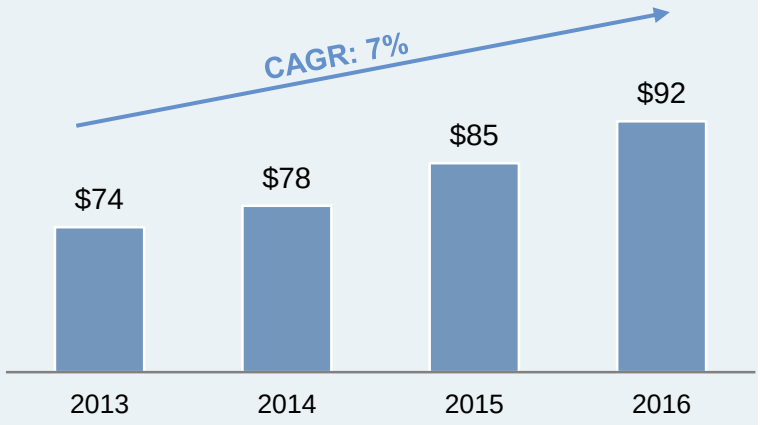
Financial performance



Note: For footnoted information, refer to slide 21

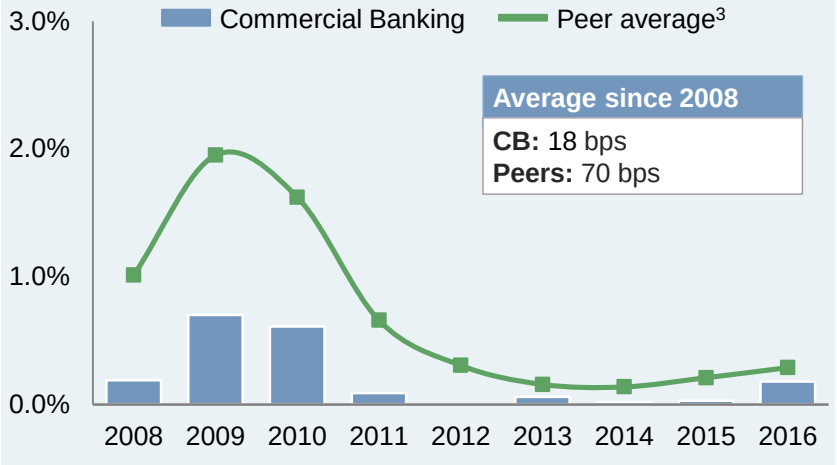
Disciplined C&I loan growth

C&I loans outstanding ($B, EOP)[1]



- MMBSI loans, up 7% YoY, with strong results across regions, particularly expansion markets, up 18%
- CCBSI loans, up 11% YoY, driven by specialized industries
- ABL loans, up 13% YoY, on record originations of $6B[2]
- Revolver utilization of 31%
- Stabilized loan spreads

C&I net charge-off rate (%)

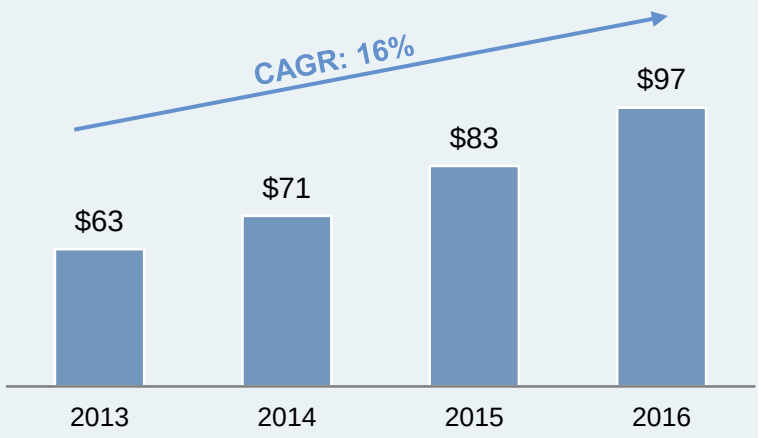


- Overall portfolio continues to perform well
- Strong allowance for loan loss coverage
- 2016 C&I NCOs primarily driven by Oil & Gas (O&G)
  - 5bps excluding O&G
- Proven O&G client selection model and disciplined reserve-based lending structures

Note: For footnoted information, refer to slide 21

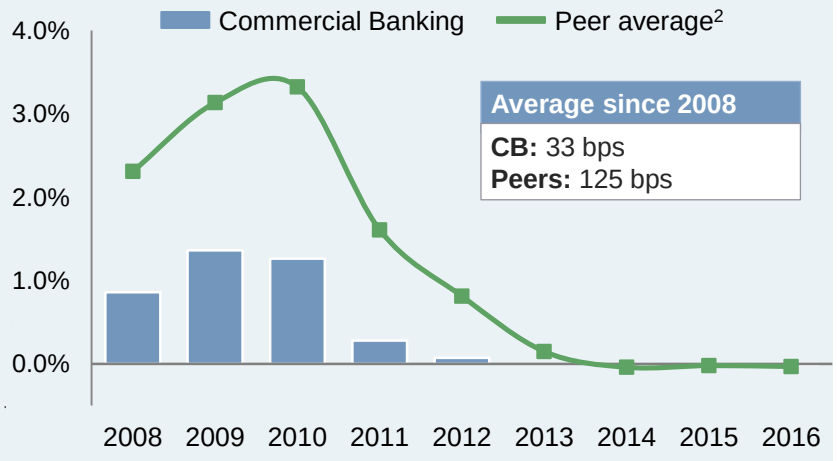
Highly-targeted CRE loan growth

CRE loans outstanding ($B, EOP)[1]



- Strong originations across CRE, while maintaining strict underwriting criteria
  - Improved market share across CTL
  - Increased term loan activity in REB
- Continue to see quality lending opportunities with the right terms and structures
- Selective around new commitments in construction

CRE net charge-off rate (%)



- Closely monitoring market fundamentals
- Stable credit performance with no net charge-offs in 2016
- Granular, loan-by-loan portfolio management
- Strong credit characteristics with conservative metrics
- Continue to be disciplined and limit exposure to riskier asset classes

Note: For footnoted information, refer to slide 21

Maintaining strict discipline in CRE

CRE credit portfolio overview

CTL — $71B loans

- Large, densely-populated, supply-constrained markets
- Class B / C properties with rents below market averages
- ~$2mm average loan size
- New originations remain high quality
  - LTV ratio of 53%[1]
  - DSC ratio of 1.55x[1]

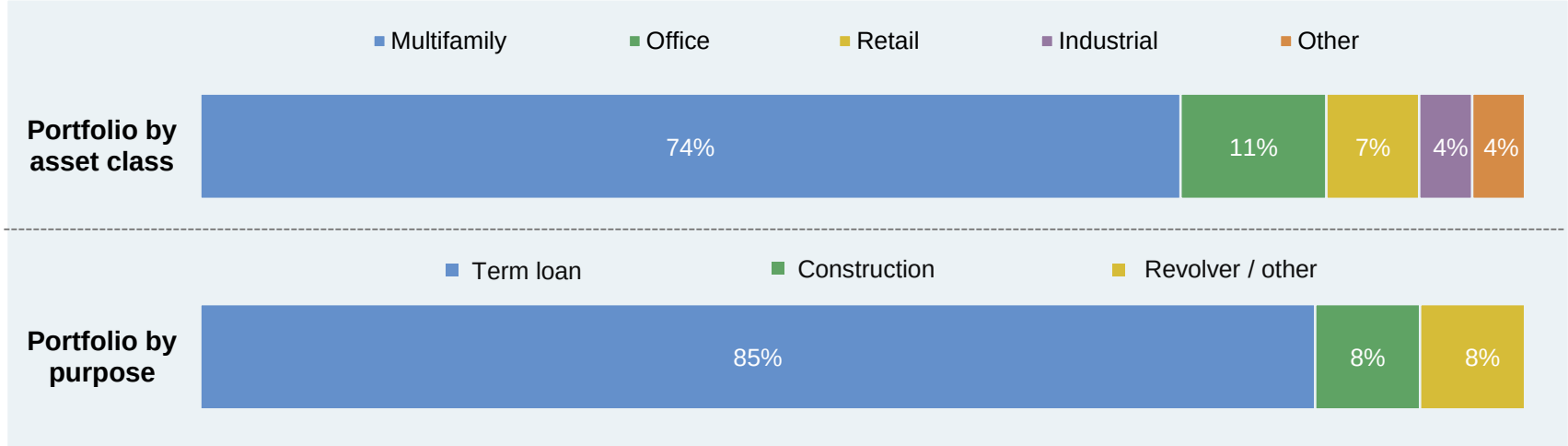
REB and CCBSI RE — $21B loans

- Focus on least volatile asset classes (e.g. multifamily)
- <1% of loans to hospitality, homebuilders, condos and land
- Diversification across major markets
- Relationships with strong developers
- Disciplined underwriting standards

CDB — $5B loans

- Offers financing for community development projects in low income communities
- Focus on construction or rehabilitation of affordable rental properties
- Financed 10,000+ units of affordable housing in 2016

CRE business built to target the least cyclical segments of the market — Total CRE $97B



Note: CRE loan portfolio data based on 2016 EOP outstandings

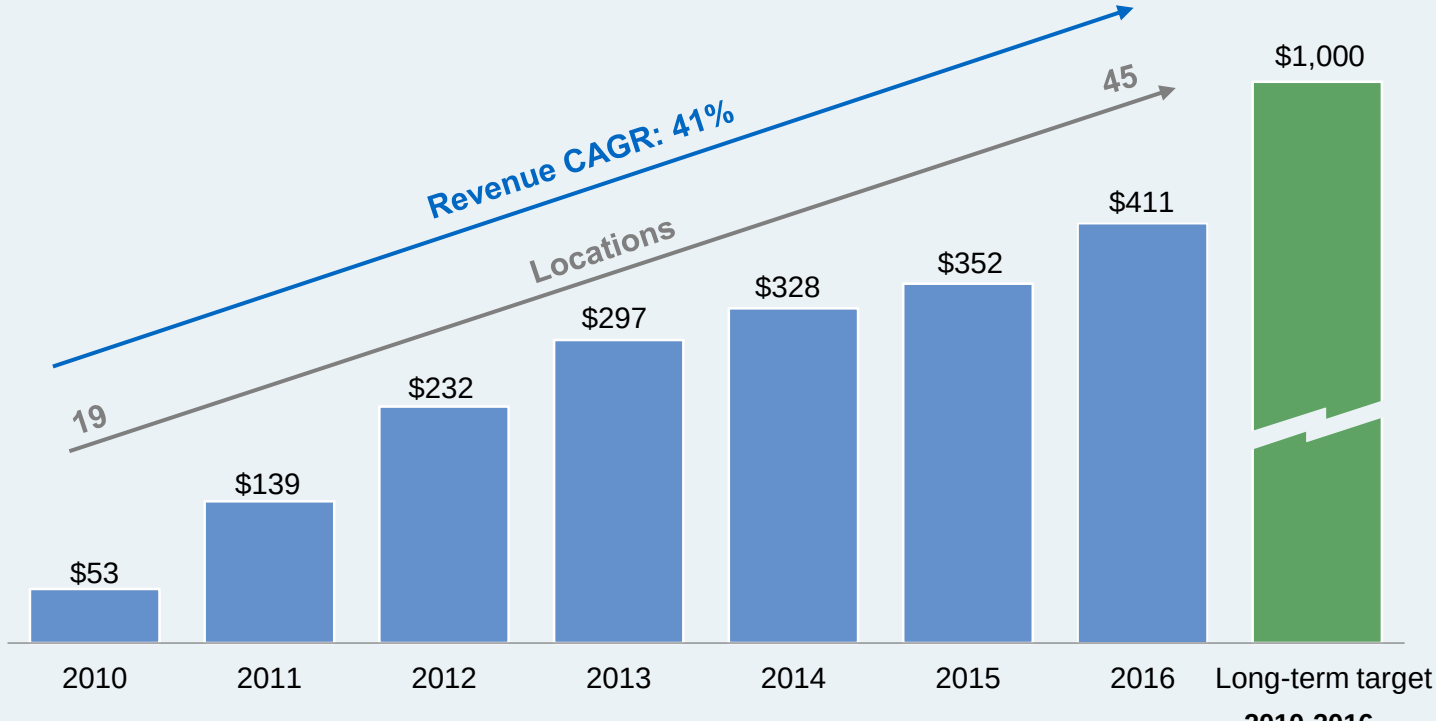
[1] Represent weighted averages for 2016 originations

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Patient, disciplined Middle Market franchise expansion

Total expansion market revenue ($mm)



	2010	2011	2012	2013	2014	2015	2016	2010-2016 CAGR
Clients (#)	820	1,100	1,360	1,470	1,670	1,970	2,220	18%
Loans EOP ($B)	$1.6	$4.4	$6.8	$8.2	$8.8	$10.7	$12.6	41%
Deposits ($B)	$1.3	$3.0	$4.7	$6.0	$7.8	$8.2	$8.2	36%

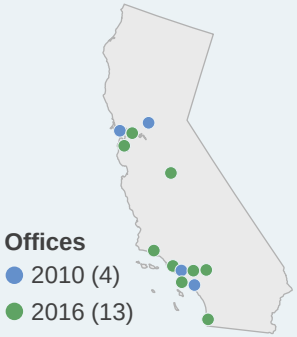
Expansion efforts have doubled MMBSI's addressable client universe[1]

Note: Prior years' financials have been revised to conform to current presentation

[1] Analysis based on Dun & Bradstreet data for companies headquartered in Metropolitan Statistical Areas with revenues between $20mm and $500mm; excludes high-risk industries and industries not aligned to MMBSI

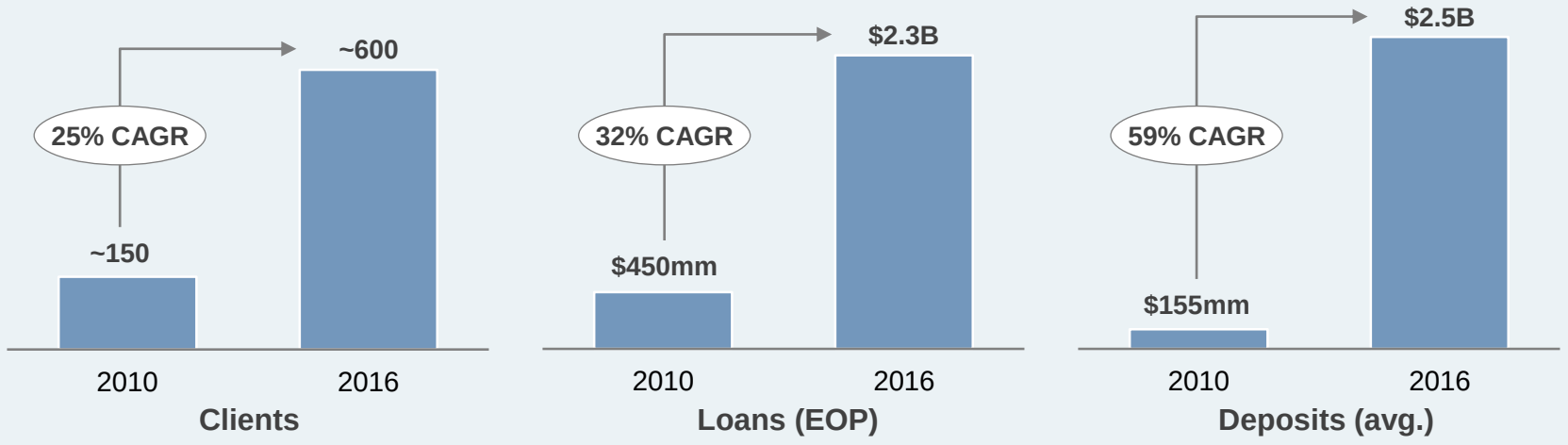
Case study: Strong results in California expansion markets

California presents a major market opportunity



- MMBSI entered California following the WaMu acquisition in 2008; now has 13 offices
- California represents the 6th largest global economy[1]
- 6 MSAs in top 50, including 4 in the top 20[2]
- Aligned with industry coverage initiatives: Technology, Life Sciences, Agribusiness

Strong performance to date



~60% Non-lending revenue

~0bps NCO rate since entering California

~$200mm Gross IB revenue since 2010[3]

Note: For footnoted information, refer to slide 22

Industry expertise remains a strong differentiator to C&I clients

Targeted industries


Agribusiness


Apparel


Beverage


Energy



Financial Institutions


Healthcare


Heavy Equipment


Higher Education


Life Sciences


Media and Entertainment


Multinational Corporations


Not-for-profit


Power


Real Estate


State and Local Government


Technology

Specialized capabilities

Industry-specific products and content

- ✓ Custom client solutions
- ✓ Sector-specific advice and content to support clients

Risk management

- ✓ Deep industry expertise in underwriting
- ✓ Prudent industry and client selection

Alignment with CIB

- ✓ Extensive insights into industry trends
- ✓ Cohesive coverage continuum as clients grow

~50% C&I clients covered within targeted industries

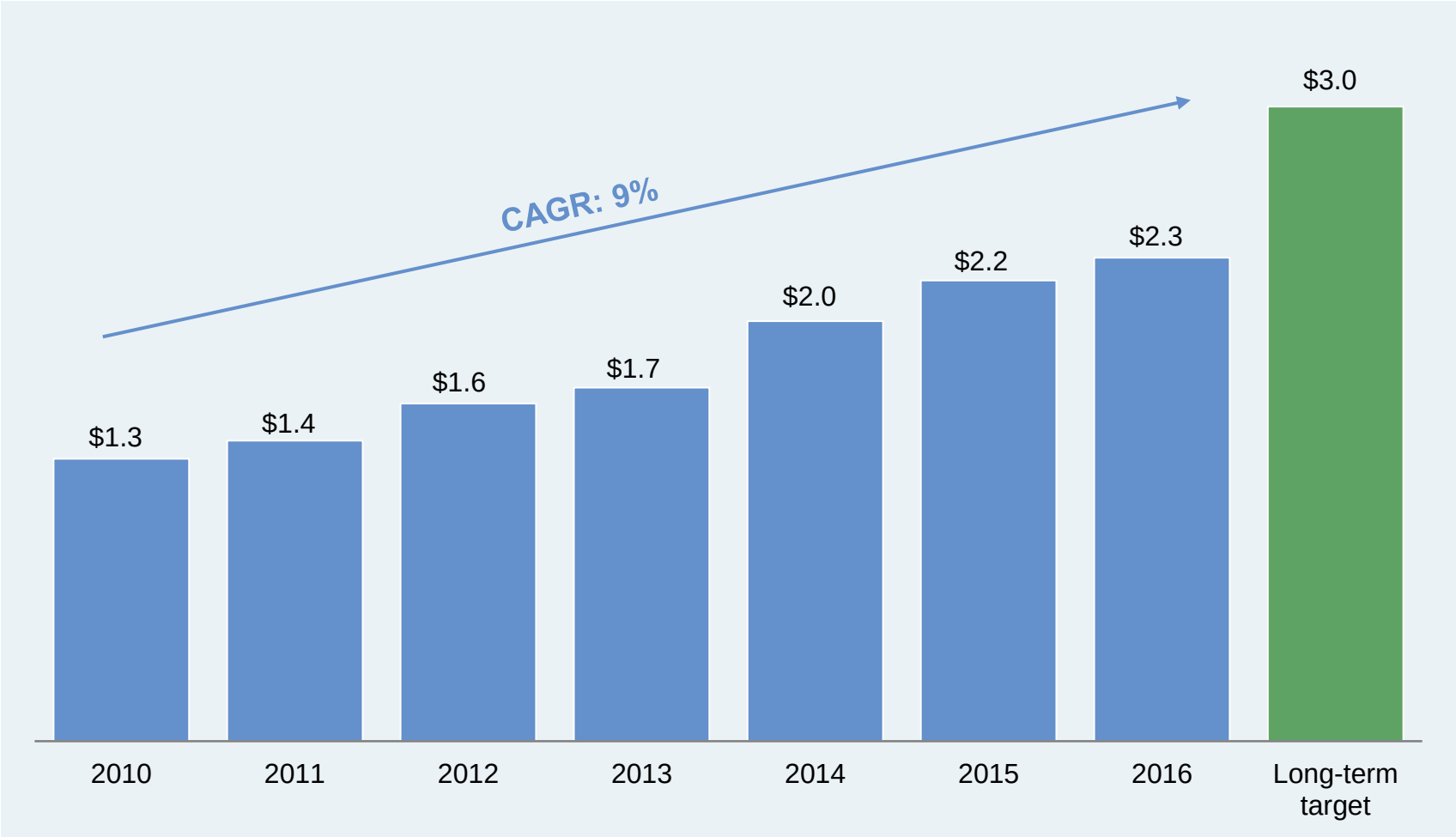
17% Increase in specialized bankers YoY

19% Increase in loans (EOP) YoY

DISCIPLINED LONG-TERM GROWTH

Continued success in delivering investment banking solutions to CB clients

Commercial Banking gross investment banking revenue[1] ($B)



CB clients represent 40% of CIB's N.A. IB fees in 2016[2]

[1] Represents total firm revenue from investment banking products provided to CB clients

[2] Does not include fees from Fixed Income and Equity Markets products which is included in Commercial Banking gross investment banking revenue

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Investing in technology to drive transformational process and product innovation

Broad focus on innovation		Select CB initiatives		
Client solutions	Treasury Services	Wholesale payments	Product integration / simplification	FinTech partnerships
	Digital	Leading digital platforms	Mobile accessibility	Integrated digital marketing
	Credit	Work-flow tools	Credit delivery enhancements	Speed and transparency
Business foundation	Ease of doing business	Streamlined onboarding process	Simplified documentation	Client health
	Data and analytics	Client insights	Prospect identification	Enhanced risk management

BUSINESS INNOVATION

Expanding wholesale payments capabilities

Large wholesale payments market...

- **$92T+** Estimated N.A. wholesale payments value[1]
- **$77B** Total N.A. wholesale payments revenue[1]
- **25B** Wholesale payments transaction volume[1]

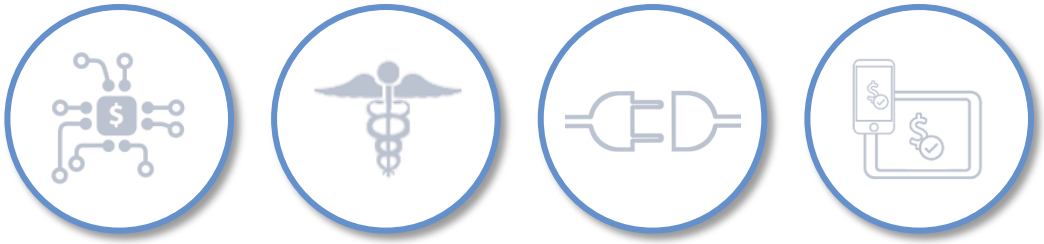
…with significant client pain-points

- **$550B+** Client costs incurred in B2B payments[2]
- **~50%** Payments made by paper check[3]
- **~60%** B2B payments require manual intervention[4]
- **~70%** Companies lack tools to optimize working capital[5]

J.P. Morgan is a market leader…

- **$5T** Average daily value of payments
- **#1** USD clearing house[6]
- **120+** Currencies to execute payments

…and is leveraging scale to make smart investments



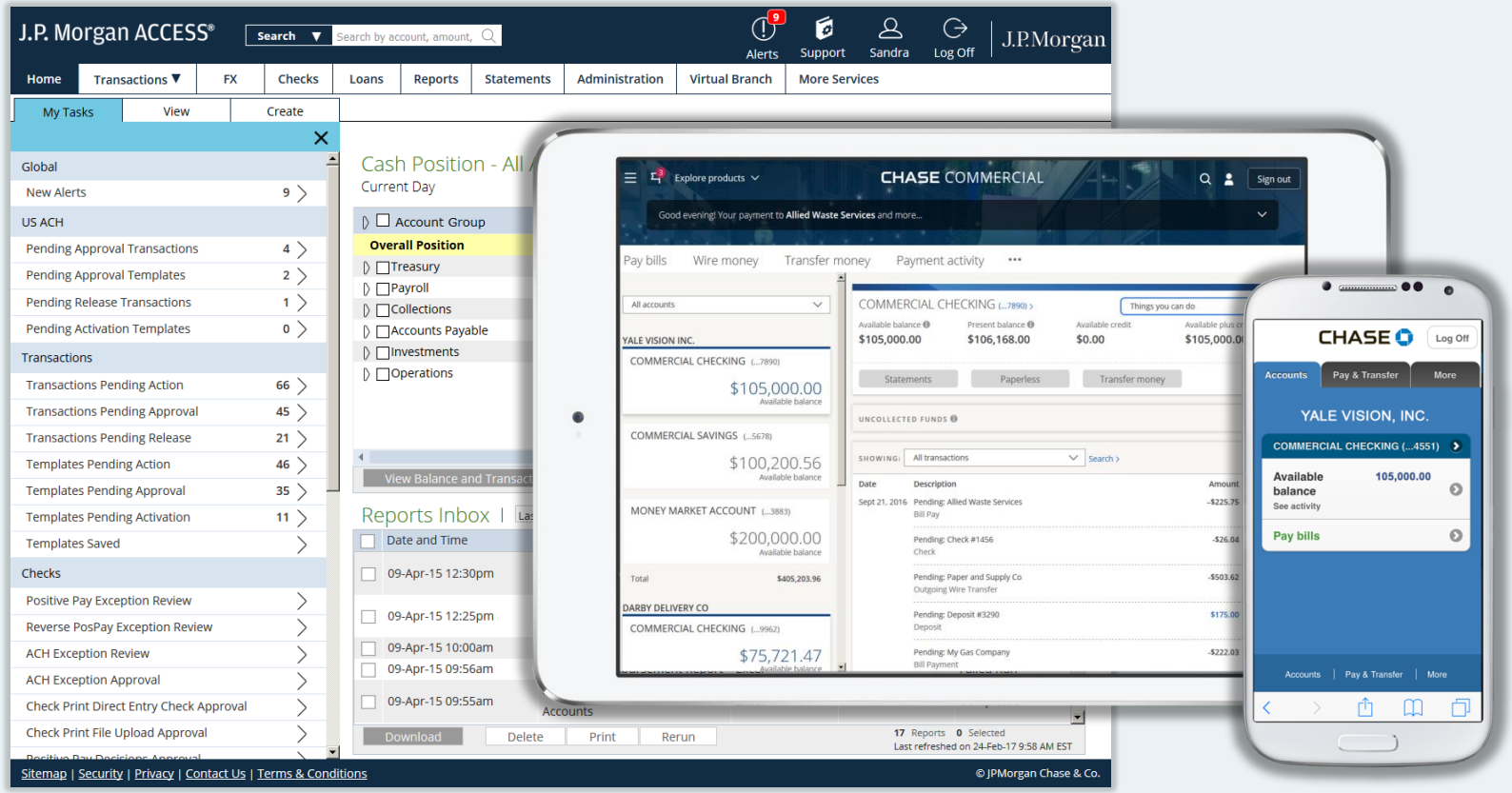
Process efficiency	Industry focus	Improved client connections	Optimize working capital
Improved reconciliations	Tailored solutions	Systems integration	Payment electronification

Note: For footnoted information, refer to slide 22

Improving client experience through enhanced digital delivery

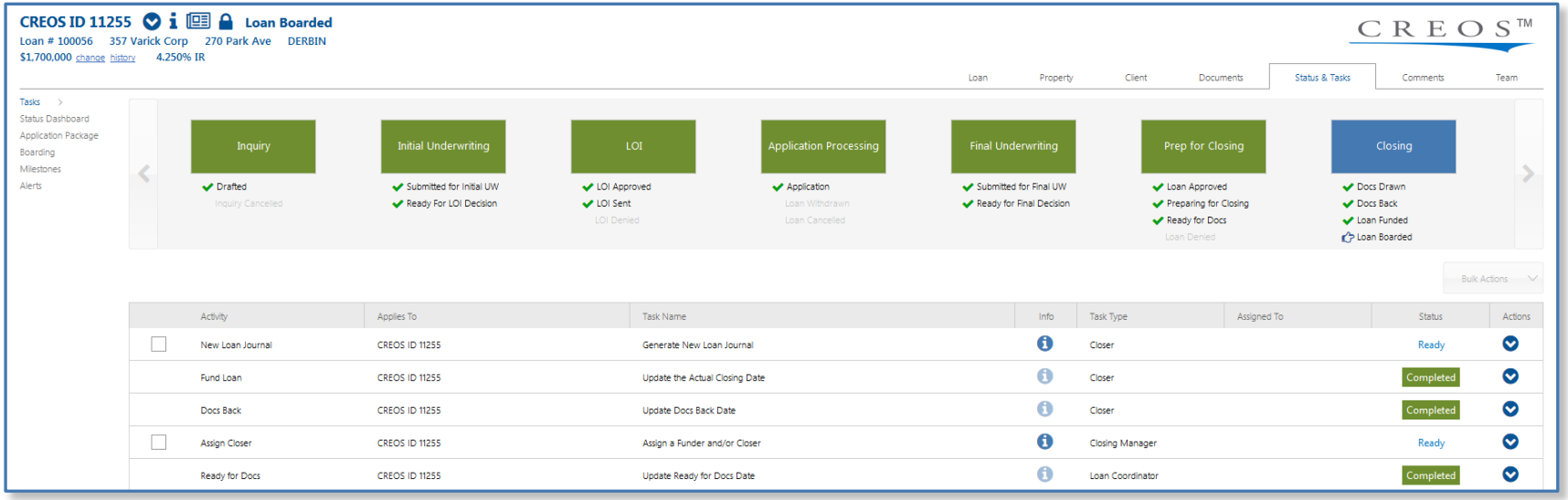
Developing end-to-end digital platform to deliver robust capabilities

- Aligned, integrated product offerings
- Comprehensive payment solutions
- Simple user experience, navigation
- Universal mobile offering
- Digital onboarding and self-service
- Direct channel for thought leadership



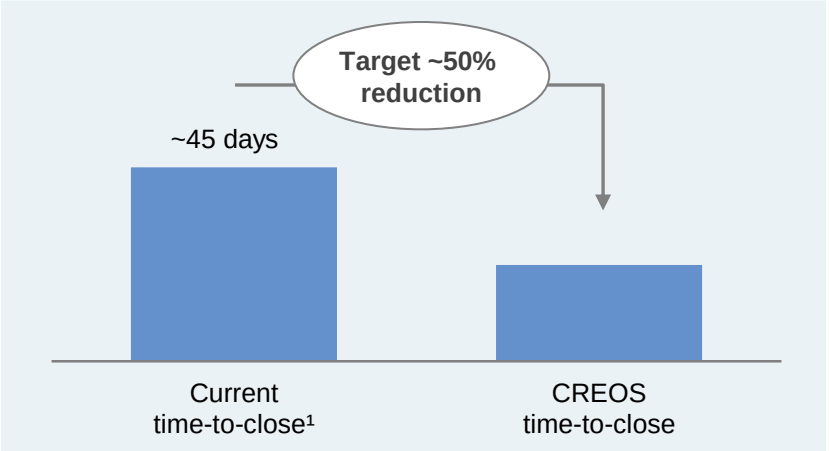
Investing to expand CTL's competitive advantage

New loan origination platform will transform CTL's lending process



Build on our tremendous scale to further differentiate our value proposition

- Reduce already leading loan closing times
- Improve transparency
- Generate incremental operating leverage
- Improve client experience
- Further enhance risk management



Note: CREOS is a trademark owned by JPMorgan Chase Bank, N.A. All rights reserved

[1] Based on CTL multi-family average close time

BUSINESS INNOVATION

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Well-positioned to capitalize on macro trends

Opportunities		CB positioning
Strong business landscape	■ Improving business sentiment ■ Prospective regulatory reform for clients ■ Potential for infrastructure investments	■ **Strong client franchises** ■ National footprint ■ Leading IB capabilities
Rising rate environment	■ Potential for additional rate increases ■ Increased rate hedging by clients	■ **$174B deposit franchise** ■ Well-connected with CIB Markets
Dynamic cross-border fundamentals	■ Increasing global activity ■ FX volumes increased 29% since 2010[1] ■ Trade and tax policy	■ **Robust global capabilities** with CB coverage of ~30 countries ■ FX capabilities
Significant CRE demand	■ $1T+ in near-term CRE maturities[2] ■ Strong multifamily fundamentals	■ **Differentiated CRE platform** with proven ability to execute ■ Strategic geographic focus
Digital banking ecosystem	■ New product opportunities and delivery channels ■ Continued evolution of wholesale payments	■ **Leading digital platforms** ■ Investing to differentiate core cash capabilities

[1] Bank for International Settlements (BIS) Triennial Central Bank Survey from April 2010 to April 2016
[2] Trepp LLC, data as of 9/30/2016

Continue to make strong progress toward achieving our targets

Financial targets

		2016	2011-2016	Targets
Execute growth initiatives (long-term revenue targets)	Middle Market expansion	**$411mm**	**24% CAGR**	**$1.0B**
	Investment banking[1]	**$2.3B**	**10% CAGR**	**$3.0B**
	International[2]	**$285mm**	**8% CAGR**	**$500mm**
Maintain expense & credit discipline (medium-term)	Overhead ratio	**39%**	**38% avg.**	**35%**
	Net charge-off rate	**0.09%**	**0.05% avg.**	**0.15%**
Optimize returns (medium-term)	Return on equity	**16%**	**15% avg.[3]**	**15%**

Note: For footnoted information, refer to slide 22

Our strategic priorities are focused on delivering incremental value to our clients

- Execute **disciplined long-term growth strategy**
- Drive **business innovation** to improve client experience and operational efficiency
- Strengthen our **business foundation** to better serve our clients
- Maintain a **control environment** that is effective and efficient
- Attract, train, develop and retain the **best, most diverse talent**

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Notes

Notes on slide 6: Executed our proven strategy in 2016

Note: Numbers herein may not sum due to rounding; prior years' financials have been revised to conform to current presentation

1. Based on total count of revenue-producing employees
2. Excludes CTL
3. Deposits herein represent average client deposits and other third-party liabilities
4. Excludes non-operating Financial Institutions Funds deposits due to strategic decision in 2014 to begin exiting the business
5. Allocated capital was $14B in 2014 and 2015, and $16B in 2016

Notes on slide 7: Disciplined C&I loan growth

1. CCBSI Real Estate is included in CRE
2. Asset-based loans also included in MMBSI and CCBSI loans outstanding
3. Peer averages based on CB-equivalent C&I segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC; however such segments / portfolios may not fully align with the firm's CB segment or wholesale portfolios

Notes on slide 8: Highly-targeted CRE loan growth

1. CCBSI Real Estate is included in CRE
2. Peer averages based on CB-equivalent CRE segments or wholesale portfolios at BAC, CMA, FITB, KEY, PNC, USB, WFC; however such segments / portfolios may not fully align with the firm's CB segment or wholesale portfolios

Notes (cont'd)

Notes on slide 11: Case study: Strong results in California expansion markets

1. GDP used as proxy for global economy; World Bank and Bureau of Economic Analysis as of 2015
2. Top 50 Metropolitan Statistical Areas ranked by population according to 2015 U.S. Census Bureau estimates
3. Represents total firm revenue from investment banking products provided to CB clients

Notes on slide 15: Expanding wholesale payments capabilities

1. BCG Perspectives: Global Payments 2016, The Interactive Edition
2. Goldman Sachs: The Future of Finance, Redefining "The Way We Pay" in the Next Decade
3. AFP: 2016 AFP Electronic Payments Survey
4. McKinsey & Company: Global Payments 2015, A Healthy Industry Confronts Disruption
5. Ardent Partners: ePayments Rising, The 2014 Market Report
6. CHIPS/Fed volume report

Notes on slide 19: Continue to make strong progress toward achieving our targets

1. Represents total firm revenue from investment banking products provided to CB clients
2. Denotes non-U.S. revenue from U.S. multinational clients
3. Represents average CB ROE from 2011-2016 if allocated common equity had been roughly equivalent to a blended capital allocation methodology that results in $20B of 2017 CB capital; average reported CB ROE from 2011-2016 was 21%

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

NOTES

CORPORATE & INVESTMENT BANK

Daniel Pinto, Chief Executive Officer Corporate & Investment Bank

February 28, 2017

JPMorgan Chase & Co.

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Summary update from previously committed priorities

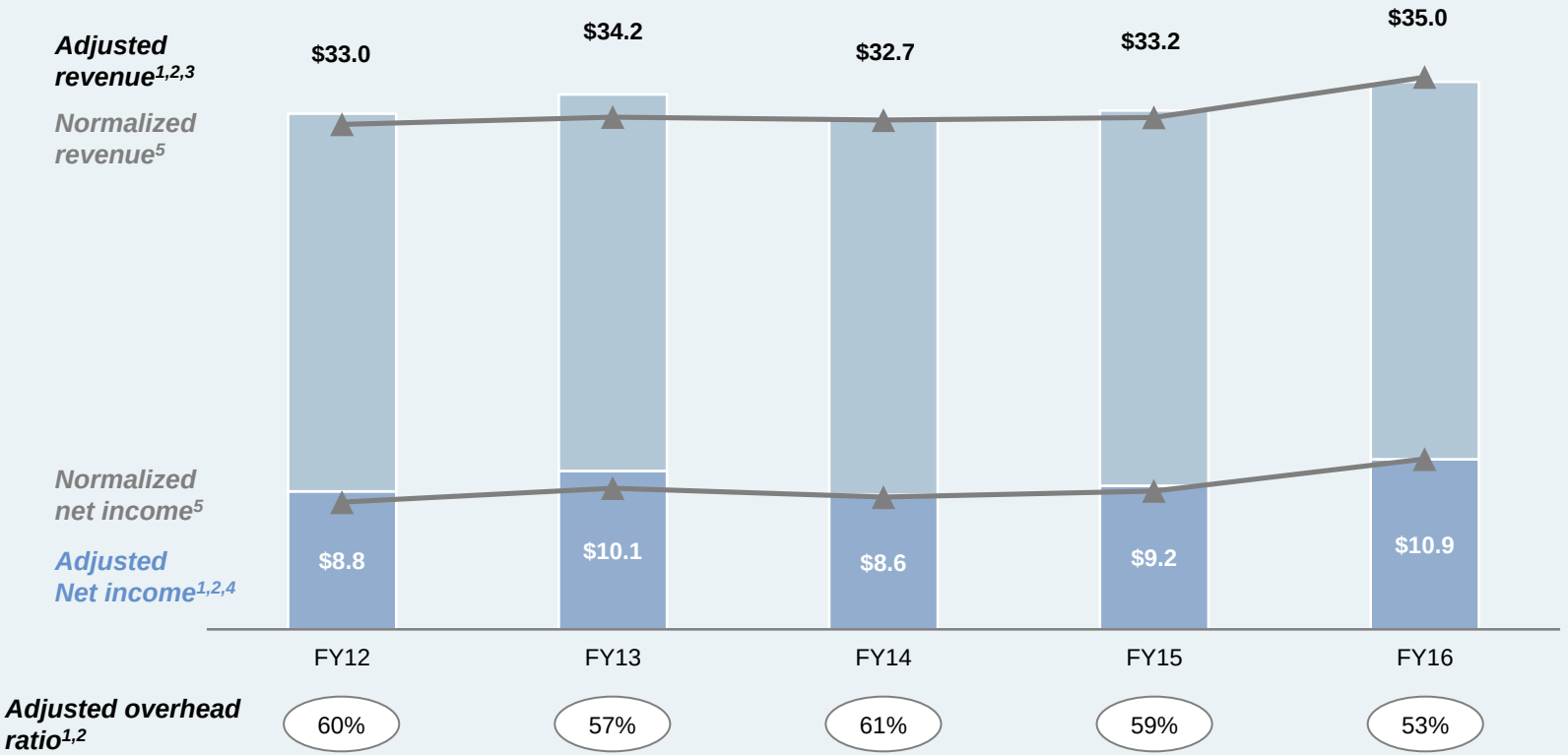
	What we said in 2016…	Progress so far…
1	**Financial targets:** $19B expenses by 2017, 13% medium-term target ROE	■ $19B expenses in 2016, benefitting from lower legal expense and FX tailwinds ■ Record earnings of $10.9B[1] with 16% ROE in FY16
2	Transform our **Treasury Services and Custody & Fund Services** businesses	■ Meaningful progress on significant multi-year platform ■ Noteworthy new mandates
3	Invest in industries / products and regions with gaps in **Global Investment Banking**	■ Hired senior bankers in key geographic regions and industries ■ Continued momentum in M&A ■ Maintained #1 ranking with 8.1% market share overall in 2016
4	Maintain **FICC** leadership and close the gap in **Cash Equities**	■ Maintained #1 position in FICC with 12.0% share ■ Improved Equities ranking to #2 and grew Cash market share
5	Ensure readiness for **new market structure** and maintain **optionality** for how clients want to transact	■ Client-centric approach with emphasis on overall experience ■ Leadership position in electronic trading with cutting-edge platforms and tools
6	Retain **global and complete** business model while **simplifying** and **optimizing** the business mix across multiple **constraints**	■ Exited non-core businesses ■ Grew revenue while retaining balance sheet discipline ■ Preserved complete offering, leveraging benefits of scale

[1] Excludes the after-tax impact of legal expense and business simplification of $(72) million

In 2016, we delivered strong results

Net revenues and income[1,2] ($B)

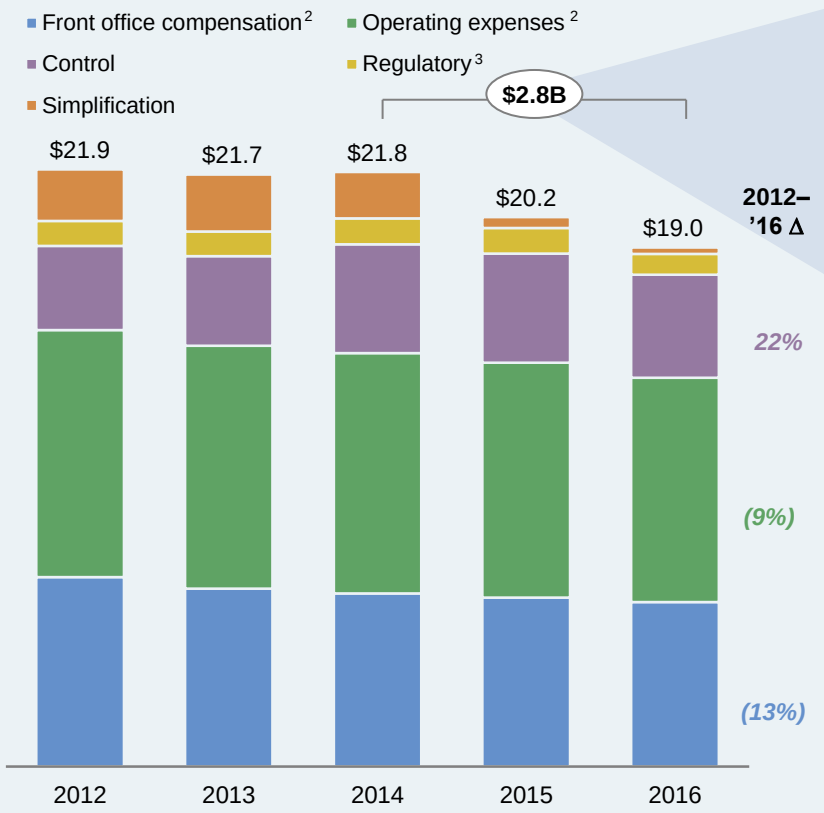
Adjusted ROE[1,2] (%)	18%	17%	13%	14%	16%
Capital ($B)	$47.5	$56.5	$61	$62	$64



[1] FY12 includes revisions related to the adoption of new accounting guidance for investments in affordable housing projects
[2] Excludes funding valuation adjustments (FVA)/debit valuation adjustments (DVA) for FY12 and FY13 and the after-tax impact of legal expense and business simplification for all years
[3] The adjustments on revenue, as described in footnote 2, exclude $1.7 billion, $533 million, $1.9 billion, $353 million and $220 million for FY12, FY13, FY14, FY15 and FY16, respectively
[4] The adjustments on net income, as described in footnote 2, exclude $(178) million, $(1.3) billion, $(1.7) billion, $(1.1) billion and $(72) million for FY12, FY13, FY14, FY15 and FY16, respectively
[5] Normalized revenues and net income additionally exclude credit adjustments & other, credit costs, one-off tax credits, run-off portfolio and fair value gains/losses on hedges of accrual loans as well as gains/losses on securities received from restructuring

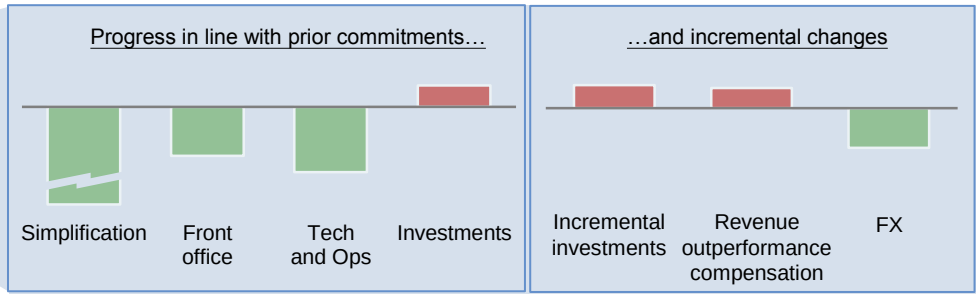
Consistent discipline driving overall expenses down while enabling reinvestment for growth and controls

Adjusted expense ($B)[1]



- Adjusted expense down 13% from 2014
- Strong track record of compensation discipline while retaining talent
- Robust management of operating expense base

Key drivers for 2014–2016



Investments

We have been investing across the franchise to enhance client offerings and experience:

- Global payment and trade platform
- Custody & Fund Services offerings, data infrastructure and platform renovation
- E-trading, derivatives transformation, mobile capabilities and overall client experience
- Hiring senior bankers across products and geographies

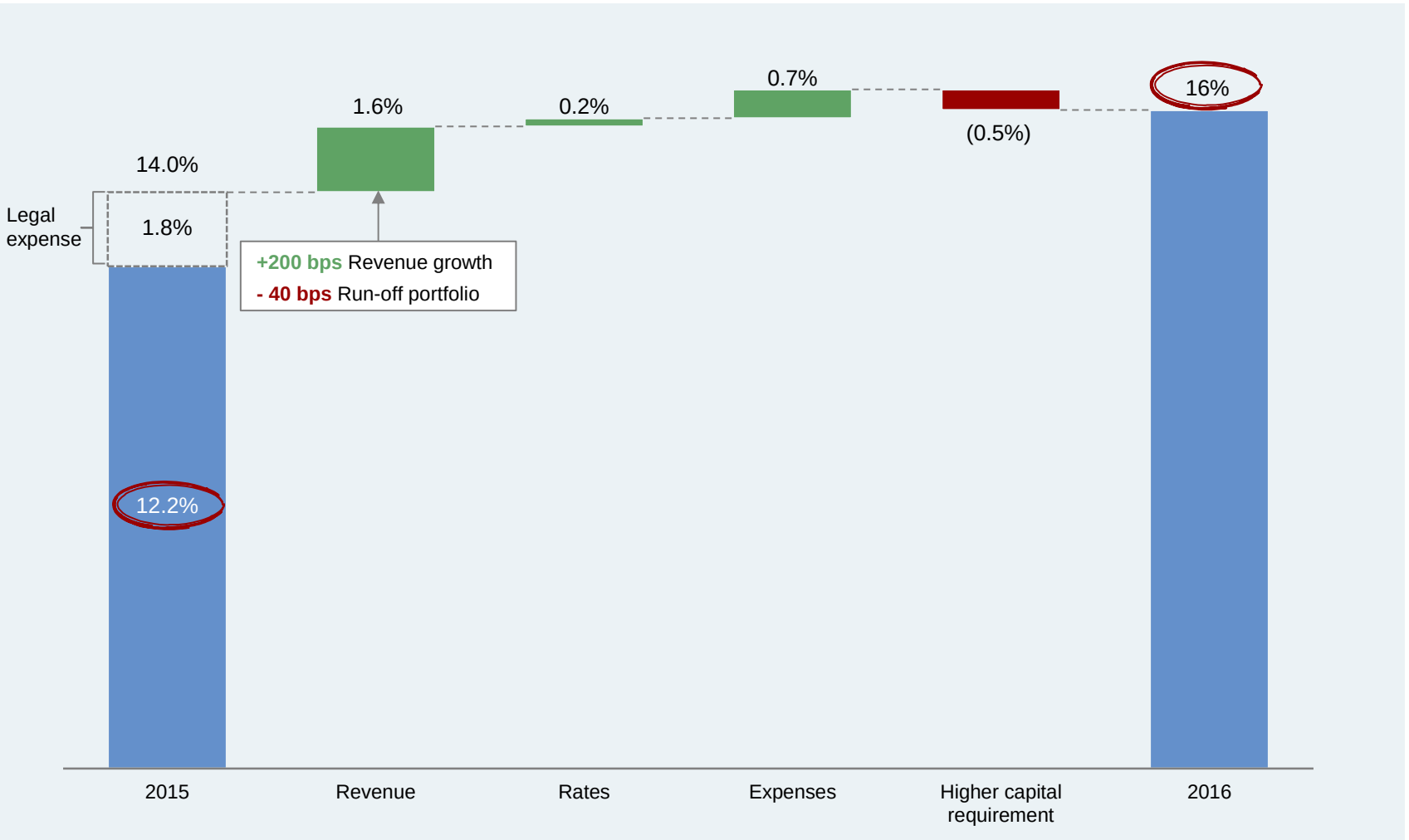
Key drivers for 2017

- ⬇ Ongoing tech and ops productivity
- ⬇ FX tailwind
- ⬆ Investments
- ⬆ Lower level of legal expense in 2016

[1] Adjusted for legal expense
[2] Excludes business simplification
[3] Includes FDIC/FICO assessment charges, UK Bank Levy and other regulatory assessments

ROE walk forward

CIB normalized ROE walk – FY2015 to FY2016



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Treasury Services

Continuing to invest in our TS franchise to capture a greater share of the global cash management wallet

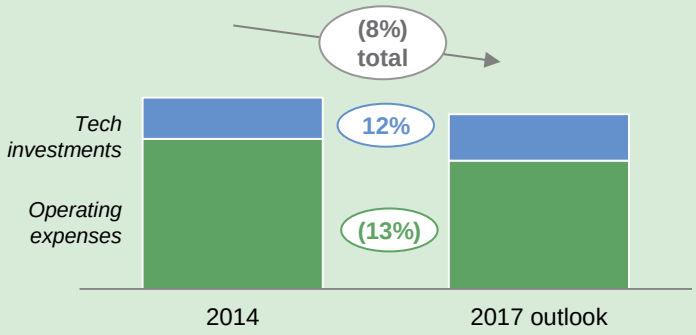
Improving the client experience

- **Make it easy to do business with TS**
  - Automate and digitize account opening
  - Transparent and fully customizable view of client relationship for service and implementation
- **Bring together wholesale payment capabilities across JPM products and clients**
  - Close partnership with Commerce Solutions and Commercial Card

Technology transformation

- **Investing to transform payments & liquidity**
  - Next generation technology platform
    - Global consistency and stability
    - Flexibility and speed for innovation and network expansion
    - Big data; cloud-ready; blockchain
  - Global eCommerce settlements
  - Cyber and fraud

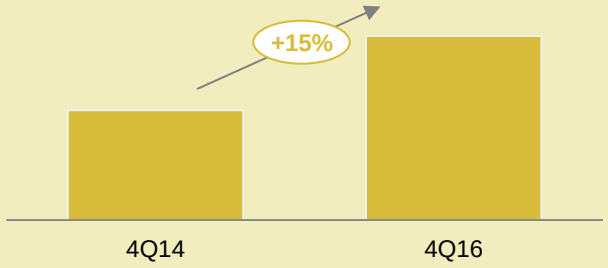
Investments in transformational technology while reducing operating expenses



Winning mandates

- **Strong performance with global corporates and financial institutions**
  - Integrated global payables, receivables and liquidity solutions
  - Winning disproportionate share of competitive deals
  - Positioned for renewed growth in Correspondent Banking segment

Grew operating balances



Custody & Fund Services

Delivering on value proposition by leveraging the power of the CIB and transforming our client offering through technology investment

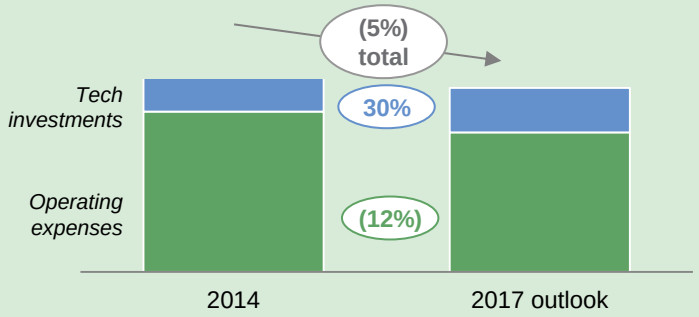
Improving the client experience

- **Highest client satisfaction in recent years**
  - Commitment to providing clients access to high quality staff in their own time zones
  - Delivering enhanced digital analytics, data solutions, workflow tools to future proof the business
  - Expanding product offerings as clients shift from active to passive investments

Optimizing infrastructure

- **Investing to transform CFS**
  - Improving margins and delivering scale through technology-driven solutions
  - Enhancing product offering (e.g., alternatives, ETFs)

Investments in transformational technology while reducing operating expenses



Winning new mandates while growing activity with our existing clients

- **Our commitment has been noticed by clients**
  - We have been awarded new mandates across sectors
  - We continue to retain and grow business with our existing clients

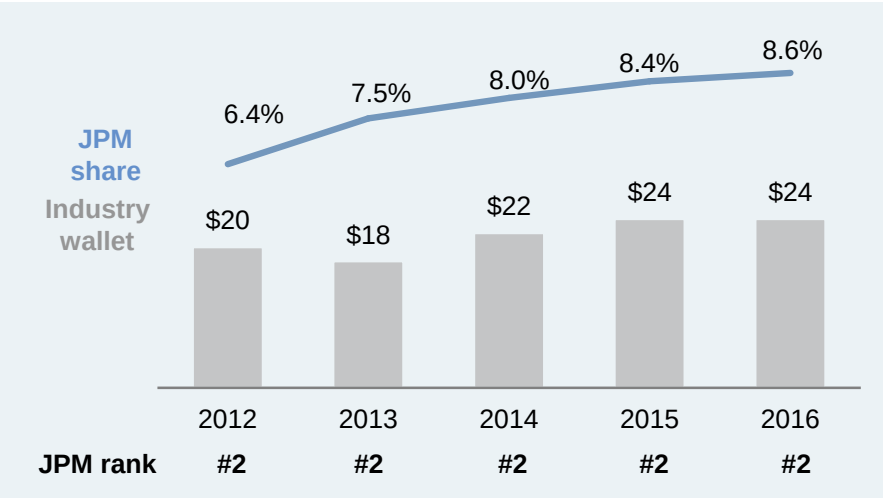




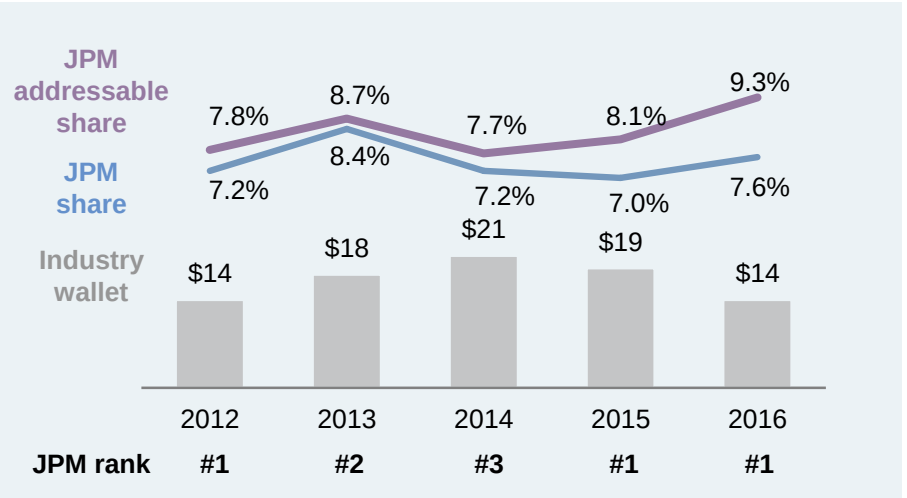
Global Investment Banking

Significant progress in M&A and ECM while preserving historically strong position in DCM

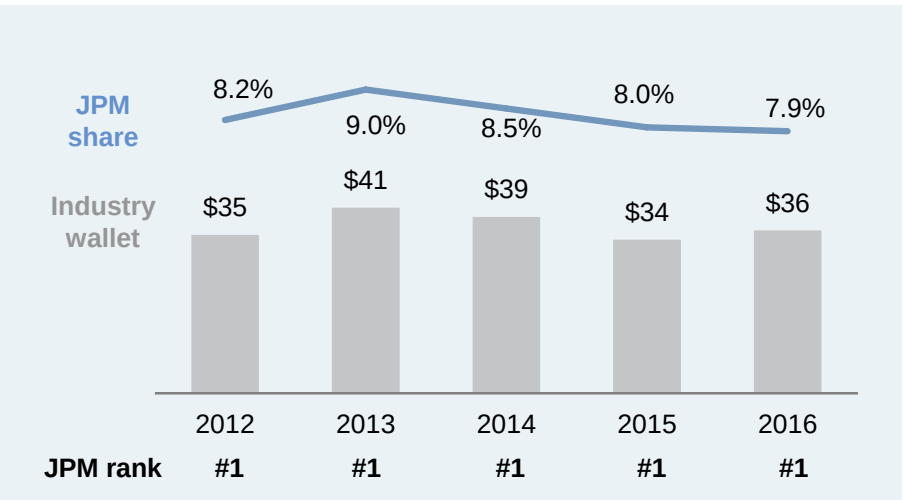
M&A industry wallet ($B) and JPM share (%) trend



ECM industry wallet ($B) and JPM share (%) trend[1]



DCM industry wallet ($B) and JPM share (%) trend



JPM industry ranks

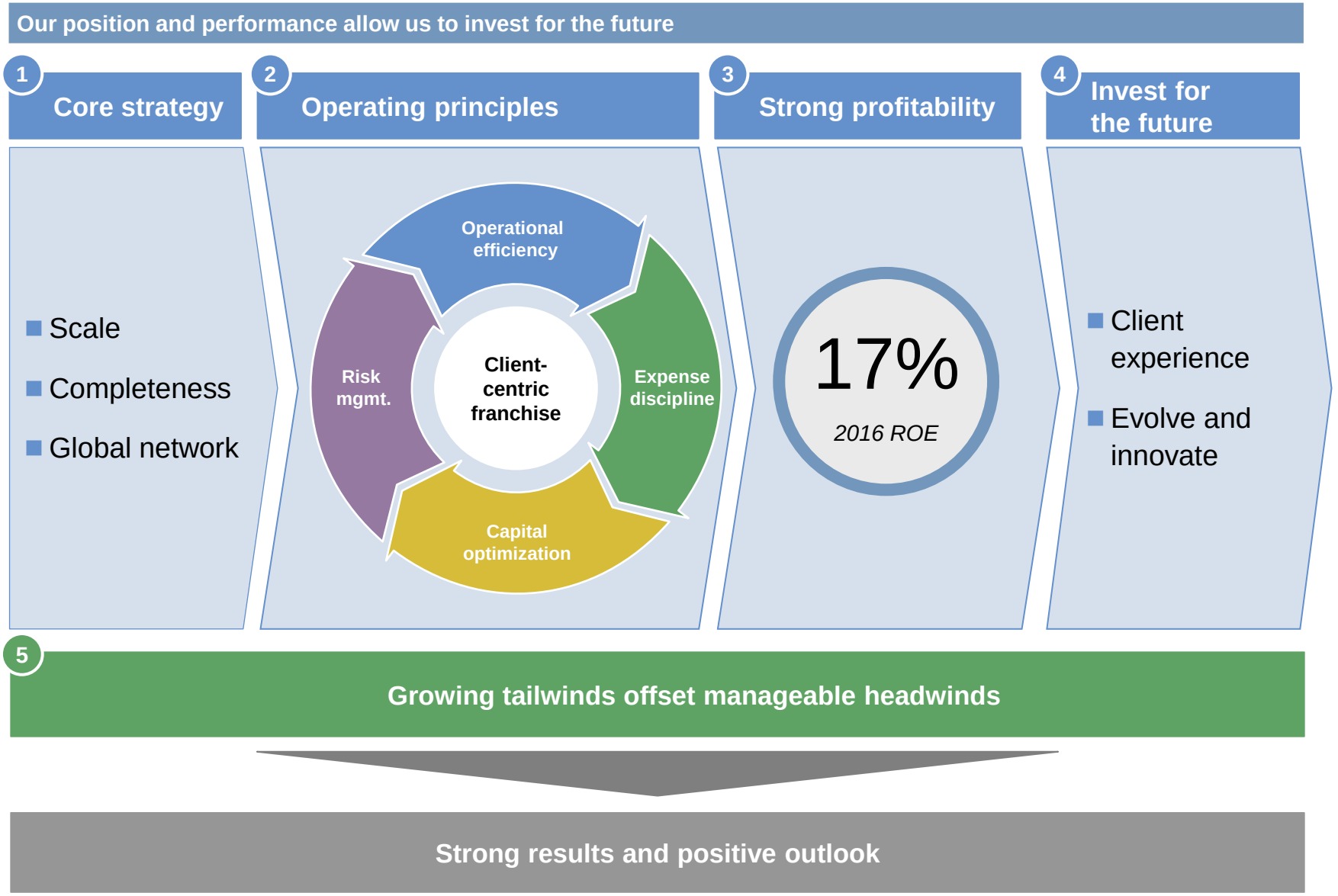
Industry	2012	2015	2016
Consumer & Retail	1	1	2
Diversified Industries	1	1	1
Energy & Natural Resources	2	2	1
Financial Institutions	1	1	1
Healthcare	1	1	1
Tech, Media & Telecom	2	2	1
Real Estate	2	1	1

Source: Dealogic. ECM excludes SHELF. DCM excludes money market, short-term

[1] ECM addressable market excludes China A-Share issuance

Markets

Our client-centric Markets franchise is scalable and well positioned to capture future opportunities

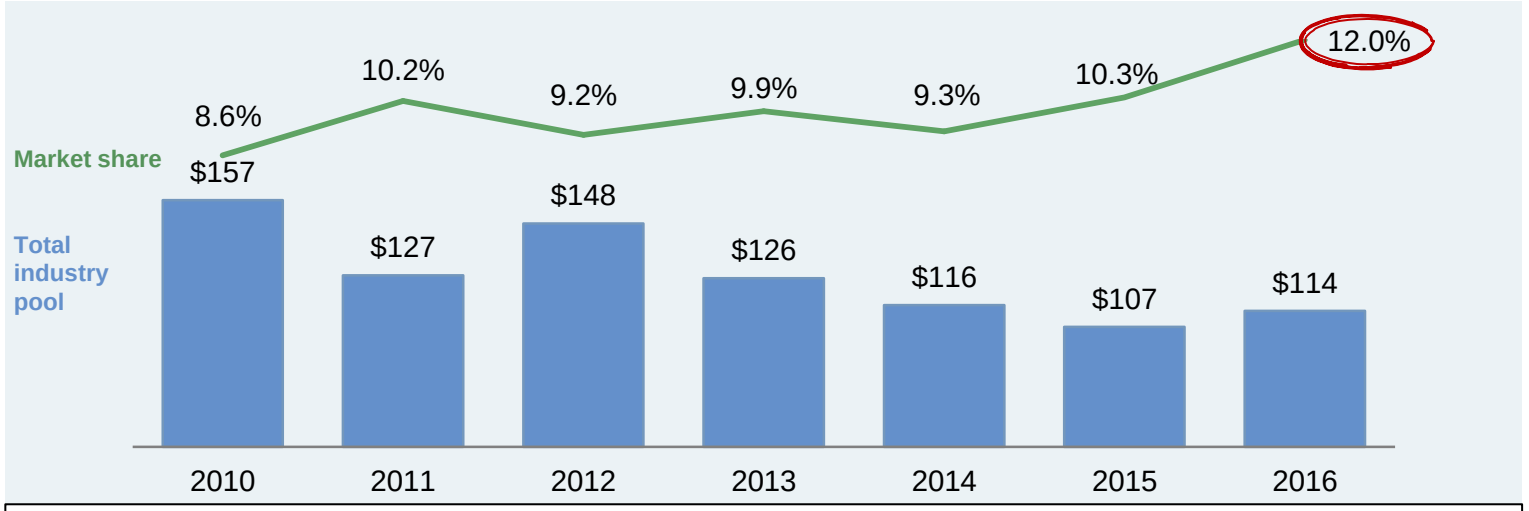


Markets

We have captured significant market share across products while overall industry revenue pool declined

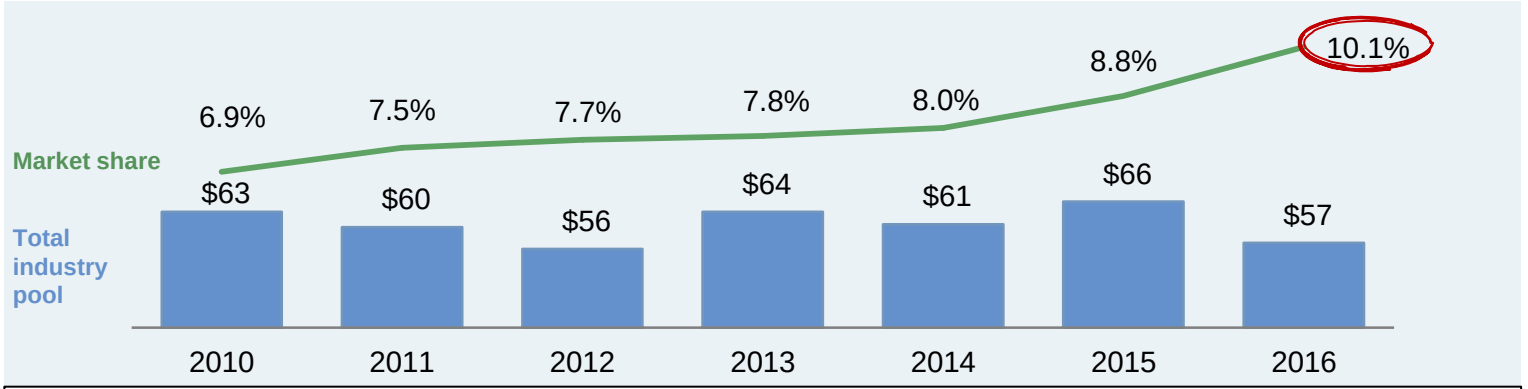
Global revenue pool ($B) and market share (%)

FICC



JPM rank	#1	#1	#1	#1	#1	#1	#1

Equities & Prime



JPM rank	#4	#3	#3	#3	#3	#3	#2

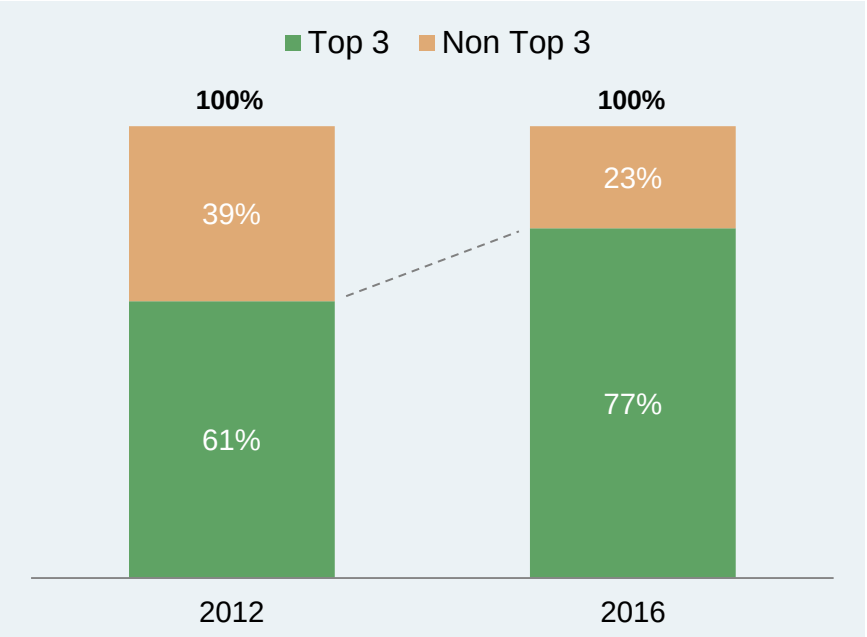
Source: Coalition. Total industry pool is based on JPM internal business structure. Market share is based on Coalition preliminary FY16 results and reflects JPM's share of Coalition's Global Industry Revenue Pool

Markets

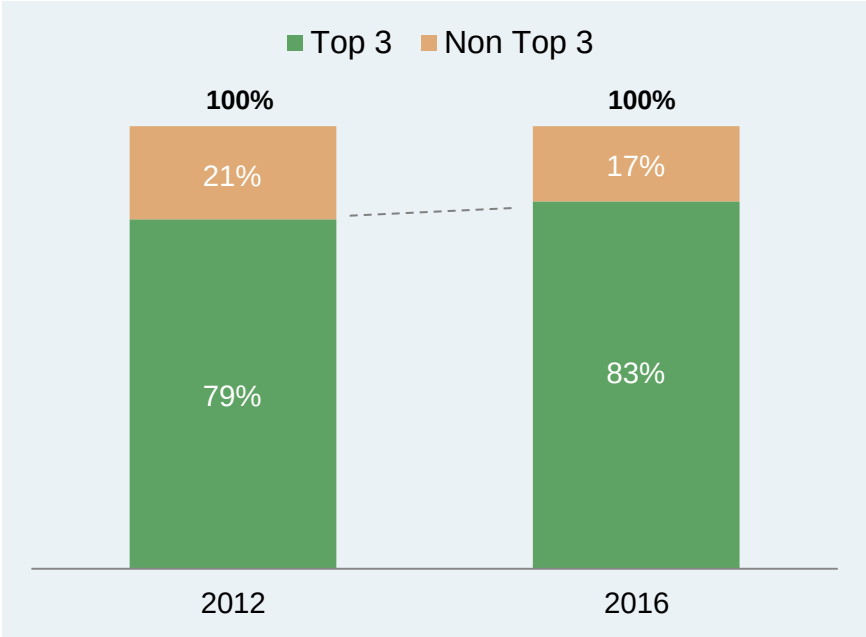
We improved our leadership positions in Markets in the last 5 years, but there is still room for growth

Top 3 positions across 31 categories

Number of JPM leadership positons



Total wallet by JPM leadership position



Evolution of leadership positions

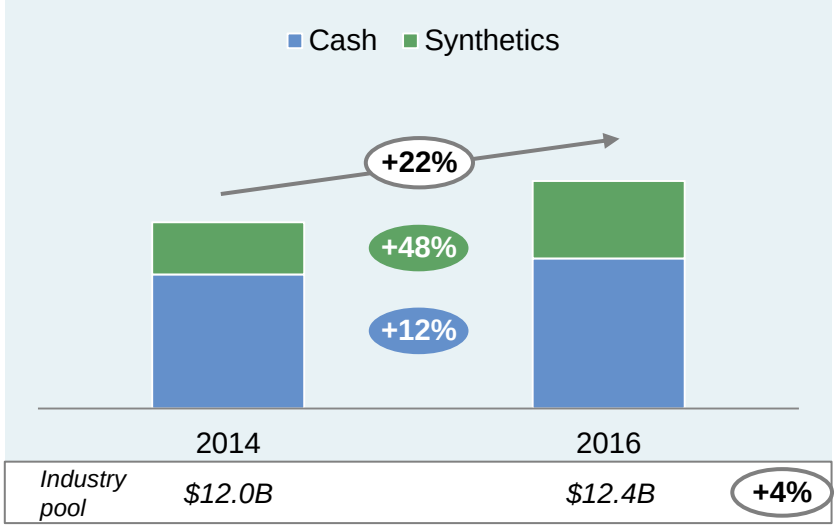
- Grown number of **top 3 positions** across 31 product and geographic categories
- Continuous assessment of areas for **improvement** and **investment**
- Strategic commitment to a **complete, global platform**, delivering **scale** and **deep, broad client relationships**

Source: Coalition. Rank analysis is based on top 10 peers and reflects JPM internal business structure

Markets

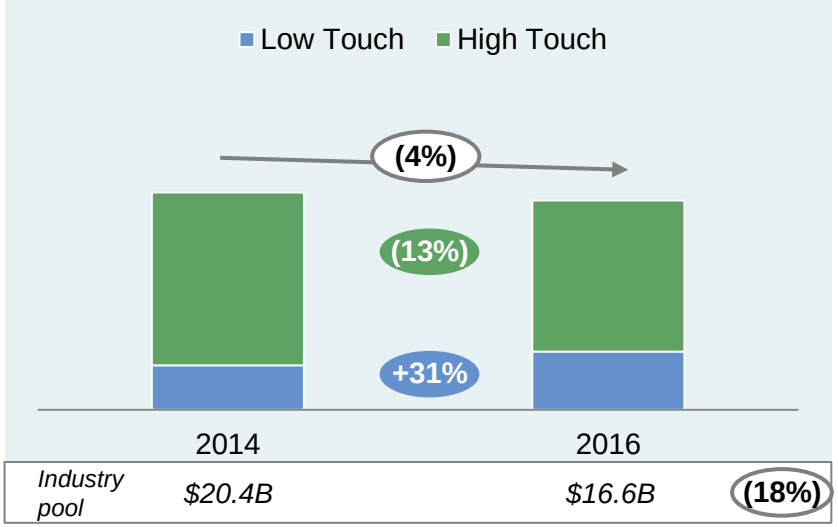
Our Equities & Prime businesses have seen significant growth in all regions following our focused investment strategy

Prime Brokerage revenue



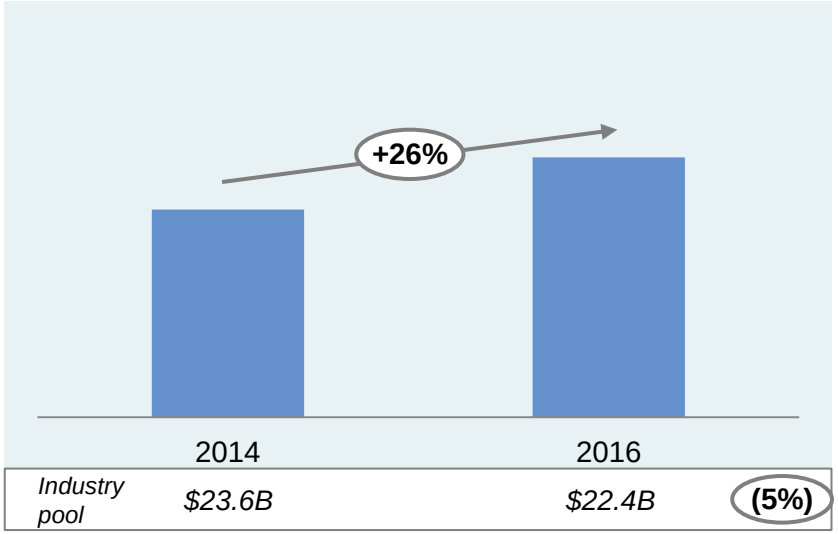
	2014	2016	
Industry pool	*$12.0B*	*$12.4B*	**+4%**

Cash Equities revenue



	2014	2016	
Industry pool	*$20.4B*	*$16.6B*	**(18%)**

Equity Derivatives revenue



	2014	2016	
Industry pool	*$23.6B*	*$22.4B*	**(5%)**

Comments

- Sustained **market share growth** in a **shrinking revenue pool** environment
- Acceleration of client onboarding and volumes as a result of ongoing **multi-year strategic investment** in Electronic and Prime platform
- Market-leading equity derivatives position driven by **sustained and balanced growth**
- **Record revenue and balances** in Prime Brokerage driven by Synthetics and International Prime Brokerage

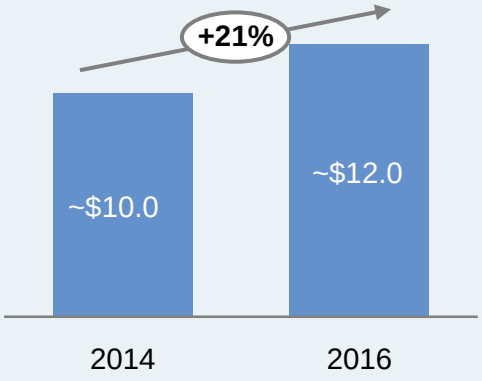
Source: Industry pool represents Coalition's Global Industry Revenue Pool based on JPM's internal business structure

Markets

Our Markets business is client-focused and flow-driven with strong financing and client solutions businesses

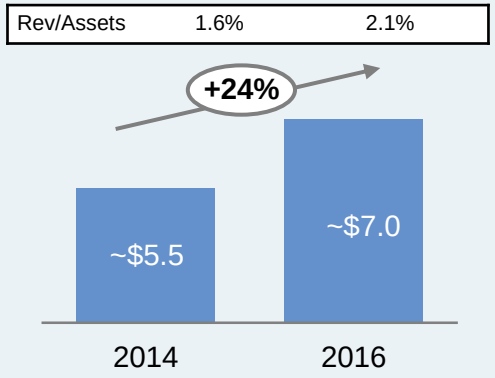
Strong growth of flow market-making businesses

Revenue ($B)



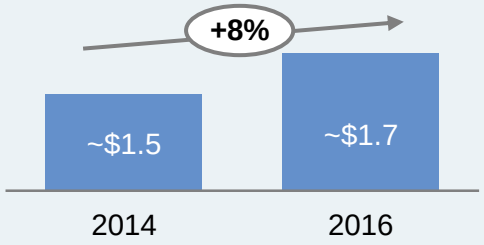
Financing-related revenue growth reflects optimization and repricing

Revenue ($B)

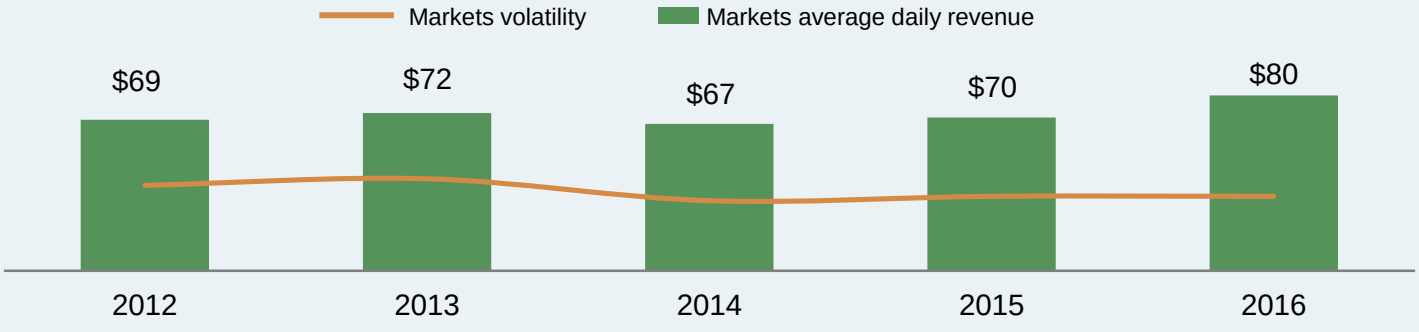


Consistent, diversified performance from client solutions businesses

Revenue ($B)



Markets average daily revenue and volatility[1,2]($mm)



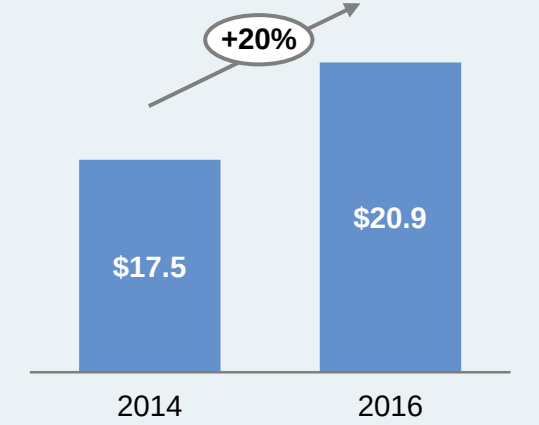
	2012	2013	2014	2015	2016
Loss days	7	0	0	2	0

[1] Volatility measured as standard deviation. Average daily revenue and volatility excludes business simplification
[2] For 2014-2016, loss days represent the number of days Markets posted losses. For 2012-2013, loss days represent the number of days for which the CIB posted losses under the market risk-related revenue measure

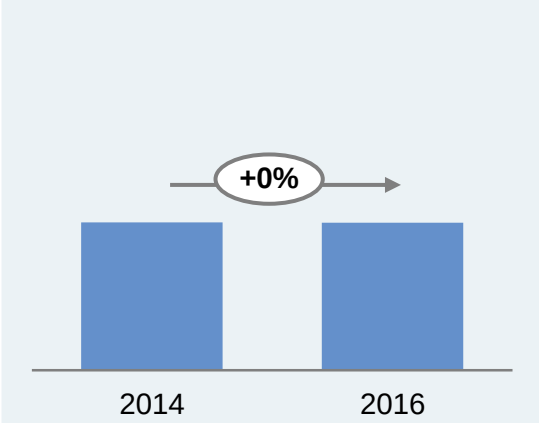
Markets

We have increased revenue while diligently optimizing our cost base and capital

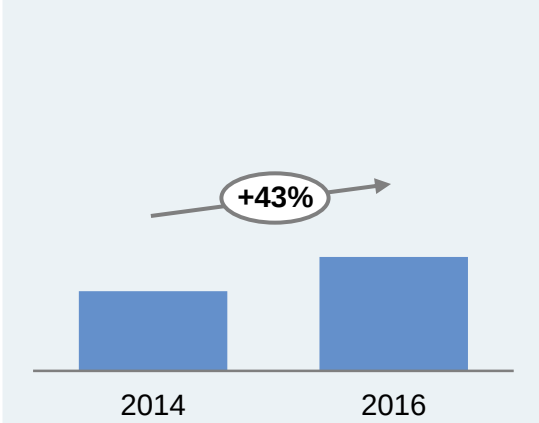
Markets revenues ($B)



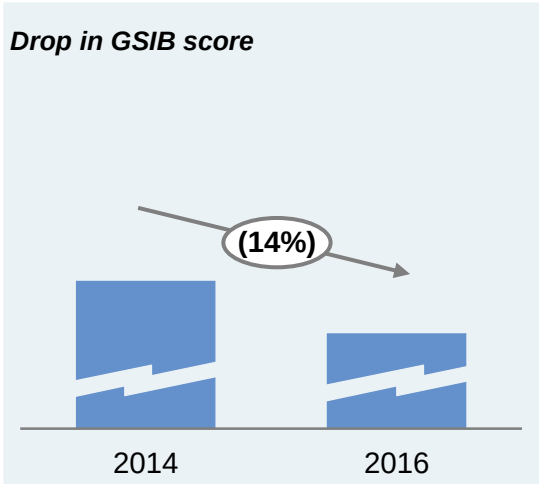
Markets expense



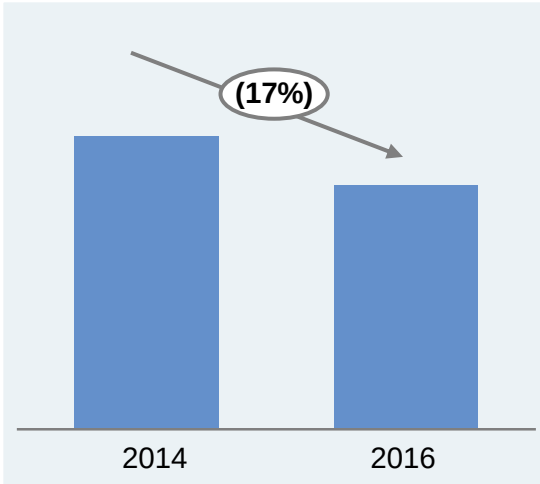
Markets net income



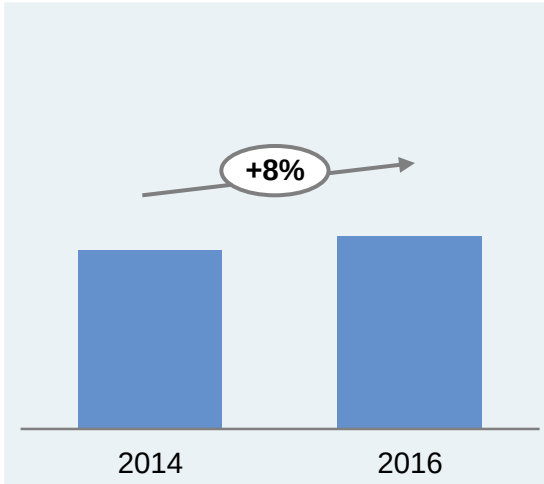
Markets GSIB optimization



Standardized Markets RWA



Advanced Markets RWA

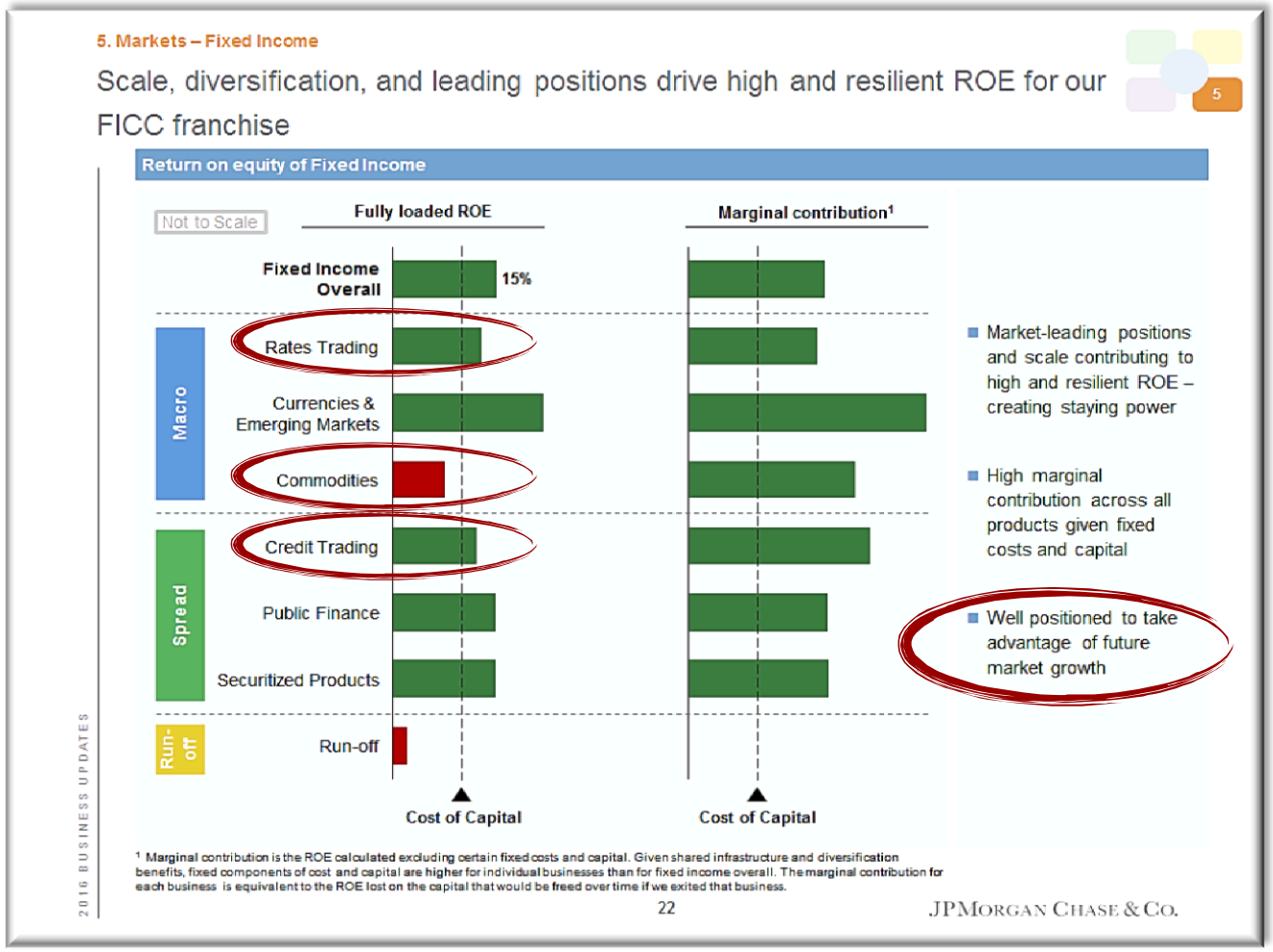


Note: All numbers shown exclude business simplification

Markets

2016 was very strong: you will recall this slide from last year

Return on equity of Fixed Income Markets

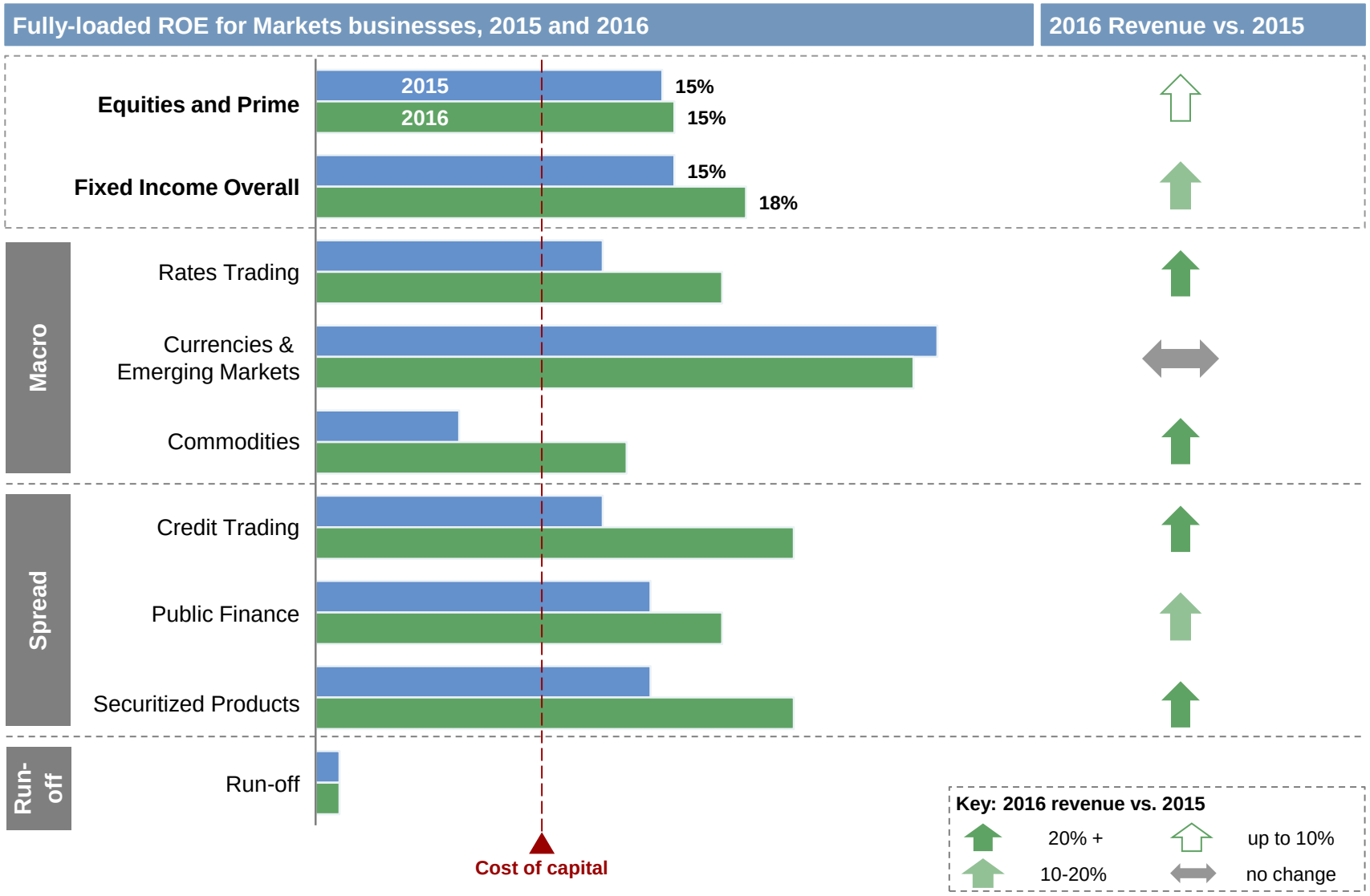


- We had some businesses with lower fully-loaded ROE
- With strong marginal contribution and operating leverage, our businesses were well positioned for growth in revenue

Markets

Scale drives high ROE and operating leverage; as a result, 2016 revenue outperformance was highly accretive

NOT TO SCALE



Markets

We are creating an end-to-end digital experience for clients to simplify their engagement with us and enable them to embrace market change



Focus on client experience

- **Engage clients digitally** across the entire trade lifecycle
- **Complete product suite** to support pre-trade, trade and post-trade activities
- **Multiple channels** will enable clients to interact with us in any way they choose
- The client's **user experience** is key – not just to trade with us across all products but to benefit from JPM's innovation
- We want to **partner with our clients** – to share and integrate our synergies, technologies and scale

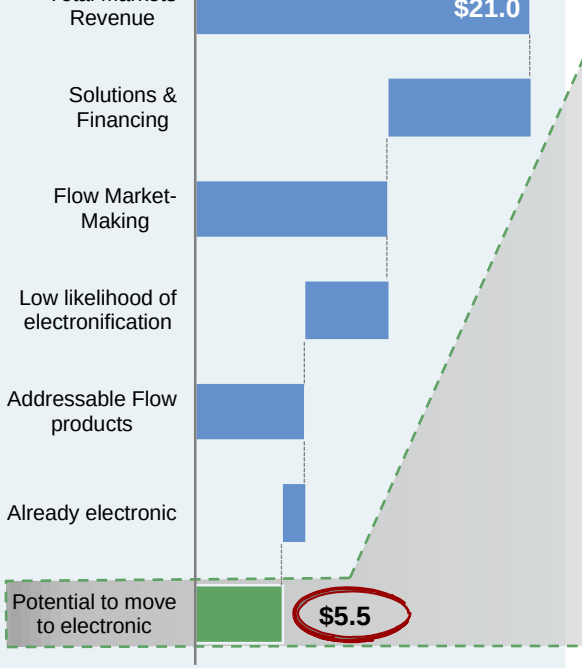
Markets

Potential further headwinds from market structure evolution remain uncertain, but seem manageable

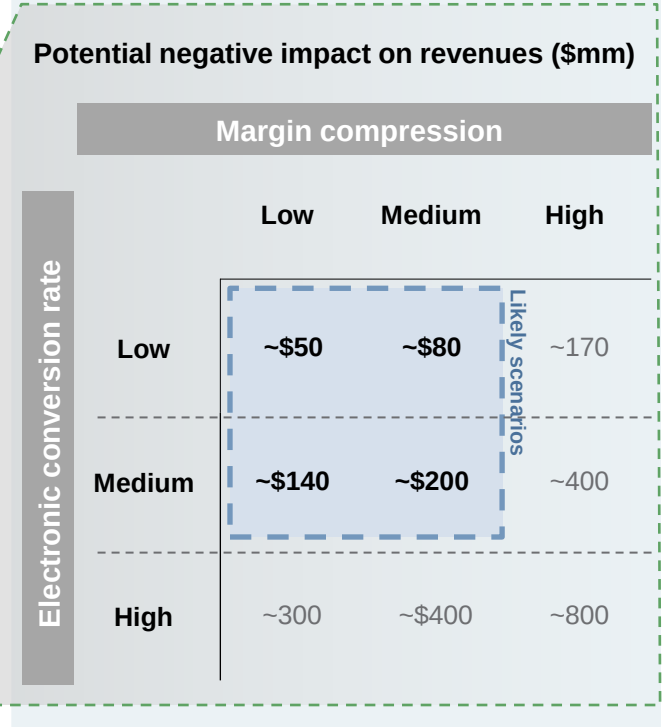
Electronic trading is growing fast, but from a low base[1]…



… and market structure continues to evolve…



… however, the additional impact is manageable



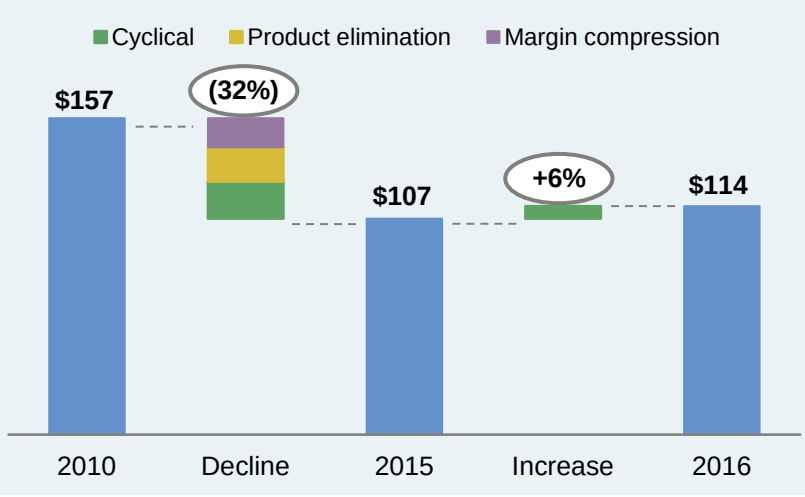
Uncertainty on the impact of future market structure change

- **Uncertainty remains** on how electronification will further impact market dynamics
- **Impact is limited** to a small subset of total revenue
- However, these areas are very **competitive** and as a result already have very **tight margins**
- We think this is a **manageable headwind**

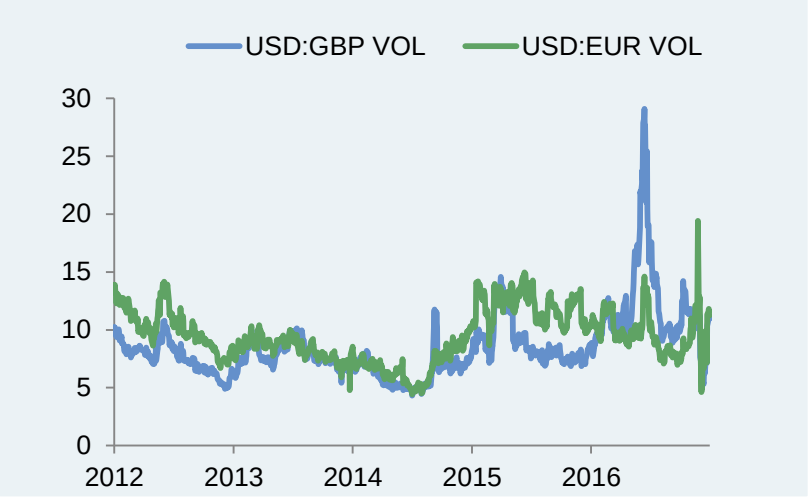
[1] Measured using JPM internal classification of flow businesses revenue

Markets
Strong macro tailwinds along with FICC revenue pool stabilization

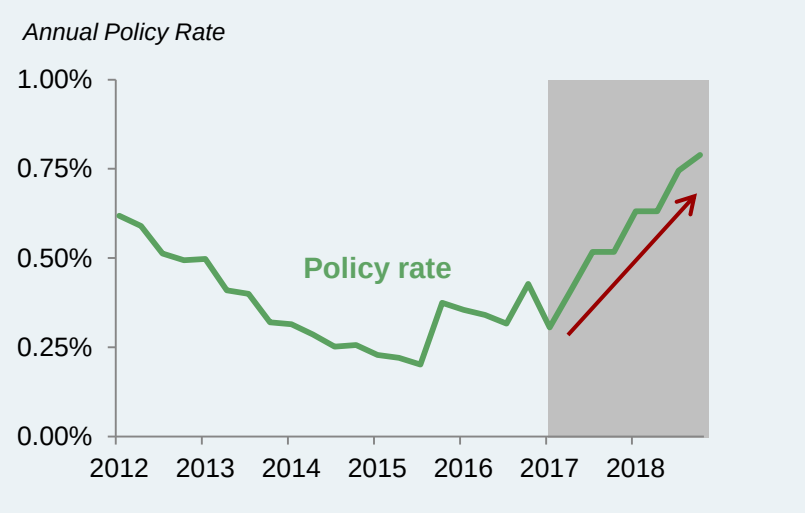
Cyclical momentum – FICC industry revenue pool ($B)[1]



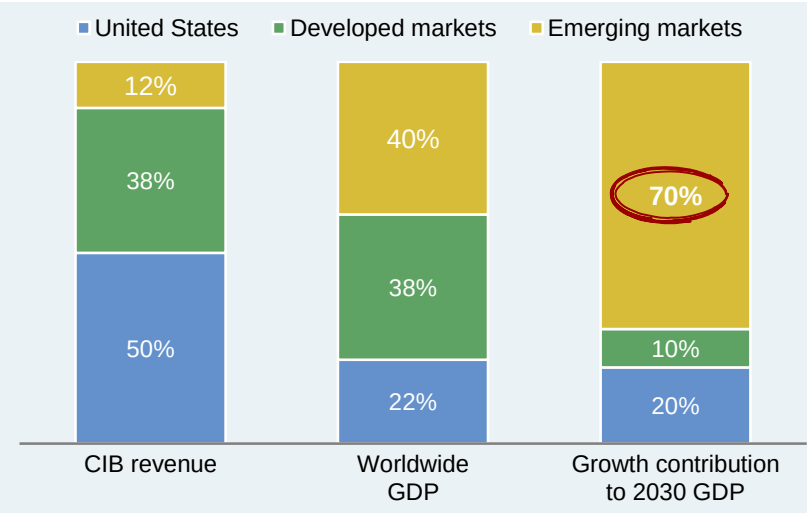
Increased FX volatility in 2016[2]



Rates expected to rise across developed markets[3]



Emerging markets to be long-term driver of growth[4]



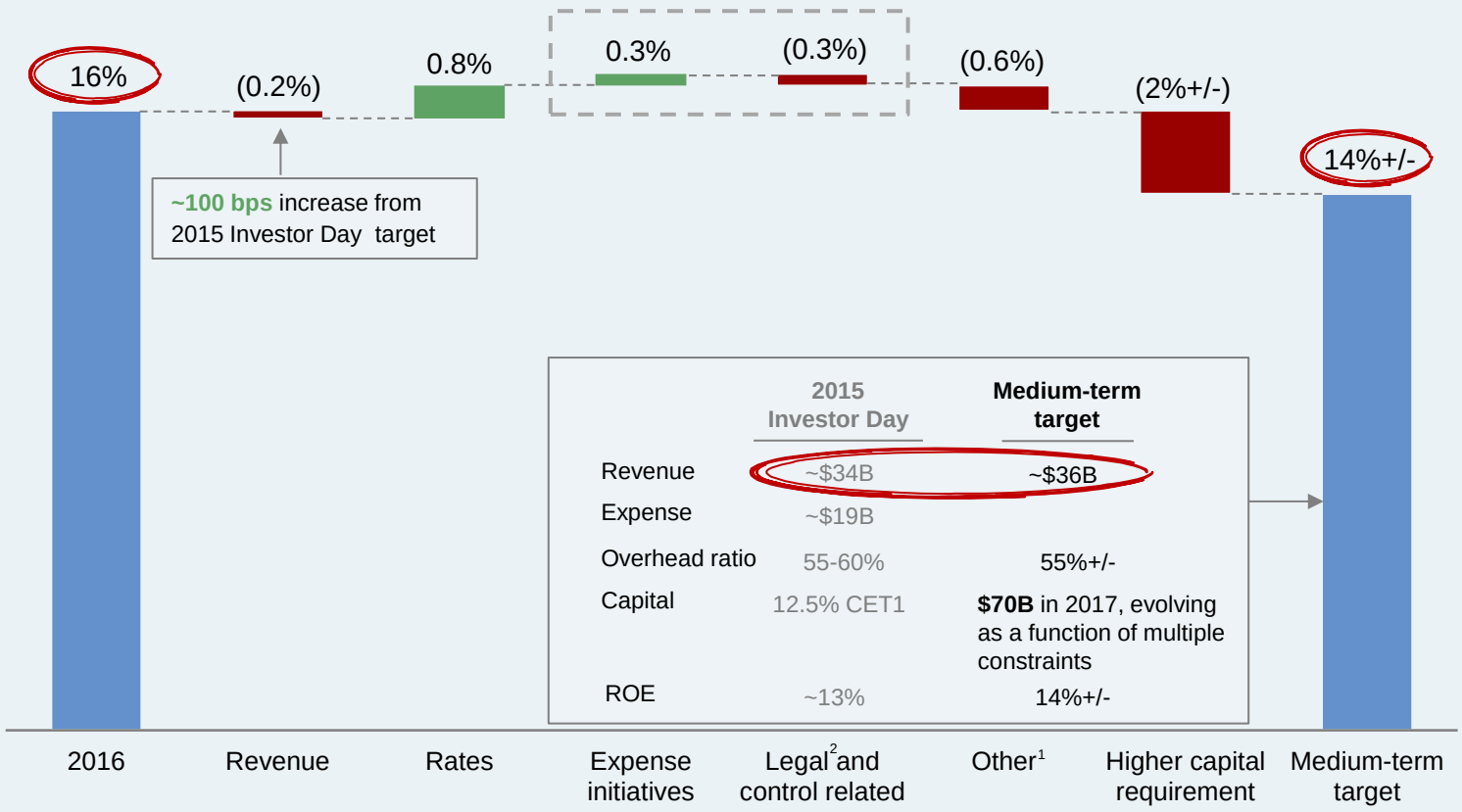
[1] Coalition Total Industry Revenue Pool based on JPMorgan's internal business structure. 2010-2015 pool decline split between cyclical, product elimination and margin compression based on JPMorgan estimates
[2] CBOE. EUVIX and GBVIX, 30 day expected volatility
[3] JPMorgan. Policy rate GDP-weighted across economies. Developed economies include: US, UK, ECB, Japan, Australia, New Zealand, Norway and Sweden
[4] World Bank World Development Indicators

Agenda

	Page
Financial performance	1
2016 Business updates	5
Financial targets	**19**

ROE walk-forward

CIB normalized ROE walk – FY2016 to Medium-term target



[1] Includes impact of normalized tax rate and credit cost
[2] Normalizing for lower level of legal expense in 2016

Looking forward

- Continue **deepening relationships** as part of our commitment to a client-centric franchise
- Maintain leading positions and **avoid complacency**
- **Embrace change** and adapt business model to disruptive forces
- Emphasize **innovation and technology** investment to **improve client experience** and drive **efficiency**
- Reinforce a culture with the **highest standards and values** independently of any potential changes in regulation
- Ensure we continue to **attract the best talent** in the industry

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

NOTES

ASSET & WEALTH MANAGEMENT

Mary Erdoes, Chief Executive Officer Asset & Wealth Management

February 28, 2017

JPMorgan Chase & Co.

Asset & Wealth Management: Uniquely positioned in the industry



Client driven

- **Trust**: Nearly 200 years of being a fiduciary focuses us on long-term thinking
- **Performance**: 83% of 10-year JPMAM long-term mutual fund AUM outperform peers[1]
- **Access:** Serve a broad client spectrum with segment-specific coverage models

Innovate and adapt

- **New solutions:** Smart beta, multi-asset, alternatives, ESG, insurance, digital
- **New partnerships/investments:** InvestCloud, Global X
- **New insights:** Research intensive (*Guide to the Markets* used by 1 in 3 U.S. advisors)

Never stop investing in the business

- **Our people:** 95%+ retention rate for top talent
- **Technology:** Innovate, automate, and eliminate waste
- **Processes:** Continuous improvements increase efficiencies and control risks

Diversification is key

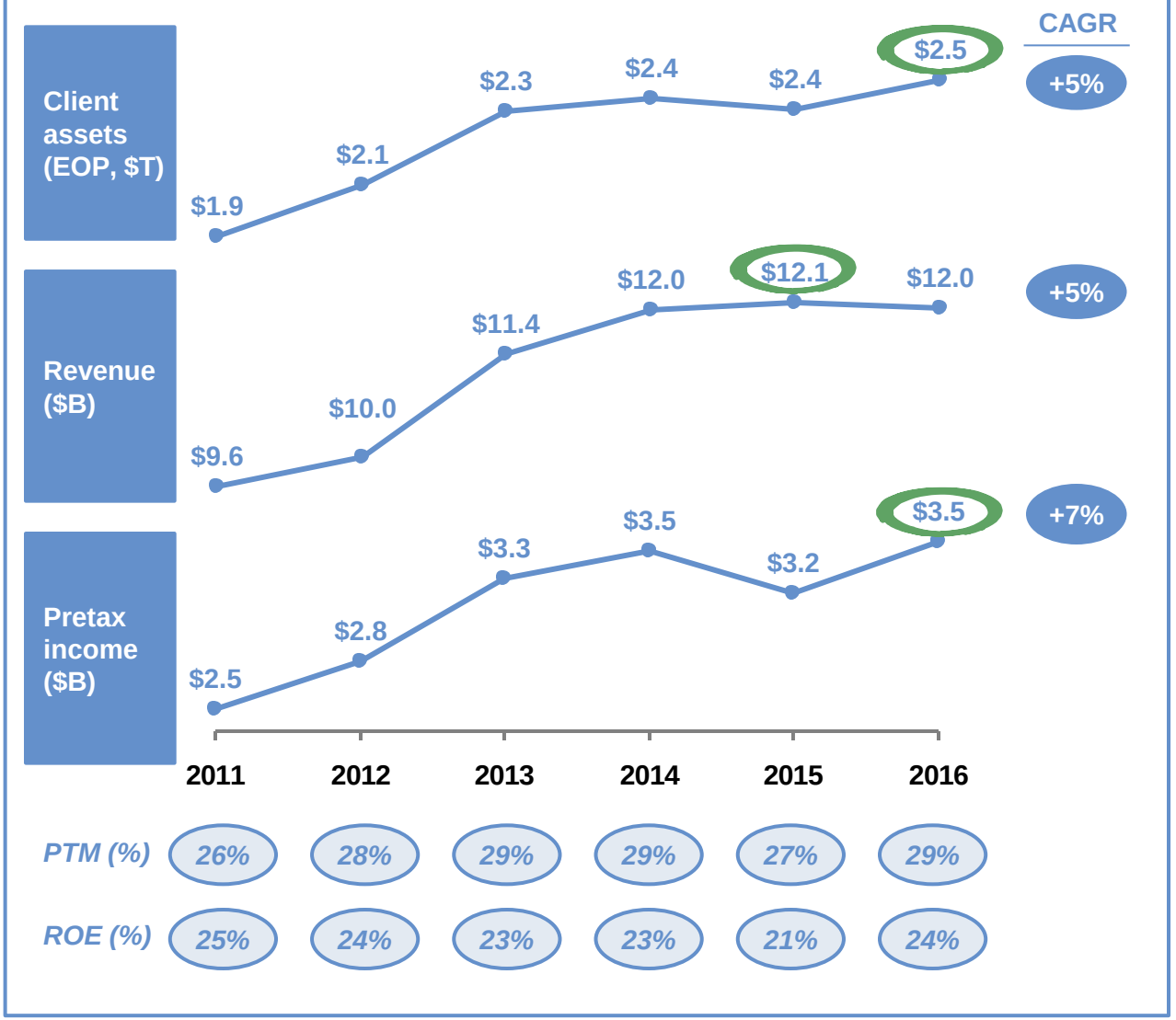
- Like portfolios we manage, our business is diversified across asset classes, regions, and client types
- More consistent asset, revenue, and profit growth

For footnoted information, refer to notes appendix

Continued strong financial performance in a challenging environment

Record

AWM key metrics and records



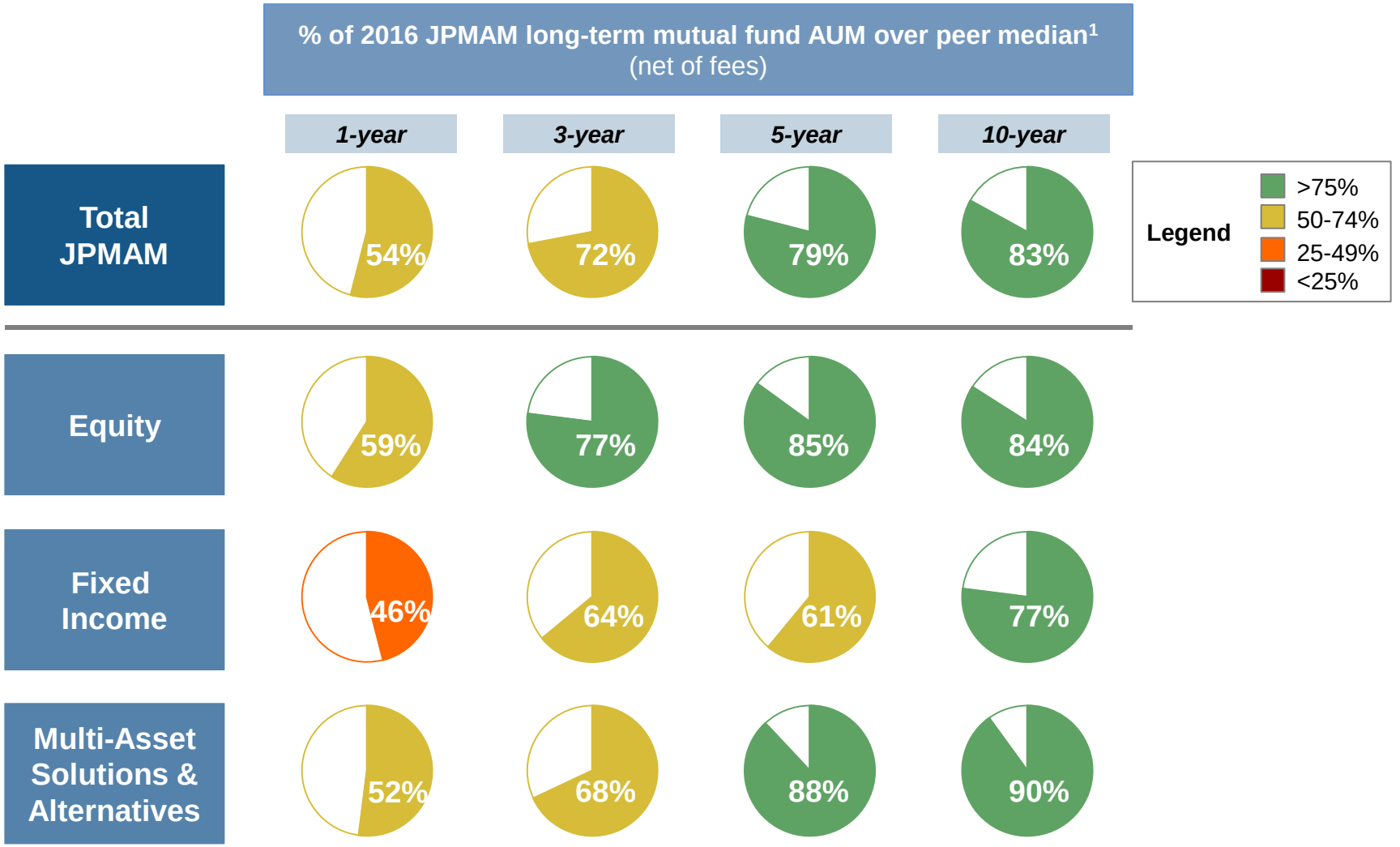
Industry challenges

- Alpha
- Flows
- Fees

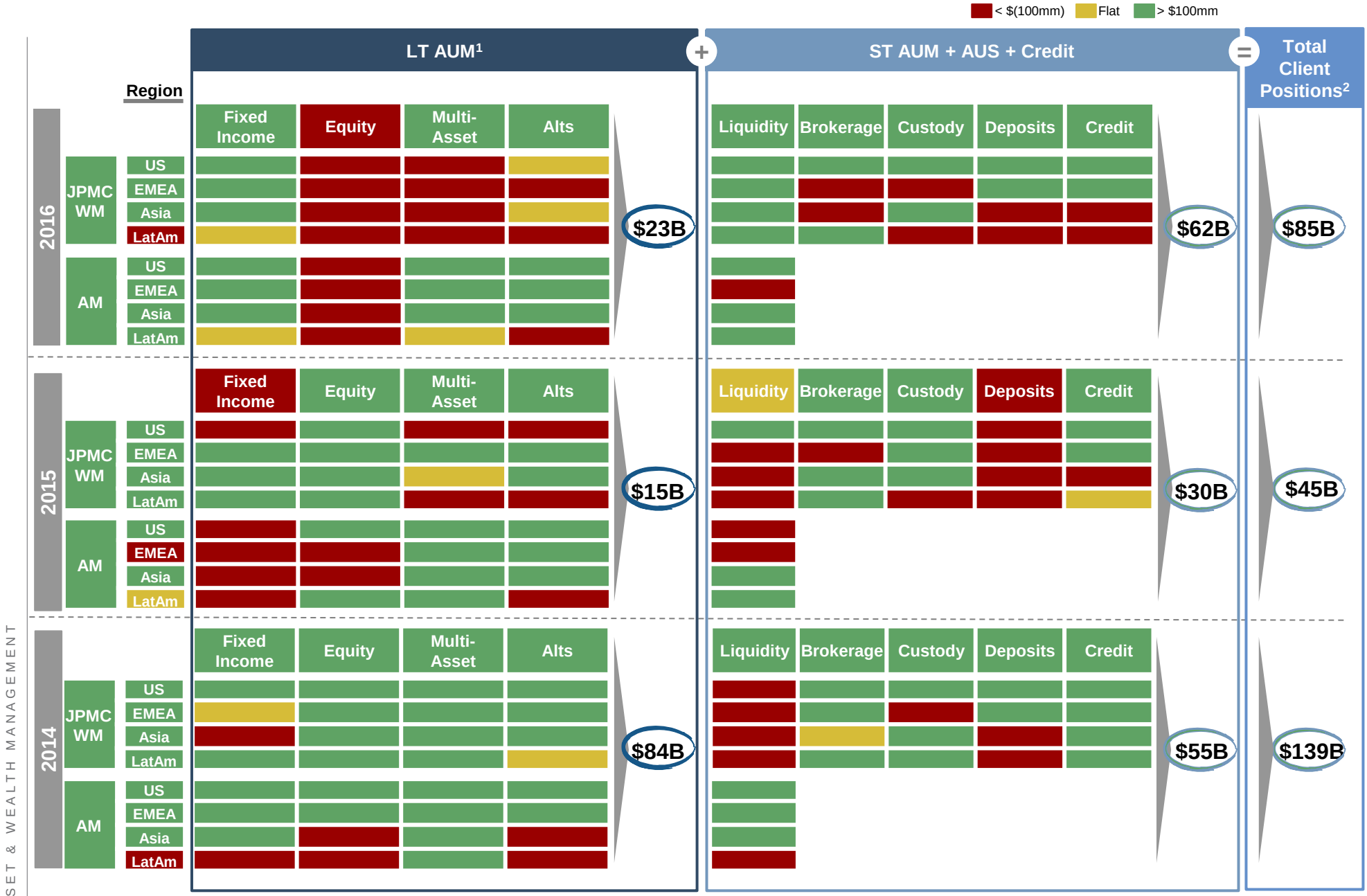
AWM priorities

- Investment performance
- Client experience
- Innovation & growth
- Operational efficiency

Despite near-term challenges, leading long-term performance



Diversified solutions across JPMC client segments and regions drive positive flows



ASSET & WEALTH MANAGEMENT

For footnoted information, refer to notes appendix

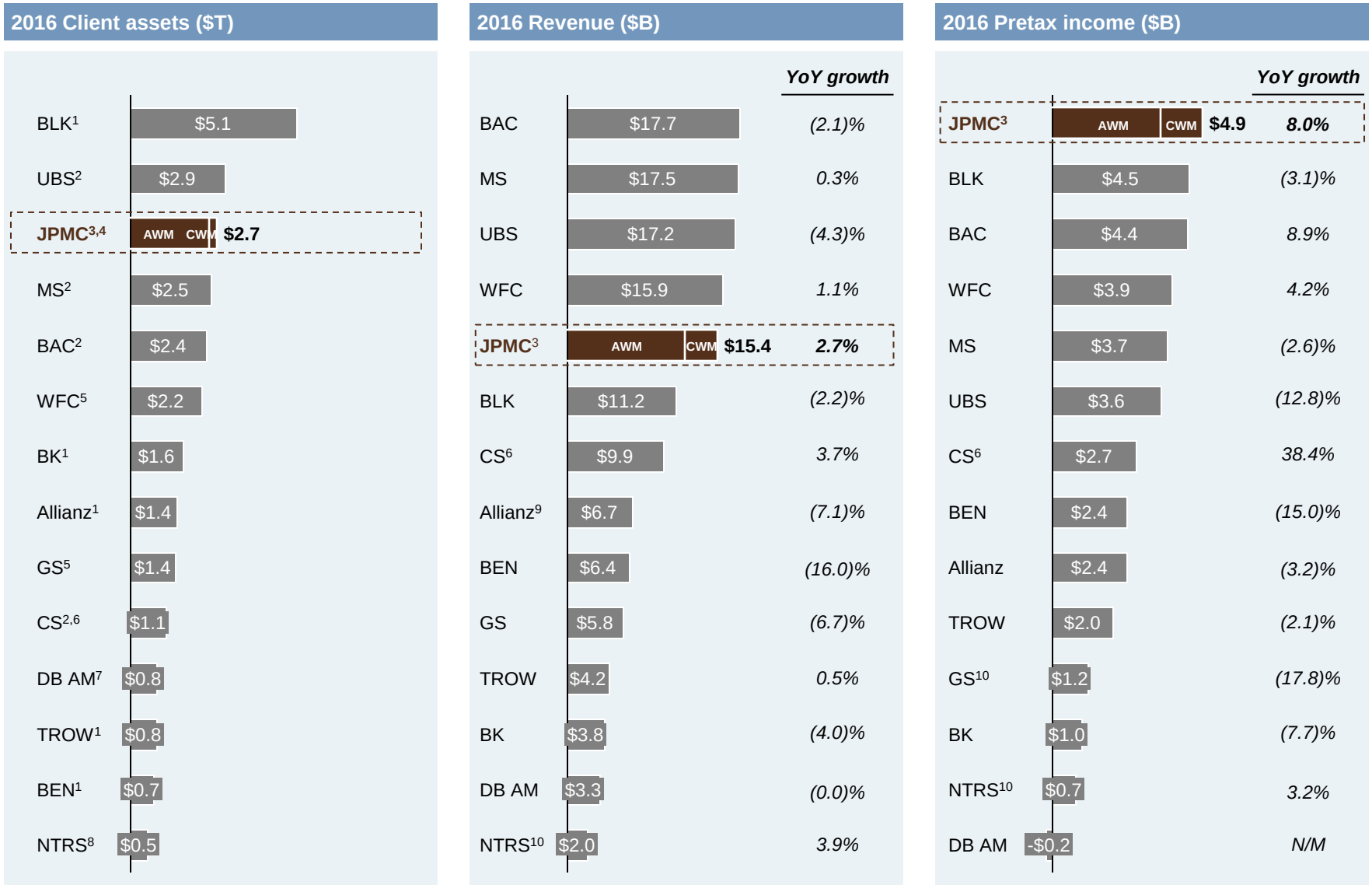
#2 in total flows over the past 5 years (large public peers)

Ranking of LT client asset flows for key large publically traded peers ($B)

2012	2013	2014	2015	2016	2012-2016 Average	2012-2016 Average	2012-2016 Cumulative
Peer 1	Peer 11	Peer 11	Peer 11	Peer 11	Peer 11[1]	$126	$628
JPMC $112	Peer 2	JPMC $113	Peer 6	JPMC $52	JPMC[2]	**$82**	**$408**
Peer 2	JPMC $93	Peer 6	Peer 10	Peer 6	Peer 6[3]	$49	$246
Peer 3	Peer 5	Peer 3	JPMC $38	Peer 5	Peer 3[4]	$44	$220
Peer 4	Peer 3	Peer 5	Peer 4	Peer 4	Peer 5[5]	$43	$217
Peer 5	Peer 4	Peer 4	Peer 3	Peer 10	Peer 4[1]	$39	$197
Peer 6	Peer 6	Peer 2	Peer 5	Peer 3	Peer 2[1]	$34	$172
Peer 7	Peer 10	Peer 10	Peer 9	Peer 9	Peer 10[6,7]	$30	$148
Peer 8	Peer 8	Peer 9	Peer 7	Peer 7	Peer 9[1]	$14	$69
Peer 9	Peer 9	Peer 7	Peer 2	Peer 2	Peer 7[8]	$2	$8
Peer 10	Peer 7	Peer 8	Peer 8	Peer 1	Peer 8[9]	$(25)	$(125)
Peer 11	Peer 1	Peer 1	Peer 1	Peer 8	Peer 1[10]	$(67)	$(337)

Source: Company filings, J.P. Morgan estimates
Note: Includes competitors in peer group with publicly reported financials and 2016 client assets of at least $500B: Allianz, BAC, BEN, BK, BLK, CS, GS, IVZ, MS, TROW, UBS
For footnoted information, refer to notes appendix

Assets, revenue, and pretax income records



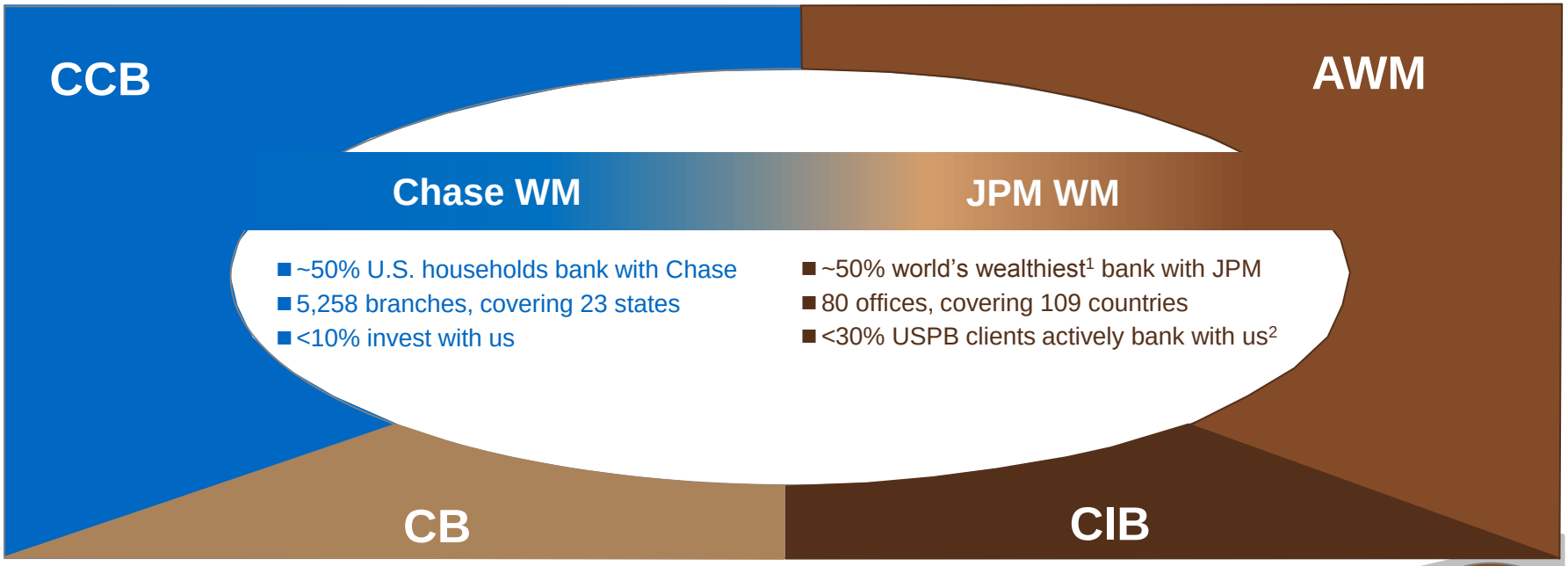
Source: Company filings, J.P. Morgan estimates
For footnoted information, refer to notes appendix
CWM consists of all Chase Wealth Management Investments and all Chase Private Client Deposits

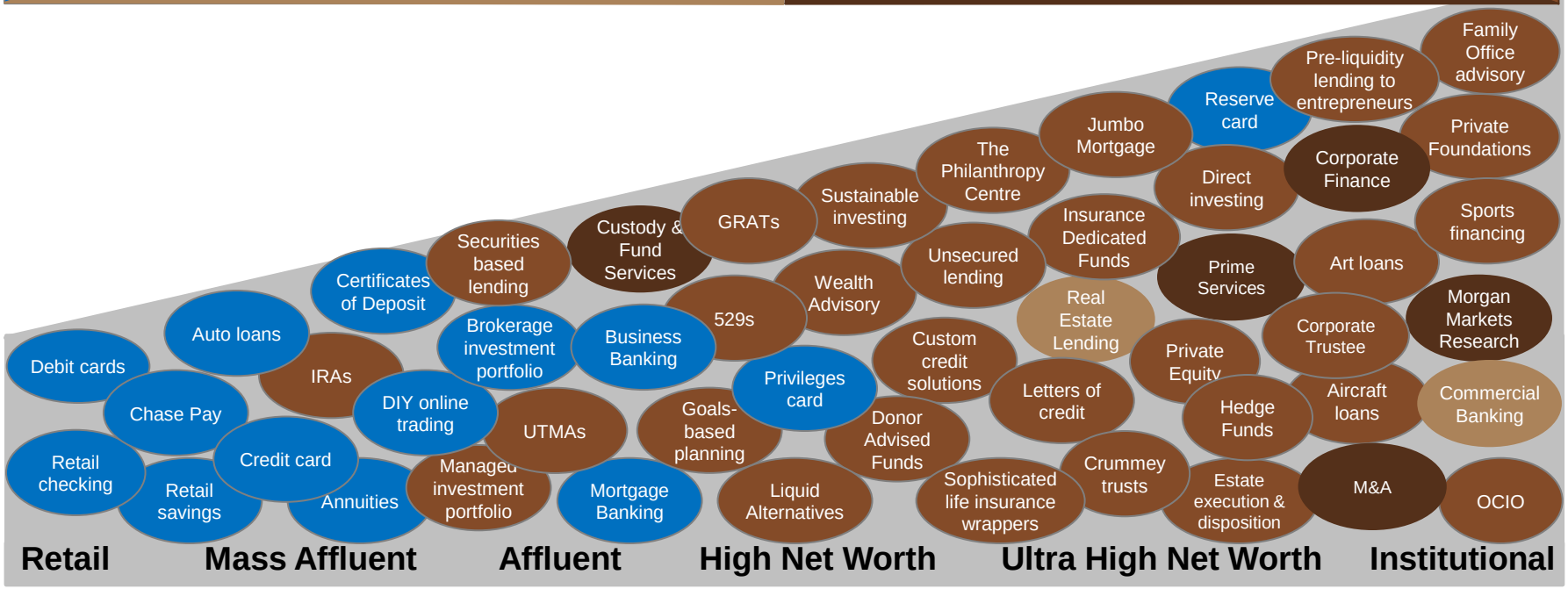
Adapting and innovating are keys to success

Industry headlines[1]		Our view
Active "versus" Passive		■ Both active & passive are key building blocks for stronger portfolios ■ Clients want advice, service, and solutions … not just products
Fee Compression		■ Fees should align with long-term value expectations ■ Reduced annual fees by >$250mm ■ Closed / merged 191 funds ■ Launched 267 funds
Computer "versus" Human		■ Client preferences vary ■ Human & digitally-enhanced advice ■ Increased productivity, decreased risk

For footnoted information, refer to notes appendix

Serving clients across wealth spectrum, leading with advice and thought leadership

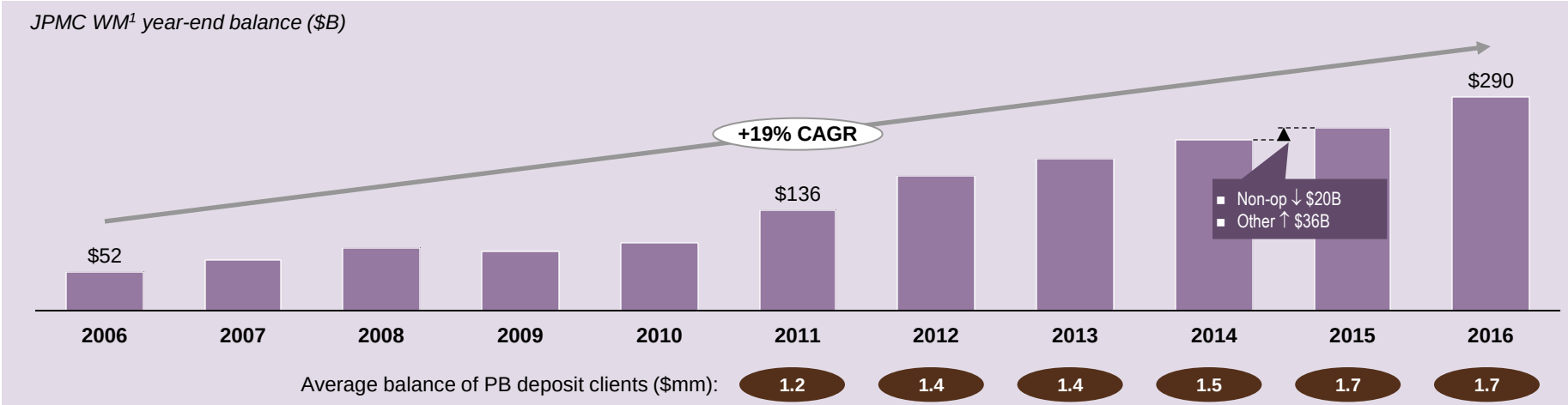




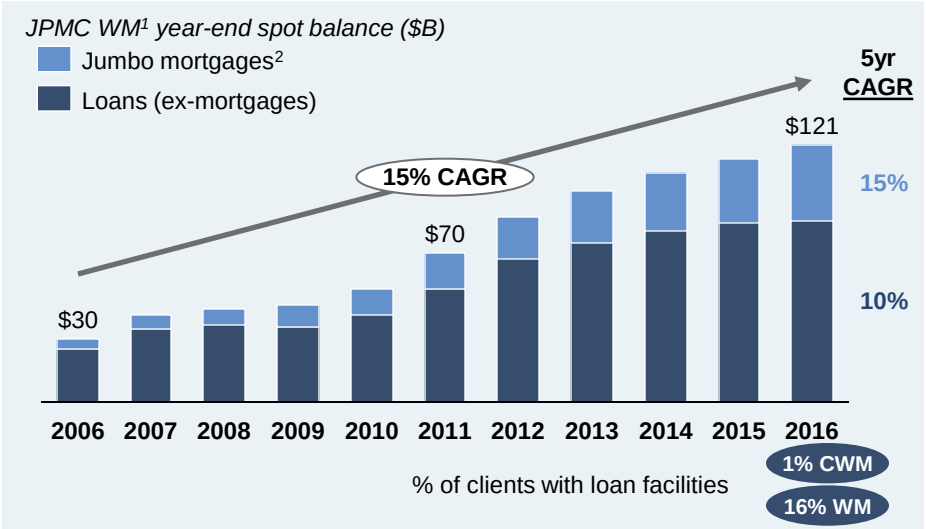
For footnoted information, refer to notes appendix

Continuing to advise WM clients on both sides of their balance sheet

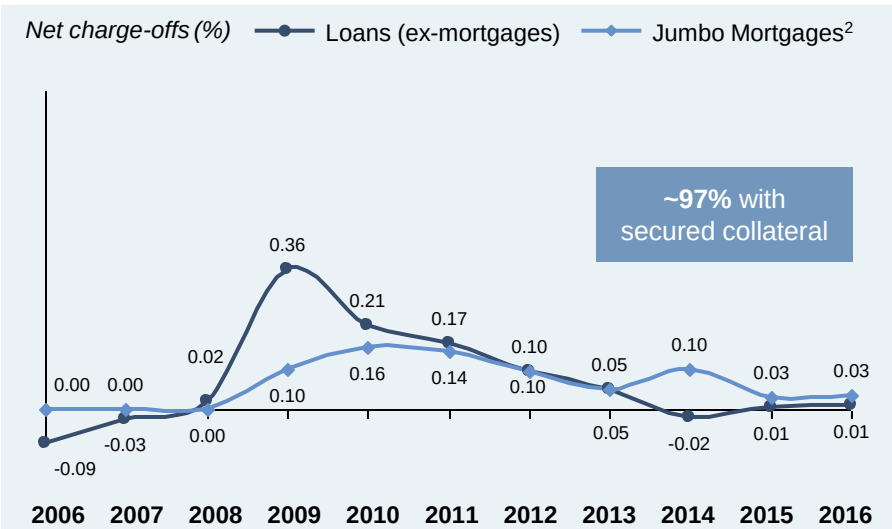
Growing deposits



Growing credit book …



… with strong risk management



ASSET & WEALTH MANAGEMENT

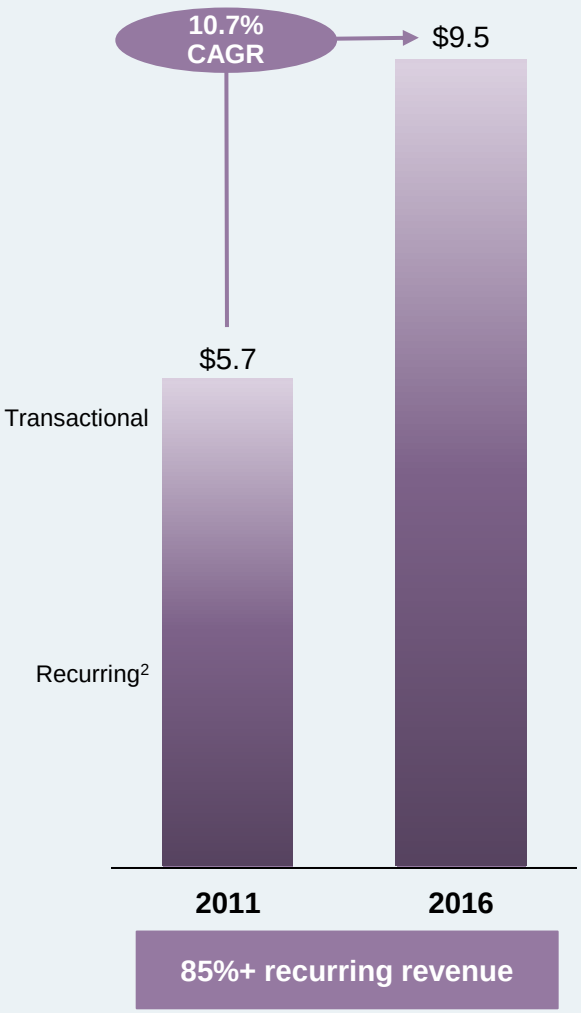
For footnoted information, refer to notes appendix

JPMC WM revenue mostly recurring, and leading peers in growth

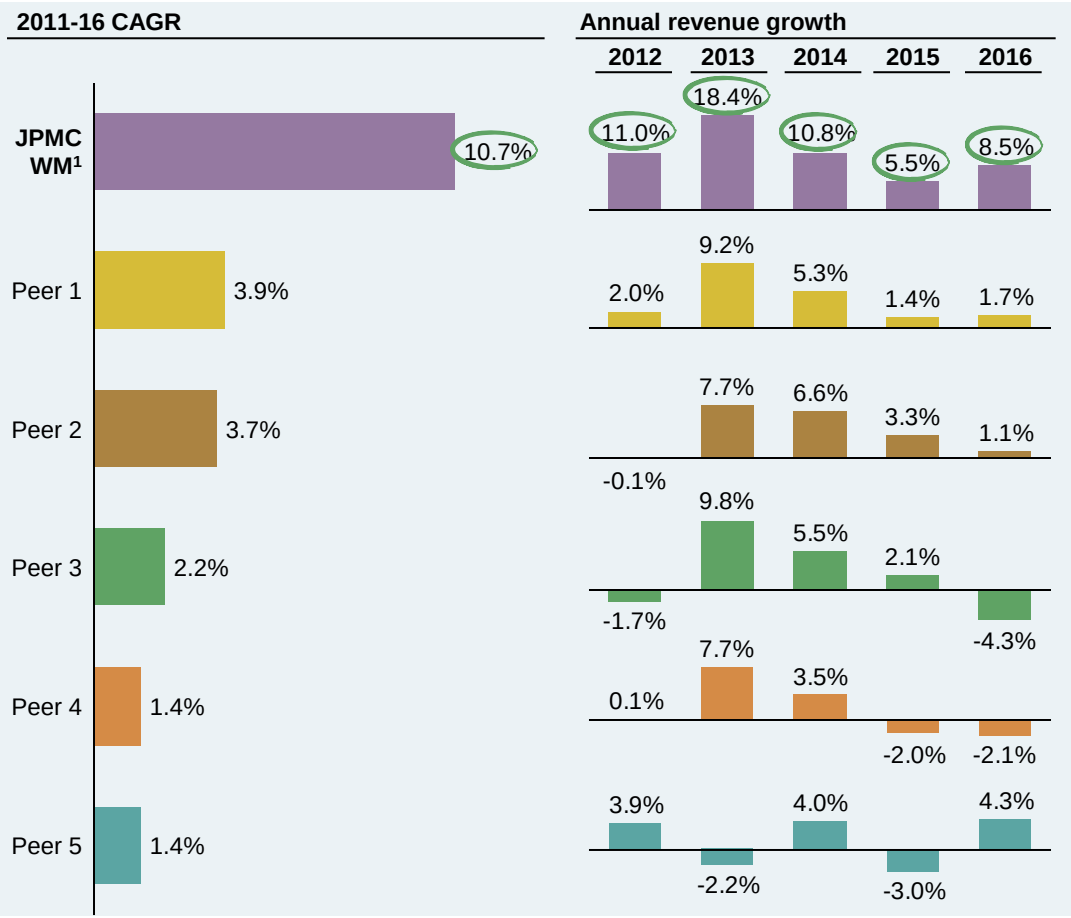
Leading revenue growth

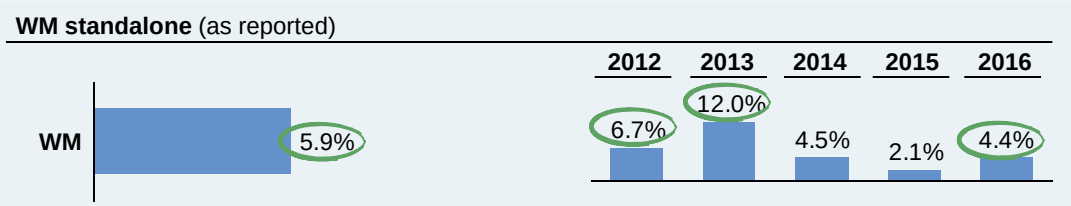
Revenue composition

JPMC WM[1] ($B)



Revenue growth vs. peers

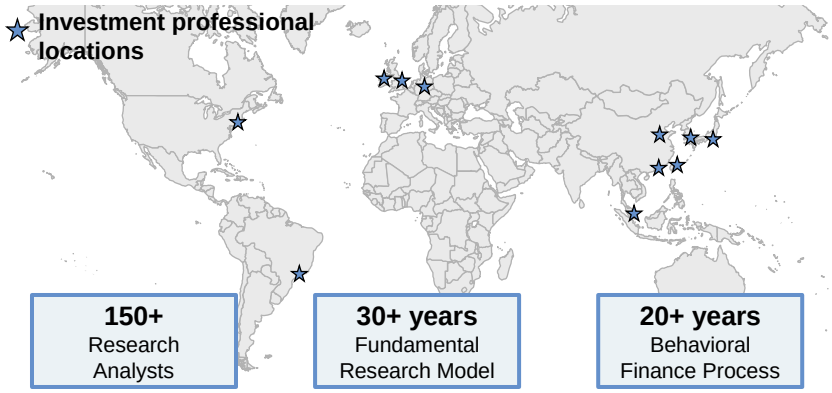




For footnoted information, refer to notes appendix

JPMAM Equity: Global, research-driven teams delivering strong performance

Legacy of global, research-driven approach



150+ Research Analysts

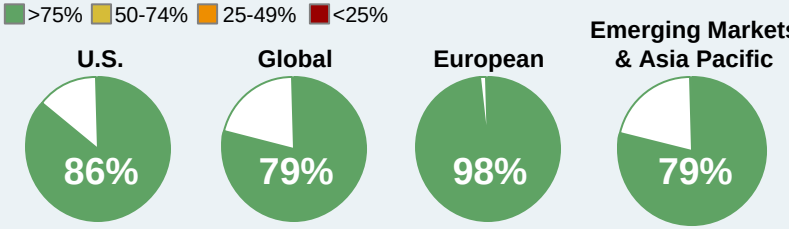
30+ years Fundamental Research Model

20+ years Behavioral Finance Process

Strong performance across entire platform[1]

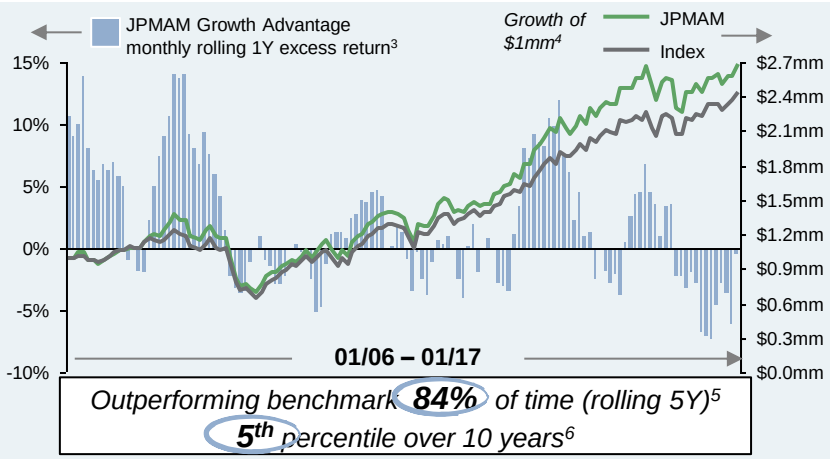
% 5Y JPMAM mutual fund AUM over peer median

>75% 50-74% 25-49% <25%



140 mutual funds rated 4- or 5- stars by Morningstar[2]

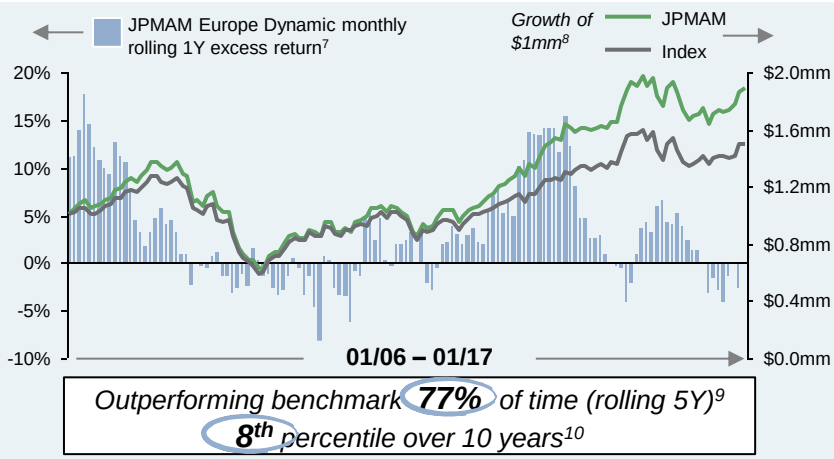
Growth Advantage Fund



*Outperforming benchmark **84%** of time (rolling 5Y)[5]*

***5th** percentile over 10 years[6]*

Europe Dynamic Fund



*Outperforming benchmark **77%** of time (rolling 5Y)[9]*

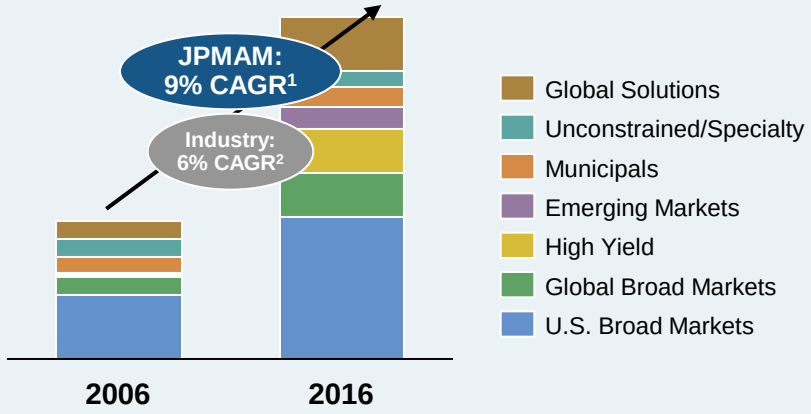
***8th** percentile over 10 years[10]*

ASSET & WEALTH MANAGEMENT

For footnoted information, refer to notes appendix

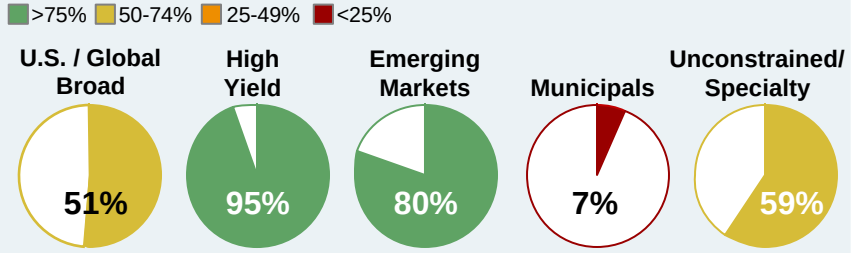
JPMAM Fixed Income strategies: Strong growth across broad platform

AUM growth across platform



Performance

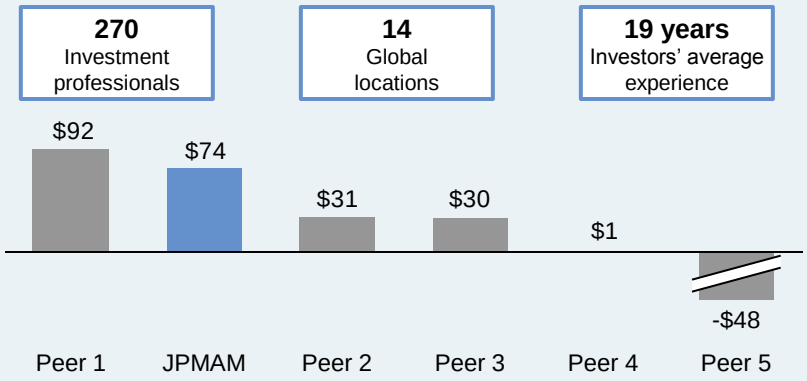
% 5Y JPMAM mutual fund AUM over peer median[3]



41 mutual funds rated 4- or 5- stars by Morningstar[4]

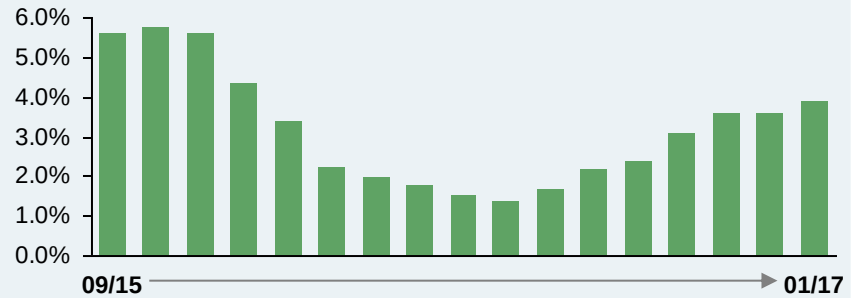
#2 in active flows over 5 years (large public peers)

Cumulative 2012-16 Active Fixed Income flows (net, $B)[5]



Leveraging entire platform: Global Bond Opportunities

Monthly rolling 3Y excess return (%)[6]



Outperforming benchmark ***100%*** *of time (rolling 3Y)[7]*

9th *percentile over 3 years (inception 9/4/2012)[8]*

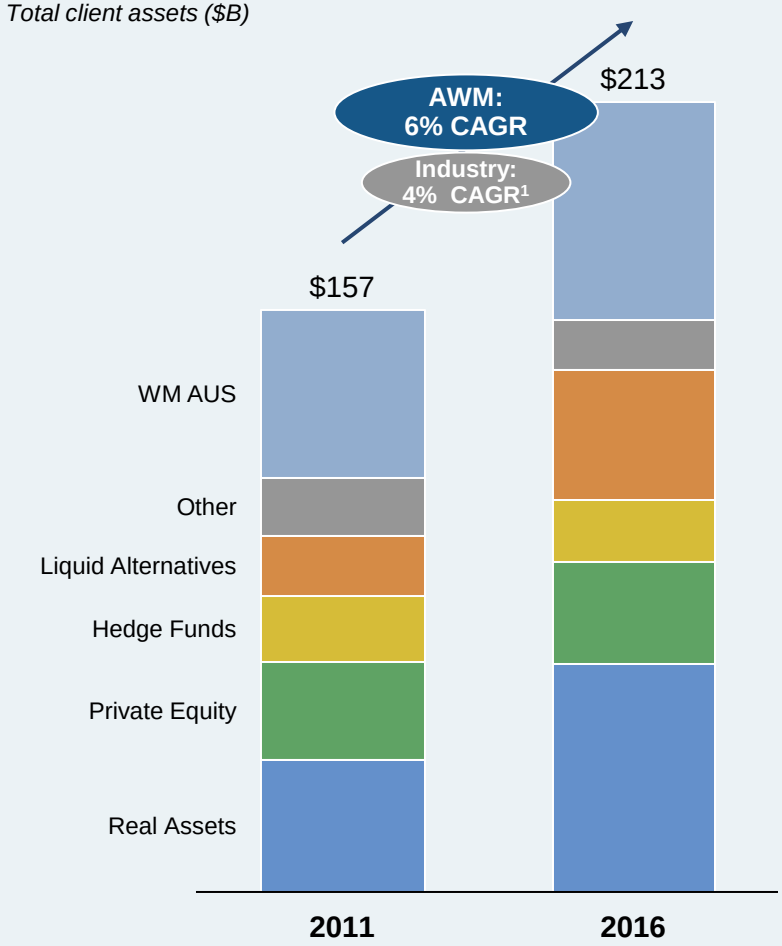
ASSET & WEALTH MANAGEMENT

For footnoted information, refer to notes appendix

Growth engines: Alternatives

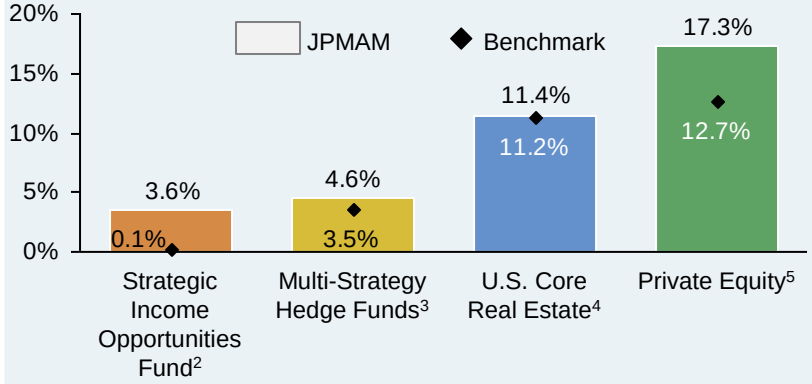
Diversified and growing platform

Total client assets ($B)

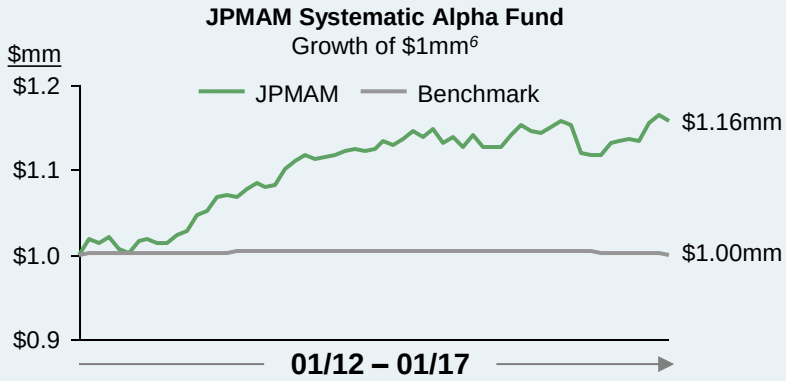


Strong investment performance

JPMAM 5Y return vs. benchmark



Alternative beta

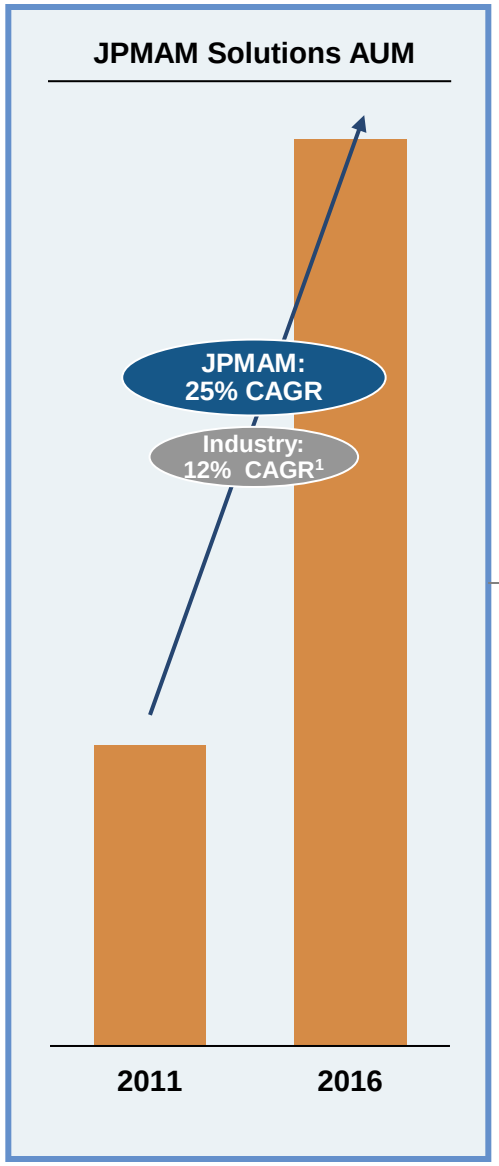


ASSET & WEALTH MANAGEMENT

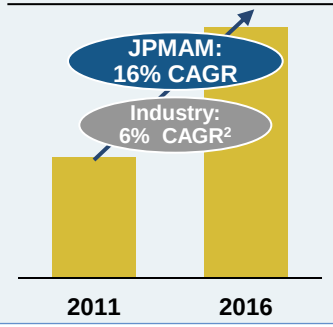
For footnoted information, refer to notes appendix

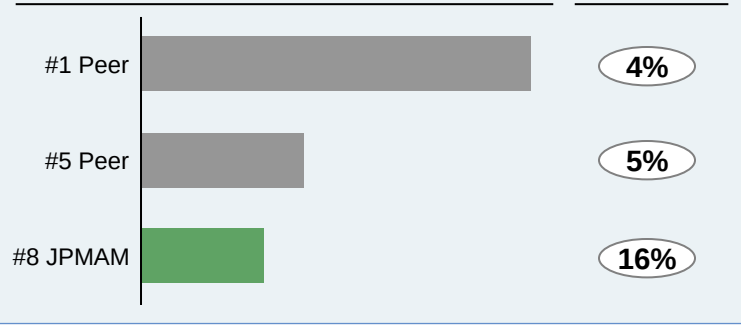
Growth engines: Solutions

Growth powered by underlying investment capabilities

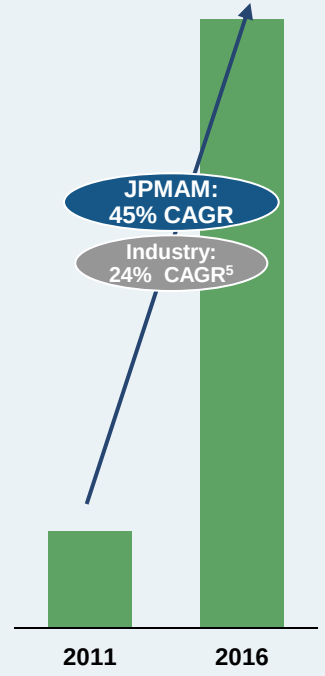


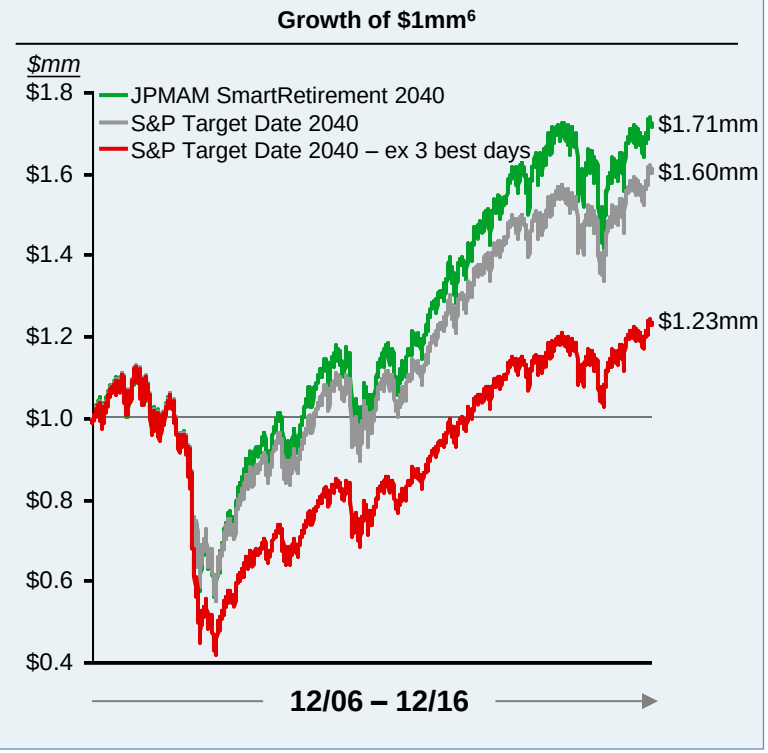
Insurance





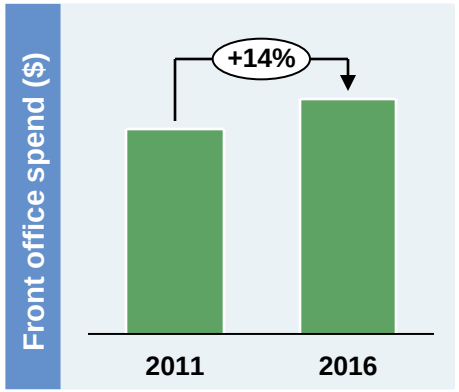
SmartRetirement

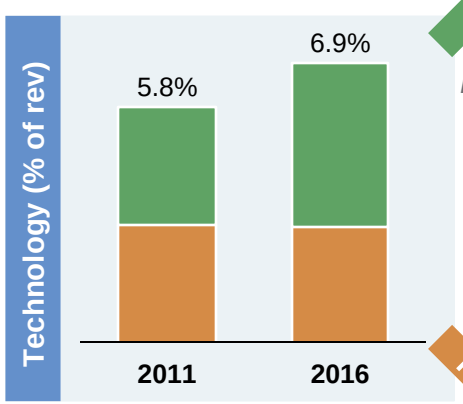


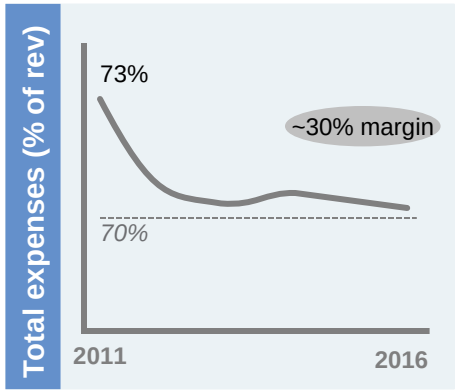


For footnoted information, refer to notes appendix

Where we invest







Initiative spend

Production spend

AWM won 7 industry awards in 2016, including:

banking technology AWARDS

2016 American Financial Technology Awards

Digital Wealth Management

- Enables client engagement choice
- Integrates mobile and online investing / banking
- Increases advisor productivity

investcloud®

Agile & The Cloud

- Frequent, rapid release cycles
- Adaptable, next-generation architecture
- J.P. Morgan's private cloud

AM Spectrum

SPECTRUM



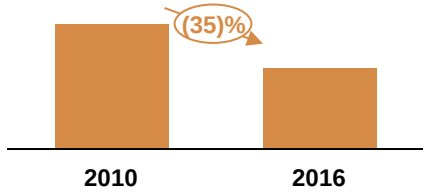
WM Connect

CONNECT



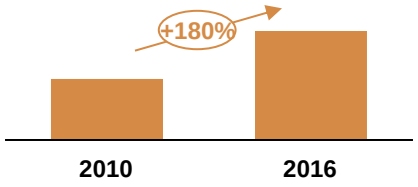
Reduce legacy footprint

of apps



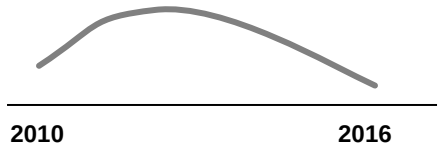
Virtualization

Ratio of virtual to physical servers

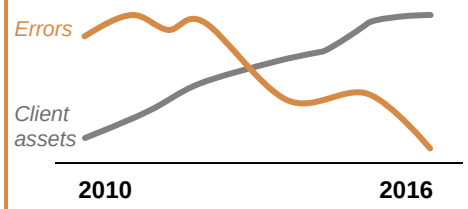


Process re-engineering

KYC days



Reduce errors



AWM poised for continued growth, leveraging the full spectrum of JPMC

Key strengths

Client focus

- Serving **entire wealth spectrum** from individual retail investors to multi-billionaires and largest institutions
- 60% of **world's largest** pension funds, sovereign wealth funds, and central banks

Global diversification

- Hard to replicate **breadth and depth** of offering
- **Global** mindset, footprint, and capabilities, even as others retrench

J.P.Morgan Asset & Wealth Management

Innovation

- Developing new solutions internally, and jointly with **strategic partners**
- Proven ability to organize around **emerging business opportunities**

Risk management

- Risk management embedded in **culture** of the Firm
- **Continuous** regulatory process improvements

Leveraging JPMC

Brand / reputation

- Benefiting from **~$3B** annual Firm marketing spend

Technology

- Benefiting from **$9B+** annual Firm tech spend

Full continuum

- Helping clients **across all areas of the Firm**

Targets (+/-)

LT AUM flows	Revenue	Pretax income	Pretax margin	ROE
4%	5%	10%	30%	25%

Note: LT AUM flows, revenue and pretax income represent medium-term annual growth targets

Notes appendix

Page 1

1. The "% of 10-year JPMAM long-term mutual fund AUM outperform peers" analysis represents the proportion of assets in mutual funds that are ranked in the top 2 quartiles of their respective peer category on a 10-year basis as of December 31, 2016. All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers redenominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results.

Page 3

1. The "% of 2016 JPMAM long-term mutual fund AUM over peer median" analysis represents the proportion of assets in mutual funds that are ranked above their respective peer category median on 1, 3, 5, and 10 year basis as of December 31, 2016. All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers redenominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results. The classifications in terms of product categories shown are J.P. Morgan's own.

Page 4

1. Prior period amounts revised to conform with current period presentation
2. Long-term AUM, administration, brokerage, custody, and deposit for AWM, Chase Wealth Management Investments, and new-to-firm Chase Private Client Deposits

Page 5

Source: Company filings, J.P. Morgan estimates

Note: Allianz, CS, and UBS figures converted at average exchange rate

1. Long-term AUM
2. Long-term AUM, administration, brokerage, custody, and deposit for AWM, Chase Wealth Management Investments, and new-to-firm Chase Private Client Deposits. 2014 and 2015 were revised to conform with current period presentation

Notes appendix

Page 5 (continued)

3. Long-term AUM and brokerage
4. Long-term AUM, brokerage, and deposit
5. Long-term AUM, fee-generating brokerage, and deposits in fee-generating brokerage accounts
6. Total AUM, Brokerage, and deposit
7. Includes client asset flows attributable to private banking and asset management units
8. Total AUM
9. Total long-term AUM excluding reinvested dividends
10. Includes 3rd party AUM flows only. 2016 figures include re-invested dividends (including capital gains) from existing clients

Page 6

Source: Company filings

Note: Allianz, CS, DB, and UBS figures converted at average exchange rate. Balances presented at end of period exchange rate.

1. Total AUM; for Allianz reflects total AUM from third-parties
2. Total AUM, brokerage, custody, and deposit; for CS as of 09/30/16 as FY2016 disclosure not yet available
3. Includes AM and WM (Wealth Management) with CWM reflecting extended segment (includes all CWM Investments and CPC Deposits)
4. Total AUM, administration, brokerage, custody, and deposit
5. Total AUM, brokerage, and deposit
6. Excludes revenue, pretax income, and client assets attributable to Corporate and Institutional Banking
7. Total invested assets plus assets under administration
8. Wealth Management Assets under Custody
9. Allianz (includes PIMCO) revenue is based on disclosed Operating Revenue
10. Reflects LTM through 3Q16 as FY2016 full disclosure not yet available. YoY growth rate calculated as LTM 3Q16 vs. LTM 3Q15.

Page 7

1. "The Death of Equities" Business Week, Aug 13, 1979; "Hard Times Come to Hedge Funds" Carol J. Loomis, Fortune, Jan 1970; "Brokers Offer Experimental Fee Plan" Business Briefs, New York Times, Jan 21, 1975; "Investors Flock to Low-Cost Funds" Jonathan Clements, Wall Street Journal, July 18, 2007; "Computers that Think" William Stockton, New York Times, December 14, 1980; "Tapping Cyberbrains For Financial Advice" Roy Furchgottoct. 29, 1998

Page 8

1. Defined as deca-billionaires
2. 5+ banking transactions per month, with deposits above certain threshold levels

Page 9

1. Pro-forma, reflecting WM (as reported) plus CWM Investments and CPC Deposits
2. Includes HELOCs and $1.6B of CIO portfolio mortgage loans originated by AWM and <5% of conforming loans

Notes appendix

Page 10

Source: Company filings

Note: Peer set includes comparable publicly disclosed businesses (MS, WFC, UBS, BAC, CS)

1. Pro-forma, reflecting WM (as reported) plus CWM Investments and CPC Deposits
2. Recurring revenue includes discretionary/managed, credit, deposit, fiduciary, custody, and performance fees; transactional includes brokerage and placement fees

Page 11

1. The "% of AUM over peer median" analysis represents the proportion of assets in mutual funds that are ranked above their respective peer category median on a 5-year basis as of December 31, 2016. All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers redenominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results. The classifications in terms of product categories shown are J.P. Morgan's own.
2. The "mutual funds with a 4/5 star rating" analysis is sourced from Morningstar for all funds with the exception of Japan-domiciled funds; Nomura was used for Japan-domiciled funds. The analysis includes only Asset Management retail open-ended funds that are rated by the aforementioned sources. The analysis excludes Brazil and India domiciled funds. The share class with the highest Morningstar star rating represents its respective fund. The Nomura star rating represents the aggregate fund. Other share classes may have different performance characteristics and may have different ratings; the highest rated share class may not be available to all investors. All star ratings sourced from Morningstar reflect the Morningstar Overall Rating™. For Japan-domiciled funds, the star rating is based on the Nomura 3-year star rating. Funds with fewer than three years of history are not rated by Morningstar nor Nomura and hence excluded from this analysis. Other funds which do not have a rating are also excluded from this analysis. Ratings are based on past performance and are not indicative of future results. The classifications in terms of product categories shown are J.P. Morgan's own.
3. Source: Morningstar. 1-Year Excess Return for Select Share class over Russell 3000 Growth index. Other share classes may have higher expenses, which would lower returns.
4. Value of $1,000,000 invested on January 31, 2006 into JPMorgan Growth Advantage Select Share class and Russell 3000 Growth Index with dividends and capital gains re-invested. Other share classes may have higher expenses, which would lower returns.
5. Percentage of monthly periods with 5Y positive excess returns in Select Share class over Russell 3000 Growth Index. Other share classes may have higher expenses, which would lower returns.
6. Source: Morningstar. Percentile ranking for Select Share class as of January 31, 2017.

Notes appendix

Page 11 (continued)

7. Source: Morningstar. 1-Year Excess Return for "C (acc) EUR" share class over MSCI Europe Net Return EUR index. Other share classes may have higher expenses, which would lower returns.
8. Value of $1,000,000 invested on January 31, 2006 into JPMorgan Europe Dynamic "C (acc) EUR" Share class and MSCI Europe Net Return EUR Index with dividends and capital gains re-invested. Other share classes may have higher expenses, which would lower returns.
9. Percentage of monthly periods with 5Y positive excess returns in "C (acc) EUR" Share class over MSCI Europe Net Return EUR Index. Other share classes may have higher expenses, which would lower returns.
10. Source: Morningstar. Percentile ranking for "C (acc) EUR" Share class as of January 31, 2017.

Page 12

1. Includes assets managed on behalf of other JPMAM investment teams
2. Source: Strategic Insight Simfund; McKinsey. Based on 2007-15 CAGR.
3. The "% of AUM over peer median" analysis represents the proportion of assets in mutual funds that are ranked above their respective peer category median on a 5-year basis as of December 31, 2016. All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers redenominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results. The classifications in terms of product categories shown are J.P. Morgan's own.
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5. Source: J.P. Morgan Asset Management, company filings. Peer set includes BEN, BK, BLK, IVZ, MS

Notes appendix

Page 12 (continued)

6. Source: Morningstar. 3-Year Excess Return for Select Share class over Bloomberg Barclays Multiverse Total Return Index. Other share classes may have higher expenses, which would lower returns.
7. Percentage of monthly periods with 3Y positive excess returns in Select Share class over Bloomberg Barclays Multiverse Total Return Index. Other share classes may have higher expenses, which would lower returns.
8. Source: Morningstar. Percentile ranking for Select Share class as of January 31, 2017.

Page 13

1. Source: McKinsey, Cerulli. Based on 2011-2015 AUM.
2. Source: Morningstar. 5-year annualized net performance for JPMorgan Strategic Income Opportunities Fund Select Share class as of December 31, 2016. Other share classes may have higher expenses, which would lower returns. Benchmark is Bank of America Merrill Lynch U.S. Treasury Bill 3-Month Index.
3. Multi-Strategy Hedge Funds Portfolio Composite and benchmark returns are presented net of fees as of December 31, 2016. The benchmark used is the HFRI FOF Diversified Index.
4. Past performance is not indicative of future results. U.S. Core Real Estate and benchmark returns are net of fees as of December 31, 2016. Net returns are based on the highest applicable fee rate for this strategy. Benchmark used is NFI-ODCE Index.
5. Private Equity performance represents IRR (Internal Rate of Return) over the time periods shown and includes all investments for all funds, separate accounts and employee account, as of September 30, 2016, net of underlying investment fees and expenses, gross of advisor fees. Benchmark shown is Cambridge Global PE & VC Index as of September 30, 2016.
6. Value of $1,000,000 invested on January 31, 2012 into JPMorgan Systematic Alpha C (acc) EUR Share class and ICE 1 Month EUR LIBOR Index ("Benchmark"), with dividends and capital gains re-invested. Other share classes may have higher expenses, which would lower returns.

Page 14

1. Source: Strategic Insights Simfund; McKinsey; P&I; eVestment. Based on 2011-2015 data.
2. Source: McKinsey. Based on 2011-2015 data
3. Source: Insurance Investment Outsourcing Report. Based on 2015 data.
4. Source: Insurance Investment Outsourcing Report. Based on 2010-2015 data.
5. Source: Strategic Insight Simfund, eVestment. Based on 2011-2015 data.
6. Value of $1,000,000 invested on December 31, 2006 into JPMorgan SmartRetirement 2040 Select Share class, S&P Target Date 2040 Index and S&P Target Date 2040 Index excluding the three days with highest daily return from December 31, 2006 through December 31, 2016, with dividends and capital gains re-invested. Other share classes may have higher expenses, which would lower returns.

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

CONSUMER & COMMUNITY BANKING

Gordon Smith, Chief Executive Officer Consumer & Community Banking

February 28, 2017

JPMorgan Chase & Co.

Agenda

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Consumer & Community Banking	**1**
Payments	13
Mortgage Banking	24
Banking	37
Appendix	57

We remain focused on a consistent set of strategic priorities

- Deepen relationships with our customers, simplify and improve customer experience
- Lead payments innovation by delivering solutions that address merchant and consumer needs
- Increase digital engagement by delivering differentiated experiences
- Protect the Firm, its clients/customers, investors, and employees from cyber attacks, as well as protecting the privacy of their data and transactions
- Continue in our unwavering commitment to build and maintain an effective and efficient control environment
- Execute structural expense management strategies while continuing to invest for the future
- Attract, train, develop, and retain the best, diverse talent

Performance targets

Consumer & Community Banking targets

		2015	2016	Medium-term guidance (+/-)	2016 Investor Day Medium-term guidance (+/-)
Business Banking	Net charge-off rate	0.66%	0.61%	0.60%	0.70%
Mortgage Banking	Net charge-off rate[1]	0.18%	0.10%	0.10%	0.15%
Card Services	Net charge-off rate	2.51%	2.63%	3-3.25%	2.50%
	Net revenue rate	12.33%	11.29%	11.25%	11.25%
Auto Finance	Net charge-off rate	0.38%	0.45%	0.50%	0.45%
Total CCB	ROE	18%	18%	20%	20%

[1] Excludes the impact of purchased credit-impaired (PCI) loans

CCB	2016 ($B)	% of JPMC
Net revenue	$44.9	45%
Net income	$9.7	39%

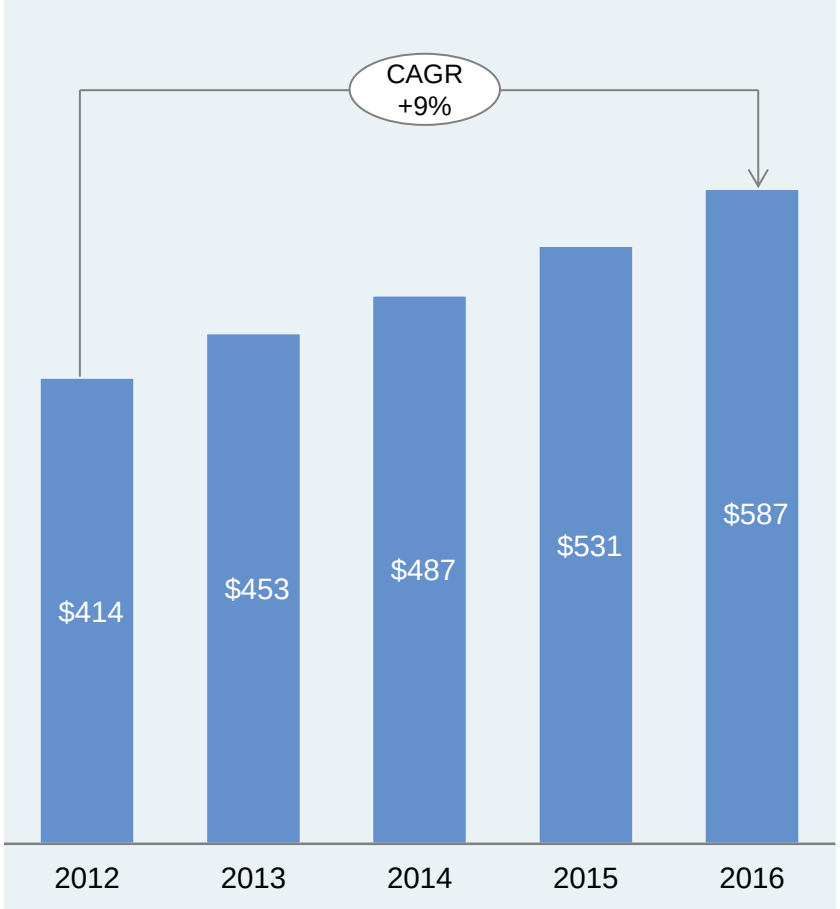
We have continued strong momentum across key business drivers, driven by consistent investment strategy

Key business drivers ($B, except ratios and where otherwise noted)			
		2016	**YoY Δ**
Consumer & Community Banking	Households[1] (mm)	60.0	4%
	Active mobile customers (mm)	26.5	16%
Consumer Banking	Average deposits	$461	11%
	Client investment assets (end of period)	$235	7%
Business Banking	Average deposits	$110	9%
	Average loans[2]	$22	7%
	Loan originations	$7	8%
	Net charge-off rate	0.61%	(5) bps
Mortgage Banking	Total mortgage origination volume	$104	(3%)
	Foreclosure units (K, end of period)	47	(36%)
	Average loans	$232	14%
	Net charge-off rate[3]	0.10%	(8) bps
Credit Card	New accounts opened[4] (mm)	10.4	20%
	Sales volume[4]	$545	10%
	Average loans	$131	4%
	Net charge-off rate	2.63%	12 bps
Commerce Solutions	Merchant processing volume	$1,063	12%
Auto Finance	Loan and lease originations	$35	9%
	Average loan and leased assets	$75	16%
	Net charge-off rate	0.45%	7 bps

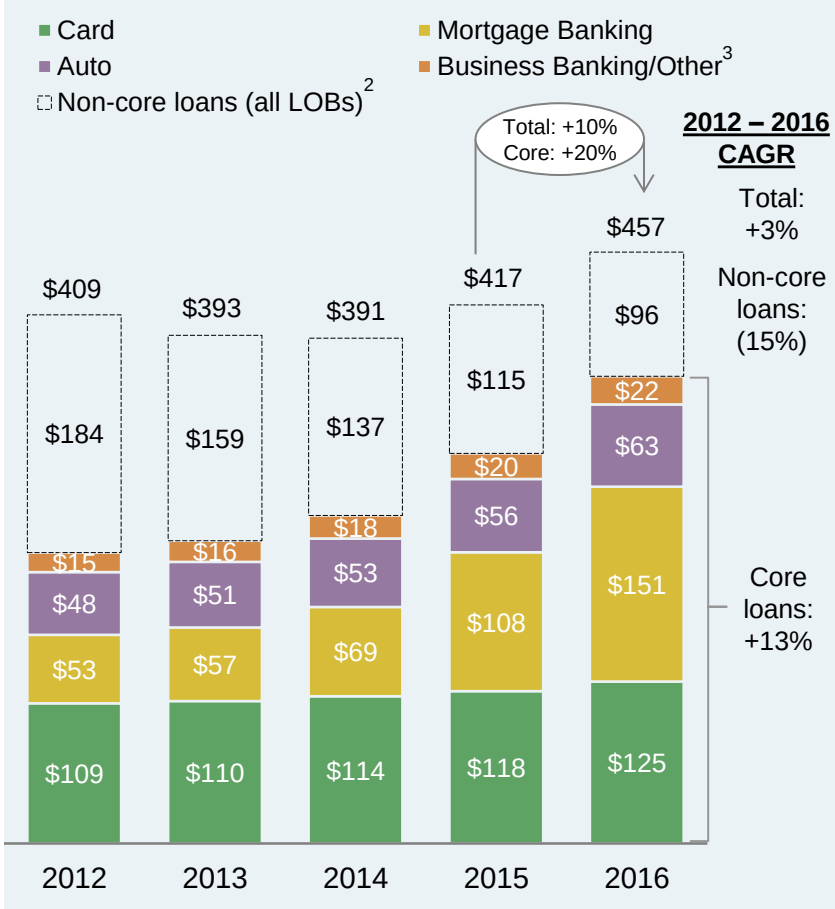
[1] Reflects data as of November 2016
[2] Includes predominantly Business Banking loans as well as deposit overdrafts
[3] Excludes the impact of PCI loans
[4] Excludes Commercial Card

We continue to see strong growth in deposits and core loans

Consumer & Community Banking avg. deposits ($B)

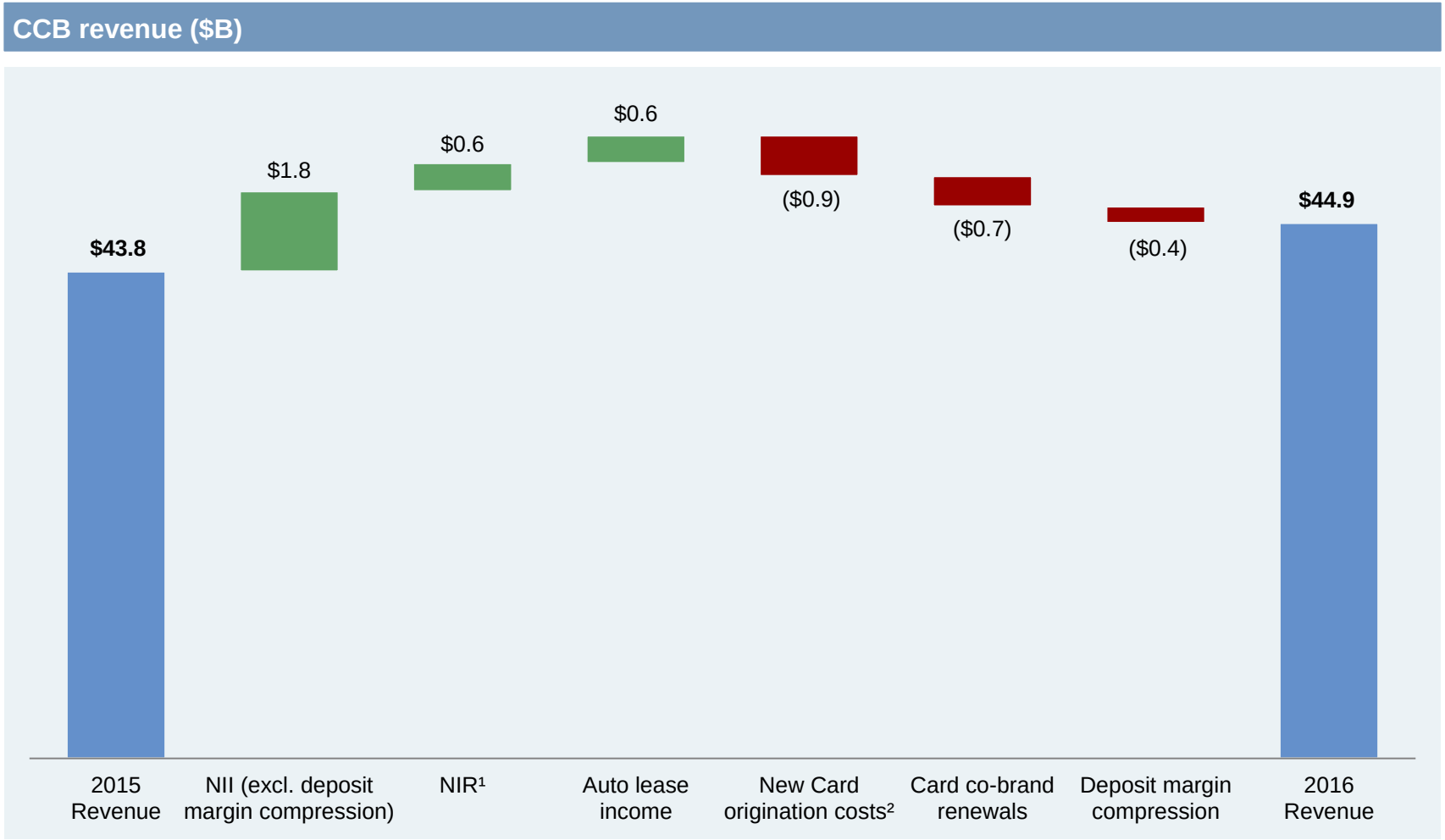


Consumer & Community Banking avg. loans[1] ($B)



Note: Numbers may not sum due to rounding
[1] Includes held-for-sale loans
[2] Non-core loans include runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit
[3] Other includes securities-based lending of $1.5B in 2016, $1.4B in 2015, $0.8B in 2014, and $0.2B in 2013

Business drivers have supported revenue growth, with offsets in Card investments and deposit margin compression



Note: Numbers may not sum due to rounding; chart not to scale
[1] Excludes Auto lease income, new Card origination costs, and Card co-brand renewals
[2] Reflects new account origination costs and Sapphire Reserve travel credits

We have invested heavily in technology and marketing – and we are seeing strong returns

Technology investments

Select investments	Cumulative spend (2015 and 2016)	Results
Branch operating model	~$1.0B	~$550mm pre-tax benefit in current annual run-rate
Digital		~$200mm pre-tax benefit in current annual run-rate Digital engagement leads to higher retention – attrition improvement since 2014 equal to 100K customers, or production of 211 branches
Chase Pay		Significant future benefits expected
Control and infrastructure		Continue to uplift standards – cybersecurity, KYC, and data

Marketing investments[1]

Select investments	Incremental spend over 2 years[2]	Results (steady state)[3]
Credit Card new account marketing[1]	~$1.7B[1]	~4.3mm new accounts ~$44.4B annual spend ~$8.2B average outstandings
Consumer Banking new account marketing		~670K new households ~$5.2B in average deposits

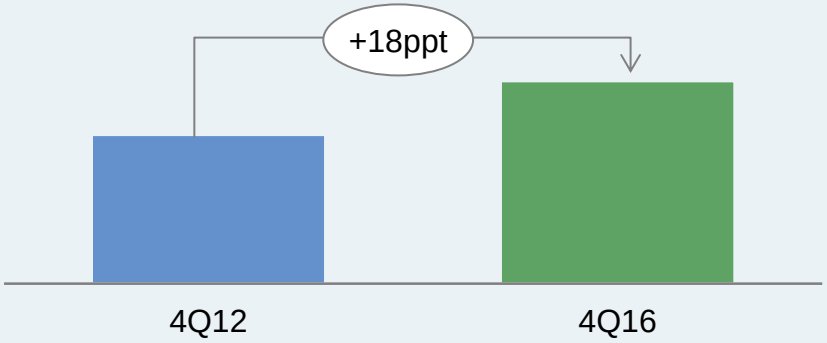
[1] Credit Card new account marketing reflects spend before the reduction for new account origination costs, which are amortized against revenue
[2] Incremental spend over 2 years calculated as the 2015 incremental versus 2014 plus the 2016 incremental versus 2014
[3] Steady state reflects year 3 performance for Card and year 1 for Consumer Banking

Our growing digitally-engaged customer base delivers strong performance metrics

Consumer Bank households – impact of digitally-engaged households[1]

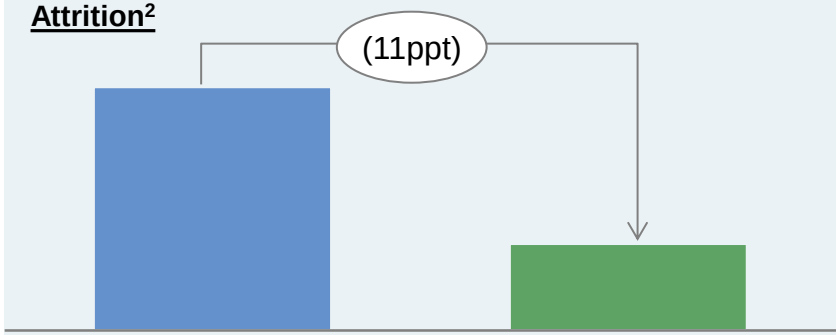
Digitally-engaged population is growing

% of households who are digitally-engaged



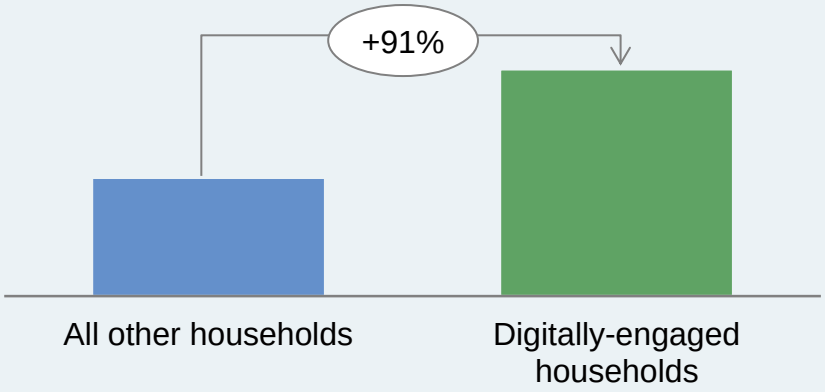
Retention rates are higher (FY16)

Attrition[2]



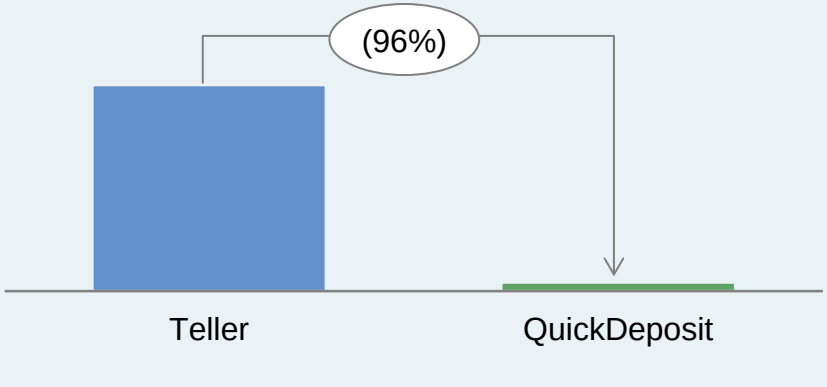
Spending is higher (FY16)[3]

Credit + debit card spend per household



Cost of digital transactions is lower (FY16)

Cost per check deposit by channel



Note: For footnoted information, refer to appendix

CCB has experienced strong growth across key business drivers, outpacing operational volumes, while unit costs significantly decreased

Strong momentum across key business drivers[1]…

Average deposit growth	Card sales volumes[2]	Average core loan growth	Merchant processing volume	Card new accounts[2]
↑ 9%	↑ 9%	↑ 16%	↑ 12%	↑ 13%

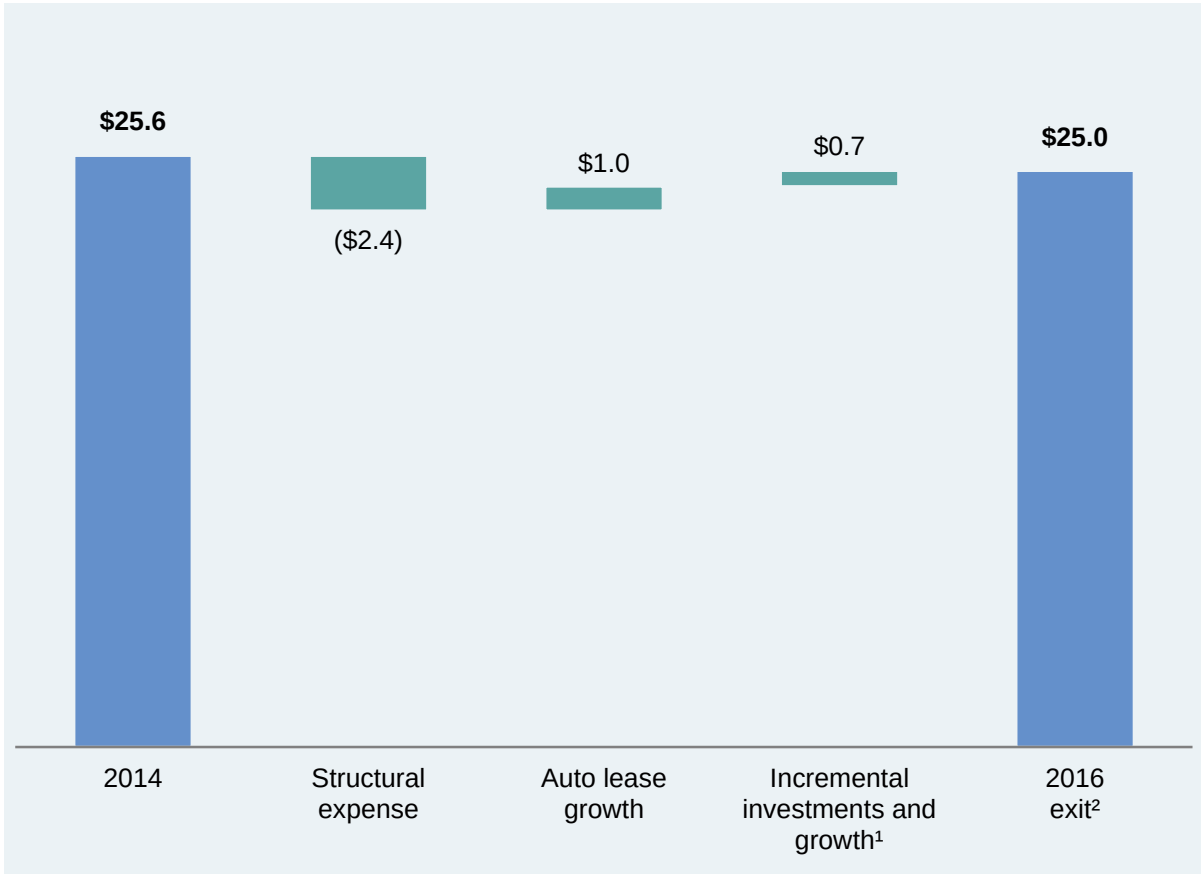
…while continuing to improve unit costs

Operations	Volume CAGR[1]	Unit cost CAGR[1]
Customer service (inbound calls)	2%	(3%)
Collections	(2%)	(9%)
Merchant processing transactions[3]	11%	0%

[1] Reflects CAGR from 2013 – 2016
[2] Excludes Commercial Card
[3] Excludes network licensing fees for ChaseNet

We have substantially reduced expense, while continuing to prudently invest

CCB expense ($B)



Overhead	58%	55%[4]
Headcount[3]	148.2K	141.0K

Note: For footnoted information, refer to appendix

Overall progress since 2014

CCB structural expense[5]

~$2.4B

CCB overhead ratio[6]

~225 bps

CCB headcount[3]

~7K

Our structural expense reduction initiatives are substantially complete, but work to eliminate waste will always continue

Structural expense initiatives overview

Select initiatives	Structural savings (2016 exit vs. 2014)	Accomplishments since 2014
Mortgage transformation[1]	~$1.2B	✓ Process streamlining ✓ Overall delinquency rate[2] approaching lowest level in a decade ✓ Product simplification (e.g., sale of USDA business)
Branch transformation	~$0.5B	✓ Reduced teller transactions by ~130mm ✓ Decreased transactional staff by ~15% ✓ Continued rolling out next generation of ATMs
Technology efficiencies	~$0.2B	✓ Rationalized technology spend ✓ Reduced consumables
Digital adoption and paperless	~$0.1B	✓ Grew active digital customers by ~20%[3] ✓ Reduced number of paper statements by 24%
Various initiatives[4]	~$0.5B	✓ Vendor rationalization ✓ Real estate/location strategy ✓ Marketing efficiencies
Total structural expense reduction	**~$2.4B**	

Note: Numbers may not sum due to rounding; 2016 exit reflects 4Q16 annualized

[1] Includes mortgage operating losses, in large part foreclosure-related

[2] Based on total mortgage and home equity loans serviced, as reported to Inside Mortgage Finance (IMF) as of December 2016

[3] Users of all web and/or mobile platforms who have logged in within the past 90 days

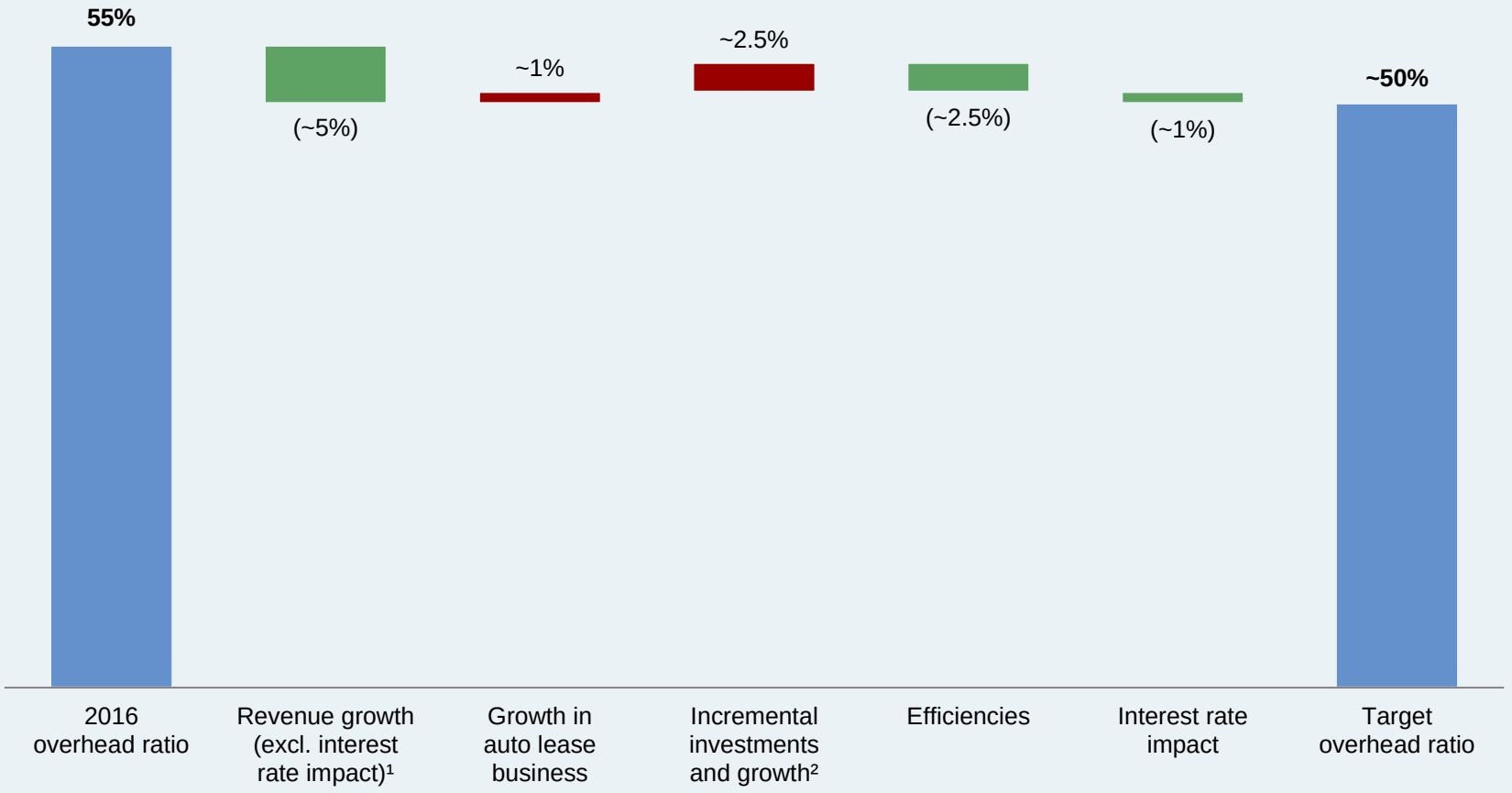
[4] Includes non-core items

We are focused on executing the next wave of expense reduction strategies

Expense reduction strategies	
Focus areas	**Planned strategies**
Operations integration	■ Increase data sharing with partners to reduce fraud ■ Reduce the cost of metal and plastic cards
Branch transformation	■ Modernize teller staffing tools ■ Data driven sales leads ■ Digital account opening and digital wealth management
Technology efficiencies	■ Agile development and cloud-based technology ■ Consolidate internal applications
Support customers' transition to digital channels	■ Digital mortgage pilot ■ E-letters and bill pay merchant directory ■ Increase paperless new checking accounts

We expect to achieve a ~50% overhead ratio in the medium-term

CCB overhead ratio



[1] Excludes incremental auto lease income
[2] Includes marketing, investments in payments and digital innovation and technology, and business growth

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Payments has seen strong metric growth driven by investments in the business

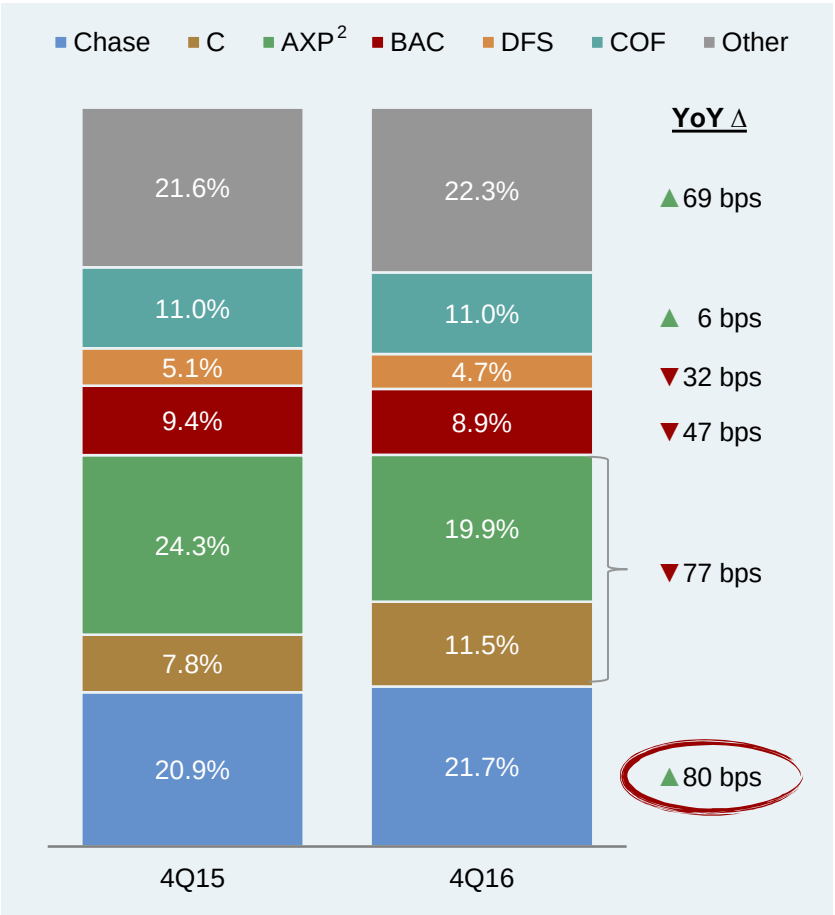
Key business drivers ($B, except ratios and where otherwise noted)				
		2015	**2016**	**YoY Δ**
Payments	Card average loans	$126	$131	4%
	Card end of period loans	$131	$142	8%
	Credit card sales volume[1]	$496	$545	10%
	Debit & credit card sales volume[1]	$754	$818	9%
	Merchant processing volume	$949	$1,063	12%
	Card new accounts opened (mm)[1]	8.7	10.4	20%
	Card Services net revenue rate	12.33%	11.29%	(104) bps
	Card net charge-off rate	2.51%	2.63%	12 bps

4Q16 sales[1] growth showed significant improvement of 14% year-over-year

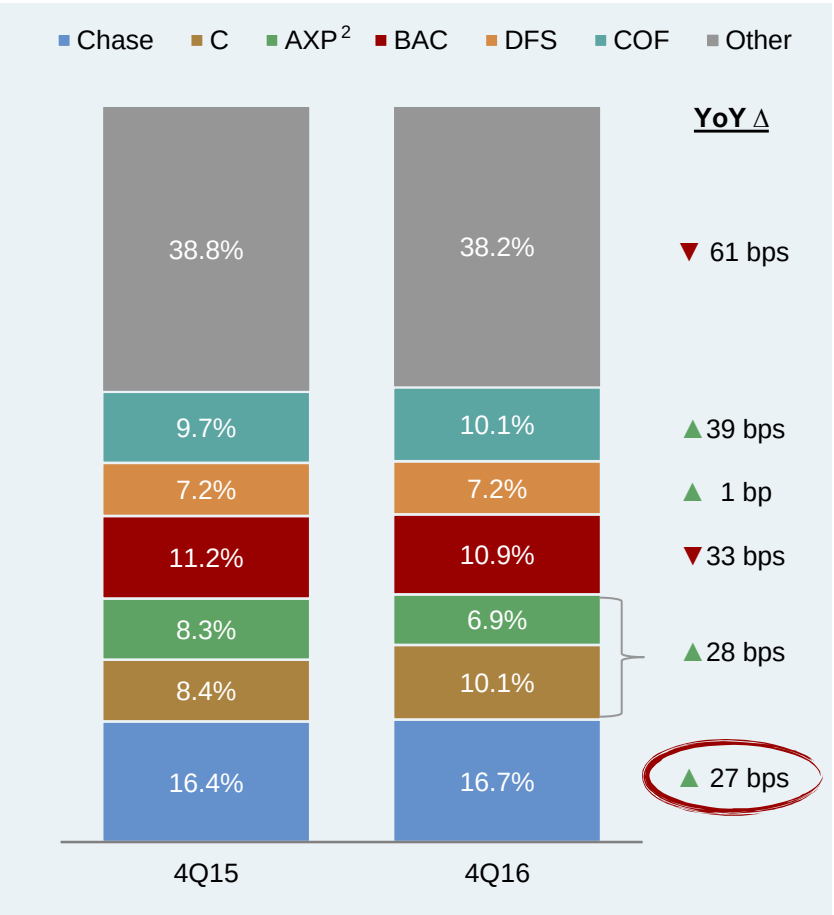
[1] Credit card data excludes Commercial Card

Our strong business performance has resulted in leading market positions

General purpose credit card sales market share[1]



General purpose credit card EOP outstandings market share[1]



Source: Company filings; internal JPMorgan Chase estimates
Note: Numbers may not sum due to rounding
[1] Based on 4Q16 sales volume and loans outstanding disclosures by peers and internal JPMorgan Chase estimates. Sales volume excludes private label and Commercial Card. Outstandings exclude private label, AXP Charge Card, and Citi Retail Cards
[2] AXP reflects the U.S. Consumer segment and internal JPMorgan Chase estimates for AXP's U.S. small business sales

Our overall card and payments strategy balances a focus on core business growth with future investment

Payments strategy

Consumer to Business

- Deliver superior consumer value by launching new and enhanced products
- Lead payments innovation with unique solutions

Person-to-Person

- Build simplified, real-time person-to-person (P2P) payment solution

Integrated Merchant Experience

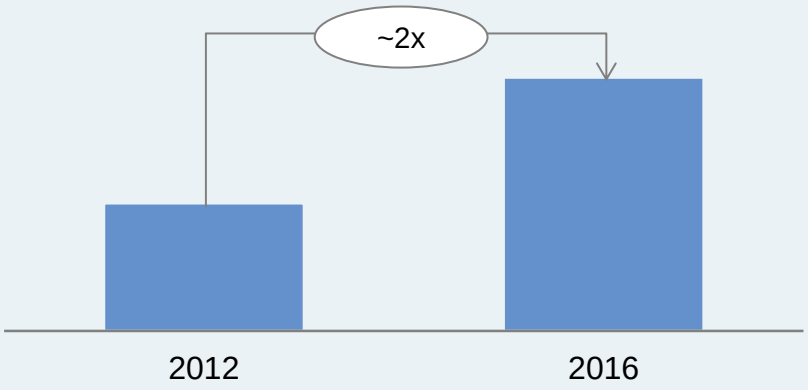
- Core acquiring and processing services
- ChaseNet closed loop system
- Integrated merchant loyalty

Ensure Chase cards can be used everywhere our customers shop

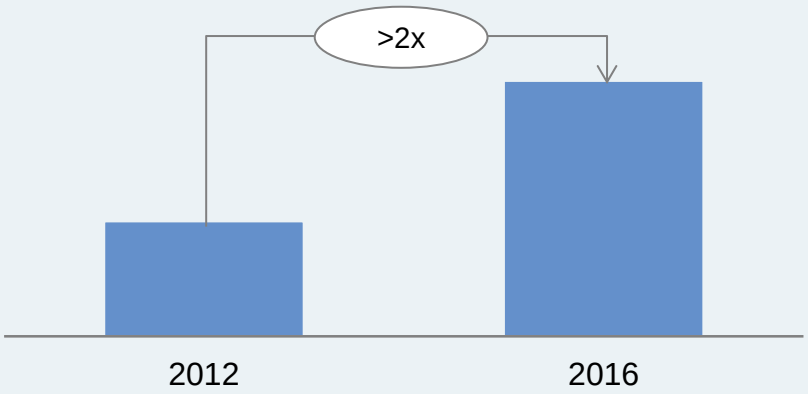
New product launches and a broad investment in marketing have generated strong customer engagement and return on our investment

Acquisition vintage in-year performance

Vintage in-year sales

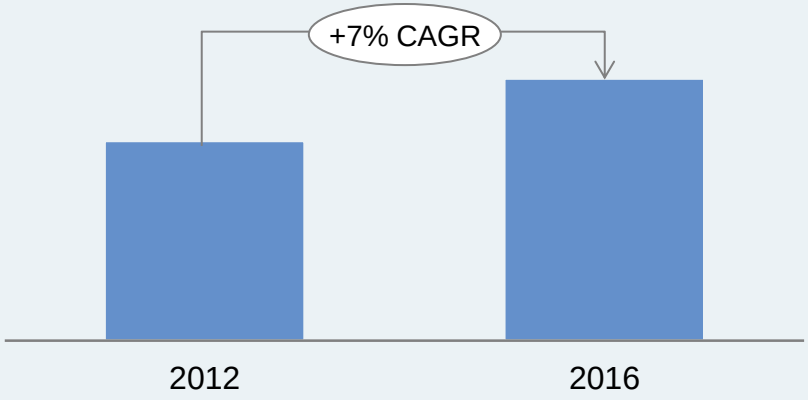


Vintage in-year outstandings

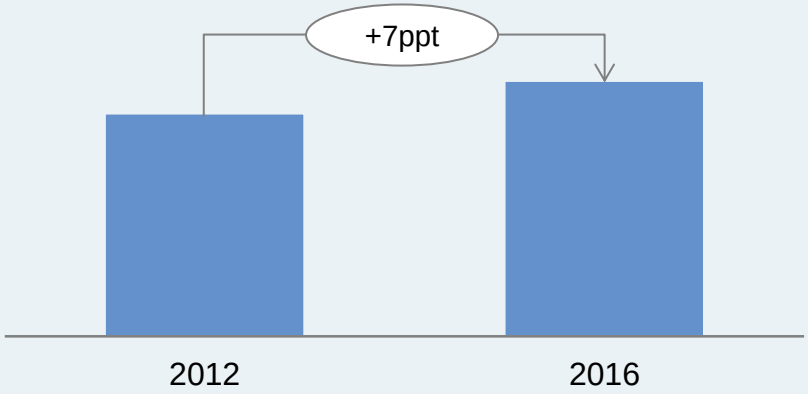


Total portfolio performance

Average sales per account



Average % of accounts with sales activity



Note: Data excludes Commercial Card and certain terminated partner portfolios

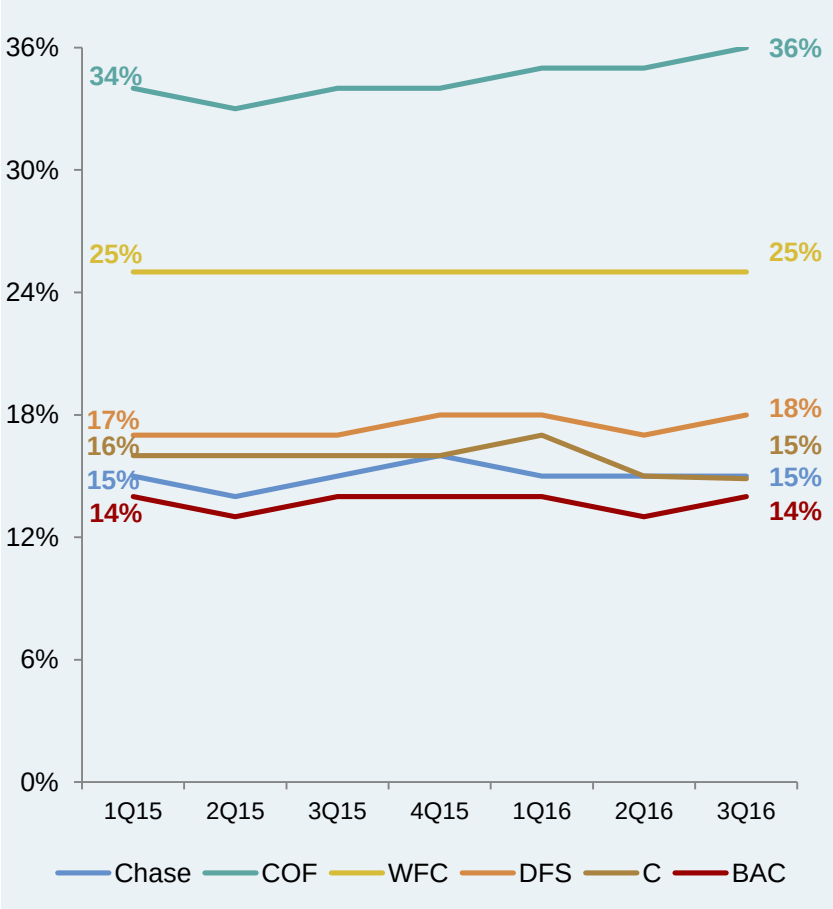
The new Sapphire Reserve customers we are acquiring have attractive characteristics

Early adopter profile of Sapphire Reserve customers as of December 2016	
Average income[1]	>$180K
Average Deposit & Investment wallet	>$800K
Average FICO score	>785
Lift in On Chase spend[2]	>50%

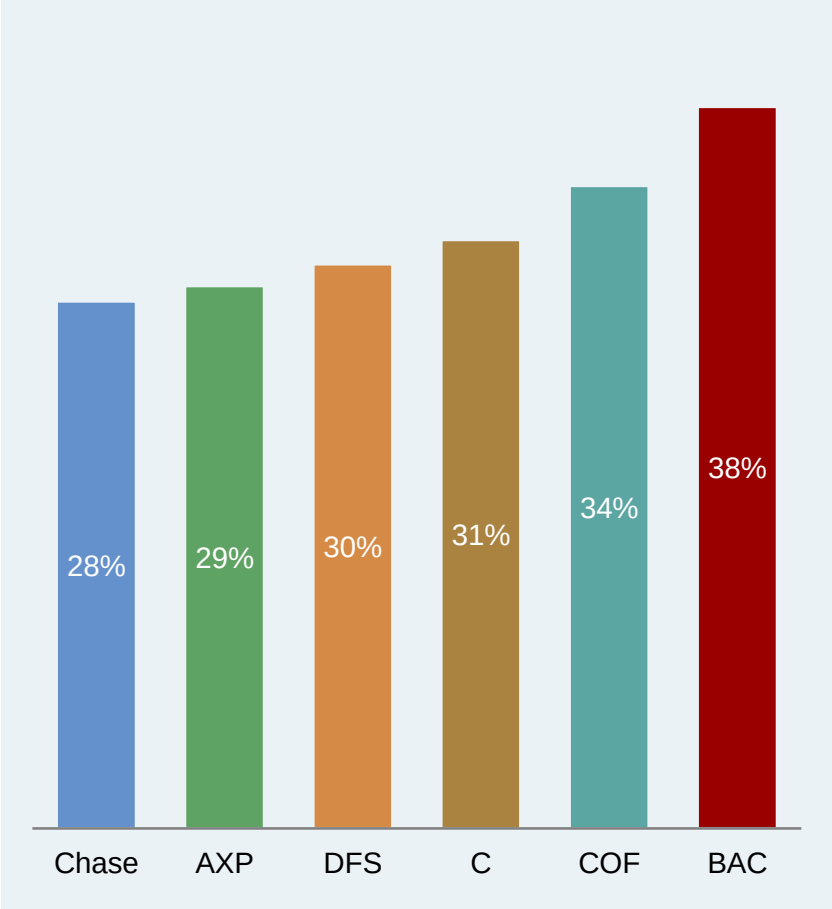
[1] Reflects self-reported income at time of application
[2] Compares July 2016 and December 2016 credit card spend (Pre-Reserve vs. Post-Reserve acquisition for existing Chase card customers only). Excludes December acquisitions

Chase Card has modest exposure to FICO <660, and is lowest in the 640 – 720 range

Chase vs. competitors – FICO <660 portfolio mix[1]



Chase vs. competitors FICO (640 – 720) portfolio mix[2]



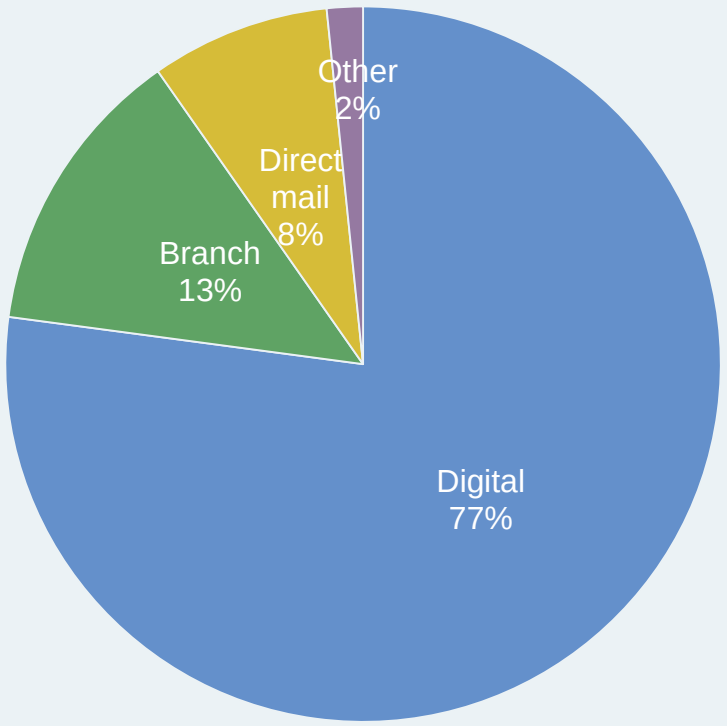
[1] Source: "U.S. Cards Subprime Plateau," Autonomous sell-side research report, 11/3/2016. Leveraged peers' Form10-Q/K disclosures and incorporates their own internal estimates. Credit card loans without a FICO score included in FICO <660 category

[2] Based on Lightspeed Behavioral Tracking Panel data for sample of existing portfolios' customers polled during 3Q16. Data represents FICO scores from 640 – 719

Increased efficiencies within our acquisition channels

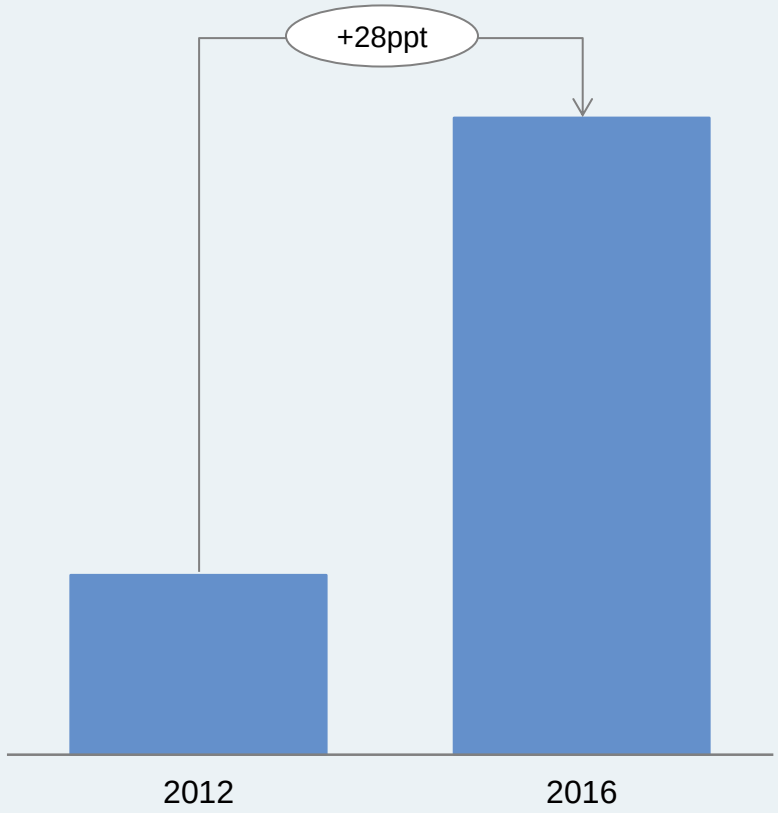
Acquisitions are moving to lower cost channels

2016 new credit card accounts by channel[1]



Increased mobile acquisitions

% of total digital credit card applications sourced from mobile devices[2]



[1] Data excludes Commercial Card and certain terminated partner portfolios
[2] Represents applications from smartphone and tablet visitors in Chase-hosted digital channels; excludes applications hosted on partner sites

Our investments in Payments extend into P2P, an important emerging segment, and we continue to enhance and grow our P2P offering with Chase QuickPay

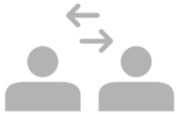
We are well positioned to succeed in P2P

Active mobile CBB households[1]



15mm
90 day active as of 4Q16

Chase QuickPay user households[2]



4mm
90 day active as of 4Q16

P2P volume and growth[3]



$28B
2016 Chase QuickPay volume

+38%
YoY growth

Annual P2P transactions[3]

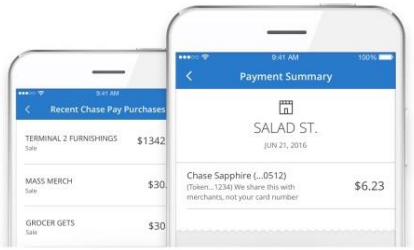


94mm
2016 Chase QuickPay transactions

[1] CBB households with a user of all mobile platforms who has logged in within the past 90 days
[2] Represents figures for CBB households only who have agreed to the Chase QuickPay legal agreements and sent a payment via Chase QuickPay during the selected time frame (as of December 2016)
[3] Includes Chase QuickPay transactions from CBB households

Chase Pay, our proprietary digital solution, expands the capabilities of our successful core business with an innovative product

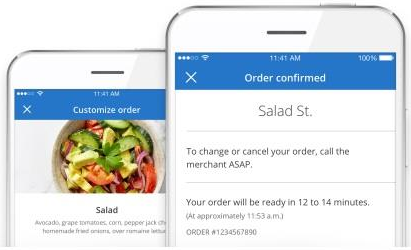
Key Features



Track purchases



Pay securely

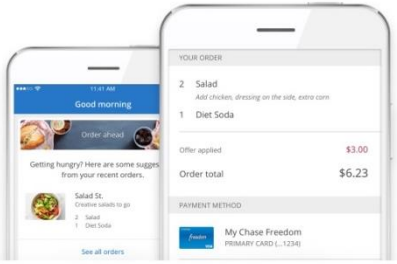


Order/pay ahead[1]

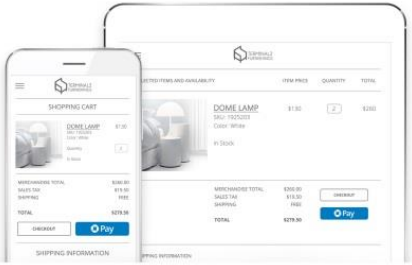
Pay



Keep cards updated



Automatic savings



Easy digital checkout

Key Partners

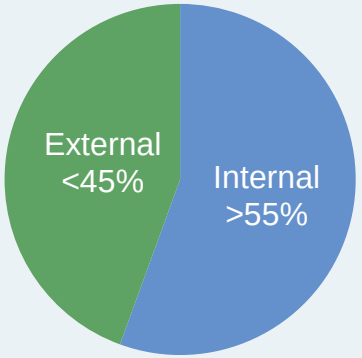
[1] Order/pay ahead is not available at Starbucks locations within the Chase Pay app

Commerce Solutions surpassed $1 trillion in processing volume

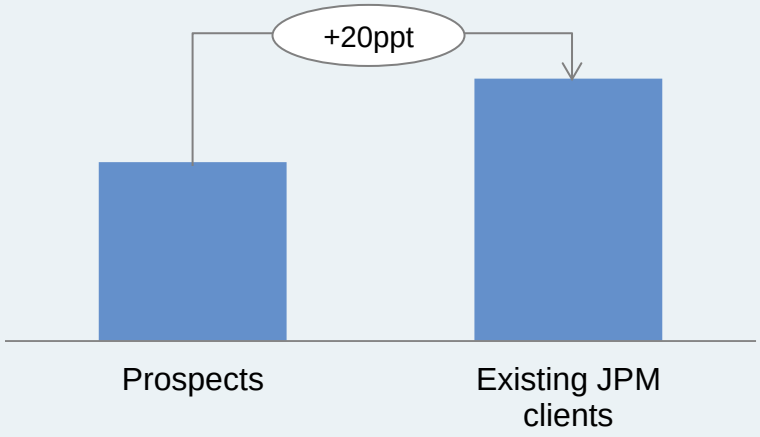
Commerce Solutions total processing volume ($B)



New company relationships by referral source[1]



Deal closure rate by relationship[1]



[1] Data represents full-year 2016. Sales lead classification based on internal JPMorgan Chase data

We made significant progress in 2016, and our go-forward strategy remains consistent

What we've accomplished

- ✓ #1 position in both credit card sales and outstandings market share[1]
- ✓ Surpassed $1T in merchant processing volume
- ✓ Successfully launched new partner and branded products
- ✓ Renewed 80% of co-brand sales volume in the last two years
- ✓ Launched Chase Pay with Starbucks and Best Buy

Where we're headed

1. Deliver overall financial returns
2. Provide superior customer value
3. Lead payments innovation and transform the payment experience

Create lifelong, engaged relationships by serving all spending and borrowing needs of our targeted customer segments

[1] Based on 4Q16 sales volume and loans outstanding disclosures by peers (C, BAC, COF, AXP, DFS) and internal JPMorgan Chase estimates. Sales volume excludes private label and Commercial Card. AXP reflects the U.S. Consumer segment and internal JPMorgan Chase estimates for AXP's U.S. small business sales. Outstandings exclude private label, AXP Charge Card, and Citi Retail Cards

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We continue to execute against our strategy of building a higher quality and less volatile mortgage business

	Progress	
Deliver a great customer experience	✓	Improved J.D. Power originations and servicing rankings
	✓	Expanded affordable lending programs
Maximize our share of high quality originations	✓	Increased our share of jumbo originations
	✓	Attractive returns and outstanding quality
Improve quality of servicing portfolio and de-risk the business	✓	Overall delinquency rate[1] approaching lowest level in a decade
	✓	Sale of USDA business

[1] Based on total mortgage and home equity loans serviced, as reported to IMF as of December 2016

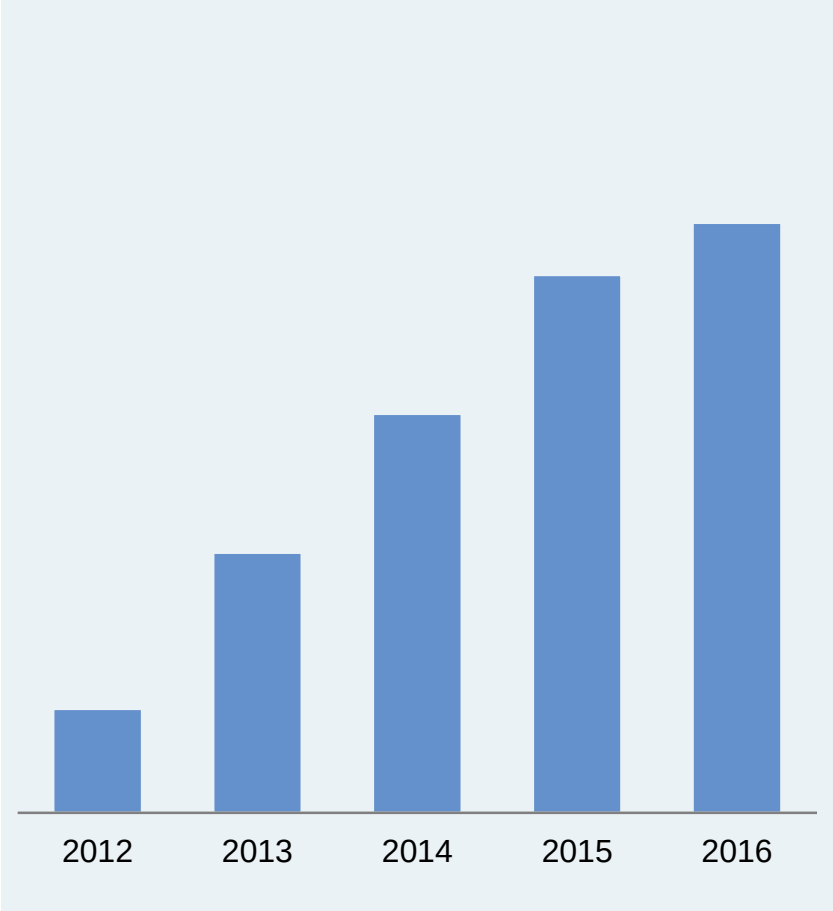
The underlying performance of the business is strong

Key business drivers ($B, except ratios and where otherwise noted)		2015	2016	YoY Δ
Mortgage Production	Total mortgage origination volume	$106	$104	(3%)
	Consumer origination volume	$36	$44	23%
	Correspondent origination volume	$70	$59	(16%)
	Home equity origination volume	$5	$7	40%
Mortgage Servicing	Total loans serviced (end of period)	$910	$847	(7%)
	Third-party mortgage loans serviced (end of period)	$674	$592	(12%)
	Foreclosure units (K, end of period)	73	47	(36%)
Loan balances and credit performance	Mortgage Banking loans (average)	$204	$232	14%
	Mortgage Banking net charge-off rate[1]	0.18%	0.10%	(8) bps

Note: Numbers may not sum due to rounding
[1] Excludes the impact of PCI loans

We have seen improvement in internal and external measurements of customer satisfaction

Annual Net Promoter Score[1]



J.D. Power Mortgage surveys[2]

Chase rank

	Originations	Servicing
2010	12	13
2015	7	10
2016	5	6
'15 – '16 change	+2	+4

[1] Net Promoter Score = % promoters minus % detractors. Survey started in August 2012. Survey methodology changed in 3Q14
[2] Source: "U.S. Primary Mortgage Origination and Servicer Satisfaction Studies," J.D. Power, 2010, 2015, and 2016

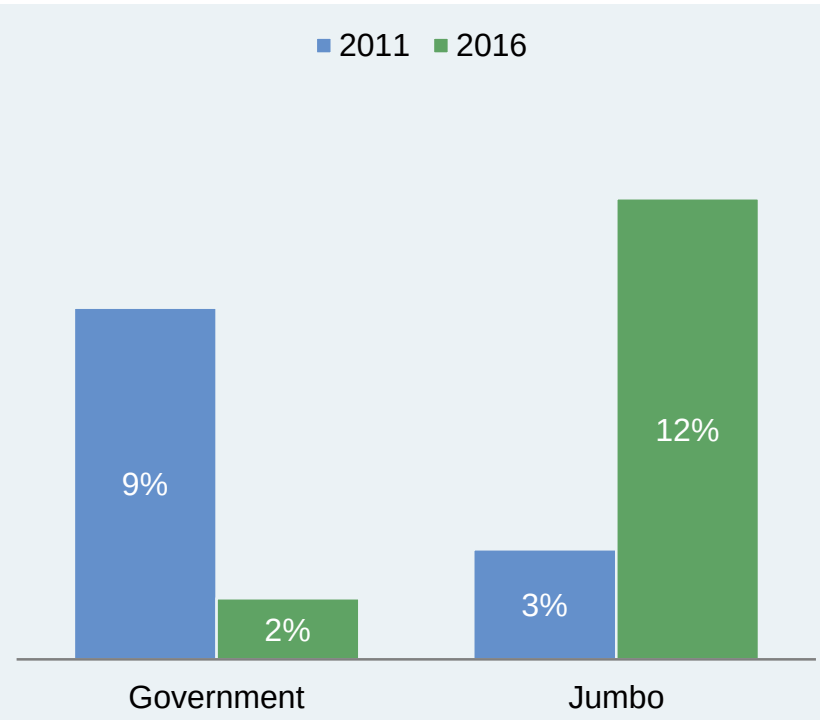
We are focused on high-quality originations…

Total originations market share



- Mortgage companies and small banks have gained share from large banks
- The largest share gain for mortgage companies and small banks has been in government lending

Chase originations market share by product type[2]

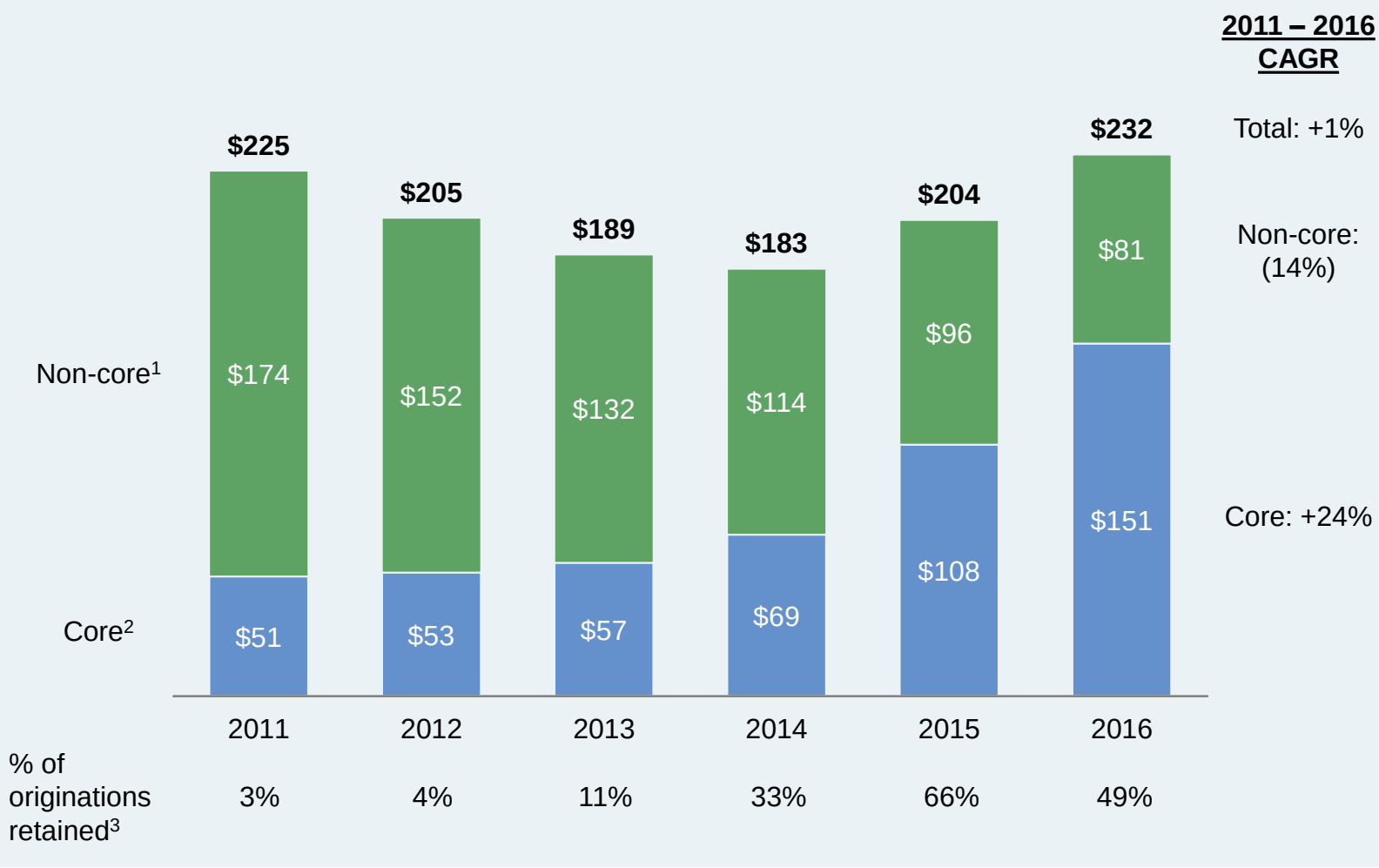


- We have shifted our origination mix toward high quality jumbo, consistent with our strategy of building a less volatile mortgage business
- The 30+ delinquency rate[3] for jumbo is 1.05%[4], compared to 13.15% for government products

[1] Source: IMF. Firmwide mortgage originations for top 5 ranked banks. Includes Conventional, Government, Jumbo, and excludes Home Equity
[2] Source: IMF and JPMorgan Chase internal data. Mortgage Banking only originations. Excludes Private Bank and Home Equity
[3] Data as of 12/31/2016. Based on unpaid principal balance of loans serviced. Includes foreclosures and excludes real estate owned ("REO") inventory
[4] Excludes PCI loans and private label securities

…and continue to see strong core loan growth

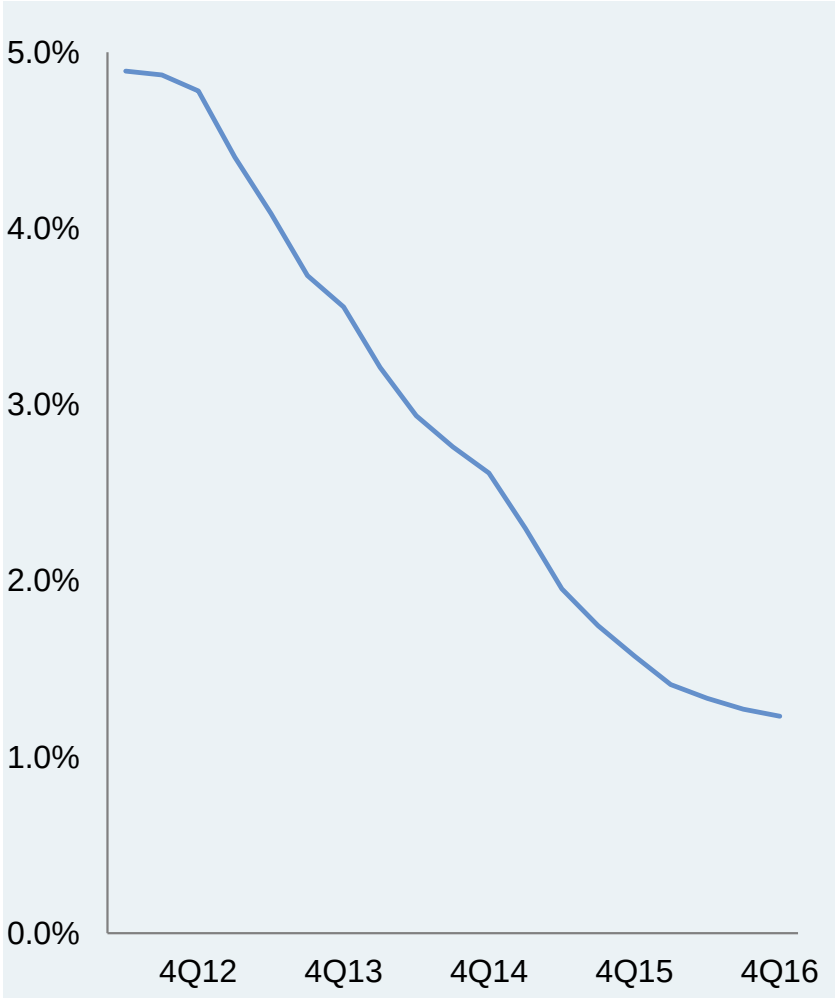
Mortgage Banking average loan balances ($B)



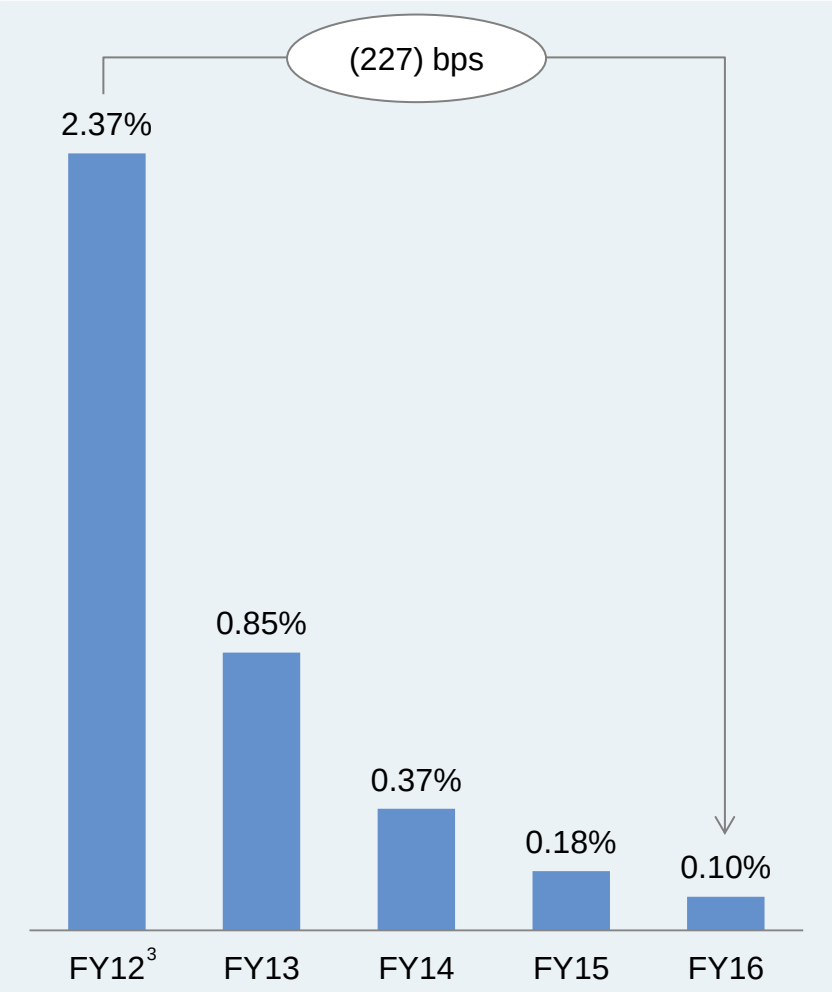
[1] Non-core loans include runoff portfolios, which are predominantly discontinued products no longer originated and PCI loans
[2] Core loans primarily include loans held in Real Estate Portfolios, as well as loans residing in Mortgage Production and Mortgage Servicing, which are predominantly prime mortgage loans repurchased from Government National Mortgage Association ("Ginnie Mae") pools, which are insured by U.S. government agencies
[3] Excludes Home Equity and Private Bank loans

We continue to maintain strong credit performance

Mortgage Banking[1] 30+ delinquency rate (%)



Mortgage Banking net charge-off rate[2] trend



[1] Excludes PCI loans and mortgage loans insured by U.S. government agencies that are 30 or more days past due. These amounts have been excluded based upon the government guarantee
[2] Excludes the impact of PCI loans
[3] Includes the effect of incremental net charge-offs based on regulatory guidance

We are actively managing our servicing book by bringing in high-quality new originations while reducing our volume of low-quality units

2014 – 2016 Chase servicing book activity

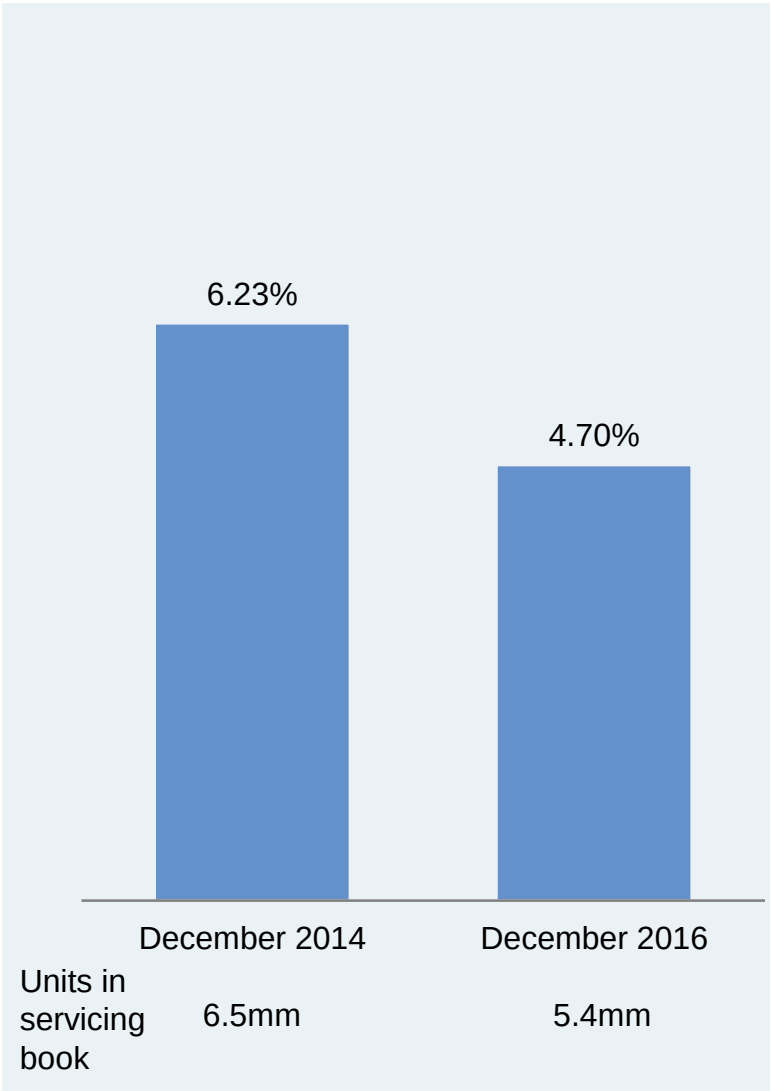
"Coming In" Dec 2014 through Dec 2016

	Units	30+ delinquency rate
New originations	~790K	0.02%
Acquired servicing	~235K	0.10%
Total "in flows"	~1,025K	0.04%

"Going Out" Dec 2014 through Dec 2016

	Units	30+ delinquency rate
Run-off	~1,850K	7.65%
Sales	~350K	29.94%
Total "out flows"	~2,200K	11.19%

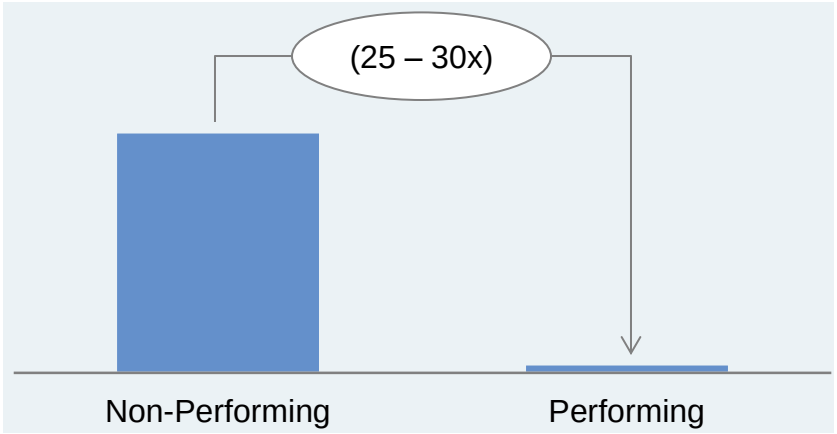
30+ delinquency rate[1] for Chase servicing book



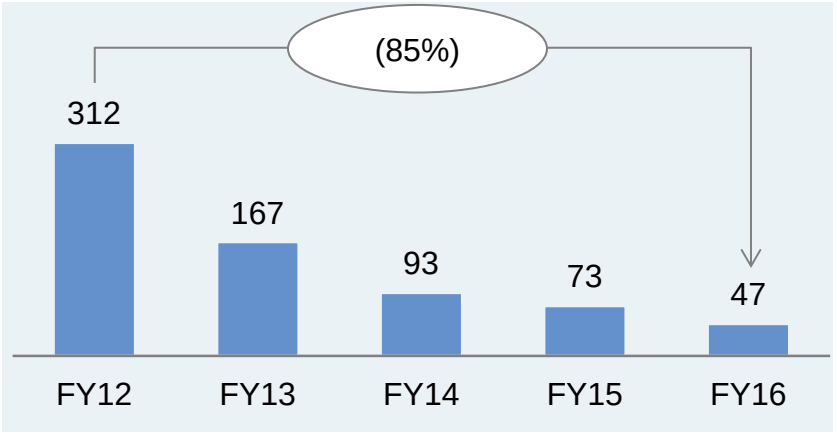
[1] Based on number of loans serviced. Includes foreclosures and second liens and excludes REO inventory

Our default inventory continues to decline, driving lower overall servicing expense

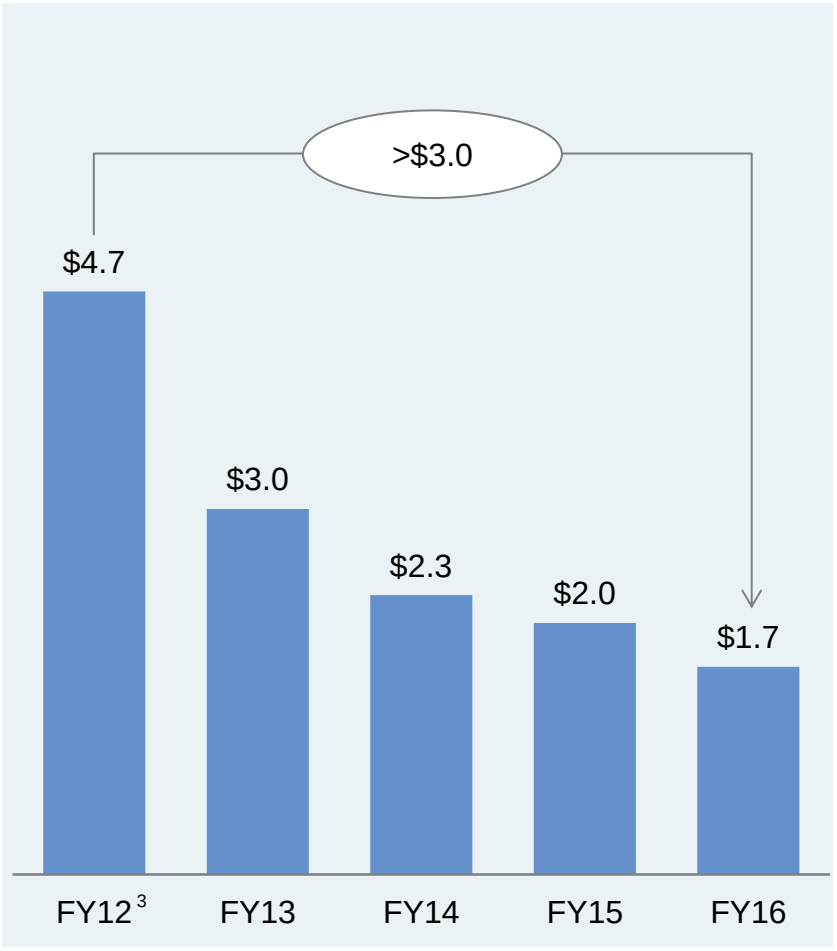
Servicing cost per unit[1]



Foreclosure inventory (K)



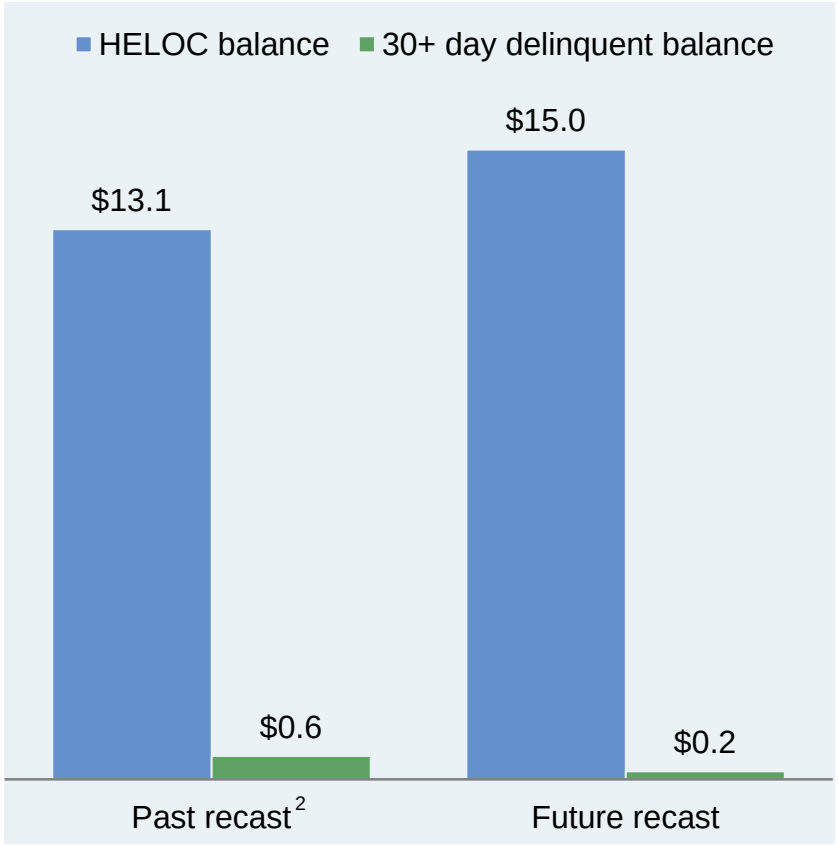
Servicing expense[2] ($B)



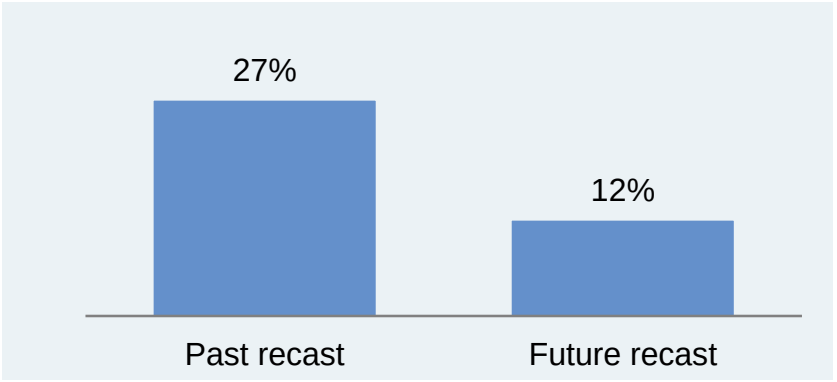
Note: Numbers may not sum due to rounding
[1] 2015 Chase data as defined by the Mortgage Bankers Association (MBA) in the Stratmor survey
[2] Credit costs excluded from all time periods
[3] FY12 includes ~$1B of additional expense for foreclosure-related matters

We are through a significant portion of home equity interest-only recast risk for the legacy Chase book, with performance in line with expectations

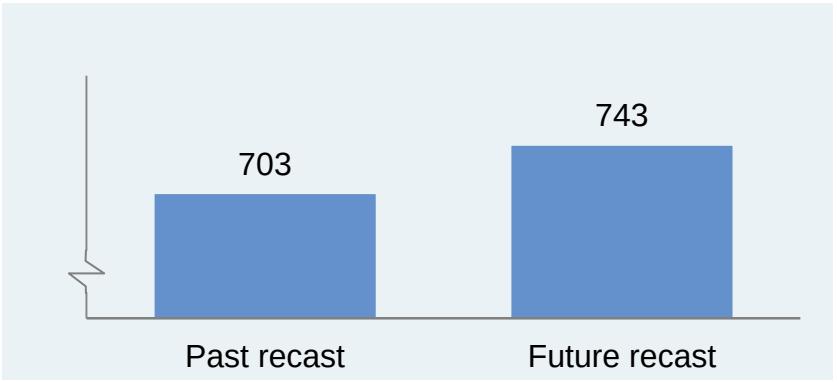
HELOC portfolio[1] balance ($B)



Loans with CLTV[3] > 80%



Average FICO



Note: Excludes PCI portfolio. Data as of December 2016

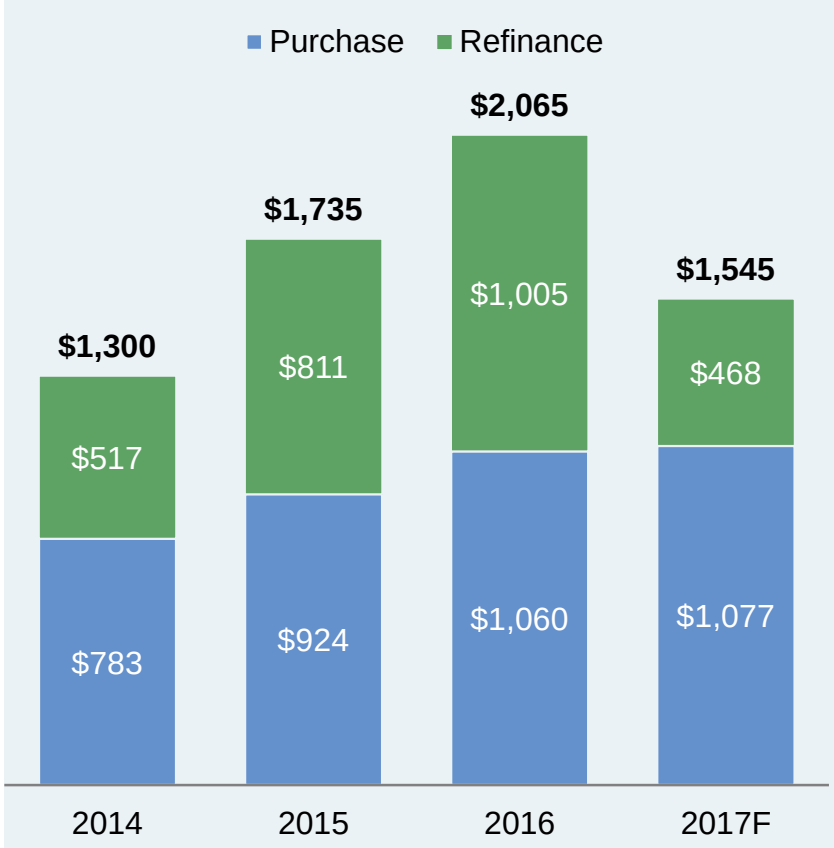
[1] Based on carrying value; excludes home equity balloon loans that maintain an interest only payment after the draw period ends

[2] Includes modifications which no longer exhibit recast risk based on modified terms

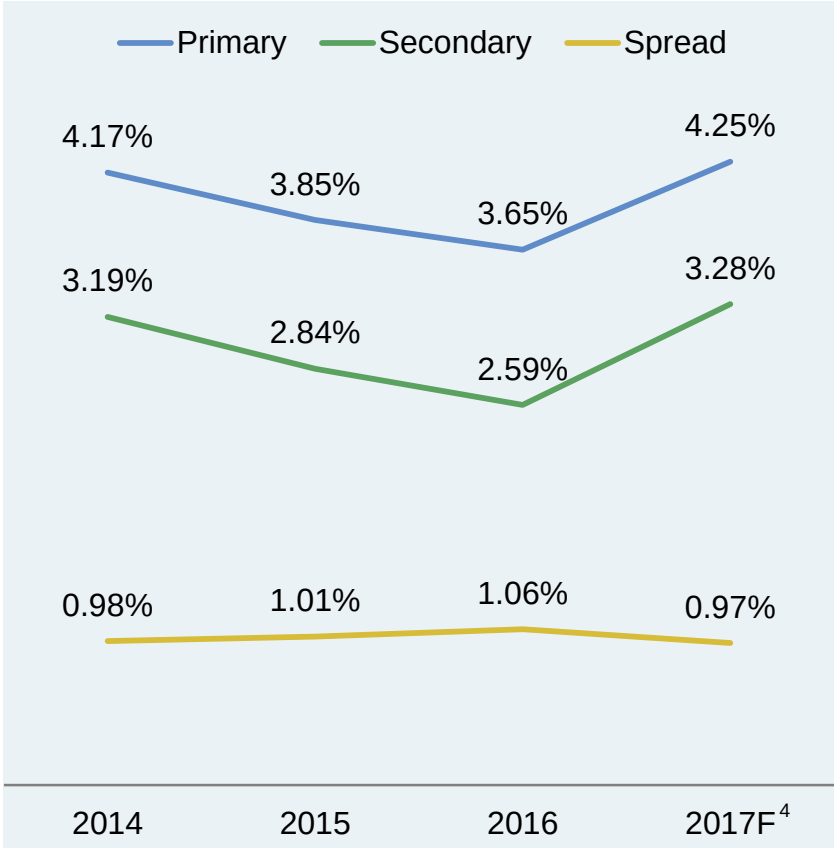
[3] Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property

We anticipate a smaller, purchase-driven market, with tightening primary and secondary spreads

Mortgage origination market[1] ($B)

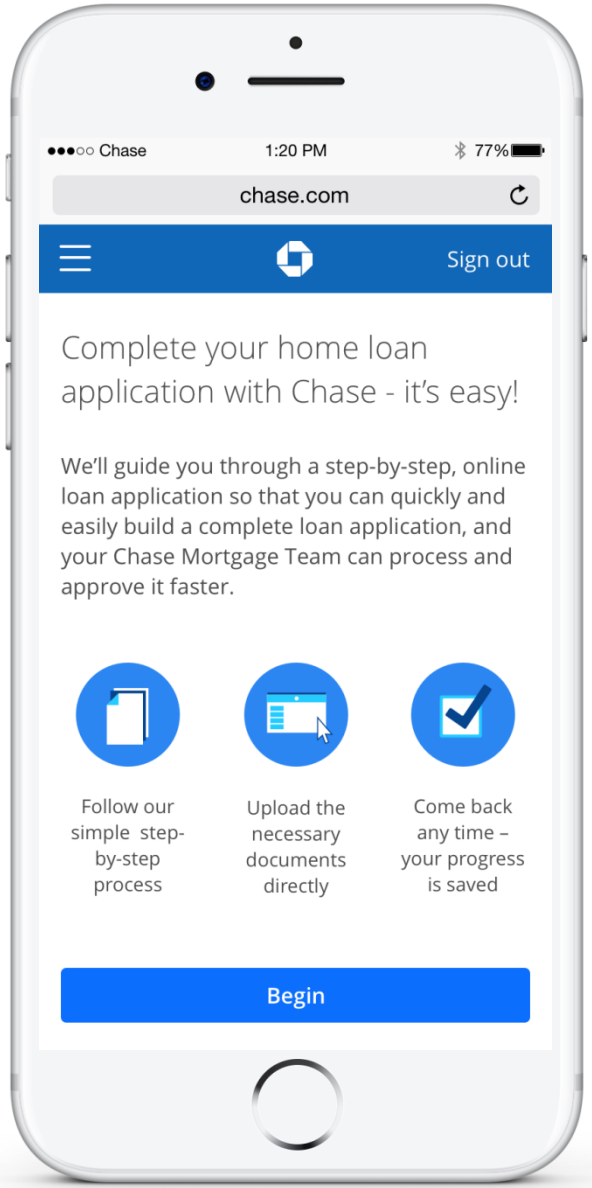


Primary[2] and secondary[3] mortgage rates



[1] Source: IMF 2014 through 2016; 2017F reflects average of forecasts from Fannie Mae (1/10/17), Freddie Mac (1/30/17), and MBA (1/19/17)
[2] Source: Freddie Mac Primary Mortgage Market Survey (PMMS). Represents 30-yr fixed rate
[3] Source: JPMorgan Chase Securitized Products Group (SPG) Research. Represents Fannie Mae 30-yr current coupon rate
[4] Source: JPMorgan Chase SPG Research

We are piloting a digital mortgage experience to address the needs of an increasingly tech-centric customer base



Our mobile-enabled customer portal will be…

Transparent – customers always know where they stand in the process

Convenient – customers can securely upload documents to the platform

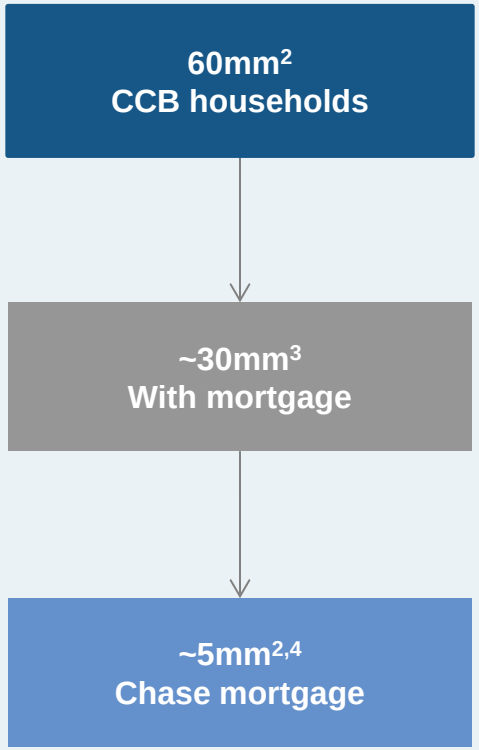
Connected – customers can e-sign documents

…resulting in benefits for customers and Chase

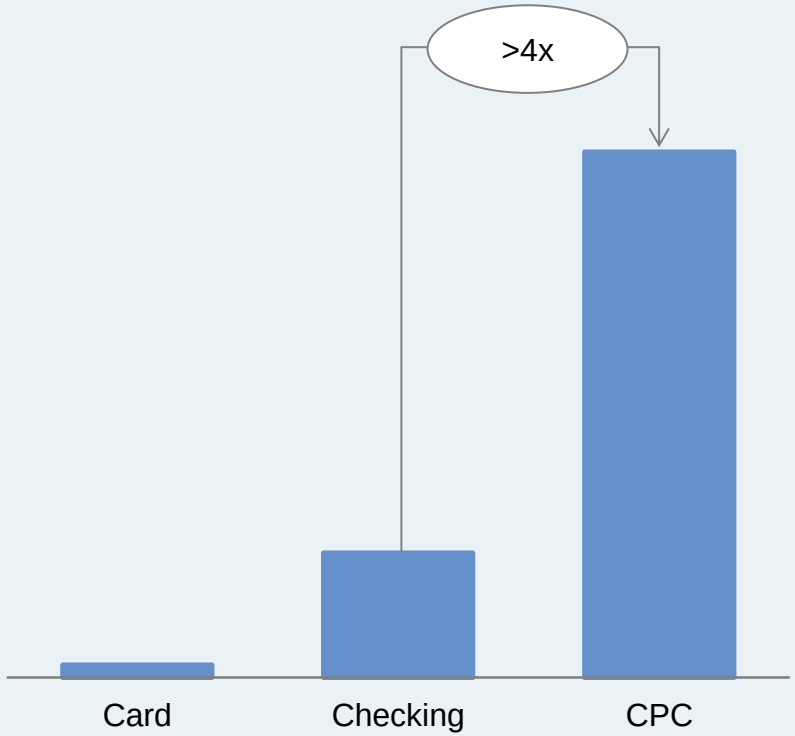
- Customers empowered with real-time information and transparency
- Efficiency gains for Chase through automation of manual handoffs
- Ongoing enhancements to the platform

We have a tremendous growth opportunity within our own Chase customer base – our performance with CPC[1] customers shows the power of a differentiated experience

CCB household distribution by homeownership



% of Chase customers originating a mortgage with Chase by relationship type, FY2016 ($ basis)



[1] Chase Private Client
[2] Reflects data as of November 2016
[3] JPMorgan Chase internal analysis
[4] JPMorgan Chase internal data

We remain focused on executing against our strategy

What we've accomplished	Where we're headed
✓ Improved the customer experience	1 Accelerate focus on deepening Chase relationships
✓ Enhanced the quality of the servicing portfolio and de-risked the business	2 Transform Chase customer experience by leveraging internal and external data
✓ Substantially reduced expenses	3 Enrich digital experience for increasingly tech-centric customer base
✓ Grown our balance sheet with high quality originations	

Positions us well to execute our strategy and drive future growth with our existing Chase customer base

Agenda

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Banking	**37**
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Consumer & Business Banking strategic priorities and progress

	Progress
Acquire and deepen relationships	✓ Grew Consumer & Business Banking deposits & investments by ~$250B – a 10% CAGR since 2012 ✓ Acquired ~2.7mm net new consumer checking households and ~235K net new business households since year-end 2012 ✓ Primary bank for more than 70% of our consumer households and nearly 50% of our business households[1]
Increase digital engagement	✓ More than doubled Consumer & Business Banking households using mobile since year-end 2012[2] ✓ Released next generation of ATM hardware and software with enhanced ATM functionality
Drive down expenses	✓ Reduced structural expenses by ~$600mm[3] since year-end 2014 while reinvesting a meaningful portion of the savings in marketing and digital ✓ Reduced teller transactions by ~130mm since year-end 2014 ✓ Decreased transactional staff by 15% since year-end 2014

[1] Primary relationship based on internal JPMorgan Chase definition
[2] Users defined as consumer or business households that had at least one mobile log-in in a given quarter
[3] Savings from 2014 based on 2016 exit (4Q16 annualized)

Consumer & Business Banking business drivers

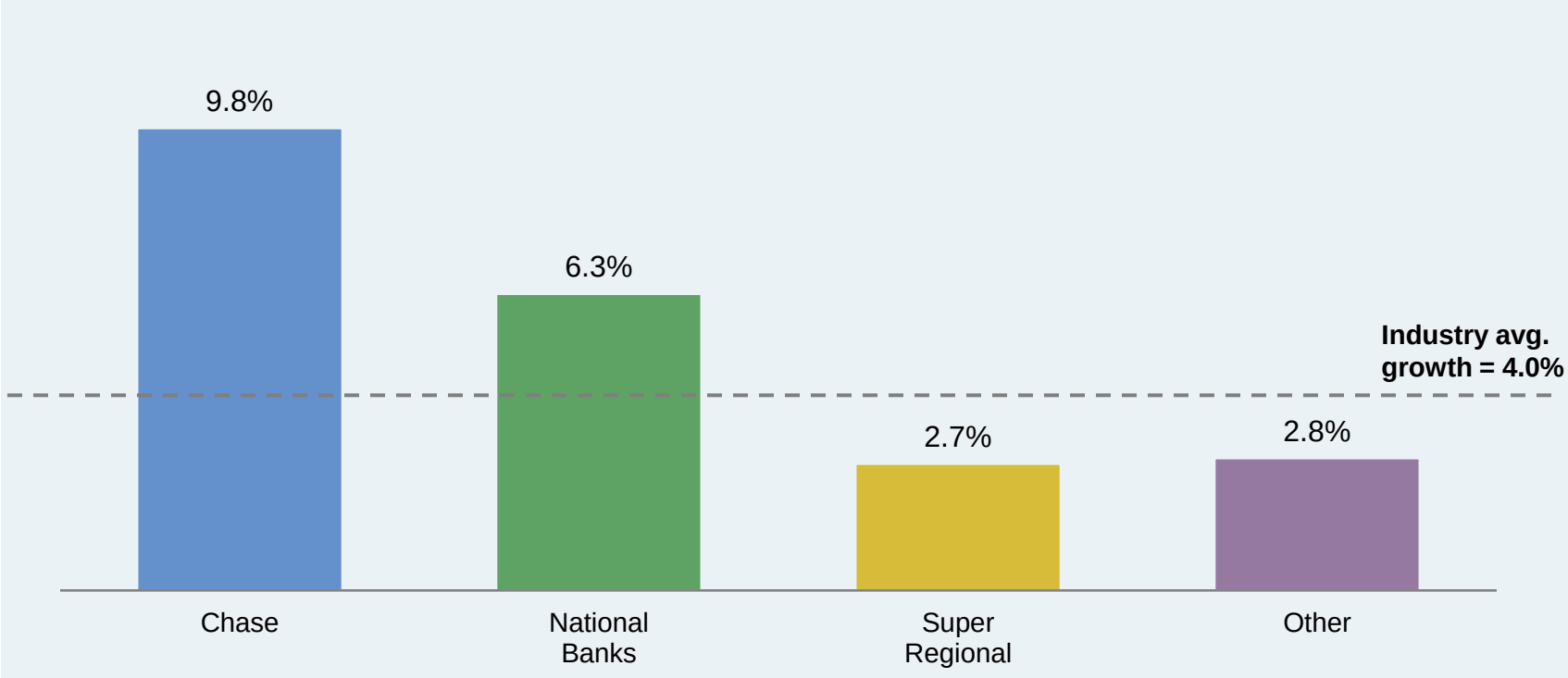
Consumer & Business Banking business drivers

		2015	2016	YoY Δ
Relationships (mm)	Consumer households	23.3	23.9	3%
	Business households[1]	2.4	2.5	4%
Financial metrics ($B)	CBB revenue	$18.0	$18.7	4%
	CBB non-interest expense	$11.9	$11.8	(1%)
	CBB overhead ratio	*66%*	*63%*	*(3 ppt)*
Balances ($B)	Average deposits[2]	$515	$571	11%
	Deposit margin[2]	*1.90%*	*1.81%*	
	Client investment assets (end of period)	$219	$235	7%
	% managed assets	*41%*	*40%*	
	Average Business Banking loans[3]	$20.5	$21.9	7%
Distribution channels	Branches	5,413	5,258	(3%)
	ATMs	17,777	18,493	4%
	Average deposits/branch employee ($mm)[2]	$11.4	$12.5	10%

[1] Includes only Business Banking households that have either a business checking, savings, CD product or credit product on the Business Banking P&L
[2] Includes Consumer & Business Banking deposits
[3] Includes predominantly Business Banking loans as well as deposit overdrafts

We continue to lead the industry in deposit balance growth

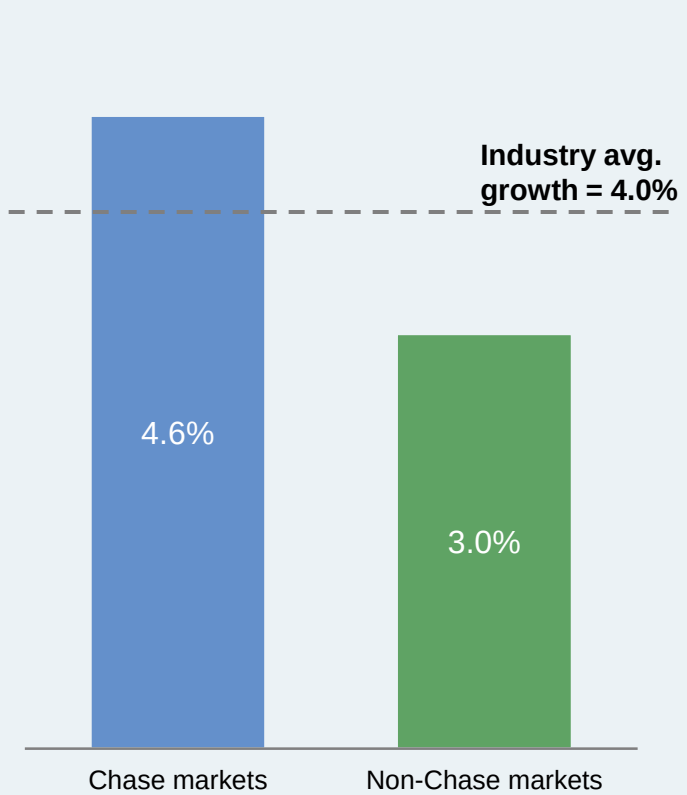
Change in deposits vs. industry (2012 – 2016 CAGR)[1]



Note: For footnoted information, refer to appendix

We have established our physical presence in faster growing markets

Industry deposit growth (2012 – 2016 CAGR)[1]



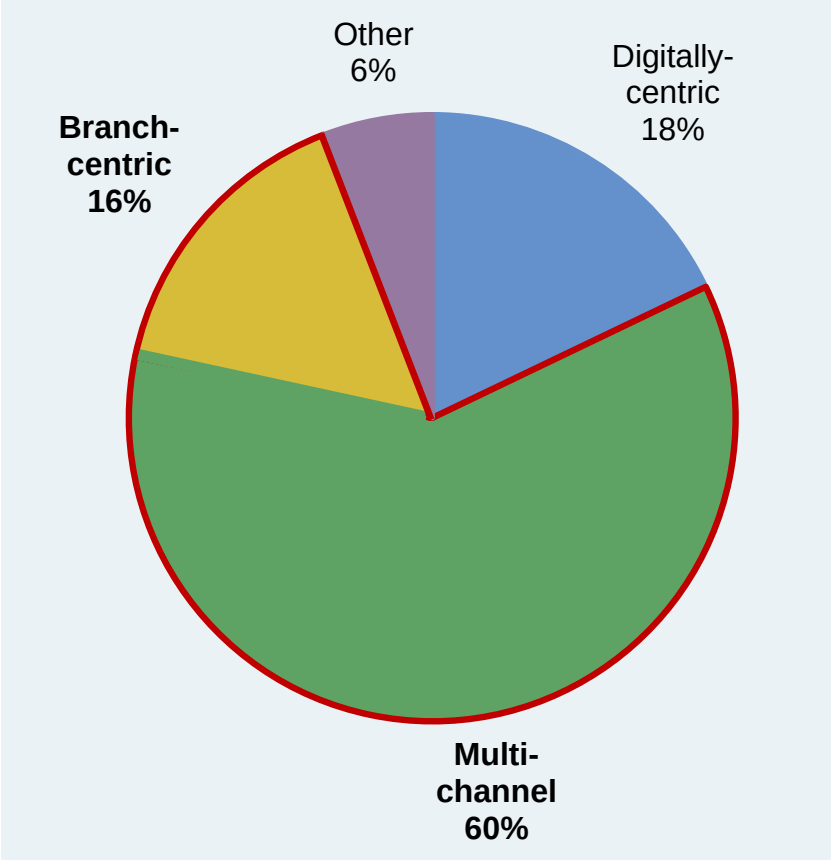
Chase performance in top 10 Chase markets (2012 – 2016)[1]

	Chase top 10 markets by deposit balances (2016)	Chase $ deposit growth rank	Chase deposit share (2016)	Chase share of $ deposit growth	Chase growth rate vs. industry ex-Chase
1	New York, NY	1	21%	35%	2.3x
2	Los Angeles, CA	1	17%	29%	2.2x
3	Chicago, IL	1	19%	53%	5.7x
4	Houston, TX	1	21%	27%	1.5x
5	Dallas-Fort Worth, TX	1	19%	28%	1.8x
6	San Francisco, CA	3	13%	19%	1.8x
7	Miami, FL	2	12%	23%	2.7x
8	Phoenix, AZ	1	26%	29%	1.2x
9	Detroit, MI	1	20%	35%	2.5x
10	San Diego, CA	1	19%	29%	2.0x

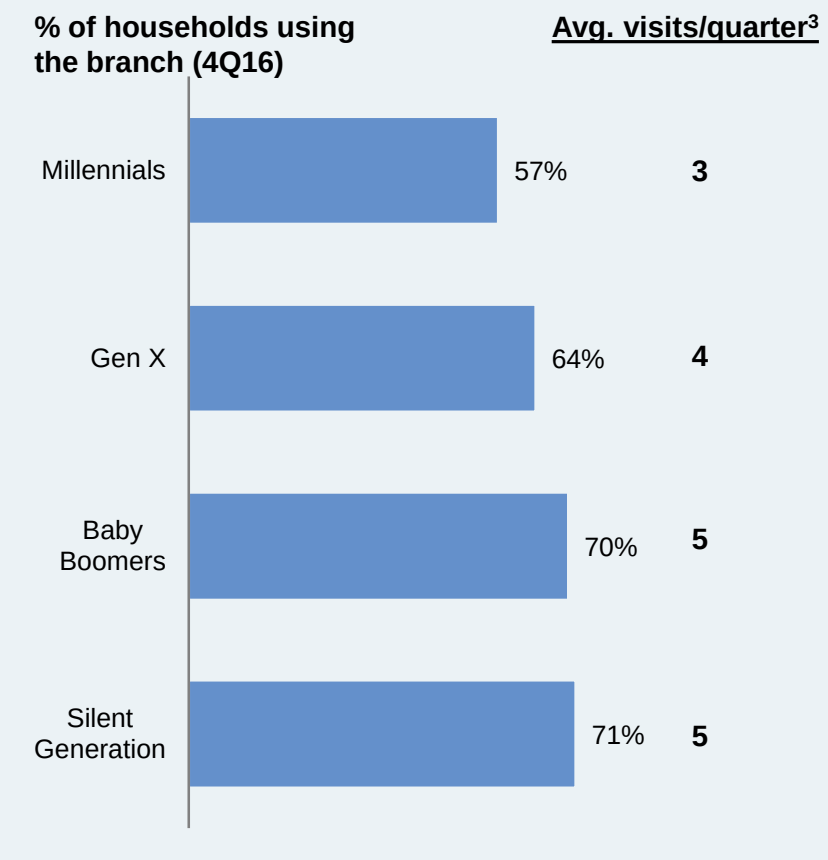
Note: For footnoted information, refer to appendix

Three-quarters of our growth has come from customers who use our branches

Chase Consumer Bank deposit growth attribution by channel usage segment (2012 – 2016)[1]



Households across generations continue to use the branch[2]



Note: For footnoted information, refer to appendix

Digital engagement embeds us in our customers' daily lives – on average, mobile banking users have 5 mobile log-ins per week

Chase leadership positions

#1 rated mobile banking app and #1 in active mobile users among large bank peers[1]

#1 most visited banking portal in the U.S.[2]

#1 ATM network in the U.S.[3]

Key engagement metrics[4]

CBB mobile usage



+12%
households using mobile vs. 2015

5 log-ins
per week in 2016

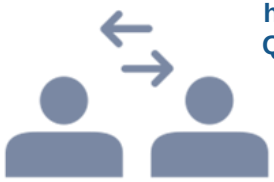
CBB Chase QuickDeposit usage



+19%
households using QuickDeposit vs. 2015

74mm
transactions in 2016

CBB Chase QuickPay usage



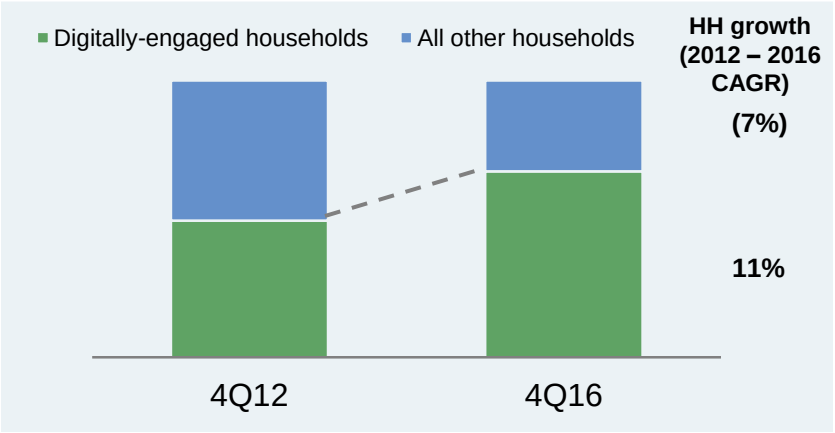
+30%
households using QuickPay vs. 2015

94mm
transactions in 2016

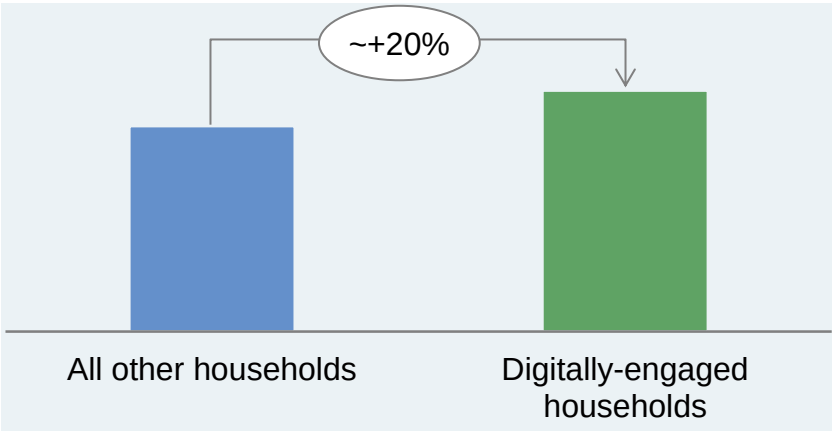
[1] Source: "2016 Mobile Banking Financial Institution Scorecard," Javelin Strategy & Research, May 2016. Ranking is among large banks. Active mobile users based on disclosures by peers in 4Q16
[2] Source: SimilarWeb.com as of December 2016 (formerly compete.com)
[3] Based on competitor filings
[4] Households using mobile defined as households that have at least one log-in through the Chase Mobile app or via mobile browser in 4Q16. Households using QuickDeposit or QuickPay are defined as households that complete at least one of the specified transactions in 4Q16

Digital engagement is a contributing factor to our record low attrition

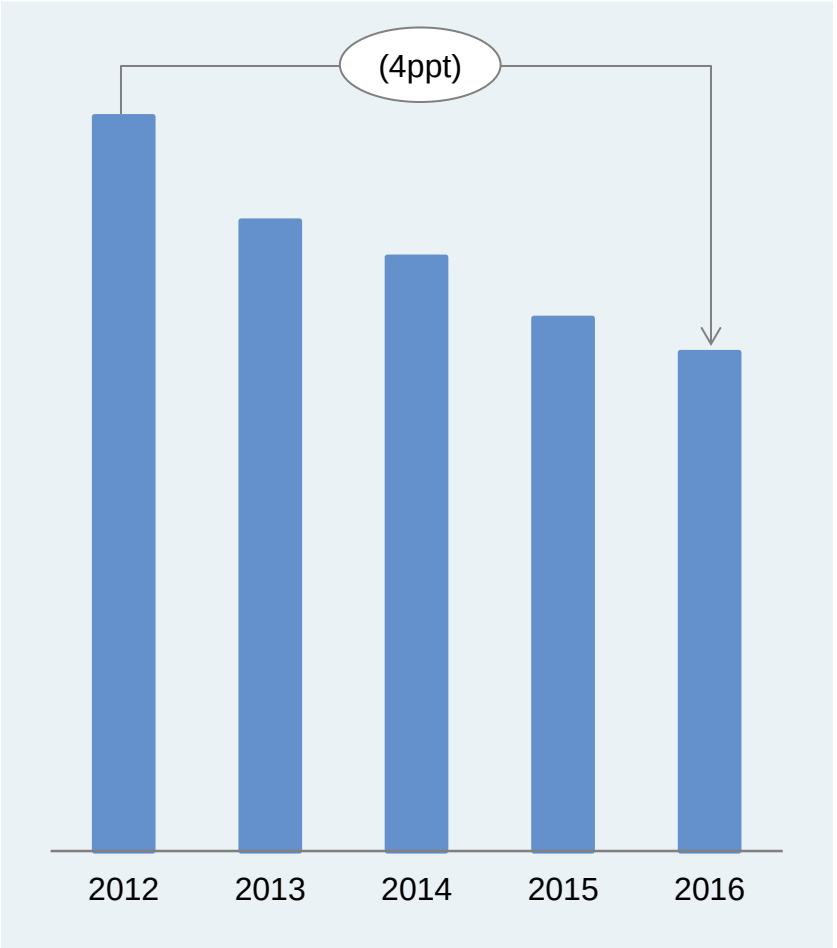
Digitally-engaged households are growing rapidly…[1]



…and exhibit higher Net Promoter Scores[1,2]



Consumer Bank household attrition rates[3]

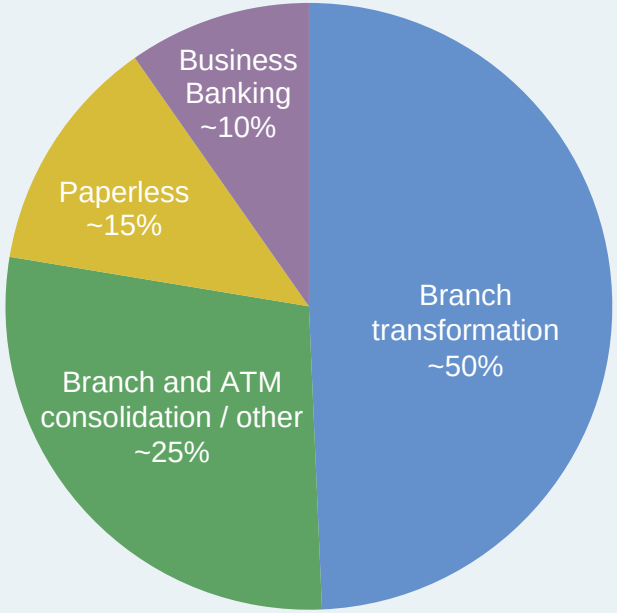


[1] Digitally-engaged households include digitally-centric and multi-channel households. All other households include branch-centric and other households
[2] Net Promoter Score = % promoters minus % detractors. Based on Net Promoter Score data collected from January – November 2016
[3] Attrition rates are based on Consumer Bank households with deposit products and include households that closed all of their deposit products with Chase. Attrition rate calculated by taking an average of the annualized monthly rates for the 12 months of each year

While delivering this winning experience, we have also reduced structural expenses

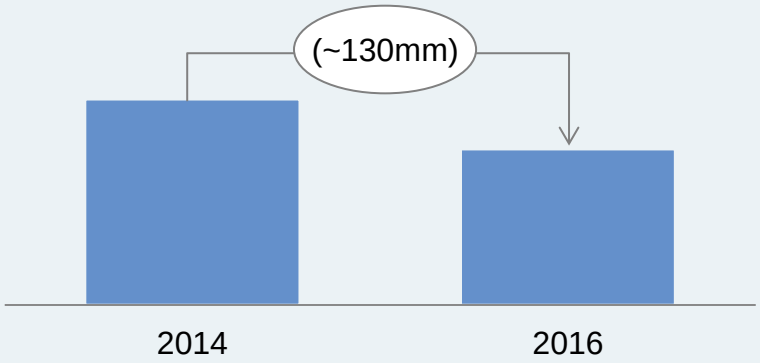
Distribution of structural expense reductions

CBB structural expense reduction (2014 – 2016)[1]

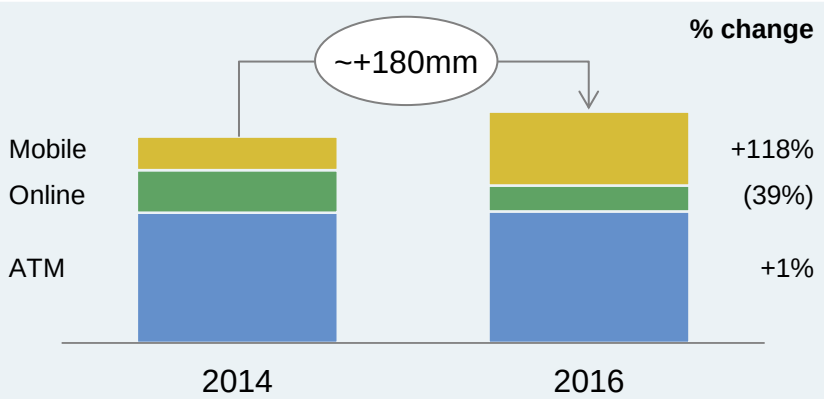


Example: branch transformation

Annual teller transactions (mm)



Annual self-service/digital transactions (mm)[2]

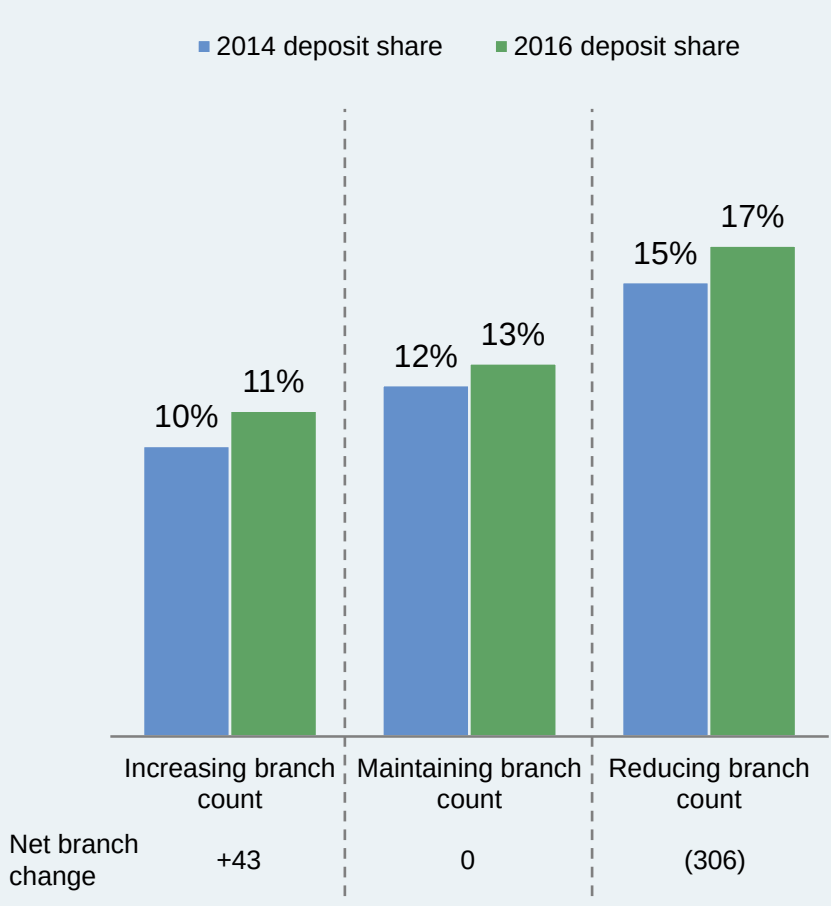


Today, ~80% of transactions are completed through self-service channels; going forward, we will continue to drive transaction migration

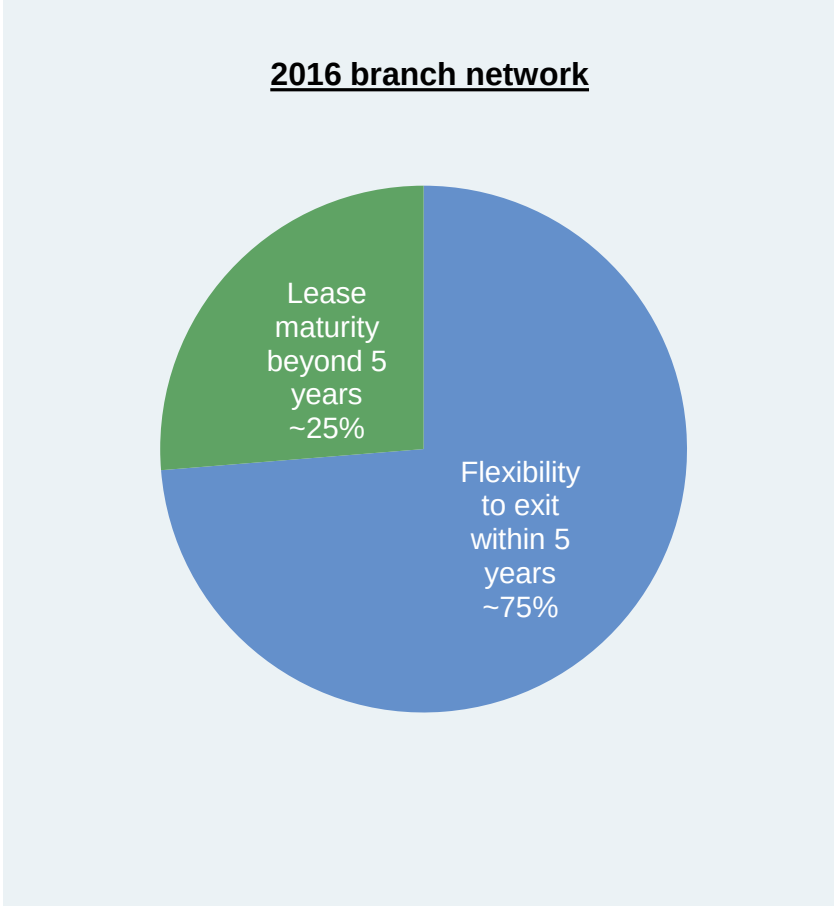
[1] 2016 represents 2016 exit (4Q16 annualized)
[2] Excludes mobile and online log-ins

As branch servicing volume decreases, we continue to optimize our network

Chase deposit share by market type[1]



Real estate optionality



[1] Source: FDIC 2016 Summary of Deposit survey per SNL Financial. Excludes all branches with $500mm+ in deposits in the last ten years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC. Markets defined as JPMC micro-market (~4K local markets across the U.S.)

We have a clear, focused strategy

What we've accomplished

- ✓ Primary bank for more than 70% of our consumer households[1]
- ✓ Leading brand perception in trust and advice
- ✓ Leading physical presence and digital capabilities
- ✓ Strong positioning with Millennials
- ✓ Success in promoting self-service options for everyday transactions

Where we're headed

1. Enhance financial solutions and advice
2. Continue to evolve our leading multi-channel experience
3. Promote operational excellence across our organization

Develop lifelong relationships with our clients by delivering a powerful combination of a trusted brand, leading multi-channel access, advice and financial solutions to meet their evolving needs

[1] Primary relationship based on internal JPMorgan Chase definition

Chase has built a powerful small business franchise

Chase for Business assets	
Online experience	#1 most visited banking portal in the U.S.[1]
Mobile offering	#1 rated mobile app for a large bank[2]
Branches	~5,250 branches and 10K+ specially-trained bankers
Deposits	#3 primary bank market share[3]
Business card	#2 small business credit card issuer by purchase volume[4]
Merchant services	#2 merchant acquirer[5]

We rank among the top 3 providers across all regions according to J.D. Power[6]

[1] Source: SimilarWeb.com as of December 2016 (formerly compete.com)
[2] Source: "2016 Mobile Banking Financial Institution Scorecard," Javelin Strategy & Research, May 2016. Ranking is among large banks
[3] Source: Barlow Research Associates, Primary Bank Market Share Database as of 4Q16. Rolling eight quarter average of small businesses with revenues of $100K – <$25mm
[4] Source: The Nilson Report, Issue 1089, June 2016. Data as of 2015 and AXP quarterly financial reports and presentations
[5] Source: The Nilson Report, Issue 1082, March 2016. Data as of 2015. Chase is the #1 wholly-owned merchant acquirer in the U.S. When volume from JVs and revenue share arrangements are included in First Data's volume, First Data holds #1 share position in the U.S.
[6] Source: "U.S. Small Business Satisfaction Study," J.D. Power, 2016

The JPMC platform offers a unique value proposition to small businesses

Business Banking customers leverage product offerings across the firm



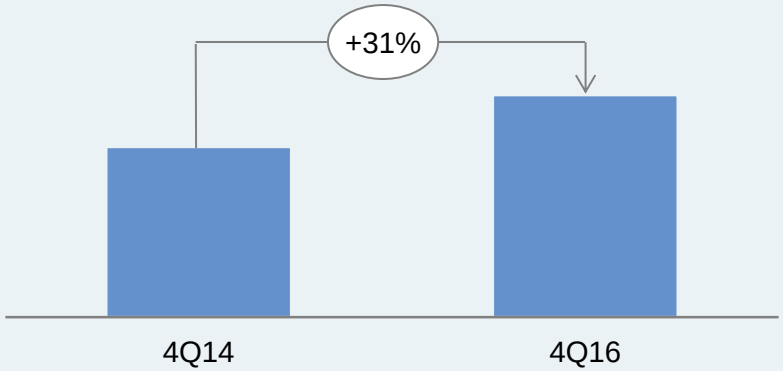
- ~75% of customers have a **Consumer Banking** account[1]
- ~30% of customers use **Chase Card Services**[1]
- 15% of Relationship Managed customers use **Commerce Solutions** products[1]
- 200+ customers grew into **Commercial Banking** clients in 2016, migrating ~$1B in deposits
- Business Banking customers use multiple **Treasury Services** products

[1] As of December 2016. U.S. customers only

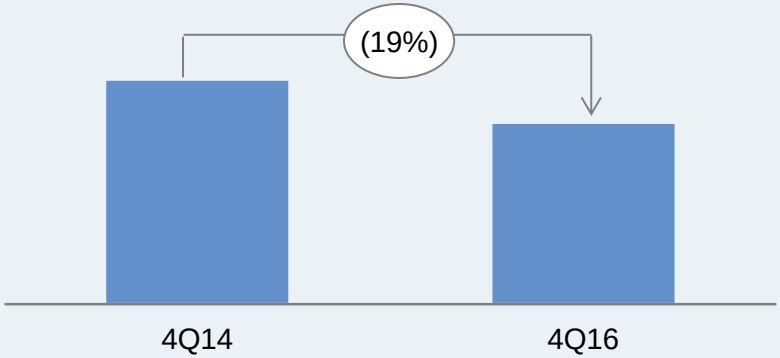
Omni-channel capabilities enable Chase to meet the needs of small businesses

Small businesses increasingly interact digitally, leading to a decrease in teller transactions

of mobile log-ins per business[1]

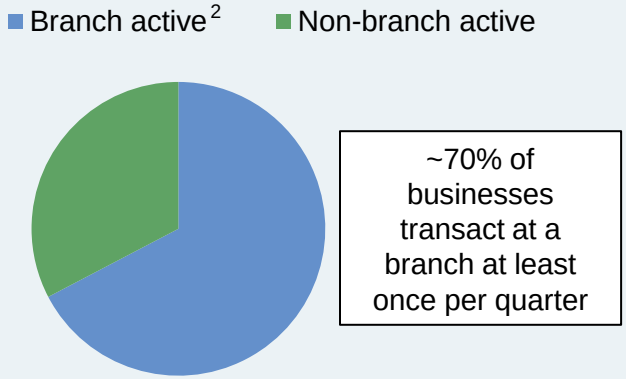


of teller transactions

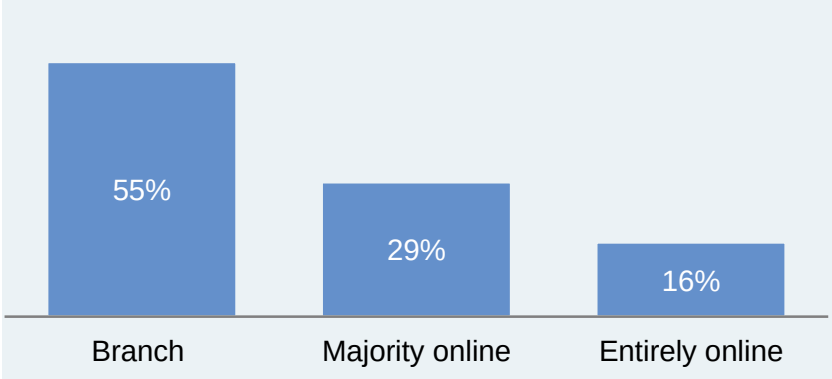


Small businesses continue to rely upon the branch network, particularly for complex interactions

Total branch activity in 4Q16



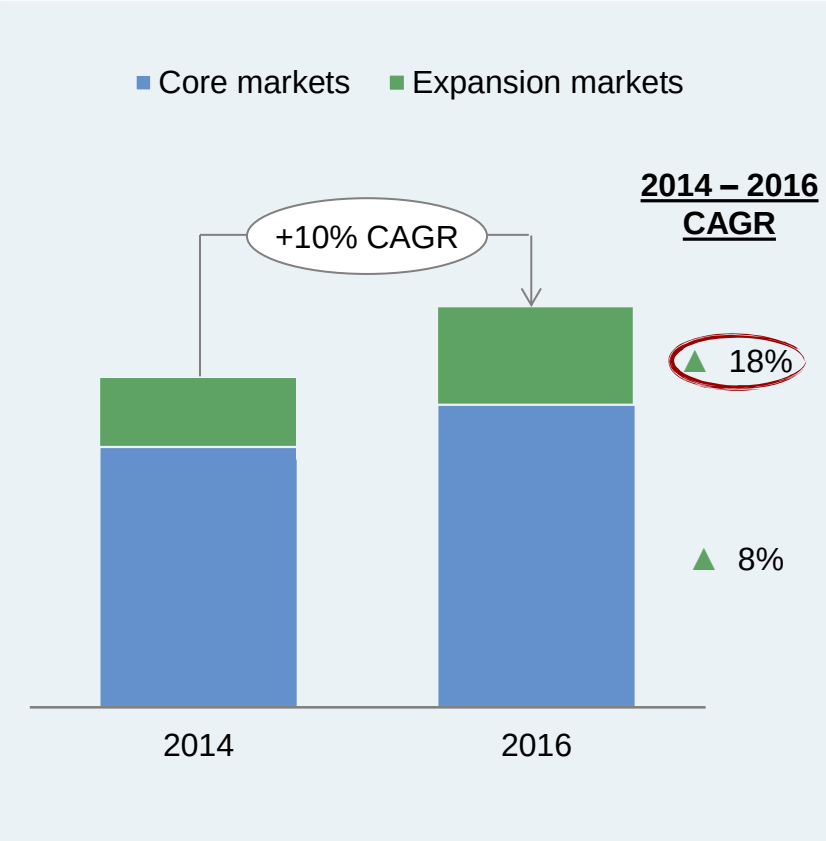
Industry-wide channel preference for account opening[3]



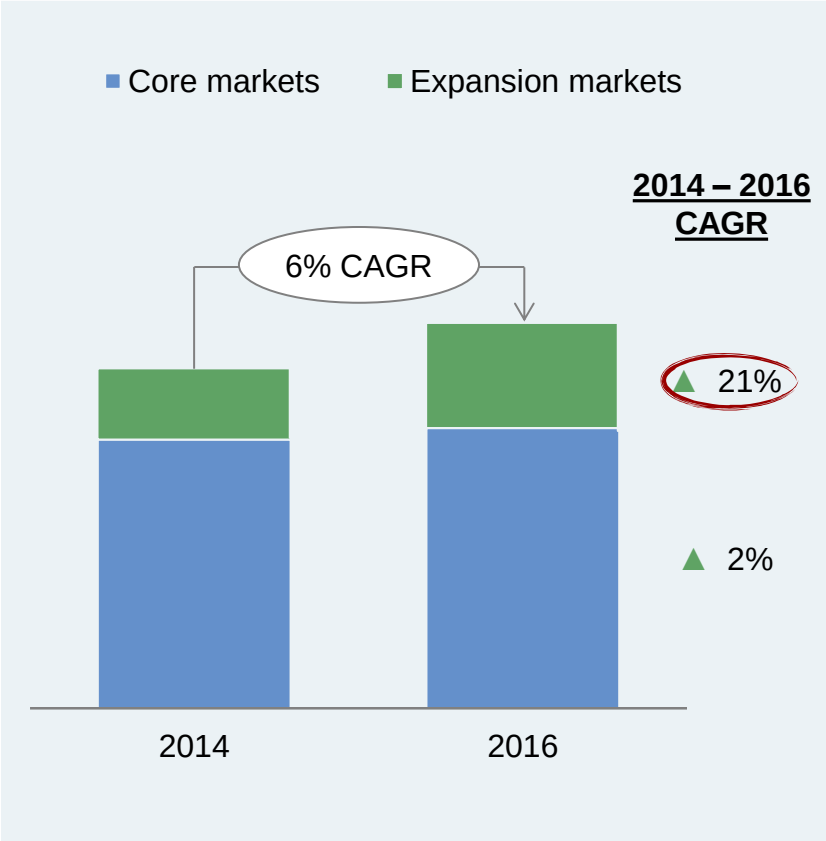
[1] Channel usage per customer active in channel
[2] Branch active defined by at least one branch transaction per quarter
[3] Source: "Digital Account Opening Study: New Customer Experience," Barlow Research Associates, October 2016. Small businesses with revenues of $100K – <$25mm. New checking accounts only

We have had strong performance since 2014 led by our expansion markets

Deposits average daily balance

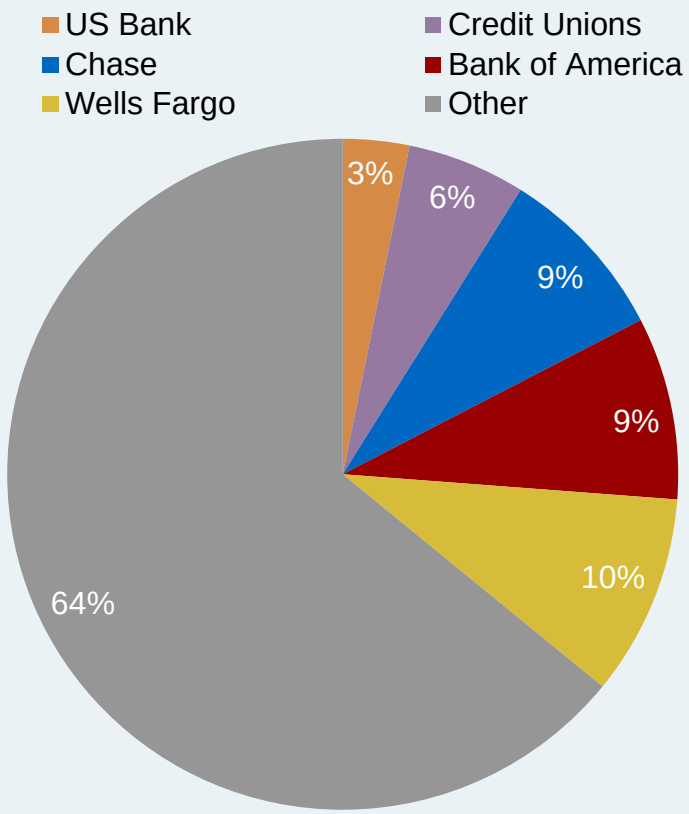


Loan average daily balance

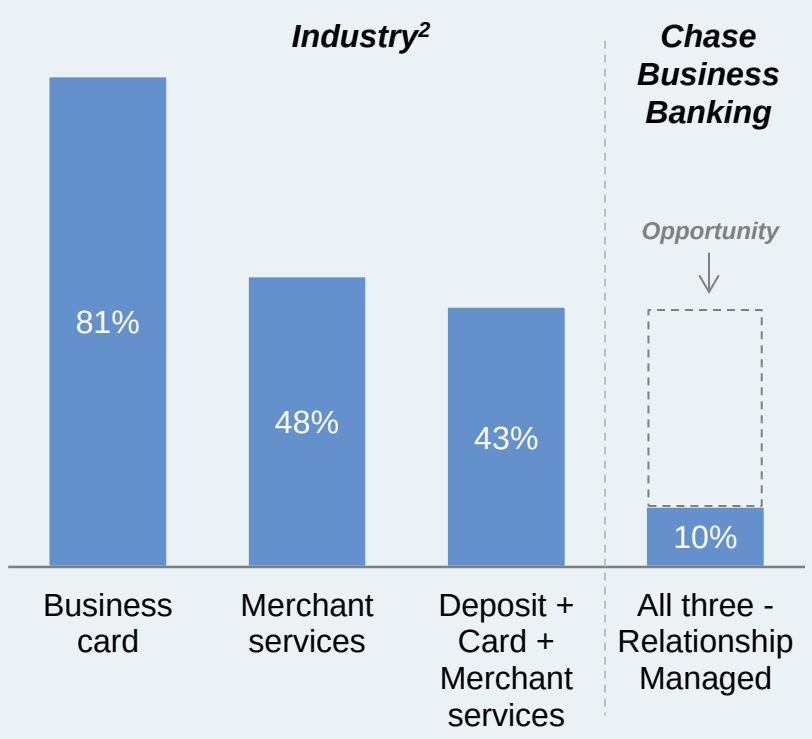


The small business market is fragmented, creating an opportunity for Chase to consolidate primary bank share and deepen product penetration

Small business primary bank market share[1]



Small business product usage



10% of Relationship Managed customers have all three products with Chase

28mm[3] small businesses contribute ~$120B[4] to financial services revenue in the U.S.

[1] Source: Barlow Research Associates, Primary Bank Market Share Database as of 3Q16. Rolling eight quarter average of small businesses with revenues of $100K – <$25mm. Numbers may not sum due to rounding

[2] Source: "Oliver Wyman Survey of Small Business Owners," Oliver Wyman, 2Q14. Based on surveys of small businesses with checking accounts and revenues of $100K+. Card includes either credit or charge card

[3] Source: "Small Business Profiles for the States and Territories," U.S. Small Business Administration, 2014

[4] Source: "Digital Models for a Digital Age: Transition and Opportunity in Small Business Banking," McKinsey & Co., 2013. Based on 2011 data of small businesses with revenues of <$20mm

Deepening engagement with Relationship Managed customers through multi-product relationships leads to stronger deposit and revenue growth

Impact of small businesses choosing Chase for multiple products

Business Banking + Chase Card[1]

ink℠ from CHASE

21% higher deposit balances

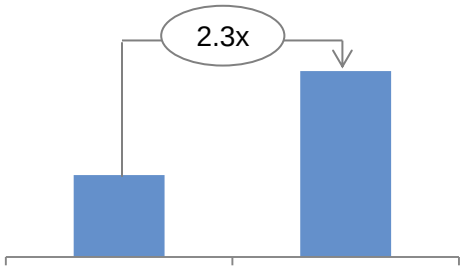
Business Banking + Chase Card + Merchant services[1]

ink℠ from CHASE

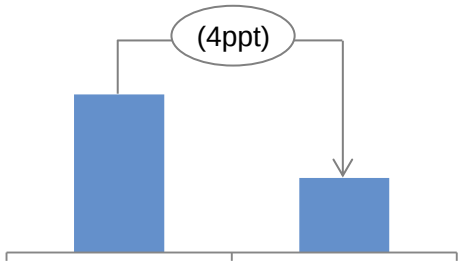


43% higher deposit balances

Higher revenue[2]



Lower attrition[3]



Note: "Relationship Managed" includes customers assigned to Business Banking Relationship Manager portfolios. They typically have larger balances, more complex products, and larger credit relationships. "Business Banking" includes Business deposits and Business loans/lines

[1] Deposits as of December 2016

[2] Revenue annualized from December 2016

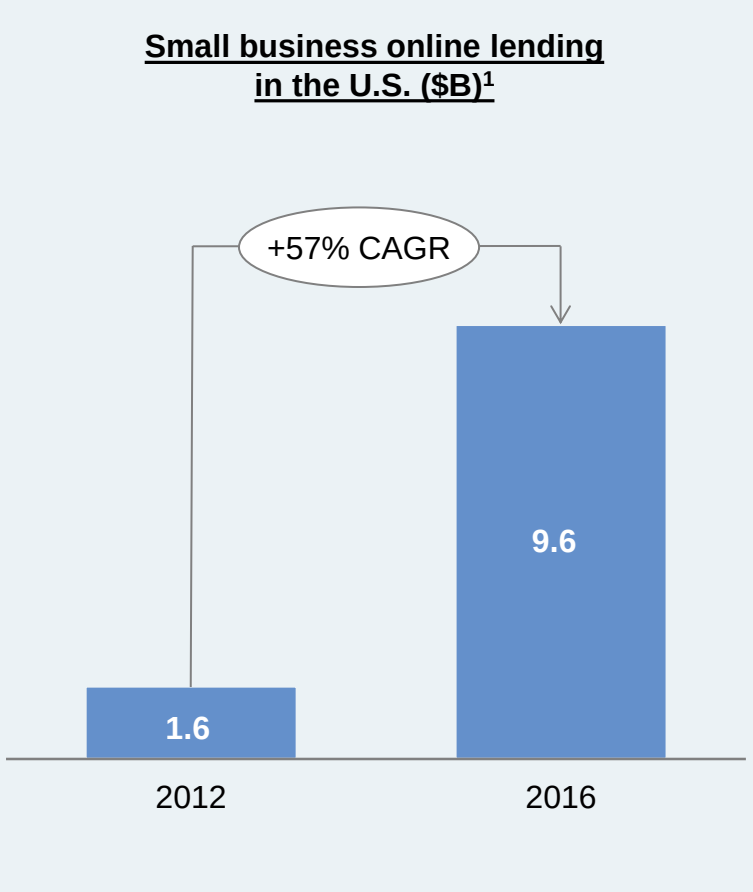
[3] Attrition based on P&L aligned bookends for December 2015 and December 2016 and Relationship Managed customers that closed all business accounts in the time period

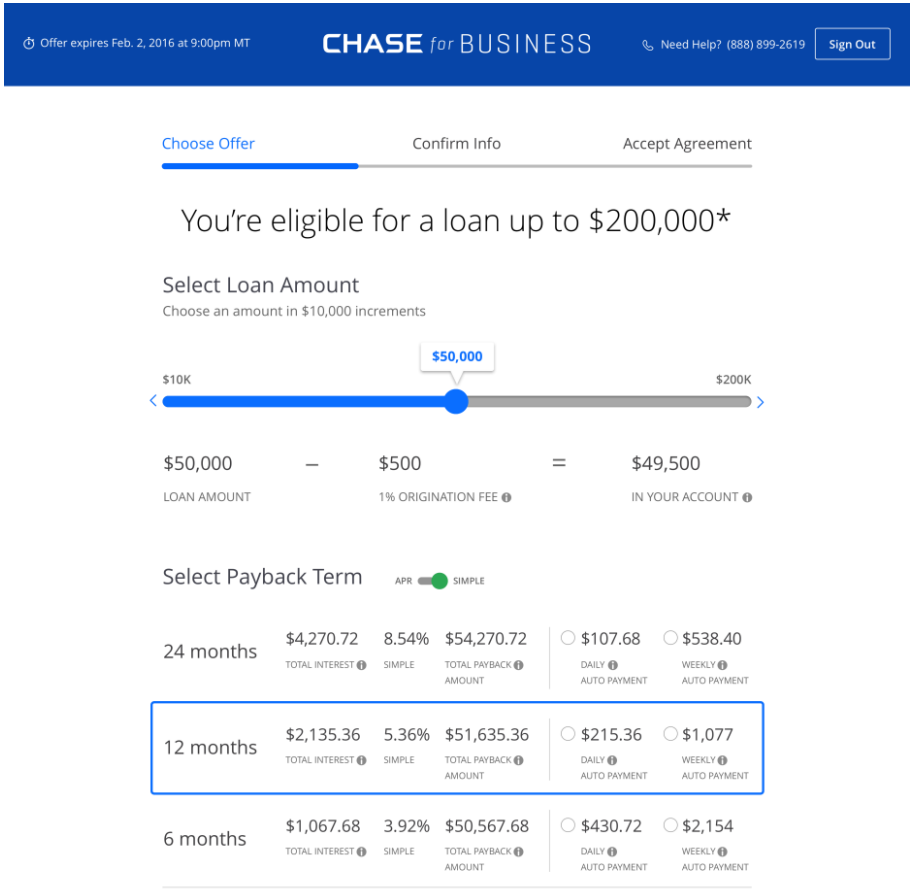
We continue to invest for further growth

Investment initiatives	
Digital platform	New Chase Business Online integrating Deposit, Payments, and Lending
Customer onboarding	Common application and underwriting
Business card	Expanded product set and improved credit decision time
Merchant services	Next-day funding and product simplification
Deposits and business loans	Chase Business Quick Capital (OnDeck)

Fintech collaboration can accelerate our growth

Chase Business Quick Capital

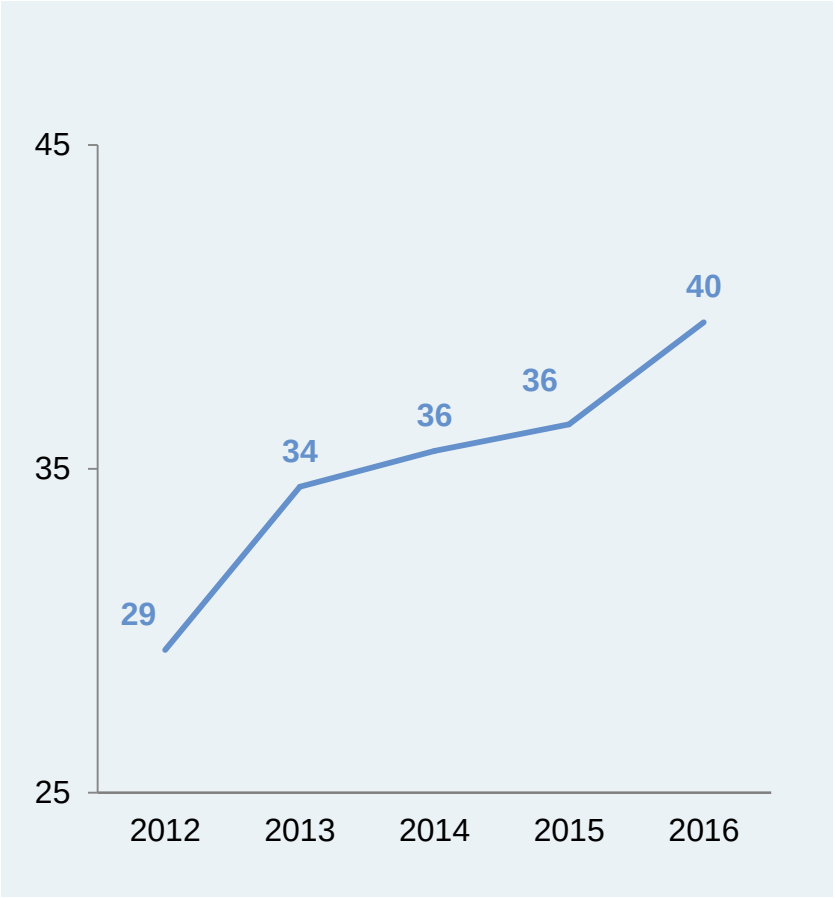




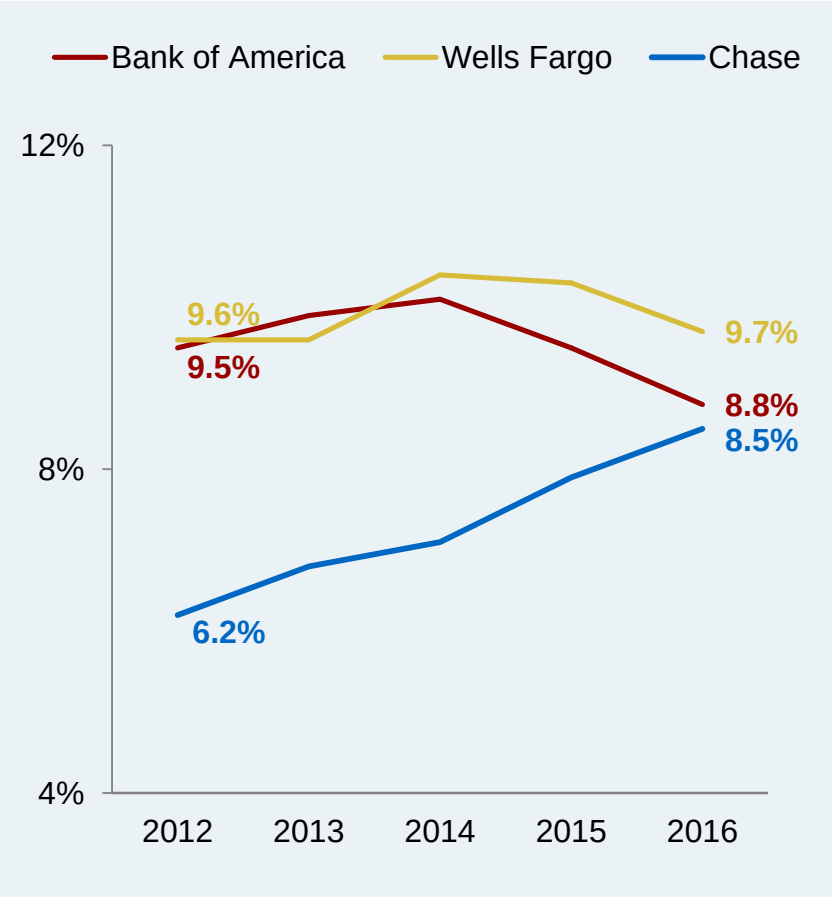
[1] Loan originations derived from internal JPMorgan Chase estimates using select financial reporting of online marketplace lenders and "Global Marketplace Lending: Disruptive Innovation in Financials," Morgan Stanley, May 2015

Our Net Promoter Score and primary bank market share show the momentum we have to build upon

Net Promoter Score[1]



Primary bank market share of top 3 banks[2]



We have grown primary bank market share from ~6% to ~9% over the past four years

[1] Net Promoter Score = % promoters minus % detractors. Survey transitioned from phone to email in September 2015. Survey design changed in 3Q16

[2] Source: Barlow Research Associates, Primary Bank Market Share Database as of 4Q16. Rolling eight quarter average of small businesses with revenues of $100K – <$25mm

We have competitive positions across our businesses, and opportunity remains to continue to grow

Powerful customer franchise	■ Consumer relationships with almost half of U.S. households ■ #1 in primary bank relationships within Chase footprint[1]
Firmwide capabilities to meet customer needs	■ Access to J.P. Morgan investment expertise, advice, and market perspectives ■ Business Banking access to Treasury Services cash management solutions
Attractive footprint	■ Branch network concentrated in the highest growth U.S. markets[2] ■ Over 50% of affluent U.S. households live within 2 miles of a Chase branch or ATM
Leading position in digital banking	■ #1 most visited banking portal in the U.S.[3] ■ #1 rated mobile banking app[4]
World-class payments franchise	■ #1 in total U.S. credit and debit payments volume[5] ■ #2 merchant acquirer[6]
National, scale lending businesses	■ #1 U.S. credit card issuer[7] and #1 U.S. co-brand credit card issuer[8] ■ #2 mortgage originator and servicer[9] ■ #3 bank auto lender[10]

Note: For footnoted information, refer to appendix

Agenda

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Consumer & Community Banking	1
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Mortgage Banking	24
Banking	37
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Notes on slide 7 – Our growing digitally-engaged customer base delivers strong performance metrics

1. Consumer Bank household channel segments are defined based on the tenure of the household as of the respective time period. For households with tenure of greater than 12 months, we use the following thresholds calculated over a year: Digitally-centric – <=4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Multi-channel – >4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Branch-centric – >4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year; Other – <=4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year. For households that are less than 12 months on books, we reduce the thresholds by 75% and track the household activity over a 3 month time period. Digitally-engaged households includes Digitally-centric households and Multi-channel households. All other households includes Branch-centric households and Other households
2. Attrition rates are based on Consumer Bank households with deposit products and includes households that closed all of their deposit products with Chase. Attrition rate for each Consumer Bank household channel segment is calculated by reclassifying households into segments each month based on their channel activity and by taking an average of the annualized monthly rates for the 12 months of 2016
3. Includes households that had at least one credit transaction and one debit transaction in 2016. Normalized for number of customers per household

Notes on slide 9 – We have substantially reduced expense, while continuing to prudently invest

Note: Numbers may not sum due to rounding; 2016 exit reflects 4Q16 annualized

1. Includes marketing, investments in select payments and digital projects, and select business growth and technology investments
2. Excludes non-core items, FDIC surcharge, and normalized legal expense at 2014 levels given the legal benefit in 2016
3. Includes employees and contractors
4. Reflects full-year 2016
5. Reflects 2016 exit vs. 2014
6. Reflects full-year 2016 vs. 2014

Notes on slide 39 – We continue to lead the industry in deposit balance growth

1. FDIC 2016 Summary of Deposits survey per SNL Financial. Excludes all branches with $500mm+ in deposits in any of the last ten years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC. National banks include Wells Fargo, Bank of America, Citi, and U.S. Bancorp. Super regional banks include all other top 50 banks by retail deposits (excluding deposits from branches with over $500mm in any of the last ten years)

Notes on slide 40 – We have established our physical presence in faster growing markets

1. FDIC 2016 Summary of Deposits survey per SNL Financial. Excludes all branches with $500mm+ in deposits in any of the last ten years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC. National banks include Wells Fargo, Bank of America, Citi, and U.S. Bancorp. Super regional banks include all other top 50 banks by retail deposits (excluding deposits from branches with over $500mm in any of the last ten years). Chase markets are defined as core based statistical areas (CBSAs) with a Chase branch. Non-Chase markets are defined as CBSAs without a Chase branch. Chase top 10 markets defined as top ten markets by deposit balances in 2016. Chase $ deposit growth rank based on total dollar increase in deposits from 2012-2016. Chase share of $ deposit growth represents 2012-2016 increase in Chase deposits as a percentage of 2012-2016 total increase in deposits in each specified market. Chase growth rate versus the industry ex-Chase represents Chase annual growth rate from 2012-2016 in the specified market divided by the specified market ex-Chase annual growth rate from 2012-2016

Notes on slide 41 – Three-quarters of our growth has come from customers who use our branches

1. Represents growth from 4Q12 to 4Q16. Consumer Bank household channel segments are defined based on the tenure of the household as of the respective time period. For households with tenure of greater than 12 months, we use the following thresholds calculated over a year: Digitally-centric – <=4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year. Multi-channel – >4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year. Branch-centric – >4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year. Other – <=4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year. For households with fewer than 12 months on books, we reduce the thresholds by 75% and track the household activity over a 3 month time period
2. Generations defined by head of household birth years: Millennials – born 1981 – 1997. Gen X – born 1965 – 1980. Baby Boomers – born 1946 – 1964. Silent Generation – born 1928 – 1945
3. Average visits per quarter for those who used the branch in 4Q16

Notes on slide 56 – We have competitive positions across our businesses, and opportunity remains to continue to grow

1. Kantar TNS 4Q16 Retail Banking Monitor. Data is based on total U.S. (5K surveys per quarter) and Chase footprint (~2.8K surveys per quarter); Calculations derived from the following questions: "With which banks do you currently do business?" and "Which do you consider to be your main or primary bank?"
2. Highest growth U.S. markets refers to top 30 core based statistical areas by deposit balance growth from 2012 to 2016, per SNL Financial
3. SimilarWeb.com as of December 2016 (formerly compete.com)
4. "2016 Mobile Banking Financial Institution Scorecard," Javelin Strategy & Research, May 2016. Ranking is among large banks
5. The Nilson Report, Issue 1086, May 2016. Data as of 2015
6. The Nilson Report, Issue 1082, March 2016. Data as of 2015. Chase is the #1 wholly-owned merchant acquirer in the U.S. When volume from JVs and revenue share arrangements are included in First Data's volume, First Data holds #1 share position in the U.S.
7. Based on 4Q16 sales volume and loans outstanding disclosures by peers (C, BAC, COF, AXP, DFS) and internal JPMorgan Chase estimates. Sales volume excludes private label and Commercial Card. AXP reflects the U.S. Consumer segment and internal JPMorgan Chase estimates for AXP's U.S. small business sales. Outstandings exclude private label, AXP Charge Card, and Citi Retail Cards
8. "Credit Card Monitor 2016: Cobrand Market Shares by Issuer," Phoenix, for 12-month period ending October 2016. Based on card accounts, revolving balance dollars and spending dollars
9. Inside Mortgage Finance as of 4Q16 for Servicer and Originator rankings
10. Experian AutoCount data for full-year 2016; bank auto lenders are non-captive auto lenders

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

ANNUAL REPORT

2017



JPMorgan Chase & Co.

Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio data and headcount)	2017	2016	2015
Reported basis[a]			
Total net revenue	**$ 99,624**	$ 95,668	$ 93,543
Total noninterest expense	**58,434**	55,771	59,014
Pre-provision profit	**41,190**	39,897	34,529
Provision for credit losses	**5,290**	5,361	3,827
Net income	**$ 24,441**	$ 24,733	$ 24,442
Per common share data			
Net income per share:			
Basic	**$ 6.35**	$ 6.24	$ 6.05
Diluted	**6.31**	6.19	6.00
Cash dividends declared	**2.12**	1.88	1.72
Book value	**67.04**	64.06	60.46
Tangible book value (TBVPS)[b]	**53.56**	51.44	48.13
Selected ratios			
Return on common equity	**10%**	10%	11%
Return on tangible common equity (ROTCE)[b]	**12**	13	13
Common equity Tier 1 capital ratio[c]	**12.1**	12.2	11.6
Tier 1 capital ratio[c]	**13.8**	13.9[d]	13.3
Total capital ratio[c]	**15.7**	15.2	14.7
Selected balance sheet data (period-end)			
Loans	**$ 930,697**	$ 894,765	$ 837,299
Total assets	**2,533,600**	2,490,972	2,351,698
Deposits	**1,443,982**	1,375,176	1,279,715
Common stockholders' equity	**229,625**	228,122	221,505
Total stockholders' equity	**255,693**	254,190	247,573
Market data			
Closing share price	**$ 106.94**	$ 86.29	$ 66.03
Market capitalization	**366,301**	307,295	241,899
Common shares at period-end	**3,425.3**	3,561.2	3,663.5
Headcount	**252,539**	243,355	234,598

(a) Results are presented in accordance with accounting principles generally accepted in the United States of America, except where otherwise noted.
(b) TBVPS and ROTCE are each non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Financial Performance Measures on pages 52–54.
(c) The ratios presented are calculated under the Basel III Advanced Fully Phased-In Approach, and they are key regulatory capital measures. For further discussion, see "Capital Risk Management" on pages 82-91.
(d) The prior period ratio has been revised to conform with the current period presentation.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $2.5 trillion and operations worldwide. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, and asset management. A component of the Dow Jones Industrial Average, JPMorgan Chase & Co. serves millions of customers in the United States and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands.

Information about J.P. Morgan's capabilities can be found at jpmorgan.com and about Chase's capabilities at chase.com. Information about JPMorgan Chase & Co. is available at jpmorganchase.com.

46.7
MILLION DIGITAL CUSTOMERS

46.7 million digital customers make us the #1 most visited bank website with the most mobile banking customers

$900+
BILLION

$900+ billion in debit and credit card sales volume

$1.75
BILLION

$1.75 billion in philanthropic investments over the next five years

$200
BILLION

$200 billion in clean energy financing by 2025

TOP EMPLOYER

Named a top company by LinkedIn for where people want to work

#1

#1 on *Fortune*'s Change the World list

400

Opening 400 new branches in 15-20 markets over the next five years

100%

Renewable energy for 100% of the firm's global power by 2020

$5
TRILLION

$5 trillion daily value of wholesale payments across 120 currencies

$1.3
TRILLION

$1.3 trillion in assets under management shifted to J.P. Morgan by BlackRock as part of the largest custody mandate in history

TOP 50

Top 50 metro areas covered by Commercial Banking following expansion into new locations

86%

86% of long-term mutual fund assets under management ranked in top two quartiles over 10-year period

Dear Fellow Shareholders,



Jamie Dimon,
Chairman and
Chief Executive Officer

Once again, I begin this letter with a sense of pride about JPMorgan Chase. As I look back on last year – in fact, the last decade – it is remarkable how well our company has performed. And I'm not only talking about our strong financial performance – but also about how much we have accomplished to help our clients, customers and communities all around the world. Ours is an exceptional company with an extraordinary heritage and a promising future.

We continue to make excellent progress around technology, risk and controls, innovation, diversity and reduced bureaucracy. We've helped communities large and small – by doing what we do best (lending, investing and serving our clients); by creatively expanding certain flagship Corporate Responsibility programs, including the Entrepreneurs of Color Fund, The Fellowship Initiative and our Service Corps; and by applying our successful Detroit investment model to neighborhood revitalization efforts in the Bronx in New York City, Chicago and Washington, D.C.

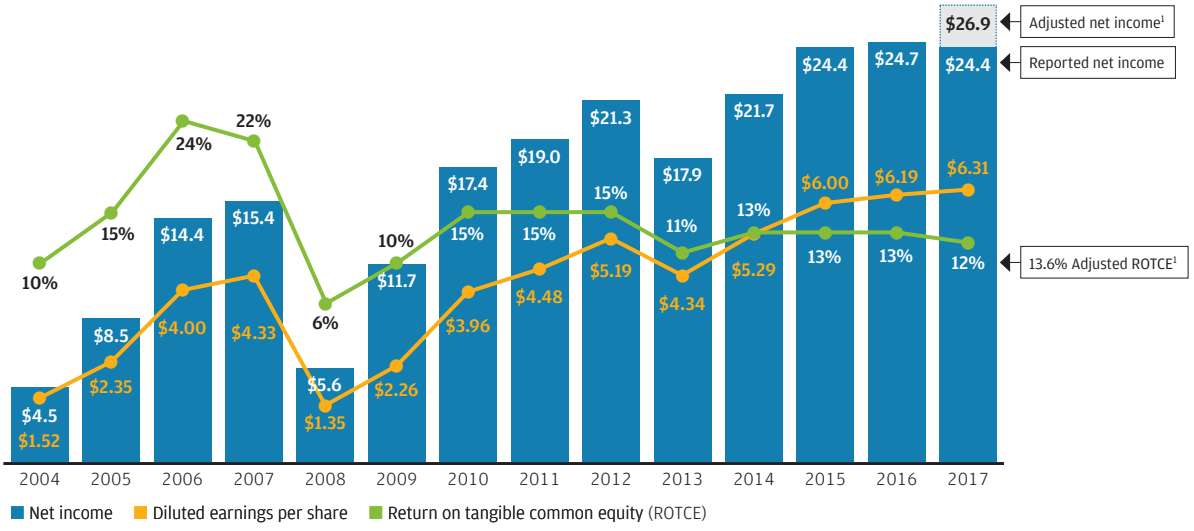
Throughout a period of profound political and economic change around the world, our company has been steadfast in our dedication to the clients, communities and countries we serve while earning a fair return for our shareholders.

2017 was another record year across many measures for our company as we added clients and customers and delivered record earnings per share. We earned $24.4 billion in net income on revenue[1] of $103.6 billion (if we exclude the tax charge at year-end, 2017 net income would have been a record $26.9 billion), reflecting strong underlying performance across our businesses. We now have delivered record results in seven of the last eight years, and we have confidence that we will continue to deliver in the future.

[1] Represents managed revenue

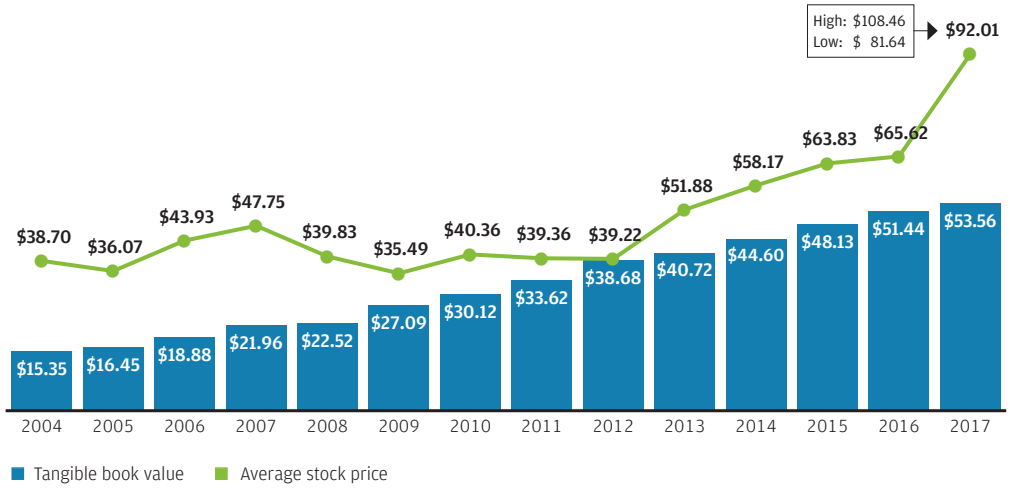
Earnings, Diluted Earnings per Share and Return on Tangible Common Equity 2004–2017

($ in billions, except per share and ratio data)



[1] Adjusted results exclude a $2.4 billion decrease to net income as a result of the enactment of the Tax Cuts and Jobs Act (TCJA)

Tangible Book Value and Average Stock Price per Share 2004–2017



As you know, we believe tangible book value per share is a good measure of the value we have created for our shareholders. If our asset and liability values are appropriate — and we believe they are — and if we can continue to deploy this capital profitably, we now think that it can earn approximately 17% return on tangible equity for the foreseeable future. Then, in our view, our company should ultimately be worth considerably more than tangible book value. The chart on the bottom of page 3 shows that tangible book value "anchors" the stock price.

Bank One/JPMorgan Chase & Co. tangible book value per share performance vs. S&P 500

	Bank One (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since becoming CEO of Bank One (3/27/2000–12/31/2017)[1]			
Compounded annual gain	11.8%	5.2%	6.6%
Overall gain	566.3%	147.3%	419.0%

	JPMorgan Chase & Co. (A)	S&P 500 (B)	Relative Results (A) – (B)
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2017)			
Compounded annual gain	12.7%	8.8%	3.9%
Overall gain	403.5%	210.4%	193.1%

Tangible book value over time captures the company's use of capital, balance sheet and profitability. In this chart, we are looking at heritage Bank One shareholders and JPMorgan Chase & Co. shareholders. The chart shows the increase in tangible book value per share; it is an after-tax number assuming all dividends were retained vs. the Standard & Poor's 500 Index (S&P 500), which is a pre-tax number with dividends reinvested.

[1] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One.

In the last five years, we have bought back nearly $40 billion in stock. In prior years, I explained why buying back our stock at tangible book value per share was a no-brainer. Six years ago, we offered an example of this, with earnings per share and tangible book value per share being substantially higher than they otherwise would have been just four years later. While we prefer buying back our stock at tangible book value, we think it makes sense to do so even at or above two times tangible book value for reasons similar to those we've expressed in the past. If we buy back a big block of stock this year, we would expect (using analyst earnings estimates for the next five years) earnings per share in five years to be 2%–3% higher and tangible book value to be virtually unchanged.

We want to remind our shareholders that we ***much*** prefer to use our capital to grow than to buy back stock. Buying back stock should only be considered when we either cannot invest (sometimes that's a function of regulatory policies) or when we are generating excess, unusable capital. We currently have excess capital, but due to recent tax reform and a more constructive regulatory environment, we hope, in the future, to use more of our excess capital to grow our businesses, expand into new markets and support our employees.

Stock total return analysis

	Bank One	S&P 500	S&P Financials Index
Performance since becoming CEO of Bank One (3/27/2000–12/31/2017)[1]			
Compounded annual gain	12.4%	5.2%	4.1%
Overall gain	691.5%	147.3%	102.8%
	JPMorgan Chase & Co.	**S&P 500**	**S&P Financials Index**
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2017)			
Compounded annual gain	10.7%	8.8%	3.6%
Overall gain	294.2%	210.4%	61.6%
Performance for the period ended December 31, 2017			
Compounded annual gain			
One year	26.7%	21.8%	22.1%
Five years	22.7%	15.8%	18.2%
Ten years	12.0%	8.5%	3.7%

These charts show actual returns of the stock, with dividends reinvested, for heritage shareholders of Bank One and JPMorgan Chase & Co. vs. the Standard & Poor's 500 Index (S&P 500) and the Standard & Poor's Financials Index (S&P Financials Index).

[1] On March 27, 2000, Jamie Dimon was hired as CEO of Bank One.

Our stock price is a measure of the progress we have made over the years. This progress is a function of continually making important investments, in good times and not-so-good times, to build our capabilities – people, systems and products. These investments drive the future prospects of our company and position it to grow and prosper for decades. Whether looking back over five years, 10 years or since the Bank One/JPMorgan Chase merger (approximately 13 years ago), our stock has significantly outperformed the Standard & Poor's 500 Index (S&P 500) and the S&P Financials Index. And this growth came during a time of unprecedented challenges for banks – both the Great Recession and the

extraordinarily difficult legal, regulatory and political environment that followed. We have long contended that these factors explained why bank stock price/earnings ratios were appropriately depressed. And we believe the anticipated reversal of many negatives and an increasingly more favorable business environment, coupled with our sustained, strong business results, are among the reasons our stock price has done so well this past year.

We do not worry about the stock price in the short run, and we do not worry about quarterly earnings. Our mindset is that we consistently build the company – if you do the right things, the stock price will take care of itself. In the next section, I discuss in more detail how we think about building shareholder value for the long run while also taking care of customers, employees and communities.

JPMorgan Chase stock is owned by large institutions, pension plans, mutual funds and directly by individual investors. However, it is important to remember that in almost all cases, the ultimate owner is an individual. Well over 100 million people in the United States own stocks, and a large percentage of them, in one way or another, own JPMorgan Chase stock. Many of these people are veterans, teachers, police officers, firefighters, retirees, or those saving for a home, school or retirement. Your management team goes to work every day recognizing the enormous responsibility that we have to perform for our shareholders.

In this letter, I discuss the issues highlighted below – which describe many of our successes and opportunities, as well as our challenges and responses.

I. JPMorgan Chase Business Strategies — Page 8

1. How has the company grown? — Page 8
2. How will the company continue to grow? What are the organic growth opportunities? — Page 10
3. Why is organic growth a better way to grow — and why is it sometimes difficult? — Page 12
4. Is there a conflict between building shareholder value vs. serving customers, taking care of employees and lifting up communities? — Page 13
5. Transparency, financial discipline and a fortress balance sheet. Why is this discipline so important? — Page 18
6. What risks worry us the most? And what could go wrong? — Page 21
7. How is the company dealing with bureaucracy and complacency that often infect large companies? — Page 26
8. What are the firm's views on succession? — Page 28

II. Public Policy — Page 29

1. What has gone wrong in public policy? — Page 30
2. Poor public policy — how has this happened? — Page 32
3. We can fix this problem through intelligent, thoughtful, analytical and comprehensive policy. — Page 33
4. The need for solutions through collaborative, competent government. — Page 34
5. A competitive business tax system is a key pillar of a growth strategy. — Page 35
6. We should reform and expand the Earned Income Tax Credit and invest in the workforce of the future. — Page 37
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10. Global engagement, trade and immigration — America's role in the world is critical. — Page 44

I. JPMORGAN CHASE BUSINESS STRATEGIES

Since our business leaders describe their businesses later in this report, I am not going to be repetitive within this section. I encourage you to read their letters following this Letter to Shareholders. Instead, in this section, I deal with some critical themes around how we run this company – in good times and in bad times – and how we are continuing to build for what we think will be a bright future.

1. How has the company grown?

Below is a powerful representation of how we have grown and built client franchises over time.

You can see from the numbers circled within the chart below that we have grown our market share fairly substantially in most of our businesses. In some cases, these market

Client Franchises Built Over the Long Term

		2006	2016	2017	
Consumer & Community Banking	Deposits market share[1]	3.6%	8.3%	8.7%	■ Relationships with ~50% of U.S. households ■ Industry-leading deposit growth[12] ■ #1 U.S. credit card issuer[13] ■ #1 U.S. co-brand credit card issuer[14] ■ #1 U.S. credit and debit payments volume[15] ■ #2 merchant acquirer[16]
	# of top 50 Chase markets where we are #1 (top 3)	11 (25)	14 (38)	16 (40)	
	Average deposits growth rate	8%	10%	9%	
	Active mobile customers growth rate	NM	16%	13%	
	Credit card sales market share[2]	15.9%	21.5%	22.4%	
	Merchant processing volume[3] ($B)	$661	$1,063	$1,192	
	# of branches	3,079	5,258	5,130	
	Client investment assets ($B)	~$80	$235	$273	
	Business Banking primary market share[24]	5.1%	8.5%	8.7%	
Corporate & Investment Bank	Global Investment Banking fees[4]	#2	#1	#1	■ >80% of Fortune 500 companies do business with us ■ #1 in both N.A. and EMEA Investment Banking fees[17] ■ #1 in Global Long-Term Debt and Loan Syndications[17] ■ #1 in FICC productivity[18] ■ Top 3 Custodian globally with AUC of $23.5T[19] ■ #1 in USD payment volumes with 20% share in 2017[20] ■ In Total Markets, J.P. Morgan has ranked #1 in each year since 2012[25] ■ Equities and Prime are now ranked co-#1[25] ■ J.P. Morgan Research ranked as the #1 Global Research Firm[26]
	Market share[4]	8.7%	7.9%	8.1%	
	Total Markets revenue[5]	#8	#1	#1	
	Market share[5]	6.3%	11.2%	11.0%	
	FICC[5]	#7	#1	#1	
	Market share[5]	7.0%	11.7%	11.4%	
	Equities[5]	#8	#2	co-#1	
	Market share[5]	5.0%	10.1%	10.3%	
	Assets under custody (AUC)($T)	$13.9	$20.5	$23.5	
Commercial Banking	# of top 50 MSAs with dedicated teams	26	47	50	■ Top 3 in overall Middle Market, large Middle Market and Asset Based Lending Bookrunner[21] ■ Industry-leading credit performance – 6th straight year of net recoveries or single digit NCO rate
	Bankers	1,203	1,642	1,766	
	New relationships (gross)	NA	911	1,062	
	Gross Investment Banking revenue ($B)	$0.7	$2.3	$2.3	
	Average loans ($B)	$53.6	$179.4	$198.1	
	Average deposits ($B)	$73.6	$174.4	$177.0	
	Multifamily lending[7]	#28	#1	#1	
Asset & Wealth Management	Mutual funds with a 4/5 star rating[8]	119	220	235	■ 86% of 10-year long-term mutual fund assets under management (AUM) in top 2 quartiles[22] ■ #2 in 5-year cumulative long-term client asset flows among publicly traded peers ■ #1 Private Bank in N.A. and LatAm[23] ■ Revenue and long-term AUM growth >90% since 2006
	Ranking of long-term client asset flows[9]	NA	#2	#2	
	Active AUM market share[10]	1.8%	2.5%	2.4%	
	North America Private Bank *(Euromoney)*	#1	#1	#1	
	Client assets ($T)	$1.3	$2.5	$2.8	
	Client assets market share[11]	3%	4%	4%	
	Average loans ($B)	$26.5	$112.9	$123.5	
	# of Wealth Management client advisors	1,506	2,504	2,605	

For information on footnotes 1-23, refer to slides 105-106 in the 2018 JPMorgan Chase Strategic Update presentation, which is available on JPMorgan Chase & Co.'s website (https://www.jpmorganchase.com/corporate/investor-relations/document/3cea4108_strategic_update.pdf), under the heading Investor Relations, Events & Presentations, JPMorgan Chase 2018 Investor Day, and on Form 8-K as furnished to the U.S. Securities and Exchange Commission (SEC) on February 27, 2018, which is available on the SEC's website (www.sec.gov).

[24] Source: Barlow Research Associates, Primary Bank Market Share Database as of 4Q17. Rolling eight quarter average of small businesses with revenues of $100,000 - <$25 million

[25] Source: Preliminary Coalition Global Industry Revenue Pool based on internal business structure, 2017

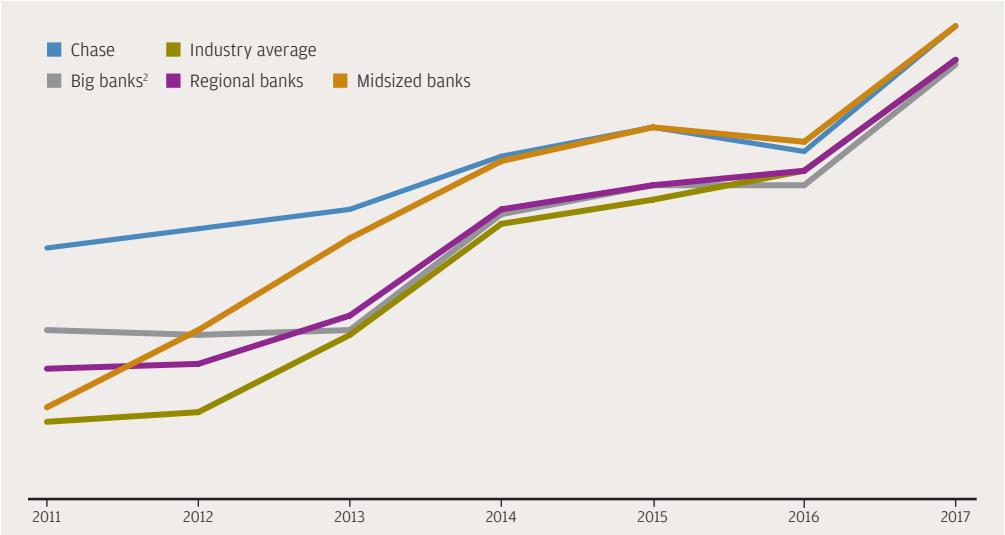
[26] Source: *Institutional Investor* magazine survey of large investors, 2017

NM = Not meaningful
NA = Not available
FICC = Fixed Income, Currencies and Commodities
N.A. = North America
EMEA = Europe/Middle East/Africa
MSAs = Metropolitan Statistical Areas
LatAm = Latin America/Caribbean
B = Billions
T = Trillions

share increases were due to our acquisitions of Bear Stearns and Washington Mutual. But in all cases, this growth is driven by consistent and disciplined investment in our businesses. The chart below shows how we try to measure customer satisfaction in multiple ways. For the most part, we have seen a rise in these scores as well. It is a given that you will not grow your share – unless you are satisfying your customers – and we know they can always walk across the street to be served by another bank.

Increasing Customer Satisfaction

U.S. retail banking satisfaction[1]



[1] Source: J.D. Power U.S. Retail Banking Satisfaction Study, 2017
[2] Big banks defined as top six U.S. banks

Other important metrics

Increasing market share is a sign of increasing customer satisfaction

Consumer & Community Banking

- Chase continues to lead the big banks and the industry average in U.S. Consumer Bank Customer Satisfaction studies including being ranked #1 in retail banking advice in the U.S. and ranked #2 in the first ever National Bank study[1]
- Customer satisfaction, measured by Net Promoter Scores ("NPS"), has continued to increase across most of our businesses since we brought CCB together five years ago. NPS increased year over year in Merchant Services, Business Banking, Home Lending, and Auto
- Digitally-engaged customers who bank with Chase are more satisfied than all other households, with higher NPS (+19%), higher retention rates (+10 percentage points), and higher card spend (+118%)
- Digitally-engaged established customers who use Chase as their primary bank also have 40% more deposits and investments with us

Corporate & Investment Bank

- Highest ever client satisfaction and retention levels for Custody & Fund Services

Commercial Banking

- NPS for Commercial Banking Middle Market clients increased from 35 to 45 from 2011 to 2017[2]
- #1 in overall satisfaction, perceived satisfaction, customer relationships and transactions/payments processing[3]

Asset & Wealth Management

- J.P. Morgan has ranked as the #1 private bank in the U.S. for nine consecutive years and #1 in Latin America for five consecutive years[4]
- J.P. Morgan has ranked as the Leading Pan-European Fund Management Firm for eight consecutive years[5]

[1] Source: J.D. Power 2018 U.S. Retail Banking Advice Study & 2017 National Bank Satisfaction Study
[2] Source: Greenwich Associates Commercial Banking Study, 2017
[3] Source: CFO magazine's Commercial Banking Survey, 2017
[4] Source: *Euromoney,* 2018
[5] Source: Thomson Reuters, 2017

2. How will the company continue to grow? What are the organic growth opportunities?

We have good market share in most businesses, but we see organic growth opportunities almost everywhere – some large and some small. Following are a few examples:

Consumer & Community Banking

- We recently announced that we will start to expand the consumer branch business into cities like Boston, Philadelphia and Washington, D.C. Over the next five years, we hope to expand to another 15-20 new markets. We know the competition is tough, but we have much to offer. When JPMorgan Chase comes to town, we come not just with our consumer branches but also with mortgages, investments, credit cards, private banking, small and midsized business banking, government business and corporate responsibility initiatives to support our communities.
- In addition, this year we are rolling out many new exciting products and have made several improvements around the customer's experience, including a fully mobile bank pilot (Finn), digital account openings, facial recognition in our app, the Amazon Prime Rewards Visa card and a simpler online application for Business Banking customers.
- We also are adding many tools that will help our customers manage their financial affairs. For example, in the credit card business, we will be allowing our customers to review and decide how and where they want their cards and credit lines to be used. In Consumer Banking, we are adding financial planning tools and insights that help customers make the most of their money – and there's more coming.

Corporate & Investment Bank

- We see growth opportunities even in Fixed Income, Currencies and Commodities, where we already have the #1 market share at 11.4%. There may be some underlying growth as the capital markets of the world grow, even though this is partially offset by declining margins like we have experienced over the last 30 years. However, we see opportunities to gain share in various products and in certain regions where we have low share.
- This opportunity would be true for Investment Banking, too. Country by country and industry by industry, there are still plenty of opportunities to increase our low market share. For example, we have 10% share in the United States but less than 5% share in Asia.
- In Treasury Services and Custody, where our market shares are 4.7% and 8.0%, respectively, we believe we can grow significantly by adding bankers, building better technology, entering new countries, building better products and continuing to do a great job for clients. In this business, while you make large initial investments in order to grow, when you gain clients, they usually stick with you for a long time.
- Over time, we do expect to expand our Corporate & Investment Bank into new countries, which will benefit all the businesses within this franchise.

Commercial Banking

- This past year, Commercial Banking has completed its expansion into the top 50 markets in the United States – this will drive growth for decades. And remember, when Commercial Banking opens its doors, it also helps drive the growth of our Private Bank and the Corporate & Investment Bank businesses.
- Commercial Banking has added many specialized industry bankers to better serve those specific segments.

Asset & Wealth Management

- In the United States, our share of the ultra-high-net-worth market ($10 million or greater) is 8%. We believe we have a superior business and that we can grow our share by essentially adding bankers, branches and better products.
- In the high-net-worth business ($3 million to $10 million) and the Chase affluent business ($500,000 to $5 million), our market shares are only 1% and 4%, respectively. We have no doubt that we can grow by adding bankers and locations, particularly because we have some exciting new products coming soon. There is no reason we can't more than double our share over the next 10 years.
- We are also adding new products, like index funds and exchange-traded funds (ETF), that we believe will help drive growth.

Across the company

In addition, we are undertaking many initiatives across the company that will help grow our businesses and better serve our customers.

- On the payments front, we have developed multiple products to make wholesale payments better, easier and faster. We are rolling out these products across our platforms, and they should help us solidify and grow our position.
- On the consumer side, we have introduced Chase Pay, the digital equivalent to using a debit or credit card, which allows customers to pay online or in-store with their mobile phone. We also introduced Zelle, a real-time consumer-to-consumer payments system, which allows customers to easily, safely and immediately send money to their friends and family. We expect these products to drive lots of customer interactions and make our payments offerings compelling, even as some very smart fintech competitors emerge.
- Across the company – not just in technology – we have thousands of employees who are data scientists or have advanced degrees in science, technology, engineering and math. Of the nearly 50,000 people in technology at the company, more than 31,000 are in development and engineering jobs, and more than 2,500 are in digital technology. Think of these talented individuals as driving change across the company.
- Artificial intelligence, big data and machine learning are helping us reduce risk and fraud, upgrade service, improve underwriting and enhance marketing across the firm. And this is just the beginning.
- Our shared technology infrastructure – our networks, data centers, and the public and private cloud – decreases costs, enhances efficiency and makes all our businesses more productive. In addition, this allows us to embrace the fact that every business and merchant has its own software and also wants easy, integrated access to our products and services. We are delivering on that through the creation of a common JPMorgan Chase API (application programming interface) store that allows customers to add simple, secure payments to their software. And we are building everything digital – both for individual customers and large corporations – from onboarding to idea generation.
- Increasingly, the management teams of Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset & Wealth Management share ideas, share platforms and serve each other's customers. The success of any one business almost always helps the other three.

- ***Privacy and safety – we spend an enormous amount of resources to protect all of our clients and customers from fraud, cybersecurity risk and invasion of their privacy.*** These capabilities are extraordinary, and we will continue to relentlessly build them. As part of this, we have consistently warned our customers about privacy issues, which will become increasingly critical for all industries as consumers realize the severity of the problem. Last year, we wrote about a new arrangement with Intuit that bears repeating – it briefly described the problem and presented a solution, which we hope might set a standard for protecting customers while giving them control of their data.

  For years, we have been describing the risks – to banks and customers – that arise when customers freely give away their bank passcodes to third-party services, allowing virtually unlimited access to their data. Customers often do not know the liability this may create for them if their passcode is misused, and, in many cases, they do not realize how their data are being used. For example, access to the data may continue for years after customers have stopped using the third-party services.

  We recently completed a new arrangement with Intuit, which we think represents an important step forward. In addition to protecting the bank, the customers and even the third party (in this case, Intuit), it allows customers to share data – how and when they want. Under this arrangement, customers can choose whatever they would like to share and opt to turn these selections on or off as they see fit. The data will be "pushed" to Intuit, eliminating the need for sharing bank passcodes, which protects the bank and our customers and reduces potential liabilities on Intuit's part as well. We are hoping this sets a new standard for data-sharing relationships.

Events from the past year underscore the importance of efforts like this. As questions are raised about how consumers' information is shared and protected, I strongly believe that data privacy and security should be a way in which we and other businesses compete to serve customers.

3. Why is organic growth a better way to grow — and why is it sometimes difficult?

Organic growth is all about hiring and training bankers, opening branches, improving or innovating new products and building new technology. It is ***hard*** work. In fact, institutionally, there is often a lot of resistance to it. It's easier ***not*** to add expenses, even when they are good for the business. And growing any sales force is usually met by some opposition from – guess who? – the existing sales force. Sometimes people are afraid the change will take away from their compensation pool or their client base. And it's hard work to properly recruit and train salespeople. Building new products and services is sometimes in conflict with existing products and services. All of these efforts require huge team coordination. So it's no surprise that it's sometimes easier not to push organic growth. However, if you build the right culture, where management teams are intensely analytical and critical of their own business' strengths, weaknesses and opportunities, you can create great clarity about what those opportunities are. If you have strong leaders, they have the discipline and fortitude to develop and execute a forward-looking growth plan.

4. Is there a conflict between building shareholder value vs. serving customers, taking care of employees and lifting up communities?

Keeping JPMorgan Chase a healthy and vibrant company is the ***best*** thing we can do for our shareholders, our customers, our employees and our communities. Building shareholder value is the ***primary*** goal of a business, but it is simply not possible to do well if a company is not properly treating and serving its customers, training and motivating its employees, and being a good citizen in the community. If they are all done well, it enhances shareholder value. Let me explain.

We cannot be a healthy and vibrant company if we are not both delivering financial success and investing for the future.

Show me a company that is not financially successful (in the long run), and I will show you an unsuccessful company. This is particularly true for a bank, where confidence in its stability is critical. I should caution, however, that financial success is a little more complex than short-term profits – and many investors are completely aware of this.

Do not confuse financial success with profits in a quarter or even in a year. All businesses have a different customer and investment life cycle, which can be anywhere from one year to 30 years – think of building new restaurants to developing new airplanes or building electrical grids. Generally, anything our business does to grow will cost money in the short term (whether it's opening branches or conducting research and development (R&D) or launching products), but it does not mean that it is not the right financial decision. A company could be losing money on its way to bankruptcy ***or*** on its way to a very high return on invested capital. Diligent management teams understand the difference between the two scenarios and invest in a way that will make the company financially successful over time. You need to invest continually for better products and services so you can serve your customers in the future.

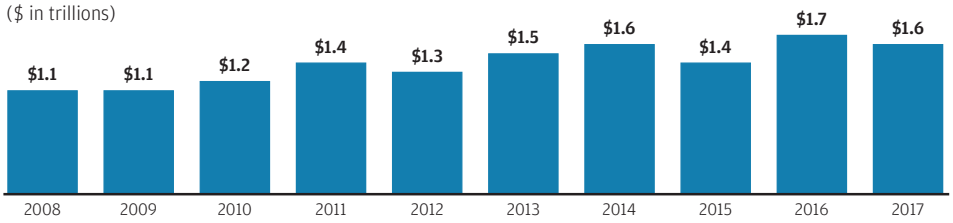
A bank cannot simply stop serving its clients or halt investing because of quarterly or annual earnings pressures. It does not work when long-term investing is changed because of short-term pressures – you cannot stop-start training programs and the development of new products, among other investments. You need to serve your clients and make investments while explaining to shareholders why certain decisions are appropriate at that time. Earnings results for any one quarter or even the next few years are fundamentally the result of decisions that were made years and even decades earlier.

New and Renewed Credit and Capital for Our Clients

at December 31,

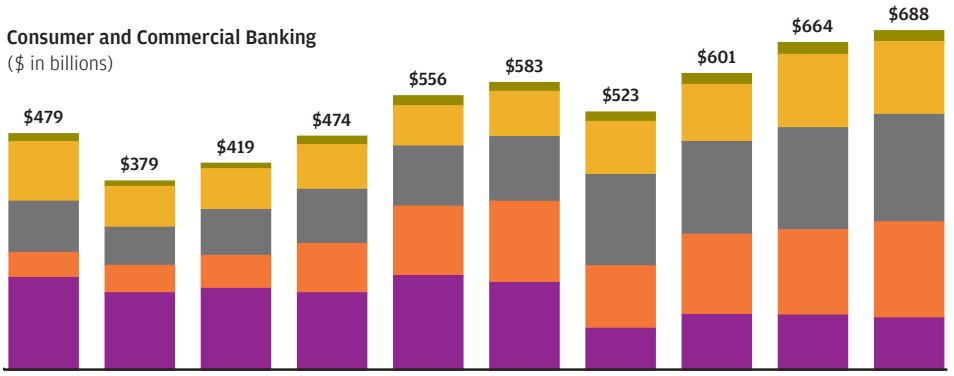
Corporate clients

($ in trillions)



Consumer and Commercial Banking

($ in billions)



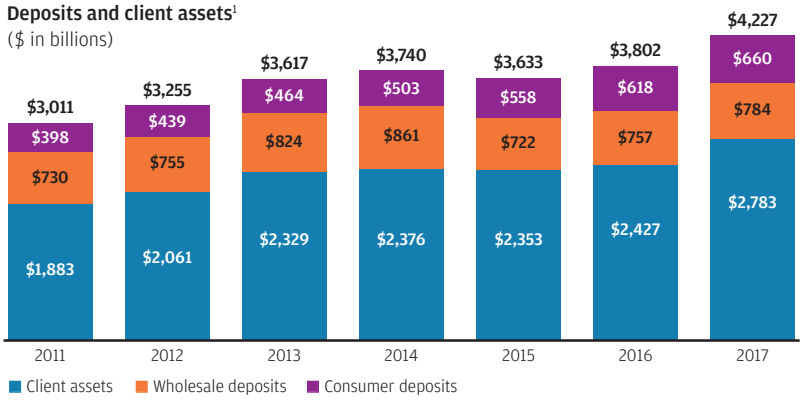
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Small business	$ 16	$ 7	$ 11	$ 17	$ 20	$ 18	$ 19	$ 22	$ 24	$ 22
Card & Auto	121	83	83	91	82	92	108	116	149	148
Commercial/Middle market	104	77	93	110	122	131	185	188	207	218
Asset & Wealth management	51	56	67	100	141	165	127	163	173	195
Mortgage/Home equity	187	156	165	156	191	177	84	112	111	105

Assets Entrusted to Us by Our Clients

at December 31,

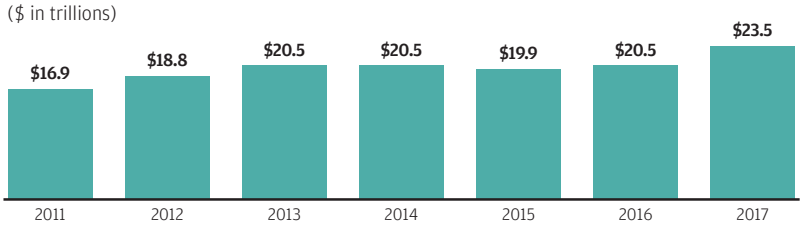
Deposits and client assets[1]

($ in billions)



Assets under custody[2]

($ in trillions)



[1] Represents assets under management, as well as custody, brokerage, administration and deposit accounts

[2] Represents activities associated with the safekeeping and servicing of assets

We have to be there for our clients in good times and bad. And we have to continuously improve the products and services we provide to them.

If you are a bank, your clients rely on you to always be there, regardless of the environment – banks are the lender of last resort. Contrary to public opinion, most banks consistently extended credit to their clients (without dramatically raising lending rates) throughout the Great Recession. The charts on page 14 show how we have consistently been there for our clients and that they trust us to hold their assets.

We simply cannot deliver to our shareholders what they deserve if we do not have high-quality, motivated, committed employees.

Talented, diverse employees deliver lifelong – and satisfied – customers. They also deliver innovative products, excellent training and outstanding ideas. Basically, everything we do emanates from our employees. And all of this creates shareholder value. We do not try to get the last dollar of profit off of our employees' or customers' backs. We want long-tenured employees and satisfied customers who stay with us year after year. We would rather earn a fair return and grow our businesses long term than try to maximize our profit over any one time period.

Great employees are the result of a healthy, open and respectful environment and continual investment in training. And great employees are the result of management teams that are humble enough to recognize that they don't know everything their employees do and, therefore, are always seeking out constructive feedback.

While keeping JPMorgan Chase a healthy and vibrant company is the best thing we can do for our communities, there's a lot more we can do.

It is important to explain both what we do and why it is so important for our communities.

As the primary engine of economic growth, the private sector has an important role to play in making sure the benefits are widely shared. The future of business and the health of our communities are ***inextricably linked***. We believe that making the economy work for more people is not simply a moral obligation – it's a business imperative.

Using our unique capabilities, we can do even more for our communities to help lift them up. We have broad and unique knowledge around how communities can develop, how work skills can be successfully implemented, how businesses can be started, how inequality can be addressed, how financial health can be secured, and how more families can find jobs and affordable housing.

We continue to step up our efforts to help communities. In 2017, we were honored to be ranked by *Fortune* magazine as the #1 company changing the world in recognition of our work in Detroit and other communities.

We do extensive investing to help our communities, such as providing affordable housing, lending to lower income households and helping advise governments in economic development. Our philanthropic efforts are only a part of what we do – but a very important part. This year, we announced we will increase our philanthropic investments by 40%. Over the next five years, we will spend $1.75 billion to help drive inclusive growth in communities around the world. Our head of Corporate Responsibility talks about our significant progress and specific measures in more detail in his letter, but I would like to highlight a few initiatives:

- **We are helping communities realize their potential as engines of growth and shared prosperity.** In 2014, we launched our most comprehensive corporate responsibility initiative to date to try to help Detroit, an iconic city that was long engulfed in economic turmoil and then bankruptcy. We view our initiative in Detroit as validation of our firm's model for driving inclusive growth. Three years in, we exceeded our initial $100 million commitment, and we now expect to invest $150 million in the city by 2019. We see the results on the ground – people are moving back into the city, small businesses are being created and

expanded, and for the first time in 17 years, property values are on the rise. Our work in Detroit has taught us many important lessons, and this past year, we extended our model for impact to communities in need in Chicago and Washington, D.C.

- **Helping people develop the skills they need to compete for today's jobs can transform lives and strengthen economies**. JPMorgan Chase is investing more than $350 million to support demand-driven skills training around the world. Through New Skills for Youth, we launched additional innovation sites to expand high-quality, career-focused education programs in cities across the United States and around the world.

- **The path to opportunity begins at an early age, but too many young people, particularly from disadvantaged backgrounds, do not get a fair shot at economic opportunity.** High school graduation rates for young men of color are dangerously low, and many who do graduate lack the skills they need to be successful in college or their careers. Through programs like The Fellowship Initiative (TFI), we are working to address barriers to opportunity. TFI engages young men of color in a comprehensive program that includes academic support, leadership development and mentoring during their critical high school years. This past year, we expanded this program to Dallas and recruited new classes of Fellows in Chicago, Los Angeles and New York. One hundred percent of these students are graduating from high school, and, combined, they have been accepted into more than 200 colleges and universities across the country.

- **Supporting re-entry programs is an important part of our effort to create opportunity that strengthens communities and results in a stronger economy.** The overwhelming majority of Americans who are incarcerated return to their communities after they are released. Reducing recidivism is not only important to returning citizens and their families – it can also have profound implications for public safety. New research from The Brookings Institution shows that, not surprisingly, joblessness and incarceration are related. Barriers to hiring returning citizens come in different forms, and some are imposed from the outside. This year, we welcomed the Federal Deposit Insurance Corporation's proposed changes to allow banks more flexibility in hiring returning citizens. Our responsibility to recruit, hire, retain and train talented workers extends to this population. Earlier this year, I visited one of our partnering organizations, the North Lawndale Employment Network in Chicago, which gives formerly incarcerated Americans a path to well-paying jobs. The network also builds a pipeline of trained mechanics for Chicago's growing transportation sector. This is a win-win for workers, employers and the economy as a whole.

- **We are expanding innovative models that enable more people to share in the rewards of a growing economy.** Small businesses are growing fastest among people of color, yet, despite their critical role in boosting economic growth, these businesses receive only a fraction of traditional loans compared with non-minority entrepreneurs. In Detroit, a city with the fourth-largest number of minority-owned small businesses, we quickly saw the need to address the challenges facing minority entrepreneurs. Therefore, in 2015, we helped launch the ***Entrepreneurs of Color Fund in Detroit*** to provide underserved entrepreneurs with greater access to the capital and assistance they needed. Seeing the tremendous success this program has had in Detroit, we decided to scale this model to the South Bronx in New York City, as well as San Francisco – cities that are experiencing similar challenges.

Our Diverse Workforce

I believe the door to diversity opens when you run a great company where everyone feels they are treated fairly and with respect – this is what we strive to create at JPMorgan Chase. We are devoted to diversity for three reasons, and each reason stands on its own – combined, they are powerful. First, it is the right thing to do from a moral perspective. Second, it is better for business to include a group of people who represent the various communities where we operate. And third, if I can pick my team from among all diverse people, I will have the best team.

We have more than 252,000 employees globally, with over 170,000 in the United States. Women represent 50% of our employees. Recently, Oliver Wyman, a leading global management consulting firm, issued a report stating that it would be 30 years before women reach 30% executive committee representation within global financial services companies. So you might be surprised to learn that, today, 50% of the Operating Committee members reporting to me are women as are approximately 30% of our firm's senior leadership globally. They run major businesses – several units on their own would be among Fortune 1000 companies. In addition to having five women on our Operating Committee – who run Asset & Wealth Management, Finance, Global Technology, Legal and Human Resources – some of our other businesses and functions headed by women include Consumer Banking, Credit Card, U.S. Private Bank, U.S. Mergers & Acquisitions, Global Equity Capital Markets, Global Research, Global Custody, Regulatory Affairs, Global Philanthropy, our U.S. branch network, our Controller and firmwide Marketing. I believe we have some of the best women leaders in the corporate world globally. In addition to gender diversity, 48% of our firm's population is ethnically diverse in the United States.

We are proud of JPMorgan Chase's industry recognition for its diversity and inclusion efforts. In 2017, we received more than 50 awards that recognize the firm and represent the diversity of our employees.

Advancing Black Leaders

In 2016, we introduced Advancing Black Leaders (ABL), an expanded diversity strategy focused on increased hiring, retention and development of talent from within the black community. This specifically recognized that – with this population – we should and could do more. We set up a separate group whose sole purpose is to help do this better. From training to retention to recruiting and hiring new employees, our intensified efforts are starting to pay off.

Two years into this initiative, we are seeing encouraging results. At executive levels, we closed 2017 with a noticeable increase in headcount (97 black managing directors globally, up from 83 a year earlier), driven by recruiting new talent and promoting existing talent. In addition, we are seeing positive headcount gains in our pipeline for mid-level managers over the last two years, with executive director representation up 30%, emerging talent with vice president representation up 17% and student talent up 7%. To encourage dialogue and engage our people, more than 85,000 employees were invited to participate in ABL Dialogues – a series of interactive panel discussions facilitated by local leaders in 10 U.S. strategic hubs.

We recently developed a few additional plans and goals for this effort, which we believe will improve these results dramatically.

5. Transparency, financial discipline and a fortress balance sheet. Why is this discipline so important?

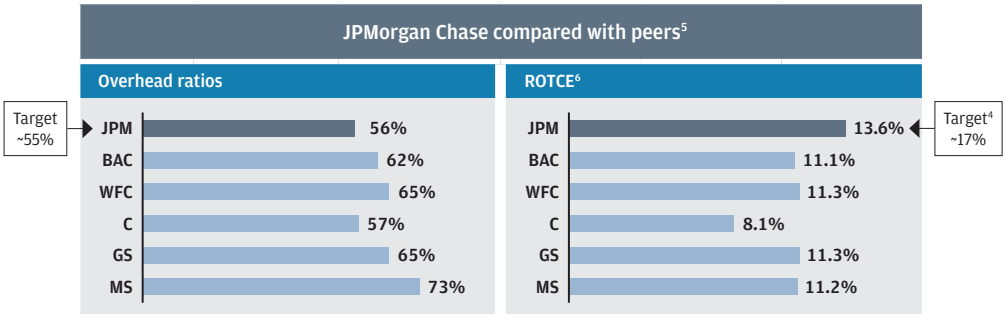
Our bank operates in a complex and sometimes volatile world. We must maintain a fortress balance sheet if we want to continually invest and support our clients through thick and thin. A fortress balance sheet also means clear, comprehensive, accurate financial and operational reporting so we can properly manage the company, particularly through difficult times.

We are fanatical about measuring our results — financial and operational. We set targets for ourselves, and we always compare ourselves with our competitors.

These targets are what we hope to achieve over the medium term and after making proper investments for the future, such as adding bankers and enhancing technology. The chart below shows that we generally compare well with our best-in-class peers (we never expect to be best-in-class every year

JPMorgan Chase Is in Line with Best-in-Class Peers in Both Efficiency and Returns

	Efficiency			Returns			
	JPM 2017 overhead ratios	Best-in-class peer overhead ratios[1]	JPM medium-term target overhead ratio	JPM 2017 ROTCE	Best-in-class peer ROTCE[2, 3]	JPM medium-term target ROTCE Year-ago	JPM medium-term target ROTCE Current[4]
Consumer & Community Banking	56%	52% BAC-CB	50%+/-	17%	22% BAC-CB	20%+/-	25%+
Corporate & Investment Bank	56%	53% BAC-GB & GM	54%+/-	14%	14% BAC-GB & GM	14%+/-	~17%
Commercial Banking	39%	42% PNC	35%+/-	17%	16% FITB	15%+/-	~18%
Asset & Wealth Management	72%	63% CS-PB & TROW	70%+/-	25%	24% BAC-GWIM & TROW	25%+/-	~35%



[1] Best-in-class overhead ratio represents comparable JPMorgan Chase (JPM) peer business segments: Bank of America Consumer Banking (BAC-CB), Bank of America Global Banking and Global Markets (BAC-GB & GM), PNC Corporate and Institutional Banking (PNC), Credit Suisse Private Banking (CS-PB) and T. Rowe Price (TROW)

[2] Best-in-class ROTCE represents implied net income minus preferred stock dividends of comparable JPM peers and peer business segments when available: BAC-CB, BAC-GB & GM, Fifth Third Bank (FITB), Bank of America Global Wealth and Investment Management (BAC-GWIM), and TROW

[3] Given comparisons are at the business segment level, where available, allocation methodologies across peers may be inconsistent with JPM's

[4] Each of our businesses has revised its medium-term return targets up, reflecting the benefit of tax reform and growth. We also increased our Firmwide ROTCE target to 17%, up from 15% last year. While competitive dynamics will impact our ultimate results, we believe this target is achievable in the medium-term, reflecting higher revenue in a normalized rate environment and our disciplined investment agenda

[5] Bank of America Corporation (BAC), Wells Fargo & Company (WFC), Citigroup Inc. (C), Goldman Sachs Group, Inc. (GS), Morgan Stanley (MS)

[6] ROTCE is a non-GAAP financial measure and has been adjusted for the impact of the enactment of the TCJA

in every business). You should assume we do this internally at a far more detailed level than what is presented here.

We need a fortress balance sheet so we can continue to do our job – regardless of the environment.

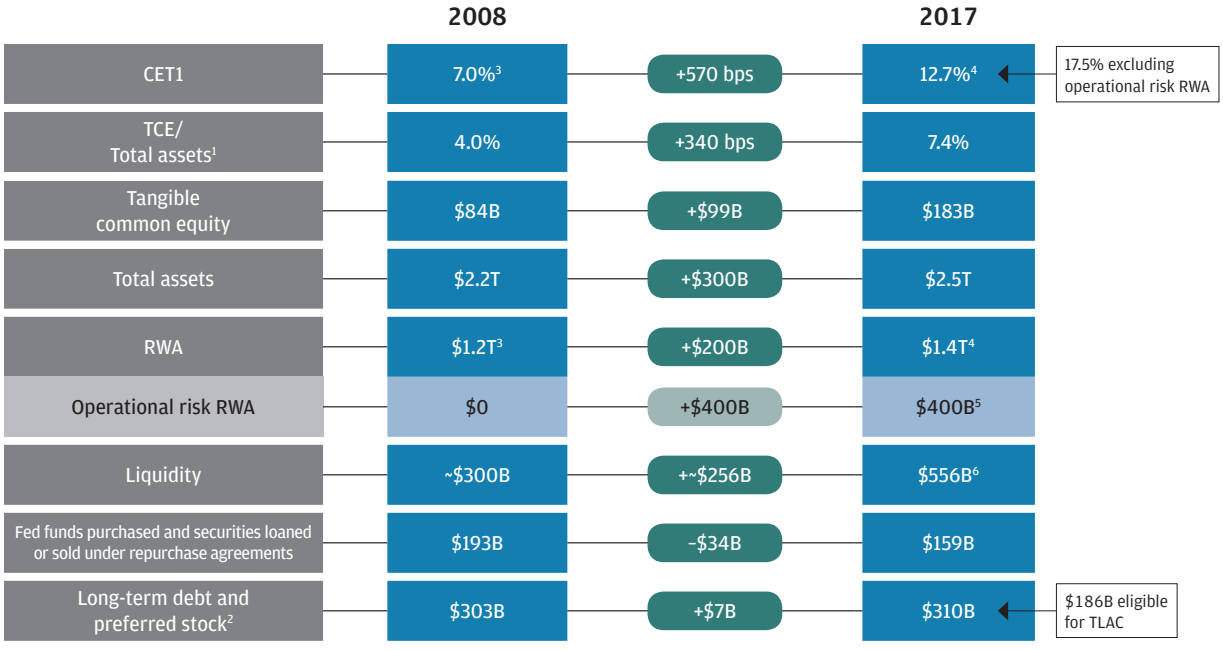
The chart below and the one on page 20 show the extraordinary strength of our balance sheet. We have always believed that maintaining a strong balance sheet (including liquidity and conservative accounting) is an absolute necessity.

We have said this before, and it remains true: JPMorgan Chase has to be prepared to handle multiple, complex, global and interrelated types of risk. We do this in many ways – let me share a few:

The Federal Reserve's Comprehensive Capital Analysis and Review (CCAR) stress test estimated what our losses would be through a severely adverse event lasting over nine quarters – an event that is worse than what actually happened during the Great Recession; e.g., high unemployment and

Our Fortress Balance Sheet

at December 31,

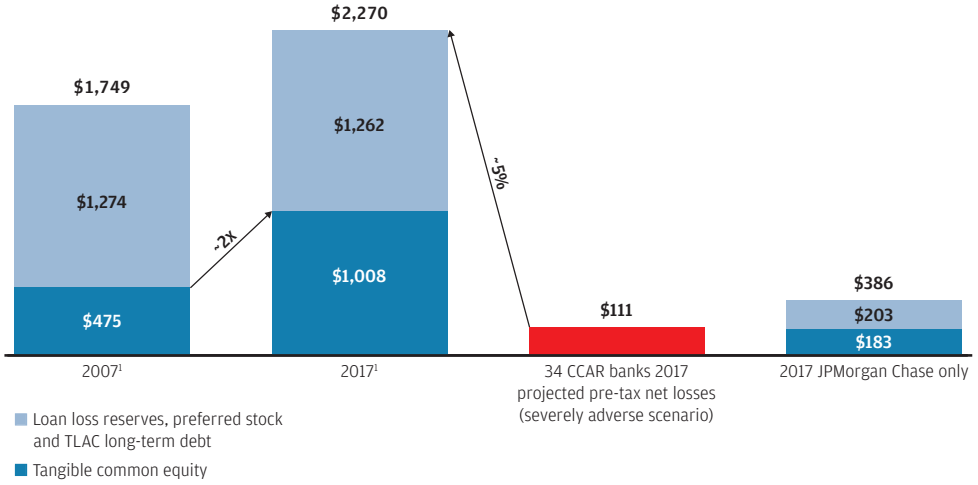


[1] Excludes goodwill and intangible assets.
[2] Includes trust preferred securities.
[3] Reflects Basel I measure; CET1 reflects Tier 1 common.
[4] Reflects Basel III Advanced Fully Phased-in measure.
[5] Operational risk RWA is a component of RWA.
[6] Represents the amount of high quality liquid assets (HQLA) included in the liquidity coverage ratio. For additional information, see LCR and HQLA on page 93.

B = Billions
T = Trillions
bps = basis points

CET1 = Common equity Tier 1 ratio
TCE = Tangible common equity
RWA = Risk-weighted assets
HQLA = High quality liquid assets predominantly includes cash on deposit at central banks, U.S. agency mortgage-backed securities, U.S. Treasuries and sovereign bonds
Liquidity = HQLA plus unencumbered marketable securities, which includes excess liquidity at JPMorgan Chase Bank, N.A.
TLAC = Total loss absorbing capacity

Loss Absorbing Resources of U.S. SIFI Banks Combined
($ in billions)



[1] Includes only the 18 banks participating in CCAR in 2013, as well as Bear Stearns, Countrywide, Merrill Lynch, National City, Wachovia and Washington Mutual
Source: SNL Financial; Federal Reserve Bank, February 2018
SIFI = Systemically important financial institution
CCAR = Comprehensive Capital Analysis and Review
TLAC = Total loss absorbing capacity

counterparty failures. The Fed estimated that in such a scenario, we would lose $18 billion over the ensuing nine quarters, which is easily manageable by JPMorgan Chase's capital base. My view is that we would make money in almost every quarter in that scenario, and this is supported by our having earned approximately $30 billion pre-tax over the course of the nine quarters during the ***actual*** financial crisis of 2009.

We are believers in the CCAR stress testing process, although our view is that it could be simplified and improved. Our shareholders should know that the CCAR stress test is only an annual test. To explain how serious we are about stress testing, you should know that we run several hundred tests a week – including a number of complicated, potentially disastrous scenarios – to prepare our company for almost every type of event. While we never know exactly how and when the next major crisis will unfold, these rigorous exercises keep us constantly prepared.

The chart above shows just how much capital is retained by the CCAR banks. To remind you, CCAR forecasts the losses of each bank over the next nine quarters as if all of them went through a crisis worse than the crisis in 2009 and that each bank performed as poorly as the worst bank throughout that crisis. The chart above also shows that even in the extremely unlikely event that it could happen this way (i.e., that each bank is the worst bank), there is plenty of capital in the system to absorb these events. This does not include the fact that the new regulatory requirements would appropriately force any bank to take corrective action long before it gets into serious trouble.

6. What risks worry us the most? And what could go wrong?

The global economy across Asia and Japan, Latin America and Europe, and the United States has been doing well – better than most would have expected a year ago. The United States in particular may be strengthening as we speak. The competitive tax system, a more constructive regulatory environment, and very high consumer and business confidence are increasing indications that the economy will likely expand. Unemployment may very well drop to 3.5% this year, and there are more and more signals that business will improve capital expenditures and raise payrolls. Credit is readily available (though still not enough in some mortgage markets). Wages, jobs and household formation are increasing. Housing is in short supply. Underlying consumer and corporate credit have been relatively strong. All these signs lead to a positive outlook for the economy for the next year or so.

I will not spend time dwelling on geopolitics here, which can – but rarely does – upset the global economy. In the next section, I talk about serious policy issues that could harm economic growth, including America's relationship with China and potential disruptions to global trade. In this section, I focus on some of the risks in the financial system and how we go about managing them.

We will be prepared for Brexit.

So far, it has turned out pretty much like we expected: It's complex and hard to figure out, and the long-term impact to the United Kingdom is still uncertain. Last year, we spoke about whether Brexit would cause the European Union to unravel or pull together – and it appears, particularly with the new leadership in France and the steady hand in Germany, that the countries might pull together. As for JPMorgan Chase, fortunately, we have the resources to be prepared for a hard Brexit, as we must be. It essentially means moving 300-400 jobs around Europe in the short term and modifying some of our legal entities to be able to conduct business the day after Brexit. What we do not know – and will not know until the negotiations are complete – is what the end state will look like. Although unlikely, there is the possibility that we could stay exactly as we are today. Unfortunately, the worst outcome would be much of London's financial center moving to the Continent over time. We hope for all involved that this outcome will not be the case.

We cannot do enough as a country when it comes to cybersecurity.

I cannot overemphasize the importance of cybersecurity in America. This is a critical issue, not just for financial companies but also for utilities, technology companies, electrical grids and others. It is an arms race, and we need to do whatever we can to protect the United States of America.

Our bank is extremely good at cybersecurity and client protection. However, cyber law in the United States is inadequate regarding banks and government entities. We need to be allowed to work even closer with our government in real time to properly protect the financial system. In addition, we need to have better international cyber laws (and include them in trade agreements) like we do in maritime and aviation laws. Countries should know what they are responsible for – and what redress companies or countries have – when either a bad state actor or criminals in a state cause extreme problems.

In the financial markets, we must be prepared for the full range of possibilities and probabilities.

We strive to try to understand the ***possibilities and probabilities*** of potential outcomes so as to be prepared for any outcome. We analyze multiple scenarios (in addition to the stress testing I wrote about earlier in this section). So regardless of what you think about the probabilities, we need to be prepared for the possibilities, including the worst case. In essence, we try to manage the company such that all possibilities, including the "fat tails" (the worst-case scenarios), cannot hurt the company.

We try to intelligently, thoughtfully and analytically make decisions and manage risk (and not overly rely on models).

When I hear people talk about banks taking risks, it often sounds as if we are taking big bets like you would at a casino or a racetrack. This is the complete opposite of reality. Every loan we extend is a proprietary risk. Every new facility we build is a risk. Whether we are adding branches or bankers – or making markets or expanding operations – we perform extensive analytics and stress testing to challenge our assumptions. In short, we look at the best- and worst-case scenarios before we "take risk." Much of what we do as a bank is to mitigate or manage the risk being taken. I think you would be impressed by the thoroughness and risk-mitigating approach demonstrated at our risk committee meetings. At these meetings, we have lawyers, compliance, risk management, bankers and technologists – folks with decades of experience who challenge each other and ensure we have thought about every possible angle. And since we know we will be wrong sometimes, we almost always look at the worst possible case – to ensure JPMorgan Chase can survive any situation. This is not risk taking on the order of taking a guess – it is intelligent, thoughtful, analytical decision making.

We rely heavily on detailed and constantly improving models as a foundational element of that analysis. But we are cognizant of the fact that models by their nature are backward looking and have a difficult time adjusting to material items, including the following:

- The character and integrity of those with whom you are doing business
- Changing technology as it impacts industries (including the banking industry)
- Future changes in the law or even how the law might be interpreted differently 10 years from now
- Deteriorating international competiveness (as what happened to our tax code)
- Emerging competitive threats
- Changes in industrial structure; e.g., new sources of competition
- Political influence and unexpected litigation
- Public sector fiscal challenges, demographic changes and challenges managing the nation's healthcare resources

There are other items – but you get the point. Judgment (which will never be perfect all of the time) cannot be removed from the process.

Volatility and rapidly moving markets should surprise no one.

We are always prepared for volatility and rapidly moving markets – they should surprise no one. I am a little perplexed when people are surprised by large market moves. Oftentimes, it takes only an unexpected supply/demand imbalance of a few percent and changing sentiment to dramatically move markets. We have seen that condition occur recently in oil, but I have also seen it multiple times in my career in cotton, corn, aluminum, soybeans, chicken, beef, copper, iron – you get the point. Each industry or commodity has continually changing supply and demand, different investment horizons to add or subtract supply, varying marginal and fixed costs, and different inventory and supply lines. In all cases, extreme volatility can be created by slightly changing factors.

It is fundamentally the same for stocks, bonds, and interest rates and currencies. Changing expectations, whether around inflation, growth or recession (yes, there will be another recession – we just don't know when), supply and demand, sentiment and other factors, can cause drastic volatility.

One scenario that we must be prepared for is the possibility that the reversal of quantitative easing (QE) by the world's central banks — in a new regulatory environment — will be different from what people expect.

The United States has had subpar economic growth over the last eight years (I believe this is due to a lot of poor policy decisions that I discuss in the next section), as well as new

demographic realities. Our growth cumulatively in this expansion has been about 20%, while a more normal recovery would have seen growth of over 40% by now. However, with recent reforms, the situation may be improving. As inflation, wages and growth seem to be modestly increasing, the Federal Reserve has started to raise interest rates and reverse QE. ***Importantly***, as long as rates are rising ***because*** the economy is strengthening and inflation is contained, it is reasonable to expect that the reversal of QE will not be painful. The benefits of a strong economy are more important than the negative impact from modest increases in interest rates.

Since QE has ***never been done*** on this scale and we don't completely know the myriad effects it has had on asset prices, confidence, capital expenditures and other factors, we cannot possibly know all of the effects of its reversal. We have to deal with the ***possibility*** that at one point, the Federal Reserve and other central banks may have to take more drastic action than they currently anticipate – reacting to the markets, not guiding the markets. A simple scenario under which this could happen is if inflation and wages grow more than people expect. I believe that many people underestimate the possibility of higher inflation and wages, which means they might be underestimating the chance that the Federal Reserve may have to raise rates faster than we all think. While in the past, interest rates have been lower and for longer than people expected, they may go higher and faster than people expect. If this happens, it is useful to look at how the table is set – what are all the things that are different or better or worse than during prior crises, particularly the last one – and try to think through the possible effects.

There are many pluses (things that are better than during the last crisis in 2009):

- Far more capital and less leverage in the banking system
- Far more liquidity in the banking system
- More collateral in the markets
- Less total short-term secured financing, which is also more properly collateralized
- Less leveraged lending
- Money market funds that are far safer due to regulatory requirements around credit standards and liquidation
- Healthier consumers in terms of both employment and disposable income (and their debt burden is still modest relative to their disposable income, while debt service burdens are historically low)
- The absence of massive losses in the mortgage markets. Mortgage underwriting since 2009 has been rather pristine. And while losses will go up in a recession, it will be nothing like what happened in the Great Recession. In the 2009 crisis, losses totaled more than $1 trillion. The marketplace realization that financial institutions and investors were going to experience massive losses is a primary reason why there was a devastating loss of confidence in the financial system.

And there are some modest negatives or potentially important differences (than during the last crisis):

- Far more money than before (about $9 trillion of assets, which represents about 30% of total mutual fund long-term assets) is managed passively in index funds or ETFs (both of which are very easy to get out of). Some of these funds provide far more liquidity to the customer than the underlying assets in the fund, and it is reasonable to worry about what would happen if these funds went into large liquidation.

- Even more procyclicality has been built into the system. Risk-weighted assets will go up as will collateral requirements – and this is on top of the procyclicality of loan loss reserving.
- Market making is dramatically smaller than in the past (e.g., aggregate primary dealer positions of bonds – including Treasury and agency securities, mortgage-backed securities and corporates – averaged $530 billion in 2007 vs. an average of $179 billion today). While in the past that total may have been too high, virtually every asset manager says today it is much harder to buy and sell securities, particularly the less liquid securities.
- Liquidity requirements, while much higher, now have an element of rigidity built in that did not exist before. Banks will be unable to use that liquidity when they most need to do so – to make loans or intermediate markets. They have a "red line" they cannot cross (they are required to maintain hard and fast liquidity requirements). As clients demand more liquidity from their banks, the banks essentially will be unable to provide it.
- There has been an excessive reliance on models (which I spoke about earlier in this section).
- The continuous politicization of complex policy is an issue. No one can believe that very detailed and complex global liquidity or capital requirements should be set by politicians.
- No banks to the rescue this time – banks got punished for helping in the last go-round.

It would be a ***reasonable*** expectation that with normal growth and inflation approaching 2%, the 10-year bond could or should be trading at around 4%. And the short end should be trading at around 2½% (these would be fairly normal historical experiences). And this is still a little lower than the Fed is forecasting under these conditions. It is also a reasonable explanation (and one that many economists believe) that today's rates of the 10-year bond trading below 3% are due to the large purchases of U.S. debt by the Federal Reserve (and others).

This situation is completely reversing. Sometime in the next year or so, many of the major buyers of U.S. debt, including the Federal Reserve, will either stop their buying or reverse their purchases (think foreign exchange managers or central banks in Japan or China and Europe). So far, only one central bank, the Federal Reserve, has started to reverse QE – and even that in a minor way. However, by the end of this year, the Fed has indicated it might reduce its holding of Treasuries by up to $150 billion a quarter. And finally, the U.S. government will need to sell more than $250 billion a quarter to fund its deficit.

There are two offsetting factors to the large sales of Treasuries. One is that as the Federal Reserve sells, it reduces excess reserves, which requires banks to buy Treasuries to meet liquidity requirements. But we do not fully know the extent of this scenario, and it certainly won't be dollar for dollar. The second factor, as some argue, is that the U.S. trade deficit effectively forces foreign countries to use their dollars to buy Treasuries, although this is not completely true – they can buy other U.S. securities or assets or sell their dollars.

So we could be going into a situation where the Fed will have to raise rates faster and/or sell more securities, which certainly could lead to more uncertainty and market volatility. Whether this would lead to a recession or not, we don't know – but even that

is not the worst case. If growth in America is accelerating, which it seems to be, and any remaining slack in the labor markets is disappearing – and wages start going up, as do commodity prices – then it is not an unreasonable ***possibility*** that inflation could go higher than people might expect. As a result, the Federal Reserve will also need to raise rates faster and higher than people might expect. In this case, markets will get more volatile as all asset prices adjust to a new and maybe not-so-positive environment. Remember that former Chairman of the Federal Reserve Paul Volcker increased the discount rate by 100 basis points on a Saturday night back in 1979 in response to a serious double-digit inflation problem. And when markets opened the next business day, the Fed funds rate went up by over 200 basis points. Also remember that the Federal Reserve is operating with extremely different monetary transmission mechanisms than in the past. The old "money multiplier" has been superseded by the new capital and liquidity requirements. Today's "excess reserves" (reserves once considered in excess of what banks were required to post in cash at the Federal Reserve – fundamentally reserves that could be lent out) are not lendable, although we still don't completely understand the effect of this.

There is a risk that volatile and declining markets can lead to market panic.

Financial markets have a life of their own and are sometimes barely connected to the real economy (most people don't pay much attention to the financial markets nor do the markets affect them very much). Volatile markets and/or declining markets generally have been a reaction to the economic environment. Most of the major downturns in the market since the Great Depression reflect negative future expectations due to a potential or real recession. In almost all of these cases, stock markets fell, credit losses increased and credit spreads rose, among other disruptions. The biggest negative effect of volatile markets is that it ***can*** create market panic, which could start to slow the growth of the ***real*** economy. The years 1929 and 2009 are the only real examples in the United States in the past 100 years when panic in the markets caused large reductions in investments and hiring. I wouldn't give this scenario very high odds – in fact, I would give it low odds. Most people think of those events as one-in-a-thousand-year floods. But because the experience of 2009 is so recent, there is always a chance that people may overreact.

If truly negative events started to unfold, we could expect the Federal Reserve, with its enormous authority and power, to take strong action, including changing regulations, if the Fed thought it necessary. In any event, our shareholders should rest assured that we will weather it all. There are a couple of things we all could do to be more prepared for this situation and other disruptions, which I will discuss in the next few paragraphs.

Banks and regulators need to be more forward looking and less backward looking – particularly when examining risks across the system.

One day there will be another crisis, and financial institutions and central banks will need to respond. The financial system is far more safe and sound than in the past. But in spite of all the regulations put in place, I worry about whether we have properly prepared for the next crisis. The Financial Stability Oversight Council was created to oversee the whole system (as appropriate), but we have not yet really worked collaboratively to prepare tabletop exercises about what would happen ***across*** the system under difficult situations.

When the next crisis begins, regardless of where or how it starts, multiple actors in the system will take actions – either out of necessity (i.e., they need cash) or sentiment (i.e., they want to reduce risk). This will happen across passive, index and ETF funds, insurance companies, banks and nonbanks. As individual actors stop providing credit and liquidity in the marketplace, we need to do a better job of understanding how this might unfold. And all this will be happening under a different regulatory regime from before.

We also need to be more forward looking in many other areas. Doing so will create a better and stronger system – not doing so will actually create additional risk. Following are a few examples:

Almost all risk and control functions (think Anti-Money Laundering, Know Your Customer (KYC) and Compliance) could be better performed if we worked with the regulators to streamline what we do and use advanced techniques, like artificial intelligence and machine learning, to improve the outcomes. The same is true for fraud prevention and customer service. We must also be far more aggressive in protecting ourselves from cybersecurity risks, both within the banking system and across the financial system (think of nonbanks, money managers, clearinghouses, exchanges, etc.)

Modest regulatory reform can strengthen the financial system, improve the functioning of our markets and enhance economic growth for all Americans.

While the regulatory environment is appropriately much stricter than it once was, we can simplify it and even strengthen it by ensuring that it is globally fair and transparent and includes continuous, regular review and appropriate modification.

Regulators now have begun to simplify, coordinate and reduce overlapping regulations. I won't repeat the details that I've discussed in prior letters – many of them were also discussed in Treasury reports issued by the government. But suffice it to say, modest regulatory reform could allow banks to expand carefully, improve access to credit (e.g., mortgages and small business loans) and improve market making and the functioning of the money markets.

7. How is the company dealing with bureaucracy and complacency that often infect large companies?

I was recently at a senior leadership offsite meeting talking about bureaucracy. We heard bureaucracy described as "a necessary outcome of complex businesses operating in complex international and regulatory environments." This is hogwash. Bureaucracy is a disease. Bureaucracy drives out good people, slows down decision making, kills innovation and is often the petri dish of bad politics. Large organizations, in fact all organizations, should be thought of as always slowing down and getting more bureaucratic. Therefore, leaders must continually drive for speed and accuracy to eliminate waste and kill bureaucracy. When you get in great shape, you don't stop exercising.

After years of increasing regulations, there has been a temptation to blame some of our bureaucracy and ridiculous processes on regulations. That, too, is (mostly) hogwash. It is easy to find excuses not to attempt to reimagine how things could be done better and more efficiently.

Below are five examples of how we've set out to combat this condition:

Meetings. Internal meetings can be a giant waste of time and money. I am a vocal proponent of having fewer of them. If a meeting is absolutely necessary, the organizer needs to have a well-planned, focused agenda with pre-read materials sent in advance. The right people have to be in the room, and follow-up actions must be well-documented. Just as important, each meeting should only run for as long as it needs to and lead

to real decisions. In addition, there should be clarity around who chairs the meeting. The chair is responsible for making sure all issues are properly raised, facilitating effective and productive discussions and driving to decisions.

War rooms. Just as important, we need to simplify our processes while accelerating the pace of change and driving new innovations. Last year, the Operating Committee created a number of "war rooms" – spanning lines of business, geographies, functions and levels – to make our firm more agile and to put a laser focus on several hot-button issues, like client onboarding and vendor and third-party management. Each war room is staffed with a dedicated group of employees tasked with solving specific problems within a set number of weeks or months. You would be amazed at how quickly our employees can come up with new solutions when they are galvanized around solving a problem in a concentrated time period. These teams have been so successful in driving bureaucracy out of the decision-making process that we plan to deploy more war rooms when critical needs arise. These war rooms are very similar to how we operated when we made complex acquisitions. Essentially, they cause better and faster dissemination of information to those who need to know – and faster and more productive decision making because everyone involved is in the room.

Reimagining. You can take any part of your business and reimagine it. You can get all the right people in the room to think about a certain process and reimagine how it could be done from the ground up. Our Know Your Customer problem-solving team is a good example of the results our reimagining and war rooms can drive. Comprising all lines of business, the group was given eight weeks to reimagine our KYC processes to improve the customer experience without sacrificing controls. By applying a sharp, firmwide focus to the KYC protocols, the team identified several KYC questions and protocols that had become outdated or been made redundant by recent controls. One customer could be subjected to multiple KYC processes depending on the line of business and channel used. As a result, the team streamlined KYC questions substantially and identified a number of processes that could be eliminated, which will allow for a better customer experience while still maintaining a strong control environment. This war room team's results not only helped disparate lines of business identify duplicative processes but also enabled the team to update the firm's priorities.

Fighting complacency by being self-critical. Complacency is another disease. It is usually borne out of arrogance or success, but it is a guarantee of future failure. Our competitors are not resting on their laurels – nor can we. The only way to fight complacency is to always analyze our own actions and point out our own weaknesses. It's great to openly celebrate our successes, but when the door is closed, management should emphasize the negatives.

Using agile management to create speed. Agile technology generally means using new forms of technology – think cloud computing, for example – to enable small teams of programmers to build and properly execute new programs and products rapidly and effectively. The concept of ***agile management*** goes hand in hand with this approach. Small teams of people responsible for products and services work with technologists to improve the customer experience. To do this, they must be given the necessary authority and resources. It is also important they understand that they can make mistakes without punishment.

8. What are the firm's views on succession?

Having a first-rate management team in place is probably the Board's highest priority. Therefore, management succession planning is a key focus of our Board. The Board knows the firm's senior leaders well, through unfettered access and significant interaction.

While the Board and I have agreed that I will continue in my current role for approximately five more years, we both believe that, under all timing scenarios, the firm has in place several highly capable successors.

Early in the year, we announced that Daniel Pinto, CEO of our Corporate & Investment Bank, and Gordon Smith, CEO of Consumer & Community Banking, have been appointed Co-Presidents and Chief Operating Officers of the company. In addition to their current roles, Daniel and Gordon will work closely with me to help drive critical firmwide functions. Our other outstanding CEOs, Mary Erdoes, Asset & Wealth Management, and Doug Petno, Commercial Banking, along with our CFO, Marianne Lake, took on expanded responsibilities last year and have played progressively more significant roles partnering across the firm in helping to manage the company. I also want to say how grateful I am to our Operating Committee and to all of the leaders of our organization for the extraordinary job they do.

II. PUBLIC POLICY

The following messages are worth repeating from last year's letter: The United States needs to ensure that we maintain a healthy and vibrant economy. This is what fuels job creation, raises the standard of living and creates opportunity for those who are hurting, while positioning us to invest in education, technology and infrastructure – in a programmatic and sustainable way – to build a better and safer future for our country and its people. And in a world with so many security threats and challenges, we need to maintain the best military. America's military will be the best in the world only as long as we have the best economy in the world.

Business plays a critical role as an engine of economic growth – particularly our largest, globally competitive American businesses. As an example, the 1,000 largest companies in America (out of approximately 29 million) employ nearly 30 million people in the United States, and nearly all of their full-time employees receive full medical and retirement benefits, as well as extensive training. In addition, these companies account for more than 30% of the roughly $2.3 trillion spent annually on capital expenditures. These expenditures and research and development spending drive productivity and innovation, which, ultimately, drive job creation across the entire economy.

Of the approximately 150 million people who work in the United States, 130 million work in private enterprise. We hold in high regard the 20 million people employed by the government or in the public sector – teachers, police officers, firefighters and others. But we could not pay for those jobs if the other 130 million workers were not actively producing America's gross domestic product (GDP).

Small businesses are a critical engine of economic growth. Small and large businesses are symbiotic – they are each other's customers, and they help drive each other's growth. They are integral to our large business ecosystem. At JPMorgan Chase, for example, we support more than 4 million small business clients, including hundreds of small banks, 15,000 middle market companies, and approximately 7,000 corporations and investor clients. Additionally, we rely on services from nearly 30,000 vendors, many of which are small and midsized companies.

Business, taken as a whole, is the source of almost all job creation. And we need to maintain trust and confidence in our businesses as in all of our institutions. Confidence is a "secret sauce" that costs nothing, but it helps the economy grow. A strong and vibrant private sector (including big companies) is good for the average American. Entrepreneurship and free enterprise, with strong ethics and high standards, are something to root for – not attack.

To support this, we need a pro-growth policy environment from the government that provides a degree of certainty around long-standing issues that have proved frustratingly elusive to solve. The most pressing areas where government, business and other stakeholders can find common ground should include tax reform, infrastructure investment, education reform, more favorable trade agreements and a sensible immigration policy.

Let's take another look at what is holding us back and some solutions that could make life better for all Americans.

1. What has gone wrong in public policy?

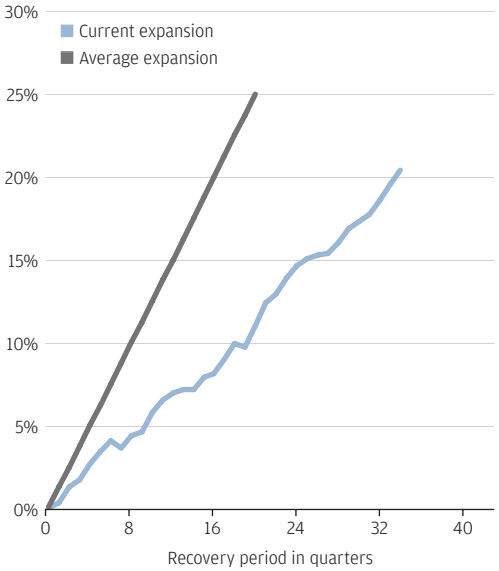
In the last several years, I have spent a good amount of time – in both these letters and elsewhere – talking about public policy. Some of the policies directly relate to JPMorgan Chase, while others are more indirect but have a large effect on the future of the United States of America, on the global economy and, therefore, on our company. With all of America's exceptional strengths, it seems clear to me that something is holding us back. As we have already pointed out, our economic growth has been anemic. Our economy has grown approximately 20% in the last eight years, but this stands in contrast with prior average recoveries where growth would have been more than 40% over an eight-year period. The chart below on the left shows this.

Last year, I laid out in detail an extensive list of things I thought were holding us back, and it bears repeating here because, just as it took many years for these obstacles to develop, it is going to take sustained effort over many years to right the course. When you look at this list in totality, it is significant and fairly shocking. Most of these areas have become consistently worse over the last 10 to 20 years, and it is hard to argue that they did not meaningfully damage the country's economic growth. It is also important to point out that I have never seen an economic model that accounts for the extremely damaging aspects of these items. (These items don't include the trillions of dollars we have spent on war-related expenditures. And whether you were for or against these wars, they certainly did not add to American productivity.) This is not secular stagnation – this represents senseless and misguided policies.

GDP[1] Growth

The present expansion relative to average

Cumulative growth since prior trough, percent



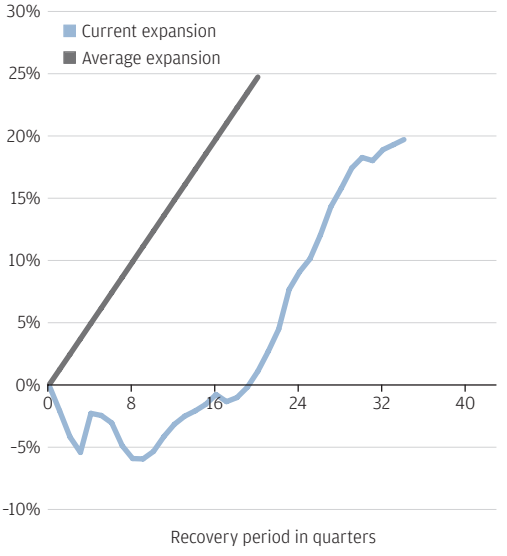
[1] Adjusted for inflation

Source: Bureau of Economic Analysis (BEA); National Bureau of Economic Resource (NBER), March 2018

Bank Credit[1] Growth

The present expansion relative to average

Cumulative growth since prior trough, percent



[1] Adjusted for inflation

Source: Haver; Federal Reserve Board, March 2018

- We had a hugely and increasingly uncompetitive tax system driving companies' capital and brainpower overseas.
- Excessive regulations for both large and small companies reduced growth and business formation. The ease of starting a business in the United States worsened, with small business formation dropping to the lowest rate in 30 years.
- The chart on the bottom right of page 30 shows how tepid bank credit growth was in general during this recovery. Remember, bank credit growth directly relates to economic growth, although it's often difficult to figure out the cause and effect. But there is no question that the things that reduce credit availability, in turn, reduce growth. One area where we know this happened was in the mortgage market. Household formation has been slow because many young adults have had a difficult time finding work and, with the help of their families, have gone back for more schooling. That is slowly reversing. But the inability to reform mortgage markets has dramatically reduced mortgage availability. In fact, our analysis shows that, conservatively, more than $1 trillion in mortgage loans might have been made over a five-year period.
- Labor force participation – particularly among men aged 25-54 – dropped dramatically. An estimated 2 million Americans are currently addicted to opioids (in 2016, a staggering 42,000 Americans died because of opioid overdoses), and some studies show this is one of the major reasons why men aged 25-54 are permanently out of work. Even worse, 70% of today's youth (ages 17-24) are not eligible for military service, essentially due to a lack of proper education (basic reading and writing skills) or health issues (often obesity or diabetes).
- Our schools are leaving too many behind. In some inner city schools, fewer than 60% of students graduate, and of those who do, a significant number are not prepared for employment. Additionally, many of our high schools, vocational schools and community colleges do not properly prepare today's younger generation for the available professional-level jobs, many of which pay a multiple of the minimum wage.
- Infrastructure is a disaster. It took eight years to get a man to the moon (from idea inception to completion), yet it now can sometimes take a decade to simply get the permits to build a bridge or a new solar field. The country that used to have the best infrastructure on the planet by most measures is now not even ranked among the top 20 developed nations according to the Basic Requirement Index.
- Our immigration policies fail us in numerous ways. Forty percent of foreign students who receive advanced degrees in science, technology and math (300,000 students annually) have no legal way of staying here, although many would choose to do so. Most students from countries outside the United States pay full freight to attend our universities but many are forced to take the training back home. From my vantage point, that means one of our largest exports is brainpower.
- Our nation's healthcare costs are twice the amount per person compared with most developed nations.
- Our litigation system is increasingly arbitrary, capricious, wasteful and slow.

Economic analysis provides a sense of the costs associated with misguided policies. The Congressional Budget Office estimates the cost of failing to pass immigration reform earlier this decade at 0.3% of GDP a year. An International Monetary Fund study suggests that a 1% of GDP rise in infrastructure investment in 2013 would have delivered a similar boost to advanced economy GDP over the subsequent decade. J.P. Morgan analysis indicates that the cost of not reforming the mortgage markets could be as high as 0.2% of GDP a year. Taken together with the costs of excessive regulation and a depressed prime age labor participation rate, it is easy to conclude that corrections in policy could add more than 1% of GDP annually. And this does not account for many of the items I mentioned in the prior list.

The end result is that our economy is still leaving many behind. Much of this is probably self-inflicted. While a job used to provide a ticket to the middle class, today more people are getting stuck in low-wage work. Historically, we've thought of these jobs as providing the first rung on a career ladder – a chance for workers to prove themselves and develop skills before moving on to other, better paying jobs. But a growing number of Americans are left hanging on this first rung: During the mid-1990s, only one in five minimum-wage workers was still at minimum wage a year later. Today, that number is nearly one in three.

So while the economy has not performed badly and has done amazingly well for a handful – low-skilled and even middle-skilled wages have gone down, leaving large swaths of Americans behind.

It is surprising that many younger people in the United States, who are effectively going to inherit the wealthiest nation on the planet, seem to be pessimistic about our future and capitalism. But falling expectations, the failure of our economy to lift up everyone, and the continual deprecation of society and its leaders have led to huge amounts of discontent and unrest.

All these issues are fixable, but we should ask ourselves how we got it wrong in the first place.

2. Poor public policy – how has this happened?

America has been an amazingly resilient country. And we hope it will reset and get back on track. But it is hard to look at the last 20 years and not think that it has been getting increasingly worse (and we should not assume that it will get better on its own). Before we try to address what we can do to fix it, it is important to look at why it has gotten worse. Here are my theories:

- The world is getting faster and more complex, making speed and analytics all the more important. But the structure of our political parties and institutions has barely changed in 100 years. They may not be set up for success – organized in a way to enable them to deal with today's challenges.
- Critical thinking, analysis of facts and proper policy formation have become extremely difficult in a politicized and media-saturated environment. Often, politics misuses facts to justify a position.
- We are effectively crippled when it comes to fixing our problems ***even when they are totally predictable***. Puerto Rico's bankruptcy, Detroit's bankruptcy, unfunded pension plans, the job skills gap, and crumbling bridges and tunnels are prime examples.
- We focus too much on the short term. For example, President Bill Clinton (and I don't mean to pick him out specifically) usually gets credit for driving a strong economy. But the excessive mortgage lending, incented and promulgated by the federal government (I am in no way saying that banks and investors didn't play a part, too), is part of the reason the economy at that time did well. It blew up

late in President George W. Bush's term. There are many examples of presidents getting credit or blame for scenarios that had nothing to do with their governing. We simply learned the wrong lessons. And in the short run, we tend to simplistically look for scapegoats instead of solutions.

- Rogoff and Reinhart wrote in their book, *This Time Is Different*, that it takes a long time to recover from a financial crisis. But this was often due to poor policy or overreaction to the financial crisis, and while history teaches us that maybe we should expect this reaction in the next crisis, it does not have to be true over and over. We have a difficult time learning from the past.
- A famous politician once said, "Don't let a good crisis go to waste." I think he really meant, "Let's use the crisis to get some good, important things done." It appears that politicians sometimes use a crisis to justify implementing their own agenda.
- Here's another example: We all know that the U.S. healthcare system needs to be reformed. Many have advocated getting on the path to universal healthcare for all Americans. The creation of Obamacare, while a step in the right moral direction, was not well done. America has 290 million people who have insurance – 180 million through private enterprise and 110 million through Medicare and Medicaid. Obamacare slightly expanded both and created exchanges that insure 10 million people. But it did very little to fix our broken healthcare system and has, in fact, torn up the body politic over 10 years – and this tumult may go on for another 10 years.

3. We can fix this problem through intelligent, thoughtful, analytical and comprehensive policy.

First off, we should find it rather easy to recognize that bad thinking often leads to bad policymaking. Let me list a few of the culprits:

- Binary arguments. When people argue as if there are binary solutions, the argument is almost always wrong. When people say you should not do something because it is like going down a "slippery slope," it generally is not a good argument. In the modern world, there are reasons to calibrate various parts of policy instead of just denying the argument altogether.
- "They complain too much" arguments. When a point has been made and someone calls it a complaint, the point is diminished right away. When someone complains about something, a better response is to think about where or how the person might be right or partially right.
- Not listening to one another. I tell my liberal friends to read columnists like Arthur Brooks and George Will. And I tell my conservative friends to read writers like Tom Friedman.
- Not asking what outcomes you really want to achieve.
- Not working with experts who know the most about a subject.
- Trying to create too many zero-tolerance environments when they are often not merited. Examples include situations where people need to be able to communicate with each other and work through miscommunications and mistakes of judgment rather than criminal and unethical behavior, where a zero-tolerance standard should be applied equally to all.
- This way of thinking also applies to institutions. We should not destroy the credibility or the effectiveness of institutions – public or private – for the mistakes or misdeeds of a few. This may feel good in the short term but will not serve us well over the long term.

We all generally know what a good decision-making process looks like – and we applaud it – whether in business or in Congress.

4. The need for solutions through collaborative, competent government.

People don't think about the challenges in their everyday lives as being Democratic or Republican issues – and our political leaders need to stop thinking that way. We need a well-performing, competent government to thrive as a nation. Clearly, there are things that only the government can do – and must do well – such as having a strong military and ensuring an efficient and properly functioning justice system. The federal government maintains most of our nation's transportation systems, and we need state and local governments to do a good job in terms of education, policing and other important functions. Some argue that the government should be doing more. But when many Americans think of the government delivering services, they think of the endless bureaucracy and paperwork associated with the Internal Revenue Service, the U.S. Postal Service and the Department of Veterans Affairs – none of which would consistently get high marks.

We all can agree that the lack of true collaboration and an unwillingness to address our most pressing policy issues have contributed to the divisive and polarized environment we have today. Certainly there is plenty of blame to go around on this front. However, rather than looking back, it now is more important than ever for the business community and government to come together to find meaningful solutions. This cannot be done by government or business alone.

By collaborating and applying some good old American can-do ingenuity, there is nothing we can't accomplish. By working together, business, government and the nonprofit sector can ensure and maintain a healthy and vibrant economy into the future – creating jobs, fostering economic mobility and maintaining sustainable economic growth. Ultimately, this translates to an improved quality of life and greater financial security for those in the United States struggling to make ends meet. It also represents a significant step in restoring public faith in two of our greatest democratic institutions in the United States: business and government. Working together will allow us to move toward a prosperous future for all Americans.

Many examples of business and government working together already have produced positive outcomes. Businesses have played a large role in trying to help Detroit recover. Businesses started the Veteran Jobs Mission. With a goal of 1 million jobs, the coalition of businesses has already helped 400,000 U.S. veterans get work, and the number is still growing. Many businesses have worked closely with the education system (mostly locally) to support charter schools, vocational schools and community colleges to provide skills training that prepares students for productive employment. We believe that collaboration can create even better outcomes in education, healthcare and job creation while shoring up pension plans and rebuilding our cities and communities across the nation.

Our Founding Fathers studied and worked hard to design a strong and permanent democracy. They perfected a Constitution to protect our basic liberties, building in protections to temper some of our worst attributes and incent our best ones. If they were here with us today, I believe they would recognize that our government institutions are stuck in the mud – too slow and inadequate for the job at hand. Therefore, they would study and work hard within the Constitution to redesign and reformulate how government should function so that it works properly. We will eventually need to do the same.

5. A competitive business tax system is a key pillar of a growth strategy.

It isn't easy to stay competitive in an increasingly global marketplace, and national tax policy was one critical area where we were falling behind. Over the last 20 years, as the world reduced its tax rates, America did not. Our previous tax code was increasingly uncompetitive, overly complex, and loaded with special interest provisions that created winners and losers. This was driving down capital investment, reducing productivity and causing wages to remain stagnant. The good news is that the recent changes in the U.S. tax system have many of the key ingredients to fuel economic expansion: a business tax rate that will make the U.S. competitive around the world; provisions to free U.S. companies to bring back profits earned overseas; and, importantly, tax relief for the middle class.

The passage of tax reform is critical because strong businesses create jobs and higher wages. Before tax reform was passed, 76% of the CEOs of leading U.S. companies said they would increase hiring if tax reform were enacted, and 82% would increase capital spending – and we already are seeing these effects. Hundreds of companies like ours are stepping up by investing in their employees and in initiatives to address challenges facing communities.

I must confess I don't understand how anyone could believe an uncompetitive tax system would be good for the United States – whether the current economic environment was good or bad. The damage has been cumulative. Here is one example: A recent study by the accounting firm Ernst & Young found that under a 20% corporate income tax rate, U.S. companies would have acquired $1.2 trillion in cross-border assets during 2004-2016 instead of losing $510 billion in such assets to foreign buyers. Simply put, this means the United States would have kept 4,700 companies under U.S. ownership during the past 13 years if they had paid taxes at a rate competitive with other countries that have modernized their corporate tax codes. Today's competitive U.S. corporate tax rate will reduce incentives for U.S. companies to relocate abroad or be purchased by foreign companies.

There is a reason why it has taken 30 years for comprehensive tax reform to take place in this country: It is complicated work, and navigating competing interests is hard. I am pleased that we did the right thing – not the easy thing. Congress took a historic step in 2017 to reform America's broken and outdated tax code. Coming together to get that work done shows that we can take on tough issues that have been holding us back.

I believe tax reform will have both short- and long-term benefits. In the short term, we already are seeing some companies increasing capital expenditures, hiring and raising wages. Of course, that will not be enough to offset all the immediate benefits associated with tax reform. Some argue that the added cash flow going to dividends and buybacks is a negative – it is not. It simply represents capital finding a higher and better use than the current owner has with it. And that higher and better use will be reinvestment in companies, innovation, R&D or consumption. Thinking this is a bad thing is just wrong. Tax reform's real benefit will be the ***long-term cumulative*** effect of retained and reinvested capital in the United States, which means more companies, innovation and employment will stay in this country. The United States should always aim to have a competitive business tax system. It should not be traded off against other objectives.

Here is some news we announced on how JPMorgan Chase is immediately putting some of the benefits of tax reform to good work.

Along with a more constructive regulatory and business environment and our strong business performance, this reform has led our company to recently announce a $20 billion, five-year comprehensive investment to help its employees while supporting job and local economic growth in the United States.

JPMorgan Chase plans to build up to 400 Chase branches in 15-20 new markets and hire up to 4,000 additional employees over the next five years. These employees will support our branch growth and more lending to small businesses and homeowners. Today, Chase has roughly 5,100 branches across 23 U.S. states, and, for a long time, we have wanted to expand beyond our current footprint. The heart of our company is our branches. We serve 61 million U.S. households – one out of every two U.S. families is a Chase customer. Nearly every line of business operates out of our branches in some way. We are not in some major markets, including Boston, Philadelphia and Washington, D.C., but Consumer Banking has started the formal application process for national expansion.

As I previously said, when Chase enters a community, it enters with the full force of JPMorgan Chase behind it. We hire people. We lend to and support local businesses. We help customers with banking, lending and saving. And our philanthropic programs help make these communities stronger.

Our company has made a significant economic impact in all the communities in which we operate, and we're excited to become an even more relevant part of many others.

We're also investing in our employees. We want to have the best people, period. We know happy customers start with happy employees, and we want to be the best place to work ***everywhere*** we do business. For the second time in two years, we're raising wages for 22,000 employees. For employees making between $12 and $16.50 an hour, we will raise hourly wages to between $15 and $18, depending on the local cost of living.

This is the right thing to do, and we believe it puts us well above the average hourly wage for most markets. These increases are on top of the value of the firm's full benefits package, which averages $12,000 for employees in this pay range. But the improvements won't stop there. We're reducing medical plan deductibles by $750 per year for employees making less than $60,000 – this essentially makes the deductible $0 for those employees who take care of themselves by meeting minimal wellness and preventative program requirements.

Credit is essential to a healthy economy and growth, and our new investments include sizable increases in lending to small businesses and homeowners. Through Commercial Banking and Business Banking, we will hire 500 new bankers and help expand small business lending by 20% – or $4 billion – over three years while entering new markets. We're also doubling the investment in our Small Business Forward initiative to $150 million over five years to help provide small businesses run by women, minorities and veterans get both the capital and technical assistance they need to grow.

We will also help more families live their dream of owning a home by increasing home lending in low- and moderate-income communities by 25% – to $50 billion – over the next five years. To do so, we will hire up to 500 new Home Lending advisors across our current markets and in some new ones. In addition, we will increase lending to finance affordable rental housing to $7 billion over five years.

Today, our company is strong and growing, and when we grow, so do the communities where we do business. We're excited to welcome new employees, new customers and new communities to JPMorgan Chase and to look forward to a bright future.

The need for rational, thoughtful, consistent tax policy.

The best long-term tax policy should have the following attributes:

- The business tax system should be competitive – always – and not be traded off against anything else. I would consider this table stakes for having a healthy economy in the long run.
- We should build the infrastructure we need. (We should consider this table stakes, too.) There are many reports that highlight how less expensive it is in the long run to have better infrastructure. In fact, some studies show it is even more expensive to have bad infrastructure.
- We should have a progressive tax system (helping people on the lower end) that progressively taxes higher incomes, like mine. And, of course, no one wants to think about their money being misspent. Therefore, it is critical for Washington to show the American public that their money will be used wisely – and that includes canceling or modifying programs that don't work and not using money to pay off special interest groups. If we need to raise taxes on the more well-off, I would hope the more affluent would recognize that they will do better if the country does better.
- The tax policy should be consistent in the long term for businesses to maximize their productivity and growth.

This is the best way to permanently drive growth and become a far wealthier and fairer society. There are two things I would do immediately to improve income inequality and create a much healthier society as explained below.

6. We should reform and expand the Earned Income Tax Credit and invest in the workforce of the future.

The Earned Income Tax Credit (EITC) supplements low- to moderate-income working individuals and couples, particularly with children. For example, a single mother with two children earning $9 an hour (approximately $20,000 a year) could get a tax credit of more than $5,000 at year's end. A single male without children (also making approximately $20,000 a year) does not get any money for a tax credit under this program. Last year, the EITC program cost the United States about $65 billion, and 27 million individuals received the credit. This program has lifted an estimated 9 million people above the poverty line. (The federal poverty guideline is determined by household size. For a four-person household, the poverty level is $25,100 or approximately $11 an hour.)

There are some problems with the EITC. Paid as a tax credit at the end of the year, 21% of the people who are entitled to it don't file for it – mostly because they don't know about it. Additionally, there is some fraud involved.

We should convert the EITC into more of a negative income payroll tax, which would spread the benefit, reduce fraud and get it into more people's hands. (Both Democrats and Republicans favor a move like this.) We should also dramatically expand the tax credit and even make it more available to workers without children.

Of the 150 million Americans working today, approximately 21 million earn between $7.25 an hour (the prevailing federal minimum wage) and $10.10 an hour. Approximately 42% of American workers make less than $15 an hour. It is hard to argue that you can live on $7-$10 an hour, particularly for families (even if two are working in that household). Decades ago, workers with very limited skills could earn a living wage to support themselves and their family. In this new highly technical world – where work skills are so greatly valued – the "natural" wage for unskilled workers may no longer lead to a living wage. This is an area that deserves more study.

Jobs are a wonderful thing. Jobs bring dignity. That first job is often the first rung on the ladder. People like working, and studies show that once people start working, they continue working. Jobs and living wages lead to better social outcomes – more household formation, more marriages and children, and less crime, as well as better health and overall well-being. As society creates an enormous amount of wealth, expanding the EITC would be a very productive way to share it. If a large portion of the American population cannot earn a living wage, then we will create a situation of permanent social turmoil.

We need to improve work skills and training that lead to better jobs – this will help both low- and middle-income workers. It is also the cure for rapid technological change.

Many high schools and vocational schools do not provide the education our students need – the ability to graduate and get a decent job. We should be ringing the alarm bell, signaling that inner city schools are failing our children – often minorities and mostly lower income students. In many inner city schools, fewer than 60% of students graduate, and many of those who do are not prepared for employment. We are creating generations of citizens who never had a chance in this land of dreams and equal opportunity. Unfortunately, it's self-perpetuating.

And we all pay the price. According to an assessment of math and science scores that the Organisation for Economic Co-operation and Development (OECD) conducted in 35 advanced industrialized countries, the United States ranks, on average, #24. Making the investment to improve our performance to the level of the OECD average would increase the U.S. gross domestic product by 1.7% over the next 35 years.

America used to be one of the best at training our workforce for good jobs. ***We know what to do*** to regain that mantle. We need to ensure that our high schools, vocational schools, technical schools and community colleges work together with local businesses to properly train these students so they can get well-paying jobs upon graduation; then we need to make sure proper apprenticeships and certifications (including college credits) are widely available. These students can continue to work or have the opportunity to go back to college, if they so choose. Doing this well will help the lower skilled and middle-income workers in the new world. The best way to offset any negatives associated with trade or technology is through continued education and training so that well-paying jobs are replaced with other well-paying jobs.

We know that technological advancements are displacing certain industries. Driverless cars, for example, are getting closer to mainstream use every day. Technology will bring innovation, but it will also change the employment opportunities available to hundreds of thousands – perhaps even millions – of people. We have the opportunity, now, to start preparing for and addressing potential future job losses. Anticipating problems that may arise from new technologies – and developing plans to responsibly minimize them – should be considered the final phase of our R&D process.

We, as a country, must also change the way we think about education. In less mutable times, a degree meant that formal learning was complete. You had acquired what you needed for a successful career in your field. A degree in today's world cannot mean the end of your studies. New discoveries, new advancements, new technologies and new terminology all mean that a degree will not carry you as far into the future as it once did. We must place a higher premium on lifelong learning. Corporations can do a lot to encourage and foster such a shift.

We should celebrate the benefits of technology, and we should also prepare for its challenges.

Overall, technology is the greatest thing that has ever happened to mankind. It is the reason why we enjoy our high living standard. It is staggering how our lives have changed when compared with 100 years ago. We live longer and work less; we are healthier and safer; and during that time period, billions of people have been pulled out of poverty. People legitimately worry that technology will eliminate jobs as artificial intelligence replaces drivers, call center

operators, etc. And this is no doubt true. But this has actually been happening for a long time. For instance, back in 1900, 41% of the U.S. workforce made their living in agriculture. Today, it is under 2%. This is only one example, but our vibrant economy has always found a way to adjust to job loss by creating new jobs and sometimes changing the way we work by reducing work days and work hours.

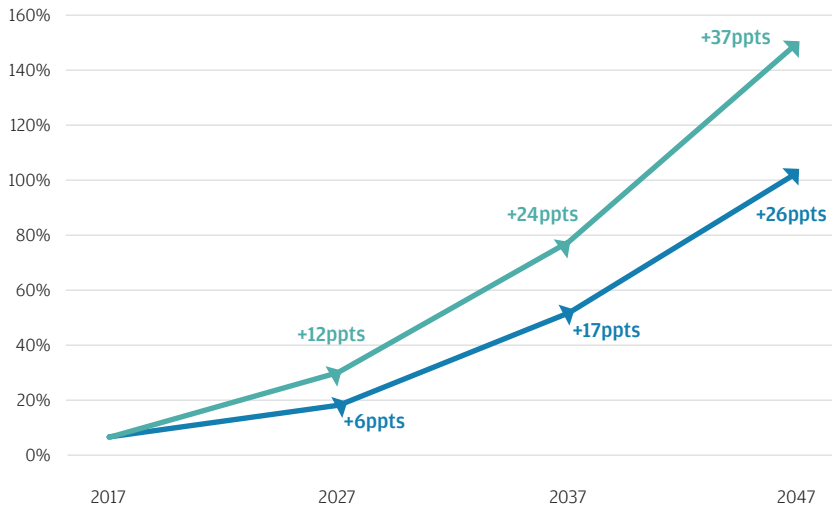
We know technology has been a great force, and for the benefit of mankind, that force should be left unleashed. In the event that it creates change faster in the future than it has in the past – and the economy is unable to adjust jobs fast enough – the best protection is continual workforce training, education and re-education, supplemented by income assistance and relocation.

7. America's growing fiscal deficit and fixing our entitlement programs.

America's net debt currently stands at 77% of GDP (this is already historically high but not unprecedented). You can see in the chart below that the debt level continues to get worse, but at an accelerated pace over the ensuing decades. We have time to fix it, so I am not immediately concerned. But this problem will not age well, and the sooner we start to fix it, the better. If we don't fix the growing deficit situation, it will adjust itself and in a way we won't like.

The chart below also shows the Congressional Budget Office's estimate of the total U.S. debt to GDP, assuming a 2% real GDP growth rate. Hopefully, with the right policies we can grow faster than 2%. We estimate if we got the growth rate even a little bit higher (i.e., 2½%), then the debt burden gets a little lighter but does not disappear.

U.S. Government Public[1] Debt as a Percentage of GDP



	2017	2027	2037	2047
Debt held by public (% of GDP growth at 2.0%)	77%	89%	113%	150%
Debt held by public (% of GDP growth at 2.5%)	77%	83%	100%	126%

[1] Debt issued in the financial markets, but not held by any U.S. government agency or fund
Source: Congressional Budget Office, March 2017
ppts = percentage points

The real problem with our deficit is the uncontrolled growth of our entitlement programs.

We cannot fix problems if we don't acknowledge them. The extraordinary growth of Medicare, Medicaid and Social Security is jeopardizing our fiscal situation. We have to attack these issues. I am not going to spend a lot of time talking about Social Security. I think fixing it is within our grasp – for example, by changing the qualification age and means testing, among other things. When President Franklin Delano Roosevelt astutely put Social Security in place in 1935, American citizens would work and pay into Social Security until they were 65 years old. At that time, when someone retired at age 65, the average life span after retirement was 13 years. Today, the average person retires at age 62, and the average life span after retiring is just under 25 years.

The core issue underpinning the entitlements problem is healthcare in the United States. Here are just a few places where we know we can do better:

- The United States has some of the best healthcare in the world, including our doctors, nurses, hospitals and clinical research. However, we also have some of the worst – in terms of some outcomes and costs.
- Administrative and fraud costs are estimated to be 25% to 40% of total healthcare spend.
- Chronic disease accounts for 75% of spend concentrated on six conditions, which, in many cases, are preventable or reversible.

While we don't know the exact fix to this problem, we do know the process that will help us fix it. We need to form a bipartisan group of experts whose direct charge is to fix our healthcare system. I am convinced that this can be done, and if done properly, it will actually improve the outcomes and satisfaction of all American citizens.

JPMorgan Chase, along with our partners Amazon and Berkshire Hathaway, recently formed a joint venture that we hope will help improve the satisfaction of our healthcare services for our employees (that could be in terms of costs and outcomes) and possibly help inform public policy for the country. The effort will start very small, but there is much to do, and we are optimistic. We will be hiring a strong management team to start working on some of these critical problems and issues:

- Aligning incentives systemwide – the United States has the highest costs associated with the worst outcomes because we're getting what we incentivize.
- Studying the extraordinary amount of money spent on waste, administration and fraud costs.
- Empowering employees to make better choices and have the best options available by owning their own healthcare data with access to excellent telemedicine options, where more consumer-driven health initiatives can help.
- Developing better wellness programs, particularly around obesity and smoking – they account for approximately 25% of chronic diseases (e.g., cancer, stroke, heart disease and depression).
- Determining why costly and specialized medicine and pharmaceuticals are frequently over- and under-utilized.
- Examining the extraordinary amount of money spent on end-of-life care, often unwanted.

To attack these issues, we will be using top management, big data, virtual technology, better customer engagement and the improved creation of customer choice (high deductibles have barely worked). This effort is just beginning, and we intend to start small. We will report on our progress in the coming years.

8. Why is smart regulation vs. just more regulation so important?

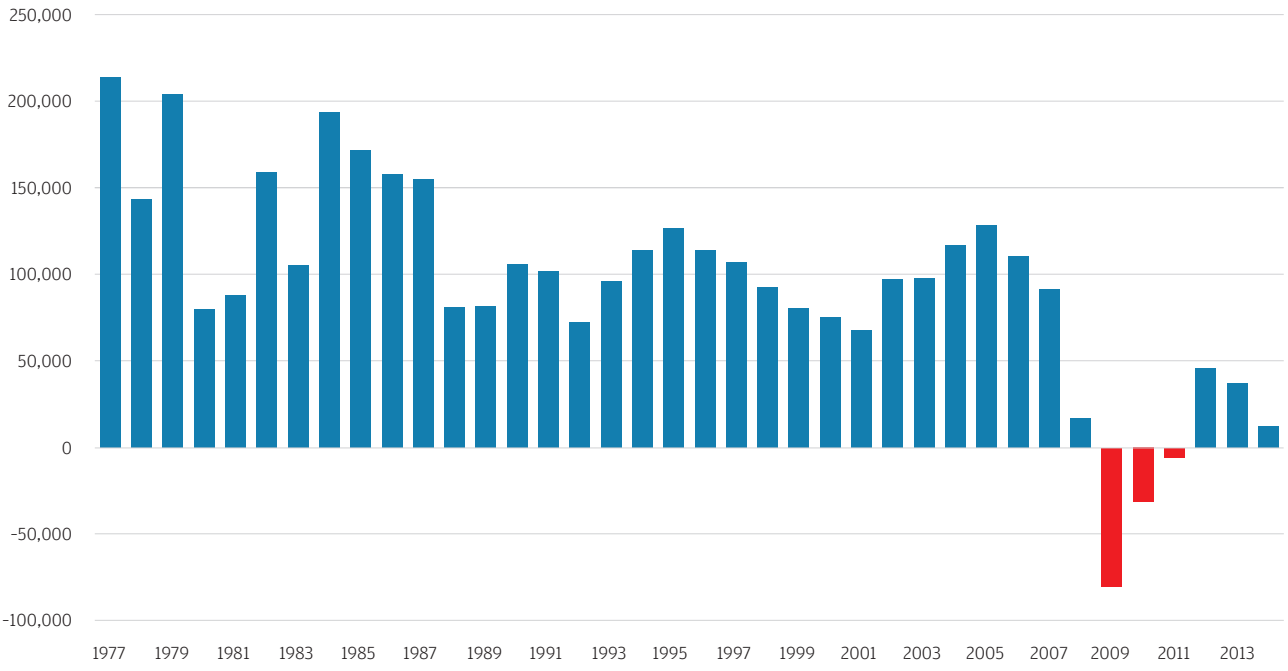
It is absolutely necessary to have proper regulation. Often, though, we confuse ***more*** regulation with ***good*** regulation. What is really needed is ***smart*** regulation. If you speak with businesses, large or small, they will give a long list of the time, effort and documentation it takes to run their business. They will show you books of red tape, inefficient, outdated systems and extraordinary delays. To start a small business today, you need multiple licenses. We have given an example of this with infrastructure in terms of needing up to 10 years to get a permit to build a bridge. Please read the article on page 42 written by a very liberal Democratic former U.S. senator and presidential candidate about what it was like to run a small business. The article provides excellent advice for all of our legislators and regulators. Unfortunately, he learned these lessons only after leaving his career in government.

The current administration is taking steps to reduce unnecessary regulation by insisting that congressional rules around cost-benefit analysis be properly applied. It is also actively trying to put regulators in the right roles with the proper authority to use commonsense principles to make appropriate changes.

By some estimates, approximately $2 trillion is spent on regulations annually, which is about $15,000 per household. While we believe much of this money is well spent (leading to cleaner water and air, and safer highways and hospitals, for example), it is hard to imagine that all of it is well spent. Decades of continuously expanding and overlapping regulation certainly can be streamlined and improved. There is little doubt that excessive regulation has adversely impacted innovation, growth and the formation of small businesses. The chart below shows the dramatic reduction in the net formation of small businesses. It is hard to know exactly

Annual Net Small Business Formations

Number of businesses



Source: U.S. Census Bureau, Business Dynamic Statistics, March 2018

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Manager's Journal:
A Politician's Dream Is a Businessman's Nightmare

By George McGovern

Wisdom too often never comes, and so one ought not to reject it merely because it comes late.

-- Justice Felix Frankfurter

It's been 11 years since I left the U.S. Senate, after serving 24 years in high public office. After leaving a career in politics, I devoted much of my time to public lectures that took me into every state in the union and much of Europe, Asia, the Middle East and Latin America.

In 1988, I invested most of the earnings from this lecture circuit acquiring the leasehold on Connecticut's Stratford Inn. Hotels, inns and restaurants have always held a special fascination for me. The Stratford Inn promised the realization of a longtime dream to own a combination hotel, restaurant and public conference facility -- complete with an experienced manager and staff.

In retrospect, I wish I had known more about the hazards and difficulties of such a business, especially during a recession of the kind that hit New England just as I was acquiring the inn's 43-year leasehold. I also wish that during the years I was in public office, I had had this firsthand experience about the difficulties business people face every day. That knowledge would have made me a better U.S. senator and a more understanding presidential contender.

Today we are much closer to a general acknowledgment that government must encourage business to expand and grow. Bill Clinton, Paul Tsongas, Bob Kerrey and others have, I believe, changed the debate of our party. We intuitively know that to create job opportunities we need entrepreneurs who will risk their capital against an expected payoff. Too often, however, public policy does not consider whether we are choking off those opportunities.

My own business perspective has been limited to that small hotel and restaurant in Stratford, Conn., with an especially difficult lease and a severe recession. But my business associates and I also lived with federal, state and local rules that were all passed with the objective of helping employees, protecting the environment, raising tax dollars for schools, protecting our customers from fire hazards, etc. While I never have doubted the worthiness of any of these goals, the concept that most often eludes legislators is: "Can we make consumers pay the higher prices for the increased operating costs that accompany public regulation and government reporting requirements with reams of red tape." It is a simple concern that is nonetheless often ignored by legislators.

For example, the papers today are filled with stories about businesses dropping health coverage for employees. We provided a substantial package for our staff at the Stratford Inn. However, were we operating today, those costs would exceed $150,000 a year for health care on top of salaries and other benefits. There would have been no reasonable way for us to absorb or pass on these costs.

Some of the escalation in the cost of health care is attributed to patients suing doctors. While one cannot assess the merit of all these claims, I've also witnessed firsthand the explosion in blame-shifting and scapegoating for every negative experience in life.

Today, despite bankruptcy, we are still dealing with litigation from individuals who fell in or near our restaurant. Despite these injuries, not every misstep is the fault of someone else. Not every such incident should be viewed as a lawsuit instead of an unfortunate accident. And while the business owner may prevail in the end, the endless exposure to frivolous claims and high legal fees is frightening.

Our Connecticut hotel, along with many others, went bankrupt for a variety of reasons, the general economy in the Northeast being a significant cause. But that reason masks the variety of other challenges we faced that drive operating costs and financing charges beyond what a small business can handle.

It is clear that some businesses have products that can be priced at almost any level. The price of raw materials (e.g., steel and glass) and life-saving drugs and medical care are not easily substituted by consumers. It is only competition or antitrust that tempers price increases. Consumers may delay purchases, but they have little choice when faced with higher prices.

In services, however, consumers do have a choice when faced with higher prices. You may have to stay in a hotel while on vacation, but you can stay fewer days. You can eat in restaurants fewer times per month, or forgo a number of services from car washes to shoeshines. Every such decision eventually results in job losses for someone. And often these are the people without the skills to help themselves -- the people I've spent a lifetime trying to help.

In short, "one-size-fits-all" rules for business ignore the reality of the marketplace. And setting thresholds for regulatory guidelines at artificial levels -- e.g., 50 employees or more, $500,000 in sales -- takes no account of other realities, such as profit margins, labor intensive vs. capital intensive businesses, and local market economics.

The problem we face as legislators is: Where do we set the bar so that it is not too high to clear? I don't have the answer. I do know that we need to start raising these questions more often.

—

Mr. McGovern, the 1972 Democratic presidential candidate, is president of the Middle-Eastern Policy Council in Washington.

(See related letters: "Letters to the Editor: A Politician's Dream Is a Businessman's Nightmare" -- WSJ July 2, 1992)

why this is happening, but the main culprits are probably the cost and difficulties that unnecessary regulations cause, coupled with the lack of access to credit for ***new*** businesses.

Another study examines the effect poor infrastructure has on efficiency (for example, poorly constructed highways, congested airports with antiquated air traffic control systems, aging electrical grids and old water pipes). This could all be costing us more than $200 billion a year. Philip Howard, who does some of the best academic work on America's infrastructure, estimates it would cost $4 trillion to fix our aging infrastructure – and this is ***less*** than it would cost ***not*** to fix it.

9. Public company corporate governance – how would you change it? And the case against earnings guidance.

Last year, I wrote about the decline in the number of public companies in the United States. Unfortunately, that trend has continued unabated. Indeed, if anything, it's accelerated. According to one study, the number of U.S. public companies has fallen by approximately 50% over two decades (from 8,090 in 1996 to 4,331 in 2016). And that decline, it pains me to say, is a uniquely American phenomenon. Public company listings in other developed markets have increased over the same period.

Fortunately, policymakers are sitting up and taking notice. In a report issued in October 2017, the U.S. Treasury Department decried the decline in the number of U.S. public companies and recommended several measures to stem the tide. Eliminating duplicative regulations, liberalizing restrictions on pre-initial public offering communications and removing non-material disclosure requirements were some of these measures. Jay Clayton, Chairman of the U.S. Securities and Exchange Commission, also has been quite vocal about the decline: He says it potentially deprives "Mr. and Ms. 401(k)" of the opportunity to participate in much of our country's wealthy creation. I share Chairman Clayton's concern.

Too many private company owners look at the burdens tied to public company status – among them, frivolous shareholder litigation, burdensome disclosures that don't get to the core of investor concerns, an unhealthy focus on short-term results and shareholder meetings that often focus on the trivial. Because of such factors, many private companies make a rational decision to stay private, particularly given rules that increasingly allow individuals to invest in private companies. Ultimately, that's not good for America because public companies are a powerful economic engine for job and wealth creation. They are also responsible for one-third of all private sector employment, with millions of American families depending on public companies for retirement, savings for college and home purchases, and investment.

So what can public companies do about these issues? For one, they can continue to engage policymakers. Second, they can continue to resist pressures to focus on the short term at the expense of long-term strategy, growth and sustainable performance. ***And in my mind, quarterly and annual earnings per share guidance is a major contributor to that short-term focus. It can cause companies to hold back on technology spending, marketing expenditures and other investments in their future in order to meet a prognostication affected by factors outside the company's control, such as fluctuations in commodity prices, stock market volatility and even the weather.*** That's why during my time as JPMorgan Chase's CEO we've never provided quarterly or annual net earnings guidance and why we would support any company that considers dropping such guidance in the future. We totally support being open and transparent about our financial and operational numbers with our shareholders – this includes providing guidance or expectations around number of branches, likely expense levels, "what ifs" and other specific items.

With their own sizable investment portfolios, most public companies could use their power as shareholders to urge public companies and asset managers to take a relentlessly long-term focus.

Of course, shareholders of all stripes – and particularly institutional shareholders (asset managers, as well as asset owners) – have a critical role to play in public company corporate governance. Among other things, they should exercise their proxy voting rights thoughtfully, using independent judgment even where they use proxy advisors to inform their judgment. They should actively engage with company boards and management, as appropriate, to understand the company's point of view and to convey their own. And they should evaluate and compensate their portfolio managers in a manner that reflects the investment time horizon applicable to the portfolio they are managing. That may mean using performance benchmarks over three-, five- and even 10-year periods, in addition to shorter period benchmarks.

10. Global engagement, trade and immigration – America's role in the world is critical.

Today's world is as complex and dynamic as ever. Things like trade, immigration, technology and social media, as well as our ability to move capital and purchase goods with the click of a button, all are changing how we live and how we do business. A natural reaction to this disruption might be to turn inward, to build walls. Such an impulse reflects real and justifiable concerns about whether our rush to change has outpaced our ability to successfully adapt. At this moment of uncertainty, however, U.S. global engagement is needed more than ever.

Following the devastation brought on by two world wars, the United States and other like-minded nations resolved to shape a new international order that would ensure a future unlike the past. In the succeeding years, America led the creation of a system defined by the rule of law and supported international institutions like the United Nations, the World Health Organization and the World Trade Organization (WTO). These institutions offered states a way to work out their differences around a conference table and address pressing economic and social challenges. Organizations like the North Atlantic Treaty Organization (NATO) were formed to enable collective action, promote peace and deter aggression. Treaties and coalitions were forged to limit the spread of nuclear weapons and to address threats such as terrorism, disease and climate change. America undertook efforts to promote and spread democratic values such as free speech and equality while standing firm against dictators and strongmen who would otherwise insist that "might makes right." There should be no doubt that these efforts have made us all more prosperous, secure and free.

The world has made incredible strides since most of us were born. We have overcome challenges once thought insurmountable. More than a billion people have been lifted out of extreme poverty in the last two decades. Food security is dramatically improving – a major driver of improving human health – and the number of undernourished people around the world is continuing to fall. Vaccines have almost entirely eliminated most infectious diseases around the globe – polio, smallpox, measles, mumps, diphtheria, rubella. Malaria has been eradicated in many parts of the world, and deaths have declined significantly in Africa and Southeast Asia over the last decade. These achievements and numerous others reinforce the overall positive trend line of human history.

Reversing the interconnectedness built by our post-World War II institutions is neither desirable nor feasible. As a nation, we cannot isolate ourselves any more than we can stem the ocean's tide. The international system provides agreed-upon rules of the road – and mechanisms for enforcing them. It serves as the basis upon which we can insist on fairer trade practices from competitors and adequate burden-sharing from allies. It is the

means by which we can continue to improve people's lives and livelihoods. The system, built at great sacrifice, continues to serve our interests. It should be preserved and defended – ideally under strong U.S. leadership.

Any system created by humans, however, is ultimately fallible. Sustaining the current order and ensuring its longevity mean acknowledging its flaws. We must have an honest conversation about its strengths and, more important, its weaknesses. Global GDP has more than doubled since 2000, yet too many people are being left behind – shut out of a growing economy's rewards. Nations with a proud history of welcoming immigrants – including the United States, a nation of immigrants – are engaged in hotly contested debates over whether immigration is good for one's country or not. Recognizing our extraordinary accomplishments is one thing, but we should acknowledge what has gotten worse. NATO has become less effective, serious issues surround trade and the WTO is unprepared to deal with today's issues – and too bureaucratic and slow to fix them. The associated loss of faith in governments and institutions has manifested itself in a wave of political disruptions, none more surprising than in the United States itself. We are increasingly divided and unable to work out our disagreements.

Retreating from the world is not the solution, nor is burning down the current system and starting anew. At the same time, we cannot and should not turn a blind eye to the real pressures millions of families face at the hands of globalization, technological advances and other factors. Ultimately, governments are charged with addressing the types of issues and popular grievances that led us to this moment of division and distrust. But increasingly, the private sector must also play a role.

Business in total has a huge amount of capabilities and knowledge. Business needs to work with the government to drive good, long-term solutions. But if it is to play a helpful role, business must be less parochial about what is good for one's particular company and more helpful about what is good for the people of our countries.

Proper resolution of serious trade issues is good for the United States and for the rest of the world.

We have entered a time of uncertainty over global trade. President Trump has rejected the Trans-Pacific Partnership (TPP) as not being in the best interests of the United States and is renegotiating the North American Free Trade Agreement (NAFTA). He has begun to demand material changes in our trade agreements with many nations and has begun to demand that nations reduce their trade surpluses with the United States, probably most importantly between the United States and China, the world's two largest economies.

We should acknowledge many of the legitimate complaints around trade. Tariffs and non-tariff barriers to trade are often not fair; intellectual property is frequently stolen; and the rights to invest in and own companies in some countries, in many cases, are not equal. Countries commonly subsidize state-owned enterprises. When the U.S. administration talks about "free" and "fair," it essentially means the same on all counts. This is not what has existed. It is not unreasonable for the United States to press ahead for more equivalency.

In last year's letter, I spoke about NAFTA and said that while there are some clear problems, an updated agreement should be worked out in a way that is fair and beneficial for all parties. The logic to do so is completely compelling.

China is far more complex – and the complaints are more legitimate. China has realized significant economic and employment gains since joining the WTO in 2001. China was expected to continue on an aggressive path of opening up its economy, but this has happened at a much slower pace than most nations expected. Now, more than 16 years later, it has the second-largest economy in the world and is home to 20% of the Fortune 500 companies, yet it still considers itself a "developing" nation that should not be subject to the same WTO standards as the United States and other "developed" countries. The Chinese government is competent and capable, and it has done an extraordinarily good job of managing its emergence as the world's second-largest economy. I believe

that China understands most of these issues and wants to properly resolve them. Recently, the United States threatened unilateral action against China. Of course, anything that starts to resemble a trade war creates risk and uncertainty to the global economic system. One of the administration's best arguments is that negotiation alone has not worked. But regardless of the process, here is my view on what the best outcomes would look like:

- The United States should define very clearly, and in detail, what it wants from China.
- The United States should lay out a distinct timeline – and determine what the reaction would be if it is not met.
- The United States should listen closely to China about any legitimate complaints it may have.
- This should be done in partnership with our largest allies, particularly Japan and Europe.
- The United States should revisit the Trans-Pacific Partnership and fix the parts considered unfair. The TPP could be an excellent economic and strategic agreement between America and its allies, particularly Asia. This is not against China: The country could at some point be offered the opportunity to enter the TPP if it demonstrates a willingness to meet its standards, which would improve upon the rules-based global trading system under American leadership.

While the chance of having an improved trade deal with both Mexico and Canada, as well as a more mutually beneficial relationship with China, is possible and preferable, there is always a chance that miscalculations on the part of the various actors could lead to negative outcomes. This obviously creates higher risk and more uncertainty until resolved.

We need to resolve immigration – it is tearing apart our body politic and damaging our economy.

Immigration reform is important both morally and economically. Immigration has been a critical part of America's economic and cultural vitality. And there are some basic and key principles that most Americans seem to agree with:

- We need to have – and ***believe*** that we have – proper border control. American citizens have the right to complain that we have not successfully protected our borders since the last immigration reform in 1986. In the 1986 amnesty, 3 million undocumented immigrants came forward, and now we estimate there are another 11 million undocumented people domiciled in our country. If the American public does not believe we have proper border control, nothing else can be accomplished.
- The "Dreamers" who came to America as undocumented children (there are approximately 2 million of them) should get a path to legal status and citizenship.
- We need improved merit-based immigration. Those who get an advanced degree in the United States should receive a green card along with their diploma. We need these skilled individuals in America. We could also improve on other merit-based immigration practices.
- Law-abiding, hardworking undocumented immigrants should have a path to legal status or citizenship. The American public should know this is no easy path. Back taxes should be paid, and citizenship could take up to 15 years.
- Finally, it is unlikely the American public will feel comfortable with immigration if we don't revert to some core principles. Immigrants should be coming here because they want to be part of our country and who we are as a people. America was an idea borne of freedom, with freedom of speech, freedom of religion, freedom of enterprise, and equality and opportunity. People immigrating to this country should be taught American history, our language and our principles. The American public will not be pro-immigration if we don't address these issues.

Closing policy thoughts.

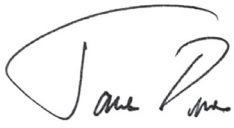
It is an absolute necessity that America maintain a world-class economy, with world-class companies and a world-class military. We need to do a significantly better job of managing our economy if we want it to be world class.

And, finally, ceding America's leadership role on the world stage is a bad idea for everyone – inside and outside our great land. We must all collaborate and respect each other to make the world a better place.

IN CLOSING

We are devoted to earning the trust and respect of our shareholders, customers, employees and the communities we serve every single day. We will never lose sight of this. And we have an outstanding management team leading this mission – a group of dedicated executives with exceptional capabilities, character, experience and wisdom.

I am humbled and honored to work at this company and with its great people. It is an extraordinary privilege and responsibility. On behalf of JPMorgan Chase and our management team, I want to express my deepest gratitude to all of our people – I am proud to be their partner.



Jamie Dimon
Chairman and Chief Executive Officer

April 5, 2018

Consumer & Community Banking

2017 financial results

JPMorgan Chase had a strong year in 2017. For Consumer & Community Banking (CCB), we delivered 17% return on equity (ROE) on net income of $9.4 billion and $46.5 billion in revenue. We grew our customer base to 61 million U.S. households – nearly half of all U.S. households do business with Chase – including 4 million small businesses. Our customers have 97 million debit and credit card accounts and spent over $900 billion on their cards in 2017. Our active digital customers grew to 47 million, and 30 million of them are active on mobile, the largest in our industry.

We've made progress since we brought the Chase businesses together five years ago, and we have seen remarkable growth in our business drivers over that time. In Consumer and Business Banking, our average deposits of $626 billion are up 60%, and our client investment assets are up 72%, hitting a record $273 billion. Annual credit card sales rose to $622 billion in 2017, up 63% since five years ago. Merchant processing volume reached $1.2 trillion, up 82%. Home Lending average loans have grown 16%, and our Auto loans and leases have grown 53%.

We delivered these results with a steady focus on the same four areas: customers, profitability, controls and people. There is no substitute for a consistent strategy well-executed.

Here are some of the highlights from 2017 for each.

Customers

Customer satisfaction is at record highs across most of our businesses. We will always have plenty of work to do, but we are extremely pleased with how far we've come.

2017 Performance Highlights

Key business drivers				
($ in billions, except ratios and where otherwise noted)		2017	2012	%Δ
Consumer & Community Banking	Households (millions)[1]	61.0	55.9	9%
	Active digital customers (millions)[2]	46.7	31.1	50%
	Active mobile customers (millions)[3]	30.1	12.4	143%
Consumer and Business Banking	Average deposits	$626	$392	60%
	Client investment assets (end of period)	$273	$159	72%
	Average Business Banking loans	$23	$18	28%
	Business Banking net charge-off rate	0.57%	1.65%	(108) bps
Home Lending	Total mortgage origination volume	$98	$181	(46)%
	Foreclosure units (thousands, end of period)	35	312	(89)%
	Average loans	$237	$205	16%
	Net charge-off rate[4]	0.02%	2.37%	(235) bps
Credit Card	New accounts opened (millions)[5]	8.4	6.7	25%
	Sales volume[5]	$622	$381	63%
	Average loans	$140	$125	12%
	Net charge-off rate	2.95%	3.95%	(100) bps
Merchant Services	Merchant processing volume	$1,192	$655	82%
Auto	Loan and lease originations	$33	$23	43%
	Average loan and leased assets	$81	$53	53%
	Net charge-off rate	0.51%	0.39%	12 bps

[1] Reflects data as of November 2017
[2] Users of all web and/or mobile platforms who have logged in within the past 90 days
[3] Users of all mobile platforms who have logged in within the past 90 days
[4] Excludes the impact of purchased credit-impaired loans
[5] Excludes Commercial Card

bps = basis points

The bar for what customers expect in every industry has grown much higher. We live in an on-demand world. Customers can get the service, content or experience they want when they want it on nearly any device. They expect speed and simplicity.

Customer service in banking and payments has improved greatly in recent years but lags compared with certain other industries such as travel or segments of retail. We are seeing fintechs have success simply by removing customer pain points that banks haven't. Customers are showing us where we need to get better, and we are paying attention. Getting this right is important because we are a part of our customers' everyday lives. On average, our digitally active customers log in more than 15 times a month. Our active debit card customers average 32 purchases a month, and those who use our ATMs have an average of five monthly ATM transactions. Our active credit card customers average 21 transactions each month.

In 2017, we made several improvements around the customer experience, including facial recognition in our app, a fully mobile bank pilot (Finn), real-time payments using Chase QuickPay℠ with Zelle and a simpler online application for Business Banking customers. For those who need our business products – deposits, credit cards and merchant processing – we collapsed the three applications into one so customers provide their information once instead of multiple times. We didn't change the products – we just made it easier for customers to get the ones they want. The simpler application reduces the time it takes to apply

for all three products by 45 minutes, and we saw engagement with new Business Banking households with both deposit and credit card accounts increase 25% with this change.

We also reached many new customers through important partnerships. In the Card business, many consumers want rewards for items they buy. In 2017, we completed co-brand renewals for partner cards with Disney, Hyatt and Marriott. We also launched the popular Amazon Prime Rewards Visa card and helped drive double-digit year-over-year sales growth for the Amazon portfolio. In addition to signing new, strategic Chase Pay® partnerships with PayPal and The Kroger Co., we launched acceptance of Chase Pay® across merchants such as Cinemark, Wakefern Food Corporation and Walmart. And in Auto, we renewed our contract with Subaru of America, extending our partnership.

Profitability

We always have said short-term growth is not our goal, but profitable growth over the long term is. We never make decisions to drive short-term earnings and always focus on investing for long-term results. We are proud of the work we have done to bring down our structural expense, allowing us to invest more in our core businesses. The CCB overhead ratio has gone from 61% in 2011 to 56% in 2017, with a medium-term target of 50%+/-. Delivering on that will allow us to further increase our investments in technology and digital, as well as to move with greater speed to market. These investments matter: Digital is a more efficient way to serve our customers, and our digitally engaged customers are happier with us and are more likely to stay with Chase. Our goal is to be the easiest bank for customers to do business with.

Controls

Controls are the checks, balances and safeguards we rely on to do our work effectively. Controls help us avoid errors and adhere to all requirements and regulations. Controls are an ongoing discipline for us, but we believe the worst is behind us. In 2017, three of our consent orders were lifted. Early in 2018, the Federal Reserve lifted our Home Lending consent order, recognizing the improvements we have made since the financial crisis; the Office of the Comptroller of the Currency lifted its own foreclosure consent order in 2016.

People

We think we have the greatest team on the field with our 134,000 Chase employees. Our steady focus on creating a great employee experience and investing in our people has made us a stronger business. We promoted more than 15,000 people in 2017 and filled over 16,000 roles with internal candidates. During the year, the firm invested in excess of $300 million on employee training to keep everyone's skills current in a changing economy. Our team reflects the customer base we serve: More than 58% of our employees are female, and over 53% are minorities. Although we are proud of our progress in increasing diversity among our senior leadership, we still have work to do.

We have also made several changes to help support our people. For the second time in two years, we raised wages for 22,000 employees to $15 to $18 an hour, depending on the local cost of living. These increases are on top of our full benefits package, which averages $12,000 for employees in this pay range and a lower medical deductible to protect families from sudden medical expense.

Perhaps the proudest moment of 2017 came when this firm and our people stepped up to help communities in need, as hurricanes, fires and mudslides devastated several communities in the U.S.

This is when our company is at its best. We made more loans, extended loan payments, waived late fees and made investments to support the long-term recovery in these communities. We also reached out to help the hundreds of our employees who were affected directly. Our employee-to-employee giving fund showed the tremendous generosity of employees looking out for each other in times of need. And from Houston to South Florida to the Bay Area, you could see the blue shirts of our Good Works volunteers helping out distributing food and water, clearing debris and helping however they could. Business has a broader social role to play, particularly now, and it's possible that no company can do as much as ours.

Looking ahead

If this organization has proved one thing, it's that we can move and adapt quickly for a company of our size. We are experiencing another period of extraordinary change. The pace of technology is accelerating faster than most businesses can absorb. Industry after industry is being disrupted as emerging players develop better customer experiences, faster than incumbents can innovate. API-based platforms allow software developers to build onto experiences, and we see services converging.

We know we have an extraordinary leadership position, and we do not take it for granted for a second. Across industries, the mighty have fallen – and we do not think we are immune. The key for us now is to invest, innovate and speed up to serve customers. As we look ahead, we will be laser focused on

> Intelligence is the ability to adapt to change.
>
> — STEPHEN HAWKING

becoming the easiest bank to do business with. We will do that by being excellent in six core areas we deliver for customers: becoming a customer, paying with Chase, owning a home, owning a car, growing wealth and growing businesses.

Becoming a customer – No matter how customers find us – in a branch, on our app, on chase.com or through a friend – we want to make it easy for them to become a customer and stay with us throughout their lives. We will continue to invest in having a simple, fast way to develop this relationship across Chase. Early in 2018, we started using a simpler digital application for our Consumer checking and savings products. Similar to the Business Banking application I mentioned earlier, we just streamlined the process to make it fast and easy. Early results have been beyond our expectations, requiring only a few minutes for existing customers to add checking or savings accounts and only a few minutes longer for customers who are new to Chase to join us. During one day in February, we opened two accounts every minute.

Paying with Chase – Helping our customers pay for things is at the center of everything we do. Whether a customer pays an individual, purchases a product or settles a bill, it should be simple, quick and safe. Forty percent of Chase customers already move money with us. We have 48 million active credit and debit card customers, and more than 70% of our active credit card customers use those cards in mobile wallets or for recurring bills and merchant payments. Zelle has been adding nearly 100,000 users every day, and Chase QuickPay℠ makes up more than 50% of Zelle's volume. We want our customers to decide who to pay and when, and we make sure it's simple, safe and seamless.

Owning a home – Buying a home is one of the most emotional purchases a family ever makes. But the process of buying one is anything but joyful. We want to help the hundreds of thousands of customers who will buy a home with Chase in 2018 to do so with ease and speed. Our partnership with Roostify has made our digital mortgage process simpler and has reduced the time it takes to refinance by 15%.

Owning a car – Over 1 million customers will buy or lease a car with Chase in 2018, yet many people still don't think to call us first if they're buying one. Like getting a home loan, the experience of buying a car can be long and daunting. We think we can reinvent it – making it easier, less expensive and a pleasant experience. Chase Auto Direct, in partnership with TrueCar, is a step in the right direction.

Growing wealth – Our brand promise is to help customers make the most of their money. Our team of bankers and wealth advisors has worked with customers for decades. In 2018, we will introduce new digital tools to help customers invest and trade from their phones, as well as connect them with an advisor when they need one. Unlike other investment apps, ours will have the team of J.P. Morgan advisors and bankers behind it.

Growing businesses – Few banks can help businesses as much as JPMorgan Chase can, from startups to multinationals. From the beginning, we can offer banking, credit and merchant services along with a business banker. We have developed new products and services that make it easier for our customers to manage and grow their business. Chase Business Quick Capital®, powered by our partnership with OnDeck, is a great example, offering same-day access to short-term loans. The next step is to expand into new markets and use the power of Chase to help our business customers grow and thrive.

Looking ahead at our ambitions for the year, we are grateful for our leadership position and are ready to do more. As large as we are and as much as we have grown, we know the best days are still to come. We raised our medium-term ROE target to 25%+ from 20%+/-, in part due to the impact of tax reform. With the strength of our products, distribution and brand, we know we can get there.

The first step will be expanding our already sizable technology investment. As a firm, we invest in excess of $10 billion annually in technology. We have more than 31,000 technologists at the firm in development and engineering jobs; that number has grown over time, and we expect to hire more people in 2018. We have moved a number of our technology teams to an agile structure, allowing them to be closer to the product owners and speeding up time to market. This change has enabled our teams to be 100% focused on their products and on delivering for our customers.

To maintain speed and adaptability, we have to fight the institutional drag that slows big companies down. Bureaucracy is like a virus. As soon

as one strain is inoculated, another appears. In most cases, bureaucracy is driven by good people thinking they're doing the right thing. But when we try to torture a product to perfection, we sacrifice time to market and risk losing customers to someone who can do it better. Jamie has asked Daniel and me to take this on, and we have accepted with pleasure. We are working at cutting unnecessary committees, making meetings more efficient and putting accountability on business owners.

And last, we will expand our retail branches into new communities. This is perhaps the most exciting development for 2018. The heart of our company is our retail branches – more than 1 million customers visit our branches each day. For years, we have been constrained to our current 23-state footprint and unable to expand into major markets such as Washington, D.C., Boston, Philadelphia, Baltimore and the Carolinas. In January 2018, we announced that we plan to open up to 400 branches in 15-20 new markets over the next five years. These markets represent a $1 trillion deposit opportunity. Our new branches in these markets will lead to nearly 3,000 new jobs and drive economic opportunity for small businesses in those communities.

When we enter these markets, we will do so with the full force of JPMorgan Chase. We will hire. We will lend. And we will help customers achieve milestones, like buying a home or sending a child to college. Our JPMorgan Chase Foundation will support the nonprofits within that area to drive economic growth. We have seen the significant impact we have made in the communities we are in, and we're excited to become an even more relevant part of many more.

I'm always an optimist, but I can honestly say I've never been more optimistic to be a part of this company. We are the largest bank in America, and I don't think we've ever been stronger, more disciplined and more focused on how we can serve our customers. Thank you for your support of this great company, and I look forward to our best days ahead.





Gordon Smith
Co-President and Chief Operating Officer,
JPMorgan Chase & Co., and
CEO, Consumer & Community Banking

2017 HIGHLIGHTS AND ACCOMPLISHMENTS

- Consumer relationships with nearly half of U.S. households
- #1 in primary bank relationships within our Chase footprint
- Consumer deposit volume has grown at a rate more than twice the industry average since 2012
- #1 most visited banking portal in the U.S. – chase.com
- #1 in Retail Banking for five years in a row (Kantar TNS)
- #1 ATM network in the U.S.
- #1 credit card issuer in the U.S.
- #1 U.S. co-brand credit card issuer
- #1 in total U.S. credit and debit payments volume
- #1 wholly-owned merchant acquirer
- #2 jumbo mortgage originator
- #3 bank auto lender
- 2017 Bank Brand of the Year (The Harris Poll)



Helping Customers in Times of Need

After Hurricane Harvey in Houston, a city where we have served people and businesses for 151 years, we provided more than $30 million in immediate relief, worked with customers on over $1.2 billion in loans and mortgages, and waived certain fees. After the storm, we hosted 1,400 Houston area neighbors at community branch events where our employees helped our customers and members of the community.

Corporate & Investment Bank

During 2017, the Corporate & Investment Bank (CIB) maintained its position as the most successful and profitable institution of its kind.

But the seeds of our current strength were planted years ago. As other banks retrenched, cutting back on products and geographies, we chose a different path. We believed that growth would come from being global, having scale and maintaining a complete product offering for clients. Those elements anchored the profitability that enabled us to invest consistently and to sustain our growth, all while improving the client experience.

Staying true to our character and reputation, we also knew we had to be open for business under all market conditions, not just when markets were strong. Whether in Europe, Latin America, Asia or North America, our teams have worked hard, built trust and gained share in recent years.

In 2017, the CIB generated earnings of $10.8 billion on $34.5 billion of revenue, resulting in a return on equity (ROE) of 14% that allowed us to continue our pace of investment in our people and technology.

Our CIB franchise also benefits from being part of JPMorgan Chase and collaborating with our firmwide partners: Commercial Banking (CB), Asset & Wealth Management (AWM) and Consumer & Community Banking (CCB).

To cite some examples, CB's universe of more than 20,000 clients has access to the CIB's treasury services and foreign exchange products as a result of the close working relationship they share. On the strength of that relationship, nearly 40% of North America Investment Banking fees were derived from CB clients – a record. Family office clients served by AWM are often interested in investing in the types of transactions the CIB brings to market, and the CCB's relationships with major merchants and businesses generate opportunities as these businesses need to raise capital, seek advisory expertise or require payments services.

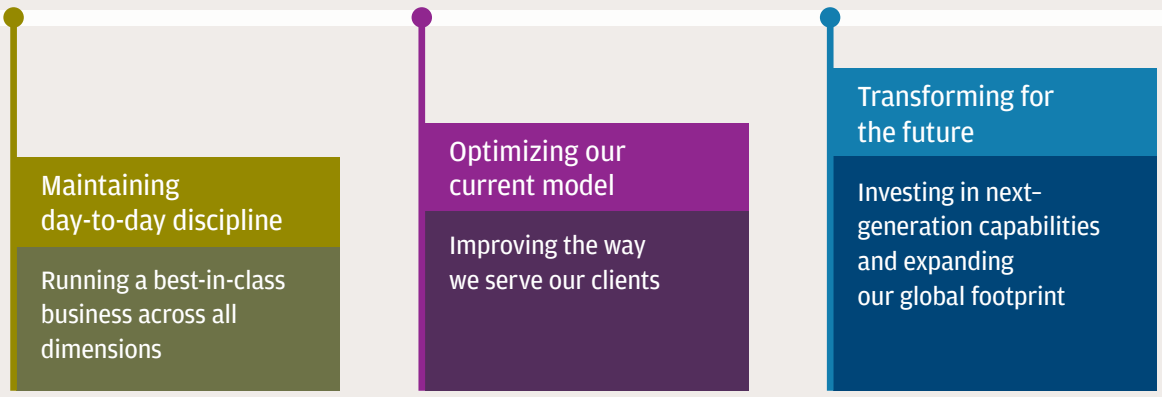
Maintaining share, and even growing it, in recent years hasn't been easy. Having scale and expertise across a set of businesses enabled us to sustain profitability under various market conditions. And while we take pride in our standings, we aren't complacent about them. Each day, our employees know that J.P. Morgan has to earn client business with innovative solutions that tap the appropriate mix of our products. More than ever, that means delivering best-in-class ideas and service through cutting-edge technology.

Providing easy-to-use technology in order to deliver a great client experience will continue to be a major differentiator in the coming years. That's why we are always exploring ways to offer our clients faster, better and simpler ways to do business with us. The banks that don't invest will lose ground and will have a long, difficult catchup process.

Looking ahead, we are implementing a set of simultaneous priorities – a blueprint for investing that runs in parallel tracks across three time horizons. In the immediate period, we are focused on maintaining day-to-day discipline to support organic growth while holding firm on costs and integrating efficiencies.

At the same time, we are planning and preparing for the changing industry conditions that will affect the business over the medium term,

Sustaining Our Lead Across Three Horizons



a period defined as the next two to three years, and the longer term, extending 10 years out. The medium-term investments we're making are already enhancing our ability to serve clients and hold the promise of transforming our business.

Looking five to 10 years out, the pace of technological innovation will only quicken as artificial intelligence, robotics, machine learning, distributed ledgers and big data will all shape our future.

We will continue the prudent expansion of our global footprint. J.P. Morgan has been doing business in China, India, Brazil and countries in Africa for decades. And as global economies grow, we are making judicious decisions that will reaffirm our unique position as the leading global financial institution.

Our efforts to expand our coverage of global clients over the last eight years are paying dividends today. Now, with economic growth taking hold across the globe, these clients have turned to us for services, such as cash management, electronic payments and fraud detection.

On the following pages, I will discuss the CIB's 2017 performance in greater detail, outlining how we intend to prepare for the industry changes that are certain to affect our business over the foreseeable future.

By the numbers: Working for clients

The CIB's revenue was more than $6 billion higher than its closest competitor, according to industry data provider Coalition.

That financial success is directly tied to how well the CIB delivers for our clients across our businesses. Their success is our success. With the increasingly competitive environment we inhabit today, we take pride in every client assignment and the number of times they choose us for repeat business.

We kicked off 2017 announcing that J.P. Morgan's Custody & Fund Services business won the largest custody mandate in history. BlackRock is in the process of shifting $1.3 trillion in assets under management over to our platform, validating the investments we've made and the resources we've added to that business. As the only global custodian with a top Markets franchise, we're confident that scale, technology and seamless execution will continue to draw clients.

Custody & Fund Services built on its momentum, as evidenced by the $3.9 billion revenue in Securities Services, which was up 9% for the year. Our business has record assets under custody of $23.5 trillion, which increased by 14% compared with 2016.

Treasury Services, a business that supports clients in their cash management needs and is rolling out its real-time payments capability, also continued to perform well through the year, with revenue rising to $4.2 billion, an increase of 15% over 2016. As it serves the needs of increasingly global commerce, Treasury Services' state-of-the-art technology is reducing to seconds what once took days.

Turning to investment banking, J.P. Morgan set a record in global Investment Banking fees, $7.2 billion, including debt underwriting of $3.6 billion. Measured by market share, in Mergers & Acquisitions (M&A), Equity Capital Markets (ECM) and Debt Capital Markets (DCM), the firm has scored gains since 2015: M&A share rose to 8.6% from 8.4%; ECM was up to 7.1% from 6.9%; and DCM moved to 8.3% from 7.9%.

Our debt underwriting team closed on the largest number of deals in its history, up about 16% over last year. While we witnessed an overall decline in the number of deals over $1 billion, J.P. Morgan still played a key role in the year's biggest transactions. We served as joint active bookrunner on AT&T's $22.5 billion bond offering, the third largest of all time, and also served as joint active bookrunner on Amazon's $16 billion offering to support its acquisition of Whole Foods Market.

J.P. Morgan was also #1 in U.S. initial public offering (IPO) volume and managed the largest number of deals during 2017. Our equity team served as global coordinator or helped to lead more than 40% of the IPOs over $1 billion in size, including Pirelli at $2.8 billion, Altice at $2.1 billion and Netmarble at $2.3 billion.

Our Global M&A team completed the most M&A deals during the year, 354, and had record post-crisis fees for its advisory work. The firm advised on six of the top M&A announced transactions in North America. One of our more visible roles is our work serving as advisor to The Walt Disney Company on its acquisition of portions of 21st Century Fox, including its film and television studio.

Looking at the Markets business, after an exceptionally strong 2016, J.P. Morgan's 2017 share in Fixed Income, Currencies and Commodities (FICC) decreased marginally to 11.4% from 11.7%. However, offsetting that slight drop, the market share in Equities and Prime rose to 10.3% from the previous year's 10.1% and shared the top ranking for the category.

We are particularly proud of progress in Prime Services. We have a competitive and complete platform,

and we grew global prime balances by 28% last year while increasing market share to 13.8% from 11.3% since 2015.

The CIB's Global Research team also continued to rank #1 worldwide and across a broad range of equity and debt market categories, providing clients with actionable insights on the markets. The regularity with which our analysts top the rankings is a remarkable achievement. As Markets in Financial Instruments Directive regulations take on a greater impact, quality research will continue to set us apart.

Our fintech future

The CIB is an investment bank, but financial technology forms the bank's backbone. As part of JPMorgan Chase, the CIB benefits from being part of a firm that draws on the expertise of nearly 50,000 technologists and a 2017 technology budget that amounted to $9.5 billion. But to underscore the firm's overall commitment, this year's technology budget totals $10.8 billion, with more than $5 billion earmarked for new investments.

Over the last several years, I have mentioned in my annual letter J.P. Morgan's commitment to embracing technology. Being creative requires a willingness to take risks. As part of our technology culture, experimentation and failure are okay – it is encouraged, in fact, in order to achieve breakthroughs.

It was only a few years ago that programmers and technology graduates seemed reluctant to build their careers in banks; that's not the case at J.P. Morgan. Nearly 30% of our recent senior hires in technology came from non-financial services firms, and they're working on finding solutions to some of the most complex issues in the field.

The divide between the front office and the back office is no more. Our technologists and our product people work side by side, in the same rooms and at the same tables. They're fully assimilated. That way, the teams are able to work in tandem to build the next-generation systems best targeted to meet the needs of our clients and the business.

In the age of smartphones, when people only need an app in order to trade, our mission is to make it possible for clients to trade and interact with us easily and in whatever way they choose. If they want to access our top-rated research or conduct business with us, we want them to have the freedom to choose the option they prefer – whether it's in person or by telephone, website, mobile app, online trading platform or third party.

On the strength of its scale and technology, J.P. Morgan processes $5 trillion in payments and trades billions of dollars electronically every day. In equities, nearly 100% of the tickets are handled electronically, representing 89% of notional volume. The macro desk, primarily foreign exchange, handles 97% of its tickets electronically, corresponding to 46% of its volume.

We have assembled talented teams to drive innovation in artificial intelligence, blockchain technology, big data, machine learning and bots, with the objectives of improving our efficiency and enabling us to serve more clients with greater effectiveness, depth and sophistication. As a result, many of our initiatives are already showing promise in terms of charting their future expansion and application.

We're piloting several ventures to test the viability of technology in real-world situations. Late in 2017, J.P. Morgan's Treasury Services and its Blockchain Center of Excellence launched a payment network powered by distributed ledger technology in partnership with the Royal Bank of Canada and the Australia and New Zealand Banking Group. Called the Interbank Information Network, the pilot's objective is to use blockchain technology to process bank-to-bank transactions faster, alleviating situations where payments get held up due to mismatched information.

Because our people are our greatest strength, we value technology as a tool to enhance their ability to provide the best-in-class ideas and solutions that our clients expect from us.

Sustainability

Before I close, I want to highlight what the CIB, along with the overall JPMorgan Chase organization, is doing to further a sustainable environment. On behalf of the entire organization, I have been asked to champion our sustainability efforts. It's an issue that is important to me and is one that our employees care about deeply as well. Employees want to work for an organization they can be proud of and that shares their values. Through our sustainability initiatives, the firm is demonstrating its commitment to those shared concerns and is taking action.

In 2017, the Operating Committee ramped up our firmwide sustainability efforts in a big way. Over the next three years, JPMorgan Chase intends to become 100% reliant on renewable power. In our own workspace, we are executing several strategies to increase our energy efficiency. We are installing building management

systems and are in the process of retrofitting 4,500 Chase branches with LED lighting as part of the world's largest LED lighting installation. We will also produce power for some of our own buildings by developing on-site solar power generation. We expect that these measures will reduce total power consumption by 15%.

Using the firm's expertise in the renewable power sector also enables us to support the development of renewable projects – and advances our goal of 100% reliance on renewable power – in other substantive ways. One example is the Buckthorn wind farm, a 100-megawatt project in Texas that came online last December. More than half of the wind farm's output will be purchased by our Global Real Estate team and the remainder by our Commodities team. This is good for the environment and good for business.

In our effort to finance green initiatives, we've raised the stakes, committing $200 billion for such projects by 2025. From 2016 to year-end 2017, we reached $60.6 billion cumulatively toward that goal. The company plans to increase its recycling efforts and to pioneer the use of greener materials in its products and processes.

We've also continued our leading role as an underwriter of green bonds. In 2017, Apple Inc. raised $1 billion using green bonds – the second green bond Apple has issued with J.P. Morgan as an active bookrunner.

In addition, J.P. Morgan led some of the largest clean energy transactions, such as serving as financial advisor to Enbridge on its C$2.1 billion partnership with EnBW on the Hohe See and Albatros offshore wind farms in the North Sea. J.P. Morgan also was a bookrunner for energy company Iberdrola's first issue of green hybrid bonds on the euromarket, valued at €1 billion. The proceeds will be used to refinance investments in various renewable projects in the United Kingdom.

Closing

The CIB has had another successful year, gaining share and generating healthy profits by remaining intently focused on serving our clients and benefiting from our scale, breadth and global reach.

J.P. Morgan is known for being a place where people want to work, where we can attract and retain the best talent, where their work is recognized and where the culture is collaborative. That is critical to our ongoing success. I, along with the entire CIB management team, appreciate the dedication, enthusiasm and intelligence our employees bring with them every day.

Finally, on a personal note, I'd like to express my gratitude to my partners on the Operating Committee. The collaboration that exists throughout the firm is the foundation that supports our strength year after year.





Daniel Pinto
Co-President and Chief Operating Officer, JPMorgan Chase & Co., and CEO, Corporate & Investment Bank

2017 HIGHLIGHTS AND ACCOMPLISHMENTS

- The CIB had earnings of $10.8 billion on $34.5 billion of revenue, producing a best-in-class ROE of 14%.
- We retained our #1 ranking in global Investment Banking fees with an 8.1% market share, according to Dealogic.
- Debt Capital Markets was #1 in closing deals, setting a record for the highest number of deals bookrun in the firm's history.
- Equity Capital Markets was #1 in U.S. IPO volume and in the number of deals.
- M&A was #1 in the number of deals completed: 354.
- The CIB continued investing in technology to offer clients a broader array of trading platforms while making it easier and faster to trade with us.
- *Institutional Investor* magazine's survey of large investors ranked J.P. Morgan as the #1 Global Research Firm. Across individual categories, J.P. Morgan ranked #1 in All-America Fixed Income Research and All-Europe Fixed Income Research. It also ranked #1 in All-America Equity Research and ranked #2 in Emerging Markets.
- Treasury Services revenue rose to $4.2 billion, an increase of 15% over 2016, and continued momentum in Custody & Fund Services drove 9% growth in Securities Services revenue for the year.
- Custody & Fund Services had a record $23.5 trillion in assets under custody while also achieving the highest ever client satisfaction and retention levels.

Commercial Banking

Commercial Banking (CB) is the nexus of everything we do at JPMorgan Chase. The hard work of our dedicated team, along with the unmatched capabilities across our firm, allows us to build deep, lasting relationships with so many great companies. We are incredibly proud of the role we play in the success of our clients, and we are grateful every day for the confidence they place in us.

One such success story is siggi's yogurt (siggi's), celebrated as the fastest-growing national yogurt brand in 2017. What started as selling his unique recipe out of coolers at local outdoor markets in New York, founder Siggi Hilmarsson quickly turned his humble operation into a thriving business. Up until 2016, Siggi and his team had fully funded the company on their own, but when their growth accelerated, we worked with them to deliver their first bank credit facility. As Siggi shaped the company's plans for the future, we provided differentiated industry advice, and in 2017, we were selected to advise siggi's on the sale of the company – the capstone transaction for an incredible brand and business. At every step, we were delighted to support Siggi's passion to share his native Icelandic recipe with households around the country.

Our dedication to clients, like siggi's, continues to drive our strategy and how we do business in CB. I'm excited to share highlights of our 2017 performance, the investments we are making to deliver more value to our clients and the steps we are taking to reach our full potential.

2017 performance

With strong momentum across all of our businesses and continued focus on executing our strategic priorities, CB delivered record financial results for 2017, earning $3.5 billion of net income on revenue of $8.6 billion. We achieved a notable return on equity of 17% and an industry-leading overhead ratio of 39%, even while making significant investments across the business.

Higher interest rates, disciplined loan growth and outstanding credit quality all contributed to our record performance. We ended the year with record loan balances across our Commercial & Industrial and Commercial Real Estate (CRE) businesses, up $15 billion or 8% from the prior year. Staying true to our proven underwriting standards, we have remained highly selective in growing our loan portfolio – 2017 marked the sixth straight year of net charge-offs of less than 10 basis points. This ongoing discipline is especially important given the late stages of the current economic cycle and competitive pressures in the market.

These record results reflect our sustained investment, the incredible effort of the CB team and their continued focus on our clients. We are committed to building upon these great milestones and see tremendous potential across our franchise.

Executing our long-term, organic growth strategy

Our strategy to grow CB remains consistent year after year: Add great clients and work hard to deepen those relationships over time by delivering valuable solutions to help them succeed. We have been steadily investing in the business, taking a long-term disciplined approach. Since 2010, we have expanded into 33 new cities and added more than 800 bankers, helping us achieve sustained organic growth across our business.

Expanding into new markets

Being able to deliver the broad-based capabilities of JPMorgan Chase at a very local level is a key competitive advantage. In 2017, we added client coverage in six new high-potential markets and now have dedicated teams in all of the top 50 metropolitan statistical areas. We look forward to growing our business in these terrific locations and expanding into additional communities in the future.

Investing in our team

Our success depends 100% on our people. As such, we are making significant investments in our training and development capabilities, all focused on providing our bankers with the deep expertise they need to best serve our clients. In 2017, we hired more than 100 bankers to support the growth and expansion of our business, and we expect to add more great bankers in the coming year.

Delivering value to our clients

Expansion is only one part of our growth strategy – deepening our relationships with our clients is equally important. Given the breadth of our capabilities, we can support the needs of businesses of all sizes – fast-growing companies, like siggi's, as well as large, multinational corporations.

With the quality of our team, differentiated advice, and ability to deliver a full range of solutions locally, not many other banks can serve clients the way we can. In 2017, our clients had more than $135 billion in assets managed by our leading Asset & Wealth Management business, generated nearly 40% of all North America Investment Banking (IB) fees for the Corporate & Investment Bank (CIB), and made over 13 million transactions in our branches.

Smart growth in our CRE business

We have been building a CRE business that will stand the test of time. Although we are in the late stages of the real estate cycle, market conditions for our targeted asset classes remain strong, and we were able to grow our CRE loan portfolio by $12 billion in 2017. Importantly, maintaining our strict underwriting standards and conservative approach, we are focusing only on the loans and markets we know best. If we can stay true to these fundamentals, we believe we can continue to selectively grow our real estate loan balances.

Innovating across CB

Complementing our investments to drive growth in our business, we are working to bring new technologies and innovation to transform how we interact with our clients. Our approach to innovation is anchored on having a full understanding of the identified, as well as unidentified, needs of our clients. Over 99% of companies in the U.S. are small to midsized businesses. We know they have unique behaviors and concerns. They tell us they don't feel in control. Small business owners and their teams can be stretched, and they struggle with forecasting, collecting receivables and managing vendors. To help, this past year we increased our payments, technology and digital investments and put more capital and resources into delivering real solutions to these challenges.

Digital

In 2017, we partnered with Consumer & Community Banking to launch a new digital platform, Chase Connect, that is tailored to meet the needs of small and midsized companies. This platform provides our clients with a simple and convenient experience, integrating account information, payables and receivables. Chase Connect allows clients to see all of their accounts in one place, stay organized when paying bills, view payment history, approve transactions quickly and easily from one location, and receive customized account alerts. We are focused on having the best integrated, digital capabilities for clients and will continue to invest in enhancing the functionality of this robust platform.

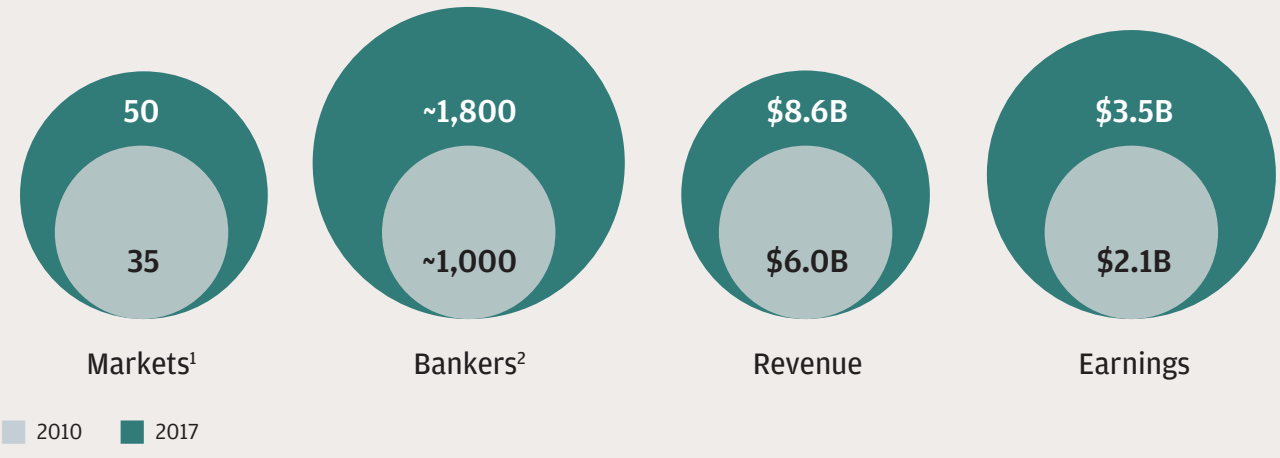
Payments

Recognizing that managing payments is a major pain point for our clients, we completed a comprehensive analysis to determine a digital solution. In 2017, we announced our investment in and partnership with Bill.com, the largest digital business-to-business payments network in the U.S. Seamlessly integrated into Chase Connect, this new automated payments capability will enable our clients to easily send and receive electronic invoices and payments, saving them substantial time and effort. We are very excited about this innovative solution and look forward to bringing this functionality to our clients in 2018.

Client experience

In addition to offering new capabilities, we are making great progress in re-engineering our core processes to

Sustained Growth Across Commercial Banking



[1] Number of Metropolitan Statistical Areas (MSAs) with Middle Market Banking presence out of top 50 MSAs

[2] Based on total count of client-facing employees

B = Billion

make it easier for clients to do business with us. For example, we are working to streamline and digitize the onboarding process to ensure that our clients' first experience with JPMorgan Chase is simple and transparent. Through these efforts, clients will be able to provide information electronically, e-sign and upload documents digitally, and receive real-time support via online chat capabilities. Clients are at the center of everything we do, and our work to deliver more value and an exceptional experience has no finish line.

Looking forward

While we celebrate CB's record 2017, we do not take our performance for granted. We understand that complacency and standing still in any way will threaten the future success of our business. As such, we remain focused on building upon our franchise to provide even more support to our clients. By combining the core strength of our business with new technologies and innovation, we believe we can further extend our competitive advantages.

I want to thank all of our great clients, like siggi's, for the trust and confidence they place in JPMorgan Chase. I also want to thank the entire CB team for their continued dedication to our clients and their communities. I am excited about the direction of the business for 2018 and beyond.





Douglas Petno
CEO, Commercial Banking

2017 HIGHLIGHTS AND ACCOMPLISHMENTS

Performance highlights

- Delivered record revenue of $8.6 billion
- Grew end-of-period loans 8%; 30 consecutive quarters of loan growth
- Generated return on equity of 17% on $20 billion of allocated capital
- Continued superior credit quality – net charge-off ratio of 0.02%

Leadership positions

- #1 U.S. multifamily lender[1]
- #1 in overall satisfaction, perceived satisfaction, customer relationships and transactions/payments processing – *CFO* magazine's Commercial Banking Survey, 2017
- Top 3 in Overall Middle Market, Large Middle Market and Asset Based Lending Bookrunner[2]
- Winner of 2017 Greenwich Best Brand Awards in Middle Market Banking – overall, loans/lines of credit, cash management, international products/services and investment banking
- Winner of 2017 Greenwich Excellence Awards in Middle Market Banking: international capabilities, cash management online banking functionality, cash management mobile banking functionality

Business segment highlights

- Middle Market Banking – Record gross Investment Banking revenue[3]; added eight new offices
- Corporate Client Banking – Record revenue, with average loans up 10% from prior year
- Commercial Term Lending – Record average loans; completed rollout of Commercial Real Estate Origination System for MFL business
- Real Estate Banking – Record revenue, with average loans up 27% from the prior year
- Community Development Banking – Record New Market Tax Credit equity investment production of $1.2 billion – Financed more than 9,000 units of affordable housing in 70+ cities through construction lending commitments of over $1 billion

Firmwide contribution

- Commercial Banking clients accounted for 38% of total North America Investment Banking fees[4]
- Over $135 billion in assets under management from Commercial Banking clients, generating more than $475 million in investment management revenue
- $479 million in Card Services revenue[3]
- $3.4 billion in Treasury Services revenue

Progress in key growth areas

- Middle Market expansion – Record revenue of $519 million; 18% CAGR since 2012
- Investment Banking – Record gross revenue of $2.3 billion[3]; 8% CAGR since 2012
- International Banking – Revenue[5] of $323 million; 8% CAGR since 2012

[1] Rank based on S&P Global Market Intelligence as of 12/31/17
[2] Thomson Reuters LPC, FY17
[3] Investment Banking and Card Services revenue represents gross revenue generated by CB clients
[4] Represents the percentage of CIB's North America IB fees generated by CB clients, excluding fees from fixed income and equity markets, which is included in CB gross IB revenue
[5] Non-U.S. revenue from U.S. multinational clients

CAGR = Compound annual growth rate
MFL = Multifamily lending

Asset & Wealth Management

J.P. Morgan Asset & Wealth Management (AWM) has been a fiduciary of client assets for nearly two centuries, with our roots dating back to the earliest cross-border fund managers in the industry. Over these many decades, we have managed the assets of institutions, central banks, sovereign wealth funds and individuals, helping them navigate their assets from the beginning stages of cash management all the way through complex multi-generational portfolios.

Our breadth of experience, through economic and geopolitical cycles, gives us the insights to help clients make smart, long-term investment decisions. It also gives our portfolio managers and advisors the perspective and fortitude to remain disciplined risk managers and opportunistic risk takers in today's ever-evolving market environment.

Today, while the fundamentals of managing money still require having the best investment minds, they must be coupled with major investments in technology. This enables more comprehensive analysis of enormous data sets, faster and more optimal execution in portfolios, and seamless delivery of all that we do in both human and digital form. The global size and scale of AWM, as well as its connectivity with JPMorgan Chase's broader technology expertise, continue to be competitive advantages for our teams, our clients and our shareholders.

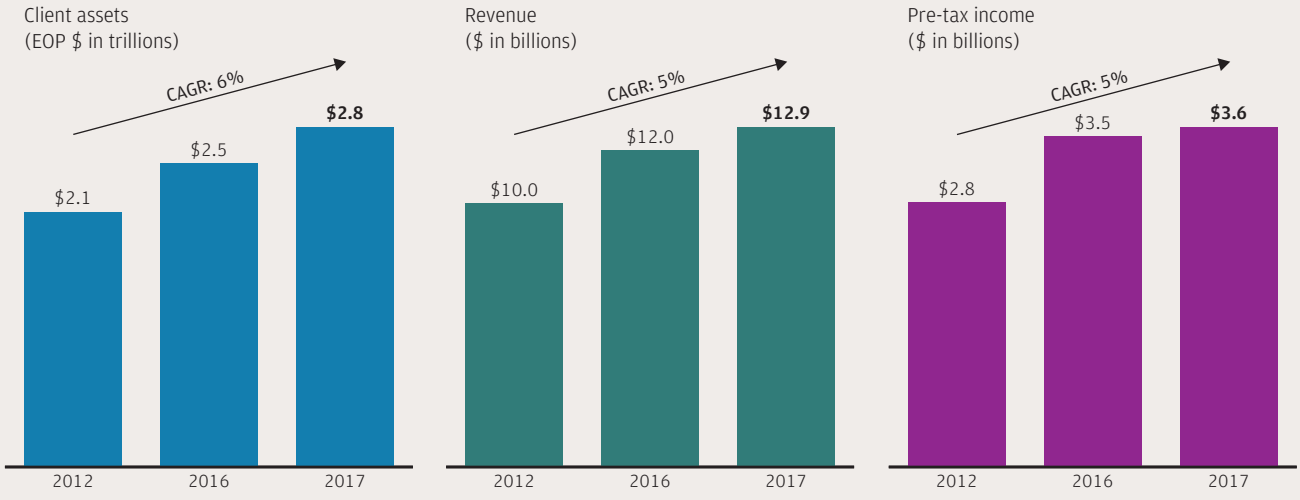
A record year for AWM

For investors in JPMorgan Chase, AWM continues to be a consistent revenue and earnings growth contributor to the company, with a very strong return on shareholder capital.

AWM's total client assets in 2017 grew to a record $2.8 trillion, with revenue of $12.9 billion and pre-tax income of $3.6 billion also hitting their highest levels ever. However, the consistent growth trajectory those numbers represent is just as important. From 2012 to 2017, we achieved a 6% compound annual growth rate (CAGR) for client assets and a 5% CAGR for both revenue and pre-tax income.

Rising client assets is a critical indicator because it tells us that clients continue to entrust even more of their capital with us every year. In 2017, clients entrusted us with an additional $84 billion of long-term assets – or $1 billion to $2 billion of incoming money every week. We have increased net new assets every year since 2004, with $388 billion coming over the past five years.

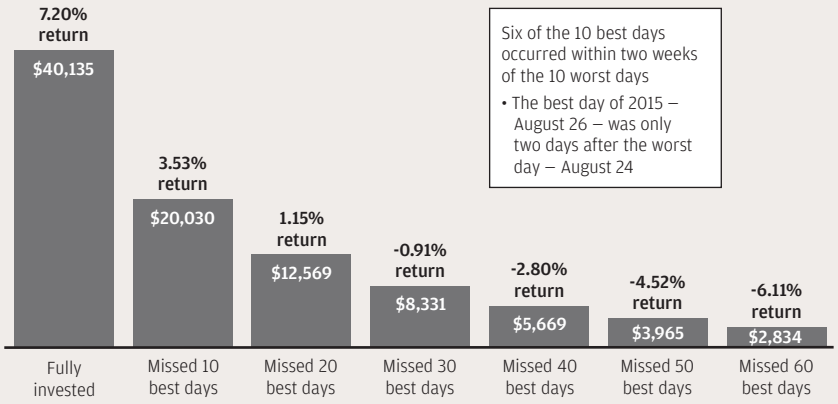
Continued Strong Financial Performance in 2017



CAGR = Compound annual growth rate
EOP = End of period

Returns of S&P 500

Performance of a $10,000 investment between January 2, 1998 and December 29, 2017



Source: Prepared by J.P. Morgan Asset Management using data from Bloomberg. Returns based on the S&P 500 Total Return Index. For illustrative purposes only. Past performance is not indicative of future returns

The primary reason clients turn to J.P. Morgan to manage their assets is because of our strong and consistent investment performance. In 2017, 86% of our long-term mutual fund assets under management outperformed the peer median in the 10-year period, including 87% for equity, 81% for fixed income, and 90% for multi-asset solutions and alternatives.

Covering the full spectrum of clients

AWM delivers investment advisory expertise to clients across the firm, ranging from Chase customers investing their first $100 to the world's wealthiest individuals and families. We also manage the portfolios of many of the largest sovereign wealth funds, pension funds and central banks in the world.

Across the Wealth Management business, in addition to investments, we help clients with their banking needs. This ranges from cash deposits to loans across many areas from real estate to investment capital for a new business. The deposit base of these private clients has grown consistently over the past five years, achieving a 10% CAGR and reaching nearly $300 billion. On the lending side, year-end spot balances of $134 billion represent a 9% CAGR over the past five years. This was accomplished with a well-managed risk profile, resulting in strong and consistent credit performance, and low charge-offs of less than 10 basis points over a cycle.

In addition to traditional investing and banking, AWM has developed a full suite of solutions to meet the complexity of our clients' needs – from alternative investments to trust and estate planning to philanthropic advice. Our platform is among the most comprehensive in the industry, enabling us to serve clients across both sides of their balance sheet and to offer insights and expertise into virtually every area of their financial life.

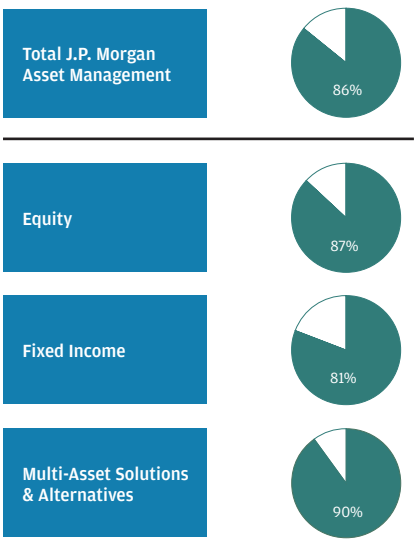
As wealth grows around the world, we continue to hire advisors to deliver J.P. Morgan's capabilities to more clients. We expect to hire in excess of 1,000 advisors over the coming years to expand in both new and existing markets. Our extensive experience in hiring and training has led our advisor productivity to rank among the top in the industry.

An increasingly digital world

Our clients' needs and behaviors are changing – and we are changing along with them.

% of J.P. Morgan Asset Management Long-Term Mutual Fund AUM Over the Peer Median[1]

(net of fees)



[1] For footnoted information, refer to slide 98 in the 2018 JPMorgan Chase Strategic Update presentation, which is available on JPMorgan Chase & Co.'s website (https://www.jpmorganchase.com/corporate/investor-relations/document/3cea4108_strategic_update.pdf), under the heading Investor Relations, Events & Presentations, JPMorgan Chase 2018 Investor Day, and on Form 8-K as furnished to the SEC on February 27, 2018, which is available on the SEC's website (www.sec.gov)

Last year, we formed a new business, Intelligent Digital Solutions (IDS), to help drive our efforts around digital transformation and big data. This group is unifying and optimizing our use of data analytics to transform how we apply these added insights efficiently and effectively in managing portfolios. IDS also is helping us digitize everything we do to make it easier for clients to gain 24/7 access to our investment ideas, insights and execution.

Additionally, we are building a digital wealth offering that provides clients access to proprietary tools that can complement their personal relationship with an advisor or be used when they want to interact with us entirely online. Ultimately, we want to be at the intersection of human and digitally enhanced advice.

Simplify for growth

Our goal is not to be the biggest asset manager but rather to be the best at what we do. Knowing that what has made us successful in the past will not necessarily be sustainable or sufficient for the future, we relentlessly challenge ourselves to focus on the products and services that are most important to clients and in which we have a competitive advantage.

We bring equal parts innovation and introspection in evaluating where to place our extra investment dollars and resources to ensure we have a differentiated offering. Last year, we launched more than 70 new fund strategies to our platform, a third of which are in our Beta Strategies lineup.

At the same time, if we aren't convinced we have a long-lasting advantage, we realign those resources to areas in which we do. In 2017, we liquidated or merged more than 70 funds and implemented significant fee reductions on 58 different funds across 235 share classes.

Above all, first-class business in a first-class way

I am proud of what we have delivered for our shareholders and clients and am even more excited about the investments we are making to position ourselves for the future. We have been working for two centuries as stewards of our clients' wealth to continuously refine what we do and how we do it. We remain committed to delivering first-class business and that in a first-class way.





Mary Callahan Erdoes
CEO, Asset & Wealth Management

2017 HIGHLIGHTS AND ACCOMPLISHMENTS

Business highlights

- Fiduciary mindset ingrained since mid-1800s
- Positive client asset flows every year since 2004
- Record revenue of $12.9 billion
- Record pre-tax income of $3.6 billion
- Record $2.8 trillion in client assets
- Record average loan balances of $123 billion
- Record average mortgage balances of $37 billion
- Retention rate of 98% for top senior portfolio management talent

Leadership positions

- #1 Private Bank Overall in North America (*Euromoney*, February 2018)
- #1 Private Bank Overall in Latin America (*Euromoney*, February 2018)
- Best Private Bank in Asia for Ultra-High-Net-Worth (*The Asset*, July 2017)
- Best Asset Management Company in Asia (*The Asset*, May 2017)
- Top Pan-European Fund Management Firm (Thomson Reuters Extel, June 2017)
- Best New Alternatives ETF and Best New Active ETF (ETF.com, March 2017)
- IT Team of the Year (*Banking Technology* magazine, December 2017)
- Social Media Leader of the Year (Fund Intelligence, March 2017)

Corporate Responsibility

One reason for JPMorgan Chase's enduring success is that we have always recognized that businesses operate within the context of their communities – and when our communities thrive, our business thrives.

Despite so much progress and so many economic gains, we know that many are still struggling. Millions in our communities and throughout the world live daily with economic uncertainty, just one unexpected expense from the financial edge.

Young people entering the labor market are finding themselves stuck in low-skill, low-wage jobs or worse, entirely disconnected from employment, education or training. When so many are left behind, we all feel the consequences: It sows division, erodes trust in our institutions and undermines confidence in our systems. We all have a stake in creating more widely shared prosperity.

Economic growth fuels economic opportunity, so the momentum we are seeing in economies around the world should be unequivocally heralded as good news. Yet it is not preordained that an expanding economy automatically translates into greater opportunity for all. Rather, it requires deliberate action and meaningful collaboration. Government and the nonprofit sector will continue to play vital roles, but the private sector must step up and do more to ensure that everyone shares in the rewards of a growing economy.

That is precisely what JPMorgan Chase is doing. Through our model for driving inclusive growth, we are undertaking significant, long-term initiatives and are making strategic investments focused in areas where we can draw on our firm's resources and capabilities to have the greatest impact: building skills for today's high-quality jobs, expanding small businesses, revitalizing neighborhoods and promoting financial health.

> "At JPMorgan Chase, we view it as a firmwide objective to be a positive force in society and to help solve today's biggest challenges."

Our firm's model is yielding real results – so we are scaling it with a 40% increase in our annual community investments. Whether times are good or tough, our firm has always supported our communities, but the strong and sustained performance of our company, recent changes to the U.S. corporate tax system, and a more constructive regulatory and business environment are enabling us to do even more. The net result is that JPMorgan Chase will invest a total of $1.75 billion over the next five years to help drive inclusive economic growth in local communities.

In 2017, for example, we announced comprehensive, multi-year initiatives to expand opportunity for the residents of Chicago's South and West sides and Washington, D.C.'s underserved neighborhoods. Our commitments to these cities are based on the successful approach we developed and refined through our firm's $150 million investment in Detroit's economic recovery, which *Fortune* magazine cited in naming us #1 on its list of companies that are changing the world.

At JPMorgan Chase, we view it as a firmwide objective to be a positive force in society and to help solve today's biggest challenges. We are deeply proud of the ways we are making a real difference in people's lives through our strategic philanthropic investments, but this is just one example of how we are stepping up. Across our firm, we are leveraging our resources, capabilities and core business to, in short, invest in opportunity – something we know will pay dividends not only for our communities but for our firm as well.





Peter L. Scher
Head of Corporate Responsibility and Chairman of the Mid-Atlantic Region

Investing in opportunity

JPMorgan Chase believes there is a pressing need to expand access to opportunity and help more people move up the economic ladder. Through our proven model for driving inclusive growth, we are taking a strategic, data-driven approach to doing just that.

Our efforts are focused on what our experience has shown are universal pillars of opportunity, and we are undertaking significant, long-term global initiatives that directly leverage our firm's worldwide presence, expertise and resources.

Extending our model for impact

We refined this model through our work in Detroit, where, in 2014, we launched our most comprehensive initiative to date. Combining philanthropic investments and our core business expertise, we have been working to address some of Detroit's biggest economic challenges, from catalyzing commercial development and boosting small business growth to revitalizing neighborhoods and equipping Detroiters with the skills to secure well-paying jobs.

Meaningful collaboration among the city's leaders, business community and nonprofit sector has been the fundamental driver of the progress we are seeing to date and has allowed us to accelerate our initial investment. In just three years, and two years ahead of schedule, we exceeded our initial $100 million commitment and now expect to invest $150 million in the city by 2019.

Our comprehensive efforts in Detroit have yielded important insights, which we are turning into action in other communities that are facing similar challenges. In 2017, we extended our model for impact to Chicago and Washington, D.C. Our comprehensive, multimillion-dollar commitment to each city will focus on driving inclusive growth in underserved neighborhoods, where economic opportunity is increasingly out of reach.



Advancing sustainability for our clients and within our operations

As a company with clients and operations around the world, JPMorgan Chase is in a unique position to leverage our expertise to promote sustainable business practices and help clients capitalize on opportunities arising from the transition to a more sustainable global economy.

While JPMorgan Chase has a long-standing commitment to protect the environment and advance sustainability for our clients and within our own operations, we recognize that today's challenges call for an even greater commitment.



In 2017, we pledged to source renewable energy for 100% of our global power needs by 2020. JPMorgan Chase has offices and operations in over 60 countries across more than 5,500 properties, covering nearly 75 million square feet. To increase energy efficiency, we are retrofitting our branches with the world's largest LED lighting installation — a total of 1.4 million new lightbulbs. This move is likely to cut our lighting energy consumption in half, which is the equivalent of taking 27,000 cars off the road.

We are also developing an on-site solar installation at the firm's largest single-tenant office. This will comprise up to 20 megawatts of capacity, which is enough to power the equivalent of 3,280 homes. Additionally, we are supporting the development of new renewable assets by contracting for long-term power off-take from wind and solar projects on the grids from which JPMorgan Chase purchases power. As a first step, we are purchasing power from the Buckthorn wind farm, a 100-megawatt project in Erath County, Texas.

Finally, as one of the largest financiers of energy in the world, we pledged to facilitate $200 billion in clean financing through 2025. Through this commitment, JPMorgan Chase will help scale the impact of sustainability efforts among more than 20,000 corporate and investor clients in the U.S. and across the world.

The size, scope and global reach of our firm allow us to take on big challenges and to drive progress that few can match.

Harnessing the power of data

Delivering data and analyses is central to our model for impact. The JPMorgan Chase Institute is harnessing the scale and scope of one of the world's leading financial firms to better understand the economy. Its mission is to help policymakers, businesses and nonprofit leaders use better facts, timely data and thoughtful analysis to make smarter decisions to advance prosperity. Drawing on JPMorgan Chase's unique proprietary data, expertise and market access, the Institute frames and provides analysis of the most critical economic challenges of our time.

In 2017, the Institute shared important insights and thoughtful analyses on:

- U.S. household expense volatility, particularly in the wake of extraordinary medical payments;
- A first-of-its-kind look into out-of-pocket healthcare spending by U.S. consumers with a high frequency view at the state, metro and county level;
- The gender gap in financial outcomes and lasting impacts of major medical payments;
- The burden and dynamics of health insurance premium payments for small business owners;
- The challenges that U.S. small businesses face in managing payroll growth and volatility;
- Resident access to everyday goods and services in Detroit and New York City;
- A full year of the Local Consumer Commerce Index, measuring consumer spending growth within and across 14 U.S. cities each month;
- How an anticipated drop in mortgage payments, resulting from lower interest rates, impacted household consumption; and
- The impact of payment and principal reduction on default and consumption provided by mortgage modifications.

2017 HIGHLIGHTS AND ACCOMPLISHMENTS

FORTUNE RANKS JPMORGAN CHASE #1 ON "CHANGE THE WORLD" LIST

"Thanks to Detroit, the bank is confident that this full-court-press approach is a blueprint that could work across the country – and in the next few months, they'll be taking components of the Motown model nationwide."

Excerpted from "How JPMorgan Chase Is Fueling Detroit's Revival," *Fortune* (September 15, 2017)



- JPMorgan Chase's investment in Detroit is yielding real results. To date, we have deployed $117 million in loans and grants to accelerate the city's economic recovery. This investment is allowing more than 15,000 adults and young people to receive skills training for in-demand jobs; supporting development projects that have created or preserved over 900 jobs, more than 1,300 housing units and over 177,000 square feet of commercial space; and providing more than 2,200 entrepreneurs with technical assistance and access to capital, creating or maintaining more than 1,100 jobs.
- Scaling innovative, high-impact models to create opportunity for more people:
  - – Expanded the Entrepreneurs of Color (EOC) Fund to the South Bronx in New York City and San Francisco. We first launched the EOC Fund in Detroit in 2015 to provide underserved entrepreneurs with greater access to capital and assistance needed to grow and thrive. To date, the fund has lent or approved nearly $4.7 million to more than 45 minority-owned small businesses, resulting in over 600 new or preserved jobs.



  - – Expanded The Fellowship Initiative (TFI) to Dallas and recruited new classes of Fellows in Chicago, Los Angeles and New York City. This program seeks to address barriers to opportunity for young men of color and to position them for success by engaging them in comprehensive training that includes academic support, mentoring and leadership development at a critical juncture in their lives. One hundred percent of TFI Fellows are graduating from high school, and, collectively, they have been accepted into more than 200 colleges and universities across the country.



  - – Expanded innovative apprenticeship models and career-focused programs that equip high school students with the skills and education they need to pursue well-paying, long-term careers through the launch of New Skills for Youth innovation sites in New York City's South Bronx and across three provinces in South Africa and four provinces in China.
- In the United Kingdom, we received the Queen's Award for Enterprise for Promoting Opportunity for the firm's Aspiring Professionals Program, which exposes young people from low-income backgrounds in London to new career opportunities.
- Engaged more than 1,800 young people in summer jobs and other work-related experiences in 19 cities across the U.S.
- Invested more than $43 million in 164 job training and career education initiatives in 35 countries around the world – including in Mexico, the Philippines and the United Kingdom – to prepare people with the skills they need to be successful in growing industries.
- Increased labor market transparency and efficiency through the development and launch of innovative workforce and career pathway tools such as the Good Jobs Index, BankingOnMyCareer.com and Credential Engine.
- Underwrote $13.5 billion in green bonds and bonds with a sustainable use of proceeds.
- In 2017, provided $1.2 billion for wind and solar projects in the U.S. Since 2003, JPMorgan Chase has committed or arranged over $18 billion in financing for wind, solar and geothermal energy projects in the U.S.
- Announced eight financial services innovators as winners of the third competition of the Financial Solutions Lab (FinLab), which is focused on improving the financial health of overlooked populations. To date, FinLab has supported 26 fintech companies offering innovative financial products to help more than 2.5 million Americans improve their financial health. Collectively, these companies have raised over $250 million in capital since joining the program. More than 100 JPMorgan Chase employees have provided mentorship to the companies as part of the Lab.



- Engaging our employees:
  - – We are putting the knowledge and expertise of our people to work for our communities. In 2017, 56,000 of our employees volunteered more than 383,000 hours of their time. And through the JPMorgan Chase Service Corps, a program that leverages the energy and skills of top talent to assist nonprofit partners, nearly 80 employee volunteers from offices in more than a dozen countries have contributed over 11,500 hours to help 20 organizations address critical needs.
  - – We are committed to supporting the communities where we work and live in their time of greatest need. In 2017, in the wake of an unprecedented number of natural disasters, our firm and employees donated $7.8 million to assist disaster relief efforts around the world.

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Note:

The following pages from JPMorgan Chase & Co.'s 2017 Form 10-K are not included herein: 1-36, 290-301

FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

(unaudited) As of or for the year ended December 31, (in millions, except per share, ratio, headcount data and where otherwise noted)	2017	2016	2015	2014	2013
Selected income statement data					
Total net revenue	**$ 99,624**	$ 95,668	$ 93,543	$ 95,112	$ 97,367
Total noninterest expense	**58,434**	55,771	59,014	61,274	70,467
Pre-provision profit	**41,190**	39,897	34,529	33,838	26,900
Provision for credit losses	**5,290**	5,361	3,827	3,139	225
Income before income tax expense	**35,900**	34,536	30,702	30,699	26,675
Income tax expense	**11,459**	9,803	6,260	8,954	8,789
Net income[a]	**$ 24,441**	$ 24,733	$ 24,442	$ 21,745	$ 17,886
Earnings per share data					
Net income: Basic	**$ 6.35**	$ 6.24	$ 6.05	$ 5.33	$ 4.38
Diluted	**6.31**	6.19	6.00	5.29	4.34
Average shares: Basic	**3,551.6**	3,658.8	3,741.2	3,808.3	3,832.4
Diluted	**3,576.8**	3,690.0	3,773.6	3,842.3	3,864.9
Market and per common share data					
Market capitalization	**$ 366,301**	$ 307,295	$ 241,899	$ 232,472	$ 219,657
Common shares at period-end	**3,425.3**	3,561.2	3,663.5	3,714.8	3,756.1
Share price:[b]					
High	**$ 108.46**	$ 87.39	$ 70.61	$ 63.49	$ 58.55
Low	**81.64**	52.50	50.07	52.97	44.20
Close	**106.94**	86.29	66.03	62.58	58.48
Book value per share	**67.04**	64.06	60.46	56.98	53.17
Tangible book value per share ("TBVPS")[c]	**53.56**	51.44	48.13	44.60	40.72
Cash dividends declared per share	**2.12**	1.88	1.72	1.58	1.44
Selected ratios and metrics					
Return on common equity ("ROE")	**10%**	10%	11%	10%	9%
Return on tangible common equity ("ROTCE")[c]	**12**	13	13	13	11
Return on assets ("ROA")	**0.96**	1.00	0.99	0.89	0.75
Overhead ratio	**59**	58	63	64	72
Loans-to-deposits ratio	**64**	65	65	56	57
High quality liquid assets ("HQLA") (in billions)[d]	**$ 556**	$ 524	$ 496	$ 600	$ 522
Common equity tier 1 ("CET1") capital ratio[e]	**12.2%**	12.3% [i]	11.8%	10.2%	10.7%
Tier 1 capital ratio[e]	**13.9**	14.0 [i]	13.5	11.6	11.9
Total capital ratio[e]	**15.9**	15.5	15.1	13.1	14.3
Tier 1 leverage ratio[e]	**8.3**	8.4	8.5	7.6	7.1
Selected balance sheet data (period-end)					
Trading assets	**$ 381,844**	$ 372,130	$ 343,839	$ 398,988	$ 374,664
Securities	**249,958**	289,059	290,827	348,004	354,003
Loans	**930,697**	894,765	837,299	757,336	738,418
Core Loans	**863,683**	806,152	732,093	628,785	583,751
Average core loans	**829,558**	769,385	670,757	596,823	563,809
Total assets	**2,533,600**	2,490,972	2,351,698	2,572,274	2,414,879
Deposits	**1,443,982**	1,375,179	1,279,715	1,363,427	1,287,765
Long-term debt[f]	**284,080**	295,245	288,651	276,379	267,446
Common stockholders' equity	**229,625**	228,122	221,505	211,664	199,699
Total stockholders' equity	**255,693**	254,190	247,573	231,727	210,857
Headcount	**252,539**	243,355	234,598	241,359	251,196
Credit quality metrics					
Allowance for credit losses	**$ 14,672**	$ 14,854	$ 14,341	$ 14,807	$ 16,969
Allowance for loan losses to total retained loans	**1.47%**	1.55%	1.63%	1.90%	2.25%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[g]	**1.27**	1.34	1.37	1.55	1.80
Nonperforming assets	**$ 6,426**	$ 7,535	$ 7,034	$ 7,967	$ 9,706
Net charge-offs[h]	**5,387**	4,692	4,086	4,759	5,802
Net charge-off rate[h]	**0.60%**	0.54%	0.52%	0.65%	0.81%

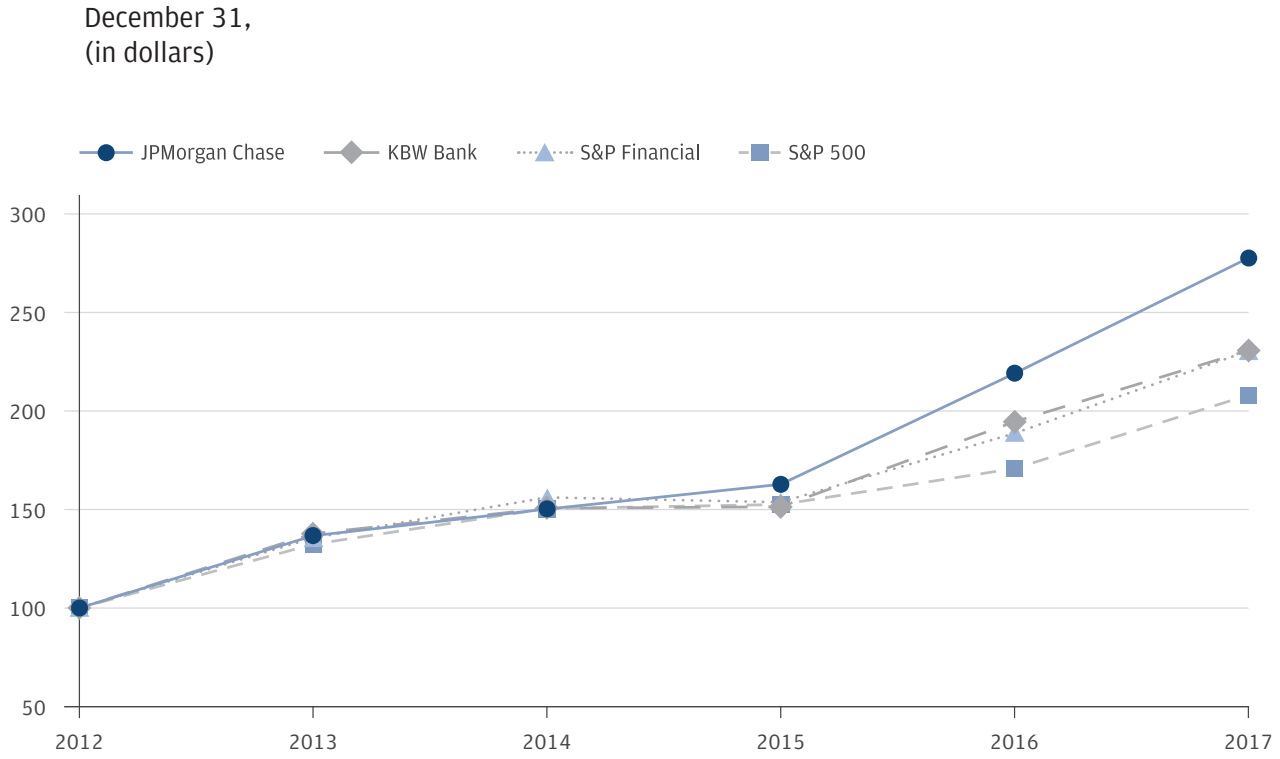
(a) On December 22, 2017, the Tax Cuts and Jobs Act ("TCJA") was signed into law. The Firm's results included a $2.4 billion decrease to net income as a result of the enactment of the TCJA. For additional information related to the impact of the TCJA, see Note 24.
(b) Based on daily prices reported by the New York Stock Exchange.
(c) TBVPS and ROTCE are non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Financial Performance Measures on pages 52–54.
(d) HQLA represents the amount of assets that qualify for inclusion in the liquidity coverage ratio. For December 31, 2017, the balance represents the average of quarterly reported results per the U.S. LCR public disclosure requirements effective April 1, 2017. Prior periods represent period-end balances under the final U.S. rule ("U.S. LCR") for December 31, 2016 and 2015, and the Firm's estimated amount for December 31, 2014 prior to the effective date of the final rule, and under the Basel III liquidity coverage ratio ("Basel III LCR") for December 31, 2013. For additional information, see LCR and HQLA on page 93.
(e) Ratios presented are calculated under the Basel III Transitional rules, which became effective on January 1, 2014, and for the capital ratios, represent the Collins Floor. Prior to 2014, the ratios were calculated under the Basel I rules. See Capital Risk Management on pages 82–91 for additional information on Basel III.
(f) Included unsecured long-term debt of $218.8 billion, $212.6 billion, $211.8 billion, $207.0 billion and $198.9 billion respectively, as of December 31, of each year presented.
(g) Excluded the impact of residential real estate purchased credit-impaired ("PCI") loans, a non-GAAP financial measure. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 52–54, and the Allowance for credit losses on pages 117–119.
(h) Excluding net charge-offs of $467 million related to the student loan portfolio sale, the net charge-off rate for the year ended December 31, 2017 would have been 0.55%.
(i) The prior period ratios have been revised to conform with the current period presentation.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Index, the KBW Bank Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced equity benchmark in the United States of America ("U.S."), consisting of leading companies from different economic sectors. The KBW Bank Index seeks to reflect the performance of banks and thrifts that are publicly traded in the U.S. and is composed of leading national money center and regional banks and thrifts. The S&P Financial Index is an index of financial companies, all of which are components of the S&P 500. The Firm is a component of all three industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2012, in JPMorgan Chase common stock and in each of the above indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2012	2013	2014	2015	2016	**2017**
JPMorgan Chase	$ 100.00	$ 136.71	$ 150.22	$ 162.79	$ 219.06	**$ 277.62**
KBW Bank Index	100.00	137.76	150.66	151.39	194.55	**230.72**
S&P Financial Index	100.00	135.59	156.17	153.72	188.69	**230.47**
S&P 500 Index	100.00	132.37	150.48	152.55	170.78	**208.05**



This section of JPMorgan Chase's Annual Report for the year ended December 31, 2017 ("Annual Report"), provides Management's discussion and analysis of financial condition and results of operations ("MD&A") of JPMorgan Chase. See the Glossary of Terms and Acronyms on pages 283-289 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 145) and in JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2017 ("2017 Form 10-K"), in Part I, Item 1A: Risk factors; reference is hereby made to both.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide; the Firm had $2.5 trillion in assets and $255.7 billion in stockholders' equity as of December 31, 2017. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national banking association that is the Firm's principal credit card-issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), a U.S. broker-dealer. The bank and non-bank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. The Firm's principal operating subsidiary in the U.K. is J.P. Morgan Securities plc, a subsidiary of JPMorgan Chase Bank, N.A.

For management reporting purposes, the Firm's activities are organized into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business is the Consumer & Community Banking ("CCB") segment. The Firm's wholesale business segments are Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset & Wealth Management ("AWM"). For a description of the Firm's business segments, and the products and services they provide to their respective client bases, refer to Business Segment Results on pages 55–74, and Note 31.

This executive overview of the MD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	2017	2016	Change
Selected income statement data			
Total net revenue	**$99,624**	$95,668	4%
Total noninterest expense	**58,434**	55,771	5
Pre-provision profit	**41,190**	39,897	3
Provision for credit losses	**5,290**	5,361	(1)
Net income	**24,441**	24,733	(1)
Diluted earnings per share	**6.31**	6.19	2
Selected ratios and metrics			
Return on common equity	**10%**	10%	
Return on tangible common equity	**12**	13	
Book value per share	**$ 67.04**	$ 64.06	5
Tangible book value per share	**53.56**	51.44	4
Capital ratios[a]			
CET1	**12.2%**	12.3% [b]	
Tier 1 capital	**13.9**	14.0 [b]	
Total capital	**15.9**	15.5	

(a) Ratios presented are calculated under the Basel III Transitional rules and represent the Collins Floor. See Capital Risk Management on pages 82–91 for additional information on Basel III.
(b) The prior period ratios have been revised to conform with the current period presentation.

Comparisons noted in the sections below are calculated for the full year of 2017 versus the full year of 2016, unless otherwise specified.

Summary of 2017 results

JPMorgan Chase reported strong results for full year 2017 with net income of $24.4 billion, or $6.31 per share, on net revenue of $99.6 billion. The Firm reported ROE of 10% and ROTCE of 12%. The Firm's results included a $2.4 billion decrease to net income as a result of the enactment of the Tax Cuts and Jobs Act ("TCJA"), driven by a deemed repatriation charge and adjustments to the value of the Firm's tax-oriented investments, partially offset by a benefit from the revaluation of the Firm's net deferred tax liability. For additional information related to the impact of the TCJA, refer to Note 24.

- Net income decreased 1% driven by higher noninterest expense and income tax expense, predominantly offset by higher net interest income.
- Total net revenue increased by 4% driven by higher net interest income and investment banking fees, partially offset by lower Fixed Income Markets and Home Lending noninterest revenue.
- Noninterest expense was $58.4 billion, up 5%, driven by higher compensation expense, auto lease depreciation expense and continued investments across the businesses.
- The provision for credit losses was $5.3 billion, relatively flat compared with the prior year, reflecting a decrease in the wholesale provision driven by credit quality improvements in the Oil & Gas, Natural Gas Pipelines and Metals & Mining portfolios, offset by an increase in the consumer provision. The increase in the consumer provision was driven by higher net charge-offs and a higher addition to the allowance for loan losses in the credit card portfolio, and the impact of the sale of the student loan portfolio.
- The total allowance for credit losses was $14.7 billion at December 31, 2017, and the Firm had a loan loss coverage ratio, excluding the PCI portfolio, of 1.27%, compared with 1.34% in the prior year. The Firm's nonperforming assets totaled $6.4 billion, a decrease from the prior-year level of $7.5 billion.
- Firmwide average core loans increased 8%.

Selected capital-related metrics

- The Firm's Basel III Fully Phased-In CET1 capital was $183 billion, and the Standardized and Advanced CET1 ratios were 12.1% and 12.7%, respectively.
- The Firm's Fully Phased-In supplementary leverage ratio ("SLR") was 6.5%.
- The Firm continued to grow tangible book value per share ("TBVPS"), ending 2017 at $53.56, up 4%.

ROTCE and TBVPS are non-GAAP financial measures. Core loans and each of the Fully Phased-In capital and leverage measures are considered key performance measures. For a further discussion of each of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 52–54, and Capital Risk Management on pages 82–91.

Lines of business highlights

Selected business metrics for each of the Firm's four lines of business are presented below for the full year of 2017.

CCB ROE 17%	• Average core loans up 9%; average deposits of $640 billion, up 9% • Client investment assets of $273 billion, up 17% • Credit card sales volume up 14% and merchant processing volume up 12%
CIB ROE 14%	• Maintained #1 ranking for Global Investment Banking fees with 8.1% wallet share • Investment Banking revenue up 12%; Treasury Services revenue up 15%; and Securities Services revenue up 9%
CB ROE 17%	• Record revenue of $8.6 billion, up 15%; record net income of $3.5 billion, up 33% • Average loan balances of $198 billion, up 10%
AWM ROE 25%	• Record revenue of $12.9 billion, up 7%; record net income of $2.3 billion, up 4% • Average loan balances of $123 billion, up 9% • Record assets under management ("AUM") of $2.0 trillion, up 15%

For a detailed discussion of results by line of business, refer to the Business Segment Results on pages 55–56.

Credit provided and capital raised

JPMorgan Chase continues to support consumers, businesses and communities around the globe. The Firm provided credit and raised capital of $2.3 trillion for wholesale and consumer clients during 2017:

- $258 billion of credit for consumers
- $22 billion of credit for U.S. small businesses
- $817 billion of credit for corporations
- $1.1 trillion of capital raised for corporate clients and non-U.S. government entities
- $92 billion of credit and capital raised for U.S. government and nonprofit entities, including states, municipalities, hospitals and universities.

Recent events

- On February 21, 2018, the Firm announced its intent to pursue building a new 2.5 million square foot headquarters at its 270 Park Avenue location in New York City. The project will be subject to various approvals, and the Firm will work closely with the New York City Council and State officials to complete the project in a manner that benefits all constituencies. Once the project's approvals are granted, redevelopment and construction are expected to begin in 2019 and take approximately five years to complete. The project is not expected to have a material impact on the company's financial results.
- On January 30, 2018, Amazon, Berkshire Hathaway, and JPMorgan Chase announced that they are partnering on ways to address healthcare for their U.S. employees, with the aim of improving employee satisfaction and reducing costs. Through a new independent company, the initial focus will be on technology solutions that will provide U.S. employees and their families with simplified, high-quality and transparent healthcare at a reasonable cost.
- On January 29, 2018, JPMorgan Chase announced that Daniel Pinto, Chief Executive Officer ("CEO") of CIB, and Gordon Smith, CEO of CCB, have been appointed Co-Presidents and Co-Chief Operating Officers ("COO") of the Firm, effective January 30, 2018, and will continue to report to Jamie Dimon, Chairman and CEO. In addition to their current roles, Mr. Pinto and Mr. Smith will work closely with Mr. Dimon to help drive critical Firmwide opportunities. Responsibilities for the rest of the Firm's Operating Committee will remain unchanged, with its members continuing to report to Mr. Dimon.
- On January 23, 2018, the Firm announced a $20 billion, five-year comprehensive investment to help its employees and support job and economic growth in the U.S. Through these new investments, the Firm plans to develop hundreds of new branches in several new U.S. markets, increase wages and benefits for hourly U.S. employees, make increased small business and mortgage lending commitments, add approximately 4,000 jobs throughout the country, and increase philanthropic investments.
- On December 22, 2017, the TCJA was signed into law. The Firm's results included a $2.4 billion decrease to net income as a result of the enactment of the TCJA. For additional information related to the impact of the TCJA, see Note 24.
- During the second half of 2017, natural disasters caused significant disruptions to individuals and businesses, and damage to homes and communities in several regions where the Firm conducts business. The Firm continues to provide assistance to customers, clients, communities and employees who have been affected by these disasters. These events did not have a material impact on the Firm's 2017 financial results.

2018 outlook

These current expectations are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking Statements on page 145 *and the Risk Factors section on* pages 8–26. *There is no assurance that actual results for the full year of 2018 will be in line with the outlook set forth below, and the Firm does not undertake to update any forward-looking statements.*

JPMorgan Chase's outlook for 2018 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client and customer activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these interrelated factors will affect the performance of the Firm and its lines of business. The Firm expects that it will continue to make appropriate adjustments to its businesses and operations in response to ongoing developments in the legal, regulatory, business and economic environments in which it operates.

Firmwide

- As a result of the change in tax rate due to the TCJA, management expects a reduction in tax-equivalent adjustments, decreasing both revenue and income tax expense, on a managed basis, by approximately $1.2 billion on an annual run-rate basis.
- Management expects the new revenue recognition accounting standard to increase both noninterest revenue and expense for full-year 2018 by approximately $1.2 billion, with most of the impact in the AWM business. For additional information on the new accounting standard, see Accounting and Reporting Developments on page 141.
- Management expects first-quarter 2018 net interest income, on a managed basis, to be down modestly compared with the fourth quarter of 2017, driven by the impact of the TCJA and a lower day count. For full-year 2018, management expects net interest income, on a managed basis, to be in the $54 to $55 billion range, market dependent, and assuming expected core loan growth. Management expects Firmwide average core loan growth to be in the 6% to 7% range in 2018, excluding CIB loans.
- Excluding the impact of the new revenue recognition accounting standard, management expects Firmwide noninterest revenue for full-year 2018, on a managed basis, to be up approximately 7%, depending on market conditions.
- The Firm continues to take a disciplined approach to managing its expenses, while investing for growth and innovation. As a result, management expects Firmwide adjusted expense for full-year 2018 to be less than $62 billion, excluding the impact of the new revenue recognition accounting standard.
- Management estimates the full-year 2018 effective income tax rate to be in the 19% to 20% range, depending upon several factors, including the geographic mix of taxable income and refinements to estimates of the impacts of the TCJA.
- Management expects net charge-off rates to remain relatively flat across the wholesale and consumer portfolios, with the exception of Card.

CCB

- Management expects the full-year 2018 Card Services net revenue rate to be approximately 11.25%.
- In Card, management expects the net charge-off rate to increase to approximately 3.25% in 2018.

CIB

- Markets revenue in the first-quarter 2018 is expected to be up by mid to high single digit percentage points when compared with the prior-year quarter; actual Markets revenue results will continue to be affected by market conditions, which can be volatile.

CONSOLIDATED RESULTS OF OPERATIONS

This section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2017, unless otherwise specified. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 138–140.

Revenue

Year ended December 31, (in millions)	2017	2016	2015
Investment banking fees	$ 7,248	$ 6,448	$ 6,751
Principal transactions	11,347	11,566	10,408
Lending- and deposit-related fees	5,933	5,774	5,694
Asset management, administration and commissions	15,377	14,591	15,509
Securities gains/(losses)	(66)	141	202
Mortgage fees and related income	1,616	2,491	2,513
Card income	4,433	4,779	5,924
Other income[(a)]	3,639	3,795	3,032
Noninterest revenue	49,527	49,585	50,033
Net interest income	50,097	46,083	43,510
Total net revenue	$ 99,624	$ 95,668	$ 93,543

(a) Included operating lease income of $3.6 billion, $2.7 billion and $2.1 billion for the years ended December 31, 2017, 2016 and 2015, respectively.

2017 compared with 2016

Investment banking fees increased reflecting higher debt and equity underwriting fees in CIB. The increase in debt underwriting fees was driven by a higher share of fees and an overall increase in industry-wide fees; and the increase in equity underwriting fees was driven by growth in industry-wide issuance, including a strong initial public offering ("IPO") market. For additional information, see CIB segment results on pages 62–66 and Note 6.

Principal transactions revenue decreased compared with a strong prior year in CIB, primarily reflecting:

- lower Fixed Income-related revenue driven by sustained low volatility and tighter credit spreads

partially offset by

- higher Equity-related revenue primarily in Prime Services, and
- higher Lending-related revenue reflecting lower fair value losses on hedges of accrual loans.

For additional information, see CIB and Corporate segment results on pages 62–66 and pages 73–74, respectively, and Note 6.

Asset management, administration and commissions revenue increased as a result of higher asset management fees in AWM and CCB, and higher asset-based fees in CIB, both driven by higher market levels. For additional information, see AWM, CCB and CIB segment results on pages 70–72, pages 57-61 and pages 62–66, respectively, and Note 6.

For information on lending- and deposit-related fees, see the segment results for CCB on pages 57-61, CIB on pages 62–66, and CB on pages 67–69 and Note 6; on securities gains, see the Corporate segment discussion on pages 73–74.

Mortgage fees and related income decreased driven by lower MSR risk management results, lower net production revenue on lower margins and volumes, and lower servicing revenue on lower average third-party loans serviced. For further information, see CCB segment results on pages 57-61, Note 6 and 15.

Card income decreased predominantly driven by higher credit card new account origination costs, largely offset by higher card-related fees, primarily annual fees. For further information, see CCB segment results on pages 57-61 .

Other income decreased primarily due to:

- lower other income in CIB largely driven by a $520 million impact related to the enactment of the TCJA, which reduced the value of certain of CIB's tax-oriented investments, and
- the absence in the current year of gains from
  - the sale of Visa Europe interests in CCB,
  - the redemption of guaranteed capital debt securities ("trust preferred securities"), and
  - the disposal of an asset in AWM

partially offset by

- higher operating lease income reflecting growth in auto operating lease volume in CCB, and
- a legal benefit of $645 million recorded in the second quarter of 2017 in Corporate related to a settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee of certain Washington Mutual trusts.

For further information, see Note 6.

Net interest income increased primarily driven by the net impact of higher rates and loan growth across the businesses, partially offset by declines in Markets net interest income in CIB. The Firm's average interest-earning assets were $2.2 trillion, up $79 billion from the prior year, and the net interest yield on these assets, on a fully taxable equivalent ("FTE") basis, was 2.36%, an increase of 11 basis points from the prior year.

2016 compared with 2015

Investment banking fees decreased predominantly due to lower equity underwriting fees driven by declines in industry-wide fee levels.

Principal transactions revenue increased reflecting broad-based strength across products in CIB's Fixed Income Markets business. Rates performance was strong, with increased client activity driven by high issuance-based flows, global political developments, and central bank actions. Credit revenue improved driven by higher market-making revenue from the secondary market as clients' appetite for risk recovered.

Asset management, administration and commissions revenue decreased reflecting lower asset management fees in AWM driven by a reduction in revenue related to the disposal of assets at the beginning of 2016, the impact of lower average equity market levels and lower performance fees, as well as due to lower brokerage commissions and other fees in CIB and AWM.

Mortgage fees and related income were relatively flat, as lower mortgage servicing revenue related to lower average third-party loans serviced was predominantly offset by higher MSR risk management results.

Card income decreased predominantly driven by higher new account origination costs and the impact of renegotiated co-brand partnership agreements, partially offset by higher card sales volume and other card-related fees.

Other income increased primarily reflecting:

- higher operating lease income from growth in auto operating lease assets in CCB
- a gain on the sale of Visa Europe interests in CCB
- a gain related to the redemption of guaranteed capital debt securities
- the absence of losses recognized in 2015 related to the accelerated amortization of cash flow hedges associated with the exit of certain non-operating deposits
- a gain on disposal of an asset in AWM

partially offset by

- a $514 million benefit recorded in the prior year from a legal settlement in Corporate.

Net interest income increased primarily driven by loan growth across the businesses and the net impact of higher rates, partially offset by lower investment securities balances and higher interest expense on long-term debt. The Firm's average interest-earning assets were $2.1 trillion in 2016, up $13 billion from the prior year, and the net interest yield on these assets, on a FTE basis, was 2.25%, an increase of 11 basis points from the prior year.

Provision for credit losses

Year ended December 31, (in millions)	2017	2016	2015
Consumer, excluding credit card	**$ 620**	$ 467	$ (81)
Credit card	**4,973**	4,042	3,122
Total consumer	**5,593**	4,509	3,041
Wholesale	**(303)**	852	786
Total provision for credit losses	**$ 5,290**	$ 5,361	$ 3,827

2017 compared with 2016

The **provision for credit losses** decreased as a result of:

- a net $422 million reduction in the wholesale allowance for credit losses, reflecting credit quality improvements in the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios, compared with an addition of $511 million in the prior year driven by downgrades in the same portfolios

predominantly offset by

- a higher consumer provision driven by
  - $450 million of higher net charge-offs, primarily in the credit card portfolio due to growth in newer vintages which, as anticipated, have higher loss rates than the more seasoned portion of the portfolio, partially offset by a decrease in net charge-offs in the residential real estate portfolio reflecting continued improvement in home prices and delinquencies,
  - a $416 million higher addition to the allowance for credit losses related to the credit card portfolio driven by higher loss rates and loan growth, and a lower reduction in the allowance for the residential real estate portfolio predominantly driven by continued improvement in home prices and delinquencies, and
  - a $218 million impact in connection with the sale of the student loan portfolio.

For a more detailed discussion of the credit portfolio, the student loan sale and the allowance for credit losses, see the segment discussions of CCB on pages 57-61, CIB on pages 62-66, CB on pages 67-69, the Allowance for Credit Losses on pages 117-119 and Note 13.

2016 compared with 2015

The **provision for credit losses** reflected an increase in the consumer provision and, to a lesser extent, the wholesale provision. The increase in the consumer provision was predominantly driven by:

- a $920 million increase related to the credit card portfolio, due to a $600 million addition in the allowance for loan losses, as well as $320 million of higher net charge-offs, driven by loan growth (including growth in newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio), and

- a $470 million lower benefit related to the residential real estate portfolio, as the reduction in the allowance for loan losses in 2016 was lower than the prior year. The reduction in both periods reflected continued improvements in home prices and lower delinquencies.

The increase in the wholesale provision was largely driven by the impact of downgrades in the Oil & Gas and Natural Gas Pipelines portfolios.

Noninterest expense

Year ended December 31, (in millions)	2017	2016	2015
Compensation expense	**$31,009**	$29,979	$29,750
Noncompensation expense:			
Occupancy	**3,723**	3,638	3,768
Technology, communications and equipment	**7,706**	6,846	6,193
Professional and outside services	**6,840**	6,655	7,002
Marketing	**2,900**	2,897	2,708
Other[(a)(b)]	**6,256**	5,756	9,593
Total noncompensation expense	**27,425**	25,792	29,264
Total noninterest expense	**$58,434**	$55,771	$59,014

(a) Included Firmwide legal expense/(benefit) of $(35) million, $(317) million and $3.0 billion for the years ended December 31, 2017, 2016 and 2015, respectively.
(b) Included FDIC-related expense of $1.5 billion, $1.3 billion and $1.2 billion for the years ended December 31, 2017, 2016 and 2015, respectively.

2017 compared with 2016

Compensation expense increased predominantly driven by investments in headcount in most businesses, including bankers and business-related support staff, and higher performance-based compensation expense, predominantly in AWM.

Noncompensation expense increased as a result of:

- higher depreciation expense from growth in auto operating lease volume in CCB
- contributions to the Firm's Foundation
- a lower legal net benefit compared to the prior year
- higher FDIC-related expense, and
- an impairment in CB on certain leased equipment, the majority of which was sold subsequent to year-end

partially offset by

- the absence in the current year of two items totaling $175 million in CCB related to liabilities from a merchant in bankruptcy and mortgage servicing reserves.

For a discussion of legal expense, see Note 29.

2016 compared with 2015

Compensation expense was relatively flat predominantly driven by higher performance-based compensation expense and investments in several businesses, offset by the impact of continued expense reduction initiatives, including lower headcount in certain businesses.

Noncompensation expense decreased as a result of lower legal expense (including lower legal professional services expense), the impact of efficiencies, and reduced non-U.S. tax surcharges. These factors were partially offset by higher depreciation expense from growth in auto operating lease assets and higher investments in marketing.

Income tax expense

Year ended December 31, (in millions, except rate)	2017	2016	2015
Income before income tax expense	**$35,900**	$34,536	$30,702
Income tax expense	**11,459**	9,803	6,260
Effective tax rate	**31.9%**	28.4%	20.4%

2017 compared with 2016

The **effective tax rate** increased in 2017 driven by:

- a $1.9 billion increase to income tax expense representing the impact of the enactment of the TCJA. The increase was driven by the deemed repatriation of the Firm's unremitted non-U.S. earnings and adjustments to the value of certain tax-oriented investments, partially offset by a benefit from the revaluation of the Firm's net deferred tax liability. The incremental expense resulted in a 5.4 percentage point increase to the Firm's effective tax rate

partially offset by

- benefits resulting from the vesting of employee share-based awards related to the appreciation of the Firm's stock price upon vesting above their original grant price, and the release of a valuation allowance.

For further information, see Note 24.

2016 compared with 2015

The **effective tax rate** in 2016 was affected by changes in the mix of income and expense subject to U.S. federal and state and local taxes, tax benefits related to the utilization of certain deferred tax assets, as well as the adoption of new accounting guidance related to employee share-based incentive payments. These tax benefits were partially offset by higher income tax expense from tax audits. The lower effective tax rate in 2015 was predominantly driven by $2.9 billion of tax benefits, which reduced the Firm's effective tax rate by 9.4 percentage points. The recognition of tax benefits in 2015 resulted from the resolution of various tax audits, as well as the release of U.S. deferred taxes associated with the restructuring of certain non-U.S. entities.

Consolidated Balance Sheets Analysis

The following is a discussion of the significant changes between December 31, 2017 and 2016.

Selected Consolidated balance sheets data

December 31, (in millions)	2017	2016	Change
Assets			
Cash and due from banks	**$ 25,827**	$ 23,873	8%
Deposits with banks	**404,294**	365,762	11
Federal funds sold and securities purchased under resale agreements	**198,422**	229,967	(14)
Securities borrowed	**105,112**	96,409	9
Trading assets:			
Debt and equity instruments	**325,321**	308,052	6
Derivative receivables	**56,523**	64,078	(12)
Securities	**249,958**	289,059	(14)
Loans	**930,697**	894,765	4
Allowance for loan losses	**(13,604)**	(13,776)	(1)
Loans, net of allowance for loan losses	**917,093**	880,989	4
Accrued interest and accounts receivable	**67,729**	52,330	29
Premises and equipment	**14,159**	14,131	–
Goodwill, MSRs and other intangible assets	**54,392**	54,246	–
Other assets	**114,770**	112,076	2
Total assets	**$ 2,533,600**	$ 2,490,972	2%

Cash and due from banks and deposits with banks increased primarily driven by deposit growth and a shift in the deployment of excess cash from securities purchased under resale agreements and investment securities into deposits with banks. The Firm's excess cash is placed with various central banks, predominantly Federal Reserve Banks.

Federal funds sold and securities purchased under resale agreements decreased primarily due to the shift in the deployment of excess cash to deposits with banks and lower client activity in CIB. For additional information on the Firm's Liquidity Risk Management, see pages 92–97.

Securities borrowed increased driven by higher demand for securities to cover short positions related to client-driven market-making activities in CIB.

Trading assets–debt and equity instruments increased predominantly as a result of client-driven market-making activities in CIB, primarily in Fixed Income Markets and Prime Services, partially offset by lower equity instruments in Equity Markets. For additional information, refer to Note 2.

Trading assets and trading liabilities–derivative receivables and payables decreased predominantly as a result of client-driven market-making activities in CIB Markets, which reduced foreign exchange and interest rate derivative receivables and payables, and increased equity derivative receivables, driven by market movements. For additional information, refer to Derivative contracts on pages 114–115, and Notes 2 and 5.

Securities decreased primarily reflecting net sales, maturities and paydowns of U.S. Treasuries, non-U.S. government securities and collateralized loan obligations. For additional information, see Notes 2 and 10.

Loans increased reflecting:

- higher wholesale loans driven by new originations in CB and higher loans to Private Banking clients in AWM
- higher consumer loans driven by higher retention of originated high-quality prime mortgages in CCB and AWM, and higher credit card loans, largely offset by the sale of the student loan portfolio, lower home equity loans and the run-off of PCI loans.

The **allowance for loan losses** decreased driven by:

- a net reduction in the wholesale allowance, reflecting credit quality improvements in the Oil & Gas, Natural Gas Pipelines and Metals & Mining portfolios (compared with additions to the allowance in the prior year driven by downgrades in the same portfolios)

largely offset by

- a net increase in the consumer allowance, reflecting additions to the allowance for the credit card and business banking portfolios, driven by loan growth in both of these portfolios and higher loss rates in the credit card portfolio, largely offset by a reduction in the allowance for the residential real estate portfolio, predominantly driven by continued improvement in home prices and delinquencies, and the utilization of the allowance in connection with the sale of the student loan portfolio.

For a more detailed discussion of loans and the allowance for loan losses, refer to Credit and Investment Risk Management on pages 99–120, and Notes 2, 3, 12 and 13.

Accrued interest and accounts receivable increased primarily reflecting higher held-for-investment margin loans related to client-driven financing activities in Prime Services.

Other assets increased slightly as a result of higher auto operating lease assets from growth in business volume in CCB.

For information on Goodwill and MSRs, see Note 15.

Selected Consolidated balance sheets data

December 31, (in millions)	2017	2016	Change
Liabilities			
Deposits	**$ 1,443,982**	$ 1,375,179	5
Federal funds purchased and securities loaned or sold under repurchase agreements	**158,916**	165,666	(4)
Short-term borrowings	**51,802**	34,443	50
Trading liabilities:			
Debt and equity instruments	**85,886**	87,428	(2)
Derivative payables	**37,777**	49,231	(23)
Accounts payable and other liabilities	**189,383**	190,543	(1)
Beneficial interests issued by consolidated variable interest entities ("VIEs")	**26,081**	39,047	(33)
Long-term debt	**284,080**	295,245	(4)
Total liabilities	**2,277,907**	2,236,782	2
Stockholders' equity	**255,693**	254,190	1
Total liabilities and stockholders' equity	**$ 2,533,600**	$ 2,490,972	2%

Deposits increased due to:

- higher consumer deposits reflecting the continuation of strong growth from new and existing customers, and low attrition rates
- higher wholesale deposits largely driven by growth in client cash management activity in CIB's Securities Services business, partially offset by lower balances in AWM reflecting balance migration predominantly into the Firm's investment-related products.

For more information, refer to the Liquidity Risk Management discussion on pages 92–97; and Notes 2 and 17.

Short-term borrowings increased primarily due to higher issuance of commercial paper reflecting in part a change in the mix of funding from securities sold under repurchase agreements for CIB Markets activities. For additional information, see Liquidity Risk Management on pages 92–97.

Beneficial interests issued by consolidated VIEs decreased due to net maturities of credit card securitizations and the deconsolidation of the student loan securitization entities in connection with the portfolio's sale. For further information on Firm-sponsored VIEs and loan securitization trusts, see Off-Balance Sheet Arrangements on pages 50–51 and Note 14 and 27; and for the sale of the student loan portfolio, see CCB segment results on pages 57-61.

Long-term debt decreased reflecting lower Federal Home Loan Bank ("FHLB") advances, partially offset by the net issuance of senior debt and the net issuance of structured notes in CIB driven by client demand. For additional information on the Firm's long-term debt activities, see Liquidity Risk Management on pages 92–97 and Note 19.

For information on changes in stockholders' equity, see page 151, and on the Firm's capital actions, see Capital actions on pages 89-90.

Consolidated Cash Flows Analysis

(in millions)	Year ended December 31, 2017	2016	2015
Net cash provided by/(used in)			
Operating activities	**$ (2,501)**	$ 20,196	$ 73,466
Investing activities	**(10,283)**	(114,949)	106,980
Financing activities	**14,642**	98,271	(187,511)
Effect of exchange rate changes on cash	**96**	(135)	(276)
Net increase/(decrease) in cash and due from banks	**$ 1,954**	$ 3,383	$ (7,341)

Operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's lending and capital markets activities. These assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities and market conditions. The Firm believes cash flows from operations, available cash and other liquidity sources, and its capacity to generate cash through secured and unsecured sources are sufficient to meet operating liquidity needs.

- In 2017, cash used reflected an increase in held-for-investment margin loans in accrued interest and accounts receivable and a decrease in trading liabilities.
- In 2016, cash provided reflected increases in accounts payable and trading liabilities, partially offset by cash used reflecting an increase in trading assets, an increase in accounts receivable from merchants and higher client receivables.
- In 2015, cash provided reflected decreases in trading assets and in accounts receivable, partially offset by cash used due to a decrease in accounts payable and other liabilities.

Investing activities

The Firm's investing activities predominantly include originating held-for-investment loans and investing in the securities portfolio and other short-term interest-earning assets.

- In 2017, cash used primarily reflected net originations of loans and a net increase in short-term interest-earning assets, partially offset by net proceeds from paydowns, maturities, sales and purchases of investment securities.
- In 2016, cash used reflected net originations of loans, an increase in short-term interest-earning assets, an increase in securities purchased under resale agreements, and the deployment of excess cash.
- In 2015, cash provided predominantly reflected lower short-term interest-earning assets, and net proceeds from lower investment securities, partially offset by cash used for net originations of loans.

Financing activities

The Firm's financing activities include acquiring customer deposits and issuing long-term debt, as well as preferred and common stock.

- In 2017, cash provided reflected higher deposits and short-term borrowings, partially offset by a decrease in long-term borrowings.
- In 2016, cash provided reflected higher deposits, and an increase in securities loaned or sold under repurchase agreements, and net proceeds from long term borrowings.
- In 2015, cash used reflected lower deposits and short-term borrowings, partially offset by net proceeds from long-term borrowings. Additionally, in 2015 cash outflows reflected a decrease in securities loaned or sold under repurchase agreements.
- For all periods, cash was used for repurchases of common stock and cash dividends on common and preferred stock.

* * *

For a further discussion of the activities affecting the Firm's cash flows, see Consolidated Balance Sheets Analysis on pages 47-48 , Capital Risk Management on pages 82–91, and Liquidity Risk Management on pages 92–97.

OFF-BALANCE SHEET ARRANGEMENTS AND CONTRACTUAL CASH OBLIGATIONS

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are off-balance sheet under accounting principles generally accepted in the U.S. ("U.S. GAAP").

The Firm is involved with several types of off-balance sheet arrangements, including through nonconsolidated SPEs, which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct.

The table below provides an index of where in this Annual Report a discussion of the Firm's various off-balance sheet arrangements can be found. In addition, see Note 1 for information about the Firm's consolidation policies.

Type of off-balance sheet arrangement	Location of disclosure	Page references
Special-purpose entities: variable interests and other obligations, including contingent obligations, arising from variable interests in nonconsolidated VIEs	See Note 14	236–243
Off-balance sheet lending-related financial instruments, guarantees, and other commitments	See Note 27	261–266

Contractual cash obligations

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's significant contractual cash obligations at December 31, 2017. The contractual cash obligations included in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the below table are certain liabilities with variable cash flows and/or no obligation to return a stated amount of principal at maturity.

The carrying amount of on-balance sheet obligations on the Consolidated balance sheets may differ from the minimum contractual amount of the obligations reported below. For a discussion of mortgage repurchase liabilities and other obligations, see Note 27.

Contractual cash obligations

By remaining maturity at December 31, (in millions)	2017					2016
	2018	2019-2020	2021-2022	After 2022	**Total**	Total
On-balance sheet obligations						
Deposits[a]	**$ 1,421,174**	**$ 5,276**	**$ 4,810**	**$ 6,204**	**$ 1,437,464**	$ 1,368,866
Federal funds purchased and securities loaned or sold under repurchase agreements	**133,779**	**4,198**	**4,958**	**15,981**	**158,916**	165,666
Short-term borrowings[a]	**42,664**	**–**	**–**	**–**	**42,664**	26,497
Beneficial interests issued by consolidated VIEs	**13,636**	**9,542**	**2,544**	**314**	**26,036**	38,927
Long-term debt[a]	**37,211**	**63,685**	**43,180**	**116,819**	**260,895**	288,315
Other[b]	**4,726**	**2,146**	**2,080**	**4,573**	**13,525**	8,980
Total on-balance sheet obligations	**1,653,190**	**84,847**	**57,572**	**143,891**	**1,939,500**	1,897,251
Off-balance sheet obligations						
Unsettled reverse repurchase and securities borrowing agreements[c]	**76,859**	**–**	**–**	**–**	**76,859**	50,722
Contractual interest payments[d]	**9,248**	**11,046**	**7,471**	**26,338**	**54,103**	48,862
Operating leases[e]	**1,526**	**2,750**	**1,844**	**3,757**	**9,877**	10,115
Equity investment commitments[f]	**174**	**46**	**19**	**515**	**754**	1,068
Contractual purchases and capital expenditures	**1,923**	**937**	**439**	**204**	**3,503**	2,566
Obligations under co-brand programs	**249**	**500**	**478**	**207**	**1,434**	868
Total off-balance sheet obligations	**89,979**	**15,279**	**10,251**	**31,021**	**146,530**	114,201
Total contractual cash obligations	**$ 1,743,169**	**$ 100,126**	**$ 67,823**	**$ 174,912**	**$ 2,086,030**	$ 2,011,452

(a) Excludes structured notes on which the Firm is not obligated to return a stated amount of principal at the maturity of the notes, but is obligated to return an amount based on the performance of the structured notes.
(b) Primarily includes dividends declared on preferred and common stock, deferred annuity contracts, pension and other postretirement employee benefit obligations, insurance liabilities and income taxes payable associated with the deemed repatriation under the TCJA.
(c) For further information, refer to unsettled reverse repurchase and securities borrowing agreements in Note 27.
(d) Includes accrued interest and future contractual interest obligations. Excludes interest related to structured notes for which the Firm's payment obligation is based on the performance of certain benchmarks.
(e) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes. Excludes the benefit of noncancelable sublease rentals of $1.0 billion and $1.4 billion at December 31, 2017 and 2016, respectively. See Note 28 for more information on lease commitments.
(f) At December 31, 2017 and 2016, included unfunded commitments of $40 million and $48 million, respectively, to third-party private equity funds, and $714 million and $1.0 billion of unfunded commitments, respectively, to other equity investments.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES AND KEY PERFORMANCE MEASURES

Non-GAAP financial measures

The Firm prepares its Consolidated Financial Statements using U.S. GAAP; these financial statements appear on pages 148–152. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year-to-year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews Firmwide results, including the overhead ratio, on a "managed" basis; these Firmwide managed basis results are non-GAAP financial measures. The Firm also reviews the results of the lines of business on a managed basis. The Firm's definition of managed basis starts, in each case, with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on a FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. These financial measures allow management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Management also uses certain non-GAAP financial measures at the Firm and business-segment level, because these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the Firm or of the particular business segment, as the case may be, and, therefore, facilitate a comparison of the Firm or the business segment with the performance of its relevant competitors. For additional information on these non-GAAP measures, see Business Segment Results on pages 55–74.

Additionally, certain credit metrics and ratios disclosed by the Firm exclude PCI loans, and are therefore non-GAAP measures. For additional information on these non-GAAP measures, see Credit and Investment Risk Management on pages 99–120.

Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

Year ended December 31, (in millions, except ratios)	2017			2016			2015		
	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis
Other income	**$ 3,639**	**$ 2,704** [b]	**$ 6,343**	$ 3,795	$ 2,265	$ 6,060	$ 3,032	$ 1,980	$ 5,012
Total noninterest revenue	**49,527**	**2,704**	**52,231**	49,585	2,265	51,850	50,033	1,980	52,013
Net interest income	**50,097**	**1,313**	**51,410**	46,083	1,209	47,292	43,510	1,110	44,620
Total net revenue	**99,624**	**4,017**	**103,641**	95,668	3,474	99,142	93,543	3,090	96,633
Pre-provision profit	**41,190**	**4,017**	**45,207**	39,897	3,474	43,371	34,529	3,090	37,619
Income before income tax expense	**35,900**	**4,017**	**39,917**	34,536	3,474	38,010	30,702	3,090	33,792
Income tax expense	**11,459**	**4,017** [b]	**15,476**	9,803	3,474	13,277	6,260	3,090	9,350
Overhead ratio	**59%**	**NM**	**56%**	58%	NM	56%	63%	NM	61%

(a) Predominantly recognized in CIB and CB business segments and Corporate.
(b) Included $375 million related to tax-oriented investments as a result of the enactment of the TCJA.

Net interest income excluding CIB's Markets businesses

In addition to reviewing net interest income on a managed basis, management also reviews net interest income excluding net interest income arising from CIB's Markets businesses to assess the performance of the Firm's lending, investing (including asset-liability management) and deposit-raising activities. This net interest income is referred to as non-markets related net interest income. CIB's Markets businesses are Fixed Income Markets and Equity Markets. Management believes that disclosure of non-markets related net interest income provides investors and analysts with another measure by which to analyze the non-markets-related business trends of the Firm and provides a comparable measure to other financial institutions that are primarily focused on lending, investing and deposit-raising activities.

The data presented below are non-GAAP financial measures due to the exclusion of markets related net interest income arising from CIB.

Year ended December 31, (in millions, except rates)	2017	2016	2015
Net interest income – managed basis[a][b]	**$ 51,410**	$ 47,292	$ 44,620
Less: CIB Markets net interest income[c]	**4,630**	6,334	5,298
Net interest income excluding CIB Markets[a]	**$ 46,780**	$ 40,958	$ 39,322
Average interest-earning assets	**$2,180,592**	$2,101,604	$ 2,088,242
Less: Average CIB Markets interest-earning assets[c]	**540,835**	520,307	510,292
Average interest-earning assets excluding CIB Markets	**$1,639,757**	$1,581,297	$ 1,577,950
Net interest yield on average interest-earning assets – managed basis	2.36%	2.25%	2.14%
Net interest yield on average CIB Markets interest-earning assets[c]	0.86	1.22	1.04
Net interest yield on average interest-earning assets excluding CIB Markets	2.85%	2.59%	2.49%

(a) Interest includes the effect of related hedges. Taxable-equivalent amounts are used where applicable.
(b) For a reconciliation of net interest income on a reported and managed basis, see reconciliation from the Firm's reported U.S. GAAP results to managed basis on page 52.
(c) The amounts in this table differ from the prior-period presentation to align with CIB's Markets businesses. For further information on CIB's Markets businesses, see page 65.

Calculation of certain U.S. GAAP and non-GAAP financial measures

Certain U.S. GAAP and non-GAAP financial measures are calculated as follows:

Book value per share ("BVPS")
Common stockholders' equity at period-end / Common shares at period-end

Overhead ratio
Total noninterest expense / Total net revenue

Return on assets ("ROA")
Reported net income / Total average assets

Return on common equity ("ROE")
Net income* / Average common stockholders' equity

Return on tangible common equity ("ROTCE")
Net income* / Average tangible common equity

Tangible book value per share ("TBVPS")
Tangible common equity at period-end / Common shares at period-end

* Represents net income applicable to common equity

Tangible common equity, ROTCE and TBVPS

Tangible common equity ("TCE"), ROTCE and TBVPS are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's net income applicable to common equity as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. TCE, ROTCE and TBVPS are utilized by the Firm, as well as investors and analysts, in assessing the Firm's use of equity.

The following summary table provides a reconciliation from the Firm's common stockholders' equity to TCE.

	Period-end		Average		
			Year ended December 31,		
(in millions, except per share and ratio data)	**Dec 31, 2017**	Dec 31, 2016	**2017**	2016	2015
Common stockholders' equity	**$ 229,625**	$ 228,122	**$ 230,350**	$ 224,631	$ 215,690
Less: Goodwill	**47,507**	47,288	**47,317**	47,310	47,445
Less: Other intangible assets	**855**	862	**832**	922	1,092
Add: Certain Deferred tax liabilities[a][b]	**2,204**	3,230	**3,116**	3,212	2,964
Tangible common equity	**$ 183,467**	$ 183,202	**$ 185,317**	$ 179,611	$ 170,117
Return on tangible common equity	**NA**	NA	**12%**	13%	13%
Tangible book value per share	**$ 53.56**	$ 51.44	**NA**	NA	NA

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.
(b) Includes the effect from the revaluation of the Firm's net deferred tax liability as a result of the enactment of the TCJA.

Key performance measures

The Firm considers the following to be key regulatory capital measures:

- Capital, risk-weighted assets ("RWA"), and capital and leverage ratios presented under Basel III Standardized and Advanced Fully Phased-In rules, and
- SLR calculated under Basel III Advanced Fully Phased-In rules.

The Firm, as well as banking regulators, investors and analysts, use these measures to assess the Firm's regulatory capital position and to compare the Firm's regulatory capital to that of other financial services companies.

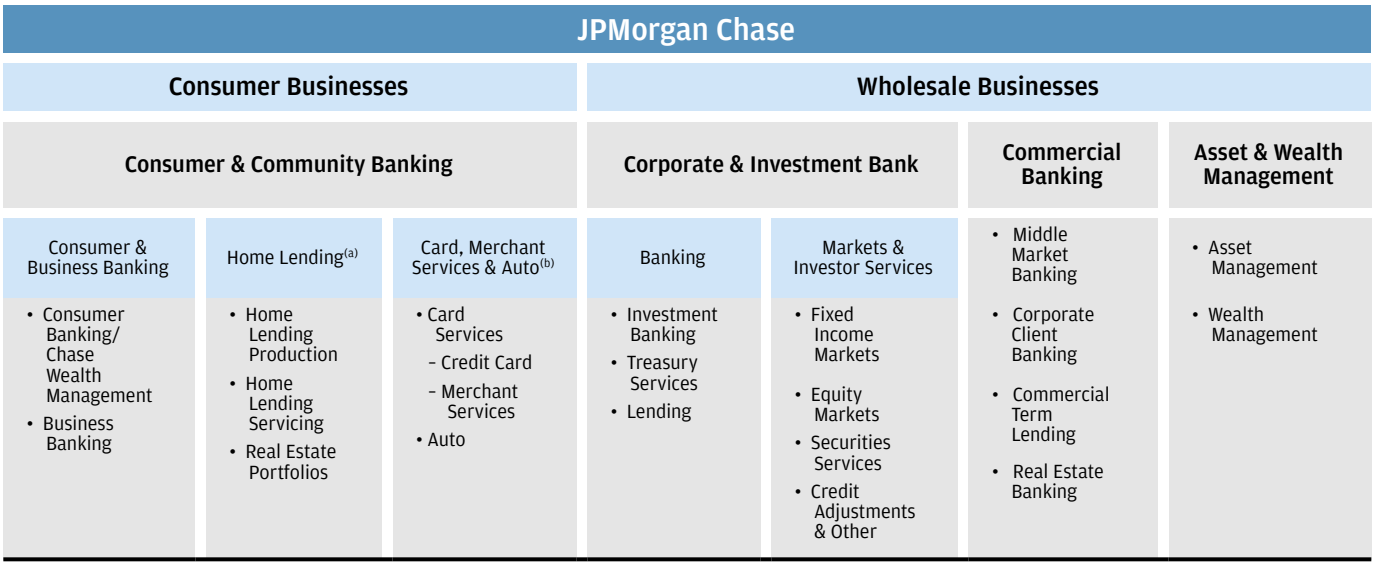
For additional information on these measures, see Capital Risk Management on pages 82–91.

Core loans are also considered a key performance measure. Core loans represent loans considered central to the Firm's ongoing businesses; and exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit. Core loans is a measure utilized by the Firm and its investors and analysts in assessing actual growth in the loan portfolio.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset & Wealth Management. In addition, there is a Corporate segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of Non-GAAP Financial Measures, on pages 52–54.



(a) Formerly Mortgage Banking
(b) Formerly Card, Commerce Solutions & Auto

Description of business segment reporting methodology

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results includes the allocation of certain income and expense items described in more detail below. The Firm also assesses the level of capital required for each line of business on at least an annual basis.

The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing

Funds transfer pricing is used to assign interest income and expense to each business segment and to transfer the primary interest rate risk and liquidity risk exposures to Treasury and CIO within Corporate. The funds transfer pricing process considers the interest rate risk, liquidity risk and regulatory requirements of a business segment as if it were operating independently. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO").

Debt expense and preferred stock dividend allocation
As part of the funds transfer pricing process, almost all of the cost of the credit spread component of outstanding unsecured long-term debt and preferred stock dividends is allocated to the reportable business segments, while the balance of the cost is retained in Corporate. The methodology to allocate the cost of unsecured long-term debt and preferred stock dividends to the business segments is aligned with the Firm's process to allocate capital. The allocated cost of unsecured long-term debt is included in a business segment's net interest income, and net income is reduced by preferred stock dividends to arrive at a business segment's net income applicable to common equity.

Business segment capital allocation
The amount of capital assigned to each business is referred to as equity. On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. For additional information on business segment capital allocation, see Line of business equity on page 89.

Expense allocation
Where business segments use services provided by corporate support units, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally allocated based on the actual cost and use of services provided. In contrast, certain other costs related to corporate support units, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Expense retained in Corporate generally includes parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align corporate support units; and other items not aligned with a particular business segment.

Segment Results – Managed Basis

The following tables summarize the business segment results for the periods indicated.

Year ended December 31,	Total net revenue			Total noninterest expense			Pre-provision profit/(loss)		
(in millions)	**2017**	2016	2015	**2017**	2016	2015	**2017**	2016	2015
Consumer & Community Banking	**$ 46,485**	$ 44,915	$ 43,820	**$ 26,062**	$ 24,905	$ 24,909	**$ 20,423**	$ 20,010	$ 18,911
Corporate & Investment Bank	**34,493**	35,216	33,542	**19,243**	18,992	21,361	**15,250**	16,224	12,181
Commercial Banking	**8,605**	7,453	6,885	**3,327**	2,934	2,881	**5,278**	4,519	4,004
Asset & Wealth Management	**12,918**	12,045	12,119	**9,301**	8,478	8,886	**3,617**	3,567	3,233
Corporate	**1,140**	(487)	267	**501**	462	977	**639**	(949)	(710)
Total	**$103,641**	$ 99,142	$ 96,633	**$ 58,434**	$ 55,771	$ 59,014	**$ 45,207**	$ 43,371	$ 37,619

Year ended December 31,	Provision for credit losses			Net income/(loss)			Return on equity		
(in millions, except ratios)	**2017**	2016	2015	**2017**	2016	2015	**2017**	2016	2015
Consumer & Community Banking	**$ 5,572**	$ 4,494	$ 3,059	**$ 9,395**	$ 9,714	$ 9,789	**17%**	18%	18%
Corporate & Investment Bank	**(45)**	563	332	**10,813**	10,815	8,090	**14**	16	12
Commercial Banking	**(276)**	282	442	**3,539**	2,657	2,191	**17**	16	15
Asset & Wealth Management	**39**	26	4	**2,337**	2,251	1,935	**25**	24	21
Corporate	**–**	(4)	(10)	**(1,643)**	(704)	2,437	**NM**	NM	NM
Total	**$ 5,290**	$ 5,361	$ 3,827	**$ 24,441**	$ 24,733	$ 24,442	**10%**	10%	11%

The following sections provide a comparative discussion of business segment results as of or for the years ended December 31, 2017, 2016 and 2015.

Consumer & Community Banking offers services to consumers and businesses through bank branches, ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking (including Consumer Banking/Chase Wealth Management and Business Banking), Home Lending (including Home Lending Production, Home Lending Servicing and Real Estate Portfolios) and Card, Merchant Services & Auto. Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Home Lending includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card, Merchant Services & Auto issues credit cards to consumers and small businesses, offers payment processing services to merchants, and originates and services auto loans and leases.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2017	2016	2015
Revenue			
Lending- and deposit-related fees	**$ 3,431**	$ 3,231	$ 3,137
Asset management, administration and commissions	**2,212**	2,093	2,172
Mortgage fees and related income	**1,613**	2,490	2,511
Card income	**4,024**	4,364	5,491
All other income	**3,430**	3,077	2,281
Noninterest revenue	**14,710**	15,255	15,592
Net interest income	**31,775**	29,660	28,228
Total net revenue	**46,485**	44,915	43,820
Provision for credit losses	**5,572**	4,494	3,059
Noninterest expense			
Compensation expense	**10,159**	9,723	9,770
Noncompensation expense[(a)]	**15,903**	15,182	15,139
Total noninterest expense	**26,062**	24,905	24,909
Income before income tax expense	**14,851**	15,516	15,852
Income tax expense	**5,456**	5,802	6,063
Net income	**$ 9,395**	$ 9,714	$ 9,789
Revenue by line of business			
Consumer & Business Banking	**$21,104**	$18,659	$17,983
Home Lending	**5,955**	7,361	6,817
Card, Merchant Services & Auto	**19,426**	18,895	19,020
Mortgage fees and related income details:			
Net production revenue	**636**	853	769
Net mortgage servicing revenue[(b)]	**977**	1,637	1,742
Mortgage fees and related income	**$ 1,613**	$ 2,490	$ 2,511
Financial ratios			
Return on equity	**17%**	18%	18%
Overhead ratio	**56**	55	57

Note: In the discussion and the tables which follow, CCB presents certain financial measures which exclude the impact of PCI loans; these are non-GAAP financial measures.

(a) Included operating lease depreciation expense of $2.7 billion, $1.9 billion and $1.4 billion for the years ended December 31, 2017, 2016 and 2015, respectively.

(b) Included MSR risk management results of $(242) million, $217 million and $(117) million for the years ended December 31, 2017, 2016 and 2015, respectively.

2017 compared with 2016

Net income was $9.4 billion, a decrease of 3%, driven by higher noninterest expense and provision for credit losses, largely offset by higher net revenue.

Net revenue was $46.5 billion, an increase of 3%.

Net interest income was $31.8 billion, up 7%, driven by higher deposit balances, deposit margin expansion, and higher loan balances in Card, partially offset by loan spread compression from higher rates, including the impact of higher funding costs in Home Lending and Auto and the impact of the sale of the student loan portfolio.

Noninterest revenue was $14.7 billion, down 4%, driven by:

- higher new account origination costs in Card,
- lower MSR risk management results,
- the absence in the current year of a gain on the sale of Visa Europe interests,
- lower net production revenue reflecting lower mortgage production margins and volumes, and
- lower mortgage servicing revenue as a result of a lower level of third-party loans serviced

largely offset by

- higher auto lease volume and
- higher card- and deposit-related fees.

See Note 15 for further information regarding changes in value of the MSR asset and related hedges, and mortgage fees and related income.

Noninterest expense was $26.1 billion, an increase of 5%, driven by:

- higher auto lease depreciation, and
- continued business growth

partially offset by

- two items totaling $175 million included in the prior year related to liabilities from a merchant bankruptcy and mortgage servicing reserves.

The provision for credit losses was $5.6 billion, an increase of 24%, reflecting:

- $445 million of higher net charge-offs, primarily in the credit card portfolio due to growth in newer vintages which, as anticipated, have higher loss rates than the more seasoned portion of the portfolio, partially offset by a decrease in net charge-offs in the residential real estate portfolio reflecting continued improvement in home prices and delinquencies,
- a $415 million higher addition to the allowance for credit losses related to the credit card portfolio driven by higher loss rates and loan growth, and a lower reduction in the allowance for the residential real estate portfolio predominantly driven by continued improvement in home prices and delinquencies, and
- a $218 million impact in connection with the sale of the student loan portfolio.

The sale of the student loan portfolio during 2017 did not have a material impact on the Firm's Consolidated Financial Statements.

2016 compared with 2015

Net income was $9.7 billion, a decrease of 1%, driven by higher provision for credit losses, predominantly offset by higher net revenue.

Net revenue was $44.9 billion, an increase of 2%.

Net interest income was $29.7 billion, up 5%, driven by higher deposit balances and higher loan balances, partially offset by deposit spread compression and an increase in the reserve for uncollectible interest and fees in Card.

Noninterest revenue was $15.3 billion, down 2%, driven by higher new account origination costs and the impact of renegotiated co-brand partnership agreements in Card and lower mortgage servicing revenue predominantly as a result of a lower level of third-party loans serviced; these factors were predominantly offset by higher auto lease and card sales volume, higher card- and deposit-related fees, higher MSR risk management results and a gain on the sale of Visa Europe interests. See Note 15 for further information regarding changes in value of the MSR asset and related hedges, and mortgage fees and related income.

Noninterest expense of $24.9 billion was flat, driven by:

- lower legal expense and branch efficiencies

offset by

- higher auto lease depreciation, and
- higher investment in marketing.

The provision for credit losses was $4.5 billion, an increase of 47%, reflecting:

- a $920 million increase related to the credit card portfolio, due to a $600 million addition in the allowance for loan losses, as well as $320 million of higher net charge-offs, driven by loan growth, including growth in newer vintages which, as anticipated, have higher loss rates compared to the overall portfolio,
- a $450 million lower benefit related to the residential real estate portfolio, as the current year reduction in the allowance for loan losses was lower than the prior year. The reduction in both periods reflected continued improvements in home prices and lower delinquencies, and
- a $150 million increase related to the auto and business banking portfolio, due to additions to the allowance for loan losses and higher net charge-offs, reflecting loan growth in the portfolios.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2017	2016	2015
Selected balance sheet data (period-end)			
Total assets	**$552,601**	$535,310	$502,652
Loans:			
Consumer & Business Banking	**25,789**	24,307	22,730
Home equity	**42,751**	50,296	58,734
Residential mortgage	**197,339**	181,196	164,500
Home Lending	**240,090**	231,492	223,234
Card	**149,511**	141,816	131,463
Auto	**66,242**	65,814	60,255
Student	**–**	7,057	8,176
Total loans	**481,632**	470,486	445,858
Core loans	**415,167**	382,608	341,881
Deposits	**659,885**	618,337	557,645
Equity	**51,000**	51,000	51,000
Selected balance sheet data (average)			
Total assets	**$532,756**	$516,354	$472,972
Loans:			
Consumer & Business Banking	**24,875**	23,431	21,894
Home equity	**46,398**	54,545	63,261
Residential mortgage	**190,242**	177,010	140,294
Home Lending	**236,640**	231,555	203,555
Card	**140,024**	131,165	125,881
Auto	**65,395**	63,573	56,487
Student	**2,880**	7,623	8,763
Total loans	**469,814**	457,347	416,580
Core loans	**393,598**	361,316	301,700
Deposits	**640,219**	586,637	530,938
Equity	**51,000**	51,000	51,000
Headcount	**134,117**	132,802	127,094

Selected metrics

As of or for the year ended December 31, (in millions, except ratio data)	2017	2016	2015
Credit data and quality statistics			
Nonaccrual loans[a][b]	**$ 4,084**	$ 4,708	$ 5,313
Net charge-offs/(recoveries)[c]			
Consumer & Business Banking	**257**	257	253
Home equity	**63**	184	283
Residential mortgage	**(16)**	14	2
Home Lending	**47**	198	285
Card	**4,123**	3,442	3,122
Auto	**331**	285	214
Student	**498**	162	210
Total net charge-offs/ (recoveries)	**$ 5,256**	$ 4,344	$ 4,084
Net charge-off/(recovery) rate[c]			
Consumer & Business Banking	**1.03%**	1.10%	1.16%
Home equity[d]	**0.18**	0.45	0.60
Residential mortgage[d]	**(0.01)**	0.01	–
Home Lending[d]	**0.02**	0.10	0.18
Card	**2.95**	2.63	2.51
Auto	**0.51**	0.45	0.38
Student	**NM**	2.13	2.40
Total net charge-offs/(recovery) rate[d]	**1.21**	1.04	1.10
30+ day delinquency rate			
Home Lending[e][f]	**1.19%**	1.23%	1.57%
Card	**1.80**	1.61	1.43
Auto	**0.89**	1.19	1.35
Student[g]	**–**	1.60	1.81
90+ day delinquency rate - Card	**0.92**	0.81	0.72
Allowance for loan losses			
Consumer & Business Banking	**$ 796**	$ 753	$ 703
Home Lending, excluding PCI loans	**1,003**	1,328	1,588
Home Lending – PCI loans[c]	**2,225**	2,311	2,742
Card	**4,884**	4,034	3,434
Auto	**464**	474	399
Student	**–**	249	299
Total allowance for loan losses[c]	**$ 9,372**	$ 9,149	$ 9,165

(a) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.

(b) At December 31, 2017, 2016 and 2015, nonaccrual loans excluded loans 90 or more days past due as follows: (1) mortgage loans insured by U.S. government agencies of $4.3 billion, $5.0 billion and $6.3 billion, respectively; and (2) student loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") of zero, $263 million and $290 million, respectively. These amounts have been excluded based upon the government guarantee.

(c) Net charge-offs and the net charge-off rates for the years ended December 31, 2017, 2016 and 2015, excluded $86 million, $156 million and $208 million, respectively, of write-offs in the PCI portfolio. These write-offs decreased the allowance for loan losses for PCI loans. For further information on PCI write-offs, see summary of changes in the allowance on page 118.

(d) Excludes the impact of PCI loans. For the years ended December 31, 2017, 2016 and 2015, the net charge-off rates including the impact of PCI loans were as follows: (1) home equity of 0.14%, 0.34% and 0.45%, respectively; (2) residential mortgage of (0.01)%, 0.01% and -%, respectively; (3) Home Lending of 0.02%, 0.09% and 0.14%, respectively; and (4) total CCB of 1.12%, 0.95% and 0.99%, respectively.

(e) At December 31, 2017, 2016 and 2015, excluded mortgage loans insured by U.S. government agencies of $6.2 billion, $7.0 billion and $8.4 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.
(f) Excludes PCI loans. The 30+ day delinquency rate for PCI loans was 10.13%, 9.82% and 11.21% at December 31, 2017, 2016 and 2015, respectively.
(g) Excluded student loans insured by U.S. government agencies under FFELP of $468 million and $526 million at December 31, 2016 and 2015, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

Selected metrics

As of or for the year ended December 31, (in billions, except ratios and where otherwise noted)	2017	2016	2015
Business Metrics			
CCB households (in millions)[a]	**61.0**	60.4	58.1
Number of branches	**5,130**	5,258	5,413
Active digital customers (in thousands)[b]	**46,694**	43,836	39,242
Active mobile customers (in thousands)[c]	**30,056**	26,536	22,810
Debit and credit card sales volume[a]	**$ 916.9**	$ 821.6	$ 754.1
Consumer & Business Banking			
Average deposits	**$ 625.6**	$ 570.8	$ 515.2
Deposit margin	**1.98%**	1.81%	1.90%
Business banking origination volume	**$ 7.3**	$ 7.3	$ 6.8
Client investment assets	**273.3**	234.5	218.6
Home Lending			
Mortgage origination volume by channel			
Retail	**$ 40.3**	$ 44.3	$ 36.1
Correspondent	**57.3**	59.3	70.3
Total mortgage origination volume[d]	**$ 97.6**	$ 103.6	$ 106.4
Total loans serviced (period-end)	**$ 816.1**	$ 846.6	$ 910.1
Third-party mortgage loans serviced (period-end)	**553.5**	591.5	674.0
MSR carrying value (period-end)	**6.0**	6.1	6.6
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	**1.08%**	1.03%	0.98%
MSR revenue multiple[e]	**3.09x**	2.94x	2.80x
Card, excluding Commercial Card			
Credit card sales volume	**$ 622.2**	$ 545.4	$ 495.9
New accounts opened (in millions)	**8.4**	10.4	8.7
Card Services			
Net revenue rate	**10.57%**	11.29%	12.33%
Merchant Services			
Merchant processing volume	**$1,191.7**	$1,063.4	$ 949.3
Auto			
Loan and lease origination volume	**$ 33.3**	$ 35.4	$ 32.4
Average Auto operating lease assets	**15.2**	11.0	7.8

(a) The prior period amounts have been revised to conform with the current period presentation.
(b) Users of all web and/or mobile platforms who have logged in within the past 90 days.
(c) Users of all mobile platforms who have logged in within the past 90 days.
(d) Firmwide mortgage origination volume was $107.6 billion, $117.4 billion and $115.2 billion for the years ended December 31, 2017, 2016 and 2015, respectively.
(e) Represents the ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end) divided by the ratio of loan servicing-related revenue to third-party mortgage loans serviced (average).

Mortgage servicing-related matters

The Firm has resolved the majority of the consent orders and settlements into which it entered with federal and state governmental agencies and private parties related to mortgage servicing, origination, and residential mortgage-backed securities activities. On January 12, 2018, the Board of Governors of the Federal Reserve System terminated its mortgage servicing-related Consent Order with the Firm, which had been outstanding since April 2011.

Some of the remaining obligations are overseen by an independent reviewer, who publishes periodic reports detailing the Firm's compliance with the obligations.

CORPORATE & INVESTMENT BANK

The Corporate & Investment Bank, which consists of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Treasury Services, which provides transaction services, consisting of cash management and liquidity solutions. Markets & Investor Services is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes Securities Services, a leading global custodian which provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

Selected income statement data

Year ended December 31, (in millions)	2017	2016	2015
Revenue			
Investment banking fees	**$ 7,192**	$ 6,424	$ 6,736
Principal transactions	**10,873**	11,089	9,905
Lending- and deposit-related fees	**1,531**	1,581	1,573
Asset management, administration and commissions	**4,207**	4,062	4,467
All other income	**572**	1,169	1,012
Noninterest revenue	**24,375**	24,325	23,693
Net interest income	**10,118**	10,891	9,849
Total net revenue[a][b]	**34,493**	35,216	33,542
Provision for credit losses	**(45)**	563	332
Noninterest expense			
Compensation expense	**9,535**	9,546	9,973
Noncompensation expense	**9,708**	9,446	11,388
Total noninterest expense	**19,243**	18,992	21,361
Income before income tax expense	**15,295**	15,661	11,849
Income tax expense	**4,482**	4,846	3,759
Net income[a]	**$ 10,813**	$ 10,815	$ 8,090

(a) The full year 2017 results reflect the impact of the enactment of the TCJA including a decrease to net revenue of $259 million and a benefit to net income of $141 million. For additional information related to the impact of the TCJA, see Note 24.

(b) Included tax-equivalent adjustments, predominantly due to income tax credits related to alternative energy investments; income tax credits and amortization of the cost of investments in affordable housing projects; and tax-exempt income from municipal bonds of $2.4 billion, $2.0 billion and $1.7 billion for the years ended December 31, 2017, 2016 and 2015, respectively.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2017	2016	2015
Financial ratios			
Return on equity	**14%**	16%	12%
Overhead ratio	**56**	54	64
Compensation expense as percentage of total net revenue	**28**	27	30
Revenue by business			
Investment Banking	**$ 6,688**	$ 5,950	$ 6,376
Treasury Services	**4,172**	3,643	3,631
Lending	**1,429**	1,208	1,461
Total Banking	**12,289**	10,801	11,468
Fixed Income Markets	**12,812**	15,259	12,592
Equity Markets	**5,703**	5,740	5,694
Securities Services	**3,917**	3,591	3,777
Credit Adjustments & Other[a]	**(228)**	(175)	11
Total Markets & Investor Services	**22,204**	24,415	22,074
Total net revenue	**$34,493**	$35,216	$33,542

(a) Consists primarily of credit valuation adjustments ("CVA") managed centrally within CIB, funding valuation adjustments ("FVA") and debit valuation adjustments ("DVA") on derivatives. Results are primarily reported in principal transactions revenue. Results are presented net of associated hedging activities and net of CVA and FVA amounts allocated to Fixed Income Markets and Equity Markets. For additional information, see Accounting and Reporting Developments on pages 141–144 and Notes 2, 3 and 23.

2017 compared with 2016

Net income was $10.8 billion, flat compared with the prior year, reflecting lower net revenue and higher noninterest expense, offset by a lower provision for credit losses, and a tax benefit resulting from the vesting of employee share-based awards. The current year included a $141 million benefit to net income as a result of the enactment of the TCJA.

Net revenue was $34.5 billion, down 2%.

Banking revenue was $12.3 billion, up 14% compared with the prior year. Investment banking revenue was $6.7 billion, up 12% from the prior year, driven by higher debt and equity underwriting fees. The Firm maintained its #1 ranking for Global Investment Banking fees, according to Dealogic. Debt underwriting fees were $3.6 billion, up 16% driven by a higher share of fees and an overall increase in industry-wide fees; the Firm maintained its #1 ranking globally in fees across high-grade, high-yield, and loan products. Equity underwriting fees were $1.4 billion, up 20% driven by growth in industry-wide issuance including a strong IPO market; the Firm ranked #2 in equity underwriting fees globally. Advisory fees were $2.2 billion, up 2%; the Firm maintained its #2 ranking for M&A. Treasury Services revenue was $4.2 billion, up 15%, driven by the impact of higher interest rates and growth in operating deposits. Lending revenue was $1.4 billion, up

18% from the prior year, reflecting lower fair value losses on hedges of accrual loans.

Markets & Investor Services revenue was $22.2 billion, down 9% from the prior year. Fixed Income Markets revenue was $12.8 billion, down 16%, as lower revenue across products was driven by sustained low volatility, tighter credit spreads, and the impact from the TCJA on tax-oriented investments of $259 million, against a strong prior year. Equity Markets revenue was $5.7 billion, down 1% from the prior year, and included a fair value loss of $143 million on a margin loan to a single client. Excluding the fair value loss, Equity Markets revenue was higher driven by higher revenue in Prime Services and Cash Equities, partially offset by lower revenue in derivatives. Securities Services revenue was $3.9 billion, up 9%, driven by the impact of higher interest rates and deposit growth, as well as higher asset-based fees driven by higher market levels. Credit Adjustments & Other was a loss of $228 million, driven by valuation adjustments.

The provision for credit losses was a benefit of $45 million, which included a net reduction in the allowance for credit losses driven by the Oil & Gas and Metals & Mining portfolios partially offset by a net increase in the allowance for credit losses for a single client. The prior year was an expense of $563 million, which included an addition to the allowance for credit losses driven by the Oil & Gas and Metals & Mining portfolios.

Noninterest expense was $19.2 billion, up 1% compared with the prior year.

2016 compared with 2015

Net income was $10.8 billion, up 34% compared with the prior year, driven by lower noninterest expense and higher net revenue, partially offset by a higher provision for credit losses.

Banking revenue was $10.8 billion, down 6% compared with the prior year. Investment banking revenue was $6.0 billion, down 7% from the prior year, largely driven by lower equity underwriting fees. The Firm maintained its #1 ranking for Global Investment Banking fees, according to Dealogic. Equity underwriting fees were $1.2 billion, down 19% driven by lower industry-wide fee levels; however, the Firm improved its market share and maintained its #1 ranking in equity underwriting fees globally as well as in both North America and Europe and its #1 ranking by volumes across all products, according to Dealogic. Advisory fees were $2.1 billion, down 1%; the Firm maintained its #2 ranking for M&A, according to Dealogic. Debt underwriting fees were $3.2 billion; the Firm maintained its #1 ranking globally in fees across high grade, high yield, and loan products, according to Dealogic. Treasury Services revenue was $3.6 billion. Lending revenue was $1.2 billion, down 17% from the prior year, reflecting fair value losses on hedges of accrual loans.

Markets & Investor Services revenue was $24.4 billion, up 11% from the prior year. Fixed Income Markets revenue was $15.3 billion, up 21% from the prior year, driven by broad strength across products. Rates performance was strong, with increased client activity driven by high issuance-based flows, global political developments, and central bank actions. Credit and Securitized Products revenue improved driven by higher market-making revenue from the secondary market as clients' risk appetite recovered, and due to increased financing activity. Equity Markets revenue was $5.7 billion, up 1%, compared to a strong prior-year. Securities Services revenue was $3.6 billion, down 5% from the prior year, largely driven by lower fees and commissions. Credit Adjustments and Other was a loss of $175 million driven by valuation adjustments, compared with an $11 million gain in the prior-year, which included funding spread gains on fair value option elected liabilities.

The provision for credit losses was $563 million, compared to $332 million in the prior year, reflecting a higher allowance for credit losses, including the impact of select downgrades within the Oil & Gas portfolio.

Noninterest expense was $19.0 billion, down 11% compared with the prior year, driven by lower legal and compensation expenses.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2017	2016	2015
Selected balance sheet data (period-end)			
Assets	**$ 826,384**	$ 803,511	$ 748,691
Loans:			
Loans retained[a]	**108,765**	111,872	106,908
Loans held-for-sale and loans at fair value	**4,321**	3,781	3,698
Total loans	**113,086**	115,653	110,606
Core loans	**112,754**	115,243	110,084
Equity	**70,000**	64,000	62,000
Selected balance sheet data (average)			
Assets	**$ 857,060**	$ 815,321	$ 824,208
Trading assets-debt and equity instruments	**342,124**	300,606	302,514
Trading assets-derivative receivables	**56,466**	63,387	67,263
Loans:			
Loans retained[a]	**108,368**	111,082	98,331
Loans held-for-sale and loans at fair value	**4,995**	3,812	4,572
Total loans	**113,363**	114,894	102,903
Core loans	**113,006**	114,455	102,142
Equity	**70,000**	64,000	62,000
Headcount	**51,181**	48,748	49,067

(a) Loans retained includes credit portfolio loans, loans held by consolidated Firm-administered multi-seller conduits, trade finance loans, other held-for-investment loans and overdrafts.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2017	2016	2015
Credit data and quality statistics			
Net charge-offs/ (recoveries)	**$ 71**	$ 168	$ (19)
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**812**	467	428
Nonaccrual loans held-for-sale and loans at fair value	**–**	109	10
Total nonaccrual loans	**812**	576	438
Derivative receivables	**130**	223	204
Assets acquired in loan satisfactions	**85**	79	62
Total nonperforming assets	**1,027**	878	704
Allowance for credit losses:			
Allowance for loan losses	**1,379**	1,420	1,258
Allowance for lending-related commitments	**727**	801	569
Total allowance for credit losses	**2,106**	2,221	1,827
Net charge-off/(recovery) rate[b]	**0.07%**	0.15%	(0.02)%
Allowance for loan losses to period-end loans retained	**1.27**	1.27	1.18
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits[c]	**1.92**	1.86	1.88
Allowance for loan losses to nonaccrual loans retained[a]	**170**	304	294
Nonaccrual loans to total period-end loans	**0.72**	0.50	0.40

(a) Allowance for loan losses of $316 million, $113 million and $177 million were held against these nonaccrual loans at December 31, 2017, 2016 and 2015, respectively.
(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
(c) Management uses allowance for loan losses to period-end loans retained, excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio.

Investment banking fees

	Year ended December 31,		
(in millions)	2017	2016	2015
Advisory	**$ 2,150**	$ 2,110	$ 2,133
Equity underwriting	**1,396**	1,159	1,434
Debt underwriting[a]	**3,646**	3,155	3,169
Total investment banking fees	**$ 7,192**	$ 6,424	$ 6,736

(a) Includes loans syndication.

League table results – wallet share

Year ended December 31,	2017 Rank	2017 Share	2016 Rank	2016 Share	2015 Rank	2015 Share
Based on fees[a]						
Debt, equity and equity-related						
Global	**#1**	**7.4%**	#1	7.0%	#1	7.6%
U.S.	**1**	**11.2**	1	11.9	1	11.5
Long-term debt[b]						
Global	**1**	**7.6**	1	6.7	1	8.1
U.S.	**2**	**10.9**	2	11.1	1	11.7
Equity and equity-related						
Global[c]	**2**	**7.1**	1	7.4	2	6.9
U.S.	**1**	**11.7**	1	13.3	1	11.3
M&A[d]						
Global	**2**	**8.6**	2	8.3	2	8.4
U.S.	**2**	**9.2**	2	9.8	2	9.9
Loan syndications						
Global	**1**	**9.5**	1	9.3	1	7.5
U.S.	**1**	**11.3**	2	11.9	2	10.8
Global investment banking fees[e]	**#1**	**8.1%**	#1	7.9%	#1	7.8%

(a) Source: Dealogic as of January 1, 2018. Reflects the ranking of revenue wallet and market share.
(b) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and mortgage-backed securities ("MBS"); and exclude money market, short-term debt, and U.S. municipal securities.
(c) Global equity and equity-related ranking includes rights offerings and Chinese A-Shares.
(d) Global M&A reflect the removal of any withdrawn transactions. U.S. M&A revenue wallet represents wallet from client parents based in the U.S.
(e) Global investment banking fees exclude money market, short-term debt and shelf deals.

Markets revenue

The following table summarizes select income statement data for the Markets businesses. Markets includes both Fixed Income Markets and Equity Markets. Markets revenue consists of principal transactions, fees, commissions and other income, as well as net interest income. The Firm assesses its Markets business performance on a total revenue basis, as offsets may occur across revenue line items. For example, securities that generate net interest income may be risk-managed by derivatives that are recorded in principal transactions. For a description of the composition of these income statement line items, see Notes 6 and 7.

Principal transactions reflects revenue on financial instruments and commodities transactions that arise from client-driven market making activity. Principal transactions revenue includes amounts recognized upon executing new transactions with market participants, as well as "inventory-related revenue", which is revenue recognized from gains and losses on derivatives and other instruments that the Firm has been holding in anticipation of, or in response to, client demand, and changes in the fair value of instruments used by the Firm to actively manage the risk exposure arising from such inventory. Principal transactions revenue recognized upon executing new transactions with market participants is driven by many factors including the level of client activity, the bid-offer spread (which is the difference between the price at which a market participant is willing to sell an instrument to the Firm and the price at which another market participant is willing to buy it from the Firm, and vice versa), market liquidity and volatility. These factors are interrelated and sensitive to the same factors that drive inventory-related revenue, which include general market conditions, such as interest rates, foreign exchange rates, credit spreads, and equity and commodity prices, as well as other macroeconomic conditions.

For the periods presented below, the predominant source of principal transactions revenue was the amount recognized upon executing new transactions.

Year ended December 31, (in millions, except where otherwise noted)	2017 Fixed Income Markets	2017 Equity Markets	2017 Total Markets	2016 Fixed Income Markets	2016 Equity Markets	2016 Total Markets	2015 Fixed Income Markets	2015 Equity Markets	2015 Total Markets
Principal transactions	**$ 7,393**	**$ 3,855**	**$ 11,248**	$ 8,347	$ 3,130	$ 11,477	$ 6,899	$ 3,038	$ 9,937
Lending- and deposit-related fees	**191**	**6**	**197**	220	2	222	194	–	194
Asset management, administration and commissions	**390**	**1,635**	**2,025**	388	1,551	1,939	383	1,704	2,087
All other income	**436**	**(21)**	**415**	1,014	13	1,027	854	(84)	770
Noninterest revenue	**8,410**	**5,475**	**13,885**	9,969	4,696	14,665	8,330	4,658	12,988
Net interest income[a]	**4,402**	**228**	**4,630**	5,290	1,044	6,334	4,262	1,036	5,298
Total net revenue	**$ 12,812**	**$ 5,703**	**$ 18,515**	$ 15,259	$ 5,740	$ 20,999	$ 12,592	$ 5,694	$ 18,286
Loss days[b]			4			0			2

(a) Declines in Markets net interest income in 2017 were driven by higher funding costs.
(b) Loss days represent the number of days for which Markets posted losses. The loss days determined under this measure differ from the disclosure of daily market risk-related gains and losses for the Firm in the value-at-risk ("VaR") back-testing discussion on pages 123–125.

Selected metrics

As of or for the year ended December 31, (in millions, except where otherwise noted)	2017	2016	2015
Assets under custody ("AUC") by asset class (period-end) (in billions):			
Fixed Income	$ 13,043	$ 12,166	$ 12,042
Equity	7,863	6,428	6,194
Other[a]	2,563	1,926	1,707
Total AUC	$ 23,469	$ 20,520	$ 19,943
Client deposits and other third party liabilities (average)[b]	$ 408,911	$ 376,287	$ 395,297
Trade finance loans (period-end)	17,947	15,923	19,255

(a) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.
(b) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses.

International metrics

Year ended December 31, (in millions, except where otherwise noted)	2017	2016	2015
Total net revenue[a]			
Europe/Middle East/Africa	$ 11,328	$ 10,786	$ 10,894
Asia/Pacific	4,525	4,915	4,901
Latin America/Caribbean	1,125	1,225	1,096
Total international net revenue	16,978	16,926	16,891
North America	17,515	18,290	16,651
Total net revenue	$ 34,493	$ 35,216	$ 33,542
Loans retained (period-end)[a]			
Europe/Middle East/Africa	$ 25,931	$ 26,696	$ 24,622
Asia/Pacific	15,248	14,508	17,108
Latin America/Caribbean	6,546	7,607	8,609
Total international loans	47,725	48,811	50,339
North America	61,040	63,061	56,569
Total loans retained	$ 108,765	$ 111,872	$ 106,908
Client deposits and other third-party liabilities (average)[a][b]			
Europe/Middle East/Africa	$ 154,582	$ 135,979	$ 141,062
Asia/Pacific	76,744	68,110	67,111
Latin America/Caribbean	25,419	22,914	23,070
Total international	$ 256,745	$ 227,003	$ 231,243
North America	152,166	149,284	164,054
Total client deposits and other third-party liabilities	$ 408,911	$ 376,287	$ 395,297
AUC (period-end) (in billions)[a]			
North America	$ 13,971	$ 12,290	$ 12,034
All other regions	9,498	8,230	7,909
Total AUC	$ 23,469	$ 20,520	$ 19,943

(a) Total net revenue is based predominantly on the domicile of the client or location of the trading desk, as applicable. Loans outstanding (excluding loans held-for-sale and loans at fair value), client deposits and other third-party liabilities, and AUC are based predominantly on the domicile of the client.
(b) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses.

Commercial Banking delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. In addition, CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Selected income statement data

Year ended December 31, (in millions)	2017	2016	2015
Revenue			
Lending- and deposit-related fees	**$ 919**	$ 917	$ 944
Asset management, administration and commissions	**68**	69	88
All other income[a]	**1,535**	1,334	1,333
Noninterest revenue	**2,522**	2,320	2,365
Net interest income	**6,083**	5,133	4,520
Total net revenue[b]	**8,605**	7,453	6,885
Provision for credit losses	**(276)**	282	442
Noninterest expense			
Compensation expense	**1,470**	1,332	1,238
Noncompensation expense	**1,857**	1,602	1,643
Total noninterest expense	**3,327**	2,934	2,881
Income before income tax expense	**5,554**	4,237	3,562
Income tax expense	**2,015**	1,580	1,371
Net income	**$ 3,539**	$ 2,657	$ 2,191

(a) Includes revenue from investment banking products and commercial card transactions.

(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities, as well as tax-exempt income related to municipal financing activities of $699 million, $505 million and $493 million for the years ended December 31, 2017, 2016 and 2015, respectively. The 2017 results reflect the impact of the enactment of the TCJA including a benefit to all other income of $115 million on certain investments in the Community Development Banking business. For additional information related to the impact of the TCJA, see Note 24.

2017 compared with 2016

Net income was $3.5 billion, an increase of 33% compared with the prior year, driven by higher net revenue and a lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was $8.6 billion, an increase of 15% compared with the prior year. Net interest income was $6.1 billion, an increase of 19% compared with the prior year, driven by higher deposit spreads and loan growth. Noninterest revenue was $2.5 billion, an increase of 9% compared with the prior year, predominantly driven by higher Community Development Banking revenue, including a $115 million benefit for the impact of the TCJA on certain investments, and higher investment banking revenue.

Noninterest expense was $3.3 billion, an increase of 13% driven by hiring of bankers and business-related support staff, investments in technology, and an impairment of approximately $130 million on certain leased equipment, the majority of which was sold subsequent to year-end.

The provision for credit losses was a benefit of $276 million, driven by net reductions in the allowance for credit losses, including in the Oil & Gas, Natural Gas Pipelines and Metals & Mining portfolios. The prior year provision for credit losses was $282 million driven by downgrades in the Oil & Gas portfolio and select client downgrades in other industries.

2016 compared with 2015

Net income was $2.7 billion, an increase of 21% compared with the prior year, driven by higher net revenue and a lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was $7.5 billion, an increase of 8% compared with the prior year. Net interest income was $5.1 billion, an increase of 14% compared with the prior year, driven by higher loan balances and deposit spreads. Noninterest revenue was $2.3 billion, a decrease of 2% compared with the prior year, largely driven by lower lending-and-deposit-related fees and other revenue, partially offset by higher investment banking revenue.

Noninterest expense was $2.9 billion, an increase of 2% compared with the prior year, reflecting increased hiring of bankers and business-related support staff and investments in technology.

The provision for credit losses was $282 million and $442 million for 2016 and 2015, respectively, with both periods driven by downgrades in the Oil & Gas portfolio and select client downgrades in other industries.

CB product revenue consists of the following:

Lending includes a variety of financing alternatives, which are primarily provided on a secured basis; collateral includes receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, and standby letters of credit.

Treasury services includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

Investment banking includes revenue from a range of products providing CB clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from Fixed Income and Equity Markets products used by CB clients is also included.

Other product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activities and certain income derived from principal transactions.

CB is divided into four primary client segments: Middle Market Banking, Corporate Client Banking, Commercial Term Lending, and Real Estate Banking.

Middle Market Banking covers corporate, municipal and nonprofit clients, with annual revenue generally ranging between $20 million and $500 million.

Corporate Client Banking covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs.

Commercial Term Lending primarily provides term financing to real estate investors/owners for multifamily properties as well as office, retail and industrial properties.

Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate investment properties.

Other primarily includes lending and investment-related activities within the Community Development Banking business.

Selected income statement data (continued)

Year ended December 31, (in millions, except ratios)	2017	2016	2015
Revenue by product			
Lending	**$ 4,094**	$ 3,795	$ 3,429
Treasury services	**3,444**	2,797	2,581
Investment banking[a]	**805**	785	730
Other[b]	**262**	76	145
Total Commercial Banking net revenue	**$ 8,605**	$ 7,453	$ 6,885
Investment banking revenue, gross[c]	**$ 2,327**	$ 2,286	$ 2,179
Revenue by client segment			
Middle Market Banking[d]	**$ 3,341**	$ 2,848	$ 2,685
Corporate Client Banking[d]	**2,727**	2,429	2,205
Commercial Term Lending	**1,454**	1,408	1,275
Real Estate Banking	**604**	456	358
Other[b]	**479**	312	362
Total Commercial Banking net revenue	**$ 8,605**	$ 7,453	$ 6,885
Financial ratios			
Return on equity	**17%**	16%	15%
Overhead ratio	**39**	39	42

(a) Includes total Firm revenue from investment banking products sold to CB clients, net of revenue sharing with the CIB.
(b) The 2017 results reflect the impact of the enactment of the TCJA including a benefit of $115 million on certain investments in the Community Development Banking business. For additional information related to the impact of the TCJA, see Note 24.
(c) Represents total Firm revenue from investment banking products sold to CB clients.
(d) Certain clients were transferred from Middle Market Banking to Corporate Client Banking in the second quarter of 2017. The prior period amounts have been revised to conform with the current period presentation.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2017	2016	2015
Selected balance sheet data (period-end)			
Total assets	**$ 221,228**	$ 214,341	$ 200,700
Loans:			
Loans retained	**202,400**	188,261	167,374
Loans held-for-sale and loans at fair value	**1,286**	734	267
Total loans	**$ 203,686**	$ 188,995	$ 167,641
Core loans	**203,469**	188,673	166,939
Equity	**20,000**	16,000	14,000
Period-end loans by client segment			
Middle Market Banking[a]	**$ 56,965**	$ 53,929	$ 50,501
Corporate Client Banking[a]	**46,963**	43,027	37,709
Commercial Term Lending	**74,901**	71,249	62,860
Real Estate Banking	**17,796**	14,722	11,234
Other	**7,061**	6,068	5,337
Total Commercial Banking loans	**$ 203,686**	$ 188,995	$ 167,641
Selected balance sheet data (average)			
Total assets	**$ 217,047**	$ 207,532	$ 198,076
Loans:			
Loans retained	**197,203**	178,670	157,389
Loans held-for-sale and loans at fair value	**909**	723	492
Total loans	**$ 198,112**	$ 179,393	$ 157,881
Core loans	**197,846**	178,875	156,975
Client deposits and other third-party liabilities	**177,018**	174,396	191,529
Equity	**20,000**	16,000	14,000
Average loans by client segment			
Middle Market Banking[a]	**$ 55,474**	$ 52,242	$ 50,334
Corporate Client Banking[a]	**46,037**	41,756	34,497
Commercial Term Lending	**73,428**	66,700	58,138
Real Estate Banking	**16,525**	13,063	9,917
Other	**6,648**	5,632	4,995
Total Commercial Banking loans	**$ 198,112**	$ 179,393	$ 157,881
Headcount	**9,005**	8,365	7,845

(a) Certain clients were transferred from Middle Market Banking to Corporate Client Banking in the second quarter of 2017. The prior period amounts have been revised to conform with the current period presentation.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2017	2016	2015
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ 39**	$ 163	$ 21
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**617**	1,149	375
Nonaccrual loans held-for-sale and loans at fair value	**—**	—	18
Total nonaccrual loans	**617**	1,149	393
Assets acquired in loan satisfactions	**3**	1	8
Total nonperforming assets	**620**	1,150	401
Allowance for credit losses:			
Allowance for loan losses	**2,558**	2,925	2,855
Allowance for lending-related commitments	**300**	248	198
Total allowance for credit losses	**2,858**	3,173	3,053
Net charge-off/(recovery) rate[b]	**0.02%**	0.09%	0.01%
Allowance for loan losses to period-end loans retained	**1.26**	1.55	1.71
Allowance for loan losses to nonaccrual loans retained[a]	**415**	255	761
Nonaccrual loans to period-end total loans	**0.30**	0.61	0.23

(a) Allowance for loan losses of $92 million, $155 million and $64 million was held against nonaccrual loans retained at December 31, 2017, 2016 and 2015, respectively.

(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.

ASSET & WEALTH MANAGEMENT

Asset & Wealth Management, with client assets of $2.8 trillion, is a global leader in investment and wealth management. AWM clients include institutions, high-net-worth individuals and retail investors in many major markets throughout the world. AWM offers investment management across most major asset classes including equities, fixed income, alternatives and money market funds. AWM also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For Wealth Management clients, AWM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AWM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios and headcount)	2017	2016	2015
Revenue			
Asset management, administration and commissions	**$ 8,946**	$ 8,414	$ 9,175
All other income	**593**	598	388
Noninterest revenue	**9,539**	9,012	9,563
Net interest income	**3,379**	3,033	2,556
Total net revenue	**12,918**	12,045	12,119
Provision for credit losses	**39**	26	4
Noninterest expense			
Compensation expense	**5,318**	5,065	5,113
Noncompensation expense	**3,983**	3,413	3,773
Total noninterest expense	**9,301**	8,478	8,886
Income before income tax expense	**3,578**	3,541	3,229
Income tax expense	**1,241**	1,290	1,294
Net income	**$ 2,337**	$ 2,251	$ 1,935
Revenue by line of business			
Asset Management	**$ 6,340**	$ 5,970	$ 6,301
Wealth Management	**6,578**	6,075	5,818
Total net revenue	**$12,918**	$12,045	$12,119
Financial ratios			
Return on common equity	**25%**	24%	21%
Overhead ratio	**72**	70	73
Pre-tax margin ratio:			
Asset Management	**25**	31	31
Wealth Management	**30**	28	22
Asset & Wealth Management	**28**	29	27
Headcount	**22,975**	21,082	20,975
Number of Wealth Management client advisors	**2,605**	2,504	2,778

2017 compared with 2016

Net income was $2.3 billion, an increase of 4% compared with the prior year, reflecting higher revenue and a tax benefit resulting from the vesting of employee share-based awards, offset by higher noninterest expense.

Net revenue was $12.9 billion, an increase of 7%. Net interest income was $3.4 billion, up 11%, driven by higher deposit spreads. Noninterest revenue was $9.5 billion, up 6%, driven by higher market levels, partially offset by the absence of a gain in the prior year on the disposal of an asset.

Revenue from Asset Management was $6.3 billion, up 6% from the prior year, driven by higher market levels, partially offset by the absence of a gain in prior year on the disposal of an asset. Revenue from Wealth Management was $6.6 billion, up 8% from the prior year, reflecting higher net interest income from higher deposit spreads.

Noninterest expense was $9.3 billion, an increase of 10%, predominantly driven by higher legal expense and compensation expense on higher revenue and headcount.

2016 compared with 2015

Net income was $2.3 billion, a decrease of 16% compared with the prior year, reflecting lower noninterest expense, predominantly offset by lower net revenue.

Net revenue was $12.0 billion, a decrease of 1%. Net interest income was $3.0 billion, up 19%, driven by higher loan balances and spreads. Noninterest revenue was $9.0 billion, a decrease of 6%, reflecting the impact of lower average equity market levels, a reduction in revenue related to the disposal of assets at the beginning of 2016, and lower performance fees and placement fees.

Revenue from Asset Management was $6.0 billion, down 5% from the prior year, driven by a reduction in revenue related to the disposal of assets at the beginning of 2016, the impact of lower average equity market levels and lower performance fees. Revenue from Wealth Management was $6.1 billion, up 4% from the prior year, reflecting higher net interest income from higher deposit and loan spreads and continued loan growth, partially offset by the impact of lower average equity market levels and lower placement fees.

Noninterest expense was $8.5 billion, a decrease of 5%, predominantly due to a reduction in expense related to the disposal of assets at the beginning of 2016 and lower legal expense.

AWM's lines of business consist of the following:

Asset Management provides comprehensive global investment services, including asset management, pension analytics, asset-liability management and active risk-budgeting strategies.

Wealth Management offers investment advice and wealth management, including investment management, capital markets and risk management, tax and estate planning, banking, lending and specialty-wealth advisory services.

AWM's client segments consist of the following:

Private Banking clients include high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide.

Institutional clients include both corporate and public institutions, endowments, foundations, nonprofit organizations and governments worldwide.

Retail clients include financial intermediaries and individual investors.

Asset Management has two high-level measures of its overall fund performance.

- **Percentage of mutual fund assets under management in funds rated 4- or 5-star:** Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best rating and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22.5% of industry-wide ranked funds. A 3-star rating represents the next 35% of industry-wide ranked funds. A 2-star rating represents the next 22.5% of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom 10% of industry-wide ranked funds. The "overall Morningstar rating" is derived from a weighted average of the performance associated with a fund's three-, five- and ten-year (if applicable) Morningstar Rating metrics. For U.S. domiciled funds, separate star ratings are given at the individual share class level. The Nomura "star rating" is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and hence excluded from this analysis. All ratings, the assigned peer categories and the asset values used to derive this analysis are sourced from these fund rating providers mentioned in footnote (a). The data providers re-denominate the asset values into U.S. dollars. This % of AUM is based on star ratings at the share class level for U.S. domiciled funds, and at a "primary share class" level to represent the star rating of all other funds except for Japan where Nomura provides ratings at the fund level. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results.
- **Percentage of mutual fund assets under management in funds ranked in the 1st or 2nd quartile (one, three and five years):** All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from the fund ranking providers mentioned in footnote (c). Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers re-denominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results.

Selected metrics

As of or for the year ended December 31, (in millions, except ranking data and ratios)	2017	2016	2015
% of JPM mutual fund assets rated as 4- or 5-star[a][b]	**60%**	63%	52%
% of JPM mutual fund assets ranked in 1st or 2nd quartile:[c]			
1 year	**64**	54	62
3 years	**75**	72	78
5 years[b]	**83**	79	79
Selected balance sheet data (period-end)			
Total assets	**$ 151,909**	$ 138,384	$ 131,451
Loans	**130,640**	118,039	111,007
Core loans	**130,640**	118,039	111,007
Deposits	**146,407**	161,577	146,766
Equity	**9,000**	9,000	9,000
Selected balance sheet data (average)			
Total assets	**$ 144,206**	$ 132,875	$ 129,743
Loans	**123,464**	112,876	107,418
Core loans	**123,464**	112,876	107,418
Deposits	**148,982**	153,334	149,525
Equity	**9,000**	9,000	9,000
Credit data and quality statistics			
Net charge-offs	**$ 14**	$ 16	$ 12
Nonaccrual loans	**375**	390	218
Allowance for credit losses:			
Allowance for loan losses	**290**	274	266
Allowance for lending-related commitments	**10**	4	5
Total allowance for credit losses	**300**	278	271
Net charge-off rate	**0.01%**	0.01%	0.01%
Allowance for loan losses to period-end loans	**0.22**	0.23	0.24
Allowance for loan losses to nonaccrual loans	**77**	70	122
Nonaccrual loans to period-end loans	**0.29**	0.33	0.20

(a) Represents the "overall star rating" derived from Morningstar for the U.S., the U.K., Luxembourg, Hong Kong and Taiwan domiciled funds; and Nomura "star rating" for Japan domiciled funds. Includes only Asset Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds.

(b) The prior period amounts have been revised to conform with the current period presentation.

(c) Quartile ranking sourced from: Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and Fund Doctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds.

Client assets

2017 compared with 2016

Client assets were $2.8 trillion, an increase of 14% compared with the prior year. Assets under management were $2.0 trillion, an increase of 15% from the prior year reflecting higher market levels, and net inflows into long-term and liquidity products.

2016 compared with 2015

Client assets were $2.5 trillion, an increase of 4% compared with the prior year. Assets under management were $1.8 trillion, an increase of 3% from the prior year reflecting inflows into both liquidity and long-term products and the effect of higher market levels, partially offset by asset sales at the beginning of 2016.

Client assets

December 31, (in billions)	2017	2016	2015
Assets by asset class			
Liquidity[a]	**$ 459**	$ 436	$ 430
Fixed income[a]	**474**	420	376
Equity	**428**	351	353
Multi-asset and alternatives	**673**	564	564
Total assets under management	**2,034**	1,771	1,723
Custody/brokerage/ administration/deposits	**755**	682	627
Total client assets	**$ 2,789**	$ 2,453	$ 2,350
Memo:			
Alternatives client assets[b]	**$ 166**	$ 154	$ 172
Assets by client segment			
Private Banking	**$ 526**	$ 435	$ 437
Institutional	**968**	869	816
Retail	**540**	467	470
Total assets under management	**$ 2,034**	$ 1,771	$ 1,723
Private Banking	**$ 1,256**	$ 1,098	$ 1,050
Institutional	**990**	886	824
Retail	**543**	469	476
Total client assets	**$ 2,789**	$ 2,453	$ 2,350

(a) The prior period amounts have been revised to conform with the current period presentation.
(b) Represents assets under management, as well as client balances in brokerage accounts.

Client assets (continued)

Year ended December 31, (in billions)	2017	2016	2015
Assets under management rollforward			
Beginning balance	**$ 1,771**	$ 1,723	$ 1,744
Net asset flows:			
Liquidity	**9**	24	–
Fixed income	**36**	30	(8)
Equity	**(11)**	(29)	1
Multi-asset and alternatives	**43**	22	22
Market/performance/other impacts	**186**	1	(36)
Ending balance, December 31	**$ 2,034**	$ 1,771	$ 1,723
Client assets rollforward			
Beginning balance	**$ 2,453**	$ 2,350	$ 2,387
Net asset flows	**93**	63	27
Market/performance/other impacts	**243**	40	(64)
Ending balance, December 31	**$ 2,789**	$ 2,453	$ 2,350

International metrics

Year ended December 31, (in billions, except where otherwise noted)	2017	2016	2015
Total net revenue (in millions)[a]			
Europe/Middle East/Africa	**$ 2,021**	$ 1,849	$ 1,946
Asia/Pacific	**1,162**	1,077	1,130
Latin America/Caribbean	**844**	726	795
Total international net revenue	**4,027**	3,652	3,871
North America	**8,891**	8,393	8,248
Total net revenue	**$ 12,918**	$ 12,045	$ 12,119
Assets under management			
Europe/Middle East/Africa	**$ 384**	$ 309	$ 302
Asia/Pacific	**160**	123	123
Latin America/Caribbean	**61**	45	45
Total international assets under management	**605**	477	470
North America	**1,429**	1,294	1,253
Total assets under management	**$ 2,034**	$ 1,771	$ 1,723
Client assets			
Europe/Middle East/Africa	**$ 441**	$ 359	$ 351
Asia/Pacific	**225**	177	173
Latin America/Caribbean	**154**	114	110
Total international client assets	**820**	650	634
North America	**1,969**	1,803	1,716
Total client assets	**$ 2,789**	$ 2,453	$ 2,350

(a) Regional revenue is based on the domicile of the client.

The Corporate segment consists of Treasury and Chief Investment Office and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO is predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Enterprise Technology, Legal, Finance, Human Resources, Internal Audit, Risk Management, Compliance, Oversight & Controls, Corporate Responsibility and various Other Corporate groups.

Selected income statement data

Year ended December 31, (in millions, except headcount)	2017	2016	2015
Revenue			
Principal transactions	**$ 284**	$ 210	$ 41
Securities gains/(losses)	**(66)**	140	190
All other income/(loss)[a]	**867**	588	569
Noninterest revenue	**1,085**	938	800
Net interest income	**55**	(1,425)	(533)
Total net revenue[b]	**1,140**	(487)	267
Provision for credit losses	**–**	(4)	(10)
Noninterest expense[c]	**501**	462	977
Income/(loss) before income tax benefit	**639**	(945)	(700)
Income tax expense/(benefit)	**2,282**	(241)	(3,137)
Net income/(loss)	**$ (1,643)**	$ (704)	$ 2,437
Total net revenue			
Treasury and CIO	**566**	(787)	(493)
Other Corporate	**574**	300	760
Total net revenue	**$ 1,140**	$ (487)	$ 267
Net income/(loss)			
Treasury and CIO	**60**	(715)	(235)
Other Corporate	**(1,703)**	11	2,672
Total net income/(loss)	**$ (1,643)**	$ (704)	$ 2,437
Total assets (period-end)	**$781,478**	$ 799,426	$ 768,204
Loans (period-end)	**1,653**	1,592	2,187
Core loans[d]	**1,653**	1,589	2,182
Headcount	**35,261**	32,358	29,617

(a) Included revenue related to a legal settlement of $645 million for the year ended December 31, 2017.
(b) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $905 million, $885 million and $839 million for the years ended December 31, 2017, 2016 and 2015, respectively.
(c) Included legal expense/(benefit) of $(593) million, $(385) million and $832 million for the years ended December 31, 2017, 2016 and 2015, respectively.
(d) Average core loans were $1.6 billion, $1.9 billion and $2.5 billion for the years ended December 31, 2017, 2016 and 2015, respectively.

2017 compared with 2016

Net loss was $1.6 billion, compared with a net loss of $704 million in the prior year. The current year net loss included a $2.7 billion increase to income tax expense related to the impact of the TCJA.

Net revenue was $1.1 billion, compared with a loss of $487 million in the prior year. The increase in current year net revenue was driven by a $645 million benefit from a legal settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee of certain Washington Mutual trusts and by the net impact of higher interest rates.

Net interest income was $55 million, compared with a loss of $1.4 billion in the prior year. The gain in the current year was primarily driven by higher interest income on deposits with banks due to higher interest rates and balances, partially offset by higher interest expense on long-term debt primarily driven by higher interest rates.

2016 compared with 2015

Net loss was $704 million, compared with net income of $2.4 billion in the prior year.

Net revenue was a loss of $487 million, compared with a gain of $267 million in the prior year. The prior year included a $514 million benefit from a legal settlement.

Net interest income was a loss of $1.4 billion, compared with a loss of $533 million in the prior year. The loss in the current year was primarily driven by higher interest expense on long-term debt and lower investment securities balances during the year, partially offset by higher interest income on deposits with banks and securities purchased under resale agreements as a result of higher interest rates.

Noninterest expense was $462 million, a decrease of $515 million from the prior year driven by lower legal expense, partially offset by higher compensation expense.

The prior year reflected tax benefits of $2.6 billion predominantly from the resolution of various tax audits.

Treasury and CIO overview

Treasury and CIO is predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's four major reportable business segments to serve their respective client bases, which generate both on- and off-balance sheet assets and liabilities.

Treasury and CIO seek to achieve the Firm's asset-liability management objectives generally by investing in high-quality securities that are managed for the longer-term as part of the Firm's investment securities portfolio. Treasury and CIO also use derivatives to meet the Firm's asset-liability management objectives. For further information on derivatives, see Note 5. The investment securities portfolio primarily consists of agency and nonagency mortgage-backed securities, U.S. and non-U.S. government securities, obligations of U.S. states and municipalities, other ABS and corporate debt securities. At December 31, 2017, the investment securities portfolio was $248.0 billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available and where not available, based primarily upon internal ratings that correspond to ratings as defined by S&P and Moody's). See Note 10 for further information on the details of the Firm's investment securities portfolio. For further information on liquidity and funding risk, see Liquidity Risk Management on pages 92-97. For information on interest rate, foreign exchange and other risks, see Market Risk Management on pages 121-128.

Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	**2017**	2016	2015
Securities gains/(losses)	**$ (78)**	$ 132	$ 190
AFS investment securities (average)	**219,345**	226,892	264,758
HTM investment securities (average)	**47,927**	51,358	50,044
Investment securities portfolio (average)	**267,272**	278,250	314,802
AFS investment securities (period-end)	**200,247**	236,670	238,704
HTM investment securities (period-end)	**47,733**	50,168	49,073
Investment securities portfolio (period-end)	**247,980**	286,838	287,777

Risk is an inherent part of JPMorgan Chase's business activities. When the Firm extends a consumer or wholesale loan, advises customers on their investment decisions, makes markets in securities, or offers other products or services, the Firm takes on some degree of risk. The Firm's overall objective is to manage its businesses, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors and protects the safety and soundness of the Firm.

The Firm believes that effective risk management requires:

- Acceptance of responsibility, including identification and escalation of risk issues, by all individuals within the Firm;
- Ownership of risk identification, assessment, data and management within each of the lines of business and corporate functions; and
- Firmwide structures for risk governance.

The Firm strives for continual improvement through efforts to enhance controls, ongoing employee training and development, talent retention, and other measures. The Firm follows a disciplined and balanced compensation framework with strong internal governance and independent Board oversight. The impact of risk and control issues are carefully considered in the Firm's performance evaluation and incentive compensation processes.

Firmwide Risk Management is overseen and managed on an enterprise-wide basis. The Firm's approach to risk management involves understanding drivers of risks, risk types, and impacts of risks.

Drivers of risk include, but are not limited to, the economic environment, regulatory or government policy, competitor or market evolution, business decisions, process or judgment error, deliberate wrongdoing, dysfunctional markets, and natural disasters.

The Firm's risks are generally categorized in the following four risk types:

- Strategic risk is the risk associated with the Firm's current and future business plans and objectives, including capital risk, liquidity risk, and the impact to the Firm's reputation.
- Credit and investment risk is the risk associated with the default or change in credit profile of a client, counterparty or customer; or loss of principal or a reduction in expected returns on investments, including consumer credit risk, wholesale credit risk, and investment portfolio risk.
- Market risk is the risk associated with the effect of changes in market factors, such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term.
- Operational risk is the risk associated with inadequate or failed internal processes, people and systems, or from external events and includes compliance risk, conduct risk, legal risk, and estimations and model risk.

There may be many consequences of risks manifesting, including quantitative impacts such as reduction in earnings and capital, liquidity outflows, and fines or penalties, or qualitative impacts, such as reputation damage, loss of clients, and regulatory and enforcement actions.

The Firm has established Firmwide risk management functions to manage different risk types. The scope of a particular risk management function may include multiple risk types. For example, the Firm's Country Risk Management function oversees country risk which may be a driver of risk or an aggregation of exposures that could give rise to multiple risk types such as credit or market risk. The following sections discuss how the Firm manages the key risks that are inherent in its business activities.

Risk Oversight	Definition	Page references
Strategic risk	The risk associated with the Firm's current and future business plans and objectives.	81
Capital risk	The risk that the Firm has an insufficient level and composition of capital to support the Firm's business activities and associated risks during normal economic environments and under stressed conditions.	82-91
Liquidity risk	The risk that the Firm will be unable to meet its contractual and contingent financial obligations as they arise or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets and liabilities.	92-97
Reputation risk	The potential that an action, inaction, transaction, investment or event will reduce trust in the Firm's integrity or competence by its various constituents, including clients, counterparties, investors, regulators, employees and the broader public.	98
Consumer credit risk	The risk associated with the default or change in credit profile of a customer.	102-107
Wholesale credit risk	The risk associated with the default or change in credit profile of a client or counterparty.	108-116
Investment portfolio risk	The risk associated with the loss of principal or a reduction in expected returns on investments arising from the investment securities portfolio held by Treasury and CIO in connection with the Firm's balance sheet or asset-liability management objectives or from principal investments managed in various lines of business in predominantly privately-held financial assets and instruments.	120
Market risk	The risk associated with the effect of changes in market factors, such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term.	121-128
Country risk	The framework for monitoring and assessing how financial, economic, political or other significant developments adversely affect the value of the Firm's exposures related to a particular country or set of countries.	129-130
Operational risk	The risk associated with inadequate or failed internal processes, people and systems, or from external events.	131-133
Compliance risk	The risk of failure to comply with applicable laws, rules, and regulations.	134
Conduct risk	The risk that any action or inaction by an employee of the Firm could lead to unfair client/customer outcomes, compromise the Firm's reputation, impact the integrity of the markets in which the Firm operates, or reflect poorly on the Firm's culture.	135
Legal risk	The risk of loss primarily caused by the actual or alleged failure to meet legal obligations that arise from the rule of law in jurisdictions in which the Firm operates, agreements with clients and customers, and products and services offered by the Firm.	136
Estimations and Model risk	The risk of the potential for adverse consequences from decisions based on incorrect or misused estimation outputs.	137

Governance and oversight

The Firm's overall appetite for risk is governed by a "Risk Appetite" framework. The framework and the Firm's risk appetite are set and approved by the Firm's Chief Executive Officer ("CEO"), Chief Financial Officer ("CFO") and Chief Risk Officer ("CRO"). LOB-level risk appetite is set by the respective LOB CEO, CFO and CRO and is approved by the Firm's CEO, CFO and CRO. Quantitative parameters and qualitative factors are used to monitor and measure the Firm's capacity to take risk consistent with its stated risk appetite. Quantitative parameters have been established to assess select strategic risks, credit risks and market risks. Qualitative factors have been established for select operational risks, and for reputation risks. Risk Appetite results are reported quarterly to the Board of Directors' Risk Policy Committee ("DRPC").

The Firm has an Independent Risk Management ("IRM") function, which consists of the Risk Management and Compliance organizations. The CEO appoints, subject to DRPC approval, the Firm's CRO to lead the IRM organization and manage the risk governance framework of the Firm. The framework is subject to approval by the DRPC in the form of the primary risk management policies. The Chief Compliance Officer ("CCO"), who reports to the CRO, is also responsible for reporting to the Audit Committee for the Global Compliance Program. The Firm's Global Compliance Program focuses on overseeing compliance with laws, rules and regulations applicable to the Firm's products and services to clients and counterparties.

The Firm places reliance on each of its LOBs and other functional areas giving rise to risk. Each LOB and other functional area giving rise to risk is expected to operate within the parameters identified by the IRM function, and within its own management-identified risk and control standards. The LOBs, inclusive of LOB aligned Operations, Technology and Oversight & Controls, are the "first line of defense" in identifying and managing the risk in their activities, including but not limited to applicable laws, rules and regulations.

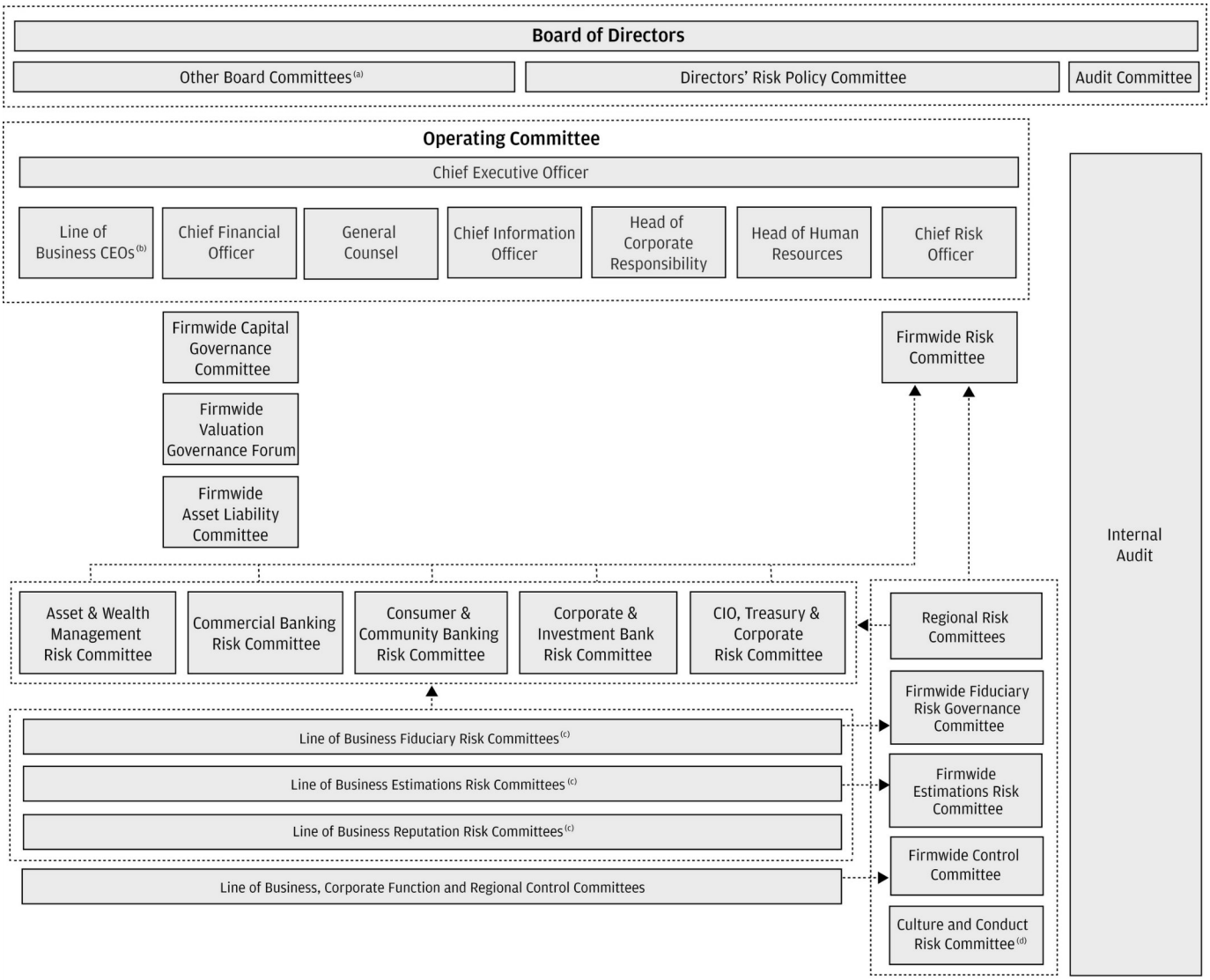
The IRM function is independent of the businesses and forms "the second line of defense". The IRM function sets and oversees various standards for the risk governance framework, including risk policy, identification, measurement, assessment, testing, limit setting, monitoring and reporting, and conducts independent challenge of adherence to such standards.

The Internal Audit function operates independently from other parts of the Firm and performs independent testing and evaluation of firmwide processes and controls across the entire enterprise as the Firm's "third line of defense" in managing risk. The Internal Audit Function is headed by the General Auditor, who reports to the Audit Committee.

In addition, there are other functions that contribute to the firmwide control environment including Finance, Human Resources, Legal, and Corporate Oversight & Control.

The independent status of the IRM function is supported by a governance structure that provides for escalation of risk issues to senior management, the Firmwide Risk Committee, and the Board of Directors, as appropriate.

The chart below illustrates the Board of Directors and key senior management level committees in the Firm's risk governance structure. In addition, there are other committees, forums and paths of escalation that support the oversight of risk, not shown in the chart below.



(a) Other Board Committees include the Compensation & Management Development Committee, Corporate Governance & Nominating Committee and Public Responsibility Committee.
(b) The Line of Business CEOs for CIB and CCB are also the Firm's Co-Presidents and Co-Chief Operating Officers.
(c) As applicable.
(d) Each Board committee oversees conduct risk within the scope of its responsibilities.

The Firm's Operating Committee, which consists of the Firm's CEO, CRO, CFO and other senior executives, is the ultimate management escalation point in the Firm and may refer matters to the Firm's Board of Directors. The Operating Committee is accountable to the Firm's Board of Directors.

The Board of Directors provides oversight of risk principally through the DRPC, the Audit Committee and, with respect to compensation and other management-related matters, the Compensation & Management Development Committee. Each committee of the Board oversees reputation risk and conduct risk issues within its scope of responsibility.

The Directors' Risk Policy Committee of the Board oversees the Firm's global risk management framework and approves the primary risk management policies of the Firm. The Committee's responsibilities include oversight of management's exercise of its responsibility to assess and manage the Firm's risks, and its capital and liquidity planning and analysis. Breaches in risk appetite, liquidity issues that may have a material adverse impact on the Firm and other significant risk-related matters are escalated to the DRPC.

The Audit Committee of the Board assists the Board in its oversight of management's responsibilities to assure that there is an effective system of controls reasonably designed to safeguard the assets and income of the Firm, assure the integrity of the Firm's financial statements and maintain compliance with the Firm's ethical standards, policies, plans and procedures, and with laws and regulations. In addition, the Audit Committee assists the Board in its oversight of the Firm's independent registered public accounting firm's qualifications, independence and performance, and of the performance of the Firm's Internal Audit function.

The Compensation & Management Development Committee ("CMDC") assists the Board in its oversight of the Firm's compensation programs and reviews and approves the Firm's overall compensation philosophy, incentive compensation pools, and compensation practices consistent with key business objectives and safety and soundness. The CMDC reviews Operating Committee members' performance against their goals, and approves their compensation awards. The CMDC also periodically reviews the Firm's diversity programs and management development and succession planning, and provides oversight of the Firm's culture and conduct programs.

Among the Firm's senior management-level committees that are primarily responsible for key risk-related functions are:

The Firmwide Risk Committee ("FRC") is the Firm's highest management-level risk committee. It provides oversight of the risks inherent in the Firm's businesses. The FRC is co-chaired by the Firm's CEO and CRO. The FRC serves as an escalation point for risk topics and issues raised by its members, the Line of Business Risk Committees, Firmwide Control Committee, Firmwide Fiduciary Risk Governance Committee, Firmwide Estimations Risk Committee, Culture and Conduct Risk Committee and regional Risk Committees, as appropriate. The FRC escalates significant issues to the DRPC, as appropriate.

The Firmwide Control Committee ("FCC") provides a forum for senior management to review and discuss firmwide operational risks, including existing and emerging issues and operational risk metrics, and to review operational risk management execution in the context of the Operational Risk Management Framework ("ORMF"). The ORMF provides the framework for the governance, risk identification and assessment, measurement, monitoring and reporting of operational risk. The FCC is co-chaired by the Chief Control Officer and the Firmwide Risk Executive for Operational Risk Governance. The FCC relies on the prompt escalation of operational risk and control issues from businesses and functions as the primary owners of the operational risk. Operational risk and control issues may be escalated by business or function control committees to the FCC, which in turn, may escalate to the FRC, as appropriate.

The Firmwide Fiduciary Risk Governance Committee ("FFRGC") is a forum for risk matters related to the Firm's fiduciary activities. The FFRGC oversees the firmwide fiduciary risk governance framework, which supports the consistent identification and escalation of fiduciary risk issues by the relevant lines of business; approves risk or compliance policy exceptions requiring FFRGC approval; approves the scope and/or expansion of the Firm's fiduciary framework; and reviews metrics to track fiduciary activity and issue resolution Firmwide. The FFRGC is co-chaired by the Asset Management CEO and the Asset & Wealth Management CRO. The FFRGC escalates significant fiduciary issues to the FRC, the DRPC and the Audit Committee, as appropriate.

The Firmwide Estimations Risk Committee ("FERC") reviews and oversees governance and execution activities related to models and certain analytical and judgment based estimations, such as those used in risk management, budget forecasting and capital planning and analysis. The FERC is chaired by the Firmwide Risk Executive for Model Risk Governance and Review. The FERC serves as an escalation channel for relevant topics and issues raised by its members and the Line of Business Estimation Risk Committees. The FERC escalates significant issues to the FRC, as appropriate.

The Culture and Conduct Risk Committee ("CCRC") provides oversight of culture and conduct initiatives to develop a more holistic view of conduct risks and to connect key programs across the Firm to identify opportunities and emerging areas for focus. The CCRC is co-chaired by the Chief Culture & Conduct Officer and the Conduct Risk Compliance Executive. The CCRC escalates significant issues to the FRC, as appropriate.

Line of Business and Regional Risk Committees review the ways in which the particular line of business or the business operating in a particular region could be exposed to adverse outcomes with a focus on identifying, accepting, escalating and/or requiring remediation of matters brought to these committees. These committees may escalate to the FRC, as appropriate. LOB risk committees are co-chaired by the LOB CEO and the LOB CRO. Each LOB risk committee may create sub-committees with requirements for escalation. The regional committees are established similarly, as appropriate, for the region.

In addition, each line of business and function is required to have a Control Committee. These control committees oversee the control environment of their respective business or function. As part of that mandate, they are responsible for reviewing data which indicates the quality and stability of the processes in a business or function, reviewing key operational risk issues and focusing on processes with shortcomings and overseeing process remediation. These committees escalate issues to the FCC, as appropriate.

The Firmwide Asset Liability Committee ("ALCO"), chaired by the Firm's Treasurer and Chief Investment Officer under the direction of the CFO, monitors the Firm's balance sheet, liquidity risk and structural interest rate risk. ALCO reviews the Firm's overall structural interest rate risk position, and the Firm's funding requirements and strategy. ALCO is responsible for reviewing and approving the Firm's Funds Transfer Pricing Policy (through which lines of business "transfer" interest rate risk and liquidity risk to Treasury and CIO), the Firm's Intercompany Funding and Liquidity Policy and the Firm's Contingency Funding Plan.

The Firmwide Capital Governance Committee, chaired by the Head of the Regulatory Capital Management Office, is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution alternatives and decisions. The Committee oversees the capital adequacy assessment process, including the overall design, scenario development and macro assumptions, and ensures that capital stress test programs are designed to adequately capture the risks specific to the Firm's businesses.

The Firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the Firmwide head of the Valuation Control Group ("VCG") under the direction of the Firm's Controller, and includes sub-forums covering the Corporate & Investment Bank, Consumer & Community Banking, Commercial Banking, Asset & Wealth Management and certain corporate functions, including Treasury and CIO.

In addition, the JPMorgan Chase Bank, N.A. Board of Directors is responsible for the oversight of management of the Bank. The JPMorgan Chase Bank, N.A. Board accomplishes this function acting directly and through the principal standing committees of the Firm's Board of Directors. Risk and control oversight on behalf of JPMorgan Chase Bank N.A. is primarily the responsibility of the DRPC and the Audit Committee of the Firm's Board of Directors, respectively, and, with respect to compensation and other management-related matters, the Compensation & Management Development Committee of the Firm's Board of Directors.

Risk Identification

The Firm has a Risk Identification process in which the first line of defense identifies material risks inherent to the Firm, catalogs them in a central repository and reviews the most material risks on a regular basis. The second line of defense, at a firmwide level, establishes the risk identification framework, coordinates the process, maintains the central repository and reviews and challenges the first line's identification of risks.

Strategic risk is the risk associated with the Firm's current and future business plans and objectives. Strategic risk includes the risk to current or anticipated earnings, capital, liquidity, enterprise value, or the Firm's reputation arising from adverse business decisions, poor implementation of business decisions, or lack of responsiveness to changes in the industry or external environment.

Overview

The Operating Committee and the senior leadership of each LOB are responsible for managing the Firm's most significant strategic risks. Strategic risks are overseen by IRM through participation in business reviews, LOB senior management committees, ongoing management of the Firm's risk appetite and limit framework, and other relevant governance forums. The Board of Directors oversees management's strategic decisions, and the DRPC oversees IRM and the Firm's risk management framework.

The Firm's strategic planning process, which includes the development and execution of strategic priorities and initiatives by the Operating Committee and the management teams of the lines of business, is an important process for managing the Firm's strategic risk. Guided by the Firm's How We Do Business ("HWDB") principles, the strategic priorities and initiatives are updated annually and include evaluating performance against prior year initiatives, assessment of the operating environment, refinement of existing strategies and development of new strategies.

These strategic priorities and initiatives are then incorporated in the Firm's budget, and are reviewed by the Board of Directors.

In the process of developing the strategic initiatives, line of business leadership identify the strategic risks associated with their strategic initiatives and those risks are incorporated into the Firmwide Risk Identification process and monitored and assessed as part of the Firmwide Risk Appetite framework. For further information on Risk Identification, see Enterprise-Wide Risk Management on page 75. For further information on the Risk Appetite framework see, Enterprise-Wide Risk Management on page 77.

The Firm's balance sheet strategy, which focuses on risk-adjusted returns, strong capital and robust liquidity, is key to management of strategic risk. For further information on capital risk, see Capital Risk Management on pages 82–91. For further information on liquidity risk see, Liquidity Risk Management on pages 92–97

For further information on reputation risk, see Reputation Risk Management on page 98.

Governance and oversight

The Firm's Operating Committee defines the most significant strategic priorities and initiatives, including those of the Firm, the LOBs and the Corporate functions, for the coming year and evaluates performance against the prior year. As part of the strategic planning process, IRM conducts a qualitative assessment of those significant initiatives to determine the impact on the risk profile of the Firm. The Firm's priorities, initiatives and IRM's assessment are provided to the Board for its review.

As part of its ongoing oversight and management of risk across the Firm, IRM is regularly engaged in significant discussions and decision-making across the Firm, including decisions to pursue new business opportunities or modify or exit existing businesses.

CAPITAL RISK MANAGEMENT

Capital risk is the risk the Firm has an insufficient level and composition of capital to support the Firm's business activities and associated risks during normal economic environments and under stressed conditions.

A strong capital position is essential to the Firm's business strategy and competitive position. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative of the Firm's Board of Directors, CEO and Operating Committee. The Firm's fortress balance sheet philosophy focuses on risk-adjusted returns, strong capital and robust liquidity. The Firm's capital risk management strategy focuses on maintaining long-term stability to enable it to build and invest in market-leading businesses, even in a highly stressed environment. Senior management considers the implications on the Firm's capital prior to making decisions that could impact future business activities. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to preserving the Firm's capital strength.

The Firm's capital risk management objectives are to hold capital sufficient to:

- Maintain "well-capitalized" status for the Firm and its insured depository institution ("IDI") subsidiaries;
- Support risks underlying business activities;
- Maintain sufficient capital in order to continue to build and invest in its businesses through the cycle and in stressed environments;
- Retain flexibility to take advantage of future investment opportunities;
- Serve as a source of strength to its subsidiaries;
- Meet capital distribution objectives; and
- Maintain sufficient capital resources to operate throughout a resolution period in accordance with the Firm's preferred resolution strategy.

These objectives are achieved through the establishment of minimum capital targets and a strong capital governance framework. Capital risk management is intended to be flexible in order to react to a range of potential events. The Firm's minimum capital targets are based on the most binding of three pillars: an internal assessment of the Firm's capital needs; an estimate of required capital under the CCAR and Dodd-Frank Act stress testing requirements; and Basel III Fully Phased-In regulatory minimums. Where necessary, each pillar may include a management-established buffer. The capital governance framework requires regular monitoring of the Firm's capital positions, stress testing and defining escalation protocols, both at the Firm and material legal entity levels.

The following tables present the Firm's Transitional and Fully Phased-In risk-based and leverage-based capital metrics under both the Basel III Standardized and Advanced Approaches. The Firm's Basel III ratios exceed both the Transitional and Fully Phased-In regulatory minimums as of December 31, 2017 and 2016. For further discussion of these capital metrics, including regulatory minimums, and the Standardized and Advanced Approaches, refer to Strategy and Governance on pages 84–88.

	Transitional			Fully Phased-In		
December 31, 2017 (in millions, except ratios)	Standardized	Advanced	Minimum capital ratios	Standardized	Advanced	Minimum capital ratios
Risk-based capital metrics:						
CET1 capital	**$ 183,300**	**$ 183,300**		**$ 183,244**	**$ 183,244**	
Tier 1 capital	**208,644**	**208,644**		**208,564**	**208,564**	
Total capital	**238,395**	**227,933**		**237,960**	**227,498**	
Risk-weighted assets	**1,499,506**	**1,435,825**		**1,509,762**	**1,446,696**	
CET1 capital ratio	**12.2%**	**12.8%**	7.5%	**12.1%**	**12.7%**	10.5%
Tier 1 capital ratio	**13.9**	**14.5**	9.0	**13.8**	**14.4**	12.0
Total capital ratio	**15.9**	**15.9**	11.0	**15.8**	**15.7**	14.0
Leverage-based capital metrics:						
Adjusted average assets[a]	**$ 2,514,270**	**$ 2,514,270**		**$ 2,514,822**	**$ 2,514,822**	
Tier 1 leverage ratio[b]	**8.3%**	**8.3%**	4.0%	**8.3%**	**8.3%**	4.0%
Total leverage exposure	**NA**	**$ 3,204,463**		**NA**	**$ 3,205,015**	
SLR[c]	**NA**	**6.5%**	NA	**NA**	**6.5%**	5.0% [e]

	Transitional			Fully Phased-In		
December 31, 2016 (in millions, except ratios)	Standardized	Advanced	Minimum capital ratios	Standardized	Advanced	Minimum capital ratios
Risk-based capital metrics:						
CET1 capital	$ 182,967	$ 182,967		$ 181,734	$ 181,734	
Tier 1 capital	208,112	208,112		207,474	207,474	
Total capital	239,553	228,592		237,487	226,526	
Risk-weighted assets	1,483,132 [d]	1,476,915		1,492,816 [d]	1,487,180	
CET1 capital ratio	12.3% [d]	12.4%	6.25%	12.2% [d]	12.2%	10.5%
Tier 1 capital ratio	14.0 [d]	14.1	7.75	13.9 [d]	14.0	12.0
Total capital ratio	16.2 [d]	15.5	9.75	15.9 [d]	15.2	14.0
Leverage-based capital metrics:						
Adjusted average assets[a]	$ 2,484,631	$ 2,484,631		$ 2,485,480	$ 2,485,480	
Tier 1 leverage ratio[b]	8.4%	8.4%	4.0%	8.3%	8.3%	4.0%
Total leverage exposure	NA	$ 3,191,990		NA	$ 3,192,839	
SLR[c]	NA	6.5%	NA	NA	6.5%	5.0% [e]

Note: As of December 31, 2017 and 2016, the lower of the Standardized or Advanced capital ratios under each of the Transitional and Fully Phased-In Approaches in the table above represents the Firm's Collins Floor, as discussed in Risk-based capital regulatory minimums on page 85.

(a) Adjusted average assets, for purposes of calculating the Tier 1 leverage ratio, includes total quarterly average assets adjusted for unrealized gains/(losses) on available-for-sale ("AFS") securities, less deductions for goodwill and other intangible assets, defined benefit pension plan assets, and deferred tax assets related to tax attributes, including net operating losses ("NOLs").
(b) The Tier 1 leverage ratio is calculated by dividing Tier 1 capital by adjusted total average assets.
(c) The SLR leverage ratio is calculated by dividing Tier 1 capital by total leverage exposure. For additional information on total leverage exposure, see SLR on page 88.
(d) The prior period amounts have been revised to conform with the current period presentation.
(e) In the case of the SLR, the Fully Phased-In minimum ratio is effective January 1, 2018.

Strategy and governance

The Firm's CEO, together with the Board of Directors and the Operating Committee, establishes principles and guidelines for capital planning, issuance, usage and distributions, and minimum capital targets for the level and composition of capital in business-as-usual and highly stressed environments. The DRPC reviews and approves the capital management and governance policy of the Firm. The Firm's Audit Committee is responsible for reviewing and approving the capital stress testing control framework.

The Capital Governance Committee and the Regulatory Capital Management Office ("RCMO") support the Firm's strategic capital decision-making. The Capital Governance Committee oversees the capital adequacy assessment process, including the overall design, scenario development and macro assumptions, and ensures that capital stress test programs are designed to adequately capture the risks specific to the Firm's businesses. RCMO, which reports to the Firm's CFO, is responsible for designing and monitoring the Firm's execution of its capital policies and strategies once approved by the Board, as well as reviewing and monitoring the execution of its capital adequacy assessment process. The Basel Independent Review function ("BIR"), which reports to the RCMO, conducts independent assessments of the Firm's regulatory capital framework to ensure compliance with the applicable U.S. Basel rules in support of senior management's responsibility for assessing and managing capital and for the DRPC's oversight of management in executing that responsibility. For additional discussion on the DRPC, see Enterprise-wide Risk Management on pages 75–137.

Monitoring and management of capital

In its monitoring and management of capital, the Firm takes into consideration an assessment of economic risk and all regulatory capital requirements to determine the level of capital needed to meet and maintain the objectives discussed above, as well as to support the framework for allocating capital to its business segments. While economic risk is considered prior to making decisions on future business activities, in most cases the Firm considers risk-based regulatory capital to be a proxy for economic risk capital.

Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar minimum capital requirements for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. The U.S. capital requirements generally follow the Capital Accord of the Basel Committee, as amended from time to time.

Basel III overview

Capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. bank holding companies ("BHC") and banks, including the Firm and its IDI subsidiaries. Basel III sets forth two comprehensive approaches for calculating RWA: a standardized approach ("Basel III Standardized"), and an advanced approach ("Basel III Advanced"). Certain of the requirements of Basel III are subject to phase-in periods that began on January 1, 2014 and continue through the end of 2018 ("transitional period").

Basel III establishes capital requirements for calculating credit risk RWA and market risk RWA, and in the case of Basel III Advanced, operational risk RWA. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced. In addition to the RWA calculated under these methodologies, the Firm may supplement such amounts to incorporate management judgment and feedback from its regulators.

Basel III also includes a requirement for Advanced Approach banking organizations, including the Firm, to calculate the SLR. For additional information on the SLR, see page 88.

On December 7, 2017, the Basel Committee issued the Basel III Reforms. Potential changes to the requirements for U.S. financial institutions are being considered by the U.S. banking regulators. For additional information on Basel III reforms, refer to Supervision & Regulation on pages 1–8.

Basel III Fully Phased-In

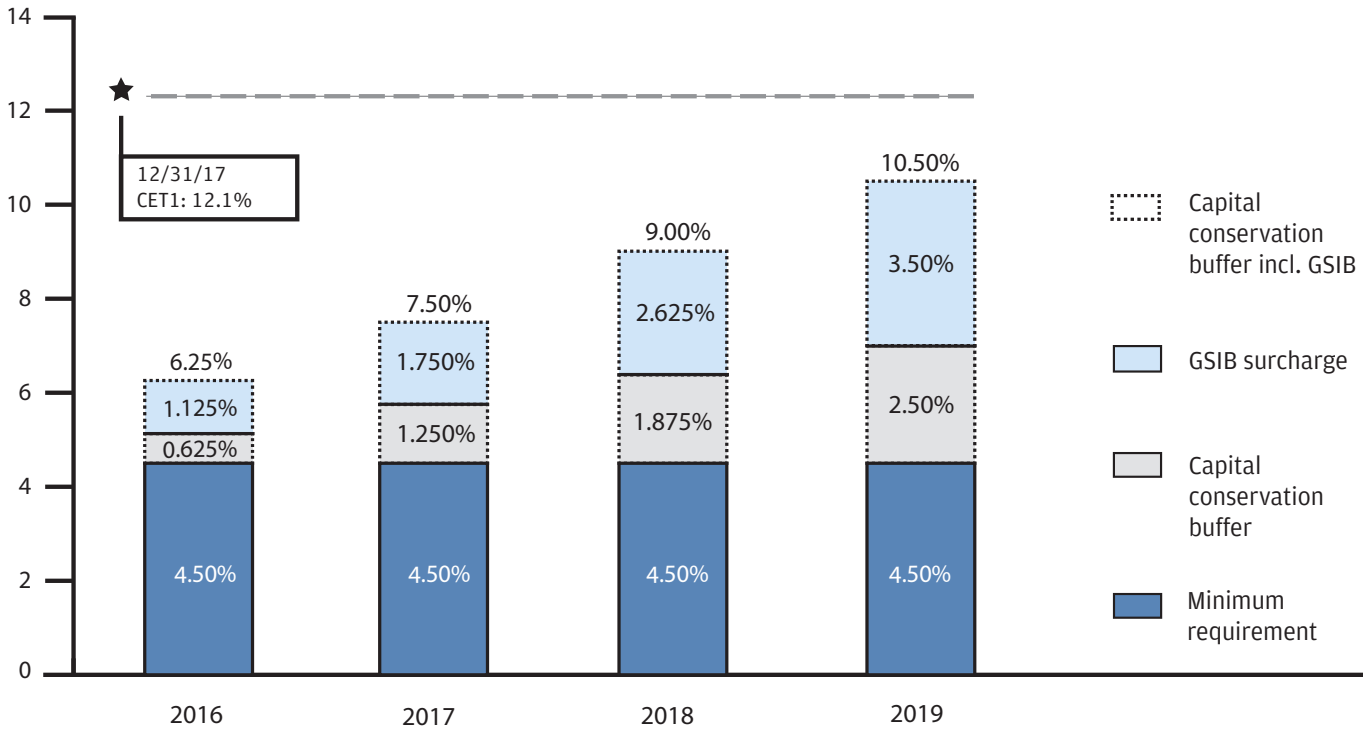
The Basel III transitional period will end on December 31, 2018, at which point the Firm will calculate its capital ratios under both the Basel III Standardized and Advanced Approaches on a Fully Phased-In basis. In the case of the SLR, the Fully Phased-In well-capitalized ratio is effective January 1, 2018. The Firm manages each of its lines of business, as well as the corporate functions, primarily on a Basel III Fully Phased-In basis.

For additional information on the Firm, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.'s capital, RWA and capital ratios under Basel III Standardized and Advanced Fully Phased-In rules and the SLR calculated under the Basel III Advanced Fully Phased-In rules, all of which are considered key regulatory capital measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 52–54.

The Basel III Standardized and Advanced Fully Phased-In capital, RWA and capital ratios, and SLRs for the Firm, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. are based on the current published U.S. Basel III rules.

Risk-based capital regulatory minimums

The following chart presents the Basel III minimum CET1 capital ratio during the transitional periods and on a fully phased-in basis under the Basel III rules currently in effect.



The Basel III rules include minimum capital ratio requirements that are subject to phase-in periods through the end of 2018. The capital adequacy of the Firm and its IDI subsidiaries, both during the transitional period and upon full phase-in, is evaluated against the Basel III approach (Standardized or Advanced) which, for each quarter, results in the lower ratio as required by the Collins Amendment of the Dodd-Frank Act (the "Collins Floor"). The Basel III Standardized Fully Phased-In CET1 ratio is the Firm's current binding constraint, and the Firm expects that this will remain its binding constraint for the foreseeable future.

Additional information regarding the Firm's capital ratios, as well as the U.S. federal regulatory capital standards to which the Firm is subject, is presented in Note 26. For further information on the Firm's Basel III measures, see the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (http://investor.shareholder.com/jpmorganchase/basel.cfm).

All banking institutions are currently required to have a minimum capital ratio of 4.5% of risk weighted assets. Certain banking organizations, including the Firm, are required to hold additional amounts of capital to serve as a "capital conservation buffer". The capital conservation buffer is intended to be used to absorb potential losses in times of financial or economic stress. If not maintained, the Firm could be limited in the amount of capital that may be distributed, including dividends and common equity repurchases. The capital conservation buffer is subject to a phase-in period that began January 1, 2016 and continues through the end of 2018.

As an expansion of the capital conservation buffer, the Firm is also required to hold additional levels of capital in the form of a GSIB surcharge and a countercyclical capital buffer.

Under the Federal Reserve's final rule, the Firm is required to calculate its GSIB surcharge on an annual basis under two separately prescribed methods, and is subject to the higher of the two. The first ("Method 1"), reflects the GSIB surcharge as prescribed by the Basel Committee's assessment methodology, and is calculated across five criteria: size, cross-jurisdictional activity, interconnectedness, complexity and substitutability. The second ("Method 2"), modifies the Method 1 requirements to include a measure of short-term wholesale funding in place of substitutability, and introduces a GSIB score "multiplication factor". The following table represents the Firm's GSIB surcharge.

	2017	2016
Fully Phased-In:		
Method 1	2.50%	2.50%
Method 2	3.50%	4.50%
Transitional[(a)]	1.75%	1.125%

(a) The GSIB surcharge is subject to transition provisions (in 25% increments) through the end of 2018.

The Firm's effective GSIB surcharge for 2018 is anticipated to be 3.5%.

The countercyclical capital buffer takes into account the macro financial environment in which large, internationally active banks function. On September 8, 2016 the Federal Reserve published the framework that will apply to the setting of the countercyclical capital buffer. As of December 1, 2017, the Federal Reserve reaffirmed setting the U.S. countercyclical capital buffer at 0%, and stated that it will review the amount at least annually. The countercyclical capital buffer can be increased if the Federal Reserve, FDIC and OCC determine that credit growth in the economy has become excessive and can be set at up to an additional 2.5% of RWA subject to a 12-month implementation period.

The Firm believes that it will operate with a Basel III CET1 capital ratio between 11% and 12% over the medium term. It is the Firm's intention that its capital ratios will continue to meet regulatory minimums as they are fully phased in 2019 and thereafter.

In addition to meeting the capital ratio requirements of Basel III, the Firm also must maintain minimum capital and leverage ratios in order to be "well-capitalized." The following table represents the ratios that the Firm and its IDI subsidiaries must maintain in order to meet the definition of "well-capitalized" under the regulations issued by the Federal Reserve and the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA"), respectively.

	Well-capitalized ratios	
	BHC	IDI
Capital ratios		
CET1	—%	6.5%
Tier 1 capital	6.0	8.0
Total capital	10.0	10.0
Tier 1 leverage	—	5.0
SLR[(a)]	5.0	6.0

(a) In the case of the SLR, the Fully Phased-In well-capitalized ratio is effective January 1, 2018.

Capital

The following table presents reconciliations of total stockholders' equity to Basel III Fully Phased-In CET1 capital, Tier 1 capital and Basel III Advanced and Standardized Fully Phased-In Total capital as of December 31, 2017 and 2016. For additional information on the components of regulatory capital, see Note 26.

Capital components

(in millions)	December 31, 2017	December 31, 2016
Total stockholders' equity	**$ 255,693**	**$ 254,190**
Less: Preferred stock	26,068	26,068
Common stockholders' equity	**229,625**	**228,122**
Less:		
Goodwill	47,507	47,288
Other intangible assets	855	862
Add:		
Certain Deferred tax liabilities[(a)(b)]	2,204	3,230
Less: Other CET1 capital adjustments[(b)]	223	1,468
Standardized/Advanced Fully Phased-In CET1 capital	**183,244**	**181,734**
Preferred stock	26,068	26,068
Less:		
Other Tier 1 adjustments[(c)]	748	328
Standardized/Advanced Fully Phased-In Tier 1 capital	**$ 208,564**	**$ 207,474**
Long-term debt and other instruments qualifying as Tier 2 capital	$ 14,827	$ 15,253
Qualifying allowance for credit losses	14,672	14,854
Other	(103)	(94)
Standardized Fully Phased-In Tier 2 capital	**$ 29,396**	**$ 30,013**
Standardized Fully Phased-in Total capital	**$ 237,960**	**$ 237,487**
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital	(10,462)	(10,961)
Advanced Fully Phased-In Tier 2 capital	**$ 18,934**	**$ 19,052**
Advanced Fully Phased-In Total capital	**$ 227,498**	**$ 226,526**

(a) Represents deferred tax liabilities related to tax-deductible goodwill and identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

(b) Includes the effect from the revaluation of the Firm's net deferred tax liability as a result of the enactment of the TCJA.

(c) Includes the deduction associated with the permissible holdings of covered funds (as defined by the Volcker Rule). The deduction was not material as of December 31, 2017 and 2016.

The following table presents reconciliations of the Firm's Basel III Transitional CET1 capital to the Firm's Basel III Fully Phased-In CET1 capital as of December 31, 2017 and 2016.

(in millions)	December 31, 2017	December 31, 2016
Transitional CET1 capital	**$ 183,300**	**$ 182,967**
AOCI phase-in[a]	128	(156)
CET1 capital deduction phase-in[b]	(20)	(695)
Intangible assets deduction phase-in[c]	(160)	(312)
Other adjustments to CET1 capital[d]	(4)	(70)
Fully Phased-In CET1 capital	**$ 183,244**	**$ 181,734**

(a) Includes the remaining balance of accumulated other comprehensive income ("AOCI") related to AFS debt securities and defined benefit pension and other postretirement employee benefit ("OPEB") plans that will qualify as Basel III CET1 capital upon full phase-in.
(b) Predominantly includes regulatory adjustments related to changes in DVA, as well as CET1 deductions for defined benefit pension plan assets and deferred tax assets related to tax attributes, including NOLs.
(c) Relates to intangible assets, other than goodwill and MSRs, that are required to be deducted from CET1 capital upon full phase-in.
(d) Includes minority interest and the Firm's investments in its own CET1 capital instruments.

Capital rollforward

The following table presents the changes in Basel III Fully Phased-In CET1 capital, Tier 1 capital and Tier 2 capital for the year ended December 31, 2017.

Year Ended December 31, (in millions)	2017
Standardized/Advanced CET1 capital at December 31, 2016	$ 181,734
Net income applicable to common equity[a]	22,778
Dividends declared on common stock	(7,542)
Net purchase of treasury stock	(13,741)
Changes in additional paid-in capital	(1,048)
Changes related to AOCI	536
Adjustment related to DVA[b]	468
Changes related to other CET1 capital adjustments[c]	59
Increase in Standardized/Advanced CET1 capital	1,510
Standardized/Advanced CET1 capital at December 31, 2017	**$ 183,244**
Standardized/Advanced Tier 1 capital at December 31, 2016	$ 207,474
Change in CET1 capital	1,510
Net issuance of noncumulative perpetual preferred stock	–
Other	(420)
Increase in Standardized/Advanced Tier 1 capital	1,090
Standardized/Advanced Tier 1 capital at December 31, 2017	**$ 208,564**
Standardized Tier 2 capital at December 31, 2016	$ 30,013
Change in long-term debt and other instruments qualifying as Tier 2	(426)
Change in qualifying allowance for credit losses	(182)
Other	(9)
Decrease in Standardized Tier 2 capital	(617)
Standardized Tier 2 capital at December 31, 2017	**$ 29,396**
Standardized Total capital at December 31, 2017	**$ 237,960**
Advanced Tier 2 capital at December 31, 2016	$ 19,052
Change in long-term debt and other instruments qualifying as Tier 2	(426)
Change in qualifying allowance for credit losses	317
Other	(9)
Decrease in Advanced Tier 2 capital	(118)
Advanced Tier 2 capital at December 31, 2017	**$ 18,934**
Advanced Total capital at December 31, 2017	**$ 227,498**

(a) Includes a $2.4 billion decrease to net income as a result of the enactment of the TCJA. For additional information related to the impact of the TCJA, see Note 24.
(b) Includes DVA related to structured notes recorded in AOCI.
(c) Includes the effect from the revaluation of the Firm's net deferred tax liability as a result of the enactment of the TCJA.

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced Fully Phased-In for the year ended December 31, 2017. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

	Standardized			Advanced			
Year ended December 31, 2017 (in millions)	Credit risk RWA	Market risk RWA	Total RWA	Credit risk RWA	Market risk RWA	Operational risk	Total RWA
December 31, 2016	$ 1,365,137 [d]	$ 127,679	**$ 1,492,816** [d]	$ 959,523	$ 127,657	$ 400,000	**$ 1,487,180**
Model & data changes[a]	(8,214)	1,739	**(6,475)**	(14,189)	1,739	–	**(12,450)**
Portfolio runoff[b]	(13,600)	–	**(13,600)**	(16,100)	–	–	**(16,100)**
Movement in portfolio levels[c]	42,737	(5,716)	**37,021**	(6,329)	(5,605)	–	**(11,934)**
Changes in RWA	20,923	(3,977)	**16,946**	(36,618)	(3,866)	–	**(40,484)**
December 31, 2017	**$ 1,386,060**	**$ 123,702**	**$ 1,509,762**	**$ 922,905**	**$ 123,791**	**$ 400,000**	**$ 1,446,696**

(a) Model & data changes refer to material movements in levels of RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).
(b) Portfolio runoff for credit risk RWA primarily reflects (under both the Standardized and Advanced approaches) reduced risk from position rolloffs in legacy portfolios in Home Lending, the sale of the student loan portfolio during the second quarter of 2017, and the sale of reverse mortgages in CIB during the third quarter of 2017.
(c) Movement in portfolio levels for credit risk RWA refers to changes primarily in book size, composition, credit quality, and market movements; and for market risk RWA refers to changes in position and market movements.
(d) The prior period amounts have been revised to conform with the current period presentation.

Supplementary leverage ratio

The SLR is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. Total leverage exposure is calculated by taking the Firm's total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-balance sheet exposures, such as undrawn commitments and derivatives potential future exposure.

The following table presents the components of the Firm's Fully Phased-In SLR as of December 31, 2017 and 2016.

(in millions, except ratio)	December 31, 2017	December 31, 2016
Tier 1 capital	**$ 208,564**	$ 207,474
Total average assets	2,562,155	2,532,457
Less: Adjustments for deductions from Tier 1 capital	47,333	46,977
Total adjusted average assets[a]	2,514,822	2,485,480
Off-balance sheet exposures[b]	690,193	707,359
Total leverage exposure	**$ 3,205,015**	$ 3,192,839
SLR	**6.5%**	6.5%

(a) Adjusted average assets, for purposes of calculating the SLR, includes total quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill and other intangible assets.
(b) Off-balance sheet exposures are calculated as the average of the three month-end spot balances during the reporting quarter.

As of December 31, 2017, JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s Fully Phased-In SLRs are approximately 6.7% and 11.8%, respectively.

Line of business equity

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons and regulatory capital requirements. For 2016, capital was allocated to each business segment for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. Through the end of 2016, capital was allocated to the lines of business based on a single measure, Basel III Advanced Fully Phased-In RWA. Effective January 1, 2017, the Firm's methodology used to allocate capital to the Firm's business segments was updated. The new methodology incorporates Basel III Standardized Fully Phased-In RWA (as well as Basel III Advanced Fully Phased-In RWA), leverage, the GSIB surcharge, and a simulation of capital in a severe stress environment. The methodology will continue to be weighted towards Basel III Advanced Fully Phased-In RWA because the Firm believes it to be the best proxy for economic risk. The Firm will consider further changes to its capital allocation methodology as the regulatory framework evolves. In addition, under the new methodology, capital is no longer allocated to each line of business for goodwill and other intangibles associated with acquisitions effected by the line of business. The Firm will continue to establish internal ROE targets for its business segments, against which they will be measured, as a key performance indicator.

The table below reflects the Firm's assessed level of capital allocated to each line of business as of the dates indicated.

Line of business equity (Allocated capital)

(in billions)	January 1, 2018	December 31, 2017	December 31, 2016
Consumer & Community Banking	**$ 51.0**	$ 51.0	$ 51.0
Corporate & Investment Bank	**70.0**	70.0	64.0
Commercial Banking	**20.0**	20.0	16.0
Asset & Wealth Management	**9.0**	9.0	9.0
Corporate	**79.6**	79.6	88.1
Total common stockholders' equity	**$ 229.6**	$229.6	$228.1

Planning and stress testing

Comprehensive Capital Analysis and Review
The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. The Federal Reserve uses the CCAR and Dodd-Frank Act stress test processes to ensure that large BHCs have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each BHC's unique risks to enable it to absorb losses under certain stress scenarios. Through the CCAR, the Federal Reserve evaluates each BHC's capital adequacy and internal capital adequacy assessment processes ("ICAAP"), as well as its plans to make capital distributions, such as dividend payments or stock repurchases.

On June 28, 2017, the Federal Reserve informed the Firm that it did not object, on either a quantitative or qualitative basis, to the Firm's 2017 capital plan. For information on actions taken by the Firm's Board of Directors following the 2017 CCAR results, see Capital actions on pages 89-90.

The Firm's CCAR process is integrated into and employs the same methodologies utilized in the Firm's ICAAP process, as discussed below.

Internal Capital Adequacy Assessment Process
Semiannually, the Firm completes the ICAAP, which provides management with a view of the impact of severe and unexpected events on earnings, balance sheet positions, reserves and capital. The Firm's ICAAP integrates stress testing protocols with capital planning.

The process assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. However, when defining a broad range of scenarios, actual events can always be worse. Accordingly, management considers additional stresses outside these scenarios, as necessary. ICAAP results are reviewed by management and the Audit Committee.

Capital actions

Preferred stock
Preferred stock dividends declared were $1.7 billion for the year ended December 31, 2017.

On October 20, 2017, the Firm issued $1.3 billion of fixed-to-floating rate non-cumulative preferred stock, Series CC, with an initial dividend rate of 4.625%. On December 1, 2017, the Firm redeemed all $1.3 billion of its outstanding 5.50% non-cumulative preferred stock, Series O.

For additional information on the Firm's preferred stock, see Note 20.

Trust preferred securities
On December 18, 2017, the Delaware trusts that issued seven series of outstanding trust preferred securities were liquidated, $1.6 billion of trust preferred and $56 million of common securities originally issued by those trusts were cancelled, and the junior subordinated debentures previously held by each trust issuer were distributed pro rata to the holders of the corresponding series of trust preferred and common securities.

The Firm redeemed $1.6 billion of trust preferred securities in the year ended December 31, 2016.

Common stock dividends
The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratio, capital objectives, and alternative investment opportunities.

On September 19, 2017, the Firm announced that its Board of Directors increased the quarterly common stock dividend to $0.56 per share, effective with the dividend paid on October 31, 2017. The Firm's dividends are subject to the Board of Directors' approval on a quarterly basis.

For information regarding dividend restrictions, see Note 20 and Note 25.

The following table shows the common dividend payout ratio based on net income applicable to common equity.

Year ended December 31,	2017	2016	2015
Common dividend payout ratio	33%	30%	28%

Common equity

During the year ended December 31, 2017, warrant holders exercised their right to purchase 9.9 million shares of the Firm's common stock. The Firm issued from treasury stock 5.4 million shares of its common stock as a result of these exercises. As of December 31, 2017, 15.0 million warrants remained outstanding, compared with 24.9 million outstanding as of December 31, 2016.

Effective June 28, 2017, the Firm's Board of Directors authorized the repurchase of up to $19.4 billion of common equity (common stock and warrants) between July 1, 2017 and June 30, 2018, as part of its annual capital plan.

As of December 31, 2017, $9.8 billion of authorized repurchase capacity remained under the common equity repurchase program.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2017, 2016 and 2015. There were no repurchases of warrants during the years ended December 31, 2017, 2016 and 2015.

Year ended December 31, (in millions)	2017	2016	2015
Total number of shares of common stock repurchased	166.6	140.4	89.8
Aggregate purchase price of common stock repurchases	$15,410	$ 9,082	$ 5,616

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading blackout periods. All purchases under Rule 10b5-1 plans must be made according to predefined schedules established when the Firm is not aware of material nonpublic information.

The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 plans; and may be suspended by management at any time.

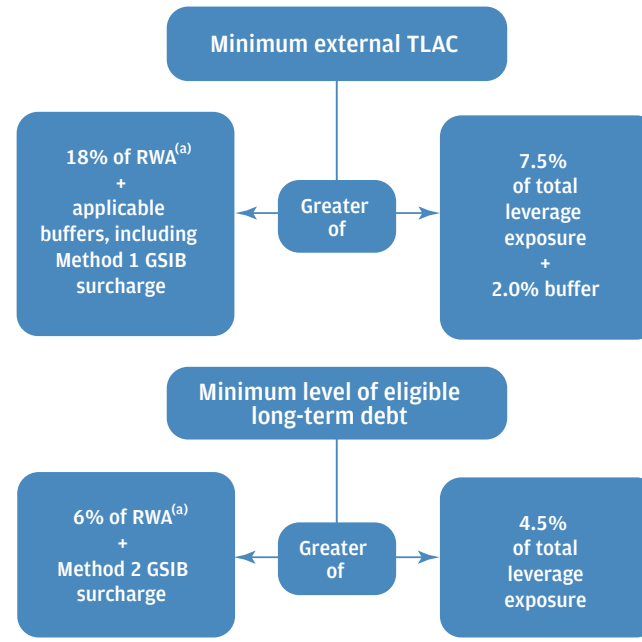
For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities on page 28.

Other capital requirements

TLAC

On December 15, 2016, the Federal Reserve issued its final TLAC rule which requires the top-tier holding companies of eight U.S. GSIB holding companies, including the Firm, to maintain minimum levels of external TLAC and external long-term debt that satisfies certain eligibility criteria ("eligible LTD"), effective January 1, 2019.

The minimum external TLAC and the minimum level of eligible long-term debt requirements are shown below:



(a) RWA is the greater of Standardized and Advanced.

The final TLAC rule permanently grandfathered all long-term debt issued before December 31, 2016, to the extent these securities would be ineligible because they contained impermissible acceleration rights or were governed by non-U.S. law. As of December 31, 2017, the Firm was compliant with the requirements under the current rule to which it will be subject on January 1, 2019.

Broker-dealer regulatory capital

JPMorgan Securities

JPMorgan Chase's principal U.S. broker-dealer subsidiary is JPMorgan Securities. JPMorgan Securities is subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities is also registered as a futures commission merchant and subject to Rule 1.17 of the CFTC.

JPMorgan Securities has elected to compute its minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule.

In accordance with the market and credit risk standards of Appendix E of the Net Capital Rule, JPMorgan Securities is eligible to use the alternative method of computing net capital if, in addition to meeting its minimum net capital requirements, it maintains tentative net capital of at least $1.0 billion and is also required to notify the SEC in the event that tentative net capital is less than $5.0 billion. As of December 31, 2017, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements. The following table presents JPMorgan Securities' net capital information:

December 31, 2017	Net capital	
(in billions)	Actual	Minimum
JPMorgan Securities	$ 13.6	$ 2.8

J.P. Morgan Securities plc

J.P. Morgan Securities plc is a wholly owned subsidiary of JPMorgan Chase Bank, N.A. and is the Firm's principal operating subsidiary in the U.K. It has authority to engage in banking, investment banking and broker-dealer activities.

J.P. Morgan Securities plc is jointly regulated by the U.K. PRA and the FCA. J.P. Morgan Securities plc is subject to the European Union Capital Requirements Regulation and the U.K. PRA capital rules, each of which implemented Basel III and thereby subject J.P. Morgan Securities plc to its requirements.

The following table presents J.P. Morgan Securities plc's capital information:

December 31, 2017	Total capital	CET1 ratio		Total capital ratio	
(in billions, except ratios)	Estimated	Estimated	Minimum	Estimated	Minimum
J.P. Morgan Securities plc	$ 39.6	15.9%	4.5%	15.9%	8.0%

LIQUIDITY RISK MANAGEMENT

Liquidity risk is the risk that the Firm will be unable to meet its contractual and contingent financial obligations as they arise or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets and liabilities.

Liquidity risk oversight

The Firm has a liquidity risk oversight function whose primary objective is to provide assessment, measurement, monitoring, and control of liquidity risk across the Firm. Liquidity risk oversight is managed through a dedicated firmwide Liquidity Risk Oversight group. The CIO, Treasury and Corporate ("CTC") CRO, who reports to the Firm's CRO, as part of the IRM function, is responsible for firmwide Liquidity Risk Oversight. Liquidity Risk Oversight's responsibilities include:

- Establishing and monitoring limits, indicators, and thresholds, including liquidity risk appetite tolerances;
- Monitoring internal firmwide and material legal entity liquidity stress tests, and monitoring and reporting regulatory defined liquidity stress testing;
- Approving or escalating for review liquidity stress assumptions;
- Monitoring liquidity positions, balance sheet variances and funding activities, and
- Conducting ad hoc analysis to identify potential emerging liquidity risks.

Liquidity management

Treasury and CIO is responsible for liquidity management. The primary objectives of effective liquidity management are to:

- Ensure that the Firm's core businesses and material legal entities are able to operate in support of client needs and meet contractual and contingent financial obligations through normal economic cycles as well as during stress events, and
- Manage an optimal funding mix and availability of liquidity sources.

The Firm manages liquidity and funding using a centralized, global approach across its entities, taking into consideration both their current liquidity profile and any potential changes over time, in order to optimize liquidity sources and uses.

In the context of the Firm's liquidity management, Treasury and CIO is responsible for:

- Analyzing and understanding the liquidity characteristics of the assets and liabilities of the Firm, lines of business and legal entities, taking into account legal, regulatory, and operational restrictions;
- Developing internal liquidity stress testing assumptions;
- Defining and monitoring firmwide and legal entity-specific liquidity strategies, policies, guidelines, reporting and contingency funding plans;
- Managing liquidity within the Firm's approved liquidity risk appetite tolerances and limits;
- Managing compliance with regulatory requirements related to funding and liquidity risk, and
- Setting transfer pricing in accordance with underlying liquidity characteristics of balance sheet assets and liabilities as well as certain off-balance sheet items.

Risk governance and measurement

Specific committees responsible for liquidity governance include the firmwide ALCO as well as line of business and regional ALCOs, and the CTC Risk Committee. In addition, the DRPC reviews and recommends to the Board of Directors, for formal approval, the Firm's liquidity risk tolerances, liquidity strategy, and liquidity policy at least annually. For further discussion of ALCO and other risk-related committees, see Enterprise-wide Risk Management on pages 75–137.

Internal stress testing

Liquidity stress tests are intended to ensure that the Firm has sufficient liquidity under a variety of adverse scenarios, including scenarios analyzed as part of the Firm's resolution and recovery planning. Stress scenarios are produced for JPMorgan Chase & Co. ("Parent Company") and the Firm's material legal entities on a regular basis, and ad hoc stress tests are performed, as needed, in response to specific market events or concerns. Liquidity stress tests assume all of the Firm's contractual financial obligations are met and take into consideration:

- Varying levels of access to unsecured and secured funding markets,
- Estimated non-contractual and contingent cash outflows, and
- Potential impediments to the availability and transferability of liquidity between jurisdictions and material legal entities such as regulatory, legal or other restrictions.

Liquidity outflow assumptions are modeled across a range of time horizons and currency dimensions and contemplate both market and idiosyncratic stresses.

Results of stress tests are considered in the formulation of the Firm's funding plan and assessment of its liquidity position. The Parent Company acts as a source of funding for the Firm through equity and long-term debt issuances, and the IHC provides funding support to the ongoing operations of the Parent Company and its subsidiaries, as necessary. The Firm maintains liquidity at the Parent Company and the IHC, in addition to liquidity held at the operating subsidiaries, at levels sufficient to comply with liquidity risk tolerances and minimum liquidity requirements, and to manage through periods of stress where access to normal funding sources is disrupted.

Contingency funding plan

The Firm's contingency funding plan ("CFP"), which is approved by the firmwide ALCO and the DRPC, is a compilation of procedures and action plans for managing liquidity through stress events. The CFP incorporates the limits and indicators set by the Liquidity Risk Oversight group. These limits and indicators are reviewed regularly to identify the emergence of risks or vulnerabilities in the Firm's liquidity position. The CFP identifies the alternative contingent funding and liquidity resources available to the Firm and its legal entities in a period of stress.

LCR and HQLA

The LCR rule requires the Firm to maintain an amount of unencumbered HQLA that is sufficient to meet its estimated total net cash outflows over a prospective 30 calendar-day period of significant stress. HQLA is the amount of liquid assets that qualify for inclusion in the LCR. HQLA primarily consist of unencumbered cash and certain high quality liquid securities as defined in the LCR rule.

Under the LCR rule, the amount of HQLA held by JPMorgan Chase Bank N.A. and Chase Bank USA, N.A that are in excess of each entity's standalone 100% minimum LCR requirement, and that are not transferable to non-bank affiliates, must be excluded from the Firm's reported HQLA. Effective January 1, 2017, the LCR is required to be a minimum of 100%.

On December 19, 2016, the Federal Reserve published final LCR public disclosure requirements for certain BHCs and non-bank financial companies. Beginning with the second quarter of 2017, the Firm disclosed its average LCR for the quarter and the key quantitative components of the average LCR, along with a qualitative discussion of material drivers of the ratio, changes over time, and causes of such changes. The Firm will continue to make available its U.S. LCR Disclosure report on a quarterly basis on the Firm's website at: (https://investor.shareholder.com/jpmorganchase/basel.cfm)

The following table summarizes the Firm's average LCR for the three months ended December 31, 2017 based on the Firm's current interpretation of the finalized LCR framework.

Average amount (in millions)		Three months ended December 31, 2017
HQLA		
Eligible cash[(a)]	$	370,126
Eligible securities[(b)(c)]		189,955
Total HQLA[(d)]	$	560,081
Net cash outflows	$	472,078
LCR		119%
Net excess HQLA [(d)]	$	88,003

(a) Represents cash on deposit at central banks, primarily Federal Reserve Banks.
(b) Predominantly U.S. Agency MBS, U.S. Treasuries, and sovereign bonds net of applicable haircuts under the LCR rules
(c) HQLA eligible securities may be reported in securities borrowed or purchased under resale agreements, trading assets, or securities on the Firm's Consolidated balance sheets.
(d) Excludes average excess HQLA at JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. that are not transferable to non-bank affiliates.

For the three months ended December 31, 2017, the Firm's average LCR was 119%, compared with an average of 120% for the three months ended September 30, 2017. The decrease in the ratio was largely attributable to a decrease in average HQLA, driven primarily by long-term debt maturities. The Firm's average LCR may fluctuate from period to period, due to changes in its HQLA and estimated net cash outflows under the LCR as a result of ongoing business activity. The Firm's HQLA are expected to be available to meet its liquidity needs in a time of stress.

Other liquidity sources

As of December 31, 2017, in addition to assets reported in the Firm's HQLA under the LCR rule, the Firm had approximately $208 billion of unencumbered marketable securities, such as equity securities and fixed income debt securities, available to raise liquidity, if required. This includes HQLA-eligible securities included as part of the excess liquidity at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates.

As of December 31, 2017, the Firm also had approximately $277 billion of available borrowing capacity at various Federal Home Loan Banks ("FHLBs"), discount windows at Federal Reserve Banks and various other central banks as a result of collateral pledged by the Firm to such banks. This borrowing capacity excludes the benefit of securities reported in the Firm's HQLA or other unencumbered securities that are currently pledged at Federal Reserve Bank discount windows. Although available, the Firm does not view the borrowing capacity at Federal Reserve Bank discount windows and the various other central banks as a primary source of liquidity.

NSFR

The net stable funding ratio ("NSFR") is intended to measure the adequacy of "available" and "required" amounts of stable funding over a one-year horizon. On April 26, 2016, the U.S. NSFR proposal was released for large banks and BHCs and was largely consistent with the Basel Committee's final standard.

While the final U.S. NSFR rule has yet to be released, as of December 31, 2017 the Firm estimates that it was compliant with the proposed 100% minimum NSFR based on its current understanding of the proposed rule.

Funding

Sources of funds

Management believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations.

The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio is funded with a portion of the Firm's deposits, through securitizations and, with respect to a portion of the Firm's real estate-related loans, with secured borrowings from the FHLBs. Deposits in excess of the amount utilized to fund loans are primarily invested in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity risk characteristics. Securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments are primarily funded by the Firm's securities loaned or sold under agreements to repurchase, trading liabilities-debt and equity instruments, and a portion of the Firm's long-term debt and stockholders' equity. In addition to funding securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments, proceeds from the Firm's debt and equity issuances are used to fund certain loans and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio. See the discussion below for additional information relating to Deposits, Short-term funding, and Long-term funding and issuance.

Deposits

The table below summarizes, by line of business, the period-end and average deposit balances as of and for the years ended December 31, 2017 and 2016.

Deposits			Year ended December 31,	
As of or for the year ended December 31,			Average	
(in millions)	**2017**	2016	**2017**	2016
Consumer & Community Banking	**$ 659,885**	$ 618,337	**$ 640,219**	$ 586,637
Corporate & Investment Bank	**455,883**	412,434	**447,697**	409,680
Commercial Banking	**181,512**	179,532	**176,884**	172,835
Asset & Wealth Management	**146,407**	161,577	**148,982**	153,334
Corporate	**295**	3,299	**3,604**	5,482
Total Firm	**$ 1,443,982**	$ 1,375,179	**$ 1,417,386**	$ 1,327,968

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. A significant portion of the Firm's deposits are consumer and wholesale operating deposits, which are both considered to be stable sources of liquidity. Wholesale operating deposits are considered to be stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm.

The table below shows the loan and deposit balances, the loans-to-deposits ratios, and deposits as a percentage of total liabilities, as of December 31, 2017 and 2016.

As of December 31, (in billions except ratios)	**2017**	2016
Deposits	**$ 1,444.0**	$ 1,375.2
Deposits as a % of total liabilities	**63%**	61%
Loans	**930.7**	894.8
Loans-to-deposits ratio	**64%**	65%

Deposits increased due to both higher consumer and wholesale deposits. The higher consumer deposits reflect the continuation of strong growth from new and existing customers, and low attrition rates. The higher wholesale deposits largely were driven by growth in client cash management activity in CIB's Securities Services business, partially offset by lower balances in AWM reflecting balance migration predominantly into the Firm's investment-related products.

The Firm believes average deposit balances are generally more representative of deposit trends than period-end deposit balances. The increase in average deposits for the year ended December 31, 2017 compared with the year ended December 31, 2016, was driven by an increase in both consumer and wholesale deposits. For further discussions of deposit and liability balance trends, see the discussion of the Firm's business segments results and the Consolidated Balance Sheet Analysis on pages 55–74 and pages 47-48, respectively.

The following table summarizes short-term and long-term funding, excluding deposits, as of December 31, 2017 and 2016, and average balances for the years ended December 31, 2017 and 2016. For additional information, see the Consolidated Balance Sheets Analysis on pages 47-48 and Note 19.

Sources of funds (excluding deposits)

As of or for the year ended December 31, (in millions)	2017	2016	Average 2017	Average 2016
Commercial paper	$ 24,186	$ 11,738	$ 19,920	$ 15,001
Other borrowed funds	27,616	22,705	26,612	21,139
Total short-term borrowings	$ 51,802	$ 34,443	$ 46,532	$ 36,140
Obligations of Firm-administered multi-seller conduits[a]	$ 3,045	$ 2,719	$ 3,206	$ 5,153
Securities loaned or sold under agreements to repurchase:				
Securities sold under agreements to repurchase[b]	$ 146,432	$ 149,826	$ 171,973	$ 160,458
Securities loaned[c]	7,910	12,137	11,526	13,195
Total securities loaned or sold under agreements to repurchase[d]	$ 154,342	$ 161,963	$ 183,499	$ 173,653
Senior notes	$ 155,852	$ 151,042	$ 154,352	$ 153,768
Trust preferred securities[e]	690	2,345	2,276	3,724
Subordinated debt[e]	16,553	21,940	18,832	24,224
Structured notes	45,727	37,292	42,918	35,978
Total long-term unsecured funding	$ 218,822	$ 212,619	$ 218,378	$ 217,694
Credit card securitization[a]	$ 21,278	$ 31,181	$ 25,933	$ 29,428
Other securitizations[a][f]	—	1,527	626	1,669
FHLB advances	60,617	79,519	69,916	73,260
Other long-term secured funding[g]	4,641	3,107	3,195	4,619
Total long-term secured funding	$ 86,536	$ 115,334	$ 99,670	$ 108,976
Preferred stock[h]	$ 26,068	$ 26,068	26,212	$ 26,068
Common stockholders' equity[h]	$ 229,625	$ 228,122	230,350	$ 224,631

(a) Included in beneficial interest issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.
(b) Excludes long-term structured repurchase agreements of $1.3 billion and $1.8 billion as of December 31, 2017 and 2016, respectively, and average balances of $1.5 billion and $2.9 billion for the years ended December 31, 2017 and 2016, respectively.
(c) Excludes long-term securities loaned of $1.3 billion and $1.2 billion as of December 31, 2017 and 2016, respectively, and average balances of $1.3 billion for both the years ended December 31, 2017 and 2016.
(d) Excludes federal funds purchased.
(e) Subordinated debt includes $1.6 billion of junior subordinated debentures distributed pro rata to the holders of the $1.6 billion of trust preferred securities which were cancelled on December 18, 2017. For further information see Note 19 .
(f) Other securitizations includes securitizations of student loans. The Firm deconsolidated the student loan securitization entities in the second quarter of 2017 as it no longer had a controlling financial interest in these entities as a result of the sale of the student loan portfolio. The Firm's wholesale businesses also securitize loans for client-driven transactions, which are not considered to be a source of funding for the Firm and are not included in the table.
(g) Includes long-term structured notes which are secured.
(h) For additional information on preferred stock and common stockholders' equity see Capital Risk Management on pages 82–91, Consolidated statements of changes in stockholders' equity, Note 20 and Note 21.

Short-term funding

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. These instruments are secured predominantly by high-quality securities collateral, including government-issued debt and agency MBS, and constitute a significant portion of the federal funds purchased and securities loaned or sold under repurchase agreements on the Consolidated balance sheets. The increase in the average balance of securities loaned or sold under agreements to repurchase for the year ended December 31, 2017, compared to December 31, 2016, was largely due to client activities in CIB. The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment securities and market-making portfolios); and other market and portfolio factors.

The Firm's sources of short-term unsecured funding primarily consist of issuances of wholesale commercial paper. The increase in short-term unsecured funding was primarily due to higher issuance of commercial paper reflecting in part a change in the mix of funding from securities sold under repurchase agreements for CIB Markets activities.

Long-term funding and issuance

Long-term funding provides additional sources of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven primarily by expected client activity, liquidity considerations, and regulatory requirements, including TLAC. Long-term funding objectives include maintaining diversification, maximizing market access and

optimizing funding costs. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

The significant majority of the Firm's long-term unsecured funding is issued by the Parent Company to provide maximum flexibility in support of both bank and non-bank subsidiary funding needs. The Parent Company advances substantially all net funding proceeds to its subsidiary, the IHC. The IHC does not issue debt to external counterparties. The following table summarizes long-term unsecured issuance and maturities or redemptions for the years ended December 31, 2017 and 2016. For additional information, see Note 19.

Long-term unsecured funding

Year ended December 31, (in millions)	2017	2016
Issuance		
Senior notes issued in the U.S. market	**$ 21,192**	$ 25,639
Senior notes issued in non-U.S. markets	**2,210**	7,063
Total senior notes	**23,402**	32,702
Subordinated debt	**–**	1,093
Structured notes	**29,040**	22,865
Total long-term unsecured funding – issuance	**$ 52,442**	$ 56,660
Maturities/redemptions		
Senior notes	**$ 22,337**	$ 29,989
Trust preferred securities	**–**	1,630
Subordinated debt	**6,901**	3,596
Structured notes	**22,581**	15,925
Total long-term unsecured funding – maturities/redemptions	**$ 51,819**	$ 51,140

The Firm raises secured long-term funding through securitization of consumer credit card loans and advances from the FHLBs.

The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemption for the years ended December 31, 2017 and 2016.

Long-term secured funding

Year ended December 31,	Issuance		Maturities/Redemptions	
(in millions)	**2017**	2016	**2017**	2016
Credit card securitization	**$ 1,545**	$ 8,277	**$ 11,470**	$ 5,025
Other securitizations[a]		–	**55**	233
FHLB advances	**–**	17,150	**18,900**	9,209
Other long-term secured funding[b]	**2,354**	455	**731**	2,645
Total long-term secured funding	**$ 3,899**	$ 25,882	**$ 31,156**	$ 17,112

(a) Other securitizations includes securitizations of student loans. The Firm deconsolidated the student loan securitization entities in the second quarter of 2017 as it no longer had a controlling financial interest in these entities as a result of the sale of the student loan portfolio.

(b) Includes long-term structured notes which are secured.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. For further description of the client-driven loan securitizations, see Note 14.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see SPEs on page 50, and credit risk, liquidity risk and credit-related contingent features in Note 5 on page 186.

The credit ratings of the Parent Company and the Firm's principal bank and non-bank subsidiaries as of December 31, 2017, were as follows.

	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A. Chase Bank USA, N.A.			J.P. Morgan Securities LLC J.P. Morgan Securities plc		
December 31, 2017	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investors Service	A3	P-2	Stable	Aa3	P-1	Stable	A1	P-1	Stable
Standard & Poor's	A-	A-2	Stable	A+	A-1	Stable	A+	A-1	Stable
Fitch Ratings	A+	F1	Stable	AA-	F1+	Stable	AA-	F1+	Stable

On February 22, 2017, Moody's published its updated rating methodologies for securities firms. As a result of this methodology change, J.P. Morgan Securities LLC's long-term issuer rating was downgraded by one notch from Aa3 to A1; the short-term issuer rating was unchanged and the outlook remained stable.

On June 1, 2017, JPMorgan Chase Bank, N.A. terminated its guarantee of the payment of all obligations of J.P. Morgan Securities plc arising after such termination. J.P. Morgan Securities plc, whose credit ratings previously reflected the benefit of this guarantee, is now rated on a stand-alone, non-guaranteed basis.

Downgrades of the Firm's long-term ratings by one or two notches could result in an increase in its cost of funds, and access to certain funding markets could be reduced as noted above. The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral factors which the Firm believes are incorporated in its liquidity risk and stress testing metrics. The Firm believes that it maintains sufficient liquidity to withstand a potential decrease in funding capacity due to ratings downgrades.

JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices, and litigation matters, as well as their broader ratings methodologies. Changes in any of these factors could lead to changes in the Firm's credit ratings.

REPUTATION RISK MANAGEMENT

Reputation risk is the potential that an action, inaction, transaction, investment or event will reduce trust in the Firm's integrity or competence by its various constituents, including clients, counterparties, investors, regulators, employees and the broader public. Maintaining the Firm's reputation is the responsibility of each individual employee of the Firm. The Firm's Reputation Risk Governance policy explicitly vests each employee with the responsibility to consider the reputation of the Firm when engaging in any activity. Because the types of events that could harm the Firm's reputation are so varied across the Firm's lines of business, each line of business has a separate reputation risk governance infrastructure in place, which consists of three key elements: clear, documented escalation criteria appropriate to the business; a designated primary discussion forum — in most cases, one or more dedicated reputation risk committees; and a list of designated contacts to whom questions relating to reputation risk should be referred. Any matter giving rise to reputation risk that originates in a corporate function is required to be escalated directly to Firmwide Reputation Risk Governance ("FRRG") or to the relevant Risk Committee. Reputation risk governance is overseen by FRRG, which provides oversight of the governance infrastructure and process to support the consistent identification, escalation, management and monitoring of reputation risk issues firmwide.

Credit and investment risk is the risk associated with the default or change in credit profile of a client, counterparty or customer; or loss of principal or a reduction in expected returns on investments.

Credit risk management

Credit risk is the risk associated with the default or change in credit profile of a client, counterparty or customer. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk primarily through its home lending, credit card, auto, and business banking businesses. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through its operating services activities (such as cash management and clearing activities), securities financing activities, investment securities portfolio, and cash placed with banks.

Credit risk management is an independent risk management function that monitors, measures and manages credit risk throughout the Firm and defines credit risk policies and procedures. The credit risk function reports to the Firm's CRO. The Firm's credit risk management governance includes the following activities:

- Establishing a comprehensive credit risk policy framework
- Monitoring, measuring and managing credit risk across all portfolio segments, including transaction and exposure approval
- Setting industry concentration limits and establishing underwriting guidelines
- Assigning and managing credit authorities in connection with the approval of all credit exposure
- Managing criticized exposures and delinquent loans
- Estimating credit losses and ensuring appropriate credit risk-based capital management

Risk identification and measurement

The Credit Risk Management function monitors, measures, manages and limits credit risk across the Firm's businesses. To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the probability of default of an obligor or counterparty, the loss severity given a default event and the exposure at default.

Based on these factors and related market-based inputs, the Firm estimates credit losses for its exposures. Probable credit losses inherent in the consumer and wholesale held-for-investment loan portfolios are reflected in the allowance for loan losses, and probable credit losses inherent in lending-related commitments are reflected in the allowance for lending-related commitments. These losses are estimated using statistical analyses and other factors as described in Note 13. In addition, potential and unexpected credit losses are reflected in the allocation of credit risk capital and represent the potential volatility of actual losses relative to the established allowances for loan losses and lending-related commitments. The analyses for these losses include stress testing that considers alternative economic scenarios as described in the Stress testing section below. For further information, see Critical Accounting Estimates used by the Firm on pages 138–140.

The methodologies used to estimate credit losses depend on the characteristics of the credit exposure, as described below.

Scored exposure

The scored portfolio is generally held in CCB and predominantly includes residential real estate loans, credit card loans, and certain auto and business banking loans. For the scored portfolio, credit loss estimates are based on statistical analysis of credit losses over discrete periods of time. The statistical analysis uses portfolio modeling, credit scoring, and decision-support tools, which consider loan-level factors such as delinquency status, credit scores, collateral values, and other risk factors. Credit loss analyses also consider, as appropriate, uncertainties and other factors, including those related to current macroeconomic and political conditions, the quality of underwriting standards, and other internal and external factors. The factors and analysis are updated on a quarterly basis or more frequently as market conditions dictate.

Risk-rated exposure

Risk-rated portfolios are generally held in CIB, CB and AWM, but also include certain business banking and auto dealer loans held in CCB that are risk-rated because they have characteristics similar to commercial loans. For the risk-rated portfolio, credit loss estimates are based on estimates of the probability of default ("PD") and loss severity given a default. The probability of default is the likelihood that a borrower will default on its obligation; the loss given default ("LGD") is the estimated loss on the loan that would be realized upon the default and takes into consideration collateral and structural support for each credit facility. The estimation process includes assigning risk ratings to each borrower and credit facility to differentiate risk within the portfolio. These risk ratings are reviewed regularly by Credit Risk Management and revised as needed to reflect the borrower's current financial position, risk profile and related collateral. The calculations and assumptions are

based on both internal and external historical experience and management judgment and are reviewed regularly.

Stress testing

Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios and the underlying parameters are defined centrally, articulated in terms of macroeconomic factors and applied across the businesses. The stress test results may indicate credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, including industry and country-specific stress scenarios, as necessary. The Firm uses stress testing to inform decisions on setting risk appetite both at a Firm and LOB level, as well as to assess the impact of stress on individual counterparties.

Risk monitoring and management

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

Consumer credit risk is monitored for delinquency and other trends, including any concentrations at the portfolio level, as certain of these trends can be modified through changes in underwriting policies and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Historical and forecasted economic performance and trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry, and individual client and counterparty level with established concentration limits that are reviewed and revised as deemed appropriate by management, typically on an annual basis. Industry and counterparty limits, as measured in terms of exposure and economic risk appetite, are subject to stress-based loss constraints. In addition, wrong-way risk — the risk that exposure to a counterparty is positively correlated with the impact of a default by the same counterparty, which could cause exposure to increase at the same time as the counterparty's capacity to meet its obligations is decreasing — is actively monitored as this risk could result in greater exposure at default compared with a transaction with another counterparty that does not have this risk.

Management of the Firm's wholesale credit risk exposure is accomplished through a number of means, including:

- Loan underwriting and credit approval process
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Master netting agreements
- Collateral and other risk-reduction techniques

In addition to Credit Risk Management, an independent Credit Review function is responsible for:

- Independently validating or changing the risk grades assigned to exposures in the Firm's wholesale and commercial-oriented retail credit portfolios, and assessing the timeliness of risk grade changes initiated by responsible business units; and
- Evaluating the effectiveness of business units' credit management processes, including the adequacy of credit analyses and risk grading/LGD rationales, proper monitoring and management of credit exposures, and compliance with applicable grading policies and underwriting guidelines.

For further discussion of consumer and wholesale loans, see Note 12.

Risk reporting

To enable monitoring of credit risk and effective decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior members of Credit Risk Management. Detailed portfolio reporting of industry; clients, counterparties and customers; product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, risk committees, senior management and the Board of Directors as appropriate.

In the following tables, reported loans include loans retained (i.e., held-for-investment); loans held-for-sale; and certain loans accounted for at fair value. The following tables do not include certain loans the Firm accounts for at fair value and classifies as trading assets. For further information regarding these loans, see Note 2 and Note 3. For additional information on the Firm's loans, lending-related commitments, and derivative receivables, including the Firm's accounting policies, see Note 12, Note 27, and Note 5, respectively.

For further information regarding the credit risk inherent in the Firm's cash placed with banks, investment securities portfolio, and securities financing portfolio, see Note 4, Note 10, and Note 11, respectively.

For discussion of the consumer credit environment and consumer loans, see Consumer Credit Portfolio on pages 102-107 and Note 12. For discussion of the wholesale credit environment and wholesale loans, see Wholesale Credit Portfolio on pages 108-116 and Note 12.

Total credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming[e][f]	
	2017	2016	**2017**	2016
Loans retained	**$ 924,838**	$ 889,907	**$ 5,943**	$ 6,721
Loans held-for-sale	**3,351**	2,628	**–**	162
Loans at fair value	**2,508**	2,230	**–**	–
Total loans – reported	**930,697**	894,765	**5,943**	6,883
Derivative receivables	**56,523**	64,078	**130**	223
Receivables from customers and other [a]	**26,272**	17,560	**–**	–
Total credit-related assets	**1,013,492**	976,403	**6,073**	7,106
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**311**	370
Other	**NA**	NA	**42**	59
Total assets acquired in loan satisfactions	**NA**	NA	**353**	429
Lending-related commitments	**991,482**	975,152 [d]	**731**	506
Total credit portfolio	**$2,004,974**	$1,951,555 [d]	**$ 7,157**	$ 8,041
Credit derivatives used in credit portfolio management activities[b]	**$ (17,609)**	$ (22,114)	**$ –**	$ –
Liquid securities and other cash collateral held against derivatives[c]	**(16,108)**	(22,705)	**NA**	NA

Year ended December 31, (in millions, except ratios)	**2017**	2016
Net charge-offs[g]	**$ 5,387**	$ 4,692
Average retained loans		
Loans	**898,979**	861,345
Loans – reported, excluding residential real estate PCI loans	**865,887**	822,973
Net charge-off rates[g]		
Loans	**0.60%**	0.54%
Loans – excluding PCI	**0.62**	0.57

(a) Receivables from customers and other primarily represents held-for-investment margin loans to brokerage customers.

(b) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on pages 115-116 and Note 5.

(c) Includes collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

(d) The prior period amounts have been revised to conform with the current period presentation.

(e) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.

(f) At December 31, 2017 and 2016, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $4.3 billion and $5.0 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of zero and $263 million, respectively, that are 90 or more days past due; and (3) Real estate owned ("REO") insured by U.S. government agencies of $95 million and $142 million, respectively. These amounts have been excluded based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council ("FFIEC").

(g) For the year ended December 31, 2017, excluding net charge-offs of $467 million related to the student loan portfolio sale, the net charge-off rate for loans would have been 0.55% and for loans - excluding PCI would have been 0.57%.

CONSUMER CREDIT PORTFOLIO

The Firm's retained consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, and business banking loans, as well as associated lending-related commitments. The Firm's focus is on serving primarily the prime segment of the consumer credit market. Originated mortgage loans are retained in the mortgage portfolio, securitized or sold to U.S. government agencies and U.S. government-sponsored enterprises; other types of consumer loans are typically retained on the balance sheet. The credit performance of the consumer portfolio continues to benefit from discipline in credit underwriting as well as improvement in the economy driven by increasing home prices and low unemployment. The total amount of residential real estate loans delinquent 30+ days, excluding government guaranteed and purchased credit impaired loans, increased from December 31, 2016 due to the impact of recent hurricanes; however, the 30+ day delinquency rate decreased due to growth in the portfolio. The Credit Card 30+ day delinquency rate and the net charge-off rate increased from the prior year, in line with expectations. For further information on consumer loans, see Note 12. For further information on lending-related commitments, see Note 27.

The following table presents consumer credit-related information with respect to the credit portfolio held by CCB, prime mortgage and home equity loans held by AWM, and prime mortgage loans held by Corporate. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 12.

Consumer credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure			Nonaccrual loans[k][l]		Net charge-offs/ (recoveries)[e][m][n]		Average annual net charge-off rate[e][m][n]	
	2017	2016		**2017**	2016	**2017**	2016	**2017**	2016
Consumer, excluding credit card									
Loans, excluding PCI loans and loans held-for-sale									
Residential mortgage[a]	**$ 216,496**	$ 192,486		**$ 2,175**	$ 2,256	**$ (10)**	$ 16	**–%**	0.01%
Home equity	**33,450**	39,063		**1,610**	1,845	**69**	189	**0.19**	0.45
Auto[b][c]	**66,242**	65,814		**141**	214	**331**	285	**0.51**	0.45
Consumer & Business Banking[a][c][d]	**25,789**	24,307		**283**	287	**257**	257	**1.03**	1.10
Student[a][e]	**–**	7,057		**–**	165	**498**	162	**NM**	2.13
Total loans, excluding PCI loans and loans held-for-sale	**341,977**	328,727		**4,209**	4,767	**1,145**	909	**0.34**	0.28
Loans – PCI									
Home equity	**10,799**	12,902		**NA**	NA	**NA**	NA	**NA**	NA
Prime mortgage	**6,479**	7,602		**NA**	NA	**NA**	NA	**NA**	NA
Subprime mortgage	**2,609**	2,941		**NA**	NA	**NA**	NA	**NA**	NA
Option ARMs[f]	**10,689**	12,234		**NA**	NA	**NA**	NA	**NA**	NA
Total loans – PCI	**30,576**	35,679		**NA**	NA	**NA**	NA	**NA**	NA
Total loans – retained	**372,553**	364,406		**4,209**	4,767	**1,145**	909	**0.31**	0.25
Loans held-for-sale	**128**	238		**–**	53	**–**	–	**–**	–
Total consumer, excluding credit card loans	**372,681**	364,644		**4,209**	4,820	**1,145**	909	**0.31**	0.25
Lending-related commitments[g]	**48,553**	53,247	[j]						
Receivables from customers[h]	**133**	120							
Total consumer exposure, excluding credit card	**421,367**	418,011	[j]						
Credit Card									
Loans retained[i]	**149,387**	141,711		**–**	–	**4,123**	3,442	**2.95**	2.63
Loans held-for-sale	**124**	105		**–**	–	**–**	–	**–**	–
Total credit card loans	**149,511**	141,816		**–**	–	**4,123**	3,442	**2.95**	2.63
Lending-related commitments[g]	**572,831**	553,891							
Total credit card exposure	**722,342**	695,707							
Total consumer credit portfolio	**$ 1,143,709**	$ 1,113,718	[j]	**$ 4,209**	$ 4,820	**$ 5,268**	$ 4,351	**1.04%**	0.89%
Memo: Total consumer credit portfolio, excluding PCI	**$ 1,113,133**	$ 1,078,039	[j]	**$ 4,209**	$ 4,820	**$ 5,268**	$ 4,351	**1.11%**	0.96%

(a) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.
(b) At December 31, 2017 and 2016, excluded operating lease assets of $17.1 billion and $13.2 billion, respectively. These operating lease assets are included in other assets on the Firm's Consolidated balance sheets. The risk of loss on these assets relates to the residual value of the leased vehicles, which is managed through projection of the lease residual value at lease origination, periodic review of residual values, and through arrangements with certain auto manufacturers that mitigates this risk.
(c) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included within the consumer portfolio.
(d) Predominantly includes Business Banking loans.
(e) For the year ended December 31, 2017, excluding net charge-offs of $467 million related to the student loan portfolio sale, the net charge-off rate for Total consumer, excluding credit card and PCI loans and loans held-for-sale would have been 0.20%; Total consumer - retained excluding credit card loans would have been 0.18%; Total consumer credit portfolio would have been 0.95%; and Total consumer credit portfolio, excluding PCI loans would have been 1.01%.
(f) At December 31, 2017 and 2016, approximately 68% and 66%, respectively, of the PCI option adjustable rate mortgages ("ARMs") portfolio has been modified into fixed-rate, fully amortizing loans.
(g) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. For further information, see Note 27.
(h) Receivables from customers represent held-for-investment margin loans to brokerage customers that are collateralized through assets maintained in the clients' brokerage accounts. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.
(i) Includes billed interest and fees net of an allowance for uncollectible interest and fees.
(j) The prior period amounts have been revised to conform with the current period presentation.
(k) At December 31, 2017 and 2016, nonaccrual loans excluded loans 90 or more days past due as follows: (1) mortgage loans insured by U.S. government agencies of $4.3 billion and $5.0 billion, respectively; and (2) student loans insured by U.S. government agencies under the FFELP of zero and $263 million, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status, as permitted by regulatory guidance issued by the FFIEC.
(l) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.
(m) Net charge-offs and net charge-off rates excluded write-offs in the PCI portfolio of $86 million and $156 million for the years ended December 31, 2017 and 2016. These write-offs decreased the allowance for loan losses for PCI loans. See Allowance for Credit Losses on pages 117–119 for further details.
(n) Average consumer loans held-for-sale were $1.5 billion and $496 million for the years ended December 31, 2017 and 2016, respectively. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances increased from December 31, 2016 predominantly due to originations of high-quality prime mortgage loans that have been retained on the balance sheet, partially offset by the sale of the student loan portfolio as well as paydowns and the charge-off or liquidation of delinquent loans.

PCI loans are excluded from the following discussions of individual loan products and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, see Note 12.

Residential mortgage: The residential mortgage portfolio predominantly consists of high-quality prime mortgage loans with a small component (approximately 1%) of subprime mortgage loans. These subprime mortgage loans continue to run-off and are performing in line with expectations. The residential mortgage portfolio, including loans held-for-sale, increased from December 31, 2016 due to retained originations of primarily high-quality fixed rate prime mortgage loans partially offset by paydowns. Residential mortgage 30+ day delinquencies increased from December 31, 2016 due to the impact of recent hurricanes. Nonaccrual loans decreased from the prior year primarily as a result of loss mitigation activities. There was a net recovery for the year ended December 31, 2017 compared to a net charge-off for the year ended December 31, 2016, reflecting continued improvement in home prices and delinquencies.

At December 31, 2017 and 2016, the Firm's residential mortgage portfolio, including loans held-for-sale, included $8.6 billion and $9.5 billion, respectively, of mortgage loans insured and/or guaranteed by U.S. government agencies, of which $6.2 billion and $7.0 billion, respectively, were 30 days or more past due (of these past due loans, $4.3 billion and $5.0 billion, respectively, were 90 days or more past due). The Firm monitors its exposure to certain potential unrecoverable claim payments related to government insured loans and considers this exposure in estimating the allowance for loan losses.

At December 31, 2017 and 2016, the Firm's residential mortgage portfolio included $20.2 billion and $19.1 billion, respectively, of interest-only loans. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment period to maturity and are typically originated as higher-balance loans to higher-income borrowers. To date, losses on this portfolio generally have been consistent with the broader residential mortgage portfolio. The Firm continues to monitor the risks associated with these loans.

Home equity: The home equity portfolio declined from December 31, 2016 primarily reflecting loan paydowns. The amount of 30+ day delinquencies decreased from December 31, 2016 but was impacted by recent hurricanes. Nonaccrual loans decreased from December 31, 2016 primarily as a result of loss mitigation activities. Net charge-offs for the year ended December 31, 2017 declined when compared with the prior year, partially as a result of lower loan balances.

At December 31, 2017, approximately 90% of the Firm's home equity portfolio consists of home equity lines of credit ("HELOCs") and the remainder consists of home equity loans ("HELOANs"). HELOANs are generally fixed-rate, closed-end, amortizing loans, with terms ranging from 3–30 years. In general, HELOCs originated by the Firm are revolving loans for a 10-year period, after which time the HELOC recasts into a loan with a 20-year amortization period.

The carrying value of HELOCs outstanding was $30 billion at December 31, 2017. Of such amounts, $14 billion have recast from interest-only to fully amortizing payments or have been modified and $5 billion are interest-only balloon HELOCs, which primarily mature after 2030. The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile.

The Firm monitors risks associated with junior lien loans where the borrower has a senior lien loan that is more than 90 days delinquent or has been modified. These loans are considered "high-risk seconds" and are classified as nonaccrual as they are considered to pose a higher risk of default than other junior lien loans. At December 31, 2017, the Firm estimated that the carrying value of its home equity portfolio contained approximately $725 million of current junior lien loans that were considered high-risk seconds, compared with $1.1 billion at December 31, 2016. For further information, see Note 12.

Auto: The auto loan portfolio, which predominantly consists of prime-quality loans, was relatively flat compared with December 31, 2016, as new originations were largely offset by paydowns and the charge-off or liquidation of delinquent loans. Nonaccrual loans decreased compared with December 31, 2016. Net charge-offs for the year ended December 31, 2017 increased compared with the prior year, primarily as a result of an incremental adjustment recorded in accordance with regulatory guidance regarding the timing of loss recognition for certain loans in bankruptcy and loans where assets were acquired in loan satisfaction.

Consumer & Business banking: Consumer & Business Banking loans increased compared with December 31, 2016 as growth due to loan originations was partially offset by paydowns and the charge-off or liquidation of delinquent loans. Nonaccrual loans and net charge-offs were relatively flat compared with prior year.

Student: The Firm wrote down and subsequently sold the student loan portfolio during 2017. Net charge-offs for the year ended December 31, 2017 increased as a result of the write-down.

Purchased credit-impaired loans: PCI loans decreased as the portfolio continues to run off. As of December 31, 2017, approximately 11% of the option ARM PCI loans were delinquent and approximately 68% of the portfolio had been modified into fixed-rate, fully amortizing loans. The borrowers for substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing. This latter group of loans is subject to the risk of payment shock due to future payment recast. Default rates generally increase on option ARM loans when payment recast results in a payment increase. The expected increase in default rates is considered in the Firm's quarterly impairment assessment.

The following table provides a summary of lifetime principal loss estimates included in either the nonaccretable difference or the allowance for loan losses.

Summary of PCI loans lifetime principal loss estimates

	Lifetime loss estimates[a]		Life-to-date liquidation losses[b]	
December 31, (in billions)	**2017**	2016	**2017**	2016
Home equity	**$ 14.2**	$ 14.4	**$ 12.9**	$ 12.8
Prime mortgage	**4.0**	4.0	**3.8**	3.7
Subprime mortgage	**3.3**	3.2	**3.1**	3.1
Option ARMs	**10.0**	10.0	**9.7**	9.7
Total	**$ 31.5**	$ 31.6	**$ 29.5**	$ 29.3

(a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses was $842 million and $1.1 billion at December 31, 2017 and 2016, respectively.
(b) Represents both realization of loss upon loan resolution and any principal forgiven upon modification.

For further information on the Firm's PCI loans, including write-offs, see Note 12.

Geographic composition of residential real estate loans

At December 31, 2017, $152.8 billion, or 63% of the total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans, were concentrated in California, New York, Illinois, Texas and Florida, compared with $139.9 billion, or 63%, at December 31, 2016. For additional information on the geographic composition of the Firm's residential real estate loans, see Note 12.

Current estimated loan-to-values of residential real estate loans

Average current estimated loan-to-value ("LTV") ratios have declined consistent with improvements in home prices, customer pay downs, and charge-offs or liquidations of higher LTV loans. For further information on current estimated LTVs of residential real estate loans, see Note 12.

Loan modification activities for residential real estate loans

The performance of modified loans generally differs by product type due to differences in both the credit quality and the types of modifications provided. Performance metrics for modifications to the residential real estate portfolio, excluding PCI loans, that have been seasoned more than six months show weighted-average redefault rates of 24% for residential mortgages and 21% for home equity. The cumulative performance metrics for modifications to the PCI residential real estate portfolio that have been seasoned more than six months show weighted average redefault rates of 20% for home equity, 19% for prime mortgages, 16% for option ARMs and 34% for subprime mortgages. The cumulative redefault rates reflect the performance of modifications completed under both the U.S. Government's Home Affordable Modification Program ("HAMP") and the Firm's proprietary modification programs

(primarily the Firm's modification program that was modeled after HAMP) from October 1, 2009, through December 31, 2017.

Certain loans that were modified under HAMP and the Firm's proprietary modification programs have interest rate reset provisions ("step-rate modifications"). Interest rates on these loans generally began to increase commencing in 2014 by 1% per year, and will continue to do so until the rate reaches a specified cap. The cap on these loans is typically at a prevailing market interest rate for a fixed-rate mortgage loan as of the modification date. At December 31, 2017, the carrying value of non-PCI loans and the unpaid principal balance of PCI loans modified in step-rate modifications, which have not yet met their specified caps, were $3 billion and $7 billion, respectively. The Firm continues to monitor this risk exposure and the impact of these potential interest rate increases is considered in the Firm's allowance for loan losses.

The following table presents information as of December 31, 2017 and 2016, relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. For further information on modifications for the years ended December 31, 2017 and 2016, see Note 12.

Modified residential real estate loans

December 31, (in millions)	2017 Retained loans	2017 Nonaccrual retained loans[d]	2016 Retained loans	2016 Nonaccrual retained loans[d]
Modified residential real estate loans, excluding PCI loans[a][b]				
Residential mortgage	**5,620**	**1,743**	6,032	1,755
Home equity	**$ 2,118**	**$ 1,032**	$ 2,264	$ 1,116
Total modified residential real estate loans, excluding PCI loans	**$ 7,738**	**$ 2,775**	$ 8,296	$ 2,871
Modified PCI loans[c]				
Home equity	**$ 2,277**	**NA**	$ 2,447	NA
Prime mortgage	**4,490**	**NA**	5,052	NA
Subprime mortgage	**2,678**	**NA**	2,951	NA
Option ARMs	**8,276**	**NA**	9,295	NA
Total modified PCI loans	**$17,721**	**NA**	$19,745	NA

(a) Amounts represent the carrying value of modified residential real estate loans.
(b) At December 31, 2017 and 2016, $3.8 billion and $3.4 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., Federal Housing Administration ("FHA"), U.S. Department of Veterans Affairs ("VA"), Rural Housing Service of the U.S. Department of Agriculture ("RHS")) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. For additional information about sales of loans in securitization transactions with Ginnie Mae, see Note 14.
(c) Amounts represent the unpaid principal balance of modified PCI loans.
(d) As of December 31, 2017 and 2016, nonaccrual loans included $2.2 billion and $2.3 billion, respectively, of troubled debt restructuring ("TDRs") for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status, see Note 12.

Nonperforming assets

The following table presents information as of December 31, 2017 and 2016, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[a]

December 31, (in millions)	2017	2016
Nonaccrual loans[b]		
Residential real estate[c]	**$ 3,785**	$ 4,154
Other consumer[c]	**424**	666
Total nonaccrual loans	**4,209**	4,820
Assets acquired in loan satisfactions		
Real estate owned	**225**	292
Other	**40**	57
Total assets acquired in loan satisfactions	**265**	349
Total nonperforming assets	**$ 4,474**	$ 5,169

(a) At December 31, 2017 and 2016, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $4.3 billion and $5.0 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of zero and $263 million, respectively, that are 90 or more days past due; and (3) real estate owned insured by U.S. government agencies of $95 million and $142 million, respectively. These amounts have been excluded based upon the government guarantee.
(b) Excludes PCI loans which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. The Firm is recognizing interest income on each pool of loans as each of the pools is performing.
(c) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.

Nonaccrual loans in the residential real estate portfolio at December 31, 2017 decreased to $3.8 billion from $4.2 billion at December 31, 2016, of which 26% and 29% were greater than 150 days past due, respectively. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 40% and 43% to the estimated net realizable value of the collateral at December 31, 2017 and 2016, respectively.

Active and suspended foreclosure: For information on loans that were in the process of active or suspended foreclosure, see Note 12.

Nonaccrual loans: The following table presents changes in the consumer, excluding credit card, nonaccrual loans for the years ended December 31, 2017 and 2016.

Nonaccrual loan activity

Year ended December 31, (in millions)	2017	2016
Beginning balance	**$ 4,820**	$ 5,413
Additions	**3,525**	3,858
Reductions:		
Principal payments and other[a]	**1,577**	1,437
Charge-offs	**699**	843
Returned to performing status	**1,509**	1,589
Foreclosures and other liquidations	**351**	582
Total reductions	**4,136**	4,451
Net changes	**(611)**	(593)
Ending balance	**$ 4,209**	$ 4,820

(a) Other reductions includes loan sales.

Credit card

Total credit card loans increased from December 31, 2016 due to strong new account growth and higher sales volume. The December 31, 2017 30+ day delinquency rate increased to 1.80% from 1.61% at December 31, 2016, while the December 31, 2017 90+ day delinquency rate increased to 0.92% from 0.81% at December 31, 2016, in line with expectations. Net charge-offs increased for the year ended December 31, 2017 primarily due to growth in newer vintages which, as anticipated, have higher loss rates than the more seasoned portion of the portfolio. The credit card portfolio continues to reflect a largely well-seasoned portfolio that has strong U.S. geographic diversification.

Loans outstanding in the top five states of California, Texas, New York, Florida and Illinois consisted of $67.2 billion in receivables, or 45% of the retained loan portfolio, at December 31, 2017, compared with $62.8 billion, or 44%, at December 31, 2016. For more information on the geographic and FICO composition of the Firm's credit card loans, see Note 12.

Modifications of credit card loans

At both December 31, 2017 and 2016, the Firm had $1.2 billion of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged off. However, the Firm establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued and billed interest and fee income.

For additional information about loan modification programs to borrowers, see Note 12.

WHOLESALE CREDIT PORTFOLIO

In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through its operating services activities (such as cash management and clearing activities), securities financing activities, investment securities portfolio, and cash placed with banks. A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk.

The wholesale credit portfolio was stable for the year ended December 31, 2017, characterized by low levels of criticized exposure, nonaccrual loans and charge-offs. See industry discussion on pages 109–112 for further information. The increase in retained loans was driven by new originations in CB and higher loans to Private Banking clients in AWM, which was partially offset by paydowns in CIB. Discipline in underwriting across all areas of lending continues to be a key point of focus. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of client credit quality and transaction structure inclusive of collateral where applicable, and of industry, product and client concentrations.

In the following tables, the Firm's wholesale credit portfolio includes exposure held in CIB, CB, AWM and Corporate, and excludes all exposure managed by CCB.

Wholesale credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming[c]	
	2017	2016	**2017**	2016
Loans retained	**$402,898**	$383,790	**$ 1,734**	$ 1,954
Loans held-for-sale	**3,099**	2,285	**–**	109
Loans at fair value	**2,508**	2,230	**–**	–
Loans – reported	**408,505**	388,305	**1,734**	2,063
Derivative receivables	**56,523**	64,078	**130**	223
Receivables from customers and other[a]	**26,139**	17,440	**–**	–
Total wholesale credit-related assets	**491,167**	469,823	**1,864**	2,286
Lending-related commitments	**370,098**	368,014	**731**	506
Total wholesale credit exposure	**$861,265**	$837,837	**$ 2,595**	$ 2,792
Credit derivatives used in credit portfolio management activities[b]	**$ (17,609)**	$ (22,114)	**$ –**	$ –
Liquid securities and other cash collateral held against derivatives	**(16,108)**	(22,705)	**NA**	NA

(a) Receivables from customers and other include $26.0 billion and $17.3 billion of held-for-investment margin loans at December 31, 2017 and 2016, respectively, to brokerage customers in CIB Prime Services and in AWM; these are classified in accrued interest and accounts receivable on the Consolidated balance sheets.

(b) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on pages 115–116, and Note 5.

(c) Excludes assets acquired in loan satisfactions.

The following tables present the maturity and ratings profiles of the wholesale credit portfolio as of December 31, 2017 and 2016. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings assigned by S&P and Moody's. For additional information on wholesale loan portfolio risk ratings, see Note 12.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[d]				Ratings profile			
					Investment-grade	Noninvestment-grade		
December 31, 2017 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	**Total**	Total % of IG
Loans retained	**$ 121,643**	**$ 177,033**	**$ 104,222**	**$ 402,898**	**$ 311,681**	**$ 91,217**	**$ 402,898**	**77%**
Derivative receivables				**56,523**			**56,523**	
Less: Liquid securities and other cash collateral held against derivatives				**(16,108)**			**(16,108)**	
Total derivative receivables, net of all collateral	**9,882**	**10,463**	**20,070**	**40,415**	**32,373**	**8,042**	**40,415**	**80**
Lending-related commitments	**80,273**	**275,317**	**14,508**	**370,098**	**274,127**	**95,971**	**370,098**	**74**
Subtotal	**211,798**	**462,813**	**138,800**	**813,411**	**618,181**	**195,230**	**813,411**	**76**
Loans held-for-sale and loans at fair value[a]				**5,607**			**5,607**	
Receivables from customers and other				**26,139**			**26,139**	
Total exposure – net of liquid securities and other cash collateral held against derivatives				**$ 845,157**			**$ 845,157**	
Credit derivatives used in credit portfolio management activities[b][c]	**$ (1,807)**	**$ (11,011)**	**$ (4,791)**	**$ (17,609)**	**$ (14,984)**	**$ (2,625)**	**$ (17,609)**	**85%**

	Maturity profile[d]				Ratings profile			
					Investment-grade	Noninvestment-grade		
December 31, 2016 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	Total	Total % of IG
Loans retained	$ 117,238	$ 167,235	$ 99,317	$ 383,790	$ 289,923	$ 93,867	$ 383,790	76%
Derivative receivables				64,078			64,078	
Less: Liquid securities and other cash collateral held against derivatives				(22,705)			(22,705)	
Total derivative receivables, net of all collateral	14,019	8,510	18,844	41,373	33,081	8,292	41,373	80
Lending-related commitments	88,399	271,825	7,790	368,014	269,820	98,194	368,014	73
Subtotal	219,656	447,570	125,951	793,177	592,824	200,353	793,177	75
Loans held-for-sale and loans at fair value[a]				4,515			4,515	
Receivables from customers and other				17,440			17,440	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 815,132			$ 815,132	
Credit derivatives used in credit portfolio management activities [b][c]	$ (1,354)	$ (16,537)	$ (4,223)	$ (22,114)	$ (18,710)	$ (3,404)	$ (22,114)	85%

(a) Represents loans held-for-sale, primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
(b) These derivatives do not qualify for hedge accounting under U.S. GAAP.
(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased. Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection used in credit portfolio management activities, are executed with investment-grade counterparties.
(d) The maturity profile of retained loans, lending-related commitments and derivative receivables is based on remaining contractual maturity. Derivative contracts that are in a receivable position at December 31, 2017, may become payable prior to maturity based on their cash flow profile or changes in market conditions.

Wholesale credit exposure – industry exposures

The Firm focuses on the management and diversification of its industry exposures, and pays particular attention to industries with actual or potential credit concerns. Exposures deemed criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, was $15.6 billion at December 31, 2017, compared with $19.8 billion at December 31, 2016, driven by a 47% decrease in the Oil & Gas portfolio.

In 2017, the Firm revised its methodology for the assignment of industry classifications, to better monitor and manage concentrations. This largely resulted in the re-assignment of holding companies from All other to the industry of risk category based on the primary business activity of the holding company's underlying entities. In the tables and industry discussions below, the prior period amounts have been revised to conform with the current period presentation.

Below are summaries of the Firm's exposures as of December 31, 2017 and 2016. For additional information on industry concentrations, see Note 4.

Wholesale credit exposure – industries[a]

As of or for the year ended **December 31, 2017** (in millions)	Credit exposure[e]	Investment-grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[f]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 139,409	$ 115,401	$ 23,012	$ 859	$ 137	$ 254	$ (4)	$ –	$ (2)
Consumer & Retail	87,679	55,737	29,619	1,791	532	30	34	(275)	(9)
Technology, Media & Telecommunications	59,274	36,510	20,453	2,258	53	14	(12)	(910)	(19)
Healthcare	55,997	42,643	12,731	585	38	82	(1)	–	(207)
Industrials	55,272	37,198	16,770	1,159	145	150	(1)	(196)	(21)
Banks & Finance Cos	49,037	34,654	13,767	612	4	1	6	(1,216)	(3,174)
Oil & Gas	41,317	21,430	14,854	4,046	987	22	71	(747)	(1)
Asset Managers	32,531	28,029	4,484	4	14	27	–	–	(5,290)
Utilities	29,317	24,486	4,383	227	221	–	11	(160)	(56)
State & Municipal Govt[b]	28,633	27,977	656	–	–	12	5	(130)	(524)
Central Govt	19,182	18,741	376	65	–	4	–	(10,095)	(2,520)
Chemicals & Plastics	15,945	11,107	4,764	74	–	4	–	–	–
Transportation	15,797	9,870	5,302	527	98	9	14	(32)	(131)
Automotive	14,820	9,321	5,278	221	–	10	1	(284)	–
Metals & Mining	14,171	6,989	6,822	321	39	3	(13)	(316)	(1)
Insurance	14,089	11,028	2,981	–	80	1	–	(157)	(2,195)
Financial Markets Infrastructure	5,036	4,775	261	–	–	–	–	–	(23)
Securities Firms	4,113	2,559	1,553	1	–	–	–	(274)	(335)
All other[c]	147,900	134,110	13,283	260	247	901	8	(2,817)	(1,600)
Subtotal	$ 829,519	$ 632,565	$ 181,349	$ 13,010	$ 2,595	$ 1,524	$ 119	$ (17,609)	$ (16,108)
Loans held-for-sale and loans at fair value	5,607								
Receivables from customers and other	26,139								
Total[d]	$ 861,265								

As of or for the year ended December 31, 2016 (in millions)	Credit exposure[e]	Investment-grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[f]	Liquid securities and other cash collateral held against derivative receivables[g]
Real Estate	$ 134,287	$ 104,869	$ 28,281	$ 937	$ 200	$ 206	$ (7)	$ (54)	$ (11)
Consumer & Retail	84,804	54,730	28,255	1,571	248	75	24	(424)	(69)
Technology, Media & Telecommunications	63,324	39,998	21,751	1,559	16	9	2	(589)	(30)
Healthcare	49,445	39,244	9,279	882	40	86	37	(286)	(246)
Industrials	55,733	36,710	17,854	1,033	136	128	3	(434)	(40)
Banks & Finance Cos	48,393	35,385	12,560	438	10	21	(2)	(1,336)	(7,337)
Oil & Gas	40,367	18,629	12,274	8,069	1,395	31	233	(1,532)	(18)
Asset Managers	33,201	29,194	4,006	1	–	17	–	–	(5,737)
Utilities	29,672	24,203	4,959	424	86	8	–	(306)	–
State & Municipal Govt[b]	28,263	27,603	624	6	30	107	(1)	(130)	–
Central Govt	20,408	20,123	276	9	–	4	–	(11,691)	(4,183)
Chemicals & Plastics	15,043	10,405	4,452	156	30	3	–	(35)	(3)
Transportation	19,096	12,178	6,421	444	53	9	10	(93)	(188)
Automotive	16,736	9,235	7,299	201	1	7	–	(401)	(14)
Metals & Mining	13,419	5,523	6,744	1,133	19	–	36	(621)	(62)
Insurance	13,510	10,918	2,459	–	133	9	–	(275)	(2,538)
Financial Markets Infrastructure	8,732	7,980	752	–	–	–	–	–	(390)
Securities Firms	4,211	1,812	2,399	–	–	–	–	(273)	(491)
All other[c]	137,238	124,661	11,988	303	286	598	6	(3,634)	(1,348)
Subtotal	$ 815,882	$ 613,400	$ 182,633	$ 17,166	$ 2,683	$ 1,318	$ 341	$ (22,114)	$ (22,705)
Loans held-for-sale and loans at fair value	4,515								
Receivables from customers and other	17,440								
Total[d]	$ 837,837								

(a) The industry rankings presented in the table as of December 31, 2016, are based on the industry rankings of the corresponding exposures at December 31, 2017, not actual rankings of such exposures at December 31, 2016.

(b) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2017 and 2016, noted above, the Firm held: $9.8 billion and $9.1 billion, respectively, of trading securities; $32.3 billion and $31.6 billion, respectively, of AFS securities; and $14.4 billion and $14.5 billion, respectively, of HTM securities, issued by U.S. state and municipal governments. For further information, see Note 2 and Note 10.

(c) All other includes: individuals; SPEs; and private education and civic organizations, representing approximately 59%, 37% and 4%, respectively, at both December 31, 2017 and December 31, 2016.

(d) Excludes cash placed with banks of $421.0 billion and $380.2 billion, at December 31, 2017 and 2016, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.

(e) Credit exposure is net of risk participations and excludes the benefit of credit derivatives used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.

(f) Represents the net notional amounts of protection purchased and sold through credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The All other category includes purchased credit protection on certain credit indices.

(g) Prior period amounts have been revised to conform with the current period presentation.

Presented below is additional detail on certain industries to which the Firm has exposure.

Real Estate

Exposure to the Real Estate industry increased $5.1 billion during the year ended December 31, 2017, to $139.4 billion predominantly driven by multifamily lending within CB. For the year ended December 31, 2017, the investment-grade percentage of the portfolio was 83%, up from 78% for the year ended December 31, 2016. For further information on Real Estate loans, see Note 12.

	December 31, 2017				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[c]
Multifamily[a]	$ 84,635	$ 34	$ 84,669	89%	92%
Other	54,620	120	54,740	74	66
Total Real Estate Exposure[b]	139,255	154	139,409	83	82

	December 31, 2016				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[c]
Multifamily[a]	$ 80,280	$ 34	$ 80,314	82%	90%
Other	53,801	172	53,973	72	62
Total Real Estate Exposure[b]	134,081	207	134,287	78	79

(a) Multifamily exposure is largely in California.
(b) Real Estate exposure is predominantly secured; unsecured exposure is largely investment-grade.
(c) Represents drawn exposure as a percentage of credit exposure.

Oil & Gas and Natural Gas Pipelines

Exposure to the Oil & Gas and Natural Gas Pipeline portfolios increased by $1.1 billion during the year ended December 31, 2017 to $45.9 billion. During the year ended December 31, 2017, the credit quality of this exposure continued to improve, with the investment-grade percentage increasing from 48% to 53% and criticized exposure decreasing by $4.5 billion.

	December 31, 2017				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[d]
Exploration & Production ("E&P") and Oilfield Services	$ 20,558	$ 1,175	$ 21,733	34%	33%
Other Oil & Gas[a]	19,032	552	19,584	72	28
Total Oil & Gas	39,590	1,727	41,317	52	31
Natural Gas Pipelines[b]	4,507	38	4,545	66	14
Total Oil & Gas and Natural Gas Pipelines[c]	$ 44,097	$ 1,765	$ 45,862	53	29

	December 31, 2016				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[d]
E&P and Oilfield Services	$ 20,971	$ 1,256	$ 22,227	27%	35%
Other Oil & Gas[a]	17,518	622	18,140	70	31
Total Oil & Gas	38,489	1,878	40,367	46	33
Natural Gas Pipelines[b]	4,253	106	4,359	66	30
Total Oil & Gas and Natural Gas Pipelines[c]	$ 42,742	$ 1,984	$ 44,726	48	33

(a) Other Oil & Gas includes Integrated Oil & Gas companies, Midstream/Oil Pipeline companies and refineries.
(b) Natural Gas Pipelines is reported within the Utilities Industry.
(c) Secured lending is $14.0 billion and $14.3 billion at December 31, 2017 and December 31, 2016, respectively, approximately half of which is reserve-based lending to the Exploration & Production sub-sector; unsecured exposure is largely investment-grade.
(d) Represents drawn exposure as a percentage of credit exposure.

Loans

In the normal course of its wholesale business, the Firm provides loans to a variety of clients, ranging from large corporate and institutional clients to high-net-worth individuals. For further discussion on loans, including information on credit quality indicators and sales of loans, see Note 12.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2017 and 2016.

Wholesale nonaccrual loan activity[(a)]

Year ended December 31, (in millions)	2017	2016
Beginning balance	**$ 2,063**	$ 1,016
Additions	**1,482**	2,981
Reductions:		
Paydowns and other	**1,137**	1,148
Gross charge-offs	**200**	385
Returned to performing status	**189**	242
Sales	**285**	159
Total reductions	**1,811**	1,934
Net changes	**(329)**	1,047
Ending balance	**$ 1,734**	$ 2,063

(a) Loans are placed on nonaccrual status when management believes full payment of principal or interest is not expected, regardless of delinquency status, or when principal or interest have been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection.

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2017 and 2016. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

Wholesale net charge-offs/(recoveries)

Year ended December 31, (in millions, except ratios)	2017	2016
Loans – reported		
Average loans retained	**$ 392,263**	$ 371,778
Gross charge-offs	**212**	398
Gross recoveries	**(93)**	(57)
Net charge-offs	**119**	341
Net charge-off rate	**0.03%**	0.09%

Lending-related commitments

The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to meet the financing needs of its clients. The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfill its obligations under these guarantees, and the counterparties subsequently fail to perform according to the terms of these contracts. Most of these commitments and guarantees are refinanced, extended, cancelled, or expire without being drawn upon or a default occurring. In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's expected future credit exposure or funding requirements. For further information on wholesale lending-related commitments, see Note 27.

Clearing services

The Firm provides clearing services for clients entering into securities and derivative transactions. Through the provision of these services the Firm is exposed to the risk of non-performance by its clients and may be required to share in losses incurred by central counterparties. Where possible, the Firm seeks to mitigate its credit risk to its clients through the collection of adequate margin at inception and throughout the life of the transactions and can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement. For further discussion of clearing services, see Note 27.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activities. Derivatives enable counterparties to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its own credit and other market risk exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For OTC derivatives the Firm is exposed to the credit risk of the derivative counterparty. For exchange-traded derivatives ("ETD"), such as futures and options, and "cleared" over-the-counter ("OTC-cleared") derivatives, the Firm is generally exposed to the credit risk of the relevant CCP. Where possible, the Firm seeks to mitigate its credit risk exposures arising from derivative transactions through the use of legally enforceable master netting arrangements and collateral agreements. For further discussion of derivative contracts, counterparties and settlement types, see Note 5.

The following table summarizes the net derivative receivables for the periods presented.

Derivative receivables

December 31, (in millions)	2017	2016
Interest rate	$ 24,673	$ 28,302
Credit derivatives	869	1,294
Foreign exchange	16,151	23,271
Equity	7,882	4,939
Commodity	6,948	6,272
Total, net of cash collateral	56,523	64,078
Liquid securities and other cash collateral held against derivative receivables[a]	(16,108)	(22,705)
Total, net of all collateral	$ 40,415	$ 41,373

(a) Includes collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

Derivative receivables reported on the Consolidated balance sheets were $56.5 billion and $64.1 billion at December 31, 2017 and 2016, respectively. Derivative receivables decreased predominantly as a result of client-driven market-making activities in CIB Markets, which reduced foreign exchange and interest rate derivative receivables, and increased equity derivative receivables, driven by market movements.

Derivative receivables amounts represent the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. However, in management's view, the appropriate measure of current credit risk should also take into consideration additional liquid securities (primarily U.S. government and agency securities and other group of seven nations ("G7") government bonds) and other cash collateral held by the Firm aggregating $16.1 billion and $22.7 billion at December 31, 2017 and 2016, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor.

In addition to the collateral described in the preceding paragraph, the Firm also holds additional collateral (primarily cash, G7 government securities, other liquid government-agency and guaranteed securities, and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Although this collateral does not reduce the balances and is not included in the table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative transactions move in the Firm's favor. The derivative receivables fair value, net of all collateral, also does not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of collateral agreements, see Note 5.

While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak represents a conservative measure of potential exposure to a counterparty calculated in a manner that is broadly equivalent to a 97.5% confidence level over the life of the transaction. Peak is the primary measure used by the Firm for setting of credit limits for derivative transactions, senior management reporting and derivatives exposure management. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. DRE is a less extreme measure of potential credit loss than Peak and is used for aggregating derivative credit risk exposures with loans and other credit risk.

Finally, AVG is a measure of the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit risk capital and the CVA, as further described below. The three year AVG exposure was $29.0 billion and $31.1 billion at December 31, 2017 and 2016, respectively, compared with derivative receivables, net of all collateral, of $40.4 billion and $41.4 billion at December 31, 2017 and 2016, respectively.

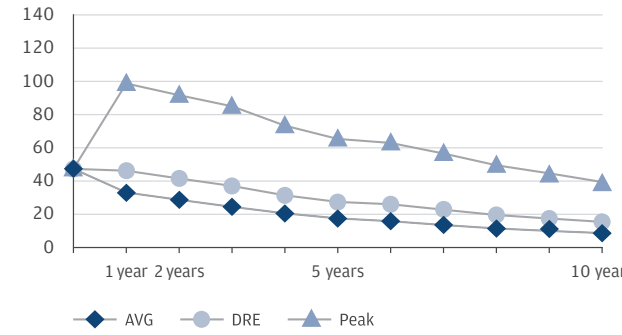
The fair value of the Firm's derivative receivables incorporates CVA to reflect the credit quality of counterparties. CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk management process takes into consideration the potential

impact of wrong-way risk, which is broadly defined as the potential for increased correlation between the Firm's exposure to a counterparty (AVG) and the counterparty's credit quality. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with that counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to the Firm's current derivatives portfolio over the next 10 years as calculated by the Peak, DRE and AVG metrics. The three measures generally show that exposure will decline after the first year, if no new trades are added to the portfolio.

Exposure profile of derivatives measures

December 31, 2017
(in billions)



The following table summarizes the ratings profile by derivative counterparty of the Firm's derivative receivables, including credit derivatives, net of all collateral, at the dates indicated. The ratings scale is based on the Firm's internal ratings, which generally correspond to the ratings as assigned by S&P and Moody's.

Ratings profile of derivative receivables

Rating equivalent	2017		2016	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 11,529**	**29%**	$ 11,449	28%
A+/A1 to A-/A3	**6,919**	**17**	8,505	20
BBB+/Baa1 to BBB-/Baa3	**13,925**	**34**	13,127	32
BB+/Ba1 to B-/B3	**7,397**	**18**	7,308	18
CCC+/Caa1 and below	**645**	**2**	984	2
Total	**$ 40,415**	**100%**	$ 41,373	100%

As previously noted, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's over-the-counter derivatives transactions subject to collateral agreements – excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity and centrally cleared trades that are settled daily – was approximately 90% as of December 31, 2017, largely unchanged compared with December 31, 2016.

Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker, and second, as an end-user to manage the Firm's own credit risk associated with various exposures. For a detailed description of credit derivatives, see Credit derivatives in Note 5.

Credit portfolio management activities

Included in the Firm's end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management" activities). Information on credit portfolio management activities is provided in the table below. For further information on derivatives used in credit portfolio management activities, see Credit derivatives in Note 5.

The Firm also uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain securities held in the Firm's market-making businesses. These credit derivatives are not included in credit portfolio management activities; for further information on these credit derivatives as well as credit derivatives used in the Firm's capacity as a market-maker in credit derivatives, see Credit derivatives in Note 5.

Credit derivatives used in credit portfolio management activities

December 31, (in millions)	Notional amount of protection purchased [(a)] 2017	2016
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 1,867**	$ 2,430
Derivative receivables	**15,742**	19,684
Credit derivatives used in credit portfolio management activities	**$ 17,609**	$ 22,114

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

The credit derivatives used in credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure.

The effectiveness of credit default swaps ("CDS") as a hedge against the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS); the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm); and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's wholesale and certain consumer lending-related commitments.

For a further discussion of the components of the allowance for credit losses and related management judgments, see Critical Accounting Estimates Used by the Firm on pages 138–140 and Note 13.

At least quarterly, the allowance for credit losses is reviewed by the CRO, the CFO and the Controller of the Firm, and discussed with the Board of Directors' Risk Policy Committee ("DRPC") and the Audit Committee. As of December 31, 2017, JPMorgan Chase deemed the allowance for credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio.

The allowance for credit losses decreased as of December 31, 2017, driven by:

- a net reduction in the wholesale allowance, reflecting credit quality improvements in the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios (compared with additions to the allowance in the prior year driven by downgrades in the same portfolios)

largely offset by

- a net increase in the consumer allowance, reflecting
  - additions to the allowance for the credit card and business banking portfolios, driven by loan growth in both of these portfolios and higher loss rates in the credit card portfolio,

  largely offset by
  - a reduction in the allowance for the residential real estate portfolio, predominantly driven by continued improvement in home prices and delinquencies, and
  - the utilization of the allowance in connection with the sale of the student loan portfolio.

For additional information on the consumer and wholesale credit portfolios, see Consumer Credit Portfolio on pages 102-107, Wholesale Credit Portfolio on pages 108–116 and Note 12.

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2017 Consumer, excluding credit card	2017 Credit card	2017 Wholesale	2017 Total	2016 Consumer, excluding credit card	2016 Credit card	2016 Wholesale	2016 Total
Allowance for loan losses								
Beginning balance at January 1,	$ 5,198	$ 4,034	$ 4,544	$ 13,776	$ 5,806	$ 3,434	$ 4,315	$ 13,555
Gross charge-offs	1,779	4,521	212	6,512	1,500	3,799	398	5,697
Gross recoveries	(634)	(398)	(93)	(1,125)	(591)	(357)	(57)	(1,005)
Net charge-offs[a]	1,145	4,123	119	5,387	909	3,442	341	4,692
Write-offs of PCI loans[b]	86	–	–	86	156	–	–	156
Provision for loan losses	613	4,973	(286)	5,300	467	4,042	571	5,080
Other	(1)	–	2	1	(10)	–	(1)	(11)
Ending balance at December 31,	$ 4,579	$ 4,884	$ 4,141	$ 13,604	$ 5,198	$ 4,034	$ 4,544	$ 13,776
Impairment methodology								
Asset-specific[c]	$ 246	$ 383	$ 461	$ 1,090	$ 308	$ 358	$ 342	$ 1,008
Formula-based	2,108	4,501	3,680	10,289	2,579	3,676	4,202	10,457
PCI	2,225	–	–	2,225	2,311	–	–	2,311
Total allowance for loan losses	$ 4,579	$ 4,884	$ 4,141	$ 13,604	$ 5,198	$ 4,034	$ 4,544	$ 13,776
Allowance for lending-related commitments								
Beginning balance at January 1,	$ 26	$ –	$ 1,052	$ 1,078	$ 14	$ –	$ 772	$ 786
Provision for lending-related commitments	7	–	(17)	(10)	–	–	281	281
Other	–	–	–	–	12	–	(1)	11
Ending balance at December 31,	$ 33	$ –	$ 1,035	$ 1,068	$ 26	$ –	$ 1,052	$ 1,078
Impairment methodology								
Asset-specific	$ –	$ –	$ 187	$ 187	$ –	$ –	$ 169	$ 169
Formula-based	33	–	848	881	26	–	883	909
Total allowance for lending-related commitments[d]	$ 33	$ –	$ 1,035	$ 1,068	$ 26	$ –	$ 1,052	$ 1,078
Total allowance for credit losses	$ 4,612	$ 4,884	$ 5,176	$ 14,672	$ 5,224	$ 4,034	$ 5,596	$ 14,854
Memo:								
Retained loans, end of period	$ 372,553	$ 149,387	$ 402,898	$ 924,838	$ 364,406	$ 141,711	$ 383,790	$ 889,907
Retained loans, average	366,798	139,918	392,263	898,979	358,486	131,081	371,778	861,345
PCI loans, end of period	30,576	–	3	30,579	35,679	–	3	35,682
Credit ratios								
Allowance for loan losses to retained loans	1.23%	3.27%	1.03%	1.47%	1.43%	2.85%	1.18%	1.55%
Allowance for loan losses to retained nonaccrual loans[e]	109	NM	239	229	109	NM	233	205
Allowance for loan losses to retained nonaccrual loans excluding credit card	109	NM	239	147	109	NM	233	145
Net charge-off rate[a]	0.31	2.95	0.03	0.60	0.25	2.63	0.09	0.54
Credit ratios, excluding residential real estate PCI loans								
Allowance for loan losses to retained loans	0.69	3.27	1.03	1.27	0.88	2.85	1.18	1.34
Allowance for loan losses to retained nonaccrual loans[e]	56	NM	239	191	61	NM	233	171
Allowance for loan losses to retained nonaccrual loans excluding credit card	56	NM	239	109	61	NM	233	111
Net charge-off rate[a]	0.34%	2.95%	0.03%	0.62%	0.28%	2.63%	0.09%	0.57%

Note: In the table above, the financial measures which exclude the impact of PCI loans are non-GAAP financial measures.

(a) For the year ended December 31, 2017, excluding net charge-offs of $467 million related to the student loan portfolio sale, the net charge-off rate for Consumer, excluding credit card would have been 0.18%; total Firm would have been 0.55%; Consumer, excluding credit card and PCI loans would have been 0.20%; and total Firm, excluding PCI would have been 0.57%.

(b) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation).

(c) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR. The asset-specific credit card allowance for loan losses modified in a TDR is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(d) The allowance for lending-related commitments is reported in accounts payable and other liabilities on the Consolidated balance sheets.

(e) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

Provision for credit losses

The following table presents the components of the Firm's provision for credit losses:

Year ended December 31, (in millions)	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
	2017	2016	2015	**2017**	2016	2015	**2017**	2016	2015
Consumer, excluding credit card	**$ 613**	$ 467	$ (82)	**$ 7**	$ –	$ 1	**$ 620**	$ 467	$ (81)
Credit card	**4,973**	4,042	3,122	**–**	–	–	**4,973**	4,042	3,122
Total consumer	**5,586**	4,509	3,040	**7**	–	1	**5,593**	4,509	3,041
Wholesale	**(286)**	571	623	**(17)**	281	163	**(303)**	852	786
Total	**$ 5,300**	$ 5,080	$ 3,663	**$ (10)**	$ 281	$ 164	**$ 5,290**	$ 5,361	$ 3,827

Provision for credit losses

The provision for credit losses decreased as of December 31, 2017 as a result of:

- a net $422 million reduction in the wholesale allowance for credit losses, reflecting credit quality improvements in the Oil & Gas, Natural Gas Pipelines, and Metals & Mining portfolios, compared with an addition of $511 million in the prior year driven by downgrades in the same portfolios.

The decrease was predominantly offset by

- a higher consumer provision driven by
  - $450 million of higher net charge-offs, primarily in the credit card portfolio due to growth in newer vintages which, as anticipated, have higher loss rates than the more seasoned portion of the portfolio, partially offset by a decrease in net charge-offs in the residential real estate portfolio reflecting continued improvement in home prices and delinquencies,
  - a $218 million impact in connection with the sale of the student loan portfolio, and
  - a $416 million higher addition to the allowance for credit losses.

    Current year additions to the consumer allowance included:
    - an $850 million addition to the allowance for credit losses in the credit card portfolio, compared to a $600 million addition in the prior year, due to higher loss rates and loan growth in both years, and
    - a $50 million addition to the allowance for credit losses in the business banking portfolio, driven by loan growth

    the additions were partially offset by
    - a $316 million net reduction in the allowance for credit losses in the residential real estate portfolio, compared to a $517 million net reduction in the prior year, reflecting continued improvement in home prices and delinquencies in both years.

INVESTMENT PORTFOLIO RISK MANAGEMENT

Investment portfolio risk is the risk associated with the loss of principal or a reduction in expected returns on investments arising from the investment securities portfolio held by Treasury and CIO in connection with the Firm's balance sheet or asset-liability management objectives or from principal investments managed in various LOBs in predominantly privately-held financial assets and instruments. Investments are typically intended to be held over extended periods and, accordingly, the Firm has no expectation for short-term realized gains with respect to these investments.

Investment securities risk

Investment securities risk includes the exposure associated with the default of principal plus coupon payments. This risk is minimized given that Treasury and CIO generally invest in high-quality securities. At December 31, 2017, the investment securities portfolio was $248.0 billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available and where not available, based primarily upon internal ratings that correspond to ratings as defined by S&P and Moody's). For further information on the investment securities portfolio, see Note 10 on pages 203-208. For further information on the market risk inherent in the portfolio, see Market Risk Management on pages 121-128. For further information on related liquidity risk, see Liquidity Risk on pages 92–97.

Governance and oversight

Investment securities risks are governed by the Firm's Risk Appetite framework, and discussed at the CIO, Treasury and Corporate (CTC) Risk Committee with regular updates to the DRPC.

The Firm's independent control functions are responsible for reviewing the appropriateness of the carrying value of investment securities in accordance with relevant policies. Approved levels for investment securities are established for each risk category, including capital and credit risks.

Principal investment risk

Principal investments are typically private non-traded financial instruments representing ownership or other forms of junior capital. Principal investments cover multiple asset classes and are made either in stand-alone investing businesses or as part of a broader business platform. As of December 31, 2017, the carrying value of the principal investment portfolios included tax-oriented investments (e.g., affordable housing and alternative energy investments) of $14.0 billion and private equity and various debt and equity instruments of $5.5 billion. Increasingly, new principal investment activity seeks to enhance or accelerate LOB strategic business initiatives. The Firm's principal investments are managed under various LOBs and are reflected within the respective LOB financial results.

Governance and oversight

The Firm's approach to managing principal risk is consistent with the Firm's general risk governance structure. A Firmwide risk policy framework exists for all principal investing activities. All investments are approved by investment committees that include executives who are independent from the investing businesses.

The Firm's independent control functions are responsible for reviewing the appropriateness of the carrying value of investments in accordance with relevant policies. Approved levels for investments are established for each relevant business in order to manage the overall size of the portfolios.

Industry, geographic and position level concentration limits have been set and are intended to ensure diversification of the portfolios. The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves and/or other risk events.

Market risk is the risk associated with the effect of changes in market factors, such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term.

Market Risk Management

Market Risk Management monitors market risks throughout the Firm and defines market risk policies and procedures. The Market Risk Management function reports to the Firm's CRO.

Market Risk Management seeks to manage risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk Management is responsible for the following functions:

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk measurement

Tools used to measure risk

There is no single measure to capture market risk and therefore the Firm uses various metrics, both statistical and nonstatistical, to assess risk including:

- VaR
- Economic-value stress testing
- Nonstatistical risk measures
- Loss advisories
- Profit and loss drawdowns
- Earnings-at-risk
- Other sensitivities

Risk monitoring and control

Market risk exposure is managed primarily through a series of limits set in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity and accommodation of client business, and management experience. The Firm maintains different levels of limits. Corporate level limits include VaR and stress limits. Similarly, line of business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns. Limits may also be set within the lines of business, as well at the portfolio or legal entity level.

Market Risk Management sets limits and regularly reviews and updates them as appropriate, with any changes approved by line of business management and Market Risk Management. Senior management, including the Firm's CEO and CRO, are responsible for reviewing and approving certain of these risk limits on an ongoing basis. All limits that have not been reviewed within specified time periods by Market Risk Management are escalated to senior management. The lines of business are responsible for adhering to established limits against which exposures are monitored and reported.

Limit breaches are required to be reported in a timely manner to limit approvers, Market Risk Management and senior management. In the event of a breach, Market Risk Management consults with senior management of the Firm and the line of business senior management to determine the appropriate course of action required to return the applicable positions to compliance, which may include a reduction in risk in order to remedy the breach. Certain Firm or line of business-level limits that have been breached for three business days or longer, or by more than 30%, are escalated to senior management and the Firmwide Risk Committee.

The following table summarizes by line of business the predominant business activities that give rise to market risk, and certain market risk tools used to measure those risks.

Risk identification and classification by line of business

Line of Business	Predominant business activities and related market risks	Positions included in Risk Management VaR	Positions included in earnings-at-risk	Positions included in other sensitivity-based measures
CCB	• Services mortgage loans which give rise to complex, non-linear interest rate and basis risk • Non-linear risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing • Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates • Originates loans and takes deposits	• Mortgage pipeline loans, classified as derivatives • Warehouse loans, classified as trading assets – debt instruments • MSRs • Hedges of pipeline loans, warehouse loans and MSRs, classified as derivatives • Interest-only securities, classified as trading assets - debt instruments, and related hedges, classified as derivatives	• Retained loan portfolio • Deposits	
CIB	• Makes markets and services clients across fixed income, foreign exchange, equities and commodities • Market risk arises from changes in market prices (e.g., rates and credit spreads) resulting in a potential decline in net income • Originates loans and takes deposits	• Trading assets/liabilities – debt and marketable equity instruments, and derivatives, including hedges of the retained loan portfolio • Certain securities purchased, loaned or sold under resale agreements and securities borrowed • Fair value option elected liabilities • Derivative CVA and associated hedges	• Retained loan portfolio • Deposits	• Private equity investments measured at fair value • Derivatives FVA and fair value option elected liabilities DVA
CB	• Engages in traditional wholesale banking activities which include extensions of loans and credit facilities and taking deposits • Risk arises from changes in interest rates and prepayment risk with potential for adverse impact on net interest income and interest-rate sensitive fees		• Retained loan portfolio • Deposits	
AWM	• Provides initial capital investments in products such as mutual funds, which give rise to market risk arising from changes in market prices in such products • Originates loans and takes deposits	• Debt securities held in advance of distribution to clients, classified as trading assets - debt instruments	• Retained loan portfolio • Deposits	• Initial seed capital investments and related hedges, classified as derivatives • Capital invested alongside third-party investors, typically in privately distributed collective vehicles managed by AWM (i.e., co-investments)
Corporate	• Manages the Firm's liquidity, funding, structural interest rate and foreign exchange risks arising from activities undertaken by the Firm's four major reportable business segments	• Derivative positions measured at fair value through noninterest revenue in earnings • Marketable equity investments measured at fair value through noninterest revenue in earnings	• Deposits with banks • Investment securities portfolio and related interest rate hedges • Long-term debt and related interest rate hedges	• Private equity investments measured at fair value • Foreign exchange exposure related to Firm-issued non-USD long-term debt ("LTD") and related hedges

Value-at-risk

JPMorgan Chase utilizes VaR, a statistical risk measure, to estimate the potential loss from adverse market moves in a normal market environment. The Firm has a single VaR framework used as a basis for calculating Risk Management VaR and Regulatory VaR.

The framework is employed across the Firm using historical simulation based on data for the previous 12 months. The framework's approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. The Firm believes the use of Risk Management VaR provides a stable measure of VaR that is closely aligned to the day-to-day risk management decisions made by the lines of business, and provides the appropriate information needed to respond to risk events on a daily basis.

The Firm's Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. Risk Management VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks and monitoring limits across businesses. VaR results are reported to senior management, the Board of Directors and regulators.

Under the Firm's Risk Management VaR methodology, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR "back-testing exceptions," defined as losses greater than that predicted by VaR estimates, an average of five times every 100 trading days. The number of VaR back-testing exceptions observed can differ from the statistically expected number of back-testing exceptions if the current level of market volatility is materially different from the level of market volatility during the 12 months of historical data used in the VaR calculation.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual products and/or risk factors. To capture material market risks as part of the Firm's risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period; inputs are selected based on the risk profile of each portfolio, as sensitivities and historical time series used to generate daily market values may be different across product types or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

As VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses, and it is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions.

For certain products, specific risk parameters are not captured in VaR due to the lack of inherent liquidity and availability of appropriate historical data. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. The Firm therefore considers other measures such as stress testing and nonstatistical measures, in addition to VaR, to capture and manage its market risk positions.

The daily market data used in VaR models may be different than the independent third-party data collected for VCG price testing in its monthly valuation process. For example, in cases where market prices are not observable, or where proxies are used in VaR historical time series, the data sources may differ (see Valuation process in Note 2 for further information on the Firm's valuation process). Because VaR model calculations require daily data and a consistent source for valuation, it may not be practical to use the data collected in the VCG monthly valuation process for VaR model calculations.

The Firm's VaR model calculations are periodically evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and measurements, and other factors. Such changes may affect historical comparisons of VaR results. For information regarding model reviews and approvals, see Model Risk Management on page 137.

The Firm calculates separately a daily aggregated VaR in accordance with regulatory rules ("Regulatory VaR"), which is used to derive the Firm's regulatory VaR-based capital requirements under Basel III. This Regulatory VaR model framework currently assumes a ten business-day holding period and an expected tail loss methodology which approximates a 99% confidence level. Regulatory VaR is applied to "covered" positions as defined by Basel III, which may be different than the positions included in the Firm's Risk Management VaR. For example, credit derivative hedges of accrual loans are included in the Firm's Risk Management VaR, while Regulatory VaR excludes these credit derivative hedges. In addition, in contrast to the Firm's Risk Management VaR, Regulatory VaR currently excludes the diversification benefit for certain VaR models.

For additional information on Regulatory VaR and the other components of market risk regulatory capital for the Firm (e.g., VaR-based measure, stressed VaR-based measure and the respective backtesting), see JPMorgan Chase's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website at: (http://investor.shareholder.com/jpmorganchase/basel.cfm).

The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level.

Total VaR

As of or for the year ended December 31,	2017			2016		
(in millions)	Avg.	Min	Max	Avg.	Min	Max
CIB trading VaR by risk type						
Fixed income	**$ 28**	**$ 20**	**$ 40**	$ 45	$ 33	$ 65
Foreign exchange	**10**	**4**	**20**	12	7	27
Equities	**12**	**8**	**19**	13	5	32
Commodities and other	**7**	**4**	**10**	9	7	11
Diversification benefit to CIB trading VaR	**(30)** [a]	**NM** [b]	**NM** [b]	(36) [a]	NM [b]	NM [b]
CIB trading VaR	**27**	**14** [b]	**38** [b]	43	28 [b]	79 [b]
Credit portfolio VaR	**7**	**3**	**12**	12	10	16
Diversification benefit to CIB VaR	**(6)** [a]	**NM** [b]	**NM** [b]	(10) [a]	NM [b]	NM [b]
CIB VaR	**28**	**17** [b]	**39** [b]	45	32 [b]	81 [b]
CCB VaR	**2**	**1**	**4**	3	1	6
Corporate VaR	**4**	**1**	**16** [c]	6	3	13 [c]
AWM VaR	**–**	**–**	**–**	2	–	4
Diversification benefit to other VaR	**(1)** [a]	**NM** [b]	**NM** [b]	(3) [a]	NM [b]	NM [b]
Other VaR	**5**	**2** [b]	**16** [b]	8	4 [b]	16 [b]
Diversification benefit to CIB and other VaR	**(4)** [a]	**NM** [b]	**NM** [b]	(8) [a]	NM [b]	NM [b]
Total VaR	**$ 29**	**$ 17** [b]	**$ 42** [b]	$ 45	$ 33 [b]	$ 78 [b]

(a) Average portfolio VaR is less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects that the risks are not perfectly correlated.

(b) Diversification benefit represents the difference between the total VaR and each reported level and the sum of its individual components. Diversification benefit reflects the non-additive nature of VaR due to imperfect correlation across lines of business and risk types. The maximum and minimum VaR for each portfolio may have occurred on different trading days than the components and consequently diversification benefit is not meaningful.

(c) Maximum Corporate VaR was higher than the prior year, due to a Private Equity position that became publicly traded in the fourth quarter of 2017. Previously, this position was included in other sensitivity-based measures.

Average Total VaR decreased $16 million for the year-ended December 31, 2017 as compared with the prior year. The reduction is a result of refinements made to VaR models for certain asset-backed products, changes made to the scope of positions included in VaR in the third quarter of 2016, and lower volatility in the one-year historical look-back period.

In addition, Credit Portfolio VaR declined by $5 million reflecting the sale of select positions and lower volatility in the one-year historical look-back period.

In the first quarter of 2017, the Firm refined the historical proxy time series inputs to certain VaR models. These refinements are intended to more appropriately reflect the risk exposure from certain asset-backed products. In the absence of this refinement, the average Total VaR, CIB fixed income VaR, CIB trading VaR and CIB VaR would have each been higher by $4 million for the year ended December 31, 2017.

VaR can vary significantly as positions change, market volatility fluctuates, and diversification benefits change.

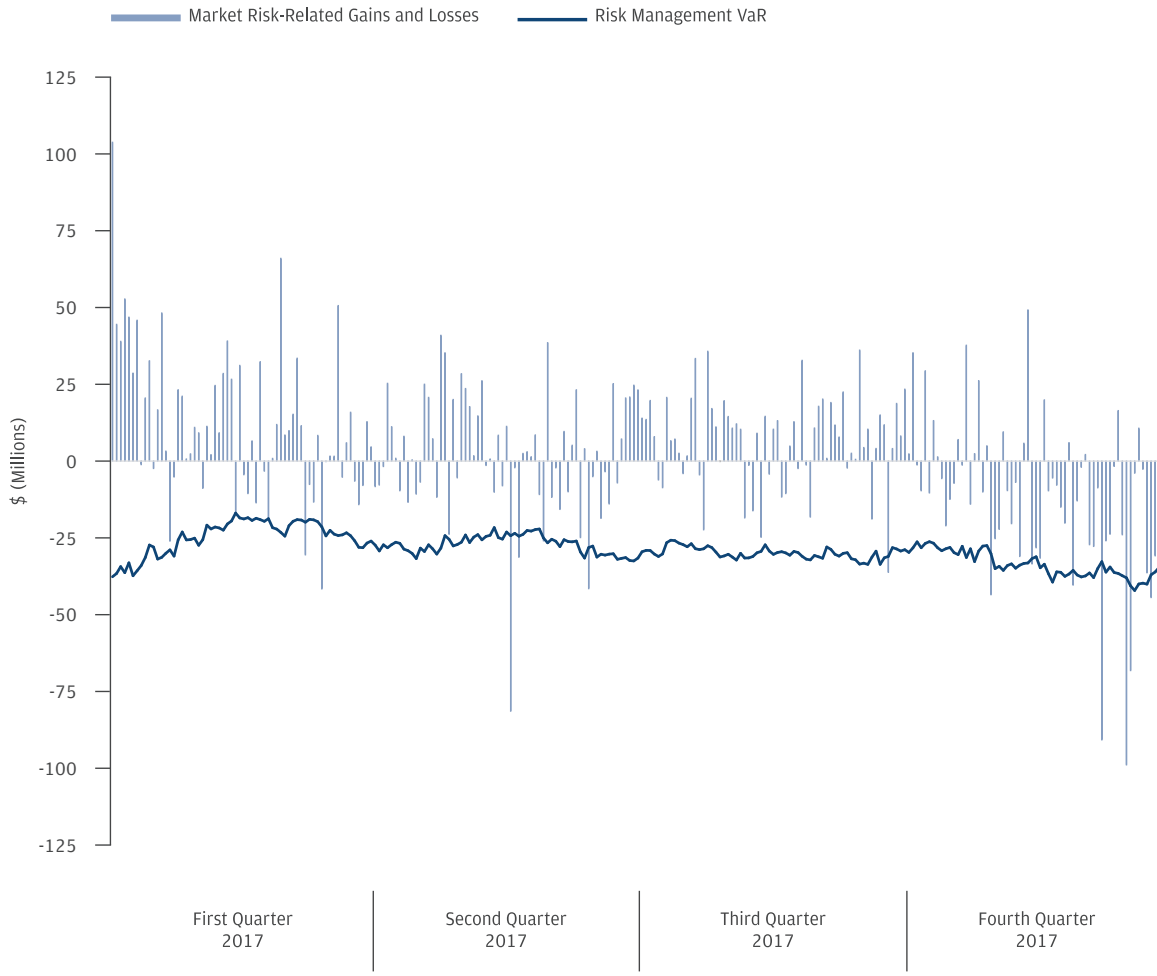
VaR back-testing

The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses actually recognized on market-risk related revenue.

The Firm's definition of market risk-related gains and losses is consistent with the definition used by the banking regulators under Basel III. Under this definition market risk-related gains and losses are defined as: gains and losses on the positions included in the Firm's Risk Management VaR, excluding fees, commissions, certain valuation adjustments (e.g., liquidity and FVA), net interest income, and gains and losses arising from intraday trading.

The following chart compares actual daily market risk-related gains and losses with the Firm's Risk Management VaR for the year ended December 31, 2017. As the chart presents market risk-related gains and losses related to those positions included in the Firm's Risk Management VaR, the results in the table below differ from the results of back-testing disclosed in the Market Risk section of the Firm's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are based on Regulatory VaR applied to covered positions. The chart shows that for the year ended December 31, 2017 the Firm observed 15 VaR back-testing exceptions and posted gains on 145 of the 258 days.

Daily Market Risk-Related Gains and Losses
vs. Risk Management VaR (1-day, 95% Confidence level)
Year ended December 31, 2017



Other risk measures

Economic-value stress testing

Along with VaR, stress testing is an important tool in measuring and controlling risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing is intended to capture the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates and commodity prices.

The Firm uses a number of standard scenarios that capture different risk factors across asset classes including geographical factors, specific idiosyncratic factors and extreme tail events. The stress framework calculates multiple magnitudes of potential stress for both market rallies and market sell-offs for each risk factor and combines them in multiple ways to capture different market scenarios. For example, certain scenarios assess the potential loss arising from current exposures held by the Firm due to a broad sell-off in bond markets or an extreme widening in corporate credit spreads. The flexibility of the stress testing framework allows risk managers to construct new, specific scenarios that can be used to form decisions about future possible stress events.

Stress testing complements VaR by allowing risk managers to shock current market prices to more extreme levels relative to those historically realized, and to stress test the relationships between market prices under extreme scenarios. Stress scenarios are defined and reviewed by Market Risk Management, and significant changes are reviewed by the relevant LOB Risk Committees and may be redefined on a periodic basis to reflect current market conditions.

Stress-test results, trends and qualitative explanations based on current market risk positions are reported to the respective LOBs and the Firm's senior management to allow them to better understand the sensitivity of positions to certain defined events and to enable them to manage their risks with more transparency. Results are also reported to the Board of Directors.

The Firm's stress testing framework is utilized in calculating results for the Firm's CCAR and ICAAP processes. In addition, the results are incorporated into the quarterly assessment of the Firm's Risk Appetite Framework and are also presented to the DRPC.

Nonstatistical risk measures

Nonstatistical risk measures include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line of business and by risk type, and are also used for monitoring internal market risk limits.

Loss advisories and profit and loss drawdowns

Loss advisories and profit and loss drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Profit and loss drawdowns are defined as the decline in net profit and loss since the year-to-date peak revenue level.

Earnings-at-risk

The VaR and sensitivity measures illustrate the economic sensitivity of the Firm's Consolidated balance sheets to changes in market variables.

The effect of interest rate exposure on the Firm's reported net income is also important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits and issuing debt. The Firm evaluates its structural interest rate risk exposure through earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's net interest income and interest rate-sensitive fees. For a summary by line of business, identifying positions included in earnings-at-risk, see the table on page 122.

The CTC Risk Committee establishes the Firm's structural interest rate risk policies and market risk limits, which are subject to approval by the DRPC. Treasury and CIO, working in partnership with the lines of business, calculates the Firm's structural interest rate risk profile and reviews it with senior management including the CTC Risk Committee and the Firm's ALCO. In addition, oversight of structural interest rate risk is managed through a dedicated risk function reporting to the CTC CRO. This risk function is responsible for providing independent oversight and governance around assumptions and establishing and monitoring limits for structural interest rate risk. The Firm manages structural interest rate risk generally through its investment securities portfolio and interest rate derivatives.

Structural interest rate risk can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve)
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, firmwide basis. Business units transfer their interest rate risk to Treasury and CIO through funds transfer pricing, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm generates a baseline for net interest income and certain interest rate-sensitive fees, and then conducts simulations of changes for interest rate-sensitive assets and liabilities denominated in U.S. dollars and other currencies ("non-U.S. dollar" currencies). This simulation primarily includes, retained loans, deposits, deposits with banks, investment securities, long term debt and any related interest rate hedges, and excludes other positions in risk management VaR and other sensitivity-based measures as described on page 122.

Earnings-at-risk scenarios estimate the potential change in this baseline, over the following 12 months utilizing multiple assumptions. These scenarios consider the impact on exposures as a result of changes in interest rates from baseline rates, as well as pricing sensitivities of deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, as well as modeled prepayment and reinvestment behavior, but do not include assumptions about actions that could be taken by the Firm in response to any such instantaneous rate changes. Mortgage prepayment assumptions are based on scenario interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience. The pricing sensitivity of deposits in the baseline and scenarios use assumed rates paid which may differ from actual rates paid due to timing lags and other factors. The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors.

The Firm's U.S. dollar sensitivities are presented in the table below.

JPMorgan Chase's 12-month earnings-at-risk sensitivity profiles

U.S. dollar	Instantaneous change in rates			
(in billions)	+200 bps	+100 bps	-100 bps	-200 bps
December 31, 2017	**$ 2.4**	**$ 1.7**	**(3.6)** [a]	**NM** [b]
December 31, 2016	$ 4.0	$ 2.4	NM [b]	NM [b]

(a) As a result of the 2017 increase in the Fed Funds target rate to between 1.25% and 1.50%, the -100 bps sensitivity has been included.

(b) Given the level of market interest rates, these downward parallel earnings-at-risk scenarios are not considered to be meaningful.

The non-U.S. dollar sensitivities for an instantaneous increase in rates by 200 and 100 basis points results in a 12-month benefit to net interest income of approximately $800 million and $500 million, respectively, at December 31, 2017 and were not material at December 31, 2016. The non-U.S. dollar sensitivities for an instantaneous decrease in rates by 200 and 100 basis points were not material to the Firm's earnings-at-risk at December 31, 2017 and 2016.

The Firm's sensitivity to rates is largely a result of assets repricing at a faster pace than deposits.

The Firm's net U.S. dollar sensitivities for an instantaneous increase in rates by 200 and 100 basis points decreased by approximately $1.6 billion and $700 million, respectively, when compared to December 31, 2016. The primary driver of that decrease was the updating of the Firm's baseline to reflect higher interest rates. As higher interest rates are reflected in the Firm's baselines, the magnitude of the sensitivity to further increases in rates would be expected to be less significant.

Separately, another U.S. dollar interest rate scenario used by the Firm — involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels — results in a 12-month benefit to net interest income of approximately $700 million and $800 million at December 31, 2017 and 2016, respectively. The increase in net interest income under this scenario reflects the Firm reinvesting at the higher long-term rates, with funding costs remaining unchanged. The results of the comparable non-U.S. dollar scenarios were not material to the Firm at December 31, 2017 and 2016.

Non-U.S. dollar foreign exchange risk

Non-U.S. dollar FX risk is the risk that changes in foreign exchange rates affect the value of the Firm's assets or liabilities or future results. The Firm has structural non-U.S. dollar FX exposures arising from capital investments, forecasted expense and revenue, the investment securities portfolio and non-U.S. dollar-denominated debt issuance. Treasury and CIO, working in partnership with the lines of business, primarily manage these risks on behalf of the Firm. Treasury and CIO may hedge certain of these risks using derivatives within risk limits governed by the CTC Risk Committee.

Other sensitivity-based measures

The Firm quantifies the market risk of certain investment and funding activities by assessing the potential impact on net revenue and OCI due to changes in relevant market variables. For additional information on the positions captured in other sensitivity-based measures, please refer to the Risk identification and classification table on page 122.

The table below represents the potential impact to net revenue or OCI for market risk sensitive instruments that are not included in VaR or earnings-at-risk. Where appropriate, instruments used for hedging purposes are reported along with the positions being hedged. The sensitivities disclosed in the table below may not be representative of the actual gain or loss that would have been realized at December 31, 2017, as the movement in market parameters across maturities may vary and are not intended to imply management's expectation of future deterioration in these sensitivities.

Gain/(loss) (in millions)				
Activity	**Description**	**Sensitivity measure**	**December 31, 2017**	**December 31, 2016**
Investment activities				
Investment management activities	Consists of seed capital and related hedges; and fund co-investments	10% decline in market value	$ (110)	$ (166)
Other investments	Consists of private equity and other investments held at fair value	10% decline in market value	(338)	(358)
Funding activities				
Non-USD LTD cross-currency basis	Represents the basis risk on derivatives used to hedge the foreign exchange risk on the non-USD LTD	1 basis point parallel tightening of cross currency basis	(10)	(7)
Non-USD LTD hedges foreign currency ("FX") exposure	Primarily represents the foreign exchange revaluation on the fair value of the derivative hedges	10% depreciation of currency	(13)	(23)
Derivatives – funding spread risk	Impact of changes in the spread related to derivatives FVA	1 basis point parallel increase in spread	(6)	(4)
Fair value option elected liabilities – funding spread risk	Impact of changes in the spread related to fair value option elected liabilities DVA[(a)]	1 basis point parallel increase in spread	22	17
Fair value option elected liabilities – interest rate sensitivity	Interest rate sensitivity on fair value option liabilities resulting from a change in the Firm's own credit spread[(a)]	1 basis point parallel increase in spread	(1)	NA

(a) Impact recognized through OCI.

COUNTRY RISK MANAGEMENT

The Firm has a country risk management framework for monitoring and assessing how financial, economic, political or other significant developments adversely affect the value of the Firm's exposures related to a particular country or set of countries. The Country Risk Management group actively monitors the various portfolios which may be impacted by these developments to ensure the Firm's exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

Organization and management

Country Risk Management is an independent risk management function that assesses, manages and monitors country risk originated across the Firm. The Firmwide Risk Executive for Country Risk reports to the Firm's CRO.

The Firm's country risk management function includes the following activities:

- Establishing policies, procedures and standards consistent with a comprehensive country risk framework
- Assigning sovereign ratings, and assessing country risks and establishing risk tolerance relative to a country
- Measuring and monitoring country risk exposure and stress across the Firm
- Managing and approving country limits and reporting trends and limit breaches to senior management
- Developing surveillance tools, such as signaling models and ratings indicators, for early identification of potential country risk concerns
- Providing country risk scenario analysis

Sources and measurement

The Firm is exposed to country risk through its lending and deposits, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country. Under the Firm's internal country risk management approach, country exposure is reported based on the country where the majority of the assets of the obligor, counterparty, issuer or guarantor are located or where the majority of its revenue is derived, which may be different than the domicile (legal residence) or country of incorporation of the obligor, counterparty, issuer or guarantor. Country exposures are generally measured by considering the Firm's risk to an immediate default of the counterparty or obligor, with zero recovery. Assumptions are sometimes required in determining the measurement and allocation of country exposure, particularly in the case of certain non-linear or index exposures. The use of different measurement approaches or assumptions could affect the amount of reported country exposure.

Under the Firm's internal country risk measurement framework:

- Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and cash and marketable securities collateral received
- Deposits are measured as the cash balances placed with central and commercial banks
- Securities financing exposures are measured at their receivable balance, net of collateral received
- Debt and equity securities are measured at the fair value of all positions, including both long and short positions
- Counterparty exposure on derivative receivables is measured at the derivative's fair value, net of the fair value of the related collateral. Counterparty exposure on derivatives can change significantly because of market movements
- Credit derivatives protection purchased and sold is reported based on the underlying reference entity and is measured at the notional amount of protection purchased or sold, net of the fair value of the recognized derivative receivable or payable. Credit derivatives protection purchased and sold in the Firm's market-making activities is measured on a net basis, as such activities often result in selling and purchasing protection related to the same underlying reference entity; this reflects the manner in which the Firm manages these exposures

Some activities may create contingent or indirect exposure related to a country (for example, providing clearing services or secondary exposure to collateral on securities financing receivables). These exposures are managed in the normal course of business through the Firm's credit, market, and operational risk governance, rather than through Country Risk Management.

The Firm's internal country risk reporting differs from the reporting provided under the FFIEC bank regulatory requirements. For further information on the FFIEC's reporting methodology, see Cross-border outstandings on page 296 of the 2017 Form 10-K.

Stress testing

Stress testing is an important component of the Firm's country risk management framework, which aims to estimate and limit losses arising from a country crisis by measuring the impact of adverse asset price movements to a country based on market shocks combined with counterparty specific assumptions. Country Risk Management periodically designs and runs tailored stress scenarios to test vulnerabilities to individual countries, or groups of countries, in response to specific or potential market events, sector performance concerns and geopolitical risks. These tailored stress results are used to assess potential risk reduction across the Firm, as necessary.

Risk Reporting

To enable effective risk management of country risk to the Firm, country nominal exposure and stress are measured and reported weekly, and used by Country Risk Management to identify trends, and monitor high usages and breaches against limits.

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of December 31, 2017. The selection of countries represents the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions. Country exposures may fluctuate from period to period due to client activity and market flows.

Top 20 country exposures (excluding the U.S.)[(a)]

	December 31, 2017			
(in billions)	Lending and deposits[(b)]	Trading and investing[(c)(d)]	Other[(e)]	Total exposure
Germany	$ 43.3	$ 13.8	$ 0.3	$ 57.4
United Kingdom	32.0	11.5	2.8	46.3
Japan	24.7	5.7	0.4	30.8
France	12.5	6.6	0.3	19.4
China	9.6	5.5	1.2	16.3
Canada	12.2	2.5	0.2	14.9
Switzerland	8.5	1.5	3.9	13.9
India	5.3	6.1	0.9	12.3
Australia	5.8	5.6	–	11.4
Luxembourg	8.7	0.8	–	9.5
Netherlands	6.6	0.8	0.6	8.0
Spain	4.7	2.1	0.1	6.9
South Korea	4.6	1.9	0.3	6.8
Italy	3.5	3.1	0.1	6.7
Singapore	4.0	1.2	1.1	6.3
Mexico	4.0	1.2	–	5.2
Brazil	3.2	1.4	0.5	5.1
Hong Kong	2.3	0.9	1.6	4.8
Saudi Arabia	3.8	0.7	–	4.5
Belgium	2.7	1.5	–	4.2

(a) Country exposures above reflect 86% of total firmwide non U.S. exposure.
(b) Lending and deposits includes loans and accrued interest receivable (net of collateral and the allowance for loan losses), deposits with banks (including central banks), acceptances, other monetary assets, issued letters of credit net of participations, and unused commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities.
(c) Includes market-making inventory, AFS securities, counterparty exposure on derivative and securities financings net of collateral and hedging.
(d) Includes single reference entity ("single-name"), index and other multiple reference entity transactions for which one or more of the underlying reference entities is in a country listed in the above table.
(e) Includes capital invested in local entities and physical commodity inventory.

Operational risk is the risk associated with inadequate or failed internal processes, people and systems, or from external events; operational risk includes cybersecurity risk, business and technology resiliency risk, payment fraud risk, and third-party outsourcing risk. Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business interruptions, inappropriate employee behavior, failure to comply with applicable laws and regulations or failure of vendors to perform in accordance with their arrangements. These events could result in financial losses, litigation and regulatory fines, as well as other damages to the Firm. The goal is to keep operational risk at appropriate levels in light of the Firm's financial position, the characteristics of its businesses, and the markets and regulatory environments in which it operates.

Operational Risk Management Framework

To monitor and control operational risk, the Firm has an Operational Risk Management Framework ("ORMF") which is designed to enable the Firm to maintain a sound and well-controlled operational environment. The ORMF has four main components: Governance, Risk Identification and Assessment, Measurement, and Monitoring and Reporting.

Governance

The lines of business and corporate functions are responsible for owning and managing their operational risks. The Firmwide Oversight and Control Group, which consists of control officers within each line of business and corporate function, is responsible for the day-to-day execution of the ORMF.

Line of business and corporate function control committees oversee the operational risk and control environments of their respective businesses and functions. These committees escalate operational risk issues to the FCC, as appropriate. For additional information on the FCC, see Enterprise-wide Risk Management on pages 75–137.

The Firmwide Risk Executive for Operational Risk Governance ("ORG"), a direct report to the CRO, is responsible for defining the ORMF and establishing minimum standards for its execution. Operational Risk Officers report to both the line of business CROs and to the Firmwide Risk Executive for ORG, and are independent of the respective businesses or corporate functions they oversee.

The Firm's Operational Risk Governance Policy is approved by the DRPC. This policy establishes the Operational Risk Management Framework for the Firm.

Risk identification and assessment

The Firm utilizes several tools to identify, assess, mitigate and manage its operational risk. One such tool is the Risk and Control Self-Assessment ("RCSA") program which is executed by LOBs and corporate functions in accordance with the minimum standards established by ORG. As part of the RCSA program, lines of business and corporate functions identify key operational risks inherent in their activities, evaluate the effectiveness of relevant controls in place to mitigate identified risks, and define actions to reduce residual risk. Action plans are developed for identified control issues and businesses and corporate functions are held accountable for tracking and resolving issues in a timely manner. Operational Risk Officers independently challenge the execution of the RCSA program and evaluate the appropriateness of the residual risk results.

In addition to the RCSA program, the Firm tracks and monitors events that have led to or could lead to actual operational risk losses, including litigation-related events. Responsible businesses and corporate functions analyze their losses to evaluate the effectiveness of their control environment to assess where controls have failed, and to determine where targeted remediation efforts may be required. ORG provides oversight of these activities and may also perform independent assessments of significant operational risk events and areas of concentrated or emerging risk.

Measurement

In addition to the level of actual operational risk losses, operational risk measurement includes operational risk-based capital and operational risk loss projections under both baseline and stressed conditions.

The primary component of the operational risk capital estimate is the Loss Distribution Approach ("LDA") statistical model, which simulates the frequency and severity of future operational risk loss projections based on historical data. The LDA model is used to estimate an aggregate operational risk loss over a one-year time horizon, at a 99.9% confidence level. The LDA model incorporates actual internal operational risk losses in the quarter following the period in which those losses were realized, and the calculation generally continues to reflect such losses even after the issues or business activities giving rise to the losses have been remediated or reduced.

As required under the Basel III capital framework, the Firm's operational risk-based capital methodology, which uses the Advanced Measurement Approach, incorporates internal and external losses as well as management's view of tail risk captured through operational risk scenario analysis, and evaluation of key business environment and internal control metrics.

The Firm considers the impact of stressed economic conditions on operational risk losses and develops a forward looking view of material operational risk events that may occur in a stressed environment. The Firm's operational risk stress testing framework is utilized in calculating results for the Firm's CCAR and ICAAP processes.

For information related to operational risk RWA, CCAR or ICAAP, see Capital Risk Management section, pages 82–91.

Monitoring and reporting
ORG has established standards for consistent operational risk monitoring and reporting. The standards also reinforce escalation protocols to senior management and to the Board of Directors. Operational risk reports are produced on a firmwide basis as well as by line of business and corporate function.

Subcategories and examples of operational risks

As mentioned previously, operational risk can manifest itself in various ways. Operational risk subcategories such as Compliance risk, Conduct risk, Legal risk and Estimations and Model risk, as well as other operational risks, can lead to losses which are captured through the Firm's operational risk measurement processes. More information on Compliance risk, Conduct risk, Legal risk and Estimations and Model risk subcategories are discussed on pages 134, 135, 136 and 137, respectively. Details on other select examples of operational risks are provided below.

Cybersecurity risk
Cybersecurity risk is an important, continuous and evolving focus for the Firm. The Firm devotes significant resources to protecting and continuing to improve the security of the Firm's computer systems, software, networks and other technology assets. The Firm's security efforts are intended to protect against, among other things, cybersecurity attacks by unauthorized parties to obtain access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage. The Firm continues to make significant investments in enhancing its cyberdefense capabilities and to strengthen its partnerships with the appropriate government and law enforcement agencies and other businesses in order to understand the full spectrum of cybersecurity risks in the operating environment, enhance defenses and improve resiliency against cybersecurity threats. The Firm actively participates in discussions of cybersecurity risks with law enforcement, government officials, peer and industry groups, and has significantly increased efforts to educate employees and certain clients on the topic. Third parties with which the Firm does business or that facilitate the Firm's business activities (e.g., vendors, exchanges, clearing houses, central depositories, and financial intermediaries) could also be sources of cybersecurity risk to the Firm. Third party cybersecurity incidents such as system breakdowns or failures, misconduct by the employees of such parties, or cyberattacks could affect their ability to deliver a product or service to the Firm or result in lost or compromised information of the Firm or its clients. Clients can also be sources of cybersecurity risk to the Firm, particularly when their activities and systems are beyond the Firm's own security and control systems. As a result, the Firm engages in regular and ongoing discussions with certain vendors and clients regarding cybersecurity risks and opportunities to improve security. However, where cybersecurity incidents are due to client failure to maintain the security of their own systems and processes, clients will generally be responsible for losses incurred.

To protect the confidentiality, integrity and availability of the Firm's infrastructure, resources and information, the Firm leverages the ORMF to ensure risks are identified and managed within defined corporate tolerances. The Firm's Board of Directors and the Audit Committee are regularly briefed on the Firm's cybersecurity policies and practices and ongoing efforts to improve security, as well as its efforts regarding significant cybersecurity events.

Business and technology resiliency risk
Business disruptions can occur due to forces beyond the Firm's control such as severe weather, power or telecommunications loss, flooding, transit strikes, terrorist threats or infectious disease. The safety of the Firm's employees and customers is of the highest priority. The Firm's global resiliency program is intended to enable the Firm to recover its critical business functions and supporting assets (i.e., staff, technology and facilities) in the event of a business interruption. The program includes corporate governance, awareness and training, as well as strategic and tactical initiatives to identify, assess, and manage business interruption and public safety risks.

The strength and proficiency of the Firm's global resiliency program has played an integral role in maintaining the Firm's business operations during and after various events.

Payment fraud risk
Payment fraud risk is the risk of external and internal parties unlawfully obtaining personal monetary benefit through misdirected or otherwise improper payment, and exposing the Firm to financial or reputational harm. Over the past year, the risk of payment fraud remained at a heightened level across the industry. The complexities of these attacks along with perpetrators' strategies continue to evolve. A Payments Control Program has been established that includes Cybersecurity, Operations, Technology, Risk and the lines of business to manage the risk, implement controls and provide employee and client education and awareness training. In addition, a new wholesale fraud detection solution has been introduced which monitors high value payments for certain anomalies. The Firm's monitoring of customer behavior is periodically evaluated and enhanced, and attempts to detect and mitigate new strategies implemented by fraud perpetrators. The Firm's consumer and wholesale businesses collaborate closely to deploy risk mitigation controls across their businesses.

Third-party outsourcing risk

To identify and manage the operational risk inherent in its outsourcing activities, the Firm has a Third-Party Oversight ("TPO") framework to assist lines of business and corporate functions in selecting, documenting, onboarding, monitoring and managing their supplier relationships. The objective of the TPO framework is to hold third parties to the same high level of operational performance as is expected of the Firm's internal operations. The Corporate Third-Party Oversight group is responsible for Firmwide TPO training, monitoring, reporting and standards.

Insurance

One of the ways in which operational risk may be mitigated is through insurance maintained by the Firm. The Firm purchases insurance from commercial insurers and utilizes a wholly-owned captive insurer, Park Assurance Company, to ensure compliance with local laws and regulations (e.g., workers compensation), as well as to serve other needs (e.g., property loss and public liability). Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

Compliance risk, a subcategory of operational risk, is the risk of failure to comply with applicable laws, rules and regulations.

Overview

Each line of business and function is accountable for managing its compliance risk. The Firm's Compliance Organization ("Compliance"), which is independent of the lines of business, works closely with senior management to provide independent review, monitoring and oversight of business operations with a focus on compliance with the legal and regulatory obligations applicable to the delivery of the Firm's products and services to clients and customers.

These compliance risks relate to a wide variety of legal and regulatory obligations, depending on the line of business and the jurisdiction, and include those related to financial products and services, relationships and interactions with clients and customers, and employee activities. For example, compliance risks include those associated with anti-money laundering compliance, trading activities, market conduct, and complying with the rules and regulations related to the offering of products and services across jurisdictional borders, among others. Compliance risk is also inherent in the Firm's fiduciary activities, including the failure to exercise the applicable high standard of care (such as the duties of loyalty or care), to act in the best interest of clients and customers or to treat clients and customers fairly.

Other Functions provide oversight of significant regulatory obligations that are specific to their respective areas of responsibility.

Compliance implements various practices designed to identify and mitigate compliance risk by establishing policies, testing, monitoring, training and providing guidance.

Governance and oversight

Compliance is led by the Firms' CCO who reports to the Firm's CRO.

The Firm maintains oversight and coordination of its Compliance Risk Management practices through the Firm's CCO, lines of business CCOs and regional CCOs to implement the Compliance program globally across the lines of business and regions. The Firm's CCO is a member of the FCC and the FRC. The Firm's CCO also provides regular updates to the Audit Committee and DRPC. In addition, certain Special Purpose Committees of the Board have been established to oversee the Firm's compliance with regulatory Consent Orders.

The Firm has a Code of Conduct (the "Code"). Each employee is given annual training on the Code and is required annually to affirm his or her compliance with the Code. All new hires must complete Code training shortly after their start date with the Firm. The Code sets forth the Firm's expectation that employees will conduct themselves with integrity at all times and provides the principles that govern employee conduct with clients, customers, shareholders and one another, as well as with the markets and communities in which the Firm does business. The Code requires employees to promptly report any known or suspected violation of the Code, any internal Firm policy, or any law or regulation applicable to the Firm's business. It also requires employees to report any illegal conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's employees, customers, suppliers, contract workers, business partners, or agents. The Code prohibits retaliation against anyone who raises an issue or concern in good faith. Specified compliance officers are specially trained and designated as "code specialists" who act as a resource to employees on questions related to the Code. Employees can report any known or suspected violations of the Code through the Code Reporting Hotline by phone or the internet. The Hotline is anonymous, except in certain non-U.S. jurisdictions where laws prohibit anonymous reporting, and is available 24/7 globally, with translation services. It is maintained by an outside service provider. Annually, the Chief Compliance Office and Human Resources report to the Audit Committee on the Code of Conduct program and provide an update on the employee completion rate for Code of Conduct training and affirmation.

CONDUCT RISK MANAGEMENT

Conduct risk, a subcategory of operational risk, is the risk that any action or inaction by an employee of the Firm could lead to unfair client/customer outcomes, compromise the Firm's reputation, impact the integrity of the markets in which the Firm operates, or reflect poorly on the Firm's culture.

Overview

Each line of business or function is accountable for identifying and managing its conduct risk to provide appropriate engagement, ownership and sustainability of a culture consistent with the Firm's How We Do Business Principles ("Principles"). The Principles serve as a guide for how employees are expected to conduct themselves. With the Principles serving as a guide, the Firm's Code sets out the Firm's expectations for each employee and provides information and resources to help employees conduct business ethically and in compliance with the law everywhere the Firm operates. For further discussion of the Code, see Compliance Risk Management on page 134.

Governance and oversight

The CMDC is the Board-level Committee with primary oversight of the firm's Culture and Conduct Program. The Audit Committee is responsible for reviewing the program established by management to monitor compliance with the Code. Additionally, the DRPC reviews, at least annually, the Firm's qualitative factors included in the Risk Appetite Framework, including conduct risk. The DRPC also meets annually with the CMDC to review and discuss aspects of the Firm's compensation practices. Finally, the Culture & Conduct Risk Committee provides oversight of certain culture and conduct risk initiatives at the Firm.

Conduct risk management is incorporated into various aspects of people management practices throughout the employee life cycle, including recruiting, onboarding, training and development, performance management, promotion and compensation processes. Businesses undertake annual RCSA assessments, and, as part of these reviews, identify their respective key inherent operational risks (including conduct risks), evaluate the design and effectiveness of their controls, identify control gaps and develop associated action plans. Each LOB and designated corporate function completes an assessment of conduct risk quarterly, reviews metrics and issues which may involve conduct risk, and provides business conduct training as appropriate.

The Firm's Know Your Employee framework generally addresses how the Firm manages, oversees and responds to workforce conduct related matters that may otherwise expose the Firm to financial, reputational, compliance and other operating risks. The Firm also has a HR Control Forum, the primary purpose of which is to discuss conduct and accountability for more significant risk and control issues and review, when appropriate, employee actions including but not limited to promotion and compensation actions.

LEGAL RISK MANAGEMENT

Legal risk, a subcategory of operational risk, is the risk of loss primarily caused by the actual or alleged failure to meet legal obligations that arise from the rule of law in jurisdictions in which the Firm operates, agreements with clients and customers, and products and services offered by the Firm.

Overview

The global Legal function ("Legal") provides legal services and advice to the Firm. Legal is responsible for managing the Firm's exposure to Legal risk by:

- managing actual and potential litigation and enforcement matters, including internal reviews and investigations related to such matters
- advising on products and services, including contract negotiation and documentation
- advising on offering and marketing documents and new business initiatives
- managing dispute resolution
- interpreting existing laws, rules and regulations, and advising on changes thereto
- advising on advocacy in connection with contemplated and proposed laws, rules and regulations, and
- providing legal advice to the LOBs and corporate functions, in alignment with the lines of defense described under Enterprise-wide Risk Management.

Legal selects, engages and manages outside counsel for the Firm on all matters in which outside counsel is engaged. In addition, Legal advises the Firm's Conflicts Office which reviews the Firm's wholesale transactions that may have the potential to create conflicts of interest for the Firm.

Governance and oversight

The Firm's General Counsel reports to the CEO and is a member of the Operating Committee, the Firmwide Risk Committee and the Firmwide Control Committee. The General Counsel's leadership team includes a General Counsel for each line of business, the heads of the Litigation and Corporate & Regulatory practices, as well as the Firm's Corporate Secretary. Each region (e.g., Latin America, Asia Pacific) has a General Counsel who is responsible for managing legal risk across all lines of business and functions in the region.

The Firm's General Counsel and other members of Legal report on significant legal matters at each meeting of the Firm's Board of Directors, at least quarterly to the Audit Committee, and periodically to the DRPC.

Legal serves on and advises various committees (including new business initiative and reputation risk committees) and advises the Firm's businesses to protect the Firm's reputation beyond any particular legal requirements.

ESTIMATIONS AND MODEL RISK MANAGEMENT

Estimations and Model risk, a subcategory of operational risk, is the potential for adverse consequences from decisions based on incorrect or misused estimation outputs.

The Firm uses models and other analytical and judgment-based estimations across various businesses and functions. The estimation methods are of varying levels of sophistication and are used for many purposes, such as the valuation of positions and measurement of risk, assessing regulatory capital requirements, conducting stress testing, and making business decisions. A dedicated independent function, Model Risk Governance and Review ("MRGR"), defines and governs the Firm's model risk management policies and certain analytical and judgment-based estimations, such as those used in risk management, budget forecasting and capital planning and analysis. MRGR reports to the Firm's CRO.

Model risks are owned by the users of the models within the various businesses and functions in the Firm based on the specific purposes of such models. Users and developers of models are responsible for developing, implementing and testing their models, as well as referring models to the Model Risk function for review and approval. Once models have been approved, model users and developers are responsible for maintaining a robust operating environment, and must monitor and evaluate the performance of the models on an ongoing basis. Model users and developers may seek to enhance models in response to changes in the portfolios and in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities.

Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on the model. This tiering is subject to the approval of the Model Risk function. A model review conducted by the Model Risk function considers the model's suitability for the specific uses to which it will be put. The factors considered in reviewing a model include whether the model accurately reflects the characteristics of the product and its significant risks, the selection and reliability of model inputs, consistency with models for similar products, the appropriateness of any model-related adjustments, and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes. Model reviews are approved by the appropriate level of management within the Model Risk function based on the relevant model tier.

Under the Firm's Estimations and Model Risk Management Policy, the Model Risk function reviews and approves new models, as well as material changes to existing models, prior to implementation in the operating environment. In certain circumstances, the head of the Model Risk function may grant exceptions to the Firm's policy to allow a model to be used prior to review or approval. The Model Risk function may also require the user to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity.

The governance of analytical and judgment-based estimations, such as those used in risk management, budget forecasting, and capital planning and analysis, within MRGR's scope, follows a consistent approach to the governance of models.

For a summary of valuations based on valuation models and other valuation techniques, see Critical Accounting Estimates Used by the Firm on pages 138–140 and Note 2.

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and the related business and risk management strategies, which may vary across the Firm's businesses and portfolios. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the carrying value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's wholesale and certain consumer lending-related commitments. The allowance for loan losses is intended to adjust the carrying value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date.

The allowance for credit losses includes a formula-based component, an asset-specific component, and a component related to PCI loans. The determination of each of these components involves significant judgment on a number of matters. For further discussion of these components, areas of judgment and methodologies used in establishing the Firm's allowance for credit losses, see Note 13.

Allowance for credit losses sensitivity

The Firm's allowance for credit losses is sensitive to numerous factors, which may differ depending on the portfolio. Changes in economic conditions or in the Firm's assumptions and estimates could affect its estimate of probable credit losses inherent in the portfolio at the balance sheet date. The Firm uses its best judgment to assess these economic conditions and loss data in estimating the allowance for credit losses and these estimates are subject to periodic refinement based on changes to underlying external or Firm-specific historical data. The use of alternate estimates, data sources, adjustments to modeled loss estimates for model imprecision and other factors would result in a different estimated allowance for credit losses, as well as impact any related sensitivities described below. During the second quarter of 2017, the Firm refined its loss estimates relating to the wholesale credit portfolio. See Note 13 for further discussion.

To illustrate the potential magnitude of certain alternate judgments, the Firm estimates that changes in the following inputs would have the following effects on the Firm's modeled credit loss estimates as of December 31, 2017, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- A combined 5% decline in housing prices and a 100 basis point increase in unemployment rates from current levels could imply:
  - an increase to modeled credit loss estimates of approximately $525 million for PCI loans.
  - an increase to modeled annual credit loss estimates of approximately $100 million for residential real estate, excluding PCI loans.
- For credit card loans, a 100 basis point increase in unemployment rates from current levels could imply an increase to modeled annual loss estimates of approximately $1.0 billion.
- An increase in PD factors consistent with a one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled credit loss estimates of approximately $1.4 billion.
- A 100 basis point increase in estimated loss given default ("LGD") for the Firm's entire wholesale loan portfolio could imply an increase in the Firm's modeled credit loss estimates of approximately $175 million.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors. In addition, these analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then-current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the overall allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm follows and the judgments made in evaluating the risk factors related to its loss estimates, management believes that its current estimate of the allowance for credit losses is appropriate.

Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy. For further information, see Note 2.

December 31, 2017 (in billions, except ratio data)	Total assets at fair value	Total level 3 assets
Trading debt and equity instruments	$ 325.3	$ 5.4
Derivative receivables[(a)]	56.5	6.0
Trading assets	381.8	11.4
AFS securities	202.2	0.3
Loans	2.5	0.3
MSRs	6.0	6.0
Other	33.2	1.2
Total assets measured at fair value on a recurring basis	625.7	19.2
Total assets measured at fair value on a nonrecurring basis	1.3	0.8
Total assets measured at fair value	$ 627.0	$ 20.0
Total Firm assets	$ 2,533.6	
Level 3 assets as a percentage of total Firm assets[(a)]		0.8%
Level 3 assets as a percentage of total Firm assets at fair value[(a)]		3.2%

(a) For purposes of the table above, the derivative receivables total reflects the impact of netting adjustments; however, the $6.0 billion of derivative receivables classified as level 3 does not reflect the netting adjustment as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

Valuation

Details of the Firm's processes for determining fair value are set out in Note 2. Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed valuation models and other valuation techniques that use significant unobservable inputs and are therefore classified within level 3 of the valuation hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate valuation technique to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 2.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. For further discussion of valuation adjustments applied by the Firm see Note 2.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, see Note 2.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 15.

Management applies significant judgment when estimating the fair value of its reporting units. Estimates of fair value are dependent upon estimates of the future earnings potential of the Firm's reporting units, long-term growth rates and the estimated market cost of equity. Imprecision in estimating these factors can affect the estimated fair value of the reporting units.

Based upon the updated valuations for all of its reporting units, the Firm concluded that the goodwill allocated to its reporting units was not impaired at December 31, 2017. The fair values of these reporting units exceeded their carrying values by approximately 15% or higher and did not indicate a significant risk of goodwill impairment based on current projections and valuations. Such valuations do not reflect the impact of the TCJA that was enacted in December 2017 as such impact would not alter the conclusion that goodwill is not impaired.

The projections for all of the Firm's reporting units are consistent with management's current short-term business outlook assumptions, and in the longer term, incorporate a set of macroeconomic assumptions and the Firm's best estimates of long-term growth and returns on equity of its

businesses. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.

Declines in business performance, increases in credit losses, increases in capital requirements, as well as deterioration in economic or market conditions, adverse estimates of regulatory or legislative changes or increases in the estimated market cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

For additional information on goodwill, see Note 15.

Credit card rewards liability

JPMorgan Chase offers credit cards with various reward programs which allow cardholders to earn reward points based on their account activity and the terms and conditions of the rewards program. Generally, there are no limits on the points that an eligible cardholder can earn, nor do they expire, and these points can be redeemed for a variety of rewards, including cash (predominantly in the form of account credits), gift cards and travel.

The Firm maintains a rewards liability which represents the estimated cost of reward points earned and expected to be redeemed by cardholders. The rewards liability is sensitive to various assumptions, including cost per point and redemption rates for each of the various reward programs, which are evaluated periodically. The liability is accrued as the cardholder earns the benefit and is reduced when the cardholder redeems points. This liability was $4.9 billion and $3.8 billion at December 31, 2017 and 2016, respectively, and is recorded in accounts payable and other liabilities on the Consolidated balance sheets.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local, and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations, and business strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. The Firm has also recognized deferred tax assets in connection with certain tax attributes, including NOLs. The Firm performs regular reviews to ascertain whether its deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize NOLs before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2017, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

Prior to December 31, 2017, U.S. federal income taxes had not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings had been reinvested abroad for an indefinite period of time. The Firm will no longer maintain the indefinite reinvestment assertion on the undistributed earnings of those non-U.S. subsidiaries in light of the enactment of the TCJA. The U.S. federal and state and local income taxes associated with the undistributed and previously untaxed earnings of those non-U.S. subsidiaries was included in the deemed repatriation charge recorded as of December 31, 2017.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective income tax rate in the period in which the reassessment occurs.

The income tax expense for the current year includes a reasonable estimate recorded under SEC Staff Accounting Bulletin No. 118 resulting from the enactment of the TCJA.

For additional information on income taxes, see Note 24.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 29.

SEC Staff Accounting Bulletin adopted during 2017

Bulletin	Summary of guidance	Effects on financial statements
Application of U.S. GAAP related to the Tax Cuts and Jobs Act ("TCJA") (SEC Staff Accounting Bulletin No. 118) *Issued December 2017*	• Provides guidance on the accounting for income taxes in the context of the TCJA. • For impacts of the tax law changes that are reasonably estimable, requires the recognition of provisional amounts in year-end 2017 financial statements. • Provides a 1-year measurement period in which to refine previously recorded provisional amounts based on new information or interpretations.	• The TCJA resulted in a $2.4 billion decrease in net income driven by a deemed repatriation charge and adjustments to the value of the Firm's tax oriented investments, partially offset by a benefit from the revaluation of the Firm's net deferred tax liability. Certain of these amounts may be refined in accordance with SEC Staff Accounting Bulletin No. 118. • Refer to Note 24 for additional information related to the impacts of the TCJA.

FASB Standards issued but not adopted as of December 31, 2017

Standard	Summary of guidance	Effects on financial statements
Revenue recognition – revenue from contracts with customers *Issued May 2014*	• Requires that revenue from contracts with customers be recognized upon transfer of control of a good or service in the amount of consideration expected to be received. • Changes the accounting for certain contract costs, including whether they may be offset against revenue in the Consolidated statements of income, and requires additional disclosures about revenue and contract costs. • May be adopted using a full retrospective approach or a modified, cumulative effect approach wherein the guidance is applied only to existing contracts as of the date of initial application, and to new contracts transacted after that date.	• Adopted January 1, 2018. • The Firm adopted the revenue recognition guidance using the full retrospective method of adoption. • The adoption of the guidance did not result in any material changes in the timing of the Firm's revenue recognition, but will require gross presentation of certain costs currently offset against revenue. This change in presentation will be reflected in the first quarter of 2018 and will increase both noninterest revenue and noninterest expense for the Firm by $1.1 billion and $900 million for the years ended December 31, 2017 and 2016, respectively. The increase is predominantly associated with certain distribution costs in AWM (currently offset against Asset management, administration and commissions), with the remainder of the increase associated with certain underwriting costs in CIB (currently offset against Investment banking fees). • The Firm's Note 6 qualitative disclosures are consistent with the guidance.
Recognition and measurement of financial assets and financial liabilities *Issued January 2016*	• Requires that certain equity instruments be measured at fair value, with changes in fair value recognized in earnings. • Provides a measurement alternative for equity securities without readily determinable fair values to be measured at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer. Any such price changes will be reflected in earnings beginning in the period of adoption. • Generally requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption, except for those equity securities that are eligible for the measurement alternative.	• The Firm early adopted the provisions of this guidance related to presenting DVA in OCI for financial liabilities where the fair value option has been elected, effective January 1, 2016. The Firm adopted the portions of the guidance that were not eligible for early adoption on January 1, 2018. • Upon adoption, the Firm elected the measurement alternative for its equity securities that do not have readily determinable fair values, and the Firm did not record a cumulative-effect adjustment related to the adoption of this guidance.

FASB Standards issued but not adopted as of December 31, 2017 (continued)

Standard	Summary of guidance	Effects on financial statements
Classification of certain cash receipts and cash payments in the statement of cash flows *Issued August 2016*	• Provides targeted amendments to the classification of certain cash flows, including treatment of cash payments for settlement of zero-coupon debt instruments and distributions received from equity method investments. • Requires retrospective application to all periods presented.	• Adopted January 1, 2018. • No material impact upon adoption as the Firm was either in compliance with the amendments or the amounts to which it is applied are immaterial.
Treatment of restricted cash on the statement of cash flows *Issued November 2016*	• Requires inclusion of restricted cash in the cash and cash equivalents balances in the Consolidated statements of cash flows. • Requires additional disclosures to supplement the Consolidated statements of cash flows. • Requires retrospective application to all periods presented.	• Adopted January 1, 2018. • The adoption of the guidance will result in reclassification of restricted cash balances into Cash and restricted cash on the Consolidated statements of cash flows in the first quarter of 2018. The Firm will include Cash and due from banks and Deposits with banks in Cash and restricted cash in the Consolidated statements of cash flows, resulting in Deposits with banks no longer being reflected in Investing activities. • In addition, to align with the presentation of Cash and restricted cash on the Consolidated statements of cash flows, the Firm will reclassify restricted cash balances to Cash and due from banks and to Deposits with banks from Other assets and disclose the total for Cash and restricted cash on the Firm's Consolidated balance sheets in the first quarter of 2018.
Definition of a business *Issued January 2017*	• Narrows the definition of a business and clarifies that, to be considered a business, the fair value of the gross assets acquired (or disposed of) may not be substantially all concentrated in a single identifiable asset or a group of similar assets. • In addition, in order to be considered a business, a set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs.	• Adopted January 1, 2018. • No impact upon adoption because the guidance is to be applied prospectively. Subsequent to adoption, fewer transactions will be treated as acquisitions or dispositions of a business.
Presentation of net periodic pension cost and net periodic postretirement benefit cost *Issued March 2017*	• Requires the service cost component of net periodic pension and postretirement benefit cost to be reported separately in the consolidated results of operations from the other components (e.g., expected return on assets, interest costs, amortization of gains/losses and prior service costs). • Requires retrospective application and presentation in the consolidated results of operations of the service cost component in the same line item as other employee compensation costs and presentation of the other components in a different line item from the service cost component.	• Adopted January 1, 2018. • The adoption of the guidance in the first quarter of 2018 will result in an increase in compensation expense and a reduction in other expense of $223 million and $250 million for the years ended December 31, 2017 and 2016, respectively.
Premium amortization on purchased callable debt securities *Issued March 2017*	• Requires amortization of premiums to the earliest call date on debt securities with call features that are explicit, noncontingent and callable at fixed prices and on preset dates. • Does not impact securities held at a discount; the discount continues to be amortized to the contractual maturity. • Requires adoption on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption.	• The Firm early adopted the new guidance on January 1, 2018. • The new guidance primarily impacts obligations of U.S. states and municipalities held in the Firm's investment securities portfolio. • The adoption of this guidance resulted in a cumulative-effect adjustment that reduced retained earnings by approximately $505 million as of January 1, 2018, with a corresponding increase of $261 million (after tax) in AOCI and related adjustments to securities and tax liabilities. • Subsequent to adoption, although the guidance will reduce the interest income recognized prior to the earliest call date for callable debt securities held at a premium, the effect of this guidance on the Firm's net interest income is not expected to be material.

FASB Standards issued but not adopted as of December 31, 2017 (continued)

Standard	Summary of guidance	Effects on financial statements
Hedge accounting *Issued August 2017*	• Reduces earnings volatility by better aligning the accounting with the economics of the risk management activities. • Expands the ability for certain hedges of interest rate risk to qualify for hedge accounting. • Allows recognition of ineffectiveness in cash flow hedges and net investment hedges in OCI. • Allows a one-time election at adoption to transfer certain securities classified as held-to-maturity to available-for-sale. • Simplifies hedge documentation requirements.	• The Firm early adopted the new guidance on January 1, 2018. • The adoption of the guidance resulted in a cumulative-effect adjustment that increased retained earnings in the amount of $34 million, with related adjustments to debt carrying values and AOCI. • The Firm will also amend its qualitative and quantitative disclosures within its derivative instruments note to the Consolidated Financial Statements in the first quarter of 2018. • In accordance with the new guidance, the Firm elected to transfer certain securities from HTM to AFS. The amendments provide the Firm with additional hedge accounting alternatives for its AFS securities (including those transferred under the election) to be considered as the Firm manages it structural interest rate risk and regulatory capital. The Firm is currently evaluating those risk management alternatives and intends to manage the transferred securities in a manner consistent with its existing AFS securities. This transfer is a non-cash transaction at fair value.
Reclassification of Certain Tax Effects from AOCI *Issued February 2018*	• Provides an election to reclassify from AOCI to retained earnings stranded tax effects due to the revaluation of deferred tax assets and liabilities as a result of changes in applicable tax rates under the TCJA. • Requires additional disclosures related to the Firm's election to reclassify amounts from AOCI to retained earnings and the Firm's policy for releasing income tax effects from AOCI. • The guidance may be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption.	• The Firm early adopted the new guidance on January 1, 2018. • The adoption of the guidance resulted in a cumulative-effect adjustment that increased retained earnings in the amount of $288 million in the first quarter of 2018. This amount is an estimate that may be refined in accordance with SEC Staff Accounting Bulletin No. 118, and represents the removal of the stranded tax effects from AOCI, thereby allowing the tax effects within AOCI to reflect the new respective corporate income tax rates. • Refer to Note 24 for additional information related to the impacts of the TCJA.
Leases *Issued February 2016*	• Requires lessees to recognize all leases longer than twelve months on the Consolidated balance sheets as lease liabilities with corresponding right-of-use assets. • Requires lessees and lessors to classify most leases using principles similar to existing lease accounting, but eliminates the "bright line" classification tests. • Permits the Firm to generally account for its existing leases consistent with current guidance, except for the incremental balance sheet recognition. • Expands qualitative and quantitative disclosures regarding leasing arrangements. • May be adopted using a modified cumulative effect approach wherein the guidance is applied only to existing contracts as of the date of initial application, and to new contracts transacted after that date.	• Required effective date: January 1, 2019.[a] • The Firm is in the process of its implementation which has included an initial evaluation of its leasing contracts and activities. As a lessee, the Firm is developing its methodology to estimate the right-of-use assets and lease liabilities, which is based on the present value of lease payments. The Firm expects to recognize lease liabilities and corresponding right-of-use assets (at their present value) related to predominantly all of the $10 billion of future minimum payments required under operating leases as disclosed in Note 28. However, the population of contracts subject to balance sheet recognition and their initial measurement remains under evaluation. The Firm does not expect material changes to the recognition of operating lease expense in its Consolidated statements of income. • The Firm plans to adopt the new guidance in the first quarter of 2019.

FASB Standards issued but not adopted as of December 31, 2017 (continued)

Standard	Summary of guidance	Effects on financial statements
Financial instruments – credit losses *Issued June 2016*	• Replaces existing incurred loss impairment guidance and establishes a single allowance framework for financial assets carried at amortized cost (including HTM securities), which will reflect management's estimate of credit losses over the full remaining expected life of the financial assets. • Eliminates existing guidance for PCI loans, and requires recognition of an allowance for expected credit losses on financial assets purchased with more than insignificant credit deterioration since origination. • Amends existing impairment guidance for AFS securities to incorporate an allowance, which will allow for reversals of impairment losses in the event that the credit of an issuer improves. • Requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption.	• Required effective date: January 1, 2020.[(a)] • The Firm has begun its implementation efforts by establishing a Firmwide, cross-discipline governance structure. The Firm is currently identifying key interpretive issues, and is assessing existing credit loss forecasting models and processes against the new guidance to determine what modifications may be required. • The Firm expects that the new guidance will result in an increase in its allowance for credit losses due to several factors, including: 1. The allowance related to the Firm's loans and commitments will increase to cover credit losses over the full remaining expected life of the portfolio, and will consider expected future changes in macroeconomic conditions 2. The nonaccretable difference on PCI loans will be recognized as an allowance, offset by an increase in the carrying value of the related loans 3. An allowance will be established for estimated credit losses on HTM securities • The extent of the increase is under evaluation, but will depend upon the nature and characteristics of the Firm's portfolio at the adoption date, and the macroeconomic conditions and forecasts at that date.
Goodwill *Issued January 2017*	• Requires an impairment loss to be recognized when the estimated fair value of a reporting unit falls below its carrying value. • Eliminates the second condition in the current guidance that requires an impairment loss to be recognized only if the estimated implied fair value of the goodwill is below its carrying value.	• Required effective date: January 1, 2020.[(a)] • Based on current impairment test results, the Firm does not expect a material effect on the Consolidated Financial Statements. • After adoption, the guidance may result in more frequent goodwill impairment losses due to the removal of the second condition. • The Firm is evaluating the timing of adoption.

(a) Early adoption is permitted.

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the SEC. In addition, the Firm's senior management may make forward-looking statements orally to investors, analysts, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and global business, economic and political conditions and geopolitical events;
- Changes in laws and regulatory requirements, including capital and liquidity requirements affecting the Firm's businesses, and the ability of the Firm to address those requirements;
- Heightened regulatory and governmental oversight and scrutiny of JPMorgan Chase's business practices, including dealings with retail customers;
- Changes in trade, monetary and fiscal policies and laws;
- Changes in income tax laws and regulations;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity, including approval of its capital plans by banking regulators;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- Technology changes instituted by the Firm, its counterparties or competitors;
- The success of the Firm's business simplification initiatives and the effectiveness of its control agenda;
- Ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to innovate and to increase market share;
- Ability of the Firm to attract and retain qualified employees;
- Ability of the Firm to control expenses;
- Competitive pressures;
- Changes in the credit quality of the Firm's customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies, including the introduction of new accounting standards;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities or conflicts and the Firm's ability to deal effectively with disruptions caused by the foregoing;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operational systems and facilities;
- Ability of the Firm to withstand disruptions that may be caused by any failure of its operational systems or those of third parties;
- Ability of the Firm to effectively defend itself against cyberattacks and other attempts by unauthorized parties to access information of the Firm or its customers or to disrupt the Firm's systems; and
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in the Firm's Annual Report on Form 10-K for the year ended December 31, 2017.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

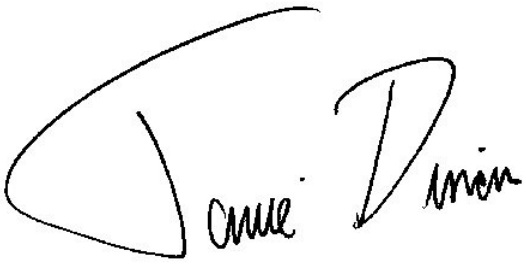
Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2017. In making the assessment, management used the "Internal Control – Integrated Framework" ("COSO 2013") promulgated by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

Based upon the assessment performed, management concluded that as of December 31, 2017, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO 2013 framework. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2017.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2017, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Marianne Lake
Executive Vice President and Chief Financial Officer

February 27, 2018



To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of JPMorgan Chase & Co. and its subsidiaries (the "Firm") as of December 31, 2017 and 2016, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2017, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Firm's internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Firm as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the COSO.

Basis for Opinions

The Firm's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's report on internal control over financial reporting. Our responsibility is to express opinions on the Firm's consolidated financial statements and on the Firm's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Firm in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PricewaterhouseCoopers LLP

February 27, 2018

We have served as the Firm's auditor since 1965.

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2017	2016	2015
Revenue			
Investment banking fees	**$ 7,248**	$ 6,448	$ 6,751
Principal transactions	**11,347**	11,566	10,408
Lending- and deposit-related fees	**5,933**	5,774	5,694
Asset management, administration and commissions	**15,377**	14,591	15,509
Securities gains/(losses)	**(66)**	141	202
Mortgage fees and related income	**1,616**	2,491	2,513
Card income	**4,433**	4,779	5,924
Other income	**3,639**	3,795	3,032
Noninterest revenue	**49,527**	49,585	50,033
Interest income	**64,372**	55,901	50,973
Interest expense	**14,275**	9,818	7,463
Net interest income	**50,097**	46,083	43,510
Total net revenue	**99,624**	95,668	93,543
Provision for credit losses	**5,290**	5,361	3,827
Noninterest expense			
Compensation expense	**31,009**	29,979	29,750
Occupancy expense	**3,723**	3,638	3,768
Technology, communications and equipment expense	**7,706**	6,846	6,193
Professional and outside services	**6,840**	6,655	7,002
Marketing	**2,900**	2,897	2,708
Other expense	**6,256**	5,756	9,593
Total noninterest expense	**58,434**	55,771	59,014
Income before income tax expense	**35,900**	34,536	30,702
Income tax expense	**11,459**	9,803	6,260
Net income	**$ 24,441**	$ 24,733	$ 24,442
Net income applicable to common stockholders[(a)]	**$ 22,567**	$ 22,834	$ 22,651
Net income per common share data			
Basic earnings per share	**$ 6.35**	$ 6.24	$ 6.05
Diluted earnings per share	**6.31**	6.19	6.00
Weighted-average basic shares[(a)]	**3,551.6**	3,658.8	3,741.2
Weighted-average diluted shares[(a)]	**3,576.8**	3,690.0	3,773.6
Cash dividends declared per common share	**$ 2.12**	$ 1.88	$ 1.72

(a) The prior period amounts have been revised to conform with the current period presentation. The revision had no impact on the Firm's reported earnings per share.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of comprehensive income

Year ended December 31, (in millions)	2017	2016	2015
Net income	**$ 24,441**	$ 24,733	$ 24,442
Other comprehensive income/(loss), after-tax			
Unrealized gains/(losses) on investment securities	**640**	(1,105)	(2,144)
Translation adjustments, net of hedges	**(306)**	(2)	(15)
Cash flow hedges	**176**	(56)	51
Defined benefit pension and OPEB plans	**738**	(28)	111
DVA on fair value option elected liabilities	**(192)**	(330)	–
Total other comprehensive income/(loss), after-tax	**1,056**	(1,521)	(1,997)
Comprehensive income	**$ 25,497**	$ 23,212	$ 22,445

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2017	2016
Assets		
Cash and due from banks	**$ 25,827**	$ 23,873
Deposits with banks	**404,294**	365,762
Federal funds sold and securities purchased under resale agreements (included **$14,732** and $21,506 at fair value)	**198,422**	229,967
Securities borrowed (included **$3,049** and $0 at fair value)	**105,112**	96,409
Trading assets (included assets pledged of **$110,061** and $115,847)	**381,844**	372,130
Securities (included **$202,225** and $238,891 at fair value and assets pledged of **$17,969** and $16,115)	**249,958**	289,059
Loans (included **$2,508** and $2,230 at fair value)	**930,697**	894,765
Allowance for loan losses	**(13,604)**	(13,776)
Loans, net of allowance for loan losses	**917,093**	880,989
Accrued interest and accounts receivable	**67,729**	52,330
Premises and equipment	**14,159**	14,131
Goodwill, MSRs and other intangible assets	**54,392**	54,246
Other assets (included **$16,128** and $7,557 at fair value and assets pledged of **$1,526** and $1,603)	**114,770**	112,076
Total assets[a]	**$ 2,533,600**	$ 2,490,972
Liabilities		
Deposits (included **$21,321** and $13,912 at fair value)	**$ 1,443,982**	$ 1,375,179
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$697** and $687 at fair value)	**158,916**	165,666
Short-term borrowings (included **$9,191** and $9,105 at fair value)	**51,802**	34,443
Trading liabilities	**123,663**	136,659
Accounts payable and other liabilities (included **$9,208** and $9,120 at fair value)	**189,383**	190,543
Beneficial interests issued by consolidated VIEs (included **$45** and $120 at fair value)	**26,081**	39,047
Long-term debt (included **$47,519** and $37,686 at fair value)	**284,080**	295,245
Total liabilities[a]	**2,277,907**	2,236,782
Commitments and contingencies (see Notes 27, 28 and 29)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares: issued **2,606,750** shares)	**26,068**	26,068
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Additional paid-in capital	**90,579**	91,627
Retained earnings	**177,676**	162,440
Accumulated other comprehensive income	**(119)**	(1,175)
Shares held in restricted stock units ("RSU") trust, at cost (**472,953** shares)	**(21)**	(21)
Treasury stock, at cost (679,635,064 and 543,744,003 shares)	**(42,595)**	(28,854)
Total stockholders' equity	**255,693**	254,190
Total liabilities and stockholders' equity	**$ 2,533,600**	$ 2,490,972

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2017 and 2016. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which were eliminated in consolidation.

December 31, (in millions)	2017	2016
Assets		
Trading assets	**$ 1,449**	$ 3,185
Loans	**68,995**	75,614
All other assets	**2,674**	3,321
Total assets	**$ 73,118**	$ 82,120
Liabilities		
Beneficial interests issued by consolidated VIEs	**$ 26,081**	$ 39,047
All other liabilities	**349**	490
Total liabilities	**$ 26,430**	$ 39,537

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. At December 31, 2017 and 2016, the Firm provided limited program-wide credit enhancement of $2.7 billion and $2.4 billion, respectively, related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 14.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity

Year ended December 31, (in millions, except per share data)	2017	2016	2015
Preferred stock			
Balance at January 1	**$ 26,068**	$ 26,068	$ 20,063
Issuance	**1,258**	–	6,005
Redemption	**(1,258)**	–	–
Balance at December 31	**26,068**	26,068	26,068
Common stock			
Balance at January 1 and December 31	**4,105**	4,105	4,105
Additional paid-in capital			
Balance at January 1	**91,627**	92,500	93,270
Shares issued and commitments to issue common stock for employee share-based compensation awards	**(734)**	(334)	(436)
Other	**(314)**	(539)	(334)
Balance at December 31	**90,579**	91,627	92,500
Retained earnings			
Balance at January 1	**162,440**	146,420	129,977
Cumulative effect of change in accounting principle	**–**	(154)	–
Net income	**24,441**	24,733	24,442
Dividends declared:			
Preferred stock	**(1,663)**	(1,647)	(1,515)
Common stock (**$2.12**, $1.88 and $1.72 per share for 2017, 2016 and 2015, respectively)	**(7,542)**	(6,912)	(6,484)
Balance at December 31	**177,676**	162,440	146,420
Accumulated other comprehensive income			
Balance at January 1	**(1,175)**	192	2,189
Cumulative effect of change in accounting principle	**–**	154	–
Other comprehensive income/(loss)	**1,056**	(1,521)	(1,997)
Balance at December 31	**(119)**	(1,175)	192
Shares held in RSU Trust, at cost			
Balance at January 1 and December 31	**(21)**	(21)	(21)
Treasury stock, at cost			
Balance at January 1	**(28,854)**	(21,691)	(17,856)
Repurchase	**(15,410)**	(9,082)	(5,616)
Reissuance	**1,669**	1,919	1,781
Balance at December 31	**(42,595)**	(28,854)	(21,691)
Total stockholders' equity	**$ 255,693**	$ 254,190	$ 247,573

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2017	2016	2015
Operating activities			
Net income	**$ 24,441**	$ 24,733	$ 24,442
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Provision for credit losses	**5,290**	5,361	3,827
Depreciation and amortization	**6,179**	5,478	4,940
Deferred tax expense	**2,312**	4,651	1,333
Other	**2,136**	1,799	1,785
Originations and purchases of loans held-for-sale	**(94,628)**	(61,107)	(48,109)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**93,270**	60,196	49,363
Net change in:			
Trading assets	**5,673**	(20,007)	62,212
Securities borrowed	**(8,653)**	2,313	12,165
Accrued interest and accounts receivable	**(15,868)**	(5,815)	22,664
Other assets	**4,318**	(4,517)	(3,701)
Trading liabilities	**(26,256)**	5,198	(28,972)
Accounts payable and other liabilities	**(8,518)**	3,740	(23,361)
Other operating adjustments	**7,803**	(1,827)	(5,122)
Net cash provided by/(used in) operating activities	**(2,501)**	20,196	73,466
Investing activities			
Net change in:			
Deposits with banks	**(38,532)**	(25,747)	144,462
Federal funds sold and securities purchased under resale agreements	**31,448**	(17,468)	3,190
Held-to-maturity securities:			
Proceeds from paydowns and maturities	**4,563**	6,218	6,099
Purchases	**(2,349)**	(143)	(6,204)
Available-for-sale securities:			
Proceeds from paydowns and maturities	**56,117**	65,950	76,448
Proceeds from sales	**90,201**	48,592	40,444
Purchases	**(105,309)**	(123,959)	(70,804)
Proceeds from sales and securitizations of loans held-for-investment	**15,791**	15,429	18,604
Other changes in loans, net	**(61,650)**	(80,996)	(108,962)
All other investing activities, net	**(563)**	(2,825)	3,703
Net cash provided by/(used in) investing activities	**(10,283)**	(114,949)	106,980
Financing activities			
Net change in:			
Deposits	**57,022**	97,336	(88,678)
Federal funds purchased and securities loaned or sold under repurchase agreements	**(6,739)**	13,007	(39,415)
Short-term borrowings	**16,540**	(2,461)	(57,828)
Beneficial interests issued by consolidated VIEs	**(1,377)**	(5,707)	(5,632)
Proceeds from long-term borrowings	**56,271**	83,070	79,611
Payments of long-term borrowings	**(83,079)**	(68,949)	(67,247)
Proceeds from issuance of preferred stock	**1,258**	–	5,893
Redemption of preferred stock	**(1,258)**	–	–
Treasury stock repurchased	**(15,410)**	(9,082)	(5,616)
Dividends paid	**(8,993)**	(8,476)	(7,873)
All other financing activities, net	**407**	(467)	(726)
Net cash provided by/(used in) financing activities	**14,642**	98,271	(187,511)
Effect of exchange rate changes on cash and due from banks	**96**	(135)	(276)
Net increase/(decrease) in cash and due from banks	**1,954**	3,383	(7,341)
Cash and due from banks at the beginning of the period	**23,873**	20,490	27,831
Cash and due from banks at the end of the period	**$ 25,827**	$ 23,873	$ 20,490
Cash interest paid	**$ 14,153**	$ 9,508	$ 7,220
Cash income taxes paid, net	**4,325**	2,405	9,423

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the U.S., with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small business, commercial banking, financial transaction processing and asset management. For a discussion of the Firm's business segments, see Note 31.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to U.S. GAAP. Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Certain amounts reported in prior periods have been reclassified to conform with the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated balance sheets.

The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity.

Voting Interest Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Firm to recognize its proportionate share of the entity's net earnings), or (ii) at fair value if the fair value option was elected. These investments are generally included in other assets, with income or loss included in other income.

Certain Firm-sponsored asset management funds are structured as limited partnerships or certain limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these voting interest entities. However, in the limited cases where the non-managing partners or members do not have substantive kick-out or participating rights, the Firm evaluates the funds as VIEs and consolidates if it is the general partner or managing member and has a potentially significant interest.

The Firm's investment companies have investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated balance sheets at fair value, and are recorded in other assets, with income or loss included in noninterest revenue.

Variable Interest Entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and

second, identifying which party, if any, has power over those activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivatives or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and are therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

Use of estimates in the preparation of consolidated financial statements

The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in OCI within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated statements of income.

Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the Consolidated balance sheets when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities sold and purchased under repurchase agreements and securities borrowed or loaned under securities loan agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances when the specified conditions are met.

The Firm uses master netting agreements to mitigate counterparty credit risk in certain transactions, including derivative, securities repurchase and reverse repurchase, and securities loaned and borrow transactions. A master netting agreement is a single agreement with a counterparty that permits multiple transactions governed by that agreement to be terminated or accelerated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due). Upon the exercise of derivatives termination rights by the non-defaulting party (i) all transactions are terminated, (ii) all transactions are valued and the positive values of "in the money" transactions are netted against the negative values of "out of the money" transactions and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount. Upon exercise of default rights under repurchase agreements and securities loan agreements in general (i) all transactions are terminated and accelerated, (ii) all values of securities or cash held or to be delivered are calculated, and all such sums are netted against each other and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount.

Typical master netting agreements for these types of transactions also often contain a collateral/margin agreement that provides for a security interest in, or title transfer of, securities or cash collateral/margin to the party that has the right to demand margin (the "demanding party"). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount of the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold. The collateral/margin agreement grants to the demanding party, upon default by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin. It also grants to the demanding party the right to liquidate collateral/margin and to apply the proceeds to an amount payable by the counterparty.

For further discussion of the Firm's derivative instruments, see Note 5. For further discussion of the Firm's repurchase and reverse repurchase agreements, and securities borrowing and lending agreements, see Note 11.

Statements of cash flows

For JPMorgan Chase's Consolidated statements of cash flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies

The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Fair value measurement	Note 2	Page 155
Fair value option	Note 3	Page 174
Derivative instruments	Note 5	Page 179
Noninterest revenue	Note 6	Page 192
Interest income and interest expense	Note 7	Page 195
Pension and other postretirement employee benefit plans	Note 8	Page 195
Employee share-based incentives	Note 9	Page 201
Securities	Note 10	Page 203
Securities financing activities	Note 11	Page 208
Loans	Note 12	Page 211
Allowance for credit losses	Note 13	Page 231
Variable interest entities	Note 14	Page 236
Goodwill and Mortgage servicing rights	Note 15	page 244
Premises and equipment	Note 16	page 248
Long-term debt	Note 19	page 249
Income taxes	Note 24	page 255
Off-balance sheet lending-related financial instruments, guarantees and other commitments	Note 27	page 261
Litigation	Note 29	page 268

Note 2 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Firm's Consolidated balance sheets). Certain assets (e.g., held-for-sale loans), liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment).

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices or inputs, where available. If prices or quotes are not available, fair value is based on valuation models and other valuation techniques that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below.

The level of precision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions by other market participants compared with those used by the Firm could result in the Firm deriving a different estimate of fair value at the reporting date.

Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated balance sheets at fair value. The Firm's VCG, which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value. The VGF is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the Firmwide head of the VCG (under the direction of the Firm's Controller), and includes sub-forums covering the CIB, CCB, CB, AWM and certain corporate functions including Treasury and CIO.

Price verification process
The VCG verifies fair value estimates provided by the risk-taking functions by leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, the VCG performs additional review to ensure the reasonableness of the estimates. The additional review may include evaluating the limited market activity including client unwinds, benchmarking valuation inputs to those used for similar instruments, decomposing the valuation of structured instruments into individual components, comparing expected to actual cash flows, reviewing profit and loss trends, and reviewing trends in collateral valuation. There are also additional levels of management review for more significant or complex positions.

The VCG determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments to quoted prices are applied for instruments classified within level 1 of the fair value hierarchy (see below for further information on the fair value hierarchy). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

- Liquidity valuation adjustments are considered where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity. Liquidity valuation adjustments are applied and determined based on current market conditions. Factors that may be considered in determining the liquidity adjustment include analysis of: (1) the estimated bid-offer spread for the instrument being traded; (2) alternative pricing points for similar instruments in active markets; and (3) the range of reasonable values that the price or parameter could take.
- The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by U.S. GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that a relevant market participant would consider in the transfer of the net open risk position, including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.
- Unobservable parameter valuation adjustments may be made when positions are valued using prices or input parameters to valuation models that are unobservable due to a lack of market activity or because they cannot be implied from observable market data. Such prices or parameters must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the resulting valuation estimate.
- Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality (CVA), the Firm's own creditworthiness (DVA) and the impact of funding (FVA), using a consistent framework across the Firm. For more information on such adjustments see Credit and funding adjustments on page 171 of this Note.

Valuation model review and approval
If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs to those models.

Under the Firm's Estimations and Model Risk Management Policy, the Model Risk function reviews and approves new models, as well as material changes to existing models, prior to implementation in the operating environment. In certain circumstances, the head of the Model Risk function may grant exceptions to the Firm's policy to allow a model to be used prior to review or approval. The Model Risk function may also require the user to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity.

Valuation hierarchy
A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following table describes the valuation methodologies generally used by the Firm to measure its significant products/instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology	Classifications in the valuation hierarchy
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features: for further information refer to the discussion of derivatives below. • Market rates for the respective maturity • Collateral characteristics	Predominantly level 2
Loans and lending-related commitments – wholesale		
Loans carried at fair value (e.g., trading loans and non-trading loans) and associated lending-related commitments	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are infrequent) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Credit spreads derived from the cost of CDS; or benchmark credit curves developed by the Firm, by industry and credit rating • Prepayment speed • Collateral characteristics	Level 2 or 3
Loans held-for-investment and associated lending-related commitments	Valuations are based on discounted cash flows, which consider: • Credit spreads, derived from the cost of CDS; or benchmark credit curves developed by the Firm, by industry and credit rating • Prepayment speed Lending-related commitments are valued similarly to loans and reflect the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become funded prior to an obligor default. For information regarding the valuation of loans measured at collateral value, see Note 12.	Predominantly level 3
Loans – consumer		
Held-for-investment consumer loans, excluding credit card	Valuations are based on discounted cash flows, which consider: • Credit losses – which consider expected and current default rates, and loss severity • Prepayment speed • Discount rates • Servicing costs For information regarding the valuation of loans measured at collateral value, see Note 12.	Predominantly level 2
Held-for-investment credit card receivables	Valuations are based on discounted cash flows, which consider: • Credit costs - the allowance for loan losses is considered a reasonable proxy for the credit cost • Projected interest income, late-fee revenue and loan repayment rates • Discount rates • Servicing costs	Level 3
Trading loans – conforming residential mortgage loans expected to be sold (CCB, CIB)	Fair value is based on observable prices for mortgage-backed securities with similar collateral and incorporates adjustments to these prices to account for differences between the securities and the value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity.	Predominantly level 2

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Investment and trading securities	Quoted market prices are used where available.	Level 1
	In the absence of quoted market prices, securities are valued based on: • Observable market prices for similar securities • Relevant broker quotes • Discounted cash flows In addition, the following inputs to discounted cash flows are used for the following products: Mortgage- and asset-backed securities specific inputs: • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity Collateralized loan obligations (“CLOs”) specific inputs: • Collateral characteristics • Deal-specific payment and loss allocations • Expected prepayment speed, conditional default rates, loss severity • Credit spreads • Credit rating data	Level 2 or 3
Physical commodities	Valued using observable market prices or data.	Predominantly level 1 and 2
Derivatives	Exchange-traded derivatives that are actively traded and valued using the exchange price.	Level 1
	Derivatives that are valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that may use observable or unobservable valuation inputs as well as considering the contractual terms. The key valuation inputs used will depend on the type of derivative and the nature of the underlying instruments and may include equity prices, commodity prices, interest rate yield curves, foreign exchange rates, volatilities, correlations, CDS spreads and recovery rates. Additionally, the credit quality of the counterparty and of the Firm as well as market funding levels may also be considered. In addition, specific inputs used for derivatives that are valued based on models with significant unobservable inputs are as follows: Structured credit derivatives specific inputs include: • CDS spreads and recovery rates • Credit correlation between the underlying debt instruments Equity option specific inputs include: • Equity volatilities • Equity correlation • Equity-FX correlation • Equity-IR correlation Interest rate and FX exotic options specific inputs include: • Interest rate spread volatility • Interest rate correlation • Foreign exchange correlation • Interest rate-FX correlation Commodity derivatives specific inputs include: • Commodity volatility • Forward commodity price Additionally, adjustments are made to reflect counterparty credit quality (CVA) and the impact of funding (FVA). See page 171 of this Note.	Level 2 or 3

Product/instrument	Valuation methodology, inputs and assumptions	Classification in the valuation hierarchy
Mortgage servicing rights	See Mortgage servicing rights in Note 15.	Level 3
Private equity direct investments	Fair value is estimated using all available information; the range of potential inputs include: • Transaction prices • Trading multiples of comparable public companies • Operating performance of the underlying portfolio company • Adjustments as required, since comparable public companies are not identical to the company being valued, and for company-specific issues and lack of liquidity. • Additional available inputs relevant to the investment.	Level 2 or 3
Fund investments (e.g., mutual/ collective investment funds, private equity funds, hedge funds, and real estate funds)	Net asset value • NAV is supported by the ability to redeem and purchase at the NAV level. • Adjustments to the NAV as required, for restrictions on redemption (e.g., lock-up periods or withdrawal limitations) or where observable activity is limited.	Level 1 Level 2 or 3[(a)]
Beneficial interests issued by consolidated VIEs	Valued using observable market information, where available. In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE.	Level 2 or 3
Long-term debt, not carried at fair value	Valuations are based on discounted cash flows, which consider: • Market rates for respective maturity	Predominantly level 2
Structured notes (included in deposits, short-term borrowings and long-term debt)	• Valuations are based on discounted cash flow analyses that consider the embedded derivative and the terms and payment structure of the note. • The embedded derivative features are considered using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that may use observable or unobservable valuation inputs, depending on the embedded derivative. The specific inputs used vary according to the nature of the embedded derivative features, as described in the discussion above regarding derivatives valuation. Adjustments are then made to this base valuation to reflect the Firm's own credit risk (DVA). See page 171 of this Note.	Level 2 or 3

(a) Excludes certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient.

The following table presents the assets and liabilities reported at fair value as of December 31, 2017 and 2016, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

December 31, 2017 (in millions)	Fair value hierarchy			Derivative netting adjustments	Total fair value
	Level 1	Level 2	Level 3		
Federal funds sold and securities purchased under resale agreements	$ –	$ 14,732	$ –	$ –	$ 14,732
Securities borrowed	–	3,049	–	–	3,049
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	41,515	307	–	41,822
Residential – nonagency	–	1,835	60	–	1,895
Commercial – nonagency	–	1,645	11	–	1,656
Total mortgage-backed securities	–	44,995	378	–	45,373
U.S. Treasury and government agencies[a]	30,758	6,475	1	–	37,234
Obligations of U.S. states and municipalities	–	9,067	744	–	9,811
Certificates of deposit, bankers' acceptances and commercial paper	–	226	–	–	226
Non-U.S. government debt securities	28,887	28,831	78	–	57,796
Corporate debt securities	–	24,146	312	–	24,458
Loans[b]	–	35,242	2,719	–	37,961
Asset-backed securities	–	3,284	153	–	3,437
Total debt instruments	59,645	152,266	4,385	–	216,296
Equity securities	87,346	197	295	–	87,838
Physical commodities[c]	4,924	1,322	–	–	6,246
Other	–	14,197	690	–	14,887
Total debt and equity instruments[d]	151,915	167,982	5,370	–	325,267
Derivative receivables:					
Interest rate	181	314,107	1,704	(291,319)	24,673
Credit	–	21,995	1,209	(22,335)	869
Foreign exchange	841	158,834	557	(144,081)	16,151
Equity	–	37,722	2,318	(32,158)	7,882
Commodity	–	19,875	210	(13,137)	6,948
Total derivative receivables[e][f]	1,022	552,533	5,998	(503,030)	56,523
Total trading assets[g]	152,937	720,515	11,368	(503,030)	381,790
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	70,280	–	–	70,280
Residential – nonagency	–	11,366	1	–	11,367
Commercial – nonagency	–	5,025	–	–	5,025
Total mortgage-backed securities	–	86,671	1	–	86,672
U.S. Treasury and government agencies[a]	22,745	–	–	–	22,745
Obligations of U.S. states and municipalities	–	32,338	–	–	32,338
Certificates of deposit	–	59	–	–	59
Non-U.S. government debt securities	18,140	9,154	–	–	27,294
Corporate debt securities	–	2,757	–	–	2,757
Asset-backed securities:					
Collateralized loan obligations	–	20,720	276	–	20,996
Other	–	8,817	–	–	8,817
Equity securities	547	–	–	–	547
Total available-for-sale securities	41,432	160,516	277	–	202,225
Loans	–	2,232	276	–	2,508
Mortgage servicing rights	–	–	6,030	–	6,030
Other assets[g]	13,795	343	1,265	–	15,403
Total assets measured at fair value on a recurring basis	$ 208,164	$ 901,387	$ 19,216	$ (503,030)	$ 625,737
Deposits	$ –	$ 17,179	$ 4,142	$ –	$ 21,321
Federal funds purchased and securities loaned or sold under repurchase agreements	–	697	–	–	697
Short-term borrowings	–	7,526	1,665	–	9,191
Trading liabilities:					
Debt and equity instruments[d]	64,664	21,183	39	–	85,886
Derivative payables:					
Interest rate	170	282,825	1,440	(277,306)	7,129
Credit	–	22,009	1,244	(21,954)	1,299
Foreign exchange	794	154,075	953	(143,349)	12,473
Equity	–	39,668	5,727	(36,203)	9,192
Commodity	–	21,017	884	(14,217)	7,684
Total derivative payables[e][f]	964	519,594	10,248	(493,029)	37,777
Total trading liabilities	65,628	540,777	10,287	(493,029)	123,663
Accounts payable and other liabilities	9,074	121	13	–	9,208
Beneficial interests issued by consolidated VIEs	–	6	39	–	45
Long-term debt	–	31,394	16,125	–	47,519
Total liabilities measured at fair value on a recurring basis	$ 74,702	$ 597,700	$ 32,271	$ (493,029)	$ 211,644

December 31, 2016 (in millions)	Fair value hierarchy			Derivative netting adjustments	Total fair value
	Level 1	Level 2	Level 3		
Federal funds sold and securities purchased under resale agreements	$ –	$ 21,506	$ –	$ –	$ 21,506
Securities borrowed	–	–	–	–	–
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	13	40,586	392	–	40,991
Residential – nonagency	–	1,552	83	–	1,635
Commercial – nonagency	–	1,321	17	–	1,338
Total mortgage-backed securities	13	43,459	492	–	43,964
U.S. Treasury and government agencies[a]	19,554	5,201	–	–	24,755
Obligations of U.S. states and municipalities	–	8,403	649	–	9,052
Certificates of deposit, bankers' acceptances and commercial paper	–	1,649	–	–	1,649
Non-U.S. government debt securities	28,443	23,076	46	–	51,565
Corporate debt securities	–	22,751	576	–	23,327
Loans[b]	–	28,965	4,837	–	33,802
Asset-backed securities	–	5,250	302	–	5,552
Total debt instruments	48,010	138,754	6,902	–	193,666
Equity securities	96,759	281	231	–	97,271
Physical commodities[c]	5,341	1,620	–	–	6,961
Other	–	9,341	761	–	10,102
Total debt and equity instruments[d]	150,110	149,996	7,894	–	308,000
Derivative receivables:					
Interest rate	715	602,747	2,501	(577,661)	28,302
Credit	–	28,256	1,389	(28,351)	1,294
Foreign exchange	812	231,743	870	(210,154)	23,271
Equity	–	34,032	908	(30,001)	4,939
Commodity	158	18,360	125	(12,371)	6,272
Total derivative receivables[e]	1,685	915,138	5,793	(858,538)	64,078
Total trading assets[g]	151,795	1,065,134	13,687	(858,538)	372,078
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	64,005	–	–	64,005
Residential – nonagency	–	14,442	1	–	14,443
Commercial – nonagency	–	9,104	–	–	9,104
Total mortgage-backed securities	–	87,551	1	–	87,552
U.S. Treasury and government agencies[a]	44,072	29	–	–	44,101
Obligations of U.S. states and municipalities	–	31,592	–	–	31,592
Certificates of deposit	–	106	–	–	106
Non-U.S. government debt securities	22,793	12,495	–	–	35,288
Corporate debt securities	–	4,958	–	–	4,958
Asset-backed securities:					
Collateralized loan obligations	–	26,738	663	–	27,401
Other	–	6,967	–	–	6,967
Equity securities	926	–	–	–	926
Total available-for-sale securities	67,791	170,436	664	–	238,891
Loans	–	1,660	570	–	2,230
Mortgage servicing rights	–	–	6,096	–	6,096
Other assets[g]	4,357	–	2,223	–	6,580
Total assets measured at fair value on a recurring basis	$ 223,943	$ 1,258,736	$ 23,240	$ (858,538)	$ 647,381
Deposits	$ –	$ 11,795	$ 2,117	$ –	$ 13,912
Federal funds purchased and securities loaned or sold under repurchase agreements	–	687	–	–	687
Short-term borrowings	–	7,971	1,134	–	9,105
Trading liabilities:					
Debt and equity instruments[d]	68,304	19,081	43	–	87,428
Derivative payables:					
Interest rate	539	569,001	1,238	(559,963)	10,815
Credit	–	27,375	1,291	(27,255)	1,411
Foreign exchange	902	231,815	2,254	(214,463)	20,508
Equity	–	35,202	3,160	(30,222)	8,140
Commodity	173	20,079	210	(12,105)	8,357
Total derivative payables[e]	1,614	883,472	8,153	(844,008)	49,231
Total trading liabilities	69,918	902,553	8,196	(844,008)	136,659
Accounts payable and other liabilities	9,107	–	13	–	9,120
Beneficial interests issued by consolidated VIEs	–	72	48	–	120
Long-term debt	–	24,836 [h]	12,850 [h]	–	37,686
Total liabilities measured at fair value on a recurring basis	$ 79,025	$ 947,914 [h]	$ 24,358 [h]	$ (844,008)	$ 207,289

(a) At December 31, 2017 and 2016, included total U.S. government-sponsored enterprise obligations of $78.0 billion and $80.6 billion, respectively, which were predominantly mortgage-related.

(b) At December 31, 2017 and 2016, included within trading loans were $11.4 billion and $16.5 billion, respectively, of residential first-lien mortgages, and $4.2 billion and $3.3 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $5.7 billion and $11.0 billion, respectively, and reverse mortgages of $836 million and $2.0 billion, respectively.

(c) Physical commodities inventories are generally accounted for at the lower of cost or net realizable value. "Net realizable value" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, net realizable value approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when net

realizable value is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. For a further discussion of the Firm's hedge accounting relationships, see Note 5. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.

(d) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).

(e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

(f) Reflects the Firm's adoption of rulebook changes made by two CCPs that require or allow the Firm to treat certain OTC-cleared derivative transactions as daily settled. For further information, see Note 5.

(g) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy. At December 31, 2017 and 2016, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were $779 million and $1.0 billion, respectively. Included in these balances at December 31, 2017 and 2016, were trading assets of $54 million and $52 million, respectively, and other assets of $725 million and $977 million, respectively.

(h) The prior period amounts have been revised to conform with the current period presentation.

Transfers between levels for instruments carried at fair value on a recurring basis

For the years ended December 31, 2017 and 2016, there were no significant transfers between levels 1 and 2.

During the year ended December 31, 2017, transfers from level 3 to level 2 included the following:

- $1.5 billion of trading loans driven by an increase in observability.
- $1.2 billion of gross equity derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.

During the year ended December 31, 2017, transfers from level 2 to level 3 included the following:

- $1.0 billion of gross equity derivative receivables and $2.5 billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $1.7 billion of long-term debt driven by a decrease in observability and an increase in the significance of unobservable inputs for certain structured notes.

During the year ended December 31, 2016, transfers from level 3 to level 2 included the following:

- $1.4 billion of long-term debt driven by an increase in observability and a reduction in the significance of unobservable inputs for certain structured notes.

During the year ended December 31, 2016, transfers from level 2 to level 3 included the following:

- $1.1 billion of gross equity derivative receivables and $1.0 billion of gross equity derivative payables as a result of an decrease in observability and an increase in the significance of unobservable inputs.
- $1.0 billion of trading loans driven by a decrease in observability.

During the year ended December 31, 2015, transfers from level 3 to level 2 included the following:

- $3.1 billion of long-term debt and $1.0 billion of deposits driven by an increase in observability on certain structured notes with embedded interest rate and FX derivatives and a reduction in the significance of unobservable inputs for certain structured notes with embedded equity derivatives.
- $2.1 billion of gross equity derivatives for both receivables and payables as a result of an increase in observability and a decrease in the significance of unobservable inputs; partially offset by transfers into level 3 resulting in net transfers of approximately $1.2 billion for both receivables and payables.
- $2.8 billion of trading loans driven by an increase in observability of certain collateralized financing transactions.
- $2.4 billion of corporate debt driven by a decrease in the significance of unobservable inputs and an increase in observability for certain structured products.

During the year ended December 31, 2015, there were no significant transfers from level 2 to level 3.

All transfers are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 valuations

The Firm has established well-structured processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3). For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, see pages 155–159 of this Note.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed valuation models and other valuation techniques that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate valuation model or other valuation technique to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs including transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and, for certain instruments, the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

In the Firm's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted average values will therefore vary from period-to-period and parameter-to-parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

For the Firm's derivatives and structured notes positions classified within level 3 at December 31, 2017, interest rate correlation inputs used in estimating fair value were concentrated towards the upper end of the range; equity correlation, equity-FX and equity-IR correlation inputs were concentrated in the middle of the range; commodity correlation inputs were concentrated in the middle of the range; credit correlation inputs were concentrated towards the lower end of the range; and the interest rate-foreign exchange ("IR-FX") correlation inputs were concentrated towards the lower end of the range. In addition, the interest rate spread volatility inputs used in estimating fair value were distributed across the range; equity volatilities and commodity volatilities were concentrated towards the lower end of the range; and forward commodity prices used in estimating the fair value of commodity derivatives were concentrated towards the lower end of the range. Recovery rate, yield, prepayment speed, conditional default rate, loss severity and price inputs used in estimating the fair value of credit derivatives were distributed across the range; and credit spreads were concentrated towards the lower end of the range.

Level 3 inputs[a]

December 31, 2017					
Product/Instrument	**Fair value** (in millions)	**Principal valuation technique**	**Unobservable inputs[g]**	**Range of input values**	**Weighted average**
Residential mortgage-backed securities and loans[b]	$ 1,418	Discounted cash flows	Yield	3% – 16%	6%
			Prepayment speed	0% – 13%	9%
			Conditional default rate	0% – 5%	1%
			Loss severity	0% – 84%	3%
Commercial mortgage-backed securities and loans[c]	714	Market comparables	Price	$ 0 – $100	$94
Obligations of U.S. states and municipalities	744	Market comparables	Price	$ 59 – $100	$98
Corporate debt securities	312	Market comparables	Price	$ 3 – $111	$82
Loans[d]	1,242	Market comparables	Price	$ 4 – $103	$84
Asset-backed securities	276	Discounted cash flows	Credit spread	204bps – 205bps	205bps
			Prepayment speed	20%	20%
			Conditional default rate	2%	2%
			Loss severity	30%	30%
	153	Market comparables	Price	$ 2 – $160	$79
Net interest rate derivatives	28	Option pricing	Interest rate spread volatility	27bps – 38bps	
			Interest rate correlation	(50)% – 98%	
			IR-FX correlation	60% – 70%	
	236	Discounted cash flows	Prepayment speed	0% – 30%	
Net credit derivatives	(37)	Discounted cash flows	Credit correlation	40 % – 75%	
			Credit spread	6bps – 1,489bps	
			Recovery rate	20% – 70%	
			Yield	1% – 20%	
			Prepayment speed	4% – 21%	
			Conditional default rate	0% – 100%	
			Loss severity	4% – 100%	
	2	Market comparables	Price	$ 10 – $98	
Net foreign exchange derivatives	(200)	Option pricing	IR-FX correlation	(50)% – 70%	
	(196)	Discounted cash flows	Prepayment speed	7%	
Net equity derivatives	(3,409)	Option pricing	Equity volatility	20% – 55%	
			Equity correlation	0 % – 85%	
			Equity-FX correlation	(50)% – 30%	
			Equity-IR correlation	10 % – 40%	
Net commodity derivatives	(674)	Option pricing	Forward commodity price	$ 54 – $68 per barrel	
			Commodity volatility	5 % – 46%	
			Commodity correlation	(40)% – 70%	
MSRs	6,030	Discounted cash flows	Refer to Note 15		
Other assets	984	Discounted cash flows	Credit spread	40bps – 70bps	55bps
			Yield	8% – 60%	47%
	971	Market comparables	EBITDA multiple	4.7x – 10.6x	8.9x
Long-term debt, short-term borrowings, and deposits[e]	21,932	Option pricing	Interest rate spread volatility	27bps – 38bps	
			Interest rate correlation	(50)% – 98%	
			IR-FX correlation	(50)% – 70%	
			Equity correlation	0% – 85%	
			Equity-FX correlation	(50)% – 30%	
			Equity-IR correlation	10% – 40%	
Other level 3 assets and liabilities, net[f]	283				

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated balance sheets. Furthermore, the inputs presented for each valuation technique in the table are, in some cases, not applicable to every instrument valued using the technique as the characteristics of the instruments can differ.

(b) Includes U.S. government agency securities of $297 million, nonagency securities of $61 million and trading loans of $1.1 billion.
(c) Includes U.S. government agency securities of $10 million, nonagency securities of $11 million, trading loans of $417 million and non-trading loans of $276 million.
(d) Includes trading loans of $1.2 billion.
(e) Long-term debt, short-term borrowings and deposits include structured notes issued by the Firm that are predominantly financial instruments containing embedded derivatives. The estimation of the fair value of structured notes includes the derivative features embedded within the instrument. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.
(f) Includes level 3 assets and liabilities that are insignificant both individually and in aggregate.
(g) Price is a significant unobservable input for certain instruments. When quoted market prices are not readily available, reliance is generally placed on price-based internal valuation techniques. The price input is expressed assuming a par value of $100.

Changes in and ranges of unobservable inputs

The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent, as a change in one unobservable input may give rise to a change in another unobservable input. Where relationships do exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline); such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

The following discussion also provides a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.

Yield – The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

Credit spread – The credit spread is the amount of additional annualized return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

The yield and the credit spread of a particular mortgage-backed security primarily reflect the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield and credit spreads reflects the range of risk inherent in various instruments owned by the Firm. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, LTV ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages. For corporate debt securities, obligations of U.S. states and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.

Prepayment speed – The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool to collateral pool, and are driven by the type and location of the underlying borrower, and the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

Conditional default rate – The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral has high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement. Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Firm's market-making portfolios, conditional default rates are most typically at the lower end of the range presented.

Loss severity – The loss severity (the inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

The loss severity applied in valuing a mortgage-backed security investment depends on factors relating to the underlying mortgages, including the LTV ratio, the nature of the lender's lien on the property and other instrument-specific factors.

Correlation – Correlation is a measure of the relationship between the movements of two variables (e.g., how the change in one variable influences the change in the other). Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity and foreign exchange) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement. The range of correlation inputs between risks within the same asset class are generally narrower than those between underlying risks across asset classes. In addition, the ranges of credit correlation inputs tend to be narrower than those affecting other asset classes.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input, as the relationship between the underlying risks may be different over different time periods. Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

Volatility – Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options, commodity options, and interest rate options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option (e.g., the volatility of a particular equity security may be significantly different from that of a particular commodity index), the tenor of the derivative as well as the strike price of the option.

EBITDA multiple – EBITDA multiples refer to the input (often derived from the value of a comparable company) that is multiplied by the historic and/or expected earnings before interest, taxes, depreciation and amortization ("EBITDA") of a company in order to estimate the company's value. An increase in the EBITDA multiple, in isolation, net of adjustments, would result in an increase in a fair value measurement.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2017, 2016 and 2015. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2017 (in millions)	Fair value measurements using significant unobservable inputs									Change in unrealized gains/(losses) related to financial instruments held at Dec. 31, 2017
	Fair value at January 1, 2017	Total realized/ unrealized gains/ (losses)	Purchases[f]	Sales	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at Dec. 31, 2017	
Assets:									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. government agencies	$ 392	$ (11)	$ 161	$ (171)	$ (70)	$ 49	$ (43)	$ 307	$ (20)
Residential – nonagency	83	19	53	(30)	(64)	132	(133)	60	11
Commercial – nonagency	17	9	27	(44)	(13)	64	(49)	11	1
Total mortgage-backed securities	492	17	241	(245)	(147)	245	(225)	378	(8)
U.S. Treasury and government agencies	–	–	–	–	–	1	–	1	–
Obligations of U.S. states and municipalities	649	18	152	(70)	(5)	–	–	744	15
Non-U.S. government debt securities	46	–	559	(518)	–	62	(71)	78	–
Corporate debt securities	576	11	872	(612)	(497)	157	(195)	312	18
Loans	4,837	333	2,389	(2,832)	(1,323)	806	(1,491)	2,719	43
Asset-backed securities	302	32	354	(356)	(56)	75	(198)	153	–
Total debt instruments	6,902	411	4,567	(4,633)	(2,028)	1,346	(2,180)	4,385	68
Equity securities	231	39	176	(148)	(4)	59	(58)	295	21
Other	761	100	30	(46)	(162)	17	(10)	690	39
Total trading assets – debt and equity instruments	7,894	550 [c]	4,773	(4,827)	(2,194)	1,422	(2,248)	5,370	128 [c]
Net derivative receivables:[a]									
Interest rate	1,263	72	60	(82)	(1,040)	(8)	(1)	264	(473)
Credit	98	(164)	1	(6)	–	77	(41)	(35)	32
Foreign exchange	(1,384)	43	13	(10)	854	(61)	149	(396)	42
Equity	(2,252)	(417)	1,116	(551)	(245)	(1,482)	422	(3,409)	(161)
Commodity	(85)	(149)	–	–	(433)	(6)	(1)	(674)	(718)
Total net derivative receivables	(2,360)	(615) [c]	1,190	(649)	(864)	(1,480)	528	(4,250)	(1,278) [c]
Available-for-sale securities:									
Asset-backed securities	663	15	–	(50)	(352)	–	–	276	14
Other	1	–	–	–	–	–	–	1	–
Total available-for-sale securities	664	15 [d]	–	(50)	(352)	–	–	277	14 [d]
Loans	570	35 [c]	–	(26)	(303)	–	–	276	3 [c]
Mortgage servicing rights	6,096	(232) [e]	1,103	(140)	(797)	–	–	6,030	(232) [e]
Other assets	2,223	244 [c]	66	(177)	(870)	–	(221)	1,265	74 [c]

Year ended December 31, 2017 (in millions)	Fair value measurements using significant unobservable inputs									Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2017
	Fair value at January 1, 2017	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at Dec. 31, 2017	
Liabilities:[b]										
Deposits	$ 2,117	$ 152 [c][i]	$ –	$ –	$ 3,027	$ (291)	$ 11	$ (874)	$ 4,142	$ 198 [c][i]
Federal funds purchased and securities loaned or sold under repurchase agreements	–	–	–	–	–	–	–	–	–	–
Short-term borrowings	1,134	42 [c][i]	–	–	3,289	(2,748)	150	(202)	1,665	7 [c][i]
Trading liabilities – debt and equity instruments	43	(3) [c]	(46)	48	–	3	3	(9)	39	– [c]
Accounts payable and other liabilities	13	(2)	(1)	–	–	3	–	–	13	(2)
Beneficial interests issued by consolidated VIEs	48	2 [c]	(122)	39	–	(6)	78	–	39	– [c]
Long-term debt	12,850	1,067 [c][i]	–	–	12,458	(10,985)	1,660	(925)	16,125	552 [c][i]

Year ended December 31, 2016 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at January 1, 2016	Total realized/ unrealized gains/ (losses)	Purchases[f]	Sales	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at Dec. 31, 2016	Change in unrealized gains/(losses) related to financial instruments held at Dec. 31, 2016
Assets:									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. government agencies	$ 715	$ (20)	$ 135	$ (295)	$ (115)	$ 111	$ (139)	$ 392	$ (36)
Residential – nonagency	194	4	252	(319)	(20)	67	(95)	83	5
Commercial – nonagency	115	(11)	69	(29)	(3)	173	(297)	17	3
Total mortgage-backed securities	1,024	(27)	456	(643)	(138)	351	(531)	492	(28)
Obligations of U.S. states and municipalities	651	19	149	(132)	(38)	–	–	649	–
Non-U.S. government debt securities	74	(4)	91	(97)	(7)	19	(30)	46	(7)
Corporate debt securities	736	2	445	(359)	(189)	148	(207)	576	(22)
Loans	6,604	(343)	2,228	(2,598)	(1,311)	1,044	(787)	4,837	(169)
Asset-backed securities	1,832	39	655	(712)	(968)	288	(832)	302	19
Total debt instruments	10,921	(314)	4,024	(4,541)	(2,651)	1,850	(2,387)	6,902	(207)
Equity securities	265	–	90	(108)	(40)	29	(5)	231	7
Other	744	79	649	(287)	(360)	26	(90)	761	28
Total trading assets – debt and equity instruments	11,930	(235) [c]	4,763	(4,936)	(3,051)	1,905	(2,482)	7,894	(172) [c]
Net derivative receivables:[a]	–						–	–	
Interest rate	876	756	193	(57)	(713)	(14)	222	1,263	(144)
Credit	549	(742)	10	(2)	211	36	36	98	(622)
Foreign exchange	(725)	67	64	(124)	(649)	(48)	31	(1,384)	(350)
Equity	(1,514)	(145)	277	(852)	213	94	(325)	(2,252)	(86)
Commodity	(935)	194	1	10	645	8	(8)	(85)	(36)
Total net derivative receivables	(1,749)	130 [c]	545	(1,025)	(293)	76	(44)	(2,360)	(1,238) [c]
Available-for-sale securities:									
Asset-backed securities	823	1	–	–	(119)	–	(42)	663	1
Other	1	–	–	–	–	–	–	1	–
Total available-for-sale securities	824	1 [d]	–	–	(119)	–	(42)	664	1 [d]
Loans	1,518	(49) [c]	259	(7)	(838)	–	(313)	570	– [c]
Mortgage servicing rights	6,608	(163) [e]	679	(109)	(919)	–	–	6,096	(163) [e]
Other assets	2,401	130 [c]	487	(496)	(299)	–	–	2,223	48 [c]

Year ended December 31, 2016 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at January 1, 2016	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at Dec. 31, 2016	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2016
Liabilities:[b]										
Deposits	$ 2,950	$ (56) [c]	$ –	$ –	$ 1,375	$ (1,283)	$ –	$ (869)	$ 2,117	$ 23 [c]
Federal funds purchased and securities loaned or sold under repurchase agreements	–	–	–	–	–	(2)	6	(4)	–	–
Short-term borrowings	639	(230) [c]	–	–	1,876	(1,210)	114	(55)	1,134	(70) [c]
Trading liabilities – debt and equity instruments	63	(12) [c]	(15)	23	–	(22)	13	(7)	43	(18) [c]
Accounts payable and other liabilities	19	–	–	–	–	(6)	–	–	13	–
Beneficial interests issued by consolidated VIEs	549	(31) [c]	–	–	143	(613)	–	–	48	6 [c]
Long-term debt	11,447 [j]	147 [c][j]	–	–	8,140 [j]	(5,810)	315	(1,389)	12,850 [j]	639 [c][j]

Year ended December 31, 2015 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/(losses) related to financial instruments held at Dec. 31, 2015
	Fair value at January 1, 2015	Total realized/ unrealized gains/ (losses)	Purchases[f]	Sales	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at Dec. 31, 2015	
Assets:									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. government agencies	$ 922	$ (28)	$ 327	$ (303)	$ (132)	$ 25	$ (96)	$ 715	$ (27)
Residential – nonagency	663	130	253	(611)	(23)	180	(398)	194	4
Commercial – nonagency	306	(14)	246	(262)	(22)	117	(256)	115	(5)
Total mortgage-backed securities	1,891	88	826	(1,176)	(177)	322	(750)	1,024	(28)
Obligations of U.S. states and municipalities	1,273	14	352	(133)	(27)	5	(833)	651	(1)
Non-U.S. government debt securities	302	9	205	(123)	(64)	16	(271)	74	(16)
Corporate debt securities	2,989	(77)	1,171	(1,038)	(125)	179	(2,363)	736	2
Loans	13,287	(174)	3,532	(4,661)	(3,112)	509	(2,777)	6,604	(181)
Asset-backed securities	1,264	(41)	1,920	(1,229)	(35)	205	(252)	1,832	(32)
Total debt instruments	21,006	(181)	8,006	(8,360)	(3,540)	1,236	(7,246)	10,921	(256)
Equity securities	431	96	89	(193)	(26)	51	(183)	265	82
Physical commodities	2	(2)	–	–	–	–	–	–	–
Other	1,050	119	1,581	(1,313)	192	33	(918)	744	85
Total trading assets – debt and equity instruments	22,489	32 [c]	9,676	(9,866)	(3,374)	1,320	(8,347)	11,930	(89) [c]
Net derivative receivables:[a]									
Interest rate	626	962	513	(173)	(732)	6	(326)	876	263
Credit	189	118	129	(136)	165	29	55	549	260
Foreign exchange	(526)	657	19	(149)	(296)	36	(466)	(725)	49
Equity	(1,785)	731	890	(1,262)	(158)	17	53	(1,514)	5
Commodity	(565)	(856)	1	(24)	512	(30)	27	(935)	(41)
Total net derivative receivables	(2,061)	1,612 [c]	1,552	(1,744)	(509)	58	(657)	(1,749)	536 [c]
Available-for-sale securities:	–								
Asset-backed securities	908	(32)	51	(43)	(61)	–	–	823	(28)
Other	129	–	–	–	(29)	–	(99)	1	–
Total available-for-sale securities	1,037	(32) [d]	51	(43)	(90)	–	(99)	824	(28) [d]
Loans	2,541	(133) [c]	1,290	(92)	(1,241)	–	(847)	1,518	(32) [c]
Mortgage servicing rights	7,436	(405) [e]	985	(486)	(922)	–	–	6,608	(405) [e]
Other assets	3,184	(29) [c]	346	(509)	(411)	–	(180)	2,401	(289) [c]

Year ended December 31, 2015 (in millions)	Fair value measurements using significant unobservable inputs									Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2015
	Fair value at January 1, 2015	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at Dec. 31, 2015	
Liabilities:[b]										
Deposits	$ 2,859	$ (39) [c]	$ –	$ –	$ 1,993	$ (850)	$ –	$ (1,013)	$ 2,950	$ (29) [c]
Short-term borrowings	1,453	(697) [c]	–	–	3,334	(2,963)	243	(731)	639	(57) [c]
Trading liabilities – debt and equity instruments	72	15 [c]	(163)	160	–	(17)	12	(16)	63	(4) [c]
Accounts payable and other liabilities	26	– [c]	–	–	–	(7)	–	–	19	–
Beneficial interests issued by consolidated VIEs	1,146	(82) [c]	–	–	286	(574)	–	(227)	549	(63) [c]
Long-term debt	11,877	(480) [c]	(58)	–	9,359	(6,465) [j]	315	(3,101)	11,447 [j]	385 [c][j]

(a) All level 3 derivatives are presented on a net basis, irrespective of underlying counterparty.

(b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 15%, 12% and 13% at December 31, 2017, 2016 and 2015, respectively.
(c) Predominantly reported in principal transactions revenue, except for changes in fair value for CCB mortgage loans, and lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.
(d) Realized gains/(losses) on AFS securities, as well as other-than-temporary impairment ("OTTI") losses that are recorded in earnings, are reported in securities gains. Unrealized gains/(losses) are reported in OCI. Realized gains/(losses) and foreign exchange hedge accounting adjustments recorded in income on AFS securities were zero, zero, and $(7) million for the years ended December 31, 2017, 2016 and 2015, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were $15 million, $1 million and $(25) million for the years ended December 31, 2017, 2016 and 2015, respectively.
(e) Changes in fair value for CCB MSRs are reported in mortgage fees and related income.
(f) Loan originations are included in purchases
(g) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, and deconsolidation associated with beneficial interests in VIEs and other items.
(h) All transfers into and/or out of level 3 are based on changes in the observability of the valuation inputs and are assumed to occur at the beginning of the quarterly reporting period in which they occur.
(i) Realized (gains)/losses due to DVA for fair value option elected liabilities are reported in principal transactions revenue. Unrealized (gains)/losses are reported in OCI. Unrealized gains were $48 million for the year ended December 31, 2017. There were no realized gains for the year ended December 31, 2017.
(j) The prior period amounts have been revised to conform with the current period presentation.

Level 3 analysis

Consolidated balance sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 0.8% of total Firm assets at December 31, 2017. The following describes significant changes to level 3 assets since December 31, 2016, for those items measured at fair value on a recurring basis. For further information on changes impacting items measured at fair value on a nonrecurring basis, see Assets and liabilities measured at fair value on a nonrecurring basis on page 172.

For the year ended December 31, 2017

Level 3 assets were $19.2 billion at December 31, 2017, reflecting a decrease of $4.0 billion from December 31, 2016, largely due to the following:

- $2.5 billion decrease in trading assets – debt and equity instruments was predominantly driven by a decrease of $2.1 billion in trading loans largely due to settlements, and a $1.0 billion decrease in other assets due to settlements and transfers from level 3 to level 2 as a result of increased observability in certain valuation inputs

Gains and losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the years ended December 31, 2017, 2016 and 2015. For further information on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 166–170.

2017

- $1.3 billion of net losses on liabilities largely driven by market movements in long-term debt

2016

- There were no individually significant movements for the year ended December 31, 2016.

2015

- $1.6 billion of net gains in interest rate, foreign exchange and equity derivative receivables largely due to market movements; partially offset by losses on commodity derivatives due to market movements
- $1.3 billion of net gains in liabilities due to market movements

Credit and funding adjustments – derivatives

Derivatives are generally valued using models that use as their basis observable market parameters. These market parameters generally do not consider factors such as counterparty nonperformance risk, the Firm's own credit quality, and funding costs. Therefore, it is generally necessary to make adjustments to the base estimate of fair value to reflect these factors.

CVA represents the adjustment, relative to the relevant benchmark interest rate, necessary to reflect counterparty nonperformance risk. The Firm estimates CVA using a scenario analysis to estimate the expected positive credit exposure across all of the Firm's existing positions with each counterparty, and then estimates losses based on the probability of default and estimated recovery rate as a result of a counterparty credit event considering contractual factors designed to mitigate the Firm's credit exposure, such as collateral and legal rights of offset. The key inputs to this methodology are (i) the probability of a default event occurring for each counterparty, as derived from observed or estimated CDS spreads; and (ii) estimated recovery rates implied by CDS spreads, adjusted to consider the differences in recovery rates as a derivative creditor relative to those reflected in CDS spreads, which generally reflect senior unsecured creditor risk.

FVA represents the adjustment to reflect the impact of funding and is recognized where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. The Firm's FVA framework, applied to uncollateralized (including partially collateralized) over-the-counter ("OTC") derivatives incorporates key inputs such as: (i) the expected funding requirements arising from the Firm's positions with each counterparty and collateral arrangements; and (ii) the estimated market funding cost in the principal market which, for derivative liabilities, considers the Firm's credit risk (DVA). For collateralized derivatives, the fair value is estimated by discounting expected future cash flows at the relevant overnight indexed swap rate given the underlying collateral agreement with the counterparty, and therefore a separate FVA is not necessary.

The following table provides the impact of credit and funding adjustments on principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities. The FVA reported below include the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality over time.

Year ended December 31, (in millions)	**2017**	2016	2015
Credit and funding adjustments:			
Derivatives CVA	**$ 802**	$ (84)	$ 620
Derivatives FVA	**(295)**	7	73

Valuation adjustments on fair value option elected liabilities

The valuation of the Firm's liabilities for which the fair value option has been elected requires consideration of the Firm's own credit risk. DVA on fair value option elected liabilities reflects changes (subsequent to the issuance of the liability) in the Firm's probability of default and LGD, which are estimated based on changes in the Firm's credit spread observed in the bond market. Effective January 1, 2016, the effect of DVA on fair value option elected liabilities is recognized in OCI. See Note 23 for further information.

Assets and liabilities measured at fair value on a nonrecurring basis

The following tables present the assets reported on a nonrecurring basis at fair value as of December 31, 2017 and 2016, by major product category and fair value hierarchy.

December 31, 2017 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3		Total fair value
Loans	**$ –**	**$ 238**	**$ 596**	[a]	**$ 834**
Other assets	**–**	**283**	**183**		**466**
Total assets measured at fair value on a nonrecurring basis	**$ –**	**$ 521**	**$ 779**	[a]	**$ 1,300**

December 31, 2016 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Total fair value
Loans	$ –	$ 730	$ 590	$ 1,320
Other assets	–	5	232	237
Total assets measured at fair value on a nonrecurring basis	$ –	$ 735	$ 822	$ 1,557

(a) Of the $779 million in level 3 assets measured at fair value on a nonrecurring basis as of December 31, 2017, $442 million related to residential real estate loans carried at the net realizable value of the underlying collateral (e.g., collateral-dependent loans and other loans charged off in accordance with regulatory guidance). These amounts are classified as level 3 as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values. These discounts to the broker price opinions ranged from 13% to 48% with a weighted average of 27%.

There were no material liabilities measured at fair value on a nonrecurring basis at December 31, 2017 and 2016.

Nonrecurring fair value changes

The following table presents the total change in value of assets and liabilities for which a fair value adjustment has been recognized for the years ended December 31, 2017 2016 and 2015, related to financial instruments held at those dates.

December 31, (in millions)	2017	2016	2015
Loans	**$ (159)**	$ (209)	$ (226)
Other Assets	**(148)**	37	(60)
Accounts payable and other liabilities	**(1)**	–	(8)
Total nonrecurring fair value gains/ (losses)	**$ (308)**	$ (172)	$ (294)

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), see Note 12.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance sheets at fair value

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table. However, certain financial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements. Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of JPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated balance sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks, deposits with banks, federal funds sold, securities purchased under resale agreements and securities borrowed, short-term receivables and accrued interest receivable, short-term borrowings, federal funds purchased, securities loaned and sold under repurchase agreements, accounts payable, and accrued liabilities. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents by fair value hierarchy classification the carrying values and estimated fair values at December 31, 2017 and 2016, of financial assets and liabilities, excluding financial instruments that are carried at fair value on a recurring basis, and their classification within the fair value hierarchy. For additional information regarding the financial instruments within the scope of this disclosure, and the methods and significant assumptions used to estimate their fair value, see pages 156–159 of this Note.

	December 31, 2017					December 31, 2016				
	Estimated fair value hierarchy					Estimated fair value hierarchy				
(in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value
Financial assets										
Cash and due from banks	**$ 25.8**	**$ 25.8**	**$ –**	**$ –**	**$ 25.8**	$ 23.9	$ 23.9	$ –	$ –	$ 23.9
Deposits with banks	**404.3**	**401.8**	**2.5**	**–**	**404.3**	365.8	362.0	3.8	–	365.8
Accrued interest and accounts receivable	**67.0**	**–**	**67.0**	**–**	**67.0**	52.3	–	52.2	0.1	52.3
Federal funds sold and securities purchased under resale agreements	**183.7**	**–**	**183.7**	**–**	**183.7**	208.5	–	208.3	0.2	208.5
Securities borrowed	**102.1**	**–**	**102.1**	**–**	**102.1**	96.4	–	96.4	–	96.4
Securities, held-to-maturity	**47.7**	**–**	**48.7**	**–**	**48.7**	50.2	–	50.9	–	50.9
Loans, net of allowance for loan losses[a][b]	**914.6**	**–**	**213.2**	**707.1**	**920.3**	878.8	–	24.1	851.0	875.1
Other	**62.9**	**–**	**52.9**	**16.5**	**69.4**	71.4	0.1	60.8	14.3	75.2
Financial liabilities										
Deposits	**$ 1,422.7**	**$ –**	**$ 1,422.7**	**$ –**	**$ 1,422.7**	$ 1,361.3	$ –	$ 1,361.3	$ –	$ 1,361.3
Federal funds purchased and securities loaned or sold under repurchase agreements	**158.2**	**–**	**158.2**	**–**	**158.2**	165.0	–	165.0	–	165.0
Short-term borrowings	**42.6**	**–**	**42.4**	**0.2**	**42.6**	25.3	–	25.3	–	25.3
Accounts payable and other liabilities	**152.0**	**–**	**148.9**	**2.9**	**151.8**	148.0	–	144.8	3.4	148.2
Beneficial interests issued by consolidated VIEs	**26.0**	**–**	**26.0**	**–**	**26.0**	38.9	–	38.9	–	38.9
Long-term debt and junior subordinated deferrable interest debentures	**236.6**	**–**	**240.3**	**3.2**	**243.5**	257.5	–	260.0	2.0	262.0

(a) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in the allowance for loan loss calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in the allowance for loan losses. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see Valuation hierarchy on pages 156–159.

(b) For the year ended December 31, 2017, the Firm transferred certain residential mortgage loans from Level 3 to Level 2 as a result of an increase in observability.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets. The carrying value of the wholesale allowance for lending-related commitments and the estimated fair value of these wholesale lending-related commitments were as follows for the periods indicated.

	December 31, 2017					December 31, 2016				
	Estimated fair value hierarchy					Estimated fair value hierarchy				
(in billions)	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[a]	Level 1	Level 2	Level 3	Total estimated fair value
Wholesale lending-related commitments	**$ 1.1**	**$ –**	**$ –**	**$ 1.6**	**$ 1.6**	$ 1.1	$ –	$ –	$ 2.1	$ 2.1

(a) Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which is recognized at fair value at the inception of the guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases as permitted by law, without notice. For a further discussion of the valuation of lending-related commitments, see page 157 of this Note.

Note 3 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments.

The Firm has elected to measure certain instruments at fair value for several reasons including to mitigate income statement volatility caused by the differences between the measurement basis of elected instruments (e.g., certain instruments elected were previously accounted for on an accrual basis) and the associated risk management arrangements that are accounted for on a fair value basis, as well as to better reflect those instruments that are managed on a fair value basis.

The Firm's election of fair value includes the following instruments:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis, including lending-related commitments
- Certain securities financing arrangements with an embedded derivative and/or a maturity of greater than one year
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument
- Structured notes, which are predominantly financial instruments that contain embedded derivatives, that are issued as part of CIB's client-driven activities
- Certain long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated statements of income for the years ended December 31, 2017, 2016 and 2015, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2017			2016			2015		
December 31, (in millions)	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	**$ (97)**	**$ –**	**$ (97)**	$ (76)	$ –	$ (76)	$ (38)	$ –	$ (38)
Securities borrowed	**50**	**–**	**50**	1	–	1	(6)	–	(6)
Trading assets:									
Debt and equity instruments, excluding loans	**1,943**	**2** [c]	**1,945**	120	(1) [c]	119	756	(10) [c]	746
Loans reported as trading assets:									
Changes in instrument-specific credit risk	**330**	**14** [c]	**344**	461	43 [c]	504	138	41 [c]	179
Other changes in fair value	**217**	**747** [c]	**964**	79	684 [c]	763	232	818 [c]	1,050
Loans:									
Changes in instrument-specific credit risk	**(1)**	**–**	**(1)**	13	–	13	35	–	35
Other changes in fair value	**(12)**	**3** [c]	**(9)**	(7)	–	(7)	4	–	4
Other assets	**11**	**(55)** [d]	**(44)**	20	62 [d]	82	79	(1) [d]	78
Deposits[a]	**(533)**	**–**	**(533)**	(134)	–	(134)	93	–	93
Federal funds purchased and securities loaned or sold under repurchase agreements	**11**	**–**	**11**	19	–	19	8	–	8
Short-term borrowings[a]	**(747)**	**–**	**(747)**	(236)	–	(236)	1,996	–	1,996
Trading liabilities	**(1)**	**–**	**(1)**	6	–	6	(20)	–	(20)
Beneficial interests issued by consolidated VIEs	**–**	**–**	**–**	23	–	23	49	–	49
Long-term debt[a][b]	**(2,022)**	**–**	**(2,022)**	(773)	–	(773)	1,388	–	1,388

(a) Unrealized gains/(losses) due to instrument-specific credit risk (DVA) for liabilities for which the fair value option has been elected is recorded in OCI, while realized gains/(losses) are recorded in principal transactions revenue. DVA for 2015 was included in principal transactions revenue, and includes the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality subsequent to issuance. See Notes 2 and 23 for further information. Realized gains/(losses) due to instrument-specific credit risk recorded in principal transaction revenue were not material for the years ended December 31, 2017 and 2016.

(b) Long-term debt measured at fair value predominantly relates to structured notes. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses that are attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2017 and 2016, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2017			2016		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding
Loans[a]						
Nonaccrual loans						
Loans reported as trading assets	**$ 4,219**	**$ 1,371**	**$ (2,848)**	$ 3,338	$ 748	$ (2,590)
Loans	**39**	**–**	**(39)**	–	–	–
Subtotal	**4,258**	**1,371**	**(2,887)**	3,338	748	(2,590)
All other performing loans						
Loans reported as trading assets	**38,157**	**36,590**	**(1,567)**	35,477	33,054	(2,423)
Loans	**2,539**	**2,508**	**(31)**	2,259	2,228	(31)
Total loans	**$ 44,954**	**$ 40,469**	**$ (4,485)**	$ 41,074	$ 36,030	$ (5,044)
Long-term debt						
Principal-protected debt	**$ 26,297** [c]	**$ 23,848**	**$ (2,449)**	$ 21,602 [c]	$ 19,195	$ (2,407)
Nonprincipal-protected debt[b]	**NA**	**23,671**	**NA**	NA	18,491	NA
Total long-term debt	**NA**	**$ 47,519**	**NA**	NA	$ 37,686	NA
Long-term beneficial interests						
Nonprincipal-protected debt	**NA**	**$ 45**	**NA**	NA	$ 120	NA
Total long-term beneficial interests	**NA**	**$ 45**	**NA**	NA	$ 120	NA

(a) There were no performing loans that were ninety days or more past due as of December 31, 2017 and 2016.

(b) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal protected notes.

(c) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Firm's next call date.

At December 31, 2017 and 2016, the contractual amount of lending-related commitments for which the fair value option was elected was $7.4 billion and $4.6 billion respectively, with a corresponding fair value of $(76) million and $(118) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 27.

Structured note products by balance sheet classification and risk component

The following table presents the fair value of the structured notes issued by the Firm, by balance sheet classification and the primary risk type.

	December 31, 2017				December 31, 2016			
(in millions)	Long-term debt	Short-term borrowings	Deposits	Total	Long-term debt	Short-term borrowings	Deposits	Total
Risk exposure								
Interest rate	**$ 22,056**	**$ 69**	**$ 8,058**	**$ 30,183**	$ 16,296	$ 184	$ 4,296	$ 20,776
Credit	**4,329**	**1,312**	**–**	**5,641**	3,267	225	–	3,492
Foreign exchange	**2,841**	**147**	**38**	**3,026**	2,365	135	6	2,506
Equity	**17,581**	**7,106**	**6,548**	**31,235**	14,831	8,234	5,481	28,546
Commodity	**230**	**15**	**4,468**	**4,713**	488	37	1,811	2,336
Total structured notes	**$ 47,037**	**$ 8,649**	**$ 19,112**	**$ 74,798**	$ 37,247	$ 8,815	$ 11,594	$ 57,656

Note 4 – Credit risk concentrations

Concentrations of credit risk arise when a number of clients, counterparties or customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential credit risk concentrations and to obtain additional collateral when deemed necessary and permitted under the Firm's agreements. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. In the wholesale portfolio, credit risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual client or counterparty basis. The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, collateral and other risk-reduction techniques. For additional information on loans, see Note 12.

The Firm does not believe that its exposure to any particular loan product (e.g., option ARMs), or industry segment (e.g., real estate), or its exposure to residential real estate loans with high LTV ratios, results in a significant concentration of credit risk.

Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale-related credit exposure by the Firm's three credit portfolio segments as of December 31, 2017 and 2016.

In 2017 the Firm revised its methodology for the assignment of industry classifications, to better monitor and manage concentrations. This largely resulted in the re-assignment of holding companies from Other to the industry of risk category based on the primary business activity of the holding company's underlying entities. In the tables and industry discussions below, the prior period amounts have been revised to conform with the current period presentation.

	2017				2016			
		On-balance sheet				On-balance sheet		
December 31, (in millions)	Credit exposure[f]	Loans	Derivatives	Off-balance sheet[g]	Credit exposure	Loans	Derivatives	Off-balance sheet[g]
Consumer, excluding credit card	**$ 421,234**	**$ 372,681**	**$ –**	**$ 48,553**	$ 417,891	$ 364,644	$ –	$ 53,247 [h]
Receivables from customers[a]	**133**	**–**	**–**	**–**	120	–	–	–
Total Consumer, excluding credit card	**421,367**	**372,681**	**–**	**48,553**	418,011	364,644	–	53,247 [h]
Credit Card	**722,342**	**149,511**	**–**	**572,831**	695,707	141,816	–	553,891
Total consumer-related	**1,143,709**	**522,192**	**–**	**621,384**	1,113,718	506,460	–	607,138 [h]
Wholesale-related[b]								
Real Estate	**139,409**	**113,648**	**153**	**25,608**	134,287	105,802	207	28,278
Consumer & Retail	**87,679**	**31,044**	**1,114**	**55,521**	84,804	29,929	1,082	53,793
Technology, Media & Telecommunications	**59,274**	**13,665**	**2,265**	**43,344**	63,324	14,063	1,293	47,968
Healthcare	**55,997**	**16,273**	**2,191**	**37,533**	49,445	15,545	2,280	31,620
Industrials	**55,272**	**18,161**	**1,163**	**35,948**	55,733	17,295	1,658	36,780
Banks & Finance Cos	**49,037**	**25,879**	**6,816**	**16,342**	48,393	22,714	12,257	13,422
Oil & Gas	**41,317**	**12,621**	**1,727**	**26,969**	40,367	13,253	1,878	25,236
Asset Managers	**32,531**	**11,480**	**7,998**	**13,053**	33,201	10,339	10,820	12,042
Utilities	**29,317**	**6,187**	**2,084**	**21,046**	29,672	7,208	888	21,576
State & Municipal Govt[c]	**28,633**	**12,134**	**2,888**	**13,611**	28,263	12,416	2,096	13,751
Central Govt	**19,182**	**3,375**	**13,937**	**1,870**	20,408	3,964	14,235	2,209
Chemicals & Plastics	**15,945**	**5,654**	**208**	**10,083**	15,043	5,292	271	9,480
Transportation	**15,797**	**6,733**	**977**	**8,087**	19,096	8,996	751	9,349
Automotive	**14,820**	**4,903**	**342**	**9,575**	16,736	4,964	1,196	10,576
Metals & Mining	**14,171**	**4,728**	**702**	**8,741**	13,419	4,350	439	8,630
Insurance	**14,089**	**1,411**	**2,804**	**9,874**	13,510	1,119	3,382	9,009
Financial Markets Infrastructure	**5,036**	**351**	**3,499**	**1,186**	8,732	347	3,884	4,501
Securities Firms	**4,113**	**952**	**1,692**	**1,469**	4,211	1,059	1,913	1,239
All other[d]	**147,900**	**113,699**	**3,963**	**30,238**	137,238	105,135	3,548	28,555
Subtotal	**829,519**	**402,898**	**56,523**	**370,098**	815,882	383,790	64,078	368,014
Loans held-for-sale and loans at fair value	**5,607**	**5,607**	**–**	**–**	4,515	4,515	–	–
Receivables from customers and other[a]	**26,139**	**–**	**–**	**–**	17,440	–	–	–
Total wholesale-related	**861,265**	**408,505**	**56,523**	**370,098**	837,837	388,305	64,078	368,014
Total exposure[e][f]	**$2,004,974**	**$ 930,697**	**$ 56,523**	**$ 991,482**	$1,951,555	$ 894,765	$ 64,078	$ 975,152 [h]

(a) Receivables from customers primarily represent held-for-investment margin loans to brokerage customers (Prime Services in CIB, AWM and CCB) that are collateralized through assets maintained in the clients' brokerage accounts, as such no allowance is held against these receivables. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.

(b) The industry rankings presented in the table as of December 31, 2016, are based on the industry rankings of the corresponding exposures at December 31, 2017, not actual rankings of such exposures at December 31, 2016.

(c) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2017 and 2016, noted above, the Firm held: $9.8 billion and $9.1 billion, respectively, of trading securities; $32.3 billion and $31.6 billion, respectively, of AFS securities; and $14.4 billion and $14.5 billion, respectively, of HTM securities, issued by U.S. state and municipal governments. For further information, see Note 2 and Note 10.

(d) All other includes: individuals; SPEs; and private education and civic organizations. For more information on exposures to SPEs, see Note 14.

(e) Excludes cash placed with banks of $421.0 billion and $380.2 billion, at December 31, 2017 and 2016, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.

(f) Credit exposure is net of risk participations and excludes the benefit of credit derivatives used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.

(g) Represents lending-related financial instruments.

(h) The prior period amounts have been revised to conform with the current period presentation.

Note 5 – Derivative instruments

Derivative contracts derive their value from underlying asset prices, indices, reference rates, other inputs or a combination of these factors and may expose counterparties to risks and rewards of an underlying asset or liability without having to initially invest in, own or exchange the asset or liability. JPMorgan Chase makes markets in derivatives for clients and also uses derivatives to hedge or manage its own risk exposures. Predominantly all of the Firm's derivatives are entered into for market-making or risk management purposes.

Market-making derivatives
The majority of the Firm's derivatives are entered into for market-making purposes. Clients use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives.

Risk management derivatives
The Firm manages certain market and credit risk exposures using derivative instruments, including derivatives in hedge accounting relationships and other derivatives that are used to manage risks associated with specified assets and liabilities.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increases or decreases as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar-equivalent values of the foreign currency-denominated assets and liabilities or the forecasted revenues or expenses increase or decrease. Gains or losses on the derivative instruments related to these foreign currency-denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities contracts are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset the depreciation or appreciation of the related inventory.

Credit derivatives are used to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of CDS. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 189–191 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 189 of this Note, and the hedge accounting gains and losses tables on pages 187–189 of this Note.

Derivative counterparties and settlement types
The Firm enters into OTC derivatives, which are negotiated and settled bilaterally with the derivative counterparty. The Firm also enters into, as principal, certain ETD such as futures and options, and OTC-cleared derivative contracts with CCPs. ETD contracts are generally standardized contracts traded on an exchange and cleared by the CCP, which is the Firm's counterparty from the inception of the transactions. OTC-cleared derivatives are traded on a bilateral basis and then novated to the CCP for clearing.

Derivative clearing services
The Firm provides clearing services for clients in which the Firm acts as a clearing member at certain derivative exchanges and clearing houses. The Firm does not reflect the clients' derivative contracts in its Consolidated Financial Statements. For further information on the Firm's clearing services, see Note 27.

Accounting for derivatives

All free-standing derivatives that the Firm executes for its own account are required to be recorded on the Consolidated balance sheets at fair value.

As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. For further discussion of the offsetting of assets and liabilities, see Note 1. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The tabular disclosures on pages 183–189 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 2 and 3.

Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and commodity derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased CDS used to manage the credit risk of loans and lending-related commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate, foreign exchange, and commodity derivatives used for risk management purposes.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the change in the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item, and for benchmark interest rate hedges, is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges primarily to hedge the exposure to variability in forecasted cash flows from floating-rate assets and liabilities and foreign currency-denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in OCI and recognized in the Consolidated statements of income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in AOCI is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses net investment hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For foreign currency qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	Page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
• Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate	187
• Interest rate	Hedge floating-rate assets and liabilities	Cash flow hedge	Corporate	188
• Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	187
• Foreign exchange	Hedge foreign currency-denominated forecasted revenue and expense	Cash flow hedge	Corporate	188
• Foreign exchange	Hedge the value of the Firm's investments in non-U.S. dollar functional currency entities	Net investment hedge	Corporate	189
• Commodity	Hedge commodity inventory	Fair value hedge	CIB	187
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
• Interest rate	Manage the risk of the mortgage pipeline, warehouse loans and MSRs	Specified risk management	CCB	189
• Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	189
• Commodity	Manage the risk of certain commodities-related contracts and investments	Specified risk management	CIB	189
• Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate	189
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	189
• Various	Other derivatives	Market-making and other	CIB, Corporate	189

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2017 and 2016.

	Notional amounts[b]	
December 31, (in billions)	**2017**	2016
Interest rate contracts		
Swaps	**$ 21,043**	$ 22,000
Futures and forwards	**4,904**	5,289
Written options	**3,576**	3,091
Purchased options	**3,987**	3,482
Total interest rate contracts	**33,510**	33,862
Credit derivatives[a]	**1,522**	2,032
Foreign exchange contracts		
Cross-currency swaps	**3,953**	3,359
Spot, futures and forwards	**5,923**	5,341
Written options	**786**	734
Purchased options	**776**	721
Total foreign exchange contracts	**11,438**	10,155
Equity contracts		
Swaps	**367**	258
Futures and forwards	**90**	59
Written options	**531**	417
Purchased options	**453**	345
Total equity contracts	**1,441**	1,079
Commodity contracts		
Swaps	**116**	102
Spot, futures and forwards	**168**	130
Written options	**98**	83
Purchased options	**93**	94
Total commodity contracts	**475**	409
Total derivative notional amounts	**$ 48,386**	$ 47,537

(a) For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 189–191.
(b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.

Impact of derivatives on the Consolidated balance sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated balance sheets as of December 31, 2017 and 2016, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Gross derivative balances as of December 31, 2017, reflect the Firm's adoption of rulebook changes made by two CCPs, that require or allow the Firm to treat certain OTC-cleared derivative transactions with that CCP as settled each day. If such rulebook changes had been in effect as of December 31, 2016, the impact would have been a reduction in gross derivative receivables and payables of $227.1 billion and $224.7 billion, respectively, and a corresponding decrease in amounts netted, with no impact to the Consolidated balance sheets.

Free-standing derivative receivables and payables[(a)]

	Gross derivative receivables				Gross derivative payables			
December 31, 2017 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[(b)]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[(b)]
Trading assets and liabilities								
Interest rate	**$ 313,276**	**$ 2,716**	**$ 315,992**	**$ 24,673**	**$ 283,092**	**$ 1,344**	**$ 284,436**	**$ 7,129**
Credit	**23,205**	**–**	**23,205**	**869**	**23,252**	**–**	**23,252**	**1,299**
Foreign exchange	**159,740**	**491**	**160,231**	**16,151**	**154,601**	**1,221**	**155,822**	**12,473**
Equity	**40,040**	**–**	**40,040**	**7,882**	**45,395**	**–**	**45,395**	**9,192**
Commodity	**20,066**	**19**	**20,085**	**6,948**	**21,498**	**403**	**21,901**	**7,684**
Total fair value of trading assets and liabilities	**$ 556,327**	**$ 3,226**	**$ 559,553**	**$ 56,523**	**$ 527,838**	**$ 2,968**	**$ 530,806**	**$ 37,777**

	Gross derivative receivables				Gross derivative payables			
December 31, 2016 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[(b)]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[(b)]
Trading assets and liabilities								
Interest rate	$ 601,557	$ 4,406	$ 605,963	$ 28,302	$ 567,894	$ 2,884	$ 570,778	$ 10,815
Credit	29,645	–	29,645	1,294	28,666	–	28,666	1,411
Foreign exchange	232,137	1,289	233,426	23,271	233,823	1,148	234,971	20,508
Equity	34,940	–	34,940	4,939	38,362	–	38,362	8,140
Commodity	18,505	137	18,642	6,272	20,283	179	20,462	8,357
Total fair value of trading assets and liabilities	$ 916,784	$ 5,832	$ 922,616	$ 64,078	$ 889,028	$ 4,211	$ 893,239	$ 49,231

(a) Balances exclude structured notes for which the fair value option has been elected. See Note 3 for further information.
(b) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

Derivatives netting

The following tables present, as of December 31, 2017 and 2016, gross and net derivative receivables and payables by contract and settlement type. Derivative receivables and payables, as well as the related cash collateral from the same counterparty, have been netted on the Consolidated balance sheets where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, amounts are not eligible for netting on the Consolidated balance sheets, and those derivative receivables and payables are shown separately in the tables below.

In addition to the cash collateral received and transferred that is presented on a net basis with derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments, but are not eligible for net presentation:

- collateral that consists of non-cash financial instruments (generally U.S. government and agency securities and other G7 government securities) and cash collateral held at third party custodians, which are shown separately as "Collateral not nettable on the Consolidated balance sheets" in the tables below, up to the fair value exposure amount.
- the amount of collateral held or transferred that exceeds the fair value exposure at the individual counterparty level, as of the date presented, which is excluded from the tables below; and
- collateral held or transferred that relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement, which is excluded from the tables below.

	2017			2016		
December 31, (in millions)	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables
U.S. GAAP nettable derivative receivables						
Interest rate contracts:						
Over-the-counter ("OTC")	**$ 305,569**	**$ (284,917)**	**$ 20,652**	$ 365,227	$ (342,173)	$ 23,054
OTC-cleared	**6,531**	**(6,318)**	**213**	235,399	(235,261)	138
Exchange-traded[a]	**185**	**(84)**	**101**	241	(227)	14
Total interest rate contracts	**312,285**	**(291,319)**	**20,966**	600,867	(577,661)	23,206
Credit contracts:						
OTC	**15,390**	**(15,165)**	**225**	23,130	(22,612)	518
OTC-cleared	**7,225**	**(7,170)**	**55**	5,746	(5,739)	7
Total credit contracts	**22,615**	**(22,335)**	**280**	28,876	(28,351)	525
Foreign exchange contracts:						
OTC	**155,289**	**(142,420)**	**12,869**	226,271	(208,962)	17,309
OTC-cleared	**1,696**	**(1,654)**	**42**	1,238	(1,165)	73
Exchange-traded[a]	**141**	**(7)**	**134**	104	(27)	77
Total foreign exchange contracts	**157,126**	**(144,081)**	**13,045**	227,613	(210,154)	17,459
Equity contracts:						
OTC	**22,024**	**(19,917)**	**2,107**	20,868	(20,570)	298
Exchange-traded[a]	**14,188**	**(12,241)**	**1,947**	11,439	(9,431)	2,008
Total equity contracts	**36,212**	**(32,158)**	**4,054**	32,307	(30,001)	2,306
Commodity contracts:						
OTC	**10,903**	**(4,436)**	**6,467**	11,571	(5,605)	5,966
Exchange-traded[a]	**8,854**	**(8,701)**	**153**	6,794	(6,766)	28
Total commodity contracts	**19,757**	**(13,137)**	**6,620**	18,365	(12,371)	5,994
Derivative receivables with appropriate legal opinion	**547,995**	**(503,030)** [b]	**44,965**	908,028	(858,538) [b]	49,490
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	**11,558**		**11,558**	14,588		14,588
Total derivative receivables recognized on the Consolidated balance sheets	**$ 559,553**		**$ 56,523**	$ 922,616		$ 64,078
Collateral not nettable on the Consolidated balance sheets[c][d]			**(13,363)**			(18,638)
Net amounts			**$ 43,160**			$ 45,440

December 31, (in millions)	2017 Gross derivative payables	2017 Amounts netted on the Consolidated balance sheets	2017 Net derivative payables	2016 Gross derivative payables	2016 Amounts netted on the Consolidated balance sheets	2016 Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC	**$ 276,960**	**$ (271,294)**	**$ 5,666**	$ 338,502	$ (329,325)	$ 9,177
OTC-cleared	**6,004**	**(5,928)**	**76**	230,464	(230,463)	1
Exchange-traded[a]	**127**	**(84)**	**43**	196	(175)	21
Total interest rate contracts	**283,091**	**(277,306)**	**5,785**	569,162	(559,963)	9,199
Credit contracts:						
OTC	**16,194**	**(15,170)**	**1,024**	22,366	(21,614)	752
OTC-cleared	**6,801**	**(6,784)**	**17**	5,641	(5,641)	–
Total credit contracts	**22,995**	**(21,954)**	**1,041**	28,007	(27,255)	752
Foreign exchange contracts:						
OTC	**150,966**	**(141,789)**	**9,177**	228,300	(213,296)	15,004
OTC-cleared	**1,555**	**(1,553)**	**2**	1,158	(1,158)	–
Exchange-traded[a]	**98**	**(7)**	**91**	328	(9)	319
Total foreign exchange contracts	**152,619**	**(143,349)**	**9,270**	229,786	(214,463)	15,323
Equity contracts:						
OTC	**28,193**	**(23,969)**	**4,224**	24,688	(20,808)	3,880
Exchange-traded[a]	**12,720**	**(12,234)**	**486**	10,004	(9,414)	590
Total equity contracts	**40,913**	**(36,203)**	**4,710**	34,692	(30,222)	4,470
Commodity contracts:						
OTC	**12,645**	**(5,508)**	**7,137**	12,885	(5,252)	7,633
Exchange-traded[a]	**8,870**	**(8,709)**	**161**	7,099	(6,853)	246
Total commodity contracts	**21,515**	**(14,217)**	**7,298**	19,984	(12,105)	7,879
Derivative payables with appropriate legal opinion	**521,133**	**(493,029)** [b]	**28,104**	881,631	(844,008) [b]	37,623
Derivative payables where an appropriate legal opinion has not been either sought or obtained	**9,673**		**9,673**	11,608		11,608
Total derivative payables recognized on the Consolidated balance sheets	**$ 530,806**		**$ 37,777**	$ 893,239		$ 49,231
Collateral not nettable on the Consolidated balance sheets[c][d]			**(4,180)**			(8,925)
Net amounts			**$ 33,597**			$ 40,306

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.

(b) Net derivatives receivable included cash collateral netted of $55.5 billion and $71.9 billion at December 31, 2017 and 2016, respectively. Net derivatives payable included cash collateral netted of $45.5 billion and $57.3 billion related to OTC and OTC-cleared derivatives at December 31, 2017 and 2016, respectively.

(c) Represents liquid security collateral as well as cash collateral held at third-party custodians related to derivative instruments where an appropriate legal opinion has been obtained. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.

(d) Derivative collateral relates only to OTC and OTC-cleared derivative instruments.

Liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk – the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to actively pursue, where possible, the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated balance sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at December 31, 2017 and 2016.

OTC and OTC-cleared derivative payables containing downgrade triggers

December 31, (in millions)	**2017**	2016
Aggregate fair value of net derivative payables	**$ 11,916**	$ 21,550
Collateral posted	**9,973**	19,383

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), at December 31, 2017 and 2016, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral (except in certain instances in which additional initial margin may be required upon a ratings downgrade), nor in termination payments requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating of the rating agencies referred to in the derivative contract.

Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

	2017		2016	
December 31, (in millions)	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted upon downgrade[(a)]	**$ 79**	**$ 1,989**	$ 560	$ 2,497
Amount required to settle contracts with termination triggers upon downgrade[(b)]	**320**	**650**	606	1,049

(a) Includes the additional collateral to be posted for initial margin.
(b) Amounts represent fair values of derivative payables, and do not reflect collateral posted.

Derivatives executed in contemplation of a sale of the underlying financial asset

In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 11, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. There were no such transfers accounted for as a sale where the associated derivative was outstanding at December 31, 2017, and such transfers at December 31, 2016 were not material.

Impact of derivatives on the Consolidated statements of income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pre-tax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2017, 2016 and 2015, respectively. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated statements of income.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2017 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a][b]	**$ (481)**	**$ 1,359**	**$ 878**	**$ (18)**	**$ 896**
Foreign exchange[c]	**(3,509)**	**3,507**	**(2)**	**–**	**(2)**
Commodity[d]	**(1,275)**	**1,348**	**73**	**29**	**44**
Total	**$ (5,265)**	**$ 6,214**	**$ 949**	**$ 11**	**$ 938**

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2016 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a][b]	$ (482)	$ 1,338	$ 856	$ 6	$ 850
Foreign exchange[c]	2,435	(2,261)	174	–	174
Commodity[d]	(536)	586	50	(9)	59
Total	$ 1,417	$ (337)	$ 1,080	$ (3)	$ 1,083

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2015 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a][b]	$ 38	$ 911	$ 949	$ 3	$ 946
Foreign exchange[c]	6,030	(6,006)	24	–	24
Commodity[d]	1,153	(1,142)	11	(13)	24
Total	$ 7,221	$ (6,237)	$ 984	$ (10)	$ 994

(a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.

(b) Excludes the amortization expense associated with the inception hedge accounting adjustment applied to the hedged item. This expense is recorded in net interest income and substantially offsets the income statement impact of the excluded components.

(c) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in foreign currency rates, were recorded primarily in principal transactions revenue and net interest income.

(d) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or net realizable value (net realizable value approximates fair value). Gains and losses were recorded in principal transactions revenue.

(e) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.

(f) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts and time values.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pre-tax gains/(losses) recorded on such derivatives, for the years ended December 31, 2017, 2016 and 2015, respectively. The Firm includes the gain/(loss) on the hedging derivative and the change in cash flows on the hedged item in the same line item in the Consolidated statements of income.

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
Year ended December 31, 2017 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[c]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	**$ (17)**	**$ –**	**$ (17)**	**$ 12**	**$ 29**
Foreign exchange[b]	**(117)**	**–**	**(117)**	**135**	**252**
Total	**$ (134)**	**$ –**	**$ (134)**	**$ 147**	**$ 281**

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
Year ended December 31, 2016 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[c]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (74)	$ –	$ (74)	$ (55)	$ 19
Foreign exchange[b]	(286)	–	(286)	(395)	(109)
Total	$ (360)	$ –	$ (360)	$ (450)	$ (90)

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
Year ended December 31, 2015 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[c]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (99)	$ –	$ (99)	$ (44)	$ 55
Foreign exchange[b]	(81)	–	(81)	(53)	28
Total	$ (180)	$ –	$ (180)	$ (97)	$ 83

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily noninterest revenue and compensation expense.

(c) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

The Firm did not experience any forecasted transactions that failed to occur for the years ended 2017 and 2016. In 2015, the Firm reclassified approximately $150 million of net losses from AOCI to other income because the Firm determined that it was probable that the forecasted interest payment cash flows would not occur as a result of the planned reduction in wholesale non-operating deposits.

Over the next 12 months, the Firm expects that approximately $96 million (after-tax) of net gains recorded in AOCI at December 31, 2017, related to cash flow hedges will be recognized in income. For terminated cash flow hedges, the maximum length of time over which forecasted transactions are remaining is approximately five years. For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately seven years. The Firm's longer-dated forecasted transactions relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pre-tax gains/(losses) recorded on such instruments for the years ended December 31, 2017, 2016 and 2015.

	Gains/(losses) recorded in income and other comprehensive income/(loss)					
	2017		2016		2015	
Year ended December 31, (in millions)	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI
Foreign exchange derivatives	**$(172)**	**$(1,294)**	$(282)	$262	$(379)	$1,885

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in other income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates and, therefore, there was no significant ineffectiveness for net investment hedge accounting relationships during 2017, 2016 and 2015.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pre-tax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from the mortgage pipeline, warehouse loans, MSRs, wholesale lending exposures, foreign currency denominated assets and liabilities, and commodities-related contracts and investments.

	Derivatives gains/(losses) recorded in income		
Year ended December 31, (in millions)	**2017**	2016	2015
Contract type			
Interest rate[a]	**$ 331**	$ 1,174	$ 853
Credit[b]	**(74)**	(282)	70
Foreign exchange[c]	**(33)**	27	25
Commodity[d]	**–**	–	(12)
Total	**$ 224**	$ 919	$ 936

(a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in the mortgage pipeline, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.

(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.

(c) Primarily relates to derivatives used to mitigate foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

(d) Primarily relates to commodity derivatives used to mitigate energy price risk associated with energy-related contracts and investments. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. See Note 6 for information on principal transactions revenue.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker, the Firm actively manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. Second, as an end-user, the Firm uses credit derivatives to manage credit risk associated with lending exposures (loans and unfunded commitments) and derivatives counterparty exposures in the Firm's wholesale businesses, and to manage the credit risk arising from certain financial instruments in the Firm's market-making businesses. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name CDS and index CDS contracts are either OTC or OTC-cleared derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index consists of a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-related notes

A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a reference entity or an index. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity (or one of the entities that makes up a reference index) experiences a specified credit event. If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity.

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2017 and 2016. Upon a credit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased through credit-related notes.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

	Maximum payout/Notional amount			
December 31, 2017 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	**$ (690,224)**	**$ 702,098**	**$ 11,874**	**$ 5,045**
Other credit derivatives[a]	**(54,157)**	**59,158**	**5,001**	**11,747**
Total credit derivatives	**(744,381)**	**761,256**	**16,875**	**16,792**
Credit-related notes	**(18)**	**–**	**(18)**	**7,915**
Total	**$ (744,399)**	**$ 761,256**	**$ 16,857**	**$ 24,707**

	Maximum payout/Notional amount			
December 31, 2016 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (961,003)	$ 974,252	$ 13,249	$ 7,935
Other credit derivatives[a]	(36,829)	31,859	(4,970)	19,991
Total credit derivatives	(997,832)	1,006,111	8,279	27,926
Credit-related notes	(41)	–	(41)	4,505
Total	$ (997,873)	$ 1,006,111	$ 8,238	$ 32,431

(a) Other credit derivatives largely consists of credit swap options.
(b) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(d) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional amounts by the ratings, maturity profile, and total fair value, of credit derivatives and credit-related notes as of December 31, 2017 and 2016, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings[a]/maturity profile

December 31, 2017 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	**$ (159,286)**	**$ (319,726)**	**$ (39,429)**	**$ (518,441)**	**$ 8,516**	**$ (1,134)**	**$ 7,382**
Noninvestment-grade	**(73,394)**	**(134,125)**	**(18,439)**	**(225,958)**	**7,407**	**(5,313)**	**2,094**
Total	**$ (232,680)**	**$ (453,851)**	**$ (57,868)**	**$ (744,399)**	**$ 15,923**	**$ (6,447)**	**$ 9,476**

December 31, 2016 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (273,688)	$ (383,586)	$ (39,281)	$ (696,555)	$ 7,841	$ (3,055)	$ 4,786
Noninvestment-grade	(107,955)	(170,046)	(23,317)	(301,318)	8,184	(8,570)	(386)
Total	$ (381,643)	$ (553,632)	$ (62,598)	$ (997,873)	$ 16,025	$ (11,625)	$ 4,400

(a) The ratings scale is primarily based on external credit ratings defined by S&P and Moody's.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

Note 6 – Noninterest revenue and noninterest expense

Investment banking fees

This revenue category includes debt and equity underwriting and advisory fees. As an underwriter, the Firm helps clients raise capital via public offering and private placement of various types of debt instruments and equity securities. Underwriting fees are primarily based on the issuance price and quantity of the underlying instruments, and are recognized as revenue typically upon execution of the client's transaction. The Firm also manages and syndicates loan arrangements. Credit arrangement and syndication fees, included within debt underwriting fees, are recorded as revenue after satisfying certain retention, timing and yield criteria.

The Firm also provides advisory services, assisting its clients with mergers and acquisitions, divestitures, restructuring and other complex transactions. Advisory fees are recognized as revenue typically upon execution of the client's transaction.

Year ended December 31, (in millions)	2017	2016	2015
Underwriting			
Equity	**$ 1,394**	$ 1,146	$ 1,408
Debt	**3,710**	3,207	3,232
Total underwriting	**5,104**	4,353	4,640
Advisory	**2,144**	2,095	2,111
Total investment banking fees	**$ 7,248**	$ 6,448	$ 6,751

Investment banking fees are earned primarily by CIB. See Note 31 for segment results.

Principal transactions

Principal transactions revenue is driven by many factors, including the bid-offer spread, which is the difference between the price at which the Firm is willing to buy a financial or other instrument and the price at which the Firm is willing to sell that instrument. It also consists of the realized (as a result of the sale of instruments, closing out or termination of transactions, or interim cash payments) and unrealized (as a result of changes in valuation) gains and losses on financial and other instruments (including those accounted for under the fair value option) primarily used in client-driven market-making activities and on private equity investments. In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities).

Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk-management activities, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives. For further information on the income statement classification of gains and losses from derivatives activities, see Note 5.

In the financial commodity markets, the Firm transacts in OTC derivatives (e.g., swaps, forwards, options) and ETD that reference a wide range of underlying commodities. In the physical commodity markets, the Firm primarily purchases and sells precious and base metals and may hold other commodities inventories under financing and other arrangements with clients.

The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven market-making activities. See Note 7 for further information on interest income and interest expense. Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual line of business.

Year ended December 31, (in millions)	2017	2016	2015
Trading revenue by instrument type			
Interest rate	**$ 2,479**	$ 2,325	$ 1,933
Credit	**1,329**	2,096	1,735
Foreign exchange	**2,746**	2,827	2,557
Equity	**3,873**	2,994	2,990
Commodity	**661**	1,067	842
Total trading revenue	**11,088**	11,309	10,057
Private equity gains	**259**	257	351
Principal transactions	**$ 11,347**	$ 11,566	$ 10,408

Principal transactions revenue is earned primarily by CIB. See Note 31 for segment results.

Lending- and deposit-related fees

Lending-related fees include fees earned from loan commitments, standby letters of credit, financial guarantees, and other loan-servicing activities. Deposit-related fees include fees earned in lieu of compensating balances, and fees earned from performing cash management activities and other deposit account services. Lending- and deposit-related fees in this revenue category are recognized over the period in which the related service is provided.

Year ended December 31, (in millions)	2017	2016	2015
Lending-related fees	**$ 1,110**	$ 1,114	$ 1,148
Deposit-related fees	**4,823**	4,660	4,546
Total lending- and deposit-related fees	**$ 5,933**	$ 5,774	$ 5,694

Lending- and deposit-related fees are earned by CCB, CIB, CB, and AWM. See Note 31 for segment results.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody, brokerage services and other products. The Firm manages assets on behalf of its clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts. Management fees are typically based on the value of assets under management and are collected and recognized at the end of each period over which the management services are provided and the value of the managed assets is known. The Firm also receives performance-based management fees, which are earned based on exceeding certain benchmarks or other performance targets and are accrued and recognized when the probability of reversal is remote, typically at the end of the related billing period. The Firm has contractual arrangements with third parties to provide distribution and other services in connection with its asset management activities. Amounts paid to third-party service providers are recorded in professional and outside services expense.

Year ended December 31, (in millions)	2017	2016	2015
Asset management fees			
Investment management fees	**$ 9,526**	$ 8,865	$ 9,403
All other asset management fees[a]	**294**	336	352
Total asset management fees	**9,820**	9,201	9,755
Total administration fees[b]	**2,029**	1,915	2,015
Commissions and other fees			
Brokerage commissions[c]	**2,239**	2,151	2,304
All other commissions and fees	**1,289**	1,324	1,435
Total commissions and fees	**3,528**	3,475	3,739
Total asset management, administration and commissions	**$ 15,377**	$ 14,591	$ 15,509

(a) The Firm receives other asset management fees for services that are ancillary to investment management services, including commissions earned on sales or distribution of mutual funds to clients. These fees are recorded as revenue at the time the service is rendered or, in the case of certain distribution fees based on the underlying fund's asset value and/or investor redemption, recorded over time as the investor remains in the fund or upon investor redemption.

(b) The Firm receives administrative fees predominantly from custody, securities lending, fund services and securities clearance fees. These fees are recorded as revenue over the period in which the related service is provided.

(c) The Firm acts as a broker, facilitating its clients' purchase and sale of securities and other financial instruments. It collects and recognizes brokerage commissions as revenue upon occurrence of the client transaction. The Firm reports certain costs paid to third-party clearing houses and exchanges net against commission revenue.

Asset management, administration and commissions are earned primarily by AWM, CIB, CCB, and CB. See Note 31 for segment results.

Mortgage fees and related income

This revenue category primarily reflects CCB's Home Lending production and servicing revenue, including fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously sold loans; the impact of risk-management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. Changes in the fair value of MSRs are reported in mortgage fees and related income. For a further discussion of MSRs, see Note 15. Net interest income from mortgage loans is recorded in interest income.

Card income

This revenue category includes interchange income from credit and debit cards and fees earned from processing card transactions for merchants, both of which are recognized when purchases are made by a cardholder. Card income also includes annual and other lending fees and costs, which are deferred and recognized on a straight-line basis over a 12-month period.

Certain Chase credit card products offer the cardholder the ability to earn points based on account activity, which the cardholder can choose to redeem for cash and non-cash rewards. The cost to the Firm related to these proprietary rewards programs varies based on multiple factors including the terms and conditions of the rewards programs, cardholder activity, cardholder reward redemption rates and cardholder reward selections. The Firm maintains a liability for its obligations under its rewards programs and reports the current-period cost as a reduction of card income.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous co-brand partners that grant the Firm exclusive rights to issue co-branded credit card products and market them to the customers of such partners. These partners endorse the co-brand credit card programs and provide their customer or member lists to the Firm. The partners may also conduct marketing activities and provide rewards redeemable under their own loyalty programs that the Firm will grant to co-brand credit cardholders based on account activity. The terms of these agreements generally range from five to ten years.

The Firm typically makes payments to the co-brand credit card partners based on the cost of partners' marketing activities and loyalty program rewards provided to credit cardholders, new account originations and sales volumes. Payments to partners based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as noninterest expense. Payments for partner rewards are reported as a reduction of card income when incurred. Payments to partners based on new credit card account originations are accounted for as direct loan origination costs and are deferred and recognized as a reduction of card income on a straight-line basis over a 12-month period. Payments to partners based on sales volumes are reported as a reduction of card income when the related interchange income is earned.

Card income is earned primarily by CCB and CB. See Note 31 for segment results.

Other income

Other income on the Firm's Consolidated statements of income included the following:

Year ended December 31, (in millions)	2017	2016	2015
Operating lease income	**$ 3,613**	$ 2,724	$ 2,081

Operating lease income is recognized on a straight-line basis over the lease term.

Noninterest expense

Other expense

Other expense on the Firm's Consolidated statements of income included the following:

Year ended December 31, (in millions)	2017	2016	2015
Legal expense/(benefit)	**$ (35)**	$ (317)	$ 2,969
FDIC-related expense	**1,492**	1,296	1,227

Note 7 – Interest income and Interest expense

Interest income and interest expense are recorded in the Consolidated statements of income and classified based on the nature of the underlying asset or liability.

The following table presents the components of interest income and interest expense:

Year ended December 31, (in millions)	2017	2016	2015
Interest Income			
Loans	**$ 41,008**	$ 36,634	$ 33,134
Taxable securities	**5,535**	5,538	6,550
Non-taxable securities[a]	**1,847**	1,766	1,706
Total securities	**7,382**	7,304	8,256
Trading assets	**7,610**	7,292	6,621
Federal funds sold and securities purchased under resale agreements	**2,327**	2,265	1,592
Securities borrowed[b]	**(37)**	(332)	(532)
Deposits with banks	**4,219**	1,863	1,250
All other interest-earning assets[c]	**1,863**	875	652
Total interest income	**$ 64,372**	$ 55,901	$ 50,973
Interest expense			
Interest bearing deposits	**$ 2,857**	$ 1,356	$ 1,252
Federal funds purchased and securities loaned or sold under repurchase agreements	**1,611**	1,089	609
Short-term borrowings[d]	**481**	203	175
Trading liabilities - debt and all other interest-bearing liabilities[e]	**2,070**	1,102	557
Long-term debt	**6,753**	5,564	4,435
Beneficial interest issued by consolidated VIEs	**503**	504	435
Total interest expense	**$ 14,275**	$ 9,818	$ 7,463
Net interest income	**$ 50,097**	$ 46,083	$ 43,510
Provision for credit losses	**5,290**	5,361	3,827
Net interest income after provision for credit losses	**$ 44,807**	$ 40,722	$ 39,683

(a) Represents securities that are tax-exempt for U.S. federal income tax purposes.
(b) Negative interest income is related to client-driven demand for certain securities combined with the impact of low interest rates. This is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense.
(c) Includes held-for-investment margin loans, which are classified in accrued interest and accounts receivable, and all other interest-earning assets included in other assets.
(d) Includes commercial paper.
(e) Other interest-bearing liabilities include brokerage customer payables.

Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for derivatives and financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP, absent the fair value option election; for those instruments, all changes in fair value including any interest elements, are reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable. For further information on accounting for interest income and interest expense related to loans, securities, securities financing (i.e. securities purchased or sold under resale or repurchase agreements; securities borrowed; and securities loaned) and long-term debt, see Notes 12, 10, 11 and 19, respectively.

Note 8 – Pension and other postretirement employee benefit plans

The Firm has various defined benefit pension plans and OPEB plans that provide benefits to its employees. The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The Firm also has defined benefit pension plans that are offered in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service. It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws. The Firm does not anticipate at this time any contribution to the U.S. defined benefit pension plan in 2018. The 2018 contributions to the non-U.S. defined benefit pension plans are expected to be $46 million of which $30 million are contractually required.

The Firm also has a number of nonqualified noncontributory defined benefit pension plans that are unfunded. These plans provide supplemental defined pension benefits to certain employees.

The Firm currently provides two qualified defined contribution plans in the U.S. and maintains other similar arrangements in certain non-U.S. locations.

The Firm offers postretirement medical and life insurance benefits to certain U.S. retirees and postretirement medical benefits to qualifying U.S. and U.K. employees.

The Firm defrays the cost of its U.S. OPEB obligation through corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The Firm has generally funded its postretirement benefit obligations through contributions to the relevant trust on a pay-as-you go basis. On December 21, 2017, the Firm contributed $600 million of cash to the trust as a prefunding of a portion of its postretirement benefit obligations. The U.K. OPEB plan is unfunded.

Pension and OPEB accounting generally requires that the difference between plan assets at fair value and the benefit obligation be measured and recorded on the balance sheet. Plans that are overfunded (excess of plan assets over benefit obligation) are recorded in other assets and plans that are underfunded (excess benefit obligation over plan assets) are recorded within other liabilities. Gains or losses resulting from changes in the benefit obligation and the value of plan assets are recorded in other comprehensive income ("OCI") and recognized as part of the net periodic

benefit cost over subsequent periods as discussed in the Gains and losses section of this Note. Additionally, service cost, interest cost, and investment returns that would otherwise be classified separately are aggregated and reported net within compensation expense.

The following table presents the changes in benefit obligations, plan assets, the net funded status, and the pretax pension and OPEB amounts recorded in AOCI on the Consolidated balance sheets for the Firm's defined benefit pension and OPEB plans, and the weighted-average actuarial annualized assumptions for the projected and accumulated postretirement benefit obligations.

As of or for the year ended December 31,	Defined benefit pension plans		OPEB plans[f]	
(in millions)	**2017**	2016	**2017**	2016
Change in benefit obligation				
Benefit obligation, beginning of year	**$ (15,594)**	$ (15,259)	**$ (708)**	$ (744)
Benefits earned during the year	**(330)**	(332)	**–**	–
Interest cost on benefit obligations	**(598)**	(629)	**(28)**	(31)
Employee contributions	**(7)**	(7)	**(16)**	(19)
Net gain/(loss)	**(721)**	(743)	**(4)**	4
Benefits paid	**841**	851	**76**	76
Plan settlements	**30**	21	**–**	–
Expected Medicare Part D subsidy receipts	**NA**	NA	**(1)**	–
Foreign exchange impact and other	**(321)**	504	**(3)**	6
Benefit obligation, end of year[a]	**$ (16,700)**	$ (15,594)	**$ (684)**	$ (708)
Change in plan assets				
Fair value of plan assets, beginning of year	**$ 17,703**	$ 17,636	**$ 1,956**	$ 1,855
Actual return on plan assets	**2,356**	1,375	**233**	131
Firm contributions	**78**	86	**602**	2
Employee contributions	**7**	7	**–**	–
Benefits paid	**(841)**	(851)	**(34)**	(32)
Plan settlements	**(30)**	(21)	**–**	–
Foreign exchange impact and other	**330**	(529)	**–**	–
Fair value of plan assets, end of year [a][b][c]	**$ 19,603**	$ 17,703	**$ 2,757**	$ 1,956
Net funded status [d]	**$ 2,903**	$ 2,109	**$ 2,073**	$ 1,248
Accumulated benefit obligation, end of year	**$ (16,530)**	$ (15,421)	**NA**	NA
Pretax pension and OPEB amounts recorded in AOCI				
Net gain/(loss)	**$ (2,800)**	$ (3,667)	**$ 271**	$ 138
Prior service credit/(loss)	**6**	42	**–**	–
Accumulated other comprehensive income/(loss), pretax, end of year	**$ (2,794)**	$ (3,625)	**$ 271**	$ 138
Weighted-average actuarial assumptions used to determine benefit obligations				
Discount Rate [e]	**0.60 - 3.70%**	0.60 - 4.30%	**3.70%**	4.20%
Rate of compensation increase [e]	**2.25 - 3.00**	2.25 - 3.00	**NA**	NA
Health care cost trend rate:				
Assumed for next year	**NA**	NA	**5.00**	5.00
Ultimate	**NA**	NA	**5.00**	5.00
Year when rate will reach ultimate	**NA**	NA	**2018**	2017

(a) At December 31, 2017 and 2016, included non-U.S. benefit obligations of $(3.8) billion and $(3.4) billion, and plan assets of $3.9 billion and $3.4 billion, respectively, predominantly in the U.K.

(b) At December 31, 2017 and 2016, approximately $302 million and $390 million, respectively, of U.S. defined benefit pension plan assets included participation rights under participating annuity contracts.

(c) At December 31, 2017 and 2016, defined benefit pension plan amounts that were not measured at fair value included $377 million and $130 million, respectively, of accrued receivables, and $587 million and $224 million, respectively, of accrued liabilities, for U.S. plans.

(d) Represents plans with an aggregate overfunded balance of $5.6 billion and $4.0 billion at December 31, 2017 and 2016, respectively, and plans with an aggregate underfunded balance of $612 million and $639 million at December 31, 2017 and 2016, respectively.

(e) For the U.S. defined benefit pension plans, the discount rate assumption is 3.70% and 4.30%, and the rate of compensation increase is 2.30% and 2.30%, for 2017 and 2016 respectively.

(f) Includes an unfunded postretirement benefit obligation of $32 million and $35 million at December 31, 2017 and 2016, respectively, for the U.K. plan.

Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the PBO or the fair value of the plan assets. Any excess is amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently eight years and for the non-U.S. defined benefit pension plans is the period appropriate for the affected plan. In addition, prior service costs are amortized over the average remaining service period of active employees expected to receive benefits under the plan when the prior service cost is first recognized. The average remaining amortization period for the U.S. defined benefit pension plan for current prior service costs is three years.

For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. This value is referred to as the market-related value of assets. Amortization of net gains and losses, adjusted for gains and losses not yet recognized, is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market-related value of assets. Any excess net gain or loss is amortized over the average expected lifetime of retired participants, which is currently eleven years; however, prior service costs resulting from plan changes are amortized over the average years of service remaining to full eligibility age, which is currently two years.

The following table presents the components of net periodic benefit costs reported in the Consolidated statements of income for the Firm's defined benefit pension, defined contribution and OPEB plans, and in other comprehensive income for the defined benefit pension and OPEB plans, and the weighted-average annualized actuarial assumptions for the net periodic benefit cost.

	Pension plans			OPEB plans		
Year ended December 31, (in millions)	**2017**	2016	2015	**2017**	2016	2015
Components of net periodic benefit cost						
Benefits earned during the year	**$ 330**	$ 332	$ 377	**$ –**	$ –	$ 1
Interest cost on benefit obligations	**598**	629	610	**28**	31	31
Expected return on plan assets	**(968)**	(1,030)	(1,079)	**(97)**	(105)	(106)
Amortization:						
Net (gain)/loss	**250**	257	282	**–**	–	–
Prior service cost/(credit)	**(36)**	(36)	(36)	**–**	–	–
Special termination benefits	**–**	–	1	**–**	–	–
Settlement loss	**2**	4	–	**–**		
Net periodic defined benefit cost	**$ 176**	$ 156	$ 155	**$ (69)**	$ (74)	$ (74)
Other defined benefit pension plans[a]	**24**	25	24	**NA**	NA	NA
Total defined benefit plans	**$ 200**	$ 181	$ 179	**$ (69)**	$ (74)	$ (74)
Total defined contribution plans	**814**	789	769	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 1,014**	$ 970	$ 948	**$ (69)**	$ (74)	$ (74)
Changes in plan assets and benefit obligations recognized in other comprehensive income						
Net (gain)/loss arising during the year	**$ (669)**	$ 395	$ (50)	**$ (133)**	$ (29)	$ 21
Amortization of net loss	**(250)**	(257)	(282)	**–**	–	–
Amortization of prior service (cost)/credit	**36**	36	36	**–**	–	–
Settlement loss	**(2)**	(4)	–	**–**	–	–
Foreign exchange impact and other	**54**	(77)	(33)	**–**	–	–
Total recognized in other comprehensive income	**$ (831)**	$ 93	$ (329)	**$ (133)**	$ (29)	$ 21
Total recognized in net periodic benefit cost and other comprehensive income	**$ (655)**	$ 249	$ (174)	**$ (202)**	$ (103)	$ (53)
Weighted-average assumptions used to determine net periodic benefit costs						
Discount rate[b]	**0.60 - 4.30 %**	0.90 - 4.50%	1.00 - 4.00%	**4.20%**	4.40%	4.10%
Expected long-term rate of return on plan assets [b]	**0.70 - 6.00**	0.80 - 6.50	0.90 - 6.50	**5.00**	5.75	6.00
Rate of compensation increase [b]	**2.25 - 3.00**	2.25 - 4.30	2.75 - 4.20	**NA**	NA	NA
Health care cost trend rate						
Assumed for next year	**NA**	NA	NA	**5.00**	5.50	6.00
Ultimate	**NA**	NA	NA	**5.00**	5.00	5.00
Year when rate will reach ultimate	**NA**	NA	NA	**2017**	2017	2017

(a) Includes various defined benefit pension plans which are individually immaterial.
(b) The rate assumptions for the U.S. defined benefit pension plans are at the upper end of the range, except for the rate of compensation increase, which is 2.30% for 2017 and 3.50% for 2016 and 2015, respectively.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2018 are as follows.

(in millions)	Defined benefit pension plans
Net loss/(gain)	$ 106
Prior service cost/(credit)	$ (25)
Total	$ 81

Plan assumptions

JPMorgan Chase's expected long-term rate of return for defined benefit pension and OPEB plan assets is a blended weighted average, by asset allocation of the projected long-term returns for the various asset classes, taking into consideration local market conditions and the specific allocation of plan assets. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns. Consideration is also given to current market conditions and the short-term portfolio mix of each plan.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was provided by the Firm's actuaries. This rate was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows. The discount rate for the U.K. defined benefit pension plan represents a rate of appropriate duration from the analysis of yield curves provided by the Firm's actuaries.

At December 31, 2017, the Firm decreased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will increase expense by approximately $66 million in 2018. The 2018 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 5.50% and 4.00%, respectively. As of December 31, 2017, the interest crediting rate assumption remained at 5.00%.

As of December 31, 2017, the effect of a one-percentage-point increase or decrease in the assumed health care cost trend rate is not material to the accumulated postretirement benefit obligation or total service and interest cost.

The following table represents the effect of a 25-basis point decline in the three listed rates below on estimated 2018 defined benefit pension and OPEB plan expense, as well as the effect on the postretirement benefit obligations.

(in millions)	Defined benefit pension and OPEB plan expense	Benefit obligation
Expected long-term rate of return	$ 54	NA
Discount rate	$ 59	$ 583
Interest crediting rate for U.S. plans	$ (41)	$ (193)

Investment strategy and asset allocation

The assets of the Firm's defined benefit pension plans are held in various trusts and are invested in well-diversified portfolios of equity and fixed income securities, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity, real estate and real assets). The trust-owned assets of the Firm's U.S. OPEB plan are invested in cash and cash equivalents. COLI policies used to defray the cost of the Firm's U.S. OPEB plan are invested in separate accounts of an insurance company and are allocated to investments intended to replicate equity and fixed income indices.

The investment policies for the assets of the Firm's defined benefit pension plans are to optimize the risk-return relationship as appropriate to the needs and goals of each plan using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Assets are managed by a combination of internal and external investment managers. The Firm regularly reviews the asset allocations and asset managers, as well as other factors that impact the portfolios, which are rebalanced when deemed necessary.

Investments held by the plans include financial instruments which are exposed to various risks such as interest rate, market and credit risks. Exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and/or registered investment companies are further diversified into various financial instruments. As of December 31, 2017, assets held by the Firm's defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except through indirect exposures through investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $6.0 billion and $4.6 billion, as of December 31, 2017 and 2016, respectively.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved asset allocation ranges by asset class.

	Defined benefit pension plans			OPEB plan[c]		
	Asset	% of plan assets		Asset	% of plan assets	
December 31,	Allocation	**2017**	2016	Allocation	**2017[d]**	2016
Asset class						
Debt securities[a]	0-80%	**42%**	35%	30-70%	**61%**	50%
Equity securities	0-85	**42**	47	30-70	**39**	50
Real estate	0-10	**3**	4	–	**–**	–
Alternatives [b]	0-35	**13**	14	–	**–**	–
Total	100%	**100%**	100%	100%	**100%**	100%

(a) Debt securities primarily include cash, corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.
(b) Alternatives primarily include limited partnerships.
(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.
(d) Change in percentage of plan assets due to the contribution to the U.S. OPEB plan.

Fair value measurement of the plans' assets and liabilities

For information on fair value measurements, including descriptions of level 1, 2, and 3 of the fair value hierarchy and the valuation methods employed by the Firm, see Note 2.

Pension and OPEB plan assets and liabilities measured at fair value

	Defined benefit pension plans							
	2017				2016			
December 31, (in millions)	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Level 3	Total fair value
Cash and cash equivalents	**$ 173**	**$ 1**	**$ –**	**$ 174**	$ 196	$ 2	$ –	$ 198
Equity securities	**6,407**	**194**	**2**	**6,603**	6,158	166	2	6,326
Mutual funds	**325**	**–**	**–**	**325**	–	–	–	–
Common/collective trust funds[a]	**778**	**–**	**–**	**778**	384	–	–	384
Limited partnerships[b]	**60**	**–**	**–**	**60**	62	–	–	62
Corporate debt securities[c]	**–**	**2,644**	**4**	**2,648**	–	2,506	4	2,510
U.S. federal, state, local and non-U.S. government debt securities	**1,096**	**784**	**–**	**1,880**	1,139	804	–	1,943
Mortgage-backed securities	**92**	**100**	**2**	**194**	42	75	–	117
Derivative receivables	**–**	**203**	**–**	**203**	–	243	–	243
Other[d]	**2,353**	**60**	**302**	**2,715**	1,497	53	390	1,940
Total assets measured at fair value[e]	**$ 11,284**	**$ 3,986**	**$ 310**	**$ 15,580**	$ 9,478	$ 3,849	$ 396	$ 13,723
Derivative payables	**$ –**	**$ (141)**	**$ –**	**$ (141)**	$ –	$ (208)	$ –	$ (208)
Total liabilities measured at fair value[e]	**$ –**	**$ (141)**	**$ –**	**$ (141)**	$ –	$ (208)	$ –	$ (208)

(a) At December 31, 2017 and 2016, common/collective trust funds primarily included a mix of short-term investment funds, domestic and international equity investments (including index) and real estate funds.
(b) Unfunded commitments to purchase limited partnership investments for the plans were $605 million and $735 million for 2017 and 2016, respectively.
(c) Corporate debt securities include debt securities of U.S. and non-U.S. corporations.
(d) Other consists primarily of money market funds and participating and non-participating annuity contracts. Money market funds are primarily classified within level 1 of the fair value hierarchy given they are valued using market observable prices. Participating and non-participating annuity contracts are classified within level 3 of the fair value hierarchy due to a lack of market mechanisms for transferring each policy and surrender restrictions.
(e) At December 31, 2017 and 2016, excludes $4.4 billion and $4.2 billion of certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient, which are not required to be classified in the fair value hierarchy, $377 million and $130 million of defined benefit pension plan receivables for investments sold and dividends and interest receivables, $561 million and $203 million of defined benefit pension plan payables for investments purchased, and $26 million and $21 million of other liabilities, respectively.

The assets of the U.S. OPEB plan consisted of $600 million and $0 million in cash and cash equivalents classified in level 1 of the valuation hierarchy and $2.2 billion and $2.0 billion of COLI policies classified in level 3 of the valuation hierarchy at December 31, 2017 and 2016, respectively.

Changes in level 3 fair value measurements using significant unobservable inputs

(in millions)	Fair value, Beginning balance	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, Ending balance
Year ended December 31, 2017						
U.S. defined benefit pension plan						
Annuity contracts and other [a]	**$ 396**	**$ –**	**$ 1**	**$ (87)**	**$ –**	**$ 310**
U.S. OPEB plan						
COLI policies	**$ 1,957**	**$ –**	**$ 200**	**$ –**	**$ –**	**$ 2,157**
Year ended December 31, 2016						
U.S. defined benefit pension plan						
Annuity contracts and other [a]	$ 539	$ –	$ (157)	$ –	$ 14	$ 396
U.S. OPEB plan						
COLI policies	$ 1,855	$ –	$ 102	$ –	$ –	$ 1,957

(a) Substantially all are participating and non-participating annuity contracts.

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	Defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2018	$ 926	$ 65	$ 1
2019	922	63	1
2020	927	60	1
2021	944	57	–
2022	960	55	–
Years 2023–2027	4,925	235	2

Note 9 – Employee share-based incentives

Employee share-based awards

In 2017, 2016 and 2015, JPMorgan Chase granted long-term share-based awards to certain employees under its LTIP, as amended and restated effective May 19, 2015. Under the terms of the LTIP, as of December 31, 2017, 67 million shares of common stock were available for issuance through May 2019. The LTIP is the only active plan under which the Firm is currently granting share-based incentive awards. In the following discussion, the LTIP, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans," and such plans constitute the Firm's share-based incentive plans.

RSUs are awarded at no cost to the recipient upon their grant. Generally, RSUs are granted annually and vest at a rate of 50% after two years and 50% after three years and are converted into shares of common stock as of the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination based on age or service-related requirements, subject to post-employment and other restrictions. All RSU awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. Generally, RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding and, as such, are considered participating securities as discussed in Note 22.

In January 2017 and 2016, the Firm's Board of Directors approved the grant of performance share units ("PSUs") to members of the Firm's Operating Committee under the variable compensation program for performance years 2016 and 2015. PSUs are subject to the Firm's achievement of specified performance criteria over a three-year period. The number of awards that vest can range from zero to 150% of the grant amount. The awards vest and are converted into shares of common stock in the quarter after the end of the performance period, which is generally three years. In addition, dividends are notionally reinvested in the Firm's common stock and will be delivered only in respect of any earned shares.

Once the PSUs have vested, the shares of common stock that are delivered, after applicable tax withholding, must be held for an additional two-year period, typically for a total combined vesting and holding period of five years from the grant date.

Under the LTI Plans, stock options and stock appreciation rights ("SARs") have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm periodically grants employee stock options to individual employees. There were no material grants of stock options or SARs in 2017, 2016 and 2015. SARs generally expire ten years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award, net of estimated forfeitures, as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee share-based incentive awards is to issue either new shares of common stock or treasury shares. During 2017, 2016 and 2015, the Firm settled all of its employee share-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. On July 15, 2014, the Compensation & Management Development Committee and Board of Directors determined that all requirements for the vesting of the 2 million SAR awards had been met and thus, the awards became exercisable. The SARs, which had an expiration date of January 2018, were exercised by Mr. Dimon in October 2017 at the exercise price of $39.83 per share (the price of JPMorgan Chase common stock on the date of grant).

RSUs, PSUs, employee stock options and SARs activity

Generally, compensation expense for RSUs and PSUs is measured based on the number of units granted multiplied by the stock price at the grant date, and for employee stock options and SARs, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorgan Chase's RSUs, PSUs, employee stock options and SARs activity for 2017.

Year ended December 31, 2017 (in thousands, except weighted-average data, and where otherwise stated)	RSUs/PSUs		Options/SARs			
	Number of units	Weighted-average grant date fair value	Number of awards	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	**81,707**	**$ 57.15**	**30,267**	**$ 40.65**		
Granted	**26,017**	**84.30**	**109**	**90.94**		
Exercised or vested	**(32,961)**	**57.80**	**(12,816)**	**40.50**		
Forfeited	**(2,030)**	**63.34**	**(54)**	**55.82**		
Canceled	**NA**	**NA**	**(13)**	**405.47**		
Outstanding, December 31	**72,733**	**$ 66.36**	**17,493**	**$ 40.76**	**3.4**	**$ 1,169,470**
Exercisable, December 31	**NA**	**NA**	**15,828**	**40.00**	**3.3**	**1,070,212**

The total fair value of RSUs that vested during the years ended December 31, 2017, 2016 and 2015, was $2.9 billion, $2.2 billion and $2.8 billion, respectively. The total intrinsic value of options exercised during the years ended December 31, 2017, 2016 and 2015, was $651 million, $338 million and $335 million, respectively.

Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee share-based incentive plans in its Consolidated statements of income.

Year ended December 31, (in millions)	2017	2016	2015
Cost of prior grants of RSUs, PSUs and SARs that are amortized over their applicable vesting periods	**$ 1,125**	$ 1,046	$ 1,109
Accrual of estimated costs of share-based awards to be granted in future periods including those to full-career eligible employees	**945**	894	878
Total noncash compensation expense related to employee share-based incentive plans	**$ 2,070**	$ 1,940	$ 1,987

At December 31, 2017, approximately $704 million (pretax) of compensation expense related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1 year. The Firm does not capitalize any compensation expense related to share-based compensation awards to employees.

Cash flows and tax benefits

Effective January 1, 2016, the Firm adopted new accounting guidance related to employee share-based payments. As a result of the adoption of this new guidance, all excess tax benefits (including tax benefits from dividends or dividend equivalents) on share-based payment awards are recognized within income tax expense in the Consolidated statements of income. In prior years these tax benefits were recorded as increases to additional paid-in capital. Income tax benefits related to share-based incentive arrangements recognized in the Firm's Consolidated statements of income for the years ended December 31, 2017, 2016 and 2015, were $1.0 billion, $916 million and $746 million, respectively.

The following table sets forth the cash received from the exercise of stock options under all share-based incentive arrangements, and the actual income tax benefit related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	2017	2016	2015
Cash received for options exercised	**$ 18**	$ 26	$ 20
Tax benefit	**190**	70	64

Note 10 – Securities

Securities are classified as trading, AFS or HTM. Securities classified as trading assets are discussed in Note 2. Predominantly all of the Firm's AFS and HTM securities are held by Treasury and CIO in connection with its asset-liability management activities. At December 31, 2017, the investment securities portfolio consisted of debt securities with an average credit rating of AA+ (based upon external ratings where available, and where not available, based primarily upon internal ratings which correspond to ratings as defined by S&P and Moody's). AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to AOCI. The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated statements of income. HTM debt securities, which management has the intent and ability to hold until maturity, are carried at amortized cost on the Consolidated balance sheets. For both AFS and HTM debt securities, purchase discounts or premiums are generally amortized into interest income over the contractual life of the security.

The amortized cost and estimated fair value of the investment securities portfolio were as follows for the dates indicated.

	2017				2016			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies[a]	**$ 69,879**	**$ 736**	**$ 335**	**$ 70,280**	$ 63,367	$ 1,112	$ 474	$ 64,005
Residential:								
U.S[b]	**8,193**	**185**	**14**	**8,364**	8,171	100	28	8,243
Non-U.S.	**2,882**	**122**	**1**	**3,003**	6,049	158	7	6,200
Commercial	**4,932**	**98**	**5**	**5,025**	9,002	122	20	9,104
Total mortgage-backed securities	**85,886**	**1,141**	**355**	**86,672**	86,589	1,492	529	87,552
U.S. Treasury and government agencies[a]	**22,510**	**266**	**31**	**22,745**	44,822	75	796	44,101
Obligations of U.S. states and municipalities	**30,490**	**1,881**	**33**	**32,338**	30,284	1,492	184	31,592
Certificates of deposit	**59**	**–**	**–**	**59**	106	–	–	106
Non-U.S. government debt securities	**26,900**	**426**	**32**	**27,294**	34,497	836	45	35,288
Corporate debt securities	**2,657**	**101**	**1**	**2,757**	4,916	64	22	4,958
Asset-backed securities:								
Collateralized loan obligations	**20,928**	**69**	**1**	**20,996**	27,352	75	26	27,401
Other	**8,764**	**77**	**24**	**8,817**	6,950	62	45	6,967
Total available-for-sale debt securities	**198,194**	**3,961**	**477**	**201,678**	235,516	4,096	1,647	237,965
Available-for-sale equity securities	**547**	**–**	**–**	**547**	914	12	–	926
Total available-for-sale securities	**198,741**	**3,961**	**477**	**202,225**	236,430	4,108	1,647	238,891
Held-to-maturity debt securities								
Mortgage-backed securities								
U.S. government agencies[c]	**27,577**	**558**	**40**	**28,095**	29,910	638	37	30,511
Commercial	**5,783**	**1**	**74**	**5,710**	5,783	–	129	5,654
Total mortgage-backed securities	**33,360**	**559**	**114**	**33,805**	**35,693**	**638**	**166**	**36,165**
Obligations of U.S. states and municipalities	**14,373**	**554**	**80**	**14,847**	14,475	374	125	14,724
Total held-to-maturity debt securities	**47,733**	**1,113**	**194**	**48,652**	**50,168**	**1,012**	**291**	**50,889**
Total securities	**$ 246,474**	**$ 5,074**	**$ 671**	**$ 250,877**	**$ 286,598**	**$ 5,120**	**$ 1,938**	**$ 289,780**

(a) Includes total U.S. government-sponsored enterprise obligations with a fair value of $45.8 billion for the years ended December 31, 2017 and 2016, which were predominantly mortgage-related.
(b) Prior period amounts have been revised to conform with the current period presentation.
(c) Included total U.S. government-sponsored enterprise obligations with amortized cost of $22.0 billion and $25.6 billion at December 31, 2017 and 2016, respectively, which were mortgage-related.

Securities impairment

The following tables present the fair value and gross unrealized losses for the investment securities portfolio by aging category at December 31, 2017 and 2016.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2017 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 36,037	$ 139	$ 7,711	$ 196	$ 43,748	$ 335
Residential:						
U.S	1,112	5	596	9	1,708	14
Non-U.S.	–	–	266	1	266	1
Commercial	528	4	335	1	863	5
Total mortgage-backed securities	37,677	148	8,908	207	46,585	355
U.S. Treasury and government agencies	1,834	11	373	20	2,207	31
Obligations of U.S. states and municipalities	949	7	1,652	26	2,601	33
Certificates of deposit	–	–	–	–	–	–
Non-U.S. government debt securities	6,500	15	811	17	7,311	32
Corporate debt securities	–	–	52	1	52	1
Asset-backed securities:						
Collateralized loan obligations	–	–	276	1	276	1
Other	3,521	20	720	4	4,241	24
Total available-for-sale debt securities	50,481	201	12,792	276	63,273	477
Available-for-sale equity securities	–	–	–	–	–	–
Held-to-maturity securities						
Mortgage-backed securities						
U.S. government securities	4,070	38	205	2	4,275	40
Commercial	3,706	41	1,882	33	5,588	74
Total mortgage-backed securities	7,776	79	2,087	35	9,863	114
Obligations of U.S. states and municipalities	584	9	2,131	71	2,715	80
Total held-to-maturity securities	8,360	88	4,218	106	12,578	194
Total securities with gross unrealized losses	$ 58,841	$ 289	$ 17,010	$ 382	$ 75,851	$ 671

December 31, 2016 (in millions)	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 29,856	$ 463	$ 506	$ 11	$ 30,362	$ 474
Residential:						
U.S.[(a)]	1,373	6	1,073	22	2,446	28
Non-U.S.	–	–	886	7	886	7
Commercial	2,328	17	1,078	3	3,406	20
Total mortgage-backed securities	33,557	486	3,543	43	37,100	529
U.S. Treasury and government agencies	23,543	796	–	–	23,543	796
Obligations of U.S. states and municipalities	7,215	181	55	3	7,270	184
Certificates of deposit	–	–	–	–	–	–
Non-U.S. government debt securities	4,436	36	421	9	4,857	45
Corporate debt securities	797	2	829	20	1,626	22
Asset-backed securities:						
Collateralized loan obligations	766	2	5,263	24	6,029	26
Other	739	6	1,992	39	2,731	45
Total available-for-sale debt securities	71,053	1,509	12,103	138	83,156	1,647
Available-for-sale equity securities	–	–	–	–	–	–
Held-to-maturity debt securities						
Mortgage-backed securities						
U.S. government agencies	3,129	37	–	–	3,129	37
Commercial	5,163	114	441	15	5,604	129
Total mortgage-backed securities	8,292	151	441	15	8,733	166
Obligations of U.S. states and municipalities	4,702	125	–	–	4,702	125
Total held-to-maturity securities	12,994	276	441	15	13,435	291
Total securities with gross unrealized losses	$ 84,047	$ 1,785	$ 12,544	$ 153	$ 96,591	$ 1,938

(a) Prior period amounts have been revised to conform with the current period presentation.

Gross unrealized losses

The Firm has recognized unrealized losses on securities that it intends to sell as OTTI. The Firm does not intend to sell any of the remaining securities with an unrealized loss in AOCI as of December 31, 2017, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2017.

Other-than-temporary impairment

AFS debt and equity securities and HTM debt securities in unrealized loss positions are analyzed as part of the Firm's ongoing assessment of OTTI. For most types of debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm considers an impairment to be other-than-temporary when there is an adverse change in expected cash flows. For AFS equity securities, the Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its cost basis.

Potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and the Firm's intent and ability to hold the security until recovery.

For AFS debt securities, the Firm recognizes OTTI losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost basis. In these circumstances the impairment loss is equal to the full difference between the amortized cost basis and the fair value of the securities. For debt securities in an unrealized loss position that the Firm has the intent and ability to hold, the expected cash flows to be received

from the securities are evaluated to determine if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI.

The Firm's cash flow evaluations take into account the factors noted above and expectations of relevant market and economic data as of the end of the reporting period. For securities issued in a securitization, the Firm estimates cash flows considering underlying loan-level data and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios.

For equity securities, OTTI losses are recognized in earnings if the Firm intends to sell the security. In other cases the Firm considers the relevant factors noted above, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the cost basis. Any impairment loss on an equity security is equal to the full difference between the cost basis and the fair value of the security.

Securities gains and losses

The following table presents realized gains and losses and OTTI from AFS securities that were recognized in income.

Year ended December 31, (in millions)	2017	2016	2015
Realized gains	$ 1,013	$ 401	$ 351
Realized losses	(1,072)	(232)	(127)
OTTI losses[a]	(7)	(28)	(22)
Net securities gains/(losses)	(66)	141	202
OTTI losses			
Credit losses recognized in income	–	(1)	(1)
Securities the Firm intends to sell[a]	(7)	(27)	(21)
Total OTTI losses recognized in income	$ (7)	$ (28)	$ (22)

(a) Excludes realized losses on securities sold of $6 million, $24 million and $5 million for the years ended December 31, 2017, 2016 and 2015, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

Changes in the credit loss component of credit-impaired debt securities

The cumulative credit loss component, including any changes therein, of OTTI losses that have been recognized in income related to AFS debt securities was not material as of and during the years ended December 31, 2017, 2016 and 2015.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2017, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity December 31, 2017 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities[a]					
Amortized cost	$ 3	$ 698	$ 6,134	$ 79,051	$ 85,886
Fair value	3	708	6,294	79,667	86,672
Average yield[b]	4.76%	2.10%	3.10%	3.35%	3.32%
U.S. Treasury and government agencies					
Amortized cost	$ 60	$ –	$ 17,437	$ 5,013	$ 22,510
Fair value	60	–	17,542	5,143	22,745
Average yield[b]	1.72%	–%	1.96%	1.76%	1.91%
Obligations of U.S. states and municipalities					
Amortized cost	$ 73	$ 750	$ 1,265	$ 28,402	$ 30,490
Fair value	72	765	1,324	30,177	32,338
Average yield[b]	1.78%	3.28%	5.40%	5.50%	5.43%
Certificates of deposit					
Amortized cost	$ 59	$ –	$ –	$ –	$ 59
Fair value	59	–	–	–	59
Average yield[b]	0.50%	–%	–%	–%	0.50%
Non-U.S. government debt securities					
Amortized cost	$ 5,020	$ 13,665	$ 8,215	$ –	$ 26,900
Fair value	5,022	13,845	8,427	–	27,294
Average yield[b]	3.09%	1.55%	1.19%	–%	1.73%
Corporate debt securities					
Amortized cost	$ 150	$ 1,159	$ 1,203	$ 145	$ 2,657
Fair value	151	1,197	1,255	154	2,757
Average yield[b]	3.07%	3.60%	3.58%	3.22%	3.54%
Asset-backed securities					
Amortized cost	$ –	$ 3,372	$ 13,046	$ 13,274	$ 29,692
Fair value	–	3,353	13,080	13,380	29,813
Average yield[b]	–%	2.14%	2.58%	2.36%	2.43%
Total available-for-sale debt securities					
Amortized cost	$ 5,365	$ 19,644	$ 47,300	$ 125,885	$ 198,194
Fair value	5,367	19,868	47,922	128,521	201,678
Average yield[b]	3.03%	1.86%	2.28%	3.66%	3.14%
Available-for-sale equity securities					
Amortized cost	$ –	$ –	$ –	$ 547	$ 547
Fair value	–	–	–	547	547
Average yield[b]	–%	–%	–%	0.71%	0.71%
Total available-for-sale securities					
Amortized cost	$ 5,365	$ 19,644	$ 47,300	$ 126,432	$ 198,741
Fair value	5,367	19,868	47,922	129,068	202,225
Average yield[b]	3.03%	1.86%	2.28%	3.65%	3.13%
Held-to-maturity debt securities					
Mortgage-backed securities[a]					
Amortized Cost	$ –	$ –	$ 49	$ 33,311	$ 33,360
Fair value	–	–	49	33,756	33,805
Average yield[b]	–%	–%	2.88%	3.27%	3.27%
Obligations of U.S. states and municipalities					
Amortized cost	$ –	$ 66	$ 2,019	$ 12,288	$ 14,373
Fair value	–	65	2,067	12,715	14,847
Average yield[b]	–%	4.74%	4.30%	4.72%	4.66%
Total held-to-maturity securities					
Amortized cost	$ –	$ 66	$ 2,068	$ 45,599	$ 47,733
Fair value	–	65	2,116	46,471	48,652
Average yield[b]	–%	4.75%	4.26%	3.66%	3.69%

(a) As of December 31, 2017, mortgage-backed securities issued by Fannie Mae exceeded 10% of JPMorgan Chase's total stockholders' equity; the amortized cost and fair value of such securities was $55.1 billion and $56.0 billion, respectively.

(b) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used

where applicable and reflect the estimated impact of the enactment of the Tax Cuts and Jobs Act ("TCJA"). The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid.

(c) Includes securities with no stated maturity. Substantially all of the Firm's U.S. residential MBS and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated weighted-average life, which reflects anticipated future prepayments, is approximately six years for agency residential MBS, three years for agency residential collateralized mortgage obligations and three years for nonagency residential collateralized mortgage obligations.

Note 11 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated balance sheets. Resale and repurchase agreements are generally carried at the amounts at which the securities will be subsequently sold or repurchased. Securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. For further discussion of the offsetting of assets and liabilities, see Note 1. Fees received and paid in connection with securities financing agreements are recorded in interest income and interest expense on the Consolidated statements of income.

The Firm has elected the fair value option for certain securities financing agreements. For further information regarding the fair value option, see Note 3. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements, securities loaned or sold under repurchase agreements, and securities borrowed on the Consolidated balance sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

Securities financing transactions expose the Firm primarily to credit and liquidity risk. To manage these risks, the Firm monitors the value of the underlying securities (predominantly high-quality securities collateral, including government-issued debt and agency MBS) that it has received from or provided to its counterparties compared to the value of cash proceeds and exchanged collateral, and either requests additional collateral or returns securities or collateral when appropriate. Margin levels are initially established based upon the counterparty, the type of underlying securities, and the permissible collateral, and are monitored on an ongoing basis.

In resale agreements and securities borrowed transactions, the Firm is exposed to credit risk to the extent that the value of the securities received is less than initial cash principal advanced and any collateral amounts exchanged. In repurchase agreements and securities loaned transactions, credit risk exposure arises to the extent that the value of underlying securities exceeds the value of the initial cash principal advanced, and any collateral amounts exchanged.

Additionally, the Firm typically enters into master netting agreements and other similar arrangements with its counterparties, which provide for the right to liquidate the underlying securities and any collateral amounts exchanged in the event of a counterparty default. It is also the Firm's policy to take possession, where possible, of the securities underlying resale agreements and securities borrowed transactions. For further information regarding assets pledged and collateral received in securities financing agreements, see Note 28.

As a result of the Firm's credit risk mitigation practices with respect to resale and securities borrowed agreements as described above, the Firm did not hold any reserves for credit impairment with respect to these agreements as of December 31, 2017 and 2016.

The table below summarizes the gross and net amounts of the Firm's securities financing agreements, as of December 31, 2017, and 2016. When the Firm has obtained an appropriate legal opinion with respect to the master netting agreement with a counterparty and where other relevant netting criteria under U.S. GAAP are met, the Firm nets, on the Consolidated balance sheets, the balances outstanding under its securities financing agreements with the same counterparty. In addition, the Firm exchanges securities and/or cash collateral with its counterparties; this collateral also reduces the economic exposure with the counterparty. Such collateral, along with securities financing balances that do not meet all these relevant netting criteria under U.S. GAAP, is presented as "Amounts not nettable on the Consolidated balance sheets," and reduces the "Net amounts" presented below, if the Firm has an appropriate legal opinion with respect to the master netting agreement with the counterparty. Where a legal opinion has not been either sought or obtained, the securities financing balances are presented gross in the "Net amounts" below, and related collateral does not reduce the amounts presented.

	2017				
December 31, (in millions)	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets[b]	Amounts not nettable on the Consolidated balance sheets[c]	Net amounts[d]
Assets					
Securities purchased under resale agreements	**$ 448,608**	**$ (250,505)**	**$ 198,103**	**$ (188,502)**	**$ 9,601**
Securities borrowed	**113,926**	**(8,814)**	**105,112**	**(76,805)**	**28,307**
Liabilities					
Securities sold under repurchase agreements	**$ 398,218**	**$ (250,505)**	**$ 147,713**	**$ (129,178)**	**$ 18,535**
Securities loaned and other[a]	**27,228**	**(8,814)**	**18,414**	**(18,151)**	**263**

	2016				
December 31, (in millions)	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets[b]	Amounts not nettable on the Consolidated balance sheets[c]	Net amounts[d]
Assets					
Securities purchased under resale agreements	$ 480,735	$ (250,832)	$ 229,903	$ (222,413)	$ 7,490
Securities borrowed	96,409	–	96,409	(66,822)	29,587
Liabilities					
Securities sold under repurchase agreements	$ 402,465	$ (250,832)	$ 151,633	$ (133,300)	$ 18,333
Securities loaned and other[a]	22,451	–	22,451	(22,177)	274

(a) Includes securities-for-securities lending transactions of $9.2 billion and $9.1 billion at December 31, 2017 and 2016, respectively, accounted for at fair value, where the Firm is acting as lender. These amounts are presented within accounts payable and other liabilities in the Consolidated balance sheets.

(b) Includes securities financing agreements accounted for at fair value. At December 31, 2017 and 2016, included securities purchased under resale agreements of $14.7 billion and $21.5 billion, respectively, and securities sold under agreements to repurchase of $697 million and $687 million, respectively. There were $3.0 billion of securities borrowed at December 31, 2017 and there were no securities borrowed at December 31, 2016. There were no securities loaned accounted for at fair value in either period.

(c) In some cases, collateral exchanged with a counterparty exceeds the net asset or liability balance with that counterparty. In such cases, the amounts reported in this column are limited to the related asset or liability with that counterparty.

(d) Includes securities financing agreements that provide collateral rights, but where an appropriate legal opinion with respect to the master netting agreement has not been either sought or obtained. At December 31, 2017 and 2016, included $7.5 billion and $4.8 billion, respectively, of securities purchased under resale agreements; $25.5 billion and $27.1 billion, respectively, of securities borrowed; $16.5 billion and $15.9 billion, respectively, of securities sold under agreements to repurchase; and $29 million and $90 million, respectively, of securities loaned and other.

The tables below present as of December 31, 2017 and 2016 the types of financial assets pledged in securities financing agreements and the remaining contractual maturity of the securities financing agreements.

	Gross liability balance			
	2017		2016	
December 31, (in millions)	Securities sold under repurchase agreements	Securities loaned and other[b]	Securities sold under repurchase agreements	Securities loaned and other[b]
Mortgage-backed securities:				
U.S. government agencies[a]	**$ 13,100**	**$ –**	$ 14,034	$ –
Residential - nonagency	**2,972**	**–**	6,224	–
Commercial - nonagency	**1,594**	**–**	4,173	–
U.S. Treasury and government agencies[a]	**177,581**	**14**	185,145	–
Obligations of U.S. states and municipalities	**1,557**	**–**	2,491	–
Non-U.S. government debt	**170,196**	**2,485**	149,008	1,279
Corporate debt securities	**14,231**	**287**	18,140	108
Asset-backed securities	**3,508**	**–**	7,721	–
Equity securities	**13,479**	**24,442**	15,529	21,064
Total	**$ 398,218**	**$ 27,228**	$ 402,465	$ 22,451

	Remaining contractual maturity of the agreements				
2017 (in millions)	Overnight and continuous	Up to 30 days	30 - 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	**$ 166,425**	**$ 156,434**	**$ 41,611**	**$ 33,748**	**$ 398,218**
Total securities loaned and other[b]	**22,876**	**375**	**2,328**	**1,649**	**27,228**

	Remaining contractual maturity of the agreements				
2016 (in millions)	Overnight and continuous	Up to 30 days	30 - 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	$ 140,318	$ 157,860	$ 55,621	$ 48,666	$ 402,465
Total securities loaned and other[b]	13,586	1,371	2,877	4,617	22,451

(a) Prior period amounts were revised to conform with the current period presentation.

(b) Includes securities-for-securities lending transactions of $9.2 billion and $9.1 billion at December 31, 2017 and 2016, respectively, accounted for at fair value, where the Firm is acting as lender. These amounts are presented within accounts payable and other liabilities on the Consolidated balance sheets.

Transfers not qualifying for sale accounting

At December 31, 2017 and 2016, the Firm held $1.5 billion and $5.9 billion, respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets and loans, and the corresponding liabilities are recorded predominantly in short-term borrowings on the Consolidated balance sheets.

Note 12 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained"), other than PCI loans
- Loans held-for-sale
- Loans at fair value
- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories:

Loans held-for-investment (other than PCI loans)

Originated or purchased loans held-for-investment, other than PCI loans, are recorded at the principal amount outstanding, net of the following: charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and net deferred loan fees or costs. Credit card loans also include billed finance charges and fees net of an allowance for uncollectible amounts.

Interest income

Interest income on performing loans held-for-investment, other than PCI loans, is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the contractual life of the loan to produce a level rate of return.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest has been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. Finally, collateral-dependent loans are typically maintained on nonaccrual status.

On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued and billed interest and fee income on credit card loans. The allowance is established with a charge to interest income and is reported as an offset to loans.

Allowance for loan losses

The allowance for loan losses represents the estimated probable credit losses inherent in the held-for-investment loan portfolio at the balance sheet date and is recognized on the balance sheet as a contra asset, which brings the recorded investment to the net carrying value. Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated statements of income. See Note 13 for further information on the Firm's accounting policies for the allowance for loan losses.

Charge-offs

Consumer loans, other than risk-rated business banking and auto loans, and PCI loans, are generally charged off or charged down to the net realizable value of the underlying collateral (i.e., fair value less costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the FFIEC. Residential real estate loans and non-modified credit card loans are generally charged off no later than 180 days past due. Scored auto, student and modified credit card loans are charged off no later than 120 days past due.

Certain consumer loans will be charged off or charged down to their net realizable value earlier than the FFIEC charge-off standards in certain circumstances as follows:

- Loans modified in a TDR that are determined to be collateral-dependent.
- Loans to borrowers who have experienced an event that suggests a loss is either known or highly certain are subject to accelerated charge-off standards (e.g., residential real estate and auto loans are charged off within 60 days of receiving notification of a bankruptcy filing).
- Auto loans upon repossession of the automobile.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on government-guaranteed loans.

Wholesale loans, risk-rated business banking loans and risk-rated auto loans are charged off when it is highly certain that a loss has been realized, including situations where a loan is determined to be both impaired and collateral-dependent. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the estimated net realizable value, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every six months thereafter. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), the Firm generally obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared with the estimated values provided by exterior opinions and interior appraisals, considering state-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

Loans held-for-sale

Held-for-sale loans are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees or costs and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or loss recognized at the time of sale.

Held-for-sale loans are subject to the nonaccrual policies described above.

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

Loans at fair value

Loans used in a market-making strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue.

Interest income on these loans is accrued and recognized based on the contractual rate of interest. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

See Note 3 for further information on the Firm's elections of fair value accounting under the fair value option. See Note 2 and Note 3 for further information on loans carried at fair value and classified as trading assets.

PCI loans

PCI loans held-for-investment are initially measured at fair value. PCI loans have evidence of credit deterioration since the loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected. Because PCI loans are initially measured at fair value, which includes an estimate of future credit losses, no allowance for loan losses related to PCI loans is recorded at the acquisition date. See page 223 of this Note for information on accounting for PCI loans subsequent to their acquisition.

Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; non-credit related losses such as those due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at the lower of cost or fair value on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 13.

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss and avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, principal forgiveness, or the acceptance of equity or other assets in lieu of payments.

Such modifications are accounted for and reported as TDRs. A loan that has been modified in a TDR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless of whether the borrower performs under the modified terms. In certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring. In such circumstances, and assuming that the loan subsequently performs under its modified terms and the Firm expects to collect all contractual principal and interest cash flows, the loan is disclosed as impaired and as a TDR only during the year of the modification; in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (i) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (ii) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, LTV ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

Because loans modified in TDRs are considered to be impaired, these loans are measured for impairment using the Firm's established asset-specific allowance methodology, which considers the expected re-default rates for the modified loans. A loan modified in a TDR generally remains subject to the asset-specific allowance methodology throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status and/or the loan has been removed from the impaired loans disclosures (i.e., loans restructured at market rates). For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 13.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, and buildings) and commercial and personal property (e.g., automobiles, aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated balance sheets and initially recognized at fair value less costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class.

Consumer, excluding credit card[a]	Credit card	Wholesale[f]
Residential real estate – excluding PCI • Residential mortgage[b] • Home equity[c] Other consumer loans • Auto[d] • Consumer & Business Banking[d][e] • Student Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Credit card loans	• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other[g]

(a) Includes loans held in CCB, prime mortgage and home equity loans held in AWM and prime mortgage loans held in Corporate.
(b) Predominantly includes prime (including option ARMs) and subprime loans.
(c) Includes senior and junior lien home equity loans.
(d) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included with the other consumer loan classes.
(e) Predominantly includes Business Banking loans.
(f) Includes loans held in CIB, CB, AWM and Corporate. Excludes prime mortgage and home equity loans held in AWM and prime mortgage loans held in Corporate. Classes are internally defined and may not align with regulatory definitions.
(g) Includes loans to: individuals; SPEs; and private education and civic organizations. For more information on SPEs, see Note 14.

The following tables summarize the Firm's loan balances by portfolio segment.

December 31, 2017 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	**$ 372,553**	**$ 149,387**	**$ 402,898**	**$ 924,838**	[b]
Held-for-sale	**128**	**124**	**3,099**	**3,351**	
At fair value	**–**	**–**	**2,508**	**2,508**	
Total	**$ 372,681**	**$ 149,511**	**$ 408,505**	**$ 930,697**	

December 31, 2016 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	$ 364,406	$ 141,711	$ 383,790	$ 889,907	[b]
Held-for-sale	238	105	2,285	2,628	
At fair value	–	–	2,230	2,230	
Total	$ 364,644	$ 141,816	$ 388,305	$ 894,765	

(a) Includes accrued interest and fees net of an allowance for the uncollectible portion of accrued interest and fee income.
(b) Loans (other than PCI loans and those for which the fair value option has been elected) are presented net of unamortized discounts and premiums and net deferred loan fees or costs. These amounts were not material as of December 31, 2017 and 2016.

The following table provides information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. This table excludes loans recorded at fair value. The Firm manages its exposure to credit risk on an ongoing basis. Selling loans is one way that the Firm reduces its credit exposures.

Year ended December 31, (in millions)	2017			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 3,461** [a][b]	**$ –**	**$ 1,799**	**$ 5,260**
Sales	**3,405**	**–**	**11,063**	**14,468**
Retained loans reclassified to held-for-sale	**6,340** [c]	**–**	**1,229**	**7,569**

Year ended December 31, (in millions)	2016			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 4,116 [a][b]	$ –	$ 1,448	$ 5,564
Sales	6,368	–	8,739	15,107
Retained loans reclassified to held-for-sale	321	–	2,381	2,702

Year ended December 31, (in millions)	2015			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 5,279 [a][b]	$ –	$ 2,154	$ 7,433
Sales	5,099	–	9,188	14,287
Retained loans reclassified to held-for-sale	1,514	79	642	2,235

(a) Purchases predominantly represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Government National Mortgage Association ("Ginnie Mae") guidelines. The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, FHA, RHS, and/or VA.
(b) Excludes purchases of retained loans sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards. Such purchases were $23.5 billion, $30.4 billion and $50.3 billion for the years ended December 31, 2017, 2016 and 2015, respectively.
(c) Includes the Firm's student loan portfolio which was sold in 2017.

The following table provides information about gains and losses on loan sales, including lower of cost or fair value adjustments, on loan sales by portfolio segment.

Year ended December 31, (in millions)	2017	2016	2015
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[a]			
Consumer, excluding credit card[b]	**$ (126)**	$ 231	$ 305
Credit card	**(8)**	(12)	1
Wholesale	**41**	26	34
Total net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)	**$ (93)**	$ 245	$ 340

(a) Excludes sales related to loans accounted for at fair value.
(b) Includes amounts related to the Firm's student loan portfolio which was sold in 2017.

Consumer, excluding credit card, loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, consumer and business banking loans and student loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period, and certain payment-option loans that may result in negative amortization.

The table below provides information about retained consumer loans, excluding credit card, by class. In 2017, the Firm sold its student loan portfolio.

December 31, (in millions)	2017	2016
Residential real estate – excluding PCI		
Residential mortgage[a]	**$ 216,496**	$ 192,486
Home equity	**33,450**	39,063
Other consumer loans		
Auto	**66,242**	65,814
Consumer & Business Banking[a]	**25,789**	24,307
Student[a]	**–**	7,057
Residential real estate – PCI		
Home equity	**10,799**	12,902
Prime mortgage	**6,479**	7,602
Subprime mortgage	**2,609**	2,941
Option ARMs	**10,689**	12,234
Total retained loans	**$ 372,553**	$ 364,406

(a) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.

Delinquency rates are a primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear whether the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, including both non-PCI and PCI portfolios, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV ratios can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit-quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (less than 660) is considered to be of higher risk than a loan to a borrower with a higher FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For scored auto and scored business banking loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.
- Risk-rated business banking and auto loans are similar to wholesale loans in that the primary credit quality indicators are the risk rating that is assigned to the loan and whether the loans are considered to be criticized and/or nonaccrual. Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information about borrowers' ability to fulfill their obligations. For further information about risk-rated wholesale loan credit quality indicators, see page 228 of this Note.

Residential real estate – excluding PCI loans

The following table provides information by class for residential real estate – excluding retained PCI loans.

Residential real estate – excluding PCI loans

December 31, (in millions, except ratios)	Residential mortgage[g]		Home equity		Total residential real estate – excluding PCI	
	2017	2016	**2017**	2016	**2017**	2016
Loan delinquency[a]						
Current	**$ 208,713**	$ 184,133	**$ 32,391**	$ 37,941	**$ 241,104**	$ 222,074
30–149 days past due	**4,234**	3,828	**671**	646	**4,905**	4,474
150 or more days past due	**3,549**	4,525	**388**	476	**3,937**	5,001
Total retained loans	**$ 216,496**	$ 192,486	**$ 33,450**	$ 39,063	**$ 249,946**	$ 231,549
% of 30+ days past due to total retained loans[b]	**0.77%**	0.75%	**3.17%**	2.87%	**1.09%**	1.11%
90 or more days past due and government guaranteed[c]	**$ 4,172**	$ 4,858	**–**	–	**$ 4,172**	$ 4,858
Nonaccrual loans	**2,175**	2,256	**1,610**	1,845	**3,785**	4,101
Current estimated LTV ratios[d][e]						
Greater than 125% and refreshed FICO scores:						
Equal to or greater than 660	**$ 37**	$ 30	**$ 10**	$ 70	**$ 47**	$ 100
Less than 660	**19**	48	**3**	15	**22**	63
101% to 125% and refreshed FICO scores:						
Equal to or greater than 660	**36**	135	**296**	668	**332**	803
Less than 660	**88**	177	**95**	221	**183**	398
80% to 100% and refreshed FICO scores:						
Equal to or greater than 660	**4,369**	4,026	**1,676**	2,961	**6,045**	6,987
Less than 660	**483**	718	**569**	945	**1,052**	1,663
Less than 80% and refreshed FICO scores:						
Equal to or greater than 660	**194,758**	169,579	**25,262**	27,317	**220,020**	196,896
Less than 660	**6,952**	6,759	**3,850**	4,380	**10,802**	11,139
No FICO/LTV available	**1,259**	1,650	**1,689**	2,486	**2,948**	4,136
U.S. government-guaranteed	**8,495**	9,364	**–**	–	**8,495**	9,364
Total retained loans	**$ 216,496**	$ 192,486	**$ 33,450**	$ 39,063	**$ 249,946**	$ 231,549
Geographic region						
California	**$ 68,855**	$ 59,802	**$ 6,582**	$ 7,644	**$ 75,437**	$ 67,446
New York	**27,473**	24,916	**6,866**	7,978	**34,339**	32,894
Illinois	**14,501**	13,126	**2,521**	2,947	**17,022**	16,073
Texas	**12,508**	10,772	**2,021**	2,225	**14,529**	12,997
Florida	**9,598**	8,395	**1,847**	2,133	**11,445**	10,528
New Jersey	**7,142**	6,374	**1,957**	2,253	**9,099**	8,627
Washington	**6,962**	5,451	**1,026**	1,229	**7,988**	6,680
Colorado	**7,335**	6,306	**632**	677	**7,967**	6,983
Massachusetts	**6,323**	5,834	**295**	371	**6,618**	6,205
Arizona	**4,109**	3,595	**1,439**	1,772	**5,548**	5,367
All other[f]	**51,690**	47,915	**8,264**	9,834	**59,954**	57,749
Total retained loans	**$ 216,496**	$ 192,486	**$ 33,450**	$ 39,063	**$ 249,946**	$ 231,549

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included $2.4 billion and $2.5 billion; 30–149 days past due included $3.2 billion and $3.1 billion; and 150 or more days past due included $2.9 billion and $3.8 billion at December 31, 2017 and 2016, respectively.

(b) At December 31, 2017 and 2016, residential mortgage loans excluded mortgage loans insured by U.S. government agencies of $6.1 billion and $6.9 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

(c) These balances, which are 90 days or more past due, were excluded from nonaccrual loans as the loans are guaranteed by U.S government agencies. Typically the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting agreed-upon servicing guidelines. At December 31, 2017 and 2016, these balances included $1.5 billion and $2.2 billion, respectively, of loans that are no longer accruing interest based on the agreed-upon servicing guidelines. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate. There were no loans that were not guaranteed by U.S. government agencies that are 90 or more days past due and still accruing interest at December 31, 2017 and 2016.

(d) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.

(e) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(f) At December 31, 2017 and 2016, included mortgage loans insured by U.S. government agencies of $8.5 billion and $9.4 billion, respectively.

(g) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.

The following table represents the Firm's delinquency statistics for junior lien home equity loans and lines as of December 31, 2017 and 2016.

	Total loans		Total 30+ day delinquency rate	
December 31, (in millions except ratios)	**2017**	2016	**2017**	2016
HELOCs:[a]				
Within the revolving period[b]	**$ 6,363**	$ 10,304	**0.50%**	1.27%
Beyond the revolving period	**13,532**	13,272	**3.56**	3.05
HELOANs	**1,371**	1,861	**3.50**	2.85
Total	**$ 21,266**	$ 25,437	**2.64%**	2.32%

(a) These HELOCs are predominantly revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period, but also include HELOCs that allow interest-only payments beyond the revolving period.
(b) The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty.

HELOCs beyond the revolving period and HELOANs have higher delinquency rates than HELOCs within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the Firm's allowance for loan losses.

Impaired loans

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 13.

	Residential mortgage		Home equity		Total residential real estate – excluding PCI	
December 31, (in millions)	**2017**	2016	**2017**	2016	**2017**	2016
Impaired loans						
With an allowance	**$ 4,407**	$ 4,689	**$ 1,236**	$ 1,266	**$ 5,643**	$ 5,955
Without an allowance[a]	**1,213**	1,343	**882**	998	**2,095**	2,341
Total impaired loans[b][c]	**$ 5,620**	$ 6,032	**$ 2,118**	$ 2,264	**$ 7,738**	$ 8,296
Allowance for loan losses related to impaired loans	**$ 62**	$ 68	**$ 111**	$ 121	**$ 173**	$ 189
Unpaid principal balance of impaired loans[d]	**7,741**	8,285	**3,701**	3,847	**11,442**	12,132
Impaired loans on nonaccrual status[e]	**1,743**	1,755	**1,032**	1,116	**2,775**	2,871

(a) Represents collateral-dependent residential real estate loans that are charged off to the fair value of the underlying collateral less costs to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual TDRs, regardless of their delinquency status. At December 31, 2017, Chapter 7 residential real estate loans included approximately 12% of home equity and 15% of residential mortgages that were 30 days or more past due.
(b) At December 31, 2017 and 2016, $3.8 billion and $3.4 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure.
(c) Predominantly all residential real estate impaired loans, excluding PCI loans, are in the U.S.
(d) Represents the contractual amount of principal owed at December 31, 2017 and 2016. The unpaid principal balance differs from the impaired loan balances due to various factors including charge-offs, net deferred loan fees or costs, and unamortized discounts or premiums on purchased loans.
(e) As of December 31, 2017 and 2016, nonaccrual loans included $2.2 billion and $2.3 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status refer to the Loan accounting framework on pages 211–213 of this Note.

The following table presents average impaired loans and the related interest income reported by the Firm.

Year ended December 31, (in millions)	Average impaired loans			Interest income on impaired loans[a]			Interest income on impaired loans on a cash basis[a]		
	2017	2016	2015	**2017**	2016	2015	**2017**	2016	2015
Residential mortgage	**$ 5,797**	$ 6,376	$ 7,697	**$ 287**	$ 305	$ 348	**$ 75**	$ 77	$ 87
Home equity	**2,189**	2,311	2,369	**127**	125	128	**80**	80	85
Total residential real estate – excluding PCI	**$ 7,986**	$ 8,687	$ 10,066	**$ 414**	$ 430	$ 476	**$ 155**	$ 157	$ 172

(a) Generally, interest income on loans modified in TDRs is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms, unless the loan is deemed to be collateral-dependent.

Loan modifications

Modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

The following table presents new TDRs reported by the Firm.

Year ended December 31, (in millions)	**2017**	2016	2015
Residential mortgage	**$ 373**	$ 254	$ 267
Home equity	**321**	385	401
Total residential real estate – excluding PCI	**$ 694**	$ 639	$ 668

Nature and extent of modifications

The U.S. Treasury's Making Home Affordable programs, as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following table provides information about how residential real estate loans, excluding PCI loans, were modified under the Firm's loss mitigation programs described above during the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

	Residential mortgage			Home equity			Total residential real estate – excluding PCI		
Year ended December 31,	**2017**	**2016**	**2015**	**2017**	2016	2015	**2017**	2016	2015
Number of loans approved for a trial modification	**1,283**	1,945	2,711	**2,321**	3,760	3,933	**3,604**	5,705	6,644
Number of loans permanently modified	**2,628**	3,338	3,145	**5,624**	4,824	4,296	**8,252**	8,162	7,441
Concession granted:[a]									
Interest rate reduction	**63%**	76%	71%	**59%**	75%	66%	**60%**	76%	68%
Term or payment extension	**72**	90	81	**69**	83	89	**70**	86	86
Principal and/or interest deferred	**15**	16	27	**10**	19	23	**12**	18	24
Principal forgiveness	**16**	26	28	**13**	9	7	**14**	16	16
Other[b]	**33**	25	11	**31**	6	–	**32**	14	5

(a) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession. A significant portion of trial modifications include interest rate reductions and/or term or payment extensions.

(b) Predominantly represents variable interest rate to fixed interest rate modifications.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under the loss mitigation programs described above and about redefaults of certain loans modified in TDRs for the periods presented. The following table presents only the final financial effects of permanent modifications and does not include temporary concessions offered through trial modifications. This table also excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

Year ended December 31, (in millions, except weighted-average data and number of loans)	Residential mortgage			Home equity			Total residential real estate – excluding PCI		
	2017	2016	2015	**2017**	2016	2015	**2017**	2016	2015
Weighted-average interest rate of loans with interest rate reductions – before TDR	**5.15%**	5.59%	5.67%	**4.94%**	4.99%	5.20%	**5.06%**	5.36%	5.51%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**2.99**	2.93	2.79	**2.64**	2.34	2.35	**2.83**	2.70	2.64
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**24**	24	25	**21**	18	18	**23**	22	22
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**38**	38	37	**39**	38	35	**38**	38	36
Charge-offs recognized upon permanent modification	**$ 2**	$ 4	$ 11	**$ 1**	$ 1	$ 4	**$ 3**	$ 5	$ 15
Principal deferred	**12**	30	58	**10**	23	27	**22**	53	85
Principal forgiven	**20**	44	66	**13**	7	6	**33**	51	72
Balance of loans that redefaulted within one year of permanent modification[(a)]	**$ 124**	$ 98	$ 133	**$ 56**	$ 40	$ 21	**$ 180**	$ 138	$ 154

(a) Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

At December 31, 2017, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 14 years for residential mortgage and 10 years for home equity. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

Active and suspended foreclosure

At December 31, 2017 and 2016, the Firm had non-PCI residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $787 million and $932 million, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Other consumer loans

The table below provides information for other consumer retained loan classes, including auto and business banking loans. This table excludes student loans that were sold in 2017.

December 31, (in millions, except ratios)	Auto		Consumer & Business Banking[c]	
	2017	2016	**2017**	2016
Loan delinquency				
Current	**$ 65,651**	$ 65,029	**$ 25,454**	$ 23,920
30–119 days past due	**584**	773	**213**	247
120 or more days past due	**7**	12	**122**	140
Total retained loans	**$ 66,242**	$ 65,814	**$ 25,789**	$ 24,307
% of 30+ days past due to total retained loans	**0.89%**	1.19%	**1.30%**	1.59%
Nonaccrual loans[a]	**141**	214	**283**	287
Geographic region				
California	**$ 8,445**	$ 7,975	**$ 5,032**	$ 4,426
Texas	**7,013**	7,041	**2,916**	2,954
New York	**4,023**	4,078	**4,195**	3,979
Illinois	**3,916**	3,984	**2,017**	1,758
Florida	**3,350**	3,374	**1,424**	1,195
Arizona	**2,221**	2,209	**1,383**	1,307
Ohio	**2,105**	2,194	**1,380**	1,402
Michigan	**1,418**	1,567	**1,357**	1,343
New Jersey	**2,044**	2,031	**721**	623
Louisiana	**1,656**	1,814	**849**	979
All other	**30,051**	29,547	**4,515**	4,341
Total retained loans	**$ 66,242**	$ 65,814	**$ 25,789**	$ 24,307
Loans by risk ratings[b]				
Noncriticized	**$ 15,604**	$ 13,899	**$ 17,938**	$ 16,858
Criticized performing	**93**	201	**791**	816
Criticized nonaccrual	**9**	94	**213**	217

(a) There were no loans that were 90 or more days past due and still accruing interest at December 31, 2017, and December 31, 2016.
(b) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.
(c) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.

Other consumer impaired loans and loan modifications

The following table sets forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

December 31, (in millions)	2017	2016
Impaired loans		
With an allowance	$ 272	$ 614
Without an allowance[a]	26	30
Total impaired loans[b][c]	$ 298	$ 644
Allowance for loan losses related to impaired loans	$ 73	$ 119
Unpaid principal balance of impaired loans[d]	402	753
Impaired loans on nonaccrual status	268	508

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) Predominantly all other consumer impaired loans are in the U.S.
(c) Other consumer average impaired loans were $427 million, $635 million and $566 million for the years ended December 31, 2017, 2016 and 2015, respectively. The related interest income on impaired loans, including those on a cash basis, was not material for the years ended December 31, 2017, 2016 and 2015.
(d) Represents the contractual amount of principal owed at December 31, 2017 and 2016. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, interest payments received and applied to the principal balance, net deferred loan fees or costs and unamortized discounts or premiums on purchased loans.

Loan modifications

Certain other consumer loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All of these TDRs are reported as impaired loans. The following table provides information about the Firm's other consumer loans modified in TDRs. New TDRs were not material for the years ended December 31, 2017 and 2016.

December 31, (in millions)	2017	2016
Loans modified in TDRs[a][b]	$ 102	$ 362
TDRs on nonaccrual status	72	226

(a) The impact of these modifications was not material to the Firm for the years ended December 31, 2017 and 2016.
(b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2017 and 2016 were immaterial.

Purchased credit-impaired loans

PCI loans are initially recorded at fair value at acquisition. PCI loans acquired in the same fiscal quarter may be aggregated into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer PCI loans were aggregated into pools of loans with common risk characteristics.

On a quarterly basis, the Firm estimates the total cash flows (both principal and interest) expected to be collected over the remaining life of each pool. These estimates incorporate assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that reflect then-current market conditions. Probable decreases in expected cash flows (i.e., increased credit losses) trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related forgone interest cash flows, discounted at the pool's effective interest rate. Impairments are recognized through the provision for credit losses and an increase in the allowance for loan losses. Probable and significant increases in expected cash flows (e.g., decreased credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans. The impacts of (i) prepayments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are generally recognized prospectively as adjustments to interest income.

The Firm continues to modify certain PCI loans. The impact of these modifications is incorporated into the Firm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans. In evaluating the effect of modifications on expected cash flows, the Firm incorporates the effect of any forgone interest and also considers the potential for redefault. The Firm develops product-specific probability of default estimates, which are used to compute expected credit losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment based upon industry-wide data. The Firm also considers its own historical loss experience to-date based on actual redefaulted modified PCI loans.

The excess of cash flows expected to be collected over the carrying value of the underlying loans is referred to as the accretable yield. This amount is not reported on the Firm's Consolidated balance sheets but is accreted into interest income at a level rate of return over the remaining estimated lives of the underlying pools of loans.

If the timing and/or amounts of expected cash flows on PCI loan pools were determined not to be reasonably estimable, no interest would be accreted and the loan pools would be reported as nonaccrual loans; however, since the timing and amounts of expected cash flows for the Firm's PCI consumer loan pools are reasonably estimable, interest is being accreted and the loan pools are being reported as performing loans.

The liquidation of PCI loans, which may include sales of loans, receipt of payment in full from the borrower, or foreclosure, results in removal of the loans from the underlying PCI pool. When the amount of the liquidation proceeds (e.g., cash, real estate), if any, is less than the unpaid principal balance of the loan, the difference is first applied against the PCI pool's nonaccretable difference for principal losses (i.e., the lifetime credit loss estimate established as a purchase accounting adjustment at the acquisition date). When the nonaccretable difference for a particular loan pool has been fully depleted, any excess of the unpaid principal balance of the loan over the liquidation proceeds is written off against the PCI pool's allowance for loan losses. Write-offs of PCI loans also include other adjustments, primarily related to interest forgiveness modifications. Because the Firm's PCI loans are accounted for at a pool level, the Firm does not recognize charge-offs of PCI loans when they reach specified stages of delinquency (i.e., unlike non-PCI consumer loans, these loans are not charged off based on FFIEC standards).

The PCI portfolio affects the Firm's results of operations primarily through: (i) contribution to net interest margin; (ii) expense related to defaults and servicing resulting from the liquidation of the loans; and (iii) any provision for loan losses. The PCI loans acquired in the Washington Mutual transaction were funded based on the interest rate characteristics of the loans. For example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with fixed-rate liabilities with a similar maturity profile. A net spread will be earned on the declining balance of the portfolio, which is estimated as of December 31, 2017, to have a remaining weighted-average life of 9 years.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

December 31, (in millions, except ratios)	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
	2017	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016
Carrying value[a]	**$10,799**	$12,902	**$ 6,479**	$ 7,602	**$ 2,609**	$ 2,941	**$10,689**	$12,234	**$30,576**	$35,679
Related allowance for loan losses[b]	**1,133**	1,433	**863**	829	**150**	–	**79**	49	**2,225**	2,311
Loan delinquency (based on unpaid principal balance)										
Current	**$10,272**	$12,423	**$ 5,839**	$ 6,840	**$ 2,640**	$ 3,005	**$ 9,662**	$11,074	**$28,413**	$33,342
30–149 days past due	**356**	291	**336**	336	**381**	361	**547**	555	**1,620**	1,543
150 or more days past due	**392**	478	**327**	451	**176**	240	**689**	917	**1,584**	2,086
Total loans	**$11,020**	$13,192	**$ 6,502**	$ 7,627	**$ 3,197**	$ 3,606	**$10,898**	$12,546	**$31,617**	$36,971
% of 30+ days past due to total loans	**6.79%**	5.83%	**10.20%**	10.32%	**17.42%**	16.67%	**11.34%**	11.73%	**10.13%**	9.82%
Current estimated LTV ratios (based on unpaid principal balance)[c][d]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 33**	$ 69	**$ 4**	$ 6	**$ 2**	$ 7	**$ 6**	$ 12	**$ 45**	$ 94
Less than 660	**21**	39	**16**	17	**20**	31	**9**	18	**66**	105
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**274**	555	**16**	52	**20**	39	**43**	83	**353**	729
Less than 660	**132**	256	**42**	84	**75**	135	**71**	144	**320**	619
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**1,195**	1,860	**221**	442	**119**	214	**316**	558	**1,851**	3,074
Less than 660	**559**	804	**230**	381	**309**	439	**371**	609	**1,469**	2,233
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	**6,134**	6,676	**3,551**	3,967	**895**	919	**6,113**	6,754	**16,693**	18,316
Less than 660	**2,095**	2,183	**2,103**	2,287	**1,608**	1,645	**3,499**	3,783	**9,305**	9,898
No FICO/LTV available	**577**	750	**319**	391	**149**	177	**470**	585	**1,515**	1,903
Total unpaid principal balance	**$11,020**	$13,192	**$ 6,502**	$ 7,627	**$ 3,197**	$ 3,606	**$10,898**	$12,546	**$31,617**	$36,971
Geographic region (based on unpaid principal balance)										
California	**$ 6,555**	$ 7,899	**$ 3,716**	$ 4,396	**$ 797**	$ 899	**$ 6,225**	$ 7,128	**$17,293**	$20,322
Florida	**1,137**	1,306	**428**	501	**296**	332	**878**	1,026	**2,739**	3,165
New York	**607**	697	**457**	515	**330**	363	**628**	711	**2,022**	2,286
Washington	**532**	673	**135**	167	**61**	68	**238**	290	**966**	1,198
Illinois	**273**	314	**200**	226	**161**	178	**249**	282	**883**	1,000
New Jersey	**242**	280	**178**	210	**110**	125	**336**	401	**866**	1,016
Massachusetts	**79**	94	**149**	173	**98**	110	**307**	346	**633**	723
Maryland	**57**	64	**129**	144	**132**	145	**232**	267	**550**	620
Arizona	**203**	241	**106**	124	**60**	68	**156**	181	**525**	614
Virginia	**66**	77	**123**	142	**51**	56	**280**	314	**520**	589
All other	**1,269**	1,547	**881**	1,029	**1,101**	1,262	**1,369**	1,600	**4,620**	5,438
Total unpaid principal balance	**$11,020**	$13,192	**$ 6,502**	$ 7,627	**$ 3,197**	$ 3,606	**$10,898**	$12,546	**$31,617**	$36,971

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.

(b) Management concluded, as part of the Firm's regular assessment of the PCI loan pools, that it was probable that higher expected credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.

(d) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

Approximately 25% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following table sets forth delinquency statistics for PCI junior lien home equity loans and lines of credit based on the unpaid principal balance as of December 31, 2017 and 2016.

	Total loans		Total 30+ day delinquency rate	
December 31,	**2017**	2016	**2017**	2016
(in millions, except ratios)				
HELOCs:[a]				
Within the revolving period[b]	**$ 51**	$ 2,126	**1.96%**	3.67%
Beyond the revolving period[c]	**7,875**	7,452	**4.63**	4.03
HELOANs	**360**	465	**5.28**	5.38
Total	**$ 8,286**	$ 10,043	**4.65%**	4.01%

(a) In general, these HELOCs are revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.
(b) Substantially all undrawn HELOCs within the revolving period have been closed.
(c) Includes loans modified into fixed rate amortizing loans.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the years ended December 31, 2017, 2016 and 2015, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. The table excludes the cost to fund the PCI portfolios, and therefore the accretable yield does not represent net interest income expected to be earned on these portfolios.

Year ended December 31, (in millions, except ratios)	Total PCI		
	2017	2016	2015
Beginning balance	**$ 11,768**	$ 13,491	$ 14,592
Accretion into interest income	**(1,396)**	(1,555)	(1,700)
Changes in interest rates on variable-rate loans	**503**	260	279
Other changes in expected cash flows[a]	**284**	(428)	230
Reclassification from nonaccretable difference[b]	**–**	–	90
Balance at December 31	**$ 11,159**	$ 11,768	$ 13,491
Accretable yield percentage	**4.53%**	4.35%	4.20%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model, for example cash flows expected to be collected due to the impact of modifications and changes in prepayment assumptions.
(b) Reclassifications from the nonaccretable difference in the year ended December 31, 2015 were driven by continued improvement in home prices and delinquencies, as well as increased granularity in the impairment estimates.

Active and suspended foreclosure

At December 31, 2017 and 2016, the Firm had PCI residential real estate loans with an unpaid principal balance of $1.3 billion and $1.7 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30 days past due); information on those borrowers that have been delinquent for a longer period of time (90 days past due) is also considered. In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, the Firm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends to be a lagging indicator. The distribution of such scores provides a general indicator of credit quality trends within the portfolio; however, the score does not capture all factors that would be predictive of future credit performance. Refreshed FICO score information, which is obtained at least quarterly, for a statistically significant random sample of the credit card portfolio is indicated in the following table. FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in credit score calculation.

The table below sets forth information about the Firm's credit card loans.

As of or for the year ended December 31, (in millions, except ratios)	2017	2016
Net charge-offs	**$ 4,123**	$ 3,442
% of net charge-offs to retained loans	**2.95%**	2.63%
Loan delinquency		
Current and less than 30 days past due and still accruing	**$ 146,704**	$ 139,434
30–89 days past due and still accruing	**1,305**	1,134
90 or more days past due and still accruing	**1,378**	1,143
Total retained credit card loans	**$ 149,387**	$ 141,711
Loan delinquency ratios		
% of 30+ days past due to total retained loans	**1.80%**	1.61%
% of 90+ days past due to total retained loans	**0.92**	0.81
Credit card loans by geographic region		
California	**$ 22,245**	$ 20,571
Texas	**14,200**	13,220
New York	**13,021**	12,249
Florida	**9,138**	8,585
Illinois	**8,585**	8,189
New Jersey	**6,506**	6,271
Ohio	**4,997**	4,906
Pennsylvania	**4,883**	4,787
Colorado	**4,006**	3,699
Michigan	**3,826**	3,741
All other	**57,980**	55,493
Total retained credit card loans	**$ 149,387**	$ 141,711
Percentage of portfolio based on carrying value with estimated refreshed FICO scores		
Equal to or greater than 660	**84.0%**	84.4%
Less than 660	**14.6**	14.2
No FICO available	**1.4**	1.4

Credit card impaired loans and loan modifications

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

December 31, (in millions)	2017	2016
Impaired credit card loans with an allowance[a][b]		
Credit card loans with modified payment terms[c]	**$ 1,135**	$ 1,098
Modified credit card loans that have reverted to pre-modification payment terms[d]	**80**	142
Total impaired credit card loans[e]	**$ 1,215**	$ 1,240
Allowance for loan losses related to impaired credit card loans	**$ 383**	$ 358

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
(b) There were no impaired loans without an allowance.
(c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.
(d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At December 31, 2017 and 2016, $43 million and $94 million, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. The remaining $37 million and $48 million at December 31, 2017 and 2016, respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.
(e) Predominantly all impaired credit card loans are in the U.S.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

Year ended December 31, (in millions)	2017	2016	2015
Average impaired credit card loans	**$ 1,214**	$ 1,325	$ 1,710
Interest income on impaired credit card loans	**59**	63	82

Loan modifications

JPMorgan Chase may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. Most of the credit card loans have been modified under long-term programs for borrowers who are experiencing financial difficulties. Modifications under long-term programs involve placing the customer on a fixed payment plan, generally for 60 months. The Firm may also offer short-term programs for borrowers who may be in need of temporary relief; however, none are currently being offered. Modifications under all short- and long-term programs typically include reducing the interest rate on the credit card. Substantially all modifications are considered to be TDRs.

If the cardholder does not comply with the modified payment terms, then the credit card loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In most cases, the Firm does not reinstate the borrower's line of credit.

New enrollments in these loan modification programs for the years ended December 31, 2017, 2016 and 2015, were $756 million, $636 million and $638 million, respectively.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the periods presented.

Year ended December 31, (in millions, except weighted-average data)	2017	2016	2015
Weighted-average interest rate of loans – before TDR	**16.58%**	15.56%	15.08%
Weighted-average interest rate of loans – after TDR	**4.88**	4.76	4.40
Loans that redefaulted within one year of modification[a]	**$ 75**	$ 79	$ 85

(a) Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, a substantial portion of these loans are expected to be charged-off in accordance with the Firm's standard charge-off policy. Based on historical experience, the estimated weighted-average default rate for modified credit card loans was expected to be 31.54%, 28.87% and 25.61% as of December 31, 2017, 2016 and 2015, respectively.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of clients, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned to each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the PD and the LGD. The PD is the likelihood that a loan will default. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. The Firm's definition of criticized aligns with the banking regulatory definition of criticized exposures, which consist of special mention, substandard and doubtful categories. Risk ratings generally represent ratings profiles similar to those defined by S&P and Moody's. Investment-grade ratings range from "AAA/Aaa" to "BBB-/Baa3." Noninvestment-grade ratings are classified as noncriticized ("BB+/Ba1 and B-/B3") and criticized ("CCC+"/"Caa1 and below"), and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note 4 for further detail on industry concentrations.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

In 2017 the Firm revised its methodology for the assignment of industry classifications, to better monitor and manage concentrations. This largely resulted in the re-assignment of holding companies from Other to the industry of risk category based on the primary business activity of the holding company's underlying entities. In the tables and industry discussions below, the prior period amounts have been revised to conform with the current period presentation.

Below are summaries of the Firm's exposures as of December 31, 2017 and 2016. For additional information on industry concentrations, see Note 4.

As of or for the year ended December 31, (in millions, except ratios)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other[d]		Total retained loans	
	2017	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016
Loans by risk ratings												
Investment-grade	**$ 68,071**	$ 65,687	**$ 98,467**	$ 88,649	**$ 26,791**	$24,294	**$ 15,140**	$ 15,935	**$103,212**	$ 95,358	**$ 311,681**	$ 289,923
Noninvestment-grade:												
Noncriticized	**46,558**	47,531	**14,335**	16,155	**13,071**	11,075	**369**	439	**9,988**	9,360	**84,321**	84,560
Criticized performing	**3,983**	6,186	**710**	798	**210**	200	**–**	6	**259**	163	**5,162**	7,353
Criticized nonaccrual	**1,357**	1,491	**136**	200	**2**	9	**–**	–	**239**	254	**1,734**	1,954
Total noninvestment-grade	**51,898**	55,208	**15,181**	17,153	**13,283**	11,284	**369**	445	**10,486**	9,777	**91,217**	93,867
Total retained loans	**$119,969**	$120,895	**$ 113,648**	$105,802	**$ 40,074**	$35,578	**$ 15,509**	$ 16,380	**$113,698**	$105,135	**$ 402,898**	$ 383,790
% of total criticized to total retained loans	**4.45%**	6.35%	**0.74%**	0.94%	**0.53%**	0.59%	**–%**	0.04%	**0.44%**	0.40%	**1.71%**	2.43%
% of nonaccrual loans to total retained loans	**1.13**	1.23	**0.12**	0.19	**–**	0.03	**–**	–	**0.21**	0.24	**0.43**	0.51
Loans by geographic distribution[a]												
Total non-U.S.	**$ 28,470**	$ 30,563	**$ 3,101**	$ 3,302	**$ 16,790**	$15,147	**$ 2,906**	$ 3,726	**$ 44,112**	$ 38,776	**$ 95,379**	$ 91,514
Total U.S.	**91,499**	90,332	**110,547**	102,500	**23,284**	20,431	**12,603**	12,654	**69,586**	66,359	**307,519**	292,276
Total retained loans	**$119,969**	$120,895	**$ 113,648**	$105,802	**$ 40,074**	$35,578	**$ 15,509**	$ 16,380	**$113,698**	$105,135	**$ 402,898**	$ 383,790
Net charge-offs/ (recoveries)	**$ 117**	$ 345	**$ (4)**	$ (7)	**$ 6**	$ (1)	**$ 5**	$ (1)	**$ (5)**	$ 5	**$ 119**	$ 341
% of net charge-offs/ (recoveries) to end-of-period retained loans	**0.10%**	0.28%	**–%**	(0.01)%	**0.01%**	(0.01)%	**0.03%**	(0.01)%	**–%**	0.01%	**0.03%**	0.09%
Loan delinquency[b]												
Current and less than 30 days past due and still accruing	**$118,288**	$119,050	**$ 113,258**	$105,396	**$ 40,042**	$35,523	**$ 15,493**	$ 16,269	**$112,559**	$104,280	**$ 399,640**	$ 380,518
30–89 days past due and still accruing	**216**	268	**242**	204	**15**	25	**12**	107	**898**	582	**1,383**	1,186
90 or more days past due and still accruing[c]	**108**	86	**12**	2	**15**	21	**4**	4	**2**	19	**141**	132
Criticized nonaccrual	**1,357**	1,491	**136**	200	**2**	9	**–**	–	**239**	254	**1,734**	1,954
Total retained loans	**$119,969**	$120,895	**$ 113,648**	$105,802	**$ 40,074**	$35,578	**$ 15,509**	$ 16,380	**$113,698**	$105,135	**$ 402,898**	$ 383,790

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality.
(c) Represents loans that are considered well-collateralized and therefore still accruing interest.
(d) Other includes individuals, SPEs, holding companies, and private education and civic organizations. For more information on exposures to SPEs, see Note 14.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio for the periods indicated. Exposure consists primarily of secured commercial loans, of which multifamily is the largest segment. Multifamily lending finances acquisition, leasing and construction of apartment buildings, and includes exposure to real estate investment trusts ("REITs"). Other commercial lending largely includes financing for acquisition, leasing and construction, largely for office, retail and industrial real estate, and includes exposure to REITs. Included in real estate loans is $10.8 billion and $9.2 billion as of December 31, 2017 and 2016, respectively, of construction and development exposure consisting of loans originally purposed for construction and development, general purpose loans for builders, as well as loans for land subdivision and pre-development.

December 31, (in millions, except ratios)	Multifamily		Other Commercial		Total real estate loans	
	2017	2016	**2017**	2016	**2017**	**2016**
Real estate retained loans	**$ 77,597**	$ 72,143	**$ 36,051**	$ 33,659	**$ 113,648**	$ 105,802
Criticized	**491**	539	**355**	459	**846**	998
% of criticized to total real estate retained loans	**0.63%**	0.75%	**0.98%**	1.36%	**0.74%**	0.94%
Criticized nonaccrual	**$ 44**	$ 57	**$ 92**	$ 143	**$ 136**	$ 200
% of criticized nonaccrual to total real estate retained loans	**0.06%**	0.08%	**0.26%**	0.42%	**0.12%**	0.19%

Wholesale impaired loans and loan modifications

Wholesale impaired loans consist of loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 13.

The table below sets forth information about the Firm's wholesale impaired loans.

December 31, (in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	2017	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016
Impaired loans												
With an allowance	**$ 1,170**	$ 1,127	**$ 78**	$ 124	**$ 93**	$ 9	**$ –**	$ –	**$ 168**	$ 180	**$ 1,509**	$ 1,440
Without an allowance[a]	**228**	414	**60**	87	**–**	–	**–**	–	**70**	76	**358**	577
Total impaired loans	**$ 1,398**	$ 1,541	**$ 138**	$ 211	**$ 93**	$ 9	**$ –**	$ –	**$ 238**	$ 256	**$ 1,867** [c]	$ 2,017 [c]
Allowance for loan losses related to impaired loans	**$ 404**	$ 258	**$ 11**	$ 18	**$ 4**	$ 3	**$ –**	$ –	**$ 42**	$ 63	**$ 461**	$ 342
Unpaid principal balance of impaired loans[b]	**1,604**	1,754	**201**	295	**94**	12	**–**	–	**255**	284	**2,154**	2,345

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.
(b) Represents the contractual amount of principal owed at December 31, 2017 and 2016. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.
(c) Based upon the domicile of the borrower, largely consists of loans in the U.S.

The following table presents the Firm's average impaired loans for the years ended 2017, 2016 and 2015.

Year ended December 31, (in millions)	**2017**	2016	2015
Commercial and industrial	**$ 1,145**	$ 1,480	$ 453
Real estate	**164**	217	250
Financial institutions	**20**	13	13
Government agencies	**–**	–	–
Other	**231**	213	129
Total[a]	**$ 1,560**	$ 1,923	$ 845

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the years ended December 31, 2017, 2016 and 2015.

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above. TDRs were $614 million and $733 million as of December 31, 2017 and 2016.

Note 13 – Allowance for credit losses

JPMorgan Chase's allowance for loan losses represents management's estimate of probable credit losses inherent in the Firm's retained loan portfolio, which consists of the two consumer portfolio segments (primarily scored) and the wholesale portfolio segment (risk-rated). The allowance for loan losses includes a formula-based component, an asset-specific component, and a component related to PCI loans, as described below. Management also estimates an allowance for wholesale and certain consumer lending-related commitments using methodologies similar to those used to estimate the allowance on the underlying loans.

During the second quarter of 2017, the Firm refined its credit loss estimates relating to the wholesale portfolio by incorporating the use of internal historical data versus external credit rating agency default statistics to estimate PD. In addition, an adjustment to the statistical calculation for wholesale lending-related commitments was incorporated similar to the adjustment applied for wholesale loans. The impacts of these refinements were not material to the allowance for credit losses.

The Firm's policies used to determine its allowance for credit losses are described in the following paragraphs.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods. At least quarterly, the allowance for credit losses is reviewed by the CRO, the CFO and the Controller of the Firm and discussed with the DRPC and the Audit Committee. As of December 31, 2017, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses inherent in the portfolio).

Formula-based component

The formula-based component is based on a statistical calculation to provide for incurred credit losses in all consumer loans and performing risk-rated loans. All loans restructured in TDRs as well as any impaired risk-rated loans have an allowance assessed as part of the asset-specific component, while PCI loans have an allowance assessed as part of the PCI component. See Note 12 for more information on TDRs, Impaired loans and PCI loans.

Formula-based component - Consumer loans and certain lending-related commitments

The formula-based allowance for credit losses for the consumer portfolio segments is calculated by applying statistical credit loss factors (estimated PD and loss severities) to the recorded investment balances or loan-equivalent amounts of pools of loan exposures with similar risk characteristics over a loss emergence period to arrive at an estimate of incurred credit losses. Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends. In addition, management applies judgment to the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate the total incurred credit losses in the portfolio. Management uses additional statistical methods and considers actual portfolio performance, including actual losses recognized on defaulted loans and collateral valuation trends, to review the appropriateness of the primary statistical loss estimate. The economic impact of potential modifications of residential real estate loans is not included in the statistical calculation because of the uncertainty regarding the type and results of such modifications.

The statistical calculation is then adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation; these adjustments are accomplished in part by analyzing the historical loss experience for each major product segment. However, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment in making this adjustment, taking into account uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, borrower behavior, and other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties. The application of different inputs into the statistical calculation, and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for credit losses for the consumer credit portfolio.

Overall, the allowance for credit losses for consumer portfolios is sensitive to changes in the economic environment (e.g., unemployment rates), delinquency rates, the realizable value of collateral (e.g., housing prices), FICO scores, borrower behavior and other risk factors. While all of these factors are important determinants of overall allowance levels, changes in the various factors may not occur at the same time or at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in another. In addition, changes in these factors would not necessarily be consistent across all geographies or product types. Finally, it is difficult to predict the extent to which changes in these factors would ultimately affect the frequency of losses, the severity of losses or both.

Formula-based component - Wholesale loans and lending-related commitments

The Firm's methodology for determining the allowance for loan losses and the allowance for lending-related commitments involves the early identification of credits that are deteriorating. The formula-based component of the allowance for wholesale loans and lending-related commitments is calculated by applying statistical credit loss factors (estimated PD and LGD) to the recorded investment balances or loan-equivalent over a loss emergence period to arrive at an estimate of incurred credit losses in the portfolio. Estimated loss emergence periods may vary by funded versus unfunded status of the instrument and may change over time.

The Firm assesses the credit quality of its borrower or counterparty and assigns a risk rating. Risk ratings are assigned at origination or acquisition, and if necessary, adjusted for changes in credit quality over the life of the exposure. In assessing the risk rating of a particular loan or lending-related commitment, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Determining risk ratings involves significant judgment; emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm.

A PD estimate is determined based on the Firm's history of defaults over more than one credit cycle.

LGD estimate is a judgment-based estimate assigned to each loan or lending-related commitment. The estimate represents the amount of economic loss if the obligor were to default. The type of obligor, quality of collateral, and the seniority of the Firm's lending exposure in the obligor's capital structure affect LGD.

The Firm applies judgment in estimating PD, LGD, loss emergence period and loan-equivalent used in calculating the allowance for credit losses. Estimates of PD, LGD, loss emergence period and loan-equivalent used are subject to periodic refinement based on any changes to underlying external or Firm-specific historical data. Changes to the time period used for PD and LGD estimates could also affect the allowance for credit losses. The use of different inputs, estimates or methodologies could change the amount of the allowance for credit losses determined appropriate by the Firm.

In addition to the statistical credit loss estimates applied to the wholesale portfolio, management applies its judgment to adjust the statistical estimates for wholesale loans and lending-related commitments, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both LGD and PD are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

Asset-specific component

The asset-specific component of the allowance relates to loans considered to be impaired, which includes loans that have been modified in TDRs as well as risk-rated loans that have been placed on nonaccrual status. To determine the asset-specific component of the allowance, larger risk-rated loans (primarily loans in the wholesale portfolio segment) are evaluated individually, while smaller loans (both risk-rated and scored) are evaluated as pools using historical loss experience for the respective class of assets.

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are reported as an adjustment to the allowance for loan losses. In certain cases, the asset-specific allowance is determined using an observable market price, and the allowance is measured as the difference between the recorded investment in the loan and the loan's fair value. Collateral-dependent loans are charged down to the fair value of collateral less costs to sell. For any of these impaired loans, the amount of the asset-specific allowance required to be recorded, if any, is dependent upon the recorded investment in the loan (including prior charge-offs), and either the expected cash flows or fair value of collateral. See Note 12 for more information about charge-offs and collateral-dependent loans.

The asset-specific component of the allowance for impaired loans that have been modified in TDRs (including forgone interest, principal forgiveness, as well as other concessions) incorporates the effect of the modification on the loan's expected cash flows, which considers the potential for redefault. For residential real estate loans modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to-date based on actual redefaulted modified loans. For credit card loans modified in TDRs, expected losses incorporate projected redefaults based on the Firm's historical experience by type of modification program. For wholesale loans modified in TDRs, expected losses incorporate management's expectation of the borrower's ability to repay under the modified terms.

Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections rely upon estimates such as loss severities, asset valuations, default rates (including redefault rates on modified loans), the amounts and timing of interest or principal payments (including any expected prepayments) or other factors that are reflective of current and expected market conditions. These estimates are, in turn, dependent on factors such as the duration of current overall economic conditions, industry-, portfolio-, or borrower-specific factors, the expected outcome of insolvency proceedings as well as, in certain circumstances, other economic factors, including the level of future home prices. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

PCI loans

In connection with the acquisition of certain PCI loans, which are accounted for as described in Note 12, the allowance for loan losses for the PCI portfolio is based on quarterly estimates of the amount of principal and interest cash flows expected to be collected over the estimated remaining lives of the loans.

These cash flow projections are based on estimates regarding default rates (including redefault rates on modified loans), loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are dependent on assumptions regarding the level of future home prices, and the duration of current overall economic conditions, among other factors. These estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Allowance for credit losses and related information

The table below summarizes information about the allowances for loan losses and lending-relating commitments, and includes a breakdown of loans and lending-related commitments by impairment methodology.

Year ended December 31, (in millions)	2017			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses				
Beginning balance at January 1,	$ 5,198	$ 4,034	$ 4,544	$ 13,776
Gross charge-offs	1,779	4,521	212	6,512
Gross recoveries	(634)	(398)	(93)	(1,125)
Net charge-offs	1,145	4,123	119	5,387
Write-offs of PCI loans[a]	86	–	–	86
Provision for loan losses	613	4,973	(286)	5,300
Other	(1)	–	2	1
Ending balance at December 31,	$ 4,579	$ 4,884	$ 4,141	$ 13,604
Allowance for loan losses by impairment methodology				
Asset-specific[b]	$ 246	$ 383 [c]	$ 461	$ 1,090
Formula-based	2,108	4,501	3,680	10,289
PCI	2,225	–	–	2,225
Total allowance for loan losses	$ 4,579	$ 4,884	$ 4,141	$ 13,604
Loans by impairment methodology				
Asset-specific	$ 8,036	$ 1,215	$ 1,867	$ 11,118
Formula-based	333,941	148,172	401,028	883,141
PCI	30,576	–	3	30,579
Total retained loans	$ 372,553	$ 149,387	$ 402,898	$ 924,838
Impaired collateral-dependent loans				
Net charge-offs	$ 64	$ –	$ 31	$ 95
Loans measured at fair value of collateral less cost to sell	2,133	–	233	2,366
Allowance for lending-related commitments				
Beginning balance at January 1,	$ 26	$ –	$ 1,052	$ 1,078
Provision for lending-related commitments	7	–	(17)	(10)
Other	–	–	–	–
Ending balance at December 31,	$ 33	$ –	$ 1,035	$ 1,068
Allowance for lending-related commitments by impairment methodology				
Asset-specific	$ –	$ –	$ 187	$ 187
Formula-based	33	–	848	881
Total allowance for lending-related commitments	$ 33	$ –	$ 1,035	$ 1,068
Lending-related commitments by impairment methodology				
Asset-specific	$ –	$ –	$ 731	$ 731
Formula-based	48,553	572,831	369,367	990,751
Total lending-related commitments	$ 48,553	$ 572,831	$ 370,098	$ 991,482

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool.
(b) Includes risk-rated loans that have been placed on nonaccrual status and all loans that have been modified in a TDR.
(c) The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.
(d) The prior period amounts have been revised to conform with the current period presentation.

(table continued from previous page)

2016				2015			
Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
$ 5,806	$ 3,434	$ 4,315	$ 13,555	$ 7,050	$ 3,439	$ 3,696	$ 14,185
1,500	3,799	398	5,697	1,658	3,488	95	5,241
(591)	(357)	(57)	(1,005)	(704)	(366)	(85)	(1,155)
909	3,442	341	4,692	954	3,122	10	4,086
156	–	–	156	208	–	–	208
467	4,042	571	5,080	(82)	3,122	623	3,663
(10)	–	(1)	(11)	–	(5)	6	1
$ 5,198	$ 4,034	$ 4,544	$ 13,776	$ 5,806	$ 3,434	$ 4,315	$ 13,555
$ 308	$ 358 (c)	$ 342	$ 1,008	$ 364	$ 460 (c)	$ 274	$ 1,098
2,579	3,676	4,202	10,457	2,700	2,974	4,041	9,715
2,311	–	–	2,311	2,742	–	–	2,742
$ 5,198	$ 4,034	$ 4,544	$ 13,776	$ 5,806	$ 3,434	$ 4,315	$ 13,555
$ 8,940	$ 1,240	$ 2,017	$ 12,197	$ 9,606	$ 1,465	$ 1,024	$ 12,095
319,787	140,471	381,770	842,028	293,751	129,922	356,022	779,695
35,679	–	3	35,682	40,998	–	4	41,002
$ 364,406	$ 141,711	$ 383,790	$ 889,907	$ 344,355	$ 131,387	$ 357,050	$ 832,792
$ 98	$ –	$ 7	$ 105	$ 104	$ –	$ 16	$ 120
2,391	–	300	2,691	2,566	–	283	2,849
$ 14	$ –	$ 772	$ 786	$ 13	$ –	$ 609	$ 622
–	–	281	281	1	–	163	164
12	–	(1)	11	–	–	–	–
$ 26	$ –	$ 1,052	$ 1,078	$ 14	$ –	$ 772	$ 786
$ –	$ –	$ 169	$ 169	$ –	$ –	$ 73	$ 73
26	–	883	909	14	–	699	713
$ 26	$ –	$ 1,052	$ 1,078	$ 14	$ –	$ 772	$ 786
$ –	$ –	$ 506	$ 506	$ –	$ –	$ 193	$ 193
53,247 (d)	553,891	367,508	974,646 (d)	56,865 (d)	515,518	366,206	938,589 (d)
$ 53,247 (d)	$ 553,891	$ 368,014	$ 975,152 (d)	$ 56,865 (d)	$ 515,518	$ 366,399	$ 938,782 (d)

Note 14 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the primary beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper conduit.

Line of Business	*Transaction Type*	*Activity*	*Annual Report page references*
CCB	Credit card securitization trusts	Securitization of originated credit card receivables	236-237
	Mortgage securitization trusts	Servicing and securitization of both originated and purchased residential mortgages	237-239
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages and other consumer loans	237-239
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	239
	Municipal bond vehicles	Financing of municipal bond investments	239-240

The Firm's other business segments are also involved with VIEs (both third-party and Firm-sponsored), but to a lesser extent, as follows:

- Asset & Wealth Management: AWM sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AWM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For fund entities that qualify as VIEs, AWM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Commercial Banking: CB provides financing and lending-related services to a wide spectrum of clients, including certain third party-sponsored entities that may meet the definition of a VIE. CB does not control the activities of these entities and does not consolidate these entities. CB's maximum loss exposure, regardless of whether the entity is a VIE, is generally limited to loans and lending-related commitments which are reported and disclosed in the same manner as any other third-party transaction.
- Corporate: Corporate is involved with entities that may meet the definition of VIEs; however these entities are generally subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs. In addition, Treasury and CIO invest in securities generally issued by third parties which may meet the definition of VIEs (e.g., issuers of asset-backed securities). In general, the Firm does not have the power to direct the significant activities of these entities and therefore does not consolidate these entities. See Note 10 for further information on the Firm's investment securities portfolio.

In addition, CIB also invests in and provides financing and other services to VIEs sponsored by third parties. See pages 241-242 of this Note for more information on the VIEs sponsored by third parties.

Significant Firm-sponsored variable interest entities

Credit card securitizations

CCB's Card business securitizes originated credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.

The Firm is considered to be the primary beneficiary of these Firm-sponsored credit card securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

The underlying securitized credit card receivables and other assets of the securitization trusts are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (generally 5%). As of December 31, 2017 and 2016, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $15.8 billion and $8.9 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 26% and 16% for the years ended December 31, 2017 and 2016. As of both

December 31, 2017 and 2016, the Firm did not retain any senior securities and retained $4.5 billion and $5.3 billion of subordinated securities in certain of its credit card securitization trusts as of December 31, 2017 and 2016, respectively. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans primarily in its CCB and CIB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

Firm-sponsored mortgage and other securitization trusts

The following table presents the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests (including amounts required to be held pursuant to credit risk retention rules), recourse or guarantee arrangements, and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. See Securitization activity on page 242 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and page 243 of this Note for information on the Firm's loan sales to U.S. government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]			
December 31, 2017 (in millions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	Securities	Other financial assets	Total interests held by JPMorgan Chase
Securitization-related[a]							
Residential mortgage:							
Prime/Alt-A and option ARMs	**$ 68,874**	**$ 3,615**	**$ 52,280**	**$ 410**	**$ 943**	**$ –**	**$ 1,353**
Subprime	**18,984**	**7**	**17,612**	**93**	**–**	**–**	**93**
Commercial and other[b]	**94,905**	**63**	**63,411**	**745**	**1,133**	**157**	**2,035**
Total	**$ 182,763**	**$ 3,685**	**$ 133,303**	**$ 1,248**	**$ 2,076**	**$ 157**	**$ 3,481**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]			
December 31, 2016(in millions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	Securities	Other financial assets	Total interests held by JPMorgan Chase
Securitization-related[a]							
Residential mortgage:							
Prime/Alt-A and option ARMs	$ 76,789	$ 4,209	$ 57,543	$ 226	$ 1,334	$ –	$ 1,560
Subprime	21,542	–	19,903	76	–	–	76
Commercial and other[b]	101,265	107	71,464	509	2,064	–	2,573
Total	$ 199,596	$ 4,316	$ 148,910	$ 811	$ 3,398	$ –	$ 4,209

(a) Excludes U.S. government agency securitizations and re-securitizations, which are not Firm-sponsored. See page 243 of this Note for information on the Firm's loan sales to U.S. government agencies.

(b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties.

(c) Excludes the following: retained servicing (see Note 15 for a discussion of MSRs); securities retained from loan sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (See Note 5 for further information on derivatives); senior and subordinated securities of $88 million and $48 million, respectively, at December 31, 2017, and $180 million and $49 million, respectively, at December 31, 2016, which the Firm purchased in connection with CIB's secondary market-making activities.

(d) Includes interests held in re-securitization transactions.

(e) As of December 31, 2017 and 2016, 61% and 61%, respectively, of the Firm's retained securitization interests, which are predominantly carried at fair value and include amounts required to be held pursuant to credit risk retention rules, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of $1.3 billion and $1.5 billion of investment-grade and $48 million and $77 million of noninvestment-grade retained interests at December 31, 2017 and 2016, respectively. The retained interests in commercial and other securitizations trusts consisted of $1.6 billion and $2.4 billion of investment-grade and $412 million and $210 million of noninvestment-grade retained interests at December 31, 2017 and 2016, respectively.

Residential mortgage
The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. CCB generally retains servicing for all residential mortgage loans it originated or purchased, and for certain mortgage loans purchased by CIB. For securitizations of loans serviced by CCB, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. CCB may also retain an interest upon securitization.

In addition, CIB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, CIB at times retains senior and/or subordinated interests (including residual interests and amounts required to be held pursuant to credit risk retention rules) in residential mortgage securitizations at the time of securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by CIB or held by CCB, when considered together with the servicing arrangements entered into by CCB, the Firm is deemed to be the primary beneficiary of certain securitization trusts. See the table on page 241 of this Note for more information on consolidated residential mortgage securitizations.

The Firm does not consolidate a residential mortgage securitization (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust. See the table on page 241 of this Note for more information on the consolidated residential mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations.

Commercial mortgages and other consumer securitizations
CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. CIB may retain unsold senior and/or subordinated interests (including amounts required to be held pursuant to credit risk retention rules) in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). The Firm generally does not retain an interest in the controlling class in its sponsored commercial mortgage securitization transactions. See the table on page 241 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

Re-securitizations
The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both agency (Federal National Mortgage Association ("Fannie Mae"), Federal Home Loan Mortgage Corporation ("Freddie Mac") and Government National Mortgage Association ("Ginnie Mae")) and nonagency (private-label) sponsored VIEs, which may be backed by either residential or commercial mortgages. The Firm's consolidation analysis is largely dependent on the Firm's role and interest in the re-securitization trusts.

The following table presents the principal amount of securities transferred to re-securitization VIEs.

Year ended December 31, (in millions)	**2017**	2016	2015
Transfers of securities to VIEs			
Firm-sponsored private-label	**$ —**	$ 647	$ 777
Agency	**$ 12,617**	$ 11,241	$ 21,908

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients is seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its clients, considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.

In more limited circumstances, the Firm creates a nonagency re-securitization trust independently and not in conjunction with specific clients. In these circumstances, the Firm is deemed to have the unilateral ability to direct the most significant activities of the re-securitization trust because of the decisions made during the establishment and design of the trust; therefore, the Firm consolidates the re-securitization VIE if the Firm holds an interest that could potentially be significant.

Additionally, the Firm may invest in beneficial interests of third-party re-securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it was not involved in the initial design of the trust, or the Firm is involved with an independent third-party sponsor and demonstrates shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

The following table presents information on nonconsolidated re-securitization VIEs.

Year ended December 31, (in millions)	2017	2016
Firm-sponsored private-label		
Assets held in VIEs with continuing involvement[a]	**783**	875
Interest in VIEs	**29**	43
Agency		
Interest in VIEs	**2,250**	**1,986**

(a) Represents the principal amount and includes the notional amount of interest-only securities.

As of December 31, 2017 and 2016, the Firm did not consolidate any agency re-securitizations or any Firm-sponsored private-label re-securitizations.

Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that provide secured financing, collateralized by pools of receivables and other financial assets, to customers of the Firm. The conduits fund their financing facilities through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, and to provide the conduits with funding to provide financing to customers in the event that the conduits do not obtain funding in the commercial paper market, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required is based upon commercial paper issuance and approximates 10% of the outstanding balance of commercial paper.

The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit enhancement facilities provided to the conduits. See page 241 of this Note for further information on consolidated VIE assets and liabilities.

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $20.4 billion and $21.2 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2017 and 2016, respectively, which have been eliminated in consolidation. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. Other than the amounts required to be held pursuant to credit risk retention rules, the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded commitments were $8.8 billion and $7.4 billion at December 31, 2017 and 2016, respectively, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 27.

Municipal bond vehicles

Municipal bond vehicles or tender option bond ("TOB") trusts allow institutions to finance their municipal bond investments at short-term rates. In a typical TOB transaction, the trust purchases highly rated municipal bond(s) of a single issuer and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates ("Floaters") and (2) inverse floating-rate residual interests ("Residuals"). The Floaters are typically purchased by money market funds or other short-term investors and may be tendered, with requisite notice, to the TOB trust. The Residuals are retained by the investor seeking to finance its municipal bond investment. TOB transactions where the Residual is held by a third party investor are typically known as Customer TOB trusts, and Non-Customer TOB trusts are transactions where the Residual is retained by the Firm. Customer TOB trusts are sponsored by a third party; see page 242 on this Note for further information. The Firm serves as sponsor for all Non-Customer TOB transactions. The Firm may provide various services to a TOB trust, including remarketing agent, liquidity or tender option provider, and/or sponsor.

J.P. Morgan Securities LLC may serve as a remarketing agent on the Floaters for TOB trusts. The remarketing agent is responsible for establishing the periodic variable rate on the Floaters, conducting the initial placement and remarketing tendered Floaters. The remarketing agent may, but is not obligated to, make markets in Floaters. The Firm held an insignificant amount of Floaters during 2017 and 2016.

JPMorgan Chase Bank, N.A. or J.P. Morgan Securities LLC often serves as the sole liquidity or tender option provider for the TOB trusts. The liquidity provider's obligation to perform is conditional and is limited by certain events ("Termination Events"), which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the liquidity provider's exposure is typically further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or, in certain transactions, the reimbursement agreements with the Residual holders.

Holders of the Floaters may "put," or tender, their Floaters to the TOB trust. If the remarketing agent cannot successfully remarket the Floaters to another investor, the liquidity provider either provides a loan to the TOB trust for the TOB trust's purchase of the Floaters, or it directly purchases the tendered Floaters.

TOB trusts are considered to be variable interest entities. The Firm consolidates Non-Customer TOB trusts because as the Residual holder, the Firm has the right to make decisions that significantly impact the economic performance of the municipal bond vehicle, and it has the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle. See page 241 of this Note for further information on consolidated municipal bond vehicles.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2017 and 2016.

	Assets				Liabilities		
December 31, 2017 (in millions)	Trading assets	Loans	Other[d]	Total assets[e]	Beneficial interests in VIE assets[f]	Other[g]	Total liabilities
VIE program type[a]							
Firm-sponsored credit card trusts	**$ –**	**$ 41,923**	**$ 652**	**$ 42,575**	**$ 21,278**	**$ 16**	**$ 21,294**
Firm-administered multi-seller conduits	**–**	**23,411**	**48**	**23,459**	**3,045**	**28**	**3,073**
Municipal bond vehicles	**1,278**	**–**	**3**	**1,281**	**1,265**	**2**	**1,267**
Mortgage securitization entities[b]	**66**	**3,661**	**55**	**3,782**	**359**	**199**	**558**
Student loan securitization entities[c]	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Other	**105**	**–**	**1,916**	**2,021**	**134**	**104**	**238**
Total	**$ 1,449**	**$ 68,995**	**$ 2,674**	**$ 73,118**	**$ 26,081**	**$ 349**	**$ 26,430**

	Assets				Liabilities		
December 31, 2016 (in millions)	Trading assets	Loans	Other[d]	Total assets[e]	Beneficial interests in VIE assets[f]	Other[g]	Total liabilities
VIE program type[a]							
Firm-sponsored credit card trusts	$ –	$ 45,919	$ 790	$ 46,709	$ 31,181	$ 18	$ 31,199
Firm-administered multi-seller conduits	–	23,760	43	23,803	2,719	33	2,752
Municipal bond vehicles	2,897	–	8	2,905	2,969	2	2,971
Mortgage securitization entities[b]	143	4,246	103	4,492	468	313	781
Student loan securitization entities [c]	–	1,689	59	1,748	1,527	4	1,531
Other	145	–	2,318	2,463	183	120	303
Total	$ 3,185	$ 75,614	$ 3,321	$ 82,120	$ 39,047	$ 490	$ 39,537

(a) Excludes intercompany transactions, which are eliminated in consolidation.
(b) Includes residential and commercial mortgage securitizations.
(c) The Firm deconsolidated the student loan securitization entities in the second quarter of 2017 as it no longer had a controlling financial interest in these entities as a result of the sale of the student loan portfolio.
(d) Includes assets classified as cash and other assets on the Consolidated balance sheets.
(e) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.
(f) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated balance sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $21.8 billion and $33.4 billion at December 31, 2017 and 2016, respectively. For additional information on interest bearing long-term beneficial interest, see Note 19.
(g) Includes liabilities classified as accounts payable and other liabilities on the Consolidated balance sheets.

VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, remarketing agent, trustee or custodian. These transactions are conducted at arm's-length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm generally does not consolidate the VIE, but it records and reports these positions on its Consolidated balance sheets in the same manner it would record and report positions in respect of any other third-party transaction.

Tax credit vehicles

The Firm holds investments in unconsolidated tax credit vehicles, which are limited partnerships and similar entities that construct, own and operate affordable housing, wind, solar and other alternative energy projects. These entities are primarily considered VIEs. A third party is typically the general partner or managing member and has control over the significant activities of the tax credit vehicles, and accordingly the Firm does not consolidate tax credit vehicles. The Firm generally invests in these partnerships as a limited partner and earns a return primarily through the receipt of tax credits allocated to the projects. The maximum loss exposure, represented by equity investments and funding commitments, was $13.4 billion and $14.8 billion, of which $3.2 billion and $3.8 billion was unfunded at December 31, 2017 and 2016 respectively. In order to reduce the risk of loss, the Firm assesses each project and withholds varying amounts of its capital investment until qualification of the project for tax credits. See Note 24 for

further information on affordable housing tax credits. For more information on off-balance sheet lending-related commitments, see Note 27.

Customer municipal bond vehicles (TOB trusts)

The Firm may provide various services to Customer TOB trusts, including remarketing agent, liquidity or tender option provider. In certain Customer TOB transactions, the Firm, as liquidity provider, has entered into a reimbursement agreement with the Residual holder. In those transactions, upon the termination of the vehicle, the Firm has recourse to the third party Residual holders for any shortfall. The Firm does not have any intent to protect Residual holders from potential losses on any of the underlying municipal bonds. The Firm does not consolidate Customer TOB trusts, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle. The Firm's maximum exposure as a liquidity provider to Customer TOB trusts at December 31, 2017 and 2016, was $5.3 billion and $5.0 billion, respectively. The fair value of assets held by such VIEs at December 31, 2017 and 2016 was $9.2 billion and $8.9 billion, respectively. For more information on off-balance sheet lending-related commitments, see Note 27.

Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgage, credit card, student and commercial (primarily related to real estate) loans, as well as debt securities. The purposes of these securitization transactions were to satisfy investor demand and to generate liquidity for the Firm.

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when all of the following accounting criteria for a sale are met: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

Securitization activity

The following table provides information related to the Firm's securitization activities for the years ended December 31, 2017, 2016 and 2015, related to assets held in Firm-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved at the time of the securitization.

	2017		2016		2015	
Year ended December 31, (in millions, except rates)	Residential mortgage[d]	Commercial and other[e]	Residential mortgage[d]	Commercial and other[e]	Residential mortgage[d]	Commercial and other[e]
Principal securitized	**$ 5,532**	**$ 10,252**	$ 1,817	$ 8,964	$ 3,008	$ 11,933
All cash flows during the period:[a]						
Proceeds received from loan sales as financial instruments[b]	**$ 5,661**	**$ 10,340**	$ 1,831	$ 9,094	$ 3,022	$ 12,011
Servicing fees collected	**525**	**3**	477	3	528	3
Purchases of previously transferred financial assets (or the underlying collateral)[c]	**1**	**–**	37	–	3	–
Cash flows received on interests	**463**	**918**	482	1,441	407	597

(a) Excludes re-securitization transactions.
(b) Predominantly includes Level 2 assets.
(c) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities – for example, loan repurchases due to representation and warranties and servicer "clean-up" calls.
(d) Includes prime/Alt-A, subprime, and option ARMs. Excludes certain loan securitization transactions entered into with Ginnie Mae, Fannie Mae and Freddie Mac.
(e) Includes commercial mortgage and other consumer loans.

Key assumptions used to value retained interests originated during the year are shown in the table below.

Year ended December 31,	**2017**	2016	2015
Residential mortgage retained interest:			
Weighted-average life (in years)	4.8	4.5	4.2
Weighted-average discount rate	2.9%	4.2%	2.9%
Commercial mortgage retained interest:			
Weighted-average life (in years)	7.1	6.2	6.2
Weighted-average discount rate	4.4%	5.8%	4.1%

Loans and excess MSRs sold to U.S. government-sponsored enterprises, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. government sponsored enterprises ("U.S. GSEs"). These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. See Note 27 for additional information about the Firm's loan sales- and securitization-related indemnifications.

See Note 15 for additional information about the impact of the Firm's sale of certain excess MSRs.

The following table summarizes the activities related to loans sold to the U.S. GSEs, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities.

Year ended December 31, (in millions)	2017	2016	2015
Carrying value of loans sold	**$ 64,542**	$ 52,869	$ 42,161
Proceeds received from loan sales as cash	**$ 117**	$ 592	$ 313
Proceeds from loans sales as securities[a]	**63,542**	51,852	41,615
Total proceeds received from loan sales[b]	**$ 63,659**	$ 52,444	$ 41,928
Gains on loan sales[c][d]	**$ 163**	$ 222	$ 299

(a) Predominantly includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt.
(b) Excludes the value of MSRs retained upon the sale of loans.
(c) Gains on loan sales include the value of MSRs.
(d) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 27, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability.

The following table presents loans the Firm repurchased or had an option to repurchase, real estate owned, and foreclosed government-guaranteed residential mortgage loans recognized on the Firm's Consolidated balance sheets as of December 31, 2017 and 2016. Substantially all of these loans and real estate are insured or guaranteed by U.S. government agencies. For additional information, refer to Note 12.

December 31, (in millions)	2017	2016
Loans repurchased or option to repurchase[a]	**$ 8,629**	$ 9,556
Real estate owned	**95**	142
Foreclosed government-guaranteed residential mortgage loans[b]	**527**	1,007

(a) Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools.
(b) Relates to voluntary repurchases of loans, which are included in accrued interest and accounts receivable.

Loan delinquencies and liquidation losses

The table below includes information about components of nonconsolidated securitized financial assets held in Firm-sponsored private-label securitization entities, in which the Firm has continuing involvement, and delinquencies as of December 31, 2017 and 2016.

	Securitized assets		90 days past due		Liquidation losses	
As of or for the year ended December 31, (in millions)	2017	2016	2017	2016	2017	2016
Securitized loans						
Residential mortgage:						
Prime/ Alt-A & option ARMs	**$ 52,280**	$ 57,543	**$ 4,870**	$ 6,169	**$ 790**	$ 1,160
Subprime	**17,612**	19,903	**3,276**	4,186	**719**	1,087
Commercial and other	**63,411**	71,464	**957**	1,755	**114**	643
Total loans securitized	**$ 133,303**	$ 148,910	**$ 9,103**	$ 12,110	**$ 1,623**	$ 2,890

Note 15 – Goodwill and Mortgage servicing rights

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	2017	2016	2015
Consumer & Community Banking	**$ 31,013**	$ 30,797	$ 30,769
Corporate & Investment Bank	**6,776**	6,772	6,772
Commercial Banking	**2,860**	2,861	2,861
Asset & Wealth Management	**6,858**	6,858	6,923
Total goodwill	**$ 47,507**	$ 47,288	$ 47,325

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	2017	2016	2015
Balance at beginning of period	**$ 47,288**	$ 47,325	$ 47,647
Changes during the period from:			
Business combinations[a]	**199**	–	28
Dispositions[b]	**–**	(72)	(160)
Other[c]	**20**	35	(190)
Balance at December 31,	**$ 47,507**	$ 47,288	$ 47,325

(a) For 2017, represents CCB goodwill in connection with an acquisition.
(b) For 2016, represents AWM goodwill, which was disposed of as part of an AWM sales transaction. For 2015 includes $101 million of Private Equity goodwill, which was disposed of as part of the Private Equity sale.
(c) Includes foreign currency translation adjustments and other tax-related adjustments.

Impairment testing

The Firm's goodwill was not impaired at December 31, 2017, 2016, and 2015.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill and other intangible assets. If the fair value is in excess of the carrying value, then the reporting unit's goodwill is considered to be not impaired. If the fair value is less than the carrying value, then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The Firm uses the reporting units' allocated capital plus goodwill and other intangible assets capital as a proxy for the carrying values of equity for the reporting units in the goodwill impairment testing. Reporting unit equity is determined on a similar basis as the allocation of capital to the Firm's lines of business, which takes into consideration the capital the business segment would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III) and capital levels for similarly rated peers. Proposed line of business equity levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors. Allocated capital is further reviewed on a periodic basis and updated as needed.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. This approach projects cash flows for the forecast period and uses the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' earnings forecasts which are reviewed with senior management of the Firm. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firms' overall estimated cost of equity to ensure reasonableness.

The valuations derived from the discounted cash flow analysis are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to assess the general reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that naturally exist between the Firm's businesses and competitor institutions. Management also takes into consideration a comparison between the aggregate fair values of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (i) a control premium that would exist in a market transaction, (ii) factors related to the level of execution risk that would exist at the firmwide level that do not exist at the reporting unit level and (iii) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

Declines in business performance, increases in credit losses, increases in capital requirements, as well as deterioration in economic or market conditions, estimates of adverse regulatory or legislative changes or increases in the estimated market cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights

MSRs represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm has elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late charges and other ancillary revenue, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that comprise the MSR asset. Conversely, securities (e.g., mortgage-backed securities), principal-only certificates and certain derivatives (i.e., those for which the Firm receives fixed-rate interest payments) increase in value when interest rates decline. JPMorgan Chase uses combinations of derivatives and securities to manage the risk of changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2017, 2016 and 2015.

As of or for the year ended December 31, (in millions, except where otherwise noted)	2017	2016	2015
Fair value at beginning of period	**$ 6,096**	$ 6,608	$ 7,436
MSR activity:			
Originations of MSRs	**1,103**	679	550
Purchase of MSRs	**–**	–	435
Disposition of MSRs[a]	**(140)**	(109)	(486)
Net additions	**963**	570	499
Changes due to collection/realization of expected cash flows	**(797)**	(919)	(922)
Changes in valuation due to inputs and assumptions:			
Changes due to market interest rates and other[b]	**(202)**	(72)	(160)
Changes in valuation due to other inputs and assumptions:			
Projected cash flows (e.g., cost to service)	**(102)**	(35)	(112)
Discount rates	**(19)**	7	(10)
Prepayment model changes and other[c]	**91**	(63)	(123)
Total changes in valuation due to other inputs and assumptions	**(30)**	(91)	(245)
Total changes in valuation due to inputs and assumptions	**(232)**	(163)	(405)
Fair value at December 31,	**$ 6,030**	$ 6,096	$ 6,608
Change in unrealized gains/(losses) included in income related to MSRs held at December 31,	**$ (232)**	$ (163)	$ (405)
Contractual service fees, late fees and other ancillary fees included in income	**1,886**	2,124	2,533
Third-party mortgage loans serviced at December 31, (in billions)	**555.0**	593.3	677.0
Servicer advances, net of an allowance for uncollectible amounts, at December 31, (in billions)[d]	**4.0**	4.7	6.5

(a) Includes excess MSRs transferred to agency-sponsored trusts in exchange for stripped mortgage backed securities ("SMBS"). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired the remaining balance of those SMBS as trading securities.
(b) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.
(c) Represents changes in prepayments other than those attributable to changes in market interest rates.
(d) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these servicer advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2017, 2016 and 2015.

Year ended December 31, (in millions)	2017	2016	2015
CCB mortgage fees and related income			
Net production revenue	**$ 636**	$ 853	$ 769
Net mortgage servicing revenue:			
Operating revenue:			
Loan servicing revenue	**2,014**	2,336	2,776
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(795)**	(916)	(917)
Total operating revenue	**1,219**	1,420	1,859
Risk management:			
Changes in MSR asset fair value due to market interest rates and other[(a)]	**(202)**	(72)	(160)
Other changes in MSR asset fair value due to other inputs and assumptions in model[(b)]	**(30)**	(91)	(245)
Change in derivative fair value and other	**(10)**	380	288
Total risk management	**(242)**	217	(117)
Total net mortgage servicing revenue	**977**	1,637	1,742
Total CCB mortgage fees and related income	**1,613**	2,490	2,511
All other	**3**	1	2
Mortgage fees and related income	**$1,616**	$ 2,491	$2,513

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices).

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2017 and 2016, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

December 31, (in millions, except rates)	2017	2016
Weighted-average prepayment speed assumption ("CPR")	**9.35%**	9.41%
Impact on fair value of 10% adverse change	**$ (221)**	$ (231)
Impact on fair value of 20% adverse change	**(427)**	(445)
Weighted-average option adjusted spread	**9.04%**	8.55%
Impact on fair value of 100 basis points adverse change	**$ (250)**	$ (248)
Impact on fair value of 200 basis points adverse change	**(481)**	(477)

CPR: Constant prepayment rate.

Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

Note 16 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 17 – Deposits

At December 31, 2017 and 2016, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	2017	2016
U.S. offices		
Noninterest-bearing	**$ 393,645**	$ 400,831
Interest-bearing (included **$14,947,** and $12,245 at fair value)[a]	**793,618**	737,949
Total deposits in U.S. offices	**1,187,263**	1,138,780
Non-U.S. offices		
Noninterest-bearing	**15,576**	14,764
Interest-bearing (included **$6,374** and $1,667 at fair value)[a]	**241,143**	221,635
Total deposits in non-U.S. offices	**256,719**	236,399
Total deposits	**$ 1,443,982**	$1,375,179

(a) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 3.

At December 31, 2017 and 2016, time deposits in denominations of $250,000 or more were as follows.

December 31, (in millions)	2017	2016
U.S. offices	**$ 30,671**	$ 26,180
Non-U.S. offices[a]	**29,049**	29,652
Total[a]	**$ 59,720**	$ 55,832

(a) The prior period amounts have been revised to conform with the current period presentation.

At December 31, 2017, the maturities of interest-bearing time deposits were as follows.

December 31, 2017 (in millions)	U.S.	Non-U.S.	Total
2018	$ 37,645	$ 27,621	$ 65,266
2019	3,487	349	3,836
2020	2,332	22	2,354
2021	4,275	26	4,301
2022	2,297	443	2,740
After 5 years	3,391	1,697	5,088
Total	$ 53,427	$ 30,158	$ 83,585

Note 18 – Accounts payable and other liabilities

Accounts payable and other liabilities consist of brokerage payables, which includes payables to customers, dealers and clearing organizations, and payables from security purchases that did not settle; accrued expenses, including income tax payables and credit card rewards liability; and all other liabilities, including obligations to return securities received as collateral and litigation reserves.

The following table details the components of accounts payable and other liabilities.

December 31, (in millions)	2017	2016
Brokerage payables	**$ 102,727**	$ 109,842
Other payables and liabilities[a]	**86,656**	80,701
Total accounts payable and other liabilities	**$ 189,383**	$ 190,543

(a) Includes credit card rewards liability of $4.9 billion and $3.8 billion at December 31, 2017 and 2016, respectively.

Note 19 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated statements of income, except for unrealized gains/(losses) due to DVA which are recorded in OCI. The following table is a summary of long-term debt carrying values (including unamortized premiums and discounts, issuance costs, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2017.

By remaining maturity at December 31, (in millions, except rates)		2017				2016
		Under 1 year	1-5 years	After 5 years	**Total**	Total
Parent company						
Senior debt:	Fixed rate	**$ 15,084**	**$ 53,939**	**$ 72,528**	**$ 141,551**	$ 128,967
	Variable rate	**5,547**	**12,802**	**8,112**	**26,461**	34,766
	Interest rates[a]	**0.38-7.25%**	**0.16-6.30%**	**0.45-6.40%**	**0.16-7.25%**	0.09-7.25%
Subordinated debt:	Fixed rate	**$ –**	**$ 149**	**$ 14,497**	**$ 14,646**	$ 16,811
	Variable rate	**–**	**–**	**9**	**9**	1,245
	Interest rates[a]	**–%**	**8.53%**	**3.38-8.00%**	**3.38-8.53%**	0.82-8.53%
	Subtotal	**$ 20,631**	**$ 66,890**	**$ 95,146**	**$ 182,667**	$ 181,789
Subsidiaries						
Federal Home Loan Banks advances:	Fixed rate	**$ 4**	**$ 34**	**$ 129**	**$ 167**	$ 179
	Variable rate	**12,450**	**37,000**	**11,000**	**60,450**	79,340
	Interest rates[a]	**1.58-1.75%**	**1.46-2.00%**	**1.18-1.47%**	**1.18-2.00%**	0.41-1.21%
Senior debt:	Fixed rate	**$ 1,122**	**$ 3,970**	**$ 6,898**	**$ 11,990**	$ 8,329
	Variable rate	**8,967**	**13,287**	**3,964**	**26,218**	19,379
	Interest rates[a]	**0.22-7.50%**	**1.65-7.50%**	**1.00-7.50%**	**0.22-7.50%**	0.00-7.50%
Subordinated debt:	Fixed rate	**$ –**	**$ –**	**$ 313**	**$ 313**	$ 3,884
	Variable rate	**–**	**–**		**–**	–
	Interest rates[a]	**–%**	**–%**	**8.25%**	**8.25%**	6.00-8.25%
	Subtotal	**$ 22,543**	**$ 54,291**	**$ 22,304**	**$ 99,138**	$ 111,111
Junior subordinated debt [b]:	Fixed rate	**$ –**	**$ –**	**$ 690**	**$ 690**	$ 706
	Variable rate	**–**	**–**	**1,585**	**1,585**	1,639
	Interest rates[a]	**–%**	**–%**	**1.88-8.75%**	**1.88-8.75%**	1.39-8.75%
	Subtotal	**$ –**	**$ –**	**$ 2,275**	**$ 2,275**	$ 2,345
Total long-term debt[c][d][e]		**$ 43,174**	**$ 121,181**	**$ 119,725**	**$ 284,080** [g][h]	$ 295,245
Long-term beneficial interests:	Fixed rate	**$ 5,927**	**$ 7,652**	**$ –**	**$ 13,579**	$ 18,678
	Variable rate	**3,399**	**4,472**	**321**	**8,192**	14,681
	Interest rates	**1.10-2.50%**	**1.27-6.54%**	**0.00-3.75%**	**0.00-6.54%**	0.39-7.87%
Total long-term beneficial interests[f]		**$ 9,326**	**$ 12,124**	**$ 321**	**$ 21,771**	$ 33,359

(a) The interest rates shown are the range of contractual rates in effect at December 31, 2017 and 2016, respectively, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2017, for total long-term debt was (0.19)% to 8.88%, versus the contractual range of 0.16% to 8.75% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.

(b) As of December 31, 2017, includes $0.7 billion of fixed rate junior subordinated debentures issued to an issuer trust and $1.6 billion of variable rate junior subordinated debentures distributed pro rata to the holders of the $1.6 billion of trust preferred securities which were cancelled on December 18, 2017.

(c) Included long-term debt of $63.5 billion and $82.2 billion secured by assets totaling $208.4 billion and $205.6 billion at December 31, 2017 and 2016, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.

(d) Included $47.5 billion and $37.7 billion of long-term debt accounted for at fair value at December 31, 2017 and 2016, respectively.

(e) Included $10.3 billion and $7.5 billion of outstanding zero-coupon notes at December 31, 2017 and 2016, respectively. The aggregate principal amount of these notes at their respective maturities is $33.5 billion and $25.1 billion, respectively. The aggregate principal amount reflects the contractual principal payment at maturity, which may exceed the contractual principal payment at the Firm's next call date, if applicable.

(f) Included on the Consolidated balance sheets in beneficial interests issued by consolidated VIEs. Also included $45 million and $120 million accounted for at fair value at December 31, 2017 and 2016, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $4.3 billion and $5.7 billion at December 31, 2017 and 2016, respectively.

(g) At December 31, 2017, long-term debt in the aggregate of $111.2 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective instruments.

(h) The aggregate carrying values of debt that matures in each of the five years subsequent to 2017 is $43.2 billion in 2018, $34.7 billion in 2019, $39.3 billion in 2020, $33.8 billion in 2021 and $13.4 billion in 2022.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 2.87% and 2.49% as of December 31, 2017 and 2016, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issuances. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 2.56% and 2.01% as of December 31, 2017 and 2016, respectively.

JPMorgan Chase & Co. has guaranteed certain long-term debt of its subsidiaries, including both long-term debt and structured notes. These guarantees rank on parity with the Firm's other unsecured and unsubordinated indebtedness. The amount of such guaranteed long-term debt and structured notes was $7.9 billion and $3.9 billion at December 31, 2017 and 2016, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

Junior subordinated deferrable interest debentures

At December 31, 2016, the Firm had outstanding eight wholly-owned Delaware statutory business trusts ("issuer trusts") that had issued trust preferred securities. On December 18, 2017, seven of the eight issuer trusts were liquidated, $1.6 billion of trust preferred and $56 million of common securities originally issued by those trusts were cancelled, and the junior subordinated debentures previously held by each trust issuer were distributed pro rata to the holders of the corresponding series of trust preferred and common securities.

Beginning in 2014, the junior subordinated debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, began being phased out from inclusion as Tier 1 capital under Basel III and they were fully phased out as of December 31, 2016. As of December 31, 2017 and 2016, $300 million and $1.4 billion, respectively, qualified as Tier 2 capital.

The Firm redeemed $1.6 billion of trust preferred securities in the year ended December 31, 2016.

Note 20 – Preferred stock

At December 31, 2017 and 2016, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock with respect to the payment of dividends and the distribution of assets.

The following is a summary of JPMorgan Chase's non-cumulative preferred stock outstanding as of December 31, 2017 and 2016.

	Shares at December 31,[a]		Carrying value (in millions) at December 31,						
	2017	2016	**2017**	2016	Issue date	Contractual rate in effect at December 31, 2017	Earliest redemption date	Date at which dividend rate becomes floating	Floating annual rate of three-month LIBOR plus:
Fixed-rate:									
Series O	**–**	125,750	**$ –**	$ 1,258	8/27/2012	**N/A**	9/1/2017	NA	NA
Series P	**90,000**	90,000	**900**	900	2/5/2013	**5.450%**	3/1/2018	NA	NA
Series T	**92,500**	92,500	**925**	925	1/30/2014	**6.700**	3/1/2019	NA	NA
Series W	**88,000**	88,000	**880**	880	6/23/2014	**6.300**	9/1/2019	NA	NA
Series Y	**143,000**	143,000	**1,430**	1,430	2/12/2015	**6.125**	3/1/2020	NA	NA
Series AA	**142,500**	142,500	**1,425**	1,425	6/4/2015	**6.100**	9/1/2020	NA	NA
Series BB	**115,000**	115,000	**1,150**	1,150	7/29/2015	**6.150**	9/1/2020	NA	NA
Fixed-to-floating-rate:									
Series I	**600,000**	600,000	**6,000**	6,000	4/23/2008	**7.900%**	4/30/2018	4/30/2018	LIBOR + 3.47%
Series Q	**150,000**	150,000	**1,500**	1,500	4/23/2013	**5.150**	5/1/2023	5/1/2023	LIBOR + 3.25
Series R	**150,000**	150,000	**1,500**	1,500	7/29/2013	**6.000**	8/1/2023	8/1/2023	LIBOR + 3.30
Series S	**200,000**	200,000	**2,000**	2,000	1/22/2014	**6.750**	2/1/2024	2/1/2024	LIBOR + 3.78
Series U	**100,000**	100,000	**1,000**	1,000	3/10/2014	**6.125**	4/30/2024	4/30/2024	LIBOR + 3.33
Series V	**250,000**	250,000	**2,500**	2,500	6/9/2014	**5.000**	7/1/2019	7/1/2019	LIBOR + 3.32
Series X	**160,000**	160,000	**1,600**	1,600	9/23/2014	**6.100**	10/1/2024	10/1/2024	LIBOR + 3.33
Series Z	**200,000**	200,000	**2,000**	2,000	4/21/2015	**5.300**	5/1/2020	5/1/2020	LIBOR + 3.80
Series CC	**125,750**	–	**1,258**	–	10/20/2017	**4.625**	11/1/2022	11/1/2022	LIBOR + 2.58
Total preferred stock	**2,606,750**	2,606,750	**$26,068**	$26,068					

(a) Represented by depositary shares.

Each series of preferred stock has a liquidation value and redemption price per share of $10,000, plus accrued but unpaid dividends.

Dividends on fixed-rate preferred stock are payable quarterly. Dividends on fixed-to-floating-rate preferred stock are payable semiannually while at a fixed rate, and become payable quarterly after converting to a floating rate.

On October 20, 2017, the Firm issued $1.3 billion of fixed to-floating rate non-cumulative preferred stock, Series CC, with an initial dividend rate of 4.625%. On December 1, 2017, The Firm redeemed all $1.3 billion of its outstanding 5.50% non-cumulative preferred stock, Series O.

Redemption rights

Each series of the Firm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date for that series. All outstanding preferred stock series except Series I may also be redeemed following a "capital treatment event," as described in the terms of each series. Any redemption of the Firm's preferred stock is subject to non-objection from the Board of Governors of the Federal Reserve System (the "Federal Reserve").

Note 21 – Common stock

At December 31, 2017 and 2016, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share.

Common shares issued (newly issued or reissuance from treasury) by JPMorgan Chase during the years ended December 31, 2017, 2016 and 2015 were as follows.

Year ended December 31, (in millions)	2017	2016	2015
Total issued – balance at January 1	**4,104.9**	4,104.9	4,104.9
Treasury – balance at January 1	**(543.7)**	(441.4)	(390.1)
Repurchase	**(166.6)**	(140.4)	(89.8)
Reissuance:			
Employee benefits and compensation plans	**24.5**	26.0	32.8
Warrant exercise	**5.4**	11.1	4.7
Employee stock purchase plans	**0.8**	1.0	1.0
Total reissuance	**30.7**	38.1	38.5
Total treasury – balance at December 31	**(679.6)**	(543.7)	(441.4)
Outstanding at December 31	**3,425.3**	3,561.2	3,663.5

At December 31, 2017, 2016, and 2015, respectively, the Firm had 15.0 million, 24.9 million and 47.4 million warrants outstanding to purchase shares of common stock (the "Warrants"). The Warrants are currently traded on the New York Stock Exchange, and they are exercisable, in whole or in part, at any time and from time to time until October 28, 2018. The original warrant exercise price was $42.42 per share. The number of shares issuable upon the exercise of each warrant and the warrant exercise price is subject to adjustment upon the occurrence of certain events, including, but not limited to, the extent to which regular quarterly cash dividends exceed $0.38 per share. As of December 31, 2017 the exercise price was $41.834 and the Warrant share number was 1.01.

On June 28, 2017, in conjunction with the Federal Reserve's release of its 2017 CCAR results, the Firm's Board of Directors authorized a $19.4 billion common equity (i.e., common stock and warrants) repurchase program. As of December 31, 2017, $9.8 billion of authorized repurchase capacity remained under the program. This authorization includes shares repurchased to offset issuances under the Firm's share-based compensation plans.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2017, 2016 and 2015. There were no warrants repurchased during the years ended December 31, 2017, 2016 and 2015.

Year ended December 31, (in millions)	2017	2016	2015
Total number of shares of common stock repurchased	**166.6**	140.4	89.8
Aggregate purchase price of common stock repurchases	**$15,410**	$ 9,082	$ 5,616

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity – for example, during internal trading "blackout periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information. For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on page 28.

As of December 31, 2017, approximately 120 million shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the Warrants.

Note 22 – Earnings per share

Earnings per share ("EPS") is calculated under the two-class method under which all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities based on their respective rights to receive dividends. JPMorgan Chase grants RSUs to certain employees under its share-based compensation programs, which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2017, 2016 and 2015.

Year ended December 31, (in millions, except per share amounts)	**2017**	2016	2015
Basic earnings per share			
Net income	**$ 24,441**	$ 24,733	$ 24,442
Less: Preferred stock dividends	**1,663**	1,647	1,515
Net income applicable to common equity	**22,778**	23,086	22,927
Less: Dividends and undistributed earnings allocated to participating securities[(a)]	**211**	252	276
Net income applicable to common stockholders[(a)]	**$ 22,567**	$ 22,834	$ 22,651
Total weighted-average basic shares outstanding[(a)]	**3,551.6**	3,658.8	3,741.2
Net income per share	**$ 6.35**	$ 6.24	$ 6.05
Diluted earnings per share			
Net income applicable to common stockholders[(a)]	**$ 22,567**	$ 22,834	$ 22,651
Total weighted-average basic shares outstanding[(a)]	**3,551.6**	3,658.8	3,741.2
Add: Employee stock options, SARs, warrants and PSUs[(a)]	**25.2**	31.2	32.4
Total weighted-average diluted shares outstanding[(a)(b)]	**3,576.8**	3,690.0	3,773.6
Net income per share	**$ 6.31**	$ 6.19	$ 6.00

(a) The prior period amounts have been revised to conform with the current period presentation. The revision had no impact on the Firm's reported earnings per share.

(b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

Note 23 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on investment securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities, and net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

Year ended December 31, (in millions)	Unrealized gains/(losses) on investment securities[b]	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	DVA on fair value option elected liabilities	Accumulated other comprehensive income/(loss)
Balance at December 31, 2014	$ 4,773	$ (147)	$ (95)	$ (2,342)	$ –	$ 2,189
Net change	(2,144)	(15)	51	111	–	(1,997)
Balance at December 31, 2015	$ 2,629	$ (162)	$ (44)	$ (2,231)	$ –	$ 192
Cumulative effect of change in accounting principle[a]	–	–	–	–	154	154
Net change	(1,105)	(2)	(56)	(28)	(330)	(1,521)
Balance at December 31, 2016	$ 1,524	$ (164)	$ (100)	$ (2,259)	$ (176)	$ (1,175)
Net change	**640**	**(306)**	**176**	**738**	**(192)**	**1,056**
Balance at December 31, 2017	**$ 2,164**	**$ (470)**	**$ 76**	**$ (1,521)**	**(368)**	**$ (119)**

(a) Effective January 1, 2016, the Firm adopted new accounting guidance related to the recognition and measurement of financial liabilities where the fair value option has been elected. This guidance requires the portion of the total change in fair value caused by changes in the Firm's own credit risk (DVA) to be presented separately in OCI; previously these amounts were recognized in net income.
(b) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS, including net unamortized unrealized gains and losses related to AFS securities transferred to HTM.

The following table presents the pre-tax and after-tax changes in the components of OCI.

	2017			2016			2015		
Year ended December 31, (in millions)	Pre-tax	Tax effect	After-tax	Pre-tax	Tax effect	After-tax	Pre-tax	Tax effect	After-tax
Unrealized gains/(losses) on investment securities:									
Net unrealized gains/(losses) arising during the period	**$ 944**	**$ (346)**	**$ 598**	$ (1,628)	$ 611	$ (1,017)	$ (3,315)	$ 1,297	$ (2,018)
Reclassification adjustment for realized (gains)/losses included in net income[a]	**66**	**(24)**	**42**	(141)	53	(88)	(202)	76	(126)
Net change	**1,010**	**(370)**	**640**	(1,769)	664	(1,105)	(3,517)	1,373	(2,144)
Translation adjustments[b]:									
Translation	**1,313**	**(801)**	**512**	(261)	99	(162)	(1,876)	682	(1,194)
Hedges	**(1,294)**	**476**	**(818)**	262	(102)	160	1,885	(706)	1,179
Net change	**19**	**(325)**	**(306)**	1	(3)	(2)	9	(24)	(15)
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**147**	**(55)**	**92**	(450)	168	(282)	(97)	35	(62)
Reclassification adjustment for realized (gains)/losses included in net income[c][d]	**134**	**(50)**	**84**	360	(134)	226	180	(67)	113
Net change	**281**	**(105)**	**176**	(90)	34	(56)	83	(32)	51
Defined benefit pension and OPEB plans:									
Net gains/(losses) arising during the period	**802**	**(160)**	**642**	(366)	145	(221)	29	(47)	(18)
Reclassification adjustments included in net income[e]:									
Amortization of net loss	**250**	**(90)**	**160**	257	(97)	160	282	(106)	176
Prior service costs/(credits)	**(36)**	**13**	**(23)**	(36)	14	(22)	(36)	14	(22)
Settlement loss/(gain)	**2**	**(1)**	**1**	4	(1)	3	–	–	–
Foreign exchange and other	**(54)**	**12**	**(42)**	77	(25)	52	33	(58)	(25)
Net change	**964**	**(226)**	**738**	(64)	36	(28)	308	(197)	111
DVA on fair value option elected liabilities, net change:	**$ (303)**	**$ 111**	**$ (192)**	$ (529)	$ 199	$ (330)	$ –	$ –	$ –
Total other comprehensive income/(loss)	**$ 1,971**	**$ (915)**	**$ 1,056**	$ (2,451)	$ 930	$ (1,521)	$ (3,117)	$ 1,120	$ (1,997)

(a) The pre-tax amount is reported in securities gains/(losses) in the Consolidated statements of income.
(b) Reclassifications of pre-tax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. The amounts were not material for the periods presented.
(c) The pre-tax amounts are primarily recorded in noninterest revenue, net interest income and compensation expense in the Consolidated statements of income.
(d) In 2015, the Firm reclassified approximately $150 million of net losses from AOCI to other income because the Firm determined that it is probable that the forecasted interest payment cash flows would not occur. For additional information, see Note 5.
(e) The pre-tax amount is reported in compensation expense in the Consolidated statements of income.

Note 24 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

Effective tax rate and expense

A reconciliation of the applicable statutory U.S. federal income tax rate to the effective tax rate for each of the years ended December 31, 2017, 2016 and 2015, is presented in the following table.

Effective tax rate

Year ended December 31,	**2017**	2016	2015
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	**2.2**	2.4	1.5
Tax-exempt income	**(3.3)**	(3.1)	(3.3)
Non-U.S. subsidiary earnings[(a)]	**(3.1)**	(1.7)	(3.9)
Business tax credits	**(4.2)**	(3.9)	(3.7)
Nondeductible legal expense	**–**	0.3	0.8
Tax audit resolutions	**–**	–	(5.7)
Impact of the TCJA	5.4	–	–
Other, net	**(0.1)**	(0.6)	(0.3)
Effective tax rate	**31.9%**	28.4%	20.4%

(a) Predominantly includes earnings of U.K. subsidiaries that were deemed to be reinvested indefinitely through December 31, 2017.

Impact of the TCJA

On December 22, 2017, the TCJA was signed into law. The Firm's effective tax rate increased in 2017 driven by a $1.9 billion income tax expense representing the estimated impact of the enactment of the TCJA. The $1.9 billion tax expense was predominantly driven by a deemed repatriation of the Firm's unremitted non-U.S. earnings and adjustments to the value of certain tax-oriented investments partially offset by a benefit from the revaluation of the Firm's net deferred tax liability.

The deemed repatriation of the Firm's unremitted non-U.S. earnings is based on the post-1986 earnings and profits of each controlled foreign corporation. The calculation resulted in an estimated income tax expense of $3.7 billion. Furthermore, accounting for income taxes requires the remeasurement of certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future. The Firm remeasured its deferred tax asset and liability balances in the fourth quarter of 2017 to the new statutory U.S. federal income tax rate of 21% as well as any federal benefit associated with state and local deferred income taxes. The remeasurement resulted in an estimated income tax benefit of $2.1 billion.

The deemed repatriation and remeasurement of deferred taxes were calculated based on all available information and published legislative guidance. These amounts are considered to be estimates under SEC Staff Accounting Bulletin No. 118 as the Firm anticipates refinements to both calculations. Anticipated refinements will result from the issuance of future legislative and accounting guidance as well as those in the normal course of business, including true-ups to the tax liability on the tax return as filed and the resolution of tax audits.

Adjustments were also recorded to income tax expense for certain tax-oriented investments. These adjustments were driven by changes to affordable housing proportional amortization resulting from the reduction of the federal income tax rate under the TCJA. SEC Staff Accounting Bulletin No. 118 does not apply to these adjustments.

The components of income tax expense/(benefit) included in the Consolidated statements of income were as follows for each of the years ended December 31, 2017, 2016, and 2015.

Income tax expense/(benefit)

Year ended December 31, (in millions)	2017	2016	2015
Current income tax expense/(benefit)			
U.S. federal	**$ 5,718**	$ 2,488	$ 3,160
Non-U.S.	**2,400**	1,760	1,220
U.S. state and local	**1,029**	904	547
Total current income tax expense/ (benefit)	**9,147**	5,152	4,927
Deferred income tax expense/(benefit)			
U.S. federal	**2,174**	4,364	1,213
Non-U.S.	**(144)**	(73)	(95)
U.S. state and local	**282**	360	215
Total deferred income tax expense/(benefit)	**2,312**	4,651	1,333
Total income tax expense	**$ 11,459**	$ 9,803	$ 6,260

Total income tax expense includes $252 million, $55 million and $2.4 billion of tax benefits recorded in 2017, 2016, and 2015, respectively, as a result of tax audit resolutions.

Tax effect of items recorded in stockholders' equity

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity. The tax effect of all items recorded directly to stockholders' equity resulted in a decrease of $915 million in 2017, an increase of $925 million in 2016, and an increase of $1.5 billion in 2015. Effective January 1, 2016, the Firm adopted new accounting guidance related to employee share-based payments. As a result of the adoption of this new guidance, all excess tax benefits (including tax benefits from dividends or dividend equivalents) on share-based payment awards are recognized within income tax expense in the Consolidated statements of income. In prior years these tax benefits were recorded as increases to additional paid-in capital.

Results from Non-U.S. earnings

The following table presents the U.S. and non-U.S. components of income before income tax expense for the years ended December 31, 2017, 2016 and 2015.

Year ended December 31, (in millions)	2017	2016	2015
U.S.	**$ 27,103**	$ 26,651	$ 23,191
Non-U.S.[(a)]	**8,797**	7,885	7,511
Income before income tax expense	**$ 35,900**	$ 34,536	$ 30,702

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

Prior to December 31, 2017, U.S. federal income taxes had not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings had been reinvested abroad for an indefinite period of time. The Firm will no longer maintain the indefinite reinvestment assertion on the undistributed earnings of those non-U.S. subsidiaries in light of the enactment of the TCJA. The U.S. federal and state and local income taxes associated with the undistributed and previously untaxed earnings of those non-U.S. subsidiaries was included in the deemed repatriation charge recorded as of December 31, 2017.

JPMC will treat any tax it may incur on global intangible low tax income as a period cost to tax expense when the tax is incurred.

Affordable housing tax credits

The Firm recognized $1.7 billion, $1.7 billion and $1.6 billion of tax credits and other tax benefits associated with investments in affordable housing projects within income tax expense for the years 2017, 2016 and 2015, respectively. The amount of amortization of such investments reported in income tax expense under the current period presentation during these years was $1.7 billion, $1.2 billion and $1.1 billion, respectively. The carrying value of these investments, which are reported in other assets on the Firm's Consolidated balance sheets, was $7.8 billion and $8.8 billion at December 31, 2017 and 2016, respectively. The amount of commitments related to these investments, which are reported in accounts payable and other liabilities on the Firm's Consolidated balance sheets, was $2.4 billion and $2.8 billion at December 31, 2017 and 2016, respectively. The results are inclusive of any impacts from the TCJA.

Deferred taxes

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2017 and 2016.

December 31, (in millions)	2017	2016
Deferred tax assets		
Allowance for loan losses	**$ 3,395**	$ 5,534
Employee benefits	**688**	2,911
Accrued expenses and other	**3,528**	6,831
Non-U.S. operations	**327**	5,368
Tax attribute carryforwards	**219**	2,155
Gross deferred tax assets	**8,157**	22,799
Valuation allowance	**(46)**	(785)
Deferred tax assets, net of valuation allowance	**$ 8,111**	$ 22,014
Deferred tax liabilities		
Depreciation and amortization	**$ 2,299**	$ 3,294
Mortgage servicing rights, net of hedges	**2,757**	4,807
Leasing transactions	**3,483**	4,053
Non-U.S. operations	**200**	4,572
Other, net	**3,502**	5,493
Gross deferred tax liabilities	**12,241**	22,219
Net deferred tax (liabilities)/assets	**$ (4,130)**	$ (205)

JPMorgan Chase has recorded deferred tax assets of $219 million at December 31, 2017, in connection with U.S. federal and non-U.S. net operating loss ("NOL") carryforwards and state and local capital loss carryforwards. At December 31, 2017, total U.S. federal NOL carryforwards were approximately $769 million, non-U.S. NOL carryforwards were approximately $142 million and state and local capital loss carryforwards were $660 million. If not utilized, the U.S. federal NOL carryforwards will expire between 2025 and 2036 and the state and local capital loss carryforwards will expire between 2020 and 2021. Certain non-U.S. NOL carryforwards will expire between 2028 and 2034 whereas others have an unlimited carryforward period.

The valuation allowance at December 31, 2017, was due to the state and local capital loss carryforwards and certain non-U.S. NOL carryforwards.

Unrecognized tax benefits

At December 31, 2017, 2016 and 2015, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $4.7 billion, $3.5 billion and $3.5 billion, respectively, of which $3.5 billion, $2.6 billion and $2.1 billion, respectively, if recognized, would reduce the annual effective tax rate. Included in the amount of unrecognized tax benefits are certain items that would not affect the effective tax rate if they were recognized in the Consolidated statements of income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income tax deductions, and the portion of gross non-U.S. unrecognized tax benefits that would have offsets in other jurisdictions. JPMorgan Chase is presently under audit by a number of taxing authorities, most notably by the Internal Revenue Service as summarized in the Tax examination status table below. As JPMorgan Chase is presently under audit by a number of taxing authorities, it is reasonably possible that over the next 12 months the resolution of these examinations may increase or decrease the gross balance of unrecognized tax benefits by as much as $1.3 billion. Upon settlement of an audit, the change in the unrecognized tax benefit would result from payment or income statement recognition.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2017, 2016 and 2015.

Year ended December 31, (in millions)	2017	2016	2015
Balance at January 1,	**$ 3,450**	$ 3,497	$ 4,911
Increases based on tax positions related to the current period	**1,355**	262	408
Increases based on tax positions related to prior periods	**626**	583	1,028
Decreases based on tax positions related to prior periods	**(350)**	(785)	(2,646)
Decreases related to cash settlements with taxing authorities	**(334)**	(56)	(204)
Decreases related to a lapse of applicable statute of limitations	**–**	(51)	–
Balance at December 31,	**$ 4,747**	$ 3,450	$ 3,497

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $102 million, $86 million and $(156) million in 2017, 2016 and 2015, respectively.

At December 31, 2017 and 2016, in addition to the liability for unrecognized tax benefits, the Firm had accrued $639 million and $687 million, respectively, for income tax-related interest and penalties.

Tax examination status

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many state and local jurisdictions throughout the U.S. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2017.

December 31, 2017	Periods under examination	Status
JPMorgan Chase – U.S.	2003 – 2005	At Appellate level
JPMorgan Chase – U.S.	2006 – 2010	Field examination of amended returns; certain matters at Appellate level
JPMorgan Chase – U.S.	2011 – 2013	Field Examination
JPMorgan Chase – California	2011 – 2012	Field Examination
JPMorgan Chase – U.K.	2006 – 2015	Field examination of certain select entities

Note 25 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the OCC. The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC, subject to applicable limits.

The Federal Reserve requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average required amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $24.9 billion and $19.3 billion in 2017 and 2016, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase & Co. ("Parent Company") and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans provided by any banking subsidiary to the Parent Company or to any particular affiliate, together with certain other transactions with such affiliate (collectively referred to as "covered transactions"), are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of covered transactions between any banking subsidiary and all of its affiliates is limited to 20% of the banking subsidiary's total capital.

The Parent Company's two principal subsidiaries are JPMorgan Chase Bank, N.A. and JPMorgan Chase Holdings LLC, an intermediate holding company (the "IHC"). The IHC holds the stock of substantially all of JPMorgan Chase's subsidiaries other than JPMorgan Chase Bank, N.A. and its subsidiaries. The IHC also owns other assets and intercompany indebtedness owing to the holding company. The Parent Company is obligated to contribute to the IHC substantially all the net proceeds received from securities issuances (including issuances of senior and subordinated debt securities and of preferred and common stock).

The principal sources of income and funding for the Parent Company are dividends from JPMorgan Chase Bank, N.A. and dividends and extensions of credit from the IHC. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization. The IHC is prohibited from paying dividends or extending credit to the Parent Company if certain capital or liquidity "thresholds" are breached or if limits are otherwise imposed by JPMorgan Chase's management or Board of Directors.

At January 1, 2018, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, approximately $17 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2018 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2017 and 2016, cash in the amount of $16.8 billion and $13.4 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers. Also, as of December 31, 2017 and 2016, the Firm had:

- Receivables and securities of $18.0 billion and $18.2 billion, respectively, consisting of cash and securities pledged with clearing organizations for the benefit of customers.
- Securities with a fair value of $3.5 billion and $19.3 billion, respectively, were also restricted in relation to customer activity.

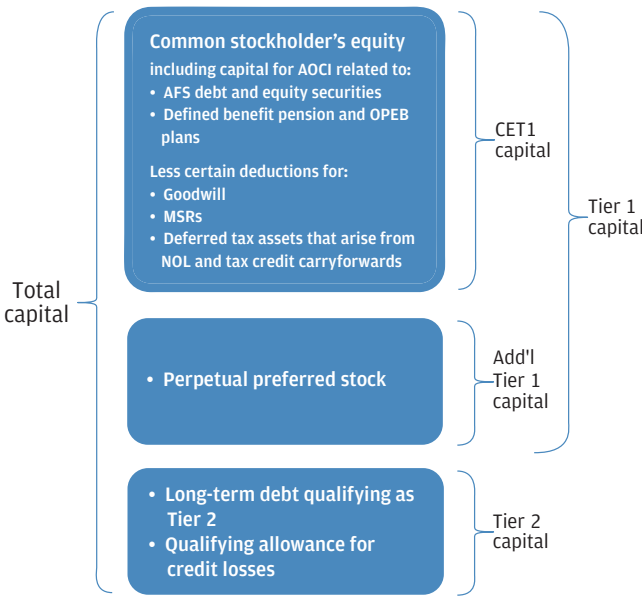
In addition, as of December 31, 2017 and 2016, the Firm had other restricted cash of $3.3 billion and $3.6 billion, respectively, primarily representing cash reserves held at non-U.S. central banks and held for other general purposes.

Note 26 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar minimum capital requirements and standards for the Firm's IDI, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

Capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. bank holding companies and banks, including the Firm and its IDI subsidiaries. Basel III set forth two comprehensive approaches for calculating RWA: a standardized approach ("Basel III Standardized") and an advanced approach ("Basel III Advanced"). Certain of the requirements of Basel III are subject to phase-in periods that began on January 1, 2014 and continue through the end of 2018 ("transitional period").

The three categories of risk-based capital and their predominant components under the Basel III Transitional rules are illustrated below:



The following tables present the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant IDI subsidiaries under both Basel III Standardized Transitional and Basel III Advanced Transitional at December 31, 2017 and 2016.

	JPMorgan Chase & Co.				
	Basel III Standardized Transitional			Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2017**	Dec 31, 2016		**Dec 31, 2017**	Dec 31, 2016
Regulatory capital					
CET1 capital	**$ 183,300**	$ 182,967		**$ 183,300**	$ 182,967
Tier 1 capital[a]	**208,644**	208,112		**208,644**	208,112
Total capital	**238,395**	239,553		**227,933**	228,592
Assets					
Risk-weighted	**1,499,506**	1,483,132	(e)	**1,435,825**	1,476,915
Adjusted average[b]	**2,514,270**	2,484,631		**2,514,270**	2,484,631
Capital ratios[c]					
CET1	**12.2%**	12.3%	(e)	**12.8%**	12.4%
Tier 1[a]	**13.9**	14.0	(e)	**14.5**	14.1
Total	**15.9**	16.2	(e)	**15.9**	15.5
Tier 1 leverage[d]	**8.3**	8.4		**8.3**	8.4

	JPMorgan Chase Bank, N.A.				
	Basel III Standardized Transitional			Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2017**	Dec 31, 2016		**Dec 31, 2017**	Dec 31, 2016
Regulatory capital					
CET1 capital	**$ 184,375**	$ 179,319		**$ 184,375**	$ 179,319
Tier 1 capital[a]	**184,375**	179,341		**184,375**	179,341
Total capital	**195,839**	191,662		**189,419**	184,637
Assets					
Risk-weighted	**1,335,809**	1,311,240	(e)	**1,226,534**	1,262,613
Adjusted average[b]	**2,116,031**	2,088,851		**2,116,031**	2,088,851
Capital ratios[c]					
CET1	**13.8%**	13.7%	(e)	**15.0%**	14.2%
Tier 1[a]	**13.8**	13.7	(e)	**15.0**	14.2
Total	**14.7**	14.6	(e)	**15.4**	14.6
Tier 1 leverage[d]	**8.7**	8.6		**8.7**	8.6

	Chase Bank USA, N.A.			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
(in millions, except ratios)	Dec 31, 2017	Dec 31, 2016	Dec 31, 2017	Dec 31, 2016
Regulatory capital				
CET1 capital	$ 21,600	$ 16,784	$ 21,600	$ 16,784
Tier 1 capital	21,600	16,784	21,600	16,784
Total capital	27,691	22,862	26,250	21,434
Assets				
Risk-weighted	113,108	112,297	190,523	186,378
Adjusted average[(b)]	126,517	120,304	126,517	120,304
Capital ratios[(c)]				
CET1	19.1%	14.9%	11.3%	9.0%
Tier 1	19.1	14.9	11.3	9.0
Total	24.5	20.4	13.8	11.5
Tier 1 leverage[(d)]	17.1	14.0	17.1	14.0

(a) Includes the deduction associated with the permissible holdings of covered funds (as defined by the Volcker Rule). The deduction was not material as of December 31, 2017 and 2016.
(b) Adjusted average assets, for purposes of calculating the Tier 1 leverage ratio, includes total quarterly average assets adjusted for unrealized gains/(losses) on AFS securities, less deductions for goodwill and other intangible assets, defined benefit pension plan assets, and deferred tax assets related to tax attributes, including NOLs.
(c) For each of the risk-based capital ratios, the capital adequacy of the Firm and its IDI subsidiaries is evaluated against the lower of the two ratios as calculated under Basel III approaches (Standardized or Advanced) as required by the Collins Amendment of the Dodd-Frank Act (the "Collins Floor")
(d) The Tier 1 leverage ratio is not a risk-based measure of capital. This ratio is calculated by dividing Tier 1 capital by adjusted average assets.
(e) The prior period amounts have been revised to conform with the current period presentation.

Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of CET1, Tier 1 and Total capital to RWA, as well as a minimum leverage ratio (which is defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. IDI subsidiaries also are subject to these capital requirements by their respective primary regulators.

The following table presents the minimum ratios to which the Firm and its IDI subsidiaries are subject as of December 31, 2017.

	Minimum capital ratios		Well-capitalized ratios	
	BHC[(a)(e)]	IDI[(b)(e)]	BHC[(c)]	IDI[(d)]
Capital ratios				
CET1	7.50%	5.75%	–%	6.50%
Tier 1	9.00	7.25	6.00	8.00
Total	11.00	9.25	10.00	10.00
Tier 1 leverage	4.00	4.00	–	5.00

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its IDI subsidiaries are subject.

(a) Represents the Transitional minimum capital ratios applicable to the Firm under Basel III at December 31, 2017. At December 31, 2017, the CET1 minimum capital ratio includes 1.25% resulting from the phase-in of the Firm's 2.5% capital conservation buffer, and 1.75% resulting from the phase-in of the Firm's 3.5% GSIB surcharge.
(b) Represents requirements for JPMorgan Chase's IDI subsidiaries. The CET1 minimum capital ratio includes 1.25% resulting from the phase-in of the 2.5% capital conservation buffer that is applicable to the IDI subsidiaries. The IDI subsidiaries are not subject to the GSIB surcharge.
(c) Represents requirements for bank holding companies pursuant to regulations issued by the Federal Reserve.
(d) Represents requirements for IDI subsidiaries pursuant to regulations issued under the FDIC Improvement Act.
(e) For the period ended December 31, 2016 the CET1, Tier 1, Total and Tier 1 leverage minimum capital ratios applicable to the Firm were 6.25%, 7.75%, 9.75% and 4.0% and the CET1, Tier 1, Total and Tier 1 leverage minimum capital ratios applicable to the Firm's IDI subsidiaries were 5.125%, 6.625%, 8.625% and 4.0% respectively.

As of December 31, 2017 and 2016, JPMorgan Chase and all of its IDI subsidiaries were well-capitalized and met all capital requirements to which each was subject.

Note 27 – Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its clients or customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees are refinanced, extended, cancelled, or expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its expected future credit exposure or funding requirements.

To provide for probable credit losses inherent in wholesale and certain consumer lending-commitments, an allowance for credit losses on lending-related commitments is maintained. See Note 13 for further information regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2017 and 2016. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. In addition, the Firm typically closes credit card lines when the borrower is 60 days or more past due. The Firm may reduce or close HELOCs when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity at December 31, (in millions)	Contractual amount						Carrying value[i]	
	2017					2016	2017	2016
	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total		
Lending-related								
Consumer, excluding credit card:								
Home equity	**$ 2,165**	**$ 1,370**	**$ 1,379**	**$ 15,446**	**$ 20,360**	$ 21,714	**$ 12**	$ 12
Residential mortgage[a][b]	**5,723**	**–**	**–**	**13**	**5,736**	10,332	**–**	–
Auto	**8,007**	**872**	**292**	**84**	**9,255**	8,468	**2**	2
Consumer & Business Banking[b]	**11,642**	**926**	**112**	**522**	**13,202**	12,733	**19**	12
Total consumer, excluding credit card	**27,537**	**3,168**	**1,783**	**16,065**	**48,553**	53,247 [h]	**33**	26
Credit card	**572,831**	**–**	**–**	**–**	**572,831**	553,891	**–**	–
Total consumer[c]	**600,368**	**3,168**	**1,783**	**16,065**	**621,384**	607,138 [h]	**33**	26
Wholesale:								
Other unfunded commitments to extend credit[d]	**61,536**	**118,907**	**138,289**	**12,428**	**331,160**	328,497	**840**	905
Standby letters of credit and other financial guarantees[d]	**15,278**	**9,905**	**7,963**	**2,080**	**35,226**	35,947	**636**	586
Other letters of credit[d]	**3,459**	**114**	**139**	**–**	**3,712**	3,570	**3**	2
Total wholesale[e]	**80,273**	**128,926**	**146,391**	**14,508**	**370,098**	368,014	**1,479**	1,493
Total lending-related	**$ 680,641**	**$ 132,094**	**$ 148,174**	**$ 30,573**	**$ 991,482**	$ 975,152 [h]	**$ 1,512**	$ 1,519
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[f]	**$ 179,490**	**$ –**	**$ –**	**$ –**	**$ 179,490**	$ 137,209	**$ –**	$ –
Derivatives qualifying as guarantees	**4,529**	**101**	**12,479**	**40,065**	**57,174**	51,966	**304**	80
Unsettled reverse repurchase and securities borrowing agreements	**76,859**	**–**	**–**	**–**	**76,859**	50,722	**–**	–
Unsettled repurchase and securities lending agreements	**44,205**	–	–	–	**44,205**	26,948	**–**	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	**NA**	**NA**	**NA**	**NA**	**NA**	NA	**111**	133
Loans sold with recourse	**NA**	**NA**	**NA**	**NA**	**1,169**	2,730	**38**	64
Other guarantees and commitments[g]	**7,668**	**1,084**	**434**	**2,681**	**11,867**	5,715	**(76)**	(118)

(a) Includes certain commitments to purchase loans from correspondents.
(b) Certain loan portfolios have been reclassified. The prior period amounts have been revised to conform with the current period presentation.
(c) Predominantly all consumer lending-related commitments are in the U.S.
(d) At December 31, 2017 and 2016, reflected the contractual amount net of risk participations totaling $334 million and $328 million, respectively, for other unfunded commitments to extend credit; $10.4 billion and $11.1 billion, respectively, for standby letters of credit and other financial guarantees; and $405 million and $265 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(e) At December 31, 2017 and 2016, the U.S. portion of the contractual amount of total wholesale lending-related commitments was 77% and 79%, respectively.
(f) At December 31, 2017 and 2016, collateral held by the Firm in support of securities lending indemnification agreements was $188.7 billion and $143.2 billion, respectively. Securities lending collateral consist of primarily cash and securities issued by governments that are members of G7 and U.S. government agencies.
(g) At December 31, 2017, primarily includes letters of credit hedged by derivative transactions and managed on a market risk basis, unfunded commitments related to institutional lending and commitments associated with the Firm's membership in certain clearing houses. Additionally, includes unfunded commitments predominantly related to certain tax-oriented equity investments.
(h) The prior period amounts have been revised to conform with the current period presentation.
(i) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value.

Other unfunded commitments to extend credit

Other unfunded commitments to extend credit generally consist of commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

The Firm acts as a settlement and custody bank in the U.S. tri-party repurchase transaction market. In its role as settlement and custody bank, the Firm is exposed to the intra-day credit risk of its cash borrower clients, usually broker-dealers. This exposure arises under secured clearance advance facilities that the Firm extends to its clients (i.e. cash borrowers); these facilities contractually limit the Firm's intra-day credit risk to the facility amount and must be repaid by the end of the day. As of December 31, 2017 and 2016, the secured clearance advance facility maximum outstanding commitment amount was $1.5 billion and $2.4 billion, respectively.

Guarantees

U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off-balance sheet lending-related arrangements to be guarantees under U.S. GAAP: standby letters of credit and other financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For certain types of guarantees, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. For indemnifications provided in sales agreements, a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires). Any contingent liability that exists as a result of issuing the guarantee or indemnification is recognized when it becomes probable and reasonably estimable. The contingent portion of the liability is not recognized if the estimated amount is less than the carrying amount of the liability recognized at inception (adjusted for any amortization). The recorded amounts of the liabilities related to guarantees and indemnifications at December 31, 2017 and 2016, excluding the allowance for credit losses on lending-related commitments, are discussed below.

Standby letters of credit and other financial guarantees

Standby letters of credit and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a client or customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were $639 million and $588 million at December 31, 2017 and 2016, respectively, which were classified in accounts payable and other liabilities on the Consolidated balance sheets; these carrying values included $195 million and $147 million, respectively, for the allowance for lending-related commitments, and $444 million and $441 million, respectively, for the guarantee liability and corresponding asset.

The following table summarizes the types of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's clients, as of December 31, 2017 and 2016.

Standby letters of credit, other financial guarantees and other letters of credit

	2017		2016	
December 31, (in millions)	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade[a]	**$ 28,492**	**$ 2,646**	$ 28,245	$ 2,781
Noninvestment-grade[a]	**6,734**	**1,066**	7,702	789
Total contractual amount	**$ 35,226**	**$ 3,712**	$ 35,947	$ 3,570
Allowance for lending-related commitments	**$ 192**	**$ 3**	$ 145	$ 2
Guarantee liability	**444**	**–**	441	–
Total carrying value	**$ 636**	**$ 3**	$ 586	$ 2
Commitments with collateral	**$ 17,421**	**$ 878**	$ 19,346	$ 940

(a) The ratings scale is based on the Firm's internal ratings, which generally correspond to ratings as defined by S&P and Moody's.

Securities lending indemnifications
Through the Firm's securities lending program, counterparties' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the borrower to return the lent securities. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending client or counterparty with the cash equivalent thereof.

Derivatives qualifying as guarantees
The Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less.

Derivatives deemed to be guarantees also includes stable value contracts, commonly referred to as "stable value products", that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value products are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio. These contracts are typically longer-term or may have no stated maturity, but allow the Firm to elect to terminate the contract under certain conditions.

The notional value of derivatives guarantees generally represents the Firm's maximum exposure. However, exposure to certain stable value products is contractually limited to a substantially lower percentage of the notional amount.

The fair value of derivative guarantees reflects the probability, in the Firm's view, of whether the Firm will be required to perform under the contract. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

The following table summarizes the derivatives qualifying as guarantees as of December 31, 2017, and 2016.

(in millions)	**December 31, 2017**	December 31, 2016
Notional amounts		
Derivative guarantees	**57,174**	51,966
Stable value contracts with contractually limited exposure	**29,104**	28,665
Maximum exposure of stable value contracts with contractually limited exposure	**3,053**	3,012
Fair value		
Derivative payables	**304**	96
Derivative receivables	**—**	16

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 5.

Unsettled reverse repurchase and securities borrowing agreements, and unsettled repurchase and securities lending agreements

In the normal course of business, the Firm enters into reverse repurchase agreements and securities borrowing agreements, which are secured financing agreements. Such agreements settle at a future date. At settlement, these commitments result in the Firm advancing cash to and receiving securities collateral from the counterparty. The Firm also enters into repurchase agreements and securities lending agreements. At settlement, these commitments result in the Firm receiving cash from and providing securities collateral to the counterparty. These agreements generally do not meet the definition of a derivative, and therefore, are not recorded on the Consolidated balance sheets until settlement date. These agreements predominantly consist of agreements with regular-way settlement periods. For a further discussion of securities purchased under resale agreements and securities borrowed, and securities sold under repurchase agreements and securities loaned, see Note 11.

Loan sales- and securitization-related indemnifications

Mortgage repurchase liability

In connection with the Firm's mortgage loan sale and securitization activities with GSEs, as described in Note 14, the Firm has made representations and warranties that the loans sold meet certain requirements that may require the Firm to repurchase mortgage loans and/or indemnify the loan purchaser. Further, although the Firm's securitizations are predominantly nonrecourse, the Firm does provide recourse servicing in certain limited cases where it agrees to share credit risk with the owner of the mortgage loans. To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the third party. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans that are deemed to have defects that were sold to purchasers (including securitization-related SPEs) plus, in certain circumstances, accrued interest on such loans and certain expenses.

Private label securitizations

The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

For additional information regarding litigation, see Note 29.

Loans sold with recourse

The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2017 and 2016, the unpaid principal balance of loans sold with recourse totaled $1.2 billion and $2.7 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it will have to perform under its recourse obligations, was $38 million and $64 million at December 31, 2017 and 2016, respectively.

Other off-balance sheet arrangements

Indemnification agreements – general

In connection with issuing securities to investors outside the U.S., the Firm may agree to pay additional amounts to the holders of the securities in the event that, due to a change in tax law, certain types of withholding taxes are imposed on payments on the securities. The terms of the securities may also give the Firm the right to redeem the securities if such additional amounts are payable. The enactment of the TCJA will not cause the Firm to become obligated to pay any such additional amounts. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Card charge-backs .

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is primarily liable for the amount of each processed card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Merchant Services will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Merchant Services is unable to collect the amount from the merchant, Merchant Services will bear the loss for the amount credited or refunded to the cardmember. Merchant Services mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Merchant Services does not have sufficient collateral from the merchant to provide cardmember refunds; and (3) Merchant Services does not have sufficient financial resources to provide cardmember refunds, JPMorgan Chase Bank, N.A., would recognize the loss.

Merchant Services incurred aggregate losses of $28 million, $85 million, and $12 million on $1,191.7 billion, $1,063.4 billion, and $949.3 billion of aggregate volume processed for the years ended December 31, 2017, 2016 and 2015, respectively. Incurred losses from merchant charge-backs are charged to other expense, with the offset recorded in a valuation allowance against accrued interest and accounts receivable on the Consolidated balance sheets. The carrying value of the valuation allowance was $7 million and $45 million at December 31, 2017 and 2016, respectively, which the Firm believes, based on historical experience and the collateral held by Merchant Services of $141 million and $125 million at December 31, 2017 and 2016, respectively, is representative of the payment or performance risk to the Firm related to charge-backs.

Clearing Services – Client Credit Risk
The Firm provides clearing services for clients by entering into securities purchases and sales and derivative transactions with CCPs, including ETDs such as futures and options, as well as OTC-cleared derivative contracts. As a clearing member, the Firm stands behind the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin: variation margin is posted on a daily basis based on the value of clients' derivative contracts and initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

As a clearing member, the Firm is exposed to the risk of nonperformance by its clients, but is not liable to clients for the performance of the CCPs. Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions. The Firm can also cease providing clearing services if clients do not adhere to their obligations under the clearing agreement. In the event of nonperformance by a client, the Firm would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as a clearing member.

The Firm reflects its exposure to nonperformance risk of the client through the recognition of margin receivables from clients and margin payables to CCPs; the clients' underlying securities or derivative contracts are not reflected in the Firm's Consolidated Financial Statements.

It is difficult to estimate the Firm's maximum possible exposure through its role as a clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, and the credit risk mitigants available to the Firm, management believes it is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

For information on the derivatives that the Firm executes for its own account and records in its Consolidated Financial Statements, see Note 5.

Exchange & Clearing House Memberships
The Firm is a member of several securities and derivative exchanges and clearing houses, both in the U.S. and other countries, and it provides clearing services. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to the guarantee fund maintained by a clearing house or exchange as part of the resources available to cover any losses in the event of a member default. Alternatively, these obligations may include a pro rata share of the residual losses after applying the guarantee fund. Additionally, certain clearing houses require the Firm as a member to pay a pro rata share of losses that may result from the clearing house's investment of guarantee fund contributions and initial margin, unrelated to and independent of the default of another member. Generally a payment would only be required should such losses exceed the resources of the clearing house or exchange that are contractually required to absorb the losses in the first instance. It is difficult to estimate the Firm's maximum possible exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Guarantees of subsidiaries
In the normal course of business, the Parent Company may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated balance sheets or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain long-term debt and structured notes of its subsidiaries, including JPMorgan Chase Financial Company LLC ("JPMFC"), a 100%-owned finance subsidiary. All securities issued by JPMFC are fully and unconditionally guaranteed by the Parent Company. These guarantees, which rank on a parity with the Firm's unsecured and unsubordinated indebtedness, are not included in the table on page 262 of this Note. For additional information, see Note 19.

Note 28 – Commitments, pledged assets and collateral

Lease commitments

At December 31, 2017, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2017.

Year ended December 31, (in millions)	
2018	1,526
2019	1,450
2020	1,300
2021	1,029
2022	815
After 2022	3,757
Total minimum payments required	9,877
Less: Sublease rentals under noncancelable subleases	(1,034)
Net minimum payment required	$ 8,843

Total rental expense was as follows.

Year ended December 31, (in millions)	2017	2016	2015
Gross rental expense	**$ 1,853**	$ 1,860	$ 2,015
Sublease rental income	**(251)**	(241)	(411)
Net rental expense	**$ 1,602**	$ 1,619	$ 1,604

Pledged assets

The Firm may pledge financial assets that it owns to maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits, collateralize repurchase and other securities financing agreements, and cover customer short sales. Certain of these pledged assets may be sold or repledged or otherwise used by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets.

The following table presents the Firm's pledged assets.

December 31, (in billions)	2017	2016
Assets that may be sold or repledged or otherwise used by secured parties	**$ 129.6**	$ 133.6
Assets that may not be sold or repledged or otherwise used by secured parties	**67.9**	53.5
Assets pledged at Federal Reserve banks and FHLBs	**493.7**	441.9
Total assets pledged	**$ 691.2**	$ 629.0

Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 14 for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities, see Note 11. For additional information on the Firm's long-term debt, see Note 19. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	2017	2016
Securities	**$ 86.2**	$ 101.1
Loans	**437.7**	374.9
Trading assets and other	**167.3**	153.0
Total assets pledged	**$ 691.2**	$ 629.0

Collateral

The Firm accepts financial assets as collateral that it is permitted to sell or repledge, deliver or otherwise use. This collateral is generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Collateral is generally used under repurchase agreements, securities lending agreements or to cover customer short sales and to collateralize deposits and derivative agreements.

The following table presents the fair value of collateral accepted.

December 31, (in billions)	2017	2016
Collateral permitted to be sold or repledged, delivered, or otherwise used	**$ 968.8**	$ 914.1
Collateral sold, repledged, delivered or otherwise used	**775.3**	746.6

Note 29 – Litigation

Contingencies

As of December 31, 2017, the Firm and its subsidiaries and affiliates are defendants or putative defendants in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $1.7 billion at December 31, 2017. This estimated aggregate range of reasonably possible losses was based upon currently available information for those proceedings in which the Firm believes that an estimate of reasonably possible loss can be made. For certain matters, the Firm does not believe that such an estimate can be made, as of that date. The Firm's estimate of the aggregate range of reasonably possible losses involves significant judgment, given the number, variety and varying stages of the proceedings (including the fact that many are in preliminary stages), the existence in many such proceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings, including where the Firm has made assumptions concerning future rulings by the court or other adjudicator, or about the behavior or incentives of adverse parties or regulatory authorities, and those assumptions prove to be incorrect. In addition, the outcome of a particular proceeding may be a result which the Firm did not take into account in its estimate because the Firm had deemed the likelihood of that outcome to be remote. Accordingly, the Firm's estimate of the aggregate range of reasonably possible losses will change from time to time, and actual losses may vary significantly.

Set forth below are descriptions of the Firm's material legal proceedings.

Foreign Exchange Investigations and Litigation. The Firm previously reported settlements with certain government authorities relating to its foreign exchange ("FX") sales and trading activities and controls related to those activities. FX-related investigations and inquiries by government authorities, including competition authorities, are ongoing, and the Firm is cooperating with and working to resolve those matters. In May 2015, the Firm pleaded guilty to a single violation of federal antitrust law. In January 2017, the Firm was sentenced, with judgment entered thereafter. The Department of Labor has granted the Firm a five-year exemption of disqualification, effective upon expiration of a temporary one-year exemption previously granted, that allows the Firm and its affiliates to continue to rely on the Qualified Professional Asset Manager exemption under the Employee Retirement Income Security Act ("ERISA"). The Firm will need to reapply in due course for a further exemption to cover the remainder of the ten-year disqualification period. Separately, in February 2017 the South Africa Competition Commission referred its FX investigation of the Firm and other banks to the South Africa Competition Tribunal, which is conducting civil proceedings concerning that matter.

The Firm is also one of a number of foreign exchange dealers defending a class action filed in the United States District Court for the Southern District of New York by U.S.-based plaintiffs, principally alleging violations of federal antitrust laws based on an alleged conspiracy to manipulate foreign exchange rates (the "U.S. class action"). In January 2015, the Firm entered into a settlement agreement in the U.S. class action. Following this settlement, a number of additional putative class actions were filed seeking damages for persons who transacted FX futures and options on futures (the "exchanged-based actions"), consumers who purchased foreign currencies at allegedly inflated rates (the "consumer action"), participants or beneficiaries of qualified ERISA plans (the "ERISA actions"), and purported indirect purchasers of FX instruments (the "indirect purchaser action"). Since then, the Firm has entered into a revised settlement agreement to resolve the consolidated U.S. class action, including the exchange-based actions, and that agreement has been preliminarily approved by the Court. The District Court has dismissed one of the ERISA actions, and the plaintiffs have filed an appeal. The consumer action, a second ERISA action and the indirect purchaser action remain pending in the District Court.

General Motors Litigation. JPMorgan Chase Bank, N.A. participated in, and was the Administrative Agent on behalf of a syndicate of lenders on, a $1.5 billion syndicated Term Loan facility ("Term Loan") for General Motors Corporation ("GM"). In July 2009, in connection with the GM bankruptcy proceedings, the Official Committee of Unsecured Creditors of Motors Liquidation Company ("Creditors Committee") filed a lawsuit against JPMorgan Chase Bank, N.A., in its individual capacity and as Administrative Agent for other lenders on the Term Loan, seeking to hold the underlying lien invalid based on the filing of a UCC-3 termination statement relating to the Term Loan. In January 2015, following several court proceedings, the United States Court of Appeals for the Second Circuit reversed the Bankruptcy Court's dismissal of the Creditors Committee's claim and

remanded the case to the Bankruptcy Court with instructions to enter partial summary judgment for the Creditors Committee as to the termination statement. The proceedings in the Bankruptcy Court continue with respect to, among other things, additional defenses asserted by JPMorgan Chase Bank, N.A. and the value of additional collateral on the Term Loan that was unaffected by the filing of the termination statement at issue. In connection with that additional collateral, a trial in the Bankruptcy Court regarding the value of certain representative assets concluded in May 2017, and a ruling was issued in September 2017. The Bankruptcy Court found that 33 of the 40 representative assets are fixtures and that these fixtures generally should be valued on a "going concern" basis. The Creditors Committee is seeking leave to appeal the Bankruptcy Court's ruling that the fixtures should be valued on a "going concern" basis rather than on a liquidation basis. In addition, certain Term Loan lenders filed cross-claims in the Bankruptcy Court against JPMorgan Chase Bank, N.A. seeking indemnification and asserting various claims. The parties are engaged in mediation concerning, among other things, the characterization and value of the remaining additional collateral, in light of the Bankruptcy Court's ruling regarding the representative assets, as well as other issues, including the cross-claims.

Hopper Estate Litigation. The Firm is a defendant in an action in connection with its role as an independent administrator of an estate. The plaintiffs sought in excess of $7 million in compensatory damages, primarily relating to attorneys' fees incurred by the plaintiffs. After a trial in probate court in Dallas, Texas that ended in September 2017, the jury returned a verdict against the Firm, awarding plaintiffs their full compensatory damages and multiple billions in punitive damages. Notwithstanding the jury verdict, in light of legal limitations on the availability of damages, certain of the plaintiffs moved for entry of judgment in the total amount of approximately $71 million, including punitive damages, while another plaintiff has not yet moved for judgment. The court has not yet entered a judgment in this matter. The parties are engaged in post-trial briefing.

Interchange Litigation. A group of merchants and retail associations filed a series of class action complaints alleging that Visa and MasterCard, as well as certain banks, conspired to set the price of credit and debit card interchange fees and enacted respective rules in violation of antitrust laws. The parties settled the cases for a cash payment of $6.1 billion to the class plaintiffs (of which the Firm's share is approximately 20%) and an amount equal to ten basis points of credit card interchange for a period of 8 months to be measured from a date within 60 days of the end of the opt-out period. The settlement also provided for modifications to each credit card network's rules, including those that prohibit surcharging credit card transactions. In December 2013, the District Court granted final approval of the settlement.

A number of merchants appealed to the United States Court of Appeals for the Second Circuit, which, in June 2016, vacated the District Court's certification of the class action and reversed the approval of the class settlement. In March 2017, the U.S. Supreme Court declined petitions seeking review of the decision of the Court of Appeals. The case has been remanded to the District Court for further proceedings consistent with the appellate decision.

In addition, certain merchants have filed individual actions raising similar allegations against Visa and MasterCard, as well as against the Firm and other banks, and those actions are proceeding.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has received subpoenas and requests for documents and, in some cases, interviews, from federal and state agencies and entities, including the U.S. Commodity Futures Trading Commission ("CFTC") and various state attorneys general, as well as the European Commission ("EC"), the Swiss Competition Commission ("ComCo") and other regulatory authorities and banking associations around the world relating primarily to the process by which interest rates were submitted to the British Bankers Association ("BBA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR") for various currencies, principally in 2007 and 2008. Some of the inquiries also relate to similar processes by which information on rates was submitted to the European Banking Federation ("EBF") in connection with the setting of the EBF's Euro Interbank Offered Rates ("EURIBOR") and to the Japanese Bankers' Association for the setting of Tokyo Interbank Offered Rates ("TIBOR") during similar time periods, as well as processes for the setting of U.S. dollar ISDAFIX rates and other reference rates in various parts of the world during similar time periods, including through 2012. The Firm continues to cooperate with these ongoing investigations, and is currently engaged in discussions with the CFTC about resolving its U.S. dollar ISDAFIX-related investigation with respect to the Firm. There is no assurance that such discussions will result in a settlement. As previously reported, the Firm has resolved EC inquiries relating to Yen LIBOR and Swiss Franc LIBOR. In December 2016, the Firm resolved ComCo inquiries relating to these same rates. ComCo's investigation relating to EURIBOR, to which the Firm and other banks are subject, continues. In December 2016, the EC issued a decision against the Firm and other banks finding an infringement of European antitrust rules relating to EURIBOR. The Firm has filed an appeal with the European General Court.

In addition, the Firm has been named as a defendant along with other banks in a series of individual and putative class actions filed in various United States District Courts. These actions have been filed, or consolidated for pre-trial purposes, in the United States District Court for the Southern District of New York. In these actions, plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively

manipulated various benchmark rates by submitting rates that were artificially low or high. Plaintiffs allege that they transacted in loans, derivatives or other financial instruments whose values are affected by changes in these rates and assert a variety of claims including antitrust claims seeking treble damages. These matters are in various stages of litigation.

The Firm has agreed to settle a putative class action related to Swiss franc LIBOR, and that settlement remains subject to final court approval.

In an action related to EURIBOR, the District Court dismissed all claims except a single antitrust claim and two common law claims, and dismissed all defendants except the Firm and Citibank.

In actions related to U.S. dollar LIBOR, the District Court dismissed certain claims, including antitrust claims brought by some plaintiffs whom the District Court found did not have standing to assert such claims, and permitted antitrust claims, claims under the Commodity Exchange Act and common law claims to proceed. The plaintiffs whose antitrust claims were dismissed for lack of standing have filed an appeal. In May 2017, plaintiffs in three putative class actions moved in the District Court for class certification, and the Firm and other defendants have opposed that motion. In January 2018, the District Court heard oral arguments on the class certification motions and reserved decision.

In an action related to the Singapore Interbank Offered Rate and the Singapore Swap Offer Rate, the District Court dismissed without prejudice all claims except a single antitrust claim, and dismissed without prejudice all defendants except the Firm, Bank of America and Citibank. The plaintiffs filed an amended complaint in September 2017, which the Firm and other defendants have moved to dismiss.

The Firm is one of the defendants in a number of putative class actions alleging that defendant banks and ICAP conspired to manipulate the U.S. dollar ISDAFIX rates. In April 2016, the Firm settled this litigation, along with certain other banks. Those settlements have been preliminarily approved by the Court.

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory Investigations. The Firm and affiliates (together, "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and certain Washington Mutual affiliates (together, "Washington Mutual") have been named as defendants in a number of cases in their various roles in offerings of MBS. The remaining civil cases include one investor action and actions for repurchase of mortgage loans. The Firm and certain of its current and former officers and Board members have also been sued in a shareholder derivative action relating to the Firm's MBS activities, which remains pending.

Issuer Litigation – Individual Purchaser Actions. With the exception of one remaining action, the Firm has resolved all of the individual actions brought against JPMC, Bear Stearns and Washington Mutual as MBS issuers (and, in some cases, also as underwriters of their own MBS offerings).

Repurchase Litigation. The Firm is defending a few actions brought by trustees and/or securities administrators of various MBS trusts on behalf of purchasers of securities issued by those trusts. These cases generally allege breaches of various representations and warranties regarding securitized loans and seek repurchase of those loans or equivalent monetary relief, as well as indemnification of attorneys' fees and costs and other remedies. The trustees and/or securities administrators have accepted settlement offers on these MBS transactions, and these settlements are subject to court approval.

In addition, the Firm and a group of 21institutional MBS investors made a binding offer to the trustees of MBS issued by JPMC and Bear Stearns providing for the payment of $4.5 billion and the implementation of certain servicing changes by JPMC, to resolve all repurchase and servicing claims that have been asserted or could have been asserted with respect to 330 MBS trusts created between 2005 and 2008. The offer does not resolve claims relating to Washington Mutual MBS. The trustees (or separate and successor trustees) for this group of 330 trusts have accepted the settlement for 319 trusts in whole or in part and excluded from the settlement 16 trusts in whole or in part. The trustees' acceptance received final approval from the court and the Firm paid the settlement in December 2017.

Additional actions have been filed against third-party trustees that relate to loan repurchase and servicing claims involving trusts sponsored by JPMC, Bear Stearns and Washington Mutual.

In actions against the Firm involving offerings of MBS issued by the Firm, the Firm has contractual rights to indemnification from sellers of mortgage loans that were securitized in such offerings. However, certain of those indemnity rights may prove effectively unenforceable in various situations, such as where the loan sellers are now defunct.

The Firm has entered into agreements with a number of MBS trustees or entities that purchased MBS that toll applicable statute of limitations periods with respect to their claims, and has settled, and in the future may settle, tolled claims. There is no assurance that the Firm will not be named as a defendant in additional MBS-related litigation.

Derivative Action. A shareholder derivative action against the Firm, as nominal defendant, and certain of its current and former officers and members of its Board of Directors relating to the Firm's MBS activities was filed in California federal court in 2013. In June 2017, the court granted defendants' motion to dismiss the cause of action that alleged material misrepresentations and omissions in the

Firm's proxy statement, found that the court did not have personal jurisdiction over the individual defendants with respect to the remaining causes of action, and transferred that remaining portion of the case to the United States District Court for the Southern District of New York without ruling on the merits. The motion by the defendants to dismiss is pending.

Municipal Derivatives Litigation. Several civil actions were commenced in New York and Alabama courts against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions. The claims in the civil actions generally alleged that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3.0 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The County filed for bankruptcy in November 2011. In June 2013, the County filed a Chapter 9 Plan of Adjustment, as amended (the "Plan of Adjustment"), which provided that all the above-described actions against the Firm would be released and dismissed with prejudice. In November 2013, the Bankruptcy Court confirmed the Plan of Adjustment, and in December 2013, certain sewer rate payers filed an appeal challenging the confirmation of the Plan of Adjustment. All conditions to the Plan of Adjustment's effectiveness, including the dismissal of the actions against the Firm, were satisfied or waived and the transactions contemplated by the Plan of Adjustment occurred in December 2013. Accordingly, all the above-described actions against the Firm have been dismissed pursuant to the terms of the Plan of Adjustment. The appeal of the Bankruptcy Court's order confirming the Plan of Adjustment remains pending.

Petters Bankruptcy and Related Matters. JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), were named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain affiliated entities (collectively, "Petters") and the Polaroid Corporation. The principal actions against JPMorgan Chase and its affiliates were brought by a court-appointed receiver for Petters and the trustees in bankruptcy proceedings for three Petters entities. These actions generally sought to avoid certain putative transfers in connection with (i) the 2005 acquisition by Petters of Polaroid, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions entered into with Polaroid; and (iii) a credit line and investment accounts held by Petters. In January 2017, the Court substantially denied the defendants' motion to dismiss an amended complaint filed by the plaintiffs. In October 2017, JPMorgan Chase and its affiliates reached an agreement in principle to settle the litigation brought by the Petters bankruptcy trustees, or their successors, and the receiver for Thomas J. Petters. The settlement is subject to final documentation and Court approval.

Wendel. Since 2012, the French criminal authorities have been investigating a series of transactions entered into by senior managers of Wendel Investissement ("Wendel") during the period from 2004 through 2007 to restructure their shareholdings in Wendel. JPMorgan Chase Bank, N.A., Paris branch provided financing for the transactions to a number of managers of Wendel in 2007. JPMorgan Chase has cooperated with the investigation. The investigating judges issued an *ordonnance de renvoi* in November 2016, referring JPMorgan Chase Bank, N.A. to the French *tribunal correctionnel* for alleged complicity in tax fraud. No date for trial has been set by the court. The Firm has been successful in legal challenges made to the Court of Cassation, France's highest court, with respect to the criminal proceedings. In January 2018, the Paris Court of Appeal issued a decision cancelling the *mise en examen* of JPMorgan Chase Bank, N.A. The Firm is requesting clarification from the Court of Cassation concerning the Court of Appeal's decision before seeking direction on next steps in the criminal proceedings. In addition, a number of the managers have commenced civil proceedings against JPMorgan Chase Bank, N.A. The claims are separate, involve different allegations and are at various stages of proceedings.

* * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downward, as appropriate, based on management's best judgment after consultation with counsel. During the years ended December 31, 2017, 2016 and 2015, the Firm's legal expense was a benefit of $(35) million, a benefit of $(317) million, and an expense of $3.0 billion, respectively. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or

consequences related to those matters. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance that the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued or that a matter will not have material reputational consequences. As a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

Note 30 – International operations

The following table presents income statement- and balance sheet-related information for JPMorgan Chase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 31.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the U.S.

As of or for the year ended December 31, (in millions)	Revenue[b]	Expense[c]	Income before income tax expense	Net income	Total assets	
2017						
Europe/Middle East/Africa	**$ 14,426**	**$ 8,653**	**$ 5,773**	**$ 4,007**	**$ 407,145**	[d]
Asia/Pacific	**5,805**	**4,277**	**1,528**	**852**	**163,718**	
Latin America/Caribbean	**1,994**	**1,523**	**471**	**299**	**44,569**	
Total international	**22,225**	**14,453**	**7,772**	**5,158**	**615,432**	
North America[a]	**77,399**	**49,271**	**28,128**	**19,283**	**1,918,168**	
Total	**$ 99,624**	**$ 63,724**	**$ 35,900**	**$ 24,441**	**$ 2,533,600**	
2016						
Europe/Middle East/Africa	$ 13,842	$ 8,550	$ 5,292	$ 3,783	$ 394,134	[d]
Asia/Pacific	6,112	4,213	1,899	1,212	156,946	
Latin America/Caribbean	1,959	1,632	327	208	42,971	
Total international	21,913	14,395	7,518	5,203	594,051	
North America[a]	73,755	46,737	27,018	19,530	1,896,921	
Total	$ 95,668	$ 61,132	$ 34,536	$ 24,733	$ 2,490,972	
2015						
Europe/Middle East/Africa	$ 14,206	$ 8,871	$ 5,335	$ 4,158	$ 347,647	[d]
Asia/Pacific	6,151	4,241	1,910	1,285	138,747	
Latin America/Caribbean	1,923	1,508	415	253	48,185	
Total international	22,280	14,620	7,660	5,696	534,579	
North America[a]	71,263	48,221	23,042	18,746	1,817,119	
Total	$ 93,543	$ 62,841	$ 30,702	$ 24,442	$ 2,351,698	

(a) Substantially reflects the U.S.
(b) Revenue is composed of net interest income and noninterest revenue.
(c) Expense is composed of noninterest expense and the provision for credit losses.
(d) Total assets for the U.K. were approximately $310 billion, $310 billion, and $306 billion at December 31, 2017, 2016 and 2015, respectively.

Note 31 – Business segments

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset & Wealth Management. In addition, there is a Corporate segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a further discussion concerning JPMorgan Chase's business segments, see Segment results of this footnote.

The following is a description of each of the Firm's business segments, and the products and services they provide to their respective client bases.

Consumer & Community Banking

CCB offers services to consumers and businesses through bank branches, ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking (including Consumer Banking/Chase Wealth Management and Business Banking), Home Lending (including Home Lending Production, Home Lending Servicing and Real Estate Portfolios) and Card, Merchant Services & Auto. Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Home Lending includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card, Merchant Services & Auto issues credit cards to consumers and small businesses, offers payment processing services to merchants, and originates and services auto loans and leases.

Corporate & Investment Bank

The CIB, which consists of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Treasury Services, which provides transaction services, consisting of cash management and liquidity solutions. Markets & Investor Services is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes Securities Services, a leading global custodian which provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

Commercial Banking

CB delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. In addition, CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Asset & Wealth Management

AWM, with client assets of $2.8 trillion, is a global leader in investment and wealth management. AWM clients include institutions, high-net-worth individuals and retail investors in many major markets throughout the world. AWM offers investment management across most major asset classes including equities, fixed income, alternatives and money market funds. AWM also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For Wealth Management clients, AWM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AWM's client assets are in actively managed portfolios.

Corporate

The Corporate segment consists of Treasury and CIO and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Enterprise Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups.

Segment results

The following tables provide a summary of the Firm's segment results as of or for the years ended December 31, 2017, 2016 and 2015 on a managed basis. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue (noninterest revenue and net interest income) for each of the reportable business segments on a FTE basis. Accordingly, revenue from investments receiving tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This allows management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit).

Effective January 1, 2017, the Firm's methodology used to allocate capital to the Firm's business segments was updated. The new methodology incorporates Basel III Standardized Fully Phased-In RWA (as well as Basel III Advanced Fully Phased-In RWA), leverage, the GSIB surcharge, and a simulation of capital in a severe stress environment. The methodology will continue to be weighted towards Basel III Advanced Fully Phased-In RWA because the Firm believes it to be the best proxy for economic risk.

Segment results and reconciliation

As of or for the year ended December 31, (in millions, except ratios)	Consumer & Community Banking			Corporate & Investment Bank			Commercial Banking			Asset & Wealth Management		
	2017	2016	2015	**2017**	2016	2015	**2017**	2016	2015	**2017**	2016	2015
Noninterest revenue	**$ 14,710**	$ 15,255	$ 15,592	**$ 24,375**	$ 24,325	$ 23,693	**$ 2,522**	$ 2,320	$ 2,365	**$ 9,539**	$ 9,012	$ 9,563
Net interest income	**31,775**	29,660	28,228	**10,118**	10,891	9,849	**6,083**	5,133	4,520	**3,379**	3,033	2,556
Total net revenue	**46,485**	44,915	43,820	**34,493**	35,216	33,542	**8,605**	7,453	6,885	**12,918**	12,045	12,119
Provision for credit losses	**5,572**	4,494	3,059	**(45)**	563	332	**(276)**	282	442	**39**	26	4
Noninterest expense	**26,062**	24,905	24,909	**19,243**	18,992	21,361	**3,327**	2,934	2,881	**9,301**	8,478	8,886
Income/(loss) before income tax expense/(benefit)	**14,851**	15,516	15,852	**15,295**	15,661	11,849	**5,554**	4,237	3,562	**3,578**	3,541	3,229
Income tax expense/(benefit)	**5,456**	5,802	6,063	**4,482**	4,846	3,759	**2,015**	1,580	1,371	**1,241**	1,290	1,294
Net income/(loss)	**$ 9,395**	$ 9,714	$ 9,789	**$ 10,813**	$ 10,815	$ 8,090	**$ 3,539**	$ 2,657	$ 2,191	**$ 2,337**	$ 2,251	$ 1,935
Average equity	**$ 51,000**	$ 51,000	$ 51,000	**$ 70,000**	$ 64,000	$ 62,000	**$ 20,000**	$ 16,000	$ 14,000	**$ 9,000**	$ 9,000	$ 9,000
Total assets	**552,601**	535,310	502,652	**826,384**	803,511	748,691	**221,228**	214,341	200,700	**151,909**	138,384	131,451
Return on equity	**17%**	18%	18%	**14%**	16%	12%	**17%**	16%	15%	**25%**	24%	21%
Overhead ratio	**56**	55	57	**56**	54	64	**39**	39	42	**72**	70	73

(table continued from above)

As of or for the year ended December 31, (in millions, except ratios)	Corporate			Reconciling Items[a]			Total		
	2017	2016	2015	**2017**	2016	2015	**2017**	2016	2015
Noninterest revenue	**$ 1,085**	$ 938	$ 800	**$ (2,704)** [b]	$ (2,265)	$ (1,980)	**$ 49,527**	$ 49,585	$ 50,033
Net interest income	**55**	(1,425)	(533)	**(1,313)**	(1,209)	(1,110)	**50,097**	46,083	43,510
Total net revenue	**1,140**	(487)	267	**(4,017)**	(3,474)	(3,090)	**99,624**	95,668	93,543
Provision for credit losses	**–**	(4)	(10)	**–**	–	–	**5,290**	5,361	3,827
Noninterest expense	**501**	462	977	**–**	–	–	**58,434**	55,771	59,014
Income/(loss) before income tax expense/(benefit)	**639**	(945)	(700)	**(4,017)**	(3,474)	(3,090)	**35,900**	34,536	30,702
Income tax expense/(benefit)	**2,282**	(241)	(3,137)	**(4,017)** [b]	(3,474)	(3,090)	**11,459**	9,803	6,260
Net income/(loss)	**$ (1,643)**	$ (704)	$ 2,437	**$ –**	$ –	$ –	**$ 24,441**	$ 24,733	$ 24,442
Average equity	**$ 80,350**	$ 84,631	$ 79,690	**$ –**	$ –	$ –	**$ 230,350**	$ 224,631	$ 215,690
Total assets	**781,478**	799,426	768,204	**NA**	NA	NA	**2,533,600**	2,490,972	2,351,698
Return on equity	**NM**	NM	NM	**NM**	NM	NM	**10%**	10%	11%
Overhead ratio	**NM**	NM	NM	**NM**	NM	NM	**59**	58	63

(a) Segment results on a managed basis reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

(b) Included $375 million related to tax-oriented investments as a result of the enactment of the TCJA.

Note 32 – Parent Company

The following tables present Parent Company-only financial statements.

Statements of income and comprehensive income[a]

Year ended December 31, (in millions)	2017	2016	2015
Income			
Dividends from subsidiaries and affiliates:			
Bank and bank holding company	**$ 13,000**	$ 10,000	$ 10,653
Non-bank[b]	**540**	3,873	8,172
Interest income from subsidiaries	**72**	794	443
Other interest income	**41**	207	234
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	**1,553**	852	1,438
Non-bank	**(88)**	1,165	(1,402)
Other income	**(623)**	(846)	1,773
Total income	**14,495**	16,045	21,311
Expense			
Interest expense to subsidiaries and affiliates[b]	**400**	105	98
Other interest expense	**5,202**	4,413	3,720
Noninterest expense	**(1,897)**	1,643	2,611
Total expense	**3,705**	6,161	6,429
Income before income tax benefit and undistributed net income of subsidiaries	**10,790**	9,884	14,882
Income tax benefit	**1,007**	876	1,640
Equity in undistributed net income of subsidiaries	**12,644**	13,973	7,920
Net income	**$ 24,441**	$ 24,733	$ 24,442
Other comprehensive income, net	**1,056**	(1,521)	(1,997)
Comprehensive income	**$ 25,497**	$ 23,212	$ 22,445

Balance sheets[a]

December 31, (in millions)	2017	2016
Assets		
Cash and due from banks	**$ 163**	$ 113
Deposits with banking subsidiaries	**5,306**	5,450
Trading assets	**4,773**	10,326
Available-for-sale securities	**–**	2,694
Loans	**–**	77
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**2,106**	524
Non-bank	**82**	46
Investments (at equity) in subsidiaries and affiliates:		
Bank and bank holding company	**451,713**	422,028
Non-bank[b]	**422**	13,103
Other assets	**10,458**	10,257
Total assets	**$ 475,023**	$ 464,618
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries and affiliates[b]	**$ 23,426**	$ 13,584
Short-term borrowings	**3,350**	3,831
Other liabilities	**8,302**	11,224
Long-term debt[c][d]	**184,252**	181,789
Total liabilities[d]	**219,330**	210,428
Total stockholders' equity	**255,693**	254,190
Total liabilities and stockholders' equity	**$ 475,023**	$ 464,618

Statements of cash flows[a]

Year ended December 31, (in millions)	2017	2016	2015
Operating activities			
Net income	**$ 24,441**	$ 24,733	$ 24,442
Less: Net income of subsidiaries and affiliates[b]	**26,185**	27,846	26,745
Parent company net loss	**(1,744)**	(3,113)	(2,303)
Cash dividends from subsidiaries and affiliates[b]	**13,540**	13,873	17,023
Other operating adjustments	**4,635**	(18,166)	2,483
Net cash provided by/(used in) operating activities	**16,431**	(7,406)	17,203
Investing activities			
Net change in:			
Deposits with banking subsidiaries	**144**	60,349	30,085
Available-for-sale securities:			
Proceeds from paydowns and maturities	**–**	353	120
Other changes in loans, net	**78**	1,793	321
Advances to and investments in subsidiaries and affiliates, net	**(280)**	(51,967)	(81)
All other investing activities, net	**17**	114	153
Net cash provided by/(used in) investing activities	**(41)**	10,642	30,598
Financing activities			
Net change in:			
Borrowings from subsidiaries and affiliates[b]	**13,862**	2,957	(4,062)
Short-term borrowings	**(481)**	109	(47,483)
Proceeds from long-term borrowings	**25,855**	41,498	42,121
Payments of long-term borrowings	**(29,812)**	(29,298)	(30,077)
Proceeds from issuance of preferred stock	**1,258**	–	5,893
Redemption of preferred stock	**(1,258)**	–	–
Treasury stock repurchased	**(15,410)**	(9,082)	(5,616)
Dividends paid	**(8,993)**	(8,476)	(7,873)
All other financing activities, net	**(1,361)**	(905)	(840)
Net cash used in financing activities	**(16,340)**	(3,197)	(47,937)
Net increase/(decrease) in cash and due from banks	**50**	39	(137)
Cash and due from banks at the beginning of the year	**113**	74	211
Cash and due from banks at the end of the year	**$ 163**	$ 113	$ 74
Cash interest paid	**$ 5,426**	$ 4,550	$ 3,873
Cash income taxes paid, net	**1,775**	1,053	8,251

(a) In 2016, in connection with the Firm's 2016 Resolution Submission, the Parent Company established the IHC, and contributed substantially all of its direct subsidiaries (totaling $55.4 billion) other than JPMorgan Chase Bank, N.A., as well as most of its other assets (totaling $160.5 billion) and intercompany indebtedness to the IHC. Total noncash assets contributed were $62.3 billion. In 2017, the Parent Company transferred $16.2 billion of noncash assets to the IHC to complete the contributions to the IHC.

(b) Affiliates include trusts that issued guaranteed capital debt securities ("issuer trusts"). For further discussion on these issuer trusts, see Note 19.

(c) At December 31, 2017, long-term debt that contractually matures in 2018 through 2022 totaled $20.6 billion, $13.3 billion, $22.4 billion, $20.6 billion and $10.5 billion, respectively.

(d) For information regarding the Parent Company's guarantees of its subsidiaries' obligations, see Notes 19 and 27.

Selected quarterly financial data (unaudited)

As of or for the period ended	2017				2016			
(in millions, except per share, ratio, headcount data and where otherwise	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Total net revenue	**$ 24,153**	**$ 25,326**	**$ 25,470**	**$ 24,675**	$ 23,376	$ 24,673	$ 24,380	$ 23,239
Total noninterest expense	**14,591**	**14,318**	**14,506**	**15,019**	13,833	14,463	13,638	13,837
Pre-provision profit	**9,562**	**11,008**	**10,964**	**9,656**	9,543	10,210	10,742	9,402
Provision for credit losses	**1,308**	**1,452**	**1,215**	**1,315**	864	1,271	1,402	1,824
Income before income tax expense	**8,254**	**9,556**	**9,749**	**8,341**	8,679	8,939	9,340	7,578
Income tax expense	**4,022**	**2,824**	**2,720**	**1,893**	1,952	2,653	3,140	2,058
Net income[a]	**$ 4,232**	**$ 6,732**	**$ 7,029**	**$ 6,448**	$ 6,727	$ 6,286	$ 6,200	$ 5,520
Per common share data								
Net income: Basic	**$ 1.08**	**$ 1.77**	**$ 1.83**	**$ 1.66**	$ 1.73	$ 1.60	$ 1.56	$ 1.36
Diluted	**1.07**	**1.76**	**1.82**	**1.65**	1.71	1.58	1.55	1.35
Average shares: Basic	**3,489.7**	**3,534.7**	**3,574.1**	**3,601.7**	3,611.3	3,637.7	3,675.5	3,710.6
Diluted	**3,512.2**	**3,559.6**	**3,599.0**	**3,630.4**	3,646.6	3,669.8	3,706.2	3,737.6
Market and per common share data								
Market capitalization	**$ 366,301**	**$ 331,393**	**$ 321,633**	**$ 312,078**	$ 307,295	$ 238,277	$ 224,449	$ 216,547
Common shares at period-end	**3,425.3**	**3,469.7**	**3,519.0**	**3,552.8**	3,561.2	3,578.3	3,612.0	3,656.7
Share price:[b]								
High	**$ 108.46**	**$ 95.88**	**$ 92.65**	**$ 93.98**	$ 87.39	$ 67.90	$ 66.20	$ 64.13
Low	**94.96**	**88.08**	**81.64**	**83.03**	66.10	58.76	57.05	52.50
Close	**106.94**	**95.51**	**91.40**	**87.84**	86.29	66.59	62.14	59.22
Book value per share	**67.04**	**66.95**	**66.05**	**64.68**	64.06	63.79	62.67	61.28
TBVPS[c]	**53.56**	**54.03**	**53.29**	**52.04**	51.44	51.23	50.21	48.96
Cash dividends declared per share	**0.56**	**0.56**	**0.50**	**0.50**	0.48	0.48	0.48	0.44
Selected ratios and metrics								
ROE	**7%**	**11%**	**12%**	**11%**	11%	10%	10%	9%
ROTCE[c]	**8**	**13**	**14**	**13**	14	13	13	12
ROA	**0.66**	**1.04**	**1.10**	**1.03**	1.06	1.01	1.02	0.93
Overhead ratio	**60**	**57**	**57**	**61**	59	59	56	60
Loans-to-deposits ratio	**64**	**63**	**63**	**63**	65	65	66	64
HQLA (in billions)[d]	**$ 560**	**$ 568**	**$ 541**	**$ 528**	$ 524	$ 539	$ 516	$ 505
LCR (average)	**119%**	**120%**	**115%**	**NA%**	NA%	NA%	NA%	NA%
CET1 capital ratio[e]	**12.2**	**12.5** [i]	**12.5** [i]	**12.4** [i]	12.3 [i]	12.0	12.0	11.9
Tier 1 capital ratio[e]	**13.9**	**14.1** [i]	**14.2** [i]	**14.1** [i]	14.0 [i]	13.6	13.6	13.5
Total capital ratio[e]	**15.9**	**16.1**	**16.0**	**15.6**	15.5	15.1	15.2	15.1
Tier 1 leverage ratio[e]	**8.3**	**8.4**	**8.5**	**8.4**	8.4	8.5	8.5	8.6
Selected balance sheet data (period-end)								
Trading assets	**$ 381,844**	**$ 420,418**	**$ 407,064**	**$ 402,513**	$ 372,130	$ 374,837	$ 380,793	$ 366,153
Securities	**249,958**	**263,288**	**263,458**	**281,850**	$ 289,059	272,401	278,610	285,323
Loans	**930,697**	**913,761**	**908,767**	**895,974**	$ 894,765	888,054	872,804	847,313
Core loans	**863,683**	**843,432**	**834,935**	**812,119**	806,152	795,077	775,813	746,196
Average core loans	**850,166**	**837,522**	**824,583**	**805,382**	799,698	779,383	760,721	737,297
Total assets	**2,533,600**	**2,563,074**	**2,563,174**	**2,546,290**	2,490,972	2,521,029	2,466,096	2,423,808
Deposits	**1,443,982**	**1,439,027**	**1,439,473**	**1,422,999**	1,375,179	1,376,138	1,330,958	1,321,816
Long-term debt[f]	**284,080**	**288,582**	**292,973**	**289,492**	295,245	309,418	295,627	290,754
Common stockholders' equity	**229,625**	**232,314**	**232,415**	**229,795**	228,122	228,263	226,355	224,089
Total stockholders' equity	**255,693**	**258,382**	**258,483**	**255,863**	254,190	254,331	252,423	250,157
Headcount	**252,539**	**251,503**	**249,257**	**246,345**	243,355	242,315	240,046	237,420
Credit quality metrics								
Allowance for credit losses	**$ 14,672**	**$ 14,648**	**$ 14,480**	**$ 14,490**	$ 14,854	$ 15,304	$ 15,187	$ 15,008
Allowance for loan losses to total retained loans	**1.47%**	**1.49%**	**1.49%**	**1.52%**	1.55%	1.61%	1.64%	1.66%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[g]	**1.27**	**1.29**	**1.28**	**1.31**	1.34	1.37	1.40	1.40
Nonperforming assets	**$ 6,426**	**$ 6,154**	**$ 6,432**	**$ 6,826**	$ 7,535	$ 7,779	$ 7,757	$ 8,023
Net charge-offs[h]	**1,264**	**1,265**	**1,204**	**1,654**	1,280	1,121	1,181	1,110
Net charge-off rate[h]	**0.55%**	**0.56%**	**0.54%**	**0.76%**	0.58%	0.51%	0.56%	0.53%

(a) The Firm's results for the three months ended December 31, 2017, included a $2.4 billion decrease to net income as a result of the enactment of the TCJA. For additional information related to the impact of the TCJA, see Note 24.
(b) Based on daily prices reported by the New York Stock Exchange.
(c) TBVPS and ROTCE are non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Financial Performance Measures on pages 52–54.
(d) HQLA represents the amount of assets that qualify for inclusion in the liquidity coverage ratio. For December 31, 2017, September 30,2017 and June 30, 2017 the balance represents the average of quarterly reported results per the U.S. LCR public disclosure requirements effective April 1, 2017 and period-end balances for the remaining periods. For additional information, see HQLA on page 93.
(e) Ratios presented are calculated under the Basel III Transitional rules and for the capital ratios represent the Collins Floor. See Capital Risk Management on pages 82–91 for additional information on Basel III.
(f) Included unsecured long-term debt of $218.8 billion, $221.7 billion, $221.0 billion, $212.0 billion, $212.6 billion, $226.8 billion, $220.6 billion, $216.1 billion respectively, for the periods presented.
(g) Excludes the impact of residential real estate PCI loans, a non-GAAP financial measure. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 52–54, and the Allowance for credit losses on pages 117–119.
(h) Excluding net charge-offs of $467 million related to the student loan portfolio sale, the net charge-off rates for the three months ended March 31, 2017 would have been 0.54%.
(i) The prior period ratios have been revised to conform with the current period presentation.

Consolidated average balance sheet, interest and rates

Provided below is a summary of JPMorgan Chase's consolidated average balances, interest rates and interest differentials on a taxable-equivalent basis for the years 2015 through 2017. Income computed on a taxable-equivalent basis is the income reported in the Consolidated statements of income, adjusted to present interest income and average rates earned on assets exempt from income taxes (i.e. federal taxes) on a basis comparable with other taxable investments. The incremental tax rate used for calculating the taxable-equivalent adjustment was approximately 37% in 2017, and 38% in 2016 and 2015.

(Table continued on next page)

Year ended December 31, (Taxable-equivalent interest and rates; in millions, except rates)	2017		
	Average balance	Interest[g]	Average rate
Assets			
Deposits with banks	$ 438,240	$ 4,219	0.96%
Federal funds sold and securities purchased under resale agreements	191,819	2,327	1.21
Securities borrowed	95,324	(37) [h]	(0.04)
Trading assets – debt instruments	237,206	7,714	3.25
Taxable securities	223,592	5,534	2.48
Non-taxable securities[a]	45,086	2,769	6.14
Total securities	268,678	8,303	3.09 [j]
Loans	906,397	41,296 [i]	4.56
All other interest-earning assets[b]	42,928	1,863	4.34
Total interest-earning assets	2,180,592	65,685	3.01
Allowance for loan losses	(13,453)		
Cash and due from banks	20,364		
Trading assets – equity instruments	115,913		
Trading assets – derivative receivables	59,588		
Goodwill, MSRs and other intangible assets	53,999		
Other assets	139,059		
Total assets	$ 2,556,062		
Liabilities			
Interest-bearing deposits	$ 1,013,221	$ 2,857	0.28%
Federal funds purchased and securities loaned or sold under repurchase agreements	187,386	1,611	0.86
Short-term borrowings[c]	46,532	481	1.03
Trading liabilities – debt and other interest-bearing liabilities[d][e]	171,814	2,070	1.21
Beneficial interests issued by consolidated VIEs	32,457	503	1.55
Long-term debt	291,489	6,753	2.32
Total interest-bearing liabilities	1,742,899	14,275	0.82
Noninterest-bearing deposits	404,165		
Trading liabilities – equity instruments[e]	21,022		
Trading liabilities – derivative payables	44,122		
All other liabilities, including the allowance for lending-related commitments	87,292		
Total liabilities	2,299,500		
Stockholders' equity			
Preferred stock	26,212		
Common stockholders' equity	230,350		
Total stockholders' equity	256,562 [f]		
Total liabilities and stockholders' equity	$ 2,556,062		
Interest rate spread			2.19%
Net interest income and net yield on interest-earning assets		$ 51,410	2.36

(a) Represents securities that are tax-exempt for U.S. federal income tax purposes.
(b) Includes held-for-investment margin loans, which are classified in accrued interest and accounts receivable, and all other interest-earning assets included in other assets.
(c) Includes commercial paper.
(d) Other interest-bearing liabilities include brokerage customer payables.
(e) Included trading liabilities – debt and equity instruments of $90.7 billion, $92.8 billion and $81.4 billion for the twelve months ended December 31, 2017, 2016 and 2015, respectively.
(f) The ratio of average stockholders' equity to average assets was 10.0% for 2017, 10.2% for 2016, and 9.7% for 2015. The return on average stockholders' equity, based on net income, was 9.5% for 2017, 9.9% for 2016, and 10.2% for 2015.
(g) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(h) Negative interest income and yield is related to client-driven demand for certain securities combined with the impact of low interest rates; this is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense and reported within trading liabilities – debt, short-term and other liabilities.
(i) Fees and commissions on loans included in loan interest amounted to $1.0 billion in 2017, $808 million in 2016, and $936 million in 2015.
(j) The annualized rate for securities based on amortized cost was 3.13% in 2017, 2.99% in 2016, and 2.94% in 2015, and does not give effect to changes in fair value that are reflected in AOCI.

Within the Consolidated average balance sheets, interest and rates summary, the principal amounts of nonaccrual loans have been included in the average loan balances used to determine the average interest rate earned on loans. For additional information on nonaccrual loans, including interest accrued, see Note 12.

(Table continued from previous page)

	2016			2015		
	Average balance	Interest[g]	Average rate	Average balance	Interest[g]	Average rate
	$ 392,160	$ 1,863	0.48%	$ 427,963	$ 1,250	0.29%
	205,368	2,265	1.10	206,637	1,592	0.77
	102,964	(332) [h]	(0.32)	105,273	(532) [h]	(0.50)
	215,565	7,373	3.42	206,385	6,694	3.24
	235,211	5,538	2.35	273,730	6,550	2.39
	44,176	2,662	6.03	42,125	2,556	6.07
	279,387	8,200	2.94 [j]	315,855	9,106	2.88 [j]
	866,378	36,866 [i]	4.26	787,318	33,321 [i]	4.23
	39,782	875	2.20	38,811	652	1.68
	2,101,604	57,110	2.72	2,088,242	52,083	2.49
	(13,965)			(13,885)		
	18,660			22,042		
	95,528			105,489		
	70,897			73,290		
	53,752			55,439		
	135,143			138,792		
	$ 2,461,619			$ 2,469,409		
	$ 925,270	$ 1,356	0.15%	$ 876,840	$ 1,252	0.14%
	178,720	1,089	0.61	192,510	609	0.32
	36,140	203	0.56	66,956	175	0.26
	177,765	1,102	0.62	178,994	557	0.31
	40,180	504	1.25	49,200	435	0.88
	295,573	5,564	1.88	284,940	4,435	1.56
	1,653,648	9,818	0.59	1,649,440	7,463	0.45
	402,698			418,948		
	20,737			17,282		
	55,927			64,716		
	77,910			79,293		
	2,210,920			2,229,679		
	26,068			24,040		
	224,631			215,690		
	250,699 [f]			239,730 [f]		
	$ 2,461,619			$ 2,469,409		
			2.13%			2.04%
		$ 47,292	2.25		$ 44,620	2.14

Interest rates and interest differential analysis of net interest income – U.S. and non-U.S.

Presented below is a summary of interest rates and interest differentials segregated between U.S. and non-U.S. operations for the years 2015 through 2017. The segregation of U.S. and non-U.S. components is based on the location of the office recording the transaction. Intercompany funding generally consists of dollar-denominated deposits originated in various locations that are centrally managed by Treasury and CIO.

(Table continued on next page)

Year ended December 31, (Taxable-equivalent interest and rates; in millions, except rates)	2017		
	Average balance	Interest	Average rate
Interest-earning assets			
Deposits with banks:			
U.S.	$ 366,177	$ 4,091	1.12%
Non-U.S.	72,063	128	0.18
Federal funds sold and securities purchased under resale agreements:			
U.S.	90,878	1,360	1.50
Non-U.S.	100,941	967	0.96
Securities borrowed:			
U.S.	68,110	(66) [c]	(0.10)
Non-U.S.	27,214	29	0.11
Trading assets – debt instruments:			
U.S.	128,293	4,186	3.26
Non-U.S.	108,913	3,528	3.24
Securities:			
U.S.	223,140	7,490	3.36
Non-U.S.	45,538	813	1.79
Loans:			
U.S.	832,608	39,439	4.74
Non-U.S.	73,789	1,857	2.52
All other interest-earning assets, predominantly U.S.	42,928	1,863	4.34
Total interest-earning assets	2,180,592	65,685	3.01
Interest-bearing liabilities			
Interest-bearing deposits:			
U.S.	776,049	2,223	0.29
Non-U.S.	237,172	634	0.27
Federal funds purchased and securities loaned or sold under repurchase agreements:			
U.S.	115,574	1,349	1.17
Non-U.S.	71,812	262	0.37
Trading liabilities – debt, short-term and all other interest-bearing liabilities:[a]			
U.S.	138,470	1,271	0.92
Non-U.S.	79,876	1,280	1.60
Beneficial interests issued by consolidated VIEs, predominantly U.S.	32,457	503	1.55
Long-term debt:			
U.S.	276,750	6,745	2.44
Non-U.S.	14,739	8	0.05
Intercompany funding:			
U.S.	(2,874)	(25)	–
Non-U.S.	2,874	25	–
Total interest-bearing liabilities	1,742,899	14,275	0.82
Noninterest-bearing liabilities[b]	437,693		
Total investable funds	$ 2,180,592	$ 14,275	0.65%
Net interest income and net yield:		$ 51,410	2.36%
U.S.		46,059	2.68
Non-U.S.		5,351	1.15
Percentage of total assets and liabilities attributable to non-U.S. operations:			
Assets			22.5
Liabilities			21.1

(a) Includes commercial paper.
(b) Represents the amount of noninterest-bearing liabilities funding interest-earning assets.
(c) Negative interest income and yield is related to client-driven demand for certain securities combined with the impact of low interest rates; this is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense and reported within trading liabilities – debt, short-term and other liabilities.

For further information, see the “Net interest income” discussion in Consolidated Results of Operations on pages 44–46.

(Table continued from previous page)

	2016			2015		
	Average balance	Interest	Average rate	Average balance	Interest	Average rate
	$ 328,831	$ 1,708	0.52%	$ 388,833	$ 1,021	0.26%
	63,329	155	0.25	39,130	229	0.59
	112,902	1,166	1.03	118,945	900	0.76
	92,466	1,099	1.19	87,692	692	0.79
	73,297	(341) [c]	(0.46)	78,815	(562) [c]	(0.71)
	29,667	9	0.03	26,458	30	0.11
	116,211	3,825	3.29	106,465	3,572	3.35
	99,354	3,548	3.57	99,920	3,122	3.12
	216,726	6,971	3.22	200,240	6,676	3.33
	62,661	1,229	1.97	115,615	2,430	2.10
	788,213	35,110	4.45	699,664	31,468	4.50
	78,165	1,756	2.25	87,654	1,853	2.11
	39,782	875	2.20	38,811	652	1.68
	2,101,604	57,110	2.72	2,088,242	52,083	2.49
	703,738	1,029	0.15	638,756	761	0.12
	221,532	327	0.15	238,084	491	0.21
	121,945	773	0.63	140,609	366	0.26
	56,775	316	0.56	51,901	243	0.47
	133,788	86	0.06	166,838	(394) [c]	(0.24)
	80,117	1,219	1.52	79,112	1,126	1.42
	40,180	504	1.25	49,200	435	0.88
	283,169	5,533	1.95	273,033	4,386	1.61
	12,404	31	0.25	11,907	49	0.41
	(20,405)	10	–	(50,517)	7	–
	20,405	(10)	–	50,517	(7)	–
	1,653,648	9,818	0.59	1,649,440	7,463	0.45
	447,956			438,802		
	$ 2,101,604	$ 9,818	0.47%	$ 2,088,242	$ 7,463	0.36%
		$ 47,292	2.25%		$ 44,620	2.14%
		40,705	2.49		38,033	2.34
		6,587	1.42		6,587	1.42
			23.1			24.7
			20.7			21.1

Changes in net interest income, volume and rate analysis

The table below presents an attribution of net interest income between volume and rate. The attribution between volume and rate is calculated using annual average balances for each category of assets and liabilities shown in the table and the corresponding annual average rates (see pages 278-282 for more information on average balances and rates). In this analysis, when the change cannot be isolated to either volume or rate, it has been allocated to volume. The average annual rates include the impact of changes in market rates as well as the impact of any change in composition of the various products within each category of asset or liability. This analysis is calculated separately for each category without consideration of the relationship between categories (for example, the net spread between the rates earned on assets and the rates paid on liabilities that fund those assets). As a result, changes in the granularity or groupings considered in this analysis would produce a different attribution result, and due to the complexities involved, precise allocation of changes in interest rates between volume and rates is inherently complex and judgmental.

	2017 versus 2016			2016 versus 2015		
	Increase/(decrease) due to change in:			Increase/(decrease) due to change in:		
Year ended December 31, (On a taxable-equivalent basis; in millions)	Volume	Rate	Net change	Volume	Rate	Net change
Interest-earning assets						
Deposits with banks:						
U.S.	**$ 410**	**$ 1,973**	**$ 2,383**	$ (324)	$ 1,011	$ 687
Non-U.S.	**17**	**(44)**	**(27)**	59	(133)	(74)
Federal funds sold and securities purchased under resale agreements:						
U.S.	**(337)**	**531**	**194**	(55)	321	266
Non-U.S.	**81**	**(213)**	**(132)**	56	351	407
Securities borrowed:						
U.S.	**11**	**264**	**275**	24	197	221
Non-U.S.	**(4)**	**24**	**20**	–	(21)	(21)
Trading assets - debt instruments:						
U.S.	**396**	**(35)**	**361**	317	(64)	253
Non-U.S.	**308**	**(328)**	**(20)**	(24)	450	426
Securities:						
U.S.	**216**	**303**	**519**	515	(220)	295
Non-U.S.	**(303)**	**(113)**	**(416)**	(1,051)	(150)	(1,201)
Loans:						
U.S.	**2,043**	**2,286**	**4,329**	3,992	(350)	3,642
Non-U.S.	**(110)**	**211**	**101**	(220)	123	(97)
All other interest-earning assets, predominantly U.S.	**137**	**851**	**988**	21	202	223
Change in interest income	**2,865**	**5,710**	**8,575**	3,310	1,717	5,027
Interest-bearing liabilities						
Interest-bearing deposits:						
U.S.	**209**	**985**	**1,194**	76	192	268
Non-U.S.	**41**	**266**	**307**	(21)	(143)	(164)
Federal funds purchased and securities loaned or sold under repurchase agreements:						
U.S.	**(83)**	**659**	**576**	(113)	520	407
Non-U.S.	**54**	**(108)**	**(54)**	26	47	73
Trading liabilities - debt, short-term and other interest-bearing liabilities: [(a)]						
U.S.	**45**	**1,140**	**1,185**	(24)	504	480
Non-U.S.	**(3)**	**64**	**61**	14	79	93
Beneficial interests issued by consolidated VIEs, predominantly U.S.	**(122)**	**121**	**(1)**	(113)	182	69
Long-term debt:						
U.S.	**(176)**	**1,388**	**1,212**	219	928	1,147
Non-U.S.	**2**	**(25)**	**(23)**	1	(19)	(18)
Intercompany funding:						
U.S.	**151**	**(186)**	**(35)**	(17)	20	3
Non-U.S.	**(151)**	**186**	**35**	17	(20)	(3)
Change in interest expense	**(33)**	**4,490**	**4,457**	65	2,290	2,355
Change in net interest income	**$ 2,898**	**$ 1,220**	**$ 4,118**	$ 3,245	$ (573)	$ 2,672

(a) Includes commercial paper.

2017 Annual Report or 2017 Form 10-K: Annual report on Form 10-K for year ended December 31, 2017, filed with the U.S. Securities and Exchange Commission.

ABS: Asset-backed securities

Active foreclosures: Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

AFS: Available-for-sale

ALCO: Asset Liability Committee

Allowance for loan losses to total loans: Represents period-end allowance for loan losses divided by retained loans.

Alternative assets: The following types of assets constitute alternative investments – hedge funds, currency, real estate, private equity and other investment funds designed to focus on nontraditional strategies.

AWM: Asset & Wealth Management

AOCI: Accumulated other comprehensive income/(loss)

ARM: Adjustable rate mortgage(s)

AUC: Assets under custody

AUM: "Assets under management": Represent assets managed by AWM on behalf of its Private Banking, Institutional and Retail clients. Includes "Committed capital not Called."

Auto loan and lease origination volume: Dollar amount of auto loans and leases originated.

Beneficial interests issued by consolidated VIEs: Represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

BHC: Bank holding company

Card Services includes the Credit Card and Merchant Services businesses.

CB: Commercial Banking

CBB: Consumer & Business Banking

CCAR: Comprehensive Capital Analysis and Review

CCB: Consumer & Community Banking

CCO: Chief Compliance Officer

CCP: "Central counterparty" is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

CDS: Credit default swaps

CEO: Chief Executive Officer

CET1 Capital: Common equity Tier 1 Capital

CFTC: Commodity Futures Trading Commission

CFO: Chief Financial Officer

Chase Bank USA, N.A.: Chase Bank USA, National Association

CIB: Corporate & Investment Bank

CIO: Chief Investment Office

Client assets: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Client deposits and other third-party liabilities: Deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs.

CLO: Collateralized loan obligations

CLTV: Combined loan-to-value

Collateral-dependent: A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.

Merchant Services: is a business that primarily processes transactions for merchants.

Commercial Card: provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

COO: Chief Operating Officer

Core loans: Represents loans considered central to the Firm's ongoing businesses; core loans exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again (or vice versa). The duration of a credit cycle can vary from a couple of years to several years.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its

obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

Criticized: Criticized loans, lending-related commitments and derivative receivables that are classified as special mention, substandard and doubtful categories for regulatory purposes and are generally consistent with a rating of CCC+/Caa1 and below, as defined by S&P and Moody's.

CRO: Chief Risk Officer

CTC: CIO, Treasury and Corporate

CVA: Credit valuation adjustments

Debit and credit card sales volume: Dollar amount of card member purchases, net of returns.

Deposit margin/deposit spread: Represents net interest income expressed as a percentage of average deposits.

Distributed denial-of-service attack: The use of a large number of remote computer systems to electronically send a high volume of traffic to a target website to create a service outage at the target. This is a form of cyberattack.

DFAST: Dodd-Frank Act Stress Test

Dodd-Frank Act: Wall Street Reform and Consumer Protection Act

DOJ: U.S. Department of Justice

DOL: U.S. Department of Labor

DRPC: Board of Directors' Risk Policy Committee

DVA: Debit valuation adjustment

E&P: Exploration & Production

EC: European Commission

Eligible LTD: Long-term debt satisfying certain eligibility criteria

Embedded derivatives: are implicit or explicit terms or features of a financial instrument that affect some or all of the cash flows or the value of the instrument in a manner similar to a derivative. An instrument containing such terms or features is referred to as a "hybrid." The component of the hybrid that is the non-derivative instrument is referred to as the "host." For example, callable debt is a hybrid instrument that contains a plain vanilla debt instrument (i.e., the host) and an embedded option that allows the issuer to redeem the debt issue at a specified date for a specified amount (i.e., the embedded derivative). However, a floating rate instrument is not a hybrid composed of a fixed-rate instrument and an interest rate swap.

ERISA: Employee Retirement Income Security Act of 1974

EPS: Earnings per share

ETD: "Exchange-traded derivatives": Derivative contracts that are executed on an exchange and settled via a central clearing house.

EU: European Union

Fannie Mae: Federal National Mortgage Association

FASB: Financial Accounting Standards Board

FCA: Financial Conduct Authority

FCC: Firmwide Control Committee

FDIA: Federal Depository Insurance Act

FDIC: Federal Deposit Insurance Corporation

Federal Reserve: The Board of the Governors of the Federal Reserve System

Fee share: Proportion of fee revenue based on estimates of investment banking fees generated across the industry from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third-party provider of investment banking fee competitive analysis and volume-based league tables for the above noted industry products.

FFELP: Federal Family Education Loan Program

FFIEC: Federal Financial Institutions Examination Council

FHA: Federal Housing Administration

FHLB: Federal Home Loan Bank

FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

Firm: JPMorgan Chase & Co.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

FRC: Firmwide Risk Committee

Freddie Mac: Federal Home Loan Mortgage Corporation

Free standing derivatives: a derivative contract entered into either separate and apart from any of the Firm's other financial instruments or equity transactions. Or, in conjunction with some other transaction and is legally detachable and separately exercisable.

FSB: Financial Stability Board

FTE: Fully taxable equivalent

FVA: Funding valuation adjustment

FX: Foreign exchange

G7: Group of Seven nations: Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government bonds: Bonds issued by the government of one of the G7 nations.

Ginnie Mae: Government National Mortgage Association

GSE: Fannie Mae and Freddie Mac

GSIB: Global systemically important banks

HAMP: Home affordable modification program

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

HELOAN: Home equity loan

HELOC: Home equity line of credit

Home equity – senior lien: Represents loans and commitments where JPMorgan Chase holds the first security interest on the property.

Home equity – junior lien: Represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.

Households: A household is a collection of individuals or entities aggregated together by name, address, tax identifier and phone. Reported on a one-month lag.

HQLA: High quality liquid assets

HTM: Held-to-maturity

ICAAP: Internal capital adequacy assessment process

IDI: Insured depository institutions

IHC: JPMorgan Chase Holdings LLC, an intermediate holding company

Impaired loan: Impaired loans are loans measured at amortized cost, for which it is probable that the Firm will be unable to collect all amounts due, including principal and interest, according to the contractual terms of the agreement. Impaired loans include the following:

- All wholesale nonaccrual loans
- All TDRs (both wholesale and consumer), including ones that have returned to accrual status

Interchange income: A fee paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

ISDA: International Swaps and Derivatives Association

JPMorgan Chase: JPMorgan Chase & Co.

JPMorgan Chase Bank, N.A.: JPMorgan Chase Bank, National Association

JPMorgan Clearing: J.P. Morgan Clearing Corp.

JPMorgan Securities: J.P. Morgan Securities LLC

Loan-equivalent: Represents the portion of the unused commitment or other contingent exposure that is expected, based on historical portfolio experience, to become drawn prior to an event of a default by an obligor.

LCR: Liquidity coverage ratio

LDA: Loss Distribution Approach

LGD: Loss given default

LIBOR: London Interbank Offered Rate

LLC: Limited Liability Company

LOB: Line of business

Loss emergence period: Represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss.

LTIP: Long-term incentive plan

LTV: "Loan-to-value": For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices consist of actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all available lien positions, as well as unused lines, related to the property. Combined LTV ratios are used for junior lien home equity products.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and

trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Master netting agreement: A single agreement with a counterparty that permits multiple transactions governed by that agreement to be terminated or accelerated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due).

MBS: Mortgage-backed securities

MD&A: Management's discussion and analysis

MMDA: Money Market Deposit Accounts

Moody's: Moody's Investor Services

Mortgage origination channels:

Retail – Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high CLTV ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime

Prime mortgage loans are made to borrowers with good credit records who meet specific underwriting requirements, including prescriptive requirements related to income and overall debt levels. New prime mortgage borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are loans that, prior to mid-2008, were offered to certain customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

MSA: Metropolitan statistical areas

MSR: Mortgage servicing rights

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

NA: Data is not applicable or available for the period presented.

NAV: Net Asset Value

Net Capital Rule: Rule 15c3-1 under the Securities Exchange Act of 1934.

Net charge-off/(recovery) rate: Represents net charge-offs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net mortgage servicing revenue includes the following components:

Operating revenue predominantly represents the return on Home Lending Servicing's MSR asset and includes:

- Actual gross income earned from servicing third-party mortgage loans, such as contractually specified servicing fees and ancillary income; and
- The change in the fair value of the MSR asset due to the collection or realization of expected cash flows.

Risk management represents the components of

Home Lending Servicing's MSR asset that are subject to ongoing risk management activities, together with derivatives and other instruments used in those risk management activities.

Net production revenue: Includes net gains or losses on originations and sales of mortgage loans, other production-related fees and losses related to the repurchase of previously sold loans.

Net revenue rate: Represents Card Services net revenue (annualized) expressed as a percentage of average loans for the period.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful

NOL: Net operating loss

Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest have been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.

Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in loan satisfaction, predominantly real estate owned and other commercial and personal property.

NOW: Negotiable Order of Withdrawal

NSFR: Net stable funding ratio

OAS: Option-adjusted spread

OCC: Office of the Comptroller of the Currency

OCI: Other comprehensive income/(loss)

OEP: One Equity Partners

OIS: Overnight index swap

OPEB: Other postretirement employee benefit

ORMF: Operational Risk Management Framework

OTTI: Other-than-temporary impairment

Over-the-counter ("OTC") derivatives: Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

Over-the-counter cleared ("OTC-cleared") derivatives: Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Parent Company: JPMorgan Chase & Co.

Participating securities: Represents unvested share-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants RSUs to certain employees under its share-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

PCA: Prompt corrective action

PCI: "Purchased credit-impaired" loans represents certain loans that were acquired and deemed to be credit-impaired on the acquisition date in accordance with the guidance of the FASB. The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics(e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

PD: Probability of default

PRA: Prudential Regulatory Authority

Pre-provision profit/(loss): Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pretax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is one basis upon which management evaluates the performance of AWM against the performance of their respective competitors.

Principal transactions revenue: Principal transactions revenue is driven by many factors, including the bid-offer spread, which is the difference between the price at which the Firm is willing to buy a financial or other instrument and the price at which the Firm is willing to sell that instrument. It also consists of realized (as a result of closing out or termination of transactions, or interim cash payments) and unrealized (as a result of changes in valuation) gains and losses on financial and other instruments (including those accounted for under the fair value option) primarily used in client-driven market-making activities and on private equity investments. In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities).

Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk-management activities, including: (a)

certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives.

PSU(s): Performance share units

RCSA: Risk and Control Self-Assessment

Real assets: Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.

REIT: "Real estate investment trust": A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate related assets by pooling their capital to purchase and manage income property (i.e., equity REIT) and/or mortgage loans (i.e., mortgage REIT). REITs can be publicly or privately held and they also qualify for certain favorable tax considerations.

Receivables from customers: Primarily represents margin loans to brokerage customers that are collateralized through assets maintained in the clients' brokerage accounts, as such no allowance is held against these receivables. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.

Regulatory VaR: Daily aggregated VaR calculated in accordance with regulatory rules.

REO: Real estate owned

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e., excludes loans held-for-sale and loans at fair value).

Revenue wallet: Proportion of fee revenue based on estimates of investment banking fees generated across the industry (i.e., the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third-party provider of investment banking competitive analysis and volume-based league tables for the above noted industry products.

RHS: Rural Housing Service of the U.S. Department of Agriculture

Risk-rated portfolio: Credit loss estimates are based on estimates of the probability of default ("PD") and loss severity given a default. The probability of default is the likelihood that a borrower will default on its obligation; the loss given default ("LGD") is the estimated loss on the loan that would be realized upon the default and takes into consideration collateral and structural support for each credit facility.

ROA: Return on assets

ROE: Return on equity

ROTCE: Return on tangible common equity

RSU(s): Restricted stock units

RWA: "Risk-weighted assets": Basel III establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced.

S&P: Standard and Poor's 500 Index

SAR(s): Stock appreciation rights

SCCL: single-counterparty credit limits

Scored portfolio: The scored portfolio predominantly includes residential real estate loans, credit card loans and certain auto and business banking loans where credit loss estimates are based on statistical analysis of credit losses over discrete periods of time. The statistical analysis uses portfolio modeling, credit scoring and decision-support tools.

SEC: Securities and Exchange Commission

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Short sale: A short sale is a sale of real estate in which proceeds from selling the underlying property are less than the amount owed the Firm under the terms of the related mortgage, and the related lien is released upon receipt of such proceeds.

Single-name: Single reference-entities

SLR: Supplementary leverage ratio

SMBS: Stripped mortgage-backed securities

SOA: Society of Actuaries

SPEs: Special purpose entities

Structural interest rate risk: Represents interest rate risk of the non-trading assets and liabilities of the Firm.

Structured notes: Structured notes are predominantly financial instruments containing embedded derivatives.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting results on a managed basis, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in managed basis results on a level comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

TBVPS: Tangible book value per share

TCE: Tangible common equity

TDR: "Troubled debt restructuring" is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

TLAC: Total Loss Absorbing Capacity

U.K.: United Kingdom

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S.: United States of America

U.S. GAAP: Accounting principles generally accepted in the U.S.

U.S. government-sponsored enterprises ("U.S. GSEs") and U.S. GSE obligations: In the U.S., GSEs are quasi-governmental, privately held entities established by Congress to improve the flow of credit to specific sectors of the economy and provide certain essential services to the public. U.S. GSEs include Fannie Mae and Freddie Mac, but do not include Ginnie Mae, which is directly owned by the U.S. Department of Housing and Urban Development. U.S. GSE obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. LCR: Liquidity coverage ratio under the final U.S. rule.

U.S. Treasury: U.S. Department of the Treasury

VA: U.S. Department of Veterans Affairs

VaR: "Value-at-risk" is a measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

VCG: Valuation Control Group

VGF: Valuation Governance Forum

VIEs: Variable interest entities

Warehouse loans: Consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired certain of the assets of the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC.

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Lenovo
Beijing, China

Jaime Augusto Zobel de Ayala
Chairman and Chief Executive Officer
Ayala Corporation
Makati City, Philippines

*Ex-officio

JPMorgan Chase & Co.

Corporate headquarters

270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-6000
jpmorganchase.com

Principal subsidiaries

JPMorgan Chase Bank,
National Association
Chase Bank USA,
National Association
JPMorgan Chase Holdings LLC
J.P. Morgan Securities LLC
J.P. Morgan Securities plc

Annual Report on Form 10-K

The Annual Report on Form 10-K of JPMorgan Chase & Co. as filed with the U.S. Securities and Exchange Commission will be made available without charge upon request to:

Office of the Secretary
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070

Stock listing

New York Stock Exchange

The New York Stock Exchange ticker symbol for the common stock of JPMorgan Chase & Co. is JPM.

Financial information about JPMorgan Chase & Co. can be accessed by visiting the Investor Relations website at jpmorganchase.com. Additional questions should be addressed to:

Investor Relations
JPMorgan Chase & Co.
270 Park Avenue
New York, NY 10017-2070
Telephone: 212-270-7325

Directors

To contact any of the Board members or committee chairs, the Lead Independent Director or the non-management directors as a group, please mail correspondence to:

JPMorgan Chase & Co.
Attention (Board member(s))
Office of the Secretary
270 Park Avenue
New York, NY 10017-2070

The Corporate Governance Principles of the Board, the charters of the principal Board committees, the Code of Conduct, the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting our website at jpmorganchase.com and clicking on "Governance" under the "About us" tab.

Transfer agent and registrar

Computershare
480 Washington Boulevard
Jersey City, NJ 07310-2053
Telephone: 800-758-4651
www.computershare.com/investor

Investor Services Program

JPMorgan Chase & Co.'s Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorgan Chase & Co. common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, Computershare, by calling 800-758-4651, by writing to the address indicated above or by visiting its website at www-us.computershare.com/Investor.

Direct deposit of dividends

For information about direct deposit of dividends, please contact Computershare.

Stockholder inquiries

Contact Computershare:

By telephone:

Within the United States, Canada and Puerto Rico: 800-758-4651 (toll free)

From all other locations: 201-680-6862 (collect)

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By overnight delivery:

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Suite 1660
Louisville, KY 40202
United States

Duplicate mailings

If you receive duplicate mailings because you have more than one account listing and you wish to consolidate your accounts, please write to Computershare at the address above.

Independent registered public accounting firm

PricewaterhouseCoopers LLP
300 Madison Avenue
New York, NY 10017

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JPMorgan Chase 2018 Investor Day Agenda

Date: Tuesday, February 27, 2018

Location: 270 Park Avenue – 50th Floor

Presentation	Speaker	Start time	End time	Duration
Registration		7:15AM	8:00AM	0:45
JPMorgan Chase strategic update	Marianne Lake	8:00AM	8:45AM	0:45
Break		8:45AM	9:00AM	0:15
JPMorgan Chase strategic update (cont'd)	Marianne Lake	9:00AM	9:45AM	0:45
Break		9:45AM	10:00AM	0:15
Q&A session	Operating Committee	10:00AM	11:00AM	1:00
Closing remarks	Jamie Dimon	11:00AM	12:00PM	1:00
Break		12:00PM	12:15PM	0:15
Lunch with senior leaders		12:15PM	1:15PM	1:00

JPMORGAN CHASE STRATEGIC UPDATE

Marianne Lake, Chief Financial Officer

February 27, 2018

JPMorgan Chase & Co.

Agenda

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Proven operating model – positioned for success

Complete | **Global** | **Diversified** | **Scale**



Customer centric



Mobile first – digital everything – multi-channel delivery



Deeply integrated – payments as a holistic solution



World-class technology and data capabilities



Long-term strategic focus on growth and profitability



Execute with discipline – capital, expense and controls

OPERATING FROM A POSITION OF STRENGTH

Our brands have never been stronger

J.P. Morgan and Chase

JPMC is recognized as a leader in global business



Fortune's 2018 World's Most Admired Companies

1. Apple
2. Amazon
3. Alphabet
4. Berkshire Hathaway
5. Starbucks
6. Disney
7. Microsoft
8. Southwest
9. FedEx
10. **JPMorgan Chase & Co.**

"Top 50 Most Innovative Companies of 2018"
– The Boston Consulting Group

Chase brand

The Harris Poll
Harris Insights & Analytics, A Stagwell LLC Company

- 2017 Bank "**Brand of the Year**"[4]

KANTAR TNS

- **#1** in **Retail Banking** for five years in a row
- **#1** in **Premier Banking** for a record six years in a row
- **#1 Primary Institution** for banking and cards among Millennials

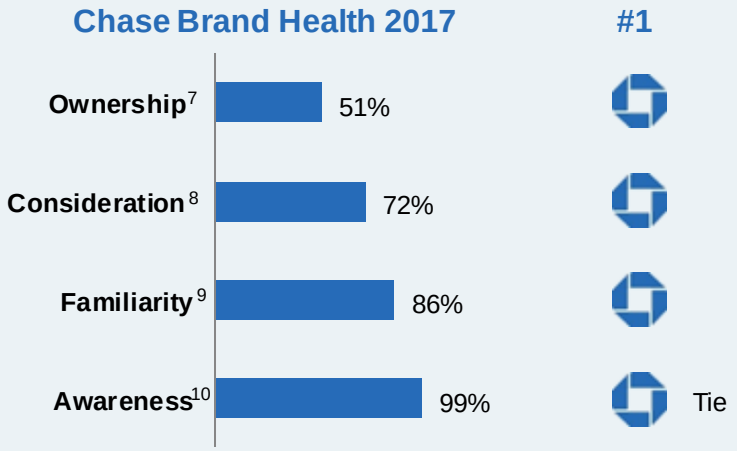
"They've built a lifestyle brand out of [Sapphire Reserve] …a part of your identity, like the clothes you wear"
– Bloomberg editorial [5]

JPM brand

J.P.Morgan

- **#1** of global large banks in *Interbrand's* Best Global Brand 2017
- **#1** Overall Global Fixed-Income Service Quality – *Greenwich Associates*[1]
- **#1** U.S. Equity Sales Trading & Execution Service Quality – *Greenwich Associates*[2]
- **Excellence Award** for Overall Digital Banking – *Greenwich Associates 2017*[3]
- **#1** Global Research Firm – *Institutional Investor*

Chase brand is #1 or tied for #1 in key categories[6]



OPERATING FROM A POSITION OF STRENGTH

JPMORGAN CHASE & CO.

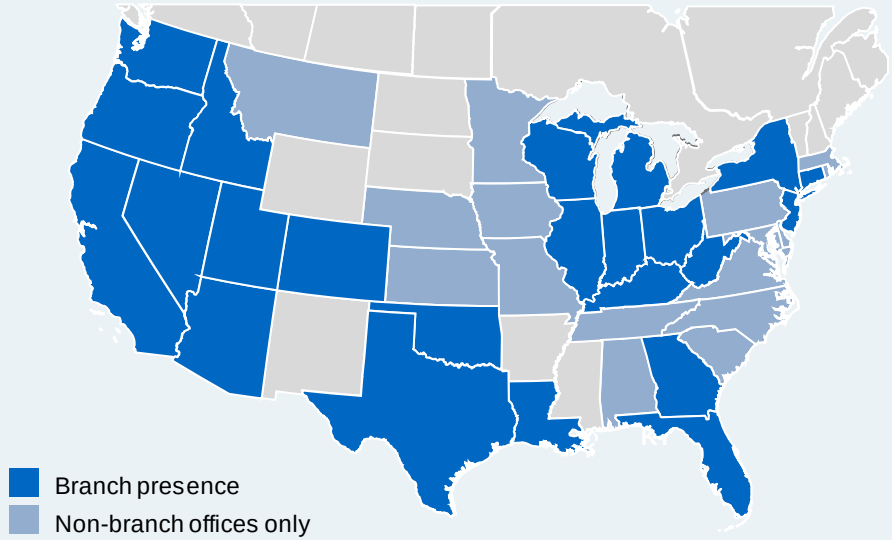
Note: For footnoted information, refer to slide 77

Attractive footprint with strong positioning across the U.S. and globally

Serving our customers across channels and geographies

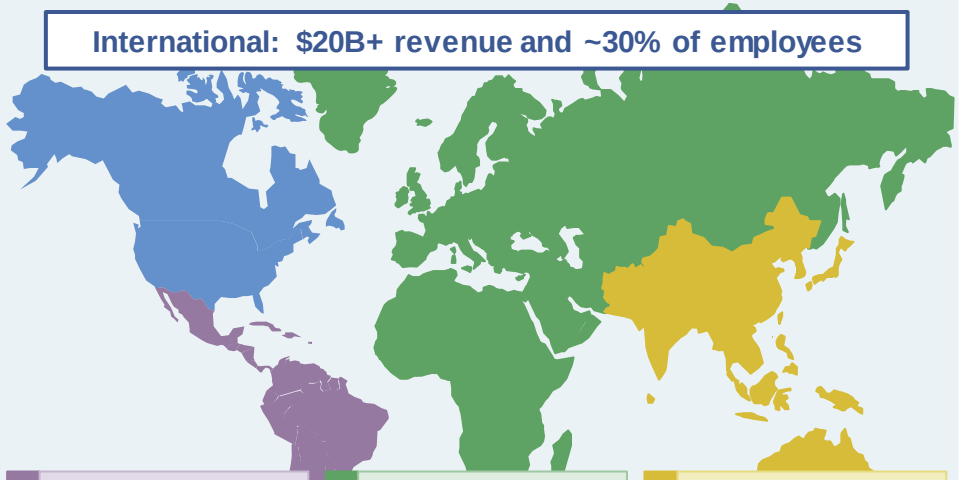
National footprint across our businesses

North America: $80B+ revenue and ~70% of employees



Global model

International: $20B+ revenue and ~30% of employees



LatAm	EMEA	APAC
~$2B revenue	~$14B revenue	~$6B revenue
CIB: $1.1B	CIB: $11.3B	CIB: $4.5B
AWM: $0.8B	AWM: $2.0B	AWM: $1.2B

Over **5,100** branches across the U.S. with over **16,000** ATMs

Presence in over **100** markets

Offices in **39** states with nationwide coverage for CIB, CB, AWM

Net revenue: **~50%** of CIB and **~30%** of AWM is international

CB presence in **125** U.S. cities, coverage of all **Top 50** MSAs

CB int'l revenue of **$323mm**, presence in **18** countries[2]

~$2.3T of client assets and over **5,000** WM client advisors[1]

~$800B of client assets and **~500** WM client advisors

Commitment and resources to build and maintain a global network

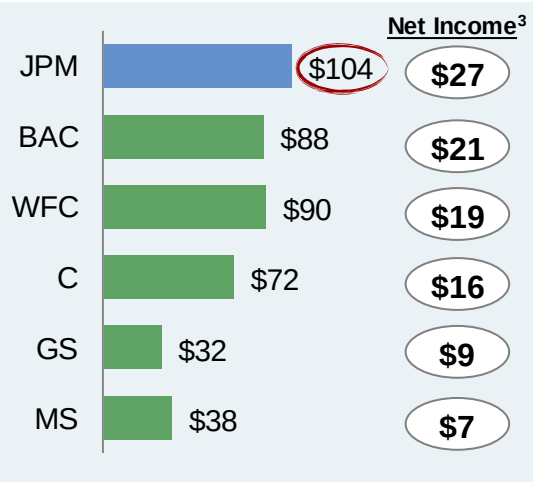
Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 78
Note: Data is as of or for the year ended December 31, 2017

Strong absolute and relative performance

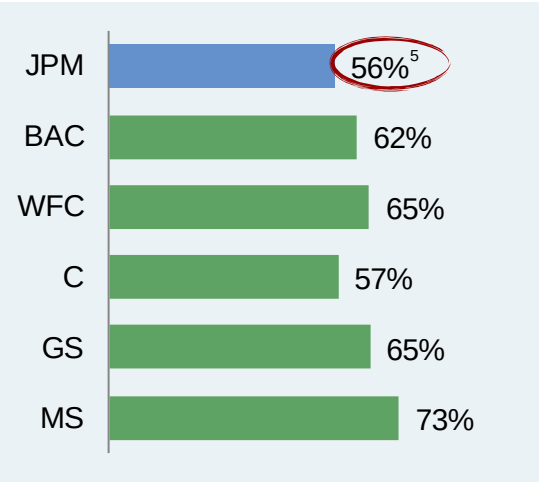
Financial overview

Financial metrics exclude the impact of tax reform

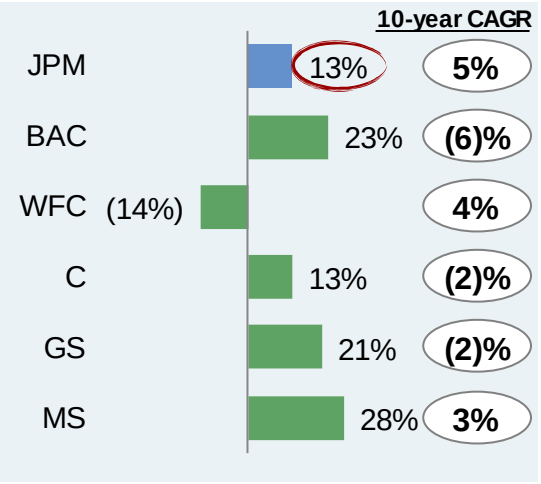
FY2017 Managed revenue[1,2] ($B)



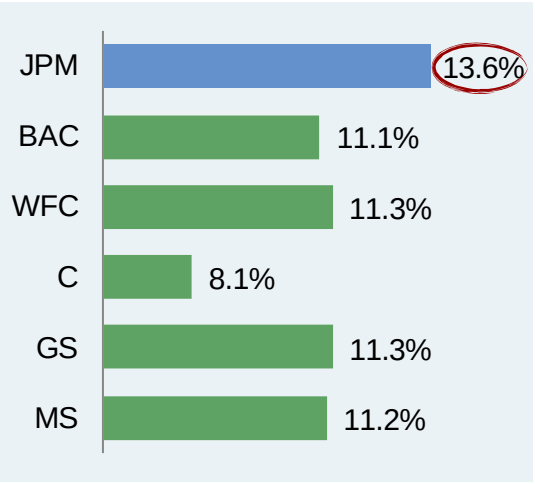
FY2017 Managed overhead ratio[1,4]



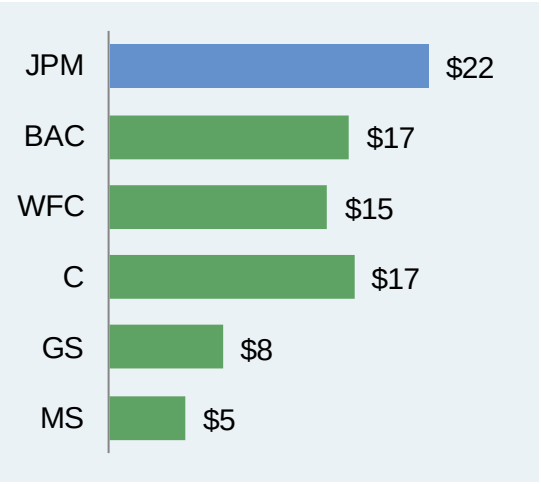
FY2017 YoY EPS[3]



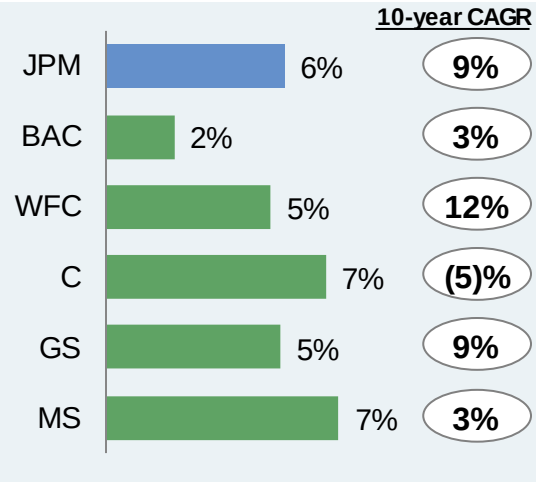
FY2017 ROTCE[3]



FY2017 Net capital distribution ($B)



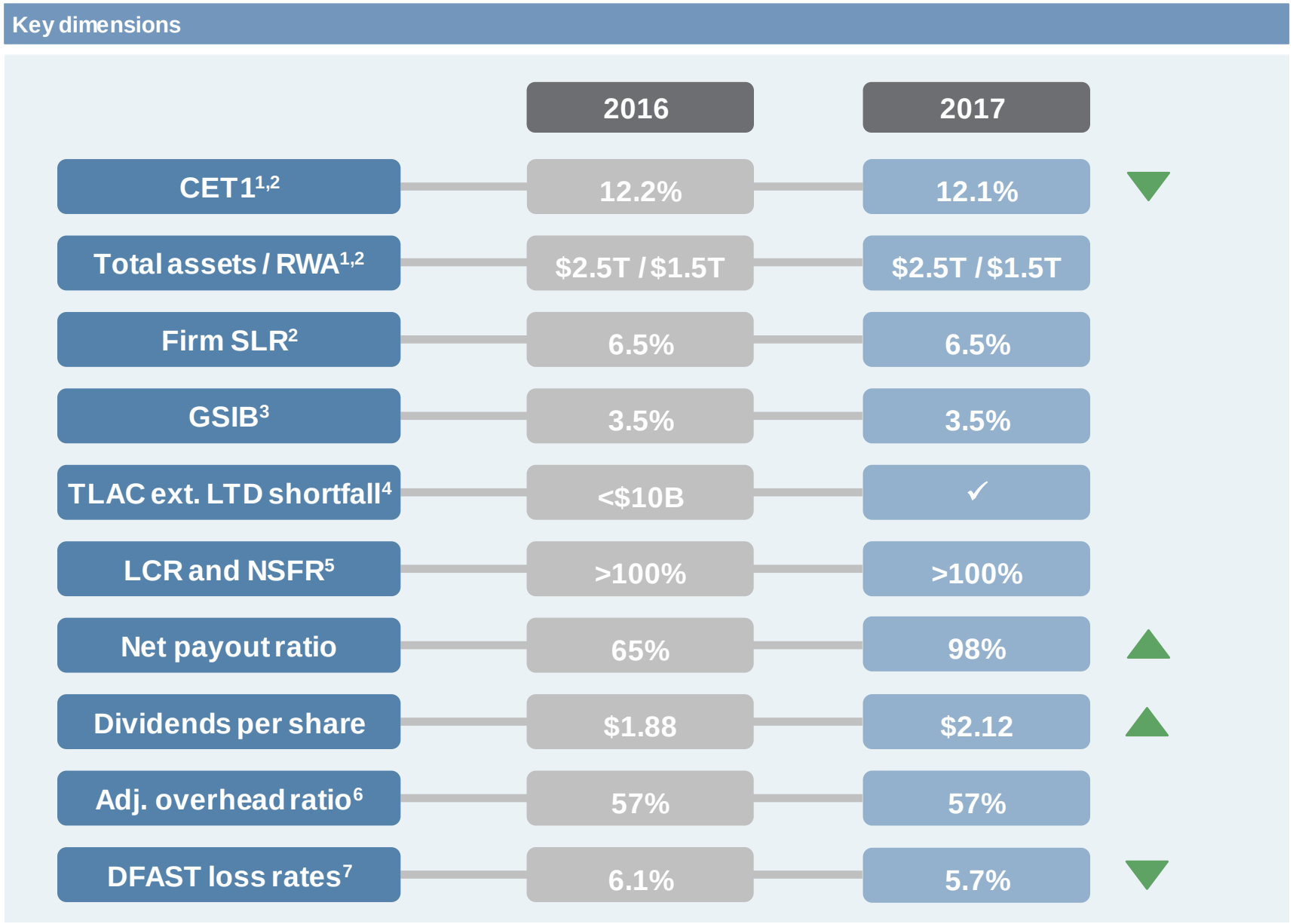
FY2017 YoY TBVPS[3,6]



Note: For footnoted information, refer to slide 79

Continue to operate from a position of strength…across all key dimensions

Financial overview

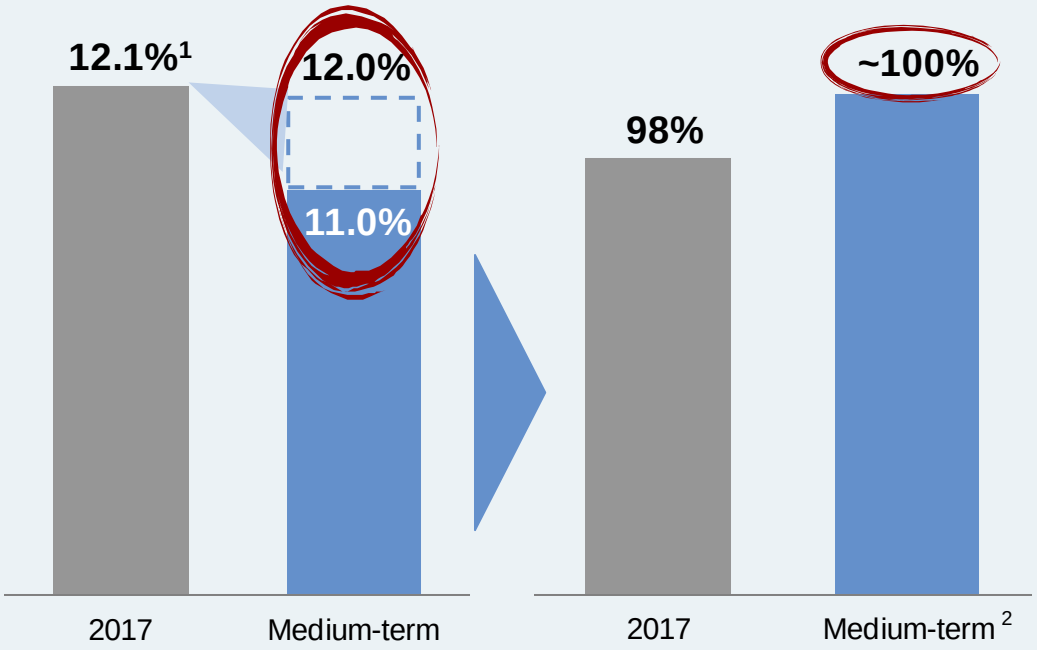


Note: For footnoted information, refer to slide 80

Capital has reached an inflection point

Medium-term expectations

Capital outlook



Capital allocation ($B)

	2018 Average retained equity[3]
Capital allocation unchanged from 2017	
Consumer & Community Banking	$51.0
Corporate & Investment Bank	70.0
Commercial Banking	20.0
Asset & Wealth Management	9.0
Total LOBs	**$150.0**
Corporate	35.0
Total Firm	**~$185.0**

Expect capital to move down within 11-12.0% corridor in the medium-term

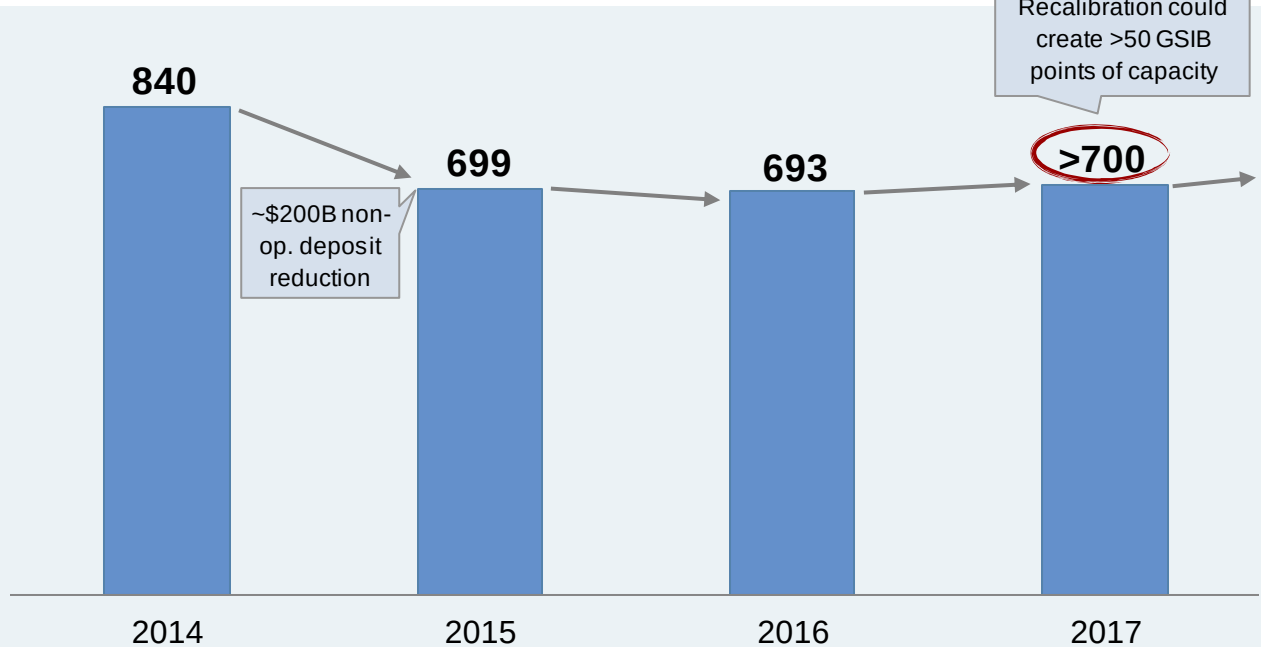
OPERATING FROM A POSITION OF STRENGTH

[1] Reflects Basel III binding Fully Phased-In measure. See note 6 on slide 76
[2] Medium-term payout ratio is based on analyst estimates
[3] Reflects average CET1 capital. Total Firm based on analyst estimates

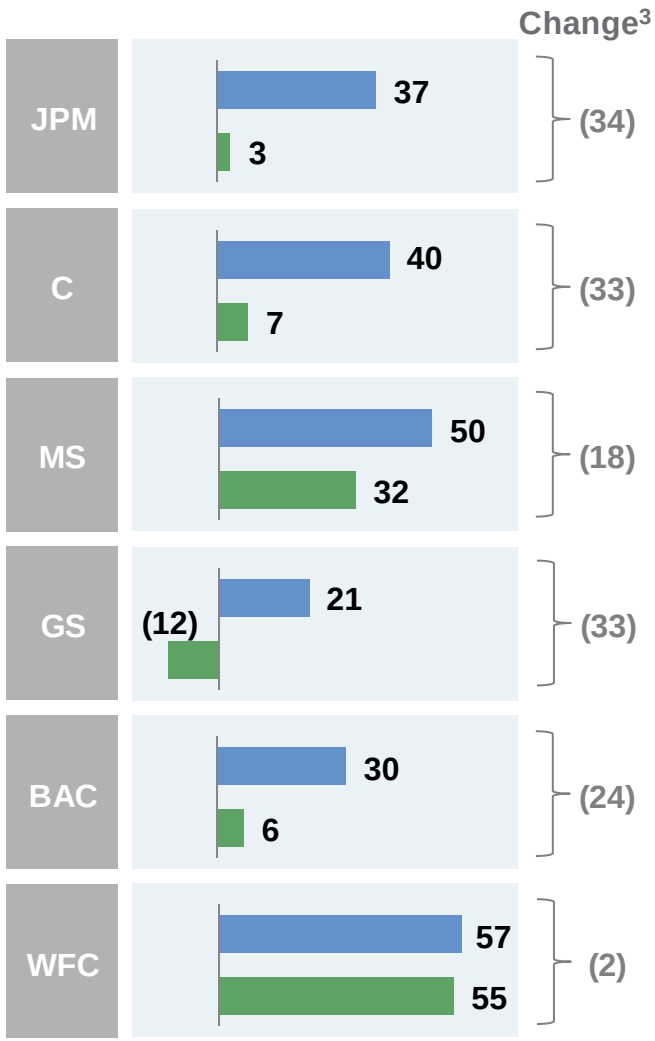
Strong U.S. economic growth supports recalibration of GSIB coefficients

Upward pressure on GSIB scores

GSIB score



Distance to next higher GSIB bucket



Overview

- U.S. economy has grown over 11%[1] – no change to fixed coefficients – no increase in systemic risk
- Federal Reserve has ability to recalibrate coefficients: "to ensure changes in economic growth do not unduly affect firms' systemic risk scores"[2]

Current calibration of GSIB coefficients could become a barrier to further economic growth

OPERATING FROM A POSITION OF STRENGTH

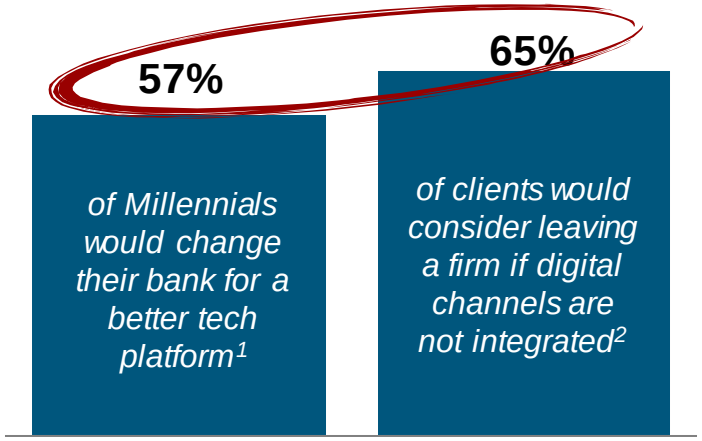
[1] >11% cumulative nominal GDP grow th since the 2014 establishment of coefficients
[2] Federal Register, Volume 80, No. 157, August 14, 2015
[3] Change betw een 4Q16 and 3Q17

Digital everything

Digital capabilities are critical to our business

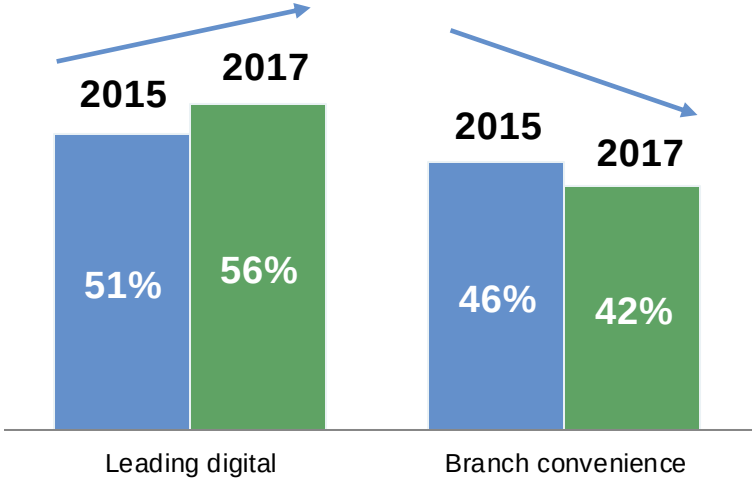
Why digital matters

Choice of bank



Importance of digital leadership

Evolution of convenience[3]



Non-branch factors are increasing perceptions of convenience

Traders

61% *of FX traders* extremely *likely to use mobile app to trade in 2018 – nearly double from last year*[4]

Corporates

76% of companies cite digital capabilities as "Highly" or "Very" important in selecting a banking partner[5]

WM clients

53% of WM clients view digital as #1 factor influencing their client service experience[6]

Our customers demand digital capabilities

Note: For footnoted information, refer to slide 81

The business case for digital is compelling

Why digital matters

Increased customer satisfaction

+19%
Net Promoter Score (NPS)[1,2,3]

#1 FX Single Dealer Platform
Euromoney FX Survey 2017

eXecute: Best Mobile Platform
Profit & Loss Digital FX Awards 2017

Increased retention & wallet

+10ppts
retention rates[1,2,4]

+118%
higher card spend[1,2,5]

85%
of wealthy individuals use financial apps[6]

+21ppts
in digitally active Business Banking clients[7]

+40%
higher deposit and investment share[1,2,8]

Business efficiencies

~99%
straight-through processing rate on ~$5T daily wholesale payments

~$365mm
benefit from paperless statements[9]

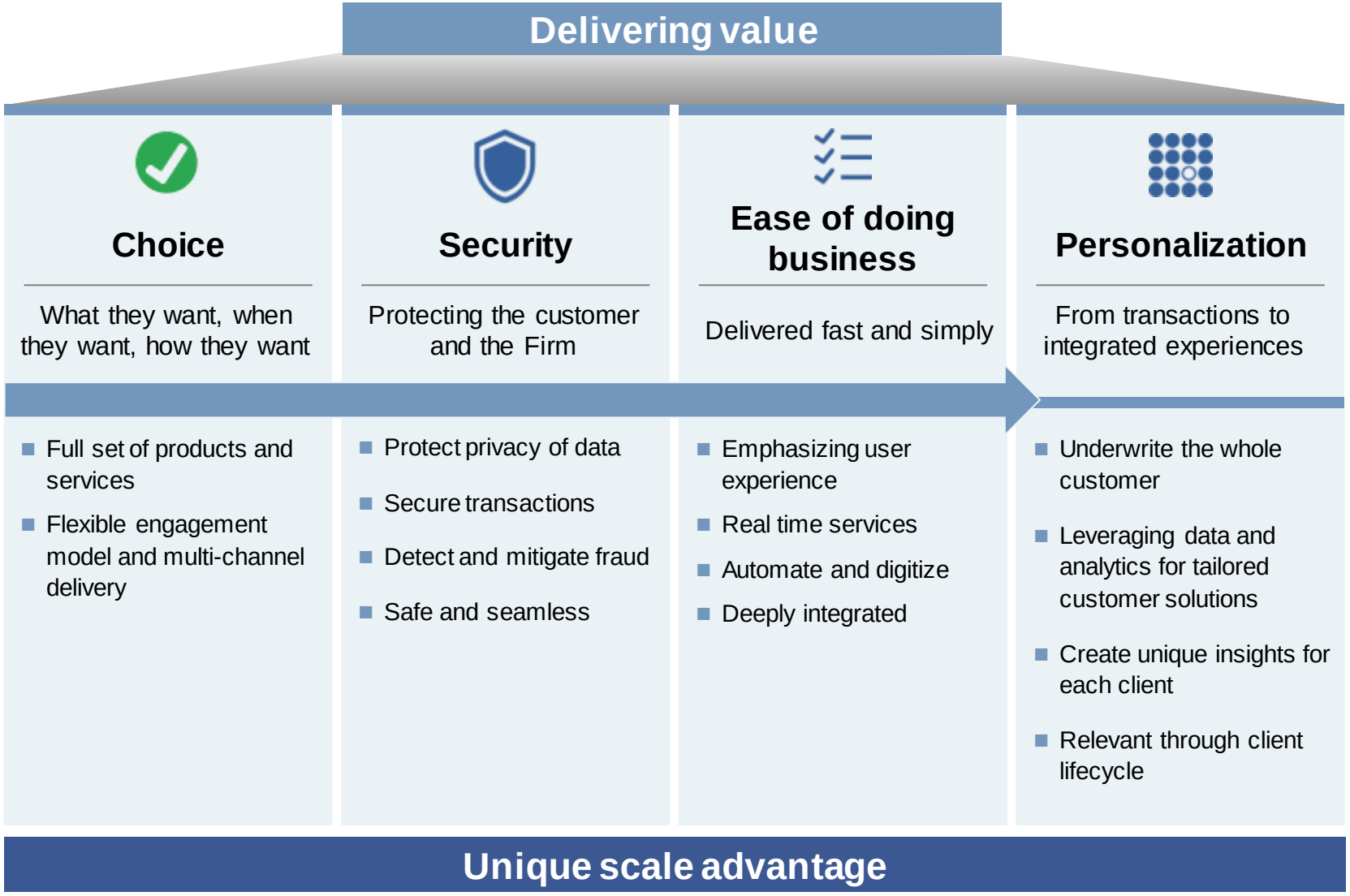
(94%)
lower cost per check deposits for digital transactions (QuickDeposit)[10]

~$0
marginal cost of many electronic trades approaches $0

[1] For digitally engaged households
Note: For additional footnoted information, refer to slide 82

The customer is at the center of everything we do

Digital strategy



Enhancing the client onboarding process across the bank

Make it easy to become a client – and seamless to add products and services



Creating STREAMLINED and SIMPLIFIED client documentation + approval processes



Enhancing client onboarding to facilitate EXPEDITED + DIGITAL account opening



Enabling data collection from clients ONCE

~90% reduction in Treasury Services account opening time driven by DataOnce™

Single application increasing multi-product engagement by **25%** (Deposit + Card) and **12%** (Deposit + Merchant Services) for small business clients[1]

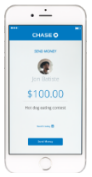
~85% reduction in WM advisor-supported client onboarding time[2]

Open a bank account online[3] or a self-directed investment account in Digital Wealth Management[4]… in minutes

Note: For footnoted information, refer to slide 83

Customers rely on Chase digital offerings throughout their daily lives

Providing choice, security, ease and personalization

Everyday activities enabled by Chase			**Embedded in customers' lives**
Get cash…		…using a **Chase eATM**	**5** ATM transactions per month[1]
Buy groceries…		…with **digital wallets**	**6** digital wallet transactions per month[1] **32** Debit and **21** Credit transactions per month[1]
Split lunch bill with friends…		…using **QuickPay with Zelle**	**3** P2P transactions per month[1]
Deposit a check…		…using **QuickDeposit**	**2** mobile QuickDeposits per month[1]
Check investment portfolio and get advice…		…using **ChaseMobile**	**12x** increase in use of online investing site since April 2017
Receive notification of purchase…		…by **text message** from Chase	**18** credit card transaction alerts monthly[2]

~47mm Chase customers bank through digital channels[3] – average 15+ log-ins per month[1]

Note: For footnoted information, refer to slide 84

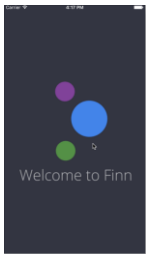
We seek to offer innovative digital solutions across products and asset classes

Portfolio of innovation

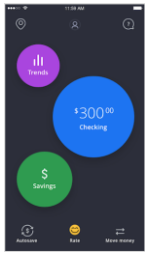
finn by CHASE

Finn – a mobile-only bank with tools designed to help customers take control of their money

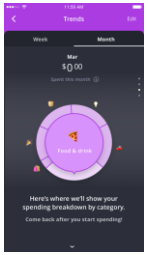
<4 mins to open an account[1]



Promote your financial well being



Rate purchases



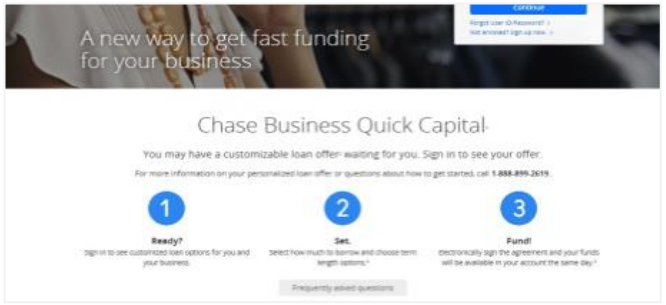
Categorize transactions

Chase Business Quick Capital

powered by… OnDeck

Chase Business Quick Capital – powered by OnDeck software – delivers small business customers same day access to capital, digitally

Strong customer satisfaction, with average NPS[2] of 83

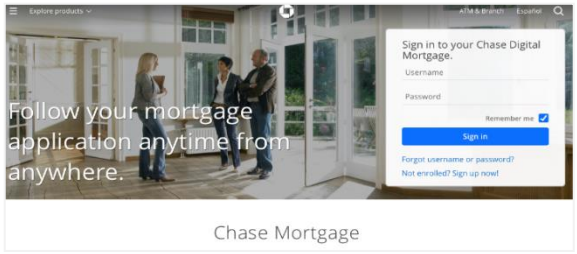


Chase Digital Mortgage

powered by… ROOSTIFY

Roostify partnership transforms the Chase Digital Mortgage process to be simpler, faster and more transparent

~15% reduction in time to complete mortgage refi process[3]



Chase Auto Direct

powered by… TRUECar

Chase Auto Direct – digital car buying service powered by TrueCar – allows customers to pick a car and secure financing in one place

~90% increase in booked loan $ volume, YoY[4]



Note: For footnoted information, refer to slide 85

We are investing significantly in Digital Wealth Management solutions

Building tailored solutions

Client types	Tailored digital solutions for our clients' needs

Just getting started



Do it yourself



Partner with advisor



Empower the advisor



Digital Advice

Digital Advice gives clients a simple and easy way to get and stay invested in diversified portfolios

In pilot with broad rollout planned later this year



Digital portfolio selection



Asset allocation recommendation

Online and Mobile investing

Online and Mobile investing, part of our new self-directed offering, gives clients a convenient way to move money and trade securities

Percent of trades placed online has doubled to ~55% since April 2017[1]





Ideas & Insights

Ideas & Insights, our content hub embedded within J.P. Morgan Online, empowers clients with world-class thought leadership

New J.P. Morgan website integrates Chase's back-end infrastructure with a Private Bank tailored interface





Digital Portfolio Insights

Digital Portfolio Insights will help advisors build stronger portfolios through sophisticated analytics and customized insights

Pilot launched February 2018 with broad rollout by end of 1Q18



Powered by J.P. Morgan Spectrum



Customized insights & analytics

These capabilities will be fully available in 2018 with ongoing enhancements

[1] Chase Wealth Management clients only

We provide a digital continuum for businesses of all sizes and complexities

Corporate clients

Digital platforms

CHASE for BUSINESS℠ | CHASE CONNECT℠ | J.P. Morgan ACCESS®

Seamless transition as clients' needs evolve

Direct access

APIs

- Seamless integration
- Flexibility

Multi-channel access to broad-based capabilities



Electronification is integral to our Markets business model

Institutional clients *– secular trends driving electronification*

FY 2017 Electronification

	% Electronic client ticket #	% Electronic client notional $
Equities[1]	99%	89%
Macro[2]	97%	46%
Spread[3]	51%	46%

[1] Equities includes all Cash Equities
[2] Macro includes securities & derivatives for Rates, Global Emerging Markets, FX and Commodities
[3] Spread includes securities & derivatives for Credit, Securitized Products and Municipal Finance

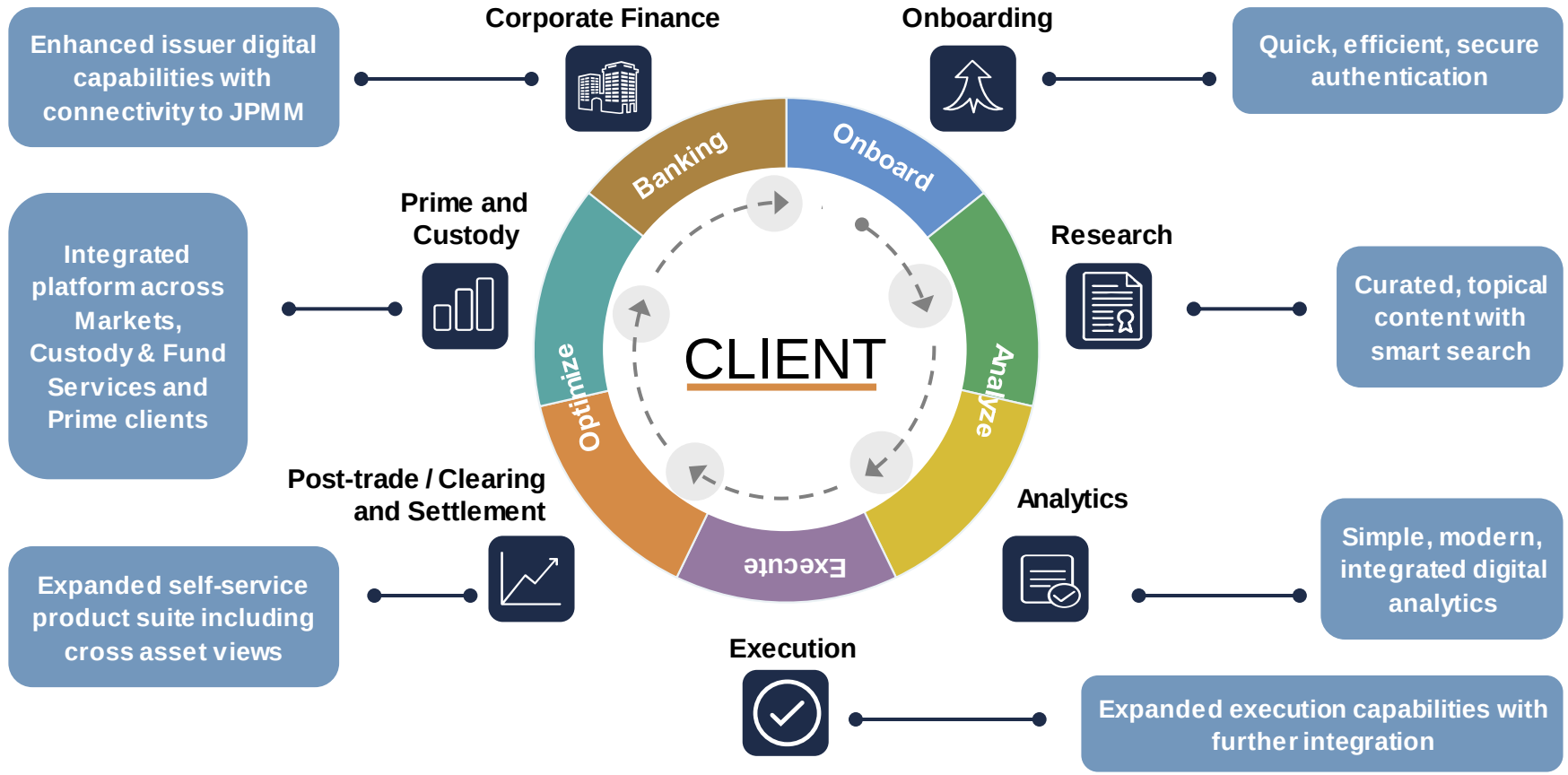
We are transforming our Markets business to deliver an end-to-end digital experience

Capabilities across the lifecycle through the clients' channel of choice

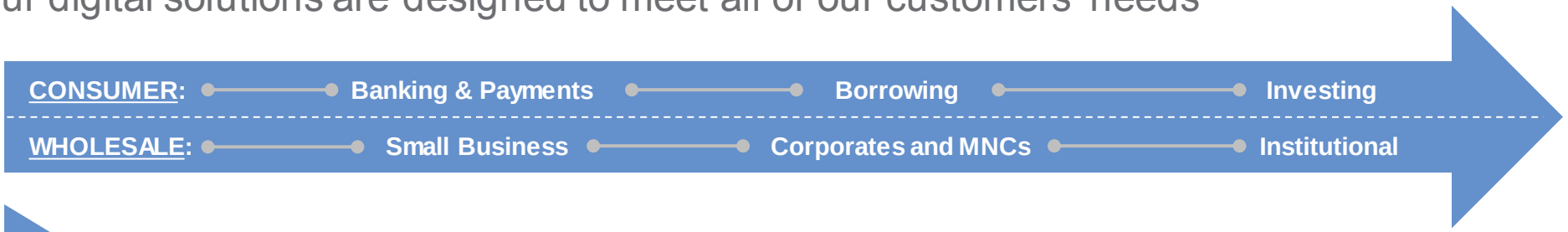
Through the clients' channel of choice…

Voice | Online | Mobile | APIs | 3rd Party

…we offer market leading capabilities across their lifecycle



Our digital solutions are designed to meet all of our customers' needs



- Investing to deliver differentiated, personalized experiences at scale
- Accelerating time to market – improving customer satisfaction and reducing cost
- Providing value through customer journeys and supporting businesses of all sizes and complexities
- Leveraging shared platforms and capabilities across the Firm
- Executing with discipline and urgency



Payments everywhere

A rapidly evolving payments landscape creates opportunities across our businesses

Industry overview and JPMorgan Chase position

Industry snapshot – the payments market is large, global and growing

Wholesale industry

- **$290B** — Global wholesale payments revenue[1]
- **~$16T** — Global trade flows[2]
- **165mm** — SWIFT messages a year[3]

Consumer industry

- **$6T** — Estimated total credit and debit card spend[5]
  - ~$10T total payments incl. ~$2.5T paper and ~$1.5T electronic[5]
- **~$350B** — Estimated total P2P market[6]
- **$5T+** — Estimated total U.S. merchant processing volume[7]

JPMorgan Chase is a market leader – delivering for our clients at scale

Wholesale – JPM

- **$5T** — Average daily value of payments (Firmwide)
- **#1** — USD clearing house[4]
- **120+** — Currencies to execute payments

Consumer – JPM

- **$900B+** — Debit & credit card sales volume[8,9]
- **$1T+** — Merchant processing volume[8]
- **$41B** — Volume processed through QuickPay with Zelle[8,10]

Market growth

- Expected global wholesale payments revenue to grow 7% annually through 2025[1]
- Credit and debit card spend in the U.S. expected to grow >5% annually over the next 5 years[11]
- Global trade growth of 3-4% in 2018 with future upside from new trade corridors[12]
- U.S. e-commerce purchase volume of $550B+ growing 6% annually to 2021, driven by faster growth in mobile commerce[13]
- 2/3 of U.S. adults are likely to be active P2P users by 2022[6]

Note: For footnoted information, refer to slide 86

We are well-positioned to deliver modern payments experiences

Consumer

We have invested in our payments value chain for over a decade…

Merchants / Partners | **Consumers**

Past

2008
Chase dissolves joint venture with First Data

2009/2010 – 2016/2017
Simplified offerings into strong, differentiated products and updated offers



2013 – 2014
Chase announces 10 year Visa deal and launches ChaseNet – first merchants go live

2015 – 2018
Co-brand renewals/new partnerships

amazon · Southwest · UNITED · BRITISH AIRWAYS · Disney · MARRIOTT · HYATT

2016
Chase launches Chase Pay℠ with key merchant partnerships

Pay · BEST BUY

2017
Chase acquisitions and partnerships

wepay · PayPal

2010 and 2017
Real-time payment launches

Chase QuickPay with Zelle

Present

…and we have tremendous reach

~75%
CCB customers are active across payments services[1]

~48mm
Debit and credit card payments customers[2]

>50% of the Zelle network
$41B in P2P volume[3], up 40% YoY

>70%
of our active credit card customers have embedded our cards in mobile wallets, recurring bills or merchant payments[4]

~22%
Credit card sales market share[5]

~12%
P2P market share[3,6]

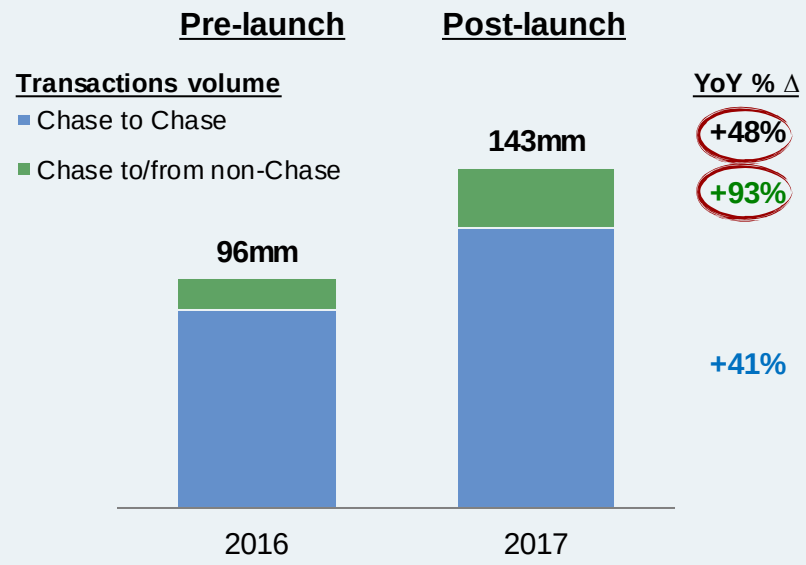
~40%
CCB customers move money through Chase[1]

Note: For footnoted information, refer to slide 87

Simplifying consumer and small business payments

P2P and integrated payments – growth opportunities

Chase QuickPay® with Zelle®



	Pre-launch	Post-launch	YoY % Δ
P2P money moved ($B)	$29	$41	+40%
Engaged users (mm)	3.5	4.4	+27%

P2P payments experiencing strong growth

CHASE + wepay

Becoming a major player in the integrated payments space, providing simple onboarding and activation of payments

Small businesses

- Instant onboarding for Chase payment processing with fast payouts
- Integration with merchants' preferred software solutions, both online and in-store

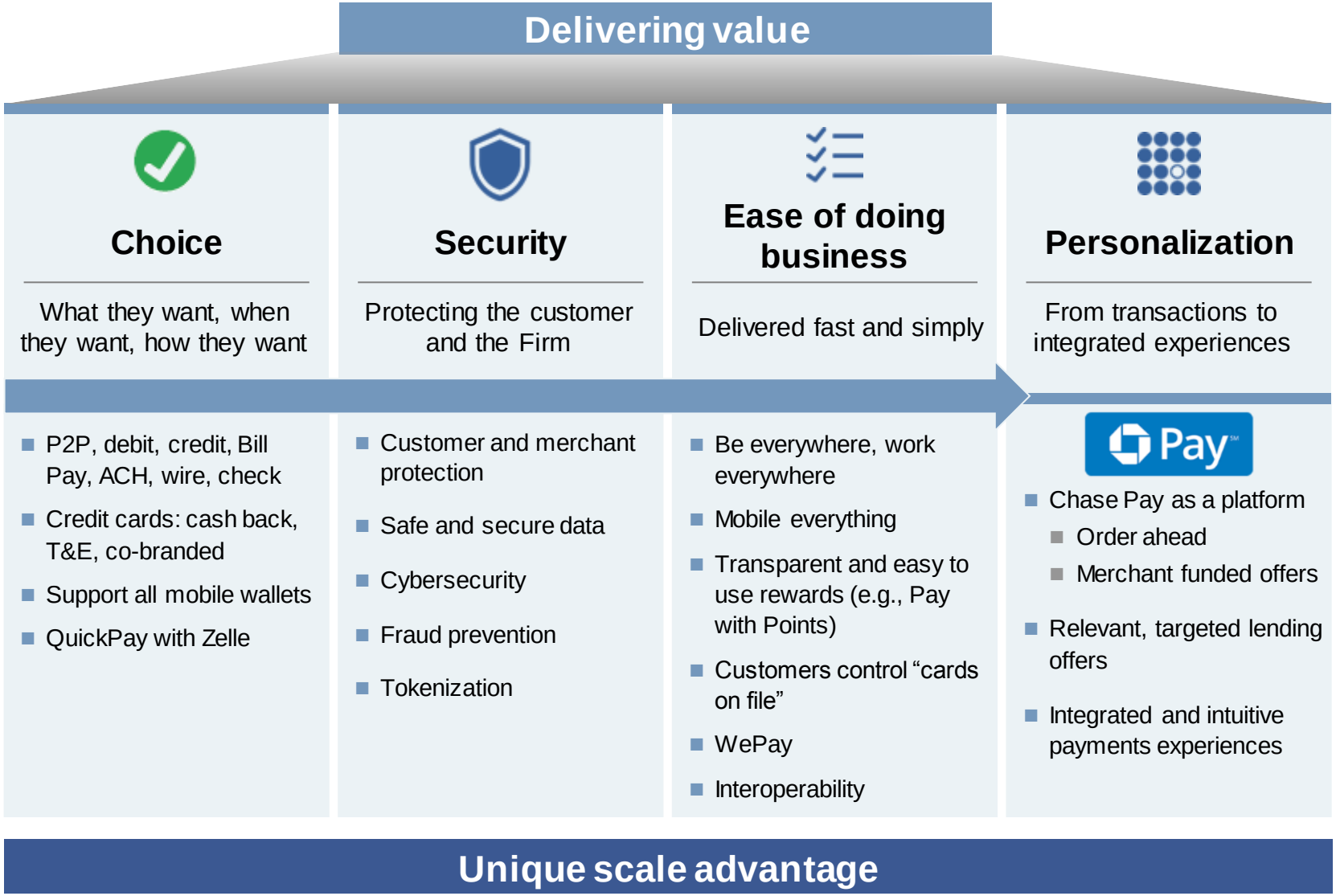
Software providers

- Simple integration of payments into software
- Access to Chase's network of 4 million small businesses
- Credibility, scale and security of the Chase brand

Differentiated payments experience for small businesses

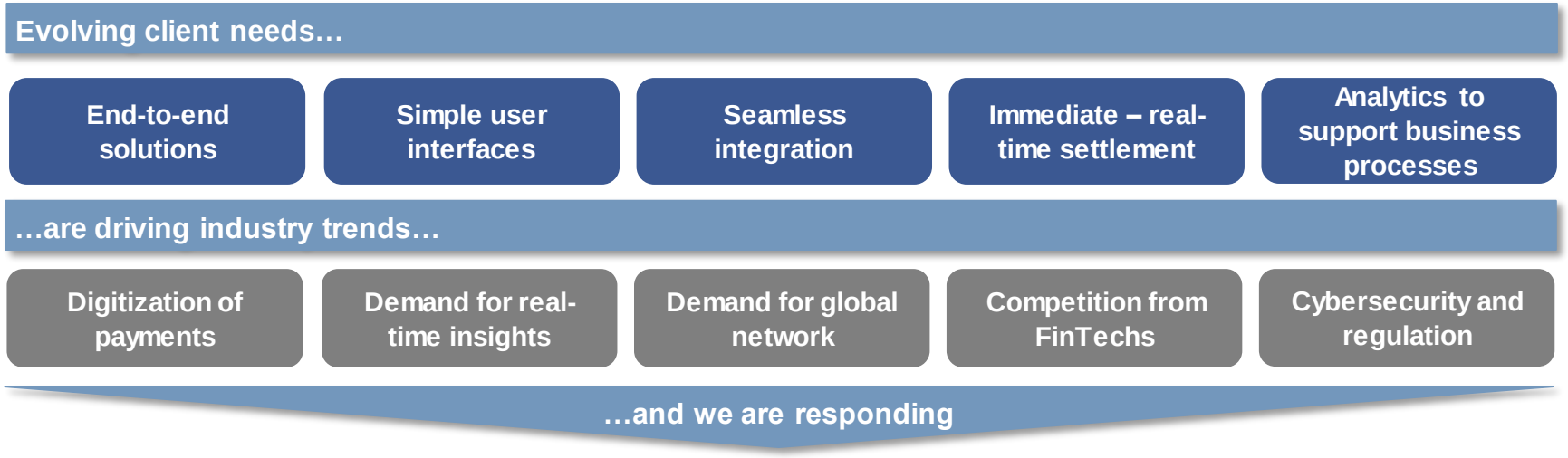
We have a strong foundation to drive habituation and personalization

Consumer – moving from transactional support to personalized, integrated experiences



We have built our competitive advantages on four pillars

Wholesale



1 Focus on client experience and ability to adapt to client needs

- Streamline and simplify on-boarding
- Multi-channel
- New products, functions and capabilities

2 Scalable, cross-business core platforms

- Global low cost options
- Digital platform
- Enable value-added services

3 Portfolio of innovation

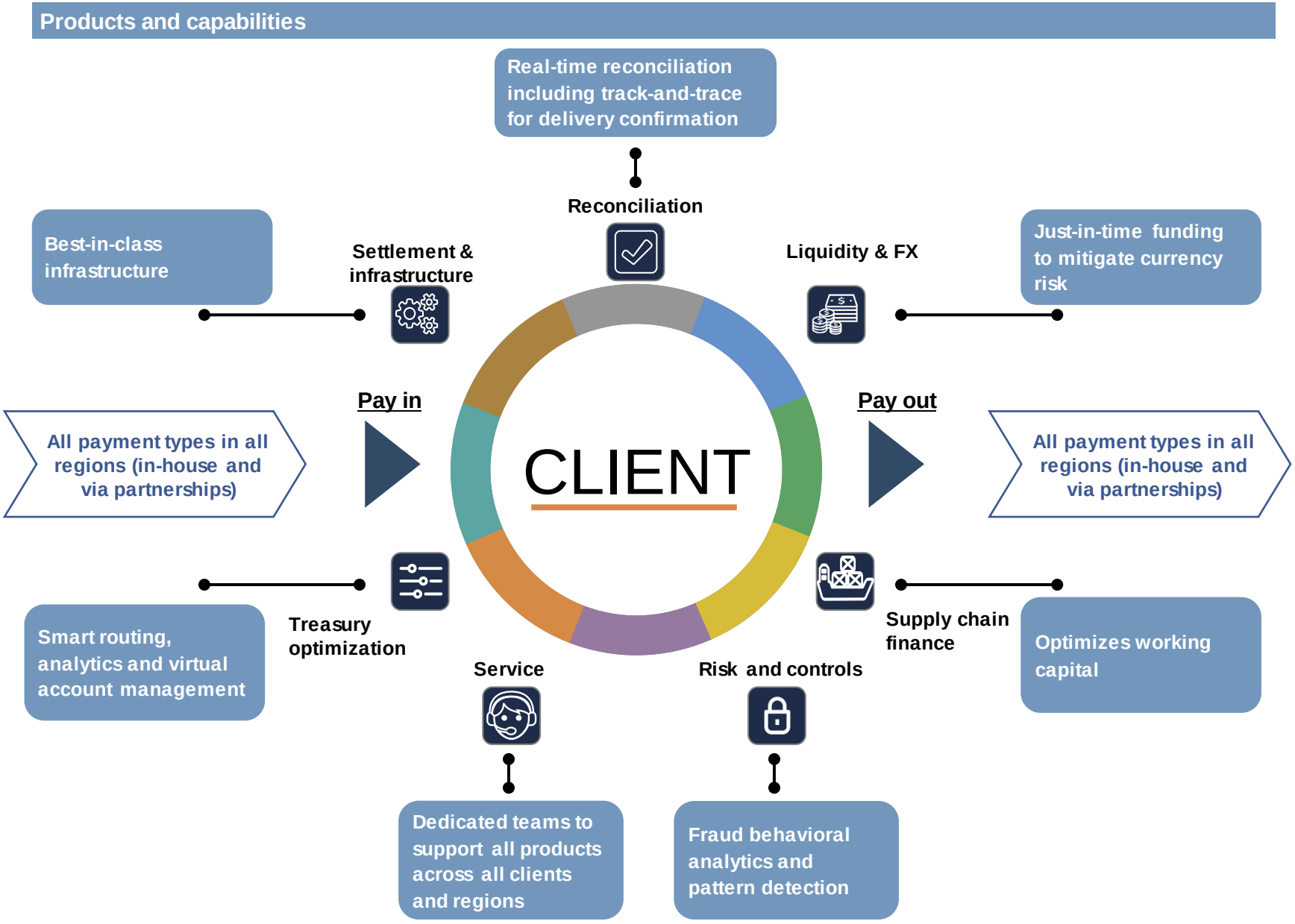
- Build, partner, invest
- Agile approach
- In-residence program
- Software integration

4 Best-in-class risk and controls

- Fraud behavioral analytics and pattern detection
- Infrastructure, scale and global footprint
- Scale advantage

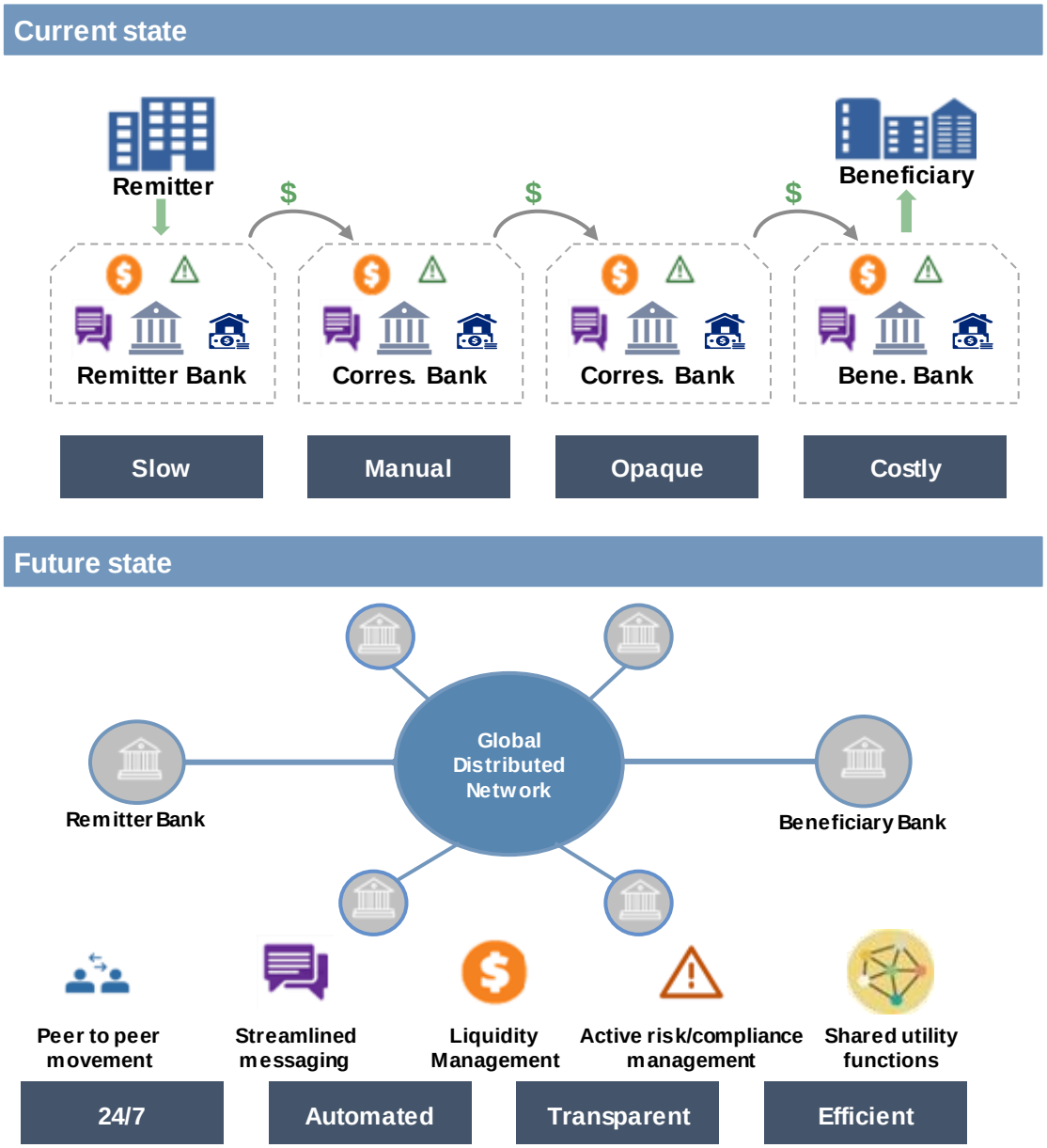
We have a complete offering across the payments value chain

Innovative client solutions



Leveraging blockchain technology to transform correspondent banking

Interbank Information Network ("IIN")



IIN Overview

- Leverages J.P. Morgan's Quorum, a blockchain technology
- Creates a secure, decentralized, permission-based network to securely exchange information
- IIN will reduce payment delays and touch points

We are positioned to lead the Real-Time Payments market

Collaboration driving development of new core payments system

Driven by The Clearing House, the key features of Real-Time Payments will be:

Speed	Amount	Availability	Messaging	Security
15	$25,000	24 / 7 / 365	ISO 20022	Credit Push
Money is available within 15 seconds	USD Credit transfers up to $25k	Instant payments availability	Extensible messaging	Sender initiates the transaction from DDA

We are uniquely positioned as a leader in RTP with collaboration between our wholesale and retail businesses

Working together…

J.P.Morgan

CHASE

- Sharing technology capabilities across wholesale and retail
- Working together with our largest corporate clients to design best in class solutions
- Collaboration positions us to lead the industry towards tighter electronic integration between corporate billers and consumers
- Shaping industry discussions with The Clearing House through early adopter forums

…to create more value for our clients

Key Use Cases

- Just-in-time supplier payments
- SMB Payments (vendor + basic payroll)
- Last minute bill payment
- Temporary employee w ages, emergency payroll, consumer refunds
- External account-to-account bank transfers
- Sending emergency funds

Protecting the Firm's stakeholders through robust security and controls

Securing everywhere – everything we do, anywhere we operate

Risk & Controls

- Safeguarding employee access and activity
- Securing the cloud
- Cybersecurity resiliency and recovery
- Protecting data and privacy
- Payment controls
- Securing third parties



Protect the bank

- Early detection and automated response
- Integrated threat intelligence
- Industry leading collaboration

Global 24x7 Cybersecurity Operations



Protect our clients

- Simplify and strengthen client authentication – proactive defense capabilities
- Monitor and test health of critical payment flows
- Advanced fraud detection – leverage machine learning coupled with human expertise
- Client education and awareness
- Robust sanctions screening process





We are uniquely positioned to deliver holistic payments solutions

- Complete set of assets, leveraging core platforms and businesses
- Market leader operating at scale in each of our payments strategies
- Continuously investing and innovating
- The opportunity ahead is large and growing
- Cross leverage investments across the company

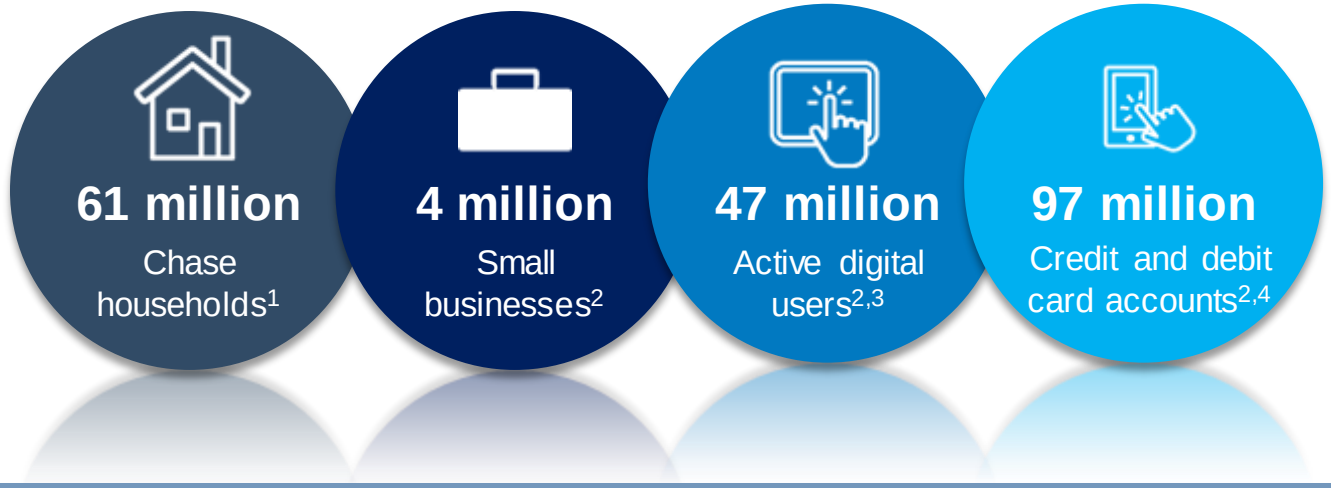
Choice | **Security** | **Ease of doing business** | **Personalization**

Business strategy

Performance and updates

Consumer & Community Banking – the power of our Consumer franchise

Diversified platform with relationships with ~50% of U.S. households



Goal is to be the easiest bank to do business with

Becoming a Chase customer

- Single application
- Pre-approved offers

Pay with Chase

- Whenever, wherever
- Keep your payments safe

Grow my wealth

- Help you save
- Help you invest

Grow my business

- Help you run your business
- Manage your cash flow

Own a home

- Digital mortgage
- Realtor partnerships

Own a car

- Buy and finance online
- Delivering value with partnerships

Note: For footnoted information, refer to slide 88

Leading industry deposit growth driven by multi-channel engagement model

CCB – Consumer Banking

Since 2012…

Consumer Bank customer satisfaction[1]
#2
National Bank
2017 JD Power

CBB average deposits
$626B
▲ 60 %
Industry growth of ~20%[2]

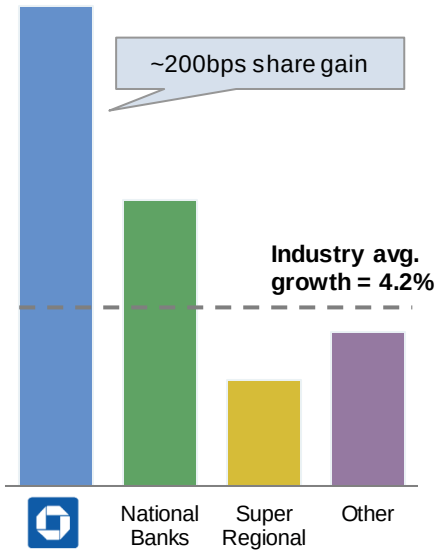
Retail deposit growth[2]
#1
8.7% share
▲ ~200bps

Client investment assets
$273B
▲ 72%
Record 2017

70% of our households use Chase as their primary bank[3]

Industry leading deposit growth

2012-2017 CAGR



CAGR	10%	6%	2%	3%
YoY	12%	6%	3%	5%

We have a multi-channel strategy

✓ Physical presence

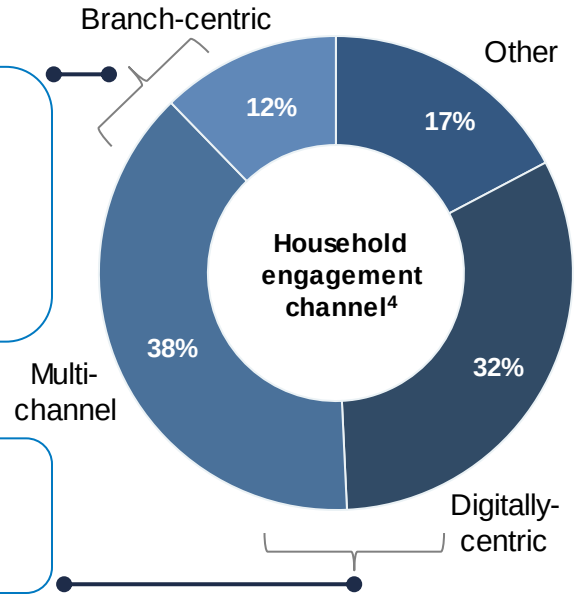
- 50% of households are branch-centric or multi-channel
- ~1mm customers in our branches daily[5]
- ~60% of households use branches every quarter[6]
- ~75% of our deposit growth comes from customers who use branches

✓ Digital engagement

- 70% of households are digitally-engaged
- 40% more deposits and investments for digitally-engaged established customers who use Chase as their primary bank[7]

✓ Leverage our brand and marketing

- Power of Chase brand enhances J.P. Morgan brand for Asset Management



BUSINESS PERFORMANCE AND STRATEGY UPDATES

Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 89

We continue to transform our physical footprint to sustain strong growth

CCB – Consumer Banking – branch network

Branch network optimization

2017

69 new builds[1]

197 consolidations[1]

20% reduction in square footage of new branch builds since 2012

75% of branches could be exited in 5 years…

…and **80%** could be extended for >10 years

Branch expansion

Next 5 years

~400 New branches

15-20 New markets

$1T Deposit market

Innovation and changing branch formats – aligned to customers' preferences

- Standalone ATMs
- Everyday express
- Full service
- New flagships







Expand while optimizing

[1] Includes relocations

We continue to grow and innovate our credit card portfolio

CCB – Card and Merchant Services

BUSINESS PERFORMANCE AND STRATEGY UPDATES

Since 2012…

Credit Card NPS[1]
▲ 18 points

Credit Card sales[2]
$622B
▲ 63%
Industry growth of ~50%[3]

Credit Card sales market share[4]
22.4%
▲ ~190bps

Credit Card outstandings
$150B
▲ 17%
Industry growth of ~20%[5]

Merchant Services NPS
▲ 13 points
Since 2016

Merchant processing volume
$1.2T
▲ 82%
~2x industry average[6]

Wholly-owned merchant acquirer[6]
#1
18.6% share
▲ ~610bps

Continued card innovation; 99% of co-brands renewed

Chase branded cards



Sapphire Reserve



Ink



Freedom Unlimited

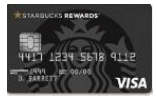
New co-brand products



Amazon Prime

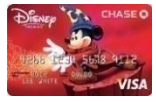


United TravelBank



Starbucks

Co-brand renewals



Disney



Marriott



Hyatt

Sapphire Reserve highlights

Average income[7]	~$180k
Average FICO	~785
Average annual sales volume[8]	~$39k
Sales active rate[9]	96%
Renewals[10]	>90%

Chase spend uplift >50%[11]

What's next?

- Integrated payments experience
- Spend and lend – flexibility and enhanced targeting
- Customer focused investment in digital and mobile
- Deeper engagement with Card customers across CCB

Note: For footnoted information, refer to slide 90

We continue to build a higher quality and less volatile home lending business

CCB – Home Lending

Since 2012…

Home Lending NPS[1]

▲ *30 points*

Average loans

$237B

▲ *16%*

Industry growth of ~8%[2]

Jumbo originator[3]

#2

14.2% share

▲ *~700bps*

Strong core loan growth largely driven by jumbo loans we retain on our balance sheet while de-risking the business

Home Lending average loan balances ($B)



2012-2017 CAGR

Total: +3%

Non-core: (15)%

Core: +26%

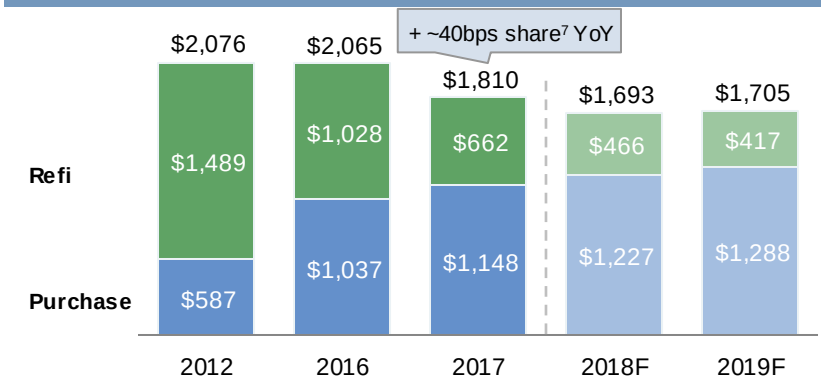
NCO rate down 235bps to 0.02%

Foreclosure inventory down ~90% to 35k

	2012	2017
Originations[7]	$181B	$98B
% Retained[7]	4%	41%

Primarily jumbo

Well positioned to capture the growing purchase market – industry originations ($B)[6]



	2012	2016	2017	2018F	2019F
JPM refi share	5.5%		5.9%		
JPM purchase share	4.5%		5.1%		

Capturing growth opportunity

61mm CCB households[8] → **30mm** with mortgage[9] → **5mm** with Chase mortgage[9]

+10% Chase Home Lending advisors in 2017…

…and **+500** over next 5 years

Note: For footnoted information, refer to slide 91

We continue to grow our auto originations and deepen our relationships

CCB – Auto

Since 2012…

Auto Finance NPS[1]

▲ *10 points*

Auto EOP loans and leases

$83B

▲ *53%*

Auto finance bank lender[2]

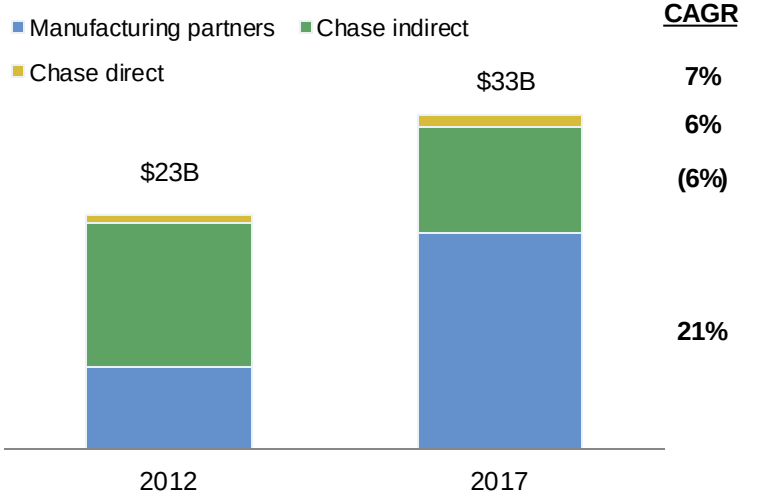
#3

4.2% share

▼ *~40bps*

Our origination growth has been driven by our Manufacturing partnerships

Originations by channel



2012-2017 CAGR

7%

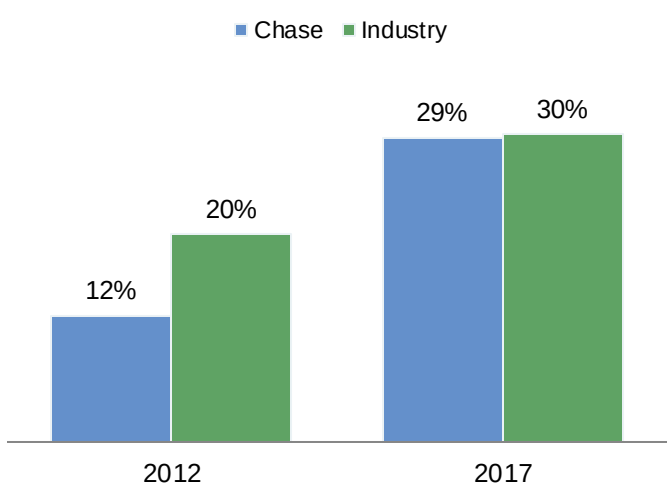
6%

(6%)

21%

Our lease penetration has grown in partnership with our Manufacturers, remaining within industry averages[3]

Lease penetration



We continue to invest in strengthening our partnerships

Manufacturing partners
Support lease growth through prudent risk framework

Dealer financing
Leverage JPMC suite of products

Digital engagement
Improve digital customer experience

Note: For footnoted information, refer to slide 92

Significant opportunity to grow market share and deepen relationships

CCB – Business Banking

Since 2012…

Business Banking NPS[1]

▲ *20 points*

Business Banking average loans

$23B

▲ *28%*

Primary bank market share[2]

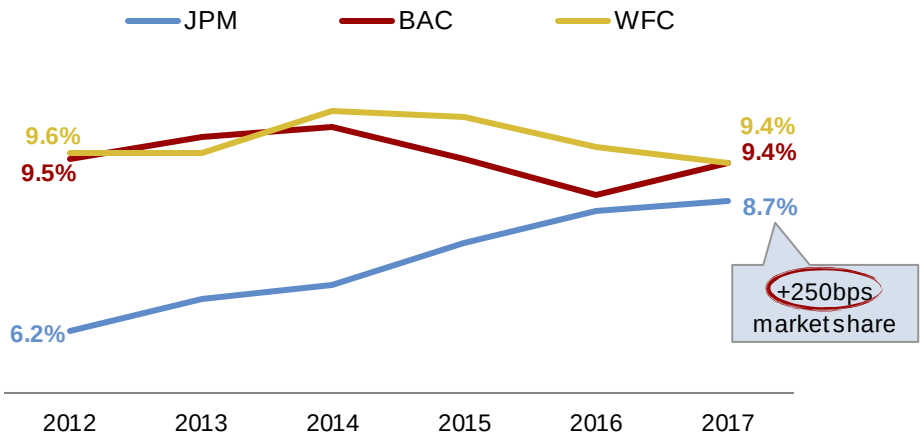
#3

8.7% share

▲ *250bps*

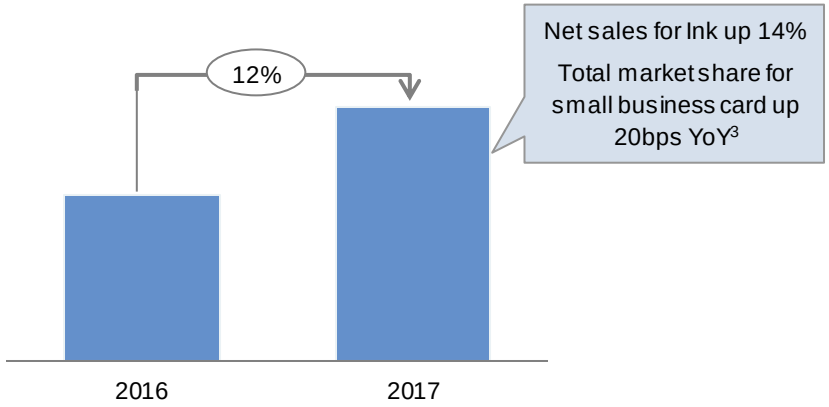
We have seen strong gains in small business primary bank market share[2]

Small business primary bank market share



Sales and market share continue to increase for small business cards

Small business card net sales (incl. Ink and partner card)



New initiatives expected to continue driving growth in Business Banking

- Chase Business Online
- Bill.com
- Single application
- Chase Business Quick Capital
- WePay
- Bankers and new markets

+500 bankers over next 5 years dedicated to small and middle market businesses

Single application has helped drive an increase in new to bank multi-product engagement[4]

25% **Deposit and Card**

12% **Deposit and Merchant Services**

Note: For footnoted information, refer to slide 93

Corporate & Investment Bank – steady, consistent strategy

Leading client franchise



Sustaining our lead across three horizons

Maintaining day-to-day discipline

- Organic growth
- Efficiencies and cost discipline
- Regulatory change management
- Risk management discipline

Optimizing our current model

- Product digitization
- Client experience
- Seamless integration
- Multi-channel accessibility

Transforming for the future

- Markets powered by artificial intelligence
- New technologies for custody and settlements
- Global payments platform

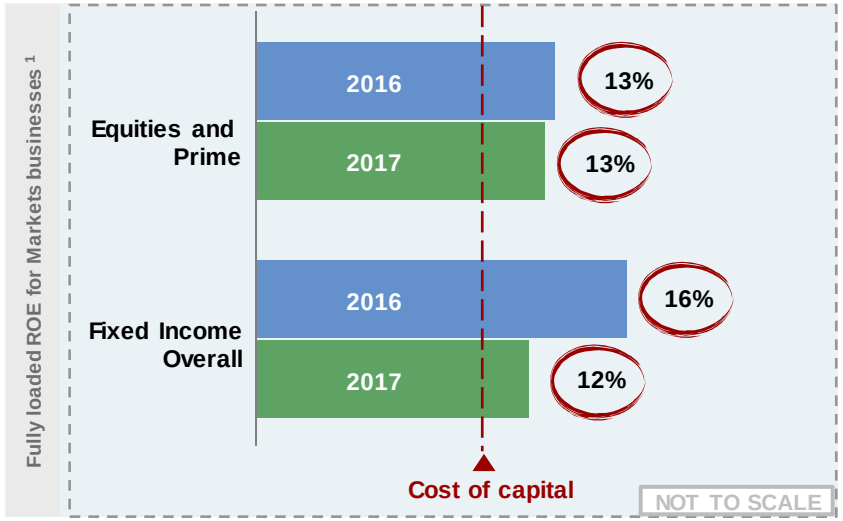
Well positioned to benefit from global wallet growth, driven by emerging markets over decades

Note: For footnoted information, refer to slide 94

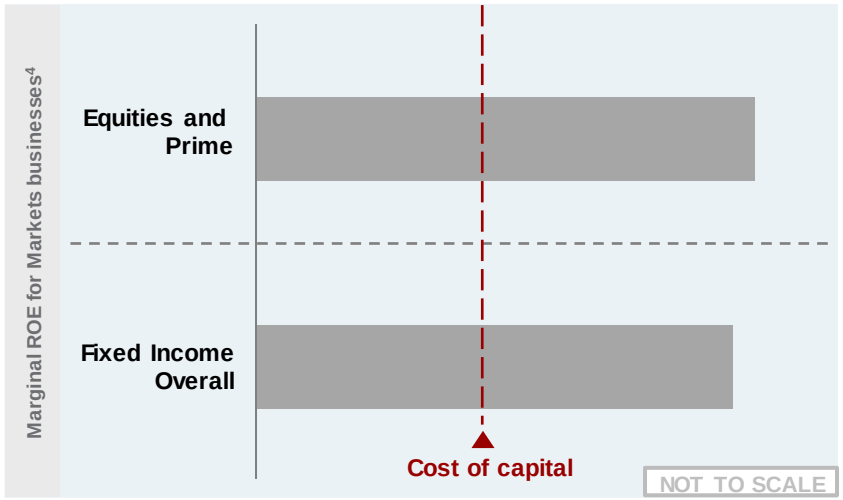
Continue to return above cost of capital

CIB – Markets

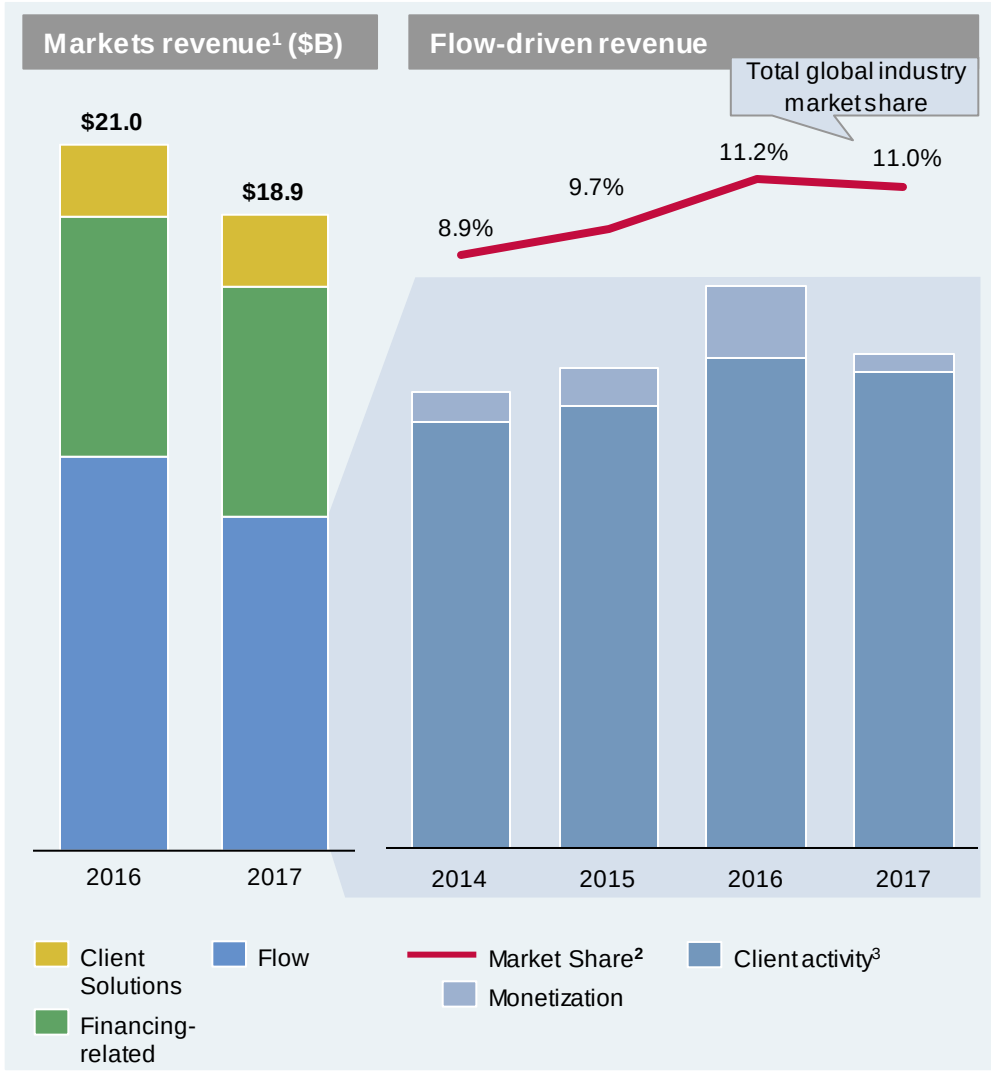
Markets ROE – fully loaded



Markets ROE – marginal



Client activities generate stable revenue

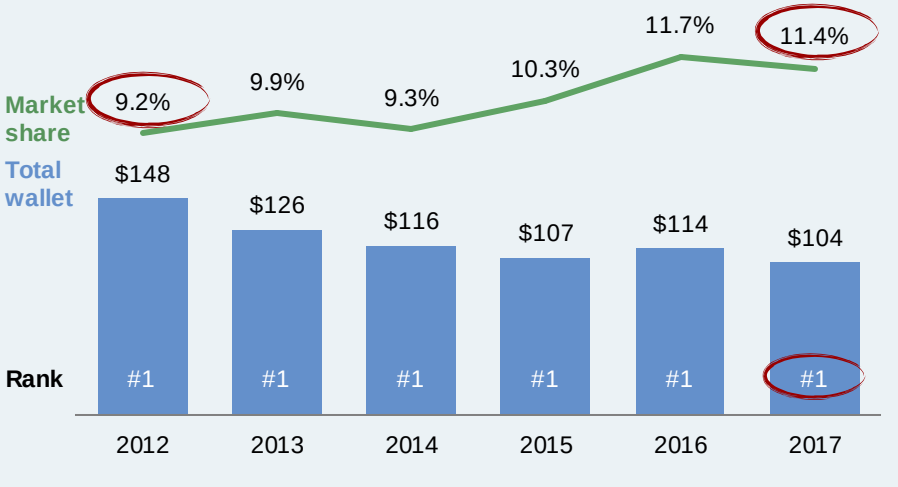


Note: For footnoted information, refer to slide 95

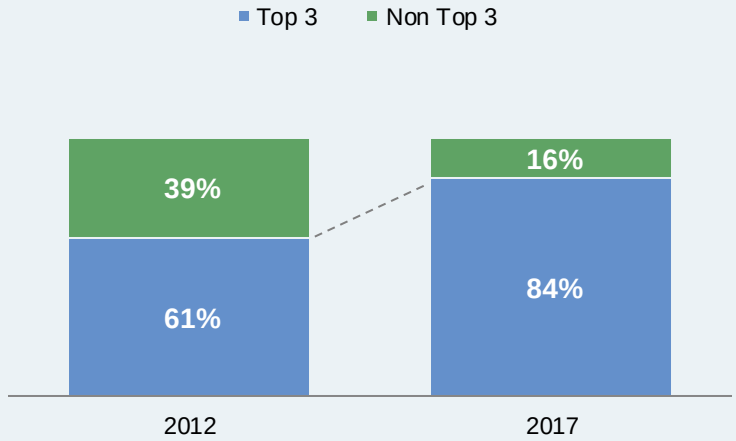
Preserve our leading positions and deepen our share

CIB – Markets

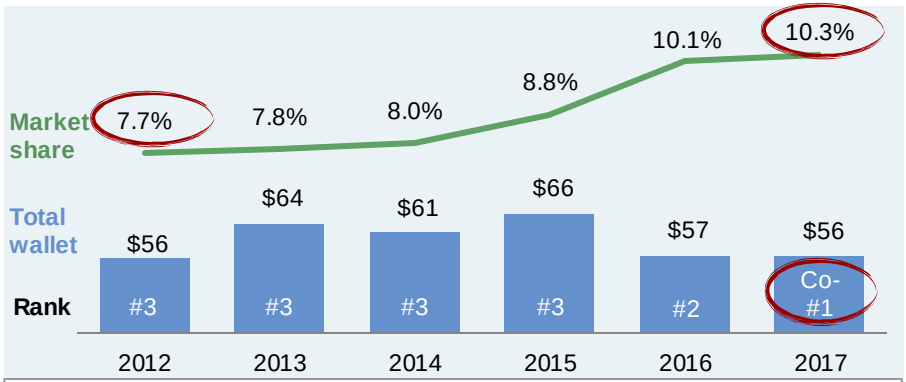
FICC – total wallet and JPM positioning ($B)[1]



Number of JPM top 3 positions across 31 Markets categories[2]



Equities & Prime – total wallet and JPM positioning ($B)[1]



Prime Services	2012	2013	2014	2015	2016	2017
Share	10.7%	10.4%	10.4%	11.3%	12.0%	13.8%
Rank	#2	#3	#3	#3	#2	#2

Key priorities

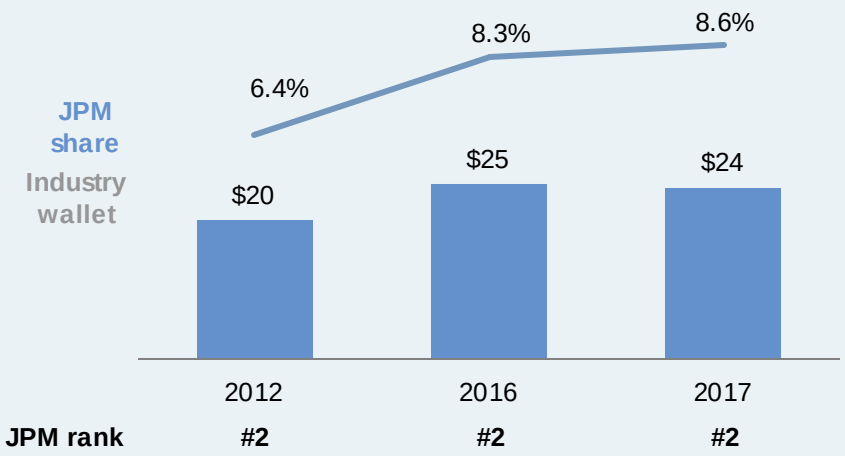
- Defend our leadership positions
- Leverage our scale and completeness
  - Continue to invest in Cash Equities and maximize synergies with Prime
  - Capture linkages between Banking and Markets
- Seize opportunities presented by electronification across markets

Note: For footnoted information, refer to slide 96

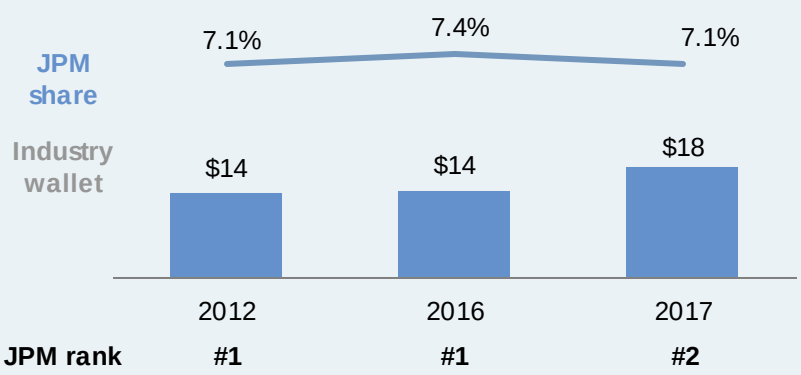
Significant progress in M&A – preserving strong positions in ECM and DCM

CIB – Investment Banking

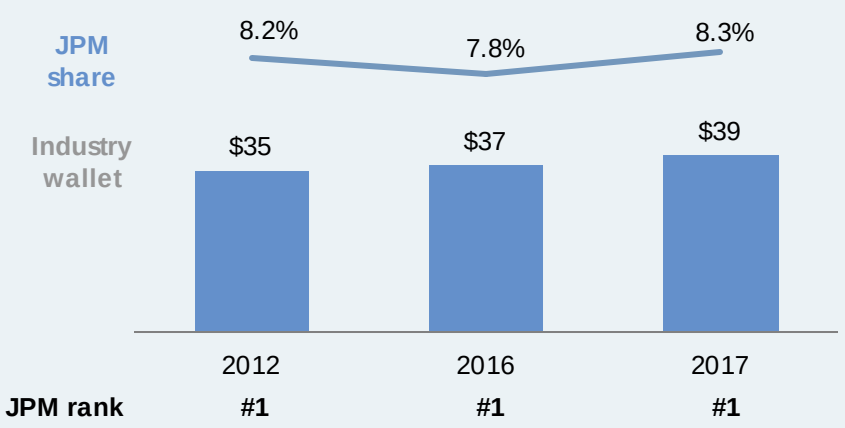
M&A industry wallet ($B) and JPM wallet share (%) trend



ECM industry wallet ($B) and JPM wallet share (%) trend



DCM industry wallet ($B) and JPM wallet share (%) trend



Key priorities

- Senior banker hires in targeted areas
- Continue to focus on transformational cross-border transactions
- Collaboration and partnership across the Firm to seamlessly deliver offerings to clients
  - Partner with the CB to better serve Middle Market clients
  - Partner with the Private Bank to better serve Family Offices
  - Capture linkages between Banking and Markets

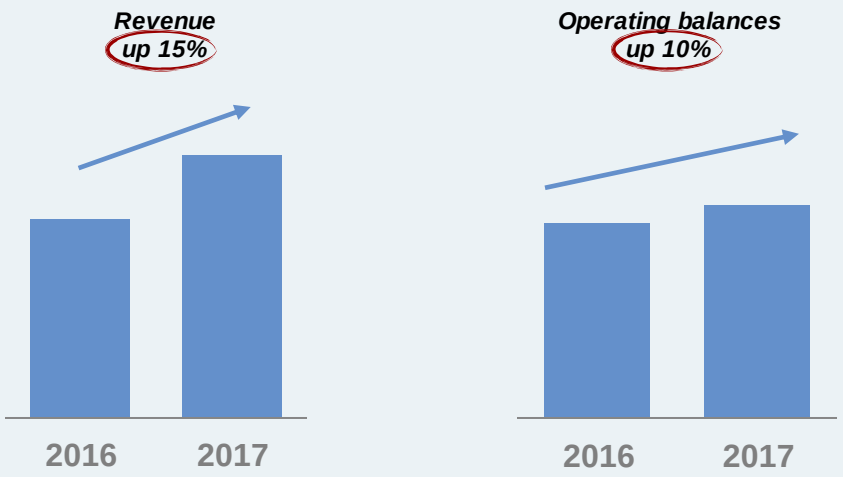
Source: Dealogic as of January 1, 2018. ECM excludes shelf deals. DCM excludes money market, short-term debt

Growth through investments in innovative product and platform offerings

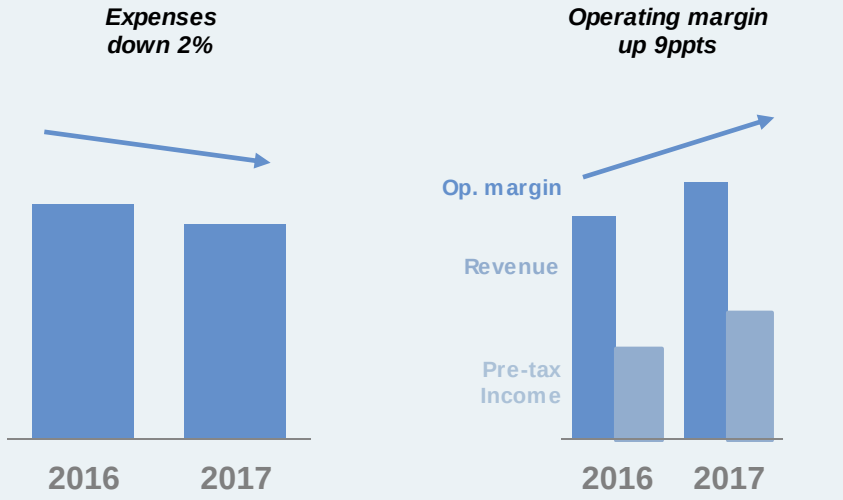
CIB – Treasury Services

Treasury Services performance

Strong growth in revenue and operating balances



Continued expense discipline and improved operating margin



Key priorities

- Develop scalable core payment platforms and provide low cost services
- Focus on innovation in an agile and flexible manner
- Continue to improve the client experience by simplifying the onboarding process and through flexible channels
- Provide best in class controls
- Strengthen position in international markets and follow clients where they grow especially as new trade corridors are established

JPM CIB Treasury Services market rankings

Regional Rankings[1]	2016	2017	
North America	#2	#2	~
EMEA	#5	#4	↑
APAC	#4	#4	~
LATAM	#3	#2	↑

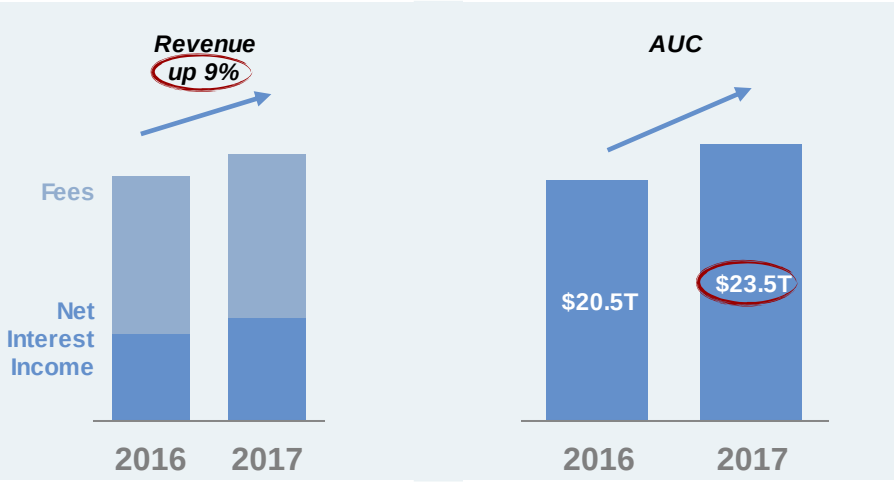
[1] Coalition. 2016 and preliminary 2017 regional rank analysis based on peer-set: BAML, BNPP, CITI, DB, HSBC, SG, SCB, and WFC, and reflects JPMorgan Chase business structure.

Investments have improved client experience – positioned for growth

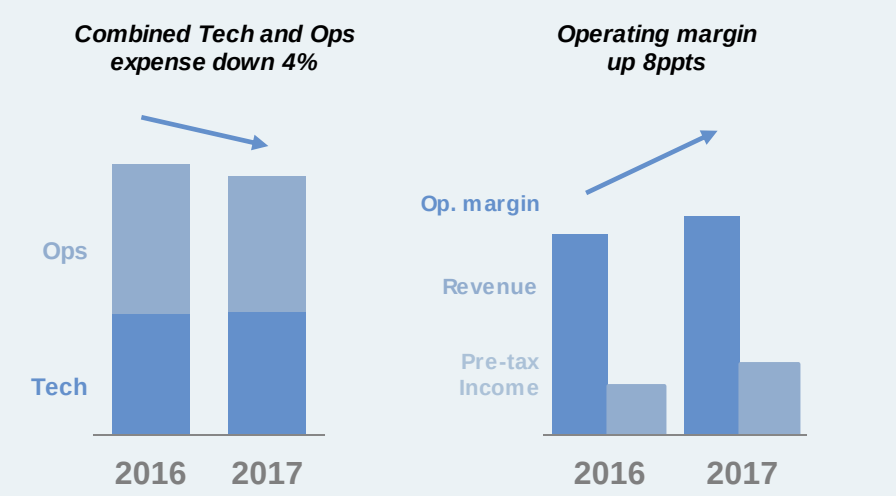
CIB – Securities Services

Securities Services performance

Strong growth in revenue with record AUC levels



Improved operating efficiency and operating margin



Key priorities

Delivering service excellence

- $1.3T BlackRock win will be the largest transition in the industry and leverages our full suite of products
- Highest ever client satisfaction and retention levels

Positioning for growth

- Our investments align with the priorities of our clients
  - Improved data and analytics
  - Middle office solutions
  - Comprehensive Emerging Market capabilities
  - Enhanced ETF servicing platform

Creating scale and efficiency

- Improving operating margin and delivering scale through increased investment in technology

Commercial Banking – building our business around our clients

Leading client franchise



Core principles of CB model

Coverage aligned to client needs	Broad-based differentiated capabilities	Intense client focus
▪ Well-defined segmentation	▪ Leading IB solutions	▪ Simplicity
▪ Local delivery	▪ Digitally-enabled	▪ Speed of delivery
▪ Industry specialization	▪ Flexible across clients' lifecycle	▪ Transparency

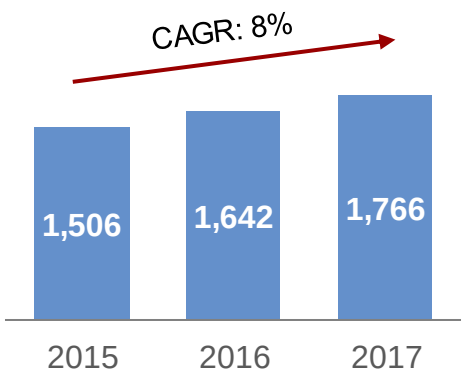
[1] Based on total count of client-facing employees
[2] The rank is based on S&P Global Market Intelligence as of 12/31/2017

Commitment to growth – investing to add great clients and deepen relationships

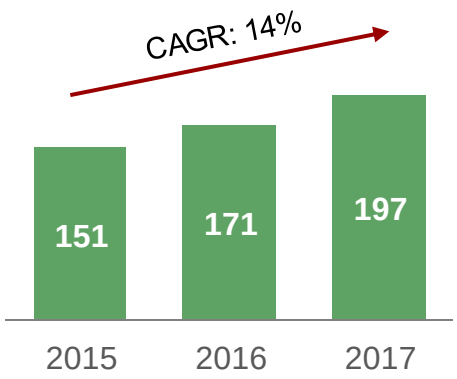
Commercial Banking

Working to deliver value to clients

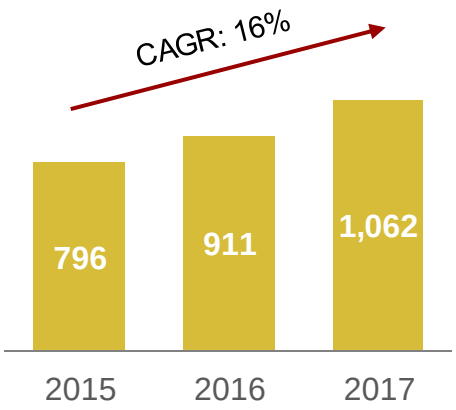
Banker count up 100+ YoY[1]



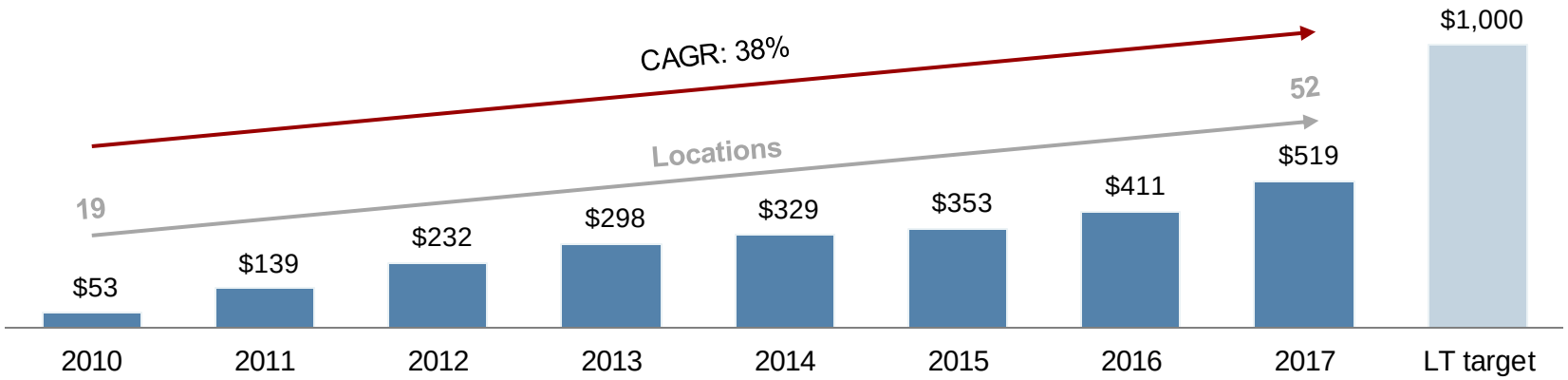
Increased calling intensity (000s)[2]



Driving new relationships[2]



Growing expansion market revenue in Middle Market Banking ($mm)



Note: The prior period amounts have been revised to conform with the current period presentation

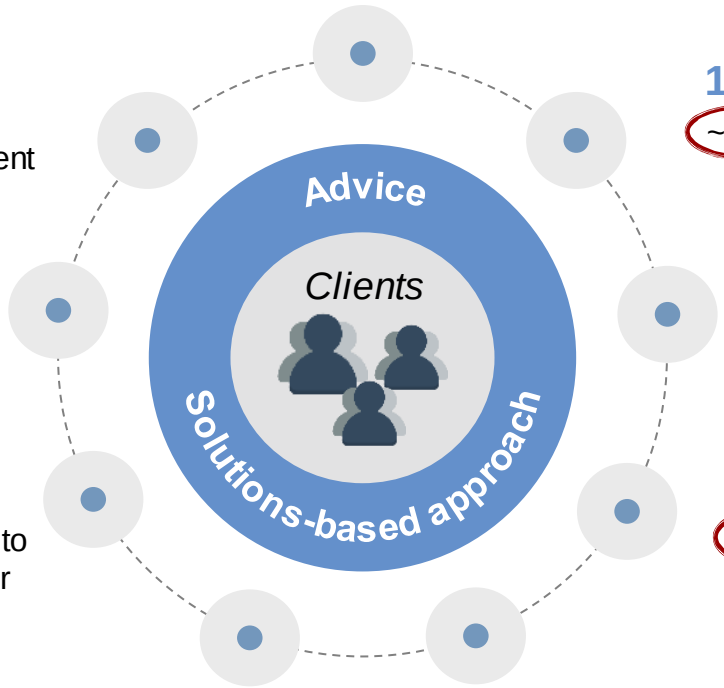
[1] Based on total count of client-facing employees

[2] Excludes Commercial Term Lending

Unmatched capabilities – investing to deliver more value to clients

Commercial Banking

CHASE | **Broad-based capabilities to serve clients' evolving needs** | J.P.Morgan



Investment Banking

38% of N.A. IB fees from CB clients[1]

Asset & Wealth Management

~$135B in Asset Management AUM from CB clients

16 Specialized Industries

~50% of C&I clients covered within specialized industries

Treasury Services

~90% of CB clients use treasury service capabilities[2]

International

Serving 2,000+ international clients, with presence in 24 international cities

Merchant Services

End-to-end solutions leveraging access to the #1 wholly-owned merchant acquirer

Deposits

~80% of CB clients have deposit accounts with JPMC[2]

Commercial Card

>$20B of total annual card spend

Loans

Loan growth outpacing industry across both C&I and CRE

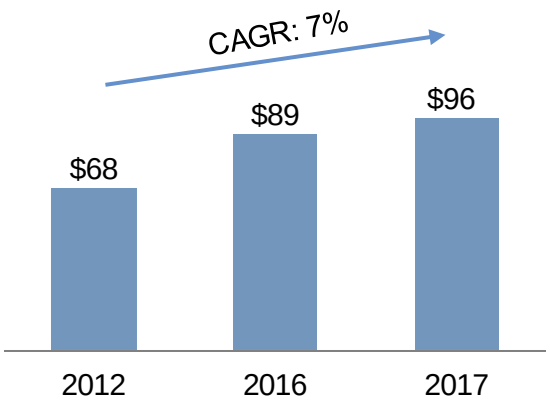
[1] Represents the percentage of CIB's North America IB fees generated by Commercial Banking clients, excluding fees from fixed income and equity markets which is included in Commercial Banking gross investment banking revenue

[2] Excluding Commercial Term Lending

Lending – deliver smart growth across our C&I and CRE loan portfolio

Commercial Banking

Average C&I loans outstanding ($B)[1]

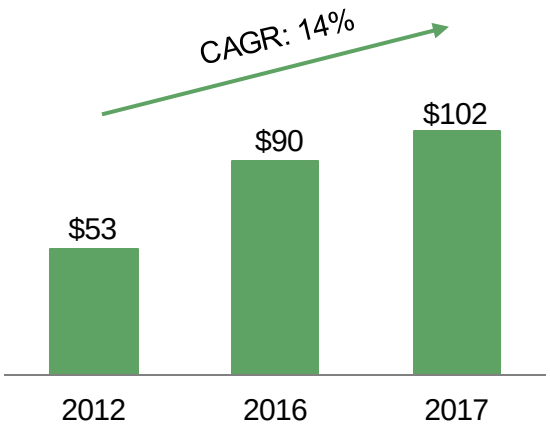


YoY	
1Q17	8%
2Q17	9%
3Q17	8%
4Q17	6%
QoQ Ann[2]	
4Q17	6%

High quality portfolio

- Maintaining proven client selection and risk discipline
- Benefiting from investments in expansion markets and specialized industry coverage
- Credit quality remains strong – average 6bps NCOs since 2011; 5bps in 2017

Average CRE loans outstanding ($B)



YoY	
1Q17	17%
2Q17	15%
3Q17	13%
4Q17	9%
QoQ Ann[2]	
4Q17	5%

How we compete

- Deep client relationships and speed of execution, in markets we know
- Selective around new commitments in construction
- High quality, granular loan portfolio – average 4bps NCOs since 2011; (1)bp in 2017

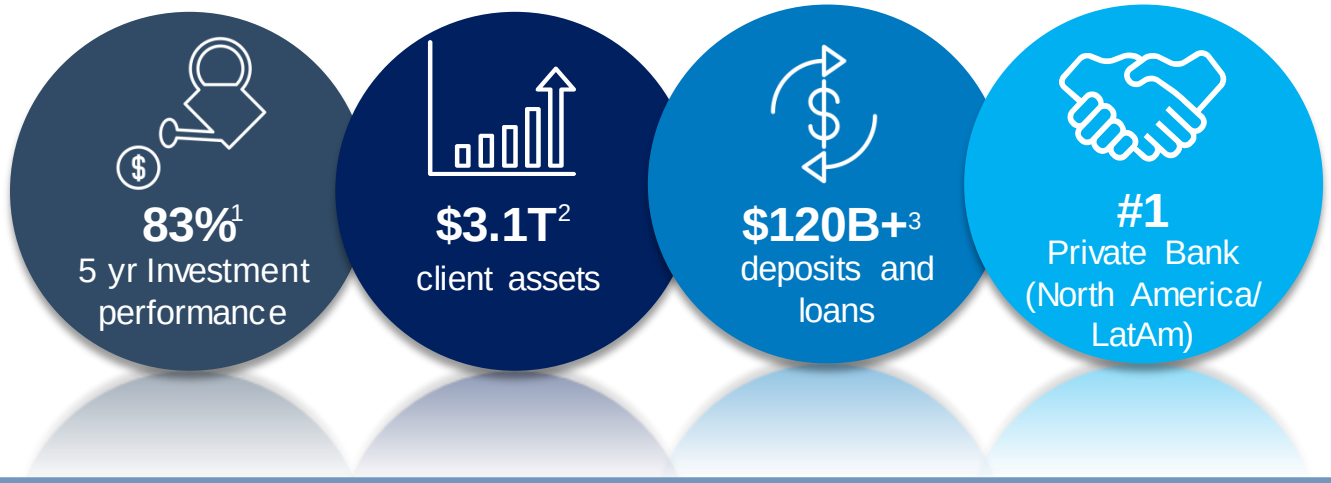
Note: CB's Commercial and Industrial ("C&I") and Commercial Real Estate ("CRE") groupings used herein are generally based on client segments and do not align with regulatory definitions

[1] Includes asset-based loans

[2] Quarter-over-quarter annualized

Asset & Wealth Management – focus on client outcomes

Leading client franchise



AWM priorities

Obsess about client experience

- Best of J.P. Morgan and Chase
- Integrated coverage model leveraging the whole Firm
- Rigorously focus on pain points across the client journey

Digitize everything

- Mobile first – digital everything
- Human & digitally enhanced advice

Investments for everyone

- Fiduciaries across all asset classes and the entire wealth spectrum
- Active & passive

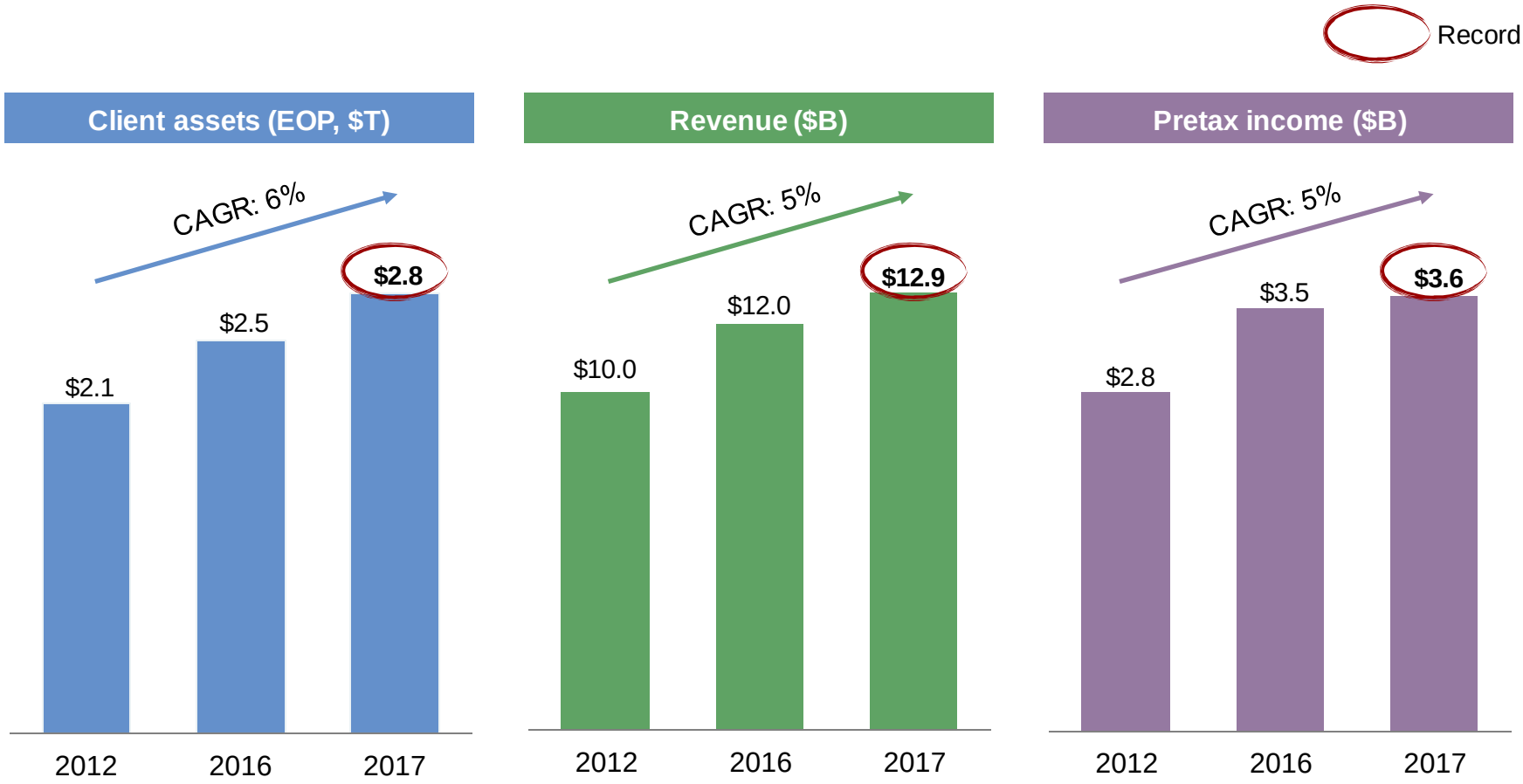
Simplify for growth

- Excel where we can be a market leader
- Exit where we don't have competitive advantages

Note: For footnoted information, refer to slide 97

Continued strong financial performance

Asset & Wealth Management

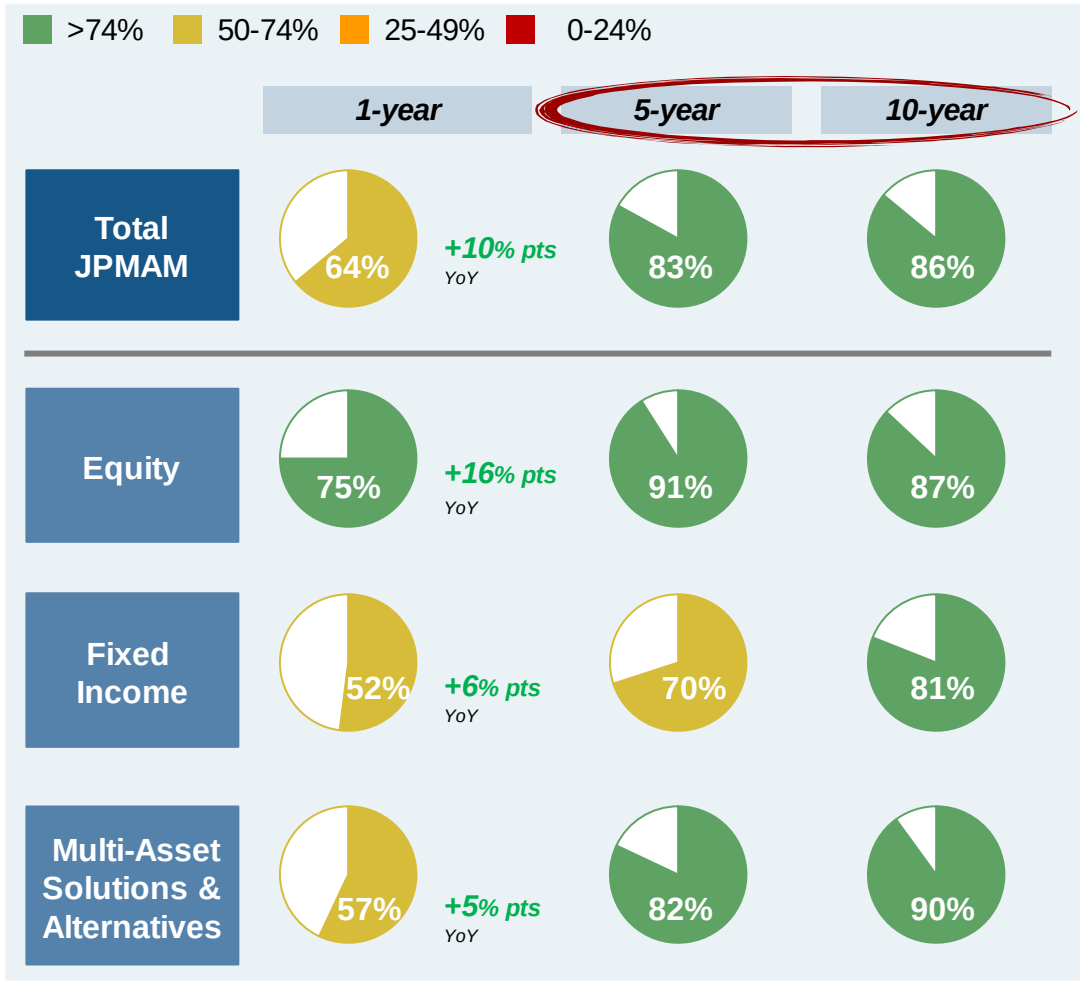


2017	LT Asset flows	Pretax margin	ROE	Loans (Avg.)	Deposits (Avg.)
	$84B	28%	25%	$123B	$149B

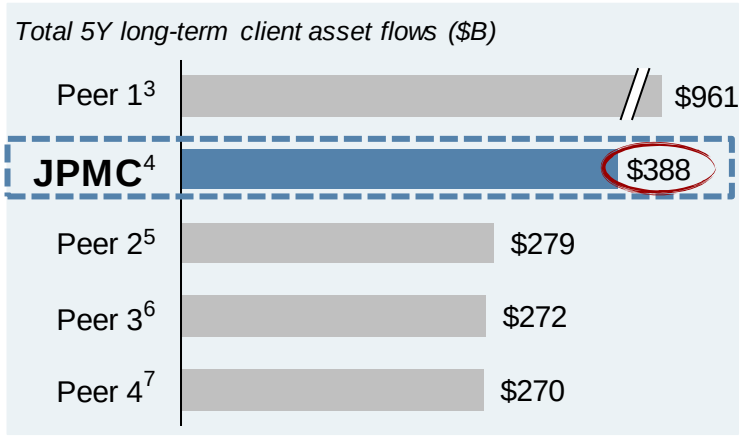
Leading long-term performance, consistently strong flows, product innovation

JPMC Wealth Management and Asset Management

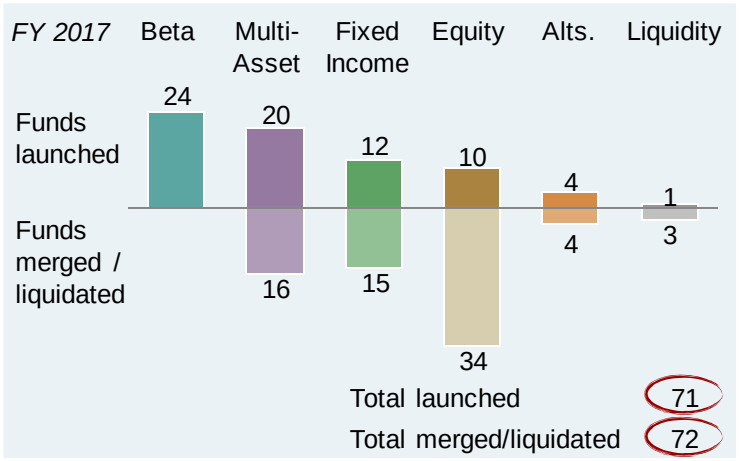
2017 % of JPMAM long-term mutual fund AUM over peer median[1] (net of fees)



#2 in total flows over past 5 years[2]



Constantly innovating and refining our offering



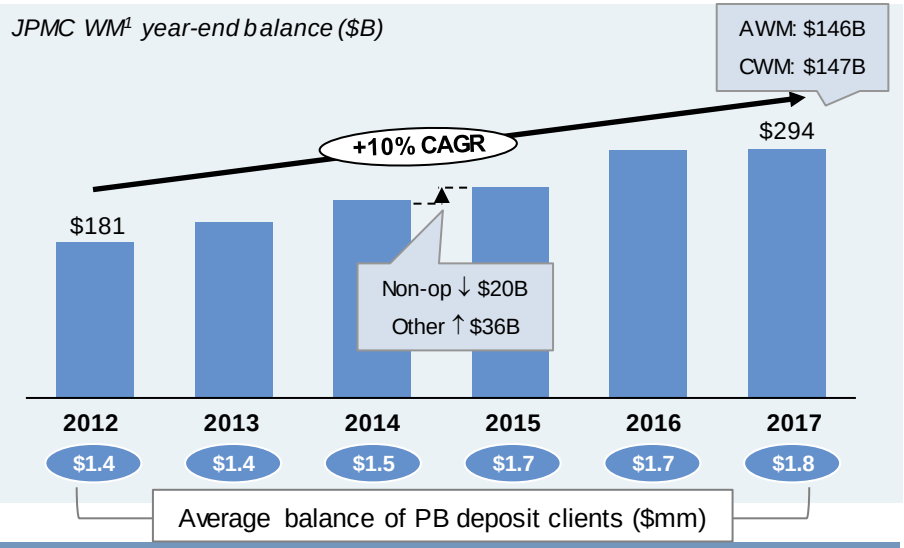
Positive client asset flows every year beginning in 2004

Note: For footnoted information, refer to slide 98

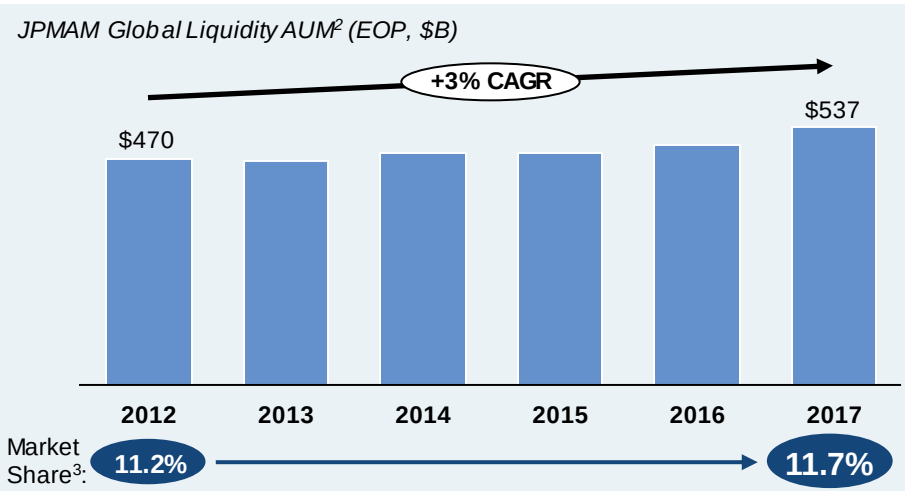
Complementing client portfolios with banking and liquidity products

JPMC Wealth Management and Asset Management

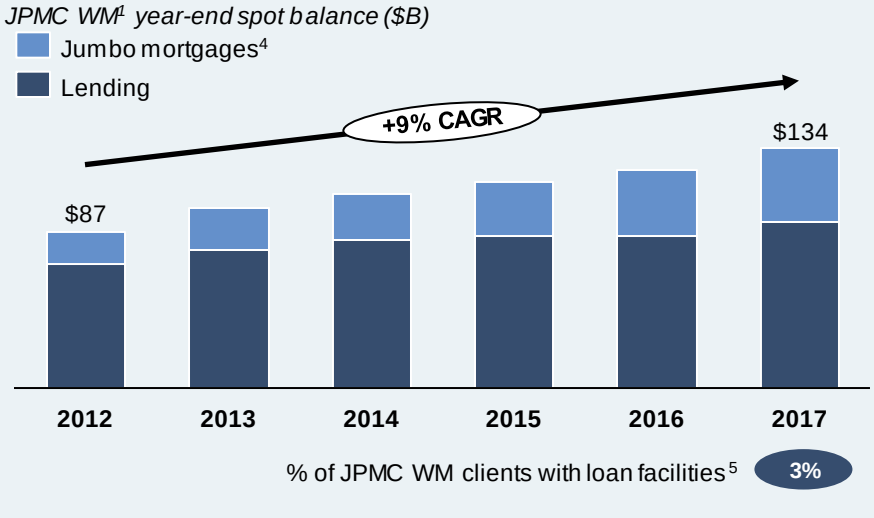
Growing deposits



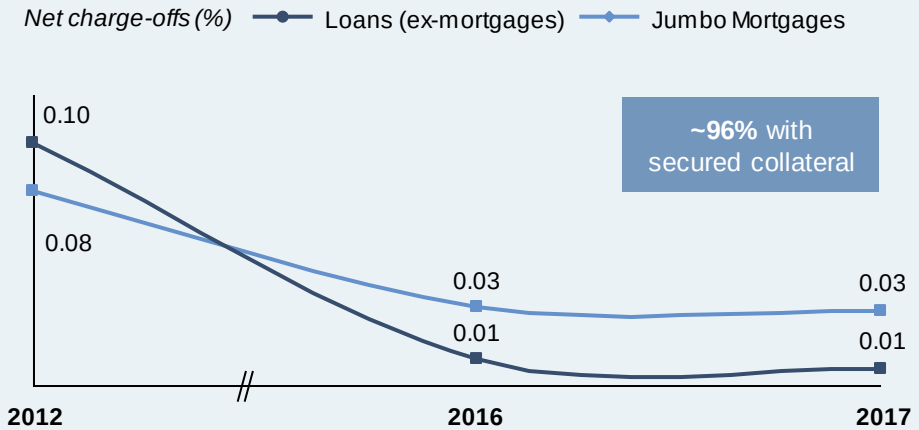
Leading liquidity business growing and capturing share



Growing credit book…



…with strong risk management

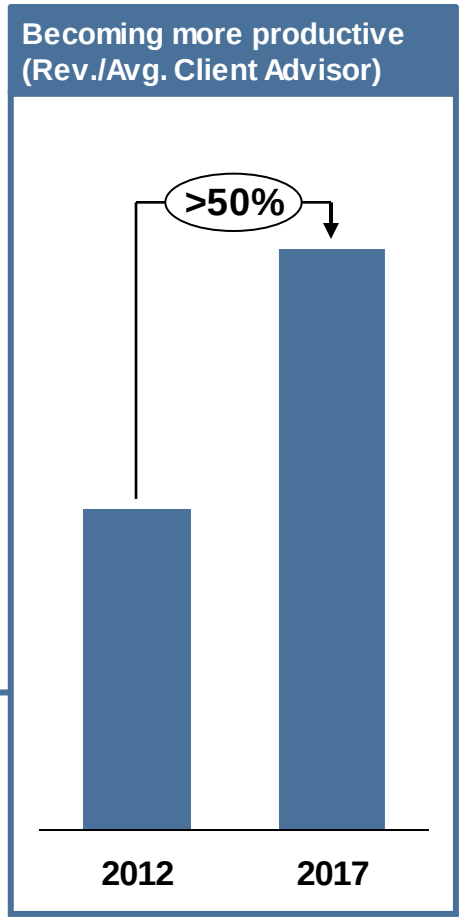


Note: For footnoted information, refer to slide 99

Hiring client advisors and increasing productivity

JPMC Wealth Management and Asset Management

Pretax income ($B)		Client assets ($T)		Client advisors (#)	
JPMC[1]	$5.5	BLK[2]	$6.3	BAC[5]	20K
BLK	$5.3	UBS[3]	$3.5	MS	16K
BAC	$5.0	JPMC[1]	$3.1	WFC[6]	15K
MS	$4.8	MS[3]	$2.9	UBS	11K
WFC	$4.3	BAC[3]	$2.6	JPMC[1]	6K
UBS	$4.2	WFC[4]	$2.4	BLK	N/A



Continued investment in growing client advisors and increasing productivity will drive further client asset and pretax income growth

Note: For footnoted information, refer to slide 100

Outlook

Power of the franchise

Operating environment

Outlook

Global macro trends

- Global GDP growth continues to be above trend
- Consumer and business confidence, as well as sentiment, remain very strong
- Developed markets close to full employment, which should drive higher wages and inflation

Credit environment

- U.S. consumer balance sheet remains relatively healthy
  - Consumer debt service burdens near record lows given low interest rates
- Corporate debt ratios near a 20-year high – however, interest coverage ratios remain within normal range due to continued low rate environment

Recession risk

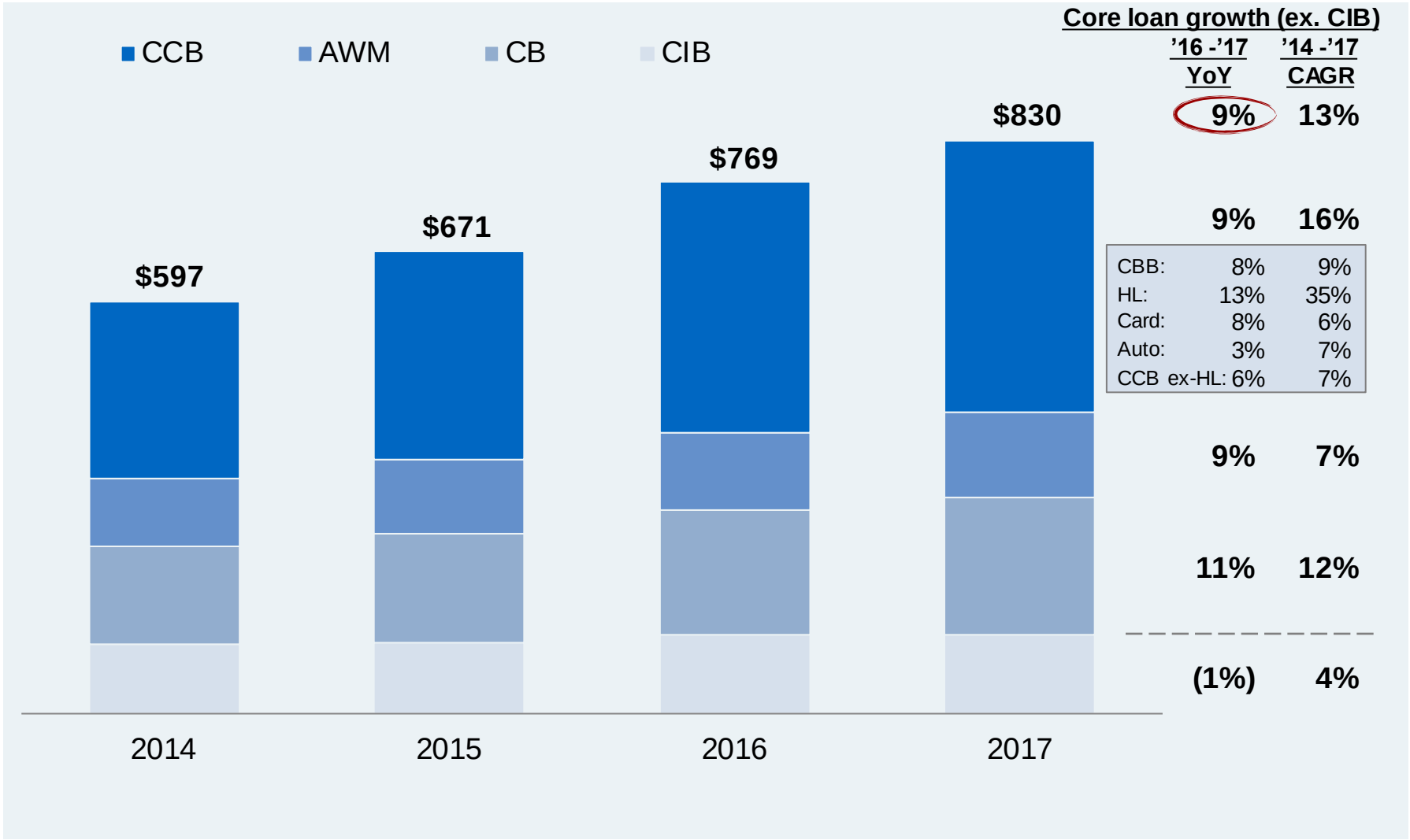
- Current economic and fiscal indicators suggest low risk of a near-term recession

Expect favorable global macro and credit trends to benefit our operating performance

Fortress balance sheet – core loans

Outlook

Average core loans ($B)



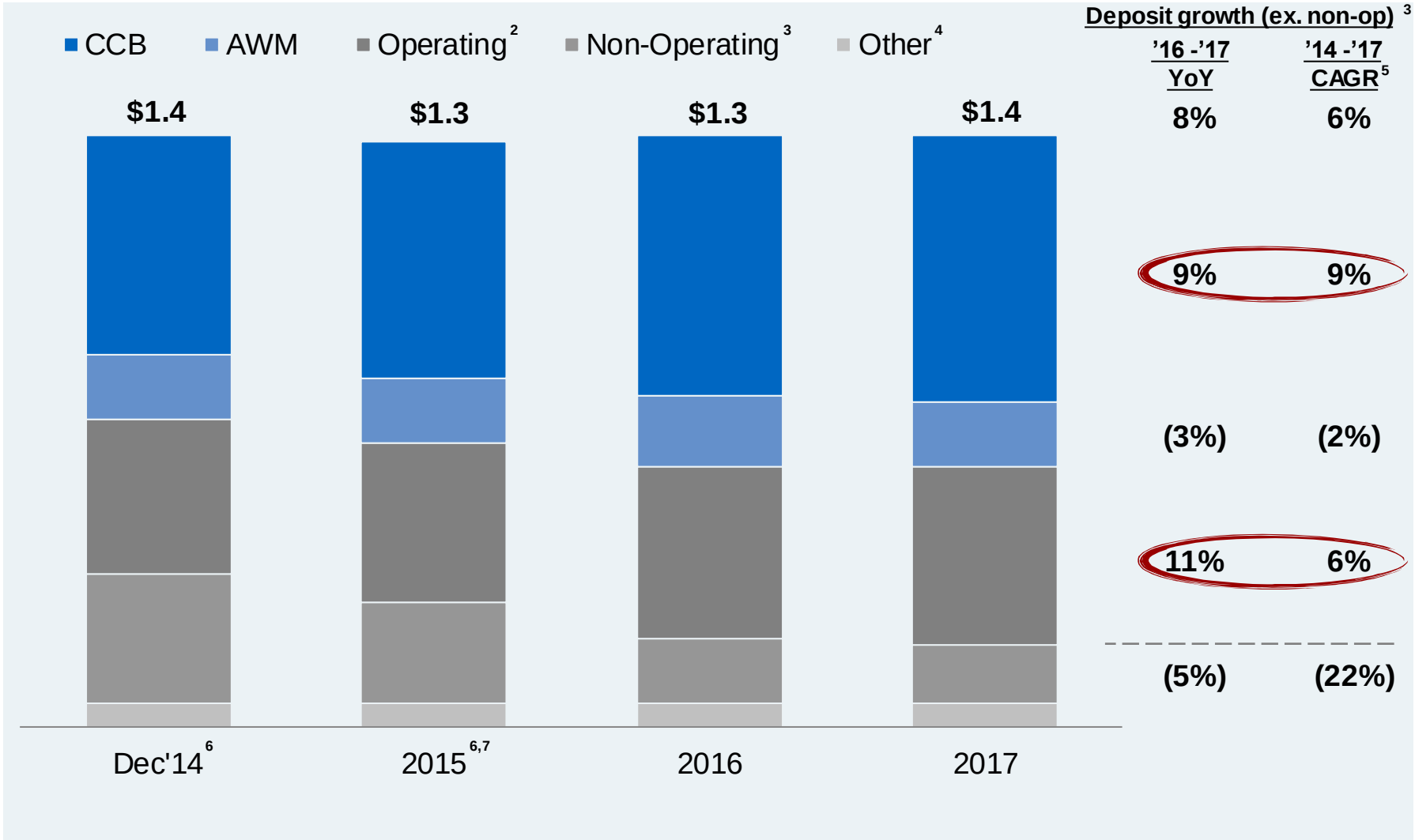
Expect 2018 core loan growth ex-CIB of 6-7%

OUTLOOK

Fortress balance sheet – deposits

Outlook

Average deposits ($T) [1]



Continue to focus on growth in retail and operating deposits

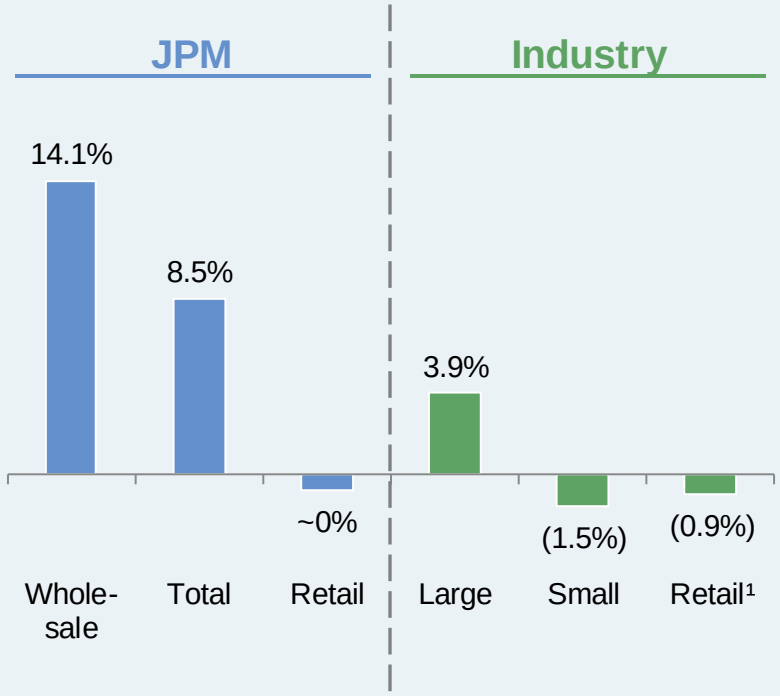
OUTLOOK

Note: For footnoted information, refer to slide 101

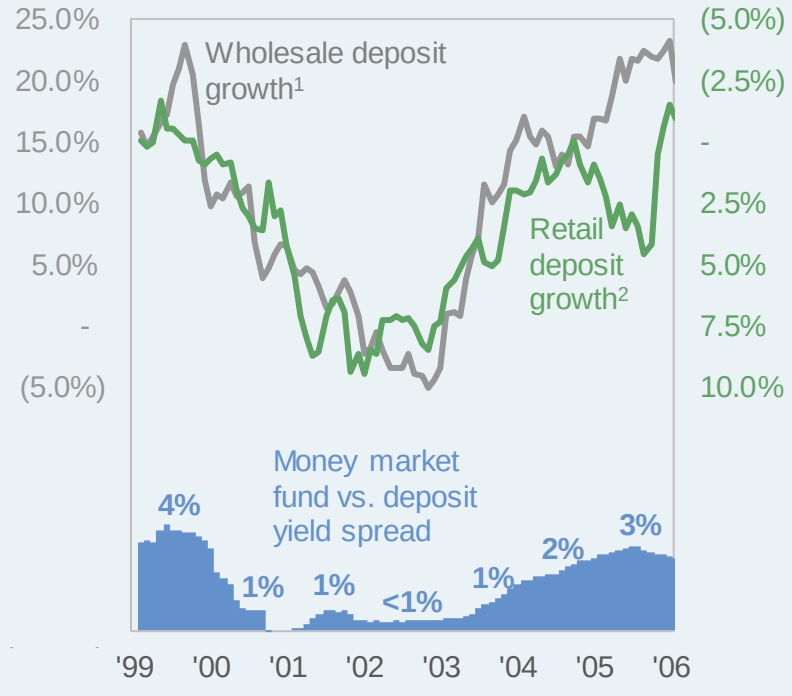
Both quantitative tightening and rate hikes will likely cause migration of deposits

Outlook

Bank deposit growth % per $1T change in Fed B/S (based on 2004-2017 data)



Wholesale & retail deposit YoY growth (%) & money market vs. deposit yield spread (%)



Commentary

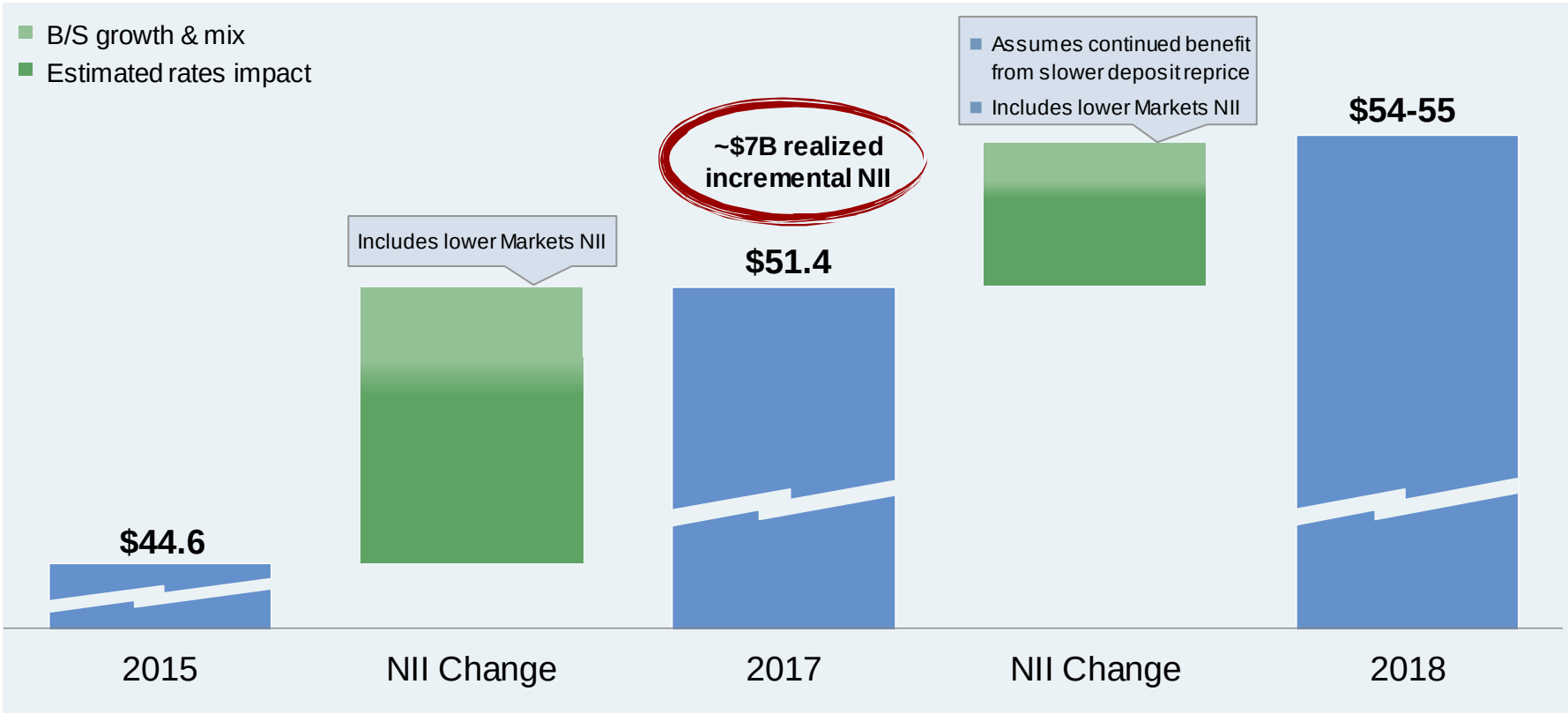
- Quantitative tightening should reduce total banking system deposits, with the primary impact in wholesale
- As rates normalize, spread between money market fund (MMF) rates and deposit rates expected to widen
- Retail deposit growth should slow
- Recycled MMF balances could drive wholesale deposit growth

Note: For footnoted information, refer to slide 102

Net interest income – well positioned on strength of balance sheet and rising rates

Outlook

Net interest income ($B)



Forward looking NII drivers

▲ Rates
- From here to neutral rate environment, expect to realize ~$2.5B of net rate benefit

▲ Balance sheet growth & mix

▼ Markets NII

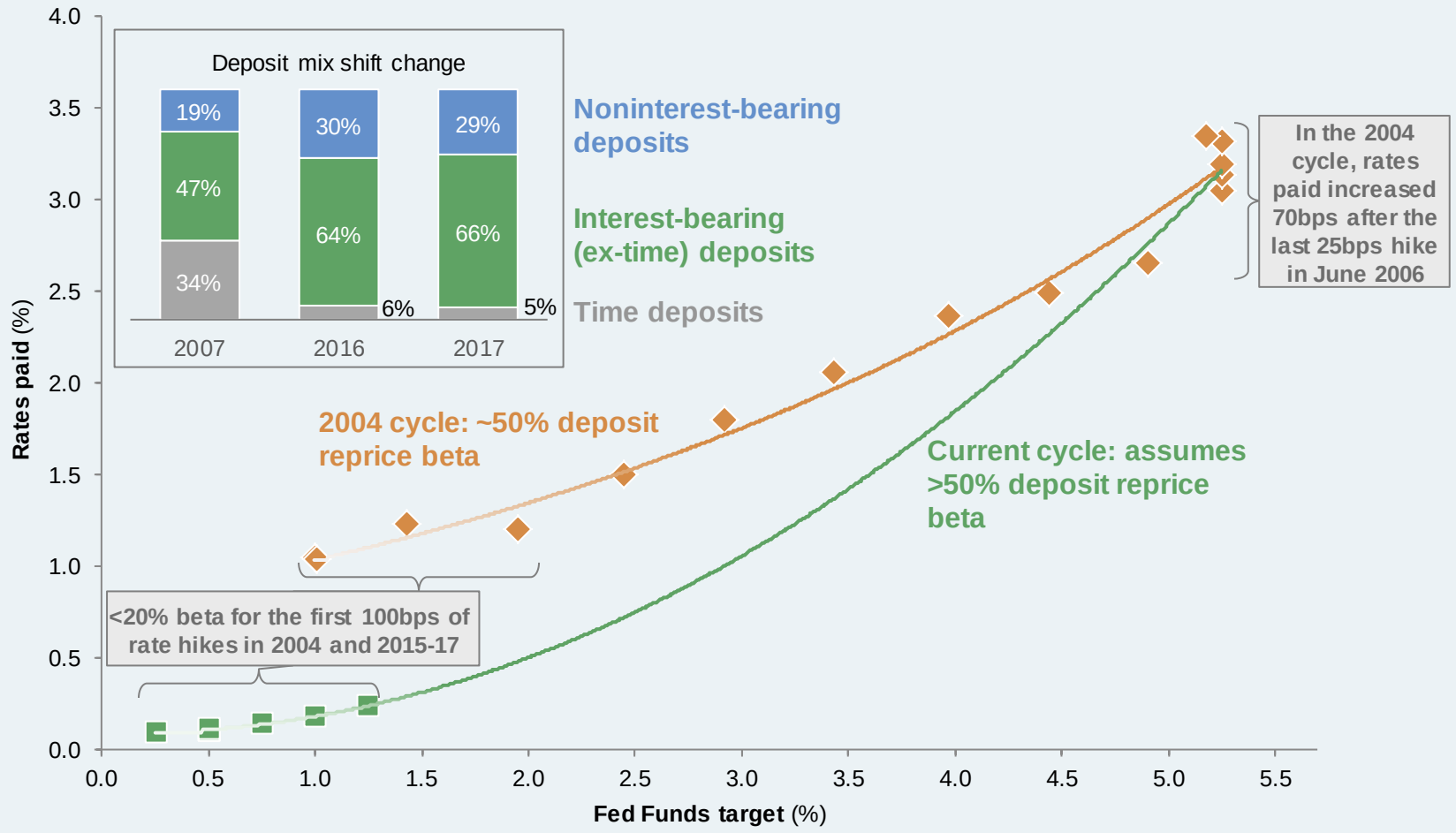
▲▼ Deposit repricing

Longer-term NII growth will be driven mostly by balance sheet growth and mix

Low rates paid beta partly reflects lack of intra-product migration thus far in the cycle

Outlook

Deposit repricing (2004 cycle vs. current cycle)[1]



No new news – cumulative reprice in line with prior cycle at this stage

[1] 2004 cycle dates: 06/04-06/06; quarterly results shown above. Excludes earnings credit rate ("ECR") impact

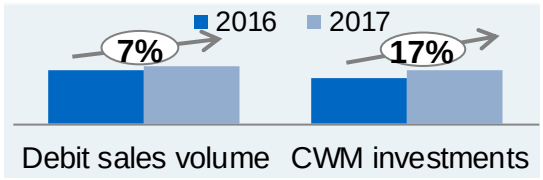
Noninterest revenue trajectory

Outlook

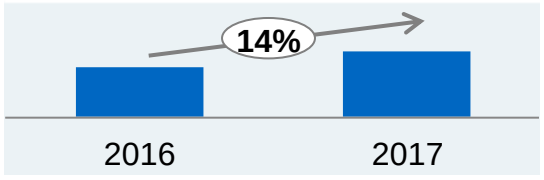
Noninterest revenue ($B)



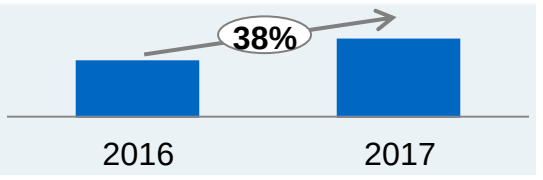
CBB



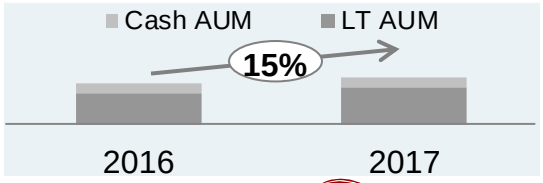
Card sales volume



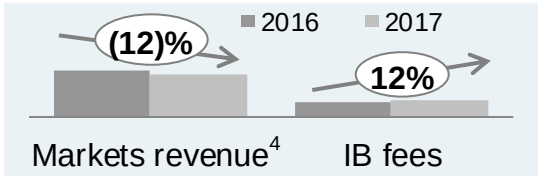
Auto – avg. operating lease assets



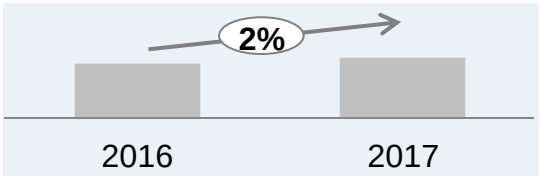
AWM AUM



CIB revenue



CB – gross IB revenue



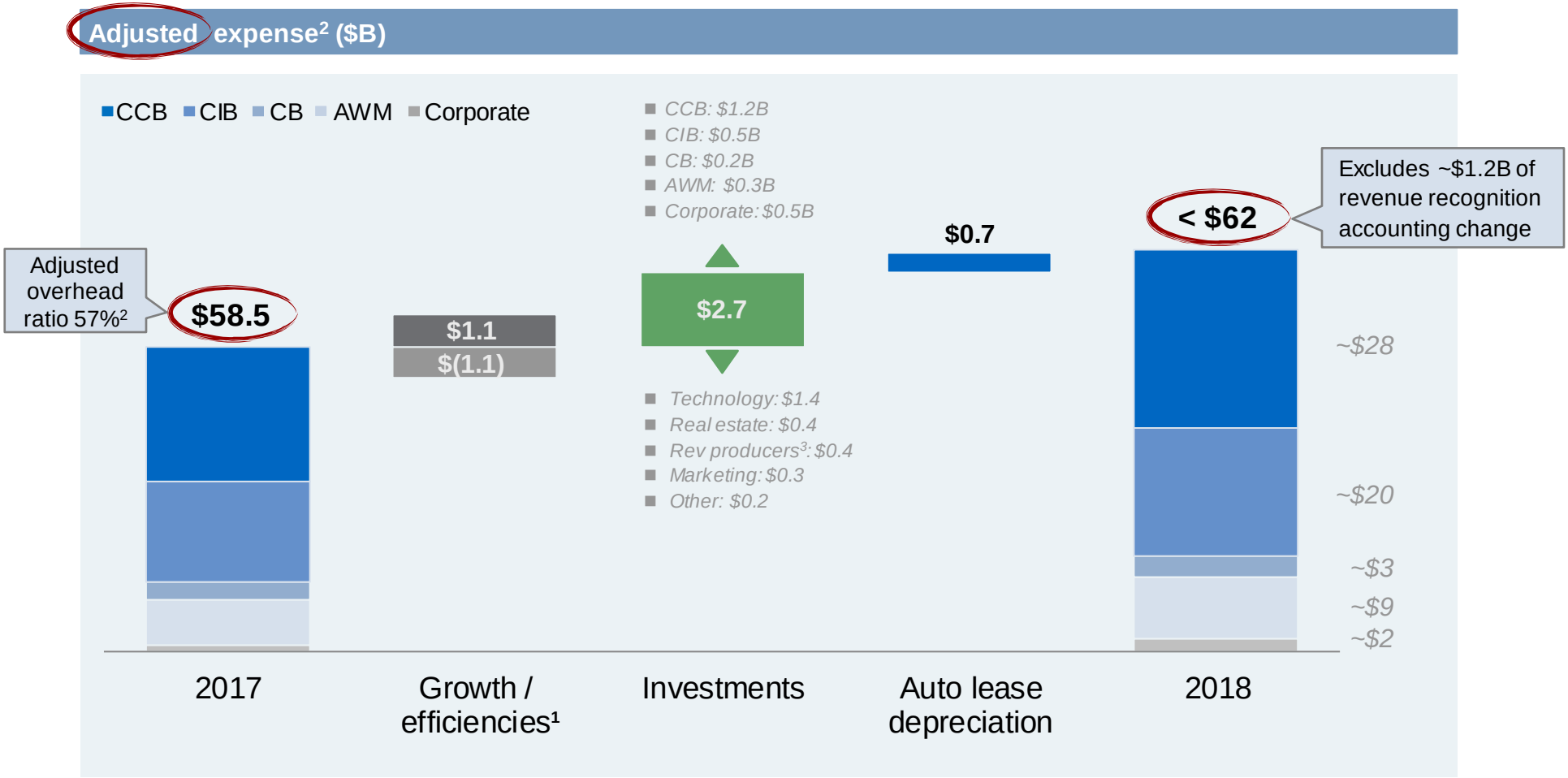
Expect ~7% NIR growth in 2018, and ~3% CAGR going forward, market dependent

~7% YoY and ~3% CAGR exclude ~$1.2B increase from revenue recognition accounting change

Note: For footnoted information, refer to slide 103

Adjusted expense – continuing to fund investments and growth

Outlook



2018 technology spend of ~$10.8B and gross marketing spend of ~$5.7B[4]

Driving efficiencies while accelerating and increasing investments

[1] Growth and efficiencies also include other offsetting non-core items, including benefits associated with the elimination of the FDIC surcharge
Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 104

Credit – net charge-offs

Outlook

Net charge-off rates

		2017	Medium-term guidance +/-
Consumer & Community Banking	Home Lending[1]	0.02%	0.05%
	Card	2.95%	3.25-3.50%
	Auto	0.51%	0.45%
	Business Banking	0.57%	0.60%
Corporate & Investment Bank		0.07%	0.10%
Commercial Banking		0.02%	0.10%
Asset & Wealth Management		0.01%	0.10%
Firmwide		$4.9B	

$5.4B including $0.5B student, exited 2Q17

Commentary

- Medium-term outlook relatively benign
- Expect 2018 and medium-term NCO rates to remain relatively flat across businesses
  - Expect Card charge-offs and reserves to be higher on seasoning of newer origination vintages

Credit fundamentals remain strong across our businesses

OUTLOOK

[1] Excludes the impact of purchased credit-impaired ("PCI") loans. Refer to note 5 on slide 76

Medium-term guidance by LOB

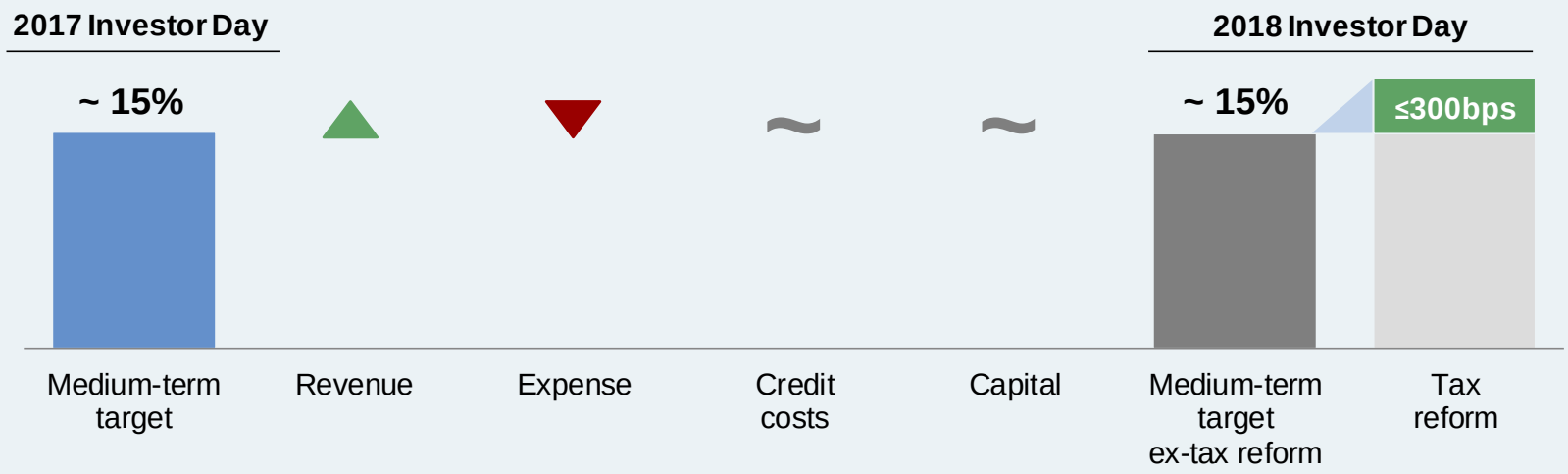
Outlook

	Medium-term targets		
	Previous ROE	Revised ROE	OH Target (%)
CCB	20% +/-	25% +	50% +/-
CIB	14% +/-	~ 17%	54% +/-
CB	15% +/-	~ 18%	35% +/-
AWM	25% +/-	~ 35%	30% +/- (pretax margin)

Benefits from tax reform

- Up to 300bps potential benefit to Firmwide ROTCE from tax reform
- Significant uncertainty around how competitive dynamics evolve
  - Expect some benefit to pass to customers over time

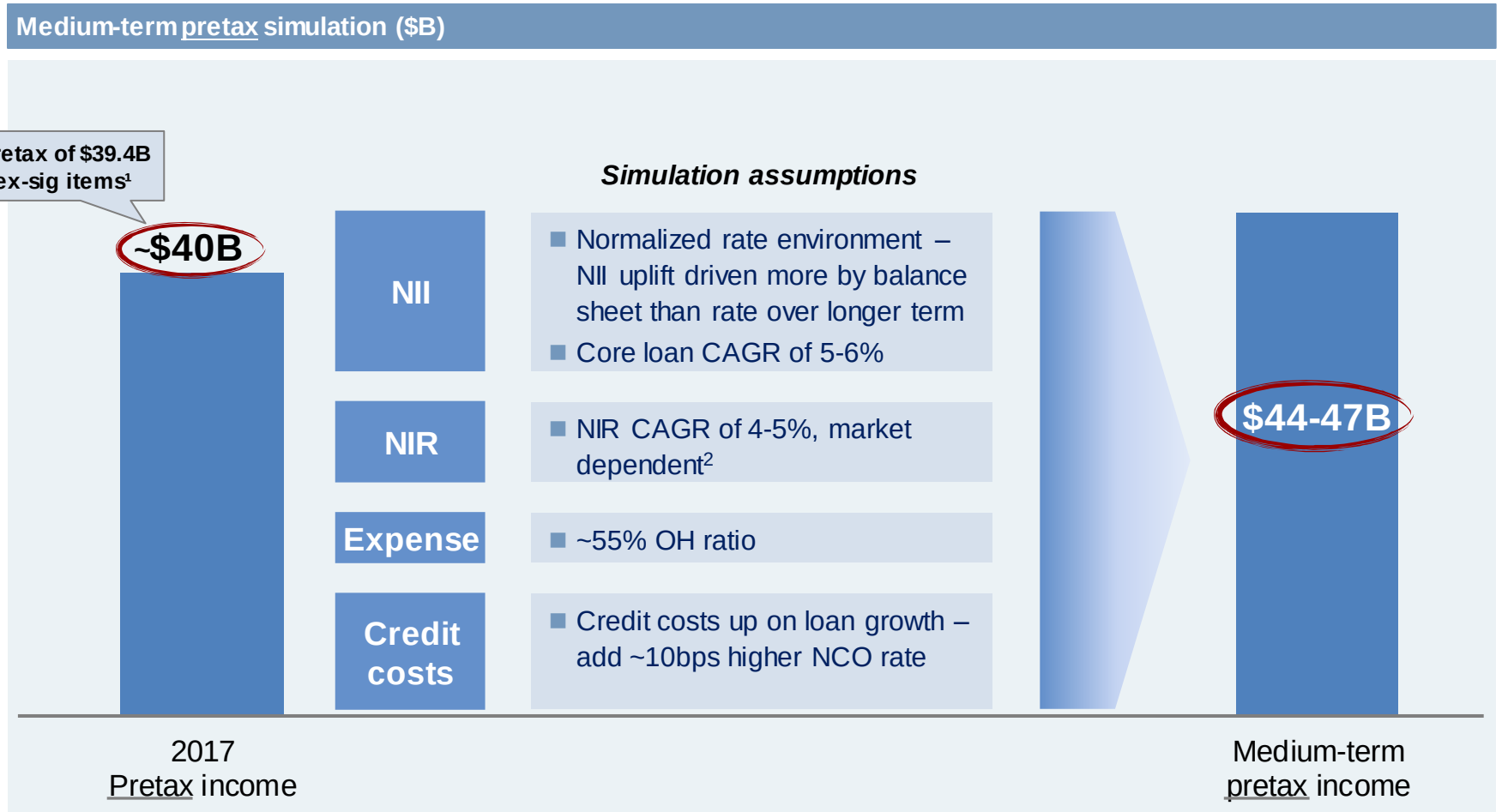
Firmwide medium-term ROTCE walk



New LOB ROE targets reflect the impact of tax reform and growth

Medium-term pretax earnings simulation

Outlook



In the medium-term expect ROTCE of ~17%

~17% *ROTCE*	11-12% *CET1 ratio*	~55% *Overhead ratio*	~100% *Net payout ratio*

[1] Excludes the impact of the enactment of TCJA of ($0.15)B pre-tax in 4Q17 and a legal benefit of $0.65B pre-tax in 2Q17. See note 4 on slide 76
[2] Excludes ~$1.2B annual increase from new revenue recognition accounting rule; expect ~7% NIR growth in 2018, and ~3% CAGR going forward

Proven operating model – positioned for success

Complete | **Global** | **Diversified** | **Scale**

- Customer centric
- Mobile first – digital everything – multi-channel delivery
- Deeply integrated – payments as a holistic solution
- World-class technology and data capabilities
- Long-term strategic focus on growth and profitability
- Execute with discipline – capital, expense and controls

Leading to

~17% *ROTCE*	11-12% *CET1 ratio*	~55% *Overhead ratio*	~100% *Net payout ratio*

OUTLOOK

Reference materials

Leading client franchises

Client franchises built over the long-term

		2006	2016	2017
CCB	Deposits market share[1]	3.6%	8.3%	8.7%
	# of top 50 Chase markets where we are #1 (top 3)	*11 (25)*	*14 (38)*	*16 (40)*
	Average deposits growth rate	8%	10%	9%
	Active mobile customers growth rate	n/m	16%	13%
	Credit card sales market share[2]	15.9%	21.5%	22.4%
	Merchant processing volume[3] ($B)	$661	$1,063	$1,192
CIB	Global IB fees[4]	#2	#1	#1
	Market share[4]	*8.7%*	*7.9%*	*8.1%*
	Total Markets revenue[5]	#8	#1	#1
	Market share[5]	*6.3%*	*11.2%*	*11.0%*
	FICC[5]	#7	#1	#1
	Market share[5]	*7.0%*	*11.7%*	*11.4%*
	Equities[5]	#8	#2	co-#1
	Market share[5]	*5.0%*	*10.1%*	*10.3%*
CB	# of MSAs with Middle Market banking presence[6]	26	47	50
	Multifamily lending[7]	#28	#1	#1
	Gross investment banking revenue ($B)	$0.7	$2.3	$2.3
AWM	Mutual funds with a 4/5 star rating[8]	119	220	235
	Ranking of long-term client asset flows[9]	n/a	#2	#2
	Active AUM market share[10]	*1.8%*	*2.5%*	*2.4%*
	North America Private Bank (Euromoney)	#1	#1	#1
	Client assets market share[11]	*3%*	*4%*	*4%*

- Relationships with **~50% of U.S. households**
- Industry leading deposit growth[12]
- #1 U.S. credit card issuer[13]
- #1 U.S. co-brand credit card issuer[14]
- #1 U.S. credit and debit payments volume[15]
- #2 merchant acquirer[16]
- **>80% of Fortune 500 companies** do business with us
- #1 in both North America & EMEA IB fees[17]
- #1 in Global Long-Term Debt & Loan Syndications[17]
- #1 FICC productivity[18]
- Top 3 Custodian globally with AUC of $23.5T[19]
- #1 in USD payment volumes with 20% share in 2017[20]
- Unparalleled platform capabilities – competitive advantage
- Top 3 in overall middle market, large middle market and asset-based lending bookrunner[21]
- Industry-leading credit performance – 6th straight year of net recoveries or single digit NCO rate
- 86% of 10-year LT mutual fund AUM in top 2 quartiles[22]
- #2 in 5-year cumulative LT client asset flows among publicly traded peers
- #1 Private Bank in North America and Latin America[23]
- Revenue and LT AUM growth >90% since 2006

Note: For footnoted information, refer to slides 105-106

LOB performance and guidance

Time period legend
✓ 2018
✓ Medium-term (3 years)
✓ Long-term (5+ years)

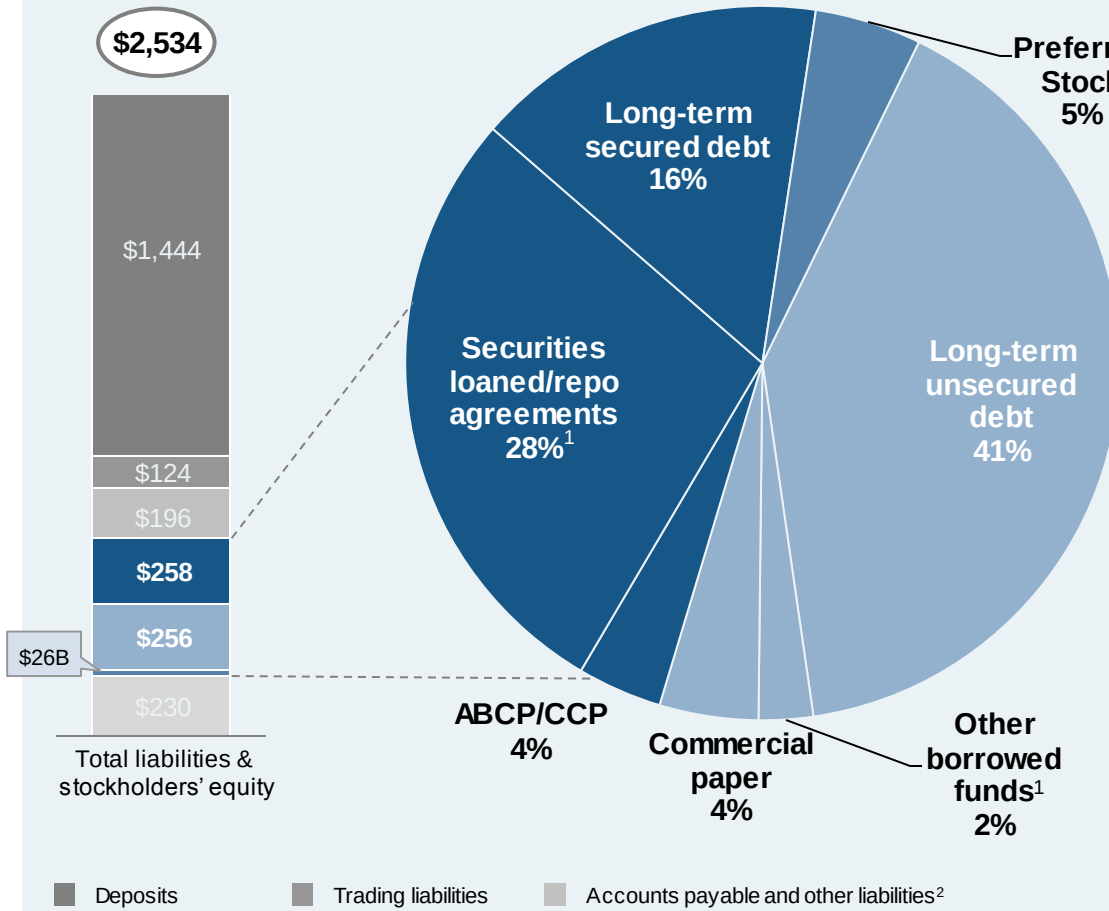
Performance and guidance

		2016	2017	Guidance	Guidance time period
CCB	Card Services net revenue rate	11.29%	10.57%	11.25%+/-	✓
	Overhead ratio	55%	56%	50%+/-	✓
	ROE	18%	17%	25%+	✓
CIB	Revenue	$35.2B	$34.5B	~$37B	✓
	Overhead ratio	54%	56%	54%+/-	✓
	ROE	16%	14%	~17%	✓
CB	Middle Market expansion revenues	$0.4B	$0.5B	$1.0B	✓
	Investment Banking revenues	$2.3B	$2.3B	$3.0B	✓
	International revenues	$0.3B	$0.3B	$0.5B	✓
	Overhead ratio	39%	39%	35%+/-	✓
	ROE	16%	17%	~18%	✓
AWM	LT AUM flows growth	2%	5%	4%+/-	✓
	Revenue growth	(1%)	7%	5%+/-	✓
	Pretax income growth	10%	1%	10%+/-	✓
	Pretax margin	29%	28%	30%+/-	✓
	ROE	24%	25%	~35%	✓

Capital markets funding sources

Continuing to optimize funding mix

Capital markets liabilities as of 12/31/17 ($B)



Secured funding highlights

- Long-term secured debt
  - $61B FHLB advances
  - $21B credit card securitization
- Short-term secured debt
  - $18B collateralized commercial paper[1]
  - $3B asset-backed commercial paper

Unsecured funding highlights

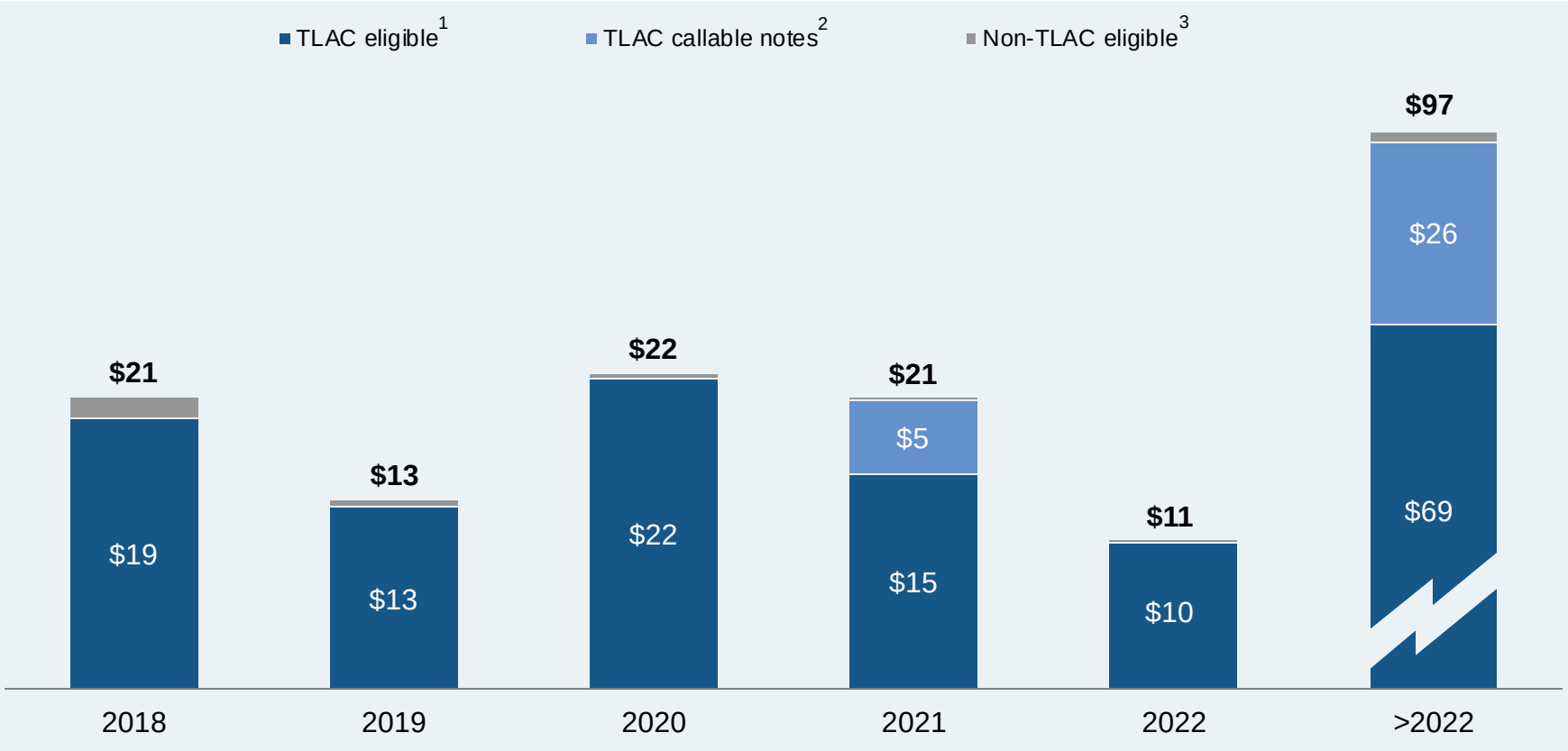
- Long-term unsecured debt
  - $156B senior debt
  - $17B subordinated debt[3]
  - $46B structured notes
- Commercial paper
  - $24B
  - Used to support CIB Markets business

Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 107

JPMorgan Chase & Co. (HoldCo) unsecured long-term debt outstanding

Managing maturity profile and TLAC efficiency

Holding Company unsecured long-term debt maturity profile ($B)



Maturity profile includes

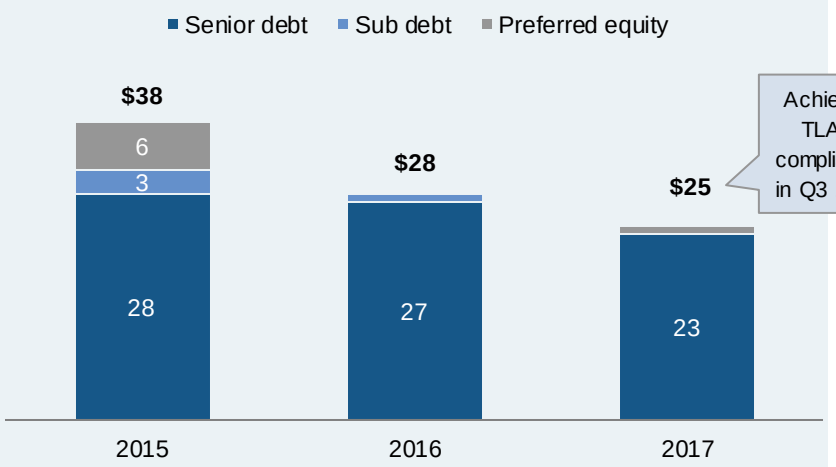
- $31B of TLAC callable notes[2] issued since August 2016
- ~$19B of debt classified as structured notes, of which ~$15B is TLAC eligible

Note: Numbers may not sum due to rounding; amounts represent the carrying value. For footnoted information, refer to slide 107

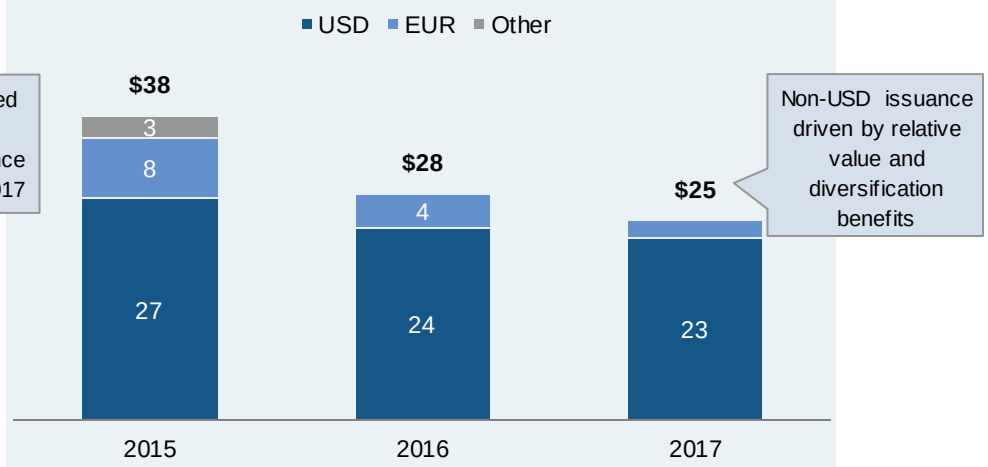
JPMorgan Chase & Co. (HoldCo) benchmark issuance

Reduced issuance requirements as TLAC compliance was achieved

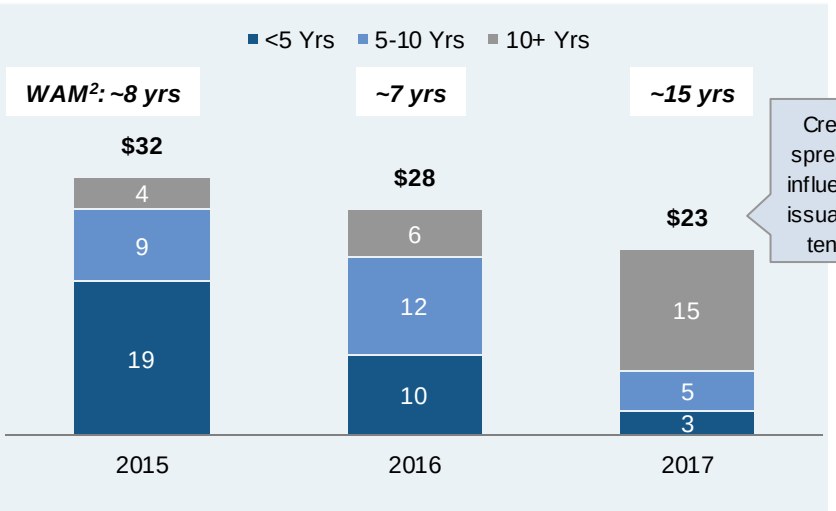
Gross issuance by security type ($B)



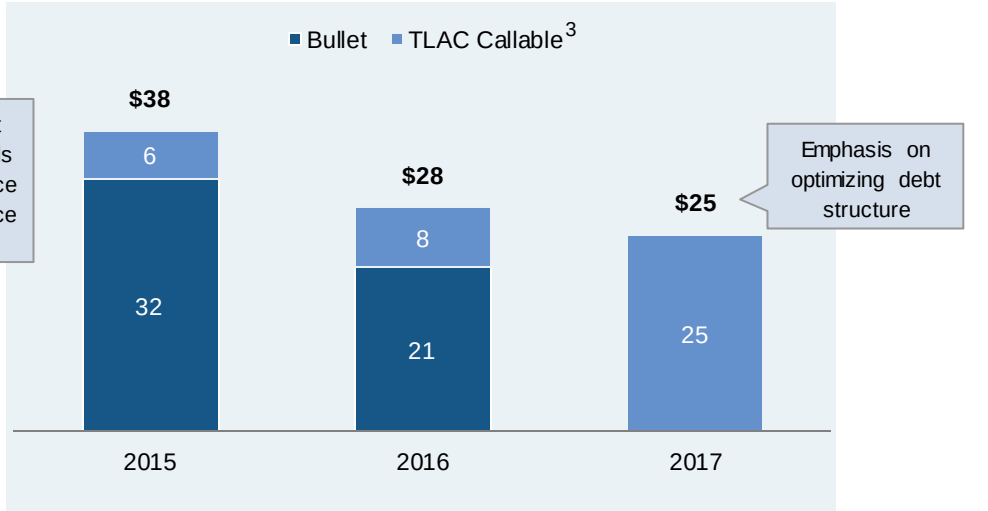
Gross issuance by currency ($B)



Gross issuance by tenor ($B)[1]



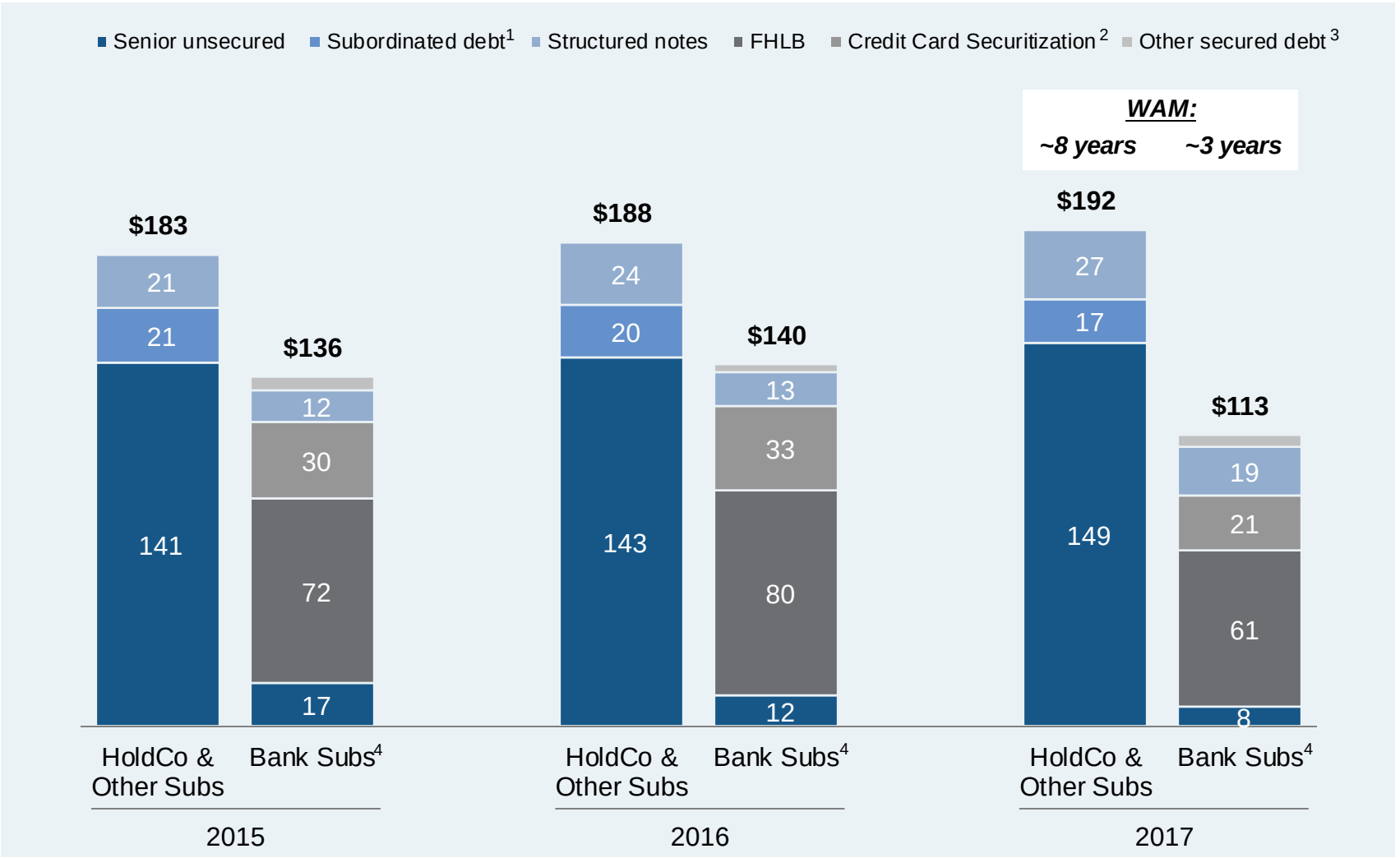
Gross issuance by structure ($B)



Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 107

Firmwide long-term funding outstanding

End of period outstanding ($B)



Note: Numbers may not sum due to rounding. For footnoted information, refer to slide 108

TLAC and External LTD requirement summary

Compliance reached in 2017

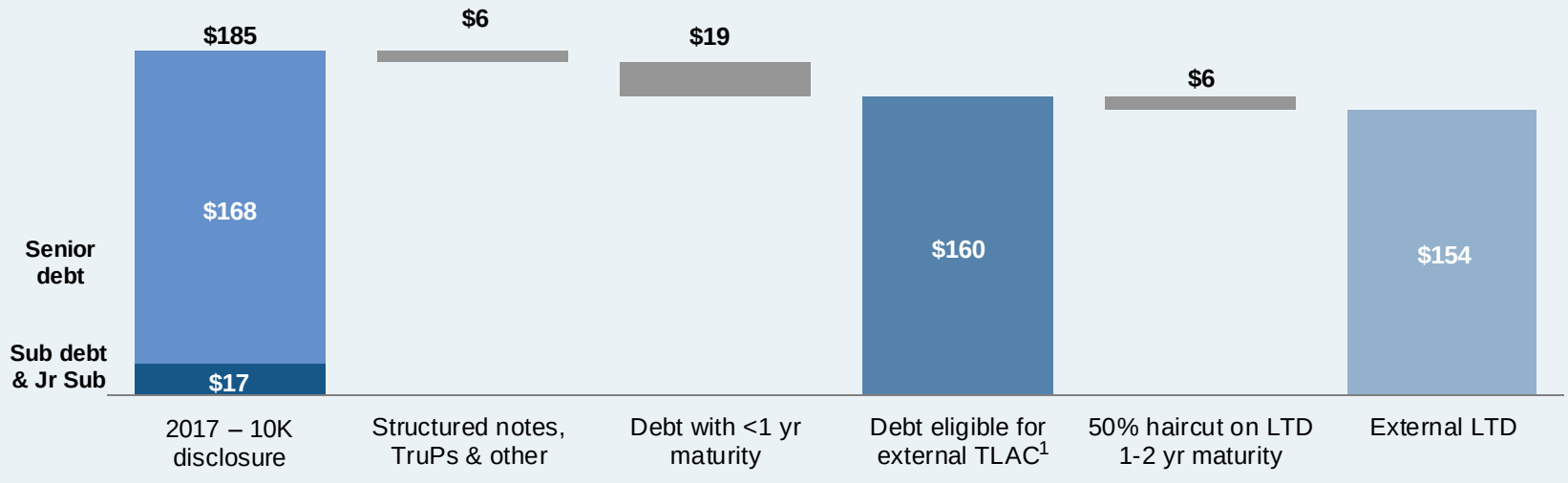
Commentary

- Achieved TLAC compliance in Q3 2017
  - Intend to hold management buffer to cover changes in FX rates and balance sheet as well as unexpected funding market volatility
- Issuance planning considers
  - Balance sheet evolution
  - TLAC maturities
  - Credit spreads and other market considerations
- Preferred and sub debt issuance needs based on capital planning requirements and replacement economics

TLAC Requirements

Key Metrics ($B) (at 12/31/2017)	External TLAC	External long-term debt
Eligible Long-term Debt	$160	$154
Preferred Equity	26	--
Common Equity Tier 1	183	--
Total	**$370**	**$154**
% of RWA	**24.5%**	**10.2%**
Requirement	*23.0%*	*9.5%*
(Shortfall)/Surplus	***$22***	***$11***
% of Leverage Assets	**11.5%**	**4.8%**
Requirement	*9.5%*	*4.5%*
(Shortfall)/Surplus	***$65***	***$10***

Holding Company – External long-term debt at 12/31/2017 ($B)



Note: Numbers may not sum due to rounding

[1] Includes ~$15B of debt classified as structured notes

Wholesale funding sources – Purpose and key features

	Product	Typical term	Callable	Multi-currency[4]	Available to meet regulatory requirement: TLAC	T1/T2 Reg. Cap.	LCR	NSFR
HoldCo	Senior Unsecured	2-30 years	✓	✓	✓	✗	✓	✓
	Subordinated Debt	10-30 years[1]	✓	✓	✓	✓	✓	✓
	Preferred Stock	Perpetual	✓	✗	✓	✓	✓	✓
	Structured Notes	2-30 years	✓	✓	✓ / ✗[5]	✗	✓	✓
Broker-Dealer	Commercial Paper	Generally < 1 year[2]	✗[3]	✓	✗	✗	✓	✗[2]
	Securities loaned / Repo agreements	Generally <6 months	✗	✓	✗	✗	✓	✗[2]
	Collateralized Commercial Paper	Generally < 1 year[2]	✗[3]	✓	✗	✗	✓	✗[2]
Bank	Unsecured Senior Debt	2-30 years	✓	✓	✗	✗	✓	✓
	Structured Notes	2-30 years	✓	✓	✗	✗	✓	✓
	Certificates of Deposit	Generally < 1 year	✗	✓	✗	✗	✓	✗[2]
	FHLB Borrowing	Generally < 5 years[2]	✓[2]	✗	✗	✗	✓	✓
	Card Securitization	1-10 years	✗	✗	✗	✗	✓	✓
	Asset-Backed Commercial Paper	Generally < 1 year[2]	✗[3]	✗	✗	✗	✓	✗[2]

Secured Funding

Note: excludes deposits and common equity. For footnoted information, refer to slide 108

Notes on non-GAAP financial measures and key performance measures

Notes on non-GAAP financial measures

1. In addition to analyzing the Firm's results on a reported basis, management reviews Firmwide results, including the overhead ratio, on a "managed" basis; these Firmwide managed basis results are non-GAAP financial measures. The Firm also reviews the results of the lines of business on a managed basis. The Firm's definition of managed basis starts, in each case, with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm and each of the reportable business segments on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. These financial measures allow management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business. For a reconciliation of the Firm's results from a reported to managed basis, see page 52 of the Firm's Annual Report on Form 10-K for the year ended December 31, 2017 ("2017 Form 10-K")

2. Tangible common equity ("TCE"), return on tangible common equity ("ROTCE") and tangible book value per share ("TBVPS"), are non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. For a reconciliation from common stockholders' equity to TCE, see page 54 of the 2017 Form 10-K. ROTCE measures the Firm's net income applicable to common equity as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. Book value per share was $67.04 at December 31, 2017. TCE, ROTCE, and TBVPS are meaningful to the Firm, as well as investors and analysts, in assessing the Firm's use of equity

3. Adjusted expense and adjusted overhead ratio are non-GAAP financial measures. Adjusted expense excluded Firmwide legal expense/(benefit) of $(35) million for the year ended December 31, 2017. The adjusted overhead ratio measures the Firm's adjusted expense as a percentage of adjusted managed net revenue, which excluded a legal benefit of $645 million for the year ended December 31, 2017. Management believes this information helps investors understand the effect of these items on reported results and provides an alternate presentation of the Firm's performance

4. On December 22, 2017, the Tax Cuts & Jobs Act ("TCJA") was signed into law. Full-year 2017 results reflect the estimated impact of the enactment of the TCJA, which resulted in a $145 million decrease to managed revenue and a $2.4 billion decrease to net income. The full year results also included a legal benefit of $406 million (after-tax) related to a settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee to certain Washington Mutual trusts. Net income, EPS, ROTCE and TBVPS excluding the impact of these significant items are non-GAAP financial measures. Management believes these measures help investors understand the effect of these items on reported results as well as facilitate a comparison with the performance of peers

5. Net charge-off ("NCO") rates exclude purchased credit-impaired ("PCI") loans; this is a non-GAAP financial measure. For a reconciliation of the NCO rates, including the impact of PCI loans, see pages 59-60 of the 2017 Form 10-K

Notes on key performance measures

6. The Basel III supplementary leverage ratio ("SLR"), to which the Firm was subject to since January 1, 2018, and the Basel III Fully Phased-In common equity Tier 1 ("CET1") capital, risk-weighted assets ("RWA") and the CET1 ratio to which the Firm will be subject on January 1, 2019, are all considered key regulatory capital measures. The capital adequacy of the Firm is evaluated against the Basel III approach (Standardized or Advanced) that results in the lower ratio as required by the Collins Amendment of the Dodd-Frank Act (the "Collins Floor"). These measures are used by management, bank regulators, investors and analysts to assess and monitor the Firm's capital position. For additional information on these measures, including the Collins Floor, see Capital Risk Management on pages 82-91 of the 2017 Form 10-K

7. Core loans represent loans considered central to the Firm's ongoing businesses; core loans exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit

Notes on slide 2 – Our brands have never been stronger

1. Tied 2017 Greenwich Quality Leader
2. Tied 2017 Greenwich Quality Leader
3. U.S. Large Corporate Cash Management
4. Chase received the highest numerical Equity Score among bank brands included in the 2017 Harris Poll EquiTrend® Study, which is based on opinions of 102,617 U.S. consumers ages 15 and over surveyed online between December 30, 2016 and February 21, 2017
5. "How Chase Made the Perfect High for Credit Card Junkies," Bloomberg, September 2016
6. Based on JPMorgan Chase data
7. Ownership measures responses to the question: "Which of these financial service providers do you use for your category?" (Categories include a wide range of financial products like personal checking accounts, investments or retirement accounts, credit cards, etc.)
8. Consideration measures responses to the questions: "The next time you are in the market for a financial product or service, how likely are you to consider the following providers?" (Definitely would not consider; Probably would not consider; Probably would consider; Definitely would consider)
9. Familiarity measures responses to the question "Which of the following best describes your familiarity with each financial service provider below?" (Never heard of; Heard of, but not familiar; Somewhat familiar; Very familiar)
10. Awareness measures aided awareness of the brand

NOTES

Notes on slide 3 – Attractive footprint with strong positioning across the U.S. and globally

1. North America client assets and client advisors include Asset & Wealth Management ("AWM") and Chase Wealth Management ("CWM"), with CWM client assets including all CWM investments and all Chase Private Client ("CPC") deposits
2. Commercial Banking ("CB") international revenue denotes non-U.S. revenue from U.S. multinational clients, and number of countries excludes U.S.

NOTES

Notes on slide 4 – Strong absolute and relative performance

1. See note 1 on slide 76
2. GS and MS showing reported revenue
3. Net income, EPS, ROTCE and TBVPS adjusted for the impact of enactment of the TCJA; If also adjusted for the 2Q17 legal benefit of $406mm, JPM net income was $26.5B, EPS was $6.87 (up 11% YoY and up 5% for the 10-year CAGR), and ROTCE was 13%
4. Managed overhead ratio = total noninterest expense / managed revenue; revenue for GS and MS is disclosed on a reported basis only
5. JPMorgan Chase adjusted overhead ratio of 57%. See note 3 on slide 76
6. See note 2 on slide 76

NOTES

Notes on slide 5 – Continue to operate from a position of strength…across all key dimensions

1. Reflects Basel III binding Fully Phased-In measure
2. See note 6 on slide 76
3. Global Systemically Important Bank (“GSIB”)
4. Total Loss-Absorbing Capacity (“TLAC”) external long-term debt short-fall
5. Liquidity coverage ratio (“LCR”) and net stable funding ratio (“NSFR”)
6. See note 1 and 3 on slide 76
7. Represents the Federal Reserve's Dodd-Frank Act Stress Test ("DFAST") estimates under the severely adverse scenario published on June 23, 2016 and June 22, 2017, respectively

NOTES

Notes on slide 9 – Digital capabilities are critical to our business

1. Deloitte, "Millennials and Wealth Management" – 2015
2. Capgemini, "2014 World Wealth Report"
3. Novantas Customer Knowledge, USA Multi-channel survey; 2015 (N=4,346), 2017 (N=4,351); Question: "Please rank up to three things a bank could do to be the most convenient bank for your financial needs." Reflects responses of: "Leading online/mobile banking" and "They have a branch location near my home"
4. J.P. Morgan online survey of over 400 institutional investors – October 2017
5. Greenwich Associates Market Pulse 68 – November 2017
6. EY, "Could your clients' needs be your competitive advantage?" – 2016

NOTES

Notes on slide 10 – The business case for digital is compelling

1. For digitally engaged households
2. Reflects Consumer Bank; Consumer Bank household channel segments are defined based on the tenure of the household as of the respective time period. For households with tenure of greater than 12 months, we use the following thresholds calculated over a year: Digitally-centric – <=4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Multi-channel – >4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Branch-centric – >4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year; Other – <=4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year. For households that are less than 12 months on book, we reduce the thresholds by 75% and track the household activity over a three-month time period. Digitally-engaged households includes Digitally-centric households and Multi-channel households. All other households includes Branch-centric households and Other households
3. Net Promoter Score = % promoters minus % detractors. Based on Net Promoter Score data collected from December 2016 through November 2017
4. Retention rates are based on Consumer Bank households with deposit products and exclude households that closed all of their deposit products with Chase. Retention rate for each Consumer Bank household channel segment is calculated by reclassifying households into segments each month based on their channel activity and by taking an average of the annualized monthly rates for the last 12 months as of November 2017
5. Includes Consumer Bank households that had at least one credit transaction and one debit transaction in 2017. Normalized for number of customers per household
6. MyPrivateBanking Research, "Digital and Mobile Solutions for Financial Advisors 2015"
7. Since 2012, based on clients who have logged onto digital platforms in prior 90 days
8. For primary bank customers, simple average across seven age cohorts of the percentage by which average deposit and investment balances per household for digitally engaged households exceed non-digitally engaged households. These seven age cohorts are: Greatest Generation (born 1900-1927), Silent Generation (born 1928 – 1945), Baby Boomers (born 1946 – 1964), Generation X (born 1965-1980), Old Millennials (born 1981-1989), Young Millennials (born 1990-1997), and other / age not available
9. Represents, for 2017, the estimated annual benefit of the statements suppressed in CCB (i.e., digital vs. paper)
10. Cost differential calculated using variable cost only

NOTES

Notes on slide 12 – Enhancing the client onboarding process across the bank

1. Reflects new-to-bank, multi-product business households after three full months of activity; accounts opened between May through October 2017 vs. 2016
2. Monthly low risk WM "Know Your Customer" ("KYC") completion time for median client, December 2017 vs. May 2015
3. Reflects accounts opened through Finn or digital account opening for existing customers; less than 8 minutes for new customers
4. For existing customers

NOTES

Notes on slide 13 – Customers rely on Chase digital offerings throughout their daily lives

1. All data reflects average for the 12 months of 2017. Engagement metrics reflect average number of transactions per active users where active users are defined as customers who make at least one transaction during the period. Digital wallet transactions include Android Pay, Apple Pay, Chase Pay and Samsung Pay
2. Average for the 12 months of 2017; reflects average alerts received per card user who received at least one purchase threshold alert
3. Data reflects 4Q17; users of all online and/or mobile platforms who have logged in within the past 90 days

NOTES

Notes on slide 14 – We seek to offer innovative digital solutions across products and asset classes

1. Reflects accounts opened through Finn
2. Net Promoter Score = % promoters minus % detractors; as of December 2017
3. Comparison relative to mortgages refinanced through the Consumer Direct (phone) channel. Improvements reflect the monthly average for 4Q17
4. Reflects 4Q17 vs. 4Q16

NOTES

Notes on slide 21 – A rapidly evolving payments landscape creates opportunities across our businesses

1. The Boston Consulting Group Global Payments 2016: Competing in Open Seas
2. World Trade Organization. Represents 2016 world-wide imports for merchandise trade
3. USD messages received by SWIFT for fiscal year 2017
4. SWIFT – December YTD2017
5. The Nilson Report, Issue 1122, December 2017. Data as of 2016
6. "2017 P2P Market Sizing: Moving into High Gear," Javelin Strategy & Research, 2017. Market size includes online and mobile person-to-person transfers via bank and non-bank providers, and excludes wire transfers through banks and money services businesses
7. The Nilson Report, Issue 1105, March 2017. Data as of 2016
8. Reflects 2017
9. Excludes Commercial Card
10. Includes Firmwide QuickPay with Zelle transactions; reflects 2017
11. The Nilson Report, Issue 1122, December 2017
12. World Trade Organization: trade outlook indicator, February 12, 2018
13. "2017-2021 Retail Point of Sale Payment Forecast," Javelin Strategy & Research, November 2017. Growth represents CAGR from 2017 to 2021

NOTES

Notes on slide 22 – We are well-positioned to deliver modern payments experiences

1. Reflects the percentage of the CCB customer population active in each payment category as of October 2017. "Move money" services include all the digital services to send payments (e.g., Wire, Transfer, Bill Pay, and QuickPay with Zelle) and/ or receive payments (e.g., Quick Deposit, QuickPay with Zelle, Internal Transfer) outside of debit and credit card payments. Customers who are active across payments services include those who engage in debit and credit card payments, digital wallet payments, and "move money" services
2. Reflects 30-day active credit and debit card customers; data as of October 2017
3. Includes firmwide QuickPay with Zelle transactions; reflects 2017
4. Reflects the percent of credit card customers who had a sales transaction between October 2017 and December 2017 and also had an embedded payment during that same period. An embedded payment is defined as a transaction at a recurring bill merchant, mobile wallet, or one of Chase's defined set of embedded payment merchants
5. Based on full-year 2017 sales volume disclosures by peers and JPMorgan Chase estimates. Excludes private label and Commercial Card
6. "2017 P2P Market Sizing: Moving into High Gear," Javelin Strategy & Research, 2017. P2P market size includes online and mobile person-to-person transfers via bank and non-bank providers, and excludes wire transfers through banks and money services businesses

NOTES

Notes on slide 32 – Consumer & Community Banking – the power of our Consumer franchise

1. Reflects November 2017
2. Reflects 4Q17
3. Reflects users of all web and/or mobile platforms who have logged in within the past 90 days
4. Excludes Commercial Card

NOTES

Notes on slide 33 – Leading industry deposit growth driven by multi-channel engagement model

1. J.D. Power 2017 National Bank Satisfaction Study, September 2017
2. FDIC 2017 Summary of Deposits survey per S&P Global Market Intelligence. Excludes all branches with $500mm+ in deposits within the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC. Comparisons to 2012 exclude all branches with $500mm+ in deposits within the last ten years. National banks include Wells Fargo, Bank of America, Citi, and U.S. Bancorp and Capital One. Super regional banks include all other top 50 banks by deposits
3. Primary relationship based on JPMorgan Chase definition
4. Reflects Consumer Bank; Consumer Bank household channel segments are defined based on the tenure of the household as of the respective time period. For households with tenure of greater than 12 months, we use the following thresholds calculated over a year: Digitally-centric – <=4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Multi-channel – >4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Branch-centric – >4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year; Other – <=4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year. For households that are less than 12 months on book, we reduce the thresholds by 75% and track the household activity over a three-month time period. Digitally-engaged households includes Digitally-centric households and Multi-channel households
5. Based on total branch visits from 4Q16 through 3Q17 by all CCB customers
6. Reflects 4Q17
7. For primary bank customers, simple average across seven age cohorts of the percentage by which average deposit and investment balances per household for digitally engaged households exceed non-digitally engaged households. These seven age cohorts are: Greatest Generation (born 1900-1927), Silent Generation (born 1928 – 1945), Baby Boomers (born 1946 – 1964), Generation X (born 1965-1980), Old Millennials (born 1981-1989), Young Millennials (born 1990-1997), and other / age not available

NOTES

Notes on slide 35 – We continue to grow and innovate our credit card portfolio

1. Net Promoter Score = % promoters minus % detractors
2. Excludes Commercial Card
3. Estimated industry market size reflects disclosed U.S. full-year 2017 Visa, MasterCard, American Express and Discover payments volume
4. Represents share of general purpose credit card ("GPCC") spend, which excludes private label and Commercial Card; based on company fillings and JPMorgan Chase estimates
5. Reflects Federal Reserve Consumer Credit (G.19) release as of February 7, 2018. Growth reflects change in total revolving credit from December 2012 to December 2017
6. The Nilson Report, Issue 1105, March 2017. Data as of 2016. Chase is the #1 wholly-owned merchant acquirer in the U.S. When volume from joint ventures and revenue sharing arrangements are included in First Data's volume, First Data holds #1 share position in the U.S.
7. Reflects self-reported income at time of application
8. Reflects sales per average open account over the last twelve months
9. Defined as number of cards with greater than zero gross sales divided by total open accounts
10. Defined as open accounts as a percentage of total cumulative booked accounts as of December 2017
11. Compares credit card spend pre-Sapphire Reserve vs. post-Sapphire Reserve acquisitions for existing Chase card customers only. Post-acquisition spend reflects spend through December 2017. Excludes spend from acquisitions post-September 2017

NOTES

Notes on slide 36 – We continue to build a higher quality and less volatile home lending business

1. Net Promoter Score = % promoters minus % detractors
2. Federal Reserve Bank of New York Quarterly Report on Household Debt and Credit, February 2018 release; reflects 4Q17 vs. 4Q12 Mortgage and Home Equity Revolving EOP balances
3. Inside Mortgage Finance ("IMF") and JPMorgan Chase internal data. Includes Private Bank originations
4. Primarily includes loans held in Real Estate Portfolios, as well as loans residing in Home Lending Production and Home Lending Servicing, which are predominantly prime mortgage loans repurchased from Government National Mortgage Association ("Ginnie Mae") pools, which are insured by U.S. government agencies
5. Includes runoff portfolios, which are predominantly discontinued products no longer originated and PCI loans
6. IMF 2012 through 2017; 2018F and 2019F reflect average of forecasts from Fannie Mae (1/10/2018), Freddie Mac (1/5/2018), and Mortgage Bankers Association ("MBA") (1/20/2018)
7. Excludes Home Equity and Private Bank loans
8. Reflects data as of November 2017
9. JPMorgan Chase data

NOTES

Notes on slide 37 – We continue to grow our auto originations and deepen our relationships

1. Net Promoter Score = % promoters minus % detractors
2. Experian AutoCount data for full-year 2017; reflects financing market share for new and used loans and leases at franchised and independent dealers; auto finance bank lenders are non-captive auto lenders
3. Lease penetration represents new vehicles only; calculated as total leased units divided by vehicle sales for both Chase Auto Finance (Source: OEM Partners) and Industry (Source: Autocount). Chase Auto Finance reflects penetration of total OEM partner sales volume

NOTES

Notes on slide 38 – Significant opportunity to grow market share and deepen relationships

1. Net Promoter Score = % promoters minus % detractors
2. Barlow Research Associates, Primary Bank Market Share Database as of 4Q17. Rolling eight quarter average of small businesses with revenues of $100K – <$25mm
3. Reflects JPMorgan Chase estimates
4. Reflects new-to-bank multi-product business households after three full months of activity; accounts opened between May through October 2017 vs. 2016

NOTES

Notes on slide 39 – Corporate & Investment Bank – steady, consistent strategy

1. Dealogic as of January 1, 2018
2. Institutional Investor, 2017
3. Source: Coalition. Preliminary 2017 rank analysis for Markets based on Coalition Index (BAML, BARC, BNPP, CITI, CS, DB, GS, HSBC, MS, JPM, SG, and UBS), for Treasury Services based on peer-set (BAML, BNPP, CITI, DB, HSBC, SG, SCB, and WFC), and reflects JPMorgan Chase's business structure
4. Source of assets under custody ("AUC"): Company filings

NOTES

Notes on slide 40 – Continue to return above cost of capital

1. 2017 ROE and revenue exclude the impact of the TCJA in Fixed Income Markets and a fair value loss on a margin loan related to a single client in Equity Markets; 2016 ROE is restated to reflect 2017 methodology and a constant capital basis of $70B
2. Coalition. 2017 based on preliminary results. Market share reflects JPMorgan Chase's share of the global industry revenue pool, and reflects JPMorgan Chase's business structure
3. Client activity measure used primarily for sales and client management as a proxy for volume
4. Marginal ROE based on 2017 data

NOTES

Notes on slide 41 – Preserve our leading positions and deepen our share

1. Coalition. 2017 based on preliminary results. Rank analysis based on Coalition Index (BAML, BARC, BNPP, CITI, CS, DB, GS, HSBC, MS, JPM, SG, and UBS). Market share reflects JPMorgan Chase's share of the global industry revenue pool. Market share & rank analysis based on JPMorgan Chase's business structure
2. Coalition. 2017 based on preliminary results. Regional rank analysis based on Coalition Index (BAML, BARC, BNPP, CITI, CS, DB, GS, HSBC, MS, JPM, SG, and UBS), and reflects JPMorgan Chase's business structure

NOTES

Notes on slide 49 – Asset & Wealth Management – focus on client outcomes

1. The “5 yr Investment performance” analysis represents the proportion of assets in mutual funds that are ranked above their respective peer category median on a 5-year basis as of December 31, 2017. All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers redenominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a “primary share class” level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The “primary share class”, as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one “primary share class” territory both rankings are included to reflect local market competitiveness (applies to “Offshore Territories” and “HK SFC Authorized” funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results
2. Includes all Chase Wealth Management Investments (“CWM”) and all Chase Private Client (“CPC”) deposits
3. 2017 average balances

NOTES

Notes on slide 51 – Leading long-term performance, consistently strong flows, product innovation

1. The "% of 2017 JPMAM long-term mutual fund AUM over peer median" analysis represents the proportion of assets in mutual funds that are ranked above their respective peer category median on 1, 5, and 10 year basis as of December 31, 2017. All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers redenominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results. The classifications in terms of product categories shown are J.P. Morgan's own
2. Source: Company filings, J.P. Morgan estimates. Peers include BLK, MS, UBS, and GS. UBS converted into USD at average 2013-2017 exchange rate
3. Long-term AUM
4. Long-term AUM, administration, brokerage, custody, and deposit for AWM, CWM investments, and new-to-firm CPC deposits
5. Long-term AUM, fee-generating brokerage, and deposits in fee-generating brokerage accounts
6. Long-term AUM, brokerage, and deposit
7. Long-term AUM and brokerage

NOTES

Notes on slide 52 – Complementing client portfolios with banking and liquidity products

1. Pro-forma, reflecting AWM's Wealth Management business ("WM") plus CWM investments and CPC deposits
2. Includes assets managed on behalf of other JPMAM investment teams
3. Source: iMoneynet as of February 23, 2018
4. Includes HELOCs and $1.1B of CIO portfolio mortgage loans for AWM clients, with <5% of conforming loans
5. Percent of combined WM and CPC clients with loan facilities

NOTES

Notes on slide 53 – Hiring client advisors and increasing productivity

Source: Company filings, J.P. Morgan estimates. UBS converted into USD at the average daily 2017 exchange rate for pre-tax income and the spot exchange rate as of December 31, 2017 for client assets

1. Includes AWM and CWM, including all CWM investments and CPC deposits. Client assets include total AUM, administration, brokerage, custody, and deposits
2. Total AUM
3. Total AUM, brokerage, custody, and deposits
4. Total AUM, brokerage, and deposits
5. Total primary sales professionals, including financial advisors and wealth advisors
6. Retail Brokerage financial advisors

NOTES

Notes on slide 57 – Fortress balance sheet – deposits

1. To ensure consistent comparison over time, years prior to 2017 have been adjusted for certain methodology changes regarding the classification of operating and non-operating deposits
2. Represents operating and retail/SME ("small and medium enterprise") deposits within the CIB, CB and Corporate lines of businesses based on the U.S. LCR rule. Excludes operating and retail/SME deposits in CCB and AWM
3. Represents non-operating deposits within the CIB, CB and Corporate lines of businesses based on the U.S. LCR rule, and includes all certificates of deposits in Corporate. Excludes non-operating deposits in CCB and AWM
4. Other includes collateralized deposits, margin cash deposits in CIB, and certain time deposits
5. Represents the average for December 2014 vs. the full-year 2017 average 3-year CAGR
6. December 2014 and full-year 2015 balances include the commercial paper sweeps product, which was discontinued in 2015
7. FY2015 balances are partially based on an average of weekly spot numbers

NOTES

Notes on slide 58 – Both quantitative tightening and rate hikes will likely cause migration of deposits

1. Large time deposit growth has been adjusted for the slope of the yield curve based on regression analysis: large time deposit YoY % change = −0.69 + 5 * (1 year forward 1 month swap rate − spot 1 month overnight indexed swap) + 5.7 * spread differential between money market funds ("MMF") and retail deposit proxy
2. Retail deposit growth adjusted for M2 based on regression: retail deposit YoY % change = 1.476 + 1.2 * M2 deposits YoY% change − 2.1 * spread differential between MMF and retail deposit proxy

NOTES

Notes on slide 61 – Noninterest revenue trajectory

1. Includes investments in Sapphire Reserve and other notable items
2. Notable items in Markets exclude revaluation of tax-oriented investments related to the TCJA in 2017 and a fair value loss on a margin loan to a single client
3. Other notable items include a legal benefit related to a settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee to certain Washington Mutual trusts, revaluation of tax-oriented investments related to the TCJA, and a fair value loss on a margin loan to a single client
4. Markets includes both NII and NIR

NOTES

Notes on slide 62 – Adjusted expense – continuing to fund investments and growth

1. Growth and efficiencies also include other offsetting non-core items, including benefits associated with the elimination of the FDIC surcharge
2. See note 3 on slide 76
3. Includes compensation associated with growth in revenue producers
4. Gross marketing includes ~$2.5B of Card "SFAS 91" acquisition costs, which are recognized as contra revenue and are not included in 2018 adjusted expense

NOTES

Notes on slide 68 – Leading client franchises

1. FDIC 2017 Summary of Deposits survey per S&P Global Market Intelligence. Excludes all branches with $500mm+ in deposits within the last two years (which are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC. 2006 excludes Washington Mutual Bank ("WaMu") and Bank of New York branch purchases
2. Represents share of general purpose credit card ("GPCC") spend, which excludes private label and Commercial Card; based on peer company filings and JPMorgan Chase estimates
3. The 2006 figure reflects First Data joint venture
4. IB fees market share for all periods presented are based on wallet data from Dealogic as of January 1, 2018
5. Coalition. 2017 based on preliminary results. 2016 and 2017 rank analysis based on Coalition Index (BAML, BARC, BNPP, CITI, CS, DB, GS, HSBC, MS, JPM, SG, and UBS). Market share reflects JPMorgan Chase's share of the global industry revenue pool. Market share & rank analysis based on JPMorgan Chase business structure. 2006 rank analysis is based on JPMorgan Chase analysis
6. Represents Top 50 Metropolitan Statistical Areas ("MSA") where CB has a presence
7. Includes the commercial term lending portfolio acquired in the 2008 WaMu transaction. S&P Global Market Intelligence based on FDIC data as of 12/31/17
8. Represents the "overall star rating" derived from Morningstar for the U.S., the U.K., Luxembourg, Hong Kong and Taiwan domiciled funds; and Nomura "star rating" for Japan domiciled funds. Includes only Asset Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds
9. Source: Company filings and JPMorgan Chase estimates. Rankings reflect competitors in the peer group with publicly reported financials and 2017 client assets of at least $500B as follows: Allianz, BAC, BEN, BK, BLK, CS, GS, IVZ, MS, TROW, UBS. JPMorgan Chase's ranking reflects AWM long-term AUM, administration, brokerage, custody, and deposits, Chase Wealth Management investments, and new-to-firm Chase Private Client deposits
10. Strategic Insight as of February 6th, 2018
11. Capgemini World Wealth Report 2017. Market share estimated based on 2016 data (latest available)
12. FDIC 2017 Summary of Deposits survey per S&P Global Market Intelligence. Excludes all branches with $500mm+ in deposits within two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC

NOTES

Notes on slide 68 – Leading client franchises

13. Based on 2017 sales volume and loans outstanding disclosures by peers (C, BAC, COF, AXP, DFS) and JPMorgan Chase estimates. Sales volume excludes private label and Commercial Card. AXP reflects the U.S. Consumer segment and JPMorgan Chase estimates for AXP's U.S. small business sales. Loans outstanding exclude private label, AXP Charge Card, and Citi Retail Cards
14. "Credit Card Monitor 2017: Cobrand Market Shares by Issuer," Phoenix, for 12-month period ending October 2017. Based on card accounts, revolving balance dollars and spending dollars
15. The Nilson Report, Issue 1108, April 2017. Data as of 2016
16. The Nilson Report, Issue 1105, March 2017. Data as of 2016. Chase is the #1 wholly-owned merchant acquirer in the U.S. When volume from joint ventures and revenue sharing arrangements are included in First Data's volume, First Data holds the #1 share position in the U.S.
17. Dealogic as of January 1, 2018
18. Coalition. Preliminary FY 2017 revenues divided by Front-Office full-time equivalents for the first-half of 2017
19. Source of Assets under custody ("AUC"): Company filings
20. SWIFT volume report as of December YTD17
21. Thomson Reuters LPC as of FY17
22. The "10-year LT mutual fund AUM in top 2 quartiles" analysis represents the proportion of assets in mutual funds that are ranked above their respective peer category median on a 10-year basis as of December 31, 2017. All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers redenominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results
23. Euromoney, 2017 results released February 2018

Notes on Fixed Income

Slide 70 – Capital markets funding sources

1. The Firm's obligations under the collateralized commercial paper ("CCP") programs are reported under other borrowed funds ("OBF") and securities loaned or sold under agreements to repurchase ("repo agreements"), in the amount of $14.3B and $3.4B, respectively as of December 31, 2017. The balances reflected above for OBF and securities loaned/repo agreements exclude balances related to the CCP programs. OBF includes ~$2B of short-term secured borrowings. Commercial Paper and OBF are included in short-term borrowings on the Firm's Consolidated balance sheets as of December 31, 2017 and 2016
2. Includes federal funds purchased, long-term securities loaned and structured repo agreements; and client-driven loan securitizations which are included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets, totaling ~$7B as of December 31, 2017
3. Includes junior subordinated debt and trust preferred securities

Slide 71 – JPMorgan Chase & Co. (HoldCo) unsecured long-term debt outstanding

1. Eligible long-term debt ("LTD") with maturity > 1 year count toward the external TLAC ("total loss absorbing capacity") requirement. Eligible LTD with a maturity > 2 years, plus 50% of eligible LTD with a maturity between 1-2 years count toward the external LTD requirement
2. Represents callable notes with an option to redeem 1 year prior to maturity
3. Non-TLAC eligible debt is approximately $0.5B for 2019, $0.4B for 2020, $0.2B for 2021, $0.2B for 2022 and $2.7B for >2022

Slide 72 – JPMorgan Chase & Co. (HoldCo) benchmark issuance

1. Excludes preferred equity issuance
2. Weighted average maturity ("WAM") is calculated based on the final maturity of all unsecured long-term debt issuance
3. Represents callable notes with an option to redeem 1 year prior to maturity, except for callable preferred stock issuance

Notes on Fixed Income

Slide 73 – Firmwide long-term funding outstanding

1. Includes junior subordinated debt and trust preferred securities
2. Includes $1.8B and $1.5B of student loan securitizations in 2015 and 2016, respectively
3. Includes $0.5B of other secured debt in a HoldCo subsidiary in each of 2015 and 2016
4. Senior unsecured for Bank Subs includes $7.7B, $3.9B and $0.3B of subordinated debt in 2015, 2016 and 2017, respectively

Slide 75 – Wholesale funding sources – Purpose and key features

1. Currently not optimal from a regulatory capital treatment perspective to issue with a tenor of less than 10 years
2. Commercial Paper ("CP")/Collateralized Commercial Paper ("CCP")/Asset-Backed Commercial Paper ("ABCP") can be issued up to 397 days, except for puttable CP/CCP/ABCP, and any CP/CCP relying on the SEC rule 3(a)3 exemption, which has a maximum tenor of 270 days. Certificates of Deposit ("CD") do not have a maximum contractual maturity. Federal Home Loan Bank ("FHLB") advances can have a legal maturity of up to 30 years and can also be extendible. Net stable funding ratio ("NSFR") reflects eligibility for maturities >365 days
3. CP, CCP and ABCP can be issued in callable format, but this feature is currently not optimal from a liquidity perspective
4. Multi-currency represents two or more currencies
5. Certain plain-vanilla debt that is classified as structured notes is TLAC-eligible

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2017, filed with the Securities and Exchange Commission and available on JPMorgan Chase & Co.'s website https://www.jpmorganchase.com/corporate/investor-relations/investor-relations and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

NOTES

FIRM OVERVIEW

February 26, 2019

- FIRM OVERVIEW
- CORPORATE & INVESTMENT BANK
- CONSUMER & COMMUNITY BANKING
- ASSET & WEALTH MANAGEMENT
- COMMERCIAL BANKING

JPMorgan Chase & Co.

Exceptional client franchises and proven operating model – positioned to outperform in any environment

Complete | **Global** | **Diversified** | **At scale**

Exceptional client franchises

- **Customer centric** and **easy to do business with**
- **Relevant** to our customers
- Focus on **safety and security**
- **Powerful brands** CHASE J.P.Morgan

Fortress balance sheet and principles

- **Capital** and **liquidity**
- **Risk governance** and **controls**
- **Culture** and **conduct**

Long-term shareholder value

- Continuously **investing** in the future while maintaining **expense discipline**
- Focus on **customer experience** and **innovation**

Leading financial performance

Strong financial performance in 2018 on an absolute basis…

$111.5B ↑
revenue[1]

$32.5B ↑
net income

$9.00 ↑
EPS

12.0% ↓
CET1 ratio[2]

$28.5B ↑
net capital distribution[3]

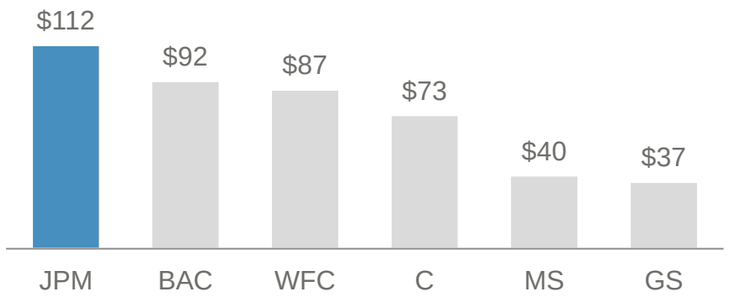
17% ↑
ROTCE[4]

Record revenue and income

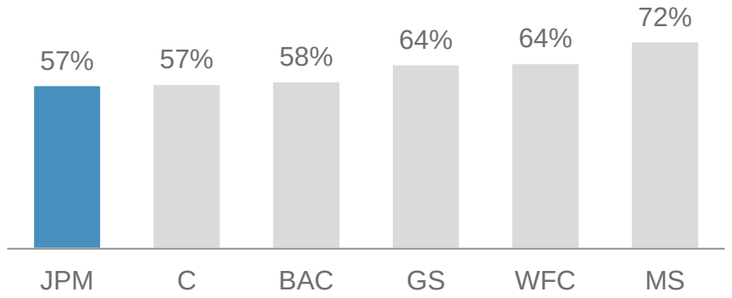
Note: For footnoted information, refer to slide 30

…as well as relative to our peers

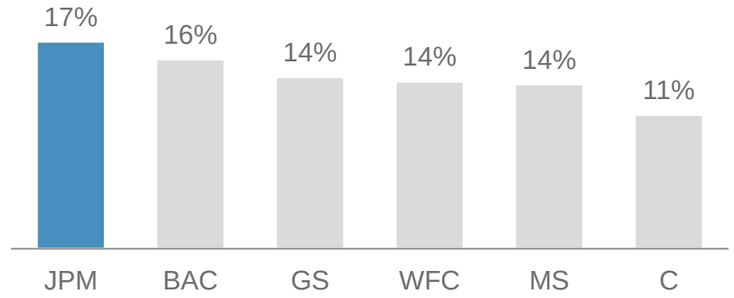
Revenue – managed ($B)[1,2]



Overhead ratio – managed[1,3]



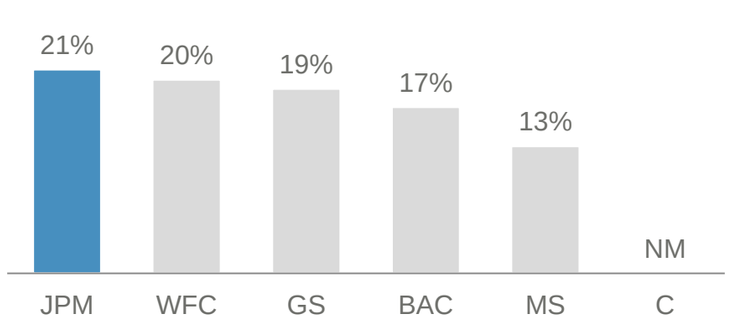
ROTCE[4]



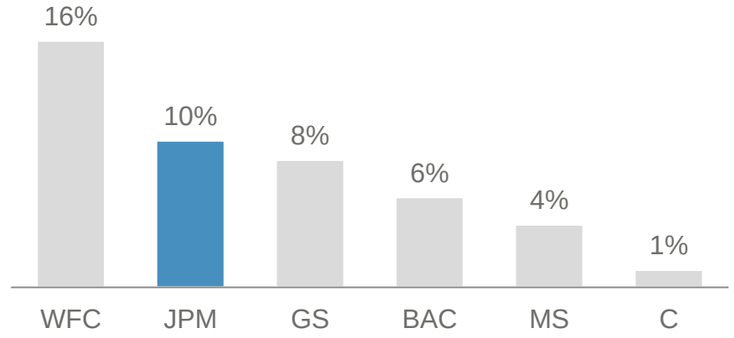
Capital distribution ($B)[5]



EPS: 10-year CAGR[6]



TBVPS[4,6]: 10-year CAGR



Note: For footnoted information, refer to slide 31

We have exceptional client franchises…

Consumer & Community Banking

- Serve **62**mm U.S. households, including **4**mm small businesses
- **49**mm active digital customers[1], including **33**mm active mobile customers[2]
- **99**mm debit and credit card accounts[3]
- #1 in new **primary bank** relationships nationally[4]
  - 9.0% retail deposit market share[5]
- #1 U.S. **credit card** issuer based on sales and outstandings[6]
  - 22.3% sales market share[7]
  - 16.6% outstandings market share[8]
- #2 **jumbo mortgage** originator[9]

Corporate & Investment Bank

- Business with **>80%** of Fortune 500 companies
- Presence in over **100** markets globally
- #1 in global **IB** fees[10]
  - 8.7% market share
  - Participated in 7 of the top 10 fee paying deals in 2018
- #1 in **Markets** revenue globally[11]
  - 11.6% market share, including 11.9% FICC and 11.2% Equities
- #1 Global **Research** Firm[12]
- #1 in **USD payments** volume[13]
- Top 3 **custodian** globally with $23T AUC[14]

Commercial Banking

- **133** locations across the U.S., incl. all of the **top 50 MSAs**
- **26** international locations
- Credit, banking and treasury services to **~17,000** C&I clients as well as **~34,000** real estate owners and investors
  - Industry leading credit – **7th** straight year of net recoveries or single-digit NCO rate
- #1 U.S. **multifamily** lender[15]
- $2.5B gross **investment banking** revenue[16]
  - #1 traditional middle market bookrunner[17]

Asset & Wealth Management

- Serve clients across the **entire wealth spectrum**
- Business with **55%** of the world's largest pension funds, sovereign wealth funds and central banks
- #1 **Private Bank** in North America[18]
- Fiduciaries across **all asset classes**
- **83%** of 10-year mutual fund AUM performed above peer median[19]
- **$2.7T** client assets, including **$2.0T** AUM

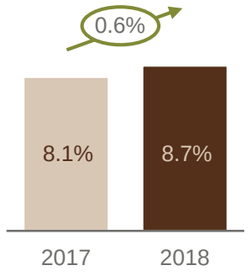
2018	Consumer & Community Banking	Corporate & Investment Bank	Commercial Banking	Asset & Wealth Management
Revenue:	**$52B**	**$36B**	**$9B**	**$14B**
ROE:	**28%**	**16%**	**20%**	**31%**

Note: For footnoted information, refer to slides 32-33

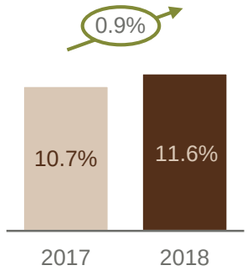
…and we are gaining market share in nearly all of our businesses

Corporate & Investment Bank

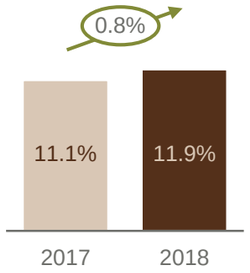
Global IB fees[1]



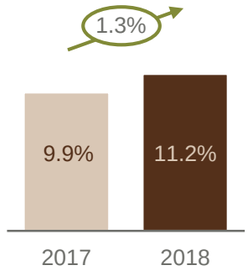
Markets revenue[2]



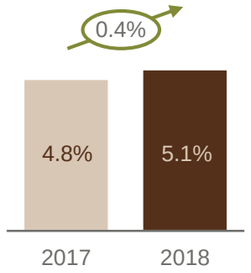
FICC revenue[2]



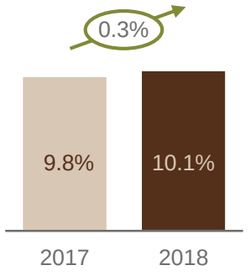
Equities revenue[2]



Treasury Services[2]

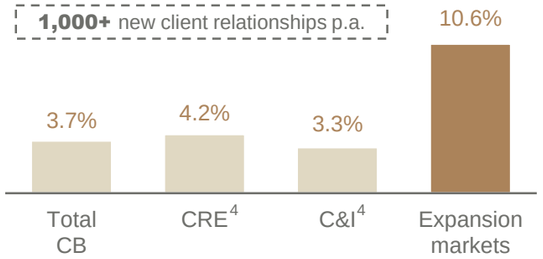


Securities Services[2]



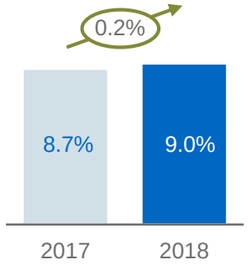
Commercial Banking

2018 YoY loan growth[3]

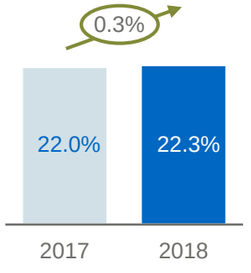


Consumer & Community Banking

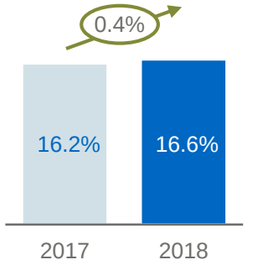
Retail deposits[5]



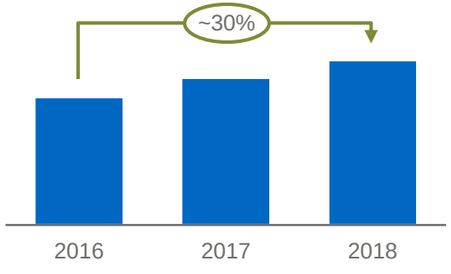
Credit card sales[6]



Credit card loans[7]

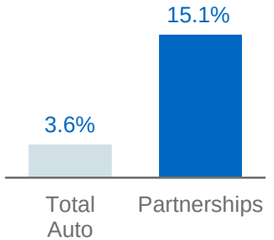


Purchase mortgage originations volume by primary bank households[8]



~50 bps lower market share in total mortgage originations YoY[9]

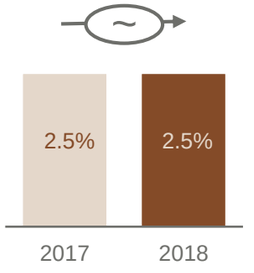
Auto loan & lease balance growth 2018 YoY[3]



~30 bps lower market share in total auto loan & lease originations YoY[10]

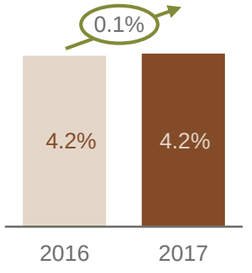
Asset & Wealth Management

Active AUM[11]



#4 in U.S. ETF net AUM flows in 2018[13]

NA PB Client assets[12]

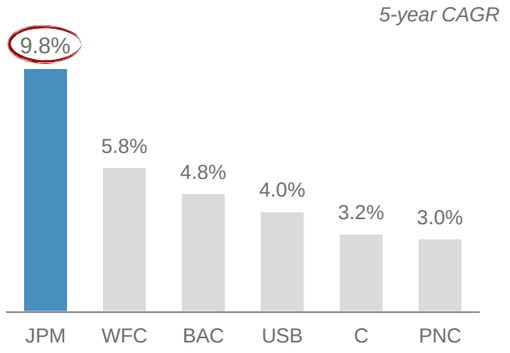


Note: Totals may not sum due to rounding. For footnoted information, refer to slide 34

JPMorgan Chase & Co.

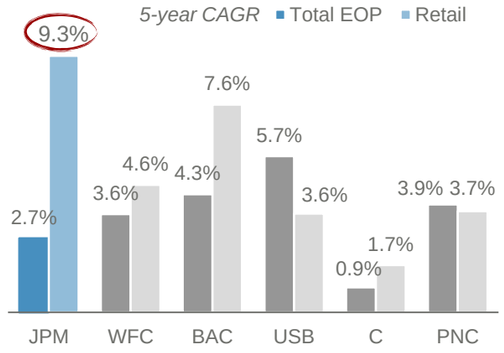
Proven best-in-class long-term performance

EOP core loans[1]



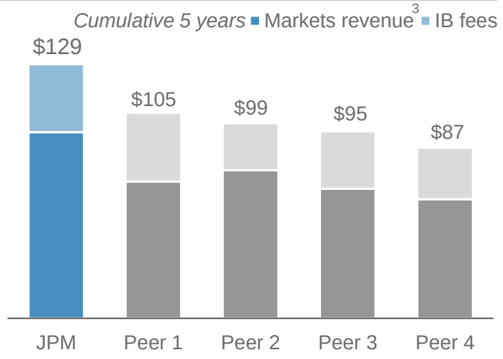
2018 YoY growth						
Total	7.9%	0.4%	3.2%	2.3%	3.9%	2.6%

Deposits[2]



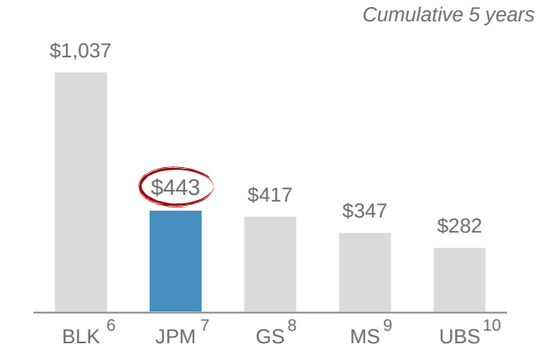
2018 YoY growth						
Total	1.8%	(3.7)%	5.5%	(0.5)%	5.6%	1.1%
Retail	6.1%	1.7%	4.4%	2.3%	(0.5)%	1.2%

Markets revenue & IB fees ($B)



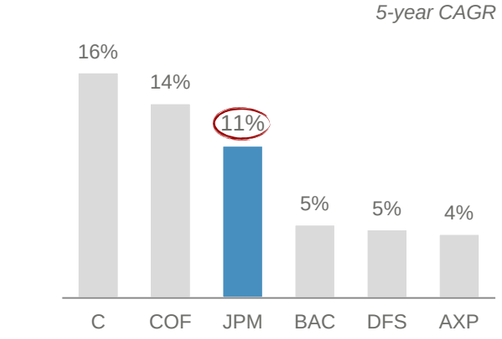
2018 share					
Markets[4]	11.6%	7.8%	8.5%	6.5%	7.1%
IB fees[5]	8.7%	7.8%	5.0%	5.6%	6.4%

Total net client asset flows ($B)



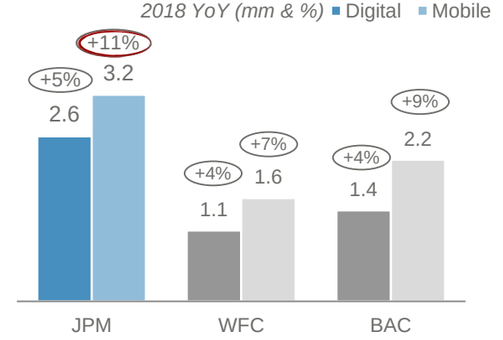
2018					
Total	$124	$97	$89	$57	$57

Credit card sales[11]



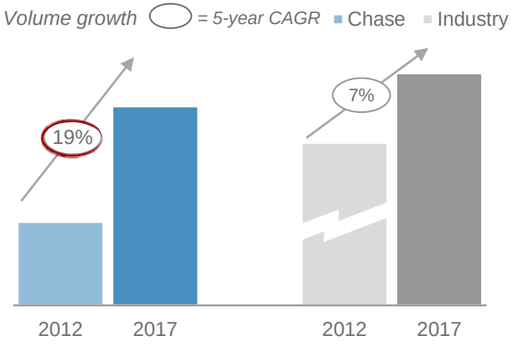
2018 ($B)						
Sales	$344	$354	$692	$265	$139	$624
YoY	7.6%	15.4%	11.3%	8.2%	7.9%	12.2%

Digital & mobile customer growth



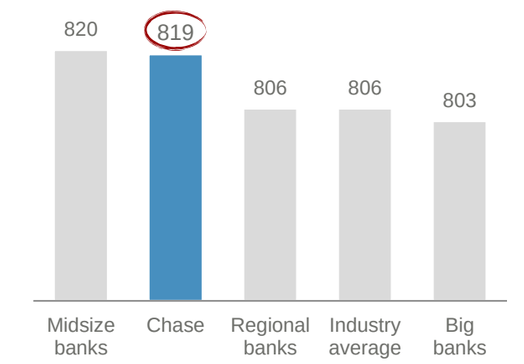
2018			
Digital	49	29	36
Mobile	33	23	26

Merchant processing bankcard[12]



2017 YoY growth		
Total	13.2%	7.8%

2018 J.D. Power U.S. retail banking satisfaction[13]

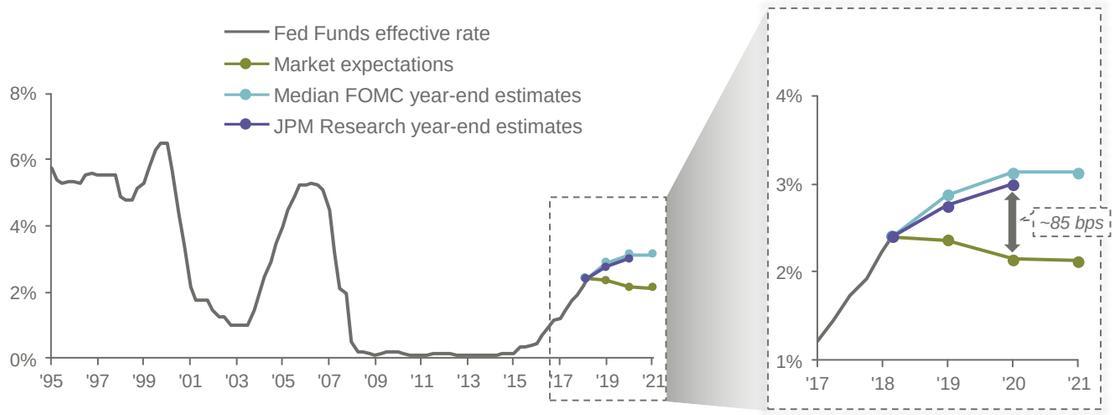


Note: For footnoted information, refer to slide 35

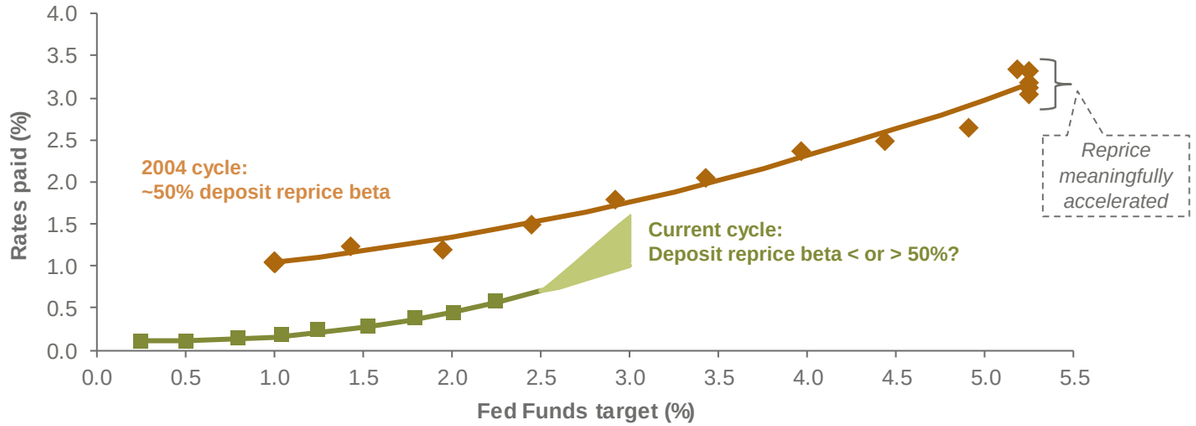
JPMorgan Chase & Co.

Macroeconomic backdrop

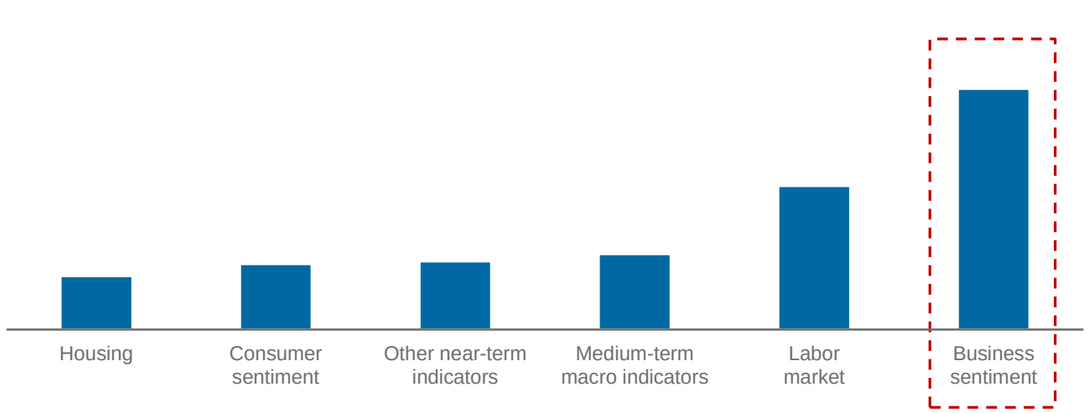
Fed Funds rate[1]



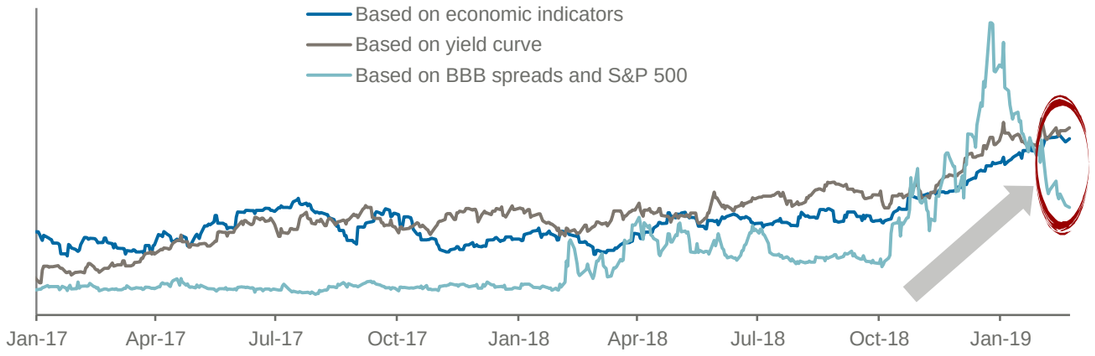
Deposit repricing[2]



Probability of a U.S. recession based on economic indicators – drivers YoY[3]



Probability of a U.S. recession in ≤12 months[3]

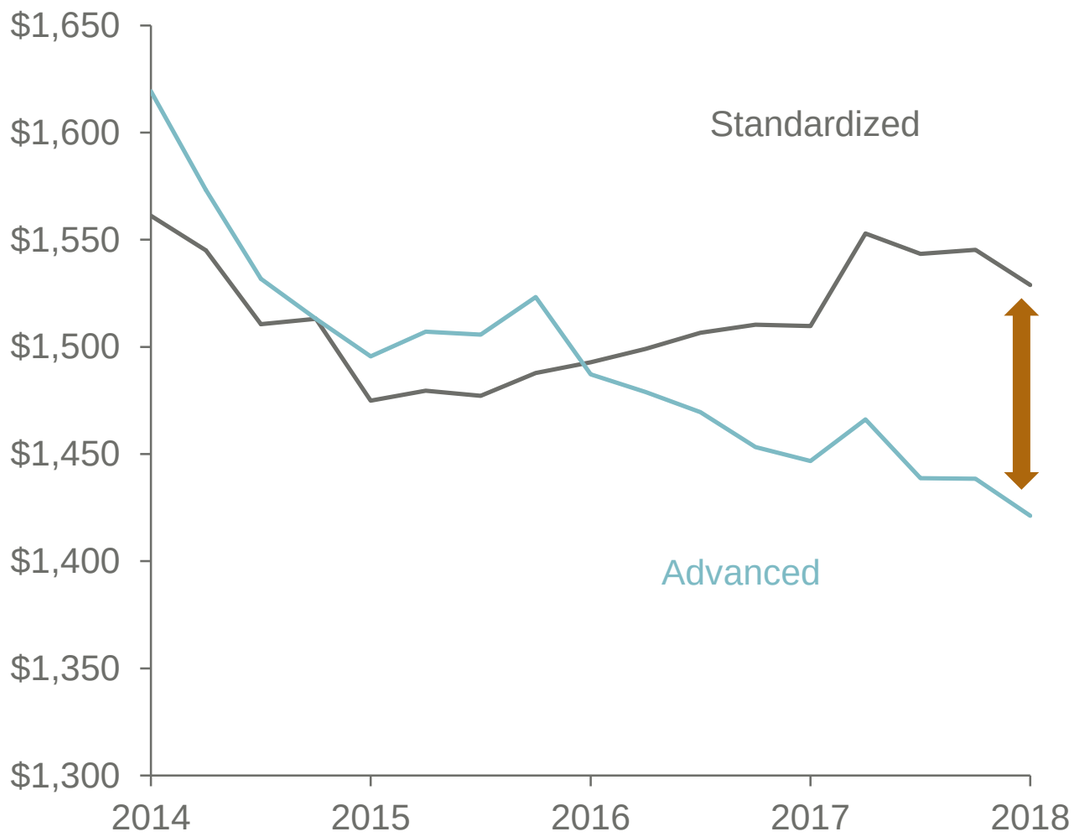


Note: For footnoted information, refer to slide 36

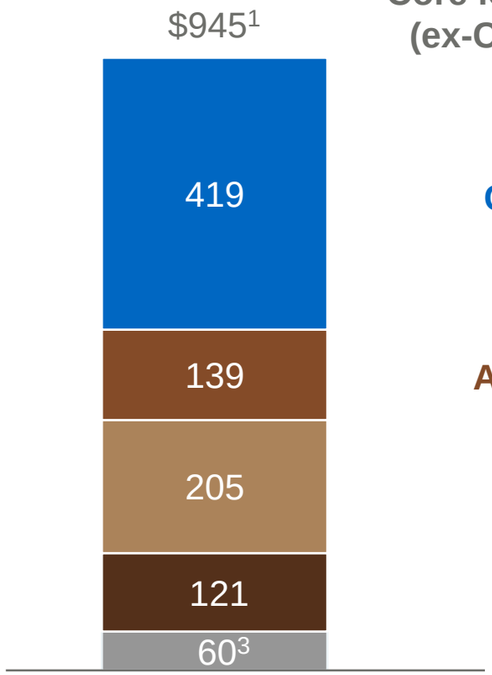
JPMorgan Chase & Co.

Evolution of the balance sheet

RWA ($B)



Avg. loans 2018 ($B)



Growth

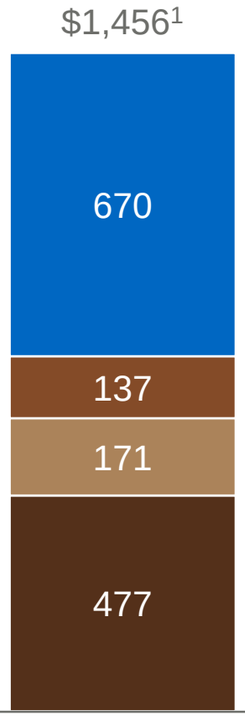
	'14-'18 CAGR	YoY 2018	YoY 4Q18
Core loans (ex-CIB)[2]:	11%	7%	6%
CCB:	13%	6%	
AWM:	9%	12%	
CB:	10%	4%	
CIB:	5%	7%	

Focus on high quality loans – expect slower pace of growth

[1] Includes Corporate
[2] See note 2 on slide 29
[3] Loans classified as runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit

Evolution of the balance sheet (cont'd)

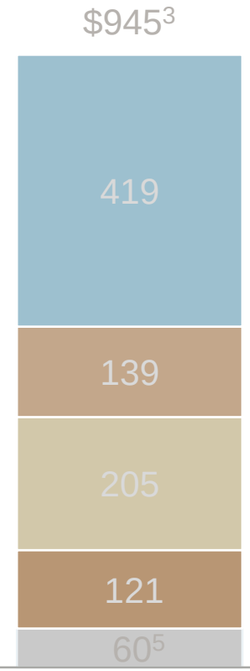
Avg. deposits 2018 ($B)



Growth

	'14-'18 CAGR	YoY 2018	YoY 4Q18
Total deposits:	4%	3%	2%
Ex. non-op.[2]:	8%	4%	3%
CCB:	8%	5%	
AWM:	(2)%	(8)%	
CB:	(3)%	(3)%	
CIB:	3%	7%	

Avg. loans 2018 ($B)



Growth

	'14-'18 CAGR	YoY 2018	YoY 4Q18
Core loans (ex-CIB)[4]:	11%	7%	6%
CCB:	13%	6%	
AWM:	9%	12%	
CB:	10%	4%	
CIB:	5%	7%	

Expect slower industry deposit growth of ~2% on quantitative tightening and higher rates

Note: For footnoted information, refer to slide 37

Balance sheet optimization strategy

Navigating the current environment

- Marginal decisions about balance sheet growth take into consideration:
  - Capital – incremental growth will be capitalized under Standardized (more expensive and less risk-sensitive)
  - Funding cost – slower deposit growth may increase need for more expensive funding

Illustrative economics of a marginal asset

Asset	RWA		ROE		
	Adv.	Stdz.	Adv. RWA Current avg. funding cost	Stdz. RWA Current avg. funding cost	Stdz. RWA Wholesale funding cost
Loan	~25%	~50%	~40%	~20%	<10%
Security	~25%	~25%	~50%	~50%	~25%

As marginal economics evolve, the Firm optimizes its balance sheet accordingly

Evolution of regulatory framework

Where we've been…

2010s

Building a robust framework of resiliency

- Dodd-Frank U.S. Collins Floor
- SCAP[1] → CCAR[2]
- GSIB Surcharge
- Liquidity Requirements
- Living Wills
- TLAC[3]
- Basel I → Basel III

Foundational principles

- Global consistency and harmonization
- Coherence and simplification of rules
- Coordinated regulatory supervision

The next chapter is close …

2020s

Finalized implementation

- Stress Capital Buffer
- GSIB[4]
- Stress
- Basel III Finalized

Resiliency & Resolvability

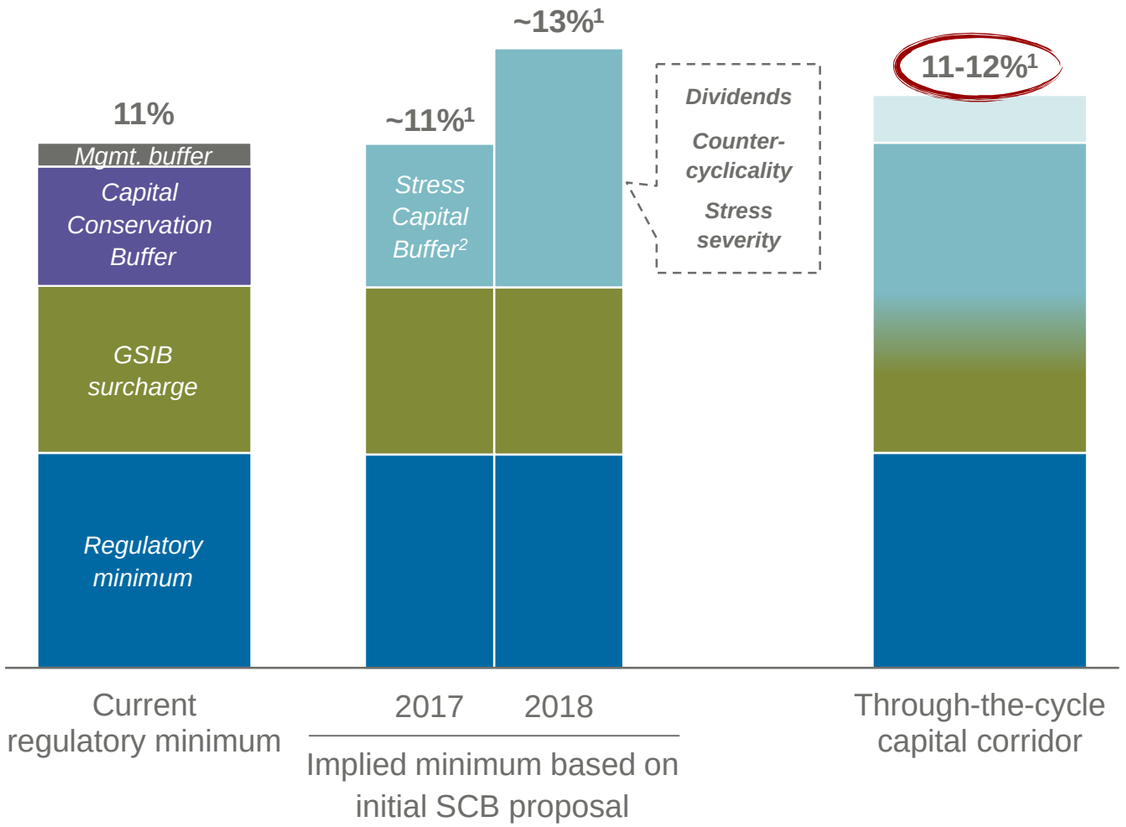
Liquidity, Living Wills, TLAC

Coherence and calibration are critical

Note: For footnoted information, refer to slide 38

CET1 requirement and capital distribution

Evolving CET1 requirement



Coherent regulatory capital minimums

- Appropriate calibration of SCB and GSIB
- Avoid duplication – in particular, counter-cyclicality

Capital distribution

- Analyst estimates of ~90-100% net payout – CCAR results dependent

Expect to remain at the higher end of the 11-12% CET1 corridor at this point in the cycle

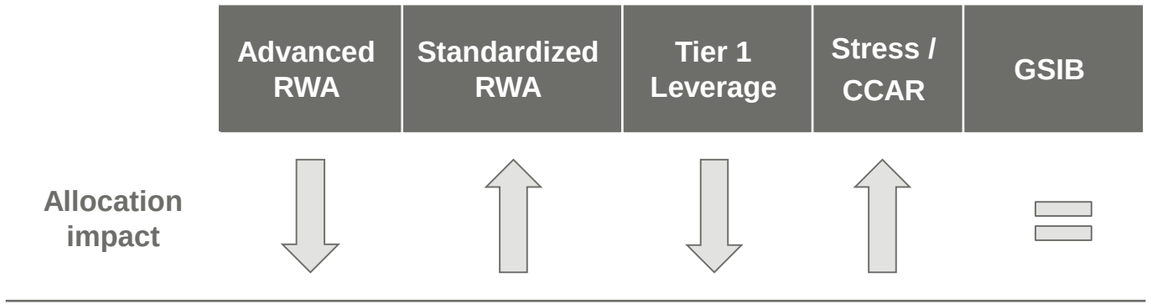
[1] Including management buffer
[2] ("SCB")

Capital allocation methodology and LOB ROE

Core philosophy: Maximize long-term shareholder value

- Ensure the Firm makes **maximum use of scarce resources** – while complying with all requirements
- Considers current and potentially **binding capital constraints**
- Aligns incentives with **medium- and long-term** perspective
- Framework **dynamically responds** to changes in our capital position and regulatory environment

Multi Metric Framework drivers for 2019 capital allocation



2019 capital allocation and ROE

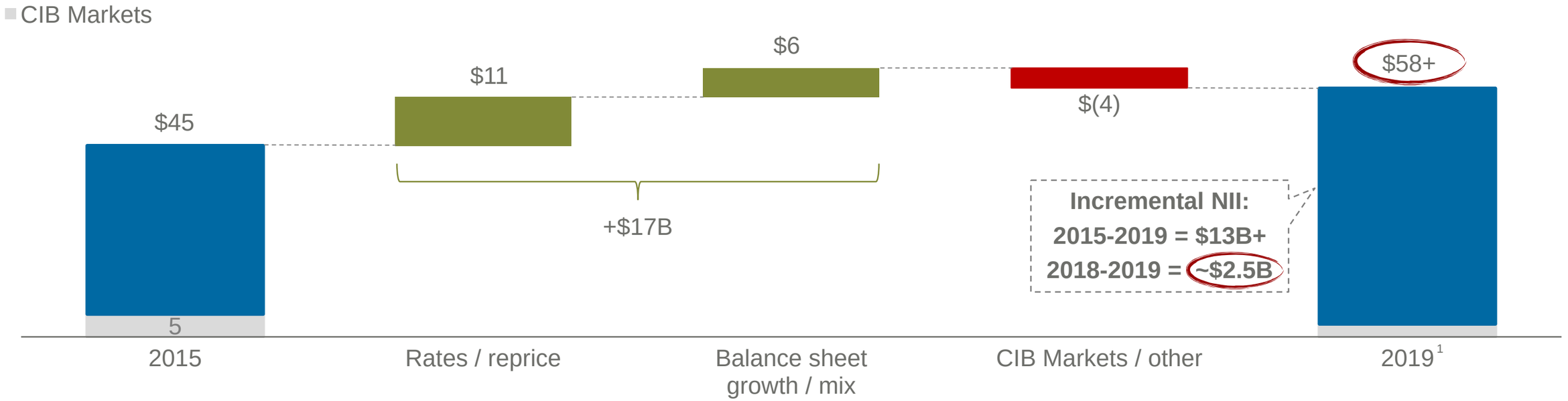
	Avg. retained equity ($B)[1]		Medium-term ROE	
	2018	2019	Previous	Revised
CCB	$51	$52	25%+	
CIB	70	80	~17%	~16%
CB	20	22	~18%	
AWM	9	10.5	~35%	25%+
Corporate	34	20.5	NM	
Firm	$184	~$185	~17% ROTCE	

Changes to our allocation framework reflect Firmwide constraints – consistent with our philosophy

[1] Reflects average CET1 capital. Total Firm for 2019 is based on analyst estimates

Net interest income – significant growth

Net interest income ($B)



Forward looking NII drivers

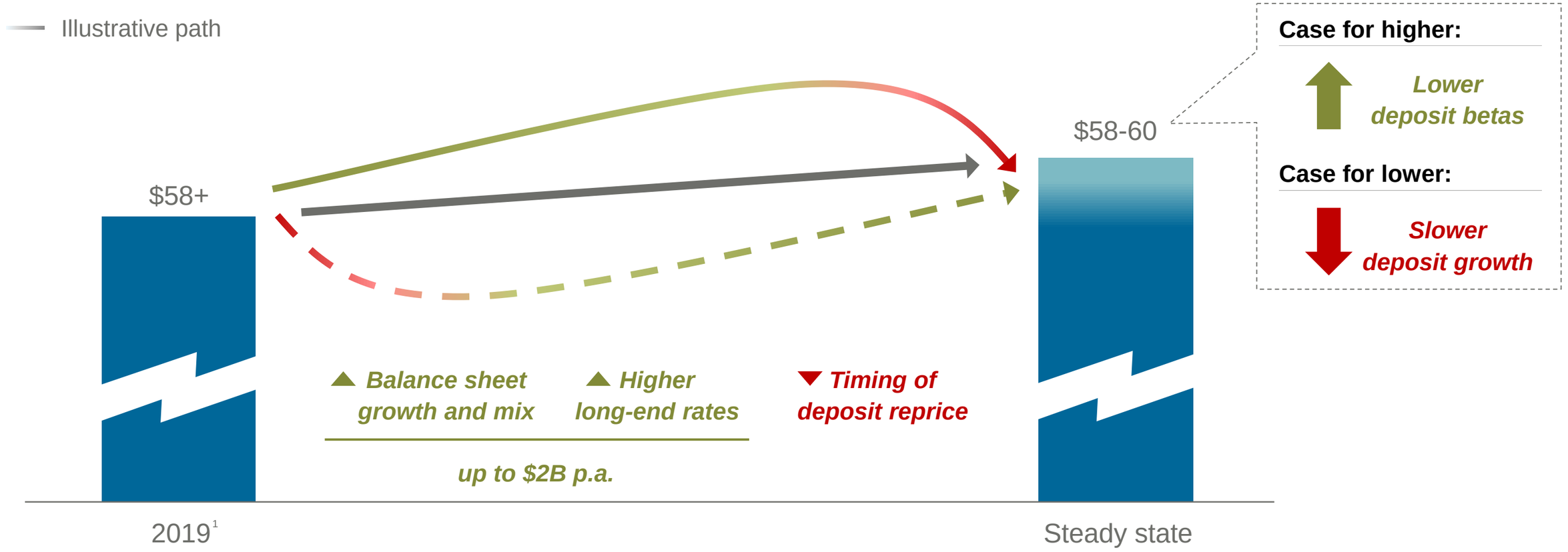
- **Rates net of deposit reprice lags**
  Rate benefit more than offset by deposit reprice
- **Balance sheet growth and mix**
- **CIB Markets NII**
  Down, but less of a drag on fewer hikes

$13B+ incremental NII includes deposit reprice lag benefit

[1] 2019 Outlook based on implied rate curve as of December 31, 2018

Net interest income – steady state

Net interest income ($B)

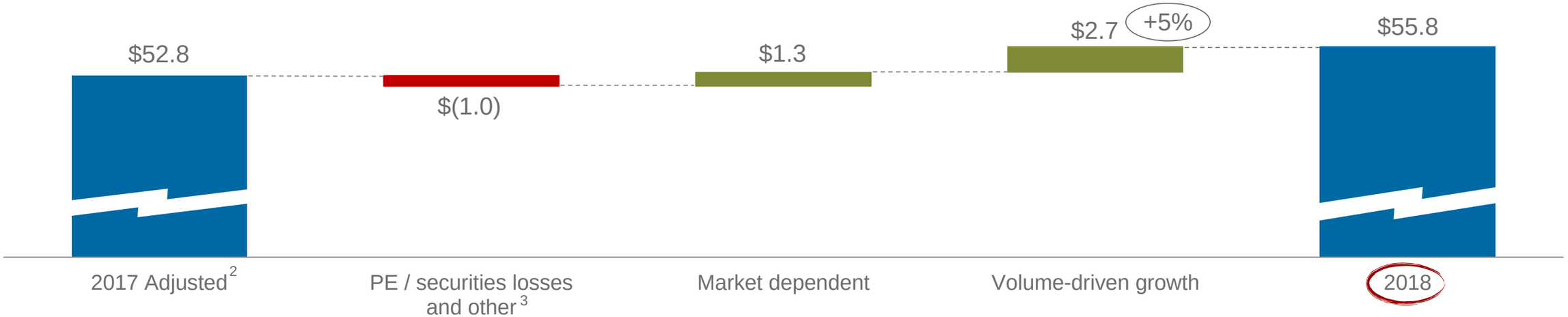


Expect steady state NII for the current cycle to be at or slightly above 2019 levels – deposit reprice dependent

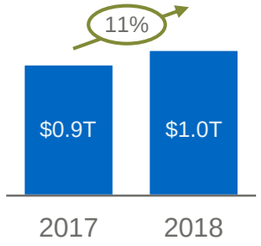
[1] 2019 Outlook based on implied rate curve as of December 31, 2018

Noninterest revenue[1]

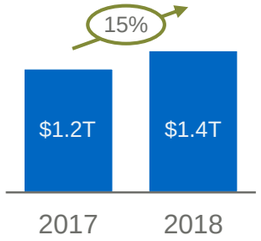
Noninterest revenue ($B)



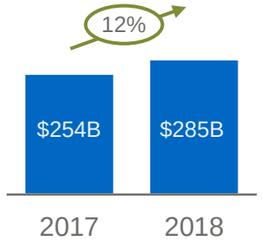
Debit and credit card sales volume



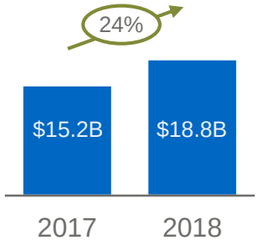
Merchant processing volume



CWM investments (avg.)[4]



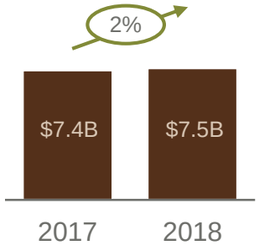
Auto op. lease assets (avg.)



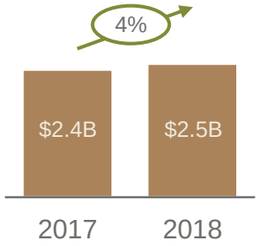
CIB Markets revenue[5]



CIB IB fees



CB Gross IB revenue



AWM AUM (avg.)[4]

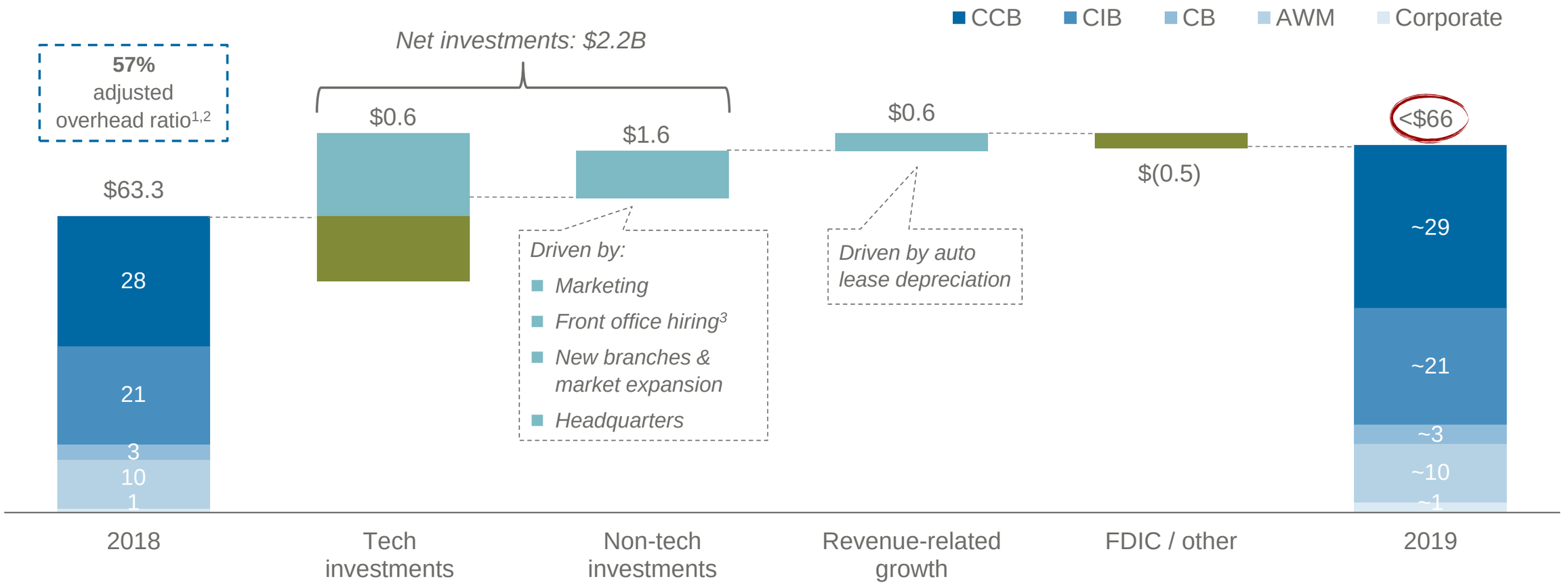


Core business drivers supporting ~3% NIR CAGR over time

Note: For footnoted information, refer to slide 39

Adjusted expense[1]

Adjusted expense ($B)



Note: Totals may not sum due to rounding. For footnoted information, refer to slide 40

Credit – net charge-offs

		2018		2019 Outlook
		NCO rate	NCOs ($B)	NCO rate
CCB	Home Lending[1,2]	(0.02)%	$(0.0)	↔
	Card	3.10%	4.5	↔
	Auto	0.38%	0.2	↔
	Business Banking[3]	0.49%	0.1	↔
CIB		0.08%	0.1	↔
CB		0.03%	0.1	↔
AWM		0.01%	0.0	↔
Firmwide[1]		**0.53%**	**$4.9**	**<$5.5B**

Medium-term: Modestly higher on mix

Higher on growth

[1] Excludes the impact of purchased credit-impaired ("PCI") loans
[2] Excludes the impact of reperforming and non-performing loan sales
[3] Excludes the impact of retail overdraft losses; CBB's reported NCO rate was 0.90%

Current Expected Credit Losses reserving standard ("CECL")

Implementation adjustment

- Estimated day 1 increase to reserves of **$5B+/- or 35%** largely **driven by Card**
- Estimates dependent on macro environment, portfolio characteristics, and continuing review of models, methodology and judgments
- **Adverse case** reflects a range of adverse outcomes

Capital implications

- 4-year phase-in of initial capital impact – no permanent capital relief
- Included in the Firm's 2020 CCAR submission – Fed modeling to follow in 2022

Effects

- Results in more volatile credit costs in stress
- Potential impact to credit availability and pricing

Day 1 CECL impact ($B)

		2018 Credit reserves		Estimated implementation adjustment
CCB	Card	$5.2	+	Material adjustment
CCB	Home Lending[1]	2.9	+	Less material adjustments
CCB	Auto & BB	1.3	+	Less material adjustments
Wholesale		5.1	+	Less material adjustments
Firmwide		**$14.5**	+	**$4-6**

Current coverage is ~12m versus avg. life of ~24m



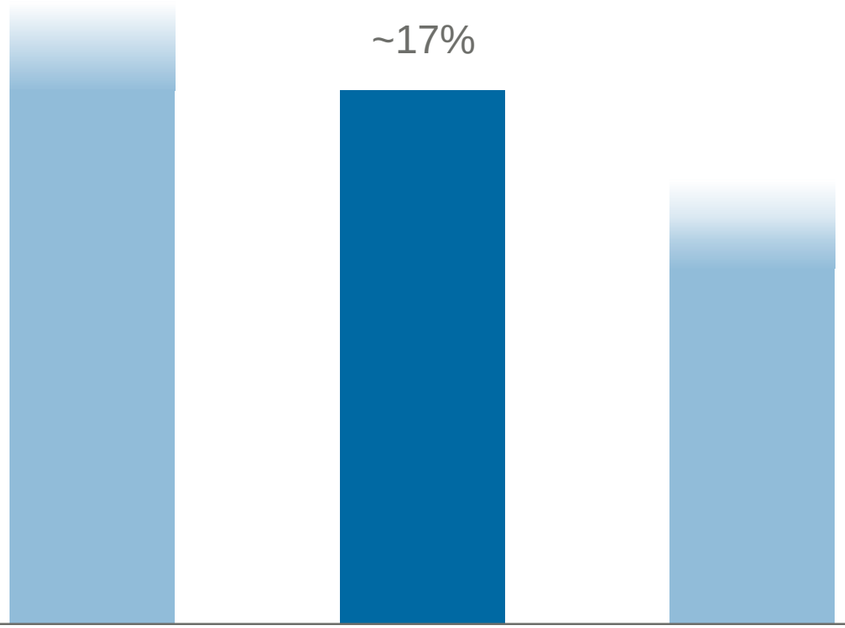
Adverse case $6-10

[1] Home Lending includes AWM mortgage portfolio

Medium-term target for ROTCE

Upside opportunities

- **Slower deposit reprice**
- **Constructive markets**
- **Benign credit environment continues**



Potential downside risks

- **Quicker deposit reprice**
- **Challenged markets**
- **Higher credit costs**
- **Higher capital**

~17% ROTCE target in the medium-term

Conclusion

Exceptional client franchises

Fortress balance sheet and principles

Long-term shareholder value

Leading financial performance

(medium-term outlook)

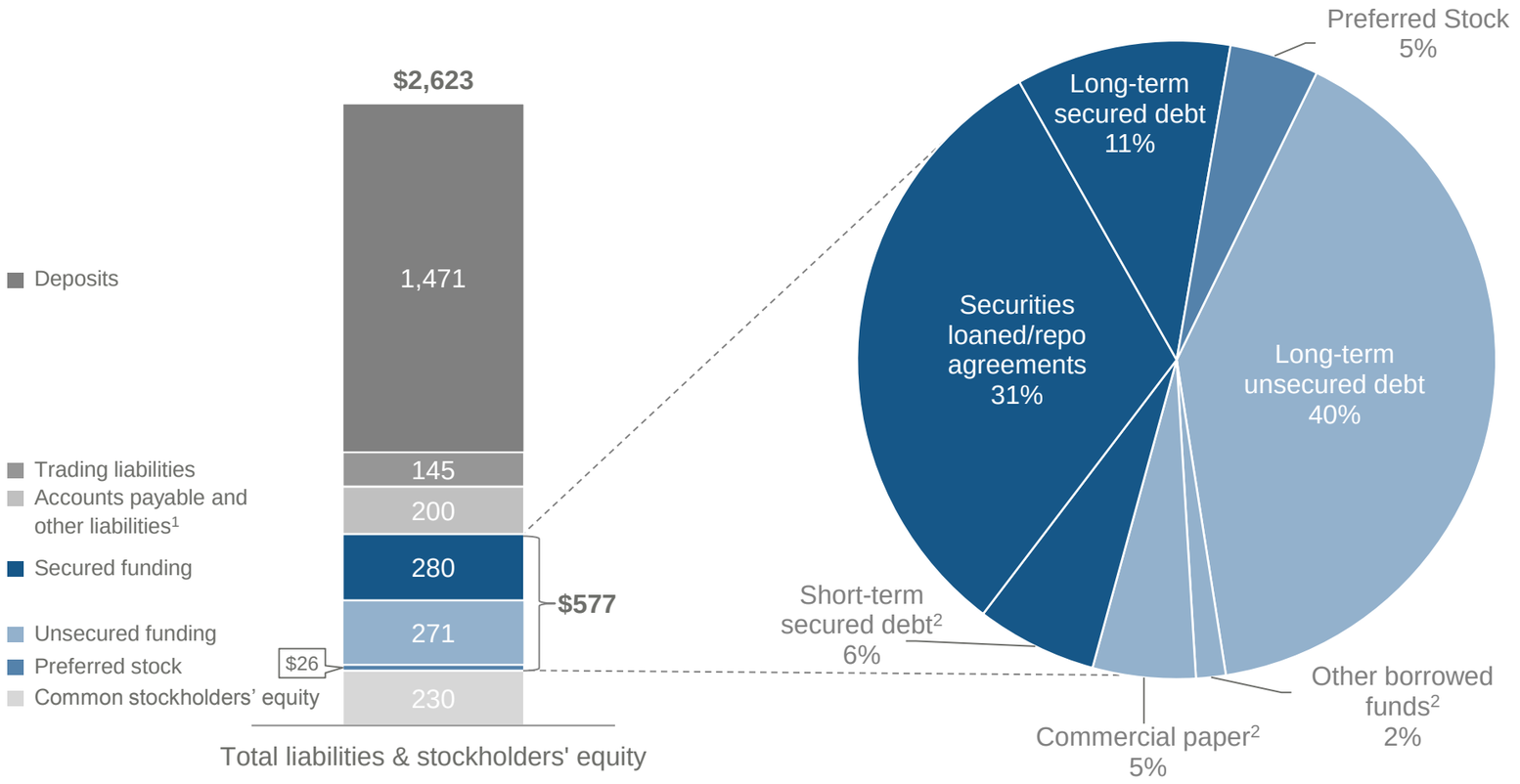
~17% *ROTCE*	**~55%** *Overhead ratio*
~12% *CET1 ratio*	**75-100%** *Net payout ratio*

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		Page
1	**Appendix – Fixed Income**	**22**
2	Notes	28

Continuing to optimize funding mix

Capital markets liabilities as of 12/31/18 ($B)



Secured funding highlights

- Long-term secured debt
  - $44B FHLB advances
  - $13B credit card securitization
- Short-term secured debt
  - $18B collateralized commercial paper
  - $5B asset-backed commercial paper
  - $11B FHLB advances

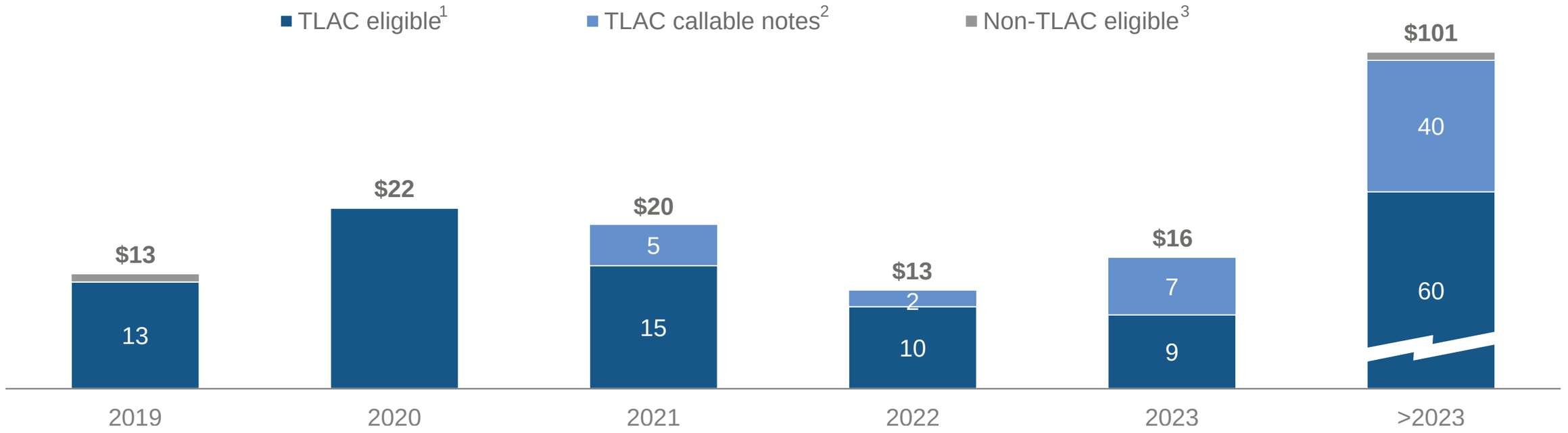
Unsecured funding highlights

- Long-term unsecured debt
  - $163B senior debt
  - $17B subordinated debt[3]
  - $53B structured notes
- Commercial paper
  - $30B
  - Supports CIB Markets business

Note: For footnoted information, refer to slide 41

Managing maturity profile and TLAC efficiency

JPMorgan Chase & Co. (HoldCo) unsecured long-term debt maturity profile ($B)



Maturity profile includes

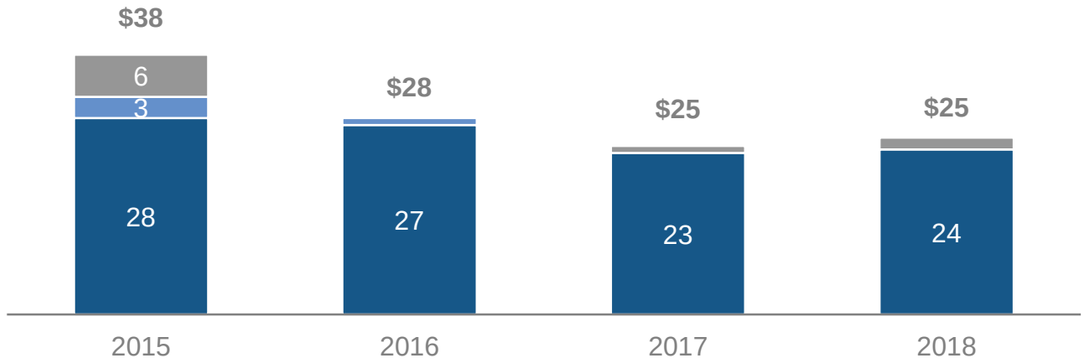
- $128B of TLAC eligible, $54B of TLAC callable notes and $3B of non-TLAC eligible
- TLAC callable notes provide the option to redeem 1 year prior to maturity; e.g., the $5B of callable notes maturing in 2021 may be redeemed in 2020
- ~$18B of debt classified as structured notes, of which ~$16B is TLAC eligible

Note: Totals may not sum due to rounding; amounts represent the carrying value. For footnoted information, refer to slide 41

JPMorgan Chase & Co. (HoldCo) benchmark issuance – TLAC continues to drive issuance activity

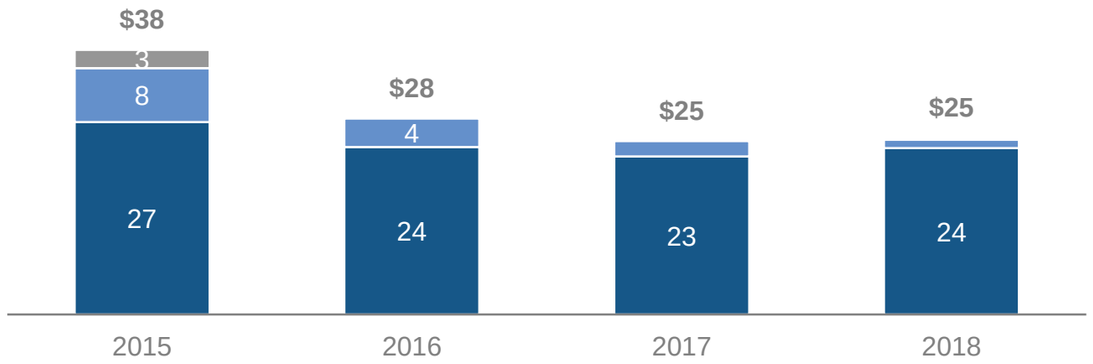
TLAC maturities and balance sheet drive issuance

Gross issuance by security type ($B) ■ Senior debt ■ Sub debt ■ Preferred equity



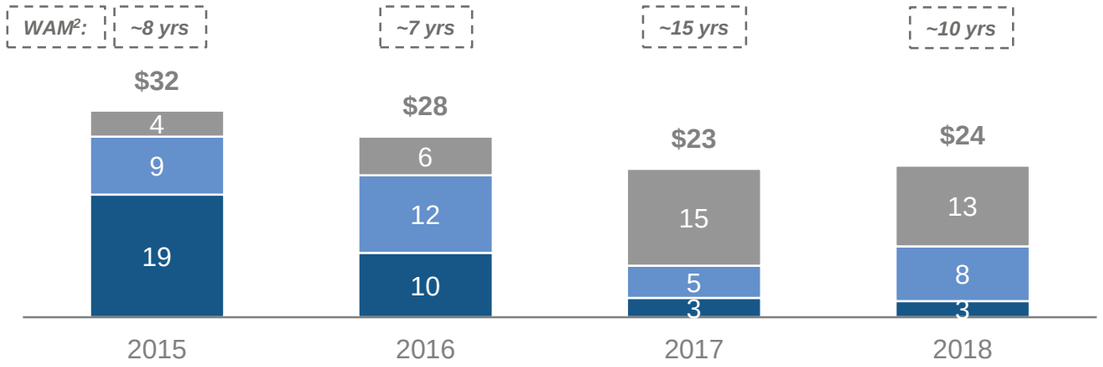
Issuance weighted towards USD due to relative economics

Gross issuance by currency ($B) ■ USD ■ EUR ■ Other



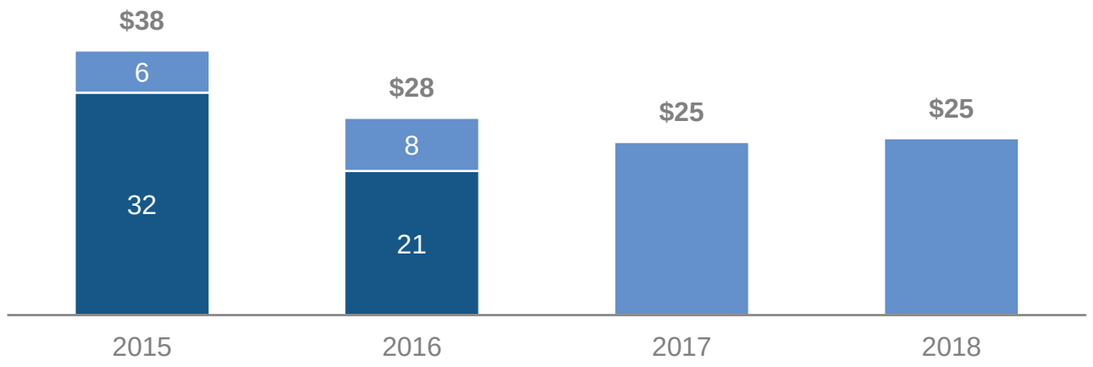
Tenor driven by maturity management and spreads

Gross issuance by tenor ($B)[1] ■ <5 Yrs ■ 5-10 Yrs ■ 10+ Yrs



Callable notes provide maximum efficiency for TLAC management

Gross issuance by structure ($B) ■ Bullet ■ TLAC Callable[3]

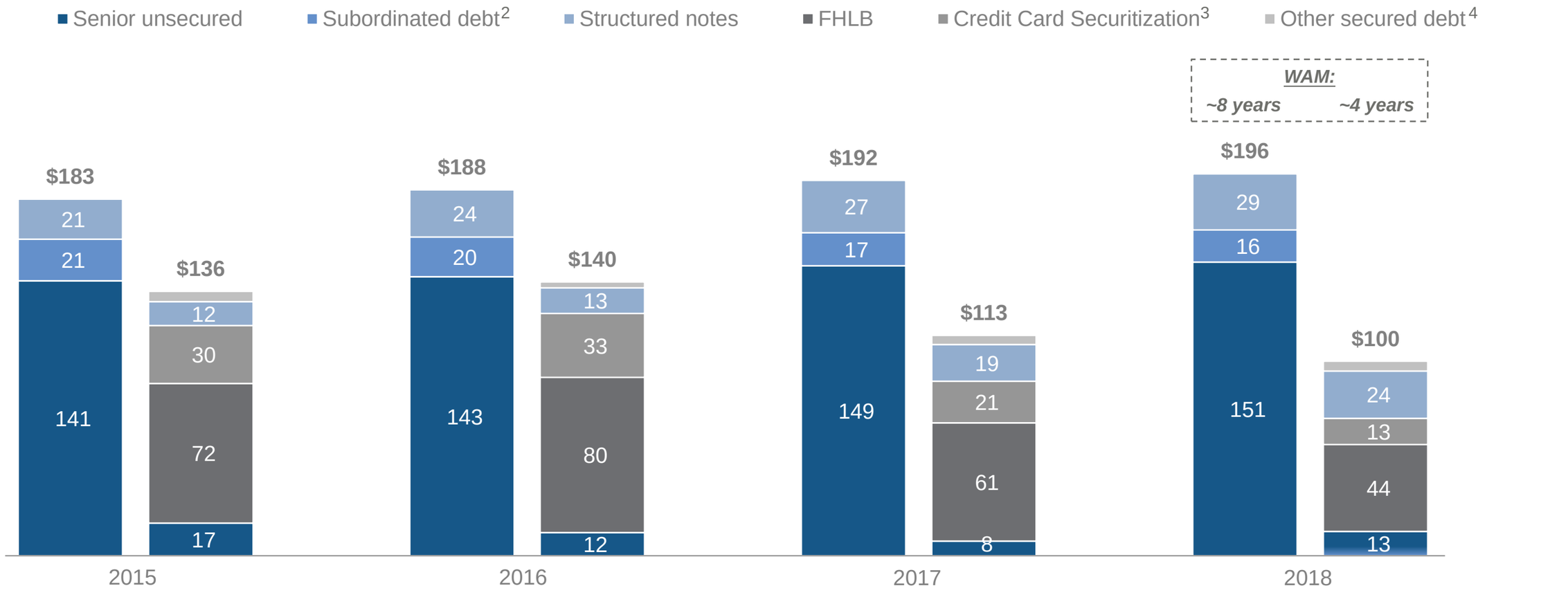


Note: Totals may not sum due to rounding. For footnoted information, refer to slide 41

JPMorgan Chase & Co.

Firmwide wholesale long-term funding outstanding

End of period outstanding ($B) – Holding Company (left) vs. Bank[1] (right)



Note: Totals may not sum due to rounding. The Holding Company includes the Holding Company and its non-bank subsidiaries. The Bank includes bank subsidiaries
For footnoted information, refer to slide 42

TLAC and external LTD requirement summary – TLAC compliance is maintained

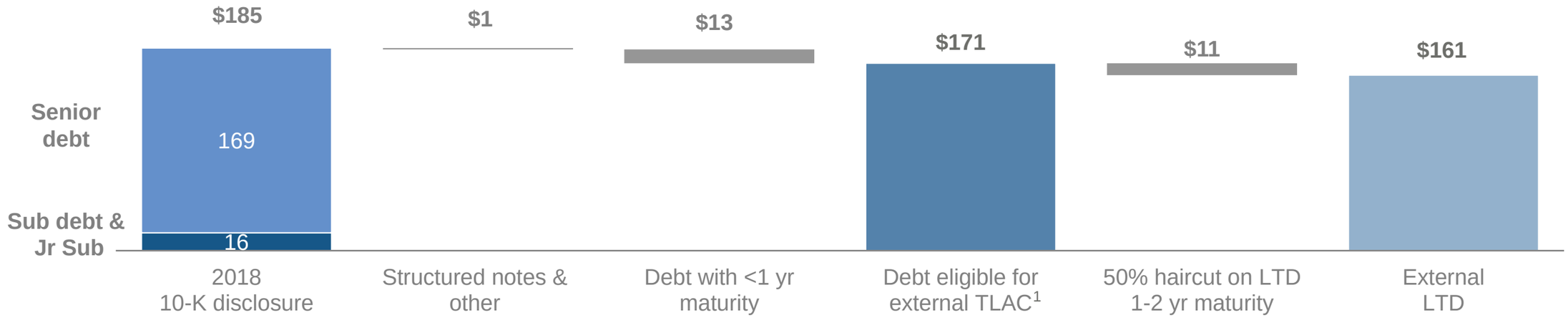
Commentary

- Holding Company funding activity driven by
  - Balance sheet evolution
  - TLAC maturities
  - Credit spreads and other market considerations
- Preferred and subordinated debt issuance needs based on capital planning requirements and replacement economics
- Non-Holding Company funding activity driven by liquidity needs

TLAC Requirements – key metrics at 12/31/2018 ($B)

	Eligible External TLAC	Eligible LTD
Eligible long-term debt	$171	$161
Preferred equity	26	-
Common equity Tier 1	183	-
Total	**$381**	**$161**
% of RWA	**24.9%**	**10.5%**
Requirement	*23.0%*	*9.5%*
(Shortfall)/surplus	***$29***	***$15***
% of Leveraged assets	**11.6%**	**4.9%**
Requirement	*9.5%*	*4.5%*
(Shortfall)/surplus	***$70***	***$13***

Holding Company – external long-term debt at 12/31/2018 ($B)



Note: Totals may not sum due to rounding

[1] Includes ~$16B of debt classified as structured notes

Wholesale funding sources – purpose and key features

	Product	Typical term	Callable	Multi-currency[4]	Available to meet regulatory requirement: TLAC	T1/T2 Reg. Cap.	LCR	NSFR
HoldCo	Senior Unsecured	2-30 years	✓	✓	✓	✗	✓	✓
	Subordinated Debt	10-30 years[1]	✓	✓	✓	✓	✓	✓
	Preferred Stock	Perpetual	✓	✗	✓	✓	✓	✓
	Structured Notes	2-30 years	✓	✓	✓ / ✗[5]	✗	✓	✓
Broker-Dealer	Commercial Paper	Generally < 1 year[2]	✗[3]	✓	✗	✗	✓	✓[2]
	Securities loaned / Repo agreements	Generally < 6 months	✗	✓	✗	✗	✓	✓[2]
	Collateralized Commercial Paper	Generally < 1 year[2]	✗[3]	✓	✗	✗	✓	✓[2]
Bank	Senior Unsecured	2-30 years	✓	✓	✗	✗	✓	✓
	Subordinated Debt	2-30 years	✓	✓	✗	✓	✓	✓
	Structured Notes	2-30 years	✓	✓	✗	✗	✓	✓
	FHLB Borrowing	Generally < 5 years[2]	✓[2]	✗	✗	✗	✓	✓
	Card Securitization	1-10 years	✗	✗	✗	✗	✓	✓
	Asset-Backed Commercial Paper	Generally < 1 year[2]	✗[3]	✗	✗	✗	✓	✓[2]

Secured Funding

Note: excludes deposits and common equity. For footnoted information, refer to slide 42

Agenda

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1	Appendix – Fixed Income	22
2	**Notes**	**28**

Notes on non-GAAP financial measures

1. In addition to analyzing the Firm's results on a reported basis, management reviews Firmwide results, including the overhead ratio, on a "managed" basis; these Firmwide managed basis results are non-GAAP financial measures. The Firm also reviews the results of the lines of business on a managed basis. The Firm's definition of managed basis starts, in each case, with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm and each of the reportable business segments on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. These financial measures allow management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business. For a reconciliation of the Firm's results from a reported to managed basis, see pages 57-59 of JPMorgan Chase Co.'s Annual Report on Form 10-K for the year ended December 31, 2018 (the "2018 Form 10-K")
2. Tangible common equity ("TCE"), return on tangible common equity ("ROTCE") and tangible book value per share ("TBVPS"), are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. For a reconciliation from common stockholders' equity to TCE, see page 59 of the 2018 Form 10-K. ROTCE measures the Firm's net income applicable to common equity as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. Book value per share was $70.35 at December 31, 2018. TCE, ROTCE and TBVPS are utilized by the Firm, as well as investors and analysts, in assessing the Firm's use of equity
3. Adjusted expense and adjusted overhead ratio are each non-GAAP financial measures. Adjusted expense excluded Firmwide legal expense/(benefit) of $72 million for the year ended December 31, 2018. The adjusted overhead ratio measures the Firm's adjusted expense as a percentage of managed net revenue. Management believes this information helps investors understand the effect of these items on reported results and provides an alternate presentation of the Firm's performance
4. Net charge-offs and net charge-off rates exclude the impact of purchased credit-impaired ("PCI") loans

Notes on key performance measures

1. The Basel III regulatory capital, risk-weighted assets and capital ratios (which became fully phased-in effective on January 1, 2019) are all considered key regulatory capital measures. The capital adequacy of the Firm is evaluated against the Basel III approach (Standardized or Advanced) which results in the lower ratio. While the required capital remained subject to the transitional rules during 2018, the Firm's capital ratios as of December 31, 2018 were equivalent whether calculated on a transitional or fully phased-in basis. For additional information on these measures, see Capital Risk Management on pages 85-94 of the Firm's 2018 Form 10-K
2. Core loans represent loans considered central to the Firm's ongoing businesses; core loans exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit

Notes on slide 2 – Strong financial performance in 2018 on an absolute basis…

1. See note 1 on slide 28
2. See note 1 on slide 29
3. Net of stock issued to employees
4. See note 2 on slide 28

Notes on slide 3 – …as well as relative to our peers

1. See note 1 on slide 28
2. Amounts for GS and MS represent reported revenue
3. Managed overhead ratio = total noninterest expense / managed revenue; revenue for GS and MS is reflected on a reported basis
4. See note 2 on slide 28
5. Reflects common dividends and common stock repurchases, net of common stock issued to employees when available
6. The EPS 10-year CAGR for GS and MS compares reported EPS for the year ended December 31, 2018, versus reported EPS for the year ended November 30, 2008 (which was their fiscal year-end in 2008). The TBVPS 10-year CAGR for GS compares TBVPS as of December 31, 2018, versus TBVPS as of November 30, 2008. All other comparisons are for the year ended or as of December 31, 2018, versus December 31, 2008

Notes on slide 4 – We have exceptional client franchises… (1/2)

1. Users of all web and/or mobile platforms who have logged in within the past 90 days
2. Users of all mobile platforms who have logged in within the past 90 days
3. Excludes Commercial Card; includes Liquid accounts
4. Kantar TNS (“TNS”) Retail Banking Monitor. Based on national data (49,244 surveys in 2018 and 2017). Calculations are derived from the following questions (answered by 2,463 customers in 2018 and 2017): “*Which is your primary bank*?" and “*In what year did [selected bank] become your primary bank*?” Data is weighted by TNS to ensure the survey is representative of the U.S. population
5. FDIC 2018 Summary of Deposits survey per S&P Global Market Intelligence. Excludes non-retail branch locations and all branches with $500mm+ in deposits within the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC
6. Based on 2018 sales volume and loans outstanding disclosures by peers (C, BAC, COF, AXP, DFS) and JPMorgan Chase estimates. Sales volume excludes private label and Commercial Card. AXP reflects the U.S. Consumer segment and JPMorgan Chase estimates for AXP’s U.S. small business sales. Loans outstanding exclude private label, AXP Charge Card, and Citi Retail Cards
7. Represents 2018 general purpose credit card (“GPCC”) spend, which excludes private label and Commercial Card; based on company filings and JPMorgan Chase estimates
8. Represents 2018 share of loans outstandings, which excludes private label, AXP Charge Card and Citi Retail Cards; based on company filings and JPMorgan Chase estimates
9. Inside Mortgage Finance; Chase was the #2 jumbo mortgage originator for FY18
10. Dealogic as of January 1, 2019
11. Coalition, preliminary 2018 rank analysis for the following peer set: BAML, BARC, BNPP, CITI, CS, DB, GS, HSBC, MS, JPM, SG and UBS. Market share reflects JPMorgan Chase’s share of the global industry revenue pool. The market share and rank analysis are based on JPMorgan Chase’s business structure

Notes on slide 4 – We have exceptional client franchises… (2/2)

12. Institutional Investor
13. Based on third-party / external data
14. Source of assets under custody (“AUC”): Company filings
15. S&P Global Market Intelligence as of December 31, 2018
16. Represents total JPMorgan Chase revenue from investment banking products provided to CB clients
17. Refinitiv LPC, FY18
18. Euromoney; 2018 results released February 2019
19. The “% of 2018 JPMAM (“JPMorgan Asset Mangement”) long-term mutual fund 10-year assets under management (“AUM”) above peer median” analysis represents the proportion of assets in mutual funds that are ranked above their respective peer category median on a 10-year basis as of December 31, 2018. All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers redenominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a “primary share class” level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The “primary share class”, as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based on the annual management fees charged, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one “primary share class” territory, both rankings are included to reflect local market competitiveness (applies to “Offshore Territories” and “HK SFC Authorized” funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results

Notes on slide 5 – …and we are gaining market share in nearly all of our businesses

1. Dealogic as of January 1, 2019
2. Coalition, preliminary 2018 market share analysis reflects JPMorgan Chase's share of the global industry revenue pool and is based on JPMorgan Chase's business structure
3. Based on average balances during indicated time period
4. Commercial and Industrial ("C&I") and Commercial Real Estate ("CRE") groupings used herein are generally based on client segments and do not align with regulatory definitions
5. FDIC 2018 Summary of Deposits survey per S&P Global Market Intelligence. Excludes non-retail branch locations and all branches with $500mm+ in deposits within the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC
6. Represents GPCC spend, which excludes private label and Commercial Card; based on company filings and JPMorgan Chase estimates
7. Represents share of end-of-period ("EOP") loans outstanding, which excludes private label, AXP Charge Card and Citi Retail Cards; based on company filings and JPMorgan Chase estimates
8. Primary relationship based on internal JPMorgan Chase definition
9. Inside Mortgage Finance ("IMF") and JPMorgan Chase internal data. Excludes AWM originations
10. Experian AutoCount data; reflects financing market share for new and used loan and lease units at franchised and independent dealers
11. Strategic Insight as of February 2019. Reflects active long-term mutual funds and exchange-traded funds ("ETFs") only. Excludes fund of funds and money market funds
12. Capgemini World Wealth Report 2018. Market share estimated based on 2017 data (latest available)
13. Bloomberg as of January 3, 2019; excludes exchange-traded notes ("ETN")

Notes on slide 6 – Proven best-in-class long-term performance

1. Represents EOP core loans, which are calculated as follows: EOP total loans less noncore loans. The CAGR for USB and PNC is based on total loans; noncore loans are defined as "liquidating" for WFC, and loans reported in the "All Other Segment" for BAC and CitiHoldings for C. Source: company disclosures
2. Total EOP deposits – from fourth quarter company reports. Retail deposits – source: FDIC 2018 Summary of Deposits survey per S&P Global Market Intelligence; excludes non-retail branch locations and all branches with $500mm+ in deposits within the last ten years for 2013-2018 comparison and two years for the 2017-2018 comparison (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks); includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC
3. Revenue is based on JPMorgan Chase's internal analysis excluding the impact of funding valuation adjustments ("FVA"), debit valuation adjustments ("DVA") and certain non-core items for JPMorgan Chase and the peer banks; and business simplification for JPMorgan Chase
4. Coalition, preliminary 2018 market share analysis reflects JPMorgan Chase and the peer banks' share of the global industry revenue pool and is based on JPMorgan Chase's business structure
5. Dealogic as of January 1, 2019
6. Total AUM net flows
7. Includes AWM total client flows, Chase Wealth Management investments and new-to-firm Chase Private Client deposits
8. Represents Investment Management division total assets under supervision ("AUS") net flows
9. Represents Investment Management total AUM inflows plus Wealth Management fee-based asset flows
10. Includes net new money from Asset Management and Global Wealth Management divisions. Net new money for 2014 reflects old reporting structure due to data availability. In 2018, UBS began to report flows for 2016-2018 in U.S. dollars ("USD"). Flows for 2014 and 2015 were converted to USD at the 2014-2015 daily average exchange rate
11. Represents GPCC spend, which excludes spend related to private label and commercial credit cards; based on company filings and internal JPMorgan Chase estimates; C reflects Branded Cards North America; COF reflects Domestic Card; AXP reflects the U.S. consumer segment and internal JPMorgan Chase estimates for AXP's U.S. small business sales
12. Source: Nilson data; U.S. Bankcard volumes include Visa and MasterCard credit card and signature debit volumes in the U.S.
13. Source: 2018 J.D. Power U.S. Retail Banking Satisfaction Survey; Big banks is defined as top six U.S. banks (Chase, PNC, USB, C, BAC, and WFC) based on asset size

Notes on slide 7 – Macroeconomic backdrop

1. Federal Reserve as of December 18, 2018; J.P. Morgan Investment Bank Global Economic Research and DataQuery as of February 22, 2019
2. 2004 cycle dates; 06/04-06/06; quarterly results shown above. Excludes earnings credit rate (“ECR”) impact
3. J.P. Morgan Investment Bank U.S. Economic Research, DataQuery as of February 22, 2019

Notes on slide 9 – Evolution of the balance sheet (cont'd)

1. Totals may not sum due to rounding
2. In determining the 2014-2018 CAGR, non-operating balances used for 2014 reflect the average for the month of December 2014 and not the full year average. Non-operating balances include only those in CIB, CB and Corporate based on the U.S. LCR rule, and include all certificates of deposits in Corporate, and exclude non-operating balances in CCB and AWM
3. Includes Corporate
4. See note 2 on slide 29
5. Loans classified as runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit

Notes on slide 11 – Evolution of regulatory framework

1. Supervisory Capital Assessment Program
2. Comprehensive Capital Analysis and Review
3. Total Loss Absorbing Capacity
4. Global Systemically Important Banks

Notes on slide 16 – Noninterest revenue

1. See note 1 on slide 28
2. Excludes a legal benefit related to a settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee to certain Washington Mutual trusts and revaluation of tax-oriented investments related to the Tax Cuts & Jobs Act (“TCJA”)
3. Includes a card rewards liability adjustment, mark-to-market gains on certain equity investments previously held at cost and Credit Adjustments & Other in CIB
4. Annual average is based on the simple average of month-end balances for each period
5. Markets includes both NII and NIR

Notes on slide 17 – Adjusted expense

1. See note 3 on slide 28
2. See note 1 on slide 28
3. Includes compensation expense related to increased hiring of revenue-producing bankers

Notes on Fixed Income

Slide 22 – Continuing to optimize funding mix

1. Includes federal funds purchased and client-driven loan securitizations which are included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets totaling ~$3B as of December 31, 2018
2. The Firm's obligations under the collateralized commercial paper ("CCP") programs, short-term Federal Home Loan Bank ("FHLB") advances and other borrowed funds ("OBF") are reported in short-term borrowings on the Firm's Consolidated balance sheet. Obligations under the asset-backed commercial paper ("ABCP") programs are included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheet
3. Includes junior subordinated debt

Slide 23 – Managing maturity profile and TLAC efficiency

1. Eligible long-term debt ("LTD") with maturities > 1 year count toward the external TLAC ("total loss absorbing capacity") requirement. Eligible LTD with maturities > 2 years, plus 50% of eligible LTD with maturities between 1-2 years count toward the external LTD requirement
2. Represents callable notes with an option to redeem 1 year prior to maturity
3. Non-TLAC eligible debt is approximately $0.6B for 2019, $0.3B for 2020, $0.1B for 2021, $0.2B for 2022, $0.4B for 2023 and $1.3B after 2023

Slide 24 – JPMorgan Chase & Co. (HoldCo) benchmark issuance – TLAC continues to drive issuance activity

1. Excludes preferred stock issuance
2. Weighted average maturity ("WAM") is calculated based on the final maturity of all unsecured long-term debt issuance
3. Represents callable notes with an option to redeem 1 year prior to maturity, except for callable preferred stock issuance

Notes on Fixed Income

Slide 25 – Firmwide wholesale long-term funding outstanding

1. Senior unsecured for banking subsidiaries includes subordinated debt of $7.7B and $3.9B in 2015 and 2016, respectively, and $0.3B in both 2017 and 2018
2. Includes junior subordinated debt
3. Includes $1.8B and $1.5B of student loan securitizations in 2015 and 2016, respectively
4. Includes $0.5B of other secured debt in a Holding Company subsidiary in each of 2015 and 2016

Slide 27 – Wholesale funding sources – purpose and key features

1. Currently it is not optimal from a regulatory capital treatment perspective to issue wholesale long-term funding with a tenor of less than 10 years
2. Commercial Paper (“CP”)/CCP/ABCP can be issued up to 397 days, except for CP/CCP relying on the 3(a)3 exemption, which has a maximum tenor of 270 days. Certificates of Deposit (“CD”) do not have a maximum contractual maturity. FHLB advances may have a legal maturity of up to 30 years and may also be extendible. Only funding with maturities > 365 days get full benefit for the net stable funding ratio (“NSFR”)
3. Callable CP, CCP and ABCP may be issued, but the Firm has not issued such debt to-date
4. Multi-currency represents two or more currencies
5. Certain plain-vanilla debt that is classified as structured notes is TLAC-eligible

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase & Co.'s management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2018, which has been filed with the Securities and Exchange Commission and is available on JPMorgan Chase & Co.'s website (https://jpmorganchaseco.gcs-web.com/financial-information/sec-filings), and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update any forward-looking statements.